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ASSESSMENT REPORT

on the

1992 DIAMOND DRILLING PROGRAM

Lemare 1 to 22 Claims

NANAIMO MINING DIVISION

NTS 92L/5W

Lat. 50°25'N Long 124°53'W

Owner and Operator:

Minnova Inc.
3-311 Water Street.
Vancouver, B.C.
V6B 1B8

GEOLOGICAL BRANCH
ASSESSMENT REPORT

Dave Heberlein
January, 1993

22,792

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1. INTRODUCTION

1.1 General:

This report documents the results of a five hole, 899m diamond drilling program carried out on the Lemare property between October 1st and October 18, 1992. The program was designed to investigate zones of potassic and phyllic alteration containing sporadic copper mineralization as a potential porphyry copper target.

1.2 Property Location and Access:

The Lemare Claim Group lies approximately 35 kilometres southwest of the Island Copper mine and 30 kilometres west of Port Alice on the northwest coast of Vancouver Island. The property is centred at latitude 50° 25′ north and longitude 127° 53′ west on NTS Map sheet 92L/5W (Fig. 1). Well maintained logging roads provide access from Port Alice, approximately 70 (road) kilometres away. Excellent recent logging access is available throughout the claim group.

1.3 Topography, Vegetation, and Climate:

The Lemare property lies in the Mahatta-Kashutl Mountain ranges on the northwest coast of Vancouver Island. Moderate to high relief characterizes the area. Elevations ranges from sea level to 750 metres in the southwestern portion of the property.

Vegetation consists of mature stands of Red Cedar and Douglas Fir. Undergrowth varies from moderate to heavy. Over 60% of the property has been logged during the past 12 years and is in various stages of reforestation. Very dense underbrush (mainly alder and wild rose) and second growth (cedar) occur in the logged areas.

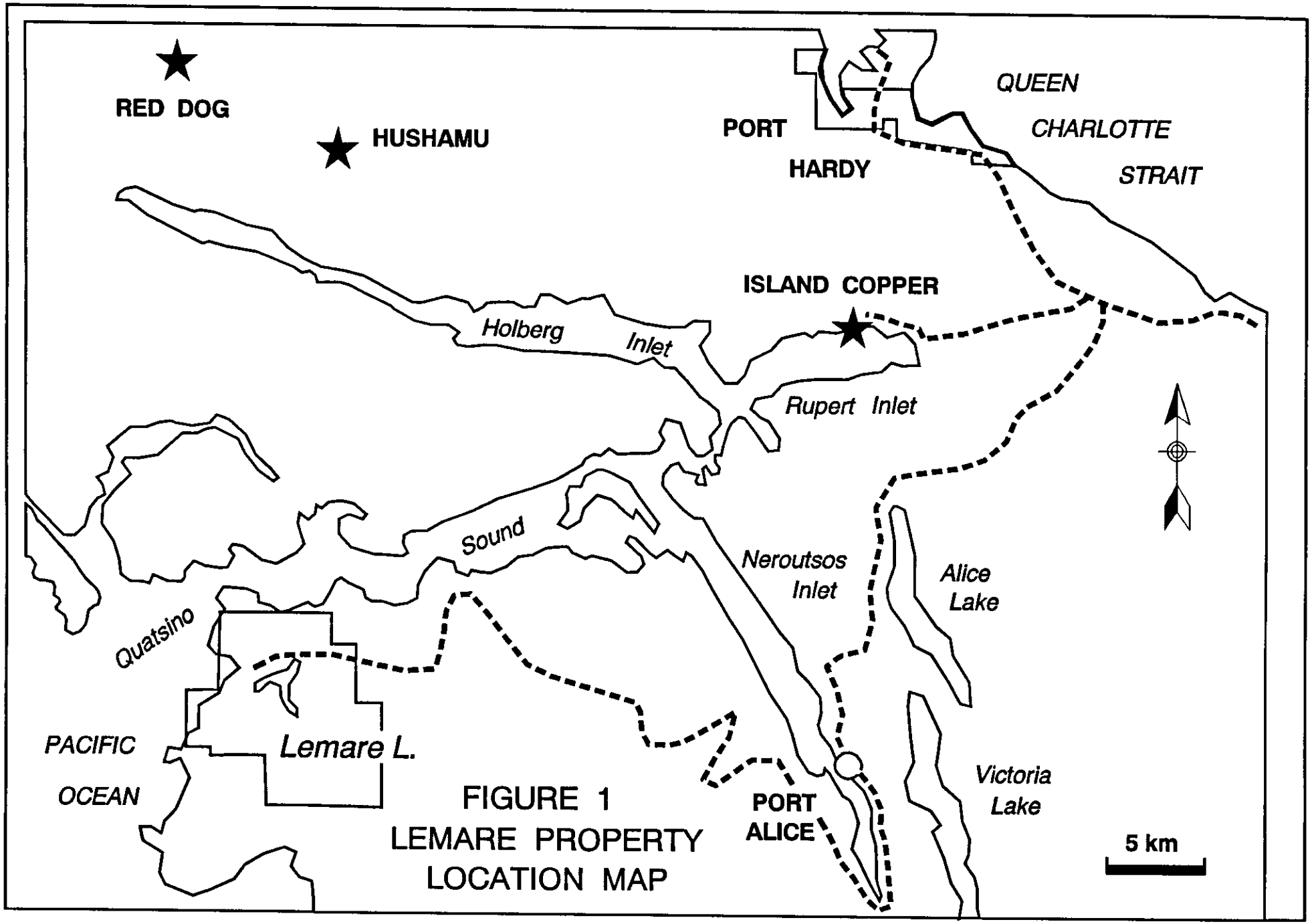


FIGURE 1
LEMARE PROPERTY
LOCATION MAP

Warm wet springs and autumns and cool wet winters are typical of this part of Vancouver Island. Summers are warm and moderately wet, with hot, dry periods common in late July and August. During these times forest fire hazards may be extreme. In October and November the area is exposed to fierce Pacific storms which often result in road wash outs and mud slides.

1.4 Property and Ownership:

The property contains 22 MGS mineral claims, totalling 387 units. Table 1. summarizes the claim information.

TABLE 1. LIST OF CLAIMS

Claim	Units	Record No	Record Date	Expiry Date
Lemare 1	18	231377	05-06-1991	05-06-1997
Lemare 2	18	231378	05-06-1991	05-06-1996
Lemare 3	18	231379	05-06-1991	05-06-1997
Lemare 4	18	231380	05-06-1991	05-06-1996
Lemare 5	18	300530	05-29-1991	05-29-1997
Lemare 6	18	300529	05-29-1991	05-29-1997
Lemare 7	18	300528	05-28-1991	05-28-1996
Lemare 8	18	300527	05-28-1991	05-28-1996
Lemare 9	18	300526	05-28-1991	05-28-1996
Lemare 10	18	300523	05-28-1991	05-28-1996
Lemare 11	18	300476	05-29-1991	05-29-1996
Lemare 12	18	300475	05-29-1991	05-29-1996
Lemare 13	18	300437	09-11-1991	09-11-1994
Lemare 14	20	306167	11-09-1991	11-09-1994
Lemare 15	20	306168	11-09-1991	11-19-1994
Lemare 16	20	306169	11-09-1991	11-09-1994
Lemare 17	18	306170	11-10-1991	11-10-1994
Lemare 18	20	307291	01-20-1992	01-20-1995
Lemare 19	20	307292	01-20-1992	01-20-1995
Lemare 20	8	307364	01-20-1991	01-20-1995
Lemare 21	18	307295	01-21-1992	01-21-1995
Lemare 22	9	307296	01-21-1992	01-21-1995

1.5 Exploration History:

Discovery of BHP Utah's Island Copper deposit stimulated exploration for Cu-Mo-Au porphyry deposits at the north end of the island in the late 1960's and early 1970's . Several companies carried out programs on the west coast. The earliest reference to staking activity in the Lemare Lake area is during 1970 when the Cam claims were recorded along the north shore of Lemare Lake. This area was later staked by British Newfoundland Exploration during 1980. A four day prospecting, mapping, and sampling program was filed for assessment (Bilquist, 1980). The claims were allowed to lapse. Keewatin Engineering restaked the area for Stow Resources Ltd. in May 1991. They carried out a program of reconnaissance geological mapping, soil, moss mat and rock sampling that summer and outlined two areas of potential porphyry style alteration and mineralization.

Minnova Inc. optioned the property in early 1992 and immediately flew and airborne magnetic, EM and gamma ray spectrometry survey using the Aerodat system. A field program consisting of systematic rock sampling and mapping was carried out during the summer of 1992 to further define the porphyry target. This was followed by a small drilling program that is the subject of this report.

2. GEOLOGY

2.1 Regional Geology:

Northwestern Vancouver Island lies within Wrangellia; a part of the Insular belt of British Columbia. Oldest rocks in the region are upper Triassic tholeiitic basalts of the Karmutsen Formation which form the basement to the overlying Jurassic and Cretaceous stratigraphy.

Middle Jurassic Bonanza Supergroup rocks outcrop over much of the western part of northern Vancouver Island. The basal part of the Bonanza Supergroup is a marine volcanic sequence consisting of amygdaloidal, pillowed basalts and andesite with interbedded tuffs and intraformational breccias. It grades upwards into a succession of andesitic to dacitic flows, tuffs, and breccias which are in turn overlain by a sub-aerial sequence of interbedded intraformational breccias and maroon sub-aerial basalt flows, dacites and rhyolites. Felsic rocks are abundant close to volcanic-intrusive centres and are often interbedded with volcaniclastic sediments.

The Bonanza volcanic sequence is unconformably overlain by or faulted against shallow marine clastic sedimentary rocks of the Cretaceous Long Arm Formation.

Intrusive rocks in the region are interpreted to be coeval with the lower Jurassic Bonanza volcanic rocks. Known as the Island Intrusives, they consist mostly of granodiorites and monzonites. These intrusions are associated with porphyry and skarn mineralization throughout the central and north parts of Vancouver Island.

The Lemare claims lie within a fault bounded structural block named the Cape Scott block by Muller (1977). Brittle faulting and broad open folding are the main styles of deformation. Muller (1977) and Jeletzky (1970) attribute this to the thick, brittle section of Karmutsen basalt that forms the basement to the Jurassic rocks.

2.2 Property Geology:

The Lemare property is underlain by upper Bonanza volcanic rocks. These consist of basic to felsic flows with local

pyroclastic and epiclastic sections. High level dikes and sills cut the volcanic pile. Basic rocks consist of massive, fine grained basalt flows and dykes. Coarser grained gabbro dykes also occur but are rare. Felsic rocks range in composition from latite through dacite to rhyolite. Latites are typified by euhedral pink K-feldspar phenocrysts in a fine grained dark green groundmass. Strong flow banding, glassy textures and vesicles are typical of the dacites and rhyolites. They are positive weathering and form pinkish bluffy exposures around Lemare lake. Pyroclastic and epiclastic rocks occur as thin units within the volcanic sequence. Welded tuffs, crystal and lithic tuffs are the most common pyroclastic units. Epiclastic rocks include volcanic wackes siltstones and heterolithic breccias. Sedimentary rocks make up only a small proportion of the stratigraphic sequence.

Extensive block faulting of the Bonanza volcanics and a lack of good marker units makes stratigraphic correlation and estimation of unit thickness very difficult. Structural attitudes are also difficult to determine. Reliable measurements are only attainable in the bedded sedimentary and pyroclastic rocks. The stratigraphic sequence at Lemare Lake generally strikes at about 140° and dips moderately (40° to 60°) southwest.

Cretaceous rocks are exposed at the western extremity of the property in the Gooding Cover area. The rocks belong the the Long Arm Formation which consists of fosssiliferous sandstones, siltstones and conglomerates. These rocks are faulted against the Bonanza volcanics by a large south east trending fault.

