# MINOREX LIMITED

# ASSESSMENT REPORT

# LINE CUTTING

# RADIOMETRIC SURVEY

# MAGNETOMETER SURVEY

# GEOLOGICAL MAPPING

# ASSAYS

# 52 E/15 & 52 L

JOHN F.STONES

NOVEMBER 1979

# ENA LAKE PROPERTY

## Location and Access:

The property is situated on the north-east shore of Ena Lake which lies 17 miles north of Kenora between the villages of Minaki and Redditt. Access to the property is via highway 599 to the junction of the Ena Lake Road. The road continues 3 miles to the boat landing on the south-west tip of the lake and from this point one must proceed by boat to reach the claim group.

## Claim Status:

The claim group consists of 18 contiguous, unpatented mineral claims located in the Kenora Mining Division. All claims are recorded in the name of Minorex and can be referred to on claim maps M-1916 and M-2644.

| | |
|---|---|
| K 522568 | K 522578 |
| K 522569 | K 522579 |
| K 522570 | K 522580 |
| K 522571 | K 522581 |
| K 522572 | K 522582 |
| K 522573 | K 522583 |
| K 522574 | K 522584 |
| K 522575 | K 522585 |
| K 522576 | K 522586 |
| K 522577 | K 522587 |

## Summer Work Program:

The 1979 field program consisted of 4 parts:

(1) Line Cutting:-(May 27 to June 2),15 miles of survey line was cut at 400 foot spacings over the entire property.

(2) Radiometric survey:-(May 30 to July 15),a gamma ray spectrometer (McPhar T.V.5) survey was completed at 25 foot intervals over the entire grid. Further detailed work was completed in 3 areas designated A, B and C on lines at 50 foot spacings with 25 foot stations.

Summer Work Program (Cont'd):

(3) Magnetometer survey:- (June 11 to July 9), utilizing a (McPhar M-700 fluxgate mag.) was conducted over the entire grid at 50 foot stations.

(4) Geological mapping: (June 15 to June 30), was conducted at a scale of 1 inch to 200 feet over the entire property and 29 rock samples were collected amd assayed.

General Geology:

The Ena Lake property lies within the English River Subprovince which is a part of the Superior Province of the Precambrian Shield. This structural and lithological subprovince can be divided into two domains the northern and southern. The northern domain is characterized by supracrustal sediments of greywacke composition in contact with vast plutonic complexes derived from highly metamorphosed sediments. These plutonic complexes are comprised of strongly foliated to gneissic trondhjemites and granodiorites. Narrow remnant belts of early Archean metavolcanics are folded along the margins as well as within these intrusive complexes.

The southern domain is a complex zone of granitoid batholiths intruding and replacing early Archean metavolcanics. Structural trends in both domains prevail in an east-west direction.

Geology of the Ena Lake Property

The property area can be described as a large granitic pluton approximately one mile wide and extending northward to Vermillion Lake. Outcrop exposure is approximately 70%, the remaining area is covered by scrub vegetation and swamp.

The two predominant rock types are granites and Archean metavolcanics. The granites are generally homogeneous and fine to medium-grained texture. Pegmatite veins and blocks of metavolcanics are found within the granites near the metavolcanic-granite contact in the southern portion of the property. The northeasterly trending band of metavolcanics range compositionally from fine-grained biotite schists to coarse-grained amphibolites. Stretched remnant pillow structures were noted, however, deformation prevented the determination of tops direction.

Nature of Mineralization:

Two uranium minerals were noted; uraninite and allanite, the latter being the more abundant. Uranophane staining is common on joint planes and in fractures. Mineralization was restricted to the southern contact of the metavolcanics and granites. High radioactivity counts were associated with erratic stringers of biotite ± amphibole and magnetite-rich zones within the granites. Coarse graphic granite with euhedral feldspar crystals up to 8 inches wide are associated with some of the more anomalous areas.

Survey Results:

Spectrometer Survey:

The average background of the radiometric survey over granitic rock was approximately 15,000 c.p.m., in contrast to an average of 6,000 c.p.m. associated with the metavolcanics. Anomalous areas exceeding 40,000 c.p.m. were contoured on the overall spectrometer map. Several potential anomalies in excess of 50,000 c.p.m., located near the southern contact were examined in detail. Three areas designated A, B and C were examined at 50 foot line spacings with 25 foot stations. The results of the detail proved to be discouraging due to the narrow and discontinuous nature of the anomalies.

Magnetometer Survey:

Drift during the survey period was extremely high and many of the lines had to be surveyed twice. The survey vaguely outlined the metavolcanic band, however, the results were too poor for detailed mapping purposes. Anomalous readings associated with the metavolcanics were above 500 gammas on the contour map.

