

GEOLOGICAL SURVEY BRANCH  
ASSESSMENT REPORTS

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Assessment Report on Geochemical and Drilling

Ham Claims, Matthew Creek Area

Fort Steele Mining Division  
British Columbia

NTS 82F/09  
49°40' N. Latitude  
116°05' W. Longitude

Owner:

Hastings Management Corp.  
1000-675 W. Hastings Street  
Vancouver, B.C., V6B 1N2

Operator:

Sedex Mining Corp.  
Cranbrook Project  
3380 Wilks Road  
P.O. Box 215  
Cranbrook, B.C., V1C 4H7

Report By:

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FILMED

November 4, 1996

GEOLOGICAL SURVEY BRANCH  
ASSESSMENT REPORT

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Cranbrook Field Office

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## 1.00 INTRODUCTION

### 1.10 Location and Access

The Ham mineral claims are located approximately 4 km west of Kimberley, B.C. See the index map (figure 1) for the location of the claim block. The claims are located along Matthew Creek, a tributary of the St. Mary River, in the Fort Steele Mining Division on reference map NTS 82F/09 and centered near 49°40'N latitude, 116°05'W longitude.

The property is accessed from highway 95A south of Kimberley, up the St. Mary River paved road to the unimproved Bootleg Road. Most of the property is crossed by logging roads.

### 1.20 History

The Ham claims were staked by S. Brian Hamilton over an area of metamorphic rocks between Cominco's Mac and Lake group to the north and east and Consolidated Ramrod's (Quest) Horn group to the south. Chapleau Mining's Darlin claims lie to the southwest.

During 1994 a soil sampling program totaling 223 samples was completed on 22 km of logging roads covering the property. A petrographic study was done on 38 rock chip samples taken along the 4 km section of Matthew Creek in 1994 also. This data is included in the 1994 assessment report.

Chris McFarlane, a graduate student from the University of Calgary began a field mapping program on the high-grade metamorphic rocks around Matthew Creek in 1996.

### 1.30 Property

The Ham claims (figure 2) are a contiguous block of claims owned by Sedex Mining Corp., 1000-675 West Hastings Street, Vancouver, B.C. with the following subdivision:

<u>Claim Name</u>	<u>Tenure No.</u>	<u>No. Units</u>	<u>Current Expiry Date</u>
Ham 1	320400	6	17-Aug-98
Ham 2	320404	20	25-Aug-98
Ham 3	320401	20	23-Aug-98
Ham 4	320405	20	25-Aug-98
Ham 5	320402	20	24-Aug-98
Ham 6	320403	12	25-Aug-98

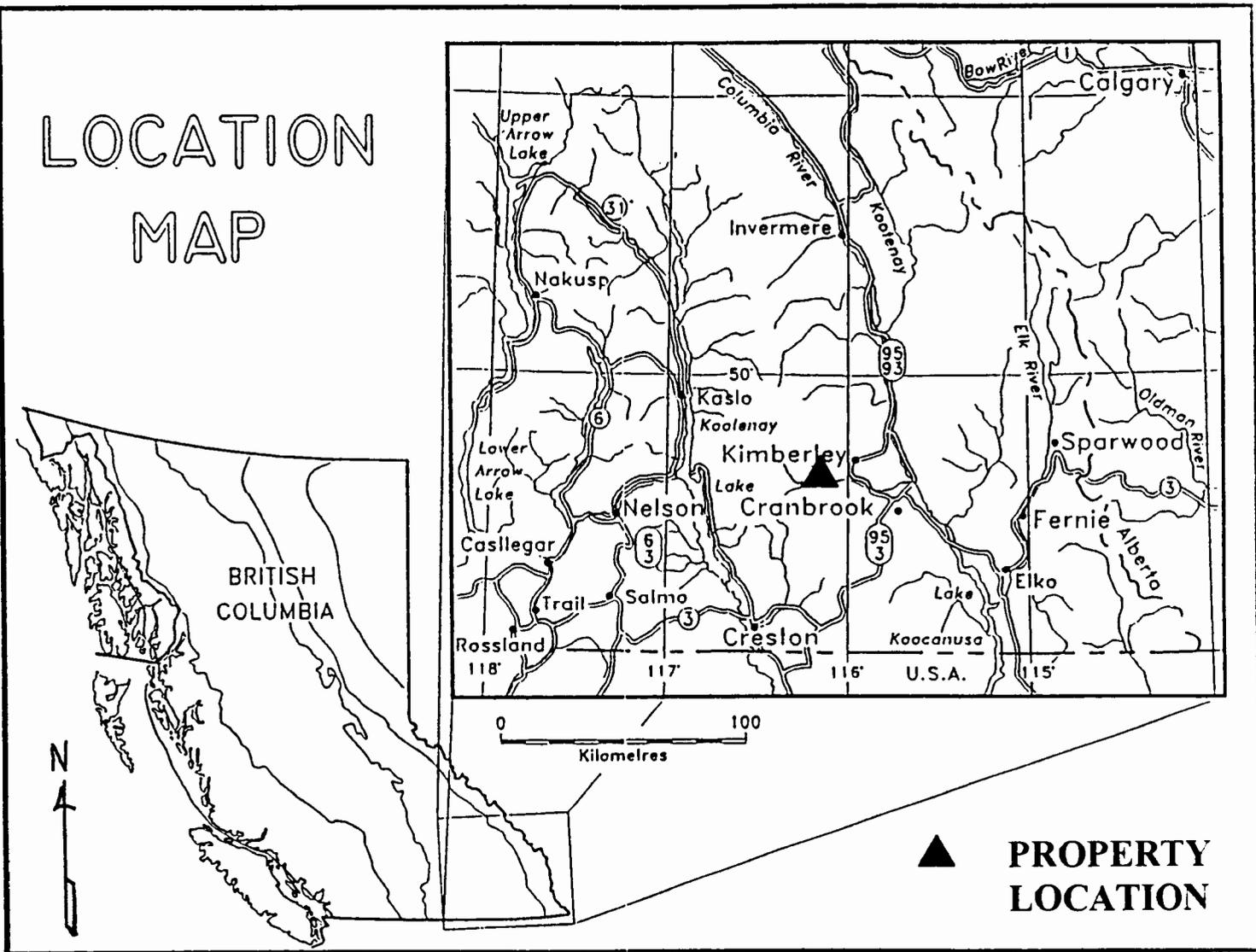


Figure 1.--Location Map.



## 1.40 Scope of Present Work

The objective of the 1996 program was to:

1. Relocate the 1994 geochemical anomaly using GPS methods,
2. Verify the 1994 geochemical anomaly using three (3) gridded soil sampling lines,
3. Drill one (1) drill hole to test the geochemical anomaly.

## 2.00 GEOLOGY

### 2.10 Regional Geology

The area of the Ham claim block is underlain by Precambrian Purcell Supergroup rocks of the Aldridge Formation. These are fine-grained clastics that include impure quartzites, siltstones and argillites. The rocks have been metamorphosed to lower greenschist facies and intruded by a series of gabbroic composition sills and dikes.

### 2.20 Property Geology

On the Ham claim block the Aldridge rocks dip 20° to the northeast and southwest forming an arch along Mathew Creek which may be an axial fault. High-grade metamorphic rocks are exposed in the drainage and on the west side of Mathew Creek. A Hellroaring Creek-type intrusive referred to as the Mathew Creek stock intrudes the Aldridge sediments on the west side of the block just east of Bootleg Mountain. Glacial sediments cover approximately ½ of the south part of the claim block.

## 3.00 GLOBAL POSITIONING SYSTEM SURVEY

### 3.10 GPS Method

The Global Positioning System (GPS) is a satellite-based positioning system operated by the U.S. Department of Defense (DoD). GPS provides all-weather, worldwide, 24-hour position and time information based on satellite trilateration. Raw data is collected in the field, downloaded to a computer and compared to a known base station to determine errors. Using a computer software program the UTM X-Y-Z coordinates (meters E., meters N., and meters Elevation) can be determined for a field station to an accuracy of  $\pm 3$  meters.

### 3.20 System Used

The GPS data collected for this survey was made using a Trimble Pro XL System consisting of a compact dome antenna, Pro LX receiver and TDC1 data collector carried by a technician in the field. At select points of interest the technician entered a station location code in to the data collector and determines the GPS location for the point. The technician also collected sample/grid location, geological and other information in a field book which correlates with the station. The data was then taken to Kimmur Forestry Consultants Ltd, Cranbrook for processing.

Kimmur Forestry Consultants Ltd, 25 Cobham Avenue West, Cranbrook, B.C., V1C 4G3 down-loaded the data to a computer, provided a base station for control and processed the data into a map using the data in the field book collected by the technician. Using this method sample locations, grids, sample lines, DDH locations, roads, cultural features and other points of interest can be constructed into a map at any appropriate scale.

