EQUITY
SILVER MINES
LIMITED

GEOLOGICAL BRANCH
ASSESSMENT REPORT

10,869

Assessment Report for Diamond Drilling

on the

T 112 and T 114 Claims

(82-1 Group)

Omineca Mining Division

NTS 93 L/1

Latitude 54° 13' N, Longitude 126° 15' W

Owned by Equity Silver Mines Ltd.

Work by Equity Silver Mines Ltd.

By: R. B. Pease, B. Sc.
1982 November

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Introduction

(i) Location and Access

The claims are located 39 kilometers from Houston, B.C., along the Equity Silver Mines access road (Figure 1). Access to the drill sites was by means of a 4x4 vehicle along the tailings pond access road, and caterpillar trail into the sites.

(ii) Claim Ownership and Status

The claims drilled are wholly owned by Equity Silver Mines Ltd. Table 1 lists the claims on which the drilling was done. For the purpose of filing this assessment, four claims have been grouped and named the 82-1 group. Table 2 lists the claims in the 82-1 group.

Table 1: Claims Drilled

Claim Name	Record Number	Expiry Date
T 112	65729	12/30/88
T 114	65731	12/30/88

Table 2: Claims in 82-1 Group

Claim Name	Record Number	Expiry Date
T 112	65729	12/30/88
T 113	65730	12/30/88
T 114	65731	12/30/88
T 115	65732	12/30/88

(iii) Diamond Drilling

On June 4 and 5, 1982, diamond drill holes 82-81 and 82-82 were drilled on claims T 112 and T 114 respectively (Figure 2). Both holes were NQ size core and orientated vertically. The total length of drilling was 80.8 metres. The drilling contractor was J.T. Thomas Diamond Drilling (1980) Ltd. of Smithers B.C.

Discussion

(i) Purpose

The purpose of the diamond drilling was two-fold. First, the extent of

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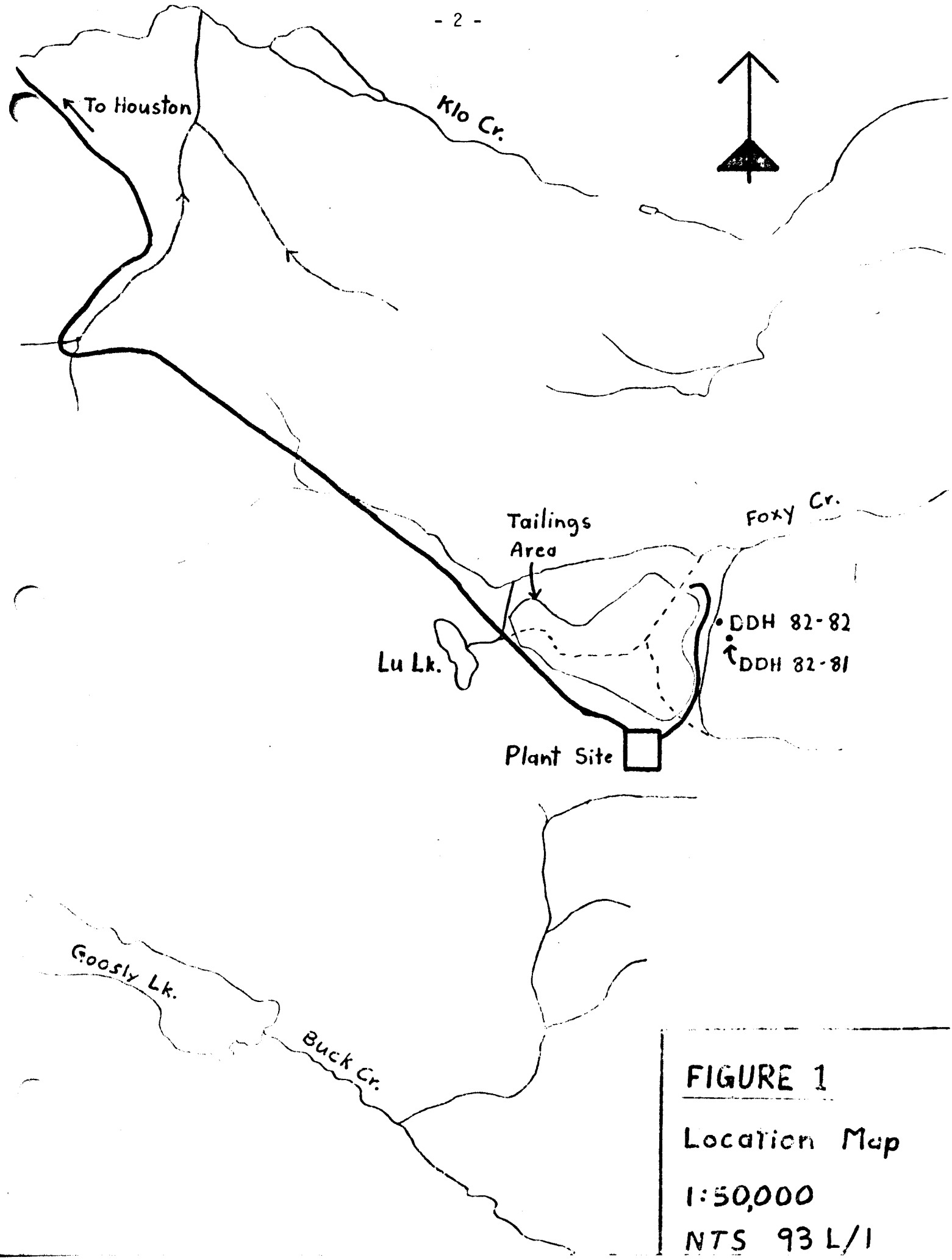


