Diamond Drilling Report on the Sam Group of Claims

Kamloops Mining Division
NTS 82M/4W

Minnova Inc.
Vancouver, B.C.

A. Hill
September, 1991

ARIS SUMMARY SHEET

District Geologist, Kamloops Off Confidential: 92.08.09

ASSESSMENT REPORT 21689 MINING DIVISION: Kamloops

PROPERTY: Samatosum
LOCATION: LAT 51 08 00 LONG 119 49 00
UTM 11 5668206 302932
NTS 082M04W

CAMP: 039 Adams Plateau - Clearwater Area

CLAIM(S): Mining Lease 41
OPERATOR(S): Minnova Rea Gold
AUTHOR(S): Hill, A.R.
REPORT YEAR: 1991, 27 Pages
COMMODITIES
SEARCHED FOR: Silver,Copper,Lead,Gold
KEYWORDS: Paleozoic,Eagle Bay Formation,Tuffs,Argillites,Turbidites
Limestones,Pyrite,Sphalerite,Galena,Chalcopyrite,Tetrahedrite
Sericite schists
WORK
DONE: Drilling,Geochemical
DIAD 1002.4 m 2 hole(s);NQ
SAMP 122 sample(s) ;ME
MAP FILE: 082M 244

DIAMOND DRILLING REPORT

on the

SAM GROUP OF CLAIMS

KAMLOOPS MINING DIVISION

NTS 82M/4W

Lat 51°08'N Long 119°49'W

Operator:

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

ALAN R. Hill

September, 1991.

TABLE OF CONTENTS

LIST OF FIGURES

APPENDICES

INTRODUCTION

The Sam Group of claims encompasses some 2000 hectares of land located approximately thirty kilometers east of Barriere, B.C. The property includes the Samatosum Mine, which began extracting polymetallic ore in June 1989, from a deposit with reserves estimated at 634,984 tonnes grading 1035g/t Ag, 1.2% Cu, 1.7% Pb, 3.6% Zn, 1.9 g/t Au.

This report summarizes the results of two diamond drill holes, RG394 and RG395, drilled in May and June of 1991 as part of an ongoing exploration program which fulfills the assessment requirements necessary to maintain the mineral claims in good standing.

LOCATION AND ACCESS

The Samatosum property is located approximately 100 km northeast of Kamloops and is easily accessible by highways and good quality gravel roads. Forest service access roads cross near the centre of the property and provide routes from both the west and southeast.

The town of Barriere lies 30 km to the west on the Yellowhead highway, and can provide all necessary services. Alternatively, the town of Chase is 45 km to the south of the property, on the Trans-Canada highway.

PHYSIOGRAPHY AND VEGETATION

The climate in the region is moderate with temperatures ranging from extremes of -25 degrees Celsius in winter to 30 degrees Celsius in the summer. Precipitation is semi-arid to moderate, with a snow free period from May to November.

The claim area lies within the Adams Plateau in an area typified by well forested, rolling mountainous terrain. Elevations on the property range from approximately 1100m at Johnson Lake to 1400m at the peak of Samatosum Mountain.

Vegetation on the property consists of stands of balsam, fir, pine, cottonwood, birch and cedar. The claim area has been extensively clear-cut by logging companies, and is currently part of the summer range for cattle from ranches in the Sinmax Valley.

PROPERTY

Ownership of the Sam Group of claims is part of a joint venture agreement with Rea Gold Corporation (Minnova 70%, Rea Gold 30%), wherein Minnova Inc. is the operator. The claim group consists of a Mining Lease, and eleven claims as shown below in

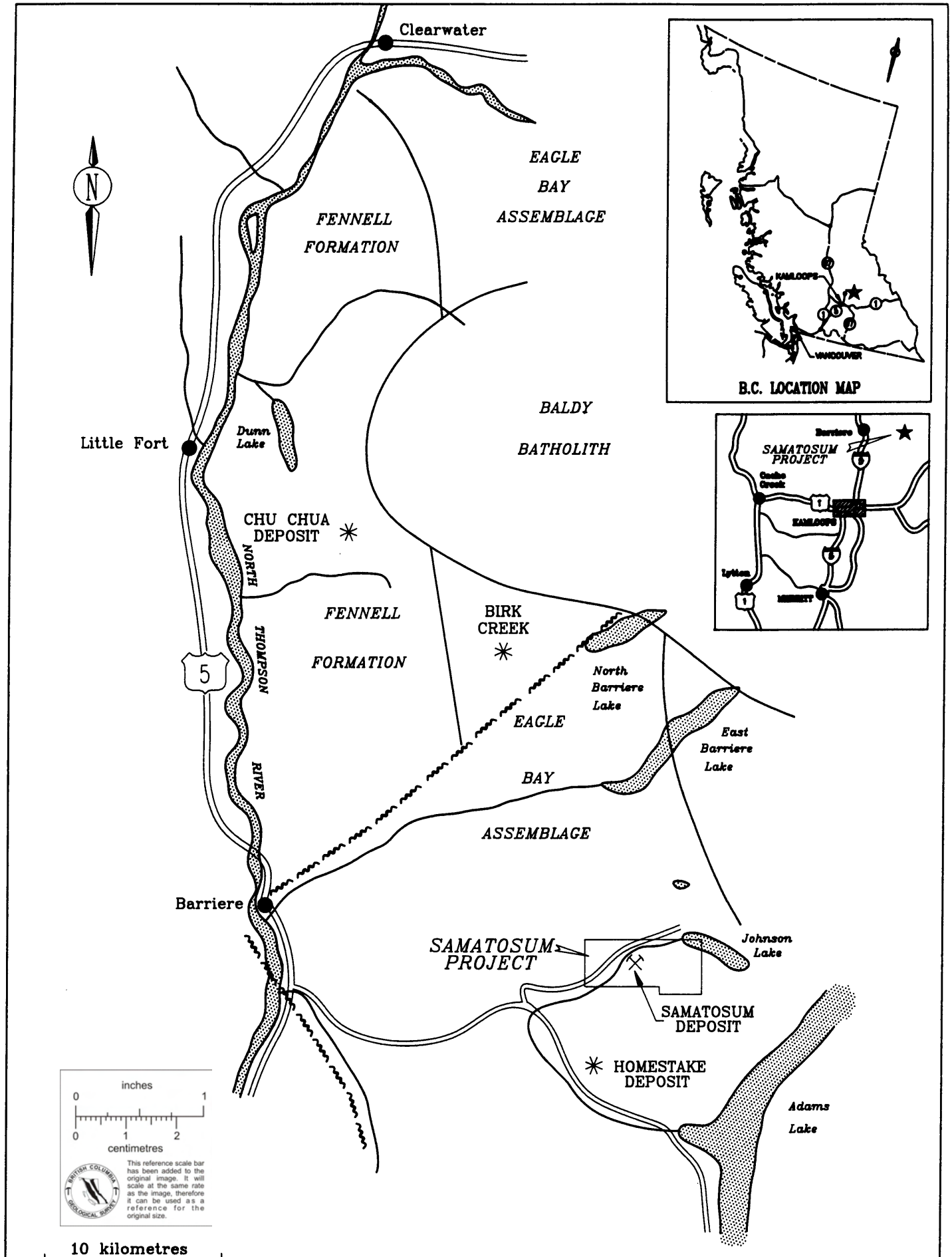


FIGURE 1

SAMATOSUM PROJECT

MINNOVA Inc.

Table 1 and in Figure 2. The drilling mentioned herein was conducted solely on the mining lease.

TABLE 1. SAM GROUP OF CLAIMS

CLAIM	REC #	UNITS	CURRENT EXP.DATE	NEW EXP.DATE
HARRISON 1	218151	8	09/06/00	09/06/2001
HN-1	217137	20	10/07/94	10/07/2001
HN-12 Fr.	217229	1	11/22/00	11/22/2001
HN-17 Fr.	217230	1	11/22/00	11/22/2001
HN-19 Fr.	217231	1	11/22/00	11/22/2001
LEO 1	218121	4	07/28/00	07/28/2001
RYAN 3 Fr.	218128	1	08/12/00	08/12/2001
RYAN 1	218129	1	08/12/00	08/12/2001
RYAN 2	218130	1	08/12/00	08/12/2001
KIM Fr.	218131	1	08/12/00	08/12/2001
WG 4 Fr.	217255	1	12/22/98	12/22/2001
Mine Lease	#41	1*	10/03/2019	(30 yr. lease)

*Considered one unit for grouping purposes.

