NICKEL RIM MINES LIMITED

CONGER TOWNSHIP URANIUM PROSPECT

REPORT ON GROUND RADIOMETRY, GEOLOGY AND MAGNETIC RESPONSE ON 44 CLAIMS

Introduction

This is a report on 44 mining claims in Conger Township, Parry Sound Mining District, Ontario, held by Nickel Rim Mines Limited as a uranium prospect. The main report is based on the following sources of information:

1. Radiometric survey and geological observations by the author.

2. Magnetic survey by Paul Martin.

Property, Location and Access

The 44 claims have been divided into 4 blocks whose location is plotted on Figure 1 and Figure 2. The general location of these claims is about 20 miles south of Parry Sound (NTS 31E/H). Block A is assessible by a road to Joselin Lake, leading 2½ miles west of Highway 69. Blocks B, C, D are accessible by a road to Healy Lake which starts 1 mile north of MacTier, off of Highway 612. Block C lies north and south of this road and Block B is accessible via a forest access leading 2½ miles north of the Healy Lake Road. Block D is accessible by the road leading south of Healy Lake road to Kapikog Lake. All 44 Claims have been covered by a 400 ft. grid system with pickets every 100 feet.

History of the Area

The Parry Sound area was actively prospected for gold and copper around the turn of the century, in the non-granitic areas north of Conger Township. Several small pegmatite pits were worked north of Block A in Conger Township in the 1920's. The occurrence of uraninite, calciomarkasite and thucolite, associated with mica in pegmatites was described by Ellsworth in 1932. (See Hewitt, ODM Report 52, 1967). To date, no significant mines have been developed in the area.

In 1970, Richore Gold Mines (now defunct) held 100 claims in Conger Township, as a uranium prospect. A total count airborne radiometric survey was done along with some ground follow-up. However, the final conclusions of their work were not seen by the author.

General Geology

The general geology of the Parry Sound area is described by Hewitt in ODM Geological Report 52. The accompanying map 2118 describes the rock underlain by the Nickel Rim claims as granitic in composition, with a predominance of banded hornblende migmatite which has been granitized.

Research by Bennet, James, Schwerdtner and Waddington (presented at the 1975 G.A.C. Annual Meeting) suggests that some of the granitic rocks are sedimentary in origin and include metagrey-wacke and sedimentary gneisses in the vicinity of Blocks B, C, D. In the vicinity of Block A, a large body of granite-syenite was delineated. Their structural interpretation suggests that the claims lie on or just west of the north trending limb of the Captain Allan Synform, which dips to the south (see figure 1).

Previous Work by Nickel Rim Mines Limited

In June 1975, Mid-North Engineering Services Limited did an airborne radiometric survey to cover 464 claims held in Conger and Freeman Township to the south. This survey was interpreted in a report by H. Grant Harper, P.Eng., Consulting Engineer. Ground follow-up, including radiometric prospecting, by M. Hall and the author, was done in July and August 1976. Pits blasted along Healy Lake road by P. Perch and others were also examined and described. The 400 foot grid on 44 claims was done in October 1976.

Present Surveys

A magnetometer survey by Paul Martin using a Scintrex M.F.1 fluxgate magnetometer was done on 44 claims.

The radiometric survey was done by the author using a McPhar TV-5 integral spectrometer. Total count readings were done on the 3 second ratemeter count. The crystal was held at hip level and anomalous radioactivity between stations was noted. Anomalous radioactivity was checked on T_2 (>1.63 Me V) and T_3 (>2.5 Me V) on the rock surface when exposed. Locations where the source of anomalous radioactivity was not apparent are designated as strip targets. The location of outcrops and geological observations were done simultaneously with the radiometric survey.

Discussion of Results

Block A

The predominant features of this block is several large outcrops of medium grained pink syenite. The syenite has probably intruded the country rock, mainly a granitized hornblende gneiss.

The radioactivity is characteristically higher on the syenite, usually about 3 to 4 times background. At least one small uranium anomaly occurs at a pit site at 38E, OON.

This might be remnant country rock, as the rock here is richer in quartz and biolite than the normally quartz and mafic poor syenite body. A sample was taken for assay. The magnetic response is generally quite uniform and tells nothing about the structure.

