

84-1347-13392
11/85

GEOLOGICAL AND GEOCHEMICAL EVALUATION

OF THE

HORSEFLY LAKE AREA PROPERTIES

Consisting of:

Astro Group Mineral Claims
Fritz Group Mineral Claims

Cariboo Mining Division
British Columbia
NTS 93A/7W

Latitude $52^{\circ} 23'$ Longitude $120^{\circ} 50'$

HOMESTAKE MINERAL DEVELOPMENT COMPANY
VANCOUVER, B.C.

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

13,392

November 1984

M. A. O'Donnell
M. P. Mudry, P. Geol.

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1.0 INTRODUCTION

1.1 Summary

This report records the results of part of a regional geological and geochemical reconnaissance program carried out in the Quesnel Trough of British Columbia during the summer of 1984 by Homestake Mineral Development Company staff. Some areas received more detailed geochemical sampling as follow-up to the reconnaissance work. A linear belt of Upper Triassic black phyllitic argillites on the eastern margin of the Quesnel Trough was the principal exploration target in all areas (O.F. 574 Campbell R.B. 1978).

The Astro Group and Fritz Group mineral claims were staked in October and November 1983 following the announcement by Eureka Resources of significant gold values intersected in diamond drilling on their Frasergold property.

During the months of May to August, 1984, reconnaissance prospecting and geochemical soil and silt surveys were conducted over the Astro Group and Fritz Group mineral claims. Results indicated the presence of gold and silver anomalies. Gold values from soil samples ranged up to 92 ppb, while silver values reached 13.5 ppm in one silt sample. Slightly anomalous values in lead, zinc, barium, and molybdenum were also noted. Limited follow-up failed to expand gold anomalies, but did expand areas anomalous in silver.

A total of 142 soil, 56 silt, and 30 rock samples were collected from the Astro and Fritz Group area.

1.2 Location and Access

The Horsefly Lake properties are located south of Horsefly Lake near the confluence of Harvie Creek and the Horsefly River, 85 kilometers east of Williams Lake, B.C. (Figure 1 and 2). The properties are centered at Latitude $52^{\circ} 23'$ and Longitude $120^{\circ} 50'$. Access is primarily by good logging roads to the Harvie Creek turn-off, from which seasonal logging roads lead to several points throughout the property.

Outcrop is best exposed along creek valleys and on rare cliffs. Elsewhere on the properties, outcrop exposure is poor.

The properties lie within an area of active logging.

1.3 Physiography and Vegetation

Topographic relief within the Astro Group and Fritz Group is moderate to steep with elevations ranging from 3,300 feet (1,000 meters) to in excess of 5,500 feet (1,700 meters).

Lower slopes and valley bottoms of the Astro and Fritz Group area have been recently logged. Vegetation of the unlogged forests generally consists of good commercial stands of cedar, spruce, and fir, with sparse undergrowth. In certain locales underbrush is moderate to dense with abundant devils club and young cedar second growth. At higher elevations, alpine meadows are present, exposing more outcrop.

1.4 Claims Schedule: Astro and Fritz Group

This report deals with those claims listed in the two table

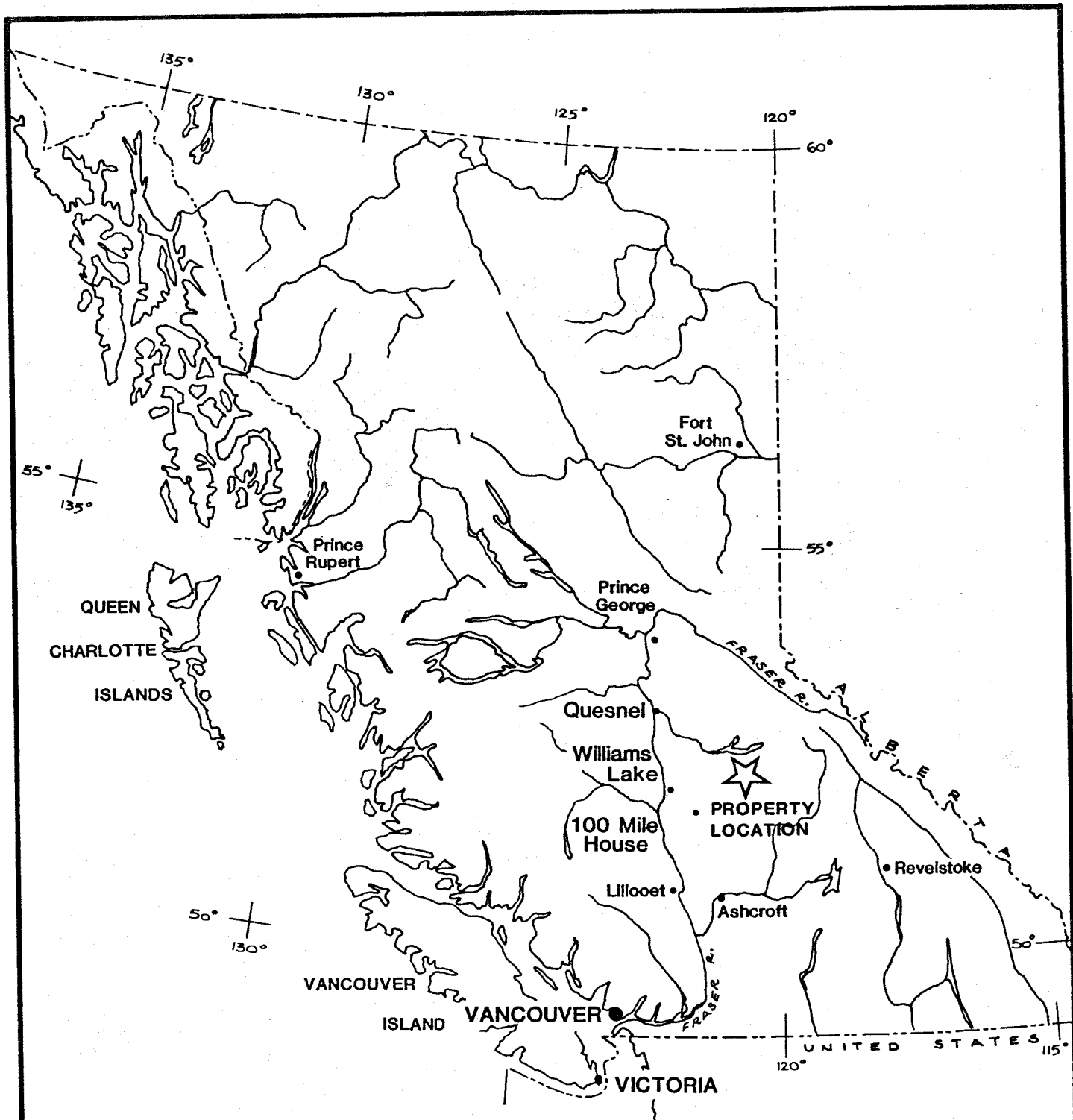
below, and as outlined on the attached claim sketches:

Astro Claim Group

<u>Claim Name</u>	<u>Number of Units</u>	<u>Record Number</u>	<u>Recording Date</u>
Astro 1	20	5358	November 14, 1983
Astro 2	20	5359	November 14, 1983
First Class 1	16	5496	November 22, 1983
First Class 2	20	5497	November 22, 1983
King Tut	20	5471	November 22, 1983
Harvie 1	1	5472	November 22, 1983
Harvie 2	1	5473	November 22, 1983
Harvie 3	1	5474	November 22, 1983
Total	99 Units		

Fritz Claim Group

<u>Claim Name</u>	<u>Number of Units</u>	<u>Record Number</u>	<u>Recording Date</u>
Jubilee 1	9	5498	November 22, 1983
Starlight 1	12	5500	November 22, 1983
Fritz 1	20	5360	November 14, 1983
Fritz 2	20	5361	November 14, 1983
Total	61 Units		

