



41010NE9110 42 CUNNINGHAM

010

## DIAMOND DRILLING

TWP/AREA Cunningham REPORT NO. #42

WORK PERFORMED FOR: Falconbridge Ltd.

RECORDED HOLDER: SAME AS ABOVE [ ]  
: OTHER  Robert Allan MacGregor

CLAIM NO.	HOLE NO.	FOOTAGE	DATE	NOTE
S116469	CU 32-01	200m	May 91	(1)
S116469	CU 32-03	275m	June 91	(1)
S116469	CU32-04	<u>183m</u>	Mar 91	(1)
		658 m		

### NOTES:

1. Report of work #W9360.00075

FILED June 24/93

**Falconbridge Limited**

**Peter Lake Option**

**1992 Progress Report**

**Cunningham Township**

**N.T.S. 41-O-10**

**December, 1992**

**J.T. Aultman  
Field Geologist**

## **EXECUTIVE SUMMARY**

The 1992 exploration program on the Peter Lake Option consisted of limited surface geophysics (HLEM) and diamond drilling. The geophysics and drilling were conducted during February and March, 1992. The geophysical survey was completed by Exsics Exploration Limited of Timmins, Ontario and the diamond drilling was completed by Norex Drilling Limited of Porcupine, Ontario.

Diamond drilling on the property in 1992 totalled 337 metres in one complete hole (Cu32-04) and two hole extensions (Cu32-01 and Cu32-03). Hole Cu32-04 was designed to test a geophysical target, while holes Cu32-01 and Cu32-03 were extended to test the down-dip potential of the main mineralized showing area. Mineralization intersected in holes Cu32-03 and Cu32-04 was low grade and over narrow widths. The fractured nature and quartz-carbonate association would suggest that the mineralization has been re-mobilized.

No further work is planned for the Peter Lake Option.





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## INTRODUCTION

The Peter Lake Option Agreement was signed on November 1, 1990. The property was acquired because of a Pb/Zn showing present on it. Limited previous work had outlined a zone, 3-5 metres wide and 60-90 metres long, of Pb/Zn mineralization to approximately 30 metres depth. This mineralization returned values of 4% Zn and 1% Pb and consisted of sulphide stringers and disseminated sulphides in a chert breccia. Other Zn/Pb showings in chert and quartz-carbonate veins and numerous untested geophysical anomalies are present on the property.

Exploration on the Peter Lake Option by Falconbridge has included ground geophysics, geological mapping, lithogeochemical sampling and diamond drilling. This report only covers the 1992 exploration program, the reader is referred to the 1991 property report by Peter Harvey for details of the 1991 program.

## LOCATION AND ACCESS

The Peter Lake Option is located approximately 125 kilometres southwest of Timmins, Ontario in the southwestern part of Cunningham Township (See Figure 1). This property consists of four leased and twenty staked claims, totalling approximately 384 hectares. The claims are approximately 20 kilometres north of the Sultan Industrial Road and are easily accessed during the summer by 4x4 pick-up using the extensive network of logging roads present in the area. These roads are summer access only.

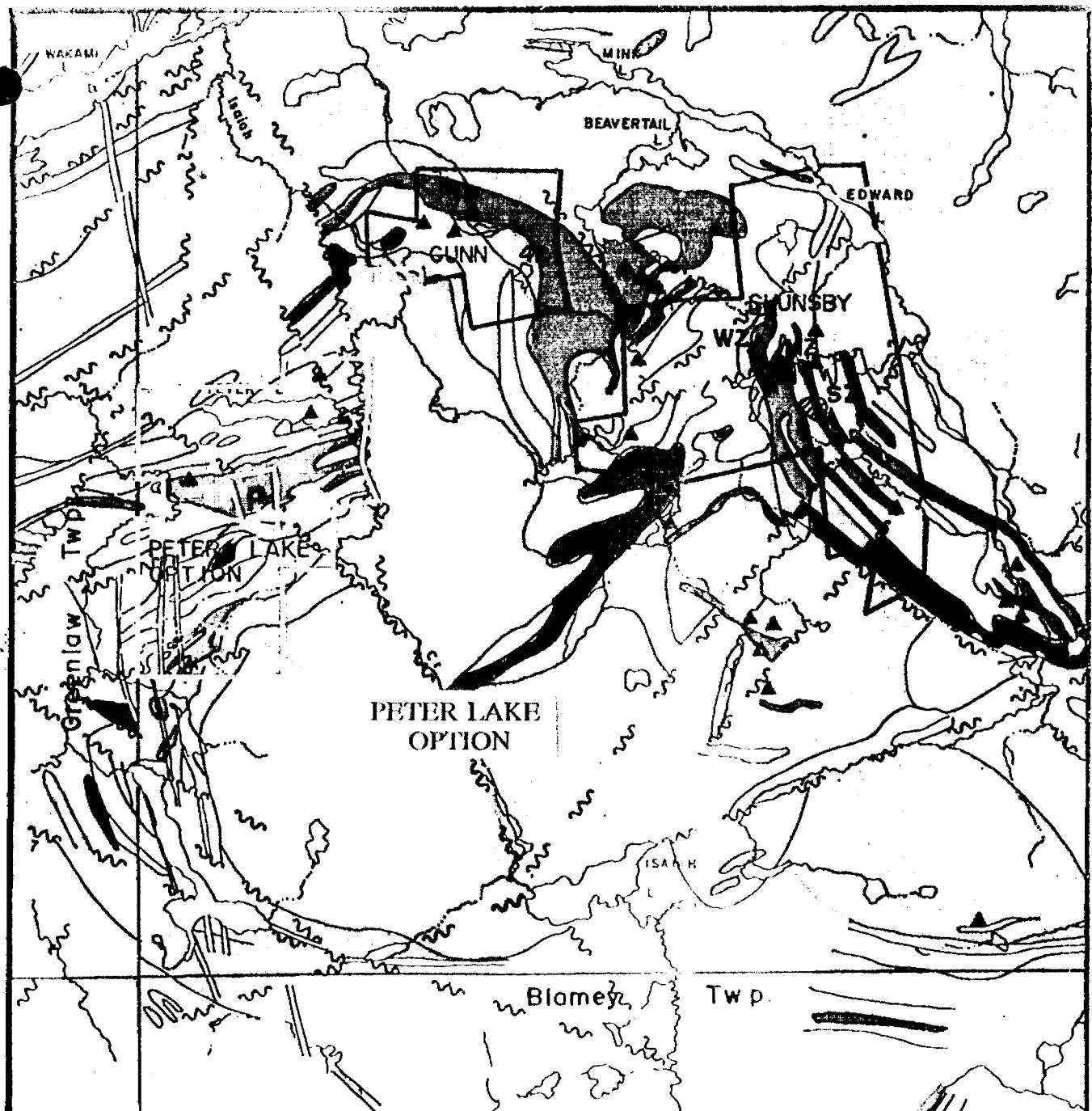
## 1992 EXPLORATION ACTIVITIES

The 1992 exploration program on the Peter Lake Option consisted of limited surface geophysics (HLEM) and diamond drilling. The geophysics and drilling were conducted during February and March, 1992. The geophysical survey was completed by Exsics Exploration Limited of Timmins, Ontario and the diamond drilling was completed by Norex Drilling Limited of Porcupine, Ontario.

The purpose of the 1992 exploration program was to:

1. Find the eastern strike extent of the HLEM conductor associated with the Pb/Zn mineralized zone by establishing and surveying another gridline (L118E) east of the 1991 grid. The HLEM survey used a shorter cable length (50m) than the 1991 survey (120m) to better define a series of closely spaced conductors located between 140+00N to 147+00N and L113+00E to L117+00E.
2. To drill test HLEM conductor "E" located under Peter Lake.
3. To drill test the down-dip extension of the surface mineralization by extending two 1991 diamond drill holes.





### LEGEND

- MAJOR ROCK DIVISION
- [10] DIABASE
- [9] FELSIC INTRUSIVE ROCKS
- [8] INTERMEDIATE INTRUSIVE ROCKS
- [7] MAFIC INTRUSIVE ROCKS
- [6] ULTRAMAFIC INTRUSIVE ROCKS
- [5] SEDIMENTARY ROCKS
- [4] FELSIC VOLCANIC ROCKS
- [3] INTERMEDIATE VOLCANIC ROCKS
- [2] MAFIC VOLCANIC ROCKS
- [1] ULTRAMAFIC VOLCANIC ROCKS

MZ MAIN ZONE

SZ SOUTH ZONE

WZ WEST ZONE

IRON FORMATION

▲ MINERALIZED OCCURRENCE

0

2000 m

Figure 8

FALCONBRIDGE LIMITED

Exploration Division

Timmins ONTARIO



CUNNINGHAM TOWNSHIP

PETER LAKE OPTION

**GEOLOGY AND PROPERTIES**

TRACED : del	DATE : 09 / 90	NTS : 41 - O / 10	PROJECT NO. : 8118
DRAWN : del	DATE : del	MAP NO. : del	FILE : del
SUPERVISED : DRC	DATE : 09 / 90		
REVISED : del	DATE : del	SCALE : 1 : 50 000	

## 1992 EXPLORATION RESULTS

### 1992 Geophysical Survey Results

The 1992 survey was successful in outlining the main mineralized area and in identifying the previously known HLEM conductors. The closely spaced conductors outlined by the 1991 survey were still not clearly identified using the 50m coil separation. Survey results are presented in Appendix A.

The HLEM survey of L118E did not detect any of the conductors that were present on L117E. The sudden truncation of the anomalies along the eastern edge of the property would suggest that the north-south trending Isaiah Creek Fault is located between L117E and L118E.

### 1992 Diamond Drilling Results

Between March 28 and April 1, 1992, one complete diamond drill hole and two hole extensions totalling 337 metres in length were completed on the Peter Lake Option by Norex Drilling Limited of Porcupine, Ontario. Diamond drilling statistics and direct invoice costs for the 1992 drilling program are illustrated in Table 1. Drill hole locations (surface plan) and drill sections are included in Appendix B. Drill logs, assay results and lithogeochemical data for the drill holes are presented in Appendix C. The diamond drill core from both the 1991 and 1992 drilling programs is stored at the Falconbridge Exploration core storage area in Timmins, Ontario.

HOLE NUMBER	NORTHING	EASTING	AZI	DIP	CASING (m)	HOLE (m)	START	END	COST Invoiced \$/m
Cu32-01	144+75N	117+00E	000	-50	3.0	75	03/31/92	04/01/92	\$ 3,999 \$53.32
Cu32-03	144+70N	116+50E	000	-65	3.0	79	03/30/92	03/31/92	\$ 4,117 \$52.11
Cu32-04	145+35N	115+70E	000	-50	3.0	183	03/28/92	03/29/92	\$ 9,259 \$50.59
Totals					377				\$17,374 \$51.56

Table 1: 1992 Diamond Drilling Summary for the Peter Lake Option PN 8203.

Drill hole Cu32-01 was extended an additional 75 metres to test the down-dip potential of the surface mineralization. The hole extension intersected massive and pillow mafic volcanics and a quartz-feldspar porphyry dyke. No anomalous base metal mineralization was encountered in this hole.

Hole Cu32-03 was also extended to test the down-dip potential of the surface mineralization. Cu32-03 was extended 79 metres and encountered pillow mafic volcanics. This hole intersected narrow quartz-carbonate stringers hosting minor amounts of sphalerite and galena. These stringers returned highly anomalous, but sub-economic base metal values over narrow widths (<0.57m). The mineralization does not appear to be associated with the surface mineralization. The pristine nature of the wallrocks and the association of the sulphides with the quartz-carbonate stringers suggest that the base metal mineralization is part of a late stage, low temperature event. Anomalous assay results are presented in Table 2.

Drill hole Cu32-04 was designed to test HLEM conductor "E" which is located under Peter Lake. This conductor is located approximately 200 metres north of main showing area. The hole



intersected fine to medium grained massive mafic volcanics, with areas of pillowd mafic volcanics. Low angle, narrow quartz-carbonate veins and stringers were encountered in the first 80 metres of the hole. A number of these stringers contained sphalerite and galena mineralization. Several highly anomalous Pb/Zn values over narrow widths (<0.45m) were returned from these stringers and these results are presented in Table 2. The quartz-carbonate veins and stringers appear to be part of a late stage event as indicated by the crosscutting nature and pristine wallrock. The conductor was explained by a narrow band of graphitic interflow material in a pillowd mafic unit.

#### ENVIRONMENTAL CONCERNS

Normal diamond drilling procedures were followed and all precautions were taken by the contractor to comply with the provisions set forth in the "Environmental Rider" in the Falconbridge Limited Diamond Drilling Contract. Drill casings were capped and left in the ground. All sites were cleaned up and were inspected during and after drilling to ensure that they met Falconbridge standards. Site inspection sheets for the 1992 drilling program are on file in the Timmins Exploration office.



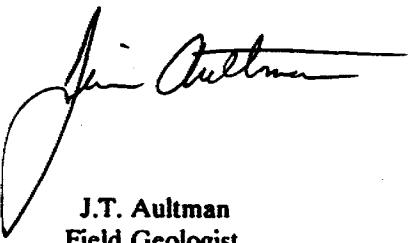


TABLE2: Assay Results from the 1992 diamond drilling program.

HOLE NUMBER	FROM (m)	TO (m)	LENGTH (m)	Au (ppb)	Ag ppm	Cu ppm	Zn (ppm)	Pb (ppm)	Ni (ppm)	REMARKS
Cu32-01 No Anomalous Values										
Cu32-03	225.50	225.80	0.30	7	1.3	132	11700	2260	76	1-2mm wide carbonate filled fracture with 2% sphalerite
	229.05	229.35	0.30	10	0.7	278	6540	781	97	3mm wide carbonate filled fracture with trace sphalerite
	233.00	233.30	0.30	<5	2	116	59	19700	87	1.5cm wide quartz-carbonate vein with 35% galena
	265.60	265.96	0.36	7	1.2	545	4740	596	63	irregular quartz vein with trace pyrite
	266.63	267.20	0.57	10	0.6	326	2720	451	59	quartz vein with 50% wallrock fragments and trace pyrite
Cu32-04	21.80	22.25	0.45	<5	0.2	102	7220	356	71	1cm wide carbonate stringer with 0.5-1% sphalerite
	23.85	24.30	0.45	<5	1.8	147	10200	12200	35	15cm wide quartz-carbonate vein with 3-5% sphalerite and 1-3% galena
	33.30	33.60	0.30	<5	0.1	115	1200	8	56	1cm wide carbonate stringer with 1-2% sphalerite
	46.60	47.00	0.40	7	0.4	148	26200	185	62	10-15% quartz-carbonate vein with 5-8% sphalerite
	54.00	54.30	0.30	<5	0.7	97	207	6360	86	3cm wide carbonate vein with 0.5% galena

## **RECOMMENDATIONS:**

Based upon the disappointing results obtained during the 1991 and 1992 drilling programs, the potential for the property to contain an economic base metal deposit is limited. Mineralization intersected to date has been low grade and over narrow widths. The fractured nature and quartz-carbonate association would suggest that the mineralization has been re-mobilized. No further work is planned for the Peter Lake Option.



J.T. Aultman  
Field Geologist



**APPENDIX A**

**1992 Geophysical Survey Results**



### FOLLOW-UP PROGRAM

This follow-up program was completed on the Peter Lake Property, Project # 8203. The original program was completed in April, 1991 by Timmins Geophysics Ltd. Refer to "Report on Geophysical survey, Peter Lake Property, Cunningham Township, by D.Londry.

The intent of this follow-up program was to enhance the known conductive zone, better separate them and to better define their characteristics. This was accomplished by rereading a portion of the original grid with a shorter cable length and the maxmin system. One additional line was also cut and read. The new line was called L11800ME and it was surveyed along with the reread.

### SURVEY RESULTS

The survey was successful in outlining the suspected target areas and relatively successful in better separating the zones. Even with the 50 meter cable, the zones were still too close for complete separation.

It should be noted here that there was a sizable topographical feature on the grid in the form of a steep hill. No attempt was made to secant chain the lines which traversed this hill, thus there was a small topo error noted mainly in the inphase values for lines affected by the hill. In effect, the coils were not kept coplanar during a portion of the survey and this usually results in inphase errors.

The following zones were outlined by this program. The conductor lettering system used by Timmins Geophysical was adhered to as best as possible.

Line	Station	Zone	Depth	Conductivity	Width
11400E	14715N	C	-21m	35mhos	Normal
	14540N	E	-26m	90mhos	Narrow
	14440N	L	-26m	>100mhos	narrow
	14280	M	-8m	>100mhos	Wide?
	14300N	N	-8m	100mhos	Normal
.....					
11500E	14420N	L	-14m	35mhos	10m
	14320N	M	-6m	90mhos	Normal
	14240	N	-9m	60mhos	10m
	14580N	E	-23m	>100mhos	Narrow
.....					
11600E	14420N	L	-7m	60mhos	Normal
	14335N	M	-8m	>100mhos	Normal
	14180N	P	-8m	58mhos	8m, Normal
.....					
11700E	14440N	L	-14m	60mhos	Normal
	14370N	M	-7m	35mhos	8m
	14250N	P	-8m	40mhos	10m
.....					

