



32D04NW0007 2.12790 ARNOLD

010

GRID A 4  
ARNOLD TOWNSHIP, ONTARIO  
LARDER LAKE MINING DIVISION  
NTS 32 D 4

REPORT ON

MAGNETIC SURVEY

**2.12790**

A. JAMES WALKER P.Eng.

NOVEMBER 25, 1987



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## ENCLOSURES

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## INTRODUCTION

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Walker Exploration Ltd. carried out a magnetometer survey over 2 claims in the southwest part of Arnold Township, just west of the Esker Lake road. The group is about 15 kilometers northeast of Kirkland Lake. The 2 claims are an extension to the north of the previously surveyed group of 6 claims.

Linecutting and chaining was done by another contractor in October, 1987. The survey was carried out November 27, 1987 over approximately 2.9 kilometers of line.

The survey was carried out with an EDA PPM 500 total field proton magnetometer with an EDA PPM 400 base station magnetometer for diurnal control.

## SUMMARY

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Magnetic highs on the west and north part of the grid likely represent basic intrusives. The northeast trending lows suggest shearing, parallel to the Murdoch Creek - Kennedy Lake Fault to the south.

The extension to the north is relatively flat magnetically.

PROPERTY

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The 8 claim group is located in the southwest part of Arnold Township, on the west boundary, just west of North Arm, Victoria Lake. The group consists of Claims 891926 to 891931 inclusive, 1104643 and 1104646. Access to the property is via the Esker Lake Park road. The group is about 15 kilometers northeast of Kirkland Lake.

PREVIOUS WORK

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Airborne magnetic and electromagnetic surveys by Rosario Resources covered this group. In 1982 Aerodat covered the north part of the grid with helicopter magnetic and electromagnetic surveys for Monopros Ltd. Ground magnetic and electromagnetic surveys were conducted by Georex Ltd. for Falconbridge Ltd. in 1980.

In March 1986, Walker Exploration carried out a magnetic survey over the 6 southerly claims in this group, which is incorporated in this report.

GENERAL GEOLOGY (OGS Map 2061)

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The property is mainly drift covered (glacial outwash sand). A few outcrops of intermediate volcanics are shown on Map 2061 on this claim block, located in a broad area of felsic to intermediate volcanics, with occasional felsic to mafic intrusives. The claims are northwest of the northeast trending Murdoch Creek - Kennedy Lake fault.

SURVEY METHOD

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The magnetic survey was performed with an EDA PPM 300 proton magnetometer, measuring total field to 0.1 gammas. Diurnal control was made by using an EDA PPM 400 base station magnetometer located on the Esker Lake road just north of Victoria Lake. Other grids on this project are tied into this common base station.

The field magnetometer and base station magnetometer have solid state memory for storage of values and locations of stations read. The instruments have built in clocks which are synchornized each day. The units are plugged together each evening and the built-in computer programme in the base station allows for automatic diurnal correction of data collected. This

corrected data was stored on the cassette of an HP85 computer in the field, and later transferred to an IBM compatible computer for final plotting.

Observations were made at 12.5 meter stations on lines 125 meters spacing. Values are plotted on a plan at a scale of 1:5000. Contours of values are plotted on a separate sheet.

#### SURVEY RESULTS

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The magnetic pattern is generally low and flat over the southerly part of the grid, with a general northeast trend. Magnetic highs on the west and north part of the group likely represent basic intrusives. The northeast trending lows suggest shearing, parallel to the Murdoch Creek - Kennedy Lake Fault which is to the southeast.

On the 3 line extension to the previous grid, magnetics are flat.

CONCLUSIONS

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The magnetic survey should assist in geological interpretation and further exploration of this claim group.

Respectfully submitted,



AJW:sb

A. James Walker, P. Eng.

Qual: 63.2234

SURVEY DATA

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Grid A4.

Arnold Township, Larder Lake Mining Division, Ontario.

Geophysical Contractor - Walker Exploration Ltd.

