



41009NW0091 2.5557 GARNET

010

GEOLOGY REPORT
FOR
GARNET GROUP 1
GARNET TOWNSHIP
DISTRICT OF SUDBURY

RECEIVED

MAY 18 1983

MINING LANDS SECTION

LACANA MINING CORPORATION
MARCH 25, 1983

RONALD C. WELLS
KIRKLAND LAKE, ONTARIO

R. C. Wells
11/5/83



010C

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FIGURE 1.0 - GEOLOGY MAP, GARNET TOWNSHIP	at rear
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INTRODUCTION

Lacana Mining Corporation holds 9 unpatented mining claims in the eastern part of Garnet Township, District of Sudbury. The claims were staked in March, 1982, following the release of the results of an airborne electromagnetic survey by Questor Surveys for the Ontario Geological Survey (1982). The EM survey indicated a number of anomalies south of Fawn Creek which were the targets of the Lacana staking. This report describes geological mapping conducted by Lacana staff during the summer months of 1982.

PROPERTY, LOCATION AND ACCESS

9 unpatented claims make up Garnet Group 1. The numbers are as follows:

627986-987-988-989

649786-787-788-789-790

Total of 9 claims with an area of approximately 360 acres.

The claims are mainly south of Fawn Creek in the south-eastern part of Garnet Township. Access is by forestry roads from Sultan. A small road to Dore and Heenan Townships passes by and forms the eastern boundary of the claim group.

PREVIOUS WORK

No previous work has been recorded on the area covered by the claim group. Dome Explorations, in 1971, tested a conductor

with a single drill hole, 1/2 mile south of the property. The hole intersected weakly mineralized iron formation with narrow zones of graphitic argillite.

GENERAL GEOLOGY

Garnet Township lies in the Swayze metavolcanic-metasedimentary belt which is part of the Abitibi Greenstone Belt (subprovince) of the Superior Province. The Garnet and Cunningham Township area has been mapped geologically by the Ontario Geological Survey on a regional rather than detailed basis. The most recent mapping by Siragusa in 1980 (Preliminary Map P2340) shows intermediate to mafic metavolcanics underlying the property. The metavolcanics have easterly strike and are intruded by a northwesterly trending gabbro body.

PROPERTY GEOLOGY

Introduction

Geological mapping and preliminary geophysical surveys were conducted on the property by Lacana staff during July, 1982. A grid was cut to cover the property with 400 foot spaced survey lines and a central east-west base line. The grid was used extensively during the geological mapping and areas between lines were covered by pace and compass traverses. A completed geological map is included with this report (Figure 1.0).

Numerous outcrop ridges and knolls occur in the northwest parts of the property while in the northeast there is virtually no outcrop in the flat, swampy areas around Fawn Creek.

Rock Types

Geological mapping of the property outlined four distinct, mapable rock units.

1. Mafic to Intermediate Metavolcanic Flows

Dark to medium green, pillowed to massive, predominantly basaltic flows outcrop in the northern and southern parts of the property. Where pillows are developed, they tend to be lobate and allow top determinations. Carbonate alteration varies from light to moderately strong and is responsible for much of the variation in rock colour. Strong carbonate alteration occurs locally where shearing is strong and gives the rock a greyish colour.

2. Schistose Mafic Metavolcanics

Strongly foliated mafic metavolcanics outcrop in the central part of the property close to the base line. These rocks probably represent a more highly deformed and altered part of the basaltic flows (1). Carbonate alteration is moderate to strong and gives the rocks a light grey to greenish grey colour. Pyrite is usually present, but in amounts not exceeding 5%. The strong foliation and carbonate alteration gives the rock a soft, flakey character.

3. Tuffs

Light to medium green, fine grained, tuffs outcrop south of Fawn Creek. Banding in the tuffs varies from good to poor and locally dacitic crystal tuffs may be present. Carbonate alteration is usually present, but tends to be light.

4. Gabbro, Diorite

Mafic intrusive rocks, predominantly gabbro, are formed in the southern and central parts of the property. These rocks are massive with well developed jointing. Coarse compositional layering was noted in one outcrop.