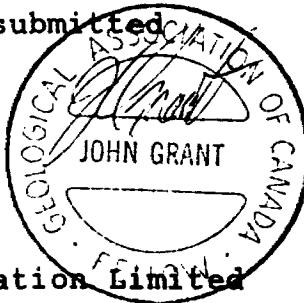
The survey was successful in locating and outlining the zones as was expected.

Line 11800ME pretty much follows a creek which generally runs north-south. The lack of any significant HLEM response on L11800ME, compared to the responses noted just 100 meters to the west, suggest that there is a possible fault structure parallelling the creek. It can be seen, that all conductive zones striking into this line from the west stop abruptly . A detailed magnetic survey would help define the type and extent of this north-south cross structure.

Respectfully submitted

J.C.Grant

Exsics Exploration Limited



## **APPENDIX C**

**1992 Diamond Drill Hole Logs, Assay and Lithogeochemistry Results**



MOLE NUMBER: CU32-01

FALCONBRIDGE LIMITED  
DRILL HOLE RECORD

DATE: 06/09/1992  
IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: 8203  
PROJECT NUMBER: 008203  
CLAIM NUMBER: 5116469  
LOCATION: CUNNINGHAM TWP

PLOTTING COORDS GRID: UTM  
NORTH: 5285335.00N  
EAST: 371970.00E  
ELEV: 410.00

ALTERNATE COORDS GRID: LINE  
NORTH: 143-75N  
EAST: 116-60E  
ELEV: 410.00

COLLAR DIP: -50° 0' 0"  
LENGTH OF THE HOLE: 200.00M  
START DEPTH: 0.00M  
FINAL DEPTH: 200.00M

DATE STARTED: 05/28/1991  
DATE COMPLETED: 05/30/1991  
DATE LOGGED: 06/01/1991

COLLAR SURVEY: NO  
ROD LOG: NO  
HOLE MAKES WATER: NO

PULSE EM SURVEY: NO  
PLUGGED: NO  
HOLE SIZE: 30

CONTRACTOR: NOREX  
CASING: BW, 2m.  
CORE STORAGE: MINESITE  
UTM COORD.:

COMMENTS : Hole extended from 125-200m in Mar 1992.  
HEDGES AT:

**DIRECTIONAL DATA:**

WOLF NUMBER: 0132-01

DRILL HOLE RECORD

SEARCHED BY: D. TRISCOTT/J. AHN TMAN

PAGE • 1

HOLE NUMBER: CUS2-01

## DRILL HOLE RECORD

DATE: 06/09/1992

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 2.00	OVERBURDEN «obj»	-sand, clay, boulders.				
2.00 TO 30.64	SILTSTONE + MAFIC TUFF; CHERT; MAGNETITE IRON FORMATION; SULPHIDE IRON FORMATION; INTER- MEDIATE TUFF «5.2t»	<ul style="list-style-type: none"> <li>-medium grey to greenish grey; dark to light grey; black; medium to light grey.</li> <li>-Well banded/beded at 35° to core axis.</li> <li>-Contacts approximately conformable to bedding.</li> <li>-Units alternate frequently, over narrow intervals.</li> <li>-Weak fracturing with calcite-chlorite infill.</li> <li>-Moderately to well foliated parallel bedding.</li> <li>-11.54-12.20m silicified and epidotized chert (?).</li> <li>-12.98-15.89m light grey to greenish grey chert; moderately fractured and chlorite-pyrrhotite-calcite filled. Fractures generally trend at low angles to core axis.</li> <li>-18.76-19.95m intermediate ash tuff/siltstone. Well banded at 30° to core axis with development of slip planes (slickensides).</li> <li>-19.95-21.50m intermediate ash-lapilli tuff. Moderately sheared at 20° to core axis and chlorite-calcite-pyrite-pyrrhotite flooded along anastomosing hairline fractures.</li> <li>-21.50-24.00m much broken core; siltstone and mafic tuff; fractured and calcite flooded with orange-brown amorphous mineral at wallrock contact.</li> <li>-24.21-24.41m 0.5 to 1.0cm wide quartz-chlorite veins with orange-brown mineral (staining) as above.</li> <li>-24.41-26.58m bleached siltstone/lapilli tuff. Well foliated at 35° to core axis. Generally schistose.</li> <li>-26.58-29.50m felsic lapilli tuff; locally cherty (silicified ?). Chlorite and pyrrhotite + pyrite flooding throughout fractures at 35° to core axis. Appears brecciated/clastic, and silicified 27.00-27.27m.</li> <li>-29.50-30.64m weakly to moderately fractured chert with calcite and chlorite flooding;</li> </ul>		<ul style="list-style-type: none"> <li>-Pervasive moderate chloritization with exception of chert intervals.</li> <li>-Variably silicified throughout.</li> <li>-Siltstone intervals generally moderately to strongly chloritized (epidotized ?).</li> <li>-14.60-14.89m and 15.00-15.73m light grey to cream-coloured with "green" green chlorite (?) spots to 1.5mm throughout.</li> <li>-Moderately to strongly chloritic.</li> <li>-Weakly bleached, moderately to strongly chloritic. Weakly silicified and epidotized.</li> <li>-Weakly to moderately carbonatized, bleached.</li> <li>-Locally weakly carbonatized.</li> </ul>	<ul style="list-style-type: none"> <li>-Trace to 1% pyrite throughout. 3-5% pyrrhotite in bedding-parallel bands, generally associated with siltstone; occasionally in fractures.</li> <li>-Trace to 1% pyrite associated with pyrrhotite.</li> <li>-Pyrite smeared along chloritic slip planes. 1-3% fine-grained sphalerite in quartz-chlorite fractures, 118.10-118.17m.</li> <li>-3-5% pyrrhotite, 2-3% pyrite parallel to schistosity.</li> <li>-Bubbly chalcopyrite to 2% in narrow calcite vein.</li> <li>-Fine-grained sphalerite to 8% of vein composition.</li> <li>-Trace pyrite throughout. Pyrrhotite in foliation-parallel lozenges throughout; possible sphalerite at 26.26m with 1 spec at 25.16m.</li> <li>-5-10% pyrrhotite in chlorite fractures with trace chalcopyrite, trace to 1% pyrite; possibly fine-grained sphalerite at 27.16m.</li> <li>-Pyrrhotite and pyrite in veins and chloritic matrix.</li> </ul>	<ul style="list-style-type: none"> <li>-Locally moderately magnetic.</li> <li>-Weakly to moderately magnetic.</li> <li>-Moderately magnetic.</li> <li>-Moderately magnetic.</li> <li>-Moderately magnetic.</li> <li>-Moderately magnetic.</li> </ul>

HOLE NUMBER: CUS2-01

## DRILL HOLE RECORD

LOGGED BY: D. TRUSCOTT/J. AULTMAN

PAGE: 2

HOLE NUMBER: CUS2-01

## DRILL HOLE RECORD

DATE: 06/09/1992

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
30.64 TO 35.28	BRECCIA ZONE «bbox»	<p>-locally sheared with cataclasite development and chloritic matrix. Calcite vein 29.56-29.65m at 30° to core axis.</p> <p>-Chert, graphic chert and mafic lapilli tuff.</p> <p>-Weakly to moderately fractured with calcite and chlorite in stockwork.</p> <p>-Breciated matrix = chlorite and pyrite (10-15%) and pyrrhotite (2-3%).</p> <p>-Mafic tuff may be cherty cataclasite.</p> <p>-Brecia fragments generally appear to be in place (hydrothermal).</p>		<p>-Moderately to strongly graphitic, chloritic, carbonatized.</p>	<p>-2-3% pyrite, 1% pyrrhotite, trace sphalerite. Sphalerite generally dusty to fine-grained in breccia matrix with calcite and "banker's" green chlorite (?) and in narrow calcite stringers.</p>	
35.28 TO 47.95	CHEART AND SILTSTONE «Scht/silt»	<p>-light to medium grey and yellowish green.</p> <p>-Chert 70%, siltstone 30%. Siltstone in bands throughout and gradually increasing in unit composition downhole.</p> <p>-Local offsets to 4cm.</p> <p>-Weakly fractured and calcite and chlorite and pyrrhotite filled.</p> <p>-36.34-36.39m calcite fragments to 1.2cm in chlorite matrix at 40° to core axis.</p> <p>-36.41-36.43m quartz-calcite vein with angular chert fragments; at 60° to core axis.</p> <p>-36.48-37.14m chert breccia with chlorite-calcite matrix.</p> <p>-37.56-37.64m as 36.48-37.14m.</p> <p>-37.84-37.99m as above.</p> <p>-40.20-40.50m chert with 1-2mm wide chlorite-filled tension fractures (?) at 50° to core axis and crosscutting chloritic veins with angular calcite fragments as 36.41-36.43m at 45-50° to core axis.</p>		<p>-Chert locally weakly carbonatized; siltstone moderately to strongly carbonatized.</p>	<p>-1-2% pyrite, 8-10% pyrrhotite in calcite-chlorite fractures/matrix. Pyrite and pyrrhotite occasionally smeared along slip planes.</p> <p>-1% pyrite.</p> <p>-Trace to 1% pyrrhotite in matrix.</p> <p>-8-12% pyrrhotite in matrix.</p> <p>-1-2% pyrrhotite in matrix.</p>	<p>-Moderately magnetic.</p>
47.95 TO 50.97	CHEART «Scht»	<p>-Weakly fractured and sheared with intercalated graphitic intervals; numerous 0.5 to 1.5cm offsets in bedding/banding.</p> <p>-47.95-48.00m cataclasite (?); rubby core; surrounded to subangular chloritic cherty fragments to 0.5cm with pyrite-chlorite-sericite (?) matrix to 40% at 60° to core axis.</p> <p>-48.08-48.17m weakly breciated and sheared with chlorite-pyrrhotite-pyrite flooding.</p> <p>-48.21-48.27m as above.</p> <p>-48.52m few specks of chalcopyrite in narrow,</p>		<p>-Moderately to strongly graphitic.</p>	<p>-3-5% pyrrhotite, 1% pyrite, dusty to fine-grained, disseminated throughout.</p> <p>-10-15% pyrrhotite, 3-5% pyrite.</p> <p>-15-20% dusty to fine-grained</p>	<p>-Moderately to strongly magnetic.</p> <p>-Weakly to locally moderately magnetic.</p> <p>-Strongly magnetic.</p>

HOLE NUMBER: CUS2-01

## DRILL HOLE RECORD

LOGGED BY: D. TRUSCOTT/J. AULTMAN

PAGE: 3

HOLE NUMBER: CU32-01

## DRILL HOLE RECORD

DATE: 06/09/1992

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
50.97 TO 86.97	ANDESITE ? #2ux	<p>vuggy quartz-calcite vein.</p> <p>-48.58-48.84m sulphide iron formation; contacts at 60° to core axis.</p> <p>-48.84-50.23m numerous narrow chlorite-pyrite-pyrrhotite flooded intervals. Sheared at 25-30° to core axis.</p> <p>-50.23-50.52m as 48.58-48.84m.</p> <p>-50.52-50.97m as 48.84-50.23m.</p> <p>-grey to greenish grey.</p> <p>-Weakly fractured and calcite ± quartz filled; moderately well foliated at 45° to core axis; numerous 1-3mm chlorite spots throughout.</p> <p>-50.97-51.13m sheared contact zone at 55° to core axis; quartz-chlorite flooded.</p> <p>-51.13-51.60m intensely carbonatized.</p> <p>-53.67-54.13m fractured and calcite-quartz flooded with orange-brown amorphous mineral as vein lining at wallrock contact.</p> <p>-64.54-65.08m moderately fractured with calcite fill and amorphous orange-brown mineral to 35% of vein matter.</p> <p>-65.55-66.45m as above.</p> <p>-67.05-68.79m bleached and strongly fractured with quartz-calcite flooding.</p> <p>-68.54-68.79 quartz-calcite flooded along shear (?) at 10-20° to core axis.</p> <p>-68.79-70.29m graphitic chert (foliated and silicified mudstone ?); sheared at 25° to core axis, becoming subparallel downhole; variably fractured; quartz-calcite flooding pervasive and increasing in intensity downhole from 69.50m.</p> <p>-70.30-70.43m ground and broken core.</p> <p>-72.43-74.40m weakly to moderately brecciated and bleached; numerous hairline calcite fractures throughout.</p> <p>-74.40-85.52m strongly to intensely carbonatized.</p> <p>-83.56-83.78m bull white calcite-quartz vein at 35° to core axis.</p> <p>-83.99-84.33m quartz-calcite flooded shear as</p>		<p>Moderately to strongly chloritic, variably carbonatized; locally weakly sericitized (?).</p> <p>Moderately chloritic.</p> <p>Moderately to strongly chloritic.</p> <p>Weakly silicified, intensely carbonatized.</p> <p>Moderately to strongly carbonatized and silicified, increasing downhole; strongly graphitic; moderately to strongly chloritic.</p> <p>Strongly to intensely carbonatized throughout with more strongly carbonatized portions forming breccia matrix (bleached).</p> <p>As 67.05-67.17m.</p>	<p>pyrrhotite, 1-2x fine- to medium-grained pyrite euhedra.</p> <p>Occasional 2-3mm pyrite-calcite veins at moderate to high angles to core axis; 5-10% pyrite, 3-4% pyrrhotite.</p> <p>Trace to 1% pyrite and trace pyrrhotite disseminated throughout.</p> <p>Trace sphalerite and galena in pressure shadow of cherty lozenge at 57.03m.</p> <p>2-3% pyrite disseminated throughout.</p> <p>Trace medium-grained euhedral pyrite.</p> <p>-67.05-67.17m semi-massive fine-grained pyrite halo at vein/wallrock contact.</p> <p>3-5% pyrite in and around quartz-calcite flooding.</p> <p>10-15% dusty to fine-grained pyrite decreasing inversely with intensity of alteration.</p> <p>5-8% dusty to medium-grained</p>	<p>Moderately magnetic.</p>

HOLE NUMBER: CU32-01

## DRILL HOLE RECORD

LOGGED BY: D. TRUSCOTT/J. AULTMAN

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HOLE NUMBER: CUS2-01

## DRILL HOLE RECORD

DATE: 06/09/1992

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
86.97 TO 89.63	GRAPHITIC MUDSTONE «5g(?)»	<p>-67.05-67.17m. -84.76-84.83m calcite-quartz vein at 50° to core axis; pinkish tinge.</p> <p>-85.52-85.76m quartz-calcite vein at 25° to core axis.</p> <p>-85.76-86.16m moderately to strongly fractured siltstone (?). Black chlorite and calcite filled and flooded at high angles (65-85°) to core axis; fractures locally appear anastomosing (augen).</p> <p>-dark grey to black.</p> <p>Moderately to well bedded at 65-70° to core axis. Fractured and calcite-filled (crosscutting bedding at moderate angles).</p> <p>Local narrow bedding-parallel calcite bands. Bedding wraps around pyrite nodules with calcite in pressure shadows.</p>		<p>-Variably carbonatized and correspondingly bleached. Moderately chloritic.</p> <p>Moderately to strongly graphitic, locally weakly to moderately carbonatized.</p>	<p>(euhedral) pyrite 83.99-84.17m.</p> <p>-3-4% medium-grained euhedral and dusty pyrite disseminated throughout, with preference to fracture planes.</p> <p>-15-18% pyrite, disseminated, in bedding-parallel bands and in calcite-rimmed nodules to 2.0cm.</p>	
89.63 TO 139.52	MASSIVE MAFICS «2mu(CH)»	<p>-As 50.97-86.97m.</p> <p>Becoming increasingly chlorite-spotted and andesitic in appearance downhole.</p> <p>-89.63-90.93m intermediate feldspar porphyry; moderately porphyritic in sub- to euhedral plagioclase (?) to 4mm. Moderately fractured and quartz-calcite filled.</p> <p>-91.63-91.91m moderately sheared and quartz-calcite flooded at 50-55° to core axis.</p> <p>-95.77-95.80m smoky-grey quartz vein at 25° to core axis.</p> <p>-96.17-97.21m graphitic mudstone (chert ?) as 86.97-89.63m, without nodular pyrite.</p> <p>-100.52-101.12m as 96.17-97.21m; cherty. 6cm calcite-chlorite flooded zone at upper contact at 40° to core axis.</p> <p>-109.10-109.88m strongly fractured and calcite-quartz flooded with amorphous orange-brown mineral lining vein walls subparallel to core axis.</p> <p>-110.92-111.27m calcite-quartz flooded shear at 15° to core axis with amorphous orange-brown mineral in wallrock.</p>		<p>Moderately chloritic; strongly bleached and silicified 89.63-90.34m; moderately to strongly chloritic; moderately carbonatized 90.34-90.93m.</p> <p>Moderately chloritic; strongly carbonatized.</p> <p>Strongly to locally intensely graphitic.</p>	<p>-89.63-90.34m trace to 1% galena, trace to 1% medium-grained sphalerite in quartz veins.</p> <p>-90.34-90.93m trace dusty to fine-grained pyrite disseminated throughout.</p> <p>-3-4% dusty to fine-grained pyrite disseminated throughout.</p> <p>-1% medium-grained pyrite. 1% Fe-carbonate (oxidized sphalerite?).</p> <p>-5-8% bedding-parallel pyrite and dusty disseminations. Trace chalcopyrite (?) at lower contact.</p> <p>-2-3% fine-grained pyrite, locally along vein contact with wallrock.</p> <p>-Trace to 1% pyrite at wallrock/vein contact.</p>	

