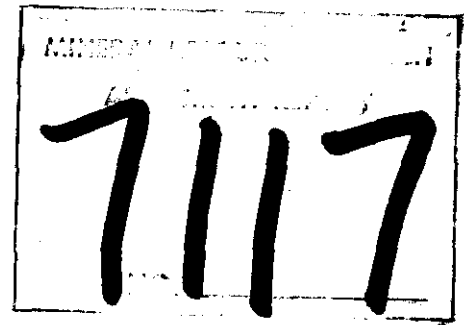


DRILLING REPORT

Mineral Hill, Mineral Hill A & B Mineral Claims

Omineca Mining Division

N.T.S. 93 L 10 East, $54^{\circ} 31'$ N. $126^{\circ} 43'$ W.



Owners: P.J. Huber and Granby Mining Corporation

Operator: Granby Mining Corporation

Author: D. H. James, P. Eng.

Date Submitted: January 31, 1979

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Figure 2. Mineral Hill Claims - Drill Hole Plan	In Pocket

1. INTRODUCTION

1.1 Location and Access

The property is located in National Topographic Series map sheet 93 L 10 East at 54° 31' N. Lat. 126° 43' W. Long. It is approximately 15 km NNW of the Village of Houston adjacent to Fishpan Lake and is in the Omineca Mining Division. Access is by 2 km of dirt road from Highway 16, through a private farm. The claims lie on the lower slopes of a ridge known as Grouse Mountain.

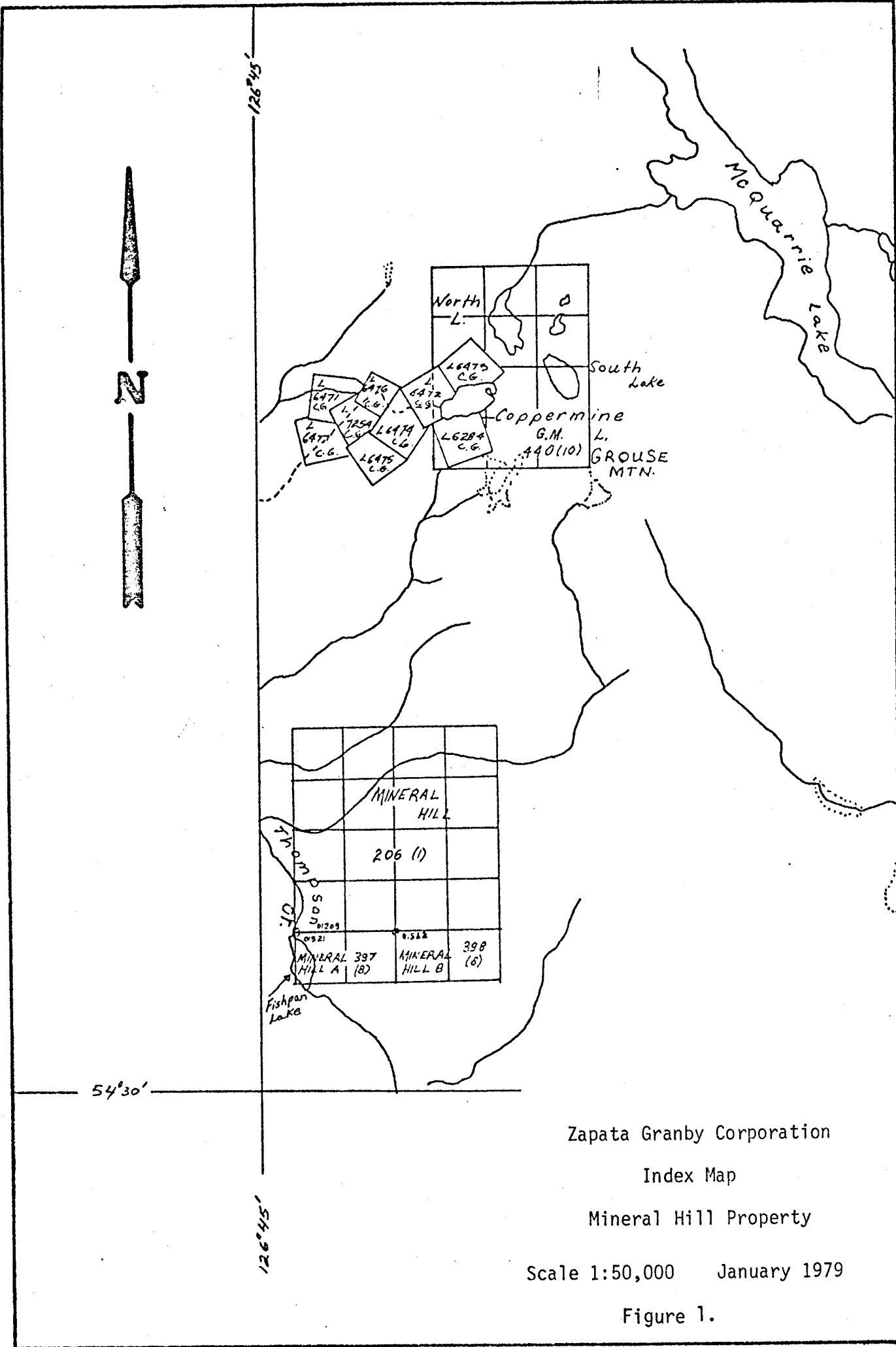
1.2 Property and History

The property consists of the Mineral Hill mineral claim #206 consisting of 16 units held in the name of P. J. Huber and the Mineral Hill A and B claims #397 and #398 consisting of 2 units each held in the name of Granby Mining Corporation. The Mineral Hill claim is under option to Granby Mining Corporation, and Granby was operator in the work program reported herein.

The history of the property is quite lengthy. Early prospectors put in a number of test pits and some short adits. Southwest Potash Corporation (now Amax) did geochemical, geological and magnetometer surveys over the Alaskite zone in 1962. Canex explored the Alaskite zone in 1964 and drilled one hole. Molymines Explorations Ltd. explored the known zones from 1965 to 1969 using geological, geophysical and geochemical methods, trenching, percussion drilling and diamond drilling. In 1966 Cominco mapped the area and drilled 8 holes in the Alaskite zone and the granitic intrusive. No work except for trenching for assessment purposes was done until Granby optioned the property in 1975. Granby compiled as much of the previous data as was available and carried out additional soil geochemical surveys. This work was followed up by 12 percussion drill holes totalling 2,240' (683 m) which are described in an assessment work report (Wilkinson, W.J., 1977). No work was done in 1977.

1.3 Summary of Work Reported

Work done to the end of 1976 indicated a very extensive area of molybdenite mineralization of very low grade. In 1978 Granby decided, with the encouragement of a contract under the Mineral Exploration Incentive Program, to test one remaining surface area of interest by percussion drilling and a short diamond drill hole and to explore below the two best surface areas by deep diamond drill holes. The work was done on the Mineral Hill claim in the period November 15 to December 15, 1978 as follows:



Zapata Granby Corporation

Index Map

Mineral Hill Property

Scale 1:50,000 January 1979

Figure 1.

Percussion Drilling

Hole M-13	73.2 metres
M-14	88.4 metres
M-15	76.2 metres
M-16	76.2 metres
M-17	61.0 metres
M-18	85.4 metres
M-19	<u>54.9 metres</u>

Total: 515.3 metres

Diamond Drilling

Hole 78-1	337.3 ^{377.3} metres	NQ
78-2	352.3 metres	NQ
78-3	<u>172.9 metres</u>	BQ

Total: 902.5 metres

This report presents the results of this work for submission of the costs as assessment work and to meet the requirements of the M.E.I.P. contract.

Summary and Brief Economic Assessment

The percussion holes and diamond drill hole 78-3 indicated only very low grade although persistent mineralization.

Hole 78-1 was drilled vertically in the "breccia zone", an area indicated by extensive earlier shallow percussion drilling and some short diamond drill holes. From rock at 20.6 metres to total depth of 377.3 metres it intersected continuous although variable mineralization consisting primarily of molybdenite in quartz veinlets and on chloritic slip planes. Other minerals present are chalcopyrite, galena, sphalerite and tetrahedrite. Average MoS_2 value for the entire hole is .062%. The interval from 181 to 335 metres averaged .075%. The highest assay for a 5 metre interval is .254% MoS_2 . Where other minerals were noted other metals were assayed for. The highest values were: copper - .14%, silver - .61 oz., WO_3 - .01%, lead - .01%. Hole 78-2 was drilled vertically in the "Alaskite zone" previously drilled with a number of diamond drill holes. This hole also intersected continuous mineralization from rock at 3.6 metres to bottom at 352.3 metres. The average MoS_2 assay is .057%. The highest among other assays were copper - .19%, silver - 3.01 oz., WO_3 - .04%, lead - 2.75%, zinc - 1.27%. The high Pb-Ag-Zn values are in samples only 10-15 centimetres long.

Holes 78-1 and 78-2 are about 1,000 metres apart and although the intervening ground has had some shallow drilling there is potential for continuous mineralization and a very large tonnage. The grade, however, is definitely sub-economic at the present time.

2. TECHNICAL DATA AND INTERPRETATION

2.1 Geology

The Mineral Hill claims are underlain by the Hazelton Group, Telkwa Formation, Babine shelf facies. (Tipper and Richards, 1976). The Babine shelf facies consists of volcanic and sedimentary rocks. On the claims these appear to be the rocks which are found, but they are altered to hornfels which obscures the original nature and structure. The hornfels is intruded by a body of granite, alaskite and fine monzonite. (Sutherland-Brown, 1965). Diorite occurs to the east.

2.1.1 Hornfels

The hornfels is purplish or occasionally green due to development of fine biotite, and judging from microscopic examination of cuttings, a good deal of very fine silica. It appears to have formed principally from tuffs and coarser fragmental volcanic rocks and possibly some sediments. The area of hornfels is very large relative to the surface area of intrusive rocks.

2.1.2 Granite

At approximately the south central part of the claim block (figure 2) the hornfels is intruded by a mass of porphyritic granite containing aplitic phases. There is some question as to whether this intrusive is a stock or a collection of dykes. The margins are not well exposed and hole 78-3 intended to intersect the contact reentered hornfels after intersecting only 14.9 metres of granite.

2.1.3 Alaskite

About 300 metres WSW of the granite is an area intruded by a branching dyke-like body of leucocratic coarse-grained granite generally similar in composition to the larger intrusive.

2.1.4 Fine Monzonite

This rock occurs as a dyke between the granite and the alaskite.

2.1.5 Diorite

An intrusive rock identified from hand specimens as diorite occurs east and northeast of the main area of interest. The magnetic response over this rock is substantially higher than over the other types described.

2.2 Mineralization

The principal mineralization on the property is molybdenite. Pyrite and chalcopyrite are widely distributed in small amounts. Other metallic minerals are pyrrhotite, galena, tetrahedrite and hematite. Silver is the principal associated metal of significant value.

The sulfides and hematite occur principally with quartz, some feldspar and some siderite in veins and veinlets. Some molybdenite has been noted disseminated in aplite and in very limited volumes of granite and alaskite. The core drilling showed a considerable amount of molybdenite on somewhat slickensided fracture surfaces with chlorite.

Two areas have received the most exploration attention although mineralization has been found throughout the hornfels.

The Alaskite Zone is centred upon the dyke-like intrusive described. A number of previous diamond drill holes explored this area to a depth of about 70 metres with a couple reaching 100 metres.

The Breccia Zone is an area of heavily fractured hornfels in which trenches indicated widths of as much as 1.5 metres of quartz.

Extensive percussion drilling to about 50 metres was done earlier in this area and several diamond drill holes put down, the deepest of which extended to 170 metres vertically.

2.3 Drilling Program

2.3.1 Design

Only a small amount of assay data from the previous work could be found, but it was well understood that the values were low - less than 0.1% MoS₂. Granby's initial work was carried out to explore the untested part of the hornfels area apparently more or less centered just north of the granite intrusive. The results of most of this work were tested by a percussion drilling program in 1976 consisting of percussion holes M1-12. Most of these holes produced low assays for MoS₂, the best being 18 metres (60') at .30% MoS₂ in M-3 (Wilkinson, W.J., 1977).

A portion of the hornfels near the eastern end of the granite intrusive subsequently was covered by soil geochemical, magnetometer and induced polarization surveys. A soil anomaly was found and prospecting turned up fragments of coarse-grained granite with disseminated molybdenite. This area constituted a target for a small additional percussion drilling program and one short diamond drill hole.

The major further potential for the property was indicated by the large area of hornfels alteration. This was interpreted to indicate the possibility of a larger intrusive in the subsurface. The Alaskite and quartz Breccia Zones were considered to be the surface expression of intrusive pulses other than that giving rise to the exposed granite. These pulses might produce at greater depth mineralization of better grade.

The drilling program submitted and carried out was designed to test the possibilities described. The Alaskite and Breccia Zones were drilled with one vertical NQ diamond drill hole each to depths of 377.3 and 352.3 metres respectively and the east surface area by one inclined BQ diamond drill hole to 172.9 metres and by 7 percussion drill holes totalling 515.3 metres.

2.3.2 Results

Logs with assays are appended to this report and the details will not be repeated in narrative form.

2.3.2.1 Hole 78-1 in the Breccia Zone intersected mineralization throughout its length, and its entire length was in hornfels with a small percentage of quartz as veinlets. There appear to be two types of quartz veins. An early, occasionally pegmatitic, type contains medium-grained molybdenite and chalcopryrite scattered in the quartz. A later type contains fine-grained molybdenite distributed in a somewhat banded manner. Molybdenite also occurs as a thin film on chloritic somewhat slickensided fracture planes. These were usually quite tight, core recovery was good and loss of molybdenite from the large core is considered negligible. Core was checked for scheelite by ultraviolet lamp and a few intervals assayed with low results. Occasional assays were obtained for copper, silver and lead with generally low results. The average molybdenite assay for the hole was .062% MoS₂. Individual assays for or adjusted to 5-metre intervals range from .254% to .008% MoS₂. Averages for the first to fourth quarters of the assays are respectively .047, .060, .075 and .067% MoS₂. One might postulate an "improving trend" on the basis of these figures, but it is certainly not marked or rapid.

2.3.2.2 Hole 78-2 in the Alaskite Zone also intersected mineralization throughout its length. Most of the rock was hornfels, with 55.7 metres total of alaskite centred on a 38.3 metre section from 33.7 to 71.6 metres. Occurrence of the mineralization is similar to that in 78-1. Occasional assays for other metals produced generally low results except for a 10-centimetre sample assaying .04% Cu, 1.83% Pb, 1.27% Zn and 1.22 oz. Ag, and a 15 centimetre sample assaying .19% Cu, 2.75% Pb and 3.01 oz. Ag. The average molybdenite assay was .057% MoS₂. The main alaskite section averages .071% MoS₂. Individual assays adjusted to 5 metres range from .209 to .011% MoS₂. The first to third 20 samples and the last 14 samples average respectively .061, .053, .044 and .074% MoS₂.

