GEOLOGICAL REPORT

ON THE

LEE - MAISONVILLE TOWNSHIP PROJECT

District of Temiskaming

Larder Lake Mining District

Timmins, Ontario

September, 1986

Douglas R. Cruji

Falconbridge Ltd.

DRC

INTRODUCTION

This report will deal with the results of a follow-up geological mapping program, completed on one claim, L-836990, located in Maisonville Township, Larder Lake Mining Division, District of Temiskaming, Northeastern Ontario (Figures 1, 2).

LOCATION

The property is located approximately 20 miles southeast of the town of Matheson and 12 miles northwest of the town of Kirkland Lake. Matheson is serviced by both the O.N.R. railway and Highway 11 north and Kirkland Lake is serviced by Highway 66 which travels east off of Highway 11 north.

More specifically, the claim group straddles the Township line between Lee and Maisonville such that 1/3 of the block, 10 claims, is situated in Lee Township and the remaining 24 claims are located in Maisonville Township.

The entire block is located approximately 8 to 10 miles northwest of the junction of Highway 11 and Highway 66 which travels east to Kirkland Lake. The grid is situated between Swan Lake, to the north, and Sesekinika Lake, to the southeast. Also, Highway 11 represents the east boundary of

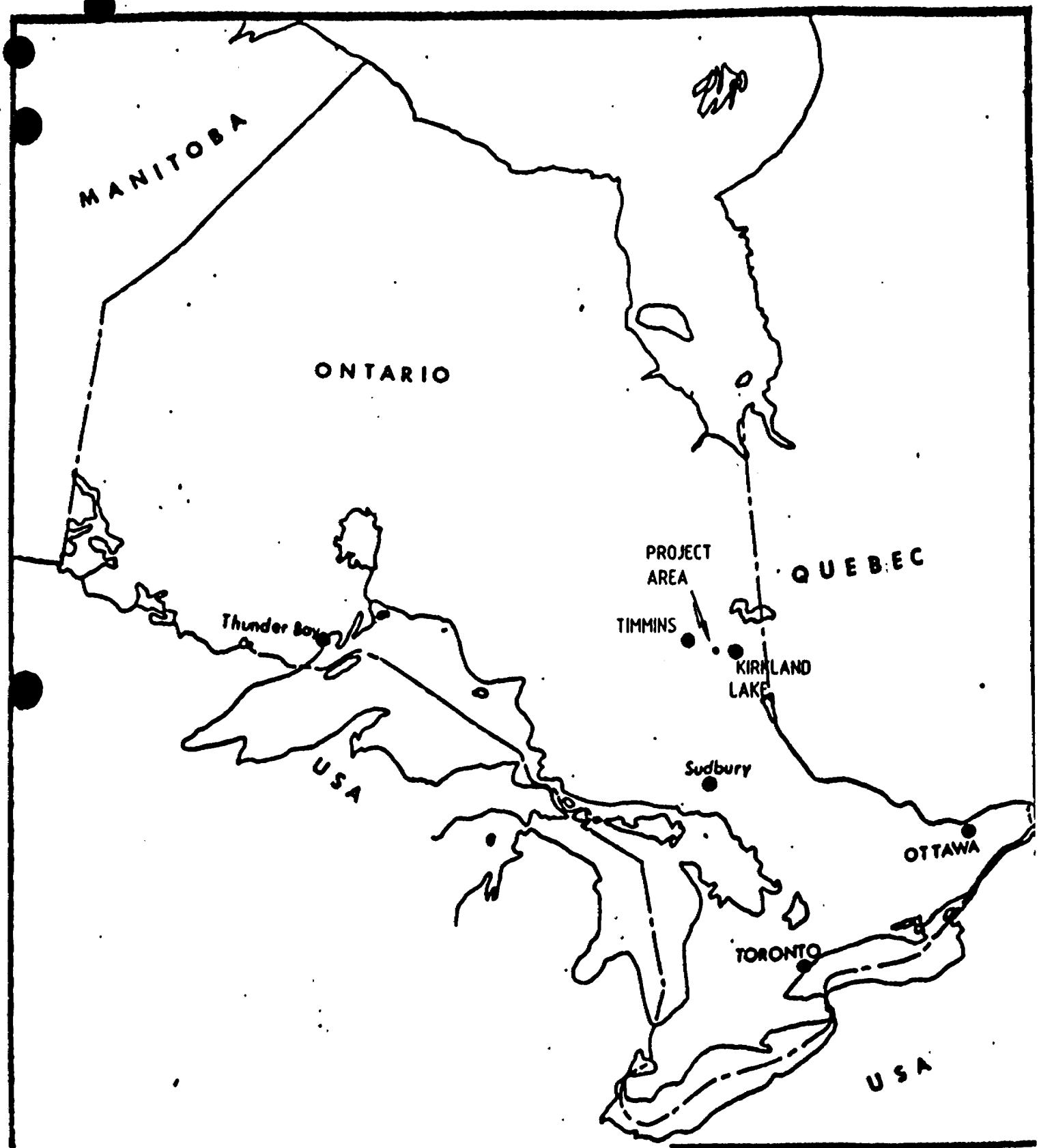

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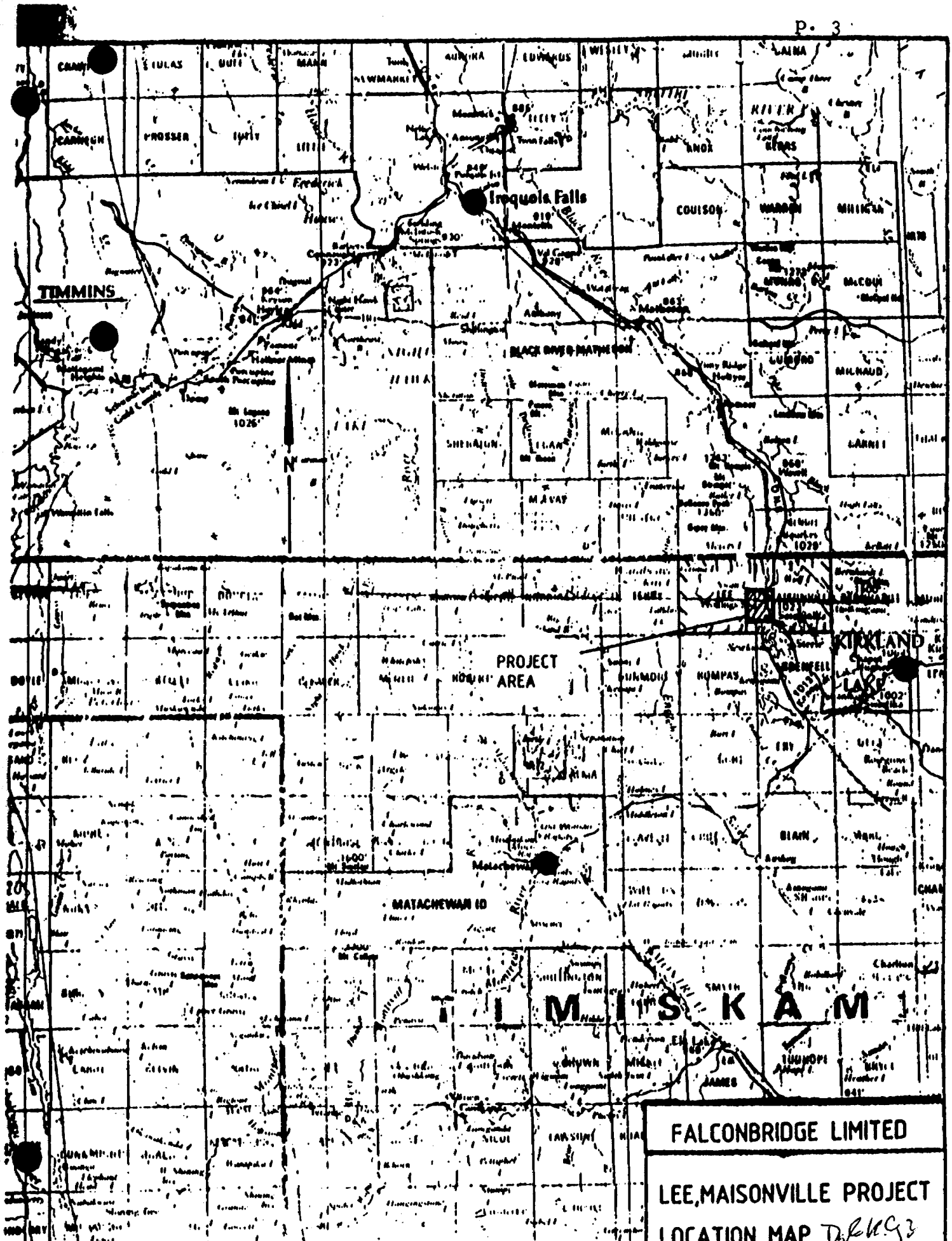
FIGURE 1

LOCATION MAP

0 125 miles 250



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LEE, MAISONVILLE PROJECT

LOCATION MAP

FIG. 2 SCALE" 1:600000.

the group.

