

**Update Report:**

**1990 Exploration Program  
on the  
Mel Property,  
Watson Lake M.D., Yukon**

**Volume I -- Report**

Prepared for:

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## Summary

Exploration activity on the Mel group during 1990 consisted principally of a program of confirmation and fill-in diamond drilling in the Mel deposit area and a follow-up investigation of results of a geochemical survey conducted in late 1989 on the Jeri prospect.

Drilling at the Mel deposit was designed to provide further details of the configuration of the deposit and additional data to support reserve estimates. Eleven BQ holes were completed for a total of 1552.0 m of diamond drilling.

The diamond drilling program was augmented by surface trenching intended to expose structurally complex areas of the mineralized horizon. Detailed mapping of the trenches has contributed significantly to the understanding of the geological controls affecting the Mel deposit.

Exploration work conducted to date has provided sufficient data density to permit an accurate estimation of potential reserves in the upper levels of the Mel deposit. The drill indicated mineral inventory in the potentially open pittable portion of the deposit above the 850 m level totals 1.027 million tonnes grading at 6.41% Zn, 1.88% Pb and 56.33% barite. The underground inventory, that is the portion of the deposit below 850 m, is estimated to be 4.210 million tonnes grading 8.22% Zn, 2.14% Pb and 47.19% barite. Total estimated reserves are therefore 5.238 million tonnes grading

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7.86% Zn, 2.09% Pb and 48.98% barite. Additional, deeper drilling will be required to confirm the tenor of all reserves and, in particular, those below the 800 m level.

At the Jeri zone, situated some 4.5 km northeast of the Mel deposit, investigations included prospecting, construction of 1.3 km of road and approximately 50 m of trenching. The work was focussed on a strong Zn soil geochemical anomaly in the vicinity of 115+00 N by 100+75 W, and identified a significant new smithsonite showing approximately 1.5 km north of the original Jeri discoveries.

Trenching exposed a strongly mineralized limestone breccia zone near the contact between a silicified limestone unit and an overlying silty calcareous argillite horizon. The zone is characterized by dark-grey angular fragments of silicified limestone in a weathered, ochre-coloured matrix of smithsonite, dolomite, siderite and limonite with minor sphalerite. Samples have returned assays as high as 5.31% Zn and a continuous channel sample averaged 4.67% Zn over 3.0 m. Further trenching and drilling will be required to assess the lateral extent of the mineralization.

The 1990 exploration program at the Mel deposit positively addresses the necessity to raise the level of confidence of reserve estimates in the upper portion of the deposit. With the objective of obtaining sufficient data for a feasibility study, exploration should continue with an integrated program of mapping and deep diamond drilling designed to test the hypothesis that the deposit thickens with depth.

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# 1. Introduction

## 1.1 Terms of Reference

This report on the MEL Claim Group, Yukon Territory was prepared by Nevin Sadlier-Brown Goodbrand Ltd. (NSBG) at the request of the management of Barytex Resources Corp. It is based on information obtained during the course of an exploration program conducted jointly by D.C. Miller Geological Services and NSBG, and a review of literature reporting previous work on the property.

The report is intended to summarize recent exploration activities on the Mel Group undertaken by Barytex during March to August, 1990.

## 1.2 Location and Access

The Mel property is situated in southeastern Yukon Territory approximately 80 km east-northeast of Watson Lake (Figure 1). Access to the claims is by aircraft — either helicopter or fixed wing. The latter is afforded by way of a 640 m long gravel airstrip located 1.5 km south of the Mel deposit. The airstrip has accommodated a Caribou aircraft with 8,000 lb payloads during earlier exploration programs. A network of tote roads access several areas of interest throughout the property.

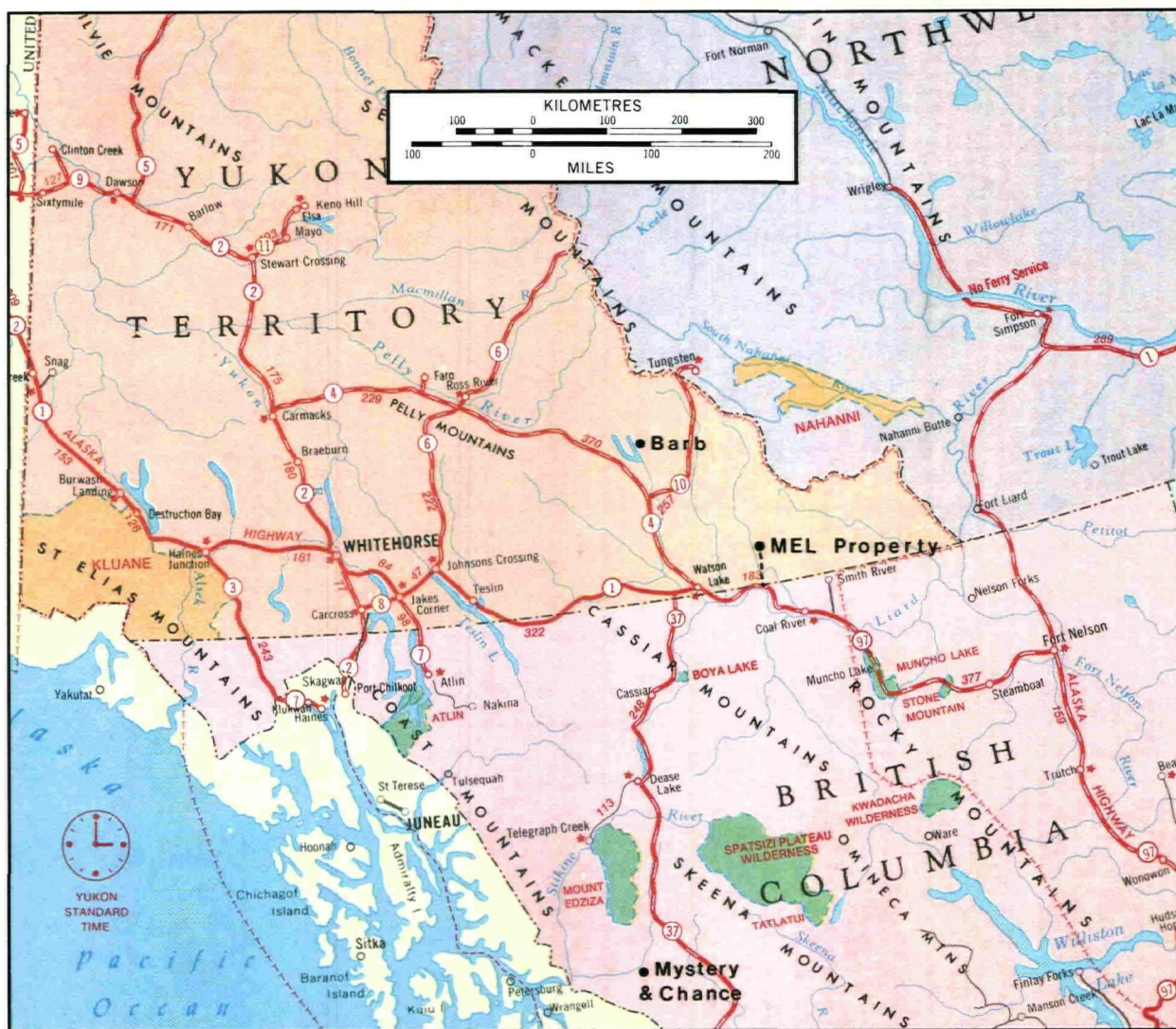
A bulldozer road some 50 km in length leads to the Mel deposit from the Alaska Highway at a point 77 km east of Watson Lake. However, travel along this route is restricted to the winter months.

## 1.3 Property Description

The Mel Claim Group comprises 171 claims and is owned jointly by Breakwater Resources Ltd. and Barytex Resources Corp. Under the terms of an agreement dated February 15, 1985, Breakwater has earned 100% interest in the property subject to a 10% net profits interest held by Barytex. An amending agreement dated February 15, 1989 grants Barytex an option to reacquire a 45% interest in the property. Particulars of the claim registry and of the agreements are detailed elsewhere (see Miller, 1990a).

## 1.4 Physiographic Features

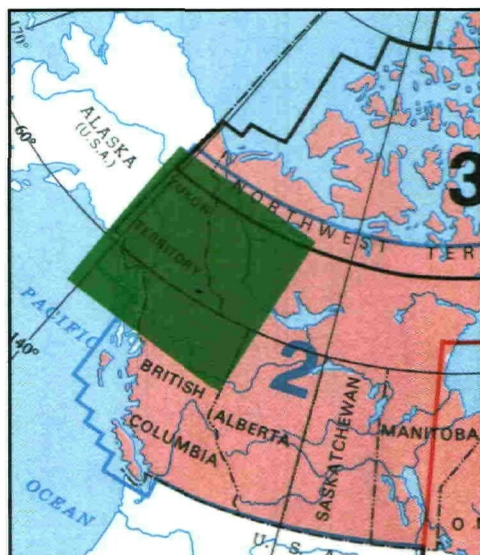
The Mel group is situated in the southern fringes of the Logan Mountains of southeastern Yukon. The terrain is characterized by subdued topography of low to moderate relief. However, the immediate area of the claims is deeply dissected by the headwater drainages and lakes of the Otter Creek system. The Coal and Rock Rivers drain the region southward along broad, flat-bottomed valleys.



## INDEX MAP ▶

Area Covered

Yukon and Northern B.C.



## PROPERTY LOCATION MAP

Barb Group - Silver, Lead, Zinc  
 MEL Project - Zinc, Lead, Barite  
 Mystery & Chance claims - Gold, Silver, Copper

### MEL - Access and Transportation

Watson Lake	80 Km (Air)
Alaska Hwy.	50 Km (Winter Road)
Fort Nelson	507Km (Railhead)
Skagway	666Km (Tidewater)

## MINERAL PROPERTY INTERESTS

November 1989

**BARYTEX RESOURCES CORP.**

The climate is similar to that of Fort Nelson, B.C. with cold winters and moderate summers. Precipitation is moderate and winter snow accumulation is on the order of 80 cm.

The property is vegetated principally by secondary spruce, pine and balsam forest with sparse to moderate willow and alder and other understory growth. Most of the region is in varying stages of regeneration following forest fires. The immediate vicinity of the Mel deposit was burned in 1982 in a fire which destroyed the camp and much of the drill core acquired prior to that time.

### 1.5 History

Miller (1990) describes the history of exploration on the Mel property as follows:

"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 (subsequently renamed Barytex Resources Corp.) Barytex optioned the property to Granby Mines Corporation, which drilled 18 diamond drill holes totalling 1952 m during 1974 and 1975. In 1976, St. Joseph Exploration 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 in 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 northeast of the Mel deposit (Figure 2). 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. Later in 1984, Sulpetro completed a new access road [from the Alaska Highway] to the property and built an airstrip near the main Mel deposit. In 1985, Sulpetro utilized the airstrip to drill the Jeri showing 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 showings. In late 1985, Sulpetro sold its mineral assets to Novamin Resources Inc., which in 1987, completed 7 diamond drill holes totalling 2011.99 m.



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This drilling tested the Mel deposit at depth and to the south along strike. In 1988, Novamin was purchase by Breakwater Resources Ltd. In October and November of 1989, Barytex Resources carried out a program of soil geochemistry near the Jeri showings and completed 4 BQ diamond drill holes totalling 662.94 m at the Mel deposit."

Work by D.C. Miller, P.Eng., as stated in his report of September 19, 1989, gave a mineral inventory estimated to contain 5,678,493 tonnes grading 6.77% zinc, 1.92% lead and 51.5% barite (Miller, 1989). This estimate was prepared from the results of holes 1 to 29 inclusive. In a subsequent estimate, excluding lower grade portions of four holes, a lower tonnage of higher grade was estimated at 4,891,937 tonnes grading 7.78% zinc, 2.20% lead and 50.73% barite.

A pre-feasibility study conducted by Sandwell Swan Wooster Inc. in October 1989 concluded that the project was potentially viable and provided site specific recommendations and cost estimates for mine and plant in the \$50 million range (Morris, 1989). Criteria for achieving viability were outlined with emphasis on definition drilling. Marketing, metallurgical work and environmental studies were identified as further areas to which attention might be directed.

#### 1.6 1990 Exploration Program

Exploration activity on the Mel group during 1990 was intended to fulfill the Phase 1 recommendations of a "*Report on the Mel Property, Watson Lake Mining Division, Yukon Territory*" by D.C. Miller dated March 9, 1990 (Miller, 1990a). A program of confirmation and fill-in diamond drilling on the Mel deposit was designed to provide further details of the configuration of the deposit, and to contribute further data to support reserve estimates. Eleven BQ holes designated 90-34 through 90-43 (as well as the deepening of hole 89-33) were completed for a total of 1552.0 m of drilling. The work was augmented by surface trenching designed to expose structurally complex areas of the deposit. Locations of all drill holes and trenches are shown in Figure 3. Trenches near 96+75 N, 98+15 N and 101+80 were mapped and are depicted in detail in Figures 8 through 10. A third trench near 97+50 N was initiated with completion pending arrival of a bulldozer larger than that presently on site. A transit and stadia were utilized to survey the locations of the drill collars and new workings.

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Work was also conducted on the "Jeri Zone" 4.5 km northeast of the Mel deposit to investigate a soil geochemical anomaly identified in late 1989. A program including prospecting, 1.3 km of road construction and trenching identified a significant new smithsonite showing approximately 1.5 km north of the original Jeri discoveries (Figure 11).

Other physical work undertaken during the 1990 exploration program included logging and clearing of vegetation along the strike of the Mel deposit, logging of standing snags in the vicinity of the northern approach to the airstrip, and reconnaissance and initial clearing of a route to the Jeri prospect which would have a lesser gradient than the tote road currently employed.

## 2. Geology

### 2.1 Regional Geology

The regional geological setting of the Mel property is depicted on GSC Map 11-1968; Coal River NTS 95D (Gabrielse & Blusson, 1969).

The claims are situated near the southern margin of the Selwyn Basin, a tectonic element present during Paleozoic time. Sedimentary rocks are dominant and range in age from late pre-Cambrian to Devonian-Mississippian. Mafic to intermediate volcanic rocks ranging in age from upper Proterozoic to lower Cambrian are present northeast of the property.

Sedimentary strata are folded along north-south trending axes and are offset by strike slip, normal and thrust faults. Major north-south trending thrusts have easterly direct displacements ranging up to 3000 m.

### 2.2 Property Geology

The Mel property is underlain by sedimentary strata which are lower Cambrian to Silurian in age. Lithologies include carbonates and clastic sediments broadly folded into a north-south trending, overturned syncline (Figure 2). The synclinal structure has been modified by a number of north/south trending faults which may exhibit both vertical and lateral displacements.

Interpretation of drill logs and surface mapping of outcrops and trenches in the area of interest on and near the property has identified seven significant lithological units. These include the barite-quartz unit which hosts the mineralization at the Mel deposit, as well as the footwall limestone and the hanging wall argillite. Table 1 depicts the stratigraphic succession in the area and provides a lithological description of each unit. It also proposes a standardized nomenclature based on recent petrographic work (Harris, 1990) and assigns symbols for each unit with cross-references to the legend employed in GSC Map 11-1968.

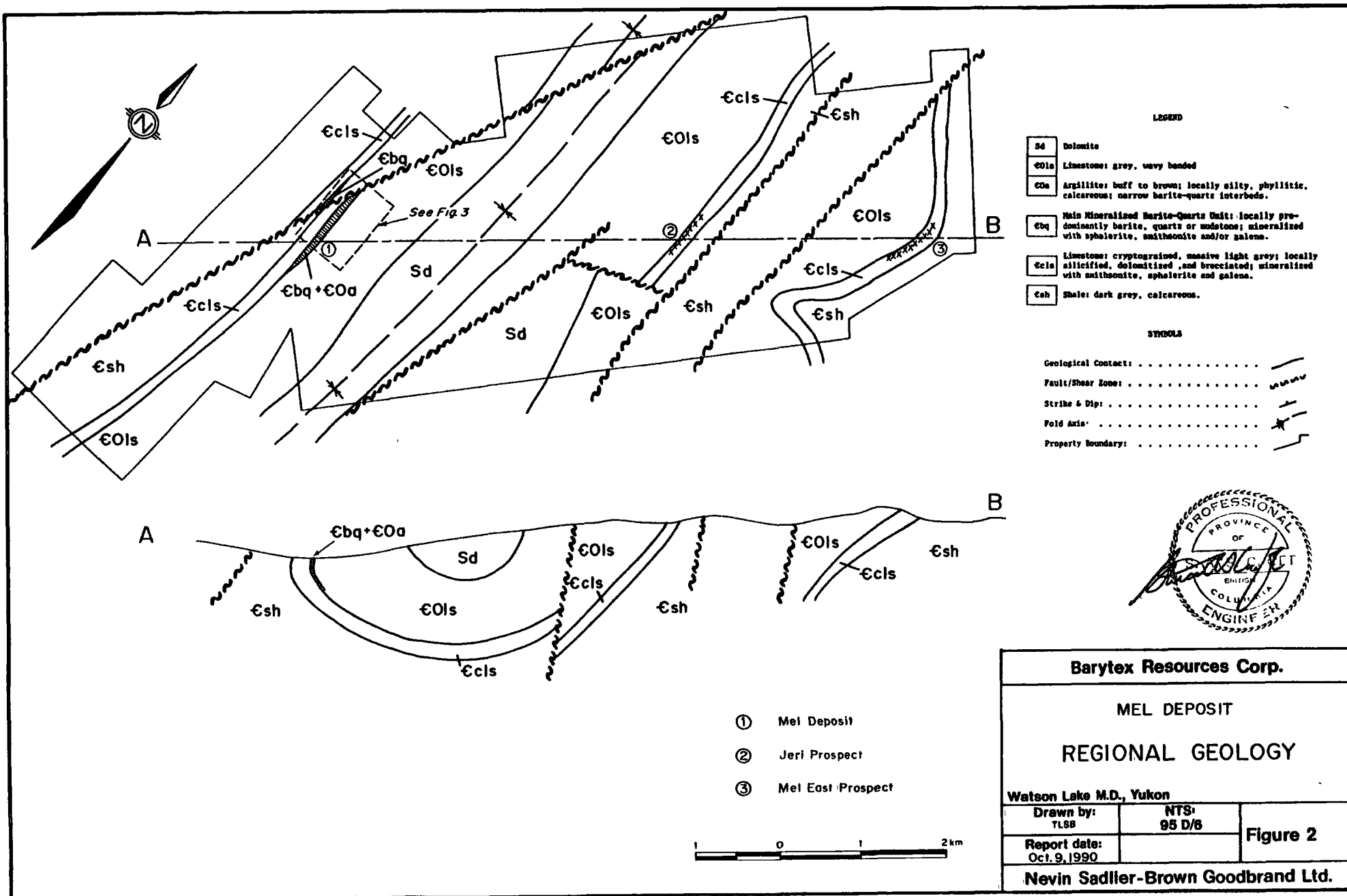


Table 1: Stratigraphy of the Mel Claim Area

## SILURIAN

**Sd** Dolomite: grey weathering (Equates to GSC Unit 12).

## CAMBRIAN OR ORDOVICIAN

**COls** Limestone: grey, wavy banded, silty (equates to GSC Unit 8).

**COa** Argillite: buff to brown silty argillite and very fine-grained siltstone; locally finely laminated, phyllitic, calcareous and may exhibit barite-quartz (or chert) banding. Minor sphalerite, galena and pyrite near base. (Equates to GSC Unit 8).

## CAMBRIAN (AGE UNCERTAIN)

**Cbq** **Mineralized Barite-Quartz Unit:** massive crystalline barite-quartz bed, locally may be predominantly barite or quartz; contains ubiquitous mudstone clasts and lenses; mineralized with sphalerite, galena and minor pyrite; smithsonite and boxwork sphalerite casts are also common where oxidized; commonly sheared and brecciated near base.

*Disconformity*

## LOWER CAMBRIAN TO CAMBRIAN

**EcIs** Limestone: cryptograined massive light grey limestone, locally subtly banded and stylolitic; contains interbedded lenses of mudstone and may contain erratic mudstone clasts in upper part (equates to GSC Unit 5).

**Csh** Shale: dark grey calcareous shale with interbeds of dolomite, siltstone, and chert pebble conglomerate. (Equates to GSC Unit 4).

## HADRYNIAN/LOWER CAMBRIAN

**HCv** Andesitic and/or basaltic flows and breccias: dark green, vesicular and amygdaloidal. (Equates to GSC Unit 3).

### **Economic Geology**

The mineralization at the Mel deposit and the showings at the Jeri and Mel-East sites are considered to be closely related components of a sedimentary-exhalative deposit or complex of deposits. The geological observations which support this genetic model and their economic implications are discussed in Section 4. of this report.

The stratigraphic unit which hosts the mineralization in the Mel deposit area is a well defined barite-quartz horizon (Cbq) which disconformably overlies a 150 m thick grey cryptograined limestone unit (Ccls). A distinctive 30 m thick argillite unit (EOa) overlying the mineralized horizon grades upward into the wavy banded limestone (EOls), a rock unit which is well represented in the region.

The mineralized barite-quartz unit (Cbq) is an elongate lens ranging in thickness from less than 1 m to over 20 m. The deposit and the enclosing strata strike generally north-south and have been folded into a recumbent syncline with a westerly dipping axial plane. The upper levels of the structure have a surface trace to the order of 800 m in length at elevations between 900 m and 950 m ASL. The deposit is open at depth, and with the deepest intersection to date at 420 m ASL, the downdip dimension is in excess of 500 m.

As presently defined, the central part of the mineralized body is characterized by near massive barite with moderate zinc and lead content. A peripheral zone exhibits the highest metal grades encountered with an attendant decrease in barite content and progressively higher silica content as the margin of the deposit is approached. At depth, this trend reverses between Holes 27 and 26 where the barite content and thickness again increase. This characteristic suggests that significant additional tonnage may occur immediately below the 400 m level.

Economically important minerals present in the Mel deposit are sphalerite, galena and barite. The sulphides occur for the most part as subhedral to euhedral grains and crystals, coarsely disseminated throughout the greater part of the barite-quartz unit which forms the gangue. Sulphide concentrations vary from negligible to nearly massive and are usually dominated by either sphalerite or galena. Grain size is commonly medium to coarse but minor local occurrences of fine-grained material are also present. Fine sparsely disseminated pyrite occurs locally but is not abundant overall.

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The sphalerite is the medium brown to honey coloured variety which is characteristic of diminished iron. This along with the low pyrite content suggests that the deposit is deficient in iron and sulphur.

The barite-quartz gangue is dominantly massive to coarsely crystalline barite with lesser quartz. Concentrations are variable, however, and may range in value from nearly pure barite to sparse disseminations of barite in quartz.

Overall the Mel deposit has been found to have an average grade of 7.86% Zn, 2.09% Pb and 48.98% barite. Grade and tonnage calculations and methodology employed are addressed in Section 3.1.3.

Mineralization at the Jeri zone is hosted by a limestone unit considered to be the equivalent of the cryptocrystalline limestone which occurs at the Mel deposit (Ccls). In the Jeri showing area these rocks are locally silicified, dolomitized and brecciated at, and immediately beneath, the contact with the overlying argillite (COa). The altered and brecciated limestone is mineralized by the zinc minerals smithsonite and sphalerite. Although lead values are elevated no economically significant lead mineralization has thus far been identified. Barite is present as a gangue mineral in quartz veins but does not appear to be sufficiently abundant to have any economic implications here. The presence of the zinc carbonate mineral smithsonite suggests that zinc mineralization may, in part, be secondary and comparable to the so-called "calamine ore" zones of some European deposits.

The work conducted on the Jeri zone to date is not sufficiently advanced to support grade and/or tonnage estimates. Individual samples of mineralized rock, however, range in grade up to 11.55% Zn, and drill core intersections assaying as high as 14.60% Zn over 2.15 m.

## 3. Exploration Results

### 3.1 Mel Program

#### 3.1.1 Drilling Program

The principal focus of exploration at the Mel deposit during 1990 was to obtain further information on the configuration and grade of the mineralized horizon. The drill program was designed to investigate the Mel zone in areas where "gaps" in the data of more than 75 m were present (Figure 3 and 4). Where possible, the holes were aimed to provide double intersections with the mineralized horizon by drilling through both limbs of the recumbent synclinal fold formed by the strata (eg. 90-41).

Diamond drill logs for holes 89-33 through 90-43, as well as detailed assay and survey information are presented in Appendix A; a summary of downhole survey data and assay information is presented in Table 2. Sections 9,700 N, 9,925 N, and 9,950 N are depicted in Figures 5 through 7. A brief synopsis of the drilling program is as follows:

#### 89-33 Extension

Hole 89-33 was stopped at 54.6 m at the completion of the 1989 exploration season in November. In March 1990, the hole was re-entered successfully and extended to a depth of 178.9 m with the objective of intersecting the mineralized zone at approximately the 730 m level.

The hole intersected the mineralized zone at 750 m, and assays averaged 7.72% Zn, 2.19% Pb and 68.30% barite over a true width of 7.76 m.

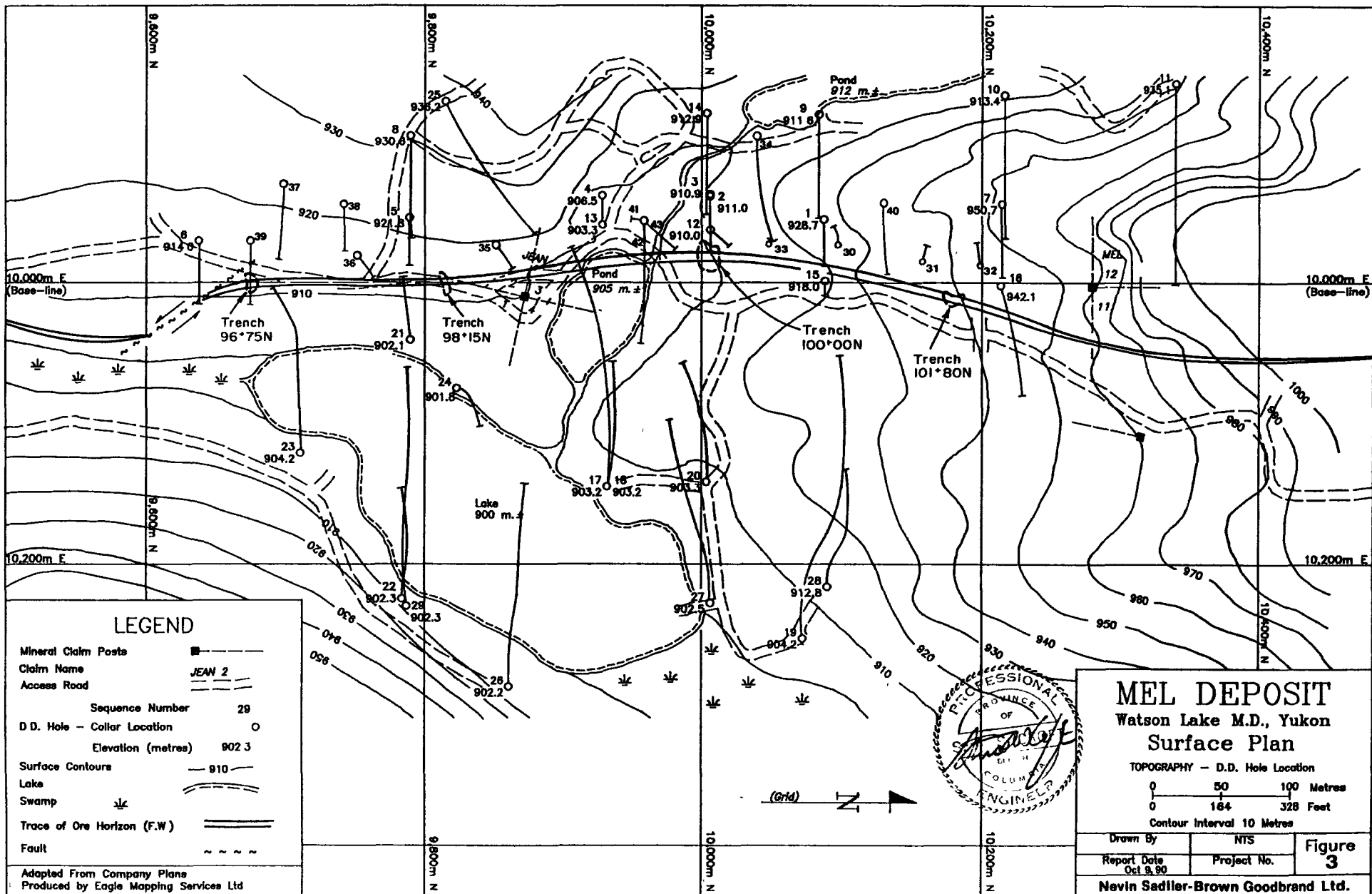
#### 90-34

This hole was drilled to complete Section 10,050 m N and sample the zone near the practical depth limit for surface mining. Assays averaged 9.37% Zn, 0.50% Pb and 59.27% barite over a calculated true width of 17.9 m.

#### 90-35

Designed to test the upper and lower limbs of the low angle fold in the mineralized horizon on Section 9,850 m N, this hole was

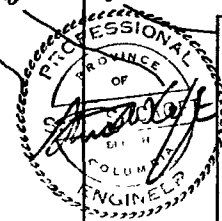




**LEGEND**

- 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



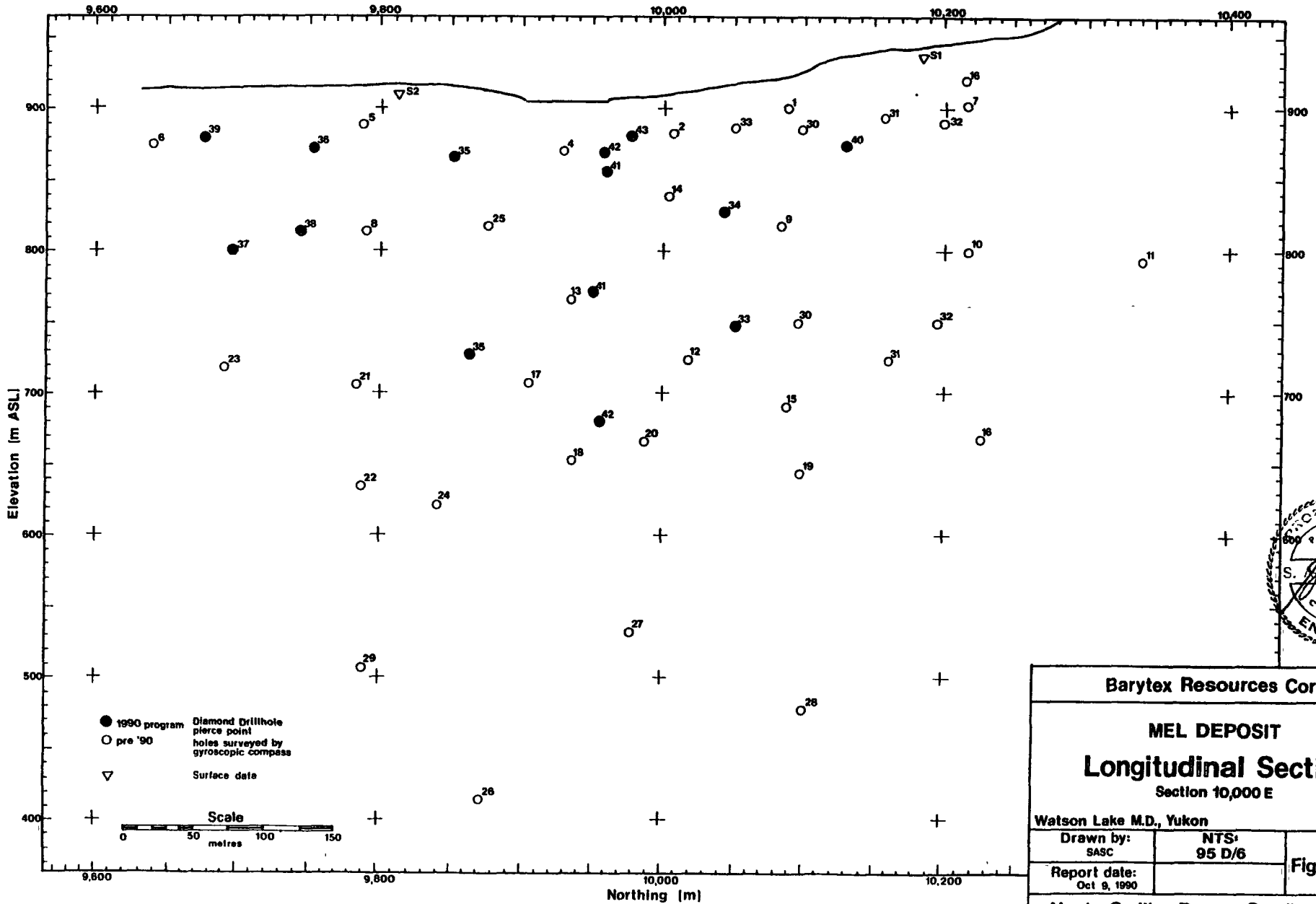
**MEL DEPOSIT**  
Watson Lake M.D., Yukon  
Surface Plan

TOPOGRAPHY - D.D. Hole Location

0     50     100 Metres  
0     164     328 Feet

Contour Interval 10 Metres

Drawn By	NTS	<b>Figure 3</b>
Report Date	Project No.	
Oct. 9, 90		
<b>Nevin Sadler-Brown Goodbrand Ltd.</b>		



<b>Barytex Resources Corp.</b>		
<b>MEL DEPOSIT</b>		
<b>Longitudinal Section</b>		
Section 10,000 E		
Watson Lake M.D., Yukon		
Drawn by: SASC	NTS: 95 D/6	<b>Figure 4</b>
Report date: Oct 9, 1990		
<b>Nevin Sadler-Brown Goodbrand Ltd.</b>		

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successfully completed to a projected depth of 203.0 m and provided a good dual intersection.

**90-36**

This hole was intended to provide a vertical test on Section 9,750 m N similar to that of 90-35. The upper limb of the mineralized horizon was intersected at the 877 m level. However, the hole deflected short of the lower target and 90-36 was abandoned prior to intersecting the lower limb.

**90-37**

By drilling eastward at  $-69^\circ$  on Section 9,700 m N, this hole was designed to intersect the barite-quartz zone on the extreme southern edge of the fold axis. The intercept proved sub-economic.

**90-38**

This hole was drilled to test the barite-quartz zone between Holes 8 and 37. Marginal assay values in Zn and Pb confirm the southern limit of potential ore.

**90-39**

This short, angled hole was designed to give a shallow intercept on Section 9,675 m N near southern limit of mineralized zone. The hole was angled at  $-45^\circ$  on an azimuth of  $090^\circ$  (grid) to intersect mineralization identified in surface trenching. The zone was encountered as predicted although zinc grades were higher than had been anticipated. A 25 cm thick quartz-barite horizon intersected some 6.5 m into the hanging wall phyllite appears to be consistent with surface mapping, and may assist in the interpretation of the deposit's origin.

**90-40**

Drilled near Section 10,130 m N, this hole was designed to intersect the mineralized zone at the 850 m and 700 m levels. Anticipated grades and thickness of the upper intersection were confirmed. Drilling was terminated prior to reaching the lower intersection due to a flattening of the hole.

**90-41**

Drilling in the vicinity of Section 9,970 m N had suggested a complex, perhaps structurally controlled, configuration to the mineralized zone beneath the "pond" near the Mel camp. The hole was designed to investigate grade and thickness of the deposit on the vicinity of levels 860 and 775 m. At 1.80 m, the upper intersection proved thinner than had been anticipated and lead-zinc grades were lower than average. The lower intersection was deeper and, at 10.53 m, was slightly thicker than predicted. Zinc grades were consistent with the average for the deposit at 6.57%, while lead grades at 2.66% were somewhat above normal. Also encountered were a significant fault zone and a 1.4 m thick sphalerite-galena-barite intercept containing nearly 10% Pb in the vicinity of the 800 m level. The latter is interpreted as a mineralized fault or hanging wall vein zone.

**90-42**

This hole was drilled easterly from the same set-up as 90-41 with the objective of intersecting the mineralized horizon below the 700 m level. The zone was first encountered at the 870 m level where a relatively narrow 2.2 m intersection assayed 9.24% Zn and 1.88% Pb, grades notably higher than those in the nearby upper intersection of Hole 90-41. At the 680 m level, the mineralized zone at the lower intercept assayed 3.79% Zn and 0.50% Pb over a true width of 4.24 m.

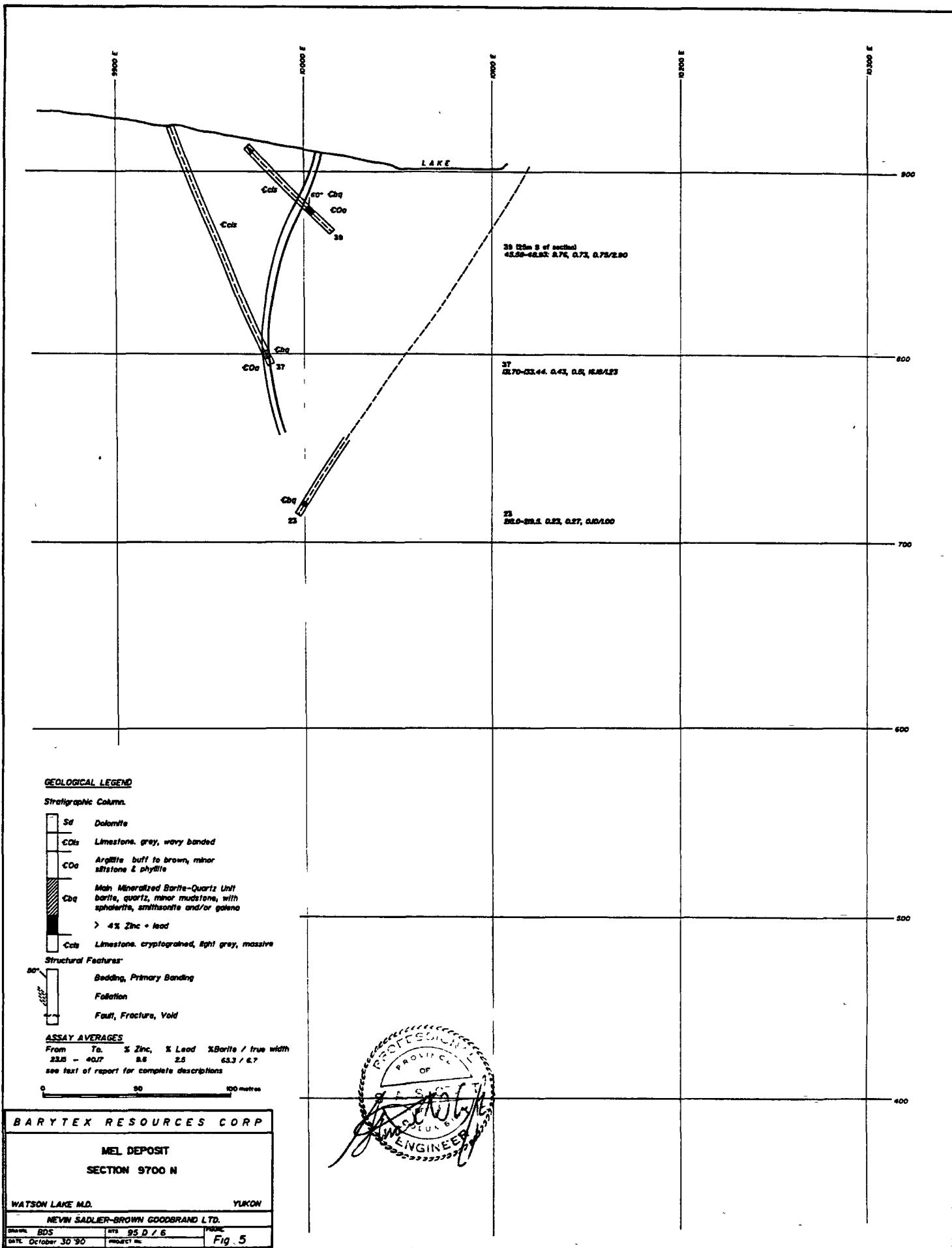
**90-43**

The third hole drilled from the same set-up as Hole 90-41 at the north end of the "pond", this hole was directed northeastward at a dip of  $-45^{\circ}$ . It was intended to investigate the configuration of the deposit within a restricted area of abrupt thickness variation. The mineralized zone was encountered as predicted at the 880 m level where it assayed 6.35% Zn and 3.16% Pb over a true thickness of 2.70 m.

