

1999 DIAMOND DRILL PROGRAM

REPORT

including the

Len 3, 4, 6, 7, 8 and Ful 1, 2 Mineral Tenures

Omineca Mining Division

British Columbia

NTS 093L/09, 16

Latitude: 54°44'

Longitude: 126°19'

-Prepared for-

Hudson Bay Exploration and Development Co. Ltd.

800-700 West Pender Street

Vancouver, British Columbia, Canada

V6C 1G8

-Prepared by-

Jason K. Dunning, M.Sc., FGAC

Hudson Bay Exploration and Development Co. Ltd.

800-700 West Pender Street

Vancouver, British Columbia, Canada

**GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT**

-Date of Report-

Wednesday, September 13, 2000

26,329

Table of Contents

Section	Page #
1.0	Introduction.....1
1.1	Physiographic Location, Access, Vegetation and Climate.....1
1.2	Mineral Tenures.....2
1.3	Owners, Operators, and Contractors.....2
1.4	Regional History.....2
1.5	Property History.....3
1.5.1	1995-1996 Reconnaissance Program.....3
1.5.2	Ground Geophysical Survey.....3
1.5.3	Len 1, 2, 3, 4, 5, 6, and 7 Mineral Tenures.....4
1.5.4	Len 8, 9, 10, and 14 Mineral Tenures.....4
1.5.5	Ful 1 and 2 Mineral Tenures.....5
1.5.6	Kut 1, 2, 3, 4, and 5 Mineral Tenures.....5
1.5.7	Results of HBED Exploration Activities.....6
1.6	Summary of Work Done.....7
1.7	Claims Worked On.....7
2.0	Detailed Technical Data.....8
2.1	Objectives of the 1999 Diamond Drill Program.....8
2.2	Tectonic Framework.....8
2.3	Geological Framework.....9
2.3.1	Regional Geology.....9
2.3.2	Property Geology.....10
2.3.3	Sulphide Mineralization.....13
2.3.4	Hydrothermal Alteration.....15
2.4	1999 Whole-Rock and Trace Element Geochemistry.....17
3.0	Discussion.....18
3.1	Proposed Genetic Models.....18
3.1.1	High Sulphidation VMS-Epithermal Deposits: 'The Eskay Creek Mine'.....18
3.1.2	'The Equity Silver Mine Genetic Model'.....18
3.2	Volcanogenic-hosted Massive Sulphide Deposits and Other Massive Sulphide Deposits of the Smithers Babine Lake Area, BC.....19
3.2.1	Major Massive Sulphide Mineralization.....19
3.2.2	Equity Silver Mine.....20
3.2.3	Fireweed VMS-Epithermal Developed Prospect.....21
3.3	Eskay Creek Precious Metal-rich VMS Mine.....21
3.4	Major Epithermal Mineralization.....22
3.4.1	Dome Mountain Epithermal Vein Deposits.....22
3.4.2	Duthic Epithermal Vein Deposit.....23
3.4.3	Cronin Epithermal Vein Deposit.....24
3.4.4	New Moon Epithermal Deposit.....24
4.0	Conclusions.....25
5.0	Recommendations.....27
7.0	Concluding Statement.....28
8.0	Bibliography.....29
9.0	Geologist Certification.....32
Appendices A through C	
A:	Exploration Costs
B:	Diamond Drill Core Logs and Summary Statements
C:	Lithogeochemistry

1.0 Introduction

Hudson Bay Exploration and Development Co. Ltd. (herein referred to as HBED), 800-700 West Pender Street, Vancouver, BC, V6C 1G8, Canada, conducted a diamond drill program in the Babine Lake area near Granisle and Topley Landing, BC during August 1999. At the request of Ed Yarrow, President, HBED, and Gerry Bidwell, Senior Geologist, HBED, Jason Dunning, Project Geologist, HBED, undertook a review of the historical data in advance of working on the Babine Lake area. This preliminary research included an examination of assessment reports previously filed in the area, as well as Minfile occurrences in proximity to the diamond drill targets. The following report pertains to all of the exploration activities conducted between July 21st, 1999 and September 10th, 1999 and is submitted in fulfillment of the Exploration and Development Assessment Work Requirements, as outlined in the BC Mineral Act Regulations.

1.1 Physiographic Location, Access, Vegetation, and Climate

The FUL and LEN mineral tenures are located in Central British Columbia (Figure 1) with main access to the HBED mineral tenures in the Babine Lake area made via Highway 16 from the towns of Burns Lake, Houston, or Smithers, BC. In the Smithers area, the Smithers Landing-Granisle Connector leaves Highway 16 6km south of Smithers and requires traveling along 78km of seal-packed, gravelly road surface to reach Granisle, BC. From the Houston area, the Granisle Highway leaves Highway 16 at Topley, BC, which is approximately 29km south of Houston, and requires traveling along 48km of paved road surface to reach Granisle, BC.

Direct access to the Len 3 and 4 mineral tenures is made off of the main Granisle Highway via the Paul Lake Recreational Road. Once on the Paul Lake Recreational Road, traffic must cross the North Main Haulage FSR and travel approximately 1.5km to an old spur road that was used originally to access the Lennac Lake area and turn left. This spur road accesses the Len 3 and 4 mineral tenures, as well as Len 5, 11, 12, and 13 mineral tenures. Access to Len 6, 7, 8, and Ful 2 mineral tenures can be made via the Granisle Highway. Len 6 is directly off the highway approximately 1.4km south of Tachek Creek. The Len 7 mineral tenure can now be accessed via a new main haulage FSR off the Granisle Highway at Tachek Creek. Len 8 is located near the BC Hydro powerline near Timber Lake, but direct access can be made off of the Granisle Highway. To get to the Ful 2 mineral tenure, traffic must take an unmarked FSR approximately 6km south of Granisle and then travel along approximately 3.5km of rough FSR. Alternatively, helicopter access can be made using either Northern Mountain or Westland Helicopters out of Houston, BC.

In the Babine Lake area, rolling hills and extensive glacial drift cover typify the area with bedrock exposure limited to the crest of small hills, along deeply incised creek beds, or along the shores of Babine or Fulton Lakes. Logging in the area has also exposed rock exposures in various road cuts and in area that were subject to soil erosion prior to reforestation (MacIntyre et al., 1996).

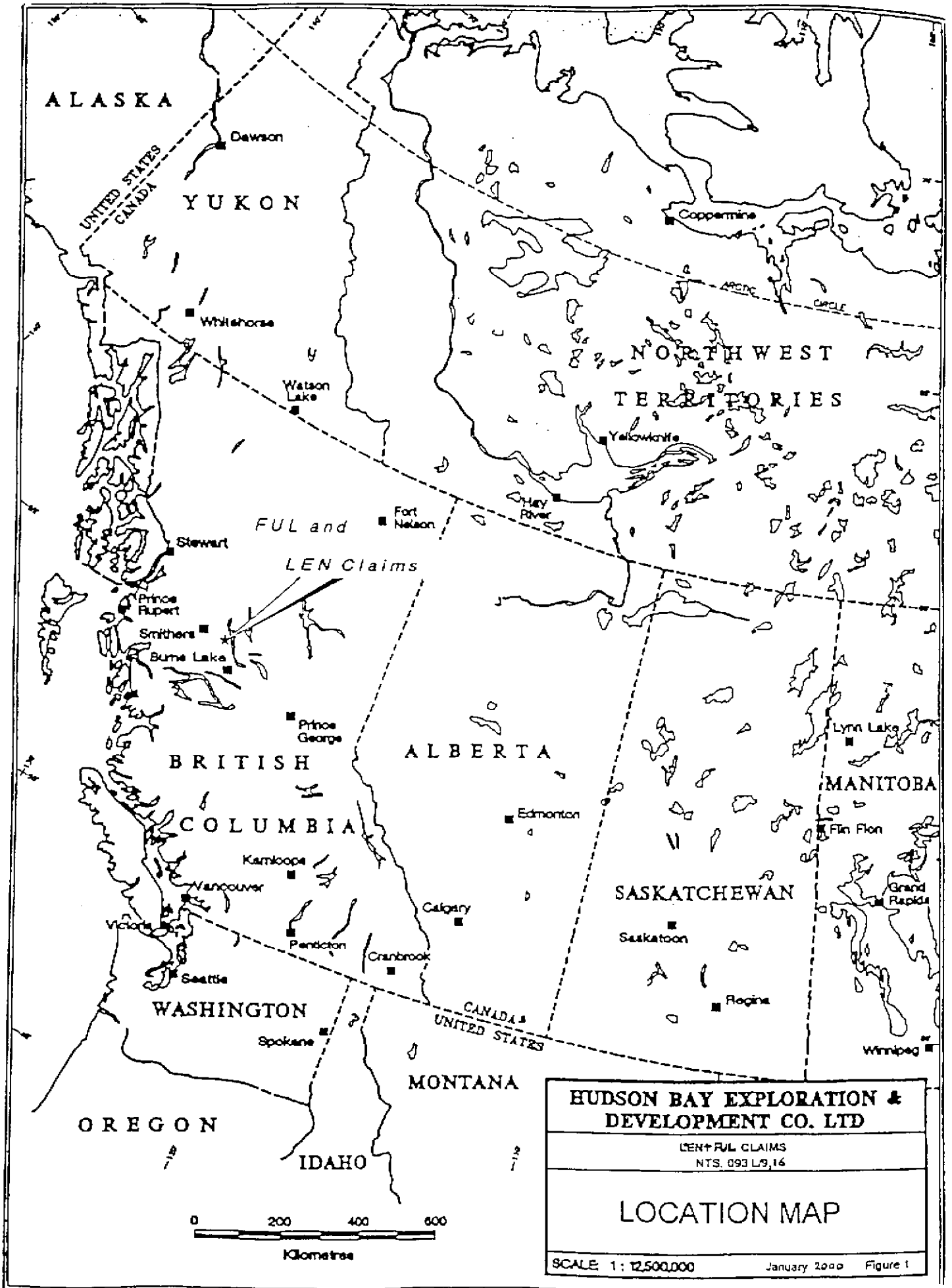


Figure 1

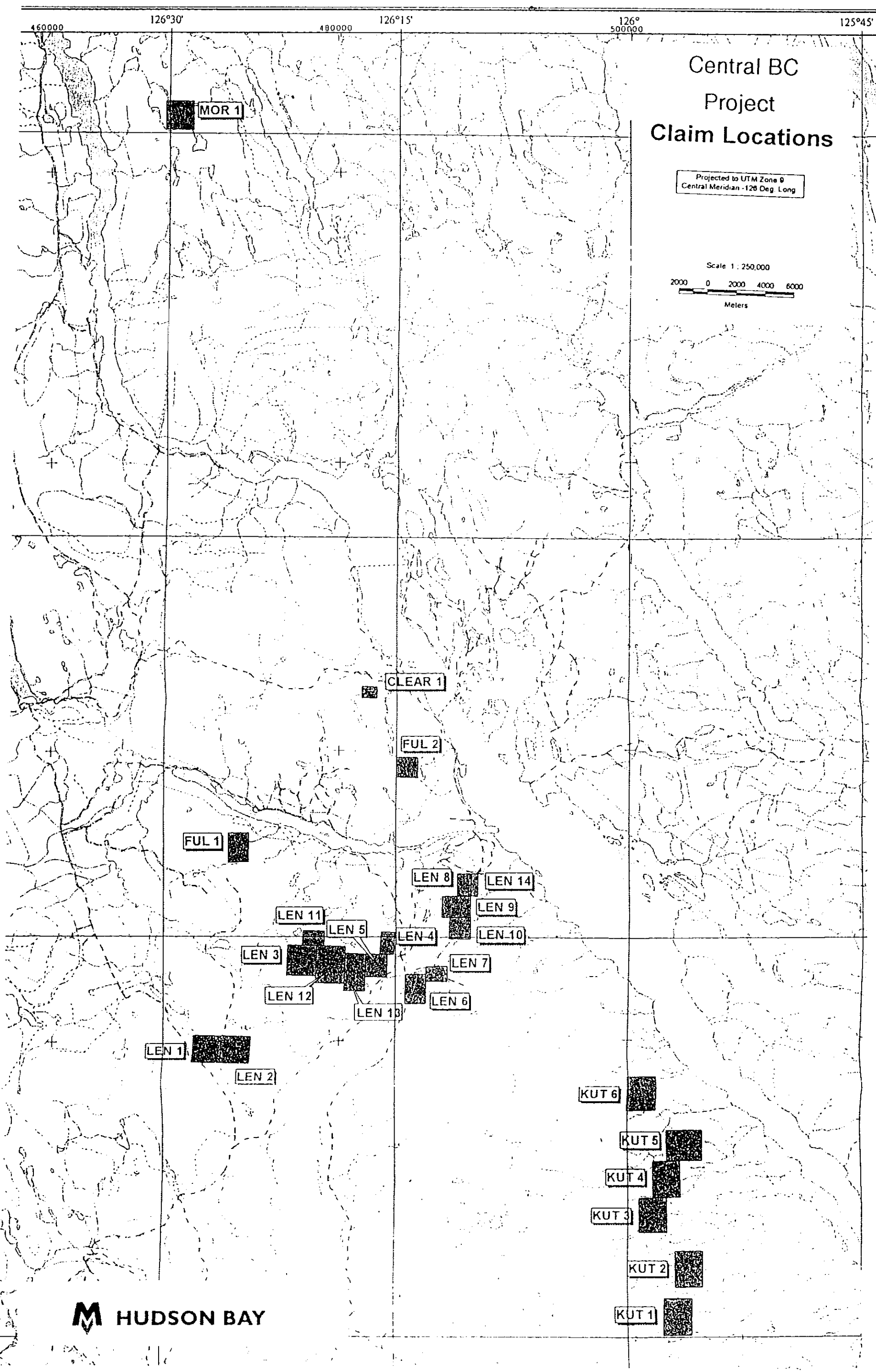


Figure 2



Hudson Bay Exploration and Development Co. Ltd.
Western District Office, Vancouver, BC

Project: Central BC <2318>

NTS: 093M08W, 07E (MOR)
093L16E, W (FUL)
093L09E, W 16E, W (LEN)

Mining Division: Omineca
Province: British Columbia

Claim	Tenure No.	Tag No.	Units	Hectares	Expiry	Assessment Fee/Year	Total Work (99)	Total Work with PAC	New Expiry	Cost to File New Expiry	Notes
MOR 1	356734	203330	16	400	19-Jun-02	\$160.00					No work completed on mineral tenure in 1999
FUL 1	356755	203333	12	300	19-Jun-02	\$120.00	\$22,512.05	\$29,265.67			1 DDH completed (FUL-002)
FUL 2	356766	234134	9	225	14-Jun-02	\$90.00	\$11,753.20	\$15,279.16			1 DDH completed (FUL-001)
LEN 1	356735	203331	16	400	7-Jun-02	\$160.00					No work completed on mineral tenure in 1999
LEN 2	356736	203332	16	400	7-Jun-02	\$160.00					No work completed on mineral tenure in 1999
LEN 3	356737	203322	16	400	11-Jun-01	\$160.00	\$22,512.05	\$29,265.67	11-Jun-04	\$480.00	1 DDH completed (LEN-005)
LEN 4	356738	203324	6	150	8-Jun-01	\$60.00	\$15,707.55	\$20,419.82	08-Jun-04	\$180.00	1 DDH completed (LEN-004)
LEN 5	356739	203323	9	225	9-Jun-01	\$90.00	(with LEN 3,4)		09-Jun-04	\$270.00	No work completed on mineral tenure in 1999
LEN 6	356740	203325	12	300	11-Jun-02	\$120.00	\$15,707.55	\$20,419.82			1 DDH completed (LEN-001)
LEN 7	356741	203326	6	150	12-Jun-02	\$60.00	\$15,707.55	\$20,419.82			1 DDH completed (LEN-002)
LEN 8	356742	203327	6	150	13-Jun-02	\$60.00	\$19,552.05	\$25,417.67	13-Jun-08	\$360.00	1 DDH completed (LEN-003)
LEN 9	356744	203328	12	300	13-Jun-02	\$120.00	(with LEN 8)		13-Jun-06	\$480.00	No work completed on mineral tenure in 1999
LEN 10	356745	203329	9	225	12-Jun-02	\$90.00	(with LEN 8)		12-Jun-06	\$360.00	No work completed on mineral tenure in 1999
LEN 11	356746	230442	6	150	10-Jun-01	\$60.00	(with LEN 3,4)		10-Jun-04	\$180.00	No work completed on mineral tenure in 1999
LEN 12	356747	230286	20	500	10-Jun-01	\$200.00	(with LEN 3,4)		10-Jun-04	\$600.00	No work completed on mineral tenure in 1999
LEN 13	356748	230287	15	375	9-Jun-01	\$150.00	(with LEN 3,4)		09-Jun-04	\$450.00	No work completed on mineral tenure in 1999
LEN 14	359543	230539	3	75	6-Oct-02	\$30.00			6-Oct-02	(not filing)	No work completed on mineral tenure in 1999
Total	17	17	189	4725		\$1,890.00	\$123,452.00	\$160,487.60		\$3,360.00	

* earliest expiry (pending assessment): October 6, 2002

Notes: 1) New expiry dates are tentative pending acceptance of the 2000 AR for the 1999 Diamond Drilling Program

TABLE 1



Hudson Bay Exploration and Development Co. Ltd.
 Western District Office, Vancouver, British Columbia

Porphyry Copper Deposits of Central British Columbia

Deposits	Status	Tonnes (millions)	Au gpt	Ag gpt	Cu %	Mo %
Fulton Lake Map Sheet Area						
Granisle (Production)	1966 to 1982	52.7	0.20		0.47	
Granisle (Reserves)		119.0	0.15		0.41	
Bell Copper (Production)	1972 to 1992	77.2	0.26		0.47	
Bell Copper (Reserves)		296.0	0.20		0.46	
Morrison	Resource	190.0	0.20		0.40	
Nak	Resource	217.0	0.04		0.19	
Hearne Hill	Resource	60.0	0.10		0.16	
Hearne Breccia	Resource	0.1	0.80		1.73	
Dorothy	Resource	45.0			0.25	0.01
Big Onion	Resource	94.0	0.20		0.42	0.02
Mount Thomlinson	Resource	40.8				0.12
Glacier Gulch	Resource	100.0	1.20			0.29
Other						
Schaft Creek	Developed Prospect	971.5	0.14	1.2	0.30	0.03
Kemess North	Care and Maintenance	175.0	0.37		0.18	
Kemess South	Care and Maintenance	250.0	0.62		0.22	
Kerr	Resource	135.0	0.34		0.76	
Mitchell	Resource	200.0	0.86		0.20	
Copper Canyon	Resource	32.4	1.17	17.1	0.75	
Whiting Creek	Resource	300.0			0.30	
Huckleberry	1996 to Present	93.9	0.07	3.3	0.50	0.02
Galore Creek (Central Zone)	Developed Prospect	233.9	0.35	7	0.67	
Galore Creek (Southwest Zone)	Developed Prospect	42.4	1.03	7	0.55	
Galore Creek (North Junction)	Developed Prospect	7.7			1.50	

Table 2

Vegetation over the area consists dominantly of spruce, balsam, and pines that range in size from less than 10 cm in diameter to greater than 50 cm in diameter. There is abundant alder and locally devils club on slopes, while in wet, low lying areas there are huckleberry, raspberry, and salmon berry bushes.

The Babine Lake area is subject to warm summer conditions and typically has a long, cold winter with variable amounts of snow; however, at higher elevations, the snow pack can remain well into May and/or June.

1.2 Mineral Tenures

The mineral tenures for the Babine Lake area are not entirely contiguous and lie within the Omineca Mining Division. Overall, there are 14 four post, modified grid claims that encompass 141 units and cover approximately 4,725 hectares with elevations that range from 712 to greater than 1,372m. A summary of the mineral tenures is presented in Figure 2 and Table 1; however, the individual locations of the mineral tenures are presented in Figures 3 to 7.

1.3 Owners, Operators, and Contractors

The mineral tenures listed in Table 1 are owned 100% by HBED with all of the work performed by HBED, except for drilling, helicopter and analytical services. Analytical services were contracted to ACME Analytical Laboratories Ltd., 852 East Hastings Street, Vancouver, British Columbia, V6A 1R6, Canada. Diamond drilling was contracted to Britton Brothers Diamond Drilling Ltd., P.O. Box 968, Smithers, BC, V0J 2N0, Canada. Helicopter services were contracted to Highland Helicopters Ltd., 4240 Agar Drive, Vancouver, BC, V7B 1A3, Canada, which was supported out of their Smithers, BC base. Jason King Dunning, M.Sc., FGAC conducted project supervision, logging of diamond drill core, and sampling with the aid of a Geological Assistant from the University of Victoria, BC, as well as a young native person who was hired off of the local Tachek Indian Reserve.

1.4 Regional History

The Babine Lake area has been historically well known for the significant number of porphyry-style mineral occurrences and/or deposits (Table 2) associated with this 80km long belt of rocks. The most notable deposits are the Granisle and the Bell Mines, both of which are now closed and on care and maintenance. Additional mineral potential in the area has been ranked extremely high, as the Babine Lake area is the fourth most prospective in the entire Skeena-Nass mineral potential project area (MacIntyre et al., 1995). MacIntyre et al. (1996a) noted that in terms of 1986 dollars, the estimated value of known in-ground mineral resources is \$1.96 billion and the value of the past production is estimated to be \$1.13 billion.

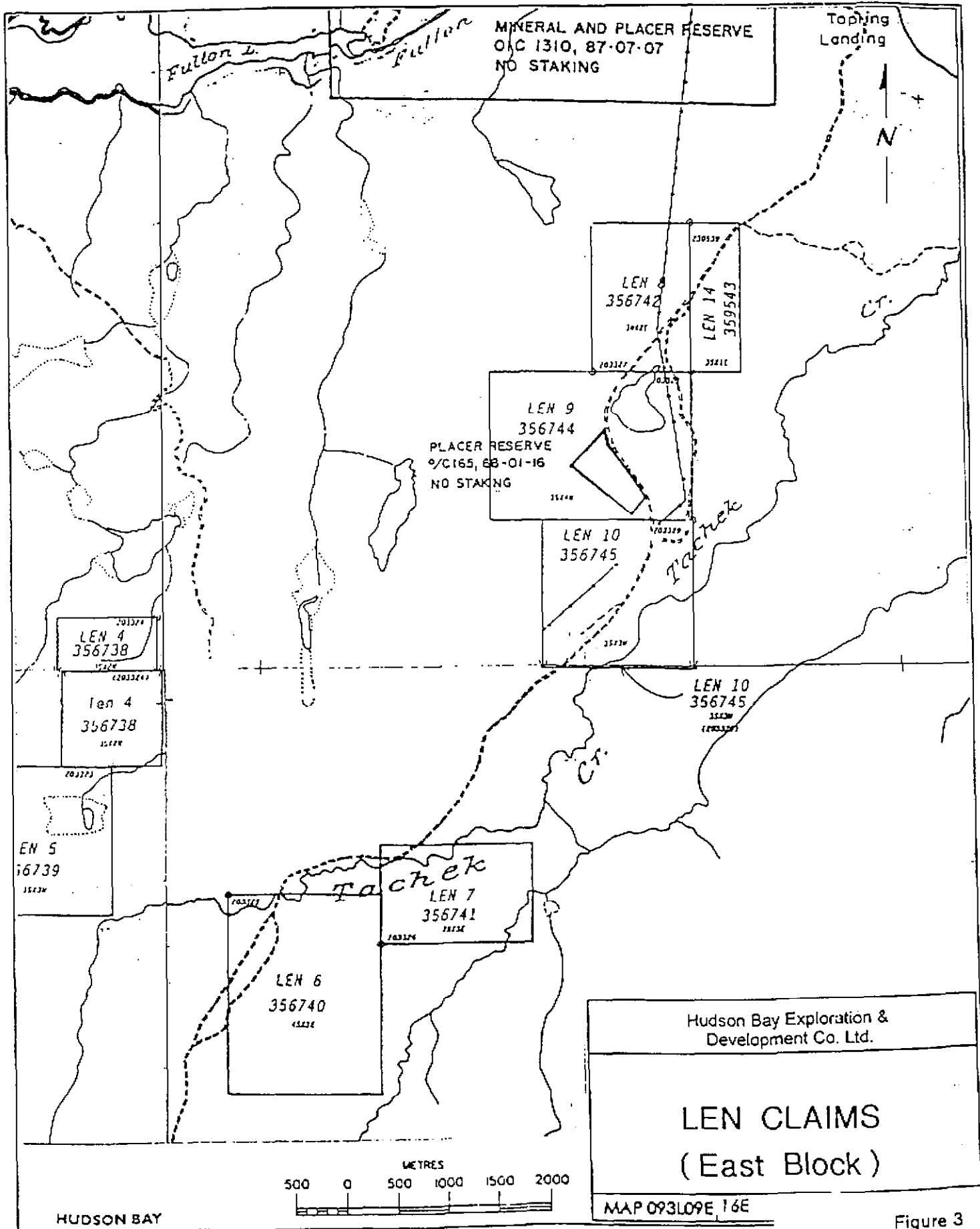


Figure 3

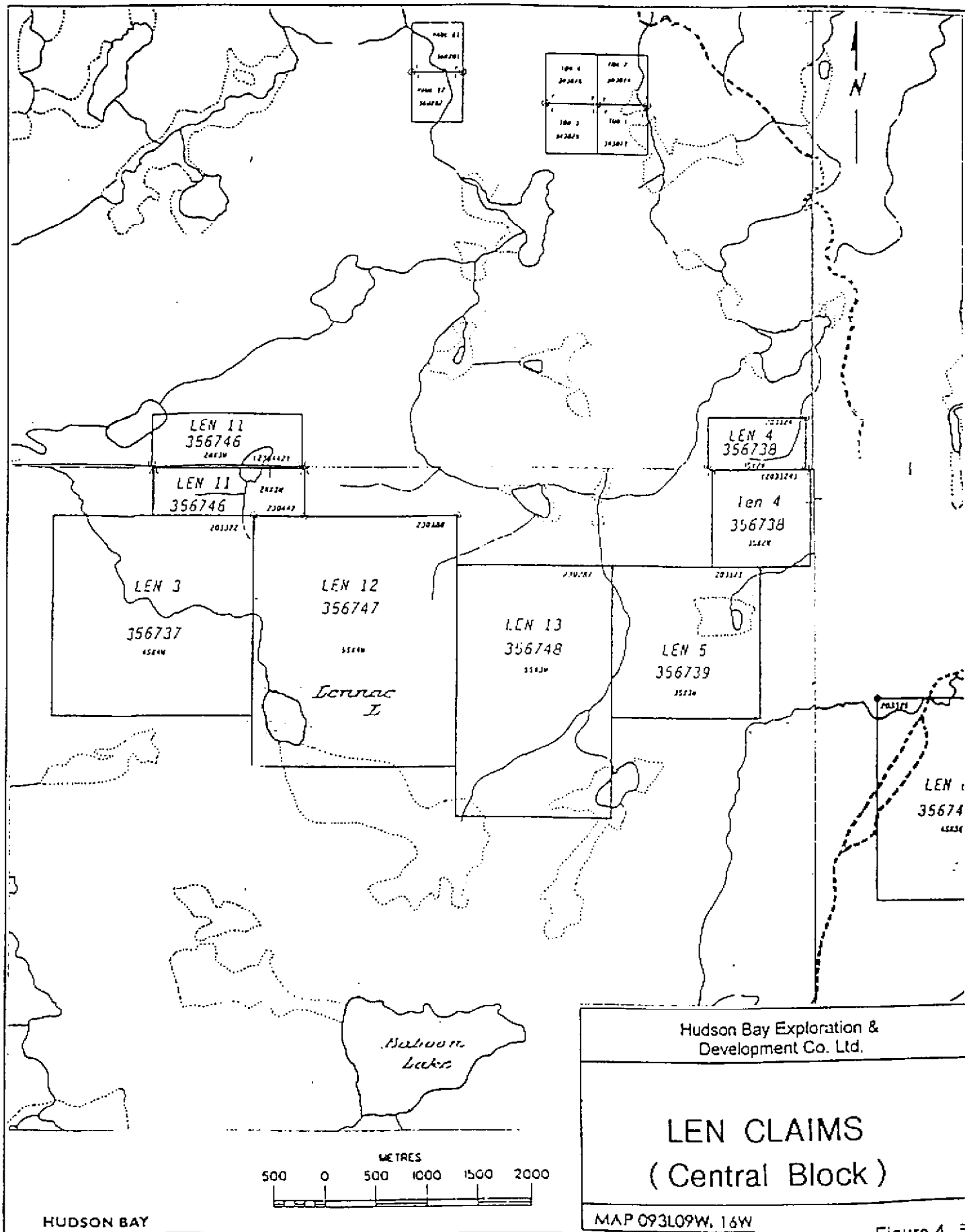


Figure 4

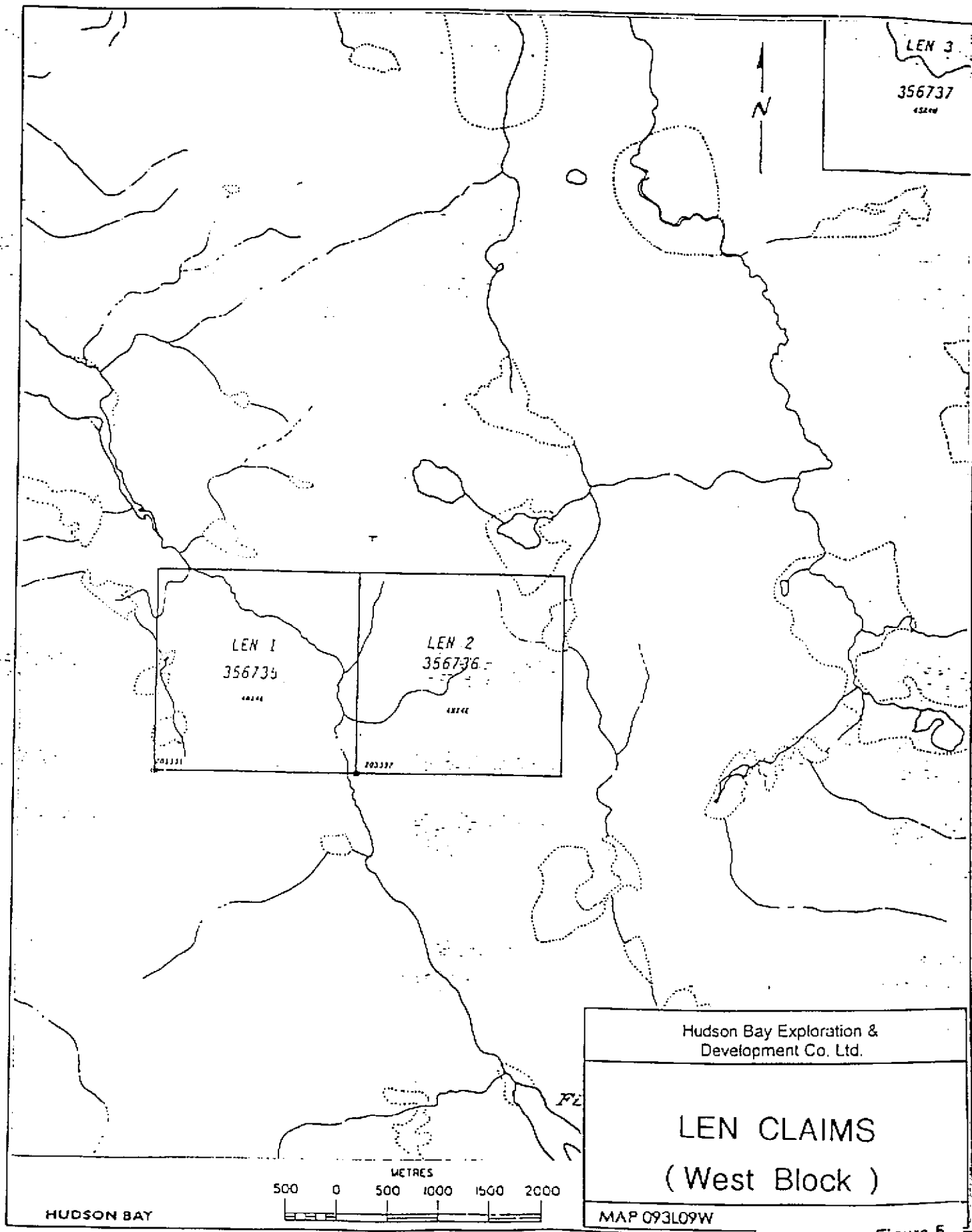


Figure 5

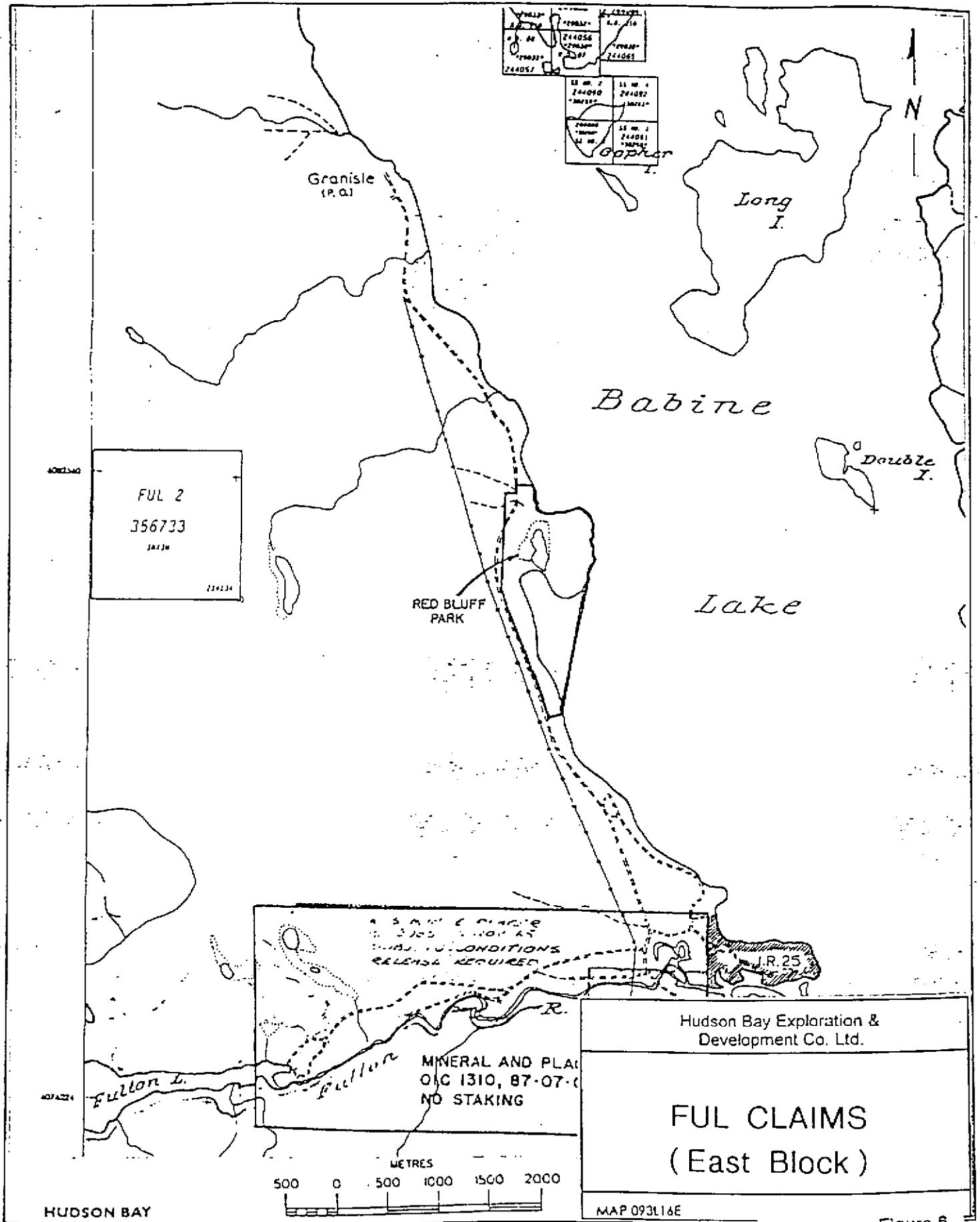
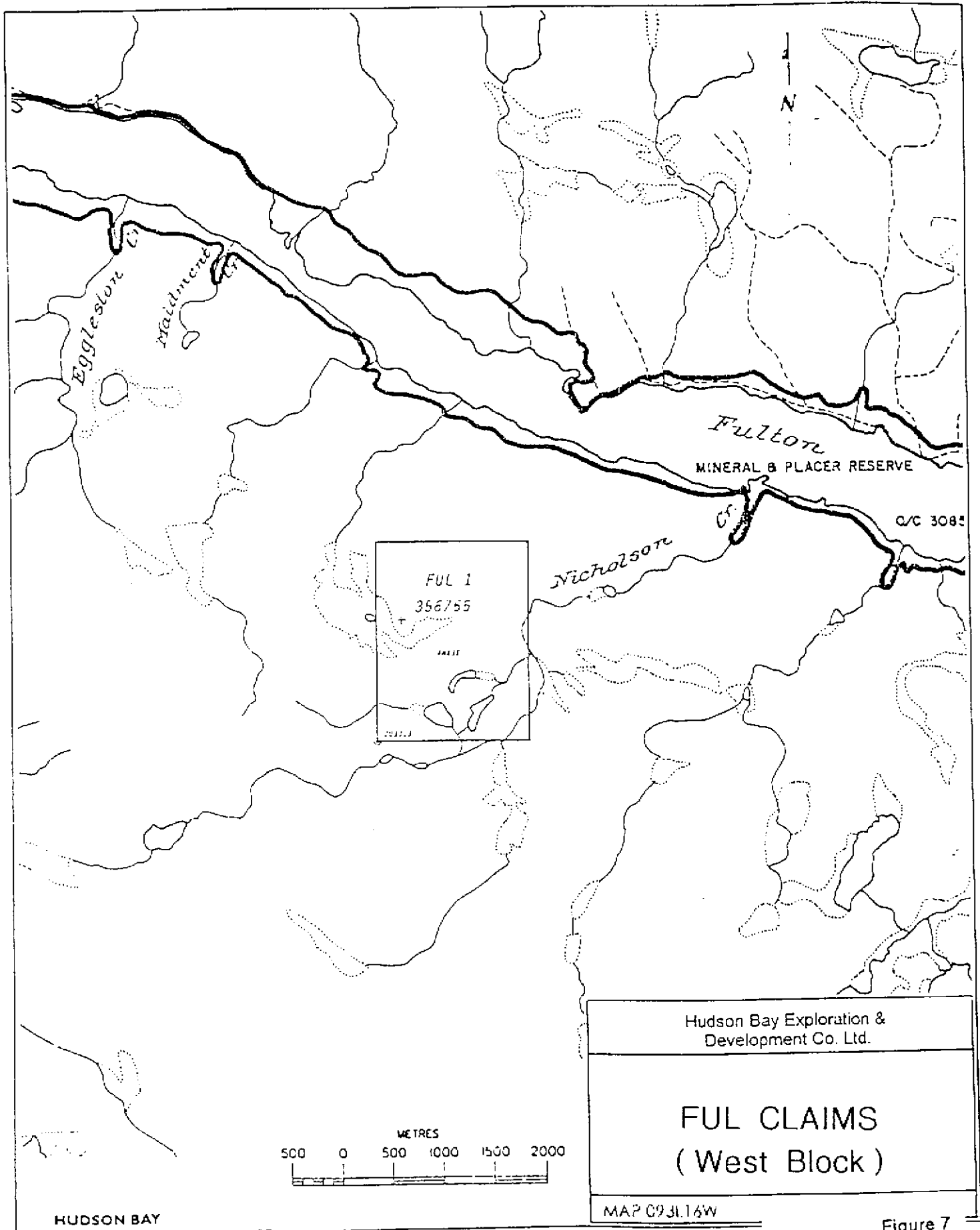


Figure 6



Hudson Bay Exploration &
Development Co. Ltd.

FUL CLAIMS (West Block)

MAP C9JL16W

Figure 7

1.5 Property History and Previous Work

1.5.1 1995-1996 Reconnaissance Program

During summer and fall of 1995 and 1996, HBED field crews spent a couple of days conducting a general orientation survey of the local geology and topography in order to determine if an airborne geophysical survey would be an effective exploration tool in the Babine Lake area (Buchanan, 2000: personal communication). The Babine Lake area was originally selected for study during 1994, as being a significant target area from an economic geology perspective.

1.5.2 Ground Geophysical Survey

The ground geophysical surveys that were successfully completed in 1997 were conducted under the guidance of Peter Walcott and Associates Ltd., Geophysical Services, 606 Rutland Court, Coquitlam, BC, Canada, V3J 3T8. Ground EM geophysical surveys were completed in 1998 by B. Koop Exploration Services Inc., PO Box 552, Flin Flon, Manitoba, R8A 1N4. Ground MAG geophysical surveys were also completed in 1998 by HBED geophysicist A. Callegarie. An accounting of the ground geophysical survey is presented in Table 3; however, 113.5 km of gridline were successfully surveyed during both 1997 and 1998. The objective of these ground geophysical surveys was to further refine and delineate the geophysical anomalies for diamond drilling.

The basic principle of any electromagnetic (EM) survey is that when conductors are subjected to primary alternating fields, secondary magnetic fields are induced in them. Measurements of these secondary fields then give indications as to the size, shape, attitude and conductivity of conductors that are present. In the absence of any conductors, no secondary fields are obtained from the survey. The EM survey was carried out using a Max-Min IIA EM unit that was manufactured by Apex Parametrics. Readings of the inphase and quadrature components of the secondary field were made with the coils in the horizontal plane, meaning the maximum coupled, every 25 meters along the picket lines at frequencies of 444, 1777 and 3555 Hz, respectively employing a coil separation of 100 meters. Additional readings were done on part of two grids with a coil separation of 50 and 150 meters respectively. Using the percentage of the slope between each tight-chained station provided by the line establishment, field crews made corrections for topography.

The magnetic surveys were carried out using an EDA Omni-Plus proton precession magnetometer that was manufactured by EDA Instruments Inc. This instrument measures variations in the earth's magnetic intensity to an accuracy of plus or minus one gamma. Corrections for diurnal variations were made through a comparison of the readings collected at each individual station with those obtained from a base magnetometer that was also manufactured by EDA. Each magnetic reading was collected at 12.5m station intervals along the gridlines.



HUDSON BAY
An Anglo American Company

Hudson Bay Exploration and Development Co. Ltd.
Western District Office, Vancouver, British Columbia

Summary of Exploration Activities Conducted on the FUL, KUT, LEN, and MOR Claim Groups

<u>Year</u>	<u>Claim</u>	<u>Grid</u> <i>(line kms)</i>	<u>Ground Geophysics</u> <i>(line kms)</i>	<u>Soil Geochemistry</u> <i>(number of samples)</i>	<u>Diamond Drilling</u> <i>(proposed)</i>
1998	Mor 1	16.60	14.00	88	2
1998	Ful 1	16.40	10.00	105	1
1997	Ful 2	8.20	7.00	31	1
1997	Len 1	17.70	15.00		
1997	Len 2				
1998	Len 3	8.00	6.50	57	1
1998	Len 4	9.40	8.00	78	1
1998	Len 5	14.10	11.00	95	
1998	Len 6	9.40	8.00	145	1
1998	Len 7	7.00	12.00	104	1
1997	Len 8	19.00	16.00	69	1
1998	Len 9	7.00	6.00	110	
1998	Len 10				
1998	Len 11				
1998	Len 12				
1998	Len 13				
1998	Len 14				
1997	Kut 1			12	
1997	Kut 2			21	
1997	Kut 3			9	
1997	Kut 4			10	
1997	Kut 5			9	
1997	Kut 6				

Table 3

1.5.3 Len 1, 2, 3, 4, 5, 6, and 7 Mineral Tenures

In the area around the Len 3, 4, and 5 mineral tenures, exploration activities date back as far as the 1960's with the discovery of Cu-Mo porphyry mineralization in Tachek Creek. The main prospect that has resulted from exploration activities occurs in the vicinity of the Lennac Lake area, where Amax Exploration Inc. discovered a Cu-Mo prospect in 1971 through a regional soil geochemistry program and was known as the Thezar Claims. Subsequent follow-up work in 1971 to 1974 included ground geophysical IP and MAG surveys and additional, more detailed soil geochemistry surveys, 44 percussion drill holes (3.462m), and 5 diamond drill holes (919m). This work confirmed the presence of a large, low-grade, Cu-Mo porphyry system in four zones over a distance of 4km. The 'west' zone is known to contain 0.2% Cu in 90,000,000m³ of host rock, whereas the 'east' zone is known to contain 0.1% Cu in 640,000,000m³ of host rock. Around the same time as the work in the Lennac Lake area, Brinex completed 11 percussion holes and 3 diamond drill holes on the Jacob showing near Baboon Lake.

In 1990, Kennecott Explorations (Canada) (herein referred to as Kennecott) optioned the area around the main Lennac Lake Cu-Mo prospect from a Mr. L. Bourgh and conducted surface exploration activities that resulted in the discovery of several new copper showings near the 'southeast' zone of mineralization. Cominco Ltd. then optioned the property from Kennecott and completed additional prospecting, soil geochemistry, and trenching in 1993 without any significant discoveries.

From April 22nd, 1997 to June 7th, 1997, the cutting of gridline and ground EM and MAG geophysical surveys were successfully completed on the Len 3, 4, and 5 mineral tenures. This work included the cutting of 31.5km of gridline, the completion of 25.5km of ground MAG and EM geophysical surveys, and the collection of 222 soil geochemistry samples. During that same period, HBED also conducted an exploration program on the Len 6 and 7 mineral tenures that included the cutting of gridline (16.4km), ground EM and MAG geophysical surveys (14.0km), and the collection of 259 soil geochemistry samples (Bidwell, 1998a).

During the period of September 24th, 1997 to October 31st, 1997, HBED undertook exploration activities on the Len 1 and 2 mineral tenures that included the establishment of a grid through the cutting of 17.7km of gridline and the completion of 15.0km of ground EM and MAG geophysical surveys (Buchanan, 1998c).

1.5.4 Len 8, 9, 10, and 14 Mineral Tenures

In 1968 and 1969, the Noranda Exploration Company Ltd. (herein referred to as Noranda) conducted exploration activities along Tachek Creek on the mineral tenures formally known as the Gold Dust I and II, which are now called the Len 10 mineral tenure. Noranda's exploration activities included geological mapping, soil geochemistry

and ground geophysical surveys, road building, 1,725m of percussion drilling, and 1,015m of diamond drilling. The following year the ground was optioned to Taseko Mines Ltd. and they completed 3 diamond drill holes for a total of 320m of diamond drilling. The area remained inactive until 1973, when Perry, Knox, and Kaufman Inc. carried out 11km of ground IP geophysical survey and diamond drilled 300m of core. There were no significant results from any of these exploration programs.

In a period between September 24th, 1997 and October 31st, 1997, HBED successfully complete exploration activities on the Len 8, 9, 10, 14 mineral tenures that consisted of gridline cutting (19km), ground EM and MAG geophysical surveys (16km), and soil geochemistry (179 samples) (Buchanan, 1998a,b).

1.5.5 Ful 1 and 2 Mineral Tenures

In a period between September 24th, 1997 and October 31st, 1997, HBED completed exploration activities on the Ful 1 mineral tenure that included cutting 16.4km of gridline, 10km of ground EM and MAG geophysical surveys and the collection of 105 soil geochemistry samples. No final report was completed for the work on the Ful 1 mineral tenure.

The earliest recorded exploration activities in the area of the Ful 2 mineral tenure can be traced back to the early 1900's with the discovery and subsequent development of the Bell and Granisle Cu-porphyry mines in the 1960's. It was during this active period of Cu-porphyry exploration that Nittetsu Mining conducted a reconnaissance soil geochemistry and a ground, IP geophysical surveys. This exploration program resulted in the delineation of a 1,800m by 450m copper anomaly in the soil that was coincident with an IP geophysical anomaly. No further exploration activities were recorded until 1981, when Musto Exploration restaked the area as the Skin mineral tenure. Musto Exploration completed a soil geochemistry survey and 5 percussion drill holes. No other significant results have been recorded in this area.

During the same period, an exploration program was successfully completed and included a limited soil geochemistry survey (31 samples), cutting 8.2km of gridline, and 7.0km of ground EM and MAG geophysical surveys (Buchanan, 1998a).

1.5.6 Kut 1, Kut 2, Kut 3, Kut 4, and Kut 5 Mineral Tenures

Over a period between May 18th, 1998 and June 5th, 1998, HBED completed exploration activities on the Kut 1, Kut 2, Kut 3, Kut 4, and Kut 5 mineral tenures that included 29.45 km of prospecting and the collection of 63 soil geochemistry samples. All prospecting activities were carried out along traverses across previously identified

airborne EM and MAG anomalies using the numerous logging roads and trails in the area. It should be noted that the overall lack of rock exposures hindered the full examination of the area; however, sparse outcrops were located on the Kut 2 and 3 mineral tenures. There were no significant results from the examination of these outcrops.

1.5.7 Results of HBED Exploration Activities in the Babine Lake Area

Surface exploration activities on the Len 1 and 2 mineral tenures showed there to be two separate EM and MAG trends. In the NE portion of the study area, the EM and MAG conductors are oriented in a NW-SE trend with the main EM conductor being 600m in length and up to 35m in width. In the SW portion of the study area, the EM and MAG conductors are oriented just west of a N-S trend; however, there is no direct correlation between the anomalies. There are two dominant EM conductors that are 300m apart in this SW portion of the study area (Buchanan, 1998c). Results from the Len 3 mineral tenure showed a strong EM conductor along a NW trend running the length of the grid at a steep easterly dip. A weaker parallel conductor occurs 350m to the east. On the Len 4 mineral tenure, there is a well-defined vertical, linear conductor in the centre of the grid that remains open to the south. The results from the Len 5 mineral tenure reveal two weak EM conductors, but a creek and a beaver pond prevent an accurate definition of the conductors; however, the more easterly of the two conductors remains open to the south. Results from the Len 6 mineral tenure suggest a very strong conductor that is near vertical along a NNE trend; however, there does appear to be a fault offset of about 75m. On the Len 7 mineral tenure, two parallel conductors were defined at the north end of the grid with both possessing a northerly trend. It should be noted that there was not direct correlation between the EM conductors and the MAG results, except that portions of the EM anomalies are near magnetic lows (Bidwell, 1998a,b).

Results from the Ful 2 mineral tenure revealed a 600m, north-south trending conductor that was up to 40m in width. Two other conductive trends were also identified during the course of this survey. A magnetic high of 300 nanoteslas above background values was also identified alongside one of the smaller conductive trends 175m west of the main conductor (Buchanan, 1998b).

Results from the soil geochemistry and prospecting programs on Kut 1, Kut 2, Kut 3, Kut 4, and Kut 5 returned a ubiquitous background Cu and Zn values from the entire study area and local elevated Au values. One sample returned 170 ppb Au and another sample from the same area returned a value of 90 ppb Au. No bedrock source was ever located for either anomaly. In fact, there is an overall lack of rock exposures in the area because of the thick glacial overburden (Sidic, 1998). As a result of the conclusions drawn from the work completed on all of the Kut mineral tenures and that the area was covered by a thick accumulation of Eocene volcanic rocks, which masked any older rocks, no further work was undertaken.