ACCESS

Access to the property is relatively easy as Highway 11 represents the east boundary of the grid. Also two secondary roads, travelling northwest off of Highway 11, within the boundaries of the group provide ideal access to the Western section of the grid.

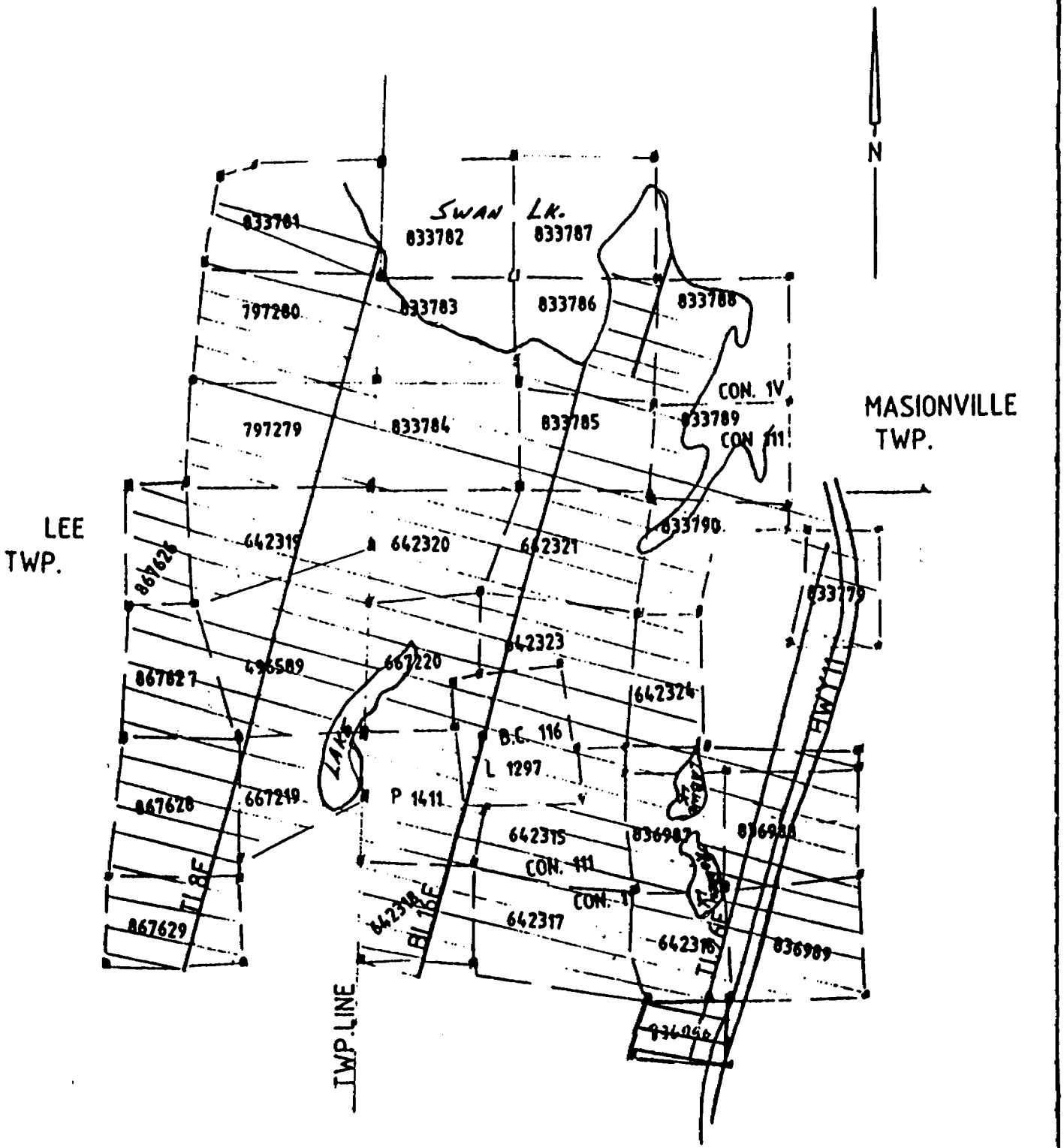
LINECUTTING PROGRAM

The existing tieline, 2600m E was extended from 5250m N to line 5000m N. Cross lines L5200m N, L5100m N and L5000m N were turned off of this tieline and were cut and chained, at 25m intervals, to cover the entire claim.

