42E03SE0007 2.7631 UPPER AGUASABON LAKE

010

LITHOGEOCHEMICAL ASSESSMENT REPORT
SHY AND SOUTHPINE LAKE GRIDS
PN 085, 088
NTS 42E/3

RECEIVED
JAN 07 1985
MINING LANDS SECTION

G. S. WELLS
CORPORATION FALCONBRIDGE COPPER
THUNDER BAY, ONTARIO
NOVEMBER 30, 1984

LITHOGEOCHEMICAL ASSESSMENT REPORT
SHY AND SOUTHPINE LAKE GRIDS
PN 086, 088

I Introduction

In 1984 Corporation Falconbridge Copper continued to explore a large block of claims in the Big Duck-Shy-Southpine Lake area. A 4 to 7-man crew carried out detailed geological and lithogeochemical surveys over the Shy Lake (70 km) and Southpine Lake (27 km) grids (Appendix I).

1. Location and Access

The Shy Lake area is located 28 km due north of Schreiber, Ontario and 155 km east-northeast of Thunder Bay (Figure 1). Access to the area is by float plane from Pays Plat Bay on Lake Superior to Big Duck Lake and then by foot from Big Duck Lake to the Shy Lake grid. The northern part of the grid is readily accessible from Rope Lake which is long and deep enough for a float plane. The Southpine Lake grid is located just west of mile 22 on the Kimberly-Clark logging road between Terrace Bay and Longlac. An old logging road which bisects the property, provides excellent access.

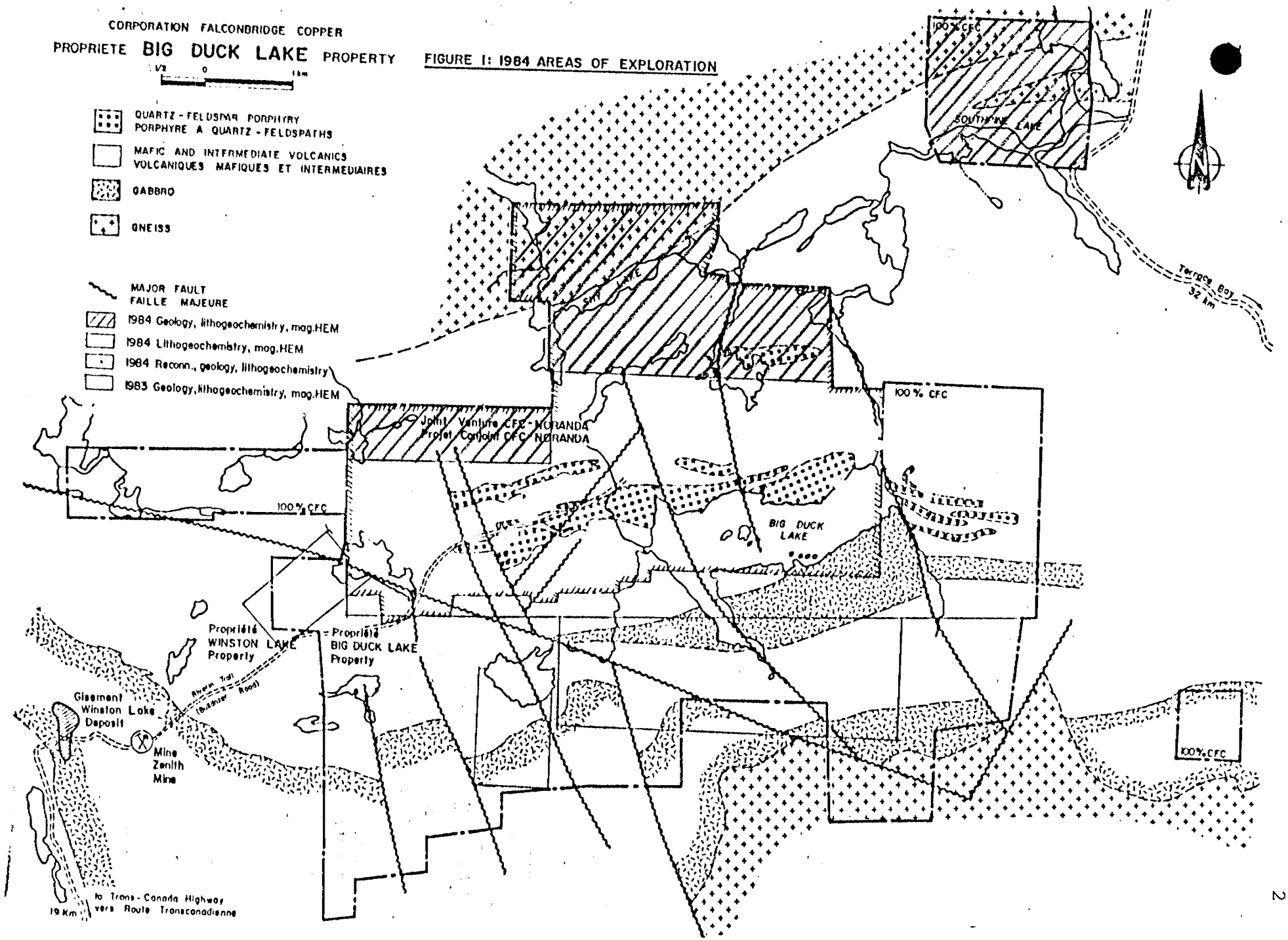
2. Topography and Vegetation

The Shy Lake and Southpine Lake grid areas are relatively flat as the topographic relief in both areas is generally less than 25 metres. Over 80% of the Southpine Lake grid area has been clear-cut and the only trees remaining are a few stands of spruce near the edges of lakes. The Shy Lake area has mature

CORPORATION FALCONBRIDGE COPPER

PROPRIETE **BIG DUCK LAKE** PROPERTY

FIGURE I: 1984 AREAS OF EXPLORATION



stands of poplar and birch on the higher ground and spruce, balsam, cedar and alders in the lower, more swampy areas. Outcrop density in both areas is high at 30 to 40%.

3. Previous Work

The Big Duck-Winston Lake area has been explored sporadically for base and precious metals since 1882 when high-grade zinc mineralization was discovered at Kenabic lake. Although the geology of the area was originally described by Hopkins (1915) and Bartley (1940), Pye's 1960 map is the most recent government issue for the area. A compilation of previous work by operators other than CFC is presented in Table 1.

CFC has flown a Questor airborne EM and magnetic survey over the area. Ground magnetic, HEM, geological and lithogeochemical surveys have been completed over a large portion of the claim block. In addition, 17 diamond drill holes totalling 3082 metres have been completed in the Big Duck Lake area. Most of this data has been submitted for assessment credit.

4. Geology

a) Shy Lake Grid

The central part of the Shy Lake grid is underlain by a series of mafic, massive and pillowed flows intercalated with metasediments. These units strike approximately east-west and dip steeply to the north (80-90°). Stratigraphic tops are also assumed to be to the north on the basis of pillow top determinations and graded bedding in volcaniclastic units which outcrop further to the south.

