

LOG NO: 0609	RD.
ACTION:	
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Drilling Report on the CC 1, CC 2 and CC 3 Claims

Kamloops Mining Division

NTS: 92P/8E

Lat: 51° 22' N

Long: 120° 04' W

Owner:

Minnova Inc.

Operator:

Minnova Inc. TECHNICAL BRANCH
ASSESSMENT REPORT

18,818

D. W. Blackadar
Minnova Inc.
May 16, 1989

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I. Introduction

The CC 1, CC 2 and CC 3 claims are part of the Chu Chua property located on Chu Chua Mountain about 22 kilometres north of the town of Barriere, B.C. This property is part of an extensive package of mineral claims held by Minnova Inc. in the Barriere area. These holdings are underlain by Paleozoic age felsic to mafic volcanic rocks of the Eagle Bay Assemblage and the Fennel Formation which are highly prospective for volcanogenic massive sulphide deposits. The CC 1, 2 and 3 claims host the Chu Chua massive sulphide deposit which consists of 2 million tonnes grading 2% Cu, 0.4% Zn, 0.4 g/T Au and 8 g/T Ag. This deposit is hosted by massive and pillowed basalts of the upper division of the Fennel Formation.

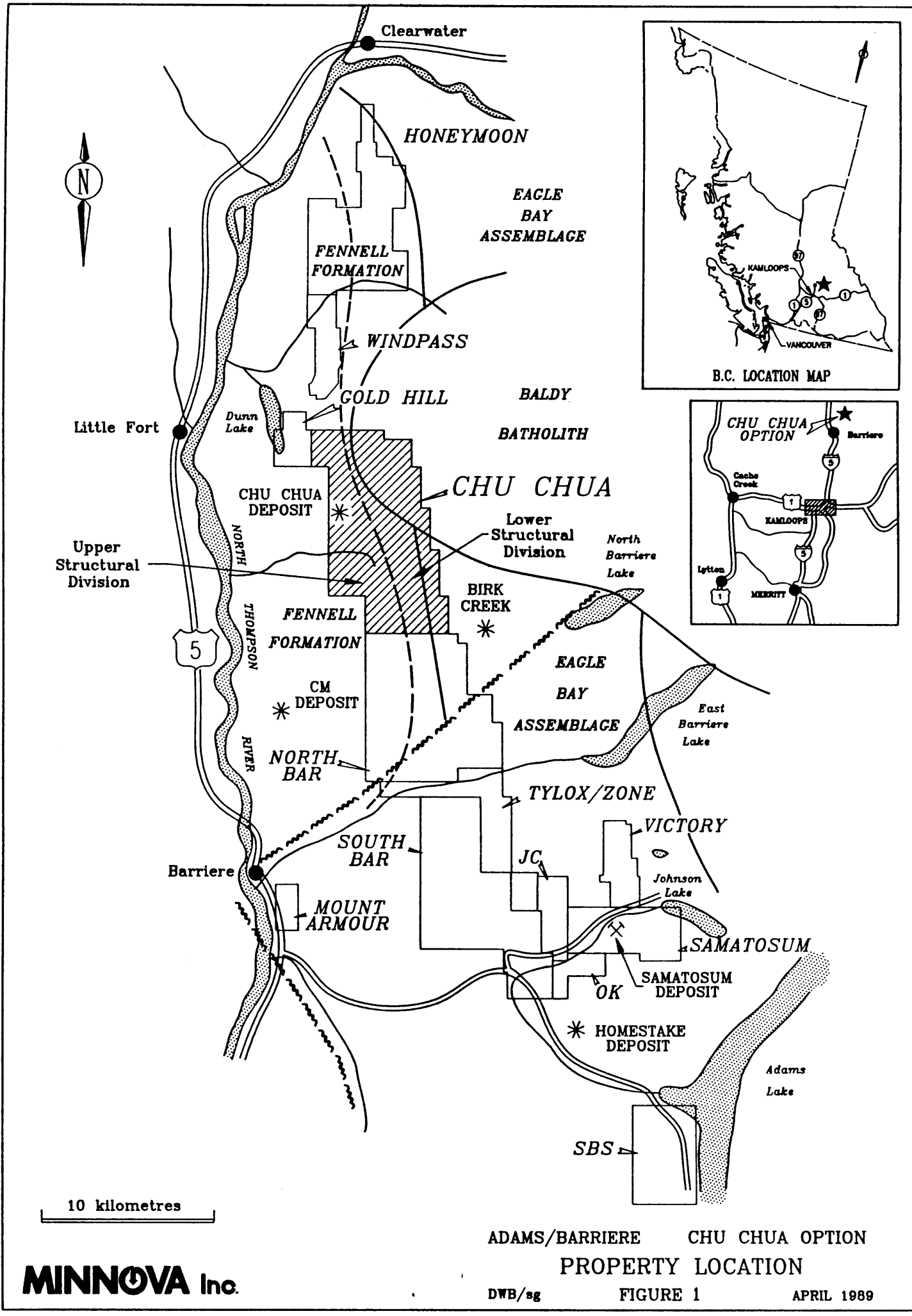
The Chu Chua property is jointly owned by Pacific Cassiar Limited of Calgary, International Vestor Resources Ltd. (formerly Vestor Explorations Limited) of Richmond and Quinterra Resources Inc. of Vancouver. Minnova Inc. is earning a 50% interest in the property and is operating ongoing exploration programs.

This report presents the results of part of a small diamond drilling program carried out on the Chu Chua deposit between September 8 and October 2, 1988. This program consisted of 13 NQ holes totalling 1152 m. Drill core from those holes is stored at Minnova's warehouse facility in Barriere.

II. Location, Access and Physiography (Figure 1)

The CC 1, 2 and 3 claims are situated on the top of Chu Chua Mountain about 22 kilometres north of the town of Barriere. Access into the property from Barriere is along the North Barriere Lake road to the Birk Creek turn off (25 km), and then along the Birk Creek logging road for about 17 kilometres.

Much of the property lies on the south facing slope of Chu Chua Mountain, with elevations ranging from 1372 m to 1890 m.



ADAMS/BARRIERE CHU CHUA OPTION
PROPERTY LOCATION

The property is generally forested with subalpine vegetation but has locally undergone clearcut logging. Sparse alpine vegetation is present at higher elevations.

The property is snowbound for much of the year and exploration is generally restricted to the period from late May to mid September.

III Claim Status (Figure 2)

The CC 1-3 claims are part of the Deposit Group (#2375, October 7, 1987) comprising the CC 1, 2, 3, 4, 8 and 10 claims for a total of 58 units. Current claim status is summarized in Table 1.