Table 2

SUMMARY OF DIAMOND DRILL DATA - \* \* AVERAGES BY SPECIFIC GRAVITY \* \*

Mid-point of zone			Hole	Hole	Intercept	Core	Width	Width	Silver	Zinc	Lead	Barite	Specific	Zone
Lat.	Dep.	Elev.	No.	Yr.-No.	(metres)	Angle	(Metres)	(Feet)	O.P.T.	%	%	%	Gravity	Description
10087.1	9983.2	900.6	1	74-1	9.00	80	8.86	29.08	0.18	5.86	2.38	65.00	4.12	Barite
10005.9	9967.3	882.4	2	74-2	13.26	75	12.81	42.02	0.17	4.82	2.20	63.10	4.05	Barite
9928.3	9959.1	870.3	4	74-4	9.60	72	9.13	29.95	0.04	6.16	1.13	48.30	3.75	Barite
9787.3	9987.6	888.2	5	74-5	2.90	82	2.87	9.42	0.06	8.62	1.55	65.60	4.13	Barite
9637.0	10011.4	873.8	6	74-6	1.52	80	1.50	4.91	0.15	3.11	1.90	0.00	2.87	Silica
10214.5	9992.4	902.5	7	74-8	4.57	75	4.41	14.48	0.05	9.07	2.88	54.50	4.02	Best
9790.0	9963.6	813.1	8	75-9	7.93	30	3.97	13.01	N/A	7.09	1.93	63.18	4.08	Barite
10083.5	9946.1	817.9	9	75-11	7.47	40	4.80	15.75	N/A	4.79	1.76	69.55	4.14	Best
10216.1	9961.3	800.7	10	75-12	3.35	45	2.37	7.77	N/A	9.05	1.37	52.99	3.90	Barite
10341.2	9998.8	794.7	11	75-13	0.76	50	0.58	1.91	N/A	13.50	1.15	0.00	3.02	Total
10017.4	9973.4	724.9	12	78-6	10.21	40	6.56	21.53	N/A	7.46	4.32	70.95	4.36	"Hi. Grade"
9933.8	9960.3	766.0	13	78-7	18.29	35	10.49	34.42	N/A	5.02	2.39	71.61	4.22	Barite
10003.5	9941.6	839.0	14	79-1	15.00	55	12.29	40.31	0.01	7.84	0.22	68.10	4.09	"Hi. Grade"
10087.6	10010.6	692.4	15	79-2	8.40	60	7.27	23.87	0.05	13.63	1.74	26.15	3.53	Total
10213.4	10002.3	920.1	16	79-3	6.85	45	4.84	15.89	0.06	4.41	4.80	53.50	4.01	Total
10225.6	10072.6	670.3	16	79-3	2.00	30	1.00	3.28	0.03	4.78	0.41	0.12	2.82	"Best"
9904.1	9992.0	708.0	17	79-4	9.12	80	8.98	29.47	0.04	6.74	2.97	63.72	4.14	Total
9935.3	10062.4	654.4	18	79-5	9.05	75	8.74	28.68	0.01	3.26	0.00	49.03	3.65	Barite
10097.7	10056.1	646.0	19	79-6	2.68	77	2.61	8.57	0.11	8.78	8.45	3.08	3.39	Total
9987.4	10061.3	667.4	20	79-7	9.70	80	9.55	31.34	0.03	5.00	5.55	43.23	4.04	Total
9784.4	9998.0	707.0	21	79-8	2.50	80	2.46	8.08	0.06	13.50	0.84	13.70	3.25	Total
9787.8	10068.9	636.1	22	79-9	0.90	60	0.78	2.56	0.10	14.80	7.06	0.20	3.38	Total
9689.9	9998.3	718.3	23	79-10	1.10	65	1.00	3.27	0.00	0.23	0.27	0.10	2.72	"Fringe"
9839.9	10096.7	623.0	24	79-11	8.50	50	6.51	21.36	0.01	4.64	1.56	36.99	3.54	Barite
9875.2	9958.0	817.1	25	79-12	3.55	53	2.84	9.30	0.15	3.84	1.66	24.35	3.30	Qtz/Barite
9872.2	10147.9	418.4	26	87-4	11.63	35	6.67	21.89	N/A	10.40	0.02	60.22	3.99	Barite
9978.8	10102.0	534.9	27	87-5	6.15	57	5.16	16.92	N/A	20.14	2.13	0.07	3.21	Total
10101.2	10135.9	481.3	28	87-6	1.10	80	1.08	3.55	N/A	8.72	0.38	0.14	2.89	Total
9789.4	10145.4	510.0	29	87-7	2.05	35	1.18	3.86	N/A	8.44	1.62	0.36	2.96	Total
10097.3	9971.1	885.7	30	89-30	13.60	30	6.80	22.31	0.04	6.58	1.09	64.86	4.06	"Best"
10095.8	9961.0	750.7	30	"	9.10	35	5.22	17.12	0.09	4.76	0.82	41.43	3.58	"Best"
10157.3	9984.0	894.0	31	89-31	12.30	30	6.15	20.18	0.02	1.89	1.31	40.73	3.54	Total
10161.2	9974.9	724.7	31	"	10.00	45	7.07	23.20	0.04	8.25	2.53	44.30	3.80	Total
10198.6	9985.3	890.0	32	89-32	16.70	32	8.85	29.03	0.03	5.36	3.47	55.47	3.99	"Best"
10195.5	9986.6	750.5	32	"	5.45	40	3.50	11.49	0.03	2.81	1.55	59.19	3.91	Total
10049.3	9973.1	886.3	33	89-33	15.02	35	8.62	28.26	0.02	9.60	0.41	65.30	4.08	Total
10050.9	9968.5	747.8	33	"	13.20	36	7.76	25.46		7.72	2.19	68.30	4.20	Total
10042.3	9944.9	828.3	34	90-34	31.20	35	17.90	58.71		9.37	0.50	59.27	3.98	Total
9850.2	9973.7	865.2	35	90-35	13.00	35	7.46	24.46		5.43	2.11	63.22	4.06	Total
9862.6	9988.7	727.2	35	"	10.60	45	7.50	24.59		4.61	3.72	74.77	4.34	Total
9751.4	9981.5	871.6	36	90-36	12.00	35	6.88	22.58		7.09	1.48	60.17	4.00	"Best"
9695.3	9980.2	799.7	37	90-37	1.74	45	1.23	4.04		0.43	0.51	16.18	3.03	Total
9742.0	9973.2	813.4	38	90-38	1.95	45	1.38	4.52		2.22	0.56	49.81	3.67	Total
9674.9	10003.4	878.2	39	90-39	3.35	60	2.90	9.52		9.76	0.73	0.75	2.94	Total
10129.5	9965.4	874.1	40	90-40	2.80	40	1.80	5.90		8.47	0.08	35.86	3.51	"Best"
9959.2	9955.5	855.6	41	90-41	5.78	45	4.09	13.41		2.50	0.19	63.03	3.89	"Best"
9952.0	9954.8	800.4	41	"	2.73	30	1.37	4.48		2.55	9.91	50.93	4.21	"Vein ?"
9949.9	9954.6	770.7	41	"	18.36	35	10.53	34.55		6.57	2.66	63.03	4.11	"Best"
9959.0	9960.5	868.5	42	90-42	2.90	50	2.22	7.29		9.24	1.88	40.99	3.72	"Best"
9956.8	10044.2	681.0	42	"	6.00	45	4.24	13.92		3.79	0.50	35.67	3.44	"Best"
9977.0	9977.7	880.5	43	"	3.30	55	2.70	8.87		6.35	3.16	56.67	4.02	"Best"



38 25m S of section  
45.50-48.50 2.74, 0.72, 0.75/2.80

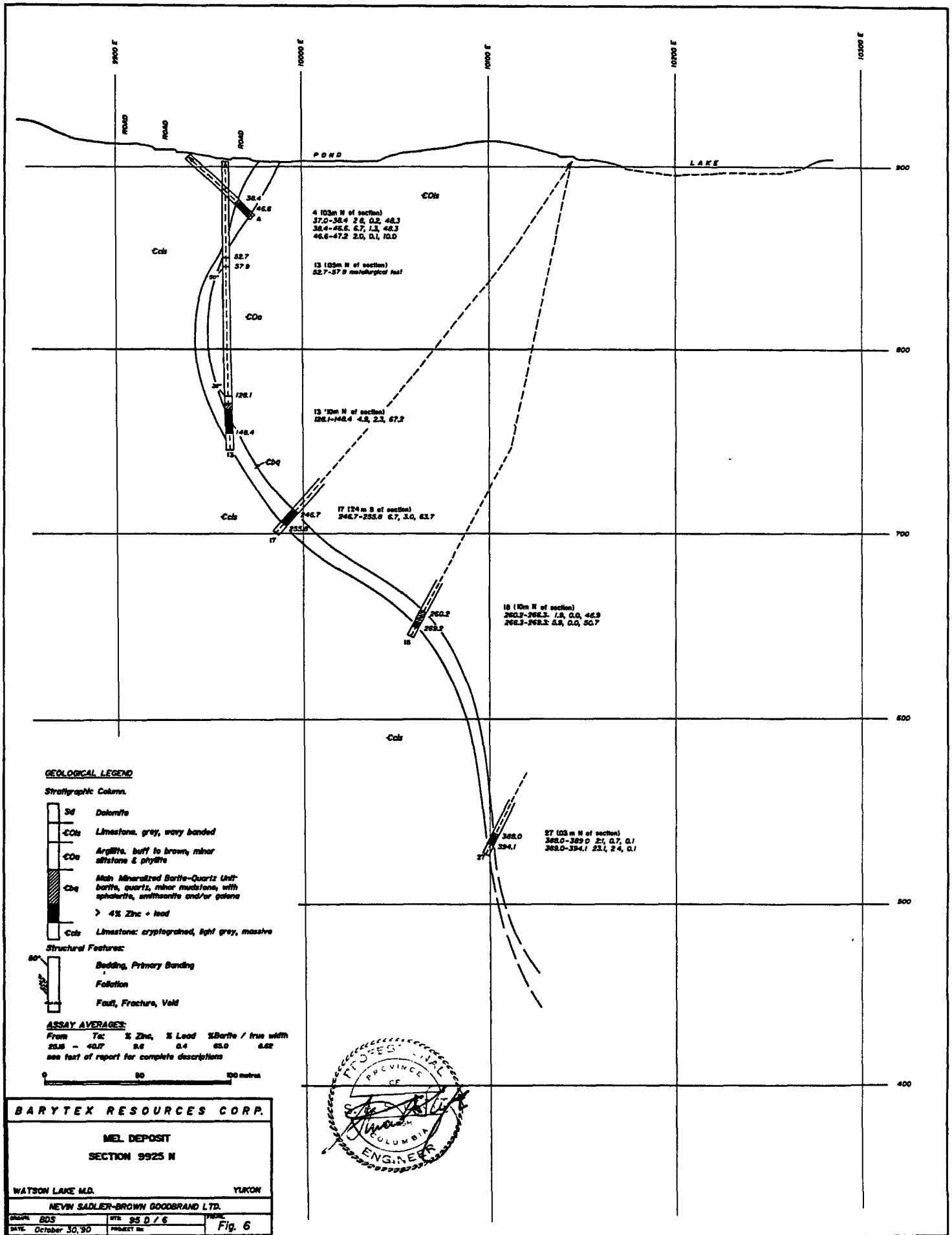
37  
41.70-43.44 0.43, 0.5, 16.8/23

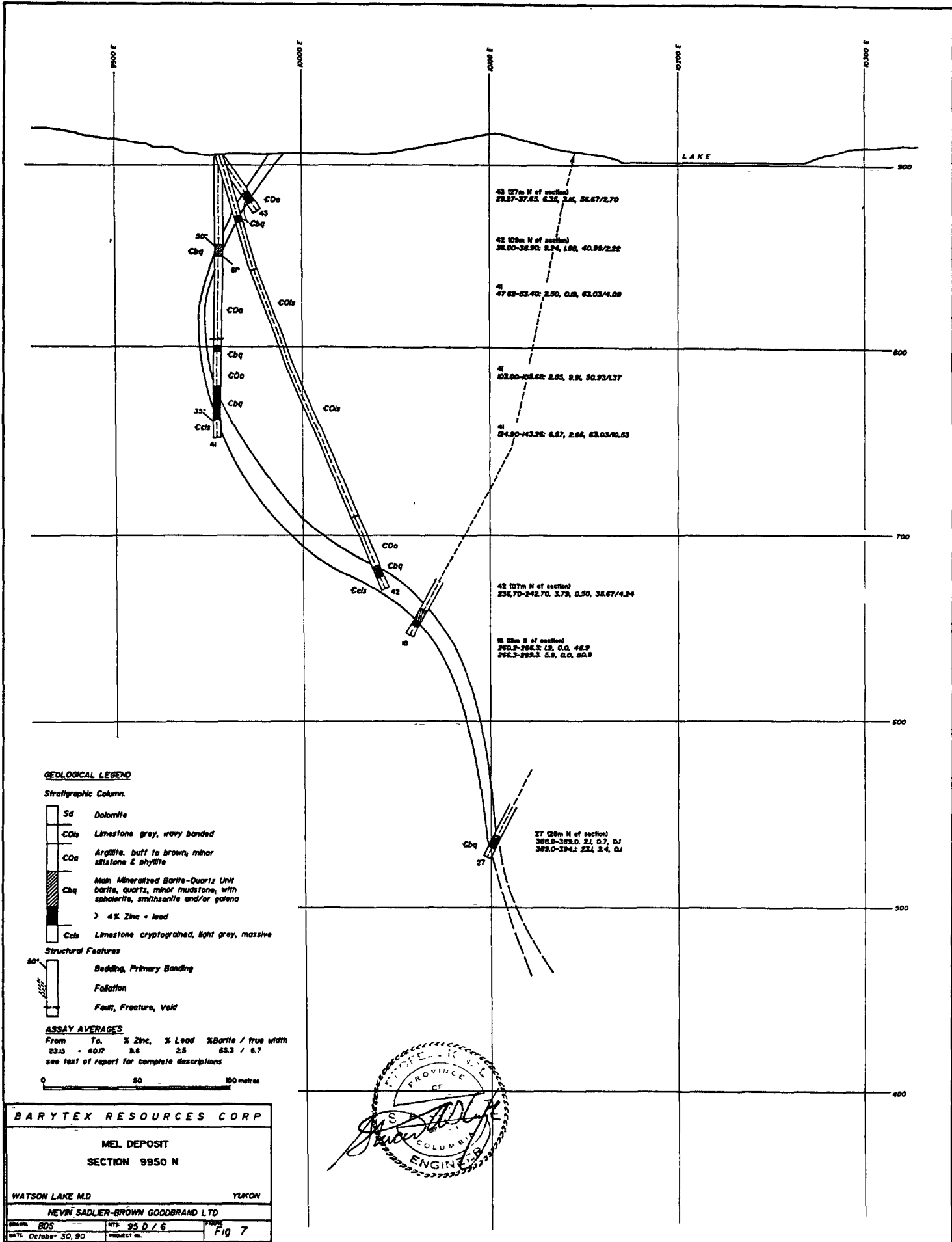
23  
35.0-38.1 0.23, 0.27, 0.6/1.00

LAKE

9900 E 10000 E 11000 E 12000 E 13000 E

900  
800  
700  
600  
500  
400





**GEOLOGICAL LEGEND**

**Stratigraphic Column**

- Sd Dolomite
- COu Limestone gray, wavy banded
- COa Argills. buff to brown, minor siltstone & phyllite
- Cbq Main Mineralized Barite-Quartz Unit barite, quartz, minor mudstone, with sphalerite, smithsonite and/or galena  
> 4% Zinc + lead
- Ccl Limestone cryptocrystalline, light grey, massive

**Structural Features**

- Bedding, Primary Banding
- Fault, Fracture, Void

**ASSAY AVERAGES**

From	To	% Zinc	% Lead	% Barite / true width
2315	4017	3.6	2.5	63.3 / 6.7

see text of report for complete descriptions



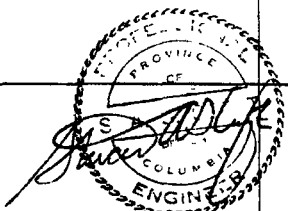
**BARYTEX RESOURCES CORP**

**MEL DEPOSIT  
SECTION 9950 N**

WATSON LAKE M.D. YUKON

NEVIN SADLER-BROWN GOODBRAND LTD

DRAWN: BDS	DATE: October 30, 90	BY: NTS 95 D / 6	PROJECT NO.	FIGURE: Fig 7
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### 3.1.2 Surface Trenching and Mapping

Surface trenching along the trace of the Mel zone was conducted to obtain further detail on the structure as well as on the nature and controls over the mineralization in the deposit. Two new trenches were dug using the JD-350C bulldozer at the site. These and one older trench were mapped during the course of the 1990 exploration program.

#### **Trench 96+75 N**

Hole 90-39 passed beneath an older trench near the southern extremity of the Mel deposit and, in order to enhance the section, the trench was re-mapped in 1990 (Figure 8). The mineralized horizon (C<sub>bq</sub>) exposed here is predominantly quartz locally well mineralized with sphalerite and galena. The trench also exposes a flexure in the unit and two steeply dipping faults lying roughly conformable to the stratigraphy. Both display perpendicular slickensides. A narrow barite-quartz interbed within the hanging wall argillite unit (C<sub>0a</sub>) 3 m above the mineralized horizon is also well exposed in the trench.

#### **Trench 98+15 N**

This trench was excavated to provide data on the structure and mode of mineralization in the central portion of the deposit (Figure 9). The deposit at 98+15 m N is relatively uniform with distinct upper and lower contacts. The footwall contact with the cryptocrystalline limestone (C<sub>cl</sub>s) is very abrupt and forms a low angle disconformity with the barite-quartz zone. A narrow shear zone in buff coloured mudstone immediately above the footwall contact is well mineralized with euhedral sphalerite crystals. Sulphide mineralization tends to be somewhat weaker in the middle sections of the barite-quartz unit, while disseminated sphalerite and stringers of galena are more prominent closer to the hanging wall contact. The mineralized zone is directly overlain by the argillite unit (C<sub>0a</sub>).

#### **Trench 101+80 N**

This trench is situated near the northern end of the lenticular deposit where the zone thins out. The exposure has greatly assisted in the interpretation of drill core intersections. Useful information was also obtained on the thickness and nature of the overburden in this area and the configuration of the subcrop.



DH-39

+ 97°00N

+ 96°75N

+ 96°50N

10 000mE  
(Baseline)



**LEGEND**

Sd	Dolomite
EOls	Limestone: grey, wavy banded
EOa	Azillite: buff to brown; locally silty, phyllitic, calcareous; narrow barite-quartz interbeds.
Ebq	Main Mineralized Barite-Quartz Unit: locally predominantly barite, quartz or mudstone; mineralized with sphalerite, smithsonite and/or galena.
Ecls	Limestone: cryptocrystalline, massive light grey; locally silicified, dolomitized, and brecciated; mineralized with smithsonite, sphalerite and galena.
Esh	Shale: dark grey, calcareous.

**SYMBOLS**

BA .....barite	SL .....sphalerite
QZ .....quartz or chert	SM .....smithsonite
MD .....mudstone	GL .....galena
PH .....phyllite	PY .....pyrite
BR .....breccia	LI .....limonite
Si .....silicification	Do .....dolomitization

Outcrop Area: . . . . .	
Geological Contact: defined . . . . .	
approximate . . . . .	
gradational/inferred . . . . .	
Fault/Shear Zone: . . . . .	
Strike & Dip of: Bedding . . . . .	
Foliation . . . . .	
Fracture . . . . .	
Trend & Plunge of Fold Axis: . . . . .	
Mineralized Vein: . . . . .	
Sample Site: . . . . .	
Trench Outline: . . . . .	
Road: . . . . .	

**Barytex Resources Corp.**

**MEL DEPOSIT**

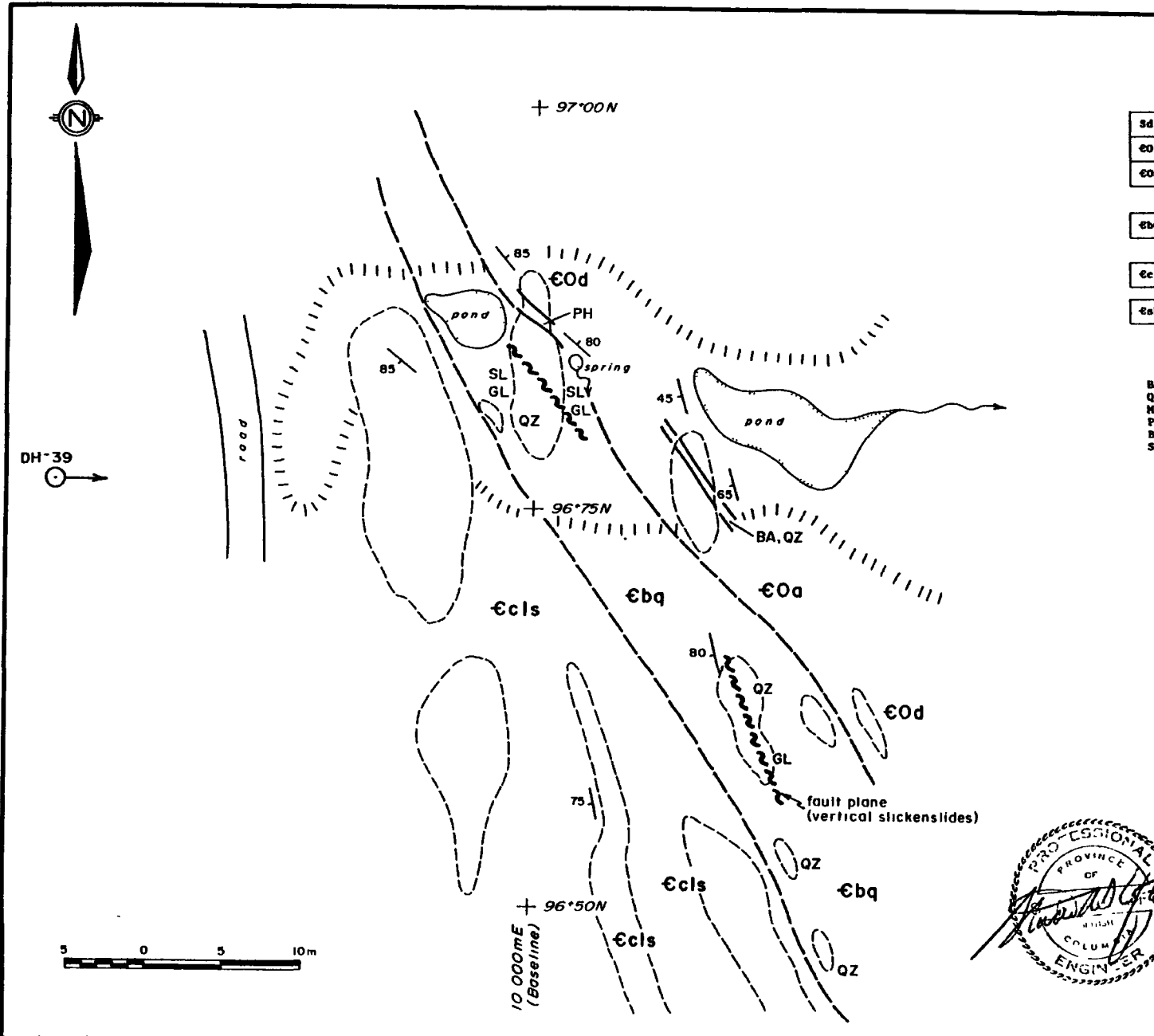
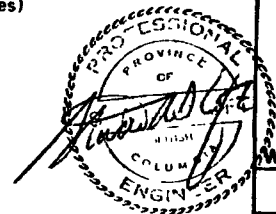
**Trench 96+65N**

**GEOLOGICAL PLAN**

Watson Lake M.D., Yukon

Drawn by: TL88	NTS: 95 D/B	<b>Figure 8</b>
Report date: Oct 9, 1990		

**Nevin Sadler-Brown Goodbrand Ltd.**





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Figure 10 depicts the structural relationships and mode of mineralization in this area of the deposit. Here, massive barite occurs as pods and lenses oriented along the trend of the zone. While commonly associated with the massive barite, sphalerite mineralization tends to be more heavily concentrated in areas of shearing, and within the numerous mudstone layers and lenses throughout the barite quartz unit (Cbq). Galena is sparsely disseminated throughout the zone although it tends to be more prominent near the "top" of the horizon where it is present as a vein filling associated with stock-work fracturing in the mudstones lying immediately beneath the silty argillite.

As exposed in Trench 98+15 N, the contact with the footwall cryptograined limestone (Ccls) is abrupt, and appears to be disconformable with the mineralized horizon (Cbq). The nature of the contact suggests the deposition of the mineralized barite-quartz unit was a discrete event. A strongly mineralized sheared mudstone (Cbq<sub>MD</sub>) is present immediately above the contact. Although intersected elsewhere in the deposit, drilling suggests that this unit is not continuous.

In contrast to the abrupt hanging wall contact exposed in the more southerly trenches, the upper contact with the overlying argillite (COa) is poorly defined in this portion of the deposit. The mineralized zone passes gradually upward into a distinctive non-calcareous mudstone before grading into the argillite. Sphalerite-galena mineralization varies from moderately- to weakly-disseminated with higher values contained within the mudstone-predominated sections. An assay cut-off would be an appropriate criteria for establishing the hanging wall contact in this section of the deposit.

The mineralized zone in the vicinity of 102+00 m N appears to be more structurally complex than anticipated. Drag folds within the argillite are evident although their occurrence is consistent with the overall deformational style of the Mel deposit.

### 3.1.3 Reserve/Grade Determination

The mineralized barite-quartz unit which forms the Mel deposit has been penetrated at 48 different points by 42 diamond drill holes. It has also been exposed at the surface in six trenches and open cuts. A total of 18 diamond drill pierce points plus the six surface exposures plot in the interval above 850 m ASL, the region of the deposit considered amenable to open pit mining methods.



**Main Mineralized Unit**  
 massive crystalline barite, locally sheared; occasional weak banding. Ubiquitous mudstone clasts and lenses; locally silicified. Minor galena and sphalerite; weathered bonework casts of oxidized sphalerite are common.

— 101°85N

— 101°80N

— 101°75N

**LEGEND**

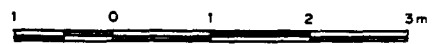
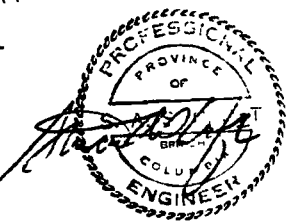
- Sd** Dolomite
- ©Dls** Limestone: grey, wavy bedded
- ©Da** Argillite: buff to brown; locally silty, phyllitic, calcareous; narrow barite-quartz interbeds.
- ©Bq** Main Mineralized Barite-Quartz Unit; locally predominantly barite, quartz or mudstone; mineralized with sphalerite, smithsonite and/or galena.
- ©cls** Limestone: cryptocrystalline, massive light grey; locally silicified, dolomitized, and brecciated; mineralized with smithsonite, sphalerite and galena.
- ©sh** Shale dark grey, calcareous

Abrupt, irregular, disconformable contact occurs between ©cls and ©Bq.

**SYMBOLS**

- BA . . . barite
- QZ . . . quartz or chert
- MD . . . mudstone
- PH . . . phyllite
- BR . . . breccia
- Si . . . silicification
- SL . . . sphalerite
- SM . . . smithsonite
- GL . . . galena
- PY . . . pyrite
- LI . . . limonite
- Do . . . dolomitization

- Outcrop Area . . .
- Geological Contact defined . . .
- approximate . . .
- gradational/inferred . . .
- Fault/Shear Zone: . . .
- Strike & Dip of: Bedding . . .
- Foliation . . .
- Fracture . . .
- Trend & Plunge of Fold Axis . . .
- Mineralized Vein. . .
- Sample Site . . .
- Trench Outline . . .
- Road . . .

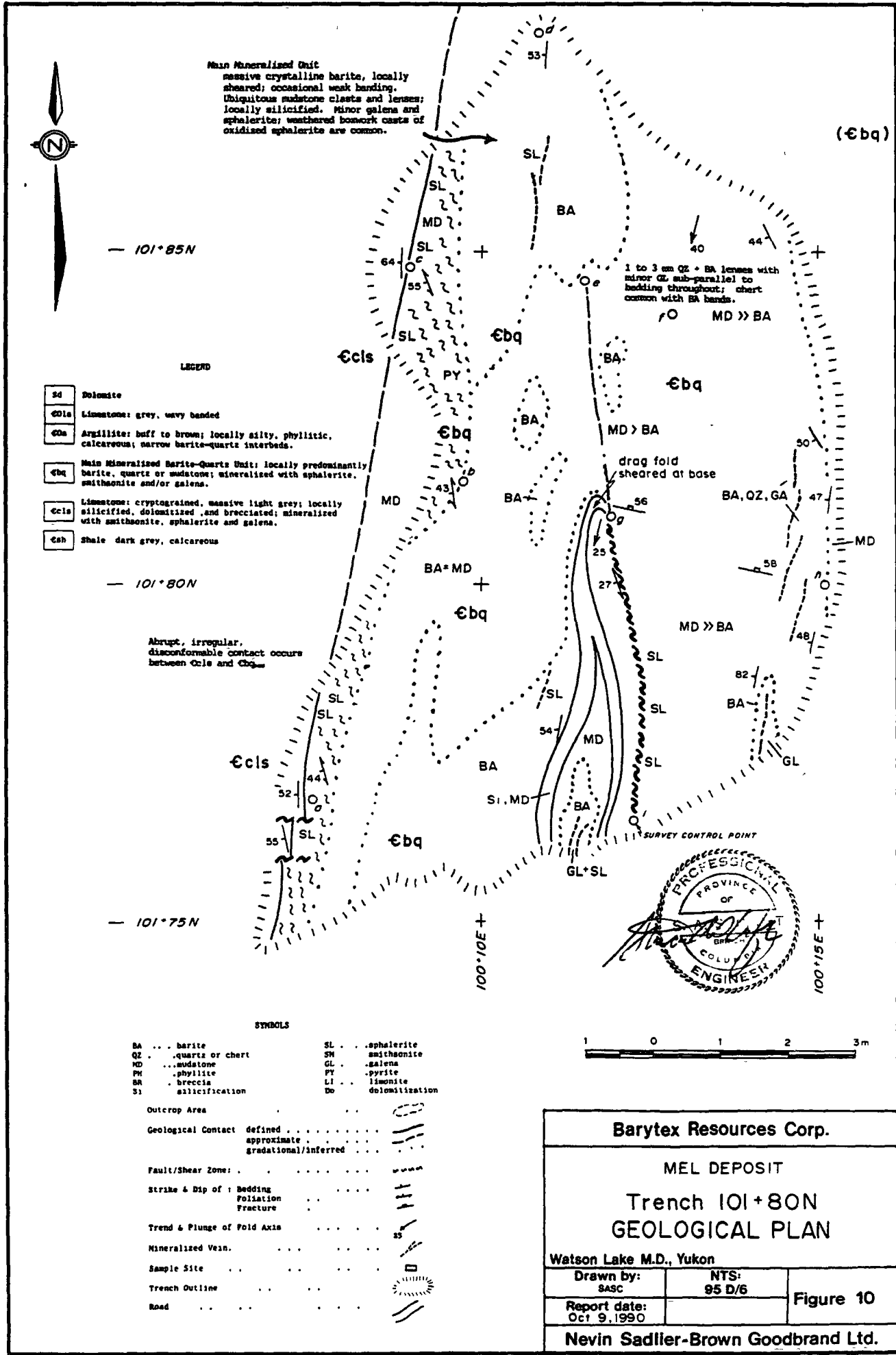


**Barytex Resources Corp.**

MEL DEPOSIT  
 Trench 101+80N  
**GEOLOGICAL PLAN**

Watson Lake M.D., Yukon

Drawn by: SASC	NTS: 95 D/6	<b>Figure 10</b>
Report date: Oct 9, 1990		
<b>Nevin Sadlier-Brown Goodbrand Ltd.</b>		



For purposes of grade and tonnage calculations, the grade of the drill hole intersections presented in Table 2 represents a weighted average of individual samples from within the section. The true width of the intersection is obtained from observations of contact angles and comparison with geological cross-sections. Spatial data were obtained from transit and stadia surveying, with downhole information provided by gyroscopic compass survey.

Reserve estimates are calculated using an "Inverse Distance Squared" technique described in CIMM Special Volume No. 9 -- Ore Reserve Estimation and Grade Control (O'Brian & Weiss, 1968). In this model, the influence exerted by any drill hole intersection on an arbitrary "block" is inversely proportional to the square of its distance from a node at the centre point the block. Methodology and sample calculations are presented in further detail in Appendix B. The Inverse Distance Squared method represents a slight departure from previous reserve estimation techniques employed by Miller (1990a), although tonnages and grades are comparable.

Following the completion of the 1990 exploration program, the revised drill indicated mineral inventory for the Mel deposit is 5.238 million tonnes grading 7.86% Zn, 2.09% Pb, and 48.98% barite. The recent drilling program resulted in a slight increase in both the tonnage and grade of the Mel deposit.

Near surface reserves were most significantly affected by the drilling program. The mineral inventory for Mel deposit above the 850 m level currently stands at 1.027 million tonnes grading 6.41% Zn, 1.88% Pb and 56.33% barite. Calculations of the mineral inventory for the 24 blocks in this region of the deposit considered amenable to open pit mining are included in Appendix B. Reserves below the 850 m level are presently estimated at 4.210 million tonnes grading 8.22% Zn, 2.14% Pb and 47.19% barite.

### 3.2 Jeri Program

During late 1989, Barytex extended the survey grid on the Jeri showings northward to 117+00 m N and conducted a program of geochemical sampling (Miller, 1990b). A follow-up investigation of a 3820 ppm zinc anomaly at 115+00 m N by 100+75 m E located a zone of strongly silicified limestone with associated smithsonite mineralization.

The JD-350C bulldozer was mobilized to the "Jeri Zone", and used to construct a road from the Jeri camp at 104 N across steep terrain to

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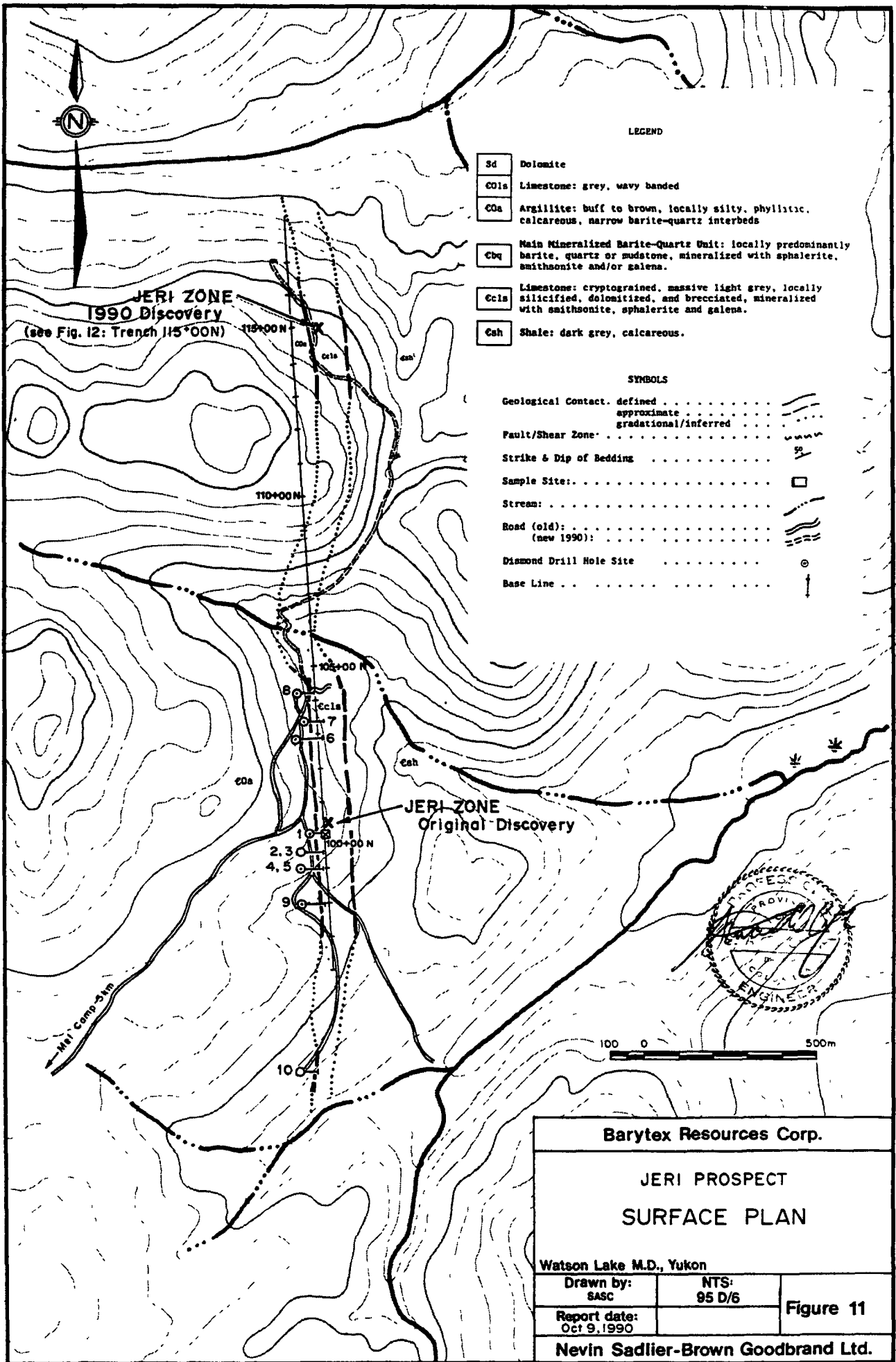
the showing near 115 N (Figure 11). Vegetation in the vicinity of the zinc anomaly was stripped and the surface trenched to expose bedrock.

Figure 12 depicts mapping in the vicinity of the trench at 115 N. The trenching identified a zone of strongly mineralized limestone breccia assaying up to 5.31% Zn near the contact between a silicified limestone unit and the overlying argillite unit. The base of the zone appears to be defined by a prominent, weakly- to moderately-mineralized silicified limestone horizon (Ccls). The western (upper) contact of the zone is considered to be constrained by an argillite (COa) contact. The northern and down dip extent of the showing remain totally unexplored.

The breccia is characterized by dark-grey to black angular fragments of silicified limestone 5 to 25 cm in length in a weathered, ochre-coloured matrix of smithsonite, dolomite, siderite, and limonite with minor sphalerite. The showing occupies a shallow depression considered to be attributable to recessive weathering between the bounding silicified limestone and the overlying argillite. A continuous channel sample over 3.0 m was collected perpendicular to the limestone-argillite contact. The sample averaged 4.67% Zn. Like mineralization sampled elsewhere in the Jeri zone area lead and silver values were geochemically anomalous but too low to be of economic interest.

A second trench immediately south of the breccia zone was excavated in an attempt to expose the argillite-limestone contact and to test a southern extension of the mineralized horizon. The contact, however, proved to be considerably farther east than had been anticipated, implying cross faulting with left lateral displacement. As further excavation was beyond the capabilities of the JD-350C bulldozer, the trench was stopped.

A brief reconnaissance northward from 115+00 N 100+75 E identified several minor smithsonite occurrences within the strongly silicified limestone unit. A grab sample from an exposure at approximately 116+50 N, 100+50 E assayed 4.00% Zn. The limestone-argillite contact in this area requires a more thorough investigation.



LEGEND

- Sd Dolomite
- C01a Limestone: grey, wavy banded
- C0a Argillite: buff to brown, locally silty, phyllitic, calcareous, narrow barite-quartz interbeds
- Cbq Main Mineralized Barite-Quartz Unit: locally predominantly barite, quartz or mudstone, mineralized with sphalerite, smithsonite and/or galena.
- Cc1a Limestone: cryptocrained, massive light grey, locally silicified, dolomitized, and brecciated, mineralized with smithsonite, sphalerite and galena.
- Csh Shale: dark grey, calcareous.

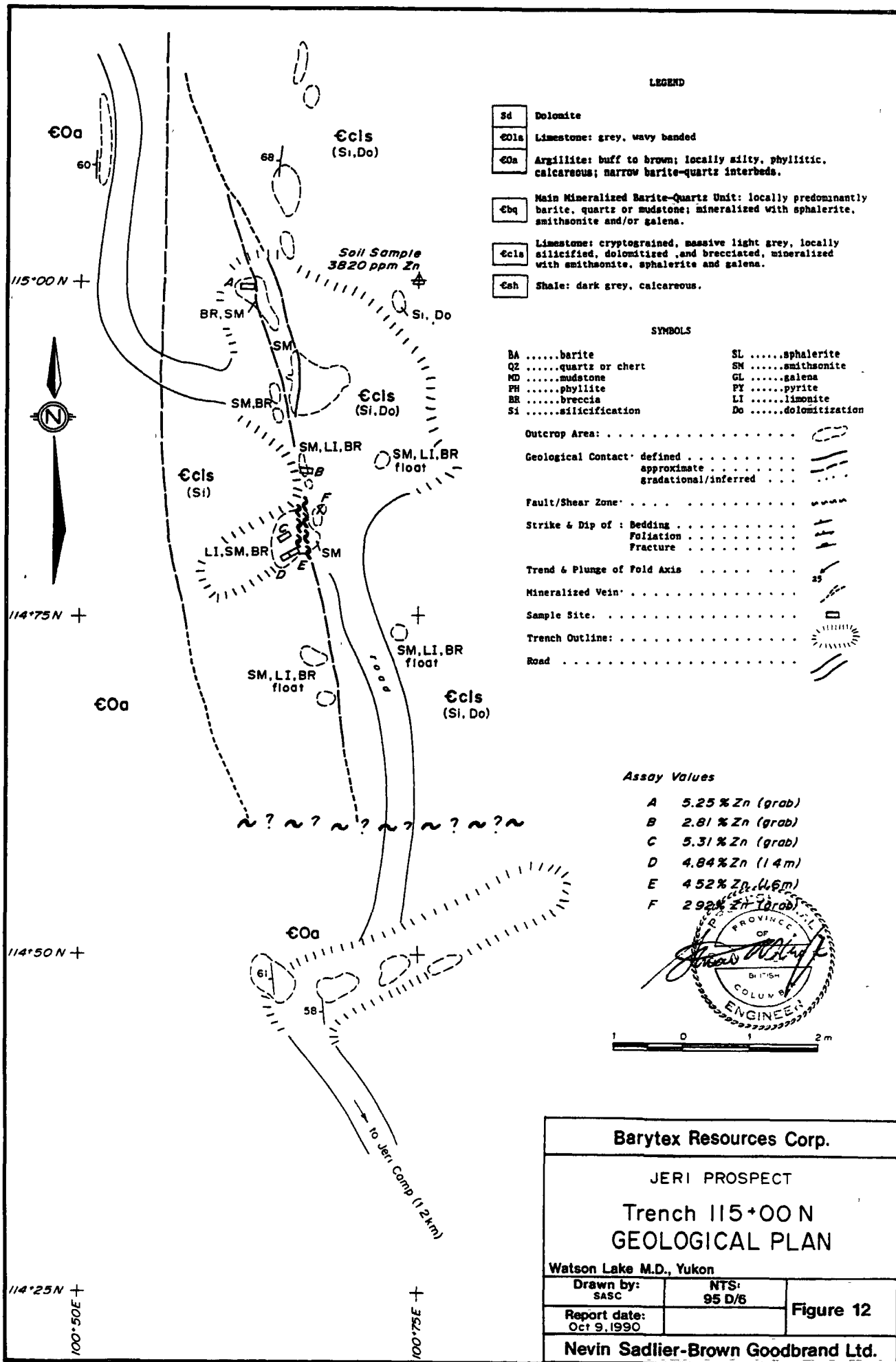
SYMBOLS

- Geological Contact: defined . . . . .
- approximate . . . . .
- gradational/inferred . . . . .
- Fault/Shear Zone . . . . .
- Strike & Dip of Bedding . . . . .
- Sample Site: . . . . .
- Stream: . . . . .
- Road (old): . . . . .
- (new 1990): . . . . .
- Diamond Drill Hole Site . . . . .
- Base Line . . . . .

100 0 500m

<b>Barytex Resources Corp.</b>		
<b>JERI PROSPECT</b>		
<b>SURFACE PLAN</b>		
Watson Lake M.D., Yukon		
Drawn by: SASC	NTS: 95 D/6	<b>Figure 11</b>
Report date: Oct 9, 1990		
<b>Nevin Sadlier-Brown Goodbrand Ltd.</b>		





**Barytex Resources Corp.**

JERI PROSPECT  
Trench 115+00 N  
GEOLOGICAL PLAN

Watson Lake M.D., Yukon		
Drawn by: SASC	NTS: 95 D/6	Figure 12
Report date: Oct 9, 1990		
Nevin Sadlier-Brown Goodbrand Ltd.		

## 4. Discussion

### 4.1 Geology

The recent drilling and trenching conducted on the Mel deposit and Jeri Showing area confirms and enhances results of a succession of exploration programs initiated in 1978. This earlier work advanced the technical database on the property to a prefeasibility level on the Mel deposit and resulted in discovery of potentially significant mineral occurrences in the Jeri zone and Mel East areas.

In the immediate area of the Mel deposit, the drilling of Holes 34 through 42 and the deepening of Hole 33 has increased the drilling density in the near surface part of the deposit to a level required for feasibility study purposes. A total of 18 holes now penetrate this portion of the zone. Given the predictability of recent results, there appears to be data of sufficient quality to form the basis for reserve calculations to feasibility standards for the part of the deposit lying between the 850 m level and the surface. Drill hole intercept density is lower in the deeper part of the deposit but results here have also proved to be remarkably predictable and locally consistent.

Work in the Jeri showing area consisted principally of geological mapping and bulldozer trenching. This work has identified a zone of zinc mineralization of sufficient extent and tenor to constitute a major exploration target.

The geological model derived from interpretation of surface mapping and drill hole data suggests that the Mel deposit and Jeri showing area may be different but more-or-less contemporaneous manifestations of a single depositional event (Sangster, 1985). This concept is consistent with observations from the recent trenching which reveals a low-angle disconformity at the base of the main mineralized barite-quartz unit (C<sub>bq</sub>) at the contact with the underlying cryptograined limestone (C<sub>cls</sub>). The contact is abrupt and depositional styles below and above it are radically different. The limestone is also cut by silica and carbonate veins which do not appear to persist into the overlying rocks.

The footwall limestone is interpreted to represent an episode of prolonged quiescent carbonate deposition. The veining implies some degree of induration prior to the deposition of the overlying strata and the disconformity is consistent with an erosional interval and/or some form of tectonic activity -- possibly subsidence. This was

followed by local deposition of very fine clastic material which formed thin discontinuous mudstone layers and lenses. Subsequent and, in places, coeval exhalative activity resulted in deposition of chemically precipitated barite, silica, sphalerite and galena to form the mineralized barite-quartz unit. This unit is now described as a sediment hosted exhalite.

At the Mel deposit the coarse-grained mineralization, particularly of barite, is suggestive of epigenetic recrystallization. Sulphides are also considered to have been remobilized from elsewhere within the barite-quartz unit. Bremner (pers. comm., 1990) observes that this mode of sulphide mineralization, particularly within brecciated sediments along low angle thrust faulting, is common among zinc-lead deposits in the southeast Yukon. However, the abundance of barite distinguishes the Mel as a sedimentary-exhalative, rather than a breccia zone replacement deposit.

At its top, the exhalative horizon gives way over a short interval or, in some instances, abruptly to a lithological unit composed of banded, silty argillite (E0a). Local occurrences of sphalerite and galena in the basal part of this unit near the contact with the barite-quartz bed suggest either an overlap between the deposition of the metal-rich exhalites and the fine clastic sediments, or possibly remobilization of Zn and Pb from the older to younger strata.

Characterization of the Mel deposit as a sediment hosted exhalative implies the existence of a source vent area somewhere in its general vicinity. Although no such feature has thus far been identified in any of the immediately adjacent rocks, there is evidence to suggest that one may occur in the Jeri zone area.

The carbonate unit which hosts the mineral occurrences in the Jeri Zone is interpreted as the stratigraphic equivalent of the cryptograined limestone (E1s) which underlies the Mel deposit. Development of hydrothermal deposits and alteration at the Jeri zone may, therefore, be contemporaneous with deposition of the stratiform exhalative unit which forms the Mel deposit. The brecciation, veining and barite-quartz stockwork, with its related zinc mineralization have been interpreted as part of a system of channels or feeders developed beneath vents from which exhalative solutions emanated. Stratiform mineralization comparable to that which occurs in the Mel deposit is not yet known to be present in this area.

The Mel property covers a substantial area of the geological terrane permissive to the sediment hosted exhalite model proposed for the Mel deposit. The stratigraphic interval represented at both the Mel

deposit and the Jeri prospect extends to depth beneath the claims and constitutes a significant exploration target for similar such metal-rich zones over the 4.5 km interval between the Mel and Jeri occurrences.

#### 4.2 Economic Evaluation

While a detailed analysis of the viability of a mining operation at the Mel property is beyond the scope of this report, a review of existing information in the context of recent exploration is warranted. Work on the Mel property seeks to provide sufficient data to support a feasibility study on a mining operation utilizing both surface and underground methods. Further development will continue to address the recommendations of the Sandwell Swan Wooster Inc. prefeasibility study (Morris, 1989).