FIGURE 1

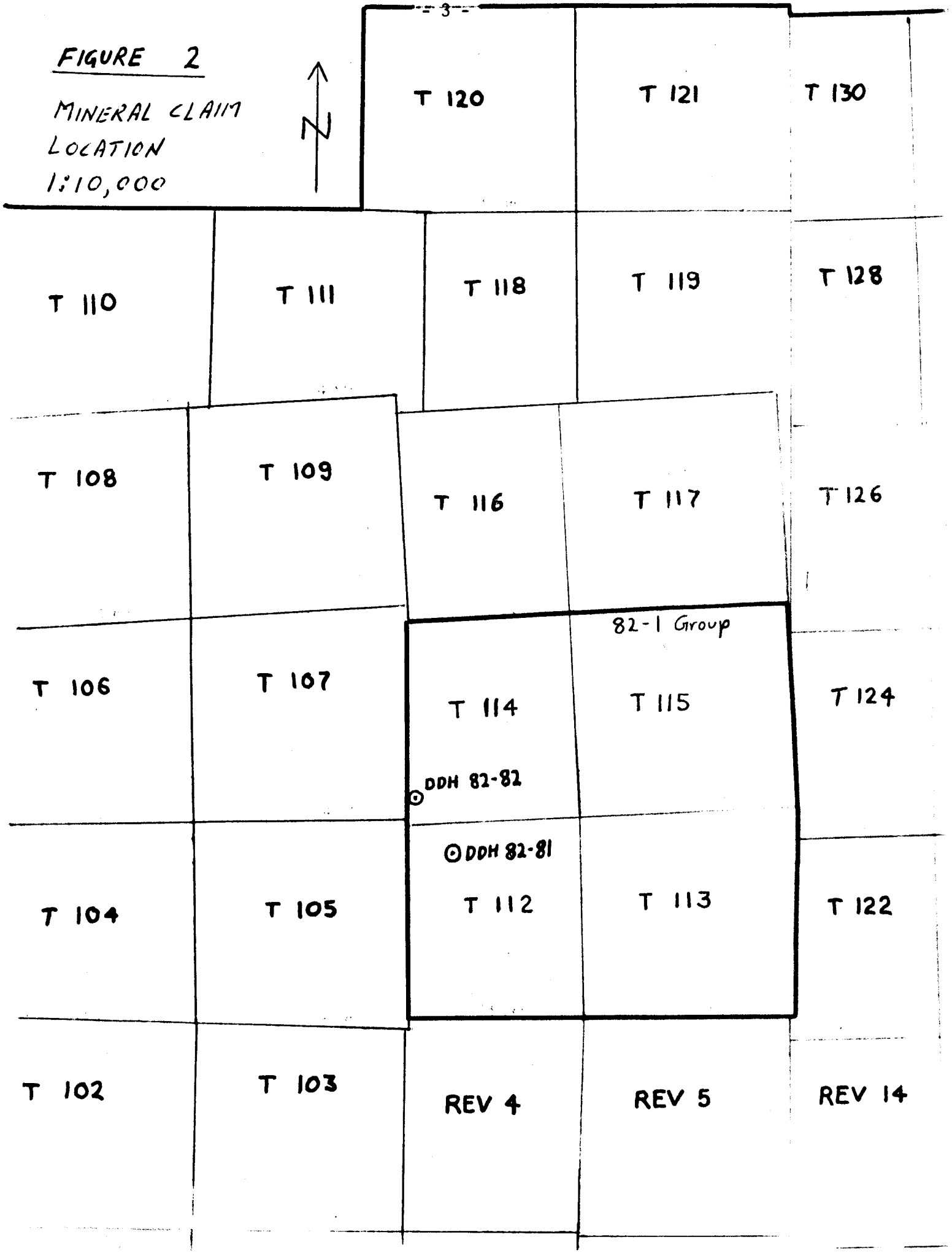
Location Map

1:50,000

NTS 93 L/1

FIGURE 2

MINERAL CLAIM LOCATION 1:10,000



the Cretaceous tuffs shown in Figure 3 was to be tested. Lack of outcrop rendered this difficult from the surface. These tuffs host the two known ore bodies located approximately 2 kilometres south of the drillholes. Secondly, if the rock types of the area were not highly mineralized with sulphides, samples could be obtained for acid production/consumption tests. These tests are designed to determine the suitability of the rocks for quarrying as construction material.

(ii) Geology

The core was logged by the author on June 7, 1982. It is presently stored on the Equity mine site in racks located immediately west of the office building. Table 3 summarizes pertinent data on the drillholes. Geologic logs of the drillholes are presented in Tables 4a and 4b.

Table 3: Drillhole Summary

Drillhole Number	Inclination	Depth (metres)	Collar Elevation (metres)	UTM Coordinates	
				Northing	Easting
82-81	-90°	50.6	1310	6009737	679051
82-82	-90°	30.2	1290	6009832	678961

The bedrock geology is plotted on Figure 3. Cretaceous lapilli and ash tuffs are conformably overlain by andesitic and dacitic flows. These units strike approximately north-south and dip 45° to the west. The tuffs host economic orebodies 2 kilometres to the south. Pyrite in fractures, veins and disseminations is ubiquitous within the Cretaceous units.

The flows and tuffs are unconformably overlain by Tertiary (Goosly Lake Group) volcanics to the north. In the area of the drilling, they appear to be relatively flat lying interbedded andesitic flows and flow breccias (Figure 4). No significant economic mineralization was intersected in these units and no assays were done. However, these rocks may be suitable as construction material.

