

Report on a
**Diamond Drilling Program
on the
Debbie Claim Group**

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VANCOUVER, B.C.

Nelson Mining Division
Nelson Area, B.C.

LOG NO: 1221 RD.
ACTION:
FILE NO:

DEBBIE (4382)
DEBBIE 2 (4756)
Latitude: 49° 24.2' N
Longitude: 117° 29.0' W

Owner:

MESA RESOURCES LTD.
11735 - 170th Street
Edmonton, Alberta
T5M 3W7

Operator:

BULLION RANGE/MESA RESOURCES JOINT VENTURE
c/o #401 - 134 Abbott Street
Vancouver, B.C. V6B 2K4

by

Stuart A.S. Croft, P.Eng.
NEVIN SADLIER-BROWN GOODBRAND LTD.

dated

November 30, 1989

GEOLOGICAL BRANCH
ASSESSMENT REPORT

19,435

Summary

The Bullion Range - Mesa Resources Joint Venture was formed in order to conduct precious metal exploration on the Debbie Group, two contiguous metric mineral claims comprising 28 units, located some 16 km southwest of Nelson, B.C. The claims are situated in the divide between Connor and Glade Creeks, immediately east of the junction of the Slocan with the Kootenay River, and are accessible by road from the Rover Creek Forestry Road. Fieldwork on the property during the summer of 1988 consisted primarily of road construction and the diamond drilling of four NQ holes totalling 1250' (381 m).

The claims lie at the contact between a granodiorite pluton considered to be correlative to the Nelson Batholith, and a sequence of older volcanic and sedimentary rocks of the Ymir Group. The property covers two old exploration adits in which gold-bearing massive sulphide mineralization has been encountered. A 1987 survey identified several features giving a geophysical response consistent with massive sulphide mineralization both in the vicinity of the old workings and elsewhere on the property. The recent diamond drilling program was designed to test the geophysical anomalies for precious metal mineralization.

DDH 88-1 was drilled to investigate a downdip extension of massive pyrite-pyrrhotite-chalcopyrite mineralization in the "Upper Adit". While the structure could not be positively identified, and gold assays of the core were low, the characteristics of the sulphide occurrences in 88-1 are consistent with that in the Upper Adit. Two holes, 88-2 and -3, investigating a strong geophysical anomaly east of the Adits encountered significant sulphide mineralization within a strongly altered metadacite. Although samples of the core returned

assay values ranging between 0.060 and 0.106 oz Au/ton, with similarly low values for silver, the discovery constitutes a significant new exploration target. Several massive pyrrhotite-pyrite-chalcopyrite veins within the most heavily mineralized sections of 88-3 clearly account for the anomalous magnetic and electromagnetic geophysical response in the area. A fourth hole, 88-4, encountered only weak sulphide mineralization within a dioritic intrusive southwest of the old workings.

Although grades encountered thus far are sub-economic, the nature of sulphide occurrences is consistent with ore grade gold mineralization identified at both the Upper Adit, and at showings on the nearby Hungary Man claim. Assays of "vein" samples collected from the Upper Adit ranging between 0.80 and 1.00 oz Au/ton indicate that precious metals were introduced at some stage of the mineralizing events which resulted in the sulphide deposits on the Debbie property.

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1. Introduction

1.1 Terms of Reference

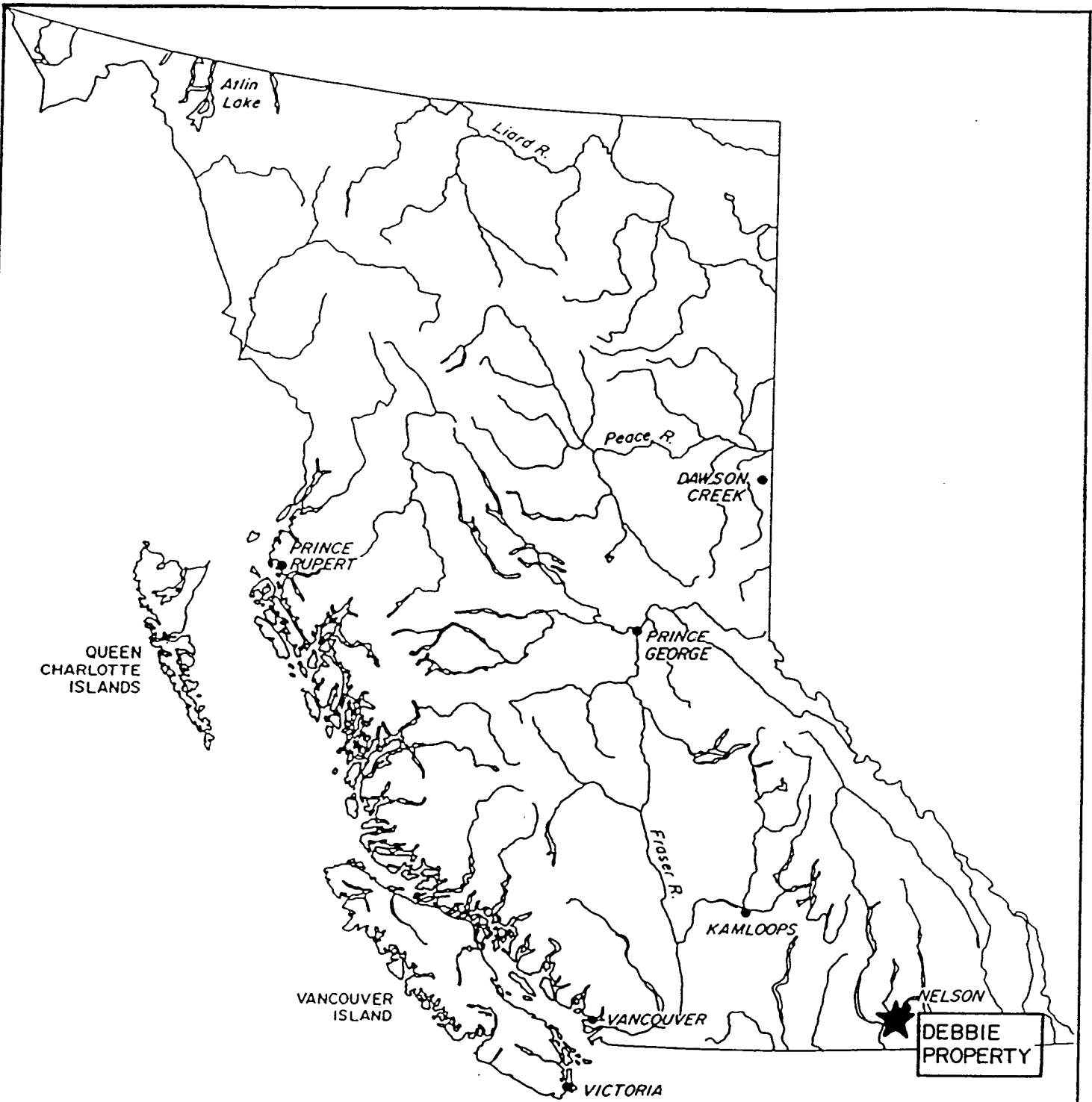
This report on the Debbie Group was prepared by Nevin Sadlier-Brown Goodbrand Ltd., Consulting Geologists and Engineers (NSBG) at the request of the management Mesa Resources Ltd., the current operator of a Joint Venture partnership formed to conduct precious metal exploration on the Debbie property.

This report is intended as a description of the property and to summarize a diamond drilling exploration program undertaken by the Bullion-Mesa Joint Venture during July to September, 1988. It is based primarily upon information obtained during the course of the exploration program conducted by NSBG and upon reviews of published and unpublished data on the area.

1.2 Location and Access

A common legal corner post is located at approximately 49° 24.2' N latitude, 117° 29.0' W longitude (NTS mapsheet 82F/6W). The claims are situated in the divide between Connor and Glade Creeks immediately east of the junction of the Slocan with the Kootenay River. The group lies 14 km northwest of Castlegar and 16 km southwest of Nelson in the Kootenay region of southeastern B.C. (Figure 1).

Access is by way of the Connor Creek branch of the Rover Creek Forestry Road which leads to the headwaters of Connor Creek. A 3 km four-wheel drive access road constructed in conjunction with the current exploration program affords excellent access to the northeastern quadrant of the Debbie Claim.



Bullion Range Exploration Corp./ Mesa Resources Ltd. Joint Venture	
DEBBIE PROJECT	
Location Map	
Connor Creek, Nelson area, B.C.	
N.T.S. 82F/6W Nelson M.D., B.C.	
Date: JAN 89	Figure 1
NEVIN SADLIER-BROWN GOODBRAND LTD.	

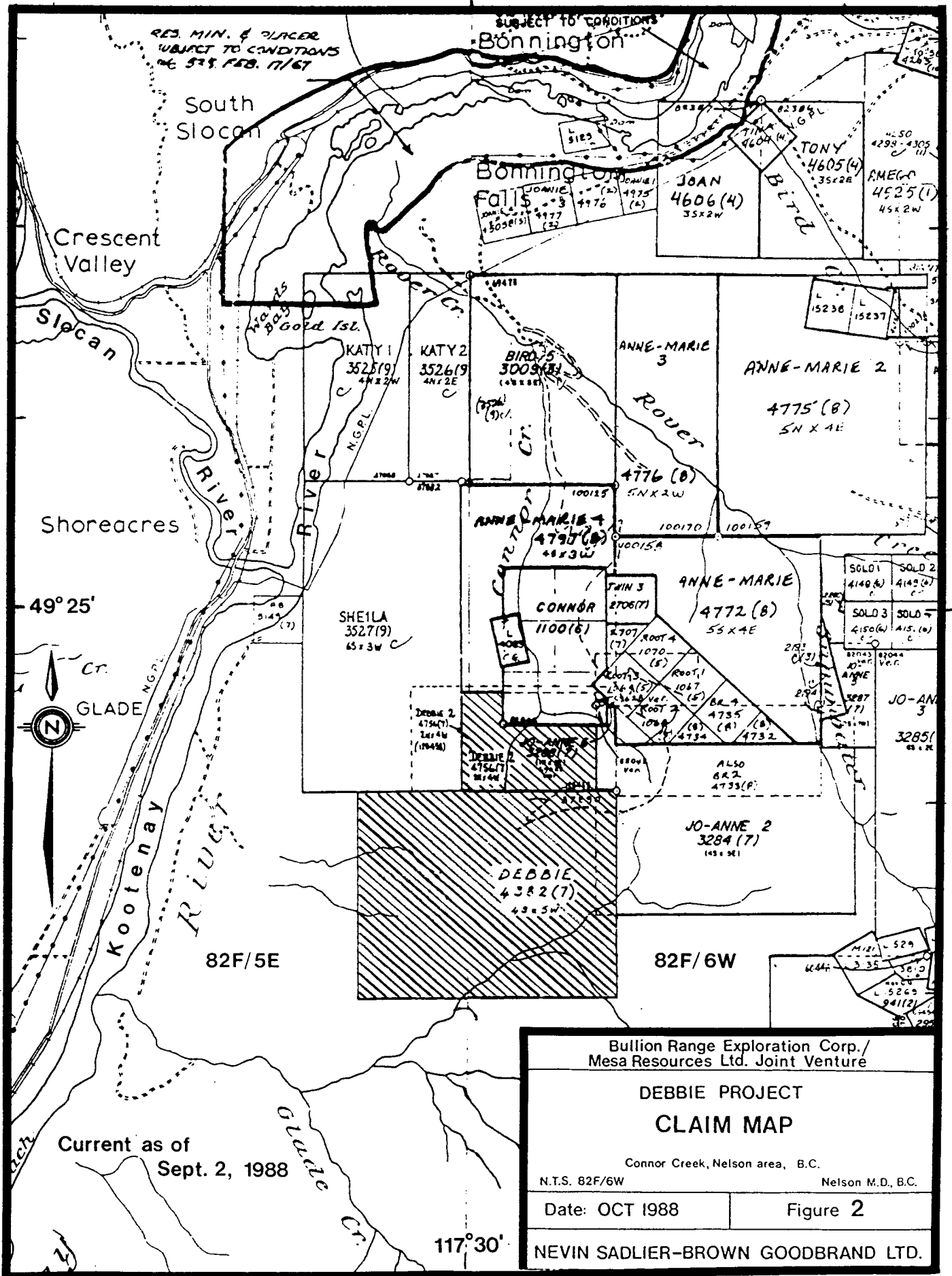
1.3 Claims and Ownership

The property consists of two metric mineral claims collectively known as the Debbie Group (Figure 2), situated in the Nelson Mining Division, southeast B.C. Staked by A.G. Isaak in July 1986, all interest in the Debbie claim was subsequently transferred to Mesa Resources Ltd. Under the terms of a Joint Venture Agreement with Mesa, Bullion Range earned a 51% title in the property in May 1987. The Debbie 2 claim adjoins the Debbie on its northern boundary and was staked by Bullion Range in July 1987 to cover possible northward extensions of structural features and mineralization identified in an earlier survey. On May 10, 1989, the Joint Venture agreement between Mesa and Bullion was terminated and, in November, 1989 the Debbie 2 claim was transferred to Mesa Resources. Pertinent claim information is as follows:

<u>Claim Name</u>	<u>Record No.</u>	<u>Mining Division</u>	<u>Units</u>	<u>Owner of Record</u>	<u>Expiry Date</u>
DEBBIE	4382	Nelson	20	Mesa Resources Ltd.	16 Jul 90
DEBBIE 2	4756	Nelson	8	Mesa Resources Ltd.	27 Jul 90

1.4 Physiography and Vegetation

The Debbie property is situated within the rugged terrain of the Selkirk Mountains and is characterized by irregular topography and moderate to steep slopes. The northern part of the property is in the headwaters of Connor Creek, a northerly flowing tributary of Rover Creek, which in turn enters the Kootenay River at the hydroelectric power dam at South Slocan, 5 km north of the Debbie claim. The remainder of the property is in the headwaters of



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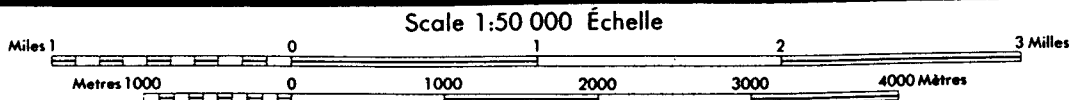
**DEBBIE PROJECT
CLAIM MAP**

Connor Creek, Nelson area, B.C.

N.T.S. 82F/6W Nelson M.D., B.C.

Date: OCT 1988 Figure 2

NEVIN SADLIER-BROWN GOODBRAND LTD.



Glade Creek and a smaller creek which both flow westerly to join the Kootenay River about 2 km west of the claim (Figure 2).

Elevations vary from 1070 m above sea level on the north boundary of the group in Connor Creek, to over 1600 m on the crest of the ridge in the centre of the Debbie claim, to 825 m on the west boundary. The topography of the group is irregular although slopes tend to be moderate and relief subdued.

The area is generally heavily wooded in mature coniferous forest but with large areas in well established mixed coniferous and deciduous second growth. Except in scattered, rocky bluff areas with little soil development, undergrowth on the predominantly north-facing slopes is dense.

1.5 Previous Work

The property covers two sets of old workings on the north facing slope in the headwater area of Connor Creek. The lower working consists of an adit 84 m in length driven on a bearing of 125°. The upper workings are located some 60 m to the southeast of the portal and consist of a short adit and an open cut. Numerous other smaller workings, including several open cuts and test pits have been rediscovered as a result of ongoing exploration in the area. Although a search of old records has been conducted, no reference to this work has been found. Judging from the condition of the workings and the nature of the vegetation, however, they are estimated to date back to the 1930's or earlier. Conceivably, work in the vicinity of the Debbie Group was conducted contemporaneously with that on the Hungary Man, a Crown-Granted mineral claim covering a gold-copper

showing (MMAR, 1956) situated near the northern boundary of the Debbie 2 claim.

In 1983 the area now covered by the Debbie group was staked and prospected by Hillside Energy Corporation of Vancouver, B.C. The lower adit was rediscovered at this time and subsequently both sampled and mapped by Hillside personnel. The claims were allowed to lapse when the Company was unable to fund a second phase exploration program.

Following staking of the Debbie claim, Bullion Range conducted an exploration program comprising line-cutting, and Horizontal Loop Electromagnetic (EM) and Magnetic surveys (Mark, 1987) centered on the old workings. The current exploration program was designed to investigate several magnetic and EM anomalies identified by the 1987 work.