Table 1

CLAIM STATUS

<u>Claim</u>	<u>Record No.</u>	<u>No. of Units</u>	<u>Expiry Date</u>
CC-1	1154	16	98/03/02
CC-2	1373	4	98/08/22
CC-3	1374	3	98/08/22

IV General Geology (Figure 3)

The Chu Chua property is underlain primarily by rocks of the upper Paleozoic age Fennel Formation which is an internally imbricated oceanic sequence consisting of tholeiitic basalt, chert, gabbro, rhyolite and a variety of sediments including argillite, sandstone and conglomerate. The Fennel Formation has been divided into an upper structural division consisting predominantly of pillow basalt, gabbro and minor chert, and lower structural

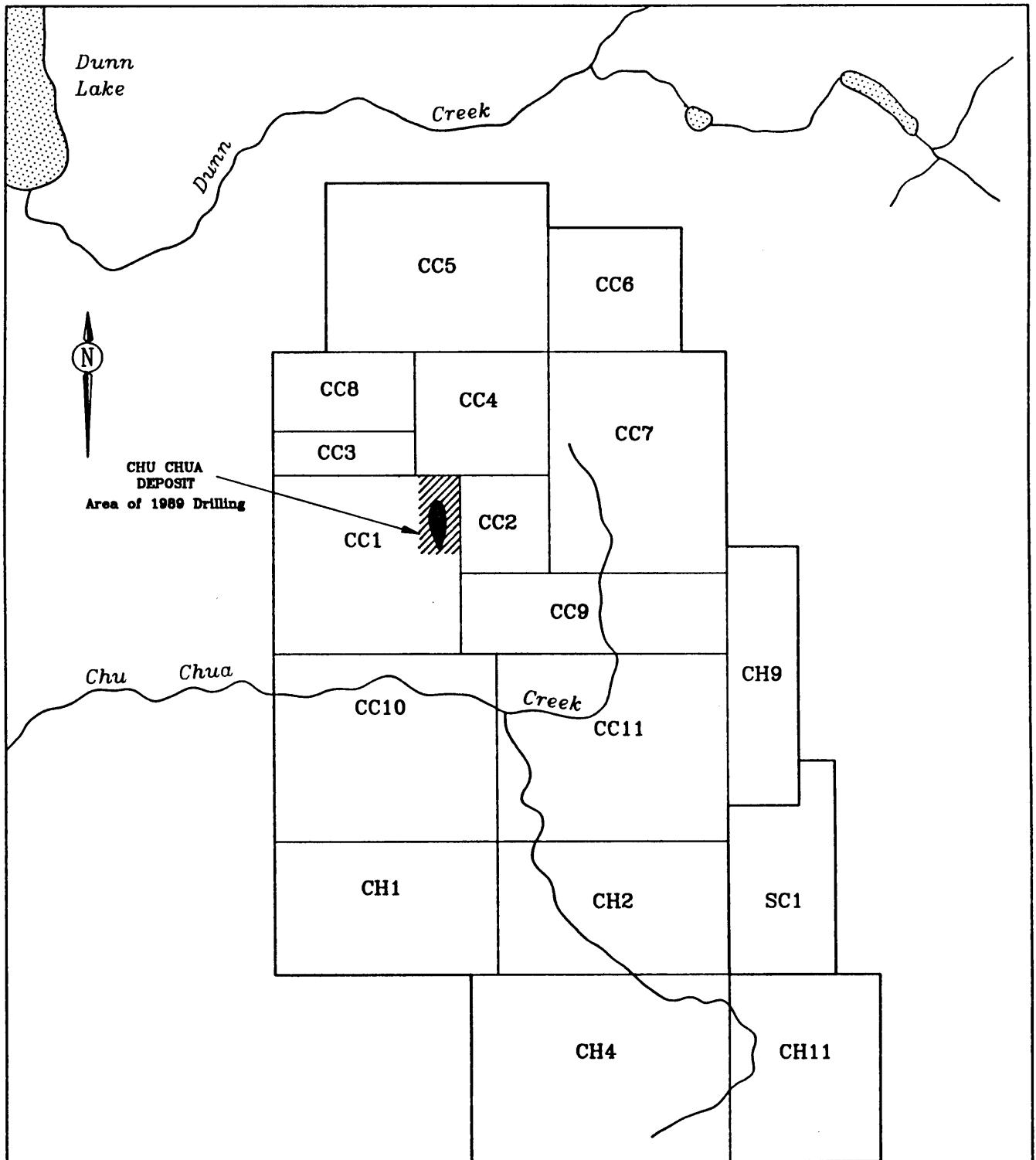
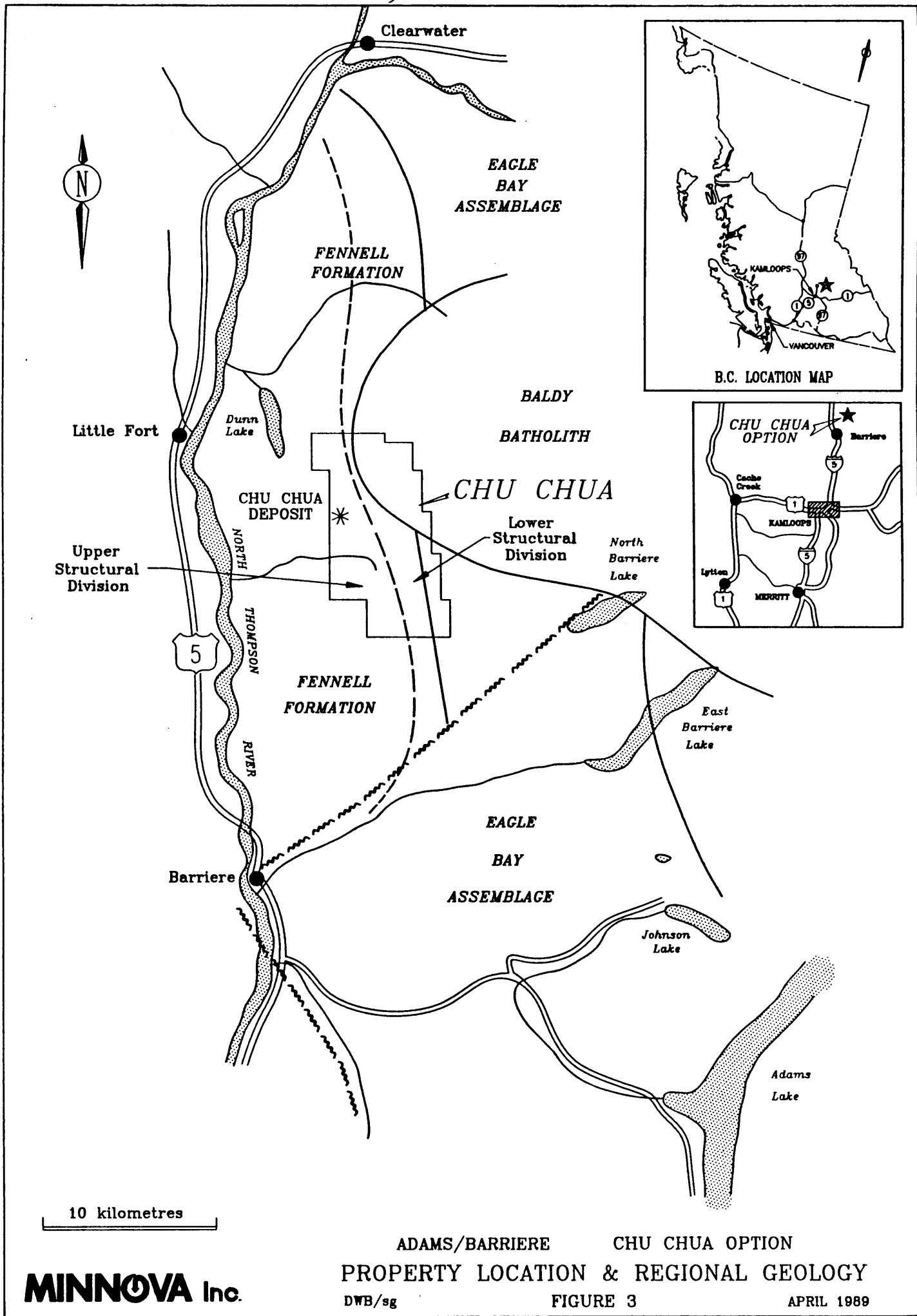


FIGURE 2
 CHU CHUA OPTION
 CLAIM CONFIGURATION
 & INDEX MAP



MINNOVA Inc.

ADAMS/BARRIERE CHU CHUA OPTION
PROPERTY LOCATION & REGIONAL GEOLOGY

DWB/sg

FIGURE 3

APRIL 1989

division dominated by rhyolite, chert and sedimentary rock. Rhyolite domes are common in this sequence.