HISTORY

The Adams Plateau on the west side of Adams Lake has received intermittant exploration activity since the 1920's, due to the presence of several large rusty rock exposures and numerous small base and precious metal occurences. Only the Homestake Mine, in the Sinmax Valley, reported minor production prior to the discoveries on Mt. Samatosum.

In 1983, Mr. Al Hilton of Kamloops located and staked a hematitic gossan that had been recently uncovered by active logging on the NW flank of Mt. Samatosum. He had been drawn to the area by anomalous soil and silt samples collected during a two year prospecting program utilizing a field geochemical kit. Trenching revealed the presence of gold-bearing massive sulphides, which would become known as the Discovery Zone. The Sam property was optioned by Rea Gold Corporation who in turn optioned it to Minnova Inc. (then named Corporation Falconbridge Copper). Exploration drilling outlined a total of three small, metallurgically difficult massive sulphide pods containing significant amounts of gold. Sub-economic reserves were estimated at approximately 150,000 tonnes of of arsenical mineralization grading 7.2 g/t Au, 85.7 g/t Ag, 0.6% Cu, 2.5% Pb, and 2.6% Zn. Exploration of other targets on the property by Minnova Inc., utilizing geology, geochemistry, and geophysics led to the 1986 discovery of the "Sam Deposit" by diamond drilling. Geological reserves were calculated at 634,984 tonnes containing 1035 g/t Ag, 1.9 g/t Au, 1.2 % Cu, 1.7% Pb, 3.6%

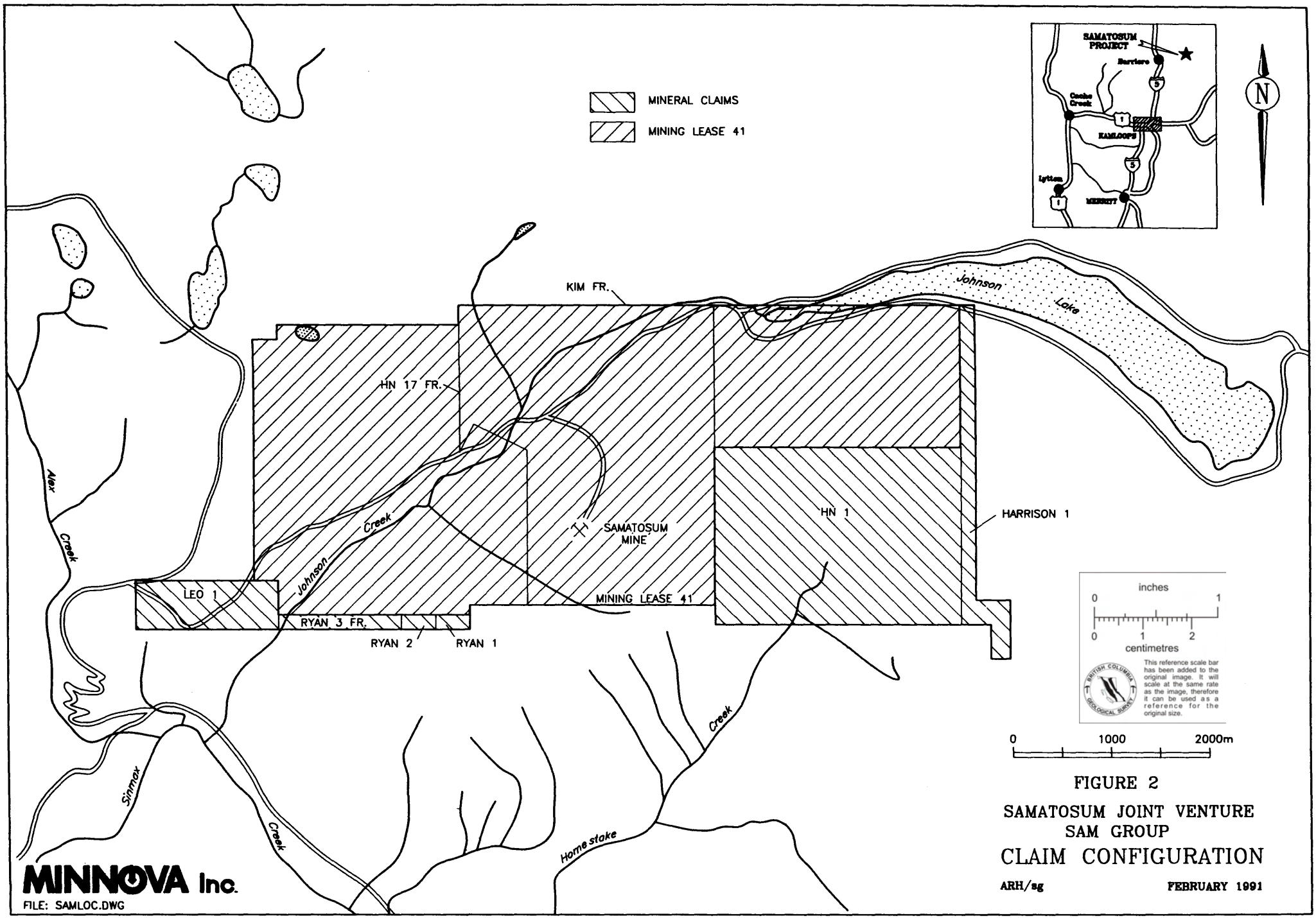


FIGURE 2

SAMATOSUM JOINT VENTURE
SAM GROUP

CLAIM CONFIGURATION

ARH/sg FEBRUARY 1991

MINNOVA Inc.

FILE: SAMLOC.DWG

Zn. Production began in June, 1989, from a small open pit at a rate of about 450 tonnes per day.

Exploration, primarily in the form of diamond drilling, has subsequently been an ongoing activity on the mine group and surrounding areas.

REGIONAL GEOLOGY

The area is comprised of structurally complex, low grade metamorphic rocks which lie along the western margin of the Omineca Belt. The package is flanked to the east by the high-grade metamorphic rocks of the Shuswap Complex and to the west by rocks of the Intermontaine Belt. Included within the area is an assemblage of metasedimentary and metavolcanic of the Paleozoic (Cambrian to Mississippian) Eagle Bay Assemblage. This assemblage has undergone several phases of deformation involving folding and thrust faulting which has produced a moderate to strong foliation in most of the units. Deformation generally increases eastward towards the margin of the Shuswap Complex. To the north the Eagle Bay Assemblage is intruded by granite and quartz monzonite of the Cretaceous Baldy Batholith.

PROPERTY GEOLOGY

The Eagle Bay Assemblage underlying the Sam claim group is comprised of northwest trending, northeast dipping sequences of: mafic volcanics, mixed cherty argillaceous sediments (including debris flows and exhalative horizons), black distal turbidites, and minor amounts of felsic volcanics and recrystallized limestone. The rocks display a strong NW regional axial planar foliation (dip 55° E) with tight overturned folding and accompanying thrust faulting. The Samatosum sulphide deposit sits at a particular horizon in cherty mixed sediments near a major volcanic-sedimentary break. This "Sam Horizon", although highly deformed, can be traced across the entire property. The Discovery Zone ("Rea Deposit") sits in a similiar package of rocks some 500 metres to the southwest of the Sam Deposit and can also be traced out across the property.

The two deposits are mineralogically very different with Sam dominated by coarse grained tetrahedrite, sphalerite, galena, and chalcopyrite associated with quartz veining while Rea is dominated by fine grained arsenopyrite, pyrite, sphalerite, galena, quartz and barite in what appears to be a volcanogenic massive sulphide deposit. The relationship between the two deposits remains uncertain.

DIAMOND DRILLING

In late May and early June of 1991 two diamond drill holes were completed as part of the ongoing exploration program in order to probe favourable stratigraphy in previously untested areas. The locations of RG394 and RG395 are shown in Figure 3. The detailled logs for the holes are reproduced in Appendix B.