Two main areas of hydrothermal alteration occur in the claim area. Near Culleet Creek, at the West end of Lemare Lake, there is a large area of silicification with patchy potassic alteration. Veinlets and envelopes of potassium feldspar typify the potassic zones. Silicification is mostly pervasive and gives the rock a distinct apple green colour. Blood red jasper is abundant in the

silicified areas. It occurs as pods and in veinlets within rhyolite fragmentals. Disseminated chalcopyrite and stringer pyrite mineralization occur sporadically in the Culleet Creek area. Best examples crop out in two small borrow pits called the Boris and Gorby showings (Fig. 2). There is a rapid gradation from potassic and silicic alteration into propylitic alteration to the south and north of the Culleet Creek area.

Extensive silicification, advanced argillic, argillic and phyllic alteration occur at the South Gossan Zone, the second altered area on the property. Alteration occurs in a roughly circular area about 600m in diameter that is exposed on the slope on the southwest side of Lemare Lake. Alteration is controlled by steeply dipping east-west faults and is in a highly vesicular rhyolite flow unit. Disseminated pyrite (to 5%) fills vesicles in the rhyolite. Fine grained pyrite (to 50%) also occurs in strongly silicified envelopes around the east-west faults. These zones reach widths up to several metres. Alteration grades into weak propylitization in all directions.

3. DIAMOND DRILLING

3.1 Program Summary:

Five holes, totalling 899.0m were drilled on the Lemare property between October 1st. and October 18th., 1992. Drilling was performed by Can-Core Drilling Ltd. of Courteney, B.C., using a skid-mounted Longyear 28 diamond drill and BGBDM diameter rods. Drill core was logged by Cam DeLong at Minnova's camp site on the property (Fig. 2).

Drill core was routinely split in three metre sections (or less if lithology dictated). Half the core was shipped to Minen Labs in North Vancouver for geochemical analysis. Gold was determined by fire assay with an AA finish and Ag, As, Ba, Cu, Mo,

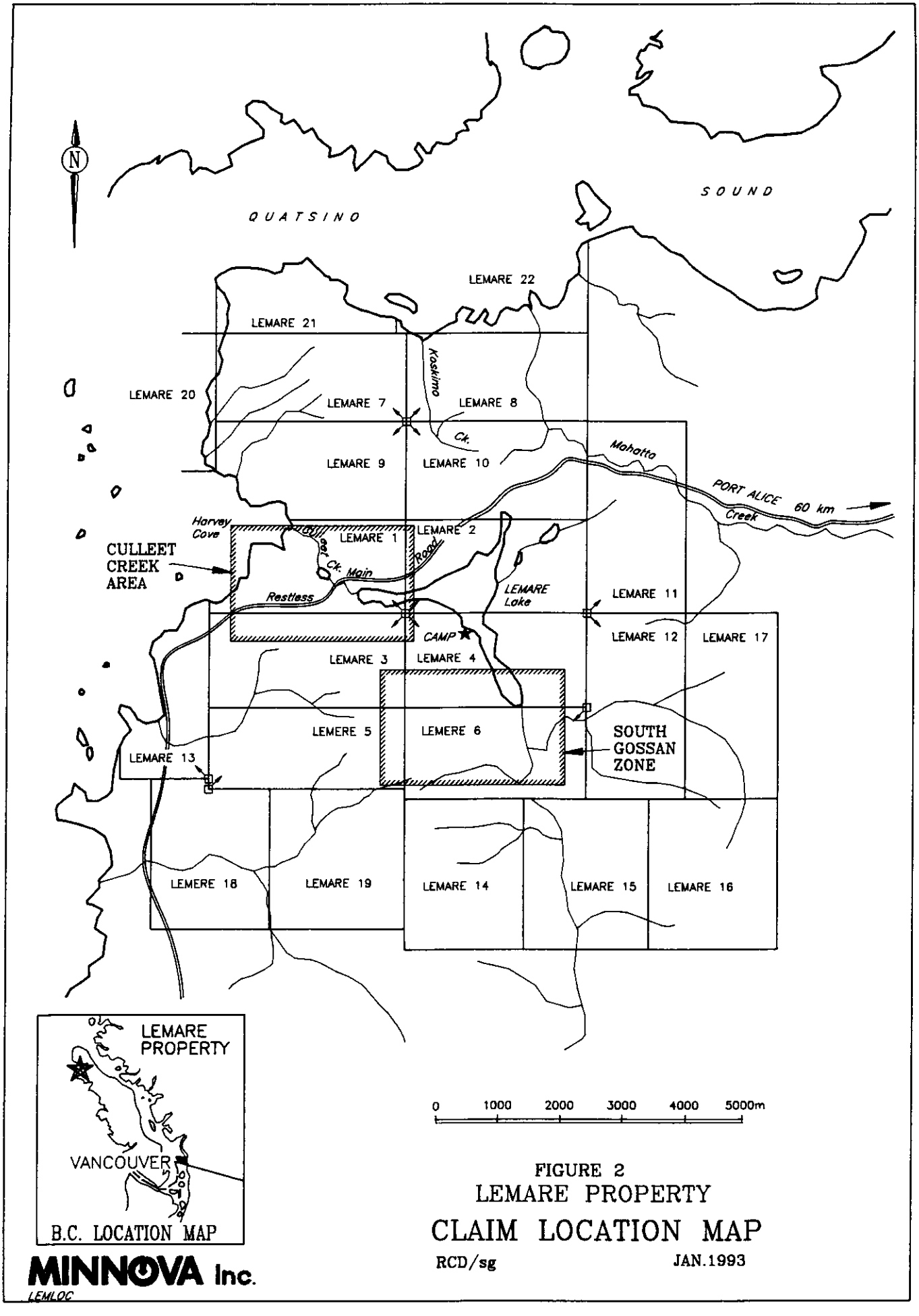


FIGURE 2

LEMARE PROPERTY

CLAIM LOCATION MAP

RCD/sg JAN.1993

MINNOVA Inc.

LEMLOC

Pb, Zn and Sb by ICP. Mercury analyses were done by AA using the cold vapour technique.

Figures 3 and 4 show the locations of the 1992 drill holes. Coordinates are summarized in Table 2. All coordinates are in UTM grid units. Drill logs and analytical results are presented in Appendix 1.

TABLE 2. DRILL HOLE INFORMATION

HOLE	EASTING	NORTHING	ELEV	AZM	DIP	DEPTH
92-676-01	577168	5585842	74	90°	70°	39.5m
92-676-1A	577232	5585855	74	90°	70°	137.0m
92-676-02	576673	5585930	63	90°	90°	260.3m
92-676-03	577593	5585417	29	90°	90°	161.0m
92-676-04	588090	5582930	228	270°	50°	114.0m
92-676-05	577150	5586070	35	270°	80°	188.7m

Note: Coordinates are in UTM units.

3.2 Results:

Culleet Creek:

Five holes (92-676-1, 1A, 2, 3 and 5) were drilled into the Culleet Creek area. The objective was to test the alteration zone at depth to determine if porphyry style mineralization is present within an economically feasible distance from surface.

Hole **92-676-1** collared on the east side of the small pond situated between Lemare Lake and Harvey Cove. It penetrated a sequence of rhyolite flows, breccias and basalt to a depth of 39.5m where it was abandoned in a fault. Extensive alteration occurs in the top 21.5m of the hole. It is characterized by strong, pervasive silicification and moderate to strong stockworking of jasper veinlets. Narrow envelopes of potassium feldspar occur in some of

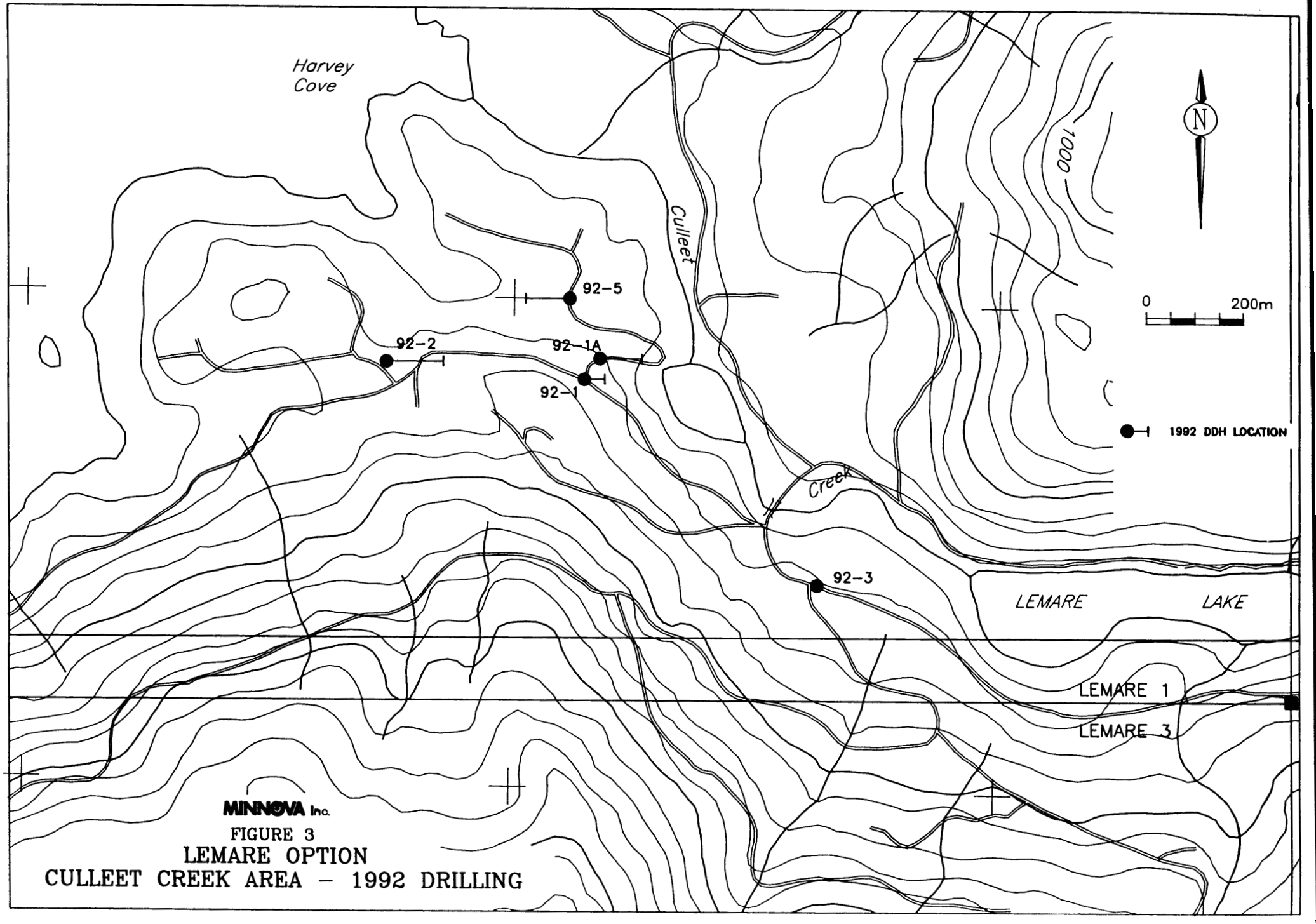
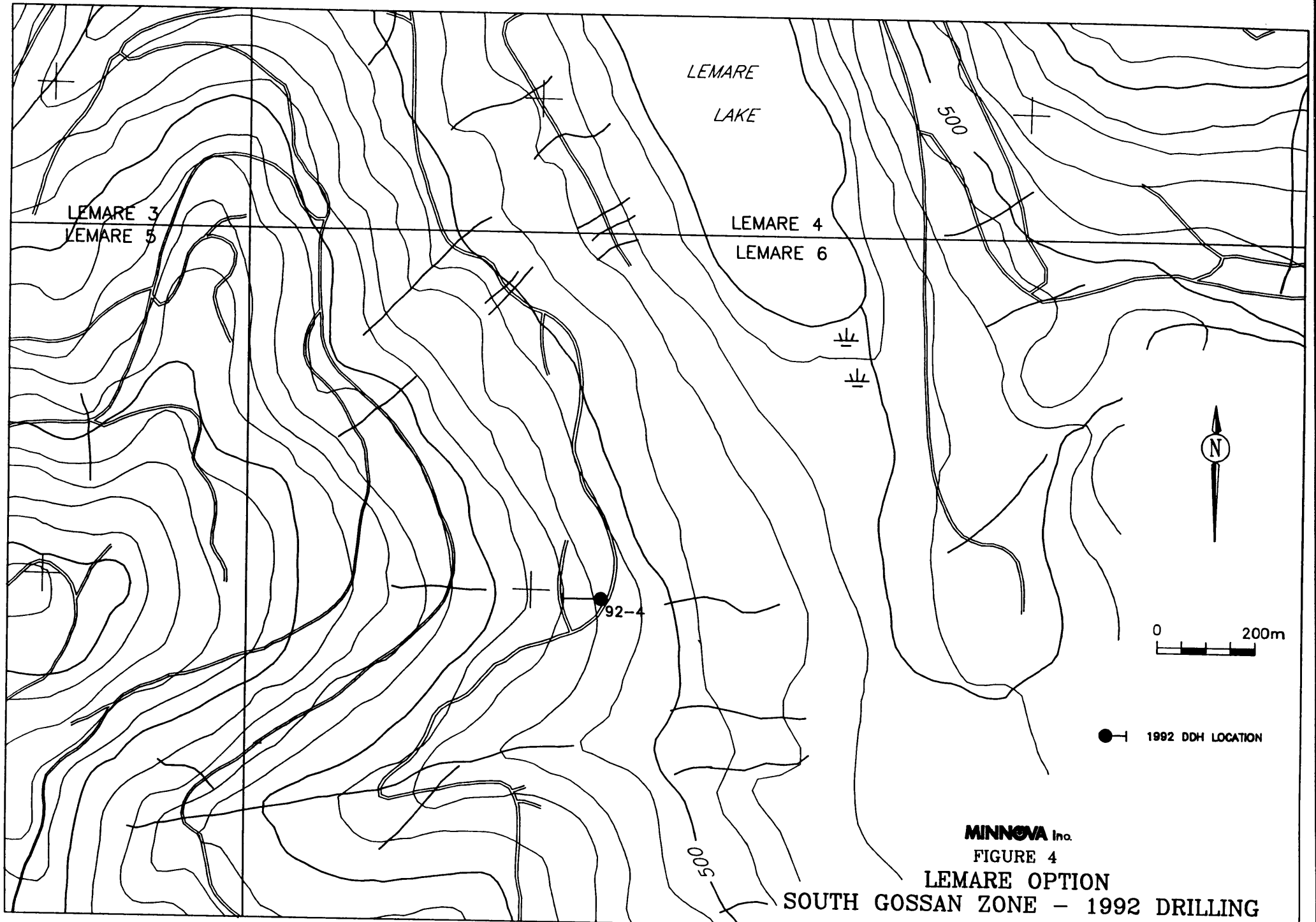