1.6 1988 Program Description

Fieldwork on the Debbie group during the summer of 1988 consisted primarily of road construction and diamond drilling with supplementary geological mapping and sampling. 3.2 km of four-wheel drive road were constructed to afford access to the old workings on the Debbie claim, and to the 1987 grid area where several EM and magnetic anomalies considered to be associated with sulphide mineralization had been identified. Four NQ (50 mm core diameter) holes totalling 1250' (381 m) were drilled during the course of the project. The locations of DDH 88-1 through 88-4 are depicted on Figure 4, with details as follows:

- 7 -

Name	Collar Location ¹	Collar El. (') ²	Azimuth (°)	Dip (°)	Depth (feet)	Depth (m)
88-1	L0+40N 0+65W	4335	090	-45	300	91.4
88-2	0+95N 1+55E	4405	102	-45	320	97.5
88-3	L0+40S 1+30E	4570	090	-45	300	91.4
88-4	L1+20S 2+30W	4420	090	-45	330	100.6

¹Relative to 1987 Grid co-ordinates ("L" designates on line).

²Relative to Lower Adit (taken as 4250') as determined by a hip-chain and compass survey.

2. Geology

2.1 Regional Geology

The Debbie property is underlain by a sequence of Mesozoic sedimentary and volcanic rocks of the Rosslund, Hall and Ymir Formations. The Rosslund Formation consists primarily of andesitic volcanics locally altered to greenstone and in some instances to serpentinite. The Ymir and Hall Formations consist principally of black carbonaceous argillites, slates and limestones.

The older rocks are locally intruded by the granodiorites of the Nelson batholith and related smaller plutons including dykes and sills of various widths.

2.2 Property Geology

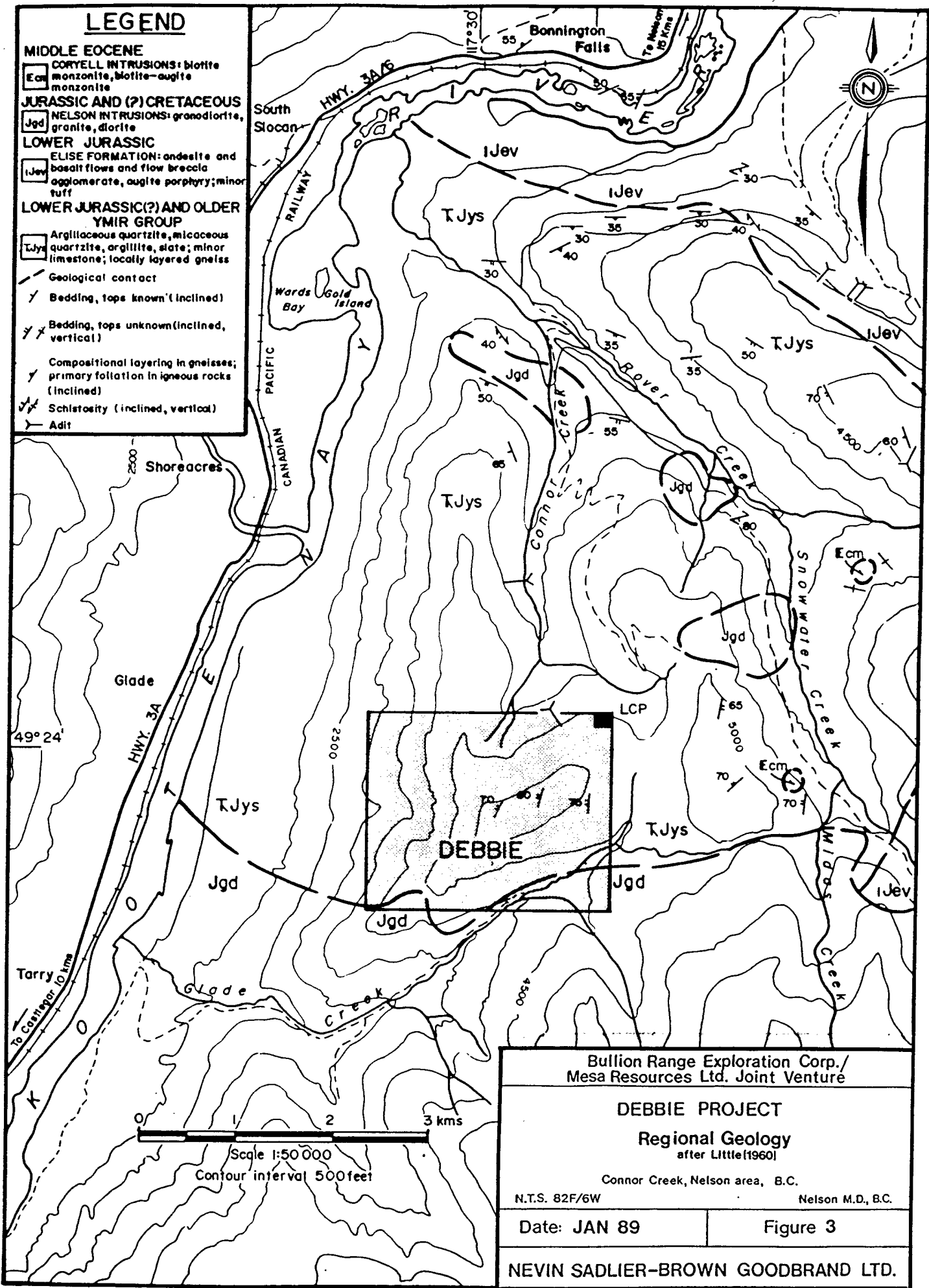
The Debbie claims lie at the contact between a granodiorite pluton of unknown dimensions and a sequence of older volcanic and sedimentary rocks of probable Triassic or Jurassic age (Figure 3). The volcanic rocks are locally metamorphosed and may represent the Rosslund Formation in the area. They are locally cut by small but undelineated dioritic intrusive bodies, one of which is located near the northern boundary of the Debbie claim at the head of Connor Creek.

2.3 Economic Geology

Several sets of old workings on the Debbie claims have been located during the course of recent surveys on the property. About 750 m west of the legal corner post on the northeast corner of the Debbie

LEGEND

- MIDDLE EOCENE**
Ecm CORYELL INTRUSIONS: biotite monzonite, biotite-augite monzonite
- JURASSIC AND (?) CRETACEOUS**
Jgd NELSON INTRUSIONS: granodiorite, granite, diorite
- LOWER JURASSIC**
IJev ELISE FORMATION: andesite and basalt flows and flow breccia agglomerate, augite porphyry; minor tuff
- LOWER JURASSIC(?) AND OLDER YMIR GROUP**
TJys Argillaceous quartzite, micaceous quartzite, argillite, slate; minor limestone; locally layered gneiss
- Geological contact
 / Bedding, tops known (inclined)
 / \ Bedding, tops unknown (inclined, vertical)
 / \ Compositional layering in gneisses; primary foliation in igneous rocks (inclined)
 / \ Schistosity (inclined, vertical)
 - Adit



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DEBBIE PROJECT
 Regional Geology
 after Little (1960)

Connor Creek, Nelson area, B.C.
 N.T.S. 82F/6W Nelson M.D., B.C.

Date: JAN 89 Figure 3

NEVIN SADLIER-BROWN GOODBRAND LTD.

claim is an adit bearing 125° (the "Lower Adit"). The adit does not appear to have encountered significant economic mineralization. Assays of material obtained from the Lower Adit dump ran between 0.042 and 0.210 oz Au/ton (Sadlier-Brown, 1986).

Approximately 60 m southeast of the Lower Adit, is a second shorter adit (the Upper Adit). Trending at 190°, the adit extends approximately 12 m into a competent metavolcanic following a shear zone varying in width from 1 to 30 cm. Samples of massive sulphide pods obtained from the zone contain a pyrite-chalcopyrite-pyrrhotite sulphide assemblage and assayed at 0.868 oz Au/ton (Sample No. 30936, Appendix D), with various other analyses reporting between 0.240 and 0.980 oz Au/ton (Daughtry, 1987). Surface trenching trends southerly from the portal for about 5 m.

A badly overgrown 5 m trench 200 m southwest of the Upper Adit was rediscovered during a road right-of-way survey. No substantial development of the pyrite-chalcopyrite mineralization appears to have been undertaken beyond the surface trenching. Assays of a sample of the sooty argillite containing sulphide mineralization in the vicinity of the old trench returned values of 0.013 oz Au/ton, 0.51 oz Ag/ton, and 0.79% Cu (Sample No. 71558, Appendix D).

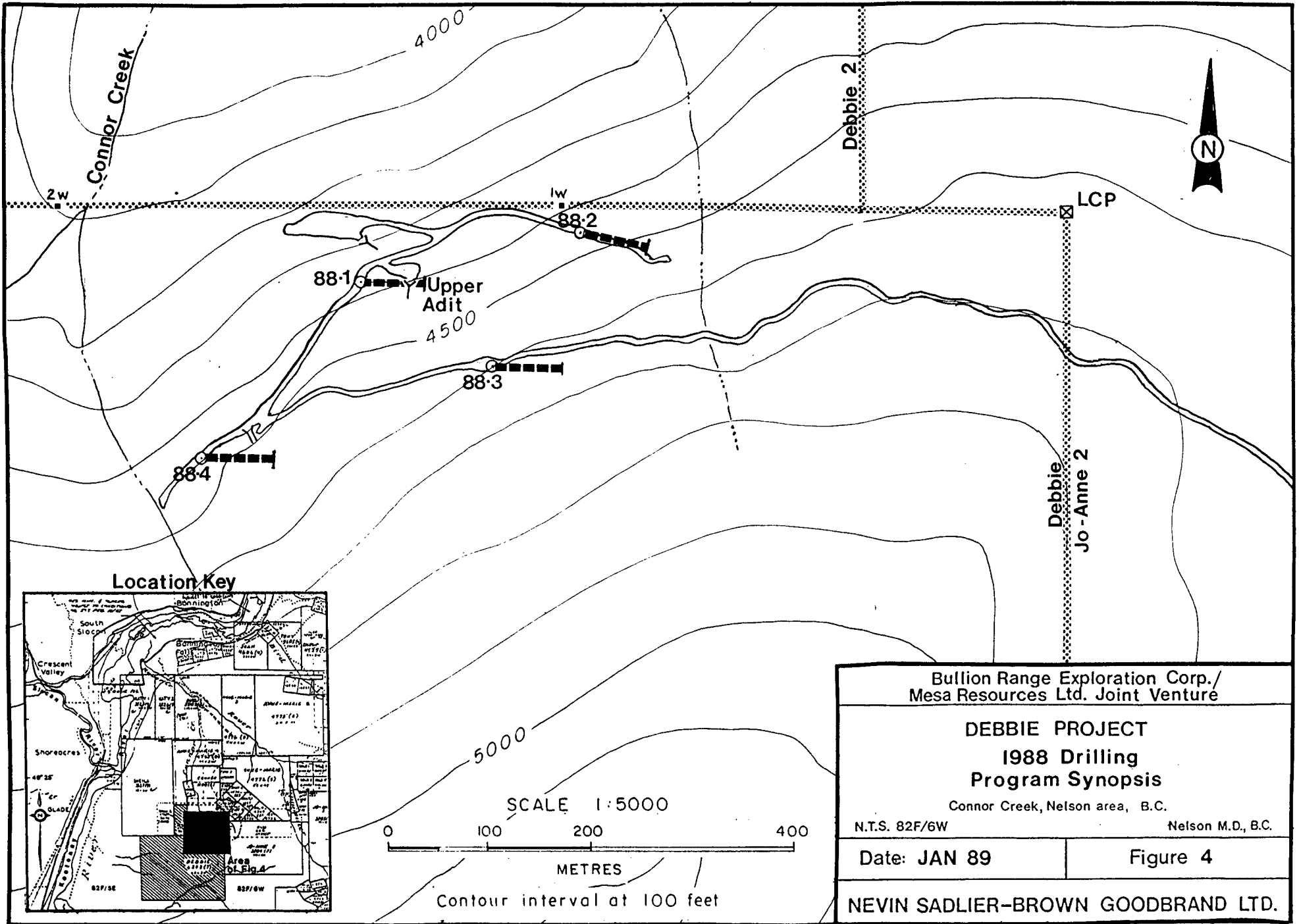
3. Drilling Program

3.1 Program Description

In order to facilitate access to the Project area, the 1988 exploration program included the construction of a four-wheel drive road to the vicinity of the northeast portion of the Debbie Claim. The "pioneered access" road was constructed in mid-July using a D-8 Caterpillar bulldozer and extends approximately 3.2 km from an existing mining road.

On 29 August 1988, a diamond drill was mobilized to the project area in upper Connor Creek, approximately 13 km by road from the Bonnington Power Station turnoff on Highway 3A. Drilling was performed by Bergeron Diamond Drilling Ltd. of Greenwood, B.C., utilizing a Longyear Super 38 equipped for NQ wireline operation. The tank track-mounted rig was manoeuvred to a drill pad constructed on the main access road immediately west of the Upper Adit. Due to dry weather conditions during the drilling program, it was necessary to truck water into the site from Rover Creek. Hole 88-1 was the first of four holes drilled in the vicinity of the 1987 grid area (Figure 4). The program was completed and the site vacated by 15 September 1988.

The NQ core (50 mm diameter) was logged by the author and is described in detail in Appendix C, with graphic logs plotted in cross-section on Figures 5 through 8. The core was stacked and secured on a leveled area on the Upper Adit dump. Portions of the core were split and submitted to Chemex Labs Ltd. of North Vancouver for analysis. The samples were fire assayed for gold (with A.A. finish) and a 32-element ICP analysis conducted to obtain further



geochemical information. Gold assays and the ICP determination for silver and copper are presented in profile on the cross-sections with the remainder of the results presented in their entirety in Appendix D.

3.2 Diamond Drillhole 88-1

The first hole, designated 88-1, was sited 45 m west of the portal of the Upper Adit (Fig. 4). It was drilled eastward at an inclination of 45° and was designed to test for a downdip extension of gold-bearing massive- and disseminated sulphide mineralization observed in the Upper Adit. The hole extended to a measured depth of 300'.

Lithology in 88-1 (Figure 5) is dominated by a medium-grained metadacite with a characteristic mottled dark grey-green and pink-purple cast resulting from regional metamorphism. The metadacite is prominent in outcrop exposures throughout the property, including that in the vicinity of the Upper Adit. Localized veinlets of pyrite with lesser pyrrhotite and trace chalcopyrite are observed throughout the section.

88-1 was collared in a heavily weathered, medium-grained feldspar porphyry dacite intrusive interpreted to be an offshoot of a nearby small diorite pluton. Between 32' and 158', the hole penetrated an alternating sequence of dacite intrusions, metadacite, and a light to medium grey dacite (perhaps rhyodacite) tuff, locally containing 3 to 5 cm sub-angular clasts of granite. Sulphides are weakly disseminated throughout the upper portion of the hole, and are also present as pyrite ± pyrrhotite veinlets 0.5 to 2 mm in width.

Below 158', the sequence is dominated by the metadacite, which at 176', is host to a 20 cm massive sulphide vein containing pyrite and chalcopyrite with minor pyrrhotite. The mode of mineralization is very similar to that observed of massive sulphides on the Upper Adit dump, and in pods inside the adit itself. A sample of the vein assayed 0.064 oz/ton gold and 0.52 oz/ton silver with copper values exceeding the upper detection limit of 1% (Sample No. 1064, Appendix D). Veinlets, or a weak stockwork of pyrite + chalcopyrite ± pyrrhotite are common within the metadacite. Eleven other samples selected from conspicuously mineralized sections, representing 42' of core, assayed near or below the lower detection limits for gold and silver (0.002 and 0.01 oz/ton respectively).

Comment

The vein structure developed in the Upper Adit was not clearly identified in 88-1. Neither the spatial relation between the sulphide occurrences in the adit and 88-1, nor their mode of mineralization are suggestive of a continuous sulphide horizon within the metadacite. Rather, the characteristics of mineralization within the core, particularly at 176', are consistent with the narrow, anastomosing sulphide mineralization developed within the Upper Adit.

3.3 Diamond Drillhole 88-2

Drillhole 88-2 was sited to investigate coincident moderate to strong electromagnetic (EM) and magnetic anomalies, gold geochemistry anomalies, and several limonitic alteration zones mapped in surface trenches at the end of the "East Branch" road. Situated 220 m east of the Lower Adit portal, 88-2 was drilled at an inclination of 45° on an azimuth of 102° with the intent of intersecting the westerly

dipping EM conductors "A" and "A1" proposed by Mark (1987). 88-2 was drilled to a (measured) depth of 320'.

The upper section of 88-2 (Figure 6) is dominated by a light- to medium-grey metamorphosed rhyodacite tuff to tuff breccia. A 3' section of weak pyrite-pyrrhotite-chalcopyrite stockwork within the silicified breccia assayed at 0.041 oz/ton gold; silver and base metal assays were similarly low (Sample No. 1073). While pervasively silicified, economic mineralization is sparse within this portion of the sequence.