- 2.3.2.3 Hole 78-3 at the east end of the granite intersected low grade material which averages .017% MoS₂. This hole on the basis of surface mapping was expected at its 70° inclination to enter the granite intrusive, but cut 3 segments of material more resembling the alaskite.
- 2.3.2.4 Percussion Holes M13 - M19 produced low assays. The best hole was M14 which from 3 to 88.4 metres averages .028% MoS₂. All cuttings were examined for scheelite with an ultraviolet lamp and by low power binocular microscope. Check assays for tungsten, tin, copper and silver produced very low results.
- 2.3.2.5 Storage Core and percussion hole cuttings together with assay rejects and pulps are stored at the warehouse of Granby in Smithers.

2.4 Conclusions

The percussion drilling and one diamond drill hole suggest a second zone somewhat similar to the Alaskite Zone, but with even lower grades.

The diamond drilling demonstrated the persistence of mineralization vertically below the Alaskite and Breccia Zones, but failed to discover any significant better grade or changes in rock type of alteration which would support revised hypotheses as to concentrations of mineralization.

It appears desirable in the exploration sense to deepen the holes, and casing was left in them and capped in case this can be done. The depths now attained are, however, such that a drastic increase in grade would be required for underground mining. The grade indicated to the depth drilled is much below economic levels and can only be considered a resource for the indefinite future. Erratic silver values would indicate a valuable by-product but also indicate potential metallurgical problems.

3. STATEMENT OF COSTSPersonnel

<u>Name</u>	<u>Position</u>	<u>Days Worked</u>	<u>Total Days</u>	<u>Day Rate</u>	<u>Total Paid</u>	
D.H. James	Exploration Manager	Nov. 24; Jan. 10-12	4	\$204	\$ 816.00	
W.J. Wilkinson	Exploration Geologist	Nov. 6-8(2.5), 18-30, Dec. 1-9, 14, 15 (22) Jan. 17($\frac{1}{2}$), Jan. 18, 19, 23 (3)	30	\$144	4,320.00	
L.B. Warren	Field Supervisor	Oct. 13, 16($\frac{1}{2}$), 17, 19, 20, 23, Nov. 7, 9, 14, 17 - 30, Dec. 1, 4, 6 ($\frac{1}{2}$), 7, 8, 11 ($\frac{1}{2}$), 12, 14 ($\frac{1}{2}$).	33	\$ 90	2,970.00	
Steve Carnie	Core Splitter	Dec. 4-8, 11-14	9	\$ 56	504.00	
Jan Then	Core Splitter	Dec. 1 (.32), Dec. 4-8, 11-14	9.32	\$ 56	522.00	
Total Wages					<u>\$9,132.00</u>	\$ 9,132.00

Food and Accommodation

W.J. Wilkinson:	Accommodation, Juniper Motel, Nov. 18 - Dec. 7/78 incl., 20 days @ \$21.00/day				\$ 420.00	
	Meals, Nov. 18 - Dec. 8, 21 days @ \$11.96/day				<u>251.17</u>	
					\$ 671.17	671.17

Transportation

W. J. Wilkinson:	Travel, Vancouver-Smithers & return (P.W.A.) Nov. 18, Dec. 8				\$ 146.00	
D. H. James:	Travel, Vancouver-Smithers (one way only), Nov. 21				73.00	
Granby	4 wheel drive pick-up, Oct. 13-23, Nov. 7-30, Dec. 1-15, 1 $\frac{1}{2}$ months @ \$400/month				600.00	
BowMac	4 wheel drive pick-up, Nov. 22 - Dec. 5				<u>262.51</u>	
					\$1,081.51	1,081.51

Contractor Charges

A. J. T. Thomas Diamond Drilling Ltd.

Overburden drilling, 64' @ 13.00/ft.	\$ 832.00
NQ Core drilling to 500', 946' @ 13.50/ft.	12,771.00
NQ Core drilling to 1,000', 1,000' @ 14.50/ft.	14,500.00
NQ Core drilling over 1,000', 392' @ 15.50/ft.	6,076.00
BQ Core drilling to 500', 490' @ 12.50/ft.	6,125.00
BQ Core drilling over 500', 67' @ 13.50/ft.	<u>904.50</u>

Sub-Total \$41,208.50

Manhours other than diamond drilling:	\$ 2,505.00
Drill hours other than diamond drilling	1,035.00
Mud Costs	973.61
Tractor Rental: 58 hours @ \$31.50	1,827.00
Core Box:	679.50
Testing Hole:	180.00
Casing and Shoes Left in Hole:	1,096.00
Material broke in hole:	958.76
Waterline	<u>162.00</u>

Total \$50,625.37

B. L. Spence Enterprises Ltd., 1,680 ft. (512 metres) percussion drilling at \$4.00/ft.	\$ 6,720.00
C. L. Spence Enterprises Ltd., 18 hours bulldozer rental at \$28.00/hour	504.00
D. Fink Sawmills Ltd., for D-8 Caterpillar with ripper 22 hrs. @ \$58.25/hr. Low bed and pilot car	\$ 1,281.50 <u>355.00</u>
	\$ 1,636.50

Assay Costs

Total Contractor Charges

\$59,485.87

Acme Analytical Laboratories Ltd.

327 - sample handling charges (oversize and wet samples) @ \$1.00	\$ 327.00
360 - total MoS ₂ assays @ \$4.75	1,710.00
36 - Cu assays ² @ \$3.00	108.00
23 - Ag assays @ \$3.00	69.00
14 - WO ₃ assays @ \$6.00	84.00
3 - Sn ₃ assays @ \$6.00	18.00
12 - Pb assays @ \$3.00	36.00
1 - F assay @ \$6.00	6.00
1 - Au assay @ \$3.00	3.00
3 - Zn assays @ \$3.00	<u>9.00</u>

Assay Cost \$ 2,370.00

Canadian Freightways - shipping of samples to assayer
and return to storage,

Invoice Nos. 438914 (\$40.35), 102110 (\$258.84),
440523 (\$201.32), 441418 (\$24.10),
440980 (\$172.56)

\$ 697.17

Invoice of Richard Goebels, re sample bags

105.00

Total shipping and assay costs

\$ 3,172.17

3,172.17

TOTAL COSTS

\$ 73,542.72

4. QUALIFICATIONS

The author is a registered Professional Engineer (Geology) in the Province of British Columbia. He holds the degrees of B.Sc. Mining Engineer, University of British Columbia, 1948 and M.Sc. Geology, Queen's University, 1950. He has been practicing his profession continuously since graduation, for the last 12 years with Granby Mining Corporation for which he is presently Manager, Minerals Exploration.

Diamond drilling was supervised in the field by Mr. W. J. Wilkinson who holds a B.Sc. degree in geology from the University of British Columbia and has been employed for 9 years by Granby Mining Corporation for which he is presently a senior exploration geologist. Mr. Wilkinson logged all core and cuttings.


Percussion drilling was supervised by Mr. L. B. Warren who has been employed in exploration by Granby Mining Corporation for 8 years and is presently senior field technician.

5. BIBLIOGRAPHY

Sutherland-Brown, A., 1965: in B. C. Report of Minister of Mines and Petroleum Resources, p. 75.

Tipper, H.W. and Richards, T.A., 1976: Jurassic Stratigraphy and History of North-Central British Columbia; Geol. Surv. Can. Bul. 270.

Wilkinson, W. J., 1977: Report on Percussion Drilling, Claims - Mineral Hill, A, B; Assessment Report 6152.



APPENDIX

LOGS OF DIAMOND DRILL
HOLES G78-1, G78-2, G78-3

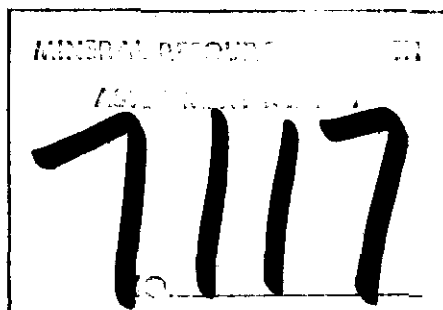
AND

PERCUSSION DRILL HOLES M13 TO M19

BY: W.J. Wilkinson, B.Sc.

To accompany Drilling Report, Mineral Hill, Mineral
Hill A & B Mineral Claims.

Author: D.H. James, P.Eng., Granby Mining Corporation



January 31, 1979

CORE DRILL LOG

PROPERTY Mineral Hill (Huber)

CLAIM Mineral Hill

LATITUDE	51 + 45' N	BEARING	-----	Hole No. G 78-1
DEPARTURE	24 + 10' W	SLOPE	-90°	PAGE 1/16
ELEVATION	2773' (845.2m)	LENGTH	377.3 metres	DATE STOPPED November 26, 1978

GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	% MoS ₂	AVG.	FROM TO	SHORT
0-	18.3 m	Overburden			%		195-	
18.3m-	19.5m	Deeply weathered, fragmented sub-bedrock; clay alteration, limonite staining.					20.7-	.95m
19.5m-	28.0m	Lapilli Tuff - strongly altered light to medium grey, mottled in red, green and dark grey. Very hard. Various sizes of angular clasts in aphanitic matrix. Alteration: clasts are strongly altered, varying in colour-light green (epidote), dark green (chlorite), red (hematite). Epidote-chlorite-hematite alteration also occurs as irregular streaks and patches, and on the (numerous) fractures. Silicification is well-developed, accounting for the hardness of the aphanitic matrix. Quartz veinlets 1mm-150mm thick occur on fractures oriented in several attitudes: -25°, -40°, -15° to core axis. Core is much weaker, and tends to break on fractures which are younger than the quartz veining, and minor offsets on quartz veins occur (e.g. at 26.5 m) where a 1-1.5 cm thick quartz veinlet at -25° (e.g. 65° dip) to core axis has been cut and offset 3 cm on a fracture	20.7-	32076	.027		22.9-	.04m
			26.0m				26.1-	
			26-28m	32077	.046		29.2	

LOGGED BY W.J. Wilkinson
W.J. Wilkinson

HOLE NO. G78-1

CORE DRILL LOG

 PROPERTY Mineral Hill

 CLAIM Mineral Hill

LATITUDE	BEARING	Hole No. G78-1
DEPARTURE	SLOPE	PAGE 2/16
ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	% FX	AVG.	FROM TO	SHORT
		at -35°. Pyrite and molybdenite occur in quartz veins, as discrete grains (and pyrite crystals), but most commonly as narrow, lace-like borders to the veins. Molybdenite occurs more prominently on dry fractures oriented parallel to the core axis, and at -20°, (and others), in thin coatings from 0.1m-1mm thick. Estimate MoS ₂ grade, 0.11%. Minor chalcopyrite locally (e.g. 22m).			MoS ₂			
28.0-	31.3m	Sheared, Brecciated, Altered Zone: light green-grey, soft to moderately hard; brecciation varies from total fragmenting of rock into 1mm-1cm clasts in a matrix of alteration minerals (chlorite-clay) to disruption in and adjoining fractures. Good quartz-pyrite molybdenite veining; MoS ₂ on fractures is slickensided (along with chlorite).	28.0-32.0	32078	.141		29.2-	
							32.3	----
							32.3-	----
							35.4	----
							35.4-	----
							38.6	----
31.3-	43.7	Tuff: strongly altered, hard to moderately soft. medium grey to light green-grey, clasts to 1mm in very fine matrix. Strongly fractured. Very prominent pale green bleached zone, adjacent to most fractures, 1 mm thick (much thicker near	32.0-37.0	32079	.034			
			37-42m	32080	.049			

 LOGGED BY W. J. Wilkinson

 HOLE NO. G78-1

CORE DRILL LOG

PROPERTY Mineral Hill

CLAIM Mineral Hill

LATITUDE	BEARING	Hole No. 678-1
DEPARTURE	SLOPE	PAGE 3/16
ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	MoS ₂ %	AVG.	FROM TO	SHORT
		fracture intersections). Quartz-pyrite-						
		molybdenite veins present, also MoS ₂ on fractures						
		(often slickensided). Talc-filled (1mm thick)						
		fractures cut moly veins and bleached fractures.						
		Occasional thick (1-6cm) milk-white quartz						
		vein occurs, oriented 50 ⁰ -80 ⁰ off core axis.						
		These veins contain amorphous and crystalline					38.6-	
		orange feldspar grains, extending inwards from					41.8	----
		vein borders. Also quartz clasts with very fine					41.8-	
		ribbons (of MoS ₂ ?). Little calcite on fractures					44.8	----
		Contact alteration zone?					44.8-	
43.7-44.5		-sheared, brecciated, with intense	42-				47.9	----
		alteration (quartz-feldspar-chlorite), intense	47m	32081	.073		47.9-	
		bleaching.					50.9	----
							50.9-	
4.5m-101.4		Hornfels? - altered tuff-dark grey, very hard,	47m-				54.0	----
		aphanitic rock with ash-sized grey clasts.	52m	32082	.038		54.0-	
		Strongly magnetic. Seems to be intensely	52-				57.0	----
		altered matrix-quartz-epidote-biotite-magnetite.	57m	32083	.032		59.5	----
		Patches of intense epidote alteration. Most	62m	32084	.029		59.5-	
		fractures very tight. Reduced quartz veining	62-				62.5	----
		and sulphides. Thin calcite selvage on	67m	32085	.035		62.5-	
		fractures, minor hematite. 46.0-46.9: sheared	67-				65.6	----
		and brecciated altered zone, strong chlorite &	72m	32086	.039		65.6-	
							68.8	----
							68.8-	
							70.5	----
							70.5-	
							72.3	.1m
							72.3-	
							75.3	----

LOGGED BY: W.J. Wilkinson

HOLE NO. 678-1

CORE DRILL LOG

PROPERTY Mineral Hill

CLAIM Mineral Hill

		Hole No. G78-1
LATITUDE	BEARING	
DEPARTURE	SLOPE	PAGE 4/16
ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG No.	MoS ₂ XXX2	AVG.	FROM TO	SHORT
		talc alter'n, vein quartz, little calcite.	82-87m	32089	.034		75.3-78.4	----
		Crystalline pyrite, MoS ₂ , minor chalcopyrite	87-92m	32090	.169		78.4-81.4	----
		throughout. Not magnetic.					81.4-84.5	----
		55m: 1-5 cm diameter clasts?, oval to sub					84.5-87.5	----
		rounded, composition ally banded with alteration					87.5-90.6	----
		minerals. Melted lapilli? 64.4-64.7m: calcite					90.6-93.6	----
		filling in bxrock. Talc on shear surface 85.5m:						
		3mm thick MoS ₂ coating on fracture at 30° off						
		core axis (i.e. dip - 60°). Beyond 85.5m,						
		noticeable increase in quartz veins with MoS ₂						
		(pyrite), and MoS ₂ onfrs.						
		Alteration also increasing (85.5m on) - pink	92.07m	32091	.064		93.6-96.7	----
		feldspar haloes into rock from fractures and	97-102m	32092	.044		96.7-99.7	----
		quartz veinlets with pale grey-green "bleaching"					99.7-102.8	----
		effect extending beyond the feldspar. Epidote					102.8-105.8	----
		patches. Good sulphides - py, MoS ₂ .					105.8-108.9	----
		97.2-97.5 - white quartz vein; few small grains					108.9-111.9	----
		MoS ₂ and chalcopyrite, larger (1 cm) angular		*first fluorite			111.9-115.0	----
		grains pyrite. Semi-crystalline patch fluorite						
		(2 cm x 4 cm) in centre - translucent, pale						
		green tint, H4-4 1/2; non-fluorescent. Specimen.						
101.4-103.1		Flow?: dark grey, aphanitic to very fine -	102-107m	32093	.048			

