



42A04NW8555 2.2620 KENOGAMING

010

REPORT ON
HORIZONTAL LOOP ELECTROMAGNETIC AND MAGNETOMETER SURVEYS

KENOGAMING CLAIMS

KENOGAMING-1

PROJECT 843-01

RECEIVED
MAR - 2 1978
PROJECTS UNIT

Kenogaming Township
Northeastern Ontario

AMAX MINERALS EXPLORATION
Timmins, Ontario

Timmins, Ontario
January 24, 1978

J. F. Gillan
Geologist

SUMMARY

Four claims were staked in May 1977 to cover an isolated, five line Input anomaly system in Kenogaming township. Amax personnel completed approximately 6 Km. of horizontal loop electromagnetic and magnetometer surveys in November and December on the Kenogaming property.

The electromagnetic survey did not record any anomalies which could be attributed to bedrock conductivity. Further electromagnetic work with different instrumentation, frequencies and cable length is required on the property.

The magnetometer survey outlined a discrete strong magnetic anomaly coincident with the location of the Input anomalies.

INTRODUCTION

This report deals with electromagnetic and magnetometer surveys conducted on the Kenogaming-1 property in Kenogaming township (Project 843-01).

The group of four contiguous claims was acquired on May 16, 1977 by Amax Potash Limited. The claims cover an isolated, five line Input anomaly system with direct magnetic association.

This work was completed by Amax personnel in November and December, 1977.

LOCATION AND ACCESS

The centre of the survey area is located approximately 36 miles southwest of Timmins (Figure 1). Highway 101, joining Timmins and Chapleau, lies 4 miles to the north of Kenogaming township.

It is possible to drive to the Kenogaming-1 property along a lumber road which turns south from Highway 101 near the Kamiskotia River. Winter access along the same road is possible by snowmobile only.

TOPOGRAPHY AND RESOURCES

The eastern half of the claim group is underlain by a relatively high, flat sand plain which is covered by jackpines. A north-south trending cedar and alder swamp occupies the central portion of the claim group.

A few small outcrops break through the thinner sand cover at the western edge of the claim group.

PREVIOUS WORK

No previous work has been filed for assessment credit on or near the property and no evidence of exploration was encountered during field work.