1.6 Summary of Work Done

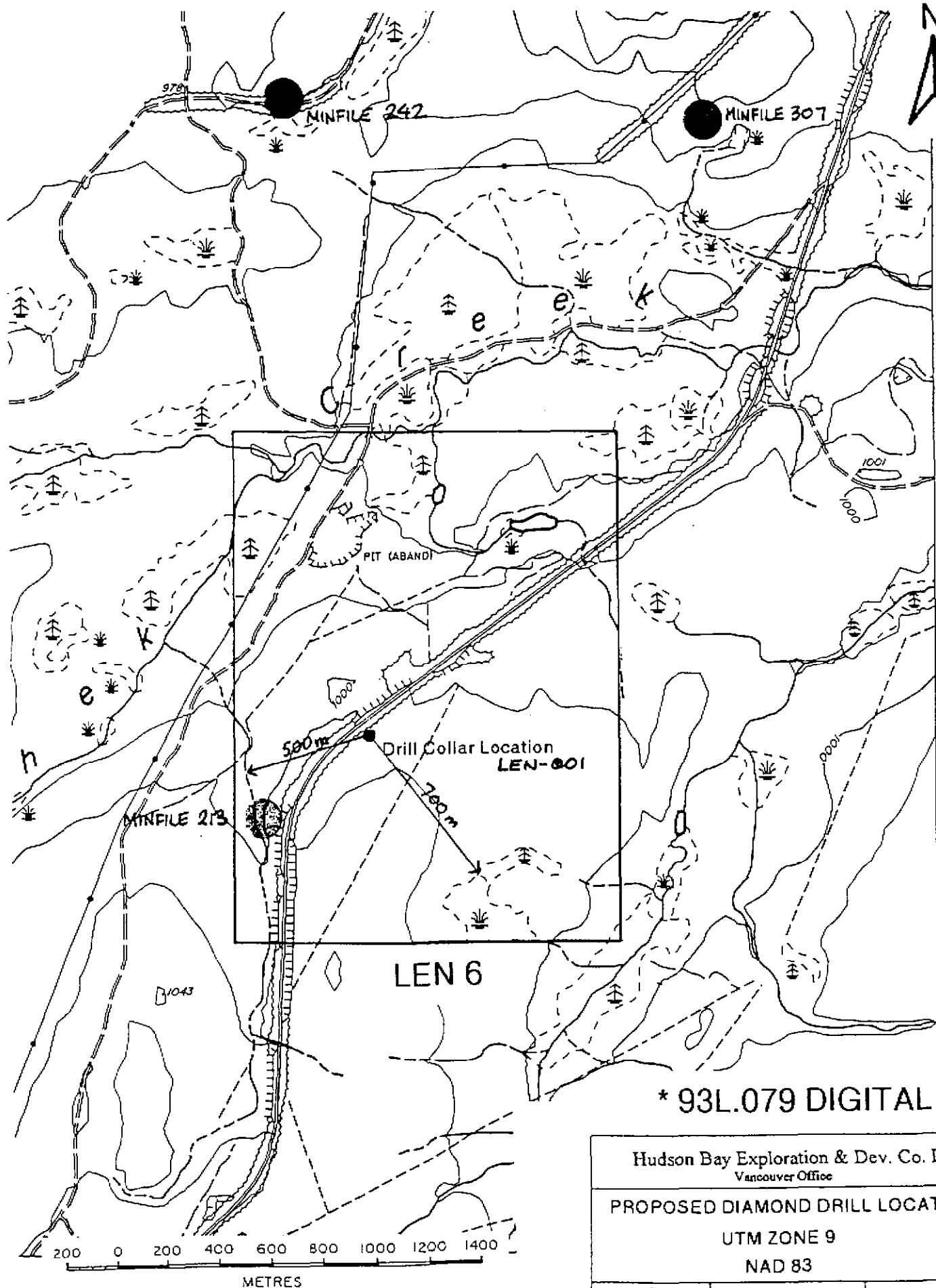
Prior to the arrival of the drilling contractor on site, HBED employees completed site preparation including the access trails and the drill site locations. Care was taken to mitigate the impact on the forest environment such that there was minimal falling of merchandisable lumber. When needed, a drill pad was built; however, in most cases, the drill did not require a drill pad because the entire set-up was on skids and could be easily moved around using a D-6 CAT.

During the course of the 1999 exploration program in the Babine Lake area, drilling was performed by Britton Brothers Drilling who used a BB 2500 Hydraulic drill rig that recovered 1094.50m of NQ core (40mm) from 7 diamond drill holes at 7 sites (Figures 8 to 14). Note that 70m of casing were left in specific diamond drill holes for the sole purpose of re-entry, should it be deemed appropriated to undertake downhole geophysical techniques. The core is currently being stored in a fabricated core rack on the Len 8 mineral tenure. All new diamond drill collars were tied into previous gridlines using both a hip-chain and compass. Each collar location was also located using a GPS unit. The diamond drill core was logged in the town of Granisle, BC and 246 samples were split using a core splitter. The samples were then packaged individually in twist-tied and labeled plastic bags, which were subsequently shipped in large rice bags via truck to ACME Analytical Laboratories for analysis. Geological and geochemical sections are presented in Figures 17 to 23.

Reclamation work on the mineral tenures that were diamond drilled during August 1999 in the Babine Lake area was successfully completed in accordance with the Exploration and Development Assessment Work Requirements, as outlined in the BC Mineral Act Regulations. All trees and/or shrubs that were cut-down during site preparation were bucked into small lengths and pulled across both the access trails and the drill sites. When necessary, erosion control grass seed was spread over effected area to mitigate any possible soil erosion.

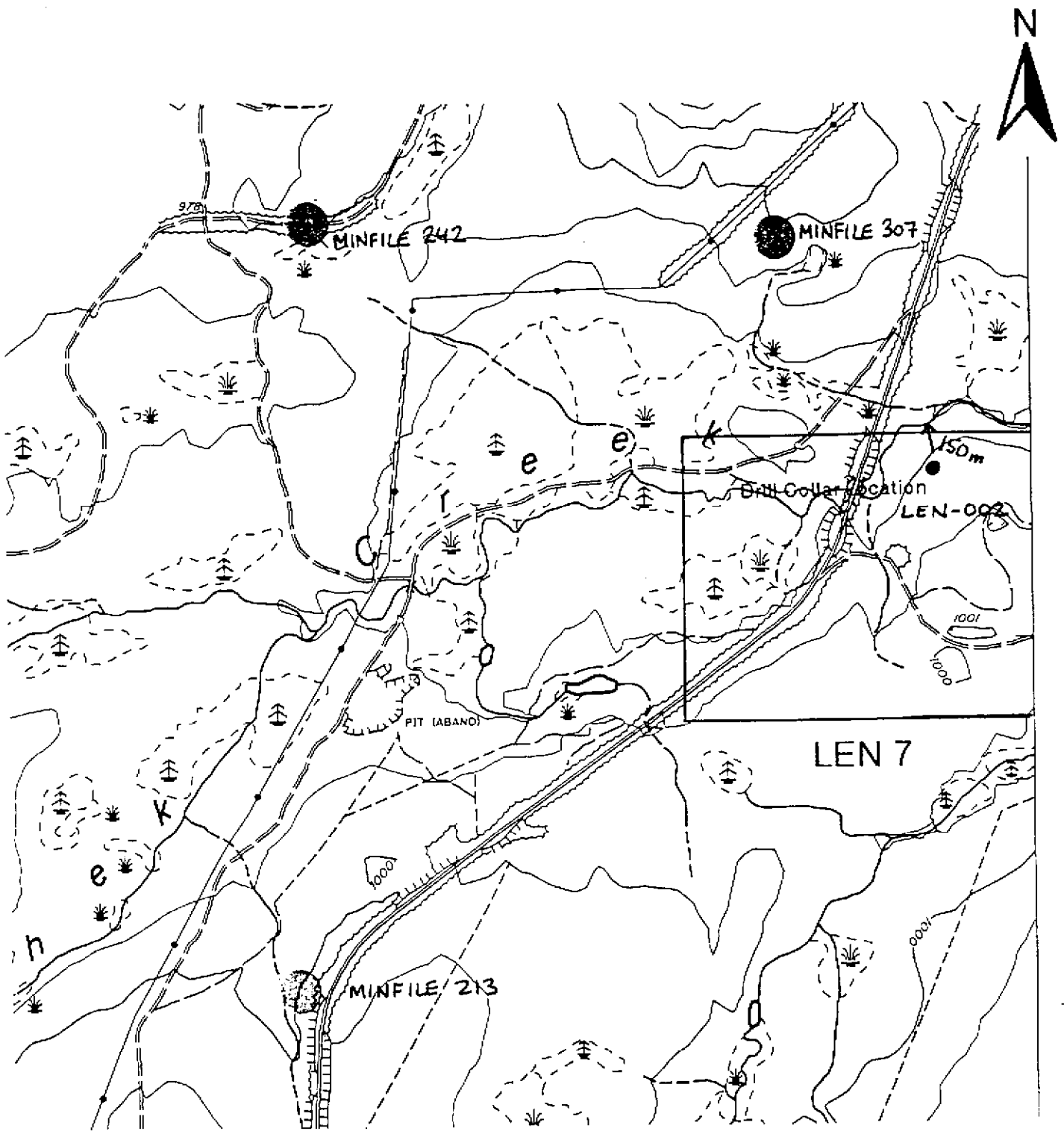
1.7 Claims Worked On

The exploration activities associated with the recent diamond drill program resulted in work being done on the Ful and 2 mineral tenures, as well as the Len 3, 4, 6, 7, and 8 mineral tenures. A summary of the claims worked on and those, that will have assessment applied too, as a result of the diamond drill program, is presented in Table 3.

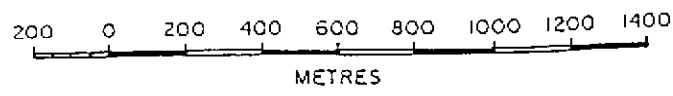


* 93L.079 DIGITAL

Hudson Bay Exploration & Dev. Co. Ltd. Vancouver Office		
PROPOSED DIAMOND DRILL LOCATION		
UTM ZONE 9		
NAD 83		
FIGURE - 8	SCALE	DATE:
AUTHOR: JKD	1:20,000	FILE:

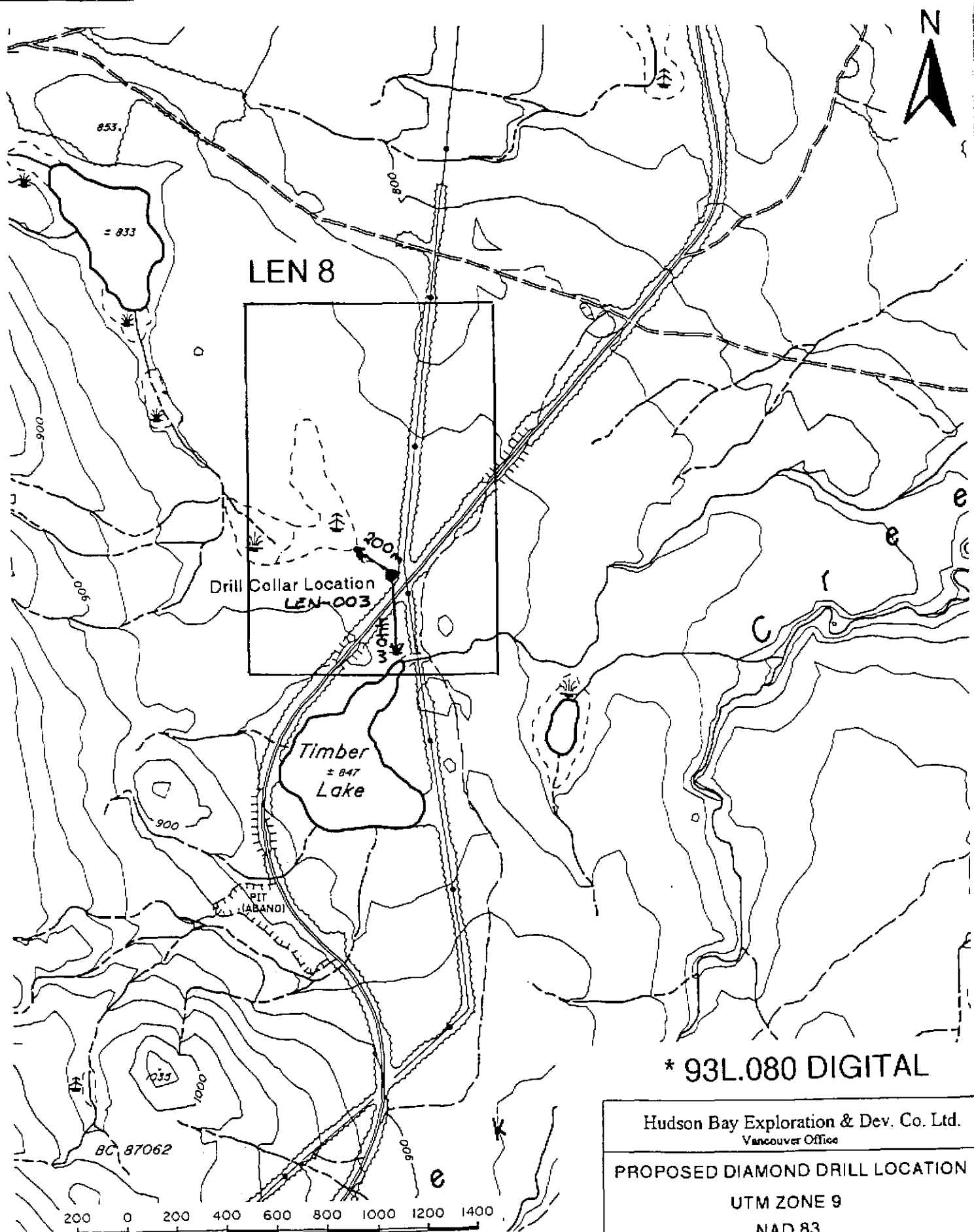


* 93L.079 DIGITAL



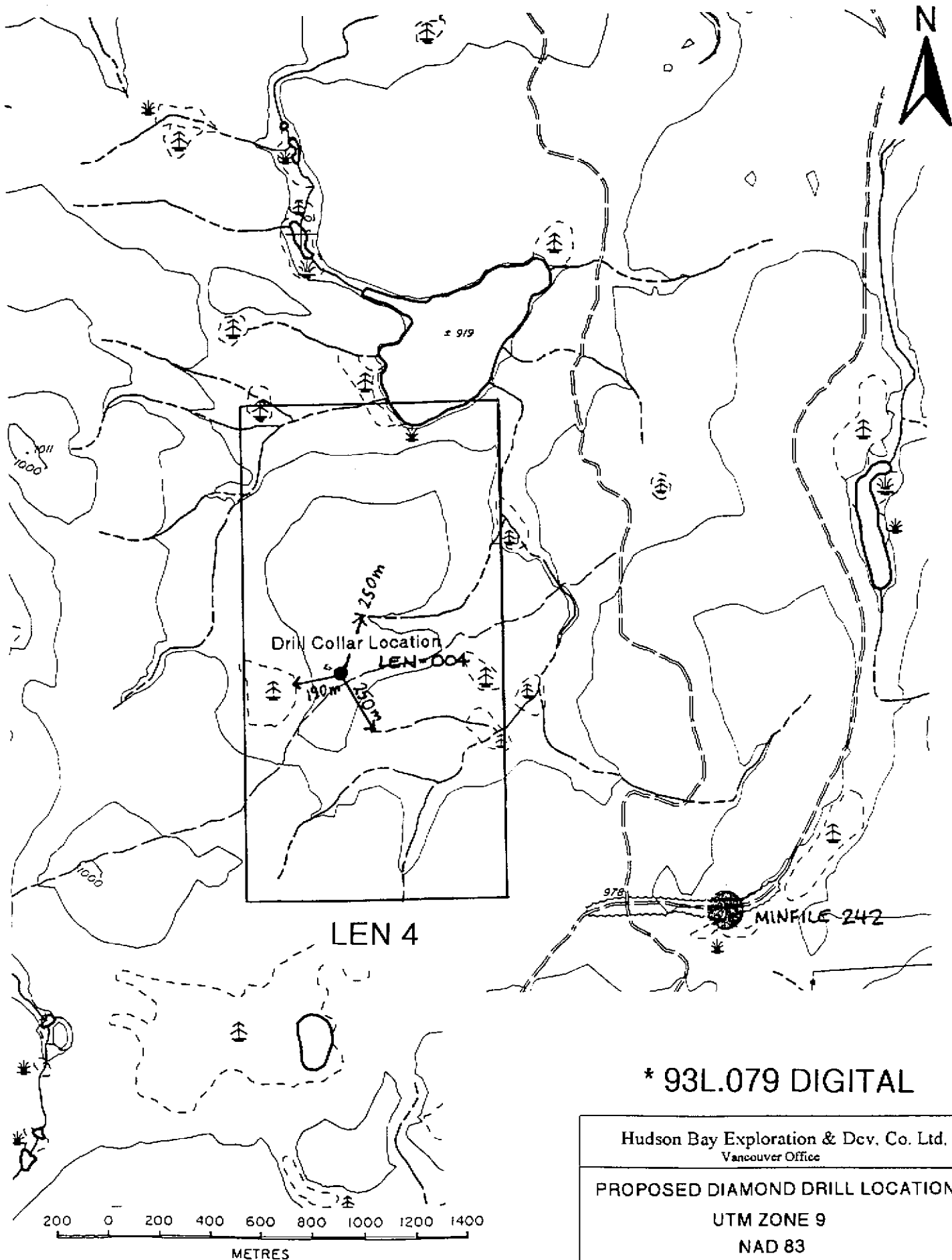
M HUDSON BAY

Hudson Bay Exploration & Dev. Co. Ltd. Vancouver Office		
PROPOSED DIAMOND DRILL LOCATION		
UTM ZONE 9		
NAD 83		
FIGURE - 9	SCALE	DATE:
AUTHOR: JKD.	1:20,000	FILE:



* 93L.080 DIGITAL

Hudson Bay Exploration & Dev. Co. Ltd. Vancouver Office		
PROPOSED DIAMOND DRILL LOCATION		
UTM ZONE 9		
NAD 83		
FIGURE - 10	SCALE	DATE:
AUTHOR: JKD	1:20,000	FILE:



* 93L.079 DIGITAL

Hudson Bay Exploration & Dev. Co. Ltd.
Vancouver Office

PROPOSED DIAMOND DRILL LOCATION

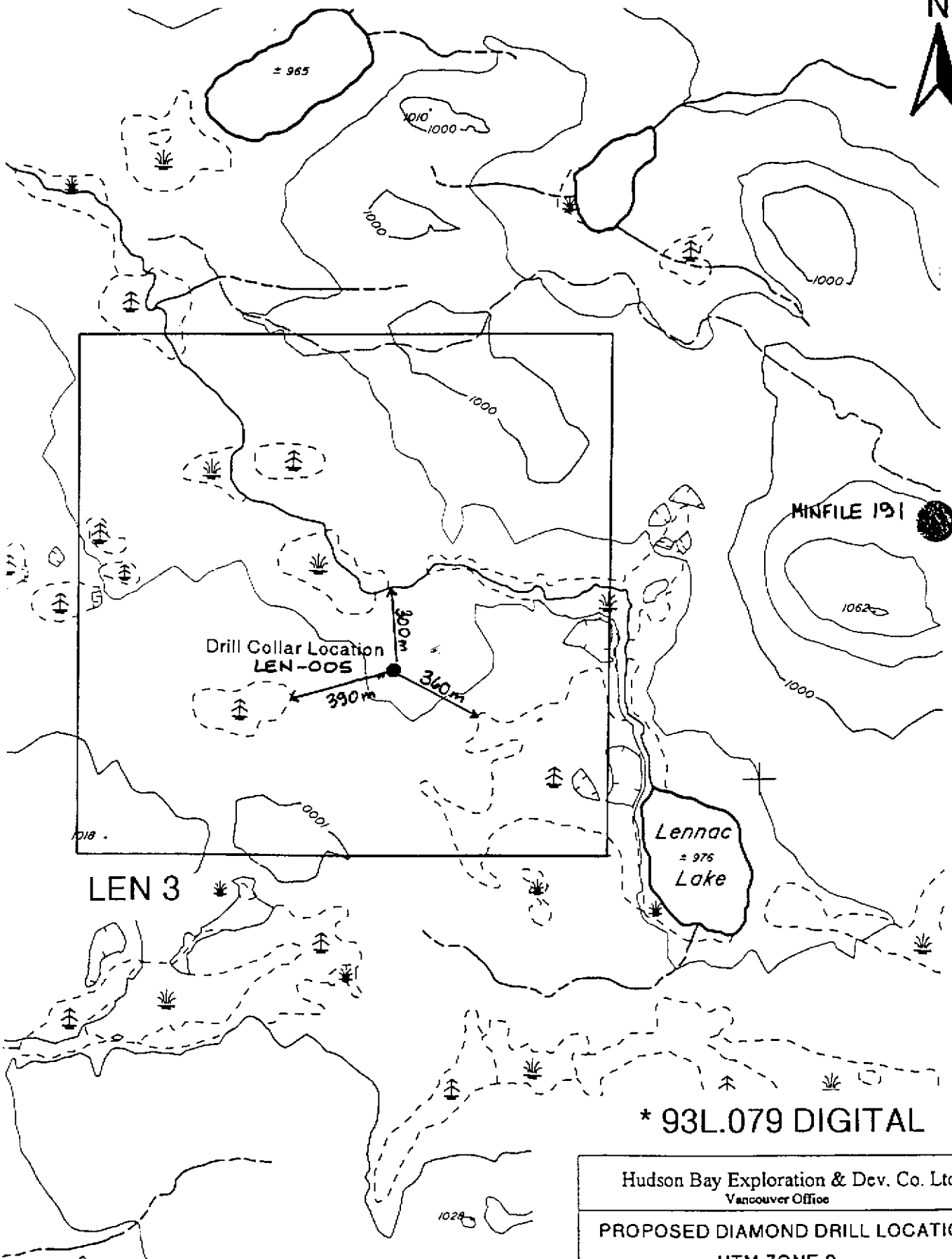
UTM ZONE 9

NAD 83

FIGURE - II
AUTHOR: JKD

SCALE
1:20,000

DATE:
FILE:



LEN 3

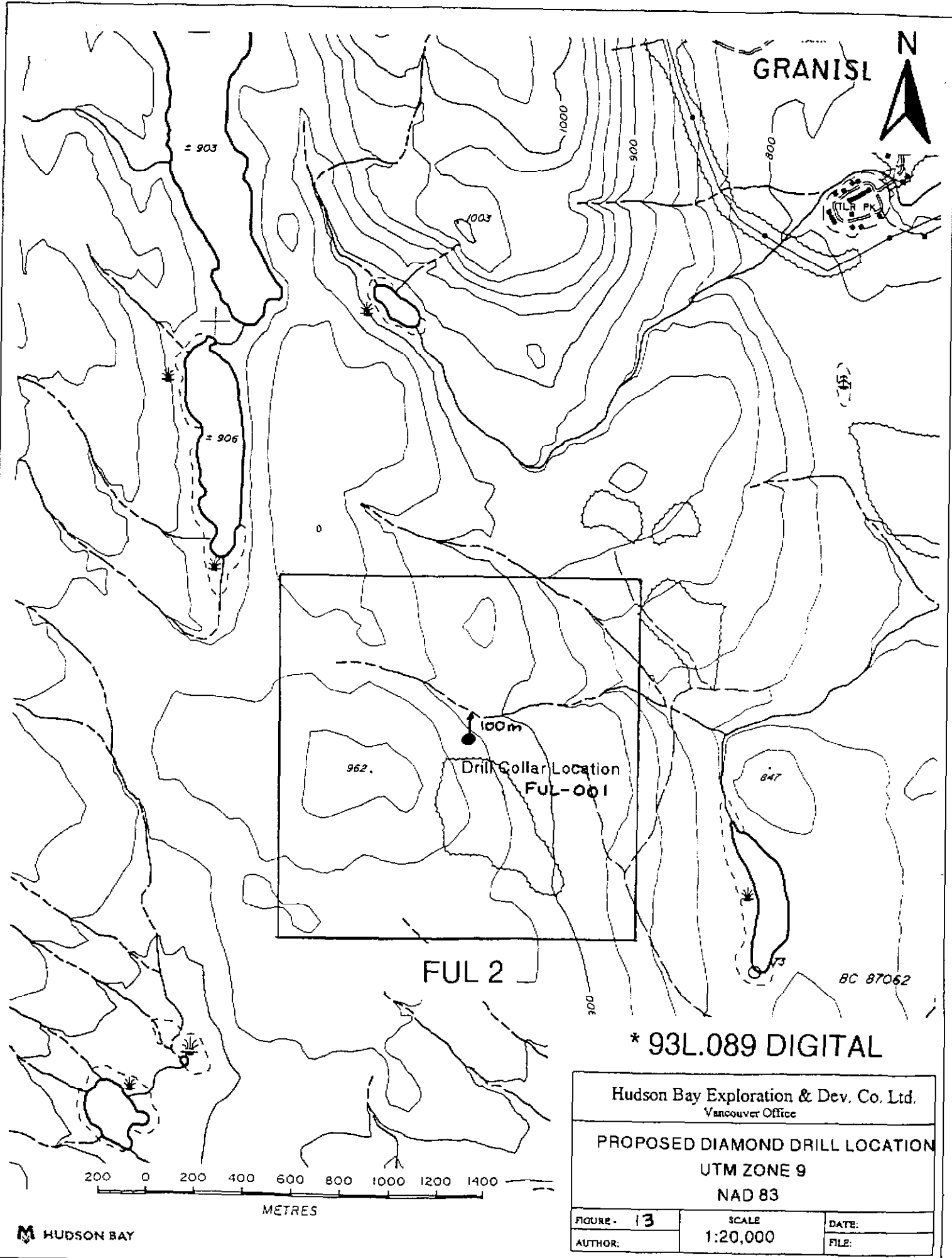
Lennac
≈ 976
Lake

MINFILE 191

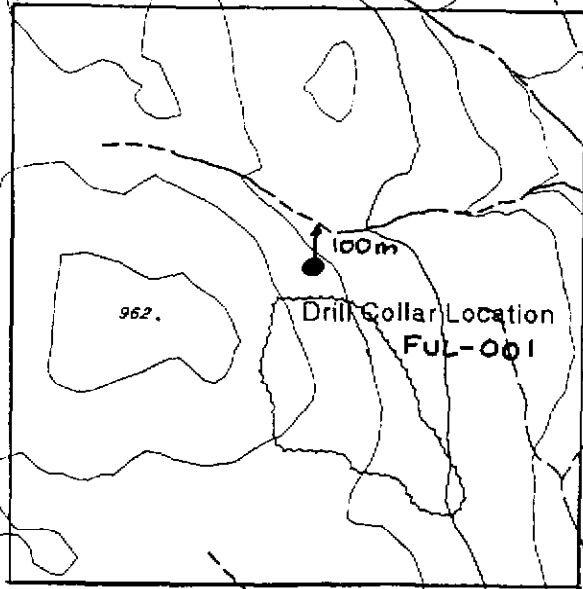
* 93L.079 DIGITAL



Hudson Bay Exploration & Dev. Co. Ltd. Vancouver Office		
PROPOSED DIAMOND DRILL LOCATION		
UTM ZONE 9		
NAD 83		
FIGURE- 12	SCALE	DATE:
AUTHOR: JKD	1:20,000	FILE:



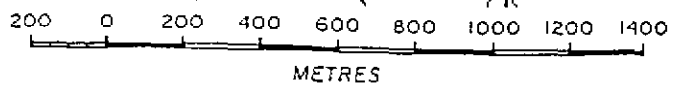
GRANISL



FUL 2

BC 87062

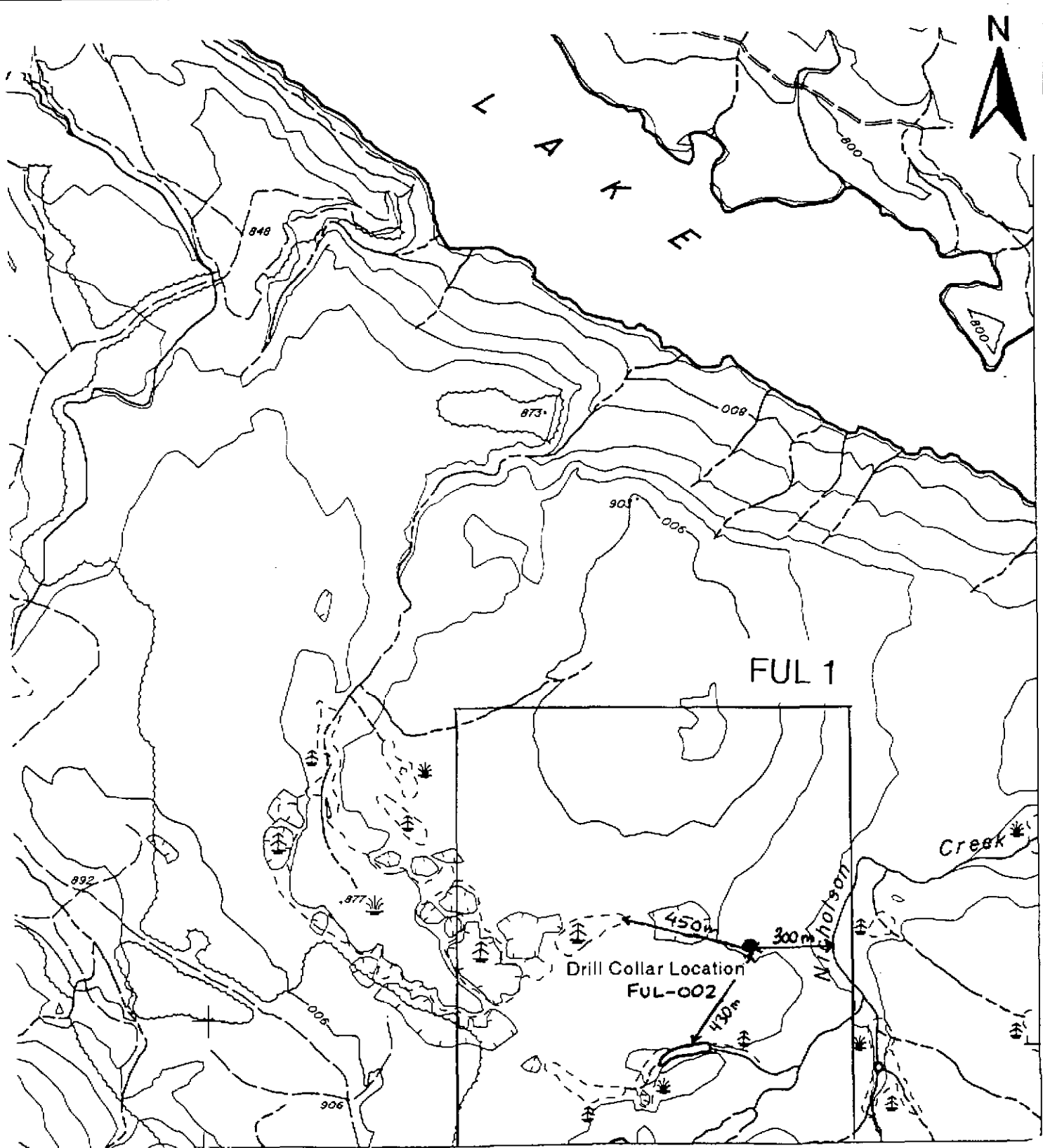
* 93L.089 DIGITAL



Hudson Bay Exploration & Dev. Co. Ltd.
Vancouver Office

PROPOSED DIAMOND DRILL LOCATION
UTM ZONE 9
NAD 83

FIGURE - 13	SCALE 1:20,000	DATE:
AUTHOR:		FILE:



* 93L.088 DIGITAL



M HUDSON BAY

Hudson Bay Exploration & Dev. Co. Ltd. Vancouver Office		
PROPOSED DIAMOND DRILL LOCATION		
UTM ZONE 9 NAD 83		
FIGURE -	14	SCALE
AUTHOR:	JKD	1:20,000
		DATE:
		FILE:

2.0 Detailed Technical Data

2.1 Objectives of the 1999 Diamond Drill Program

The objectives of the recently completed 1999 diamond drill program in the Babine Lake area are as follows:

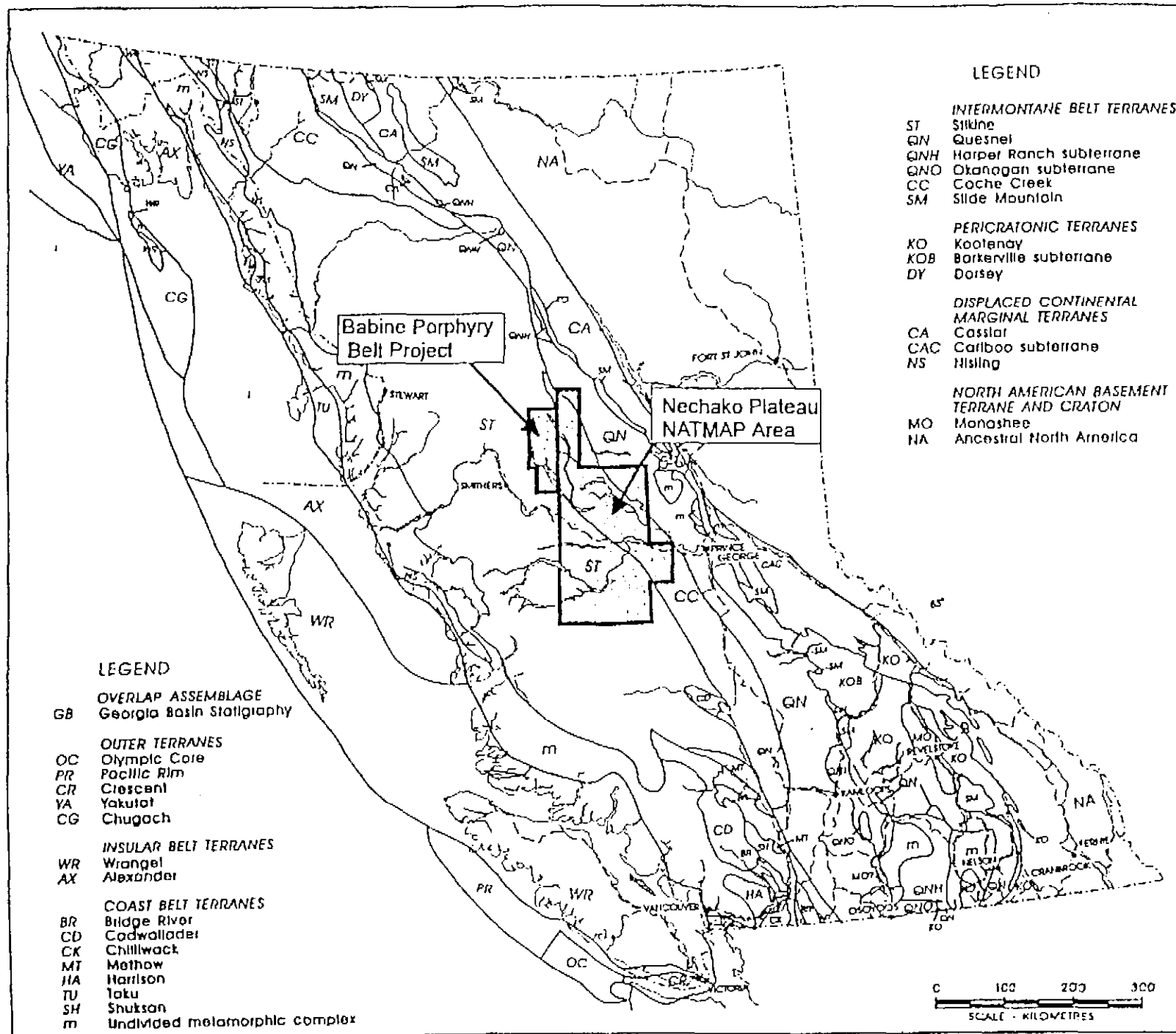
- 1) Test the highest priority geophysical anomalies identified through HBED's airborne EM and MAG surveys and then verified through follow-up ground EM and MAG geophysical surveys that were conducted in 1997 and 1998. 10 sites were selected for drilling in the summer of 1999.
- 2) Test for the volcanological, alteration and mineralization characteristics, which could be used to *further delineate and/or define favourable stratigraphy that could host VMS-style mineralization similar to the Eskay Creek precious metal-rich VMS deposit and/or other massive sulphide deposits, prospects, and/or occurrences in the Smithers-Babine Lake area.*

2.2 Tectonic Framework

The Babine Lake area is part of the largest terrane within the Intermontane Tectonic Belt known as Stikinia (Figure 15) (McMillan and Struik, 1996). Monger (1977) described Stikinia as being composed of Lower Devonian to Middle Jurassic volcanic and sedimentary rocks from the Asitka, Stuhini, Lewes River, and Hazelton Groups and their comagmatic intrusions.

A depositional hiatus, which occurred prior to the formation of the Late Triassic volcanic arc sequences of the mafic Stuhini Group, followed Upper Paleozoic island-arc tectonism. At the beginning of the Early Jurassic, the Central British Columbia area was part of the calc-alkaline Hazelton Group volcanic arc. The orientation of this volcanic arc remains enigmatic to this day; however, it should be noted that the current understanding of the facies relationships suggest that NW-trending island-arcs bounded a marine trough. NE-trending, dextral slip, transcurrent fault zones *further complicate the paleogeography of the area, but a NE-dipping subduction zone appears to be the most likely source for the western portion of the Hazelton Group volcanic arc.* Currently, the correlation between the Stuhini and Hazelton Group rocks is based on general lithologies and relative stratigraphic position (MacIntyre et al., 1996).

The formation of the Bowser Basin can be attributed to the collision of the Cache Creek Terrane with Stikinia during the Middle Jurassic resulted an apparent uplift of the Skeena Arch. Further uplift from the Late Jurassic to the Early Cretaceous caused the erosion of the Skeena Arch and the Omineca Crystalline Belt, which produced sedimentation that resulted in the formation of the sedimentary rocks of the Bowser Basin. During the Early Cretaceous, deposition of the Skeena Group sedimentary and volcanic rocks was focused along basin-related fault systems. The uplift of the Coast Mountain Complex also occurred during the Middle Cretaceous, which can be attributed to a



Location of Nechako NATMAP Project and tectonic boundaries

Figure 15

major plate collision, extensive folding, and thrust faulting. Detritus from the uplifted metamorphic and plutonic complexes filled the Sustat Basin to the east and this was followed by the formation of N-trending Andean-type volcanic arc from the Middle Cretaceous to the Eocene (MacIntyre et al., 1996).

These Andean-type arcs resulted from oblique, easterly subducting oceanic crustal material that was along the margin of the ancient North American Craton. The volcanic centers typically associated with this form of tectonic activity were most likely centered along the zones of extension within a transtensional regime. All of the calc-alkaline volcanic rocks of the Upper Cretaceous Kasalka Group and the Eocene Ootsa Lake Group are the remnant portions of those volcanic arcs. The Buckley Intrusions (Middle to Late Cretaceous) and the Babine Intrusions (Eocene) are the plutonic roots of these continental volcanic arc sequences and are commonly associated with base and precious metal mineralization (MacIntyre et al., 1996).

Tectonic activity from the Middle Cretaceous to the Late Eocene resulted in typical basin and range geomorphology that appears to have a NE displacement along dextral, transcurrent fault systems, which offset earlier NW-trending horsts and grabens (MacIntyre et al., 1989). Further extension in the lithosphere from the Eocene to Miocene caused an influx of continental mafic volcanism, which produced the Endako and Chilcotim Groups (MacIntyre et al., 1996).

2.3 Geological Framework

2.3.1 Regional Geology

The geological framework of the Babine Lake area has been mapped at various scales over the years including a 1:250,000 scale compilation by the Geological Survey of Canada during the 1970's. Other more recent work has included MacIntyre et al. (1987a,b; 1989), who carried out more detailed mapping studies as part of the Nechako NATMAP project at scale of 1:50,000.

The Babine Lake area lies within Stikinia and is composed of Late Triassic to Eocene volcanic and sedimentary rocks. The Takla Group is a Late Triassic-aged succession of submarine, calc-alkaline to alkaline, island arc volcanic rocks of which, the most important formation to the study area is the Telkwa Formation (MacIntyre et al., 1989). Tipper and Richards (1976) described the rocks of the Babine Lake area to be transitional between subaerial and submarine, as there is a general lack of marine-related rocks to east and a very thick accumulation of marine-related rocks to the west. On top of the Takla Group rocks are the Hazelton Group rocks, which are the other *important subdivision of the Babine Lake stratigraphic column*. These rocks range from subaerial to submarine, calc-alkaline island arc volcanic and sedimentary rocks. Further up the stratigraphic column are the siliciclastic to basinal sedimentary rocks of the Late Jurassic to Early Cretaceous-aged Bowser Lake Group, which are then

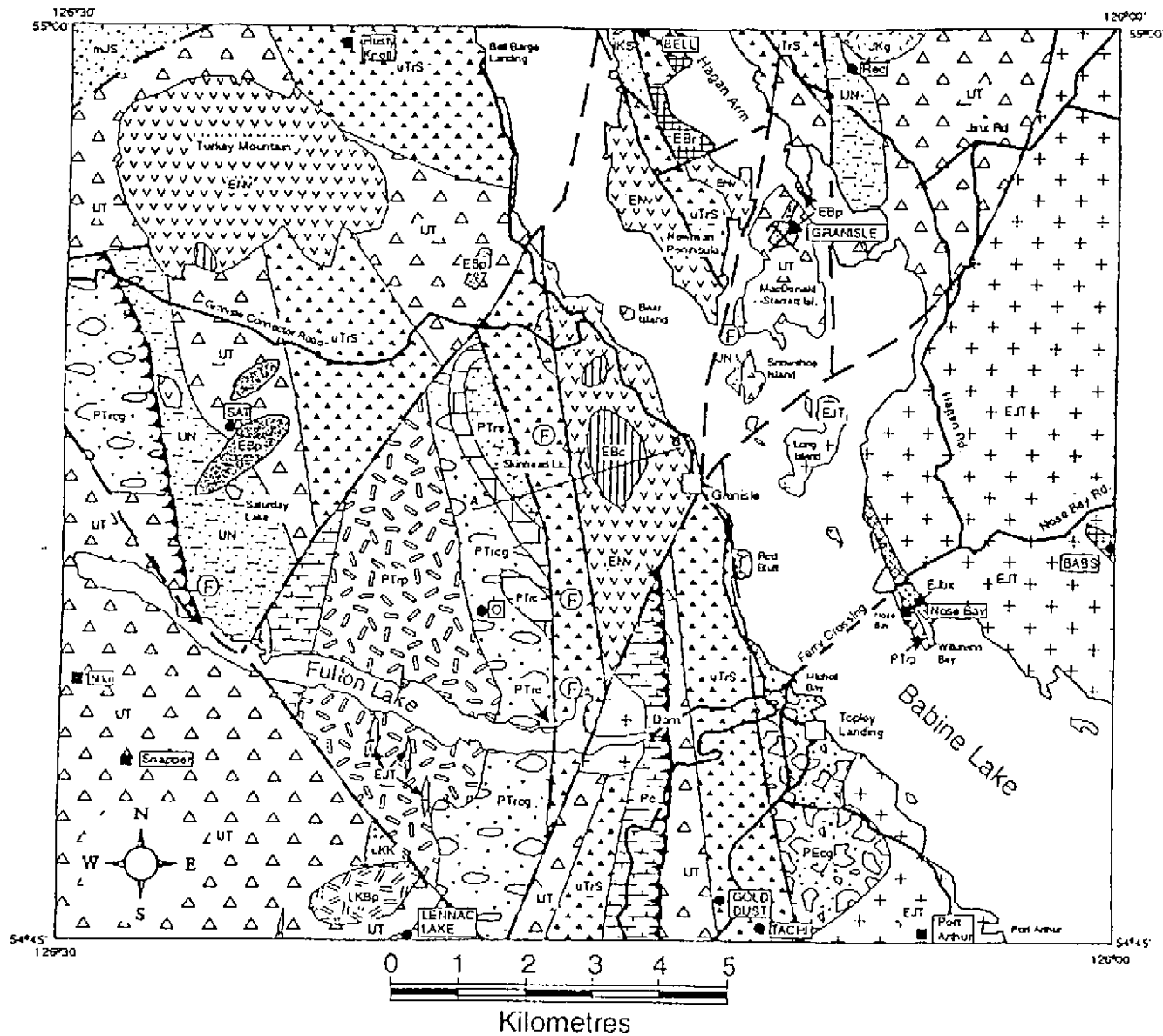
covered by the post-accretionary rocks of the Lake Cretaceous-aged Skeena and Sustut Group, continental clastic sedimentary rocks. The regional stratigraphy is capped with Late Cretaceous to Early Tertiary Kasalka, Ootsa Lake and Endako Group volcanic rocks, as well as Eocene Newman Formation volcanic rocks.

In the immediate Babine Lake area, the Hazelton Group rocks are divided into the Telkwa, Nilkitkwa, and Smithers Formations. The Telkwa Formation is the stratigraphically lowest unit, as well as the aerially most extensive. Telkwa Formation rocks consist of green to maroon, submarine to subaerial volcanic rocks. These rocks have been recently age-dated using fossils at between Sinemurian to early Pleinsbachian. MacIntyre et al. (1989) recognized four distinctive units that included the following: (i) basaltic to rhyolitic, siliceous, quartz- and feldspar-phyric, pyroclastic facies; (ii) augite-phyric, red tuff-sized facies and massive flows, as well as their related sedimentary rocks; (iii) thick-bedded, feldspar-phyric, andesite volcanoclastic facies; and (iv) a basal conglomeratic unit.

The Nilkitkwa Formation is a succession of marine sedimentary and submarine volcanic rocks that has been fossil age-dated at Pleinsbachian to Early Torcian-aged (Tipper and Richards, 1976). MacIntyre (1987) described the Nilkitkwa Formation as being composed of four principal units including (i) thinly bedded mudstones, cherts, and limestones; (ii) fine-grained to coarse-grained volcanoclastic rocks; (iii) rhyolite volcanic rocks; (iv) and amygduloidal mafic volcanic rocks with interbedded, red sedimentary rocks. Overlying the Nilkitkwa Formation are the shallow marine sedimentary rocks of the Smithers Formation, which are characterized by a strongly fossiliferous quartz arenite and siltstone.

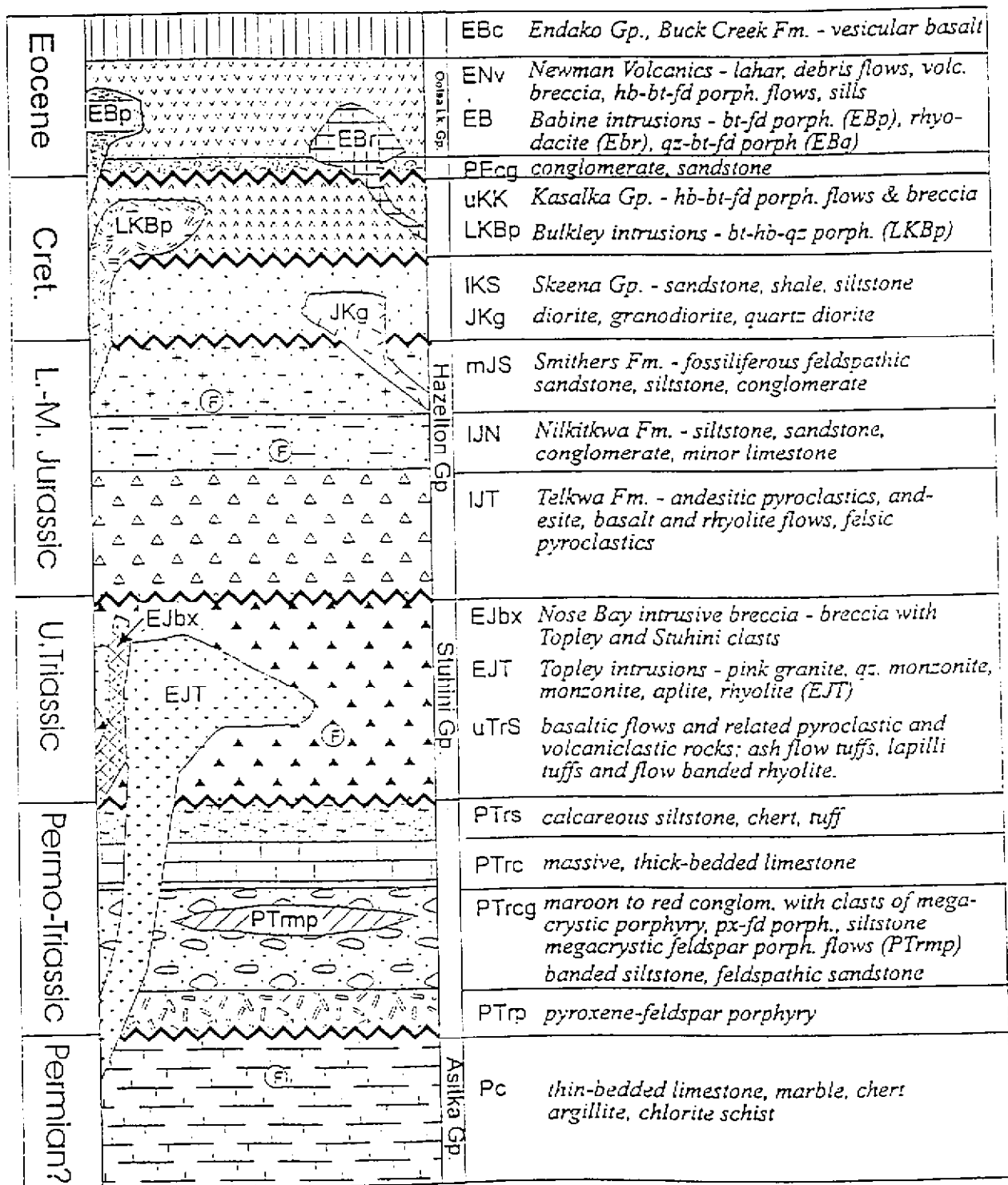
2.3.2 Property Geology

The geological framework of the property is not well known, as no property scale mapping has been carried out on either of the Ful and Len mineral tenures. Thick glacial overburden covers most of the area in question; however, traverses along gridlines during the verification of the individual gridlines and prospecting did reveal minimal rock exposures in the vicinity of a few of the mineral tenures. A complex succession of volcanic and sedimentary rocks and several suites of intrusions dominate the geology of the Ful and Len mineral tenures (Figure 16a,b). There are a number of facies variations in the rock-types present including aphyric to crystal-rich, volcanic flows or sills, siltstones and siliceous sediments, mudstones, and graphitic to calcareous mudstones. Most of the knowledge regarding the geological framework of the Ful and Len mineral tenures is based on the geological information gleaned from prior exploration activities by other companies, as well as from the downhole geology in the recently completed diamond drill holes. The geology intercepted in the 1999 diamond drill program is presented in Appendix B and in Figures 17 to Figure 23.



Geological Framework of NTS 093L/16

Figure 16a



Legend for Geological Framework of NTS 093L/16

Figure 16b

Mafic volcanic flows or sills are an important rock-type in the property area, but, in some instances, it was increasingly difficult to ascertain whether or not the mafic rock being described in the core was actually volcanic or plutonic in origin. Along the margins of the mafic volcanic flows or sills there is either a monomictic breccia unit or a sharp chill zone. The monomictic breccia typically consists of blocky, angular fragments in a mudstone or siltstone matrix. These monomictic breccia units are believed to be typical hydroclastic breccia having formed through autobrecciation as a result of the interaction of hot magma and wet sediments during emplacement. An interesting monomictic, tightly packed, hydroclastic, mafic volcanic breccia unit was intersected in LEN-004 that is composed entirely of augite-phyric, shard-like fragments that are intensely chlorite altered. In most of the drilling, the majority of the mafic volcanic rocks are Jurassic in age with the exception of the augite phyric mafic volcanic flows or sills in LEN-002 and possibly LEN-004, which appear to be Upper Triassic in age. These temporal interpretations are based on the regional mapping and descriptions provided in MacIntyre et al. (1996a).

The mafic volcanic flows or sills are typically pale to medium green, massive, homogeneous, inequigranular, fine-grained ($0.5\text{mm} < x < 1.5\text{mm}$), and locally feldspar and augite phyric (LEN-001, -002, -003, -004, and FUL-001); however, one unit intersected in LEN-005 contained abundant amygdules (up to 13mm) and olivine-augite phenocrysts/xenoliths (up to 95mm). Feldspar phenocrysts are pale green to chalky white, subhedral to euhedral, rhombohedral to rectangular, fine- to medium-grained (1 to 4mm), and can constitute up to 10% of the mafic volcanic rock. Augite phenocrysts are dark green, subhedral to euhedral, square to octagonal, medium- to coarse-grained (3 to 10mm), and can constitute up to 15% of the mafic volcanic rock. It should be noted that the mafic volcanic and volcanoclastic rocks that were intersected in FUL-001 on the Ful 2 mineral tenure are extremely similar to the bimodal volcanic rocks observed south of the Clear claims northwest of Granisle, BC.