FIGURE 3
LEMARE OPTION
CULLEET CREEK AREA - 1992 DRILLING



MINNOVA Inc.

FIGURE 4

LEMARE OPTION

SOUTH GOSSAN ZONE – 1992 DRILLING

the stringers. Trace to 1% fine grained pyrite is also present in the veinlets.

Below 21.5m alteration becomes increasingly more propylitic, with chlorite and calcite the dominant alteration minerals. From 29.5 to 39.5, quartz, sericite and kaolinite are noted. This assemblage is similar to the advanced argillic alteration at the South Gossan Zone. No copper mineralization is present in the hole.

676-92-1A collared 50m east of 676-92-1 to test the same area of alteration. Rhyolite and rhyolite breccia are present to a depth of 98.6m where the hole cuts a gougy fault zone. Below the fault massive rhyolite is dominant to the end of the hole at 137.0m.

Moderate to strong pervasive silica-hematite alteration occurs to a depth of 30.9m. Below this level, kaolinite and sericite become dominant. Again, chlorite and calcite stringers, increase in abundance lower in the hole. Specular hematite is abundant between 56.6 and 78.2m.

Disseminated pyrite is present throughout the hole, but rarely exceeds 1%. Traces of disseminated and fracture controlled chalcopyrite are noted at 82.6m. Here copper values reach 190 ppm, the highest in the hole.

676-92-2 was drilled to test the depth extent of disseminated chalcopyrite mineralization at the Gorby Zone. The hole penetrated a sequence of potassic to chlorite altered flow banded rhyolites, rhyolite breccias and felsic tuffs with rare intervals of basalt. Consistent fracture controlled chalcopyrite mineralization (to 3%) occurs in the upper 26m of the hole. Quartz stockworking is well developed in the mineralized section. Wall rocks are pervasively silicified and potassium feldspar alteration envelopes occur. Up to 0.3% chalcopyrite is present throughout this interval and Cu grades range up to 959 ppm.

Lower in the hole chlorite-calcite-hematite alteration is prevalent. Traces of chalcopyrite occur to a depth of 252.1m, but copper grades do not exceed 124 ppm.

A different sequence of rocks is present in hole **92-676-3**. It collared in a potassium feldspar phyric dacite and entered a thick sequence of basalt flows at 13.9m. These continue to 125.0m. Below the basalts the hole continued in dacite to the end of the hole at 161.5m.

The entire hole is moderately propylitized. In the basalts, chlorite, epidote and calcite typify the alteration. Hematite, epidote and quartz is the dominant alteration assemblage in the dacites. Disseminated and stringer pyrite occur throughout the hole, but in amounts rarely greater than 1%. Traces of chalcopyrite are noted between 49.5 and 59.4m and 128 to 132m. Copper values are only weakly anomalous (to 288 ppm) over narrow intervals.

In hole **92-676-5** rhyolite and rhyolite pyroclastic rocks are the dominant lithologies. Basalt dykes are present at 30.8m and 96.8m. At both locations the dykes are occupying fault zones. Alteration varies in intensity in the rhyolites. Mostly, it consists of propylitization, i.e., chlorite stringers and pervasive hematite. Potassic alteration occurs between 50.2 and 89.0m. Here rhyolite breccia clasts are rimmed by secondary potassium feldspar. Argillic alteration becomes increasingly abundant in the lower parts of the hole. Between 96.0 and 161.4m strong kaolinite alteration is accompanied by up to 10% fracture controlled gypsum.

Mineralization is sparse in this hole although disseminated pyrite is noted throughout. Traces of chalcopyrite occur between 38.8 and 44.5m and 50.2 to 89.0. Copper grades are low and do not exceed 166 ppm.

South Gossan Zone:

Hole **92-676-4** was the only hole drilled into the South Gossan Zone. It penetrated a section dominated by highly vesicular rhyolite flows and fragmental rocks. Alteration is moderate and consists of pervasive sericitization with minor silica flooding. Chlorite is also abundant, particularly near to a basalt dyke at 91.0m.

Pyrite is abundant (up to 25%), occurring as vesicle fillings and disseminations. No other metallic minerals were seen. The lack of anomalous geochemical values suggests that pyrite is the only sulphide mineral present.

4. SUMMARY AND CONCLUSIONS

This diamond drilling program investigated areas of potassic alteration and spotty chalcopyrite mineralization in the Culleet Creek area and a large zone of phyllic and advanced argillic alteration at the South Gossan Zone. The program tested the hypothesis that the alteration is part of a blind, large copper porphyry system.

Results of the program demonstrate that porphyry style mineralization does not occur at either the South Gossan Zone or the Culleet Creek Zone. Potassic alteration and weak copper mineralization at the Gorby and Boris showings are isolated occurrences that die out with depth. Alteration also diminishes in intensity with increasing depth. The holes at Culleet Creek failed to intersect significant copper mineralization. The highest copper value found was 959 ppm and this was an isolated sample.

At the South Gossan Zone, drilling showed that the strong argillic alteration seen in outcrop, is not present below the surface. It is likely that the clays are supergene in origin, formed by reaction of the rhyolites with sulphuric acid liberated through weathering of pyrite. The occurrence of pyrite as vesicle fillings and the lack of fracture controlled pyrite is not consistent with a porphyry system. Where fracture controlled silicification and pyrite mineralization occurs it is invariably localized along east-west faults. The results do not justify any additional work on the property.

5. REFERENCES

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Eaton, G.P., 1982; The Basin and Range Province: origin and tectonic significance. A. Rev. Earth Plant. Sci. 10, 409-440.

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APPENDIX I
DRILL LOGS AND ANALYTICAL RESULTS

HOLE NUMBER: 92-676-1A

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: LEMARE	PLOTTING COORDS GRID: UTM	ALTERNATE COORDS GRID:	COLLAR DIP: -70° 0' 0"
PROJECT NUMBER: 676	NORTH: 5855.00N	NORTH: 0+ 0	LENGTH OF THE HOLE: 137.00m
CLAIM NUMBER: LEMARE 1	EAST: 7232.00E	EAST: 0+ 0	START DEPTH: 0.00m
LOCATION: CULLEET CREEK	ELEV: 64.00	ELEV: 64.00	FINAL DEPTH: 137.00m
	COLLAR GRID AZIMUTH: 90° 0' 0"	COLLAR ASTRONOMIC AZIMUTH: 90° 0' 0"	

DATE STARTED: September 28, 1992	COLLAR SURVEY: NO	PULSE EM SURVEY: NO	CONTRACTOR: CONCORE
DATE COMPLETED: October 3, 1992	MULTISHOT SURVEY: NO	PLUGGED: NO	CASING:
DATE LOGGED: October 3, 1992	RQD LOG: NO	HOLE SIZE: NQ	CORE STORAGE:

PURPOSE: TEST POTASSIC ALTERATION, SPOTTY Cp MINERALIZATIONIN CULLEET AREA. HOLE ABANDONED IN BAD GROUND

DIRECTIONAL DATA: AFTER USING SEVERAL BITS

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 9.80	«OB»					
9.80 TO 22.10	RHYOLITE TO RHYOLITE FLOW BX «RHYL BX»	Colour: pink grey to largely pale grey Grain Size: v.f.gr. to aphanitic clasts to 5 cm Massive to breciated matrix to breccia similar to of softer than fragments		Silica, clay (restricted to matrix) clays? grey to pale green, non-sticky illitic, sericitic «argillic-advanced argillic» non-staining - K depletion		
22.10 TO 30.90	RHYOLITE BX TO EPICLAS. SEDS «RHYL BX»	Colour: pink to red maroon Grain Size: clasts: v.f.gr., aphanitic, clast size 2 mm to 5 cm		«silica, hematite» -narrow zones of pale green sericite-illite @ 70 deg to c.a. -no K-spar, non-magnetic	-rare	-some pinking, but no stain, very little veining or fracturing; yet some pervasive alteration -> primary permeability
30.90 TO 56.60	«RHYL BX»	Colour: grey Grain Size: as above Massive, vague clast outlines ⌊37.2-37.7⌋ -pink to pink orange -sharper clast outlines, re-worked?, clasts rounded, in contact, sericite, clay (dickite?) in matrix ⌊37.7-39.3⌋ «basalt» -dark green, fine grained, massive hypidiomorphic -upper contact @ -grey to occasionally pink grey. f.gr. -clastic, vague to sharp clast outlines, occasional pinking of groundmass, clasts probably rhyolitic, show leaching and some porosity. Matrix is usually hard, grey, massive, pink grey to grey silica 39.3 -fracture filled veinlets of translucent soft, massive, material gypsum, dickite? (sample 52) ⌊47.5-56.6⌋ -increased density of fracture filled veinlets of above material from occasional to approx. 30 per	 30 70	Silica, minor grey clays, sericite advanced argillic -pinking due to Fe2O3, some hydro-thermal reworking? «w-m hem staining» -chlorite, in groundmass at contacts, calcite veinlets No envelopes to veinlets but evidence of strong fracturing. Silica, clays,	 -rare pods or matrix (sample 1A-37.7) -«tr py», rare disseminated pyrite Rare	 -hydrothermal fracturing Fe2O3 intro-duction, zone of weakness? -dike Gcold fracturing - stockwork to sheeted veinlets, no sulphides

