



**Geological Survey Branch
Assessment Report Indexing System**



[ARIS12A]

ARIS Summary Report

Regional Geologist, Kamloops

Date Approved: 1987.12.15

Off Confidential: 1988.03.31

ASSESSMENT REPORT: 15717

Mining Division(s): Kamloops

Property Name: Chu Chua

Location:
NAD 27 **Latitude:** 51 23 00 **Longitude:** 120 04 00 **UTM:** 10 5696320 704117
NAD 83 **Latitude:** 51 23 00 **Longitude:** 120 04 04 **UTM:** 10 5696535 704033
NTS: 092P08E

Camp: 039 Adams Plateau - Clearwater Area

Claim(s): CC 1-2, CC 4, CC 7, CC 9-11, CH 11

Operator(s): Falconbridge Copper
Author(s): Pirie, I.D.

Report Year: 1986

No. of Pages: 48 Pages

Commodities Searched For:
 Silver, Gold, Copper, Zinc

General Work Categories:
 DRIL, GEOC, GEOP

Work Done:
 Drilling
 DIAD Diamond surface (6 hole(s);NQ) (668.6 m) No. of maps : 1 ; Scale(s) : 1:2500
 Geochemical
 SAMP Sampling/assaying (83 sample(s);)
 Elements Analyzed For : Copper, Lead, Zinc, Silver, Arsenic, Nickel, Gold
 SOIL Soil (1074 sample(s);) No. of maps : 2 ; Scale(s) : 1:2500
 Elements Analyzed For : Copper, Lead, Zinc, Silver, Gold
 Geophysical
 EMGR Electromagnetic, ground (30.0 km;HLEM) No. of maps : 2 ; Scale(s) : 1:2500
 Physical
 LINE Line/grid (33.1 km;)

Keywords:

Statement Nos.:

MINFILE Nos.: 092P 140

Related Reports:

KAMLOOPS

FAME E12-15717



Province of
British Columbia

Ministry of
Energy, Mines and
Petroleum Resources

ASSESSMENT REPORT
TITLE PAGE AND SUMMARY

TYPE OF REPORT/SURVEY(S) <i>Geophysical, geochemical, drilling</i>	TOTAL COST \$ <i>100 862.19</i>
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AUTHOR(S) *I. D. Pirie* SIGNATURE(S)

DATE STATEMENT OF EXPLORATION AND DEVELOPMENT FILED *22 Dec / 86* YEAR OF WORK *1986*

PROPERTY NAME(S) *Chu Chua*

COMMODITIES PRESENT *Cu, Zn, Au, Ag*

B.C. MINERAL INVENTORY NUMBER(S), IF KNOWN *92P-140*

MINING DIVISION *Kamloops* NTS *92P 8E*

LATITUDE *51° 23'* LONGITUDE *120° 04'*

NAMES and NUMBERS of all mineral tenures in good standing (when work was done) that form the property [Examples: TAX 1-4, FIRE 2 (12 units); PHOENIX (Lot 1706); Mineral Lease M 123; Mining or Certified Mining Lease ML 12 (claims involved)]:

CC 1, CC 2, CC 4, CC 7, CC 8, CC 10, CC 11, CH 11.

OWNER(S)
(1) *Corporation Falconbridge Copper*

MAILING ADDRESS
*6415 - 64. Street
Delta, B.C. V4K 4E2*

OPERATOR(S) (that is, Company paying for the work)
(1) *Corporation Falconbridge Copper*

MAILING ADDRESS
- same -

SUMMARY GEOLOGY (lithology, age, structure, alteration, mineralization, size, and attitude):

The ~~pro~~ claims cover the contact between basalts of the Fennell Formation and felsic volcanics and sediments of the Eagle Bay Formation. The mineralized zone consists of a mixed chert and/or cherty tuff containing cupriferous pyrite and magnetite lenses. Current reserves are 2 million tonnes of 2% Cu, 0.5% Zn, 0.5g Au/tonne, and 8.5g Ag/tonne.

REFERENCES TO PREVIOUS WORK
A.R. 15385, 14187, 14186, 12884, 10958, 10957, 10940, 9623, 8496, 7499, 7443, 7110

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	COST APPORTIONED
GEOLOGICAL (scale, area) Ground Photo			
GEOPHYSICAL (line-kilometres) Ground Magnetic ✓ Electromagnetic Induced Polarization Radiometric Seismic Other Airborne	ENGR. 30.0 km, MAXMIN II	see front	
GEOCHEMICAL (number of samples analysed for) ✓ Soil Silt Rock Other	1074, Cu, Pb, Zn, Ag, Au		
DRILLING (total metres; number of holes, size) ✓ Core Non-core	DIAD 668.6 m, 6 holes, NQ		
RELATED TECHNICAL ✓ Sampling/assaying Petrographic Mineralogic Metallurgic	33 Cu, Pb, Zn, Ag, As, Ni, Au		
PROSPECTING (scale, area)			
PREPARATORY/PHYSICAL Legal surveys (scale, area) Topographic (scale, area) Photogrammetric (scale, area) ✓ Line/grid (kilometres) Road, local access (kilometres) Trench (metres) Underground (metres)	33.1 km		
TOTAL COST			100 862.19

FOR MINISTRY USE ONLY	NAME OF PAC ACCOUNT	DEBIT	CREDIT	REMARKS:
Value work done (from report) 100 862.19				
Value of work approved				
Value claimed (from statement)				
Value credited to PAC account				
Value debited to PAC account				
Accepted <i>PK</i> Date	Rept. No. 15717			Information Class (2)

(b) Goods and Services

Description	Expenditure	
	B.C.	Outside
Meals, Groceries, etc.	\$ 1,490	\$
Camping Supplies, Equipment, etc.	500	
Accommodation	400	
Transportations — Scheduled Air		
— Air Charter		
— Vehicle Rentals	700	
— Vehicle O and M Costs	300	
— Other (specify)		
Equipment Rentals —		
Equipment Rentals — Trenching, etc.		
— Geophysical, etc.		
— Other (specify)		
Contract Drilling	60,543.43	
Consultant Services MaxMin II	5,227.05	
Assays and Analyses	11,955.70	
Communications		
Other (specify) Contract Linecutting	7,121.01	

89237.19

9. IMPACT OF FAME GRANT

(a) Please indicate what level of expansion of your project was attributable to receiving a FAME grant.

\$ 25,000

person/days employment.

(b) Please indicate what you feel to be the main achievement of this FAME funded program.

The main achievement of this FAME funded program was the drill testing of several high priority targets on the Chu Chua property as well as being able to carry out additional geophysical and geochemical surveys to delineate new targets for 1987.



Province of British Columbia
Ministry of Energy, Mines and Petroleum Resources



EXPLORATION BRITISH COLUMBIA

FINANCIAL ASSISTANCE FOR MINERAL EXPLORATION

FORM 3

APPLICATION FOR PAYMENT

INSTRUCTIONS:

- Please type or print
- Please submit completed forms, with a copy of the final technical report, to:
Manager, EXPLORATION BRITISH COLUMBIA, Mineral Resources Division
Ministry of Energy, Mines and Petroleum Resources
Parliament Buildings, Victoria, B.C. V8V 1X4

Grant Identification No. 10962 E-12

LOG NO: 1222 MGE-F 1

ACTION:

FILE NO:

FILMED

1. Date of this Application December 18, 1986		
2. Applicant's Identification and Location Name Corporation Falconbridge Copper		
Address — Street Number and Name, Apt. No. 6415 - 64th Street		Telephone No. 946-5451
City, Town, Village Delta, B. C.	Province British Columbia	Postal Code V 4 K 4 E 2
3. Head Office Location Address — Street Number and Name, Apt. No. P. O. Box 91, Suite 3970 Commerce Court West		
City, Town, Village Toronto	Province Ontario	Postal Code M 5 L 1 C 7
4. Mailing Address (If different from above) Address — Street Number and Name, Apt. No. Same		
City, Town, Village	Province	Postal Code
5. British Columbia Free Miner Certificate No. 278726 CORFAC		
6. I/We, Corporation Falconbridge Copper, hereby apply for payment of a grant under the Exploration British Columbia Financial Assistance for Mineral Exploration Program and declare the information given above to be true and accurate.		
	Alex J. Davidson	Name (please print)
Exploration Manager, Western Can.	Chu Chua Project	Title/Occupation (please print) Project Name (please print)
Corporation Falconbridge Copper	December 18, 1986	Company (please print) Date

GEOLOGICAL BRANCH ASSESSMENT REPORT

15,717

7. EXPENDITURES (N.B. Please provide actual all-inclusive costs, including salaries and wages, equipment and machinery rental, supplies, services, transportation and accommodation directly attributable to the field program.)

(a) For the following, the full cost (100% of expenditures) are eligible: Total Eligible Expenses

	Total Eligible Expenses
Geological Surveys, Map and Report Preparation and Related Costs	\$
Geophysical Surveys (line-kilometres)	
Ground	
Magnetic \$	
Electromagnetic 30km \$ 5,752.05	
Induced Polarization \$	
Radiometric \$	
Seismic \$	
Other \$	
Airborne \$	
\$ 5,752.05	\$ 5,752.05
Geochemical Surveys (No. of samples analysed for _____)	
Soil Cu, Pb, Zn, Ag, Au (1074) \$ 17,733.70	
Silt \$	
Rock \$	
Other \$	
\$ 17,733.70	\$ 17,733.70
Drilling	
Surface 668.6m m @ \$ 103.34 = \$ 69,093.43	
Underground m @ \$ = \$	
\$ 69,093.43	\$ 69,093.43
Related Technical Surveys	
Sampling/Assaying \$ 1,162.00	
Petrographic \$	
Mineralogic \$	
Metallurgic \$	
\$ 1,162.00	\$ 1,162.00
Preparatory/Physical	
Line/Grid (kilometres) 33.12 km \$ 7,121.01	
Trenching (metres) \$	
\$ 7,121.01	\$ 7,121.01
Other Exploration Costs (attach detailed schedules)	
..... \$	
..... \$	
..... \$	
..... \$	
\$	\$
Total Eligible Expenses	\$ 100,862.19

(b) For the following activities only 25% of total costs are eligible:

Tunnelling, Drifting, Other Lateral Excavation, Shaft Sinking (25% of total expenses are eligible)	
..... m @ \$ = \$ × 25% = \$	
..... m @ \$ = \$ × 25% = \$	
\$	\$

(c) **TOTAL ELIGIBLE EXPENDITURES:** \$

8. SUPPLEMENTARY INFORMATION: The following information is required in order to help us determine the contribution which mineral exploration activity makes to the economy, and relates to the utilization of B.C. vs. outside labour and services. Only figures directly attributable to the funded program should be included (approximate figures acceptable, but please be as accurate as possible).

(a) **Employment, wages and salaries**

Type	No. Employed		No. Person-days		Salaries/Wages Paid	
	B.C.	Outside	B.C.	Outside	B.C.	Outside
Prospectors					\$	\$
Linecutters						
Technicians						
General Labourers	3		34		3400	
Drillers/Helpers						
Equipment Operators						
Geologists	2		26		4100	
Geophysicists						
Geochemists						
Engineers						
Supervisory						
Consulting						
Secretarial	2		8		800	
Managerial	1		3		900	
Legal						
Accounting						
Others (specify)						
Others (specify)						
TOTALS					\$ 9200.00	\$ --

Chu Chua Option
Report on the 1986 Work Programme

Kamloops Mining Division

NTS 82M/5W, 92P/8E

Owner & Operator
Corporation Falconbridge Copper
6415 - 64th Street
Delta, B. C.

Ian D. Pirie
December 1986

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MAPS

Map 1	Chu Chua Grid, MaxMin II Survey - 444 Hz	Pocket
Map 2	Chu Chua Grid, MaxMin II Survey - 1777 Hz	Pocket
Map 3	Chu Chua Grid Soil Geochemistry - Cu, Pb, Zn ppm	Pocket
Map 4	Chu Chua Grid Soil Geochemistry - Ag ppm, Au ppb	Pocket
Map 5	SC/CH Grid Drill Hole Locations	Pocket

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

Surface exploration on the Main grid area of the Chu Chua property in 1986 has outlined at least two coincident geophysical - geochemical targets in an area of heavy overburden. Drilling is recommended.

Meanwhile, drill testing of the CH grid area has eliminated targets there and indicated that a westward extension of surface exploration is warranted.

INTRODUCTION

General

The Chu Chua property was optioned by Corporation Falconbridge Copper in August 1985 from Pacific Cassiar Ltd., Quinterra Resources Inc., and Vestor Explorations Ltd. The property includes a massive sulphide deposit, discovered in 1978, estimated to contain 1.6M tonnes grading 2% copper. The property was optioned because it offered good potential for further mineralization with higher grades of base and precious metals.