HOLE NUMBER: CUS2-01

## DRILL HOLE RECORD

LOGGED BY: D. TRUSCOTT/J. AULTMAN

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HOLE NUMBER: CUS2-01

## DRILL HOLE RECORD

DATE: 06/09/1992

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
139.52 TO 141.05	QUARTZ FELDSPAR PORPHYRY DYKE +90°	<ul style="list-style-type: none"> <li>-113.76-114.01m moderately sheared and calcite-quartz flooded at moderate to high angles to core axis.</li> <li>-sharp lower contact at 45°/CA</li> <li>-light grey.</li> <li>-medium to coarse grained.</li> <li>-unit contains 10-15% feldspar phenocrysts (1-3mm in diameter) and 5% quartz phenocrysts (1mm in diameter).</li> <li>-unit is weakly fractured at 40-45°/CA.</li> <li>-fractures are filled with chlorite.</li> <li>-sharp lower contact at 50°/CA.</li> </ul>		<ul style="list-style-type: none"> <li>-Moderately carbonatized and chloritic.</li> </ul>	<ul style="list-style-type: none"> <li>-Trace fine-grained pyrite at wallrock/vein contact.</li> </ul>	
141.05 TO 200.00	MAFIC VOLCANICS +2m(p) auch+	<ul style="list-style-type: none"> <li>-medium to dark grey-green.</li> <li>-fine to medium grained.</li> <li>-unit is massive but becomes mainly pillowed at depth.</li> <li>-pillow selvages are up to 2cm wide and contain chlorite, pyrite, hyaloclastite and trace pyrrhotite.</li> <li>-quartz and feldspar filled amygdules are present.</li> <li>-amygdules are up to 5mm in diameter.</li> <li>-massive areas have trace amounts of white leucoxenes (0.5mm in length).</li> <li>-unit is weakly fractured (irregular pattern).</li> <li>-fractures contain quartz carbonate and orthoclase.</li> <li>-193.48-194.48m, area has buff coloured leucoxenes and 1-3% fracture controlled hematite.</li> </ul>		<ul style="list-style-type: none"> <li>-weak chloritization and sericitization.</li> <li>-moderate chloritization.</li> <li>-weak sericitization.</li> <li>-patchy weak silicification.</li> </ul>	<ul style="list-style-type: none"> <li>-trace pyrite and pyrrhotite.</li> </ul>	
200.00 TO 200.00	E.O.H.			<ul style="list-style-type: none"> <li>-193.48-195.5m, moderate pervasive buff coloured carbonatization and weak sericitization.</li> </ul>	<ul style="list-style-type: none"> <li>-193.48-195.5m, rare specks of sphalerite in 1-3mm wide quartz filled fractures.</li> </ul>	

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## DRILL HOLE RECORD

LOGGED BY: D. TRUSCOTT/J. AULTMAN

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## ASSAYS SHEET

DATE: 09/06/1992

Sample	From (M)	To (M)	Length (M)	Cu ppm	Zn ppm	Au ppb	Ag ppm	Pb ppm	As ppm	Ni ppm
AN04645	2.00	3.50	1.50	32	10	17	0.1	25		24
AN04646	3.50	5.00	1.50	38	10	14	0.1	9		26
AN04647	5.00	6.50	1.50	21	9	<5	0.1	1		22
AN04648	6.50	8.00	1.50	35	10	21	0.2	3		31
AN04649	8.00	8.51	0.51	90	19	110	0.5	5		33
AN04650	8.51	9.61	1.10	61	14	38	0.2	1		18
AN04651	9.61	11.54	1.93	20	9	21	0.1	1		12
AN04652	11.54	12.20	0.66	36	7	14	0.1	1		15
AN04653	12.20	12.98	0.78	21	16	<5	0.2	1		16
AN04654	12.98	14.00	1.02	63	20	<5	1.2	1		21
AN04655	14.00	14.63	0.63	38	9	<5	0.3	1		14
AN04656	14.63	15.89	1.26	43	12	<5	0.7	1		18
AN04657	15.89	17.00	1.11	45	18	10	0.7	2		18
AN04658	17.00	18.43	1.43	68	322	10	1.3	10		18
AN04659	18.43	18.76	0.33	152	547	10	2.3	12		31
AN04660	18.76	19.95	1.19	103	8560	<5	1.9	251		27
AN04661	19.95	21.50	1.55	177	1310	17	2.2	58		62
AN04662	21.50	23.00	1.50	165	68	<5	0.3	7		100
AN04663	23.00	24.00	1.00	266	77	<5	0.4	20		142
AN04664	24.00	24.50	0.50	196	12900	<5	0.7	459		120
AN04665	24.50	26.00	1.50	113	402	10	0.5	13		132
AN04666	26.00	26.58	0.58	134	315	<5	0.9	38		92
AN04667	26.58	27.27	0.69	249	203	14	2.2	21		80
AN04668	27.27	27.87	0.60	107	5320	10	1.6	669		20
AN04669	27.87	29.00	1.13	37	50	14	0.4	11		16
AN04670	29.00	29.53	0.53	33	14	<5	0.1	1		15
AN04671	29.53	30.64	1.11	48	123	<5	0.3	6		21
AN04672	30.64	32.00	1.36	123	4860	17	1.0	141		29
AN04673	32.00	33.50	1.50	127	491	10	1.3	43		34
AN04674	33.50	35.03	1.53	49	361	14	0.6	10		20
AN04675	35.03	35.28	0.25	209	35	24	1.7	4		29
AN04676	35.28	36.50	1.22	36	12	<5	0.2	1		15
AN04677	36.50	37.14	0.64	22	26	10	0.1	3		13
AN04678	37.14	38.00	0.86	43	9	14	0.3	1		20
AN04679	38.00	39.00	1.00	34	10	10	0.2	1		17
AN04680	39.00	41.00	2.00	26	10	<5	0.3	1		13
AN04681	41.00	42.50	1.50	24	6	14	0.2	1		17
AN04682	42.50	44.00	1.50	34	11	<5	0.2	1		17
AN04683	44.00	45.50	1.50	48	11	14	0.5	1		16
AN04684	45.50	47.00	1.50	24	5	10	0.1	1		17
AN04685	47.00	47.95	0.95	28	6	10	0.1	1		13
AN04686	47.95	48.50	0.55	536	817	213	3.2	52		43
AN04687	48.50	48.84	0.34	262	1850	10	1.8	103		50
AN04688	48.84	49.34	0.50	261	247	10	1.6	6		43
AN04689	49.34	49.84	0.50	226	479	<5	1.3	19		37
AN04690	49.84	50.23	0.39	178	611	<5	1.1	15		43
AN04691	50.23	50.52	0.29	216	3000	<5	2.4	104		104

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ASSAYS SHEET

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HOLE NUMBER : CL32-01

## ASSAYS SHEET

DATE: 09/06/1992

Sample	From (M)	To (M)	Long. (M)	Cu ppm	Zn ppm	Au ppb	Ag ppm	Pb ppm	As ppm	Ni ppm
AM04692	50.52	50.97	0.45	252	602	<5	2.1	256	68	
AM04693	50.97	51.60	0.63	187	627	10	0.8	349	131	
AM04694	51.60	53.00	1.40	129	55	<5	0.2	11		105
AM04695	53.00	54.50	1.50	158	374	<5	0.2	32		91
AM04696	54.50	56.00	1.50	139	378	<5	0.1	59		105
AM04697	56.00	57.50	1.50	101	119	<5	0.1	34		121
AM04698	57.50	58.54	1.04	136	492	<5	0.1	2		86
AM04699	58.54	59.00	0.46	142	70	<5	0.1	1		76
AM04700	59.00	60.50	1.50	127	105	10	0.1	12		53
AM04701	60.50	62.00	1.50	141	537	<5	0.3	328		36
AM04702	62.00	63.50	1.50	118	107	<5	0.2	17		35
AM04703	63.50	64.54	1.04	106	131	<5	0.1	10		52
AM04704	64.54	65.08	0.54	109	1170	<5	0.3	139		71
AM04705	65.08	66.45	1.37	94	58	<5	0.1	8		81
AM04706	66.45	67.05	0.60	122	68	7	0.1	6		79
AM04707	67.05	68.00	0.95	167	712	<5	0.2	120		99
AM04708	68.00	68.79	0.79	177	372	<5	0.7	172		100
AM04709	68.79	69.50	0.71	237	276	17	1.2	101		145
AM04710	69.50	70.29	0.79	35	268	14	0.9	87		56
AM04711	70.29	72.41	2.12	146	697	<5	0.6	262		83
AM04712	72.41	74.00	1.59	135	358	<5	0.2	48		84
AM04713	74.00	74.40	0.40	101	93	10	0.2	36		85
AM04714	74.40	75.50	1.10	85	627	<5	0.3	259		100
AM04715	75.50	77.00	1.50	99	3000	<5	0.4	354		113
AM04716	77.00	78.50	1.50	89	363	<5	0.4	59		125
AM04717	78.50	80.00	1.50	112	2010	<5	0.3	402		117
AM04718	80.00	81.50	1.50	100	156	<5	0.2	43		116
AM04719	81.50	83.00	1.50	114	142	<5	0.3	38		99
AM04720	83.00	83.56	0.56	127	148	<5	0.6	23		105
AM04721	83.56	83.78	0.22	31	347	<5	0.1	2		29
AM04722	83.78	83.99	0.21	77	140	<5	0.1	2		106
AM04723	83.99	84.17	0.18	72	62	10	0.6	29		57
AM04726	84.17	85.52	1.35	143	151	10	0.2	38		89
AM04724	85.52	86.16	0.64	102	87	14	0.5	72		83
AM04725	86.16	86.97	0.81	188	10600	14	0.9	2400		102
AM04727	86.97	87.50	0.53	272	306	21	0.7	67		100
AM04728	87.50	89.00	1.50	621	3640	113	5.1	148		183
AM04729	89.00	89.63	0.63	642	4660	110	4.9	143		216
AM04730	89.63	90.34	0.71	116	1900	14	1.2	2860		46
AM04731	90.34	90.70	0.36	78	2620	<5	1.8	478		58
AM04732	90.70	91.63	0.93	89	465	<5	0.6	45		53
AM04734	91.63	91.91	0.28	637	4200	27	4.5	134		265
AM04735	91.91	93.50	1.59	43	55	<5	0.1	8		28
AM04736	93.50	95.00	1.50	43	35	10	0.1	4		30
AM04737	95.00	96.17	1.17	140	570	10	1.1	201		67
AM04738	96.17	97.21	1.04	187	771	14	1.8	58		91
AM04739	97.21	98.00	0.79	275	381	<5	0.8	27		143

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ASSAYS SHEET

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HOLE NUMBER : CU32-01

## ASSAYS SHEET

DATE: 09/06/1992

Sample	From (M)	To (M)	Length (M)	Cu ppm	Zn ppm	Au ppb	Ag ppm	Pb ppm	As ppm	Ni ppm
AM04740	98.00	99.50	1.50	124	233	<5	0.3	21		114
AM04741	99.50	100.52	1.02	57	67	<5	0.1	7		83
AM04742	100.52	101.12	0.60	305	1510	14	1.2	40		86
AM04743	101.12	102.50	1.38	58	172	<5	0.1	6		94
AM04744	102.50	104.00	1.50	63	51	<5	0.1	3		86
AM04746	104.00	105.50	1.50	93	68	10	0.2	13		95
AM04747	105.50	107.00	1.50	109	64	10	0.2	1		92
AM04748	107.00	108.50	1.50	209	77	<5	0.3	5		87
AM04749	108.50	109.10	0.60	111	39	<5	0.1	2		101
AM04745	109.10	109.88	0.78	95	41	34	0.1	76		85
AM04750	109.88	110.92	1.04	130	48	27	0.1	7		110
AM04751	110.92	111.27	0.35	180	41	<5	0.1	15		103
AM04752	111.27	112.65	1.38	127	40	<5	0.1	1		80
AM04753	112.65	113.76	1.11	225	48	10	0.1	1		88
AM04754	113.76	114.01	0.25	76	86	27	0.1	1		85
AM04755	114.01	114.50	0.49	82	49	<5	0.1	1		97
AM04756	114.50	116.00	1.50	81	66	7	0.1	1		90
AM04757	116.00	117.50	1.50	126	125	7	0.1	1		73
AM04758	117.50	119.00	1.50	106	45	<5	0.1	1		90
AM04759	119.00	120.50	1.50	102	52	<5	0.1	1		80
AM04760	120.50	122.00	1.50	101	43	<5	0.1	1		93
AM04761	122.00	123.50	1.50	95	46	10	0.1	2		111
AM04762	123.50	124.60	1.10	86	31	<5	0.1	1		91
AM04763	124.60	125.00	0.40	83	39	<5	0.1	10		95
AN00390	191.98	193.48	1.50	97.000	138.00	7.0000	0.2000	9.0000		68.000
AN00391	193.48	194.48	1.00	145.00	737.00	<5	0.1000	76.000		77.000
AN00392	194.48	195.98	1.50	89.000	116.00	<5	0.1000	15.000		78.000
AN00393	195.98	197.48	1.50	105.00	58.000	<5	0.1000	22.000		66.000

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## ASSAYS SHEET

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HOLE NUMBER : CU32-01

DATE: 09/06/1992

## GEOCHEMICAL ASSAY

Sample	From (M)	To (M)	Leng. (M)	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	CAO %	MGO %	Na <sub>2</sub> O %	K <sub>2</sub> O %	FE <sub>2</sub> O <sub>3</sub> %	TiO <sub>2</sub> %	P <sub>2</sub> O <sub>5</sub> %	MnO %	CR <sub>2</sub> O <sub>3</sub> %	LOI %	SUM %	Y PPM	ZR PPM	BA PPM	RB PPM	SR PPM	CO <sub>2</sub> %	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD NAME	CHEM ID	ALUM
AM04359	5.40	6.80	1.40	76.61	0.57	1.55	1.10	0.11	0.10	19.42	0.03	<0.02	0.28	<0.00	0.62	100.38	6	146					25	30	<10	4PR	32		
AM04360	11.54	12.01	0.47	80.29	0.39	0.85	0.97	0.06	0.06	15.38	0.02	<0.02	0.41	0.00	0.85	99.04	<2	128					25	25	<10	4PR	40		
AM04361	15.22	15.63	0.41	86.27	0.56	0.59	0.72	0.03	0.08	10.72	0.02	<0.02	0.25	<0.00	1.01	100.25	<2	106					20	50	50	4PR	80		
AM04362	20.72	21.26	0.54	77.77	6.32	0.11	0.98	0.14	1.08	10.22	0.23	0.02	0.10	0.00	2.64	99.70	6	180					70	1615	50	4PR*	475		
AM04363	25.82	26.50	0.68	55.12	17.90	0.61	3.42	0.19	3.64	14.34	1.00	0.08	0.32	0.09	3.85	100.56	14	174					100	725	90	2w*	403		
AM04364	48.01	48.50	0.49	80.45	1.51	0.32	0.87	0.16	0.20	10.92	0.06	<0.02	1.07	<0.00	3.00	97.66	6	134					70	870	<10	4PR	222		
AM04365	53.00	54.00	1.00	47.85	14.34	7.48	8.31	2.53	1.26	12.38	0.79	0.04	0.23	0.03	4.44	99.68	16	156					140	310	140	2u	127		
AM04366	68.95	69.57	0.62	51.97	7.52	13.77	2.65	2.31	0.52	8.83	0.43	<0.02	0.07	0.01	8.49	96.58	6	110					90	170	50	2v	45		
AM04367	73.00	74.00	1.00	47.58	13.65	8.35	7.14	3.56	0.42	12.08	0.84	0.06	0.22	0.03	5.11	99.04	18	172					115	415	100	2u	111		
AM04368	88.20	89.00	0.80	34.73	7.64	5.59	1.66	1.28	1.34	17.02	0.35	0.04	0.07	0.03	22.43	92.48	14	188					285	2965	100	2v1	93		
AM04369	89.76	90.26	0.50	67.69	12.28	4.38	1.39	5.00	0.88	3.50	0.25	0.10	0.06	0.05	4.25	99.82	<2	138					45	1045	30	3PR	120		
AM04370	96.45	97.00	0.55	57.97	7.55	3.44	2.43	1.28	0.90	11.82	0.29	0.06	0.10	0.01	12.05	97.89	12	164					145	415	80	2v1	134		
AM04371	104.00	105.50	1.50	47.93	14.53	7.34	6.43	2.57	1.20	13.01	0.86	0.10	0.26	0.04	4.73	98.97	20	178					95	120	100	2u	131		
AM04373	110.00	113.00	3.00	46.54	13.13	10.22	5.58	2.58	1.52	11.27	0.63	0.04	0.24	0.05	6.26	98.04	20	152					75	80	100	2u	92		
AM04374	119.00	122.00	3.00	49.30	15.01	9.59	8.33	2.03	1.30	11.28	0.63	0.04	0.21	0.05	2.88	100.63	16	116					110	105	180	2u	116		
AN00232	135.00	138.00	3.00	49.79	13.81	9.52	8.36	1.82	1.30	10.34	0.63	0.08	0.20	0.08	2.17	98.11	12	32					90	90	110	2u	109		
AN00233	139.52	141.05	1.53	71.05	15.35	1.80	0.55	6.89	1.08	1.39	0.18	0.10	0.02	0.07	0.79	99.27	4	88					10	40	<10	4PR	157		
AN00234	173.00	176.00	3.00	50.03	14.19	11.49	7.32	1.58	0.86	10.70	0.69	0.08	0.20	0.07	1.63	98.84	12	34					90	90	100	2u	102		
AN00235	185.00	188.00	3.00	48.25	14.71	9.20	8.35	2.29	1.06	11.60	0.75	<0.02	0.20	0.06	2.01	98.46	14	40					90	75	120	2u	117		