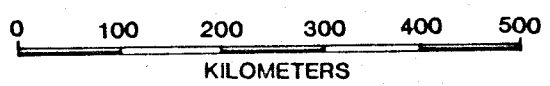


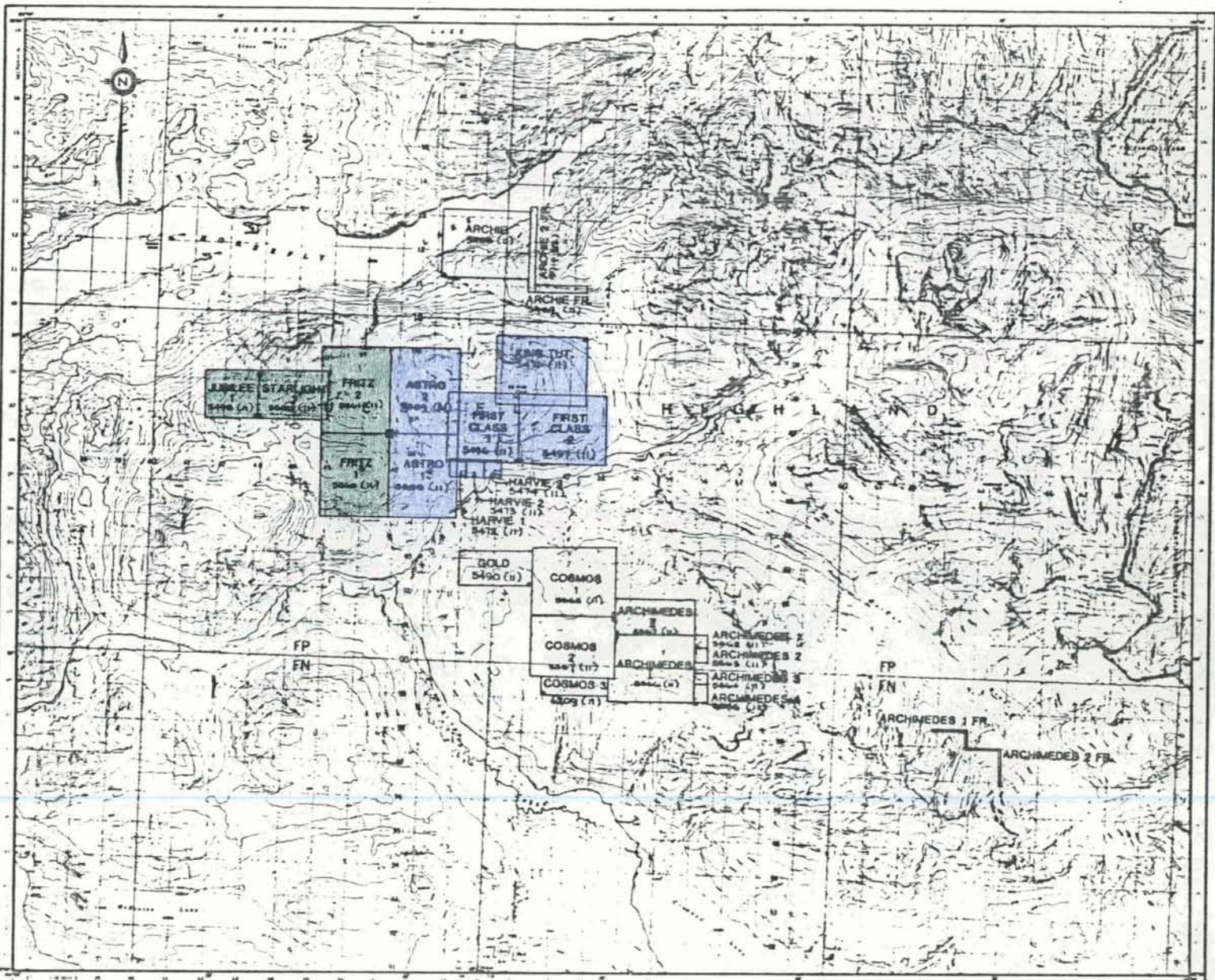
HOMESTAKE
MINERAL DEVELOPMENT COMPANY

**ASTRO GROUP & FRITZ GROUP
GENERAL LOCATION MAP**

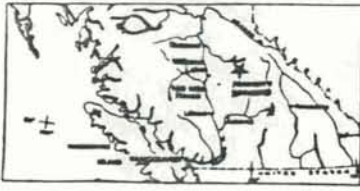
Central British Columbia

DRAWN	DATE	FILE CODE	FIG. 1
	11/84	93 A/7	
Revised _____			





- ASTRO GROUP
- FRITZ GROUP



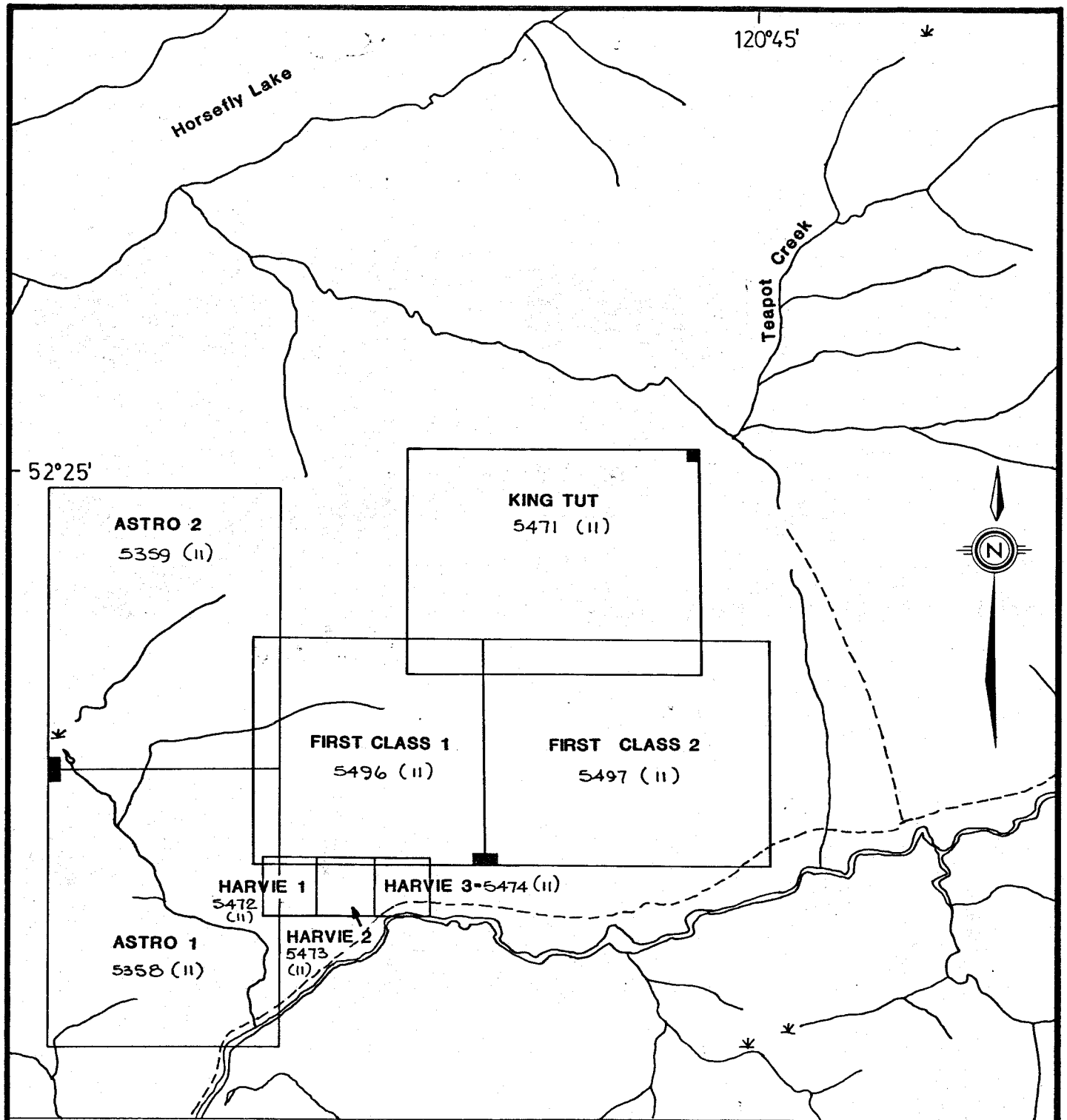
0 5000 metres

HOMESTAKE
MINERAL DEVELOPMENT COMPANY




**HORSEFLY LAKE AREA
PROPERTIES
CLAIM LOCATION
CARIBOO MINING
DISTRICT**

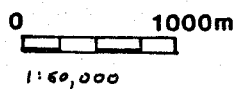
DRAWN KAB	DATE 1/78	FILE CODE 8647
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Fig. 2



LEGEND

-  CLAIM BOUNDARY
-  LCP
-  ROAD



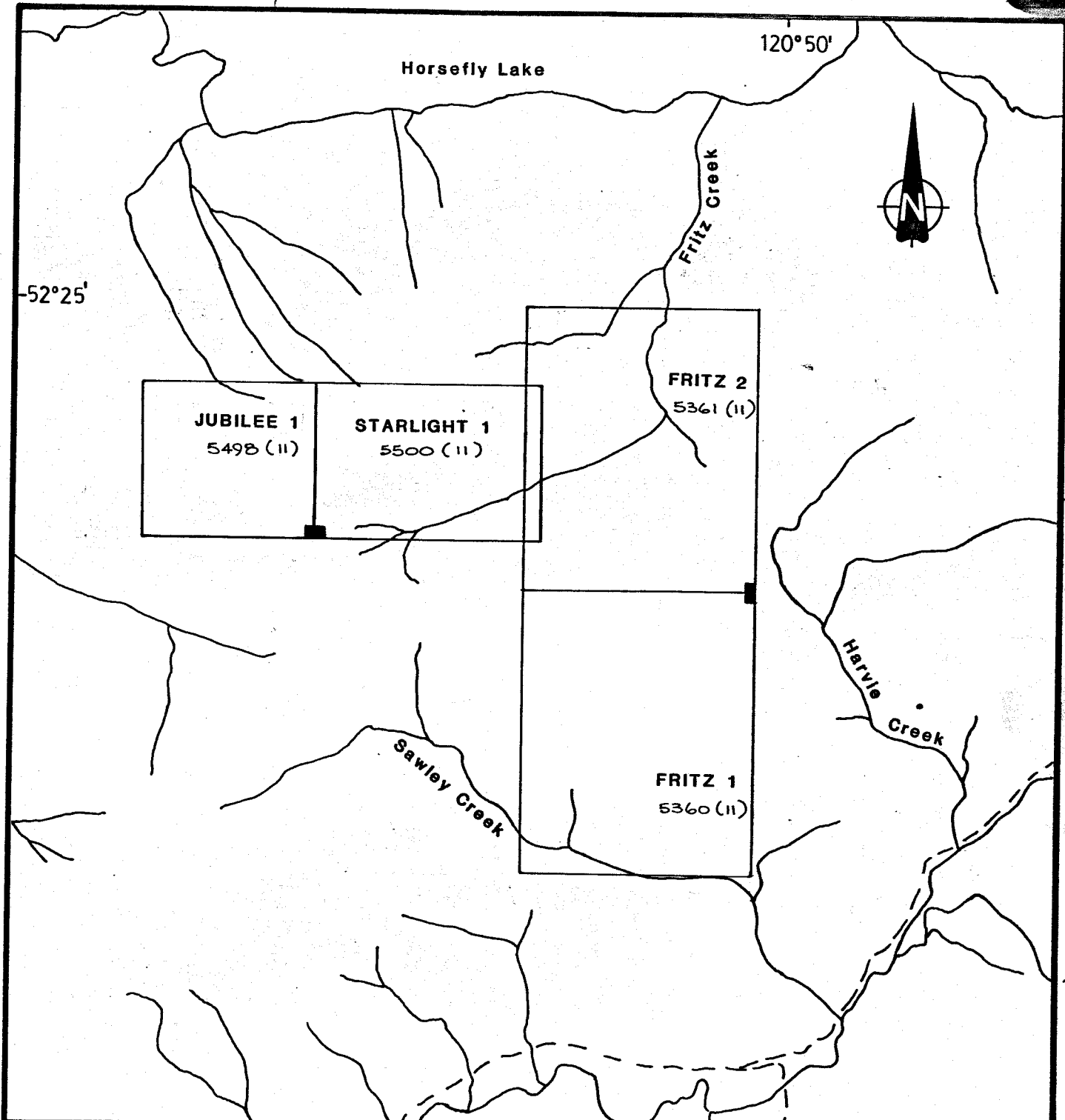
HOMESTAKE MINERAL DEVELOPMENT COMPANY






**ASTRO GROUP
CLAIM SKETCH**

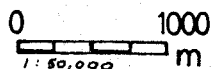
CARIBOO MINING DISTRICT

DRAWN KLH	DATE 11/84	FILE CODE 93A/7	FIG. 3
Revised _____			



LEGEND

-  CLAIM BOUNDARY
-  LCP
-  ROAD



HOMESTAKE 
MINERAL DEVELOPMENT COMPANY

--- **FRITZ GROUP**
CLAIM SKETCH
CARIBOO MINING DISTRICT

DRAWN
GC, KLH

DATE
9/84

FILE CODE
93A/7

FIG. 4

Revised _____

2.0 REGIONAL GEOLOGY

The Astro Group and Fritz Group are situated within a series of Upper Triassic sedimentary and volcanic rocks located near the eastern edge of the Quesnel Trough structural terrane. The Quesnel Trough rocks are fault bounded along the eastern margin against late Paleozoic schists, gneisses and phyllites of the Shuswap Metamorphic Complex of the Omineca Structural Terrane (O.F. 574 Campbell R.B. 1978).

Westward, the Quesnel Trough rocks consist of basic to intermediate volcanic, volcanoclastics, and sedimentary rocks that were intruded by Jurassic and Cretaceous intrusive rocks.

The region is characterized by elongate northwesterly trending stratigraphic assemblages of sedimentary and volcanic rocks.

The properties are underlain by a Triassic aged assemblage of black phyllitic argillites, siliceous sediments, andesite breccia and tuffs which have been metamorphosed to the greenschist facies.

3.0 PROPERTY GEOLOGY

The claims overlie an interfingered contact between the Triassic phyllitic argillites and Takla-equivalent intermediate to felsic volcanic flows, pyroclastic rocks, and intercalated siltstone and argillites.

3.1 Geology

The rocks have been divided into six main map units. These include: Unit 1, black to gossanous phyllitic argillites; Unit 2, grey massive to laminated siliceous sediments, intercalated siltstone, argillites and pyroclastic rocks; Unit 3, felsic to intermediate flows and pyroclastic rocks; Unit 4, augite porphyry breccia flow; Unit 5, pyroxene gabbro sill; Unit 6, feldspar porphyry dyke.

Unit 1 consists of phyllitic argillite that varies from a black to dark grey foliated rock to a dark grey rusty fissile argillite. This unit commonly contains numerous quartz stringers which appear to be the product of regional metamorphism. The quartz is generally parallel to the main foliation, occurring as short veins, lenses and pods. In places the unit may become fine grained, highly fissile, carbonaceous to graphitic argillite. This unit underlies most of the southern and eastern portions of the properties. The phyllitic argillite is mineralized with pyritic quartz stringers which were not found to contain anomalous precious metal values.

Unit 2, located in the northwest portion of the property, consists of greenish grey, massive to laminated siliceous siltstone

commonly interbedded with coarser tuffaceous pyroclastic rocks and, to a lesser extent, with black, phyllitic argillite. The sequence is believed to be a transition zone between the phyllitic argillite of Unit 1 and the predominantly volcanic flows and pyroclastic rocks of Unit 3.

Unit 3 outcrops southwest of the properties, and consists of felsic to intermediate weakly altered tuffs, intermediate volcanic flows, buff to grey weakly foliated tuffs, block and ash tuffs, and weakly sericitized volcanoclastics.

Unit 4 may be a later volcanic flow acting as a cover over Units 1 and 2. The rock comprises a light to medium green andesitic augite porphyry breccia. Breccia fragments range up to 75 cm long and 30 cm wide commonly containing 20-30% dark green augite crystals. The best exposures of Unit 4 are found in the north-central area of the Astro Group.

Unit 5 is not found in outcrop on the property, but mafic geochemical signatures in soil samples suggest that it may be present on the southern flanks of Big Slide Mountain. On nearby claims this unit occurs as coarse-grained mafic to ultramafic sills rich in pyroxene and calcic plagioclase.

Unit 6 outcrops on the upper slopes of the Starlight mineral claim as a small, siliceous potassium feldspar porphyritic dyke in brecciated contact with the country argillite.

3.2 Alteration

Alteration varies from weak sericitization to weak silicification, with local very limited, very weak argillic zones and carbonatization.

Silicification is seen as quartz veining and/or podding in the argillite of the southern portion of the Astro 1 mineral claim, and in the intercalated flows, tuffs, and siltstones on the mountains drained by Fritz Creek. Quartz-carbonate veining, bleaching, and minor argillic alteration are also noted in the latter locality. The feldspar-porphyritic dyke has a limited, silicified halo.

Weak sericitization is pervasive in the volcanic flows and volcanoclastic rocks southwest of the properties, and more poorly developed in tuffaceous interbeds to the north.

3.3 Mineralization

Pyrite was the only form of sulphide mineralization observed in the phyllitic argillites and siliceous sediments of the Astro and Fritz Groups. Pyrite in those units appeared to be restricted to rocks exposed along Sawley Creek, where it composes up to 2 modal percent of the rock. Pyrite occurs there as granular stringers, blebs, and fine to medium grained euhedral to subhedral disseminations.

In the volcanic flows and pyroclastic rocks southwest of the properties, both pyrite and pyrrhotite are present in varying sub-equal ratios as fine disseminations together forming less than 2 modal percent of the rock.

These mineralized zones failed to contain anomalous precious metal values.

No other units identified on the property to date have been found to be mineralized.

3.4 Structure

Field evidence suggests that the Astro and Fritz Group areas were affected by at least 3 episodes of deformation.

The main foliation marks tight, upright folding (D_2) about a northwest to west trending axis.

Crenulation of the main foliation defines a later phase of deformation, D_3 , while poorly defined cleavage offset by the main foliation suggests an earlier phase of deformation, D_1 .

Subsequent to this ductile deformation, minor brittle deformation is expressed by northeast trending shears in the phyllitic argillite and a northwest trending fracture set in the more massive siltstone. Uncertainty in the limited structural data and lack of lithological continuity prevent meaningful application of any detailed analysis of the data collected to date.

4.0 GEOCHEMISTRY

4.1 Sampling Procedures

Soil samples were collected on reconnaissance traverses perpendicular to the stratigraphy and later on infill lines in areas of anomalous reconnaissance samples. Sampling intervals varied from 100 meters to 300 meters on the soil traverses. All traverses were established with flagging, compass, and hip chains. Each sample site was identified with flagging and the appropriate sample number. Samples of the B horizon of the soil profile were collected from depths of 15 to 40 cm. The 500 to 750 gm sample was described as to colour, size fraction, and organic content prior to being placed in a kraft paper bag. All samples were dried prior to shipment to the analytical laboratory.

Rock samples were collected as composite grab samples or chip samples. Chip samples were collected in a narrow 5 to 10 cm swath as continuous chips across the strike of lithological units. All samples were terminated at prominent lithological or mineralogical contacts. Lengths of samples ranged from 2 to 5 meters. One to three kilograms of sample were collected.

Composite grab samples were collected over an area not greater than 5 meters of the same lithological unit. Most samples were taken over smaller areas because of the lack of sufficient outcrop. One to two kilograms of sample were collected.

Stream sediments were collected, usually during soil reconnaissance traverses. On stream sediment traverses, the samples were collected at intervals 200 to 300 meters. Samples were collected from the center of the stream. Field data including the width, depth and flow rate

of the stream, and the colour, composition and organic content of the sample were recorded at each sample site. Sample weight ranged from 300 to 500 gm and each was stored in kraft paper bags. Samples were dried prior to shipment to the laboratory.