GENERAL GEOLOGY

The map area lies between the Larder Lake and Destor-Porcupine Faults, in the broad "Abitibi" belt of volcanic rocks extending about 400 miles from Timmins, Ontario to Chibougamau, Quebec.

The oldest rocks in the area are Keewatin-type mafic and felsic volcanic flows and pyroclastic rocks, with thin



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GRID SKETCH
LEE, MASONVILLE PROJECT
FIG. 3
Scale: 1 400 0 400

interbedded and (or) overlying beds of sedimentary rocks. Both are cut by Haileyburian-type mafic to ultramafic stocks and by Algoma-type felsic stocks, cupolas, and a few sills or flows. The intrusive rocks, in turn, are cut by Matachewan-type mafic dykes. Cobalt sedimentary rocks overlie all the above rocks.

PROPERTY GEOLOGY

In general the map area is underlain by massive or pillowed basalt and diabase. Coarse grained gabbroic phases may either be intrusive or more likely these phases constitute the base of the volcanic flows. Some phases of the volcanic sequence are highly magnetic.

Mafic Volcanics

The mafic volcanics consist mainly of pillowed to massive tholeiitic basalts, although one narrow flow top breccia section was observed.

The mafic volcanics are generally non magnetic but the more massive coarser grained gabbroic phases vary from weakly to strongly magnetic.

These rocks are generally relatively unaltered, the grade of metamorphism being lower greenschist; characterized by chlorite, carbonate and epidote. Epidote

Dyck R. Cyr

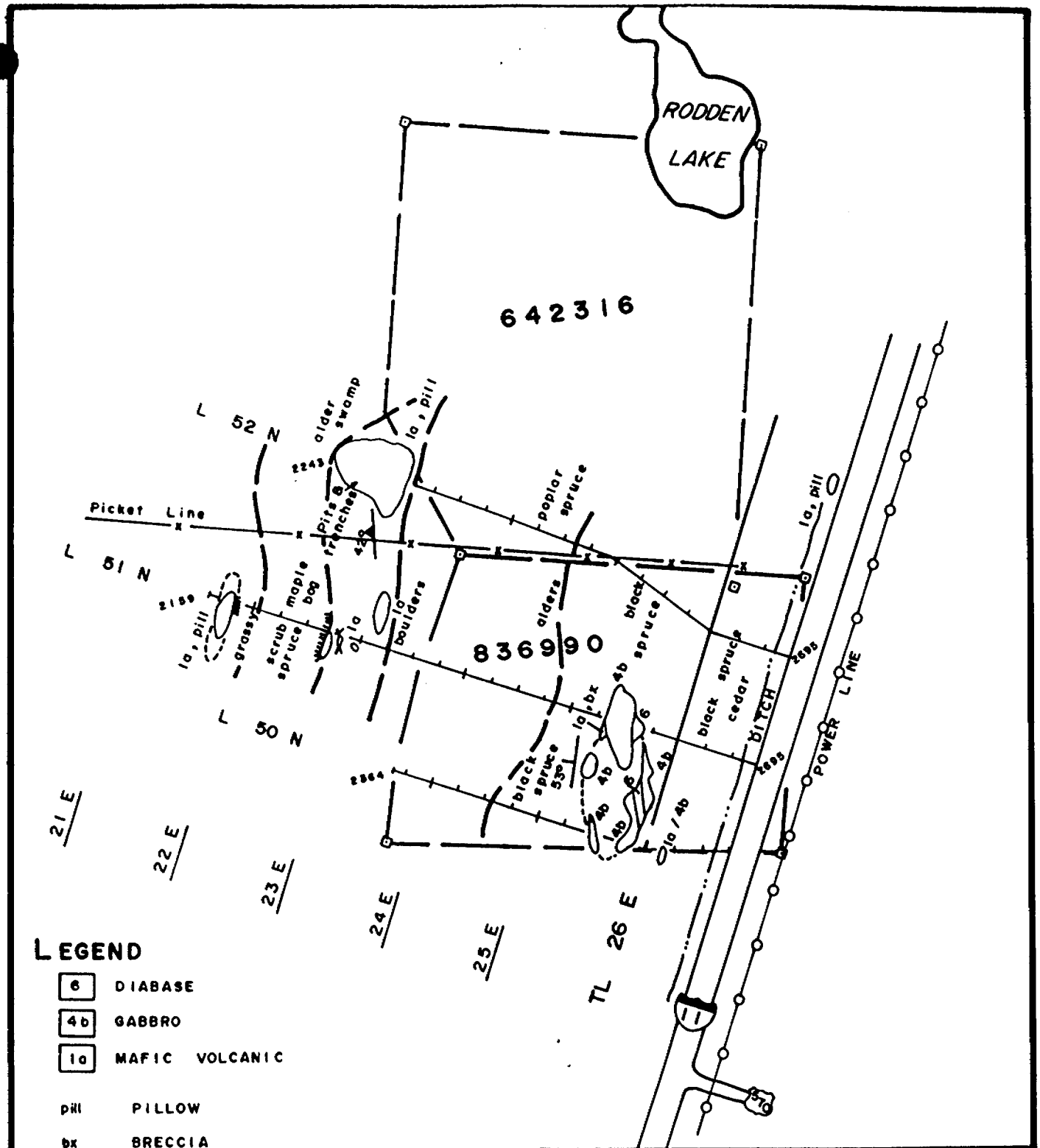
is especially prevalent at pillow margins and along fractures. More intensive alteration is observed paralleling the 2-3 cm quartz vein, in an old pit at 5185N/2275E, trending 180°/42°W. The alteration is in the form of silicification and bleaching along fractures paralleling the vein for approximately 10 cm on either side. There was no observed mineralization.