RESULTS OF DDH RG394

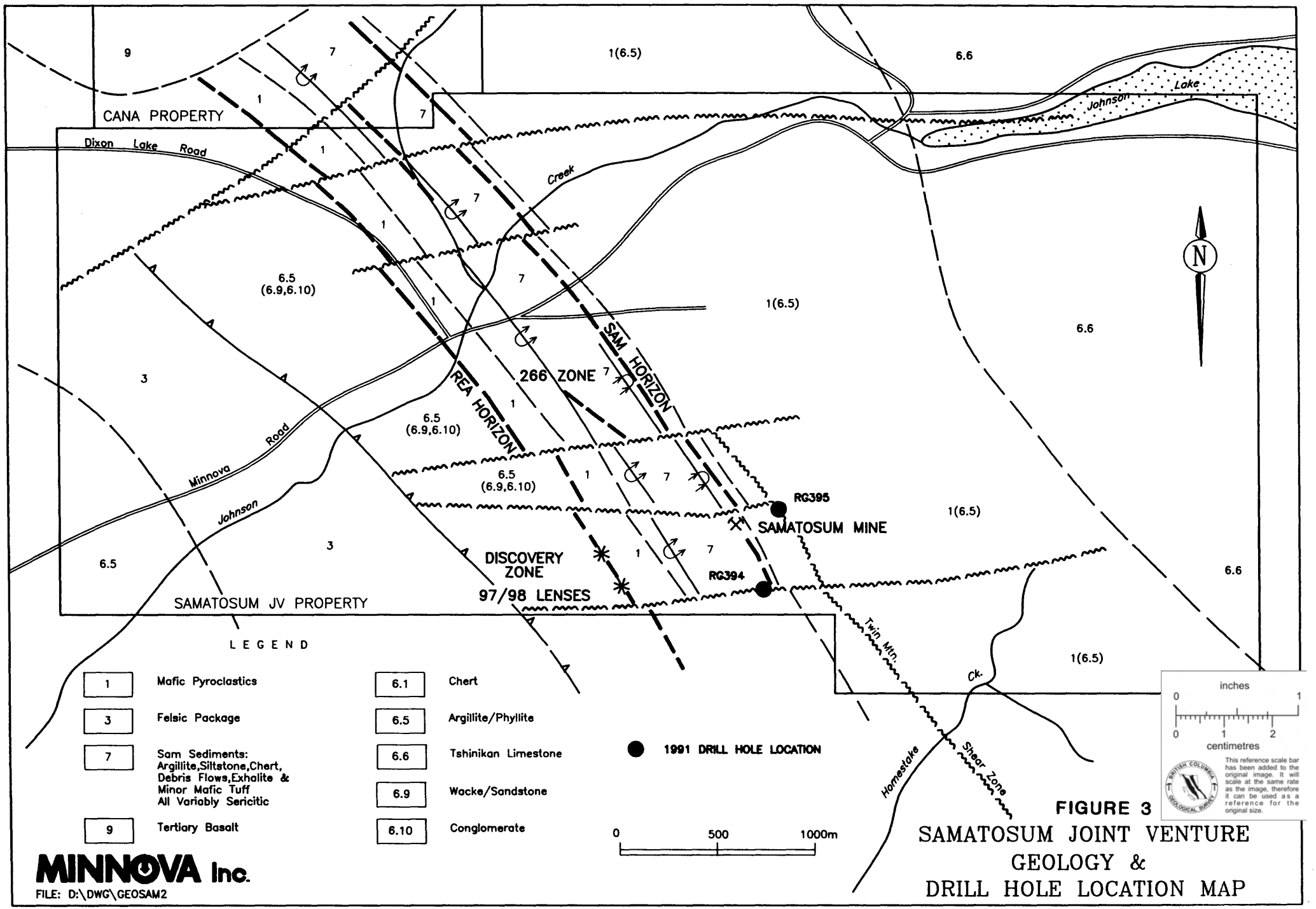
Hole RG394 was drilled on section 93+00W in order to test a possible corridor of mineralization located to the southeast of the SAM orebody at 1300 meters elevation.

The hole collared in a thick sequence of chloritized to carbonatized mafic volcaniclastic rocks which contains large zones of brittle fault brecciation. At the 167.5m mark these volcanics are in sharp contact with a narrow interval of intensely altered sediments. Initially the sediments consist of a healed and silicified fragmental argillite which is banded by intense yellow sericite alteration. This unit is in turn in sharp contact with a pyritiferous grey sericite schist in which fault gouge and relict fragmental textures are common. Between 181-182.2m the hole a intersected silcified zone containing 60% cataclastic pyrite, 3% sphalerite, and trace amounts of galena, chalcopyrite and tetrahedrite which returned assays of 1.16% Cu, 2.37% Zn, 3.99% Pb, 58.9 g/t Ag, and .56 g/t Au. The hole next intersected a variably silicified and carbonatized mixed sequence consisting of pyritiferous grey sericite schist, argillite and minor volcaniclastic rocks. Within this interval, (between 206.8-208.4m), another less well mineralized siliceous sulphide zone occurs which assayed .26% Cu, 2.18% Zn, 1.09% Pb, 15.3 g/t Ag, and 0.38 g/t Au. The interval containing the zones of pyritiferous grey sericite schist is interpreted to be the Sam horizon. At 220.2m the hole encountered ribbon cherts which graded into silicified argillite with minor chert at 224.5m. The laminations within the cherts exhibit strong chaotic folding. Between 235.7-241.8m and 362.9-387.4m the hole intersected carbonatized and locally sericitized mafic volcanics in which alteration increases with depth. Interstial to these two zones is a mixed pile of primarily distal sediments which are locally weakly silicified, carbonatized, or sericitized. The hole ended at 387.4 meters.

RESULTS OF DDH RG395

RG395 tested an undrilled zone located 350m below surface on section 95+50W. The target is beneath and to the south-east of the orebody.

This hole collared in a thick sequence of chloritic to calcareous mafic volcaniclastic rocks. At 327.9m the mafic volcanics are in contact with a thinly bedded sequence of highly deformed and brecciated sericitized tuff and silicified argillite. One 20cm wide quartz vein in this interval returned assays of .08%


CANA PROPERTY
SAMATOSUM JV PROPERTY
Dixon Lake Road
Minnova Road
Johnson Creek
Johnson Lake
REA HORIZON
SAM HORIZON
266 ZONE
DISCOVERY ZONE
97/98 LENSES
SAMATOSUM MINE
RG395
RG394
Twin Mtn. Ck.
Homestake Shear Zone
9
7
1(6.5)
6.6
6.5 (6.9,6.10)
3
6.5
1
N
LEGEND
1 Mafic Pyroclastics
3 Felsic Package
7 Sam Sediments: Argillite,Siltstone,Chert, Debris Flows,Exhalite & Minor Mafic Tuff All Variably Sericitic
9 Tertiary Basalt
6.1 Chert
6.5 Argillite/Phyllite
6.6 Tshinikan Limestone
6.9 Wacke/Sandstone
6.10 Conglomerate
1991 DRILL HOLE LOCATION
0 500 1000m
inches
0 1
0 1 2
centimetres
This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.
MINNOVA Inc.
FILE: D:\DWG\GEOSAM2
FIGURE 3
SAMATOSUM JOINT VENTURE
GEOLOGY &
DRILL HOLE LOCATION MAP

Cu, 11.45% Zn, 2.10% Pb, 12.9 g/t Ag, and .10 g/t Au. Between 361.4-411.3m the hole intersect-ed a similar sequence consisting of intensely carbonatized mafic volcanics followed by interbedded tuffs and argillites. The above unit is in fault contact with an interval of silicified argillite and minor chert. The latter unit is cut by deformed white to grey quartz veins carrying an average of 7% pyrite, 2% sphalerite, and trace amounts of galena and chalcopyrite. At 445.6m the hole intersected a mixed sequence of laminated argillite, silstone, minor chert, and tuff. The rocks of this unit are variably silicified and carbonatized. Mineralized quartz veinlets carry an average of 6% pyrite, 1% sphalerite, and <1% galena and chalcopyrite. More carbonatized mafic volcaniclastic rocks containing a possible broad open fold nose followed. This unit ended in a three meter wide silicified fault zone in which carbonate, sericite and talc are common. The fault zone gave way to a weakly altered mafic lapilli tuff at 519m. The hole ended at 614.7 in a sequence of silicified argillites and tuff(?) similar to those seen at the top of the hole.

CONCLUSIONS

Neither RG394 nor RG395 encountered economic mineralization, but they did intersect significant polymetallic grades over narrow widths associated with quartz veining and silicification. A moderately mineralized zone within RG394 was recognized as belonging to the Sam horizon despite the presence of intense deformation. The equilavent horizon within RG395 was only poorly mineralized.

Sufficient evidence exists to suggest that a hydrothermal system was once active and extended to include the vicinity of the holes. Exhalative rocks were scarce, however, and are represented only by minor ribbon cherts,and thin pyrite laminae, indicative of a distal enviroment.

It should be noted that the holes discussed above are part of an ongoing drill program which is expected to continue throughout the life of the Samatosum mine. It is hoped that this program will enable trends to be delineated, which could lead to the discovery of new centres of mineralization, and hopefully add to the reserves currently being mined on the property.

