MAP NO.:	**ASSESSMENT REPORT** X	**DOCUMENT NO:**	092833
	PROSPECTUS	**MINING DISTRICT:**	Watson Lake
	CONFIDENTIAL X	**TYPE OF WORK:**	Diamond drilling
95 D 6	**OPEN FILE**		

REPORT FILED UNDER: Breakwater Resources Ltd

DATE PERFORMED: 4 October-13 November, 1990 **DATE FILED:** 23 March, 1990

LOCATION: **LAT.:** 60°21'N **AREA:** Rock River

LONG.: 127°24'W **VALUE $:**

CLAIM NAME & NO.: MEL 11-16(Y22230-35); JEAN 1-21(Y72731-4,72961-66;74418-28);WET 1-32(Y83309-32) JOE 1-2FR(YA45269-70); SOV 1-6(YA28600-05); KELI 1-4(YA66842-45);JONI 1-8(YA66846-53); HOSE 1-8 (YA66919-26);JERI 1-8(YA66931-8); KELI 5-8(YA66927-30); RALFO 1-7(YA66939-45); CHUNGO 1-8(YA66946 -53); OTT 1-8(YA66954-61); EDY 1-7(YA66962-8); TOMI 1-8(YA66969-76); MUMBO 1-8(YA66977-84); BOZ 1 -4(YA66985-8); SIN 1-8(YA66985-96); YANG 1-6(YA66994-7); DAVE 1-8(YA72501-8);ANDY 1-8(YA72509-16)

WORK DONE BY: D.C. Miller

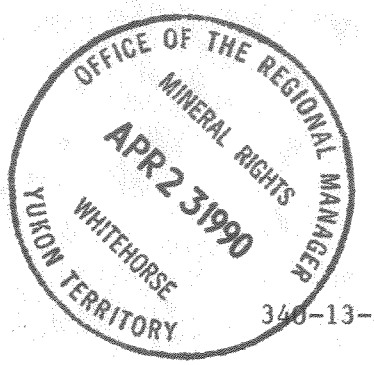
WORK DONE FOR: Breakwater Resources Ltd, option from Barytex Resources Corp.

DATE TO GOOD STANDING:

REMARKS: #2 MEL-HOSER

Geological reserves of 5 687 000 tonnes grading 6.77% Zn, 1.92% Pb & 51.1% barite occur in a folded lensoid body up to 21.7 m thick and 800 m long. In 1989, 4 BQ holes totalling 662.94 m tested the north and upper part of the deposit for its open pit potential. The best intersection in hole 89-33 averaged 9.6% Zn, 0.41% Pb and 65.30% Ba over a true width of 8.62 m.

Indian and Northern Affairs Canada
Affaires indiennes et du Nord Canada



9 April, 1990

340-13-3

DIRECTOR GENERAL, YUKON REGION

ATTENTION: REGIONAL MANAGER MINERAL RIGHTS

RESTRICTED

Enclosed are Diamond Drill Logs etc. submitted by Barytex Resources Corp. for assessment on the JEAN, WET, MEL, JOE, HOSE, JERI, SIN, OTT, YANG, AND TOMI mineral claims on 095-D.06.

Diamond Drilling was as follows:

89-30	JEAN 3	184.10 m
89-31	JEAN 3	220.06 m
89-32	JEAN 3	204.22 m
89-33	JEAN 3	54.56 m
TOTAL	662.94 m	

Assessment Credit requested is $23,200.00. The drill core is stored on the property.

Yours truly,

Patti L. McLeod
Mining Recorder
Watson Lake Mining District
Box 269
Watson Lake, Yukon
Y0A 1C0

encls.
cc: Regional Manager, Geological Services

092833

NJM

Canada

DESIGNATION NO. EIP89061

REPORT ON DIAMOND DRILLING

MEL PROPERTY, YUKON

(JEAN 3 CLAIM)

CLAIM SHEET 95D/6

LATITUDE 60 DEGREES 21 MINUTES NORTH

LONGITUDE 127 DEGREES 24 MINUTES WEST

PREPARED BY

D.C. MILLER, P.ENG.

FOR

BARYTEX RESOURCES CORP.

COVERING FIELD WORK

BETWEEN

OCTOBER 4 AND NOVEMBER 13, 1989

SUBMITTED JANUARY 31, 1990

TABLE OF CONTENTS

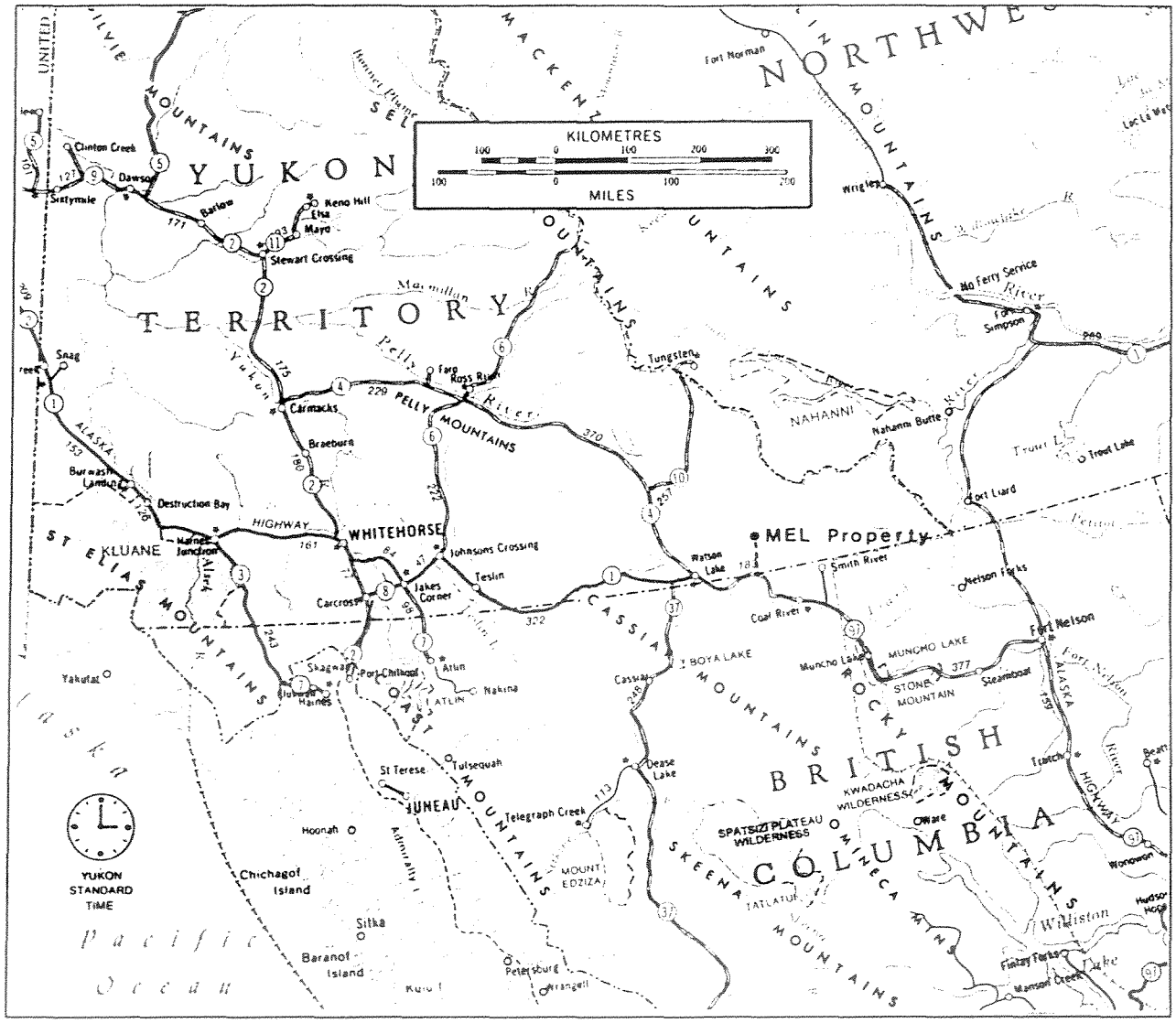
ILLUSTRATIONS

INTRODUCTION AND SUMMARY

Previous drilling at the Mel property during 1974-1987 indicated geological reserves totalling 5,687,493 tonnes grading 6.77% zinc, 1.92% lead and 51.1% barite. In this calculation, individual drill sample assays were combined by linear weighting and the combined assays representing each drill hole intersection were weighted by a block of mineralization calculated taking into account the specific gravity of that block. Mineralization occurs in a stratiform, folded lens-shaped body up to 21.7 m thick at its centre. Mineralization gradually thins towards both ends over a 800 m stike-length.

During October and November 1989, 4 BQ diamond drill holes totalling 662.94 m tested the north and upper part of the zone. The drilling was designed to firm up estimated geological reserves within a proposed open pit location and to delineate the fold structure in more detail. To obtain the maximum amount of information, the holes were located to intersect the zone above and below the fold axis. Three holes were completed to total depth with dual intersections and the final hole was suspended due to weather after intersecting only the upper part of the zone. The drilling provided seven additional intersections within the mineralized unit. All intersections occurred within a few metres of the predicted location, but variations in grade and thickness indicate trends not previously recognized in earlier drilling at wider spacing. Continuation of drilling at 50 metre spacing is clearly warranted.

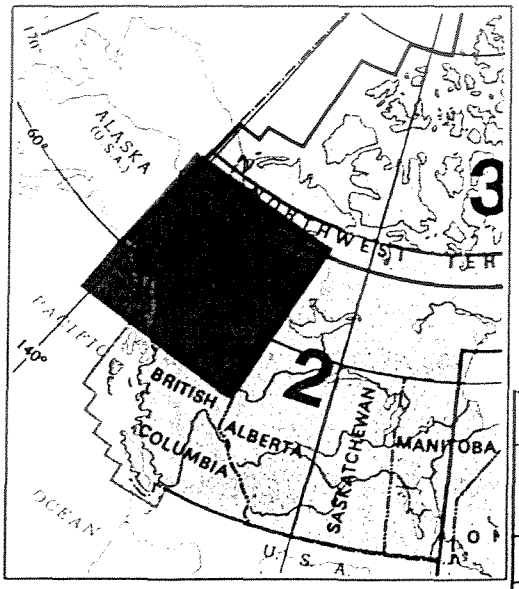
As drilling operations were suspended for a planned winter shut-



LOCATION MAP

Watson Lake Mining District, Yukon

INDEX MAP



Area Covered

Yukon and Northern B.C.

Distances from Mel Property

Watson Lake	80 km (Air)
Alaska Hwy	50 km (Winter Rd.)
Fort Nelson	507 km - Railhead
Skagway	666 km - Tidewater

BARYTEX RESOURCES CORP.

MEL PROPERTY
LOCATION & ACCESS

DRAWN BY	NTS	FIGURE
DCM	95D/6	
REPORT DATE	PROJECT NO.	1
JAN. 31, 1990	9068	

D.C. MILLER GEOLOGICAL SERVICES

down, the program as outlined in my Report dated September 19, 1989 has not yet been completed. Work is expected to resume in March and a comprehensive review of data will be completed following this work.

The results of the recent drilling continue to suggest that the Mel deposit compares favourably with existing base metal deposits.

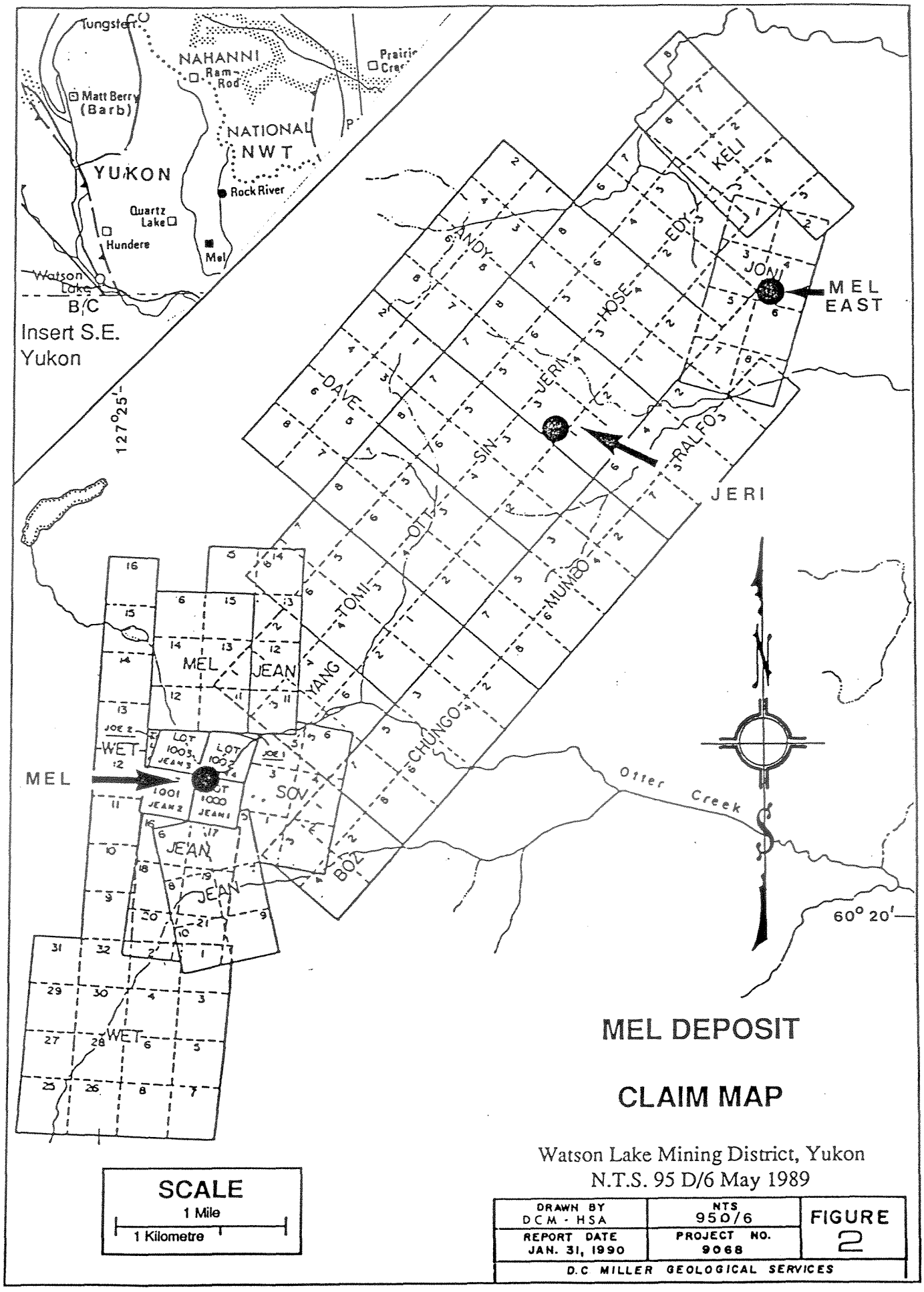
LOCATION AND ACCESS

The Mel property is located 80 km east-northeast of Watson Lake, Yukon. Access is provided by a winter road, some 50 km long, leading from the Alaska Highway at a point some 77 km eastward of Watson Lake. Alternative access is provided by a 640 m airstrip located 1.5 km south of the Mel deposit or by helicopter. Road distance from the property to the railhead at Fort Nelson is 507 km and to tidewater at Skagway is 666 km.