Mafic volcanoclastic rocks were intersected in FUL-001 and LEN-005. These mafic volcanoclastic rocks were the only resedimented or epipelagically reworked volcanoclastic rocks identified in the property area. The mafic volcanoclastic rocks in FUL-001 are Eocene in age and part of the Newman Formation and the mafic volcanoclastic rocks in LEN-005 are Lower Jurassic-aged and part of the Teikwa Formation. These temporal interpretations are based on the regional mapping and descriptions provided in MacIntyre et al. (1996a). In both cases, there are clearly several depositional cycles and rapid facies changes, as there are tuff-, lapilli-tuff-, and agglomerate-lapilli-tuff-sized units in each of these diamond drill holes. Volcanoclastic textures present include normal grading, gradational to sharp contact relationships between facies, monomictic to heteromictic clast content, matrix supported, poor consolidation, and ablated clasts. The clasts in the mafic volcanoclastic rocks are well rounded with a high degree of sphericity and low degree of angularity and also tend to be both feldspar- and amphibole-phyric. Although most clasts share a general mineralogical similarity, there are significant colour differences, which lead to two possible conclusions. One, the clasts are from a series of chemically different mafic flows in stratigraphy that were from the same source regions or two, each of the flows that contributed to the mafic volcanoclastic rocks were variably altered by hydrothermal alteration.

One interesting sub-unit of the Eocene Newman Formation volcanoclastic rocks is an intercalated coal seam. This unit has an approximate thickness of 18.1m and was extremely friable and fissile. There was minor oxidation and weathering suggesting that there had been meteoric or groundwater percolation through the coal seam. MacIntyre (1999: personal communication) has noted that coal seams are very commonplace in the Eocene volcanic and volcanoclastic rocks in Central British Columbia.

A felsic volcanic flow or sill was intersected in LEN-004 and it appears to be the only felsic unit in the property area. It is currently difficult to fully ascertain whether or not this potentially key unit is a flow or a sill because the felsic unit has only been cored with one diamond drill hole and there extremely thick overburden cover in the collar area of LEN-004. The felsic volcanic flow or sill is pale grey to bleached white, massive, strongly altered, strongly foliated, homogeneous, inequigranular, quartz and feldspar phyric and possesses sharp, but irregular contact relationships with the adjacent, strongly altered mudstones. Feldspars phenocrysts are chalky white, subhedral to euhedral, rhombohedral to rectangular, fine- to medium-grained (1 to 6mm), and appear to constitute less than 5% of the felsic unit. The quartz phenocrysts are anhedral to subhedral, pale to medium-gray, fine- to medium-grained (1-3mm), and appear to constitute less than 2% of the rock unit. Note that there might be a higher percentage of phenocrysts present; however, the intense alteration might have resulted in the majority of the feldspar and quartz phenocrysts being masked or pseudomorphed by sericite, other clay minerals, and/or free quartz.

Only one type of intrusion could be definitively identified in the diamond drill core and that type of intrusion was intersected in LEN-002, and -003. The intrusions are pale gray to medium green, holocrystalline, massive, homogeneous, inequigranular, phyric, fine- to coarse-grained (1 to 8mm), and non- to weakly magnetic in an aphanitic groundmass. Feldspar phenocrysts are off-white to pink, subhedral to euhedral, rhombohedral to rectangular, medium-grained (3-8mm) and can constitute between 10 and 20% of the intrusion. Amphibole phenocrysts are dark green to black, subhedral to euhedral, rectangular to prismatic, medium-grained (3-4mm) and can constitute up to 5% of the intrusion. The intrusions do not show any great degree of fabric suggesting that they are either syn- or post-deformational in their origin: however, there are age dates on these particular intrusions. Similar intrusions have been age dated from the Topley and Buckley suites of intrusions. A Topley suite, biotite-quartz-feldspar porphyry dyke near the Tachek Porphyry Cu prospect was a K-Ar age dated at 176 ± 7 Ma (Carter, 1981) and a Buckley suite, biotite-hornblende-feldspar dyke near the Lennac Lake Porphyry Cu prospect was K-Ar age dated at 77 ± 2.5 Ma (Carter, 1976).

There are four sedimentary rock-types present within the property area including graphitic to calcareous mudstones, siliceous siltstones, and pelagic or fossiliferous wacke. Graphitic to calcareous mudstones were intersected in LEN-001, -002, -003, -004, and FUL-002 diamond drill holes. In general, these sedimentary rocks were medium gray to black, extremely fine-grained (<0.5mm), tightly packed, well sorted, texturally immature and indicative of a low-energy depositional environment such as an anoxic, organic-rich basin. The graphite content was extremely variable and could be greater than 40% to less than 5%. In units that were graphite-rich, it was not uncommon to see an

increase in the overall fissile nature of the core, whereas, units with a low percentage of graphite were typically more cohesive. It should also be noted that chlorite was also found in greater abundance in the graphite-rich units or rather was much easier to identify on broken surfaces. Sedimentary structures are also visible including thin to thick laminations, thin to thick bedding, and sharp contact relationships. There are small-scale folds present in the graphitic to carbonaceous mudstone units, which could be either the function of soft sediment deformation or minor isoclinal deformation. Only one example of a possible isoclinal fold was identified in the diamond drill core and that was in FUL-002 on the Ful I mineral tenure. This diamond drill hole cored through 176.8m of carbonaceous to graphitic mudstones of the Nilkitkwa Formation.

The siliceous siltstones were typically very similar in nature to the graphitic to calcareous mudstones except for two things. First, there was absolutely no graphite or chlorite in any of the units intersected in the diamond drill core. Second, the siliceous siltstones did not possess thin to thick laminations, but rather only thin to thick bedding. The siliceous siltstones did however possess locally weak, discrete, patchy to pervasive biotite alteration. Biotite alteration was typically identified when the siliceous siltstones were cut by an intrusion, which suggests that the biotite alteration might be in those cases part of a contact metamorphic aureole related to the emplacement of the intrusion.

The pelagic or fossiliferous wacke was only intersected in one diamond drill hole, FUL-002. This rock-type was stratigraphically beneath a subaqueous, mafic volcanic flow and hydroclastic unit and is medium gray to medium brown, very fine-grained (<0.5mm), moderately to well sorted, tightly packed, and containing minor fossils of an unknown type.

2.3.3 Sulphide and Oxide Mineralization

Four sulphide minerals have been definitively identified in the diamond drill core from the Ful and Len mineral tenures including pyrrhotite, pyrite, and sphalerite with chalcopyrite only occurring in trace quantities. Pyrrhotite and pyrite are the two most dominant sulphide minerals. In general, the sulphide mineralization is hosted within deformed and altered sedimentary rocks that are principally mudstones and graphitic to carbonaceous mudstones; however, minor quantities of sulphide mineralization were identified in one mafic volcanic flow or sill. Overall, there were three major styles of sulphide mineralization encountered in the 1999 diamond drill program including (i) lithology- controlled or syn-genetic; (ii) fracture- or vein-controlled; and (iii) disseminated sulphide mineralization.

The lithology-controlled or syn-genetic sulphide mineralization occurs principally as massive sulphide or semi-massive sulphide mineralization; however, it should be noted that there is also a disseminated sulphide mineralization component. Only the sedimentary rocks from FUL-002 yielded any massive or semi-massive sulphide mineralization with the only sulphide mineral present being pyrite. Here sulphide mineralization is restricted to bedding planes or coarser-grained lithological units or layers. The massive sulphide mineralization is

composed of up to 55% pyrite and is typically fine- to medium-grained (1-2mm) in size. Pyrite appears to be replacing the matrix of the coarser-grained layers, as the distribution appears directly related to the coarseness of the unit. If the unit is a very fine-grained mudstone, then the mineralization is restricted to the bedding plane or the contact between depositional cycles. This gives the sulphide mineralization a disseminated distribution and with individual pyrite crystals having a flattened appearance. Sulphide mineralization resembling these flattened pyrite crystals is also present in LEN-001, -002, and -003; however, pyrite is not always the dominant sulphide mineral as pyrrhotite is also present and can occur in greater quantities. The same relationship of pyrite distribution can be applied to even the coarser-grained units, which tend to be sulphide-rich. In these units, there is often normal grading and a definite fining direction. As the sediment becomes finer-grained, the sulphide content decreases or rather there is an apparent decrease in the quantity and/or distribution of sulphide mineralization.

Fracture- or vein-controlled sulphide mineralization occurs principally as orthogonal or conjugate sets that tend to crosscut the fabric and/or lithological contacts in the rock-types. Quartz and carbonate minerals are often found in close spatial association within the mineralized structures, but they are also known to crosscut and be crosscut by the fracture- or vein-controlled sulphide mineralization. Mudstones, graphitic to calcareous mudstones, siltstones, and siliceous siltstones are the dominant host rock-types for the fracture- or vein-controlled sulphide mineralization. Nowhere in the property area were mafic volcanic flow or sill rocks crosscut by fracture or vein-controlled sulphide mineralization. One possible reason for this is the significant competency contrast between volcanic and sedimentary rocks. Volcanic rocks are more resilient to deformation and strain under brittle deformation conditions, whereas, sedimentary rocks will more likely fracture or break under those same conditions.

Three sulphide minerals known to occur in this manner in the study area are pyrite, pyrrhotite, and sphalerite with pyrite being the dominant sulphide mineral overall. In diamond drill hole LEN-002, pyrrhotite is the dominant sulphide mineral; however, there are locations where pyrrhotite and pyrite co-exist, as if one is replacing the other. It should also be noted that the fracture- or vein-controlled sulphide mineralization uphole is dominantly pyrite, but with increasing depth and increasing proximity to the intrusion in LEN-002, the dominant sulphide species slowly becomes pyrrhotite. For the most part though, both pyrite and pyrrhotite are anhedral in their crystal form and rarely are there any individual subhedral to euhedral crystals observed in the core. In diamond drill hole LEN-004 the sphalerite is the dominant sulphide mineral and there are negligible quantities of either pyrrhotite or pyrite. Sphalerite is principally hosted within quartz-carbonate veins that possess a vuggy texture. One of the veins also displayed a crack-seal texture suggesting a multistage formational history for these sphalerite-bearing veins. Individual sphalerite crystals are cream to rose in colour, subhedral to euhedral, fine- to medium-grained (2-8mm), and often appear as crystal aggregates. Sphalerite is also present around the vein, as it was not uncommon to observe disseminated sphalerite crystals in adjacent wall rock.

Oxide mineralization was intersected in only one diamond drill hole, LEN-005, which was in proximity to the Lennac Lake Cu-Mo Porphyry prospect. The host rocks for the oxide mineralization are the deep red to maroon, subaerial volcanoclastic rocks of the Telkwa Formation. Most commonly found in the matrix of the fine-grained, tuff- or lapilli-tuff-sized units, rare specular hematite crystals were identified in various clasts within the coarser-grained units. Specular hematite occurs as metallic gray, subhedral to euhedral, platy, hexagonal, and fine- to medium-grained (1 to 2mm) crystals that could constitute less than 2% of the rock unit.

2.3.4 Hydrothermal Alteration

Corbett and Leach (1998) described kaolin group minerals as being derived from hydrothermal fluid with a pH that is approximately 4 and that can co-exist with alunite group minerals under slightly more acidic conditions. Kaolinite will form at temperatures from less than 150 to 200°C at shallow crustal levels and pyrophyllite will form lower down in the crust and at temperatures between 200 and 250°C. Dickite forms in a transitional setting between the above crustal and temperature ranges. Illite group minerals form under near neutral pH conditions (4-6) and will co-exist with kaolin group minerals depending on the temperature and salinity of the hydrothermal fluid. Temperatures of formation for illite group minerals are typically less than 250°C with smectite stable from 100 to 150°C, interlayered smectite-illite stable from 150 to 200°C, and illite stable from 200 to 250°C. Above 250°C, muscovite or sericite is the dominant phyllosilicates; however, this fine-grained muscovite can contain minor illite.

The strongest phyllosilicates and/or clay alteration observed in the diamond drill core was from LEN-004, where there was a wide interval of mudstones and possible felsic volcanic rock or an intrusion that had been moderately to intensely masked by alteration minerals. The mudstones were variably and complexly altered both parallel to and crosscutting the major fabric of the rock. The colour of the altered mudstones ranged from a pale grey to a medium, dark yellow. This variability in colour suggests that there might have been some degree of compositional banding in the mudstones; that there were multiple stages of alteration overprinting the mudstones; and/or there was evolution within the hydrothermal fluid as minerals were both created and destroyed. There were also discrete patches of a bright green alteration that is known as fuchsite alteration; however, this alteration will be discussed further later in the section. In the case of the possible felsic volcanic rock or intrusion, the entire unit had been essentially altered to a zone of massive sericite and clay minerals. The drill core was extremely friable and fissile such that individual flakes could be extracted with little effort and the drill core could be broken without the use of mechanical core-splitter or power saw. The colour of the rock was a bright white to a pale grey and the original mineralogy had been essentially masked by hydrothermal alteration; however, close inspection revealed the faint outlines of relict and/or pseudomorphed, subhedral to euhedral, feldspar and subhedral quartz phenocrysts. The most intense phyllosilicates and/or clay alteration was apparently centered in the possible felsic volcanic rock or intrusion and gradually became less intense outward from the possible felsic volcanic rock or intrusion. This resulted in an alteration halo that extends an apparent 12.5m uphole and an apparent 10.1m downhole from the possible felsic volcanic rock or intrusion.

Another alteration facies that is present in LEN-004 is epidote or epidote-quartz alteration. In VMS systems, this alteration facies occurs dominantly in subaqueous mafic volcanic successions and along synvolcanic structures. Epidote-quartz alteration is typically characterized by a mineral assemblage consisting of epidote, quartz, amphibole, and carbonate, which means that there is a net enrichment of Ca and a depletion of Fe, Mg, Na with or without Cu, Mn, and Zn (Gibson, 1990). Galley (1993) noted that epidote-quartz alteration will form from 300 to 400°C under low fluid to rock ratios and typically involves chemical reactions with albite, anorthite, clinozoisite, and magnetite. In an epithermal environment, Corbett and Leach (1998) noted that calc-silicate minerals, which includes epidote, form under neutral to alkaline pH fluid conditions and include other minerals such as zeolites, chlorite, carbonate, and amphiboles. Epidote crystals tend to be granular to crystalline in habit and form between 180 and 220°C, but under slightly hotter fluid conditions up to 250°C, epidote will form subhedral to euhedral crystals.

Epidote-quartz alteration is only present in the LEN-004 diamond drill hole and does not appear to be directly associated with any forms of sulphide mineralization; however, there is very anomalous base and precious metal mineralization further downhole in the graphitic to calcareous mudstones. The epidote-quartz alteration occurs as discrete patches over an interval of 19.6m in coarse-grained, mafic volcanoclastic rocks of the Telkwa Formation and can best be described as a partial to whole-scale replacement of the matrix in the mafic volcanoclastic rocks. The discrete patches of epidote-quartz alteration vary in colour and include pale gray, pistachio green, and a greenish yellow.

One of the more interesting alteration facies identified in the study area was the fuchsite or Cr-muscovite alteration that was intersected in diamond drill hole LEN-004 on the Len 4 mineral tenure. The fuchsite alteration is a patchy, discrete alteration of the illite group alteration facies and principally alters the graphitic mudstones both parallel and crosscutting the dominant fabric and rock contacts in the drill core. The mode of the fuchsite suggests that there might be either a lithological or structural control focusing of the hydrothermal fluids responsible for the formation of the fuchsite. Corbett and Leach (1998) noted that both Cr-muscovite (fuchsite) and V-muscovite (roscoelite) are extremely commonplace when the source region of the hydrothermal fluid transgresses an ultramafic or mafic rock. Moritz and Crocket (1991), in their study of the Archean Quartz-Fuchsite Vein in the Timmins-Porcupine Gold Camp, Ontario, noted that after an initial stage of intense carbonate alteration of the host komatiite volcanic rocks, there was a second stage of intense fuchsite-pyrite alteration that was centered on the adjacent quartz-feldspar, felsic porphyry intrusion. This is also the case with the location of the fuchsite in diamond drill hole LEN-004. In proximity to the fuchsite alteration is a highly altered, quartz-feldspar, felsic unit; however it is uncertain if the unit is an intrusion or a lobe of a volcanic flow.

Around some of the minor dykes and/or sills observed in the diamond drill holes LEN-001, LEN-002, and LEN-003, there are zones of a pale to medium reddish brown coloration associated with the chill margin or contact zone of the intrusions, which intrude mudstone, graphitic mudstone and siliceous siltstones. This coloration is most likely biotite alteration, which is part of the potassic alteration facies. Potassic alteration minerals tend to form at high temperature and neutral to alkaline geochemical conditions in either proximity to or adjacent to the intrusions. Secondary biotite will form at temperatures between 300° and 325°C in active porphyry systems (Corbett and Leach, 1998). In the case of the biotite alteration in diamond drill hole LEN-002, the progressive evolution of the hydrothermal alteration from a focused, structurally controlled, vein-style of alteration to a more pervasive form has resulted in false clastic textures. McPhie et al. (1993) coined these false clastic textures pseudobreccia, as they appear to possess a matrix and clasts of differing composition; however, the only true difference is their colour. Each phase of this polyphase hydrothermal alteration commonly varies in intensity, meaning that a single, homogeneous or monomictic unit can appear polymictic or heterolithic in composition. This confusion can often result in rock-types being mis-identified in the field, thereby making correlation of stratigraphy extremely difficult. Allen (1998) noted in the Mount Lyell volcanic rocks of Tasmania that pseudobreccia units have been deformed such that they possess a lenticular shape, which is parallel to the tectonic fabric. This alignment of the alteration minerals makes the pseudobreccia mimic a volcanoclastic unit of flattened pumice fragments in a welded tuff-sized deposit.

2.4 1999 Whole-Rock and Trace Element Geochemistry

Prior to the 1999 diamond drill program completed by HBED, only a limited number of samples had been previously submitted for litho-geochemistry in the Babine Lake area. As a result, an effort was made to collect several samples from each rock-type, each of which was submitted for whole-rock (ICP) and trace element (ICP-MS) analysis at ACME Analytical Laboratories Ltd. Compilation and interpretation of the geochemical data obtained during the 1999 diamond drill program is currently underway now that all results have been received from ACME Analytical Laboratories. Both the whole-rock data and all of the trace element data are presented in Appendix C.

All of the samples collected from the diamond drill core that were submitted for litho-geochemistry have now been received and digitally compiled into a master database. Out of the 7 diamond drill holes completed in the Babine Lake area, only LEN-004 on the Len 4 mineral tenure yielded any significant and/or anomalous values base and precious metal values. From 74.68m (245 ft) to 111.46m (365.7 ft) (36.79 or 120.7 ft) there was visible sulphide mineralization, which graded 0.007% Cu, 0.052% Pb, 0.200% Zn, 0.393% Mn, 0.131% As, and 6.38 gpt Ag. This large interval also included 10.21m (33.5 ft) grading 0.009% Cu, 0.121% Pb, 0.427% Zn, 0.719% Mn, 0.329% As, and 14.39 gpt Ag. Further analysis of the litho-geochemistry is pending a full digital compilation of the historical data from the area, as well as the diamond drill program.

3.0 Discussion

3.1 Proposed Genetic Models

3.1.1 High Sulphidation VMS-Epithermal Transition Deposits: 'The Eskay Creek Genetic Model'

Eskay Creek is an extremely attractive target for the mining industry and only recently has there been enough study to accurately ascertain the most likely scenario for the formation of the anomalous base and precious metal mineralization that constitutes the Eskay Creek Mine. Sherlock et al. (1999) noted that the hydrothermal system that resulted in the formation of the sulphide mineralization was below 200°C and possessed an extremely high gas content. Results from detailed fluid inclusion studies revealed that the mineralization formed at approximately 150 bars that equates to roughly 1,500m BSL; however, there was significant contribution from the gas phases, which resulted in extremely variable data. Oxygen isotope data from quartz mineral separates and whole rock data indicate that seawater was the dominant fluid in the hydrothermal system and that there was a mixing of seawater with a very low temperature saline fluid that was less than 100°C. This high salinity fluid possessed high K/Na and Cl/Br ratios in comparison to seawater, but it should be noted that the exact relevance of the halogen-rich, saline fluid to the sulphide mineralization remains enigmatic. Sulphur isotope results indicate that the majority of the sulphur employed during the formation of the sulphide mineralization was derived from sulphate in seawater; however, one anomalous result from barite suggests an oxidized, igneous source for some of the sulphur. In conclusion, Sherlock et al. (1999) noted that the sulphide mineralization formed at or near the seafloor-seawater interface in a shallow water setting, whereby fluid boiling resulting in the precipitation of gold and silver.

3.1.2 'The Equity Silver Genetic Model'

The genetic model for the Equity Silver Mine is based on a combination of several key attributes of the geological framework including mineralogy, mode and style of mineralization, and the geological setting; however, it should be noted up front that current research has been unable to accurately assign the Equity Silver Mine to a single genetic model, as Equity Silver Mine's origin remains enigmatic. One key factor is the close spatial and age association between the advanced argillic altered zones and the quartz monzonite intrusions. Cyr et al. (1984) noted that the sericite from the advanced argillic altered zones yielded K-Ar age dates around 58 Ma. K-Ar age dates from the quartz monzonite cover a similar range from 56 to 61 Ma. This similarity in ages for the intrusions and the spatially related alteration zones are suggestive of a genetic link, whereby they are contemporaneous and part of the mineralizing process.

Cyr et al. (1984) noted that the processes associated with the intrusions in the mine area were responsible for the shattering of the host volcanic and volcanoclastic rocks, which is evident in the various brecciation-styles such as jigsaw and crackle breccia zones. Metal-rich hydrothermal fluids were then introduced into these porous and permeable breccia zones, which acted as a 'sponge' and resulted in widespread disseminated sulphide mineralization that gradually grades into either semi-massive or massive sulphide mineralization. Sulphide mineralization was precipitated and deposited primarily as disseminated crystals in the open spaces created during shattering of the host rock, which acted as low-pressure zones that allowed for the boiling of the hydrothermal fluids and formation of sulphide minerals. Subsequent to the formation of the sulphide mineralization, the emplacement of post-mineralization dykes and sills caused local remobilization and concentration of metals in the vicinity of the intrusion contact zones with the wall rock.

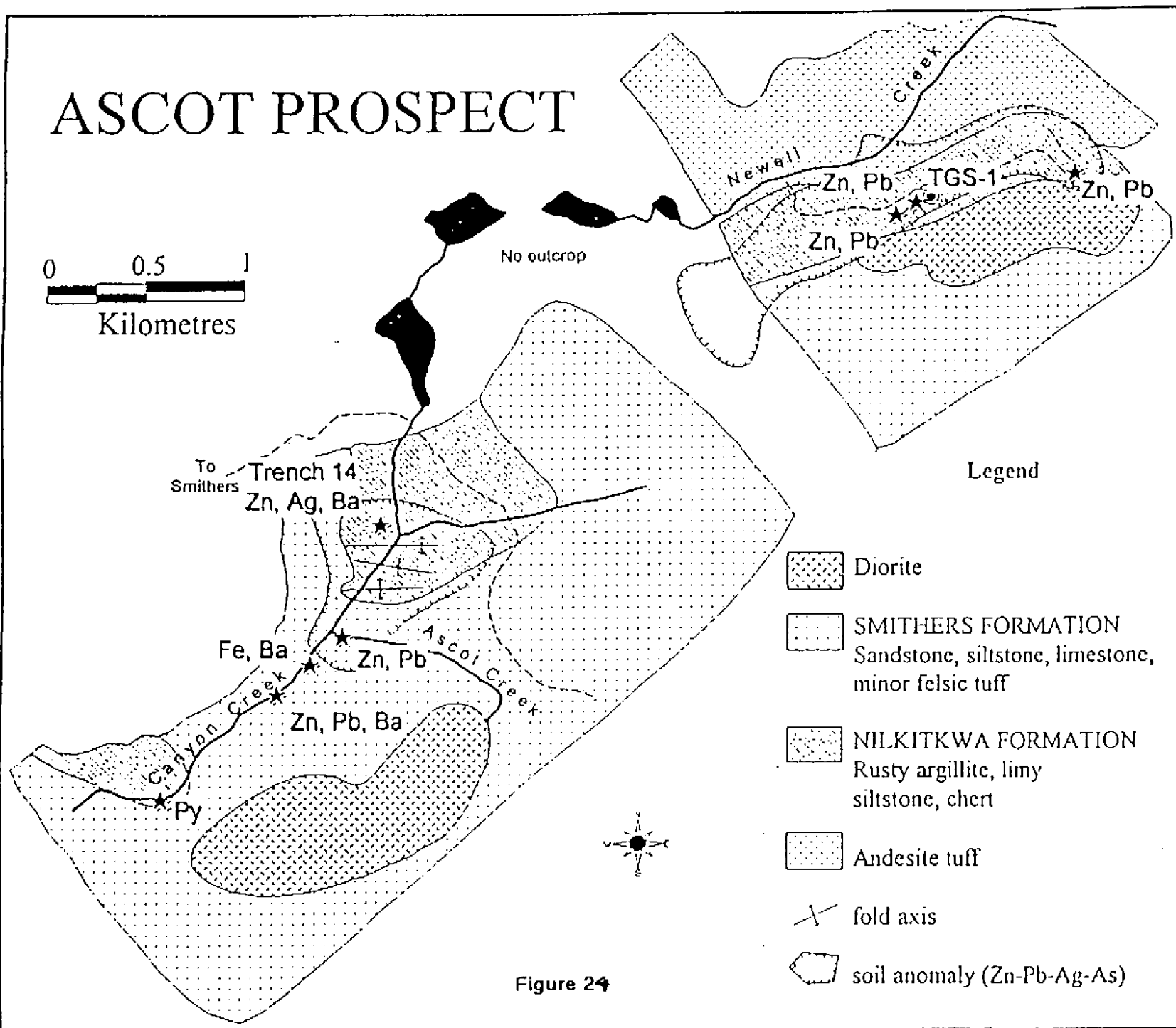
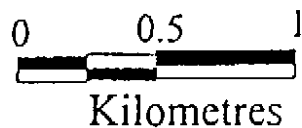
Shen and Sinclair (1982) noted that fluid inclusion studies supported the genetic model presented in Wetherell (1979), which stated that the a quartz monzonite stock acted as the heat engine for a hydrothermal system that resulted in periodic fracturing during the mineralizing process. Mineralization most likely formed from a single, long-lived, hydrothermal system that centered on the quartz monzonite stock with mineralization gradually progressing outward under decreasing temperature conditions. Although the high salinities within the fluid inclusions and their respective daughter minerals such as halite suggest an igneous origin, there is evidence that meteoric water was a significant component of the hydrothermal system.

3.2 Volcanogenic-hosted Massive Sulphide Deposits and Other Massive Sulphide Deposits of the Smithers-Babine Lake Area, BC

3.2.1 Major Volcanogenic-hosted Massive Sulphide Mineralization

Within the Hazelton Group rocks of the Smithers area in Central British Columbia, there are several base metal occurrences that share many affinities to VMS deposits found elsewhere in the Hazelton Group. These occurrences have seen a long exploration history with most of the work having been completed during the 1960's and 1970's; however, one reason none of these occurrences have been conclusively identified as VMS occurrences was perception that the rocks of the Hazelton Group did not conform ideally to the genetic model of those times. After the discovery of the Eskay Creek VMS mine, many workers began to reassess the depositional environments of the Hazelton Group. Most recently, Wojdak (1999) provided a general summary of the stratigraphic position of the mineralization at the possible VMS occurrences in the Smithers area; however, there are also some other massive sulphide occurrences in the area that could also be related or transitional to the VMS genetic model. These deposits, prospects, and/or occurrences include the Ascot (Figure 24), Copper Crown, Del Santo (Figure 25), Equity Silver, Fireweed, Harry Davis, Lakeview (Figure 2165), New Moon, Red, SU (Figure 27), and Trek. An overview for these possible VMS deposits, prospects, and/or occurrences is presented in Table 4, noting that only those with either a geological resource or reserve are presented in the summary.

ASCOT PROSPECT



Legend







-  Diorite
-  SMITHERS FORMATION
Sandstone, siltstone, limestone,
minor felsic tuff
-  NILKITKWA FORMATION
Rusty argillite, limy
siltstone, chert
-  Andesite tuff
-  fold axis
-  soil anomaly (Zn-Pb-Ag-As)

Figure 24

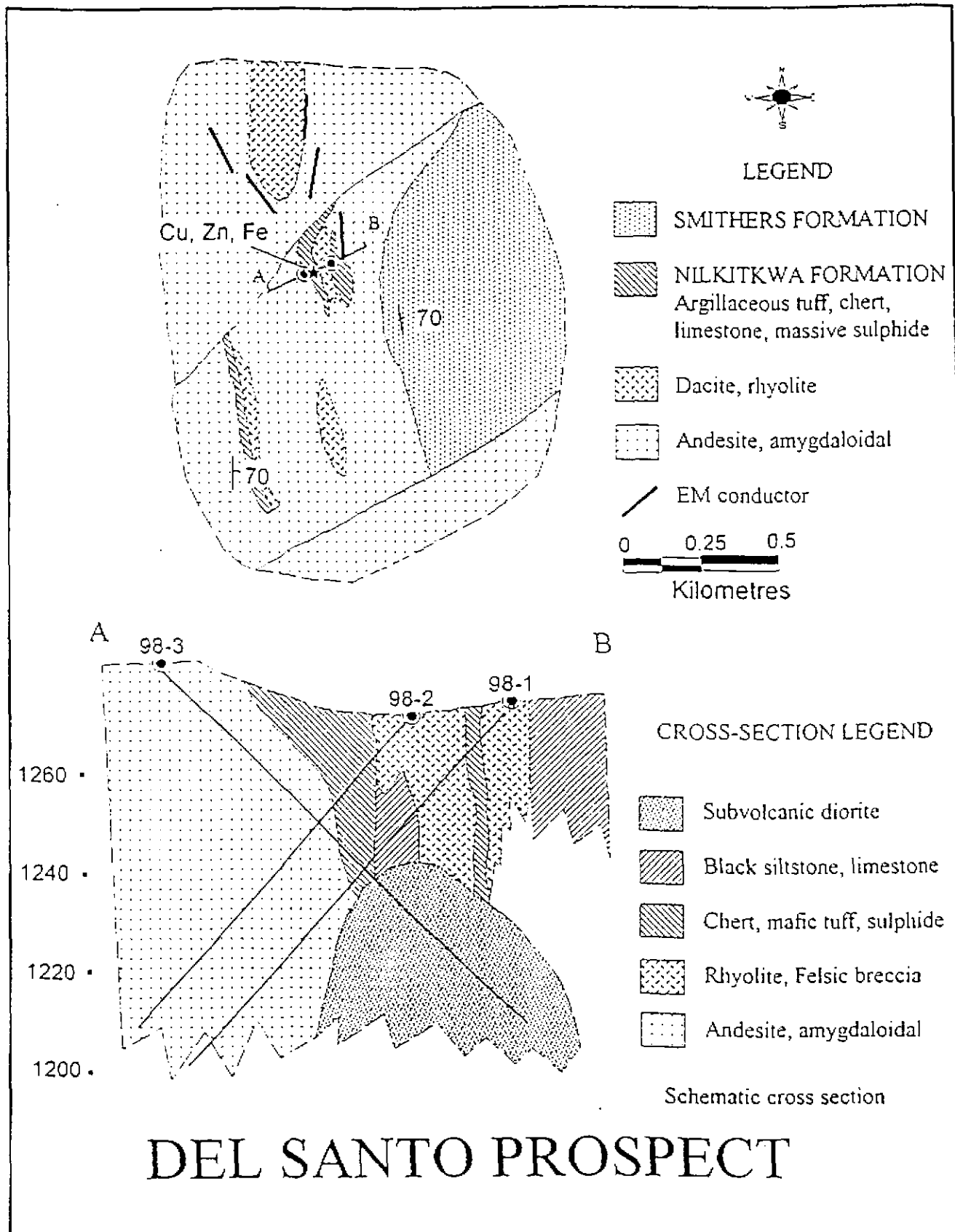
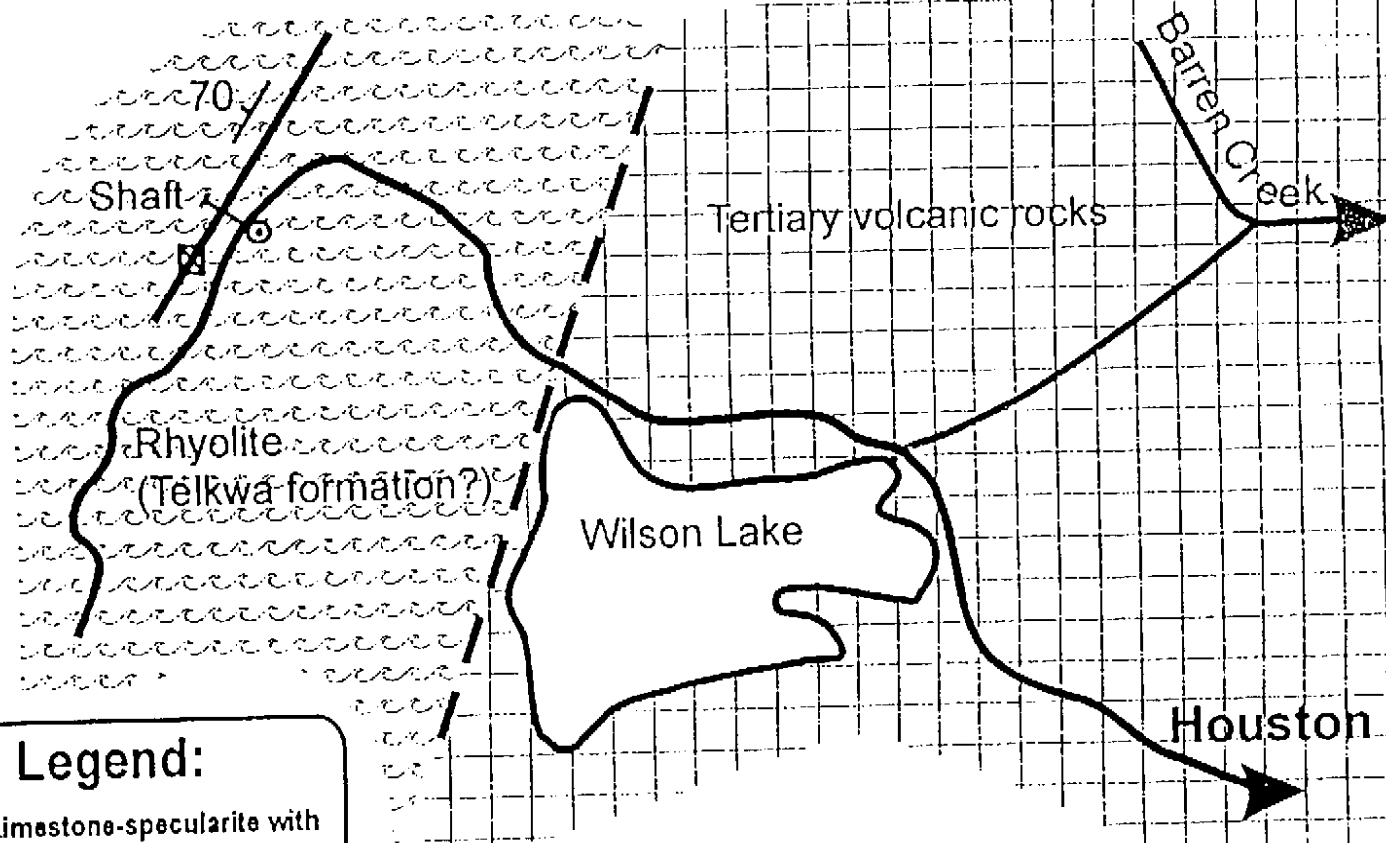


Figure 25

LAKEVIEW SHOWING



Legend:

-  Limestone-specularite with chalcopyrite-sphalerite
-  Diamond Drill Hole (1956)

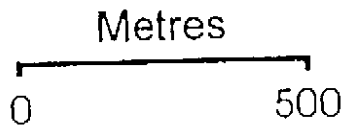


Figure 26

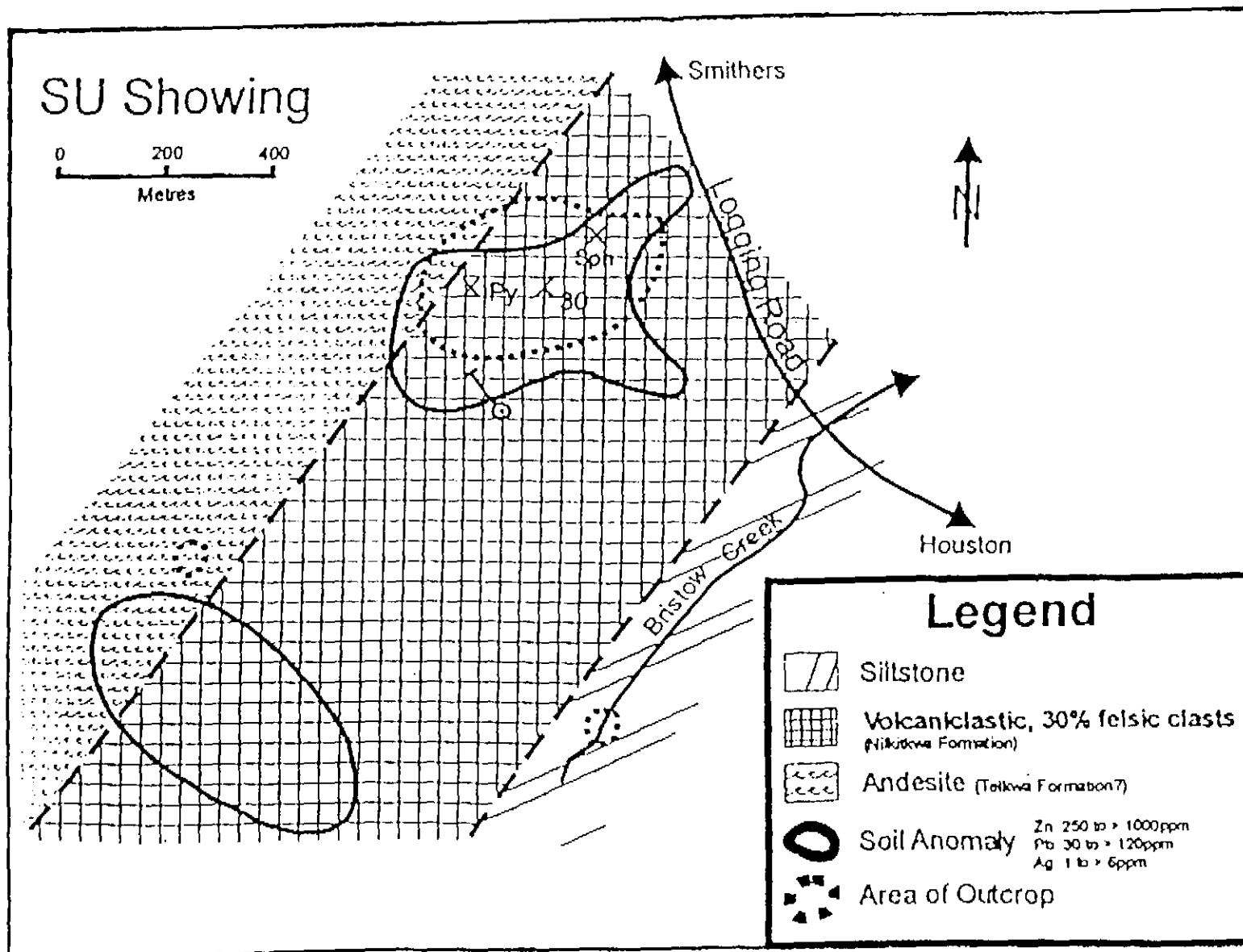


Figure 27



Hudson Bay Exploration and Development Co. Ltd.
 Western District Office, Vancouver, British Columbia

Massive Sulphide Deposits of Mesozoic Rock, Central BC

Deposits	Host Rocks	Age	Tonnes (Mt)	Au gpt	Ag gpt	Cu %	Zn %	Pb %
Anyox	Sedimentary	Hazelton	45.8	0.2	9	1.25		
Big Missouri	Volcanic	Hazelton	3.3	2.6	18			
Copper Crown	Volcanic	Hazelton	0.2		20	0.53	4.50	
Dolly Varden	Volcanic	Hazelton	0.1		1000	0.95		0.50
Double Ed	Volcanic	Hazelton	2.0			1.30	0.60	
Eagle	Volcanic	Hazelton	0.2			2.50		
Equity Silver	Volcanic	Skeena	32.4	1.0	94	0.35		
Eskay Creek	Sedimentary	Hazelton	1.9	60.2	2652	0.70	5.20	3.20
Fireweed	Sedimentary	Hazelton/Skeena	1.0		390		2.40	1.40
Granduc	Sedimentary	Hazelton	24.8	0.1	8	1.60		
Inel	Sedimentary	Hazelton/Stuhini	0.5	2.0	12	0.10	2.60	0.10
North Star	Volcanic	Hazelton	0.1		402			
Outsider	Volcanic	Hazelton	0.3	0.1	10	1.50		
Redwing	Volcanic	Hazelton	0.2	1.2	86	2.00	2.70	
Rock & Roll	Volcanic	Triassic	0.7	2.5	336	0.64	3.10	0.80
Scotia	Volcanic	Paleozoic	0.2		21		11.80	1.30
Topley Richfield	Volcanic	Hazelton	0.2	3.5	159		2.00	2.00
Torbrit	Volcanic	Hazelton	7.8		187		0.40	0.40

Table 4

3.2.2 The Equity Silver Mine

The Equity Silver Mine is located approximately 38km southeast of Houston, BC (Figure 28) and is no longer in production. Cyr et al. (1984) described the deposit as a volcanic-hosted sulphide deposit that was associated with magmatic activity. The deposit occurs in a succession of Upper Jurassic to Late Cretaceous-aged volcanic and sedimentary rocks that have been unconformably overlain with Tertiary volcanic and volcanoclastic rocks near the midpoint of the Buck Creek Basin. Stratigraphy within the immediate mine area strikes at to the south-southwest (195°) and dip off to the east at 45°. At the base of the stratigraphic column in the mine area is a coarse-grained, chert pebble conglomerate with intercalated mudstones. Pyroclastic and reworked, tuff-sized, volcanoclastic rock conformably overlie the basal conglomeratic unit; however, it should be noted that it is this pyroclastic unit that hosts the majority of the sulphide mineralization. A succession of tuff-sized volcanoclastic rocks, sandstones, and conglomeratic units are at the top of the mine stratigraphy, but locally, there are occurrences of flat-lying to shallowly dipping Eocene mafic volcanic rocks of the Francois Group, namely the Goosly Lake and Buck Creek Formations.

Overall, there are three main zones of mineralization: (i) Main; (ii) Southern Tail; and (iii) Waterline Zones (Figure 28). The total mineralization that was extracted from the Equity Silver Mine was 33.4 Mt grading 0.46 gpt Au, 64.9 gpt Ag, and 0.4% Cu. The three zones of sulphide mineralization were parallel to known stratigraphic contacts and occurred principally in the form of veins and broad areas of replacement. Sulphide replacement ranges from fine-grained disseminations to massive, coarse-grained bodies. The Main Zone has a thickness that ranges from 60m to 120m, whereas the Southern Tail Zone is only approximately 30m in thickness. The major sulphide minerals that compose the sulphide mineralization at the Equity Silver Mine include pyrite, chalcopyrite, pyrrhotite, and tetrahedrite with galena, sphalerite, argentite, pyrargyrite, and some miscellaneous silver sulphosalts being only minor components. Other styles of mineralization at the Equity Silver Mine include a zone of Cu-Mo stockwork that is directly adjacent to the Quartz Monzonite intrusion, as well as a large zone of tourmaline, magmatic-hydrothermal breccia to the west and northwest of the Main Zone. This breccia zone contains minor pyrite and is very similar to other magmatic-hydrothermal breccia, which are associated with both porphyry and epithermal deposits throughout the Cordillera and Andes.

Hydrothermal alteration facies are characterized by an assemblage of minerals rich in alumina, boron and phosphorous. The alumino-silicate mineral assemblage includes andalusite, corundum, pyrophyllite, and scorzalite. Boron-rich minerals are dominantly tourmaline, but dumortierite is also known to occur in the hanging wall of the deposit. The phosphorous-rich minerals include scorzante, apatite, augelite, and svanbergite, which also occur in the hanging wall of the deposit in the vicinity of the Main and Waterline Zones. Advanced argillic alteration also occurs in the mine area, but typically as an envelope around zones of intense fracturing and veining that may possess

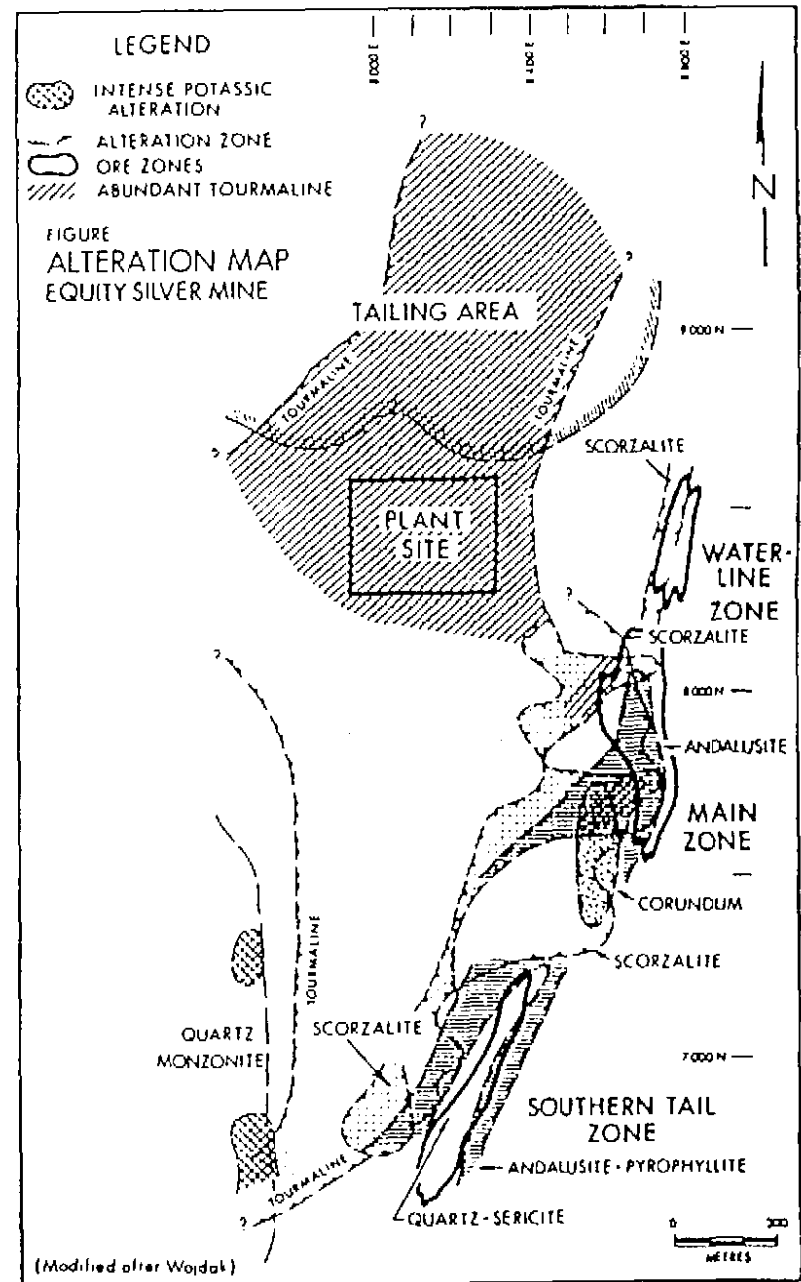
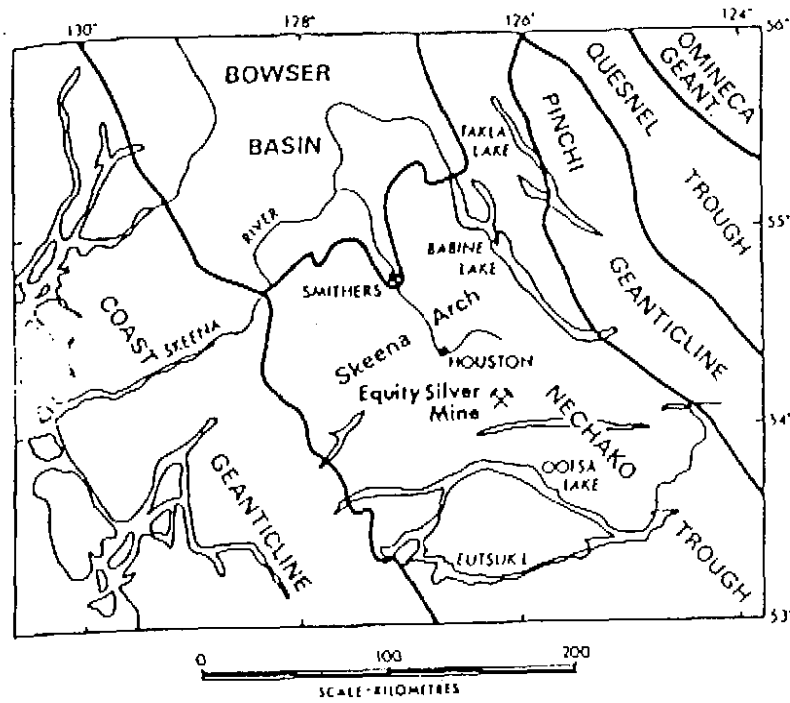


Figure 28

either chalcopyrite and/or tetrahedrite, but can be best described as a sericite and quartz replacement of the host rock.

3.2.3 Fireweed VMS-Epithermal Developed Prospect

Possibly similar to the Equity Silver Mine is Mansfield Minerals Ltd.'s Fireweed massive sulphide, developed prospect, which is located on the south side of Babine Lake approximately 54km northeast of Smithers, BC. The sulphide mineralization is hosted within a volcanic-sedimentary succession that includes the Upper Triassic to Lower Jurassic Takla Group and the Middle Jurassic to Upper Cretaceous Kitsuns Creek Formation of the Skeena Group. It should be noted that the Skeena Group sedimentary rocks appear to be the host for the sulphide mineralization and not the volcanic rocks. The common orientation of stratigraphy in the area ranges between 70° and 80° with dips off to the southeast at 20° to 30°. Eocene Babine-type intrusions have cut stratigraphy in the area; however, several diamond drill holes have also intersected strongly altered latite dykes and sills. A geological resource has been calculated for the West Zone of sulphide mineralization at 584,500 tonnes grading 1.34% Pb, 2.22% Zn, and 341.77 gpt Ag (Figure 29); however, it should be noted that the geological resource is from three principal zone (West, East, and South) and does not include the 1600, 3200, Jan and Mn Zones. Overall, there are three main styles of sulphide mineralization including (i) breccia-related sulphide; (ii) disseminated sulphide; and (iii) semi-massive to massive sulphide mineralization. The semi-massive to massive sulphide mineralization is commonly very fine- to fine-grained, banded or layered, and contains abundant quartz crystals and sedimentary rock fragments or clasts. The more massive forms of sulphide mineralization are either pyrrhotite-pyrite or sphalerite-galena, which is extremely similar to the breccia-related sulphide mineralization; however, the breccia-related sulphide mineralization does also contain chalcopyrite. All of the sulphide mineralization associated with zones of brecciation are spatially related to the latite dykes and sills. In the case of the disseminated sulphide mineralization, pyrite and pyrrhotite are the dominant sulphide species; however, more detailed studies have identified the presence of marcasite, and tetrahedrite. Hydrothermal alteration facies are commonly widespread and disconformable throughout the volcanic-sedimentary succession and most commonly in the porous, coarse sandstones. The most common alteration minerals include quartz, ankerite, sericite, chlorite, and kaolinite.

