

LOG NO:	INDV. 17 1992	RD.
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REPORT OF DIAMOND DRILLING ON
MURDER CREEK PROJECT,
RAIN PROPERTY

Revelstoke Mining Division

NTS 82M/8E
51°26'N, 118°07'W

For

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October 22, 1992

GEOLOGICAL BRANCH
ASSESSMENT REPORT

22,622

OREQUEST



SUMMARY

The Murder Creek Project on the Rain property represents an exploration target for stratabound copper-zinc massive sulphide deposits. The property is located approximately 60 kilometres north of Revelstoke, B.C. and consists of 15 claims totalling 178 units. The property was staked in 1989-90 and is owned by Bethlehem Resources Corp. (100%).

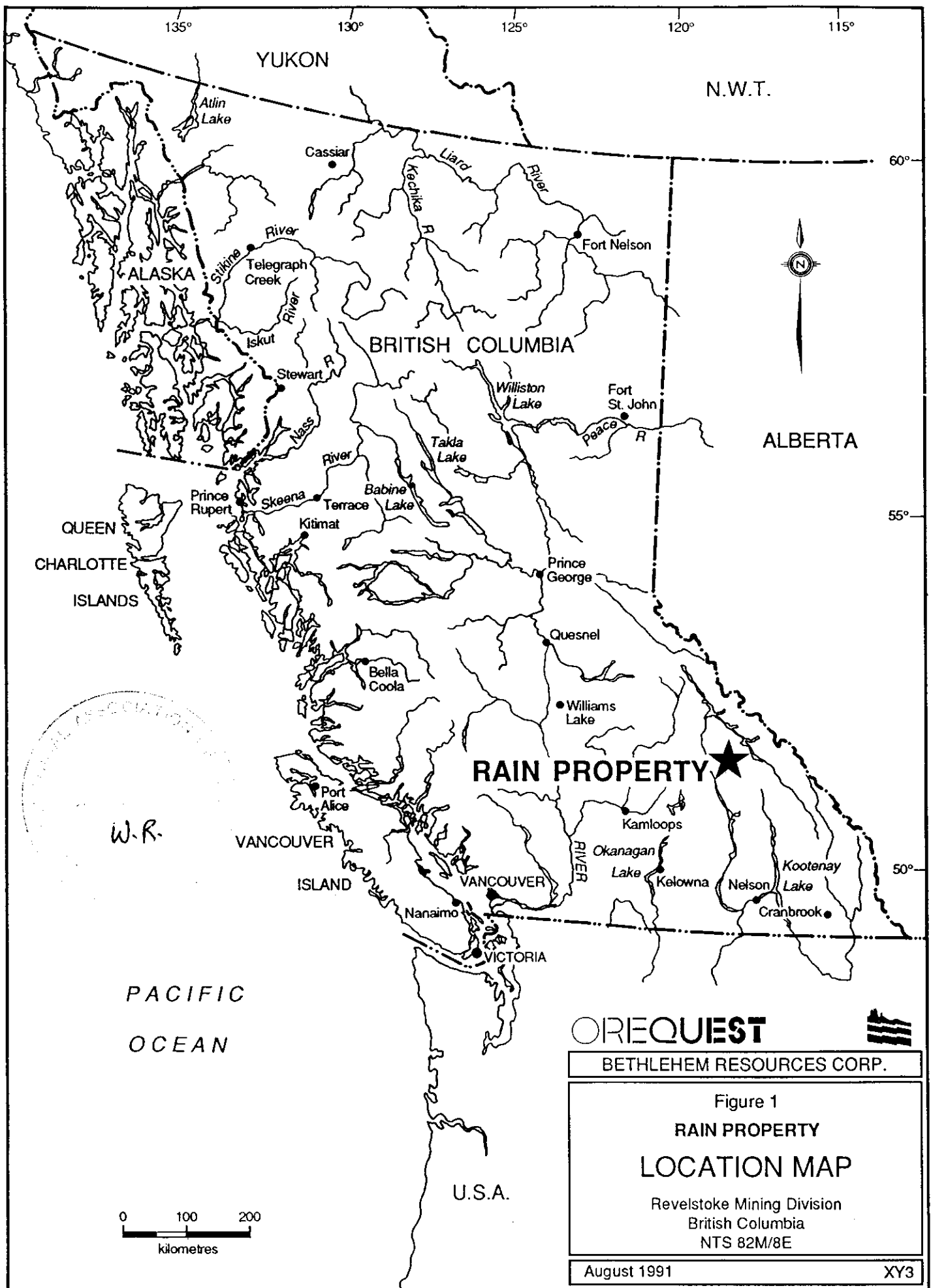
The 1992 exploration program consisted of a limited diamond drill program initially consisting of one hole designed to define the stratigraphy of the area and test strong copper and zinc soil geochemical anomalies coincident with 5 ground VLF-EM geophysical anomalies. This first program commenced August 5, 1992 and was completed on August 15, 1992. Encouraging results from the first hole led to an expanded program starting September 14, 1992 and ending September 25, 1992. The entire program consisted of 5 holes totalling 904.47 m (2967 feet) over a strike length of 775 m.

The drilling has confirmed a stratigraphic package of rocks very similar to that seen at the Goldstream Mine. No economic mineralization was encountered in any of the drill holes but multiple garnet/semi-massive sulphide zones were encountered with up to 30% pyrrhotite and traces of chalcopyrite and sphalerite over 0.5 m. The presence of the garnet zones is very significant as a well defined garnet zone is located structurally above the ore zone at the Goldstream Mine and is believed to be unique to the mine area itself. Thus, the garnet zones seen on the Rain Property may

be key indicators for another massive sulphide deposit similar to that at the Goldstream Mine.

Further work is warranted on the property. A borehole time domain-EM geophysical survey is recommended to fill-in information between the existing drill holes and obtain better resolution on any deep seated mineralization not detected from surficial surveys. If the results of the borehole surveys are successful in delineating and tracing the garnetiferous/massive sulphide horizons then a surface program over the grid area utilizing the same type of survey may be warranted, though given the available information, it is possible to continue further drilling with reasonable confidence.

Additional drilling is recommended to continue to define the garnetiferous mineralized horizons to the south and to attempt to locate significant concentrations of chalcopyrite and sphalerite. A fence of holes at a 200 m hole spacing should be able to adequately trace the mineralization. In-fill holes will be required to further define the stratigraphy.



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Figure 1
RAIN PROPERTY
LOCATION MAP
 Revelstoke Mining Division
 British Columbia
 NTS 82M/8E

August 1991 XY3

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INTRODUCTION

The Murder Creek Project, within the Rain Property, represents a target for stratabound copper-zinc massive sulphide deposits similar to the Goldstream Mine. The property, held 100% by Bethlehem Resources Corp. is located approximately 60 kilometres north of Revelstoke, British Columbia and is underlain by rocks of the Proterozoic Horsethief Creek Group, Proterozoic to Lower Paleozoic Hamill Group, Paleozoic Badshot Formation and Lardeau Group. The Lardeau and Badshot rocks are known to host several massive sulphide deposits in the region.

This report describes and presents results from a two phase diamond drilling program completed between August 5 and September 25, 1992. The first phase of drilling consisted of one hole, designed to test strong copper and zinc soil geochemical anomalies coincident with five ground VLF-EM geophysical conductors. The hole helped to further define the stratigraphy in an area of limited surface outcrop. This first hole was successful in outlining stratigraphy very similar to that seen at the Goldstream Mine, in particular, several garnetiferous, semi-massive sulphide zones. This first phase of drilling commenced August 5, 1992 and was completed on August 15, 1992.

The success obtained from this first program lead to an expanded drilling program which commenced September 14, 1992 and was completed on September 25, 1992. The second phase of drilling

tested the garnet/semi-massive sulphide zones along strike both north and south of the first hole and also up dip from the initial intersection.

LOCATION AND ACCESS

The Rain property is located approximately 80 road kilometres north of Revelstoke within the northern Selkirk Mountains of southeastern B.C. (Figure 1). The property straddles the Downie Creek valley from approximately 1 kilometre north of the Sorcerer Creek confluence, southward for approximately 15 kilometres, and a portion of the property area covers the headwaters of Standard Creek. The property is centred at $51^{\circ}26'N$ latitude and $118^{\circ}07'W$ longitude, NTS map sheet 82M/8E.

Access to the lower elevations of the property areas is gained by travelling 67 kilometres north from Revelstoke on Route 23 (Nakusp-Mica Creek Highway) then eastward along the Downie Creek logging road. The property lies between kilometre 15 and 29 along the Downie Creek logging road from which several branch roads to logged areas provide access to the lower elevations. The alpine portions of the property must be accessed by helicopter. The property is located 56 road km south of the Goldstream Mine and mill complex.

TOPOGRAPHY, VEGETATION AND PHYSIOGRAPHY

The Murder Creek Project area is centred along Downie Creek, a large U-shaped drainage in the northern Selkirk Mountains. Elevations over the whole property range from 670 m ASL on the valley floor to 2530 m ASL. Valley walls are steep with ridges and peaks being very sharp. Small glaciers cover portions of the southwestern portion of the claim group.

Vegetation consists of mature stands of cedar, hemlock and spruce with extensive ground cover consisting of dense underbrush, slide alder and devils club. Active logging continues in the Downie Creek valley and along the heavily wooded slopes.

Outcrop exposure is very limited in the lower valley being restricted to road cuts, creek exposure and scattered cliffs. Cliffs are more prevalent along the east side of the Downie Creek valley. Exposure in the alpine areas ranges from 80 to 100 per cent. Exposure on the Murder Creek grid was limited to Murder Creek, Cooler Creek and scattered outcrops of marble at the western end of northern lines.

Thick glacial till is evident from road cuts over portions of the lower valley areas. In the area of Murder Creek the soil profile consisted of a thin humus layer underlain by a 5-20 cm thick intermixed glacial till, clay layer, followed by a thin grey leached layer. Good B horizon red brown soil was located

underneath the leached layer. Soil pits dug on some of the upslope portions of Murder Creek grid revealed an overburden depth of 1 to 2 m. Overburden depth increased on the eastern portions of the grid as evidenced from road cuts, where the topography lessens and benches out.

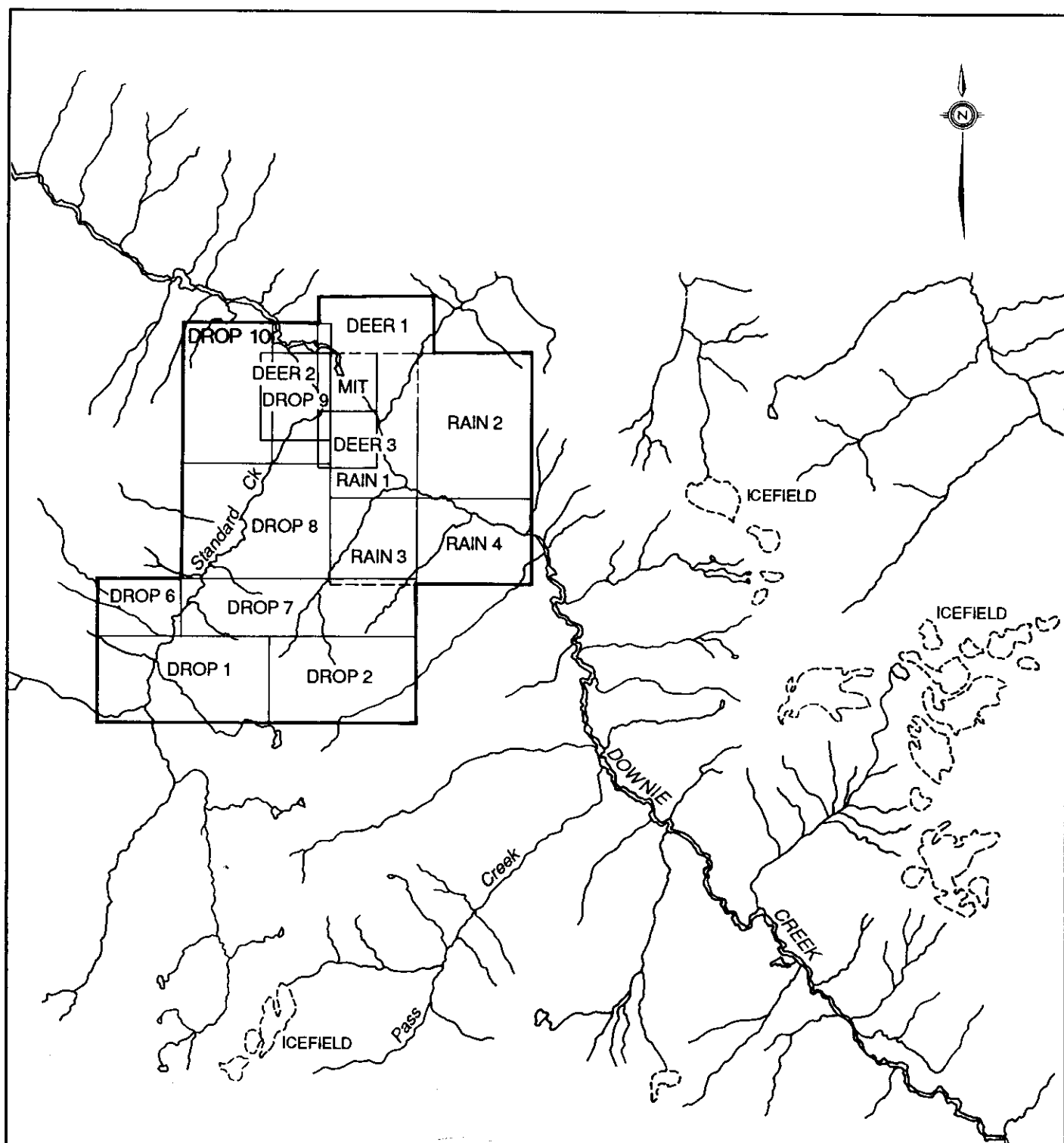
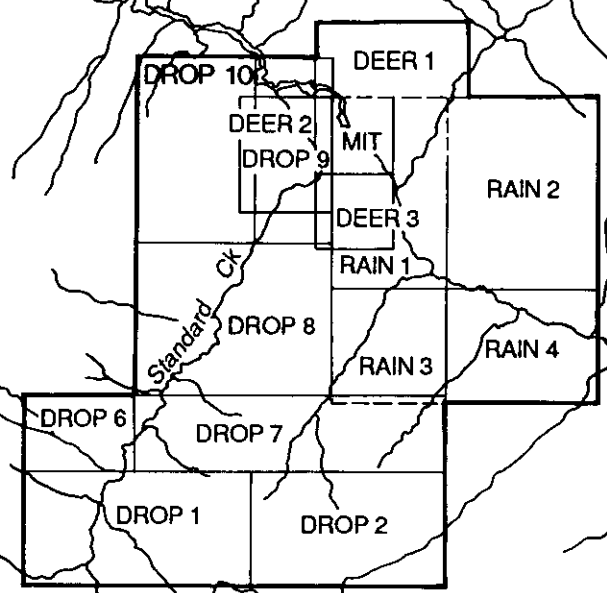
The Downie Creek area lies within the interior rain belt with precipitation averaging 1.15 m annually. Temperatures range between -30° C and $+35^{\circ}$ C.

CLAIM STATUS

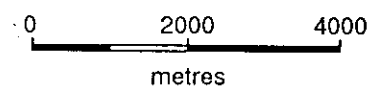
The Rain property consists of 15 mineral claims totalling 178 units (Figure 2) registered within the Revelstoke Mining Division, B.C. Pertinent claim information is listed in Table 1 and does not include assessment credits earned during the current work program.

TABLE 1: CLAIM INFORMATION

<u>CLAIM</u>	<u>TENURE #</u>	<u>UNITS</u>	<u>AREA(ha)</u>	<u>LOCATION DATE</u>	<u>EXPIRY DATE</u>
RAIN 1	248282	15	375	OCT 18/89	OCT 18/93
RAIN 2	248283	20	500	OCT 18/89	OCT 18/93
RAIN 3	248284	9	225	OCT 18/89	OCT 18/93
RAIN 4	248285	12	300	OCT 18/89	OCT 18/93
DROP 1	248425	18	450	SEP 24/90	SEP 24/93
DROP 2	248426	15	375	SEP 24/90	SEP 24/93
DROP 6	248430	6	150	SEP 25/90	SEP 25/93
DROP 7	248431	16	400	SEP 24/90	SEP 24/93
DROP 8	248432	20	500	SEP 25/90	SEP 25/93
DROP 9	248433	10	250	SEP 25/90	SEP 25/93
DROP 10	248434	15	375	SEP 25/90	SEP 25/93
DEER 1	248451	8	200	DEC 06/90	DEC 06/93
DEER 2	248452	6	150	DEC 05/90	DEC 05/93
DEER 3	248453	4	100	DEC 06/90	DEC 06/93
MIT	302917	4	100	AUG 08/91	AUG 09/94
		<u>178</u>	<u>4450</u>		



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Figure 2
**RAIN PROPERTY
 CLAIM MAP**

Revelstoke Mining Division
 British Columbia
 NTS 82M/8E

August 1991

XY3

PROPERTY HISTORY

Regionally, the area has a long history of mining exploration dating back to the 1860's. Interest in hardrock mining intensified with the discovery of the Montgomery copper-zinc-silver massive sulphide showing in 1896, approximately 12 kilometres to the northwest of the Rain property. Work on the Montgomery property has continued sporadically with the most recent work consisting of a short diamond drill program completed in September 1990 by joint venture partners Goldnev Resources Inc. and Bethlehem Resources Corp.

The Standard property located approximately 8 kilometres southwest of the Rain 10 claim was also discovered in 1896. This copper-zinc-silver massive sulphide occurrence has also been worked intermittently, the last serious work completed in 1976 by Noranda Exploration Co.

The area currently has one producing mine, the Goldstream copper-zinc massive sulphide deposit which lies approximately 20 kilometres northwest of the Rain property. Goldstream was discovered in 1974 by two prospectors, Bried and King, who optioned the property to Noranda Exploration Co. Ltd. By late 1975, a deposit containing 3.175 million tonnes grading 4.49% copper and 3.14% zinc had been outlined. The mine operated for seven months in 1983 before closing due to prevailing metal prices. Joint ventures partners, Bethlehem Resources Corp. and Goldnev Resources

Inc., purchased the mine and mill complex in 1989. The Goldstream Mine is currently producing at a rate of approximately 1200 tonnes per day, at an average grade of 4.08% copper and 2.82% zinc. Current mineable reserves are 1.381 million tonnes grading 4.41% copper (Stockwatch, October 21, 1992) and 3.06% zinc (Northern Miner, July 22, 1991) . Diamond drilling in 1991 on the down plunge extension of the ore body has increased the possible reserves by approximately 30% with the deposit remaining open at depth (Campbell, personal comm., 1991). The mine started up June 1, 1991. Production for the six months ending July 31, 1992 has been some 215,295 tonnes of ore being milled, 33,535 tonnes of concentrate shipped to Nippon Mining in Japan resulting in the production of 18,371,578 pounds of copper. The zinc circuit started in April of 1992 with production to July 31, 1992 of 1,580,426 pounds of zinc at Cominco Ltd.'s smelter in Trail, B.C.