PROPERTY AND OWNERSHIP

The property comprises 171 claims and is jointly owned by Breakwater Resources Ltd. and Barytex Resources Corp. Under the terms of an agreement dated February 15, 1985 Breakwater has earned a 100% interest in the property subject to a 10% net profits interest held by Baytex. Barytex also receives a $20,000 per year advance royalty and has the right to earn a 5% participating interest when a production decision is reached.

Under the terms of an amending agreement dated August 31, 1989 Breakwater has agreed to grant Barytex an option to reaquire a 45% interest in the property. The property is located in the Watson Lake Mining District and includes 171 contiguous claims as follows:



MEL DEPOSIT

CLAIM MAP

Watson Lake Mining District, Yukon
N.T.S. 95 D/6 May 1989

DRAWN BY	NTS	FIGURE
DCM - HSA	95D/6	2
REPORT DATE	PROJECT NO.	
JAN. 31, 1990	9068	
D.C MILLER GEOLOGICAL SERVICES		

CLAIM NAME	GRANT NO.	EXPIRY DATE
Mel 11-16	Y 22230-35	April 3, 2000
Jean 1- 4	Y 72731-34	April 3, 2000
Jean 5-10	Y 72961-66	April 5, 1998
Jean 11-21	Y 74418-28	Oct. 15, 1999
Wet 1	Y 83309	April 3, 1999
Wet 2	Y 83310	April 3, 2000
Wet 3	Y 83311	April 3, 1999
Wet 4	Y 83312	April 3. 2000
Wet 5-8	Y 83313-16	April 3, 1999
Wet 9-16	Y 83317-24	April 3, 1998
Wet 25-29	Y 83325-29	April 3, 1999
Wet 30	Y 83330	April 3, 2000
Wet 31	Y 83331	April 3, 1999
Wet 32	Y 83332	April 3, 2000
Joe 1-2 Fractions	YA45269-70	Aug. 13, 1997
Sov 1-6	YA28600-05	April 26, 2000
Keli 1-4	YA66842-45	Aug. 10, 1994
Joni 1-8	YA66846-53	Aug. 10, 1994
Hose 1-8	YA66919-26	Aug. 24 1994
Keli 5-8	YA66927-30	Aug. 24, 1994
Jeri 1-8	YA66931-38	Aug. 24, 1994
Ralfo 1-7	YA66939-45	Aug. 24, 1994
Chungo 1	YA66946	Aug. 24, 1994
Chungo 2-8	YA66947-53	Aug. 24, 1995
Ott 1-8	YA66954-61	Aug. 24, 1994
Edy 1-7	YA66962-68	Aug. 24, 1994
Tomi 1-8	YA66969-76	Aug. 24, 1994
Mumbo 1	YA66977	Aug. 24, 1994
Mumbo 2-4	YA66978-80	Aug. 24, 1993
Mumbo 5-8	YA66981-84	Aug. 24, 1994
Boz 1-4	YA66985-88	Aug. 24, 1994
Sin 1-2	YA66989-90	Aug. 24, 1994
Sin 3-5	YA66991-93	Aug. 24, 1995
Sin 6-8	YA66994-96	Aug. 24, 1994
Yang 1	YA66997	Aug. 24 1990
Yang 2-6	YA66998-02	Aug. 24, 1994
Dave 1-8	YA72501-08	Nov. 5, 1994
Andy 1-8	YA72509-16	Nov. 5, 1994

The claim information was obtained from Breakwater records and is thought to be accurate. A cross-check against the Mining Recorder's records is recommended.

PHYSIOGRAPHY AND CLIMATE

The base elevation at the property is 850 m and maximum elevations range up to 1300 m. Topography is generally moderate. Forests are composed mainly of spruce, pine and balsam. Much of the forests on the property were burned in 1982 by a large forest fire. The property is drained by Otter Creek and its tributaries which flow eastward into the Rock River and Mel Creek which flows south to the Coal River. Adequate water is present for mining and exploration purposes. The climate is similar to that at Ft. Nelson, B.C., with cold winters and moderate summers. Precipitation is moderate and winter snow accumulation is in the order of 80 cm.

HISTORY

The property was first staked in 1967 by J. Melnychuk and T. Flint and optioned to Newmont Mining Corporation. Early work by Newmont included road work, trenching and a geochemical survey. Newmont dropped their option and the property was later sold to Empire Metals Corporation which was subsequently renamed Barytex Resources Corp. Barytex optioned the property to Granby Mining Corporation, which drilled 18 diamond drill holes totalling 1952 m during 1974 and 1975. In 1976 St. Joseph Explorations Limited entered the agreement and conducted geological, geochemical and geophysical surveys followed by 4054.2 m of diamond drilling in 19 holes during 1978 and 1979. In 1981 the Canadian interests of St. Joe Minerals Corporation were sold to Sulpetro Limited and Sulpetro Minerals Limited was formed as the minerals division.

In 1981 regional exploration work by Sulpetro discovered zinc mineralization 7.3 km (Fig. 3) northeast of the Mel deposit. The showings were named Mel-East (Joni), but little further work was done in this area. In 1984 the Jeri zinc showings were discovered between the Mel and Mel-East areas (Fig. 3). Later in 1984 Sulpetro completed a new access road to the property and built an airstrip near the main Mel deposit. In 1985 Sulpetro utilized the airstrip to drill the Jeri showings with 10 diamond drill holes totalling 1009.8 m. At this time a 5.5 km tote road was built to connect the Mel and the Jeri showimgs. In late 1985 Sulpetro sold its mineral assets to Novamin Resources Inc., which in 1987, completed 7 diamond drill holes totalling 2011.99 m. This drilling tested the Mel deposit at depth and to the south along strike. In 1988 Novamin was purchased by Breakwater Resources Ltd.

CURRENT WORK

MOBILIZATION AND CAMP

Initial mobilization started on October 4 when the writer and assistant Leo Loranger drove from Kamloops to Watson Lake bringing a load of exploration equipment. Initially this equipment was used for a brief program of soil sampling and line cutting on the adjoining Jeri claims. On October 14 much of the camp equipment from the Jeri campsite was slung by helicopter to the Mel campsite. A 14x16 tent frame left from 1987 was utilized for the office tent. During October 15-19 additional lumber, plywood, groceries, drill equipment and 4 drillers and a cook were were flown from Watson Lake and Contact Creek using Bell 205 and Bell 206B helicopters. As the materials arrived, a camp consisting of a 14x16 kitchen tent and a 12x14 driller's tent was set up. On October 18 a mechanic was brought in and started up the John Deere 350 C tractor which had been stored at the airstrip since 1985.

Diesel fuel consumption was about 1 barrel per day for the drill, coil heater, pumps, tractor and oil stoves. Gasoline consumption for the generator, Ferret tractor and power saws was about 2 gallons per day. Initially old fuel left at the property from previous programs was used and later, new fuel was brought in by Beaver aircraft as required while empty drums were taken out.

WEATHER

From Oct. 14 to 25 the weather was fairly mild with temperatures averaging about -2 deg. C. with several periods of snowfall.

From Oct. 26 to Nov. 1 temperatures dropped to as low as -20 deg. C., but averaged -10 deg. C. From Nov. 2 to 7, temperatures were milder, averaging about -2 deg. C. A cooling trend started on Nov. 8 which resulted in lows of -30 and -42 deg. C. on Nov. 10 and 11 respectively. Total snow accumulation by Nov. 11 was 45 cm.

DIAMOND DRILLING

During Oct. 20 to Nov. 9, 4 BQ holes totalling 662.94 m were completed to test relatively near surface mineralization within a broad fold structure between sections 10,050N and 10,200N. Drilling was done with a hydracore drill. Three days were lost because of mechanical problems, but when operating normally the drill perfomed well, good core recovery was obtained and good directional control was maintained.

The first 3 (deeper) holes were surveyed with a Pajari compass-dip instrument and survey results are appended to this report. Very little hole deviation occurred.

Drill core was logged on a daily basis and all significant mineralization was split and shipped to Chemex Labs, North Vancouver, B.C. where samples were assayed for silver, zinc, lead and barite.

Drilling was stopped temporarily on Nov. 9 and the drill was left set up at hole 89-33. It is planned to resume drilling in March 1990.

DIAMOND DRILLING SUMMARY TABLE

HOLE NO.	LAT. (m)	DEP. (m)	ELEV. (m)	GRID AZ. (DEG)	DIP (DEG)	O.B. (m)	TOTAL DEPTH (m)	DATE START/ FINISH
89-30	10,097.3	9,974.5	924.7	270	-85	0.76	184.10	OCT. 20/24
89-31	10,157.3	9,985.4	935.0	270	-88	3.28	220.06	OCT. 26/30
89-32	10,198.6	9,988.0	942.1	270	-87	0.30	204.22	OCT. 30/ NOV. 07
89-33	10,049.3	9,973.4	919.0	270	-89.5	0.61	54.56	NOV. 08/09
						TOTAL	662.94	

SURVEY

A survey was done to tie the base line to a previous claim survey, to re-establish the baseline and to survey the collars of the current drill holes. A Wild T1A theodolite and a metric stadia rod were used. For control with respect to astronomic north, 2 iron pins of the claim survey were located. These included the main iron pin at the common point of the Jean 1-4 claims and the north iron pin between the Jean 3 and 4 claims. The azimuth of the base line was determined to be 1 deg. 54 min. 20 sec.

In previous surveys the Granby base point was assigned coordinates of 9,971.58N, 10,000E and an elevation of 906.05 m. This point was used to set 4 iron pins along the baseline between 9800.00N and 10110.80N and as a reference to tie in the current drill holes.

CORE STORAGE

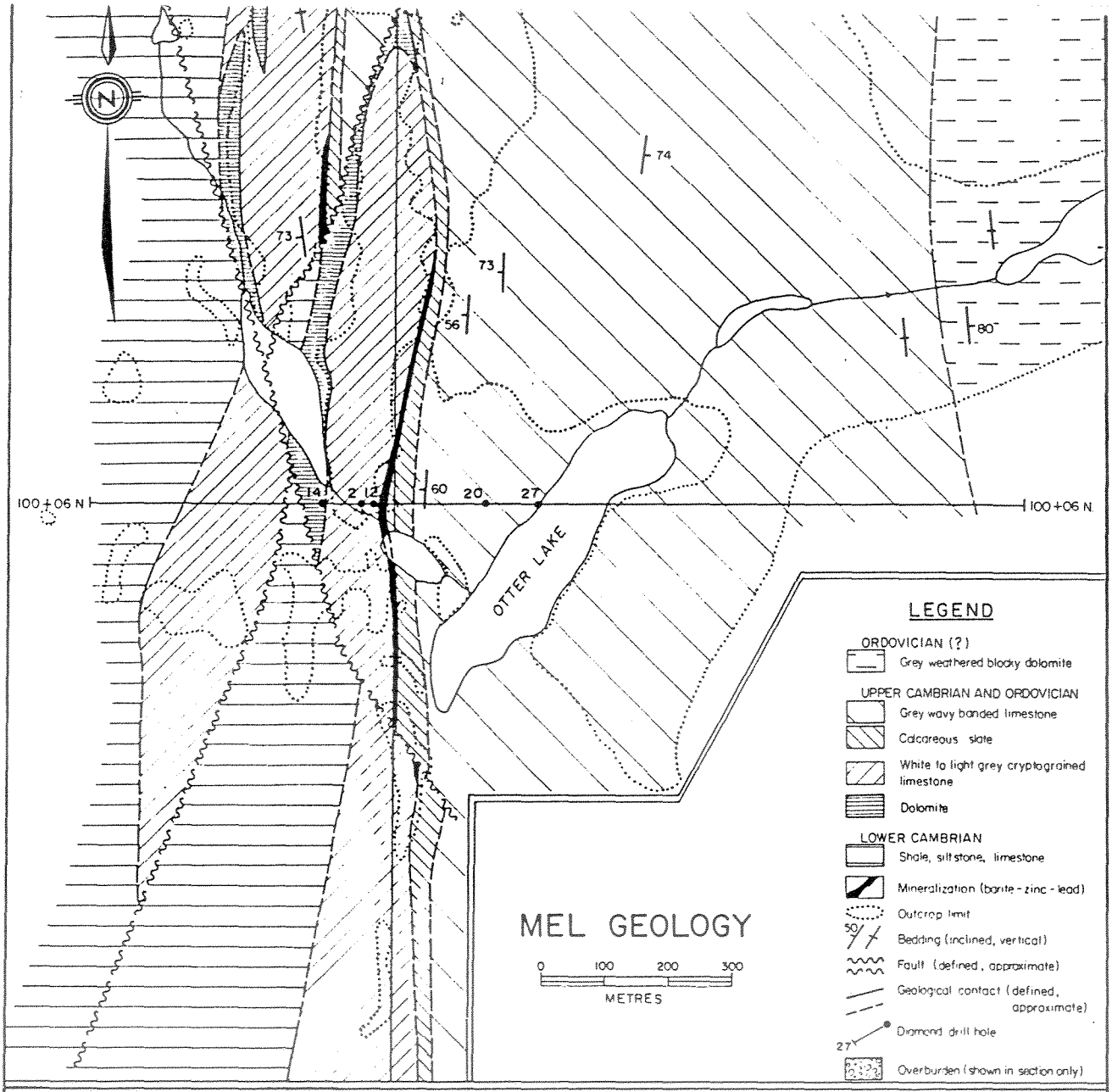
The core rack materials arrived on Oct. 27 and the core rack was constructed using 2x6 lumber and 1/2 in. rebar on 4 in. centers. It has a capacity for 360 NQ or BQ core boxes. The site for the