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HOLE NO. G78-1

CORE DRILL LOG

PROPERTY Mineral Hill

CLAIM Mineral Hill

LATITUDE	BEARING	Hole No. 678-1
DEPARTURE	SLOPE	PAGE 5/16
ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	% MoS ₂ XXXX	AVG.	FROM TO	SHORT
		grained matrix, with very distinctive spotting of subangular to sub-rounded orange & white grains, average dimension about 1cm, which consist of zoned orange and grey feldspar, some sericite, epidote,. Amygdule filling? Matrix has very fine biotite. Strongly magnetic.						
		8 cm long rounded (cobble?) in rock consists of quartz, biotite, and is cut by mineralized qtz vein. Upper contact sharp, 40° off core axis (-50° dip). Lower contact appears to be gradational, but obscured by quartz veins and alteration effects. Specimen taken at 101.9m.						
103.1-170.0		Tuffs (in part waterlain?): aphanitic to fine-grained (clasts); dark to light grey; compositional banding visible perpendicular to core axis. Strongly magnetic. 108.0-108.9: brecciated altered zone, strongly altered with chlorite, calcite, feldspars; qtz. veining. Looks like fair MoS ₂ . 122.4-162.1: patchy epidote alteration of matrix and some large (2-3cm) clasts (rounded to subangular). Veinlets are quartz-orange feldspars-epidote-calcite, with						
			107-112m	32094	.029		115-118.0	----
			112-117m	32095	.032		118-121.1	----
			117-122m	32096	.044		121.1-123.8	----
			122-127m	32097	.109		123.8-126.9	----
			127-129m	32098	.010		126.9-129.9	----
							129.9-133.0	----

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HOLE NO. 678-1

CORE DRILL LOG

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		Hole No. 678-1
LATITUDE	BEARING	
DEPARTURE	SLOPE	PAGE 6/16
ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	% Cu % Mo % S	AVG.	FROM TO	SHORT
		high proportion of sulphides.			2		129.9-	
		(pyrite-chalcopyrite-molybdenite)					133.0-	-----
		128.5-128.8: Welded Tuff: 1/2-1cm long, ovoid,					133.0-	-----
		to flattend ellipsoid (clasts), compositionally					136.0-	-----
		banded light grey to black (biotite)-deformed					136.0-	-----
		lapilli. Magnetic.					139.4-	-----
		126.8-132.3: epidote-calcite alteration more					139.4-	-----
		pervasive, and is intense in vicinity of contacts					142.4-	-----
		between various tuff beds, which here are dipping					142.4-	-----
		at -30°. Generally occurs in top 10 cm of bed,					145.5-	-----
		with only very weak, thin extension into over-					145.5-	-----
		lying bed. Magnetic. 129.2-129.6 - series of					148.5-	-----
		quartz veins at -30° to core axis. Very good					148.5-	-----
		pyrite-chalcopyrite-molybdenite mineralization.					151.3-	-----
		130.7-132.3: Zone of intense clay-chlorite	129-				151.3-	-----
		alteration, with 2-3cm quartz vein sub-parallel	132m	32099*	.226	cu12	154.3-	-----
		to core axis. Good moly in vein, on fractures,	132-					
		and in clay matrix.	137m	32100	.042			
		132.3-170.0: tuffs-weak to moderate alteration,	137-					
		visible contacts +60° to core axis, fair number	142m	32101	.024			
		quartz veins with sulphides, unrelated to bedding.	142-					
		Red hematite coating on occasional fractures.	147m	32102	.061			

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HOLE NO. 678-1

CORE DRILL LOG

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	LATITUDE	BEARING	Hole No.	G78-1
	DEPARTURE	SLOPE	PAGE	7/16
	ELEVATION	LENGTH	DATE STOPPED	

GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	MoS ₂	AVG.	FROM TO	SHORT
		148.7m: lapilli tuff/ash tuff contact 75° off	147-		MoS ₂		154.3-	
		core axis. 159.3m: tuff specimen taken.	152m	32103	.068		157.4	----
			152-				157.4-	
			157m	32104	.071		160.4	----
		162.1-170.0 Brecciated, Altered Zone: strongly	157-		Prob.		160.4-	
		fractured to intensely brecciated, with pervasive	162m	32105	.091		163.5	----
		talch-chlorite-quartz-calcite alteration. Good	162-				163.5-	
			167m	32106	.050		166.5	----
			167-				166.5-	
			170m	32107	.038		169.6	----
			170-				169.6-	
			175m	32108	.019		172.6	----
			175-				172.6-	
			178.4m	32109	.006		176.0	----
170.0-197.3		Hornfused Tuffs: medium to dark grey, very	178.4-				176.0-	
		hard; aphanitic recrystallized matrix, clasts	181.0m	32110	.262		178.7	----
		still visible. Moderate amount of fracturing;					178.7-	.08
		bleaching-chlorite-feldspar-calcite alteration					180.3	groun
		-along fractures, sometimes 10cm patches.					180.3-	
		Magnetic. Very similar to preceeding tuffs.					182.1	.45
		Quartz veins with MoS ₂ , cp, py of several					182.1-	
		orientations, one clear cross-cutting relation-					185.1	----
		ship at 174.5:- Larger (3.5cm) younger vein,						
		well mineralized with Mly, at 60° to core axis,						
		cuts .4cm white/orange vein with Mly-py-cp						
		mainly on borders, 25° off core axis (opposing						
		dips). Buff-coloured, bx material in younger						
		vein-assay W03.						
		178.4-181: zone of strong quartz veining with						

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HOLE NO.....G78-1.....

CORE DRILL LOG

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LATITUDE	BEARING	Hole No. G78-1
DEPARTURE	SLOPE	PAGE 8/16
ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG No.	MoS ₂ % Cu	AVG.	FROM TO	SHORT
		pyrite chalcopryrite, MoS ₂ . Two distinct vein sets with opposing dips; relatively barren set (with orange feldspar crystals) at 50° to core axis cuts relatively large (3-5cm) veins with narrow ribbons of sulphides, at 25° to core axis, e.g. 178.5m.						
		Some ground core in interval, considerable MoS ₂	181-184 m	32111	.031		185.1-188.2	----
		lost from ground quartz vein at (180.3-180.5)	184-189m	32112	.206	cu.14	188.2-191.2	----
		Both vein sets contain the distinctive orange feldspar crystals. 183.4-186.0: Altered Zone- strongly fractured brecciated in part. Talc-chlorite-calcite alteration. Quartz veins & fracture-filling, with py-cp-MoS ₂ . Locally very good MoS ₂ e.g. 185.2m, 1.5cm, thick seam Mly-chlorite on fracture. 195.5, 195.9 - near massive py with cp in veins 1.5, 2.5 cm thick. 196.5 - 197.5 - 50% vein quartz.	189-194m	32113	.015		191.2-194.3	----
		197.1: 5 cm vein has large orange feldspar crystals 2 cm long (albite?) projecting from contacts.	194-197.3m	32114	.034	cu.09	194.3-197.3	----
		Basalt (?): dark grey-green, hard, magnetic.					197.3-200.4	----
		Near-dense matrix of green-black pyroxene.	197.3-200.6	32115	.014	cu.13	200.4-203.4	----
							203.4-209.5	----
							209.5-212.6	.1

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HOLE NO. G78-1

CORE DRILL LOG

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LATITUDE	BEARING	Hole No. G78-1
DEPARTURE	SLOPE	PAGE 9/16
ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	%Cu ^{MoS₂}	AVG.	FROM TO	SHORT
		Spotted with what appear to be round amygdules filled with calcite and (quartz? - hardness 7 or better). Very finely disseminated pyrite, chalcopyrite. Assay Cu, MoS ₂ . Specimen at 199.4m.	200.6-205m	32116	.171	cu.13 Ag.41		
200.6-210		Tuffs: extremely hard, tough (hornfelsed), bleached and altered, as described (170-197.3). Quartz veining, fracturing reduced; mineralized with MoS ₂ -cp-py where present. Dark grey-black intervals, aphanitic & massive, may be hornfelsed sediments.	205-210m	32117	.080			
210-212		Brecciated zone: strongly brecciated and bleached. Voids filled with talc, calcite. Relatively minor quartz veining, chloritization.	210-212m	32118	.040		212.6-215.6 215.6-218.7 218.7-221.7	---- .1 ----
212-220		Tuffs-as 200-210, etc. (no dark grey hornfelsed (sediments?)). Short intervals intensely fractured, clay-chlorite-calcite altered. Some quartz veining with sulphides.	212-217m 217-220m	32119 32120	.085 .037		221.7-224.8 224.8-227.8	---- ----
220-221.5		Vein Zone: altered rock and quartz veins, including section (220.4-221) consisting of white vein quartz fragments in a dark grey aphanitic siliceous matrix which seems rich in dark grey sulphides.	220-221.5m	32121	.375	cu.09 Ag.08 WO ₃ .01	227.8-230.9 230.9-233.9 233.9-237 237-240 240-243.1	---- ---- --- ---- ----

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HOLE NO.....G78-1.....

CORE DRILL LOG

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LATITUDE	BEARING	Hole No. <u>G78-1</u>
DEPARTURE	SLOPE	PAGE <u>10/16</u>
ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	XXX ^{MoS₂}	AVG.	FROM TO	SHORT
		Assay MoS ₂ , Cu, W, Ag					243.1	----
							246.1	----
221.5	265	Tuffs-as previous, light to dark grey-green, hard. Bleached and altered (epidote-chlorite). Fragmental volcanic textures visible on core surface, but fresh break looks like typical aphanitic hornfels.	221.5-225m	32122	.061		246.1	----
			225-230m	32123	.047		249.2	----
			230-235m	32124	.088		249.2	----
			235-240m	32125	.042		252.2	----
							255.3	----
							255.3	----
							258.3	----
		Bleaching effect diminishes downward, minor effect below 226m to 242m. Moderate quartz veining with sulphides.	240-242.2m	32126	.041			
		242.2-243.4: Breccia & alteration zone (intense bleaching-chlorite-calcite-(feldspar?), and quartz veining with pink feldspar, mly, (cp)py.	242.2-243.4m	32127	.570	cu.02 Ag.07		
		Assay MoS ₂ , Cu, Ag. 243.4-254 - only minor bleaching, fair proportion mineralized quartz veins-243.4-250-Assay MoS ₂ Cu	242.4-245m	32128	.032	cu.01		
			245-250m	32129	.068	cu.04		
		254-260.5: moderate to intense bleaching, good quartz veining, (also feldspar) with mly, py, dark grey aphanitic sulphide (maybe tetrahedrite?). 250-255-assay cu, Ag, W, Mo;	250-255m	32130	.104	cu.02	258.3	-----
			255-260m	32131	.022	cu.02 Ag.15	261.4	----
			260-265m	32132	.157	W _{0.3} Tr cu.06	261.4	.05
							264.4	----
							267.5	----
							270.5	----
		255-260 ditto						
		260.5-262.8-dust tuff? distinctive because clasts (1-2mm in size) predominate over matrix (reverse					270.5	----
							273.6	----
							273.6	----
							276.0	----

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 HOLE NO. G78-1

CORE DRILL LOG

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LATITUDE	BEARING	Hole No. <u>G78-1</u>
DEPARTURE	SLOPE	PAGE <u>11/16</u>
ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG No.	XXXXX	AVG.	FROM TO	SHORT
		of normal situation); intense alteration-bleaching, silicification, chloritization; good pyrite, chalcopyrite, molybdenite mineralization, well disseminated into rock from quartz veins & fractures. Assay MoS ₂ , Cu. 262.8-265 - Strongly altered tuffs, good veins with sulphides, little fluorite - 264.1.			MoS ₂			
265-271		Sediments: dark grey to black, aphanitic, extremely hard, argillitic-(Hornfels?) Light grey-green bleaching effect on fractures and irregularly permeating the rock (chlorite-albite?). Good molybdenite-(to 5% in quartz), chalcopyrite, pyrite mineralization as ribbons (very thin, lacy) in quartz veins 1-3cm thick, 10° and 35° off core axis, and in fine veinlets, fractures, local bx zones. Cut by younger, less well mineralized quartz veins at 70°, 90° to core axis. Considerable purple fluorite, predominantly in younger veins, locally in large sub-crystalline patches, i.e. 267.75m.	265-270m	32133	.115	cu.04		
271-281.4		Altered tuffs, as previously described from 221.5 on. Short intervals appear to be	270-275m	32134	.128	cu.09 Wo3Tr		
			275-280m	32135	.064	cu.05 Wo3Tr		

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 HOLE NO. G78-1

CORE DRILL LOG

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	LATITUDE	BEARING	Hole No. G78-1
	DEPARTURE	SLOPE	PAGE 12/16
	ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG No.	% Cu	AVG.	FROM TO	SHORT
		hornfelsed sediments. Magnetic.			MoS ₂			
		Good mineralization in quartz veins (as 265-271);					282.1-	
		large (5mm) subhedral fluorite crystals Assay.					285.2	.2
		Cu, W-270-280 - 275m on: reduction in frequency					285.2-	
		and size of mineralized quartz veins. Local talc-					288.2	----
		-chlorite alteration related to minor shears,					288.2-	
		thin hematite coating in fractures, sometimes					291.3	----
		with MoS ₂ .					291.3-	
							294.3	----
							294.3-	
							294.9	----
							294.9-	
							298.0	----
281.4-	285.2	Hornfelsed sediments? - aphanitic,	Cu Mo 280- 285m	32136	.061	cu .04	298.0-	
		black to grey-green, strongly fractured,					301.0	.05
		bleached and altered-calcite-talc-chlorite-					301-	
		(feldspar). Magnetic. Quartz veins with					303.8	.05
		subhedral orange feldspars and buff (siderite?);						
		sulphides as (275 on)						
285.2-	299.5	Altered tuffs - medium grey;	285- 290m	32137	.055	cu.04 Pb.01-Ag.07		
		same alteration as (281.4-285.2), but more	290- 295m	32138	.254	cu.11-Ag.25		
		pervasive. 285.5m: 8cm quartz-calcite vein						
		with grain fine crystalline galena. Quartz						
		vein at 287.3: 5mm anhedral clast, tetrahedrite						
		290-294.3: Large blue-grey quartz						
		veins sub-parallel to core axis with relatively						
		coarse (to 1mm thick) ribbons (galena-soft, cleavage						