Assays:

Chip samples were taken in existing trenches found in the anomalous areas. The average assay value of 29 samples was .22 lbs./ton $U_3O_8$. The highest value obtained was 1.6 lbs./ton at location 6 on spectrometer detail Map A.

Recommendations:

The low grade and lack of continuity of the anomalies at Ena Lake were very discouraging. Further work is not planned for the 1980 summer field program.

Respectfully submitted,

John F. Stones

John F. Stones,
Exploration Geologist

JFS/dd.

Ontario

Ministry of Na

GEOPHYSICAL – GEOLO
TECHNICAL DA

52L02SE0002 2.3136 SAND LAKE

900

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.

Linecutting, Radiometrics, Magnetometer

Type of Survey(s) Geological Mapping

Township or Area Minaki and Sand Lake Areas

Claim Holder(s) Minorex Limited

Survey Company Minorex Limited

Author of Report John F.Stones

Address of Author P.O.Box 7, Thetford Mines,P.Q.

Covering Dates of Survey May 27 to July 15,1979
(linecutting to office)

Total Miles of Line Cut 15 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 | N.A. |
| –Magnetometer | 40 |
| –Radiometric | 20 |
| –Other | N.A. |
| Geological | 20 |
| Geochemical | N.A. |

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

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

DATE: Nov. 16/79 SIGNATURE: John F. Stones
Author of Report or Agent

Res. Geol. _____ Qualifications not in the mining field

Previous Surveys

| File No. | Type | Date | Claim Holder |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

LD

MINING CLAIMS TRAVERSED
List numerically

| (prefix) | (number) |
|---|---|
| K | 522568 |
| K | 522569 |
| K | 522570 |
| K | 522571 |
| K | 522573 |
| K | 522574 |
| K | 522575 |
| K | 522577 |
| K | 522 578 |
| K | 522579 2/3 not covered |
| K | 522580 2/3 |
| K | 522581 2/3 |
| K | 522583 |
| K | 522584 |
| K | 522585 |
| K | 522586 |
| K | 522587 |

If space insufficient, attach list

TOTAL CLAIMS 17

OFFICE USE ONLY

## GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 792 at 100 Foot Stations Number of Readings 1469

Station interval 50 feet Line spacing 400 feet

Profile scale

Contour interval 1 Major Contour plus 500Gammas

### MAGNETIC

Instrument McPhar Fluxgate M-700

Accuracy – Scale constant Zeroed

Diurnal correction method Drift Distribution Method

Base Station check-in interval (hours) Each Hour

Base Station location and value Stump on Baseline at 36+00 West (60 Gammas)

### ELECTROMAGNETIC

Instrument N.A.

Coil configuration

Coil separation

Accuracy

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

Frequency (specify V.L.F. station)

Parameters measured

### GRAVITY

Instrument N.A.

Scale constant

Corrections made

Base station value and location

Elevation accuracy

### INDUCED POLARIZATION RESISTIVITY

Instrument N.A.

Method ☐ Time Domain ☐ Frequency Domain

Parameters – On time Frequency

– Off time Range

– Delay time

– Integration time

Power

Electrode array

Electrode spacing

Type of electrode

## RADIOMETRIC

| | | | |
|---|---|---|---|
| Number of Stations | 792 at 100 Foot Stations | | |
| Number of Readings | 2938 | | |
| Station Interval | 25 Feet | Line Spacing | 400 Feet |
| Profile Scale | | | |
| Contour Interval | +40,000 c.p.m. on Major Map and 20,000 c.p.m. on detailed maps | | |

## SELF POTENTIAL

Instrument N.A. Range

Survey Method

Corrections made

## RADIOMETRIC

Instrument McPhar T.V.S.Gamma Ray Spectrometer

Values measured Total Count

Energy windows (levels) $T_1$ at 1.30 Mev. $T_2$ at 1.63 Mev. $T_3$ at 2.50 Mev.

Height of instrument Directly on surface Background Count 15,000 C.P.M.

Size of detector 1-3/4 inches in diameter and 2 inches thick

Overburden

(type, depth – include outcrop map)

## OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey N.A.

Instrument

Accuracy

Parameters measured

Additional information (for understanding results)

## AIRBORNE SURVEYS

Type of survey(s) N.A.

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 N.A.