The CC 1, 2 and 3 claims are underlain primarily by massive and pillowed basalts of the upper structural division of the Fennel Formation. These rocks are interbedded with well developed chert units up to 60 m thick.

The Chu Chua deposit (Figures 4 and 5) consists of two large massive sulphide pods known as the North and Main Lenses, and a smaller pod known as the South Lens. These pods consist predominantly of massive pyrite with local concentrations of massive magnetite and talc. Base metal sulphides consisting predominantly of chalcopyrite with minor dark brown sphalerite occur within and interstitial to pyrite grains in the massive sulphide sections. Talc-magnetite zones are generally relatively barren, although magnetite lenses may contain discrete bodies of pyrite-chalcopyrite and grade accordingly.

In general, the deposits plunge steeply to the south and are thickest at surface (up to 50 m in the Main Lens) narrowing with depth. The deposits are associated with a thick cherty unit which has been traced along strike to the north. This unit is well developed in the footwall of the Main Lens and envelopes the North Lens.

V. Exploration History

Work carried out in the Chu Chua area in 1977 by International Vestor Resources Ltd., outlined a small copper gossan associated with a north-striking massive magnetite body. In 1978, the property was optioned to Craigmont Mines Limited and subsequent drilling resulted in the discovery of massive sulphide mineralization. To the end of 1979, approximately 5776 metres of diamond drilling were completed on the property by Craigmont. This work resulted in the delineation of 2 million Tonnes of reserves

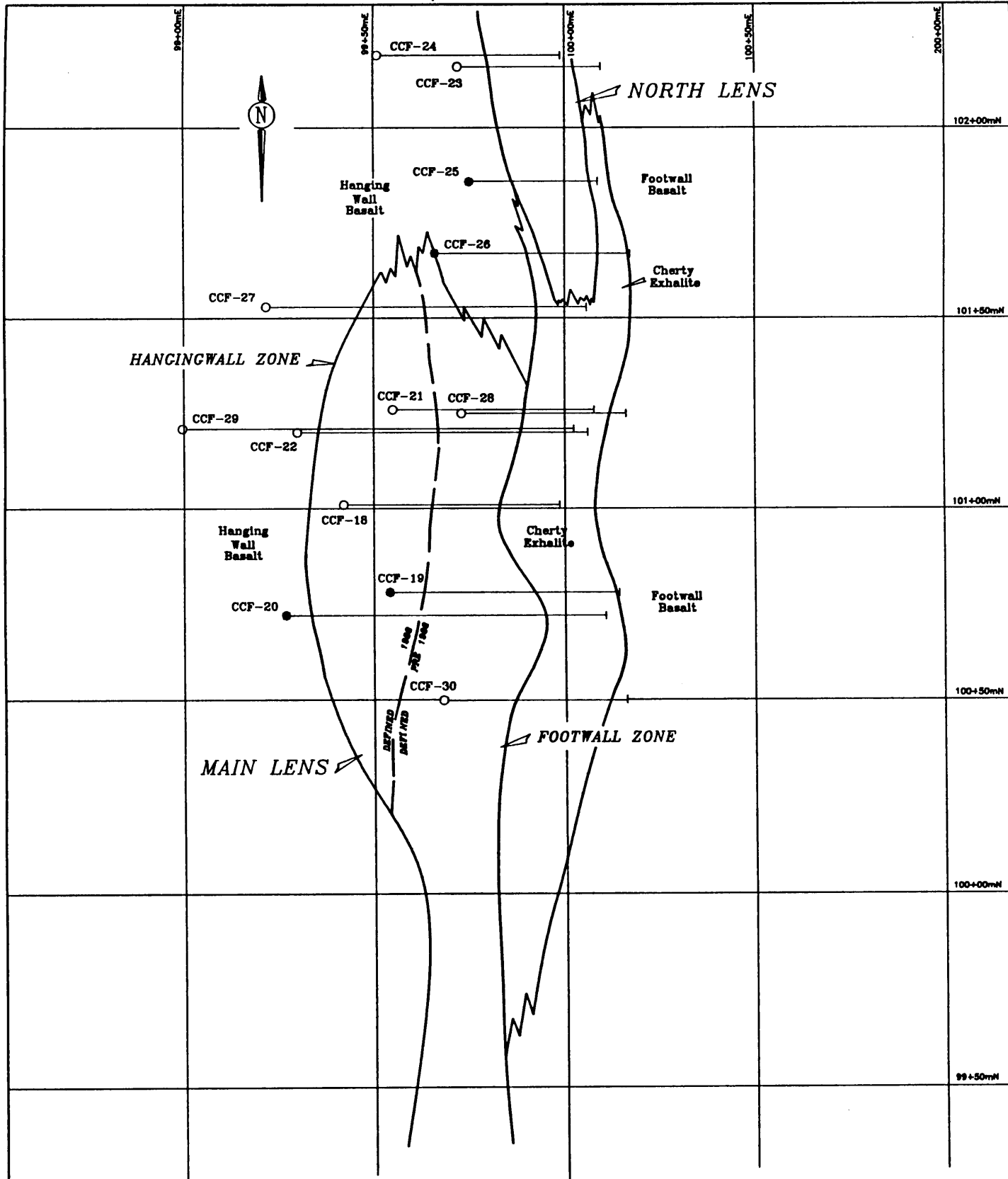
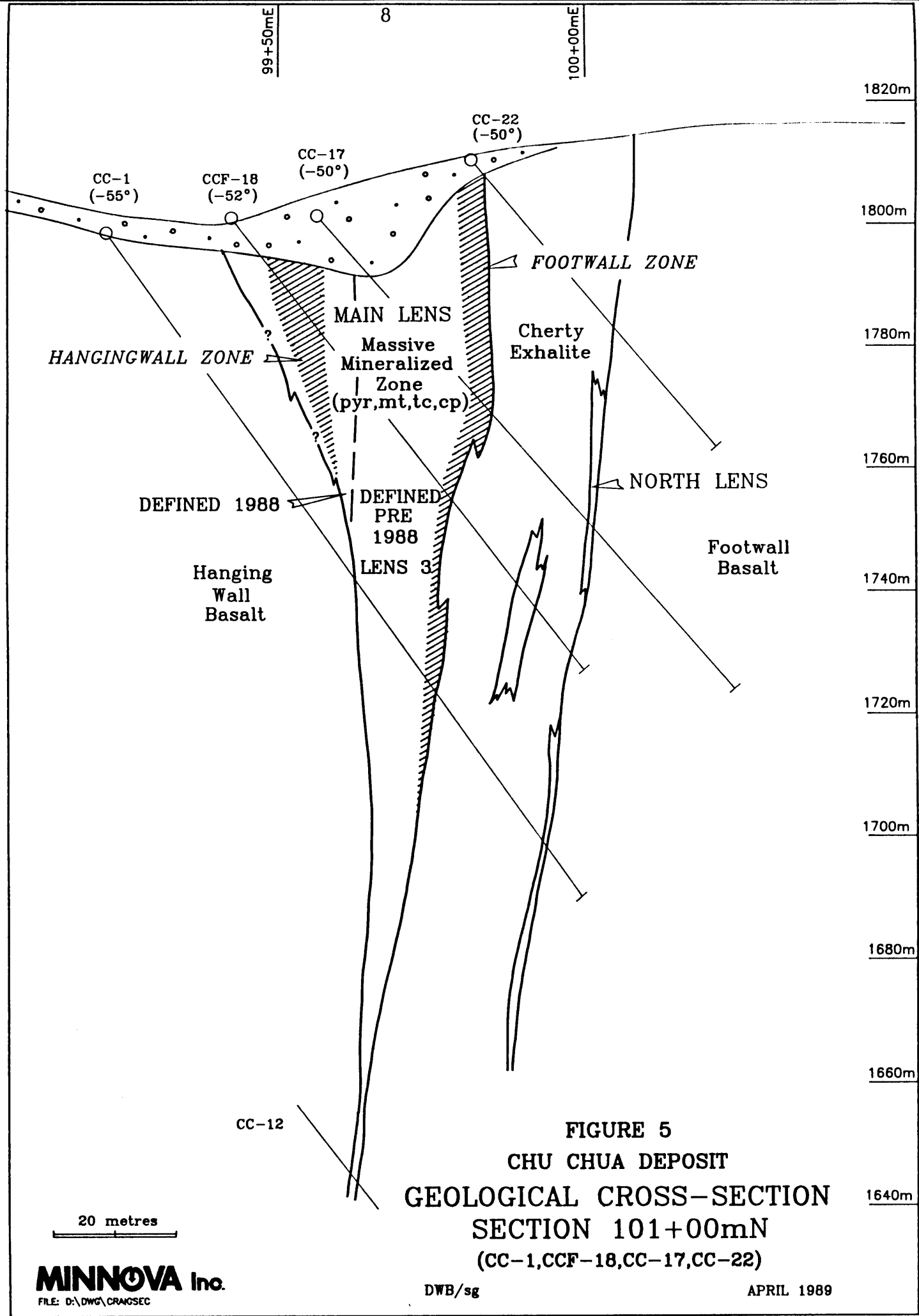