APPENDIX A

STATEMENT OF COSTS

STATEMENT OF COSTS

	Up To July 28	Post July 28
DIAMOND DRILLING		
Direct Drilling Costs (1002.4m @ 52.60/m) (Frontier Drilling Ltd.).....	$52,729.10	
ANALYTICAL COSTS		
Min-En Labs, North Vancouver, B.C:		
(122 Assays @ $15.50/sample).....	$1,891.00	
PERSONNEL		
A. Hill - Project Geologist		
7 days @ 350/day.....	$2,450.00	
2 days @ $350/day.....		$700.00
C. Nagati - Geologist		
9 days @ $250/day.....	$2,250.00	
R. Muzyka - Field Technician		
8 days @ $150/day.....	$1,200.00	
1 day @ $150/day.....		$150.00
S. Fraser - Field Technician		
6 days @ $150/day.....	$900.00	
C. Noble - Data Entry Technician		
1 day @ $120/day.....		$120.00
LOGISTICS		
Vehicles: 31 days @ $50/day.....	$1,550.00	
1 day @ $50/day.....		$50.00
Food & Accomodation: 31 days @ $40/day.	$1,160.00	
1 day @ $40/day...		$40.00
MISCELLANEOUS COSTS		
Drafting, computer, supplies.....		$250.00
Core rack supplies & Reclamation.....	$300.00	
A) TOTAL BEFORE JUL 28/91:	$64,430.10	
B) TOTAL AFTER JUL 28/91:		$1,310.00
GRAND TOTAL (A+B) :	$65,740.10	

APPENDIX B

DIAMOND DRILL LOGS AND ANALYTICAL RESULTS

MINNOVA INC.

HOLE NUMBER: RG394 — DRILL HOLE RECORD — IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: SAM
PROJECT NUMBER: 240
CLAIM NUMBER:
LOCATION: SE of pit

PLOTTING COORDS GRID: Sam est.
NORTH: 600.00N
EAST: 9300.00W
ELEV: 1475.00

ALTERNATE COORDS GRID: Est.
NORTH: 6+ 0N
EAST: 93+ 0W
ELEV: 1475.00

COLLAR DIP: -75° 0' 0"
LENGTH OF THE HOLE: 387.40m
START DEPTH: 0.00m
FINAL DEPTH: 387.40m

COLLAR GRID AZIMUTH: 180° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 225° 0' 0"

DATE STARTED: May 21, 1991
DATE COMPLETED: May 28, 1991
DATE LOGGED: May 22, 1991

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

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

CONTRACTOR: Frontier
CASING: Left in hole.
CORE STORAGE: Samex camp.

PURPOSE: 9300w section, hole p-15. (as laid out with topofil, AH91)

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
90.50	-	-75° 0'	ACID	OK	
104.80	-	-74° 0'	ACID	OK	
187.70	-	0° 0'	ACID	NO	POOR ETCH
230.40	-	0° 0'	ACID	NO	POOR ETCH
271.20	-	-71° 0'	ACID	OK	
321.50	-	-69° 0'	ACID	OK	
355.50	-	-68° 0'	ACID	OK	
386.20	-	-66° 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 9.70	«CSG»	Overburden/casing, left in hole.				
9.70 TO 167.50	«MAF VOLC»	Green and white. Fine to medium grained. Typical chloritic and calcareous Sam mafics. Moderately broken core down to 35.0m, with 10% white carb/qtz veining. 9.7-24.0m: lapilli tuff. 24.0-53.0m: fine to med. grained lows. 53.0-125.5: mafic lapilli tuff. A few crosscutting dol-qtz veins begin at 59.5m Major brittle fault from 67.0-101.2m. During the faulted interval core ranges from gauge to moderately broken, but only weakly carb'd. FOLIATION at 107.0m: 118.0-120.3m: frioble fault breccia, very green. Below this the degree of Fe-dol alternation increases 'til mafic rock type is indistinguishable. Continues increasing to contact, with strong streching fabric at....	40 80 75	⟦24.0-32.0⟧ «Brittle flt.» with vuggy carb veins. ⟦67.0-101.2⟧ «Major br. flt.» Minor bright green talc and moderate carb'n, assoc. with faulting. ⟦125.0-167.5⟧ «Strong dol. altn» with assoc. py and talc, and brown sericite.	No visible sx. except: ⟦59.5-59.9⟧ «qdv, 3% cpy, 3% gn» and ⟦67.1-69.3⟧ «qdv, flt, 1% gn, tr cpy» ⟦81.4-82.4⟧ «qdv, tr gn» 105.3-105.4m: thin dol vein with 5% py and trace gn, sp. 125.0-167.5m: 2-5% as dissem and f.f. assoc. with carb flooding.	
167.50 TO 168.80	«QTZ SER/ ARG»	Yellow and black. Contact is knife sharp and marked by a 5cm broken qtz-ser veinlet. Interval is strongly fragmented but well healed, faint contorted relict bedding between argillaceous and yellow sericitic portions (1:5). Probably correlative with "serts" and "trans frags" of previous loggers. Strong stretching fabric at.... White crystalline qtz now in "balls" and lenses.	75	Intense yellow to pale green sericite, with white qtz fragments and segregations. Silicified and not carb'd.	Wispy fracture filling pyrite (2-3%).	
168.80 TO 181.00	«GREY SER/ PY/ARG»	Grey and black. Very fine grained. Conformable, knife sharp contact with "snowy mut" (grey sericite schist) with a nodular carbonate overprint. A few slivers of argillite present, ranging from a few mm to a few cm. At 170.6m argillite is finely laminated with syngenetic(?) looking pyrite, although highly contorted and cut by hazy qtz-carb veinlets. Schistosity @ 171.5m A 30cm slug of white qtz-carb vein, barren, within	70	Strong grey "muddy" sericite, pyrite, carbonate alteration. ⟦173.1-178.0⟧ «Flt @ 40degs.» with gouge, breccia, and a swing in fabric to 40degs. at 177.0m. Probably all variable flt. breccia to lower contact.	15-25% very fine grained py disseminated throughout. Minor coarser pyrite and trace sphalerite assoc. with veinlets of carb-qtz. ⟦168.8-181.0⟧ «15% py»	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		gouge @ 173.5m. Good debris flow(?) textures @ 177.5m.				
181.00 TO 182.20	«MASSIVE PY»	Sharp contact with massive, milled-up pyrite in a siliceous matrix. Texture is cataclastic, with a few cm scale qtz patches rimmed by gn, sp, cp and a few grains of tet(?).		Possible silicification which seems to add base metal sulphides to an older pyrite body.	⟨181.0-182.2⟩ «60% py, 3% sp, tr gn, cp, tt»	Resembles core from recent u/g drilling of gold zone.
182.20 TO 192.00	«FLT/PY/ QTZ/SER/ ARG»	Grey. Mostly friable interval of grey sericitic, siliceous, pyritic schist. Short 5-10cm seams of massive pyrite may be fault blocks of above interval. Relict fragmental textures present. (ie: brecciated breccia).		Quartz injection pre and possibly syn-faulting. Minor arg survives, intense grey sericitization, mostly as clasts.	⟨182.0-192.0⟩ «20% py, 3% sp, tr tt?» Coarser pyrite assoc. with qtz veinlets and minor base metals. A few suspected grains of tetrahedrite.	
192.00 TO 194.00	«SIL ZONE»	White and grey. Very hard, intensely silicified zone. White stockwork cuts grey siliceous material, with argillaceous & pyritic stylolites. Probably a silicified argillite.		Intense sil.	Pyrite (5%) in stylolites. A few coarse grains of brown sphalerite and galena assoc. with qtz veinlets.	
194.00 TO 206.80	«SER/DOL/ PY/MAFICS?»	Brown, grey and green. Upper contact marked by change from sil. to carb. alteration, appearance of brown sericite, and traces of fuchsite. Faulting continues, but mostly parallel to foliation... Strong fabric, locally friable. Minor argillaceous component present.	65	Intense ferrodol'n, with brown sericite (after chlorite?), and minor weak fuchsite development. Pyrite also an alteration product.	⟨194.0-206.8⟩ «15% py, tr sp» disseminated throughout.	Is this a "mutized" mafic volcaniclastic? Resembles "mut" above in this hole, but is browner.
206.80 TO 208.40	«SIL/PY ZONE»	Another intensely silicified zone, but this time with considerably more sulphides. Quartz is pervasive, light to dark grey, & finely crystalline.		Intense sil of probable argilliceous sediments.	⟨206.8-208.4⟩ «10% py, 2% sp, tr cp, tt?» Pyrite is medium to coarse grained and concentrated in bands, roughly parallel to foliation. Sphalerite concentrated along veinlet margins.	
208.40 TO 220.20	«GREY SER SCHIST»	Grey. Rather monotonous interval of dense grey ser., with 15% white qtz wisps along foliation at Competant with very little broken core. Relict coarse wacke texture visible in places. Lower contact a fault.	60	Intense grey sericite, moderate silicification. ⟨220.1-220.2⟩ «Gouge»	Very fine grained pyrite dissem. throughout. ⟨208.4-220.2⟩ «15% py» Also ⟨213.8-214.3⟩ «QDV, tr sp, gn,tt» as coarse grains in milky vein.	
220.20 TO 224.50	«RIBBON CHERT»	Grey. Aphanitic grained. Very finely laminated light grey chert, highly contorted, with disharmonic, chaotic folding throughout. Layers are separated by all or one of black argillite, pyrite, or grey sericite.		Minor grey sericite septae. Virtually no evidence of qtz veining.	5% pyrite as septae between chert layers.	Corrugated look, with rough core surface.