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HOLE NO. G78-1

CORE DRILL LOG

 PROPERTY Mineral Hill

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	LATITUDE	BEARING	Hole No. <u>G78-1</u>
	DEPARTURE	SLOPE	PAGE <u>13/16</u>
	ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG No.	XXX XXX	AVG.	FROM TO	SHORT
		flakes; MoS ₂ -(?) soft parallel to contacts.			MoS ₂			
		Veins not complete in core; up to 4 cm thickness visible. Cut by larger(?) (5cm -to 50cm (291-291.5m)) white quartz veins, relatively barren, with large (up to 1-2cm) sub-angular grains pyrite, chalcopyrite, tetrahedrite (sulphide grain size roughly proportional to thickness of vein), 80°, 90°, 45° off core axis.						
295.6-299.5		Good molybdenite in quartz veins 40°-45° off core axis; larger milkwhite quartz veins perpendicular to core axis have molybdenite on contacts, with pyrite, chalcopyrite; veins and Mo much reduced below 299.5m. 296.45: Sample taken (tuff)	295-300m	MoS ₂ , Cu 32139	.195	cu.07	303.8-306.8 306.8-309.9 309.9-313.1	---- ---- -----
299.5m-322.0		Sediments, hornfelsed-as described previously; dark grey, hard, aphanitic; alteration as bleaching emanating from fractures, (relatively weak effect-talc seams, calcite, albite?, chlorite), mineralized quartz veins much reduced only relatively weakly mineralized. Magnetic. Short intervals with clastic (tuff?) texture, much more strongly altered. 315.5-316 - Intense	300-305m 305-310m 310-315m 315-320m	32140 32141 32142 32143	.059 .034 .052 .090		316-319 319-322.1 322.1-325.1 325.1-328.5 328.5-331.5	----- ---- ---- ---- -----

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 HOLE NO. G78-1

CORE DRILL LOG

 PROPERTY Mineral Hill

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	LATITUDE	BEARING	Hole No. G78-1
	DEPARTURE	SLOPE	PAGE 14/16
	ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES				RECOVERY	
FROM	TO	DESCRIPTION	FROM TO	TAG No.	AVG.	FROM TO	SHORT
		feldspar-chlorite (sericite?) alteration on vein walls.					
322-331		Hornfels? : light-dark grey, green, colour-banded, hard, tough. Strongly altered; - quartz	320-325m	32144	.055		
		-feldspar-chlorite-(talc); (calcite on fractures, intensely altered zones). Maybe a hornfels. Aphanitic recrystallized felted biotite visible (microscope) in dark bands. Dark green streaks and patches of mafics-mainly chlorite, (magnetite). Dark layers magnetic. Light layers, streaks-quartz, feldspar. Occasional good (mineralized) quartz vein (spaced 1-2m). Banding dip slightly variable, 60°-80° off c.a. Specimens: 324.4, 329.5. Chlorite-talc-	325-330m	32145	.032		
		calcite alteration increases gradually downward toward shear zone, rock increasingly soft and crumbly.					331.5-334.6
331-342.1		Breccia and Shear Zone: strongly chlorite-clay	330-335m	32146	.097		337.6-340.7
		-calcite altered, light grey-green, soft and crumbly where original rock intact. Some sections slickensided, 0-5° off c.a., some with brecciated vein quartz and rock (angular to sub-rounded,	335-340m	32147	.073		340.7-343.7
							343.7-346.8
							346.8-349.8

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 HOLE NO. G78-1

CORE DRILL LOG

PROPERTY Mineral Hill	CLAIM Mineral Hill	Hole No. G78-1
LATITUDE	BEARING	PAGE 15/16
DEPARTURE	SLOPE	DATE STOPPED
ELEVATION	LENGTH	

GEOLOGY		SAMPLER				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG No.	MoS ₂ XXX	Avg.	FROM TO	SHORT
		pebble and cobble size - see sample from 335.9).					349.8-	
		Bx zones very hard, cemented with light grey,					352.9-	.05
		dense, hard chalcedonic quartz. Very fine-					352.9-	----
		grained lacy molybdenite in quartz veins					355.9-	
		(veins are disrupted by breccia). Py; not					359	----
		magnetic in zone. 340.8 on: Bx, matrix					359-	----
		chalcedony and calcite. Rock resembles "Quartz					362	----
		Breccia" of nearby surface exposures.					362-	----
							365.1	----
342.1-	377.3	Hornfelsed Sediment: Bleached and altered,	340-	32148	.059		365.1-	----
		light and dark green, fine banded rock (45° to	345-	32149	.035		368.1-	----
		core axis) with thin bx layers (1-2cm thick)	350-	32150	.047		371.2-	----
		parallel to banding and on fractures. Very hard	355-	32151	.026		374.2-	----
		to moderately soft, aphanitic on fresh break.	360-				377	----
		Chlorite-talc-calcite alteration.	365m	32152	.040			
		343.9-7cm. quartz vein with subhedral feldspar	370m	32153	.047			
		crystals in vein-quartz matrix.	375m	32154	.027			
		347.5 - see specimen - similar material from bx	375-	32155	.030			
		zone, euhedral quartz, subhedral white and	377.3m					
		orange felds crystals 351-360.2. Fairly good						
		molybdenite (py) quartz veining, parallel to						
		banding (40° off c.a.) and sub-parallel to c.a.					371.2-	
		Alteration more intense. Light apple-green					374.2	----
							374.2-	----
							377.3	----

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HOLE NO. G78-1

CORE DRILL LOG

PROPERTY Mineral Hill

CLAIM Mineral Hill

LATITUDE	BEARING	Hole No. <u>G78-1</u>
DEPARTURE	SLOPE	PAGE <u>16/16</u>
ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES				RECOVERY	
FROM	TO	DESCRIPTION	FROM TO	TAG No.	AVG.	FROM TO	SHORT
		chloritic alteration locally. 364.5: specimen:					
		8cm quartz-eye-feldspar rhyolite (sill?) 50° to					
		c.a. Extremely hard, aphanitic hornfels in					
		interval 364-365.2. 359-359.5, 365.7-366.8:					
		distinctive "salt pepper" texture suggests					
		altered tuffs.					
		366.8-377.3: extremely hard, fresh hornfels					
		with only minor alteration, some molybdenite-					
		quartz veins .					
		371.3-371.6: sillas at 364.5, cut by					
		molybdenite-quartz veins.					
		377.3m: End of Hole.					
		Uncorrected Results, HF Acid Dip Tests:					
		321.9m - 82 1/2°					
		367.9m - 86°					

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HOLE NO. G78-1

CORE DRILL LOG

PROPERTY Mineral Hill (Huber)

CLAIM Mineral Hill

LATITUDE	19 + 90° N	BEARING	-----	Hole No.	G78-2
DEPARTURE	46 + 95' W	SLOPE	- 90°	PAGE	1/15
ELEVATION	2,891'; 881.2m	LENGTH	352.3m	DATE STOPPED	December 1, 1978

GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	MoS ₂ %	AVG.	FROM TO	SHORT
0-3.6		Overburden; Casing to 3 metres					3.6- 5.2	-----
3.6-22.6		Hornfels: Altered sediments and tuffs:	3.6- 5m	32157	.071		5.2- 8.2	-----
		Magnetic, mostly aphanitic, dark grey-	5-10m	32158	.061	WO ₃ .04	8.2- 11.3	-----
		brown and grey-green, very hard. Short	10- 15m	32159	.030		11.3- 14.3	-----
		intervals (20cm) medium-grained,						
		tuffaceous, contact 60° to c.a. (i.e.	15- 20m	32160	.035		14.3- 17.4	-----
		30° dip). Moderately to strongly	20- 22.6m	32161	.044		17.4- 20.4	-----
		fractured: a - weak, irregular fracturing					20.4- 23.5	-----
		parallel to c.a., with .05mm-1mm quartz					23.5- 26.5	-----
		-calcite-pyrite veining, cutting veins						
		on less steep fractures, b - fairly well					26.5- 29.6	-----
		developed at 30° to core axis, with						
		pyrite-molybdenite in quartz						
		veins to 2 cm; cut narrower fractures						
		(described next), c - Fairly well-developed						
		older fracture set at -25° to c.a.						
		(dip opposite to cross-cutting veins						
		above) with slightly more sulphides						
		{pyrite-chalcopyrite-molybdenite) - many						
		random fracture directions, healed with						
		quartz veining. Alteration: pervasive						
		re-crystallization to aphanitic hornfels						

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HOLE NO. G78-2

CORE DRILL LOG

PROPERTY Mineral Hill (Huber)

CLAIM Mineral Hill

	LATITUDE	BEARING	Hole No. <u>G78-2</u>
	DEPARTURE	SLOPE	PAGE <u>2/15</u>
	ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG No.	% XXX	AVG.	FROM TO	SHORT
		(biotite, garnet(?)); weak to moderate bleaching effect emanating from fractures (chlorite-(albite?)); strongly silicified. Mineralization: weak to moderate (1%) pyrite and minor magnetic pyrrhotite, little molybdenite, traces chalcopyrite.			MoS ₂			
		5.5-5.7m: quartz-pyrite (pyrrhotite-chalcopyrite) vein with very fine crystals					29.6-32.6	.05
		fluorite(?) (H4, bright blue fluorescence square crystal outline).					32.6-35.7	----
22.6-23.7		Alaskite: light grey, hard, fresh, medium-grained feldspar-quartz-biotite (5%) rock. Disseminated pyrite, pyrrhotite, little MoS ₂ ; chalcopyrite in occasional chloritized mafic grain.	22.6-23.7m	32162	.066		35.7-38.7	----
		23.7-27.2m	32163	.276				
		27.2-29.5m	32164	.077				
		29.5-32	32165	.022				
		23.7, 22.6-contact at 65° to c.a. Biotite sericitized; very weak chlorite alteration. Relatively weak quartz veining with pyrite-pyrrhotite-molybdenite (cp).						
23.7-27.2		Hornfels: same as (3.6-22.6m). 27.2 - 65° to c.a.						

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HOLE NO. G78-2

CORE DRILL LOG

PROPERTY Mineral Hill (Huber)

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LATITUDE	BEARING	Hole No. 678-2
DEPARTURE	SLOPE	PAGE 3/15
ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG No.	XXX MoS ₂	AVG.	FROM TO	SHORT
27.2-28		Alaskite: same as (22.6-23.7m), slightly more MoS ₂ .						
28-29.1		Hornfels: 29.1 - contact at 60° to c.a.						
29.1-29.5		Alaskite: 29.5-contact irregular						
29.5-31		Hornfels: no change						
31-31.2		Alaskite: 31 - contact at 30° to c.a;						
		31.2 - irregular						
31.2-32.0		Hornfels: 32 - contact at 50° to c.a.						
32.0-32.9		Alaskite: clay -talc alteration of feldspars	32-35m	32166	.068			
32.9-33.7		Hornfels: 33.7 - Irregular contact, about 90° to c.a. Hornfels fragment floated in alaskite near contact.						
33.7-71.6		Alaskite: Same as previously described, but random spotting of intensely kaolinized feldspars, strong talc-kaolin alteration on some fractures.	35-40m	32167	.103			
			40-45m	32168	.118			
			45-50m	32169	.056			
			50-55m	32170	.079		38.7-	----
			55-60m	32171	.052		41.8-	----
			60-65m	32172	.056		44.8-	----
		Also dissemp py, po. Prominent fracturing					47.9-	----
		45° to c.a., 33.7-71.6	65-70m	32173	.121		47.9-	----
							50.9	----

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CORE DRILL LOG

PROPERTY Mineral Hill (Huber)

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	LATITUDE	BEARING	Hole No. 678-2
	DEPARTURE	SLOPE	PAGE 4/15
	ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	% CH MoS ₂	AVG.	FROM TO	SHORT
		Also locally, near-vertical fractures with quartz veining (46m). 62.1-62.5: hornfels - stoped block?			XXXX MoS ₂		50.9-54	-----
		Very gradual increase downwards in chloritization - rock at 63m has pronounced greenish tint. 66.5-68m: strongly fractured, crackled, locally brecciated; very strong, talc-kaolin alteration, calcite veinlet. Good MoS ₂ on fractures and in bx interstices. 68-71.6: chloritic alteration much weaker than above bx zone.					54-57	----
							57-60.1	----
							60.1-63.1	-----
							63.1-66.2	----
							66.2-69.2	.05
							69.2-72.3	----
							72.3-75.3	----
71.6-73		Hornfels: fresh, hard, unaltered.	70-75m	32174	.038		75.3-78.4	----
		Weakly fractured. Mineralized quartz veining on intrusive contact, at 45° to core axis (71.6). Lower contact irregular, intrusive penetrates hornfels .3m.					78.4-81.4	----
73-75.3		Alaskite: as described previously.						
75.3-83.2		Hornfels: light and darker grey, hard and soft, Compositional banding at 90° to c.a. Moderate fracturing. Locally	75-80m	32175	.030			

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HOLE NO. 678-2

CORE DRILL LOG

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		Hole No. G78-2
LATITUDE	BEARING	
DEPARTURE	SLOPE	PAGE 5/15
ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	% CU	AVG.	FROM TO	SHORT
		intense kaolin-talc alteration; highly silicified.						
83.2	84.8	Alaskite: as previously described. Not strongly altered. Fair MoS ₂ with pyrite -pyrrhotite dissem. and in veins, fractures. 83.2-contact at 45° to c.a. 84.8 - contact at 90° to c.a.	80-85m	32176	.106		81.4-84.5	----
							84.5-87.5	----
							87.5-90.6	----
							90.6-93.6	----
							93.6-96.7	----
84.8	90.5	Hornfels: similar to (75.3-83.2m) but no strongly altered, soft intervals	85-90m	32177	.122		96.7-99.7	-----
							99.7-102.8	-----
90.5	92.3	Alaskite: As (83.2-84.8)	90-95m	32178	.042		102.8-	-----
							105.8	-----
92.3	93.8	Spotted Hornfels: dark grey-brown, aphanitic, prominently spotted with 1cm subhedral to rounded light grey-white grains andalusite (?) -see specimen, from 93.4m. Much-reduced fracturing, veining in the rock. 92.3 - contact at 45° to c.a.; 93.8 - 30° to c.a.						
93.8	97.3	Alaskite: as previous Contact at 97.3, 60° to c.a.	95-100	32179	.116			
97.3	98.3	Hornfels: similar to (84.8-90.5)						
98.3	100.5	Alaskite: as previous 98.3 contact at 35° to c.a.; 1 cm near-						

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HOLE NO. G78-2

CORE DRILL LOG

PROPERTY Mineral Hill (Huber)

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LATITUDE	BEARING	Hole No. G78-2
DEPARTURE	SLOPE	PAGE 6/15
ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	MoS ₂ XXXX	AVG.	FROM TO	SHORT
		massive pyrrhotite.						
		100.5: contact at 60° to c.a.						
100.5-147.8		Hornfels: same as preceding intervals,	100-105m	32180	.073		105.8-108.9	----
		particularly (3.6-22.6). Total sulphides ~ 3%,	cu, MoS ₂ 105-110m	32181	.033		108.9-111.9	-----
		mostly po. Extensive quartz veining, molybdenite lacings.	110-115m	32182	.019		111.9-115	----
		105.4 - 7 cm, near-massive po (specimen)	115-120m	32183	.058		115-118	-----
		129.9 - 4 cm thick alaskite dykelet, hornfels	120-125m	32184	.058	cu.02	118-121.1	-----
		fragments within	cu, MoS ₂ 125-130	32185	.017		121.1-124.1	-----
		126-135 fracturing, alteration more intense.	130-135m	32186	.037		124.1-127.2	-----
		More molybdenite on fractures and in blue-grey	135-140m	32187	.035		127.2-130.2	-----
		quartz veins						
		142-147.8 ditto. Moderate talc-calcite-	W, F, Mo 140-145m	32188	.042		130.2-133.3	-----
		chlorite alteration, mostly confined to fractures					133.3-136.3	----
		Quartz veins frequent, very bluish-grey due to					136.3-139.4	-----
		fine molybdenite, and/or other sulphides.					139.4-142.0	-----
		Bright blue fluorescence in very fine-grains.				Wo3 0.01% F 0.20%		
		-assay W, F.	W, F, Mo 145-150m	32189	.054		142.0-145	-----
147.8-		Contact at 60° to core axis.					145-148.2	----
147.8-151		Hornfels-tuff?: Very hard to soft (alteration)	150-155m	32190	.024			
		grey-brown, conchoidal fracture, aphanitic.						
		Cut surface show fine-grained clastic texture.						