Block B

The geology is mainly granite gneiss with scattered pegmatite patches. There is one significant radioactive anomaly in the southwest corner which should be stripped and sampled.

Block C

The geology of this large block is very complex and exposure in the eastern half is poor. The general radioactivity of the southwestern position is lower, partly because of the deeper overburden, but also perhaps because a different instrument, which read slightly lower, was used here.

The high anomalies along Healy Lake road are associated with a hornblende biotite gneiss which has coarse felsic inclusions and sometimes ptygmatic folding - stripping targets are indicated. Pegmatites usually occur in patches too small to be mapped.

The magnetic response is generally low except for a small arcuate belt about 1,000 feet long just north of the Healy Lake road showings. Here the magnetic response is up to 4 times the normal response. The origin of this anomaly is not known.

Block D

The general geology is granite and granite gneiss tending towards a syenite composition. The block is about 70% outcrop and is generally elevated about 150 feet above Kapikog Lake to the west. The regional strike is about 090. There is no indication of uranium on this block.

Conclusions

1. Further work should be concentrated on Block C where strip targets have been indicated. Sampling of the highest anomalies should be done by trenching or possibly X-ray drilling.

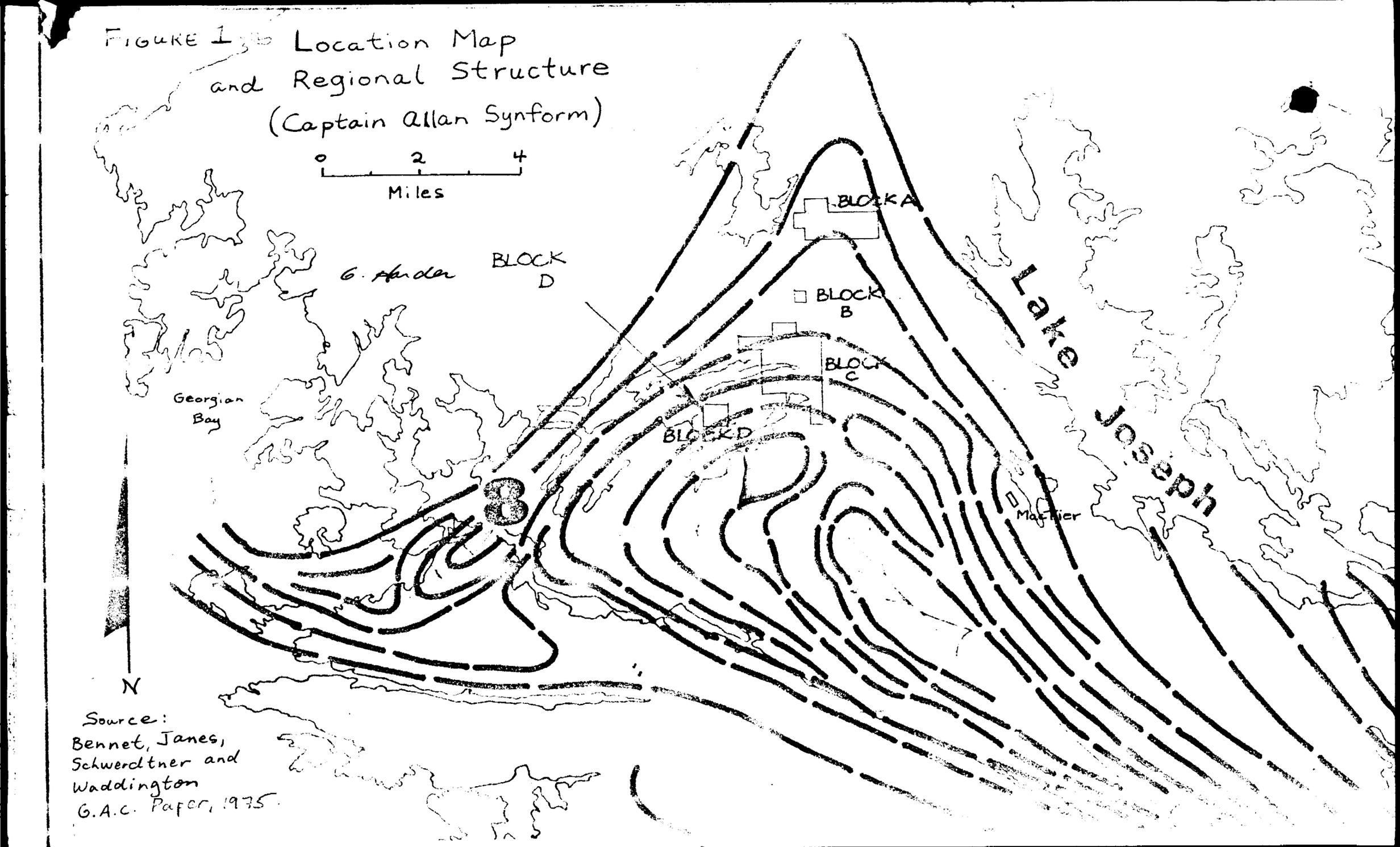
2. On Block B, a small anomaly in the southwest corner should be stripped.

