

LOG NO: SEP 20 1991 K

ACTION:

FILE NO:

ASSESSMENT REPORT

GEOCHEMICAL SOIL SURVEY

MINERAL HILL PROPERTY

NTS 93 L 10 E

Omineca Mining Division  
British Columbia

Latitude: 54 31' North

Longitude: 126 44' West

By

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Box 662  
Smithers B.C.  
VOJ 2N0

June 18, 1991

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**21,635**

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### Introduction

The Mineral Hill property of L.B. Warren & P.J. Huber (50% each) is located close to Highway 16 between Houston and Smithers in the Omineca Mining Division. The property consists of 52 claim units and 2-post mineral claims and has a long history of exploration beginning prior to 1914. Exploration in the 1960's and 1970's was directed at porophyry-style molybdenum and copper mineralization. More recently, the principal target has shifted to vein or breccia-hosted precious metal mineralization.

### LOCATION AND ACCESS

The Mineral Hill property is located approximately 14 kilometers north of Houston in north-central British Columbia, and 1 kilometre east of Highway 16 between Houston and Smithers. Geographic coordinates are 54 31' North latitude and 126 44' West Longitude. Access to the area of the Geochem grid layedout in 1991 is via Highway 16 from Smithers (45 km) or from Houston (20km). Smithers has daily jet service to Vancouver and is the regional centre for supplies, services and provincial government offices (Mine recorder, district geologist & mine inspector). From Highway 16, a gravel road leads through property owned by G. Murphy to the Mineral Hill claims via the north end of Fishpan Lake (Figure 2). Within the property a network of roads and trails extends to all zones explored over the past 30 years; many of these trails are only accessible with four wheel drive vehicles.

The northern CN Rail line follows the Bulkley River a few kilometres west of the property; a B.C. Hydro transmission line and a natural gas pipe line parallel the highway.

### Property

The Mineral Hill property consists of five Modified Grid mineral claims (a total of 54 units) and four 2-post mineral claims shown on the claim sheet 93 L 10 E in the Omineca Mining Division (Figure 2). These claims are owned jointly by L.B. Warren and P.J. Huber.

<u>Claim Name</u>	<u>Units</u>	<u>Record Number</u>
Mineral Hill	16	206
Mineral Hill A	2	397
Mineral Hill B	2	398
Mineral Hill F	12	5215
Mineral Hill G	16	5216
East 1	1	13038
East 2	1	13039
East 3	1	13040
East 4	1	13041

The Geochem Grid is located on the Mineral Hill Claim.

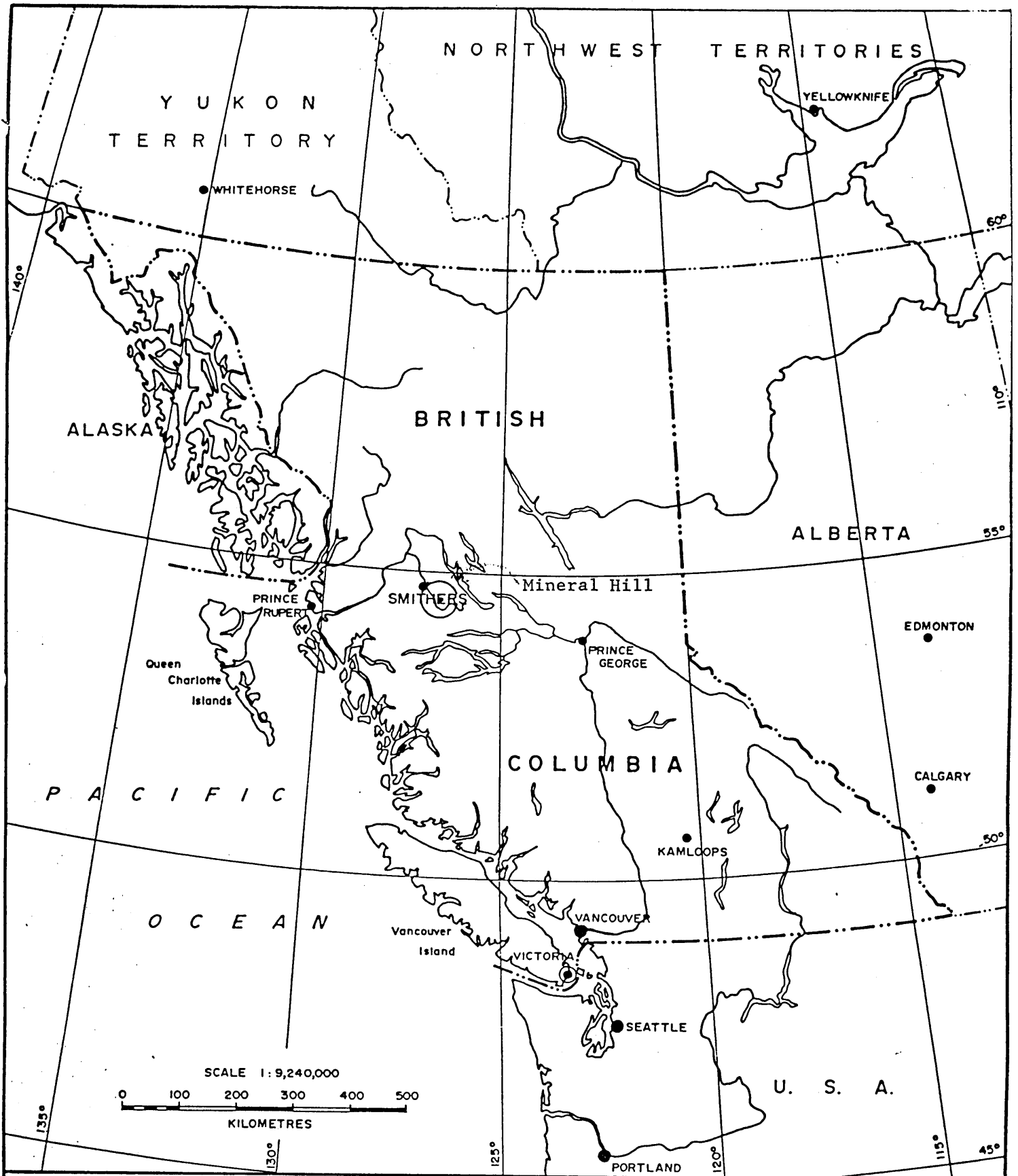


Figure 1. Location of the Mineral Hill Claim Group  
NTS 93 L / 10E

MAP TITLE	LOCATION MAP	
PROJECT TITLE	Mineral Hill	
PROJECT NO.	1039-1	SCALE 1:9,240,000



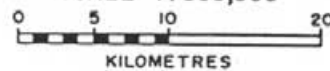
LOCATION MAP

93 N.W.

Figure 2. Location Map, Mineral Hill Claim Group

NTS 93 L / 10E

SCALE 1:500,000

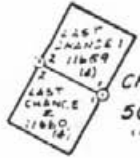


KILOMETRES



Farewell L.

S.D.  
8407(S)  
3N+4W



CHANCE 1  
5028(3)  
(10N+4W)

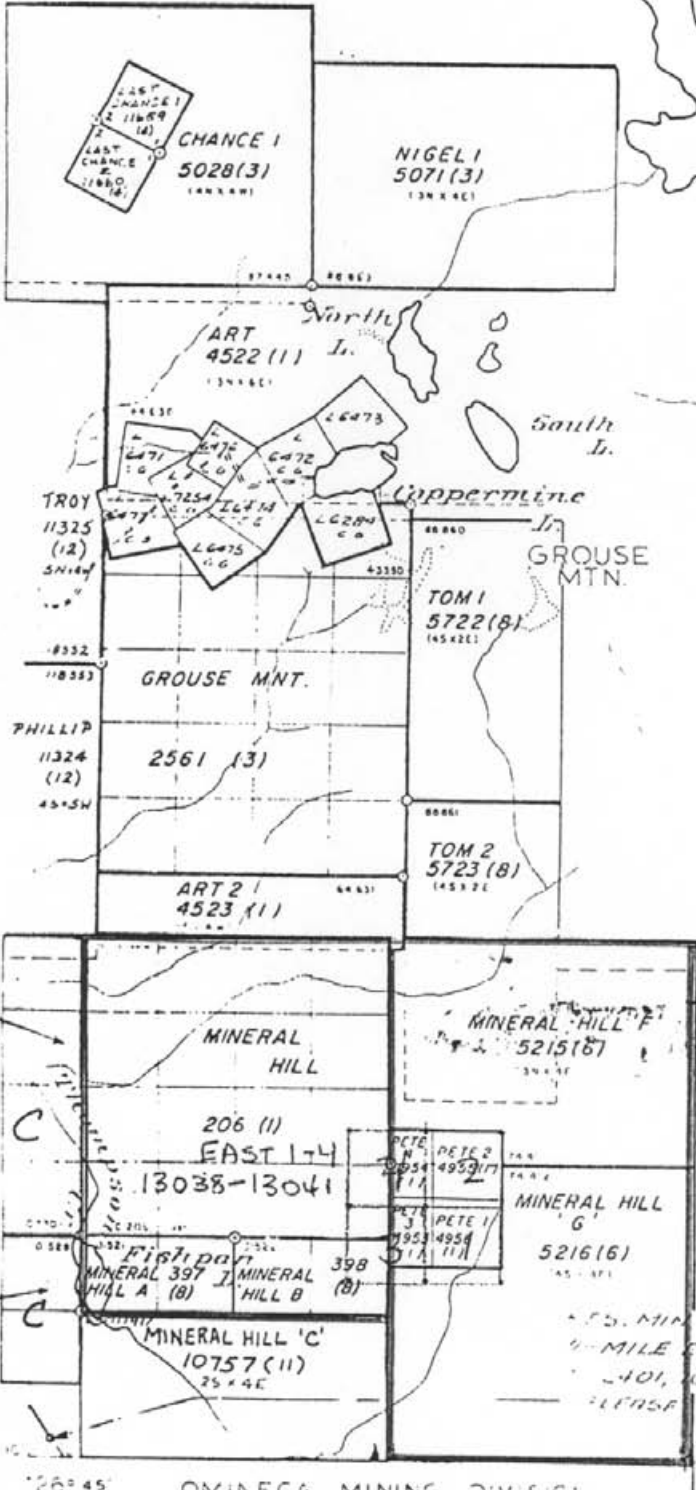
NIGEL 1  
5071(3)  
(10N+4E)