From an economic standpoint, the principal outcome of the 1990 exploration and drilling program on the Mel deposit is the confirmation and enhancement of earlier results. The deposit's mineral inventory was increased by about 7% over "higher grade" tonnage described by Miller (1990a) and the level of confidence of inventory estimates, particularly in the upper portions of the deposit, was raised substantially.

##### *Drill Indicated Mineral Inventory (1990)*

Inventory Location elevation (ASL)	million tonnes	Zinc (%)	Lead (%)	Barite (%)
850 m to surface	1.027	6.41	1.88	56.33
400 m to 850 m	4.210	8.22	2.14	47.19
<b>Total Inventory</b>	<b>5.238</b>	<b>7.86</b>	<b>2.09</b>	<b>48.88</b>

In consideration of indicated grades, mining dilution, metallurgical recoveries and prevailing metal prices, a valuation of the mineral inventory at the Mel deposit is illustrated as follows:

**Valuation of Potentially Mineable Reserves**

Mining Classification	million tonnes <sup>1</sup>	Mill Feed Grade <sup>2</sup>		"Deemed Price" (\$/lb)		Mill recovery <sup>3</sup>		"Gross recovered value" (\$/tonne)		
		% Zinc	% Lead	Zinc	Lead	Zinc	Lead	Zinc	Lead	Zinc + Lead
Open Pit	0.971	6.09	1.79	\$0.80	\$0.50	93.0%	98.0%	\$99.88	\$19.29	\$119.17
Underground	3.705	7.40	1.93	\$0.80	\$0.50	93.0%	98.0%	\$121.34	\$20.81	\$142.15
<b>TOTAL</b>	<b>4.676</b>	<b>7.13</b>	<b>1.90</b>	<b>\$0.80</b>	<b>\$0.50</b>	<b>93.0%</b>	<b>98.0%</b>	<b>\$116.89</b>	<b>\$20.49</b>	<b>\$137.38</b>

<sup>1</sup> Tonnage from "Mineral Inventory" adjusted for dilution (5% for surface; 10% for underground) and losses (10% for surface; 20% for underground) after Morris (1989).

<sup>2</sup> Grade from "Mineral Inventory" adjusted for dilution (5% for surface; 10% for underground) after Morris (1989).

<sup>3</sup> Mill recovery estimates based on preliminary metallurgical investigations as detailed in Miller (1990a).

Miller (1990a) defines the net smelter return (NSR) as the gross value of recoverable metals and commodities minus transportation and smelter charges. Given recent volatility in base metal prices and the uncertain impact of higher energy costs, and in the absence of metal sales or smelting contracts, it is assumed that the NSR value for material from the Mel deposit will be slightly less than half of the "Gross metal value" described above.

Operating costs, of course, comprise both production costs and debt service costs. Morris (1989) has estimated mining and milling costs for a 1500 tonne/day operation follows:

***Estimated Production Costs***

surface mining costs:	\$17.76/tonne
underground mining costs:	\$32.00/tonne
milling costs:	\$11.50/tonne

Plant amortization and debt service costs will depend largely on staging of plant and underground facility development. However, for example, an initial capital cost on the order of \$30 to \$50 million would incur a cost in the range of \$10.50 to \$17.25/tonne over a ten year mine life based on present tonnage estimates and an assumed interest rate of 11%.

On the basis of the current grade and tonnage estimates, prevailing metal prices, estimated NSR values and mining costs, a mining operation at the Mel deposit approaches viability. Given the remaining potential below the 400 m level, the indication of additional potential on the Jeri Zone, and the significant impact of a marketable barite by-product, the Mel deposit compares favourable with other Canadian base metal mines and advanced development projects.

## 5. Conclusions

The exploration and development work done to date on the Mel claim group has delineated one potentially mineable base metal deposit and identified two additional promising base metal occurrences. Interpretation of geological data from throughout the property has produced a model which may both explain the genesis of the mineralization and provide a useful guide to continued exploration on the property.

The principal target for further development work is the Mel deposit, a steeply dipping, broadly folded stratiform body composed of massive barite and quartz mineralized with disseminated sphalerite and galena. Over those portions explored to date, the barite-quartz unit is well defined geologically, and is readily distinguished from the bounding sediments by prominent lithological and structural features. The deposit has been shown to contain reserves estimated at 5.238 million tonnes grading 7.86% Zn, 2.09% Pb and 48.98% barite between the surface and a depth of 500 m -- it is open downdip.

The 1990 exploration season at the Mel deposit saw the successful completion of the "Phase I" program described by Miller (1990a). The program affirmed in part the recommendations of the Sandwell Swan Wooster Inc. prefeasibility study (Morris, 1989) in providing sufficient additional information on the near surface portion of the barite-quartz unit to permit a feasibility-level estimate of reserves accessible by open pit mining. As the configuration of the upper levels of the deposit is reasonably well established, further shallow diamond drilling would probably be of little benefit. Rather, underground work designed both to investigate the geotechnical factors affecting a mining operation, and to obtain a bulk sample for confirmation of grade estimates and metallurgical evaluation should be contemplated.

Preliminary economic modelling suggests that the near surface component of the reserves might be recovered from an open pit operation and the remainder using underground mining methods. Based on an evaluation using current technical and economic data, a 1,000 tonne/day mining operation at the Mel deposit could be financially viable.

The most important secondary target area on the Mel property is the Jeri Zone which lies 4.5 km northeast of the Mel deposit. Mineralization here consists of smithsonite and minor sphalerite associated with quartz-barite stockwork veining in limestones. The

- 35 -

host rocks have also been subjected to intense hydrothermal alteration including silicification and dolomitization. Assay values for chip samples of up to 11.55% Zn have been obtained from samples from the Jeri showings. Recent trenching identified a surface exposure averaging 4.67% Zn over 3.0 m.

At the Mel East showing some 7.3 km northeast of the Mel deposit, disseminated smithsonite is present in silicified and dolomitized limestone at the same stratigraphic horizon as the Mel and Jeri mineralization. Three grab samples of the best mineralization from this area averaged 8.6% Zn.

In general, the Mel property is situated in an area which would be amenable to development. The climate, though cool, is not severe. Topography, both within the claims and access corridors, is moderate. Availability of water and proximity to existing transportation and commercial infrastructure is good. In fact, with road access established, the project location will compare favourably with most northern Canadian producing mines. The road distance to the railhead at Fort Nelson, B.C. would be 507 km and, to tidewater at Skagway, Alaska, about 660 km. Environmental questions remain to be addressed but there are no obvious sensitive points. The very low sulphur content of the mineralized material and a local topographic configuration which should facilitate tailings storage are strong positive factors.



## 6. Recommendations

With the addition of the positive results of the 1990 field work to the geological database on the Mel deposit, the supplemental development now required to support an economic feasibility study is amply justified. An integrated exploration and development program including intermediate and deep diamond drilling, trenching, road construction and geological mapping is recommended for the 1991 field season.

Further work on the Mel deposit should follow the "Phase 2" recommendations of Miller (1990a). A series of deep diamond drill holes should be used to test the hypothesis that the deposit thickens and grades increase down dip, below the 400 m level.

Further work on the Jeri prospect is also well warranted. A detailed investigation including trenching and drilling should be conducted both in the immediate vicinity of the 1990 discoveries and as a follow-up to the 1985 diamond drilling program near the original Jeri discoveries. Additional prospecting, mapping and trenching should also be performed between these two areas. The work should be focussed on the geologically permissive zone near the top of the cryptograined limestone and within the overlying argillite.

Work on the Mel East also appears warranted. However, the near term emphasis for exploration in this area should remain with the Jeri Zone.

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**Certificate and Statement of Qualifications**

I, Stuart A.S. Croft, hereby certify that:

1. I reside at #307 - 1918 York Ave., Vancouver, B.C. V6J 1E3
2. I am a consulting geological engineer with the firm of Nevin Sadlier-Brown Goodbrand Ltd., Suite 500 - 342 Water Street, Vancouver, B.C. V6B 1B6.
3. I hold a B.A.Sc. in Geological Engineering from the University of British Columbia and have been practicing my profession since 1981.
4. I am a registered member of the Association of Professional Engineers of British Columbia (Geological).
5. This report is based upon knowledge of the Mel Claim Group obtained during the course of an exploration program on the property during March to September, 1990. I participated in the exploration program jointly with David C. Miller, P.Eng. on behalf of Barytex Resources Corp., and assumed field management of the project following Mr. Miller's tragic death in late July.
6. I hold no interest, direct or otherwise, in either the Mel property, or the securities of Breakwater Resources Ltd. I am the beneficial owner of 4000 common shares of Barytex Resources Corp.

  
Stuart A.S. Croft, P.Eng.

October 9, 1990

**Update Report:**

**1990 Exploration Program  
on the  
Mel Property,  
Watson Lake M.D., Yukon**

**Volume II -- Appendices**

Prepared for:

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Dated:

**October 9, 1990** *YMP 90-039*

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## Summary

Exploration activity on the Mel group during 1990 consisted principally of a program of confirmation and fill-in diamond drilling in the Mel deposit area and a follow-up investigation of results of a geochemical survey conducted in late 1989 on the Jeri prospect.

Drilling at the Mel deposit was designed to provide further details of the configuration of the deposit and additional data to support reserve estimates. Eleven BQ holes were completed for a total of 1552.0 m of diamond drilling.

The diamond drilling program was augmented by surface trenching intended to expose structurally complex areas of the mineralized horizon. Detailed mapping of the trenches has contributed significantly to the understanding of the geological controls affecting the Mel deposit.

Exploration work conducted to date has provided sufficient data density to permit an accurate estimation of potential reserves in the upper levels of the Mel deposit. The drill indicated mineral inventory in the potentially open pittable portion of the deposit above the 850 m level totals 1.027 million tonnes grading at 6.41% Zn, 1.88% Pb and 56.33% barite. The underground inventory, that is the portion of the deposit below 850 m, is estimated to be 4.210 million tonnes grading 8.22% Zn, 2.14% Pb and 47.19% barite. Total estimated reserves are therefore 5.238 million tonnes grading

- ii -

7.86% Zn, 2.09% Pb and 48.98% barite. Additional, deeper drilling will be required to confirm the tenor of all reserves and, in particular, those below the 800 m level.

At the Jeri zone, situated some 4.5 km northeast of the Mel deposit, investigations included prospecting, construction of 1.3 km of road and approximately 50 m of trenching. The work was focussed on a strong Zn soil geochemical anomaly in the vicinity of 115+00 N by 100+75 W, and identified a significant new smithsonite showing approximately 1.5 km north of the original Jeri discoveries.

Trenching exposed a strongly mineralized limestone breccia zone near the contact between a silicified limestone unit and an overlying silty calcareous argillite horizon. The zone is characterized by dark-grey angular fragments of silicified limestone in a weathered, ochre-coloured matrix of smithsonite, dolomite, siderite and limonite with minor sphalerite. Samples have returned assays as high as 5.31% Zn and a continuous channel sample averaged 4.67% Zn over 3.0 m. Further trenching and drilling will be required to assess the lateral extent of the mineralization.

The 1990 exploration program at the Mel deposit positively addresses the necessity to raise the level of confidence of reserve estimates in the upper portion of the deposit. With the objective of obtaining sufficient data for a feasibility study, exploration should continue with an integrated program of mapping and deep diamond drilling designed to test the hypothesis that the deposit thickens with depth.

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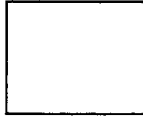
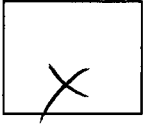
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Appendix A

Diamond Drill Logs

### Program Description

In March 1990, a crew was mobilized to the Mel camp to reactivate a diamond drilling program on the Mel deposit suspended in November 1989 due to deteriorating weather conditions. Drilling was performed by Nomad Drilling Inc. utilizing a JKS 300 hydraulic diamond drill equipped for BQ wireline operation. Drill moves were facilitated by a JD 350C bulldozer, and on occasion, by helicopter.

The BQ core was logged visually by D.C. Miller, S.A.S. Croft and T.L. Sadlier-Brown. Sampling of mineralized sections was performed at the discretion of the geologist logging the core. The core samples were submitted to either Acme Analytical Laboratories Ltd. of Vancouver, B.C., Northern Analytical Laboratories Ltd. in Whitehorse, Y.T. or Chemex Labs Ltd. in North Vancouver, B.C. Samples were routinely analysed by A.A.S. or I.C.P. for zinc, lead, and silver following aqua regia digestion. Barite determinations were conducted using  $\text{LiBO}_2$  fusion with analysis by I.C.P.

The core was stored in order in open air core racks at the main Mel camp.

### Drill Core Lithology

The diamond drilling conducted on the Mel deposit targeted the main mineralized barite-quartz horizon and, accordingly, only the four rock units nearest the mineralized zone are represented in the drill core. In some of these units lithological variations along strike and down dip are minimal while others vary markedly from one intercept to another. The variations are reflected in the drill logs which may present different rock descriptions and names to the same unit depending upon its characteristics in the specific intercept. In an effort to overcome this difficulty this report proposes a standard nomenclature which assigns a symbol for each unit according to its age and dominant lithology. These are shown on the following table with descriptions and symbols for specific characteristics or variations as well as comments, where considered appropriate.

## CAMBRIAN OR ORDOVICIAN

E01s

Limestone: grey, wavy banded, silty.

This unit equates to Unit 8 on GSC Map 68-38

E0a

Argillite: buff to brown silty argillite and very fine-grained siltstone; locally finely laminated, phyllitic (PH), calcareous and may exhibit barite-quartz (BA,QZ) banding; minor sphalerite (SL), galena (GL) and pyrite (PY) near base.

This unit equates to GSC Unit 8 (lower part) and may be described in core logs as *calcareous shale, shale, argillite, or phyllite*.

## CAMBRIAN (AGE UNCERTAIN)

Ebg

**Mineralized Barite-Quartz Unit:** massive crystalline barite-quartz bed, locally may be predominantly barite (BA) or quartz (QZ). It contains ubiquitous mudstone (MD) as clasts and lenses; normally well mineralized with sphalerite (SL), galena (GL) and minor pyrite (PY); smithsonite (SM) and boxwork sphalerite casts are also common where oxidized; commonly sheared and brecciated (BR) near base.

## LOWER CAMBRIAN TO CAMBRIAN

Ecls

Limestone: cryptograined massive light grey limestone, locally subtly banded and stylolitic; contains interbedded lenses of mudstone (MD) and may contain erratic mudstone clasts in upper part

This unit equates to GSC Unit 5.

### Rock Quality Designation

Now frequently used in geological and geotechnical engineering, the RQD represents the percentage of rock core in each drill run that exceeds 4" (10.16 cm) in length without the presence of a discontinuity, discounting any mechanical fractures or breaks as follows:

<u>Rock Quality</u>	<u>RQD (%)</u>	<u>Abbreviation</u>
Very poor	0- 25	VP
Poor	25- 50	P
Fair	50- 75	F
Good	75- 90	G
Excellent	90-100	E

In addition, recovery is also reported in terms of the length of rock attempted for coring vs. that length of rock actually retrieved. If, for example, 1.52 m (60") is attempted and 1.27 m (50") recovered, the core recovery would equal 84%.

### Survey and Assay Information

Drill logs for holes completed during the 1990 exploration are followed by a compilation of assay data, and a calculation of average intersection grades in the Table entitled "*Diamond Drill Hole Assay Data - Table II*". Details of the downhole survey calculations are tabulated in "*Diamond Drill Hole Survey Calculations*".

# BARYTEX RESOURCES CORP.

# DRILL LOG

HOLE No. 90-33

D.C. Miller Geological Services

Page: 1 of 4

Core Size: BO

PROPERTY MEL	DISTRICT / N.T.S. Watson Lake/95 D/6	AZIMUTH AT COLLAR Mag. <u>n/a</u> Grid: <u>270°</u>	DATE STARTED March 16, 1990	DOWN HOLE SURVEY			
PROJECT MEL - 1990	LATITUDE: 10,049.3	DIP AT COLLAR -89½°	DATE COMPLETED March 18, 1990	Read at. 174.0	Dip -87°	Brg (M) 259°	Azim (G) 291°
CLAIM No. JEAN 3 #Y72733	DEPARTURE: 9,973.4	LENGTH: <u>extended</u> 124.36 m (408')	DRILLED BY Nomad Drilling Inc.				
GRID LOCATION Section 10050 N	*ROD - Rock Quality Designation (see separate text)	COLLAR ELEV. 919.0	LOGGED BY D. C. Miller, P. Eng.				
				Inst.: <u>Pajari</u>			

INTERVAL		LITHOLOGY	CORE		SAMPLING			
From	To		% Rec.	* ROD	Sample No.	From	To	Length
		OBJECTIVE: Extend hole 89-33 to zone at depth.						
0.00	54.56	See previous log.						
54.56	66.45	<u>Calcareous Shale</u> Light and dark grey laminae; uniform banding @ 50-35°; generally fair core; broken at (64.92 - 66.45); approx. 5% white calcite veinlets at various angles and thickness from less than 1 mm to 3 cm.	95%	F				
66.45	72.85	<u>Wavy Banded Limestone</u> Similar to above, but light grey bands 1-2 cm thick pre-dominate; banding 35-45°; about 5% white calcite veinlets less than 5 mm thick with a large vein at (72.30 - 72.85); core tends to blocky and broken parallel to banding with several pieces less than 4 cm.	95%	P				
72.85	99.00	<u>Calcareous Shale</u> Similar to (54.56 - 66.45), mainly thick dark laminae; banding - 35-25° @ (72.85 - 80.00), 25-15° @ (80.00 - 86.00), 15-0° @ (86.00 - 92.00), 0-25° @ (92.00 - 99.00).  Calcite veinlets: About 5% at various angles crosscutting banding; thickness from less than 1 mm to 2 cm. Core: Generally good in pieces to 80 cm, core breaks both parallel to and crossing banding.	99%	G				

**BARYTEX RESOURCES CORP.**

**DRILL LOG**

HOLE No. 90-33

D.C. Miller Geological Services

Page: 2 of 4

Core Size: BQ

INTERVAL		LITHOLOGY <small>Metric units unless noted otherwise</small>	CORE		SAMPLING			
From	To		% Rec.	* ROD	Sample No.	From	To	Length
99.00	120.50	<p><u>Wavy Banded Limestone</u></p> <p>Similar to (66.45 - 72.85) above; banding mainly 10-15° @ (99.0 - 115.5) with local 0° banding; small drag folds @ (111.5 - 114.0); 20-35° banding @ (115.5 - 120.50).</p> <p>Calcite veinlets: Less than 5%, mainly 1 mm <u>+</u> thick cross-cutting banding.</p> <p>Core: Many pieces over 40 cm; broken @ (102.00 - 114.10).</p>	99%	G				
120.50	137.90	<p><u>Calcareous Shale</u></p> <p>Light and dark bands 1 - 2 cm. thick with dark bands predominant; bands are composed of finer laminae; banding 30-15° @ (120.50 - 127.00), 15-0° @ (127.00 - 137.20), 80-45° @ (133.20 - 135.5), 45-15° @ (135.5 - 137.9).</p> <p>Calcite veinlets: Approx. 10%, up to 10 cm. thick; mainly 2 mm <u>+</u>.</p> <p>Core: Broken @ (123.50 - 123.75), (128.40 - 131.67), (133.10 - 134.60).</p>	95%	G				
137.90	144.30	<p><u>Wavy Banded Limestone</u></p> <p>Similar to (66.45 - 72.85), strong boudinage structure; banding @ 40-20°; less than 5% calcite veining.</p>	99%	G				
144.30	157.10	<p><u>Calcareous Shale</u></p> <p>Similar to (120.50 - 137.90); banding 0-15° @ (144.3 - 147.5), 15-20° @ (147.5 - 150.5); mainly 30° @ (150.50 - 155.00), 39-45° @ (155.40 - 157.10).</p>	99%	G				

## BARYTEX RESOURCES CORP.

## DRILL LOG

HOLE No. 90-33

D.C. Miller Geological Services

Page: 3 of 4Core Size: BQ

INTERVAL		LITHOLOGY <small>Metric units unless noted otherwise</small>	CORE		SAMPLING			
From	To		% Rec.	* ROD	Sample No.	From	To	Length
144.30	157.10	<p><u>Calcareous Shale</u> Cont'd.</p> <p>Calcite Veining: Approx. 5% with some very fine grained pyrite. Slightly greenish altered with 0.5-1.0% very fine grained pyrite veinlets @ (155.40 - 157.10), traces of galena near 157.10; good core, breaks mainly along banding.</p>						
157.10	171.30	<p><u>Mineralized Zone</u></p> <p>(157.10 - 158.10) - Mineralized shale and light grey silica @ (157.58 - 158.10), weak brown sphalerite and galena as blebs and veinlets.</p> <p>(158.10 - 161.10) - Fair sphalerite and galena; siliceous to 158.35, barite @ (158.35 - 160.07), barite and mudstone @ (160.07 - 161.10); minor calcite.</p> <p>(161.10 - 164.10) - Good to weak sphalerite and lesser galena; mudstone @ (161.10 - 161.25); barite @ (161.25 - 163.54); mudstone and barite @ 163.54 - 164.10); minor calcite.</p> <p>(164.10 - 167.10) - Barite with 25% mudstone sections; good sphalerite with mudstone, barite mainly barren; minor calcite.</p> <p>(167.10 - 170.10) - Approx. 40% barite rich and 60% mudstone rich; good sphalerite and fair galena associated with mudstone; minor calcite.</p>	99	G	13557	157.10	158.10	1.00
			99	G	13558	158.10	161.10	3.00
			99	G	13559	161.10	164.10	3.00
			96	E	13560	164.10	167.10	3.00
			97	E	13561	167.10	170.10	3.00



**BARYTEX RESOURCES CORP.**

**DRILL LOG**

HOLE No. 90-33

D.C. Miller Geological Services

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Core Size: BQ

INTERVAL		LITHOLOGY <small>Metric units unless noted otherwise</small>	CORE		SAMPLING			
From	To		% Rec.	' ROD	Sample No.	From	To	Length
157.10	171.30	<p><u>Mineralized Zone</u> Cont'd.</p> <p>(170.10 - 171.30) - Mainly barite with good galena and generally weak, fine, sphalerite, good sphalerite - galena @ (171.00 - 171.30), (honey coloured sphalerite) sharp contact @ 171.30 @ 36° with weak banding.</p>	99	E	13562	170.10	171.30	1.20
171.30	178.92	<p><u>Cryptograined Limestone</u></p> <p>Pale grey, massive, contains about 10% irregular shaped brown mudstone clasts which carry fine pyrite; approx. 2% fine white calcite veining; good core to 175.25, then tends to be blocky and broken.</p>	99	G				
	178.92	End @ 587 feet.						

BARYTEX RESOURCES CORP.		DRILL LOG			HOLE No. 90-34						
D.C. Miller Geological Services		Page: 1 of 3			Core Size: BQ						
PROPERTY		DISTRICT / N.T.S.	AZIMUTH AT COLLAR		DATE STARTED	DOWN HOLE SURVEY					
MEL		Watson Lake/95 D/6	Mag. _____ Grid: 090°		March 23, 1990	Read at.	Dip	Brg. (M)	Azim (G)		
PROJECT		LATITUDE:	DIP AT COLLAR		DATE COMPLETED	139 m	-55°	045½°	077½°		
MEL - 1990		10,039.1	-60°		March 26, 1990						
CLAIM No.		DEPARTURE:	LENGTH:		DRILLED BY						
JEAN 3 #Y72733		9,895.6	143.56 m		Nomad Drilling Inc.						
GRID LOCATION		*ROD - Rock Quality Designation (see separate text)	COLLAR ELEV.		LOGGED BY	Inst: Pajari					
Section 10050 N			909.8		D.C. Miller, P. Eng.						
INTERVAL		LITHOLOGY				CORE		SAMPLING			
From	To	OBJECTIVE: Delineate fold structure & fill in between wide spaced holes.				% Rec.	* ROD	Sample No.	From	To	Length
0	1.27	Casing. No Core. (Casing later reamed to 2.13 m).									
1.27	79.90	<p><u>Cryptograined Limestone</u></p> <p>Pale grey-white, mainly massive, core tends to be blocky; contains about 3% grey to brown mudstone clasts along with about 5% limy clasts, both ranging from less than 1 cm to several cm in size.</p> <p>(1.27 - 9.75) oxidized and broken, vague 60°-70° banding.</p> <p>(9.75 - 23.60) - Better core, 60-70° vague banding, core breaks mainly @ 60-90°; a few breaks along low angle fractures @ 10-40°; grainy grey dolomite @ (22.2-23.1); broken core with 90° fractures @ (18.70-18.90) and (21.50-21.95).</p> <p>(23.60 - 37.90) - Similar, broken @ (26.95-29.57), grey dolomite @ (30.7-31.5), large grey mudstone inclusion @ (34.1-34.5).</p> <p>(37.90 - 60.20) - Slight brownish discoloration with minor leached core, brown mud and siderite alteration (water courses?); broken core @ (49.1-49.4) associated with grey mudstone inclusion; broken @ (51.0-52.45) and (54.1-55.1) associated with low angle rusty fractures.</p> <p>(60.20 - 66.60) - Similar, but more broken.</p>				86%	P				8.48
					99%	G					13.85
					99%	G					14.30
					90%	F					22.30
					75%	VP					6.40

**BARYTEX RESOURCES CORP.**

**DRILL LOG**

HOLE No. 90-34

D.C. Miller Geological Services

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Core Size: BQ

INTERVAL		LITHOLOGY <small>Metric units unless noted otherwise</small>	CORE		SAMPLING			
From	To		% Rec.	* RQD	Sample No.	From	To	Length
1.27	79.90	<u>Cryptograined Limestone Cont'd.</u> (66.60 - 79.90) - Now unoxidized, good core; contact with mineralized zone sharp @ 40°; local weak banding @ 24-50°.	98%	G				13.3
79.90	115.80	<u>Mineralized Zone</u> (79.90 - 82.10) - Mudstone, limestone, minor barite, good fine to medium grained sphalerite, minor galena.	100%	G	13563	79.90	82.10	2.20
		(82.10 - 84.50) - Mainly barite with fair-good sphalerite associated with mudstone, calcite sections; coarse grained brown sphalerite, minor galena.	100%	G	13564	82.10	84.50	2.40
		(84.50 - 87.50) - Similar, high grade @ (86.40-87.50).	100%	G	13565	84.50	87.50	3.00
		(87.50 - 90.50) - High grade sphalerite with mudstone and lesser barite from (87.50-89.75), then virtually pure barite; sphalerite is brown to honey coloured.	100%	G	13566	87.50	90.50	3.00
		(90.50 - 93.50) - Barite to 91.75, then mainly mudstone with good grade sphalerite.	100%	G	13567	90.50	93.50	3.00
		(93.50 - 96.50) - Mainly barite with lesser mudstone-calcite-sphalerite sections - low grade.	100%	G	13568	93.50	96.50	3.00
		(96.50 - 99.50) - Barite, mudstone, calcite, fair-good coarse sphalerite, minor galena; broken @ (98.70-99.50).	99%	F	13569	96.50	99.50	3.00
		(99.50 - 102.50) - Barite, weak sphalerite, minor galena, broken core.	96%	P	13570	99.50	102.50	3.00
		(102.50 - 105.50) - Mostly pale grey silica; some barite, calcite and mudstone; good galena, fair sphalerite.	98%	F	13571	102.50	105.50	3.00

## BARYTEX RESOURCES CORP.

## DRILL LOG

HOLE No. 90-34

D.C. Miller Geological Services

Page: 3 of 3Core Size: BQ

INTERVAL		LITHOLOGY <small>Metric units unless noted otherwise</small>	CORE		SAMPLING			
From	To		% Rec.	* ROD	Sample No.	From	To	Length
79.90	115.80	<u>Mineralized Zone</u> Cont'd.  (105.50 - 108.50) - Similar, good sphalerite and galena @ (107.0-108.5), appears to be well mineralized shale  (108.50 - 111.10) - Mainly grey silica with calcite, mineralized shale and barite, good coarse grained sphalerite.  (111.10 - 114.10) - Weakly mineralized shale; fine sphalerite galena pyrite veinlets; banding 75° @ 111.10, 20° @ 111.60, 0 - 15° @ (111.70-114.10); broken @ (111.10-111.60).  (114.10 - 115.80) - Barite @ (114.10-114.65) parallel to laminae @ 15-25°, weak sphalerite galena; weakly mineralized shale @ (114.65-115.80) as (111.10-114.10), laminae @ 25-5°, badly broken core @ (114.65-115.80).	98%	F	13572	105.50	108.50	3.00
115.80	143.56	<u>Calcareous Shale</u>  Dark and light grey laminated dark predominant; banding 50° @ 116.5; 5° @ 117.5, 10-35° @ (118.5-129.0), 10-0° @ 129.0.  Generally good core, broken @ (115.80-116.74) along bedding plane slips and at (138.5-137.8) associated with low angle fractures; about 3% white calcite veinlets @ various angles, minor very fine pyrite veinlets near 115.80; drag folds @ 140.30 and 140.82.  Broken core with heavy loss @ (140.82-143.56). Note: Drillers report core tube didn't lock on last run, hence broken and ground core.  Note: Hole stopped as it was flattening too much to intersect other limb of fold.	90%	P		115.80	116.74	0.94
END OF HOLE	471 ft.		98%	G		116.74	140.82	24.08
			15%	VP		140.82	143.56	2.74

# BARYTEX RESOURCES CORP.

# DRILL LOG

HOLE No. 90-35

D.C. Miller Geological Services

Page: 1 of 5

Core Size: BQ

PROPERTY <b>MEL</b>	DISTRICT / N.T.S. Watson Lake/95 D/6	AZIMUTH AT COLLAR Mag. <u>n/a</u> Grid: <u>-</u>	DATE STARTED March 27, 1990	DOWN HOLE SURVEY			
PROJECT <b>MEL - 1990</b>	LATITUDE 9,850.2 N	DIP AT COLLAR -90°	DATE COMPLETED March 30, 1990	Read at	Dip	Brg. (M)	Azim (G)
CLAIM No. <b>JEAN 2</b>	DEPARTURE: 9,973.7E	LENGTH: 203.00 m	DRILLED BY Nomad Drilling Inc.	150.0m	-80°	018°	050°
GRID LOCATION Section 98 + 50 N	*ROD - Rock Quality Designation (see separate text)	COLLAR ELEV. 918.4	LOGGED BY D.C. Miller, P. Eng.	198.0m	-83°	021°	053°
				Inst.: Pajari			

INTERVAL		LITHOLOGY	CORE		SAMPLING			
From	To		% Rec.	* ROD	Sample No.	From	To	Length
0	0.61	Casing, no core.						
0.61	45.20	<u>Cryptograined Limestone</u> White to light grey, generally massive, local weak banding; contains about 3% brown mudstone clasts and about 5% limy clasts.  (0.61 - 2.13) - Broken; oxidized core.  (2.13 - 10.20) - Local weak banding @ 25-40°.  (10.20 - 13.30) - Broken core associated with rusty fractures @ 20-40°.  (13.30 - 27.10) - Better core local 40° banding.  (27.10 - 45.20) - Slightly more broken, minor oxidation and leaching.	60%	VP		0.61	2.13	1.52
			99%	G		2.13	10.20	8.07
			95%	P		10.20	13.30	3.10
			99%	G		13.30	27.10	13.80
			95%	F		27.10	45.20	18.10
45.20	61.20	<u>Mineralized Zone</u> (45.20 - 46.70) - Silicified with weak sphalerite and galena; brecciated with local brownish discoloration; wavy uneven contact at 45.20; some pyrolusite on fractures.  (46.70 - 47.85) - Mainly grey silica, minor barite, fair fine to medium grained sphalerite & galena; weak oxidation & leaching.	95%	G	13576	45.20	46.70	1.50
			95%	F	13577	46.70	47.85	1.15

**BARYTEX RESOURCES CORP.**

**DRILL LOG**

HOLE No. 90-35

D.C. Miller Geological Services

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Core Size: BQ

INTERVAL		LITHOLOGY <small>Metric units unless noted otherwise</small>	CORE		SAMPLING			
From	To		% Rec.	* ROD	Sample No.	From	To	Length
45.20	61.20	<p><u>Mineralized Zone Cont'd.</u></p> <p>(47.85 - 49.85) - Mainly barite, fair coarse sphalerite and galena; some oxidation and leached sphalerite.</p> <p>(49.85 - 52.90) - Barite, minor brown mudstone and calcite; good coarse grained sphalerite, minor galena.</p> <p>(52.90 - 56.69) - Similar, more broken, grey silica starts @ 56.55; irregular contact @ 0-45°; well mineralized with sphalerite and galena to 55.90, then abruptly lower grade.</p> <p>(56.69 - 59.70) - Grey silica, finely fractured and brecciated; fine fractures healed locally by calcite; fair galena mineralization.</p> <p>(59.70 - 61.20) - Similar to preceding, but includes 10% shale bands which are soft and broken, very sparse galena and sphalerite; local 35° banding.</p>	95%	F	13578	47.85	49.85	2.00
			100%	G	13579	49.85	52.90	3.05
			95%	F	13580	52.90	56.69	3.79
			98%	G	13581	56.69	59.70	3.01
			98%	F	13582	59.70	61.20	1.50
61.20	112.60	<p><u>Calcareous Shale</u></p> <p>Dark and light laminae, dark predominant, fissile core broken along partings near contact, about 3% calcite veining, mainly cutting laminae; less than 1% fine pyrite veinlets near 61.20.</p> <p>(61.20 - 63.25) - Fissile 3 cm <sup>+</sup> core pieces, 70-40° banding; small drag fold near 63.25.</p> <p>(63.25 - 77.40) - Better core but broken along low angle fractures; fault nearly parallel to banding @ 30° @ 63.50 with 4 cm at brecciation and leached core; banding averages 30°; rare larger quartz-calcite vein to 5 cm. thick.</p>	98%	VP		61.20	63.25	2.05
			98%	P-F		63.25	77.40	14.15

**BARYTEX RESOURCES CORP.**

**DRILL LOG**

HOLE No. 90-35

D.C. Miller Geological Services

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Core Size: BQ

INTERVAL		LITHOLOGY <small>Metric units unless noted otherwise</small>	CORE		SAMPLING			
From	To		% Rec.	* RQD	Sample No.	From	To	Length
61.20	112.60	<p><u>Calcareous Shale</u> Cont'd.</p> <p>(77.40 - 90.60) - Good core, banding 0-30°, averages 20°.</p> <p>(90.60 - 94.20) - Wavy banded limestone with strong boudinage structure, broken core.</p> <p>(94.20 - 112.60) - Calcareous shale; banding on 50° @ (94.20-98.40), 50-30° @ (98.40-103.00), 30-0°, average 15° @ (103.00-112.60); approx. 10% calcite veining with rare calcite-pyrite veinlet.</p>	99%	G		77.40	90.60	13.20
			90%	VP		90.60	94.20	3.60
			98%	G		94.20	112.60	18.40
112.60	139.30	<p><u>Wavy Banded Limestone</u></p> <p>Mainly light grey, about 3% calcite veinlets, banding 0-15° @ (112.60-129.0), 15-20° @ (129.0-139.30); gradational contact; calcareous shale section @ (133.20-135.33).</p>	98%	G		112.60	139.30	26.70
139.30	186.80	<p><u>Calcareous Shale</u></p> <p>As (61.20-112.60); dark grey bands predominate; about 5% white fine calcite veining (2 mm+) cutting banding, occasional larger calcite-quartz vein up to 20 cm. thick.</p> <p>Banding 20° @ 139.5, 40° @ 141, 0-20° @ (142.5-150.0), 20-35° @ (150.0-160.0), 20-0° @ (160-163), 35° @ 163, 15-20° @ (165-168), 25-35° @ (169-176), 35° average @ (176-183.5), 48° average @ (184-186.8).</p> <p>(161.20 - 162.90) - Broken on bedding plane slips near fold axis @ 162.10.</p> <p>(173.1 - 176.0) - Wavy banded limestone.</p>	98%	E		139.30	148.00	8.70
			95%	G		148.00	152.90	4.90
			98%	E		152.90	159.00	6.10
			98%	G		159.00	161.20	2.20
			98%	VP		161.20	162.90	1.70
			98%	G		162.90	176.00	13.10
			98%	F		176.00	181.36	5.36
			33%	VP (mislatch)		181.36	183.18	1.82

## BARYTEX RESOURCES CORP.

## DRILL LOG

HOLE No. 90-35

D.C. Miller Geological Services

Page: 4 of 5

Core Size: BQ

INTERVAL		LITHOLOGY <small>Metric units unless noted otherwise</small>	CORE		SAMPLING			
From	To		% Rec.	* ROD	Sample No.	From	To	Length
139.30	186.80	<u>Calcareous Shale</u> Cont'd.  (184.40 - 186.80) - Fissile, breaks along bedding into 3 - 10 cm. pieces; minor fine pyrite mineralization in fine veinlets, slightly bleached at (186.35-186.80).	98%	F		183.18	184.40	1.22
			98%	VP		184.40	186.80	2.40
186.80	199.00	<u>Mineralized Zone</u>  (186.8 - 187.5) - Limestone, pale grey, locally siliceous, sparse fine pyrite, some fossil debris?, some calcite-barite veining, occasional stylolitic structures (Specimen taken by H. S. Aikins from (187.0-187.4).  (187.50 - 188.70) - Barite, minor limestone, fair galena, minor sphalerite.  (188.70 - 191.70) - Barite, minor calcite, quartz and brown mudstone; fair sphalerite and galena.  (191.70 - 194.70) - Similar, slightly better grade, very minor quartz.  (194.70 - 198.10) - Similar, slightly lower grade; 3 cm. soft mudstone with 30° fracture at 196.0.  (198.10 - 199.00) - mudstone-limestone, some fine sphalerite and minor fine pyrite, contact with cryptograined limestone sharp @ 49°.	100%	E	N/S	186.80	187.50	0.70
			100%	G	13583	187.50	188.70	1.20
			98%	E	13584	188.70	191.70	3.00
			98%	G	13585	191.70	194.70	3.00
			100%	G	13586	194.70	198.10	3.40
			98%	F	13587	198.10	199.00	0.90
199.00	203.00	<u>Cryptograined Limestone</u>  Pale grey, massive, contains about 2% brown mudstone clasts	95%	VP		199.00	200.25	1.25



**BARYTEX RESOURCES CORP.**

**DRILL LOG**

HOLE No. 90-35

D.C. Miller Geological Services

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Core Size: BQ

INTERVAL		LITHOLOGY <small>Metric units unless noted otherwise</small>	CORE		SAMPLING			
From	To		% Rec.	* ROD	Sample No.	From	To	Length
199.00	203.00	<p><u>CRYPTOGRAINED LIMESTONE</u> Cont'd.</p> <p>which carry very fine brown pyrite; also some pale grey carbonate clasts; a network of fine fractures is healed by 1 mm or less white calcite veinlets. Badly broken core along low angle fractures @ (199.00 - 200.25).</p> <p>Casing left in hole for possible deep wedge drilling.</p>	98%	F		200.25	203.00	2.75
End of Hole	666 ft							

**BARYTEX RESOURCES CORP.**

**DRILL LOG**

HOLE No. 90-36

D.C. Miller Geological Services

Page: 1 of 4

Core Size: BQ

PROPERTY MEL	DISTRICT / N.T.S. Watson Lake/95 D/6	AZIMUTH AT COLLAR Mag. <u>n/a</u> Grd: <u>-</u>	DATE STARTED March 31, 1990	DOWN HOLE SURVEY			
PROJECT MEL - 1990	LATITUDE: 9,751.0 N	DIP AT COLLAR - 90°	DATE COMPLETED April 3, 1990	Read at.	Dip	Brq. (M)	Azim (G)
CLAIM No. JEAN 2, JEAN 1	DEPARTURE: 9,981.1 E	LENGTH: 167.03 m	DRILLED BY Nomad Drilling Inc.	65.53	-85°	13°	45°
GRID LOCATION Section 9750 N	*ROD - Rock Quality Designation (see separate text)	COLLAR ELEV. 910.9	LOGGED BY D. C. Miller, P.Eng.	160.63	-76°	23°	55°
			Inst.: Pajari				

INTERVAL		LITHOLOGY	CORE		SAMPLING			
From	To		% Rec.	* ROD	Sample No.	From	To	Length
0	0.61	Casing, no core.						
0.61	30.90	<p><u>Cryptograined Limestone</u></p> <p>Light grey, mainly massive, local vague banding; contains about 3% clasts and small bands ( up to 10 cm thick) of brown mudstone; approx. 5% carbonate clasts which are orange stained near the start of the hole.</p> <p>(0.61 - 7.8) - Broken, oxidized core.</p> <p>(7.8 - 15.85) - Better core, still tends to be broken.</p> <p>Local weak 35-45° fine banding @ (25.0-30.9).</p>	75%	VP		0.61	7.8	7.19
30.90	57.75	<p><u>Mineralized Zone</u></p> <p>(30.90 - 33.30) - Pale grey quartz and lesser mudstone and limestone, sharp 35° contact @ 30.90 with mudstone against CGL; fair to weak fine to med. brown sphalerite.</p> <p>(33.30 - 36.30) - Pale grey quartz and mudstone to 35.25, then mainly barite, good sphalerite, minor galena.</p> <p>(36.30 - 39.30) - Mainly barite, lesser mudstone and quartz, good coarse brown sphalerite, minor galena.</p>	90%	P		7.8	15.85	8.05
			96%	F		15.85	30.90	15.05
			98%	G	13588	30.90	33.30	2.40
			95%	F	13589	33.30	36.30	3.00
			98%	F	13590	36.30	39.30	3.00

## BARYTEX RESOURCES CORP.

## DRILL LOG

HOLE No. 90-36

D.C. Miller Geological Services

Page: 2 of 4Core Size: BQ

INTERVAL		LITHOLOGY <small>Metric units unless noted otherwise</small>	CORE		SAMPLING			
From	To		% Rec.	ROD	Sample No.	From	To	Length
30.90	57.75	<u>Mineralized Zone</u> Cont'd. (39.30 - 42.30) - Baritic with good sphalerite to 39.75, then brown mudstone and grey quartz with sparse sphalerite, but more galena. (42.30 - 45.30) - Mainly quartz with lesser barite, good sphalerite and galena. (45.30 - 48.50) - Mainly barite, grey quartz @ (48.0-48.5), fair to weak sphalerite, fair galena, banding @ 30° @ 48.50. (48.50 - 49.15) - Quartz/silicified shale, very weak sphalerite/galena; broken core, 30° banding. (49.15 - 50.90) - Weakly mineralized shale, 25-40° banding. (50.90 - 53.80) - Mainly barite with quartz @ (50.90 - 51.10) and (53.20-53.80); weak to fair sphalerite-galena. (53.80 - 56.14) - Shale and silicified shale, folded banding @ 0-30°, local fair galena and sphalerite, less than 1% very fine pyrite veinlets and lenses. (56.14 - 57.75) - Mainly light grey quartz intergrown with barite, undulating contacts between quartz and barite; good galena, fair sphalerite; 45° banding @ 57.75.	99%	F	13591	39.30	42.30	3.00
			99%	G	13592	42.30	45.30	3.00
			95%	F	13593	45.30	48.50	3.20
			90%	P		48.50	49.15	0.65
			99%	G	13594	48.50	50.90	2.40
			100%	G	13595	50.90	53.80	2.90
			100%	F	13596	53.80	56.14	2.34
			100%	G	13597	56.14	57.75	1.61
57.75	135.30	<u>Calcareous Shale</u> Dark and light grey bands up to 2 cm. thick composed of finer laminae; banding 30° @ (57.75-62.50), then undulating mainly @ 0-30° and averaging 15° @ (62.50-86.45); includes some tight folding with banding up to 60° @ (73.46-74.68); approx. 2% calcite veining, mainly less than 2 mm. thick.						