At 105.5', the hole passed into the more common metadacite encountered in 88-1. Strong alteration of this unit and associated disseminated pyrite and pyrrhotite mineralization were intersected at 220' to 240'. This zone probably represents conductor "A1" and appears to correlate with the surface alteration zone. However, assays across the intersection were low with only one sample reporting significantly above lower detection levels (Sample No. 1083, 234' to 238'; 0.022 oz Au/ton, 0.03 oz Ag/ton, 0.1% Cu). Likewise, at surface, a 50 cm channel sample from the alteration zone reported uneconomic yet slightly elevated precious and base metal values.

Comment

Due to topographic constraints, 88-2 was set up too far east to effectively test EM anomaly "A". Anomaly A1, considered to be a structure closely related to A, exhibits alteration patterns and mineralization consistent with vein-type sulphide deposition. While no significant gold mineralization was identified within 88-2,

anomalous gold levels in soils in the immediate vicinity of the hole remain unexplained.

3.4 Diamond Drillhole 88-3

Hole 88-3 was collared in a weathered diorite intrusive 120 m southeast of and approximately 200' above the Upper Adit. The hole was drilled on an azimuth of 090° and an inclination of 45°, and was targeted to investigate the most conductive portion of EM anomaly "A" on Line 0+40 m S at 1+12 m E. The hole extended to a depth of 300'.

From the collar to a depth of 124.5', 88-3 encountered a uniform, medium-grained diorite containing subhedral feldspar crystals within a microcrystalline groundmass (Figure 7). Numerous erratic narrow quartz veins were observed both in surface exposures near the collar and within the core. The diorite forms a distinct lower contact with the metadacite.

A band of silicic, moderately brecciated rhyodacite tuff containing pyrite ± pyrrhotite veinlets was encountered between 130' and 154'. Moderate to strong chloritization of mafic minerals (principally secondary biotite) is evident within the section. A gradational contact with the metadacite occurs over 18' at the base of the rhyodacite.

At 172', the hole encountered the metadacite unit, which from 195' to 227', is intensely altered and mineralized. Several massive pyrrhotite veins 5 to 20 cm in thickness, and sections containing a strong pyrite-pyrrhotite-chalcopyrite stockwork were recorded within this interval. Samples of the massive pyrrhotite veins assayed 0.066 oz Au/ton, 0.10 oz Ag/ton, and 0.1% Cu (Sample No. 1092),

while the samples split from the sulphide stockwork reported 0.106 oz Au/ton, 0.16 oz Ag/ton, and 0.19% Cu (Sample No. 1090). The entire section is intensely chloritized, particularly along shears and folia at a shallow angle to the core axis.

Below 230', the intensity of the alteration, and accordingly, in the amount of sulphide mineralization decreases. To the end of the hole at 300', the metadacite exhibits weak to moderate pervasive chloritization with pyrrhotite and pyrite present only in sparse veinlets 1 to 10 mm in width.

Comment

The anomalous geophysical response along Line 0+40 S (Anomaly A) is clearly attributable to the sulphide mineralization, particularly pyrrhotite, that was encountered in drillhole 88-3. The geophysical model proposed by Mark (1987) accurately predicted the depth and orientation of the conductor, and to some degree, its mineralogy as well.

3.5 Diamond Drillhole 88-4

Hole 88-4 was sited near the western edge of the 1987 grid (Line 1+20 m S, 2+30 m W), and was drilled eastward at an inclination 45° to a total depth of 330'. The hole was designed to investigate coincident magnetic and EM anomalies (Anomalies "C" and "C1" in Mark, 1987) in the immediate vicinity.

The hole was collared in the metadacite unit, although mineralization was very sparse. Laminated very-fine grained tuff bands and argillite at a depth of 30' support the interpretation that the

metadacite sequence formed in a sub-marine volcanic environment (Figure 8). Younger dacite dykes within the metadacite are common.

At 200', the hole passes into a uniform medium-grained feldspar porphyry diorite which persists through the end of the hole. Pervasive weak propylitic alteration of the diorite is characterized by chloritization of feldspars, epidote flooding along fractures and weak, sparsely disseminated pyrite. With the exception of minor mineralization accompanying dacite intrusions at 284', sulphides are very sparse. Samples from this vicinity assayed at or near the lower detection limits for precious metals.

Comment

Lithologically, the rocks encountered within 88-4 cannot account for the anomalous geophysical response in the southwestern portion of the 1987 grid area. The intense magnetic high identified approximately 15 m east of the 88-4 setup must therefore be attributable to a very shallow, or shallow dipping structure. Anomalous EM response could result from the conductivity contrast between the metadacites and the underlying diorite. However, the source of the anomalies, and perhaps of the pyrite-chalcopyrite mineralization observed at the switchback 60 m northeast of 88-4 remains largely unresolved.

4. Conclusions

The results of assays from the diamond drilling program, particularly from the strongly mineralized section in DDH 88-3, were too low to be of economic interest. The program did however, definitively identify the source of several geophysical anomalies resulting from the 1987 work, and delineated a significant new exploration target. Though gold grades encountered thus far are sub-economic, the nature of sulphide occurrences is consistent with ore grade gold mineralization identified at both the Upper Adit, and at showings on the Hungary Man claim 1 km north of the property. Furthermore, assays from the vicinity of the Upper Adit between 0.80 and 1.00 oz/ton gold suggest that, although their distribution appears erratic, precious metals were introduced at some stage of the mineralizing events resulting in metalliferous deposits on the Debbie property. The best values appear to be associated with the massive pyrite mineralization encountered in the structure exposed in the Upper Adit. This structure gave only weak EM and magnetometer responses compared to those tested by the drilling program, particularly at 88-3. This observation may have significant implications for further work on the Debbie claim group.

References

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- Little, H.W. (1960): Nelson Map-Area, West Half, British Columbia (82F W1/2). *Geological Survey of Canada, Memoir 308.*
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- Mark, D.G. (1987): Geophysical Report on Horizontal Loop Electromagnetic and Magnetic Surveys over the Debbie Claim, Conner Creek, Nelson Area, Nelson Mining Division, B.C. Report to Bullion Range Exploration Corp. Ltd. by *Geotronics Surveys Ltd.* March 31, 1987.
- Sadlier-Brown, T.L. (1986): A Geological Report on the Debbie Claim, Nelson Mining Division, B.C. Private report to Mesa Resources Ltd. by *Nevin Sadlier-Brown Goodbrand Ltd.* August 19, 1986.
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Appendix A

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., 401 - 134 Abbott Street, Vancouver, B.C. V6B 2K4
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 Debbie Claim Group obtained during the course of an exploration program on the property. I personally supervised and participated in the diamond drilling program conducted in August to September, 1988 by Nevin Sadlier-Brown Goodbrand Ltd., the findings of which are subject of this report.


Stuart A.S. Croft, P.Eng., Eng.

November 30, 1989

Appendix B

Itemized Statement of Costs

The following is an itemized summary of exploration costs incurred in 1988.

A. FEES PAID

S. Croft, Geological Engineer

01 Aug to 30 Sep 88: 77.5 h @	\$50.00	\$3,875.00	
19 d @	\$345.00	\$6,555.00	

T.L. Sadlier-Brown, Senior Geologist

01 Aug to 30 Sep 88: 35.3 h @	\$75.00	\$2,643.75	\$13,073.75
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B. FOOD AND ACCOMMODATION

Meals	20 md @	≈\$16.25	\$324.83	
Accommodation	18 md @	≈\$33.00	\$591.85	\$916.68

C. TRANSPORTATION

Truck rental

1 4WD Pickup;	3 wk @	\$280.00	\$840.00	
plus	2460 km @	\$.15	\$369.00	
1 4WD rental	2 d		\$139.51	
Fuel			\$347.05	
Airfare (Castlegar return)			\$249.30	\$1,944.86

D. INSTRUMENT RENTAL

Core splitter	3 wk @	\$43.75	\$131.25	\$131.25
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E. DIAMOND DRILLING EXPENSES

Diamond Drilling	1250' @	\$22.00	\$27,500.00	
(note: price includes fuel room & board, misc. supplies)				
Mobe/demobe			\$2,000.00	
Water Supply Truck	11 sh @	\$400.00	\$4,400.00	
Bulldozer	40.5 h @	\$70.00	\$2,835.00	
CAT operator overtime	5 h @	\$12.00	\$60.00	
swamper overtime	14 h @	\$16.00	\$224.00	\$37,019.00

F. ANALYSES

Core samples analyzed for Au plus 32-element ICP	53 @	\$33.65	\$1,783.40	
Rock samples analyzed for Au plus 32-element ICP	3 @	\$33.65	\$100.95	
Rock samples - Au only	6 @	\$11.00	\$66.00	
Sample shipment charges			\$59.85	\$2,010.19

G. MISCELLANEOUS FIELD EXPENSES AND SUPPLIES

Expendable equipment and supplies		\$71.34		\$71.34
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H. REPORTING

Geologist	84.5 h @	\$50.00	\$4,225.00	
Clerical and Admin. copying and reproduction			\$581.63	
drafting			\$33.56	
courier			\$165.00	
Telephone - communication			\$44.00	
			\$592.43	\$5,641.61
			1988 TOTAL	<u>\$60,808.69</u>

The following exploration costs were incurred in 1989.

A. FEES PAID (report preparation & revision, geological evaluation)

S. Croft, Geological Engineer 27 Jul to 30 Nov 89: 39.5 h @	\$50.00	\$1,975.00	
T.L. Sadlier-Brown, Senior Geologist 27 Jul to 30 Nov 89: 29.0 h @	\$75.00	\$2,175.00	\$ 4,150.00

B. FEES PAID (road/drillsite repair & maintenance, abatement and program management)

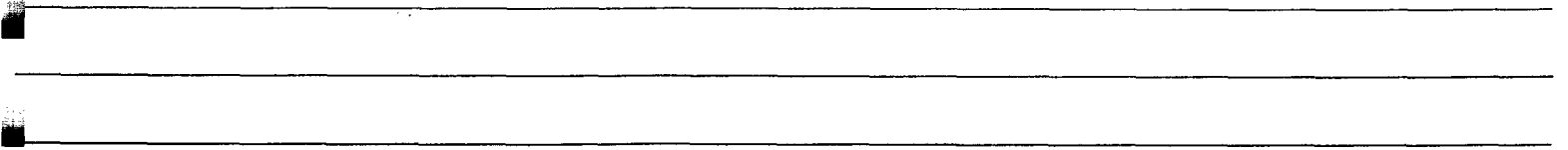
T.L. Sadlier-Brown, Senior Geologist 27 Jul to 30 Nov 89: 14.5 h @	\$75.00	\$1,087.50	\$ 1,087.50
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C. OTHER EXPENSES & DISBURSEMENTS

Typing, clerical and administration	\$ 115.00	
Drafting, copying, reproduction	125.00	
Communication (phone, fax, courier)	98.00	
Vehicle rental (2 days @ \$69)	138.00	
Fuel	27.00	\$ 503.00
		<hr/>
	1989 TOTAL	\$ 5,740.50
		<hr/>

Appendix C

DIAMOND DRILL LOGS



Key to Abbreviations in
A S S A Y R E P O R T S H E E T S

CH	chlorite	CH'tic	chloritic
EP	epidote		
CP	chalcopyrite		
PR	pyrrhotite		
PY	pyrite	PY'tic	pyritic
SP	sphalerite		
SU	sulphides		
QZ	quartz		
tr	trace	DACT	dacite
diss	disseminated	BRXX	breccia
HW	hanging wall	RYDT	rhyodacite
FW	footwall	DIOR	diorite
w/	with	GBRO	gabbro
w/i	within		



NEVIN SADLIER-BROWN GOODBRAND LTD.

DIAMOND DRILL LOG SHEET

Hole 88-1

Sheet 1 of 4

From	To	Lithology	Alteration	Precipitates
0	20'	CASED in loose, weathered diorite; collared in bedrock		
20'	32'	Feldspar porphyry DACITE . Sub-angular phenocrysts of K-feldspar 0.5 to 2 mm in length occur within a medium grey groundmass comprising weakly to moderately chlor-		Rusted pyrite commonly occurs on fracture faces.
		itized mafics (probably hornblende) interspersed throughout cryptocrystalline grey feldspar(?). Quartz veinlets 1 to 5 mm thick occur throughout. Section is badly weathered, oxidized.		
32'	46'	DACITE TUFF Medium to very fine grained fragmental tuff commonly containing sub-angular clasts of granite(?). Metamorphosis and alteration have largely destroyed texture though fabric (banding?) is apparent at 20° to 30° to core axis. Lower contact relation	Pervasive moderate silicification throughout. Alteration has resulted in slight purple-pink cast in more massive tuff bands.	
		appears sharp though occurs across end of a core run; blockage at fault contact(?).		
46'	60.3'	DACITE intrusion; Medium to dark grey dacite intrusive similar to 20 to 32. However, feldspar phenocrysts are smaller (1 to 2 mm) resulting in darker overall colour. Quartz veining is minimal as is pyrite content. Section is much more competent than upper intrusive.		
60.3'	84'	Lower contact is sharp at 35° to core axis. META DACITE TUFF Light to medium grey, very fine-grained tuff similar to section in 32 to 46. Some remnant banding evident. Rusty weathering along frac-	Some weakly disseminated pyrite-pyrrhotite present, particularly in darker coloured bands and lenses around 65	Minor quartz stockwork with trace pyrite-pyrrhotite noted at 65'. Pyrite-pyrrhotite in 0.2 to 0.5 mm



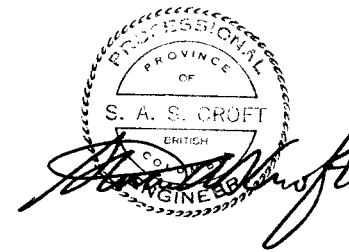
NEVIN SADLIER-BROWN GOODBRAND LTD.

DIAMOND DRILL LOG SHEET

Hole 88-1

Sheet 2 of 4

From	To	Lithology	Alteration	Precipitates
60.3'	84' (cont.)	ture faces occurs in 70 to 80. Indistinct contact followed by quartz veining with minor pyrite + pyrrhotite.	to 70'. Pervasive moderate to strong silicification persists.	veinlets in this section.
84'	142.5'	DACITE Uniform medium to dark grey to black fine-grained dacite. Localized pods to 1 cm are heavily chloritized and typically contain disseminated pyrite ± pyrrhotite. Some isolated bands of pyrite ± pyrrhotite mineralization 2 to 5 cm in width of up to 50%	Pyrite in cubes to 0.3 mm very sparsely disseminated throughout. Alteration of mafic bands to chlorite results in pink-purple and drab green mottling of core.	Veinlets of pyrite + pyrrhotite 0.5 to 2 mm are common throughout; typically spaced 30 to 50 cm apart. Some areas exhibit weak sulphide stockwork associated with altered
142.5'	146'	sulphides. DACITE DYKE Dark grey-green feldspar porphyry dyke probably of similar are as enclosing dacite flows. [This section is not magnetic]. Upper and lower con-	Feldspars are heavily chloritized; as are mafics. Biotite after hornblende is common. Very sparsely disseminated	mafic bands (ex. 130 -134).
146'	155'	tacts are sharp at approximately 45° to core axis. Mottled DACITE as in 84 to 142.5	pyrite is pervasive.	
155'	158'	Dark grey to black DACITE Sparse subhedral porphyritic K-feldspar crystals within a black cryptocrystalline groundmass. Sharp upper and lower contacts at 48° to core axis exhibit minimal alteration of bounding dacite. [Section is non-magnetic]. Moderately hard	Very sparse disseminated cubes of pyrite to 0.5 mm are pervasive.	
		and competent. Distinctly different from dyke at 142.5 to 146.		



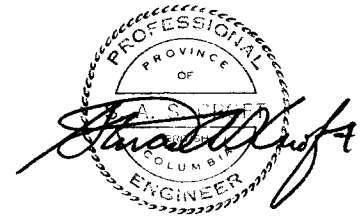
NEVIN SADLER-BROWN GOODBRAND LTD.