McQuarrie Lake

McQuarrie

N.T.S. 93L/10E  
Mineral Hill  
Claims.  
June 15/91  
R.W.

Figure 4  
0 1000 M



OMINECA MINING DIVISION

LAKEVIEW  
8993  
3N+4W  
(10E+3E)

TO SOUTH SEE MAP 93L

#### PHYSIOGRAPHY, CLIMATE, VEGETATION

The Mineral Hill claims are situated on the western slopes and upper plateau of Mineral Hill, a subsidiary ridge of the higher Grouse Mountain range immediately to the north (figure 2). Elevations range from 2,500 feet (760 metres) to 4,500 feet (1370 metres) at the summit of Mineral Hill. The lower western slopes (location of the 1987 diamond drill program) are quite gentle with deciduous tree cover broken by open grassy meadows. The upper plateau of Mineral Hill is an area of low rolling hills and valleys with small lakes and swamps. Between 2,800 - 4,000 feet (850 - 1220 metres), steeper slopes with a thick cover of coniferous forest hinders access and visibility.

Rock outcrop on the property is limited by overburden cover, undergrowth and swamp. The principal drainages on the property should provide adequate water for drilling purposes throughout the field season. Climate is typical of lower elevations in the west-central British Columbia; field work can be carried out from early May to late October.

#### REGIONAL GEOLOGICAL SETTING

The property is situated within the Hazelton Trough of the Intermontane tectonic belt, an area underlain principally by Mesozoic volcanic and sedimentary rocks intruded by a variety of granitic rocks ranging in age from early Jurassic to Tertiary. In the Smithers-Houston area, northwest trending lower Jurassic Hazelton Group subaerial to subaqueous red and green pyroclastic and flow rocks with intercalated sediments predominate. These are intruded by coeval Topley granitic rocks and by numerous granitic and lesser gabbroic stocks, dykes and plugs of late Cretaceous (Bulkley intrusives) and Tertiary age.

Structure of the region is dominated by northwest-striking fault structures along which vertical movement has been most prevalent.

A variety of mineral deposit types have been recognized in the general area, most common of which are polymetallic vein and replacement deposits (Cu, Pb, Zn, Ag, Mo, Au,) developed in Hazelton Group layered rocks commonly adjacent to younger granitic intrusions. The region is also well known for porphyry copper and molybdenum deposits of several styles and ages (Carter, 1981). Not as well defined are volcanogenic massive sulphide deposits, of which only a few have been recognized to date. Copper-zinc mineralization on Grouse Mountain 5 km north of Mineral Hill has massive sulphide affinities although cross-cutting relationships are evident.

Silver-copper mineralization at the Equity Silver Mine, located 40 km southeast of Houston consists of disseminated vein and breccia filling sulphide and sulfosalt mineralization, sub-concordant with host-rock stratigraphy contained in a well-developed alteration zone, possibly related to hydrothermal fluids circulation at a high level in a porphyry system. Mineralization has characteristics of both massive sulphide and replacement types of mineral deposit. Production commenced in the Southern Tail deposit in 1980 and totalled 4.3 million tonnes grading 135 g/tonne silver, 0.45% copper, 1.3 g/tonne gold by December 1982. Production from the Main Zone orebody began in late 1983 with ore reserves of 21.6 million tonnes grading 109 g/tonne silver, 0.35% copper and 0.85 g/tonne gold (Cyr, Pease and Schoeter, 1984).

#### PROPERTY GEOLOGY AND MINERALIZATION

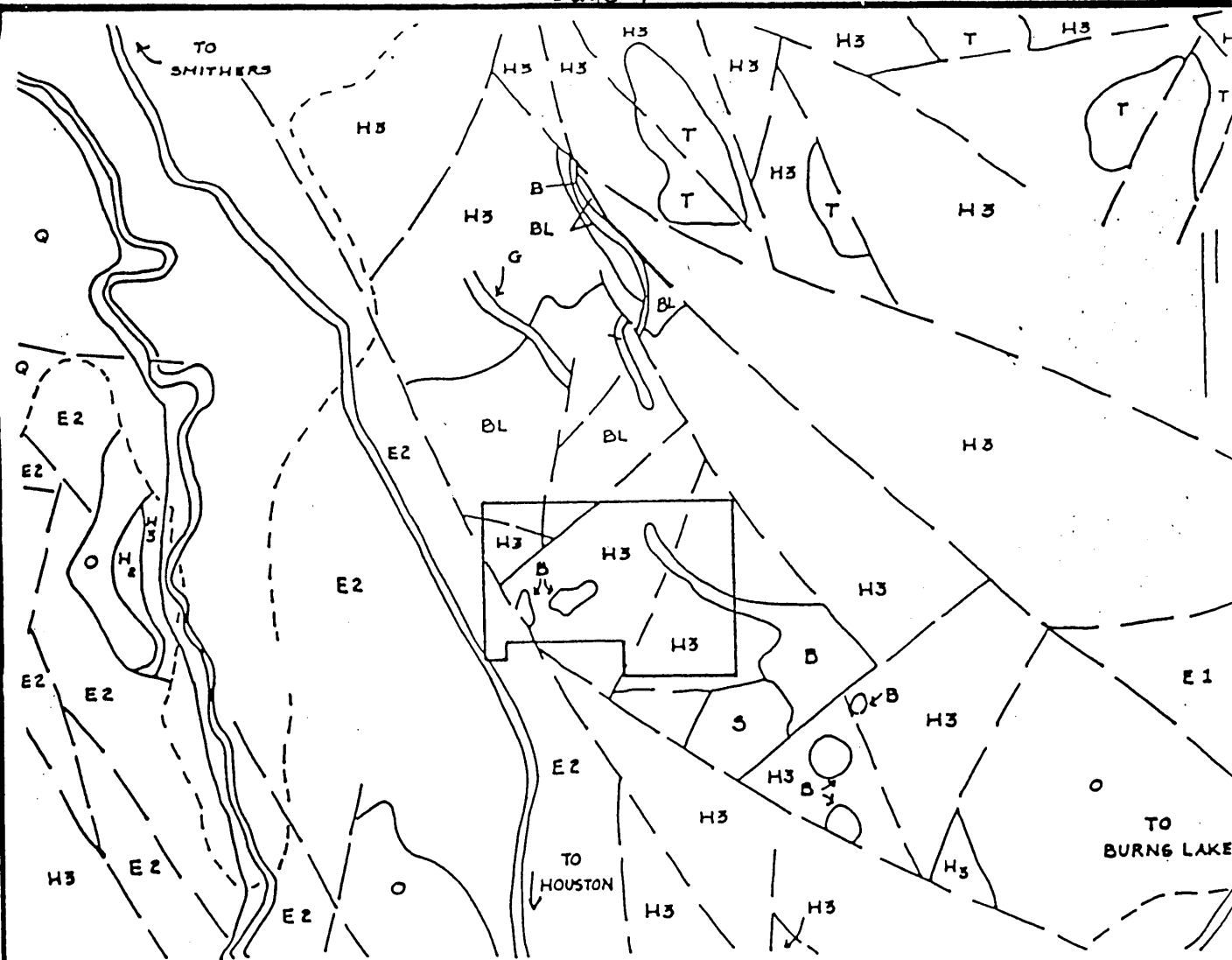
The Mineral Hill property is largely underlain by a northwest striking sequence of volcanic rocks of the Telkwa Formation (Hazelton Group) with lesser volumes of sedimentary rock and probably belonging to the Upper Jurassic Bowser Lake Group. In the areas drilled in 1987 these rocks are strongly hornfelsed by a variety of intrusive rocks of late Cretaceous (Bulkley) age.