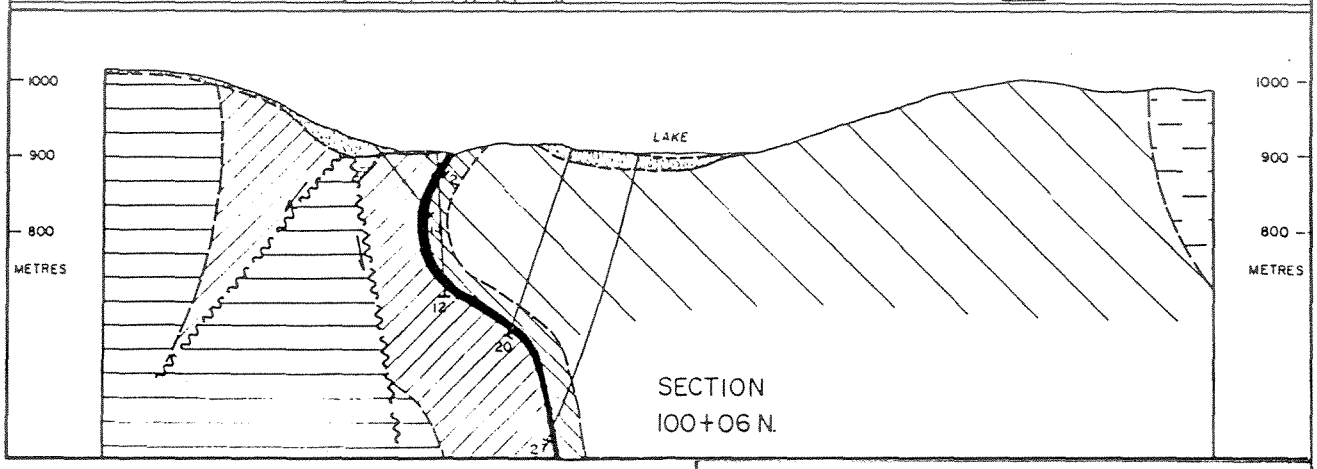
core rack was levelled by the John Deere tractor before deep frost and the rack was well braced by 2x6 lumber and steel rods. All core except for parts of holes 30 and 33 are stored in this core rack located on the Jean 4 claim near its initial post. Core from 171.30 to 175.00 m in hole 30 and from approximately 20 to 50 m in hole 33, was shipped to Vancouver and is being used for petrographic and metallurgical testing.

GEOLOGY

The Mel area is underlain by Cambrian to Ordovician strata including carbonates and various clastic sediments. These strata have been folded into a north-south trending overturned syncline. The Mel zinc-lead-barite deposit occurs at the top of a 200 m thick cryptograined limestone unit which is overlain by a finely laminated calcareous shale-phyllite unit some 30 m thick which in turn grades into a thick overlying unit of wavy banded limestone.

Zinc-lead mineralization is largely confined to a baritic bed which occurs in the upper part of the cryptograined limestone and is thought to represent a sediment hosted exhalative deposit. Lesser, apparently remobilized zinc-lead and barite mineralization locally extends a few metres into the shaly unit. The deposit is essentially strataform and occurs in a folded lens-shaped body up to 21.7 m thick at its centre and gradually thinning outward over a total strike-length of 800 m. To date drilling has intersected mineralization to a vertical depth of 489.5 m and the deposit is still open at depth.





ADAPTED FROM
COMPANY PLANS

BARYTEX RESOURCES CORP.

MEL DEPOSIT GEOLOGY

DRAWN BY	NTS	FIGURE
DCM	95D/6	3
REPORT DATE	PROJECT NO.	
JAN. 31, 1990	9068	

D.C. MILLER GEOLOGICAL SERVICES

DIAMOND DRILLING RESULTS

Assay results are tabulated in Table 2 with averaged grade results shown below the single dashed line. The averaging was done using a specific gravity weighting for each assay interval. Thus, each assay is weighted by the product of the linear assay interval and the calculated specific gravity. This method is technically more accurate than linear weighting alone.

Geological descriptions corresponding to the assay interval and sample number are obtained by referring to the appended diamond drill hole logs and the drill hole sections. Holes 30, 31 and 32 were drilled through a fold structure and each cut 2 intersections through the mineralized zone. Hole 33 tested only the upper limb of the fold structure.

HOLE 89-30 (SECTION 10,100N, FIGURE 5)

This hole intersected the zone much as expected. The best part of the upper intersection from 32.4 to 46.0 m, or 13.6 m averaged 6.58% zinc, 1.09% lead and 64.86% barite over an estimated 6.80 m true width. Core recovery averaged about 98% overall. The best part of the lower intersection averaged 4.76% zinc, 0.82% lead and 41.43 % barite over a length of 9.10 m, or an estimated 5.22 m true width.

HOLE 89-31 (SECTION 10,150N, FIGURE 6)

This hole also intersected the zone as expected, but the grade of the upper intersection was lower than expected. It averaged 1.89% zinc, 1.31% lead and 40.73% barite over length of 12.34 m, or an estimated 6.17 m true width. The lower intersection averaged 8.25% zinc, 2.53% lead and 44.30% barite over a 10.00 m length, or an estimated 7.07 m true width. Core recoveries averaged about 98%.

HOLE 89-32 (SECTION 10,200N, FIGURE 7)

This hole also intersected the zone as expected. The upper intersection averaged 5.36% zinc, 3.47% lead and 55.47% barite over a length of 15.7 m, or an estimated 8.32 m true width. The lower intersection averaged 2.81% zinc, 1.55% lead and 59.19% barite over a length of 5.45 m, or an estimated 3.50 m true width. Core recovery averaged about 95% in the upper zone and 98% in the lower zone.

HOLE 89-33 (SECTION 10,050N, FIGURE 8)

This hole tested only the upper zone of the fold structure and intersected better than expected mineralization averaging 9.60% zinc, 0.41% lead and 65.30% barite over a 15.02 m length, or an estimated 8.62 m true width. A higher grade section averaged 12.24% zinc, 0.42% lead and 59.48% barite over a 10.25 m interval. Core recovery averaged about 98%.

Barytex Resources Corp.

MAIN MZL ZONE
DIAMOND DRILL HOLE ASSAY DATA - TABLE II

Sequence No.	Hole No.	Sample No.	From (metres)	To (metres)	Interval (metres)	Silver O.P.T.	Zinc %	Lead %	Barite %	Specific Gravity
30	89-30	447401	31.09	31.50	0.41	0.01	0.12	0.07	0.34	2.71
		447402	31.50	32.40	0.90	0.03	2.53	0.13	10.35	2.94
		447403	32.40	34.40	2.00	0.04	5.83	0.23	37.38	3.50
		447404	34.40	36.30	1.90	0.06	6.10	0.55	77.15	4.24
		447405	36.30	37.90	1.60	0.01	2.17	0.06	87.34	4.32
		447406	37.90	40.00	2.10	0.04	14.40	0.70	57.78	4.06
		447407	40.00	42.00	2.00	0.01	4.60	0.61	69.50	4.07
		447408	42.00	44.00	2.00	0.03	6.30	2.50	61.00	4.06
		447409	44.00	46.00	2.00	0.06	5.54	2.71	63.89	4.11
		447410	46.00	47.10	1.10	0.01	1.86	0.30	22.94	3.17
		447411	47.10	47.90	0.80	0.01	0.05	0.16	84.63	4.23
		447412	47.90	48.60	0.70	0.02	0.07	0.57	1.39	2.76
Not assayed			48.60	165.40	116.80					
		447413	165.40	166.10	0.70	0.06	4.90	3.39	20.22	3.35
		447414	166.10	166.50	0.40	0.22	3.97	3.57	23.45	3.40
		447415	166.50	168.50	2.00	0.03	2.22	0.39	71.71	4.06
		447416	168.50	170.00	1.50	0.01	0.96	0.39	82.76	4.23
		447417	170.00	171.30	1.30	0.01	4.43	0.02	64.74	3.95
		BTX_1	171.30	173.40	2.10	0.01	4.35	0.02	49.96	3.68
		BTX_2	173.40	173.70	0.30	0.63	3.14	7.15	60.50	4.24
		BTX_3	173.70	175.00	1.30	0.15	5.32	1.11	29.23	3.39
		447418	175.00	177.00	2.00	0.10	5.64	0.61	18.35	3.17
		447419	177.00	179.10	2.10	0.10	4.60	1.12	40.10	3.57
		447420	179.10	180.00	0.90	0.04	1.74	0.48	4.50	2.84
Sp.Gr. Avg.	-Upper		32.40	46.00	13.60	0.04	6.58	1.09	64.86	4.06
Sp.Gr. Avg.	-Lower,all		165.40	180.00	14.60	0.07	3.76	0.87	47.81	3.68
Sp.Gr. Avg.	-Lower,best		170.00	179.10	9.10	0.09	4.76	0.82	41.43	3.58

Ref: Cert of Analysis #A8929347 & #A8929499
File: M_DCALC8.WK1 Nov.15/89

Baryter Resources Corp.

MAIN MEL ZONE
DIAMOND DRILL HOLE ASSAY DATA - TABLE II

Sequence No.	Hole No.	Sample No.	From (metres)	To (metres)	Interval (metres)	Silver O.P.T.	Zinc %	Lead %	Barite %	Sp.Gr. (Calc.)
31	89-31	447421	33.10	33.40	0.30	<0.01	1.15	0.03	11.59	2.93
		447422	33.40	34.90	1.50	0.01	0.10	0.29	45.03	3.53
		447423	34.90	36.35	1.45	<0.01	3.53	0.06	12.20	2.99
		447424	36.35	38.00	1.65	<0.01	2.70	0.04	73.41	4.08
		447425	38.00	40.00	2.00	<0.01	3.72	0.42	63.38	3.94
		447426	40.00	40.60	0.60	0.02	0.12	1.83	72.22	4.10
		447427	40.60	42.00	1.40	0.03	1.35	1.22	40.27	3.52
		447428	42.00	43.35	1.35	0.03	0.18	1.51	40.27	3.51
		447429	43.35	44.60	1.25	0.01	0.04	0.58	3.18	2.79
		447430	44.60	46.00	1.40	0.06	2.30	2.49	21.24	3.26
		447431	46.00	47.24	1.24	0.08	0.04	5.52	8.11	3.15
Outside of zone		N/S	47.24	202.80	155.56					
		447432	202.80	204.00	1.20	0.01	0.03	0.72	0.34	2.75
		447433	204.00	205.70	1.70	<0.01	0.04	0.32	1.36	2.74
		447434	205.70	207.70	2.00	0.07	6.30	6.36	39.08	3.88
		447435	207.70	210.00	2.30	0.04	5.74	3.09	78.17	4.39
		447436	210.00	212.00	2.00	0.03	7.05	1.06	22.43	3.30
		447437	212.00	214.00	2.00	0.03	10.70	0.44	38.23	3.62
		447438	214.00	215.70	1.70	0.04	13.50	0.75	24.98	3.45
		447439	215.70	216.40	0.70	0.03	1.14	0.53	1.36	2.78
Sp.Gr. Avg. - Upper			34.90	47.24	12.34	0.02	1.89	1.31	40.73	3.54
Sp.Gr. Avg. - Lower			205.70	215.70	10.00	0.04	8.25	2.53	44.30	3.80
32	89-32	447440	44.30	46.10	1.80	0.08	6.83	1.58	32.80	3.51
		447441	46.10	48.20	2.10	0.04	4.60	2.94	68.14	4.18
		447442	48.20	50.20	2.00	0.01	8.08	0.44	69.84	4.14
		447443	50.20	52.20	2.00	0.04	5.40	5.53	74.09	4.44
		447444	52.20	54.20	2.00	0.03	5.64	4.68	76.81	4.45
		447445	54.20	55.70	1.50	0.01	7.16	1.10	52.68	3.85
		447446	55.70	56.60	0.90	0.03	2.77	1.30	4.57	2.91
		447447	56.60	58.50	1.90	0.01	0.23	0.25	1.48	2.74
		447448	58.50	60.00	1.50	0.06	4.60	10.90	53.70	4.36
		447449	60.00	62.00	2.00	<0.01	0.05	0.38	1.90	2.76
		447450	62.00	64.00	2.00	0.02	0.87	0.72	25.83	3.22
		447451	64.00	65.68	1.68	0.03	2.87	0.87	50.30	3.71
Outside of zone		N/S	65.68	188.10	122.42					
		447452	188.10	189.30	1.20	<0.01	0.01	0.27	0.54	2.72
		447453	189.30	189.80	0.50	0.02	1.22	1.19	0.51	2.80
		447454	189.80	191.65	1.85	0.03	1.97	2.61	31.10	3.44
		447455	191.65	193.35	1.70	<0.01	0.56	0.31	82.59	4.21
		447456	193.35	195.25	1.90	0.07	5.64	1.83	60.67	4.00
Sp.Gr. Avg. - Upper			44.30	60.00	15.70	0.03	5.36	3.47	55.47	3.99
Sp.Gr. Avg. - Lower			189.80	195.25	5.45	0.03	2.81	1.55	59.19	3.91