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CORE DRILL LOG

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LATITUDE	BEARING	Hole No. 678-2
DEPARTURE	SLOPE	PAGE 7/15
ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	% CU	AVG.	FROM TO	SHORT
		Alteration: grey-green chlorite (albite?)						
		bleaching, emanating from fractures, as in						
		preceding sections; talc-carbonate on open						
		fractures. Quartz veining slightly reduced						
		from that in interval (126-147.8); blue-						
		grey molybdenite-quartz veins most prevalent						
		at 60° to c.a., other semi-random orientations.						
		150.7: 6 cm. bx quartz vein, healed with					148.2-	
		abundant calcite. Large grains pyrite-					151.3	----
		pyrrhotite-chalcopyrite in quartz, only trace					151.3-	
		molybdenite.					154.5	-----
							154.5-	
							157.5	----
151-153		Shear Zone: rock strongly to intensely					157.5-	
		sheared, crumbly. Strong chlorite-talc-calcite					160.6	----
		alteration, irregular (broken) quartz veining					160.6-	
		with pyrite-pyrrhotite-chalcopyrite-molybdenite.					163.8	----
							163.8-	
							166.8	-----
							166.8-	
							169.9	----
153-167.5		Hornfels-tuff? - same as (147.8-151)	155-				169.9-	
			160m	32191	.030		172.9	----
		153-163: Relatively thick (4-8cm) quartz veins	160-					
		with pyrite, pyrrhotite, little chalcopyrite,	165m	32192	.030			
		with and without minor amount of MoS ₂ . Thin						
		molybdenite quartz veinlets (< 1cm) rather						
		abundant, on fractures of many orientations,						
		mostly 30°-70° to c.a. 167.5m-contact at 65°						

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CORE DRILL LOG

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LATITUDE	BEARING	Hole No. 678-2
DEPARTURE	SLOPE	PAGE 8/15
ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	% MoS ₂	AVG.	FROM TO	SHORT
		to c.a. 166.9 on: 2-4cm quartz veins, about 3 cm separation, at 15° to c.a., run down core. Cut off on minor fault surface (chloritic alteration slickensided) at 167.4m. Well mineralized - pyrrhotite-pyrite-molybdenite-chalcopyrite. Cut older, small veins.			XXXXX MoS ₂			
167.5-169.7		Alaskite: Light grey-buff, medium-grained, hard. Greenish tint due to chloritic alteration. Quartz veining (as 166.9+), sub-parallel to c.a. more irregular. Numerous fractures cutting veining at 70° to c.a., several with thick coating MoS ₂ . 169.7m-contact at 60° to c.a.	165-170m	32193	.209		172.9-176-176-179-179-	-----
169.7-225.5		Hornfels - as (153-167.5), except (170-171m) which is spotted with grey and grey-white, very hard, porphyroblastic crystals, andalusite up to 1.5 cm across. Fractures at 50° to c.a. are chloritized, slickensided.	170-175m	32194	.017		182.1-185.1	----
			175-180m	32195	.032		185.1-188.2	----
			180-185m	32196	.028	P6Tr Zn.01	188.2-191.2	-----
			Ag,P6,2m			Ag.02		
			185-190m	32197	.052		191.2-194.3	----
		170m - 191m: much increased quartz-pyrite-pyrrhotite-molybdenite veining; veins parallel to c.a. much larger, and cut older veins (which are frequently better mineralized with	190-195m	32198	.057		194.3-197.3	----
			195-200m	32199	.065	cu.01 P6Tr	197.3-200.4	----
			AgP6Zn Cu.7			Zn.01 Ag.02		

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 HOLE NO. 678-2

CORE DRILL LOG

PROPERTY Mineral Hill (Huber)

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LATITUDE	BEARING	Hole No. <u>G78-2</u>
DEPARTURE	SLOPE	PAGE <u>9/15</u>
ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	% Cu XXXX %	AVG.	FROM TO	SHORT
		molybdenite, and others?-often blue-grey due to extremely fine sulphide particles). (188-191: vein quartz ~ 30% of total rock). Locally intense chlorite-clay-talc-calcite alteration, related to shearing or faulting. 188.2-.3: fault? at 15° to c.a.. 187.6-190: rock very rich in pyrrhotite, little chalcopryrite, related to altered, compositional banding at 40° to c.a. 191-194: reduced veining 194-230: veining as (176-191)			MoS ₂ %			
		200.70-200.8 - sphalerite, galena, molybdenite, chalcopryrite in irregular, calcareous quartz-healed fracture zone.	200.7-200.8m	32200	.004		200.4-203.4	----
		200.8-205m	205m	32289	.035		203.4-206.5	----
		205-210m	210m	32290	.024		206.5-209.5	----
		200.3-200.7 - strongly chloritized shears, slickensided, at 15° to c.a.. Strong fractures perpendicular to c.a.. Minor malachite stain in quartz vein.	210-215m	32291	.029		209.5-212.6	----
		215-220m	220m	32292	.033		212.6-215.6	----
		220-225m	225m	32293	.034		215.6-218.7	----
		219.5-223.7: strong to virtually complete greenish grey "bleaching" alteration of hornfels; alteration minerals aphanitic - chlorite?					218.7-221.7	----
							221.7-224.8	----
							224.8-227.8	----

Ag 1.22 oz./ton
 Pb 1.83%
 Zn 1.27%
 Cu 0.04%

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HOLE NO. G78-2

CORE DRILL LOG

PROPERTY..... Mineral Hill (Huber).....

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	LATITUDE	BEARING	Hole No.	G78-2
	DEPARTURE	SLOPE	PAGE	10/15
	ELEVATION	LENGTH	DATE STOPPED	

GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	XXXXX XXXXX XXXXX	AVG.	FROM TO	SHORT
		albite? Specimen @ 228.3m. Some fairly good quartz-pyrite-molybdenite-(galena?) veining, as preceding sections; also occasional fracture (weakly to moderately chloritic) has coating MoS ₂ . Prominent fractures 55°, 70°, 80° to c.a. (core has slight tendency to split in "buttons").					227.8- 230.9	----
225.5-225.57		Alaskite, medium grained. Contacts 65° (upper), 80° to c.a. 4 mm quartz-molybdenite veinlet cuts intrusive, parallel to upper contact.	225- 229.9m	32294	.036	cu 0.19% Pb 2.75% Ag 3.01 oz./ton		
225.57-352.3		Hornfels, as previous. Abrupt decrease in bleaching and alteration, amount of fracturing and quartz veining. Short stockwork-like zones, as 227.4-227.8, with pyrite-molybdenite-blue quartz, pyrrhotite, little chalcopyrite.						
		229.9-230.05 - Interval includes 3 veins - 2, 3.5, 1.5 cm thick, quartz-calcite, with blebs fine crystalline galena, tetrahedrite, little chalcopyrite. Not fluorescent. Assay MoS ₂ , Pb, Cu, Ag. 230m on (increasing downward):	229.9- 230.05m	32295	.144	cu .19 Pb 2.75 Ag 3.01	230.9- 233.9 233.9- 237	---- ---- ----
		brown, grey, green colours outline compositional variation in hornfels, banding wavy, irregular, generally ±90° to c.a..	230.05- 235- 240m	32296 32297	.069 .039	Pb Tr Pb Tr	240- 243.1 243.1- 246.1	---- ---- ----
			240- 245m	32298	.030	cu .03	246.1- 249.2	----
			245- 250m	32299	.039		249.2- 252.2	----

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HOLE NO..... G78-2.....

CORE DRILL LOG

PROPERTY Mineral Hill (Huber)

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		Hole No. G78-2
LATITUDE	BEARING	
DEPARTURE	SLOPE	PAGE 11/15
ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG No.	XXXXX MoS ₂	AVG.	FROM TO	SHORT
		Rock a hard, aphanitic hornfels, conchoidal fracture. Much pyrrhotite: in quartz veins; along banding; along with pyrite, little chalcopyrite, aphanitic MoS ₂ and/or galena.					252.2- 255.3	-----
		235m-248: blue-grey (molybdenite) quartz veining (with cp) more prevalent, along banding as well as on fractures.					255.3- 258.3	-----
		251.7-252.0 Alaskite - fine dissem. pyrite, pyrrhotite; porphyritic texture .	250- 255m	32300	.016		258.3- 261.4	-----
		254.7-254.8 Alaskite - glassy quartz - eyes, feldspars in aphanitic matrix.					261.4- 264.4	.02
		254.8-259.5: 5 - 10 cm thick quartz - pyrrhotite, molybdenite veins with 1m-2m spacing, at 65°-75° to c.a., younger than (cut) smaller (±1cm) quartz molybdenite veinlets at more oblique angles (30° to c.a.; sub-parallel to c.a. ±70° seems to be a late fracture orientation; minor offsets sometimes visible 248-251: colour banding partly obscured by increased bleaching (as previously described).	255- 260m	32301	.050		264.4- 267.5	-----
		270-275m	32302	.053			267.5- 270.5	-----
		270-275m	32303	.032				
		270-275m	32304	.073		Pb Tr Ag .05	270.5-	
		271.6: deep blue quartz vein at 15° to core axis; colour due to aphanitic sulphides (galena,?)				W03.01	270.5- 273.6	.02
							273.6- 276.6	.02

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	LATITUDE	BEARING	Hole No. G78-2
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GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	MoS ₂	AVG.	FROM TO	SHORT
		molybdenite, chalcopyrite, pyrrhotite. Specimen taken. Several tiny grains with bright blue fluorescence.					276.6-279.7	.05
		Assay MoS ₂ , Pb, Ag, W					279.7-282.7	.05
		259.5-291: relatively abundant blue, blue-grey quartz veinlets, 2mm-7cm, various orientations, as at 271.6.					282.7-285.8	.05
		275.1-275.6: quartz vein zone, about 30% included rock, contacts 45-60° (irregular) to c.a. Late fractures coated with pyrite, sooty black dusty film.	275-280m	32305	.039	cu.01	285.8-288.8	-----
		261-291.9: strong irregular bleaching, high pyrrhotite content (5%+), much pyrite.						
		282.5-291.9: angular, irregular blocks of black, aphanitic, hornfelsic (argillite?), in sharp contact with bleached rock. Fragments all sizes, to 20cm+. Not affected by bleaching, or any alteration except hornfelsic recrystallization.	280-285m	32306	.073			
			285-290m	32307	.071			
		291.9-295.1: zone of intense fracturing, local brecciation. Strong bleaching, clay-chlorite-calcite alteration.	290-295m	32308	.047			

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LATITUDE	BEARING	Hole No. G78-2
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ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	MoS ₂	AVG.	FROM TO	SHORT
		Good MoS ₂ locally.					288.8- 291.9	----
	291.5-300.7	Hornfels - black and green-grey; aphanitic, hard black, with distinctive rib-like alteration pattern -irregular light-dark banding-chlorite, epidote? feldspar?	295-300m	32309	.067	Ag.03		
		-see specimens, 297.3, 299.4. Molybdenite in blue quartz veins, dry fractures. Altered argillite? 300.7-307. Hornfels: grey-green, brown, black, strongly to moderately bleached and altered, aphanitic to fine grained. Same mineralization as previous-molybdenite in blue-grey quartz veins with pyrite, pyrrhotite; much pyrrhotite throughout rock.					291.9-298 298-300.7 300.7-303.8 303.8-306.8 306.8-310 310-313.1 313.1-316.3 316.3-319.3 319.3-322.4	----- ----- ----- ----- ----- ----- ----- -----
		304.2: 5 cm thick alaskite porphyry dyke with cobble-size angular hornfels fragment, (and others, smaller) suspended.						
	307-316.4	Hornfels - same, but core surface shows fine grained clastic (tuffaceous?) texture, with larger, ovoid clasts.	305-310m	32311	.063			
	310-315m			32312	.157			
	316.4-319.1	Alteration zone: strongly fractured, locally brecciated; strongly chloritized; some yellow-green epidote; quite	315-320m	32313	.082			

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LATITUDE	BEARING	Hole No. 678-2
DEPARTURE	SLOPE	PAGE 14/15
ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG No.	XXX	AVG.	FROM TO	SHORT
		calcareous. Good MoS ₂ with pyrite in quartz veins, bx vein quartz, and very impressive			MoS ₂		322.4- 324.2	----
		MoS ₂ , 2 mm plus, on fractures perpendicular to c.a. Much molybdenite lost on these fractures due to ground core,					324.2- 325.4	----
		washing.					325.4- 328.5	----
	319.1- ³³⁰	Hornfels: as (307-316.4m). Quartz-pyrrhotite-pyrite-molybdenite-chalcopyrite veining; blue-grey quartz-molybdenite veins parallel to c.a., various angles, and irregularly	320- 325m	32314	.153	cu.05 Pb Tr Ag.02	328.5- 331.5	----
		diffused into banding ±50°, cut by younger, relatively barren quartz veins (40° to c.a.)	325- 330m	32315	.066	cu.02 Pb.01	331.5- 334.6	----
		Pyrite-pyrrhotite (chalcopyrite) distributed throughout rock. Suspect galena as well as moly diffused in blue quartz.	330- 335m	32316	.070	Ag.02 Cu.03	334.6- 340.7	----
		328.8: 1.5cm thick vein of sphalerite, galena on fracture at 60° to c.a., cuts older quartz-molybdenite veinlets at 40° to c.a. (opposite dip) 330-338.5: reduced bleaching, fracturing, and quartz - molybdenite veining. Pyrite-pyrrhotite-molybdenite-chalcopyrite still present (1/2 - 2% sulphides).	335- 340m	32317	.051	Cu.02	340.7- 343.7	----
			340- 345m	32318	.061		343.7- 346.8	----
			345- 350m	32319	.059		346.8- 349.8	----
			350- 352.3m	32320	.052		349.9- 352.3	----