3. Further work on Block A should be concentrated on the contact of the syenite with the country rock. As this contact is poorly exposed, radon in soils and waters might be a useful indicator.

4. Block D shows no potential for more detailed work.

FIGURE 1

Location Map and Regional Structure (Captain Allan Synform)



Source:
Bennet, Janes, Schwerdtner and Waddington
G.A.C. Paper, 1975.

900

GEOPHYSICAL – GEOL
TECHNICAL D.....

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 Magnetic + Radiometric
Township or Area GONGER TOWNSHIP
Claim holder(s) MID-NORTH ENGINEERING SERVICES LIMITED
SUITE 1402, 390 BAY ST TORONTO
Author of Report GLENN HARDER B.Sc. GEOLOGIST
Address BOX 840, DEEP RIVER ONT.
Covering Dates of Survey OCT 19/76 to NOV 27/76
(linecutting to office)
Total Miles of Line cut 56.31 miles.

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	40
–Radiometric	20
–Other	
Geological	
Geochemical	

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

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

DATE: 21 Dec 1976 SIGNATURE: for GLENN HARDER B.Sc. J.J. Miller
Author of Report

MINING CLAIMS TRAVERSED
List numerically

(prefix) (number)

AS PER ATTACHED LIST.

If space insufficient, attach list

NOTE:
RADIOMETRIC CREDITS REDUCED TO EQUAL 80 DAYS GEOPHYSICAL, ON RECORD, EXCEPT CLAIM E.O. 402877

TOTAL CLAIMS 44

OFFICE USE ONLY

PROJECTS SECTION L.D.
Res. Geol. _____ Qualifications New on this file
Previous Surveys _____

Checked by _____ date _____

GEOLOGICAL BRANCH

Approved by _____ date _____

GEOLOGICAL BRANCH

Approved by _____ date _____

BLOCK C

E.O. 426374 ✓
426375
426378 ✓
426379 ✓
426380 ✓
426381 ✓
426418 ✓
426419 ✓
426420 ✓
402819 ✓
402820 ✓
402821 ✓
402822 ✓
402877 ← 20 DAYS
389396 ✓
389397 ✓
389398 ✓
389399 ✓
389400 ✓
389401 ✓
389558 ✓
389559 ✓
373999 ✓
374002 ✓

BLOCK A

E.O. 411962
411964
411965
411966
411967
411968
411969
411970
411971
426459
426460
437546
437547
437550
437551

15.8 DAYS CREDIT RECORDED ON REMAINING CLAIMS.

BLOCK D

E.O. 460923
460924
460925
460926

BLOCK B

E.O. 426389

2.2279

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations 2499 Number of Readings 4998

Station interval 100 FEET

Line spacing 400 FEET

Profile scale or Contour intervals N/A
(specify for each type of survey)

MAGNETIC

Instrument SCINTREX MF1 FLUXGATE MAGNETOMETER

Accuracy - Scale constant ± 10 GAMMAS

Diurnal correction method SEVERAL CONTROL STNS - ½ Lv to 1 Lv check CONTROL

Base station location INDICATED ON MAPS

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

Time domain Frequency domain

Frequency Range

Power

Electrode array

Electrode spacing

Type of electrode

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

_____

Corrections made _____

_____

RADIOMETRIC

Instrument McPHAR TV5 SCINTILLOMETER

Values measured GENERAL SURVEY - BROAD SCAN > 0.2 MEV

Energy windows (levels) SPECIAL LOCATIONS - T_2 > 1.63 MEV & T_3 > 2.5 MEV at GROUND LEVEL