Covering Dates	- Linecutting	- October 1986
	Magnetic	- October 27, 1987
	Drafting	- Nov. 10-25, 1987
	Report	- November 25, 1987

Line Coverage	- Linecutting	- 2.9 km.
	Magnetic Survey	- 2.9 km.
	Readings	- 237
	Line Spacing	- 125 meters
	Station Spacing	- 12.5 meters

Crew

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Linecutting	- Charles Bosum, Chibougamau, Quebec
Magnetic Survey	- J. Tough, Bracebridge, Ontario
Drafting	- A.J. Walker, Oakville, Ontario
	R.T. Marcroft, Mississauga, Ontario
Field Report	- A.J. Walker, Oakville, Ontario

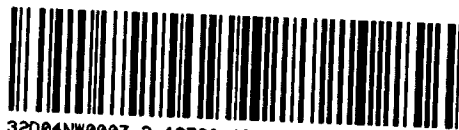


Instruments

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Magnetic Survey

- EDA PPM 300 Proton, Total field  
Direct Reading, 0.1 Gamma  
Solid State Memory.
- EDA PPM 400 Base Station Recorder.



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

900

Type of Survey(s) Magnetic
Township or Area Arnold
Claim Holder(s) Lac Minerals Ltd.
Survey Company Walker Exploration Ltd.
Author of Report A. James Walker
Address of Author 406 Canterbury Cr., Oakville
Covering Dates of Survey Oct. 1 - Nov. 21, 1987
Total Miles of Line Cut 2.9 km

MINING CLAIMS TRAVERSED List numerically
Table with columns for prefix and number, containing entries L1104643 and L1104646.

SPECIAL PROVISIONS CREDITS REQUESTED table with columns for Geophysical and DAYS per claim.

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

DATE: November 25, 1987 SIGNATURE: [Signature] Author of Report or Agent

Res. Geol. Qualifications 63-2234

Table with columns: File No., Type, Date, Claim Holder

TOTAL CLAIMS 2

If space insufficient, attach list

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 119 Number of Readings 237
Station interval 12.5 meters Line spacing 125 meters
Profile scale 200 nT/cm
Contour interval 25 nT

MAGNETIC

Instrument EDA PPM 300, Proton Total Field
Accuracy - Scale constant Readout to 0.1 gammas
Diurnal correction method Base Station Recorder EDA PPM 400
Base Station check-in interval (hours) Continuous - 15 seconds
Base Station location and value Off Esker Lake Road, just north of
Victoria Lake - 58640 gammas

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



Clifford Twp. (M.338)

THE TOWNSHIP OF

ARNOLD

DISTRICT OF  
TIMISKAMING

LARDER LAKE  
MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

LEGEND DATE OF ISSUE

- PATENTED LAND (P)
- CROWN LAND SALE (UG 25 1988)
- LEASES (L)
- LOCATED LAND (L.A.N.T.E.R.L.A.K.E. O.C.)
- 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
- PATENT SURFACE RIGHTS ONLY