Each sample was assigned a nine digit code:

B B - 0 7 - 1 - 7 3 0 4

The first two digits are letters which refer to the claim group. The third and fourth digits are numbers identifying the individual claim. The fifth digit classifies the type of sample as follows:

- 1 = silt sample
- 3 = soil sample
- 4 = rock sample

The final four digits uniquely specify the sample.

For example, in BB-07-1-7304, "BB" refers to groups in the Horsefly Lake area, "07" designates the Astro 2 mineral claim, "1" classifies the sample as a silt sample and "7304" names the specific sample.

On most maps, the initial four digits are omitted.

4.2 Geochemical Results

A total of 228 rock, soil, and silt samples were collected on the Astro and Fritz Groups. All of the analytical results for gold were plotted on the "Gold Geochemistry" map (Map 2) at a scale of 1:10,000.

Gold values ranged up to a high of 92 ppb in a soil sample from the east side of the Astro 1 mineral claim. Several other anomalous gold values (≥ 20 ppb) were obtained. All except one were found on the Astro 1 claim.

Elevated silver values (> 1.2 ppm) were more widespread, and ranged up to 13.5 ppm in a silt sample from the Astro 1 claim.

Although no correlation between silver and gold values was found, there appeared to be an enrichment in lead and zinc accompanying the higher silver values.

In some Fritz Group soil samples, elevated silver values were sometimes accompanied by slightly anomalous molybdenum and barium values. These molybdenum and barium "anomalies" also occur independently of silver anomalies, and probably reflect underlying lithology or geochemical dispersive processes rather than mineralization.

Elevated values in Ni, Co, Cu, and Mg in soil samples from the southern flanks of Big Slide Mountain may reflect the presence of underlying mafic or ultramafic rocks.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Much of the area covered by the Astro and Fritz Group claims is underlain by an assemblage of Upper Triassic-aged argillites, siliceous siltstones, and pyroclastic rocks. These lithologies may correlate with the similar lithologies which host the gold occurrence currently being explored by Eureka Resources and Amoco on their Frasergold property.

Several single sample site precious metal anomalies were recorded in the course of the geochemical program. Limited follow-up has expanded some silver anomalies.

The source rocks for these anomalies have not yet been successfully identified and sampled.

On the basis of these results a limited program of infill geochemical sampling and mapping is warranted to fully explore the claims.

6.0 REFERENCES

- Campbell, R. B., 1978 Geology of the Quesnel Lake Map - Area
B.C. 1:125,000 G.S.C. Open File 574.
- Campbell, R. B., 1963 Quesnel Map Sheet 1" to 4 miles; G.S.C.
map 1-1963
- Campbell, K. V., 1971 Metamorphic Petrology and Structural
Geology of the Crooked Lake Area,
Cariboo Mountains, B.C. (unpublished
Ph.D. Thesis, University of Washington)

APPENDIX A

STATEMENT OF EXPENDITURES

FRITZ GROUP AND ASTRO GROUP

LABOUR (field 1984)

P. Mudry:	May 1,4,8,18,21,28,30,31 June 5-7,13 July 3,16,28	
	19 days @ \$133/day	\$2,527.00
G. Cooper:	May 4,8,16,17,20,24,28,30,31 June 22,23,28,29	
	13 days @ \$122/day	\$1,586.00
P. Plishka:	May 4,8,17,20,21,24,25,30,31 June 5-7 July 21-26,28,29,31 August 17,18	
	23 days @ \$108/day	\$2,484.00
M. O'Donnell:	May 21,28,30,31	
	4 days @ \$108/day	\$ 432.00
K. Harrap:	May 30,31 June 5,6,7 July 21-26,28,29	
	13 days @ \$82/day	\$1,066.00
F. Speidel:	May 17,18,21,24,30,31	
	6 days @ \$93/day	\$ 558.00
	Sub Total	\$ 9,653.00

LABOUR (office 1984)

P. Mudry:	3 days @ \$133/day	399.00
K. Harrap:	3 days @ \$ 93/day	279.00
Drafting & Typing		400.00
	TOTAL LABOUR	\$ 9,731.00

TRANSPORTATION

Truck:	Two Trucks	
	16 days @ \$50/day x 2	1,600.00
	Fuel and Maintenance	200.00

TRAVEL

Travel Expenses, Groceries, Accommodation, Meals	78 man days @ \$50/day	3,900.00
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MATERIALS AND SUPPLIES

Flagging, Topo fil, Kraft Bags, etc.	500.00
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ANALYTICAL

30 Rock sample prep	@\$2.75	82.50
142 Soil sample prep	@\$0.60	85.20
56 Silt sample prep	@\$0.60	33.60
228 30 Element ICP	@\$6.00	1,368.00
228 Geochem Au by FA+AA	@\$5.50	1,254.00

TOTAL GEOCHEMISTRY	2,823.30
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GRAND TOTAL	18,754.30
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TOTAL COSTS CLAIM FRITZ GROUP	8,251.90
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TOTAL COSTS CLAIM ASTRO GROUP	10,502.40
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Note: Grand Total expenditure breakdown reflects the percentage of samples collected from each Group relative to the total area of contiguous claims.

APPENDIX B
GROUPING NOTICES
AND
ASSESSMENT FILINGS
FRITZ GROUP AND ASTRO GROUP



MINERAL ACT

STATEMENT OF EXPLORATION AND DEVELOPMENT

I, J. F. GILLAN (Name) Agent for HOMESTEAD MINERAL DEVELOPMENT CO. (Name)
201-850 HOMER ST. (Address) 201-850 HOMER ST. (Address)
VANCOUVER B.C. (Address) VANCOUVER B.C. (Address)
V6B 2W5 (Postal Code) 684-2345 (Telephone Number) V6B 2W5 (Postal Code) 684-2345 (Telephone Number)
 Valid subsisting F.M.C. No. 267567 Valid subsisting F.M.C. No. 234244

STATE THAT

1. I have done, or caused to be done, work on the AMES, ADONIS, FIRST CHASE, HARVE, I Claim(s)
 Record No.(s) 5358(11), 5359(11), 5496(11), 5472
 Situate at HARVE CREEK (43A/7W) in the CARIBOO Mining Division,
 to the value of at least \$6502.40 dollars. Work was done from the 1 day
 of MAY 19 84, to the 30 day of SEPT 19 84

2. The following work was done in the 12 months in which such work is required to be done:

(COMPLETE APPROPRIATE SECTION(S) A, B, C, D, FOLLOWING)

A. PHYSICAL

(Trenches, open cuts, adits, pits, shafts, reclamation, and construction of roads and trails)

(Give details as required by section 13 of regulations.)

SUB-RECORDER
 RECEIVED
 NOV 29 1984
 222481E
 M.R. # 222481E \$
 VANCOUVER, B.C.

COST

TOTAL PHYSICAL

I wish to apply \$ of physical work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record no.)

B. PROSPECTING

(Details in report submitted as per section 9 of regulations.)
 (The Itemized cost statement must be part of the report.)

COST

I wish to apply \$ of this prospecting work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record no.)



Province of British Columbia
 Ministry of Energy, Mines and Petroleum Resources
 MINERAL RESOURCES BRANCH-TITLES DIVISION

SUB-RECORDER
 RECEIVED
 NOV 14 1984
 M.R.# 2224235
 VANCOUVER, B.C.

MINERAL ACT
 FORM 1

NOTICE TO GROUP

Mining Division C.A.K.I.B.C. Location FRITZ CREEK

Name of group FRITZ Map No. 93A/7W

We, the undersigned owners* of the following adjoining claims, desire to group them according to the provisions of the Mineral Act:-

NAME OF CLAIM	No. of Units	Record No.	Month of Record	SIGNATURE OF OWNER*	Free Miner Certificate No.
JUBILEE 1	9	5498	11	HOMESTEAD MINERAL DEVELOPMENT CO.	234244
STARLIGHT 1	12	5580	11	201-850 HOMER ST. VANCOUVER, B.C.	
FRITZ 1	20	5360	11	V.L.B. 245	
FRITZ 2	20	5361	11	J.S. MORROW AGENT	

* May be signed by agent on behalf of owner.



Province of British Columbia
 Ministry of Energy, Mines and Petroleum Resources
 MINERAL RESOURCES BRANCH-TITLES DIVISION

SUB-RECORDER
 RECEIVED

NOV 14 1984

MINERAL ACT

M.F. # 222423E
 VANCOUVER, B.C.

FORM 1

NOTICE TO GROUP

Mining Division CARIBOO Location HARVIE CREEK

Name of group ASTRO Map No. 9347W

We, the undersigned owners* of the following adjoining claims, desire to group them according to the provisions of the Mineral Act:-

NAME OF CLAIM	No. of Units	Record No.	Month of Record	SIGNATURE OF OWNER*	Free Miner Certificate No.
ASTRO 1	20	5358	11	HOMESTEAD MINERAL DEVELOPMENT CO.	234246
ASTRO 2	20	5359	11	221-850 HOMER ST. VANCOUVER, B.C.	
FIRST CLASS 1	10	5496	11	VAB ZWS	
FIRST CLASS 2	20	5497	11		
KING TUT	20	5471	11	J. J. MORROW AGENT	
HARVIE 1	1	5472	11		
HARVIE 2	1	5473	11		
HARVIE 3	1	5474	11		

* May be signed by agent on behalf of owner.



Province of British Columbia
Ministry of Mines and Petroleum Resources

APPLICATION TO REDUCE THE SIZE OF A MINERAL CLAIM

MINERAL ACT
(Section 18)

SUB-RECORDER
RECEIVED
NOV 19 1984
M.R. # 2224506
VANCOUVER, B.C.

1. HOMESTAKE MINERAL DEVELOPMENT CO. *Agent for
(Name) (Name)

201-85th HOMER ST. VANCOUVER BC
(Address) (Address)
NOB 2WS

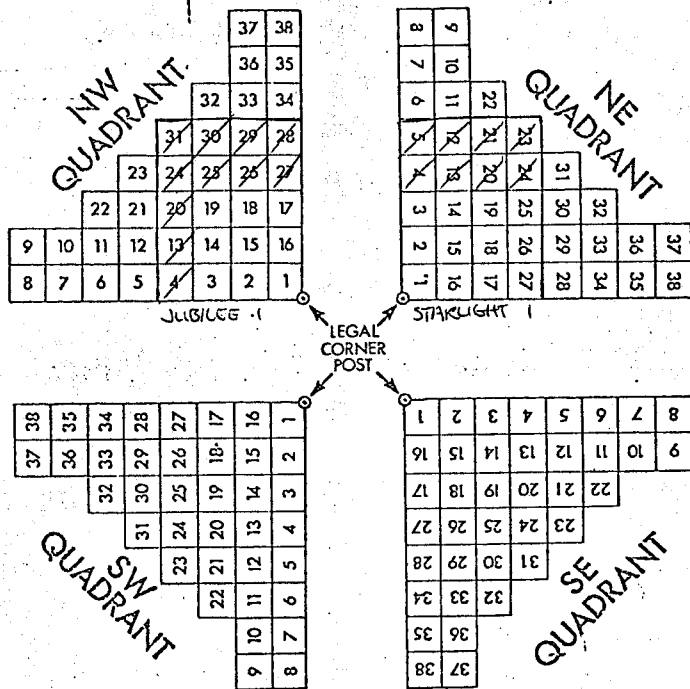
make application to reduce the under listed mineral claims by dropping units in accordance with the regulations. The unit numbering system shown on the reverse of the application has been used to denote the unit(s) to be dropped.

Name of claim	Record no.	Units to be dropped	OFFICE USE ONLY Value of exploration and development to be credited to reduced claim
<u>JUBILEE 1</u>	<u>5498(11)</u>	<u>4, 13, 20, 24, 25, 26, 27, 28, 29, 30, 31</u>	
<u>STARLIGHT 1</u>	<u>5500(11)</u>	<u>4, 5, 12, 13, 20, 21, 23, 24</u>	
<u>PATA CLAIMS ARE IN THE</u>			
<u>CHARLES MINING DIVISION</u>			

Total \$

*Agent must be authorized in writing.

14 November 1984
(Date)
(Signature) [Signature] P. Geal
Regional Geologist



UNIT NUMBERING SYSTEM

To use the unit numbering system:

1. Relate the claims to be reduced to the diagram shown above and select the appropriate quadrant, which would be:

SE if legal corner post is at the NW corner of claim.
 SW if legal corner post is at the NE corner of claim.
 NW if legal corner post is at the SE corner of claim.
 NE if legal corner post is at the SW corner of claim.

2. List the numbers of the units you wish to drop in the appropriate space on the front of the application.

C. DRILLING <small>(Details in report submitted as per section 8 of regulations.) (The itemized cost statement must be part of the report.)</small>	COST
D. GEOLOGICAL, GEOPHYSICAL, GEOCHEMICAL <small>(Details in report submitted as per section 5, 6, or 7 of regulations.) (The itemized cost statement must be part of the report.) (State type of work in space below.)</small>	
	GEOLOGICAL MAPS \$4251.90
	TOTAL OF C AND D \$4251.90

Who was the operator (provided the financing)? Name HOME STATE MINERAL DEVELOPMENT CO.
 Address 201-358 HOMER ST.
VANCOUVER, BC

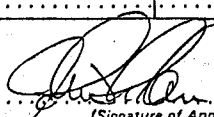
Portable Assessment Credits (PAC) Withdrawal Request		AMOUNT
Amount to be withdrawn from owner(s) or operator(s) account(s):		
Name of Owner		
1.		
2.		
3.		
4.		
TOTAL WITHDRAWAL		
TOTAL OF C AND (OR) D PLUS PAC WITHDRAWAL		\$4251.90

I wish to apply \$ 2100.00 of this work to the claims listed below.
(State number of years to be applied to each claim, its month of record, and identify each claim by name and record no.)

JURVILLE 1 5478 (10) 1 YEAR 9 x 100 x 1 = 900 ..
STANFORD 1 5500 (11) 1 YEAR 12 x 100 x 1 = 1200 ..
BOTH CLAIMS ARE IN THE PRIZ GROUP 2100 ..