Approximately 20 kilometres to the south of the Rain property Cheni Gold Mines Inc. is currently doing a feasibility study on the J and L polymetallic massive sulphide property. Current reserves in the Main Zone stand at 1.7 million tonnes grading 7.2 g/ton gold, 2.0 g/ton silver, 2.5% lead and 5.2% zinc, while the Yellowjacket Zone hosts possible reserves of 1,000,000 tonnes grading 7.09% zinc, 2.47% lead, 56 g/tonne silver (Canadian Mines Handbook, 1992-93). The deposits are hosted in "Hamill Group metasedimentary and metavolcanic rocks interlayered or in fault contact with Early Cambrian Mohican and Badshot formations, and the

Lower and Upper Index Formations of the Cambrian and younger Lardeau Group" (Meyers, R.E. et al, 1989).

Portions of the Rain property were previously held by Noranda Exploration Co. Ltd. in the late 1970's in order to evaluate a copper-tungsten showing immediately north of the Sorcerer Creek-Downie Creek confluence. Geological mapping, B horizon geochemistry and ground magnetometer and VLF-EM geophysics were completed over a control grid. The Sorcerer Creek showing was interpreted to be skarn mineralization related to a Cretaceous aged intrusive to the north. Follow up work was recommended on a zinc-lead-copper-silver geochemical anomaly detected on the southern portion of the grid. No further work was recorded.

In 1989, Bethlehem Resources Corp staked the Rain property based on a re-evaluation of the Goldstream Mine stratigraphy which suggested the Rain property may be underlain by similar host rocks. Geological work by Bethlehem in 1990 (Wild, 1990) confirmed portions of the property to be underlain by the Palaeozoic Lardeau Group host to several other copper-lead-zinc massive sulphide deposits in the region, including Goldstream. Further work was recommended for the Murder Creek area.

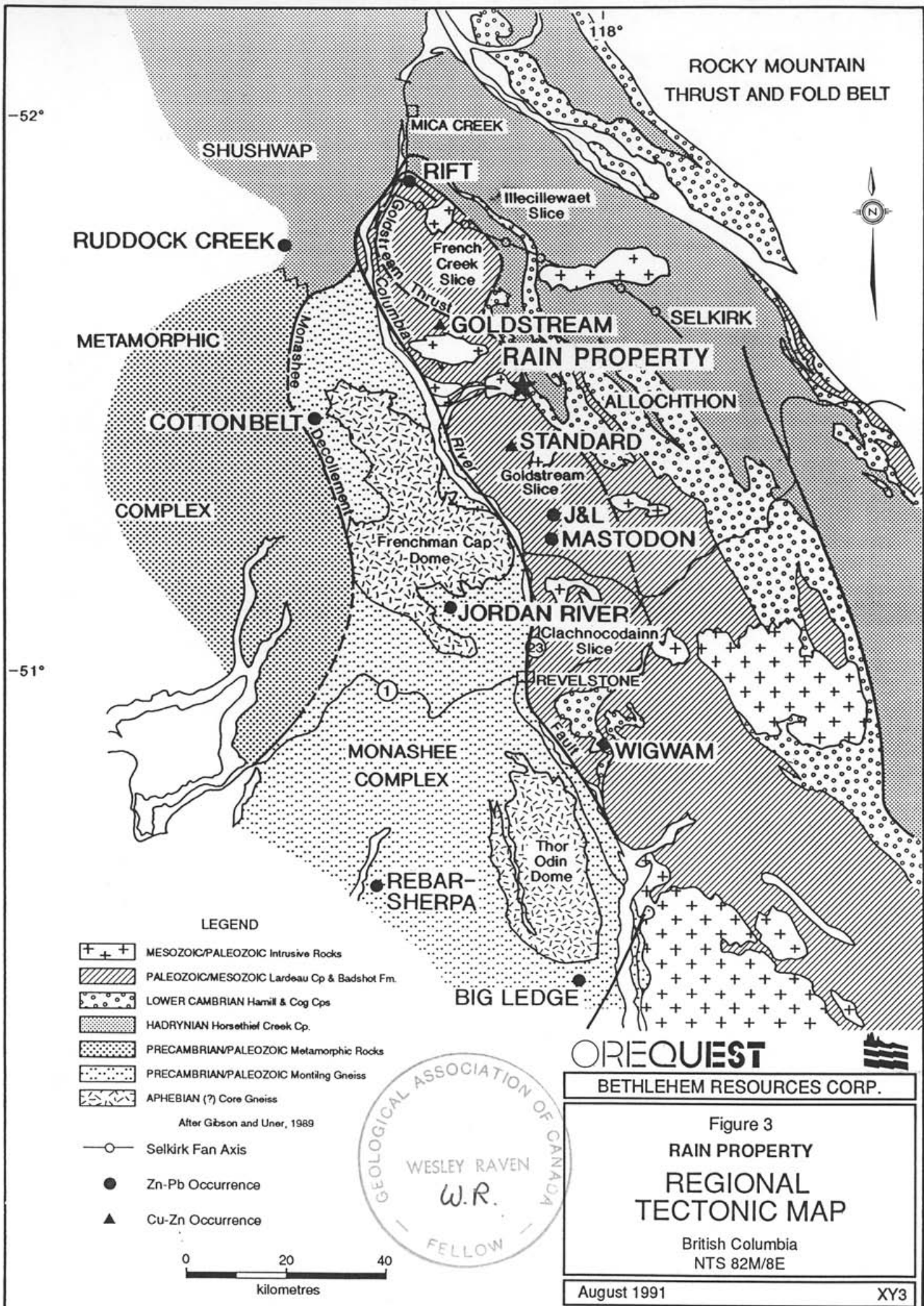
In 1991, a detailed ground exploration program was conducted on the Murder Creek area of the Rain Property by OreQuest Consultants Ltd. This program consisted of the establishment of a

flagged grid utilized for control of soil geochemistry (B-horizon) sampling, ground magnetometer/VLF-EM geophysics, geological mapping and prospecting. This program outlined 2 anomalous areas both of which occur along strike from the banded pyrite mineralization discovered by Wild, 1990. This first area occurred in the northern part of the Murder Creek grid with the second area 1 km to the south along Murder Creek. This first area was the subject of the 1992 drilling programs.

REGIONAL GEOLOGY

The regional geology of the Goldstream River-Downie Creek area has been described in detail by several authors: Gunning (1928) and Wheeler (1965), Gibson (1978-86), Høy et al (1977, 1984-85) and Read and Brown (1981-89). The regional geology consists of metasedimentary and lesser amounts of metavolcanic rocks of early paleozoic age deposited along the western margin of Cratonic North America. These rocks lie within the Selkirk Allochthon, a composite terrain comprised of at least four major fault bounded complexly deformed tectonic slices. The Rain property lies within the Goldstream slice which also hosts the Goldstream copper-zinc deposit, the Montgomery and Standard copper-zinc, lead-zinc massive sulphide occurrences (Figure 3).

Rocks comprising the Selkirk Allochthon were transported from west to east over the core and mantling gneisses of the Monashee Complex during Middle Mesozoic to Eocene times and have also been



ROCKY MOUNTAIN THRUST AND FOLD BELT

-52°

SHUSHWAP

MICA CREEK

RIFT

Illecillewaet Slice

RUDDOCK CREEK

French Creek Slice

METAMORPHIC

GOLDSTREAM RAIN PROPERTY

SELKIRK

COTTONBELT

ALLOCHTHON

COMPLEX

STANDARD

Goldstream Slice

Frenchman Cap Dome

J&L

MASTODON

JORDAN RIVER

Clachnocodainn Slice

-51°

REVELSTONE

MONASHEE COMPLEX

WIGWAM

REBAR-SHERPA

Thor Odin Dome

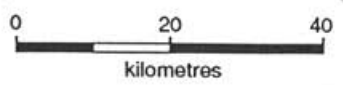
BIG LEDGE

LEGEND

- MESOZOIC/PALEOZOIC Intrusive Rocks
- PALEOZOIC/MESOZOIC Lardeau Cp & Badshot Fm.
- LOWER CAMBRIAN Hamill & Cog Cps
- HADRYNIAN Horsethief Creek Cp.
- PRECAMBRIAN/PALEOZOIC Metamorphic Rocks
- PRECAMBRIAN/PALEOZOIC Monting Gneiss
- APHEBIAN (?) Core Gneiss

After Gibson and Uner, 1989

- Selkirk Fan Axis
- Zn-Pb Occurrence
- Cu-Zn Occurrence



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Figure 3
RAIN PROPERTY
REGIONAL
TECTONIC MAP
British Columbia
NTS 82M/8E

August 1991 XY3

intruded by granite stocks of probable Cretaceous age (Høy et al, 1985). The Monashee décollement marks the contact between the Monashee Complex and the Shuswap Metamorphic Complex to the north and west. To the east, the east dipping Columbia River Fault separates the Selkirk Allochthon from the underlying Monashee Complex.

Rocks within the Selkirk Allochthon have undergone at least three phases of deformation. Phase 1 is believed to have inverted much of the Goldstream slice possibly as the underlimb of a major recumbent nappe. Large tight isoclinal to recumbent folds with strong axial planar foliation and northwest trending fold axes define Phase 2 folding. A third phase of deformation is evidenced by kink folds, crenulation cleavages and broad, upright, open folds.

Massive sulphide occurrences in the region are hosted in chloritic schists, sericite schist and dark banded graphitic calcareous phyllite associated with basic volcanism. Stratigraphy that hosts the Standard deposit has been correlated with the Lower Paleozoic Index formation while lead isotope data from the Goldstream Mine gives a Devonian age.

PROPERTY GEOLOGY

The Rain property is underlain by rocks of the Proterozoic Horsethief Creek Group, Proterozoic to Lower Paleozoic Hamill Group and Paleozoic Badshot Formation and Lardeau Group.

Structurally these units trend northwest with moderate east to northeast dips. Second phase isoclinal folding and a dominant axial planar foliation are the dominant structural elements. Fold axes plunge gently to the southeast and northeast end of Keystone Peak. East of Downie Creek, plunges are moderate to the northeast, steepening northward toward Downie Peak. Broad, open third phase folds warp the foliation and original layering kink folds and crenulation cleavage are the dominant third phase structures showing near vertical axial planar cleavage and gentle east-west plunges (Wild, 1990).

Chloritic and calcareous metasediments dominate from Downie Creek westward to Standard Creek. These rocks tend to become more chloritic to the south and west, eventually becoming metavolcanic greenstones near Standard Peak. To the north, graphitic dark banded phyllites are more common. These metasediments are overlain to the east by older Badshot Marble and Hamill quartzites indicating the entire section to be overturned.

The Murder Creek project area (Figure 9) is underlain by graphitic dark banded phyllite, sericite to quartz sericite schist,

siliceous siltstones and marble. Outcrop is restricted to creek valleys and road cuts, making geological contacts somewhat speculative. The dark banded phyllite exposed in Murder Creek and just north of Cooler Creek consists of siliceous chloritic to quartzitic phyllite with calcareous and graphitic interbeds. This unit is very similar, if not identical, to the enclosing strata of the Goldstream ore body. The unit trends north-south to south-southwest with dips ranging from 40° to 65° east. The marble contact in the west portion of the grid not noted in outcrop, is based on geophysical interpretation from the field magnetics, the presence of 2 small marble outcrops on the west end of Line 2+00S, and the strike extension of the contact in Murder Creek at the Murder Creek showing (Wild, 1990).

The dark banded phyllite is overlain by sericite to quartz sericitic siliceous schists and siliceous siltstones, mapped along the lower road. Interbedded marble units were noted within the dark banded phyllite, and the sericitic schists.

STRATIGRAPHY

Mapping by Høy (1979) in the Goldstream area has outlined five major lithologic packages. The stratigraphically lowest consists of dominantly pelitic and calcareous schists and marble which have been tentatively correlated with the late Proterozoic Horsethief Creek Group. This package is overlain by a succession of Lower Paleozoic rocks that consists of four main divisions: 1) lower

quartzite-schist division; 2) calc-silicate gneiss division; 3) metavolcanic-phyllite division, and; 4) carbonate-phyllite division. This is considered to be the original stratigraphic succession, the Goldstream Mine is hosted within the metavolcanic-phyllite division. The succession is believed to be overturned in the area of the Goldstream deposit. It is unclear as to whether the stratigraphy is upright or overturned in the Murder Creek area though mapping south of the headwaters of Standard Creek indicates the stratigraphy is inverted.

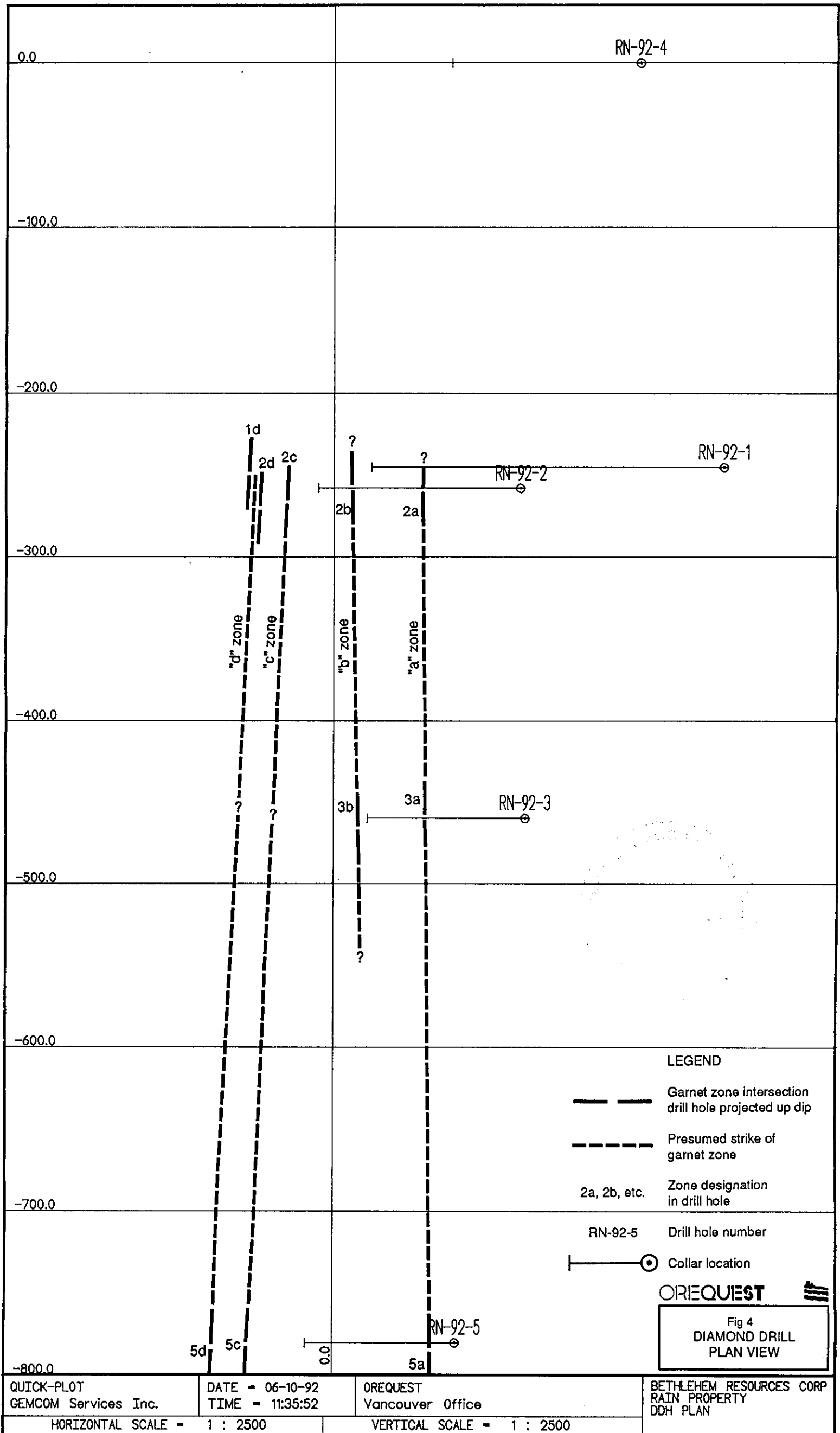
The general stratigraphic sequence at the Goldstream Mine (after Høy, Gibson and Berg, 1984) consists of the following units: unit 1 - siliceous chlorite-biotite-phyllite, phyllitic quartzite, calcareous and graphitic phyllite; unit 2 - dark carbonaceous and calcareous phyllite (dark banded phyllite) unit 3 - garnet zone; unit 4 - siliceous chlorite and sericite phyllite which encloses the massive sulphide layer; unit 5 - massive sulphide layer; unit 6 - grey banded limestone, and; unit 7 - a siliceous sericite-biotite- chlorite phyllite with minor quartzite and limestone. Greenstone (andesite) was encountered in some of the drill holes west of the deposit and likely lies structurally below the ore zone. It is referred to as unit 8 in this report. The so called garnet zone appears to be an integral part of the ore hosting sequence at the Goldstream Mine and has been interpreted to a be metamorphosed, manganiferous iron rich chert, probably an exhalite unit. Given that this stratigraphic sequence above is considered

to be overturned, the garnet zone may represent a feeder system for the mineralization or an earlier silica-sulphide rich exhalative horizon.

Units intersected in drill core at the Rain property and correlated with those seen at the Goldstream Mine include the dark banded phyllite - unit 2, garnet zone - unit 3, and likely unit 7, the siliceous sericite-biotite-chlorite phyllite. The thick succession limestone seen at the top of the holes is believed to belong to the carbonate-phyllite division. On the drill sections it appears that the stratigraphy is upright unless this limestone is in the core of an anticline, similar to that suggested at the headwaters of Standard Creek, with the drilling intersecting only one limb of a larger fold.

DIAMOND DRILLING

The drilling program was conducted in two phases. The first phase consisted of one hole (RN-1), 303.97 m (997 ft) in length, the second phase consisted of 4 holes (RN-2, 3, 4, and 5) totalling 600.5 m (1970 ft). In summary, five holes totalling 904.47 m (2967 ft) were drilled (Figure 4). The drilling was performed by Falcon Drilling Ltd. of Prince George, B.C. utilizing a "Falcon 1000" drill, core size was BDBGM. Acid tests, for dip variance. were performed on holes RN-2, 3 and 5 with the holes remaining relatively stable. All holes were collared at an azimuth of 255° and a dip of -45°. Slope profiles were constructed for each drill



section to determine the true horizontal distance of the drill hole collars relative to the grid baseline.