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 _____

AREA OF 2·3/36

# SAND LAKE

**DISTRICT OF**
KENORA

KENORA
**MINING DIVISION**

**SCALE: 1-INCH = 40 CHAINS**

## LEGEND

| | |
|---|---|
| PATENTED LAND | (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. |

## NOTES

400' Reserve around all Lakes & Rivers to Dept of Lands & Forests:

In the disposition of crown lands, reserve flooding rights without compensation up to easement contours 1042 & 1045 geodetic survey of Canada datum, 1923 adjustment

Contour 1042 is from head of Whitedog Falls to foot of Dalles Rapids

Contour 1045 is from head of Dalles Rapids to controls at old Fort Island File 4922

Islands & Lands abutting on Gun Lake, Pistol Lake & Winnipeg River are withdrawn from staking under Sec 39 Sub (c) Mining Act

DATE OF ISSUE
NOV 30 1979
SURVEYS AND MAPPING BRANCH

NATIONAL TOPOGRAPHIC SERIES 52 L

PLAN NO. M. 2644

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

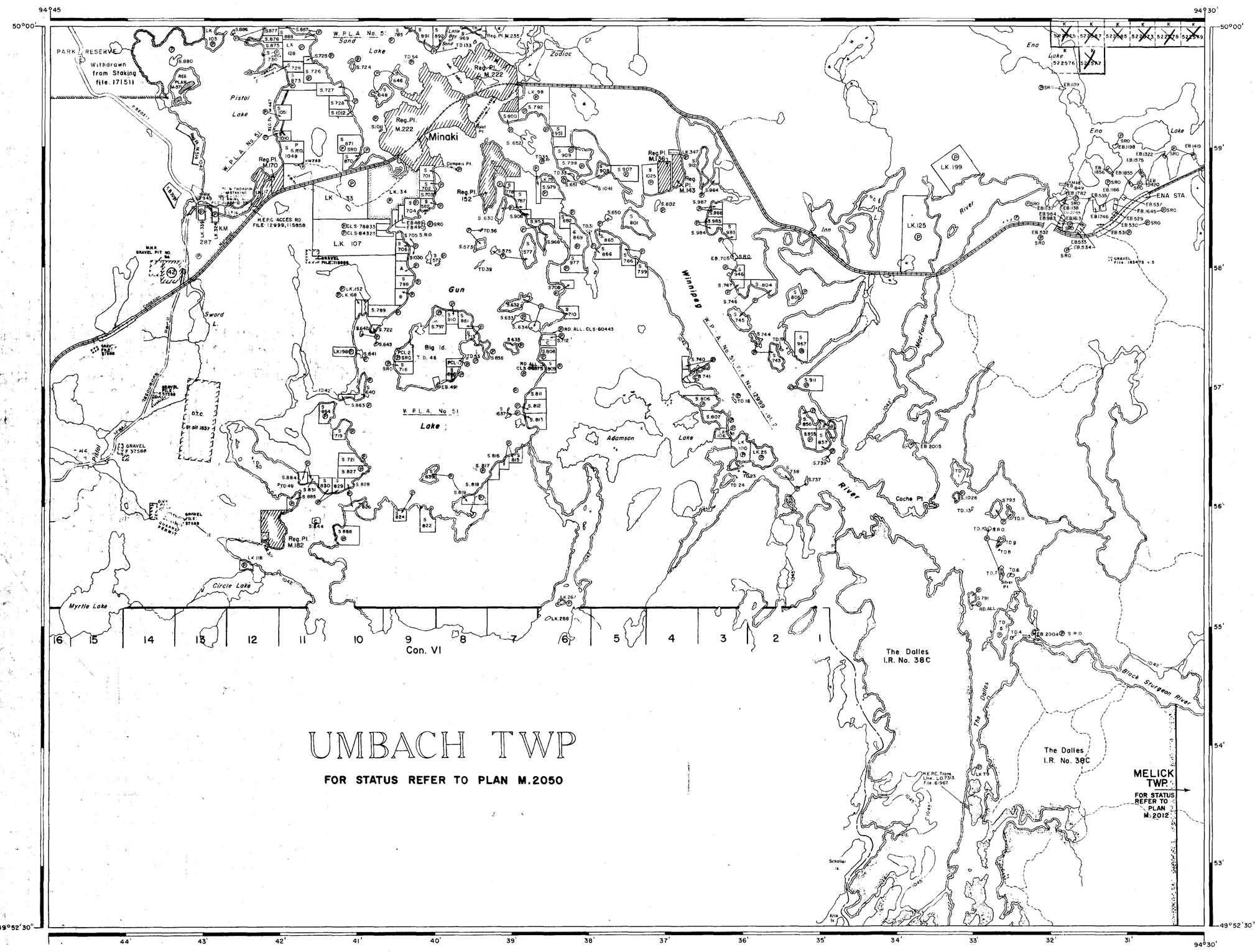
Forgotten Lake Area - M.3005

501943

52L02SE0002 2.3136 SAND LAKE

200

SAND LAKE AREA (M.2644)




AREA OF 2.3136

# MINAKI

DISTRICT OF KENORA

KENORA MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

## LEGEND

| | |
|---|---|
| PATENTED LAND | (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. |

## NOTES

400' reserve around all lakes and rivers to Dept. of Lands & Forests.

Islands and lands abutting in Gun Lake, Pistol Lake, and Winnipeg River are withdrawn from staking under Sect. 39, sub 'C' of the Mining Act. File: 67051.