Value of work to be credited to portable assessment credit (PAC) account(s).
(May only be credited from the approved value of C and (or) D not applied to claims.)

Name		AMOUNT
In owner(s) name:	1. <u>HOME STATE MINERAL DEVELOPMENT CO.</u>	<u>\$ 2151.90</u>
	2.	
	3.	
In operator(s) name (party providing the financing):	1.	
	2.	
	3.	


 (Signature of Applicant)

APPENDIX C
ANALYTICAL PROCEDURES

ANALYTICAL PROCEDURES

All analyses were completed by Acme Analytical laboratories in Vancouver, B.C.

All rock, soil and silt samples were analysed utilizing 30 element Inductively Coupled Argon Plasma (ICP) techniques and geochemical fire assay plus atomic absorption (FA+AA) analytical procedure for gold.

All samples were prepared to a -100 mesh size fraction. Half gram samples are digested with 3 ml of dilute regia at 95°C for one hour, then diluted to 10 ml with water. Thirty elements were then analysed by ICP (Appendix D). This technique enables only a partial leach for 20 of the 30 elements analysed.

Gold analyses required 10 gram samples that were subjected to a fire assay preconcentration techniques to produce a lead button. The button was then digested with hot aqua regia. The quantity of gold was then determined from the solution by graphite furnace Atomic Absorption technique.

APPENDIX D

GEOCHEMICAL RESULTS

FRITZ GROUP AND ASTRO GROUP

SAMPLE	NO	CU	PB	ZK	AG	XI	CO	MW	FE	AS	U	AU	TH	SR	CD	SB	BI	V	CA	P	LA	CR	HG	BA	TI	B	AL	KA	K	Y	AU11	HG
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	%	PPM	%	PPM	%	%	%	PPM	PPM	PPM
BB-14-3-7209	1	41	10	118	.5	40	23	320	2.74	6	2	ND	2	20	2	2	2	60	.21	.07	12	84	.64	125	.11	4	2.92	.01	.09	2	2	02
BB-14-3-7210	6	57	12	236	1.5	89	19	991	4.21	13	2	ND	3	33	3	2	2	64	.42	.11	14	96	.78	174	.09	2	4.12	.01	.19	2	5	170
BB-14-3-7211	2	16	10	94	1.1	20	5	234	3.59	4	2	ND	3	15	2	2	2	55	.17	.06	6	51	.46	87	.10	2	2.46	.01	.09	2	1	110
BB-14-3-7212	5	25	6	137	1.3	28	8	540	3.96	9	2	ND	2	18	2	2	2	85	.29	.23	7	60	.26	140	.08	3	2.98	.01	.06	2	2	70
BB-14-3-7213	9	35	10	130	1.3	34	10	1174	2.94	8	2	ND	2	24	2	2	2	59	.25	.09	16	57	.46	118	.06	4	2.27	.01	.08	2	1	150
BB-14-3-7214	3	58	8	93	.4	40	10	461	2.85	4	2	ND	2	23	2	2	2	59	.29	.04	12	73	.63	89	.10	2	2.12	.01	.08	2	1	100
BB-14-3-7215	2	30	12	197	.4	36	14	549	3.88	8	2	ND	4	25	2	2	2	82	.20	.15	12	75	.67	168	.13	2	2.12	.01	.09	2	2	100
BB-14-3-7216	1	31	7	140	.4	32	10	287	3.87	2	2	ND	3	17	2	2	2	94	.21	.07	6	64	.57	70	.15	4	2.20	.01	.04	2	1	50
BB-14-3-7217	1	132	18	200	.9	69	21	2452	4.37	6	2	ND	2	39	3	3	2	106	.61	.07	19	111	.94	130	.12	3	3.66	.01	.09	2	1	120
BB-14-3-7218	2	29	8	100	1.3	28	5	1187	3.62	3	2	ND	3	15	2	2	2	82	.29	.04	9	72	.27	85	.13	2	2.29	.01	.05	2	1	90
BB-14-3-7219	2	16	8	83	.5	18	5	265	3.11	6	2	ND	2	13	2	2	2	66	.16	.09	6	48	.42	84	.11	2	1.77	.01	.06	2	1	100
BB-14-3-7220	3	29	14	119	.6	27	8	527	2.61	8	2	ND	2	20	2	2	2	66	.22	.04	10	59	.54	119	.10	4	1.48	.01	.10	2	2	20
BB-14-3-7221	2	23	11	196	1.7	29	8	513	3.31	9	2	ND	2	17	2	2	2	75	.29	.09	9	90	.81	120	.13	4	1.75	.01	.09	2	3	30
BB-14-3-7051	3	74	6	64	.7	21	9	352	3.27	11	2	ND	2	18	1	2	4	51	.20	.05	12	35	.40	75	.10	21	1.75	.01	.05	2	1	
BB-13-3-7036	5	26	9	122	.5	21	5	320	3.28	10	2	ND	3	15	1	2	2	59	.10	.08	13	26	.48	166	.08	2	1.47	.01	.14	2	2	
BB-13-3-7037	4	94	16	233	.6	51	16	1807	3.59	19	2	ND	2	76	2	2	2	34	.84	.14	25	31	.69	135	.03	2	2.11	.01	.10	2	4	
BB-13-3-7038	14	85	15	468	2.1	70	13	663	4.58	10	2	ND	3	8	1	2	3	45	.07	.16	17	31	.94	201	.01	2	2.84	.01	.13	2	3	
BB-13-3-7039	1	32	9	175	.1	18	11	475	3.20	12	2	ND	2	17	1	2	2	60	.21	.09	8	22	.72	101	.13	2	2.36	.01	.10	2	1	
BB-13-3-7040	4	42	12	242	.1	52	9	618	2.92	13	2	ND	5	14	1	2	2	38	.13	.04	16	40	.75	119	.09	2	1.88	.01	.21	2	2	
BB-13-3-7041	1	55	9	86	.2	19	6	743	2.41	8	2	ND	2	18	1	2	2	34	.18	.10	9	24	.56	181	.05	5	1.69	.01	.12	2	1	
BB-13-3-7042	1	14	10	102	.5	20	3	195	3.05	11	2	ND	4	15	1	2	2	45	.16	.22	10	36	.38	89	.10	3	1.71	.01	.12	2	5	
BB-13-3-7043	1	24	7	140	.8	32	7	393	2.66	8	2	ND	4	14	1	2	2	41	.14	.15	11	44	.64	106	.08	4	1.56	.01	.12	2	2	
BB-13-3-7044	7	54	12	166	1.0	54	10	1116	2.59	16	2	ND	2	30	2	2	2	31	.36	.08	13	44	.64	120	.05	3	1.33	.01	.11	2	5	
BB-22-3-7045	1	38	9	69	.4	30	6	392	4.28	10	2	ND	2	27	1	2	2	85	.37	.07	4	71	.85	89	.16	6	2.78	.01	.06	2	2	
BB-22-3-7046	11	48	11	160	3.3	33	7	1384	3.89	14	2	ND	2	9	1	2	2	79	.07	.11	12	45	.40	157	.06	3	1.91	.01	.11	2	6	
BB-22-3-7047	11	45	5	132	.9	37	9	709	3.03	10	2	ND	2	19	1	2	2	60	.22	.17	12	46	.60	229	.01	3	2.13	.01	.11	2	3	
BB-22-3-7048	15	72	15	485	.3	58	11	607	6.03	25	2	ND	2	21	3	2	2	124	.22	.21	7	61	1.23	702	.07	2	2.98	.01	.15	2	1	
BB-22-3-7049	3	58	15	233	1.0	42	11	1022	7.34	15	2	ND	2	33	1	2	2	142	.37	.15	4	86	.84	100	.15	6	3.02	.02	.06	2	2	
BB-22-3-7050	6	68	10	159	1.1	19	11	1301	6.41	15	2	ND	2	20	1	2	2	113	.21	.23	3	47	.71	112	.09	2	2.63	.01	.08	2	8	
BB-22-3-7251	8	91	14	200	1.1	21	9	740	7.49	22	2	ND	2	30	2	2	2	95	.26	.23	8	32	.47	123	.07	2	3.26	.01	.09	2	3	
BB-22-3-7252	8	106	12	516	1.5	73	19	849	5.46	21	2	ND	2	54	7	2	4	100	.75	.13	14	91	1.32	172	.15	6	2.99	.02	.17	2	2	
BB-22-3-7253	18	128	17	523	1.7	67	18	2355	3.48	18	2	ND	2	111	7	2	2	38	1.14	.31	19	44	.60	185	.02	5	2.16	.01	.12	2	2	
BB-22-3-7254	4	385	16	208	2.8	64	19	1629	5.54	32	2	ND	2	169	2	2	2	41	1.75	.22	18	70	.57	124	.02	4	2.26	.01	.08	2	2	
BB-22-3-7255	12	159	60	421	2.8	75	16	961	3.87	29	2	ND	2	50	6	7	2	44	.70	.18	15	24	.14	329	.01	6	1.41	.01	.11	2	1	
BB-13-3-7256	2	24	4	51	.2	8	2	358	3.26	8	2	ND	2	26	1	2	2	59	.16	.11	7	16	.32	111	.11	2	1.49	.02	.10	2	1	
BB-13-3-7257	2	33	3	121	.3	15	7	712	4.11	16	2	ND	2	26	1	2	2	61	.22	.08	10	27	.57	165	.07	2	2.31	.01	.10	2	1	
BB-13-3-7258	5	43	4	122	.1	35	10	705	5.40	12	2	ND	2	21	1	2	2	47	.19	.08	11	43	.52	117	.05	2	1.90	.01	.16	2	4	
BB-13-3-7260	1	10	6	73	.1	15	4	183	1.63	6	2	ND	3	9	1	2	2	23	.12	.13	7	21	.30	47	.05	6	1.03	.01	.05	2	1	

SAMP: FI	NO PPM	CU PPM	PB PPM	ZN PPM	AR PPM	KI PPM	CO PPM	MN PPM	FE %	AS PPM	U PPM	AU PPM	TH PPM	SR PPM	CD PPM	SB PPM	BI PPM	V PPM	CA %	P %	LA PPM	CR PPM	MG %	BA PPM	TI %	B PPM	AL %	KA %	K %	V PPM	NI PPM	ME PPM
BB-13-3-7023	17	51	11	151	1.3	32	5	524	4.08	23	2	NO	2	5	1	5	2	84	.05	.10	10	42	.39	88	.03	4	1.89	.01	.04	2	10	
BB-13-3-7024	7	47	8	140	2.2	38	12	528	3.61	17	2	NO	2	19	1	4	2	69	.27	.08	9	51	.57	99	.08	3	2.44	.01	.04	2	9	
BB-13-3-7025	1	42	8	66	.1	22	8	513	4.18	14	2	NO	2	11	1	2	2	74	.13	.07	6	42	.63	57	.13	4	1.99	.01	.04	2	1	
BB-13-3-7026	2	29	10	73	.2	15	5	505	4.40	18	2	NO	2	10	1	2	2	66	.08	.07	4	35	.58	58	.11	3	2.50	.01	.04	2	1	
BB-13-3-7027	2	21	5	45	.3	14	3	304	3.23	12	2	NO	2	10	1	2	2	64	.09	.06	6	35	.38	59	.10	3	1.73	.01	.03	2	1	
BB-13-3-7028	3	98	13	161	.3	38	13	958	4.42	23	2	NO	2	47	1	3	2	55	.60	.12	13	55	.78	147	.06	4	2.74	.01	.12	2	3	
BB-13-3-7029	2	45	8	89	.7	23	8	974	3.20	12	2	NO	2	28	1	2	2	54	.28	.10	19	46	.68	85	.04	4	2.07	.01	.04	2	3	
BB-13-3-7030	2	48	9	50	1.1	11	15	598	2.34	14	2	NO	2	24	1	2	2	30	.47	.13	14	26	.20	72	.05	5	3.52	.01	.02	2	2	
BB-13-3-7031	1	25	7	40	.2	7	4	327	4.03	14	2	NO	2	17	1	2	2	101	.11	.09	3	17	.33	59	.16	3	1.57	.01	.03	2	3	
BB-13-3-7032	2	24	9	93	.2	14	4	357	3.88	12	2	NO	2	15	1	2	2	55	.15	.14	6	25	.55	111	.08	3	1.67	.01	.04	2	1	
BB-13-3-7033	2	41	7	91	.4	22	7	479	3.69	20	2	NO	2	13	1	2	2	49	.16	.18	7	34	.53	123	.05	3	1.84	.01	.03	2	1	
BB-13-3-7034	3	33	8	93	.3	19	7	540	4.77	23	2	NO	2	11	1	2	2	58	.09	.07	5	36	.78	128	.07	3	2.12	.01	.04	2	1	
BB-13-3-7035	5	52	14	73	.6	25	8	400	3.67	20	2	NO	2	33	1	3	2	59	.37	.08	14	40	.35	130	.03	4	1.71	.01	.05	2	3	
BB-13-3-7259	1	11	7	101	.1	21	6	208	2.27	10	2	NO	4	9	1	2	2	35	.15	.21	8	25	.34	44	.05	2	1.40	.01	.03	2	1	
BB-14-4-7052	2	17	8	80	.4	14	7	300	3.15	8	2	NO	2	14	1	2	3	41	.15	.14	6	32	.37	102	.04	24	1.88	.01	.05	2	1	
BB-14-4-7053	2	15	7	76	1.8	19	6	289	2.46	6	2	NO	2	10	1	2	3	41	.16	.08	6	48	.47	79	.07	17	2.01	.01	.06	2	1	
BB-14-4-7054	3	23	8	136	.5	33	7	274	2.60	7	2	NO	3	10	1	2	3	42	.13	.10	7	59	.63	97	.06	22	2.68	.01	.07	2	4	
BB-14-4-7055	2	18	7	118	.8	26	10	466	2.38	9	2	NO	2	10	1	2	3	42	.12	.05	5	56	.41	125	.06	16	3.22	.01	.04	2	1	
BB-14-4-7056	2	20	4	85	.8	21	6	288	2.54	7	2	NO	2	9	1	2	2	40	.12	.06	6	39	.46	90	.05	17	1.50	.01	.05	2	1	
BB-14-4-7053	1	103	12	193	.7	113	11	768	2.37	4	2	NO	4	2	1	2	2	10	.02	.03	13	13	.38	65	.01	4	.98	.01	.14	2	1	
BB-14-4-7301	2	74	15	100	.4	53	6	2664	2.02	2	4	NO	2	46	1	3	2	16	1.06	.09	9	17	1.36	218	.01	7	1.08	.01	.13	2	2	
BB-14-4-7003	1	37	11	54	.1	9	4	450	2.75	9	2	NO	2	18	1	2	2	43	.69	.05	4	20	.71	46	.10	6	1.46	.03	.07	2	18	
BB-14-4-7004	1	78	12	115	.1	29	12	1006	6.04	4	2	NO	3	8	1	2	2	70	.18	.10	12	30	2.41	123	.01	3	2.90	.01	.12	2	2	
BB-13-1-7023	2	48	9	105	.3	29	12	673	2.96	9	5	NO	2	21	1	2	2	33	.14	.06	15	26	.74	79	.04	3	1.27	.01	.09	2	2	
BB-13-1-7024	3	53	10	163	.3	50	15	924	3.63	10	5	NO	3	17	1	2	2	52	.18	.07	11	48	1.11	90	.06	9	1.59	.01	.08	2	3	
BB-13-1-7025	1	46	9	142	.3	11	15	906	3.63	12	5	NO	2	17	1	4	2	56	.25	.07	10	51	1.13	88	.07	3	1.70	.01	.08	2	7	
BB-13-1-7026	1	48	10	142	.3	44	15	962	3.65	10	5	NO	3	19	1	2	2	57	.28	.07	9	53	1.12	91	.07	6	1.74	.01	.08	2	3	
BB-13-1-7027	1	45	6	138	.3	45	15	939	3.75	10	5	NO	3	13	1	2	2	59	.37	.06	9	52	1.20	84	.08	6	1.72	.01	.07	2	7	
BB-13-1-7028	1	51	13	147	.5	40	18	1319	3.68	11	5	NO	4	21	1	4	2	59	.44	.08	11	48	.94	125	.07	8	1.92	.01	.09	2	3	
BB-13-1-7029	1	42	6	137	.2	31	15	1393	3.81	11	5	NO	3	16	1	4	2	58	.53	.07	10	39	.99	107	.08	12	1.85	.01	.07	2	2	
BB-13-1-7030	1	46	7	154	.3	48	15	921	3.59	10	5	NO	3	16	1	3	2	61	.54	.07	8	65	1.25	94	.06	7	1.81	.01	.08	2	12	
BB-13-1-7031	1	51	6	157	.3	45	16	1087	3.69	13	5	NO	4	15	1	2	2	61	.59	.07	9	54	1.18	99	.07	10	1.83	.01	.07	2	7	