Structure

The rock units on the property have easterly strike and have vertical to steep dips. Pillow facing determinations suggest that an easterly trending anticlinal structure crosses the property with an axial trace north of the base line.

Numerous small shear zones occur within the meta-volcanic sequence. A larger, easterly trending zone, characterized by well developed foliation and strong carbonate alteration, occurs just to the south of the base line.

8306.00083

Mar 23rd



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

83



41009NW0091 2.5557 GARNET

900

The Mining

Type of Survey(s) GEOLOGICAL		Township or Area GARNET TOWNSHIP	
Claim Holder(s) LACANA MINING CORPORATION		Prospector's Licence No. TR14	
Survey Company LACANA MINING CORPORATION	Survey Dates (linecutting to office) Day Mo. Yr. Day Mo. Yr. 1 6 82 1 3 83		Total Miles of line Cut 5.0 MILES
Name and Address of Author (of Geo-Technical report) PO Box 338 KIRKLAND LAKE, ONT.			2.5557

Special Provisions Credits Requested

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

Mining Claims Traversed (List in numerical sequence)

Prefix	Mining Claim Number	Expend. Days Cr.	Prefix	Mining Claim Number	Expend. Days Cr.
P	627986				
	627987				
	627988				
	627989				
	649787				
	649790				

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APR 11 1983
MINING LANDS SECTION

Man Days

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

Airborne Credits

Note: Special provisions credits do not apply to Airborne Surveys.	Days per Claim
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.

Report Completed

Date of Report

Recorded Holder or Agent (Signature)

Total number of mining claims covered by this report of work. **6**

For Office Use Only

Total Days Cr. Recorded 240	Date Recorded MAR 24/83	Mining Recorder <i>[Signature]</i>
	Date Approved as Recorded July 28/83	Regional/Branch Director <i>[Signature]</i>

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
RONALD C WELLS PO Box 338 KIRKLAND LAKE, ONT.

Date Certified
2/13/83

Certified by (Signature)
[Signature]



Ministry of
Natural
Resources

Geotechnical
Report
Approval

File
2.5557

June 13/83

Mining Lands Comments

To: Geophysics

Comments

Approved

Wish to see again with corrections

Date

Signature

To: Geology - Expenditures

Mr. Kustra.

Comments

Approved

Wish to see again with corrections

Date

July 14/83

Signature

CKustra

To: Geochemistry

Comments

LD

Approved

Wish to see again with corrections

Date

Signature

To: Mining Lands Section, Room 6462, Whitney Block.

(Tel: 5-1380)

1983 06 02

2.5557

Mr. William L. Good
Mining Recorder
Ministry of Natural Resources
60 Wilson Avenue
Timmins, Ontario
P4N 2S7

Dear Sir:

We have received reports and maps for a Geological survey submitted under Special Provisions (credit for Performance and Coverage) on Mining Claims P627986 et al in the Township of Garnet.

This material will be examined and assessed and a statement of assessment work credits will be issued.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1380

A. Barr:mc

cc: Lacana Mining Corporation
Suite 3701
P.O. Box 354
Royal Trust Tower
TD Centre
Toronto, Ontario
M5K 1K7

cc: R.C. Wells
P.O. Box 338
Kirkland Lake, Ontario
P2N 3J1



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) GEOLOGICAL
Township or Area GARNET TWP
Claim Holder(s) LACANA MINING CORPORATION
Survey Company LACANA
Author of Report R. C. WELLS
Address of Author P.O. BOX 338, KIRKLAND LAKE, ONT
Covering Dates of Survey 1-4-82 to 1-3-83
(linecutting to office)
Total Miles of Line Cut 5.0 MILES

MINING CLAIMS TRAVERSED
List numerically

(prefix) 627986 (number)
627987
627988
627989
649789
649790

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AY 18 1983

MINING LANDS SECTION

TOTAL CLAIMS 6

<u>SPECIAL PROVISIONS CREDITS REQUESTED</u>	Geophysical	DAYS per claim
ENTER 40 days (includes line cutting) for first survey.	--Electromagnetic _____	
ENTER 20 days for each additional survey using same grid.	--Magnetometer _____	
	--Radiometric _____	
	--Other _____	
	Geological <u>40</u>	
	Geochemical _____	