The bed of the Winnipeg River including tributaries, are reserved to H.E.P.C. for W.P.L.A. File: 12999.

In the disposition of crown lands, reserve flooding rights without compensation up to easement contours 1042' and 1045' geodetic survey of Canada datum, 1923 adjustment.

Contour 1042' is from head of Whitedog Falls to foot of Dalles Rapids.
Contour 1045' is from head of Dalles Rapids to controls at old Fort Island.
File: 4922.

Areas withdrawn from staking under Section 42 of the Mining Act.

| | File | Date | Disposition |
|---|---|---|---|
| (42) | 163473 | Mar 1/71 | S R O |



NATIONAL TOPOGRAPHIC SERIES 52 E 15

PLAN NO. M.1916

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

52L02SE0002 2.3136 SAND LAKE



498943

94°30'

N

| | | | | | |
|---|---|---|---|---|---|
| | | K 522571 | K 522570 | K 522569 | K 522581 |
| K 522574 | K 522586 | K 522584 | K 522583 | K 522568 | K 522580 |
| K 522575 | K 522587 | K 522585 | K 522573 | K 522578 | K 522579 |
| K 522576 | K 522577 | | | | |

ENA LAKE

50°00

# MINOREX LIMITED

ENA LAKE PROPERTY

## CLAIM SKETCH

Kenora Mining Division

| | | |
|---|---|---|
| March 79 | 1.5 inches = 1/4 mile | 2317 - ONT - 22 |

John Stones Thurs. March 6, 1980
Exploration Geologist
Minorex Limited.

2.3136

K 522574

K 522575

K 522576

ENA LAKE

K 522586

K 522587

K 522584

K 522585

K 522583

K 522573

K 522571

K 522570

K 522569

K 522568

K 522578

K 522581

K 522580

K 522579

## LEGEND

Scale: 1 inch = 200 feet or 1:2400

200 0 200 400 600 800 ft

PRECAMBRIAN
EARLY PRECAMBRIAN

- Primarily homogeneous granites with minor pegmatite veins and blocks or inclusions of meta-volcanics; syngenetic pegmatites
- Granite gneiss with minor pegmatites and inclusions of meta-volcanics
- Meta-volcanics ranging from fine-grained biotite schists to coarse-grained amphibolites, intruded by pegmatitic granite and granite gneisses

### SYMBOLS

- Geological Contact (known, assumed, inclusions)
- Fault
- Gneissosity, schistosity, foliation (dip known, unknown, vertical)
- Mineral Orientation (plunge unknown)
- Joint (dip known, vertical)
- Trench, with number and mineral occurrence
- Gossan
- Beaver Pond, swamp, stream (with flow direction)
- Glacial Striae

declination 5°34' East

| MINOREX LIMITED | | | |
|---|---|---|---|
| ENA LAKE PROPERTY | | | |
| KENORA ONTARIO | | | |
| GEOLOGY | | | |
| Kenora Mining Division | | | |
| JULY, 1979 | 1 inch = 200 feet | 2.3136 - ONT - ENA | |

John Gilbert
Exploration Geologist
Minorex Limited

2.3136
Date: Mar 6, 1980


LEGEND

500 gammas

Swamp or marshland

Open water i.e. beaver pond

Direction of stream flow

declination 5° 24' East

# MINOREX LIMITED

## ENA LAKE PROPERTY

KENORA, ONTARIO

## MAGNETOMETER SURVEY

Kenora Mining Division

| June, 1979 | 1 inch = 200 feet | 2317-ONT-24B |
|---|---|---|

John Ethans
Exploration Geologist
Minorex Limited

2.3136

Mining Claims Geological Geophysical Claim Map 6.1980
Attawapiskat Lowlands 2.3136

MINOREX LIMITED

ENA LAKE PROPERTY

KENORA, ONTARIO

SPECTROMETER SURVEY

Kenora Mining Division

| June, 1984 | Line - 200 feet | 2317-ONT-24C |
|---|---|---|

declination 3°W, East

LEGEND

400 — 400 (x10³) Contour Rate

Swamp or Marsh/Land

Open water i.e. Beaver pond

direction of stream flow

Ena Lake

Beaver Pond

36+00 E
32+00 E
28+00 E
24+00 E
20+00 E
16+00 E
12+00 E
8+00 E
4+00 E
0+00
4+00 W
8+00 W
12+00 W
16+00 W
20+00 W
24+00 W
28+00 W
32+00 W
36+00 W