3.3 Eskay Creek Precious Metal-rich VMS Mine

The Eskay Creek Mine is located approximately 85km northeast of Stewart, BC (Figure 30) and is currently one of the most prolific gold and silver mines in the world, even though, the mineralization is dominantly syngenetic and falls under the classification scheme of VMS deposits. During the 1980's, a junior mining company named Kerrisdale Resources Ltd. successfully completed a small diamond drill program that intersected the 21 Zone of massive sulphide mineralization. Subsequent exploration activities in 1988 with Kerrisdale Resources Ltd.'s joint venture partners Stikine Resources Ltd. and Calpine Resource Inc. confirmed the presence of significant VMS mineralization in what was to become known as the 21A Zone. Further step-out diamond drilling encountered the

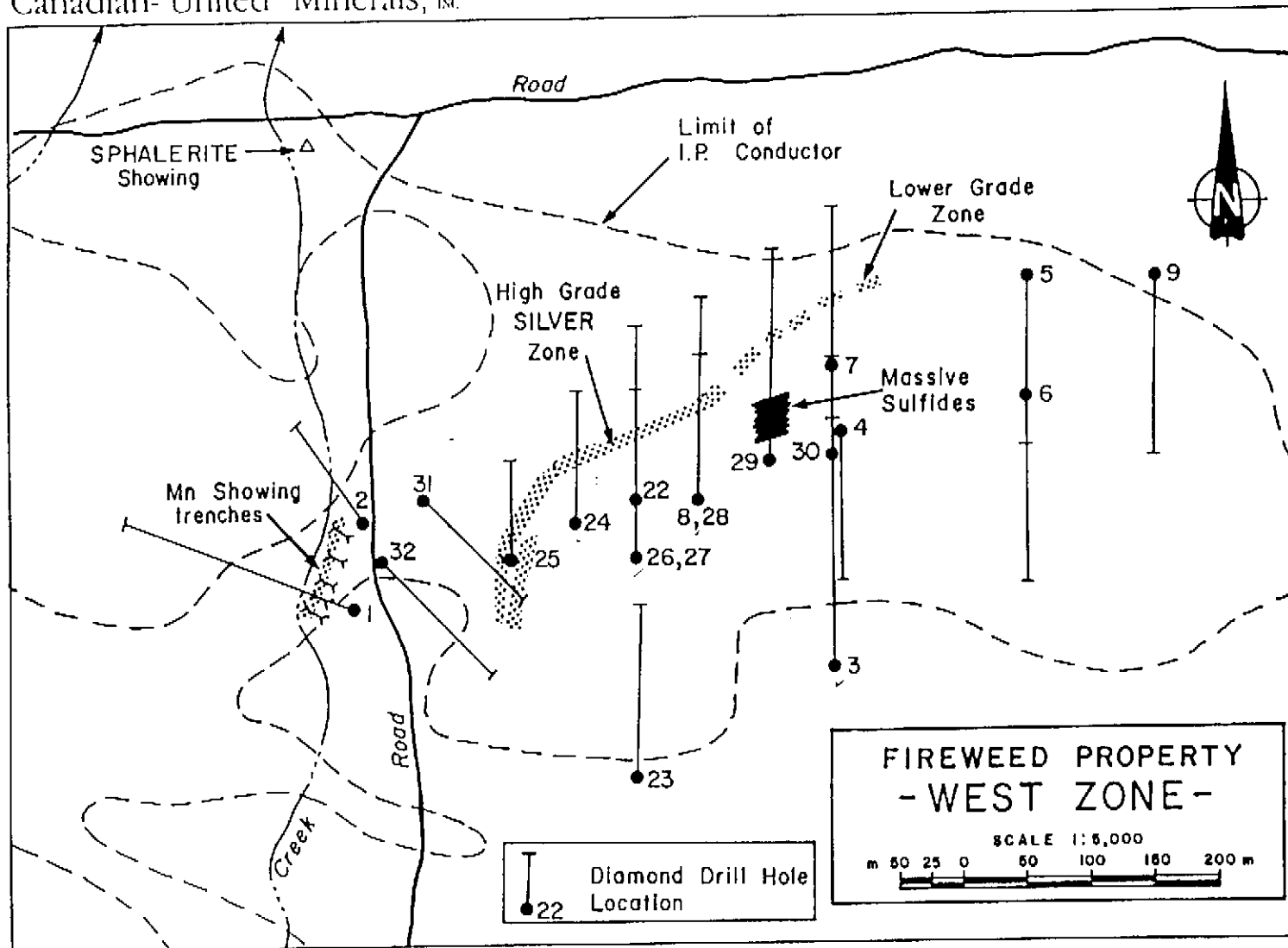


Figure 29

extremely high-grade 21B and 109 Zones. More recent mine exploration programs in 1995 defined the limits of the 21B and 109 Zones; however, new results have shown that the exploration activities have been successful in identifying two new zones of mineralization that include the NEX and 21C Zones. These new discoveries have increased the current reserve base to a higher level than what was originally calculated for the mine opening in 1995.

The geological framework for the Eskay Creek Mine is dominated by Middle Jurassic volcanic and sedimentary rocks of the Hazelton Group that includes andesite, marine or basinal sediments, dacite to rhyolite volcanic and volcanoclastic rocks, and basaltic sills and flows. The basaltic sills and flows compose part of the hanging wall stratigraphy of the mine environment, but they are intercalated with a large succession of turbiditic mudstones that are locally very graphite-rich. It should be noted that the basaltic dykes cross cut all lithologies in the mine environment. The Eskay stratigraphic column is then overlain with the clastic sediments that comprise the Bowser Lake Group. Several younger intrusions complicate stratigraphy, as the lower portion of the stratigraphic column is cut by a monzodiorite and a felsic dyke swarm that appears to be the feeder system for the mine rhyolite sequence, which stratigraphically underlies the massive sulphide mineralization.

There are currently at least 8 mineralized subzones that compose the 21 Zone that have a collective geological reserve of 1.9 Mt grading 60.2 gpt Au, 2,652 gpt Ag, 3.2% Pb, 5.2% Zn, and 0.7% Cu (Figure 31). Each subzone has been previously distinguished from the other subzones on the basis of mineralogy, textures, ore grades, and metallurgical characteristics. Stratiform or syngenetic sulphide mineralization is primarily hosted along the contact zone between the rhyolite volcanic rocks and the overlying basinal sediments. The 21A, 21B, and NEX Zones all occur along this contact zone, whereas, the HW Zone occurs higher in the stratigraphic column within the hanging wall.

3.4 Major Epithermal Vein Mineralization

3.4.1 Dome Mountain Epithermal Vein Deposits

The mineral deposits, prospects and occurrences in the Dome Mountain area are located on the eastern limb of a plunging anticline of volcanic and volcanoclastic rocks of the Nitkitkwa Formation. A geological resource was calculated in 1994 at 200,700 tonnes grading 14.9 gpt Au. The hanging wall rocks have typically undergone intense sericitization in proximity to the mineralized structures and grades outward into strong chloritization with patchy and discrete epidote-quartz, carbonate and pyrite alteration. Target-size of the alteration halo is known to extend outward several meters into the adjacent wall rock.

Mineralization occurs along vein structures that reach up to 2.7m in width and have sharp wall rock contacts, which is sometimes coincident with minor gouge and a narrow zone of bleaching. In the hanging wall, the narrow zone of bleaching grades outward into the intense sericitization. It is within this intense hydrothermal alteration that both

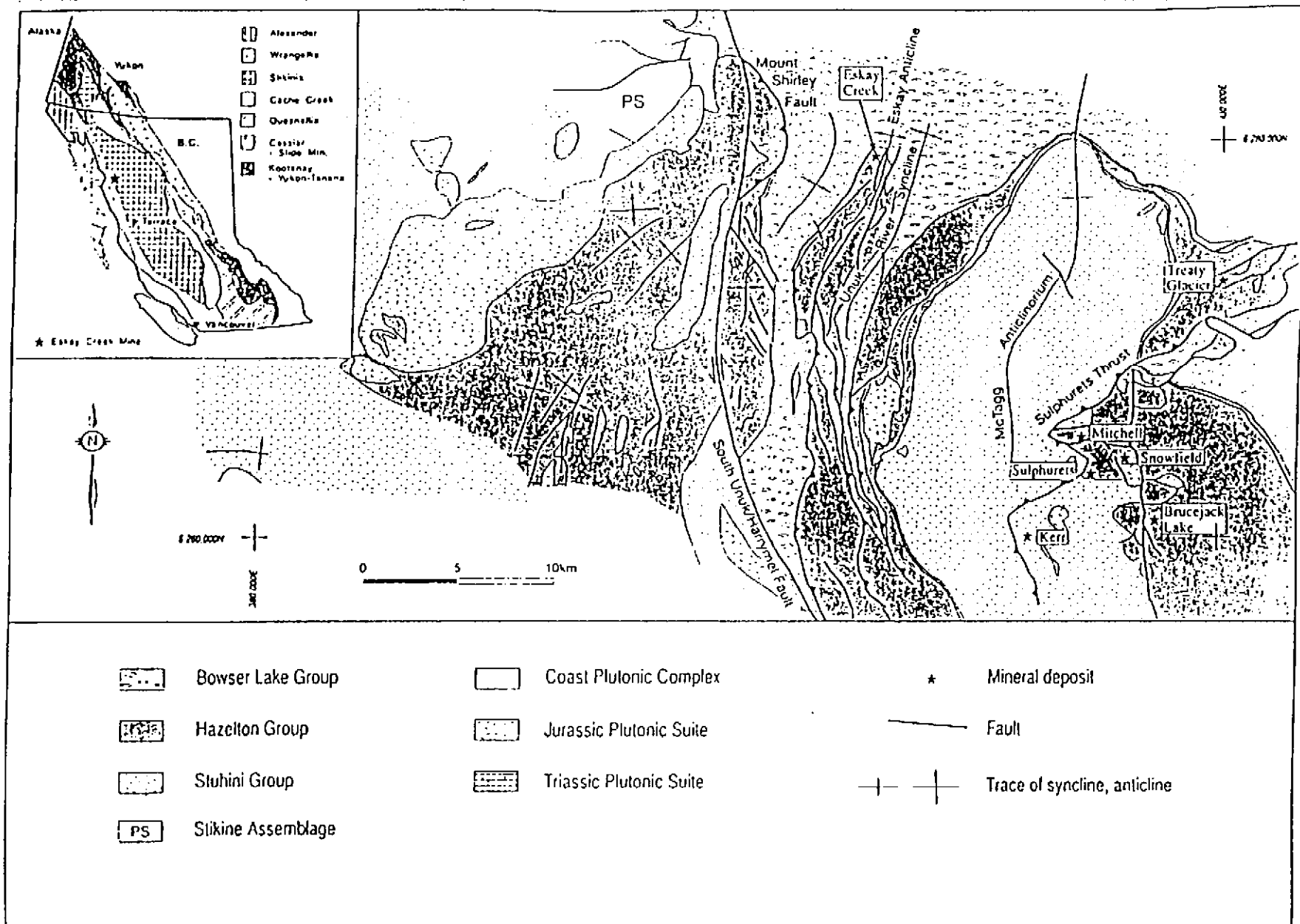


Figure 30

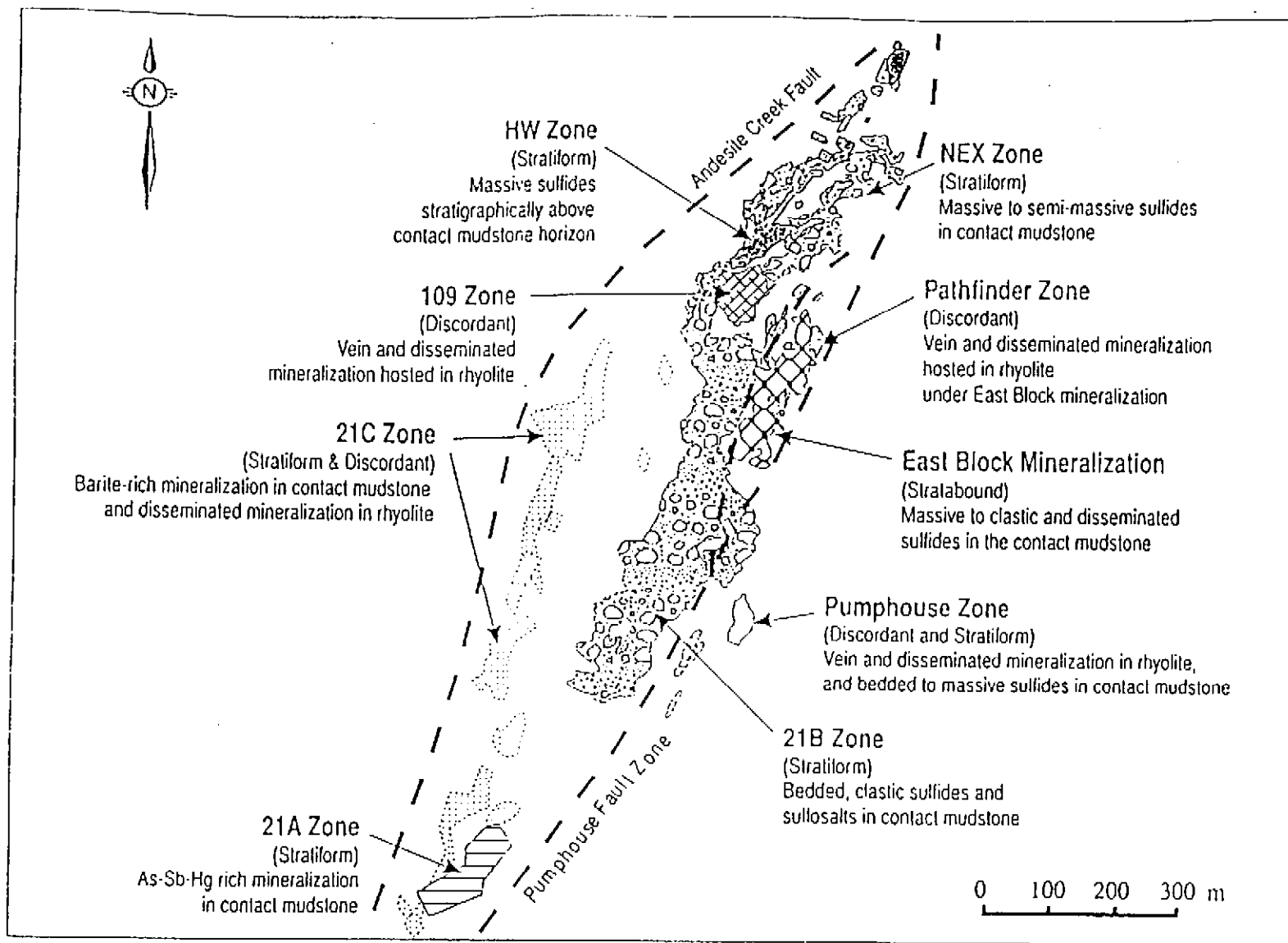


Figure 31

barren and polymetallic veins are known to occur with quartz and/or carbonate stringers. One such vein system is the Boulder Vein that has been defined for 150m along strike and up to 60m down dip, but also cross cuts all rock-types in the area. Most of the tonnage in the vein structures occurs in zones of brecciation that pinches and swells up to 15m in width; however sulphide mineralization varies from disseminated to zones of banded, massive sulphide mineralization within the quartz vein.

Elsewhere in the Dome Mountain area, mineralization occurring at the Dome Mountain (Forks) Occurrence was originally discovered in a creek bed as a NE-trending shear zone through the Lower to Middle Jurassic-aged mafic volcanic rocks of the Nilkitkwa Formation. A geological resource was calculated in 1985 at 20,000 tonnes grading 23.6 gpt Au; however, no values were ever ascribed to the base metal content of the system other than some rough production values.

Overall, mineralization was reported vein-style with between 5 and 10% galena, arsenopyrite, pyrite, and sphalerite. Subsequent underground development outlined two mineralized quartz veins that range up to 1.5m in width hosted within a sericite, carbonate, fuchsite (Cr-muscovite) altered volcanic, tuff-sized unit. The NW-trending vein dips to the NE and has an average grade of 42.1 gpt Au and 85.4 gpt Ag. The second vein trends to the NE and has an average grade of 15.3 gpt Au and 59.0 gpt Ag.

3.4.2 Duthie Epithermal Vein Deposits

At the Duthie Mine located on the south side of Hudson Bay Mountain outside of Smithers, BC, polymetallic, epithermal veins are hosted in spherulitic, flow-banded, felsic volcanic and volcaniclastic rocks that are cut by a Middle to Late Cretaceous Bulkley Intrusion that is composed of granodiorite and quartz monzonite. A geological resource was calculated in 1985 at 19,700 tonnes grading 5.0% Pb, 7.5% Zn, 207.0 gpt Ag, and 2.6 gpt Au. Overall, there are four main zones of mineralization that are localized within a fault zone, which generally strike to the northeast and dip between 50° and 70° to the southeast. Individual veins reach up to 2.4m in width and range in strike length from 213m to 1,067m.

Mineralization is composed primarily of galena and sphalerite with minor tetrahedrite, pyrrargyite, pyrite, arsenopyrite, chalcopyrite, freibergite, silver, and gold. Pyrrhotite and marcasite are also known to occur locally. As well, many of the veins show varying degrees of faulting and brecciation. Hydrothermal alteration facies are not well known; however, there is mention that in the vicinity of the veins there is intense alteration and bleaching, but no description of individual alteration facies.

3.4.3 Cronin Epithermal Deposit

Another example of similar mineralization and hydrothermal alteration facies is located 30km east of Smithers, BC, at the Cronin Mine where mineralization is hosted in the Middle to Upper Jurassic-aged Ashman Formation and is cross cut by at least two Late Cretaceous to Tertiary felsic subvolcanic intrusions. The Ashman Formation is composed of predominantly intercalated mudstones, sandstones, wackes, and conglomerate units. These units have also been subsequently structurally modified with tight folding, which is most evident in the fine-grained sediments.

Sulphide mineralization at the Cronin Mine principally occurs in vein or stockwork structures and zones of quartz precipitation in fault zones. Most of the mineralized structures are related to two main fault zones that strike to the northeast and dip to the west. Mineralization is typically pod-like in nature and reaches up to 40m in length and up to 6m in width; however, there is a distinctive zonation with argentiferous galena, friebertite, boulangerite, and tetrahedrite in the core of fault zone and sphalerite increasing outward into the wall rock. Both pyrite and chalcopyrite are extremely sporadic in their dispersion throughout the vein system. Hydrothermal alteration facies associated with the sulphide vein structures include the formation of 'sericite schist' at the contact between the felsic intrusion and the sedimentary rocks and discrete silicification adjacent to quartz veins and/or stockworks. There is also local development of zoisite (epidote), calcite and chlorite.

3.4.4 New Moon Epithermal Deposit

Further examples of this style of mineralizing system have also been identified at the New Moon Property, which is located approximately 100km south of Smithers, BC. A preliminary geological resource for the prospect was calculated in 1991 at 688,700 tonnes grading 1.82% Pb, 5.51% Zn, 58.6 gpt Ag, and 0.99 gpt Au. The mineralizing system is hosted within intermediate to felsic volcanic and volcanoclastic rocks of the Lower to Middle Jurassic-aged Telkwa Formation and has been cut by numerous sills and dykes of the Topley Intrusive-suite. Stratigraphy in the area is typically flat to moderately dipping; however, structural complication has not only disrupted most of the lithological relationships, but also provided the plumbing system to localize the mineralization. The major faults occur along two dominant trends to the northwest and northeast with each set possessing moderate to steep inclinations.

At least two styles of mineralization have been identified on the property including an epithermal vein and oxide skarn system. The epithermal vein system is primarily quartz and carbonate veins that have undergone a multistage paragenetic formational history. Evidence of this complex formational history can be found in the various styles of breccia, colloform banding and/or crack-seal textures, drusy quartz, and overlapping stages of chalcidonic veinlets. Composite vein sets range between 1.0 and 25.0m in width, whereas individual veins reach up to 7.6m in width. There is also a significant degree of pinching and swelling associated with the mineralized vein system. The mineralization is composed of primarily sphalerite and galena with minor amounts of chalcopyrite, pyrite, malachite

and azurite with the gold typically associated with the pyrite in the form of electrum. It should be noted that the sulphide mineralization ranges from disseminated- to massive-styles that reach up to 10cm in width.

Hydrothermal alteration on the property is principally silicification along the major structures, clay alteration of the feldspars, chloritization of mafic components, and rare potassium feldspar rimming of quartz veins. It should be noted that the hydrothermal alteration is known to occur outward from the mineralized structures to a distance up to 50m, thereby suggesting a substantial target-size and large hydrothermal system. Epidote, prehnite, and calcite also occur as individual veins and/or stockworks; however, it should be noted that the rocks have been regionally metamorphosed to zeolite grade facies, which is further evidence of a complex, multistage, overprinting hydrothermal paragenetic history.

4.0 Conclusions

- 1) The Central BC Project is located in an area that covers Upper Triassic to Eocene volcanic and sedimentary rocks, which are dominantly part of the Hazelton Group. The geological framework for the Hazelton Group rocks remains very prospective to host significant an 'Eskay Creek, transitional VMS-Epithermal deposit and other VMS mineralization, as well as low and high sulphidation epithermal deposits.
- 2) The extensive exploration activities in the project carried out by numerous other mining companies has resulted in a major database; however, the majority of the contained data still requires compilation, digitization, and interpretation. This includes the sizeable number of diamond drill holes that were cored to examine various Porphyry Cu targets in the area.
- 3) The Central BC Project successfully completed the objectives laid out in previous years, in that the highest rated geophysical targets were to be diamond drilled during the summer of 1999. The diamond drill program successfully completed 1694.5m of NQ-sized drill core from 7 sites in the project area.
- 4) There remains definite diamond drill targets in the Central BC Project area that were not tested in the successfully completed 1999 diamond drill program; however, there are also many other geophysical anomalies in the project area that were never followed-up with any field examination or further processing in the office. It should be noted that the remaining diamond drill targets all occur in highly conductive areas.
- 5) The geophysical anomaly that was successfully diamond drilled during the summer of 1999 on the Ful 2 mineral tenure (DDH FUL-001) can best be explained by the presence of a coal seam hosted within the Eocene Newman Group volcanic rocks.
- 6) The geophysical anomalies that were successfully diamond drilled during the summer of 1999 on the Len 3, 4, 6, 7, and 8, and Ful 1 mineral tenures can best be explained by the presence of abundant graphitic mudstones in the immediate area of the mineral tenures. Each diamond drill hole intersected significant widths of graphite-rich sedimentary rocks. There were also numerous fault zones with

- abundant clay gouge, which could have also been responsible for the presence of a geophysical anomaly.
- 7) Seafloor volcanic rocks were intersected in FUL-001 diamond drill hole on the Ful 2 mineral tenure, which strongly resemble the succession of Jurassic-aged bimodal succession of volcanic rocks in the Clear claim group area. Don MacIntyre of the BCGS U-Pb zircon age dated these volcanic rocks at 184.5 Ma. Further examination is warranted in any further exploration activities to determine the full potential being a favourable environment for hosting a VMS system.
 - 8) Possible ultramafic to mafic, hydroclastic volcanoclastic units were intersected in LEN-004 diamond drill hole at three separate intervals; however, given the lack of rock exposure in the vicinity of the diamond drill hole and the fact these possible hydroclastic volcanoclastic rocks were only intersected in the one area, a more definitive origin remains enigmatic at this time.
 - 9) Only one of the diamond drill holes out of seven successfully completed in the Babine Lake area intersected any significant and/or anomalous base and precious metal values. This was the LEN-004 diamond drill hole on the Len 4 mineral tenure. It should also be noted that it was this same hole that intersected the only significant hydrothermal alteration that could be attributed to a VMS system.
 - 10) The sulphide mineralization intersected in diamond drill hole LEN-004 on the Len 4 mineral tenure is principally disseminated to fracture-controlled sphalerite and pyrite; however, there was also minor galena and chalcopyrite.
 - 11) The sulphide mineralization intersected in diamond drill hole LEN-004 on the Len 4 mineral tenure is hosted within a succession of graphitic mudstones, siliceous siltstones, and carbonate rocks that have been structurally complicated by extensive faulting.
 - 12) Weakly disseminated specular hematite mineralization was intersected in diamond drill hole LEN-005, which was successfully completed on the Len 3 mineral tenure. There were no significant trace element results from this diamond drill hole. It should be noted that the geophysical anomalies tested with LEN-003 appear to be a part of the distal alteration zone of the Lennac Lake Cu-Mo porphyry prospect.
 - 13) The hydrothermal alteration facies spatially associated with the sulphide mineralization in diamond drill hole LEN-004 on the Len 4 mineral tenure include sericite, Cr-muscovite (fuchsite), silicification, epidote-quartz, chlorite, hematite, and clay alteration (sericite, illite, kaolinite, and others). Some of the clay minerals have not been positively identified because their individual grain-size is too small. Either petrographic or a PIMA study will be necessary to more precisely determine the exact alteration assemblage associated with the clay alteration. Note that there is a complex, multistage, overprinting paragenetic history to the hydrothermal alteration associated with the sulphide mineralization that appears to be in part structurally controlled by a fault zone.
 - 14) Biotite alteration or potassic alteration facies is evidence of a possible porphyry influence for any alteration and mineralization found in the vicinity to the Len 6, 7, and 8 mineral tenures. It should be noted that the quartz monzonite intrusions (178 Ma) responsible for the sulphide and gold

mineralization at the Tachi showing on the Len 10 mineral tenure are also responsible for the patchy to pervasive pseudobreccia alteration, as biotite alteration is a dominant alteration mineral at the Tachi showing.

- 15) Both the sulphide mineralization and the hydrothermal alteration facies in diamond drill hole LEN-004 on the Len 4 mineral tenure are strikingly similar to the polymetallic vein mineralization in the vicinity of Dome Mountain. The area around Dome Mountain is known to host numerous Minfile occurrences that include several past producers of Ag, Au, Pb, and Zn.
- 16) The sulphide mineralization and hydrothermal alteration facies in diamond drill hole LEN-004 possess similar characteristics to both a more classical epithermal deposit model and the high-sulphidation, transitional VMS-Epithermal deposit model (Figure 32 and 33). Further work is needed to further refine the genetic model of the mineralization intersected in the diamond drill hole.
- 17) If the base and precious metal mineralization intersected in diamond drill hole LEN-004 is part of an epithermal vein system similar to others in the Babine Lake area, then the tonnage potential could be quite variable, but could still host economic mineralization.
- 18) If the base and precious metal mineralization intersected in diamond drill hole LEN-004 is part of a VMS system, then based upon the rock-types, alteration facies, and style of sulphide mineralization, the intercept could be a lateral and/or distal equivalent to the core of the mineralizing system.

5.0 Recommendations

- 1) An exploration program has been proposed for an upcoming field season and will include further compilation of data, follow-up geological assessment in the vicinity of any diamond drill holes.
- 2) All of the geological, geochemical, and geophysical data collected in the Babine Lake area should be recompiled and reprocessed for reinterpretation based on the results and new information collected from the 1999 diamond drill program.
- 3) Digital copies of the newly revised geological maps currently being produced at the BCGS in Victoria, as a result of the Nechako NATMAP Project, should be acquired and processed to update our geological model of the Babine Lake area.
- 4) All of the lithochemical data should be processed and correlated with the descriptions taken from core logging in order to properly ascertain the rock-types in the vicinity of the diamond drill holes. This will include both major and trace element binary and tertiary plots.
- 5) A selected suite of thin section should be made of the various rock-types, alteration facies, and mineralization styles in order to more precisely describe and enhance both the visual and lithochemical descriptions of the geology in the vicinity of the diamond drill holes. Note that a representative suite has already been collected from each diamond drill hole.

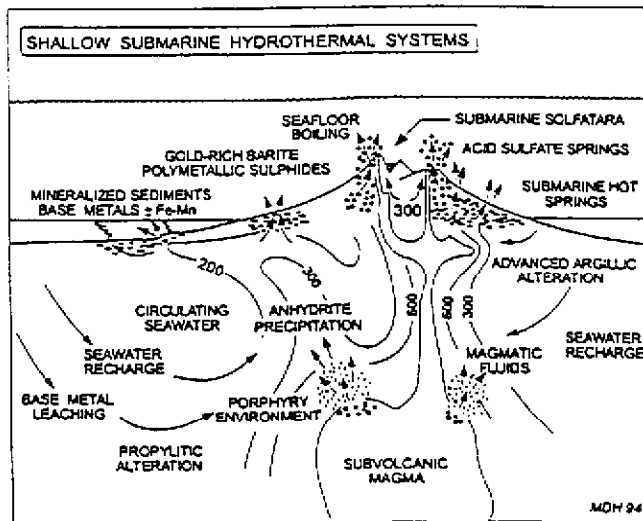
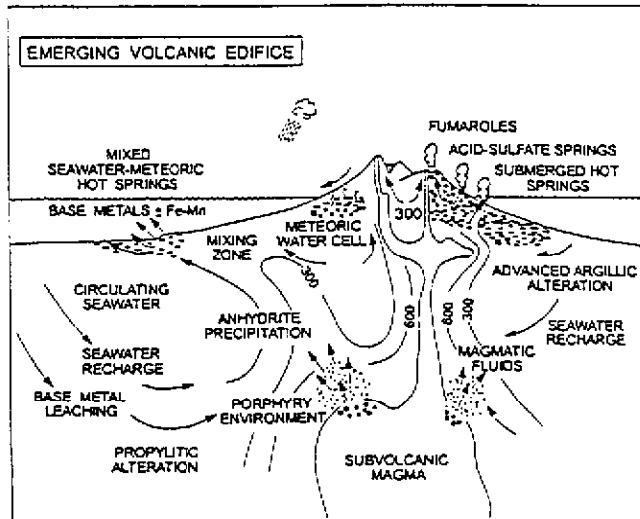
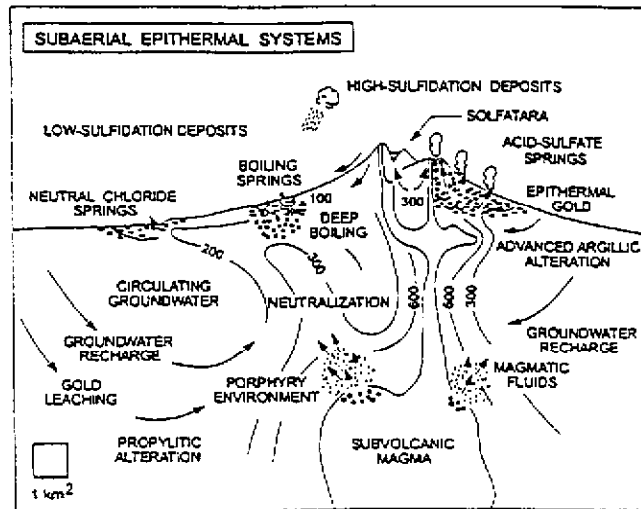
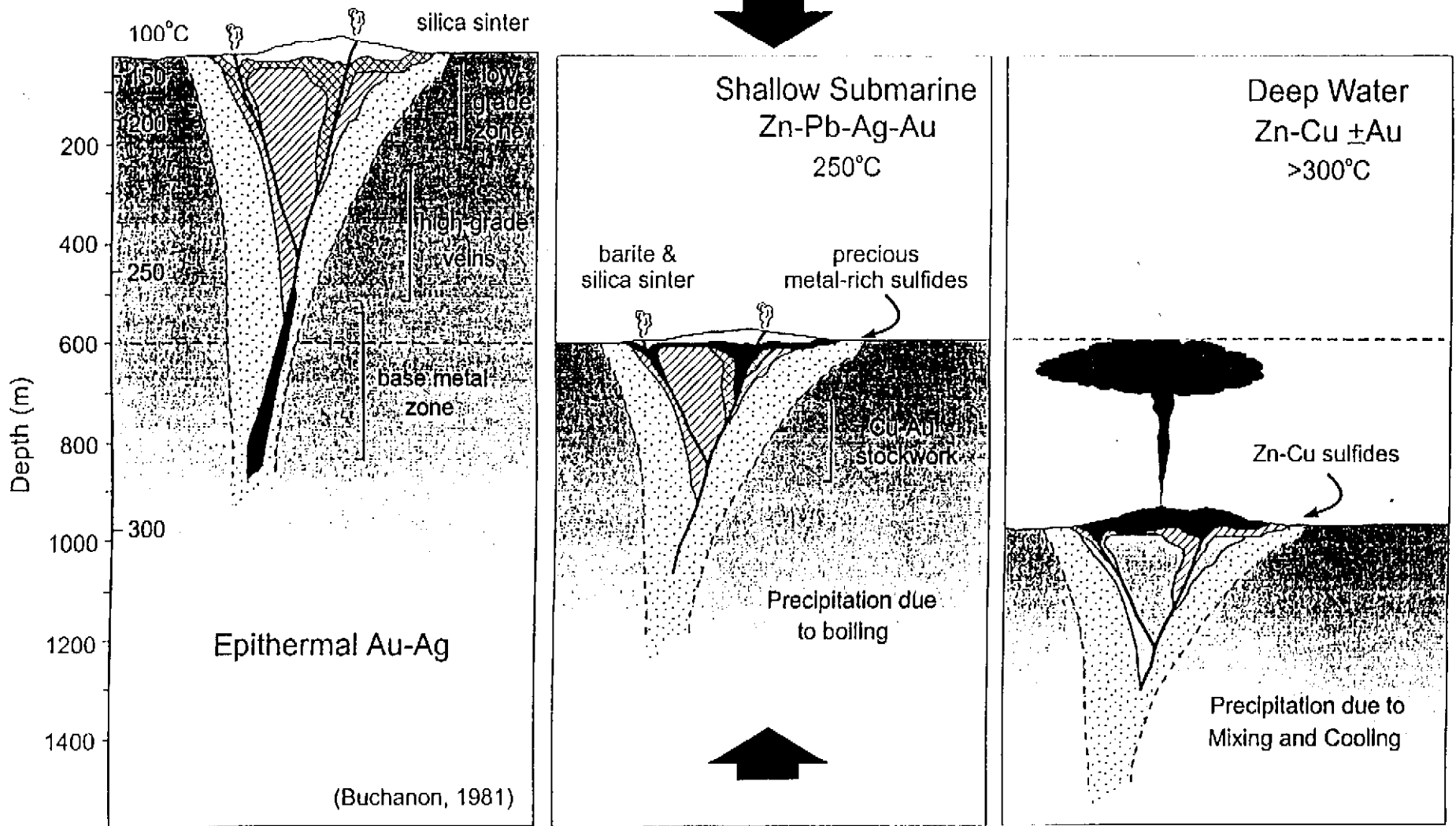


Figure 32



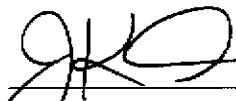
MDH99

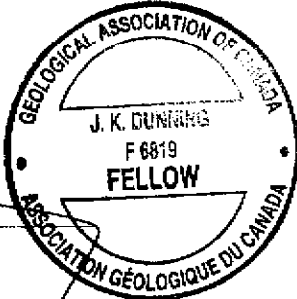
Figure 33

7.0 Concluding Statement

Even though several airborne and ground geophysical targets were drilled during this past exploration program, the presence of massive sulphide mineralization in the Smithers-Babine Lake area remains enigmatic, albeit present in some locations, and open to further interpretation. The host rock in the area have been subjected to various phases of structural deformation and igneous activity, which combined with the scarcity of rock exposures, permits a tentative correlation of the diamond drill hole data with the surface geological framework. More follow-up work is required to further the understanding of the host rocks and depositional environment for sulphide mineralization in the Smithers-Babine Lake area; however, there still remains an excellent opportunity to identify and define new sulphide mineralization in the Hazelton Group rocks of Central British Columbia.

Respectfully submitted,


Jason K. Dunning, M.Sc., FGAC
Project Geologist



8.0 Bibliography

Allen, R., 1988. False Pyroclastic Textures in Altered Silicic Lavas with Implications for Volcanic-Associated Mineralization. *Economic Geology*, vol. 83, 1988, pp. 1424-1446

Archer, C.T. and Klinkert, P.S., 1997. Airborne Electromagnetic and Magnetic Survey of Smithers A and Smithers B Areas. Unpublished internal Hudson Bay Exploration and Development Co. Ltd. document prepared by the Geophysical Services Department, Geophysical Section, Anglo American plc, South Africa; 10p.

Bidwell, G., 1998a. Line Cutting, Geochemical, and Geophysical Report on the Len 3, 4, and 5 Claims. Unpublished Hudson Bay Exploration and Development Co. Ltd. BCDM Assessment Report, 12p.

Bidwell, G., 1998b. Line Cutting, Geochemical, and Geophysical Report on the Len 6 and 7 Claims. Unpublished Hudson Bay Exploration and Development Co. Ltd. BCDM Assessment Report, 12p.

Buchanan, M., 1998a. Line Cutting, Geochemical, and Geophysical Report on the Ful 2 Claim. Unpublished Hudson Bay Exploration and Development Co. Ltd. BCDM Assessment Report, 11p.

Buchanan, M., 1998b. Line Cutting, Geochemical, and Geophysical Report on the Len 8, 9, 10, and 14 Claims. Unpublished Hudson Bay Exploration and Development Co. Ltd. BCDM Assessment Report, 11p.

Buchanan, M., 1998c. Line Cutting and Geophysical Report on the Len 1 and 2 Claims. Unpublished Hudson Bay Exploration and Development Co. Ltd. BCDM Assessment Report, 11p.

Buchanan, M., 2000. Personal Communication.

Carter, N.C., 1976. Regional Setting of Porphyry Deposits in West-Central British Columbia. In, *Porphyry Deposits of the Canadian Cordillera*; eds. Sultherland Brown, A.; Canadian Institute of Mining and Metallurgy, Special Volume 15, 1976; pp. 245-263

Carter, N.C., 1981. Porphyry Copper and Molybdenum Deposits of West-Central British Columbia. In, *British Columbia Ministry of Employment and Investment, Energy and Minerals Division, Geological Survey Branch Bulletin 64*; 150p.

Corbett, G.J. and Leach, T.M., 1998. Southwest Pacific Rim Gold-Copper Systems- Structure, Alteration, and Mineralization (Short Course Manual); 235p.

Cyr, J.B., Pease, R.B., and Schroeter, T.G., 1984. Geology and Mineralization at Equity Silver Mine. *Economic Geology*, vol. 79, 1984, pp. 947-968

Hannington, M.D., 1999. Submarine Epithermal Deposits and VMS-Epithermal Transition: A New Exploration Target. In, *Eskay Creek & Subaqueous Hot-Spring Deposits Workshop*; sponsored by Vancouver Mining Exploration Group (MEG), British Columbia and Yukon Chamber of Mines, and the British Columbia Geological Survey Branch; November 25th, 1999, Simon Fraser University, Harbour Front Centre, Vancouver, BC, Canada; unpublished workshop notes.

MacIntyre, D.G., 1999. Personal Communication.

MacIntyre, D.G., Webster, I.C.L., and Bellefontaine, K.A., 1996a. Babine Porphyry Belt Project: Bedrock Geology of the Fulton Lake Map Area (93L/16), British Columbia. In, *Geological Fieldwork 1995 - A Summary of Field Activities and Current Research*; British Columbia Ministry of Employment and Investment, Energy and Minerals Division, Geological Survey Branch; pp. 11-36

MacIntyre, D.G., Webster, I.C.L., and Bellefontaine, K.A., 1996b. Bedrock Geology of the Fulton Lake Map Area, North-Central, BC. British Columbia, Ministry of Energy, Mines and Petroleum Resources, Mineral Resources Division, Geological Survey Branch, Open File Report 1996-29.

MacIntyre, D.G., Brown, D., Desjardins, P. and Mallet, P., 1987a. Babine Project. In, *Geological Fieldwork 1988 - A Summary of Field Activities and Current Research*; British Columbia Ministry of Employment and Investment, Energy and Minerals Division, Geological Survey Branch; pp. 201-202

MacIntyre, D.G., Desjardins, P. and Tercier, P., 1989. Jurassic Stratigraphic Relationships in the Babine and Telkwa Ranges. In, *Geological Fieldwork 1988 - A Summary of Field Activities and Current Research*; British Columbia Ministry of Employment and Investment, Energy and Minerals Division, Geological Survey Branch; pp. 195-208

McMillan, W.J. and Struik, L.C., 1996. NATMAP: Nechako Project, Central British Columbia. In, *Geological Fieldwork 1996 - A Summary of Field Activities and Current Research*; eds. Lefebure, D.A., McMillan, W.J., and McArthur, J.G.; British Columbia Ministry of Employment and Investment, Energy and Minerals Division, Geological Survey Branch; pp. 3-9

McPhie, J., Doyle, M., and Allen, R., 1993. *Volcanic Textures: A guide to the interpretation of textures in volcanic rocks.* Centre for Ore Deposit and Exploration Studies, University of Tasmania; 198p.

Moritz, R.P. and Crocket, J.H., 1991. Hydrothermal Wall Rock Alteration and Formation of the Gold-bearing Quartz-Fuchsite Vein at the Dome Mine, Timmins Area, Ontario, Canada. *Economic Geology*, vol. 86, 1991, pp. 620-643

Shen, K. and Sinclair, A.J., 1982. Preliminary Results of a fluid inclusion study of the Sam Goosly Deposit, Equity Silver Mines Limited, Houston, BC. In, British Columbia Ministry of Energy, Mines, and Petroleum Resources, Geological Field Work, 1981, Paper 1982-1, pp.229-233

Sherlock, R.L., Roth, T., Spooner, E.T.C., and Bray, C.J., 1999. Origin of the Eskay Creek Precious Metal-rich Volcanogenic-hosted Massive Sulphide Deposit: Fluid Inclusion and Stable Isotope Evidence. *Economic Geology*, vol. 94, 1999, pp. 803-824

Sidic, V., 1998. Prospecting Report on Claims Kut1, Kut2, Kut3, Kut4, and Kut5. Unpublished Hudson Bay Exploration and Development Co. Ltd., BCDM Assessment Report, 3p.


Wojdak, P., 1999. Volcanogenic-hosted Massive Sulphide Deposits in the Hazelton Group, Babine Range, BC. In, British Columbia Ministry of Energy and Mines, Energy and Minerals Division, Mines Branch, Exploration and Mining in British Columbia – 1998; pp. C-1 to C-14

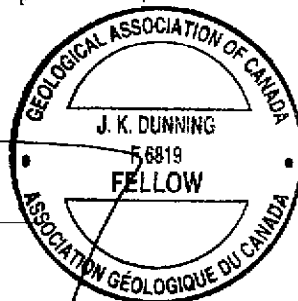
Geologist Certification

1. I, **Jason King Dunning**, of 12041 234th Street, Maple Ridge, British Columbia, Canada, hereby state that I am a Project Geologist with Hudson Bay Exploration and Development Co. Ltd. with offices at 800-700 West Pender Street, Vancouver, British Columbia, V6C 1G8, and that:
2. I hold a B.Sc. (Honours Geology) from Carleton University, Ontario (1994) and a M.Sc. (Geology) from the Mineral Exploration Research Centre at Laurentian University, Ontario (1998).
3. I have 7 years experience with various research institutions and mining companies in Canada and the United States, not including my summer field season work during my undergraduate degree. My primary employment since 1994 has been in the field of mineral exploration.
4. I am a member in good standing of the Association of Geoscientists of Ontario, where registration as such, through the Government of Ontario, is pending certification.
5. I am the Past-National Chairman of the Mineral Deposits Division (MDD) of the Geological Association of Canada (GAC) for 1999 and 2000, as well as being a Fellow of the GAC.
6. I am also a member with the Canadian Institute of Mining and Metallurgy (CIM), Prospectors and Developers Association of Canada (PDAC), Geological Society of America (GSA), and the Society of Economic Geologists (SEG).
7. I have specialized training in the areas of volcanology, ore deposit geology and hydrothermal alteration through academic training, numerous short-courses, and exploration project experience. My experience has allowed me to become familiar with the evaluation of both regional and property geology, prospecting, geophysical surveys, geochemical analysis, diamond core drilling, and the various facets of the permitting process in Ontario and BC.
8. This report is based upon data collected from historical documents and journal articles, as well as field observations collected from July 12th to September 10th, 1999 over the course of the 1999 diamond drill program.

DATED at Vancouver, B.C., Wednesday, September 13, 2000

Respectfully submitted,


Jason King Dunning, B.Sc., M.Sc., FGAC
Project Geologist
Hudson Bay Exploration and Development Co. Ltd.



APPENDIX A

PROJECT Central British Columbia
 DATE
 TOTAL EXPLORATION BUDGET \$124,488.70

WAGES (including benefits)	No#	DAYS	RATE		COMMENT
Project Geologist: Jason Dunning	1	39	\$270.00	\$10,530.00	
Geologist: Daniel Tutt	1	6	\$100.00	\$900.00	
Assistant: Randy Langille	1	13	\$120.00	\$1,560.00	

RENTALS	No#	DAYS	RATE		COMMENT
Apartment (Granisle)	2	39	\$15.00	\$1,170.00	Accommodation for field crew in Granisle, BC
Truck (4 x 4) (all inclusive)	1	39	\$95.00	\$3,705.00	Transport for personel and materials
Hand Held Radios	3	39	\$2.00	\$234.00	Communications equipment

SUBCONTRACTS	No#	DAYS	RATE		COMMENT
Helicopter/ Hrs. (all inclusive)	20		\$695.00	\$13,900.00	Highland Helicopters (Smithers Base)
Drilling (all inclusive)	1094.5		\$65.50	\$71,680.75	Britton Brothers Drilling (Smithers)

MATERIAL AND SUPPLIES	No#	DAYS	RATE		COMMENT
Apartment Food	1	60	\$22.00	\$1,320.00	Supplies for kitchens in apartments
Fuel - Propane (cost / L)	60		\$0.34	\$10.95	Propane for BBQ for cooking at apartments
Helicopter - Fuel (cost / L)	820		\$0.80	\$656.00	Fuel not bought directly off helicopter company
Fuel Drum Deposit	4		\$30.00	\$120.00	Deposit against damaged fuel drums
Field - Equipment	3		\$500.00	\$1,500.00	Field equipment for three man crew
Field - Expandibles	3		\$750.00	\$2,250.00	Flagging, sample bags, ship-chain line, mylar, ...
Building Supplies			N/A	\$200.00	Material for core storage structure

CHEMICAL ANALYZES	No#	DAYS	RATE		COMMENT
Rock				\$7,368.00	Lithochemistry on drill core samples

SUPPORT	No#	DAYS	RATE		COMMENT
Travel - Airfare	1	1	\$329.00	\$329.00	Flight for Daniel Tutt to Vancouver (Sept. 99)
Travel - Hotels/Motels	2	2	\$50.00	\$200.00	Hotels to and from Vancouver-Granisle
Travel - Meals	2	2	\$50.00	\$200.00	Meals to and from Vancouver-Granisle
Freight - Truck				\$1,000.00	Shipping of samples to ACME Laboratory
Freight - Courier				\$50.00	Shipping documents to Vancouver Office
Telephone (including long distance)				\$500.00	Also includes fax-email of data to Vancouver

REPORTS	No#	DAYS	RATE		COMMENT
Report (all inclusive)	1	20	\$260.00	\$5,000.00	Maps, reproduction, charts, figures, ...

TOTAL \$124,488.70

Notes:

1000 Drill Program cost per metre (all inclusive)	Diamond Drilling Program (all inclusive)	\$124,488.70
	Site Construction and Reclamation (all inclusive)	\$15,361.00 (see site construction and reclamation budgets)

Total \$139,847.70

Total (m) 1,094.50 cost/m \$127.77

Cost per man (includes accommodation and meals) \$3,864.95 (note that does not include daily salary)

Number of Man Days 123

cost/man \$31.42 (if include transportation cost rises to \$82.03)

APPENDIX B

Summary Information for Diamond Drilling

General Information		Drill Hole Data	
Drill Site	FUL-001	Azimuth	83
NTS Sheet	093L / 16	Angle	-55
NTS Zone	9	Depth	157.3
UTM	665933 E	Casing	7.6
UTM	6076413 N	Rods	NQ
Grid	4+00 N	Casing-size	HQ
Grid	6+00 E	Water Source	lake
Mineral Tenure	Ful 2	Distance to Water	2.2km
Site Dimensions	17x17m (289m ²)		
Drill Trail	350x3.5m (1,225m ²)		
Total Area Disturbed	1,514m ²		
Total Area Reclaimed	1,514m ²		

Reclamation Activities

All shrubs, bushes and trees were bucked, quartered, and scattered over the exploration trail and drill site. The blade on the D-6 CAT was used to smooth out the drill site after drilling. All garbage and waste materials was collected in large buckets and removed from site for later disposal.

Comments

Only three small pine trees (<20cm) were cut in the construction of the exploration trail and drill site. The remainder of the vegetation removed through cutting were alder, poplar and willow. All were less than 15cm. Given the length of distance from water source to drill, two pumps were run in tandem. Note that there was an extensive length of the exploration trail that was purely tall grass with no trees to cut.

Summary Information for Diamond Drilling

General Information		Drill Hole Data	
Drill Site	FUL-002	Azimuth	83
NTS Sheet	093L / 16	Angle	-55
NTS Zone	9	Depth	157.3
UTM	677311 E	Casing	7.6
UTM	6082152 N	Rods	NQ
Grid	4+00 N	Casing-size	HQ
Grid	4+25 E	Water Source	lake
Mineral Tenure	Ful 1	Distance to Water	2.2km
Site Dimensions	50x25m (1,250m ²)		
Drill Trail	(helicopter access)		
Total Area Disturbed	1,250m ²		
Total Area Reclaimed	1,250m ²		

Reclamation Activities

All shrubs, bushes and trees were bucked, quartered, and scattered over the drill site.

Comments

Extensive deadfall in area around the drill site.

Dominant vegetation was balsam fir, pine, and spruce with rare poplar.

All trees that were cut during the construction were bucked and cross-piled along the side of the drill site.

This drill site required the most cutting in order to facilitate a helipad on site for crew changes for drill.

Summary Information for Diamond Drilling

General Information			Drill Hole Data	
Drill Site	LEN-001		Azimuth	93
NTS Sheet	093L / 09		Angle	-50
NTS Zone	9		Depth	141.7
UTM	678179 E		Casing	25.9
UTM	6066999 N		Rods	NQ
Grid	0+00	N	Casing-size	HQ
Grid	4+00	E	Water Source	creek
Mineral Tenure	Len 6		Distance to Water	1.1km
Site Dimensions	20x15m	(300m ²)		
Drill Trail	25x3.5	(87.5m ²)		
Total Area Disturbed	387.5m ²			
Total Area Reclaimed	387.5m ²			

Reclamation Activities

All shrubs, bushes and trees were bucked, quartered, and scattered over the drill site.
 All garbage and waste materials was collected in large buckets and removed from site for later disposal.
 Grass seed was spread over areas of disturbance along the Granisle Highway in front of exploration trail.
 The blade on the D-6 CAT was used to smooth out the drill site after drilling.

Comments

The drill site is located just off of the Granisle Highway.
 Only one pine tree was cut (35-40cm) during the construction of this drill site.
 All remaining vegetation removed was small alder and willow.

Summary Information for Diamond Drilling

General Information		Drill Hole Data	
Drill Site	LEN-002	Azimuth	91
NTS Sheet	093L / 09	Angle	-50
NTS Zone	9	Depth	146.3
UTM	680127 E	Casing	7.6
UTM	6068432 N	Rods	NQ
Grid	5+00 N	Casing-size	HQ
Grid	7+00 E	Water Source	creek
Mineral Tenure	Len 7	Distance to Water	400m
Site Dimensions	17x17m (289m ²)		
Drill Trail	(used old FSR)		
Total Area Disturbed	289m ²		
Total Area Reclaimed	289m ²		

Reclamation Activities

All shrubs, bushes and trees were bucked, quartered, and scattered over the drill site.

The blade on the D-6 CAT was used to smooth out the drill site after drilling.

All garbage and waste materials was collected in large buckets and removed from site for later disposal.

Comments

No construction was required for an exploration trail, as an old Forest Service Road (FSR) passed directly through the drill site.

Only natural regenerative pine trees were removed to clean-up the old FSR to the drill site.

Between 15 to 20 pine trees (< 20cm) were cut during the construction of the drill site

Summary Information for Diamond Drilling

General Information			Drill Hole Data	
Drill Site	LEN-003		Azimuth	73
NTS Sheet	093L / 16		Angle	-55
NTS Zone	9		Depth	158.8
UTM	681594 E		Casing	22.9
UTM	6073953 N		Rods	NQ
Grid	6+00	N	Casing-size	HQ
Grid	4+75	E	Water Source	lake
Mineral Tenure	Len 8		Distance to Water	0.9km
Site Dimensions	17x20m	(340m ²)		
Drill Trail	30x3m	(90m ²)		
Total Area Disturbed	430m ²			
Total Area Reclaimed	430m ²			

Reclamation Activities

All shrubs, bushes and trees were bucked, quartered, and scattered over the drill site.