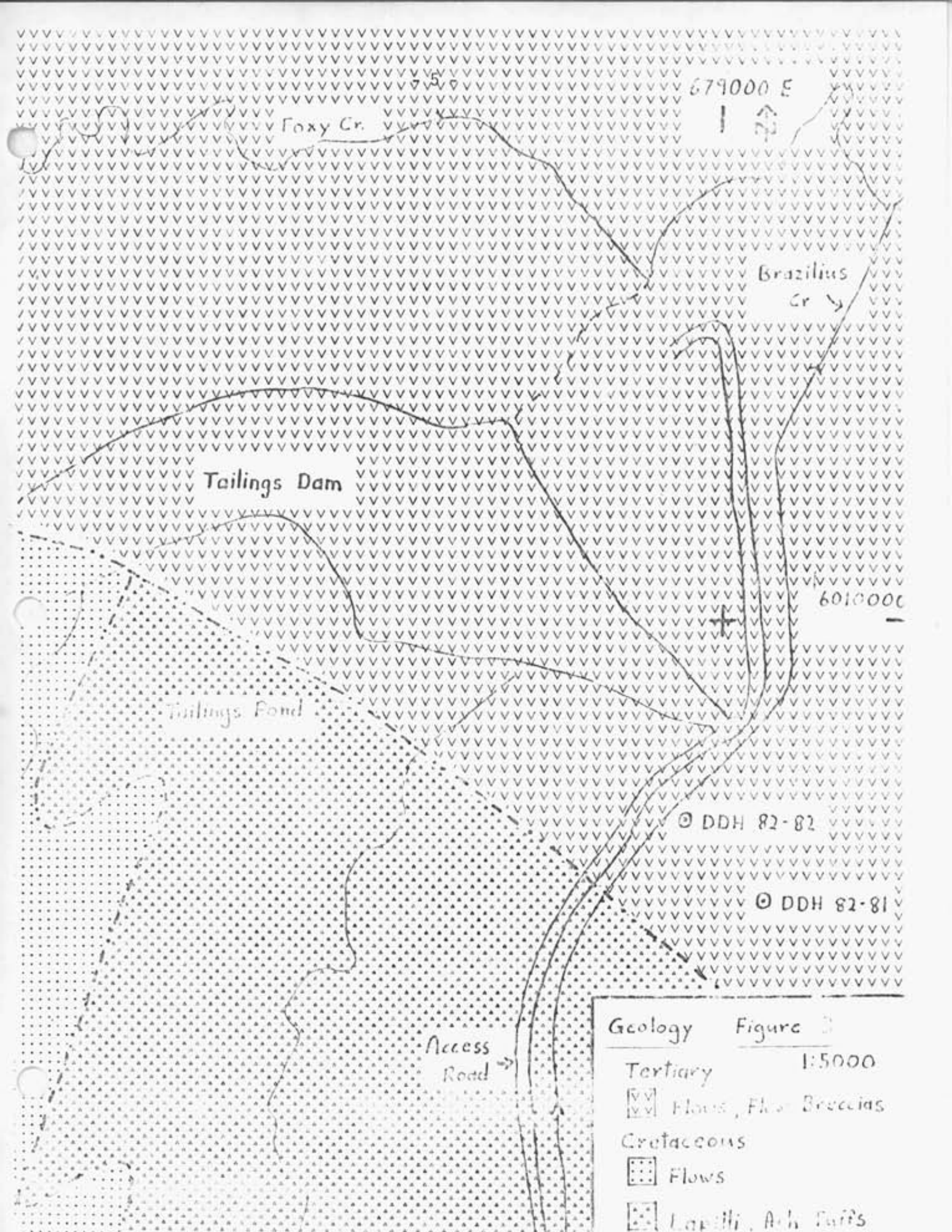

679000 E
N
Foxy Cr.
Brazilius Cr
Tailings Dam
6010000
Tailings Pond
DDH 82-82
DDH 82-81
Access Road
Geology
Figure
1:5000
Tertiary
Flows, Flow Breccias
Cretaceous
Flows
Lapilli, Ash Tuffs

Figure 4.