Volcanic rocks are predominantly andesitic flows and pyroclastics with lesser amounts of rhyolite and basalt. Sedimentary units include argillite, quartzite and greywacke with some limy varieties occurring locally. Gill and Myers (1984) reported a resistant trachytic flow unit with large feldspar laths capping low ridges on the upper plateau of Mineral Hill. This unit resembles Tertiary Goosly Lake volcanics elsewhere in the district.

Bodies of porphyritic quartz-monzonite ("quartz feldspar porphyry") and alaskite are the principal intrusive rocks occurring in the western part of the property. Further to the east on Mineral Hill are outcrops of medium grained diorite. Dykes of aplite and monzonite are present around the quartz-monzonite stock. These intrusions have produced a large area of hornfelsing (perhaps 2000 by 2500 metres) in the surrounding volcanic and sedimentary units. Hard fine-grained biotite hornfels is the most common type in the South (Alaskite) zone. Hornfelsing hardened the rocks surrounding the intrusions and made them brittle and hence more susceptible to the development of fracture and breccia zones.

Typical mineralization consists of pyrite, pyrrhotite, molybdenite and chalcopyrite with quartz, calcite, minor siderite or feldspar in fractured intrusive rocks or zones of quartz breccia in hornfels. Silver-bearing tetrahedrite with galena, sphalerite and chalcopyrite occurs within both the Alaskite and Quartz Breccia zones.





INTRUSIVE ROCKS

- G** EOCENE - GOOSLY LAKE MONZONITE
- B** LATE CRETACEOUS - BULKLEY GRANODIORITE, QUARTZ MONZONITE
- T** EARLY JURASSIC - TOPLEY GRANODIORITE, QUARTZ MONZONITE

SEDIMENTARY AND VOLCANIC ROCKS

- Q** QUATERNARY - ALLUVIUM
- ENDAKO GROUP
- E1** LOWER MIOCENE - BASALT BRECCIA
- E2** EOCENE - OLIGENE: ANDESITE, DACITE

OOTSJA LAKE GROUP

- O** LATE CRETACEOUS - EOCENE: RHYOLITE, DACITE

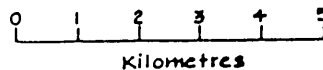
SKEENA GROUP

- S** LOWER CRETACEOUS: SHALE, GREYWACKE

BOWSER LAKE GROUP

- BL** UPPER JURASSIC: SHALE, SANDSTONE
- HAZELTON GROUP
- H1** MIDDLE JURASSIC SMITHERS FORMATION; GREYWACKE, SHALE
- H2** LOWER JURASSIC: RED TUFF
- H3** LOWER JURASSIC TELKWA FORMATION: RED, GREEN TUFF, BRECCIA FLOWS

- RAILWAY
- LIMIT OF OUTCROP
- FAULTS, LINEAMEN



MINERAL HILL REGIONAL GEOLOGY		
N.T.S: 93L10	LBW	DATE: June 9.
SCALE: 1:125,000	DRAFTING: LBW	FIGURE: 3

#### SUMMARY OF PREVIOUS EXPLORATION

Initial work on Mineral Hill was carried out in 1914 or earlier when a 5 metre shaft was sunk on a narrow quartz vein containing silver, copper, lead and minor gold values. A number of other showings were explored in the 1920's by trenches, short adits and shallow shafts.

During the 1960's and 1970's, considerable exploration was carried out for large tonnage molybdenum-copper mineralization. In 1966 Cominco and Molybdenum Exploration Ltd. completed a large program of geological, geophysical and geochemical surveys, trenching and 15 diamond drill holes (2225 metres). In 1967, Molybdenum completed 102 percussion drill holes (2882 metres) and 13 diamond drill holes (1308) (Sharp, 1968). In 1976, Granby Mining Corporation optioned the property and drilled 12 percussion holes (683 metres) in the Granby Zone, east of the North zone. Granby completed seven percussion holes in 1978 (James, 1979) in the east edge of the quartz monzonite (575 metres) and three widely spaced diamond drill holes (902 metres) in the area of percussion drilling, in the Alaskite Zone and in the Breccia Zone. Control of Granby Mining was passed to Noranda in 1979; they carried out programs of prospecting, geochemical and geophysical surveys in 1981, 1983 and 1984 (Gill and Myers, 1984). Southern Cross Gold Inc. drilled 512.8 metres in eight holes in 1987.

In summary, molybdenite grades of 0.10% MoS<sub>2</sub> are associated with closely spaced quartz veins peripheral to this zone carrying silver-lead-zinc values were tested by early workings and some of the more recent exploration. Molybdenite mineralization in the eastern part of the quartz monzonite ("Granite Zone") generally grades less than 0.05% MoS<sub>2</sub>. Low molybdenite values were also found in Granby's drill testing of a hornfels zone in the northeast part of the Mineral Hill claim ("Granby Zone"; James, 1979). The Quartz Breccia Zone has approximate surface dimensions of 240 to 450 metres (Sharp, 1968) with grades of 0.05% MoS<sub>2</sub> indicated by extensive trenching and drilling.

Molybdenum's drilling in 1966-1967 indicated that a quartz vein system with sometimes significant silver values was present in the Quartz Breccia Zone. Diamond drill hole D-16 intersected a narrow vein grading 135.8 g/ton silver. Hole D-14 was the only hole completely analyzed for silver; values ranged from 0.06 to 3.7 oz/ton. Hole D-20 included a 50 foot interval grading 1.2 oz/ton silver. Hole D-16 is located approximately 300 metres southeast of holes D-14, D20.

During 1985 the Mineral Hill property was optioned by Dafrey Resources who cleaned out and sampled some of the old trenches in the Quartz Breccia Zone and material from dumps at old workings on the silver-bearing quartz veins elsewhere on the property. One sample by N.C. Carter, P.Eng. contained 659 oz/ton silver and 0.29 oz/ton gold in a narrow tetrahedrite vein exposed in a trench in the south east portion of the Quartz Breccia Zone. Dafrey drilled 12 percussion holes in the quartz Breccia and Alaskite Zones. At the same time, Lacana Mining Corporation compiled much of the earlier data on the property and assayed samples from the 1985 drilling, pulps from Moly mine's and Granby's percussion drilling and core from the top 200 metres of Graby's G78-1 drill hole in Quartz Breccia Zone. These analyses indicated an area of silver mineralization within the Quartz Breccia Zone grading around 2 oz/ton silver, with dimensions of 10 by 30 by 250 metres; however, results from hole G78-1, drilled in the centre of this block, showed no significant silver values. Lacana's interest in the property expired in late 1985.

In 1987, Southern Cross Gold Inc. completed eight diamond drill holes on the Mineral Hill claim (record number 206) totalling 521.8 metres.

1991 Geochem Soil Sample Survey

A grid using metric coordinates was established for sampling. At a point 123 metres at 026 degrees from Identification post 1E for Mineral Hill "A" a tree was cut off one metre high, squared and marked with the coordinates 10,000 E and 10,000 N. A baseline was established for 250 metres at a bearing of 330 degrees. Wooden lath was used to mark all Baseline stations\* and for all stations along the flagged and blazed sidelines.

A total of ninety-five<sup>4</sup> "B" horizon soils were collected on the grid lines at 25 metre intervals. Base Line Samples were taken twice by different samplers and compared as a check on the samplers.

The samples were placed in brown Kraft soil bags and delivered to the Min En Prep. Lab in Smithers.

All samples taken were analysed by I.C.P. methods for thirty-one elements and for gold by Geochem AA methods.

\* NOTE : A labeling error occurred on the Baseline and sidelines were turned off at 50 metre intervals but labeled in the field and on the sample bags as 100 metre intervals.

The Geochem maps in this report are plotted correctly.

A Lotus 123 computer program was used to generate histograms for Pb, Zn, Au, Ag, Cu and Mo. Using the total sample population of 95 "B" horizon soils the following table was constructed.

ELEMENT	WEAKLY ANOMOLOUS	STRONGLY ANOMOLOUS
Pb	25	32
Zn	354	490
Cu	150	250
Mo	28	45
Au	9	14
Ag	17	24

#### PURPOSE OF THE 1991 SOIL GEOCHEM SURVERY

The 1991 soil sample survey was undertaken to determine if a relationship exists between Gold and Silver geochem values and copper and molybdenite geochem values in the soil. An extensive data base of old geochemical soil survey results for copper and molybdenite exists and if a relationship between the precious metal geochem values and the basemetal values could be shown smaller grids over the old soil anomolies could be done thus reducing the overall size of the area which would have to be covered by new soil grids.