Gabbro

Typically medium grained, massive and varying from strongly to non magnetic. The weathered surface is dark grey green and the fresh surface dark green. The unit is not observed to cross cut the mafic volcanics and possibly represents the basal portion of the observed pillowed flows.

Diabase

The weathered surface is dark grey to rusty brown, and the fresh surface is grey to black in colour. The dykes are generally magnetic and contain minor disseminated pyrrhotite. The dykes are of gabbroic composition and diabasic texture. The country rocks are only slightly altered by the intrusion.



LEGEND

- 6 DIABASE
- 4b GABBRO
- 1a MAFIC VOLCANIC
- pill PILLOW
- bx BRECCIA
- VEIN
- BEDDING
- OUTCROPS
- GEOLOGICAL CONTACT BOUNDARY

0 100 200 metres

FALCONBRIDGE LTD.
Exploration Division Timmins, ONTARIO

ROUSSEAU OPTION
MAISONVILLE Twp.

GEOLOGY

Data N.C.T.

SCALE: 1 : 5,000		Data: DRC
Drawn: DEL	Project N°: 661	Date: 04/09/86

CONCLUSION AND RECOMMENDATIONS

The geological mapping program failed to find any areas of interest. No work specific to this claim is recommended at this time.

Future work would be undertaken in conjunction with a program over the entire claim group. (Refer to conclusions: Lee Maisonville Report, J. Grant, March 24, 1986).

Douglas R. Cruji

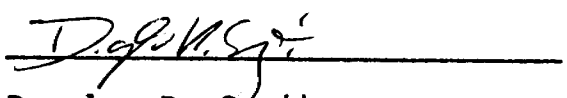
CERTIFICATE

I. Douglas R. Cruji, hereby certify that:

1) I am a 1982, graduate geologist of the 4 year Honours, Bachelor of Science Geology program at the University of Western Ontario, London, Ontario

2) I have been actively engaged in my profession for the past four (4) years

3) I have no specific or special interest in the described property and the field work described in the attached report was carried out under my supervision. The interpretations and conclusions contained therein are based on my training and professional experience



Douglas R. Cruji

Falconbridge Ltd.

Ontario and Mines

(Geophysical, Geological, Geochemical and Expenditures)

LW 382/86 Mini

42A01NW0003 2.9381 MAISONVILLE

900

Type of Survey(s)
Geophysical

Claim Holder(s)
Falconbridge Ltd.

Prospector's Licence No.
A-21647

Address
571 Moneta Ave., Box 1140, Timmins, Ontario

Survey Company
Exsics Exploration Limited

Date of Survey (from & to)
08 05 86 | 14 05 86
Day Mo. Yr. | Day Mo. Yr.