MINOREX LIMITED

ENA LAKE PROPERTY

DETAILED SPECTROMETER SURVEY

KEY MAP ; A, B, C

Kasama Mining Division

| July 1974 | 1 inch = 200 feet | 2317-ONT-241 |
|---|---|---|

Glen Calvin
Mathematical Geophysicist
Mineral Formation Division, Ottawa, Ont. K1A 0E8

declination 25°34' East

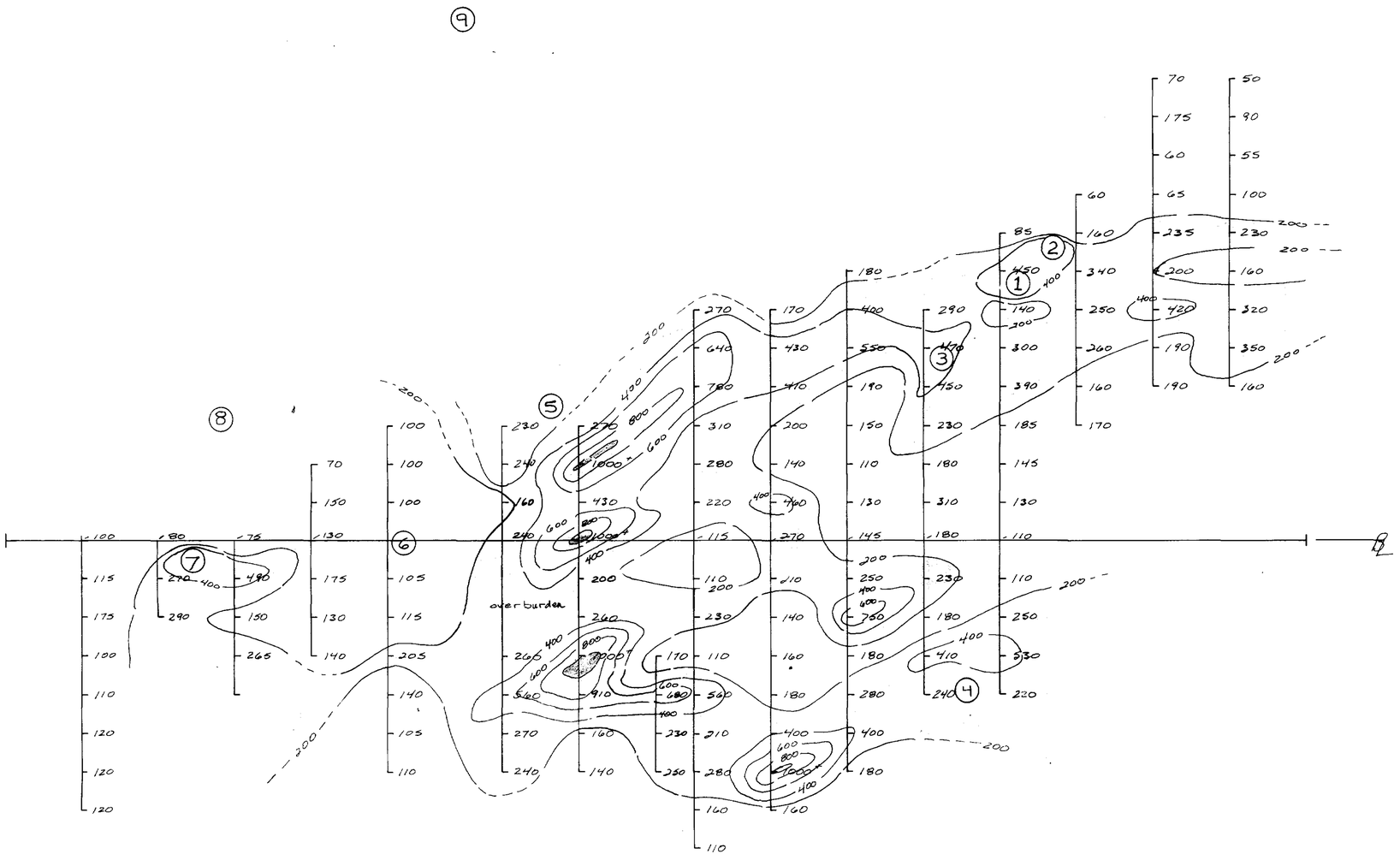
ENA LAKE

B

A

C

0
1+00 N
4+00 N
8+00 N
12+00 N
16+00 N
20+00 N
24+00 N
1+00 S
4+00 S
8+00 S
12+00 S
16+00 S
20+00 S
24+00 S
28+00 S
32+00 S
36+00 S
36+00 E
32+00 E
28+00 E
24+00 E
20+00 E
16+00 E
12+00 E
8+00 E
4+00 E
0+00
4+00 W
8+00 W
12+00 W
16+00 W
20+00 W
24+00 W
28+00 W
32+00 W
36+00 W




## LEGEND

Contour Interval 200 x 100 cpm  Rate $T_o$

- 0 - 200
- 200 - 400
- 400 - 600
- 600 - 800
- 800 - 1000
- 1000 +

Interval Known, assumed

Instrument used : McPhar Tv-5
γ-ray Spectrometer

Trenches, number and assay :