NOTES

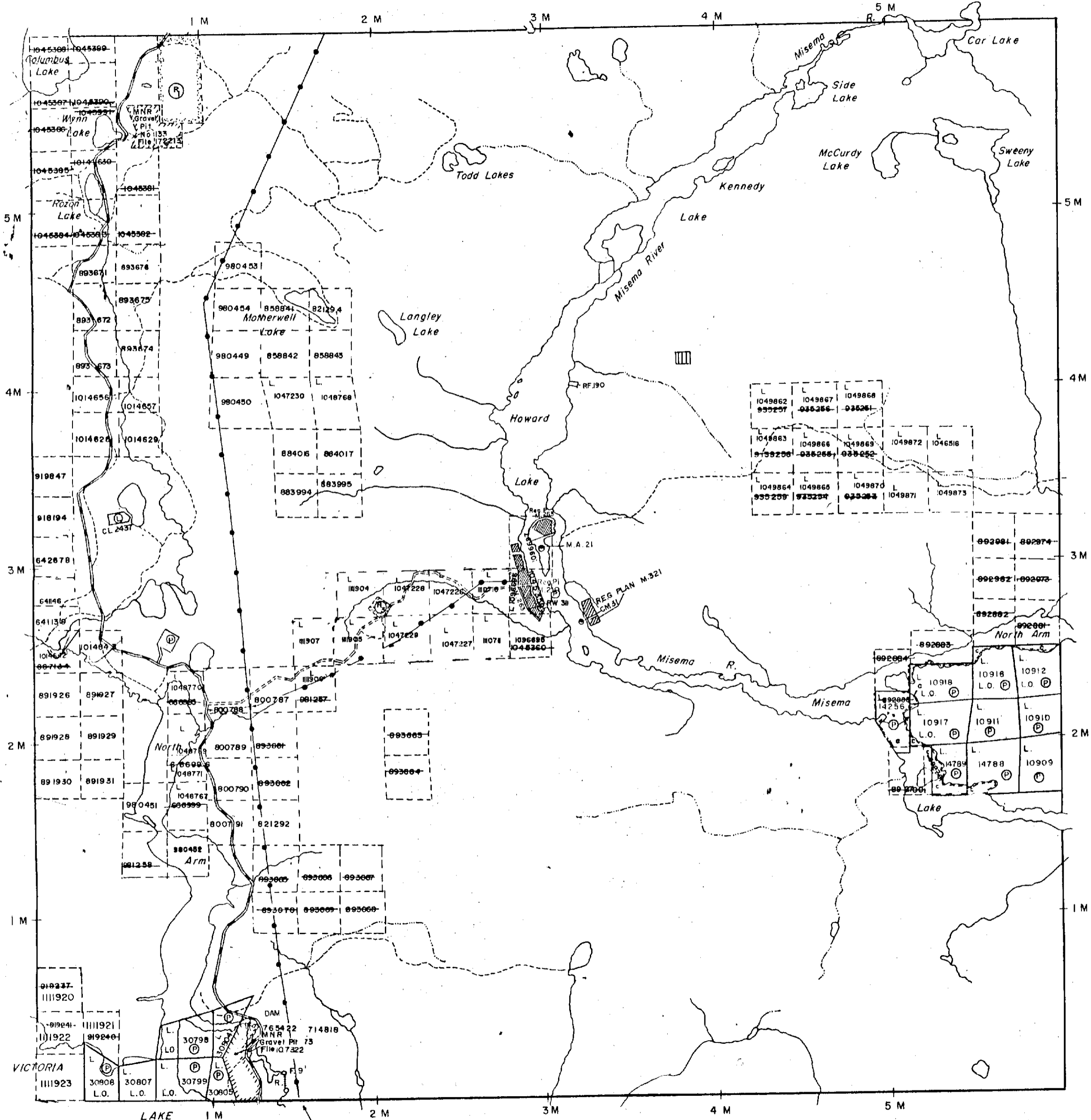
- 400' Surface Rights Reservation along the shores of all lakes and rivers
- Areas withdrawn from staking under Section 36 of the Mining Act (R.S.O. 1980).  
Order No. File Date Disposition
- (R) SURFACE RIGHTS WITHDRAWN FROM STAKING SECTION 43 ORDER (R.S.O.1970) FILE NO. 163497
- (R2) SURFACE RIGHTS WITHDRAWN FROM STAKING SECTION 43 ORDER (R.S.O.1970) NO.NR W.32/79
- (R3) SURFACE + MINING RIGHTS WITHDRAWN FROM STAKING, section 36/80 order NO. W/32/88 ORDER NO. O-34/88 OPENS W/32/88
- (R5) SURFACE + MINING RIGHTS WITHDRAWN FROM STAKING, section 36/80 ORDER NO. W/33/88NR O-07/88L OPENS W-33/88NR
- (H) PROPOSED CROWN SUBDIVISION

PLAN NO. M.321

MINISTRY OF  
NORTHERN DEVELOPMENT  
AND MINES

Morrisette Twp.(M.374)

Katrine Twp.(M.357)