Location and Access (Figure 1)

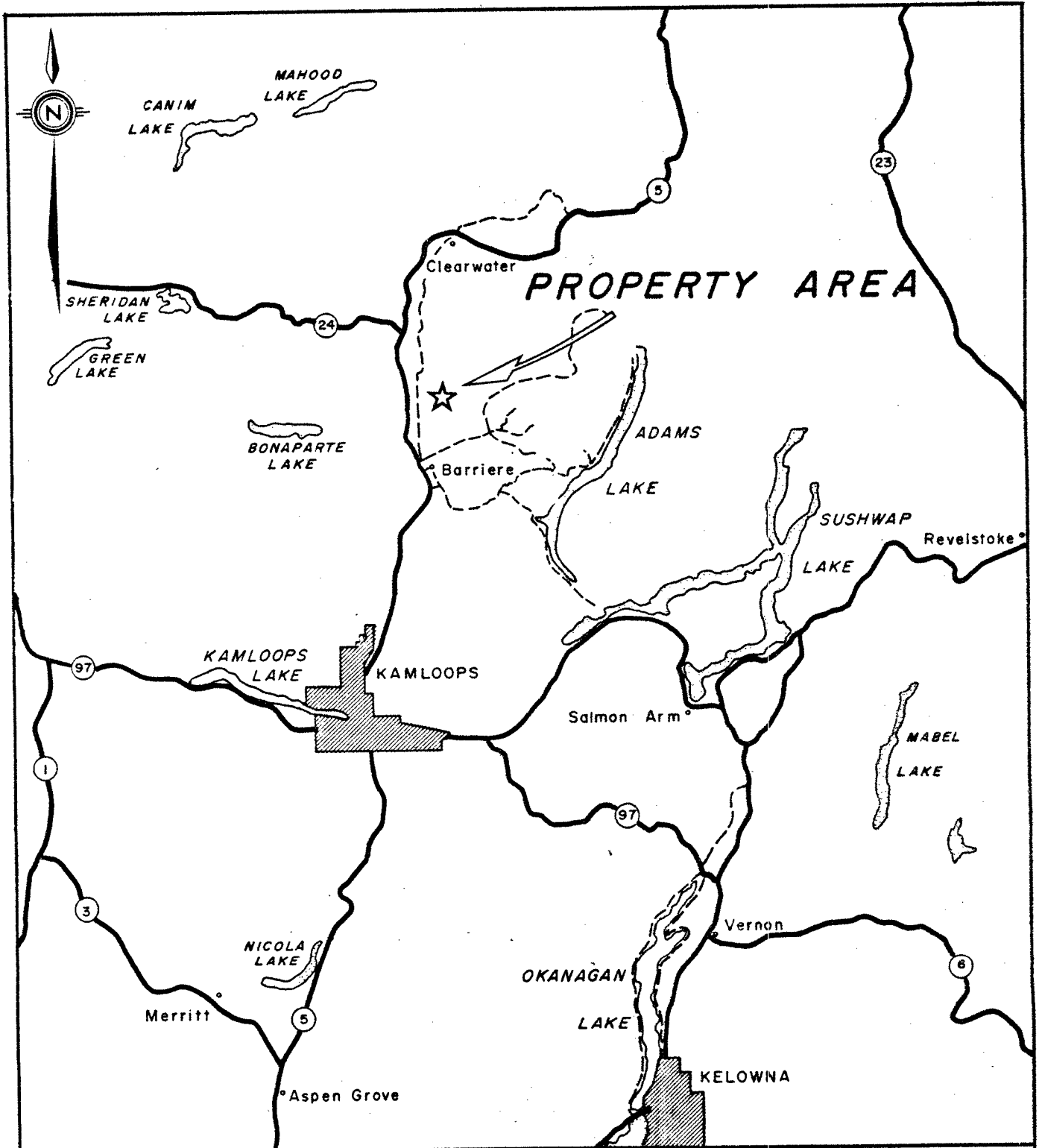
The Chu Chua property is situated about 20km NE of Barriere, B. C. It is readily accessible from the Yellowhead highway by way of the North Barriere Lake road and the Birk Creek logging road.

Physiography

The property straddles Chu Chua Creek in sub-alpine terrain at an elevation of approximately 1500m. Both north and south of the creek elevations rise to in excess of 2000m. The climate is moderate to extreme with the snow free period very brief, from July to October.

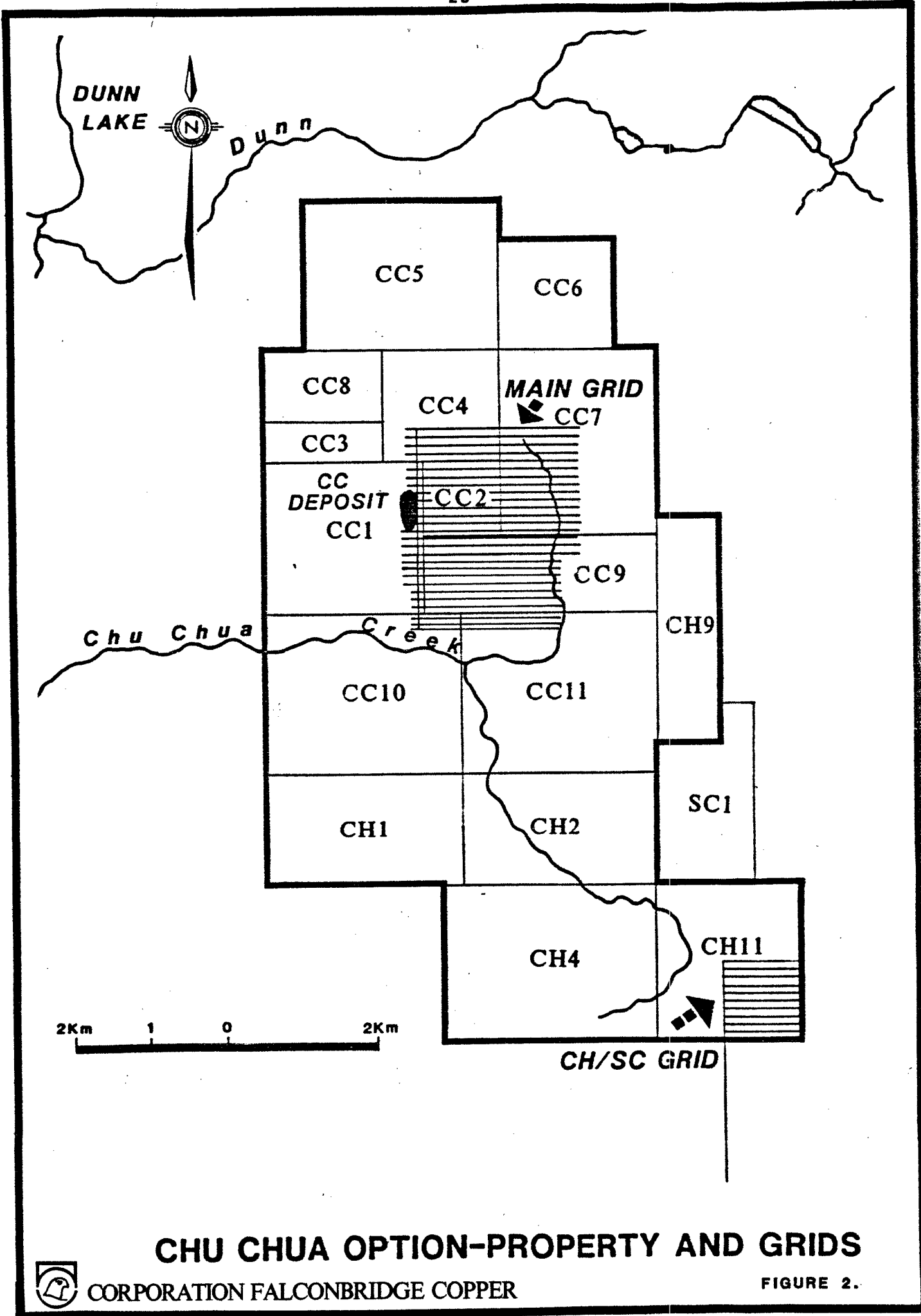
Property and Ownership

Table 1 and Figure 2 summarizes the pertinent claim data for the Chu Chua property. All claims are registered to Corporation Falconbridge Copper.



**- LOCATION MAP -
CHU CHUA OPTION**

Figure 1



CHU CHUA OPTION-PROPERTY AND GRIDS



CORPORATION FALCONBRIDGE COPPER

FIGURE 2.

Table 1

<u>Claim</u>	<u>Units</u>	<u>Record No.</u>	<u>Month</u>	<u>Group</u>
CC1	16	1154	3	South
CC2	4	1373	8	South
CC3	3	1374	8	South
CC4	9	1423	10	North
CC5	20	1455	10	Dunn
CC6	9	1456	10	Dunn
CC7	20	1457	10	Dunn
CC8	6	1424	10	North
CC9	12	1458	10	Pink
CC10	20	1459	10	South
CC11	20	1460	10	Pink
CH1	20	1461	10	South
CH2	20	1462	10	Pink
CH9	12	1469	10	Dunn
CH4	20	1464	10	South
CH11	16	1471	10	South

History

A massive sulphide deposit was located on claim CC1 during exploration by Craigmont in 1978. This was subsequently estimated to contain 1.6M tonnes grading 2% Cu. During 1979 a DigheM AEM survey was flown over the area (AR - July'79, Fraser & Dvorak). Between 1979 and 1985 further geology, geochem and drilling was carried out on the property without additional discovery.

Regional Geology

The regional geology of the area has been described in fair detail by the B. C. Department of Energy, Mines and Petroleum Resources (Preto et al 1980, 1981, 1984) and by the Geological Survey of Canada (Campbell and Tipper, 1971).

The major stratigraphic units in the area (Figure 3) are the Fennell Formation basaltic volcanic rocks and the Eagle Bay formation, a sequence of mixed felsic-mafic volcanics and clastic sediments. The Fennell basalts and the Eagle Bay sediments are separated north of the Barriere River by a "transition zone" of interbedded massive basalt, argillite, phyllite, chert and rhyolite. All of the rocks in the area appear to face west and dip between vertical and 35 degrees east.

WORK DONE

Work carried out during 1986 consisted of extending the Chu Chua Main grid 1.5km south, covering it with a MaxMin II and soil geochemical survey and the drilling of 6 holes to test pre-existing targets on the CH grid (see Figure 4). Details are as follows:

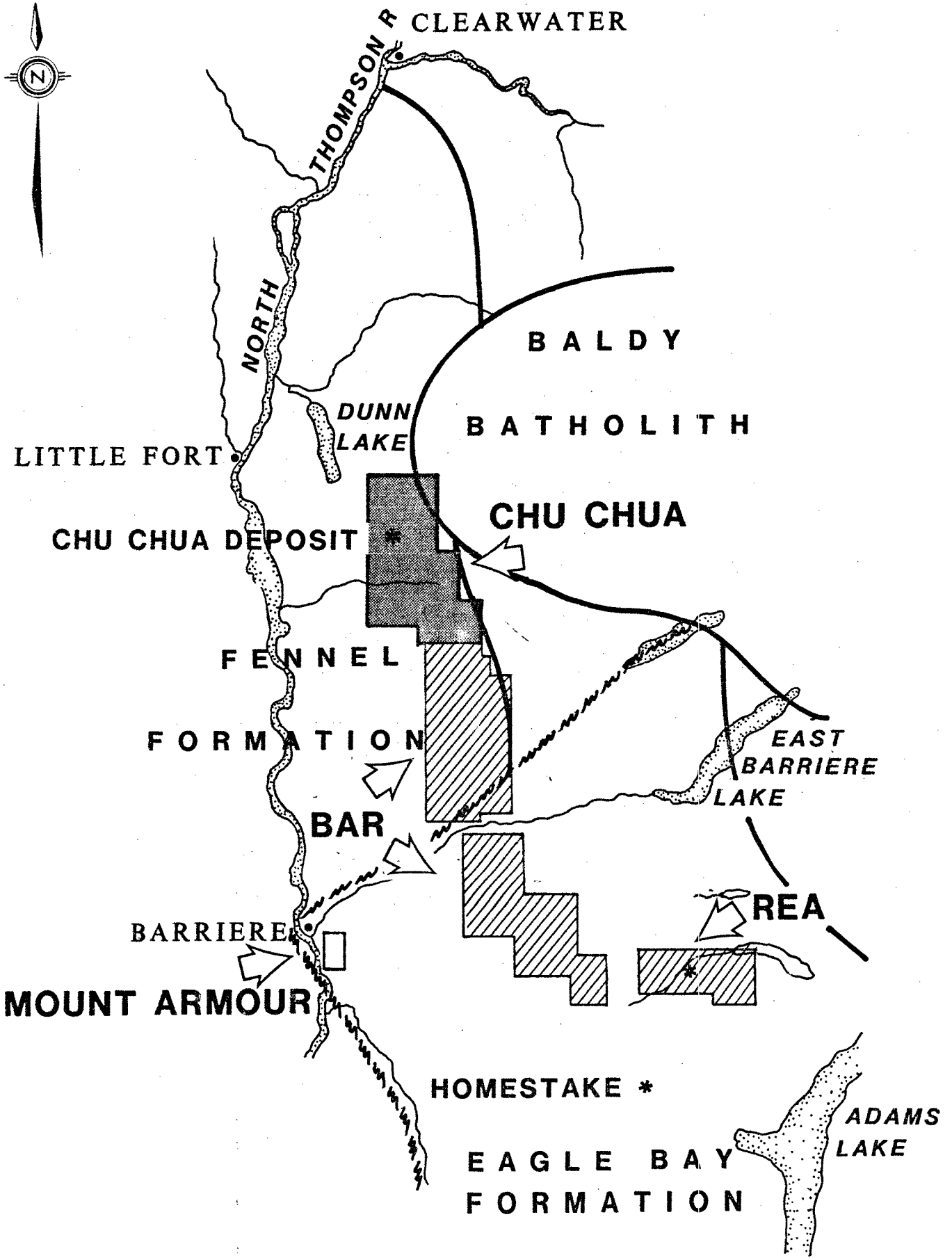
Linecutting	33km	extended main grid south
MaxMin II	30km	new lines covered
Soil Geochem	1074 samples analyzed for Cu Pb,Zn,Ag,Au	new lines completely covered
Diamond Drilling	6 holes drilled CCF-6 to 11 inclusive 668.6m	tested existing targets on the CH grid

LOGISTICS

MaxMin II

The MaxMin II survey was carried out by MPH Consulting Ltd. using a two man crew under the command of M. Kratochvil. Coil spacing was 150m, stations were 25m apart and lines were 100m apart. Frequencies employed were 444 Hz and 1777 Hz.