All garnet-sulphide zones were generally split in 1 m sample lengths and sent to Vangeochem Labs Ltd. for analysis. A total of 35 samples were collected and run for 25 elements using the ICP method. The main non-economic element of interest in the analysis was manganese, analyzed to compare with the manganese content of the garnet zone at the Goldstream Mine. The economic elements of interest include copper with results ranging from 44 to 573 ppm, zinc with results from 54 to 443 ppm and silver, ranging from <0.1 to 1.0 ppm.

The manganese results from within the garnet zones in each hole range in value as follows: RN-1) 589-8839 ppm; RN-2) 2124-14,611 ppm; RN-3) 4839->20,000 ppm; RN-4) no samples taken, and; RN-5) 7148->20,000 ppm (Figure 5a, 6a and 8a). The manganese content of samples taken outside the garnet zones (collected from RN-1 only) range from 268 ppm to 1656 ppm.

The garnet zones, (labelled a, b, c and d) as shown on Figures 4 and 9, were projected up dip to a common elevation point (820 m was arbitrarily chosen). They appear to show some consistency from hole to hole, especially the "a" zone, which is quite linear in holes RN-2, 3 and 5 with a consistent dip of -60° . The other zone projections (b, c and d) are somewhat more speculative as they are

based on intercepts from only two holes (RN-2 and 5), some 525 m apart, with different dips for the zones from hole to hole. RN-3 lies between RN-2 and 5 but did not intersect the c and d garnet zones for reasons which remain unknown. Dips used for the respective zones from relevant drill holes were -60° for zones 2b, 2c, and 2d and -50° for zones 3b, 5c and 5d. This indicates a shallowing of the dip angle to the south, though this observation is based on limited data. More drilling would be required to determine if these garnet zones can be accurately projected throughout the grid area. The numerous garnet zones may be the result of fold repetitions, though there is insufficient structural information to prove or disprove this observation.

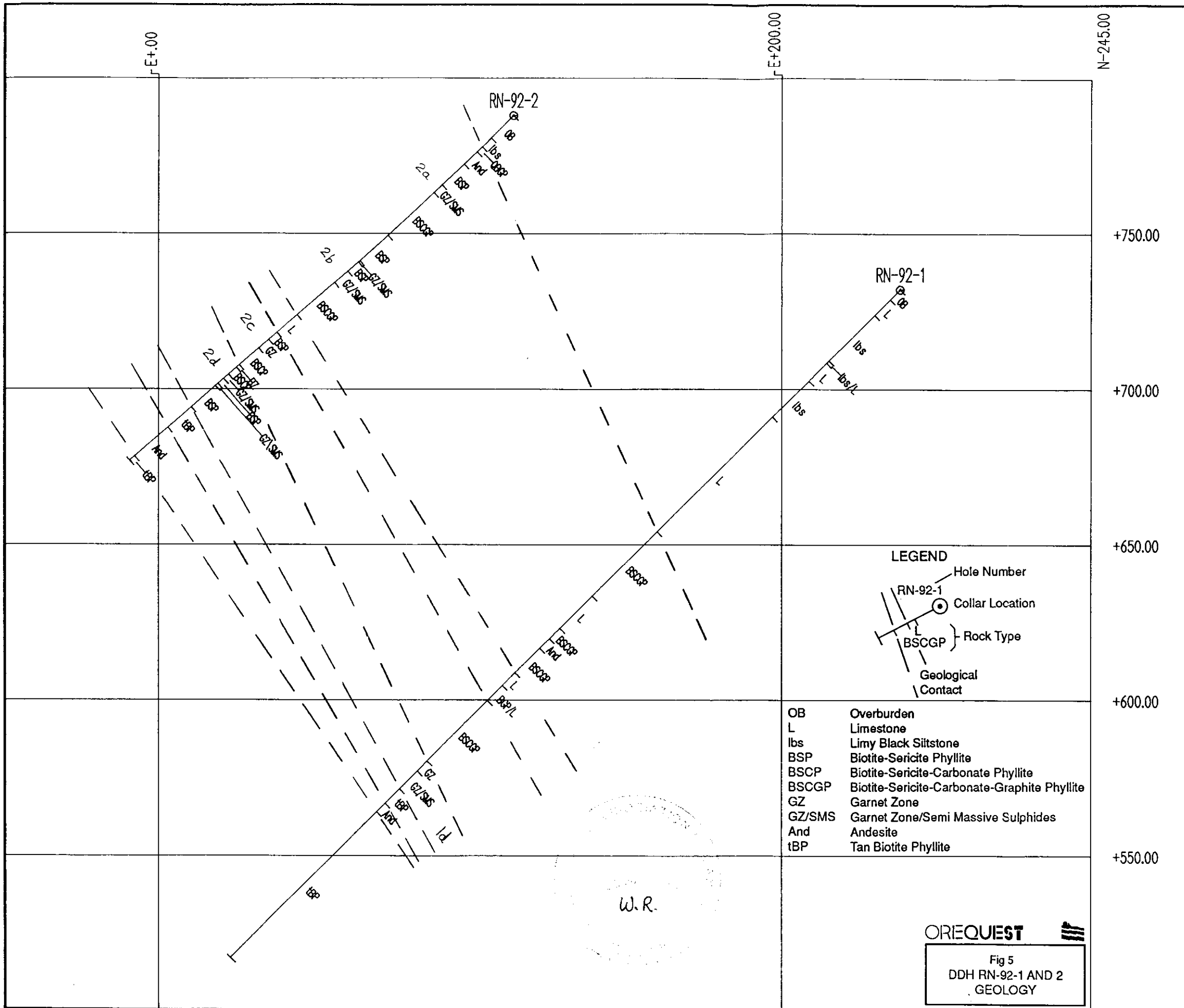
RN-92-1 and 2 (Figures 5 and 5a)

These two holes lie on essentially the same section line (L2+50S) with hole 1 collared at 2+38E and hole 2 collared at 1+13E. Hole 1 intersected a thick sequence of limestone to 110.32 m (carbonate-phyllite division), then largely biotite-sericite-carbonate-graphite phyllite (dark banded phyllite, unit 2) with some intercalated limestone and andesite to 214.57 m. A garnet zone (sulphide poor, unit 3) exists from 214.57 to 219.10 m then a garnet/semi-massive sulphide zone from 219.10 to 227.15 m. Immediately below this zone is a thin lens of tan biotite phyllite, then andesite, then a thick succession of tan biotite phyllite from 237.57 m to the bottom of the hole at 303.97 m (all part of unit 7).

Sulphides within the garnet zone consist chiefly of pyrrhotite as laminations or contorted laminations and discontinuous wispy streaks with trace amounts of chalcopyrite and sphalerite, sulphide concentrations are up to 30% over 0.5 m.

Hole RN-2 intersected minor limestone (carbonate-phyllite division) at the top of the hole to 14.25 m then a thick succession of biotite-sericite phyllite and biotite-sericite-carbonate-graphite phyllite (both are dark banded phyllite) with minor limestone to 139.91 m (unit 2). Within these dark banded phyllites are seven individual garnet zones (unit 3) which have been combined into four fairly distinct zones labelled 2a, 2b, 2c and 2d. These four main zones coincide quite well with the first four VLF-EM conductors that lie west of the collar location. The lowest zone (2d), which consists of three individual zones from 119.31 - 120.55 m, 123.89 - 125.98 m, and 128.41 - 129.45 m has been correlated with the zone intersected in RN-1. The other three zones are found at 32.08 - 35.74 (2a), 68.20 - 68.87 m and 73.34 - 79.00 m (these two constitute one zone (2b)) and 106.93 - 111.12 m (2c). All of these zones are enclosed by dark banded phyllite. Just below the 2d garnet zone is biotite-sericite phyllite to 139.91 m then the same tan biotite phyllite, andesite, tan biotite phyllite sequence seen at the bottom of RN-1 ending at 166.12 m (unit 7).

These lowermost units correlate well between RN-1 and 2 and give the best information regarding the dip of the units. The



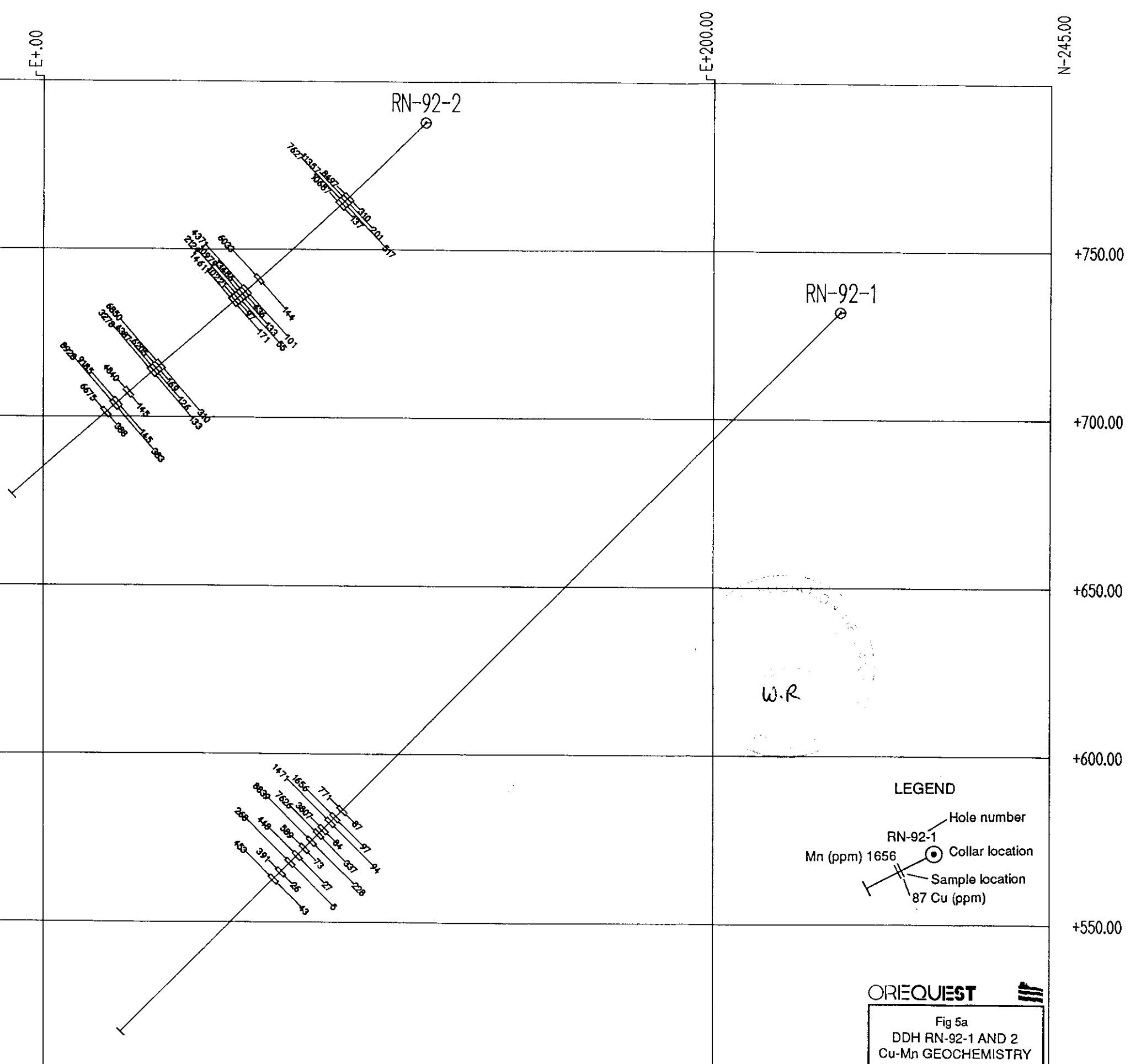
LEGEND

- Hole Number
- Collar Location
- } Rock Type
- } Geological Contact

OB	Overburden
L	Limestone
lbs	Limy Black Siltstone
BSP	Biotite-Sericite Phyllite
BSCP	Biotite-Sericite-Carbonate Phyllite
BSCGP	Biotite-Sericite-Carbonate-Graphite Phyllite
GZ	Garnet Zone
GZ/SMS	Garnet Zone/Semi Massive Sulphides
And	Andesite
tBP	Tan Biotite Phyllite

OREQUEST

Fig 5
DDH RN-92-1 AND 2
GEOLOGY



LEGEND

Hole number
 RN-92-1
 Collar location
 Sample location
 Mn (ppm) 1656
 87 Cu (ppm)

OREQUEST

Fig 5a
 DDH RN-92-1 AND 2
 Cu-Mn GEOCHEMISTRY

QUICK-PLOT
 GEMCOM Services Inc.

DATE = 13-10-92
 TIME = 11:32:53

OREQUEST
 Vancouver Office

BETHLEHEM RESOURCES CORP
 RAIN PROPERTY
 DDH SECTION L2+45S
 CU and MN GEOCHEMISTRY

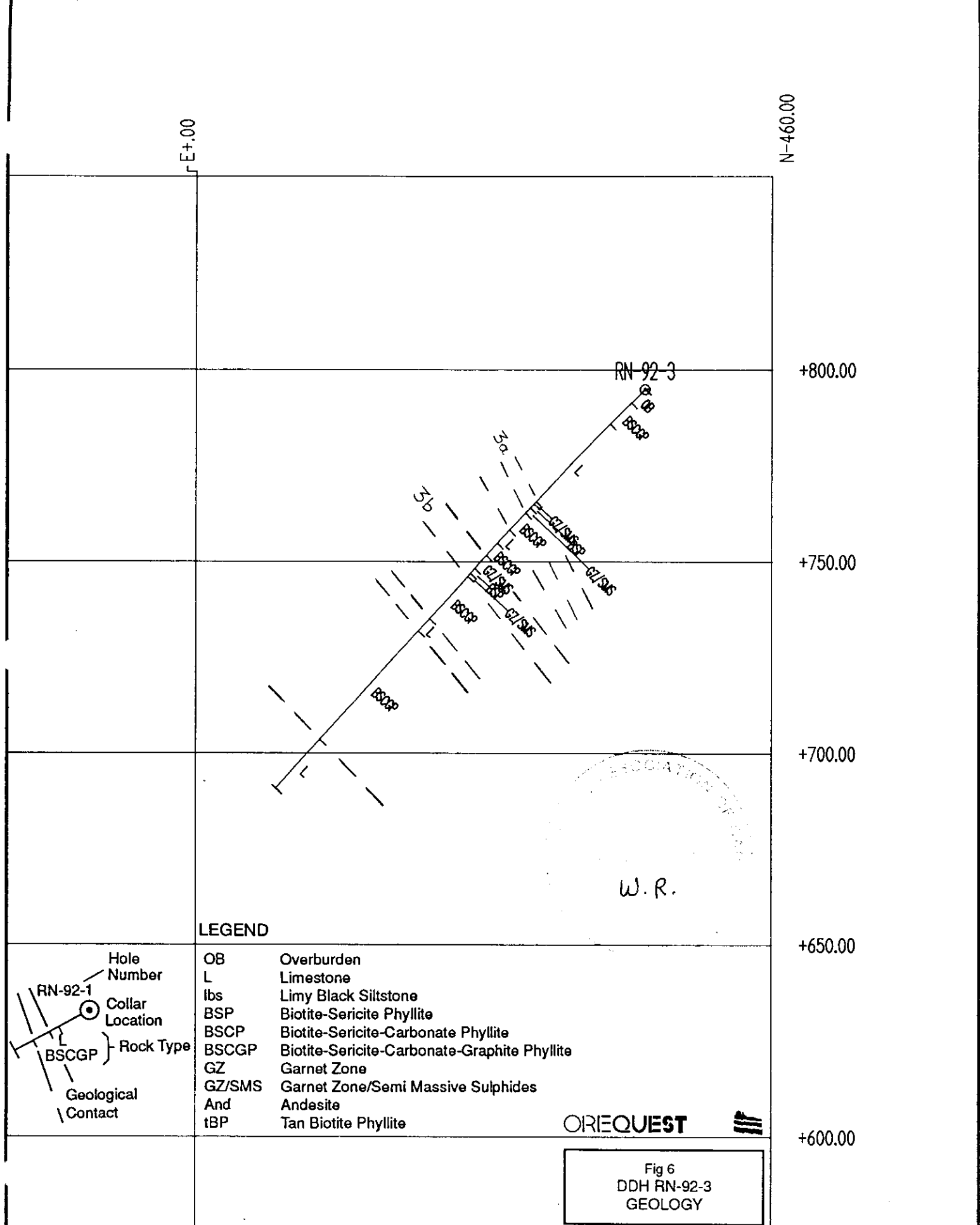
HORIZONTAL SCALE = 1 : 1250

VERTICAL SCALE = 1 : 1250

remaining units do not correlate quite as well. The thick limestone sequence is gone, though, that in part is due to hole 2 being collared well up dip on the limestone. The biggest difference lies in the many subtle variation of dark banded phyllite in RN-2 and the numerous garnet zones that occur within it that are not seen in RN-1. The other noticeable difference is a large limestone unit from 139.60 - 154.28 m in RN-1 is not at all present in RN-2. As RN-2 is closer to a large fold system that appears on the walls of Standard Creek near the Downie Creek confluence, it is likely that it is closer to a zone of more intense deformation. The result may be en-echelon stacking of the garnet zone, which would help to explain why there are so many garnet zones in RN-2 and why the dark banded phyllite succession is thicker.