1. a 0.2 lbs/ton, b 0.1 lbs/ton
2. a 0.14 lbs/ton, b 0.14 lbs/ton
3. a 0.04 lbs/ton, b 0.02 lbs/ton, c 0.24 lbs/ton, d 0.36 lbs/ton
4. a 0.14 lbs/ton
5. a 0.22 lbs/ton, b 0.20 lbs/ton
6. a 1.6 lbs/ton, b 0.5 lbs/ton
7. a 0.16 lbs/ton
8. a 0.12 lbs/ton
9. a 0.26 lbs/ton

declination 5° 34' East

# MINOREX LIMITED

## ENA LAKE PROPERTY

KENORA ONTARIO

DETAILED

SPECTROMETER

SURVEY - (A)

Kenora Mining Division

| JULY, 1979 | 1 inch = 50 feet | 2317-ONT-24E |
|---|---|---|

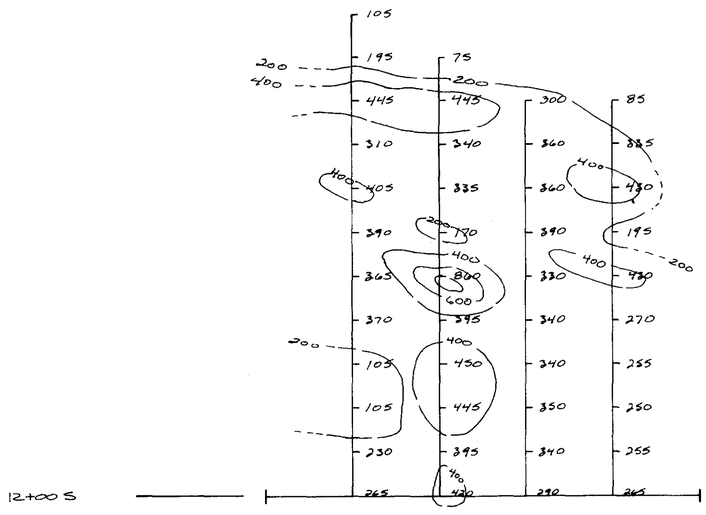
John Thomas
Exploration Geologist
Minorex Limited