The metasediments are primarily wackes although more felsic beds and chert horizons are locally present. Immediately south

TABLE 1: PREVIOUS WORK - BIG DUCK LAKE AREA

Company/Year	Type of Work	Area/Showing
Haslat-Duck L. Mines (1928)	Geology report - F. Loring	Little Duck Lake
Sanadenise Gold Mines (1945)	Sample assays	Little Duck Lake
Magnet Cons. Mines (1951)	Drill logs (10 DDH, 2,939 ft)	Little Duck Lake #1
S. Ciglen (1952)	Geological report	Southpine, Burslem & Little Duck Lake areas
Zenmac Metal Mines Ltd. (1952-1969)	Geology, geochem, E.M., Mag, Trenching, Drill logs (143 DDH, 50,294 ft)	Zenith Mine
Bathurst-Maritimes Mining corp. (1954)	Geology, E.M.	Little Duck Lake
United Montauban Mines Ltd. (1954)	VLEM	SE of Big Duck Lake
A. Hopkins (1954)	Geology	Estell, Little Duck Lake, Longworth
Stratmat Ltd. (1955)	Geology, drill logs (14 DDH, 6,048 ft)	Estell
R. Janes (1957)	Drill logs (7 DDH, 451 ft)	NE of Little Duck Lake
Canabel Syndicate (1957-1958)	Geology, EM, drill logs (5 DDH, 1944 ft)	Burslem, Shy, Cable, Southpine Lakes
C. Authier (1957-1958)	Geology, VEM, drill logs (5 DDH, 1944 ft)	Shy, Cable Lakes
KRNO & Kinasco Mines (1959-1960)	Geology, self-potential survey, air photo interpretation, drill logs (56 DDH, 14,723 ft)	Coco-Estelle, Church
Norrie, Lanfear (1965)	Drill logs (3 DDH, 340 ft)	Gesic
Kennco Expl. Ltd. (1971)	Airborne EM & Mag.	Southpine-Stingray Lakes
Selco Mining Corp. Ltd. (1979)	HLEM, Mag, drill logs (4 DDH, 340 m)	Rope-Southpine Lakes
Noranda Exploration (1980-1981)	Geology, soil geochem, VLF, Mag.	Shy Lake
Noranda Exploration (1981-1983)	IP,VLF,Mag, geology, soil geochem. Drill plan & sections Questor airborne INPUT EM & Mag.	Gray Option-Little Duck Lake Coco-Estelle-Church

of Shy Lake, the metasediments are pelitic in composition with mineral assemblages of biotite, garnet and staurolite. A magnetite slate consisting of beds of massive magnetite intercalated with quartz-rich beds is found within the pelitic sequence. Laterally extensive conductive zones occur commonly at the base of any one particular sedimentary unit. Where seen, these conductors are due to sulphide facies (py-po) iron formation.

In the southern part of the Shy Lake grid an intrusive QFP is overlain by a fragmental QFP and a thin felsic flow. The area north of Shy Lake is underlain by medium to coarse-grained granite. A thin wedge of sedimentary material is enclosed within this intrusive.

b) Northwest Extension of the Big Duck Lake Grid

This area is underlain by mafic massive and pillowed flows which are interbedded with intermediate to felsic tuffs and lapilli tuffs. The geology is just an extension of that seen in the northern part of the Big Duck Lake grid.

c) Southpine Lake Grid

The Southpine Lake grid is underlain by granite and sediments. The biotite-rich sediments have a strong east-west foliation and dips are steep to the south (80-90°). There are no indications of stratigraphic tops in the area. There are 2 types of granitic material present on the claim group: a medium to coarse-grained granitic gneiss which outcrops in the north and a fine-grained biotite granite which intrudes the sediments. Coarse-grained pegmatitic dykes and/or veins which consist of quartz, K-feldspar and tourmaline intrude all rock types in the Southpine Lake area.

II Results of the Lithogeochemical Survey

1. Introduction

A total of 937 samples were collected from these grids during the summer of 1984. Where-ever possible, rock samples were taken every 50 metres on north-south picket lines which were spaced at 100 metre intervals. All samples were analysed for zinc at Metriclab located in Ste.-Marthe-sur-le-Lac, Quebec. These analyses, the sample locations, rock types and sulphide contents were then entered into the computer and stored on a floppy disk. The statistics of the data were calculated using the Q'Gas programs (Table 2). Contour intervals for the selection of anomalous areas of zinc were chosen on the basis of these statistics. For normally distributed sample populations the contour intervals are as follows:

Contour Interval 1: arithmetic mean + 1x standard deviation --> arithmetic mean + 2x standard deviation
Contour Interval 2: >arithmetic mean + 2x standard deviation
For log normally distributed samples the contour intervals are:
Contour Interval 1: geometric mean x standard deviation --> geometric mean x (standard deviation)^2
Contour Interval 2: >geometric mean x (standard deviation)^2

The data was then contoured by hand. It should be noted that although absolute values of the contour interval vary with the rock type, the statistical significance of each interval is the same.

In many volcanogenic massive sulphide deposits there is commonly an underlying zinc enrichment halo which is a reflection

TABLE 2: LITHOGEOCHEMICAL STATISTICS FOR ZINC

Rock Type	N	Min ppm	Max ppm	$\tilde{x}(N)$ ppm	$\sigma(N)$ ppm	$\mu(N)$ ppm	$\sigma(\ln N)$ ppm	Type of Distribution
Granite (all)	255	13	144	40.7	16.4	-	-	normal (skewed)
Biotite Granite (Southpine)	91	13	144	43.4	18.0	-	-	normal
Qtz-eyed Granite (Southpine)	75	18	101	44.8	16.4	-	-	normal
Sediments (all)	317	6	313	57.0	21.6	-	-	normal
QP - QFP (1983)	239	5	846	31.5	20.1	-	-	normal (bimodal)
Intermediate Tuffs (1983)	56	9	6990	54.3	20.4	-	-	normal (skewed)
Mafic Volcanics (1984)	372	6	271	33.8	26.1	26.5	1.74	log normal
Mafic Volcanics (1983)	1321	5	1410	32.5	17.6	28.3	1.69	log normal
Gabbro (1983)	702	2	1175	23.3	14.7	19.5	1.82	log normal

of the hydrothermal system responsible for the orebody. It was felt that this element would help us zero in on potentially significant zones associated with the laterally extensive conductors on the Shy Lake and Southpine Lake grids.

2. Shy Lake Grid

Zinc content in the rocks which outcrop on this grid is generally low although the sediments are slightly enriched in zinc (Table 2). Numerous 1 or 2 sample anomalies are present but there are no extensive zinc enrichment zones (Figure 2). Several of these "spotty" zinc highs occur in the metasediments which outcrop along TL14N.

3. Northwest Extension of the Big Duck Lake Grid

There are several weakly anomalous zones of zinc enrichment present in the mafic volcanics and intermediate to felsic volcaniclastics which outcrop on this grid (Figure 3). A 3 sample anomaly on the north end of lines 28W and 29W occurs in mafic volcanics which underly the extension of the Cable-Shy Lake iron formation.

4. Southpine Lake Grid

Two zones of weak zinc enrichment and several isolated zinc highs are present on this grid (Figure 4). In the northwestern part of the claim block a broad zinc anomaly occurs primarily in sediments but extends into adjacent granitic rocks. The highest zinc value obtained in this zone is 144 ppm. The second zinc anomaly occurs in the southeastern part of the grid. Zinc values

of up to 117 ppm are present. However, 4 of the 5 samples which comprise this anomaly are in granite and consequently this zinc enrichment zone is not considered to be significant.

III Conclusions

Numerous isolated zinc highs are present on all 3 grids sampled in 1984. However, no extensive zinc enrichment zones were located. Consequently, there does not appear to be a metal rich zone underlying any of the laterally extensive conductors located on these grids. Thus the potential for a proximal, economic massive sulphide zone is low.

Gary Wells

REFERENCES

Bartley, M. W. (1940): Geology of the Big duck - Aguasabon Lakes Area. ODM Annual Report, vol. 49, part 7, p. 1-11.

Hopkins, P. E. (1921): Schreiber - Duck Lake Area. ODM Annual Report, vol. 30, part 4, p. 1-26.

Pye, E. G. (1964): Mineral Deposits of the Big Duck Lake Area. Geological Report 27.

APPENDIX 1 - SUMMER PERSONNEL 1984

Lithogeochemical Samplers

1.	Mark Simmons	1426 Hamilton Ave., Thunder Bay, Ont.
2.	Susan Arbuckle	393 Earle Street, Kingston, Ont.
3.	Dave Grant	224 Camelot St., Thunder Bay, Ont.
4.	Paul Severin Jr.	1837 MacGregor St., Thunder Bay, Ont.

STATEMENT OF QUALIFICATIONS

I, Gary Steven Wells of Apt. 1, 623 Vickers Street, North, Thunder Bay, Ontario, hereby certify that:

1. I hold an Honours BSc Degree in combined Geology and Geochemistry from Carleton University (1975) and PhD in Geology from Queen's University (1980).
2. I have practised my profession since graduation.
3. I have based the conclusions and recommendations of this survey on my previous experience and on the results of the field work which was carried out under my supervision.

Gary Wells.