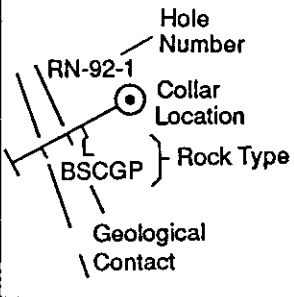
RN-92-3 (Figures 6 and 6a)

This hole was collared on L4+60S, 1+17E and is similar to RN-1. The hole intersected limestone (carbonate phyllite division, or unit 2) to 41.03 m then a small garnet zone (3a - unit 3) which consists of two zones at 41.03 - 41.77 m and 43.21 - 45.05 m separated by biotite-sericite phyllite. Below zone 3a is biotite-sericite-carbonate phyllite to 51.10 m then limestone to 55.80 m then more dark banded phyllite to 60.13 m (all unit 2). The second garnet zone (3b - unit 3) also comprised of two small zones, occurs from 60.13 - 64.70 m and 66.38 - 67.41 m. separated by silicified dark banded phyllite. Below this second garnet zone is dark banded



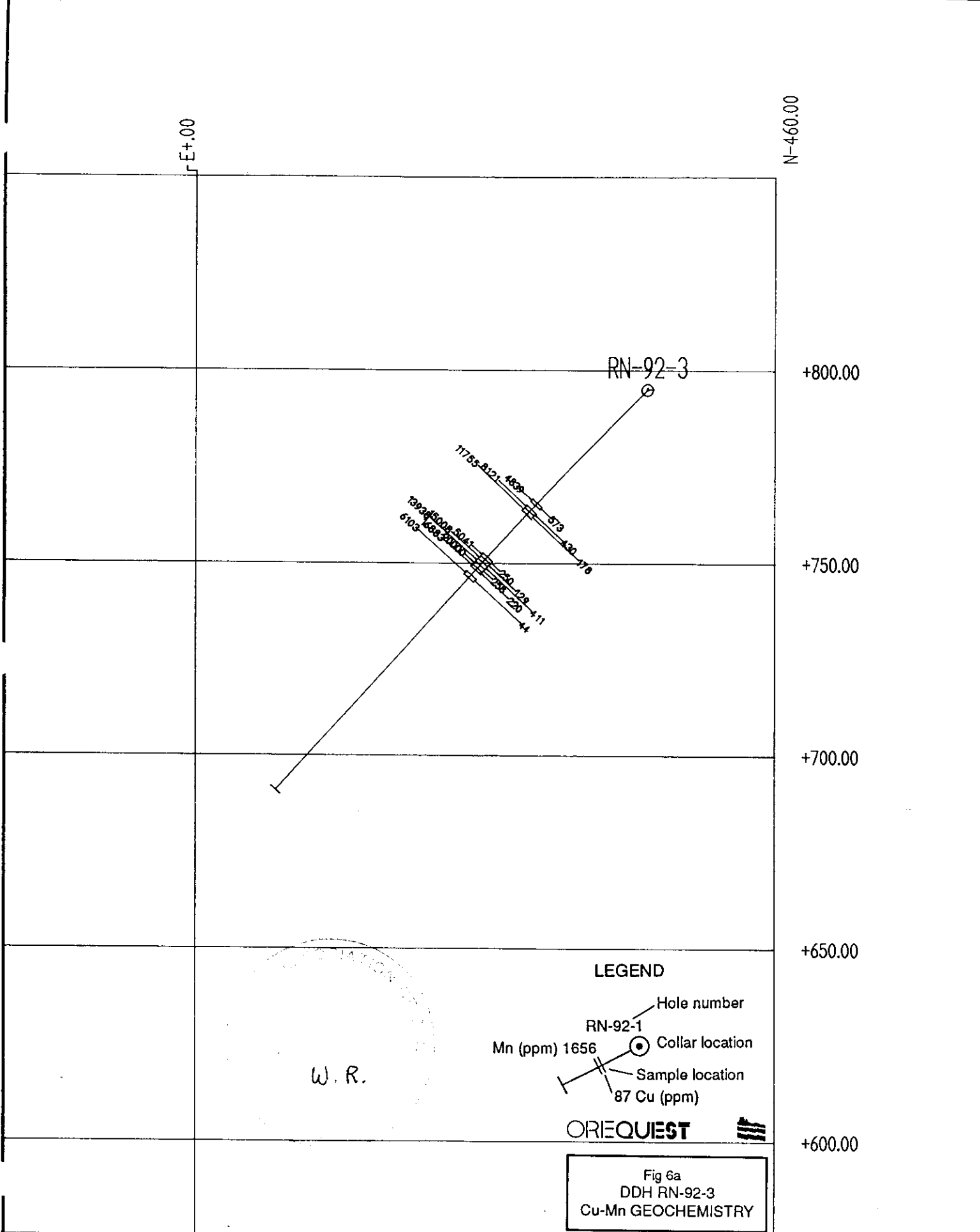
LEGEND

- OB Overburden
- L Limestone
- lbs Limy Black Siltstone
- BSP Biotite-Sericite Phyllite
- BSCP Biotite-Sericite-Carbonate Phyllite
- BSCGP Biotite-Sericite-Carbonate-Graphite Phyllite
- GZ Garnet Zone
- GZ/SMS Garnet Zone/Semi Massive Sulphides
- And Andesite
- tBP Tan Biotite Phyllite



OREQUEST

Fig 6
DDH RN-92-3
GEOLOGY



QUICK-PLOT
GEMCOM Services Inc.

DATE = 13-10-92
TIME = 16:09:18

OREQUEST
Vancouver Office

BETHLEHEM RESOURCES CORP
RAIN PROPERTY
DDH SECTION L4+60S
CU and MN GEOCHEMISTRY

HORIZONTAL SCALE = 1 : 1250

VERTICAL SCALE = 1 : 1250

phyllite to 82.41 m, a thin lens of limestone to 89.69 m, then a thick succession of dark banded phyllite to 124.75 m (unit 2), then limestone (unit 2?) to the end of the hole at 141.77 m. The lower garnet zones, seen in RN-2 (2c and 2d), were not seen in this hole although a 13 cm section of dark banded phyllite containing 3-4% sphalerite at 115.35 - 115.48 m correlates well with zone 2c. The limestone at the bottom of the hole appears to occupy the projected location of the main zone in RN-1 and the lowermost zone (2d) in RN-2.

The hole is very similar to RN-1 in that it consists of alternating limestone and dark banded phyllite below a thick upper limestone member. The main difference is the two upper garnet zones in RN-3 and the lack of a lower garnet zone, with a thick limestone unit occupying the projected zone location.

RN-92-4 (Figure 7)

This hole was collared at L0+00, 1+87E and was intended to check for a northerly strike extension of the favorable garnet-sulphide stratigraphy and any southerly expression of the Sorcerer Creek sulphide showing. The hole approaches the area of folding and subsequent limestone thickening seen in the walls of Standard Creek. The net result is that the limestone appears to have displaced, in an unknown direction, the thick successions of dark banded phyllite.

E+1.00

N+1.00

+750.00

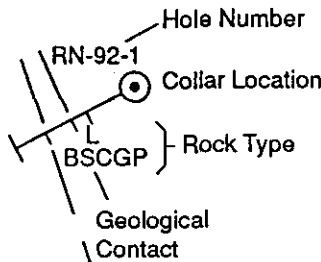
+700.00

+650.00

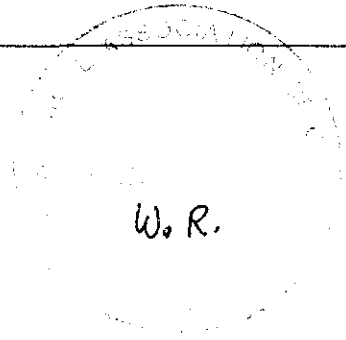
+600.00

RN-92-4

LEGEND



OB	Overburden
L	Limestone
lbs	Limy Black Siltstone
BSP	Biotite-Sericite Phyllite
BSCP	Biotite-Sericite-Carbonate Phyllite
BSCGP	Biotite-Sericite-Carbonate-Graphite Phyllite
GZ	Garnet Zone
GZ/SMS	Garnet Zone/Semi Massive Sulphides
And	Andesite
tBP	Tan Biotite Phyllite



OREQUEST

Fig 7
 DDH RN-92-4
 GEOLOGY

QUICK-PLOT
 GEMCOM Services Inc.

DATE = 15-10-92
 TIME = 11:01:34

OREQUEST
 Vancouver Office

BETHLEHEM RESOURCES CORP
 RAIN PROPERTY
 DDH SECTION L0+00
 GEOLOGY

HORIZONTAL SCALE = 1 : 1250

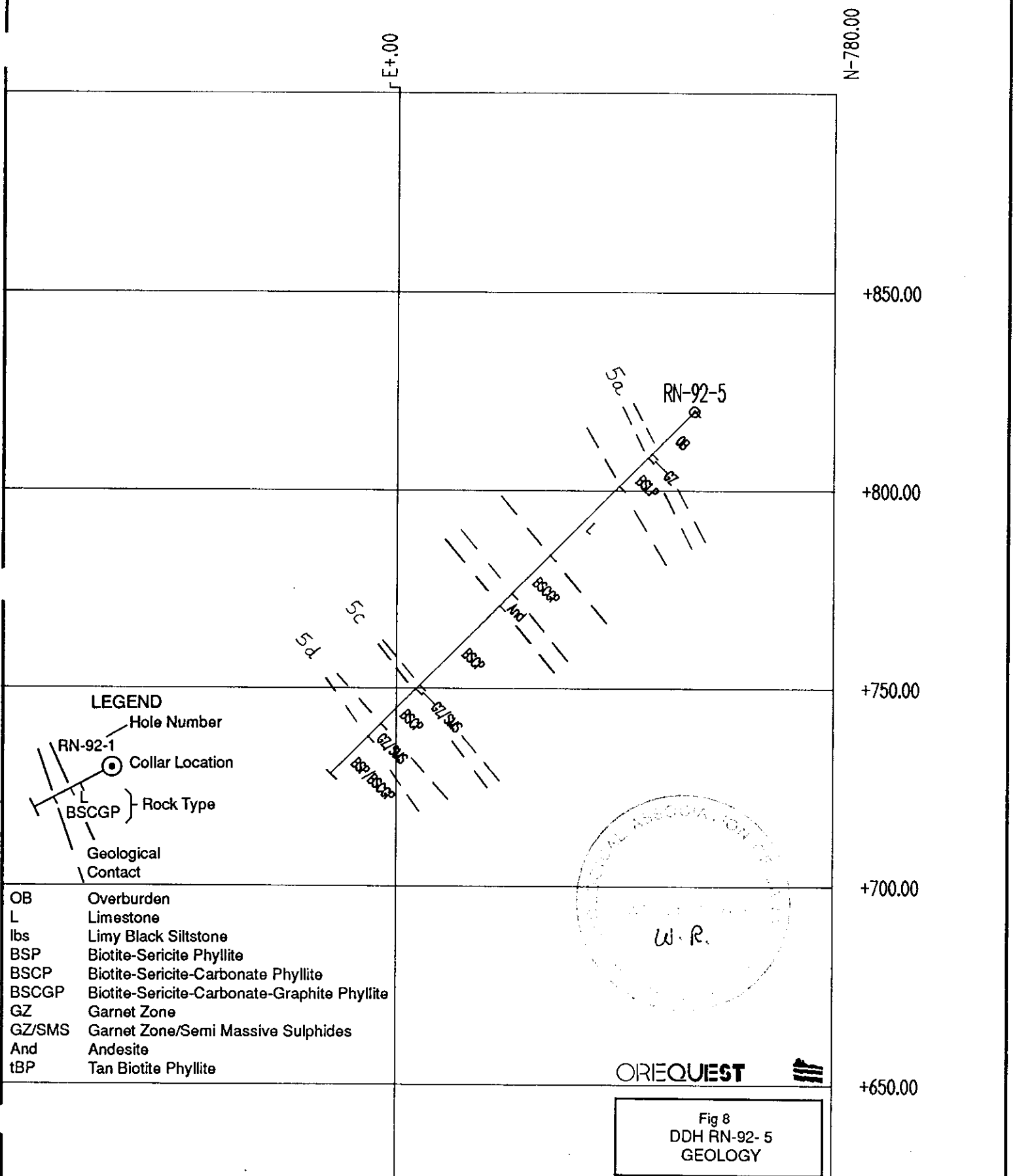
VERTICAL SCALE = 1 : 1250

The hole intersected limestone to 101.88 m (carbonate-phyllite division), then dark banded phyllite to 105.20 m (unit 2) then tan biotite phyllite to 111.85 m (unit 7) then a thick succession of andesite to 163.07 m (unit 8) at which point the hole was abandoned. It was felt that such a thick accumulation of andesite was a significant departure from any of the other holes, and the lack of a thick succession of dark banded phyllite did not resemble the typical Goldstream Mine stratigraphy.

RN-92-5 (Figures 8 and 8a)

The final hole of the program was collared on L7+80S, 0+75E. The overburden depth at this location was twice as thick as previously encountered which may have resulted in casing through part of the first garnet zone (5a - unit 3). The zone started directly below the casing at 15.24 m, ending at 16.66 m, it is uncertain as to whether or not any of the zone was lost due to casing. Below this upper garnet zone is an intercalated sequence of limestone and dark banded phyllite to 51.54 m which is dominated by limestone (unit 2). From here to the bottom of the hole at 129.54 m is a thick succession of dark banded phyllite consisting of biotite-sericite \pm carbonate, \pm graphite phyllite (unit 2).

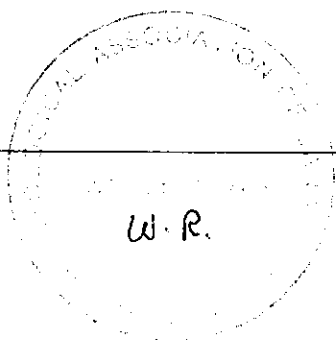
In addition, the hole intersected two lower garnet zones (unit 3) within the dark banded phyllite with zone 5c at 97.95 - 99.30 m and zone 5d at 111.65 - 116.25 m. These zones have been correlated with zones 2c and 2d.



LEGEND

- Hole Number
- Collar Location
- Rock Type
- Geological Contact

- OB Overburden
- L Limestone
- lbs Limy Black Siltstone
- BSP Biotite-Sericite Phyllite
- BSCP Biotite-Sericite-Carbonate Phyllite
- BSCGP Biotite-Sericite-Carbonate-Graphite Phyllite
- GZ Garnet Zone
- GZ/SMS Garnet Zone/Semi Massive Sulphides
- And Andesite
- tBP Tan Biotite Phyllite



OREQUEST

Fig 8
DDH RN-92- 5
GEOLOGY

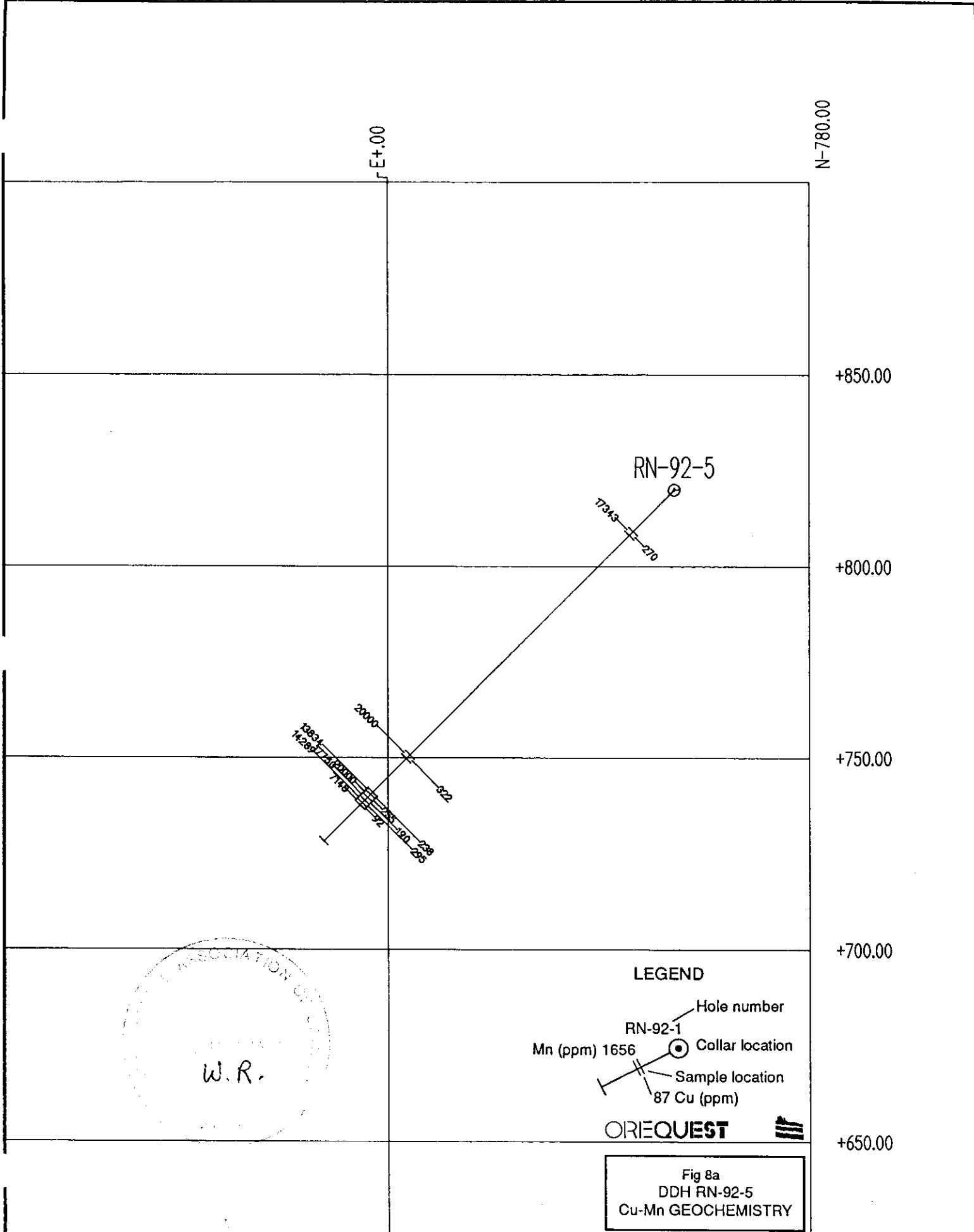


Fig 8a
DDH RN-92-5
Cu-Mn GEOCHEMISTRY

QUICK-PLOT GEMCOM Services Inc.	DATE = 14-10-92 TIME = 10:00:51	OREQUEST Vancouver Office	BETHLEHEM RESOURCES CORP RAIN PROPERTY DDH SECTION L7+80S CU and MN GEOCHEMISTRY
HORIZONTAL SCALE = 1 : 1250		VERTICAL SCALE = 1 : 1250	

DISCUSSION OF RESULTS

Although the drilling program completed to date has yet to intersect economic mineralization, the program must still be considered a success primarily because of the presence of multiple garnetiferous horizons. The garnet zone appears to be an integral part of the ore hosting sequence at the Goldstream Mine.

On the Rain property, the garnet zones are hosted within dark banded phyllite, originally either the biotite-sericite-carbonate-graphite phyllite or the biotite-sericite phyllite. The zones themselves are strongly silicified as a fine grained pervasive alteration and commonly containing siliceous bands, likely originally chert bands, up to 5%. Quartz augens are also present as are splotches of quartz comprising 5-10% of the unit. The garnets are subhedral to euhedral and pale white to pinkish-white in color. They are porphyritic relative to the matrix material ranging from 2x2 mm to 5x5 mm. The unit is not fractured and sheared like that commonly seen at the Goldstream Mine.

Sulphides consist chiefly of pyrrhotite as laminations or contorted laminations and discontinuous wispy streaks with trace amounts of chalcopyrite and sphalerite. Sulphide concentrations can be up to 30% over 0.5 m.