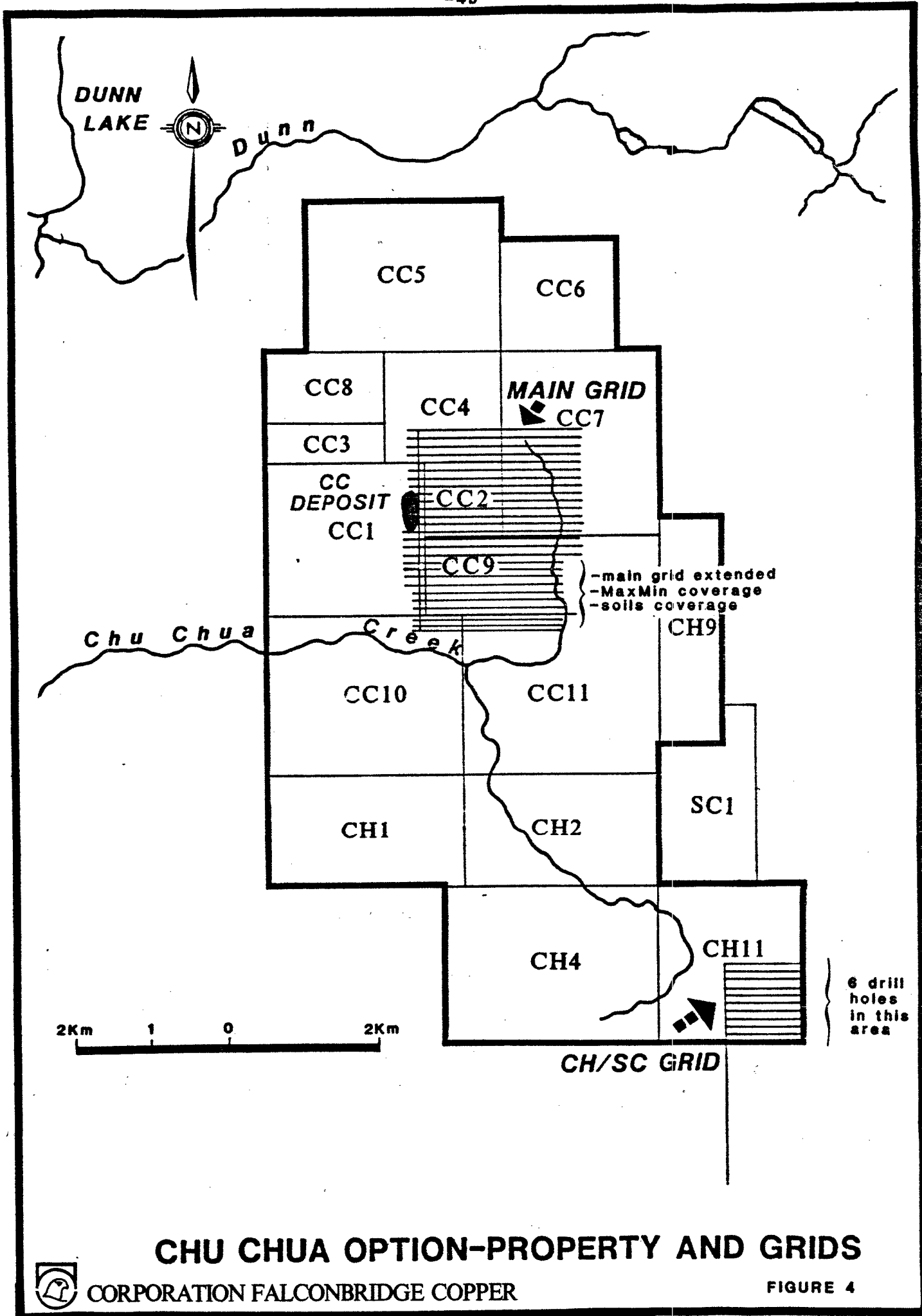
At each station, secant measurements were taken to correct for nominal coil spacing irregularities induced by rough terrain. The in-phase and quadrature values, read as percentage of the primary field strength, were recorded for each of the frequencies.



ADAMS/BARRIERE PROPERTY LOCATION MAP

0 10Km





CHU CHUA OPTION-PROPERTY AND GRIDS



CORPORATION FALCONBRIDGE COPPER

FIGURE 4

Soil Geochem Survey

Soil samples were taken at 25m intervals along lines 100m apart by M. Peters, D. Paige and M. Clayton. Wherever possible the material sampled was from the B-horizon (10-40cm depth) but if outcrop or swamp prevented this no sample was taken at that station.

Analysis was carried out by Min-En Labs in North Vancouver for Au, Ag, Cu, Pb, Zn using the -80 mesh. Au was determined by aqua regia - AA, the others by a standard ICP procedure.

RESULTS (Main Grid Area)

MaxMin II Survey (Maps 1,2)

The survey detected a number of subtle anomalies some of which are only 1777 Hz out of phase responses. These anomalies are labelled on Map 2.

Anomalies A and B are very weak geophysical responses identifying very poor conductors although B at least does show continuity across the grid.

Anomaly C is the principal conductor crossing all lines. It varies in width from thin to 25m, exhibits conductances of around 2 siemens and varies in depth from less than 15m to 40m. It is undoubtedly formational in nature with offsets indicating cross faults between lines 89N and 90N, 86N and 87N and 82N and 83N.

Anomalies D, E, and F, like A and B, are generally very weak and unsupported by in phase data.

Soil Geochem (Maps 3 and 4)

Data for the 1074 soil samples was computer processed to establish what could be considered anomalous values. These are summarized in Table 2.

Table 2
Soil Geochem Stats

<u>Element</u>	<u>Population</u>	<u>Mean</u> (ppm)	<u>Range</u>	<u>Standard</u> <u>Deviation</u>	<u>Threshold</u> (ppm)	<u>Comments</u>
Cu	+ve skew	62	8-2750	160	160	95% less than 160
Pb	approx.normal	16	4-120	5.5	27	$x + \sigma$
Zn	approx.normal	72	17-820	29	130	$x + \sigma$
Ag	log normal	0.62	0.1-6.2	0.23(log)	1.5	$x + SD$
Au	+ve skew	8 ppb	3-125	8.7	20 ppb	95% less than 20

Due to probable glacial and topographic effects on the soils of the area anomalies are not particularly well defined. However, certain areas are distinctly noisy and hence considered anomalous.

The extreme NW corner of the grid is characterized by Cu values of up to 275 ppm accompanied by Zn up to 820 ppm and Pb to 120 ppm. This corresponds to an area of rusty weathering soil which can be traced back up the hill (N) to the 1.6M tonne CC pyritic massive sulphide body outcropping 500m to the north.

Between 107E on line 85N and 105+50E on line 80N is an irregular zone of anomalies characterized by Cu up to 250 ppm, Zn to 200 ppm, Pb to 51 ppm, Ag to 2.5 ppm and Au to 30 ppb. Although erratic, there are a sufficient number of anomalous values to warrant further attention.

Between 110+50E on line 94N and 113+25E on line 89N is another irregular zone with up to 210 ppm Cu, 180 ppm Zn, 51 ppm Pb, 2.8 ppm Ag and 125 ppb Au. This is a fairly narrow zone paralleling drainage trends in the immediate area which may indicate mineralization towards its northern end.

Other anomalies tend to be single point or 2-3 point at most and are scattered throughout the area.

INTERPRETATION

Comparing the geophysical and geochemical data it is apparent that two of the three areas of soil anomalies have coincident geophysical responses.

These are between L84 and L80, where at least partial coincidence with MaxMin anomaly B, occurs, and between L93 and L90 where some coincidence with anomaly C occurs.

Since almost no outcrop exists in the immediate area it is hard to assess the geological significance of these anomalies. However, the area to the north is known to be underlain largely by basaltic volcanics and both anomalies B and C are parallel to the known regional strikes. Thus they may be indicative of breaks in volcanism where some argillitic material has been deposited and the geochem may indicate areas of mineralization along these. They are excellent targets for diamond drilling.

DIAMOND DRILLING RESULTS (CH Grid Area)

A total of 668.6m of NQ drilling in 6 holes was carried out between October 1st and October 15th, 1986. The purpose of the programme was to test certain geophysical anomalies on the CH grid, CH 11 claim in the south-east corner of the property (see Figure 4).

Logs for the six holes are included in Appendix 1. Hole locations are shown on Map 5 (in pocket) which shows a portion of a MaxMin survey conducted in 1985 and reported on in an Assessment Report by this author dated December 1985.

CCF 6 and CCF 7 tested an anomaly in an area where coincident Ag, Cu, Zn and Au anomalies occur in soils. They intersected a sequence of diorites, chert and sufficient graphitic argillite to explain the MaxMin response. CCF 7 failed to reach it's full depth because of bad faulting. Neither intersected mineralization in sufficient quantities to explain the soil responses.

CCF 8, 9 and 10 tested a complex series of broad, high amplitude anomalies with coincident geochem. Only CCF-10 was drilled to its full depth because of ground conditions. The holes intersected a sequence of sediments which included thick sections of often highly graphitic argillite. Up to 5% pyrite was quite common in these and zinc values of up to 2340 ppm were recorded. Thus both the geophysical and geochemical anomalies appear to have been explained.

CCF-11 tested a short strike length anomaly (200-250m) located further to the west. Although predominantly in diorites and sediments it did

intersect a couple of narrow units of felsic tuff which were pyritic and clay altered. Graphitic argillites again accounted for the geophysical anomalies and again were locally anomalous in zinc (up to 1482 ppm).

Overall the programme was fairly successful in testing the targets and provided significant new information in what is an area of very poor exposure. In the main it is underlain by sediments intruded by diorites. Volcanic units appear to the west. Sulphide content is generally quite low in all rock types although local concentrations may occur. These are usually associated with graphitic argillites which is a fairly common phenomenon. Likewise anomalous zinc values in the graphitic sediments are not uncommon as carbonaceous material acts as a scavenger for metal ions.

The potential for discovery of sulphide deposits in the units tested is considered to be low, however the appearance of felsic tuffs in the western parts suggests increased potential in that direction. Future work should be directed to this area.

CONCLUSIONS AND RECOMMENDATIONS

Exploration on the Chu chua property in 1986 has focussed on two separate areas of the property at different stages of development. On the main grid area the aim has been to develop drill targets in a poorly exposed section adjacent to a known deposit. On the CH grid existing targets have been drill tested. Both phases have been successfully completed.

On the main grid, two excellent targets have been defined by coincident MaxMin II and soil geochem anomalies. They will require drill testing in 1987.

On the CH grid geophysical anomalies have been explained by graphitic units which seem to have little chance of hosting a significant deposit. However, the appearance of volcanic units in the western part of the drilled area points to enhanced potential and future work must be in that direction. This should include linecutting, MaxMin II, geology where outcrop permits and either litho- or soil geochemistry.

ITEMIZED COST STATEMENT

Linecutting, soils, MaxMin II

Linecutting (33.121km)		
contractor: Martinson Linecutting	\$215/km	7,121.01
MaxMin II		
contractor: MPH Consulting	30km @ \$155.79/km	4,673.64
computer, drafting, printing, etc.		553.41
Soil Geochem		
1074 samples for Cu, Pb, Zn, Ag, Au @ \$10.05 each		10,793.70
34 man-days sampling at \$125/day		4,250.00
(M. Peters 17 days, D. Paige 5 days, M. Clayton 12 days)		
field expenses 34 man-days @ \$35/day		1,190.00
Supervision		
G. Evans 2 days @ \$300/day		600.00
Report, Interpretation		
L. D. Pirie 3 days @ \$350/day		1,050.00
Miscellaneous		
(drafting, typing, etc.)		<u>375.00</u>
	TOTAL	\$30,606.76

Apportionment

70% of grid is on CC9, CC1 (Pink Group)

30% of grid is on CC11, CC10 (South Group)

therefore to Pink Group $\$30,606.76 \times 0.7 = \$21,424.73$

to South Group $\$30,606.76 \times 0.3 = \$9,182.03$

ITEMIZED COST STATEMENT

Drilling

Contractor - J. T. Thomas

2193 feet (668.6m) @ \$16.70/ft	36,623.10
Man & machine hours 208 @ \$21/hr	4,368.00
Cat hours 69.5 @ \$65/hr	4,517.50
Materials	15,034.83

60,543.43 = 27.61/ft

Field Expenses

G. Evans 20 days @ \$300/day	6,000.00
Truck 20 days @ \$50/day	1,000.00
Food, accommodation 20 days @ \$35/day	700.00

Analyses

83 (Cu, Pb, Zn, Ag, As, Ni, Au) @ \$14	1,162.00
--	----------

Report

L. D. Pirie 1 day @ \$350	350.00
---------------------------	--------

Miscellaneous

Typing, drafting, etc.	<u>500.00</u>
------------------------	---------------

TOTAL \$70,255.43


100% of work carried out on CH11 (South Group)


Certificate of Qualifications

I, Ian D. Pirie certify that:

1. I am an Exploration Geologist residing at 2727 W. 15th Avenue, Vancouver, B. C.
2. I have a BSc (Hons.) in Applied Geology from the University of Strathclyde, Glasgow, Scotland (1977) and a MSc (Geology/Geochemistry) from Queen's University at Kingston, Ontario (1980).
3. I have practised my profession since 1977.
4. I personally carried out or supervised the work reported herein.

Dec 18th, 1986
Date

A circular seal with the text "GEOLOGICAL ASSOCIATION OF CANADA" around the top edge and "FELLOW" around the bottom edge. In the center, it reads "IAN D. PIRIE".

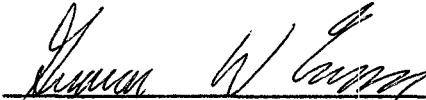

Ian D. Pirie

Certificate of Qualifications

I, Graeme W. Evans certify that:

1. I am an Exploration Geologist residing at #46 - 1810 Summit Drive,
Kamloops, B. C.
2. I have a BSc (Geol.) from the University of British Columbia (1983).
3. I have practiced my profession since 1983.
4. I personally carried out or supervised the work reported herein.