Height of instrument HIP LEVEL Background Count 800 c/m

Size of detector 1 3/4" x 2" SODIUM IODIDE CRYSTAL

Overburden VARIES FROM MASSIVE ROCK OUTCROP TO SEVERAL FEET
(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 _____

NOTES

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

AREAS WITHDRAWN FROM STAKING

S.R. – SURFACE RIGHTS   M.R.–MINING RIGHTS

	Section	Order No.	Date	Disposition	File
R1	42 (R.S.O.1960) PROPOSED MOON ISLAND PROVINCIAL PARK	N/A	JAN 23/69	S.R.&M.R.	171517
R2	42(R.S.O.1960) PROPOSED MOON ISLAND PROVINCIAL PARK	N/A	FEB 5/69	S.R.&M.R.	171517
R3	43(R.S.O.1970) PUBLIC ACCESS POINT	W 57/72	AUG 11/72	S.R.	160707
R4	43(R.S.O.1970) GARBAGE DISPOSAL SITE	W 64/72	AUG 31/72	S.R.	160707
R5	RESERVE		JUNE 14/66	S.R.	132995
R6	RESERVED FOR PUBLIC USE		AUG 21/72		160707
R7	CROWN RESERVE	requested	SEPT 14/62	S.R.	24586
R8	TEMPORARY RESERVE	"	"	"	"
R9	43(R.S.O.1970) PROPOSED BLACKSTONE HARBOUR PROV. PARK	W.37/75	25/7/75	S.R.&M.R.	171517

Land under water in Georgian Bay WITHDRAWN FROM STAKING by Order in Council dated April 30/12

Islands in Georgian Bay WITHDRAWN FROM STAKING. File 67051.

SAND and GRAVEL

- G1 - M.T.C. Pit 1622
- G2 - " " 1623
- G3 - " " 1633
- G4 - " " 1672
- G5 - Gravel File 132995
- G6 - " " 11849
- G7 - " " 107976
- G8 - " " 162722
- G9 - " " 34973
- G10 - " " 131709
- G11 - Gravel File 115864
- G12 - " " 187910
- G13 - " " 30856
- G14 - " " 39598
- G15 - " " 181474
- G16 - M.N.R. Gravel Pit No.176 File: 187910
- G17 - Gravel File 181477

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	C.S.
ORDER-IN-COUNCIL	OC
RESERVATION	R
CANCELLED	X
SAND & GRAVEL	G

SCALE : 1 INCH = 40 CHAINS

FEET 0 500 1000 2000 4000 6000 8000

METRES 0 200 400 600 800 1 KM 2 KM

ACRES 40   HECTARES 16

TOWNSHIP

CONGER

DISTRICT
PARRY SOUND

MINING DIVISION
EASTERN ONTARIO

Ontario
Ministry of Natural Resources
Surveys and Mapping Branch

Date JAN. 1975
Whitney Block
Queen's Park, Toronto

Plan No. M.170

2.2279

NICKEL RIM MINES LTD.

CONGER TOWNSHIP ONT.

INDEX MAP

0 2000 4000 6000 8000

Scale (feet)

1 INCH : 40 CHAINS

FIG 1

G. Harden

Blackstone Lake

Crane Lake

Conger L.

Healey Lake

Kapikog Lake

Meggridge L.

Joselin L.

Payne L.

Gould Lake

Jolott Marsh

Hutcheson Lake

BLOCK A

BLOCK. B

BLOCK C

BLOCK D

C.N.R.

C.P.R.

X

IX

VIII

VII

VI

V

IV

III

II

I

N

TO MACTIER


NICKEL RIM MINES LIMITED
CONGER TOWNSHIP ONTARIO
MAGNETOMETER SURVEY
1 INCH = 200 FEET
BLOCK A
INSTRUMENT
SCINTREX M.F.1
FLUXGATE MAGNETOMETER
LEGEND
550 MAGNETOMETER READING
CONTROL
O.C. OUTCROP AREA
CLIFF
SWAMP
XXXX BEAVER DAM
NOTE: CONCESSIONS AND LOTS ARE APPROXIMATE
TO HWY #69
APPROX CAMP 430
APPROX ROAD
MAGRIDGE LAKE
JOSELIN LAKE
BEERS LAKE
RAILROAD
POND
B.L. #1
B.L. #2
B.L. #3
T.L.
PIT
CAMP
BUSH ROAD
OLD ROAD
CRK
411962
411964
411965
411966
411967
411968
411969
411970
411971
426459
426460
437546
437547
437550
437551
IX
VIII
VII
10
9
8
7
6
5
4