### 3.30 Results

A Geochemical Sample Location Map (scale 1:5000, in pocket) is the result of the GPS survey and shows the location of:

1. Logging roads,
2. 1994 geochemical sample sites,
3. Ham-96-1 DDH location (565937m E., 5501870m N., 1370m Elevation)
4. Location of the 1996 geochemical sample lines (1, 2 and 3 South) and
5. The UTM grid.

There was a good comparison of the 1996 GPS stations and the 1994 geochemical sample sites given in the 1994 assessment report.

## 4.00 GEOCHEMISTRY

### 4.10 Soil Survey

A total of 94 soil samples were collected on three (3) 45° azimuth gridded lines 400 and 500 m apart as shown on the Geochemical Sample Location Map (figure 3, scale 1:5,000, in pocket). Samples were collected by C.J.J. Exploration Contracts, 2445 DeWolfe Avenue, Kimberley, B.C., V1A 1R1. The samples were collected from the "B" horizon and placed in standard Kraft envelopes. They were then dried, tested for pH and shipped to Bondar-Clegg & Company Ltd., 130 Pemberton Avenue, North Vancouver, B.C., V7P 2RS for analysis by conventional ICP (Induc. Coup. Plasma) methods.

#### 4.20 Sample Preparation

Bondar-Clegg dried, disaggregated and sieved the samples to -80 Mesh size. The samples then underwent an Aqua Regina digestion (HCl-HNO<sub>3</sub>) in preparation for geochemical analysis.

#### 4.30 Geochemical Analysis

Bondar-Clegg analyzed the samples using standard ICP-Atomic Emission Spectroscopy techniques for 34 elements including: Ag, Bi, Cr, K, Mn, Ni, Sn, Ti, Zn, Al, Ca, Cu, La, Mo, Pb, Sr, V, Zr, As, Cd, Fe, Li, Na, Sb, Ta, W, Ba, Co, Ga, Mg, Nb, Sc, Te and Y. A copy of the geochemical lab report showing the elements, lower detection limits, extraction analysis method and number of analyses is given in the appendix.

#### 4.40 Results

A listing of the results of the analysis of the 94 samples for the 34 elements is given in the appendix. An examination of the values suggests that only the results for Pb and Zn are significant. Results for Pb (ppm) and Zn (ppm) are plotted along the geochemical sampling lines 1, 2 and 3 south on figure 3 (in pocket).

Scientifically, it would be statistically invalid to contour the Pb and Zn values with such a small population of data from the three geochemical sampling lines, but certain inferences can be made:

1. Lead values range from a low of 8 ppm to a high of 49 ppm and values greater than 30 are judged to be anomalous.
2. Zinc values range from a low of 33 ppm to a high of 627 ppm and values greater than 200 are judged to be anomalous.
3. Zinc values obtained during the 1996 survey support the 1994 greater than 200 ppm Zn anomaly but are displaced further down slope with the highest zinc values occurring nearest to the high-grade metamorphic outcrops in the bottom of Matthew Creek.
4. No good relationships can be made with the Pb values.

## 5.00 DIAMOND DRILLING

A total of 305.41 meters were drilled in the Ham-96-1 vertical drill hole at the following GPS location: 565937m E., 5501870m N, 1370m elevation. See figure 4 for the location on TRIM map 82F/09 at 1:20,000 scale.

### 5.10 Results

A typical section of Lower Aldridge siltstones, quartzitic siltstones and argillaceous siltstones with gabbro sills were intersected. Several fault breccias and possible fault zones were identified. No significant sulfides were identified except for the occasional pyrrhotite and pyrite as dissemination along bedding. No samples were taken for assay. See appendix for listing of the drill hole record.

## 6.00 CONCLUSIONS AND RECOMMENDATIONS

No significant base metal sulfides were recognized in the drilling. No explanation for the 1994 geochemical soil anomaly can be made. No further work is recommended.

## 7.00 STATEMENT OF COSTS

### Drilling

Ham-96-1, 305.41 m of NQ Core by  
Lone Ranger Drilling.....\$17115

Mobilization/Demobilization..... 1000

Logging Core (Peter Klewchuk)  
4-days @ \$225/day..... 900

### GPS Survey

Field Technician (Jim Stemler)  
2-days @ \$100/day..... 200

Field Expenses (Jim Stemler)  
2-days @ \$50/day for 4x4 vehicle..... 100

Kimmur Base Station Rental and Data Plotting..... 500

Geochemical Sampling Program

Sample Collection (CJJ Exploration Contracts)  
2-day @ \$250/person/day..... 1000

Geochemical Analysis (Bondar-Clegg)  
94 samples (shipping, drying, preparation, analysis)..... 1880

Supervision

Drilling, GPS and Soil Sampling (Robert Woodfill)  
11-day @ \$300/day..... 3300

Field Expenses (Robert Woodfill and Glen Rodgers)  
13-day 4x4 vehicle @\$50/day..... 650

Project Management and Permitting (Glen Rodgers)  
2-day @ \$200/day.....400

Report Preparation  
1-day report writing (Robert Woodfill).....300  
5-hrs typing drill log @ \$15/hr.....75  
Supplies..... 50

Total.....\$27470

8.00 STATEMENT OF QUALIFICATIONS

I, Glen Rodgers certify that:

1. I am a graduate of the University of Manitoba School of Geological Engineering (1977) and am registered with the British Columbia Association of Professional Engineers and Geoscientists as a P. Eng.
2. I have based this report on work done by myself during 1996 on the Ham claims including the supervision of the project.
3. I do not expect to receive any share consideration as a result of writing this report.
4. I have practiced my profession continuously over the last 20 years as an exploration geologists working in Canada, Alaska and Central America

Signed:

Glen M. Rodgers, P. Eng.

Date:

Nov. 5/96

I, Robert Woodfill, Ph.D. certify that:

1. I am a Ph.D. graduate of Purdue University in structural geology and a M.S. graduate of the University of Wyoming in geophysics. I am a registered Professional Geologist in the State of Wyoming.
2. I have based this report on work done by myself during 1996 on the Ham claim block .
3. I do not expect to receive any share consideration as a result of writing this report.
4. I have practiced my profession continuously over the last 24 years as an exploration geologist/geophysicist working in the United States, Alaska, Canada, Mexico, Australia and Africa.

Signed:

Robert Woodfill  
Robert Woodfill, Ph.D.

Date:

November 5, 1996

DDH-HAM-96-1

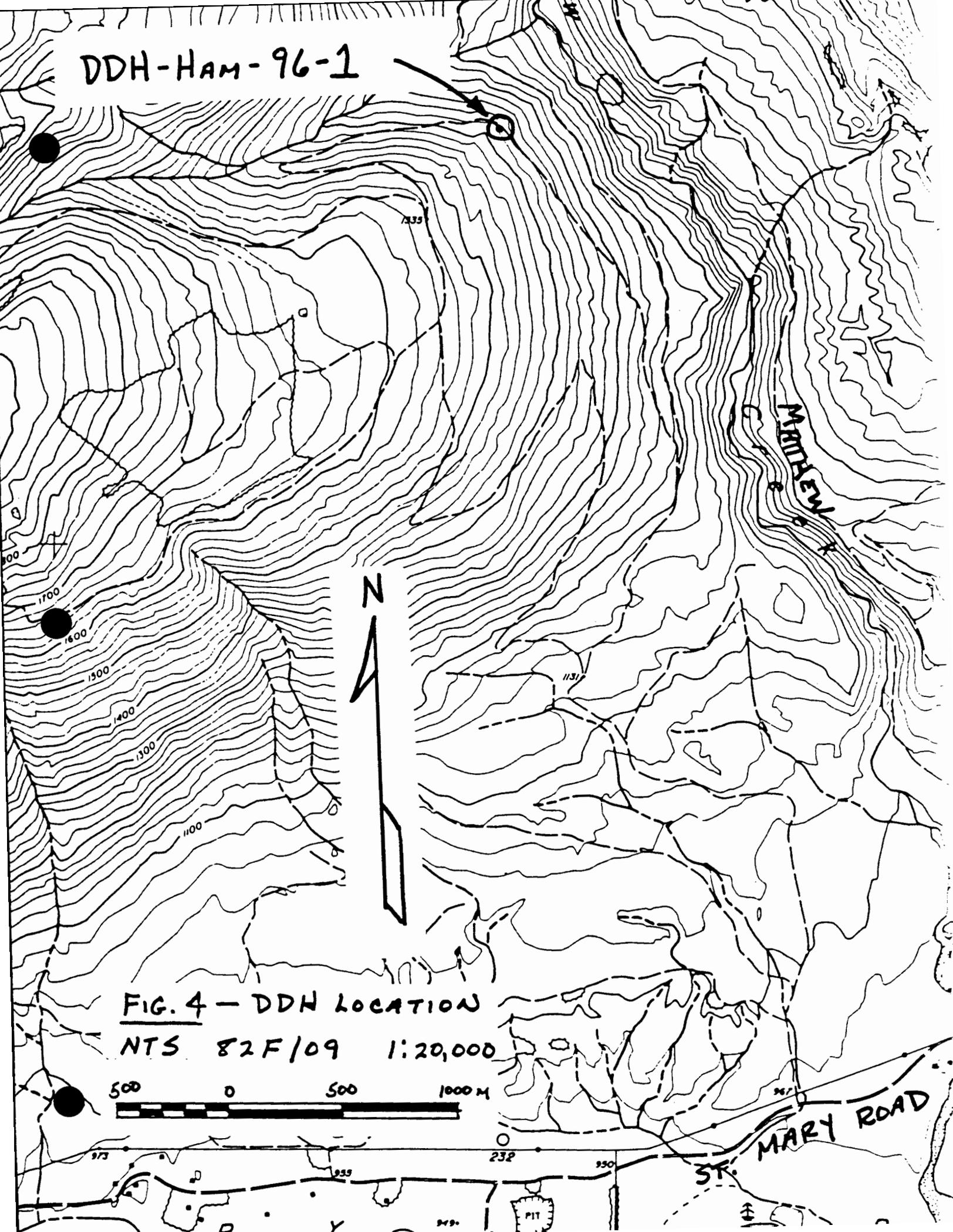


FIG. 4 - DDH LOCATION

NTS 82F/09 1:20,000



## Appendix

- I. Geochemical Lab Report
- II. Drill Log (Ham-96-1)



**Bondar Clegg**  
Inchcape Testing Services

Geochemical  
Lab  
Report

HASTINGS MANAGEMENT CORP.  
MR. BOB WOODFILL  
P.O. BOX 215  
CRANBROOK, BC  
V1C 4H7

+ + + + +

Bondar-Clegg & Company Ltd., 130 Pemberton Avenue, North Vancouver, B.C., V7P 2R5, (604) 985-0681

REPORT: V96-01149.0 ( COMPLETE )

REFERENCE:

CLIENT: HASTINGS MANAGEMENT CORP.

SUBMITTED BY: G. RODGERS

PROJECT: HAM

DATE PRINTED: 14-AUG-96

ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION	EXTRACTION	METHOD
1 Ag	94	0.2 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
2 Cu	94	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
3 Pb	94	2 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
4 Zn	94	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
5 Mo	94	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
6 Ni	94	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
7 Co	94	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
8 Cd	94	0.2 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
9 Bi	94	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
10 As	94	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
11 Sb	94	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
12 Fe	94	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
13 Mn	94	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
14 Te	94	10 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
15 Ba	94	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
16 Cr	94	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
17 V	94	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
18 Sn	94	20 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
19 W	94	20 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
20 La	94	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
21 Al	94	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
22 Mg	94	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
23 Ca	94	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
24 Na	94	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
25 K	94	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
26 Sr	94	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
27 Y	94	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
28 Ga	94	2 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
29 Li	94	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
30 Nb	94	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
31 Sc	94	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
32 Ta	94	10 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
33 Ti	94	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
34 Zr	94	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
S SOIL	94	1 -80	94	DRY, SIEVE -80	94

REPORT COPIES TO: #1000-675 W. HASTINGS ST.  
MR. GLEN RODGERS  
MR. BOB WOODFILL

INVOICE TO: #1000-675 W. HASTINGS ST.

CLIENT: HASTINGS MANAGEMENT CORP.

REPORT: V96-01149.0 ( COMPLETE )

PROJECT: HAM

DATE PRINTED: 14-AUG-96

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Ag	Cu	Pb	Zn	Mo	Ni	Co	Cd	Bi	As	Sb	Fe	Mn	Te	Ba	Cr	V	Sn	W	La	Al	Mg	Ca	Na	K	Sr	Y	Ga	Li	Nb	Sc	Ta	Ti	Zr
		PPM	PCT	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PCT	PCT	PCT	PCT	PCT	PPM	PPM	PPM	PPM	PPM	PPM	PCT	PPM										
L1S-50E		0.4	10	12	57	2	12	9	<.2	<5	15	<5	2.13	294	<10	61	17	39	<20	<20	9	1.35	0.63	0.20	0.02	0.12	9	4	15	13	4	<5	<10	0.09	1
L1S-100E		0.4	9	15	91	1	16	16	<.2	<5	30	<5	1.99	409	<10	109	15	33	<20	<20	6	2.10	0.34	0.16	0.02	0.09	12	2	6	17	4	<5	<10	0.07	8
L1S-150E		0.3	8	11	33	2	9	5	<.2	<5	9	<5	1.63	162	<10	58	14	33	34	<20	9	0.97	0.46	0.19	0.01	0.12	7	3	20	12	3	<5	<10	0.08	<1
L1S-200E		0.5	9	14	56	2	16	16	<.2	<5	37	<5	2.33	349	<10	101	13	38	<20	<20	4	3.20	0.22	0.14	0.02	0.07	13	2	36	16	4	<5	<10	0.11	17
L1S-250E		0.8	17	17	107	3	24	22	<.2	<5	20	<5	2.60	225	<10	85	15	39	20	<20	8	3.51	0.34	0.15	0.02	0.10	14	6	64	19	6	<5	<10	0.12	27
L1S-275E		0.4	11	14	137	3	21	37	<.2	<5	33	<5	2.11	565	<10	94	9	31	<20	<20	7	4.86	0.12	0.17	0.03	0.06	26	8	<2	15	7	<5	<10	0.14	37
L1S-300E		0.4	7	16	137	<1	14	22	<.2	<5	40	<5	1.86	521	<10	144	11	28	<20	71	4	2.77	0.19	0.10	0.03	0.08	20	2	<2	17	3	<5	<10	0.12	17
L1S-325E		0.4	7	22	125	1	16	28	<.2	<5	9	<5	2.25	781	<10	139	12	37	<20	<20	8	1.88	0.48	0.29	0.02	0.18	36	3	<2	20	2	<5	<10	0.11	4
L1S-350E		0.8	10	28	102	1	16	22	<.2	<5	51	<5	3.10	453	<10	110	19	50	24	55	5	2.68	0.57	0.17	0.02	0.16	18	2	27	27	3	<5	<10	0.13	11
L1S-375E		0.5	6	15	114	2	9	17	<.2	<5	19	<5	2.58	563	<10	185	8	43	31	<20	3	2.06	0.42	0.13	0.02	0.31	22	2	<2	19	2	<5	<10	0.15	9
L1S-400E		0.5	8	32	80	2	12	20	<.2	<5	36	<5	2.17	377	<10	128	11	39	31	<20	4	2.15	0.35	0.17	0.02	0.14	27	2	16	16	4	<5	<10	0.12	9
L1S-450E		0.8	13	26	102	2	12	17	<.2	<5	14	5	2.95	752	<10	167	15	48	<20	<20	7	1.75	0.84	0.23	0.02	0.21	26	3	<2	20	3	<5	<10	0.10	1
L1S-475E		0.5	9	22	154	<1	16	31	<.2	<5	35	<5	2.53	1084	<10	194	14	42	<20	<20	4	2.94	0.39	0.17	0.02	0.14	21	2	<2	19	2	<5	<10	0.11	12
L1S-500E		0.4	12	19	68	1	5	16	<.2	<5	16	6	2.26	483	<10	200	7	39	20	<20	10	1.47	0.38	0.14	0.03	0.18	22	4	<2	11	3	<5	<10	0.10	3
L1S-525E		0.7	27	22	53	3	13	12	<.2	<5	21	<5	2.67	286	<10	57	17	40	31	<20	14	1.73	0.91	0.19	0.02	0.27	9	6	11	14	4	<5	<10	0.11	3
L1S-550E		0.6	7	24	125	1	19	21	<.2	<5	22	<5	2.55	484	<10	193	11	41	<20	<20	8	2.39	0.65	0.17	0.02	0.32	24	3	<2	23	3	<5	<10	0.12	7
L1S-575E		0.8	15	29	125	<1	14	16	<.2	<5	53	<5	3.44	327	<10	129	15	59	<20	<20	8	2.40	0.98	0.15	0.01	0.39	12	3	29	26	3	<5	<10	0.15	6
L1S-600E		0.6	21	20	73	3	11	11	<.2	<5	44	<5	2.93	327	<10	57	16	52	24	<20	14	1.74	1.06	0.22	0.02	0.34	12	5	16	19	3	<5	<10	0.14	3
L1S-625E		0.7	15	22	126	2	13	14	<.2	<5	37	<5	3.03	359	<10	167	13	54	<20	<20	6	2.77	0.81	0.18	0.02	0.29	20	3	27	26	2	<5	<10	0.14	8
L1S-650E		0.6	10	26	164	2	14	17	<.2	<5	27	6	2.84	493	<10	171	13	49	31	20	8	2.05	0.78	0.19	0.02	0.34	20	3	<2	23	2	<5	<10	0.12	4
L1S-675E		0.6	6	21	194	2	15	17	<.2	<5	10	<5	2.84	323	<10	148	14	47	<20	<20	6	2.41	0.70	0.13	0.02	0.28	16	2	24	25	2	<5	<10	0.12	5
L1S-700E		0.7	7	47	172	2	9	10	<.2	<5	33	5	3.41	491	<10	169	18	55	<20	26	6	1.62	0.82	0.14	0.01	0.42	16	2	14	21	2	<5	<10	0.15	2
L1S-725E		0.4	11	28	112	1	14	8	<.2	<5	37	<5	2.51	249	<10	78	15	40	32	24	8	1.61	0.75	0.14	0.01	0.26	14	2	37	18	3	<5	<10	0.11	3
L1S-750E		0.6	10	31	100	2	9	6	<.2	<5	33	<5	2.56	260	<10	80	24	46	20	<20	10	1.28	0.74	0.13	0.01	0.32	11	3	26	13	3	<5	<10	0.11	1
L1S-775E		0.6	7	25	239	3	15	16	<.2	<5	<5	<5	2.69	754	<10	179	17	39	<20	<20	7	1.80	0.69	0.21	0.02	0.34	27	2	<2	23	2	<5	<10	0.11	4
L1S-800E		0.4	14	20	229	2	19	15	<.2	<5	13	<5	2.01	717	<10	196	14	29	52	<20	9	1.73	0.55	0.16	0.02	0.18	22	3	<2	23	3	<5	<10	0.09	4
L1S-825E		0.4	11	18	303	3	21	16	<.2	<5	21	<5	2.04	702	<10	146	12	30	49	<20	8	2.73	0.35	0.19	0.02	0.13	25	3	<2	19	3	<5	<10	0.10	11
L1S-850E		0.8	26	33	211	3	37	29	<.2	<5	40	<5	3.57	261	<10	145	19	50	<20	<20	12	2.90	0.75	0.13	0.02	0.28	14	5	65	32	4	<5	<10	0.14	9
L1S-875E		0.5	19	16	378	2	40	30	<.2	<5	14	<5	2.30	327	<10	155	16	34	42	<20	12	2.18	0.61	0.21	0.02	0.26	19	4	18	27	4	<5	<10	0.10	8
L1S-900E		1.3	44	27	627	4	29	35	0.3	<5	18	6	4.96	747	<10	110	18	61	30	<20	39	2.73	1.04	0.23	0.02	0.51	19	16	<2	43	9	<5	<10	0.17	2