The blade on the D-6 CAT was used to smooth out the drill site after drilling.

All garbage and waste materials was collected in large buckets and removed from site for later disposal.

Comments

Drill site can be directly accessed off of BC Hydro Powerline, meaning minimal construction required for access.

Large balsam and pine trees were avoided during the construction of this drill site.

Between 5 to 8 pine trees (< 20cm) were cut during the construction of the drill site.

All other vegetation cut during the construction of this drill site included alder and willow.

Temporary drill storage facility was built to store all diamond drill core from the 1999 drilling program.

Summary Information for Diamond Drilling

General Information		Drill Hole Data	
Drill Site	LEN-004	Azimuth	90
NTS Sheet	093L / 09	Angle	-50
NTS Zone	9	Depth	176.8
UTM	676308 E	Casing	24.4
UTM	6070035 N	Rods	NQ
Grid	3+00 N	Casing-size	HQ
Grid	3+70 E	Water Source	creek
Mineral Tenure	Len 4	Distance to Water	0.8km
Site Dimensions	17x17m (289m ²)		
Drill Trail	20x3.5 (70m ²)		
Total Area Disturbed	359m ²		
Total Area Reclaimed	359m ²		

Reclamation Activities

All shrubs, bushes and trees were bucked, quartered, and scattered over the drill site.

All garbage and waste materials was collected in large buckets and removed from site for later disposal.

The blade on the D-6 CAT was used to smooth out the drill site after drilling.

Minor grass seed was spread over a muddy area in proximity to the entrance to the exploration trail.

Comments

The area around the drill site had undergone extensive thinning by the Ministry of Forests.

Large balsam and pine trees were avoided during the construction of this drill site.

Between 20 to 25 pine trees (< 20cm) were cut during the construction of the drill site.

All other vegetation cut during the construction of this drill site included alder and willow.

Summary Information for Diamond Drilling

General Information		Drill Hole Data	
Drill Site	LEN-005	Azimuth	60
NTS Sheet	093L / 09	Angle	-50
NTS Zone	9	Depth	152.4
UTM	670576 E	Casing	13.7
UTM	6068239 N	Rods	NQ
Grid	3+00 N	Casing-size	HQ
Grid	4+80 E	Water Source	lake
Mineral Tenure	Len 3	Distance to Water	0.4km
Site Dimensions	25x25m (625m ²)		
Drill Trail	(helicopter access)		
Total Area Disturbed	900m ²		
Total Area Reclaimed	900m ²		

Reclamation Activities

All shrubs, bushes and trees were bucked, quartered, and scattered over the drill site.
All garbage and waste materials was collected in large buckets and removed from site for later disposal.

Comments

Extensive deadfall in area around the drill site.
Dominant vegetation was pine; however, there were also spruce, balsam, and rare poplar.
All trees that were cut during the construction were bucked and cross-piled along the side of the drill site.
This drill site required no cutting in order to facilitate a helipad for crew changes for drill, as a marshy area in proximity to the drill was solid and dry enough to facility landing of the helicopter for extended periods of time without any impact on vegetation.

North Face Geological Ltd.

North Face Geological Ltd.
15575 86 Avenue
Surrey, B.C. V3S 5C8

**DRILL HOLE DESCRIPTION
DETAILED GRAPHIC LOG**

Project: *Central BC*

Hole #: FUL-001

Comments: Subaqueous volcanic rocks possibly of Jurassic age

Northing: 400.000
Easting: 600.000
Elevation: 1100.000
Field Location: 4+00N, 6+00E (m);

Casing Exposed: 7.6
Casing Size: NQ
Contractor Britton Brothers
Assay Lab: ACME

Length: 157.28
Start Dip: -55.0
Start Azimuth: 90

Project: 2318
Area: Babine
Property: FUL

Logged by: JKD
Log date: 28/10/1999
Date Started: 08/08/1999
Date Finished: 09/08/1999

Map Reference: 93.078, 93L.088
Claim: Ful 2
Region: Omineca

Dip Tests

Hole #	Depth	Azimuth	Dip
FUL-001	0.00	90.00	-55.00

From To Description

fuchsit ser Maf

From To Width Sample Pb (ppm) Zn (ppm) Ag (ppb) Ba (ppm) As (ppm)

35.00
40.00
45.00
50.00
55.00
60.00
65.00



41.61 - 59.77 Coal

59.77 - 62.48 (Amph)FP Maf-D ALT/TLA

62.48 - 86.65 FP Maf-D T/LT

From	To	Width	Sample	Pb (ppm)	Zn (ppm)	Ag (ppb)	Ba (ppm)	As (ppm)
38.10	38.71	0.61	JKDR00083	3.84	59.60	44.00	72.40	0.10
65.23	65.84	0.61	JKDR00083	7.76	58.40	55.00	1224.00	1.40

From To Description

fuchsit ser Maf

From To Width Sample Pb (ppm) Zn (ppm) Ag (ppb) Ba (ppm) As (ppm)

70.00

75.00

80.00

85.00

90.00

95.00

86.65 - 120.40 Amyg FP Maf-D



94.49	95.10	0.61	JKDR00083	1.94	42.50	16.00	163.50	0.10
-------	-------	------	-----------	------	-------	-------	--------	------

RocktypePROJECT: *Central BC*

North Face Geological Ltd.

Hole ID: FUL-001

From	To	Rocktype
0.00	7.62	Casing
7.62	41.61	FAmphP Maf-D ALT/TLA
41.61	59.77	Coal
59.77	62.48	(Amph)FP Maf-D ALT/TLA
62.48	86.65	FP Maf-D T/LT
86.65	120.40	Amyg FP Maf-D
120.40	128.72	FP Maf-D ALT/TLA
128.72	138.44	FP Maf-D T/LT
138.44	157.28	Fossiliferous Wacke/Siltstone
157.28	157.28	EOH

Sample Summary with AssaysPROJECT: *Central BC*

North Face Geological Ltd.

Hole ID: FUL-001

Sample	From	To	Width	Type	Pb (ppm)	Zn (ppm)	Ag (ppb)	Ba (ppm)	As (ppm)
JKDR000833	8.84	9.45	0.61	WT	4.60	54.10	27.00	83.40	0.10
JKDR000834	21.34	21.95	0.61	WT	2.06	20.40	31.00	149.80	0.10
JKDR000835	28.35	28.96	0.61	WT	4.72	60.30	42.00	133.60	0.10
JKDR000836	38.10	38.71	0.61	WT	3.84	59.60	44.00	72.40	0.10
JKDR000837	65.23	65.84	0.61	WT	7.76	58.40	55.00	1224.00	1.40
JKDR000838	94.49	95.10	0.61	WT	1.94	42.50	16.00	163.50	0.10
JKDR000839	103.02	103.63	0.61	WT	2.24	61.00	14.00	146.50	0.10
JKDR000840	117.04	117.65	0.61	WT	3.91	48.10	31.00	141.20	0.10
JKDR000841	123.14	123.75	0.61	WT	2.01	47.30	34.00	113.10	0.10
JKDR000842	126.49	127.10	0.61	WT	2.53	57.70	45.00	116.30	0.10
JKDR000843	137.16	137.77	0.61	WT	3.50	50.40	34.00	73.10	0.10
JKDR000844	146.00	146.61	0.61	WT	5.66	79.20	53.00	96.70	16.00
JKDR000845	153.92	154.53	0.61	WT	7.73	58.70	61.00	67.60	19.30

North Face Geological Ltd.

North Face Geological Ltd.
15575 86 Avenue
Surrey, B.C. V3S 5C8

**DRILL HOLE DESCRIPTION
DETAILED GRAPHIC LOG**

Project: *Central BC*

Hole #: *FUL-002*

Comments: Entire hole remained within Nilkitkwa Formation shales

Northing: 400.000
Easting: 425.000
Elevation: 1100.000
Field Location: 4+00N, 4+25E (m);

Casing Exposed: 27.4
Casing Size: NQ
Contractor Britton Brothers
Assay Lab: ACME

Length: 161.54
Start Dip: -50.0
Start Azimuth: 90

Project: 2318
Area: Babine
Property: FUL

Logged by: JKD
Log date: 28/10/1999
Date Started: 14/08/1999
Date Finished: 15/08/1999

Map Reference: 93L.089
Claim: Ful 1
Region: Omineca

Dip Tests

Hole #	Depth	Azimuth	Dip
FUL-002	0.00	90.00	-55.00

From To Description

fuchsht ser Maf

From To Width Sample Pb (ppm) Zn (ppm) Ag (ppb) Ba (ppm) As (ppm)

0.00 - 28.35 Casing

CASING
CASING
CASING
CASING
5.00 CASING
CASING
CASING
CASING
CASING
10.00 CASING
CASING
CASING
CASING
CASING
15.00 CASING
CASING
CASING
CASING
CASING
20.00 CASING
CASING
CASING
CASING
CASING
25.00 CASING
CASING
CASING

28.35 - 161.54 Graphitic Argillite

Mudstone

30.00

	27.74	30.48	2.74	JKDR00060	7.50	228.10	182.00	99.50	40.90
	30.48	33.53	3.05	JKDR00060	5.97	135.20	145.00	118.30	48.90

From To Description

fuchsht ser Maf

From To Width Sample Pb (ppm) Zn (ppm) Ag (ppb) Ba (ppm) As (ppm)

From	To	Description	fuchsht	ser	Maf	From	To	Width	Sample	Pb (ppm)	Zn (ppm)	Ag (ppb)	Ba (ppm)	As (ppm)
						33.53	36.58	3.05	JKDR00060	4.76	182.50	154.00	111.90	40.40
35.00														
						36.58	39.62	3.04	JKDR00060	5.42	188.70	172.00	94.90	54.50
40.00														
						39.62	42.67	3.05	JKDR00060	3.85	146.10	133.00	101.40	54.40
						42.67	45.72	3.05	JKDR00060	5.61	217.20	133.00	135.70	73.10
45.00														
						45.72	48.77	3.05	JKDR00060	5.48	153.50	133.00	109.00	71.60
						48.77	51.82	3.05	JKDR00060	5.46	156.70	120.00	103.40	57.30
50.00														
						51.82	54.86	3.04	JKDR00060	5.06	165.30	132.00	123.10	36.30
						54.86	57.91	3.05	JKDR00061	6.27	190.80	155.00	118.30	49.30
55.00														
						57.91	60.96	3.05	JKDR00061	5.93	167.00	173.00	116.90	43.40
60.00														
						60.96	64.01	3.05	JKDR00061	5.96	288.90	196.00	103.80	51.70
						64.01	67.06	3.05	JKDR00061	5.48	264.20	208.00	97.80	50.20
65.00														

From To Description

fuchst ser Maf

From To Width Sample Pb (ppm) Zn (ppm) Ag (ppb) Ba (ppm) As (ppm)

From	To	Description	fuchst	ser	Maf	From	To	Width	Sample	Pb (ppm)	Zn (ppm)	Ag (ppb)	Ba (ppm)	As (ppm)
						67.06	70.10	3.04	JKDR00061	5.44	170.50	136.00	95.40	46.70
	70.00					70.10	73.15	3.05	JKDR00061	5.78	261.40	183.00	109.20	37.20
						73.15	76.20	3.05	JKDR00061	5.66	239.40	190.00	98.20	41.30
	75.00													
						76.20	79.25	3.05	JKDR00061	6.41	300.60	241.00	105.90	37.50
						79.25	82.30	3.05	JKDR00061	5.24	252.00	225.00	98.40	31.90
	80.00													
						82.30	85.34	3.04	JKDR00061	5.15	381.10	275.00	103.40	31.30
	85.00													
						85.34	88.39	3.05	JKDR00062	5.64	299.00	201.00	117.30	24.30
						88.39	91.44	3.05	JKDR00062	4.92	184.90	168.00	100.90	19.20
	90.00													
						91.44	94.49	3.05	JKDR00062	6.36	162.40	164.00	119.90	15.50
						94.49	97.54	3.05	JKDR00062	5.53	256.60	209.00	117.20	20.00
	95.00													
						97.54	100.58	3.04	JKDR00062	5.95	273.30	255.00	105.50	24.90

From	To	Description	fuchs	st	ser	Mat	From	To	Width	Sample	Pb (ppm)	Zn (ppm)	Ag (ppb)	Ba (ppm)	As (ppm)
100.00							100.58	103.63	3.05	JKDR00062	5.58	325.00	244.00	97.70	32.00
							103.63	106.68	3.05	JKDR00062	5.38	239.60	202.00	107.10	29.50
105.00							106.68	109.73	3.05	JKDR00062	5.05	255.50	222.00	99.70	28.50
							109.73	112.78	3.05	JKDR00062	5.15	211.80	262.00	99.20	23.90
110.00							112.78	115.82	3.04	JKDR00062	5.11	182.40	188.00	110.20	22.40
							115.82	118.87	3.05	JKDR00063	5.14	285.30	182.00	94.20	24.30
115.00							118.87	121.92	3.05	JKDR00063	5.40	244.30	137.00	100.40	23.90
							121.92	124.97	3.05	JKDR00063	5.43	176.60	137.00	102.80	15.70
120.00							124.97	128.02	3.05	JKDR00063	5.25	259.20	165.00	106.10	31.00
							128.02	131.06	3.04	JKDR00063	5.42	229.20	157.00	95.10	18.80
125.00							131.06	134.11	3.05	JKDR00063	5.00	261.50	156.00	99.90	31.70
130.00															

From To Description

fuchsit ser Mat

From To Width Sample Pb (ppm) Zn (ppm) Ag (ppb) Ba (ppm) As (ppm)

From	To	Description	fuchsit	ser	Mat	From	To	Width	Sample	Pb (ppm)	Zn (ppm)	Ag (ppb)	Ba (ppm)	As (ppm)
						134.11	137.16	3.05	JKDR00063	5.36	220.10	164.00	117.70	29.00
						137.16	140.21	3.05	JKDR00063	5.33	168.00	217.00	117.40	25.30
						140.21	143.26	3.05	JKDR00063	5.32	162.20	172.00	97.50	25.70
						143.26	146.30	3.04	JKDR00063	6.34	249.00	179.00	108.30	33.70
						146.30	149.35	3.05	JKDR00064	3.58	204.20	122.00	100.10	22.60
						149.35	152.40	3.05	JKDR00064	2.43	105.70	78.00	108.40	11.20
						152.40	155.45	3.05	JKDR00064	5.35	355.60	196.00	96.80	29.50
						155.45	158.50	3.05	JKDR00064	5.90	244.70	196.00	93.00	28.50
						158.50	161.54	3.04	JKDR00064	5.37	191.70	150.00	99.50	28.10
161.54 - 161.54		EOH												

RocktypePROJECT: *Central BC*

North Face Geological Ltd.

Hole ID: FUL-002

From	To	Rocktype
0.00	28.35	Casing
28.35	161.54	Graphitic Argillite
161.54	161.54	EOH

Sample Summary with Assays

PROJECT: *Central BC*

North Face Geological Ltd.

Hole ID: FUL-002

Sample	From	To	Width	Type	Pb (ppm)	Zn (ppm)	Ag (ppb)	Ba (ppm)	As (ppm)
JKDR000601	27.74	30.48	2.74	T	7.50	228.10	182.00	99.50	40.90
JKDR000602	30.48	33.53	3.05	T	5.97	135.20	145.00	118.30	48.90
JKDR000603	33.53	36.58	3.05	T	4.76	182.50	154.00	111.90	40.40
JKDR000604	36.58	39.62	3.04	T	5.42	188.70	172.00	94.90	54.50
JKDR000605	39.62	42.67	3.05	WT	3.85	146.10	133.00	101.40	54.40
JKDR000606	42.67	45.72	3.05	T	5.61	217.20	133.00	135.70	73.10
JKDR000607	45.72	48.77	3.05	T	5.48	153.50	133.00	109.00	71.60
JKDR000608	48.77	51.82	3.05	T	5.46	156.70	120.00	103.40	57.30
JKDR000609	51.82	54.86	3.04	T	5.06	165.30	132.00	123.10	36.30
JKDR000610	54.86	57.91	3.05	T	6.27	190.80	155.00	118.30	49.30
JKDR000611	57.91	60.96	3.05	WT	5.93	167.00	173.00	116.90	43.40
JKDR000612	60.96	64.01	3.05	T	5.96	288.90	196.00	103.80	51.70
JKDR000613	64.01	67.06	3.05	T	5.48	264.20	208.00	97.80	50.20
JKDR000614	67.06	70.10	3.04	T	5.44	170.50	136.00	95.40	46.70
JKDR000615	70.10	73.15	3.05	T	5.78	261.40	183.00	109.20	37.20
JKDR000616	73.15	76.20	3.05	T	5.66	239.40	190.00	98.20	41.30
JKDR000617	76.20	79.25	3.05	WT	6.41	300.60	241.00	105.90	37.50
JKDR000618	79.25	82.30	3.05	T	5.24	252.00	225.00	98.40	31.90
JKDR000619	82.30	85.34	3.04	T	5.15	381.10	275.00	103.40	31.30
JKDR000620	85.34	88.39	3.05	T	5.64	299.00	201.00	117.30	24.30
JKDR000621	88.39	91.44	3.05	T	4.92	184.90	168.00	100.90	19.20
JKDR000622	91.44	94.49	3.05	T	6.36	162.40	164.00	119.90	15.50
JKDR000623	94.49	97.54	3.05	WT	5.53	256.60	209.00	117.20	20.00
JKDR000624	97.54	100.58	3.04	T	5.95	273.30	255.00	105.50	24.90
JKDR000625	100.58	103.63	3.05	T	5.58	325.00	244.00	97.70	32.00
JKDR000626	103.63	106.68	3.05	T	5.38	239.60	202.00	107.10	29.50
JKDR000627	106.68	109.73	3.05	T	5.05	255.50	222.00	99.70	28.50
JKDR000628	109.73	112.78	3.05	T	5.15	211.80	262.00	99.20	23.90
JKDR000629	112.78	115.82	3.04	WT	5.11	182.40	188.00	110.20	22.40
JKDR000630	115.82	118.87	3.05	T	5.14	285.30	182.00	94.20	24.30
JKDR000631	118.87	121.92	3.05	T	5.40	244.30	137.00	100.40	23.90

Sample Summary with AssaysPROJECT: *Central BC*

North Face Geological Ltd.

Hole ID: FUL-002

Sample	From	To	Width	Type	Pb (ppm)	Zn (ppm)	Ag (ppb)	Ba (ppm)	As (ppm)
JKDR000632	121.92	124.97	3.05	T	5.43	176.60	137.00	102.60	15.70
JKDR000633	124.97	128.02	3.05	T	5.25	259.20	165.00	106.10	31.00
JKDR000634	128.02	131.06	3.04	WT	5.42	229.20	157.00	95.10	18.80
JKDR000635	131.06	134.11	3.05	T	5.00	261.50	156.00	99.90	31.70
JKDR000636	134.11	137.16	3.05	T	5.36	220.10	164.00	117.70	29.00
JKDR000637	137.16	140.21	3.05	T	5.33	168.00	217.00	117.40	25.30
JKDR000638	140.21	143.26	3.05	T	5.32	162.20	172.00	97.50	25.70
JKDR000639	143.26	146.30	3.04	T	6.34	249.00	179.00	108.30	33.70
JKDR000640	146.30	149.35	3.05	WT	3.58	204.20	122.00	100.10	22.60
JKDR000641	149.35	152.40	3.05	T	2.43	105.70	78.00	108.40	11.20
JKDR000642	152.40	155.45	3.05	T	5.35	355.60	196.00	96.80	29.50
JKDR000643	155.45	158.50	3.05	T	5.90	244.70	196.00	93.00	28.50
JKDR000644	158.50	161.54	3.04	T	5.37	191.70	150.00	99.50	28.10

North Face Geological Ltd.

North Face Geological Ltd.
15575 86 Avenue
Surrey, B.C. V3S 5C8

**DRILL HOLE DESCRIPTION
DETAILED GRAPHIC LOG**

Project: *Central BC*

Hole #: **LEN-001**

Comments: Core extremely broken suggesting large deformation zone

Northing: 0.000
Easting: 400.000
Elevation: 1100.000
Field Location: 0+00N, 4+00E (m);

Casing Exposed: 25.9
Casing Size: NQ
Contractor: Britton Brothers
Assay Lab: ACME

Length: 141.73
Start Dip: -50.0
Start Azimuth: 90

Project: 2318
Area: Babine
Property: LEN

Logged by: JKD
Log date: 28/10/1999
Date Started: 02/08/1999
Date Finished: 04/08/1999

Map Reference: 93L.079
Claim: Len 6
Region: Omineca

Dip Tests
Hole # Depth Azimuth Dip
LEN-001 0.00 90.00 -55.00

From To Description

fuchsit ser Mat

From To Width Sample Pb (ppm) Zn (ppm) Ag (ppb) Ba (ppm) As (ppm)

0.00 - 36.88 Casing

	From	To	Width	Sample	Pb (ppm)	Zn (ppm)	Ag (ppb)	Ba (ppm)	As (ppm)
CASING									
CASING									
CASING									
CASING									
5.00 CASING									
CASING									
CASING									
CASING									
CASING									
10.00 CASING									
CASING									
CASING									
CASING									
15.00 CASING									
CASING									
CASING									
CASING									
20.00 CASING									
CASING									
CASING									
CASING									
25.00 CASING									
CASING									
CASING									
CASING									
30.00 CASING									
CASING									
CASING									

From To Description

fecht ser Maf

From To Width Sample Pb (ppm) Zn (ppm) Ag (ppb) Ba (ppm) As (ppm)

From	To	Description	fecht	ser	Maf	From	To	Width	Sample	Pb (ppm)	Zn (ppm)	Ag (ppb)	Ba (ppm)	As (ppm)
	100.00													
	101.19					101.19	103.63	2.44	JKDR00065	15.02	139.00	671.00	60.00	44.40
	103.63					103.63	106.68	3.05	JKDR00065	3.30	80.40	93.00	71.00	14.10
	105.00													
	106.68					106.68	109.73	3.05	JKDR00065	2.71	59.10	86.00	74.90	8.40
	109.73					109.73	112.78	3.05	JKDR00065	2.94	52.60	109.00	81.70	14.70
	110.00													
	112.78					112.78	115.82	3.04	JKDR00065	3.31	48.90	178.00	54.30	15.30
	115.00													
	115.82					115.82	118.87	3.05	JKDR00065	2.95	55.50	137.00	63.40	23.20
	118.87					118.87	121.92	3.05	JKDR00065	3.39	65.80	147.00	60.10	18.40
	120.00													
	121.92					121.92	124.97	3.05	JKDR00066	4.28	58.90	165.00	69.30	18.50
	124.97					124.97	125.88	0.91	JKDR00066	4.94	38.60	112.00	62.90	16.90
125.88 - 141.73	125.88	Siliceous/Graphitic Mudstone				125.88	128.02	2.14	JKDR00066	8.39	26.40	153.00	31.90	50.70
	128.02					128.02	131.06	3.04	JKDR00066	9.60	52.40	130.00	68.60	42.30
	130.00													
	131.06					131.06	134.11	3.05	JKDR00066	2.73	63.60	119.00	46.90	16.30

RocktypePROJECT: *Central BC*

North Face Geological Ltd.

Hole ID: LEN-001

From	To	Rocktype
0.00	36.88	Casing
36.88	51.82	Maf / FP Maf
51.82	55.78	Graphitic Argillite
55.78	96.10	Maf / FP Maf
96.10	125.88	Graphitic Argillite
125.88	141.73	Siliceous/Graphitic Mudstone
141.73	141.73	EOH

Sample Summary with Assays

PROJECT: *Central BC*

North Face Geological Ltd.

Hole ID: LEN-001

Sample	From	To	Width	Type	Pb (ppm)	Zn (ppm)	Ag (ppb)	Ba (ppm)	As (ppm)
JKDR000646	44.04	44.81	0.77	WT	1.82	76.60	47.00	41.50	1.20
JKDR000647	69.34	70.10	0.76	WT	2.67	66.70	36.00	71.80	0.10
JKDR000648	85.80	86.41	0.61	WT	2.22	75.30	37.00	1078.70	0.10
JKDR000649	93.27	93.88	0.61	WT	3.70	56.10	47.00	250.40	1.20
JKDR000650	93.88	96.10	2.22	WT	4.18	54.90	73.00	177.20	6.60
JKDR000651	96.10	98.45	2.35	WT	12.43	93.10	372.00	64.90	38.70
JKDR000652	98.45	101.19	2.74	T	18.51	144.60	606.00	65.00	50.80
JKDR000653	101.19	103.63	2.44	T	15.02	139.00	671.00	60.00	44.40
JKDR000654	103.63	106.68	3.05	T	3.30	80.40	93.00	71.00	14.10
JKDR000655	106.68	109.73	3.05	T	2.71	59.10	86.00	74.90	8.40
JKDR000656	109.73	112.78	3.05	T	2.94	52.60	109.00	81.70	14.70
JKDR000657	112.78	115.82	3.04	T	3.31	48.90	178.00	54.30	15.30
JKDR000658	115.82	118.87	3.05	T	2.95	55.50	137.00	63.40	23.20
JKDR000659	118.87	121.92	3.05	T	3.39	65.80	147.00	60.10	18.40
JKDR000660	121.92	124.97	3.05	T	4.28	58.90	165.00	69.30	18.50
JKDR000661	124.97	125.88	0.91	T	4.94	38.60	112.00	62.90	16.90
JKDR000662	125.88	128.02	2.14	T	8.39	26.40	153.00	31.90	50.70
JKDR000663	128.02	131.06	3.04	T	9.60	52.40	130.00	68.60	42.30
JKDR000664	131.06	134.11	3.05	T	2.73	63.60	119.00	46.90	16.30
JKDR000665	134.11	137.16	3.05	T	3.94	64.70	101.00	92.90	14.80
JKDR000666	137.16	140.21	3.05	T	7.44	127.40	397.00	84.30	46.20
JKDR000667	140.21	141.73	1.52	T	11.86	260.10	4875.00	127.60	56.10

North Face Geological Ltd.

North Face Geological Ltd.
15575 86 Avenue
Surrey, B.C. V3S 5C8

**DRILL HOLE DESCRIPTION
DETAILED GRAPHIC LOG**

Project: *Central BC*

Hole #: *LEN-002*

Comments:

Northing: 500.000
Easting: 700.000
Elevation: 1100.000
Field Location: 5+00N, 7+00E (m);

Casing Exposed: 38.1
Casing Size: NQ
Contractor Britton Brothers
Assay Lab: ACME

Length: 146.30
Start Dip: -50.0
Start Azimuth: 90

Project: 2318
Area: Babine
Property: LEN

Logged by: JKD
Log date: 28/10/1999
Date Started: 04/08/1999
Date Finished: 05/08/1999

Map Reference: 93L.079, 93L.080
Claim: Len 7
Region: Omineca

Dip Tests

Hole #	Depth	Azimuth	Dip
LEN-002	0.00	90.00	-50.00

From To Description

fuchsit ser Maf

pu

From To Width Sample Pb (ppm) Zn (ppm) Ag (ppb) Ba (ppm) As (ppm)

From	To	Description	fuchsit	ser	Maf	pu	From	To	Width	Sample	Pb (ppm)	Zn (ppm)	Ag (ppb)	Ba (ppm)	As (ppm)
							99.06	100.58	1.52	JKDR00074	3.83	68.30	62.00	72.20	2.50
							100.58	101.86	1.28	JKDR00074	4.99	112.10	48.00	83.50	16.30
							101.86	105.16	3.30	JKDR00074	3.05	92.80	108.00	62.60	8.20
							105.16	108.20	3.04	JKDR00074	31.44	125.70	129.00	68.90	4.60
							108.20	109.97	1.77	JKDR00074	8.98	91.00	157.00	63.50	25.30
							109.97	110.58	0.61	JKDR00074	8.56	204.90	91.00	42.30	102.30
							114.51	115.12	0.61	JKDR00075	6.04	63.60	30.00	66.00	4.30
							115.12	118.26	3.14	JKDR00075	6.80	190.90	186.00	41.30	554.80
							118.26	121.31	3.05	JKDR00075	5.17	189.00	170.00	69.50	239.30
							121.31	124.36	3.05	JKDR00075	9.97	192.30	245.00	100.20	9.30
							124.36	127.41	3.05	JKDR00075	4.84	118.30	146.00	82.60	79.00
							127.41	130.45	3.04	JKDR00075	6.32	456.70	155.00	64.80	407.10
							130.45	133.50	3.05	JKDR00075	3.18	59.40	92.00	74.30	11.40

109.97 - 115.12 FAmphP Maf Dyke

115.12 - 146.30 Graphitic Argillite

From To Description

depth ser Maf

po

From To Width Sample Pb (ppm) Zn (ppm) Ag (ppb) Ba (ppm) As (ppm)

From	To	Description	depth	ser	Maf	po	From	To	Width	Sample	Pb (ppm)	Zn (ppm)	Ag (ppb)	Ba (ppm)	As (ppm)
			135.00				133.50	136.55	3.05	JKDR00075	5.07	46.20	154.00	123.10	368.50
							136.55	139.60	3.05	JKDR00075	10.08	81.90	380.00	104.00	678.80
			140.00				139.60	142.65	3.05	JKDR00075	13.93	208.10	258.00	71.70	14.90
							142.65	144.23	1.58	JKDR00076	15.53	187.60	246.00	55.20	11.80
			145.00				144.23	145.39	1.16	JKDR00076	2.71	32.40	166.00	15.40	3.50
							145.39	146.30	0.91	JKDR00076	6.71	49.50	261.00	23.70	11.80
146.30 - 146.30		EOH				EOH									

Rocktype

North Face Geological Ltd.

PROJECT: *Central BC*

Hole ID: LEN-002

From	To	Rocktype
0.00	38.10	Casing
38.10	51.18	(Amyg) Augite FP Maf ALT-TLA
51.18	54.89	FP Maf Dyke
54.89	72.69	Graphitic Siltstone
72.69	109.97	Graphitic Mudstone
109.97	115.12	FAmphP Maf Dyke
115.12	146.30	Graphitic Argillite
146.30	146.30	EOH

Sample Summary with Assays

PROJECT: *Central BC*

North Face Geological Ltd.

Hole ID: LEN-002

Sample	From	To	Width	Type	Pb (ppm)	Zn (ppm)	Ag (ppb)	Ba (ppm)	As (ppm)
JKDR000725	40.39	41.00	0.61	WT	2.81	77.60	92.00	12.70	1.00
JKDR000726	48.46	49.07	0.61	WT	2.37	48.30	116.00	26.40	1.80
JKDR000727	51.82	52.43	0.61	WT	1.85	58.20	45.00	21.00	0.70
JKDR000728	55.78	56.39	0.61	WT	8.41	91.60	217.00	27.90	10.40
JKDR000729	60.96	61.72	0.76	WT	2.92	78.80	92.00	19.40	23.70
JKDR000730	63.70	64.31	0.61	WT	3.80	76.50	251.00	19.90	39.10
JKDR000731	72.24	72.85	0.61	WT	6.43	68.00	126.00	20.60	327.80
JKDR000732	72.85	75.90	3.05	WT	5.79	109.20	186.00	80.00	68.70
JKDR000733	75.90	78.94	3.04	T	3.74	127.10	105.00	56.70	11.60
JKDR000734	78.94	81.99	3.05	T	4.58	100.10	150.00	56.00	14.90
JKDR000735	81.99	85.04	3.05	T	5.52	230.60	216.00	41.00	1589.40
JKDR000736	85.04	88.09	3.05	T	5.26	181.90	189.00	91.00	36.20
JKDR000737	88.09	89.76	1.67	WT	3.63	226.10	221.00	181.60	17.10
JKDR000738	89.76	91.44	1.68	WT	1.44	93.10	61.00	434.50	3.20
JKDR000739	91.44	92.96	1.52	WT	1.16	86.40	45.00	573.00	2.80
JKDR000740	92.96	94.49	1.53	WT	1.56	89.60	89.00	490.90	1.40
JKDR000741	94.49	96.01	1.52	WT	3.22	87.40	61.00	160.20	1.80
JKDR000742	96.01	97.54	1.53	WT	3.56	112.90	39.00	195.60	2.50
JKDR000743	97.54	99.06	1.52	WT	3.19	84.70	47.00	118.00	2.10
JKDR000744	99.06	100.58	1.52	WT	3.83	68.30	62.00	72.20	2.50
JKDR000745	100.58	101.86	1.28	WT	4.99	112.10	48.00	83.50	16.30
JKDR000746	101.86	105.16	3.30	T	3.05	92.80	108.00	62.60	8.20
JKDR000747	105.16	108.20	3.04	T	31.44	125.70	129.00	68.90	4.60
JKDR000748	108.20	109.97	1.77	T	8.98	91.00	157.00	63.50	25.30
JKDR000749	109.97	110.58	0.61	WT	8.56	204.90	91.00	42.30	102.30
JKDR000750	114.51	115.12	0.61	WT	6.04	63.60	30.00	66.00	4.30
JKDR000751	115.12	118.26	3.14	T	6.80	190.90	186.00	41.30	554.80
JKDR000752	118.26	121.31	3.05	T	5.17	189.00	170.00	69.50	239.30
JKDR000753	121.31	124.36	3.05	WT	9.97	192.30	245.00	100.20	9.30
JKDR000754	124.36	127.41	3.05	T	4.84	118.30	146.00	82.60	79.00
JKDR000755	127.41	130.45	3.04	T	6.32	456.70	155.00	64.80	407.10

Sample Summary with AssaysPROJECT: *Central BC*

North Face Geological Ltd.

Hole ID: LEN-002

Sample	From	To	Width	Type	Pb (ppm)	Zn (ppm)	Ag (ppb)	Ba (ppm)	As (ppm)
JKDR000756	130.45	133.50	3.05	T	3.18	59.40	92.00	74.30	11.40
JKDR000757	133.50	136.55	3.05	T	5.07	46.20	154.00	123.10	368.50
JKDR000758	136.55	139.60	3.05	T	10.08	81.90	380.00	104.00	678.80
JKDR000759	139.60	142.65	3.05	WT	13.93	208.10	258.00	71.70	14.90
JKDR000760	142.65	144.23	1.58	T	15.53	187.60	246.00	55.20	11.80
JKDR000761	144.23	145.39	1.16	T	2.71	32.40	166.00	15.40	3.50
JKDR000762	145.39	146.30	0.91	T	6.71	49.50	261.00	23.70	11.80

North Face Geological Ltd.

North Face Geological Ltd.
15575 86 Avenue
Surrey, B.C. V3S 5C8

**DRILL HOLE DESCRIPTION
DETAILED GRAPHIC LOG**

Project: *Central BC*

Hole #: *LEN-003*

Comments: Poor core angles suggestion some folding complications

Northing: 600.000
Easting: 475.000
Elevation: 1100.000
Field Location: 6+00N, 4+75E (m);

Casing Exposed: 22.9
Casing Size: NQ
Contractor Britton Brothers
Assay Lab: ACME

Length: 158.80
Start Dip: -55.0
Start Azimuth: 90

Project: 2318
Area: Babine
Property: LEN

Logged by: JKD
Log date: 28/10/1999
Date Started: 06/08/1999
Date Finished: 07/08/1999

Map Reference: 93L.068
Claim: Len 8
Region: Omineca

Dip Tests

Hole #	Depth	Azimuth	Dip
LEN-003	0.00	90.00	-55.00

From To Description

fuchsit ser Maf

From To Width Sample Pb (ppm) Zn (ppm) Ag (ppb) Ba (ppm) As (ppm)

0.00 - 22.86 Casing

CASING
CASING
CASING
CASING
5.00 CASING
CASING
CASING
CASING
CASING
10.00 CASING
CASING
CASING
CASING
CASING
15.00 CASING
CASING
CASING
CASING
CASING
20.00 CASING
CASING
CASING
CASING
CASING
25.00 CASING
CASING
CASING
CASING
CASING
30.00 CASING
CASING
CASING

22.86 - 33.83 Overburden

From To Description

fuchsit ser Maf

From To Width Sample Pb (ppm) Zn (ppm) Ag (ppb) Ba (ppm) As (ppm)

33.83 - 58.40 Graphitic Mudstone/Siltstone

35.00

40.00

45.00

50.00

55.00

58.40 - 61.69 Maf-D

60.00

61.69 - 131.67 Graphitic Mudstone

65.00

33.83	36.88	3.05	JKDR00068	3.08	139.40	158.00	117.20	1.70
36.88	39.93	3.05	JKDR00068	2.97	164.10	208.00	145.80	1.50
39.93	42.98	3.05	JKDR00068	3.80	133.30	164.00	164.70	2.10
42.98	46.02	3.04	JKDR00068	3.65	146.90	179.00	132.40	0.70
46.02	49.07	3.05	JKDR00068	3.52	110.00	209.00	109.70	0.30
49.07	52.12	3.05	JKDR00068	3.11	117.30	196.00	135.00	0.50
52.12	55.17	3.05	JKDR00068	2.97	86.80	149.00	105.90	0.50
55.17	58.40	3.23	JKDR00068	3.67	101.00	111.00	89.50	1.80
59.59	60.20	0.61	JKDR00068	3.06	63.60	15.00	129.90	0.10
63.70	64.31	0.61	JKDR00068	3.57	315.50	149.00	122.60	18.20
64.31	68.15	3.84	JKDR00069	3.16	175.90	176.00	122.10	2.70

From To Description

fuchsit ser Maf

From To Width Sample Pb (ppm) Zn (ppm) Ag (ppb) Ba (ppm) As (ppm)

From	To	Description	fuchsit	ser	Maf	From	To	Width	Sample	Pb (ppm)	Zn (ppm)	Ag (ppb)	Ba (ppm)	As (ppm)
						68.15	68.88	0.73	JKDR00069	1.93	82.20	108.00	61.40	12.90
						68.88	70.41	1.53	JKDR00069	3.08	217.90	146.00	114.40	13.40
70.00						70.41	73.00	2.59	JKDR00069	3.45	169.50	141.00	115.30	11.90
						73.00	73.73	0.73	JKDR00069	5.04	92.20	176.00	90.20	0.10
						73.73	75.77	2.04	JKDR00069	2.22	126.30	33.00	65.00	1.40
75.00						75.77	77.78	2.01	JKDR00069	2.73	77.80	113.00	131.30	2.80
						77.78	80.83	3.05	JKDR00069	3.33	127.80	141.00	98.60	13.30
						80.83	82.51	1.68	JKDR00069	3.76	87.30	120.00	105.60	1.80
80.00						82.51	85.34	2.83	JKDR00069	4.10	144.70	141.00	62.00	3.90
						85.34	88.39	3.05	JKDR00070	3.42	131.50	137.00	86.50	1.10
85.00						88.39	91.44	3.05	JKDR00070	3.97	144.70	147.00	98.80	2.10
						91.44	94.49	3.05	JKDR00070	3.52	104.50	107.00	96.30	1.80
90.00						94.49	97.54	3.05	JKDR00070	3.51	134.60	148.00	69.80	0.70
						97.54	100.58	3.04	JKDR00070	4.15	94.80	164.00	51.30	349.40

From To Description

fuchsit ser Maf

From To Width Sample Pb (ppm) Zn (ppm) Ag (ppb) Ba (ppm) As (ppm)

100.00

100.58 104.15 3.57 JKDR00070 5.41 98.30 175.00 42.40 134.70

105.00

104.15 105.00 0.85 JKDR00070 4.90 62.60 195.00 36.20 1195.50
 105.00 106.68 1.68 JKDR00070 4.29 66.20 94.00 40.30 10.60
 106.68 109.73 3.05 JKDR00070 4.37 124.40 140.00 59.70 0.20

110.00

109.73 112.78 3.05 JKDR00070 4.06 112.20 123.00 42.30 0.80

115.00

112.78 115.82 3.04 JKDR00071 4.88 126.30 175.00 36.70 1.30

120.00

115.82 118.87 3.05 JKDR00071 3.68 92.80 153.00 43.20 2.20

125.00

118.87 121.92 3.05 JKDR00071 3.99 101.90 108.00 42.60 4.60

130.00

121.92 123.29 1.37 JKDR00071 4.15 79.20 148.00 49.20 1.40

123.29 124.97 1.68 JKDR00071 3.34 63.20 107.00 149.60 8.20

124.97 125.58 0.61 JKDR00071 1.93 41.30 52.00 112.40 20.60

125.58 129.36 3.78 JKDR00071 3.18 106.20 158.00 138.40 2.70

129.36 131.67 2.31 JKDR00071 3.21 149.90 173.00 96.30 1.60

131.67 132.28 0.61 JKDR00071 4.27 76.60 44.00 49.40 1.30

131.67 - 138.74 Maf Dyke Complex

From To Description

fuchsit ser Maf

From To Width Sample Pb (ppm) Zn (ppm) Ag (ppb) Ba (ppm) As (ppm)

138.74 - 158.80 Siltstone

158.80 - 158.80 EOH

135.00

140.00

145.00

150.00

155.00

EOH

137.16	137.77	0.61	JKDR00071	1.80	69.80	43.00	30.10	34.80
--------	--------	------	-----------	------	-------	-------	-------	-------

142.04	142.65	0.61	JKDR00072	4.62	60.30	66.00	85.20	2.10
--------	--------	------	-----------	------	-------	-------	-------	------

149.35	149.96	0.61	JKDR00072	3.65	67.70	64.00	97.60	4.40
--------	--------	------	-----------	------	-------	-------	-------	------

158.19	158.80	0.61	JKDR00072	3.14	90.00	100.00	172.20	1.90
--------	--------	------	-----------	------	-------	--------	--------	------

RocktypePROJECT: *Central BC*

North Face Geological Ltd.

Hole ID: LEN-003

From	To	Rocktype
0.00	22.86	Casing
22.86	33.83	Overburden
33.83	58.40	Graphitic Mudstone/Siltstone
58.40	61.69	Maf-D
61.69	131.67	Graphitic Mudstone
131.67	138.74	Maf Dyke Complex
138.74	158.80	Siltstone
158.80	158.80	EOH

Sample Summary with Assays

PROJECT: *Central BC*

Hole ID: LEN-003

North Face Geological Ltd.

Sample	From	To	Width	Type	Pb (ppm)	Zn (ppm)	Ag (ppb)	Ba (ppm)	As (ppm)
JKDR000680	33.83	36.88	3.05	WT	3.08	139.40	158.00	117.20	1.70
JKDR000681	36.88	39.93	3.05	T	2.97	164.10	208.00	145.80	1.50
JKDR000682	39.93	42.98	3.05	T	3.80	133.30	164.00	164.70	2.10
JKDR000683	42.98	46.02	3.04	T	3.65	146.90	179.00	132.40	0.70
JKDR000684	46.02	49.07	3.05	T	3.52	110.00	209.00	109.70	0.30
JKDR000685	49.07	52.12	3.05	T	3.11	117.30	196.00	135.00	0.50
JKDR000686	52.12	55.17	3.05	WT	2.97	86.80	149.00	105.90	0.50
JKDR000687	55.17	58.40	3.23	T	3.67	101.00	111.00	89.50	1.80
JKDR000688	59.59	60.20	0.61	WT	3.06	63.60	15.00	129.90	0.10
JKDR000689	63.70	64.31	0.61	WT	3.57	315.50	149.00	122.60	18.20
JKDR000690	64.31	68.15	3.84	T	3.16	175.90	176.00	122.10	2.70
JKDR000691	68.15	68.88	0.73	T	1.93	82.20	108.00	61.40	12.90
JKDR000692	68.88	70.41	1.53	T	3.08	217.90	146.00	114.40	13.40
JKDR000693	70.41	73.00	2.59	T	3.45	169.50	141.00	115.30	11.90
JKDR000694	73.00	73.73	0.73	T	5.04	92.20	176.00	90.20	0.10
JKDR000695	73.73	75.77	2.04	T	2.22	126.30	33.00	65.00	1.40
JKDR000696	75.77	77.78	2.01	T	2.73	77.80	113.00	131.30	2.80
JKDR000697	77.78	80.83	3.05	WT	3.33	127.80	141.00	98.60	13.30
JKDR000698	80.83	82.51	1.68	T	3.76	87.30	120.00	105.60	1.80
JKDR000699	82.51	85.34	2.83	T	4.10	144.70	141.00	62.00	3.90
JKDR000700	85.34	88.39	3.05	T	3.42	131.50	137.00	86.50	1.10
JKDR000701	88.39	91.44	3.05	T	3.97	144.70	147.00	98.80	2.10
JKDR000702	91.44	94.49	3.05	T	3.52	104.50	107.00	96.30	1.80
JKDR000703	94.49	97.54	3.05	WT	3.51	134.60	148.00	69.80	0.70
JKDR000704	97.54	100.58	3.04	T	4.15	94.80	164.00	51.30	349.40
JKDR000705	100.58	104.15	3.57	T	5.41	98.30	175.00	42.40	134.70
JKDR000706	104.15	105.00	0.85	T	4.90	62.60	195.00	36.20	1195.50
JKDR000707	105.00	106.68	1.68	T	4.29	66.20	94.00	40.30	10.60
JKDR000708	106.68	109.73	3.05	T	4.37	124.40	140.00	59.70	0.20
JKDR000709	109.73	112.78	3.05	WT	4.06	112.20	123.00	42.30	0.80
JKDR000710	112.78	115.82	3.04	T	4.88	126.30	175.00	36.70	1.30

Sample Summary with Assays

PROJECT: *Central BC*

North Face Geological Ltd.

Hole ID: LEN-003

Sample	From	To	Width	Type	Pb (ppm)	Zn (ppm)	Ag (ppb)	Ba (ppm)	As (ppm)
JKDR000711	115.82	118.87	3.05	T	3.66	92.80	153.00	43.20	2.20
JKDR000712	118.87	121.92	3.05	T	3.99	101.90	108.00	42.60	4.60
JKDR000713	121.92	123.29	1.37	T	4.15	79.20	148.00	49.20	1.40
JKDR000714	123.29	124.97	1.68	T	3.34	63.20	107.00	149.60	8.20
JKDR000715	124.97	125.58	0.61	WT	1.93	41.30	52.00	112.40	20.60
JKDR000716	125.58	129.36	3.78	T	3.18	106.20	158.00	138.40	2.70
JKDR000717	129.36	131.67	2.31	T	3.21	149.90	173.00	96.30	1.60
JKDR000718	131.67	132.28	0.61	WT	4.27	76.60	44.00	49.40	1.30
JKDR000719	137.16	137.77	0.61	WT	1.80	69.80	43.00	30.10	34.80
JKDR000720	142.04	142.65	0.61	WT	4.62	60.30	66.00	85.20	2.10
JKDR000721	149.35	149.96	0.61	WT	3.65	67.70	64.00	97.60	4.40
JKDR000722	158.19	158.80	0.61	WT	3.14	90.00	100.00	172.20	1.90

North Face Geological Ltd.

North Face Geological Ltd.
15575 86 Avenue
Surrey, B.C. V3S 5C8

Project: *Central BC*

**DRILL HOLE DESCRIPTION
DETAILED GRAPHIC LOG**

Hole #: *LEN-004*

Comments: Very strong hydrothermal alteration and minor
sphalerite

Northing: 300.000
Easting: 370.000
Elevation: 1100.000
Field Location: 3+00N, 3+70E (m);

Casing Exposed: 24.4
Casing Size: NQ
Contractor Britton Brothers
Assay Lab: ACME

Length: 176.78
Start Dip: -50.0
Start Azimuth: 90

Project: 2318
Area: Babine
Property: LEN

Logged by: JKD
Log date: 28/10/1999
Date Started: 10/08/1999
Date Finished: 11/08/1999

Map Reference: 93L.079
Claim: Len 4
Region: Omineca

Dip Tests

Hole #	Depth	Azimuth	Dip
LEN-004	0.00	90.00	-50.00

From To Description

fuchsht ser Maf

From To Width Sample Pb (ppm) Zn (ppm) Ag (ppb) Ba (ppm) As (ppm)

0.00 - 27.13 Casing

CASING
CASING
CASING
CASING
5.00 CASING
CASING
CASING
CASING
10.00 CASING
CASING
CASING
CASING
15.00 CASING
CASING
CASING
CASING
CASING
20.00 CASING
CASING
CASING
CASING
CASING
25.00 CASING
CASING
Maf T
30.00

27.13 - 31.39 Maf T

31.39 - 32.31 Fault Zone

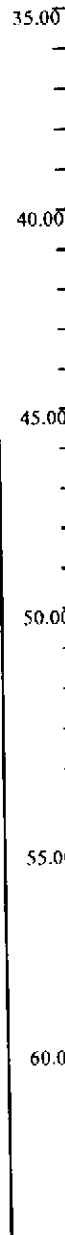
32.31 - 51.91 (Amph)FP Maf T/LT

29.57	30.18	0.61	JKDR00076	4.20	116.80	33.00	96.30	0.80
32.61	33.22	0.61	JKDR00076	3.91	61.60	22.00	88.70	0.70

From To Description

fuchsit ser Maf

From To Width Sample Pb (ppm) Zn (ppm) Ag (ppb) Ba (ppm) As (ppm)



51.91 - 55.47 Maf-D LT

55.47 - 55.78 Fault Zone

55.78 - 62.76 Graphitic Argillite

62.76 - 65.75 Maf T

From	To	Width	Sample	Pb (ppm)	Zn (ppm)	Ag (ppb)	Ba (ppm)	As (ppm)
44.50	45.11	0.61	JKDR00076	1.59	59.10	9.00	123.10	0.60
50.90	51.51	0.61	JKDR00076	4.85	94.10	10.00	84.10	0.90
51.91	53.64	1.73	JKDR00076	862.04	182.20	254.00	459.00	8.90
53.64	55.47	1.83	JKDR00076	16.52	103.10	64.00	54.70	25.10
55.47	59.44	3.97	JKDR00077	5.16	103.30	74.00	30.50	31.10
59.44	62.76	3.32	JKDR00077	5.22	291.80	250.00	26.10	30.10
62.76	64.01	1.25	JKDR00077	3.42	79.90	101.00	28.40	16.40
64.01	65.75	1.74	JKDR00077	4.77	86.70	194.00	44.50	29.20

Hole ID: LEN-004

North Face Geological Ltd.

ct: C al Bf

From To Description

fuchsit ser Maf

From To Width Sample Pb (ppm) Zn (ppm) Ag (ppb) Ba (ppm) As (ppm)

From	To	Description	fuchsit	ser	Maf	From	To	Width	Sample	Pb (ppm)	Zn (ppm)	Ag (ppb)	Ba (ppm)	As (ppm)
65.75	69.31	Amyg FAugiteP Maf ALT/TLA				65.75	66.45	0.70	JKDR00077	0.97	35.10	23.00	138.90	2.20
						68.58	69.31	0.73	JKDR00077	1.12	36.50	27.00	368.00	1.60
69.31	70.62	Graphitic Argillite				69.31	70.62	1.31	JKDR00077	6.98	59.60	97.00	89.30	36.80
70.62	71.29	Amyg FAugiteP Maf ALT/TLA				70.62	71.29	0.67	JKDR00077	1.54	85.80	60.00	43.30	14.30
71.29	77.72	Graphitic Argillite				71.29	74.68	3.39	JKDR00077	9.08	104.90	240.00	70.00	36.00
						74.68	77.72	3.04	JKDR00077	62.93	335.20	2360.00	43.10	59.10
77.72	80.10	Fault Zone				77.72	80.10	2.38	JKDR00078	587.01	2837.40	8268.00	54.40	1996.30
80.10	80.65	Graphitic Argillite				80.10	80.65	0.55	JKDR00078	175.90	651.30	2593.00	93.00	60.40
80.65	81.17	Graphitic Argillite				80.65	81.17	0.52	JKDR00078	256.95	3511.90	1706.00	51.00	56.30
81.17	81.56	Graphitic Argillite				81.17	81.56	0.39	JKDR00078	1162.98	5568.40	3841.00	97.70	205.80
81.56	82.30	Graphitic Argillite				81.56	82.30	0.74	JKDR00078	824.53	1942.10	4579.00	48.90	68.60
82.30	83.36	Graphitic Argillite				82.30	83.36	1.06	JKDR00078	731.83	2235.50	4841.00	112.20	74.80
83.36	85.53	Limestone				83.36	85.53	2.17	JKDR00078	84.69	330.40	692.00	58.20	8.40
85.53	111.47	Graphitic Argillite				85.53	86.87	1.34	JKDR00078	278.68	1204.10	4566.00	100.20	67.30
						86.87	87.78	0.91	JKDR00078	1187.54	2207.00	4114.00	68.20	41.70
						87.78	88.39	0.61	JKDR00078	585.61	2792.70	4492.00	95.30	49.90
						88.39	90.22	1.83	JKDR00079	4424.85	13172.60	12910.00	109.70	68.80
						90.22	92.05	1.83	JKDR00079	323.85	872.60	13425.00	64.80	259.60
						92.05	93.57	1.52	JKDR00079	434.76	3416.30	31177.00	67.10	10571.50
						93.57	96.01	2.44	JKDR00079	452.35	2228.20	11802.00	74.30	3963.30

From	To	Description	fuchs	ser	Maf	From	To	Width	Sample	Pb (ppm)	Zn (ppm)	Ag (ppb)	Ba (ppm)	As (ppm)
						96.01	97.08	1.07	JKDR00079	434.17	3364.90	14952.00	37.30	6727.40
						97.08	99.06	1.98	JKDR00079	236.48	1488.10	7589.00	89.80	2380.10
						99.06	100.58	1.52	JKDR00079	204.72	1181.90	1965.00	139.40	87.30
						100.58	102.11	1.53	JKDR00079	162.10	663.10	1915.00	94.90	135.80
						102.11	103.63	1.52	JKDR00079	157.16	793.60	2150.00	99.40	238.90
						103.63	105.16	1.53	JKDR00079	177.41	1201.30	3290.00	75.40	513.10
						105.16	106.68	1.52	JKDR00080	252.99	485.20	2637.00	105.20	1172.50
						106.68	108.20	1.52	JKDR00080	245.36	632.80	2229.00	98.00	614.80
						108.20	109.73	1.53	JKDR00080	144.10	563.20	1328.00	50.50	142.80
						109.73	111.47	1.74	JKDR00080	81.22	294.90	1376.00	57.40	141.30
						111.47	111.98	0.51	JKDR00080	5.50	91.50	74.00	50.20	405.10
						111.98	112.78	0.80	JKDR00080	12.06	70.70	128.00	103.10	292.70
						112.78	114.12	1.34	JKDR00080	54.07	342.20	256.00	131.20	108.70
						114.12	114.82	0.70	JKDR00080	6.76	89.80	214.00	184.20	41.30
						114.82	117.50	2.68	JKDR00080	12.26	147.20	401.00	76.20	95.50
						117.50	120.55	3.05	JKDR00080	17.22	141.20	486.00	87.70	88.50
						120.55	123.60	3.05	JKDR00081	15.86	168.00	392.00	168.80	127.00
						123.60	123.99	0.39	JKDR00081	11.33	93.00	613.00	80.80	93.80
						123.99	124.66	0.67	JKDR00081	7.06	100.20	61.00	225.60	10.10
						124.66	125.27	0.61	JKDR00081	4.30	31.80	84.00	180.60	13.00
						125.27	127.71	2.44	JKDR00081	3.19	7.80	49.00	640.10	5.60
						127.71	128.32	0.61	JKDR00081	1.25	4.40	65.00	183.30	1.90

111.47 - 123.99 FP Maf T+Graphitic Mudstone

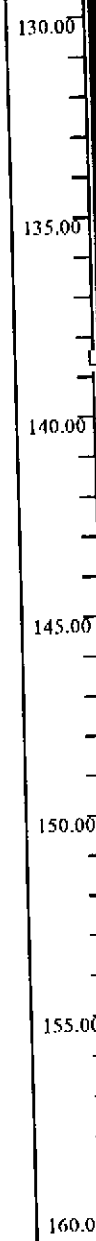
123.99 - 138.38 FP Maf-D

bedded T-L

bedded T-L

From To Description

fuchsit ser Maf



138.38 - 148.53 Maf T/(L)T+Graphitic Mudstone

148.53 - 150.97 AugiteFP Maf T/LT

150.97 - 152.25 Fault Zone

152.25 - 176.78 Maf (L)T / Fxl Maf (L)T

From	To	Width	Sample	Pb (ppm)	Zn (ppm)	Ag (ppm)	As (ppm)	Cs (ppm)
128.32	131.06	2.74	JKDR00081	6.03	21.50	107.00	553.30	7.80
131.06	131.67	0.61	JKDR00081	4.56	28.60	75.00	113.40	10.30
131.67	134.11	2.44	JKDR00081	6.84	107.70	126.00	96.70	16.60
134.11	136.86	2.75	JKDR00081	4.00	22.30	78.00	131.80	10.30
136.86	137.46	0.60	JKDR00082	7.88	50.10	28.00	36.20	12.40
137.46	138.38	0.92	JKDR00082	12.21	47.50	86.00	32.00	129.80
138.38	140.21	1.83	JKDR00082	42.26	478.60	569.00	28.10	142.30
140.21	143.26	3.05	JKDR00082	26.26	452.40	448.00	39.00	97.20
143.26	146.30	3.04	JKDR00082	18.79	215.30	688.00	85.70	81.70
146.30	149.14	2.84	JKDR00082	15.84	231.00	558.00	40.30	115.70
149.14	151.18	2.04	JKDR00082	1.19	32.90	27.00	40.90	2.30
154.99	155.60	0.61	JKDR00082	1.71	84.30	95.00	90.70	2.20
160.54	161.15	0.61	JKDR00082	2.92	76.00	71.00	387.50	7.80

ID: 004

Fac logi ... td.