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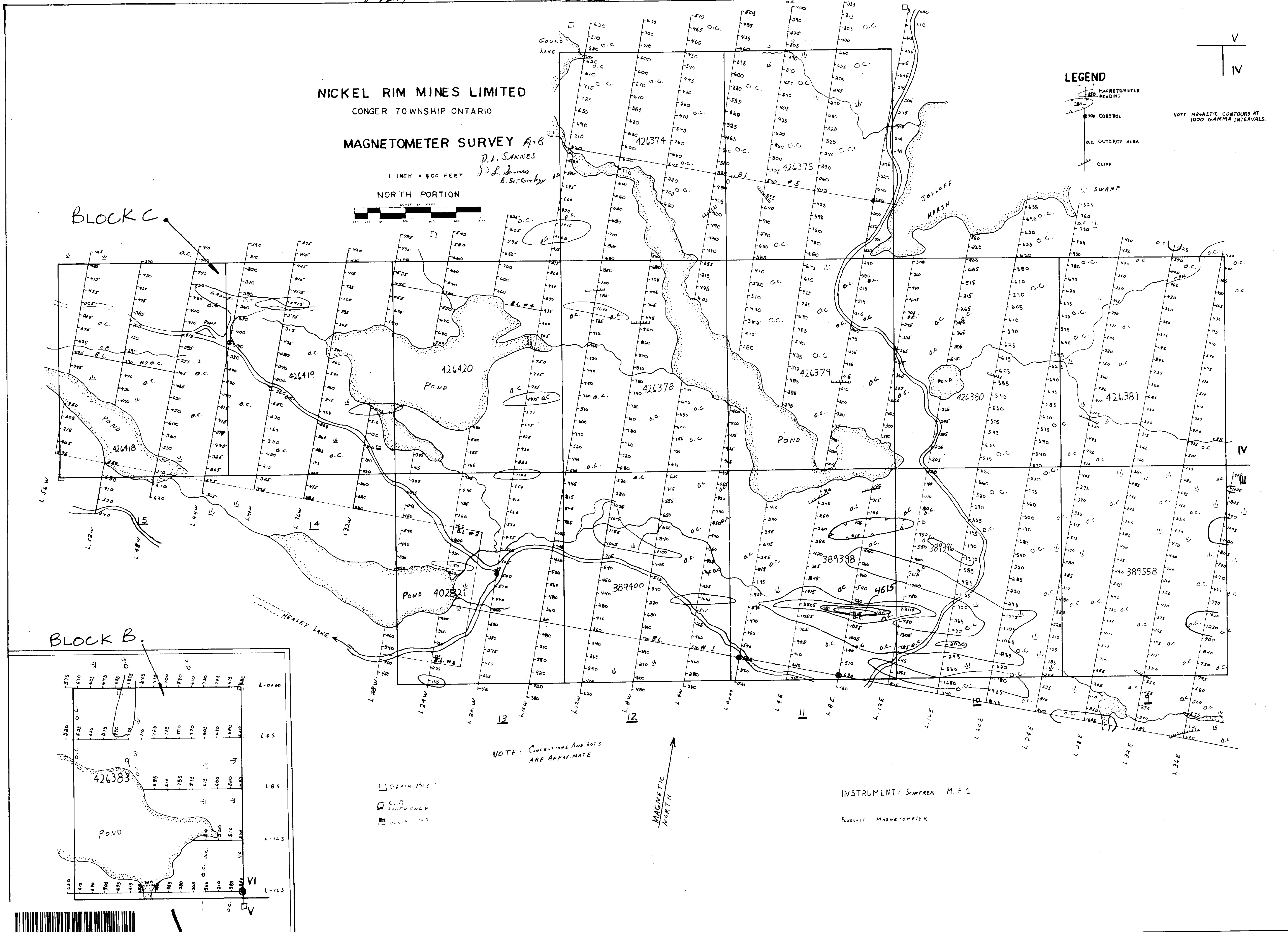