HOLE NUMBER: CU32-01

GEOCHEMICAL ASSAY

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HOLE NUMBER : CU32-01

DATE: 09/06/1992

## GEOCHEMICAL ASSAYS

Sample	From (M)	To (M)	Leng. (M)	AG PPM	AU PPB	CO PPM	PB PPM	S PPM	V PPM	AS PPM	SN PPM	CD PPM	SB PPM	BI PPM	SE PPM	HF PPM	TA PPM	W PPM	MO PPM	TH PPM	U PPM	B PPM	CS PPM	LA PPM	CE PPM	ND PPM	SM PPM	EU PPM	GD PPM
AM04359	5.40	6.80	1.40			<5		12000																					
AM04360	11.54	12.01	0.47			<5		21600																					
AM04361	15.22	15.63	0.41			<5		19400																					
AM04362	20.72	21.26	0.54			25		22000																					
AM04363	25.82	26.50	0.68			45		1800																					
AM04364	48.01	48.50	0.49			5		30800																					
AM04365	53.00	54.00	1.00			45		1200																					
AM04366	68.95	69.57	0.62			50		47800																					
AM04367	73.00	74.00	1.00			45		1000																					
AM04368	88.20	89.00	0.80			50		135000																					
AM04369	89.76	90.26	0.50			10		3700																					
AM04370	96.45	97.00	0.55			65		58200																					
AM04371	104.00	105.50	1.50			40		3200																					
AM04373	110.00	113.00	3.00			65		8900																					
AM04374	119.00	122.00	3.00			50		600																					
AN00232	135.00	138.00	3.00			45																							
AN00233	139.52	141.05	1.53			<5																							
AN00234	173.00	176.00	3.00			40																							
AN00235	185.00	188.00	3.00			50																							

HOLE NUMBER: CU32-01

GEOCHEMICAL ASSAYS

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HOLE NUMBER : CU32-01

DATE: 09/06/1992

## GEOCHEMICAL ASSAYS

Sample	From (M)	To (M)	Len. (M)	DY PPM	ER PPM	LU PPM	OS PPB	IR PPB	RU PPB	RH PPB	PT PPB	PD PPB	LI PPM	BE PPM	MN PPM	GA PPM	GE PPM	IN PPM	TL PPM	SC PPM	BR PPM	YB PPM	NB PPM
AM04359	5.40	6.80	1.40																				
AM04360	11.54	12.01	0.47																				
AM04361	15.22	15.63	0.41																				
AM04362	20.72	21.26	0.54																				
AM04363	25.82	26.50	0.68																				
AM04364	48.01	48.50	0.49																				
AM04365	53.00	54.00	1.00																				
AM04366	68.95	69.57	0.62																				
AM04367	73.00	74.00	1.00																				
AM04368	88.20	89.00	0.80																				
AM04369	89.76	90.26	0.50																				
AM04370	96.45	97.00	0.55																				
AM04371	104.00	105.50	1.50																				
AM04373	110.00	113.00	3.00																				
AM04374	119.00	122.00	3.00																				
AN00232	135.00	138.00	3.00																				
AN00233	139.52	141.05	1.53																				
AN00234	173.00	176.00	3.00																				
AN00235	185.00	188.00	3.00																				

HOLE NUMBER: CU32-01

GEOCHEMICAL ASSAYS

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HOLE NUMBER: CU32-03

FALCONBRIDGE LIMITED  
DRILL HOLE RECORD

PROJECT NAME: 8203  
PROJECT NUMBER: 008203  
CLAIM NUMBER: 2116469  
LOCATION: CUNNINGHAM TWP

PLOTTING COORDS GRID: UTM  
NORTH: 5285323.00N  
EAST: 371925.00E  
ELEV: 411.00

ALTERNATE COORDS GRID: LINE  
NORTH: 143+70W  
EAST: 116+10E  
ELEV: 411.00

DATE: 06/09/1992  
IMPERIAL UNITS: METRIC UNITS: X

DATE STARTED: 06/05/1991  
DATE COMPLETED: 06/07/1991  
DATE LOGGED: 06/22/1991

COLLAR SURVEY: NO  
RQD LOG: NO  
HOLE MAKES WATER: YES

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

CONTRACTOR: NOREX  
CASING: BW, 3m.  
CORE STORAGE: MINESITE  
UTM COORD.:

COMMENTS : Hole extended from 196-275m in Mar 1992.  
WEDGES AT:

**DIRECTIONAL DATA:**

**HOLE NUMBER: CL32-03**

DRILL HOLE RECORD

LOGGED BY: D. TRUSCOTT/J. ALTMAN

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HOLE NUMBER: CU32-03

## DRILL HOLE RECORD

DATE: 06/09/1992

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 3.00	OVERBURDEN «obj»	-sandy clay, organics, boulders, casing.				
3.00 TO 9.22	CHLORITE- GRAPHITE SCHIST «5g,Ch»	<ul style="list-style-type: none"> <li>-greenish grey.</li> <li>-Strongly sheared with schistosity developed at low angles to core axis. Possibly altered argillaceous chert.</li> <li>-Lower contact at 15-20° to core axis.</li> </ul>		<ul style="list-style-type: none"> <li>-Strongly chloritic; weakly graphitic; talcose (?)</li> </ul>	<ul style="list-style-type: none"> <li>-3-5% pyrite throughout, along schistosity and in occasional chert rafts/quartz veins; trace to 1% pyrrhotite in chert.</li> </ul>	<ul style="list-style-type: none"> <li>-Moderately magnetic.</li> </ul>
9.22 TO 31.57	CHERT «5cht»	<ul style="list-style-type: none"> <li>-medium grey.</li> <li>-Moderately fractured and black chlorite filled at 10-15° and 100-105° to core axis.</li> <li>-Weakly sheared and green chlorite and pyrrhotite flooded.</li> <li>-Narrow chloritic bands throughout at 25° to core axis.</li> <li>-13.01-13.24m felsic lapilli tuff (?); moderately chloritic and epidotized.</li> <li>-17.12-19.51m intermediate lapilli tuff/sheared cataclastic argillaceous chert (?); sheared at 25° to core axis with shear direction rotating into core axis downhole with increasing cataclasis.</li> <li>-19.51-20.60m fractures variably chlorite, pyrite, sphalerite, galena and chalcopyrite filled.</li> <li>-20.60-22.20m moderately sheared and chlorite + pyrrhotite + chalcopyrite flooded, with rare sphalerite + chalcopyrite + galena mineralization associated with narrow chlorite veins.</li> </ul>		<ul style="list-style-type: none"> <li>-Locally moderately chloritic and epidotized (?); chloritic bands may represent sheared intermediate tuff or siltstone.</li> </ul>	<ul style="list-style-type: none"> <li>-2-3% pyrrhotite disseminated throughout; 4-6% pyrrhotite associated with chlorite and as massive fracture filling with trace pyrite.</li> </ul>	<ul style="list-style-type: none"> <li>-Locally moderately magnetic.</li> </ul>
31.57 TO 35.45	SILTSTONE «5g,silt»	<ul style="list-style-type: none"> <li>-dark grey.</li> <li>-Well banded at 25° to core axis, with gradational upper and lower contacts; cherty intervals throughout. Strongly chloritic and epidotitic (?) bands host dusty pyrrhotite + chalcopyrite to 8%.</li> </ul>		<ul style="list-style-type: none"> <li>-Moderately chloritic, moderately to strongly silicified.</li> </ul>	<ul style="list-style-type: none"> <li>-Trace pyrite, indeterminate pyrrhotite.</li> <li>-33.64-33.78m 2-3% sphalerite in narrow carbonate fractures in cherty interval.</li> </ul>	<ul style="list-style-type: none"> <li>-Weakly, locally strongly, magnetic.</li> </ul>

HOLE NUMBER: CU32-03

## DRILL HOLE RECORD

LOGGED BY: D. TRUSCOTT/J. AULTMAN

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HOLE NUMBER: CU32-03

## DRILL HOLE RECORD

DATE: 06/09/1992

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
35.45 TO 41.30	CHERT «5cht»	-As 9.22-31.57m; argillaceous bands, generally narrow, at 25° to core axis host dusty to medium-grained locally semi-massive pyrite; weakly fractured and carbonate filled.				
41.30 TO 44.44	GRAPHITIC SHEAR «5g, {FAI}»	-grey to black.  -Graphitic shear with rafts of downhole unit; schistosity at 15-20° to core axis; narrow pyrite-carbonate bands at 65° to core axis. -43.00-44.00m ground core.		-Strongly graphitic.	-Narrow bands and blebs of pyrite throughout.	
44.44 TO 90.50	BASALT «2lu»	-greenish grey, fine- to medium-grained.  -Increasingly coarse-grained downhole; variably fractured and carbonate + quartz filled.  -45.10-45.53m carbonate-quartz flooded with 5-7% blebby sphalerite throughout, trace galena. -46.18-46.36m carbonate-quartz flooded shear as above; 2mm wide sphalerite and trace galena in carbonate at host rock contact. -59.11-59.52m carbonate veining hosting 1-2% spotty sphalerite. -59.63-59.92m carbonate veining at 10-15° to core axis, hosting 5-8% sphalerite at wallrock contacts and along carbonate margins. -68.17-68.38m sheared and quartz-carbonate flooded at 40° to core axis. -68.91-69.83m moderately to strongly pervasively carbonatized with quartz-carbonate veins and carbonate veinlets throughout. -73.37-74.70m as above. Locally weakly to moderately sheared and quartz-carbonate flooded. Strong shear at 73.74-73.82m at 45° to core axis. -77.45-78.58m as 68.91-69.83m with quartz-carbonate vein 77.97-78.09 at 40-45° to core axis. -80.72-81.47m as 68.91-69.83m. -81.47-82.16m weakly silicified and moderately hairline fractured; quartz-carbonate vein 81.96-82.10m; lower contact graphitic. -82.16-82.32m carbonatized with carbonate band at upper contact with graphitic band.		-Moderately to strongly chloritic; variably carbonatized.  -Bleached and carbonatized.  -Intensely chloritic.	-Rare fine-grained sphalerite (?) associated with carbonate veining; trace fine-grained pyrite disseminated throughout.  -Trace fine-grained pyrite associated with flooding. -2-3% fine- to medium-grained subhedral pyrite at upper contact in vein.  -Trace to 1% fine-grained pyrite in halo around vein.	

HOLE NUMBER: CU32-03

## DRILL HOLE RECORD

LOGGED BY: D. TRUSCOTT/J. AULTMAN

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HOLE NUMBER: CU32-03

## DRILL HOLE RECORD

DATE: 06/09/1992

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		<ul style="list-style-type: none"> <li>-82.70-83.63m weakly sheared and carbonate-black chlorite-amorphous orange-brown mineral flooded.</li> <li>-83.72-83.99m weakly to moderately sheared and quartz-carbonate-chlorite flooded at 40° to core axis.</li> <li>-85.55-85.71m carbonate-quartz vein at high angle to core axis.</li> <li>-85.97-87.50m weakly to moderately sheared at moderate angles to core axis with carbonate (pink at upper contact) and quartz flooding.</li> <li>-87.25-87.50m moderately to strongly sheared/brecciated and chlorite healed with trace sphalerite in matrix.</li> <li>-87.50-90.50m as 87.25-87.50m; strongly sheared at 25-35° to core axis; locally carbonate-quartz flooded. Lower contact at 50° to core axis.</li> </ul>		<ul style="list-style-type: none"> <li>Moderately carbonatized and chloritic, increasing downhole with intervals of shearing; weakly to moderately silicified.</li> <li>Strongly silicified.</li> </ul>	<ul style="list-style-type: none"> <li>-2-4% fine-grained pyrite associated with flooding.</li> <li>-Weakly pyritic, carbonatized halo downhole.</li> <li>-2-3% dusty to fine-grained pyrite disseminated throughout, 10-40% to 87.94m. Sphalerite and trace galena in carbonate veins along contacts with wallrock as specks and locally massive fining to 3mm.</li> <li>-2-3% fine- to medium-grained light brown to honey coloured sphalerite and trace fine- to medium-grained galena in contorted bands and associated with carbonate flooding.</li> </ul>	
90.50 TO 93.15	GRAPHITIC SHEAR «5g, {FAI}»	-Shear banding at 30° to core axis with carbonate flooding shear plane and filling stockwork; banding locally contorted.				
93.15 TO 143.15	BASALT «2l»	<ul style="list-style-type: none"> <li>-greenish grey, fine- to medium grained.</li> <li>-As 44.44-90.50m; occasional amorphous orange-brown veining associated with carbonate veins; variably chlorite-spotted and calcite spotted to 3mm.</li> <li>-101.86-102.56m moderately to strongly silicified, weakly carbonatized.</li> <li>-104.18-104.35m porphyritic in plagioclase (?).</li> <li>-109.23-109.40m graphitic; carbonate flooded shear at 45-50° to core axis.</li> <li>-111.96-113.14m amygdular interval; amygdules to 1.6mm.</li> </ul>			<ul style="list-style-type: none"> <li>Trace fine-grained pyrite.</li> </ul>	
143.15 TO 146.15	GABBRO «7Tux»	<ul style="list-style-type: none"> <li>-greenish grey; medium-grained.</li> <li>-Massive to weakly foliated, equigranular.</li> <li>-144.50-145.03m sheared and quartz flooded.</li> </ul>		<ul style="list-style-type: none"> <li>Moderately to strongly silicified.</li> </ul>	<ul style="list-style-type: none"> <li>Trace fine-grained pyrite.</li> <li>Trace pyrite.</li> </ul>	