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		metre (1-3 mm wide late - cross cut matrix and clasts alike)		sericite, massive rock, on the whole, softer «argillic-advance argillic» «m-hem» -some silica is amethystine -sample 56.2		
56.60 TO 78.20	«RHYL BX»	Colour: pink-grey to red-maroon to dark grey Grain Size: Similar to above, alteration appears to be changing, alteration can be texture destructive - mottled pink-grey rock - lokks k-spar, biotite but no stain	70 20	Maroon material, Fe203, more sericite clay, softer at least two periods of veining 1. silica, clay, hematite 2. soft translucent «ser-clay-hem» «gypsum strg.»	«.35 disseminated py» -some darker grey clasts are partially pyritized	
		┤62.1-65.0├ «basalt» -dark green, f.gr. -hydidiomorphic -upper contact @	40	┤62.1-65.0├ «chlor, minor calc» veining	-disseminated pyrite	Altered but much fresher than surrounding rock, propylitic
		-some veins contain sharp edged frags of wall rock, hydro fracturing		-up to 40% dark grey material, less silica, dark grey material streaks rock Fe203, f.gr. specular hematite, some sericite-clay shears	-.3% disseminated pyrite	-specular hematite-silica
		┤73.0-78.2├ «fault» -grey green, gouge to sand			┤74.4-78.2├ «1-35 py str.» -pyrite becomes more common or blebs, fracture fills	
78.20 TO 87.20	«RHYOLITE»	Colour: dark grey green Grain Size: u.f.gr. to aphanitic Massive to faintly banded @ Irregular small, dark green chloritic spots (devitrification), occasional K-spar (.5 mm) pheno @ 83.1 -.5 cm qtz vein @	40 45	Fractures have pale, pink-orange aphanitic K-spar envelopes, some fractures have jaspar pyrite, some jaspar, some nothing «Kf envelopes, jasper vnlts»	.5% fracture controlled py -rare small veinlets of qtz and cp 82.6 m «0.5% py, tr cp»	First observed Cp
		┤83.5-84.7├ «shear zone» -light apple green, u.f.gr. -foliation @	45	«chlorite, sericite» -light green chlorite		Propylitic
		┤84.7-87.2├ «microgabbro» -microgabbro to basalt -fine to medium grained -hypidiomorphic, interlocking, mafic phenocrysts, up to .5 mm, zones of small spherical calcite		«chl cal str» -chloritic (dark green calcite vnlts»	«.3% py» -1% py in rhyolitic inclusions	Propylitic

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
87.20 TO 92.70	«QTZ CLAY» (advance argillic altered rock)	Colour: pale grey Grain Size: fine to aphanitic Massive, minor leached porosity, rare vague silica veining		«advanced argillic»	«.5% disseminated py -fine cubes	Advanced argillic - argillic silica
92.70 TO 96.70	«FAULT» missing core	Colour: grey Grain Size: blocky to gouge Fractured				
96.70 TO 98.60	«RHYOLITE»	Colour: grey Grain Size: aphanitic Massive		Silica	«.3% dissem py»	
98.60 TO 100.00	«BASALT»	Colour: dark green Grain Size: f.gr. Hydidiomorphic to microporphyritic, dk green mafics		«chlorite, calcite»	«.3% dissem py»	
100.00 TO 113.40	«RHYOLITE»	Colour: pale grey Grain Size: f.gr. to aphanitic Massive to vaguely veined to showing leached porosity ┤108-109.8├ «fault» ┤112.8-113.4├ «fault»		Silica, minor clay, minor sericite «advanced argillic» -blocky, broken, missing core -" " " " " "	1% blebby to disseminated pyrite «1% blebby py»	
113.40 TO 137.00	«RHYOLITE»	Colour: grey-green Grain Size: aphanitic to sparsely porphyritic Massive to faintly banded 124.5-132.5 -core is fractured, broken and rubbly in places, some caving, no gouge, but poor recovery in places ┤124.5-126.0├ «basalt» -broken 132.4-136.5 -return to better quality core	20	┤113.4-117.8├ «albite» -non staining, some fractures have ┤117.0-137├ pale aphanitic envelopes -faintly staining, some envelopes to fractures, more strongly «weakly potassic», occasional «qtz-carbonate str» veinlet cross-cutting fractures with stained envelopes	«.5% dissem. py» «.5% py» both disseminate and fracture controlled	Weakly potassic Zones of weakness, fracturing and small scale faulting

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		134.7-135.0 -basalt, broken				
	E.O.H.					

Sample	From (m)	To (m)	Length (m)	GEOCHEMICAL Ag ppm	As ppm	Ba ppm	Cu ppm	Fe %	Mo ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb	S %	COMMENTS
58610	32.70	35.60	2.90	0.3	16	37	5	0.12	-999	3	1	-999	1	0.01	
58611	35.60	39.70	4.10	0.1	1	458	15	2.62	-999	5	1	-999	1	0.11	
58612	39.70	43.50	3.80	0.8	14	1610	5	0.16	-999	1	1	-999	1	0.54	
58613	43.50	47.60	4.10	0.7	11	355	5	0.14	-999	1	1	-999	1	0.25	
58614	47.60	52.00	4.40	0.9	7	23	5	0.08	-999	3	1	-999	2	1.6	
58615	52.00	56.20	4.20	0.8	6	63	4	0.1	-999	2	1	-999	3	2.3	
58616	56.20	60.50	4.30	0.5	1	44	5	2.18	-999	1	1	-999	2	3.67	
58617	60.50	64.60	4.10	0.1	1	113	21	3.04	-999	7	1	-999	1	3.01	
58618	64.60	68.70	4.10	0.5	3	75	5	0.85	-999	4	1	-999	2	1.82	
58619	68.70	73.20	4.50	0.5	1	62	5	1.84	-999	1	1	-999	2	2.98	
58620	73.20	77.10	3.90	0.3	1	170	41	4.63	-999	9	1	-999	1	4.05	
58633	77.10	82.10	5.00	0.1	1	272	131	5.01	-999	6	1	-999	5	2.66	
58634	82.10	85.60	3.50	0.1	1	144	190	4.06	-999	8	1	-999	7	1.21	
58635	85.60	91.90	6.30	0.1	1	67	63	3.66	-999	9	1	-999	3	1.41	
58636	91.90	98.60	6.70	0.1	39	119	33	2.01	-999	8	1	-999	2	1.6	
58637	98.60	110.50	11.90	0.1	1	141	25	2.98	-999	6	1	-999	1	0.69	
58638	110.50	114.40	3.90	0.6	17	878	65	2.29	-999	7	1	-999	2	2.53	
58639	114.40	118.80	4.40	0.1	1	499	31	3.16	-999	6	1	-999	1	1.56	
58640	118.80	122.90	4.10	0.4	6	185	13	2.96	-999	8	1	-999	4	2.87	
58641	122.90	126.50	3.60	0.1	1	75	33	4.61	-999	6	1	-999	8	2.79	
58642	126.50	130.70	4.20	0.1	1	578	18	3.8	-999	7	1	-999	1	1.63	
58643	130.70	134.00	3.30	0.1	1	73	16	4.94	-999	2	1	-999	1	0.94	
58644	134.00	137.00	3.00	0.1	1	196	50	5.35	-999	1	1	-999	2	0.63	

HOLE NUMBER: 92-676-1

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: LEMARE
PROJECT NUMBER: 676
CLAIM NUMBER: LEMARE 1
LOCATION: CULLEET CREEK AREA

PLOTTING COORDS GRID: UTM
NORTH: 5842.00N
EAST: 7168.00E
ELEV: 74.00

ALTERNATE COORDS GRID: SAMPLING
NORTH: 0+ 0N
EAST: 0+ 0E
ELEV: 74.00

COLLAR DIP: -70° 0' 0"
LENGTH OF THE HOLE: 39.50m
START DEPTH: 0.00m
FINAL DEPTH: 39.50m

COLLAR GRID AZIMUTH: 90° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 90° 0' 0"

DATE STARTED: September 28, 1992
DATE COMPLETED: September 29, 1992
DATE LOGGED: September 29, 1992

COLLAR SURVEY: NO
MULTISHOT SURVEY: NO
RQD LOG: NO

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: BGBGM

CONTRACTOR: CANCORE DRILLING LTD.
CASING: REMOVED
CORE STORAGE: AT BORIS PIT

PURPOSE: TO TEST POTASSIC ALTERATION, SPOTTY CP MINERALIZAT-ION IN CULLEET CREEK AREA

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 4.90						
4.90 TO 21.50	«RHYOLITE»	Colour: red to jasparitic to maroon Grain Size: aphanitic to very f.gr. Massive to fractured zones of small (less than .5 mm) K-spar phenos -faint banding @ -fractures @ -fractures @ -smallscale stockworking breccia	 30 70 48	-qtz veinlets (fracture fill) -«qtz-hem (Jasper)» fracture -«K-spar envelopes» (stain) to some fractures -qtz veinlets cross cut jasper veinlets 16-23 -jasper veinlets may have thin streaky bands of sulphide in core, envelopes are, from 1-2 m jasper veinlets out 1-2 mm pale, pink grey, aphanitic, hard, non-staining-ab, qtz -1-5 m aphanitic pink orange K-spar stain sample at 20 m	-rare, very fine grained pyrite «tr py» -.1% py, fracture controlled, core to jaspar veinlets	Good fracturing silica veining introduced K-spar, very poor in sulphides
21.50 TO 23.00	«MIXED»	Colour: red, maroon, to dk. green Grain Size: Basaltic fragments with indistinct contacts		21.5 increase in chlorite from almost none to 10% in matrix of basaltic fragments, slickensides to some core ends	«increased in disseminated «py to .3%»	Approaching fault
23.00 TO 29.50	«BASALT»	Colour: medium to dark green Grain Size: f.gr. Massive to fractured		Propylitic, 10% groundmass chlorite -«Chl-Cal» -55 groundmass to fracture filling calcite	-«.3% disseminated py»	Dike or flow?
29.50 TO 37.30	«RHYOLITE»	Colour: pink to grey Grain Size: v.f.gr. to aphanitic Massive to gouge		«silica», minor kaolinite, sericite «advanced argillic-argillic» remnant clastic flow breccia texture, mixed with grey gouge	rare	Advanced argillic to silicification focussed along fault

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
37.30 TO 39.50	«FAULT» «HOLE LOST»	Colour: grey Grain Size: gouge to mixed sand Gouge		-fault	rare	Hole lost in fault

Sample	From (m)	To (m)	Length (m)	GEOCHEMICAL Ag ppm	As ppm	Ba ppm	Cu ppm	Fe %	Mo ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb	S %		COMMENTS
	0.00	0.00	0.00													

HOLE NUMBER: 92-676-2

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: LEMARE
PROJECT NUMBER: 677
CLAIM NUMBER:
LOCATION: CULLEET CK

PLOTTING COORDS GRID: UTM
NORTH: 5930.00N
EAST: 6673.00E
ELEV: 63.00

ALTERNATE COORDS GRID:
NORTH: 0+ 0N
EAST: 0+ 0E
ELEV: 63.00

COLLAR DIP: -50° 0' 0"
LENGTH OF THE HOLE: 260.30m
START DEPTH: 0.00m
FINAL DEPTH: 260.30m

COLLAR GRID AZIMUTH: 90° 0' 0"
COLLAR ASTRONOMIC AZIMUTH: 90° 0' 0"

DATE STARTED: June 10, 1992
DATE COMPLETED: October 12, 1992
DATE LOGGED: October 12, 1992

COLLAR SURVEY: NO
MULTISHOT SURVEY: NO
RQD LOG: NO

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: BGBDM

CONTRACTOR: CANCOR DRILLING LTD.
CASING: REMOVED
CORE STORAGE: AT BORIS PIT

PURPOSE:

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
0.00	-	-50° 0'	ACID	OK	
107.00	-	-51° 0'	ACID	OK	
213.00	-	-45° 0'	ACID	OK	