Geologic Cross-Section (Facing South-West)

Scale: 1:1000

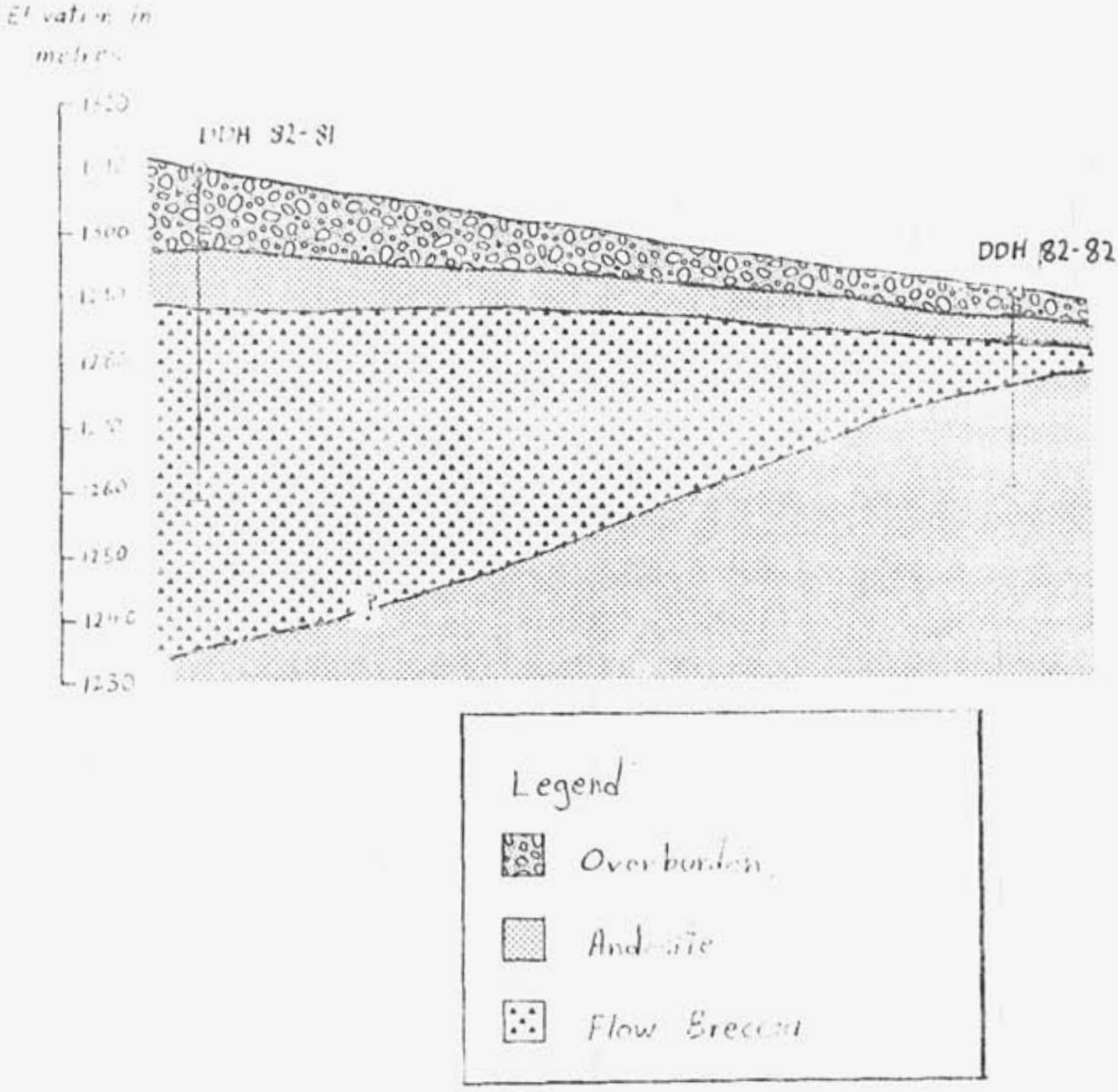


Table 4a: Drillhole 82-81 Log

Interval (metres)	Rock Type	Description
0.0 to 12.3	Overburden	
12.3 to 21.2	Andesite	Texture: - fine grained, purplish grey matrix - porphyritic - 1mm to 4mm long by 1mm wide, white feldspar phenocrysts compose 25% of rock - some phenocrysts have chlorite rims Fractures: - moderate intensity - dominate angle to core axis, 30° - some fractures filled with calcite (up to 1mm wide) - some fractures have chlorite envelopes Mineralization: - 0.5% disseminated magnetite - no sulphides
21.2 to 50.6 (end of hole)	Volcanic Flow Breccia	Contact with andesite irregular Texture: - fine grained greyish green matrix - matrix has minor carbonaceous component Clasts: - 80% of rock - closed framework - angular to subrounded - size varies from <1mm in diameter up to apparently >50 cm - 70% of clasts are above andesite - remaining 30% are fine grained, green, brown, red, grey and black in colour (mixture of sediments, tuffs and flows) Fractures: - weak intensity - dominate angle to core axis, 30° Mineralization: - pyrite blebs in matrix (0.05%) - andesite clasts have 0.1% magnetite

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Table 4b: Drillhole 82-82 Log

Interval (metres)	Rock Type	Description
0.0 to 4.1	Overburden	
4.1 to 7.4	Andesite	Same as Andesite in DDH 82-81
7.4 to 14.8	Volcanic Flow Breccia	Same as Flow Breccia in DDH 82-81
14.8 to 30.2	Andesite	Same as Andesite above - slightly higher magnetite (up to 1.0%)

(iii) Acid Production Potential Tests

The purpose of this test is to determine the acid production potentials of three waste rock samples. Many materials that contain sulphur and sulphide minerals can be oxidized mirobiologically to sulphuric acid and soluble metal sulphate salts by the leaching bacterium Thiobacillus ferrooxidans. This phenomenon can result in a potential water pollution hazard if the amount of sulphuric acid which the bacteria produce exceeds the neutralizing capacity of the host rock. If this is the case, acidic drainage water will occur, which may also solubilize heavy metals which could be toxic to aquatic flora and fauna in the area.

The sample numbers and locations are plotted on Figure 5. The samples were chosen to be representative of their respective rock type. The tests were conducted by B.C. Research, Division of Extractive Metallurgy in Vancouver. The results are presented in Table 5.

All the samples clearly consumed more acid than could be produced. Any acid produced by localized biological activity in dumps of these rock types will most likely be neutralized by surrounding material.