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HOLE NO. 678-2

CORE DRILL LOG

PROPERTY Mineral Hill (Huber)

CLAIM Mineral Hill

LATITUDE 12 + 55' N.	BEARING S58°W	Hole No. G78-3
DEPARTURE 15 + 80' W.	SLOPE -70°	PAGE 1/6
ELEVATION 3,545'; 1080.5m	LENGTH 172.9 metres	DATE STOPPED December 4, 1978

GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	MoS ₂ %	AVG.	FROM TO	SHORT
-3.7		Casing, overburden					3.7- 5.3	----
3.7-31.4		Hornfelsed Tuffs: grey, grey-green, purple, moderately hard to soft. Fine compositional layering at 30° to c.a.. Grain size 1/2-1mm. Fracturing at 40° to c.a. and 8° to c.a. Talc (& clay) on some fractures. Rock bleached to grey or greenish-grey from many fractures, and quartz-carbonate (pyrite) and narrow (.5mm) to 5cm molybdenite veins. Rock breaks with conchoidal fracture with aphanitic surface of (re-crystallized?) aphanitic material. 12.5m - rock specimen taken.	3.7-5m 5-10m 10-15m 15-20m 20-25m 25-31.4m	32251 32252 32253 32254 32255 32256	.043 .016 .010 .040 .007 .012		5.3-8.2 8.2-10.7 10.7-13.9 13.9-17.1 17.1-20.3 20.3-23.5 23.5-26.5 26.5-29.6 29.6-32.6 32.6-35.7	----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----
31.4-37.0		Alaskite Granite: light grey-buff, hard, fresh, fine-grained. Mostly quartz-feldspar with minor biotite. Pink garnets present. Buff-coloured, dense, (feldspathic?) alteration emanating from fractures. Quartz veinlets on many fractures. Pyrite disseminated through rock and in veins, with (minor) molybdenite. 34.4m - specimen taken. Contacts: 31.4 - (20°?) to core axis -core broken up.	31.4-37.0	32257	.012		35.7-38.7 38.7-41.8 41.8-44.8 44.8-47.9 47.9-50.9	----- ----- ----- ----- -----
		37.0 - irregular, interfingered;						

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HOLE NO. G78-3

CORE DRILL LOG

PROPERTY Mineral Hill (Huber)

CLAIM Mineral Hill

LATITUDE	BEARING	Hole No. G78-3
DEPARTURE	SLOPE	PAGE 2/6
ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES			RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG No. XXXXXX MOS-2	AVG.	FROM TO	SHORT
		sub-parallel to c.a.					
37.0 - 92.0		Hornfelsed tuffs: as described (3.7-31.4m).	37-40m	32258	.012		
		Fracturing at 90°, 50°, 15°, 8° to c.a.; quartz-pyrite-molybdenite veinlets. Magnetic.					
		Several fractures strongly clay and chlorite altered, crumbly.	40-45m	32259	.012	50.9-54	----
		45-62: Dark grey-brown, aphanitic hornfels: relatively weak alteration, little quartz veining. 50.9: good molybdenite in 10cm quartz vein, with pyrite, at 35° to c.a.	45-50m	32260	.003	54-57	----
		53-58m: several short (10cm-20cm) intervals of fine grained granite intruding; various angles to c.a. (20° to 65°).	50-55m	32261	.034	57-60.1	-----
		62-74: same hornfels as (45-62): slight increase in bleaching; several fractures show strong epidote-chlorite alteration, associated with pyrite, magnetic pyrrhotite.	55-60m	32262	.006	60.1-63.1	-----
		72.2-72.4m: porcellanous dyke, amorphous orange feldspar, contacts 55° to c.a.	60-65m	32263	.014	63.1-66.2	----
		74-92m: moderate to very strong epidote-chlorite feldspar alteration. Strong alteration in irregular patches with and without pyrite,	65-70m	32264	.004	66.2-69.2	-----
			70-75m	32265	.006	69.2-72.3	.1
			75-80m	32266	.006	72.3-75.3	.05
			80-85m	32267	.007		
			85-90m	32268	.002	75.3-81.4	----
			90-92m	32269	.013	81.4-84.5	----
						84.5-87.5	----
						87.5-90.6	----
						90.6-93.6	----
						93.6-94.5	.05

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HOLE NO. G78/3

CORE DRILL LOG

PROPERTY Mineral Hill

CLAIM Mineral Hill

	LATITUDE	BEARING	Hole No. G78-3
	DEPARTURE	SLOPE	PAGE 3/6
	ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG No.	MoS ₂ XXX	AVG.	FROM TO	SHORT
		pyrrhotite. Very little molybdenite-quartz veining.					94.5-96.7	-----
		79.9-80.1: orange granitic dyke, fresh, hard; fine grained to aphanitic; contacts at 60° to c.a.					96.7-99.7	-----
		38.3-89.1: ditto						
		92.0: contact at 20° to c.a.						
92.0-106.9		(Alaskite) Granite: light grey-buff, hard, fresh to moderately altered, fine to medium-grained. Mostly quartz-feldspar, about 1% biotite (weakly to strongly chloritized). Feldspars kaolinized, (chalky, white) adjoining strong fractures. Some sericitic alteration. Rock only moderately fractured, at 10°, 40°, 60° to c.a. Only very minor quartz veinlets (5-1mm) little pyrite. Extremely finely disseminated grains pyrite, and chalcopyrite-molybdenite in minor amount (estimate <.1% total sulphides).	92-95m	32270	.025		99.7-102.8	----
			95-100m	32271	.005		102.8-105.8	----
			100-105m	32272	.002		105.8-108.9	----
			105-106.9m	32273	.005		108.9-111.9	----
							111.9-115	----
		106.9 - irregular contact ±90° to c.a.						
106.9-		Hornfels: vari-coloured grey-brown to green-grey, aphanitic, recrystallized, with very fine light-dark grains visible on cut surface;	106.9-110m	32274	.006			
			110-115m	32275	.009			

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HOLE NO. G78-3

CORE DRILL LOG

PROPERTY Mineral Hill(Huber)

CLAIM Mineral Hill

LATITUDE	BEARING	Hole No. G78-3
DEPARTURE	SLOPE	PAGE 4/6
ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	XXXXX MoS ₂	AVG.	FROM TO	SHORT
		extremely fine banding, about 15° to c.a. Little difference from (37-92). Locally magnetic.						
		106.9-110.3: little fracturing; some quartz-pyrite veining, with minor MoS ₂ ; grey bleaching emanates from vein fractures.						
		110.3-112: Moderate epidote-quartz-chlorite-calcite alteration, related to compositional banding at 20° to c.a. 1-2% pyrite, magnetic pyrrhotite, (very) little MoS ₂ .						
		112-126.7: as 106.9 - 110.3, with patchy alteration and sulphides, as described for (110.3-112).	115-120m	32276	.008		115-118	----
			120-125m	32277	.003		118-121.1	----
		113.9: compositional banding at 40° to c.a.	125-128.7	32278	.010		121.1-124.1	-----
		126.7-128.7 - strong chloritization on fractures parallel to c.a.					124.1-127.2	.02
							127.2-130.2	----
		128.3-130m - abrupt appearance of quartz-pyrite-molybdenite veins to 1.5cm thick, irregular, but tending to parallel c.a.. Molybdenite occurs as distinct lacy band down center of vein, rather than predominantly on borders.	128.3-130m	32279	.045		130.2-132.4	.02
			130-135m	32280	.035		132.4-139.4	----
			135-140m	32281	.019		139.4-142.4	----
			140-145m	32282	.029		142.4-145.5	----
			145-150m	32283	.063		145.5-148.5	-----
		131.8-133.4: 2-3cm thick quartz vein right down core, parallel to c.a.. Pyrite in coarse	150-155m	32284	.081		148.5-151.6	.01
			155-160m	32285	.034		151.6-154.6	----

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HOLE NO. G78-3

CORE DRILL LOG

PROPERTY Mineral Hill (Huber)

CLAIM Mineral Hill

LATITUDE	BEARING	Hole No. G78-3
DEPARTURE	SLOPE	PAGE 5/6
ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	MoS ₂	AVG.	FROM TO	SHORT
		crystals and large patches, very finely dis-	160-				154.6-	
		sembled Molybdenite, and molybdenite smeared	165m	32286	.021		157.7	----
		along grey chloritic contact. Vein slightly	165-				157.7-	
		calcareous. Very fine grains with blue	170m	32287	.010		160.7	----
		fluorescence.	170-				160.7-	
		126.7-150: generally as for (112-126.7, except	172.9m	32288	.011		163.8	----
		for detail described above.						
		136.4: banding at 40° to c.a.						
		151.4: molybdenite lost from 10 (?) cm quartz						
		vein due to grinding.						
		150-157.4: rock more strongly fractured,						
		bleached.						
		133.4-162.8: quartz-molybdenite veinlets,						
		mostly 1cm, to 5cm irregularly spaced, .1 to .5m						
		apart.						
162.8-163.4		Granitic Dyke: buff-orange and grey mottled,						
		quartz-feldspar rock, dense to fine and						
		medium grained crystalline, with minor quartz						
		veining. Upper contact rounded, lower contact						
		50° to c.a., opposite dip to compositional						
		banding (55° to c.a.). Epidote-sericite						
		alteration near lower contact.						

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HOLE NO. G78-3

PERCUSSION

DRILL LOG

PROPERTY Mineral Hill (Huber)

CLAIM Mineral Hill

LATITUDE	12 + 50' N	BEARING	-----	Hole No.	M13	Hole Diam.	5cm
DEPARTURE	15 + 15' W	SLOPE	-90°	PAGE	1/3		
ELEVATION	3540', 1,079.0m	LENGTH	(240') 73m	DATE STOPPED	November 12, 1978		

GEOLOGY		SAMPLES					
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	MoS ₂ %	AVG.	Wt. Cut.
0-3m		Overburden.	3-6		.011		
3m-73.2m		Hornfels: variably altered and bleached, with pyrite and minor molybdenite.	6-9m		.019		
3m-9m		Hornfels: 50% dark biotite-rich hornfels chips,	9-12m		.012		
		50% epidote chips; 5% pyrite as coarse grains	12-15m		.020		
		and fine disseminations. 1% Limonite coated	15-18m		.010		
		chips -	18-21m		.007		
			21-24m		.006		
9m-12m		Hornfels: 5% free quartz; remainder a mixture	24-27.5m		.003		
		of dark hornfels and epidote chips. Coarse	27.5-30.5m		.014		
		pyrite grains.					
12m-15m		Hornfels: same as 9-12m (minor chalcopyrite).					
15m-18m		As above, except biotite is more amber-coloured					
		and an odd chip of free quartz contains MoS ₂					
		associated with pyrite.					
18m-21m		Hornfels (as above), but more MoS ₂ noted in					
		the free quartz. Less pyrite (2-3%).					
21m-24m		Hornfels: 30% epidote chips, quartz - 5-10%,					
		pyrite - (2%) as Coarse grains.					
24-27.5m		Predominantly bleached hornfels; epidote chips					
		< 5%; about 5% quartz; less than	30.5-33.5m		.007		
		1% pyrite as coarse grains.	33.5-36.5m		.024		
			36.5-39.5m		.026		

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HOLE NO. M13

PROPERTY Mineral Hill (Huber)

CLAIM Mineral Hill

LATITUDE	BEARING	Hole No. M13
DEPARTURE	SLOPE	PAGE 2/3
ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES						
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	%	AVG.	Wt.	Cut.
27.5m-30.5m		Bleached hornfels - Epidote < 1%, - Quartz - 2%; pyrite < 1%; traces of MoS ₂ in free quartz chips.	39.5- 42.5m		MoS ₂ .006			
30.5m-33.5m		Bleached Hornfels: Epidote < 1%; Quartz - 3-5%, pyrite < .5%.						
33.5m-36.5m		Bleached hornfels > 40%; quartz - 5% as clear chips and 35% as milky chips. Pyrite < 0.5%; MoS ₂ occurs in the clear quartz grains as coarse crystals.						
36.5m-39.5m		As above except-clear quartz 10%, pyrite 1%, MoS ₂ slight increase, epidote 0.5%.						
39.5m-42.5m		Bleached Hornfels: Quartz - 60% (5% as clear chips containing pyrite and MoS ₂ ; 55% as milky chips with traces of pyrite).						
42.5m-45.5m		Bleached Hornfels: Less quartz (10%); traces MoS ₂ ; pyrite < 0.5%; traces chalcopyrite. Sericite?	42.5- 45.5m 45.5- 49m 49- 52m		.009 .008 .006			
45.5-49m		Bleached hornfels: 1% epidote chips, quartz - 5%, traces MoS ₂ , pyrite < 0.5%.	52- 55m 55- 58m 58- 61m 61- 64m		.010 .011 .014 .008			
49m-52m		Bleached Hornfels: 60% quartz, traces MoS ₂ ,						

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HOLE NO. M13

PERCUSSION DRILL LOG

PROPERTY Mineral Hill (Huber)

CLAIM Mineral Hill

LATITUDE	BEARING	Hole No. M13
DEPARTURE	SLOPE	PAGE 3/3
ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES				
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	MoS ₂ %	AVG.
		pyrite.				
		< 0.5% Sericite in some of the Hornfels chips.				
52m-55m		Bleached Hornfels - 20% quartz chips, - 1% pyrite.				
55m-58m		Hornfels: Less bleaching - pyrite < 0.5%; traces of MoS ₂ as grains in clear quartz - (Quartz - 10%).				
58m-61m		Bleached Hornfels: 40% quartz, more MoS ₂ as free grains and as specks in free clear quartz chips. Pyrite < 0.5%.				
61m-64m		Bleached Hornfels: 25% quartz (mainly milky variety; traces MoS ₂ ; pyrite less than 0.5%.				
64m-67m		Bleached Hornfels: 10% quartz. More epidote and chlorite alteration in chips. Traces of pyrite and MoS ₂ .	64-67m		.014	
			67-70m		.008	
			70-73m		.009	
67,-70m		Bleached Hornfels, as above section. (64m-67m).				
70m-73.2m		Bleached Hornfels - Traces of pyrite; 3% epidote chips, 15% quartz.				
		Total depth 73.2 metres.				