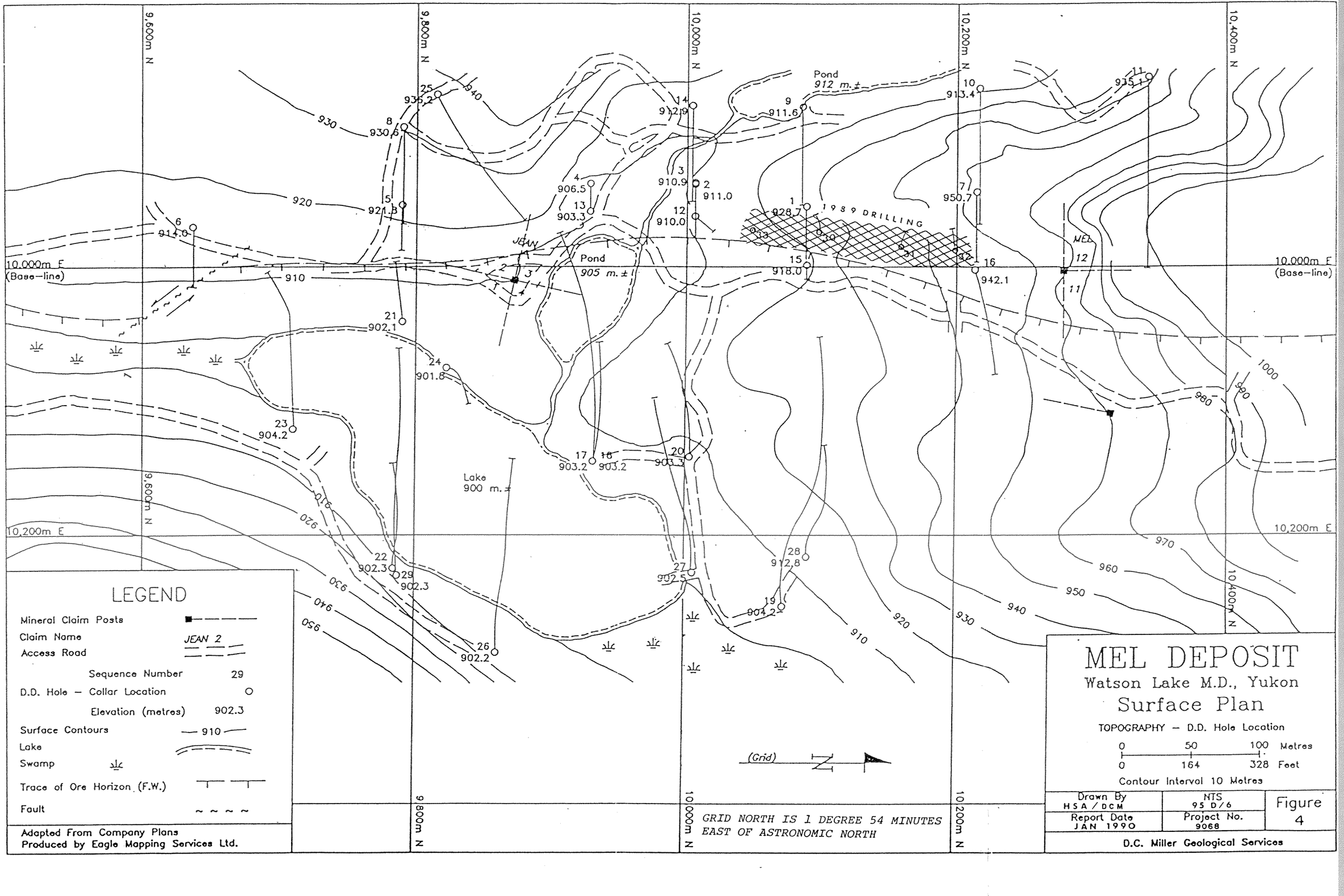
Ref: Cert of Analysis #A8929668 & #A8929953
File: M_DCALC9.WK1

Barytex Resources Corp.

MAIN MEL ZONE
DIAMOND DRILL HOLE ASSAY DATA - TABLE II

Sequence No.	Hole No.	Sample No.	From (metres)	To (metres)	Interval (metres)	Silver O.P.T.	Zinc %	Lead %	Barite %
33	89-33	475751	23.34	25.15	1.81	0.02	0.54	0.38	15.02
		475752	25.15	27.84	2.69	<0.01	5.53	0.04	59.99
		475753	27.84	30.00	2.16	NA	6.91	0.76	79.53
		475754	30.00	32.25	2.25	0.02	7.39	0.96	81.57
		475755	32.25	35.40	3.15	0.04	26.80	0.04	23.96
		475756	35.40	36.10	0.70	<0.01	8.37	0.00	34.67
		475757	36.10	37.20	1.10	<0.01	0.04	0.00	93.12
		475758	37.20	40.17	2.97	<0.01	4.90	0.62	79.53
		475759	40.17	42.44	2.27	<0.01	2.45	0.06	50.64
		475760	42.44	43.60	1.16	0.02	1.20	0.24	34.33
Sp.Gr. Average			25.15	40.17	15.02	0.02	9.60	0.41	65.30

Ref: Cert. No. A8931755 & A8932204
File: M_DCALC0.WK1
Revised: Date: Dec.29/89



LEGEND

- Mineral Claim Posts
- Claim Name — JEAN 2
- Access Road
- Sequence Number — 29
- D.D. Hole – Collar Location
- Elevation (metres) — 902.3
- Surface Contours — 910
- Lake
- Swamp
- Trace of Ore Horizon (F.W.)
- Fault

Adapted From Company Plans
Produced by Eagle Mapping Services Ltd.

GRID NORTH IS 1 DEGREE 54 MINUTES EAST OF ASTRONOMIC NORTH

MEL DEPOSIT

Watson Lake M.D., Yukon

Surface Plan

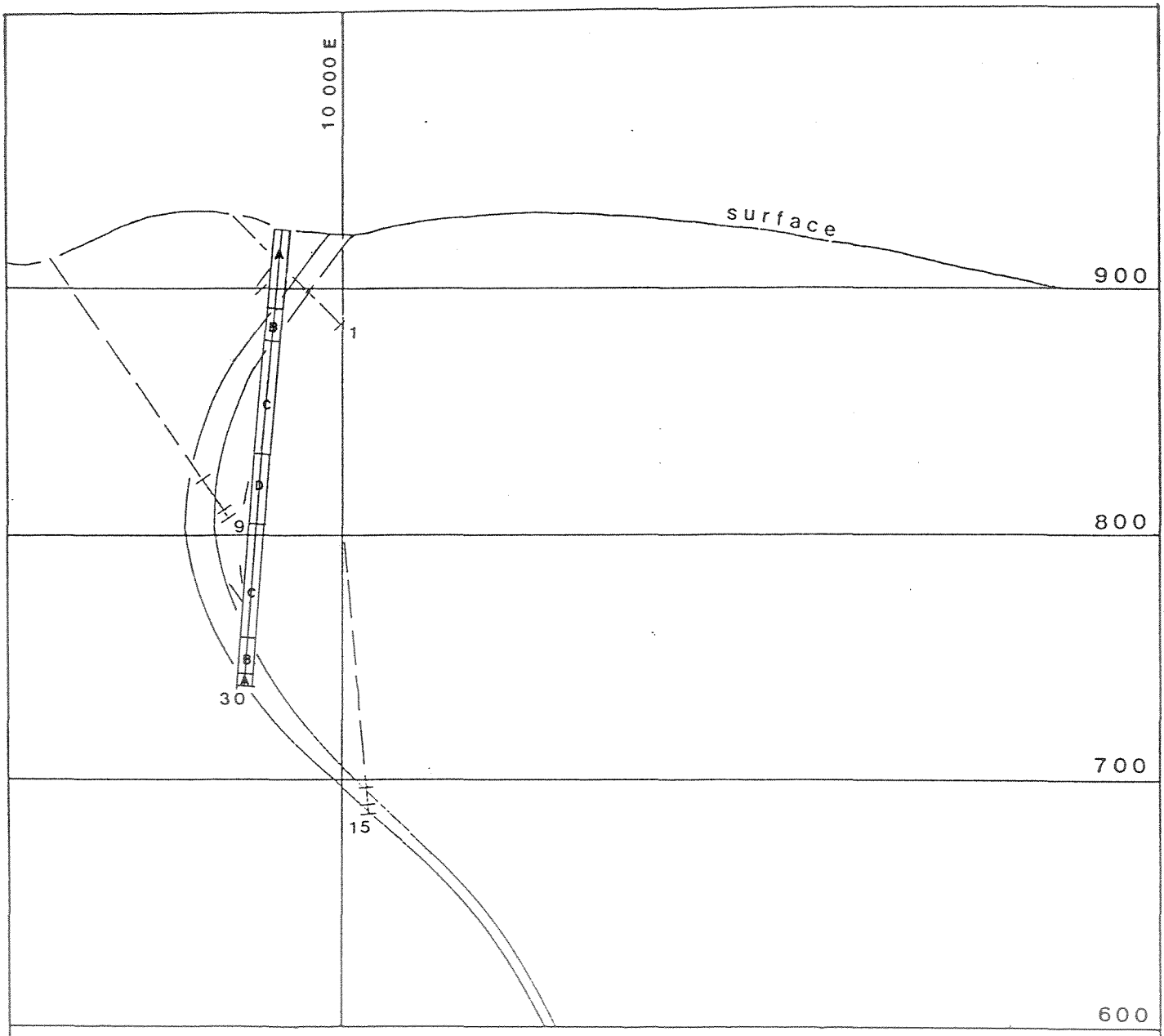
TOPOGRAPHY – D.D. Hole Location

0 50 100 Metres
0 164 328 Feet

Contour Interval 10 Metres

Drawn By HSA / DCM	NTS 95 D/6	Figure 4
Report Date JAN 1990	Project No. 9068	

D.C. Miller Geological Services



PLOT of D.D.H. #30 (1989)

See text for surface & downhole (Pajari) survey data.
See assay data table for analytic results.

RESULTS (Lithology structure)

Wavy Banded Limestone

Calcareous Shale

Cryptograined Limestone

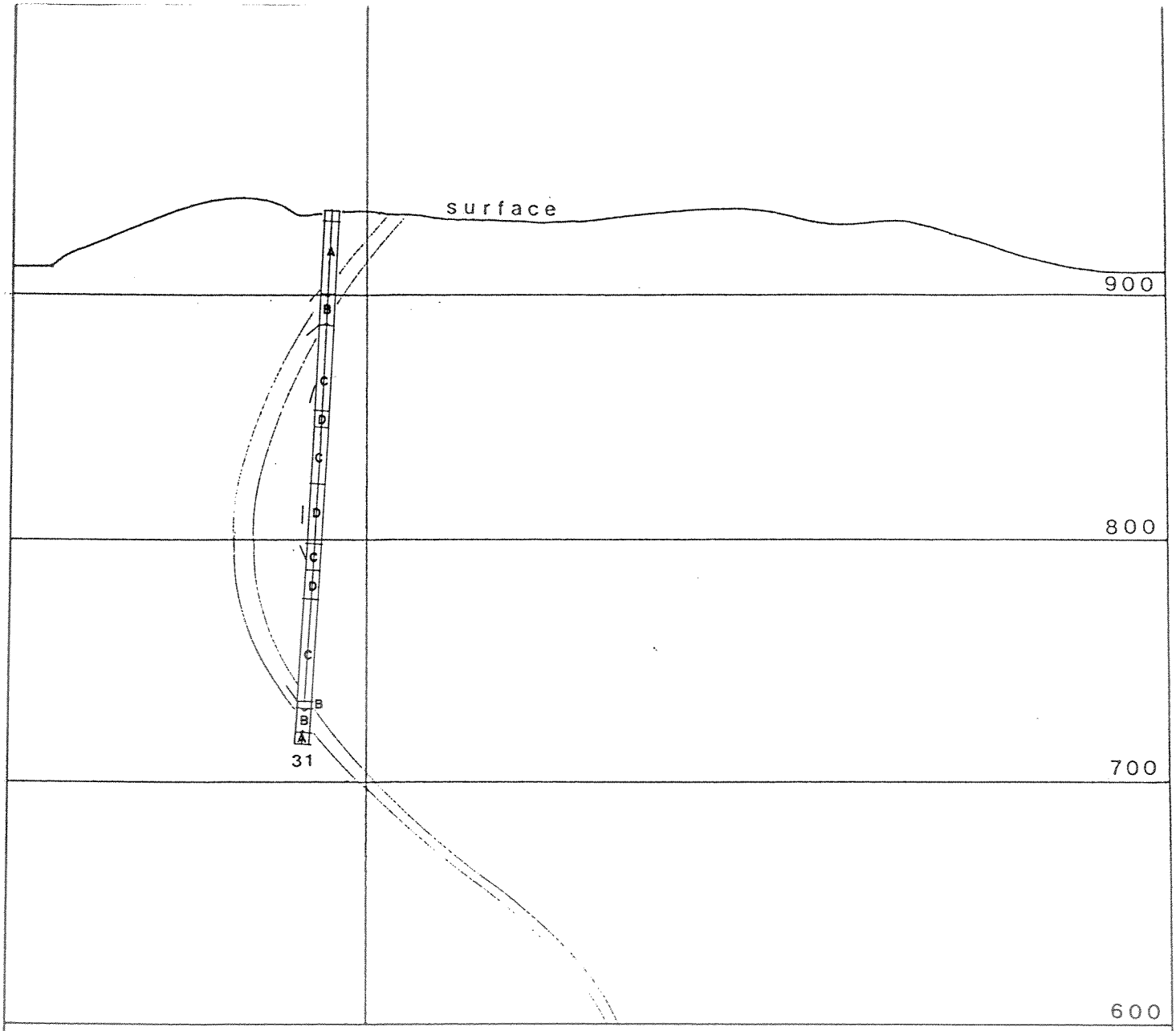
Barite, Sphalerite,
Galena, Quartz

Banding attitude, dips

0 50 100 m

scale 1:2500

Barytex Resources Corp.		
MEL Project Section 10,100N		
DRAWN BY HSA	NTS 95 D6	FIGURE 5
REPORT DATE JAN. 31, 1990	PROJECT NO. 9068	
D.C. MILLER GEOLOGICAL SERVICES		



PLOT of D.D.H. #31 (1989)

See text for surface & downhole (Pajari) survey data.
See assay data table for analytic results.