FIGURE 4
 CHU CHUA OPTION
 DRILL HOLE PLAN WITH
 SURFACE GEOLOGY



grading 2% Cu, 0.4% Zn, 0.4 g/T Au and 8 g/T Ag. Craigmont also established extensive grid coverage on the property and completed soil and geophysical surveys.

In 1985, the CC property was optioned to Corporation Falconbridge Copper, now Minnova Inc. Minnova has established a number of grids on the property and has completed geological mapping, Max/Min surveying and local soil geochem surveys. Seventeen drill holes totalling 2400 m were drilled to test reconnaissance targets in 1985, 1986 and 1987.

VI. 1988 Diamond Drill Program

1. Description

Drilling carried out on the deposit in the late 1970's by Craigmont Mines defined two areas (Main and North Lenses) of relatively thick, high grade Cu mineralization occurring within 100 m of surface. This mineralization occurs over a strike length of about 200 m and is thought to be potentially open pittable. Minnova's 1988 drill program, carried out between September 8 and October 2, was designed to test the continuity of grade and thickness in this area by establishing drill intercepts at an average 25 m spacing. This program consisted of 13 NQ holes totalling 1152 metres. This report includes the results of four of these holes: CCF 19 and 20, drilled to test the Main Lens and CCF 25 and 26 drilled to test the North Lens. Drill logs, including dip test results and analytical data, are summarized in Appendix III. Collar locations are shown on Figure 6 and at 1:2500 scale.

Assay and geochemical analyses undertaken in conjunction with the drilling program were carried out by Min-En Labs of North Vancouver, B.C. Mineralized samples from the North and Main Lenses were analyzed geochemically for Cu, Zn, Ag and Au. High Au (>400

ppb) and Cu (>10000 ppm) values were then re-run by assay. Specific gravity measurements were also taken on all mineralized samples.

2. Results

The 1988 drill program was successful in upgrading reserve estimates and in improving our knowledge of the geology and configuration of the deposit. The most significant results of the program are as follows:

1. The western margin of the Main Lens had not been defined by Craigmont during the initial drill programs. The 1988 program defined this margin and added significant tonnage to the deposit. (Figures 4 and 5)
2. Mineralization in the Main Lens was found to be concentrated in two main areas known as the Footwall Zone and the Hangingwall Wall Zone (Figure 5). The Footwall Zone is continuous and well developed along the Footwall contact of the lens, but is highly variable in thickness. This zone has an average thickness of about 7.2 m and contains the highest grade mineralization in the deposit. The Hanging wall zone is thinner, less continuous and lower grade, and averages about 4.5 m in thickness.

VII. Summary and Conclusions

The 1988 drilling program has added significantly to our geological knowledge of the Chu Chua deposit and has improved reserve estimates. The near surface parts of the deposit are still open to the north and south however, and further drilling is required to define potentially open pitable reserves.

Appendix I

Itemized Cost Statement

Itemized Cost Statement

Diamond Drilling

Tonto Drilling Ltd., Burnaby, B.C.

Longyear 38 Drill: 328.8 m @ \$80/m \$26,304

Analytical

Min-En Labs, North Vancouver, B.C.

116 assays for Cu, Zn, Ag, Au and S.G. @ 36.75 \$4236

Personnel

D. W. Blackadar

Senior Project Geologist 1 day @ \$350/day \$350

G. Sharp

Field Geologist 6 days @ \$250/day \$1500

L. Holder

Junior Assistant 6 days @ \$150/day \$900

\$33,317

Appendix II

Statement of Qualifications

STATEMENT OF QUALIFICATIONS

I, Donald William Blackadar of 3838 Regent Avenue, North Vancouver, B. C. do hereby certify that:

1. I graduated from the University of Calgary with a BSc. in Geology in 1975 and from the University of Alberta with a M.Sc. in Geology in 1981.
2. I have been a professional geologist registered in the Province of Alberta since 1978.
3. I have been employed on a full time basis in my profession since April 1975 and I am currently employed as a Senior Project Geologist by Minnova Inc. of 3rd Floor - 311 Water St., Vancouver, B.C.
4. Work reported in this volume was carried out under my direct supervision.

Date: May 17, 1987

Signature: D. W. Blackadar
D. W. Blackadar

STATEMENT OF QUALIFICATIONS

I, Shelley R. Lear certify that:

1. I am an exploration geologist residing at 2393 W. 6th Ave., Vancouver, B.C.
2. I have a BSc. in Geology from the University of British Columbia (1981).
3. I have practised my profession since 1981.
4. I personally carried out or supervised the work reported herein.

Date:

May 17, 1989

Signature:

Shelley R. Lear
S. R. Lear

STATEMENT OF QUALIFICATIONS

I, Grant Sharp, of 941 Brucedale Ave., E. Hamilton, Ontario certify that:

1. I graduated from the University of Western Ontario in 1988 with a BSc. in Geology.
2. I was employed by Minnova Inc. as a field geologist from May to November, 1988.
3. I personally carried out or supervised the work reported herein.

Date:

May 17, 1989

Signature:

Grant Sharp
Grant Sharp

Appendix III

Drill Logs (including analytical results)

(CCF 19, 20, 25, 26)

MINNOVA INC.
DRILL HOLE RECORD

HOLE NUMBER: CCF-19

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: CHU CHUA PLOTTING COORDS GRID: MAIN ALTERNATE COORDS GRID: COLLAR DIP: -47x 0' 0"
 PROJECT NUMBER: NORTH: 10078.50N NORTH: 100+79M LENGTH OF THE HOLE: 87.40m
 CLAIM NUMBER: EAST: 9951.90E EAST: 99+55E START DEPTH: 0.00m
 LOCATION: CHU CHUA MAIN ELEV: 1803.50 ELEV: 1801.00 FINAL DEPTH: 87.40m

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

DATE STARTED: September 12, 1988 COLLAR SURVEY: YES PULSE EM SURVEY: NO CONTRACTOR: TONTO DRILLING
 DATE COMPLETED: September 13, 1988 MULTISHOT SURVEY: NO PLUGGED: NO CASING: 18.9M
 DATE LOGGED: 0, 0 RQD LOG: NO HOLE SIZE: NO CORE STORAGE: BARRIERE

PURPOSE: TO DELINEATE CHU CHUA COPPER DEPOSIT.