The presence of multiple garnet zones in some holes, "missing" garnet zones in other holes (ie. the two lower zones not present in

RN-3, but present in RN-2 and 5 north and south respectively) and only one zone in RN-1 cannot be fully explained. It is felt that these are structurally related differences.

Multiple garnet zones have not been consistently observed at the Goldstream Mine itself, but on the Rain property they could be the result of an en-echelon stacking of the unit. This would explain why there are multiple garnet zones and also help to account for the local thickening and diversity of units from hole to hole. The multiple zones themselves likely explain why there is such a large soil geochemical anomaly at the north end of the grid. The anomaly is not from one single source, but many sources. Thickening overburden to the south may have been sufficient to mask any surface soil geochemical anomalies.

Another general observation is that the three holes drilled closer to the baseline (RN-2, 3 and 5) seem to have a more complex stratigraphy than the holes drilled further east (RN-1 and 4) with much intercalation of units, subtle variation within the dark banded phyllite and multiple garnet zones. Perhaps there is a broad detachment zone related to folding that gradually diminishes further east of the baseline. A re-examination of the ground magnetic and VLF-EM geophysical surveys does not give any conclusive evidence of such a feature, though the cross-cutting geophysically inferred fault on Lines 4+00S to 15+00 may represent such a feature at depth (Figure 9).

There are many similarities between the holes drilled on the Rain Property and those drilled proximal to the Goldstream Mine by Noranda and Bethlehem. Except for the thick limestone seen at the top of most of the holes, the stratigraphic succession is quite similar with a thick dark banded phyllite unit overlying the garnet zone. The most notable differences are: 1) the lack of a siliceous grey-green chlorite-sericite phyllite unit which envelops the ore zone at Goldstream, and; 2) the limestone unit that sits structurally below the ore zone at Goldstream has not been observed in the Rain drilling.

The relationship of the lower limestone (unit 6) may or may not be important to the Goldstream deposit. However, the siliceous grey-green chlorite sericite phyllite is thought to be important because, although in part, it may represent epiclastic accumulations, it may also include a siliceous exhalative component (Hoy, Gibson and Berg, 1974).

If a similar unit could be intersected in future drill programs, it is felt that it would help significantly in locating the Rain stratigraphy relative to that seen at the Goldstream Mine and therefore aid in determining if another economic sulphide zone exists on the Rain property. The presence of the garnet zones indicate that the area drilled must be close to a "Goldstream type" model, how close cannot yet be accurately determined.

An examination of the Noranda and OreQuest drill holes completed on and peripheral to the Goldstream deposit has yielded some useful information in determining the proximity of the Rain Property stratigraphy relative to that at the Goldstream Mine. Holes NG-51 and A-06, which are both approximately 1.8 km west of the orebody, intersected garnet zones with semi-massive sulphides. Therefore the garnet zones located on the Rain Property may be up to 1.8 km away from significant economic base metal mineralization.

Another point of interest is the lateral extent of the siliceous grey-green chlorite sericite phyllite. At the Goldstream Mine this unit (outside the defined ore body) is found in holes NG 35, 37, 17 and 18; both east and west of the deposit but not on the more distal holes like NG-51 and A-06. This gives it an extent of some 450-500 m flanking the deposit and narrows down the proximity to the Goldstream deposit considerably more than does the garnet zone.

Intersecting this unit does not necessarily mean that economic mineralization is sure to follow; a case in point is hole NG-56. This hole intersected stratigraphy virtually identical to that seen at the ore zone, unit 2-6, but no unit 5; the copper-zinc massive-sulphide horizon. This would indicate that there are more than just stratigraphic controls on the mineralization.

CONCLUSIONS AND RECOMMENDATIONS

Surface diamond drilling work completed on the Rain Property - Murder Creek Project has confirmed a stratigraphic package of rocks very similar to that seen at the Goldstream Mine. The drilling has not intersected any economic mineralization but has encountered multiple garnet zones containing semi-massive sulphides (pyrrhotite with traces of chalcopyrite and sphalerite) of up to 30% over 0.5 m. The presence of the garnet zone is very significant as this horizon has only been found structurally above the ore zone at the Goldstream Mine and therefore is believed to be unique to the Goldstream deposit itself. Thus, the garnet zones may be a key indicator for massive sulphide deposits similar to the Goldstream deposit.

A total of 5 drill holes totalling 904.47 m (2967 ft) were completed on the Rain property. The holes are spread out over a strike length of 775 m at roughly 200 m intervals, with two of the holes on the same section line. The drilling indicates that the favorable stratigraphy disappears to the north, somewhere between L0+00 and L2+50S, but is present from 2+50W to 7+75S with potential for continued exploration to the initial Murder Creek showing a further 2.2 km to the southwest.

Further work is definitely warranted on the property. As a prelude to further drilling, a borehole time domain-EM geophysical survey is recommended. The casing was left in all the drill holes

so no difficulties are expected in going back down the holes except for hole 2. This hole has penetrated an aquifer and therefore is producing water which could potentially force the sensing equipment back out to surface.

The borehole survey will have the advantage of getting better resolution on any deep seated mineralization as the sensor will be up to 200 m vertically below surface. It will also give more detailed information between the drill holes as a relatively inexpensive way to fill in the gaps resulting from a 200 m hole spacing and should aid in collaring future in-fill drilling.

If the results of the borehole geophysics are successful in providing useful information with which to trace the garnet zones and/or massive sulphide horizons, then a surface program over the grid area utilizing the same type of survey equipment utilized in the borehole program may be warranted, though there is enough information to continue drilling with reasonable confidence. The surface program can be considered as an option, depending upon the effectiveness of the borehole program. No budget estimates have been made for this type of survey.

Additional drilling is also recommended, after the borehole geophysical survey, to continue to test for the continuation of the favorable stratigraphic package to the south of the last drill hole. A fence of drill holes at roughly 100 m and 200 m east of

the baseline at a 200 m hole spacing should adequately test the favorable stratigraphy both along strike and down dip. Any anomalies detected by the geophysical survey should also be tested.

The two tiers of drill holes could be staggered to result in roughly a 100 m hole spacing with the upper tier of drill holes at even numbered lines, eg. L8+00S and L10+00S and the lower tier of holes at odd numbered lines, eg. L9+00S and L11+00S. Given that the Goldstream orebody is roughly 100 to 150 m wide, this drill program should intersect economic mineralization if it is present, or at least, the favorable garnet and siliceous grey-green chlorite sericite phyllite stratigraphy, thus narrowing down the area for in-fill drilling. If the borehole geophysics is successful in the old holes then it should also be done in any new holes drilled.

COST ESTIMATES

PHASE II BORE HOLE GEOPHYSICS

Mob/Demob

Personnel: 3 men @ \$900/day x 2 days	\$ 1,800
Vehicle: 2 @ \$75/day/truck x 2 days	300
Accommodation/Food: 3 men @ \$25/day x 2 days	150
Misc. (gas)	150

Field Costs

Geophysicist: 1 @ \$400/day x 5 days	2,000
Assistants: 2 @ \$500/day x 5 days	2,500

Support Costs

Accommodation

Room/Day: 1 cabin @ \$35/day x 6 days	210
Board/Day: 3 men @ \$75/day x 5 days	375
Camp Supplies	200

Transportation

4x4 truck: 2 x \$75/day x 5 days	750
4-trax: 1 x \$40/day x 5 days	200

Equipment Rental

Borehole EM unit: 5 days @ \$650/day	3,000
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Report

Subtotal	<u>1,500</u>
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Contingency @ 10%

TOTAL PHASE II	<u>\$13,135</u>
SAY	<u>1,314</u>

	<u>\$14,449</u>
--	-----------------

	<u><u>\$15,000</u></u>
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Note: If borehole EM sensor is lost downhole it will likely cost \approx \$15,000 to replace

PHASE III DIAMOND DRILLING

Mob/Demob

Personnel: 2 men @ \$600/day x 2 days	\$ 1,200
Vehicle: 1, 4x4 @ \$75/day x 2 days	150
Food: 2 men @ \$25/day x 2 days	100
Misc. (gas)	50

Field Costs

Project Manager: 1 @ \$450/day x 6 days	2,700
Project Geologist: 1 @ \$350/day x 45 days	15,750
Assistants: 1 @ \$250/day x 45 days	11,250

Support Costs

Accommodation (includes drillers)	
Room/Day: 45 mandays @ \$70/day	3,150
Board/Day: 270 mandays @ \$20/day	5,400
Camp Supplies	500

Transportation

4x4 truck: 1 @ \$75/day x 45 days	3,375
Communication	1,000
Freight	500
Vancouver Support	1,500

Contract Services

Drilling: 8500' @ \$22/foot	187,000
Cat: 120 hours @ \$60/hr	7,200

Analysis:

Rocks - Geochemical: 150 @ \$10/sample	1,500
- Assay: 25 @ \$20/sample	500
Thin Section: 10 @ \$50/sample	500

Report

Project Manager: 4 @ \$450/day	1,800
Geologist: 8 @ \$350/day	2,800
Drafting: 30 hours @ \$20/hr	600
Supplies, Typing, Copying, etc.	400

Subtotal	\$248,925
Contingency @ 10%	24,892
TOTAL PHASE III	\$273,817
SAY	<u>\$274,000</u>

STATEMENT OF COSTS

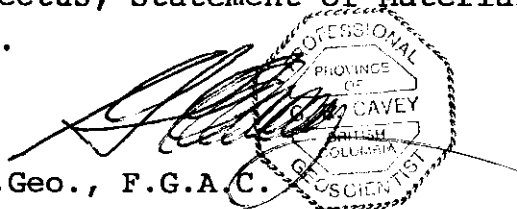
Mob/Demob	\$ 2,558.78
Camp Costs	3,034.62
Wages:	
Raven, W. - 21 days @ \$350/day	7,350.00
Pickston, D. - 20 days @ \$250/day	5,000.00
Contract Services	
Falcon Drilling	71,536.03
Analyses	519.50
Equipment Rental	660.00
Communication	206.48
Office Costs/Report	<u>2,669.67</u>
Total Statement of Costs	<u>\$93,535.08</u>

CERTIFICATE OF QUALIFICATIONS

I, George Cavey, of 6891 Wiltshire Street, Vancouver, British Columbia hereby certify:

1. I am a graduate of the University of British Columbia (1976) and hold a B.Sc. degree in geology.
2. I am presently employed as a consulting geologist with OreQuest Consultants Ltd. of #306-595 Howe Street, Vancouver, British Columbia.
3. I have been employed in my profession by various mining companies since graduation, with OreQuest Consultants Ltd. since 1982.
4. I am a Fellow of the Geological Association of Canada.
5. I am a member of the Canadian Institute of Mining and Metallurgy.
6. I am licensed to practice as a Professional Geologist in Alberta.
7. I am licensed to practice as a Professional Geologist in British Columbia.
8. The information contained in this report is based on supervision of the work done by OreQuest Consultants Ltd., a property examination during the recently completed drill program, and information listed in the Bibliography.
9. Neither OreQuest Consultants Ltd. nor myself have or expect to receive direct or indirect interest in the Rain Property nor in the securities of Bethlehem Resources Corp.
10. I consent to and authorize the use of the attached report and my name in the Company's Prospectus, Statement of Material Facts or other public document.

George Cavey, P.Ge., F.G.A.C.

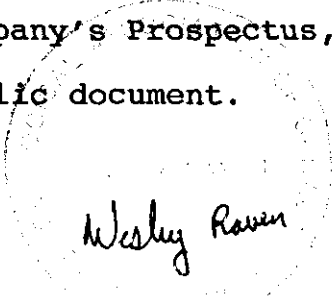


DATED at Vancouver, British Columbia, this 22nd day of October, 1992

CERTIFICATE of QUALIFICATIONS

I, Wesley D.T. Raven, of #108-1720 W. 12th Ave., Vancouver, British Columbia hereby certify:

1. I am a graduate of the University of British Columbia (1983) and hold a B.Sc. degree in geology.
2. I am presently retained as a consulting geologist with OreQuest Consultants Ltd. of #306-595 Howe Street, Vancouver, British Columbia and have been employed on a full time basis since 1983.
3. I am a Fellow of the Geological Association of Canada.
4. The information contained in this report is based on work done by OreQuest Consultants Ltd. for which I was the field project manager, and information listed in the Bibliography
- 5 . Neither OreQuest Consultants Ltd. nor myself have or expect to receive direct or indirect interest in the Rain Property nor in the securities of Bethlehem Resources Corp.
6. I consent to and authorize the use of the attached report and my name in the Company's Prospectus, Statement of Material Facts or other public document.


Wesley D.T. Raven,
B.Sc., F.G.A.C.

DATED at Vancouver, British Columbia, this 22nd day of October, 1992

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APPENDIX I
DRILL LOGS

FROM (m)	TO (m)	ROCK TYPE	DESCRIPTION	PERCENT SULPHIDE	FOL SCA	SAMPLE No.	FROM (m)	TO (m)	LENGTH (m)	Ag ppm	Au ppb	Cu ppm	Mn ppm	Pb ppm	Zn ppm
			-14.10-14.33m 3mm wide gouge vein at 85 to SCA												
			-14.33-14.50m broken core, rubble,												
			-15.80-16.36m quartz-carbonate vein and quartz flooded section, solid vein to 16.11m then broken core that is quartz flooded to 16.36m												
			-16.36m foliated section at 60 to SCA, minor folds with axes at 60 to SCA, one small speck of chalcopyrite												
			-17.88-23.00m quartz flooded and brecciated section with graphite sutures around the quartz blebs, upper section to 19.36m is dirty grey quartz-carbonate mix with angular quartz breccia fragments, upper contact at 40 to SCA, lower contact at 50 to SCA												
			-19.36-20.43m less quartz, more graphite with gouge at upper contact												
			-20.43-20.70m broken quartz vein												
			-20.70-21.64m limy black siltstone												
			-21.64-23.00m quartz-carbonate flooded with white quartz up to 70% of section												
			-22.30m 1cm wide gouge vein with clay and rock chips at 65 to SCA												
			-22.35-22.45m limy bed with bands at 70 to SCA												
			-30.80-31.02m quartz-carbonate vein, upper contact at 20 to SCA, lower contact gradational but approximately 50 to SCA												
32.48	33.58		LIMY BLACK SILTSTONE / LIMESTONE TRANSITION ZONE (lbs/L)												
			Gradational contact zone between well defined siltstone above and well defined marble below. Has limy matrix with darker bands of the black siltstone at 5-15 to SCA. Weak minor folding, axes at 5-25 to SCA. Trace-1% disseminated pyrite and pyrrhotite.												
33.58	41.65		LIMESTONE (L)												
			As previously described, 4.63-11.68m. Contains minor graphitic stylolites. Sugary looking texture, dirty grey-white colour.												
			-34.70-34.90m minor folding throughout section with axes at 10-40 to SCA, the pyrrhotite is concentrated around the fold axes												
			-41.00-41.65m transition zone between marble above and limy black siltstone below												
41.65	57.95		LIMY BLACK SILTSTONE (lbs)												
			As previously described, 11.68-32.48m. Foliations are a little flatter at 5-15 to SCA. Quartz flooded like the previous unit. Contains trace-1% pyrite and pyrrhotite (weakly magnetic) generally as elongated grains stretched out along the foliation planes. Quartz +/- carbonate a bit more prevalent than upper same unit at 10-20% mostly as 5-20mm wide veins, blebs, and tension gash infillings. Minor graphitic stylolites, local minor kink bands.												

FROM (m)	TO (m)	ROCK TYPE	DESCRIPTION	PERCENT SULPHIDE	FOL SCA	SAMPLE No.	FROM (m)	TO (m)	LENGTH (m)	Ag ppm	Au ppb	Cu ppm	Mn ppm	Pb ppm	Zn ppm
			-42.30m minor fold, axis at 45 to SCA												
			-43.30-43.77m strongly deformed section with kink bands and minor folds at 45-60 to SCA												
			-51.23-51.29m dark banded section with 5% pyrite drawn out along foliation planes at 5-30 to SCA												
			-54.69-54.74m brown clay gouge, upper and lower contacts at 5 to SCA												
			-55.13-55.55m moderately broken section with minor quartz flooding ending in a 10cm wide quartz vein, minor limonitic staining												
57.95	110.32	LIMESTONE (L)	As previously described, 4.63-11.68m. Dirty grey-white colour, sugary appearance, probably a carbonate flooded quartz rich siltstone?? Upper contact semi broken but ~ 10-20 to SCA, lower contact sharp at 40 to SCA. Moderate fracturing throughout unit, stronger than that seen in any previous unit.												
			-57.95-58.35m fracture zone, sections of broken core												
			-61.90-62.45m fracture zone, sections of broken core, especially last 15cm												
			-63.11-63.31m broken and fractured core												
			-66.20-66.50m broken and fractured core												
			-69.15-69.80m moderate fracture zone												
			-75.25-77.56m broken and fractured core, 50% intercalated limy black siltstone for upper 50cm												
			-80.46-90.55m this entire section is basically one broad fracture zone, all the rock is moderately to strongly fractured with very minor limonite staining, local sections of more competent core but overall very few pieces > 10cm in length, also contains ~ 15-20% intercalated limy black siltstone												
			-81.27-81.37m is intense rubble												
			-90.55-97.00m rock is much more competent and the quantity of limy black siltstone is gradually decreasing downhole, the siltstone, when present, forms bands/foliations at 0-10 to SCA												
			-95.44-95.78m is mostly siltstone												
			-97.00-99.43m good "clean" marble, no siltstone intercalations												
			-99.43-110.32m black banded marble due to intercalations of limy black siltstone marble is weakly fractured with minor limonite stain on fractures												
110.32	139.60	BITOTITE - SERICITE - QUARTZ - GRAPHITE PHYLLITE (BSCGP) (DARK BANDED PHYLLITE)	Dark black colour with small bands or veinlets of quartz +/- carbonate generally 1-5mm wide at 10-30 to SCA. Rock is composed of black												