DIAMOND DRILL LOG SHEET

Hole 88-1

Sheet 3 of 4

From	To	Lithology	Alteration	Precipitates
158'	236.5'	Mottled DACITE as in 84 to 142.5 175.5 to 176.5 is 20 cm vein (true width) of massive sulphide comprising an admixture of pyrite and chalcoppyrite in framboidal grains to 1.5 mm. Pyrrhotite in-	Localized weak silicification accom- panies pervasive moderate chloritiza- tion of mafics (where present). Pink- green cast to core results from alter- ation of feldspathic and mafic compo-	Numerous veinlets of pyrite + pyr- rhotite, particularly in associ- ation with chloritized bands. •Pale green anitgorite(?) is present as slickensides forming thin coat-
		fills fractures within sulphides with resulting weak magnetism. Quartz commonly occurs between sulphide grains. Blebs of epidote throughout are common. Dis- tinct upper and lower contacts at 60° to core axis.	nents of rock.	ings on fractures, and locally, as a boxwork in sheared zones (ex. 196 to 198). •Localized veinlets of pyrrhotite + pyrite ± chalcoppyrite; particular-
236.5'	247'	ANDESITE DYKE Fresh, medium to fine grained biotite- quartz-feldspar intrusive is distinctive by its moder-	Weakly disseminated pyrite with trace chalcoppyrite is pervasive. (Neither	ly evident in vicinity of chlorit- ization - epidotization. Waxy, pale green chlorite forms a slickensided coating on some frac-
		ate to strong magnetic character throughout. Upper contact appears faulted with dyke being very crumbly; some porphyritic feldspar near upper contact. Lower contact is sharp at 60° to core axis.	pyrrhotite or magnetite are evident though finely disseminated magnetite would be consistent with black colour and magnetic character of the intrusion Biotite and feldspars are conspicuously	ture faces.
247'	256'	Altered DACITE DYKE Medium to dark grey, older dacite dyke with moderately altered feldspar porphyry.	fresh. Pervasive weak to moderate propylitic alteration, with associated weakly disseminated pyrite.	Some pyrite + pyrrhotite in vein- lets; sparse blebs of pyrrhotite with trace chalcoppyrite.
256'	295'	Mottled DACITE TUFF Variably altered dacite of similar composition to that in 84 to 142.5.	Patchy, weak silicification overprints pervasive weak propylitic alteration. Moderate to strongly chloritized sec- tion in 268 to 272 contains finely dis- seminated pyrite to 2%	Stockwork with pyrite + pyrrhotite ± chalcoppyrite is common, notably at 278, 285, and 294.



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DIAMOND DRILL LOG SHEET

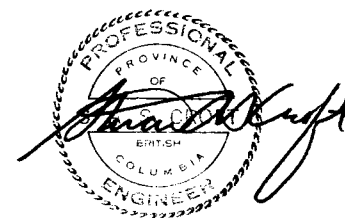
Hole 88-1

Sheet 4 of 4

From	To	Lithology	Alteration	Precipitates
295'	298'	ANDESITE DYKE Remnant feldspar porphyry within a dark grey-black groundmass is similar to hanging wall of dyke at 237' (weakly to moderately magnetic). Both contacts are badly broken and contact zones moderately to strongly mineralized by pyrite, pyrrhotite, trace		
298'	300'	chalcopyrite. DACITE TUFF Badly broken, fractured tuff is similar to section above dyke. Moderate sulphide mineralization appears to be associated with intrusion of narrow		
		dyke. [300' -- END OF HOLE]		

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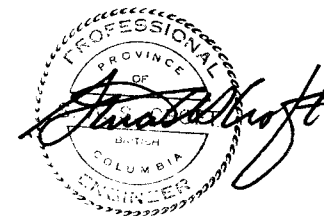
DIAMOND DRILL LOG SHEET

Hole 88-2Sheet 1 of 3

From	To	Lithology	Alteration	Precipitates
0	5'	CASED (Heavily weathered to 35')		
5'	64'	META-RHYODACITE Light to medium grey-green cryptocrystalline metamorphosed volcanic tuff is moderately to strongly altered. Pale pink (feldspathized?) and green (chloritized) bands form indistinct, weak layering throughout; localized fracturing, crackling of brittle sequence results in weakly brecciated appearance with weak sulphide stockwork. Breakage occurs along chloritic fracture faces; commonly attains	Pervasive moderate silicification is accompanied by weakly disseminated pyrite and pyrrhotite. Silicification overprints chloritization of more mafic bands. Pyrite + pyrrhotite are closely associated with chloritic zones.	Pyrite + pyrrhotite commonly form veinlets and locally a weak stockwork (ex. 29, 32). Chalcopyrite is present in trace amounts within stockwork and is invariably located at pyrite grain boundaries; never mixed among pyrrhotite. Stockwork veins are generally formed within
		schistose appearance due to closely spaced microfracturing in chloritic bands. Locally, erratically oriented, tuff breccia fragments 5 to 10 cm across exhibit a finely laminated texture. This is particularly evident towards 55'.		quartz-silica and are 3 to 5 cm thick; orientation varies. Massive pyrite, pyrrhotite, chalcopyrite occur in 1 cm bands (approximately 90° to core axis) around 49'.
64'	67'	QUARTZ-PYRITE VEIN Broken 2 to 4 cm thick quartz vein with pyrite cubes to 20 mm is hosted by broken dacite dyke. (Core axis is sub-parallel to vein). Moderately weathered vein also contains strongly oxidized black material (manganese oxides?). Upper contact is ragged,		
67'	73.5'	erratic; attitude is (very) approximately 45° to core axis. Feldspar porphyry DACITE DYKE Porphyritic subhedral feldspar to 3 mm occur within a dark grey green fine-	Section is weakly to moderately propylitized with chloritization of feldspars	
		grained biotite-hornblende groundmass. (sequence is non-magnetic)	and groundmass; influx of epidote along some fractures. Very weakly disseminated fine grained pyrite is pervasive.	

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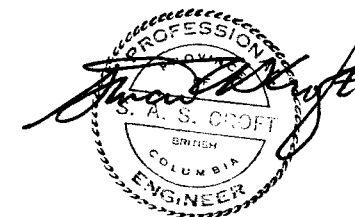
DIAMOND DRILL LOG SHEET

Hole 88-2Sheet 2 of 3

From	To	Lithology	Alteration	Precipitates
73.5'	79'	DACITE DYKE Porphyritic feldspars virtually absent below an epidotized fracture at 73.5' though hazy laths are evident. Lower "contact" is erratic; though averages 15° to core axis. Xenolith at 77 to 79 is strongly brecciated over 15 cm (true) width with strong		Some pyrite veinlets occur with associated quartz along hairline fractures.
79'	105.5'	chloritization and quartz + pyrite flooding. Feldspar porphyry DACITE DYKE Minor compositional variation is reflected in relative abundance and size of euhedral feldspar crystals generally averaging 1 to	Pervasive propylitic alteration results in weak to moderate chloritization of mafic groundmass, feldspar. Epidote	Chlorite is common on fracture faces; pyrite is generally accessory.
		2 mm in length. Compositional fabric is subtle, at approximately 75° to core axis. Section is <u>non</u> -magnetic. Hazy but distinct lower contact cuts core axis nearly perpendicular	flooding occurs along fractures. Weak, finely disseminated pyrite is also pervasive.	
105.5'	184'	Altered META-DACITE Pale pink to grab green altered dacite. Original texture is obscured by alteration. Section is very similar to 5 through 64 except for lack of weathering and oxidation. Several narrow shear zones (118, 125) exhibit moderate sulphide mineral-	Moderate to strong silicification throughout. Some sections, particularly chloritized areas (subsequently silicified) contain disseminated pyrrhotite.	Pyrrhotite veinlets are common throughout with lesser pyrite. Shear zones are commonly infilled with chlorite + muscovite + trace carbonates.
184'	186'	ization, moderate to strong infilling along fractures. Section is very hard, brittle. DACITE DYKE similar in composition to 73.5 to 79.		
186'	200.5'	Altered META-DACITE as in 105.5 to 184.		

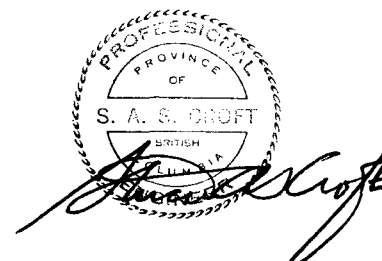
NEVIN SADLIER-BROWN GOODBRAND LTD.

DIAMOND DRILL LOG SHEET

Hole 88-2Sheet 3 of 3

From	To	Lithology	Alteration	Precipitates
200.5'	224'	Feldspar porphyry DACITE mixed with META-DACITE Porphyritic dacite grades into heavily pyritized, biotite altered dacite between 200 and 210 with 218 to 224 predominated by meta-dacite.	Moderate pervasive chloritization. Moderate to strongly disseminated pyrite (locally to 10%).	
224'	253.5'	Feldspar porphyry DACITE Dark grey-green dacite exhibits compositional, textural variation with porphyritic feldspar at upper contact to weakly foliated hornblende-biotite sections dominating lower sections. Chloritic foliation planes 70° to 80° to core axis tend	Moderate pervasive chloritization with intense chlorite + pyrite alteration at 224 to 234. Pyrite to 20% occurs within this interval. Pyrrhotite is also strongly disseminated throughout	Massive chlorite veins to 8 mm occur randomly throughout section. They are commonly accompanied by minor carbonates and epidote.
253.5'	264.5'	to sub-parallel aligned hornblende-biotite. Fine to very fine grained feldspathic groundmass is ubiquitous. META-DACITE is heavily chloritized and sheared. At 260', a 1 m wide shear zone contains pyrite and carb-	this section, particularly in 230 to 234.	* Isolated carbonate-pyrite vein 1 cm in width at 244.5' exhibits euhedral pyrite cubes to 1.5 mm and spectacular radiating masses of cubic fluorite(?). Open space
		onates infilling 1 to 3 cm sub-rounded breccia fragments. This section is similar to 68 to 105.5 with the exception of the intensity of alteration and pyritization. Upper contact with dacite intrusive - 70° to core axis; lower contact - 45°. The shear zone cuts		filling is evident.
264.5'	311'	the core axis at 15° to 20°. Dark grey DACITE intrusive. Weakly foliated hornblende biotite dacite predominates section following a narrow band of chloritic brecciated dacite tuff in the vicin-		Massive pyrite + pyrrhotite veins at 295 and 300 are 1 to 2 cm (true) width.
311'	320' [End of Hole]	ity of 270. META-DACITE Hornfelsed medium to fine grained dacite tuff with local breccia. Distinct upper contact at 35° to core axis.	Pervasive weak chloritization with weak to moderate pyritization.	Pyrite + pyrrhotite present in narrow (1 to 2 mm) veinlets and stringers.

Box	Recovery (%)	Description	Sample Number	From (feet)	To (feet)	Width (feet)	Au (oz/ton)	Ag (ppm)	Cu (ppm)	Fe (%)
2	100	Sulfide stckwork in silicic tuff BRXX; somewhat	1072	28.5	33.5	5.0	.010	-	211	4.00
-	-	higher sulfide content than bordering sections								
3	100	Moderate PY+PR+CP veins within silic. BRXX	1073	48.0	51.0	3.0	.041	-	386	6.03
3	100	Moderate PY+PR+CP veins within silic. BRXX	1074	51.0	54.0	3.0	.015	-	288	6.43
4	100	Contact zone in silic. BRXX; mod. dissem. sulf	1075	62.0	64.0	2.0	.002	-	145	2.75
4	100	QZ vein w/i broken HW of dyke; PY+PR+SP to 15%	1076	64.0	67.0	3.0	-	-	28	5.30
6	100	Silicif. sulfide zone in DACT BRXX at footwall	1077	105.5	108.5	3.0	-	-	29	2.28
7	100	Silic. PY±PR in DACT BRXX (test of sect.)	1078	124.5	127.0	2.5	-	-	65	3.09
9	100	Silic. PY±PR in DACT BRXX (test of sect.)	1079	154.5	157.5	3.0	.004	.5	28	2.49
12	100	Pyritic dacite (hornblende + biotite dominant)	1080	210.0	214.0	4.0	.002	1.0	254	6.12
12	100	Sheared, mod. CH'ized/PY'tic foliated dacite	1081	224.0	230.0	6.0	.002	1.0	74	9.12
13	100	Heavily PY'tic-CH'itic dacite (foliated)	1082	230.0	234.0	4.0	.002	1.5	359	10.60
13	100	Moderately " (foliated/massive)	1083	234.0	238.0	4.0	.022	1.0	664	10.20
13	100	3 cm quartz vein within pyritic alt'd dacite	1084	238.0	241.0	3.0	.002	.5	100	4.67
13	100	PY'tic-biotite fol'n in DACT (2 cm open space)	1085	241.0	246.0	5.0	.002	.5	253	6.42
16	100	2cm PR+PY+CP vein w/ EP in PY'tic hrnflsd DACT	1086	293.0	297.0	4.0	-	.5	118	5.87
16	100	Wkly silicif. DACT w/ PY-PR veinlets & dissem.	1087	297.0	301.0	4.0	-	-	98	4.26



NEVIN SADLIER-BROWN GOODBRAND LTD.

DIAMOND DRILL LOG SHEET

Hole 88-3

Sheet 1 of 3

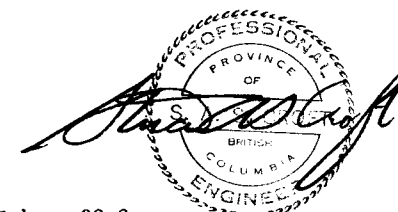
From	To	Lithology	Alteration	Precipitates
0	40'	CASED (Triconed in feldspar porphyry DACITE)		
0	124.5'	Feldspar porphyry DIORITE Subhedral crystals of weakly altered K-feldspar within a medium to dark grey microcrystalline groundmass, locally containing secondary biotite. Grain size varies somewhat; notably in 71 to 85 where feldspars become very fine grained. Sequence is very weakly magnetic. This is probably the intrusive equivalent of the dacite dykes noted elsewhere. Distinct lower contact at 70° to core axis.	Feldspars affected by weak to moderate propylitization; chloritization of mafics is apparent. Feldspars are altered to a dull yellow green. Some localized epidote flooding along fractures. Pervasive weakly disseminated fine grained pyrite. Moderate quartz + epidote + chlorite alteration in 118 to	Fracture faces are commonly coated thinly with chlorite. Some minor quartz veining to 2 mm around 90'. Quartz vein at 57' is approximately 15 cm (true) width, contains minor pyrite in cubes to 15 mm. Attitude is approximately 45° to core axis. (Numerous erratic narrow quartz
			122 in vicinity of undulating 1 cm quartz-open space vein.	veins observed in surface exposures.)
124.5'	130'	Massive hornfelsed META-DACITE Medium to dark grey-brown, uniform fine grained dacite tuff. Weakly sheared throughout. Distinct lower contact at 60° to core axis.		Pyrite + chlorite veins to 3 mm throughout.
130'	154'	META-RHYODACITE Silicic, brecciated rhyodacite comprises a light grey-pale pink green microcrystalline tuff(?). Appears to be moderately to strongly brecciated throughout though alteration has obscured original texture badly. Subrounded fragments 1 to 2 cm	Moderate pervasive silicification. Chlorite commonly infills small voids between clasts.	Pyrite with minor pyrrhotite occurs in 1 to 2 mm veinlets throughout (at ≈ 2' spacings). Chlorite is common on fracture planes.
		in diameter are otherwise featureless. Minor localized shearing along kaolinized surfaces (133, 138). Lower contact occurs at 5 mm shear oriented at 35° to core axis.		

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DIAMOND DRILL LOG SHEET

Hole 88-3

Sheet 2 of 3



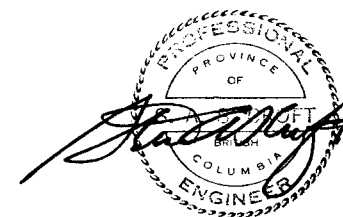
From	To	Lithology	Alteration	Precipitates
154'	172'	Mixed DACITE TUFF BRECCIA and massive granular TUFF Pale silicic breccia grades into massive to weakly foliated hornfelsed tuff. Shearing is common with narrow, clayey seams developed along foliation surfaces at 20° to core axis. Shattering is common throughout	Weak to moderate pervasive chloritization, particularly within granular tuff sections. Localized strongly disseminated pyrite.	Fracture faces, brittle fracture zones filled with chlorite + silica Some 1 to 3 mm pyrite veinlets, usually sub-parallel to foliation.
172'	195'	with white to pale green (chloritic?) infilling common. Foliated META-DACITE Moderately altered, strongly foliated metamorphosed dacite. Localized brecciation is evident, notably in 180' to 186'. Strong sulphide		
		mineralization throughout. Pyrrhotite is most abundant with minor chalcopryrite and trace pyrite. Massive (> 40%) sulphides occur over 30 to 40 cm length and generally accompany intense chloritization. Sulphide "veins" are roughly parallel to folia at 25° to 30° to		
		core axis. Pyrite + pyrrhotite and minor chalcopryrite are also present in narrow veinlets 1 to 3 mm (true) width throughout section. Notable intersections are: 181' - 3 cm massive pyrrhotite + chalcopryrite + chlorite vein parallel to foliation;		
		185' - 25 cm massive pyrrhotite + chalcopryrite + chlorite within a stockwork at 45° to core axis; 191' - massive (100%) pyrrhotite + minor chalcopryrite in vein 10 cm (true) width at 45° to		
		core axis. Note that strongly pyrrhotitic sections are not as magnetic as might be anticipated; contain other sulphides.		