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
42.60	-	-47x 0'	ACID	OK		-	-	-	-	-	
79.20	-	-47x 0'	ACID	OK		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
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MINNOVA INC.
DRILL HOLE RECORD

HOLE NUMBER: CCF-19

DATE: 5-May-1989

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 18.90	CASING .08/					
18.90 TO 48.40	MASSIVE SULPHIDE .ass/	Colour - brassy yellow. Grain Size - fine. Mostly pyrite. Minor magnetite, some chalcopyrite rich sections.			.95% py; 3% cpy, 2% mgt/ 32.8 - 37.8 85% pyrite, 10% chalcopyrite, 5% magnetite. 37.8 - 40.0 95% pyrite, 5% chalcopyrite. 44.2 - 44.4 10% magnetite; minor quartz veins. 45.2 Trace brown sphalerite in fine grained pyrite.	22.5 - 32.8 Very broken core. Possible fault.
48.40 TO 66.40	CHERT AND BASALT .cht bslt/	Colour - grey, green. Grain Size - fine. Mostly grey chert with minor silicified basalt. 59.4 - 61.1 Fault breccia, grey chert frags in pyritic gouged matrix. Moderately well healed. 66.0 - 66.4 Pyritic fault breccia.		59.5 - 59.7 Quartz-carbonate vein in fault. 65.6 - 66.0 Strong quartz-carbonate veining.	.10% py/ Pyrite as fine grained stringers; especially in cherty sections.	59.4 - 61.1 .FLT/ Fault breccia.
66.40 TO 70.30	MASSIVE SULPHIDE .ass/	Colour - brassy yellow. Grain Size - fine. Mostly fine grained pyrite. Minor chalcopyrite over lower in.		Occasional thin quartz veins & patches.	.98% py, tr cpy/	

HOLE NUMBER: CCF-19

DRILL HOLE RECORD

LOGGED BY: S. LEAR

PAGE: 2

HOLE NUMBER: CCF-19

MINNOVA INC.
DRILL HOLE RECORD

DATE: 5-May-1989

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE: TO CA:	ALTERATION	MINERALIZATION	REMARKS
70.30 TO 87.50	BASALT .fv bslt/	Colour - grey-green. Grain Size - fine. Basalt. Occasional varioles over lower 4.0m. silicified near upper contact.		SI thin quartz veins @ 50 + 20 degrees to C.A. 70.3 - 71.0 Highly silicified grey basalt.	70.3 - 71.0 10% pyrite stringers.	71.0 - 72.8 Broken core.
	E. D. H.					

HOLE NUMBER: CCF-19

DRILL HOLE RECORD

LOGGED BY: S. LEAR

PAGE: 3

Sample	From (m)	To (m)	Length (m)	ASSAYS						SG SG	COMMENTS
				Cu %	Pb %	Zn %	Ag g/T	Au g/T	SG		
17505	19.90	20.50	1.60	.64	.01	.06	5.4	.18			
17506	20.50	22.00	1.50	.54	.01	.05	5.3	.28			
17507	22.00	23.50	1.50	.79	.01	.06	6.4	.3			
17508	23.50	25.00	1.50	3.15	.01	.62	16.5	.3	4.68		
17509	25.00	28.00	3.00	2.73	.01	.26	9.6	.61	4.66		
17510	28.00	29.50	1.50	2.37	.01	.07	7.4	.27	4.62		
17511	29.50	31.50	2.00	4.32	.01	.24	11.9	.21	4.68		
17512	31.50	33.00	1.50	6.90	.01	.2	17.3	.23	4.44		
17513	33.00	34.50	1.50	6.49	.01	.41	19.8	.36	4.62		
17514	34.50	36.00	1.50	7.18	.01	.23	20.7	.39	4.44		
17515	36.00	37.50	1.50	6.52	.01	.3	19.9	.52	4.67		
17516	37.50	39.00	1.50	5.02	.01	.06	15.8	.26	4.67		
17517	39.00	40.50	1.50	5.18	.01	.09	14.3	.39	4.68		
17518	40.50	42.00	1.50	3.88	.01	.07	10.4	.31	4.65		
17519	42.00	43.50	1.50	4.62	.01	.1	13.7	.38	4.2		
17520	43.50	45.00	1.50	2.36	.01	.06	7.8	.29	4.48		
17521	45.00	46.50	1.50	1.89	.04	.44	15.7	1.92	4.71		
17522	46.50	48.50	2.00	1.53	.01	.14	6.9	1.24	4.65		
17534	48.50	50.00	1.50	0.07	.01	.09	1.2	0.08			
17535	50.00	51.50	1.50	0.01	0.00	0.0	.50	.01			
17536	51.50	52.40	0.90	0.01	0.0	0.0	.6	0.01			
17537	52.40	53.75	1.35	0.00	0.00	0.00	0.4	0.01			
17538	53.75	54.20	0.45	0.01	.0	0.0	1.2	0.07			
17539	54.20	53.70	-0.50	0.01	0.0	0.0	0.5	0.02			
17540	55.70	59.00	3.30	0.01	0.0	0.01	0.8	0.03			
17541	59.00	60.50	1.50	0.06	0.0	0.02	0.9	0.04			
17542	60.50	62.00	1.50	0.08	0.0	0.03	0.9	0.06			
17543	62.00	63.50	1.50	0.12	0.0	0.06	1.2	.05			
17544	63.50	64.90	1.40	0.05	0.0	0.01	1.2	0.01			
17545	64.90	66.40	1.50	0.12	0.0	0.02	2.52	.08			
17523	66.40	68.00	1.60	1.48	0.01	0.08	11.1	0.35	4.56		
AVE.	66.40	70.30	3.90	1.59	0.02	0.27	11.75	0.73	4.54		
17524	68.00	70.30	2.30	1.67	0.03	0.40	12.2	1.0	4.53		
AVE.	23.50	48.40	24.90	4.14	0.01	0.22	13.44	0.52	4.60		
AVE.	23.50	48.50	25.00	4.13	0.01	0.22	13.41	0.53	4.60		
AVE.	23.50	48.50	25.00	4.13	0.01	0.22	13.41	0.53	4.60		

Sample	From (m)	To (m)	Length (m)
17525	77.00	80.00	3.00

MINNOVA INC.
DRILL HOLE RECORD

HOLE NUMBER: CCF-20

IMPERIAL UNITS: METRIC UNITS: I

PROJECT NAME: CHU CHUA PLOTTING COORDS GRID: CC MAIN ALTERNATE COORDS GRID: COLLAR DIP: -45x 0' 0"
 PROJECT NUMBER: 321 NORTH: 10071.20N NORTH: 100+75N LENGTH OF THE HOLE: 114.00m
 CLAIM NUMBER: EAST: 9927.50E EAST: 99+29E START DEPTH: 0.00m
 LOCATION: CC MAIN ELEV: 1799.50 ELEV: 1812.00 FINAL DEPTH: 114.00m

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

DATE STARTED: September 13, 1988
 DATE COMPLETED: September 14, 1988
 DATE LOGGED: 0, 0

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

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

CONTRACTOR: TONTO DRILLING
 CASING: 11.3M
 CORE STORAGE: BARRIERE

PURPOSE: TO DELINEATE CHU CHUA DEPOSIT.