FROM (m)	TO (m)	ROCK TYPE	DESCRIPTION	PERCENT SULPHIDE	FOL SCA	SAMPLE No.	FROM (m)	TO (m)	LENGTH (m)	Ag ppm	Au ppb	Cu ppm	Mn ppm	Pb ppm	Zn ppm
			biotite > graphite (50-60%), sericite (10-30%), and quartz (10-30%). Also contains 1-3% subhedral pyrrhotite and minor pyrite as blebs 1x1mm up to 5x5mm which overgrow foliation and vein boundaries. Also found as elongate blebs stretched along foliation planes. Little to no carbonate in matrix except as a local alteration. Upper contact sharp at 40 to SCA. (Much steeper than anticipated). Lower contact sharp at 20 to SCA. Pyrrhotite is also stretched along the quartz-carbonate veinlets. Minor carbonate veinlets and tension gash infillings. Weak foliation parallel to the veinlets at 10-30 to SCA. The pyrrhotite is weakly to moderately magnetic. Locally there are sections of a more tan coloured biotite.												
			-112.05-112.83m quartz-carbonate flooded section with 20-25% as veins and blebs												
			-114.00m minor sphalerite												
			-115.36m minor folds in quartz-carbonate vein, axes at 40 to SCA												
			-117.62-118.70m quartz-carb flooded section, minor chlorite in veins and 3-4% pyrrhotite throughout interval with trace chalcopyrite, minor light green coloured mineral = chlorite-sericite mix?												
			-120.01-120.33m broken fractured core, blocky												
			-124.33-124.68m silicified section containing 2 quartz veins both 2cm wide that coalesce into one vein containing 5% pyrrhotite blebs, veins at 40 to SCA, trace chalcopyrite												
			-125.30-125.50m local quartz flooding to 30% with 3% pyrr and chlorite												
			-125.93-130.18m strongly deformed section with phase 3 crenulation cleavage developed at 60 to SCA, strong carbonate alteration throughout section, 2-3% pyrrhotite strung out parallel to foliation at 20 to SCA and as coarser blebs overgrowing foliation and occasionally over the crenulation cleavage												
			-131.18-131.88m still deformed but intensity decreasing												
			-131.88-139.60m quartz flooded section with tan biotite (20%) and large clots of pale green chlorite-sericite, variable silica intensity of 20-40% mostly as veins 1-5cm wide at 10-30 to SCA												
			-131.88-132.10m quartz vein												
			-132.83-133.23m broken core, 8mm gouge at end												
			-135.05-135.80m 30% tan biotite, silicification decreased to 5% veins												
			-135.80-136.15m broken core, gouge and rubble with 50% recovery												
			-138.98-139.60m marked decrease in tan biotite and drop in silica												
139.60	154.28	LIMESTONE (L)	As previously described, 4.63-11.68m. Minor black argillaceous bands over upper part of unit giving rise to foliation at 10-15 to SCA, then a marked increase in the argillaceous component below 144.69m. Upper contact sharp at 20 to SCA												

FROM (#)	TO (#)	ROCK TYPE	DESCRIPTION	PERCENT SULPHIDE	FOL SCA	SAMPLE No.	FROM (#)	TO (#)	LENGTH (#)	Ag ppm	Au ppb	Cu ppm	Mn ppm	Pb ppm	Zn ppm	
			<p>-140.21m minor folds, axes at 5-10 to SCA</p> <p>-140.64-140.95m broken core</p> <p>-144.69-148.78m strong argillaceous component in the marble, black bands to 30% of the unit at 5-15 to SCA</p> <p>-148.78-149.38m small interbed of biotite-graphite-sericite phyllite upper contact sharp, lower contact more gradational, at 15-20 to SCA</p> <p>-149.38-153.10m as 144.69-148.78m, with strongly broken core from 152.86-153.10m</p> <p>-153.10-154.28m Transition Zone = 50-50 marble with biotite-graphite-sericite phyllite, basically a gradational change between a well defined marble and well defined black phyllite</p>													
154.28	158.98		<p>CONTORTED BIOTITE - SERICITE - CARBONATE - GRAPHITE PHYLLITE (BSCGP)</p> <p>Rock is composed of foliated biotite, sericite, and graphite in a quartz-carbonate matrix and also contains 10% quartz-carbonate veins, blebs, and tension gash infillings which are highly contorted. Foliated at 0-10 to SCA with a Phase 3 crenulation cleavage (graphitic bands) at 40 to SCA. Contains 2-5% disseminated pyrrhotite with minor pyrite and trace chalcopyrite around more silicified sections. The pyrrhotite occurs as coarse blebs up to 8x8mm and as elongate blebs and fine disseminations strung out along the foliation planes. The upper half of the unit is the most contorted. Upper contact is gradational but appears to parallel the foliation at ~ 10 to SCA. The lower contact is also semi-gradational at roughly 20 to SCA. Unit has a mottled grey-black colour and is strongly calcareous throughout.</p>													
158.98	163.27		<p>CHLORITE - SERICITE - QUARTZ - BIOTITE PHYLLITE (And)</p> <p>Unit is not contorted like the black phyllite above. Chlorite is the dominant mineral in a fine grained quartz-carbonate matrix. Well foliated at 10-15 to SCA. Also contains 5-8% quartz-carbonate veins 1-10mm wide parallel to foliation. Upper and lower contacts fairly sharp at 20 to SCA. Trace disseminated pyrrhotite. Minor "granitic" looking bands near bottom of unit.</p>													
163.27	174.52		<p>CONTORTED BIOTITE - SERICITE - CARBONATE - GRAPHITE PHYLLITE (BSCGP)</p> <p>As described, 154.28 - 158.98m but even more contorted. Anastomosing veins as tension gash infillings. Wavy foliation, crenulated folds and Phase 3 crenulation cleavage developed at 40 to SCA. Contains 1 - 5% pyrrhotite with trace pyrite and chalcopyrite as blebs and drawn out along foliation. Some broad folds at 85 to SCA.</p> <p>-164.13-166.04m band of marble, crenulation cleavage is also developed in this unit at 40 to SCA, upper contact sharp at 20 to SCA</p>													

FROM (m)	TO (m)	ROCK TYPE	DESCRIPTION	PERCENT SULPHIDE	FOL SCA	SAMPLE No.	FROM (m)	TO (m)	LENGTH (m)	Ag ppm	Au ppb	Cu ppm	Mn ppm	Pb ppm	Zn ppm
			sharp lower contact at 40 to SCA.												
174.52	180.38	LIMESTONE	As previously described. Upper contact sharp at 55 to SCA. Black bands give foliated appearance at 20 to SCA with some silty bands at 70 to SCA. -175.70-175.91m broken fractured core -177.75-177.90m broken core, rubble and rock chips -180.18-180.27m blebby pyrite zone 4 cm wide at 70 to SCA, pyrite 10%												
180.38	187.17	CONTORTED BIOTITE-GRAPHITE PHYLLITE & LIMESTONE (BGP/L)	Upper contact distorted at 85 to SCA. Intercalated marble and black phyllite with blebby pyrite enrichment, locally to 10%, averages 3-5% over length of section. Most of the pyrite is in a 2cm vein with graphitic stringers at 85 to SCA to 181.27m. This vein is crosscut by quartz carbonate veins at 60 to SCA which have been offset by the pyrite vein by 1 - 2 cm. The main vein contains 20% pyrite. -182.00-183.70m marble as general description -183.70-185.26m mostly black phyllite with minor intercalated marble, local pyrite enrichment in the marble, especially at 183.77-183.88m (20-25%) disseminated pyrite blebs and at 184.94-185.06m, 10% pyrrhotite and 1% pyrite in a quartz flooded area of black phyllite. -185.26-187.17 is mostly limestone												
187.17	214.57	BIOTITE - SERICITE - CARBONATE - GRAPHITE PHYLLITE (BSCGP)	As previously described 110.32 - 139.60, not contorted, contains minor intercalated sections of Chlorite-Sericite-Quartz-Biotite Phyllite and Marble. Weak carb in matrix. Foliation at 20 to SCA. Upper contact sharp at 15 to SCA. Contains 3 - 5% qtz - carb tension gash infillings and 1 - 3% blebby po and rare traces of cpy. -187.17-187.89m Chlorite-Sericite-Quartz-Biotite Phyllite (Andesite) -189.03-189.97m Chlorite-Sericite-Quartz-Biotite Phyllite (Andesite) -193.66m partial quartz vein with 10% pyrrhotite, trace chalcocopyrite -194.21-199.25m rubble -194.35-196.30m marble, upper contact sharp at 40 to SCA, lower contact sharp at 15 to SCA. -197.90-198.01m rubble and gouge, 1 cm gouge vein at 20 to SCA -199.08-199.19m quartz veining and silicification with 10% blebby disseminated pyrrhotite at 40 to SCA. -201.93-202.01m silicified section with 10% po, tr-5% chalcocopyrite,												

FROM (m)	TO (m)	ROCK TYPE	DESCRIPTION	PERCENT SULPHIDE	FOL SCA	SAMPLE No.	FROM (m)	TO (m)	LENGTH (m)	Ag ppm	Au ppb	Cu ppm	Mn ppm	Pb ppm	Zn ppm
			above and below this interval are patches of quartz-carbonate altered feldspar crystals?, small white blebs up to 2mmx2mm, mostly anhedral with some good square crystals.												
			-202.75-205.00m section of broken fractured core with quartz-carb veining throughout, up to 10%, veins generally at 70 - 85 to SCA with 1-5% pyrrhotite and tr chalcopyrite around the most silicified areas.												
			-205.95-206.00m gouge and rubble.												
			-206.40-214.57m finely laminated (at 20 - 25% to SCA), alternating light(carbonate) and dark(biotite) bands with 5% very fine grained disse. pyrrhotite within the laminae and occasionally larger blebs overgrowing the lamination. Unit is highly calcareous.												
			-206.92-207.14m silicified zone with 10% pyrrhotite, .5% chalcopyrite as blebs, mineralization parallel to foliation at 20-25 to SCA												
210.00	211.00		-as general description	5		8216	210.00	211.00	1.00	0.5	50	87	771	23	136
213.00	214.00		-as general description	5		8217	213.00	214.00	1.00	0.4	30	97	1656	<2	132
214.57	219.10		SILICIFIED GARNET ZONE (GZ)												
			Silicified zone, carbonate virtually gone replaced by fine grained pervasive silicification. Also contains up to 10% fine grained garnets 2x2mm that are a pale white to faint white-pink colour, they show up as more pinkish on split surfaces. Unit also contains 2-5% disseminated pyrrhotite strung out along foliation at 10-20 to SCA.												
215.00	216.00		-as general description	3		8218	215.00	216.00	1.00	0.3	10	94	1471	<2	75
218.00	219.00		-as general description	3		8219	218.00	219.00	1.00	0.3	30	84	3807	<2	97
219.10	227.15		GARNET ZONE / SEMI MASSIVE SULPHIDES (GZ/SMS)												
			Biotite-graphite-garnet-silicified zone with semi - massive pyrrhotite locally to 30% but averages 5-10% as fine disseminations and massive bands parallel to foliation at 10-20 to SCA. The zone is strongly silicified with 5-10% blebby quartz. Areas of strongest silicification have greatest sulphide concentration. Also has fine grained pervasive silicification and 5% cherty bands.												
			-219.10-219.50m 30% massive pyrrhotite, trace chalcopyrite												
220.00	221.00		-220.18-220.66m 30% massive pyrrhotite, trace chalcopyrite and from 220.88-221.00m is 20% massive pyrrhotite, trace chalcopyrite	25		8220	220.00	221.00	1.00	2.3	50	337	7626	82	391
			-222.15-222.80m 10% banded pyrrhotite, trace chalcopyrite												
223.00	224.00		-as general description	8		8221	223.00	224.00	1.00	0.8	20	228	8839	4	202
			-223.92-224.70m 15-20% massive banded pyrrhotite, trace chalcopyrite												
226.00	227.00		-as general description	8		8222	226.00	227.00	1.00	0.4	50	73	589	<2	139
			-227.15-233.71m more laminated, gradual decrease in sulphides to 3-5% pyrrhotite then a gradational contact to the underlying tan biotite phyllite												

FROM (m)	TO (m)	ROCK TYPE	DESCRIPTION	PERCENT SULPHIDE	FOL SCA	SAMPLE No.	FROM (m)	TO (m)	LENGTH (m)	Ag ppm	Au ppb	Cu ppm	Mn ppm	Pb ppm	Zn ppm		
227.15	233.71		TAN BIOTITE - MUSCOVITE - SERICITE - QUARTZ PHYLLITE (TBP) Unit contains tan coloured biotite (30-40%), muscovite and sericite (20-30%), quartz (20-40%), quartz veining (5%), and 5-8% coarse augen shaped porphyroblasts that appear to be mostly quartz with minor biotite +/- chlorite. There are also some greenish-black coloured porphyroblasts that are probably hornblende that is now chlorite altered. Trace to 1% disseminated pyrite and pyrrhotite. Unit has a fine foliation at 20 to SCA.														
229.00	230.00		-228.00-228.15m quartz vein at 40 to SCA, contains 10% pyrrhotite trace chalcopyrite -as general description	tr		8223	229.00	230.00	1.00	0.3	20	27	448	<2	109		
232.00	233.00		-230.31-230.53m quartz vein, upper contact is diffuse but ~ 10-20 to SCA, lower contact fairly sharp at 40 to SCA -230.53-233.40m the porphyritic hornblende ? present up to 10% -233.40-233.71m silicified with cherty bands at 20 to SCA	tr		8224	232.00	233.00	1.00	0.2	10	5	268	<2	55		
233.71	237.57		TUFFACEOUS ANDESITE (And) Medium green colour with 10-15% white feldspar crystals partially replaced by quartz giving the unit a speckled appearance. Upper and lower contacts sharp at 20 to SCA. Minor quartz +/- carbonate veining generally at 40 to SCA. Minor disseminated pyrrhotite, trace - 1%														
236.00	237.00		-as general description	tr		8225	236.00	237.00	1.00	0.2	10	26	391	<2	37		
237.57	303.97		TAN BIOTITE - MUSCOVITE - SERICITE - QUARTZ PHYLLITE (TBP) As previously described, 227.15-233.71m.														
239.00	240.00		-237.57-237.90m silicified section with cherty bands at 20 to SCA -as general description -247.11-247.20m quartz vein at 30 to SCA with 2-3% pyrrhotite -255.18-257.80m wavy foliation, otherwise not much different -259.65-259.95m broken core, minor gouge and rubble -260.00-303.97m basically same as above only not contorted and more siliceous, chlorite clots in the quartz veining with trace-1% pyrrhotite -273.35-274.44m grey white colour, strongly silicified -275.86-278.00m fracture zone, fractures generally at 85-90 to SCA with 1-3% disseminated pyrite blebs along the fracture planes. rock is a greenish colour due to more silica and sericite -281.66-281.94m milky white quartz vein, upper and lower contacts are contorted traces of pyrrhotite blebs	tr		8226	239.00	240.00	1.00	0.2	10	43	453	<2	138		

FROM (m)	TO (m)	ROCK TYPE	DESCRIPTION	PERCENT SULPHIDE	FOL SCA	SAMPLE No.	FROM (m)	TO (m)	LENGTH (m)	Ag ppm	Au ppb	Cu ppm	Mn ppm	Pb ppm	Zn ppm
			-285.06-285.08m quartz bleb with 20% pyrrhotite												
			-289.96-294.82m greenish-grey-white colour, strongly silicified section with sericite, there are numerous small quartz veins throughout the section at various angles to the core axis filling stress related fracturing, veins are 1-2mm wide, @ 293.90-294.82 core is intensely fractured with broken rock chips and minor gouge with carbonate in the gouge, minor pyrite and pyrrhotite at 293.90m												
			-294.82m dark biotite phyllite, there is broken core to 295.02m												
			-295.53-295.73m quartz vein with 1-2% disseminated pyrite and pyrrhotite along with chlorite-sericite clots, upper contact sharp at 40 to SCA, lower contact broken but approximately 10 to SCA												
			-296.00-296.10m quartz vein, barren												
			-300.77-301.02m broken core, rock chips												
			-301.02-301.26m pale green colour, silicified with sericite												
			-301.75-302.40m pale green colour, silicified with sericite												

303.97

END OF HOLE

FROM (#)	TO (#)	ROCK TYPE	DESCRIPTION	PERCENT SULPHIDE	FOL SCA	SAMPLE No.	FROM (#)	TO (#)	LENGTH (#)	Ag ppm	Au ppb	Cu ppm	Mn ppm	Pb ppm	Zn ppm
			veining and foliation at 15 to SCA												
22.32	32.08		BIOTITE - SERICITE - PHYLLITE (BSP)												
			Pale grey colour, fine grained semi-massive to foliated unit with foliation at 10 to SCA. Minor quartz veining and augens. No carbonate in unit. Minor traces of pyrrhotite.												
			-gradational change into a black phyllite with increase in biotite and graphite at the expense of quartz, also weak carbonate now present												
32.08	35.74		GARNET ZONE / SEMI MASSIVE SULPHIDES (GZ/SHS)												
			Unit is silicified black quartz - graphite - biotite phyllite with 5% small (2-3mm) pink to white garnet porphyroblasts and 5-25% pyrrhotite as blebs and wispy disseminations. Minor carbonate veining with narrow halos of carbonate in matrix of rock. Quartz veining is also present, 2-8% at 30-50 to SCA with most of the quartz present as large blebs. There are minor traces of chalcopyrite in the pyrrhotite and some possible specks of sphalerite. Upper contact fairly sharp at 10-15 to SCA, the lower contact is less obvious and more of a gradational change with a gradual drop in sulphides and garnets, otherwise looks basically the same.												
32.00	33.00		-as above, zone averages 8% pyrrhotite	8		8227	32.00	33.00	1.00	0.6		310	8497	13	338
33.00	34.00		-as above, zone averages 10% pyrrhotite mostly as wispy stringers but some blebs appear to infill tension gashes rimed with carbonate	10		8228	33.00	34.00	1.00	0.3		201	11357	4	338
34.00	35.00		-zone averages 15% pyrrhotite, trace chalcopyrite and sphalerite with local 10-15cm long sections with 25% pyrrhotite	15		8229	34.00	35.00	1.00	0.5		517	7627	13	259
35.00	36.00		-zone averages 5-8% pyrrhotite, last 26cm is silicified black phyllite, no garnets	6		8230	35.00	36.00	1.00	0.2		137	10687	<2	111
35.74	56.00		BIOTITE - SERICITE - CARBONATE - GRAPHITE PHYLLITE (BSCGP)												
			Unit is the typical looking black banded phyllite. The upper portion of the unit to 38.00m is silicified. Carbonate is found as small veins at 0-15 to SCA and as a moderately pervasive matrix constituent. Contains 1-3% pyrrhotite as small disseminated blebs and minor traces of sphalerite. Local limy intercalations, usually < 20cm in length. Has 1-5% quartz +/- carbonate veins 1-10mm wide also at 0-15 to SCA which is parallel to foliation.												
			-44.00-44.40 broken core, minor gouge												
			-47.11-47.21 barren quartz vein at 30 to SCA												
			-48.95-49.75 Biotite-Sericite Phyllite, upper and lower contacts fairly sharp at 20 to SCA												