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)
Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)
DATE: 4th May 1983 SIGNATURE: R. C. Wells
Author of Report or Agent

Res. Geol. _____ Qualifications 23507

Previous Surveys

File No.	Type	Date	Claim Holder

OFFICE USE ONLY

If space insufficient, attach list

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 260 APPROX Number of Readings _____
Station interval 100 FEET Line spacing 400 FEET
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 _____

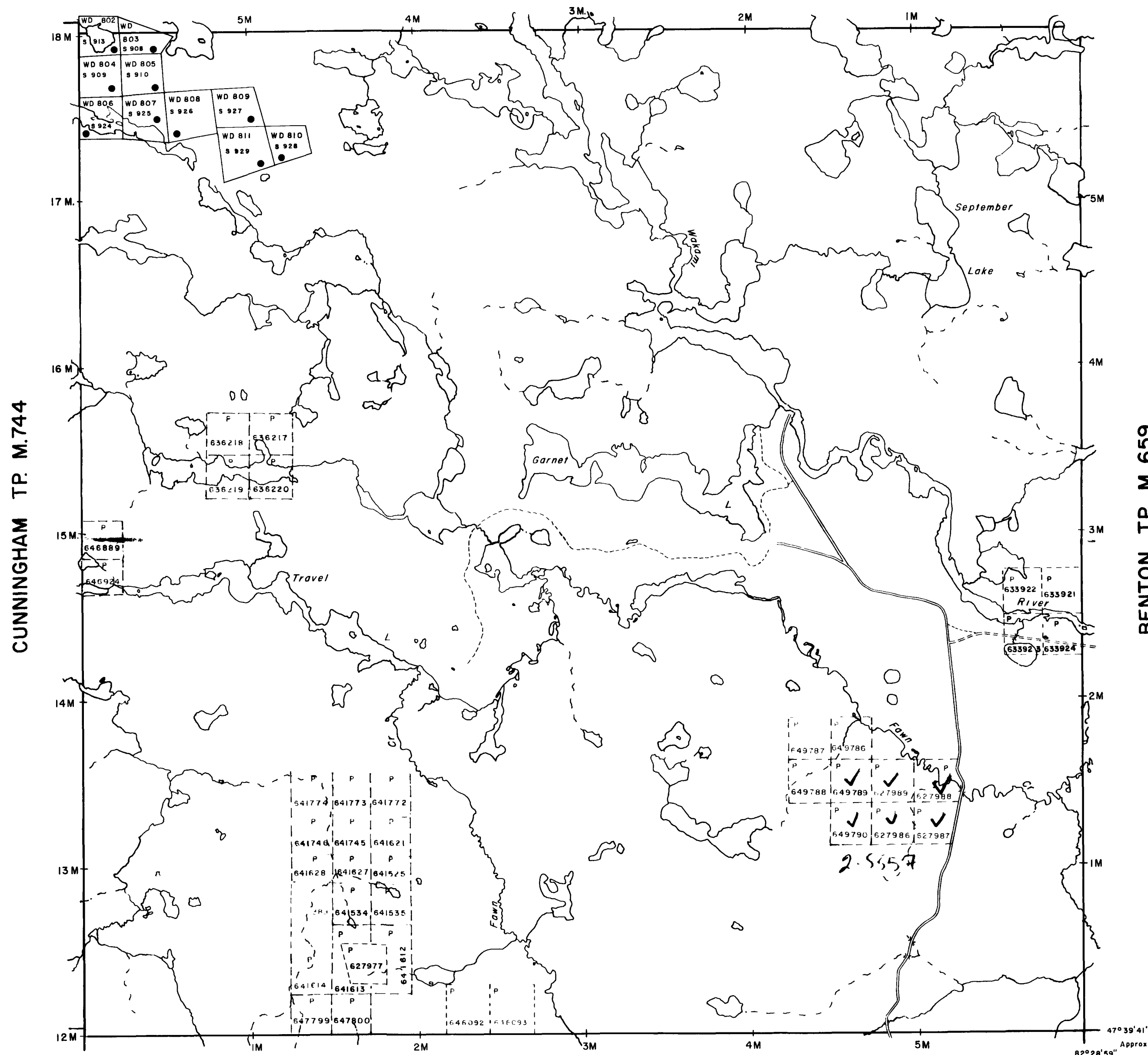
Reagents Used _____

General _____

NOTES

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