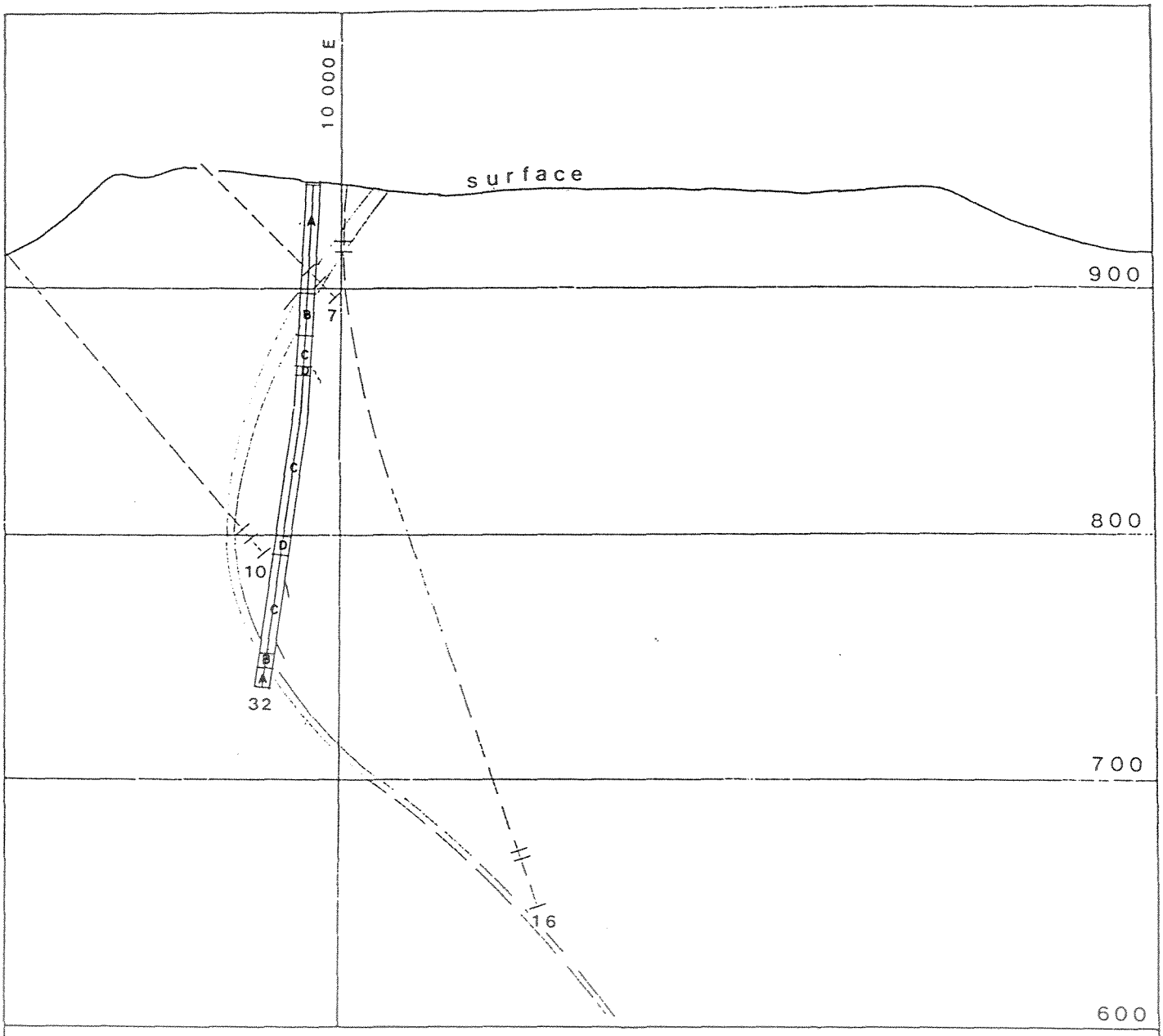
LEGEND (Lithology-structure)

- Wavy Banded Limestone
- Calcareous Shale
- Cryptograined Limestone
- Barite, Sphalerite, Galena, Quartz
- Banding attitude, dips

0 50 100m

scale 1:2500

Barytex Resources Corp.		
MEL Project Section 10,150 N		
DRAWN BY HSA	NTS 95 D 6	FIGURE 6
REPORT DATE JAN. 31, 1990	PROJECT NO. 9068	
D.C MILLER GEOLOGICAL SERVICES		



PLOT of D.D.H. #32 (1989)

See text for surface & downhole (Pajari) survey data.
See assay data table for analytic results.

RESULTS (Lithology-structure)

Wavy Banded Limestone

Calcareous Shale

Cryptograined Limestone

Barite, Sphalerite, Galena Quartz

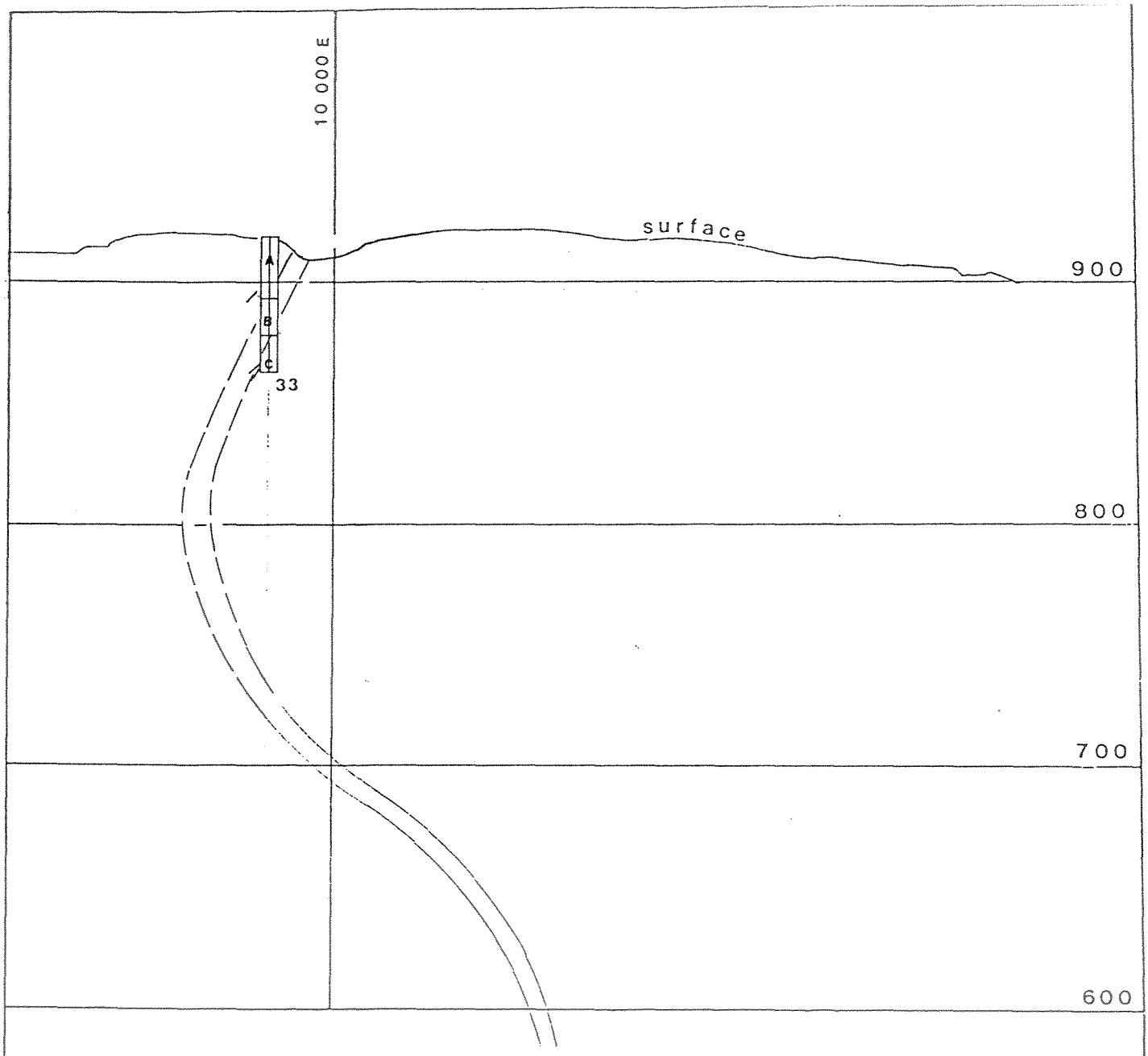
Banding attitude, dips

0 50 100m

scale 1:2500

Barytex Resources Corp.	
MEL Project Section 10,200 N	
DRAWN BY HSA	NTS 95 D 6
REPORT DATE JAN. 31, 1990	PROJECT NO. 9068
DC MILLER GEOLOGICAL SERVICES	

FIGURE 7



PLOT of D.D.H. #33 (1989)

See text for surface & downhole (Pajari) survey data.
See assay data table for analytic results.

RESULTS (Lithology-structure)

Wavy Banded Limestone

Calcareous Shale

Cryptograined Limestone

Barite, Sphalerite, Galena Quartz

Banding attitude, dips

0 50 100 m

scale 1:2500

Barytex Resources Corp.		
MEL Project Section 10,050 N		
DRAWN BY HSA	NTS 95 D 6	FIGURE 8
REPORT DATE JAN. 31, 1990	PROJECT NO. 9068	
D.C MILLER GEOLOGICAL SERVICES		

CONCLUSIONS

1) Four BQ diamond drill holes were drilled to fill in between previous widely spaced drill holes at the north end of the Mel deposit. The holes were located to intersect both limbs of a major fold structure and to firm up estimated tonnages and grades within a proposed open pit.

2) The holes intersected the mineralized zone much as expected and indicated good continuity of mineralization.

3) In order to obtain a firm estimate of tonnage and grade, drilling at about 50 m centres will be required. Surface stripping, mapping and sampling will help in the calculation of near surface reserves.

RECOMMENDATIONS

1) Continue drilling the upper portion of the deposit at 50 m centres to firm up grade and tonnage estimates of sections where open pit and underground mining are proposed.

2) Strip, wash, map and sample as much of the surface of the mineralization as is possible.

3) With encouraging results from near surface work, additional deep drilling is recommended to firm up and expand the deeper reserves.

Respectfully submitted,

D.C. Miller, P. Eng.
January 31, 1990

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
D. C. MILLER

CERTIFICATE

I, David C. Miller, hereby certify that:

1) I am a Consulting Geological Engineer with an office at 769 Fraser Street, Kamloops, B.C. V2C 3H1.

2) I am a graduate of the University of British Columbia and earned a B.A.Sc. Degree in Geological Engineering in 1959.

3) I am a member of the Association of Professional Engineers of B.C. and a Fellow of the Geological Association of Canada.

4) I have practiced my profession for over 25 years.

5) This report is based on personal observations at the subject property.

6) I have no direct or indirect interest in this property nor in the securities of Barytex Resources Corp. or Breakwater Resources Ltd.

D.C. Miller, P. Eng.
January 31, 1990

NAMES AND ADDRESSES OF EMPLOYEES AND CONTRACTORS

AND TIME EMPLOYED IN PREPARING REPORT

1) D.C. Miller, 769 Fraser Street, Kamloops, B.C., V2C 3H1

2) L. Loranger, 6545 Beaver Cresent, Kamloops, B.C., V2C 4V2

3) J. Van Bibber, Box 494, Watson Lake, Yukon Territory, YOA 1C0

4) Pat Lund, Watson Lake, Yukon Territory, YOA 1C0

5) J. Melnychuk, Box 350, Watson Lake, Yukon Territory, YOA ICO

6) H.S. Aikins, 305-535 Thurlow Street, Vancouver, B.C. V6E 3L2

7) Nomad Drilling Inc.,
604-543 Granville Street, Vancouver, B.C. V6C 1X8

Time spent preparing report:

a) Drill hole assay averaging, drafting, drill hole survey calculations, drill log preparation..... 6 days

b) Report writing, proof reading, manual checking of computer calculations, printing, binding and mailing..... 5.5 days

Total 11.5 days

COST ESTIMATE

1)	Diamond drilling charges	$ 39,144.75
2)	Fees, wages, CP and UI (includes some travel expenses,and equipment charges)	31,005.91
3)	Fuel	3,514.19
4)	Land freight	63.65
5)	Insurance	400.00
6)	Frontier Helicopters	15,236.39
7)	Watson Lake Flying Services	3,492.80
8)	Campground Services (groceries)	3,833.91
9)	Cat rental and parts	3,270.06
10)	Vancouver Petrographics	518.75
11)	Chemex assays and freight	3,584.57
12)	Cedar Motel	132.20
13)	Pajari rental	550.00
14)	L & R Aircraft repair	540.00
15)	Prints	44.68
	Subtotal	$105,331.86
16)	Estimated January charges	3,000.00
	Total estimated cost	$108,331.86

REFERENCES

Miller, D.C., 1989: Report on the Mel Property, Watson Lake Mining Division, Yukon Territory for Barytex Resources Corp.