HOLE NUMBER: CU32-03

## DRILL HOLE RECORD

LOGGED BY: D. TRUSCOTT/J. AULTMAN

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HOLE NUMBER: CU32-03

## DRILL HOLE RECORD

DATE: 06/09/1992

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
146.15 TO 196.00	BASALT «2lu»	<ul style="list-style-type: none"> <li>-greenish grey; fine- to medium-grained.</li> <li>-As 93.15-143.15m; increasingly coarse-grained flows downhole with black chlorite spots to 0.5cm common; poorly foliated at 30-35° to core axis.</li> <li>-154.85-155.55m weakly brecciated and quartz-flooded; weakly bleached halo 153.86-154.85m.</li> <li>-163.27-163.62m carbonate-flooded shear at 25° to core axis.</li> <li>-172.90-174.03m feldspar (-quartz) porphyry dyke; weakly fractured and black chlorite filled; generally buff to grey coloured and poorly foliated with weak alignment of phenocrysts (flow banded) at 30° to core axis; rare zoned plagioclase (?) phenocrysts; plagioclase (?) and K-feldspar (?) phenocrysts to 45%, from 1 to 4mm, sub- to euhedral; rare quartz phenocrysts; narrow chilled contacts.</li> <li>-174.26-174.33m as above.</li> <li>-176.32-196.00m fine-grained, generally massive flows; few quartz veins.</li> </ul>		<ul style="list-style-type: none"> <li>-Generally moderately silicified; biotite - chlorite and calcite.</li> <li>-50cm carbonatized alteration halo.</li> <li>-Moderately to strongly silicified; weakly chloritic groundmass.</li> <li>-Bleached haloes around quartz veins weakly carbonatized; locally strongly chloritic.</li> </ul>	<ul style="list-style-type: none"> <li>-Rare blebs pyrrhotite and void-filling pyrrhotite and trace chalcopyrite at 148.58m. Trace pyrite throughout.</li> <li>-Slightly elevated pyrite content at upper contact.</li> <li>-Trace to 1% dusty to fine-grained, rarely medium-grained pyrite disseminated throughout.</li> <li>-Slightly elevated pyrite content in bleached haloes; trace to 1% pyrite in quartz veins. Trace fine-grained pyrite throughout.</li> </ul>	<ul style="list-style-type: none"> <li>-Generally weakly magnetic.</li> <li>-Locally weakly magnetic.</li> </ul>
196.00 TO 275.00	PILLOWED MAFICS «2peu(CH)»	<ul style="list-style-type: none"> <li>-medium grey-green.</li> <li>-fine grained.</li> <li>-moderately hard (slightly marked by scribe) and slightly magnetic.</li> <li>-pillowed unit, selvages are up to 2cm wide and contain chlorite, hyaloclastite and pyrite.</li> <li>-pillows have quartz filled amygdules.</li> <li>-unit is weakly fractured at 45-50°/CA.</li> <li>-fractures are filled with carbonate, quartz and orthoclase.</li> <li>-a second minor set of fractures are also present, this set has irregular orientations.</li> <li>-247.42-247.74m -quartz vein at 40°/CA, vein contains 10-15% wallrock fragments and trace pyrite.</li> <li>-265.69-265.77m, irregular quartz vein with trace pyrite.</li> <li>-265.96-266.25m, quartz vein at 40°/CA with 2-3% pyrite.</li> <li>-266.63-267.20m, quartz vein at 40°/CA with 50%</li> </ul>		<ul style="list-style-type: none"> <li>-weak silicification.</li> <li>-moderate chloritization.</li> <li>-weak sericitization.</li> <li>-weak bleaching on pillow rims.</li> </ul>	<ul style="list-style-type: none"> <li>-1-2% pyrite (present in pillow selvages and fractures).</li> <li>-trace pyrrhotite (found in the selvages).</li> <li>-trace sphalerite and galena (found in quartz-carbonate stringers and fractures).</li> <li>-rare specks of chalcopyrite.</li> <li>-225.62-225.68m, 2% sphalerite in a 1-2mm wide fracture.</li> <li>-229.21-229.27m, 3mm wide sphalerite and carbonate filled fracture.</li> <li>-233.05-233.15m, 1.5cm wide quartz (50%) - carbonate (50%) vein at 45°/CA which contains 35% galena and one speck of chalcopyrite.</li> </ul>	

HOLE NUMBER: CU32-03

## DRILL HOLE RECORD

LOGGED BY: D. TRUSCOTT/J. AULTMAN

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HOLE NUMBER: CU32-03

## DRILL HOLE RECORD

DATE: 06/09/1992

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
275.00 TO 275.00	E.O.H.	wallrock fragments and trace pyrite.				

HOLE NUMBER: CU32-03

## DRILL HOLE RECORD

LOGGED BY: D. TRUSCOTT/J. AULTMAN

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HOLE NUMBER : CU32-03

## ASSAYS SHEET

DATE: 09/06/1992

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Au ppb	Ag ppm	Pb ppm	As ppm	Ni ppm
AM04945	3.00	4.00	1.00	119	115	10	0.1	1		168
AM04946	4.00	5.00	1.00	81	140	<5	0.1	1		167
AM04947	5.00	6.50	1.50	134	112	17	0.2	2		211
AM04948	6.50	8.00	1.50	92	110	<5	0.3	4		162
AM04949	8.00	8.30	0.30	196	110	<5	0.5	9		180
AM04950	8.30	9.22	0.92	158	587	<5	0.4	154		172
AM05801	9.22	11.00	1.78	66	57	10	0.6	1		40
AM05802	11.00	12.50	1.50	61	147	17	0.2	1		28
AM05803	12.50	14.00	1.50	52	56	21	0.3	1		20
AM05804	14.00	15.50	1.50	52	74	72	0.4	1		16
AM05805	15.50	17.12	1.62	42	86	17	0.4	10		17
AM05806	17.12	18.12	1.00	136	4620	<5	1.3	1730		29
AM05807	18.12	19.51	1.39	105	4280	<5	0.8	1050		20
AM05808	19.51	20.60	1.09	97	3750	24	1.3	1710		19
AM05809	20.60	22.20	1.60	151	1210	24	3.2	274		28
AM05810	22.20	23.00	0.80	124	2930	10	2.2	518		21
AM05811	23.00	24.50	1.50	56	50	10	0.3	13		21
AM05812	24.50	26.00	1.50	25	25	<5	0.2	2		15
AM05813	26.00	27.50	1.50	21	18	21	0.1	2		21
AM05814	27.50	29.00	1.50	39	12	55	0.4	1		19
AM05815	29.00	30.50	1.50	30	13	<5	0.2	1		14
AM05816	30.50	31.57	1.07	26	15	<5	0.1	1		15
AM05817	31.57	33.50	1.93	48	24	<5	0.2	1		22
AM05818	33.50	34.50	1.00	33	139	<5	0.2	1		30
AM05819	34.50	35.45	0.95	22	55	<5	0.2	1		14
AM05821	35.45	37.20	1.75	82	103	17	1.3	4		19
AM05822	37.20	37.45	0.25	23	103	10	0.3	11		11
AM05823	37.45	38.84	1.39	29	33	24	0.5	15		15
AM05824	38.84	39.56	0.72	55	7	27	0.4	10		20
AM05825	39.56	41.30	1.74	184	113	96	1.0	43		26
AM05826	41.30	42.43	1.13	337	1620	27	5.9	303		112
AM05827	42.43	44.44	2.01	247	306	21	1.2	65		113
AM05828	44.44	45.10	0.66	164	105	10	0.6	44		126
AM05829	45.10	45.53	0.43	89	17200	10	0.4	1510		75
AM05830	45.53	46.18	0.65	137	3070	14	0.7	425		110
AM05838	46.18	46.36	0.18	71	41800	10	1.0	911		72
AM05831	46.36	47.15	0.79	129	995	65	0.6	135		152
AM05832	47.15	47.68	0.53	171	17900	10	0.8	518		94
AM05833	47.68	48.50	0.82	112	1140	<5	0.2	102		126
AM05834	48.50	50.50	2.00	85	200	<5	0.1	66		121
AM05835	50.50	51.50	1.00	114	1290	<5	0.4	550		130
AM05836	51.50	53.00	1.50	128	63	<5	0.2	3		100
AM05837	53.00	54.50	1.50	105	131	10	0.2	405		106
AM05839	54.50	56.00	1.50	124	152	<5	0.1	94		91
AM05855	56.00	57.50	1.50	95	85	<5	0.1	4		95
AM05856	57.50	59.00	1.50	88	288	<5	0.2	23		102
AM05857	59.00	60.50	1.50	86	2150	<5	0.2	16		95

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ASSAYS SHEET

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HOLE NUMBER : CU32-03

## ASSAYS SHEET

DATE: 09/06/1992

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Au ppb	Ag ppm	Pb ppm	As ppm	Ni ppm
AM05858	60.50	62.00	1.50	115	116	<5	0.2	60	93	
AM05859	62.00	63.50	1.50	96	192	<5	0.2	15	92	
AM05860	63.50	65.00	1.50	130	938	<5	0.2	17	66	
AM05861	65.00	66.50	1.50	115	91	<5	0.1	7	56	
AM05862	66.50	68.00	1.50	127	67	<5	0.1	25	36	
AM05863	68.00	69.50	1.50	112	58	<5	0.3	3	52	
AM05864	69.50	71.00	1.50	149	61	<5	0.1	4	53	
AM05865	71.00	72.50	1.50	128	99	10	0.1	7	42	
AM05866	72.50	74.00	1.50	113	478	<5	0.2	33	63	
AM05867	74.00	75.50	1.50	84	65	<5	0.2	2	67	
AM05868	75.50	77.00	1.50	127	45	<5	0.2	2	43	
AM05869	77.00	78.50	1.50	116	82	<5	0.1	1	63	
AM05870	78.50	80.00	1.50	134	51	<5	0.2	3	51	
AM05871	80.00	81.50	1.50	113	71	<5	0.2	11	71	
AM05872	81.50	83.00	1.50	133	214	<5	0.4	204	108	
AM05873	83.00	84.50	1.50	101	62	<5	0.1	4	103	
AM05874	84.50	85.97	1.47	102	87	<5	0.1	1	94	
AM05875	85.97	87.50	1.53	113	2140	<5	0.9	68	94	
AM05876	87.50	89.00	1.50	81	1250	21	1.4	291	57	
AM05878	89.00	90.50	1.50	183	7520	24	2.2	2620	75	
AM05879	90.50	92.00	1.50	603	36400	<5	4.7	8240	154	
AM05880	92.00	93.00	1.00	167	20900	34	2.0	4800	70	
AM05881	93.00	95.00	2.00	93	629	<5	0.1	151	131	
AM05882	95.00	96.50	1.50	79	371	14	0.3	73	88	
AM05883	96.50	98.00	1.50	66	310	<5	0.1	72	107	
AM05884	98.00	99.50	1.50	91	951	<5	0.1	85	126	
AM05885	99.50	101.00	1.50	93	1750	<5	0.1	335	93	
AM05886	101.00	101.86	0.86	155	329	<5	0.2	86	105	
AM05898	101.86	102.56	0.70	42	458	<5	0.2	90	31	
AM05887	102.56	104.00	1.44	126	384	<5	0.2	57	89	
AM05888	104.00	105.50	1.50	92	94	<5	0.1	277	85	
AM05889	105.50	107.00	1.50	123	197	<5	0.1	16	106	
AM05890	107.00	108.50	1.50	134	92	<5	0.2	8	146	
AM05891	108.50	110.00	1.50	117	120	<5	0.2	4	108	
AM05892	110.00	111.50	1.50	99	56	<5	0.1	1	78	
AM05893	111.50	111.96	0.46	177	177	<5	0.1	4	92	
AM05894	111.96	113.14	1.18	44	59	<5	0.1	5	62	
AM05895	113.14	114.00	0.86	113	47	<5	0.2	2	86	
AM05896	114.00	116.00	2.00	187	1380	<5	0.4	179	93	
AM05897	116.00	117.50	1.50	127	87	<5	0.3	5	84	
AM05899	117.50	119.00	1.50	130	59	<5	0.2	8	64	
AM05900	119.00	120.50	1.50	128	40	<5	0.1	2	72	
AM05901	120.50	122.00	1.50	123	44	7	0.2	16	73	
AM05902	122.00	123.50	1.50	134	58	<5	0.2	21	72	
AM05903	123.50	125.00	1.50	107	67	14	0.2	7	91	
AM05904	125.00	126.50	1.50	119	70	10	0.1	1	80	
AM05905	126.50	128.00	1.50	138	59	17	0.2	3	63	

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ASSAYS SHEET

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HOLE NUMBER : CU32-03

## ASSAYS SHEET

DATE: 09/06/1992

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Au ppb	Ag ppm	Pb ppm	As ppm	Ni ppm
AM05906	128.00	129.50	1.50	129	191	14	0.2	21		54
AM05907	129.50	131.00	1.50	140	975	10	0.2	75		50
AM05908	131.00	132.50	1.50	124	125	7	0.2	12		51
AM05909	132.50	134.00	1.50	157	41	14	0.1	5		61
AM05910	134.00	135.50	1.50	131	42	<5	0.1	2		69
AM05911	135.50	137.00	1.50	134	39	14	0.1	2		66
AM05912	137.00	138.50	1.50	167	147	21	0.2	22		75
AM05913	138.50	140.00	1.50	130	32	10	0.2	3		68
AM05914	140.00	141.50	1.50	124	39	7	0.1	2		77
AM05915	141.50	143.15	1.65	156	177	10	0.2	48		91
AM05916	143.15	144.50	1.35	125	36	17	0.1	1		64
AM05917	144.50	145.03	0.53	117	43	21	0.1	5		41
AM05918	145.03	146.15	1.12	141	57	10	0.1	1		60
AM05919	146.15	147.50	1.35	186	38	7	0.1	1		67
AM05921	147.50	149.00	1.50	118	36	14	0.1	1		51
AM05922	149.00	150.50	1.50	159	31	<5	0.1	1		66
AM05923	150.50	152.00	1.50	147	48	10	0.2	10		78
AM05924	152.00	153.50	1.50	116	39	14	0.2	1		78
AM05925	153.50	154.85	1.35	127	209	10	0.7	44		105
AM05926	154.85	155.55	0.70	132	147	<5	0.4	47		80
AM05927	155.55	157.00	1.45	139	38	17	0.1	1		87
AM05928	157.00	158.00	1.00	137	34	17	0.1	1		82
AM05929	158.00	159.50	1.50	125	35	<5	0.1	1		79
AM05930	159.50	161.00	1.50	83	34	<5	0.1	1		77
AM05931	161.00	162.50	1.50	99	77	10	0.1	6		101
AM05932	162.50	164.00	1.50	229	347	7	0.8	68		113
AM05933	164.00	165.50	1.50	187	55	<5	0.7	2		83
AM05934	165.50	167.00	1.50	176	37	<5	0.1	1		56
AM05935	167.00	168.50	1.50	154	40	<5	0.1	2		45
AM05936	168.50	170.00	1.50	153	36	<5	0.1	2		42
AM05937	170.00	171.50	1.50	146	35	<5	0.1	1		50
AM05938	171.50	172.90	1.40	131	89	<5	0.2	13		49
AM05939	172.90	174.03	1.13	30	332	10	0.1	94		13
AM05940	174.03	175.00	0.97	178	65	<5	0.2	56		58
AM05941	175.00	176.32	1.32	139	87	14	0.2	11		51
AM05942	176.32	177.50	1.18	121	521	<5	0.9	28		56
AM05943	177.50	179.00	1.50	139	282	14	0.1	67		60
AM05944	179.00	180.50	1.50	126	37	10	0.2	3		52
AM05945	180.50	182.00	1.50	138	31	7	0.1	1		53
AM05946	182.00	183.50	1.50	149	28	<5	0.1	1		59
AM05947	183.50	185.00	1.50	141	55	10	0.1	9		64
AM05948	185.00	186.50	1.50	137	39	10	0.2	14		65
AM05949	186.50	188.00	1.50	150	93	10	0.2	19		65
AM05950	188.00	189.50	1.50	128	58	<5	0.1	43		67
AM05951	189.50	191.00	1.50	129	550	<5	0.2	128		73
AM05952	191.00	192.50	1.50	161	85	<5	0.2	20		81
AM05953	192.50	194.00	1.50	147	50	<5	0.1	3		74

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## ASSAYS SHEET

DATE: 09/06/1992

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Au ppb	Ag ppm	Pb ppm	As ppm	Ni ppm
AM05954	194.00	195.50	1.50	125	348	<5	0.1	28	69	
AM05955	195.50	196.00	0.50	139	61	<5	0.2	18	83	
AM0394	224.00	225.50	1.50	138.00	437.00	17.000	0.5000	50.000	87.000	
AN00395	225.50	225.80	0.30	132.00	011700	7.0000	1.3000	2260.0	76.000	
AN00396	225.80	227.30	1.50	101.00	105.00	<5	0.2000	39.000	88.000	
AN00397	227.30	228.30	1.00	111.00	40.000	<5	0.1000	1.0000	91.000	
AN00398	228.30	229.05	0.75	201.00	126.00	21.000	0.6000	161.00	94.000	
AN00399	229.05	229.35	0.30	278.00	6540.0	10.000	0.7000	781.00	97.000	
AN00400	229.35	230.85	1.50	467.00	487.00	10.000	0.9000	652.00	172.00	
AN00402	230.85	231.85	1.00	149.00	78.000	<5	0.1000	133.00	131.00	
AN00403	231.85	233.00	1.15	115.00	207.00	<5	0.1000	80.000	88.000	
AN00404	233.00	233.30	0.30	116.00	59.000	<5	2.0000	019700	87.000	
AN00405	233.30	233.80	0.50	161.00	45.000	<5	0.1000	41.000	94.000	
AN00406	245.92	247.42	1.50	130.00	55.000	<5	0.2000	27.000	62.000	
AN00407	247.42	247.74	0.32	139.00	34.000	<5	0.1000	36.000	35.000	
AN00408	247.74	249.24	1.50	662.00	73.000	7.0000	0.9000	26.000	75.000	
AN00409	264.10	265.60	1.50	108.00	252.00	<5	0.1000	32.000	67.000	
AN00410	265.60	265.96	0.36	545.00	4740.0	7.0000	1.2000	596.00	63.000	
AN00411	265.96	266.25	0.29	147.00	984.00	38.000	0.2000	91.000	32.000	
AN00412	266.25	266.63	0.38	84.000	173.00	<5	0.2000	61.000	108.00	
AN00413	266.63	267.20	0.57	326.00	2720.0	10.000	0.6000	451.00	59.000	
AN00414	267.20	268.70	1.50	131.00	391.00	7.0000	0.4000	179.00	86.000	