DORE TP. M.763



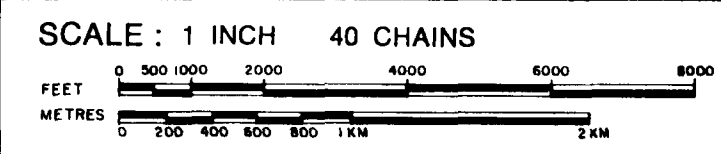
LEGEND

- 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
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES

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 | |
| CROWN LAND SALE | CS |
| ORDER-IN-COUNCIL | OC |
| RESERVATION | |
| CANCELLED | |
| SAND & GRAVEL | |

DATE OF ISSUE
JUL 27 1983
 Ministry of Natural Resources
 TORONTO



ACRES HECTARES

40 16

TOWNSHIP
GARNET

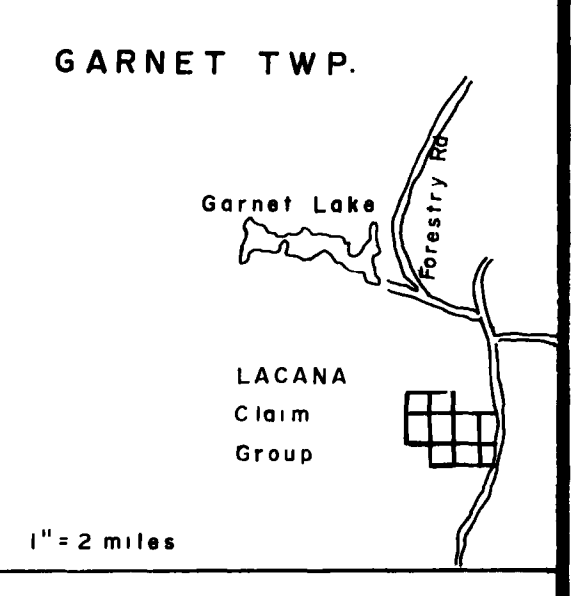
DISTRICT
 SUDBURY

MINING DIVISION
 PORCUPINE

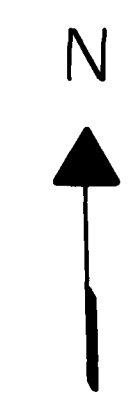
Ministry of Natural Resources
 Ontario Surveys and Mapping Branch