NEVIN SADLIER-BROWN GOODBRAND LTD.

DIAMOND DRILL LOG SHEET

Hole 88-3

Sheet 3 of 3



From	To	Lithology	Alteration	Precipitates
195'	226.5'	Altered massive META-DACITE Dark green, strongly altered massive dacite tuff is locally shattered and infilled by a weak chlorite-silica stockwork. Massive pyrrhotite vein at 225 to 226.5 contains brecciated dacite fragments to 3 cm. Vein is 20 cm (true) width	Strong to intense pervasive chloritization.	1 to 5 cm veins of pyrrhotite + pyrite with variable chalcocopyrite occur throughout section.
226.5'	238'	with contacts oriented at 75° to core axis. Moderately foliated META-DACITE Altered dacite exhibits a distinct foliation fabric which weakens with depth. Shearing in zones 10 to 20 cm wide is common.	Moderate to strong pervasive chloritization. Secondary biotite is aligned with foliation and is weakly chloritized.	
			ed. Moderate to strong sulphide mineralization accompanies chlorite, particularly along foliation planes. Average sulphide content is 5% comprising pyrite + pyrrhotite with minor to trace	
238'	300'	Massive to weakly foliated META-DACITE Moderately altered dacite grades between massive and foliated	chalcocopyrite. Numerous localized clots of sulphide occur within section. Variable weak to moderate pervasive chloritization in section.	Minimal precipitate throughout section. Pyrrhotite + pyrite are
		textures. Where present, foliation, forming along planes of aligned secondary biotite (chloritized), is oriented at 65° to core axis.		present in sparse veinlets 1 to 10 mm width. Voids with very fine quartz+pyrite crystals cost open space at 274'. Accompanied by sphalerite + pyrite
				+ chalcocite(?) veinlets. 3 cm pyrite + pyrrhotite + quartz vein in sheared dacite at 288'.
		[END OF HOLE - 300']		

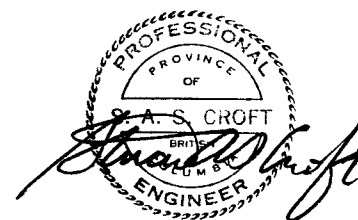
Box	Recovery (%)	Description	Sample Number	From (feet)	To (feet)	Width (feet)	Au (oz/ton)	Ag (ppm)	Cu (ppm)	Fe (%)
6	100	Test of silicic altered RYDT tuff	71570	135.0	140.0	5.0	.002	-	48	1.89
7	100	Minor PY+PR+tr CP in sheared DACT (3-5% SU)	1088	172.0	176.0	4.0	.002	1.0	323	5.02
8	100	Minor PY+PR+tr CP in shr'd CHtic DACT (5% SU)	1089	176.0	180.0	4.0	.006	2.5	777	5.14
8	100	PR+CP+PY stkrk in shr'd CH'ic DACT (10% SU)	1090	180.0	182.0	2.0	.106	5.5	1895	6.65
8	100	Minor PR+CP+PY along folia of shr'd DACT	1091	182.0	184.5	2.5	.010	6.0	866	4.04
8	100	Massive PR+CP+PY in brecciated DACT (30% SU)	1092	184.5	185.5	1.0	.066	3.5	1060	4.80
8	100	CHic fol'ted META DACT w/ PR+CP+PY (5-8% SU)	1093	185.5	188.5	3.0	.004	28.5	8390	15.60
8	100	CHic fol'ted META DACT w/ PR+CP+PY (8-12% SU)	1094	188.5	190.5	2.0	.002	1.5	586	6.00
8	100	CHic fol'ted META DACT incl PR vein(35-50% SU)	1095	190.5	192.0	1.5	.008	4.0	3010	16.05
9	100	CHic fol'ted META DACT w/ PR+CP+PY (3-5% SU)	1096	192.0	196.0	4.0	.024	1.5	785	13.25
9	100	CHic fol'ted META DACT w/ PR+CP+PY (1-3% SU)	1097	196.0	200.0	4.0	.008	.5	461	15.65
9	100	CHic fol'ted META DACT w/ PR+CP+PY (1-3% SU)	1098	200.0	204.0	4.0	.002	1.5	790	11.25
9	100	CHic fol'ted META DACT w/ PR+CP+PY (1-3% SU)	1099	204.0	208.0	4.0	.006	1.0	401	10.65
9	100	CHic fol'ted META DACT w/ PR+CP+PY (3-5% SU)	1100	208.0	212.0	4.0	.014	2.0	715	13.55
10	100	CHic fol'ted META DACT w/ PR+CP+PY (1-3% SU)	71562	212.0	216.0	4.0	.006	2.0	980	12.30
10	100	" with SU stringers parallel to core axis	71563	216.0	218.0	2.0	.026	7.0	3030	20.90
10	100	"	71564	218.0	221.5	3.5	.004	1.5	621	8.28

NEVIN SADLIER-BROWN GOODBRAND LTD.

DIAMOND DRILL LOG SHEET

Hole 88-4Sheet 1 of 2

From	To	Lithology	Alteration	Precipitates
0	5'	CASED		
5'	120'	META-DACITE Medium to dark grey sequence of inter-layered fragmental (crystalline?) tuff, very fine grained tuff bands and narrow lenses of argillite.	Sequence is hornfelsed pervasively. Numerous narrow bands 3 to 5 cm in width are present, particularly evident	Chlorite + silica with very minor carbonates are present on some fracture faces.
		Laminae in fine grained tuff oriented 30° to 35° to core axis. Individual layers range from 30 cm to 3 m in length (ie. 15 cm to 1.5 m true width) with clear, abrupt contacts common. Clasts 5 mm to 10 mm noted in tuff sequence at 30'.	in fine grained tuff; orientation appears random. 80' to 85' is moderately broken and chloritized and contains very minor pyrrhotite + chalcopyrite; possibly	
120'	132'	Altered porphyry DACITE dyke Dark grey to black very fine grained dacite intrusive contains euhedral medium grey porphyritic feldspar. Upper contact is shattered	some arsenopyrite. Pervasive weak chloritization. Feldspars are medium to dark grey after alteration and are just slightly soft-	Chlorite is accompanied by thin calcite coating on fracture faces. Some weakly disseminated pyrite is
132'	155'	but lower is sharp though erratic at 45° to core axis. DACITE TUFF and DACITE DYKE A ragged, though sharp contact between the two rock types follows the core	er than the weakly chloritized ground-mass.	present in dacite tuff at contacts.
		axis for 1 m. Sequence alternates with six intervals averaging 4' in width with approximately equal components.		
155'	199.5'	Banded DACITE TUFF Medium to dark grey-brown dacite tuff exhibits distinctive banding at approximately 35° to core axis. Moderately to well developed foliation and thin quartz stringers tend to be sub-parallel. Lower contact with diorite is gradational over 30 cm	Localized weak chloritic alteration along veinlets. Some zones of strong quartz-chlorite flooding are noted but tend to be narrow (1 to 5 cm) and erratic. Sulphides are absent.	



NEVIN SADLIER-BROWN GOODBRAND LTD.

DIAMOND DRILL LOG SHEET

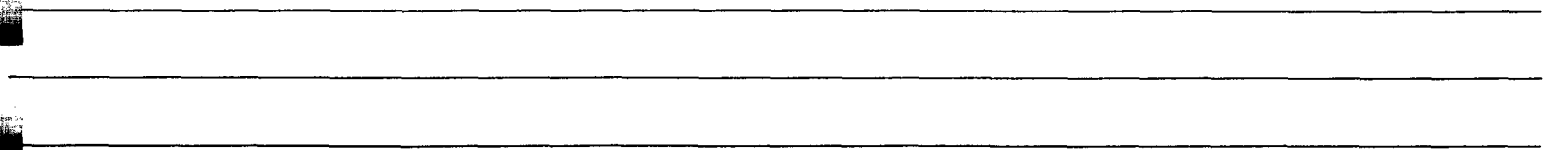
Hole 88-4

Sheet 2 of 2

From	To	Lithology	Alteration	Precipitates
155'	199.5' cont.	but appears to be consistent with orientation of foliation.	Some minor disseminated pyrite accompanies secondary biotite along foliation planes over lower 2 m.	
199.5'	330'	Feldspar porphyry DIORITE Medium to dark grey very fine grained hornblende groundmass contains weakly altered euhedral to subhedral feldspar crystals 1 to 2 mm in length to 25% to 35%. Black biotite - hornblende dykes occur at 241.5 to 245	Pervasive weak propylitic alteration is evident by chloritization of feldspars; weak disseminated fine grained pyrite is also common. Epidote flooding along fractures is apparent throughout.	Barren to very weakly mineralized quartz veins typically 2 to 4 mm in width (but up 15 cm) occur throughout. Quartz veining is prominent in 245 to 255 where 3 to 5
		and 283 to 285. Contacts are sharp, oriented 70° to 85° to core axis, and exhibit almost no alteration. (Upper intrusion is bounded on both hanging wall and footwall by 6 cm quartz veins.)	Localized strong chlorite + epidote + quartz + pyrite alteration occurs at 275 to 280, 290 to 310.	mm quartz veins oriented at 70° to 80° to core axis are spaced 3 to 5 cm apart. Only trace pyrite accompanies veining. Some veins are vuggy.
		[END OF HOLE - 330']		In altered sections, pyrite in bands and veins may contain trace amounts of magnetite.
		NOTE: 88-4 was making water at approximately 5 L/min immediately following completion of the hole. At this time, water in Connor Creek immediately west of the site was "trickling" at about 2 L/min. There appears to be an interrelation		
		between the 88-4 discharge and a seep on the upper bank of the road cut 50 m east of the setup, which dried substantially following completion of drilling. A section of 2" ABS pipe was placed 5' into the 88-4 collar to protect against surface sloughing.		

Appendix D

ANALYSIS CERTIFICATES





Chemex Labs Ltd.

Analytical Chemists • Geochemists • Registered Assayers

212 BROOKSBANK AVE., NORTH VANCOUVER,
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PHONE (604) 984-0221

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VANCOUVER, B.C.
V6B 2K4

A8822885

Comments:

CERTIFICATE A8822885

NEVIN SADLIER-BROWN GOODBRAND LTD.,

PROJECT : 335

P.O.# : NONE

Samples submitted to our lab in Vancouver, BC.

This report was printed on 19-SEP-88.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	20	Rock Geochem: Crush,split,ring
232	20	Total ICP digestion

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
100	20	Au ppb: Fuse 10 g sample	FA-AAS	5	10000
554	20	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
556	20	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	20	Zn ppm: 24 element, rock & core	ICP-AES	2	10000
559	20	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	20	Pb ppm: 24 element, rock & core	ICP-AES	2	10000
561	20	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
562	20	Cd ppm: 24 element, rock & core	ICP-AES	0.5	10000
563	20	Co ppm: 24 element, rock & core	ICP-AES	1	10000
564	20	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
565	20	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
566	20	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
568	20	Mn ppm: 24 element, rock & core	ICP-AES	1	10000
569	20	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
570	20	Mg %: 24 element, rock & core	ICP-AES	0.01	25.0
572	20	V ppm: 24 element, rock & core	ICP-AES	1	10000
573	20	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
575	20	Be ppm: 24 element, rock & core	ICP-AES	0.5	10000
576	20	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
577	20	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
578	20	Ag ppm: 24 element, rock & core	AAS	0.5	500
579	20	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
582	20	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
583	20	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
584	20	K %: 24 element, rock & core	ICP-AES	0.01	20.0



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Project : 335

Comments :

**Page No. : 1-A

Tot. Pages: 1

Date : 19-SEP-88

Invoice # : I-8822885

P.O. # : NONE

CERTIFICATE OF ANALYSIS A8822885

SAMPLE DESCRIPTION	PREP CODE		Au ppb FA+AA	Mb ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)	P ppm (ICP)	Pb ppm (ICP)	Bi ppm (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Ni ppm (ICP)	Ba ppm (ICP)	Fe % (ICP)	Mn ppm (ICP)	Cr ppm (ICP)
	1060	205	232	< 5	< 1	< 10	35	860	4	< 2	< 0.5	10	38	260	2.71	133
1061	205	232	15	< 1	< 10	68	1300	10	< 10	< 0.5	34	20	650	5.06	355	44
1062	205	232	150	2	< 10	58	660	6	< 2	< 1.0	17	26	600	4.11	230	71
1063	205	232	20	4	< 10	51	700	10	< 2	< 0.5	18	32	870	3.92	422	73
1064	205	232	2200	26	< 10	410	50	2	< 2	13.0	174	115	50	17.10	782	94
1065	205	232	10	2	< 10	74	670	4	2	< 0.5	15	27	830	3.82	447	64
1066	205	232	5	< 1	< 10	100	3740	26	6	< 0.5	33	160	1450	5.46	1065	408
1067	205	232	5	1	< 10	104	680	4	< 2	< 0.5	24	26	720	4.29	463	64
1068	205	232	< 5	12	< 10	68	1210	2	8	< 0.5	35	173	220	5.66	1080	407
1069	205	232	370	< 1	20	81	640	4	6	< 0.5	13	33	630	4.50	724	86
1070	205	232	90	< 1	< 10	87	630	6	6	< 0.5	39	41	130	6.98	495	84
1071	205	232	65	8	< 10	30	590	6	< 2	< 0.5	20	25	530	4.53	590	90
1072	205	232	330	< 1	< 10	24	980	< 2	< 2	< 0.5	8	24	100	4.00	173	66
1073	205	232	1400	< 1	< 10	607	920	2	< 2	5.0	14	21	60	6.03	294	62
1074	205	232	510	< 1	< 10	42	900	< 2	< 2	10.0	51	25	60	6.43	124	62
1075	205	232	80	< 1	< 10	29	1040	6	< 2	< 0.5	7	23	160	2.75	214	63
1076	205	232	< 5	1	< 10	79	750	< 2	< 2	< 0.5	28	16	80	5.30	1165	95
1077	205	232	< 5	1	< 10	22	690	< 2	< 2	< 0.5	7	26	240	2.28	183	89
1078	205	232	< 5	1	< 10	193	900	14	< 2	1.5	10	33	300	3.09	277	92
1079	205	232	140	< 1	< 10	58	620	10	< 2	< 0.5	12	26	130	2.49	261	89

CERTIFICATION :

B. Coughlin



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Project : 335

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P.O. # : NONE

CERTIFICATE OF ANALYSIS A8822885

SAMPLE DESCRIPTION	PREP CODE		Mg % (ICP)	V ppm (ICP)	Al % (ICP)	Be ppm (ICP)	Ca % (ICP)	Cu ppm (ICP)	Ag ppm AAS	Ti % (ICP)	Sr ppm (ICP)	Na % (ICP)	K % (ICP)			
	1060	205	232	0.90	198	4.91	1.0	0.98	73	1.0	0.23	95	0.57	1.96		
1061	205	232	1.70	171	8.75	2.0	2.65	161	0.5	0.47	351	3.50	1.87			
1062	205	232	1.38	133	7.16	2.0	2.11	559	2.0	0.38	258	2.70	1.58			
1063	205	232	1.43	157	7.74	2.0	2.46	188	1.0	0.41	206	2.21	2.10			
1064	205	232	1.00	140	5.12	4.0	6.40	>10000	18.0	0.26	237	0.37	0.34			
1065	205	232	1.43	147	7.91	2.0	1.83	230	1.0	0.42	213	2.65	1.89			
1066	205	232	4.38	155	6.50	3.0	4.93	138	1.5	0.67	1140	2.67	2.14			
1067	205	232	1.39	180	8.02	2.0	1.75	93	< 0.5	0.42	310	2.87	1.75			
1068	205	232	2.95	224	6.80	2.0	9.04	52	1.0	0.44	332	0.57	0.71			
1069	205	232	1.62	151	6.92	1.5	2.15	79	0.5	0.42	169	1.71	1.73			
1070	205	232	1.37	158	6.90	2.5	1.91	264	< 0.5	0.44	179	1.98	1.72			
1071	205	232	1.56	124	7.43	1.0	1.90	103	< 0.5	0.41	201	2.23	1.54			
1072	205	232	0.69	116	3.62	0.5	0.30	211	< 0.5	0.11	24	0.19	1.25			
1073	205	232	0.56	97	3.69	1.0	1.06	386	< 0.5	0.15	45	0.14	1.33			
1074	205	232	0.49	88	3.13	0.5	0.47	488	< 0.5	0.11	19	0.13	1.22			
1075	205	232	0.64	112	3.51	0.5	0.58	145	< 0.5	0.17	63	0.48	1.21			
1076	205	232	1.69	146	7.14	1.0	2.20	28	< 0.5	0.32	284	3.32	1.43			
1077	205	232	0.68	150	4.35	1.0	0.77	29	< 0.5	0.23	64	0.53	1.60			
1078	205	232	0.60	118	3.73	1.0	1.20	65	< 0.5	0.18	40	0.16	1.20			
1079	205	232	0.62	110	3.79	0.5	0.72	28	0.5	0.18	37	0.22	1.48			