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## ASSAYS SHEET

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HOLE NUMBER : CU32-03

## GEOCHEMICAL ASSAY

DATE: 09/06/1992

Sample	From (M)	To (M)	Leng. (M)	S102 %	AL203 %	CAO %	MGO %	NA20 %	K20 %	FE203 %	T102 %	P205 %	MNO %	CR203 %	LOI %	SUM %	Y PPM	ZR PPM	BA PPM	RB PPM	SR PPM	CO2 %	CU PPM	ZN PPM	N1 PPM	CR PPM	FIELD NAME	CHEM ID	ALUM
AM04952	8.30	9.22	0.92	65.00	17.87	0.69	0.85	0.89	3.28	6.12	0.99	0.12	0.05	0.09	3.37	99.34	10	156					85	1160	130		3?*	368	
AM04953	11.61	12.31	0.70	75.77	1.02	1.03	1.37	0.04	0.14	20.31	0.05	<0.02	0.44	0.00	0.32	100.48	8	146					40	210	<10		4PR	84	
AM04954	15.50	16.30	0.80	94.10	0.14	0.55	0.12	0.03	0.04	4.75	0.02	<0.02	0.08	<0.00	0.67	100.49	2	94					15	40	<10		4PR	23	
AM04955	21.20	22.20	1.00	87.65	0.73	0.43	0.38	0.03	0.08	6.52	0.03	<0.02	0.05	<0.00	1.95	97.84	<2	68					60	675	<10		4PR	135	
AM04956	24.00	25.33	1.33	85.72	0.53	1.05	0.82	0.04	0.12	11.64	0.03	<0.02	0.21	<0.00	0.46	100.62	6	134					45	40	50		4PR	44	
AM04957	30.50	31.00	0.50	82.58	0.08	0.54	1.02	0.02	<0.02	15.84	<0.01	<0.02	0.28	<0.00	0.06	100.41	6	134					25	20	<10		4PR	14	
AM04958	32.50	33.50	1.00	77.77	1.02	0.98	1.67	0.01	0.04	16.35	0.06	<0.02	0.28	0.00	1.13	99.32	4	162					25	1135	<10		4PR	99	
AM04959	43.44	44.44	1.00	54.93	8.01	2.19	4.01	0.86	0.48	13.29	0.35	0.04	0.16	0.01	13.36	97.69	12	160					210	935	50		2VI	227	
AM04960	48.90	49.90	1.00	45.19	13.94	6.93	8.41	1.21	0.90	11.91	0.74	0.04	0.19	0.03	8.42	97.91	10	136					115	1100	120		2u	154	
AM04961	53.00	54.00	1.00	49.29	15.14	8.32	7.64	1.87	1.32	12.29	0.82	0.06	0.24	0.03	2.56	99.58	12	162					110	110	130		2u	132	
AM04963	80.50	81.50	1.00	50.63	13.19	7.05	6.57	2.70	0.74	10.59	0.76	0.06	0.20	0.03	6.18	98.70	12	130					105	140	90		2u	126	
AM04964	83.00	83.63	0.63	47.88	13.60	7.17	8.45	2.87	0.92	11.62	0.87	0.06	0.26	0.03	5.27	98.98	14	140					135	80	120		2u	124	
AM04965	88.00	89.00	1.00	56.67	11.40	7.55	4.92	1.65	1.24	8.19	0.60	0.06	0.16	0.02	6.87	99.35	12	114					130	1195	70		2u	109	
AM04967	91.00	92.00	1.00	61.11	5.32	6.30	1.22	0.32	1.60	5.37	0.19	0.06	0.06	0.01	15.11	96.49	6	96					485	19580	110		2VI	66	
AM04968	143.15	144.15	1.00	51.51	12.88	9.24	7.90	1.75	1.00	10.85	0.61	0.04	0.21	0.05	2.92	98.95	10	156					255	405	90		2u	107	
AM04969	153.86	154.85	0.99	48.46	13.96	8.58	8.71	2.40	1.04	11.10	0.63	0.04	0.20	0.04	4.11	99.26	12	134					130	215	150		2u	116	
AM04970	172.90	173.90	1.00	69.37	15.60	2.48	0.67	6.80	1.62	2.24	0.18	0.08	0.03	<0.00	1.11	100.19	4	142					40	190	<10		4PR	143	
AN00237	200.00	203.00	3.00	50.85	15.00	11.81	5.29	1.68	0.64	10.36	0.76	0.06	0.22	0.09	1.16	97.90	16	44					80	120	120		2w	106	
AN00238	236.00	239.00	3.00	49.43	14.69	10.06	6.63	2.72	1.04	11.59	0.68	0.02	0.24	0.08	1.69	98.87	16	36					50	135	110		2u	106	
AN00239	272.00	275.00	3.00	49.80	15.18	9.18	6.59	4.08	0.74	11.21	0.71	<0.02	0.22	0.08	2.03	99.80	16	34					90	85	110		2u	108	

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GEOCHEMICAL ASSAY

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HOLE NUMBER : CU32-03

DATE: 09/06/1992

## GEOCHEMICAL ASSAYS

Sample	From (M)	To (M)	Leno. (M)	AG PPM	AU PPB	CO PPM	PB PPM	S PPM	V PPM	AS PPM	SN PPM	CD PPM	SB PPM	BI PPM	SE PPM	HF PPM	TA PPM	W PPM	MO PPM	TH PPM	U PPM	B PPM	CS PPM	LA PPM	CE PPM	ND PPM	SM PPM	EU PPM	GD PPM
AM04952	8.30	9.22	0.92			45		11700																					
AM04953	11.61	12.31	0.70			<5		14500																					
AM04954	15.50	16.30	0.80			<5		11700																					
AM04955	21.20	22.20	1.00			5		33400																					
AM04956	24.00	25.33	1.33			<5		3900																					
AM04957	30.50	31.00	0.50			<5		4400																					
AM04958	32.50	33.50	1.00			<5		10400																					
AM04959	43.44	44.44	1.00			35		44200																					
AM04960	48.90	49.90	1.00			40		2400																					
AM04961	53.00	54.00	1.00			45		1700																					
AM04963	80.50	81.50	1.00			35		3200																					
AM04964	83.00	83.63	0.63			35		2000																					
AM04965	88.00	89.00	1.00			30		8300																					
AM04967	91.00	92.00	1.00			125		30000																					
AM04968	143.15	144.15	1.00			35		2000																					
AM04969	153.86	154.85	0.99			40		2900																					
AM04970	172.90	173.90	1.00			<5		900																					
AN00237	200.00	203.00	3.00			50																							
AN00238	236.00	239.00	3.00			55																							
AN00239	272.00	275.00	3.00			45																							

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HOLE NUMBER : CU32-03

DATE: 09/06/1992

## GEOCHEMICAL ASSAYS

Sample	From (M)	To (M)	Leng. (M)	DY PPM	ER PPM	LU PPM	OS PPB	IR PPB	RU PPB	RH PPB	PT PPB	PD PPB	LI PPM	BE PPM	MN PPM	GA PPM	GE PPM	JN PPM	TL PPM	SC PPM	BR PPM	YB PPM	NB PPM
AM04952	8.30	9.22	0.92																				
AM04953	11.61	12.31	0.70																				
AM04954	15.50	16.30	0.80																				
AM04955	21.20	22.20	1.00																				
AM04956	24.00	25.33	1.33																				
AM04957	30.50	31.00	0.50																				
AM04958	32.50	33.50	1.00																				
AM04959	43.44	44.44	1.00																				
AM04960	48.90	49.90	1.00																				
AM04961	53.00	54.00	1.00																				
AM04963	80.50	81.50	1.00																				
AM04964	83.00	83.63	0.63																				
AM04965	88.00	89.00	1.00																				
AM04967	91.00	92.00	1.00																				
AM04968	143.15	144.15	1.00																				
AM04969	153.86	154.85	0.99																				
AM04970	172.90	173.90	1.00																				
AN00237	200.00	203.00	3.00																				
AN00238	236.00	239.00	3.00																				
AN00239	272.00	275.00	3.00																				

HOLE NUMBER: CU32-03

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HOLE NUMBER: CU32-04

FALCONBRIDGE LIMITED  
DRILL HOLE RECORD

DATE: 06/09/1992  
IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: 8203  
PROJECT NUMBER: 8203  
CLAIM NUMBER: R116469  
LOCATION: CUNNINGHAM TWP

PLOTTING COORDS GRID: UTM  
NORTH: 5285470.00N  
EAST: 371840.00E  
ELEV: 420.00

ALTERNATE COORDS GRID: LINE  
NORTH: 145°30'N  
EAST: 115°70'E  
ELEV: 420.00

COLLAR DIP: -50° 0' 0"  
LENGTH OF THE HOLE: 183.00M  
START DEPTH: 0.00M  
FINAL DEPTH: 183.00M

COLLAR ASTRONOMIC AZIMUTH: 360° 0' 0"

GRID ASTRONOMIC AZIMUTH: 360° 0' 0"

DATE STARTED: 03/27/1992  
DATE COMPLETED: 03/29/1992  
DATE LOGGED: 04/09/1992

COLLAR SURVEY: NO  
RDR LOG: NO  
HOLE MAKES WATER: NO

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

CONTRACTOR: NOREX DRILLING  
CASING: 3m BW  
CORE STORAGE: KIDD MINESITE  
UTM COORD.:

COMMENTS : To test HLEM "E" under Peter Lake.  
WEDGES AT:

**DIRECTIONAL DATA:**

HOLE NUMBER: C132-04

DRILL HOLE RECORD

LOGGED BY: J. ALVITMAN

---

PAGE • 1

HOLE NUMBER: CU32-04

## DRILL HOLE RECORD

DATE: 06/09/1992

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 4.85	OVERBURDEN «lob»					
4.85 TO 183.00	MAFIC VOLCANICS «2meu(Ch)»	<ul style="list-style-type: none"> <li>-fine to medium grained.</li> <li>-medium to dark green.</li> <li>-massive and with rare faint, narrow pillow selvages.</li> <li>-unit contains &lt;0.5% white leucoxenes (up to 1mm in length).</li> <li>-quartz and feldspar filled amygdules present.</li> <li>-amygdules are up to 5mm in diameter.</li> <li>-massive areas have white leucoxenes (0.5mm in length).</li> <li>-unit is slightly fractured at 30-40°/CA.</li> <li>-fractures are filled with carbonate, quartz and orthoclase.</li> <li>-a minor set of fractures has an irregular orientation.</li> <li>-unit is weakly foliated at 40-45°/CA.</li> <li>-unit contains irregular narrow (&lt;1-3mm wide) quartz and orthoclase fractures.</li> <li>-unit becomes more pillowed with depth.</li> <li>-the selvages become 1-3cm wide and contain chlorite, pillow fragments and trace pyrite.</li> <li>-between 135.0 and 145.0m, a number of sediment like bands are present in the selvages.</li> <li>-these bands are weakly conductive.</li> </ul>	<ul style="list-style-type: none"> <li>-weak to moderate chloritization.</li> </ul>	<ul style="list-style-type: none"> <li>-21.80-22.25m, 0.5-1% sphalerite present in a 1cm wide carbonate stringer, parallel to CA.</li> <li>-23.85-24.28m, 3-5% sphalerite and 1-3% galena in a quartz-carbonate vein (80% quartz, 20% carbonate); vein is 15cm wide and is at 30°/CA.</li> <li>-24.60-24.65m, trace sphalerite.</li> <li>-27.04-27.09m, trace to 0.5% sphalerite.</li> <li>-33.43-33.51m, 1-2% sphalerite and trace chalcopyrite in a 1cm carbonate vein at 25°/CA.</li> <li>-44.23-44.24m, trace sphalerite in a 2mm wide carbonate fracture.</li> <li>-46.60-47.00m, a 10-15cm wide quartz-carbonate vein (60% quartz, 40% carbonate) at 25°/CA. Vein contains 5-8% sphalerite and trace galena and chalcopyrite.</li> <li>-54.08-54.14m, 3cm wide carbonate vein at 35°/CA with 0.5% galena present.</li> <li>-78.70-78.90m, specks of chalcopyrite in carbonate stringers.</li> </ul>	<ul style="list-style-type: none"> <li>-the sphalerite and galena mineralization appears to be a late stage low temperature event.</li> </ul>	
183.00 TO 183.00	E.O.H.					

HOLE NUMBER: CU32-04

## DRILL HOLE RECORD

LOGGED BY: J. AULTMAN

PAGE: 2

HOLE NUMBER : CU32-04

## ASSAYS SHEET

DATE: 09/06/1992

Sample	From (M)	To (M)	Length (M)	Cu ppm	Zn ppm	Au ppb	Ag ppm	Pb ppm	As ppm	Ni ppm
AN00369	20.80	21.80	1.00	117.00	55.000	<5	0.1000	82.000	87.000	
AN00370	21.80	22.25	0.45	102.00	7220.0	<5	0.2000	356.00	71.000	
AN00371	22.25	23.85	1.60	84.000	614.00	<5	0.1000	103.00	81.000	
AN00372	23.85	24.30	0.45	147.00	010200	<5	1.8000	012200	35.000	
AN00373	24.30	25.80	1.50	104.00	79.000	<5	0.1000	79.000	142.00	
AN00374	25.80	27.30	1.50	102.00	206.00	<5	0.2000	39.000	89.000	
AN00375	27.30	28.80	1.50	116.00	56.000	<5	0.1000	5.0000	60.000	
AN00376	32.80	33.30	0.50	114.00	59.000	<5	0.1000	7.0000	67.000	
AN00377	33.30	33.60	0.30	115.00	1200.0	<5	0.1000	8.0000	56.000	
AN00378	33.60	35.10	1.50	129.00	30.000	7.0000	0.1000	1.0000	54.000	
AN00379	43.60	45.10	1.50	128.00	211.00	<5	0.2000	11.000	45.000	
AN00380	45.10	46.60	1.50	164.00	65.000	<5	0.2000	93.000	83.000	
AN00382	46.60	47.00	0.40	148.00	026200	7.0000	0.4000	185.00	62.000	
AN00383	47.00	48.50	1.50	109.00	98.000	<5	0.1000	1.0000	75.000	
AN00384	53.00	54.00	1.00	109.00	51.000	<5	0.1000	1.0000	75.000	
AN00385	54.00	54.30	0.30	97.000	207.00	<5	0.7000	6360.0	86.000	
AN00386	54.30	55.30	1.00	117.00	55.000	<5	0.1000	4.0000	66.000	
AN00387	77.70	78.70	1.00	100.00	58.000	<5	0.1000	1.0000	79.000	
AN00388	78.70	79.00	0.30	407.00	83.000	14.000	0.3000	7.0000	58.000	
AN00389	79.00	80.00	1.00	146.00	79.000	7.0000	0.1000	1.0000	63.000	

HOLE NUMBER: CU32-04

## ASSAYS SHEET

PAGE: 5

HOLE NUMBER : CU32-04

DATE: 09/06/1992

## GEOCHEMICAL ASSAY

Sample	From (M)	To (M)	Leng. (M)	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	CaO %	MgO %	Na <sub>2</sub> O %	K <sub>2</sub> O %	Fe <sub>2</sub> O <sub>3</sub> %	TiO <sub>2</sub> %	P <sub>2</sub> O <sub>5</sub> %	MnO %	Cr <sub>2</sub> O <sub>3</sub> %	LOI %	SUM %	Y PPM	Zr PPM	Ba PPM	Rb PPM	SR PPM	CO <sub>2</sub> %	CU PPM	Zn PPM	Ni PPM	CR PPM	FIELD NAME	CHEM ID	ALUM
AN00226	6.00	9.00	3.00	49.88	14.72	11.36	6.88	2.25	0.28	11.19	0.74	0.08	0.22	0.09	1.16	98.87	16	44					105	80	150		2u	106	
AN00227	49.00	52.00	3.00	48.49	14.54	10.25	8.11	1.54	1.16	11.18	0.72	0.06	0.19	0.06	1.85	98.15	14	36					115	90	110		2u	112	
AN00228	81.00	84.00	3.00	49.58	14.90	9.91	7.36	1.78	0.60	12.25	0.77	<0.02	0.27	0.08	2.29	99.79	14	44					105	130	130		2u	121	
AN00229	126.00	129.00	3.00	49.98	14.46	9.35	6.69	3.04	0.30	11.42	0.75	0.16	0.24	0.08	2.06	98.52	16	38					85	130	120		2u	114	
AN00230	174.00	177.00	3.00	49.70	14.58	10.12	7.50	1.95	1.08	11.02	0.72	0.04	0.22	0.07	2.09	99.08	12	38					95	90	100		2u	111	

HOLE NUMBER: CU32-04

GEOCHEMICAL ASSAY

PAGE: 4

HOLE NUMBER : CU32-04

DATE: 09/06/1992

## GEOCHEMICAL ASSAYS

Sample	From (M)	To (M)	Length. (M)	AG PPM	AU PPB	CO PPM	PB PPM	S PPM	V PPM	AS PPM	SN PPM	CD PPM	SB PPM	BT PPM	SE PPM	HF PPM	TA PPM	W PPM	MO PPM	TH PPM	U PPM	B PPM	CS PPM	LA PPM	CE PPM	ND PPM	SM PPM	EU PPM	GD PPM
AN00226	6.00	9.00	3.00																										
AN00227	49.00	52.00	3.00																										
AN00228	81.00	84.00	3.00																										
AN00229	126.00	129.00	3.00																										
AN00230	174.00	177.00	3.00																										

HOLE NUMBER: CU32-04

GEOCHEMICAL ASSAYS

PAGE: 5

HOLE NUMBER : CU32-04

DATE: 09/06/1992

## GEOCHEMICAL ASSAYS

Sample	From (M)	To (M)	Length (M)	DY PPM	ER PPM	LU PPM	OS PPB	IR PPB	RU PPB	RH PPB	PT PPB	PD PPB	L1 PPM	BE PPM	MN PPM	GA PPM	GE PPM	IN PPM	TL PPM	SC PPM	BR PPM	YB PPM	NB PPM
AN00226	6.00	9.00	3.00																				
AN00227	49.00	52.00	3.00																				
AN00228	81.00	84.00	3.00																				
AN00229	126.00	129.00	3.00																				
AN00230	174.00	177.00	3.00																				

HOLE NUMBER: CU32-04

GEOCHEMICAL ASSAYS

PAGE: 6



Ministry of  
Northern Development  
and Mines

Ontario

# Report of Work Conducted After Recording Claim

Mining Act

Personal information collected on this form is obtained under the authority of the Mining Act. Any inquiry concerning this collection should be directed to the Provincial Manager, Mining Lands, 100 Queen Street East, Sudbury, Ontario, P3E 8A5, telephone (705) 670-7264.