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
224.50 TO 235.70	«SIL ARG/ CHT»	Black and white. Very black argillite with grey ribbon chert, laminations contorted. Qtz. veining is white and barren with black stylolites. Ratios arg: cht: qv are 2:5:1. Strong fabric avg.	65	Silicification is moderate in arg. Minor dol also in veins.	2% py as thin bands and fracture fillings.	
235.70 TO 241.80	«DOL MAF VCLASTICS?»	"Dolomitized Mafic Volconiclastics?" Buff and grey. Upper contact broken, into interval of buff sericitic rock with grey dolomitic lenses. Rock has banded appearance, with no relict textures. Lower contact is conformable and sharp.	70	Strong carbonatization, brown ser, grey Fe-dol, trace fuchsite.	2% dissem py.	
241.80 TO 362.90	«ARG/CHT/ TUFF BX»	Black, grey, and pale green respectively. Long sequence of laminated to thinly bedded argillite, with lesser chert, and thin beds of pale green tuff(?). Fabric is strong & varies from foliation to spaced cleavage +\- 10degs. Proportion of dol. mafics increases from 10% to 40% at 325.5m, and looks like a volcaniclastic wacke. Gradational lower contact.	65	Silicification is moderate in arg, dol is pervasive in tuff. White qdv's common and mostly deformed, and barren, both crosscutting and conformable. ǂ268.7-269.3ǂ «Flt. gouge»	Only trace to 1% pyrite as dissem. assoc. with veining.	Highly contorted, tectonically brecciated, and strained. Fault intensity is centered around ǂ239.4-261.3ǂ «Ductile thrust?» and weakens downhole.
362.90 TO 387.40	«ALT MAFICS»	Green, white and grey. Consistantley textured green mafics with pervasive carbonate. However, no brown sericte is developed. Widely spaced qtz-carb veining is typical of unaltered Sam mafics. Internal volcanic textures destroyed. Weak foliation..... END OF HOLE.	60	Evenly spotted texture with porphyroblastic carbonate (Fe-dol) giving rock a "pseudogabbroic" appearance. Chlorite is abundant also.	Trace diss. py only.	"Middle Mafics" At 386.9 the lithology changes to lapilli tuff from a probable massive flow.

HOLE NUMBER: RG394 | ASSAY SHEET | DATE: 25-September-1991

Sample	From (m)	To (m)	Length (m)	ASSAYS CU %	ZN %	PB %	AG G/T	AU G/T	SB %	AS %	GEOCHEMICAL CU PPM	ZN PPM	PB PPM	S.G.	AG OZ/T	AU OZ/T	AS PPM	BA PPM	BA %	SB PPM	AG PPM	AU PPB	COMMENTS
BCD45226	59.50	59.90	0.40	.213	.80	.15	4.2	.03			2129	8024	1542				1			1	4.2	26	
BCD45230	60.80	61.90	1.10								1145	563	250				1			1	2.3	18	
BCD45227	67.10	68.70	1.60								1517	1696	1143				1			3	3.9	34	
BCD45228	68.70	69.30	0.60								45	114	145				34			1	1.6	19	
BCD45229	81.40	82.40	1.00								34	129	373				1			1	2.7	20	
BCD45231	166.00	167.50	1.50								63	106	9				206			1	1.7	10	
BCD45232	167.50	168.80	1.30								21	65	18				62			1	0.6	2	
BCD45233	168.80	170.60	1.80								84	93	68				47			1	2.1	22	
BCD45234	170.60	172.10	1.50								86	157	95				10			1	2.7	16	
BCD45235	172.10	173.10	1.00								93	218	81				45			5	2.4	25	
BCD45236	173.10	174.00	0.90								53	236	360				57			2	2.1	87	
BCD45237	174.00	175.50	1.50								39	60	166				59			1	1.7	75	
BCD45238	175.50	177.00	1.50								65	238	335				131			3	3.2	142	
BCD45239	177.00	178.50	1.50	.015	.47	.39	11.8	.13			147	4721	3966				278			29	11.8	132	
BCD45240	178.50	180.00	1.50	.007	.16	.18	4.7	.10			73	1596	1822				282			8	4.7	100	
BCD45241	180.00	181.00	1.00	.011	.05	.07	2.5	.10			107	488	652				236			13	2.5	103	
BCD45242	181.00	182.20	1.20	1.163	2.37	3.99	58.9	.56									3140			2820			
BCD45243	182.20	183.20	1.00	.178	.38	.82	16.6	.27			1776	3803	8245				920			365	16.6	270	
BCD45244	183.20	184.70	1.50	.089	1.39	.64	10.2	.21			894	13889	6438				700			124	10.2	212	
BCD45245	184.70	186.20	1.50	.040	1.41	.33	6.5	.31			404	14105	3362				728			50	6.5	309	
BCD45246	186.20	187.70	1.50	.173	2.43	1.52	21.7	.26			1731	24298	15237				742			92	21.7	264	
BCD45247	187.70	189.20	1.50	.058	.82	.78	14.1	.06			580	8205	7879				509			65	14.1	61	
BCD45248	189.20	190.70	1.50								227	410	224				228			33	3.8	78	
BCD45249	190.70	192.00	1.30								83	220	242				246			7	2.5	76	
BCD45250	192.00	193.00	1.00								61	735	403				127			6	1.9	29	
BCD45251	193.00	194.00	1.00								24	67	82				238			3	1.6	38	
BCD45252	194.00	195.50	1.50								44	136	63				326			1	2.4	37	
BCD45253	195.50	197.00	1.50								83	294	456				865			5	3.7	292	
BCD45254	197.00	198.50	1.50								137	484	468				549			1	2.9	108	
BCD45255	198.50	200.00	1.50								60	209	318				420			1	2.1	29	
BCD45256	200.00	201.50	1.50								77	1507	438				426			1	2.3	68	
BCD45257	201.50	203.00	1.50								95	94	198				408			6	2.0	19	
BCD45258	203.00	204.40	1.40								96	207	316				659			1	1.7	92	
BCD45259	204.40	205.50	1.10								499	1765	1636				411			6	4.4	90	
BCD45261	205.50	206.80	1.30								102	1476	1805				1300			4	6.1	119	
BCD45262	206.80	208.40	1.60	.257	2.18	1.09	15.3	.38			2573	21889	10989				1068			270	15.3	382	
BCD45263	208.40	209.40	1.00								49	123	178				140			5	6.1	130	
BCD45264	209.40	210.90	1.50								39	121	132				104			4	2.9	84	

HOLE NUMBER: RG394 ASSAY SHEET DATE: 25-September-1991

Sample	From (m)	To (m)	Length (m)	CU %	ZN %	PB %	AG G/T	AU G/T	SB %	AS %	CU PPM	ZN PPM	PB PPM	S.G.	AG OZ/T	AU OZ/T	AS PPM	BA PPM	BA %	SB PPM	AG PPM	AU PPB		
BCD45265	210.90	212.40	1.50								30	27	66				83			2	2.6	72		
BCD45266	212.40	213.80	1.40								184	722	582				110			5	4.7	55		
BCD45267	213.80	214.30	0.50								65	172	3171				18			16	8.0	18		
BCD45268	214.30	215.80	1.50								25	35	175				29			3	8.8	37		
BCD45269	215.80	217.30	1.50								26	1775	2592				23			6	11.4	69		
BCD45270	217.30	218.80	1.50								24	72	207				14			1	7.8	83		
BCD45271	218.80	220.20	1.40								33	63	126				62			3	2.4	76		
BCD45272	220.20	221.70	1.50								35	55	35				64			4	3.6	244		

MINNOVA INC.