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments

MINNOVA INC.
DRILL HOLE RECORD

DATE: 2-February-1993

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 9.50	«OB»					
9.50 TO 26.20	«RHYOLITE»	Colour: green to apple green with pink grn patches Grain Size: v.f.gr. to aphanitic Massive to banded, bands defined by jasperitic, @ 55-70 deg to c.a., or occasionally chloritic laminae some ovoid qtz filled (amygdules?), 1-3 mm long axis parallel to subparallel to banding where preseent. Similar ovoid, amydaloidal structures are observed stretching into flow banding defined by qtz on surface and in core		┤9.5-16├ -some calcite veining, hydro-fracturing jigsaw qtz veining, strong stain primary and secondary k-spar greenish colours - «5% chlorite 1% jasper 10% k-spar»	9.5-26.2 «.5% py, .3% cp»	
26.20 TO 46.10	«RHYOL +/- BASALTIC DIKES +/- BROKEN ZONES GOUGE»	Colour: green to dark green Grain Size: gouge to aphanitic to f.gr.				
		┤26.2-27.2├ -massive, dark green rhyolite		«10% chlorite, .5% jasper patches»	«.5% py»	
		┤27.2-31.1├ -broken and fractured, heavily veined (5-7%) basaltic			«.8% py»	
		31.1-31.8 -massive rhyolite				
		31.8-39.4 -crushed, broken, veined basaltic, 10% gouge		┤31.8-39.4├ «25% chlorite»	┤31.8-39.4├ «1% py, tr cp»	
		39.4-39.8 -50% gouge		┤39.4-39.8├ «hematitic stain»	┤39.4-46.1├ «.5% py, tr cp»	
		┤39.8-42.3├ -more competent material with fracture foliation -upper contact sharp @	30	«occasional pinking (Fe2O3)»		
		42.3-42.5 -gouge				
		42.5-44.5 -dark green to pink -fractured -@ 35-40 deg to c.a.		┤42.3-44.5├ «15% Fe2O3, 10% chlorite»		
		44.5-46.1		┤44.5-46.1├		

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		-20% gouge -pink to grey -lower contact sharp @	35	«30% Fe2O3, 10% chlorite»		
46.10 TO 165.90	«RHYOL TO DACITE OCCASIONAL LENSES OF FLOW BX»	Colour: dark green to maroon to occasionally red (jasperitic patches) Grain Size: v.f.gr. to aphanitic Generally massive, sometimes, faintly banded, sometimes showing vesiculation, sometimes sparsely porphyritic		«Hematite-chlorite», occasionally potassic. Some hematite may be primary or diagenetic (thermal oxidation)	Usually less than «.5% py, occasional tr. cp.»	«Very thick series of rhyolitic flows»
		┤46.1-58├ «flow breccia, irregular chlorite filled structures (amygdules)»sometimes with jasper haloes: 1-3 mm		«1% jasper patches, 10% chlorite» some qtz veins have jasper +/- py selvages	-.5% py	Zones of up to 10% amygdules of irregular shape (flow deformed, gas spaces, frothy flow)
		┤58-67.9├ «amygdules can form 40%, occasionally spheroid, often ovoid, but majority are elongate, irregular cuspate to shard-like» -70% chlorite filled -30% qtz +/- jasper +/- chl +/- py (rarely cp) «long axes of amygdules are parallel locally 58.3 m @ 61.9 m @ 64 m @»	 30 70 5			
		-less than 1% qtz veining 0-20%				
		┤67.9-77.5├ -slight increase in qtz veining to approx 1% -@ 72.8 vein 8 cm thick with k-spar envelopes		67.9-77.5 «10% k-spar, 10% chlorite, 5% silica-hematite» (mostly jasper haloes around amygdules)	«.5% py, tr cp often as aggregates in amygdules»	
		-long axis of amygdules @ 15-25 deg to c.a. @ «75m long axis of amygdules» @	30			
		77.5-88 -loss of amygdules becomes massive to sparsely porphyritic with small dark green lath-like to equant .5-1 mm phenocrysts				
		88.0-88.4 -chlorite healed pink (silica+hematite) breccia zone				

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		88.4-99.4 -pink-green mottled -massive, non-phyric, faintly staining (probable primary k-spar) -1% qtz-calcite veins 99.4-99.7 -increase in fracture density and irregularity; vein material pale green, soft, massive, translucent-illite-sericite ┤99.7-119.7├ -veins becomes qtz-calcite again with some soft green material, some at 0 deg to c.a., «sparsely porphyritic, 0-3% dark, .5-1 mm, mafic 1% similarly sized plagioclase laths, rare k-spar»		┤88.4-119.7├ «minor hematite, minor chlorite»	«.5% py, tr cp»	
		119.7-121 -rubbled and broken zone				
		┤121-130├ «faintly banded in places @ 30-40 deg to c.a.; up to 5% mafic phenocrysts», long axis often parallel to banding where present. Quartz-calcite-chlorite veining less than 1%, moderate stain		«minor chlorite, minor hematite»	«.5% py»	
		130-140.5 -pink-green to grey-green with maroon caste -up to 7% microphenocrysts, 4% mafic (hornblende), 2% plagioclase, 1% k-spar, groundmass approx. 50% k-spar, 50% chlorite		┤130-140.5├ «chlorite fractures sometimes have Fe203 envelopes, some of the k-spar stain in groundmass may be secondary»	«.5% py»	
		┤140.5-156.9├ -similar protolith minor chloritic gouge zones, faintly banded in places @ 20-30 deg to c.a.		«up to 20% chlorite»	«.5-1.0% py»	
		156.9-161.8 -similar protolith		┤156.9-161.8├ «jasperitic envelopes to some fracture some phenocrysts show pale green-yellow alteration-sericite»	«1.5% py, 15% chlorite»	
		161.8-165.9 -faintly banded faintly mottled with maroon (Fe203)		┤161.8-165.9├ «maroon to red (jasperitic) envelopes» on some fractures -some «jasper-chlorite envelopes» -qtz-calcite crosscuts jasper and	«.3% py, tr cp»	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
				jasper-qtz		
165.90 TO 192.00	«BEDDED FELSIC TUFF, PYROCLASTIC FLOW, EPICLASTIC SED»	Colour: maroon to green Grain Size: aphanitic to ash to lapilli lenses 165.9-168.3 -angular breccia fragments u to 5 cm across they can be green staining or green non-staining or maroon; groundmass ranges from siliceous to chloritic; fragments are 90-100% felsic volcanics 168.3-171.7 -gradually becomes more massive, hematitic -3% qtz-calcite-hard green material (ser+qtz)? veins ┤171.7-172├ -several thick veins @ of green mineral + qtz calcite fragments remain angular, some sorting, ash beds, «bedding @ 65»	 25 65	┤165.9-168.3├ «qtz veins +/- hematitic envelopes» -crosscut by qtz-calcite +/- hard pale green material ┤165.9-192├ «varying strengths of stain but most or all k-spar appears primary»		Maroon groundmass may have green frags but frags generally same colour as groundmass ┤165.9-192├ «sequence of pyroclastic flows, water reworked, bedded tuffs, medium to fine grained epiclastic sediments». Beds ar usually less than 1 m thick, but can show flattened textures, incipient welding. Some beds have accidental lithic fragments up to 3 cm across but for the most part are sorted. Some very fine grained interbeds show silty beds with green-maroon alterations
192.00 TO 198.00	«CONTACT ZONE»	Colour: maroon to green to dark greey Grain Size: v.f.gr. to f.gr. 192-194 -spheroidal (weathering?) basalt bals in paler green felsic material 194-198 -broken and veined basalt to trachyandesitic material occasionally with small K-spar phenocrysts		«chlorite»	«py .5%»	«possible regolith or paleosol» -most material may be from diking
198.00 TO 203.00	«BASALT»	Colour: dark green to maroon Grain Size: Highly veined calcite, chlorite sheared, broken, sometimes healed by calcite, hematite, chlorite		«15% chlorite, 10% Fe2O3»	«py 1.5%, cp .1%»	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
203.00 TO 213.00	«TRACHYANDE DITE»	Colour: dark green Grain Size: -less veined, massive to«porphyritic» 2% chloritic mafics, .5 mm, «3% K-spar to 1.5 mm»		⟨213-216⟩ «10% chlorite»	⟨213-227.5⟩ «py .5%, tr cp»	
213.00 TO 252.50	RHYOLITE TO DACITE RHYOLITIC TO DACITIC FLOW BX	Colour: red to maroon to red-grey Grain Size: v.f.gr. to aphanitic to flow brecciated Faintly banded in places 213-216 brick red, strongly hematized clastic rock, v.f.gr. to aphanitic clasts to 1 cm, angular		-10% chlorite	-py .5%, tr cp	
		-upper contact sharp @	30			
		216-218.4 -broken, rubbled, 20% green chloritic gouge				
		218.4-220.7 -maroon, f. to v.f.gr., hematized, vaguely fragmental		-20% hematite		
		220.7-226 -broken, rubbled core, 10% gouge, maroon to chloritic fractures are at low angle 10-15 deg				
		226-227.5 -faintly fragmental				
		⟨227.5-233⟩ -thin calcite veinlets, irregular beds of brick red to jasperitic material, sometimes making fragmental texture more distinct (maroon fragments in red groundmass rather than maroon in maroon) bedding @ 0-40 deg		«30% hematite»	«3% py, tr cp»	
		⟨233-235.5⟩ -increase in stain primary =/- secondary k-spar		«minor k-spar»	«.5% py»	
		235.5-239 -broken and rubbled				
		239-242.4 -basaltic to andesitic dike, v.f. to f.gr., ophitic texture 5% hb phenocrysts .5-1 mm sparsely amygdaloidal, up to 3 mm chlorite-calcite filled -15% groundmass chlorite		⟨239-242.4⟩ «15% calcite»		

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		⟨242.4-250.3⟩ «chl-hematite altered rhyolitic breccia»		⟨242.4-244.7⟩ «hem 10%, chl 10%»		
				⟨244.7-245.8⟩ «pink f.gr. alt zone» -with sharp but faulted contacts with surrounding maroon-green rhyolite breccias		
				-lower contact @ 55 deg		
				244.9 -5 cm vaguely banded qtz-cal-chlorite vein (chlorite core)		
		250.3-252.1 -f.gr. basaltic dike, sparsely amydaloidal fracture fill, vesicles fill qtz calcite, quartz is fine to medium grained, euhedral, rarely with intergrown cp		⟨250.3-251.1⟩ «.1% cp»		
		⟨252.1-252.5⟩ «chloritic, crushed and gouge zone» «lower contact @ 20»	20			
252.50 TO 260.30	«BRECCIA»	Colour: maroon to red Grain Size: clasts to 6 cm Heterolithic breccia - matrix supported in upper regions to clast contact to interlocking (pressure solution). «Most clasts are rhyolitic-ignimbritic, fiamme, plag porphyritic, flow banded, dark maroon, massive occasionally basaltic, often jasperitic matrix»		«clasts with quartz veinlets truncated at clast boundary»	«wispy py in matrix 1%»	