DISCUSSION OF RESULTS

A weak relationship between the precious metal soil geochem values and the base metals copper and molybdenite seems to exist based the limited data from this test survey. Another small grid over one of the larger copper and molydenite soil anomolies should be undertaken next season to build a larger data base for further study.

## REFERENCES

- Carter, N.C., 1981 : Porphyry Copper and Molybdenum Deposits, West-Central British Columbia. B.C. Ministry of Energy, Mines and Petroleum Resources Bulletin 64, 150 pp.
- Carter, N.C., 1985 : Geological Report on the Mineral Hill Property, Unpublished report for Dafrey Resources Inc.
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- Gill, G., Myers, D., 1984 : Geology, Geochemistry and VLF-EM Survey Report, Mineral Hill. B.C.D.M. Assessment Report 12180.
- James, D.H., 1978 : Drilling Report, Mineral Hill, for Granby Mining Corporation. B.C.D.M. Assessment Report 7117.
- Sellmer, H.W., 1966 : Property Examination Report of the Mineral Hill Moly Prospect. Private report for Amax.
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- Tipper, H.W., Richards, T.A., 1976 : Geology, Smithers Map Area. Geological Survey of Canada Open File 351.
- Robertson, R.C.R. : Diamond Drilling on the Mineral Hill Property, Southern Cross Gold Inc.  
1987

Appendix 1  
Statement of cost



STATEMENT OF COSTS

WAGES

LABOUR COSTS 10 mandays @ \$75/day	\$ 750.00
SUPERVISION AND REPORT WRITING ( L.B. Warren) 2 field and 1 report	750.00
ANALYSIS	850.00
FIELD TRANSPORTATION	560.00
FIELD EXPENSES	160.00
ROOM AND BOARD 12 mandays @ \$ 40/day	480.00
TOTAL COST OF PROJECT	\$ 4320.00

I N V O I C E

TO: CJL ENTERPRISES

BOX 662  
SMITHERS, B.C. V0J 2N0  
ATT'N: ACCOUNTS PAYABLE

INVOICE No 00019832

PAGE No 1

DATE 05/15/91

ACCOUNT C200

ATTENTION: L. WARREN  
PROJECT: MINERAL HILL

FILE No: 15-0035

QTY DESCRIPTION	UNIT PRICE	AMOUNT
95 GEOCHEM - AU FIRE	7.25	688.75
GEOCHEM - 31 ICP NO CHARGE		
95 SOIL SAMPLE PREP	1.25	118.75

SUB TOTAL 807.50

GST REGISTRATION # R100294743 56.52  
\* TOTAL \* 864.02

THESE ARE PROFESSIONAL SERVICES AND ARE PAYABLE WHEN RENDERED.  
OUTSTANDING BALANCES OVER 30 DAYS WILL BE CHARGED 2% INTEREST/MONTH.

Appendix 2

Statement of Qualifications

STATEMENT OF QUALIFICATIONS

- 1963      Geological Assistant - Mastodon Highland Bell  
Gordon Hilchey - Geologist  
Dome Mnt. - Smithers B.C.
- 1964      Geological Assistant - Phelps Dodge Corp.  
Stikine Area , B.C.
- 1965      Geological Assistant - Native Mines Ltd.  
W.J. Wilkinson - Geologist  
Terrace Area , B.C.
- 1966      Prospector and Geological Assistant  
Native Mines Ltd.  
W.J. Wilkinson - Supervisor  
Bridge River Area ,B.C.
- 1966 - 1971  
Full time- Field Tech.- Line cutter - Prospector  
Manex Mining Ltd.  
Throughout B.C.
- 1971 - 1979  
Granby Mining Corp.- Field Supervisor -  
Office Manager - Smithers area  
Supervised Drill programs  
Logged Drill core and Percussion Cuttings
- 1979 - Present  
  
President and Manager - CJL Enterprises Ltd.  
Kengold Mines Ltd. and Angel Jade Mines Ltd.  
Full time Prospector

Appendix 3

Analytical Results

COMP: CJL (SMITHERS EXP. GROUP)  
 PROJ: MINERAL HILL  
 ATTN: LORNE WARREN

MIN-EN LABS — ICP REPORT  
 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2  
 (604)980-5814 OR (604)988-4524

FILE NO: 1S-0035-SJ1  
 DATE: 91/05/15  
 \* SOIL \* (ACT:F31)

SAMPLE NUMBER	AG PPM	AL PPM	AS PPM	B PPM	BA PPM	BE PPM	BI PPM	CA PPM	CD PPM	CO PPM	CU PPM	FE PPM	K PPM	LI PPM	MG PPM	MN PPM	MO PPM	NA PPM	NI PPM	P PPM	PB PPM	SB PPM	SR PPM	TH PPM	U PPM	V PPM	ZN PPM	GA PPM	SN PPM	W PPM	CR PPM	AU PPM
100+00N 98+00E	2.2	23480	14	3	142	.6	2 7800	.1	15 574	39120	2230	23 8800	1367	48 470	21 950	41	1 11	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	66.4	471	1	1	2 25	7	
100+00N 98+25E	1.0	14720	1	1	111	.2	2 5460	.1	11 34	29700	1250	13 6590	696	6 410	15 600	18	1 9	1 1	1 9	1 1	1 9	1 1	1 1	1 1	1 1	53.1	194	1	1	1 18	3	
100+00N 98+50E	1.1	20460	1	1	159	.3	2 6190	.1	14 43	37630	2100	16 8000	1030	12 530	14 750	22	1 13	1 1	1 13	1 1	1 13	1 1	1 1	1 1	1 1	68.9	171	1	1	1 21	3	
100+00N 98+75E	1.0	22000	1	1	170	.4	2 7180	.1	14 55	36520	2370	15 8070	945	8 510	16 1100	15	1 14	1 1	1 14	1 1	1 14	1 1	1 1	1 1	1 1	68.9	168	1	1	1 23	2	
100+00N 99+00E	1.1	22020	1	2	120	.1	2 7130	.1	17 85	39860	3030	19 10740	1000	19 550	18 740	17	1 12	1 1	1 12	1 1	1 12	1 1	1 1	1 1	1 1	80.0	129	1	1	1 26	1	
100+00N 99+25E	1.0	23690	1	1	149	.3	2 6970	.1	15 68	39250	2240	16 8070	1081	16 490	19 940	15	1 12	1 1	1 12	1 1	1 12	1 1	1 1	1 1	1 1	71.3	277	1	1	1 24	2	
100+00N 99+50E	1.0	30530	1	2	210	.4	1 6440	.1	19 106	45840	5190	22 9790	2070	36 440	25 940	20	1 10	1 1	1 10	1 1	1 10	1 1	1 10	1 1	1 1	81.8	195	1	1	1 28	5	
100+00N 99+75E	.8	22270	1	1	128	.3	2 5580	.1	10 67	31570	2410	16 8180	613	22 420	15 820	16	1 9	1 1	1 9	1 1	1 9	1 1	1 9	1 1	1 1	61.5	111	1	1	2 21	2	
100+00N 100+00E a	.5	19490	1	1	131	.2	2 6390	.1	12 38	33520	1370	14 6280	776	12 910	12 470	16	1 11	1 1	1 11	1 1	1 11	1 1	1 11	1 1	1 1	67.6	145	1	1	1 19	11	
100+00N 100+00E b	.9	24430	1	1	121	.5	2 5610	.1	13 76	37670	1670	17 9340	842	16 470	18 610	17	1 10	1 1	1 10	1 1	1 10	1 1	1 10	1 1	1 1	72.3	107	1	1	1 24	8	
100+00N 100+25E	.8	23430	1	1	116	.5	2 4420	.1	12 47	34580	1060	15 6800	657	17 480	15 540	17	1 8	1 1	1 8	1 1	1 8	1 1	1 8	1 1	1 1	68.9	119	1	1	1 23	1	
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100+00N 101+50E	1.0	17050	1	1	121	.1	2 6680	.1	11 27	34960	1330	17 6120	653	4 390	11 730	14	1 15	1 1	1 15	1 1	1 15	1 1	1 15	1 1	1 1	71.9	125	1	1	1 21	1	
100+00N 101+75E	1.3	23460	1	1	167	.4	4 7310	.1	12 102	35940	2630	24 9580	807	15 590	18 730	17	1 13	1 1	1 13	1 1	1 13	1 1	1 13	1 1	1 1	70.0	276	1	1	1 22	2	
100+00N 102+00E	1.4	24390	1	1	115	.3	2 6660	.1	12 45	38390	1080	17 8660	509	8 530	12 1090	19	1 13	1 1	1 13	1 1	1 13	1 1	1 13	1 1	1 1	75.3	204	1	1	1 22	3	
101+00N 98+00E	1.4	18770	1	1	136	.1	3 6780	.1	12 42	33590	1280	16 7830	847	6 390	18 740	40	1 14	1 1	1 14	1 1	1 14	1 1	1 14	1 1	1 1	64.9	164	1	1	1 21	1	
101+00N 98+25E	1.3	24110	1	1	134	.5	2 6280	.1	14 63	38250	1620	16 8370	957	7 530	15 1050	36	1 13	1 1	1 13	1 1	1 13	1 1	1 13	1 1	1 1	71.1	220	1	1	1 24	1	
101+00N 98+50E	1.1	25980	1	1	128	.5	2 4520	.1	14 126	37780	2170	16 7850	892	11 850	18 1050	22	1 10	1 1	1 10	1 1	1 10	1 1	1 10	1 1	1 1	67.1	149	1	1	1 24	2	
101+00N 98+75E	1.3	26350	1	1	183	.5	2 6820	.1	14 82	40800	3160	17 8820	1008	10 440	22 1250	20	1 15	1 1	1 15	1 1	1 15	1 1	1 15	1 1	1 1	73.3	135	1	1	1 28	3	
101+00N 99+00E	1.1	21360	1	1	126	.4	2 6750	.1	13 152	35730	1650	19 8000	923	16 510	19 760	19	1 13	1 1	1 13	1 1	1 13	1 1	1 13	1 1	1 1	66.7	207	1	1	1 24	4	
101+00N 99+25E	1.4	19400	1	1	99	.2	2 5780	.1	15 145	34710	1150	16 7940	1018	17 560	19 680	24	1 15	1 1	1 15	1 1	1 15	1 1	1 15	1 1	1 1	65.8	408	1	1	1 24	14	
101+00N 99+50E	1.0	25790	2	1	110	.3	2 5450	.1	13 56	37070	1250	16 8290	767	8 430	15 640	25	7 11	1 1	1 11	1 1	1 11	1 1	1 11	1 1	1 1	71.6	148	1	1	1 23	3	
101+00N 99+75E	1.1	26240	1	1	140	.5	2 6750	.1	13 79	40640	1400	16 7070	816	24 510	12 890	36	1 12	1 1	1 12	1 1	1 12	1 1	1 12	1 1	1 1	81.5	218	1	1	2 21	4	
101+00N 100+00E a	1.2	26920	1	1	116	.7	2 5270	.1	15 238	40840	1250	28 9120	656	39 490	26 510	16	1 8	1 1	1 8	1 1	1 8	1 1	1 8	1 1	1 1	74.0	167	1	1	2 25	3	
101+00N 100+00E b	1.5	24300	1	1	180	.3	4 6460	.1	16 60	43350	1730	18 8180	1006	27 470	16 820	17	1 11	1 1	1 11	1 1	1 11	1 1	1 11	1 1	1 1	85.4	285	1	1	2 23	12	
101+00N 100+25E	1.0	23730	1	1	101	.4	2 4640	.1	12 95	36280	1450	17 7830	493	26 490	16 390	15	1 9	1 1	1 9	1 1	1 9	1 1	1 9	1 1	1 1	71.2	115	1	1	1 23	1	
101+00N 100+50E	1.7	28970	1	1	78	.4	4 4290	.1	22 234	64230	1880	31 11770	1548	121 510	1 990	7	1 5	1 1	1 5	1 1	1 5	1 1	1 5	1 1	1 1	121.7	353	1	1	14 14	1	