HOLE NUMBER: RG395 — DRILL HOLE RECORD — IMPERIAL UNITS: — METRIC UNITS: X

PROJECT NAME: SAM
PROJECT NUMBER: 240
CLAIM NUMBER:
LOCATION: SE OF PIT

PLOTTING COORDS GRID: SAM GEOL.
NORTH: 954.30N
EAST: 9552.30W
ELEV: 1452.88

ALTERNATE COORDS GRID: SAM EST.
NORTH: 9+50N
EAST: 95+55W
ELEV: 1452.00

COLLAR DIP: -89° 0' 0"
LENGTH OF THE HOLE: 614.70m
START DEPTH: 0.00m
FINAL DEPTH: 614.70m

COLLAR GRID AZIMUTH: 180° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 225° 0' 0"

DATE STARTED: May 28, 1991
DATE COMPLETED: June 8, 1991
DATE LOGGED: June 8, 1991

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

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

CONTRACTOR: FRONTIER DRILLING
CASING: LEFT IN HOLE
CORE STORAGE: SAMEX CAMP

PURPOSE: PROPOSED HOLE P-18, TEST SAM HORIZON 150M UPSTRIKERG 376.

DIRECTIONAL DATA: (cd's as laid out by survey)

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
75.20	-	-87° 0'	ACID	OK	
124.00	-	-86° 0'	ACID	OK	
178.90	-	-83° 0'	ACID	OK	
228.60	-	-80° 0'	ACID	OK	
270.40	-	-76° 0'	ACID	OK	
316.10	-	-89° 0'	ACID		STUMPER?
346.60	-	-74° 0'	ACID	OK	
386.20	-	-72° 0'	ACID	OK	
465.40	-	-70° 0'	ACID	OK	
495.90	-	-70° 0'	ACID	OK	
533.70	-	-70° 0'	ACID	OK	
556.90	-	-69° 0'	ACID	OK	
303.90	211° 0'	-75° 0'	MULTISHOT	OK	SPERRY-SUN
553.80	209° 0'	-70° 0'	MULTISHOT	OK	SPERRY-SUN
-	-	-	-	-	
-	-	-	-	-	
-	-	-	-	-	
-	-	-	-	-	
-	-	-	-	-	
-	-	-	-	-	
-	-	-	-	-	
-	-	-	-	-	
-	-	-	-	-	
-	-	-	-	-	
-	-	-	-	-	
-	-	-	-	-	
-	-	-	-	-	
-	-	-	-	-	
-	-	-	-	-	

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 15.80	«CASING»	Casing through overburden.				
15.80 TO 327.90	«MAF VOLC»	Dark to light green. Core is badly broken from ⌊15.8-24.6⌋ «Flt Bx» and bleached out from ⌊26.7-32.0⌋ «Carb Flt.» Otherwise a dark green chloritic greenstone, cut by 10-15% irregular qtz-calcite veinlets. Moderate FOLIATION @ 50 First lapilli seen at 122m, but still mostly massive volcanics. Relatively fresh and green, with dark spots, and white veinlets and segregations through to 307.5m. From ⌊237.6-240.0⌋ «Qdv, Flt Bx» & ⌊262.4-264.2⌋ «Qdv, Flt Bx» break the monotony. Lower contact is sharp and conformable at angle of ..... 65 Competant core.	50 65	Pervasive calcareous and chloritic except around faults as noted, where ferrodolomitization and minor diss. pyrite present, along with trace fuchsite and talc. Patchy weak fe-dol. locally throughout 65.0-90.0m. Carbonatization, centered around lapilli, starts gradationally at 319.0m and increases intensity along with fabric until contact. ⌊319.0-327.9⌋ «Dol Alt»	2-3% disseminated pyrite except for a fairly rich dol (+/- qtz.) vein. ⌊54.5-54.7⌋ «3% gn, 2% sp, py, cp» with spectacular pegmatitic "spider web" textures. Minor disseminated pyrite only except for a mineralized dol vein from ⌊322.8-323.1⌋ «2% sp, gn; qdv»	
327.90 TO 361.40	«SIL ARG/ TUFF TECT»	Black and pale green. Apparently a part of the mafic pile (or very well annealed) is a competant, black argillaceous unit, with grey silty & cherty clasts and deformed laminations. Very strong FOLIATION @ 55 Parallel qtz veinlets (10%) and axial cleavage to small scale folds. Clast are angular or boudin shaped. Lower contact is interbanded (bedded?) & marks last argillite seen.	55	Silicification related to veinlets, with minor pale green to yellow sericite development in tuff layers which comprise 10-30% of unit increasing down hole.	Trace disseminated pyrite only except ofr mineralized qtz-dol veinlets: ⌊329.1-329.3⌋ «qdv» with 10% sp in a medium grained pyritic mass, 3% gn, tr cp. Also at 344.6-344.8m & 347.1-347.7m and 353.1-354.1m. These veinlets are 1-10cm thick & although often parallel, are deformed. Most were sampled.	
361.40 TO 395.30	«DOL MAF»	Grey and mustard yellow. Grey dolomite in medium to coarse grained patches separated by sericite (15%) and lesser talc or fuchsite. Irregular fabric swings from 30-70 degs. (Does this mean that alt. is post penetrative deformation?). Lower contact is also interbanded and gradational and marks reappearance of blk argillaceous component.		Very intense ferrodolomitization and mustard yellow to buff sericitization. Becomes darker buff and dark grey downhole.	3-4% disseminated pyrite only until 390m when sulphide rich qtz-carb veins become common. ⌊390.7-395.3⌋ «7% py, 2% sp, tr gn,cp»	
395.30 TO 411.30	«ARG/SILT TUFF TECT»	Black, yellow grey, green. Mixed lithology tectonic breccia, with a strong stretching fabric at Possible "heterolithic fragmental" from ⌊395.3-397.0⌋ «het frag?» Mainly an argillaceous matrix, with siliceous clasts, although there are short intervals of yellow sericite or fuchsite. Overall a very "ratty" irregular texture, very disturbed. Minor gouge & friable breccia throughout but most intense at	55	Patchy silicification associated with 1-10cm qtz veinlets and also patchy yellow or green sericte apparently host rock dependant. ⌊410.6-411.3⌋ «fuch. fault gouge»	3% py as wispy disseminations and in cataclysed siliceous patches & veinlets Trace sphalerite associated with py. Very rare cp at 397.4m.	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		bottom contact.				
411.30 TO 445.60	«SIL ARG/ CHT?	Black, white, and grey. Very hard and silicified interval, cut by white milky quartz veins up to 10cm, and by grey quartz stockwork, crosscutting & deformed. Clotty fine to coarse grained pyrite & sphalerite are disseminated and fracture filling, as well as in veins. Interval textures destroyed, with only minor contorted laminations remaining. Fabric ranges from 40-90 degs. to core axis.		Pervasive, vein controlled silicification. Some siltstone now is cherty, perhaps some primary chert. Black, graphitic "stylolites" common throughout. ┤416.2-416.5├ «fuch.» ┤434.8-436.8├ «cht?» ┤443.4-444.6├ «15%py,5%sp,2%gn in qvs» Minor fault breccia over last 5m.	Patchy veinlet related sulphides. ┤411.3-445.6├ «7% py, 2% sp, tr g & c» Sphalerite is generally brown, medium to coarse grained and within veins with trace galena. Pyirte is more widespread in veins and in wallrock dissem and patches.	Continuously sampled for ICP/Geochem analysis.
445.60 TO 501.00	«MIXED SEDS TUFF/ TECT»	Black, grey, and green. Top contact friable fault breccia for 60cm with silicified and dolomitized fragments containing disseminated pyrite (10%). Lithologically mixed and altered, apparently laminated argillite/siltstone (+/- cht?) with thicker 0.1-1.0m scal interbeds of heavily carbonatized & fuchsitic tuff? or volcaniclastic wacke. The laminated portions are contorted, disrupted, and silified. Spaced cleavage at 456m Fragmental, tectonic bx locally. Unit becomes thickly bedded coarse wacke(?) downhole, with only patchy argillaceous material. At 490m the black argillite is cut by fractures, now deformed and filled in with qtz-carb, which display strongly pyritized wallrock alteration envelopes. (see specimen). Gradational lower contact.	60	Silicification predominates, with dol'n host rock dependant eg: ┤451.0-451.9├ «fuch.» Sericite (yellow and brown) in patches appears around 454m within mafics, and minor grey sericite around 458m in argillaceous portions. Gradationally (ca 477m) downhole the rock becomes more even textured & dark grey; probably a coarse wacke with minor argillaceous component, now pervasively ferrodolomitized. Very little grey sericite developed, just enough to give broken surfaces a sheen.	Coarse, caraclysed, pyrite grains in siliceous seams and veins, with minor sphalerite and traces of galena. ┤445.6-501.0├ «6% py, 1% sp, tr gn,cp» Particular samples of interest include: 446.2-446.7m: 3% cpy. 463.3-369.4m: 10% py, 3% sp. From 477m down the richer basemetal bearing deformed veinlets are less common and wider spaced (2-3m apart) and only 1-2cm thick. Very fine grained py disseminations increase inversely 499-501m: 15% very fine grained pyrite.	Very reactive unit, possible due to porosity, and primary carbonate component(?) The alteration `corona' looks like "Mut". This specimen given to J. Clarke for petrography.
501.00 TO 516.00	«DOL MAF?»	Brown to grey. Gradational contact expressed mainly by the increase in buff to brown sericite present. Still a highly altered, dense dolomitic rock with irregular fabric. Possible fold nose at 503m, broad and open.		Pervasive, strong ferrodolomitization with accompanying brown sericite and pyrite. Also cut by uncommon, irregular white qtz-dol units.	5-10% disseminated pyrite throughout.	
516.00 TO 519.00	«FAULT»	Brown and white. Hosted by a strong talc-sericite schist which way to fault gouge and breccia from 516.5-517.4m. Milky silicification from 517.4 to 519m. Angles varied, but much subparallel to core axis.		Strong dolomitization cut by milky white quartz veining (20%). Associated sericite and talc common.	Only 5% pyrite as very fine grained disseminations in wallrock.	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
519.00 TO 563.40	«MAF LAP TUFF»	Pale green to buff and olive. Easily recognizable lapilli textures, although rock quite bleached. Rock has no foliation, & lapilli are not flattened but are lighter colour than matrix. Chlorite common in matrix. Deformed 1cm qtz-carb veinlets comprise about 10% of interval. Lower contact sharp with fault gouge.		Weak fe-dol, centered about lapilli. From ⌊521.0-521.8⌋ «qdv» which is white and barren.	2-3% disseminated pyrite only. One speck of galena at 520m in siliceous patch.	Typical "Sam Mafics" occuring where 'Middle Mafics" usually appear.
563.40 TO 614.70	«SIL ARG/ TUFF?»	Black and white. Friable fault gouge and breccia at top of interval, with black argillite and qtz vein fragments. ⌊563.4-565.2⌋ «Flt.» Unit is comprised of about 20% white xaline quartz veins, highly deformed along with finely laminated argillite/siltstone. Most common cleavage direction: with bedding at all orientations. From ⌊586-602.5⌋ «fold nose?» where bread open folds with bedding along axis and common q.v.'s. END OF HOLE	55	Intense vein related silicification becomes pervasive in places. The rock has a pale greenish tinge in siltier portions & around veining esp. at 593-598m and from 608.2-612m perhapse due to minor tuffaceous component. Very minor buff sericite also in the green portions.	Only a few coarse euhedra of pyrite in quartz-dol veining around 594-595m.	In places resembles HW seds, but more likely correlatable with the "SIL ARG/ TUFF TECTONITE" near the top of the hole.