**BARYTEX RESOURCES CORP.**

**DRILL LOG**

HOLE No. 90-36

D.C. Miller Geological Services

Page: 3 of 4

Core Size: BQ

INTERVAL		LITHOLOGY <small>Metric units unless noted otherwise</small>	CORE		SAMPLING			
From	To		% Rec.	* ROD	Sample No.	From	To	Length
57.75	135.30	<p><u>Calcareous Shale</u> Cont'd.</p> <p>Banding:                      15° average @ (86.45-99.00); range 0-30°                      3° average @ (86.45-103.5); range 0-5°                      10° average @ (103.5-113.0); range 0-30°                      30° average @ (113.0-130.0); range 0-45°                      15° average @ (130.0-135.3); range 0-20°</p> <p>(57.75 - 64.26) - Badly broken core along bedding planes; some fine pyrite mineralization near 57.75; 1% fine calcite veining.</p> <p>(73.30 - 78.03) - Badly broken core, broken along bedding planes with some clay infilling.</p> <p>(93.30 - 94.60) - Broken along bedding plane slips with minor clay gouge.</p> <p>122.53 - 20 cm. - Quartz-carbonate vein parallel banding @ 30°.</p> <p>(128.40 - 132.60) - Broken along bedding plane slips, minor brecciation and clay gouge.</p>						
			85%	VP		57.75	64.26	6.51
			95%	F		64.26	73.30	9.04
			90%	VP		73.30	78.03	4.73
			95%	F		78.03	86.45	8.42
			98%	G		86.45	93.30	6.85
			90%	VP		93.30	94.60	1.30
			99%	G		94.60	98.40	3.80
			100%	E		98.40	103.50	5.10
			99%	G		103.50	119.00	15.50
			95%	F		119.00	128.40	9.40
			90%	VP		128.40	132.60	4.20
			95%	F		132.60	135.30	2.70
135.30	159.30	<p><u>Wavy Banded Limestone</u></p> <p>Light and dark grey with strong boudinage structure; approx. 2% calcite or calcite-quartz veining, mainly less than 2 mm. thick, but locally thicker; veinlets may be parallel to, or cut banding.</p> <p>Banding:                      (135.30 - 159.30) - Average 4°, range 0-20°.</p>	100%	G - E		135.30	159.30	24.00

**BARYTEX RESOURCES CORP.**

**DRILL LOG**

HOLE No. 90-36

D.C. Miller Geological Services

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Core Size: BQ

INTERVAL		LITHOLOGY <small>Metric units unless noted otherwise</small>	CORE		SAMPLING			
From	To		% Rec.	* ROD	Sample No.	From	To	Length
159.30	167.03	<p><u>Calcareous Shale (Transition Zone)</u></p> <p>Similar to above, but lacking strong boudinage structure.</p> <p>End 548 ft. Banding - Average 5°, range 0-13° (13° @ 167.03).</p> <p>Hole stopped because it was deviating from target.</p> <p>Casing left in hole for possible future deepening.</p>	100%	E		159.30	167.03	7.73

**BARYTEX RESOURCES CORP.**

**DRILL LOG**

HOLE No. 37

D.C. Miller Geological Services

Page: 1 of 2

Core Size: BQ

PROPERTY MEL	DISTRICT / N.T.S. Watson L. 95D/6	AZIMUTH AT COLLAR Mag. --- Grid: <u>090</u>	DATE STARTED	DOWN HOLE SURVEY			
PROJECT 1990 - B	LATITUDE: 9698.6	DIP AT COLLAR -69°	DATE COMPLETED June 14/90	Read at.	Dip	Brq. (M)	Azim (G)
CLAIM No. Jean 2	DEPARTURE: 9929.9	LENGTH: 142.07	DRILLED BY Nomad				
GRID LOCATION 9700 N	*ROD - Rock Quality Designation (see separate text)	COLLAR ELEV. 922.2	LOGGED BY T.Sadlier-Brown	Incl:			

INTERVAL		LITHOLOGY	CORE		SAMPLING			
From	To		% Rec.	* ROD	Sample No.	From	To	Length
		OBJECTIVE: Test mineralized zone on section 97+00N						
0	4.27	Cased in overburden						
4.27	98.17	<u>Cryptograined Limestone</u>  Massive fine grained and pale grey in colour. Locally silicified and contains fine disseminated quartz.  (4.27 - 15.09) weak foliation at 45-60° to core axis. (15.09 - 16.38) Darker grey limestone. CA 30°-40° (14.94) Ground core, gouge and alteration - possible fault. (16.38 - 23.17) Pale grey limestone faint banding at 30° to CA local black carbonaceous stylolitic bands. (21.5) Argillic alteration and Fe staining - possible fault. (23.17 - 98.17) Alternating pale and dark grey limestone bands.  Core angles: 24m 50° - 60° 24.7 - 34.15 40° 45.12 - 53.05 30° 53.5 40°  Argillic alteration and Fe staining - possible fault zones at: 26.5m 34.1m 79.3m	95	F				
			95	F				
			60	P				
			95	G				

**BARYTEX RESOURCES CORP.**

**DRILL LOG**

HOLE No. 37

D.C. Miller Geological Services

Page: 2 of 2

Core Size: \_\_\_\_\_

INTERVAL		LITHOLOGY <small>Metric units unless noted otherwise</small>	CORE		SAMPLING			
From	To		% Rec.	* ROD	Sample No.	From	To	Length
98.17	130.34	<p><u>Cryptogained Limestone with shale interbeds</u></p> <p>(98.17-98.78) Shale or mudstone. Brown, well laminated 30° to core axis.</p> <p>(98.78-121.34) Grey limestone, banding at 30 to CA.</p> <p>(121.34-121.65) Dark grey shale. Sparse disseminated pyrite. Banded at 20-30° to core axis.</p> <p>(121.65-127.74) Pale grey limestone. CA 30-40°</p> <p>(127.74-130.18) Mottled pale and dark grey limestone. CA 40°</p> <p>(130.18-130.34) Brown shale. Bedded at 50-60° to CA.</p>	95	G				
130.34	133.44	<p><u>Mineralized Zone</u></p> <p>Dark grey Quartz or chert containing sparse disseminated euhedral pyrite and minor disseminated galena and sphalerite. Minor Barite locally shattered and healed by later veins of pale grey to white quartz. Also local chaotic brecciation. No distinct bedding or banding.</p> <p>(131.7-133.44) Quartz breccia; sparse disseminated sphalerite, galena and pyrite particularly in vicinity of lower contact.</p>	90	G				
			95	G	13606	131.7	133.44	1.74
133.44	142.07 END	<p><u>Calcareous shale or phyllite</u></p> <p>Well laminated dark and pale grey in sharp contact with above unit.</p> <p>(134-138) Core angles 40-45°</p> <p>(142.07) Total Depth; Core angle 30°</p>						

**BARYTEX RESOURCES CORP.**

**DRILL LOG**

HOLE No. 38

D.C. Miller Geological Services

Page: 1 of 3

Core Size: BQ

PROPERTY MEL	DISTRICT / N.T.S. Watson L., 95D/6	AZIMUTH AT COLLAR Mag. _____ Grid: <u>090</u>	DATE STARTED <u>June 18/90</u>	DOWN HOLE SURVEY			
PROJECT 1990 - B	LATITUDE: <u>9,742.0</u>	DIP AT COLLAR <u>-75</u>	DATE COMPLETED <u>June 21/90</u>	Read at.	Dip	Brg. (M)	Azim (G)
CLAIM No. <u>Jean 2</u>	DEPARTURE: <u>9,944.0</u>	LENGTH: <u>133.23</u>	DRILLED BY <u>Nomad</u>				
GRID LOCATION <u>9750 N</u>	*ROD - Rock Quality Designation (see separate text)	COLLAR ELEV. <u>921.1</u>	LOGGED BY <u>T.Sadlier-Brown</u>	Inst.:			

INTERVAL		LITHOLOGY	CORE		SAMPLING			
From	To		% Rec.	* ROD	Sample No.	From	To	Length
0	2.13	Cased in overburden						
2.13	47.71	<p><u>Cryptograined Limestone</u> Pale grey, massive to weakly banded. Argillic alteration and possible fault zones at: (22.2-22.6, 25.0, 28.4, 34.5m).</p> <p>Core Angles:      29.27m    45°                          31.10m    50°                          32.60m    40°                          33.50m    45°                          38.72m    50°</p>	95	F				
47.71	110.67	<p><u>Cryptograined Limestone with Shale/mudstone interbeds</u> Mainly grey massive limestone but with occasional narrow ( 0.1m) interbeds of grey shale and/or grey brown mudstone.</p> <p>Core Angles:      48.0m    45°      76.8m    45°                          50.0m    30°      79.9m    45°                          52.0m    30°      82.9m    50°                          57.3m    45°      86.0m    50°                          59.1m    30°      89.6m    45°                          64.6m    30°      94.5m    45°                          68.6m    35°      96.6m    45°                          70.7m    40°      99.7m    30°                          71.3m    25°     100.6m    35°                          73.2m    45°     102.4m    35°</p>	95	G				



**BARYTEX RESOURCES CORP.**

**DRILL LOG**

HOLE No. 38

D.C. Miller Geological Services

Page: 2 of 3

Core Size: BQ

INTERVAL		LITHOLOGY <small>Metric units unless noted otherwise</small>	CORE		SAMPLING			
From	To		% Rec.	* ROD	Sample No.	From	To	Length
		Core Angles: (Cont'd...) 75.2m 30° 108.2m 35° 75.3m 30° 110.7 45°						
		Argillic Alteration, possible fault gouge at 52.05, 53.05, 88.26.						
110.70	113.87	<u>Mineralized Zone</u> Mainly massive quartz (chert) barite, locally brecciated and mineralized with <u>sphalerite, galena</u> and minor pyrite.	95	G				
		(110.7-111.98) Pale greenish brown banded mudstone with sharp upper contact at 45° to core axis. Lower contact with quartz barite unit is gradational.			13607	110.70	112.65	1.95
		(111.98-112.50) Massive grey quartz barite, locally brecciated. <u>Weak ZnPb</u> mineralization in upper 0.6m. Bedded at 112m.			13608	112.65	113.87	1.22
		(112.50-112.65) Pale greenish brown mudstone. <u>Strong sphalerite</u> on bedding planes and as disseminations, <u>minor galena</u> .			13609	113.87	118.29	4.42
		(112.65-113.87) Mudstone; weak or no sulphide mineralization.						
		Core Angles: 112.6m 45° 113.7m 20° 112.8m 30° 113.9m 45° 113.6m 40°						
		.../Pg. 3						

**BARYTEX RESOURCES CORP.**

**DRILL LOG**

HOLE No. 38

D.C. Miller Geological Services

Page: 3 of 3

Core Size: BQ

INTERVAL		LITHOLOGY <small>Metric units unless noted otherwise</small>	CORE		SAMPLING																																							
From	To		% Rec.	* ROD	Sample No.	From	To	Length																																				
113.87	133.23	<p><u>Calcareous Shale or Phyllite Unit</u>                      Alternating pale and light grey banded shale or phyllite with local brown mudstone interbeds.                      Axis of fold occurs at 117.5m. <u>Galena</u> and <u>sphalerite</u> present on bedding.</p> <p>(113.87-115.2) Mainly grey shale or phyllite                      (115.2-118.3) Pale green grey mudstone. Broken at 115.24.                      (118.3-133.23) Banded light and grey phyllite.                      (118.3-118.6) Broken core; possible fault.</p> <p>Core Angles:</p> <table style="margin-left: 40px;"> <tr> <td>115.4m</td> <td>25°</td> <td>122-6m</td> <td>25°</td> </tr> <tr> <td>117.1-117.7m</td> <td>0°</td> <td>123.5m</td> <td>40°</td> </tr> <tr> <td>117.7-118.3m</td> <td>25-30°</td> <td>125.0m</td> <td>30°</td> </tr> <tr> <td>118.6m</td> <td>40°</td> <td>126.2m</td> <td>40°</td> </tr> <tr> <td>118.9m</td> <td>45°</td> <td>127.7m</td> <td>20°</td> </tr> <tr> <td>119.8m</td> <td>30°</td> <td>129.3-129.6m</td> <td>0°</td> </tr> <tr> <td>121.3m</td> <td>25°</td> <td>130.2m</td> <td>20°</td> </tr> <tr> <td></td> <td></td> <td>130.8m</td> <td>25°</td> </tr> <tr> <td></td> <td></td> <td>132.6m</td> <td>30°</td> </tr> </table>	115.4m	25°	122-6m	25°	117.1-117.7m	0°	123.5m	40°	117.7-118.3m	25-30°	125.0m	30°	118.6m	40°	126.2m	40°	118.9m	45°	127.7m	20°	119.8m	30°	129.3-129.6m	0°	121.3m	25°	130.2m	20°			130.8m	25°			132.6m	30°	80	F-P				
115.4m	25°	122-6m	25°																																									
117.1-117.7m	0°	123.5m	40°																																									
117.7-118.3m	25-30°	125.0m	30°																																									
118.6m	40°	126.2m	40°																																									
118.9m	45°	127.7m	20°																																									
119.8m	30°	129.3-129.6m	0°																																									
121.3m	25°	130.2m	20°																																									
		130.8m	25°																																									
		132.6m	30°																																									

# BARYTEX RESOURCES CORP.

# DRILL LOG

HOLE No. 39

D.C. Miller Geological Services

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Core Size: \_\_\_\_\_

PROPERTY <b>MEL</b>	DISTRICT / N.T.S. <b>Watson L., 95D/6</b>	AZIMUTH AT COLLAR Mag. _____ Grid: <b>090</b>	DATE STARTED <b>June 22/90</b>	DOWN HOLE SURVEY			
PROJECT <b>1990-B</b>	LATITUDE: <b>9,675.0</b>	DIP AT COLLAR <b>-46</b>	DATE COMPLETED <b>June 25/90</b>	Read at.	Dip	Brg (M)	Azim (G)
CLAIM No. <b>Jean #1</b>	DEPARTURE: <b>9,970.5</b>	LENGTH: <b>64.63</b>	DRILLED BY <b>Nomad</b>				
GRID LOCATION <b>9675 N</b>	*ROD - Rock Quality Designation (see separate text)	COLLAR ELEV <b>912.1</b>	LOGGED BY <b>T. Sadlier-Brown</b>	Incl:			

INTERVAL		OBJECTIVE:	LITHOLOGY	CORE		SAMPLING			
From	To			% Rec.	* ROD	Sample No.	From	To	Length
0	3.51	Cased in overburden							
3.51	45.58	<p><u>Cryptograined Limestone</u> Mainly pale grey but with local rusted and argillically altered zones and narrow (0.1m) mudstone and/or clay beds.</p> <p>Alteration zones/possible faults at: 15.85m, 18.60m, Broken core/poor recovery at : 22.86m, 25.0m, 27.4m, 28.4m, and 29.1m.</p> <p>Core angles:   20.7m   60°           32.6m   60°                   22.0m   60°           34.8m   70°                   25.3m   50°           38.7m   60°                   27.4m   70°           41.2m   65°                   29.7m   90°           44.8m   60°                   31.7m   65°           45.4m   70-80°</p>	90	F					
-	45.58	<u>Disconformity</u> ; Core angle 60°							
45.58	48.93	<p><u>Mineralized Zone</u> (45.58-46.49) // Bedded mudstone and chert; locally brecciated and well mineralized with reddish brown <u>sphalerite</u> - locally near massive. Core Angle: 60°</p> <p>(46.49-46.65) // Pale grey chert.</p> <p>(46.65-46.80) // Bedded mudstone. Strong <u>galena</u> mineralization on lower contact at 46.8m.</p>			13610	45.58	48.93	3.35	

**BARYTEX RESOURCES CORP.**

**DRILL LOG**

HOLE No. 39

D.C. Miller Geological Services

Page: 2 of 3

Core Size: \_\_\_\_\_

INTERVAL		LITHOLOGY <small>Metric units unless noted otherwise</small>	CORE		SAMPLING			
From	To		% Rec.	* RCD	Sample No.	From	To	Length
		<p><u>Mineralized Zone (Cont'd...)</u></p> <p>(46.80-47.56) Chert or quartz with minor barite - Medium to strong disseminated <u>galena sphalerite</u>.</p> <p>(47.56-48.63) Chert or quartz barite. Very strong <u>sphalerite</u> ( 15-20%)</p> <p>(48.63-48.93) Grey chert.</p>						
48.93	56.40	<p><u>Calcareous Shale or Phyllite</u></p> <p>Grey to black banded shale. Broken core, rust stained and possibly faulted at: 49.69-50.30m, 52.13, 52.74.</p> <p>Core Angles:    49.08m      80°                                        50.30m      70°                                        51.22m      60°                                        51.52m      10° (drag fold)                                        51.83m      45°                                        52.74m      50°                                        54.27m      45°                                        54.88m      50°                                        55.79m      45°</p>						
56.40	56.70	<p><u>Quartz Barite Bed</u></p> <p>Massive white quartz with lesser barite. Conformable to shale banding at 60° to core axis. Contains fragments of black shale near upper contact (ie. footwall).</p>	100	G				
56.70	64.63 END	<p><u>Calcareous Shale</u></p> <p>Core Angles:    56.70m      60°                                        57.32m      70°                                        57.93m      60°                                        59.45m      50°</p> <p>Broken and rusted, possible fault at: 57.32 - 57.62 and 59.75 to 60.36.</p>	85	F				
		<p>....Pg.3</p>						

**BARYTEX RESOURCES CORP.**

**DRILL LOG**

HOLE No. 39

D.C. Miller Geological Services

Page: 3 of 3

Core Size: \_\_\_\_\_

INTERVAL		LITHOLOGY <small>Metric units unless noted otherwise</small>	CORE		SAMPLING			
From	To		% Rec.	* ROD	Sample No.	From	To	Length
		<p><u>Calcareous Shale</u> (Cont'd...)</p> <p>(58.23-64.63) Calcareous shale or wavy banded shaley limestone.</p> <p>Core Angles:   61.59m       70°                                      63.11m       45°                                      64.02m       60°</p>						

**BARYTEX RESOURCES CORP.**

**DRILL LOG**

HOLE No. 90-40

D.C. Miller Geological Services / Nevin Sadlier-Brown Goodbrand Ltd.

Page: 1 of 4

Core Size: BQ

PROPERTY <b>MEL</b>	DISTRICT / N T S <b>Watson Lake 95D/6</b>	AZIMUTH AT COLLAR Mag <u>---</u> Grid: <u>090°</u>	DATE STARTED <b>27 June 1990</b>	DOWN HOLE SURVEY			
PROJECT <b>Mel - 1990</b>	LATITUDE <b>10,129.5 m N</b>	DIP AT COLLAR <b>-70°</b>	DATE COMPLETED <b>3 July 1990</b>	Read at <b>134.1</b>	Dip <b>-65°</b>	Brg. (M) <b>052°</b>	Azim (G) <b>084°</b>
CLAIM No <b>Jean #3 Y 72733</b>	DEPARTURE <b>9,943.1 m E</b>	LENGTH: <b>134.1 (440')</b>	DRILLED BY <b>Nomad Drilling Inc.</b>				
GRID LOCATION <b>101+30 N</b>	*RQD - Rock Quality Designation (see separate text)	COLLAR ELEV. <b>935.2</b>	LOGGED BY <b>Stuart Croft</b>	Inst.: <b>Pajari</b>			

INTERVAL		OBJECTIVE	CORE		SAMPLING			
From	To		% Rec.	* RQD	Sample No.	From	To	Length
0.00	1.83	<i>Overburden</i> (cased)						
1.83	60.55	<p><i>Cryptograined Limestone</i> Massive light to medium grey very fine-grained to cryptocrystalline limestone. Localized medium to dark grey dolomitization. Styolitic(?) structures locally infilled with medium grey-brown mudstone. Some poorly defined bedding.</p> <p>(25.00-28.00) Broken zone with calcite recrystallization in open fractures; 1 to 3 mm aperture. Moderately to strongly weathered.</p> <p>(28.00-60.55) Massive, locally weakly banded light grey limestone. Minor dolomitization in 2 to 5 cm bands at 41.0 m. Medium to dark grey-brown mudstone bands at 40.8, 51.9, 58.6, 59.8 and 60.3.</p>	80	P				
60.55	71.60	<p><i>Mineralized Zone</i> Massive barite-quartz containing sphalerite mineralization in clots comprising 1 to 10 mm subhedral blebs; minor to moderate galena generally in stringers comprising cubic crystals 0.5 to 1 mm.</p>	99	F-G				

**BARYTEX RESOURCES CORP.**

**DRILL LOG**

**HOLE No.** 90-40

D.C. Miller Geological Services /Nevin Sadlier-Brown Goodbrand Ltd.

Page: 2 of 4

Core Size: BQ

INTERVAL		LITHOLOGY	CORE		SAMPLING			
From	To		% Rec	* RQD	Sample No	From	To	Length
		Metric units unless noted otherwise						
		(60.55-63.60) Distinct undulating footwall contact between CGL and mineralized mudstone clast averages 40° to core axis. Section is predominantly massive, chaotic barite with buff coloured clasts of mudstone. Locally, mudstone is moderately silicified. Weak to moderate sphalerite mineralization in 0.5 to 2 mm subhedral masses. Minor shearing occurs throughout with associated talc-sericite on slip surfaces. Narrow broken/ brecciated zone at 61.0 to 61.3.	95	G-E	13611	60.55	63.60	3.05
		(63.60-66.40) Angular to subangular clasts of buff coloured mudstone and minor chert and barite+quartz 5 to 25 mm in moderately sheared "breccia". Shear planes typically talcose though rock is competent. Moderate to strong sphalerite with minor galena. Trace pyrite and chalcopyrite commonly rimming sphalerite grains.	100	E	13612	63.60	66.40	2.80
		(66.40-69.20) Dominant barite+quartz mineralization with bands of sphalerite 1 to 3 cm thick in euhedral blebs. Minor erratic galena banding 0.5 to 1 mm thick. Fracturing and banding is irregular. Talc-sericite is common on fractures and shear planes.	100	E	13613	66.40	69.20	2.80
		(69.20-71.60) Massive barite+quartz with minor sulphides grades into thinly laminated, weakly phyllitic silicified tuff(?). Weak to moderate galena mineralization occurs in thin erratic stringers 1 to 2 mm thick, particularly near shale hanging wall. Weak sphalerite occurs in sparse subhedral blebs 5 to 15 mm across. Lower (hanging wall) "contact" is sub-parallel to foliation at 39° though weak sulphide mineralization persists into "silicic tuff".	98	F-G	13614	69.20	71.60	2.40





**BARYTEX RESOURCES CORP.**

**DRILL LOG**

HOLE No. 90-40

D.C. Miller Geological Services / Nevin Sadler-Brown Goodbrand Ltd.

Page: 4 of 4

Core Size: BQ

INTERVAL		LITHOLOGY <small>Metric units unless noted otherwise</small>	CORE		SAMPLING			
From	To		% Rec.	* RQD	Sample No.	From	To	Length
101.30	119.00	<p><b>Calcareous Shale</b> As in (73.30-77.90). Shale component is moderately calcareous though partings along shale/limestone layers are moderately phyllitic.</p> <p>(101.40-102.90) Shear zone(?) is largely "washed out".</p> <p>(102.90-109.30) Core angle on either side of sharp axial plane of small fold at 103.70 is 35°.</p> <p>(109.30-111.90) Shear zone; moderately to strongly phyllitic. Footwall intersection comprises fine gouge of silt consistency.</p> <p>(111.90-119.00) Shale component becomes increasingly calcareous with depth. Laminae are 1 to 5 mm in thickness. Core angle consistent around 40° though partings are parallel to core axis over (114.6-115.0). Some distortion and associated calcite veinlets in (115-119).</p>						
119.00	134.11	<p><b>Wavy Banded Limestone</b> As in (77.90-101.30). Layering consistent at 50° to core axis. Minor calcite veining throughout.</p> <p>(128.90-130.30) Shear zone</p>	30	VP				
134.11		<p>End of Hole (440')</p> <p><i>Note: Casing pulled but hole is collared in competent limestone at surface. Re-entry should be simple.</i></p>	95	F-G				
			40	VP-P				
			95	P-F				
			100	G				
			30	VP				

# BARYTEX RESOURCES CORP.

# DRILL LOG

HOLE No. 90-41

D.C. Miller Geological Services /Nevin Sadlier-Brown Goodbrand Ltd.

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Core Size: BQ

PROPERTY <b>MEL</b>	DISTRICT / N T S <b>Watson Lake 95D/6</b>	AZIMUTH AT COLLAR Mag. --- Grid ---	DATE STARTED <b>8 July 1990</b>	DOWN HOLE SURVEY			
PROJECT <b>Mel - 1990</b>	LATITUDE <b>9,959.2 m N</b>	DIP AT COLLAR <b>-90°</b>	DATE COMPLETED <b>14 July 1990</b>	Read at.	Dip	Brg. (M)	Azim (G)
CLAIM No <b>Jean #3 Y 72733</b>	DEPARTURE. <b>9,955.6 m E</b>	LENGTH <b>152.7 (501')</b>	DRILLED BY <b>Nomad Drilling Inc.</b>	<b>23.5</b>	<b>-90°</b>	<b>---</b>	<b>---</b>
GRID LOCATION <b>99+60 N</b>	*RQD - Rock Quality Designation (see separate text)	COLLAR ELEV <b>904.2</b>	LOGGED BY <b>Stuart Croft</b>	<b>82.3</b>	<b>-82°</b>	<b>154°</b>	<b>186°</b>
				<b>152.7</b>	<b>-89°</b>	<b>143°</b>	<b>175°</b>
				Inst: <b>Pajari</b>			

INTERVAL		LITHOLOGY	CORE		SAMPLING			
From	To		% Rec.	* RQD	Sample No	From	To	Length
0.00	1.70	<b>Overburden</b> cased (65 cm stickup)						
1.70	46.02	<p><b>Cryptograined Limestone</b> Massive light to medium grey, very fine-grained to cryptocrystalline limestone containing localized fragments of pale to medium buff mudstone. Locally dolomitized over 5 to 15 cm sections.</p> <p>(1.70-8.50) Extensive surface weathering with minor iron staining.</p> <p>(8.50-17.00) Massive CGL with sparse irregular lenses of mudstone 1 to 5 mm in thickness. Minor pyrite commonly associated with mudstone. Layers tend to be oriented at 40° to 50°. Localized minor dolomitization of CGL.</p> <p>(17.00-21.00) As above but mudstone lenses are 1 to 15 cm thick.</p> <p>(21.00-27.40) Massive CGL; no mudstone</p>	90	P-F				
			99	G				
			99	G				
			99	G				

**BARYTEX RESOURCES CORP.**

**DRILL LOG**

HOLE No. 90-41

D.C. Miller Geological Services /Nevin Sadlier-Brown Goodbrand Ltd.

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Core Size: BQ

INTERVAL		LITHOLOGY <small>Metric units unless noted otherwise</small>	CORE		SAMPLING			
From	To		% Rec.	* ROD	Sample No.	From	To	Length
		(27.40-35.60) Limestone becomes weakly to moderately weathered; pales to light grey with some staining along erratic fracture surfaces. 10 cm wide open space at 29.0 filled with euhedral calcite crystals to 10 mm. Mudstone, sparse near 28.0, is more common towards 35.0 as 1 to 3 mm lenses.	99	F				
		(35.60-40.20) Sinuous mudstone lenses 1 to 15 mm thick are common and exhibit very fine, wispy bedding structure. Average angle of bedding fabric is 40° to 50° to core axis. Pyrite is commonly disseminated in mudstone lenses.	99	P				
		(40.20-40.90) Shear zone in phyllitic mudstone lens contains minor limestone rubble. Core angles along strongly phyllitic surfaces and alignment of limestone breccia pebbles is 55°. Some dark grey to black mudstone in elongate clasts(?) contain pyrite to 10%. Pyrite also commonly rims mudstone clasts.	80	VP				
		(40.90-46.02) Limestone contains abundant buff coloured mudstone lenses, some clasts. Minor shearing along mudstone lenses is common, occurring at 40° to 45° to core axis.	98	F-G				
46.02	53.40	<b>Mineralized Zone</b> Variably mineralized buff coloured sheared mudstone near footwall grading to massive barite-quartz with sphalerite and galena near hanging wall. Upper contact with limestone is abrupt though ragged at 50° to core axis.						

**BARYTEX RESOURCES CORP.**

**DRILL LOG**

**HOLE No. 90-41**

D.C. Miller Geological Services / Nevin Sadler-Brown Goodbrand Ltd.

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Core Size: BQ

INTERVAL		LITHOLOGY <small>Metric units unless noted otherwise</small>	CORE		SAMPLING			
From	To		% Rec.	* RQD	Sample No	From	To	Length
		(46.02-47.62) Moderately to strongly sheared breccia contains sub-angular clasts of mudstone, chert and shale. Pervasive weakly disseminated fine-grained pyrite with minor sphalerite(?). Very fine-grained galena occurs in erratic 0.5 to 1 mm stringers. Pyrite also noted to be banded in 0.1 to 0.5 mm layers in some clasts. Phyllitic partings generally occur along weakly sericitized mudstone lenses at 45° to 50° to core axis. Trace to minor barite.	98	P-F	13615	46.02	47.62	1.60
		(47.62-49.50) Weakly sheared zone predominated by medium- to fine-grained quartz+barite with numerous thin mudstone lenses to 2 mm. Angular mudstone clasts 1 to 5 cm in length comprise 5 to 15% of section. Shear fabric angle increases abruptly to 55° at 47.62. Minor galena in veinlets with trace disseminated sphalerite. Massive (late stage?) quartz in 2 to 5 cm veins at 49.0 and 49.2.	100	G	13616	47.62	49.50	1.88
		(49.50-53.20) Massive white coarse-grained barite-quartz with weakly to moderate disseminated euhedral dark brown sphalerite grains to 3 mm. Sphalerite is weakly banded and locally associated with minor pyrite. Galena occurs as erratic veinlets 1 to 5 mm wide throughout the section, and less commonly as accessory to sphalerite.	100	G-E	13167	49.50	53.40	3.90
		(53.20-53.40) Footwall contact is badly broken by several open fractures sub-parallel to core axis. Some angular fragments of footwall shale in brecciated quartz-barite overlie distinct phyllitic shear 3 mm wide at 61° to core axis.	95	P-F				

**BARYTEX RESOURCES CORP.**

**DRILL LOG**

HOLE No. 90-41

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Core Size: BQ

INTERVAL		LITHOLOGY	CORE		SAMPLING			
From	To		% Rec	* RQD	Sample No	From	To	Length
53.40	83.70	<p><b>Calcareous Shale</b>                      Medium- and dark-grey very fine-grained shale in alternating bands 1 to 15 mm thick. Section is weakly to moderately calcareous throughout, particularly in lighter bands. Locally extremely sheared (with phyllitic fracture surfaces) to fault brecciated.</p> <p>(53.40-64.50) Moderately fractured shale with weakly phyllitic fracture planes sub-parallel to bedding. Angles grading from 40° near top of section to 20° at bottom.</p> <p>(64.50-83.70) Section typified by strong fracturing and foliation at 10° to sub-parallel to core axis. Localized trace pyrite paralleling bedding. Bedding attitudes are highly variable. Section becomes decreasingly calcareous with depth.</p>						
83.70	84.43	<p><b>Barite-Quartz</b>                      Thin lens of massive barite with minor quartz and trace sulphides. Pervasive sericitic alteration occurs along fracture surfaces and shear planes. Upper contact defined by 2 mm wide sericitic shear at 30° to core axis; lower contact contains some weakly brecciated fragments of shale immediately above "hanging wall" contact defined by shear at 24° to core axis. Relative attitudes of contacts are indistinguishable though presumed to be sub-parallel.</p>	99	F-G				
84.43	98.30	<p><b>Laminated Mudstone</b>                      Light grey to pale olive mudstone is finely laminated in 1 to 3 mm bands. Section is badly contorted with phyllite fracture surfaces parallel to core axis. Rare conformable barite lenses, particularly in heavily folded sections. Quartz stringers 1 to 5 mm are common throughout.</p>	99	VP-P				

**BARYTEX RESOURCES CORP.**

**DRILL LOG**

**HOLE No. 90-41**

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Core Size: BQ

INTERVAL		LITHOLOGY <small>Metric units unless noted otherwise</small>	CORE		SAMPLING			
From	To		% Rec.	* RQD	Sample No	From	To	Length
98.30	101.55	<p><b>Fault Zone</b> Strongly sheared, weakly sericitic mudstone accompanied by 15 to 30 cm quartz with minor barite veins.</p> <p>(98.30-99.80) Massive quartz with minor barite interspersed with severely sheared laminated mudstone. Shear angles are obscure but appear to be sub-parallel to foliation of mudstone at 30° to 40° to core axis. Some minor disseminated pyrite, particularly in mudstone.</p> <p>(99.80-101.20) Rubble consisting of quartz pebbles and coarse gouge of sand consistency in a silty to clayey matrix of ground mudstone(?)</p> <p>(101.20-101.55) Massive quartz with 5 to 15% barite accompanied by minor sheared mudstone. Distinct irregular lower contact formed at 40° to core axis by phyllitic mudstone. (see box 15)</p>	95	VP				
101.55	102.95	<p><b>Laminated Mudstone</b> As in (84.43-98.30) though somewhat more competent. Core angles variable at 20° to 40° to core axis; laminae are less contorted.</p>						
102.95	105.68	<p><b>Mineralized Zone</b> Foliated, weakly mineralized quartz-barite with minor shale grades to massive barite with moderate to strong galena (in erratic stringers 2 to 8 mm thick) and sphalerite (in widely disseminated euhedral crystals to 15 mm).</p> <p>(102.95-103.55) Upper contact formed at sheared mudstone at 52° to core axis (slickensides on shear surface plunging 65° to core axis. Attitude of quartz-barite "beds" is 23° to core axis.</p>	98	G-E	13618	102.95	105.68	2.73

**BARYTEX RESOURCES CORP.**

**DRILL LOG**

HOLE No. 90-41

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Core Size: BQ

INTERVAL		LITHOLOGY	CORE		SAMPLING			
From	To		% Rec	* RQD	Sample No.	From	To	Length
		(103.55-105.68) Strong galena mineralization occurring as cubes 0.5 to 1 mm (to 15%) in stringers within massive barite persists to lower contact. Variable sphalerite (5 to 10%) generally proximal to galena stringers. Lower contact is indistinct in moderately sheared, weakly "mineralized" barite over 15 cm. Best available attitude for contact is a narrow shear in broken mudstone at 15° to core axis.	98	F-G				
105.68	123.25	<b>Calcareous Shale</b> Moderately to strongly foliated band of dark grey very fine-grained shale is inter-laminated with light to medium grey fine-grained calcareous arenite. Siliceous quartz stringers 1 to 4 mm thick generally sub-parallel to bedding are common throughout. Laminae are strongly deformed near top of section, gradually becoming more uniform with depth. Core angles are 0° to 15° in (105.7-115.0), variable around 15° in (115.0-119.0); and flattening from 30° at 119.5 to 40° at 123.0. Section becomes less calcareous with depth.	98	P-G				
123.25	124.90	<b>Laminated Mudstone</b> Finely laminated buff to pale olive mudstone in wispy bands 0.1 to 0.5 mm thick. Section is interspersed with thin quartz veins 1 to 3 mm thick. Distinct from shale by colour and lack of calcareous component. Weakly sericitic fractures occurs along bedding planes at 44° to core axis.	100	G				
124.90	146.69	<b>Mineralized Zone</b> Weakly to moderately disseminated sphalerite within mudstone grades to moderately to strongly mineralized quartz-barite as follows:						

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**DRILL LOG**

HOLE No. 90-41

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Core Size: BQ

INTERVAL		LITHOLOGY <small>Metric units unless noted otherwise</small>	CORE		SAMPLING			
From	To		% Rec	* ROD	Sample No.	From	To	Length
		(124.90-126.87) Laminae in host mudstone change to ≈0° to 10° abruptly at thin shear zone at 124.70. At 124.90, euhedral brown sphalerite in grains to 4 mm occurs in bands sub-parallel to bedding/foliation. Mudstone becomes progressively more shattered to 125.0 where a "breccia" contains light grey cherty clasts to 10 cm and sphalerite with minor galena within a contorted mudstone groundmass. Galena mineralization, in erratic stringers 5 to 15 mm wide with euhedral crystals to 1 mm, increases with depth. 3 to 5 mm clasts of fine-grained pyrite are sparsely disseminated throughout. Best available attitude for intersection appears to be parallel to foliation in mudstone at 30° to 35° to core axis. [aka (MDST+CHRT)+GA+SP+BA]	100	G-E	13619	124.90	126.87	1.97
		(126.87-128.94) Massive white microcrystalline quartz with lesser coarse-grained white to pale blue barite contains sphalerite as disseminated euhedral blebs to 10 mm and galena in erratic stringers 3 to 10 mm wide. Sulphides are commonly weakly banded and generally, sphalerite is closely associated with galena. Rare clots of fine-grained pyrite throughout. Estimated sphalerite to 8%; galena to 10%. [aka (QZ>BA)+SP+GA]	100	G-E	13620	126.87	128.94	1.07
		(128.94-130.17) Massive coarse-grained white to light pale blue barite with minor quartz. Spotty disseminated sphalerite; trace galena. [aka BA]	100	E	13621	128.94	130.17	1.23
		(130.17-137.50) Massive barite with lessor quartz containing moderately to strongly disseminated dark red-brown sphalerite and galena as in (126.87-128.94). Rare mudstone clasts are moderately sericitized along fracture/shear surfaces at 50° to core axis. Notable section of massive sphalerite in euhedral crystals to 15 mm at (134.17-134.88). [aka (BA>QZ)+SP+GA±MDST]	100	G-E	13622 13623	130.17 133.15	133.15 137.50	2.98 4.35



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Core Size: BQ

INTERVAL		LITHOLOGY <small>Metric units unless noted otherwise</small>	CORE		SAMPLING			
From	To		% Rec.	* ROD	Sample No.	From	To	Length
		(137.50-140.00) Massive barite as in (128.49-130.17) [aka BA]	100	E	13624	137.50	140.00	2.50
		(140.00-145.12) Massive barite with lessor quartz containing sphalerite and minor galena. Similar to (130.17-137.50) though galena content notably lower. [aka (BA>QZ)+SP>GA+MDST]	100	G-E	13625	140.00	143.26	3.26
		(145.12-146.69) Breccia comprising sub-angular irregular clasts of mudstone and light grey chert with weakly disseminated blebs of sphalerite 1 to 3 mm, trace galena. Upper "intersection" to footwall breccia is distinct at 35° to core axis. Fracture surfaces at ≈35° to core axis in mudstone are moderately sericitic. Thin shear zones within mudstone are common. Very fine-grained pyrite is moderately disseminated throughout mudstone, particularly near contact. Contact with footwall limestone is ragged, irregular; best average angle is 35° to core axis. [aka (MDST+CHRT+BA)+SP+GA]	100	G-E	13626	143.26	146.69	3.43
146.69	152.70	<i>Cryptocrystalline Limestone</i> Light to medium grey massive cryptocrystalline limestone contains clasts of buff coloured mudstone as in (8.5-17.0).	100	E				
153.70		<i>End of Hole</i> (casing pulled -- hole marked by stump)						

BARYTEX RESOURCES CORP.		DRILL LOG				HOLE No. <u>90-42</u>						
D.C. Miller Geological Services / Nevin Sadler-Brown Goodbrand Ltd.		Page: <u>1</u> of <u>5</u>		Core Size: <u>BQ</u>								
PROPERTY		DISTRICT / N T S		AZIMUTH AT COLLAR		DATE STARTED		DOWN HOLE SURVEY				
<b>MEL</b>		Watson Lake 95D/6		Mag ---- Grid <u>090°</u>		14 July 1990		Read at	Dip	Brg. (M)	Azim (G)	
PROJECT		LATITUDE		DIP AT COLLAR		DATE COMPLETED		20.4	-73°	060°	092°	
Mel - 1990		9,959.2 m N		-71°		23 July 1990		100.0	-70°	054.5°	086.5°	
CLAIM No		DEPARTURE		LENGTH:		DRILLED BY		130.0	-68°	061°	093°	
Jean #3 Y 72733		9,955.8 m E		249.02 (817')		Nomad Drilling Inc.		162.0	-67°	059.5°	091.5°	
GRID LOCATION		*RQD - Rock Quality Designation (see separate text)		COLLAR ELEV		LOGGED BY		185.0	-67°	058°	090°	
99+50 N				904.2		D.C. Miller		199.0	-67°	068°	100°	
INTERVAL		LITHOLOGY				CORE		SAMPLING				
From	To	OBJECTIVE: test fold structure and thin zone of deposit				% Rec.	* ROD	Sample No.	From	To	Length	
0.00	2.43	<i>Casing</i> - no core										
2.43	35.60	<p><i>Cryptograined Limestone</i>            Pale grey with 5% brown mudstone clasts; some orange weathered carbonate clasts. Local vague banding. Core breaks generally along fractures mainly at 50° to 70°, but also some at 5° to 30°. Local brown rusty stains on fractures.</p> <p>(2.43-4.00) Broken core</p> <p>(4.00 - 35.60) Generally fair to good core; 35° to 55°. Local banding. Broken core at (19.60 - 20.30) associated with a low angle fracture.</p>				82	VP					
35.60	39.30	<p><i>Mineralized Zone</i>            (35.60 - 36.00) Weakly mineralized breccia composed of mudstone, limestone, barite and quartz. Broken core occurs in 5 cm or less pieces. Approximately 1% pyrite with minor galena.</p>				95	F					
						95	VP	13627	35.60	36.00	0.30	

**BARYTEX RESOURCES CORP.**

**DRILL LOG**

HOLE No. 90-42

D.C. Miller Geological Services / Nevin Sadlier-Brown Goodbrand Ltd.

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Core Size: BQ

INTERVAL		LITHOLOGY <small>Metric units unless noted otherwise</small>	CORE		SAMPLING			
From	To		% Rec	* ROD	Sample No	From	To	Length
		(36.00 - 38.90) Generally fair to good grade brown sphalerite and galena except (36.00 - 36.30) which is very weak; mainly barite to 37.7 with minor quartz and mudstone, than mainly pale grey silica breccia. Banding at 38.90 oriented at 55°. RQD is VP in (36.00 - 36.60); G in (36.60 - 38.90)	95	F	13628	36.00	38.90	2.90
		(38.90 - 39.30) Weakly mineralized, principally non-calcareous shale with banding at 55°. Very fine galena and pyrite.	99	P	13629	38.90	39.30	0.40
39.30	74.10	<b>Calcareous Shale</b> Dark and pale grey banded calcareous shale. (39.30 - 46.70) Shale is banded at 55° to 70° to core axis. Broken core in pieces 9 cm or less. Weakly calcareous with traces of galena to 40.20; less than 1% very fine pyrite veinlets and small lenses; 5% fine white calcite veining.  (46.70 - 51.80) Similar to above but fair to good core.  (51.80 - 59.00) Similar to above but core broken along banding at 55°.  (59.00 - 74.10) Similar but more broken along banding at 55° to 40°	90	VP				
74.10	217.02	<b>Wavy Banded Limestone</b> Similar to preceding, but lighter grey with boudinage structure; occasional calcite veining up to 4 cm thick.  (74.10 - 79.70) Abrupt change in banding to 0° to 20°	95	F				

**BARYTEX RESOURCES CORP.**

**DRILL LOG**

HOLE No. 90-42

D.C. Miller Geological Services / Kevin Sadlier-Brown Goodbrand Ltd.

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Core Size: BQ

INTERVAL		LITHOLOGY <small>Metric units unless noted otherwise</small>	CORE		SAMPLING			
From	To		% Rec	* ROD	Sample No	From	To	Length
		(79.70 - 90.00) More broken with variable banding at 30° to 40° in (79.0 - 89.0); 0° to 30° in (89.0 - 90.0). Fault zone at (87.30 - 88.09) with brecciated, broken, leached core.	90	VP				
		(90.00 - 99.00) Better core with banding predominantly at 0° to 30°; folding at (93.5 to 94.0) with local 50° banding.	95	F				
		(99.00 - 106.50) Similar to above with banding at 0° to 35°. Badly broken at (105.30 - 106.20) with occasional massive grey limestone bands up to 30 cm. 2% fine white discontinuous calcite veins perpendicular to banding.	95	F				
		(106.50 - 112.80) Good core with uniform 35° to 40° banding; pronounced 1 cm x 2 mm white calcite veinlets cutting dark bands at right angles ("tiger texture").	99	G				
		(112.80 - 124.50) Mainly pale grey bands with 45° banding; good core. Folded at 122.5 with banding at 0° to 30° in (122.5 - 124.5)	99	G				
		(124.50 - 146.91) Similar banding at 0° to 15° with generally broad folding; minor tight folds with up to 70° limbs.	99	G				
		(146.91 - 160.70) Similar but more broken; banding steepens to 70°.	99	F				
		(160.70 - 171.10) Similar but more broken.	95	P				
		(171.10 - 181.97) Core angle steepens to 50° to 60° with occasional tight to broad folds; core in buttons 5 cm or less with smooth grey partings.	90	VP				

## BARYTEX RESOURCES CORP.

## DRILL LOG

HOLE No. 90-42

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Core Size: BQ

INTERVAL		LITHOLOGY Metric units unless noted otherwise	CORE		SAMPLING			
From	To		% Rec.	* ROD	Sample No.	From	To	Length
		(181.97 - 187.30) Better core. Core angle averages 45° with local tight folding.	99	P				
		(187.30 - 196.10) Core in buttons and small pieces; banding averages 45° with local folding. 5% white calcite veins to 5 cm.	99	VP				
		(196.10 - 206.70) Better core. Banding at 15° to 50° with minor folding.	99	F				
		(206.70 - 212.21) Similar to above; core more broken.	99	P				
		(212.21 - 217.02) Similar to above though core more broken. Banding averages 50° with occasional folding. Gradational contact with calcareous shale.	99	VP				
217.02	235.70	<b>Calcareous Shale</b> Light and dark grey bands with dark grey being more predominant. Banding at 50° to 80° with minor local folding at (217.02 - 229.70); 0° to 30° in (217.02 - 230.40); 30° to 50° in (230.40 - 233.65); 0° to 40° in (233.65 - 235.00); 60° in (235.00 - 235.70)	99	F		217.02	234.40	
			99	VP		234.40	235.70	
235.70	245.35	<b>Mineralized Zone</b> (235.70 - 236.70) Mineralized shale, minor sphalerite and galena with 1% pyrite. Partly silicified with some calcite; banding at 55°.	95	F	13630	235.70	236.70	1.00
		(236.70 - 239.70) Mainly barite with fair brown sphalerite and galena mineralization; minor calcite. Section contains 10% brown mudstone.	100	G	13631	236.70	239.70	3.00
		(239.70 - 242.70) Similar to above with some fine grained sphalerite with mudstone; less galena. Section is limy below 242.40.	100	E	13632	239.70	242.70	3.00

**BARYTEX RESOURCES CORP.**

**DRILL LOG**

HOLE No. 90-42

D.C. Miller Geological Services/Nevin Sadlier-Brown Goodbrand Ltd.