COMP: CJL (SMITHERS EXP. GROUP)

PROJ: MINERAL HILL

ATTN: LORNE WARREN

MIN-EN LABS — ICP REPORT

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

(604)980-5814 OR (604)988-4524

FILE NO: 1S-0035-SJ2

DATE: 91/05/15

\* SOIL \* (ACT:F31)

SAMPLE NUMBER	AG PPM	AL PPM	AS PPM	B PPM	BA PPM	BE PPM	BI PPM	CA PPM	CD PPM	CO PPM	CU PPM	FE PPM	K PPM	LI PPM	MG PPM	MN PPM	MO PPM	NA PPM	NI PPM	P PPM	PB PPM	SB PPM	SR PPM	TH PPM	U PPM	V PPM	ZN PPM	GA PPM	SN PPM	W PPM	CR PPM	AU PPB
101+00N 100+75E	3.9	23150	1	11	121	.3	3	5090	.1	11	35	33450	890	15	6850	498	6	400	16	420	13	1	11	1	1	67.7	186	1	1	1	21	1
101+00N 101+00E	1.6	18690	26	8	89	.2	2	4640	.1	11	89	34430	840	17	7530	531	26	490	12	390	13	1	7	1	1	68.1	110	1	1	1	21	11
101+00N 101+25E	.4	18140	1	8	109	.3	2	5840	.1	11	44	36100	1100	18	6420	515	9	450	11	620	12	1	9	1	1	71.7	240	1	1	1	22	1
101+00N 101+50E	.7	29660	3	8	194	.4	3	7030	.1	17	161	44100	3620	24	10230	1860	15	510	20	970	19	1	13	1	1	77.6	335	1	1	1	27	2
101+00N 101+75E	.2	16860	1	5	125	.3	2	6760	.1	12	40	33110	1220	19	7260	843	9	470	12	590	14	1	14	1	1	66.2	170	1	1	2	21	2
101+00N 102+00E	.4	19130	1	6	189	.3	2	6860	.1	13	32	32810	990	16	6860	1377	3	560	15	630	18	1	18	1	1	67.3	348	1	1	1	19	1
102+00N 98+00E	.9	17230	1	6	215	.4	2	8640	.1	12	147	29680	1760	13	5690	1624	11	370	28	810	16	1	15	1	1	54.4	327	1	1	1	20	5
102+00N 98+25E	.5	17260	1	6	141	.2	3	5610	.1	13	36	35370	1260	17	7480	1077	6	120	16	710	15	1	9	1	1	71.6	115	1	1	2	23	1
102+00N 98+50E	.5	24120	1	6	156	.5	2	6760	.1	14	100	40710	1750	18	9150	1016	12	430	20	740	16	1	11	1	1	75.2	149	1	1	2	26	2
102+00N 98+75E	.5	29670	1	9	146	.5	2	5160	.1	15	94	42940	2820	21	9590	940	9	440	19	1120	18	1	10	1	1	78.6	135	1	1	2	28	3
102+00N 99+00E	.8	26740	1	7	195	.6	2	7510	.1	15	112	40410	1890	21	9920	1372	26	490	27	810	14	1	13	1	1	77.3	173	1	1	1	27	1
102+00N 99+25E	.5	21450	1	7	137	.3	2	7390	.1	15	48	37540	1410	16	8930	1068	17	420	21	690	13	1	14	1	1	73.3	117	1	1	1	25	2
102+00N 99+50E	.6	28430	1	7	158	.5	2	5820	.1	15	123	41910	2030	20	8240	1226	23	430	22	860	16	1	10	1	1	78.1	396	1	1	1	27	1
102+00N 99+75E	.7	25530	1	6	120	.4	3	4240	.1	13	52	38220	1240	17	8510	707	9	560	16	550	14	1	7	1	1	77.6	196	1	1	1	23	1
102+00N 100+00E a	1.0	27240	3	7	110	.6	4	6320	.1	15	140	40000	1320	25	9020	932	33	450	17	420	16	1	9	1	1	80.4	263	1	1	1	25	9
102+00N 100+00E b	.8	25970	1	6	118	.4	2	6120	.1	15	74	42070	1170	17	7590	1231	17	480	15	730	20	1	9	1	1	77.8	309	1	1	2	23	6
102+00N 100+25E	.5	22510	1	5	105	.5	2	3990	.1	12	67	39280	940	16	6850	652	25	900	13	520	18	1	6	1	1	71.1	216	1	1	2	21	1
102+00N 100+50E	.6	20580	47	6	94	.1	2	5790	.1	12	49	37140	1010	19	7100	485	30	500	7	350	24	1	11	1	1	81.6	422	1	1	1	21	2
102+00N 100+75E	.3	20390	2	5	107	.1	2	4780	.1	13	35	36920	1080	18	7380	617	10	430	13	370	13	1	8	1	1	73.7	114	1	1	1	23	2
102+00N 101+00E	.3	18080	1	6	110	.2	2	5710	.1	13	31	34310	1080	15	7550	601	3	470	17	440	12	1	9	1	1	65.3	82	1	1	1	22	1
102+00N 101+25E a	2.0	32670	1	7	212	1.0	2	8440	.1	14	285	42670	2320	34	8290	1397	52	520	29	750	15	1	14	1	1	77.7	363	1	1	1	33	15
102+00N 101+25E b	1.4	22370	5	5	123	.5	3	7190	.1	11	114	35540	1690	22	8080	658	34	470	18	750	11	1	12	1	1	68.0	167	1	1	1	26	35
102+00N 101+50E	.6	13380	6	2	87	.2	3	5530	.1	9	64	25250	1090	16	5610	401	12	430	11	340	13	1	9	1	1	50.5	160	3	1	1	19	3
102+00N 101+75E	1.4	25260	1	5	120	.4	5	6920	.1	14	176	37710	2040	26	12170	959	21	490	15	700	20	1	11	1	1	72.4	508	1	1	1	25	18
102+00N 102+00E	1.3	25070	4	6	183	.6	3	6940	.1	16	282	38770	1830	25	9080	1728	21	410	20	560	28	1	13	2	1	73.5	789	1	1	1	28	13
103+00N 98+00E	.5	16040	1	3	137	.2	3	5810	.1	11	24	29730	1090	13	5830	681	1	490	18	620	10	1	12	1	1	60.0	85	1	1	1	22	1
103+00N 98+50E	.5	14720	1	3	138	.3	2	6870	.1	12	31	32090	720	12	5980	818	1	370	13	810	15	1	11	1	1	63.9	74	1	1	1	22	2
103+00N 99+25E	.5	17590	14	2	84	.5	3	6030	.1	11	226	30690	970	22	7930	649	42	590	15	480	15	1	9	1	1	56.9	109	1	1	1	22	1
103+00N 99+50E	1.1	20320	1	4	116	.2	3	6480	.1	13	78	34250	1110	20	7320	847	26	370	24	520	15	1	11	1	1	66.4	267	1	1	1	25	1
103+00N 99+75E	.9	20990	2	4	147	.3	3	6850	.1	14	55	35210	1090	15	7380	1069	17	350	13	530	20	1	13	1	1	70.4	362	1	1	1	22	1