Sample	From (m)	To (m)	Length (m)	ASSAYS CU %	ZN %	PB %	AG G/T	AU G/T	SB %	AS %	GEOCHEMICAL CU PPM	ZN PPM	PB PPM	S.G.	AG OZ/T	AU OZ/T	AS PPM	BA PPM	BA %	SB PPM	AG PPM	AU PPB	COMMENTS
BCD45260	54.50	54.70	0.20	.113	1.34	.65	9.7	.07			1131	13397	6453				67	22		20	9.7	65	
BCD45273	322.80	323.10	0.30	.059	.91	.35	4.0	.02			591	9131	3457				1	63		11	4.0	16	
BCD45274	329.10	329.30	0.20	.079	11.45	2.10	12.9	.10			785	114544	20958				485	33		54	12.9	97	
BCD45275	344.60	344.80	0.20	.029	.74	.14	2.0	.01			293	7425	1425				177	77		4	2.0	2	
BCD45276	344.80	345.80	1.00								31	448	228				30	86		1	0.9	1	
BCD45277	345.80	347.10	1.30								51	206	110				18	81		1	0.8	3	
BCD45278	347.10	347.70	0.60	.052	1.64	.29	3.6	.04			515	16380	2915				136	55		10	3.6	40	
BCD45279	353.10	354.10	1.00	.068	1.96	.87	13.7	.06			680	19578	8738				345	38		222	13.7	57	
BCD45280	357.50	358.70	1.20	.029	.61	.44	6.4	.06			287	6118	4439				229	54		105	6.4	56	
BCD45281	360.90	361.40	0.50	.035	.66	.57	4.5	.05			346	6649	5674				221	70		23	4.5	53	
BCD45282	361.40	369.90	8.50								33	255	200				132	287		1	0.9	8	
BCD45283	390.70	392.30	1.60								270	2076	690				621	169		20	2.4	42	
BCD45284	392.30	393.80	1.50								261	900	851				377	146		10	2.1	37	
BCD45285	393.80	395.30	1.50	.044	.38	.18	4.5	.06			439	3840	1831				795	140		31	4.5	55	
BCD45286	395.30	396.80	1.50	.039	.27	.15	3.6	.05			392	2669	1512				278	147		39	3.6	54	
BCD45287	396.80	397.60	0.80	.11	.87	.16	4.7	.04			1105	8727	1647				274	167		28	4.7	39	
BCD45288	411.30	412.80	1.50								43	423	305				226	283		8	0.9	27	
BCD45289	412.80	414.30	1.50								61	995	875				351	122		28	2.9	43	
BCD45290	415.70	417.30	1.60								49	2293	1017				145	165		13	2.4	31	
BCD45291	417.30	418.80	1.50								131	107	129				196	151		11	0.5	26	
BCD45292	417.30	418.80	1.50								29	81	139				205	163		10	0.9	25	
BCD45293	418.80	420.30	1.50								30	79	164				303	92		12	0.9	37	
BCD45294	420.30	421.80	1.50								44	207	276				315	59		14	1.1	46	
BCD45295	421.80	423.30	1.50								50	671	435				401	91		28	1.7	72	
BCD45296	423.30	424.80	1.50								138	1433	612				632	116		25	2.1	89	
BCD45297	424.80	426.30	1.50								27	57	111				177	134		10	0.8	38	
BCD45298	426.30	427.80	1.50	.006	.08	.21	3.9	.06			58	810	2093				365	134		44	3.9	57	
BCD45299	427.80	429.30	1.50	.034	.10	.22	4.4	.08			337	1047	2214				594	113		41	4.4	78	
BCD45300	429.30	430.80	1.50	.128	1.03	.50	9.6	.14			1275	10321	5016				759	70		45	9.6	138	
BCD45301	430.80	432.30	1.50								18	55	83				120	111		1	0.1	59	
BCD45302	432.30	433.80	1.50								18	137	76				154	107		1	0.1	74	
BCD45303	433.80	435.30	1.50								16	37	86				222	73		2	0.3	63	
BCD45304	435.30	436.80	1.50								70	1184	136				360	76		5	0.5	80	
BCD45305	436.80	438.30	1.50								47	211	116				346	62		43	0.9	102	
BCD45306	438.30	439.80	1.50								15	138	74				152	62		2	0.1	103	
BCD45307	439.80	441.30	1.50								20	64	101				331	93		2	0.1	76	
BCD45308	441.30	442.40	1.10	.004	.10	.01	0.4	.14			37	97	140				436	55		13	0.4	140	
BCD45309	442.40	443.40	1.00	.004	.28	.02	1.1	.12			44	2799	185				290	89		10	1.1	122	