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SAMPLE NUMBER	ELEMENT UNITS	Ag	Cu	Pb	Zn	Mo	Ni	Co	Cd	Bi	As	Sb	Fe	Mn	Te	Ba	Cr	V	Sn	W	La	Al	Mg	Ca	Na	K	Sr	Y	Ga	Li	Nb	Sc	Ta	Ti	Zr
		PPM	PCT	PPM	PCT	PCT	PCT	PCT	PCT	PPM	PCT																								
L2S-00E		0.3	12	14	67	<1	16	12	<.2	<5	17	<5	1.59	659	<10	87	12	25	<20	<20	8	1.70	0.33	0.13	0.02	0.08	9	2	<2	17	2	<5	<10	0.08	3
L2S-50E		0.3	12	13	43	1	11	9	<.2	<5	29	<5	1.51	190	<10	62	13	24	<20	<20	7	1.34	0.42	0.13	0.01	0.09	11	3	13	15	3	<5	<10	0.07	3
L2S-100E		0.3	15	8	45	2	14	9	<.2	<5	15	6	1.49	354	<10	58	19	26	<20	<20	9	1.35	0.38	0.16	0.01	0.13	12	3	<2	11	2	<5	<10	0.06	1
L2S-150E		0.5	19	16	53	1	22	24	<.2	<5	<5	<5	2.37	524	<10	84	24	37	<20	<20	15	2.40	0.67	0.17	0.02	0.14	14	9	<2	23	6	<5	<10	0.09	2
L2S-200E		0.3	10	8	33	<1	11	6	<.2	<5	<5	<5	1.62	162	<10	39	18	28	39	<20	11	1.32	0.58	0.21	0.02	0.09	8	5	17	14	3	<5	<10	0.09	2
L2S-250E		0.4	8	12	56	2	14	9	<.2	<5	26	<5	1.82	490	<10	87	16	31	<20	<20	13	1.60	0.28	0.16	0.02	0.07	12	7	<2	12	5	<5	<10	0.07	2
L2S-300E		0.4	13	11	52	3	15	8	<.2	<5	8	<5	1.80	163	<10	49	19	31	61	26	11	1.52	0.66	0.19	0.02	0.11	9	4	34	16	3	<5	<10	0.09	2
L2S-350E		0.4	19	12	68	2	21	13	<.2	<5	19	<5	2.46	195	<10	82	23	39	<20	<20	10	2.35	0.63	0.20	0.02	0.13	13	4	47	22	4	<5	<10	0.09	3
L2S-375E		0.7	21	13	68	1	26	15	<.2	<5	54	<5	2.83	311	<10	115	25	46	24	<20	8	2.98	0.59	0.19	0.02	0.12	12	4	45	22	4	<5	<10	0.11	6
L2S-400E		0.4	16	13	67	2	21	20	<.2	<5	19	<5	1.99	422	<10	150	17	30	<20	<20	11	2.50	0.31	0.11	0.02	0.10	12	5	20	17	4	<5	<10	0.10	5
L2S-425E		0.3	11	13	42	1	11	13	<.2	<5	9	<5	1.78	386	<10	59	18	30	<20	<20	12	1.42	0.59	0.28	0.02	0.13	12	6	<2	13	4	<5	<10	0.09	<1
L2S-450E		0.4	18	18	44	2	18	14	<.2	<5	21	<5	2.16	404	<10	75	23	36	<20	<20	18	1.81	0.74	0.31	0.02	0.15	17	10	<2	18	6	<5	<10	0.11	1
L2S-475E		0.3	11	10	45	2	12	10	<.2	<5	<5	<5	1.86	225	<10	77	18	34	59	<20	12	1.50	0.54	0.26	0.02	0.10	12	6	17	15	4	<5	<10	0.10	1
L2S-500E		0.4	16	16	43	1	13	13	<.2	<5	6	<5	1.97	374	<10	49	22	35	<20	<20	13	1.50	0.75	0.32	0.02	0.14	13	7	<2	16	4	<5	<10	0.10	1
L2S-525E		0.3	13	13	43	1	13	12	<.2	<5	33	<5	1.88	244	<10	43	20	36	<20	<20	11	1.45	0.71	0.29	0.02	0.12	11	6	8	17	4	<5	<10	0.11	2
L2S-550E		0.4	15	16	43	2	13	13	<.2	<5	18	<5	2.07	273	<10	54	19	35	<20	<20	12	1.51	0.68	0.28	0.02	0.14	12	6	12	14	5	<5	<10	0.09	2
L2S-575E		0.4	20	15	42	3	13	11	<.2	<5	18	6	2.20	297	<10	63	19	39	44	<20	12	1.49	0.73	0.34	0.02	0.18	16	6	<2	13	4	<5	<10	0.10	2
L2S-600E		0.4	7	15	76	2	20	23	<.2	<5	18	<5	2.15	474	<10	160	16	30	<20	<20	6	2.37	0.38	0.20	0.02	0.13	23	3	<2	18	3	<5	<10	0.09	6
L2S-625E		0.4	7	12	103	1	19	13	<.2	<5	45	<5	1.93	660	<10	248	12	28	<20	<20	5	2.79	0.30	0.23	0.02	0.11	32	2	<2	17	2	<5	<10	0.08	9
L2S-650E		0.4	10	16	89	3	23	14	<.2	<5	9	<5	1.82	831	<10	153	13	30	<20	<20	9	2.47	0.40	0.22	0.02	0.12	28	4	<2	17	4	<5	<10	0.09	11
L2S-675E		0.4	8	15	68	1	16	16	<.2	<5	20	<5	2.06	767	<10	210	16	33	<20	<20	8	1.95	0.51	0.28	0.02	0.17	27	3	<2	18	2	<5	<10	0.09	2
L2S-700E		0.5	12	14	129	1	20	14	<.2	<5	24	5	2.15	435	<10	126	14	35	<20	<20	6	3.18	0.45	0.22	0.03	0.13	24	2	17	21	3	<5	<10	0.11	15
L2S-725E		0.4	14	10	84	<1	13	13	<.2	<5	52	<5	1.90	220	<10	89	12	31	67	<20	9	3.74	0.33	0.25	0.03	0.10	27	6	45	16	5	<5	<10	0.14	32
L2S-750E		0.5	12	14	114	<1	19	16	0.4	<5	30	<5	2.30	618	<10	198	20	38	23	<20	6	3.04	0.63	0.22	0.02	0.16	35	2	<2	21	3	<5	<10	0.11	10
L2S-775E		0.5	9	24	229	2	19	17	<.2	<5	32	<5	2.32	442	<10	245	28	38	33	<20	7	1.94	0.82	0.28	0.03	0.21	31	2	<2	24	2	<5	<10	0.09	3
L2S-800E		0.5	9	35	242	2	25	18	<.2	<5	43	<5	2.67	435	<10	114	27	46	<20	<20	6	1.99	0.80	0.23	0.03	0.28	20	3	3	23	2	<5	<10	0.12	3
L2S-825E		0.5	12	25	194	2	22	23	<.2	<5	41	<5	2.48	630	<10	215	23	40	<20	<20	6	2.25	0.75	0.22	0.03	0.24	34	2	<2	25	2	<5	<10	0.11	6
L2S-850E		0.9	34	40	74	4	18	16	<.2	<5	81	8	3.51	339	<10	92	33	55	24	<20	11	2.24	1.16	0.33	0.02	0.26	29	5	29	18	3	<5	<10	0.12	2
L2S-875E		0.4	19	13	137	2	23	17	0.3	<5	26	<5	2.11	338	<10	172	13	32	<20	<20	11	3.46	0.47	0.34	0.04	0.15	47	6	27	20	5	<5	<10	0.13	27
L2S-900E		0.5	8	13	201	2	22	26	<.2	<5	28	<5	1.87	372	<10	181	14	29	<20	<20	8	2.22	0.49	0.19	0.03	0.16	30	3	9	25	3	<5	<10	0.09	4