GARY S. WELLS
THUNDER BAY, ONTARIO

NOVEMBER 30, 1984

2.7631

535946	16		646505	12	
947	20		506	15	
948	9		507	3	
556215	14		508	0	
716	18		646509	8	
717	32		512	24	
718	53		513	20	
719	25		514	4	
565611	5		517	15	
662	4		583	24	
663	21		646586	25	
664	27		646746	20	
565714	19		747	22	
645737	9		748	4	
738	17		654401	20	
739	11		404	21	
740	4		405	17	
741	15		415	20	
742	10		420	14	
743	10		421	28	
744	11		654508	24	
745	3		569	1	
746	4		570	34	
747	11		571	3	
748	22		572	25	
749	2		654627	7	
			628	4	
	765			796	
				861	716.2 Soundings / claims

CORPORATION FALCONBRIDGE COPPER

BIG DUCK LAKE AREA
NORTHWEST EXTENSION
Zn (ppm)
LITHOGEOCHEMISTRY

100 50 0 100 m.

DATE	FEB. 1984	DRAWN	SMS
NTS REF.	42/E-3 PN088	DATA	GSW

STATISTICS (Zn < 100ppm)

ROCK TYPE	N	MINIMUM (ppm)	MAXIMUM (ppm)	$\bar{x}_g$ (ppm)	σ_g (ppm)	GEOMETRIC MEAN (U_{gm}) (ppm)	σ_{gm} (ppm)
QP-QFP	239	5	846	31.5	20.1		
INTERMEDIATE TUFF	56	9	6990	54.3	20.4		
MAFIC VOLCANICS	1321	5	1410	32.5	17.6	28.3	1.69
GABBRO	702	2	1175	23.5	14.7	19.5	1.82
ALL DATA	2338	2	6990	30.3	18.1	25.5	1.82

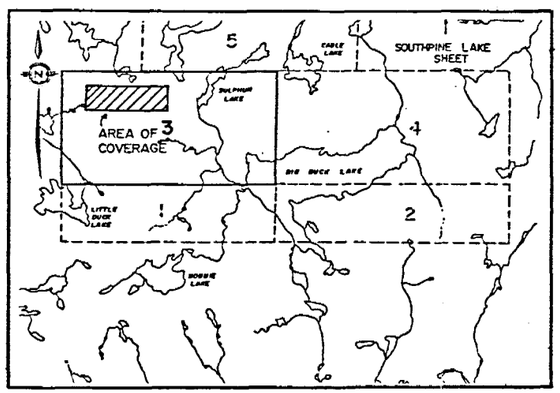
CONTOUR INTERVALS (in ppm)

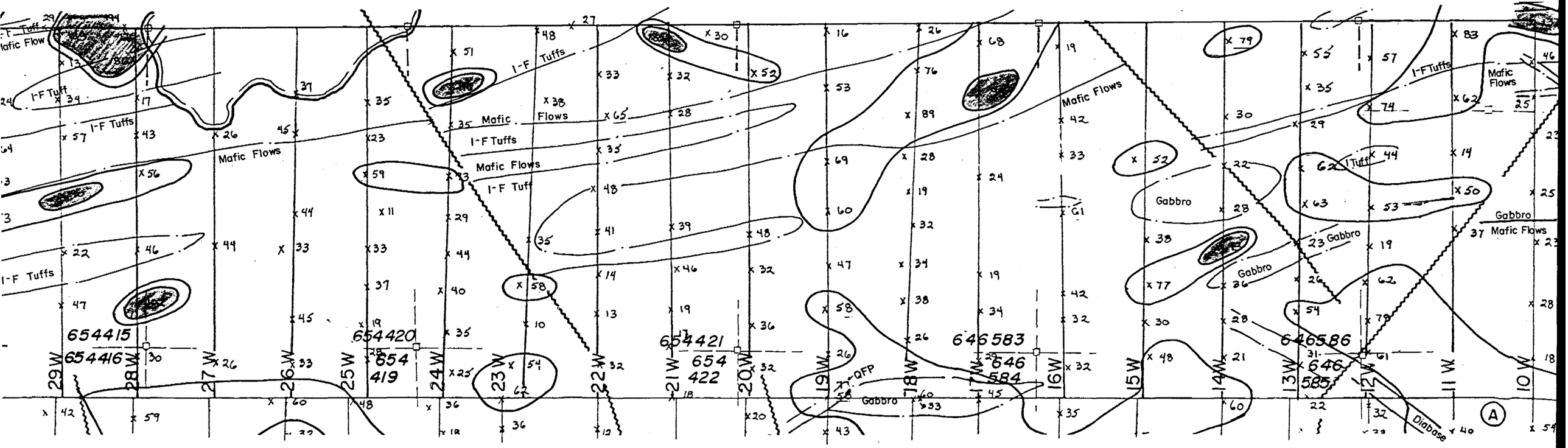
CONTOUR INTERVAL / ROCK TYPE	$\mu_g - \mu_g + 1\sigma_g$	$\mu_g + 1\sigma_g - \mu_g + 2\sigma_g$	$> \mu_g + 2\sigma_g$
QP-QFP	31 — 52	52 — 72	> 72
INTERMEDIATE TUFFS	54 — 75	75 — 95	> 95
MAFIC VOLCANICS	28 — 48	48 — 81	> 81
GABBRO	20 — 35	35 — 65	> 65

Gary Wells Nov. 30/84

27631

Figure 3





Ministry of Natural Resources
Ontario

Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

#19

42E03SE0007 2.7631 UPPER AGUASABON LAKE

900

Mining Act

In the Expend. Days Cr. columns. – Do not use shaded areas below.

Type of Survey(s)	Township or Area
LITHOGEOCHEMICAL	Upper Aguasabon / BIG DUCK LAKE AREA G-609;617

Claim Holder(s)	Prospector's Licence No.
CORPORATION FALCONBRIDGE COPPER	T-556

Address: P.O. BOX 40, COMMERCE COURT WEST, TORONTO, ONTARIO M5L 1B4

Survey Company	Date of Survey (from & to)	Total Miles of line Cut
CORPORATION FALCONBRIDGE COPPER	26 05 84 (Day Mo. Yr.) 30 11 84 (Day Mo. Yr.)	97 Km

Name and Address of Author (of Geo-Technical report)
GARY S. WELLS, c/oCORPORATION FALCONBRIDGE COPPER, 2606 VICTORIA AVE.EAST,THUNDER BAY, ONT.

Credits Requested per Each Claim in Columns at right

Special Provisions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical	
	- Electromagnetic	
	- Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other	
	Geological	
	Geochemical	20

RECEIVED

Man Days		Days per Claim
Complete reverse side and enter total(s) here	Geophysical	
	- Electromagnetic	
MINING LANDS SECTION	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	

Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures $ ÷ 15 = Total Days Credits

Instructions
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Mining Claims Traversed (List in numerical sequence) P7C 1E7

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
TB	535946	
	947	
	535948	
	556215	
	216	
	217	
	218	
	556219	
	565661	
	662	
	663	
	565664	
	565714	
	645737	
	738	
	739	
	645740	
	741	
	645742	

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
TB	645743	
	744	
	745	
	746	
	747	
	748	
	645749	
	646505	
	506	
	507	
	508	
	646509	
	646512	
	513	
	646514	
	646519	
	646583	
	646586	

See also attached list

Total number of mining claims covered by this report of work. 53

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
1060	Dec. 19/84	Audrey M. Harper
	Date Approved as Recorded	Branch Director
	see revised statement	

Date	Recorded Holder or Agent (Signature)
Nov. 30/84	Gary Wells

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying

GARY S. WELLS, c/o CORPORATION FALCONBRIDGE COPPER, 2606 VICTORIA AVENUE, EAST,
THUNDER BAY, ONTARIO P7C 1E7

Date Certified	Certified by (Signature)
NOVEMBER 30,1984	Gary Wells

1362 (81/9)

Ontario

Ministry of Natural Resources

File _____

GEOPHYSICAL – GEOLOGICAL – GEOCHEMICAL TECHNICAL DATA STATEMENT

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s) LITHOGEOCHEMICAL

Township or Area BIG DUCK LAKE AREA - G-609; G-617

Claim Holder(s) CORPORATION FALCONBRIDGE COPPER

P.O. BOX 40, COMMERCE COURT WEST, TORONTO, ONT. M5L 1B4

Survey Company CORPORATION FALCONBRIDGE COPPER

Author of Report GARY S. WELLS

Address of Author c/o CORPORATION FALCONBRIDGE COPPER THUNDER BAY, Ont. 2606 VICTORIA AVE. EAST, P7C 1E7