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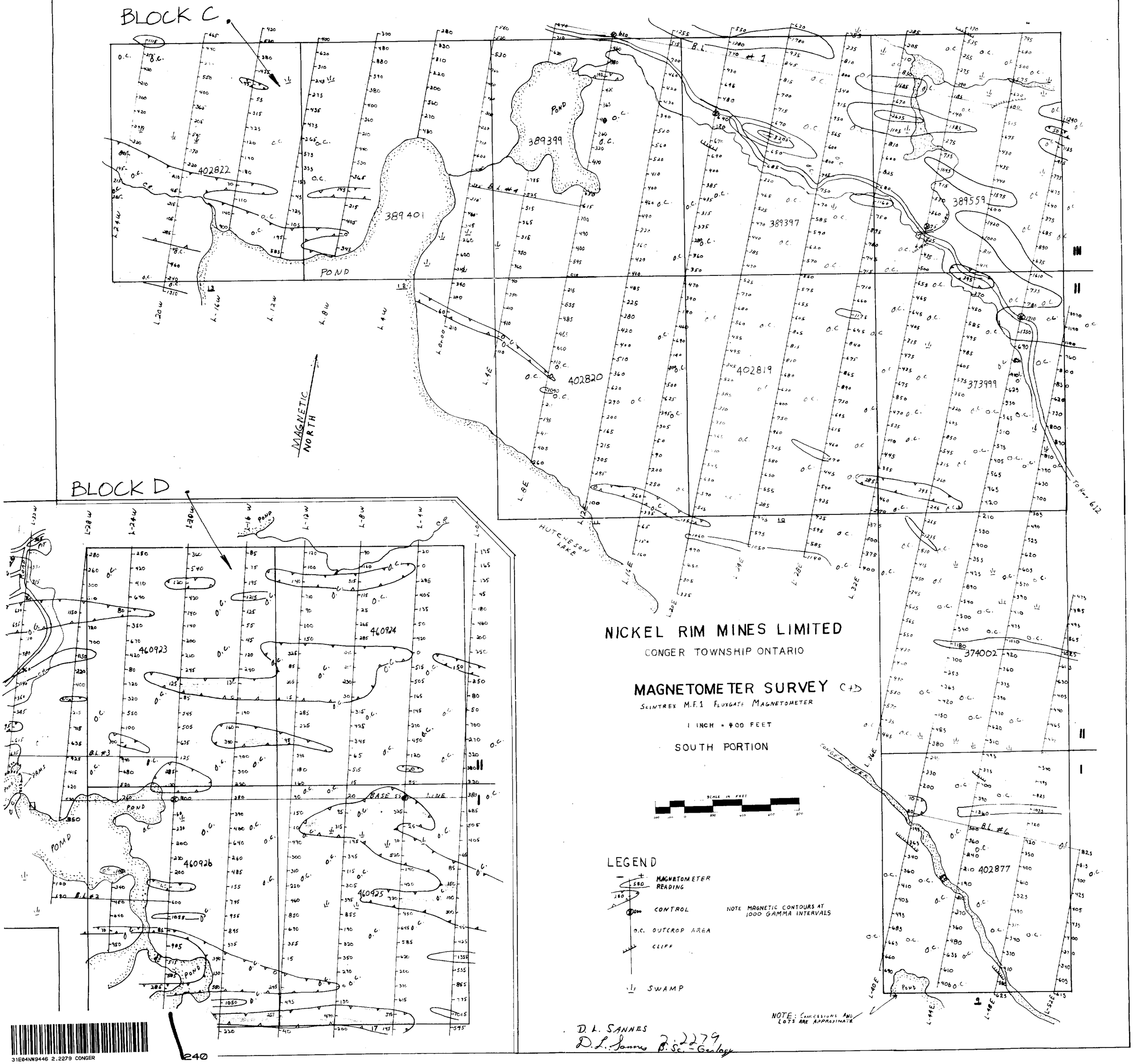