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Core Size: DO

INTERVAL		LITHOLOGY <small>Metric units unless noted otherwise</small>	CORE		SAMPLING			
From	To		% Rec.	* ROD	Sample No	From	To	Length
		(242.70 - 245.35) Limestone/mudstone breccia with weak sphalerite-galena mineralization. Sphalerite is generally fine-grained; less than 1% local fine pyrite. Contact with cryptograined limestone at 50°.	100	E	13633	242.70	245.35	2.65
245.35	249.02	<i>Cryptograined Limestone</i> Pale grey massive cryptograined limestone includes approximately 2% brown mudstone clasts in addition to some pale carbonate clasts. Core is broken near contact.  <i>End of Hole (817 ft) -- casing pulled hole marked by stick</i>	100	E				

**BARYTEX RESOURCES CORP.**

**DRILL LOG**

**HOLE No. 90-43**

D.C. Miller Geological Services /Nevin Sadlier-Brown Goodbrand Ltd.

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Core Size: BQ

PROPERTY <b>MEL</b>	DISTRICT / N.T.S. <b>Watson Lake 95D/6</b>	AZIMUTH AT COLLAR Mag ---- Grid: <b>042°</b>	DATE STARTED <b>24 July 1990</b>	DOWN HOLE SURVEY			
PROJECT <b>Mel - 1990</b>	LATITUDE <b>9,959.5 m N</b>	DIP AT COLLAR <b>-45°</b>	DATE COMPLETED <b>25 July 1990</b>	Read at	Dip	Brg. (M)	Azim (G)
CLAIM No <b>Jean #3 Y 72733</b>	DEPARTURE <b>9,955.9 m E</b>	LENGTH <b>43.28 (142')</b>	DRILLED BY <b>Nomad Drilling Inc.</b>				
GRID LOCATION <b>99+50 N</b>	*RQD - Rock Quality Designation (see separate text)	COLLAR ELEV <b>904.2</b>	LOGGED BY <b>D.C. Miller</b>	Incl:			

INTERVAL		LITHOLOGY	CORE		SAMPLING			
From	To		% Rec	* RQD	Sample No.	From	To	Length
		OBJECTIVE: <b>test Mel deposit beneath creek at 99+75N</b>						
0.00	10.00	<b>Casing</b> - no core						
10.00	29.27	<b>Cryptograined Limestone</b> Pale grey, fine- to cryptograined limestone. Core mainly in pieces 5 to 10 cm long. Commonly broken along fractures mainly at 45° or more but also along lower angle fractures. Contains about 2% brown mudstone clasts and almost 5% grey to orange weathered carbonate clasts; some rusty oxidation and leaching on fractures.	95 99	VP F		10.00 21.95	21.95 29.27	
29.27	39.00	<b>Mineralized Zone</b> (29.27 - 30.80) Mudstone-calcite-barite-quartz breccia. Fair fine-grained sphalerite and galena mineralization.  (30.80 - 34.10) Mainly barite and quartz with minor mudstone. Good sphalerite and galena mineralization, principally coarse-grained.  (34.10 - 37.65) Mineralized shale containing less than 1% pyrite with sparse galena and sphalerite; 25% barite veining. Banding mainly at 40° to 60° but 0° at 35.4 m.  (37.65 - 39.00) Mineralized shale with less than 1% fine pyrite. 5% barite veining with traces of sphalerite and galena.	99 99 95 90	F F P VP	13634 13635 13636	29.27 30.80 34.10	30.80 34.10 37.65	1.53 3.30 3.55

**BARYTEX RESOURCES CORP.**

**DRILL LOG**

HOLE No. 90-43

D.C. Miller Geological Services/Mevin Sadlier-Brown Goodbrand Ltd.

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Core Size: BQ

INTERVAL		LITHOLOGY <small>Metric units unless noted otherwise</small>	CORE		SAMPLING			
From	To		% Rec.	* ROD	Sample No	From	To	Length
39.00	43.29	<p><i>Calcareous Shale</i>                      Pale grey-green, broken soft core with banding mainly 50° to 70°. Local sharp folding at (42.80 - 43.28). Minor fine pyrite veinlets (less than 1%). Possible fault at (40.7 - 41.1).</p>	85	VP				
43.29		<p><i>End of Hole</i> (142')</p>						



MAIN MEL ZONE  
DIAMOND DRILL HOLE ASSAY DATA - TABLE II

Sequence No.	Hole No.	Sample No.	From (Feet)	To (Feet)	From (metres)	To (metres)	Interval (metres)	Zinc %	Lead %	Barite %	Gangue %	Sp.Gr. (Calc.)		
33	89-33	475751	76.57	82.51	23.34	25.15	1.81	.54	.38	15.02	83.74	3.00		
		475752	82.51	91.34	25.15	27.84	2.69	5.53	.04	59.99	31.72	3.89		
		475753	91.34	98.43	27.84	30.00	2.16	6.91	.76	79.53	9.30	4.31		
		475754	98.43	105.81	30.00	32.25	2.25	7.39	.96	81.57	6.31	4.36		
		475755	105.81	116.14	32.25	35.40	3.15	26.80	.04	23.96	36.06	3.65		
		475756	116.14	118.44	35.40	36.10	.70	8.37	.00	34.67	52.86	3.49		
		475757	118.44	122.05	36.10	37.20	1.10	.04	.00	93.12	6.82	4.38		
		475758	122.05	131.79	37.20	40.17	2.97	4.90	.62	79.53	12.46	4.26		
		475759	131.79	139.24	40.17	42.44	2.27	2.45	.06	50.64	45.64	3.66		
		475760	139.24	143.04	42.44	43.60	1.16	1.20	.24	34.33	63.61	3.35		
			WASTE	143.04	515.42	43.60	157.10	113.50	required					
		90-33		13557	515.42	518.70	157.10	158.10	1.00	.80	.24	4.55	93.98	2.81
				13558	518.70	528.54	158.10	161.10	3.00	5.41	6.09	53.22	31.71	4.10
				13559	528.54	538.39	161.10	164.10	3.00	6.02	.24	75.30	15.46	4.19
				13560	538.39	548.23	164.10	167.10	3.00	4.81	.28	82.31	10.20	4.29
				13561	548.23	558.07	167.10	170.10	3.00	15.06	.24	58.17	19.12	4.05
13562	558.07			562.01	170.10	171.30	1.20	7.39	6.70	75.69	5.60	4.58		
AVERAGE- Weighted by Sp.Gr		"Upper Zone"			25.15	40.17	15.02	9.60	.41	65.30	19.91	4.08		
AVERAGE- Weighted by Sp.Gr		"Lower Zone"			158.10	171.30	13.20	7.72	2.19	68.30	17.67	4.20		

Sequence No.	Hole No.	Sample No.	From (Feet)	To (Feet)	From (metres)	To (metres)	Interval (metres)	Zinc %	Lead %	Barite %	Gangue %	Sp.Gr. (Calc.)
34	90-34	13563	262.14	269.36	79.90	82.10	2.20	7.59	.24	37.71	50.71	3.54
		13564	269.36	277.23	82.10	84.50	2.40	7.01	.01	80.94	8.61	4.29
		13565	277.23	287.07	84.50	87.50	3.00	17.24	.53	60.68	13.02	4.16
		13566	287.07	296.92	87.50	90.50	3.00	24.76	.04	36.72	26.34	3.84
		13567	296.92	306.76	90.50	93.50	3.00	14.87	.02	51.81	26.01	3.92
		13568	306.76	316.60	93.50	96.50	3.00	2.55	.01	86.32	9.86	4.30
		13569	316.60	326.44	96.50	99.50	3.00	4.30	.02	71.76	21.81	4.08
		13570	326.44	336.29	99.50	102.50	3.00	.98	.01	85.41	13.12	4.26
		13571	336.29	346.13	102.50	105.50	3.00	5.28	4.26	53.82	33.42	4.01
		13572	346.13	355.97	105.50	108.50	3.00	6.53	.04	42.55	47.67	3.59
		13573	355.97	364.50	108.50	111.10	2.60	13.34	.04	23.38	56.70	3.38
		13574	364.50	374.34	111.10	114.10	3.00	.61	1.41	3.69	93.78	2.86
		13575	374.34	379.92	114.10	115.80	1.70	.04	.90	46.32	52.58	3.58
		AVERAGE- Weighted by Sp.Gr		"Upper Zone"			79.90	111.10	31.20	9.37	.50	59.27
AVERAGE- Weighted by Sp.Gr		"includes "			84.50	93.50	9.00	18.88	.20	50.04	21.59	3.98

Cert.#90 - 0911 (Acme Anal. Lab. Ltd.)  
Calc. April 19/90 HSA  
File: C:\Lotus\DD33-39.WK1

Sequence No.	Hole No.	Sample No.	From (Feet)	To (Feet)	From (metres)	To (metres)	Interval (metres)	Zinc %	Lead %	Barite %	Gangue %	Sp.Gr. (Calc.)	
35	90-35	13576	148.29	153.22	45.20	46.70	1.50	.39	.20	15.11	84.08	2.99	
		13577	153.22	156.99	46.70	47.85	1.15	3.32	.41	48.84	45.74	3.67	
		13578	156.99	163.55	47.85	49.85	2.00	3.30	.30	90.95	3.79	4.42	
		13579	163.55	173.56	49.85	52.90	3.05	6.16	1.16	62.57	26.92	4.01	
		13580	173.56	185.99	52.90	56.69	3.79	7.80	3.70	72.31	11.82	4.36	
		13581	185.99	195.87	56.69	59.70	3.01	3.52	2.92	32.35	59.04	3.51	
		13582	195.87	200.79	59.70	61.20	1.50	.25	.09	3.94	95.58	2.78	
		WASTE	200.79	615.16	61.20	187.50	126.30	required					
		13583	615.16	619.09	187.50	188.70	1.20	.43	4.50	30.11	64.07	3.50	
		13584	619.09	628.94	188.70	191.70	3.00	4.54	2.97	79.34	10.48	4.38	
		13585	628.94	638.78	191.70	194.70	3.00	6.25	4.68	72.88	12.42	4.39	
		13586	638.78	649.93	194.70	198.10	3.40	4.40	3.31	84.74	4.89	4.49	
		13587	649.93	652.89	198.10	199.00	.90	1.83	.80	13.36	83.00	3.02	

AVERAGE- Weighted by Sp.Gr	"Upper Zone"	46.70	59.70	13.00	5.43	2.11	63.22	26.26	4.06
AVERAGE- Weighted by Sp.Gr	" includes "	49.85	59.70	9.85	6.14	2.70	58.53	29.21	4.02
AVERAGE- Weighted by Sp.Gr	"Lower Zone"	187.50	198.10	10.60	4.61	3.72	74.77	14.09	4.34

Sequence No.	Hole No.	Sample No.	From (Feet)	To (Feet)	From (metres)	To (metres)	Interval (metres)	Zinc %	Lead %	Barite %	Gangue %	Sp.Gr. (Calc.)
36	90-36	13588	101.38	109.25	30.90	33.30	2.40	3.06	.54	7.41	87.41	2.92
		13589	109.25	119.09	33.30	36.30	3.00	7.95	.79	51.81	35.43	3.83
		13590	119.09	128.94	36.30	39.30	3.00	8.97	.01	79.17	7.45	4.30
		13591	128.94	138.78	39.30	42.30	3.00	3.05	.63	47.36	47.37	3.65
		13592	138.78	148.62	42.30	45.30	3.00	7.89	4.36	59.44	23.79	4.16
		13593	148.62	159.12	45.30	48.50	3.20	1.55	2.45	64.03	30.84	4.02
		13594	159.12	166.99	48.50	50.90	2.40	.18	.17	1.87	97.67	2.75
		13595	166.99	176.51	50.90	53.80	2.90	.83	2.80	64.56	30.99	4.03
		13596	176.51	184.19	53.80	56.14	2.34	3.36	2.28	6.51	85.86	3.01
		13597	184.19	189.47	56.14	57.75	1.61	4.98	5.23	39.80	46.77	3.80

AVERAGE- Weighted by Sp.Gr	"Upper Zone"	30.90	57.75	26.85	4.49	1.89	48.51	42.62	3.76
AVERAGE- Weighted by Sp.Gr	" includes "	33.30	45.30	12.00	7.09	1.48	60.17	27.58	4.00

AVERAGE- Weighted by Sp.Gr	" Low Grade "	45.30	57.75	12.45	1.92	2.56	42.43	51.77	3.64
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37	90-37	13606	432.09	437.80	131.7	133.44	1.74	.43	.51	16.18	82.60	3.03
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38	90-38	13607	363.19	369.59	110.70	112.65	1.95	2.22	.56	49.81	46.24	3.67
		13608	369.59	373.59	112.65	113.87	1.22	.23	.34	2.38	96.89	2.77
		13609	373.59	388.09	113.87	118.29	4.42	.01	.15	12.80	87.02	2.94

39	90-39	13610	149.54	160.53	45.58	48.93	3.35	9.76	.73	.75	83.87	2.94
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Cert.#90-0911 & #90-2144 (Acme Anal. Lab. Ltd.)

Calc. April 22/90 HSA Rev. August 28/90

File: C:\Lotus\DD33-39.WK1

MAIN MEL ZONE  
DIAMOND DRILL HOLE ASSAY DATA - TABLE II

Sequence No.	Hole No.	Sample No.	From (feet)	To (feet)	From (metres)	To (metres)	Interval (metres)	Zinc %	Lead %	Barite %	Gangue %	Sp.Gr. (calc.)	
40	90-40	13611	198.7	208.7	60.55	63.60	3.05	2.09	.04	70.18	26.66	4.01	
		13612	208.7	217.8	63.60	66.40	2.80	8.47	.08	35.86	51.43	3.51	
		13613	217.8	227.0	66.40	69.20	2.80	1.77	.27	78.29	18.77	4.16	
		13614	227.0	234.9	69.20	71.60	2.40	.73	1.53	26.10	71.05	3.27	
AVERAGE-"Baritic"					60.55	69.20	8.65	3.84	.13	62.96	31.16	3.91	
AVERAGE-" >4.0% "					63.60	66.40	2.80	8.47	.08	35.86	51.43	3.51	
41	90-41	13615	151.0	156.2	46.02	47.62	1.60	.15	.52	5.10	94.08	2.82	
		13616	156.2	162.4	47.62	49.50	1.88	2.87	.21	25.12	70.37	3.22	
		13617	162.4	175.2	49.50	53.40	3.90	2.36	.18	77.22	19.06	4.15	
		NS			53.40	103.00	49.60						
		13618	337.9	346.5	103.00	105.60	2.60	2.55	9.91	50.93	33.88	4.21	
		NS			105.60	124.90	19.30						
		13619	409.8	416.2	124.90	126.87	1.97	3.93	10.72	19.32	62.50	3.72	
		13620	415.3	423.0	126.57	128.94	2.37	4.97	3.71	47.33	41.00	3.85	
		13621	423.0	427.1	128.94	130.17	1.23	.16	.01	98.08	1.67	4.47	
		13622	427.1	436.8	130.17	133.15	2.98	6.49	6.28	48.23	34.88	4.04	
		13623	436.8	451.1	133.15	137.50	4.35	9.90	.80	69.11	15.22	4.18	
		13624	451.1	459.3	137.50	140.00	2.50	.07	.01	97.57	2.31	4.46	
		13625	459.3	470.0	140.00	143.26	3.26	12.81	.03	59.44	21.44	4.02	
13626	470.0	481.3	143.26	146.69	3.43	2.64	.12	50.28	45.65	3.66			
AVERAGE- "Upper"					47.62	53.40	5.78	2.50	.19	63.03	33.04	3.89	
AVERAGE- "Vein ?"					102.95	105.68	2.73	2.55	9.91	50.93	33.88	4.21	
AVERAGE- "Lower"					124.90	143.26	18.36	6.57	2.66	63.03	24.13	4.11	
42	90-42	13627	116.8	118.1	35.60	36.00	.40	.29	.15	21.21	78.19	3.10	
		13628	118.1	127.6	36.00	38.90	2.90	9.24	1.88	40.99	43.08	3.72	
		13629	127.6	128.9	38.90	39.30	.40	.98	.72	5.30	92.42	2.85	
		NS	128.9	773.3	39.30	235.70	196.40				100.00	2.70	
		13630	773.3	776.6	235.70	236.70	1.00	.51	.29	83.61	15.31	4.23	
		13631	776.6	786.4	236.70	239.70	3.00	3.74	.65	54.45	39.23	3.79	
		13632	786.4	796.3	239.70	242.70	3.00	3.86	.30	12.03	81.87	3.01	
		13633	796.3	805.0	242.70	245.35	2.65	.40	.03	.00	99.36	2.71	
AVERAGE-Upper >4%					36.00	38.90	2.90	9.24	1.88	40.99	43.08	3.72	
AVERAGE-Lower >4%					236.70	242.70	6.00	3.79	.50	35.67	58.10	3.44	
43	90-43	13634	96.0	101.0	29.27	30.80	1.53	.82	.47	16.11	82.13	3.03	
		13635	101.0	111.9	30.80	34.10	3.30	6.35	3.16	56.67	30.23	4.02	
		13636	111.9	123.5	34.10	37.65	3.55	.36	1.05	28.04	70.22	3.27	
AVERAGE-Upper >4%					30.80	34.10	3.30	6.35	3.16	56.67	30.23	4.02	

Ref.: Assay Cert's. (Acme # 90-2607, Rossbacher #8275, NCL ? Chemex ? )  
 Calc.: HSA July 26/90 -Rev. Aug 21/90  
 File: \LOTUS\DD40-43.WK1

MEL DEPOSIT DIAMOND DRILLING

DIAMOND DRILL HOLE SURVEY CALCULATIONS

Sequence No.	Hole No.	Location of Collar or Node			Dip (decimal)	Bearing (Grid)	Survey point	Slope distance	Horiz. component	Vert. comp.	Northing N +, S -	Easting E +, W -
33	89-33	10049.30	9973.40	919.00								
	deepened in 1990	10049.30	9972.64	832.00	-89.5	270.0	0.00	87.00	0.76	-87.00	0.00	-0.76
		10051.02	9968.15	740.21	-87.0	291.0	174.00	91.92	4.81	-91.79	1.72	-4.49
							178.92	(End)				
	Top of U. Zone	10049.30	9973.18	893.85	From collar		25.15	25.15	0.22	-25.15	0.00	-0.22
	Mid'of U. Zone	10049.30	9973.11	886.34	From collar		32.66	32.66	0.29	-32.66	0.00	-0.29
	Base of U. Zone	10049.30	9973.05	878.83	From collar		40.17	40.17	0.35	-40.17	0.00	-0.35
	Top of L. Zone	10050.63	9969.17	761.00	"measure from end"		158.10	-20.82	-1.09	20.79	-0.39	1.02
	Mid' of L. Zone	10050.76	9968.84	754.41	"measure from end"		164.70	-14.22	-0.74	14.20	-0.27	0.69
	Base of L. Zone	10050.88	9968.52	747.82	"measure from end"		171.30	-7.62	-0.40	7.61	-0.14	0.37
	End of Hole	10051.02	9968.15	740.21			178.92	178.92	5.57	-178.79	1.72	-5.25
34	90-34	10039.10	9895.60	909.80								
		10039.10	9930.35	849.61	-60.0	90.0	0.00	69.50	34.75	-60.19	0.00	34.75
		10048.29	9971.82	788.94	-55.0	77.5	139.00	74.06	42.48	-60.67	9.19	41.47
							143.56					
	Top of U. Zone	10040.39	9936.17	841.09	"measure from 69.5		79.90	10.40	5.97	-8.52	1.29	5.82
	Mid'of U. Zone	10042.33	9944.91	828.31	"measure from 69.5		95.50	26.00	14.91	-21.30	3.23	14.56
	Base of U. Zone	10044.26	9953.65	815.53	"measure from 69.5		111.10	41.60	23.86	-34.08	5.16	23.30
	End of Hole	10048.29	9971.82	788.94			143.46	143.56	77.23	-120.86	9.19	76.22
35	90-35	9850.20	9973.70	918.40								
		9850.20	9973.70	843.40	-90.0	0.0	0.00	75.00	0.00	-75.00	0.00	0.00
		9861.25	9986.87	745.90	-80.0	50.0	150.00	99.00	17.19	-97.50	11.05	13.17
		9863.38	9989.69	717.12	-83.0	53.0	198.00	29.00	3.53	-28.78	2.13	2.82
							203.00					
	Top of U. Zone	9850.20	9973.70	871.70	From collar		46.70	46.70	0.00	-46.70	0.00	0.00
	Mid'of U. Zone	9850.20	9973.70	865.20	From collar		53.20	53.20	0.00	-53.20	0.00	0.00
	Base of U. Zone	9850.20	9973.70	858.70	From collar		59.70	59.70	0.00	-59.70	0.00	0.00
	Top of L. Zone	9862.24	9988.18	732.50	"measure from end"		187.50	-15.50	-1.89	15.38	-1.14	-1.51
	Mid' of L. Zone	9862.63	9988.70	727.24	"measure from end"		192.80	-10.20	-1.24	10.12	-0.75	-0.99
	Base of L. Zone	9863.02	9989.21	721.98	"measure from end"		198.10	-4.90	-0.60	4.86	-0.36	-0.48
	End of Hole	9863.38	9989.69	717.12			203.00	203.00	20.73	-201.28	13.18	15.99
36	90-36	9751.00	9981.10	910.90								
		9751.00	9981.10	878.14	-90.0	0.0	0.00	32.77	0.00	-32.77	0.00	0.00
		9755.95	9986.05	798.13	-85.0	45.0	65.53	80.32	7.00	-80.01	4.95	4.95
		9763.44	9996.74	745.78	-76.0	55.0	160.63	53.95	13.05	-52.35	7.49	10.69
							167.03					
	Top of U. Zone	9751.03	9981.13	877.60	From 32.77m		33.30	0.53	0.05	-0.53	0.03	0.03
	Mid'of U. Zone	9751.40	9981.50	871.62	From 32.77m		39.30	6.53	0.57	-6.51	0.40	0.40
	Base of U. Zone	9751.77	9981.87	865.65	From 32.77m		45.30	12.53	1.09	-12.49	0.77	0.77
	End of Hole	9763.44	9996.74	745.78			167.03	167.03	20.73	-165.12	12.44	15.64

Note: See assay log for Hole 36, additional "Low Grade"

File: C:\Lotus\Survey11

MEL DEPOSIT DIAMOND DRILLING

Sequence No.	Hole No.	Location of Collar or Node			Dip (decimal)	Bearing (Grid)	Survey point	Slope distance	Horiz. component	Vert. comp.	Northing N +, S -	Easting E +, W -	
37	90-37	9698.60	9929.90	922.20			Collar						
		9698.60	9947.82	875.52	-69.0	90.0	0.00	50.00	17.92	-46.68	0.00	17.92	
		9696.28	9971.93	818.45	-67.0	95.5	100.00	62.00	24.23	-57.07	-2.32	24.11	
		9694.79	9984.07	790.98	-66.0	97.0	124.00	30.07	12.23	-27.47	-1.49	12.14	
								142.07					
	Top of U. Zone	9695.30	9979.89	800.45	"measure from end"	131.70	-10.37	-4.22	9.47	0.51	-4.19		
	Mid'of U. Zone	9695.26	9980.24	799.66	"measure from end"	132.57	-9.50	-3.86	8.68	0.47	-3.84		
	Base of U. Zone	9695.22	9980.59	798.86	"measure from end"	133.44	-8.63	-3.51	7.88	0.43	-3.48		
	End of Hole	9694.79	9984.07	790.98		142.07	142.07	54.37	-131.22	-3.81	54.17		
38	90-38	9742.03	9944.00	921.11	-75.0	90.0	Collar						
		9742.03	9978.48	792.42	-75.0	90.0	133.23	133.23	34.48	-128.69	0.00	34.48	
								133.23					
			Top of U. Zone	9742.03	9972.65	814.18	"measure from end"	110.70	-22.53	-5.83	21.76	0.00	-5.83
			Mid'of U. Zone	9742.03	9972.90	813.24	"measure from end"	111.68	-21.55	-5.58	20.82	0.00	-5.58
	Base of U. Zone	9742.03	9973.16	812.30	"measure from end"	112.65	-20.58	-5.33	19.88	0.00	-5.33		
	End of Hole	9742.03	9978.48	792.42		133.23	133.23	34.48	-128.69	0.00	34.48		
39	90-39	9674.99	9970.47	912.11	-46.0	90.0	Collar						
		9674.99	10015.37	865.62	-46.0	90.0	64.63	64.63	44.90	-46.49	0.00	44.90	
								64.63					
			Top of U. Zone	9674.99	10002.13	879.32	"measure from end"	45.58	-19.05	-13.23	13.70	0.00	-13.23
			Mid'of U. Zone	9674.99	10003.30	878.12	"measure from end"	47.26	-17.37	-12.07	12.50	0.00	-12.07
	Base of U. Zone	9674.99	10004.46	876.91	"measure from end"	48.93	-15.70	-10.91	11.29	0.00	-10.91		
	End of Hole	9674.99	10015.37	865.62		64.63	64.63	44.90	-46.49	0.00	44.90		
40	90-40	10129.52	9943.14	935.15			Collar						
		10129.52	9966.07	872.14	-70.0	90.0	0.00	67.06	22.93	-63.01	0.00	22.93	
		10132.48	9994.26	811.37	-65.0	84.0	134.11	67.06	28.34	-60.77	2.96	28.18	
								134.11					
			Top of U. Zone	10129.52	9964.89	875.39	"From Collar"	63.60	63.60	21.75	-59.76	0.00	21.75
	Mid'of U. Zone	10129.52	9965.37	874.07	"From Collar"	65.00	65.00	22.23	-61.08	0.00	22.23		
	Base of U. Zone	10129.52	9965.85	872.75	"From Collar"	66.40	66.40	22.71	-62.40	0.00	22.71		
	End of Hole	10132.48	9994.26	811.37		134.11	134.11	51.27	-123.78	2.96	51.12		

MEL DEPOSIT DIAMOND DRILLING

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 -		
41	90-41	9959.16 9955.55 904.17			Collar							
		9959.16 9955.55 892.42	-90.0	0.0	0.00	11.75	0.00	-11.75	0.00	0.00		
		9959.16 9955.55 851.27	-90.0	0.0	23.50	41.15	0.00	-41.15	0.00	0.00		
		9950.22 9954.61 787.30	-82.0	186.0	82.30	64.60	8.99	-63.97	-8.94	-0.94		
		9949.61 9954.66 752.10	-89.0	175.0	152.70	35.20	0.61	-35.19	-0.61	0.05		
					152.70							
		9959.16 9955.55 856.55	" From 11.75m "		47.62	35.87	0.00	-35.87	0.00	0.00		
		9959.16 9955.55 855.61	" From 11.75m "		48.56	36.81	0.00	-36.81	0.00	0.00		
		9959.16 9955.55 854.67	" From 11.75m "		49.50	37.75	0.00	-37.75	0.00	0.00		
		9950.09 9954.62 779.90	" From end "		124.90	-27.80	-0.49	27.80	0.48	-0.04		
		9949.93 9954.64 770.72	" From end "		134.08	-18.62	-0.32	18.62	0.32	-0.03		
		9949.77 9954.65 761.54	" From end "		143.26	-9.44	-0.16	9.44	0.16	-0.01		
		9949.61 9954.66 752.10				152.70	9.60	-152.07	-9.55	-0.89		
-----												
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 -		
42	90-42	9959.10 9955.90 904.20			Collar							
		9959.10 9959.22 894.56	-71.0	90.0	0.00	10.20	3.32	-9.64	0.00	3.32		
		9958.59 9973.83 846.74	-73.0	92.0	20.40	50.00	14.62	-47.82	-0.51	14.61		
		9959.73 9992.54 795.25	-70.0	86.5	100.00	54.80	18.74	-51.50	1.14	18.71		
		9959.13 10004.14 766.50	-68.0	93.0	130.00	31.00	11.61	-28.74	-0.61	11.60		
		9958.84 10014.88 741.19	-67.0	91.5	162.00	27.50	10.75	-25.31	-0.28	10.74		
		9958.84 10031.87 701.15	-67.0	90.0	185.00	43.50	17.00	-40.04	0.00	17.00		
		9956.67 10044.19 671.67	-67.0	100.0	249.00	32.02	12.51	-29.47	-2.17	12.32		
							249.02					
				9958.84 9966.76 869.88	" From 10.2m "		36.00	25.80	7.54	-24.67	-0.26	7.54
		9958.82 9967.18 868.50	" From 10.2m "		37.45	27.25	7.97	-26.06	-0.28	7.96		
		9958.81 9967.61 867.11	" From 10.2m "		38.90	28.70	8.39	-27.45	-0.29	8.39		
		9957.51 10039.45 683.01	" From end "		236.70	-12.32	-4.81	11.34	0.84	-4.74		
		9957.30 10040.61 680.25	" From end "		239.70	-9.32	-3.64	8.58	0.63	-3.59		
		9957.10 10041.76 677.49	" From end "		242.70	-6.32	-2.47	5.82	0.43	-2.43		
		9956.67 10044.19 671.67				249.02	88.55	-232.53	-2.43	88.29		
-----												
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 -		
43	90-43	9959.46 9955.85 904.17			Collar							
		9982.20 9976.33 873.57	-45.0	42.0	43.28	43.28	30.60	-30.60	22.74	20.48		
		9974.84 9969.70 883.47	" From Collar "		29.27	29.27	20.70	-20.70	15.38	13.85		
		9977.04 9971.68 880.51	" From Collar "		33.46	33.46	23.66	-23.66	17.58	15.83		
		9979.24 9973.66 877.55	" From Collar "		37.65	37.65	26.62	-26.62	19.78	17.81		
		9982.20 9976.33 873.57				43.28	30.60	-30.60	22.74	20.48		

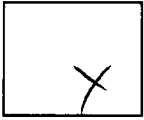
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Date: May 26/90 Rev. Aug 9/90

# Document Separator

Start

Stop



Levels

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Binder								
Folder								
Staple								
Paper Clip								
Binder Clip								
Plastic Protector								
Elastic Bands								
TABS		X						
OTHER _____								

Special Instructions: *Behind red tab*

Appendix B

**Reserve Calculations**



### Mineral Reserve Calculation Technique

Estimation of the mineral inventory of the Mel deposit employs a true width and specific gravity weighted, inverse distance squared technique to derive the properties at the node point of a rectangular (or square) block.

#### *Method*

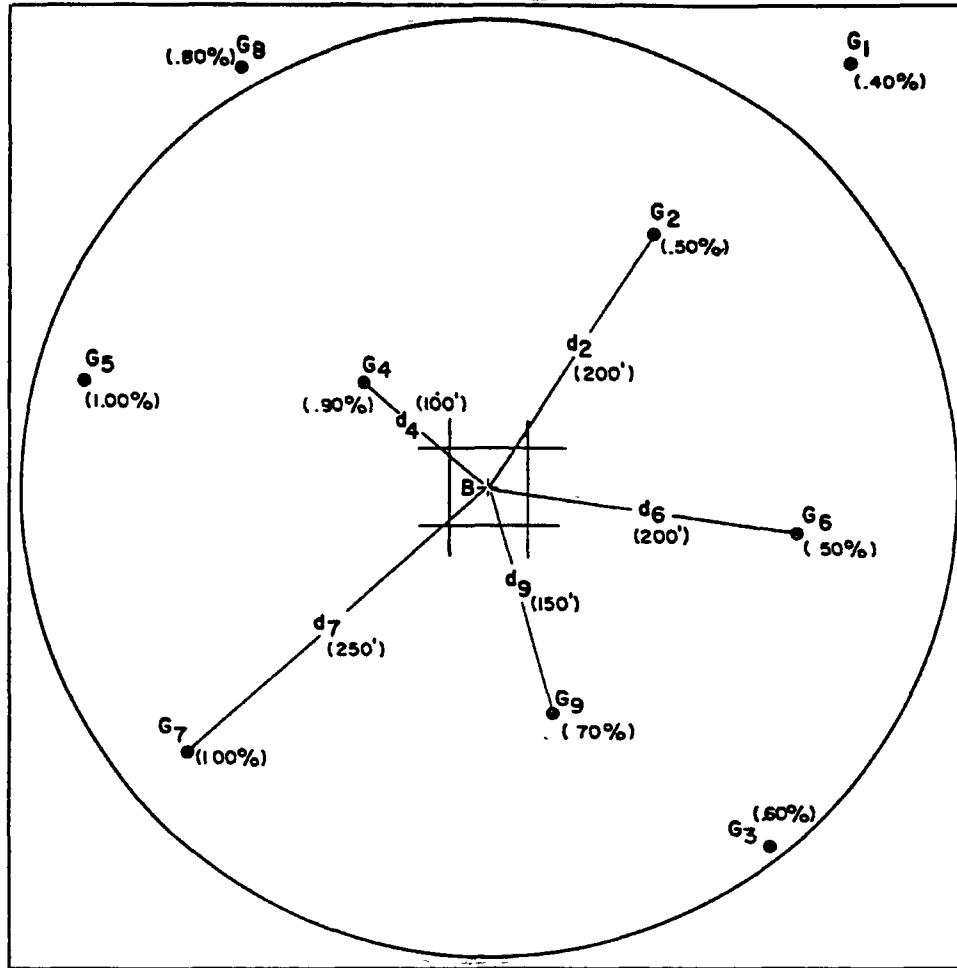
Assays of samples from individual diamond drill hole intersections are weighted by their respective sample length and combined to produce a single average grade and specific gravity for the entire length of the intersection. For the purposes of assigning "economic" widths, data from lower grade peripheral samples may be discarded. The true width of the mineralized horizon is calculated both from intersection angles and by comparison with geologic cross sections. The mid-point of the intersection is presumed to lie on the centre-line of the deposit. The coordinates of the mid-point of the intersection are then calculated from downhole gyroscopic compass surveys.

The deposit has been gridded into 81 blocks, most of which are 50 m in both horizontal and vertical dimension. Within each block, the mineralized horizon is approximated by assuming it forms a regular, tabular body with uniform strike, dip, and thickness. Values for strike and dip are obtained from surface observations and from cross-sectional calculations.

True thickness and grade are calculated by the inverse distance squared technique, as depicted in Figure B-1. A set number of intersection points, usually between two and four is selected to be used in interpolating values of thickness and grade at node points within the regular grid. For each grid node, the distances and grade values of the nearest intersection points are evaluated according to the formula in Figure B-1. In calculating average grade, the weighting ascribed to any one intersection point is the quotient of the specific gravity calculated from assays at that point, and the square of the distance between the point and the node of the block. True thicknesses are weighted only by the inverse of the square of the distance. For the purposes of tonnage calculations, average specific gravity for the block is calculated from the overall block assay.

The following pages summarize the calculation of the drill indicated mineral inventory for the Mel deposit updated to reflect the results of the 1990 exploration program. These are followed by detailed

reserve calculations for the area of the deposit above the 850 level. The remainder of the calculations are available from Barytex Resources Corp. upon request.



— LEGEND —

G = Assay Composite Value  
 d = Distance  
 B = Block Assay

$$B = \frac{G_2 \times \frac{1}{(d_2)^2} + G_6 \times \frac{1}{(d_6)^2} + G_9 \times \frac{1}{(d_9)^2} + G_7 \times \frac{1}{(d_7)^2} + G_4 \times \frac{1}{(d_4)^2}}{\frac{1}{(d_2)^2} + \frac{1}{(d_6)^2} + \frac{1}{(d_9)^2} + \frac{1}{(d_7)^2} + \frac{1}{(d_4)^2}}$$

$$B = \frac{.5 \times \frac{1}{(200)^2} + .5 \times \frac{1}{(200)^2} + .7 \times \frac{1}{(150)^2} + 1.0 \times \frac{1}{(250)^2} + .9 \times \frac{1}{(100)^2}}{\frac{1}{(200)^2} + \frac{1}{(200)^2} + \frac{1}{(150)^2} + \frac{1}{(250)^2} + \frac{1}{(100)^2}} = .77\%$$

Figure B-1 — A Hypothetical Block Calculation from Neighbouring Samples.

### Reserve Estimates

Drill indicated mineral inventories for the Mel deposit are summarized in the following table. The region of the deposit considered amenable to open pit mining lies above the 850 m level. Estimates of "underground" reserves are also presented although more drilling, particularly below the 700 m level, will be required to raise confidence levels to feasibility standards.

*Table B-1*

#### TOTAL MINERAL INVENTORY

Level (m ASL)	Tonnes	Zinc (%)	Lead (%)	barite (%)	tonnes Zinc	tonnes Lead	tonnes barite
+ 850	1,027,489	6.41	1.88	56.33	65,858	19,269	578,824
700-850	1,943,480	6.85	2.14	60.56	133,068	41,535	1,176,957
400-700	2,267,127	9.39	2.14	35.72	212,990	48,588	809,835
Total	5,238,096	7.86	2.09	48.98	411,916	109,392	2,565,616
below 850	4,210,607	8.22	2.14	47.19	346,058	90,123	1,986,792

### Reserve Calculations

The following are print-outs of "*Reserve Summary Sheets*" level by level which correspond to estimates and calculations for individual blocks. "*Ore Reserve Calculation Sheets*" for the 24 blocks above the 850 m level are included as a sample of the derivation of data included on the Reserve Summaries.

MEL DEPOSIT - MINERAL INVENTORY

850 LEVEL

BLOCK	TONNES	TRUE W	% ZINC	% LEAD	% BARITE	Sp.Gr.	Tonnes Zinc	Tonnes Lead	Tonnes Barite
B - 85	22293	2.89	9.71	0.74	1.14	2.95	2165	165	254
C - 85	53749	5.12	7.07	1.66	66.39	4.12	3800	892	35684
D - 85	49474	4.57	7.62	1.53	62.18	4.05	3770	757	30763
E - 85	50767	4.64	6.08	2.01	63.60	4.07	3087	1020	32288
F - 85	58603	5.66	6.08	2.19	53.95	3.91	3563	1283	31616
G - 85	79761	8.13	6.09	1.13	48.92	3.76	4857	901	39019
H - 85	34463	3.25	6.50	1.54	56.26	3.92	2240	531	19389
I - 85	132828	11.88	6.66	1.43	63.64	4.05	8846	1899	84532
J - 85	95302	8.53	7.66	1.17	63.43	4.05	7300	1115	60450
K - 85	26785	2.64	6.87	0.60	46.18	3.70	1840	161	12369
L - 85	64266	6.39	4.20	2.38	48.19	3.78	2699	1530	30970
M - 85	66197	6.09	6.72	3.21	55.08	4.00	4448	2125	36461
TOTAL	734488		6.62%	1.69%	56.34%		48616	12380	413795

900 LEVEL

BLOCK	TONNES	TRUE W	% ZINC	% LEAD	% BARITE	Sp.Gr.	Tonnes Zinc	Tonnes Lead	Tonnes Barite
B - 90	5101	2.90	9.76	0.73	0.75	2.94	498	37	38
C - 90	12840	5.19	7.59	1.34	49.08	3.80	975	172	6302
D - 90	13791	3.82	7.98	1.52	63.33	4.08	1101	210	8734
E - 90	13657	4.70	6.62	1.90	64.10	4.09	904	259	8754
F - 90	23465	8.05	5.71	1.74	57.55	3.94	1340	408	13504
G - 90	6531	7.46	6.18	1.33	49.14	3.78	404	87	3209
H - 90	8113	5.84	5.48	2.33	58.95	4.00	445	189	4783
I - 90	29281	10.38	6.75	1.54	64.15	4.07	1976	451	18784
J - 90	40568	8.55	6.42	1.99	65.02	4.10	2604	807	26377
K - 90	42797	6.21	5.10	1.64	56.87	3.91	2183	702	24339
L - 90	48600	6.15	4.67	2.93	49.99	3.85	2270	1424	24295
M - 90	48257	4.75	5.27	4.44	53.69	4.01	2543	2143	25909
TOTAL	293001		5.88%	2.35%	56.32%		17241	6889	165028

SUB-TOTAL - TENTATIVE OPEN PIT RESOURCES

BLOCK	TONNES	% ZINC	% LEAD	% BARITE	Tonnes Zinc	Tonnes Lead	Tonnes Barite
	1027489	6.41%	1.88%	56.33%	65858	19269	578824

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## MEL DEPOSIT - MINERAL INVENTORY

## 700 LEVEL

BLOCK	TONNES	TRUE W	% ZINC	% LEAD	% BARITE	Sp.Gr.	Tonnes Zinc	Tonnes Lead	Tonnes Barite
D - 70	25075	2.70	11.26	1.42	27.89	3.50	2823	356	6993
E - 70	66542	5.73	6.08	3.18	65.51	4.17	4046	2116	43592
F - 70	91983	7.67	4.95	3.56	72.90	4.30	4553	3275	67056
G - 70	104202	8.85	6.17	2.79	65.60	4.15	6429	2907	68357
H - 70	96564	7.77	6.83	3.28	65.04	4.18	6595	3167	62805
I - 70	89201	6.64	7.51	4.19	70.27	4.34	6699	3738	62682
J - 70	89864	7.32	8.85	2.44	59.17	4.07	7953	2193	53173
K - 70	59566	6.83	9.00	2.17	40.13	3.72	5361	1293	23904
L - 70	67280	6.42	7.76	2.44	45.57	3.81	5221	1642	30659
TOTAL	690277		7.20%	3.00%	60.73%		49681	20686	419220

## 750 LEVEL

BLOCK	TONNES	TRUE W	% ZINC	% LEAD	% BARITE	Sp.Gr.	Tonnes Zinc	Tonnes Lead	Tonnes Barite
D - 75	28941	2.83	7.10	1.58	55.01	3.91	2055	457	15920
E - 75	46601	4.42	5.94	2.69	60.85	4.06	2768	1254	28357
F - 75	65710	6.00	4.80	2.79	65.36	4.12	3154	1833	42948
G - 75	111502	10.24	5.34	2.45	69.51	4.19	5954	2732	77505
H - 75	107447	9.97	6.33	2.55	65.84	4.15	6801	2740	70743
I - 75	104830	9.65	8.32	1.67	65.27	4.13	8722	1751	68423
J - 75	74957	7.21	6.95	1.31	59.08	3.97	5210	982	44285
K - 75	56341	5.69	6.09	1.46	48.90	3.78	3431	823	27551
L - 75	60573	5.77	7.03	1.69	50.98	3.85	4258	1024	30880
TOTAL	656902		6.45%	2.07%	61.90%		42353	13595	406611

## 800 LEVEL

BLOCK	TONNES	TRUE W	% ZINC	% LEAD	% BARITE	Sp.Gr.	Tonnes Zinc	Tonnes Lead	Tonnes Barite
D - 80	36997	3.64	6.82	1.75	61.89	4.04	2523	647	22897
E - 80	46793	4.45	6.1	1.95	58.62	3.98	2854	912	27430
F - 80	25932	3.03	4.09	1.70	29.88	3.41	1061	441	7748
G - 80	73421	7.51	5.38	1.48	53.54	3.85	3950	1087	39310
H - 80	86767	8.39	6.77	0.69	66.17	4.06	5874	599	57414
I - 80	154854	15.47	8.91	0.46	60.58	3.99	13797	712	93811
J - 80	63810	6.13	6.18	1.36	66.05	4.08	3943	868	42147
K - 80	37170	3.64	5.58	1.33	58.79	3.94	2074	494	21852
L - 80	38724	3.68	6.65	2.24	55.10	3.94	2575	867	21337
M - 80	31833	2.98	7.48	1.97	53.97	3.93	2381	627	17180
TOTAL	596301		6.88%	1.22%	58.88%		41034	7255	351126

## SUB-TOTAL - UNDERGROUND POTENTIAL BETWEEN 700 LEVEL &amp; PIT BOTTOM

TONNES	% ZINC	% LEAD	% BARITE	Tonnes Zinc	Tonnes Lead	Tonnes Barite
1943480	6.85%	2.14%	60.56%	133068	41535	1176957

## MEL DEPOSIT - MINERAL INVENTORY

## TONNAGE BELOW 600 LEVEL

BLOCK	TONNES	TRUE W	% ZINC	% LEAD	% BARITE	Sp.Gr.	Tonnes Zinc	Tonnes Lead	Tonnes Barite
EP - 40	238958	5.66	10.48	0.21	55.39	3.91	25043	502	132359
GH - 40	212435	4.86	13.42	0.73	38.50	3.69	28509	1551	81787
IJ - 40	99370	2.31	13.97	1.01	17.08	3.33	13882	1004	16972
EP - 50	163857	3.87	8.51	1.48	32.60	3.53	13944	2425	53417
GH - 50	218302	5.76	15.23	2.22	13.66	3.36	33247	4846	29820
IJ - 50	148109	4.01	13.41	3.72	14.07	3.42	19861	5510	20839
TOTAL	1081031		12.44%	1.47%	31.01%		134487	15837	335195

## 600 LEVEL

BLOCK	TONNES	TRUE W	% ZINC	% LEAD	% BARITE	Sp.Gr.	Tonnes Zinc	Tonnes Lead	Tonnes Barite
E - 60	65308	5.65	4.83	1.66	36.23	3.54	3154	1084	23661
F - 60	72166	6.60	4.89	1.23	38.19	3.55	3529	888	27560
G - 60	81294	7.77	4.48	0.34	44.30	3.60	3642	276	36013
H - 60	79275	7.84	5.16	2.96	42.06	3.72	4091	2347	33343
I - 60	63509	6.31	6.65	4.96	34.71	3.73	4223	3150	22044
J - 60	36407	3.82	9.42	6.05	17.52	3.53	3430	2203	6379
K - 60	32601	3.21	9.85	5.87	13.88	3.46	3211	1914	4525
TOTAL	430560		5.87%	2.75%	35.66%		25280	11861	153525

## 650 LEVEL

BLOCK	TONNES	TRUE W	% ZINC	% LEAD	% BARITE	Sp.Gr.	Tonnes Zinc	Tonnes Lead	Tonnes Barite
D - 65	24133	2.11	10.41	1.84	18.60	3.34	2512	444	4489
E - 65	54711	3.66	6.74	2.74	47.63	3.84	3688	1499	26059
F - 65	141946	8.15	5.08	2.24	59.65	4.00	7211	3180	84671
G - 65	108948	6.75	4.19	0.80	48.82	3.70	4565	872	53188
H - 65	100905	6.28	4.32	2.92	41.19	3.69	4359	2946	41563
I - 65	128313	8.48	6.93	4.68	44.27	3.89	8892	6005	56804
J - 65	79270	6.17	11.78	3.01	28.91	3.61	9338	2386	22917
K - 65	64202	5.10	11.61	3.08	25.28	3.55	7454	1977	16230
L - 65	53108	3.70	9.80	2.92	28.61	3.57	5205	1551	15194
TOTAL	755536		7.04%	2.76%	42.50%		53223	20860	321115

## TOTAL BELOW 700 LEVEL (ABOVE 400 LEVEL)

TONNES	% ZINC	% LEAD	% BARITE	Tonnes Zinc	Tonnes Lead	Tonnes Barite
2267127	9.39%	2.14%	35.72%	212990	48558	809835

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900 LEVEL - RESERVE SUMMARY

BLOCK	TONNES	TRUE W	% ZINC	% LEAD	% BARITE	Sp.Gr.
B - 90	5101	2.90	9.76	0.73	0.75	2.94
C - 90	12840	5.19	7.59	1.34	49.08	3.80
D - 90	13791	3.82	7.98	1.52	63.33	4.08
E - 90	13657	4.70	6.62	1.90	64.10	4.09
F - 90	23465	8.05	5.71	1.74	57.55	3.94
G - 90	6531	7.46	6.18	1.33	49.14	3.78
H - 90	8113	5.84	5.48	2.33	58.95	4.00
I - 90	29281	10.38	6.75	1.54	64.15	4.07
J - 90	40568	8.55	6.42	1.99	65.02	4.10
K - 90	42797	6.21	5.10	1.64	56.87	3.91
L - 90	48600	6.15	4.67	2.93	49.99	3.85
M - 90	48257	4.75	5.27	4.44	53.69	4.01
TOTAL	293001		5.88	2.35	56.32	

BARYTEX RESOURCES CORP.