Covering Dates of Survey May 26, 1984 - Nov. 30th, 1984 (linecutting to office)

Total Miles of Line Cut 97 Km

SPECIAL PROVISIONS CREDITS REQUESTED

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

	DAYS per claim
Geophysical	
--Electromagnetic	
--Magnetometer	
--Radiometric	
--Other	
Geological	
Geochemical	20

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer _____ Electromagnetic _____ Radiometric _____ (enter days per claim)

DATE: NOV. 30th, 1984 SIGNATURE: Gary Wells
Author of Report or Agent

Res. Geol. _____ Qualifications 2.4196

Previous Surveys

File No.	Type	Date	Claim Holder

OFFICE USE ONLY

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
TB	535946
	947
	535948
TB	556215
	216
	217
	218
	556219
TB	565661
	662
	663
	565664
TB	565714
TB	645737
	738
	739
	645740
TB	645741

If space insufficient, attach list

TOTAL CLAIMS 53

837 (5/79)

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS - If more than one survey, specify data for each type of survey

Number of Stations _____ Number of Readings _____

Station interval _____ Line spacing _____

Profile scale _____

Contour interval _____

MAGNETIC

Instrument _____

Accuracy – Scale constant _____

Diurnal correction method _____

Base Station check-in interval (hours) _____

Base Station location and value _____

_____

ELECTROMAGNETIC

Instrument _____

Coil configuration _____

Coil separation _____

Accuracy _____

Method: ☐ Fixed transmitter ☐ Shoot back ☐ In line ☐ Parallel line

Frequency _____
(specify V.L.F. station)

Parameters measured _____

GRAVITY

Instrument _____

Scale constant _____

Corrections made _____

_____

Base station value and location _____

_____

Elevation accuracy _____

INDUCED POLARIZATION RESISTIVITY

Instrument _____

Method ☐ Time Domain ☐ Frequency Domain

Parameters – On time _____ Frequency _____

– Off time _____ Range _____

– Delay time _____

– Integration time _____

Power _____

Electrode array _____

Electrode spacing _____

Type of electrode _____

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

_____

Corrections made _____

_____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(type, depth – include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

_____

Additional information (for understanding results) _____

_____

_____

AIRBORNE SURVEYS

Type of survey(s) _____

Instrument(s) _____

(specify for each type of survey)

Accuracy _____

(specify for each type of survey)

Aircraft used _____

Sensor altitude _____

Navigation and flight path recovery method _____

_____

Aircraft altitude _____ Line Spacing _____

Miles flown over total area _____ Over claims only _____

GEOCHEMICAL SURVEY – PROCEDURE RECORD

Numbers of claims from which samples taken TB 535946 et al (as per attached list)

TOTAL 53 Claims

Total Number of Samples 937

Type of Sample Rock
(Nature of Material)

Average Sample Weight 1 Kg.

Method of Collection By hand using 4 pound sledge hammer

Soil Horizon Sampled

Horizon Development

Sample Depth Surface

Terrain Moderate relief

Drainage Development Fair to good

Estimated Range of Overburden Thickness 0 - 5 m

SAMPLE PREPARATION
(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis -200 mesh

General Primary crushing using jaw and cone crushers.
Riffle table used to half sample
1 gram of -200 mesh used for base metal determination.

ANALYTICAL METHODS

Values expressed in: per cent ☐
p. p. m. ☒
p. p. b. ☐

Cu, Pb, (Zn), Ni, Co, Ag, Mo, As,-(circle)

Others

Field Analysis (tests)

Extraction Method

Analytical Method

Reagents Used

Field Laboratory Analysis

No. (tests)

Extraction Method

Analytical Method

Reagents Used

Commercial Laboratory (937 tests)

Name of Laboratory METRICLAB (1980) INC.

Extraction Method

Analytical Method ATOMIC ABSORPTION

Reagents Used AQUA REGIA

General

November 30th, 1984

CORPORATION FALCONBRIDGE COPPER,
P. O. BOX 40,
COMMERCE COURT WEST,
TORONTO, ONTARIO.
M5L 1B4

Licence T-556

List of additional claims to accompany Technical Data Statement re Lithogeochemical Report - Big Duck Lake area. G-609; 617.

TB 645742
743
744
745
746
747
748
TB 645749
TB 646505
506
507
508
TB 646509
TB 646512
513
TB 646514
TB 646519
TB 646583
TB 646586
TB 646746
747
TB 646748
TB 654401
TB 654404
TB 654405
TB 654415
TB 654420
TB 654421
TB 654568
569
570
571
TB 654572
TB 654627
TB 654628

TOTAL 53 CLAIMS

CORPORATION FALCONBRIDGE COPPER
2606 Victoria Avenue East
Thunder Bay, Ontario P7C 1E7
Telephone 807/623-1511

February 8th, 1985

Mr. Doug Isherwood,
Ministry of Natural Resources,
Land Management Branch,
Room 6643 - Whitney Block,
Queen's Park,
Toronto, Ontario.
M7A 1W3

RECEIVED
FEB 11 1985
MINING LANDS SECTION

RE: Your File 2.7631 - Lithogeochemical Report

Dear Mr. Isherwood:

I have enclosed two copies of "Assessment Work Breakdown" covering 504 days of manday credits for a lithogeochemical survey in the Big Duck Lake area (your file 2.7631) and two copies of the "Report of Work" form covering the same survey on 53 claims and requesting 9.3 days of coverage per claim.

A "Report of Work" form will be forwarded shortly accompanied by receipt(s) and sample location map covering the filing of geochemical expenditure credits as assessment on the above noted claims.

Yours truly,
CORPORATION FALCONBRIDGE COPPER

Gary Wells

GARY G. WELLS
EXPLORATION GEOLOGIST
GSW/cme
encls. 6

Ministry of Natural Resources
Ontario

Assessment Work Breakdown

MNR - TORONTO - File #2.7631

Mining Recorder File #19

1. Type of Survey LITHOGEOCHEMICAL

2. Township or Area BIG DUCK LAKE AREA - CLAIM MAPS G-609, G-617

3. Numbers of Mining Claims Traversed by Survey TB 535946 - 948; 556215 - 219; TB 565661 - 664; 565714; 645737 - 749; 646505 - 509; 646512 - 514; 646519; 646583; 646586; 646746 - 748; 654401; 654404 - 405; 654415; 654420 - 421; 654568 - 572; 654627 - 628: Total 53 Claims

4. Number of Miles of Line Cut 97 Km Flown

*5. Number of Stations Established

*6. Make and type of Instrument Used

*7. Scale Constant or Sensitivity

*8. Frequency Used and Power Output

9. Summary of Assessment Credits (details on reverse side)

Total 8 hour Technical Days (Include Consultants, Draughting etc.) 72

Total 8 hour Line-Cutting Days

Calculation

72 (Technical) x 7 = 504 + ____ (Line-cutting) = 504 ÷ 53 (Number of claims) = 9.5 (Assessment credits per claim)

The dates listed on this form represent working time spent entirely within the limits of the above listed claims [X] Check
If otherwise, please explain

Dated: FEBRUARY 8th 1985 Signed: Gary Wells

Note: (A) * Complete only if applicable.
(B) Complete list of names, addresses and dates on reverse side.
(C) Submit separate breakdown for each type of survey.
(D) Submit in duplicate.

Ministry of Natural Resources
Ontario

Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

MNR-TORONTO File #2.7631

Mining Act

Instructions: - Please type or print.
- If number of mining claims traversed exceeds space on this form, attach a list.

Note: - Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
- Do not use shaded areas below.