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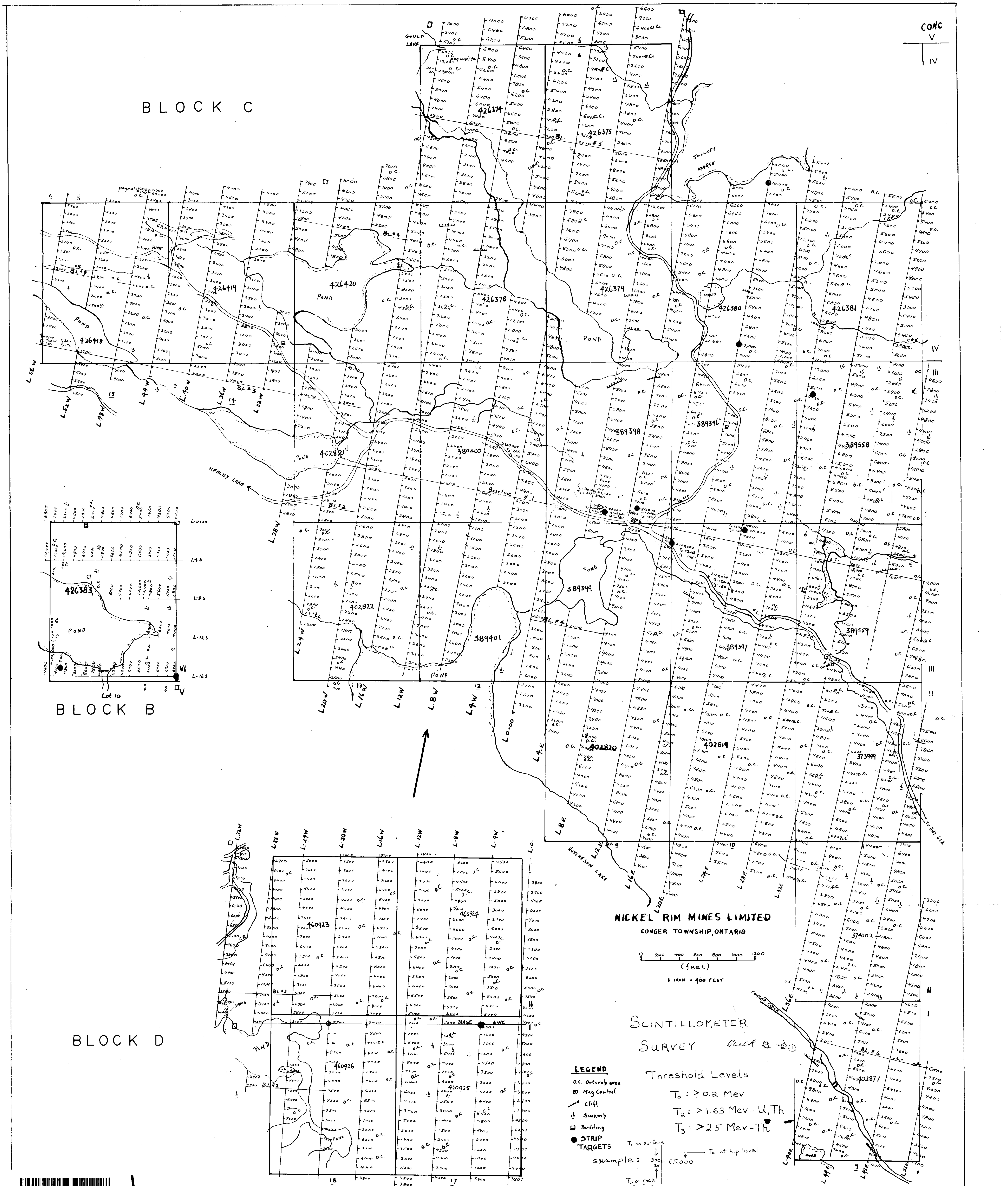
NICKEL RIM MINES LTD.
CONGER TOWNSHIP ONT.
SCINTILLOMETER SURVEY
&
GEOLOGY OF BLOCK A
GEOLOGY
INSTRUMENT = MCPHAR TV-5
Threshold Levels =
T₀ = > 0.2 Mev or total gamma radiation
T₂ = > 1.63 Mev, U and Th
T₃ = > 2.5 Mev, Th only
CONTOUR INTERVALS
T₀ < 9000 cpm
T₀ : 9000 - 15,000 cpm
T₀ : 15000 - 25,000 cpm
T₀ > 25,000 cpm
OUTCROP
Tohiplevel
20,000
0 200 400 600
SCALE (feet)
D Glenn Harder
MOORIDGE LAKE
JOSELIN LAKE
BEERS LAKE
PAYNE LAKE
POND
CREEK
411966
411967
411962
411965
411968
411964
411969
411970
426460
411971
426459
437546
437550
437551
250