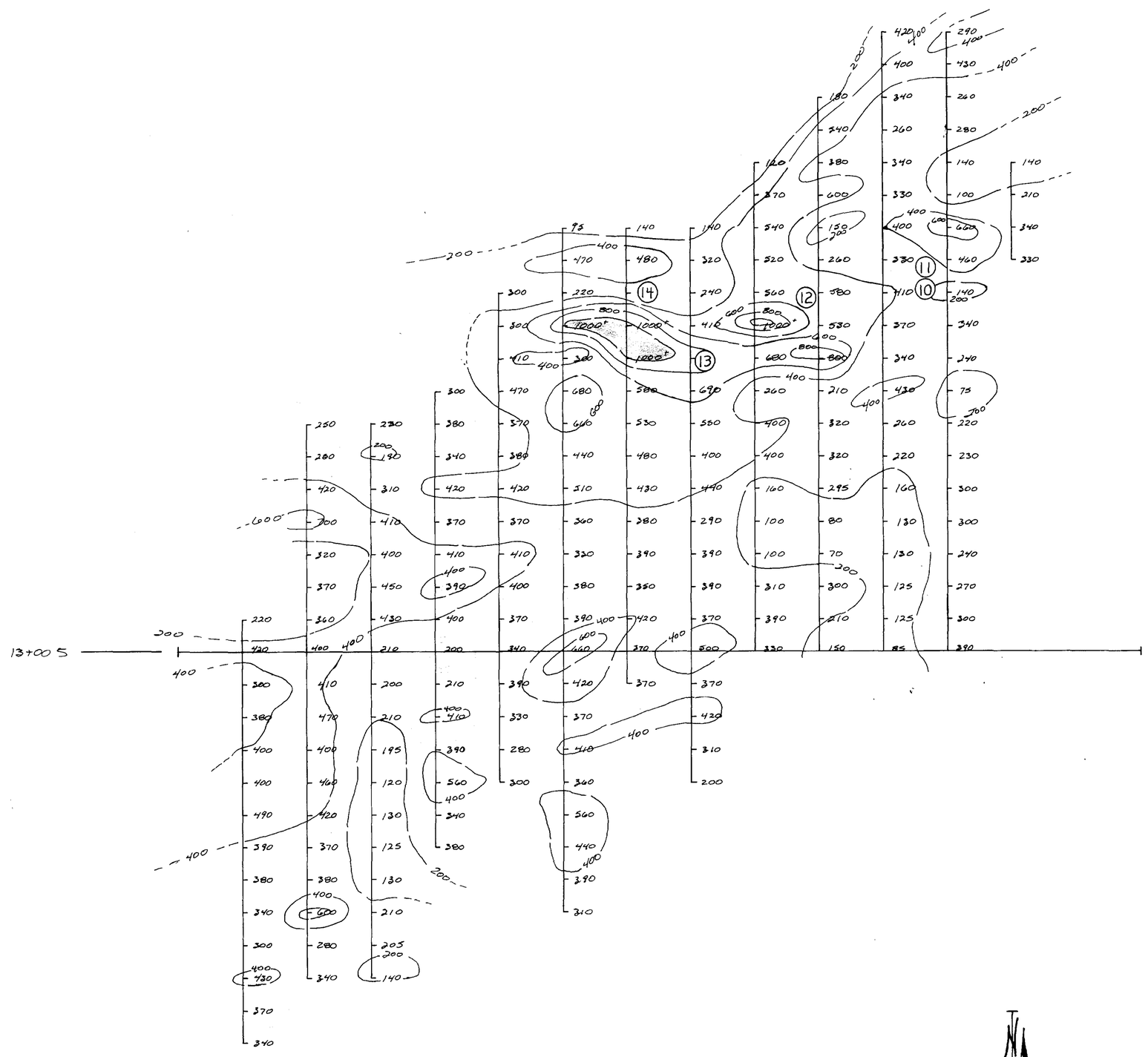
Date Mar 6, 1980

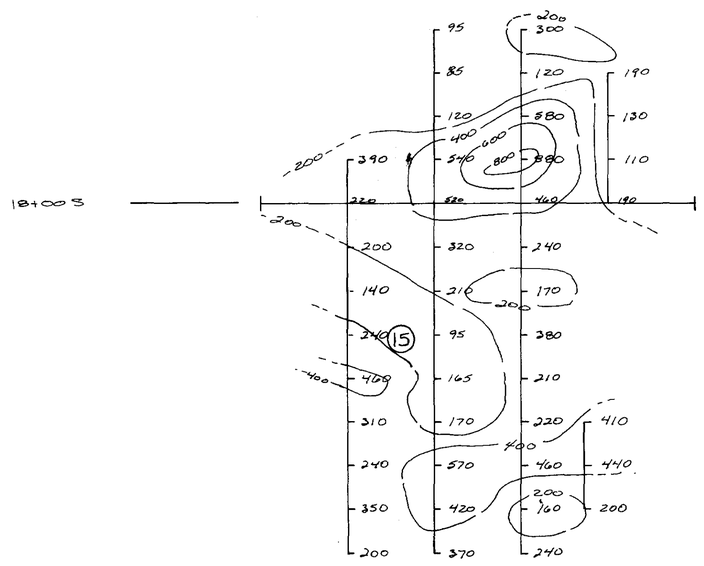
2.3136



270






declination 5° 34' East

## LEGEND

Contour Interval : 200 x 100 e.p.m. Rate $T_o$

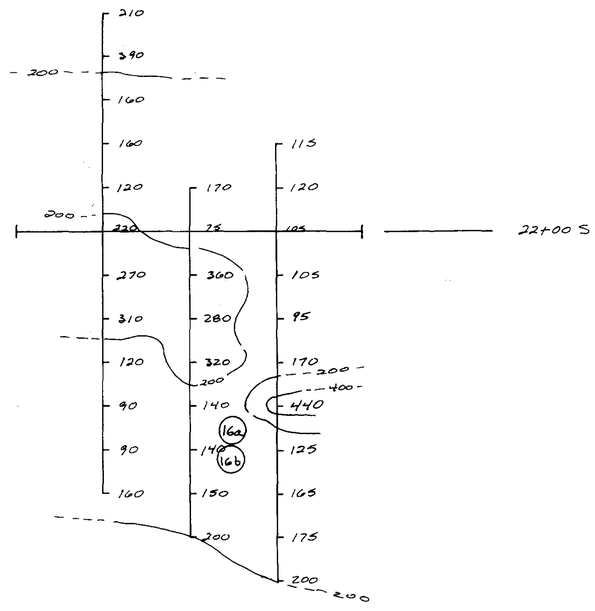
- 0 - 200
- 200 - 400
- 400 - 600
- 600 - 800
- 800 - 1000
- 1000+

Interval Known, assumed

Instrument used : McPhar $T_V$-5
γ-ray spectrometer

Trenches, number and assay :

- (10) 0.12 lbs/ton
- (11) 0.06 lbs/ton
- (12) 0.16 lbs/ton
- (13) 0.08 lbs/ton
- (14) 0.24 lbs/ton
- (15) a 0.32 lbs/ton
  b 0.16 lbs/ton
  c 0.04 lbs/ton
  d 0.02 lbs/ton
- (16) a 0.02 lbs/ton
  b 0.16 lbs/ton