Sample	From (m)	To (m)	Length (m)	CU %	ZN %	PB %	AG G/T	AU G/T	SB %	AS %	CU PPM	ZN PPM	PB PPM	S.G.	AG OZ/T	AU OZ/T	AS PPM	BA PPM	BA %	SB PPM	AG PPM	AU PPB
BCD45310	443.40	444.60	1.20	.157	2.16	.40	31.5	.34			1565	21580	4035				1862	26		150	31.5	337
BCD45311	444.60	445.60	1.00								56	1537	215				354	83		5	0.3	19
BCD45334	445.60	446.20	0.60								55	732	1141				788	58		6	0.5	86
BCD45312	446.20	446.70	0.50	.083	.66	.48	7.8	.10			833	6632	4793				643	27		23	7.8	96
BCD45313	446.70	448.00	1.30								35	176	214				359	67		1	0.1	44
BCD45314	448.00	449.50	1.50								31	117	330				1579	46		1	1.1	26
BCD45315	449.50	451.00	1.50								31	126	94				391	29		1	0.1	37
BCD45316	451.00	451.90	0.90								40	70	105				948	38		1	1.1	28
BCD45317	451.90	453.40	1.50								62	102	190				793	63		1	0.8	82
BCD45318	453.40	454.30	0.90	.069	.79	.71	8.1	.09			693	7858	7089				664	63		26	8.1	85
BCD45319	454.30	455.80	1.50								43	165	282				288	89		4	0.1	46
BCD45320	455.80	457.30	1.50								28	113	112				143	121		1	0.2	31
BCD45321	457.30	458.80	1.50								10	80	74				103	113		1	0.2	29
BCD45322	458.80	460.30	1.50								19	165	141				233	112		1	0.3	42
BCD45323	460.30	461.80	1.50	.016	.13	.16	2.7				164	1308	1571				263	89		5	2.7	27
BCD45324	461.80	463.30	1.50	.015	.20	.30	3.6				148	1967	3059				376	37		12	3.6	60
BCD45325	463.30	464.80	1.50	.061	.38	.50	9.7				614	3787	4968				340	73		39	9.7	68
BCD45326	464.80	466.30	1.50	.009	.09	.17	2.9				86	871	1706				313	66		5	2.9	80
BCD45327	466.30	467.80	1.50	.017	.04	.12	2.7				167	402	1234				383	68		10	2.7	121
BCD45328	467.80	469.40	1.60	.056	.92	.37	9.3				555	9240	3727				505	53		41	9.3	184
BCD45329	478.30	479.30	1.00	.067	1.41	1.4	19.5				667	14183	14006				877	29		104	19.5	163
BCD45330	479.30	480.00	0.70	.067	.27	.41	7.1				678	2748	4097				2984	88		75	7.1	141
BCD45331	480.00	481.50	1.50	.126	.90	1.57	16.3				1260	9025	15728				1441	65		206	16.3	192
BCD45332	481.50	483.00	1.50	.023	.72	.16	1.5	.12			227	7210	1624				623	45		26	1.5	115
BCD45333	483.00	484.50	1.50								61	529	459				462	67		7	0.2	68
BCD45335	491.70	493.20	1.50	.077	.33	.19	4.1	.07			768	3289	1909				510	56		28	4.1	65
BCD45336	493.20	494.70	1.50	.234	.40	.43	10.6	.07			2343	4043	4290				543	92		31	10.6	69
BCD45337	494.70	496.20	1.50	.077	.31	.30	11.1	.04			765	3127	2957				344	110		24	11.1	38
BCD45338	496.20	496.90	0.70								38	98	214				232	97		3	1.6	27
BCD45339	496.90	497.80	0.90	.114	.57	.38	9.1	.07			1138	5749	3824				637	43		54	9.1	71
BCD45340	497.80	499.30	1.50	.027	.11	.05	1.5	.05			267	1075	530				526	87		25	1.5	48
BCD45341	499.30	501.00	1.70	.046	.66	.15	3.0	.07			461	6576	1465				507	51		43	3.0	72
BCD45342	509.60	511.10	1.50								48	376	231				401	71		7	0.1	64
BCD45343	511.10	512.60	1.50								67	87	226				390	40		10	0.8	79
BCD45344	512.60	514.10	1.50	.012	.28	.19	3.1	.31			118	2780	1862				594	29		26	3.1	310
BCD45345	514.10	515.50	1.40								101	1018	823				407	63		11	1.4	143
BCD45346	515.50	516.50	1.00								119	930	1386				153	57		7	1.5	75
BCD45347	593.00	595.30	2.30								32	221	100				38	80		1	0.9	2

APPENDIX C

STATEMENT OF QUALIFICATIONS

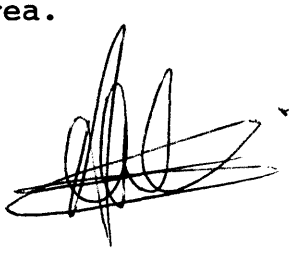
STATEMENT OF QUALIFICATIONS

I, Alan R. Hill hereby certify that:

1) I hold a Bachelor of Science degree (Geology Major) obtained in 1984 from the University of Western Ontario, in London.

2) I have practised my profession in minerals exploration continuously since graduation.

3) I have personally supervised the work reported herein, in the field, and have based my recommendations on that work, my knowledge of the area, and previous experience in the area.



Alan R. Hill, B.Sc.
Vancouver, B.C.

Fast action extinguishes car fire

ANN PIPER

Prompt and effective action on the part of a number of passersby stopped a car fire on Barriere Lakes Road Aug. 7 before it could spread to underbrush and timber in its immediate area.

The excitement began a few minutes before 11 a.m., that day, when a 16-year-old Barriere-area driver lost control of the 1989 Eagle Vista his was driving, police reported.

Eastbound, the car went into the right-hand ditch and caught fire. Neither the driver nor a 15-year-old passenger was injured in the incident. Ray Left

Others arriving on the scene attacked the blaze with fire extinguishers and other tools before Barriere resident Wally Welz passed by in his Tri-Service septic tank pumper truck. Welz proceeded to the Barriere Landfill site, disposed of his cargo, filled his tank with water from a nearby source and returned to quell the blaze.

Police report the car is a total write-off, but after completing their investigation of the matter, Barriere RCMP indicate no charges will be laid.

MINERAL & PLACER RESERVE
B.C. REG 26/95
1995 JAN 23
NO STAKING

MINERAL AND PLACER RESERVE
OIC 1310, 87-07-07
NO STAKING

MINERAL RESERVE
B.C. REG. 78/91
1991-MAR.-19
NO STAKING

MINERAL & PLACER RESERVE
B.C. REG. 212/89, 89-07-28
NO STAKING

MINERAL & PLACER RESERVE
B.C. REG 26/95
1995 JAN 23
NO STAKING

PROVINCE OF
BRITISH COLUMBIA

MINISTRY OF
ENERGY, MINES AND
PETROLEUM RESOURCES

MINERAL TITLES REFERENCE

MAP 092P09E

U.T.M. ZONE 10

LAST MAP UPDATE: 1995 NOV 28

ORIGINAL PRODUCED AT 1:31680

METRES
500 0 500 1000 1500 2000

ADMINISTRATIVE AREAS

MINING DIVISIONS: KAMLOOPS

LAND DISTRICTS:

inches
0 1 2
0 1 2 3 4 5
centimetres

This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

ALIENATIONS

NO STAKING AREAS

NO STAKING RESERVES
PARKS
ECOLOGICAL RESERVES
RECREATION AREAS
INDIAN RESERVES

CONDITIONAL AREAS

SUBJECT TO CONDITIONS RESERVES

SECTION 19 RECREATION AREAS

1 POST CLAIM AREAS

AREAS SUBJECT TO
URANIUM / THORIUM
REGULATIONS

MINERAL TENURE

MINERAL CLAIM	
MINERAL LEASE	
INDUSTRIAL MINERAL CLAIM	
CLAIM NAME	EXAMPLE
TITLE NUMBER	345679
OLD TITLE NUMBER	*3456*
TAG NUMBER	100000
LEGAL POST	⊙
WITNESS POST	** ○
FORFEITED TENURE	C
VERIFIED	VER
SURVEYED	SUR
REVERTED C.G. MINERAL CLAIM	REV CG OR RCG
CROWN GRANTED	C G
OPEN FOR STAKING	O.F.S.

1 UNIT 2 POST CLAIM OLD 2 POST CLAIM

THIS MAP IS PREPARED ONLY AS A GUIDE TO THE LOCATION OF MINERAL TENURE AS AS SHOWN ON THE LOCATOR'S SKETCHES. FOR CURRENT OR MORE SPECIFIC INFORMATION, APPLICATION SHOULD BE MADE TO THE MINING DIVISION CONCERNED.

INDEX TO ADJOINING MAPS

092P16W	092P16E	082M13W
092P09W	092P09E	082M12W
092P08W	092P08E	082M05W

092P09E

005058