APPENDIX

DIAMOND DRILL HOLE LOGS, DRILL HOLE SURVEY CALCULATIONS

AND PETROGRAPHIC REPORT

D.C. MILLER GEOLOGICAL SERVICES

DRILL LOG

HOLE NO. 89-30
Sheet 1 of 6

PROPERTY	TP OR AREA	AZIMUTH (Grid)	DATE STARTED
MEL		270° @ Collar	October 20, 1989
PROJECT	LOT & CONC.	DIP	DATE COMPLETED
		-85° @ Collar	October 24, 1989
CLAIM NO.	CO-ORDINATES.	LENGTH	DRILLED BY
JEAN 3	10,097.3 N	184.10	Nomad Drilling
GRID NO.	9,974.5 E	COLLAR ELEV.	LOGGED BY
		924.7	D. C. Miller

CORRECTED DIP TESTS			
Pajari	Test	@	565'
Corr.	to Grid	-32°	
		Brg.	Dip
172.2m		256°	-86°

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
			OBJECTIVES:- Delineate mineralization on fold structure, B.Q. core.				
0	0.76		Casing, no core.				
0.76	31.09		Cryptograined Limestone White to pale grey; very fine grained; contains numerous irregular shaped pale grey clasts and occasional pale brown mudstone clasts and bands to 10 cm; locally dolomitic; local fine white veining by calcite/dolomite. (0.76-14.3) - Leached, orange discoloured core, generally blocky and broken-oxidized zone; approx. 85% core recovery. (14.3-31.09) - Good core, 95% recovery, local weak layering @ 30-45°; minor fine pyrite in mudstone clasts.				
31.09	48.60		Mineralized Zone (31.09-31.50) - Siliceous limestone; weakly mineralized with brown sphalerite and galena, 99% recovery; also minor fine pyrite associated with brown mudstone clasts; vague layering @ 40-45°.	447401H	31.09	31.50	0.41
			(31.50-32.40) - Siliceous limestone with increasing fine sphalerite and galena mineralization; 15% soft broken mudstone clasts - well mineralized; 99% recovery.	447402H	31.50	32.40	0.90

D.C. MILLER GEOLOGICAL SERVICES — DRILL LOG — HOLE NO. 89-30

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
31.09	48.60		Mineralized Zone (Cont'd)				
			(32.4-34.4) - Limestone and minor barite with 35% large and small mudstone clasts; best barite at 33.8-34.4; good core; about 10% brown to honey coloured sphalerite and minor galena as fine to coarse grains; 95% core recovery;	447403H	32.4	34.4	2.0
			(34.4-36.3) - Now mainly barite with less than 5% brown mudstone clasts; about 5% coarse brown sphalerite as multiple grains;about 1% galena as veinlets and grains locally cutting sphalerite; good core, 99% recovery.	447404H	34.4	36.3	1.9
			(36.3-37.9) - Similar; less sphalerite; good core, 99% recovery.	447405H	36.3	37.9	1.6
			(37.9-40.0) - Similar but strong sphalerite mineralization, particularly at 37.9-38.7; overall estimate 10% sphalerite and 1% galena; about 1% brown mudstone; good core, 99% recovery.	447406H	37.9	40.0	2.1
			(40.0-42.0) - Similar; less sphalerite; more barite; good core, 99% recovery.	447407H	40.0	42.0	2.0
			(42.0-44.0) - Now increased galena; fair sphalerite and about 10% mudstone clasts, mainly barite; good core, 99% recovery.	447408H	42.0	44.0	2.0
			(44.0-46.0) - Similar, but with good sphalerite at 44.0-44.8; good core, 99% recovery; estimate 6% sphalerite and 2% galena.	447409H	44.0	46.0	2.0
			(46.0-47.1) - Silica zone; about 3% fine sphalerite and 1% galena; good core, 99% recovery.	447410H	46.0	47.1	1.1
			(47.1-47.9) - Mainly barite with 10% broken shale clasts; broken core, 95% recovery.	447411H	47.1	47.9	0.8

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
			Mineralized Zone (Cont'd) (47.9-48.6) - Mineralized shale; bleached pale brownish-grey; finely laminated at 60-65°; good core but breaks easily parallel to banding; contains fine galena and pyrite veinlets and minor sphalerite.	447414H	47.9	48.6	0.7
48.6	91.6		Calcareous Shale Dark and light grey, dark colours predominant; finely laminated; soft blocky core; broken at 48.6-49.0; minor fine pyrite veinlets mainly parallel to banding; variable layering: 50° @ 49 m, 6° @ 50.5 m, 30° @ 50.2 m. Broken core @ 48.6-49.0; breaks along bedding plane partings. (48.6-49.6) - Weakly calcareous, dark grey. (49.6-91.6) - Increasingly calcareous with light and dark grey laminae ranging from 1 mm to 3 cm; some boundinage structure; layering at 40° @ 57 m, 0° @ 52.0 m, 25-40° @ 52.2 to 91.6 m; about 5% white carbonate veining parallel to and cutting across layering, generally good core, 95% recovery. (51.4-51.9) - Broken core associated with bedding plane fault @ 30°. (59.0-62.0) - Broken, ground core associated with bedding plane slips @ 25-40°, 50% recovery. (80.0-80.5) - Bedding plane slips with thick white carbonate veining parallel to layering @ 30°.				
91.6	119.7		Wavy Banded Limestone Banded light and dark grey, light bands predominate; band widths vary from 1 mm or less to over 1 cm; generally strong				

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
91.6	119.7		Wavy Banded Limestone (Cont'd) boudinage structure; generally good core, recovery averages about 95%; this unit is gradational with the preceeding unit over 1 metre as the percentage of light coloured bands increases to over 50%. Banding: 20-25° from 91.6-96.5, 0-10° from 96.5-111.0, 15° from 111.0-119.7. White carbonate veining: approximately 3% mainly cutting layering. Broken core: 92.4-92.6, associated with bedding plane slips; 95.1-97.0 broken and ground with 75% core recovery.				
119.7	165.4		Calcareous Shale Similar to 48.6-91.6 preceeding; contact with wavy banded limestone gradational over several metres; good core, 99% recovery. Banding: 15° @ 119.7-123.0, 20-25° @ 123.0-127.0, 0-10° @ 127.0-131.5, 10-25° @ 131.5-141.5, 0-10° @ 141.5-143.5,10-25° @ 143.5-146.0, 25-40° @ 146.0-152.5, 20-0° @ 152.5-157.5, 35-40° @ 157.5. White carbonate veining: approximately 5% both cutting and parallel to layering; rare fine pyrite associated with white carbonate veinlets. (163.90-164.90) - Thick light and dark grey bands up to 10 cm composed of fine 2 mm laminae, less than 1% fine pyrite veinlets. (164.90-165.40) - Brownish grey, weakly calcareous shale; less than 1% fine pyrite veinlets.				

D.C. MILLER GEOLOGICAL SERVICES — DRILL LOG — HOLE NO. 89-30

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
165.4	180.0		Lower Mineralized Zone				
			(165.4-166.1) - Mineralized shale; fair brown sphalerite-barite veining with minor galena to 3 cm thick sub-parallel to laminations at 40-55°, average 50°, about 7% sphalerite; 99% recovery.	447413H	165.40	166.10	0.70
			(166.1-166.5) - Silica band, good sphalerite and galena; no layering; about 99% sphalerite, 3% galena, 99% recovery.	447414H	166.10	166.50	0.40
			(166.50-168.50) - Barite, patchy coarse grained sphalerite and minor galena; 2.5 cm. jasperoidal quartz clast at 167.7, about 5% sphalerite, 99% recovery.	447415H	166.50	168.50	2.00
			(168.50-170.0) - Similar, less sphalerite, 99% recovery.	447416H	168.50	170.0	1.50
			(170.0-171.3) - Similar, siliceous near 171.3 about 7% sphalerite and 1% galena, 99% recovery.	447417H	170.0	171.30	1.30
			(171.30-175.00) - Core taken to Vancouver. Siliceous with minor barite and about 10% sphalerite at 171.3-172.97; barite and quartz at 172.97-173.70, with about 6% combined sphalerite and galena; 80% mudstone at 173:7-175.0 with about 10% sphalerite and galena. Three specimens from this portion of the zone were selected for Petrographic examination. See appendix for petrographic descriptions.	BTX 1 BTX 2 BTX 3	171.30 173.40 173.70	173.40 173.70 175.00	2.10 0.30 1.30
			(175.00-177.00) - 80% brown mudstone with about 7% fine brown sphalerite, minor soft broken core; strong sericite alteration; about 2% fine galena, less than 1% fine pyrite.	447418H	175.00	177.00	2.00
			(177.0-179.10) - Similar, barite @ 177.90-178.55.	447419H	177.00	179.10	2.10
			(179.10-180.00) - Similar, weaker mineralization.	447420H	179.10	180.00	0.90

D.C. MILLER GEOLOGICAL SERVICES

DRILL LOG

HOLE NO. 89-30

Sheet 6 of 6

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
180.0	184.10		Cryptograined Limestone				
E.O.H. 604	Feet		Light grey, massive, well fractured with fine fractures filled with dark grey material; several dark grey clasts to 3 cm mineralized with very fine pyrite.				
			(180.00-180.30) - Brown mudstone with 2% very fine pyrite.				
			(181.40-181.60) - Grey, fractured quartz band trending @ 40-50°.				
			End of hole.				

D.C. MILLER GEOLOGICAL SERVICES

DRILL LOG

HOLE NO. 89-31
Sheet 1 of 6

PROPERTY	TP OR AREA	AZIMUTH (Grid)	DATE STARTED	CORRECTED DIP TESTS			
MEL		270° @ Collar	October 26, 1989	Pajari Corr.	Test to Grid	@ -32°	600'
PROJECT	LOT & CONC.	DIP	DATE COMPLETED			Brg.	Dip
		-88° @ Collar	October 30, 1989	183 m		298°	-86°
CLAIM NO.	CO-ORDINATES.	LENGTH	DRILLED BY				
JEAN 3	10,157.3 N	722' = 220.06 m.	Nomad Drilling				
GRID NO.	9,985.4 E	COLLAR ELEV.	LOGGED BY				
		935.0	D. C. Miller				

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
			OBJECTIVES:- Test mineralization and delineate fold structure.				
0	3.28		Casing, no core.				
3.28	33.10		Cryptograined Limestone Light grey, minor white; local weak fine banding; contains about 4% brown mudstone clasts which are more numerous and larger (up to 10 cm.) near mineralization and carry up to 10% fine pyrite as disseminations and discontinuous veinlets; pyrite increases near mineralization; limestone also contains numerous carbonate clasts and is cut by about 5% white carbonate veinlets at various angles; generally good core with 98% recovery; locally blocky with minor orange to rusty oxidation coloring on fractures and carbonate veinlets and clasts. Banding: 40-55° @ 3.28 - 27.0 m , 43° @ 27.84 m, 40° @ 28 m, 43° @ 31 m.				
33.10	47.24		Upper Mineralized Zone (33.1 - 33.4) - Brown mudstone, soft, broken; sharp contact with previous unit with broken core at contact; contains about 3% fine sphalerite and galena and traces of pyrite; some barite near 33.4; 95% core recovery.	447421H	33.1	33.4	0.3

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
33.10	47.24		Upper Mineralized Zone (Cont'd)				
			(33.40 - 34.90) - Mixed brown mudstone, barite and grey quartz breccia; core breaks at 40 - 70°; blocky with minor broken core; mainly mudstone and quartz with about 4% sphalerite and galena as fine to medium grains; mudstone is partly altered to sericite and clay; contains about ½% of very fine pyrite; core recovery - 95%.	447422H	33.40	34.90	1.50
			(35.40 - 36.35) - Similar; less galena, but some good honey coloured and brown sphalerite; 95% recovery.	447423H	34.90	36.35	1.45
			(36.35 - 38.00) - Mainly barite with about 20% gray quartz as veins and blebs apparently cutting the barite; fair galena and coarse honey-brown sphalerite associated with quartz; good core; 99% recovery; about 6% combined sphalerite and galena.	447424H	36.35	38.00	1.65
			(38.00 - 40.00) - Similar with about 40% grey quartz; 99% recovery.	447425H	38.00	40.00	2.00
			(40.00 - 40.60) - Mainly barite with fair galena and sparse sphalerite; 15% grey green shale bands @ 45°; good core, 99% recovery.	447426H	40.00	40.60	0.60
			(40.60 - 42.00) - Mainly grey quartz with minor barite and 10% grey green shale remnants; good galena and fair sphalerite; fold structure at 40.60 - 40.80 with limbs @ 40-45°; good core; 99% recovery.	447427H	40.60	42.00	1.40
			(42.00 - 43.35) - Mainly grey-green shale with minor quartz and barite veining up to 20 cm thick; fair galena as veinlets and sparse sphalerite; 30-40° banding; good core; 99% recovery.	447428H	42.00	43.35	1.35

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
33.10	47.24		Upper Mineralized Zone (Cont'd) (43.35 - 44.60) - Grey-green shale with minor galena - pyrite veining; minor barite veining; good core 99% recovery; 43° banding.	447429H	43.35	44.60	1.25
			(44.60 - 46.00) - Similar but with fair sphalerite-galena mineralization.	447430H	44.60	46.00	1.40
			(46.00 - 47.24) - Similar to preceeding but with minor sphalerite and fair galena; soft broken core; breaks along 45° partings parallel to layering; 90% recovery.	447431H	46.00	47.24	1.24
47.24	82.48		Calcareous Shale Banded dark and light grey with layers averaging about 1 cm. in thickness; individual dark and light layers are composed of many very fine laminae; core recovery averages about 97%; generally good core; contains about 5% white carbonate veinlets. Banding: 45° @ 47.24 m, 50° @ 48 m, 30° @ 51 m, 50° 53 m, 25° @ 55 m, 25-35° @55-73 m, 12° @ 73.4-74.5 m, 25-30° @ 75.0-82.48 m. Broken Core: (47.24 - 53.80) - With bedding plane faults @ 53.00 - 53.80; 69.7 - 70.6 - associated with bedding plane slips.				
82.48	88.60		Wavy Banded Limestone Mainly light grey, lesser dark grey bands; gradational with previous unit over about 2 m; strong boudinage structure; generally excellent core; 5% white carbonate-quartz veins ranging up to 5 cm parallel to banding. Banding: 40° @ 83 m, 30° @ 85 m, 40° @ 86.5 m, 0° @ 88.0 m. Broken Core: (87.80 - 88.60) associated with 0° core angle.				