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FROM (m)	TO (m)	ROCK TYPE	DESCRIPTION	PERCENT SULPHIDE	FOL SCA	SAMPLE No.	FROM (m)	TO (m)	LENGTH (m)	Ag ppm	Au ppb	Cu ppm	Mn ppm	Pb ppm	Zn ppm
			-50.81-51.70 pyrite and pyrrhotite speckled black phyllite with 10% total sulphides which include traces of sphalerite, at 50.59 there is a 3mm wide vein of reddish sphalerite at 20 to SCA -51.70-52.72 lens of limy siltstone, upper contact at 5 to SCA												
56.00	68.20		BIOTITE - SERICITE PHYLITE (BSP) Similar looking to the unit above but lacks the graphite and the fairly distinctive carbonate veining. More massive looking, less foliated. Also is a gradational lithologic change. Contains local sections with black porphyroblasts = amphibole? Contains trace-1% pyrrhotite as disseminated blebs. -58.00-58.65 Chlorite-Biotite-Sericite Phyllite, some of the biotite is tan coloured -65.23-65.55 quartz flooded (50%) as milky white veins at 10-20 to SCA -67.05-67.50 quartz flooded (50%) as milky white veins at 10-20 to SCA -67.99-68.20 quartz flooded (50%) as milky white veins at 10-20 to SCA												
68.20	68.87		GARNET ZONE / SEMI MASSIVE SULPHIDES (GZ/SMS) As previously described 32.08-35.74m. The zone averages 10% pyrrhotite with trace chalcopyrite. Also contains " 5% 1-2mm pinkish garnets.												
68.00	69.00		-as described above, trace sphalerite	10		8231	68.00	69.00	1.00	0.1		144	6033	<2	126
68.87	73.34		BIOTITE - SERICITE PHYLITE (BSP) As previously described 56.00-68.20m. -69.95-70.40 silicified section (quartz veins) with 5% pyrrhotite and trace chalcopyrite and garnets -73.08-73.34 strongly broken core												
73.34	79.00		GARNET ZONE / SEMI MASSIVE SULPHIDES (GZ/SMS) As previously described, 32.08-35.74m. The zone is silicified and has a highly variable sulphide content. Some of the zone is in the graphitic phyllite with other sections of garnet in more of the biotite-sericite phyllite, that unit is sulphide poor. The sulphides are highly contorted.												
73.00	74.00		-upper 34cm is biotite-sericite schist, rest is the garnet zone with highly broken core to 73.81	4		8232	73.00	74.00	1.00	<0.1		101	4371	<2	139
74.00	75.00		-this section averages 25% pyrrhotite with trace chalcopyrite and sphalerite to 74.63m, from 74.63-75.00m averages 5% pyrrhotite and	15		8233	74.00	75.00	1.00	<0.1		436	13486	44	293

HOLE #: RN-92-2

FROM (m)	TO (m)	ROCK TYPE	DESCRIPTION	PERCENT SULPHIDE	FOL SCA	SAMPLE No.	FROM (m)	TO (m)	LENGTH (m)	Ag ppm	Au ppb	Cu ppm	Mn ppm	Pb ppm	Zn ppm
75.00	76.00		Looks like silicified biotite-sericite-garnet phyllite -upper 50cm is silicified biotite-sericite-garnet phyllite with 3% pyrrhotite, lower 50cm has more cherty bands at 20 to SCA and also averages 3% pyrrhotite	3		8234	75.00	76.00	1.00	<0.1		133	10979	13	87
76.00	77.00		-garnet and sulphide poor section with both averaging 1% respectively in silicified biotite-sericite phyllite	1		8235	76.00	77.00	1.00	<0.1		55	2124	<2	154
77.00	78.00		-upper 25cm as above, lower 75cm has 5% cherty banding, sulphide poor	2		8236	77.00	78.00	1.00	<0.1		97	10221	3	90
78.00	79.00		-more quartz flooding, garnets and sulphides	8		8237	78.00	79.00	1.00	0.2		171	14611	8	132
79.00	94.75		BIOTITE - SERICITE - CARBONATE - GRAPHITE PHYLLITE (BSCGP) As previously described from 35.74-56.00m. Contains 2-5% disseminated blebby pyrrhotite, trace pyrite. -80.81-81.01 dirty quartz vein, minor graphitic fragments and 1-2% pyrrhotite -83.68-83.82 quartz vein, upper and lower contacts at 10 to SCA -84.02-84.13 quartz vein, upper and lower contacts at 10 to SCA -85.30-85.41 quartz vein, upper and lower contacts at 10 to SCA -89.57-90.61 limy siltstone with black bands at 30 to SCA, upper contact at 5 to SCA, lower contact at 40 to SCA -92.45-94.00 foliation steepens gradually till its 90 to SCA												
94.75	103.33		LIMESTONE (L) Massive equigranular re-crystallized limestone with weak black banding at 20 to SCA. Minor intercalated black phyllite, upper contact sharp at 20 to SCA, lower contact gradational. -96.35-96.95 lens of black phyllite, upper and lower contacts at 10 to SCA -102.11-103.33 gradational change from clean limestone to limy black siltstone to phyllite below												
103.33	106.93		BIOTITE - SERICITE PHYLLITE (BSP) As previously described 56.00-68.20m.												
106.93	111.12		GARNET ZONE (GZ) As previously described 32.08-35.74m. Upper contact ~ 20 to SCA, lower contact more gradational, both poorly defined												
106.93	108.00		-silicified, averages 3% pyrrhotite, trace chalcopyrite, 10% garnets	3		8238	106.93	108.00	1.07	<0.1		310	6850	<2	71
108.00	109.00		-as above, fewer sulphides	2		8239	108.00	109.00	1.00	<0.1		169	6205	<2	54

OREQUEST CONSULTANTS LTD.

HOLE # : RN-92-2

PAGE # 5 of 6

FROM (m)	TO (m)	ROCK TYPE	DESCRIPTION	PERCENT SULPHIDE	FOL SCA	SAMPLE No.	FROM (m)	TO (m)	LENGTH (m)	Ag ppm	Au ppb	Cu ppm	Mn ppm	Pb ppm	Zn ppm
109.00	110.00		-as above, 5% cherty bands at 10 to SCA	2		8240	109.00	110.00	1.00	<0.1		126	4387	<2	65
110.00	111.12		-upper half is very weak as a garnet zone, lower half much stronger with pyrrhotite to 5% and trace chalcopyrite	3		8241	110.00	111.12	1.12	<0.1		133	3278	<2	81
111.12	119.31		BIOTITE - SERICITE - CARBONATE PHYLLITE (BSCP) Like the Biotite - Sericite Phyllite but strongly calcareous. Includes calcareous lens of limy siltstone and the matrix is strongly calcareous, becomes more silicified at expense of carb. below 115.02m. -112.15-115.02 limestone lens												
119.31	120.55		GARNET ZONE (GZ) As previously described 32.08-35.74m.												
119.31	120.55		-contains 5% garnets and averages 3% pyrrhotite with most of the pyrrhotite in the upper half of the unit	3		8242	119.31	120.55	1.24	<0.1		145	4840	<2	129
120.55	123.89		BIOTITE - SERICITE - CARBONATE PHYLLITE (BSCP) As previously described 111.12-119.31m. Becomes silicified above the garnet zone below.												
123.89	125.98		GARNET ZONE / SEMI MASSIVE SULPHIDES (GZ/SMS) As previously described.												
123.89	125.00		-siliceous bands, 10% garnets, section averages 5% pyrrhotite and trace chalcopyrite	5		8243	123.89	125.00	1.11	<0.1		145	9185	<2	103
125.00	126.00		-as above but greater pyrrhotite content	15		8244	125.00	126.00	1.00	0.6		383	8928	12	411
125.98	128.41		BIOTITE - SERICITE PHYLLITE (BSP) As previously described, sericite content quite pronounced.												
128.41	129.45		GARNET ZONE / SEMI MASSIVE SULPHIDES (GZ/SMS)												
128.41	129.45		-upper contact sharp at 70 to SCA, lower contact sharp at 50 to SCA with foliations the same, contains 2-4% garnets, 20% pyrrhotite and trace chalcopyrite	20		8245	128.41	129.45	1.04	0.5		388	6675	3	312
129.45	139.91		BIOTITE - SERICITE PHYLLITE (BSP) As previously described 125.98-128.41												

HOLE # : RN-92-2

FROM (m)	TO (m)	ROCK TYPE	DESCRIPTION	PERCENT SULPHIDE	FOL SCA	SAMPLE No.	FROM (m)	TO (m)	LENGTH (m)	Ag ppm	Au ppb	Cu ppm	Mn ppm	Pb ppm	Zn ppm
			Contains about 1% fine disseminated pyrrhotite. Minor carbonate tension gash infillings near bottom of unit.												
43.21	45.05		GARNET ZONE / SEMI MASSIVE SULPHIDES (GZ/SMS)												
			As described at 41.03-41.77m. Has good sections of siliceous banding (chert bands) and splotches of quartz.												
43.21	44.00		-as described above	15		8247	43.21	44.00	.79	0.7		430	8121	11	212
44.00	45.05		-as above, broken core from 44.07-44.45m	5		8248	44.00	45.05	1.05	0.2		178	11755	<2	146
45.05	51.10		BIOTITE - SERICITE - CARBONATE - GRAPHITE PHYLLITE (BSCGP)												
			Unit is strongly calcareous with 15-20% carbonate stringer veins. Contains 1-3% pyrrhotite as coarser blebs. Foliation at 5-15 to SCA. Upper contact at 20 to SCA, lower contact gradational and broken.												
51.10	55.80		LIMESTONE (L)												
			Dirty limestone like that described at 35.50-41.03m. Minor pyrrhotite (10%) over 15cm in phyllite above at contact. Argillaceous bands give foliation at 5-25 to SCA.												
55.80	60.13		BIOTITE - SERICITE - CARBONATE - GRAPHITE PHYLLITE (BSCGP)												
			As described 45.05-51.10m. Upper contact sharp at 20 to SCA, lower contact sharp at 10 to SCA.												
60.13	64.70		GARNET ZONE / SEMI MASSIVE SULPHIDES (GZ/SMS)												
			As previously described 41.03-41.77m. Entire zone is strongly contorted and silicified and contains pyrrhotite, chalcopyrite and traces of sphalerite. Core difficult to see as its is soaked in hydraulic oil.												
60.13	61.00		-upper 25cm more like biotite-sericite phyllite than well developed garnet zone, good garnet zone below 60.38m	20		8249	60.13	61.00	.87	0.3		250	5041	<2	322
61.00	62.00		-as general description, convoluted foliations	8		8250	61.00	62.00	1.00	0.2		129	15008	4	177
62.00	63.00		-pyrrhotite banded at 35 to SCA	15		8251	62.00	63.00	1.00	0.3		411	13938	8	182
63.00	64.00		-as general description	8		8252	63.00	64.00	1.00	0.4		258	>20000	6	126
64.00	64.70		-zone ends at 15cm wide quartz vein	8		8253	64.00	64.70	.70	0.2		220	16883	<2	120
64.70	66.38		SILICIFIED BIOTITE - SERICITE PHYLLITE (BSP)												
66.38	67.41		GARNET ZONE / SEMI MASSIVE SULPHIDES (GZ/SMS)												

FROM (m)	TO (m)	ROCK TYPE	DESCRIPTION	PERCENT SULPHIDE	FOL SCA	SAMPLE No.	FROM (m)	TO (m)	LENGTH (m)	Ag ppm	Au ppb	Cu ppm	Mn ppm	Pb ppm	Zn ppm	
			-37.38-38.43 contorted Biotite-Sericite-Carbonate-Graphite Phyllite, upper and lower contacts sharp at 5 to SCA -41.15-41.28 vuggy weathered limestone -41.49-41.85 vuggy weathered limestone all small rock chips < 1cm wide -42.32-44.36 vuggy weathered limestone all small rock chips < 1cm wide -44.36-46.25 Biotite-Sericite-Carbonate-Graphite Phyllite, upper and lower contacts fairly sharp at 20 to SCA, foliated at 10-15 to SCA, upper part to 44.60m contains 8% pyrrhotite and is silicified, from 45.15m to 46.25 is broken core with gouge and rubble													
51.54	65.17		BIOTITE - SERICITE - CARBONATE - GRAPHITE PHYLLITE (BSCGP) Contains 5% quartz augens and 2-3% coarse blebby pyrrhotite which overgrows foliation at 5 to SCA. Carbonate as small veins parallel to foliation. -55.55-55.80 broken core and rock chips -61.25-62.73 wavy foliation at 40 to SCA													
65.17	69.50		TUFFACEOUS ANDESITE TO CHLORITE PHYLLITE (And) Foliated at 10 to SCA, has 5% quartz veins													
69.50	97.95		BIOTITE - SERICITE +/- CARBONATE PHYLLITE (BSCP) Upper contact at ~ 10 to SCA. Unit contains 2-3% pyrrhotite blebs which overgrow foliation at 10-15 to SCA and are up to 5x5mm. -71.84-73.63 Biotite - Sericite Phyllite with 3-5% very fine grained disseminated pyrrhotite													
97.95	99.30		GARNET ZONE / SEMI MASSIVE SULPHIDES (GZ/SMS) Zone is silicified and has a variable sulphide and garnet content. Zone averages 10% pyrrhotite but has local 10cm sections with 15-20% pyrrhotite. Upper contact sharp at 10 to SCA, lower contact broken.													
97.95	99.30		-as above description	10		8256	97.95	99.30	1.35	0.6		322	>20000	<2	209	
99.30	111.65		BIOTITE - SERICITE - CARBONATE +/- GRAPHITE PHYLLITE (BSCGP) Unit is well foliated at 5-10 to SCA, the foliation is often wavy. Contains approximately 5% quartz veins generally parallel to foliation. Also has 2-4% coarse pyrrhotite blebs (up to 5x5mm) that overgrow foliation and some finer grained pyrrhotite that parallels foliation.													

APPENDIX II
ANALYTICAL PROCEDURES

October 24, 1991

TO: Mr. Ian Campbell
OREQUEST CONSULTANTS LTD.
306 - 595 Howe Street
Vancouver, BC V6C 2T5

FROM: VANGEOCHEM LAB LIMITED
1630 Pandora Street
Vancouver, BC V5L 1L6

SUBJECT: Analytical procedure used to determine gold by fire assay method and detect by atomic absorption spectrophotometry in geological samples.

1. Method of Sample Preparation

- (a) Geochemical soil, silt or rock samples were received at the laboratory in high wet-strength, 4" x 6", Kraft paper bags. Rock samples would be received in poly ore bags.
- (b) Dried soil and silt samples were sifted by hand using an 8" diameter, 80-mesh, stainless steel sieve. The plus 80-mesh fraction was rejected. The minus 80-mesh fraction was transferred into a new bag for subsequent analyses.
- (c) Dried rock samples were crushed using a jaw crusher and pulverized to 100-mesh or finer by using a disc mill. The pulverized samples were then put in a new bag for subsequent analyses.

2. Method of Extraction

- (a) 20.0 to 30.0 grams of the pulp samples were used. Samples were weighed out using a top-loading balance and deposited into individual fusion pots.
- (b) A flux of litharge, soda ash, silica, borax, and, either flour or potassium nitrite is added. The samples are then fused at 1900 degrees Fahrenheit to form a lead "button".

-2-

- (c) The gold is extracted by cupellation and parted with diluted nitric acid.
- (d) The gold beads are retained for subsequent measurement.

3. Method of Detection

- (a) The gold beads are dissolved by boiling with concentrated aqua regia solution in hot water bath.
- (b) The detection of gold was performed with a Techtron model AA5 Atomic Absorption Spectrophotometer with a gold hollow cathode lamp. The results were read out on a strip chart recorder. The gold values, in parts per billion, were calculated by comparing them with a set of known gold standards.

4. Analysts

The analyses were supervised or determined by Mr. Raymond Chan or Mr. Conway Chun and his laboratory staff.



Raymond Chan
VANGEOCHEM LAB LIMITED

October 21, 1992

TO: Mr. Wes Raven
OREQUEST CONSULTANTS LTD.
306 - 595 Howe Street
Vancouver, BC V6C 2T5

FROM: VANGEOCHEM LAB LIMITED
1630 Pandora Street
Vancouver, BC V5L 1L6

SUBJECT: Analytical procedure used to determine hot acid soluble for 25 element scan by Inductively Coupled Plasma Spectrophotometry in geochemical silt and soil samples.

1. Method of Sample Preparation

- (a) Geochemical soil, silt or rock samples were received at the laboratory in high wet-strength, 4" X 6", Kraft paper bags. Rock samples would be received in poly ore bags.
- (b) Dried soil and silt samples were sifted by hand using an 8" diameter, 80-mesh, stainless steel sieve. The plus 80-mesh fraction was rejected. The minus 80-mesh fraction was transferred into a new bag for subsequent analyses.
- (c) Dried rock samples were crushed using a jaw crusher and pulverized to 100-mesh or finer by using a disc mill. The pulverized samples were then put in a new bag for subsequent analyses.

2 Method of Digestion

- (a) 0.50 gram portions of the minus 80-mesh samples were used. Samples were weighed out using an electronic balance.
- (b) Samples were digested with a 5 ml solution of HCl:HNO₃:H₂O in the ratio of 3:1:2 in a 95 degree Celsius water bath for 90 minutes.
- (c) The digested samples are then removed from the bath and bulked up to 10 ml total volume with demineralized water and thoroughly mixed.

-2-

3. Method of Analyses

The ICP analyses elements were determined by using a Jarrell-Ash ICAP model 9000 directly reading the spectrophotometric emissions. All major matrix and trace elements are interelement corrected. All data are subsequently stored onto disketts.

4. Analysts

The analyses were supervised or determined by Mr. Conway Chun or Mr. Raymond Chan and his laboratory staff.



Conway Chun
VANGEOCHEM LAB LIMITED

APPENDIX III
ANALYTICAL RESULTS

GEOCHEMICAL ANALYTICAL REPORT

CLIENT: OREQUEST CONSULTANTS LTD.
ADDRESS: 306 - 595 Howe St.
: Vancouver, BC
: V6C 2T5

DATE: AUG 18 1992

REPORT#: 920076 GA
JOB#: 920076

PROJECT#: RAIN
SAMPLES ARRIVED: AUG 17 1992
REPORT COMPLETED: AUG 18 1992
ANALYSED FOR: Au (FA/AAS) ICP

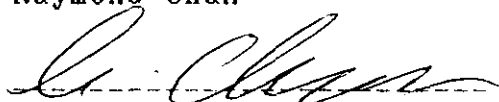
INVOICE#: 920076 NA
TOTAL SAMPLES: 11
SAMPLE TYPE: 11 CORE
REJECTS: SAVED

SAMPLES FROM: MR. GEORGE CAVEY
COPY SENT TO: OREQUEST CONSULTANTS LTD.

PREPARED FOR: MR. GEORGE CAVEY

ANALYSED BY: Raymond Chan

SIGNED:



GENERAL REMARK: RESULTS FAXED TO MR. GEORGE CAVEY @ 688-9727.