Date *April 27th, 1973* Plan No
 Whitney Block
 Queen's Park, Toronto **M.829**

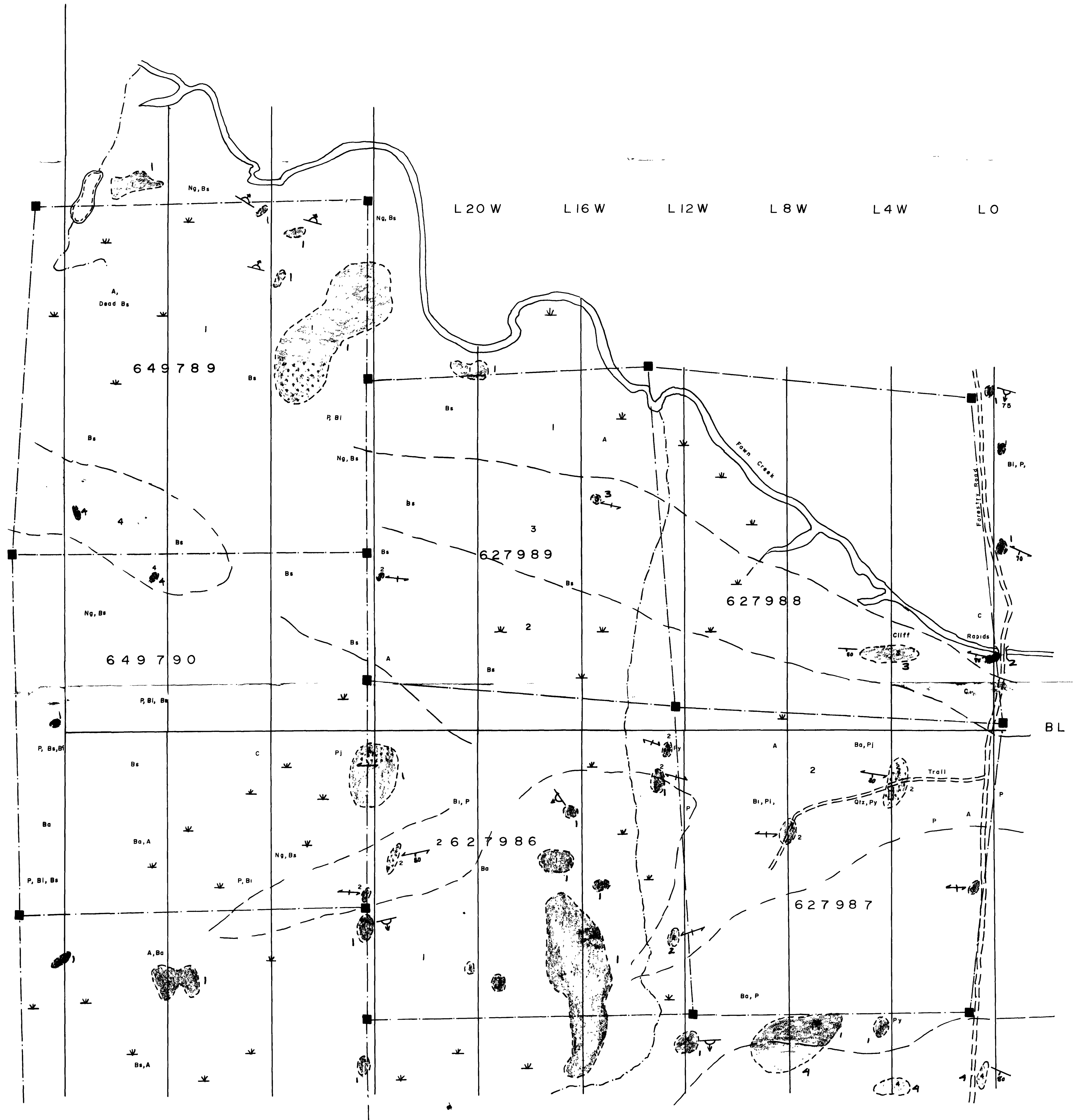




CLAIM LOCATION MAP



L 36 W L 32 W L 28 W L 24 W
 L 20 W L 16 W L 12 W L 8 W L 4 W L 0



LEGEND

- 4 [Symbol] GABBRO, DIORITE
- 3 [Symbol] TUFFS
- 2 [Symbol] SCHISTOSE MAFIC VOLCANICS
- 1 [Symbol] MAFIC TO INTERMEDIATE METAVOLCANIC FLOWS

SYMBOLS

- [Symbol] Outcrop area
- [Symbol] Geological boundary
- [Symbol] Foliation (inclined & vertical)
- [Symbol] Lava flow; top (arrow) from pillows shape & packing
- [Symbol] Carbonate alteration
- [Symbol] Bedding

- | | | | |
|----|--------|-----|--------------|
| Py | pyrite | Qtz | quartz |
| A | Alders | Bs | Black spruce |
| P | Poplar | Pj | Jack pine |
| Ba | Balsam | Ng | New growth |
| Bi | Birch | L | Larch |
| C | Cedar | | |

LACANA MINERAL OIL COMPANY LTD
 CONVENTURES LTD
 LACANA MINING CORPORATION

CANADIAN MINERALS JOINT VENTURE

GEOLOGY MAP
 GARNET TWP. GROUP I
 SWAYZE PROJECT

PREPARED BY	SCALE	DATE	N.T.S. SHEET	FIGURE
RW/KG	1"=200'	Apr./83	410/010	1

2557
 P. J. Miller 1/15/83