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
88.60	112.0		Calcareous Shale (Transition Zone) Similar to 47.24 - 82.48, dark grey bands predominate; contains about 3% white carbonate-quartz veins to 4 cm thick mainly parallel to banding. Banding: 0-60° (folded) at 88.7-90.4; 30° @ 92 m, 45-60° @ 92.5-93.0, 30° @ 92.6-97.0, 25-20° @ 97.5-103.0, 20-0° @ 103.5-104.0, 20-10° @ 104.0-112.0. Broken Core: 86.60-88.90, 89.90-90.60, associated with low core angles; 98.70-98.80 associated with bedding plane slips; 103.70-105.0 - associated with low core angles. This section is a transitional zone between calcareous shale and wavy banded limestone.				
112.0	137.0		Wavy Banded Limestone Similar to 82.48-88.60; excellent core; 99% recovery; contains about 8% white carbonate veins mainly about 2 m thick and oriented at right angles to banding, giving a striped effect; this was referred to as tiger texture in 1979 drill logs; these veinlets are present from 114.5-137.0 and occur at the hinge line of the fold structure. Banding: uniform 0-5° @ 112.0-137.0.				
137.0	147.0		Calcareous Shale Transition Zone Similar to 88.60-112.00, excellent core; 99% recovery; striped texture ends at 145.40. Banding: 10-20° @ 137.0-145.0; 20-25° @ 145.0-147.0.				

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
147.0	159.50		Wavy Banded Limestone As 117.0-137.0; excellent core; 99% recovery. Banding @ 25-35°.				
159.50	202.8		Calcareous Shale Similar 137.0-147.0; generally good core, 99% recovery. Banding: 0-15° @ 159.50-166.0, 20-30° @ 167.0-186.0, 30-40° @ 186.5-201.4 with relatively few drag fold structures; tight fold structures @ 198.6-198.7, 200.15-200.35 and 201.4-202.0; 0-40° @ 202.0-202.8.				
202.8	216.4		Mineralized Zone (202.8-204.0)- Partly silicified mineralized shale; blocky and broken core; breaks along partings; folded at 0-30°; contains about 1% pyrite and ½% galena as fine veinlets; 95% recovery.	447432H	202.8	204.0	1.2
			(204.0-205.7) - Similar, softer; breaks along partings at 50-60° parallel to banding; 95% recovery; 2 cm. barite vein @ 205.0 m.	447433H	204.0	205.7	1.7
			(205.7-207.7) - Main zone; good coarse brown-honey colored sphalerite and good galena; mainly barite host rock with a quartz band at 205.7-206.1 and mudstone at 206.8-207.3 - good core, 99% recovery; estimate 5% galena and 5% sphalerite; some calcite with barite.	447434H	205.7	207.7	2.0

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METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
202.8	216.4		Mineralized Zone (Cont'd)				
			(207.7-210.0) - Similar; good sphalerite and galena in a baritic host rock with10% brown mudstone clasts; good core 95% recovery; estimate 2% galena and 6% sphalerite; some calcite with barite.	447435H	207.7	210.0	2.3
			(210.0-212.0) - Mainly brown mudstone with fair sphalerite and minor galena; soft broken core @ 210.2-211.4; 95% recovery; estimate 1% galena and 6% sphalerite; limestone mixed with mudstone.	447436H	210.0	212.0	2.0
			(212.0-214.0) - Good sphalerite in a mainly brown mudstone - barite host rock with some limestone and calcite veining; broken at 212.0-212.7 along banding? @ 0-10°; core recovery 99%; estimate 9% sphalerite and less than 1% galena.	447437H	212.0	214.0	2.0
			(214.0-215.7) - High grade brown to honey coloured sphalerite; fine to medium grained, in a mainly mudstone host rock; good core; 99% recovery; estimate 18% sphalerite and less than 1% galena.	447438H	214.0	215.7	1.7
			(215.7 - 216.4) - Weakly mineralized mudstone with about 3% fine to medium grained, brown to honey coloured sphalerite; good core, 99% recovery.	447439H	215.7	216.4	0.7
216.4	220.06		Cryptograined Limestone				
E.O.M.	722		White to pale grey with about 10% brown mudstone clasts which carry 1% fine pyrite; ecellent core, 99% recovery; massive core; vague 20° bands @ 217.10.				
			End of hole.				

D.C. MILLER GEOLOGICAL SERVICES

DRILL LOG

HOLE NO. 89-32

PROPERTY: MEL	TP OR AREA:	AZIMUTH (Grid): 270° @ Collar	DATE STARTED: October 30, 1989	CORRECTED DIP TESTS: Pajar Test @ 600' Corr. -32° (to grid)
PROJECT:	LOT & CONC.	DIP: -87° @ Collar	DATE COMPLETED: November 7, 1989	
CLAIM NO.: JEAN 3	CO-ORDINATES.: 10,198.6 N	LENGTH: 204.22	DRILLED BY: Nomad Drilling	Corrected Reading: Depth 182.9m, Dip -83°, Brg. 259°
GRID NO.:	9,988.0 E	COLLAR ELEV.: 942.1	LOGGED BY: D. C. Miller	

B.Q. Core

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
			OBJECTIVES:- Test mineralization and delineate fold structure.				
0	0.30		Casing, no core.				
0.30	44.30		Cryptograined Limestone Pale grey, minor white, generally massive with weak, local layering, cut by 5% fine, white carbonate veinlets commonly @ 45° but also at all angles; contains about 30% brown mudstone clasts which carry 1-5% very fine pyrite; core commonly breaks through these clasts, also contains numerous carbonate clasts which are oxidized to an orange colour near surface; carbonate veins are also orange coloured near surface; core recovery - about 95%. (0.30-7.0) - Broken and blocky core. (7.0-33.2) - Generally good core. (33.2-36.3) - Oxidized, broken core (water channel?) (36.3-44.30) - Good core, locally broken. Banding: 47° @ 22.9, 35° @ 24.3 and 35° @ 45.9.				
44.30	65.68		Mineralized Zone (44.30-46.10) - Well mineralized brown mudstone with minor barite, some calcite; core loss at 44.30-44.81; sharp 60° contact at 44.30; generally good core with 90% core recovery;				

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
44.30	65.68		Mineralized Zone (Cont'd)				
			estimate 10% sphalerite, minor galena.	447440H	44.30	46.10	1.80
			(46.10-48.20) - Barite with good sphalerite and galena; good core 95% recovery; estimate 4% sphalerite and 3% galena, some calcite.	447441H	46.10	48.20	2.10
			(48.20-50.20) - Similar, better sphalerite (about 10%); good core, 99% recovery.	447442H	48.20	50.20	2.00
			(50.20-52.20) - Similar; 99% core recovery; estimate 5% sphalerite; 3% galena.	447443H	50.20	52.20	2.00
			(52.20-54.20) - Similar, quartz band @ 53.70-54.20; estimate 3.5% galena and 5% sphalerite; good core, 98% recovery.	447444H	52.20	54.20	2.00
			(54.20-55.70) - Similar, quartz band @ 54.20-54.80; estimate 2% galena, 5% sphalerite; good core, 99% recovery.	447445H	54.20	55.70	1.50
			(55.70-56.60) - Silicified, mineralized shale; 30-40° layering; good core, 95% recovery; estimate 3% sphalerite and 2% galena.	447446H	55.70	56.60	0.90
			(56.60-58.50) - Mineralized shale, pale green, soft layering at 10-30°; soft broken and blocky core with sparse 1 mm galena veinlets parallel to layering; 95% core recovery.	447447H	56.60	58.50	1.90
			(58.50-60.00) - Mixed barite, shale and minor quartz; good sphalerite and galena; 95% core recovery; estimate 5% galena, 4% sphalerite.	447448H	58.50	60.00	1.50
			(60.00-62.00) - Mineralized shale; as 56.60-58.50; soft broken core; breaks along layering at 70-20°; 90% recovery, core in 1 cm to 10 cm pieces with some clay on partings.	447449H	60.00	62.00	2.00

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
44.30	65.68		Mineralized Zone (Cont'd) (62.00-64.00) - Similar badly broken core; 10 cm barite-sphalerite vein @ 63.70; core is shattered into chips mainly 1 cm in size from 62.50-63.25.	447450H	62.00	64.00	2.00
			(64.00-65.68) - Mineralized shale and barite with fair local sphalerite and galena; broken core with 90% recovery; baritic section from 64.00-64.92; soft, broken shale @ 64.92-65.70; 30° layering; sericite/clay on partings.	447451H	64.00	65.68	1.68
65.68	72.60		Calcareous Shale Light and dark grey; layering mainly @ 30°, folded @ 72.10-72.60 at 0-30°; soft, broken core. (66.44-66.6), (67.0-67.06), (71.10-71.32) - Shattered core with clay gouge on 30° partings; about 85% recovery.				
72.60	75.30		Wavy Banded Limestone Mainly light grey; strong boudinage structure; banding @ 40-50°; good core 99% recovery.				
75.30	142.50		Calcareous Shale As 65.68-72.60 preceeding, but good core; consists of dark and light layers averaging about 1 cm; about 95% recovery. 75.30- abrupt change in banding from 50° to 0-10°; possible fault. Banding: 0-15° @ 75.30-78.00, 20-30° @ 78.00-91.60, 0-30° @ 91.60-97.80, 30° @ 97.80-99.0, 0-15° @ 100.0-142.5. Veining: (75.30 - 97.54) - Less than 5% white carbonate veins;				

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
75.30	142.50		Calcareous Shale (Cont'd) (97.54-133.3) Increase in white carbonate veining to about 5% with some veinlets parallel to banding and a strong set at right angles to banding (Striped structure). (91.60-91.80), (92.00-92.30) - Soft broken core with clay gouge associated with bedding plane slips. (119.0-142.5) - Excellent core in pieces 50 cm long.				
142.5	151.00		Wavy Banded Limestone Fairly abrupt change from previous unit with dominant light bands with strong boudinage structure; good core, 99% recovery. Banding: 0-25° @ 142.5-151.0.				
151.00	188.10		Calcareous Shale Similar to 75.30-142.50 with dark bands greater than light coloured bands and little or no boudinage structure; excellent core in pieces to 1.5 m; contact gradational over 3 m. Veining: less than 5% white carbonate veinlets both cross-cutting and parallel to banding; some quartz blebs in thicker veinlets. Banding: 15-25° @ 151.00-164.00, 25-30° @ 164.00-184.00, undulating 0-30° @ 184.00-189.30; lighter bands are pale greenish altered at 181.00-189.30 with less than 1% fine pyrite veinlets and disseminations; generally good core in this section but with sericite on fractures @ 0-45°. Broken core: 187.25-187.50 - associated with 0-5° fractures.				

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METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
188.10	195.25		Mineralized Zone (188.10-189.30) - Weakly mineralized calcareous shale with fine galena/pyrite veinlets and disseminations; approx. 1% pyrite and less galena; good core, 90% recovery; banding undulating @ 0-30°.	447452H	188.10	189.30	1.20
			(189.30-189.80) - Similar, better galena and some fine brown sphalerite; 99% recovery, 0-30° banding.	447453H	189.30	189.80	0.50
			(189.80-191.65) - Main zone; siliceous host rock @ 189.80-190.20 and 190.90-191.65, otherwise barite; fair galena and sphalerite; vague 40° banding @ 190.00; good core, 98% recovery.	447454H	189.80	191.65	1.85
			(191.65-193.35) - Mainly barite, sparse galena and sphalerite; good core, 98% recovery.	447455H	191.65	193.35	1.70
			(193.35-195.25) - Mixed barite, silica and mudstone; fair-good sphalerite as fine-medium sized grains associated with mudstone clasts; mainly barite to 194.5 m; then mainly mudstone and silica breccia; contact @ 195.25 @50° - brown mudstone against cryptograined limestone along fracture; good core 98% recovery.	447456H	193.35	195.25	1.90
195.25	204.22 670 ft.		Cryptograined Limestone White to pale grey, massive with about 15% white carbonate veinlets and clasts and about 4% brown mudstone clasts which carry about 1% very fine pyrite disseminations; good core, 95% recovery. End of hole.				