Sample	From (m)	To (m)	Length (m)	GEOCHEMICAL Ag ppm	As ppm	Ba ppm	Cu ppm	Fe %	Mo ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb	S %	COMMENTS
58667	9.10	11.10	2.00	0.1	1	145	169	2.92	-999	47	1	-999	3	0.19	
58668	11.10	13.10	2.00	0.1	1	138	684	3.02	-999	9	1	-999	4	0.18	
58669	13.10	15.10	2.00	0.1	1	129	719	2.41	-999	15	1	-999	3	0.17	
58670	17.00	17.10	0.10	0.1	1	129	301	2.7	-999	29	2	-999	2	0.18	
58672	17.00	19.00	2.00	0.1	1	102	330	2.97	-999	17	1	-999	1	0.16	
58673	19.00	21.00	2.00	0.1	10	108	746	2.37	-999	18	2	-999	8	0.21	
58674	21.00	23.00	2.00	0.1	5	131	863	1.98	-999	8	2	-999	3	0.2	
58675	23.00	25.00	2.00	0.1	8	98	959	1.63	-999	13	2	-999	2	0.18	
58676	25.00	27.00	2.00	0.1	1	75	207	12.2	-999	27	3	-999	2	1.76	
58677	27.00	29.00	2.00	0.1	1	84	169	13.15	-999	24	4	-999	1	1.13	
58678	29.00	31.00	2.00	0.1	1	233	264	12.38	-999	39	3	-999	7	1.4	
58679	31.00	33.00	2.00	0.1	1	181	360	11.41	-999	62	5	-999	1	0.89	
58680	33.00	35.00	2.00	0.1	1	532	406	11.33	-999	24	5	-999	2	0.42	
58681	35.00	37.00	2.00	0.1	1	300	104	7.96	-999	94	5	-999	1	0.27	
58682	37.00	39.00	2.00	0.1	1	83	169	13.67	-999	26	4	-999	2	0.52	
58683	39.00	41.00	2.00	0.1	1	182	73	7.61	-999	22	4	-999	2	0.2	
58684	41.00	43.00	2.00	0.1	1	152	44	5.22	-999	16	3	-999	2	0.18	
58685	43.00	47.60	4.60	0.1	1	182	31	4.23	-999	14	3	-999	1	0.16	
58686	47.60	52.40	4.80	0.1	1	143	41	5.27	-999	13	3	-999	2	0.17	
58687	52.40	58.00	5.60	0.1	1	90	54	5.67	-999	10	2	-999	1	0.18	
58688	58.00	62.70	4.70	0.1	1	54	529	5.71	-999	15	3	-999	1	0.25	
58689	62.70	67.90	5.20	0.1	1	37	99	4.96	-999	11	3	-999	3	0.21	
58690	67.90	73.20	5.30	0.1	1	112	50	5.01	-999	15	4	-999	1	0.16	
58691	73.20	78.60	5.40	0.1	1	107	34	4.57	-999	15	3	-999	1	0.33	
58692	78.60	84.00	5.40	0.1	1	57	27	4.96	-999	14	3	-999	1	0.42	
58693	83.40	89.20	5.80	0.1	1	71	75	4.87	-999	14	4	-999	1	0.4	
58694	89.20	94.30	5.10	0.1	1	136	82	6.09	-999	14	4	-999	4	0.44	
58695	94.30	99.70	5.40	0.1	1	130	40	6.4	-999	14	5	-999	2	0.58	
58696	99.70	104.80	5.10	0.1	1	126	108	5.18	-999	13	4	-999	2	0.49	
58697	104.80	109.90	5.10	0.1	1	98	25	4.65	-999	13	5	-999	3	0.13	
58698	109.90	115.20	5.30	0.1	1	94	31	5.64	-999	15	5	-999	1	0.14	
58699	115.20	119.70	4.50	0.1	1	121	36	5.12	-999	13	4	-999	2	0.08	
58700	119.70	125.00	5.30	0.1	1	128	16	4.93	-999	14	4	-999	2	0.09	
40301	125.00	130.00	5.00	0.1	1	111	26	4.41	-999	11	3	-999	1	0.12	
40302	130.00	135.20	5.20	0.1	1	112	37	4.43	-999	16	4	-999	1	0.09	
40303	135.20	140.50	5.30	0.1	1	111	15	4.61	-999	12	5	-999	3	0.09	
40304	140.50	145.80	5.30	0.1	1	136	24	4.91	-999	14	5	-999	1	0.11	
40305	145.80	150.90	5.10	0.1	1	394	21	5.2	-999	19	7	-999	2	0.18	

Sample	From (m)	To (m)	Length (m)	Ag ppm	As ppm	Ba ppm	Cu ppm	Fe %	Mo ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb	S %
40306	150.90	156.40	5.50	0.1	1	122	28	5.14	-999	17	6	-999	3	0.11
40307	156.40	161.80	5.40	0.1	1	131	32	5.56	-999	11	3	-999	1	0.14
40308	161.80	166.00	4.20	0.1	1	184	25	6.81	-999	7	3	-999	3	0.13
40309	166.00	172.70	6.70	0.1	1	192	35	5	-999	10	4	-999	1	0.19
40310	172.70	177.40	4.70	0.1	1	232	11	5.34	-999	12	3	-999	1	0.09
40311	177.40	182.30	4.90	0.1	1	192	50	4.23	-999	11	4	-999	2	0.08
40312	182.30	188.20	5.90	0.1	1	211	11	3.87	-999	11	4	-999	1	0.09
40313	188.20	193.80	5.60	0.1	1	151	124	3.74	-999	12	6	-999	1	0.07
40314	193.80	199.00	5.20	0.1	1	117	24	7.65	-999	23	10	-999	1	0.1
40315	199.00	204.80	5.80	0.1	1	781	118	7.69	-999	24	8	-999	2	0.18
40316	204.80	210.50	5.70	0.1	1	322	30	5.95	-999	23	9	-999	2	0.1
40317	210.50	216.30	5.80	0.1	1	73	47	8.84	-999	19	6	-999	1	0.12
40318	216.30	221.40	5.10	0.1	1	60	92	9.77	-999	10	3	-999	1	0.18
40319	221.40	227.50	6.10	0.1	1	47	65	9.37	-999	19	7	-999	1	0.19
40320	227.50	233.00	5.50	0.1	1	65	65	10.45	-999	11	3	-999	1	0.19
40321	233.00	237.80	4.80	0.1	1	54	85	10.54	-999	11	2	-999	2	0.18
40322	237.80	243.30	5.50	0.1	1	118	179	9.12	-999	23	9	-999	2	0.11
40323	243.30	248.50	5.20	0.1	1	183	39	7.65	-999	19	7	-999	1	0.22
40324	248.50	254.10	5.60	0.1	1	560	42	10.52	-999	20	9	-999	2	0.25
40325	254.10	260.30	6.20	0.1	13	1454	10	2.65	-999	4	4	-999	8	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		41.7-42.3 -fractured, chloritic				
		┤45.2-47.1├ «rubbly fault» -brittle fracture zone		┤44.7-49.5├ «m-hem» -fractures are chlorite coated, ground mass maroon in places, 10% hematite 3% cp vein material, slightly magnetic 1% mt	«.5% py, tr cp»	
		┤55-58├ «rubbly broken zone»		┤49.5-59.4├ «10% hem, 1% ep, qtz-calc stgrs»	«.5% py, .1% cp»	
				┤59.4-80.5├ «.5% py» -loss of hematite «1% total epidote, 1% groundmass mt»	«.5% py»	
		94.5 -modified chilled contact @ between basalt flows, parallel to qtz-calcite-epidote veinlet, crosscut by calcite only veins	23	┤80.5-96.6├ «cal+/-qtz+/-ep, minor py» -occasional patches of faintly hem. groundmass, 3% vein material -minor brecciated zones up to 5 cm wide Healed with coarsely crystalline calcite, minor epidote in core «1-2% mt»		
		┤96.6-112.6├ «plag porphyritic» ┤99.1-99.8├ «chl-cc healed shear» @ 0-10 deg to c.a. 108 -chlorite selvages on some fractures	20	-minor brecciated zones up to 5 cm wide Healed with coarsely crystalline calcite, minor epidote in core «1-2% mt»		
				┤96.6-112.6├ «cal-qtz-ep-veining»	«.5% py»	
		112.8-113 -small zone of qtz-calcite healed breccia, crustiform banding, no open spaces @ sample #112.8	35	112.8 -continued propylitically altered		
				124.3-125 -mild stain, tiny K-spar laths growing groundmass	-.5 py	
125.00 TO 153.20	«DACITE RHYOLITE»	Colour: medium grey-maroon Grain Size: f.gr. to v.f.gr. -massive to faintly banded -upper contact @ -banding @ 20-35 deg. to c.a.	20	«calcite-qtz epi vning» continues ┤128-132├ «w. hem» maroon zones 135-136.5 -irregular amygdules of qtz-calcite -occasional qtz-calcite-ep veins and	«.3% py, tr cp» -no mt	Contact is sharp, look conformable

FROM - TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
				brecciat zones have cp blebs -sample @ 136		
				⟨138-150⟩ «mod hem» -strongly maroon, irregular open spaces less common, filled with ep rims qtz cores, rarely sulphides, very rarely cp	-no mt	
		⟨150-153⟩ «brittle fracture» -broken core		⟨125-150⟩ «1% ep, 5% cal, 2% qtz» 150-153 -increase in f.c. «epi approx. 5%»	«.3% py, trace cp»	
153.20 TO 159.50	«BASALT-MICRO GABBRO»	Colour: grey Grain Size: fine to medium grained Chilled margin @ Hornblende porphyritic in places (phenos up to 1.5 mm long), -lower contact brecciated	30	«3% ep, 2% calc, chlor. on fracs»	«tr py»	Dike intruding minor fault
159.50 TO 161.50 E.O.H.	«DACITE-RHYOLITE»	Colour: grey to maroon Grain Size: u.f.gr. Massive to irregularly amygdaloidal		«5% epidote-amygdule fill»	«tr py»	

Sample	From (m)	To (m)	Length (m)	GEOCHEMICAL Ag ppm	As ppm	Ba ppm	Cu ppm	Fe %	Mo ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb	S %	COMMENTS
58645	12.20	16.00	3.80	0.1	1	46	67	5.11	-999	19	1	-999	24	0.26	
58646	16.00	21.30	5.30	0.1	1	32	163	10.1	-999	11	1	-999	4	0.89	
58647	21.30	27.80	6.50	0.1	1	142	111	7.72	-999	12	1	-999	1	0.29	
58648	33.30	38.50	5.20	0.1	1	69	56	5.71	-999	13	1	-999	3	0.31	
58649	44.00	49.10	5.10	0.1	1	76	288	11.88	-999	9	1	-999	3	0.34	
58650	54.80	59.40	4.60	0.1	1	149	257	10.15	-999	15	2	-999	6	0.35	
58655	64.50	69.60	5.10	0.1	1	144	120	7.22	-999	13	1	-999	2	0.39	
58656	75.10	80.30	5.20	0.1	1	108	107	7.02	-999	11	1	-999	5	0.68	
58657	86.10	91.40	5.30	0.1	1	101	94	6.28	-999	11	1	-999	1	0.31	
58658	96.60	102.40	5.80	0.1	1	400	107	5.83	-999	10	3	-999	4	0.51	
58659	107.90	112.80	4.90	0.1	1	286	105	5.98	-999	19	5	-999	3	0.23	
58660	118.10	122.90	4.80	0.1	1	450	94	6.15	-999	12	1	-999	2	0.16	
58661	128.00	132.10	4.10	0.1	1	185	125	8.01	-999	11	1	-999	1	0.68	
58662	132.10	138.60	6.50	0.1	1	71	96	9.03	-999	15	1	-999	6	1.06	
58663	138.60	144.20	5.60	0.1	1	52	55	9.21	-999	8	1	-999	1	0.25	
58664	144.20	149.70	5.50	0.1	1	55	63	8.36	-999	11	1	-999	2	0.48	
58665	149.70	156.60	6.90	0.1	1	55	58	8.15	-999	4	1	-999	7	0.11	
58666	156.60	161.50	4.90	0.1	1	136	71	7.79	-999	14	1	-999	1	0.16	

HOLE NUMBER: 92-676-4

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: LEMARE
PROJECT NUMBER: 676
CLAIM NUMBER:
LOCATION: SOUTH GOSSAN ZONE

PLOTTING COORDS GRID: UTM
NORTH: 2930.00N
EAST: 10090.00E
ELEV: 228.00

ALTERNATE COORDS GRID:
NORTH: 0+ 0N
EAST: 0+ 0E
ELEV: 228.00

COLLAR DIP: -50° 0' 0"
LENGTH OF THE HOLE: 114.00m
START DEPTH: 0.00m
FINAL DEPTH: 114.00m

COLLAR GRID AZIMUTH: 270° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 270° 0' 0"