REPORT NUMBER: 920076 GA

JOB NUMBER: 920076

OREQUEST CONSULTANTS LTD.

PAGE 1 OF 1

SAMPLE #	Au ppb
8216	50
8217	30
8218	10
8219	30
8220	50
8221	20
8222	50
8223	20
8224	10
8225	10
8226	10

DETECTION LIMIT
nd = none detected

-- = not analysed

5

ls = insufficient sample

VANGEOCHEM LAB LIMITED

1630 Pandora Street, Vancouver, B.C. V5L 1L6
Ph: (604)251-5656 Fax: (604)254-5717

ICAP GEOCHEMICAL ANALYSIS

A .5 gram sample is digested with 5 ml of 3:1:2 HCL to HNO₃ to H₂O at 95 °C for 90 minutes and is diluted to 10 ml with water.
This leach is partial for Al, Ba, Ca, Cr, Fe, K, Mg, Mn, Na, P, Sn, Sr and W.

ANALYST: *J. Gama*

REPORT #: 920076 PA

OREQUEST CONSULTANTS LTD.

PROJECT: RAIN

DATE IN: AUG 17 1992

DATE OUT: AUG 18 1992

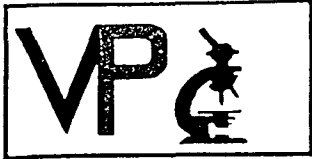
ATTENTION: GEORGE CAVEY

PAGE 1 OF 1

Sample Name	Ag	Al	As	*Au	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sn	Sr	U	W	Zn
	ppm	%	ppm	ppb	ppm	ppm	%	ppm	ppm	ppm	ppm	%	%	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
8216	0.5	2.27	<3	50	62	<3	>10	0.7	12	50	87	3.00	<0.01	1.26	771	8	0.04	37	0.26	23	<2	<2	282	<5	<3	136
8217	0.4	4.78	<3	30	185	<3	7.53	<0.1	19	79	97	4.82	<0.01	2.12	1656	5	0.11	53	0.28	<2	<2	<2	176	<5	<3	132
8218	0.3	3.30	<3	10	318	<3	4.17	<0.1	14	36	94	3.50	<0.01	1.25	1471	2	0.09	23	0.18	<2	<2	<2	121	<5	<3	75
8219	0.3	2.66	<3	30	253	<3	3.85	<0.1	15	48	87	4.27	<0.01	1.10	3907	1	0.02	30	0.25	<2	<2	<2	111	<5	<3	97
8220	2.3	1.35	<3	50	101	<3	9.04	<0.1	20	44	337	>10	<0.01	0.73	7626	22	0.11	135	0.31	82	<2	<2	189	<5	<3	391
8221	0.8	0.99	54	20	117	<3	5.08	<0.1	15	51	228	8.39	<0.01	0.21	8839	8	0.04	129	0.35	4	<2	<2	105	<5	<3	202
8222	0.4	3.21	<3	50	65	<3	1.83	<0.1	25	66	73	4.83	<0.01	0.96	589	9	0.19	84	0.07	<2	<2	<2	59	<5	<3	139
8223	0.3	5.54	<3	20	166	<3	1.62	<0.1	31	106	27	5.77	<0.01	1.34	448	4	0.29	61	0.04	<2	<2	<2	76	<5	<3	109
8224	0.2	3.46	<3	10	111	<3	0.10	<0.1	26	76	5	4.87	<0.01	1.43	268	3	0.11	63	0.04	<2	<2	<2	6	<5	<3	55
8225	0.2	2.24	<3	10	2	<3	2.61	<0.1	24	49	26	2.67	<0.01	1.03	391	<1	0.21	24	0.06	<2	<2	<2	47	<5	<3	37
8226	0.2	5.02	<3	10	226	<3	1.21	<0.1	34	95	43	5.75	<0.01	1.42	453	4	0.25	71	0.05	<2	<2	<2	40	<5	<3	138
Minimum Detection	0.1	0.01	3	5	1	3	0.01	0.1	1	1	1	0.01	0.01	0.01	1	1	0.01	1	0.01	2	2	2	1	5	3	1
Maximum Detection	50.0	10.00	2000	10000	1000	1000	10.00	1000.0	20000	1000	20000	10.00	10.00	10.00	20000	1000	10.00	20000	10.00	20000	2000	1000	10000	100	1000	20000

< - Less Than Minimum > - Greater Than Maximum is - Insufficient Sample ns - No Sample *Au Analysis Done By Fire Assay Concentration / AAS Finish.

APPENDIX IV
THIN SECTION REPORT



Vancouver Petrographics Ltd.

JAMES VINNELL, Manager
JOHN G. PAYNE, Ph.D. Geologist
CRAIG LEITCH, Ph.D. Geologist
JEFF HARRIS, Ph.D. Geologist
KEN E. NORTHCOTE, Ph.D. Geologist

P.O. BOX 39
8080 GLOVER ROAD,
FORT LANGLEY, B.C.
VOX 1J0
PHONE (604) 888-1323
FAX. (604) 888-3642

Report for: Christopher J. Wild,
Goldstream Mine,
P.O. Box 2970,
Revelstoke, B.C.
VOE 2S0

Job 58

September 9th, 1992

SAMPLES:

Two rock samples representing the Garnet Zone at the Rain property were submitted for petrographic examination. The samples, numbered RN 92-01 216.45-216.7 and 224.34-224.52 respectively, were prepared as polished thin sections.

SUMMARY:

The two samples are of similar macroscopic appearance, being fine-grained, laminated rocks of metasedimentary aspect.

Sample 216.45-216.7 is composed predominantly of quartz, with pale green (actinolitic?) amphibole as the principal accessory. Biotite, garnet, pyrrhotite and graphite are minor components. Feldspars are notably absent. The laminar fabric is defined by variations in grain size and relative abundance of the accessory constituents.

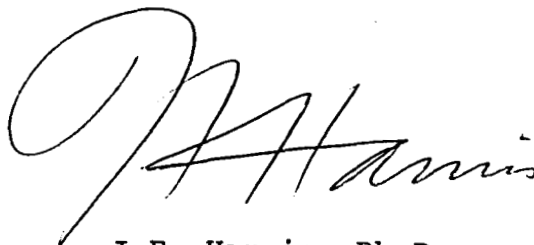
Sample 224.34-224.52 is composed essentially of quartz and carbonate with accessory pyrrhotite, biotite and minor garnet.

The precise origin of these rocks is debatable. They clearly show a high degree of metamorphic recrystallization, and may have originated from thinly bedded, impure, siliceous and calcareous siltstones.

The suggestion of an exhalative connection is not inconsistent with the observed petrography. The first sample somewhat resembles some variants of the feldspar-free, siliceous, sulfidic amphibolites from Echo Bay's Lupin property - rocks which most likely represent metamorphosed cherts. The second sample, with its high content of carbonate, could also be interpreted as a form of chemical sediment.

The substantial contents of sulfides (pyrrhotite, with traces of chalcopyrite, sphalerite and arsenopyrite), occurring as an intimately intergrown component within the quartz-amphibole and quartz-carbonate matrices, have the aspect of a primary (syngenetic) constituent - recrystallized along with the calc-silicate host.

Individual petrographic descriptions are attached.

A handwritten signature in cursive script, appearing to read 'J.F. Harris'.

J.F. Harris Ph.D.

(929-5867)

SAMPLE RN 92-01 216.45 - 216.7

QUARTZ-AMPHIBOLE LAMINITE

Estimated mode

Quartz	75
Amphibole	13
Biotite	2
Garnet	2
Carbonate	1
Epidote	trace
Pyrrhotite	5
Fe-Ti oxide	trace
Graphite	2

This is a metasedimentary rock consisting predominantly of a microgranular aggregate of quartz and accessory amphibole. A prominent, finely laminar fabric is defined by variations in grain size and/or proportions of accessory amphibole, and by the presence of abundant, close-spaced schlieren of biotite, pyrrhotite and graphite. The sectioned area also includes part of a non-laminated, quartz-rich lens.

The quartz matrix in the laminated portion typically has a grain size of 20 - 60 microns, and often shows more or less pronounced grain flattening. Occasional intercalations of slightly coarser grain size are less deformed.

The principal accessory is a pale green amphibole - possibly actinolite. This occurs intimately intergrown with the quartz in varying proportions, as foliaceous wisps and small fibrous/radiate clusters. It locally segregates as laminae in which it constitutes the predominant constituent.

The non-foliated quartz lens consists of a mosaic of grain size 50 - 200 microns, locally showing coarser, accretive recrystallization. Minor actinolite, commonly associated with carbonate, forms sporadic shreds and clumps within the quartz.

Biotite is a minor, intimately intergrown associate of the amphibole in some of the most strongly laminated zones.

Pale brown garnet forms scattered, individual grains and strings of lenticular to ovoid porphyroblasts, 0.1 - 0.5mm in size. Garnet also occurs as a single, more concentrated lamina at one end of the slide. This consists of subhedral grains of homogenous garnet, to 1.0mm in size, mantled by "dirty", garnetized matrix (packed with wisps of Fe oxides and graphite).

The principal opaque component is pyrrhotite, typically as fine-grained flecks of grain size 10 - 50 microns, locally coalescing as networks and small segregations to 200 microns. It sometimes concentrates as specks within garnet porphyroblasts. Chalcopyrite, of similar textural mode, is a rare associate. The

Sample RN 92-10 216.45 - 216.7 cont.

pyrrhotite is notably fresh.

Graphite forms intermittent thin films or contorted schlieren, 5 - 20 microns in thickness. Tiny lamellar grains of an anisotropic (ilmenitic?) oxide are another trace constituent, oriented parallel to the sinuous foliation.

SAMPLE RN 92-01 224.34 - 224.52
QUARTZ-CARBONATE-PYRRHOTITE LAMINITE

Estimated mode

Quartz	40
Carbonate	39
Amphibole	1
Biotite)	6
Phlogopite)	
Garnet	3
Epidote	trace
Pyrrhotite	10
Arsenopyrite	trace
Chalcopyrite	trace
Sphalerite	trace
Graphite	1

This is a rock of similar macroscopic aspect to the other sample. The sectioned portion consists of a finely laminated sequence flanking a more massive augen-like core of coarser, sulfide-poor material.

Thin section examination shows that it is made up of the same mineralogical components as the other sample, but in markedly different proportions.

Carbonate is a major constituent, present in approximately equal abundance to the quartz. Amphibole is very minor and, instead, the principal mafic constituent is biotite. Pyrrhotite is perceptibly more abundant than in the other sample, and the sulfide assemblage includes traces of arsenopyrite and sphalerite as well as (extremely sparse) chalcopyrite.

The laminated portion consists of intergrowths and segregated bands of mosaic-textured quartz and carbonate, having a general grain size range of 20 - 150 microns. The carbonate is partly reactive with dilute acid, and is probably a mixture of calcite and dolomite or ankerite. The dark schlieren consist of concentrations of fine-grained biotite and intimately intergrown pyrrhotite, with occasional graphitic partings. The biotite is partly a normal brown variety and partly pale olive-coloured phlogopite.

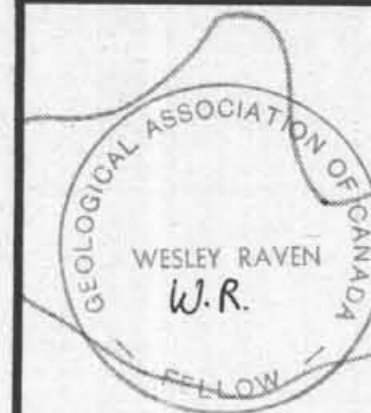
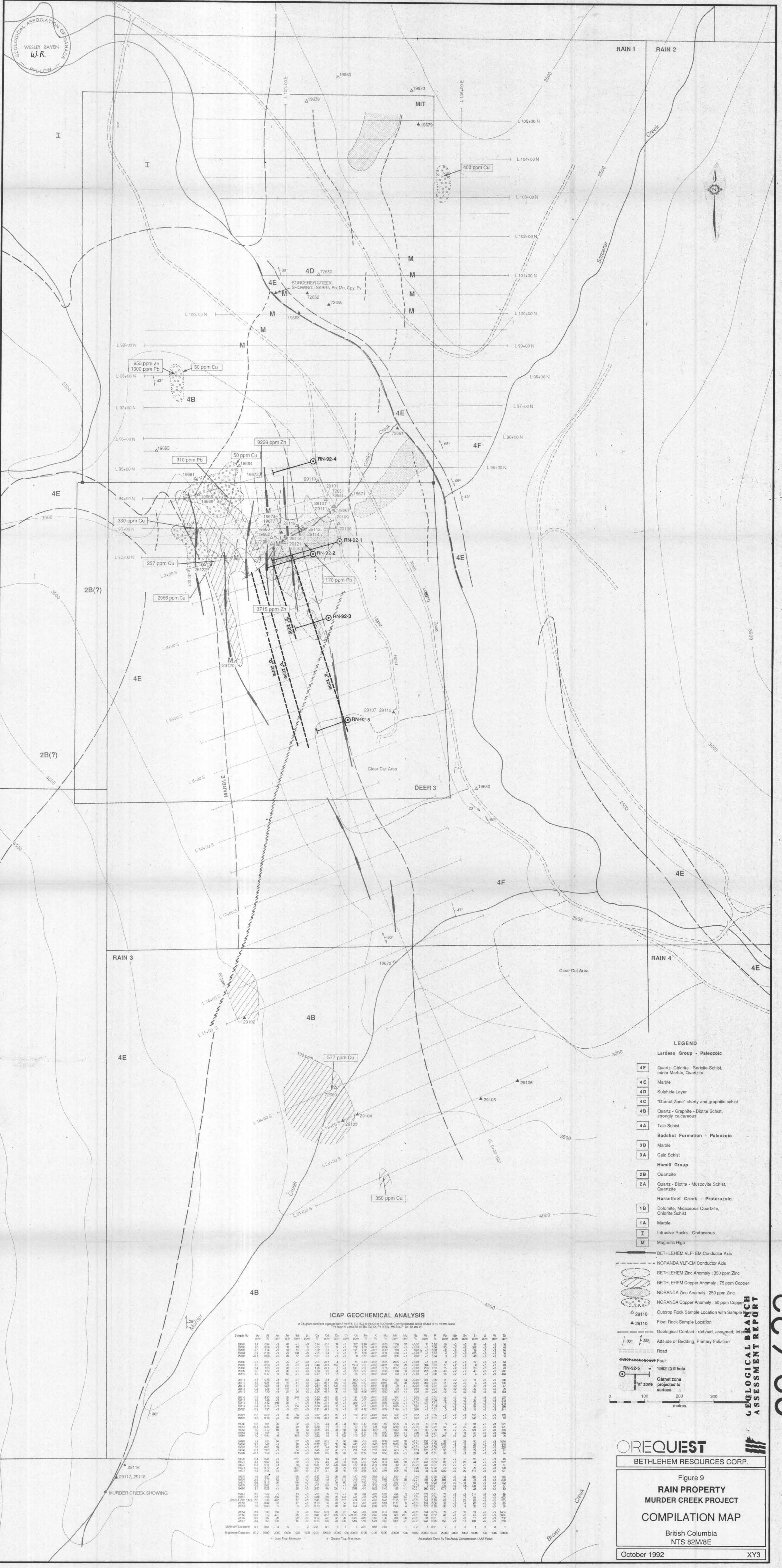
Garnet occurs in some of the biotite/sulfide schlieren as thin (0.5 - 1.0mm), semi-continuous bands. It is typically loaded with fine-grained inclusions of the other constituents. It is also seen, in more homogenous form, as rare clumps in the granular quartz/carbonate intergrowth making up the central augen.

Pyrrhotite in this rock has a grain size of 10 - 50 microns, and occurs intimately intergrown with the matrix. It frequently shows partial segregation as networks and semi-continuous schlieren, in which sulfides from patches up to 0.2mm (and rarely as much as 0.5mm) in size. The finer pyrrhotite is typically in the biotite-

Sample RN 92-10 224.34 - 224.52 cont.

garnet laminae, and the coarser segregations in carbonate or quartz zones.

Arsenopyrite is seen as scattered, small, porphyroblast-like grains within the more segregated pyrrhotite. Chalcopyrite is a trace constituent, sometimes associated with pyrrhotite and sometimes as tiny independent specks in the matrix. Sphalerite is present in similar abundance, typically associated with pyrrhotite rather than chalcopyrite.



LEGEND

- Lardeau Group - Paleozoic**
 - 4F Quartz - Chlorite - Sericite Schist, minor Marble, Quartzite
 - 4E Marble
 - 4D Sulphide Layer
 - 4C 'Garnet Zone' cherty and graphitic schist
 - 4B Quartz - Graphite - Biotite Schist, strongly calcareous
 - 4A Talc Schist
 - Bedford Formation - Paleozoic**
 - 3B Marble
 - 3A Calc Schist
 - Hamill Group**
 - 2B Quartzite
 - 2A Quartz - Biotite - Muscovite Schist, Quartzite
 - Horasthief Creek - Proterozoic**
 - 1B Dolomite, Micaceous Quartzite, Chlorite Schist
 - 1A Marble
 - I Intrusive Rocks - Cretaceous
 - M Magnetic High
- BETHELEM VLF-EM Conductor Axis
 --- NORANDA VLF-EM Conductor Axis
- 350 ppm Zinc
 ○ 75 ppm Copper
 ○ 250 ppm Zinc
 ○ 50 ppm Copper
- △ 29110 Outcrop Rock Sample Location with Sample ID
 ▲ 29110 Flat Rock Sample Location
- Geological Contact - defined, assumed, inferred
 --- Attitude of Bedding, Primary Foliation
 --- Fault
 ○ RN-92-5 1992 Drill hole
 --- Garnet zone projected to surface
- 0 100 200 300 metres

ICAP GEOCHEMICAL ANALYSIS

A 0.5 gram sample is digested with 5 ml of 1:2 HCl, then H₂O₂ to 100% H₂O. For 100% digestion and diluted to 10 ml with water. The results are reported as follows: Au, Ag, As, Sb, Bi, Cd, Co, Cr, Cu, Fe, Ga, In, Mn, Mo, Ni, Pb, Se, Sn, Zn, Hg, Tl, U, V, W, Y, Zr, Th, U, Th, Pa, and all trace elements.

Sample No.	Au ppm	Ag ppm	As ppm	Sb ppm	Bi ppm	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe ppm	Ga ppm	In ppm	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Se ppm	Sn ppm	Zn ppm	Hg ppm	Tl ppm	U ppm	Th ppm	Pa ppm	Y ppm	Zr ppm																
29101	14	0.06	0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.18	0.19	0.20	0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.30	0.31	0.32	0.33	0.34	0.35	0.36	0.37	0.38	0.39	0.40	0.41	0.42	0.43	0.44	0.45	0.46	0.47	0.48	0.49	0.50

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