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SAMPLE NUMBER	ELEMENT UNITS	Ag	Cu	Pb	Zn	Mo	Ni	Co	Cd	Bi	As	Sb	Fe	Mn	Te	Ba	Cr	V	Sn	W	La	Al	Mg	Ca	Na	K	Sr	Y	Ga	Li	Nb	Sc	Ta	Ti	Zr
		PPM	PCT	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PCT	PCT	PCT	PCT	PCT	PPM	PCT	PPM																
L2S-950E		0.6	18	22	116	2	17	17	0.3	<5	19	<5	2.61	334	<10	85	20	36	<20	<20	19	1.87	1.11	0.27	0.03	0.38	19	6	10	21	4	<5	<10	0.10	5
L2S-975E		0.3	12	18	231	2	16	19	0.6	<5	39	<5	1.73	1493	<10	367	13	27	43	<20	7	2.26	0.56	0.29	0.04	0.22	39	2	<2	22	2	<5	<10	0.08	6
L2S-1000E		0.5	18	22	94	2	37	28	<2	<5	46	<5	3.01	339	<10	289	13	40	<20	<20	8	4.47	0.45	0.28	0.04	0.27	46	5	50	42	4	<5	<10	0.15	29
L2S-1025E		0.6	8	27	134	1	18	27	<2	<5	32	<5	2.36	421	<10	188	15	36	<20	<20	9	1.93	0.74	0.18	0.02	0.25	20	3	6	23	2	<5	<10	0.09	4
L2S-1050E		0.5	14	15	112	2	27	35	<2	<5	24	<5	2.40	193	<10	163	14	36	<20	<20	9	2.14	0.74	0.30	0.03	0.21	38	3	47	23	2	<5	<10	0.10	8
L2S-1075E		0.4	17	28	73	2	13	10	<2	<5	<5	<5	2.51	304	<10	59	15	44	<20	<20	13	1.47	0.87	0.29	0.02	0.38	14	6	4	15	4	<5	<10	0.13	1
L2S-1100E		0.5	14	46	114	1	19	9	<2	<5	31	<5	2.59	278	<10	36	31	43	<20	<20	14	1.48	1.10	0.23	0.02	0.34	9	6	24	16	4	<5	<10	0.12	1
L2S-1125E		0.7	18	32	120	1	27	20	<2	<5	9	<5	3.14	652	<10	86	22	45	56	<20	22	1.92	1.13	0.25	0.02	0.40	15	6	<2	26	4	<5	<10	0.12	1
L2S-1150E		0.6	15	38	98	2	18	20	<2	<5	17	<5	3.09	347	<10	73	27	52	37	<20	13	1.86	1.19	0.27	0.02	0.35	17	6	12	24	3	<5	<10	0.14	1
L3S-00E		0.4	14	11	44	2	16	7	<2	<5	16	<5	1.48	228	<10	55	15	26	<20	<20	9	1.57	0.47	0.23	0.03	0.15	18	5	7	18	3	<5	<10	0.08	2
L3S-50E		0.4	8	10	57	2	19	8	<2	<5	23	<5	1.55	224	<10	227	12	22	<20	<20	8	1.65	0.37	0.20	0.02	0.11	27	3	25	18	3	<5	<10	0.08	4
L3S-100E		<2	11	16	53	1	13	7	<2	<5	18	<5	1.38	514	<10	163	11	22	<20	<20	8	1.17	0.38	0.34	0.02	0.12	31	3	<2	14	2	<5	<10	0.07	2
L3S-150E		0.4	18	11	83	2	30	12	<2	<5	39	<5	2.23	221	<10	133	15	34	<20	<20	6	3.29	0.56	0.29	0.03	0.17	48	3	50	23	3	<5	<10	0.12	18
L3S-200E		<2	5	9	57	2	9	6	<2	<5	<5	<5	1.22	299	<10	124	11	21	<20	<20	7	1.36	0.26	0.22	0.02	0.11	16	3	<2	11	2	<5	<10	0.07	1
L3S-250E		<2	12	12	54	2	13	12	<2	<5	11	<5	1.26	325	<10	76	12	24	<20	<20	23	1.25	0.43	0.28	0.02	0.13	20	12	<2	19	7	<5	<10	0.07	1
L3S-300E		0.6	28	16	111	2	30	28	<2	<5	38	<5	2.43	275	<10	255	15	37	<20	<20	14	3.71	0.55	0.29	0.03	0.22	40	9	49	26	7	<5	<10	0.13	12
L3S-350E		0.4	14	12	78	3	23	11	<2	<5	21	<5	1.88	364	<10	109	12	33	<20	<20	6	2.78	0.37	0.23	0.02	0.11	26	3	9	16	3	<5	<10	0.11	19
L3S-400E		0.5	13	25	171	<1	23	20	<2	<5	32	<5	2.31	272	<10	124	15	32	<20	<20	8	2.20	0.57	0.14	0.02	0.16	13	3	31	21	3	<5	<10	0.09	11
L3S-425E		0.4	15	22	114	2	16	18	<2	<5	25	<5	2.23	348	<10	195	15	32	<20	<20	11	1.71	0.71	0.18	0.02	0.18	18	3	4	20	2	<5	<10	0.08	2
L3S-450E		0.4	14	11	160	2	23	18	0.3	<5	14	<5	1.68	865	<10	304	12	23	45	<20	5	2.10	0.29	0.21	0.03	0.15	29	3	<2	14	2	<5	<10	0.08	8
L3S-475E		0.4	12	9	80	3	16	10	<2	<5	32	<5	1.46	481	<10	165	8	23	<20	<20	6	2.74	0.15	0.22	0.03	0.08	28	4	<2	12	3	<5	<10	0.10	14
L3S-500E		0.3	6	12	112	<1	16	13	<2	<5	16	<5	1.10	568	<10	251	11	19	<20	<20	6	1.53	0.17	0.16	0.02	0.09	22	2	<2	14	2	<5	<10	0.07	4
L3S-525E		0.4	13	17	84	1	13	11	<2	<5	21	<5	2.28	293	<10	101	16	34	55	<20	14	1.63	0.91	0.19	0.01	0.23	17	4	16	21	3	<5	<10	0.09	1
L3S-550E		0.4	10	13	135	2	13	11	<2	<5	23	<5	1.99	1212	<10	345	11	29	26	<20	5	3.08	0.27	0.13	0.02	0.12	22	2	<2	19	2	<5	<10	0.11	14
L3S-575E		0.4	6	18	108	2	13	14	0.3	<5	<5	<5	1.60	352	<10	259	10	24	<20	22	6	1.50	0.31	0.13	0.02	0.14	19	2	11	16	2	<5	<10	0.08	4
L3S-600E		0.8	46	17	136	<1	33	21	<2	<5	23	<5	3.01	659	<10	206	25	41	<20	<20	25	4.40	0.58	0.22	0.03	0.20	31	19	6	30	12	6	<10	0.14	23
L3S-625E		0.6	48	25	78	<1	25	26	<2	<5	38	<5	2.72	1167	<10	116	26	39	<20	<20	50	2.87	0.84	0.35	0.02	0.26	28	29	<2	23	17	<5	<10	0.10	2
L3S-650E		0.5	25	14	125	4	26	12	<2	<5	37	<5	2.50	384	<10	193	17	39	40	<20	11	3.84	0.41	0.14	0.03	0.13	19	8	32	22	6	<5	<10	0.14	21
L3S-675E		0.4	27	18	74	1	19	14	<2	<5	25	<5	1.92	246	<10	61	20	35	<20	<20	18	1.80	0.71	0.26	0.02	0.21	14	9	9	19	5	<5	<10	0.11	3
L3S-700E		0.4	10	11	154	2	29	23	<2	<5	15	<5	1.90	350	<10	142	14	29	<20	<20	6	2.17	0.34	0.19	0.03	0.15	23	3	<2	18	3	<5	<10	0.09	9