NO	CU	FE	NI	AR	XI	CO	MX	FE	AS	U	AU	TH	SR	CO	SB	BI	V	CA	P	LA	CR	MG	BA	TJ	B	AL	NA	K	Y	AUII	HE
PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM
7010	1	82	5	150	.2	47	12	513	3.88	20	2	ND	2	7	1	2	2	21	.34	.06	2	25	1.03	85	.01	8	1.85	.01	.11	2	10
7011	2	39	14	106	.1	32	3	319	2.57	7	2	ND	2	5	1	2	2	17	.08	.06	4	21	.76	85	.01	2	1.21	.01	.10	2	11
7012	3	114	5	.62	.5	23	5	297	2.15	2	2	ND	2	10	1	2	2	14	.05	.04	4	17	.71	71	.01	5	.71	.01	.12	2	2
7013	1	61	1	46	.1	71	17	865	3.98	30	7	ND	2	225	1	2	2	42	4.04	.12	2	119	2.66	11	.01	2	1.09	.02	.08	2	2
7014	3	69	5	87	.2	11	7	432	4.32	9	2	ND	2	19	1	2	2	95	.50	.15	2	45	1.55	33	.12	9	1.87	.03	.07	2	6
7015	5	47	4	92	.1	30	9	324	2.63	5	2	ND	2	11	1	2	2	42	1.58	.07	2	50	.70	12	.07	8	1.73	.01	.01	2	6
7016	11	57	10	197	.7	47	7	484	2.86	9	2	ND	2	61	3	2	2	17	1.12	.10	4	10	.63	86	.01	7	.68	.01	.13	3	20
7017	12	102	18	585	1.2	122	14	612	2.73	14	2	ND	4	15	11	2	2	22	.23	.07	9	14	.57	85	.01	5	.71	.01	.11	2	12
7018	6	42	11	82	.1	21	9	677	3.78	10	2	ND	2	3	1	2	2	31	.06	.06	6	18	.96	59	.01	4	1.37	.01	.08	2	2
7104	1	77	1	51	.1	24	16	1018	4.79	16	3	ND	2	150	1	2	2	25	4.78	.10	2	7	2.26	34	.01	2	.54	.04	.07	2	1
7301	12	103	16	479	1.3	102	13	2362	3.54	16	2	ND	2	63	6	5	2	49	.87	.15	17	44	.70	192	.03	8	1.49	.01	.07	2	9
7302	14	101	14	484	1.1	108	14	2654	3.55	14	2	ND	2	57	6	5	2	47	.80	.13	18	41	.88	195	.03	8	1.38	.01	.06	2	11
7303	9	144	16	459	1.9	124	13	2724	3.35	12	2	ND	2	48	3	3	2	40	.78	.13	18	39	.74	235	.02	7	1.41	.01	.06	2	13
7304	9	87	12	332	1.0	85	11	1981	3.08	9	2	ND	2	45	4	3	2	45	.68	.12	17	41	.70	169	.03	7	1.34	.01	.06	2	12
7305	10	99	13	397	1.0	98	13	2474	3.49	10	2	ND	2	47	5	2	2	52	.69	.12	18	46	.80	196	.04	7	1.48	.01	.06	2	37
7306	9	97	12	352	1.0	101	13	2284	3.39	9	2	ND	2	46	4	2	2	51	.69	.12	17	51	.81	186	.04	8	1.44	.01	.04	2	8
7307	11	93	15	364	.8	109	14	2498	3.53	10	2	ND	2	35	4	2	2	51	.51	.11	20	51	.91	186	.04	7	1.41	.01	.07	2	7
7019	14	59	11	388	1.2	72	12	1524	2.90	16	5	ND	2	39	6	6	5	29	.01	.08	10	27	.50	154	.01	2	.92	.01	.06	2	13
7020	5	53	13	226	.4	42	12	753	3.03	8	5	ND	2	40	4	2	2	45	.01	.12	10	40	.94	106	.03	8	1.25	.01	.07	2	7
7021	3	73	19	142	.7	35	17	1183	4.05	10	5	ND	2	45	2	4	2	44	.01	.09	22	30	.70	131	.01	3	1.63	.01	.08	2	5
7022	1	60	12	119	.7	38	14	875	3.07	9	5	ND	2	47	1	2	2	35	.01	.09	29	31	.70	123	.04	13	1.64	.01	.11	2	7
7201	3	27	7	127	1.2	34	8	764	2.39	4	2	ND	2	37	2	2	2	45	.51	.08	10	61	.57	115	.05	3	2.12	.01	.08	2	5 90
7202	4	26	10	119	.7	35	11	1536	2.46	6	2	ND	2	36	2	2	2	42	.48	.08	11	50	.58	99	.06	2	1.57	.01	.07	2	6 50
7203	3	31	8	116	.8	35	13	2053	2.99	9	2	ND	2	29	2	2	2	49	.43	.07	12	46	.55	116	.07	4	1.68	.01	.06	2	4 100
7204	3	36	8	128	.9	38	9	704	2.45	6	2	ND	2	17	2	2	2	50	.26	.06	9	50	.49	88	.07	2	1.67	.01	.06	2	6 80
7205	2	55	8	154	1.1	47	12	1184	2.62	5	2	ND	2	40	4	2	2	57	.75	.07	10	70	.61	77	.06	2	1.84	.01	.06	2	4 110
7206	1	55	11	134	.6	53	15	1046	3.93	8	3	ND	2	39	2	2	2	98	.81	.08	7	103	1.25	41	.13	2	2.42	.01	.07	2	3 40
7207	6	47	9	223	.3	69	13	1596	3.16	10	2	ND	2	19	3	2	2	56	.30	.06	10	65	.88	113	.08	3	1.56	.01	.07	2	9 30

SAMPLE#	MO	CU	PI	ZK	AG	XI	CO	MN	FE	AS	U	AU	TH	SR	CB	SB	BI	V	CA	P	LA	CR	MG	BA	TI	I	AL	NA	K	Y	AU11	
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	PPM	PPM	PPM	%	PPM	%	%	%	PPM	PPM	
BB-06-1-7001	5	52	11	238	.5	50	9	872	2.33	8	2	ND	2	52	4	2	2	39	.71	.10	7	59	.73	78	.04	9	1.32	.01	.07	2	1	4
BB-07-1-7002	5	60	11	314	.6	70	13	951	2.62	9	4	ND	2	57	5	4	2	44	.89	.12	7	53	.69	63	.07	6	1.35	.02	.08	2	1	2
BB-07-1-7003	4	55	14	273	.6	61	13	802	2.80	7	2	ND	3	47	4	2	2	44	.66	.11	8	57	.75	61	.08	6	1.42	.01	.09	2	1	2
BB-07-1-7004	3	41	12	307	.4	52	12	600	2.71	6	2	ND	3	53	4	2	2	45	.75	.11	9	47	.62	58	.08	5	1.40	.02	.08	2	1	1
BB-07-1-7005	7	69	33	(564)	.7	83	14	1089	3.75	14	2	ND	2	38	6	2	2	63	.51	.10	3	105	1.20	61	.11	2	1.70	.01	.07	2	1	2
BB-08-1-7006	5	64	10	181	.6	61	12	1557	2.70	12	3	ND	2	72	3	2	2	40	.97	.16	14	70	.65	185	.03	2	2.02	.01	.16	2	1	1
BB-08-1-7007	6	58	15	299	.6	67	12	1200	2.73	15	5	ND	2	41	5	3	2	43	.55	.10	8	75	.89	85	.04	12	1.43	.01	.08	2	1	2
BB-08-1-7008	6	60	11	310	.7	62	11	1195	2.56	10	2	ND	2	51	6	2	2	42	.70	.10	7	66	.81	80	.04	2	1.39	.01	.08	2	1	2
BB-08-1-7009	6	54	10	286	.4	60	11	1214	2.68	9	2	ND	2	40	5	2	2	43	.53	.09	7	72	.90	78	.04	4	1.41	.01	.07	2	1	1
BB-08-1-7010	6	53	8	265	.4	55	10	1010	2.65	11	2	ND	2	42	5	2	2	43	.55	.09	8	67	.87	80	.04	11	1.42	.01	.06	2	1	6
BB-08-1-7011	4	47	10	295	.5	47	10	889	2.42	9	2	ND	2	44	4	2	2	39	.58	.10	7	57	.74	73	.04	3	1.38	.01	.06	2	1	2
BB-08-1-7012	4	36	8	160	.4	38	10	1090	2.30	10	2	ND	2	31	2	2	2	37	.39	.08	9	48	.65	73	.05	6	1.31	.01	.05	2	1	1
BB-08-1-7013	4	32	6	161	.5	39	10	1380	2.44	6	2	ND	2	34	2	2	2	38	.44	.08	8	58	.78	90	.04	3	1.44	.01	.07	2	1	2
BB-08-1-7014	5	36	6	168	.5	43	13	2422	2.67	7	2	ND	2	35	3	3	2	39	.41	.08	10	54	.76	109	.04	4	1.47	.01	.07	2	1	5
BB-08-1-7015	4	60	5	140	.8	46	10	732	2.19	8	2	ND	2	39	3	2	2	32	.44	.07	21	31	.49	98	.06	5	1.43	.01	.10	2	1	3
BB-08-1-7016	6	65	11	150	1.4	63	14	1631	2.72	10	2	ND	2	41	3	2	2	44	.44	.06	19	36	.49	191	.07	7	1.84	.01	.16	2	1	2
BB-08-1-7017	5	31	8	170	.3	42	11	1773	2.54	7	2	ND	2	30	2	2	2	40	.36	.08	10	57	.82	98	.05	10	1.45	.01	.07	2	1	1
BB-08-1-7308	6	131	9	222	.3	33	22	1279	4.27	13	5	ND	2	24	3	2	2	42	.45	.08	51	22	.58	98	.09	7	1.28	.01	.05	2	1	1
BB-08-1-7018	31	101	22	535	5.1	118	15	1257	4.26	11	5	ND	2	26	5	14	2	52	.01	.09	19	53	.60	155	.05	6	1.71	.01	.16	2	1	34
BB-08-1-7151	3	60	6	122	.1	61	11	363	2.65	6	2	ND	9	19	1	2	2	29	.29	.11	18	35	.57	61	.08	29	1.63	.01	.04	2	1	2
BB-08-1-7152	5	66	9	(1211)	.9	194	8	452	2.39	4	2	ND	4	20	4	2	2	27	.19	.04	15	29	.49	75	.06	22	1.40	.01	.02	2	1	40
BB-08-1-7153	3	18	7	94	.3	21	4	261	2.00	4	2	ND	3	18	1	2	2	45	.17	.06	11	33	.43	60	.08	21	1.04	.01	.02	2	1	35
BB-08-1-7154	2	70	5	75	.4	38	16	534	3.74	4	2	ND	2	44	1	2	2	68	.48	.10	2	94	1.25	60	.16	27	2.35	.01	.06	2	1	35
BB-08-1-7101	5	41	8	142	.7	44	10	1039	2.51	5	2	ND	2	39	2	2	2	39	.48	.10	14	44	.63	96	.08	24	1.48	.01	.03	2	12	60
BB-08-1-7102	(66)	(136)	28	(576)	1.4	178	18	4149	5.99	59	4	ND	2	63	12	20	2	105	.78	.17	26	66	.49	(332)	.05	25	2.65	.01	.08	2	10	580
BB-08-1-7103	8	59	10	257	.8	100	11	1636	2.62	12	2	ND	2	41	4	2	2	43	.47	.09	20	47	.59	163	.06	27	1.73	.01	.05	2	18	90
BB-12-1-7051	6	88	14	(289)	1.5	93	12	1192	2.75	16	2	ND	2	79	4	3	2	38	1.33	.12	11	49	.64	107	.04	23	1.62	.01	.03	2	1	110
BB-12-1-7151	5	(371)	14	(744)	2.25	457	19	919	3.55	16	2	ND	2	88	7	2	2	40	1.69	.12	84	58	.50	154	.06	7	2.25	.01	.04	2	1	1
BB-12-1-7152	6	(121)	12	251	1.4	179	16	629	3.15	13	2	ND	2	65	3	2	2	45	1.16	.10	28	66	.61	97	.08	5	1.73	.01	.03	2	1	1
BB-12-1-7153	3	87	7	181	.7	107	10	601	2.17	10	2	ND	2	34	2	2	3	35	.66	.08	21	74	.90	57	.05	4	1.34	.01	.02	3	1	1
BB-12-1-7154	4	(108)	8	(345)	1.3	117	11	915	2.55	8	2	ND	2	78	4	2	2	39	1.41	.10	30	52	.63	92	.05	3	1.60	.01	.02	2	1	1
BB-12-1-7155	2	58	6	131	.8	68	7	692	1.58	6	2	ND	2	62	2	2	2	24	1.23	.08	18	33	.55	62	.04	4	1.07	.01	.02	2	1	1
BB-12-1-7156	3	85	9	151	.6	81	10	773	2.17	4	2	ND	2	45	1	2	2	30	.79	.09	16	38	1.03	58	.06	4	1.37	.01	.02	2	12	1