COMP: CJL (SMITHERS EXP. GROUP)  
 PROJ: MINERAL HILL  
 ATTN: LORNE WARREN

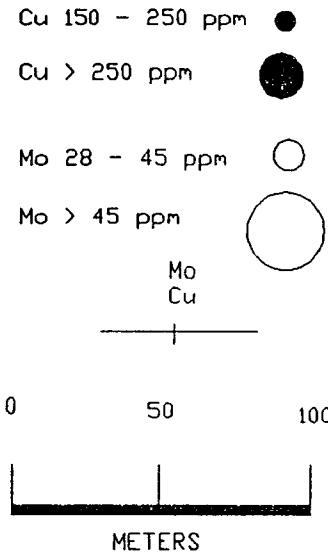
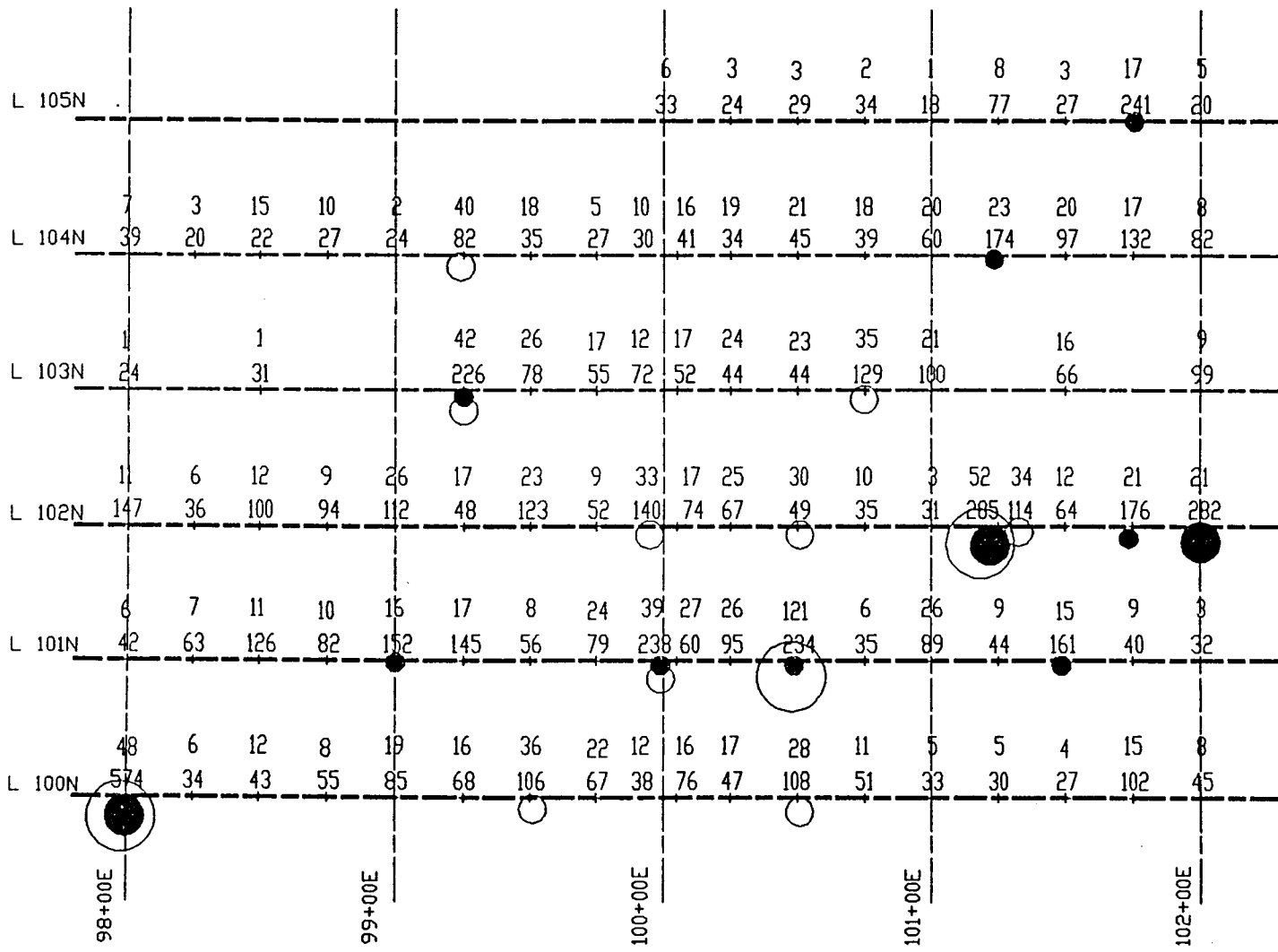
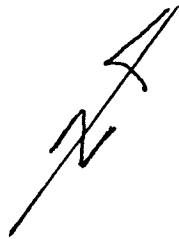
MIN-EN LABS — ICP REPORT  
 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2  
 (604)980-5814 OR (604)988-4524

FILE NO: 1S-0035-SJ3  
 DATE: 91/05/15  
 \* SOIL \* (ACT:F31)