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SAMPLE NUMBER	ELEMENT UNITS	Ag	Cu	Pb	Zn	Mo	Ni	Co	Cd	Bi	As	Sb	Fe	Mn	Te	Ba	Cr	V	Sn	W	La	Al	Mg	Ca	Na	K	Sr	Y	Ga	Li	Nb	Sc	Ta	Ti	Zr
		PPM	PCT	PPM	PCT	PCT	PCT	PCT	PCT	PPM	PCT																								
L3S-725E		1.6	95	33	187	2	345	60	<.2	<5	31	<5	6.55	1261	<10	129	387	134	<20	21	3	3.80	2.81	0.32	0.01	0.56	22	7	8	55	4	<5	<10	0.20	4
L3S-750E		0.7	22	24	85	1	37	23	<.2	<5	13	<5	3.08	488	<10	74	17	33	<20	<20	14	1.79	0.67	0.18	0.01	0.18	14	7	<2	20	5	<5	<10	0.09	2
L3S-775E		0.5	22	49	91	3	40	20	<.2	<5	13	<5	2.79	352	<10	70	18	33	<20	<20	14	2.20	0.66	0.17	0.01	0.17	13	5	16	22	4	<5	<10	0.10	2
L5N-3375E		0.7	20	42	114	1	16	13	<.2	<5	19	<5	3.06	462	<10	105	15	49	<20	<20	12	2.13	0.44	0.07	0.01	0.15	9	4	29	21	5	<5	<10	0.10	4

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STANDARD NAME	ELEMENT UNITS	Ag	Cu	Pb	Zn	Mo	Ni	Co	Cd	Bi	As	Sb	Fe	Mn	Te	Ba	Cr	V	Sn	W	La	Al	Mg	Ca	Na	K	Sr	Y	Ga	Li	Nb	Sc	Ta	Ti	Zr	
ANALYTICAL BLANK		<.2	<1	<2	<1	<1	<1	<1	0.3	<5	<5	<5	<.01	<1	<10	<1	<1	<1	<20	<20	<1	<.01	<.01	<.01	<.01	<.01	<1	<1	<2	<1	<1	<5	<10	<.01	<1	
ANALYTICAL BLANK		<.2	<1	<2	<1	<1	2	<1	<.2	<5	<5	<5	<.01	<1	<10	<1	<1	<1	<20	<20	<1	<.01	<.01	<.01	<.01	<.01	<1	<1	3	<1	<1	<5	<10	<.01	<1	
ANALYTICAL BLANK		<.2	<1	<2	<1	<1	<1	<1	<.2	<5	<5	<5	<.01	<1	<10	<1	<1	<1	<20	<20	<1	<.01	<.01	<.01	<.01	<.01	<1	<1	<2	<1	<1	<5	<10	<.01	<1	
Number of Analyses		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Mean Value		0.1	0.5	1	0.5	0.5	1	0.5	0.2	3	3	3	.005	0.5	5	0.5	0.5	0.5	10	10	0.5	.005	.005	.005	.005	.005	0.5	0.5	2	0.5	0.5	3	5	.005	0.5	
Standard Deviation		<.1	-	-	-	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Accepted Value		0.2	1	2	1	1	1	1	0.1	2	5	5	0.05	1	.01	.01	1	1	.01	.01	.01	<.01	<.01	<.01	<.01	<.01	.01	.01	.01	.01	.01	.01	.01	<.01	.01	
BCC GEOCHEM STD 4		1.4	294	39	238	5	44	10	1.2	<5	26	6	2.64	634	<10	59	79	9	<20	<20	2	0.80	1.62	1.48	0.06	0.14	38	3	<2	6	<1	<5	<10	<.01	10	
Number of Analyses		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mean Value		1.4	294	39	238	5	44	10	1.2	3	26	6	2.64	634	5	59	79	9	10	10	2	0.80	1.62	1.48	0.06	0.14	38	3	1	6	0.5	3	5	.005	10	
Standard Deviation		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Accepted Value		0.8	290	33	255	4	42	9	0.8	1	30	0.5	2.40	600	0.1	55	80	9	5	1	4	0.77	1.34	1.43	0.04	0.14	39	4	2	7	1	12	1	0.01	8	
BCC GEOCHEM STD 3		6.4	869	209	480	539	517	40	<.2	<5	346	50	4.56	869	<10	231	150	36	<20	<20	5	5.14	3.30	4.56	0.35	0.21	82	5	<2	17	1	<5	<10	0.03	3	
Number of Analyses		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mean Value		6.4	869	209	480	539	517	40	0.1	3	346	50	4.56	869	5	231	150	36	10	10	5	5.14	3.30	4.56	0.35	0.21	82	5	1	17	1	3	5	0.03	3	
Standard Deviation		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Accepted Value		7.8	820	250	500	600	600	40	2.0	4	310	50	5.00	850	1	220	150	34	16	8	6	4.64	4.90	5.13	0.30	0.20	78	6	2	14	11	12	1	0.03	2	
BCC GEOCHEM STD 5		-	94	7	78	2	35	17	<.2	<5	30	<5	4.55	795	<10	204	51	133	<20	21	4	3.25	2.09	1.02	0.06	0.32	36	8	<2	27	3	10	<10	0.21	14	
Number of Analyses		-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mean Value		-	94	7	78	2	35	17	0.1	3	30	3	4.55	795	5	204	51	133	10	21	4	3.25	2.09	1.02	0.06	0.32	36	8	1	27	3	10	5	0.21	14	
Standard Deviation		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Accepted Value		0.7	90	11	80	2	40	18	0.1	1	8	1	4.74	720	0.2	200	54	133	4	2	5	3.09	1.83	1.08	0.06	0.32	39	9	4	-	1	18	1	-	9	

CLIENT: HASTINGS MANAGEMENT CORP.

PROJECT: HAM

REPORT: V96-01149.0 ( COMPLETE )

DATE PRINTED: 14-AUG-96

PAGE 6

SAMPLE NUMBER	ELEMENT UNITS	Ag	Cu	Pb	Zn	Mo	Ni	Co	Cd	Bi	As	Sb	Fe	Mn	Te	Ba	Cr	V	Sn	W	La	Al	Mg	Ca	Na	K	Sr	Y	Ga	Li	Nb	Sc	Ta	Ti	Zr
		PPM	PCT	PPM	PCT	PCT	PCT	PCT	PCT	PPM	PCT																								
L1S-450E		0.8	13	26	102	2	12	17	<.2	<5	14	5	2.95	752	<10	167	15	48	<20	<20	7	1.75	0.84	0.23	0.02	0.21	26	3	<2	20	3	<5	<10	0.10	1
Duplicate		0.6	13	27	100	3	11	17	<.2	<5	38	<5	2.92	751	<10	166	14	48	26	<20	7	1.73	0.82	0.22	0.02	0.20	25	3	<2	20	2	<5	<10	0.10	1
L1S-875E		0.5	19	16	378	2	40	30	<.2	<5	14	<5	2.30	327	<10	155	16	34	42	<20	12	2.18	0.61	0.21	0.02	0.26	19	4	18	27	4	<5	<10	0.10	8
Duplicate		0.5	19	19	378	3	40	31	<.2	<5	<5	<5	2.34	334	<10	154	17	35	38	25	13	2.20	0.61	0.22	0.02	0.26	19	4	27	27	4	<5	<10	0.10	8
L2S-625E		0.4	7	12	103	1	19	13	<.2	<5	45	<5	1.93	660	<10	248	12	28	<20	<20	5	2.79	0.30	0.23	0.02	0.11	32	2	<2	17	2	<5	<10	0.08	9
Duplicate		0.4	7	15	91	2	16	14	<.2	<5	41	<5	1.97	660	<10	247	12	29	24	<20	5	2.79	0.31	0.23	0.02	0.11	32	2	<2	16	3	<5	<10	0.09	9
L2S-1075E		0.4	17	28	73	2	13	10	<.2	<5	<5	<5	2.51	304	<10	59	15	44	<20	<20	13	1.47	0.87	0.29	0.02	0.38	14	6	4	15	4	<5	<10	0.13	1
Duplicate		0.5	18	29	79	2	12	10	<.2	<5	25	6	2.58	315	<10	62	16	45	<20	<20	14	1.52	0.90	0.29	0.02	0.39	14	7	6	16	4	<5	<10	0.13	1
L3S-600E		0.8	46	17	136	<1	33	21	<.2	<5	23	<5	3.01	659	<10	206	25	41	<20	<20	25	4.40	0.58	0.22	0.03	0.20	31	19	6	30	12	6	<10	0.14	23
Duplicate		0.7	47	19	159	3	35	21	<.2	<5	54	<5	3.05	674	<10	211	25	42	<20	<20	26	4.49	0.59	0.22	0.03	0.20	32	20	10	31	12	6	<10	0.14	23