SAMPLE1	MO	CU	PB	ZN	AG	NI	CO	MN	FE	AS	U	AU	TH	SR	CD	SB	BI	V	CA	P	LA	CR	MG	BA	TI	B	AL	NA	K	Y	AU11
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	%	PPM	%	PPM	%	%	PPM	PPM	
BB-06-3 7322	1	32	2	91	.4	21	12	991	3.76	9	2	ND	2	19	1	2	2	68	.28	.07	5	57	.75	96	.18	13	3.05	.01	.06	2	2
BB-06-3 7323	1	45	8	94	.4	27	11	1168	3.26	13	2	ND	2	44	1	2	2	63	.60	.11	6	57	.82	128	.11	10	2.01	.01	.03	2	1
BB-06-3 7324	1	21	5	60	.3	15	5	547	3.95	10	2	ND	2	18	1	2	2	63	.18	.10	4	17	.66	73	.18	3	2.04	.01	.07	2	1
BB-06-3 7325	4	31	12	74	.5	4	4	585	6.40	16	2	ND	2	23	1	2	2	65	.25	.16	3	15	.50	155	.22	3	1.64	.01	.05	2	1
BB-06-3 7326	4	27	12	116	.2	13	5	338	5.70	13	2	ND	2	17	1	2	2	79	.18	.23	7	24	.62	153	.18	3	1.93	.01	.09	2	1
BB-06-3 7327	3	40	9	63	.1	16	6	487	4.22	11	2	ND	2	20	1	2	3	53	.22	.26	3	25	.72	123	.07	2	1.99	.01	.07	2	2
BB-06-3-7316	5	92	11	124	2.8	72	10	1260	2.88	16	2	ND	2	131	4	6	2	41	1.70	.12	8	81	.61	129	.03	11	1.86	.01	.13	2	2
BB-06-3-7317	4	28	6	57	1.3	19	4	485	2.32	16	2	ND	2	14	1	3	2	52	.12	.07	9	34	.27	138	.05	4	.94	.01	.05	2	2
BB-06-3-7318	4	15	6	49	1.9	14	3	468	1.86	13	2	ND	2	6	1	2	2	17	.06	.07	7	27	.24	91	.04	5	.80	.01	.04	2	2
BB-06-3-7319	6	36	10	61	1.1	25	4	467	2.92	13	2	ND	2	48	1	3	2	58	.51	.09	8	54	.34	109	.03	3	1.20	.01	.06	2	3
BB-06-3-7320	3	13	4	49	.6	14	3	476	1.61	10	2	ND	2	12	1	3	2	42	.13	.06	7	26	.30	93	.04	4	.77	.01	.06	2	1
BB-06-3-7321	3	17	6	47	1.1	14	3	650	1.38	7	2	ND	2	7	1	2	2	34	.09	.06	6	23	.32	100	.05	4	.75	.01	.06	2	1
BB-06-4-7151	1	61	12	61	.3	29	6	660	1.75	6	2	ND	3	86	1	4	2	7	1.76	.04	5	7	1.11	96	.01	14	.73	.01	.05	2	1
BB-06-4-7152	2	38	20	69	.8	24	7	252	2.21	43	2	ND	4	10	1	6	2	12	.03	.03	10	7	.28	145	.01	21	.63	.01	.04	2	1
BB-06-4-7153	61	27	15	108	2.1	20	2	113	1.50	43	2	ND	3	11	1	22	2	80	.02	.04	11	18	.16	118	.01	15	.52	.01	.04	2	60
BB-06-4-7102	2	26	9	72	.5	30	3	197	2.14	8	2	ND	5	3	1	2	2	15	.02	.04	12	24	.64	69	.01	18	1.12	.01	.04	2	12
BB-06-4-7101	2	55	10	67	.4	29	4	981	1.70	9	2	ND	2	8	1	2	2	9	.06	.05	8	10	.29	85	.01	19	.59	.01	.04	2	6
BB-06-4-7154	3	19	10	24	1.1	9	1	102	1.68	24	2	ND	2	11	1	4	2	15	.05	.04	6	15	.18	151	.01	15	.43	.01	.04	2	12
BB-06-87103	1	28	11	26	46.1	134	11	140	1.53	188	2	9	2	20	1	818	2	27	.12	.02	2	107	1.10	82	.01	30	.58	.01	.03	2	8850
BB-12-4-7151	4	97	1	97	.4	26	28	992	7.43	2	2	ND	2	16	2	2	2	136	.84	.13	2	35	2.04	2	.43	2	3.58	.01	.01	2	4
BB-07-4-7201	1	41	10	137	.9	35	6	368	1.05	3	2	ND	4	27	1	2	2	18	.78	.16	13	11	.12	113	.09	66	.35	.02	.10	2	10
BB-07-4-7202	2	125	1	91	.1	392	30	446	3.35	3	2	ND	2	16	4	2	2	61	.50	.09	2	445	2.77	41	.19	4	2.68	.01	.07	2	20
BB-07-4-7203	1	75	6	78	.1	65	21	483	4.88	6	2	ND	2	25	2	2	2	129	1.36	.13	4	113	1.79	23	.27	20	3.06	.02	.04	2	110
BB-06-4-7001	1	65	11	108	1.5	50	5	334	4.16	2	2	ND	4	4	1	2	2	19	.05	.03	5	23	.53	74	.09	2	.91	.01	.14	2	1
BB-07-4-7002	2	27	53	222	.7	19	6	1599	2.82	8	2	ND	2	14	3	6	6	32	.22	.08	8	19	1.39	51	.08	3	1.88	.01	.09	2	7.2
BB-06-4-7005	1	31	11	34	.1	4	2	346	1.38	2	2	ND	2	34	1	2	2	12	.39	.04	4	10	.25	65	.11	40	.65	.03	.11	2	18
BB-06-4-7006	1	52	7	68	.1	6	7	746	3.27	6	2	ND	2	22	1	2	3	43	.52	.08	2	17	.92	36	.21	13	1.54	.02	.04	2	1
BB-06-4-7007	12	28	15	56	.5	11	1	289	2.17	2	2	ND	5	12	1	2	2	21	.03	.06	11	21	.45	85	.01	5	.60	.01	.11	2	2
BB-06-4-7008	4	14	8	37	.1	3	3	364	1.46	7	2	ND	2	59	1	2	2	10	.90	.04	3	8	.51	145	.09	1	.75	.02	.01	2	1
BB-06-4-7009	2	27	17	84	.6	31	2	210	2.20	8	2	ND	4	4	1	2	2	15	.02	.03	8	24	.61	77	.01	4	.82	.01	.16	2	22

SAMPLE#	MO PPM	CU PPM	PB PPM	ZN PPM	AG PPM	NI PPM	CO PPM	KM PPM	FE I PPM	AS PPM	U PPM	AU PPM	TH PPM	SR PPM	CD PPM	SB PPM	BI PPM	V PPM	CA I PPM	P I PPM	LA PPM	CR PPM	MG I PPM	BA PPM	TI I PPM	B PPM	AL I PPM	NA I PPM	K I PPM	V PPM	AU11 PPM
BB-07-3-7114	5	61	30	274	1.1	63	12	834	5.39	9	2	ND	2	28	2	2	2	111	.31	.10	6	136	1.08	111	.11	3	2.72	.01	.07	2	3
BB-07-3-7115	3	37	41	183	1.0	45	8	616	4.39	10	2	ND	2	21	1	2	2	140	.31	.10	5	159	1.13	133	.15	5	1.99	.01	.05	3	1
BB-07-3-7116	5	49	43	246	.5	54	9	598	4.94	9	2	ND	2	24	2	2	2	129	.35	.09	5	156	1.30	88	.15	5	2.12	.01	.05	2	6
BB-07-3-7117	5	97	30	208	.9	84	12	358	4.50	12	2	ND	2	55	3	2	2	101	.82	.08	8	88	.62	89	.09	6	2.12	.01	.04	3	1
BB-07-3-7201B	5	105	35	523	1.3	131	17	1107	4.77	12	2	ND	2	36	5	2	3	93	.51	.08	10	157	1.51	107	.12	6	2.74	.01	.10	2	4
BB-06-3-7012	2	58	8	91	1.4	41	6	427	1.82	3	2	ND	2	112	2	2	2	32	1.55	.15	12	68	.57	102	.02	4	1.50	.01	.07	2	1
BB-06-3-7013	5	86	9	130	2.0	71	11	3004	2.93	17	2	ND	2	46	4	2	2	47	.60	.10	28	62	.91	193	.05	5	2.03	.01	.16	2	5
BB-06-3-7014	7	70	10	178	2.8	98	10	646	3.71	23	2	ND	2	56	2	4	2	55	.59	.10	13	69	.80	154	.06	4	2.74	.01	.17	2	11
BB-06-3-7015	4	24	5	129	.9	35	6	542	2.72	11	2	ND	2	11	1	2	2	52	.10	.10	9	52	.58	107	.05	3	1.30	.01	.11	2	3
BB-06-3-7016	7	102	14	190	2.4	70	12	1026	3.07	18	2	ND	2	37	3	3	2	54	.43	.13	18	67	.72	162	.05	2	1.97	.01	.13	2	5
BB-06-3-7017	4	43	11	162	1.0	56	9	884	2.56	13	2	ND	2	18	1	2	2	41	.23	.08	13	52	.88	111	.05	4	1.48	.01	.12	2	5
BB-06-3-7018	4	45	3	151	1.2	52	8	610	3.01	16	2	ND	2	16	1	3	2	50	.16	.06	12	54	.87	139	.06	3	1.89	.01	.11	2	2
BB-06-3-7019	4	46	9	179	3.0	41	7	695	3.67	15	2	ND	2	9	1	2	2	54	.10	.23	11	53	.71	112	.06	2	2.06	.01	.08	2	3
BB-06-3-7020	3	36	6	115	.4	44	7	452	2.38	13	2	ND	4	13	1	2	2	39	.16	.07	12	46	.76	86	.10	4	1.49	.01	.11	2	11
BB-06-3-7021	5	80	3	166	.3	37	12	618	5.74	18	2	ND	3	13	1	2	2	43	.11	.13	9	35	.61	142	.10	4	2.41	.01	.08	2	1
BB-06-3-7022	2	21	7	116	.4	33	6	222	2.45	9	2	ND	3	12	1	2	2	38	.13	.09	8	39	.58	97	.08	3	1.69	.01	.08	2	5
BB-06-3-7301	1	11	5	89	.5	12	3	468	1.51	4	2	ND	2	12	1	2	2	34	.16	.08	8	21	.39	110	.07	3	1.40	.01	.06	2	1
BB-06-3-7302	2	29	4	120	1.3	30	6	425	3.06	15	2	ND	2	13	1	2	2	47	.18	.14	8	42	.56	145	.08	3	1.71	.01	.09	2	6
BB-06-3-7303	3	45	8	156	3.4	50	9	418	2.90	14	2	ND	3	10	1	2	2	43	.14	.11	9	53	.75	130	.08	3	2.32	.01	.10	2	19
BB-06-3-7304	3	18	7	137	2.7	28	5	466	2.29	12	2	ND	2	11	1	2	2	44	.14	.11	10	39	.56	128	.04	3	1.21	.01	.10	2	2
BB-06-3-7305	3	34	6	113	.9	39	8	757	2.50	14	2	ND	2	29	1	2	2	44	.35	.06	11	46	.72	134	.09	2	1.29	.01	.11	2	3
BB-06-3-7306	3	20	8	116	.5	33	4	262	2.69	14	2	ND	2	9	1	2	2	52	.11	.15	8	52	.62	146	.06	2	1.44	.01	.09	2	4
BB-06-3-7307	5	19	6	67	.2	23	2	114	1.42	10	2	ND	2	10	1	2	2	36	.11	.04	9	18	.17	48	.04	3	.43	.01	.04	2	12
BB-06-3-7308	9	74	8	212	1.6	100	9	1068	2.92	20	2	ND	2	17	1	4	2	54	.14	.05	14	74	.90	156	.04	2	1.67	.01	.14	2	18
BB-06-3-7309	9	41	9	145	.2	47	5	572	2.31	13	2	ND	3	12	1	4	2	51	.12	.07	10	53	.76	139	.05	2	1.36	.01	.10	2	9
BB-06-3-7310	7	83	19	415	1.2	207	16	722	4.05	41	2	ND	2	19	1	5	2	60	.11	.13	10	348	2.33	174	.02	2	2.47	.01	.10	2	1
BB-06-3-7311	2	14	7	115	.2	18	4	219	2.53	12	2	ND	2	11	1	2	2	48	.16	.18	8	32	.47	75	.06	2	1.23	.01	.06	2	1
BB-07-3-7118	2	26	10	259	.5	50	10	443	3.49	14	2	ND	3	16	2	2	2	65	.21	.14	8	71	.86	97	.10	3	2.09	.01	.07	2	1
BB-07-3-7119	3	18	14	192	.3	37	6	480	2.88	12	2	ND	2	8	1	2	2	80	.12	.07	7	84	.79	106	.09	2	1.67	.01	.05	2	1
BB-07-3-7120	1	19	11	94	.6	20	4	157	3.05	13	2	ND	2	12	1	2	2	68	.08	.07	10	50	.56	71	.06	3	1.85	.01	.05	2	1
BB-07-3-7121	3	44	69	342	.7	47	11	1138	5.05	35	2	ND	2	25	3	2	2	113	.17	.13	6	141	1.26	193	.09	2	2.57	.01	.06	2	2
BB-07-3-7122	1	28	16	205	2.4	40	6	224	3.02	15	2	ND	2	13	1	2	2	46	.13	.10	10	41	.57	62	.09	3	2.61	.01	.03	3	2
BB-07-3-7123	1	41	57	488	1.5	30	11	1186	6.14	20	2	ND	2	15	2	3	2	127	.14	.18	7	132	1.12	89	.07	3	3.41	.01	.05	2	3
BB-07-3-7124	1	32	12	80	.9	17	5	549	3.54	18	2	ND	2	12	1	2	2	98	.08	.13	4	41	.46	112	.07	2	1.70	.01	.04	2	1
BB-07-3-7125	2	38	22	91	.9	21	4	568	3.05	14	2	ND	2	10	1	2	2	68	.10	.15	7	51	.44	152	.04	3	1.44	.01	.06	2	17
BB-07-3-7126	3	46	16	139	1.0	46	8	564	3.96	18	2	ND	2	8	1	4	2	81	.08	.09	9	98	1.04	96	.08	3	2.24	.01	.03	2	1
BB-07-3-7127	19	41	22	331	2.3	27	4	372	6.92	46	2	ND	2	22	3	7	2	106	.10	.33	5	91	.60	189	.06	2	2.52	.01	.06	2	1
BB-06-3-7312	10	32	10	126	.3	39	4	262	2.78	11	2	ND	2	13	1	2	2	61	.12	.05	9	54	.44	96	.08	3	1.08	.01	.09	2	1
BB-06-3-7313	10	55	9	185	1.8	61	10	810	3.10	11	2	ND	2	24	1	4	2	59	.22	.07	11	64	.75	171	.04	4	1.51	.01	.11	2	13
BB-06-3-7314	4	17	4	66	.3	19	4	1071	1.57	3	2	ND	2	11	1	2	2	36	.15	.05	7	24	.32	100	.06	3	.70	.01	.07	2	6
BB-06-3-7315	4	37	6	94	.3	40	7	510	2.78	7	2	ND	2	11	1	2	2	46	.15	.13	9	52	.84	122	.05	3	1.67	.01	.10	2	4