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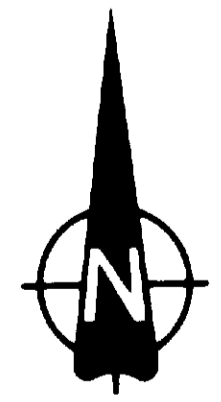
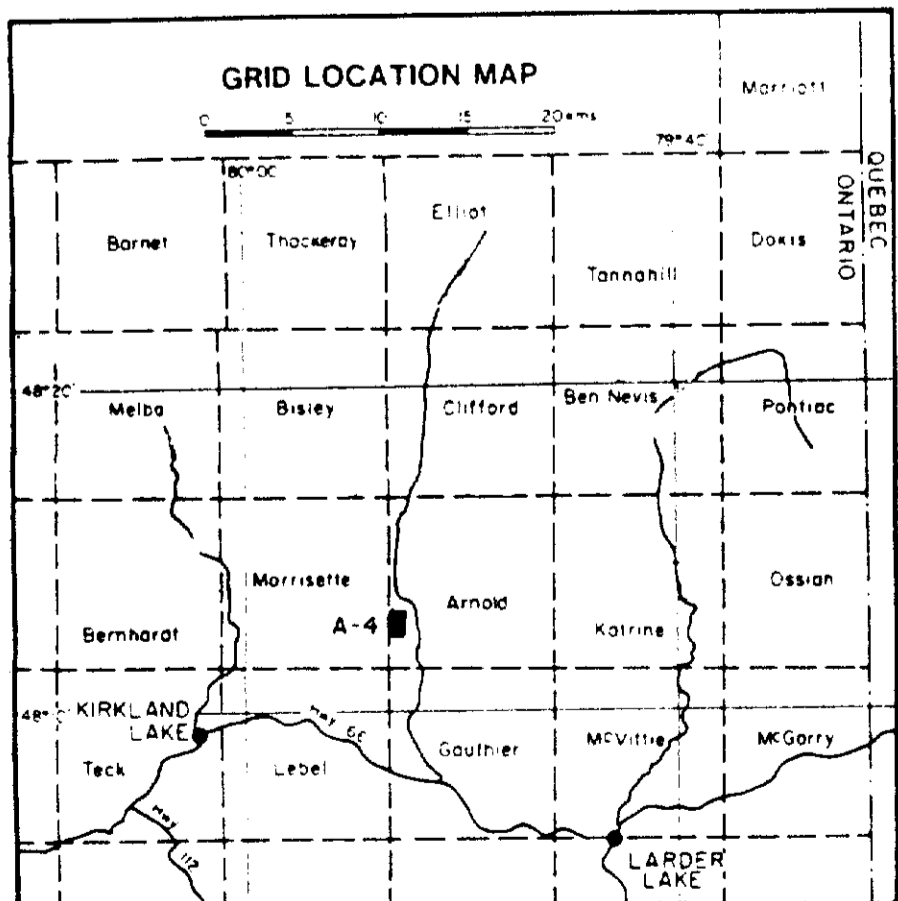
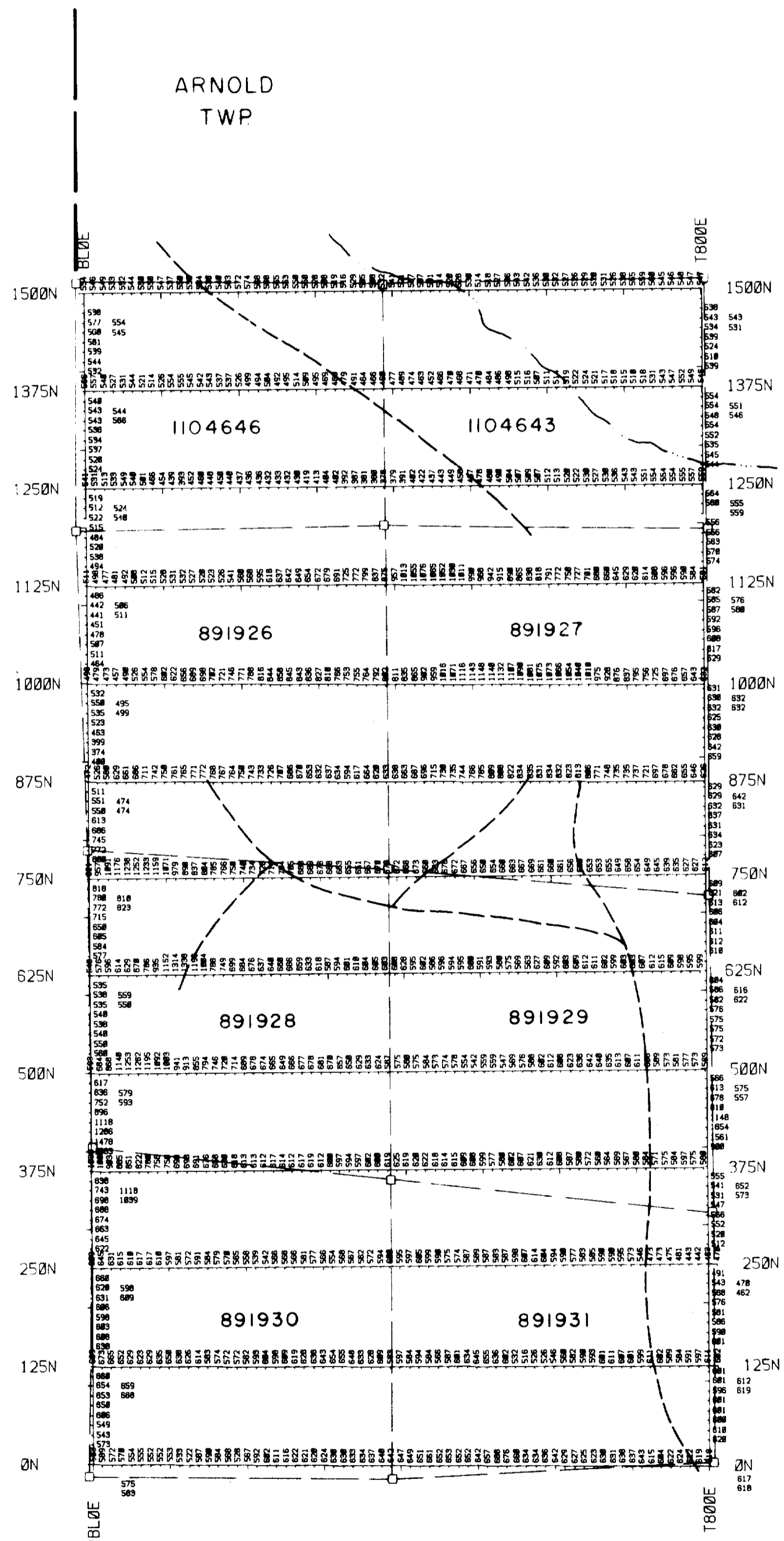
200