DATE STARTED: October 12, 1992
DATE COMPLETED: October 14, 1992
DATE LOGGED: October 14, 1992

COLLAR SURVEY: NO
MULTISHOT SURVEY: NO
RQD LOG: NO

PULSE EM SURVEY: NO
PLUGGED: YES
HOLE SIZE: BGBDM

CONTRACTOR: CANCOR DRILLING LTD.
CASING: LEFT IN HOLE
CORE STORAGE:

PURPOSE:

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
0.00	-	-50° 0'	ACID	OK	
100.00	-	-45° 0'	ACID	OK	

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
-	-	-	-	-	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 6.10	«OB»					
6.10 TO 41.50	«RHYOLITE - RHYO FLOW BRECCIA»	Colour: grey green Grain Size: aphanitic to v.f.gr. to sparsely porphyritic 6.1-12.8 -broken, rubbled, no gouge faintly banded @ 50-60 deg -2% small .5-1.5 m euhedral plagioclase phenocrysts, sometimes zoned, 1% dark green mafic (Hb) euhedral phenos 19.2 -flow banding at 45-55 deg to c.a. ┤12.8-30.7├ -up to 7% phenocrysts, moderate stain, probably primary ┤30.7-41.5├ «flow contact» «upper contact @ 45» «rhyolite becomes frothy, amydaloidal auto-brecciated», pale to dark green depending on chlorite content amygdules ovoid to irregular, 1-5 mm silica filled +/- py often with chloritic rinds, sometimes central parts empty, glassy perlitic in places, tiny spherulites -2-3% tiny euhedral phenocrysts of plagioclase, hornblende +/- cristabolite plag phenocryst + vary from fresh to buff earthy alteration	45	┤6.1-12.8├ «minor sericite, minor chlorite» -chlorite envelopes +/- jasper -sericite envelopes	6.1-12.8 «2% fracture controlled to disseminate pyrite, tr cp, tr covellite?» -trace cp, trace covellite? -two periods of pyrite development 1. py veinlets often subparallel to banding with narrow sericitic (pale v.f.gr.) +/- hematite envelopes 2. crosscutting pyrite veinlets to veins up to 5 mm with chloritic _/- jasperitic envelopes ┤12.8-30.7├ «2% py»	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
41.50 TO 43.50	«BASALT - BASALTIC AND»	Colour: dark green Grain Size: f.gr. Plagioclase porphyritic, 5% small, 1-5 mm euhedral «lower contact sharp @ 60»	 60	-chlorite, calcite	-.5% py	-dike
43.50 TO 51.10	«LITH TUFF - LAP TUFF»	Colour: maroon to green Grain Size: f.gr. to 5 cm Subrounded felsic volcanic clasts, possible flattening, long axis of clasts are subparallel soft chloritic matrix, replacement of devitrified glass?			«7% disseminated pyrite»	«pyroclastic flow with possible incipient welding, flattening»
51.10 TO 54.30	«FLOW BANDED RHYOLITE TO FLOW BRECCIA»	Colour: grey to very light grey Grain Size: f.gr. to aphanitic Some brecciation may hydrothermally enhanced, jigsaw pyrite in matrix gradational to slightly erosional upper contact with overlying pyroclastic flow			«5% disseminated py»	
54.30 TO 91.00	«RHYOLITE»	Colour: grey to light grey to cream to light green Grain Size: v.f.gr. to aphanitic 54.3-59.7 -massive to sparsely porphyritic, 2% small plag laths, minor flow brecciation with some possible hydrofracturing -1% irregular amygdules -3% tiny spherulites 59.7-82 -greenish dull grey to grey pink 59.7-68 -up to 50% broken core 68-82 -3% euhedral plagioclase phenocrysts .5-1.5 mm long occasional diamond shaped crystal-qtz? after cristabolite. .5% dark green lathlike mafics, hornblende core is cloudy in places with tiny spherulites. Some K-spar in groundmass 82-91		⟨54.3-59.7⟩ «10% silica fill of fractures, amygdules», no stain K-depletion ⟨59.7-68⟩ «silica +/- minor chlorite +/- minor sericite, +/- minor hematite» ⟨68-91⟩ «silica +/- chlorite, +/- sericite»	«3% py in amygdules» and fractures «5% py» 68-1-91 «3% py» as rinds in amygdules in	Mucy of the pyrite looks early, may be locally derived formed by fluids

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		-82.0 flow contact between overlying massive, sparsely porphyritic flows and underlying frothy vesiculated rhyolite flows, 35% irregular to stretched amygdules, often silica filled with pyrite rinds. Tiny earthy flesh coloured specks --> spherulite replacement 86.0-87.3 -missing core, rubbled recovery 87.3-91 -amygdules become very stretched 55 deg to parallel			matrix to breccias, some fracture controlled	coming from primary degassing of rhyolites
91.00 TO 93.30	«BASALT TO BASALTIC ANDESITE»	Colour: dark green Grain Size: f.gr. 5% saussaritized plagioclase phenocrysts .5-2 mm		«calcite and chlorite in groundmass»		
93.30 TO 114.10	«RHYOLITE» (lost in fault) E.O.H.	Colour: dull grey to pale grey green Grain Size: v.f.gr. to aphanitic «vesiculated flow to flow breccia amygdules ovoid to irregular to stretched». They have pale envelop +/- pyrite rinds coating the walls, silica cores «3% small euhedral plagioclase phenos»	25		«3% py in amygdules» and fracture controlled	Last bit of recovery is sandsized ground core

Sample	From (m)	To (m)	Length (m)	GEOCHEMICAL Ag ppm	As ppm	Ba ppm	Cu ppm	Fe %	Mo ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb	S %	COMMENTS
40326	6.10	12.80	6.70	0.1	1	99	111	4.13	-999	13	3	-999	2	1.68	
40327	12.80	19.20	6.40	0.1	1	112	8	7.16	-999	17	4	-999	3	2.35	
40328	19.20	25.00	5.80	0.1	1	271	6	5	-999	17	4	-999	3	1.5	
40329	25.00	31.50	6.50	0.1	1	344	10	4.39	-999	14	4	-999	5	2.08	
40330	31.50	37.10	5.60	0.1	5	1349	10	4.52	-999	19	3	-999	2	3.44	
40331	37.10	42.80	5.70	0.1	1	321	33	4.69	-999	19	4	-999	4	2.8	
40332	42.80	49.90	7.10	0.1	1	447	41	5.54	-999	29	7	-999	1	2.84	
40333	49.90	54.30	4.40	0.1	1	860	28	4.38	-999	13	3	-999	2	4.71	
40334	54.30	59.40	5.10	0.1	1	119	6	2.56	-999	8	1	-999	6	2.63	
40335	59.40	65.60	6.20	0.1	1	365	14	4.19	-999	20	4	-999	5	2.13	
40336	65.60	71.10	5.50	0.1	1	515	7	3.89	-999	13	3	-999	9	2.16	
40337	71.10	76.00	4.90	0.1	1	1063	5	3.85	-999	16	3	-999	1	0.92	
40338	76.00	81.60	5.60	0.1	7	893	6	3.22	-999	16	4	-999	1	1.81	
40339	81.60	87.70	6.10	0.1	6	319	11	2.49	-999	10	3	-999	3	2.47	
40340	87.70	93.30	5.60	0.1	1	526	58	3.46	-999	23	6	-999	8	1.8	
40341	93.30	98.70	5.40	0.3	5	876	8	2.85	-999	7	3	-999	1	2.91	
40342	98.70	104.40	5.70	0.2	1	1179	7	2.74	-999	8	3	-999	1	3.21	
40343	104.40	109.90	5.50	0.2	1	321	6	2.59	-999	5	2	-999	2	2.54	
40344	109.90	114.00	4.10	0.1	1	700	14	3.8	-999	17	4	-999	4	2.23	

HOLE NUMBER: 92-676-5

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: LEMARE
PROJECT NUMBER: 676
CLAIM NUMBER:
LOCATION: CULLEET CREEK

PLOTTING COORDS GRID: UTM
NORTH: 6070.00N
EAST: 7150.00E
ELEV: 35.00

ALTERNATE COORDS GRID:
NORTH: 0+ ON
EAST: 0+ ON
ELEV: 35.00

COLLAR DIP: -80° 0' 0"
LENGTH OF THE HOLE: 188.70m
START DEPTH: 0.00m
FINAL DEPTH: 188.70m

COLLAR GRID AZIMUTH: 270° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 270° 0' 0"

DATE STARTED: October 15, 1949
DATE COMPLETED: October 18, 1992
DATE LOGGED: October 19, 1992

COLLAR SURVEY: NO
MULTISHOT SURVEY: NO
RQD LOG: NO

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE:

CONTRACTOR: CANCOR DRILLING LTD.
CASING:
CORE STORAGE:

PURPOSE:

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
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-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 4.30	«OB»					
4.30 TO 6.10	«RHYOLITE»	Colour: maroon to green Grain Size: v.f.gr. to aphanitic Rhyolitic rubble				Not sampled
6.10 TO 19.00	«FLOW BANDED RHYOLITE RHYOLITE FLOW BX»	Colour: maroon to chloritic green Grain Size: v.f.gr. to aphanitic Flow banded to massive, very sparsely porphyritic Flow banding at very low angle, occasional patches of fracture controlled material		Some fractures have salmon pink staining envelopes up to .5 cm thick, «10% K-spar envelopes, 15% groundmass chlorite, 15% Fe2O3»	«.3% py»	
19.00 TO 21.70	«CONTACT/ FAULT ZONE»	Colour; green to maroonish Grain Size: varied Rubbled core, gouge, 80% felsic material, 20% basaltic, some lost recovery				
21.70 TO 30.80	«K-SPAR PHYRIC RHYOLITE»TO TRACHYAND-ESITE	Colour: dark green to maroon Grain Size: aphanitic 10%, 1-3 mm pink-orange subhedral K-spar phenos. Groundmass has moderate stain (K-spar)		«some groundmass K-spar and chlorite, minor hematite»	«.1% py»	
30.80 TO 38.80	«FAULT/ BASALTIC DIKES»	Colour: medium to dark green Grain Size: f.gr. 30.8-33.4 -30% gouge 33.4-38.4 -v.f.gr. basalt (dike?) 38.4-38.8 -rubbled zone, minor gouge		«minor gouge, minor hematite»	«.1% py»	
38.80 TO 44.50	«RHYOLITE»	Colour: maroon to green Grain Size: aphanitic Massive		«chlorite, hematite»	«.2% py, .1% cp»	
44.50 TO 46.80	«BASALT»	Colour: medium to dark green Grain Size: f.gr. Massive «contacts (appear chilled) @ 50»	50	«minor chlorite»	«tr py»	Dike or sill