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HOLE NO. M13

PERCUSSION

DRILL LOG

PROPERTY Mineral Hill (Huber)

CLAIM Mineral Hill

LATITUDE	12 + 60' N	BEARING	-----	Hole No. M14	Hole Diam. 5cm
DEPARTURE	16 + 23' W	SLOPE	-90°	PAGE	1/4
ELEVATION	3547', 108.1m	LENGTH	88.4m 290'	DATE STOPPED	November 17, 1978

GEOLOGY		SAMPLES				
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	% MoS ₂	AVG.
0-6m		Overburden.	3-6m		.045	
6-27.5m		Contact alteration zone, predominantly aphanitic hornfels chips, plus free quartz, and quartz associated with amber biotite, sericite, chlorite, (very fine grains, with foliated, peppery texture imparted by biotite flakes). Feldspars are buff, altered. 6-9m: Some fine-grained MoS ₂ in quartz; traces pyrrhotite, magnetite, pyrite, limonite. 9-12m: as above.	6-9m		.011	
			9-12m		.010	
			12-15m		.022	
		12-15m Pyrite increased to about 0.5%, MoS ₂ as fine selvage on boundary of narrow quartz veinlet; MoS ₂ as very fine specks in quartz grains; most hornfels grains bleached; composed of quartz - biotite - sericite - clay - chlorite.				
		15-18m: Hornfels chips reduced; feldspar chips (milky, buff) and quartz (60%? - much is vein quartz) plentiful. MoS ₂ , Mo-ochre visible; biotite decreasing.	15-18m		.024	
						WO ₃ .01%
						Sn .002%
		18-21m: As 15-18m; (pyrite < 0.5%, 15-24m)	18-21m		.013	
		Assay for WO ₃ : Assay for Sn:				
		21-27.5m: As 15-21m; little chalcopyrite	21-24m		.021	

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HOLE NO. M14

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PERCUSSION DRILL LOG

PROPERTY Mineral Hill (Huber)

CLAIM Mineral Hill

LATITUDE	BEARING	Hole No. M14
DEPARTURE	SLOPE	PAGE 2/4
ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES				
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	MoS ₂ %	AVG.
		associated with MoS ₂ grains.				
27.5-33.5m		Granite: Primarily very acid quartz-feldspar-sericite and coarsely crystalline muscovite rock. 27.5-30.5m: Amber-brown, translucent, aphanitic, damaged crystals and shards appear to be garnet. Hornfels chips, biotite flakes very minor component.	24-27.5m		.008	
		30.5-33.5m: as previously described; pyrite about 1/2% in fine crystals, MoS ₂ grains common, some yellow moly ochre staining.	27.5-30.5m		0.010	
		Assay for - WO ₃ : Sn:	30.5-33.5m		.036	WO ₃ .01%
		33.5-88.4m Contact Alteration Zone:				Sn .001%
		33.5-35.5: hornfels chips about 40%, remainder quartz (40%), feldspar, muscovite-sericite. Pyrite and magnetic pyrrhotite, some relatively large MoS ₂ grains. (Main sample contains plentiful fine flakes MoS ₂). Few grains chalcopyrite.	33.5-36.5m		.021	WO ₃ .01% Sn .003%
		36.5-39.5m: same as (33.5-36.5m)	36.5-39.5m		.011	
		39.5-42.5m: same as (33.5-36.5m)	39.5-42.5m		.007	
		42.5-54.5m: same as (33.5-36.5m)	42.5-45.5m		.005	
		45.5-49m: same as (33.5-36.5m); emerald-green	45.5-49m		.006	

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HOLE NO. M14

PERCUSSION DRILL LOG

PROPERTY Mineral Hill (Huber)

CLAIM Mineral Hill

LATITUDE	BEARING	Hole No.	M14
DEPARTURE	SLOPE	PAGE	3/4
ELEVATION	LENGTH	DATE STOPPED	

GEOLOGY		SAMPLES				
FROM	TO	DESCRIPTION	FROM TO	TAG No.	MoS ₂	Avg.
		(epidote and chlorite?) shards.				
	49-52m:	same as (33.5-36.5m); very fine-grained metallic grey-brown mineral; traces calcite.	49-52m		.006	(cu .02% Ag .01oz.)
	52-55m:	same as (49-52m); some very fine grains of dark grey metallic sulphide (tetrahedrite?).	52-55m		.088	(cu .02% Ag .01 oz. WO ₃ Tr)
	55-58m:	same as (52-55). Epidote, chlorite present. Assay for WO ₃ , Ag, Cu.	55-58m		.182	(cu .02% Ag .02 oz. WO ₃ .01%
	58-61m:	same as (52-58m). Assay WO ₃ , Ag, Cu.	58-61m		.087	(cu .02% Ag .01 oz. WO ₃ Tr)
	61-64m:	same as (52-58m). Assay WO ₃ , Ag, Cu. Much finer grains.				
	64-67m:	Contact zone? (very finely crushed sample).	61-64m		.032	
	67-82.5m:	same as (52-64m).	64-67m		.015	
	82.5-85.5m:	same as 64m on. Extremely fine crushed.	67-70m		.023	
	85.5-88.4:	same as 64 m on.	70-73m		.016	
			73-76.2m		.023	
			76.2-79.2m		.012	
			79.2-82.3m		.007	

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HOLE NO. M14

PERCUSSION DRILL LOG

PROPERTY Mineral Hill (Huber)

CLAIM Mineral Hill

	LATITUDE	BEARING	Hole No. M14
	DEPARTURE	SLOPE	PAGE 4/4
	ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES			
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	<chem>MoS2</chem> AVG.
			82.3-		
			85.3m		.008
			85.3-		
			88.4m		.022
		End of Hole 88.4 metres.			

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HOLE NO. M14

PERCUSSION DRILL LOG

PROPERTY Mineral Hill (Huber)

CLAIM Mineral Hill

LATITUDE	8 + 20' N	BEARING	-----	Hole No.	M15
DEPARTURE	15 + 15' W	SLOPE	-90°	PAGE	1/1
ELEVATION	3458', 1,054.0m	LENGTH	76.2m	DATE STOPPED	November 20, 1978

GEOLOGY		SAMPLES				
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	MoS ₂ %	AVG.
			metres			
0-9m		Overburden.	9-12m		.004	
9-12m		Hornfels - Aphanitic - 10% clear and milky quartz. Epidote < 1%. Py < 0.5%.	12-15m		.002	
			15-18m		.002	
12-76.2m		12-15m. Alteration zone or fault.	18-21m		.002	
		Hornfels - about 20% dark chips, and	21-24m		.002	
		Altered monzonite - 70 - 80% altered chips	24-27m		.002	
		composed of milky quartz, chlorite, epidote,	27-30m		.002	
		altered biotite, some feldspar, minor altered	30-33m		.001	
		hornblended, Feldspars are lathy plagioclase,	33-36m		.002	
		chalky alteration. Minor magnetite, pyrite,	36-40m		.002	
		molybdenite.	40-43m		.003	
			43-46m		.002	
			46-49m		.002	
		End of Hole 76.2 metres.	49-52m		.001	
			52-55m		.001	
			55-58m		.001	
			58-61m		.001	
			61-64m		.001	
			64-67m		.001	
			67-70m		no sample	
			70-73m		.001	
			73-76m		.002	

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HOLE NO. M15

PERCUSSION DRILL LOG

PROPERTY Mineral Hill (Huber)

CLAIM Mineral Hill

LATITUDE	14 + 50' N	BEARING	-----	Hole No.	M-16	Hole Diam.	5 cm
DEPARTURE	15 + 65' W	SLOPE	-90°	PAGE	1/4		
ELEVATION	3576', 1090.0m	LENGTH	76.2m	DATE STOPPED	November 23, 197		

GEOLOGY		SAMPLES				
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	MoS ₂ %	AVG.
0-3m		Overburden.	3-6m		.018	
3-9m		Granite:				
		3-6m: Quartz-feldspar chips, some with fine	6-9m		.048	
		crystalline texture and minor amber-brown	9-12m		.011	
		biotite associated with altered hornfels	12-15m		.009	
		chips; pyrite 5%. Quartz less than 10% - fine*	15-18m		.008	
		MoS ₂ flakes and fine grains. Tr. chalcopyrite.	18-21m		.007	
		6-9m: Same as above except chlorite present.	21-24m		.006	
		(Altered hornfel chips and limonite stained				
		chips.)				
9-15.0m		9-12m: Hornfels: brown-amber biotite hornfels				
		chips. Some bleached chips with chlorite				
		alteration. Pyrite less than 0.5%; traces MoS ₂				
		in clear quartz chips.				
		12-15m: Hornfels, minor Acid quartz -feldspar				
		chips; minor MoS ₂ and chalcopyrite. Pyrite > 1%.				
15-27m		15-18m: Bleached Hornfels - brown				
		Biotite grains, minor pyrite; no visible MoS ₂ ;				
		quartz less than .5%.				
		18-21m: As above - Minor pyrite plus MoS ₂ .				
		Quartz - 5-10%.				
		21-24m: As above, but increase in quartz				

LOGGED BY W.J. Wilkinson

W.J. Wilkinson

HOLE NO. M16

PERCUSSION DRILL LOG

PROPERTY Mineral Hill (Huber)

CLAIM Mineral Hill

LATITUDE	BEARING	Hole No. M16
DEPARTURE	SLOPE	PAGE 2/4
ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES				
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	MoS ₂ %	vg.
		-Feldspar chips; 1-2% pyrite, visible flakes of MoS ₂ .				
		24-27m: - as 15-18m - less MoS ₂ .	24-27m		.066	
		Traces of chalcopyrite.	27-30.5m		.004	
27-42.5m		27-30.5m: Hornfels - less bleaching, more brown - amber biotite, chlorite and epidote; - foliated texture in chips due to brown Biotite layers in Hornfels chips.	30.5-33.5m		.008	
		Epidote < 1%, Pyrite < 1%. Some traces chalcopyrite and MoS ₂ .	33.5-36.5m		.006	
		30.5-33.5m; - as above.	36.5-39.5m		.005	
		33.5-36.5m: - as above but pyrite increased to 3%. Traces chalcopyrite and MoS ₂ .	39.5-42.5m		.008	
		36.5-39.5m: - as above except less quartz (1%). Traces only of pyrite, MoS ₂ .	42.5-45.5m*		.018	
		39.5-42.5m: as 27-30.5m but no epidote or chlorite - Minor pyrite.				
42.5-73m		42.5-45.5m: - Bleached Hornfels; foliated texture - more bleaching than 27-42.5m section and increase in pyrite.				
		Visible MoS ₂ in clear quartz chips and as free grains.				

LOGGED BY W.J. Wilkinson

HOLE NO. M16

PERCUSSION DRILL LOG

PROPERTY Mineral Hill (Huber)

CLAIM Mineral Hill

LATITUDE	BEARING	Hole No. M16
DEPARTURE	SLOPE	PAGE 3/4
ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES				
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	MoS ₂ %	AVG.
	45.5-49m	- as 42.5-45.5m - Amber biotite;	45.5-49m		.007	
		epidote; increase in quartz-clear and cloudy	49-52m		.011	
		chips. 1% pyrite; minor MoS ₂ (as flakes and in	52-55m*		.010	
		clear quartz). Muscovite flakes present.	55-58m*		.011	
			58-61m		.010	
	49-52m	- as above - increase in quartz to 10%;	61-64m*		.022	
		more epidote, less than 0.5% pyrite, traces	64-67m*		.013	
		MoS ₂ .				
	52-55m	- as above, but more MoS ₂ and pyrite.				
	55-58m	- as above - increase in quartz to 20%;				
		more chloritic alteration, less pyrite, MoS ₂ .				
	58-61m	- as above, but quartz is 10%, and very				
		little pyrite or MoS ₂ .				
	61-64m	- as 42.5-45.5m - 10% quartz, minor				
		pyrite and MoS ₂ ; little epidote.				
	61-64m	- as above - quartz 5% - some sulphides.				
	64-67m	- as above - 10% quartz, minor pyrite				
		and MoS ₂ .				
	67-70m	- as above - 5% quartz, minor pyrite -	67-70m		.005	
		MoS ₂ - epidote.	70-73m		.012	
	70-73m	- as above - 0.5% pyrite,	73-76m		.013	
		minor MoS ₂ , epidote, trace chalcopyrite.				

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HOLE NO. M16

PERCUSSION DRILL LOG

PROPERTY Mineral Hill (Huber)

CLAIM Mineral Hill

LATITUDE	BEARING	Hole No. M16
DEPARTURE	SLOPE	PAGE 4/4
ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES				
FROM	TO	DESCRIPTION	FROM TO	TAG No.	MoS ₂ %	AVG.
73-76 ^m		73-76 ^m - Granite: Quartz-feldspar chips as interval 3-9m; minor pyrite and MoS ₂ .				
		Note: (Sample intervals which show numerous spots of blue-white fluorescence under U.V. Lamp are indicated by *).				
		End of Hole 76.2 metres.				

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W.J. Wilkinson

HOLE NO. M16

PERCUSSION DRILL LOG

PROPERTY Mineral Hill (Huber)

CLAIM Mineral Hill

LATITUDE	13 + 23' N	BEARING	----	Hole No.	M17
DEPARTURE	16 + 85' W	SLOPE	-90°	PAGE	1/1
ELEVATION	3,587'; 1,093.3m	LENGTH	61.0m	DATE STOPPED	November 27, 197

GEOLOGY		SAMPLES				
FROM	TO	DESCRIPTION	FROM TO metres	TAG No.	MoS ₂ %	AVG.
0-61m		Quartz Monzonite: quartz-feldspar-(biotite) rock. Only slightly altered - (weak, sericitic alteration of biotite). Pyrite 1-3%, traces chalcopyrite. MoS ₂ as fine grains in quartz. Weak epidote alteration of several grains. Some orange-brown limonitic staining of grains, throughout depth of hole.	0-3m		.006	
			3-6m		.006	
			6-9m		.007	
			9-12m		.006	
			12-15m		.001	
			15-18m		.006	
			18-21m		.009	
		39.5-61: amber biotite, about 5% of sample, is about 50% altered to emerald-green chlorite.	21-24m		.008	
			24-27m		.009	
			27-30m		.010	
			30-33m		.006	
		End of Hole 61.0 metres	33-36m		.019	
			36-40m		.009	
			40-43m		.005	
			43-46m		.004	
			46-49m		.003	
			49-52m		.003	
			52-55m		.014	
			55-58m		.009	
			58-61m		.006	

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W.J. Wilkinson

HOLE NO. M17

PERCUSSION DRILL LOG

PROPERTY Mineral Hill (Huber)

CLAIM Mineral Hill

LATITUDE	12 + 72' N	BEARING	-----	Hole No.	M18
DEPARTURE	18 + 05' W	SLOPE	-90°	PAGE	1/2
ELEVATION	3,602'; 1,097.9m	LENGTH	85.4m	DATE STOPPED	November 28, 1978

GEOLOGY		SAMPLES				
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	MoS ₂ %	AVG.
0-3m		Overburden, casing.				
3-85.4m		Quartz Monzonite: composed almost entirely of quartz and white feldspar grains. Only minor alteration effects. Minor pyrite, pyrrhotite. Molybdenite as very fine flakes and grains. Very minor (2%?) amber biotite; very fine sericitic alteration. Slightly calcareous. 9-12m - same as above, plus small amount of white and altered (sericitic?) muscovite, few grains of blue quartz.	3-6m		.038	
			6-9m		.077	
			9-12m		.065	
			12-15m		.012	
			15-18m		.018	
			18-21m		.054	
			21-24m		.014	
			24-27m		.055	
			27-30m		.022	
			30-33m		.017	
		27.5-33.5 - same as (3-27.5), but with amorphous black and brown grains, possibly oxidized to limonite (not magnetic).	33-36m		.017	
			36-40m		.032	
			40-43m		.018	
		33.5-39.5 - as (27.5-33.5) except that samples contain: about 25% cloudy grey vein quartz chips, with extremely fine MoS ₂ disseminated in quartz, accounting, at least in part, for colour.	43-46m		.017	
			46-49m		.020	
			49-52m		.013	
			52-55m		.010	
		39.5-55m - grey vein-quartz reduced to ±10%, decreasing downwards	55-58m		.046	
		55m-58m - no grey vein quartz; MoS ₂ present in	58-61m		.024	