From To Description

fuchsht ser Maf

From To Width Sample Pb (ppm) Zn (ppm) Ag (ppb) Ba (ppm) As (ppm)

					165.00	[Image]																
							168.86	169.47	0.61	JKDR00082	3.82	60.10	895.00	284.90	133.10							
					170.00	[Image]																
							172.58	173.19	0.61	JKDR00083	2.79	60.70	10.00	39.30	2.70							
					175.00	[Image]																
							176.17	176.78	0.61	JKDR00083	2.55	89.40	10.00	295.90	2.90							
176.78 - 176.78 EOH																						
						EOH																

RocktypePROJECT: *Central BC*

North Face Geological Ltd.

Hole ID: LEN-004

From	To	Rocktype
0.00	27.13	Casing
27.13	31.39	Maf T
31.39	32.31	Fault Zone
32.31	51.91	(Amph)FP Maf T/LT
51.91	55.47	Maf-D LT
55.47	55.78	Fault Zone
55.78	62.76	Graphitic Argillite
62.76	65.75	Maf T
65.75	69.31	Amyg FAugiteP Maf ALT/TLA
69.31	70.62	Graphitic Argillite
70.62	71.29	Amyg FAugiteP Maf ALT/TLA
71.29	77.72	Graphitic Argillite
77.72	80.10	Fault Zone
80.10	80.65	Graphitic Argillite
80.65	81.17	Graphitic Argillite
81.17	81.56	Graphitic Argillite
81.56	82.30	Graphitic Argillite
82.30	83.36	Graphitic Argillite
83.36	85.53	Limestone
85.53	111.47	Graphitic Argillite
111.47	123.99	FP Maf T+Graphitic Mudstone
123.99	138.38	FP Maf-D
138.38	148.53	Maf T/(L)T+Graphitic Mudstone
148.53	150.97	AugiteFP Maf T/LT
150.97	152.25	Fault Zone
152.25	176.78	Maf (L)T / Fxl Maf (L)T
176.78	176.78	EOH

Sample Summary with Assays

PROJECT: *Central BC*

Hole ID: LEN-004

North Face Geological Ltd.

Sample	From	To	Width	Type	Pb (ppm)	Zn (ppm)	Ag (ppb)	Ba (ppm)	As (ppm)
JKDR000764	29.57	30.18	0.61	WT	4.20	116.80	33.00	96.30	0.80
JKDR000765	32.61	33.22	0.61	WT	3.91	61.60	22.00	88.70	0.70
JKDR000766	44.50	45.11	0.61	WT	1.59	59.10	9.00	123.10	0.60
JKDR000767	50.90	51.51	0.61	WT	4.85	94.10	10.00	84.10	0.90
JKDR000768	51.91	53.64	1.73	WT	862.04	182.20	254.00	459.00	8.90
JKDR000769	53.64	55.47	1.83	WT	16.52	103.10	64.00	54.70	25.10
JKDR000770	55.47	59.44	3.97	T	5.16	103.30	74.00	30.50	31.10
JKDR000771	59.44	62.76	3.32	WT	5.22	291.80	250.00	26.10	30.10
JKDR000772	62.76	64.01	1.25	WT	3.42	79.90	101.00	28.40	16.40
JKDR000773	64.01	65.75	1.74	WT	4.77	86.70	194.00	44.50	29.20
JKDR000774	65.75	66.45	0.70	WT	0.97	35.10	23.00	138.90	2.20
JKDR000775	68.58	69.31	0.73	WT	1.12	36.50	27.00	368.00	1.60
JKDR000776	69.31	70.62	1.31	WT	6.98	59.60	97.00	89.30	36.80
JKDR000777	70.62	71.29	0.67	WT	1.54	85.80	60.00	43.30	14.30
JKDR000778	71.29	74.68	3.39	T	9.08	104.90	240.00	70.00	36.00
JKDR000779	74.68	77.72	3.04	T	62.93	335.20	2360.00	43.10	59.10
JKDR000780	77.72	80.10	2.38	T	587.01	2837.40	8268.00	54.40	1996.30
JKDR000781	80.10	80.65	0.55	WT	175.90	651.30	2593.00	93.00	60.40
JKDR000782	80.65	81.17	0.52	T	256.95	3511.90	1706.00	51.00	56.30
JKDR000783	81.17	81.56	0.39	T	1162.98	5568.40	3841.00	97.70	205.80
JKDR000784	81.56	82.30	0.74	T	824.53	1942.10	4579.00	48.90	68.60
JKDR000785	82.30	83.36	1.06	T	731.83	2235.50	4841.00	112.20	74.80
JKDR000786	83.36	85.53	2.17	T	84.69	330.40	692.00	58.20	8.40
JKDR000787	85.53	86.87	1.34	T	278.68	1204.10	4566.00	100.20	67.30
JKDR000788	86.87	87.78	0.91	T	1187.54	2207.00	4114.00	68.20	41.70
JKDR000789	87.78	88.39	0.61	T	585.61	2792.70	4492.00	95.30	49.90
JKDR000790	88.39	90.22	1.83	T	4424.85	13172.60	12910.00	109.70	68.80
JKDR000791	90.22	92.05	1.83	T	323.85	872.60	13425.00	64.80	259.60
JKDR000792	92.05	93.57	1.52	T	434.76	3416.30	31177.00	67.10	10571.50
JKDR000793	93.57	96.01	2.44	WT	452.35	2228.20	11802.00	74.30	3963.30
JKDR000794	96.01	97.08	1.07	T	434.17	3364.90	14952.00	37.30	6727.40

Sample Summary with Assays

PROJECT: *Central BC*

Hole ID: LEN-004

North Face Geological Ltd.

Sample	From	To	Width	Type	Pb (ppm)	Zn (ppm)	Ag (ppb)	Ba (ppm)	As (ppm)
JKDR000795	97.08	99.06	1.98	T	236.48	1488.10	7589.00	89.80	2380.10
JKDR000796	99.06	100.58	1.52	T	204.72	1181.90	1965.00	139.40	87.30
JKDR000797	100.58	102.11	1.53	T	162.10	663.10	1915.00	94.90	135.80
JKDR000798	102.11	103.63	1.52	T	157.16	793.60	2150.00	99.40	238.90
JKDR000799	103.63	105.16	1.53	T	177.41	1201.30	3290.00	75.40	513.10
JKDR000800	105.16	106.68	1.52	T	252.99	485.20	2637.00	105.20	1172.50
JKDR000801	106.68	108.20	1.52	T	245.36	632.80	2229.00	98.00	614.80
JKDR000802	108.20	109.73	1.53	T	144.10	563.20	1328.00	50.50	142.80
JKDR000803	109.73	111.47	1.74	T	81.22	294.90	1376.00	57.40	141.30
JKDR000804	111.47	111.98	0.51	WT	5.50	91.50	74.00	50.20	405.10
JKDR000805	111.98	112.78	0.80	WT	12.06	70.70	128.00	103.10	292.70
JKDR000806	112.78	114.12	1.34	T	54.07	342.20	256.00	131.20	108.70
JKDR000807	114.12	114.82	0.70	WT	6.76	89.80	214.00	184.20	41.30
JKDR000808	114.82	117.50	2.68	T	12.26	147.20	401.00	76.20	95.50
JKDR000809	117.50	120.55	3.05	T	17.22	141.20	486.00	87.70	88.50
JKDR000810	120.55	123.60	3.05	T	15.86	168.00	392.00	168.80	127.00
JKDR000811	123.60	123.99	0.39	WT	11.33	93.00	613.00	80.80	93.80
JKDR000812	123.99	124.66	0.67	WT	7.06	100.20	61.00	225.60	10.10
JKDR000813	124.66	125.27	0.61	WT	4.30	31.80	84.00	180.60	13.00
JKDR000814	125.27	127.71	2.44	T	3.19	7.80	49.00	640.10	5.60
JKDR000815	127.71	128.32	0.61	WT	1.25	4.40	65.00	183.30	1.90
JKDR000816	128.32	131.06	2.74	T	6.03	21.50	107.00	553.30	7.80
JKDR000817	131.06	131.67	0.61	WT	4.56	28.60	75.00	113.40	10.30
JKDR000818	131.67	134.11	2.44	T	6.84	107.70	126.00	96.70	16.60
JKDR000819	134.11	136.86	2.75	T	4.00	22.30	78.00	131.80	10.30
JKDR000820	136.86	137.46	0.60	WT	7.88	50.10	28.00	36.20	12.40
JKDR000821	137.46	138.38	0.92	T	12.21	47.50	86.00	32.00	129.80
JKDR000822	138.38	140.21	1.83	WT	42.26	478.60	569.00	28.10	142.30
JKDR000823	140.21	143.26	3.05	T	26.26	452.40	448.00	39.00	97.20
JKDR000824	143.26	146.30	3.04	T	18.79	215.30	688.00	85.70	81.70
JKDR000825	146.30	149.14	2.84	T	15.84	231.00	558.00	40.30	115.70

Sample Summary with AssaysPROJECT: *Central BC*

North Face Geological Ltd.

Hole ID: LEN-004

Sample	From	To	Width	Type	Pb (ppm)	Zn (ppm)	Ag (ppb)	Ba (ppm)	As (ppm)
JKDR000826	149.14	151.18	2.04	WT	1.19	32.90	27.00	40.90	2.30
JKDR000827	154.99	155.60	0.61	WT	1.71	84.30	95.00	90.70	2.20
JKDR000828	160.54	161.15	0.61	WT	2.92	76.00	71.00	387.50	7.80
JKDR000829	168.86	169.47	0.61	WT	3.82	60.10	896.00	284.90	133.10
JKDR000830	172.58	173.19	0.61	WT	2.79	60.70	10.00	39.30	2.70
JKDR000831	176.17	176.78	0.61	WT	2.55	89.40	10.00	295.90	2.90

North Face Geological Ltd.
North Face Geological Ltd.
15575 86 Avenue
Surrey, B.C. V3S 5C8

DRILL HOLE DESCRIPTION DETAILED GRAPHIC LOG

Project: *Central BC*

Hole #: *LEN-005*

Comments: Subaerial volcanic rocks of the Telkwa Formation

Northing: 300.000
Easting: 480.000
Elevation: 1100.000
Field Location: 3+00N, 4+80E (m);

Casing Exposed: 13.7
Casing Size: NQ
Contractor: Britton Brothers
Assay Lab: ACME

Length: 152.40
Start Dip: -50.0
Start Azimuth: 90

Project: 2318
Area: Babine
Property: LEN

Logged by: JKD
Log date: 28/10/1999
Date Started: 12/08/1999
Date Finished: 13/08/1999

Map Reference: 93L.079
Claim: Len 3
Region: Omineca

Dip Tests		
Hole #	Depth	Azimuth Dip
LEN-005	0.00	90.00 -50.00

From To Description

factbit ser Maf

From To Width sample rd (ppm) Zn (ppm) Ag (ppm) Ba (ppm) Pb (ppm)

0.00 - 13.72 Casing

CASING
CASING
CASING
CASING
5.00 CASING
CASING
CASING
CASING
CASING
10.00 CASING
CASING
CASING

13.72 - 31.85 (FP) Maf T/(L)T

15.00
20.00
25.00
30.00

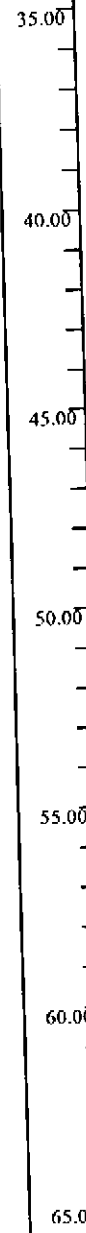
31.85 - 42.28 (Amyg) F-Ol Xeno Maf

30.18 30.78 0.60 JKDR00066 11.76 72.50 155.00 200.70 5.60

From To Description

fuchsit ser Maf

From To Width Sample Pb (ppm) Zn (ppm) Ag (ppb) Ba (ppm) As (ppm)



42.28 - 68.88 (FP) Maf T/(L)T

36.12	36.73	0.61	JKDR00067	2.38	90.10	51.00	1018.10	3.50
-------	-------	------	-----------	------	-------	-------	---------	------

45.11	45.72	0.61	JKDR00067	8.70	62.40	86.00	266.00	6.80
-------	-------	------	-----------	------	-------	-------	--------	------

From To Description

fuchsit ser Maf

From To Width Sample Po (ppm) Zn (ppm) Ag (ppm) S (ppm)

68.88 - 73.30 FP Maf LT

73.30 - 82.20 (FP) Maf T/(L)T

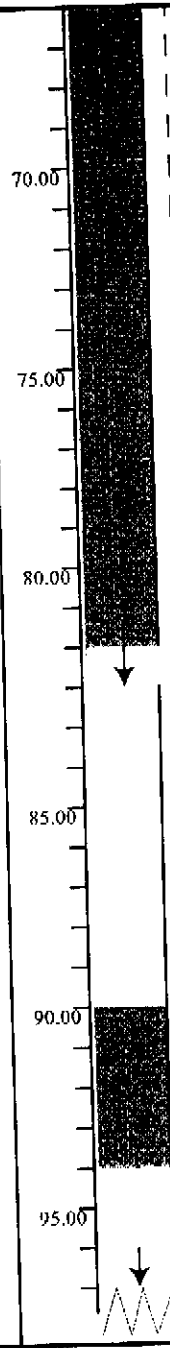
82.20 - 82.54 FP Maf LT

82.54 - 90.34 (FP) Maf T

90.34 - 94.09 (FP) Maf (L)T/LT

94.09 - 96.41 (FP) Maf T

96.41 - 129.11 Fault Zone



From	To	Width	Sample	Po (ppm)	Zn (ppm)	Ag (ppm)	S (ppm)
74.52	75.13	0.61	JKDR00067	5.84	66.50	61.00	185.50
76.20	77.11	0.91	JKDR00067	5.89	59.20	54.00	256.60
77.11	77.72	0.61	JKDR00067	7.84	57.60	68.00	287.70
91.44	92.05	0.61	JKDR00067	5.03	45.40	43.00	229.80
96.01	96.62	0.61	JKDR00067	6.59	71.90	60.00	182.10

Hole ID: LEN-005

North Face Geological Ltd.

Project: Central BC

From To Description

fuchsit ser Maf

From To Width Sample Pb (ppm) Zn (ppm) Ag (ppb) Ba (ppm) As (ppm)

100.00

105.00

110.00

115.00

120.00

125.00

129.11 - 152.40 (Amph)FP Maf ALT/TLA

Page

5

14/02/2000

report: log_2_pagesize.frx

East D: L 05 N Face logic d.

From To Description

fuchsht ser Maf

From To Width Sample Pb (ppm) Zn (ppm) Ag (ppm) Cu (ppm) As (ppm)

130.00
135.00
140.00
145.00
150.00



From	To	Width	Sample	Pb (ppm)	Zn (ppm)	Ag (ppm)	Cu (ppm)	As (ppm)
132.59	133.20	0.61	JKDR00067	3.77	57.20	50.00	72.30	4.10
151.79	152.40	0.61	JKDR00067	4.91	54.80	56.00	143.90	7.40

152.40 - 152.40 EOH

EOH

Rocktype

PROJECT: *Central BC*

North Face Geological Ltd.

Hole ID: LEN-005

From	To	Rocktype
0.00	13.72	Casing
13.72	31.85	(FP) Maf T/(L)T
31.85	42.28	(Amyg) F-OI Xeno Maf
42.28	68.88	(FP) Maf T/(L)T
68.88	73.30	FP Maf LT
73.30	82.20	(FP) Maf T/(L)T
82.20	82.54	FP Maf LT
82.54	90.34	(FP) Maf T
90.34	94.09	(FP) Maf (L)T/LT
94.09	96.41	(FP) Maf T
96.41	129.11	Fault Zone
129.11	152.40	(Amph)FP Maf ALT/TLA
152.40	152.40	EOH

Sample Summary with Assays

PROJECT: *Central BC*
Hole ID: LEN-005

North Face Geological Ltd.

Sample	From	To	Width	Type	Pb (ppm)	Zn (ppm)	Ag (ppb)	Ba (ppm)	As (ppm)
JKDR000669	30.18	30.78	0.60	WT	11.76	72.50	155.00	200.70	5.60
JKDR000670	36.12	36.73	0.61	WT	2.38	90.10	51.00	1018.10	3.50
JKDR000671	45.11	45.72	0.61	WT	8.70	62.40	86.00	266.00	6.80
JKDR000672	74.52	75.13	0.61	WT	5.84	66.50	61.00	185.50	6.70
JKDR000673	76.20	77.11	0.91	WT	5.89	59.20	54.00	256.60	9.70
JKDR000674	77.11	77.72	0.61	WT	7.84	57.60	68.00	287.70	12.20
JKDR000675	91.44	92.05	0.61	WT	5.03	45.40	43.00	229.80	16.10
JKDR000676	96.01	96.62	0.61	WT	6.59	71.90	60.00	182.10	7.00
JKDR000677	132.59	133.20	0.61	WT	3.77	57.20	50.00	72.30	4.10
JKDR000678	151.79	152.40	0.61	WT	4.91	54.80	56.00	143.90	7.40

14/02/2000

APPENDIX C



Hudson Bay Expl. & Dev. Co. Ltd. PROJECT 2318 File # 9903261 Page 1 (a)

405 - 470 Granville St., Vancouver BC V6C 1V5 Submitted by: Jason K. Dunning

SAMPLE#	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	W	Tl	Hg	Se	Te	Ga
	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	µ	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	µ	ppm	%	%	%	%	ppm	ppm	ppb	ppm	ppm	ppm	
99JKDR000601	12.12	47.54	7.50	238.1	181.7	76.1	9.5	450.2	85.40	9.3	1.0	8.446	0.102	2.52	.14	55	8.08	0.72	8.2	27.1	30	99.5	.001	4	.31	0.00	11	1.3	2.58	66	6.5	.16	1.0		
99JKDR000602	8.41	33.99	5.97	135.2	135.4	47.1	8.6	414.2	47.48	9.3	1.3	1.0	473.0	1.26	1.77	.15	37	8.21	0.71	8.4	17.5	23	116.3	.001	4	.38	0.21	14	1.4	2.15	44	4.1	.14	.9	
99JKDR000603	11.29	38.16	4.76	182.5	151.4	47.7	7.6	534.2	60.40	4.3	.9	8.622	0.224	1.98	.11	36	11.30	0.98	8.8	20.0	37	111.9	.001	4	.33	0.20	11	1.2	1.63	44	5.1	.15	.9		
99JKDR000604	13.57	38.46	5.42	188.7	172.6	67.0	8.0	485.2	66.54	5.3	.9	9.530	0.218	2.30	.12	42	10.13	0.78	8.2	19.1	22	94.9	.001	4	.29	0.20	10	1.6	2.01	54	5.7	.16	.8		
99JKDR000605	8.78	32.35	3.85	146.1	133.4	43.8	7.0	558.2	46.51	4.3	.8	6.588	3.158	1.23	.08	40	12.41	0.56	6.5	16.3	59	101.4	.001	4	.35	0.17	.09	8.1	0.1	34	3.9	.13	.8		
99JKDR000606	18.84	39.41	5.64	217.2	131.9	91.0	8.7	572.2	83.73	1.1	6	5.11	676.0	2.51	1.30	.10	45	10.63	1.25	8.9	13.5	33	135.7	.001	5	.43	0.19	12	1.5	1.33	43	3.6	.14	1.0	
99JKDR000607	24.36	38.35	5.48	153.5	133.9	99.0	8.7	479.2	73.71	6.5	.7	8.612	3.176	.98	.10	45	9.51	0.80	7.1	16.1	34	109.0	.001	5	.33	0.21	11	1.2	2.15	30	3.4	.15	.8		
99JKDR000608	20.59	42.39	5.46	156.7	120.7	79.9	9.8	452.2	63.57	3.3	.5	7.8	623.2	1.70	1.93	.11	53	10.03	0.67	7.9	15.7	28	103.4	.001	4	.32	0.20	0.9	1.4	2.32	48	4.5	.14	.9	
99JKDR000609	11.72	41.63	5.06	165.3	132.5	48.8	9.6	566.2	61.36	3.3	.3	7.779	2.03	1.80	.24	67	10.12	0.76	7.6	18.6	43	123.1	.001	5	.57	0.21	10	1.3	1.25	36	4.0	.20	1.6		
99JKDR000610	14.95	41.45	6.27	190.8	155.6	62.2	9.2	529.2	79.49	3.3	.3	7.10	545.8	2.32	2.12	.13	58	8.31	0.80	7.1	19.0	51	118.3	.001	5	.45	0.24	11	1.8	1.45	47	4.7	.14	1.2	
RE 99JKDR000610	14.20	39.63	6.11	183.6	151.5	59.8	8.8	508.2	70.46	7.3	.8	1.0	506.3	2.24	2.07	.12	56	7.97	0.78	6.8	17.1	51	113.6	.001	5	.42	0.23	11	1.9	1.67	40	4.4	.16	1.2	
RRE 99JKDR000610	15.00	41.45	5.96	188.2	142.6	61.0	9.5	531.2	75.46	3.3	.3	.7	.9	520.4	2.33	2.02	.11	57	8.31	0.80	7.2	17.6	54	116.9	.001	5	.45	0.23	11	1.3	1.58	39	4.4	.13	1.2
99JKDR000611	15.66	41.39	5.93	167.0	173.6	63.5	8.5	462.2	67.43	4.3	<.2	.9	518.4	1.85	2.11	.12	54	8.42	0.80	7.8	20.2	47	116.9	.001	5	.43	0.23	11	1.4	1.63	50	4.8	.13	1.1	
99JKDR000612	18.81	47.61	5.96	288.9	196.6	71.1	8.3	416.2	67.51	7.3	.6	1.0	629.9	3.78	3.06	.14	63	9.74	0.81	8.6	22.2	37	103.8	.001	4	.48	0.20	10	1.3	2.16	65	6.3	.18	1.3	
99JKDR000613	21.86	50.37	5.48	264.2	208.7	79.6	8.3	437.2	79.50	2.4	.4	.8	599.6	3.17	2.46	.11	73	9.54	0.93	8.6	19.9	33	97.8	.001	3	.56	0.20	10	1.5	1.78	49	6.3	.13	1.6	
99JKDR000614	25.52	46.36	5.44	170.5	136.9	91.9	8.9	477.2	61.46	7.4	.2	.9	560.3	2.10	2.05	.13	73	9.32	0.72	7.1	19.6	36	95.4	.001	4	.65	0.19	10	1.3	2.51	61	4.9	.13	1.7	
99JKDR000615	24.98	48.22	5.78	261.4	183.7	70.7	8.7	557.2	73.37	2.4	<.2	1.0	597.0	3.34	2.49	.12	73	9.93	0.97	8.2	19.8	42	109.2	.001	4	.73	0.20	10	1.5	2.20	58	6.0	.16	1.9	
99JKDR000616	24.83	49.36	5.66	239.4	190.9	91.8	9.4	466.2	89.41	3.4	<.2	1.0	638.9	3.21	2.52	.12	72	8.82	0.80	9.8	24.6	48	98.2	.001	4	.81	0.18	0.9	1.3	2.63	61	6.3	.14	2.0	
99JKDR000617	20.82	44.52	6.41	300.6	241.6	66.1	9.0	534.3	01.37	5.4	.4	1.1	655.6	4.47	3.53	.13	61	8.83	0.85	11.8	23.2	60	105.9	.001	3	.94	0.20	11	1.6	2.16	66	7.0	.16	2.5	
99JKDR000618	10.73	53.42	5.24	252.0	225.6	61.0	9.9	487.2	88.31	9.2	<.2	.9	517.5	2.43	3.26	.11	55	9.13	0.86	10.1	22.9	46	98.4	.001	4	.85	0.20	10	1.0	1.55	59	5.8	.14	2.2	
99JKDR000619	12.70	50.70	5.15	381.1	275.5	54.1	8.6	443.2	84.31	3.3	.2	.9	633.9	5.11	4.07	.12	58	10.14	0.96	12.2	24.8	45	103.4	.001	4	.85	0.18	0.9	1.3	1.22	48	7.4	.16	2.1	
99JKDR000620	14.48	41.98	5.64	299.0	201.5	58.7	8.5	453.2	66.24	3.3	.2	1.0	549.1	4.41	3.41	.12	76	8.00	1.06	13.0	25.7	53	117.3	.001	4	.99	0.19	11	1.2	1.68	52	5.9	.11	2.4	
99JKDR000621	12.57	40.51	4.92	184.9	168.4	48.6	8.5	426.2	55.19	2.3	<.2	.9	473.6	2.24	1.92	.36	49	7.47	0.85	11.0	20.7	43	100.9	.001	4	.87	0.20	10	1.7	1.40	42	3.9	.17	2.2	
99JKDR000622	13.96	38.01	6.36	162.4	164.4	49.3	7.9	512.2	34.15	5.5	.5	1.7	676.3	2.08	1.66	.16	46	8.91	0.70	13.2	14.7	44	119.9	.001	3	.86	0.17	10	1.6	1.31	38	3.7	.13	2.2	
RE 99JKDR000622	14.56	38.47	6.39	166.0	165.4	49.4	8.0	523.2	39.15	5.5	.5	1.7	661.6	2.04	1.66	.14	48	9.03	0.72	13.2	18.1	44	123.5	.001	4	.86	0.17	10	1.6	1.40	33	3.5	.13	2.3	
RRE 99JKDR000622	12.97	37.14	6.44	162.6	173.4	48.0	7.7	524.2	35.15	0.4	<.2	1.7	642.9	1.99	1.66	.13	46	9.15	0.72	13.4	13.4	43	114.4	.001	3	.83	0.16	10	1.9	1.40	33	3.6	.12	2.2	
99JKDR000623	15.58	47.23	5.53	256.6	209.7	71.7	9.9	452.2	77.20	0.4	.4	1.0	506.5	3.23	2.96	.12	68	8.86	0.74	12.6	26.6	55	117.2	.001	4	1.03	0.20	11	1.2	2.26	51	5.2	.11	2.7	
99JKDR000624	18.65	47.18	5.95	273.3	255.6	77.7	8.5	503.2	74.24	9.4	<.2	1.1	565.3	4.25	2.31	.12	74	8.62	0.87	14.0	24.9	52	105.5	.001	3	.98	0.17	10	1.3	1.71	47	6.1	.14	2.5	
99JKDR000625	19.54	51.26	5.58	325.0	244.7	75.5	8.5	489.2	85.32	0.4	.8	1.1	554.9	4.57	3.54	.12	73	8.13	0.60	12.4	27.0	50	97.7	.001	4	.88	0.15	0.9	1.0	2.51	65	7.7	.13	2.3	
99JKDR000626	18.65	45.36	5.38	249.6	202.6	61.1	9.9	564.2	3.12	29.5	.4	1.8	1.0	605.7	3.30	3.08	.11	69	8.31	0.73	13.6	26.3	49	107.1	.001	4	.98	0.21	11	1.5	1.90	55	5.8	.14	2.6
99JKDR000627	13.34	53.66	5.05	255.5	222.6	64.3	10.7	418.2	81.28	5.3	1.1	9.516	2.97	3.23	.11	57	7.70	0.75	12.7	27.6	45	99.7	.002	3	.88	0.21	0.9	1.1	1.47	70	5.9	.11	2.2		
99JKDR000628	10.25	42.37	5.15	211.8	262.4	41.9	6.9	469.2	45.23	9.3	.6	8.627	2.73	2.88	.11	44	9.89	1.02	13.1	22.8	40	99.2	.001	3	.81	0.17	10	1.3	.63	53	6.1	.15	2.2		
99JKDR000629	13.27	40.76	5.11	182.4	188.5	50.0	8.1	487.2	80.22	4.4	.2	8.577	2.19	2.42	.10	61	9.03	0.94	11.5	23.4	51	110.2	.001	3	1.01	0.17	10	1.4	2.14	49	1.8	.11	2.5		
99JKDR000630	14.66	45.88	5.14	285.3	182.5	52.2	7.7	440.2	64.24	3.3	<.2	8.599	3.70	3.4																					



SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppb	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppb	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 %	Na %	K %	W ppm	Tl ppm	Hg ppb	Se ppm	Te ppm	Ga ppm
99JKDR000631	22.84	43.70	5.40	244.3	137	63.1	7.9	434	2.53	23.9	4	1.5	9	574.7	2.55	3.25	.18	50	9.43	.082	10.2	15.8	31	100.4	.001	3	.79	.013	.12	1.2	1.40	39	5.6	.13	1.9
99JKDR000632	12.76	49.31	5.43	170.6	137	47.8	11.6	628	3.01	15.7	4	1.2	8	740.6	1.77	1.42	.13	66	7.57	.080	9.4	39.9	80	102.8	.001	3	1.39	.018	.12	2.2	.57	33	3.2	.13	3.3
99JKDR000633	24.74	49.60	5.25	259.2	165	64.9	8.7	505	2.76	31.0	5	1.1	.8	636.5	2.95	3.14	.12	69	8.24	.066	8.0	19.5	.47	106.1	.001	2	.94	.024	.10	1.6	1.49	58	5.1	.12	2.4
99JKDR000634	17.13	35.41	5.42	229.2	157	60.4	5.7	423	2.01	18.8	6	.8	.7	991.0	2.68	2.39	.11	85	9.96	.067	5.2	18.7	1.41	95.1	.001	2	1.02	.018	.08	1.8	1.35	44	4.2	.17	2.7
99JKDR000635	26.15	43.29	5.00	261.5	156	73.4	7.8	425	2.58	31.7	6	<.2	6	791.5	2.91	3.38	.27	56	9.00	.072	4.6	14.1	.97	99.9	.001	2	.88	.018	.09	1.4	1.61	51	5.5	.19	2.3
99JKDR000636	24.79	40.16	5.36	220.1	164	56.6	7.7	411	2.76	29.0	5	.8	.9	685.4	2.84	3.08	.13	58	7.88	.078	5.2	16.3	.76	117.7	.001	3	1.17	.019	.11	1.7	1.36	51	5.0	.14	2.9
99JKDR000637	12.25	44.05	5.33	168.0	217	56.1	9.5	495	2.63	25.3	5	1.1	6	802.5	1.86	2.72	.10	61	9.14	.138	7.0	26.1	.62	117.4	.001	3	1.08	.018	.10	1.3	.84	49	5.0	.11	2.8
99JKDR000638	20.55	46.20	5.32	162.2	172	90.2	8.4	476	2.76	25.7	6	<.2	6	665.0	1.33	2.66	.39	75	9.35	.102	6.0	22.8	.65	97.5	.001	3	1.06	.018	.08	1.3	1.38	55	4.7	.23	2.9
99JKDR000639	38.06	50.74	6.34	249.0	179	104.6	9.2	386	2.89	33.7	7	.5	.6	550.6	2.37	2.53	.15	72	7.85	.067	4.6	18.3	.64	108.3	.001	2	1.06	.020	.09	1.2	1.76	52	6.5	.13	2.7
99JKDR000640	25.14	43.71	3.58	204.2	122	87.5	7.4	498	2.73	22.6	7	.4	.5	834.1	2.17	1.67	.10	113	10.80	.067	4.6	16.4	2.08	100.1	.001	2	1.27	.015	.06	1.1	1.06	30	5.1	.14	3.2
RE 99JKDR000640	25.90	43.31	3.75	205.9	125	87.9	7.5	504	2.77	22.6	7	<.2	.5	817.9	2.17	1.73	.10	114	10.90	.068	4.8	19.4	2.08	99.5	.001	2	1.29	.016	.06	1.1	1.11	34	5.1	.14	3.3
RRE 99JKDR000640	25.04	44.16	3.69	202.2	122	86.1	7.4	514	2.77	23.1	7	<.2	.5	823.6	2.18	1.68	.10	113	10.89	.068	4.6	20.6	2.15	99.7	.001	2	1.27	.015	.06	1.1	1.13	33	5.2	.13	3.3
99JKDR000641	11.58	34.52	2.43	105.7	78	55.6	5.4	849	2.98	11.2	6	<.2	.4	1111.2	1.10	.91	.07	116	14.70	.056	4.3	13.4	4.13	108.4	.001	1	1.28	.012	.04	.7	.59	19	3.8	.14	3.3
99JKDR000642	61.28	60.20	5.35	355.6	196	124.2	8.9	343	2.47	29.5	9	<.2	.8	595.2	4.01	2.95	.11	82	7.83	.083	5.4	18.9	.56	96.8	.001	2	.90	.019	.08	1.2	1.51	51	7.8	.13	2.4
99JKDR000643	67.52	63.26	5.90	244.7	196	119.4	10.2	392	3.16	28.5	8	6.5	.8	598.9	2.49	2.40	.10	121	7.08	.073	4.9	22.5	.98	93.0	.002	2	1.34	.019	.07	1.3	1.54	53	6.5	.14	3.5
99JKDR000644	18.02	47.67	5.37	191.7	150	83.4	10.3	447	2.52	28.1	5	.4	.5	575.4	1.54	1.94	.10	55	8.03	.058	3.8	13.4	.53	99.5	.001	3	.86	.017	.08	1.0	1.35	52	4.5	.13	2.2
STANDARD DS2	14.49	131.68	29.64	167.0	239	37.2	13.1	840	3.24	66.4	21.0	202.6	3.5	30.0	11.69	8.98	10.98	83	.61	.083	15.8	173.5	.62	147.6	116	2	1.82	.040	.17	6.9	1.87	232	2.5	1.81	6.2

Sample type: CORE. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

GEOCHEMICAL ANALYSIS CERTIFICATE



Hudson Bay Expl. & Dev. Co. Ltd. PROJECT 2318 File # 9903261 Page 1 (b)
 405 - 470 Granville St., Vancouver BC V6C 1V5 Submitted by: Jason K. Dunning

SAMPLE#	Cs ppm	Ge ppm	Nb ppm	Rb ppm	Sc ppm	Sn ppm	S %	Zr ppm	Y ppm	Ce ppm	In ppm	Re ppb	Li ppm
99JKDR000601	.32	<.1	.04	3.6	2.7	.3	2.31	2.6	13.36	13.8	.04	19	4.1
99JKDR000602	.50	<.1	.03	4.8	2.5	.3	1.99	2.2	14.63	15.8	.04	17	2.9
99JKDR000603	.29	<.1	.03	3.5	2.4	.2	1.81	2.7	14.38	14.3	.03	13	3.5
99JKDR000604	.32	<.1	.02	3.2	2.6	.2	2.08	3.0	15.78	13.7	.04	16	3.1
99JKDR000605	.31	<.1	.02	3.3	2.6	.1	1.31	2.1	18.44	10.6	.03	9	5.0
99JKDR000606	.42	<.1	.02	4.3	3.1	.2	1.72	4.1	21.10	14.2	.04	15	5.5
99JKDR000607	.35	<.1	.03	3.5	2.8	.2	1.70	3.2	17.50	12.5	.04	19	4.2
99JKDR000608	.29	<.1	.04	3.0	2.9	.1	1.83	2.7	16.28	14.2	.04	19	3.9
99JKDR000609	.33	<.1	.06	3.4	3.1	.3	1.31	2.1	16.10	13.1	.04	11	7.8
99JKDR000610	.36	<.1	.02	3.5	2.6	.2	1.62	2.8	16.27	12.8	.04	12	5.5
RE 99JKDR000610	.34	<.1	.02	3.4	2.5	.3	1.55	2.8	15.44	12.4	.04	13	5.7
RRE 99JKDR000610	.35	<.1	.02	3.5	2.5	.2	1.44	2.8	16.18	13.1	.04	14	6.0
99JKDR000611	.40	<.1	.03	3.6	2.4	.2	1.72	2.5	17.93	13.7	.04	13	4.3
99JKDR000612	.35	<.1	.02	3.4	2.7	.2	1.90	3.0	18.17	14.8	.04	18	5.4
99JKDR000613	.33	<.1	.02	3.1	3.1	.2	2.11	2.9	17.79	14.3	.05	16	5.1
99JKDR000614	.35	<.1	.02	3.3	2.8	.2	1.82	3.2	16.69	13.3	.05	27	6.9
99JKDR000615	.34	<.1	.03	3.3	2.9	.3	1.89	3.1	19.04	14.7	.05	24	6.9
99JKDR000616	.35	<.1	.02	3.2	2.5	.3	1.87	3.2	18.17	16.6	.05	21	8.9
99JKDR000617	.36	<.1	.02	3.3	3.1	.3	2.56	3.0	20.54	20.3	.05	21	9.5
99JKDR000618	.34	<.1	.02	3.1	3.1	.3	2.00	2.3	17.12	16.4	.05	11	8.5
99JKDR000619	.34	<.1	.02	3.2	3.3	.3	1.93	2.6	19.47	17.9	.05	16	9.0
99JKDR000620	.38	<.1	.02	3.5	2.9	.4	1.48	2.8	19.28	21.3	.05	15	9.7
99JKDR000621	.33	<.1	.05	3.3	2.5	.5	1.48	2.5	15.16	17.3	.03	18	8.4
99JKDR000622	.35	<.1	.03	3.3	2.7	.3	1.39	2.7	14.84	20.3	.04	12	8.2
RE 99JKDR000622	.36	<.1	.03	3.4	2.8	.4	1.36	2.8	14.70	20.5	.04	15	8.7
RRE 99JKDR000622	.34	<.1	.02	3.0	2.6	.3	1.38	2.6	14.07	20.6	.04	12	7.9
99JKDR000623	.36	<.1	.02	3.3	3.2	.4	1.71	2.8	16.06	19.8	.04	17	9.7
99JKDR000624	.33	<.1	.02	3.1	3.2	.4	1.80	2.8	17.72	22.3	.05	19	8.9
99JKDR000625	.33	<.1	.07	3.1	3.1	.5	1.92	2.9	17.42	19.8	.05	19	9.9
99JKDR000626	.36	<.1	.03	3.5	3.5	.5	2.09	2.7	19.05	22.2	.05	21	10.1
99JKDR000627	.32	<.1	.02	3.1	3.4	.4	1.88	2.4	16.39	19.2	.04	16	8.3
99JKDR000628	.31	<.1	.02	2.9	3.3	.3	1.71	2.1	17.60	17.0	.04	14	7.4
99JKDR000629	.31	<.1	.02	3.0	3.2	.3	1.53	3.9	14.42	17.5	.04	19	9.5
99JKDR000630	.31	<.1	.02	3.1	3.3	.3	1.66	3.0	12.66	15.0	.04	14	7.4
STANDARD DS2	2.81	<.1	2.14	15.5	2.9	25.8	.03	4.4	7.77	32.3	5.28	2	13.3

GROUP 1F30 - 30.00 GM SAMPLE LEACHED WITH 180 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR, DILUTED TO 600 ML, ANALYSED BY ICP/ES & MS.
 UPPER LIMITS - AG, AU, HG, W, SE, TE, TL, GA, SN = 100 PPM; MO, CO, CD, SB, BI, TH, U, B = 2,000 PPM; CU, PB, ZN, NI, MN, AS, V, LA, CR = 10,000 PPM.
 - SAMPLE TYPE: CORE Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: SEP 3 1999 DATE REPORT MAILED: *Sept 23/99* SIGNED BY: *C. L.* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS



SAMPLE#	Cs ppm	Ge ppm	Nb ppm	Rb ppm	Sc ppm	Sn ppm	S %	Zr ppm	Y ppm	Ce ppm	In ppm	Re ppb	Li ppm
99JKDR000631	.41	<.1	.03	3.2	3.1	.4	1.80	3.2	13.08	17.0	.05	13	6.2
99JKDR000632	.40	<.1	.02	3.4	3.4	.3	1.26	2.6	11.07	16.0	.04	14	13.0
99JKDR000633	.34	<.1	.03	3.2	3.6	.3	1.81	2.6	11.84	13.3	.04	23	8.3
99JKDR000634	.27	<.1	.02	2.3	3.6	.3	1.28	3.0	9.69	8.7	.04	18	8.4
99JKDR000635	.33	<.1	.04	2.7	3.1	.3	1.97	3.3	9.55	7.9	.04	25	6.4
99JKDR000636	.36	.1	.04	3.6	3.4	.2	1.72	3.0	11.02	9.1	.04	20	8.9
99JKDR000637	.41	.1	.02	3.4	3.7	.2	1.64	2.4	14.18	11.5	.04	21	8.2
99JKDR000638	.32	.1	.08	2.8	3.5	.3	1.56	3.3	12.03	9.8	.04	29	9.1
99JKDR000639	.29	.1	.05	2.9	3.2	.2	1.90	3.5	10.54	7.9	.05	30	8.2
99JKDR000640	.21	.1	.04	2.1	4.2	.1	1.43	3.4	9.91	7.3	.04	27	9.9
RE 99JKDR000640	.21	<.1	.03	2.0	4.1	.2	1.44	3.4	9.63	7.6	.04	26	9.7
RRE 99JKDR000640	.20	.1	.04	2.0	4.1	.2	1.47	3.3	9.62	7.3	.04	23	9.6
99JKDR000641	.15	.1	.04	1.4	4.1	.2	1.28	3.0	7.64	6.9	.03	18	9.4
99JKDR000642	.27	<.1	.02	2.6	3.5	.2	1.80	3.8	12.17	8.8	.05	31	7.1
99JKDR000643	.29	.1	.04	2.4	3.7	.2	1.66	3.6	10.92	8.4	.05	25	12.1
99JKDR000644	.29	<.1	.02	2.8	3.2	.1	1.64	2.7	9.58	6.9	.04	29	6.9
STANDARD DS2	2.74	<.1	2.03	15.7	3.2	27.1	.03	4.5	7.73	31.2	5.39	1	13.4

Sample type: CORE. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

WHOLE ROCK ICP ANALYSIS



Hudson Bay Expl. & Dev. Co. Ltd. PROJECT 2318 File # 9903261 Page 1
405 - 470 Granville St., Vancouver BC V6C 1V5 Submitted by: Jason K. Dunning

SAMPLE#	SiO2	Al2O3	Fe2O3	MgO	CaO	Na2O	K2O	TiO2	P2O5	MnO	Cr2O3	Ba	Ni	Sr	Zr	Y	Nb	Sc	LOI	TOT/C	LOI/S	SUM
	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%
99JKDR000605	44.56	7.49	4.17	1.35	21.12	.38	.71	.35	.17	.08	.015	689	73	714	46	28	<20	11	19.4	6.30	1.63	99.97
99JKDR000611	51.62	9.57	4.58	1.15	13.88	1.35	.99	.47	.21	.06	.005	1107	69	905	61	27	<20	13	14.6	5.23	2.10	98.71
99JKDR000617	51.15	9.95	5.05	1.21	14.51	1.52	1.02	.47	.20	.06	.006	1028	69	890	66	29	<20	13	13.6	4.99	2.56	98.99
99JKDR000623	53.51	9.64	4.76	1.11	13.76	1.61	.93	.44	.18	.07	.005	919	74	720	55	24	<20	13	13.0	4.87	1.98	99.01
99JKDR000629	51.45	9.14	4.76	1.07	15.34	1.34	.94	.40	.22	.06	.004	788	55	729	53	23	<20	11	13.9	4.89	1.78	98.81
STANDARD SO-15/CSB	48.92	12.78	7.28	7.24	5.85	2.40	1.85	1.66	2.69	1.39	1.057	2232	89	395	997	21	29	11	5.9	2.38	5.32	99.46

GROUP 4A - 0.200 GM SAMPLE BY LiBO2 FUSION, ANALYSIS BY ICP-ES. LOI BY LOSS ON IGNITION.
TOTAL C & S BY LECO. (NOT INCLUDED IN THE SUM)
- SAMPLE TYPE: CORE

DATE RECEIVED: SEP 3 1999 DATE REPORT MAILED: *Sept 23/99* SIGNED BY: *C.L.* J.D. TOYE, C.LEONG, J. WANG; CERTIFIED B.C. ASSAYERS



SAMPLE#	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	Ba ppm	Ni ppm	Sr ppm	Zr ppm	Y ppm	Nb ppm	Sc ppm	LOI %	TOT/C %	TOT/S %	SUM %
99JKDR000634	48.90	8.01	3.49	3.00	16.55	1.32	.67	.33	.16	.04	.005	656	75	1210	59	22	<20	9	16.3	5.69	1.46	99.00
99JKDR000640	43.12	8.01	4.66	3.98	18.26	1.26	.53	.37	.17	.03	.003	594	100	1071	41	17	<20	11	18.6	6.66	1.62	99.20

Sample type: CORE.