DECEMBER 18/1986
Date


Graeme W. Evans

APPENDIX 1

Drill Logs CCF 6 to 11 inclusive

FROM TO	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	ANGLE TO CORE AXIS	ALTERATION	SULPHIDES	REMARKS
3.08 to 58.97	DIORITE M.Gr. 4.1	Lt. grey	M.Gr. Porph.	Massive M.Gr. feldspar porphyry, biotite +/- chlorite. Diorite		Qtz veinlets 1-2% chlorite +/- carb. on fract. Occasional weak bleaching by quartz veins. Increasing quartz veins to 5% down hole.	No sulphides	Non magnetic 98-99% recovery
58.97 to 86.60	DIORITE F.Gr. 4.1	Lt. grey- Lt. green	F.Gr. Porph.	- Border Phase? - Lt. grey - F.Gr. matrix with M.Gr. mafics 5%		- Rock more siliceous with quartz flooding + more chloritic alteration - Zones occasionally weakly saus. - Carb alteration around quartz vein 72.45 - 72.90m	Quartz veins @ 61.50-61.90m 20-30cm quartz veins with 3-4% py dissem. & blebs.	
86.60 to 88.42	CHERT 6.1	Grey - Lt. grey	Aphan.	Vague bedding in grey cherts and green (muddy) cherts.	Bedding 55° to axis	Occasional quartz and chlorite veinlet.	Tr. py	Contact Gradational Over 1+ m. 100% recovery
88.42 to 89.83	DIORITE F.Gr. DYKE 4.1	Med. grey	F.Gr.	- Vague gradational contacts - Non magnetic f.gr. porph. and massive		- Quartz vein @ 89.17 (5cm with 5% po) - Contacts silicified		
89.83 to 100.95	CHERT + MUDDY CHERT	Lt. brown lt. green lt. grey	Aphan.	Grey cherts interbedded with muddy green cherts + f.gr. wackes - occasional chert frags 3-5mm.	Bedding 45° to axis	Occasional quartz veins + veinlets of py, po.	- zones up to 1m of dissem. py, po + blebs to 5cm up to 10% sulphides Average 2-3%	- Moderately magnetic with po - Occasional "Mottling" of the cherts
100.95 to 106.74	F.Gr. DIORITE DYKE 4.1	Lt. green - grey	F.Gr.	F.Gr. porphyry - Gradational Contacts		Occasional quartz veins + some silicification.	Finely dissem. Po and Py Po = 5% Py = 1-2%	Moderately magnetic
106.74 to 109.70	CHERT	Green - grey	Aphan.	Mottled Massive Chert	Bedding 45-50° to axis	Occasional quartz veins	Approx. 1% diss. Po	- 99% Recovery

FROM TO	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	ANGLE TO CORE AXIS	ALTERATION	SULPHIDES	REMARKS
109.70 to 116.00	F.GR. DIORITE DYKE	Green	F.Gr.	Gradational contacts - F.Gr. Porphyry		Weak Saus. of feldspar - Occasional quartz veins	Tr py, po	@ 112.31m 10cm Fault zone with clay gouge
116.00 to 121.85 E.O.H.	CHERT WITH GREYWACKES	Grey - green	Aphan. - F.Gr.	50% Cherts, 50% wackes with f.gr. siltstone interbeds - Soft sediments in slumps indicate Tops, up hole!	Bedding 50° to axis	- Occasional quartz veins and Py, Po veinlet	- Cherts have blebs to 2cm of po, py while wackes have 10% po, py dissem. Average = 5% po, 5% py	Tops up hole?!

HOLE NO. CCF-6

ZIPPY PRINT # - BRIDGEPORT, RICHMOND

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<u>From To</u>	<u>Rock Type</u>	<u>Texture and Structure</u>	<u>Angle to Core Axis</u>	<u>Alteration</u>	<u>Sulphides</u>	<u>Remarks</u>
0 to 3.69	CASING					
3.69 to 45.70	M.GR DIORITE	Colour - med. grey to med green Grain size - med. Porphyritic with 1mm crystals of plagioclase + 5+% mafics		5% qtz veinlets weak saussuritisation of feldspars weak propylitic alteration +/- clay in fault zones Occasional mottled appearance	Tr py in faults	7.30-11.85m: strongly fractured fault zone with qtz +/- carb alteration + propylitic alteration. (89% recovery) non-magnetic; generally 98% recovery 38.1-39.1m: fault zone with carb. + tr py
45.70 to 48.46	F.GR DIORITE	Colour - lt. grey/green Grain size - fine Fine gr. border phase of diorite; silicification by contact with chert		Qtz veinlets	up to 1% py in fracture	contact at 48.46m is a fault Gradational contact with M.Gr. Diorite
48.46 to 53.60	CHERT, WACKES + ARGILLITE	Colour - black to lt. grey, green Grain size - med. to aphanitic Interbedded argillite, wackes, cherts with fine laminations (N.B. some wackes maybe felsic Qtz Porph. Tufts?)	bedding 50 - 60°	Occasional qtz veins	Cherts have tr. py 49.66-50.16: coarse wacke, 10% py blebs 50.00-51.00: argillite + f.gr. wacke, 5% py bands 51.55-51.80: wacke + felsic tuff? with 30% py Avg = 10+% PY	Sulphide Bands are conductive

<u>From To</u>	<u>Rock Type</u>	<u>Texture and Structure</u>	<u>Angle to Core Axis</u>	<u>Alteration</u>	<u>Sulphides</u>	<u>Remarks</u>
53.60 to 60.40	F.GR DIORITE DYKE	Colour - lt. green Grain size - fine Porphyritic but especially mafics are drawn out "stringy"		Occasional qtz vein	Tr.- 5% py in veinlets	weakly magnetic
60.40 to 66.46 EOH	CHERTS interbedded with FELSIC ASH?	Colour - lt. green to grey Grain size - aphanitic Silicic, grey, massive chert with green "muddy" laminations of ash every 1-2cm	50 - 55°		Tr py to 63.39 to E.O.H. where 10% diss py is fault zone	Only about 20% recovery in fault zone which ended the hole

ABANDONED HOLE IN FAULT ZONE

<u>From To</u>	<u>Rock Type</u>	<u>Texture and Structure</u>	<u>Angle to Core Axis</u>	<u>Alteration</u>	<u>Sulphides</u>	<u>Remarks</u>
0 to 6.77	CASING					
6.77 to 16.10	SILTSTONE with ARGILLITE	Colour - lt. grey to dark grey Grain size - fine Beds of siltstone with argillite bands; some weathered out mafics in siltstone (volcanic origin?)	40 - 50°	Qtz-carb veinlets	Blebs from 3-10mm of py = 10% of rock	85% recovery
16.10 to 116.93 EOH	GRAPHITIC ARGILLITE	Colour - dark black Grain size - fine Fine gr., black carbonaceous argillite with occasional siltstone interbeds Ground very "broken" with slickensides of carbon common	bedding@ 20° 47.0m-20° 59.0m-45°	Intense faulting causing pure graphite on slickensides White (barite?) veinlets	Occasional py bleb = 1% py	rock is extremely conductive recovery approx. 70-80% down to 30-40% in faults 55.69m: fault 65-75m have 40% recovery
		86.90 - 90.06: Qtz vein stockwork 10-15%	90m-40°	Qtz flooding	1% py with Qtz veins	
		Well laminated argillite and siltstone	bedding at 107-108m is 40°	Occasional qtz vein	tr py	E.O.H. at 116.93m in a fault Recovery 100-116m is 80-90% Still extremely conductive

ASSAY SHEET

Sample Number	From (m)	To (m)	Estimate		Length (m)	% Cu	% Zn	% Pb	gm T Ag	gm T Au	% SiO ₂	% TiO ₂	% Na ₂ O	% MgO	% Fe	PPM Cu	PPM Zn	PPM Pb	PPM Ag	PPB Au	PPM As	PPM Ni
			Cu	Zn																		
CCF-8001	7.07	8.07			1.00											45	312	68	.6	20	36	38
CCF-8002	22.04	23.04			1.00											61	444	16	2.7	10	1	51
CCF-8003	30.60	31.60			1.00											59	471	12	1.7	20	1	33
CCF-8004	44.82	45.82			1.00											17	143	26	1.1	10	1	24
CCF-8005	60.00	61.00			1.00											37	225	49	2.7	10	1	49
CCF-8006	78.40	79.40			1.00											65	263	15	2.1	30	1	49
CCF-8007	88.04	89.04			1.00											80	408	46	2.5	10	3	61
N/S																						
CCF-8009	100.00	101.00			1.00											55	209	15	2.5	20	1	36
CCF-8010	110.01	111.01			1.00											58	349	50	2.6	10	7	61

<u>From To</u>	<u>Rock Type</u>	<u>Texture and Structure</u>	<u>Angle to Core Axis</u>	<u>Alteration</u>	<u>Sulphides</u>	<u>Remarks</u>
0 to 6.77	CASING					
6.77 to 14.00	CHERT BRECCIA	Colour - med. grey Grain size - aphanitic to fine Round to sub-angular chert + argillite fragments in a grey chert matrix	bedding 50°	Propylitic alteration on fractures with occasional qtz veinlet	Occasional py cube zones to 3% py Avg = 1% py	Recovery 98%
14.00 to 14.70	QUARTZ VEIN	Colour - white Grain size - aphanitic Milky white "bull" qtz vein with occasional argillite fragment			Tr py	
14.70 to 17.40	BANDED CHERT	Colour - lt. to dark grey Grain size - aphanitic Banded lt. and dark grey chert	Bedding 60°	occasional qtz vein	Avg. 2% diss py cubes	
17.40 to 38.73	GRAPHITIC ARGILLITE	Colour - dark grey Grain size - fine Finely laminated argillite and siltstone Very graphitic	bedding 70°	Occasional qtz-carb veinlets	fine py in bands 1-4mm (3-5%)	Gradational contact with chert frags at top hence: tops down hole? Mod. to strongly conductive

<u>From</u> <u>To</u>	<u>Rock Type</u>	<u>Texture and Structure</u>	<u>Angle to</u> <u>Core Axis</u>	<u>Alteration</u>	<u>Sulphides</u>	<u>Remarks</u>
38.73 to 39.86	FELSIC TUFF?	Colour - lt. grey/green Grain size - med. Very little features. A homogeneous, m.gr. feldspar-rich unit		Strong clay alteration	0.5% diss. py	Quite broken
39.86 to 77.85	GRAPHITIC ARGILLITE	Colour - dark grey to black Grain size - fine Very conductive graphitic argillite; very finely laminated with siltstone	bedding 65° 45.0m-70° 59.0m-65°	Occasional qtz veinlet	1-2% py finely laminated + 2-4mm fragments	Argillite becomes steadily more graphitic down the hole Recovery goes from 95% at 40m to 23% at E.O.H. E.O.H. is a fault zone with intense fractures

ABANDONED IN A FAULT ZONE

<u>From To</u>	<u>Rock Type</u>	<u>Texture and Structure</u>	<u>Angle to Core Axis</u>	<u>Alteration</u>	<u>Sulphides</u>	<u>Remarks</u>
0 to 6.15	CASING					
6.15 to 10.33	CHERT	Colour - Lt. grey/green Grain size - aphanitic Massive chert with occasional angular chert frag. or wispy bedding of green mudstone or volcanic ash?	bedding 45	Propylitic alteration on fractures	2-3% diss. py Occasional pyrrhotite bleb	98% recovery
10.33 to 13.70	SILTSTONE	Colour - dark grey Grain size - fine Finely laminated f.gr. siltstone	bedding 35 - 40	Qtz + Propylitic alteration on fractures	1-2% diss py	
13.70 to 41.02	CHERT with (MUDSTONE OR ASH)	Colour - lt. grey to lt. green Grain size - aphanitic to fine Massive grey chert with laminations + zones of green mudstone or ash? Zones with chips? of chert, argillite Occasional chert breccia frags		Propylitic alteration on fractures Occasional qtz vein	1-2% diss py as cubes	21.51-22.31m: fault
41.02 to 44.92	CHERT BRECCIA with ARGILLITE	Colour - lt. grey/green to dark grey Grain size - aphanitic to fine Mainly grey/green chert fragments (Avg 1-6cm) in a chert matrix with occasional fragment of band of argillite	bedding 55 - 60	Occasional qtz vein	2-3% diss py with some blebs. Occasional pyrrhotite bleb	Argillite band; mod. conductive Recovery 99%

<u>From To</u>	<u>Rock Type</u>	<u>Texture and Structure</u>	<u>Angle to Core Axis</u>	<u>Alteration</u>	<u>Sulphides</u>	<u>Remarks</u>
44.92 to 51.24	CHERT with (MUDSTONE OR ASH?)	Colour - lt. grey/green Grain size - aphanitic Massive, lt. grey-green chert with mudstone (ash?) mixed in. Occasional chert fragment		Occasional qtz veinlet and propylitic alteration on fracture	2% py as blebs + small frags 1% pyrrhotite as small frags	
51.24 to 77.92	ARGILLITE BRECCIA	Colour - dark grey to black Grain size - aphanitic to fine Black to dark grey argillite matrix with angular fragments from 0.5-5+cm of argillite and white chert Occasional greywacke unit	Bedding 65 - 70	Occasional qtz vein	5% py blebs throughout the zone 73.30-73.55m: 30-40% py zone finely laminated	Some zones very graphitic and very conductive
77.92 to 90.77	ARGILLITE	Colour - black Grain size - fine Black occasionally laminated very graphitic argillite with argillite breccias occasionally.	bedding 65 - 70	Occasional qtz vein + carb veinlet	5-10% diss py with occasional py frag. from 0.5-3cm Avg = 10% py	recovery 98% 82.71-85.40m: very graphitic and conductive zone Fault with gouge at 90.4m
90.77 to 100.75	LAMINATED CHERT	Colour - dark to lt. grey Grain size - aphanitic Finely laminated cherts with minor argillite	bedding 45	Occasional qtz veinlet	Py as blebs and diss bands 3-5% avg.	94.1m: fault with gouge
100.75 to 112.37	CHERT BRECCIA	Colour - lt. to dark grey Grain size - aphanitic Grey, chert frags + 2% argillite frags (angular to rounded) from 0.5-10cm in diameter	bedding 45	Qtz veinlets +/- vuggy carb zones	Frag to 2 cm of py, blebs and cubes most common Avg. 5% py	Cherts have strange vesicles? in them