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
42.60	-	-47x 0'	ACID	OK		-	-	-	-	-	
79.20	-	-47x 0'	ACID	OK		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
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MINNOVA INC.
DRILL HOLE RECORD

HOLE NUMBER: CCF-20

DATE: 5-May-1989

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE: TO CA:	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 11.30	CASING .OB/					
11.30 TO 15.50	HANGINGWALL BASALT .hw bsit/	Colour - light grey. Grain Size - very fine grained. - massive. Fractures	45	- silicified moderately - "black" micaceous	- barren	
15.50 TO 68.20	PYRITIC ZONE .py mss/	Colour - metallic py Grain Size - very fine grained. - massive - throughout mottled tex. of massive pyrite (differential cooling - larger grain size)			.85-90% py, 1-2% cpy, 5-10% mt/ 85-90% pyrite, 1-2% chalcopyrite, 5-10% magnetite. 60.5 - 62.7 95-98% magnetite.	- chalcopyrite occurring mainly as stringers on as blobs 1-3mm.
68.20 TO 69.20	SILICIFIED BASALT .bsit/	Colour - grey, blotchy dark green. Grain Size - fine grained. - tectonically brecciated basalt		.silicification/ - silicification - matrix of tec. breccia chlorite	- possible Mo >1% - 1% - but too dull (graphite)	- gradational contact below pyrite zone and silicified basalt
69.20 TO 77.50	MAGNETITE CHALCO-PYRITE .mt cpy/	Colour - black + metallic bronze. Grain Size - very fine grained. - massive magnetite - blobby chalcopyrite		- quartz veining 1-4cm, 1-2% containing chlorite, graphite, some disseminated pyrite	.40-50% mt, 30-35% py, 10-15% cpy/ 40-50% magnetite, 30-35% pyrite, 10-15% chalcopyrite.	
77.50 TO 84.70	CHERTY EXHALITE .exh/	Colour - light grey. Grain Size - very fine grained. - tectonically brecciated - possible bedding @	45	- very silicified - chlorite around tec. brecciated clasts	.str. py 5-6%/ - stringer pyrite 5 to 6%	
84.70 TO 94.90	PYRITIC ZONE .py mss/	Colour - metallic py. Grain Size - very fine grained.			.90-95% py, 3-5% SiO2, tr -1% cpy/ 90-95% pyrite, 3-5% SiO2, trace to 1% chalcopyrite. 89.0 - 89.3	

HOLE NUMBER: CCF-20

DRILL HOLE RECORD

LOGGED BY: G. SHARP

PAGE: 2

HOLE NUMBER: CCF-20

MINNOVA INC.
DRILL HOLE RECORD

DATE: 5-May-1989

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE: TO CA:	ALTERATION	MINERALIZATION	REMARKS
					90-95% SiO ₂ , 5% pyrite - could be exhalitic small lense	
94.90 TO 114.00	FOOTWALL BASALT fw basalt/	Colour - light grey to light green. Grain Size - very fine grained. 89.8 - 100.5 - tectonically brecciated, intense silicification 100.5 - 114.8 - barren footwall basalt - varolitic textures		- silicification - "black mica" within interstitial cracks and fissures	- trace amounts of pyrite	
	E. O. H.					

HOLE NUMBER: CCF-20

DRILL HOLE RECORD

LOGGED BY: G. SHARP

PAGE: 3

Sample	From (m)	To (m)	Length (m)	ASSAYS					SG	COMMENTS
				Cu I	Pb I	Zn I	Ag g/T	Au g/T		
12587	0.00	15.20	15.20	0	0	.01	3.2	.01		
22588	15.50	17.00	1.50	1.82	.01	.06	6.7	.35	4.64	
12589	17.00	18.50	1.50	2.81	.02	.04	7.3	.4	4.78	
12590	18.50	20.00	1.50	3.05	.02	.04	9.5	.37	5.25	
12591	20.00	21.50	1.50	1.87	.01	.03	8.1	.4	5.38	
12592	21.50	23.00	1.50	1.18	.01	.03	5.8	.39	5.44	
12593	23.00	24.50	1.50	1.36	.01	.04	6.2	.3	5.41	
12594	24.50	26.00	1.50	4.29	.01	.16	15.5	.27	4.78	
12595	26.00	27.50	1.50	.67	.01	.06	5.1	.28	5.34	
12596	27.50	29.00	1.50	.46	.02	.13	5.3	.3	5.23	
12597	29.00	30.50	1.50	.37	.02	.15	6.8	.34	5.44	
12598	30.50	32.00	1.50	.29	.01	.33	5.6	.24	4.64	
12599	32.00	33.50	1.50	2.42	.02	.19	11.4	.27	4.41	
12600	33.50	35.00	1.50	.918	.02	.15	8.4	.3	4.56	
18026	35.00	36.50	1.50	.82	.02	.3	7.9	.31	4.72	
18027	36.50	38.00	1.50	1.15	.03	.54	10.9	.28	4.66	
18028	38.00	39.50	1.50	1.39	.03	.31	15.8	.3	4.46	
18029	39.50	41.00	1.50	2.40	.03	.44	11.8	.34	4.64	
18030	41.00	42.50	1.50	.64	.01	.39	8.2	.32	4.79	
18031	42.50	44.00	1.50	.58	.01	.4	7.1	.3	4.65	
18032	44.00	45.50	1.50	.56	.01	.16	6.2	.33	4.67	
18033	45.50	47.00	1.50	1.18	.01	.18	6.3	.27	4.55	
18034	47.00	48.50	1.50	1.54	.01	.14	6.8	.22	4.6	
18035	48.50	50.00	1.50	1.63	.01	.04	8.5	.2	4.61	
18036	50.00	51.50	1.50	1.93	.01	.09	12.1	.26	4.52	
18037	51.50	53.00	1.50	2.07	.01	.31	6.3	.19	4.59	
18038	53.00	54.50	1.50	.71	0.01	0.84	3.5	0.15	4.4	
18039	54.50	56.00	1.50	0.94	0.01	0.22	4.9	0.13	4.64	
18040	56.00	57.50	1.50	1.04	.01	.2	5.7	.12	4.46	
18041	57.50	59.00	1.50	0.11	0.00	0.07	2.2	0.07	4.5	
18042	59.00	60.00	1.00	0.78	0.01	0.06	3.5	0.11	4.42	
18043	60.00	61.10	1.10	1.53	.01	.04	5.1	.1	4.39	
18044	61.10	62.70	1.60	.24	0	.01	2.3	.01	3.43	
18045	62.70	64.20	1.50	2.12	0	.01	6.9	.01	4.01	
18046	64.20	65.40	1.20	1.79	0.01	0.04	7.2	0.13	4.48	
18047	65.40	66.70	1.30	2.11	0.01	0.13	8.4	0.27	4.56	
18048	66.70	67.80	1.10	1.73	0.02	0.54	7.1	0.38	4.61	
18049	67.80	69.20	1.40	.06	0	.02	.5	.02	2.83	
18050	69.20	70.60	1.40	5.98		0.08	7.8	0.13	3.89	
18076	70.60	71.60	1.00	7.18	0.01	0.06	8.2	0.16	3.89	