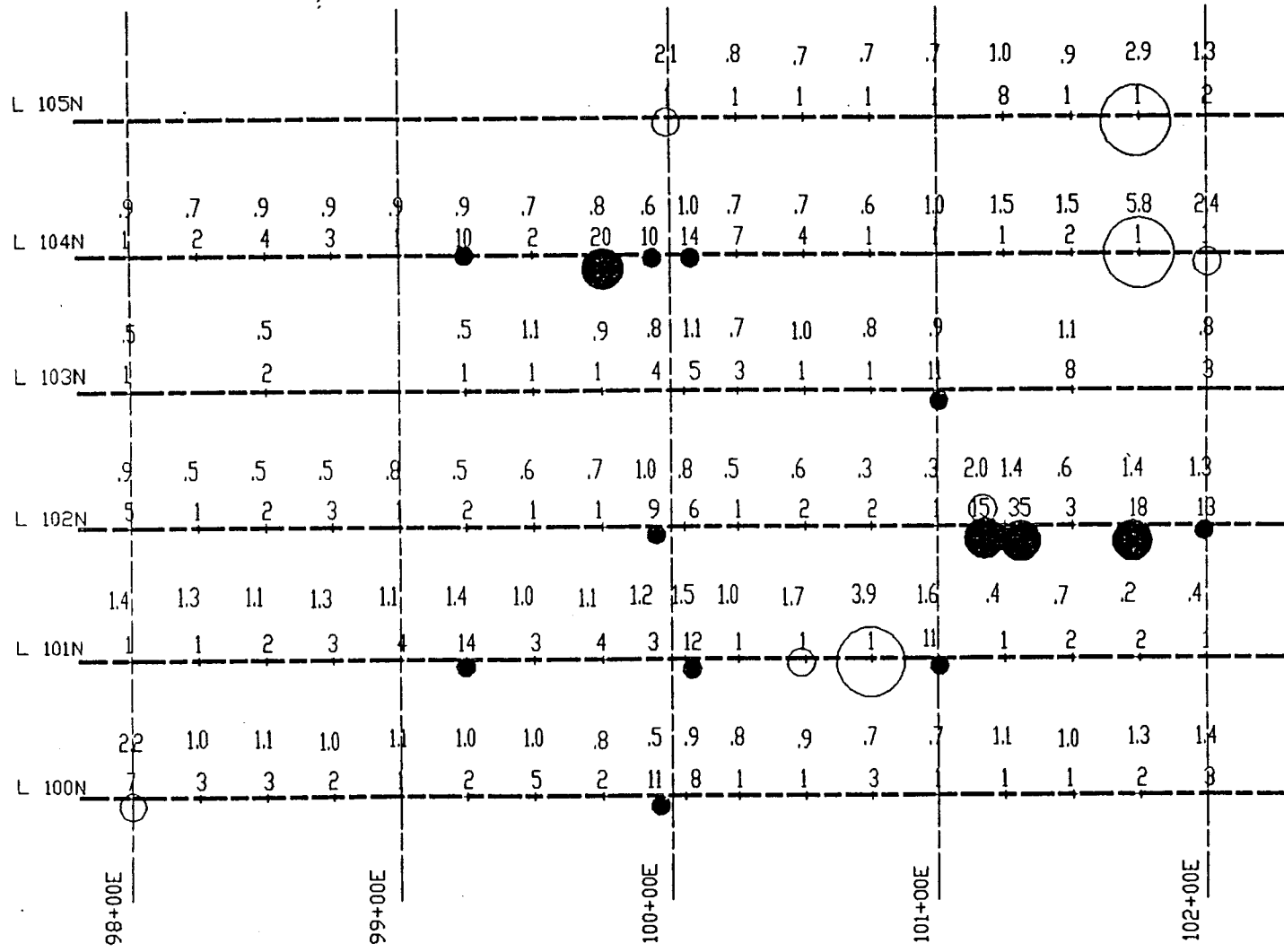
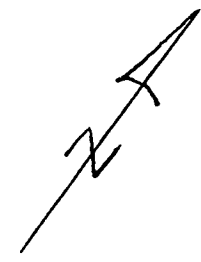
SAMPLE NUMBER	AG PPM	AL PPM	AS PPM	B PPM	BA PPM	BE PPM	BI PPM	CA PPM	CD PPM	CO PPM	CU PPM	FE PPM	K PPM	LI PPM	MG PPM	MN PPM	MO PPM	NA PPM	NI PPM	P PPM	PB PPM	SB PPM	SR PPM	TH PPM	U PPM	V PPM	ZN PPM	GA PPM	SN PPM	W PPM	CR PPM	AU PPM
103+00N 100+00E a	.8	23060	1	7	126	.5	2	5390	.1	15	72	38510	1210	17	7380	1457	12	430	13	550	17	1	7	1	1	76.9	275	1	1	1	20	4
103+00N 100+00E b	1.1	21550	1	7	184	.4	2	6040	.1	15	52	42070	1370	15	5910	1489	17	430	8	720	18	1	10	1	1	80.2	413	1	1	3	20	5
103+00N 100+25E	.7	19440	1	6	91	.4	2	5420	.1	13	44	36360	1080	17	7180	771	24	300	9	410	16	1	7	1	1	71.0	223	1	1	1	20	3
103+00N 100+50E	1.0	20150	1	6	94	.3	2	6260	.1	13	44	37690	980	22	7370	521	23	140	13	370	9	1	8	1	1	77.1	150	1	1	2	23	1
103+00N 100+75E	.8	19570	163	5	95	.3	2	6510	.1	12	129	31310	1120	20	6690	820	35	140	13	380	12	1	8	1	1	64.8	194	1	1	1	20	1
103+00N 101+00E	.9	20430	1	5	99	.3	3	6840	.1	13	100	33580	1610	24	8140	562	21	170	13	400	9	1	9	1	1	66.4	164	1	1	1	20	11
103+00N 101+50E	1.1	16960	1	5	83	.3	2	5540	.1	11	66	33000	1200	19	7340	564	16	140	15	380	12	1	9	1	1	62.8	234	1	1	1	22	8
103+00N 102+00E	.8	17210	1	5	102	.2	2	5540	.1	11	99	32050	1000	19	7430	612	9	430	12	390	15	1	9	1	1	62.7	407	1	1	1	23	3
104+00N 98+00E	.9	17420	1	4	117	.4	2	6890	.1	13	39	34350	1730	17	7540	990	7	170	15	750	18	1	11	1	1	65.1	90	1	1	1	22	1
104+00N 98+25E	.7	13050	1	3	109	.3	2	5520	.1	10	20	27740	780	10	4970	699	3	110	13	590	12	1	9	1	1	54.5	88	1	1	1	19	2
104+00N 98+50E	.9	14230	1	4	110	.3	1	5560	.1	11	22	29780	900	13	5390	803	15	110	11	680	11	1	8	1	1	55.9	96	1	1	1	20	4
104+00N 98+75E	.9	12790	1	4	122	.2	2	6150	.1	10	27	28460	960	11	4710	975	10	490	11	700	15	1	9	1	1	53.4	132	1	1	1	17	3
104+00N 99+00E	.9	14450	1	5	119	.2	2	5680	.1	12	24	33630	960	14	6150	1256	2	410	11	670	15	1	9	1	1	64.4	132	1	1	1	19	1
104+00N 99+25E	.9	16700	1	5	106	.2	2	5980	.1	11	82	29980	910	16	5540	755	40	140	13	610	11	1	9	1	1	59.0	161	1	1	1	21	10
104+00N 99+50E	.7	16670	1	4	91	.4	2	6500	.1	11	35	32140	1280	18	6590	694	18	370	14	650	15	1	8	1	1	63.0	102	1	1	1	21	2
104+00N 99+75E	.8	12930	1	3	145	.2	2	5930	.1	11	27	27080	1250	10	4900	1116	5	340	15	550	16	1	10	1	1	52.5	97	1	1	1	18	20
104+00N 100+00E a	.6	16880	1	5	127	.2	2	6500	.1	12	30	30600	1230	12	5680	965	10	460	12	510	14	1	11	1	1	62.1	195	1	1	1	20	10
104+00N 100+00E b	1.0	19320	1	5	115	.3	2	6240	.1	12	41	33620	950	16	6980	637	16	460	15	470	16	1	10	1	1	66.4	135	1	1	1	23	14
104+00N 100+25E	.7	16340	1	4	112	.2	2	5280	.1	11	34	30580	970	14	6390	961	19	410	15	470	16	1	8	1	1	60.0	124	1	1	1	19	7
104+00N 100+50E	.7	19750	1	5	110	.2	2	5770	.1	13	45	35560	1170	18	8270	690	21	420	13	540	15	1	10	1	1	68.4	104	1	1	1	21	4
104+00N 100+75E	.6	18680	1	6	108	.3	1	5960	.1	12	39	34780	1140	18	7130	665	18	370	11	590	12	1	11	1	1	73.1	117	1	1	1	22	1
104+00N 101+00E	1.0	18280	1	5	101	.2	2	5500	.1	13	60	32940	1470	16	7200	845	20	110	15	530	13	1	9	1	1	62.5	164	1	1	1	22	1
104+00N 101+25E	1.5	24130	1	6	173	.5	2	6940	.1	14	174	37560	1950	21	7900	1267	23	410	20	590	19	1	15	1	1	71.7	330	1	1	1	27	1
104+00N 101+50E	1.5	17560	1	5	100	.2	2	6330	.1	13	97	34310	1390	19	6540	1149	20	410	15	460	17	1	13	1	1	68.2	424	1	1	1	23	2
104+00N 101+75E	5.8	16570	1	4	105	.5	2	5470	.1	10	132	30910	1040	19	6570	803	17	140	16	430	14	1	10	1	1	59.7	499	1	1	1	22	1
104+00N 102+00E	2.4	15420	1	3	98	.1	3	6230	.1	9	82	26570	1100	18	6060	446	8	130	11	300	13	1	12	1	1	55.1	334	1	1	1	19	1
105+00N 100+00E	2.1	15450	1	3	61	.3	2	5140	.1	10	33	29640	700	11	5760	368	6	310	10	750	15	1	8	1	1	55.5	66	1	1	1	19	1
105+00N 100+25E	.8	15240	1	4	125	.3	2	4810	.1	10	24	29070	860	12	5830	761	3	430	15	690	13	1	10	1	1	56.4	121	1	1	1	21	1
105+00N 100+50E	.7	13980	1	3	152	.2	1	6560	.1	11	29	28860	1090	10	5340	1014	3	350	14	640	16	1	11	1	1	53.4	152	1	1	1	18	1
105+00N 100+75E	.7	14060	1	14	141	.2	1	8010	.1	12	34	31260	870	11	6070	976	2	610	14	870	15	1	12	1	1	57.7	97	1	1	1	21	1