<u>From To</u>	<u>Rock Type</u>	<u>Texture and Structure</u>	<u>Angle to Core Axis</u>	<u>Alteration</u>	<u>Sulphides</u>	<u>Remarks</u>
112.37 to 117.60	ARGILLITE	Colour - dark grey to black Grain size - fine Massive, dark grey argillite with occasional lamination of argillite (of a different shade)	bedding 45	Occasional qtz veinlet	Avg. 3-5% py as zones and cubes to 7mm in diameter (marcasite)	Non-conductive 99% recovery
117.60 to 132.22	ARGILLITE BRECCIA	Colour - dark grey to med. grey Grain size - fine Argillite matrix with angular argillite and 20% chert frags from 3mm to 5cm	bedding 30	Occasional vuggy qtz-carb veinlet	Blebs avg. 5% py Large frags 8mm to 2cm = 3% py Avg = 8% py Some zones have up to 15% diss py but normally minor	Some argillite graphitic and conductive Becomes more graphitic down section
132.22 to 146.77 EOH	ARGILLITE	Colour - dark grey Grain size - fine Dark grey, massive argillite		Occasional vuggy qtz-carb veinlet	Avg. 3-5% py veinlets 20-30cm zones up to 30% py 142.60-142.81m	weakly conductive

ASSAY SHEET

Sample Number	From (M)	To (M)	Estimate		Length (M)	% Cu	% Zn	% Pb	gm T Ag	gm T Au	% SiO ₂	% TiO ₂	% Na ₂ O	% MgO	% Fe	PPM Cu	PPM Zn	PPM Pb	PPM Ag	PPB Au	ppm As	ppm Ni	
			Cu	Zn																			
CCF-10001	9.10	10.10			1.00											65	58	22	.5	6	4	20	
CCF-10002	11.00	12.00			1.00											88	109	32	1.3	7	15	32	
CCF-10003	19.00	20.00			1.00											14	34	19	.3	2	1	11	
CCF-10004	28.04	29.04			1.00											50	87	36	.3	4	11	21	
CCF-10005	40.01	41.01			1.00											57	56	26	.5	5	1	17	
CCF-10006	43.00	44.00			1.00											67	34	23	.4	3	1	13	
CCF-10007	49.00	50.00			1.00											25	48	27	.3	5	1	17	
CCF-10008	54.95	55.95			1.00											30	59	28	.5	4	3	18	
CCF-10009	60.00	61.00			1.00											52	77	29	.5	4	6	25	
CCF-10010	68.00	69.00			1.00											57	79	39	.5	8	21	24	
CCF-10011	73.17	73.42			0.25											203	123	131	1.4	7	226	57	
CCF-10012	76.54	77.54			1.00											47	238	38	1.2	10	28	52	
CCF-10013	79.00	80.00			1.00											43	235	39	1.1	7	10	42	
CCF-10014	81.20	82.20			1.00											55	131	53	1.4	12	39	59	
CCF-10015	88.00	89.00			1.00											42	87	23	.6	5	1	47	
CCF-10016	100.01	101.01			1.00											64	93	19	.6	1	1	17	
CCF-10017	105.06	106.06			1.00											21	68	33	.6	3	1	27	
CCF-10018	111.02	112.02			1.00											68	129	43	.8	3	23	26	
CCF-10019	115.00	116.00			1.00											79	82	45	.8	2	18	26	
CCF-10020	119.45	120.45			1.00											--	--	--	--	--	--	--	N/S?

<u>From To</u>	<u>Rock Type</u>	<u>Texture and Structure</u>	<u>Angle to Core Axis</u>	<u>Alteration</u>	<u>Sulphides</u>	<u>Remarks</u>
0 to 6.15	CASING					
6.15 to 51.70	F.GR TO M.GR DIORITE	Colour - med. grey/green Grain size - fine to med. Massive diorite with mafic and plagioclase phenos 1-2mm (mafic chlorite altered)		Weak saussuritisation pervasive 6.15-8.00m carb alteration + silicification Occasional qtz vein +/- calcite Some chlorite alteration on fracture	Occasional tr py	Non-magnetic Very f.gr. border phase
51.70 to 61.75	CHERT BRECCIA	Colour - dark grey to white Grain size - aphanitic Angular white + lt. green chert frags 3mm to 5cm in a dark grey chert matrix Occasional med.gr. wacke unit 10-20cm thick	bedding 40°	Occasional qtz veinlet	1-2% py as coarse cubes and blebs	
61.75 to 63.25	FELSIC TUFF	Colour - lt. green Grain size - very fine Lt. green, f.gr tuff with 0.5mm feldspar crystals and occasional green 1mm mafic? pheno		feldspars broken down to weak clay? alteration, carb alteration?	1% diss cubes of py	rip up frags of the tuff in the overlying chert suggest tops up hole
63.25 to 71.69	CHERT	Colour - lt. to med. grey Grain size - aphanitic Massive, grey chert with occasional laminations and occasional chert fragment	bedding 45°	Occasional qtz veinlet	1% diss py cubes	

<u>From To</u>	<u>Rock Type</u>	<u>Texture and Structure</u>	<u>Angle to Core Axis</u>	<u>Alteration</u>	<u>Sulphides</u>	<u>Remarks</u>
71.69 to 90.82	CHERT BRECCIA	Colour - lt. grey to lt. green Grain size - aphanitic Angular chert frags in a lt. green to grey matrix		Occasional qtz veins	1-2% diss py cubes	
90.82 to 104.76	ARGILLITE	Colour - dark grey Grain size - fine Black, finely laminated argillite with occasional wacke unit	bedding 45°	Occasional qtz vein 100.31-100.84m: Qtz vein stockwork; 50% qtz	Avg. 5% diss. py with 1-2cm beds of py (marcasite) + rip up frags of beds 20-30% py in zones	Graphite on fractures Argillite + sulphides generally very conductive
104.76 to 107.48	FELDSPAR - RICH FELSIC TUFF	Colour - lt. green Grain size - fine Feldspar-rich felsic tuff		Feldspars weakly clay altered Some carb alteration	Ranges between 20-30% py diss Very fine py in bands and vague blebs (5cm across of 50% py)	The carb? altered felsic tuffs, Gradational contact with argillite
107.48 to 123.00	GRAPHITIC ARGILLITE	Colour - black Grain size - fine Generally well-laminated argillite with f.gr. wackes Occasional slump breccia and soft sediment deformation	bedding 45°	Occasional qtz-carb veinlet	1-2% diss py cubes	Extremely conductive with graphitic slickensides
123.00 to 123.43	FELSIC TUFF	Colour - lt. grey Grain size - very fine F.gr felsic with 1mm qtz eyes and finely laminated sulphides	bedding 50°		Avg. 25% py Finely laminated and diss.	

<u>From To</u>	<u>Rock Type</u>	<u>Texture and Structure</u>	<u>Angle to Core Axis</u>	<u>Alteration</u>	<u>Sulphides</u>	<u>Remarks</u>
123.43 to 127.92	GRAPHITIC ARGILLITE	Colour - black to dark grey Grain size - fine Well-laminated black and grey argillite	bedding 60 - 70°	Occasional Qtz-carb veinlet	1-2% diss py	Graphite is very conductive
127.92 to 141.28	GREYWACKE	Colour - med. grey Grain size - med. Finely laminated with soft sediment deformation Frag of a soft, white material 5-6mm (subround) in zones (volcanic tuff?) Breccia zones with Argillite fragments	bedding 45 - 50°	Occasional qtz veinlet Very weak to mod. clay alteration around faults	5% py diss 5% py as blebs and beds Avg = 10%	136.80-137.35m: Fault zone with clay gouge
141.28 to 144.93 EOH	GRAPHITIC ARGILLITE	Colour - black Grain size - fine Massive black graphitic argillite with graphite on fractures		Occasional qtz vein	Tr. PY	Argillite is very conductive

ASSAY SHEET

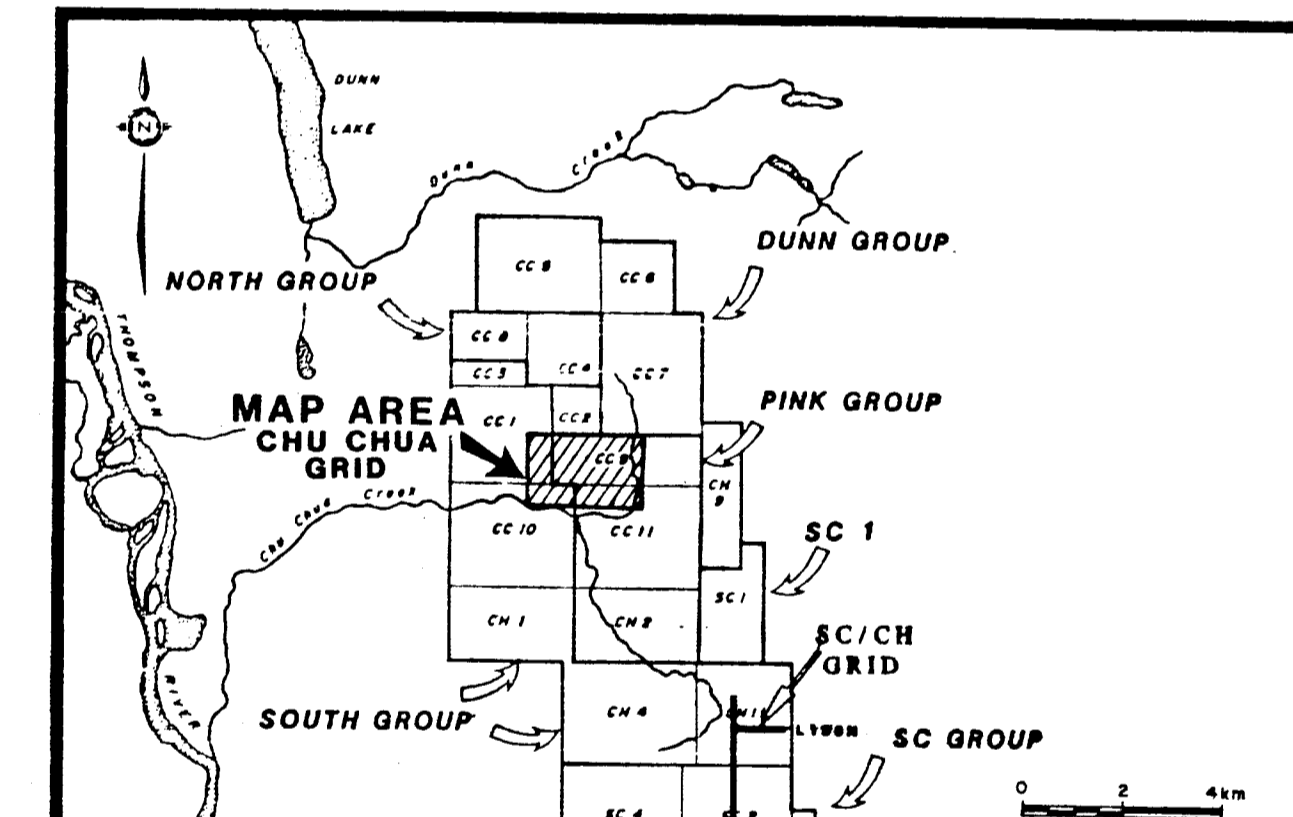
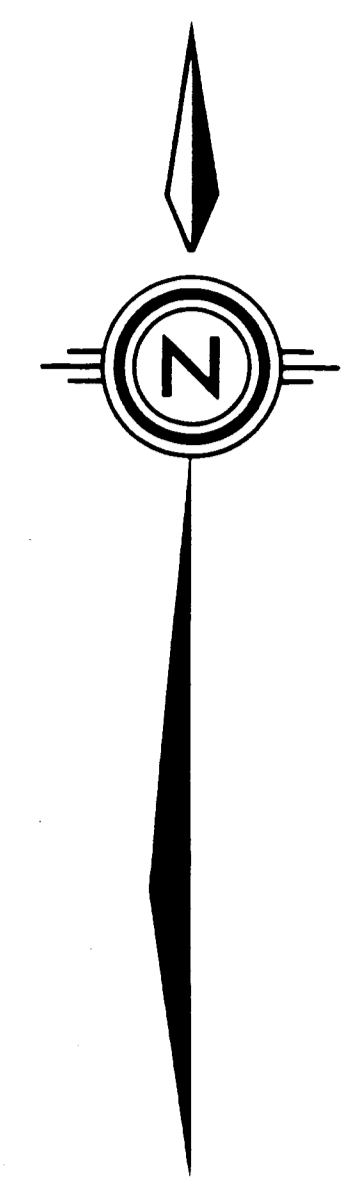
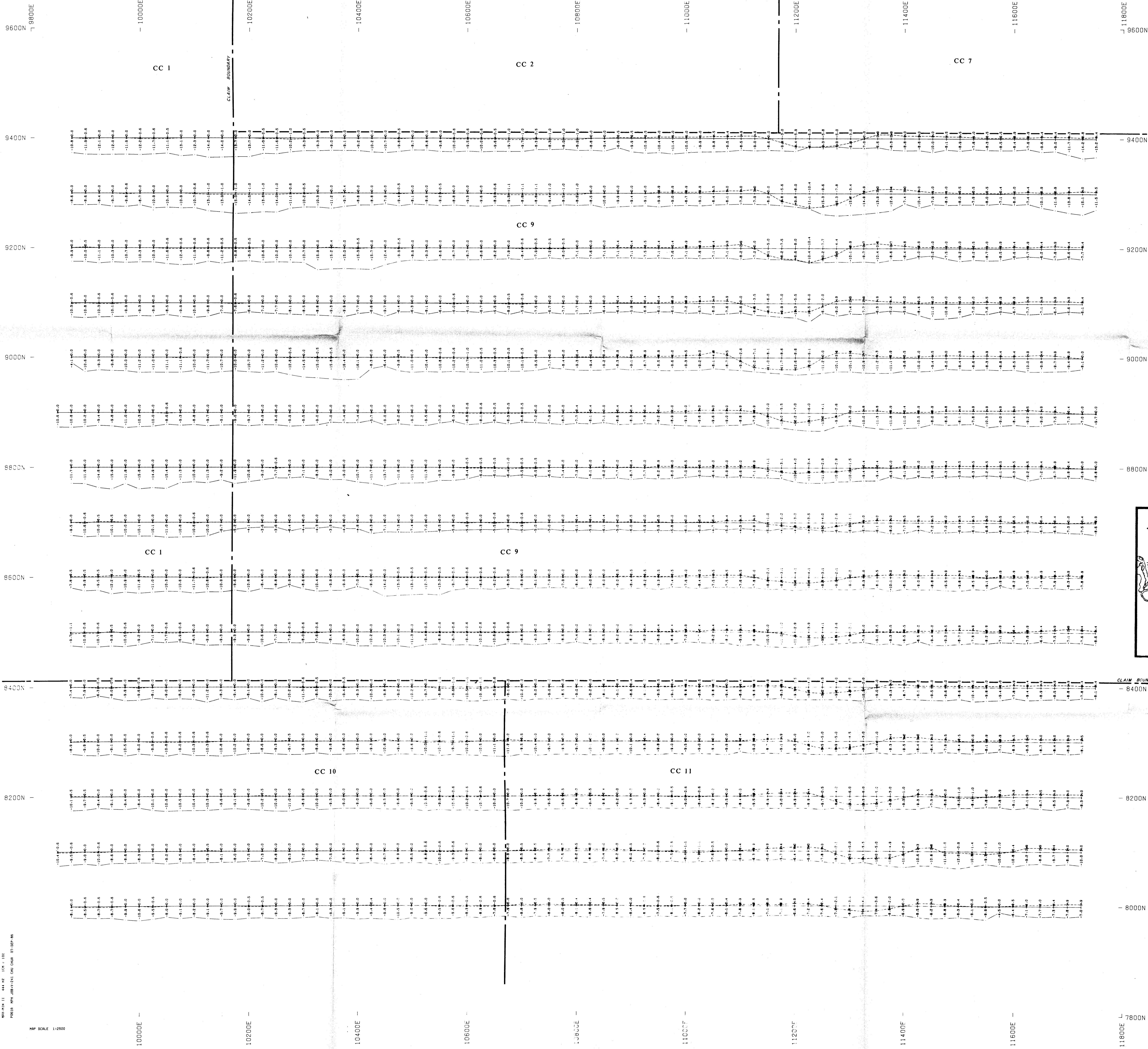
Sample Number	From (m)	To (m)	Estimate		Length (m)	% Cu	% Zn	% Pb	gm T Ag	gm T Au	% SiO ₂	% TiO ₂	% Na ₂ O	% MgO	% Fe	PPM Cu	PPM Zn	PPM Pb	PPM Ag	PPB Au	ppm As	ppm Ni	
			Cu	Zn																			
CCF-11001	17.47	18.47			1.00											59	35	12	1.9	3	10	12	
CCF-11002	29.00	30.00			1.00											25	22	10	1.7	4	8	8	
CCF-11003	38.60	39.60			1.00											34	33	14	1.6	8	7	23	
CCF-11004	50.00	51.00			1.00											51	54	60	0.9	11	39	43	
CCF-11005	54.00	55.00			1.00											41	56	23	0.9	10	1	21	
CCF-11006	57.24	58.24			1.00											17	80	45	1.0	9	24	21	
CCF-11007	62.00	63.00			1.00											51	88	69	0.9	4	78	56	
CCF-11008	69.00	70.00			1.00											35	63	39	0.5	3	11	26	
CCF-11009	77.00	78.00			1.00											17	57	32	0.5	7	10	22	
CCF-11010	91.00	92.00			1.00											7	73	32	1.0	5	1	10	
CCF-11011	98.10	99.10			1.00											72	995	66	2.8	44	63	73	
CCF-11012	106.00	107.25			1.25											67	56	70	1.4	32	75	30	
CCF-11013	111.00	112.00			1.00											75	1482	32	3.6	23	43	77	
CCF-11014	118.06	119.06			1.00											30	666	20	2.4	9	14	45	
CCF-11015	123.08	123.38			0.30											19	103	56	2.4	6	20	20	
CCF-11016	126.20	127.20			1.00											73	486	27	4.0	8	12	70	
CCF-11017	130.04	131.04			1.00											9	54	50	1.4	3	10	11	
CCF-11018	131.90	132.90			1.00											8	52	38	1.2	3	1	10	
CCF-11019	139.40	140.40			1.00											7	75	47	1.1	5	1	16	
CCF-11020	143.80	144.80			1.00											79	520	19	4.0	10	1	70	