ASSESSMENT FILES

Transaction Number

W9360.00075



41010NE9110 42 CUNNINGHAM

900

- Instructions:**
- Please type or print and submit in duplicate.
  - Refer to the Mining Act and Regulations for requirements of filing assessment work or consult the Mining Recorder.
  - A separate copy of this form must be completed for each Work Group.
  - Technical reports and maps must accompany this form in duplicate.
  - A sketch, showing the claims the work is assigned to, must accompany this form.

Recorded Holder(s) Robert Allan MacGregor		Client No. 162287
Address 28 Ford Street, Sault Ste. Marie, ON, P6A 4N4		Telephone No. (705)949-4250
Mining Division Porcupine	Township/Area Cunningham	M or G Plan No. G-1095
Dates Work Performed	From: March 28, 1992	To: April 1, 1992

## Work Performed (Check One Work Group Only)

Work Group	Type
Geotechnical Survey	
Physical Work, Including Drilling	DANNOBIO GEOLOGICAL SURVEY Drilling Assessment Files GIS - ASSESSMENT FILES
Rehabilitation	RECORDED
Other Authorized Work	JUN 4 1993 MAR 19 1993
Assays	RECEIVED
Assignment from Reserve	Receipt _____

Total Assessment Work Claimed on the Attached Statement of Costs \$ 18,600

**Note:** The Minister may reject for assessment work credit all or part of the assessment work submitted if the recorded holder cannot verify expenditures claimed in the statement of costs within 30 days of a request for verification.

## Persons and Survey Company Who Performed the Work (Give Name and Address of Author of Report)

Name	Address
Alex Gagnon	
Norex Drilling Limited	P.O. Box 88, Porcupine, ON, P0N 1C0
Jim T. Aultman (author)	
Falconbridge Limited	P.O. Box 1140, 571 Moneta Avenue, Timmins, ON, P4N 7H9

(attach a schedule if necessary)

## Certification of Beneficial Interest \* See Note No. 1 on reverse side

I certify that at the time the work was performed, the claims covered in this work report were recorded in the current holder's name or held under a beneficial interest by the current recorded holder.	Date	Recorded Holder or Agent (Signature)
	10/3/93	K. Mac Gregor

## Certification of Work Report

I certify that I have a personal knowledge of the facts set forth in this Work report, having performed the work or witnessed same during and/or after its completion and annexed report is true.		
Name and Address of Person Certifying		
R.E. Gadzala, c/o Falconbridge Limited, P.O. Box 1140, 571 Moneta Avenue, Timmins, ON, P4N 7H9		
Telephone No. (705)267-1188	Date March 3, 1993	Certified By (Signature) R. Gadzala

## For Office Use Only

Total Value Cr. Recorded 18,600	Date Recorded March 25th/93	Mining Recorder S. White	Received MINING ACT MINING LANDS RECEIVED MAR 25 1993
Deemed Approval Date JUN 20 RD /93	Date Approved		
Date Notice for Amendments Sent			HB (c) 4:00

Work Report Number for Applying Reserve	Claim Number (see Note 2)	Number of Claim Units
	S116466	LEASE
	S116467	LEASE
	S116468	LEASE
	S116469	LEASE
	P641188	1
	P641189	1
	P641190	1
	P641191	1
	P641192	1
	P641193	1
	P641352	1
	P1131998	1
	P1131999	1
	P1132000	1
	P1132001	1
	P1132002	1
	P1132003	1

Value of Assessment Work Done on this Claim	Value Applied to this Claim
Ø	
Ø	
Ø	
\$18,600	Ø
Ø	
Ø	
Ø	
Ø	
Ø	
Ø	
Ø	
Ø	
Ø	
Ø	
Ø	
Ø	
Ø	
Ø	
Ø	
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—	—
<b>Total Value Work Done</b>	<b>Total Value Work Applied</b>

Value Assigned from this Claim	Reserve: Work to be Claimed at a Future Date
$\emptyset$	\$18,600
<hr/>	<hr/>
Total Assigned From	Total Reserve

Credits you are claiming in this report may be cut back. In order to minimize the adverse effects of such deletions, please indicate from which claims you wish to prioritize the deletion of credits. Please mark (✓) one of the following:

1.  Credits are to be cut back starting with the claim listed last, working backwards.
  2.  Credits are to be cut back equally over all claims contained in this report of work.
  3.  Credits are to be cut back as prioritized on the attached appendix.

In the event that you have not specified your choice of priority, option one will be implemented.

**Note 1:** Examples of beneficial interest are unrecorded mining agreements, memorandums of agreements, etc., with respect to the mining claims.

Note 2: All work had been performed on patented or leased land.

Please complete the following:

Date 10/3/93

0241 (03/91)

Continued on next page ...

**Nombre total  
de claims**

Valeur des travaux d'évaluation exécutés sur ce claim	Valeur affectée à ce claim
Ø	Ø
Ø	Ø
Ø	Ø
Ø	Ø
Ø	Ø
Ø	Ø
Ø	Ø
\$18,600	Ø
Valeur totale des travaux exécutés	Valeur totale des travaux qui a été affectée

## Valeur totale des travaux exécutés

### **Valeur totale des travaux qui a été affectée**

### Réserve totale

**Les crédits que vous réclamez dans le présent rapport peuvent être réduits. Afin de diminuer les conséquences défavorables de telles réductions, veuillez indiquer l'ordre dans lequel vous désirez au elles soient appliquées à vos claims. Veuillez cocher (✓) l'une des options suivantes :**

- Les crédits doivent être réduits également entre tous les claims figurant dans le présent rapport.

Les crédits doivent être réduits selon l'ordre donné en annexe.

### Note 1 : Examples d'Allusions

**Note 1 : Exemples d'intérêts bénéficiaires : cessions non enregistrées, ententes sur des options, protocoles d'entente, etc. relatifs aux claims.**

<b>Note 2: Si des travaux ont été exécutés sur un terrain faisant l'objet de lettres patentes ou d'un bail, veuillez remplir ce qui suit:</b>	<b>Date</b>
Je certifie que le titulaire enregistré possédait un intérêt bénéficiaire sur le terrain faisant l'objet de lettres patentes ou d'un bail, au moment où les travaux ont été exécutés.	 Signature



Ministry of  
Northern Development  
and Mines

Ministère du  
Développement du Nord  
et des mines

## Statement of Costs for Assessment Credit

## État des coûts aux fins du crédit d'évaluation

Transaction No./N° de transaction

W9360.00075

### Mining Act/Loi sur les mines

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used to maintain a record and ongoing status of the mining claim(s). Questions about this collection should be directed to the Provincial Manager, Minerals Lands, Ministry of Northern Development and Mines, 4th Floor, 159 Cedar Street, Sudbury, Ontario P3E 6A5, telephone (705) 670-7264.

Les renseignements personnels contenus dans la présente formule sont recueillis en vertu de la Loi sur les mines et serviront à tenir à jour un registre des concessions minières. Adresser toute question sur la collecte de ces renseignements au chef provincial des terrains miniers, ministère du Développement du Nord et des Mines, 159, rue Cedar, 4<sup>e</sup> étage, Sudbury (Ontario) P3E 6A5, téléphone (705) 670-7264.

#### 1. Direct Costs/Coûts directs

Type	Description	Amount Montant	Totals Total global
Wages Salaires	Labour Main-d'œuvre		
	Field Supervision Supervision sur le terrain	\$500	\$500
Contractor's and Consultant's Fees Droits de l'entrepreneur et de l'expert- conseil	Type Diamond Drilling	\$17,374	
	Report	500	
Supplies Used Fournitures utilisées	Type		\$17,874
Equipment Rental Location de matériel	Type		
Total Direct Costs Total des coûts directs		\$18,374	

#### 2. Indirect Costs/Coûts indirects

\* \* Note: When claiming Rehabilitation work Indirect costs are not allowable as assessment work.  
Pour le remboursement des travaux de réhabilitation, les coûts indirects ne sont pas admissibles en tant que travaux d'évaluation.

Type	Description	Amount Montant	Totals Total global
Transportation Transport	Type Truck Rental	\$150	
	Gas	\$76	
			\$226
Food and Lodging Nourriture et hébergement			
Mobilization and Demobilization Mobilisation et démobilisation			
Sub Total of Indirect Costs Total partiel des coûts indirects			\$226
Amount Allowable (not greater than 20% of Direct Costs) Montant admissible (n'excédant pas 20 % des coûts directs)			
Total Value of Assessment Credit (Total of Direct and Allowable Indirect costs)			\$18,600

Note: The recorded holder will be required to verify expenditures claimed in this statement of costs within 30 days of a request for verification. If verification is not made, the Minister may reject for assessment work all or part of the assessment work submitted.

Note : Le titulaire enregistré sera tenu de vérifier les dépenses demandées dans le présent état des coûts dans les 30 jours suivant une demande à cet effet. Si la vérification n'est pas effectuée, le ministre peut rejeter tout ou une partie des travaux d'évaluation soumis.

#### Filing Discounts

1. Work filed within two years of completion is claimed at 100% of the above Total Value of Assessment Credit.
2. Work filed three, four or five years after completion is claimed at 50% of the above Total Value of Assessment Credit. See calculations below:

Total Value of Assessment Credit	Total Assessment Claimed $\times 0.50 =$

#### Remises pour dépôt

- MAR 25 1993
1. Les travaux déposés dans les deux ans suivant leur achèvement sont remboursés à 100 % de la valeur totale susmentionnée du crédit d'évaluation.
  2. Les travaux déposés trois, quatre ou cinq ans après leur achèvement sont remboursés à 50 % de la valeur totale du crédit d'évaluation susmentionné. Voir les calculs ci-dessous.

Valeur totale du crédit d'évaluation	Evaluation totale demandée $\times 0,50 =$

#### Certification Verifying Statement of Costs

I hereby certify:  
that the amounts shown are as accurate as possible and these costs were incurred while conducting assessment work on the lands shown on the accompanying Report of Work form.

That as R.E. Gadzala (Sr. Field Geologist), I am authorized  
(Recorded Holder, Agent, Position in Company)

To make this certification

#### Attestation de l'état des coûts

J'atteste par la présente :  
que les montants indiqués sont le plus exact possible et que ces dépenses ont été engagées pour effectuer les travaux d'évaluation sur les terrains indiqués dans la formule de rapport de travail ci-joint.

Et qu'à titre de \_\_\_\_\_ je suis autorisé  
(titulaire enregistré, représentant, poste occupé dans la compagnie)

à faire cette attestation.

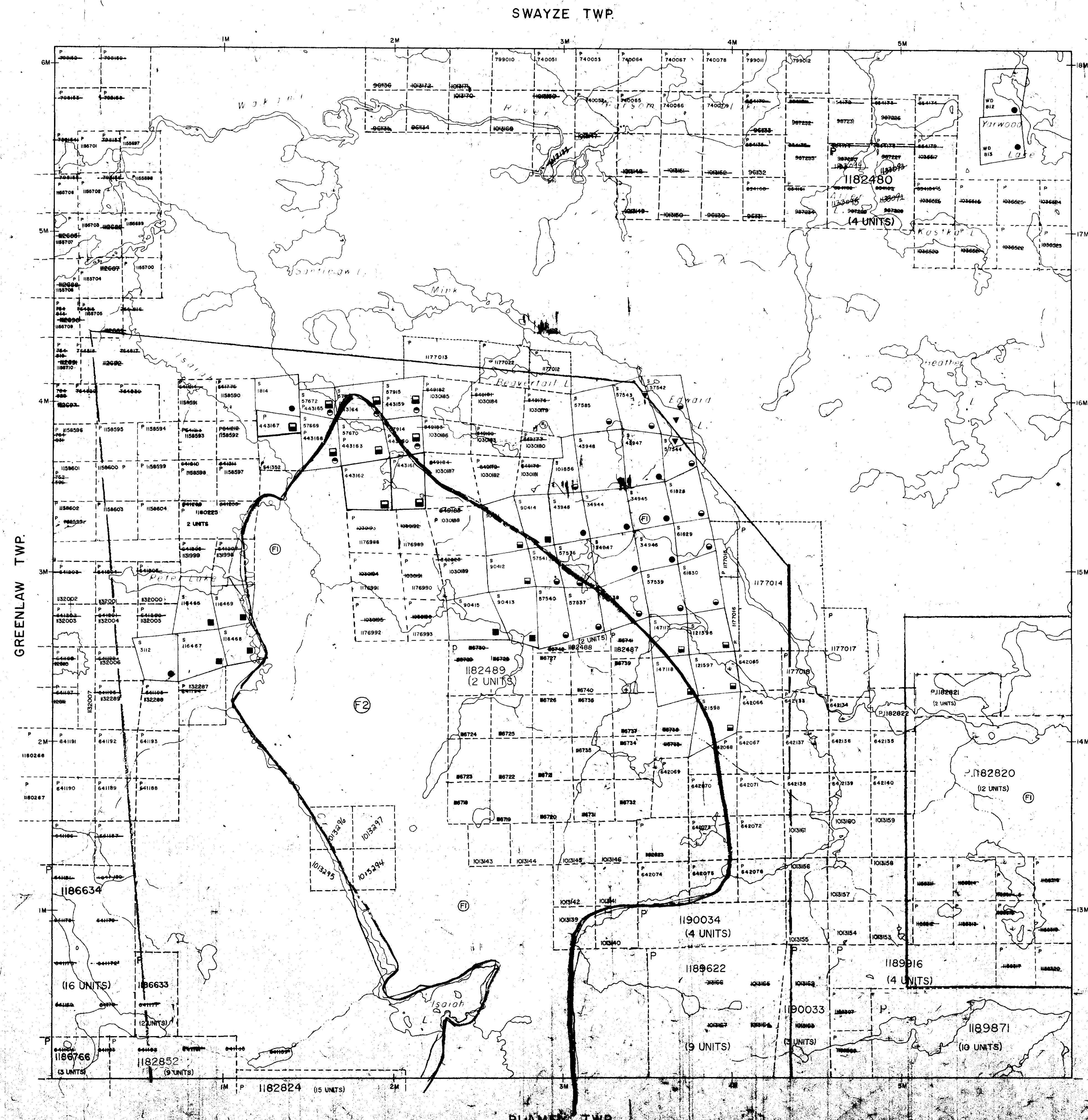
Signature	Date
<u>R. Gadzala</u>	March 3/93

Note : Dans cette formule, lorsqu'il désigne des personnes, le masculin est utilisé au sens neutre.