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Sample	From (m)	To (m)	Length (m)	Cu %	Pb %	Zn %	Ag g/T	Au g/T	SG %
17551	71.60	72.90	1.30	0.01	0.00	0.01	1.20	0.01	
18077	72.50	73.90	1.40	0.753	0.01	0.05	2.3	0.04	3.54
18078	73.90	75.00	1.10	3.04	0.0	0.05	4.4	0.02	4.33
18079	75.00	76.50	1.50	4.09	0.01	0.08	4.7	0.28	3.71
18080	76.50	77.40	0.90	4.03	0.01	0.13	5.6	0.21	3.91
17552	77.40	80.60	3.20	0.27	0.0	0.01	0.9	0.02	
17553	80.60	83.10	2.50	0.11	0.00	0.0	0.6	0.01	
17554	83.10	84.60	1.50	0.03	0.0	0.01	1.5	0.04	
18081	84.60	86.00	1.40	3.33	0.02	0.11	18.3	0.98	4.85
AVE.	84.60	87.50	2.90	2.28					4.76
18082	86.00	87.50	1.50	1.260	01	0.11	12.9	0.79	4.68
18083	87.50	89.00	1.50	1.37	0.01	0.11	13.4	0.38	4.88
18084	89.00	91.30	2.30	0.81	0.01	0.03	7.2	0.22	3.24
18085	91.30	92.80	1.50	1.49	0.03	0.16	11.8	0.76	4.64
18086	92.80	94.90	2.10	1.96	0.03	0.34	13.3	0.35	4.65
17555	94.90	96.10	1.20	0.1	0.0	0.01	1.2	0.03	
18087	100.40	109.50	9.10	0.0	0.0	0.01	1.8	0.01	
AVE.	16.10	26.90	10.80	2.23	0.01	0.06	8.26	0.35	5.14
AVE.	17.00	26.00	9.00	2.43	0.01	0.06	8.73	0.35	5.17
AVE.	62.60	77.40	14.80	2.690	0.01	0.09	5.37	0.14	3.70
AVE.	62.70	77.40	14.70	2.706	0.01	0.10	5.39	0.14	3.71

Sample	From (z)	To (m)	Length (m)
12587	11.30	15.20	3.90
18049	67.80	69.20	1.40
18087	100.40	109.50	9.10

HOLE NUMBER: CCF-25

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: CHU CHUA
PROJECT NUMBER: 321
CLAIM NUMBER:
LOCATION:

PLOTTING COORDS GRID: CC MAIN
NORTH: 10183.50N
EAST: 9979.00E
ELEV: 1820.70

ALTERNATE COORDS GRID:
NORTH: 101+85N
EAST: 99+76E
ELEV: 1821.70

COLLAR DIP: -47x 0' 0"
LENGTH OF THE HOLE: 49.70m
START DEPTH: 0.00m
FINAL DEPTH: 49.70m

COLLAR GRID AZIMUTH: 90x 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 90x 0' 0"

DATE STARTED: September 21, 1988
DATE COMPLETED: September 22, 1988
DATE LOGGED: 0, 0

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

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

CONTRACTOR: TONTO DRILLING
CASING: 3.6M
CORE STORAGE: BARRIERE

PURPOSE: TO DEFINE LENS 2 MINERALIZATION.

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
33.90	-	-46x 0'	ACID	OK		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
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HOLE NUMBER: CCF-25

DRILL HOLE RECORD

LOGGED BY: S. LEAR

PAGE: 1

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 3.60	CASING .08/					
3.60 TO 11.40	ALTERED BASALT .hw bslt/	Colour - light grey - green. Grain Size - fine. Silicified and bleached basalt. 3.6 - 5.5 Angular basalt fragments in limonite matrix.		Limonite on fractures.		
11.40 TO 33.40	MASSIVE SULPHIDE .ass/	Colour - brassy yellow. Grain Size - fine. Mostly pyrite. Minor chalcopyrite, often on fractures + with thin quartz patches - chalcopyrite appears to be secondary.			.95 py, 1% cpy/ 14.8 - 15.5 10-20% chalcopyrite. Very broken core with black coating on fractures. 28.7 - 29.2 10% chalcopyrite with minor quartz.	932.3 - 33.4L .FLT/ Some mud, most core lost.
33.40 TO 49.70	BASALT .fw bslt/	Colour - grey - green. Grain Size - fine - medium. Basalt. Mostly fine grained, some medium grained sections with white F.S. crystals. 47.5 - 49.7 Fine grained basalt. 49.7# E.O.H.		33.4 - 35.4 Very light grey fractures + silicified basalt. 36.4 - 41.7 Black chlorite filling fine.	35.4 - 36.4 20% stringer pyrite. 47.5 - 49.7 Trace disseminated pyrite + po.	33.4 - 34.1 Very broken core.

HOLE NUMBER: CCF-25

ASSAY SHEET

DATE: 5-May-1989

Sample	From (m)	To (m)	Length (m)	ASSAYS					SG %	COMMENTS
				Cu %	Pb %	Zn %	Ag g/T	Au g/T		
18460	9.70	11.40	1.70	0.03	0.0	0.01	1.3	0.01		
18069	11.40	14.50	3.10	1.18	0.0	0.08	3.7	0.22	4.78	
18070	14.50	18.00	3.50	5.93	0.02	0.02	19.7	0.83	4.55	
18071	18.00	20.00	2.00	1.42	0.01	0.06	4.4	0.21	4.73	
18072	20.00	21.50	1.50	2.18	0.04	0.48	8.9	0.81	4.67	
18073	21.50	25.50	4.00	2.24	0.02	0.32	8.6	0.6	4.51	
18074	25.50	27.00	1.50	2.14	0.02	0.35	7.9	0.61	4.55	
18075	27.00	28.50	1.50	2.25	0.02	0.39	7.4	0.38	4.47	
18001	28.50	29.50	1.00	6.34	0.02	0.89	15.4	0.42	4.23	
18002	29.50	33.40	3.90	1.44	0.01	0.05	25.9	0.24	4.25	
18461	33.40	36.30	2.90	0.01	0.0	0.01	1.1	0.05		
18462	36.30	39.00	2.70	0.02	0	0.02	0.8	0.03		
AVE.	11.40	33.40	22.00	2.64	0.02	0.21	12.56	0.48	4.53	

HOLE NUMBER: CCF-25

ASSAY SHEET

PAGE: 3

HOLE NUMBER: CCF-25

GEOCHEM. SHEET

DATE: 5-May-1989

Sample	From (m)	To (m)	Length (m) :
18003	44.00	47.00	3.00 :

HOLE NUMBER: CCF-25

GEOCHEM. SHEET

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MINNOVA INC.
DRILL HOLE RECORD

HOLE NUMBER: CCF-26

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: CHU CHUA	PLOTTING COORDS GRID: CC MAIN	ALTERNATE COORDS GRID:	COLLAR DIP: -50x 0' 0"
PROJECT NUMBER: 321	NORTH: 10174.00N	NORTH: 101+66N	LENGTH OF THE HOLE: 77.70m
CLAIM NUMBER:	EAST: 9962.60E	EAST: 99+67E	START DEPTH: 0.00m
LOCATION:	ELEV: 1816.60	ELEV: 1814.00	FINAL DEPTH: 77.70m

COLLAR GRID AZIMUTH: 90x 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 90x 0' 0"

DATE STARTED: September 22, 1988
DATE COMPLETED: September 23, 1988
DATE LOGGED: 0, 0

COLLAR SURVEY: NO
MULTISHOT SURVEY: NO
ROD LOG: NO

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

CONTRACTOR: TONTO DRILLING
CASING: 6.1M
CORE STORAGE: BARRIERE

PURPOSE: TO TEST LENS 2.