ORE RESERVE CALCULATION SHEET - MEL DEPOSIT - BLOCK No. : B - 90

=====  
 Block Boundaries; Latitude - South -: 9650 North -: 9700 Str.Lgt.: 50  
 Elevation - Upper -: 910 Lower -: 900 Vert.Hgt. 10

Block Centre:- Latitude: 9675 Departure: 10015 Elevation 905 6.021385 0.965925  
 Block Attitude:- Dip - - : 60 Strike - : 345 True HD : 51.76 True SD : 11.55

Source of Grade Data - (°/rad.conversion)

	Hole	From	To	Intercept	True W.	% Zn.	% Pb.	% Barite	Sp.Gr.
G1	39	45.58	48.93	3.35	2.90	9.76	0.73	0.75	2.94
G2				0.00					
G3				0.00					
G4				0.00					

Weighting calculation by inverse distance<sup>2</sup>

	Hole No.	Centre of Pierce Point			Distance from Centre			Distance squared		
		Lat.	Dep.	Elev.	DLat.	DDep.	DElev.	(DL) <sup>2</sup>	(DD) <sup>2</sup>	(DE) <sup>2</sup>
1	39	9674.9	10003.4	878.2	0.1	11.6	26.8	0.0	134.6	718.2
2										
3										
4										

Weight calculation continued -

	Hole No.	True dist	D <sup>2</sup>	1/D <sup>2</sup>	True W.	Sp.Gr.	Weight	Wt. %
W1	39	29.20	852.8	0.0012	2.90	2.94	0.01	100.00
W2								
W3								
W4								

0.009997

Grade calculations -  $((G1*W1)+(G2*W2)+(Gn*Wn)/(W1+W2+Wn)) = \text{Average grade}$

ZINC 9.76 % )  
 LEAD 0.73 % ) @ Specific Gravity: 2.94  
 BARIITE 0.75 % )  
 GANGUE 83.87 % )  
 TRUE W 2.90 (calc. by inverse distance<sup>2</sup> only)

Tonnage calculation - (True HD \* True SD \* True W) \* Sp.Gr. = Tonnes

TONNES 5101 TONS = 5,623

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BARYTEX RESOURCES CORP.

ORE RESERVE CALCULATION SHEET - MEL DEPOSIT - BLOCK No. : C - 90

=====  
 Block Boundaries; Latitude - South -: 9700 North -: 9750 Str.Lgt.: 50  
 Elevation - Upper -: 912 Lower -: 900 Vert.Hgt. 12

Block Centre:- Latitude: 9725 Departure: 10005 Elevation 906 6.178465 0.994521  
 Block Attitude:- Dip - - : 68 Strike - : 354 True HD : 50.28 True SD : 12.94  
 1.186823 0.927183  
 Source of Grade Data - (°/rad.conversion)

Hole	From	To	Intercept	True W.	% Zn.	% Pb.	% Barite	Sp.Gr.	
G1	39	45.58	48.93	3.35	2.90	9.76	0.73	0.75	2.94
G2	36	33.30	45.30	12.00	6.88	7.09	1.48	60.17	4.00
G3				0.00					
G4				0.00					

Weighting calculation by inverse distance<sup>2</sup>

Hole No.	Centre of Pierce Point Lat.	Dep.	Elev.	Distance from Centre DLat.	DDep.	DElev.	Distance squared (DL) <sup>2</sup>	(DD) <sup>2</sup>	(DE) <sup>2</sup>	
1	39	9674.9	10003.4	878.2	50.1	1.6	27.8	2510.0	2.6	772.8
2	36	9751.4	9981.5	871.6	-26.4	23.5	34.4	697.0	552.3	1183.4
3										
4										

Weight calculation continued -

Hole No.	True dist	D <sup>2</sup>	1/D <sup>2</sup>	True W.	Sp.Gr.	Weight	Wt. %	
W1	39	57.32	3285.4	0.0003	2.90	2.94	0.00	18.66
W2	36	49.32	2432.6	0.0004	6.88	4.00	0.01	81.34
W3								
W4								

Grade calculations -  $((G1*W1)+(G2*W2)+(Gn*Wn)/(W1+W2+Wn)) = \text{Average grade}$   
 0.013908

ZINC 7.59 % )  
 LEAD 1.34 % ) @ Specific Gravity: 3.80  
 BARITE 49.08 % )  
 GANGUE 38.07 % )  
 TRUE W 5.19 (calc. by inverse distance<sup>2</sup> only)

Tonnage calculation - (True HD \* True SD \* True W) \* Sp.Gr. = Tonnes  
 TONNES 12840 TONS = 14,153

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BARYTEX RESOURCES CORP.

ORE RESERVE CALCULATION SHEET - MEL DEPOSIT - BLOCK No. : D - 90

=====  
 Block Boundaries; Latitude - South -: 9750 North -: 9800 Str.Lgt.: 50  
 Elevation - Upper -: 915 Lower -: 900 Vert.Hgt. 15

Block Centre:- Latitude: 9775 Departure: 10000 Elevation 907.5 6.230825 0.998629  
 Block Attitude:- Dip - - : 58 Strike - : 357 True HD : 50.07 True SD : 17.69  
 1.012290 0.848048  
 Source of Grade Data - (°/rad.conversion)

	Hole	From	To	Intercept	True W.	% Zn.	% Pb.	% Barite	Sp.Gr.
G1	36	33.30	45.30	12.00	6.88	7.09	1.48	60.17	4.00
G2	5	46.02	48.92	2.90	2.87	8.62	1.55	65.60	4.13
G3									
G4									

Weighting calculation by inverse distance<sup>2</sup>

	Hole No.	Centre of Pierce Point			Distance from Centre			Distance squared		
		Lat.	Dep.	Elev.	DLat.	DDep.	DElev.	(DL) <sup>2</sup>	(DD) <sup>2</sup>	(DE) <sup>2</sup>
1	36	9751.4	9981.5	871.6	23.6	18.5	35.9	557.0	342.3	1288.8
2	5	9787.3	9987.6	888.2	-12.3	12.4	19.3	151.3	153.8	372.5
3										
4										

Weight calculation continued -

	Hole No.	True dist	D <sup>2</sup>	1/D <sup>2</sup>	True W.	Sp.Gr.	Weight	Wt. %
W1	36	46.78	2188.0	0.0005	6.88	4.00	0.01	41.83
W2	5	26.03	677.5	0.0015	2.87	4.13	0.02	58.17
W3								
W4								

0.030071

Grade calculations -  $((G1*Wt.1)+(G2*Wt.2)+(Gn*Wt.n)/(Wt.1+Wt.2+Wt.n)) = \text{Avg. grade}$

ZINC 7.98 % )  
 LEAD 1.52 % ) @ Specific Gravity: 4.08  
 BARITE 63.33 % )  
 GANGUE 23.03 % )  
 TRUE W 3.82 (calc. by inverse distance<sup>2</sup> only)

Tonnage calculation - (True HD \* True SD \* True W) \* Sp.Gr. = Tonnes  
 TONNES 13791 TONS = 15,201

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BARYTEX RESOURCES CORP.

ORE RESERVE CALCULATION SHEET - MEL DEPOSIT - BLOCK No. : E - 90

Block Boundaries; Latitude - South -: 9800 North -: 9850 Str.Lgt.: 50  
 Elevation - Upper -: 912 Lower -: 900 Vert.Hgt. 12

Block Centre:- Latitude: 9825 Departure: 9993 Elevation 906 6.178465 0.994521  
 Block Attitude:- Dip - - : 58 Strike - : 354 True HD : 50.28 True SD : 14.15

Source of Grade Data - 1.012290 0.848048  
 (°/rad.conversion)

	Hole	From	To	Intercept	True W.	% Zn.	% Pb.	% Barite	Sp.Gr.
G1	35	46.70	59.70	13.00	7.46	5.43	2.11	63.22	4.06
G2	5	46.02	48.92	2.90	2.87	8.62	1.55	65.6	4.13
G3									
G4									

Weighting calculation by inverse distance<sup>2</sup>

	Hole No.	Centre of Pierce Point Lat.	Dep.	Elev.	Distance from Centre DLat.	DDep.	DElev.	Distance squared (DL) <sup>2</sup>	(DD) <sup>2</sup>	(DE) <sup>2</sup>
1	35	9850.2	9973.7	865.2	-25.2	19.3	40.8	635.0	372.5	1664.6
2	5	9787.3	9987.6	888.2	37.7	5.4	17.8	1421.3	29.2	316.8
3										
4										

Weight calculation continued -

	Hole No.	True dist	D <sup>2</sup>	1/D <sup>2</sup>	True W.	Sp.Gr.	Weight	Wt. %
W1	35	51.69	2672.2	0.0004	7.46	4.06	0.01	62.82
W2	5	42.04	1767.3	0.0006	2.87	4.13	0.01	37.18
W3								
W4								

0.018041

Grade calculations -  $((G1*Wt.1)+(G2*Wt.2)+(Gn*Wt.n)/(Wt.1+Wt.2+Wt.n)) = \text{Avg. grade}$

ZINC 6.62 % )  
 LEAD 1.90 % ) @ Specific Gravity: 4.09  
 BARITE 64.10 % )  
 GANGUE 23.85 % )  
 TRUE W 4.70 (calc. by inverse distance<sup>2</sup> only)  
 Tonnage calculation - (True HD \* True SD \* True W) \* Sp.Gr. = Tonnes  
 TONNES 13657 TONS = 15,054

ORE RESERVE CALCULATION SHEET - MEL DEPOSIT - BLOCK No. : P - 90

Block Boundaries; Latitude - South -: 9850 North -: 9900 Str.Lgt.: 50  
 Elevation - Upper -: 912 Lower -: 900 Vert.Hgt. 12

Block Centre:- Latitude: 9875 Departure: 9970 Elevation 906 6.143558 0.990268  
 Block Attitude:- Dip - - : 55 Strike - : 352 True HD : 50.49 True SD : 14.65  
 0.959931 0.819152  
 Source of Grade Data - (°/rad.conversion)

	Hole	From	To	Intercept	True W.	% Zn.	% Pb.	% Barite	Sp.Gr.
G1	4	37.03	46.63	9.60	9.13	6.16	1.13	48.30	3.75
G2	35	46.7	59.7	13.00	7.46	5.43	2.11	63.22	4.06
G3									
G4									

Weighting calculation by inverse distance<sup>2</sup>

	Hole No.	Centre of Pierce Point			Distance from Centre			Distance squared		
		Lat.	Dep.	Elev.	DLat.	DDep.	DElev.	(DL) <sup>2</sup>	(DD) <sup>2</sup>	(DE) <sup>2</sup>
1	4	9928.3	9959.1	870.3	-53.3	10.9	35.7	2840.9	118.8	1274.5
2	35	9850.2	9973.7	865.2	24.8	-3.7	40.8	615.0	13.7	1664.6
3										
4										

Weight calculation continued -

	Hole No.	True dist	D <sup>2</sup>	1/D <sup>2</sup>	True W.	Sp.Gr.	Weight	Wt. %
W1	4	65.07	4234.2	0.0002	9.13	3.75	0.01	37.98
W2	35	47.89	2293.4	0.0004	7.46	4.06	0.01	62.02
W3								
W4								

0.021292

Grade calculations -  $((G1*Wt.1)+(G2*Wt.2)+(Gn*Wt.n)/(Wt.1+Wt.2+Wt.n)) = \text{Avg. grade}$

ZINC 5.71 % )  
 LEAD 1.74 % ) @ Specific Gravity: 3.94  
 BARITE 57.55 % )  
 GANGUE 31.94 % )  
 TRUE W 8.05 (calc. by inverse distance<sup>2</sup> only)

Tonnage calculation - (True HD \* True SD \* True W) \* Sp.Gr. = Tonnes  
 TONNES 23465 TONS = 25,865

BARYTEX RESOURCES CORP.

ORE RESERVE CALCULATION SHEET - MEL DEPOSIT - BLOCK No. : G - 90

=====  
 Block Boundaries; Latitude - South -: 9900 North -: 9950 Str.Lgt.: 50  
 Elevation - Upper -: 904 Lower -: 900 Vert.Hgt. 4

Block Centre:- Latitude: 9925 Departure: 9970 Elevation 902 6.195918 0.996194  
 Block Attitude:- Dip - - : 60 Strike - : 355 True HD : 50.19 True SD : 4.62  
 1.047197 0.866025  
 Source of Grade Data - (°/rad.conversion)

	Hole	From	To	Intercept	True W.	% Zn.	% Pb.	% Barite	Sp.Gr.
G1	4	37.03	46.63	9.60	9.13	6.16	1.13	48.30	3.75
G2	43	30.80	34.10	3.30	2.70	6.35	3.16	56.67	4.02
G3									
G4									

Weighting calculation by inverse distance<sup>2</sup>

	Hole No.	Centre of Pierce Point			Distance from Centre			Distance squared		
		Lat.	Dep.	Elev.	DLat.	DDep.	DElev.	(DL) <sup>2</sup>	(DD) <sup>2</sup>	(DE) <sup>2</sup>
1	4	9928.3	9959.1	870.3	-3.3	10.9	31.7	10.9	118.8	1004.9
2	43	9977.0	9977.7	880.5	-52.0	-7.7	21.5	2704.0	59.3	462.3
3										
4										

Weight calculation continued -

	Hole No.	True dist	D <sup>2</sup>	1/D <sup>2</sup>	True W.	Sp.Gr.	Weight	Wt. %
W1	4	33.68	1134.6	0.0009	9.13	3.75	0.03	89.97
W2	43	56.79	3225.5	0.0003	2.70	4.02	0.00	10.03
W3								
W4								

0.033541

Grade calculations -  $((G1*Wt.1)+(G2*Wt.2)+(Gn*Wt.n)/(Wt.1+Wt.2+Wt.n)) = \text{Avg. grade}$

ZINC 6.18 % )  
 LEAD 1.33 % ) @ Specific Gravity: 3.78  
 BARITE 49.14 % )  
 GANGUE 40.12 % )  
 TRUE W 7.46 (calc. by inverse distance<sup>2</sup> only)

Tonnage calculation - (True HD \* True SD \* True W) \* Sp.Gr. = Tonnes  
 TONNES 6531 TONS = 7,199

ORE RESERVE CALCULATION SHEET - MEL DEPOSIT - BLOCK No. : H - 90

=====  
 Block Boundaries; Latitude - South -: 9950 North -: 10000 Str.Lgt.: 50  
 Elevation - Upper -: 906 Lower -: 900 Vert.Hgt. 6

Block Centre:- Latitude: 9975 Departure: 9973 Elevation 903 6.195918 0.996194  
 Block Attitude:- Dip - - : 60 Strike - : 355 True HD : 50.19 True SD : 6.93

Source of Grade Data - 1.047197 0.866025  
 (°/rad.conversion)

	Hole	From	To	Intercept	True W.	% Zn.	% Pb.	% Barite	Sp.Gr.
G1	4	37.03	46.63	9.60	9.13	6.16	1.13	48.30	3.75
G2	2	33.83	47.09	13.26	12.81	4.82	2.20	63.10	4.05
G3	43	30.80	34.10	3.30	2.70	6.35	3.16	56.67	4.02
G4									

Weighting calculation by inverse distance<sup>2</sup>

	Hole No.	Centre of Pierce Point Lat.	Dep.	Elev.	DLat.	DDep.	DElev.	(DL) <sup>2</sup>	(DD) <sup>2</sup>	(DE) <sup>2</sup>
1	4	9928.3	9959.1	870.3	46.7	13.9	32.7	2180.9	193.2	1069.3
2	2	10005.9	9967.3	882.4	-30.9	5.7	20.6	954.8	32.5	424.4
3	43	9977.0	9977.7	880.5	-2.0	-4.7	22.5	4.0	22.1	506.3
4										

Weight calculation continued -

	Hole No.	True dist	D <sup>2</sup>	1/D <sup>2</sup>	True W.	Sp.Gr.	Weight	Wt. %
W1	4	58.68	3443.4	0.0003	9.13	3.75	0.01	14.82
W2	2	37.57	1411.7	0.0007	12.81	4.05	0.04	54.78
W3	43	23.07	532.3	0.0019	2.70	4.02	0.02	30.39
W4								

0.067083

Grade calculations -  $((G1*Wt.1)+(G2*Wt.2)+(Gn*Wt.n)/(Wt.1+Wt.2+Wt.n)) = \text{Avg. grade}$

ZINC 5.48 % )  
 LEAD 2.33 % ) @ Specific Gravity: 4.00  
 BARITE 58.95 % )  
 GANGUE 30.19 % )  
 TRUE W 5.84 (calc. by inverse distance<sup>2</sup> only)

Tonnage calculation - (True HD \* True SD \* True W) \* Sp.Gr. = Tonnes  
 TONNES 8113 TONS = 8,942

BARYTEX RESOURCES CORP.

ORE RESERVE CALCULATION SHEET - MEL DEPOSIT - BLOCK No. : I - 90

Block Boundaries; Latitude - South -: 10000 North -: 10050 Str.Lgt.: 50  
 Elevation - Upper -: 912 Lower -: 900 Vert.Hgt. 12

Block Centre:- Latitude: 10025 Departure: 9985 Elevation 906 0 1

Block Attitude:- Dip - - : 60 Strike - : 0 True HD : 50.00 True SD : 13.86

1.047197 0.866025

(°/rad.conversion)

Source of Grade Data -

Hole	From	To	Intercept	True W.	% Zn.	% Pb.	% Barite	Sp.Gr.	
G1	1	35.20	44.20	9.00	8.86	5.86	2.38	65.00	4.12
G2	2	33.83	47.09	13.26	12.81	4.82	2.20	63.10	4.05
G3	33	25.15	40.17	15.02	8.62	9.60	0.41	65.30	4.08
G4									

Weighting calculation by inverse distance<sup>2</sup>

Hole No.	Centre of Pierce Point Lat.	Dep.	Elev.	Distance from Centre DLat.	DElev.	Distance squared (DL) <sup>2</sup>	(DD) <sup>2</sup>	(DE) <sup>2</sup>
1	10087.1	9983.2	900.6	-62.1	1.8	3856.4	3.2	29.2
2	10005.9	9967.3	882.4	19.1	17.7	364.8	313.3	557.0
3	10049.3	9973.1	886.3	-24.3	11.9	590.5	141.6	388.1
4								

Weight calculation continued -

Hole No.	True dist	D <sup>2</sup>	1/D <sup>2</sup>	True W.	Sp.Gr.	Weight	Wt. %
W1	62.36	3888.8	0.0003	8.86	4.12	0.01	11.34
W2	35.14	1235.1	0.0008	12.81	4.05	0.04	50.74
W3	33.47	1120.2	0.0009	8.62	4.08	0.03	37.92
W4							

0.082789

Grade calculations - ((G1\*Wt.1)+(G2\*Wt.2)+(Gn\*Wt.n)/(Wt.1+Wt.2+Wt.n)) = Avg. grade

ZINC 6.75 % )

LEAD 1.54 % ) @ Specific Gravity: 4.07

BARITE 64.15 % )

GANGUE 24.02 % )

TRUE W 10.38 (calc. by inverse distance<sup>2</sup> only)

Tonnage calculation - (True HD \* True SD \* True W) \* Sp.Gr. = Tonnes

TONNES 29281 TONS = 32,277

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BARYTEX RESOURCES CORP.

ORE RESERVE CALCULATION SHEET - MEL DEPOSIT - BLOCK No. : J - 90

Block Boundaries; Latitude - South -: 10050 North -: 10100 Str.Lgt.: 50  
 Elevation - Upper -: 920 Lower -: 900 Vert.Hgt. 20

Block Centre:- Latitude: 10075 Departure: 9985 Elevation 910 0.052359 0.998629  
 Block Attitude:- Dip - - : 60 Strike - : 3 True HD : 50.07 True SD : 23.09  
 Source of Grade Data - 1.047197 0.866025  
 (°/rad.conversion)

Hole	From	To	Intercept	True W.	% Zn.	% Pb.	% Barite	Sp.Gr.	
G1	1	35.20	44.20	9.00	8.86	5.86	2.38	65.00	4.12
G2	30	32.40	46.00	13.60	6.80	6.58	1.09	64.86	4.06
G3	33	25.15	40.17	15.02	8.62	9.60	0.41	65.30	4.08
G4									

Weighting calculation by inverse distance<sup>2</sup>

Hole No.	Centre of Pierce Point Lat.	Dep.	Elev.	Distance from Centre DLat.	DDep.	DElev.	Distance squared (DL) <sup>2</sup>	(DD) <sup>2</sup>	(DE) <sup>2</sup>
1	10087.1	9983.2	900.6	-12.1	1.8	9.4	146.4	3.2	88.4
2	10097.3	9971.1	885.7	-22.3	13.9	24.3	497.3	193.2	590.5
3	10049.3	9973.1	886.3	25.7	11.9	23.7	660.5	141.6	561.7
4									

Weight calculation continued -

Hole No.	True dist	D <sup>2</sup>	1/D <sup>2</sup>	True W.	Sp.Gr.	Weight	Wt. %
W1	15.43	238.0	0.0042	8.86	4.12	0.15	76.41
W2	35.79	1281.0	0.0008	6.80	4.06	0.02	10.74
W3	36.93	1363.8	0.0007	8.62	4.08	0.03	12.85
W4							

0.200708

Grade calculations -  $((G1*Wt.1)+(G2*Wt.2)+(Gn*Wt.n)/(Wt.1+Wt.2+Wt.n)) = \text{Avg. grade}$

ZINC 6.42 % )  
 LEAD 1.99 % ) @ Specific Gravity: 4.10  
 BARITE 65.02 % )  
 GANGUE 23.13 % )  
 TRUE W 8.55 (calc. by inverse distance<sup>2</sup> only)  
 Tonnage calculation - (True HD \* True SD \* True W) \* Sp.Gr. = Tonnes  
 TONNES 40568 TONS = 44,718

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BARYTEX RESOURCES CORP.

ORE RESERVE CALCULATION SHEET - MEL DEPOSIT - BLOCK No. : K - 90

Block Boundaries; Latitude - South -: 10100 North -: 10150 Str.Lgt.: 50  
 Elevation - Upper -: 933 Lower -: 900 Vert.Hgt. 33

Block Centre:- Latitude: 10125 Departure: 9992 Elevation 916.5 0.087266 0.996194  
 Block Attitude:- Dip - - : 70 Strike - : 5 True HD : 50.19 True SD : 35.12

Source of Grade Data - 1.221730 0.939692  
 (°/rad.conversion)

	Hole	From	To	Intercept	True W.	% Zn.	% Pb.	% Barite	Sp.Gr.
G1	1	35.20	44.20	9.00	8.86	5.86	2.38	65.00	4.12
G2	30	32.40	46.00	13.60	6.80	6.58	1.09	64.86	4.06
G3	31	34.90	47.24	12.34	6.15	1.89	1.31	40.73	3.54
G4	40	63.60	66.40	2.80	1.80	8.47	0.08	35.86	3.51

Weighting calculation by inverse distance<sup>2</sup>

	Hole No.	Centre of Pierce Point			Distance from Centre			Distance squared		
		Lat.	Dep.	Elev.	DLat.	DDep.	DElev.	(DL) <sup>2</sup>	(DD) <sup>2</sup>	(DE) <sup>2</sup>
1	1	10087.1	9983.2	900.6	37.9	8.8	15.9	1436.4	77.4	252.8
2	30	10097.3	9971.1	885.7	27.7	20.9	30.8	767.3	436.8	948.6
3	31	10157.3	9984.0	894.0	-32.3	8.0	22.5	1043.3	64.0	506.3
4	40	10129.5	9965.4	874.1	-4.5	26.6	42.4	20.3	707.6	1797.8

Weight calculation continued -

	Hole No.	True dist	D <sup>2</sup>	1/D <sup>2</sup>	True W.	Sp.Gr.	Weight	Wt. %
W1	1	42.03	1766.7	0.0006	8.86	4.12	0.02	41.76
W2	30	46.40	2152.7	0.0005	6.80	4.06	0.01	25.92
W3	31	40.17	1613.5	0.0006	6.15	3.54	0.01	27.27
W4	40	50.26	2525.6	0.0004	1.80	3.51	0.00	5.06

0.049481

Grade calculations -  $((G1*W1)+(G2*W2)+(Gn*Wn)/(W1+W2+Wn)) = \text{Average grade}$

ZINC 5.10 % )  
 LEAD 1.64 % ) @ Specific Gravity: 3.91  
 BARITE 56.87 % )  
 GANGUE 33.65 % )  
 TRUE W 6.21 (calc. by inverse distance<sup>2</sup> only)

Tonnage calculation - (True HD \* True SD \* True W) \* Sp.Gr. = Tonnes  
 TONNES 42797 TONS = 47,176

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Date:Jan.20/90 Rev.:Sep 1/90

BARYTEX RESOURCES CORP.

ORE RESERVE CALCULATION SHEET - MEL DEPOSIT - BLOCK No. : L - 90

Block Boundaries; Latitude - South -: 10150 North -: 10200 Str.Lgt.: 50  
 Elevation - Upper -: 938 Lower -: 900 Vert.Hgt. 38

Block Centre:- Latitude: 10175 Departure: 9995 Elevation 919 0.226892 0.974370  
 Block Attitude:- Dip - - : 72 Strike - : 13 True HD : 51.32 True SD : 39.96  
 1.256637 0.951056  
 Source of Grade Data - (°/rad.conversion)

	Hole	From	To	Intercept	True W.	% Zn.	% Pb.	% Barite	Sp.Gr.
G1	16	22.05	28.90	6.85	4.84	4.41	4.80	53.50	4.01
G2	7	66.29	70.87	4.58	4.41	9.07	2.88	54.50	4.02
G3	32	43.30	60.00	16.70	8.85	5.44	3.36	54.24	3.97
G4	31	34.90	47.20	12.30	6.15	1.90	1.30	40.83	3.54

Weighting calculation by inverse distance<sup>2</sup>

	Hole No.	Centre of Lat.	Pierce Point Dep.	Elev.	Distance from Centre			Distance squared		
		Lat.	Dep.	Elev.	DLat.	DDep.	DElev.	(DL) <sup>2</sup>	(DD) <sup>2</sup>	(DE) <sup>2</sup>
1	16	10213.4	10002.3	920.1	-38.4	-7.3	-1.1	1474.6	53.3	1.2
2	7	10214.5	9992.4	902.5	-39.5	2.6	16.5	1560.3	6.8	272.3
3	32	10198.6	9985.3	890.0	-23.6	9.7	29.0	557.0	94.1	841.0
4	31	10157.3	9984.0	894.0	17.7	11.0	25.0	313.3	121.0	625.0

Weight calculation continued -

	Hole No.	True dist	D <sup>2</sup>	1/D <sup>2</sup>	True W.	Sp.Gr.	Weight	Wt. %
W1	16	39.10	1529.1	0.0007	4.84	4.01	0.01	19.11
W2	7	42.89	1839.3	0.0005	4.41	4.02	0.01	14.51
W3	32	38.63	1492.1	0.0007	8.85	3.97	0.02	35.45
W4	31	32.55	1059.3	0.0009	6.15	3.54	0.02	30.94

0.066432

Grade calculations -  $((G1*Wt.1)+(G2*Wt.2)+(Gn*Wt.n)/(Wt.1+Wt.2+Wt.n)) = \text{Avg. grade}$

ZINC 4.67 % )  
 LEAD 2.93 % ) @ Specific Gravity: 3.85  
 BARITE 49.99 % )  
 GANGUE 39.68 % )  
 TRUE W 6.15 (calc. by inverse distance<sup>2</sup> only)

Tonnage calculation - (True HD \* True SD \* True W) @ Sp.Gr. = Tonnes  
 TONNES 48600 TONS = 53,572

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Date:Jan.20/90 Rev.:Sep 1/90 (N/C)

BARYTEX RESOURCES CORP.

ORE RESERVE CALCULATION SHEET - MEL DEPOSIT - BLOCK No. : M - 90

=====  
 Block Boundaries; Latitude - South -: 10200 North -: 10250 Str.Lgt.: 50  
 Elevation - Upper -: 940 Lower -: 900 Vert.Hgt. 40

Block Centre:- Latitude: 10225 Departure: 10004 Elevation 920 0.139626 0.990268  
 Block Attitude:- Dip - - : 53 Strike - : 8 True HD : 50.49 True SD : 50.09

Source of Grade Data - 0.925024 0.798635  
 (°/rad.conversion)

Hole	From	To	Intercept	True W.	% Zn.	% Pb.	% Barite	Sp.Gr.	
G1	16	22.05	28.90	6.85	4.84	4.41	4.80	53.50	4.01
G2	7	66.29	70.87	4.58	4.41	9.07	2.88	54.50	4.02
G3				0.00					
G4									

Weighting calculation by inverse distance<sup>2</sup>

	Hole No.	Centre of Pierce Point			Distance from Centre			Distance squared		
		Lat.	Dep.	Elev.	DLat.	DDep.	DElev.	(DL) <sup>2</sup>	(DD) <sup>2</sup>	(DE) <sup>2</sup>
1	16	10213.4	10002.3	920.1	11.6	1.7	-0.1	134.6	2.9	0.0
2	7	10214.5	9992.4	902.5	10.5	11.6	17.5	110.3	134.6	306.3
3										
4										

Weight calculation continued -

	Hole No.	True dist	D <sup>2</sup>	1/D <sup>2</sup>	True W.	Sp.Gr.	Weight	Wt. %
W1	16	11.72	137.5	0.0073	4.84	4.01	0.14	81.44
W2	7	23.47	551.1	0.0018	4.41	4.02	0.03	18.56
W3								
W4								

0.173364

Grade calculations -  $((G1*W1)+(G2*W2)+(Gn*Wn)/(W1+W2+Wn)) = \text{Average grade}$

ZINC 5.27 % )  
 LEAD 4.44 % ) @ Specific Gravity: 4.01  
 BARITE 53.69 % )  
 GANGUE 33.34 % )  
 TRUE W 4.75 (calc. by inverse distance<sup>2</sup> only)

Tonnage calculation - (True HD \* True SD \* True W) \* Sp.Gr. = Tonnes  
 TONNES 48257 TONS = 53,193

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Date:Jan.20/90 Rev.:Sep 1/90 (N/C)

## BARYTEX RESOURCES CORP.

## 850 LEVEL - RESERVE SUMMARY

BLOCK	TONNES	TRUE W	% ZINC	% LEAD	% BARITE	Sp.Gr.
B - 85	22293	2.89	9.71	0.74	1.14	2.95
C - 85	53749	5.12	7.07	1.66	66.39	4.12
D - 85	49474	4.57	7.62	1.53	62.18	4.05
E - 85	50767	4.64	6.08	2.01	63.60	4.07
F - 85	58603	5.66	6.08	2.19	53.95	3.91
G - 85	79761	8.13	6.09	1.13	48.92	3.76
H - 85	34463	3.25	6.50	1.54	56.26	3.92
I - 85	132828	11.88	6.66	1.43	63.64	4.05
J - 85	95302	8.53	7.66	1.17	63.43	4.05
K - 85	26785	2.64	6.87	0.60	46.18	3.70
L - 85	64266	6.39	4.20	2.38	48.19	3.78
M - 85	66197	6.09	6.72	3.21	55.08	4.00
TOTAL	734488		6.62	1.69	56.34	

BARYTEX RESOURCES CORP.

ORE RESERVE CALCULATION SHEET - MEL DEPOSIT - BLOCK No. : B - 85

Block Boundaries; Latitude - South -: 9650 North -: 9700 Str.Lgt.: 50  
 Elevation - Upper -: 900 Lower -: 850 Vert.Hgt. 50

Block Centre:- Latitude: 9675 Departure: 10005 Elevation 875 6.073745 0.978147  
 Block Attitude:- Dip - - : 78 Strike - : 348 True HD : 51.12 True SD : 51.12  
 1.361356 0.978147  
 Source of Grade Data - (°/rad.conversion)

	Hole	From	To	Intercept	True W.	% Zn.	% Pb.	% Barite	Sp.Gr.
G1	6	57.15	58.67	1.52	1.50	3.11	1.90	0.00	2.87
G2	39	45.58	48.93	3.35	2.90	9.76	0.73	0.75	2.94
G3	36	33.30	45.30	12.00	6.88	7.09	1.48	60.17	4.00
G4	37	131.67	133.44	1.77	1.23	0.43	0.51	16.18	3.03

Weighting calculation by inverse distance<sup>2</sup>

	Hole No.	Centre of Pierce Point Lat.	Dep.	Elev.	Distance from Centre DLat.	DDep.	DElev.	Distance squared (DL) <sup>2</sup>	(DD) <sup>2</sup>	(DE) <sup>2</sup>
1	6	9637.0	10011.4	873.8	38.0	-6.4	1.2	1444.0	41.0	1.4
2	39	9674.9	10003.4	878.2	0.1	1.6	-3.2	0.0	2.6	10.2
3	36	9751.4	9981.5	871.6	-76.4	23.5	3.4	5837.0	552.3	11.6
4	37	9695.3	9980.2	799.7	-20.3	24.8	75.3	412.1	615.0	5670.1

Weight calculation continued -

	Hole No.	True dist	D <sup>2</sup>	1/D <sup>2</sup>	True W.	Sp.Gr.	Weight	Wt. %
W1	6	38.55	1486.4	0.0007	1.50	2.87	0.00	0.43
W2	39	3.58	12.8	0.0781	2.90	2.94	0.67	98.85
W3	36	80.00	6400.8	0.0002	6.88	4.00	0.00	0.64
W4	37	81.84	6697.2	0.0001	1.23	3.03	0.00	0.08

0.673325

Grade calculations -  $((G1*Wt.1)+(G2*Wt.2)+(Gn*Wt.n)/(Wt.1+Wt.2+Wt.n)) = \text{Avg. grade}$

ZINC 9.71 % )  
 LEAD 0.74 % ) @ Specific Gravity: 2.95  
 BARITE 1.14 % )  
 GANGUE 83.55 % )  
 TRUE W 2.89 (calc. by inverse distance<sup>2</sup> only)  
 Tonnage calculation - (True HD \* True SD \* True W) \* Sp.Gr. = Tonnes  
 TONNES 22293 TONS = 24,574

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Date:Aug. 14/90

ORE RESERVE CALCULATION SHEET - MEL DEPOSIT - BLOCK No. : C - 85

Block Boundaries; Latitude - South -: 9700 North -: 9750 Str.Lgt.: 50  
 Elevation - Upper -: 900 Lower -: 850 Vert.Hgt. 50

Block Centre:- Latitude: 9725 Departure: 9990 Elevation 875 6.195918 0.996194

Block Attitude:- Dip - - : 80 Strike - : 355 True HD : 50.19 True SD : 50.77

1.396263 0.984807

(°/rad.conversion)

Source of Grade Data -

Hole	From	To	Intercept	True W.	% Zn.	% Pb.	% Barite	Sp.Gr.	
G1	38	110.70	112.65	1.95	1.38	2.22	0.56	49.81	3.67
G2	39	45.58	48.93	3.35	2.90	9.76	0.73	0.75	2.94
G3	36	33.30	45.30	12.00	6.88	7.09	1.79	73.18	4.25
G4	37	131.67	133.44	1.77	1.23	0.43	0.51	16.18	3.03

Weighting calculation by inverse distance<sup>2</sup>

Hole No.	Centre of Pierce Point Lat.	Dep.	Elev.	Distance from Centre DLat.	DDep.	DElev.	Distance squared (DL) <sup>2</sup>	(DD) <sup>2</sup>	(DE) <sup>2</sup>	
1	38	9742.0	9973.2	813.4	-17.0	16.8	61.6	289.0	282.2	3794.6
2	39	9674.9	10003.4	878.2	50.1	-13.4	-3.2	2510.0	179.6	10.2
3	36	9751.4	9981.5	871.6	-26.4	8.5	3.4	697.0	72.3	11.6
4	37	9695.3	9980.2	799.7	29.7	9.8	75.3	882.1	96.0	5670.1

Weight calculation continued -

Hole No.	True dist	D <sup>2</sup>	1/D <sup>2</sup>	True W.	Sp.Gr.	Weight	Wt. %	
W1	38	66.07	4365.8	0.0002	1.38	3.67	0.00	2.74
W2	39	51.96	2699.8	0.0004	2.90	2.94	0.00	7.46
W3	36	27.94	780.8	0.0013	6.88	4.25	0.04	88.48
W4	37	81.54	6648.2	0.0002	1.23	3.03	0.00	1.32

0.042359

Grade calculations -  $((G1*Wt.1)+(G2*Wt.2)+(Gn*Wt.n)/(Wt.1+Wt.2+Wt.n)) = \text{Avg. grade}$

ZINC 7.07 % )  
 LEAD 1.66 % ) @ Specific Gravity: 4.12  
 BARITE 66.39 % )  
 GANGUE 21.17 % )  
 TRUE W 5.12 (calc. by inverse distance<sup>2</sup> only)

Tonnage calculation - (True HD \* True SD \* True W) \* Sp.Gr. = Tonnes

TONNES 53749 TONS = 59,247

BARYTEX RESOURCES CORP.

ORE RESERVE CALCULATION SHEET - MEL DEPOSIT - BLOCK No. : D - 85

=====  
 Block Boundaries; Latitude - South -: 9750 North -: 9800 Str.Lgt.: 50  
 Elevation - Upper -: 900 Lower -: 850 Vert.Hgt. 50

Block Centre:- Latitude: 9775 Departure: 9980 Elevation 875 6.195918 0.996194

Block Attitude:- Dip - - : 70 Strike - : 355 True HD : 50.19 True SD : 53.21

1.221730 0.939692  
 (°/rad.conversion)

Source of Grade Data -

Hole	From	To	Intercept	True W.	% Zn.	% Pb.	% Barite	Sp.Gr.
G1	5	46.02	48.92	2.87	8.62	1.55	65.60	4.13
G2	36	33.30	45.30	6.88	7.09	1.48	60.17	4.00
G3	8	131.67	139.60	3.97	7.09	1.93	63.18	4.08
G4								

Weighting calculation by inverse distance<sup>2</sup>

	Hole No.	Centre of Pierce Point			Distance from Centre			Distance squared		
		Lat.	Dep.	Elev.	DLat.	DDep.	DElev.	(DL) <sup>2</sup>	(DD) <sup>2</sup>	(DE) <sup>2</sup>
1	5	9789.3	9987.6	888.2	-14.3	-7.6	-13.2	204.5	57.8	174.2
2	36	9751.4	9981.5	871.6	23.6	-1.5	3.4	557.0	2.3	11.6
3	8	9790.0	9963.6	813.1	-15.0	16.4	61.9	225.0	269.0	3831.6
4										

Weight calculation continued -

	Hole No.	True dist	D <sup>2</sup>	1/D <sup>2</sup>	True W.	Sp.Gr.	Weight	Wt. %
W1	5	20.89	436.5	0.0023	2.87	4.13	0.03	34.32
W2	36	23.89	570.8	0.0018	6.88	4.00	0.05	60.94
W3	8	65.77	4325.6	0.0002	3.97	4.08	0.00	4.73
W4								

0.079115

Grade calculations - ((G1\*W1)+(G2\*W2)+(Gn\*Wn)/(W1+W2+Wn)) = Average grade

ZINC 7.62 % )  
 LEAD 1.53 % ) @ Specific Gravity: 4.05  
 BARITE 62.18 % )  
 GANGUE 24.72 % )  
 TRUE W 4.57 (calc. by inverse distance<sup>2</sup> only)

Tonnage calculation - (True HD \* True SD \* True W) \* Sp.Gr. = Tonnes

TONNES 49474 TONS = 54,536

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Date:Jan.23/90 Rev. Aug.27/90

**BARYTEX RESOURCES CORP.**

**ORE RESERVE CALCULATION SHEET - MEL DEPOSIT - BLOCK No. : E - 85**

=====  
 Block Boundaries; Latitude - South -: 9800 North -: 9850 Str.Lgt.: 50  
 Elevation - Upper -: 900 Lower -: 850 Vert.Hgt. 50

Block Centre:- Latitude: 9825 Departure: 9971 Elevation 875 6.195918 0.996194  
 Block Attitude:- Dip - - : 69 Strike - : 355 True HD : 50.19 True SD : 53.56  
 1.204277 0.933580  
 Source of Grade Data - (°/rad.conversion)

	Hole	From	To	Intercept	True W.	% Zn.	% Pb.	% Barite	Sp.Gr.
G1	5	46.02	48.92	2.90	2.87	8.62	1.55	65.60	4.13
G2	8	131.67	139.60	7.93	3.97	7.09	1.93	63.18	4.08
G3	35	46.70	59.70	13.00	7.46	5.43	2.11	63.22	4.06
G4									

Weighting calculation by inverse distance<sup>2</sup>

	Hole No.	Centre of Pierce Point			Distance from Centre			Distance squared		
		Lat.	Dep.	Elev.	DLat.	DDep.	DElev.	(DL) <sup>2</sup>	(DD) <sup>2</sup>	(DE) <sup>2</sup>
1	5	9787.3	9987.6	888.2	37.7	-16.6	-13.2	1421.3	275.6	174.2
2	8	9790.0	9963.6	813.1	35.0	7.4	61.9	1225.0	54.8	3831.6
3	35	9850.2	9973.7	865.2	-25.2	-2.7	9.8	635.0	7.3	96.0
4										

Weight calculation continued -

	Hole No.	True dist	D <sup>2</sup>	1/D <sup>2</sup>	True W.	Sp.Gr.	Weight	Wt. %
W1	5	43.26	1871.1	0.0005	2.87	4.13	0.01	16.09
W2	8	71.49	5111.4	0.0002	3.97	4.08	0.00	8.05
W3	35	27.17	738.4	0.0014	5.43	4.06	0.03	75.85
W4								

0.039361

Grade calculations -  $((G1*W1)+(G2*W2)+(Gn*Wn)/(W1+W2+Wn)) = \text{Average grade}$

ZINC 6.08 % )

LEAD 2.01 % ) @ Specific Gravity: 4.07

BARITE 63.60 % )

GANGUE 25.04 % )

TRUE W 4.64 (calc. by inverse distance<sup>2</sup> only)

Tonnage calculation -  $(\text{True HD} * \text{True SD} * \text{True W}) * \text{Sp.Gr.} = \text{Tonnes}$

TONNES 50767 TONS = 55,960

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Date:Jan.20/90 Rev.Aug 27/90



BARYTEX RESOURCES CORP.