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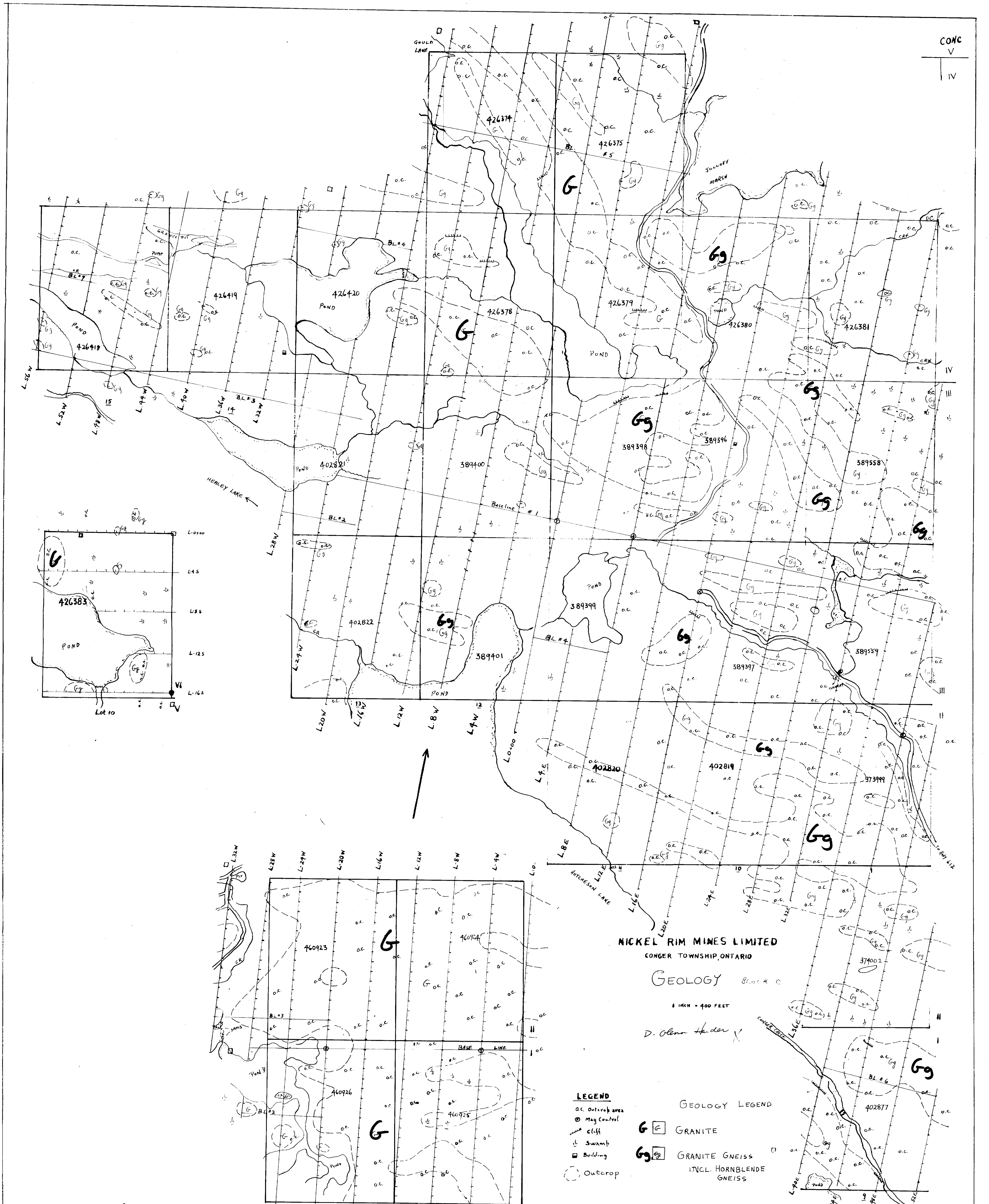
X



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