D.C. MILLER GEOLOGICAL SERVICES

DRILL LOG

HOLE NO. 89-33
Sheet 1 of 3

PROPERTY	TP OR AREA	AZIMUTH (Grid)	DATE STARTED	CORRECTED DIP TESTS
MEL		270°	November 8, 1989	No tests.
PROJECT	LOT & CONC.	DIP -89½°	DATE COMPLETED November 9, 1989	
CLAIM NO. JEAN 3	CO-ORDINATES. 10,049.3 N	LENGTH 54.56 m	DRILLED BY Nomad Drilling	
GRID NO.	9,973.4 E	COLLAR ELEV. 919.0	LOGGED BY D. C. Miller	

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
			OBJECTIVES:- Drill hole for metallurgical tests and to test mineralization and structure on section 10,050 N.				
0	0.61		Casing, no core.				
0.61	23.30		Cryptograined Limestone White to pale gray; contains about 5% brown mudstone clasts ranging in size from a few millimetres to over 10 cm; core commonly breaks through larger mudstone clasts; also contains about 15% carbonate clasts and veinlets at various orientations which are oxidized to an orange colour near surface; core tends to be blocky, but core recovery average about 95%. Banding - local vague banding @ 40-50°. Siderite alteration @ 22.90-23.10.				
23.30	45.25		Mineralized Zone (23.30-25.15) - Mixed mudstone, barite, quartz and calcite with fair galena and very sparse sphalerite; broken core @ 24.23-25.15; overall 97% recovery; minor fine pyrite.	475751	23.34	25.15	1.81
			(25.15-26.00) - Mainly mudstone with fair to fine to medium grained sphalerite, broken core; 97% recovery.	475752	25.15	27.84	2.69
			(26.00-32.30) - Mainly barite host rocks with fair patchy coarse brown sphalerite often associated with mudstone clasts; some local galena; good core, 99% recovery.	475753 475754	27.84 30.00	30.00 32.25	2.16 2.25

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
23.30	45.25		Mineralized Zone (Cont'd)				
			(32.30-36.10) - High grade coarse brown sphalerite associated with mainly mudstone host rocks; lesser barite, quartz and calcite; local strong breccia structure; generally good core with 98% recovery; soft and broken with clay/sericite at 33.83-34.14, also broken at 35.20-35.40.	475755	32.25	35.40	3.15
				475756	35.40	36.10	0.70
			(36.10-40.17) - Mainly barite host rocks, similar to 26.00-32.30; very minor white silica alteration; good core, 98% recovery.	475757	36.10	37.20	1.10
				475758	37.20	40.17	2.97
			(40.17-42.44) - Mainly pale grey silica, minor mudstone and calcite; fair sphalerite to 41.50 then very sparse with increasing fine pyrite, up to 2%; good core, 99% recovery.	475759	40.17	42.44	2.27
			(42.44-42.75) - Mainly barite, good core, 99% recovery.	475760	42.44	43.60	1.16
			(42.75-43.60) - Medium to pale grey silica; sparse sphalerite about 1% pyrite, block core, 99% recovery.				
			(43.60-45.25) - Weakly mineralized shale; pale green grey, soft, blocky and broken core with sericite on partings parallel to fine laminae @ 30-40° with some 0° undulations; mineralization includes minor brown sphalerite and pyrite as veinlets and blebs subparallel to banding and cutting banding.				

D.C. MILLER GEOLOGICAL SERVICES

DRILL LOG

HOLE NO. 89-33

METRES FROM	METRES TO	SECTION	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
45.25	49.30		Altered Calcareous Shale Pale green-grey, finely laminated, soft, locally broken; breaks into 1-10 cm pieces along sericite altered partings parallel to banding; some brecciation and clay gouge at 48.40-49.30; core is mineralized with about 2% fine pyrite veinlets mainly subparallel to banding, mainly at 50-55° but locally undulating to 0°; about 4% white calcite-quartz veinlets, up to 2 cm thick, mainly parallel to banding; good core recovery, about 95%.				
49.30	54.56		Calcareous Shale Dark and light grey, well banded at 35-50° with local 0° folding; fair core but tends to break along partings parallel to banding; about 3% white calcite veining; 94% core recovery. End. Drill left on set-up (November 9, 1989). Mineralized core not split; mineralized section and adjacent core shipped to Vancouver in 4 boxes.				

DIAMOND DRILL HOLE SURVEY CALCULATIONS

Sequence No.	Hole No.	Location of Collar or Node Lat.(N)	Dep.(E)	Elev.	Dip (decimal)	Bearing (Grid)	Survey point	Slope distance	Horiz. component	Vert. comp.	Northing N +,S -	Easting E +, W -
30	89-30	10097.30	9974.50	924.70								
		10097.30	9967.00	838.93	-85	270	0.00	86.10	7.50	-85.77	0.00	-7.50
		10095.65	9960.36	741.17	-86	256	172.20	98.00	6.84	-97.76	-1.65	-6.63
							184.10	0.00				
Top of U.zone		10097.30	9971.68	892.42	From Collar		32.40	32.40	2.82	-32.28	0.00	-2.82
Mid' of U.zone		10097.30	9971.08	885.65	From Collar		39.20	39.20	3.42	-39.05	0.00	-3.42
Base of U.zone		10097.30	9970.49	878.88	From Collar		46.00	46.00	4.01	-45.82	0.00	-4.01
Top of L. zone		10095.96	9961.63	759.82	"measure from end"		165.40	18.70	1.30	18.65	0.32	1.27
Mid' of L.zone		10095.84	9961.13	752.54	"measure from end"		172.70	11.40	0.80	11.37	0.19	0.77
Base of L.zone		10095.72	9960.64	745.26	"measure from end"		180.00	4.10	0.29	4.09	0.07	0.28
End of Hole		10095.65	9960.36	741.17			184.10	184.10	14.34	-183.53	-1.65	-14.14
31	89-31	10157.30	9985.40	935.00								
		10157.30	9982.21	843.56	-88	270	0.00	91.50	3.19	-91.44	0.00	-3.19
		10161.51	9974.29	715.31	-86	298	183.00	128.56	8.97	-128.25	4.21	-7.92
							220.06					
Top of U.zone		10157.30	9984.18	900.12	From Collar		34.90	34.90	1.22	-34.88	0.00	-1.22
Mid' of U.zone		10157.30	9983.97	893.96	From Collar		41.07	41.07	1.43	-41.04	0.00	-1.43
Base of U.zone		10157.30	9983.75	887.79	From Collar		47.24	47.24	1.65	-47.21	0.00	-1.65
Top of L. zone		10161.04	9975.17	729.63	"measure from end"		205.70	14.36	1.00	14.33	-0.47	0.88
Mid' of L.zone		10161.20	9974.87	724.65	"measure from end"		210.70	9.36	0.65	9.34	-0.31	0.58
Base of L.zone		10161.37	9974.56	719.66	"measure from end"		215.70	4.36	0.30	4.35	-0.14	0.27
End of Hole		10161.51	9974.29	715.31			220.06	220.06	12.16	-219.69	4.21	-11.11
32	89-32	10198.60	9988.00	942.10								
		10198.60	9983.21	850.78	-87	270	0.00	91.45	4.79	-91.32	0.00	-4.79
		10195.98	9969.72	738.85	-83	259	182.90	112.77	13.74	-111.93	-2.62	-13.49
							204.22					
Top of U.zone		10198.60	9985.68	897.86	From Collar		44.30	44.30	2.32	-44.24	0.00	-2.32
Mid' of U.zone		10198.60	9985.27	890.02	From Collar		52.15	52.15	2.73	-52.08	0.00	-2.73
Base of U.zone		10198.60	9984.86	882.18	From Collar		60.00	60.00	3.14	-59.92	0.00	-3.14
Top of L. zone		10196.35	9971.65	776.20	"measure from end"		188.10	16.12	1.96	16.00	0.37	1.93
Mid' of L.zone		10196.27	9971.22	760.20	"measure from end"		191.68	12.54	1.53	12.45	0.29	1.50
Base of L.zone		10196.19	9970.80	747.75	"measure from end"		195.25	8.97	1.09	8.90	0.21	1.07
End of Hole		10195.98	9969.72	738.85				204.22	18.53	-203.25	-2.62	-18.28
33	89-33	10049.30	9973.40	919.00								
					-89.5	270	54.56	54.56	0.48	-54.56	0.00	-0.48
Top of U.zone		10049.30	9973.18	893.85			25.15	25.15	0.22	-25.15	0.00	-0.22
Mid' of U.zone		10049.30	9973.11	886.34			32.66	32.66	0.29	-32.66	0.00	-0.29
Base of U.zone		10049.30	9973.05	878.83			40.17	40.17	0.35	-40.17	0.00	-0.35
End of Hole		10049.30	9972.92	864.44			54.56	54.56	0.48	-54.56	0.00	-0.48

File: C:\WORK\SURVEY-9
Calc: Nov.15/89 HSA

Vancouver Petrographics Ltd.

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Report for: H.S. Aikins,
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Invoice 8630

November 20th, 1989

Samples:

3 samples of drill core for sectioning and petrographic examination.

Samples are as follows:

Sample	Corresponding Assay Intervals
BTX-1	562 - 569 ft.
BTX-2	569 - 570 ft.
BTX-3	570 - 574 ft.

The samples consist of a piece of "typical" material from each assayed interval. They were prepared for optical examination as polished thin sections.

Summary:

These samples consist of sphalerite and galena as streaky and clumpy segregations in an intensely silicified matrix.

The mineralization in BTX-1 and 3 is essentially monomineralic sphalerite. In BTX-2 it includes major proportions of galena. Pyrite is a trace accessory in all cases, and chalcopyrite and tetrahedrite are additional trace consitutents in BTX-3.

Barite is an accessory gangue component, together with carbonate and sericite. Barite forms irregular impregnations and veinlets in the siliceous matrix.

There is evidence of contemporaneous deformation and mineralization. Sulfides in BTX-2 typically incorporate foliaceous sericite, and in BTX-3 are partially in fragment-like clumps and partially as fine-grained, streaked-out trains.

Individual petrographic descriptions are attached.

J.F. Harris Ph.D.

(929-5867)

SAMPLE BTX-1

Estimated mode

Quartz	87
Carbonate	4
Barite	3
Sericite	trace
Sphalerite	6
Pyrite	trace
Tetrahedrite(?)	trace

This is a mineralized sample consisting predominantly of quartz (as vein material or totally silicified host rock).

The quartz matrix is made up of a rather equigranular, randomly interlocking aggregate of anhedral-subhedral, prismatic grains, 0.05 - 0.3mm in size.

Carbonate forms randomly scattered, small pockets, 0.2 - 1.0mm in size. A few larger pockets occur, in which the carbonate is intergrown with well-crystallized barite. Barite also forms a few areas of pockety and veniform impregnations of the quartz matrix, independent of carbonate.

Sericite is seen as rare, fine-grained flecks and wisps.

Sulfides consist of monomineralic sphalerite. This is a light brown, colour-zoned variety. It occurs as sporadic, irregular patches, 0.5 - 3.0mm in size. These show crenulate outlines, and often contain small inclusions of the quartz matrix. They are fringed by halos of clear recrystallized quartz (distinct from the diffusely turbid quartz of the matrix as a whole).

Trace accessories are pyrite, as occasional small euhedra (to 0.2mm) in the quartz matrix and as rare inclusions in sphalerite. Rare traces of a brownish phase (tetrahedrite?) occur in a few as inclusions, to 25 microns in size, in sphalerite.

SAMPLE BTX-2

Estimated mode

Quartz	55
Sericite	5
Leucoxene(?)	2
Carbonate	2
Barite	10
Galena	17
Sphalerite	9
Pyrite	trace

A little over half of this slide is made up of an aggregate of turbid quartz similar to the matrix in BTX-1. This consists of anhedral to subhedral, locally comb-textured or lamellar quartz, of grain size 0.1 - 0.3mm, with a much finer-grained cherty intergranular component.

This is cut by occasional veinlets and pockets of carbonate and of barite.

One side of the slide consists of a strongly mineralized assemblage. This is made up of irregular, streaky masses of sulfides in a gangue of lamellar-textured quartz, barite and rather abundant fine-grained, foliaceous sericite, plus minor carbonate. The barite forms some relatively coarse patches, up to 2mm or more, and also extends as occasional veinlets into the adjacent barren quartz area.

Sulfides are galena and sphalerite in heterogenous intergrowth. In part, they form segregated streaks and patches, up to 1 or 2mm in size, but they are also present in finer-grained mutual intergrowth (irregular inclusions, one in the other) on a scale down to 0.05 - 0.1mm.

A minor proportion of the sulfides, especially galena, occur as small intergranular pockets in the quartz/barite gangue.

A notable feature is the intimate association of sericite with the sulfides, as contorted swarms and meshworks of minute, scaly flakes, included within otherwise well-segregated sulfides.

Pyrite is a minor accessory, as scattered, individual euhedra, 0.02 - 0.5mm in size, in the gangue matrix, and also within galena or sphalerite.

SAMPLE BTX-3

Estimated mode

Quartz	45
Plagioclase	14
Sericite	15
Leucoxene(?)	2
Barite	3
Carbonate	5
Sphalerite	15
Galena	0.5
Pyrite	0.5
Chalcopyrite	trace
Tetrahedrite	trace

The mineralization in this sample is characterized by sphalerite, as abundant disseminated clumps through an altered rock matrix.

The latter is a heterogenous, vari-granular aggregate having the aspect of a strongly silicified, possibly brecciated host.

It consists predominantly of quartz, as an anhedral aggregate of grain size 0.05 - 0.2mm, interstitially pervaded by fine-grained sericite and minor carbonate.

This matrix incorporates sporadic, streaked-out lenses of foliaceous, shale-like and/or felsitic (tuffaceous?) material, diffusely impregnated with leucoxene; patches of cherty-textured quartz speckled with small carbonate porphyroblasts; and occasional patches of compact sericite, having the aspect of altered feldspar phenocrysts.

Sulfides consist almost entirely of light brown, colour-zoned sphalerite, as in BTX-1. They form highly irregular clumps, 0.5 - 3.0mm in size, as well as clusters and streaky trains of finer-grained pockets and tiny granules, 20 - 200 microns in size.

The sphalerite clumps commonly show marginally intergrown patches of coarse quartz and carbonate - some of which look like fragments.

Accessory sulfides are slightly more abundant than in BTX-1. They consist principally of galena - as scattered, small pockets and tiny inclusions, 0.02 - 0.5mm in size, in sphalerite - and pyrite, as sparsely disseminated individual euhedra, 10 - 100 microns in size, mostly in the silicified matrix.

Chalcopyrite and tetrahedrite are notable trace constituents, mostly as small patches of polymineralic intergrowth with galena within, or marginal to, sphalerite clumps.

Sample BTX-3 cont.

Barite occurs sporadically, in association with the sulfides and quartz, as veinlets and coarse pockets and, locally, as intimate fine-grained impregnations of the matrix. In part, the barite veinlets cross-cut the sphalerite - possibly as a result of remobilization.

The rock appears somewhat sheared and/or cataclastically disrupted, possibly by a pene-contemporaneous and/or post mineralization event. The deformation could be non-tectonic - i.e. this could be a slumped melange of exhalative sedimentary affinities.