18+00 W
17+00 W
16+00 W
15+00 W
14+00 W
13+00 W
12+00 W
11+00 W
10+00 W
9+00 W

# MINOREX LIMITED

## ENA LAKE PROPERTY

KENORA ONTARIO

DETAILED SPECTROMETER SURVEY - (B)

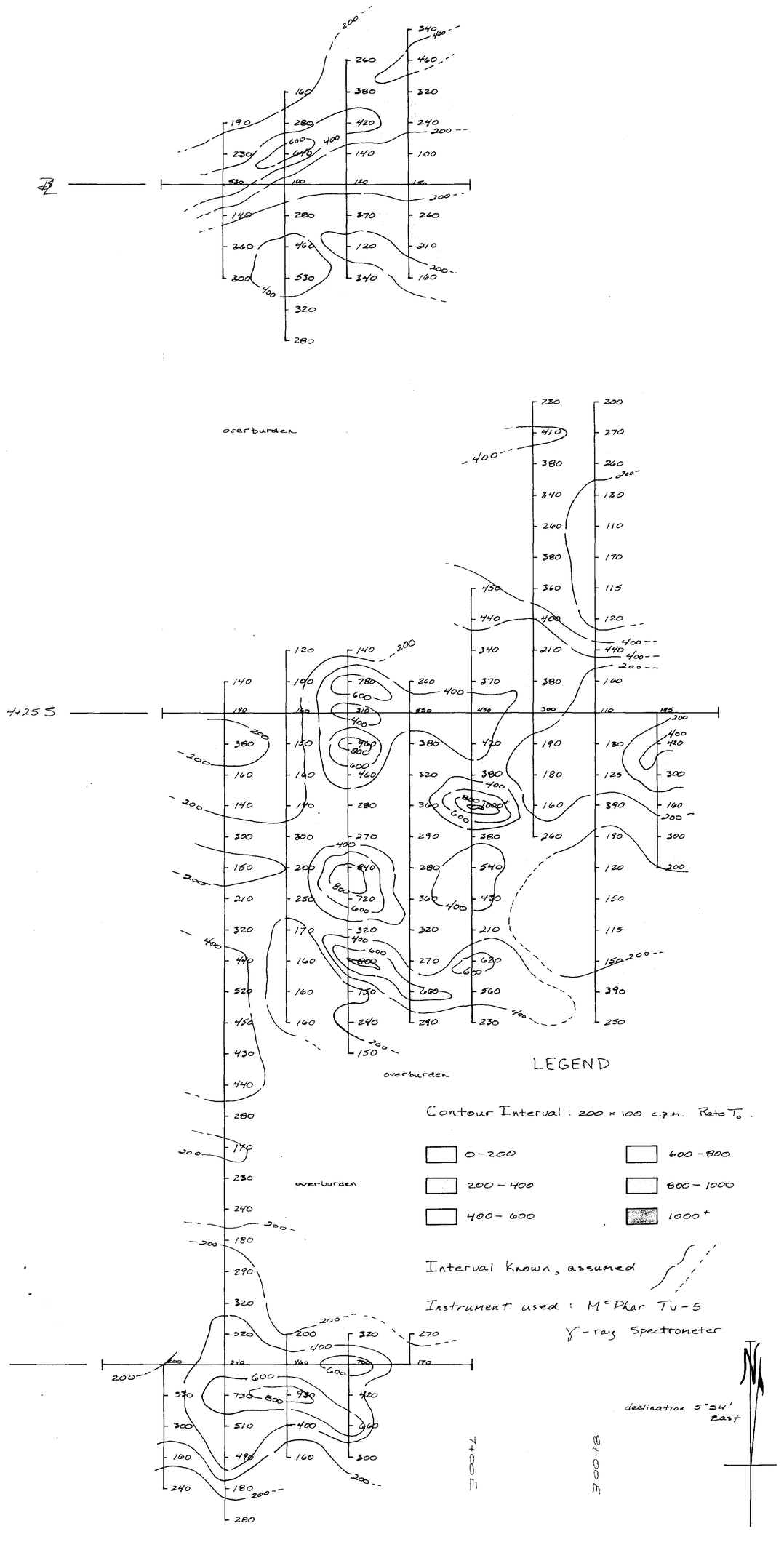
Kenora Mining Division

| JULY, 1979 | 1 inch = 50 feet | 2317-ONT-24 F |
|---|---|---|

John Stokes
Exploration Geologist
Minorex Limited

2.3136

Thurs Mar 6, 1980




# MINOREX LIMITED

## ENA LAKE PROPERTY

KENORA ONTARIO

DETAILED

SPECTROMETER

SURVEY - (C)

Kenora Mining Division

| | | |
|---|---|---|
| July 1979 | 1 inch = 50 feet | 2317-ONT-24G |

John Chiles
Exploration Geologist
Minorex Limited

Chiles Mar 6, 1980