SAMPLE	NO	CU	PB	ZN	AG	XI	CO	MH	FE	AS	U	AU	TH	SR	CD	SR	BI	V	CA	P	LA	CR	HG	BA	TI	D	AL	HA	K	M	AU11	HE
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	I	I	FPM	PPM	%	PPM	%	PPM	%	%	%	PPM	PPB	PPB
BB-07-3-7201	6	98	36	518	.9	118	18	1019	1.65	14	2	ND	2	38	6	1	2	94	.49	.06	9	151	1.18	123	.12	2	2.12	.01	.12	2	2	90
BB-07-3-7202	3	26	24	229	1.1	37	9	489	3.39	9	3	ND	2	12	2	2	2	88	.22	.08	6	111	.91	118	.11	2	2.21	.01	.08	2	2	10
BB-07-3-7203	5	10	18	252	.7	45	12	811	3.31	10	2	ND	2	28	1	2	2	80	.41	.07	6	91	.87	116	.10	2	2.05	.01	.05	2	1	60
BB-07-3-7204	3	21	11	158	.7	25	6	493	3.03	7	2	ND	2	17	3	2	2	73	.21	.09	6	79	.88	127	.09	1	1.73	.01	.07	2	3	10
BB-07-3-7205	1	18	18	187	.4	26	7	330	2.76	9	2	ND	2	15	2	2	2	69	.24	.12	6	74	.61	99	.11	2	1.65	.01	.06	2	1	10
BB-07-3-7206	2	23	15	141	.8	30	7	283	3.51	8	2	ND	3	12	2	2	2	82	.23	.15	7	86	.88	110	.10	2	2.21	.01	.08	2	1	50
BB-07-3-7207	2	30	0	145	.5	37	10	385	2.95	3	2	ND	4	20	2	2	2	54	.26	.10	11	66	.78	97	.10	2	1.92	.01	.11	2	2	10
BB-07-3-7208	5	51	13	155	1.0	61	14	828	3.31	4	2	ND	3	51	2	2	2	58	.85	.09	13	84	.82	113	.08	1	2.28	.01	.14	2	1	90
BB-06-3-7001	3	17	7	83	.4	18	5	215	2.00	8	2	ND	2	9	1	2	2	38	.11	.06	6	35	.40	99	.05	20	1.35	.01	.06	2	2	
BB-06-3-7002	3	23	7	76	.7	26	7	424	2.25	7	2	ND	2	10	1	2	2	39	.13	.06	9	45	.61	91	.06	15	1.35	.01	.09	2	1	
BB-07-3-7003	11	38	12	124	1.1	34	13	2001	2.91	13	4	ND	2	47	2	2	2	44	.64	.09	9	50	.49	91	.04	24	1.49	.01	.06	2	2	
BB-07-3-7004	6	28	13	102	.4	24	11	973	3.15	8	2	ND	2	48	2	2	2	53	.67	.07	5	56	.39	60	.07	20	1.31	.01	.05	2	1	
BB-07-3-7005	3	19	7	184	.8	22	6	423	2.25	4	2	ND	2	13	2	2	2	44	.15	.09	6	37	.45	125	.03	21	1.40	.01	.08	2	2	
BB-07-3-7006	4	20	7	124	.7	26	6	227	2.54	9	2	ND	3	8	1	2	2	50	.10	.11	6	45	.55	111	.04	12	1.71	.01	.06	2	1	
BB-07-3-7007	8	41	10	101	.6	38	9	573	2.73	11	2	ND	2	42	2	2	2	52	.45	.05	8	50	.47	127	.05	13	1.69	.01	.07	2	1	
BB-07-3-7008	5	29	10	134	.6	29	9	1073	2.59	10	2	ND	2	18	1	2	2	45	.19	.07	6	51	.52	128	.03	13	1.30	.01	.05	2	2	
BB-06-3-7009	9	66	11	168	2.0	69	10	724	2.71	17	2	ND	2	32	2	3	4	45	.32	.05	12	51	.60	125	.04	15	1.51	.01	.13	2	9	
BB-06-3-7010	4	32	9	87	.3	31	9	578	2.31	13	2	ND	2	13	1	2	3	41	.14	.05	7	44	.54	126	.04	16	1.34	.01	.11	2	15	
BB-16-3-7011	5	39	9	81	.8	37	8	918	2.49	12	2	ND	2	12	1	2	3	52	.10	.05	9	51	.61	194	.03	20	1.53	.01	.08	2	2	
BB-06-3-7101	3	14	6	35	.2	20	6	112	2.88	3	2	ND	6	9	1	2	2	45	.07	.02	12	33	.37	65	.09	17	1.86	.01	.02	2	5	30
BB-06-3-7102	3	37	4	53	.1	45	11	349	3.05	2	2	ND	8	30	1	2	2	54	.32	.07	16	59	.79	84	.16	13	1.75	.01	.05	2	5	20
BB-06-3-7103	2	11	6	67	.1	22	7	161	2.32	2	2	ND	4	17	1	2	2	34	.20	.10	10	43	.44	66	.09	13	1.45	.01	.02	2	5	10
BB-06-3-7104	2	38	4	50	.1	41	10	275	2.57	2	2	ND	6	31	1	2	2	43	.35	.12	11	58	.73	72	.13	15	1.61	.01	.04	2	3	20
BB-06-3-7105	3	66	6	56	.4	66	18	455	3.85	3	3	ND	5	40	1	2	2	72	.54	.07	7	146	1.54	114	.21	23	2.62	.01	.06	2	2	10
BB-06-3-7106	2	18	7	56	.1	27	8	192	2.29	3	2	ND	6	21	1	2	2	32	.23	.08	13	36	.55	92	.09	21	1.59	.01	.03	2	2	30
BB-06-3-7107	2	39	10	56	.5	46	12	622	3.18	4	2	ND	6	43	1	2	2	43	.54	.05	13	55	.79	160	.14	27	2.24	.01	.05	2	2	40
BB-06-3-7108	2	30	6	56	.4	41	9	327	2.56	3	2	ND	6	25	1	2	2	40	.32	.23	14	47	.59	102	.11	4	1.75	.01	.04	2	9	30
BB-06-3-7109	2	16	7	128	.5	37	10	207	2.96	2	2	ND	7	31	1	2	2	45	.30	.22	11	53	.50	98	.11	23	2.56	.01	.02	1	1	30
BB-06-3-7110	3	21	6	66	.3	37	8	230	2.61	2	2	ND	7	21	1	2	2	40	.26	.21	13	49	.52	77	.11	3	1.77	.01	.02	2	14	30
BB-06-3-7151	9	70	12	195	.6	80	13	1826	3.18	12	2	ND	2	33	2	2	2	44	.40	.10	14	52	.77	114	.06	5	1.52	.01	.03	3	9	40
BB-06-3-7152	4	99	12	162	.7	83	13	1271	3.04	17	2	ND	4	25	2	2	2	37	.26	.06	13	47	.95	105	.08	7	1.60	.01	.04	2	20	50
BB-06-3-7153	10	87	12	257	1.8	85	16	3828	3.73	12	2	ND	2	17	6	2	2	44	.76	.10	14	36	.54	220	.05	23	1.82	.01	.04	2	9	90
BB-06-3-7154	3	118	6	80	.4	117	22	706	4.46	2	2	ND	2	58	1	2	2	97	.89	.11	2	190	1.92	108	.18	3	2.88	.01	.13	2	1	40
BB-12-3-7151	1	58	9	92	.6	41	15	715	2.90	96	4	ND	3	18	1	2	2	46	.45	.07	20	73	.59	82	.07	9	1.80	.01	.03	2	4	
BB-12-3-7152	1	54	2	52	.2	42	12	317	2.45	38	2	ND	10	22	1	2	2	37	.32	.05	20	38	.54	56	.09	8	1.63	.01	.03	2	3	
BB-12-3-7153	1	48	2	44	.2	33	13	350	2.96	3	4	ND	3	10	1	2	2	64	.27	.07	6	59	.71	34	.17	5	1.76	.01	.01	2	1	
BB-12-3-7154	2	35	5	191	.3	65	11	360	2.39	6	2	ND	4	17	1	2	2	31	.20	.10	9	25	.34	55	.08	6	1.16	.01	.01	2	10	
BB-12-3-7155	6	96	6	391	.4	189	19	268	3.09	11	2	ND	4	25	2	2	2	46	.32	.04	12	50	.64	54	.09	6	1.70	.01	.02	2	7	
BB-12-3-7156	1	35	5	98	.3	37	7	202	1.74	6	4	ND	2	13	1	2	2	28	.23	.06	6	26	.67	52	.10	1	1.17	.01	.02	2	3	
BB-12-3-7157	1	19	4	57	.2	28	6	204	2.03	2	2	ND	2	12	1	2	2	36	.16	.04	7	34	.47	54	.10	4	1.33	.01	.02	2	5	
BB-12-3-7158	1	51	21	246	.5	60	13	865	2.34	7	2	ND	2	10	1	2	2	51	.13	.10	8	51	.79	215	.04	6	1.86	.01	.02	2	13	
BB-12-3-7159	4	52	9	95	.8	51	10	341	2.50	5	3	ND	4	15	1	2	2	43	.21	.09	11	62	.95	75	.10	5	1.70	.01	.02	2	14	
BB-12-3-7160	4	38	14	248	.9	81	16	1259	2.81	5	2	ND	2	26	2	2	2	51	.30	.09	8	127	.89	102	.04	6	1.60	.01	.03	2	14	

APPENDIX E

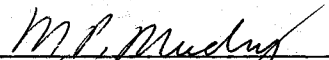
STATEMENT OF QUALIFICATIONS
AND FIELD PERSONNEL

STATEMENT OF QUALIFICATIONS

I, M. Phillip Mudry of 301 - 909 2nd Avenue, N.W. of Calgary, Alberta hereby certify that:

1. I am a graduate of the University of Calgary with a B.Sc in Geology (1978).
2. I have worked in the field of mineral exploration since 1974.
3. I am a member in good standing of the Association of Professional Engineers, Geologists and Geophysicists of Alberta.
4. The work described in this report was done by myself or under my supervision.

Respectfully submitted,


M. P. Mudry, P. Geol.

STATEMENT OF QUALIFICATIONS

I, Megan A. O'Donnell of 223 Trelawn Avenue, Oakville, Ontario do hereby certify that:

1. I am currently employed as Senior Geological Assistant by Homestake Mineral Development Company with offices at 201 - 856 Homer Street, Vancouver, B.C.
2. I have worked in the field of mineral exploration since 1980.
3. I am a graduate of McGill University with a B.Sc. in Geology (1984).
4. This report is based on my personal work on the property and a review of all available pertinent data.