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Project : 335

Comments: ATTN: STU CROFT

**Page No. : 1-A
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Date : 21-SEP-88
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CERTIFICATE OF ANALYSIS A8823175

SAMPLE DESCRIPTION	PREP CODE		Au oz/T	Mb ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)	P ppm (ICP)	Pb ppm (ICP)	Bi ppm (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Ni ppm (ICP)	Ba ppm (ICP)	Fe % (ICP)	Mn ppm (ICP)	Cr ppm (ICP)
1080	208	232	0.002	3	< 10	118	610	16	< 2	< 0.5	23	12	130	6.12	475	48
1081	208	232	0.002	2	< 10	167	860	40	< 2	< 0.5	20	27	200	9.12	1385	69
1082	208	232	0.002	2	< 10	626	710	220	< 2	< 5.0	15	24	130	10.60	1310	86
1083	208	232	0.022	1	< 10	127	1270	24	< 2	< 0.5	21	10	180	10.20	1250	40
1084	208	232	0.002	3	< 10	79	1400	20	2	< 0.5	18	4	630	4.67	540	48
1085	208	232	0.002	< 1	< 10	92	1360	4	4	< 0.5	18	4	710	6.42	598	47
1086	208	232	0.002	14	< 10	68	1590	10	4	< 0.5	18	6	280	5.87	348	50
1087	208	232	0.002	3	< 10	89	1510	12	< 2	< 0.5	14	6	1000	4.26	443	31
1088	208	232	0.002	3	< 10	194	1030	16	< 2	< 0.5	11	29	470	5.02	672	61
1089	208	232	0.006	4	< 10	978	440	16	< 2	8.0	7	32	140	5.14	654	108
1090	208	232	0.106	< 1	< 10	3240	560	24	< 2	29.5	7	42	80	6.65	710	108
1091	208	232	0.010	2	< 10	925	640	20	< 2	7.5	7	33	450	4.04	598	103
1092	208	232	0.066	2	< 10	100	460	10	< 2	< 0.5	8	39	180	4.80	379	97
1093	208	232	0.004	< 1	< 10	393	70	16	< 2	3.5	31	85	60	15.60	545	103
1094	208	232	0.002	2	< 10	104	380	16	< 2	< 0.5	23	45	220	6.00	620	112
1095	208	232	0.008	< 1	20	455	300	12	< 2	5.0	23	90	100	16.05	735	89

ALL ASSAY DETERMINATIONS ARE PERFORMED OR SUPERVISED BY B.C. CERTIFIED ASSAYERS

CERTIFICATION :

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Project: 335

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CERTIFICATE OF ANALYSIS A8823188

SAMPLE DESCRIPTION	PREP CODE		Au oz/T	Mb ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)	P ppm (ICP)	Pb ppm (ICP)	Bi ppm (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Ni ppm (ICP)	Ba ppm (ICP)	Fe % (ICP)	Mn ppm (ICP)	Cr ppm (ICP)
	1096	208	232	0.024	< 1	50	279	1180	12	< 2	1.0	18	31	80	13.25	1980
1097	208	232	0.008	< 1	20	205	2520	6	< 2	0.5	8	9	110	15.65	2920	25
1098	208	232	0.002	< 1	20	156	2700	24	< 2	0.5	24	13	250	11.25	2050	28
1099	208	232	0.006	< 1	10	145	2650	16	< 2	< 0.5	11	15	380	10.65	2120	21
1100	208	232	0.014	< 1	10	381	2570	20	< 2	1.0	12	19	110	13.55	2770	24
71562 E	208	232	0.006	< 1	20	626	2760	8	< 2	2.5	8	11	230	12.30	2730	20
71563 E	208	232	0.026	< 1	20	853	2270	2	< 2	6.5	142	46	40	20.9	2320	21
71564 E	208	232	0.004	< 1	10	140	2770	24	< 2	< 0.5	21	11	90	8.28	1100	21
71565 E	208	232	0.034	< 2	10	326	2350	28	< 2	0.5	18	20	80	8.95	1355	38
71566 E	208	232	0.028	< 1	< 10	2130	720	16	< 2	22.0	< 1	189	50	>25.0	764	23
71567 E	208	232	0.004	< 1	< 10	340	670	36	< 2	2.0	22	28	120	7.89	1065	64
71568 E	208	232	0.004	3	< 10	291	950	12	< 2	1.0	54	24	140	10.30	1290	51
71569 E	208	232	0.006	< 1	< 10	161	1220	12	< 2	< 0.5	47	220	180	7.07	974	394
71570 E	208	232	0.006	< 1	< 10	169	1030	32	< 2	< 0.5	13	56	140	6.96	896	138
71571 E	208	232	0.002	< 1	< 10	50	320	4	< 2	< 0.5	6	21	530	1.89	297	77

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CERTIFICATE OF ANALYSIS A8823175

SAMPLE DESCRIPTION	PREP CODE		Mg % (ICP)	V ppm (ICP)	Al % (ICP)	Be ppm (ICP)	Ca % (ICP)	Cu ppm (ICP)	Ag ppm AAS	Ti % (ICP)	Sr ppm (ICP)	Na % (ICP)	K % (ICP)			
1080	208	232	1.89	246	8.57	< 0.5	2.79	254	1.0	0.49	410	2.78	1.90			
1081	208	232	2.18	191	7.93	< 0.5	1.06	74	1.0	0.33	29	0.27	2.22			
1082	208	232	1.55	154	5.45	< 0.5	1.55	359	1.5	0.31	98	0.54	1.05			
1083	208	232	1.67	135	7.58	< 0.5	1.11	664	1.0	0.39	82	0.61	2.63			
1084	208	232	1.10	94	7.92	< 0.5	2.85	100	0.5	0.30	347	2.37	1.54			
1085	208	232	1.77	153	7.95	< 0.5	2.95	253	0.5	0.43	414	1.63	1.99			
1086	208	232	1.00	81	8.79	< 0.5	3.26	118	0.5	0.29	497	2.79	1.45			
1087	208	232	1.04	82	9.76	< 0.5	2.57	98	< 0.5	0.30	427	3.01	1.92			
1088	208	232	1.61	248	8.50	< 0.5	1.26	323	1.0	0.44	85	0.57	2.90			
1089	208	232	1.00	308	7.28	< 0.5	0.74	777	2.5	0.43	67	0.52	2.71			
1090	208	232	0.96	239	5.59	< 0.5	0.84	1895	5.5	0.31	70	0.63	1.91			
1091	208	232	0.80	291	6.33	< 0.5	0.60	866	6.0	0.36	64	0.67	2.31			
1092	208	232	0.76	247	5.72	< 0.5	0.23	1060	3.5	0.31	26	0.27	2.17			
1093	208	232	0.79	190	4.22	< 0.5	0.75	8390	28.5	0.25	71	0.81	1.17			
1094	208	232	1.07	267	7.10	< 0.5	0.23	586	1.5	0.45	30	0.31	2.69			
1095	208	232	0.82	225	5.47	< 0.5	0.37	3010	4.0	0.35	62	1.03	1.84			

ALL ASSAY DETERMINATIONS ARE PERFORMED OR SUPERVISED BY B.C. CERTIFIED ASSAYERS

CERTIFICATION :

B. Coughlin



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

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

PHONE (604) 984-0221

To: NEVIN SADLIER-BROWN GOODBRAND LTD.,

401 - 134 ABBOTT ST.
VANCOUVER, B.C.
V6B 2K4

Project: 335

Comments:

**Page No. : 1-B

Tot. Pages: 1

Date : 20-SEP-88

Invoice # : I-8823188

P.O. # : NONE

CERTIFICATE OF ANALYSIS A8823188

SAMPLE DESCRIPTION	PREP CODE		Mg % (ICP)	V ppm (ICP)	Al % (ICP)	Be ppm (ICP)	Ca % (ICP)	Cu ppm (ICP)	Ag ppm AAS	Ti % (ICP)	Sr ppm (ICP)	Na % (ICP)	K % (ICP)			
	1096	208	232	1.62	257	6.13	< 0.5	0.44	785	1.5	0.76	64	0.62	1.25		
1097	208	232	2.33	286	7.10	< 0.5	0.71	461	0.5	1.51	47	0.35	1.13			
1098	208	232	2.80	285	7.26	< 0.5	1.52	790	1.5	1.52	192	1.60	0.78			
1099	208	232	3.09	285	7.10	< 0.5	1.81	401	1.0	1.45	163	1.48	1.02			
1100	208	232	2.78	274	6.96	< 0.5	1.01	715	2.0	1.45	95	1.19	0.62			
71562 E	208	232	2.89	306	7.41	< 0.5	0.85	980	2.0	1.60	54	0.80	0.90			
71563 E	208	232	2.55	254	5.96	< 0.5	1.38	3030	7.0	1.29	90	0.81	0.57			
71564 E	208	232	2.57	294	7.30	< 0.5	1.97	621	1.5	1.49	243	1.79	1.17			
71565 E	208	232	2.60	278	6.65	< 0.5	1.41	1410	3.0	1.25	149	1.48	0.92			
71566 E	208	232	1.16	137	2.86	< 0.5	0.59	1370	7.0	0.55	46	0.42	0.58			
71567 E	208	232	1.21	144	6.40	< 0.5	1.11	447	1.0	0.28	60	0.35	1.80			
71568 E	208	232	1.46	160	6.20	< 0.5	0.91	286	1.0	0.37	100	0.48	1.84			
71569 E	208	232	4.51	165	6.60	< 0.5	2.99	204	1.0	0.38	97	0.46	1.76			
71570 E	208	232	2.01	169	6.77	< 0.5	1.16	419	2.0	0.40	83	0.37	2.31			
71571 E	208	232	0.46	72	2.69	< 0.5	0.84	48	< 0.5	0.16	29	0.10	0.92			

B. Coughlin



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212 BROOKSBANK AVE., NORTH VANCOUVER,
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V6B 2K4

Project : 335
Comments:

**Page No. : 1-A

Tot. Pages: 1

Date : 27-SEP-88

Invoice # : I-8823688

P.O. # : NONE

CERTIFICATE OF ANALYSIS A8823688

SAMPLE DESCRIPTION	PREP CODE		Au oz/T	Mb ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)	P ppm (ICP)	Pb ppm (ICP)	Bi ppm (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Ni ppm (ICP)	Ba ppm (ICP)	Fe % (ICP)	Mn ppm (ICP)	Cr ppm (ICP)
	71572 E	208	232	< 0.002	7	10	68	640	28	6	< 0.5	6	7	260	3.64	504
71573 E	208	232	< 0.002	4	20	77	870	12	8	< 0.5	16	10	200	5.39	669	59

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V6B 2K4

Project : 335

Comments:

**Page No. : 1-B
Tot. Pages: 1
Date : 27-SEP-88
Invoice # : I-8823688
P.O. # : NONE

CERTIFICATE OF ANALYSIS A8823688

SAMPLE DESCRIPTION	PREP CODE		Mg % (ICP)	V ppm (ICP)	Al % (ICP)	Be ppm (ICP)	Ca % (ICP)	Cu ppm (ICP)	Ag ppm AAS	Ti % (ICP)	Sr ppm (ICP)	Na % (ICP)	K % (ICP)			
	71572 E	208	232	1.20	107	7.42	0.5	2.39	163	1.5	0.26	287	4.12	1.18		
71573 E	208	232	1.66	168	8.34	1.0	3.97	99	1.5	0.39	319	3.08	1.59			

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V6B 2K4

Project : 335
Comments:

**Page No. : 1-A
Tot. Pages: 1
Date : 25-SEP-88
Invoice # : I-8823687
P.O. # : NONE

CERTIFICATE OF ANALYSIS A8823687

SAMPLE DESCRIPTION	PREP CODE		Au ppb	Al %	Ag ppm	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
			FA+AA																		
951	205	238	585	0.55	1.8	890	100	< 0.5	2	0.06	< 0.5	5	126	215	7.37	< 10	< 1	0.18	< 10	0.18	47
952	205	238	35	3.19	0.6	45	330	< 0.5	6	0.49	< 0.5	22	50	140	6.47	10	< 1	1.79	< 10	2.05	311
953	205	238	30	1.78	0.4	25	420	< 0.5	2	0.17	< 0.5	9	118	39	3.03	< 10	2	0.90	< 10	1.04	305

CERTIFICATION :

B. Coughlin



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Project: 335

Comments:

**Page No. : 1-B

Tot. Pages: 1

Date : 25-SEP-88

Invoice # : I-8823687

P.O. # : NONE

CERTIFICATE OF ANALYSIS A8823687

SAMPLE DESCRIPTION	PREP CODE		Mo	Na	Ni	P	Pb	Sb	Sc	Sr	Ti	Tl	U	V	W	Zn
			ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
951	205	238	4	0.01	2	790	102	5	2	13	0.10	10	< 10	43	< 5	49
952	205	238	3	0.07	13	1670	22	5	13	25	0.30	10	< 10	158	< 5	71
953	205	238	1	0.04	14	430	16	< 5	4	22	0.17	< 10	< 10	88	< 5	103

CERTIFICATION :

B. Caughlin

ACME ANALYTICAL LABORATORIES LTD. DATE RECEIVED: SEP 23 1988
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6
PHONE(604)253-3158 FAX(604)253-1716 DATE REPORT MAILED: *Sept. 29/88.*

ASSAY CERTIFICATE

- SAMPLE TYPE: ROCK AU - 10 GM REGULAR ASSAY.

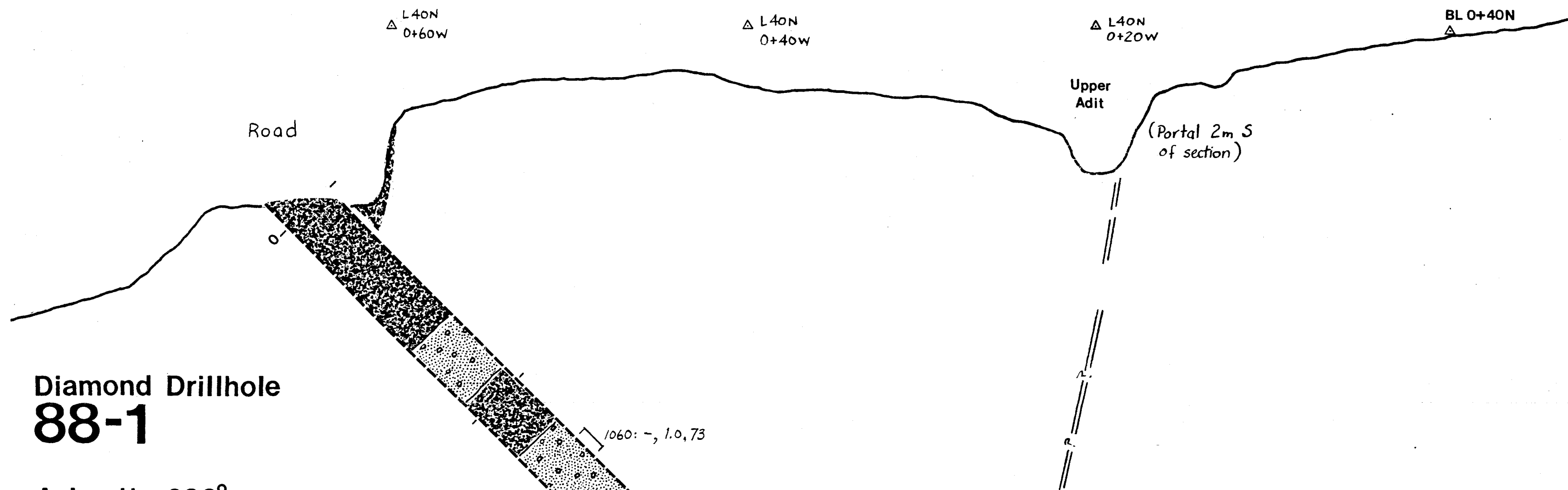
ASSAYER: *C. Leong* D.TOYE OR C.LEONG, CERTIFIED B.C. ASSAYERS

NEVIN SADLIER-BROWN GOODBRAND LTD. FILE # 88-4740

SAMPLE#	AU oz/t
30932	.002
30933	.007
30934	.006
30935	.135
30936	.868
30937	.005

Section A
looks north

A'