or Twp.(M.350)

IN CIRCULATION JULY 8, 1988 T.O.

MORRISETTE  
TWP

ARNOLD  
TWP



0 250 500m

- LEGEND
- Stream, Swamp, Lakeshore.....
  - Claim Post and line.....
  - Instrument..... EDR PPM-500
  - Base Station..... EDR PPM-400
  - Base level..... 50000 nt



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GRID A4 ARNOLD TOWNSHIP  
KIRKLAND LAKE AREA

MAGNETOMETER SURVEY

TOTAL FIELD VALUES

0 100 200 300 meters  
Scale 1 : 5000

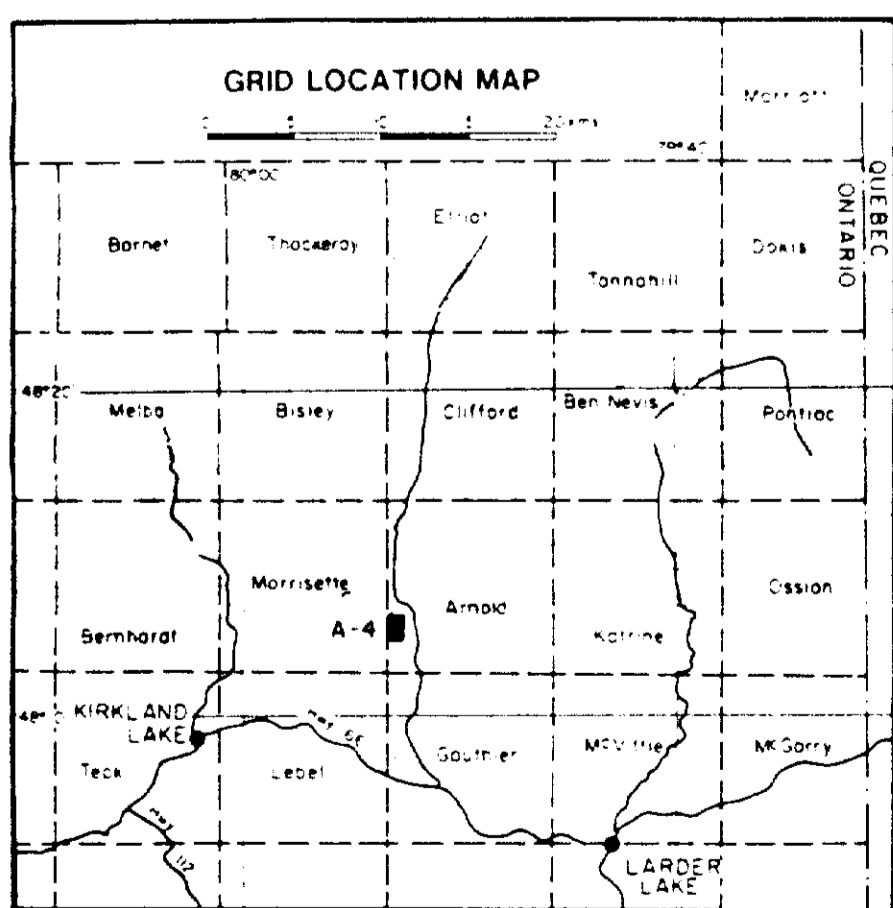
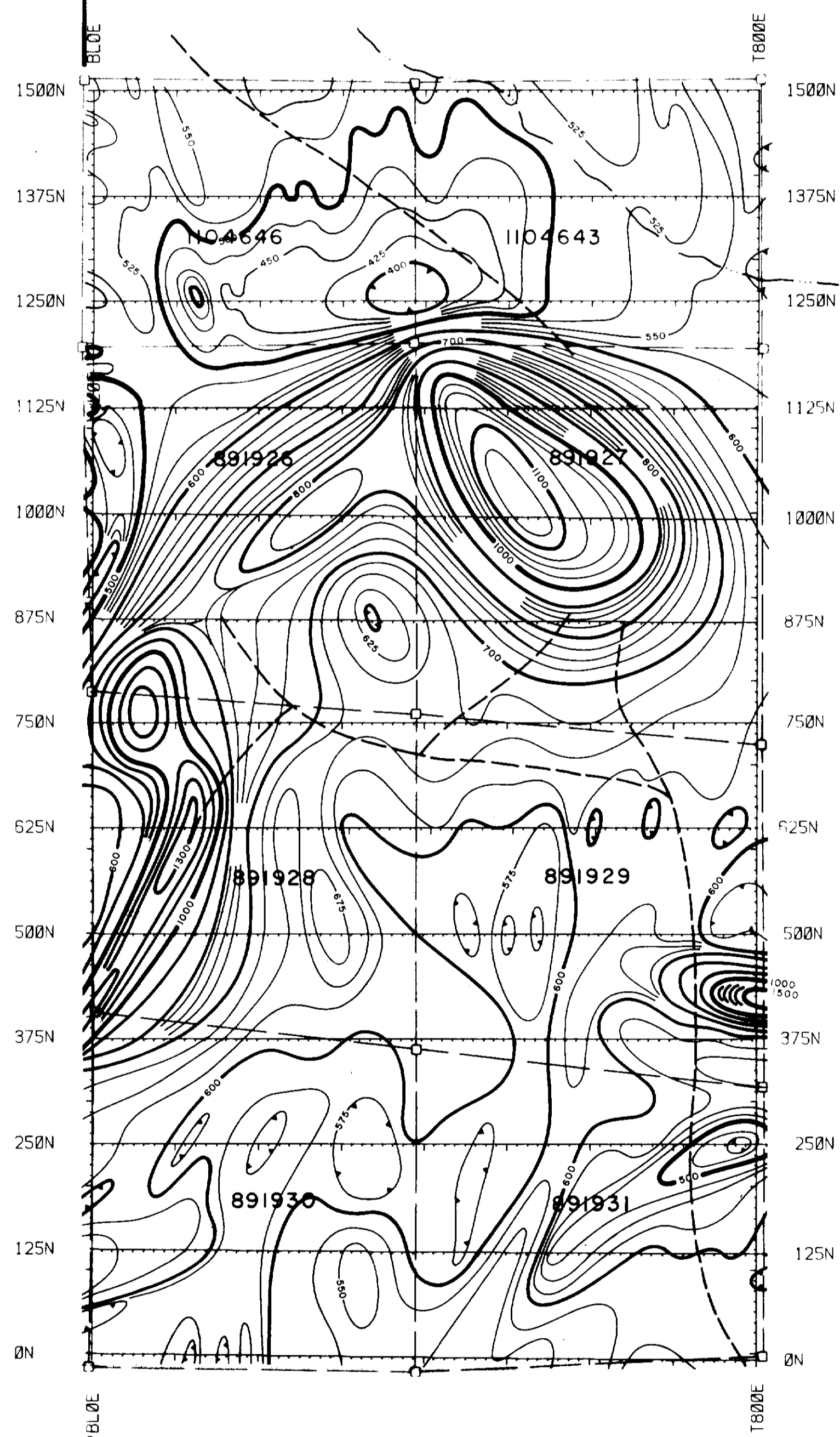
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Mississauga Ontario  
OCTOBER 1987