C-1092

SWAYZE MNR

**AREAS WITHDRAWN FROM DISPOSITION**  
 M.R.O. - MINING RIGHTS ONLY  
 S.R.O. - SURFACE RIGHTS ONLY  
 M.+S. - MINING AND SURFACE RIGHTS  
 Description Order No. Date Disposition File  
 CROWN RESERVE



THE INFORMATION THAT  
 ACCURACY OF THIS MAP  
 HAS BEEN COMPILED  
 FROM VARIOUS SOURCES  
 AND ACCURACY IS NOT  
 GUARANTEED. THOSE  
 WHO USE IT TO DETERMINE  
 THE STATUS OF THE  
 LANDS SHOWN HEREON  
 SHOULD CONSULT  
 WITH THE MINING  
 RECORDER, MINISTRY OF  
 NORTHERN DEVELOP-  
 MENT AND MINES FOR AD-  
 DITIONAL INFORMATION  
 ON THE STATUS OF THE  
 LANDS SHOWN HEREON.

**LEGEND**

- HIGHWAY AND ROUTE NO.
- OTHER ROADS
- TRAILS
- SURVEYED LINES
- LOTS, MINING CLAIMS, PARCELS ETC.
- UNSURVEYED LINES
- LOTS, PARCEL BOUNDARY
- MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NATURAL HENNAL STREAM
- FLOWING OR FLOODING RIGHTS
- SUBDIVISION OR COMPOSITE PLAN
- RESERVATIONS
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES
- TRAVERSE MONUMENT

**DISPOSITION OF CROWN LANDS**

TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	●
SURFACE RIGHTS ONLY	○
MINING RIGHTS ONLY	■
LEASE, SURFACE & MINING RIGHTS	□
SURFACE RIGHTS ONLY	△
MINING RIGHTS ONLY	◆
LICENCE OF OCCUPATION	◆
ORDER IN COUNCIL	OC
RESERVATION	○
CANCELLED	○
SAND & GRAVEL	○

NOTE: MINING CLAIMS IN PARCELS PLACED PRIOR TO MAY 1, 1992, ARE LISTED IN ORIGINAL PATENTS BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSECT. 1.

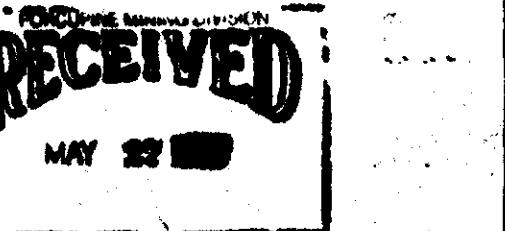
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 Chains 10 0 10 20 40 50 60 70 Chains  
 Feet 500 0 1000 2000 3000 4000 5000 Feet

THIS TWP. IS SUBJECT TO FOREST ACTIVITIES IN 1992/93

FURTHER INFORMATION AVAILABLE ON FILE.

© JDS TWP. IS SUBJECT TO FOREST ACTIVITY IN 1993/94.

FURTHER INFORMATION ON FILE.

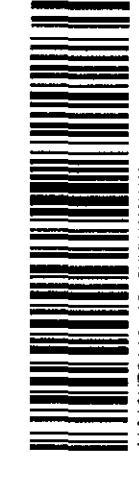




**TOWNSHIP**  
**CUNNINGHAM**  
 M.N.R. ADMINISTRATIVE DISTRICT  
**CHAPLEAU**  
 MINING DIVISION  
**PORCUPINE**  
 LAND TITLES / REGISTRY DIVISION  
**SUDSBURY**


Received by [Signature]  
 Ministry of Natural Resources  
 Ontario

AUGUST 1993

G-1095

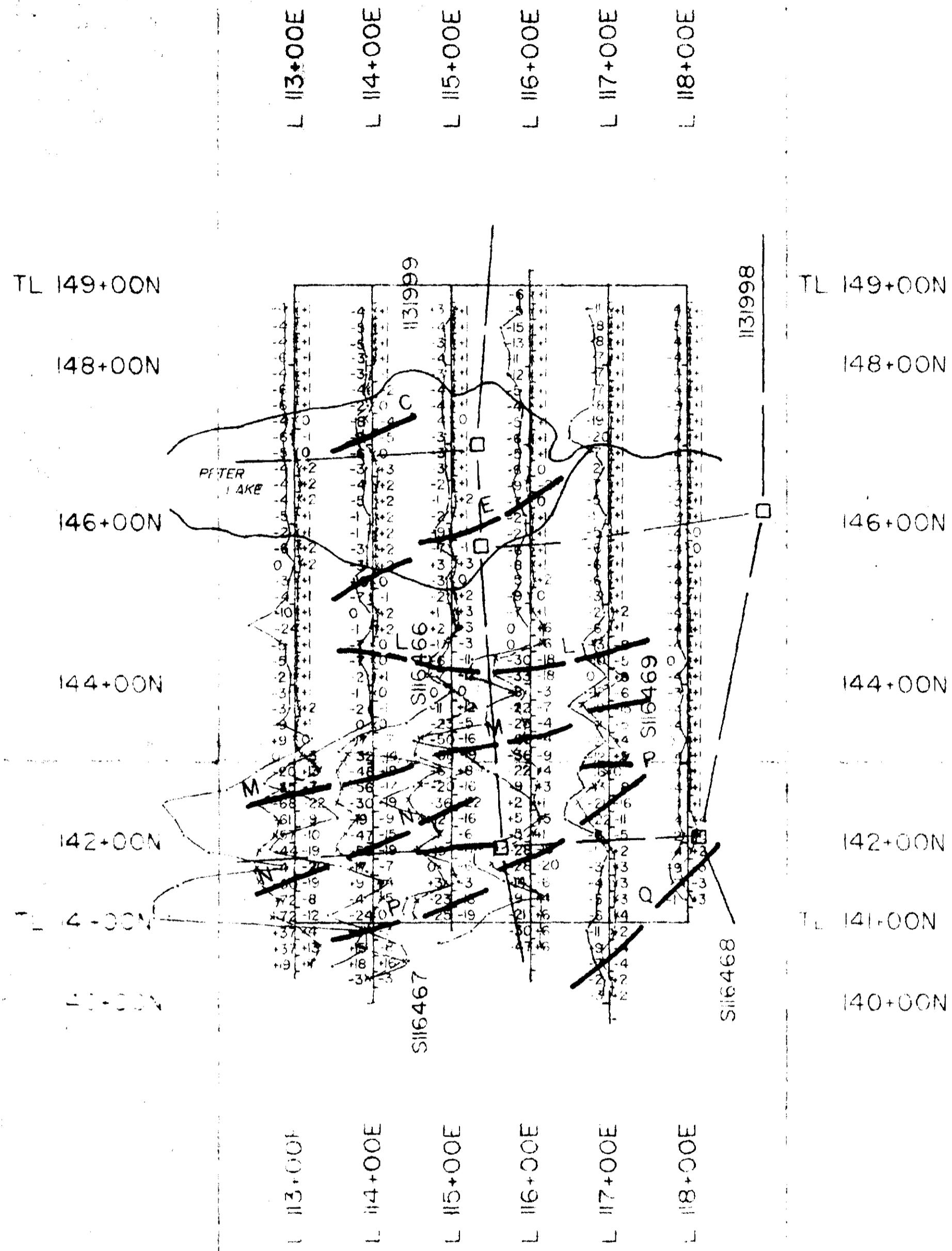






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41010NE9110 42 CUNNINGHAM

250

LEGEND

INSTRUMENT: Apex Parametrics Max-Min II  
TYPE: Maximum Coupled, Horizontal Loop Survey.

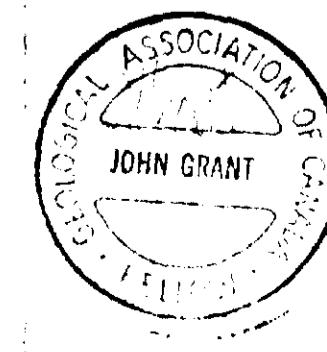
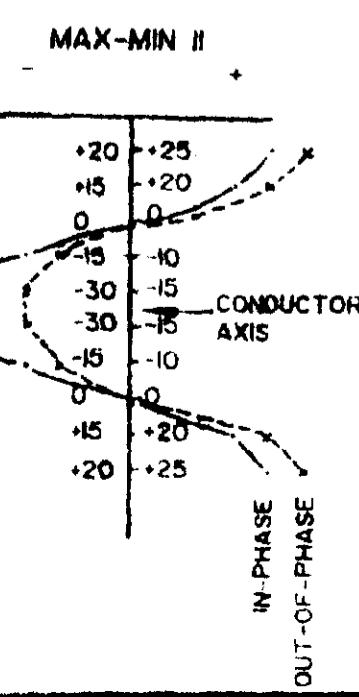
PARAMETERS MEASURED: In-phase (%)  
Out-of-phase (%)

FREQUENCY: 444 Hz

LINE SEPARATION: 50m

OPERATOR: R. Mathieu

PROFILE SCALE: 1cm=20%



JOHN GRANT

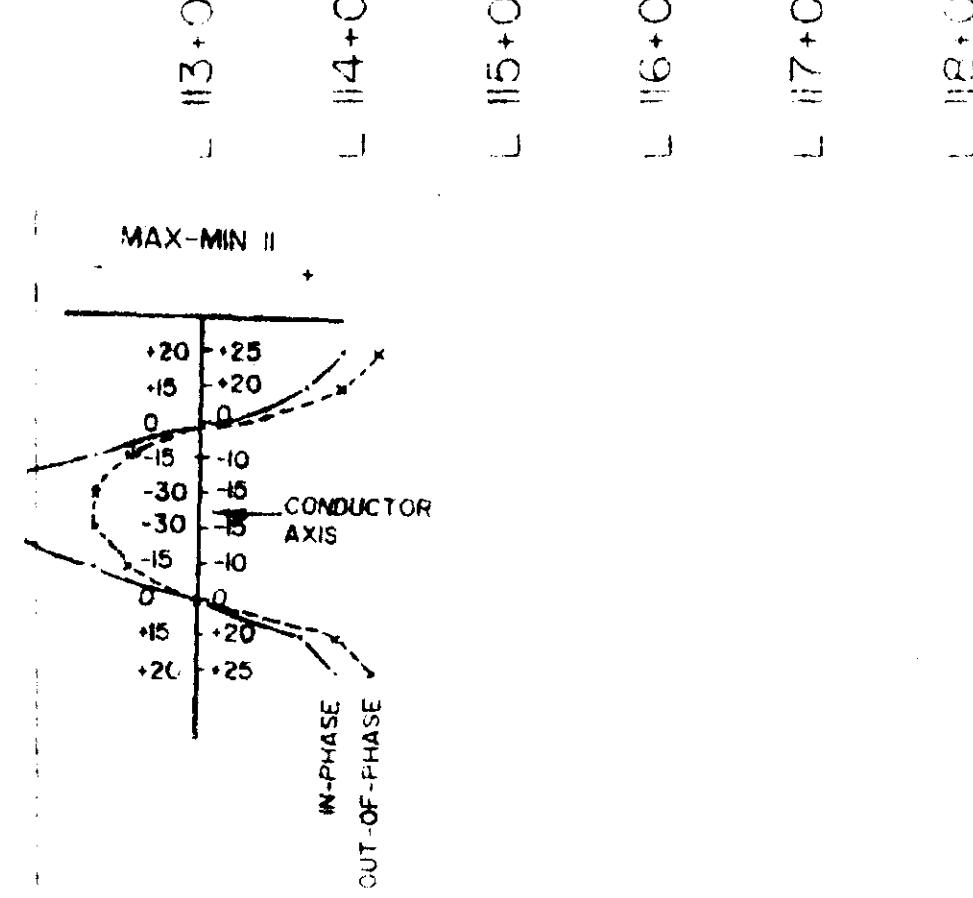
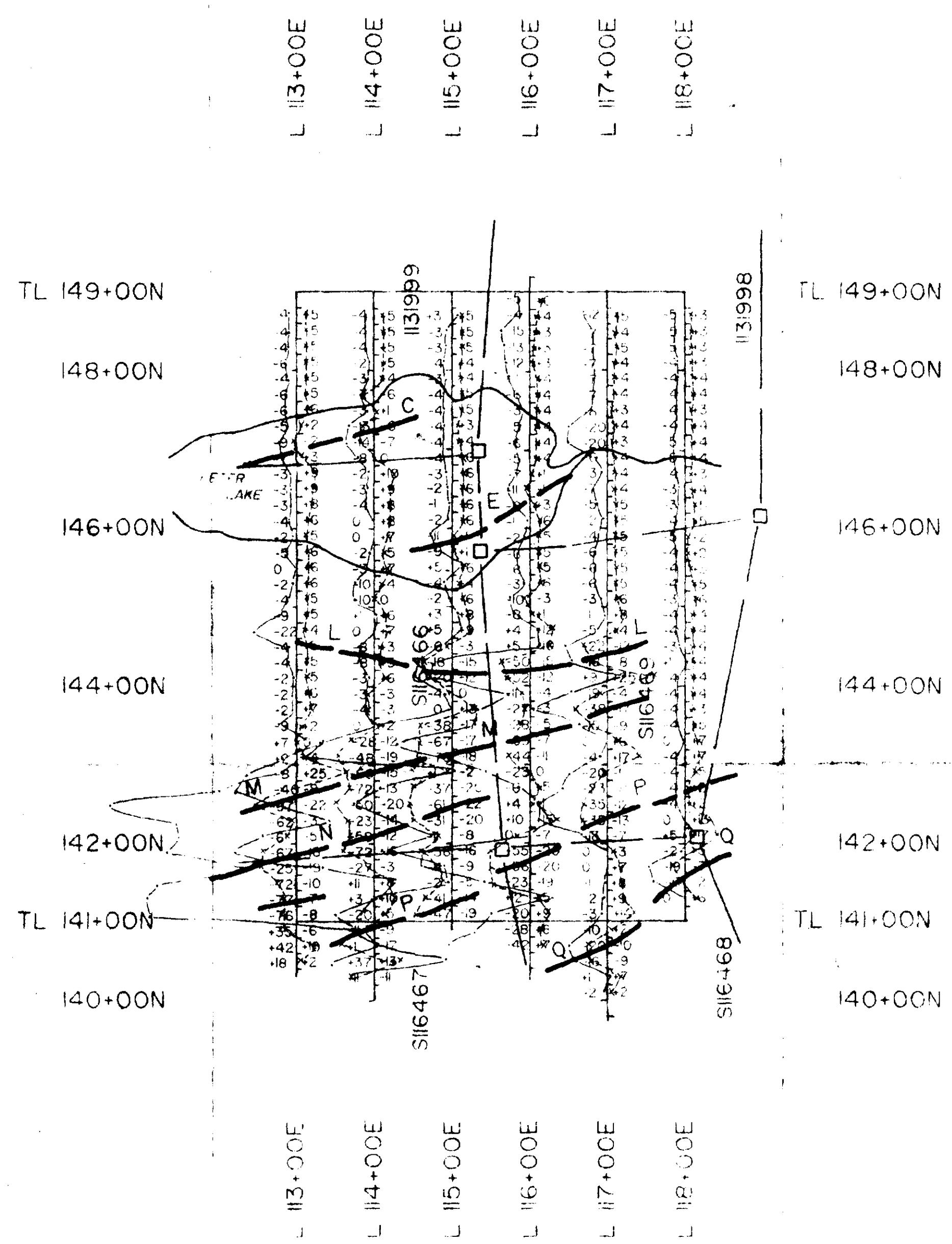
EXSICS EXPLORATION LTD.

P.O. Box 1880, PLH-2X1  
Suite 13 Hollinger Bldg., Timmins, Ont.  
Telephone 705-287-4151

CLIENT FALCONBRIDGE LIMITED  
PROPERTY CUNNINGHAM TOWNSHIP  
TITLE

MAX-MIN II 444 Hz

Date: 05/05/92	Scale:	NTS
Drawn by:	Interp by:	Joe Mc

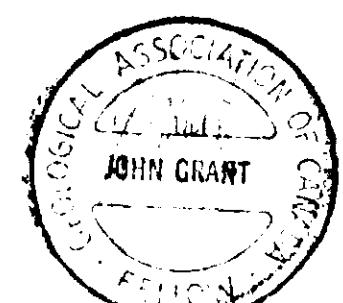


41010NE9110 42 CUNNINGHAM

260

#### LEGEND

INSTRUMENT: Apex Parametrics Max-Min II  
MODE: Medium Coupled, Horizontal Loop Survey  
PARAMETERS MEASURED: Inphase (%)  
Out of phase (%)  
FREQUENCY: 1777 Hz  
SEPARATION: 50m  
OPERATOR: R. Mathieu  
PROPSY SCALE: 1cm=20%



EXSICS EXPLORATION LTD			
P.O. Box 1849, P.O.M.-T44 Suite 2, Hollinger Bldg., London, Ont. Telephone 735-267-1451			
CLIENT	FALCONBRIDGE LIMITED		
PROPERTY	CUNNINGHAM TOWNSHIP		
TITLE	MAX-MIN II 1777 Hz		
Date	20	Scale	NTS
Drawn	Interp.	Job No.	23