Type of Survey(s): MAN DAYS - GEOCHEMICAL SURVEY

Township or Area: BIG DUCK LAKE AREA G-609-617

Claim Holder(s): CORPORATION FALCONBRIDGE COPPER

Prospector's Licence No.: T-556

Address: P. O. BOX 40, COMMERCE COURT WEST, TORONTO, ONTARIO M5L 1B4

Survey Company: CORPORATION FALCONBRIDGE COPPER-THUNDER BAY

Date of Survey (from & to): 26 05 84 (Day, Mo., Yr.) to 30 11 84

Total Miles of line Cut: 97 Km

Name and Address of Author (of Geo-Technical report): GARY S. WELLS, c/o CORPORATION FALCONBRIDGE COPPER, 2606 VICTORIA AVE. EAST, THUNDER BAY, ONT P7C 1E7

Credits Requested per Each Claim in Columns at right

		Days per Claim
Special Provisions For first survey: Enter 40 days. (This includes line cutting) For each additional survey: using the same grid: Enter 20 days (for each)	Geophysical - Electromagnetic	
	Geophysical - Magnetometer	
	Geophysical - Radiometric	
	Geophysical - Other	
	Geological	
	Geochemical	
Man Days Complete reverse side and enter total(s) here	Geophysical - Electromagnetic	
	Geophysical - Magnetometer	
	Geophysical - Radiometric	
	Geophysical - Other	
	Geological	
	Geochemical	9.5
Airborne Credits **Note:** Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures $ ÷ 15 = Total Days Credits

Instructions: Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Mining Claims Traversed (List in numerical sequence)

Prefix	Mining Claim Number	Expend. Days Cr.
TB	535946	
	947	
	535948	
	556215	
	216	
	217	
	218	
	556219	
	565661	
	662	
	663	
	565664	
	565714	
	645737	
	738	
	739	
	645740	
	741	
	645742	

Prefix	Mining Claim Number	Expend. Days Cr.
TB	645743	
	744	
	745	
	746	
	747	
	748	
	645749	
	646505	
	506	
	507	
	508	
	646509	
	646512	
	513	
	646514	
	646519	
	646583	
	646586	

See also attached list additional claims

Total number of mining claims covered by this report of work: 53

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
	Date Approved as Recorded	Branch Director

Date: FEBRUARY 8,1985

Recorded Holder or Agent (Signature): Gary Wells

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying: GARY S. WELLS, c/o CORPORATION FALCONBRIDGE COPPER, 2606 VICTORIA AVENUE, EAST, THUNDER BAY, ONTARIO P7C 1E7

Date Certified: FEBRUARY 8, 1985

Certified by (Signature): Gary Wells

1362 (81/9)

CORPORATION FALCONBRIDGE COPPER
2606 Victoria Avenue East
Thunder Bay, Ontario P7C 1E7
Telephone 807/623-1511

LICENCE T-556

February 8th, 1985

MAN DAYS - GEOCHEMICAL SURVEY -

Refer MNR - Toronto File #2.7631

Additional Claims - Report of Work Form

Big Duck Lake Area - Maps G-609 and 617

TB 646746
747
646748

TB 654401

TB 654404

TB 654405

TB 654415

TB 654420

TB 654421

TB 654568
569
654570
571

Total Claims 53

TB 654572

TB 654627

TB 654628

Ministry of Natural Resources
Ontario

Assessment Work Breakdown

MNR - TORONTO - File #2.7631
Mining Recorder File #19

1. Type of Survey LITHOGEOCHEMICAL

2. Township or Area BIG DUCK LAKE AREA - CLAIM MAPS G-609, G-617

3. Numbers of Mining Claims Traversed by Survey TB 535946 - 948; 556215 - 219; TB 565661 - 664; 565714; 645737 - 749; 646505 - 509; 646512 - 514; 646519; 646583; 646586; 646746 - 748; 654401; 654404 - 405; 654415; 654420 - 421; 654568 - 572; 654627 - 628; Total 53 Claims

4. Number of Miles of Line Cut 97 Km Flown

*5. Number of Stations Established

*6. Make and type of Instrument Used

*7. Scale Constant or Sensitivity

*8. Frequency Used and Power Output

9. Summary of Assessment Credits (details on reverse side)

Total 8 hour Technical Days (Include Consultants, Draughting etc.) 72

Total 8 hour Line-Cutting Days

Calculation

72 (Technical) x 7 = 504 + ____ (Line-cutting) = 504 ÷ 53 (Number of claims) = 9.5 (Assessment credits per claim)

The dates listed on this form represent working time spent entirely within the limits of the above listed claims [x] Check
If otherwise, please explain

Dated: FEBRUARY 8th 1985 Signed: Gary Wells

Note: (A) * Complete only if applicable.
(B) Complete list of names, addresses and dates on reverse side.
(C) Submit separate breakdown for each type of survey.
(D) Submit in duplicate.

Ministry of Natural Resources
Ontario

Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

MNR-TORONTO File #2.7631

Mining Act

Instructions: – Please type or print.
– If number of mining claims traversed exceeds space on this form, attach a list.
Note: – Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
– Do not use shaded areas below.

Type of Survey(s): **MAN DAYS - GEOCHEMICAL SURVEY**

Township or Area: **BIG DUCK LAKE AREA G-609-617**

Claim Holder(s): **CORPORATION FALCONBRIDGE COPPER**

Prospector's Licence No.: **T-556**

Address: **P. O. BOX 40, COMMERCE COURT WEST, TORONTO, ONTARIO M5L 1B4**

Survey Company: **CORPORATION FALCONBRIDGE COPPER-THUNDER BAY**

Date of Survey (from & to): Day 26 Mo. 05 Yr. 84 / Day 30 Mo. 11 Yr. 84

Total Miles of line Cut: **97 Km**

Name and Address of Author (of Geo-Technical report): **GARY S. WELLS, c/o CORPORATION FALCONBRIDGE COPPER, 2606 VICTORIA AVE. EAST, THUNDER BAY, ONT P7C 1E7**

Credits Requested per Each Claim in Columns at right

		Days per Claim
Special Provisions For first survey: Enter 40 days. (This includes line cutting) For each additional survey: using the same grid: Enter 20 days (for each)	Geophysical - Electromagnetic - Magnetometer - Radiometric - Other Geological Geochemical	
Man Days Complete reverse side and enter total(s) here	Geophysical - Electromagnetic - Magnetometer - Radiometric - Other Geological Geochemical	Days per Claim 9.5
Airborne Credits Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic Magnetometer Radiometric	Days per Claim

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures: $ ÷ 15 = Total Days Credits

Instructions
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Mining Claims Traversed (List in numerical sequence)

Prefix	Mining Claim Number	Expend. Days Cr.
TB	535946	
	947	
	535948	
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	556219	
	565661	
	662	
	663	
	565664	
	565714	
	645737	
	738	
	739	
	645740	
	741	
	645742	

Prefix	Mining Claim Number	Expend. Days Cr.
TB	645743	
	744	
	745	
	746	
	747	
	748	
	645749	
	646505	
	506	
	507	
	508	
	646509	
	646512	
	513	
	646514	
	646519	
	646583	
	646586	

See also attached list additional claims

Total number of mining claims covered by this report of work: **53**

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
	Date Approved as Recorded	Branch Director

Date: **FEBRUARY 8,1985**

Recorded Holder or Agent (Signature): Gary Wells

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying
GARY S. WELLS, c/o CORPORATION FALCONBRIDGE COPPER, 2606 VICTORIA AVENUE, EAST, THUNDER BAY, ONTARIO P7C 1E7

Date Certified: **FEBRUARY 8 1985**

Certified by (Signature): Gary Wells

1362 (81/01)

CORPORATION FALCONBRIDGE COPPER

2606 Victoria Avenue East
Thunder Bay, Ontario P7C 1E7
Telephone 807/623-1511

LICENCE T-556

February 8th, 1985

MAN DAYS - GEOCHEMICAL SURVEY -

Refer MNR - Toronto File #2.7631

Additional Claims - Report of Work Form

Big Duck Lake Area - Maps G-609 and 617

TB 646746
747
646748

TB 654401

TB 654404

TB 654405

TB 654415

TB 654420

TB 654421

TB 654568
569
654570
571

TB 654572

TB 654627

TB 654628

Total Claims 53

NOVEMBER 30th, 1984

CORPORATION FALCONBRIDGE COPPER

LICENCE T-556

P. O. BOX 40,
COMMERCE COURT WEST,
TORONTO, ONTARIO
M5L 1B4

ADDITIONAL CLAIMS - LITHOGEOCHEMICAL SURVEY - BIG DUCK LAKE AREA - MAPS G-609; 617

TB 646746
747
TB 646748

TB 654401

TB 654404
TB 654405

TB 654415

TB 654420
TB 654421

TB 654568
569
570
571
TB 654572

TB 654627
TB 654628

Total 53 Claims

Ministry of Natural Resources
Ontario

Technical Assessment Work Credits

File 2.7631

Date 1985 03 05

Mining Recorder's Report of Work No. 19

Recorded Holder	CORPORATION FALCONBRIDGE COPPER
Township or Area	BIG DUCK LAKE, UPPER AGUASABON LAKE AREA

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	TB 535946 to 948 inclusive 556215 to 219 inclusive 565661 to 664 inclusive 565714 645737 to 749 inclusive 646505 to 507 inclusive 646509 646512 to 514 inclusive 646519 646583 646586 646746 to 748 inclusive 654401 654404-405 654415 654420-421 654568 to 572 inclusive 654627-628
Electromagnetic _____ days	
Magnetometer _____ days	
Radiometric _____ days	
Induced polarization _____ days	
Other _____ days	
Section 77 (19) See "Mining Claims Assessed" column	
Geological _____ days	
Geochemical 10 days	
Man days [X] Airborne [ ]	
Special provision [ ] Ground [X]	
[X] Credits have been reduced because of partial coverage of claims.	
[ ] Credits have been reduced because of corrections to work dates and figures of applicant.	