MEGAN A. O'DONNELL

George Cooper
Geologist

BSc. McMaster 1980

1662 Ralph Street
N. Vancouver, B.C.
V7K 1V7

Paul Plishka
Geologist

BSc. Brock 1983
MSc. McGill (pending)

785 Oshawa Blvd.
N. Oshawa, Ontario
L1G 5V1

Karen Harrap
Geologist

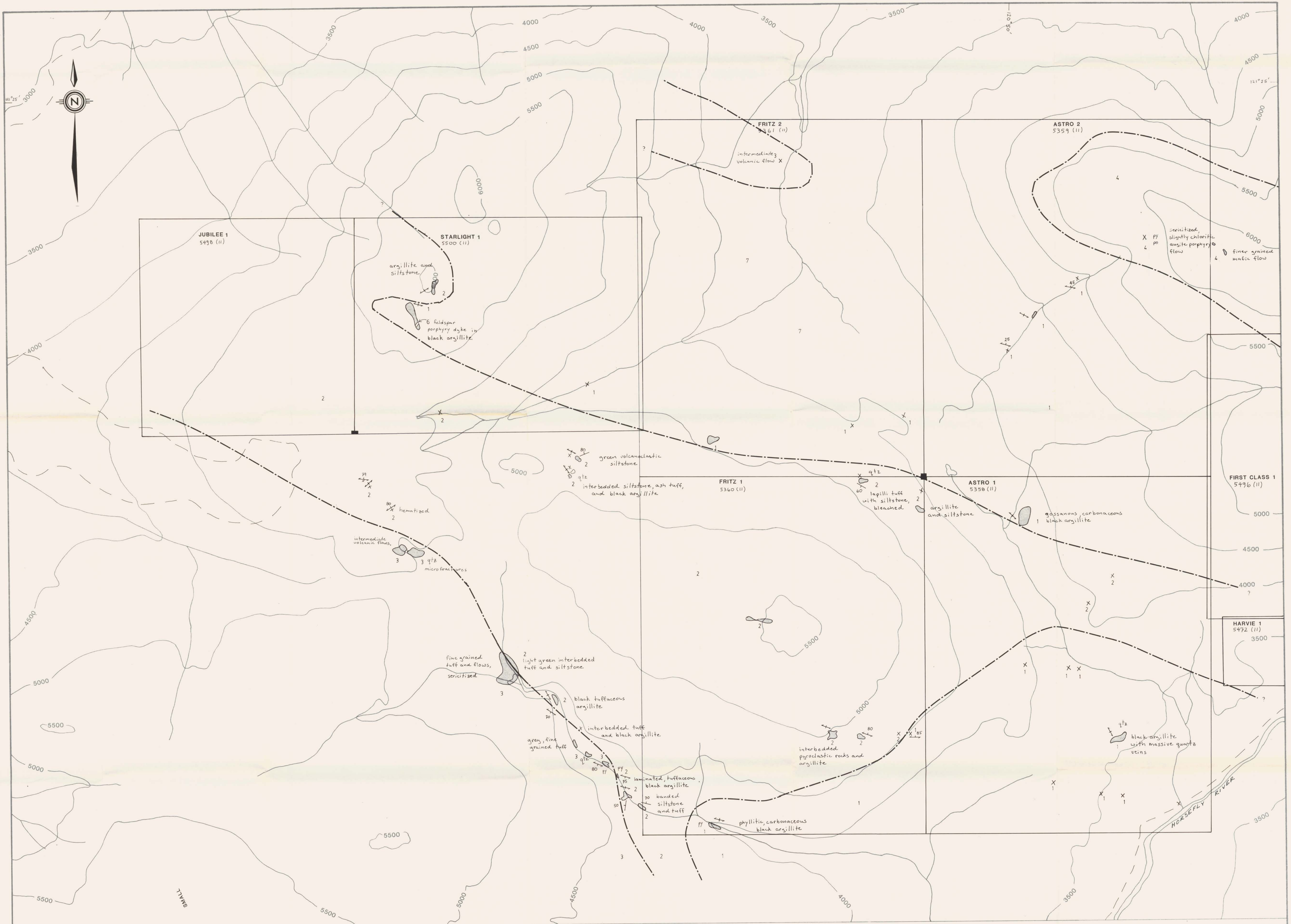
BSc. Queens 1983
C.E.T. Mining Engineering

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Agincourt, Ontario
M1T 2X7

Friedrich Speidel
Geologist

BSc. McGill 1984

401 Des Ormes
Laval, Quebec
H7X 1R4



GEOLOGY LEGEND

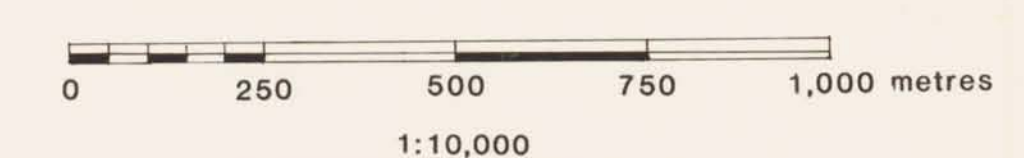
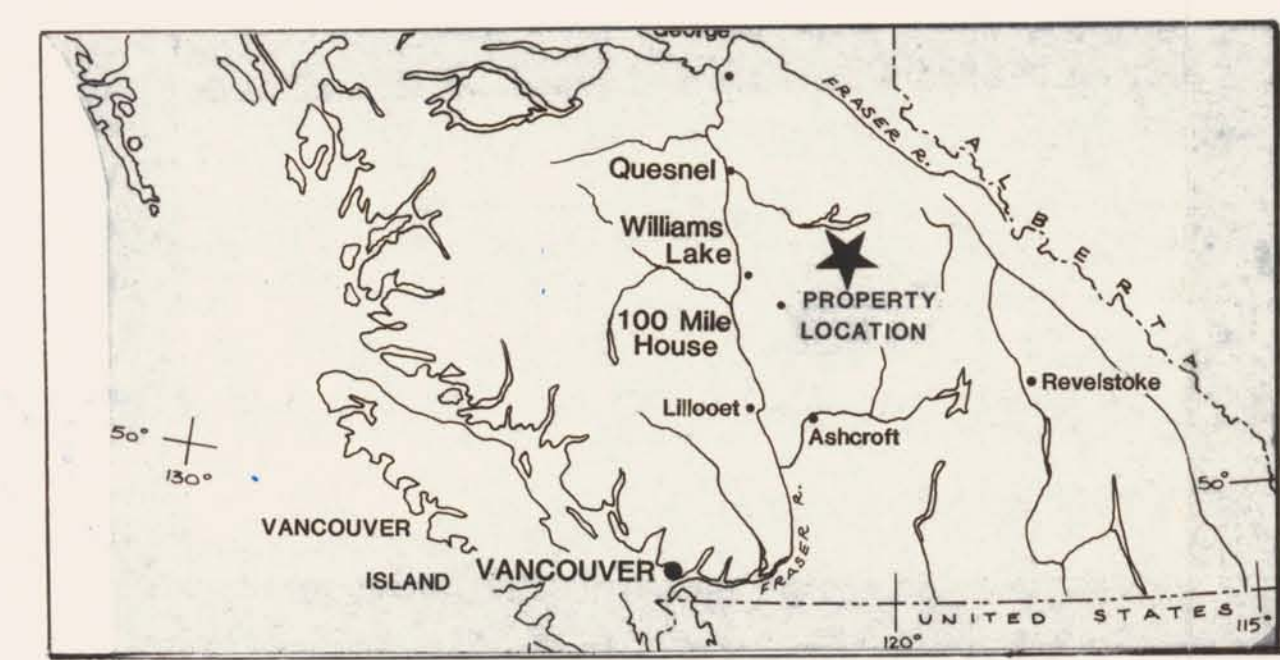
PLEISTOCENE TO RECENT	7	GLACIAL DEPOSITS, TILL AND GRAVEL
	6	FELDSPAR PORPHYRY DYKE
	5	PYROXENE GABBRO SILL
UPPER TRIASSIC TO LOWER JURASSIC	4	AUGITE-PORPHYRY BRECCIA FLOW
	3	VARIABLE SEQUENCE OF FELSIC TO INTERMEDIATE VOLCANIC FLOWS AND PYROCLASTIC ROCKS, COMMONLY SERICITIZED
	2	GREY MASSIVE TO LAMINATED SILICEOUS SEDIMENT, INTERCALATED SILTSTONE, ARGILLITE, AND PYROCLASTIC ROCKS
UPPER TRIASSIC	1	BLACK TO GOSSANOUS PHYLLITIC ARGILLITE - QUARTZ VEINS

qtz QUARTZ
py PYRITE
po PYRRHOTITE

KEY

X	OUTCROP BOUNDARY (MAP SCALE, SMALL)
---	GEOLOGICAL BOUNDARY (INFERRED)
---	GEOLOGICAL BOUNDARY (OBSERVED)
45	BEDDING
45 X	FOLIATION (DIPPING, VERTICAL)
4500	TOPOGRAPHIC CONTOUR (CONTOUR INTERVAL 500')
---	CLAIM BOUNDARY AND LCP
---	ROAD

GEOLOGICAL BRANCH ASSESSMENT REPORT
13,392



HOMESTAKE MINERAL DEVELOPMENT COMPANY

FRITZ GROUP & ASTRO GROUP (WEST HALF)

GEOLOGY MAP
CARIBOO MINING DISTRICT

DRAWN	DATE	FILE CODE
MOD	11/84	
REVISED		93A/7

MAP 1



SAMPLE NUMBER SYSTEM

(a) (b) (c) (d) as follows:

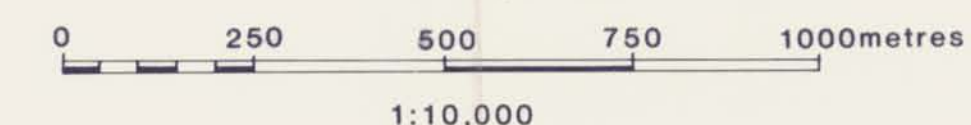
- (a),(b) CLAIM GROUP and CLAIM BLOCK (omitted)
 - (c) SAMPLE TYPE
1 - SILT
3 - SOIL
4 - ROCK
 - (d) SAMPLE NUMBER (eg. 7301)
- For all soils, (c), ie "3", is omitted

LEGEND

- x ROCK SAMPLE LOCATION
- SOIL SAMPLE LOCATION
- o STREAM SEDIMENT LOCATION
- ROAD
- LCP
- CLAIM BOUNDARY

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

13,392



**HOMESTAKE
MINERAL DEVELOPMENT COMPANY**

**FRITZ GROUP
&
ASTRO GROUP (WEST HALF)**

**SAMPLE LOCATION MAP
CARIBOO MINING DISTRICT**

DRAWN KLH KMc	DATE 09/84	FILE CODE 93A/7	MAP 2
REVISED			



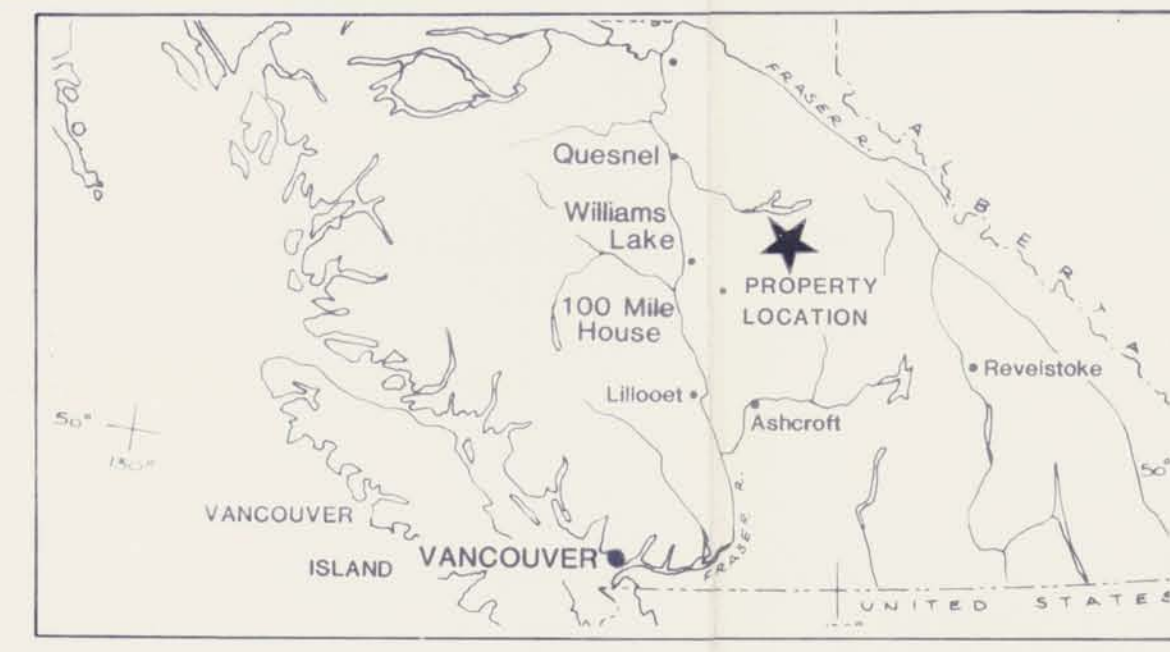
LEGEND

- X ROCK SAMPLE LOCATION
- SOIL SAMPLE LOCATION
- STREAM SEDIMENT LOCATION
- ROAD
- ┌ LCP
- CLAIM BOUNDARY

NOTE: Gold geochemistry values plotted in ppb.

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

13,392



**HOMESTAKE
MINERAL DEVELOPMENT COMPANY**

**FRITZ GROUP
&
ASTRO GROUP (WEST HALF)**

GOLD GEOCHEMISTRY
CARIBOO MINING DISTRICT

DRAWN KLH KMc	DATE 09/84	FILE CODE 93A/7	MAP 3
REVISED:			