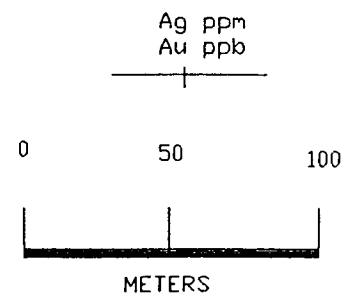




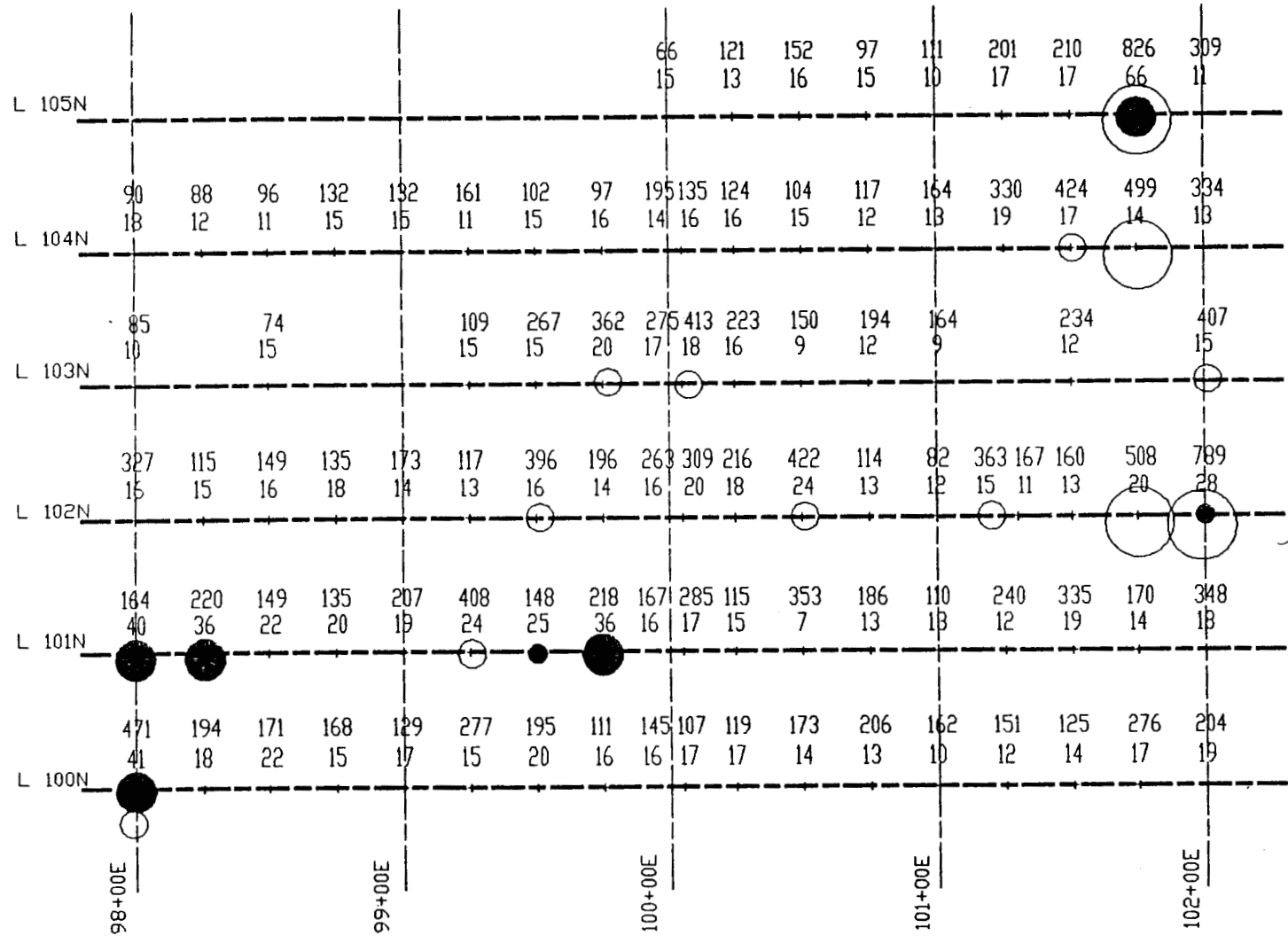
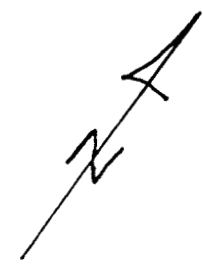
MINERAL HILL  
 Figure 5.  
 SOIL GEOCHEMISTRY  
 1991 GRID  
 Cu Mo  
 SCALE: 1:2500  
 JUNE 1991



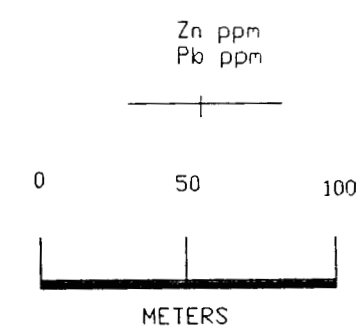
- Au 9-14 ppb
- Au >14 ppb
- Ag 1.7-2.4 ppm
- Ag >2.4 ppm



MINERAL HILL  
Figure 6  
SOIL GEOCHEMISTRY  
1991 GRID  
  
Au Ag  
  
JUNE 1991



- Pb 25-32 ppm ●
- Pb >32 ppm ●
- Zn 354-490 ppm ○
- Zn >490ppm ○



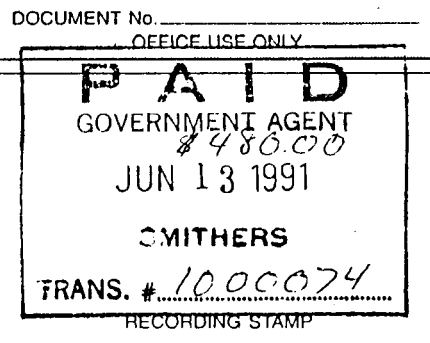
MINERAL HILL  
Figure 7.  
SOIL GEOCHEMISTRY  
1991 GRID

Pb Zn

JUNE 1991



MINERAL ACT



# Statement of Work — Cash Payment

1. Lorne B. Warren  
(Name) 128313  
Valid subsisting FMC No. 280283  
Box 662  
(Address)  
Smithers, B.C.  
VOJ-2N0 847-3612  
(Postal Code) (Telephone Number)

Agent for SELF + P.J. Huber.  
(Name) 128313 & 1124  
Valid subsisting FMC No. - 249636  
Site 80 Comp 33  
(Address)  
Keremeos B.C. R.R. #1  
VOX-1N0 499-2962  
(Postal Code) (Telephone Number)

STATE THAT: [NOTE: If only paying cash in lieu, turn to reverse and complete columns G to J and S to V.]  
1. I have done, or caused to be done, work on the Mineral Hill Group of  
Claim(s)  
Record No(s). 206, 397, 398, 5216, 5215.  
Situate at Mineral Hill in the Omineca Mining Division,  
Work was done from April 15, 1991, to June 01, 1991.

TYPE OF WORK

- PHYSICAL: Work such as trenches, open cuts, adits, pits, shafts, reclamation, and construction of roads and trails. Details as required under section 13 of the Regulations, including the map and cost statement, must be given on this statement.
- PROSPECTING: Details as required under section 9 of the Regulations must be submitted in a technical report. Prospecting work can only be claimed once by the same owner of the ground, and only during the first three years of ownership.
- GEOLOGICAL, GEOPHYSICAL, GEOCHEMICAL, DRILLING: Details must be submitted in a technical report conforming to sections 5 through 8 (as appropriate) of the Regulations.
- PORTABLE ASSESSMENT CREDIT (PAC) WITHDRAWAL: A maximum of 30% of the approved value of geological, geophysical, geochemical and/or drilling work on this statement may be withdrawn from the owner's or operator's PAC account and added to the work value on this statement.

TYPE OF WORK (Specify Physical (include details), Prospecting, Geological, etc.)	VALUE OF WORK		
	Physical	*Prospecting	*Geological etc.
<u>Physical Reclamation Work.</u>			
<u>20 mandays @ \$150/day</u>	<u>3000</u>		
<u>20 mandays Room + Board @ \$40</u>	<u>800</u>		
<u>6 Vehical days @ \$70/day.</u>	<u>420</u>		
<u>4 Powersaw days @ \$25</u>	<u>100</u>		
<u>Geochem Report.</u>			
<u>\$850.00 Assays</u>			
<u>750.00 Labour.</u>			
<u>750.00 L.B. Warren Supervision Etc.</u>			
<u>560.00 8 Vehical days.</u>			
<u>480.00 Room + Board.</u>			
<u>160.00 Materials Used.</u>			
TOTALS	<u>A 4320 +</u>	<u>B</u>	<u>+ C 4275</u>
PAC WITHDRAWAL — Maximum 30% of Value in Box C Only			<u>D 85</u>
from account(s) of <u>L.B. Warren</u>			<u>E 1282.00</u>
Who was the operator (provided the financing)? Name <u>L.B. Warren</u>			<u>F 98</u>
Address <u>Box 662</u>			
<u>Smithers, B.C. Phone: 847-3612.</u>			

Transfer amount in Box F to reverse side of form and complete as required.