ORE RESERVE CALCULATION SHEET - MEL DEPOSIT - BLOCK No. : P - 85

=====  
 Block Boundaries; Latitude - South -: 9850 North -: 9900 Str.Lgt.: 50  
 Elevation - Upper -: 900 Lower -: 850 Vert.Hgt. 50

Block Centre:- Latitude: 9875 Departure: 9965 Elevation 875 6.073745 0.978147  
 Block Attitude:- Dip - - : 75 Strike - : 348 True HD : 51.12 True SD : 51.76  
 1.308996 0.965925  
 Source of Grade Data - (\* /rad.conversion)

Hole	From	To	Intercept	True W.	% Zn.	% Pb.	% Barite	Sp.Gr.	
G1	4	37.03	46.63	9.60	9.13	6.16	1.13	48.30	3.75
G2	5	46.02	48.92	2.90	2.87	8.62	1.55	65.60	4.13
G3	25	157.75	161.30	3.55	2.84	3.84	1.66	24.35	3.30
G4	35	49.85	59.70	9.85	5.64	6.14	2.70	58.53	4.02

Weighting calculation by inverse distance<sup>2</sup>

Hole No.	Centre of Pierce Point Lat.	Dep.	Elev.	Distance from Centre DLat.	DDep.	DElev.	Distance squared (DL) <sup>2</sup>	(DD) <sup>2</sup>	(DE) <sup>2</sup>	
1	4	9928.3	9959.1	870.3	-53.3	5.9	4.7	2840.9	34.8	22.1
2	5	9787.3	9987.6	888.2	87.7	-22.6	-13.2	7691.3	510.8	174.2
3	25	9875.2	9958.0	817.1	-0.2	7.0	57.9	0.0	49.0	3352.4
4	35	9850.2	9973.7	865.2	24.8	-8.7	9.8	615.0	75.7	96.0

Weight calculation continued -

Hole No.	True dist	D <sup>2</sup>	1/D <sup>2</sup>	True W.	Sp.Gr.	Weight	Wt. %	
W1	4	53.83	2897.8	0.0003	9.13	3.75	0.01	26.37
W2	5	91.52	8376.3	0.0001	2.87	4.13	0.00	3.16
W3	25	58.32	3401.4	0.0003	2.84	3.30	0.00	6.15
W4	35	28.05	786.8	0.0013	5.64	4.02	0.03	64.32
							0.044802	

Grade calculations -  $((G1*Wt.1)+(G2*Wt.2)+(Gn*Wt.n)/(Wt.1+Wt.2+Wt.n)) = \text{Avg. grade}$

ZINC 6.08 % )  
 LEAD 2.19 % ) @ Specific Gravity: 3.91  
 BARITE 53.95 % )  
 GANGUE 34.47 % )  
 TRUE W 5.66 (calc. by inverse distance<sup>2</sup> only)

Tonnage calculation - (True HD \* True SD \* True W) / Sp.Gr. = Tonnes  
 TONNES 58603 TONS = 64,598

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 Date:Jan.20/90,Rev.May 6/90

BARYTEX RESOURCES CORP.

ORE RESERVE CALCULATION SHEET - MEL DEPOSIT - BLOCK No. : G - 85

Block Boundaries; Latitude - South -: 9900 North -: 9950 Str.Lgt.: 50  
 Elevation - Upper -: 900 Lower -: 850 Vert.Hgt. 50

Block Centre:- Latitude: 9925 Departure: 9961 Elevation 875 6.161012 0.992546  
 Block Attitude:- Dip - - : 75 Strike - : 353 True HD : 50.38 True SD : 51.76  
 1.308996 0.965925  
 Source of Grade Data - (\* /rad.conversion)

	Hole	From	To	Intercept	True W.	% Zn.	% Pb.	% Barite	Sp.Gr.
G1	4	37.03	46.63	9.60	9.13	6.16	1.13	48.30	3.75
G2	35	46.70	59.70	13.00	7.46	5.43	2.11	63.22	4.06
G3	41	47.62	53.40	5.78	4.09	2.50	0.19	63.03	3.89
G4	42	36.00	38.90	2.90	2.22	9.24	1.88	40.99	3.72

Weighting calculation by inverse distance<sup>2</sup>

	Hole No.	Centre of Pierce Point			Distance from Centre			Distance squared		
		Lat.	Dep.	Elev.	DLat.	DDep.	DElev.	(DL) <sup>2</sup>	(DD) <sup>2</sup>	(DE) <sup>2</sup>
1	4	9928.3	9951.1	870.3	-3.3	9.9	4.7	10.9	98.0	22.1
2	35	9850.2	9973.7	865.2	74.8	-12.7	9.8	5595.0	161.3	96.0
3	41	9959.2	9955.5	855.6	-34.2	5.5	19.4	1169.6	30.3	376.4
4	42	9959.0	9960.5	868.5	-34.0	0.5	6.5	1156.0	0.3	42.3

Weight calculation continued -

	Hole No.	True dist	D <sup>2</sup>	1/D <sup>2</sup>	True W.	Sp.Gr.	Weight	Wt. %
W1	4	11.45	131.0	0.0076	9.13	3.75	0.26	92.18
W2	35	76.50	5852.4	0.0002	7.46	4.06	0.01	1.83
W3	41	39.70	1576.3	0.0006	4.09	3.89	0.01	3.56
W4	42	34.62	1198.5	0.0008	2.22	3.72	0.01	2.43
							0.283534	

Grade calculations -  $((G1*W1)+(G2*W2)+(Gn*Wn)/(Wt.1+W2+Wn)) = \text{Average grade}$

ZINC 6.09 % )  
 LEAD 1.13 % ) @ Specific Gravity: 3.76  
 BARITE 48.92 % )  
 GANGUE 40.70 % )  
 TRUE W 8.13 (calc. by inverse distance<sup>2</sup> only)

Tonnage calculation - (True HD \* True SD \* True W) & Sp.Gr. = Tonnes  
 TONNES 79761 TONS = 87,921

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 Date:Jan.20/90 Rev.Aug.27/90

BARYTEX RESOURCES CORP.

ORE RESERVE CALCULATION SHEET - MEL DEPOSIT - BLOCK No. : H - 85

=====  
 Block Boundaries; Latitude - South -: 9950 North -: 10000 Str.Lgt.: 50  
 Elevation - Upper -: 900 Lower -: 850 Vert.Hgt. 50

Block Centre:- Latitude: 9975 Departure: 9960 Elevation 875 6.195918 0.996194  
 Block Attitude:- Dip - - : 68 Strike - : 355 True HD : 50.19 True SD : 53.93  
 1.186823 0.927183  
 Source of Grade Data - (°/rad.conversion)

Hole	From	To	Intercept	True W.	% Zn.	% Pb.	% Barite	Sp.Gr.	
G1	14	89.00	104.00	15.00	12.29	7.84	0.22	68.10	4.09
G2	41	47.62	53.40	5.78	4.09	2.50	0.19	63.03	3.89
G3	42	36.00	38.90	2.90	2.22	9.24	1.88	40.99	3.72
G4	43	30.80	34.10	3.30	2.70	6.35	3.16	56.67	4.02

Weighting calculation by inverse distance<sup>2</sup>

Hole No.	Centre of Pierce Point Lat. Dep. Elev.	Distance from Centre DLat. DDep. DElev.	Distance squared (DL) <sup>2</sup> (DD) <sup>2</sup> (DE) <sup>2</sup>
1	14 10003.5 9941.6 839.0	-28.5 18.4 36.0	812.3 338.6 1296.0
2	41 9959.2 9955.5 855.6	15.8 4.5 19.4	249.6 20.3 376.4
3	42 9959.0 9960.5 868.5	16.0 -0.5 6.5	256.0 0.3 42.3
4	43 9977.0 9977.7 880.5	-2.0 -17.7 -5.5	4.0 313.3 30.3

Weight calculation continued -

Hole No.	True dist	D <sup>2</sup>	1/D <sup>2</sup>	True W.	Sp.Gr.	Weight	Wt. %
W1	14 49.47	2446.8	0.0004	12.29	4.09	0.02	19.74
W2	41 25.42	646.2	0.0015	4.09	3.89	0.02	23.66
W3	42 17.28	298.5	0.0034	2.22	3.72	0.03	26.59
W4	43 18.64	347.5	0.0029	2.70	4.02	0.03	30.01
							0.104059

Grade calculations -  $((G1*W1)+(G2*W2)+(Gn*Wn)/(W1+W2+Wn)) = \text{Average grade}$

ZINC 6.50 % )  
 LEAD 1.54 % ) @ Specific Gravity: 3.92  
 BARITE 56.26 % )  
 GANGUE 32.28 % )  
 TRUE W 3.25 (calc. by inverse distance<sup>2</sup> only)

Tonnage calculation - (True HD \* True SD \* True W) \* Sp.Gr. = Tonnes  
 TONNES 34463 TONS = 37,988

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 Date:Aug.30/90

BARYTEX RESOURCES CORP.

ORE RESERVE CALCULATION SHEET - MEL DEPOSIT - BLOCK No. : I - 85

Block Boundaries; Latitude - South -: 10000 North -: 10050 Str.Lgt.: 50  
 Elevation - Upper -: 900 Lower -: 850 Vert.Hgt. 50

Block Centre:- Latitude: 10025 Departure: 9968 Elevation 875 0 1  
 Block Attitude:- Dip - - : 65 Strike - : 0 True HD : 50 True SD : 55.17  
 1.134464 0.906307  
 Source of Grade Data - (°/rad.conversion)

	Hole	From	To	Intercept	True W.	% Zn.	% Pb.	% Barite	Sp.Gr.
G1	2	33.83	47.09	13.26	12.81	4.82	2.20	63.10	4.05
G2	14	89.00	104.00	15.00	12.29	7.84	0.22	68.10	4.09
G3	33	25.15	40.17	15.02	8.62	9.60	0.41	65.30	4.08
G4	34	79.90	111.10	31.20	17.90	9.37	0.50	59.27	3.98

Weighting calculation by inverse distance<sup>2</sup>

	Hole No.	Centre of Pierce Point Lat.	Dep.	Elev.	DLat.	DDep.	DElev.	(DL) <sup>2</sup>	(DD) <sup>2</sup>	(DE) <sup>2</sup>
1	2	10005.9	9967.3	882.4	19.1	0.7	-7.4	364.81	0.49	54.76
2	14	10003.5	9941.6	839.0	21.5	26.4	36	462.25	696.96	1296.00
3	33	10049.3	9973.1	886.3	-24.3	-5.1	-11.3	590.49	26.01	127.69
4	34	10042.3	9944.9	828.3	-17.3	23.1	46.7	299.29	533.61	2180.89

Weight calculation continued -

	Hole No.	True dist	D <sup>2</sup>	1/D <sup>2</sup>	True W.	Sp.Gr.	Weight	Wt. %
W1	2	20.49536	420.06	0.0024	12.81	4.05	0.12	57.48
W2	14	49.55007	2455.21	0.0004	12.29	4.09	0.02	9.53
W3	33	27.27984	744.19	0.0013	8.62	4.08	0.05	21.99
W4	34	54.89799	3013.79	0.0003	17.90	3.98	0.02	11.00

0.214878

Grade calculations -  $((G1*Wt.1)+(G2*Wt.2)+(Gn*Wt.n)/(Wt.1+Wt.2+Wt.n)) = \text{Avg. grade}$

ZINC 6.66 % )  
 LEAD 1.43 % ) @ Specific Gravity:4.053468  
 BARITE 63.64 % )  
 GANGUE 24.79 % )  
 TRUE W 11.88 (calc. by inverse distance<sup>2</sup> only)  
 Tonnage calculation - (True HD \* True SD \* True W) 8 Sp.Gr. = Tonnes  
 TONNES 132828 TONS = 146,416

BARYTEX RESOURCES CORP.

ORE RESERVE CALCULATION SHEET - MEL DEPOSIT - BLOCK No. : J - 85

Block Boundaries; Latitude - South -: 10050 North -: 10100 Str.Lgt.: 50  
 Elevation - Upper -: 900 Lower -: 850 Vert.Hgt. 50

Block Centre:- Latitude: 10075 Departure: 9973 Elevation 875 0.209439 0.978147  
 Block Attitude:- Dip - - : 68 Strike - : 12 True HD : 51.12 True SD : 53.93  
 1.186823 0.927183  
 Source of Grade Data - (°/rad.conversion)

	Hole	From	To	True W.	% Zn.	% Pb.	% Barite	Sp.Gr.
G1	1	35.20	44.20	8.86	5.86	2.38	65.00	4.12
G2	30	32.40	46.00	6.80	6.58	1.09	64.86	4.06
G3	33	25.15	40.17	8.62	9.72	0.41	62.19	4.03
G4	34	79.90	111.10	17.90	9.37	0.50	59.27	3.98

Weighting calculation by inverse distance<sup>2</sup>

	Hole No.	Centre of Pierce Point Lat.	Dep.	Elev.	DLat.	DDep.	DElev.	(DL) <sup>2</sup>	(DD) <sup>2</sup>	(DE) <sup>2</sup>
1	1	10087.1	9983.2	900.6	-12.1	-10.2	-25.6	146.4	104.0	655.4
2	30	10097.3	9971.1	885.7	-22.3	1.9	-10.7	497.3	3.6	114.5
3	33	10049.3	9973.1	886.3	25.7	-0.1	-11.3	660.5	0.0	127.7
4	34	10042.3	9944.9	828.3	32.7	28.1	46.7	1069.3	789.6	2180.9

Weight calculation continued -

	Hole No.	True dist	D <sup>2</sup>	1/D <sup>2</sup>	True W.	Sp.Gr.	Weight	Wt. %
W1	1	30.10	905.81	0.0011	8.86	4.12	0.04	27.44
W2	30	24.81	615.39	0.0016	6.80	4.06	0.04	30.55
W3	33	28.07	788.19	0.0013	8.62	4.03	0.04	30.01
W4	9	63.56	4039.79	0.0002	17.90	3.98	0.02	12.01
								0.146870

Grade calculations -  $((G1*Wt.1)+(G2*Wt.2)+(Gn*Wt.n)/(Wt.1+Wt.2+Wt.n)) = \text{Avg. grade}$

ZINC 7.66 % )  
 LEAD 1.17 % ) @ Specific Gravity: 4.05  
 BARI TE 63.43 % )  
 GANGUE 23.82 % )  
 TRUE W 8.53 (calc. by inverse distance<sup>2</sup> only)

Tonnage calculation - (True HD \* True SD \* True W) \* Sp.Gr. = Tonnes  
 TONNES 95302 TONS = 105,052

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 Date:Jan.20/90,Rev.Aug.30/90

BARYTEX RESOURCES CORP.

ORE RESERVE CALCULATION SHEET - MEL DEPOSIT - BLOCK No. : K - 85

Block Boundaries; Latitude - South -: 10100 North -: 10150 Str.Lgt.: 50  
 Elevation - Upper -: 900 Lower -: 850 Vert.Hgt. 50

Block Centre:- Latitude: 10125 Departure: 9975 Elevation 875 0.226892 0.974370  
 Block Attitude:- Dip - - : 69 Strike - : 13 True HD :51.31520 True SD :53.55724  
 1.204277 0.933580  
 (/rad.conversion)

Source of Grade Data -  
 Hole From To Intercept True W. % Zn. % Pb. % Barite Sp.Gr.

Hole	From	To	Intercept	True W.	% Zn.	% Pb.	% Barite	Sp.Gr.	
G1	30	32.40	46.00	13.60	6.80	6.58	1.09	64.86	4.06
G2	31	34.90	47.20	12.30	6.15	1.90	1.30	40.83	3.54
G3	9	110.64	118.11	7.47	4.80	4.79	1.76	69.55	4.14
G4	40	63.60	66.40	2.80	1.80	8.47	0.08	35.86	3.51

Weighting calculation by inverse distance<sup>2</sup>

Hole No.	Centre of Pierce Point Lat.	Dep.	Elev.	Distance from Centre DLat.	DDep.	DElev.	(DL) <sup>2</sup>	(DD) <sup>2</sup>	(DE) <sup>2</sup>	
1	30	10097.3	9971.1	885.7	27.7	3.9	-10.7	767.3	15.2	114.5
2	31	10157.3	9984.0	894.0	-32.3	-9.0	-19.0	1043.3	81.0	361.0
3	9	10083.5	9946.1	817.9	41.5	28.9	57.1	1722.3	835.2	3260.4
4	40	10129.5	9965.4	874.1	-4.5	9.6	0.9	20.3	92.2	0.8

Weight calculation continued -

Hole No.	True dist	D <sup>2</sup>	1/D <sup>2</sup>	True W.	Sp.Gr.	Weight	Wt. %	
W1	30	29.95	897.0	0.0011	6.80	4.06	0.03	29.41
W2	31	38.54	1485.3	0.0007	6.15	3.54	0.01	14.01
W3	9	76.27	5817.9	0.0002	4.80	4.14	0.00	3.26
W4	40	10.64	113.2	0.0088	1.80	3.51	0.06	53.32
							0.10	

Grade calculations -  $((G1*Wt.1)+(G2*Wt.2)+(Gn*Wt.n)/(Wt.1+Wt.2+Wt.n)) = \text{Avg. grade}$

ZINC 6.87 % )  
 LEAD 0.60 % ) @ Specific Gravity: 3.70  
 BARITE 46.18 % )  
 GANGUE 42.88 % )  
 TRUE W 2.64 (calc. by inverse distance<sup>2</sup> only)

Tonnage calculation - (True HD \* True SD \* True W) / Sp.Gr. = Tonnes  
 TONNES 26785 TONS = 29,525

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 Date:Jan.20/90, Aug.30/90

BARYTEX RESOURCES CORP.

ORE RESERVE CALCULATION SHEET - MEL DEPOSIT - BLOCK No. : L - 85

Block Boundaries; Latitude - South -: 10150 North -: 10200 Str.Lgt.: 50  
 Elevation - Upper -: 900 Lower -: 850 Vert.Hgt. 50

Block Centre:- Latitude: 10175 Departure: 9978 Elevation 875 0.209439 0.978147  
 Block Attitude:- Dip - - : 74 Strike - : 12 True HD :51.11702 True SD :52.01497  
 1.291543 0.961261  
 Source of Grade Data - (°/rad.conversion)

	Hole	From	To	Intercept	True W.	% Zn.	% Pb.	% Barite	Sp.Gr.
G1	31	34.90	47.20	12.30	6.15	1.90	1.30	40.83	3.54
G2	32	43.30	60.00	16.70	8.85	5.44	3.36	54.24	3.97
G3	10	145.39	148.74	3.35	2.37	9.05	1.37	52.99	3.90
G4	40	63.60	66.40	2.80	1.80	8.47	0.08	35.86	3.51

Weighting calculation by inverse distance<sup>2</sup>

	Hole No.	Centre of Pierce Point Lat.	Dep.	Elev.	Distance from Centre DLat.	DDep.	DElev.	Distance squared (DL) <sup>2</sup>	(DD) <sup>2</sup>	(DE) <sup>2</sup>
1	31	10157.3	9984.0	894.0	17.7	-6.0	-19.0	313.3	36.0	361.0
2	32	10198.6	9985.3	890.0	-23.6	-7.3	-15.0	557.0	53.3	225.0
3	10	10216.1	9961.3	800.7	-41.1	16.7	74.3	1689.2	278.9	5520.5
4	40	10129.5	9965.4	874.1	45.5	12.6	0.9	2070.3	158.8	0.8

Weight calculation continued -

	Hole No.	True dist	D <sup>2</sup>	1/D <sup>2</sup>	True W.	Sp.Gr.	Weight	Wt. %
W1	31	26.65	710.3	0.0014	6.15	3.54	0.03	39.92
W2	32	28.90	835.3	0.0012	8.85	3.97	0.04	54.78
W3	10	86.54	7488.6	0.0001	2.37	3.90	0.00	1.61
W4	40	47.22	2229.8	0.0004	1.80	3.51	0.00	3.69

0.076783

Grade calculations -  $((G1*Wt.1)+(G2*Wt.2)+(Gn*Wt.n)/(Wt.1+Wt.2+Wt.n)) = \text{Avg. grade}$

ZINC 4.20 % )  
 LEAD 2.38 % ) @ Specific Gravity: 3.78  
 BARITE 48.19 % )  
 GANGUE 42.82 % )  
 TRUE W 6.39 (calc. by inverse distance<sup>2</sup> only)  
 Tonnage calculation - (True HD \* True SD \* True W) / Sp.Gr. = Tonnes  
 TONNES 64266 TONS = 70,840

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Date:Jan.20/90,Rev.Feb.2/90 Rev.:Sep 1/90

BARYTEX RESOURCES CORP.

ORE RESERVE CALCULATION SHEET - MEL DEPOSIT - BLOCK No. : M - 85

Block Boundaries; Latitude - South -: 10200 North -: 10250 Str.Lgt.: 50  
 Elevation - Upper -: 900 Lower -: 850 Vert.Hgt. 50

Block Centre:- Latitude: 10225 Departure: 9985 Elevation: 875 0.209439 0.978147  
 Block Attitude:- Dip - - : 70 Strike - : 12 True HD : 51.12 True SD : 53.21  
 1.221730 0.939692  
 Source of Grade Data - (°/rad.conversion)

	Hole	From	To	Intercept	True W.	% Zn.	% Pb.	% Barite	Sp.Gr.
G1	7	66.29	70.97	4.68	4.41	9.07	2.88	54.50	4.02
G2	32	44.30	60.00	15.70	8.32	5.36	3.47	55.47	3.99
G3	10	145.39	148.74	3.35	2.37	9.05	1.37	52.99	3.90
G4									

Weighting calculation by inverse distance<sup>2</sup>

	Hole No.	Centre of Pierce Point			Distance from Centre			Distance squared		
		Lat.	Dep.	Elev.	DLat.	DDep.	DElev.	(DL) <sup>2</sup>	(DD) <sup>2</sup>	(DE) <sup>2</sup>
1	7	10214.5	9992.4	902.5	10.5	-7.4	-27.5	110.3	54.8	756.3
2	32	10198.6	9985.3	890.0	26.4	-0.3	-15.0	697.0	0.1	225.0
3	10	10216.1	9961.3	800.7	8.9	23.7	74.3	79.2	561.7	5520.5
4										

Weight calculation continued -

	Hole No.	True dist	D <sup>2</sup>	1/D <sup>2</sup>	True W.	Sp.Gr.	Weight	Wt. %
W1	7	30.35	921.3	0.0011	4.41	4.02	0.02	33.91
W2	32	30.37	922.0	0.0011	8.32	3.99	0.04	63.45
W3	10	78.49	6161.4	0.0002	2.37	3.90	0.00	2.64
W4								

0.056746

Grade calculations -  $((G1*W1)+(G2*W2)+(Gn*Wn)/(W1+W2+Wn)) = \text{Average grade}$

ZINC 6.72 % )  
 LEAD 3.21 % ) @ Specific Gravity: 4.00  
 BARITE 55.08 % )  
 GANGUE 31.22 % )  
 TRUE W 6.09 (calc. by inverse distance<sup>2</sup> only)  
 Tonnage calculation - (True HD \* True SD \* True W) \* Sp.Gr. = Tonnes  
 TONNES 66197 TONS = 72,968

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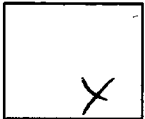
Date:Jan.20/90 Rev.:Sep 1/90 (N/C)



Document Separator

Start

Stop



Levels

	1	2	3	4	5	6	7	8
Binder								
Folder								
Staple								
Paper Clip								
Binder Clip								
Plastic Protector								
Elastic Bands								
TABS			X					
OTHER _____								

Special Instructions: *Behind clear tab*

Appendix C

**Assayer's Certificates**







# Chemex Labs Ltd.

Analytical Chemists • Geochemists • Registered Assayers

212 BROOKSBANK AVE. NORTH VANCOUVER,  
BRITISH COLUMBIA, CANADA V7J-2C1

PHONE (604) 984-0211

TO LARYTEX RESOURCES CORP.

305 - 535 THURLOW ST.  
VANCOUVER, BC  
V6E 3L2

Project MEL

Comments: CC D C MILLER

• Page No. ...1  
Tot. Pages 1  
Date : 7-DEC-89  
Invoice #: I-8929668  
P.O. # :

## CERTIFICATE OF ANALYSIS A8929668

SAMPLE DESCRIPTION	PREP CODE	Pb %	Zn %	Ag oz/T	Ba %						
447421	208 ---	0.03	1.15	< 0.01	6.82						
447422	208 ---	0.29	0.10	< 0.01	26.50						
447423	208 ---	0.06	3.53	< 0.01	7.18						
447424	208 ---	0.04	2.70	< 0.01	43.20						
447425	208 ---	0.42	3.72	< 0.01	37.30						
447426	208 ---	1.83	0.12	0.02	42.50						
447427	208 ---	1.22	1.35	0.03	23.70						
447428	208 ---	1.51	0.18	0.03	23.70						
447429	208 ---	0.58	0.04	0.01	1.87						
447430	208 ---	2.49	2.30	0.06	12.50						
447431	208 ---	5.52	0.04	0.08	4.77						
447432	208 ---	0.72	0.03	0.01	0.20						
447433	208 ---	0.32	0.04	< 0.01	0.80						
447434	208 ---	6.36	6.30	0.07	23.00						
447435	208 ---	3.09	5.74	0.04	46.00						
447436	208 ---	1.06	7.05	0.03	13.20						
447437	208 ---	0.44	10.70	0.03	22.50					MEL	
447438	208 ---	0.75	13.50	0.04	14.70					HOLE 31	
447439	208 ---	0.53	1.14	0.03	0.80						

CERTIFICATION :

*W. Sant'Amorini*



# Chemex Labs Ltd.

Analytical Chemists • Geochemists • Registered Assayers

212 BROOKSBANK AVE., NORTH VANCOUVER,  
BRITISH COLUMBIA, CANADA V7J-2C1

PHONE (604) 984-0221

TRARYTEX RESOURCES CORP.

305 - 535 THURLOW ST.  
VANCOUVER, BC  
V6E 3L2

Project MEL

Comments: CC D C MILLER

• Page No. .  
Tot. Pages. 1  
Date : 05-DEC-89  
Invoice # : I-8929953  
P.O. # :

## CERTIFICATE OF ANALYSIS A8929953

SAMPLE DESCRIPTION	PREP CODE	Pb %	Zn %	Ba %	Ag oz/T					
447440	208 ---	1.58	6.83	19.30	0.08					
447441	208 ---	2.94	4.60	40.10	0.04					
447442	208 ---	0.44	8.08	41.10	0.01					
447443	208 ---	5.53	5.40	43.60	0.04					
447444	208 ---	4.68	5.64	45.20	0.03					
447445	208 ---	1.10	7.16	31.00	0.01					
447446	208 ---	1.30	2.77	2.69	0.03					
447447	208 ---	0.25	0.23	0.87	0.01					
447448	208 ---	10.90	4.60	31.60	0.06					
447449	208 ---	0.38	0.05	1.12	< 0.01					
447450	208 ---	0.72	0.87	15.20	0.02					
447451	208 ---	0.87	2.87	29.60	0.03					
										MEL HOLE 32

CERTIFICATION : *W. Benvenuti*

**ASSAY CERTIFICATE**

**Barytek Resources Corp.** FILE # 90-0911 Page 1  
 305 - 535 Thurlow St., Vancouver BC V6E 3L2 Attn: D.C. MILLER

SAMPLE#	Pb %	Zn %	Ba %
13557	.24	.80	2.68
13558	6.09	5.41	31.32
13559	.24	6.02	44.31
13560	.28	4.81	48.44
13561	.24	15.06	34.23
13562	6.70	7.39	44.54
13563	.24	7.59	22.19
13564	.01	7.01	47.63
13565	.53	17.24	35.71
13566	.04	24.76	21.61
13567	.02	14.87	30.49
13568	.01	2.55	50.80
13569	.02	4.30	42.23
13570	.01	.98	50.26
13571	4.26	5.28	31.67
13572	.04	6.53	25.04
13573	.04	13.34	13.76
13574	1.41	.61	2.17
13575	.90	.04	27.26
13576	.20	.39	8.89
13577	.41	3.32	28.74
13578	.30	3.30	53.52
13579	1.16	6.16	36.82
13580	3.70	7.80	42.55
13581	2.92	3.52	19.04
13582	.09	.25	2.32
13583	4.50	.43	17.72
13584	2.97	4.54	46.69
13585	4.68	6.25	42.89
13586	3.31	4.40	49.87
13587	.80	1.83	7.86
13588	.54	3.06	4.36
13589	.79	7.95	30.49
13590	.01	8.97	46.59
13591	.63	3.05	27.87
13592	4.36	7.89	34.98
STANDARD R-1/SO-4	1.40	2.41	.24

MEL  
 HOLES 33 - 36

- SAMPLE TYPE: Core BA - LIBO2 FUSION, ANALYSIS BY ICP.

SIGNED BY: *C. Leong* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

SAMPLE#	Pb %	Zn %	Ba %
13593	2.45	1.55	37.68
13594	.17	.18	1.10
13595	2.80	.83	37.99
13596	2.28	3.36	3.83
13597	5.23	4.98	23.42



SAMPLE#	Ag oz/t
13558-13562	.05
13563-13573	.01
13574-13575	.01
13577-13581	.06
13583-13586	.01
13588-13593	.12
13594-13597	.05
STANDARD R-1	2.92

852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
PHONE(604)253-3158 FAX(604)253-1716

DATE REPORT MAILED:

*July 7/90*

### ASSAY CERTIFICATE

Barytek Resources Corp. FILE # 90-2144  
305 - 535 Thurlow St., Vancouver BC V6E 3L2

SAMPLE#	Pb %	Zn %	Ag oz/t	Ba %
13606	.51	.43	.06	9.52
13607	.56	2.22	.05	29.31
13608	.34	.23	.02	1.40
13609	.15	.01	.01	7.53
13610	.73	9.76	.17	.44

- SAMPLE TYPE: Core BA - LIBO2 FUSION, ANALYSIS BY ICP.

SIGNED BY. *C. Leong*. D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

MEL  
HOLES 37 - 39

ACME ANALYTICAL LABORATORIES LTD.  
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
PHONE(604)253-3158 FAX(604)253-1716

DATE RECEIVED: JUL 17 1990

DATE REPORT MAILED:

*July 24/90*

### ASSAY CERTIFICATE

Barytek Resources Corp. FILE # 90-2607  
305 - 535 Thurlow St., Vancouver BC V6E 3L2

SAMPLE#	Pb %	Zn %	Ag oz/t	Ba %
13611	.04	2.09	.01	41.30
13612	.08	8.47	.07	21.10
13613	.27	1.77	.01	46.07
13614	1.53	.73	.06	15.36
13615	.52	.15	.01	3.00
13616	.21	2.87	.03	14.78
13617	.18	2.36	.03	45.44
13618	9.91	2.55	.09	29.97
13619	10.72	3.93	.08	11.37
13620	3.71	4.97	.01	27.85
13621	.01	.16	.01	57.72
13622	6.28	6.49	.04	28.38
13623	.80	9.90	.01	40.67
13624	.01	.07	.01	57.42
13625	.03	12.81	.01	34.98
13626	.12	2.64	.02	29.59
STANDARD R-1/BA-A	1.39	2.46	3.03	26.97

MEL  
HOLES 40 - 41

- SAMPLE TYPE: Core BA - LIBO2 FUSION, ANALYSIS BY ICP.

SIGNED BY *C. Leong* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

August 6, 1990

Work Order # 08275

Barytex Resources Corp.  
 305 -535 Thurlow St.  
 Vancouver, B.C.  
 V6E 3L2

**Assay Certificate For Samples Provided**

Sample	% Pb	% Zn
13627	0.154	0.288
13628	1.88	9.24
13629	0.715	0.980
13630	0.289	0.506
13631	0.653	3.74
13632	0.299	3.86
13633	0.030	0.404

H.L. 42  
 ... ..

**MEL**  
**HOLE 42**

Metals -- Aqua Regia Digestion/AAS Assay



ROSSBACHER LABORATORY LTD.

2225 S. Springer Ave., Burnaby,  
British Columbia, Can. V5B 3N1  
Ph: (604)299-6910 Fax: 299-6252

CERTIFICATE OF ANALYSIS

LABORATORY : NORTHERN ANALYTICAL LABORATORY LTD.  
105 COPPER ROAD  
WHITEHORSE, Y.T.

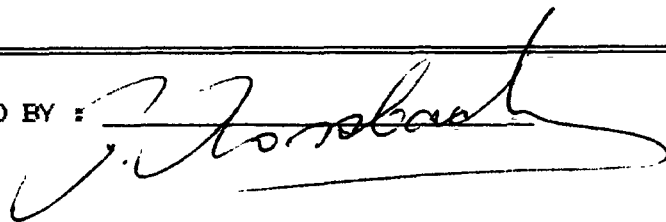
CERTIFICATE # : W0#8275  
INVOICE # : 10490  
DATE ENTERED : 90-08-16  
FILE NAME : NAL90367  
PAGE # : 1

PROJECT : BARYTEX  
TYPE OF ANALYSIS : ASSAY

FILE NO	SAMPLE NAME	% %	
		Ba	BaSO4
	13627	12.48	21.20
	13628	24.12	40.98
P	13629	3.12	5.37
	13630	49.20	83.59
	13631	32.04	44.24
P	13632	7.08	12.02

MEL  
HOLE 42 - part  
DUPLICATE

CERTIFIED BY :





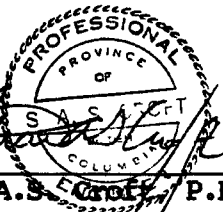
Appendix D

Author's Certificate

**Certificate and Statement of Qualifications**

I, Stuart A.S. Croft, hereby certify that:

1. I reside at #307 - 1918 York Ave., Vancouver, B.C. V6J 1E3
2. I am a consulting geological engineer with the firm of Nevin Sadlier-Brown Goodbrand Ltd., Suite 500 - 342 Water Street, Vancouver, B.C. V6B 1B6.
3. I hold a B.A.Sc. in Geological Engineering from the University of British Columbia and have been practicing my profession since 1981.
4. I am a registered member of the Association of Professional Engineers of British Columbia (Geological).
5. This report is based upon knowledge of the Mel Claim Group obtained during the course of an exploration program on the property during March to September, 1990. I participated in the exploration program jointly with David C. Miller, P.Eng. on behalf of Barytex Resources Corp., and assumed field management of the project following Mr. Miller's tragic death in late July.
6. I hold no interest, direct or otherwise, in either the Mel property, or the securities of Breakwater Resources Ltd. I am the beneficial owner of 4000 common shares of Barytex Resources Corp.

  
Stuart A.S. Croft, P.Eng.

October 9, 1990



COPY

REPORT ON THE MEL PROPERTY

WATSON LAKE MINING DIVISION

YUKON TERRITORY

NTS 95D/6

LATITUDE: 60 DEGREES 21 MINUTES

LONGITUDE: 127 DEGREES 24 MINUTES

FOR

BARYTEX RESOURCES CORP.

BY

D.C. MILLER, P. ENG.

D.C. MILLER GEOLOGICAL SERVICES

MARCH 9, 1990 90-039

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## INTRODUCTION

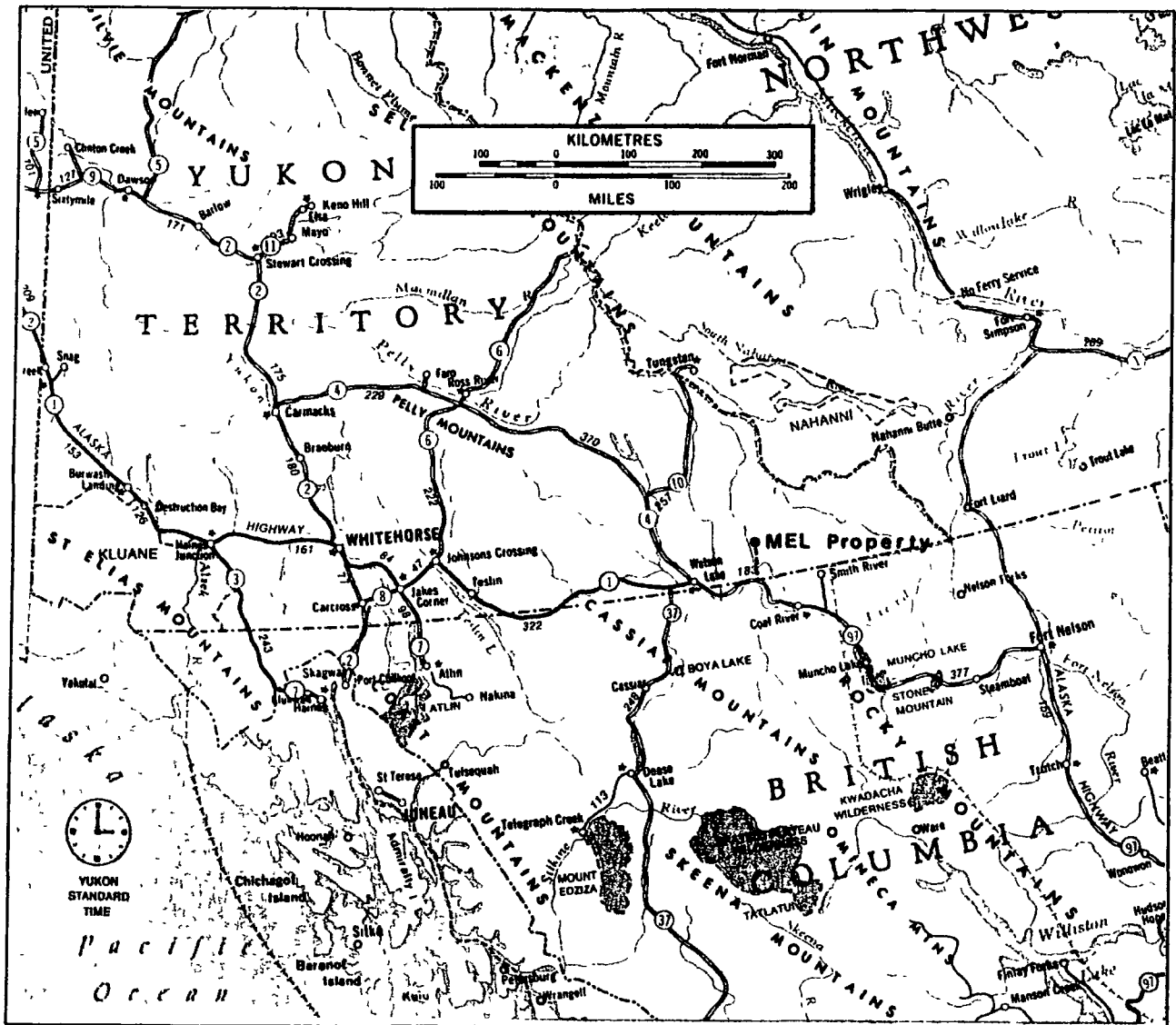
At the request of H.S. Aikins, president of Barytex Resources Corp., the writer has reviewed and summarized exploration results at the Mel zinc-lead-barite property and has submitted a proposal for further exploration of the property. The purpose of this proposed exploration is to develop sufficient data to determine if production at the property is warranted.

The writer is well acquainted with the property and supervised exploration on the property during 1977 to 1989 while employed by St. Joseph Explorations Limited, its successor companies and Barytex Resources Corp.

## SUMMARY

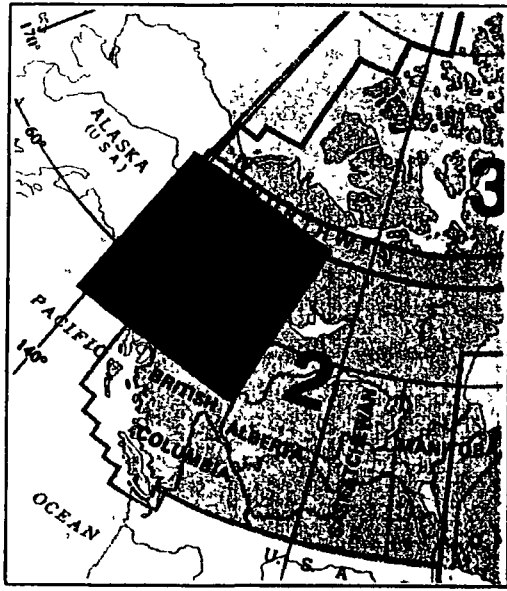
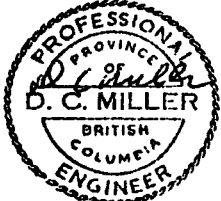
The Mel zinc-lead-barite deposit is located in southeastern Yukon Territory 50 km by winter road eastward of the Alaska Highway. The deposit was first staked in 1967 and has since been explored by geological mapping, geochemistry, ground geophysics, trenching and diamond drilling. This work has indicated a stratiform, folded, lens-shaped deposit, up to 21.7 m thick at its centre, which gradually thins towards both ends over a strike-length of 800 m. Drilling to a depth of 490 m has indicated a mineral inventory of some 5.7 million tonnes (6.27 million short tons) grading 6.77% zinc, 1.92% lead and 51.1% barite. Higher grade portions are present within this reserve including some 4.89 million tonnes (5.39 million short tons) grading 7.78% zinc 2.21% lead and 50.73% barite.

The mineralization is hosted in a barite-quartz horizon at the top of a cryptograined limestone unit at its contact with younger



**INDEX MAP**

Area Covered  
Yukon and Northern B.C.



**LOCATION MAP**

Watson Lake Mining District, Yukon

**Distances from Mel Property**

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

<b>BARYTEX RESOURCES CORP.</b>		
<b>MEL PROPERTY</b>		
<b>LOCATION &amp; ACCESS</b>		
DRAWN BY DCM/HSA	NTS 95D/6	FIGURE
REPORT DATE MARCH 8, 1990	PROJECT NO. 8069	1
<b>D. C. MILLER GEOLOGICAL SERVICES</b>		

slate and shale. The deposit is generally steeply dipping and is still open at depth. The deposit has good continuity and of 33 holes drilled through the deposit, all intersected mineralization. The mineralization is zoned and the best zinc grades occur outward from the centre of the deposit near surface. At depth, zinc grades are strong in 2 of the deepest holes (26 and 27 Fig. 6). Hole 27 averages 20.14% zinc, 2.13% lead and 0.07 % barite over a 5.16 m true width.

Metallurgical test in work in 1978 by Lakefield Research indicated excellent metal recoveries and high concentrate grades. Recent metallurgical work by Westcoast Mineral Testing Inc. confirms earlier work.

Net smelter return data indicate that near surface open-pittable mineralization and higher grade mineralization at depth have economic potential.

In 1981 and 1984 two further zinc showings were discovered eastward of the Mel deposit ( Fig.3). They were named the Mel-East and Jeri showings respectively. Preliminary work on these showings indicate they occur at or near the same stratigraphic level as the Mel, but they are less stratiform in nature and may represent feeder (vein) type mineralization.

A 1989 prefeasibility study by Sandwell Swan Wooster Inc. confirmed the economic potential of the property and recommended further work including diamond drilling.