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
45.00	-	-50x 0'	ACID	OK		-	-	-	-	-	
77.30	-	-49x 0'	ACID	OK		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
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HOLE NUMBER: CCF-26

DRILL HOLE RECORD

LOGGED BY: S. LEAR

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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 6.10	CASING .OB/					
6.10 TO 30.50	ALTERED BASALT .hw bslt/	Colour - grey, green. Grain Size - fine. Basalt, moderately - highly silicified. - occasional SI 0.5mm white F.S. crystals - core moderately - highly broken throughout.		6.1 - 16.5 Moderate limonite staining on fractures.		925.6 - 30.2L .FLT BX/ Partially healed Fault breccia. Matrix often pyritic.
30.50 TO 50.30	MASSIVE SULPHIDE .ass/	Colour - brassy yellow. Grain Size - fine. Mostly pyrite. Minor chalcopyrite especially with quartz patches and pitted core.			.95% py, 2-3% cpy/ 31.4 - 32 10% chalcopyrite in pitted broken core. 40% recovery. 39 - 39.3 30% chalcopyrite. 46.8 - 47.1 30% chalcopyrite. 47.75 - 47.8 60% chalcopyrite. 48.3 - 48.7 10% chalcopyrite.	
50.30 TO 77.70	BASALT .fw bslt/	Colour - grey - green. Grain Size - fine. Basalt. Fine grained 0.5mm F.S. crystals in places up to 20%. Silicified near upper contact.		50.3 - 56.3 Moderately - highly silicified basalt. SI quartz veining at 60 + 20 degrees to C.A.	50.3 - 56.3 10% pyrite as fine grained stringers.	E. O. H.

HOLE NUMBER: CCF-26

MINNOVA INC.
DRILL HOLE RECORD

DATE: 5-May-1989

FROM	ROCK		ANGLE				REMARKS
TO	TYPE	TEXTURE AND STRUCTURE	TO CA	ALTERATION	MINERALIZATION		

HOLE NUMBER: CCF-26

DRILL HOLE RECORD

LOGGED BY: S. LEAR

PAGE: 3

Sample	From (#)	To (#)	Length (#)	ASSAYS					SG	COMMENTS
				Cu I	Pb I	Zn I	Ag g/T	Au g/T		
18004	18.00	21.00	3.00	0.01	0.0	0.01	0.8	0.01		
18463	28.60	30.50	1.90	0.13	0.0	0.01	1.0	0.05		
18005	30.50	32.50	2.00	1.62	.02	.05	10.9	.6	4.45	
18006	32.50	35.50	3.00	2.43	.02	.16	13.2	1.6	4.45	
18007	35.50	37.50	2.00	3.61	.02	.18	14.8	1.2	4.79	
18008	37.50	39.00	1.50	2.89	.04	.77	12.6	.9	4.8	
18009	39.00	40.50	1.50	4.07	.04	1.92	14.3	.80	4.66	
18010	40.50	42.00	1.50	2.61	.04	1.78	11.5	.82	4.72	
18011	42.00	43.50	1.50	3.69	.02	1.32	15.9	.96	4.69	
18012	43.50	45.00	1.50	2.87	.02	.73	13.2	.6	4.76	
18013	45.00	46.50	1.50	1.48	.02	.64	6.5	1	4.77	
18014	46.50	48.00	1.50	2.53	.01	1.58	12.2	.79	4.58	
18015	48.00	50.30	2.30	1.69	.03	.34	13.4	.8	4.49	
18464	50.30	52.70	2.40	0.01	0.0	0.01	0.9	0.04		
18016	52.70	54.70	2.00	0.16	0.0	0.01	2.1	0.04		
18017	66.00	69.00	3.00	0.0	0.0	0.01	1.9	0.01		
AVE.	30.50	50.30	19.80	2.62	0.02	0.75	12.68	0.96	4.63	

HOLE NUMBER: CCF-26

GEOCHEM. SHEET

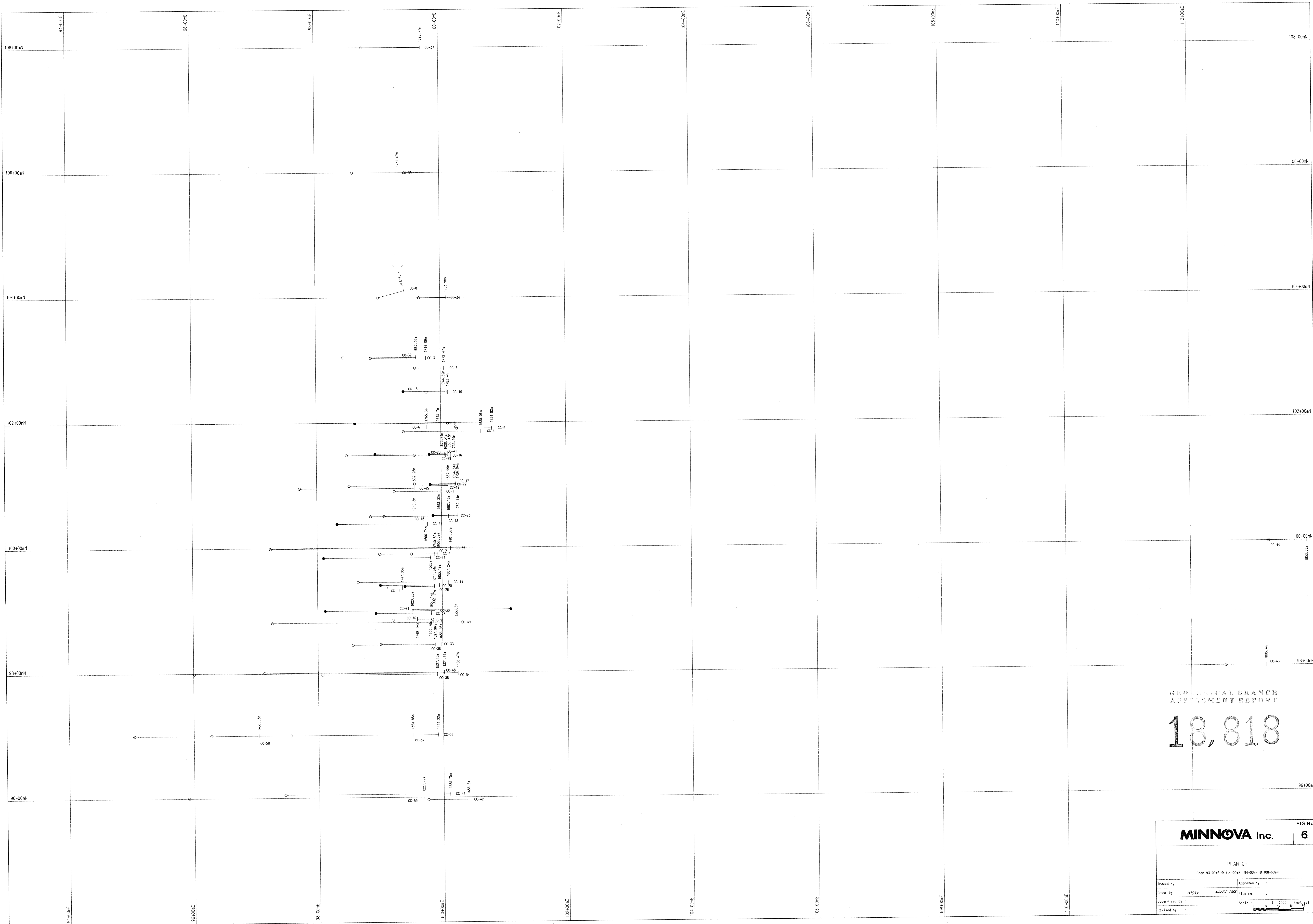
DATE: 5-May-1989

Sample	From	To	Length
	(m)	(m)	(m)
18004	18.00	21.00	3.00
18017	65.00	69.00	3.00

HOLE NUMBER: CCF-26

GEOCHEM. SHEET

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GEOLOGICAL BRANCH
ASSESSMENT REPORT

18,818

MINNOVA Inc.		FIG. No. 6
PLAN 0m From 93400E @ 94400E, 94400N @ 108400N		
Traced by : _____	Approved by : _____	
Drawn by : <i>VP/Sy</i>	Checked by : <i>AS/ST</i>	Plan no. : _____
Supervised by : _____	Scale : 1 : 2000 (metres)	
Revised by : _____		