LOGGED BY W. Wilkinson
W. Wilkinson

HOLE NO. M18

PERCUSSION DRILL LOG

PROPERTY Mineral Hill (Huber)

CLAIM Mineral Hill

LATITUDE

BEARING

Hole No. M18

DEPARTURE

SLOPE

PAGE 2/2

ELEVATION

LENGTH

DATE STOPPED

GEOLOGY		SAMPLES				
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	MoS ₂	AVG.
		fine grains.	61-64m		.031	
		58m-85.4: same as (3-55); grey vein quartz	64-67m		.010	
		present (1-3%). Locally also see extremely	67-70m		.012	
		minute (sulphide?) needles.	70-73m		.013	
			73-76m		.009	
			76-79m		.009	
			79-82m		.011	
		End of Hole 85.4 metres	82-85m		.052	

LOGGED BY W. Wilkinson
W. Wilkinson

HOLE NO. M18

PERCUSSION DRILL LOG

PROPERTY Mineral Hill (Huber)

CLAIM Mineral Hill

LATITUDE	11 + 30' N	BEARING	-----	Hole No.	M-19
DEPARTURE	18 + 95' W	SLOPE	-90°	PAGE	1/1
ELEVATION	3,590'; 1,094.2m	LENGTH	54.9m	DATE STOPPED	November 29, 1978

GEOLOGY		SAMPLES				
FROM	TO	DESCRIPTION	FROM TO metres	TAG No.	MoS ₂	AVG.
0-	54.9m	Quartz Monzonite: composed of quartz and white feldspar grains, with minor biotite. Minor alteration effects (sericitic alteration of biotite; traces epidote, chlorite). Molybdenite as fine grains in quartz. Pyrite 1-3%, traces chalcopyrite.	3-6m		.042	
			6-9m		.038	
			9-12m		.023	
			12-15m		.105	
			15-18m		.015	
			18-21m		.016	
			21-24m		.013	
			24-27m		.010	
			27-30m		.010	
			30-33m		.045	
			33-36m		.029	
			36-40m		.025	
			40-43m		.013	
			43-46m		.018	
			46-49m		.010	
			49-52m		.012	
			52-54.9m		.021	
		End of Hole 54.9 metres.				

LOGGED BY W.J. Wilkinson
W.J. Wilkinson

HOLE NO. M19

7117

Zapata Granby Corporation

FINANCIAL REPORT - MINERAL HILL PROJECT, 1978

Part I - Summary of Costs

Diamond Drilling (inclusive)

902.5 metres @ \$63.28/metre -- \$57,114.05

Percussion Drilling (inclusive)

515.3 metres @ \$23.74/metre -- \$12,230.50

TOTAL DRILLING COSTS \$69,344.55

Assay Costs

360 samples @ \$11.66/sample -- \$ 4,198.17

TOTAL PROJECT COSTS \$73,542.72

Part II - Distribution of Costs (from Cost Statement)

Diamond Drilling:

Contractor charges	--	\$50,625.37
Supervision - James	--	816.00
- Wilkinson	--	4,320.00
Meals and accomodation (Wilkinson)	--	671.17
Transportation - Air fares,		
-Wilkinson and James	--	219.00
- Vehicle	--	462.51

\$57,114.05 -- \$57,114.05

Financial Report - Mineral Hill Project, 1978

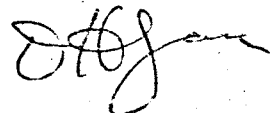
Percussion Drilling:

Contractor Drill charges	--	\$ 6,720.00	
Contractor charges, road and site construction	--	(504.00	
Supervision - L.B. Warren	--	(1,636.50	
Transportation - vehicles	--	2,970.00	
		400.00	
		<hr/>	
		\$12,230.50	-- \$12,230.50

Assay Costs:

a. Direct Assay Costs: Sample handling, 327 samples @ \$1.00	--	\$ 327.00	
MoS ₂ assays 360 @ \$4.75	--	1,710.00	
Miscellaneous assays for Cu, Zn, Pb, Au, Ag - 75 @ \$3.00	--	225.00	
Miscellaneous assays for Wo ₃ , Sn, F, - 18 @ \$6.00	--	108.00	
b. Freight Charges; sample bags	--	802.17	
c. Wages, core splitting	--	1,026.00	
		<hr/>	
		\$ 4,198.17	--- \$ 4,198.17

TOTAL PROJECT COST \$73,542.72



3. STATEMENT OF COSTS

Personnel

<u>Name</u>	<u>Position</u>	<u>Days Worked</u>	<u>Total Days</u>	<u>Day Rate</u>	<u>Total Paid</u>	
D.H. James	Exploration Manager	Nov. 24; Jan. 10-12	4	\$204	\$ 816.00	
W.J. Wilkinson	Exploration Geologist	Nov. 6-8(2.5), 18-30, Dec.1-9,14,15 (22) Jan. 17(1/2), Jan. 18,19,23 (3)	30	\$144	4,320.00	
L.B. Warren	Field Supervisor	Oct. 13, 16(1/2), 17, 19, 20, 23, Nov. 7, 9, 14, 17 - 30, Dec. 1, 4, 6 (1/2), 7, 8, 11 (1/2), 12, 14 (1/2).	33	\$ 90	2,970.00	
Steve Carnie	Core Splitter	Dec. 4-8, 11-14	9	\$ 56	504.00	
Jan Then	Core Splitter	Dec. 1 (.32), Dec. 4-8, 11-14	9.32	\$ 56	522.00	
<u>Total Wages</u>					<u>\$9,132.00</u>	<u>\$ 9,132.00</u>

Food and Accommodation

W.J. Wilkinson:	Accommodation, Juniper Motel, Nov. 18 - Dec. 7/78 incl., 20 days @ \$21.00/day	\$ 420.00	
	Meals, Nov. 18 - Dec. 8, 21 days @ \$11.96/day	<u>251.17</u>	
		\$ 671.17	671.17

Transportation

W. J. Wilkinson:	Travel, Vancouver-Smithers & return (P.W.A.) Nov. 18, Dec. 8	\$ 146.00	
D. H. James:	Travel, Vancouver-Smithers (one way only), Nov. 21	73.00	
	Granby 4 wheel drive pick-up, Oct. 13-23, Nov. 7-30, Dec. 1-15, 1 1/2 months @ \$400/month	600.00	
	BowMac 4 wheel drive pick-up, Nov. 22 - Dec. 5	<u>262.51</u>	
		\$1,081.51	1,081.51

7117

Contractor Charges

A. J. T. Thomas Diamond Drilling Ltd.

Overburden drilling, 64' @ 13.00/ft.	\$ 832.00
NQ Core drilling to 500', 946' @ 13.50/ft.	12,771.00
NQ Core drilling to 1,000', 1,000' @ 14.50/ft.	14,500.00
NQ Core drilling over 1,000', 392' @ 15.50/ft.	6,076.00
BQ Core drilling to 500', 490' @ 12.50/ft.	6,125.00
BQ Core drilling over 500', 67' @ 13.50/ft.	<u>904.50</u>

Sub-Total \$41,208.50

Manhours other than diamond drilling:	\$ 2,505.00
Drill hours other than diamond drilling	1,035.00
Mud Costs	973.61
Tractor Rental: 58 hours @ \$31.50	1,827.00
Core Box:	679.50
Testing Hole:	180.00
Casing and Shoes Left in Hole:	1,096.00
Material broke in hole:	958.76
Waterline	<u>162.00</u>
Total	\$50,625.37

B. L. Spence Enterprises Ltd., 1,680 ft. (512 metres) percussion drilling at \$4.00/ft.	\$ 6,720.00
C. L. Spence Enterprises Ltd., 18 hours bulldozer rental at \$28.00/hour	504.00
D. Fink Sawmills Ltd., for D-8 Caterpillar with ripper 22 hrs. @ \$58.25/hr.	\$ 1,281.50
Low bed and pilot car	<u>355.00</u>
	\$ 1,636.50

Assay Costs

Total Contractor Charges

\$59,485.87

Acme Analytical Laboratories Ltd.

327 - sample handling charges (oversize and wet samples) @ \$1.00	\$ 327.00
360 - total MoS ₂ assays @ \$4.75	1,710.00
36 - Cu assays @ \$3.00	108.00
23 - Ag assays @ \$3.00	69.00
14 - WO ₃ assays @ \$6.00	84.00
3 - Sn assays @ \$6.00	18.00
12 - Pb assays @ \$3.00	36.00
1 - F assay @ \$6.00	6.00
1 - Au assay @ \$3.00	3.00
3 - Zn assays @ \$3.00	<u>9.00</u>

Assay Cost \$ 2,370.00

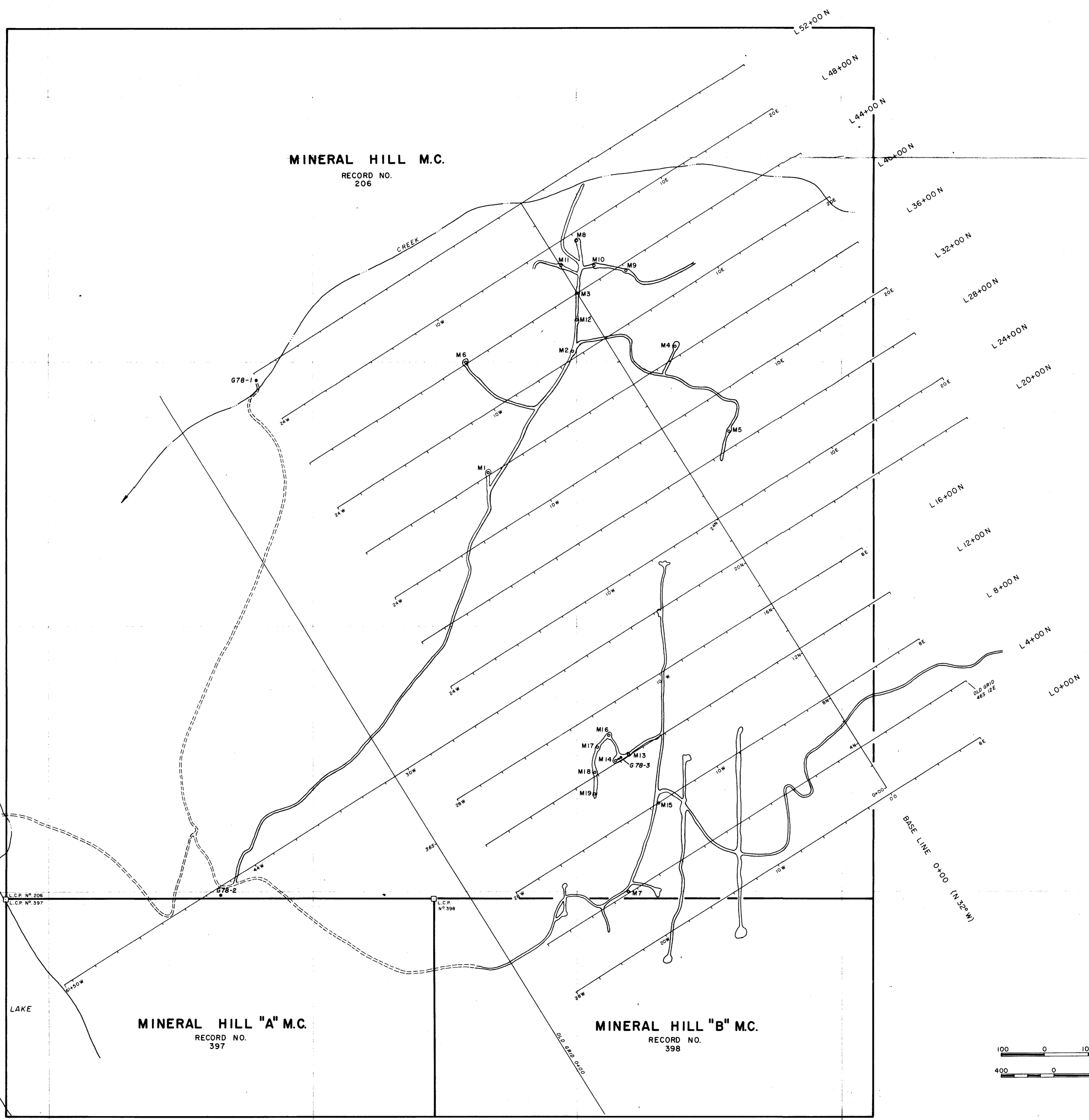
Canadian Freightways - shipping of samples to assayer
and return to storage,

Invoice Nos. 438914 (\$40.35), 102110 (\$258.84),
440523 (\$201.32), 441418 (\$24.10),
440980 (\$172.56) \$ 697.17

Invoice of Richard Goebels, re sample bags 105.00

Total shipping and assay costs \$ 3,172.17 3,172.17

TOTAL COSTS \$ 73,542.72 73,542.72



LEGEND:

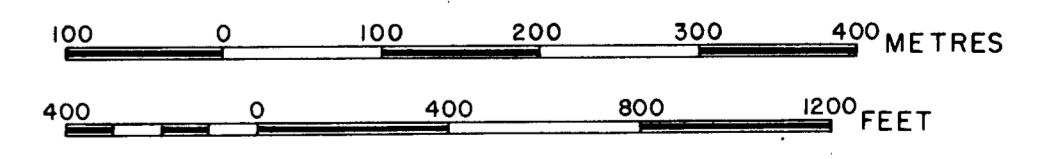
- Road (surveyed, unsurveyed)
- Percussion drill hole
- Diamond drill hole

1978 DRILLING

Hole No.	Elevation	Depth	Inclination
G78-1	845 m	377.3 m	-90°
G78-2	881 m	352.3 m	-90°
G78-3	1080 m	172.9 m	-70° S58°W
M13	1079 m	73.2 m	-90°
M14	1081 m	88.4 m	"
M15	1054 m	76.2 m	"
M16	1090 m	76.2 m	"
M17	1093 m	61.0 m	"
M18	1098 m	85.4 m	"
M19	1094 m	54.9 m	"

NOTE: Mineral claim and drill hole locations by compass and chain; elevations by aneroid altimeter.

MINERAL HILL CLAIMS
 AGREEMENT NO. 7117



VAN CAL

DATE REVISED	BY	DRAWN BY: WJW / ewf	ZAPATA GRANBY CORPORATION	TITLE: DRILL HOLE PLAN
		CHECKED: <i>[Signature]</i>	PROJECT: MINERAL HILL CLAIMS	NO. FIGURE 2
		APPROVED: <i>[Signature]</i>	SCALE: 1 INCH = 400 FEET	
		DATE: JAN 20, 1979		