Drill Hole Record

Property: HAM  
District: Fort Steele  
Hole No: HAM-96-1  
Length of Hole: 305.41 m  
Commenced: August 9, 1996  
Completed: August 12, 1996  
General Location: On main Bootleg Road, approximately  
4 km southwest of the town of Kimberley  
Co-ordinates: 49°40'N Latitude, 116°05'W Longitude  
Elevation: 1370 m  
GPS Location: 565937m E., 5501870 m. N, 1370 m Elev.  
Inclination: -90°  
Azimuth: 0  
Dip Test Results: None done  
Hole/Core Size: NQ  
Logged By: Peter Klewchuk  
Objective: Test Soil Geochem  
Location Core Storage: 3380 Wilks Road, Cranbrook  
Drilled By: Lone Ranger Drilling  
Type of Drill: Longyear 44  
WP7 File No: Tplog.8  
Owner: Hastings Management Corp  
1000--675 W. Hastings Street  
Vancouver, B.C., V6B 1N2  
Operator: Sedex Mining Corp.  
Cranbrook, B.C., V1C 4H7

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0-6.4m	CASING; NO CORE
6.4-32.1	<p>GRANOPHYRE Medium gray, mottled, massive. Medium to fine grained. Mainly quartz with est 15% biotite, minor chlorite (chloritized amphibole?), feldspar and sericite. Est 2 - 3% sulfides with both po and py. Numerous healed, bleached fractures are present, most commonly at ~65° to core angle. Finer grained zone at 22.1m (15cm wide) is calcareous.</p>
32.1-33.8	<p>MASSIVE SILTSTONE/FINER GRAINED GRANOPHYRE, FAULT ZONE Medium gray, fine-grained. Similar mineralogy to granophyre. 32.4 to 33.7 is brecciated with thin veinlets of white calcite. 34.0 - 34.5 is broken core with calcite veins up to 1cm wide, sub-parallel to core angle. 10cm of more intense brecciation 34.5 - 34.6 has a weak fabric at ~60° to core angle. Minor pyrite is common in the brecciated material and locally there is very fine reddish ZnS.</p>
33.8-41.7	<p>GRANOPHYRE Medium to darker gray, generally similar to 6.4-32.1 interval below 33.8m but becoming finer (medium) grained with more distinct minor white feldspar and more abundant chlorite/chloritized amphibole toward 41.7m. Strongly biotic throughout with est 15 - 20% biotite. Minor disseminated fine po est. 1%.</p>
41.7-94.6	<p>GABBRO Indistinct contact at 41.7m is foliated at 50° to core angle. Medium gray-green color. Variably coarse to medium, almost fine-grained locally. Becomes more uniformly "medium grained" below 55m. Pale gray-green (yellowish) from 84.1 to 84.9 - looks like an internal chill margin. 88.1 to 92.0 is speckled brown with abundant biotite. Minor sub-horizontal fault zone at 92m; 5cm of crushed rock with 5cm wide calcite veins. Thin calcite veins, typically 30 - 60° to core angle, occur throughout the gabbro. Broken core from 93.10 to 94.6 and fault breccia over 10 - 15cm at 94.6 indicate a fault contact with underlying</p>

sediments. Chloritic slickensides in broken core are commonly at  $\sim 45^\circ$  to core angle. at 72.4m a 15cm wide 'vein' of fine-grained more siliceous material with fine disseminated py cuts core at  $35^\circ$  to core angle.

94.6-95.8

**FAULT BRECCIA**

Mottled pale gray-green-brown. Wavy healed cleavage/shearing qat  $\sim 45 - 55^\circ$  to core angle. Brecciated sediments, argillaceous siltstone. Some fragments show relict laminations. 20 - 25% of the zone is fault gouge.

95.8-125.7

**SILTSTONE**

Alternating light, medium or dark gray bands. Thin bedded and laminated. Commonly biotite-rich. Disseminated po is common throughout; 1 - 2%. Blebs and thin veins of po are also present. Py occurs as thin veins and as fracture coatings on chloritic fractures. Bedding:  $40^\circ$  at 96m;  $50^\circ$  at 101.2m;  $54^\circ$  at 109m;  $57^\circ$  at 113m;  $60^\circ$  at 119m;  $63^\circ$  at 124m. Aspy occurs locally with thin bedding-parallel qv (eg. at 119.9m) and narrow cross-cutting fracture veins (eg. at 110.2, 117.9 and 123.1m). Cross-cutting veins are at  $35 - 55^\circ$  to core angle and close to  $90^\circ$  to bedding. Minor ZnS occurs with Aspy veins and with a chlorite-quartz bedding-parallel band at 110.25m. Minor PbS occurs with Aspy at 117.9m. Chloritic alteration is noticeable below  $\sim 112$ m, increasing gradually downward.

125.7-150.4

**GABBRO SILL**

Both contacts bedding-parallel at  $60^\circ$  to core angle. Medium-darker gray green. Fine-grained chill contacts are 50 - 60cm thick, mainly medium grained with coarser grained from  $\sim 128$ m to 134m. Quite massive. Minor fracturing, some healed, some open, with quartz, calcite, chlorite and minor pyrite occurring at  $\sim 15^\circ$  to core angle near 132m, 139m, and 137.7m. Minor fine disseminated po occurs in the gabbro and locally there are small specks of ZnS. Notably biotitic between 147.2 - 149.8m.

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- 150.4-169.2      SILTSTONE  
Very light to medium and darker gray. Thin bedded and laminated, rare medium beds. Strongly bleached from 150.4 - 151.6. Bleaching is associated with near vertical healed wavy fracturing with some quartz veining and minor po and accessory Cpy. Bedding is offset ~10cm along this fracture. Beds are locally weakly chloritic. Beds are typically sericitic but more strongly micaceous near 160m and 166.5m with thin cross-cutting veinlets of muscovite ± minor biotite. Minor po and py are common (est. 1%), disseminated in thin veinlets, and as small irregular blebs. Near 138.2m a 15cm length of more strongly bleached (albitized?) core carries ~7% patchy po with minor py. Bedding: 60° at 153.5m; 70° at 160.5m; 68° at 166m.
- 169.2-169.5      FAULT ZONE  
Broken core with chloritic fractures, dark gray clay gouge with minor quartz (as small pebbles) and disseminated pyrite. Fabric in clay gouge is ~60° to core angle - may be a bedding-parallel zone.
- 169.5-186.5      SILTSTONE  
Similar to previous intervals. Core is more broken with local narrow zones of minor faulting. 169.5 - 169.8 is weakly brecciated with thin QV, minor py. Pyrite is common fractures with bluish-green chlorite. At 179m, fracture coating is more distinctly blue and may be cobaltite. Bedding: 70° at 171.8m; 65° at 183.7m.
- 186.5-187.0      FAULT ZONE  
Brecciated micaceous siltstone with quartz and calcite veining and minor veins and disseminated py. Lower contact at 45° to core angle with horizontal slickensides on chloritic shear surfaces.