Total Miles of line Cut
1.5 km

Name and Address of Author (of Geo-Technical report)
Douglas R. Cruji, 571 Moneta Ave., Box 1140, Timmins, Ontario

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	40
	Geochemical	
Man Days Complete reverse side and enter total(s) here	Geophysical	Days per Claim
	Geophysical - Electromagnetic	
	Geophysical - Magnetometer	
	Geophysical - Radiometric	
	Geophysical - Other	
	Geological	
	Geochemical	
Airborne Credits Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	Days per Claim
	Magnetometer	
	Radiometric	

RECEIVED
OCT 02 1986
MINING LANDS SECTION

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
	836990	40			

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.

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

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
40	SEP 22 1986	
	Date Approved as Recorded	Branch Director
	Sept. 10, 17	

Date	Recorded Holder or Agent (Signature)
Sept 4/86	Dgls R. Cruji

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
Douglas R. Cruji, 571 Moneta Ave., Box 1140, Timmins, Ontario

	Date Certified	Certified by (Signature)
	Sept. 18/86	Dgls R. Cruji

1362 (85/12)

Ministry of Northern Development and Mines

Ontario

Geophysical-Geological-Geochemical Technical Data Statement

File _____

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) Geological

Township or Area Maisonville Township

Claim Holder(s) Falconbridge Limited
571 Moneta Ave, Box 1140, Timmins, Ont.

Survey Company Falconbridge Ltd.

Author of Report Douglas R. Cruji

Address of Author 571 Moneta Ave, Box 1140 Timmins, Ont.

Covering Dates of Survey August 27, 29
(linecutting to office)

Total Miles of Line Cut 1.5 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	40
Geochemical	

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

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

DATE: Sept 4/86 SIGNATURE: Dgl R. Cruji
Author of Report or Agent

Res. Geol. _____ Qualifications 2.7294

Previous Surveys

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED
List numerically

L 836990
(prefix) (number)

RECEIVED
1986
MINING LANDS SECTION

TOTAL CLAIMS 1

If space insufficient, attach list

OFFICE USE ONLY

837 (85/12)

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 _____

_____

_____

Total Number of Samples _____

Type of Sample _____
(Nature of Material)

Average Sample Weight _____

Method of Collection _____

_____

Soil Horizon Sampled _____

Horizon Development _____

Sample Depth _____

Terrain _____

_____

Drainage Development _____

Estimated Range of Overburden Thickness _____

_____

_____

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

Mesh size of fraction used for analysis _____

_____

_____

_____

General _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

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 (_____ tests)

Name of Laboratory _____

Extraction Method _____

Analytical Method _____

Reagents Used _____

General _____

_____

_____

_____

_____

_____

_____

_____

_____

BENOIT TWP. - M.326

LEE TWP. - M.360

BERNHARDT TWP. - M.327

GRENFELL TWP. - M.351

VI

V

IV

III

II

I

12 11 10 9 8 7 6 5 4 3 2 1

48°11'22"

80°16'27"

THE TOWNSHIP
OF

MAISONVILLE

DISTRICT OF
TIMISKAMING

SEP 26 1983

LARDER LAKE
MINING DIVISION

SCALE: 1-INCH 40 CHAINS

LEGEND

PATENTED LAND	● or (P)
CROWN LAND SALE	C.S.
LEASES	(L)
LOCATED LAND	Loc.
LICENSE OF OCCUPATION	L.O.
MINING RIGHTS ONLY	M.R.O.
SURFACE RIGHTS ONLY	S.R.O.
ROADS	
IMPROVED ROADS	
KING'S HIGHWAYS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
MINES	
CANCELLED	C.X
PATENTED S.R.O.	⊖

NOTES

400' surface rights reservation along the shores of all lakes and rivers.

Areas withdrawn from staking under Section 43 of the Mining Act, R.S.O. 1970. (Sec.42, R.S.O. '60)

Order No.	File	Date	Disposition
(R2)	22032	11/8/70	S.R.O.
(R3) NR.W.5/81	22032	23/1/81	S.R.O.
(K4) W.8/80	Sec 36/80	20/01/80	M.R.O.

All islands in Sesekinika Lake are withdrawn from staking by Order-in-Council, dated Dec. 7, 1921.

withdrawn from staking, Sec 8 (6) pending application under Public Lands Act.

PLAN NO. M.361

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

42A01NW0003 2.9381 MAISONVILLE