Special credits under section 77 (16) for the following mining claims

No credits have been allowed for the following mining claims

[X] not sufficiently covered by the survey [ ] Insufficient technical data filed

TB 646508

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical — 80; Geological — 40; Geochemical — 40; Section 77(19)—60:

Mining Lands Section File No 27631

Control Sheet

TYPE OF SURVEY

____ GEOPHYSICAL

____ GEOLOGICAL

✓ GEOCHEMICAL

____ EXPENDITURE

MINING LANDS COMMENTS:

- need mandays breakdown (avg. readings/claim) ✓

Sgd

Signature of Assessor

5/3/85

Date

1985 03 25

Your File: 19
Our File: 2.7631

Mining Recorder
Ministry of Natural Resources
P.O. Box 5000
Thunder Bay, Ontario
P7C 5G6

Dear Madam:

RE: Notice of Intent dated March 5, 1985
Geochemical Survey on Mining Claims
TB 535946, et. al., in the Big Duck Lake
Upper Aguasabon Lake Area

The assessment work credits, as listed with the above-mentioned Notice of Intent, have been approved as of the above date.

Please inform the recorded holder of these mining claims and so indicate on your records.

Yours sincerely,

S.E. Yundt
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone:(416)965-4888

D. Isherwood:mc

cc: Corporation Falconbridge Copper
P.O. Box 40
Commerce Court West
Toronto, Ontario
M5L 1B4

cc: Mr. G.H. Ferguson
Mining & Lands Commissioner
Toronto, Ontario

cc: Gary S. Wells
c/o Corporation Falconbridge Copper
2606 Victoria Avenue East
Thunder Bay, Ontario
P7C 1E7

cc: Resident Geologist
Thunder Bay, Ontario

Encl.

Ministry of
Natural
Resources

Ontario

March 20/85

1985 03 05

Your File: 19
Our File: 2.7631

Mining Recorder
Ministry of Natural Resources
P.O. Box 5000
Thunder Bay, Ontario
P7C 5G6

Dear Madam:

Enclosed are two copies of a Notice of Intent with statements listing a reduced rate of assessment work credits to be allowed for a technical survey. Please forward one copy to the recorded holder of the claims and retain the other. In approximately fifteen days from the above date, a final letter of approval of these credits will be sent to you. On receipt of the approval letter, you may then change the work entries on the claim record sheets.

For further information, if required, please contact Mr. R.J. Pichette at 416/965-4888.

Yours sincerely,

S.E. Yundt
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3

RJD. Isherwood:mc

Encls.

cc: Corporation Falconbridge Copper
P.O. Box 40
Commerce Court West
Toronto, Ontario
M5L 1B4

cc: Gary S. Wells
c/o Corporation Falconbridge Copper
2606 Victoria Avenue East
Thunder Bay, Ontario
P7C 1E7

cc: Mr. G.H. Ferguson
Mining & Lands Commissioner
Toronto, Ontario

845

Ministry of Natural Resources

Ontario

Notice of Intent

for Technical Reports

1985 03 05

2.7631/19

An examination of your survey report indicates that the requirements of The Ontario Mining Act have not been fully met to warrant maximum assessment work credits. This notice is merely a warning that you will not be allowed the number of assessment work days credits that you expected and also that in approximately 15 days from the above date, the mining recorder will be authorized to change the entries on his record sheets to agree with the enclosed statement. Please note that until such time as the recorder actually changes the entry on the record sheet, the status of the claim remains unchanged.

If you are of the opinion that these changes by the mining recorder will jeopardize your claims, you may during the next fifteen days apply to the Mining and Lands Commissioner for an extension of time. Abstracts should be sent with your application.

If the reduced rate of credits does not jeopardize the status of the claims then you need not seek relief from the Mining and Lands Commissioner and this Notice of Intent may be disregarded.

If your survey was submitted and assessed under the "Special Provision-Performance and Coverage" method and you are of the opinion that a re-appraisal under the "Man-days" method would result in the approval of a greater number of days credit per claim, you may, within the said fifteen day period, submit assessment work breakdowns listing the employees names, addresses and the dates and hours they worked. The new work breakdowns should be submitted direct to the Land Management Branch, Toronto. The report will be re-assessed and a new statement of credits based on actual days worked will be issued.

January 14, 1985

Our File: 2.7631
Mining Recorder's
File: 19

Corporation Falconbridge Copper
P.O. Box 40
Commerce Court West
Toronto, Ontario
M5L 1B4

Dear Sirs:

RE: Geochemical Survey submitted on Mining Claims
TB 535946 et al in the Areas of Upper Aguasabon
Lake and Big Duck Lake

We received reports and maps for the above-mentioned survey on January 7, 1985.

Examination of your submission indicates that this survey does not qualify for assessment using the Special Provisions Method. Credits will be allowed, however, under the mandays method. Please complete the enclosed Mandays Breakdown forms and return them to this office quoting file 2.7631.

For further information, please contact Doug Isherwood at (416)965-4888.

Yours sincerely,

S.E. Yundt
Director
Land Management Branch

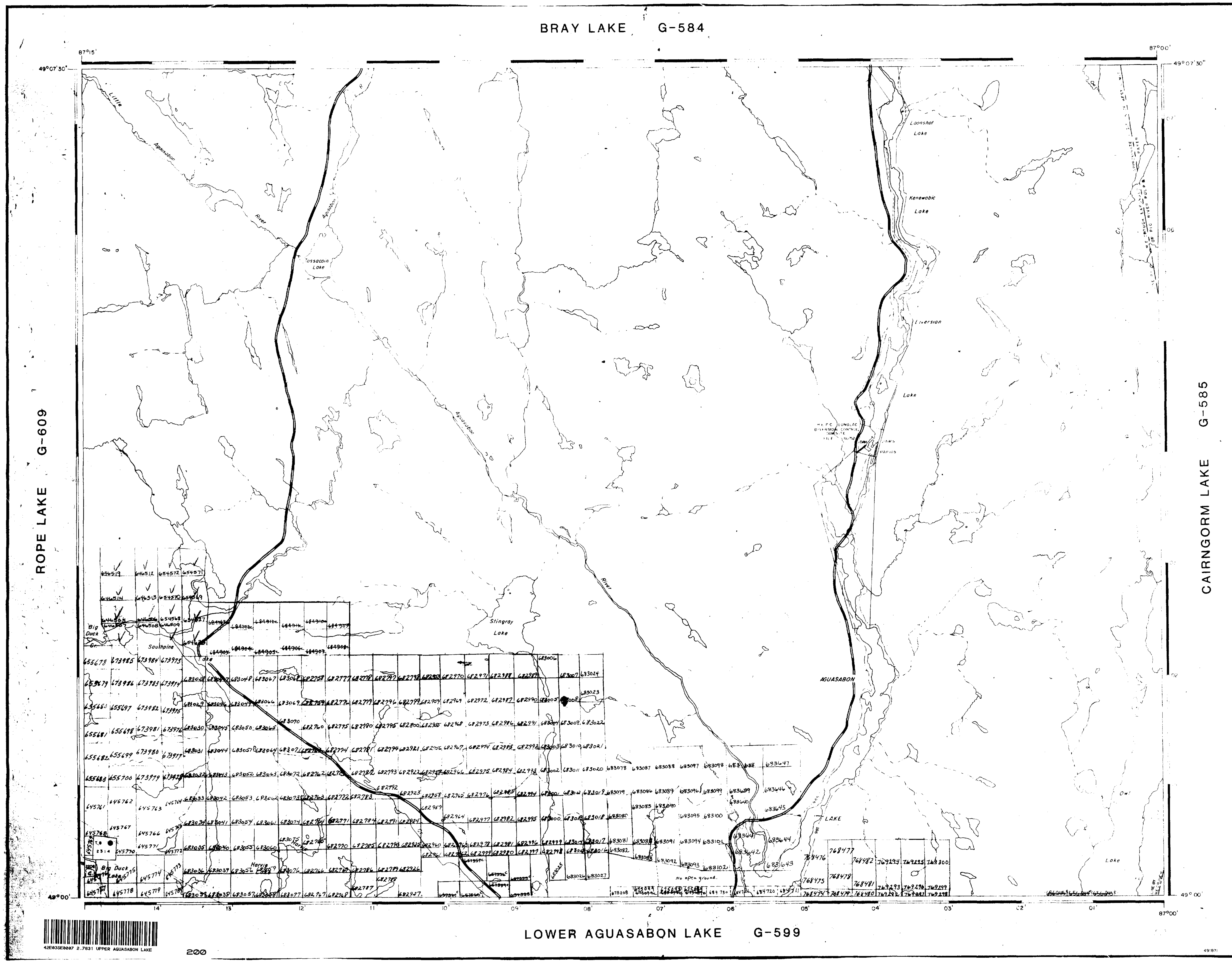
Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone:(416)965-4888