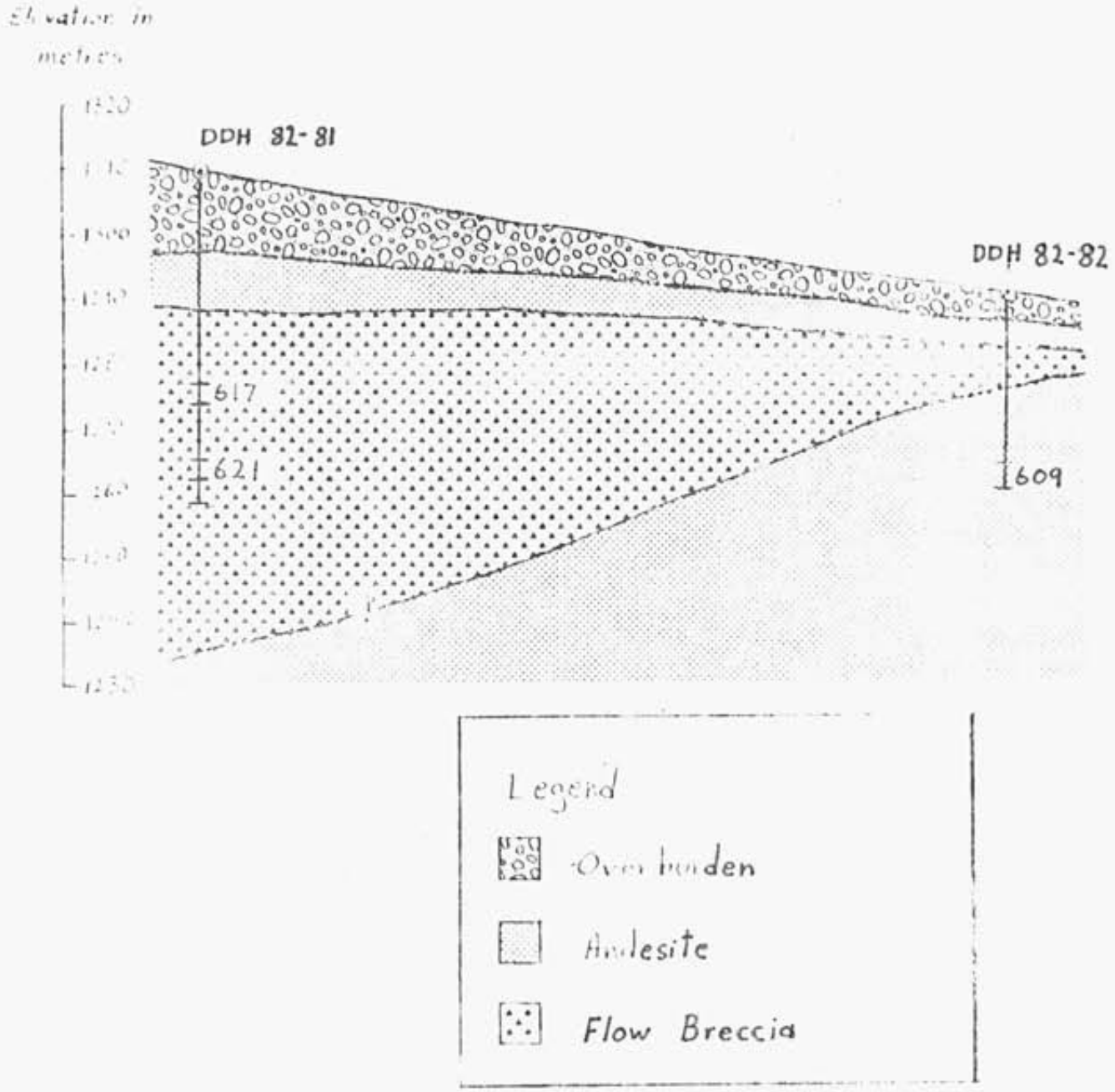
Table 5: Acid Production/Consumption Test

Sample No.	Rock Type	Sulphur (%)	Theoretical Acid Production (Kg H_2SO_4/tonne)	Theoretical Acid Consumption (kg H_2SO_4/tonne)
609	Andesite	0.034	1.0	75.0
617	Flow Breccia	0.33	10.1	81.1
621	Flow Breccia	0.22	6.7	109.8

Figure 5. Sample Locations

Geologic Cross-Section (Facing south east)

Scale: 1:1000



Conclusions and Recommendations

No significant economic mineralization was intersected. The Tertiary flows and flow breccias will be suitable to quarry as construction material as they will not be acid generating. Further diamond drilling is recommended moving south from drillholes 82-81 and 82-82. This will define the Tertiary-Cretaceous contact and search for economic mineralization in the Cretaceous pyroclastics.

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Statement of Expenditures

1.	Salaries, Compensation and Supervision	
	R. Pease 3 days @ $ 136.70	$ 410.10
2.	Transportation	
	3/4 ton Chev 4x4 3 days @ $ 40.00	120.00
3.	Site Preparation	
	Caterpillar 8 hours @ $ 100.00	800.00
4.	Diamond Drilling	
	80.8 metres @ $ 44.28	3,577.82
5.	Acid Production Potential Tests	
	3 samples	700.00
6.	Report Preparation	
	3 days @ $ 250.00	750.00
		$ 6,357.92

Author's Qualifications

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

Robert B. Pease, B. Sc.