WHOLE ROCK ICP ANALYSIS



Hudson Bay Expl. & Dev. Co. Ltd. PROJECT 2318 File # 9903262

405 - 470 Granville St., Vancouver BC V6C 1V5 Submitted by: Jason K. Dunning

SAMPLE#	SiO2	Al2O3	Fe2O3	MgO	CaO	Na2O	K2O	TiO2	P2O5	MnO	Cr2O3	Ba	Ni	Sr	Zr	Y	Nb	Sc	LOI	TOT/C	TOT/S	SUM
	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%
99JKDR000645	70.74	15.27	2.09	.57	1.72	4.57	3.21	.21	.08	.04	.011	1212	226	667	104	10	<10	1	.9	.04	<.01	99.66

GROUP 4A - 0.200 GM SAMPLE BY LIBO2 FUSION, ANALYSIS BY ICP-ES. LOI BY LOSS ON IGNITION.
TOTAL C & S BY IECO. (NOT INCLUDED IN THE SUM)
- SAMPLE TYPE: ROCK

DATE RECEIVED: SEP 3 1999

DATE REPORT MAILED:

Sept 21/99 SIGNED BY: *Cheng*

TOYE, C. EDONG, J. WANG; CERTIFIED B.C. ASSAYERS

GEOCHEMICAL ANALYSIS CERTIFICATE



Hudson Bay Expl. & Dev. Co. Ltd. PROJECT 2318 File # 9903262 (a)

405 - 470 Granville St., Vancouver BC V6C 1V5 Submitted by: Jason K. Dunning

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Hg	Ba	Ti	B	Al	Na	K	W	Tl	Hg	Se	Te	Ga
	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppb	ppm	ppm	ppm	
99JKDR000645	2.35	31.36	2.89	39.9	27	6.5	2.9	158	1.12	<.1	3.6	1.5	4.9	37.9	.04	.05	<.02	12	.26	.030	17.9	18.1	.29	61.3	.048	8	.47	.056	.27	7.3	.10	5	.1	.04	2.8

GROUP 1F30 - 30.00 GM SAMPLE, 180 ML 2-2-2 HCl-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 600 ML, ANALYSIS BY ICP/ES & MS.
UPPER LIMITS - AG, AU,, HG, W, SE, TE, TL, GA, SN = 100 PPM; MO, CO, CD, SB, BI, TH, U, B = 2000 PPM; CU, PB, ZN, NI, MN, AS,V, LA, CR = 10,000 PPM.
- SAMPLE TYPE: ROCK

DATE RECEIVED: SEP 3 1999 DATE REPORT MAILED: *Sept 21/99* SIGNED BY: *CL* .D. TOYE, C.LEONG, J. WANG; CERTIFIED B.C. ASSAYERS



GEOCHEMICAL ANALYSIS CERTIFICATE



Hudson Bay Expl. & Dev. Co. Ltd. PROJECT 2318 File # 9903262 (b)

405 - 470 Granville St., Vancouver BC V6C 1V5 Submitted by: Jason K. Dunning

SAMPLE#	Cs ppm	Ge ppm	Nb ppm	Rb ppm	Sc ppm	Sn ppm	S %	Zr ppm	Y ppm	Ce ppm	In ppm	Re ppb	Li ppm
99JKDR000645	.43	<.1	1.16	15.1	1.0	1.0	<.01	14.7	6.33	42.5	<.02	<2	18.1

GROUP 1F30 - 30.00 GM SAMPLE, 180 ML 2-2-2 HCl-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 600 ML WITH WATER, ANALYSIS BY ICP/ES & MS.
UPPER LIMITS - AG, AU, HG, W, SE, TE, TI, GA, SN = 100 PPM; MO, CO, CD, SB, BI, TH, U, B = 2000 PPM; CU, PB, ZN, NI, MN, AS, V, LA, CR = 10,000 PPM.
- SAMPLE TYPE: ROCK

DATE RECEIVED: SEP 3 1999 DATE REPORT MAILED: *Sept 21/99* SIGNED BY: *C.L.* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS



WHOLE ROCK ICP ANALYSIS

Hudson Bay Expl. & Dev. Co. Ltd. PROJECT 2318 File # 9903434 Page 1
 405 - 470 Granville St., Vancouver BC V6C 1V5 Submitted by: Jason K. Dunning

SAMPLE#	SiO2	Al2O3	Fe2O3	MgO	CaO	Na2O	K2O	TiO2	P2O5	MnO	Cr2O3	Ba	Ni	Sr	Zr	Y	Nb	Sc	LOI	C/TOT	S/TOT	SUM
	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%
99JKDR000646	54.67	16.25	7.64	3.69	4.37	3.18	4.33	.83	.21	.13	.012	1112	24	664	79	23	<10	15	4.3	.57	.10	99.83
99JKDR000647	76.72	7.84	3.97	1.21	2.95	2.71	.38	.36	.05	.29	.012	231	20	183	90	27	<10	8	3.3	.70	.03	99.86
99JKDR000648	64.88	15.09	5.14	2.55	1.65	3.75	1.81	.69	.15	.35	.009	2350	21	212	153	48	<10	12	3.6	.48	.06	99.99
99JKDR000649	76.92	8.96	3.80	1.99	1.71	1.15	1.28	.42	.07	.11	.014	1327	<20	108	77	29	<10	8	3.4	.48	.77	100.00
99JKDR000650	71.92	10.44	4.23	2.37	2.98	1.20	1.49	.49	.10	.11	.015	1074	26	191	72	25	<10	9	4.5	.78	.83	100.00
99JKDR000651	69.77	6.19	4.28	2.28	5.54	.52	1.04	.31	.26	.12	.019	637	41	164	51	26	<10	6	9.4	3.91	2.43	99.84
99JKDR000655	66.03	11.05	6.19	2.16	4.31	1.20	1.70	.67	.12	.10	.016	577	51	130	62	30	<10	14	6.2	1.82	2.07	99.85
99JKDR000661	57.50	11.91	6.01	2.24	8.06	2.44	1.70	.67	.11	.12	.011	440	25	237	79	30	<10	14	9.0	2.84	2.75	99.87
99JKDR000667	76.24	7.42	4.22	1.67	1.94	.95	1.20	.35	.30	.03	.016	1101	62	91	75	29	<10	8	5.3	2.73	2.93	99.79
99JKDR000668	71.32	15.39	2.04	.56	1.68	4.60	3.41	.19	.04	.03	.011	1025	<20	700	88	11	<10	2	.4	.06	.02	99.88
RE 99JKDR000668	71.13	15.39	2.02	.56	1.67	4.62	3.53	.20	.03	.03	.014	1024	20	700	100	10	<10	2	.5	.06	.01	99.91
RRE 99JKDR000668	70.76	15.32	2.09	.55	1.66	4.50	3.74	.19	.03	.03	.013	1027	<20	695	85	10	<10	2	.8	.06	.02	99.90
99JKDR000669	60.69	17.13	6.27	1.94	2.84	3.42	2.89	.70	.14	.12	.010	1101	37	376	131	28	<10	12	3.5	.14	.01	99.84
99JKDR000670	47.96	18.27	10.97	5.17	5.23	5.07	.97	1.14	.20	.25	.006	4661	<20	1598	45	20	<10	18	4.0	.10	<.01	99.96
99JKDR000671	59.11	17.28	6.50	2.38	3.13	2.93	2.69	.75	.11	.13	.009	1033	<20	429	115	25	<10	11	4.8	.22	<.01	100.01
99JKDR000672	60.06	15.67	7.95	3.67	2.04	4.10	.93	.93	.14	.19	.010	671	20	432	102	22	<10	14	4.0	.12	<.01	99.84
99JKDR000673	57.19	16.47	6.95	3.02	5.17	2.84	1.48	.87	.21	.18	.009	898	32	410	221	24	<10	14	5.4	.50	<.01	99.98
99JKDR000674	57.33	16.97	7.08	2.29	4.38	2.70	2.34	.80	.19	.14	.011	1055	<20	408	103	25	<10	12	5.4	.39	<.01	99.82
99JKDR000675	59.93	16.71	7.01	2.20	2.70	4.01	1.82	.90	.16	.12	.011	1146	<20	470	98	20	<10	14	4.1	.19	.02	99.87
STANDARD SO-15/CSB	48.67	12.97	7.39	7.35	5.94	2.44	1.87	1.62	2.73	1.41	1.073	1938	75	401	825	27	<10	9	5.9	2.38	5.33	99.75

GROUP 4A - 0.200 GM SAMPLE BY LIBO2 FUSION, ANALYSIS BY ICP-ES. LOI BY LOSS ON IGNITION.
 TOTAL C & S BY LECO. (NOT INCLUDED IN THE SUM)
 - SAMPLE TYPE: CORE Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: SEP 13 1999 DATE REPORT MAILED: *Oct 1/99* SIGNED BY: *C. Toy* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS



SAMPLE#	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	Ba ppm	Ni ppm	Sr ppm	Zr ppm	Y ppm	Nb ppm	Sc ppm	LOI %	C/TOT %	S/TOT %	SUM %
99JKDR000676	58.58	16.91	7.93	3.09	1.94	3.37	1.96	.85	.10	.15	.012	957	20	393	95	16	<10	12	4.8	.07	.01	99.86
99JKDR000677	53.64	16.18	5.86	1.12	7.59	3.24	.93	.68	.13	.13	.012	624	25	315	77	18	<10	9	10.2	1.73	.04	99.84
99JKDR000678	54.80	17.04	6.26	1.90	6.22	3.86	1.25	.68	.12	.13	.010	956	20	440	80	18	<10	11	7.5	.40	<.01	99.95
99JKDR000679	69.78	15.63	2.15	.57	1.83	4.62	3.82	.20	.07	.03	.012	1062	<20	742	101	11	<10	2	.9	.06	<.01	99.84
99JKDR000680	73.63	9.35	4.59	1.68	3.19	1.67	1.00	.43	.08	.06	.014	666	30	143	68	29	<10	9	4.0	.83	1.87	99.80
99JKDR000686	67.55	9.06	4.19	2.34	6.90	1.40	1.70	.39	.20	.16	.012	881	32	172	71	34	<10	9	5.8	1.86	1.57	99.84
99JKDR000688	61.87	15.85	3.98	1.07	5.36	4.17	1.90	.33	.18	.11	.011	753	<20	297	112	24	<10	3	5.0	1.03	.33	99.97
99JKDR000689	69.98	10.52	4.62	1.28	4.23	2.37	1.04	.53	.12	.09	.010	741	29	248	84	35	<10	11	4.9	1.51	1.62	99.82
99JKDR000697	66.43	13.14	6.86	2.01	2.26	4.10	.68	.68	.16	.12	.014	516	24	195	55	27	<10	12	3.3	.46	2.74	99.85
99JKDR000703	66.39	10.75	5.13	1.54	6.02	3.03	.76	.52	.09	.23	.013	547	30	211	50	23	<10	9	5.3	1.37	1.95	99.87
STANDARD SO-15/CSB	48.67	12.97	7.39	7.35	5.94	2.44	1.87	1.62	2.73	1.41	1.073	1938	75	401	825	27	<10	9	5.9	2.38	5.33	99.75

Sample type: CORE.



SAMPLE#	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	Ba ppm	Ni ppm	Sr ppm	Zr ppm	Y ppm	Nb ppm	Sc ppm	LOI %	C/TOT %	S/TOT %	SUM %
99JKDR000709	75.41	9.17	4.29	1.09	2.36	2.55	1.03	.48	.02	.09	.012	421	29	183	50	21	<10	9	3.4	.77	1.61	99.98
99JKDR000715	49.74	13.88	10.21	9.37	9.90	1.98	1.12	.79	.25	.25	.040	550	89	351	37	19	<10	27	2.3	.23	.23	99.96
99JKDR000718	64.48	16.97	3.73	1.05	3.28	5.73	1.73	.39	.13	.11	.014	1000	23	340	56	10	<10	3	2.2	.13	.32	99.98
RE 99JKDR000718	64.29	16.94	3.66	1.03	3.26	5.76	1.63	.41	.12	.10	.009	3737	<20	341	57	<10	<10	3	2.3	.14	.30	99.98
RRE 99JKDR000718	64.67	16.94	3.66	1.04	3.28	5.70	1.72	.39	.12	.10	.012	998	<20	341	60	10	<10	3	2.2	.13	.31	100.00
99JKDR000719	44.29	14.49	8.96	9.74	8.07	1.24	1.69	.95	.19	.19	.095	649	209	177	65	20	<10	20	9.9	1.59	.03	99.94
99JKDR000720	80.93	7.20	3.35	1.54	1.60	1.46	1.07	.31	<.01	.13	.016	1171	35	86	105	21	<10	6	2.2	.31	.01	99.97
99JKDR000721	79.32	7.79	3.51	1.74	1.85	1.50	1.08	.34	.02	.13	.017	1319	41	123	61	19	<10	6	2.4	.32	.03	99.88
99JKDR000722	76.74	9.19	4.24	1.34	1.86	2.55	.87	.49	.09	.07	.012	794	31	168	53	20	<10	9	2.3	.40	.83	99.88
99JKDR000723	71.14	15.02	1.90	.55	1.79	4.69	3.55	.21	.01	.03	.012	1033	<20	689	94	12	<10	2	.9	.10	<.01	100.02
99JKDR000724	46.68	15.09	9.73	5.45	9.20	2.25	1.56	.74	.18	.21	.014	617	39	451	31	15	<10	23	8.7	1.51	.33	99.94
99JKDR000725	49.13	16.12	9.69	5.86	8.93	3.56	1.01	.75	.23	.20	.017	364	47	723	29	16	<10	24	4.2	.43	.07	99.84
99JKDR000726	48.88	15.81	9.22	5.60	10.55	3.25	1.03	.73	.20	.18	.015	563	44	703	27	14	<10	23	4.3	.36	.06	99.93
99JKDR000727	48.30	17.22	9.16	5.36	7.57	3.85	.88	.75	.24	.17	.012	359	53	691	36	15	<10	18	6.3	.88	.15	99.95
99JKDR000728	73.04	10.41	4.03	1.97	2.58	2.25	.93	.44	.07	.14	.018	414	52	234	114	19	<10	6	3.9	.27	<.01	99.88
99JKDR000729	47.06	17.33	10.32	4.84	9.29	1.84	2.68	1.00	.19	.21	.006	899	34	600	52	20	<10	21	5.0	.49	.01	99.95
99JKDR000730	64.36	12.33	6.84	2.55	3.56	2.50	2.10	.64	.14	.18	.016	819	39	234	67	21	<10	12	4.6	.60	.01	99.95
RE 99JKDR000730	64.41	12.21	6.88	2.57	3.57	2.53	2.11	.64	.10	.18	.017	802	43	232	68	20	<10	12	4.6	.62	.01	99.95
RRE 99JKDR000730	64.52	12.16	6.83	2.55	3.55	2.48	2.11	.64	.10	.18	.016	803	42	230	66	21	<10	12	4.7	.59	.01	99.97
99JKDR000731	74.72	8.95	4.01	1.43	3.42	1.97	1.29	.46	.05	.14	.015	625	31	172	61	21	<10	9	3.4	.64	.37	99.96
99JKDR000732	68.41	12.56	5.57	1.97	2.13	2.71	1.85	.67	.11	.09	.011	953	34	211	115	38	<10	12	3.7	.59	1.39	99.94
99JKDR000737	73.92	8.57	5.51	1.66	4.09	1.64	.74	.51	.07	.18	.018	561	54	176	64	26	<10	11	2.9	1.06	1.69	99.91
STANDARD SO-15/CSB	49.17	12.81	7.30	7.26	5.87	2.41	1.85	1.61	2.70	1.39	1.060	1912	84	396	946	23	<10	9	5.9	2.40	5.34	99.73

Sample type: CORE. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



SAMPLE#	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	Ba ppm	Ni ppm	Sr ppm	Zr ppm	Y ppm	Nb ppm	Sc ppm	LOI %	C/TOT %	S/TOT %	SUM %
99JKDR000738	72.54	11.56	4.75	2.86	1.76	1.90	1.82	.60	.09	.14	.014	1064	24	138	103	36	<10	11	2.0	.17	.28	100.19
99JKDR000739	74.60	11.00	4.60	2.73	1.09	1.36	1.96	.58	.11	.08	.015	1111	<20	113	98	35	<10	11	2.0	.06	.13	100.28
99JKDR000740	74.25	11.22	4.65	2.41	1.48	1.37	1.98	.54	.16	.10	.013	1439	25	122	103	39	<10	11	1.9	.17	.42	100.27
99JKDR000741	73.61	11.21	4.57	2.63	1.17	1.86	1.71	.61	.10	.11	.014	1255	<20	144	100	29	<10	11	2.7	.08	.42	100.47
99JKDR000742	69.39	13.55	5.12	3.43	1.44	2.05	1.98	.66	.12	.13	.014	1365	22	167	125	46	<10	12	2.2	.08	.27	100.28
99JKDR000743	74.70	11.41	4.15	2.56	.85	1.40	1.97	.51	.04	.07	.017	1445	<20	107	112	35	<10	9	2.4	.02	.34	100.27
99JKDR000744	78.70	8.69	3.52	1.88	1.47	1.54	1.38	.38	.06	.07	.015	883	28	133	78	29	<10	8	2.4	.07	.32	100.24
99JKDR000745	72.40	11.23	4.20	2.34	1.89	2.38	1.76	.59	.13	.11	.012	1361	<20	178	96	35	<10	11	3.0	.29	.65	100.24
99JKDR000749	59.60	16.47	5.79	2.58	4.66	5.05	1.88	.62	.21	.16	.011	1005	<20	415	85	18	<10	9	3.2	.43	.29	100.41
99JKDR000750	59.91	16.28	5.87	2.61	4.12	5.15	1.93	.63	.20	.15	.013	1010	27	408	85	18	<10	9	3.2	.34	.23	100.24
RE 99JKDR000750	59.72	16.52	5.82	2.59	4.11	5.33	1.94	.63	.22	.15	.009	1030	<20	412	102	19	<10	11	3.1	.35	.21	100.32
RRE 99JKDR000750	59.63	16.50	5.81	2.57	4.07	5.33	1.93	.63	.20	.15	.013	1023	<20	413	105	18	<10	9	3.2	.33	.22	100.22
99JKDR000753	65.58	12.24	6.79	2.89	3.02	2.57	1.24	.68	.12	.15	.015	857	25	257	149	29	<10	14	4.7	1.19	2.97	100.15
99JKDR000759	71.41	6.65	5.10	1.09	4.57	1.00	2.09	.36	.68	.04	.021	906	76	142	65	33	<10	6	7.0	4.16	2.05	100.15
99JKDR000764	50.40	16.64	8.07	3.00	7.02	2.97	2.20	.81	.25	.16	.009	772	<20	273	62	19	<10	15	8.4	1.64	.01	100.06
99JKDR000765	55.35	17.60	6.71	1.63	5.98	3.80	2.26	.59	.13	.15	.009	1128	<20	402	71	15	<10	9	5.8	1.02	.01	100.20
99JKDR000766	54.43	18.27	6.90	2.16	8.05	3.95	1.42	.64	.17	.15	.011	815	<20	824	55	15	<10	8	4.0	.66	.01	100.35
99JKDR000767	51.36	18.07	7.92	3.69	6.19	4.13	1.40	.69	.17	.16	.010	533	<20	467	39	11	<10	12	6.3	.99	<.01	100.21
99JKDR000768	48.85	15.85	7.93	3.85	8.77	3.40	1.17	.80	.20	.16	.012	676	37	355	53	17	<10	15	9.0	1.77	.11	100.13
STANDARD SO-15/CSB	48.63	12.98	7.40	7.36	5.95	2.44	2.13	1.62	2.74	1.41	1.074	2063	71	401	921	23	<10	9	5.9	2.40	5.33	100.05

Sample type: CORE. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



SAMPLE#	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	Ba ppm	Ni ppm	Sr ppm	Zr ppm	Y ppm	Nb ppm	Sc ppm	LOI %	C/TOT %	S/TOT %	SUM %
99JKDR000769	47.85	16.47	9.06	4.44	7.30	3.69	1.01	.91	.23	.17	.013	355	47	294	61	20	<10	18	8.6	1.48	.06	99.84
99JKDR000771	49.30	14.27	7.62	3.42	10.28	3.24	1.67	.72	.28	.13	.016	353	58	720	65	23	<10	14	8.7	2.70	1.67	99.79
99JKDR000772	49.46	17.97	7.90	3.29	5.81	5.80	2.42	.84	.31	.18	.009	723	22	380	60	20	<10	12	5.7	1.19	.59	99.83
99JKDR000773	52.50	17.45	6.16	3.16	4.73	4.60	4.77	.56	.42	.13	.015	1547	39	477	56	17	<10	8	5.1	1.01	.24	99.84
99JKDR000774	36.90	5.39	8.60	27.21	6.20	.06	.16	.32	.17	.14	.202	164	883	234	<10	<10	<10	12	14.4	2.08	.07	99.91
99JKDR000775	33.66	4.88	8.20	23.55	9.23	.05	.21	.29	.13	.15	.199	384	855	436	11	<10	<10	12	19.3	3.58	.05	100.06
99JKDR000776	49.75	8.81	6.37	5.76	10.93	.80	1.61	.45	.10	.10	.015	933	102	299	45	19	<10	9	15.0	5.44	2.65	99.86
99JKDR000777	32.61	6.55	9.79	20.04	9.51	.07	.32	.41	.17	.14	.259	51	1092	397	14	<10	<10	15	19.9	3.73	.24	99.97
99JKDR000781	53.38	12.66	7.26	3.38	9.31	.15	3.21	.86	.09	.37	.012	2442	41	112	76	27	<10	14	8.8	3.25	4.05	99.79
99JKDR000793	55.80	11.68	7.59	2.52	6.42	.10	2.84	.59	.14	.67	.013	1035	88	108	58	23	<10	12	10.8	4.05	3.72	99.31
STANDARD SO-15/CSB	48.63	12.98	7.40	7.36	5.95	2.44	2.13	1.62	2.74	1.41	1.074	2063	71	401	921	23	<10	9	5.9	2.40	5.33	100.05

Sample type: CORE.



SAMPLE#	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	Ba ppm	Ni ppm	Sr ppm	Zr ppm	Y ppm	Nb ppm	Sc ppm	LOI %	TOT/C %	TOT/S %	SUM %
99JKDR000804	28.42	3.38	6.31	10.70	19.93	.01	.74	.18	.10	.24	.130	65	614	243	<10	<10	<10	5	29.7	8.32	.20	99.96
99JKDR000805	31.93	7.76	6.78	8.38	16.66	.09	1.56	.40	.29	.24	.082	128	370	184	33	<10	<10	6	25.7	6.83	.57	99.96
99JKDR000807	41.71	12.83	7.61	4.97	9.97	.59	3.61	.58	.33	.16	.023	922	53	250	41	19	<10	8	17.4	4.60	.56	99.93
99JKDR000811	50.33	15.58	6.15	3.24	6.70	.55	3.94	.68	.31	.11	.011	682	46	185	53	22	<10	7	12.2	3.16	1.25	99.92
99JKDR000812	67.13	18.11	1.16	1.02	1.65	.86	4.86	.11	.01	.03	.009	844	<20	71	65	<10	<10	1	4.9	.58	.19	99.96
99JKDR000813	67.28	17.21	1.34	1.22	1.99	.12	5.03	.10	.02	.05	.011	956	<20	57	62	<10	<10	1	5.5	.79	.20	99.99
99JKDR000815	66.40	16.93	.94	.34	3.89	2.83	3.37	.11	.01	.04	.012	637	<20	228	57	<10	<10	<1	5.0	.94	.14	99.98
99JKDR000817	66.55	17.13	.95	.34	3.42	3.62	3.04	.10	<.01	.04	.012	552	<20	200	58	<10	<10	1	4.7	.84	.15	100.00
99JKDR000820	65.43	17.30	1.07	.44	3.43	3.38	3.31	.10	.01	.04	.011	371	<20	172	62	<10	<10	1	5.4	.95	.05	99.99
99JKDR000822	55.03	13.62	7.06	2.33	6.51	.88	2.75	.70	.27	.12	.019	298	51	197	52	25	<10	7	10.5	3.23	2.19	99.86
RE 99JKDR000822	54.82	13.76	7.02	2.36	6.55	.87	2.84	.69	.27	.12	.020	302	55	200	54	26	<10	7	10.5	3.31	2.28	99.90
RRE 99JKDR000822	55.08	13.72	7.02	2.36	6.56	.87	2.72	.72	.30	.12	.019	298	47	199	52	26	<10	7	10.3	3.24	2.24	99.86
99JKDR000826	36.72	4.64	7.95	21.10	7.89	.11	.23	.26	.10	.12	.211	44	884	241	<10	<10	<10	7	20.5	4.38	.03	99.98
99JKDR000827	44.32	13.07	9.41	8.06	6.77	3.48	.27	.66	.34	.17	.035	155	70	210	36	16	<10	13	13.3	2.77	.01	99.94
99JKDR000828	46.31	16.82	9.90	4.33	4.44	5.37	1.34	.82	.18	.15	.012	485	29	155	35	18	<10	11	10.2	2.41	.01	99.96
99JKDR000829	41.16	16.18	8.26	4.41	8.17	1.25	3.78	.66	.13	.25	.012	490	41	180	29	14	<10	12	15.6	3.88	.36	99.95
99JKDR000830	47.36	16.94	9.90	2.89	4.87	5.33	1.02	.74	.18	.14	.006	309	<20	213	37	18	<10	10	10.5	2.18	<.01	99.95

Sample type: CORE. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



SAMPLE#	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	Ba ppm	Ni ppm	Sr ppm	Zr ppm	Y ppm	Nb ppm	Sc ppm	LOI %	TOT/C %	TOT/S %	SUM %
99JKDR000831	49.57	18.04	8.36	3.83	5.59	4.43	2.14	.72	.18	.14	.005	569	<20	193	34	18	<10	13	7.3	1.18	<.01	100.40
99JKDR000832	70.56	15.64	1.89	.60	1.86	4.70	2.97	.20	.01	.03	.012	916	<20	700	89	11	<10	1	.8	.05	<.01	99.47
99JKDR000833	58.04	16.92	5.47	3.29	5.45	3.55	2.18	.82	.30	.07	.015	985	38	1098	94	15	<10	7	4.0	.07	<.01	100.37
99JKDR000834	41.91	13.12	5.24	3.34	16.72	2.86	1.70	.60	.27	.22	.009	855	31	1028	79	12	<10	5	13.8	3.02	.01	100.02
99JKDR000835	60.02	16.95	5.06	2.50	5.05	3.58	2.70	.80	.29	.07	.017	1049	39	1055	102	15	<10	7	2.3	.06	.05	99.60
99JKDR000836	57.90	17.02	5.77	3.08	5.60	3.92	2.54	.87	.35	.08	.014	1105	42	1166	99	15	<10	8	2.5	.10	.03	99.93
99JKDR000837	64.41	17.08	2.68	1.15	3.62	3.68	2.72	.61	.11	.03	.015	1813	22	1188	85	11	<10	4	3.3	.03	.01	99.76
99JKDR000838	52.99	19.41	5.98	1.63	5.10	3.25	2.57	.48	.25	.10	.008	703	<20	370	63	17	<10	5	8.0	.78	.02	99.90
99JKDR000839	55.09	18.00	6.78	2.06	4.17	2.94	2.60	.44	.25	.08	.008	690	<20	318	64	17	<10	4	7.5	.75	<.01	100.05
99JKDR000840	54.14	18.19	5.68	1.72	5.57	3.17	2.42	.47	.21	.09	.008	547	<20	420	62	17	<10	4	8.2	1.05	<.01	99.99
RE 99JKDR000840	54.06	18.27	5.56	1.73	5.61	3.29	2.42	.42	.21	.09	.007	545	21	422	59	18	<10	4	8.2	1.08	<.01	99.99
RRE 99JKDR000840	54.05	18.21	5.58	1.73	5.62	3.23	2.38	.46	.24	.09	.008	544	<20	421	63	18	<10	4	8.2	1.10	.01	99.92
99JKDR000841	55.24	16.73	5.74	2.09	6.49	2.48	2.19	.39	.19	.12	.007	679	<20	403	64	17	<10	4	8.6	1.14	<.01	100.40
99JKDR000842	54.41	18.22	6.38	2.27	5.67	2.41	2.34	.41	.21	.12	.007	850	<20	402	63	18	<10	4	7.6	.89	.01	100.20
99JKDR000843	51.34	16.02	6.01	2.09	8.73	2.14	1.68	.57	.21	.18	.009	300	<20	352	55	17	<10	7	11.3	1.96	.04	100.37
99JKDR000844	57.97	16.44	5.87	1.28	4.96	1.96	1.79	.73	.17	.10	.014	286	25	225	78	27	<10	12	9.2	1.48	1.11	100.56
99JKDR000845	62.47	10.90	4.23	1.54	7.78	.87	1.61	.48	.12	.21	.010	252	20	198	76	28	<10	7	10.2	2.13	.95	100.49
99JKDR000846	71.03	15.51	1.95	.57	1.58	4.38	3.17	.20	.04	.03	.009	905	<20	632	86	12	<10	1	.8	.03	.02	99.46
STANDARD SD-15/CSB	49.26	13.39	7.31	7.36	5.88	2.40	2.02	1.66	2.72	1.38	1.083	1920	72	391	835	23	<10	8	5.9	2.38	5.29	100.75

Sample type: CORE. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppb	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppb	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	Ta ppm	Cr ppm	Mg %	Ba ppm	Ti %	R ppm	Al %	Na %	K %	W ppm	Cl ppm	Hg ppb	Se ppm	Te ppm	Ga ppm
99JKDR000676	1.18	14.89	6.59	71.9	60	7.2	16.8	1102	4.00	7.0	.8	2.6	1.8	119.3	.03	.82	.39	91	.50	.051	8.8	15.4	1.46	182.1	.067	8	1.57	140	.28	.5	.06	7	.2	.05	5.5
99JKDR000677	.69	77.81	3.77	57.2	50	6.3	14.1	986	3.16	4.1	.4	2.0	1.3	108.3	.07	.59	.17	94	4.62	.062	14.3	14.3	.52	72.3	.027	8	1.03	.071	.13	.9	.03	9	.1	.03	6.0
99JKDR000678	.77	65.76	4.91	54.8	56	7.0	14.0	887	3.03	7.4	.9	3.0	1.6	224.1	.10	.33	.13	110	3.71	.051	9.8	9.9	1.05	143.9	.227	6	3.94	.290	.08	.7	<.02	<.5	<.1	.06	13.7
99JKDR000679	1.61	5.33	3.09	39.9	19	3.3	3.0	216	1.13	1.6	2.0	<.2	3.7	72.8	.03	.07	.10	15	.43	.031	23.0	15.6	.31	77.2	.065	9	.77	.129	21	8.3	.04	<.5	.1	.02	3.5
99JKDR000680	8.58	58.20	3.08	139.4	158	22.7	10.1	420	2.89	1.7	1.8	.2	.9	82.6	1.19	.53	.08	103	1.02	.037	4.0	19.2	.86	117.2	.091	1	1.97	.075	.21	4.3	.21	10	3.9	.06	6.6
99JKDR000681	17.89	56.65	2.97	164.1	208	45.1	8.9	572	3.02	1.5	2.7	<.2	1.0	66.5	1.30	.41	.46	146	1.62	.059	4.1	26.5	1.02	145.8	.044	1	1.47	.073	.39	4.4	.38	<.5	4.1	.21	5.4
99JKDR000682	8.77	51.23	3.80	133.3	164	26.6	10.9	729	3.05	2.1	1.5	.6	1.0	207.2	.94	.67	.13	124	2.43	.047	3.7	25.8	.18	164.7	.078	1	1.84	.117	.29	5.1	.32	8	3.7	.10	6.4
99JKDR000683	15.55	49.08	3.65	146.9	179	34.9	8.6	522	2.79	.7	2.2	.7	.8	149.8	1.01	.68	.11	107	2.69	.046	3.1	21.8	.91	132.4	.020	<.1	1.41	.059	.18	3.2	.21	7	3.3	.12	4.6
99JKDR000684	11.65	58.62	3.52	110.0	209	22.1	12.4	536	3.53	.3	2.1	<.2	.7	127.7	.66	1.03	.12	88	2.14	.045	3.4	17.1	1.02	109.7	.037	<.1	1.77	.061	.21	3.8	.46	7	2.6	.09	5.9
99JKDR000685	12.53	47.29	3.11	117.3	196	27.4	8.4	456	3.08	.5	2.5	<.2	.7	250.8	.79	.82	.10	83	1.48	.051	3.1	23.4	.92	135.0	.028	<.1	1.54	.077	.26	4.0	.40	<.5	2.9	.11	4.9
RE 99JKDR000685	11.34	45.49	3.15	116.9	197	27.0	8.5	462	3.08	.5	2.5	<.2	.7	247.5	.82	.80	.09	83	1.48	.050	3.2	21.5	.93	141.7	.028	<.1	1.56	.077	.25	3.8	.40	7	2.8	.08	4.8
RRE 99JKDR000685	12.68	46.78	3.20	118.0	198	25.0	8.7	459	3.16	.6	2.6	<.2	.8	258.9	.82	.83	.09	86	1.46	.051	3.2	16.6	.98	144.6	.029	<.1	1.62	.074	.25	4.5	.40	5	3.0	.11	4.9
99JKDR000686	14.34	38.20	2.97	86.8	149	20.8	7.0	862	2.47	.5	3.3	<.2	.7	77.5	.58	.78	.07	64	3.54	.077	2.9	22.9	.93	105.9	.062	<.1	1.39	.052	.21	4.1	.24	5	2.4	.07	4.9
99JKDR000687	8.06	44.41	3.67	101.0	111	10.8	8.1	1083	2.67	1.8	1.7	<.2	.7	77.8	.50	.87	.11	51	3.62	.051	3.4	14.8	1.16	89.5	.097	<.1	1.56	.086	.17	5.0	.22	<.5	1.2	.06	5.8
99JKDR000688	2.01	2.52	3.06	63.6	15	1.9	4.4	797	2.32	<.1	.3	<.2	1.4	109.8	.06	.16	.05	9	3.23	.087	16.4	5.8	.51	129.9	.015	2	1.38	.090	.23	1.9	.08	<.5	.1	.02	4.3
99JKDR000689	6.70	51.75	3.57	315.5	149	19.2	8.2	663	2.96	18.2	1.6	<.2	.7	124.4	2.69	1.02	.85	55	2.40	.054	6.1	16.6	.66	122.6	.012	2	1.24	.063	.16	4.6	.22	15	2.7	.37	4.2
99JKDR000690	11.54	53.93	3.16	175.9	176	26.6	10.8	676	3.27	2.7	1.6	.3	.9	49.7	2.69	.69	.19	92	1.91	.051	5.5	24.3	.92	122.1	.051	2	1.26	.064	.21	3.5	.17	7	3.4	.16	5.0
99JKDR000691	1.85	72.51	1.93	82.2	108	42.5	25.3	982	3.55	12.9	.4	1.2	.8	95.8	.28	.37	.08	141	2.32	.111	5.5	81.9	1.83	61.4	.122	2	2.35	.178	.13	4.2	.08	<.5	1.2	.10	7.7
99JKDR000692	9.27	58.08	3.58	217.9	146	22.3	9.0	530	3.03	13.4	1.5	<.2	.9	21.1	1.78	.60	.17	70	.83	.042	4.3	20.6	.83	114.4	.068	1	1.32	.109	.23	5.3	.19	5	3.0	.09	4.9
99JKDR000693	8.24	78.45	3.45	169.5	141	21.6	14.4	912	3.85	11.9	1.4	.4	.7	50.7	1.09	.44	.12	103	2.23	.051	4.2	18.0	1.00	115.3	.068	1	1.43	.074	.37	5.1	.28	<.5	2.8	.12	5.9
99JKDR000694	3.25	118.59	5.04	92.2	176	11.7	17.8	1266	4.97	.1	.8	.5	.9	81.4	.23	.44	.14	124	1.89	.100	5.3	14.4	1.82	90.2	.192	1	3.05	.068	.15	1.7	.14	<.5	1.7	.12	11.7
99JKDR000695	.47	9.73	2.22	126.3	33	2.7	23.9	1541	5.25	1.4	.2	<.2	.7	57.9	.09	.17	.07	205	4.09	.087	5.0	3.9	2.26	65.0	.274	1	3.06	.108	.17	1.1	.08	5	.2	.02	12.7
99JKDR000696	2.91	94.96	2.73	77.8	113	11.0	16.7	1882	4.41	2.8	.7	.5	.8	60.0	.19	.45	.09	146	3.11	.097	4.4	15.6	1.80	131.3	.192	1	2.20	.151	.77	1.7	.20	<.5	1.1	.05	9.7
99JKDR000697	6.58	115.99	3.33	127.8	141	19.1	19.1	901	4.46	13.3	1.3	.3	.8	22.3	.68	.71	.12	162	.51	.068	3.4	24.4	1.26	98.6	.119	<.1	1.53	.156	.54	4.8	.42	<.5	2.1	.15	7.0
99JKDR000698	4.47	74.56	3.76	87.3	120	19.6	13.6	730	3.26	1.8	1.8	<.2	.7	32.9	.34	.68	.11	59	.59	.019	2.0	23.1	.93	105.6	.074	1	1.40	.107	.38	5.2	.38	<.5	1.7	.09	5.6
RE 99JKDR000698	4.16	75.11	3.68	87.3	115	20.1	12.7	738	3.27	1.4	1.8	<.2	.7	31.0	.33	.66	.11	59	.59	.019	2.0	23.2	.89	102.7	.072	1	1.34	.103	.41	4.8	.36	<.5	1.5	.11	5.4
RRE 99JKDR000698	3.53	74.81	3.84	87.2	116	15.7	13.0	718	3.10	1.2	1.7	<.2	.7	30.3	.35	.56	.11	58	.51	.019	2.0	20.5	.93	102.3	.073	1	1.36	.105	.40	6.8	.38	<.5	1.5	.10	5.4
99JKDR000699	10.89	111.58	4.10	144.7	141	26.0	14.8	1066	3.53	3.9	1.9	<.2	.7	49.1	1.16	.92	.12	141	2.17	.050	3.5	29.1	.79	62.0	.094	1	1.14	.102	.34	5.7	.44	5	3.4	.10	4.9
99JKDR000700	4.56	115.06	3.42	131.5	137	24.5	19.3	750	3.51	1.1	1.2	<.2	.8	33.3	.74	.49	.13	140	1.04	.060	4.4	31.5	.94	86.5	.121	1	1.39	.148	.34	6.8	.32	<.5	1.9	.14	5.3
99JKDR000701	13.03	80.00	3.97	144.7	147	38.7	15.0	643	3.46	2.1	2.0	7.6	9	44.4	1.03	.57	.13	109	1.02	.044	3.6	35.4	.85	98.8	.099	1	1.35	.118	.40	7.2	.33	<.5	3.2	.12	5.4
99JKDR000702	10.74	67.60	3.52	104.5	107	24.9	14.3	811	3.41	1.8	1.9	2.5	.8	62.3	.74	.39	.11	137	1.76	.050	3.1	32.2	1.07	96.3	.149	1	1.64	.068	.41	7.9	.32	7	2.5	.08	6.6
99JKDR000703	8.20	84.58	3.51	134.6	148	19.4	12.4	1587	3.09	.7	1.4	<.2	.8	60.3	.91	.50	.12	96	3.24	.044	3.6	22.5	.82	69.8	.127	1	1.29	.099	.21	5.4	.19	<.5	1.9	.07	5.8
99JKDR000704	6.54	92.56	4.15	94.8	164	17.4	14.9	2275	3.01	349.4	1.8	.5	.7	78.1	.62	1.10	.12	111	4.74	.059	3.1	22.9	.75	51.3	.118	1	1.15	.090	.18	6.5	.18	<.5	2.3	.13	5.0
99JKDR000705	10.02	93.15	5.41	98.3	175	22.7	14.0	1621	3.43	134.7	1.8	<.2	.9	79.6	.68	1.11	.15	112	4.33	.055	5.2	27.1	.77	42.4	.148	1	1.42	.064	.16	5.7	.25	8	2.7	.11	5.7
99JKDR000706	4.74	115.77	4.90	62.6	195	17.1	15.2	1586	3.20	1195.5	1.5	2.9	.6	74.9	.47	3.03	.13	91	7.17	.072	4.3	16.6	.69	36.2	.118	1	1.26	.042	.10						



SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Ed	Sb	Bi	V	Cr	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Tl	Hg	Sr	Te	Ga		
	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppb	ppm	ppm	ppm		
99JKDR000738	2.35	35.45	1.44	93.1	61.10	3.8	725	2.88	3.2	<1	1.1	5	22.0	.32	1.31	40	67	.55	.034	2.6	15.4	1.77	434	5.172	2.7	76	110	54	3.8	21	6	9	.08	8.2			
99JKDR000739	1.39	38.35	1.16	86.4	45.9	4.9	464	2.81	2.8	1	.7	5	28.3	.13	.89	14	67	.79	.036	4.2	13.3	1.65	573	0.163	2.2	29	055	72	3.8	.29	<5	4	.09	8.2			
99JKDR000740	2.86	57.88	1.56	89.6	89	11.5	9.5	502	2.84	1.4	1.1	4	26.4	.34	.64	.18	47	.44	.051	2.9	12.8	1.46	490	9.137	1.2	16	.091	58	3.7	27	<5	8	13	7.4			
99JKDR000741	1.17	33.32	3.22	87.4	61	7.3	7.3	684	2.76	1.8	<1	.7	4	33.5	.12	.80	.12	52	.56	.034	2.6	10.5	1.57	160	2.159	1.2	10	.043	21	2.9	10	8	8	07	7.4		
99JKDR000742	1.47	27.50	3.56	112.9	39	8.5	7.9	870	3.17	2.5	.1	1.0	.6	31.9	.19	.76	.08	56	.67	.043	4.0	9.8	7.15	195	6.182	1.2	59	.046	28	1.8	14	<5	6	.06	9.2		
99JKDR000743	1.00	32.05	3.19	84.7	47	7.9	5.8	515	2.54	2.1	<1	.7	.6	28.9	.06	.95	.06	32	.43	.021	3.7	9.9	1.48	118	0.114	1.1	97	.037	.18	2.9	08	<5	8	08	6.3		
99JKDR000744	1.81	35.30	3.83	68.3	62	11.9	6.9	487	2.12	2.5	<1	8	.8	43.9	.12	2.20	06	42	.78	.026	3.4	21.6	1.11	72	2.109	<1	1	82	.046	.10	3.7	05	<5	8	08	6.0	
99JKDR000745	2.04	34.64	4.99	112.1	48	9.7	7.4	710	2.55	16.3	1	.8	5	41.5	.64	1.66	.10	55	.98	.048	2.6	7.5	1.34	83	5.129	<1	1	88	.051	15	3.7	09	5	1.0	04	7.2	
99JKDR000746	13.02	40.57	3.05	92.8	108	23.8	8.4	360	2.52	8.2	1.0	3	4	15.6	.58	2.29	.43	59	.28	.025	1.7	18.0	.67	62	6.038	<1	87	.039	14	5.2	.19	7	2.1	21	2.8		
99JKDR000747	16.83	51.29	31.44	125.7	129	24.1	9.1	425	2.88	4.6	1.2	<2	.5	23.3	1.09	2.00	.15	77	.61	.033	2.4	14.0	.78	68	9.056	<1	1	13	.037	14	4.7	21	6	2.1	.09	3.8	
99JKDR000748	7.69	66.42	8.98	91.0	157	13.2	15.2	870	3.70	25.3	.4	.6	.7	58.7	.75	2.47	.15	101	2.33	.064	2.3	17.0	1.07	63	5.134	<1	2	01	.070	.11	3.6	16	8	2.0	.08	7.1	
99JKDR000749	1.08	17.17	8.56	204.9	91	5.8	11.9	881	7.98	102.3	.6	2.6	1.8	56.6	.12	9.31	.17	96	1.86	.072	6.4	16.0	1.25	42	3.189	1	2	03	.067	05	2.6	03	7	.3	07	10.0	
99JKDR000750	2.06	17.33	6.04	63.6	30	7.3	12.8	908	3.26	4.3	.9	<2	2.0	46.0	.07	1.26	.11	108	1.74	.073	7.7	20.4	1.47	65	0.217	1	2	13	.184	08	3.2	07	<5	4	<0.2	10.3	
RE 99JKDR000750	1.98	16.92	5.65	63.1	31	7.2	12.8	913	3.24	4.3	.8	<2	1.9	45.4	.07	1.15	.09	109	1.74	.074	7.3	20.3	1.39	62	0.198	1	2	02	.174	09	3.0	.02	<5	4	02	9.8	
RRE 99JKDR000750	1.96	17.27	5.81	63.5	27	7.4	12.5	909	3.26	4.5	.8	<2	1.9	43.8	.09	1.13	.09	108	1.71	.075	7.2	19.4	1.39	57	9.194	1	2	01	.163	09	3.0	03	<5	4	.02	9.8	
99JKDR000751	6.71	73.58	6.80	190.9	186	13.5	12.6	1613	3.20	554.8	.7	1.2	.5	53.8	1.85	8.71	.16	81	4.67	.074	2.2	13.8	.79	41	3.079	1	1	24	.044	.08	5.2	.12	5	2.0	08	4.1	
99JKDR000752	7.69	72.66	5.17	189.0	170	14.9	13.3	697	3.19	239.3	.5	.6	.7	41.1	1.83	4.19	.12	42	1.57	.037	3.6	11.2	.74	69	5.070	1	1	30	.048	.14	3.0	11	<5	2.0	07	4.0	
99JKDR000753	8.35	80.48	9.97	192.3	245	15.1	14.0	878	4.25	9.3	.6	.6	.9	56.6	1.60	3.70	.11	107	.95	.050	2.2	18.0	1.73	100	2.015	<1	1	93	.174	12	3.8	.14	10	1.6	05	6.5	
99JKDR000754	9.98	90.57	4.84	118.3	146	16.7	11.6	491	3.84	79.0	.5	3	1.0	21.6	1.09	2.53	.27	42	.62	.052	2.0	14.9	.78	82	6.095	1	1	19	.043	15	4.6	10	<5	1.8	08	3.2	
99JKDR000755	7.19	87.68	6.32	456.7	155	13.0	12.7	695	3.28	407.1	.8	.4	.7	43.5	4.61	5.54	.93	50	1.33	.052	2.4	12.8	.96	64	8.081	1	1	77	.046	.11	4.8	11	5	2.4	08	4.4	
99JKDR000756	5.45	95.74	3.18	59.4	92	22.5	10.1	411	2.92	11.4	.3	<2	.6	18.9	.46	2.01	1.06	36	.59	.037	2.3	16.1	.89	74	3.019	2	1	12	.032	.13	4.7	17	<5	2.5	.34	3.1	
99JKDR000757	6.99	69.06	5.07	46.2	154	18.2	11.4	890	3.37	368.5	.7	1.3	.7	50.4	.33	4.27	.31	60	2.44	.043	2.8	8.3	.92	123	1.017	2	1	76	.050	.14	3.9	11	<5	2.7	.16	3.6	
99JKDR000758	20.61	82.76	10.88	81.9	380	34.0	14.5	587	4.10	678.8	2.8	.6	1.0	36.5	.74	26.59	.55	169	1.86	.090	3.4	26.3	.88	104	0.065	1	1	11	.085	14	6.9	13	<5	6.0	09	4.3	
99JKDR000759	81.76	72.05	13.93	208.1	258	81.8	13.3	303	3.33	14.9	12.5	.4	2.1	43.9	2.52	7.17	.73	463	2.64	.790	5.5	49.5	50	71.7	0.065	1	81	.050	16	10.0	.12	9	9.1	05	3.3		
99JKDR000760	63.46	85.43	15.53	187.6	246	71.6	13.4	409	3.19	13.8	11.0	<2	1.6	35.5	2.31	6.51	.99	448	2.03	.255	4.9	46.1	.72	55	2.076	1	1	06	.051	.16	9.0	11	7	9.1	.10	4.3	
RE 99JKDR000760	64.62	88.94	16.02	194.6	260	73.1	13.4	425	3.26	12.6	11.4	<2	1.7	36.4	2.42	6.68	1.01	465	2.10	.263	5.0	52.0	.74	57.4	0.081	1	1	09	.056	17	9.4	12	8	9.3	07	4.5	
RRE 99JKDR000760	63.72	86.96	15.60	191.1	248	73.7	13.9	471	3.26	12.0	11.2	<2	1.6	35.6	2.37	6.57	1.01	458	2.07	.259	4.8	47.9	.73	56.7	0.078	1	1	08	.055	17	9.4	12	8	9.2	08	4.2	
99JKDR000761	21.62	116.28	2.71	32.4	166	19.2	2.7	650	1.73	3.5	2.8	<2	.5	39.7	.24	7.72	.47	115	4.29	.051	3.6	24.3	.10	15.4	0.078	<1	76	.017	03	8.8	<0.2	<5	1.3	07	2.5		
99JKDR000762	8.41	171.91	6.71	49.5	261	30.9	10.2	615	2.88	11.8	1.1	<2	1.1	23.3	.42	12.61	.41	105	1.91	.041	3.5	23.1	.78	23.7	0.030	1	1	11	.080	06	6.0	03	<5	6.0	03	4.6	
99JKDR000763 N.S.																																					
99JKDR000764	.52	14.05	4.20	116.8	33	7.3	21.5	1175	3.88	.8	.3	4.9	.9	128.2	.14	.70	.04	98	4.39	.102	12.1	4.8	1.62	.96	3.015	3	2	21	.029	.16	.8	03	<5	<1	<0.2	6.9	
99JKDR000765	.84	13.85	3.91	61.6	22	3.0	13.0	961	2.31	.7	.3	.2	1.2	129.0	.07	1.05	.03	44	3.19	.067	9.7	5.8	.85	.88	7.011	2	1	34	.080	11	1.3	02	<5	.1	02	3.7	
99JKDR000766	.72	3.55	1.59	59.1	9	3.5	12.2	698	1.72	.6	.7	<2	.6	130.9	.04	.41	<0.02	34	2.44	.071	4.7	9.3	1.20	123	1.091	2	1	64	.098	07	2.5	<0.07	<5	.4	02	4.2	
99JKDR000767	.62	1.19	4.85	94.1	10	5.9	19.3	1094	3.41	.9	.3	<2	1.0	180.4	.07	1.46	.07	87	3.14	.072	7.7	6.4	2.11	.84	1.019	4	2	58	.095	07	1.0	<0.02	<5	.3	06	7.4	
99JKDR000768	9.98	659.34	862.04	182.2	254	28.7	25.2	1114	4.73	8.9	.2	<2	1.0	190.7	3.81	.46	.02	115	5.30	.072	7.7	49.7	2.35	459	0.015	3	3	13	.058	08	9	02	41	1.2	.03	8.9	
STANDARD 052	13.78	179.87	30.56	163.5	244	35.9	13.0	830	3.14	61.3	20.6	705.1	3.4	29.9	11.38	10.10	10.92	83	55	.082	16.4	167.0	58	119	1.116	2	1	71	.039	16	7.5	1.94	251	2.6	1.91	6.0	

Sample type: CORE. Samples beginning 'RE' are Retuns and 'RRE' are Reject Retuns.



SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppb	Hg ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppb	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Hg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Tl ppm	Hg ppb	Se ppm	Te ppm	Ga ppm
99JKDR000831	.19	6.58	2.55	89.4	10	1.3	21.6	997	3.96	2.9	.3	<.2	.6	93.0	.07	1.45	.12	118	3.36	0.78	7.8	3.4	1.84	295.9	.010	4.2	11	.077	.14	.3	.05	<.5	.1	<.02	6.7
99JKDR000832	1.78	5.76	2.47	41.6	24	5.1	3.0	201	.99	.2	2.7	.2	3.7	21.5	.03	.19	.08	13	.27	0.30	21.0	20.1	.35	62.7	.057	7	.39	.040	.27	4.7	.11	<.5	.1	<.02	2.7
99JKDR000833	.50	38.51	4.69	54.1	27	10.0	7.5	260	1.78	<.1	.9	.6	3.2	57.8	.03	.09	.05	59	.77	1.28	21.1	18.9	.69	83.4	.082	1	.88	.098	.15	.2	.03	<.5	<.1	<.02	3.4
99JKDR000834	.45	22.65	2.06	20.4	31	2.4	4.1	1217	1.60	<.1	.5	.3	1.1	250.8	.02	.06	.02	39	8.13	1.03	9.7	4.6	.67	149.8	.061	<.1	.53	.098	.11	.5	.03	<.5	<.1	<.02	2.0
99JKDR000835	.64	24.32	4.72	60.3	42	16.8	14.3	303	1.54	<.1	2.3	1.2	3.6	61.0	.06	.09	.08	46	.75	1.25	21.8	15.6	.54	133.6	.092	<.1	.63	.100	.17	.3	.06	<.5	<.1	<.02	2.6
99JKDR000836	.56	29.41	3.84	59.6	44	16.0	8.8	424	1.87	<.1	1.5	<.2	3.9	70.1	.05	.06	.25	53	.92	1.48	22.2	31.4	.75	72.4	.108	<.1	.64	.115	.15	.3	.04	<.5	<.1	.08	2.9
99JKDR000837	.45	14.16	7.76	58.4	55	7.7	4.4	100	.83	1.4	.9	.2	2.7	212.0	.06	.16	.18	31	.35	.053	15.8	13.2	.35	1224.0	.086	1	.90	.312	.49	.2	.17	.8	.1	.03	3.2
99JKDR000838	.41	10.10	1.94	42.5	16	1.3	7.8	782	2.92	<.1	.2	.4	1.2	130.9	.04	<.02	.03	41	2.76	1.09	14.9	<.5	.57	163.5	.004	3	1.81	.214	.28	<.2	<.02	<.5	<.1	<.02	3.6
99JKDR000839	.14	7.08	2.24	61.0	14	1.1	9.2	569	3.39	<.1	.1	<.2	1.2	151.4	.05	.03	.33	24	2.43	1.03	17.5	3.8	.87	146.5	.002	4	2.37	.188	.27	<.2	.03	.7	<.1	.10	4.5
99JKDR000840	.34	11.50	3.91	48.1	31	1.0	7.5	692	2.71	<.1	.5	<.2	1.2	194.5	.09	.02	.05	26	3.25	1.01	16.7	<.5	.66	141.2	.002	3	1.96	.186	.27	.2	.03	.6	<.1	.03	3.7
RE 99JKDR000840	.31	10.96	3.78	46.5	32	1.0	7.5	678	2.67	<.1	.5	<.2	1.2	185.4	.09	<.02	.03	26	3.20	0.99	16.1	3.1	.65	138.2	.001	3	1.94	.181	.26	.2	.02	<.5	<.1	.02	3.6
RRE 99JKDR000840	.32	11.28	3.98	47.8	34	.9	7.5	681	2.66	<.1	.5	.3	1.2	191.6	.08	<.02	.02	26	3.22	0.98	16.8	3.6	.67	144.0	.002	3	2.01	.189	.27	.2	.02	.6	<.1	.02	3.7
99JKDR000841	.11	8.31	2.01	47.3	34	.7	8.8	953	3.05	<.1	.2	<.2	1.6	171.7	.06	<.02	.02	31	3.71	0.87	15.8	<.5	.96	113.1	.001	2	2.15	.170	.19	.2	<.02	<.5	<.1	.02	4.5
99JKDR000842	.21	9.52	2.53	57.7	45	1.8	11.1	906	3.43	<.1	.2	<.2	1.7	140.5	.06	<.02	.02	38	2.97	0.93	16.6	<.5	1.04	116.3	.002	3	2.43	.171	.18	<.2	<.02	<.5	<.1	<.02	5.0
99JKDR000843	.17	14.21	3.50	50.4	34	1.7	12.8	1278	3.51	<.1	.2	4.1	1.2	260.7	.07	.03	.03	60	5.24	0.87	12.6	3.8	1.01	73.1	.001	2	2.44	.149	.14	<.2	.03	<.5	.2	.02	5.7
99JKDR000844	1.43	27.34	5.66	79.2	53	14.5	13.9	813	3.77	16.0	.4	1.4	1.6	159.3	.14	.27	.09	44	3.30	0.98	14.2	7.1	.49	96.7	.001	4	1.80	.227	.16	<.2	.15	.38	.4	.06	4.5
99JKDR000845	3.01	18.42	7.73	58.7	61	7.3	5.5	1525	2.48	19.3	.5	.6	1.1	159.3	.25	.68	.09	22	4.74	0.48	10.4	8.0	.63	67.6	.001	2	1.47	.155	.12	.2	.14	.22	.7	.03	3.4
99JKDR000846	1.95	6.81	3.06	39.7	25	5.0	2.7	165	1.06	.4	2.3	<.2	3.9	46.0	.03	.11	.08	11	.29	0.30	20.4	16.3	.33	42.5	.040	9	.48	.048	.16	4.7	.04	<.5	<.1	<.02	3.0
STANDARD DS2	13.67	131.14	29.86	166.8	260	36.8	12.4	832	3.17	64.8	20.2	198.3	3.3	29.8	11.52	9.11	10.79	82	.54	.082	16.3	177.3	.62	148.6	.118	2	1.85	.042	.16	7.1	1.80	246	2.3	1.94	5.9

Sample type: CORE. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

GEOCHEMICAL ANALYSIS CERTIFICATE



Hudson Bay Expl. & Dev. Co. Ltd. PROJECT 2318 File # 9903434 Page 1 (b)
405 - 470 Granville St., Vancouver BC V6C 1V5 Submitted by: Jason K. Dunning

SAMPLE#	Cs ppm	Ge ppm	Nb ppm	Rb ppm	Sc ppm	Sn ppm	S %	Zr ppm	Y ppm	Ce ppm	In ppm	Re ppb	Li ppm
99JKDR000646	.20	.1	.07	5.2	8.7	.8	.11	5.1	10.97	21.5	.03	<1	12.9
99JKDR000647	.16	<.1	.03	2.1	3.1	.4	.05	1.2	8.01	18.6	.02	<1	7.2
99JKDR000648	.25	<.1	.03	4.2	3.5	.4	.05	6.3	9.34	21.2	.03	<1	10.4
99JKDR000649	.18	<.1	.02	2.7	2.3	.3	.74	2.1	5.17	9.2	.03	3	7.2
99JKDR000650	.37	<.1	.06	3.5	3.7	.2	.86	2.0	6.64	11.5	.03	<1	12.0
99JKDR000651	.68	.1	.05	3.7	2.6	.6	2.12	14.6	11.76	7.0	.03	35	2.8
99JKDR000652	.35	.1	<.02	3.7	3.5	.7	2.89	17.2	12.14	7.4	.05	56	5.8
99JKDR000653	.43	.1	.02	3.9	1.6	.9	2.76	17.5	12.20	6.5	.04	71	1.9
99JKDR000654	.40	<.1	<.02	3.1	6.5	.3	1.52	2.7	6.69	6.4	.04	9	22.6
99JKDR000655	.36	<.1	<.02	2.9	3.3	<.1	1.76	3.2	5.75	5.9	.05	10	19.2
99JKDR000656	.28	<.1	<.02	2.6	4.4	.3	1.94	3.2	6.84	5.4	.03	6	12.4
RE 99JKDR000656	.28	<.1	<.02	2.5	4.2	<.1	1.89	3.3	6.65	5.2	.03	9	11.4
RRE 99JKDR000656	.30	<.1	<.02	2.3	4.5	.1	1.87	3.5	7.07	5.6	.03	9	12.7
99JKDR000657	.51	<.1	<.02	3.7	8.0	.3	1.72	5.8	8.60	9.8	.03	10	19.1
99JKDR000658	.50	<.1	<.02	3.5	2.8	.3	2.50	8.9	7.90	7.7	.05	24	11.1
99JKDR000659	.26	<.1	<.02	3.5	5.9	.3	3.17	5.5	6.04	13.5	.04	14	34.3
99JKDR000660	.30	<.1	.07	2.6	3.5	.7	1.87	5.5	6.96	7.4	.04	14	6.2
99JKDR000661	.35	<.1	.02	3.8	3.2	.2	2.35	3.9	7.14	7.4	.03	7	9.6
99JKDR000662	.13	<.1	.02	1.4	4.9	.1	1.27	3.6	5.34	4.3	.03	12	5.6
99JKDR000663	.21	<.1	.02	2.7	3.5	.1	1.09	1.7	5.71	5.2	.04	2	6.6
99JKDR000664	.13	<.1	<.02	2.4	3.3	.1	.26	1.6	4.86	6.8	.02	3	7.5
99JKDR000665	.14	<.1	<.02	2.6	2.7	.2	.28	.8	4.69	8.7	.03	1	7.2
99JKDR000666	.18	<.1	<.02	2.3	3.9	.3	1.44	5.0	6.50	6.0	.03	9	6.7
99JKDR000667	.19	<.1	.03	4.2	1.1	.7	2.43	10.8	6.32	7.2	.04	60	5.1
99JKDR000668	.34	<.1	.41	10.5	.8	.7	<.01	18.9	5.66	42.2	<.02	<1	19.6
RE 99JKDR000668	.34	<.1	.40	10.8	.7	.7	<.01	19.0	5.89	42.6	<.02	<1	16.8
RRE 99JKDR000668	.33	<.1	.36	11.1	.7	.7	<.01	18.2	5.92	41.9	<.02	<1	18.1
99JKDR000669	2.77	<.1	.24	8.6	5.4	1.1	<.01	20.5	13.21	30.0	.04	<1	13.4
99JKDR000670	3.33	.2	.13	2.6	5.7	.9	<.01	19.5	11.76	21.0	.04	<1	59.7
99JKDR000671	3.13	<.1	.18	9.0	5.4	1.0	<.01	16.8	11.89	27.6	.03	<1	14.1
99JKDR000672	1.92	<.1	.04	4.1	7.7	1.4	<.01	5.7	9.08	23.3	.03	<1	32.2
99JKDR000673	2.87	<.1	.08	6.5	7.4	.8	.02	12.6	11.14	24.7	.04	<1	21.8
99JKDR000674	3.52	<.1	.10	9.3	6.0	.8	.01	10.8	11.75	26.7	.03	<1	15.7
99JKDR000675	2.39	<.1	.03	6.8	5.1	.8	.01	6.3	11.21	23.7	.03	<1	16.0
STANDARD DS2	2.85	<.1	2.03	14.7	2.8	25.4	.02	4.5	7.65	31.8	5.52	2	14.2

GROUP 1F30 - 30.00 GM SAMPLE LEACHED WITH 180 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR, DILUTED TO 600 ML, ANALYSED BY ICP/ES & MS.
UPPER LIMITS - AG, AU, HG, W, SE, TE, TL, GA, SN = 100 PPM; MO, CO, CD, SB, BI, TH, U, B = 2,000 PPM; CU, PB, ZN, NI, MN, AS, V, LA, CR = 10,000 PPM.
- SAMPLE TYPE: CORE Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: SEP 13 1999 DATE REPORT MAILED: Oct 1/99 SIGNED BY: [Signature] D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS



SAMPLE#	Cs ppm	Ge ppm	Nb ppm	Rb ppm	Sc ppm	Sn ppm	S %	Zr ppm	Y ppm	Ce ppm	In ppm	Re ppb	Li ppm
99JKDR000676	3.82	<.1	.04	10.6	4.6	1.1	<.01	5.9	7.11	18.6	.03	2	21.8
99JKDR000677	2.46	<.1	.07	4.4	5.6	.8	.02	2.9	10.09	26.7	.04	1	13.9
99JKDR000678	2.29	.2	.08	2.3	6.1	1.0	.01	11.5	9.02	19.7	.03	2	10.1
99JKDR000679	.29	<.1	.50	8.2	1.3	.9	<.01	18.2	5.56	45.5	<.02	<1	16.6
99JKDR000680	.94	.1	.06	5.3	4.3	.6	1.75	7.1	12.80	8.2	.04	16	11.3
99JKDR000681	1.03	.1	.07	11.0	4.4	.9	1.70	15.4	10.00	8.4	.05	40	12.5
99JKDR000682	1.17	.1	.08	9.2	5.7	.6	1.80	8.5	12.81	7.6	.05	25	14.8
99JKDR000683	.94	<.1	.04	5.8	3.5	.5	1.77	14.8	13.76	8.6	.04	32	12.6
99JKDR000684	1.34	.1	.03	6.7	5.4	.4	2.44	11.4	14.18	7.0	.05	14	12.9
99JKDR000685	1.34	.1	.03	7.6	4.7	.5	2.09	12.7	12.53	6.9	.04	18	11.0
RE 99JKDR000685	1.33	.1	.03	7.5	4.7	.5	2.12	12.5	13.99	7.0	.04	19	11.7
RRE 99JKDR000685	1.36	.1	.02	7.5	4.8	.4	2.28	12.8	12.63	7.0	.04	26	10.8
99JKDR000686	.77	<.1	.06	7.1	3.1	.5	1.40	13.8	13.08	6.8	.04	20	9.2
99JKDR000687	.73	<.1	.07	5.8	5.1	.5	1.37	7.9	12.33	7.5	.05	7	12.3
99JKDR000688	1.28	<.1	.22	7.1	1.3	.3	.35	6.5	11.94	31.3	.02	2	9.0
99JKDR000689	1.23	<.1	.10	4.8	3.4	1.0	1.61	9.2	14.36	13.3	.06	13	9.9
99JKDR000690	1.02	.1	.06	6.3	4.9	.6	1.52	8.1	13.09	11.5	.06	41	11.1
99JKDR000691	.53	.1	.11	3.6	8.2	.6	.58	1.4	6.50	11.1	.05	<1	20.8
99JKDR000692	.76	.1	.07	5.9	4.9	.4	1.51	8.0	11.76	10.6	.06	16	10.5
99JKDR000693	1.42	.1	.04	8.7	6.4	.3	2.36	7.5	11.06	9.0	.07	12	11.7
99JKDR000694	1.72	.1	.05	3.9	7.8	.5	3.03	2.3	17.84	12.5	.06	4	21.5
99JKDR000695	1.18	.1	.19	4.9	11.2	.4	.29	3.3	10.60	11.7	.05	<1	26.9
99JKDR000696	.85	.2	.14	6.1	12.1	.5	2.31	4.2	14.46	9.7	.06	5	20.9
99JKDR000697	.94	.1	.09	11.0	10.5	.4	2.75	11.9	8.88	7.6	.07	14	14.3
99JKDR000698	1.01	.1	.05	10.6	5.1	.5	2.12	11.2	6.33	4.6	.05	4	10.9
RE 99JKDR000698	.95	<.1	.07	10.3	5.0	.5	2.09	9.7	6.03	4.8	.05	3	10.7
RRE 99JKDR000698	.97	.1	.07	11.0	5.0	.4	1.93	11.7	6.20	4.7	.05	2	11.6
99JKDR000699	.90	.1	.08	9.1	7.5	.5	2.50	13.5	9.62	6.9	.07	29	9.1
99JKDR000700	.73	.1	.07	9.2	8.5	.4	2.12	9.7	10.82	8.8	.07	15	12.0
99JKDR000701	.92	.1	.09	10.6	6.2	.5	2.23	13.8	10.36	7.1	.05	26	9.9
99JKDR000702	1.53	.1	.05	10.2	7.3	.6	1.75	7.8	8.86	6.2	.05	31	14.0
99JKDR000703	.69	.1	.11	5.9	6.4	.5	1.99	7.7	9.79	7.2	.08	8	12.5
99JKDR000704	.68	.1	.08	5.0	7.0	.6	2.21	8.1	9.48	6.6	.06	13	10.7
99JKDR000705	1.11	.1	.09	4.9	6.9	.6	2.66	10.6	12.66	10.8	.06	22	13.3
99JKDR000706	.79	.1	.09	3.3	5.0	.5	2.61	6.9	9.81	8.0	.04	9	12.7
STANDARD DS2	2.75	<.1	2.04	15.6	3.0	25.4	.01	4.2	7.50	32.1	5.31	2	14.1

Sample type: CORE. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



SAMPLE#	Cs ppm	Ge ppm	Nb ppm	Rb ppm	Sc ppm	Sn ppm	S %	Zr ppm	Y ppm	Ce ppm	In ppm	Re ppb	Li ppm
99JKDR000707	.91	.1	.10	2.8	4.3	.9	1.36	5.3	10.68	5.8	.04	9	11.8
99JKDR000708	1.23	.1	.09	6.7	5.5	.7	1.69	11.1	13.12	7.7	.06	25	10.6
99JKDR000709	.84	.1	.09	4.6	5.7	.5	1.39	7.7	7.00	5.3	.05	23	7.2
99JKDR000710	.90	.1	.07	3.5	6.5	.6	1.71	8.0	8.62	6.2	.06	15	10.9
99JKDR000711	.80	.1	.09	4.4	7.0	.5	2.11	3.7	7.46	5.8	.05	11	13.8
99JKDR000712	1.27	.1	.05	2.4	7.7	.6	1.56	4.6	10.81	7.1	.05	19	15.6
99JKDR000713	.57	.1	.15	1.9	10.9	.5	1.48	2.4	14.73	9.1	.06	13	16.5
99JKDR000714	.73	.1	.13	5.9	7.9	.3	.54	.9	6.51	10.6	.03	4	25.7
99JKDR000715	.45	.1	.10	2.7	5.8	.3	.21	1.0	4.20	9.2	.03	2	15.3
99JKDR000716	1.02	.1	.17	7.2	10.1	.9	1.69	3.6	10.28	7.8	.06	26	14.6
99JKDR000717	.89	.1	.16	3.8	10.4	.7	1.57	2.0	14.92	8.8	.06	7	20.1
99JKDR000718	.57	.2	.26	2.8	3.1	.3	.32	.7	5.85	8.8	.03	<1	14.1
RE 99JKDR000718	.54	.2	.28	2.6	3.1	.5	.32	.6	5.61	8.6	.04	2	14.3
RRE 99JKDR000718	.56	.2	.26	2.6	3.0	.4	.32	2.6	5.63	8.5	.04	1	14.8
99JKDR000719	.51	.2	.18	2.9	15.8	.3	.03	2.5	7.83	8.6	.05	2	48.9
99JKDR000720	.56	.1	.38	2.3	4.7	.8	.04	.9	10.02	10.6	.04	2	16.0
99JKDR000721	.72	.1	.32	2.9	5.2	.6	.04	2.7	9.66	9.5	.04	4	18.1
99JKDR000722	.98	.1	.18	5.2	7.8	.6	.76	2.2	7.70	6.7	.05	5	13.2
99JKDR000723	.37	<.1	.87	11.5	.9	.8	.02	20.8	7.41	44.2	<.02	3	16.9
99JKDR000724	.66	.1	.07	3.7	10.3	.2	.34	1.6	4.82	3.4	.02	<1	10.8
99JKDR000725	.80	.1	.05	1.8	5.6	.1	.10	1.2	2.69	1.6	<.02	2	5.5
99JKDR000726	.39	.3	.14	1.9	5.1	.6	.09	1.7	2.90	1.8	<.02	<1	7.6
99JKDR000727	.76	.1	.10	3.2	10.2	.4	.15	1.4	6.61	6.9	.03	1	11.2
99JKDR000728	1.12	.1	.14	2.0	4.3	.9	.02	1.4	10.92	24.3	.04	4	13.2
99JKDR000729	.48	.2	.11	1.5	11.5	.4	.04	15.2	8.93	12.8	.04	1	18.5
99JKDR000730	.69	.2	.08	1.2	9.1	.7	.04	1.3	12.84	18.1	.06	5	17.4
RE 99JKDR000730	.66	.1	.07	1.1	8.9	.7	.05	1.1	12.60	17.8	.07	4	17.4
RRE 99JKDR000730	.67	.2	.08	1.2	9.0	.8	.04	1.3	12.78	17.9	.06	2	16.8
99JKDR000731	.63	.1	.07	2.1	4.9	.5	.35	1.1	10.21	9.1	.03	4	10.4
99JKDR000732	1.24	.1	.05	6.5	5.8	.7	1.42	3.9	16.67	13.6	.04	17	12.8
99JKDR000733	.72	<.1	.05	3.4	4.6	.5	.77	3.8	11.58	10.1	.04	29	10.5
99JKDR000734	.87	.1	.07	3.1	7.2	.8	1.15	4.4	14.01	9.7	.07	19	11.1
99JKDR000735	.99	.1	.09	6.4	6.6	.6	1.31	4.2	14.18	7.9	.07	27	11.8
99JKDR000736	.87	.1	.09	6.2	5.7	.9	1.53	5.3	12.52	9.1	.06	19	9.9
99JKDR000737	.89	.2	.11	9.2	6.7	.6	1.59	5.3	9.24	8.9	.05	59	6.0
STANDARD DS2	2.98	.1	2.14	15.5	3.0	23.6	.02	4.1	7.50	32.3	5.75	1	14.0

Sample type: CORE. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



SAMPLE#	Cs ppm	Ge ppm	Nb ppm	Rb ppm	Sc ppm	Sn ppm	S %	Zr ppm	Y ppm	Ce ppm	In ppm	Re ppb	Li ppm
99JKDR000738	1.66	.2	.16	14.8	8.5	1.3	.29	5.1	6.58	6.8	.07	5	22.3
99JKDR000739	2.54	.1	.14	20.8	8.0	1.1	.13	1.1	4.61	10.1	.07	3	24.3
99JKDR000740	2.10	.1	.13	17.7	7.1	.9	.39	1.9	6.36	6.7	.07	6	22.7
99JKDR000741	1.16	.1	.06	6.4	6.0	.6	.45	.7	10.89	6.9	.07	4	23.2
99JKDR000742	1.62	.1	.04	9.4	7.1	.7	.30	.5	16.10	10.1	.07	5	32.8
99JKDR000743	1.06	.1	.06	6.2	3.5	.4	.34	.7	11.90	8.8	.04	2	24.9
99JKDR000744	.70	.1	.04	3.6	4.3	.4	.35	.7	10.65	7.7	.04	2	15.9
99JKDR000745	.72	.1	.03	4.8	5.7	.4	.75	1.4	12.61	6.6	.06	4	14.9
99JKDR000746	.51	<.1	.06	4.9	2.6	.5	1.62	7.5	7.52	4.0	.04	18	7.9
99JKDR000747	.57	.1	.05	4.8	3.0	.3	1.77	10.2	7.97	5.3	.04	19	9.4
99JKDR000748	.77	<.1	.05	4.9	6.9	.5	2.42	4.9	11.90	5.8	.04	7	13.5
99JKDR000749	.70	.2	.22	2.5	5.4	.5	.33	5.7	6.12	13.0	.03	2	23.7
99JKDR000750	.71	.2	.54	3.4	8.3	.6	.24	8.2	7.50	15.4	.03	<1	14.0
RE 99JKDR000750	.67	.2	.52	3.5	7.8	.7	.23	6.5	7.29	14.7	.03	2	14.6
RRE 99JKDR000750	.68	.2	.47	3.2	7.6	.6	.23	8.9	6.94	14.1	.03	1	14.3
99JKDR000751	.51	<.1	.09	3.4	3.3	.3	2.49	4.5	10.77	4.9	.08	14	9.2
99JKDR000752	1.28	<.1	.02	6.0	2.4	.2	2.35	6.2	12.08	8.2	.06	12	7.8
99JKDR000753	.57	.1	.11	5.0	6.7	.3	2.93	5.5	8.09	5.3	.07	11	11.1
99JKDR000754	.61	<.1	.16	5.6	2.2	.3	2.74	10.9	10.65	4.9	.04	11	7.1
99JKDR000755	1.07	<.1	.04	4.6	2.5	.2	2.07	5.4	10.50	5.8	.09	10	8.8
99JKDR000756	.76	<.1	.12	4.2	1.8	.7	1.76	5.9	7.35	5.0	<.02	18	6.9
99JKDR000757	.89	<.1	.05	5.1	2.6	.4	2.18	4.4	9.67	6.0	.04	25	7.9
99JKDR000758	.57	.1	.14	5.6	5.4	.7	2.81	8.8	13.34	7.2	.04	30	6.2
99JKDR000759	.73	.1	.25	9.5	3.5	1.1	2.14	10.0	16.14	10.2	.07	121	4.9
99JKDR000760	.74	.1	.21	9.6	4.6	1.0	1.70	9.6	13.82	9.0	.05	99	6.1
RE 99JKDR000760	.77	.1	.22	10.1	4.7	1.3	1.75	9.8	14.59	9.3	.06	95	6.4
RRE 99JKDR000760	.75	.1	.21	9.8	4.6	1.0	1.71	9.6	14.32	8.9	.06	94	6.3
99JKDR000761	.25	<.1	.11	1.4	1.6	.3	.13	6.3	9.42	7.1	.04	21	2.8
99JKDR000762	.41	.1	.10	2.6	4.8	.4	1.29	6.5	11.07	7.3	.04	18	6.3
99JKDR000763 not rec.	<.02	<.1	<.02	<.1	<.1	<.1	<.01	<.1	<.01	<.1	<.02	<1	<.1
99JKDR000764	1.90	.1	.11	5.0	7.8	.2	.03	3.8	7.69	24.4	.04	<1	21.1
99JKDR000765	1.36	<.1	.02	3.4	4.0	.3	.01	2.0	5.98	19.1	.02	<1	7.1
99JKDR000766	.58	<.1	.06	2.2	2.2	.1	<.01	3.0	4.20	8.9	<.02	<1	7.8
99JKDR000767	2.21	.1	.03	2.8	6.4	.2	<.01	1.8	5.89	15.4	.03	<1	18.3
99JKDR000768	2.22	.1	.04	2.8	8.8	.3	.15	3.0	8.78	15.8	.04	22	18.7
STANDARD DS2	2.97	<.1	2.09	15.3	3.1	24.5	.02	4.3	7.35	30.8	5.95	3	14.8

Sample type: CORE. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



SAMPLE#	Cs ppm	Ge ppm	Nb ppm	Rb ppm	Sc ppm	Sn ppm	S %	Zr ppm	Y ppm	Ce ppm	In ppm	Re ppb	Li ppm
99JKDR000769	1.08	<.1	.06	2.9	11.3	.3	.08	1.0	12.21	16.2	.03	4	17.4
99JKDR000770	1.06	<.1	.03	3.3	6.5	.2	1.04	1.0	11.72	10.1	.04	8	16.5
99JKDR000771	1.14	.1	.04	4.0	5.8	.3	1.64	2.7	9.56	9.2	.05	18	19.0
99JKDR000772	.79	.1	.05	3.2	9.3	.3	.61	3.7	12.90	15.2	.03	3	15.1
99JKDR000773	1.05	.1	.06	3.9	6.5	.3	.23	3.9	10.01	16.8	.03	4	21.3
99JKDR000774	4.49	.1	.03	3.4	12.1	.2	.06	1.5	4.53	4.7	.02	<1	41.0
99JKDR000775	5.61	.1	.02	7.3	13.5	.2	.06	1.3	5.06	4.9	.02	<1	33.0
99JKDR000776	6.05	<.1	.06	8.5	4.0	.2	2.68	3.5	8.74	4.2	.02	71	.7
99JKDR000777	6.12	.1	.05	9.4	20.3	.2	.24	3.1	6.55	6.1	.03	<1	32.1
99JKDR000778	3.90	<.1	.03	8.4	2.9	.2	3.39	4.9	8.05	4.9	.03	66	.8
99JKDR000779	3.87	<.1	.02	9.9	3.0	.1	2.01	4.6	10.13	7.3	.03	15	.3
99JKDR000780	2.97	<.1	.02	6.6	6.7	.2	2.15	1.3	14.24	3.5	.04	6	.2
RE 99JKDR000780	2.88	<.1	.03	6.3	6.4	.2	2.07	1.3	13.68	3.4	.04	3	.2
RRE 99JKDR000780	2.84	<.1	.05	6.3	6.5	.2	2.05	1.3	13.86	3.4	.04	5	.2
99JKDR000781	1.31	<.1	.03	5.1	7.2	.1	3.62	1.0	9.02	3.7	.03	<1	<.1
99JKDR000782	.43	<.1	.02	1.8	2.6	.1	1.03	1.5	5.31	1.6	.02	2	<.1
99JKDR000783	1.43	<.1	.04	5.8	9.5	.3	4.04	1.9	14.58	3.6	.04	<1	.2
99JKDR000784	1.24	<.1	.04	3.8	3.8	.4	1.93	5.9	9.79	2.8	.02	32	<.1
99JKDR000785	1.14	<.1	.02	4.3	3.8	.2	2.20	1.8	6.00	2.3	.02	7	<.1
99JKDR000786	.19	<.1	.07	.7	.8	<.1	.36	.6	7.40	2.2	.02	1	<.1
99JKDR000787	1.66	.1	.03	4.6	2.5	.4	1.58	9.1	10.31	4.0	.02	59	<.1
99JKDR000788	.55	<.1	.02	2.4	2.7	.2	1.93	2.4	7.97	3.3	.02	2	<.1
99JKDR000789	1.11	<.1	.03	2.9	3.9	.3	1.29	3.3	6.87	2.1	.03	16	<.1
99JKDR000790	.78	<.1	.02	2.3	2.0	.3	1.55	3.4	9.11	2.0	.03	17	<.1
99JKDR000791	5.80	<.1	.06	18.9	6.1	.3	1.15	1.2	13.45	11.1	.03	9	.6
99JKDR000792	4.29	<.1	.05	13.0	6.5	.1	3.35	1.0	14.69	8.6	.04	7	.3
RE 99JKDR000792	4.13	<.1	.04	12.4	6.4	<.1	3.34	.9	14.38	8.3	.04	6	.3
RRE 99JKDR000792	4.09	<.1	.04	12.2	6.2	<.1	3.27	.9	14.16	8.4	.05	5	.3
99JKDR000793	3.90	.1	.04	8.4	4.7	.2	3.51	4.9	9.92	3.4	.04	64	.2
99JKDR000794	5.60	<.1	.03	13.8	7.2	.1	2.34	1.0	14.39	8.8	.04	9	.3
99JKDR000795	6.43	<.1	.02	12.1	4.4	.1	1.90	2.5	12.30	6.7	.03	7	.4
99JKDR000796	.89	<.1	.02	4.2	2.3	.3	1.64	5.9	8.00	3.6	.03	21	.2
99JKDR000797	1.56	<.1	.02	4.1	3.5	.3	1.91	3.2	6.01	2.3	.03	13	.1
99JKDR000798	1.91	<.1	.02	4.8	3.7	.2	1.65	3.3	8.41	2.9	.02	25	.2
99JKDR000799	2.64	<.1	.02	5.5	4.2	.3	2.33	4.5	10.09	3.7	.03	26	.2
STANDARD DS2	2.66	<.1	2.02	15.3	4.3	25.3	.03	4.4	8.09	30.0	5.40	1	14.2

Sample type: CORE. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



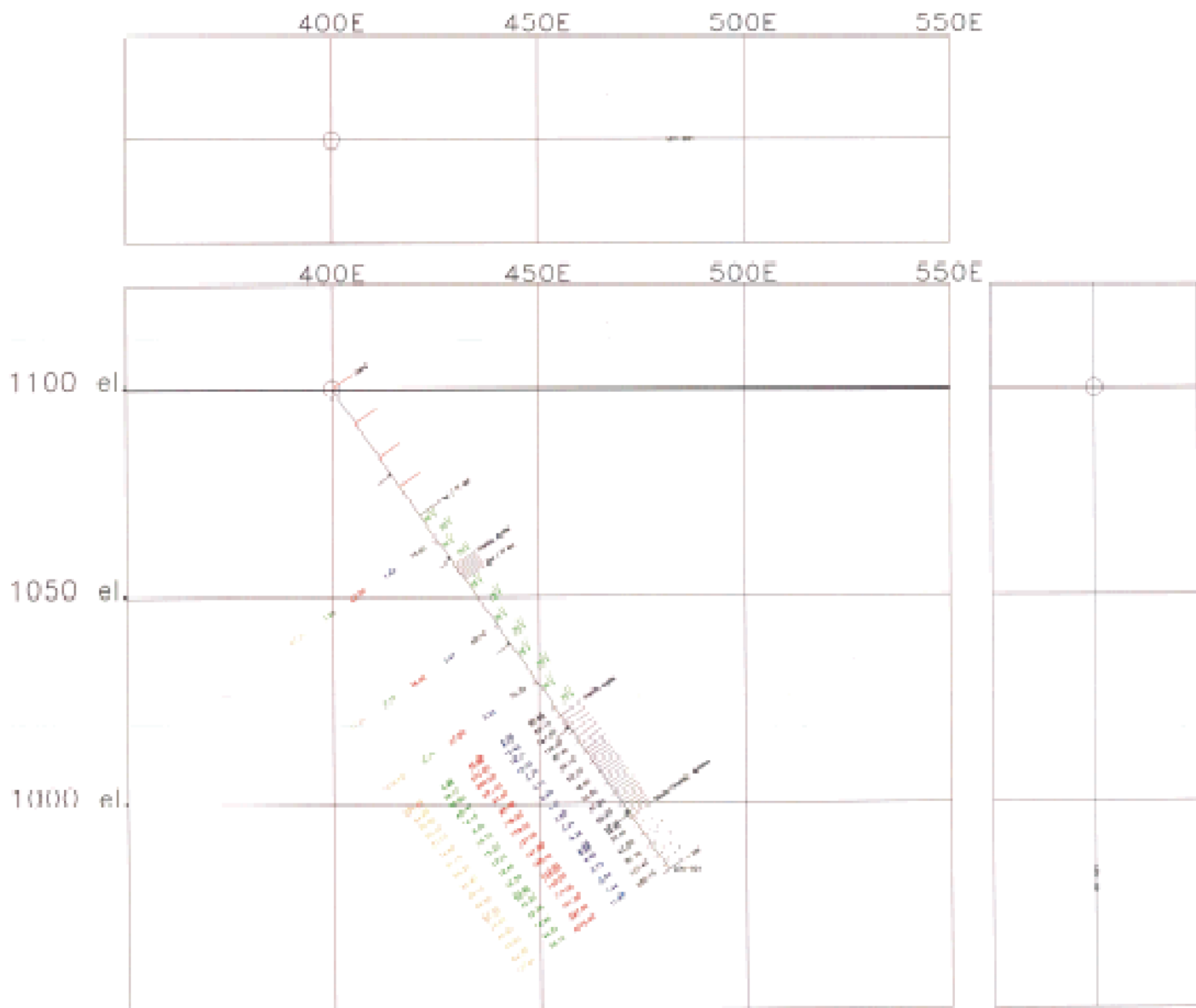
SAMPLE#	Cs ppm	Ge ppm	Nb ppm	Rb ppm	Sc ppm	Sn ppm	S %	Zr ppm	Y ppm	Ce ppm	In ppm	Re ppb	Li ppm
99JKDR000800	3.33	<.1	.05	6.9	3.9	.2	1.45	2.2	9.93	4.6	.03	7	.3
99JKDR000801	4.17	<.1	.02	7.4	5.0	.2	.80	1.6	8.33	4.3	.03	8	.4
99JKDR000802	3.30	.1	.03	7.6	4.0	.3	2.58	4.7	8.28	2.9	.03	50	.3
99JKDR000803	2.41	.1	.02	6.6	3.1	.3	2.31	5.8	8.31	5.0	.02	49	.3
99JKDR000804	5.07	<.1	.05	9.1	7.6	<.1	.18	.8	4.58	4.0	.02	<1	2.1
99JKDR000805	7.52	<.1	.05	16.1	9.8	.1	.57	1.7	9.71	12.0	.03	<1	3.1
99JKDR000806	7.93	<.1	.03	16.8	10.4	<.1	.78	1.3	11.12	12.2	.04	6	1.8
99JKDR000807	8.88	<.1	.02	12.8	10.4	<.1	.48	1.6	10.12	10.9	.04	2	1.1
99JKDR000808	8.14	<.1	.02	15.2	3.6	<.1	.99	3.7	10.70	9.1	.03	6	1.0
99JKDR000809	6.62	<.1	<.02	13.6	3.4	.2	1.41	3.6	8.17	8.1	.02	7	1.5
99JKDR000810	7.76	<.1	<.02	15.0	3.4	.2	1.02	3.7	9.10	10.1	.02	2	.9
RE 99JKDR000810	7.49	<.1	<.02	14.6	3.2	.2	1.01	3.4	8.96	9.7	.02	1	.9
RRE 99JKDR000810	7.72	<.1	<.02	14.8	3.3	.1	1.03	3.7	9.03	9.7	.02	<1	.7
99JKDR000811	9.72	<.1	<.02	15.7	2.8	<.1	1.10	2.6	7.44	8.4	.02	7	3.0
99JKDR000812	5.49	<.1	<.02	10.1	.2	<.1	.16	1.6	.83	2.6	<.02	<1	1.3
99JKDR000813	3.46	<.1	<.02	7.1	.2	<.1	.17	1.6	1.06	1.9	<.02	<1	.2
99JKDR000814	3.06	<.1	<.02	6.8	.1	<.1	.21	1.2	1.43	1.8	<.02	<1	.3
99JKDR000815	2.21	<.1	<.02	5.8	.1	<.1	.11	1.1	1.10	2.0	<.02	<1	.2
99JKDR000816	2.83	<.1	<.02	6.5	.1	.3	.19	1.7	.99	1.9	<.02	<1	.3
99JKDR000817	2.70	<.1	<.02	6.6	.2	.2	.13	1.6	.82	2.2	<.02	<1	.3
99JKDR000818	3.37	<.1	<.02	7.5	.3	.2	.19	1.2	1.07	2.4	<.02	<1	.7
99JKDR000819	3.25	<.1	<.02	7.4	.1	.2	.22	1.7	.60	2.0	<.02	<1	.4
99JKDR000820	3.17	<.1	<.02	7.0	.1	<.1	.06	1.1	.54	2.3	<.02	<1	.9
99JKDR000821	5.09	<.1	<.02	9.8	.3	.1	.21	.7	1.52	2.8	<.02	<1	1.1
99JKDR000822	8.53	.1	<.02	12.1	3.4	.1	1.93	3.1	7.32	6.7	.04	55	5.9
RE 99JKDR000822	8.39	.1	<.02	12.1	3.3	.2	1.88	3.0	7.29	6.5	.03	51	5.9
RRE 99JKDR000822	8.75	.1	<.02	12.3	3.4	.1	1.95	3.4	7.56	6.8	.03	54	6.4
99JKDR000823	7.33	<.1	<.02	12.7	3.1	.1	1.40	3.2	6.93	6.7	.03	10	7.5
99JKDR000824	4.57	<.1	<.02	12.4	1.6	.2	2.01	4.3	8.68	9.8	.02	8	5.8
99JKDR000825	5.04	<.1	<.02	10.0	2.0	.2	1.74	4.0	7.10	7.5	.03	13	3.9
99JKDR000826	6.88	.1	<.02	13.4	10.8	.1	.02	1.1	4.77	3.8	.02	<1	35.2
99JKDR000827	5.10	.1	<.02	4.0	12.8	.2	.01	1.0	7.37	16.8	.04	<1	30.2
99JKDR000828	6.71	<.1	<.02	8.0	7.7	.2	.01	.5	7.03	14.0	.03	1	10.4
99JKDR000829	10.34	<.1	<.02	14.2	11.6	.1	.32	.2	7.26	5.0	.04	<1	3.2
99JKDR000830	4.01	<.1	<.02	3.6	7.3	.2	.01	1.2	7.86	15.8	.03	<1	9.1
STANDARD DS2	2.74	<.1	2.06	14.8	3.0	25.8	.02	4.3	8.14	31.1	5.38	2	14.2

Sample type: CORE. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



SAMPLE#	Cs ppm	Ge ppm	Nb ppm	Rb ppm	Sc ppm	Sn ppm	S %	Zr ppm	Y ppm	Ce ppm	In ppm	Re ppb	Li ppm
99JKDR000831	5.87	<.1	<.02	5.9	6.0	.3	.01	.7	9.29	16.6	.03	<1	19.2
99JKDR000832	.50	<.1	.51	17.0	.8	1.3	<.01	19.6	6.44	41.9	<.02	2	22.3
99JKDR000833	.13	<.1	<.02	6.1	2.5	.5	<.01	2.4	7.63	41.7	.02	<1	6.9
99JKDR000834	.64	<.1	.03	6.8	.9	.2	.04	4.1	3.62	19.2	<.02	2	5.2
99JKDR000835	.11	<.1	<.02	6.9	2.2	.5	.07	5.4	9.22	42.4	.02	<1	4.6
99JKDR000836	.05	<.1	.02	6.2	2.8	.6	.02	4.6	9.54	43.7	.02	<1	4.4
99JKDR000837	.47	<.1	.04	18.3	1.9	.6	<.01	16.5	6.72	30.1	.03	<1	5.3
99JKDR000838	.40	<.1	.02	9.9	2.4	.2	<.01	1.5	12.59	28.8	.02	2	9.6
99JKDR000839	.43	<.1	.05	9.7	2.0	.5	<.01	.9	11.94	31.8	<.02	<1	9.4
99JKDR000840	.39	<.1	<.02	10.0	2.1	.2	.01	1.0	13.07	31.2	.02	<1	6.7
RE 99JKDR000840	.37	<.1	<.02	9.8	2.0	.2	.01	.8	12.57	30.7	.02	1	6.1
RRE 99JKDR000840	.37	<.1	<.02	9.9	2.2	.3	.02	.8	12.72	31.3	.02	<1	6.4
99JKDR000841	.32	<.1	<.02	7.2	2.2	.3	.02	.7	11.23	29.2	.02	<1	5.7
99JKDR000842	.32	<.1	<.02	7.4	1.9	.3	.01	.6	10.92	30.8	.02	<1	6.6
99JKDR000843	.13	<.1	.02	4.0	4.2	.4	.05	.5	11.10	24.8	.03	2	6.5
99JKDR000844	.18	<.1	.02	4.8	7.9	.7	1.11	2.0	17.77	27.3	.06	3	11.2
99JKDR000845	.11	<.1	.02	3.2	3.9	.5	.92	1.4	16.06	21.2	.04	9	6.4
99JKDR000846	.21	<.1	.46	6.6	.8	1.0	.02	14.5	6.01	40.8	<.02	<1	20.6
STANDARD DS2	2.71	<.1	2.06	15.0	2.9	26.1	.03	4.2	8.02	31.0	5.28	3	13.6

Sample type: CORE. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



Section created using LoggerDB Software © North Face Software Ltd. 1999-1998

CENTRAL BC PROJECT

Hudson Bay Exploration and Development Co. Ltd.

Section: LEN-001

LEN-001 DIAMOND DRILL SECTION
LEN 6 CLAIM, BABINE LAKE AREA, BC

Zn(ppm)/Pb(ppm)/Ag(ppb)/As(ppm)/Ba(ppm)

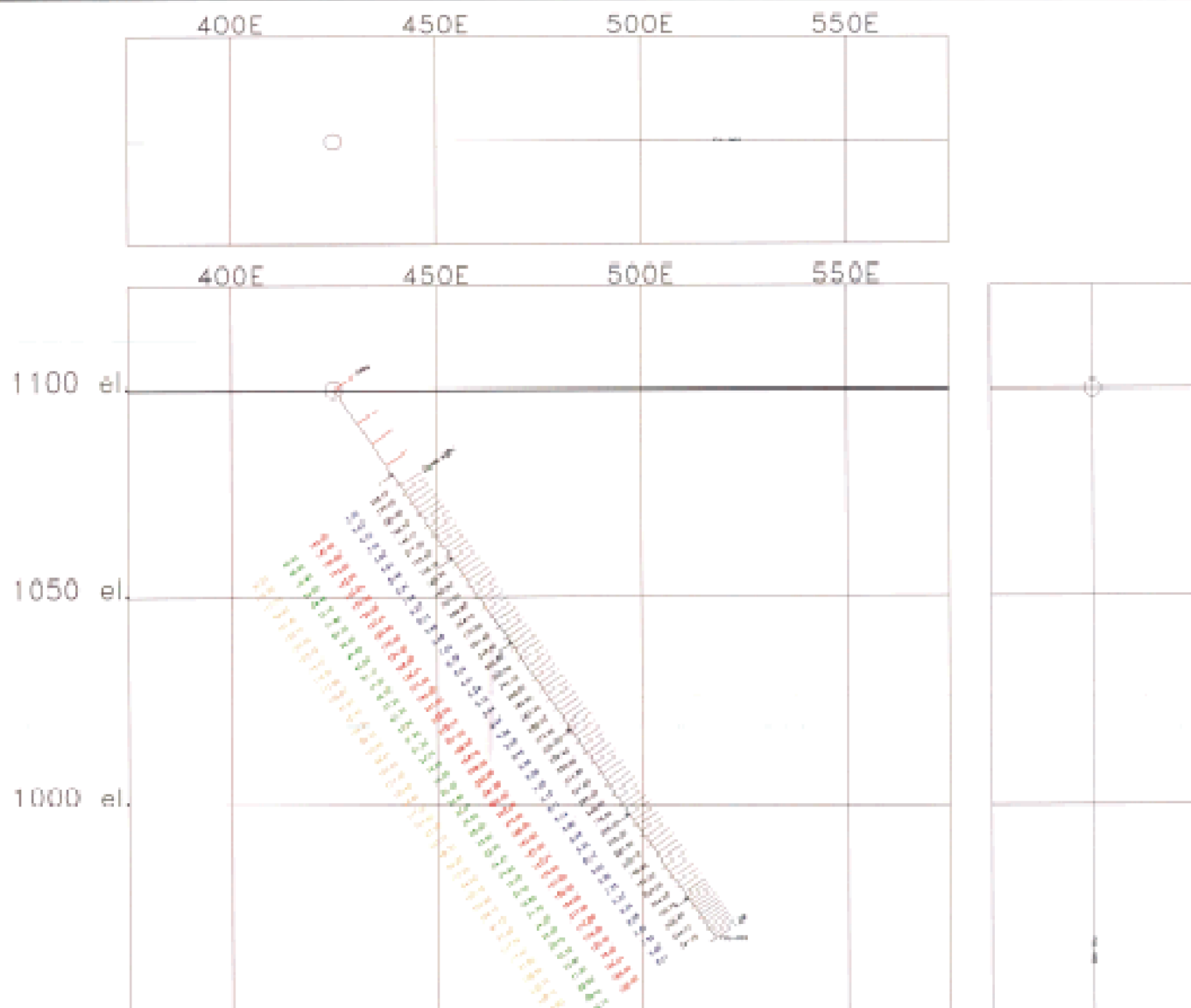
Drawn by: JKD

Date: 03/02/2000

Scale: 1:100

File: LEN_001.Dxf

26.529



Section created using Logger32 Software © North Hill Software Ltd. 1995-1998

CENTRAL BC PROJECT

Hudson Bay Exploration and Development Co. Ltd.

Section: FUL-002

FUL-002 DIAMOND DRILL SECTION
 FUL 1 CLAIM, BABINE LAKE AREA, BC

Zn(ppm)/Pb(ppm)/Ag(ppb)/As(ppm)/Ba(ppm)

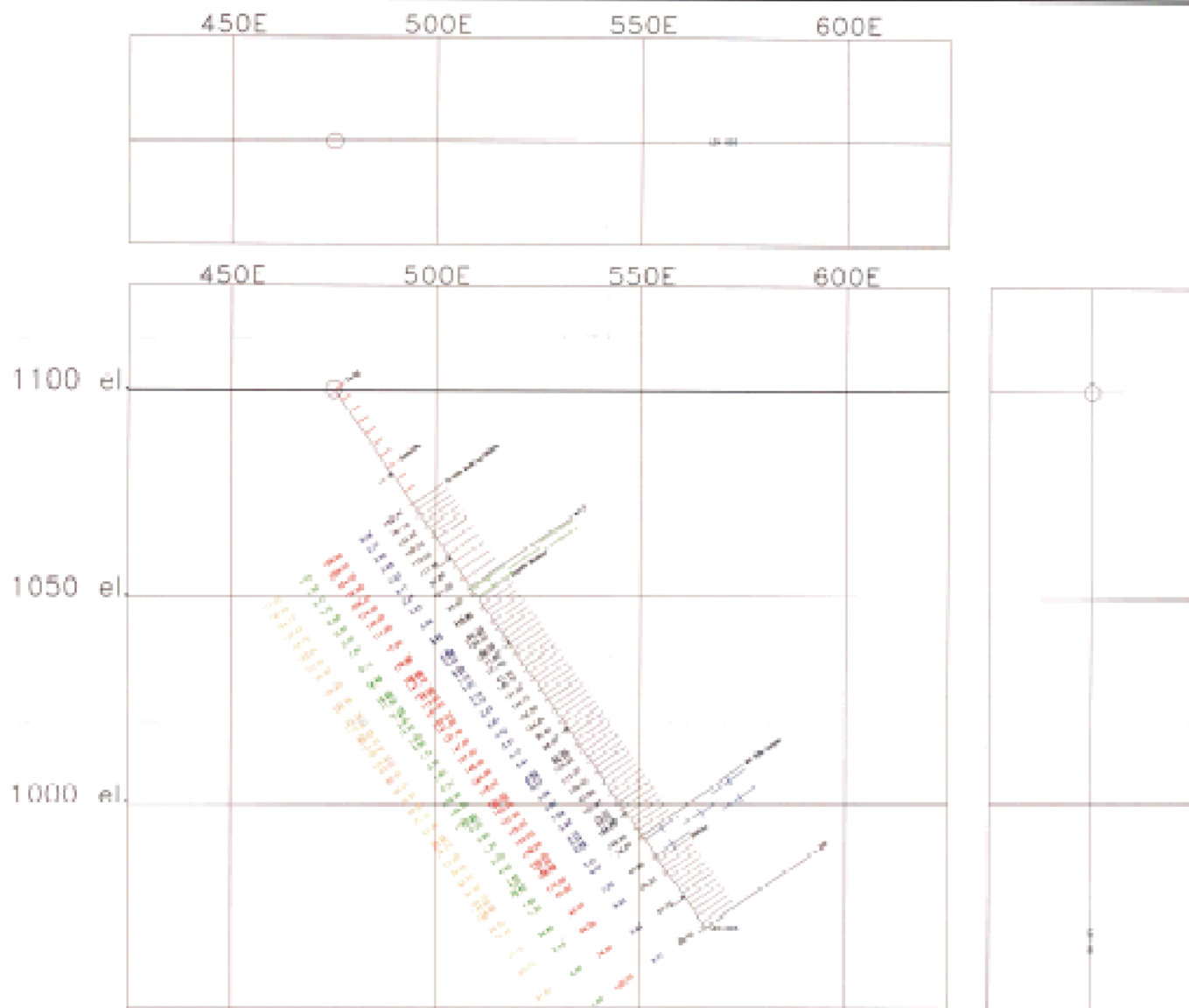
Drawn by: JKD

Date: 03/02/2000

Scale: 1:100

File: FUL-002.Dxt

2000



Section created using Logger98 Software © North Face Software Ltd. 1995-1998

CENTRAL BC PROJECT

Hudson Bay Exploration and Development Co. Ltd.

Section: LEN-003

LEN-003 DIAMOND DRILL SECTION
LEN 8 CLAIM, BABINE LAKE AREA, BC

Drawn by: JKD

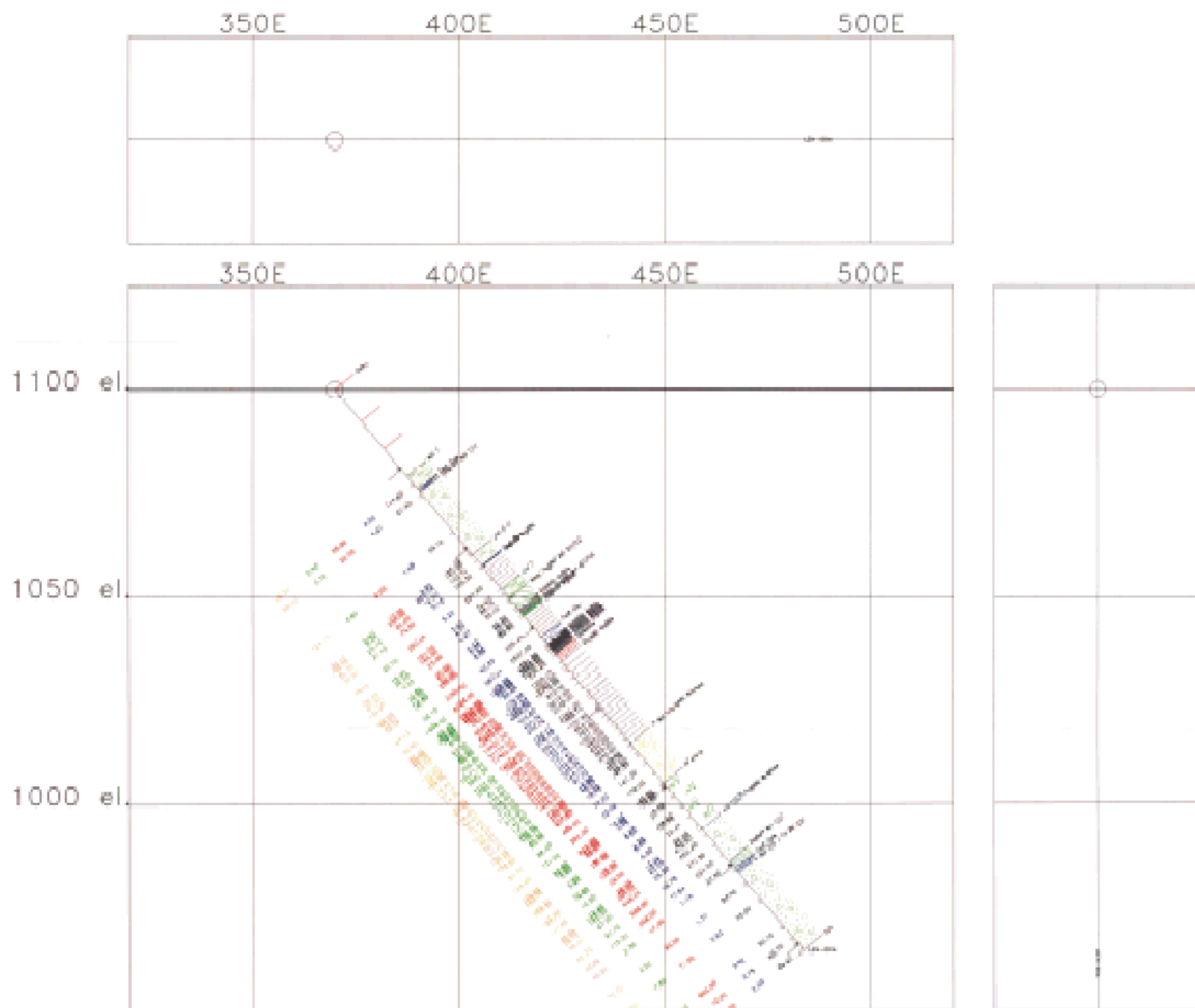
Date: 03/02/2000

Scale: 1:100

File: LEN003.D

APPROVED BY: JAMES MURPHY

2000



Section created using Logger3D Software v. North Face Software Ltd. 1995-1998

Zn(ppm)/Pb(ppm)/Ag(ppb)/As(ppm)/Ba(ppm)

CENTRAL BC PROJECT

Hudson Bay Exploration and Development Co. Ltd.

Section: LEN-004

LEN-004 DIAMOND DRILL SECTION
LEN 4 CLAIM, BABINE LAKE AREA, BC

Drawn by: JKD

Date: 03/02/2000

Scale: 1:100

File: LEN-004.Dxf

2000