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187.0-192.7	<p><b>SILTSTONE</b> Light, medium and darker gray. Thin and medium bedded. Weakly to moderately chloritic altered. Minor pyrite, est 1 - 2%, occurs disseminated as bedding-parallel concentrations as thin cross-cutting veinlets and as local irregular blebs with chlorite. Biotite is locally present, usually with increased silicification. Bedding 75 - 85° to core angle throughout.</p>
192.7-196.9	<p><b>GABBRO, FAULT ZONE</b> Upper contact at 60° to core angle, bedding parallel; lower contact in broken core. Medium gray-green, fine grained, variably biotite-rich. Pyrite and lesser po are common in thin irregular veinlets. Very minor accessory Cpy occurs with po. Sulfides occur with thin quartz (-calcite) veins. 195.3 - 196.9 is broken core with fault breccia of quartz veining, coarse biotite and minor calcite over 20cm near 195.5m.</p>
196.9-198.2	<p><b>SILTSTONE</b> Darker brown-green, biotite and chlorite-rich. Core is fairly broken, affected by adjacent fault zones. Patchy silicification. Pyrite occurs throughout, locally abundant on chlorite-pyrite shear 1cm wide, at 35° to core angle. Contact at 198.2m at 50° to core angle, sheared, silicified and pyritic.</p>
198.2-205.3	<p><b>GABBRO, FAULT ZONE</b> Lower contact bedding-parallel at 50° to core angle. Medium gray-green, massive and fine-medium grained. Variably biotitic. Vuggy py-po-chlorite veins are common, 2 - 4mm wide, typically at 50° to core angle. Wavy near-vertical quartz-calcite vein ~4 - 5 cm wide cuts core from 198.9 - 199.6. Vein contains small vugs and local concentrations of pyrite. 199.6 - 200.0 is fault breccia and gouge, broken core. Quartz-calcite forms a matrix to angular wallrock fragments near 199.6m; calcareous clay gouge with quartz fragments, disseminated py over 15cm at 200.0m. Near 204.6m veins of coarse</p>

Aspy with minor py are developed over 15 - 20cm of core. Veins are at 40° and 50° to core angle and cross-cut each other at ~120°. Coarse Aspy is disseminated along thinner veins/fractures with pyrite and chlorite.

205.3-305.41

SILTSTONE, QUARTZITIC SILTSTONE, ARGILLACEOUS SILTSTONE

Variably light to darker gray, brownish where biotite is concentrated. Typically thin bedded and laminated with scattered medium thick beds.

DETAILS: 205.3 to 206.1 is more strongly biotitic, darker brown with a few thin vuggy bedding-parallel bands of pyrite.

At 208.9, 209.4 and 213.2 are 3 6 - 15cm bands of white albitic alteration with weakly chloritic, mottled texture.

228.8 - 229.5 FAULT ZONE with broken core, fault breccia, gouge, shearing at 30 - 35° to core angle and disseminated pyrite.

At 233.0 and 234.0 Albitic zones 6cm and 30cm wide. 1cm wide QV cuts core at 20° to core angle at 234.1m, within albitic zone; carries disseminated chl and po.

At 234.5m 15cm of heavily disseminated to patchy po in a mottled chloritic zone, minor py. Est. 15 - 20% sulfides over 15cm.

Near 235.5m more strongly micaceous with filamentous mica bands 1 - 3mm wide waving across individual 4 - 6cm wide beds, bands are at high angle to bedding.

235.9 - 239.7 - variably brecciated with fault zone at 239.0 - 239.3m; Crackle breccia over 15cm at 236.1m, calcite veinlets; more intense crackle breccia with chlorite, pyrite matrix from 237.0 - 237.4. Veining tends to be at 10° to core angle, 70 - 80° to bedding; brecciation and clay fault gouge, fine disseminated pyrite, chloritic fault zone. 239.0 - 239.3 - shearing most strongly developed at 20 - 30° to core angle.

At 251 and 252m quartz veins at 40° to core angle, somewhat ribboned with disseminated chl.

At 237.2m, 20cm albitic zone, mottled with disseminated chl,

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biotite and light pink garnets.

At 286.0m, 10cm albitic zone, mottled with disseminated chl, biotite and light pink garnets.

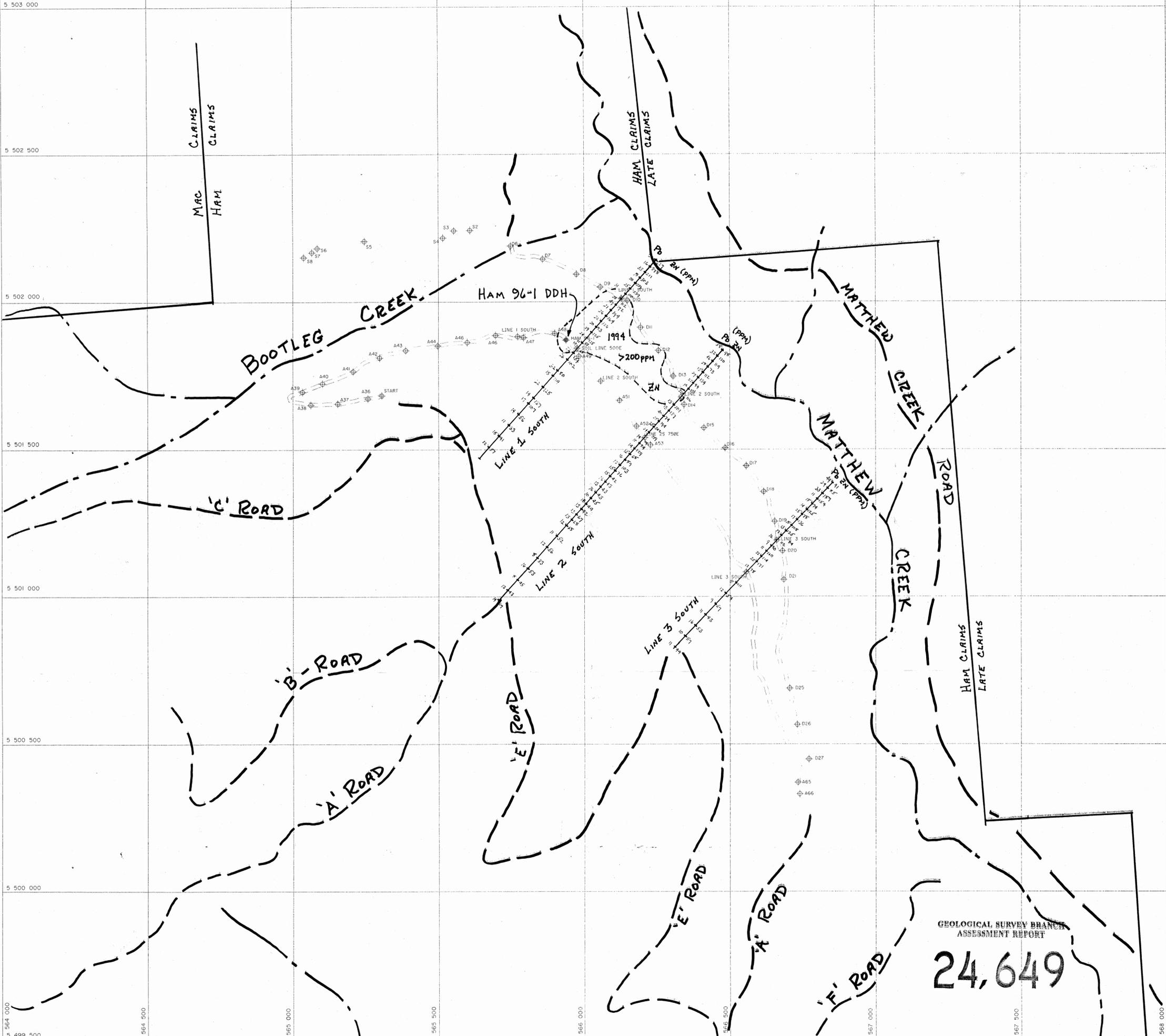
At 304.6m 35cm zone of bleaching, albitization with 6% patchy po, stronger chlorite.

GENERAL: No discernable increase downward in development of muscovite. This lower zone of siltstone is locally weakly chloritic, appears moderately silicified, variably biotitic.

Bedding: 77° at 231m; 68° at 243m; 65° at 266m; 65° at 275m; 70° at 288m; 65° at 303m.

305.41

END OF HOLE



GEOLOGICAL SURVEY BRANCH  
ASSESSMENT REPORT  
**24,649**

**Explanation**

POWER LINE: PL	TRENCH: 10-50	
ROAD: ---	12-65	
DRILL HOLE: ⊕ DDH	20-100	
CLAIM POST: ■ CP	Pb Zn (ppm)	
GPS STATION MARKER: ⊕		
POWER POLE: ⊕ PP+		
BASE LINE: ⊕ BL+		

**HASTINGS MANAGEMENT CORP.**

GPS FILE NAME: HAM	
SEDEX MINING CORP.	DATE: 18-OCT-96

**Data Points**

Point	X (Meters)	Y (Meters)	Z (Meters)	X (Feet)	Y (Feet)	Z (Feet)
HAM 96-1	565937	5501870	1370	1856748	18050755	4495

**GEOCHEMICAL  
SAMPLE LOCATION MAP**

**FIGURE 3.**