### LOCATION AND ACCESS

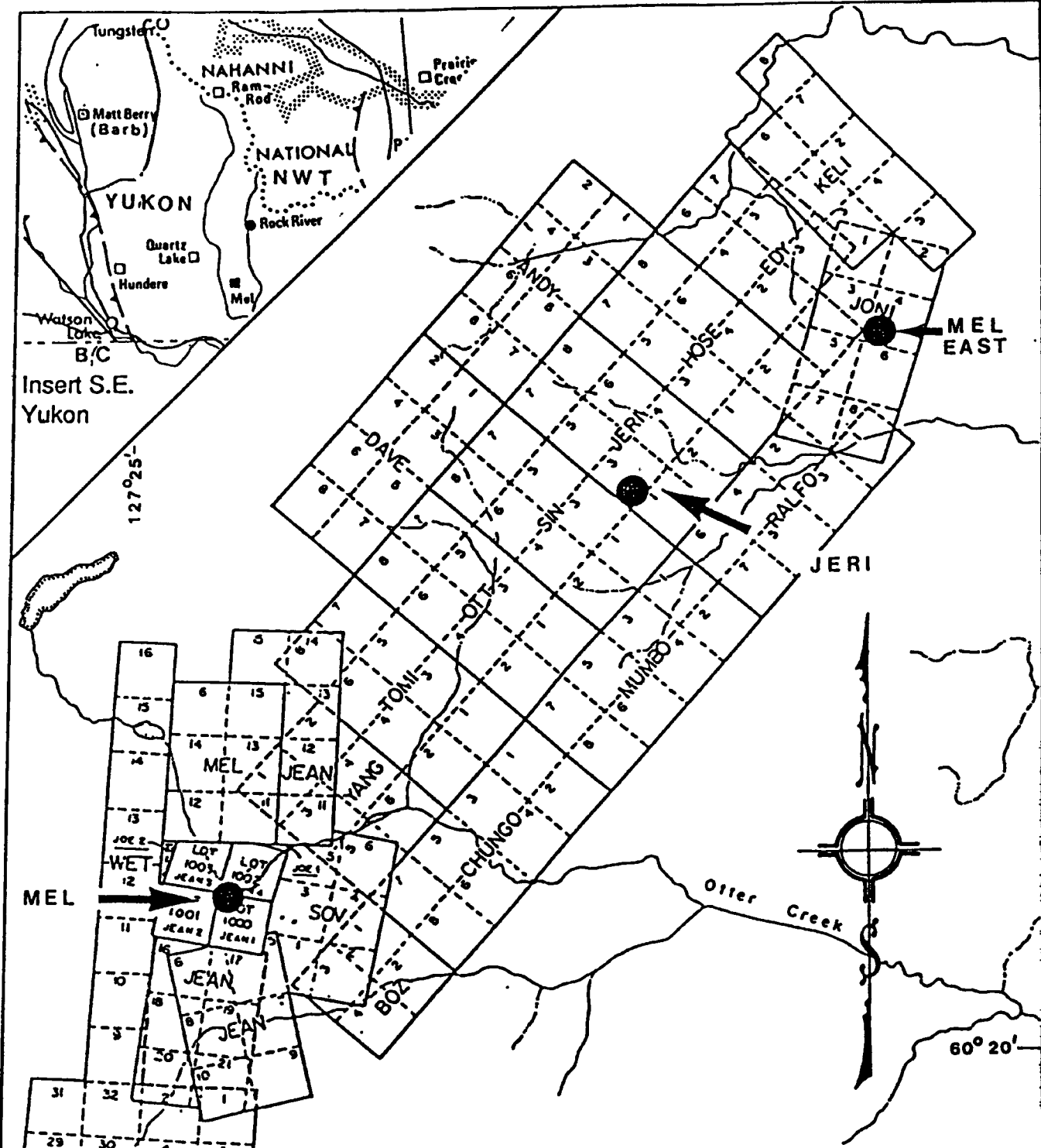
The Mel property is located in southern Yukon Territory, 80 km east-northeast of Watson Lake. Access to the property is provided by a winter road, some 50 km long, leading from the Alaska Highway at a point some 77 km eastward of Watson Lake. Alternative access is provided by a 640 m airstrip located 1.5 km south of the Mel deposit. In 1985 this airstrip accommodated a Caribou aircraft with 8,000 pound payloads. Road distance from the property to the rail-head at Fort Nelson is 507 km and to tidewater at Skagway is 666 km.

### PROPERTY AND OWNERSHIP

The property comprises 171 claims and is owned jointly 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 Barytex. 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 reacquire a 45% interest in the subject property.

The property is located in the Watson Lake Mining District and includes 171 contiguous claims as follows:



Insert S.E. Yukon

127°25'

60°20'

# MEL DEPOSIT CLAIM MAP

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



DRAWN BY HSA/DCM	NTS 95D/6	FIGURE <b>2</b>
REPORT DATE MARCH 9, 1990	PROJECT NO. 9089	
D.C. MILLER GEOLOGICAL SERVICES		



<u>CLAIM NAME</u>	<u>GRANT NO.</u>	<u>EXPIRY DATE</u>
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.

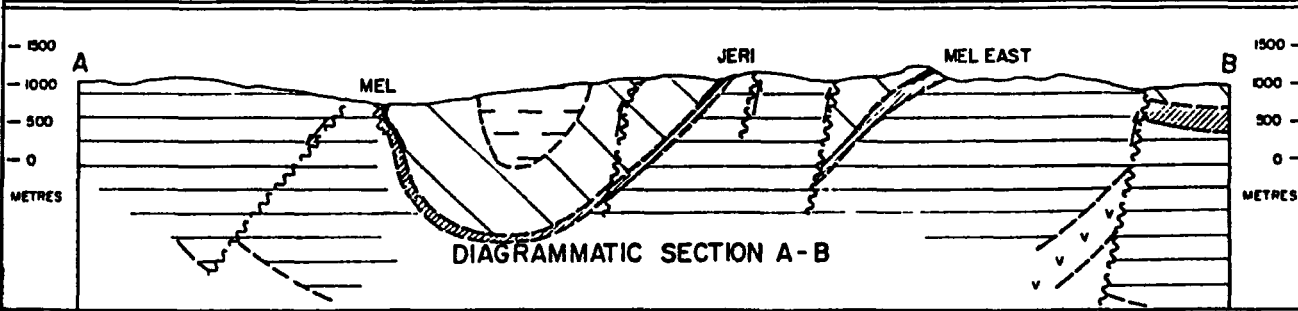
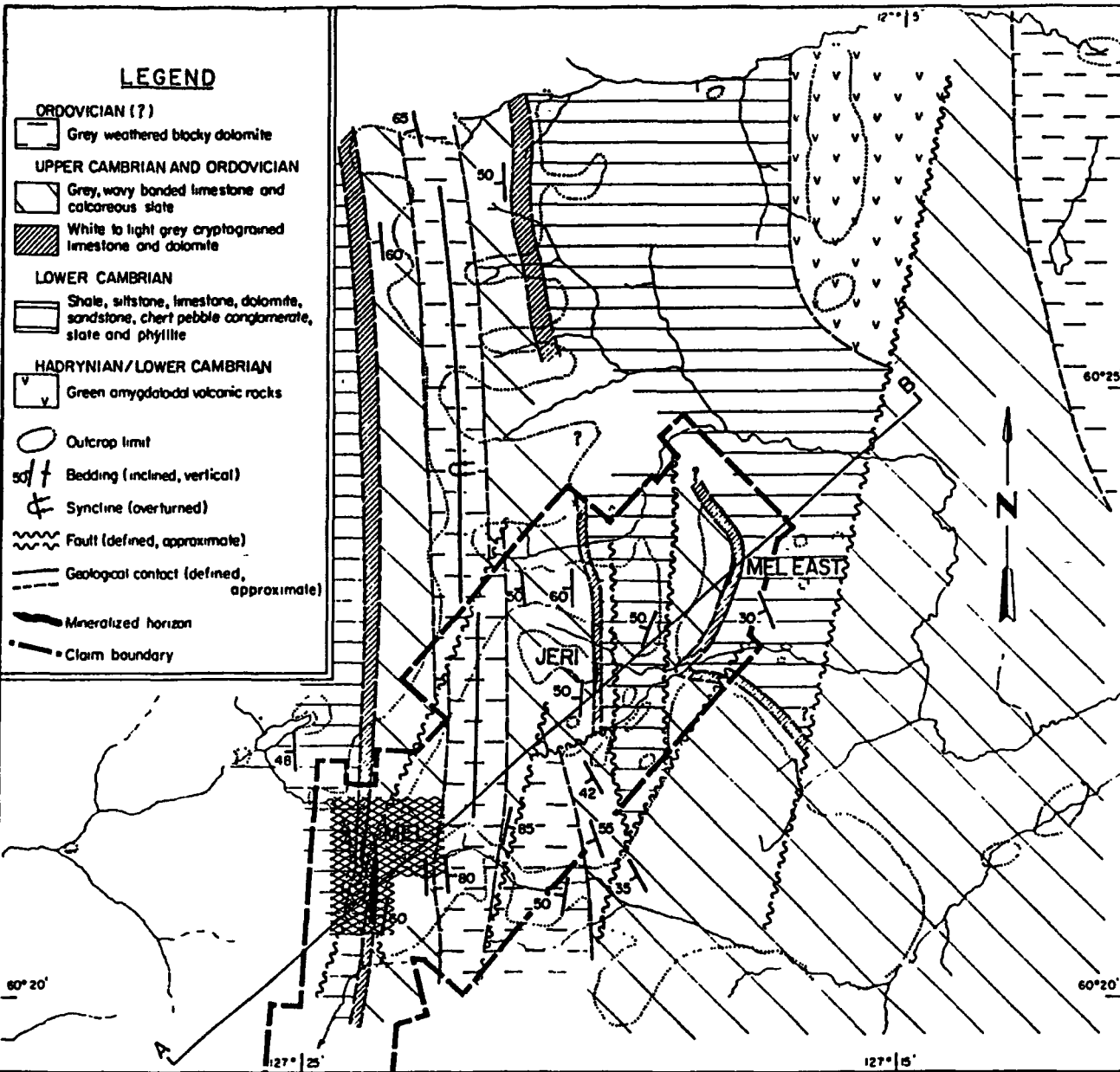
### HISTORY

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.

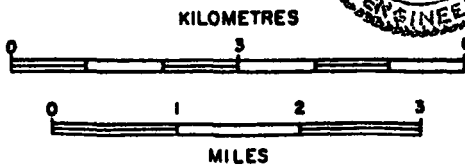
In 1981 regional exploration work by Sulpetro discovered zinc mineralization 7.3 km (Fig. 3) northeast of the Mel deposit. The showings were named Mel-East (Joni), but little further work was done in this area. In 1984 the Jeri zinc showings were discovered between the Mel and Mel-East areas (Fig. 3). 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 showings. 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. In October and November of 1989 Barytex Resources carried out a program of soil geochemistry near the Jeri showings and completed 4 BQ diamond drill holes totalling 662.94 m at the Mel deposit.

#### REGIONAL GEOLOGY

The Mel property is located in the Coal River map area, NTS 95D (Gabrielse and Blusson, 1969). It lies near the southern margin of the Selwyn Basin, a tectonic element present during early Paleozoic time. Sedimentary rocks are dominant and range in age from late Precambrian to Tertiary age. Tertiary age coal-bearing sediments are present in the upper Rock River valley. Mafic to intermediate volcanic rocks range from Late Precambrian to Middle Ordovician



AREA COVERED BY FIGURES 4 TO 6



ADAPTED FROM GSC MAP N-1968 AND COMPANY PLANS

**BARYTEX RESOURCES CORP.**

**MEL AREA REGIONAL GEOLOGY AND KEY MAP**

DRAWN BY DCM	NTS 95 D/6	<b>FIGURE 3</b>
REPORT DATE MARCH 9, 1990	PROJECT NO 9069	

DC MILLER GEOLOGICAL SERVICES

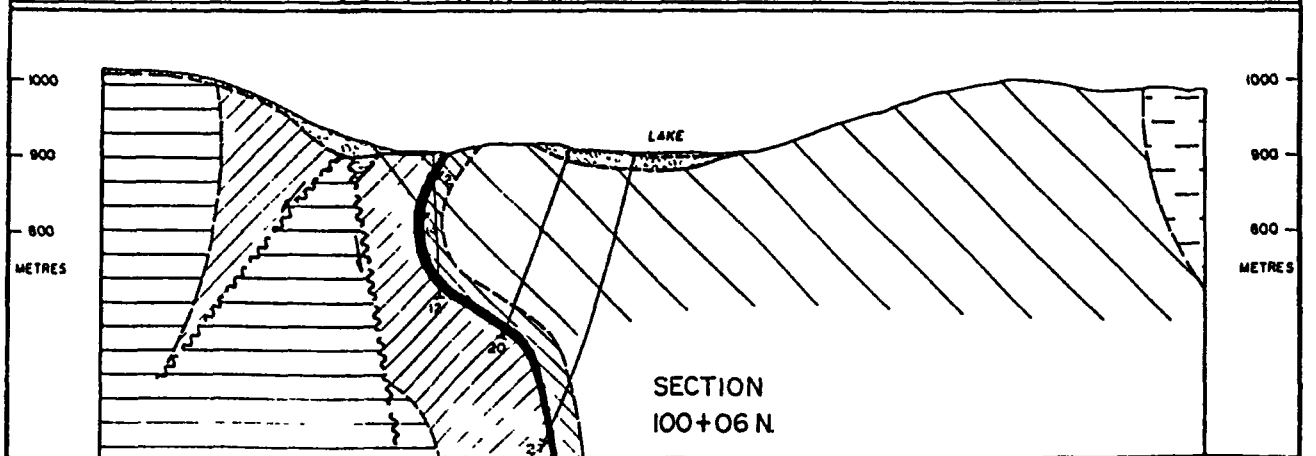
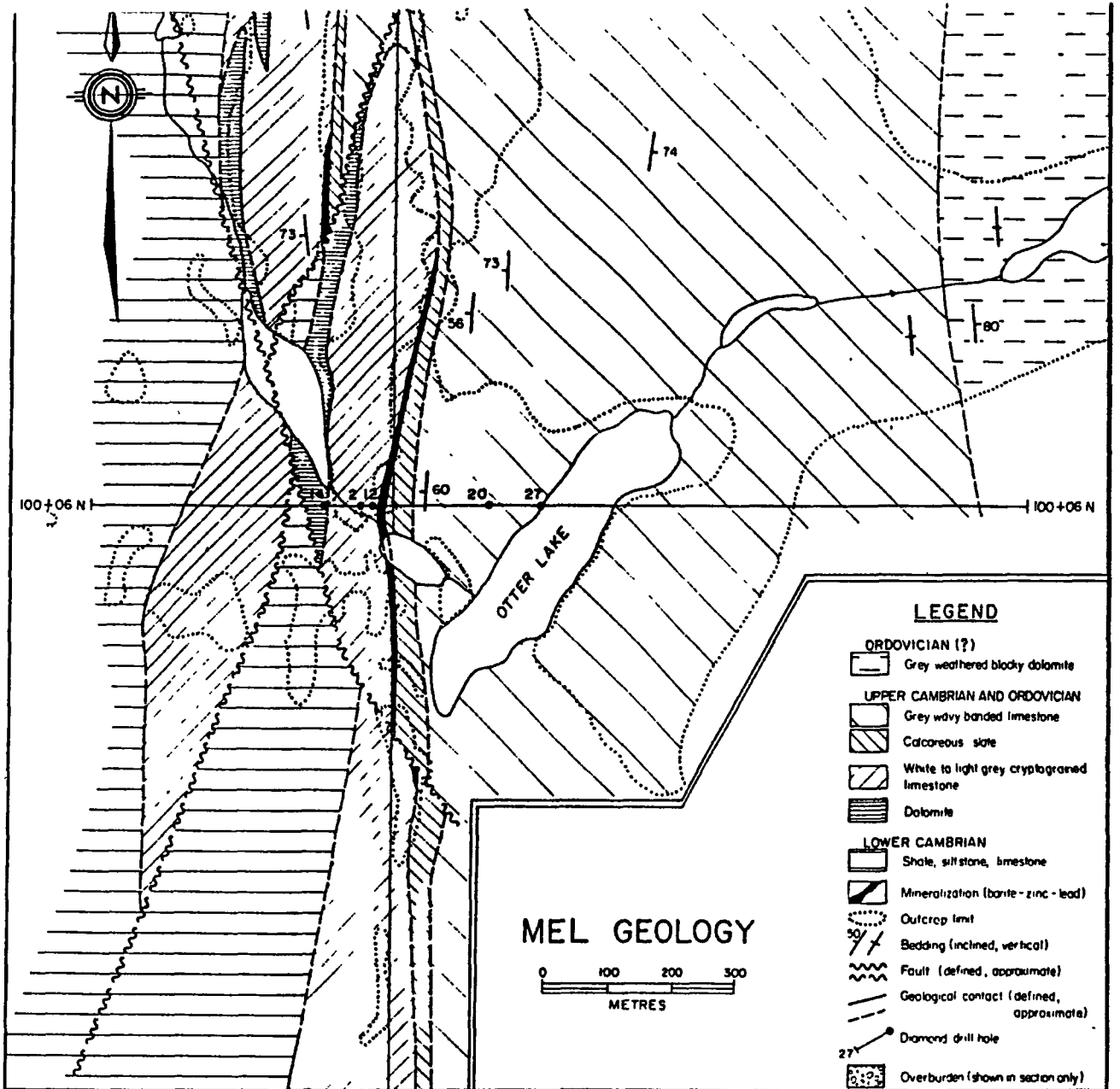
age. Cretaceous age felsic intrusive rocks are present north of the property, with the closest major intrusion lying some 53 km to the northwest. Major north-south trending faults have easterly directed thrust displacements ranging up to 3000 m.

#### PROPERTY GEOLOGY

The Mel property is underlain by Cambrian to Ordovician age strata including carbonates and various clastic sediments. These beds have been folded into a north-south trending, overturned syncline (Figs. 3 and 4). The Mel zinc-lead-barite deposit occurs in a barite-quartz horizon at the top of a 150 m thick cryptograined limestone unit which is overlain by a finely laminated slate-shale unit some 30 m thick. The shale unit grades upward into wavy banded limestone as the calcareous component increases. The wavy banded limestone is some 700 m thick and is in turn overlain by a dolomite unit approximately 800 m thick.

At the Mel deposit, the north part of the mineralization has been offset by a northeast striking normal fault (Fig. 4). The offset portion is known as the West Zone. Drilling at the West Zone indicates mineralization is faulted off at a shallow depth by the normal fault and has little tonnage potential. The south tip of the Mel deposit has been offset to the south by a northwest striking reverse fault. Neither of these faults affect the main portion of the deposit which appears to be relatively undisturbed by faulting.

In the eastern part of the property, two main northerly striking faults are responsible for the repetition of the cryptograined limestone unit in this area (Fig. 3).



ADAPTED FROM  
COMPANY PLANS



**BARYTEX RESOURCES CORP**

**MEL DEPOSIT GEOLOGY**

DRAWN BY  
DCM

NTS  
950/6

**FIGURE**

REPORT DATE  
MARCH 9, 1990

PROJECT NO  
9069

**4**

DC MILLER GEOLOGICAL SERVICES

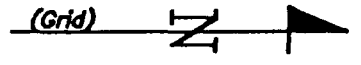
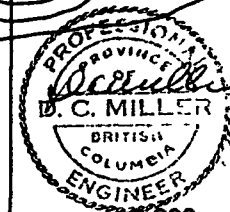
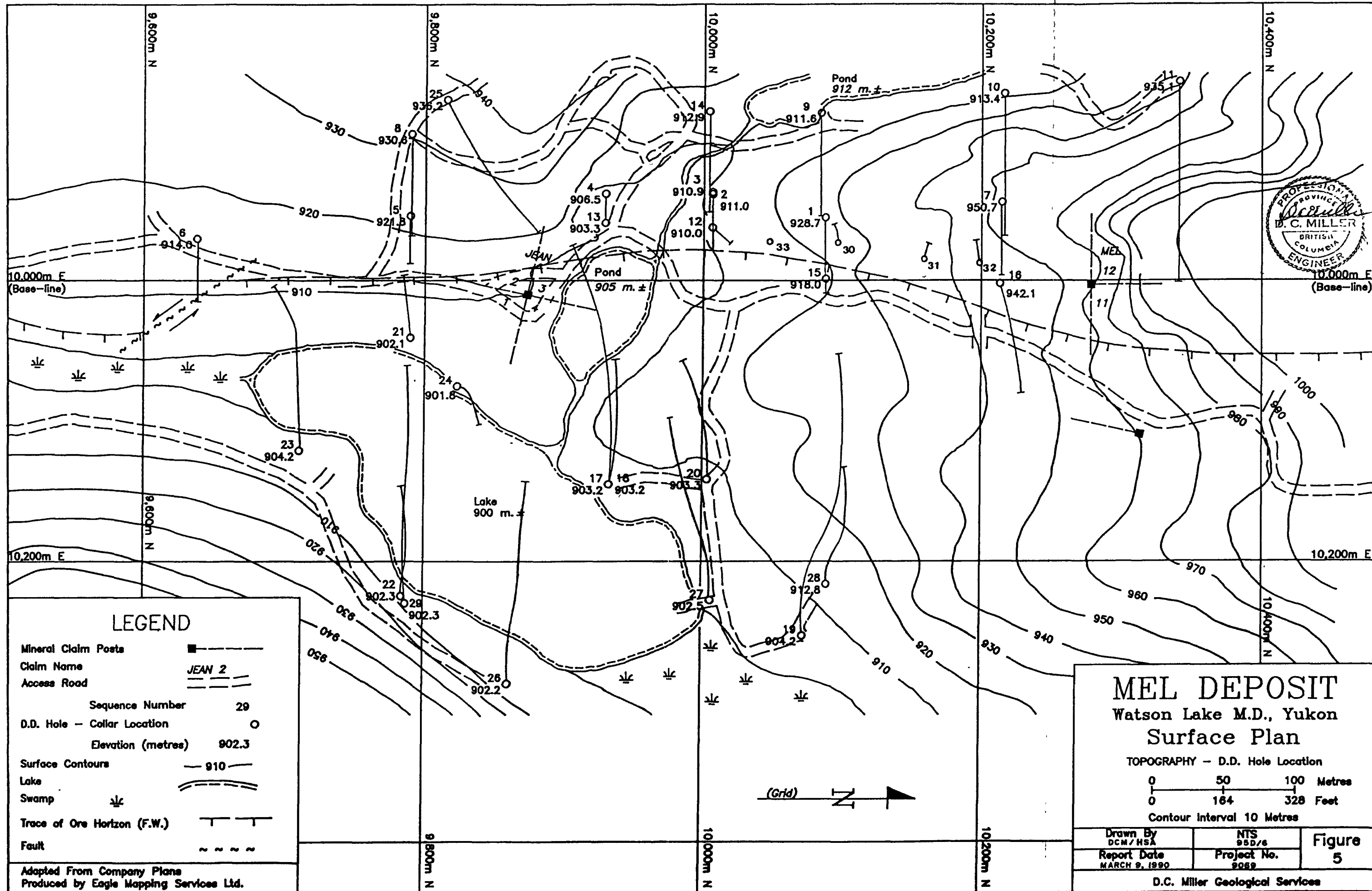
## MINERALIZATION AND DRILLING

### MEL DEPOSIT

At the Mel deposit, sulphide mineralization is largely confined to a barite or barite-quartz facies which locally forms the upper part of the cryptograined limestone unit and is thought to represent an exhalative event within predominantly carbonate rocks. Cross-cutting veinlets thought to represent remobilized mineralization extend into the adjacent shale unit. The deposit is essentially concordant although devoid of sedimentary textures and occurs as a broadly folded lens shaped body up to 21.7 m thick at its centre. It tapers gradually towards both ends over a strike length of 800 m. To date, drilling has intersected mineralization to a vertical depth of 490 m, where an increase in barite content may reflect the upper edge of a thickening trend (hole 26). The deposit is open at depth. Mineralization strikes nearly north-south and dips about 55 degrees westward at surface. The dip steepens to vertical at a depth of 100 m and then reverses to the east, flattens to less than 45 degrees and then steepens to 60 to 80 degrees eastward (Fig. 4).

Economic minerals include sphalerite, galena and barite with trace amounts of chalcopyrite, covellite and tetrahedrite. Gangue minerals include pyrite, quartz, calcite, and sericite. The sericite forms from the alteration of brown mudstone clasts which occur in the mineralized zone.

Sphalerite is nearly iron free and ranges in color from brown to honey-colored. It is associated with barite, quartz and mudstone clasts. It occurs as relatively coarse grained blebs ranging in





size from less than 1 mm up to 2 cm.

Galena occurs mainly as veinlets cutting quartz, barite and sphalerite or is interstitial to these minerals. The grain size of galena is variable, but it is generally finer than that of sphalerite.

Barite is mainly coarse grained and relatively pure. It also occurs to a minor extent in late veinlets associated with quartz and calcite.

The pyrite content is about 2% and it is mainly fine grained. It occurs as disseminations in mudstone clasts and cherty quartz and as veinlets cutting other sulphides, along grain boundaries and in wallrocks. It occurs mainly near the margins of the deposit.

Mineral zoning is evident and the highest grade combined zinc-lead occurs in zones outward from a barite-rich central core (Fig. 6).

With respect to stratigraphic level within the deposit, sphalerite content is generally highest in the lower to middle parts of the deposit. Galena is more erratically distributed and favors the mid to upper stratigraphic levels.

Diamond drill hole intersections are shown in longitudinal section on Figure 6. To date the deposit has been tested with 33 holes. With consideration to grade and thickness, the best hole is No. 27 which intersected 20.14% zinc and 2.13% lead over a true width of 5.16 m at a vertical depth of 370 m below surface.

#### JERI SHOWINGS

The Jeri showings lie 4.5 km northeast of the Mel at nearly the same stratigraphic level (Fig. 3). Stratigraphically, they ex-

tend from the level of the Mel deposit to a depth of 70 m below the Mel horizon. On surface, 3 chip samples from widely spaced showings over a 400 m strike-length averaged 11.55% zinc, 0.02% lead, 0.02% barium and 0.34g/t silver over an average width of 6.9 m. The mineralization is mainly smithsonite and appears to lie parallel to the bedding which dips 50-60 degrees west and strikes due north.

The zone was tested by 10 diamond drill holes at mainly 50 to 100 m centres. These holes indicated significant sphalerite-smithsonite mineralization and strong silicification and dolomitization to occur over a 500 m strike-length and a vertical range of 100 m plus. The best intersection was 14.6% zinc over a core length of 2.15 m in hole 4. Other better intersections included 13.11% zinc over a 3.37 m core length in hole 1 and 7.96% zinc over a 4.58 m core length in hole 2. The drilling indicated the mineralization to be less uniform than that at the Mel, to be accompanied by more intense alteration and to occur over a thicker stratigraphic interval. The Jeri mineralization may be part of a feeder zone that cuts the stratigraphy, as opposed to the Mel, which is clearly conformable with bedding. Additional drilling is required to determine the extent of mineralization at Jeri.

#### MEL-EAST SHOWINGS

The Mel-East showings are located 7.3 km northeast of the Mel and 2.7 km northeast of the Jeri showings. They occur at the same horizon as the Mel and Jeri mineralization and closely resemble the Jeri showings. Fine to coarse smithsonite blebs occur erratically

along a 170 m strike length at the top of the cryptograined limestone unit accompanied by dolomitization and silicification. Rock exposure is poor and the width of mineralization is unknown, but may exceed 3 m. Three grab samples of the best mineralization averaged 8.6% zinc, less than 0.1% lead with very minor barium and silver.

#### GEOCHEMISTRY

In previous work, soil samples from the "B" horizon were strongly anomalous in zinc and lead near the Mel deposit and the Jeri and Mel-East showings. In October 1989 additional soil sampling was conducted north of the Jeri showings and indicated anomalous zinc values to extend intermittently over a distance of 1200 m to the north of the Jeri showings.

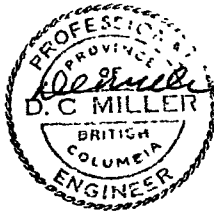
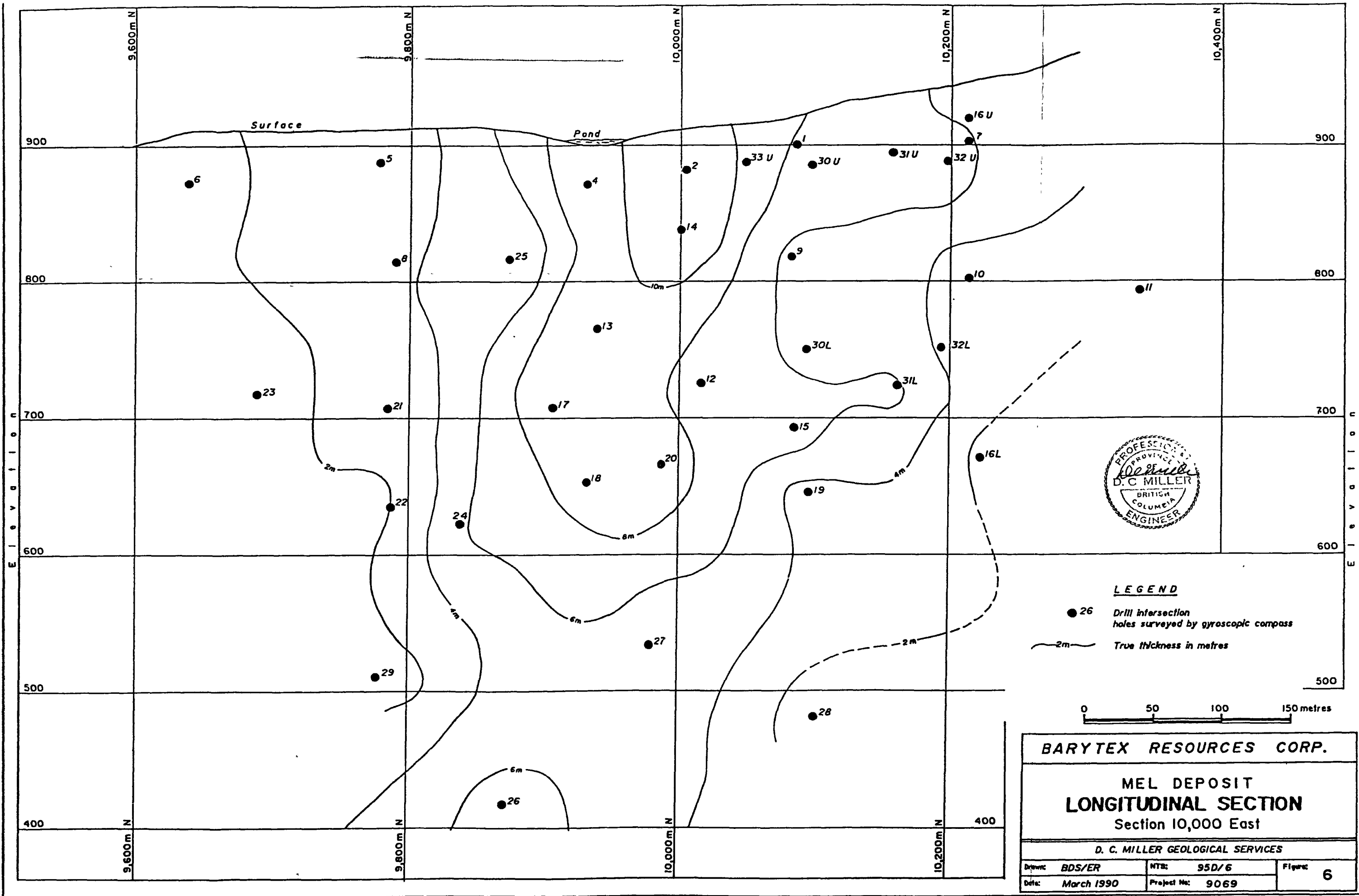
#### GEOPHYSICS

The Mel deposit is not a good geophysical target. In 1977 gravity and induced polarization surveys were carried out by St. Joseph Explorations to obtain model responses over the deposit. Weak induced polarization anomalies were located which appeared to reflect pyrite and galena mineralization. As well, weak gravity anomalies were located over barite mineralization. Similar anomalies were also found well south of the known mineralization, but subsequent drilling to test these targets failed to intersect mineralization. Further geophysical surveys are not recommended.

NEL DEPOSIT, TABLE OF DIAMOND DRILL HOLE INTERSECTIONS

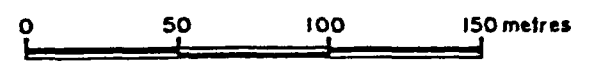
HOLE NO.	FROM (METRES)	TO (METRES)	INTERVAL (METRES)	TRUE WIDTH (METRES)	ZINC %	LEAD %	BARITE %	SPECIFIC GRAVITY
1	35.20	44.20	9.00	8.86	5.86	2.38	65.00	4.12
2	33.83	47.09	13.26	12.81	4.82	2.20	63.10	4.05
3	Hole intersected only part of zone							
4	37.83	46.63	9.60	9.13	6.16	1.13	48.30	3.75
5	46.02	48.92	2.90	2.87	8.62	1.55	65.60	4.13
6	57.15	58.67	1.52	1.50	3.11	1.90	0.00	2.87
7	65.53	70.87	5.34	5.15	8.09	2.50	54.50	3.98
8	131.67	139.60	7.93	3.97	7.09	1.93	63.18	4.08
9	107.59	124.05	16.46	10.58	3.20	2.48	56.84	3.92
Includes	118.64	118.11	7.47	4.80	4.79	1.76	69.55	4.14
10	145.39	148.74	3.35	2.37	9.05	1.37	52.99	3.90
11	198.12	198.88	0.76	0.58	13.50	1.15	0.00	3.02
12	166.21	191.26	25.05	16.10	4.02	2.16	79.33	4.32
Includes	181.05	191.26	10.21	6.56	7.46	4.32	78.95	4.36
13	128.32	148.44	20.12	11.54	4.92	2.27	67.18	4.13
Includes	128.32	146.61	18.29	10.49	5.07	2.39	71.61	4.22
14	89.00	114.50	25.50	20.89	4.77	0.17	46.95	3.65
Includes	89.00	104.00	15.00	12.29	7.84	0.22	68.10	4.09
15	222.00	230.40	8.40	7.27	13.63	1.74	26.15	3.53
16U	22.05	28.90	6.85	4.84	4.41	4.80	53.50	4.01
16L	283.00	285.00	2.00	1.00	4.78	0.41	0.12	2.82
17	246.68	255.80	9.12	8.98	6.74	2.97	63.72	4.14
18	260.25	269.30	9.05	8.74	3.26	0.00	49.83	3.65
19	328.84	331.52	2.68	2.61	8.78	8.45	3.08	3.39
20	245.40	255.10	9.70	9.55	5.00	5.55	43.23	4.04
21	198.80	201.30	2.50	2.46	13.50	0.84	13.70	3.25
22	312.90	313.80	0.90	0.78	14.80	7.06	0.17	3.38
23	225.10	226.20	1.10	1.00	0.23	0.27	0.12	2.72
24	277.20	285.70	8.50	6.51	4.64	1.56	36.99	3.54
25	157.75	161.30	3.55	2.84	3.84	1.66	24.35	3.30
26	498.30	509.93	11.63	6.67	10.40	0.02	60.22	3.99
27	387.95	394.10	6.15	5.16	20.14	2.13	0.07	3.21
28	439.38	440.40	1.10	1.08	8.72	0.38	0.14	2.89
29	401.45	403.10	2.05	1.18	8.44	1.62	0.36	2.96
30U	32.40	46.80	13.60	6.80	6.58	1.09	64.86	4.06
30L	170.80	179.10	9.10	5.22	4.76	0.82	41.43	3.58
31U	34.90	47.24	12.34	6.17	1.89	1.31	40.73	3.54
31L	205.70	215.70	10.00	7.07	8.25	2.53	44.30	3.80
32U	44.38	60.80	15.70	8.32	5.36	3.47	55.47	3.99
32L	189.80	195.25	5.45	3.50	2.81	1.55	59.19	3.91
33U	25.15	40.17	15.02	8.62	9.60	0.41	65.30	4.08

U=upper, L=lower



**LEGEND**

- 26 Drill intersection holes surveyed by gyroscopic compass
- 2m— True thickness in metres



**BARYTEX RESOURCES CORP.**

**MEL DEPOSIT  
LONGITUDINAL SECTION  
Section 10,000 East**

D. C. MILLER GEOLOGICAL SERVICES		
Drawn: <b>BDS/ER</b>	NTS: <b>95D/6</b>	Figure: <b>6</b>
Date: <b>March 1990</b>	Project No: <b>9069</b>	

In the preceding table each sample within a drill hole intersection has been weighted by a factor equal to the product of the assay interval and the calculated specific gravity of the core within that assay interval. In previous work, individual samples were weighted only by the core length of the sample. The specific gravity weighting technique has been used because of the variation in specific gravity between quartz rich and barite rich host rocks. In practice, where a large number of samples are averaged, both methods give a similar result.

#### MINERAL INVENTORY

The term "mineral inventory" is used here to denote mineralization which has not yet been proven to be economic to mine. While the writer was employed by St. Joseph Explorations and later by Novamin Resources, several estimates of mineral inventory were calculated. In a previous report dated September 19, 1989 the writer estimated the mineral inventory to contain 5,687,493 tonnes or 6,269,324 tons grading 6.77% zinc, 1.92% lead and 51.1% barite.

These reserves were calculated on vertical cross-sections and each drill hole intersection was weighted by specific gravity, a dip-length and a strike-length. Individual assays within drill hole intersections were weighted by their corresponding core lengths to calculate the weighted average of each intersection. Sample lengths average about 1.3 m.

Because the drill holes are widely spaced, particularly at depth, additional drilling is required to firm-up this initial estimate.

With respect to Figure 6 and the preceding table of drill hole

intersections, holes 6, 23, 29, 18, 28, 16(1) and 11 were omitted from the estimate because of low grades or narrow widths. Also, holes 30 to 33 were not included as they were drilled later.

In another estimate, minor changes were made by using only the higher grade intervals of holes 9, 12, 13 and 14 as listed in the table of drill hole intersections. This resulted in a lower tonnage, but a higher grade mineral inventory estimated at 4,891,937 tonnes (5,392,382 tons) grading 7.78% zinc, 2.20% lead and 50.73% barite.

Using only holes 5, 8, 21, 22, 26, 17, 20, 27, 15, 19, 16, 7 and 10, an estimated 2,481,660 tons grading 9.71% zinc, 2.52% lead and 43.73% barite is indicated.

The preceding estimates do not include the results of holes 30 to 33 which will modify, but will not greatly change these estimates. A new calculation will be made following completion of the current phase of drilling.

#### METALLURGICAL TESTING

In 1978 preliminary metallurgical testing was carried out by Lakefield Research on sections of mineralized drill core. The average calculated head grade was 2.30% lead, 4.80% zinc and 51.6% barite. After grinding to -100 mesh, the mineralization responded well to flotation and yielded concentrates ranging from 60.9 to 64.7% zinc, 78.0 to 79.6% lead and 90.8 to 94.4% barite with recoveries of 90.3 to 96.2% for zinc, 97.7 to 98.0% for lead and 88 to 90.9% for barite. A later large scale test was done to produce barite concentrate for market evaluation. Concentrate grading 95.1% barite with a

recovery of 92.6% was produced from 12 kg of feed grading 53.5% barite. Recent test work by Westcoast Mineral Testing confirmed earlier results.

#### ESTIMATED NET SMELTER RETURN

The net smelter return (NSR) is defined as the gross value of recoverable metals and commodities minus transportation and smelting charges. Estimates of NSR were made for zinc and lead based on Cominco smelter schedules for mineralization ranging from 7.78% zinc and 2.20% lead up to 9.71% zinc and 2.52% lead allowing for 10% dilution, transportation costs of \$100 per dry ton of concentrates and concentrate grades of 62.8% zinc and 78% lead. Zinc and lead recoveries used were 93% and 98% respectively. Zinc prices range from \$0.70 to \$0.93 per lb. and lead prices range from \$0.40 to \$0.45 per lb. all in Canadian funds. On this basis, NSR ranges are estimated at \$40 to \$73 per ton compared with recoverable gross metal values of \$108 to \$178 per ton. It is expected that more favourable smelter charges could be negotiated on a long term basis.

For barite an NSR has not been estimated as it is presently unknown how much of the barite can be sold. Barite is viewed as a by-product which may provide additional revenue if a market can be established. The location of the Mel property in relation to northern oil and gas exploration areas may provide a competitive advantage over barite supplies shipped from more southerly locations. Once it is demonstrated that the Mel property has a large stockpile of barite and could be a reliable supplier, an entry into the barite market should be possible.



### PREFEASIBILITY REPORT

In October 1989 Sandwell Swan Wooster Inc. prepared a prefeasibility report for Barytex Resources covering construction, capital and operating costs, marketing, economics and recommendations. Capital costs were estimated at \$49,800,000 for a 1650 ton per day operation. Mining costs were estimated at \$16.11/ton for an open pit containing 895,068 tons of ore and \$29.03/ton for underground mining. Milling costs were estimated at \$10.43/ton. Recommendations included a detailed marketing study, metallurgical testing, further drilling and environmental studies.

### EXPLORATION POTENTIAL

It is the writer's opinion that the Mel deposit and the Jeri and Mel-East showings are geologically related and that much of the ground between these occurrences is relatively unexplored. At the present time the Mel deposit is a potential producer which requires closer spaced diamond drilling, bulk sampling, metallurgical testing and marketing and feasibility studies. Additional geological work, trenching and diamond drilling are required to assess the potential of the Jeri and Mel-East areas.

### CONCLUSIONS

- 1) The Mel property was first staked in 1967 and since that time has been explored by geological, geochemical and geophysical surveys, trenching and diamond drilling in several programs spanning 20 years. Each program has contributed positive results.
- 2) Diamond drilling and trenching have indicated the Mel deposit to be remarkably continuous and potentially economic to mine.
- 3) In addition, 2 other areas with zinc-lead mineralization have been discovered on the property, at or near the same stratigraphic level as the Mel deposit, but are located 4.5 to 7.3 km to the northeast. Further work is required to assess these areas.
- 4) Infrastructure in the area has been improved with the construction of an airstrip and a winter road. Drilling or bulk sampling can be done in either winter or in summer months on a cost effective basis.

## RECOMMENDATIONS

### A) Mel Deposit:

- 1) Diamond drilling is required to fill in between present wide-spaced holes near surface and to locate additional mineralization at depth. Surface stripping of shallow overburden areas over the deposit should be done to allow additional sampling and mapping of the surface of the deposit.
- 2) Rejects from diamond drill hole intersections should be used for metallurgical test work. Following drilling and metallurgical work the prefeasibility study should be updated.
- 3) With encouraging results, underground bulk sampling should be done to confirm the continuity of mineralization and to assess rock characteristics. Further metallurgical testing, and a final feasibility study would commence at this time.

### B) Jeri Area:

- 1) Carry out trenching and stripping of anomalous areas.
- 2) Conduct diamond drilling to further test the Jeri Showings as well as new targets indicated by trenching.

### C) Mel-East:

- 1) Additional work at this stage would depend on favourable results from the Jeri showings which are better grade, more widespread and more easily accessed.

ESTIMATED COST

Phase 1

Mel deposit:

Stripping, geological mapping and sampling estimated all in cost.....	\$ 25,000
BQ diamond drilling, 1500 m @ \$150/m all in cost.....	225,000

Jeri showings:

Trenching to test geochemical soil anomalies.....	20,000
BQ diamond drilling, 500 m @ \$140/m all in cost.....	70,000
Report, assessment fees, overhead.....	12,000
Contingency allowance.....	13,000

Total Phase 1 costs	\$ 365,000
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Phase 2

Mel deposit, (contingent on favourable  
Phase 1 results):

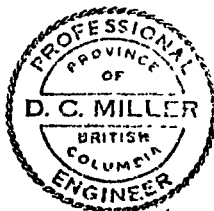
NQ diamond drilling, deep wedged holes, 3800 m @ \$160/m all in cost.....	\$ 608,000
Metallurgical testing, geotechnical and prefeasibility studies, allow.....	92,000

Total Phase 2 costs	\$ 700,000
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Phase 3

Contingent on favourable results from Phase 2, work should include sufficient underground work to determine ground conditions and to allow bulk sampling to confirm grade estimates from drill holes and to provide further material for metallurgical and marketing studies. A project feasibility study should commence following this work.

Preliminary cost estimate- Phase 3.....	\$1,000,000
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Respectfully submitted,

*D.C. Miller*

D.C. Miller, P. Eng.  
March 9, 1990

**CERTIFICATE**

I, David C. Miller, 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 a study of technical data and previous work on the property where I supervised exploration work during 1977 to 1989.
- 6) I have no direct interest in this property nor in the securities of Barytex Resources Corp. or Breakwater Resources Ltd.



*D.C. Miller*  
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D.C. Miller, P. Eng.

March 9, 1990

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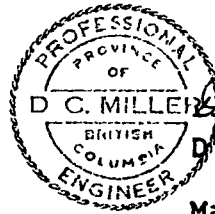
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USE OF REPORT

Re: Report on the Mel Property by D.C. Miller, P.Eng, dated March 9, 1990:

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Permission is hereby granted to use this report in a Prospectus or Statement of Material Facts or for other purposes in its entire unedited form.



*D.C. Miller*  
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D.C. Miller, P. Eng.

March 9, 1990