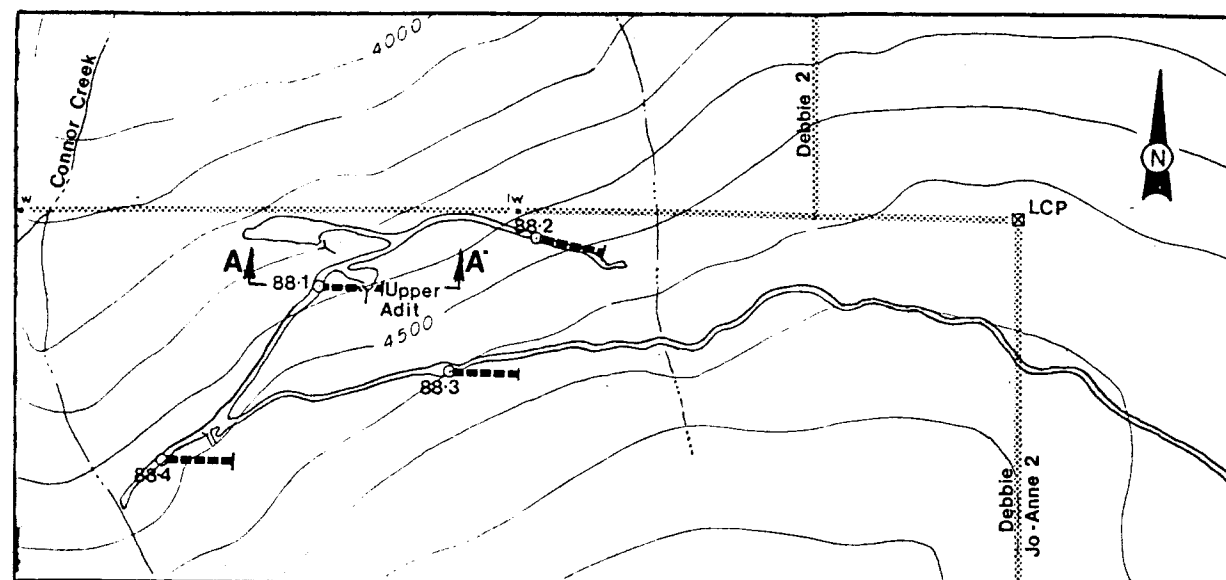


Diamond Drillhole 88-1

Azimuth: 090°
Dip: -45°
Length: 300' / 91.4 m

LEGEND

Depth	in feet (as measured along drill hole).
OVERBURDEN	
DACITE / DIORITE	Feldspar porphyry intrusive containing sub-angular phenocrysts of K-feldspar within a medium grey groundmass comprising weakly to moderately chloritized mafics. Diorite phase tends to be somewhat finer grained, with the principal distinction between the rock types being the extent of the intrusive. Triangles denote intrusive is moderately magnetic.
RYODACITE TUFF	Medium to very fine grained fragmental tuff commonly containing sub-angular clasts of granite. Metamorphosis and alteration largely destroy original texture though some banding is apparent. Sequence tends to be moderately to strongly silicified.
Gradational contact	
META-DACITE	Uniform medium to fine grained dacite (locally with tuffaceous texture) is moderately metamorphosed ("hornfelsed"). Alteration of mafic bands to chlorite results in distinctive pink-purple to drab green mottled colouration of core.
Shear Zone/ Alteration	CH = Chloritization; EP = Epidote
DACITE DIKE	Dark grey-green fine-grained massive dacite intrusion. Characteristically, this section is strongly chloritized and sheared; texture is friable.
Massive Sulphides	Sulphide stockwork or veins > 40% PY = pyrite; PR = pyrrhotite CP = chalcopyrite
Sampled section	Sample No.: gold (FAA), silver (ICP), copper (ICP) (oz/ton) (ppm) (ppm) (- denotes "less than detectable limit")



Lower Adit
(face 4m N of section)

19,435
GEOLOGICAL BRANCH
ASSESSMENT REPORT

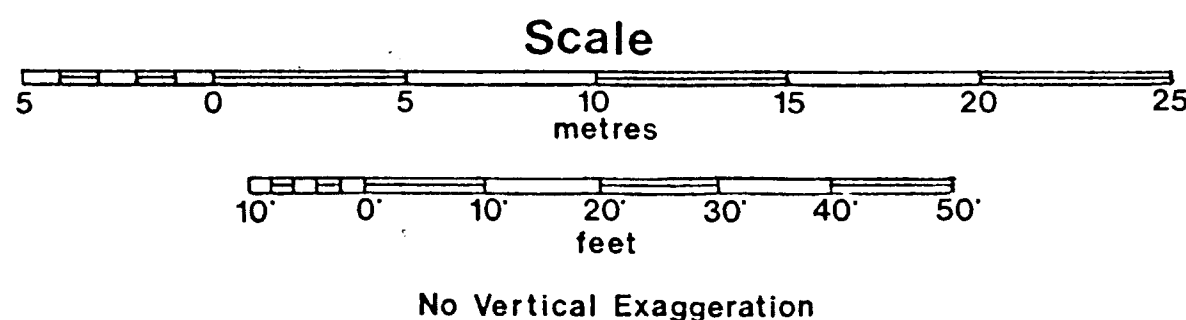
Bullion Range Exploration Corp./
Mesa Resources Ltd. Joint Venture

DEBBIE PROJECT
Section A-A'
GRAPHIC LOG: D.D.H. 88-1
Connor Creek, Nelson area, B.C.

N.T.S. 82F/6W Nelson M.D., B.C.

Date: OCT 1988 Figure 5

NEVIN SADLIER-BROWN GOODBRAND LTD.



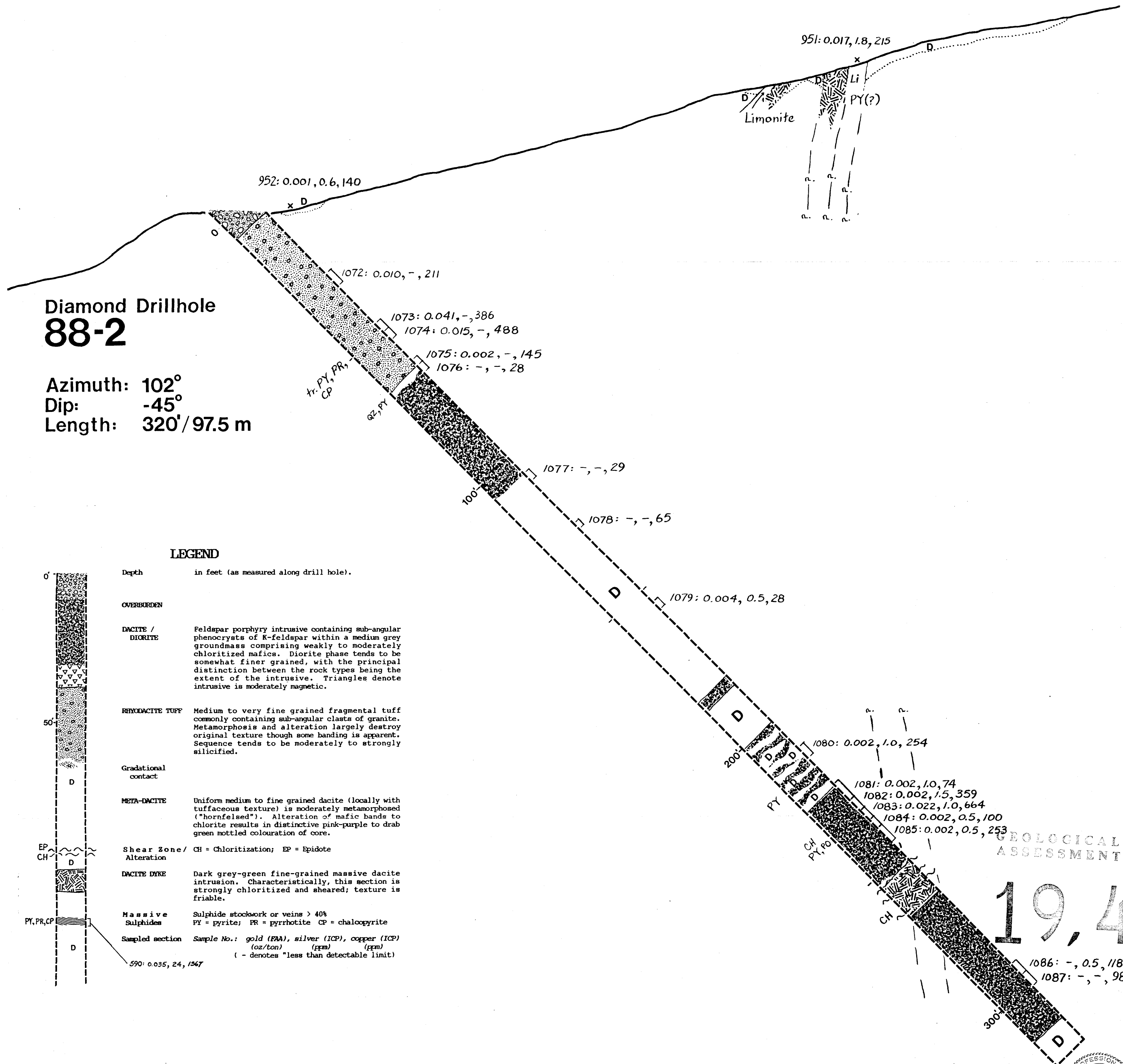
To accompany a report entitled "1988 DIAMOND DRILLING PROGRAM ON THE DEBBIE CLAIM GROUP, SLOCAN M.D., NELSON AREA, B.C.", dated January 17, 1989, by

Stuart A. [Signature] P.Eng.

Section B

looks north

B'



Diamond Drillhole 88-2

Azimuth: 102°
Dip: -45°
Length: 320' / 97.5 m

LEGEND

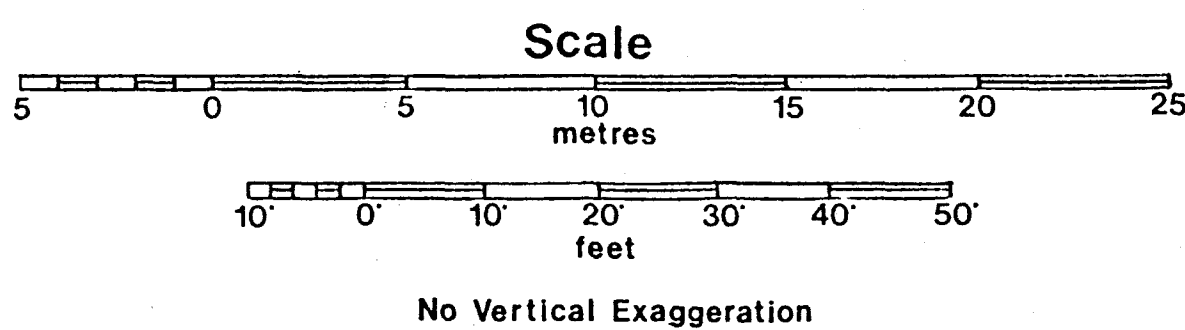
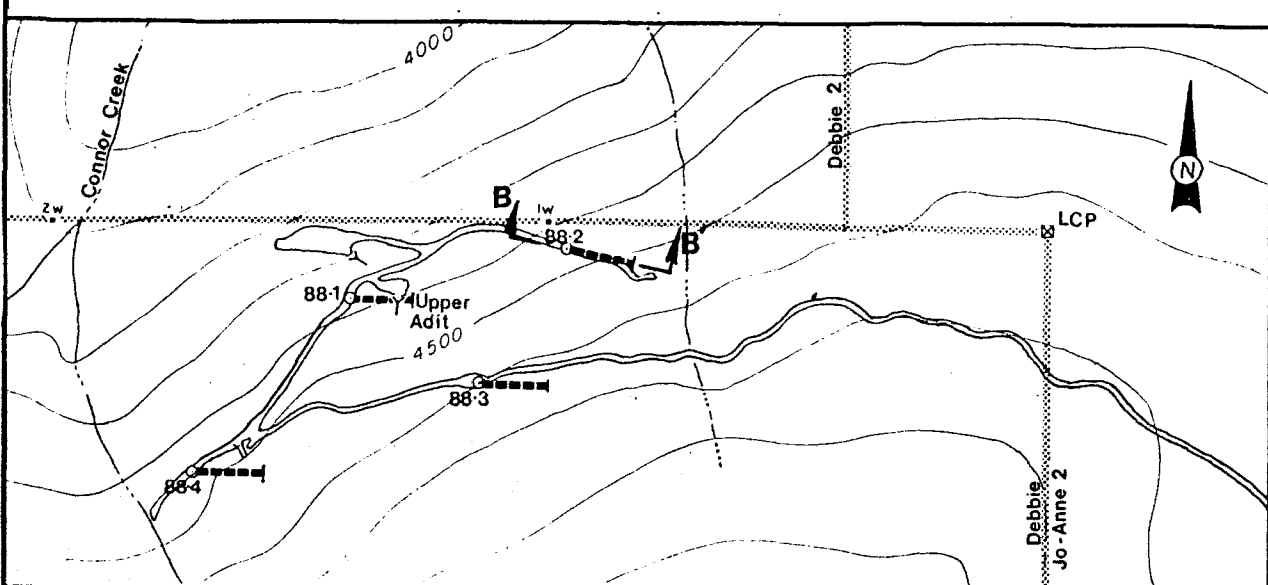
Depth	in feet (as measured along drill hole).
OVERBURDEN	
DACTE / DIORITE	Feldspar porphyry intrusive containing sub-angular phenocrysts of K-feldspar within a medium grey groundmass comprising weakly to moderately chloritized mafics. Diorite phase tends to be somewhat finer grained, with the principal distinction between the rock types being the extent of the intrusive. Triangles denote intrusive is moderately magnetic.
RYHODACTE TUFF	Medium to very fine grained fragmental tuff commonly containing sub-angular clasts of granite. Metamorphosis and alteration largely destroy original texture though some banding is apparent. Sequence tends to be moderately to strongly silicified.
Gradational contact	
META-DACTE	Uniform medium to fine grained dacite (locally with tuffaceous texture) is moderately metamorphosed ("hornfelsed"). Alteration of mafic bands to chlorite results in distinctive pink-purple to drab green mottled colouration of core.
Shear Zone/Alteration	CH = Chloritization; EP = Epidote
DACTE DYKE	Dark grey-green fine-grained massive dacite intrusion. Characteristically, this section is strongly chloritized and sheared; texture is friable.
Massive Sulphides	Sulphide stockwork or veins > 40% PY = pyrite; PR = pyrrhotite CP = chalcopyrite
Sampled section	Sample No.: gold (FAA), silver (ICP), copper (ICP) (oz/ton) (gms) (gms) (- denotes "less than detectable limit")

GEOLOGICAL BRANCH
ASSESSMENT REPORT

19,435

To accompany a report entitled
"1988 DIAMOND DRILLING PROGRAM
ON THE DEBBIE CLAIM GROUP,
SLOCAN M.D., NELSON AREA, B.C.",
dated January 17, 1989, by

Stuart A.S. Croft, P.Eng.



Bullion Range Exploration Corp./
Mesa Resources Ltd. Joint Venture

DEBBIE PROJECT
Section B-B'
GRAPHIC LOG: D.D.H. 88-2
Connor Creek, Nelson area, B.C.