CCF-11

HOLE NO. _____

PAGE 5

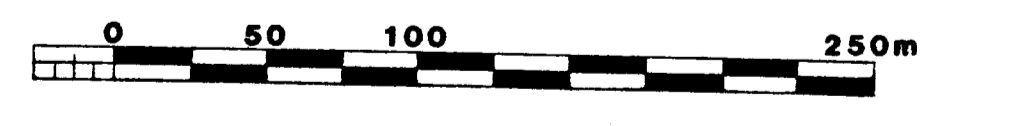
ZIPPY PRINT - BRIDGE MOUNT RICHMOND



**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

15,717

- LEGEND**
- INSTRUMENT: Apex Parametrics Max Min II
 - CABLE LENGTH: 150 metres
 - FREQUENCY:
 - |-| Plotting Designation
 - Inphase Profile
 - Quadrature Profile
 - ± Inphase, Quadrature Value
 - PROFILE SCALE: 1cm = 10%



MAP NO. **1**

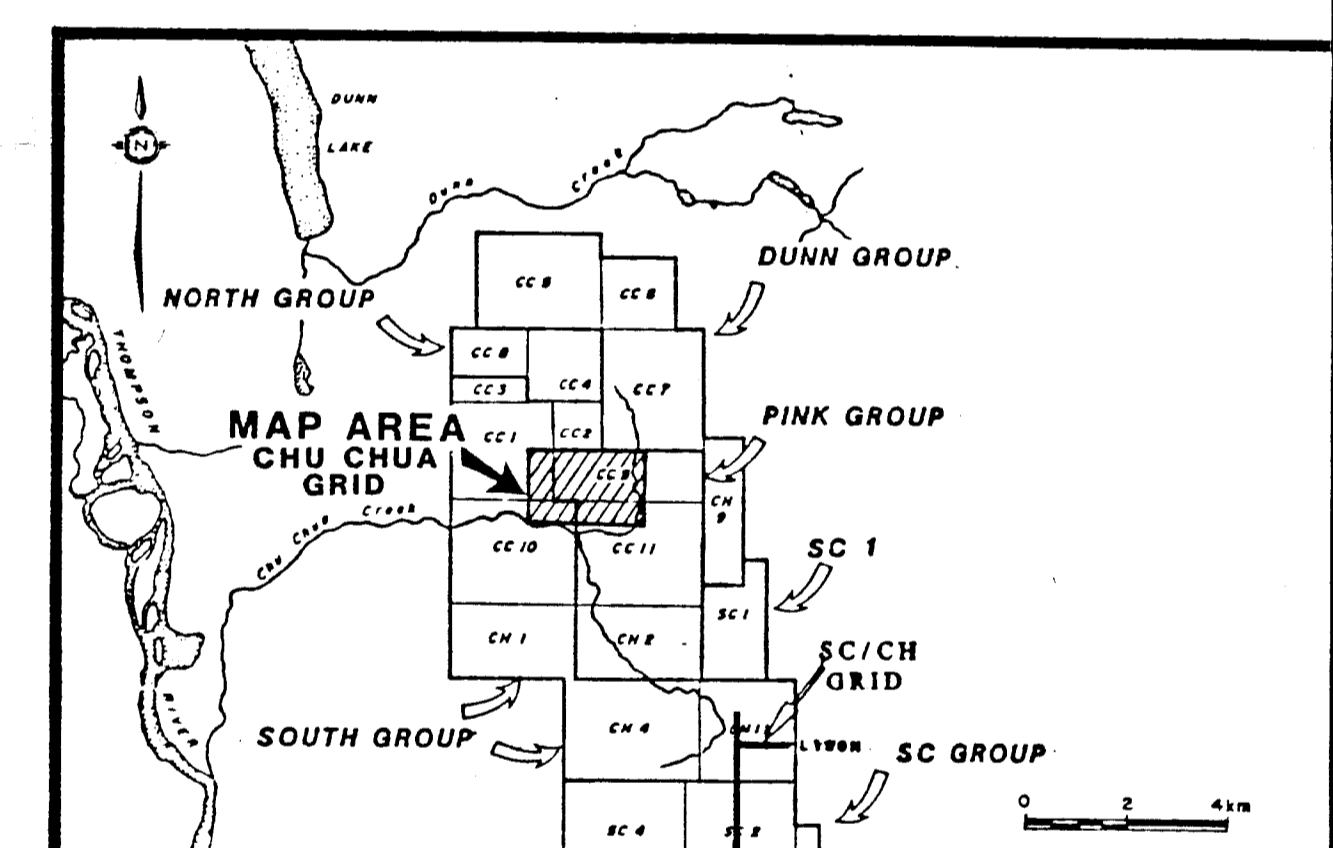
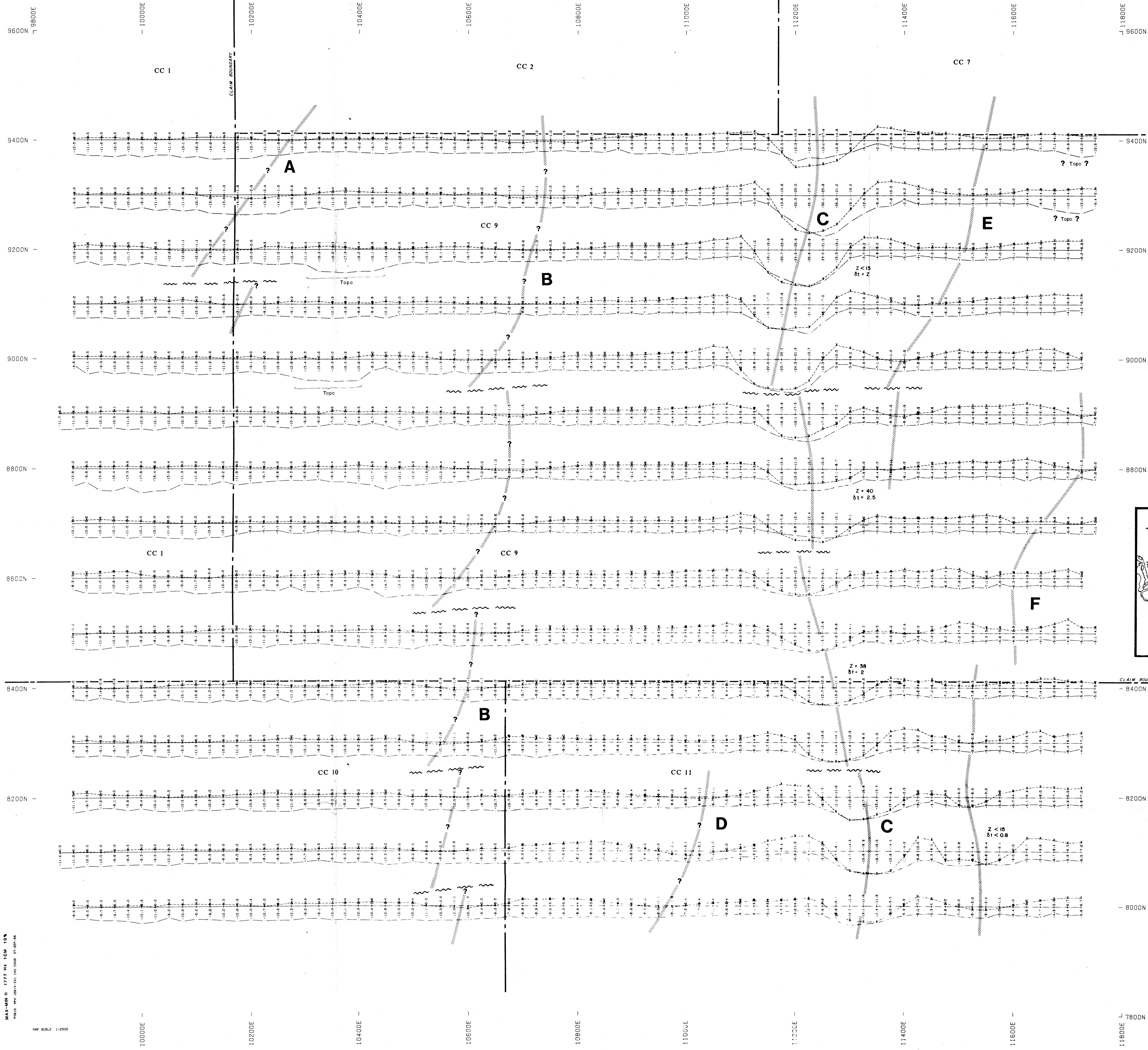
CORPORATION FALCONBRIDGE COPPER

CHU CHUA PROJECT
 MAX - MIN II SURVEY
 644 Hz
 CHU CHUA GRID
 KAMLOOPS MINING DIVISION

Project No: V 241	By: D B
Scale: 1:2500	Drawn: IP/JS
Drawing No:	Date: SEPTEMBER 1986

MPH Consulting Limited

MPH PLAN 11 444 447 1/10" = 1" 100'
 PUBLISHED BY 241 CHU CHUA GRID 07-10-86
 MAP SCALE 1:2500

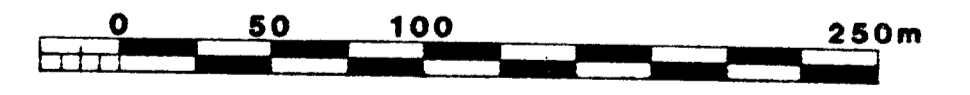


LEGEND

- INSTRUMENT: Apex Parametrics Max Min II
- CABLE LENGTH: 150 metres
- FREQUENCY:
 - Plotting Designation
 - Inphase Profile
 - Quadrature Profile
 - Inphase, Quadrature Value
- PROFILE SCALE: 1cm = 10%
- Max - Min anomaly