ORG. 1A



MORRISSETTE  
TWP

ARNOLD  
TWP



0 250 500 meters

- LEGEND
- Stream, Swamp, Lakeshore.....
  - Claim Post and line.....
  - Instrument..... EDR PPM-500
  - Base Station..... EDR PPM-400
  - Contours of Total Field..... 25nt Interval
  - 25nt contour.....
  - 100nt contour.....
  - 500nt contour.....



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 GRID A4 ARNOLD TOWNSHIP  
 KIRKLAND LAKE AREA  
 MAGNETOMETER SURVEY  
 TOTAL FIELD CONTOURS

0 100 200 300 meters  
 Scale 1 : 5000

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 Mississauga Ontario,  
 OCTOBER 1987

DRG 1B

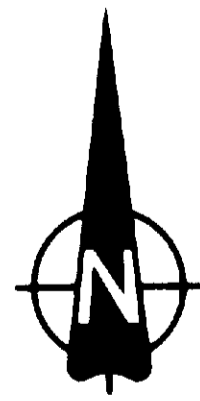
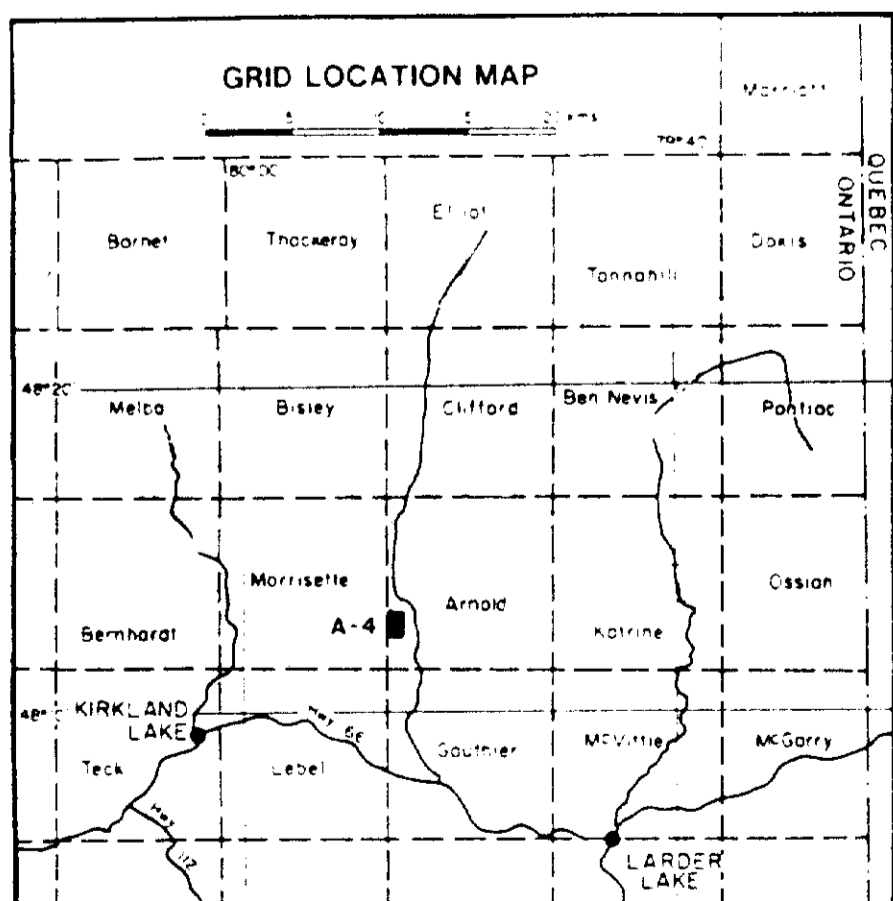
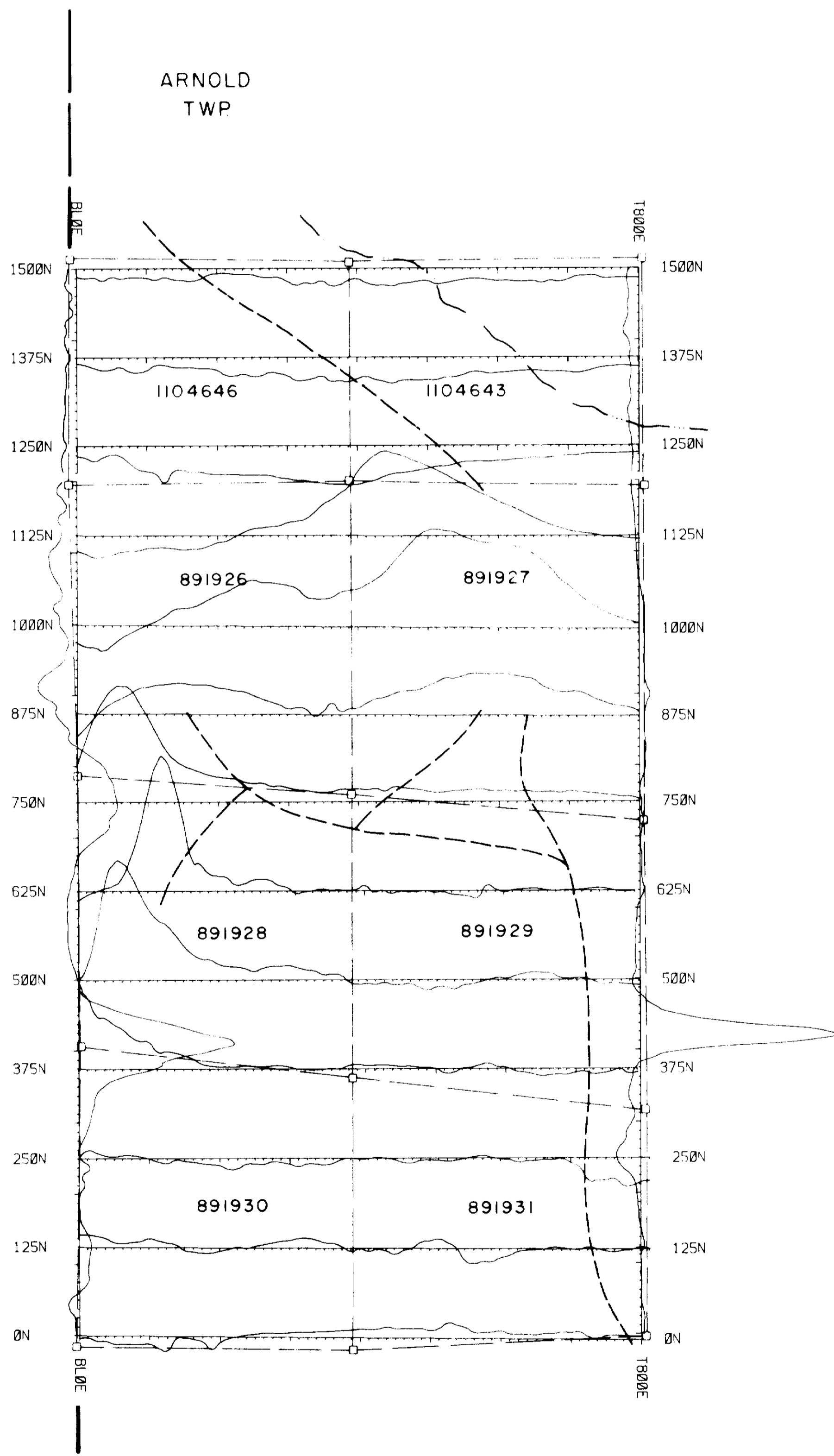
NTS 32 D 4



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MORRISETTE  
TWP

ARNOLD  
TWP



0 250 500 meters

LEGEND  
Stream, Swamp, Lakeshore.....  
Claim Post and line.....  
Instrument..... EDR PPM-500  
Base Station..... EDR PPM-400  
Base level..... 58600 nt  
Profile, Scale = 200 nt/cm.....



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GRID A4 ARNOLD TOWNSHIP  
KIRKLAND LAKE AREA

MAGNETOMETER SURVEY  
TOTAL FIELD PROFILES

0 100 200 300 meters  
Scale 1 : 5000

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OCTOBER 1987

DRG. 1C