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
46.80 TO 50.20	«BEDDED TUFFS TO EPICLASTIC SEDIMENTS»	Colour: medium green Grain Size: f.gr. sand or ash «plane (vaguely) bedded @ 55 deg» 80% fine broken crystals, 10% shards, pumice fragments 49.2-50.2 -coarser bed, clasts up to 2 mm across lithics, and juvenile material «lower contact @ 55»	55 53	46.8-50.2 -crosscutting fractures have very narrow chloritic envelopes, coarse mottled silica - chlorite vein at 47.9 10 cm thick, subparallel to bedding otherwise fresh looking	«tr py»	«Pyroclastic flows?»
50.20 TO 89.00	«FLOW BANDED TO FROTHY RHYOLITE FLOWS»	Colour: dark to light green with salmon pink to pale orange bands, sometimes dark green bands Grain Size: aphanitic 10% flow brecciated matrix is rhyolitic half the time, v.f.gr. silica +/- calcite core +/- chloritic selvages +/- sulphide banding is folded and brecciated but where consistent is 30-40 deg to c.a. {65-68.6} -flow gradually becomes amygdaloidal first appearing as flattened qtz filled structures. They can become almost ovoid @ 66.8, but still have slightly irregular outlines, can have calcite cores. These «ovoid amygdules grade into streaked out qtz structures which grade impercetably into banding @ 35» 68.6-89 -zones of flow banded and amygdaloidal rhyolite	35	{50.2-65} «breccia in fragments have salmon pink rims (K-spar)» fragments and rhyolite stain, moderately but not as strongly as rims or salmon pink bands, chl in groundmass «K-spar, chlorite alteration» {65-89} «10% secondary k-spar 5-15% hem» (some may be near primary, derived from thermal oxidation) «10% chlorite»	«.3% py, tr cp» 65-89 «.5% py»	
89.00 TO 96.80	«BEDDED TUFFS TO EPICLASTIC SEDS»	Colour: maroon to green interbedded Grain Size: v.f. ash to ash or sand size 89-96.8 -sequence of v.f.gr. ash, mud and pyroclastic flows. «Slight erosional basal contacts», evidence of flattening,«minor welding» (devitrified glassy groundmass altering to chlorite)	25	Tiny fractures +/- sericite or clay fill, most with 1-5 mm envelopes that darkens surrounding rock (chloritic?)	«.5% disseminated pyrite»	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
96.80 TO 97.60	«FAULT GOUGE BASALTIC RUBBLE»	Colour: light green to grey green Grain Size: gouge to f.gr. Fault zoe, with basaltic dike		«Chlorite, clay»		
97.60 TO 111.80	«PYROCLASTICS» (PROTOLITH OBSCURED BY ALTERATION)	Colour: pink to maroon to splotchy purple, occasionally white-grey Grain Size: f.gr. to aphanitic to clastic Texture appears fragmental but silica-hematite-clay alteration is texture destructive 97.6-100: pinkish 100-105: maroon to purple 105-108: purple-deep purple with pinkish mottling 108-111.8: gradually becomes grey		┤96-111.8├ «50-100% silica-clay hematite alteration; amount of clay varies from low (soft groundmass) to over 70%» where is is harder than knife; «rare gypsum filled fracture»		
111.80 TO 163.50	«RHYOLITE, BRECCIA, PYROCLASTICS» (PROTOLITH OBSCURED BY ALTERATION)	Colour: pale grey to grey to grey with purplish cast Grain Size: clastic to f.gr. to v.f.gr. ┤111.8-130.8├ -silica-clay rock, fragmental appearing texture with rounded to subrounded grey clasts in softer groundmass - clays (not kaolinite), illite sericite «10% stockwork (gypsum fill)» -veins 1-5 mm thick -one set of veinlets @ approx.	70	«argillic to advanced argillic increase in fracture controlled gypsum to 10% by 120 m»	«.5% py»	
		-occasionally a vein of pure gypsum can be up to 6 cm wide -some fragments have remnant amygdules, flow banding. Some fragments have pitted appearance - acid leaching	70	┤132-152.9├ «argillic to advanced argillic with overprinting gypsum (10% total)»	«.5% py»	
		130.8-132 -dike, basalt -green, f.gr. -upper and lower contacts @	55		-.5% py	Dike with shearing at contacts
		152.6-152.9 -dike similar to 130.8-132				Small dike
		┤152.9-161.4├ -much broken core, minor gouge		«argillic to advanced argillic gypsum	152.9-161.4	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
				stockwork gradually becoming less important», gradual increase in py often associated with some fractures that gypsum is found in but not directly with gypsum	«3% py»	
		[161.4-163.5] «basalt dike» -sharp contacts @	40	«15% fracture associated epidote»	«1% py»	
163.50 TO 180.00	PROTOLITH NOT RECOGNIZED «RHYOLITE?»	Colour: dull grey Grain Size: f.gr. to aphanitic Silica pyrite rock with zones of almost massive py, silica is aphanitic -fuzzy outlines of possible small phenocrysts		«30% silica, minor sericite clays 1% gypsum stockwork, some parts of this section appear very silicified»	«10% py» -pyrite can be found as envelopes to fractures, rarely as selvage to gypsum veinlets, small irregular bodies of massive v.f.gr. pyrite are sometimes associated with an increase in fracture density but sometimes just as bodies of massive pyr up to 5 cm across	
		Phenocrysts gradually become crisper to contact			«generally gypsum crosscuts pyrite»	
180.00 TO 188.80	«RHYOLITE»	Colour: grey to medium green Grain Size: aphanitic «Sparsely porphyritic to massive, 3% fresh looking plagioclase phenocrysts» Occasional crystal 1-1.5 m has salmon pink rim with white of corroded interior perhaps K-spars in a field whre k-spar is only marginally stable or not stable (propylitic)		«Chlorite (10%) in groundmass, rare gypsum veinlet»	«Py 2%» (fracture controlled)	

HOLE NUMBER: 92-676-5 ASSAY SHEET DATE: 2-February-1993

Sample	From (m)	To (m)	Length (m)	GEOCHEMICAL Ag ppm	As ppm	Ba ppm	Cu ppm	Fe %	Mo ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb	S %	COMMENTS
40345	4.30	10.50	6.20	0.1	1	234	5	2.99	-999	6	4	-999	6	0.33	
40346	10.50	16.60	6.10	0.1	1	228	4	3.75	1	11	4	31	2	0.14	
40347	16.60	21.40	4.80	0.1	1	169	7	4.79	3	12	4	44	2	0.27	
40348	21.40	27.40	6.00	0.1	1	427	15	4.26	4	22	6	115	3	0.15	
40349	27.40	33.40	6.00	0.1	1	121	65	4.21	1	14	7	120	6	0.16	
40350	33.40	39.40	6.00	0.1	1	73	134	14.85	1	20	8	144	5	0.41	
40351	39.40	43.80	4.40	0.1	1	35	166	14.48	1	22	6	166	1	0.19	
40352	43.80	49.30	5.50	0.1	1	110	76	6.87	1	26	8	106	1	0.62	
40353	49.30	55.00	5.70	0.1	1	658	15	5.87	1	18	4	67	6	1.23	
40354	55.00	60.70	5.70	0.1	1	162	6	6.31	1	14	4	62	2	0.93	
40355	60.70	66.40	5.70	0.1	1	177	5	5.74	1	13	4	51	2	0.61	
40356	66.40	72.20	5.80	0.1	1	128	5	7.12	1	15	5	71	4	0.52	
40357	72.20	77.70	5.50	0.1	1	1073	4	6.02	1	16	4	66	1	0.38	
40358	77.70	83.50	5.80	0.1	1	262	7	8.64	1	13	5	98	1	0.28	
40361	83.50	101.10	17.60	0.1	1	150	5	6.1	1	13	3	61	1	0.35	
40359	89.10	95.10	6.00	0.2	1	88	5	3.27	1	10	3	29	1	0.24	
40360	95.10	100.40	5.30	0.1	1	586	12	2.16	1	14	4	41	3	0.25	
40362	100.40	106.20	5.80	0.1	1	165	3	3.35	1	1	1	1	1	0.44	
40363	106.20	111.90	5.70	0.1	2	396	2	2.09	1	2	3	1	1	0.63	
40364	111.90	117.50	5.60	0.2	12	822	3	0.2	3	2	2	1	11	0.03	
40365	117.50	123.30	5.80	1.2	12	23	2	0.15	2	2	3	1	3	4	
40366	123.30	129.10	5.80	1	9	13	3	0.14	2	2	1	1	4	3.91	
40367	129.10	135.70	6.60	0.9	1	85	46	1.45	3	7	3	31	10	2.47	
40368	135.70	140.30	4.60	1	7	205	3	0.16	4	1	2	1	1	3.79	
40369	140.30	146.00	5.70	1.2	10	17	4	0.15	3	2	2	2	6	3.61	
40370	146.00	151.90	5.90	0.9	10	17	3	0.15	3	3	3	1	1	4.86	
40371	151.90	157.70	5.80	0.3	1	42	9	1.95	2	4	2	1	1	4.78	
40372	157.70	163.90	6.20	0.1	1	30	134	5.77	2	17	5	29	5	5.38	
40373	163.90	169.60	5.70	0.6	1	20	10	3.93	5	10	1	1	3	6.5	
40374	169.60	175.60	6.00	0.4	1	18	9	3.32	3	8	1	2	1	5.83	
40375	175.60	181.10	5.50	0.3	2	35	5	1.28	3	7	3	1	4	2.23	
40376	181.10	186.90	5.80	0.2	4	38	5	1.31	3	4	1	3	2	2.25	

APPENDIX II
STATEMENT OF COSTS

STATEMENT OF COSTS
LEMARE GROUP B

Direct Drilling Costs (CanCore Drilling Ltd.):
114m @ $ 56.06/m.....$6,390.50

Personnel:
Cam Delong (Project Geologist):
1.5 days @ $170/day $255.00
Lloyd Cornish (Assistant)
1.5 days @ $110/day.....$165.00

Analytical Costs (Minen Labs):

19 Geochems @ $15.50.....$294.50

Field Expenses:

Room and Board
3 mandays @ $25.....$75.00
Vehicle Rental
1.5 days @ $50/day.....$75.00
Travel Expenses.....$68.00

Supervision:
Dave Heberlein (Senior Project Geologist)
1 days @ $250 /day.....$250.00

Report Preparation:
Dave Heberlein
1 days @ $250/day.....$250.00

TOTAL $7,823.00

STATEMENT OF COSTS
LEMARE GROUP C

Direct Drilling Costs (CanCore Drilling Ltd.):
149m @ $56.06/m.....$8,352.94

Personnel
Cam Delong (Project Geologist):
7 days @ $170/day..... $1,190.00
Lloyd Cornish (Assistant)
7 days @ $110/day..... $770.00

Analytical Costs (Minen Labs):
23 Geochems @$15.50..... $356.50

Field Expenses:

Room and Board
14 mandays @ $25..... $350.00
Vehicle Rental
7 days @ $50/day..... $350.00
Travel Expenses.....$147.99

Supervision:

Dave Heberlein (Senior Project Geologist)
1 days @ $250/day.....$250.00

Report Preparation:

Dave Heberlein
1 days @ $250/day.....$250.00

TOTAL $11,767.43

STATEMENT OF COSTS
LEMARE GROUP D

Direct Drilling Costs (CanCore Drilling Ltd.):
149m @ $56.06/m.....$8,352.94

Personnel
Cam Delong (Project Geologist):
7 days @ $170/day.....$1,190.00
Lloyd Cornish (Assistant)
7 days @ $110/day..... $770.00

Analytical Costs (Minen Labs):
18 Geochems @ $15.50..... $279.00

Field Expenses:

Room and Board
14 mandays @ $25..... $350.00
Vehicle Rental
7 days @ $50/day.....$350.00
Travel Expenses..... $147.99

Supervision:
Dave Heberlein (Senior Project Geologist)
1 days @ $250 /day.....$250.00

Report Preparation:
Dave Heberlein
1 days @ $250/day..... $250.00

TOTAL $11,689.93

APPENDIX III
STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, David Heberlein of 12221 Makinson Street, Maple Ridge, B.C. certify that:

1. I graduated from the University of Southampton, England with a B.Sc (Honours) Degree in Geology in 1980.

2. I graduated from the University of British Columbia with a M.Sc Degree in Geology in 1985.

3. I have practised my profession continuously since my graduation.

4. I am a Fellow of the Geological Association of Canada (F5050).

5. I am a Registered Professional Geoscientist of the Province of British Columbia.

6. I am now by Minnova Inc. as a Senior Project Geologist.

7 Work described in this report was carried out under my direct supervision.

Date: 02-05-1993

Signature: 

STATEMENT OF QUALIFICATIONS

I, Campbell DeLong of 4539 West 12th Avenue, Vancouver, B.C. certify that:

1. I graduated from Memorial University, Newfoundland with a B.Sc (Honours) Degree in Geology in 1976.

2. I am presently enroled in an M.Sc. program in geology at the University of British Columbia.

3. I have practised my profession for eight years.

4. I am a Geoscientist in Training with the Association of Professional Engineers and Geoscientists of British Columbia.

5. I am currently employed by Minnova Inc. as a Contract Geologist.

6. Work documented in this report was carried out under my direct supervision.

Date: 02-05-1997

Signature: C. Campbell DeLong