GEOLOGICAL BRANCH ASSESSMENT REPORT

15,717



MAP NO.:
2

CORPORATION FALCONBRIDGE COPPER

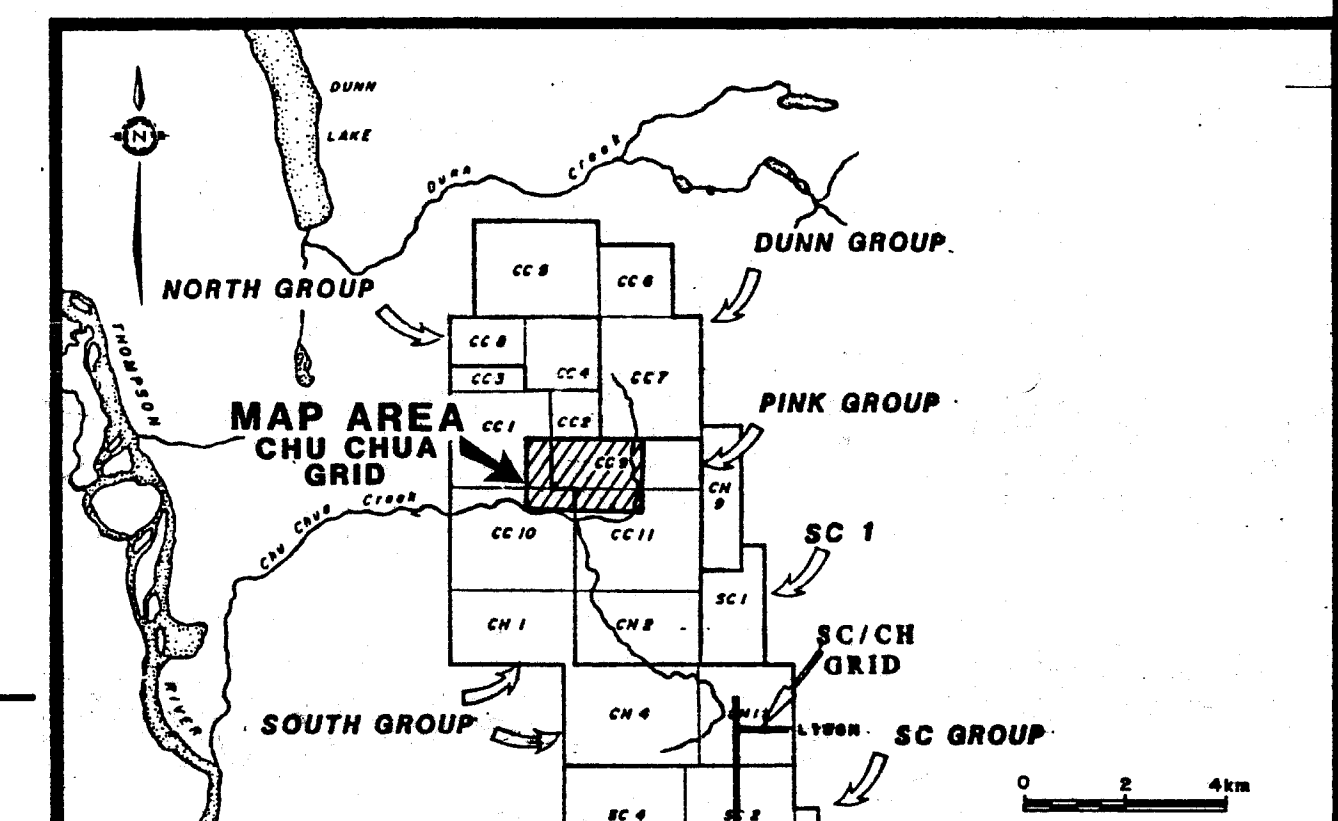
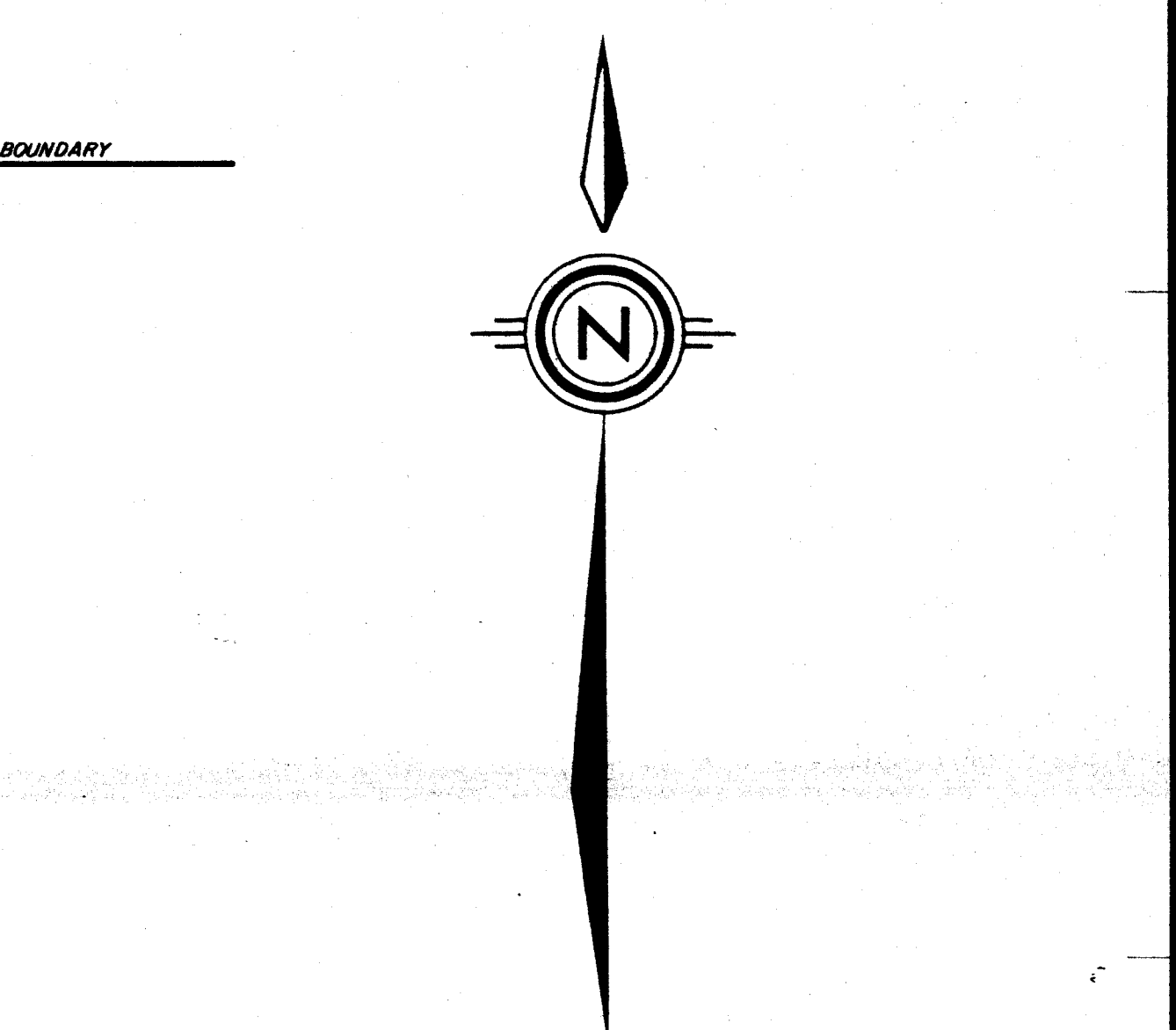
CHU CHUA PROJECT
 MAX - MIN II SURVEY
 1777 Hz
 CHU CHUA GRID
 KAMLOOPS MINING DIVISION

Project No: V 241	By: D.B.
Scale: 1:2500	Drawn: IP/JB
Drawing No:	Date: SEPTEMBER 1986

MPH Consulting Limited

MAX-MIN II 1777 Hz 1CM 10%
 PUBL. MAP 15,717 CHU CHUA GRID 01-107-04

MAP SCALE 1:2500



LEGEND

1390 34, 13, 80
Sample location Cu, Pb, Zn ppm

- 160 ppm Cu
- 27 ppm Pb
- 130 ppm Zn

CORPORATION FALCONBRIDGE COPPER

CHU CHUA PROJECT
CHU CHUA GRID

SOIL GEOCHEMISTRY
Cu, Pb, Zn ppm

SCALE: 1:2500

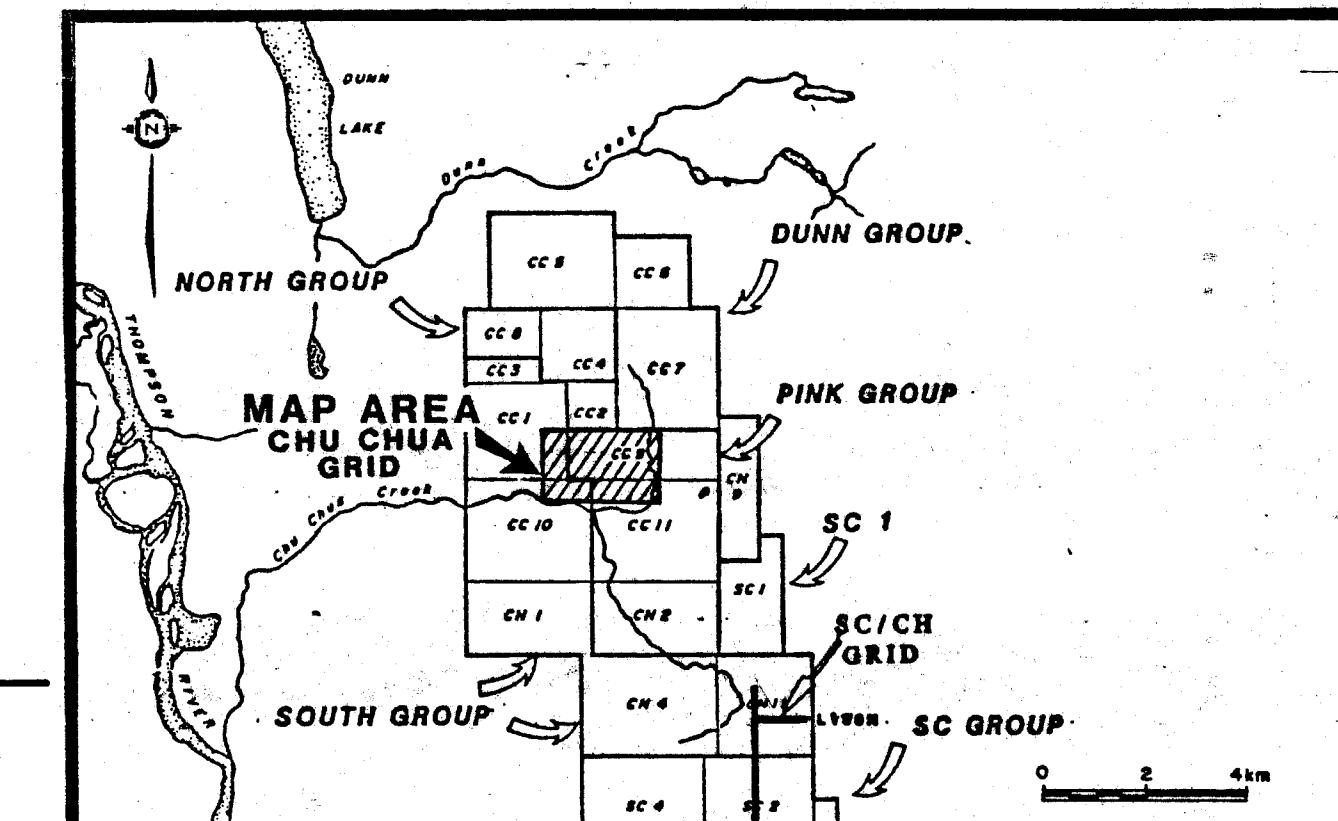
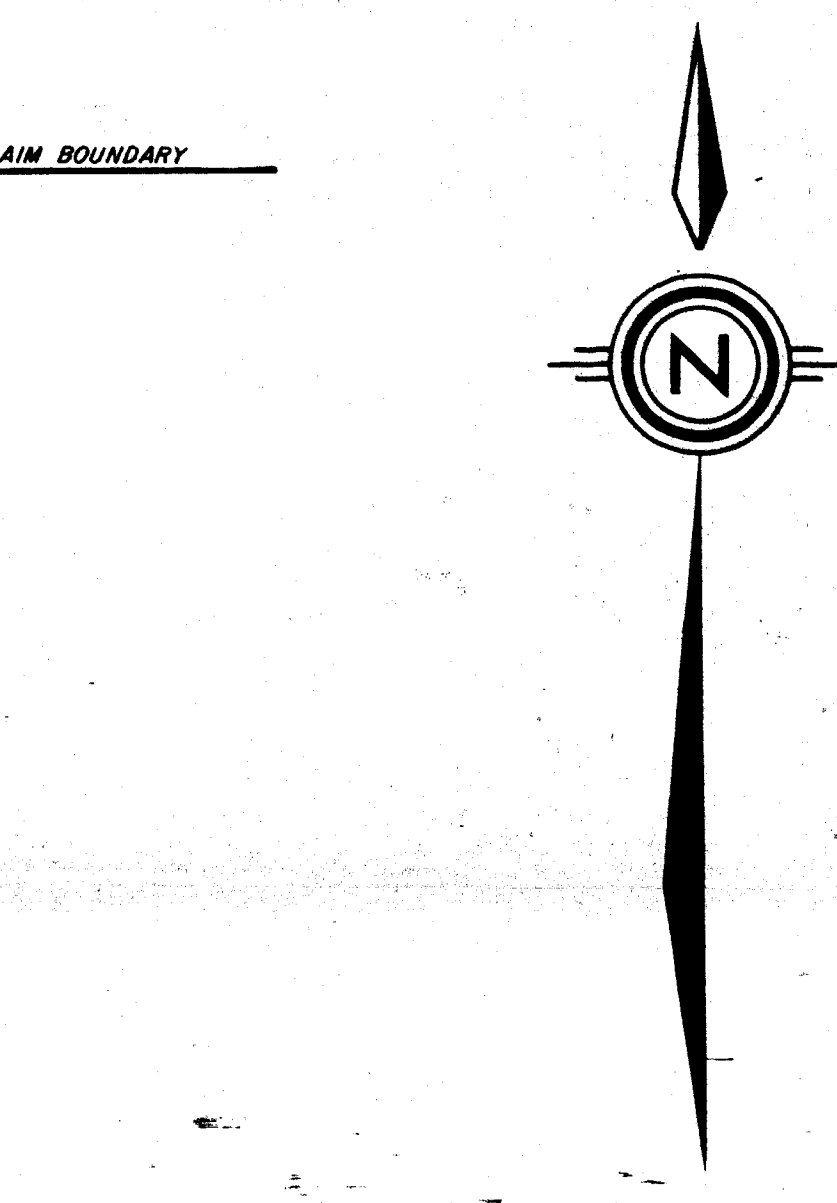
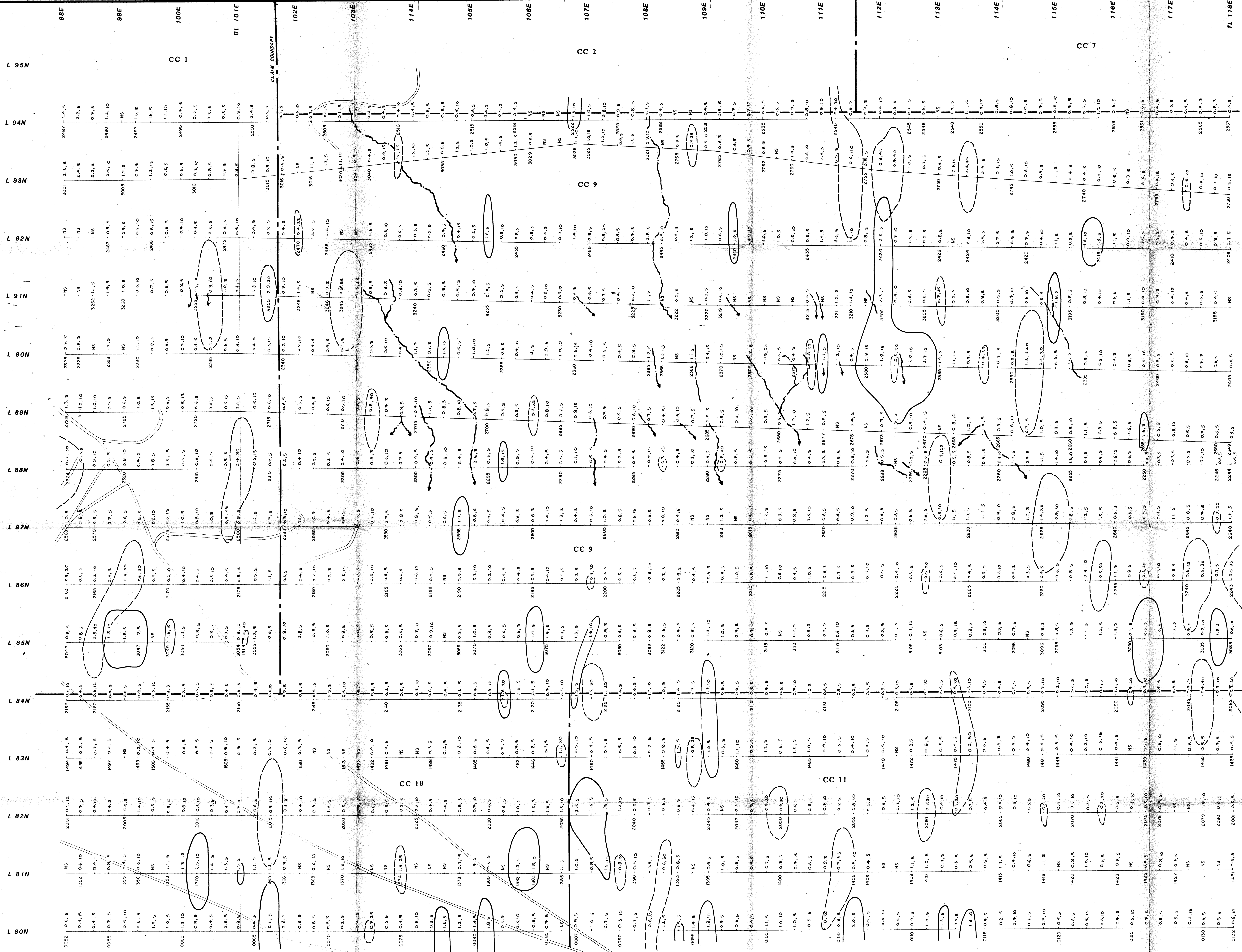
0 50 100 250m