D. Isherwood:mc

cc: Gary S. Wells
c/o Corporation Falconbridge Copper
2606 Victoria Avenue East
Thunder Bay, Ontario
P7C 1E7

cc: Mining Recorder
Thunder Bay, Ontario

Encl.



REFERENCES

LEGEND

HIGHWAY AND ROUTE No.
OTHER ROADS
TRAILS
SURVEYED LINES
TOWNSHIP, BASE LINES, ETC.
LOTS, MINING CLAIMS, PARCELS, ETC.
UNSURVEYED LINES
LOT LINES
PARCEL BOUNDARY
MINING CLAIMS ETC.
RAILWAY AND RIGHT OF WAY
UTILITY LINES
NON PERENNIAL STREAM
FLOODING 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	(R)
CANCELLED	(X)
SAND & GRAVEL	(G)

NOTE MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC. 1

SCALE: 1 INCH = 40 CHAINS

FEET 0 1000 2000 4000 6000 8000
METRES 0 200 1000 2000
1 KM 2 KM

AREA
UPPER AGUASABON LAKE

M.N.R. ADMINISTRATIVE DISTRICT
TERRACE BAY
MINING DIVISION
THUNDER BAY
LAND TITLES / REGISTRY DIVISION
THUNDER BAY

Ontario Ministry of Natural Resources — Land Management Branch

Date FEB. 22, 1982 — Number **G-617**

MAY 7, 1982

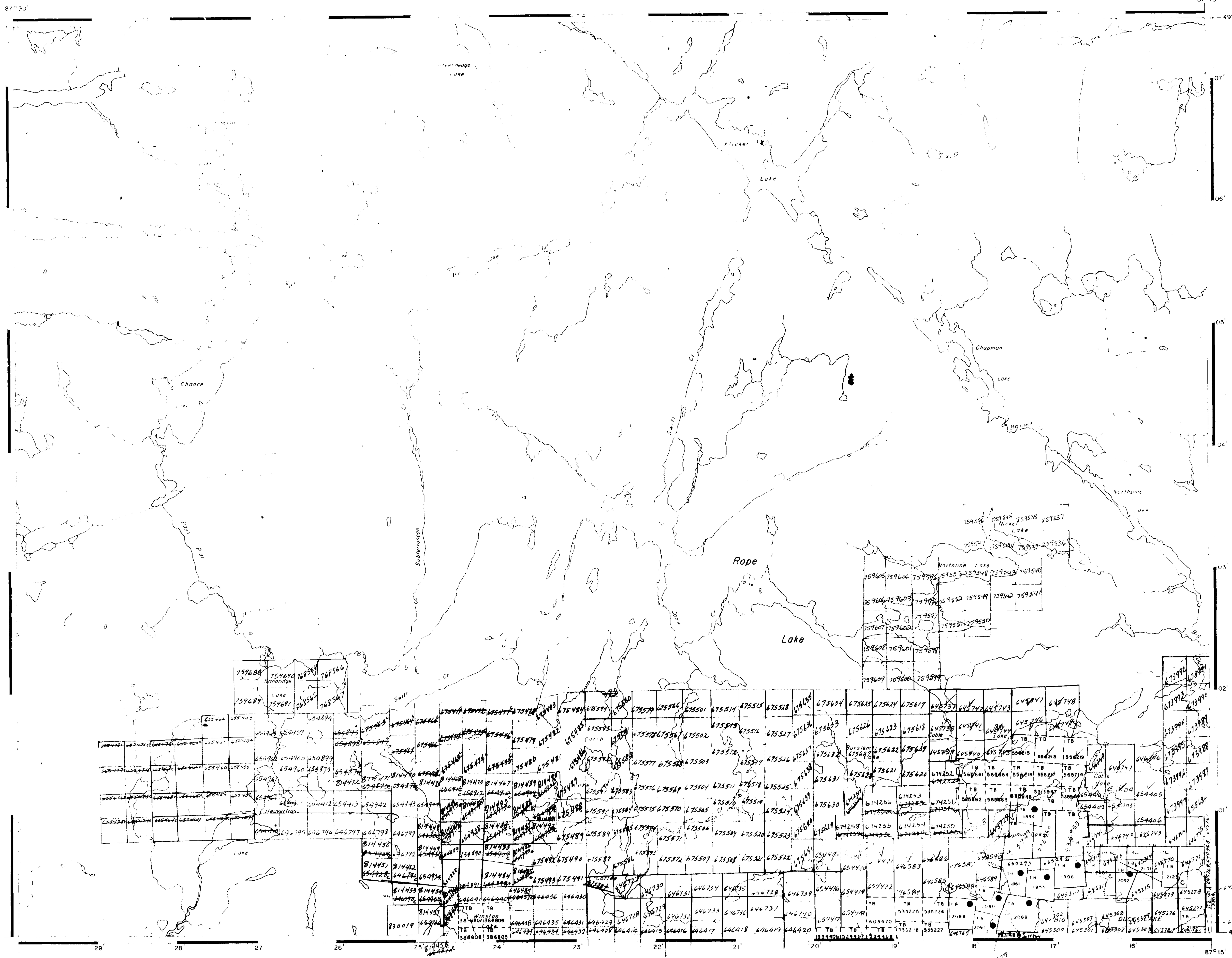
R-61

42E03SE0087 2.7631 UPPER AGUASABON LAKE 200

DICKISON LAKE G-31

GRAVEL RIVER G-45

UPPER AGUASABON LAKE G-617



PAYS PLAT LAKE G-606

REFERENCES

LEGEND

HIGHWAY AND ROUTE NO.	
OTHER ROADS	
TRAILS	
SURVEYED LINES	
TOWNSHIPS, BASE LINES, ETC.	
LOTS, MINING CLAIMS, PARCELS, ETC.	
UNSURVEYED LINES	
LOT LINES	
PARCEL BOUNDARY	
MINING CLAIMS ETC.	
RAILWAY AND RIGHT OF WAY	
UTILITY LINES	
NON-PERENNIAL STREAM	
FLOODING 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 RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC. 1

SCALE: 1 INCH = 40 CHAINS

FEET 0 1000 2000 4000 6000 8000

METRES 0 200 1000 (1 KM) 2000 (2 KM)