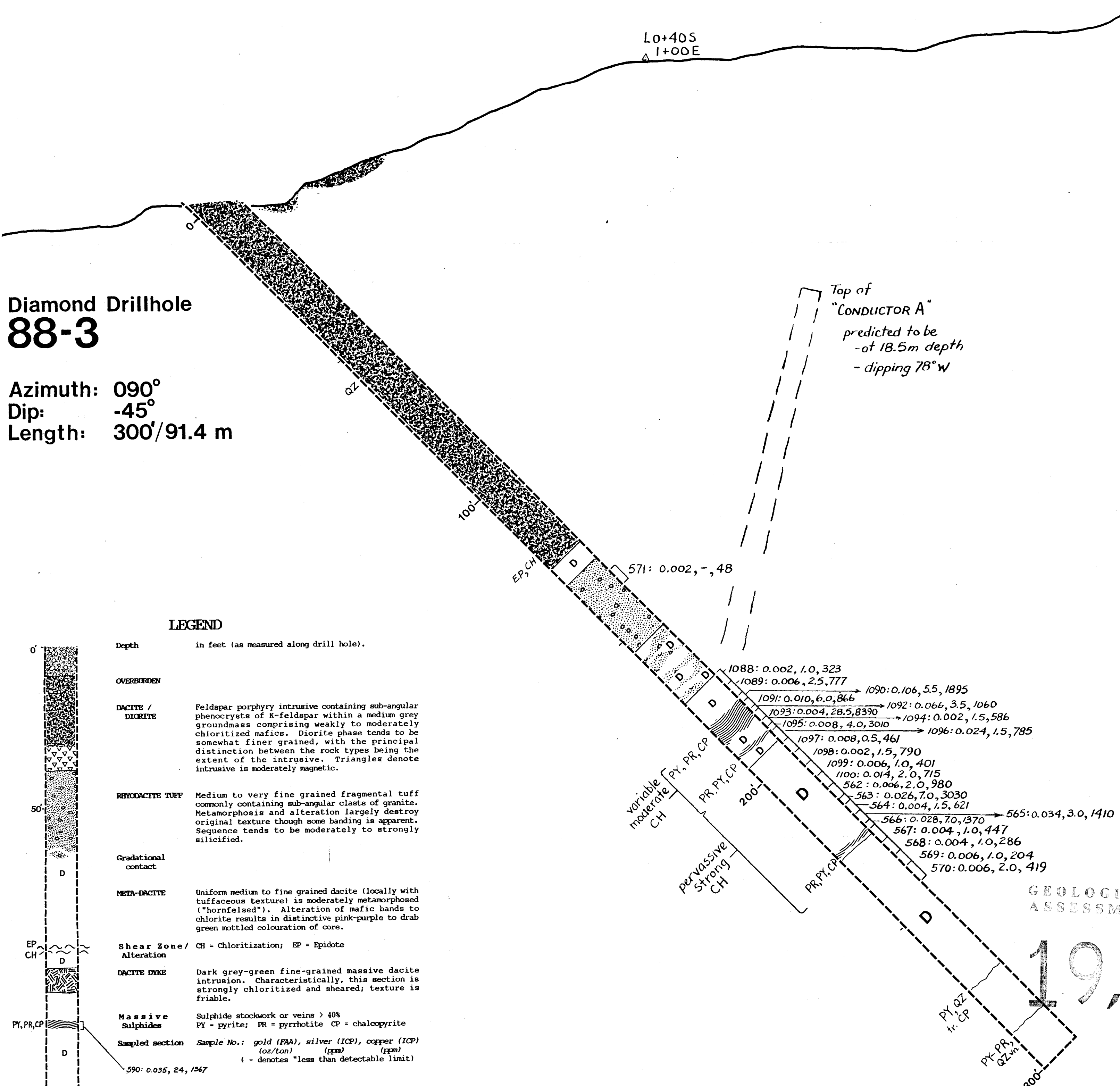
N.T.S. 82F/6W Nelson M.D., B.C.

Date: OCT 1988 Figure 6

NEVIN SADLIER-BROWN GOODBRAND LTD.

Section C
looks north

C'



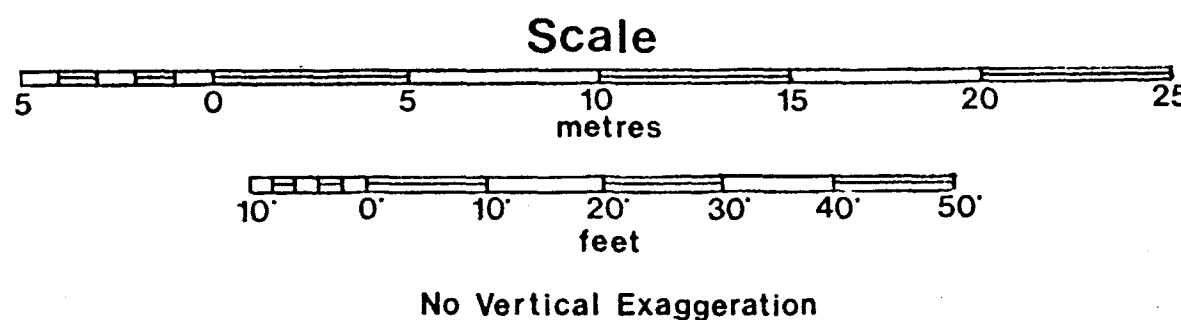
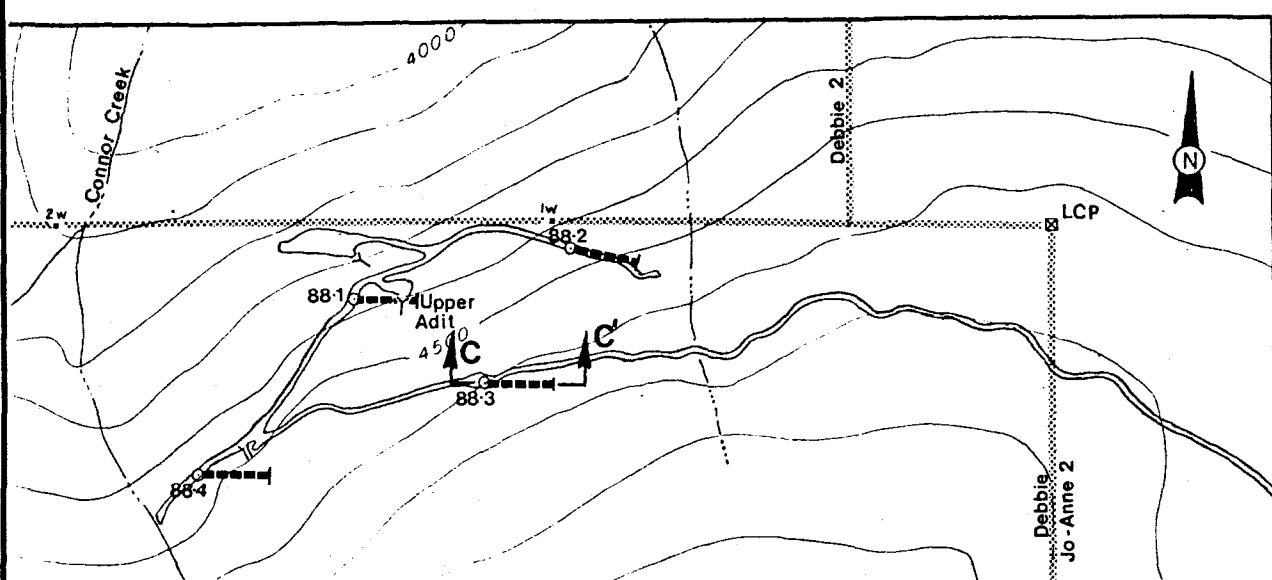
Depth	in feet (as measured along drill hole).
OVERBURDEN	
DACITE / DIORITE	Feldspar porphyry intrusive containing sub-angular phenocrysts of K-feldspar within a medium grey groundmass comprising weakly to moderately chloritized mafics. Diorite phase tends to be somewhat finer grained, with the principal distinction between the rock types being the extent of the intrusive. Triangles denote intrusive is moderately magnetic.
RHYODACITE TUFF	Medium to very fine grained fragmental tuff commonly containing sub-angular clasts of granite. Metamorphosis and alteration largely destroy original texture though some banding is apparent. Sequence tends to be moderately to strongly silicified.
Gradational contact	
META-DACITE	Uniform medium to fine grained dacite (locally with tuffaceous texture) is moderately metamorphosed ("hornfelsed"). Alteration of mafic bands to chlorite results in distinctive pink-purple to drab green mottled colouration of core.
Shear Zone/ Alteration	CH = Chloritization; EP = Epidote
DACITE DYKE	Dark grey-green fine-grained massive dacite intrusion. Characteristically, this section is strongly chloritized and sheared; texture is friable.
Massive Sulphides	Sulphide stockwork or veins > 40% PY = pyrite; PR = pyrrhotite CP = chalcopyrite
Sampled section	Sample No.: gold (FAA), silver (ICP), copper (ICP) (oz/ton) (gms) (gms) (- denotes "less than detectable limit")

GEOLOGICAL BRANCH
ASSESSMENT REPORT

19,435

To accompany a report entitled
"1988 DIAMOND DRILLING PROGRAM
ON THE DEBBIE CLAIM GROUP,
SLOCAN M.D., NELSON AREA, B.C.",
dated January 17, 1989, by

Stuart A. S. Croft
Stuart A. S. Croft, P.Eng.



Bullion Range Exploration Corp./
Mesa Resources Ltd. Joint Venture

DEBBIE PROJECT
Section C-C'
GRAPHIC LOG: D.D.H. 88-3
Connor Creek, Nelson area, B.C.

N.T.S. 82F/6W Nelson M.D., B.C.

Date: OCT 1988 Figure 7

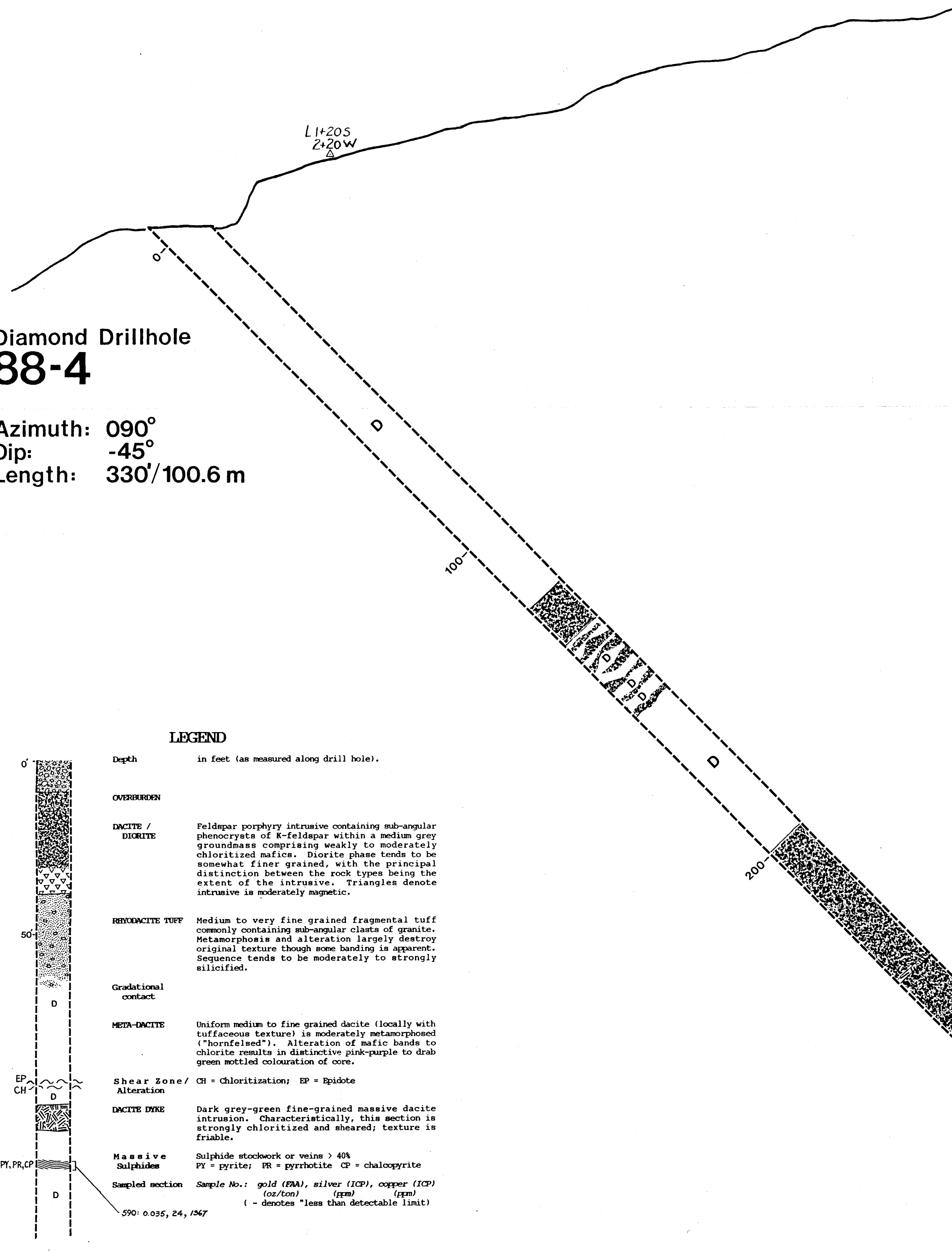
NEVIN SADLER-BROWN GOODBRAND LTD.

Section
D
looks north

D'

Diamond Drillhole
88-4

Azimuth: 090°
Dip: -45°
Length: 330'/100.6 m



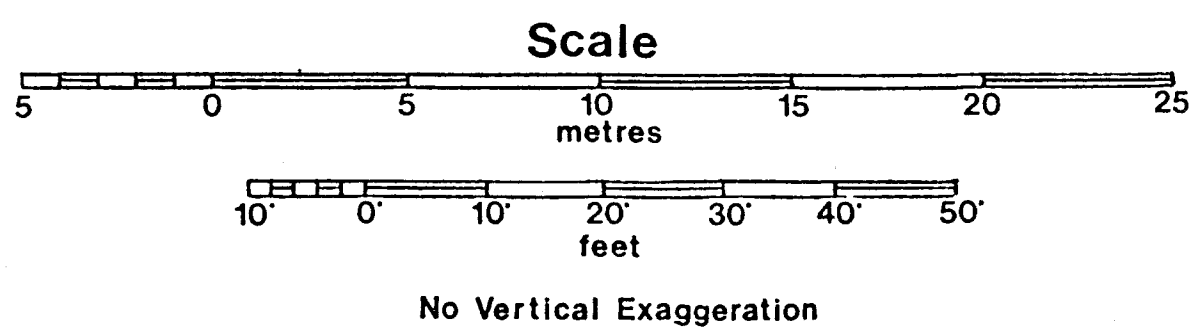
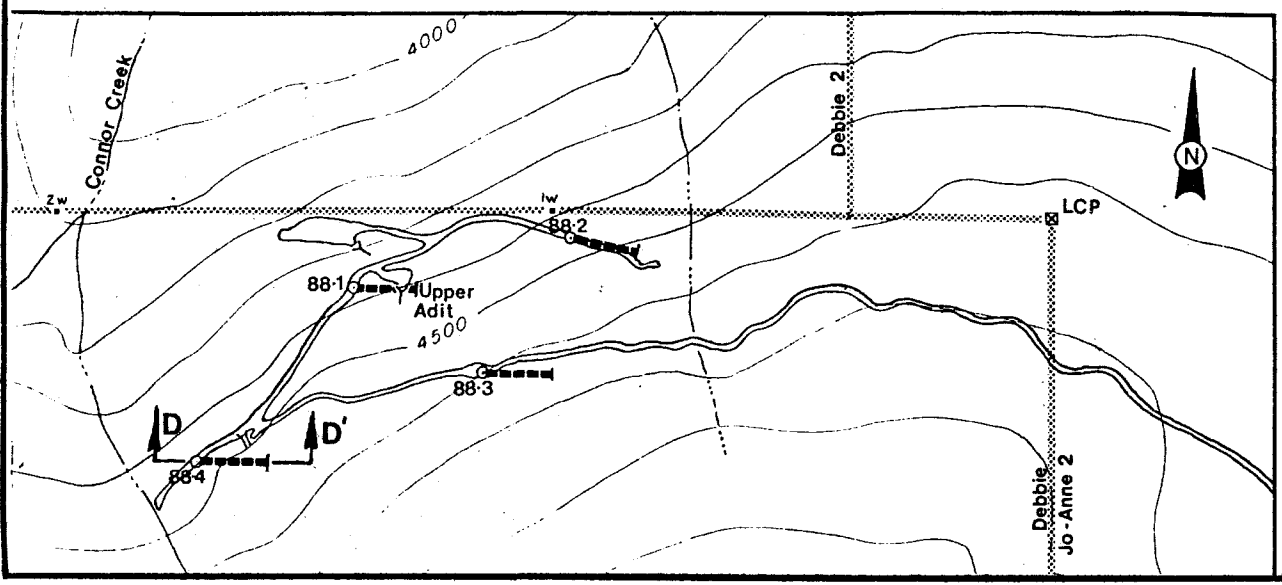
71572: -, 1.5, 163
71573: -, 1.5, 99

MINERALOGICAL BRANCH
ASSESSMENT REPORT

19,135

To accompany a report entitled
"1988 DIAMOND DRILLING PROGRAM
ON THE DEBBIE CLAIM GROUP,
SLOCAN M.D., NELSON AREA, B.C.",
dated January 17, 1989, by

Stuart A. Sadlier
Stuart A. Sadlier, P.Eng.



Bullion Range Exploration Corp./ Mesa Resources Ltd. Joint Venture	
DEBBIE PROJECT Section D-D' GRAPHIC LOG: D.D.H. 88-4 Connor Creek, Nelson area, B.C.	
N.T.S. 82F/6W	Nelson M.D., B.C.
Date: OCT 1988	Figure 8
NEVIN SADLIER-BROWN GOODBRAND LTD.	