DRAWN BY: IP/eg
DATE: NOV, 1986

MAP NO.: **3**
N.T.S. 92P/8,82M/5

15,717

GEOLOGICAL BRANCH ASSESSMENT REPORT



LEGEND

- 1390 | O.S. 10
- Sample location | Ag ppm, Au ppb
- | 1.5 ppm Ag
- | 20 ppb Au

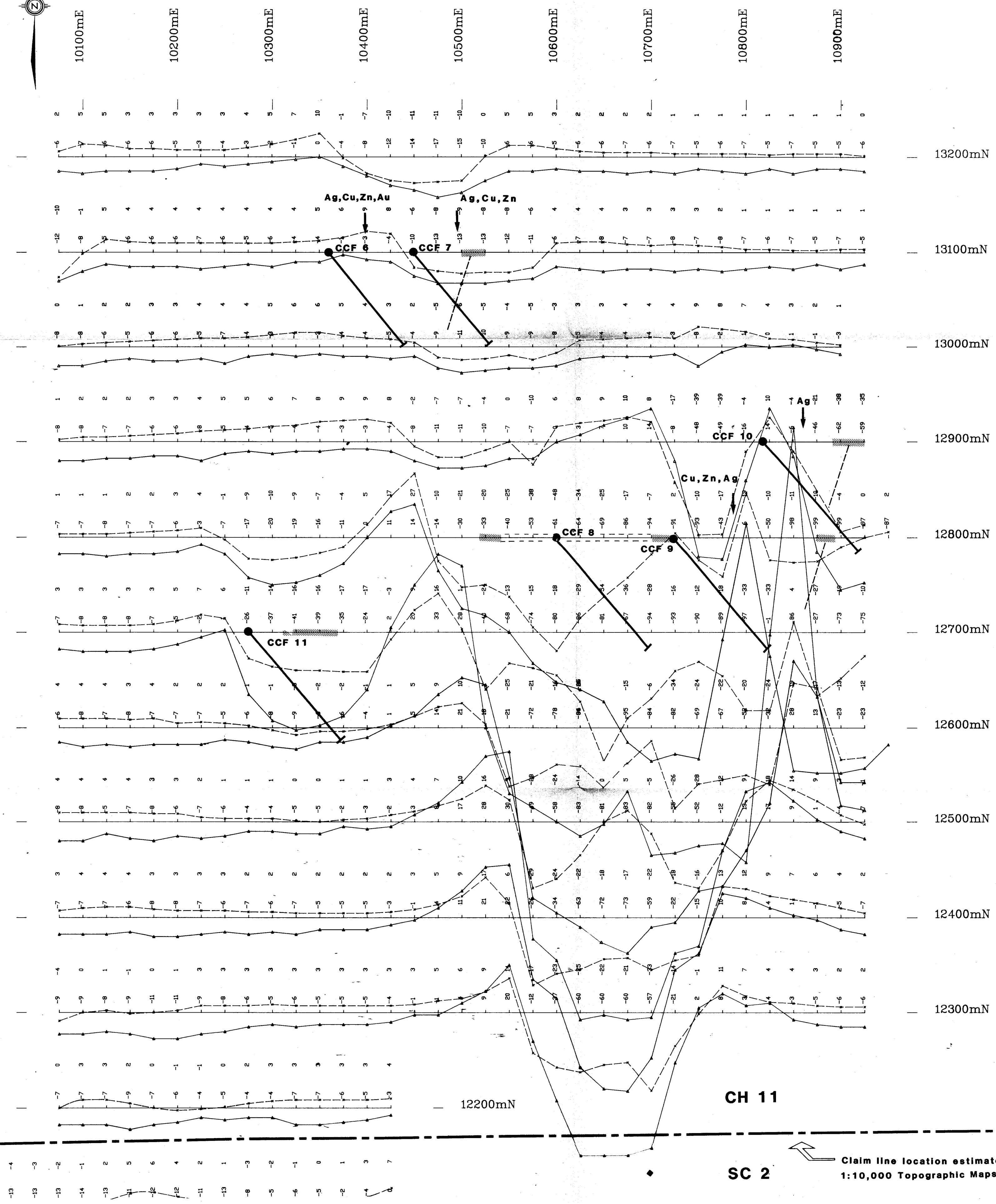
CORPORATION FALCONBRIDGE COPPER

CHU CHUA PROJECT
CHU CHUA GRID
SOIL GEOCHEMISTRY
Ag ppm, Au ppb

MAP NO.: **4**

0 50 100 250m
 SCALE: 1:2500

DRAWN BY: IP/eg
 DATE: NOV. 1986
 N.T.S.: 92P/8,82M/5

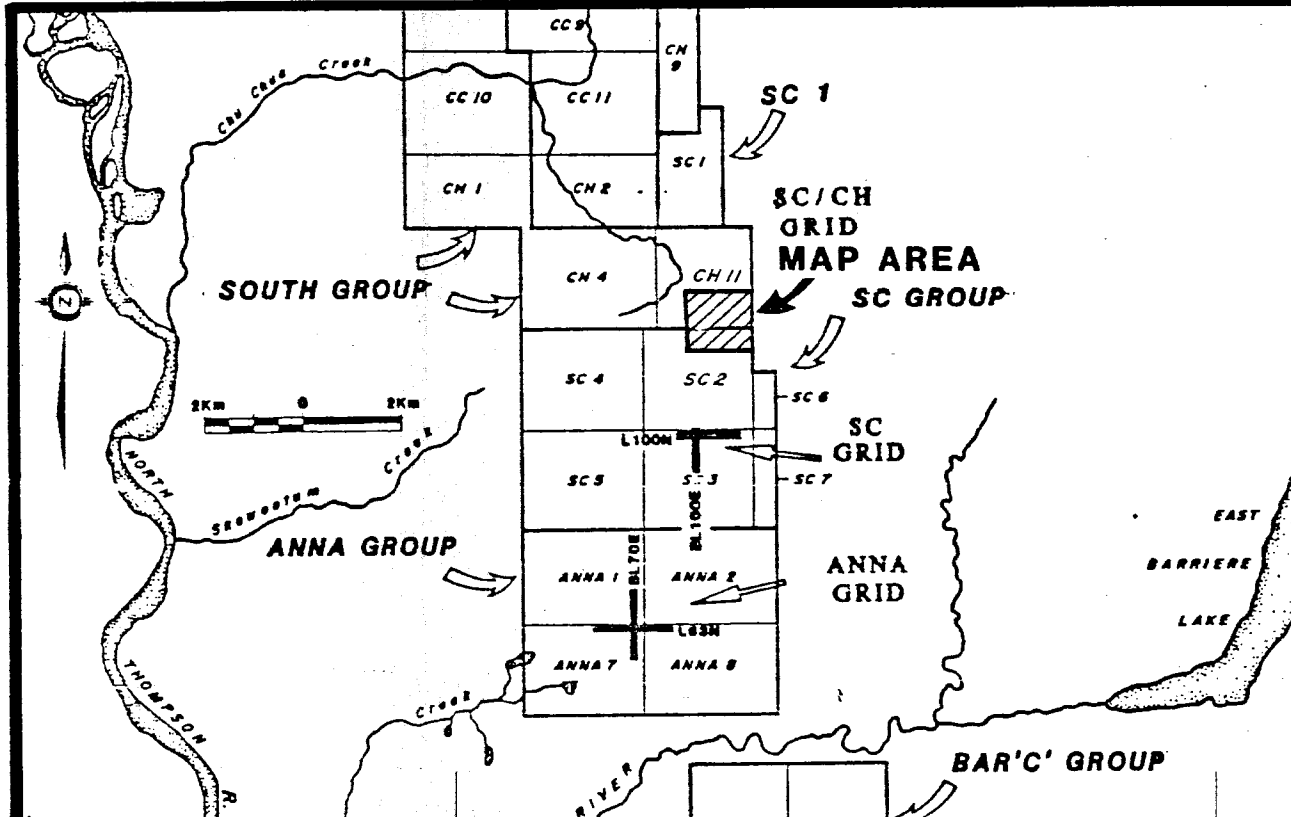


**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

15,717

LEGEND

- 1986 Drill hole location
- Inphase Profile
- Quadrature Profile
- Max Min anomaly

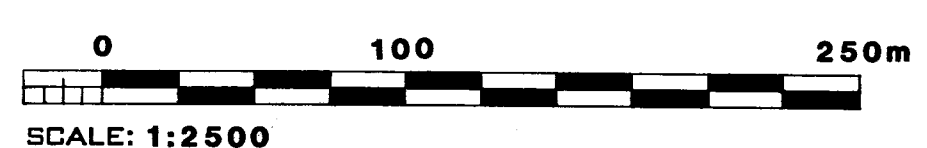


CORPORATION FALCONBRIDGE COPPER

CHU CHUA OPTION

SC/CH Grid
MAX MIN I SURVEY - 444 Hz

DRILL HOLE LOCATIONS



DRAWN BY: IP/dm

DATE: SEPT 1986

N.T.S. 82M/4W

MAP NO.:

5