AREA

ROPE LAKE

M.N.R. ADMINISTRATIVE DISTRICT

TERRACE BAY

MINING DIVISION

THUNDER BAY

LAND TITLES / REGISTRY DIVISION

THUNDER BAY

Ministry of Natural Resources Ontario — Land Management Branch

MAY 17, 1982

Date FEB. 17, 1982

Number **G-609**

42E03SE0007 2.7631 UPPER AGUASABON LAKE

210

Pool-8

R-Pool

CORPORATION FALCONBRIDGE COPPER

BIG DUCK LAKE AREA
SOUTHPINE LAKE

Zn (ppm)
LITHOGEOCHEMISTRY

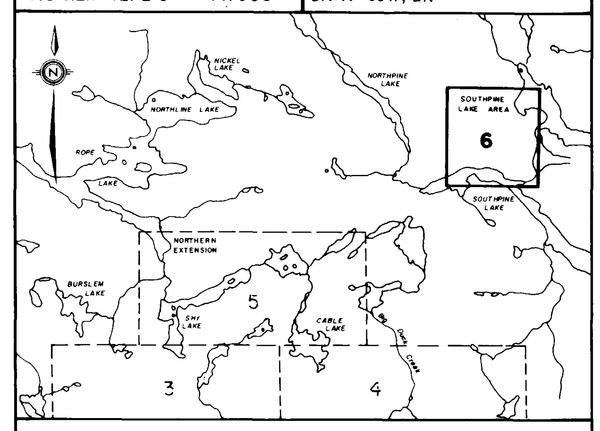
Gary Wells Nov. 30/84
27631

Figure 4

100 50 0 KM metres
1:2500

DATE JUNE 1984 | DWG. BY SMS

NTS REF. 42/E-3 PN086 | DATA GSW, BN



KEY PLAN
SCALE 1:50,000

SHEET 6 OF 6

STATISTICS (Zn)

ROCK TYPE	N	MINIMUM (PPM)	MAXIMUM (PPM)	$\bar{x}_N$ (PPM)	σ_N (PPM)	
SEDIMENTS	317	6	313	57.0	21.6	Zn < 150 ppm
QTZ-EYED GRANITE	75	18	101	44.8	16.4	Zn < 100 ppm
BIOTITE GRANITE	91	13	144	43.4	18.0	Zn < 100 ppm

CONTOUR INTERVALS (in ppm)

ROCK TYPE	CONTOUR INTERVAL $\bar{x}+1\sigma_N \rightarrow \bar{x}+2\sigma_N$	CONTOUR INTERVAL $> \bar{x}+2\sigma_N$
SEDIMENTS	79 → 100	> 100
QTZ-EYED GRANITE	61 → 78	> 78
BIOTITE GRANITE	61 → 79	> 79

42E03SE0007 2.7631 UPPER AGUASABON LAKE

CORPORATION FALCONBRIDGE COPPER

BIG DUCK LAKE AREA
NORTHERN EXTENSION

Figure 2

Zn (ppm)

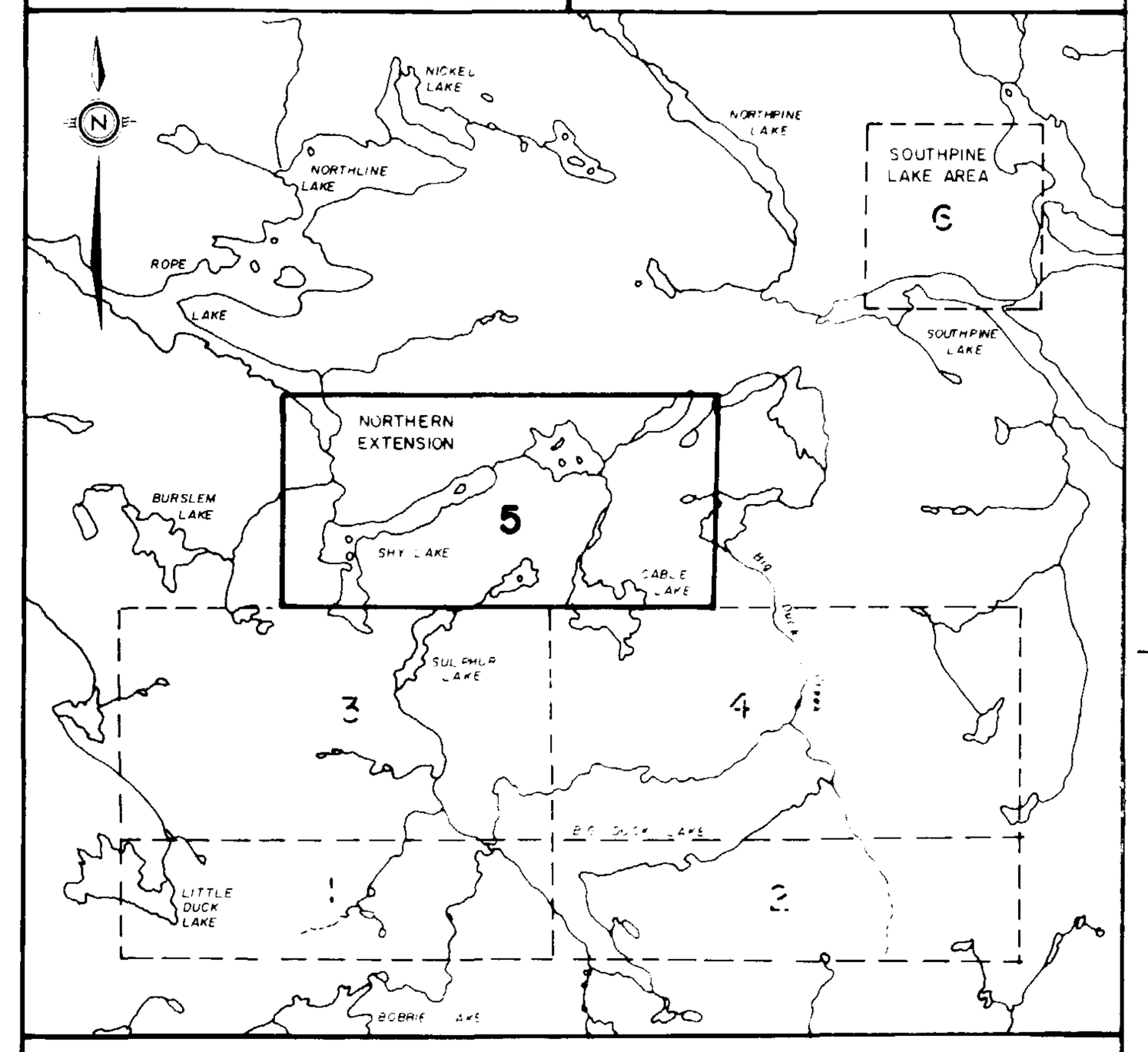
LITHOGEOCHEMISTRY

Gary Wells Nov. 30/84

27631

1:2500

DATE August 1984		DWG. BY SMS	
NTS REF. 42/E-3	PN 088	DATA GSW	



KEY PLAN
SCALE 1:50,000

SHEET 5 OF 6

STATISTICS (Zn < 100 ppm)

ROCK TYPE	N	MINIMUM (PPM)	MAXIMUM (PPM)	$\bar{X}_N$ (PPM)	σ_N (PPM)	GEOMETRIC MEAN (μ_N) (PPM)	$\sigma_{\mu N}$ (PPM)
GRANITE	255	13	144	40.7	16.4		
SEDIMENTS	317	6	313	57.0	21.6		
QP-QFP	239	5	846	31.5	20.1		
INTERMEDIATE TUFF	56	9	6990	54.3	20.4		
MAFIC VOLCANICS	1321	5	1410	32.5	17.6	28.3	1.69
GABBRO	702	2	1175	23.3	14.7	19.5	1.82

CONTOUR INTERVALS (in ppm)

ROCK TYPE	CONTOUR INTERVAL: $\bar{X}_N(\mu_N) + 1\sigma_N \rightarrow \bar{X}_N(\mu_N) + 2\sigma_N$	CONTOUR INTERVAL (shaded): $> \bar{X}_N(\mu_N) + 2\sigma_N$
GRANITE	57 → 74	> 74
SEDIMENTS	79 → 100	> 100
QP-QFP	52 → 72	> 72
INTERMEDIATE TUFF	75 → 95	> 95
MAFIC VOLCANICS	48 → 81	> 81
GABBRO	35 → 65	> 65

230