SURVEY METHODS

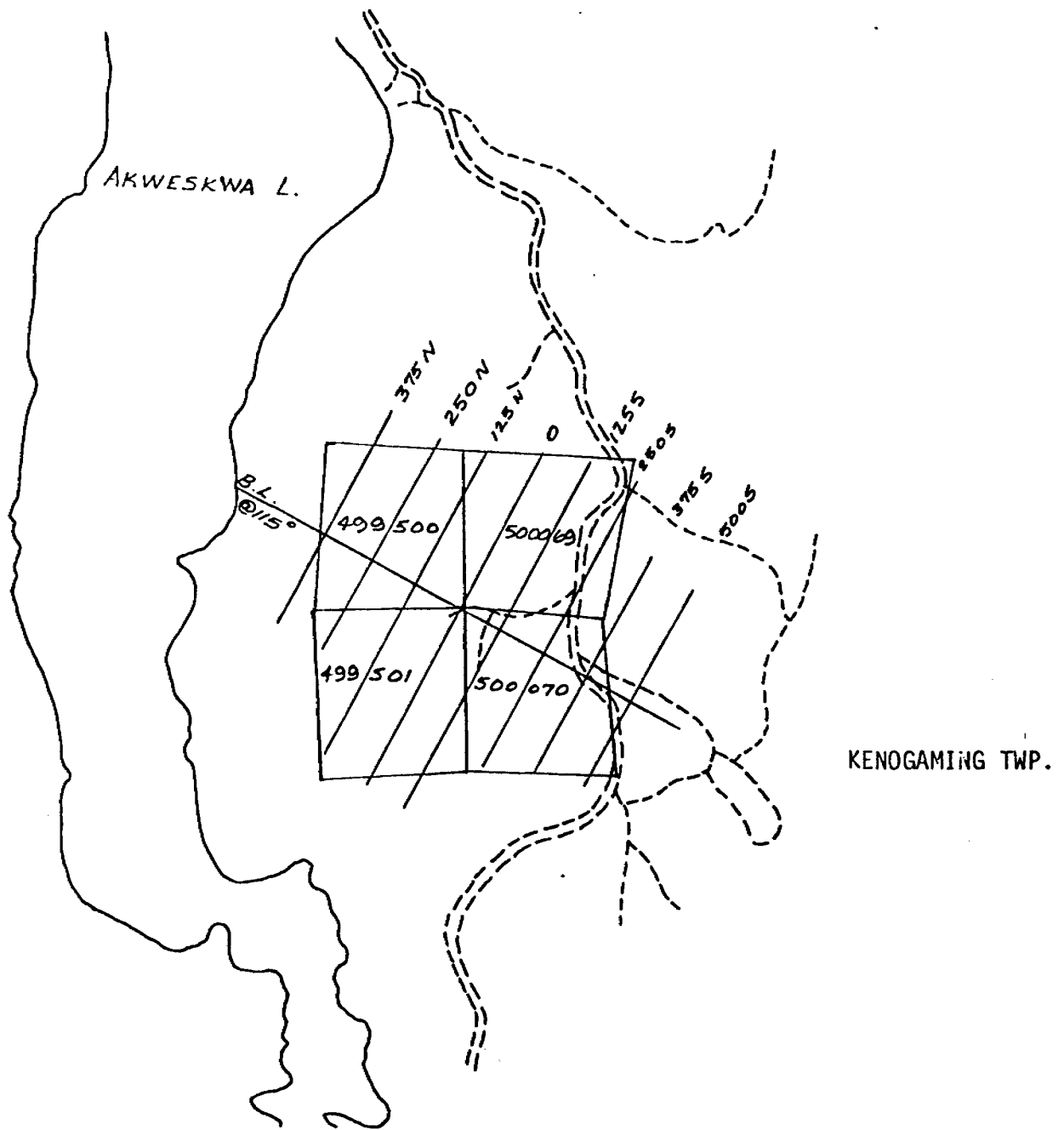
A McPhar VHEM instrument was used in the horizontal loop configuration. Two frequencies of 600 cps and 2400 cps were measured using a cable length of 300 feet. Readings were taken every 25 meters along lines spaced 125 meters apart for a total of 216 readings (Figure 2). The field work was completed by S. Senior and S. Spencer on November 15, 1977.

The magnetometer survey was completed by S. Senior using a Geometrics G-836 (Unimag) proton precession magnetometer and S. Spencer using a Scintrex MP-2 proton precession magnetometer, on November 23, 1977.

RESULTS AND DISCUSSIONS

The results of the electromagnetic survey are presented as Map #1 for the 2400 cps readings and Map #2 for the 600 cps readings with the McPhar VHEM.

The results of the magnetometer survey are presented in contoured form as Map #3.



GRID MAP

PROJECT 843-01

KENOGAMING-01

Kenogaming Township

Scale: 1" = 1/4 mile

Fig. 2

Electromagnetic Survey

No significant anomalous readings defining zones of conductivity were outlined by the McPhar instrument survey.

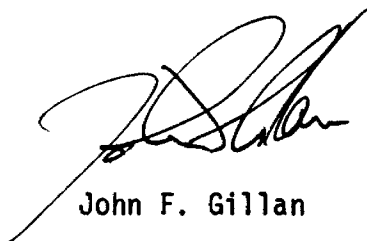
Magnetometer Survey

An oval shaped magnetic high ranging up to 5,500 gammas above background was outlined. At the 1,000 gamma contour interval, the zone is approximately 700 meters east-west and 500 meters north-south. The western part of the zone shows a dipole effect indicating a northerly dip.

The characteristics of the magnetic anomaly are consistent with the magnetic expression associated with an intrusion of ultramafic rocks.

CONCLUSIONS AND RECOMMENDATIONS

The McPhar HEM survey was not successful in locating the weak, five line Input anomaly system. This could be due to the conductor being too deep for the cable length or some other unknown parameter. A horizontal loop survey using an Apex Maxmin II instrument at 1777 and 3555 cps frequencies and a 150 meter cable should be conducted. If the conductor is found, further detailed electromagnetic surveys may be necessary to better define it. Further checks of the A.E.M. data and the ground magnetometer data indicate that further electromagnetic work is required.



John F. Gillan

APPENDIX A
SCHEDULE OF CLAIMS
PROJECT 843

Claim Group	Township	Number	Claim Numbers	Recording Date
843-01	Kenogaming	4	P-499500 - 499501 P-500069 - 500070	May 16, 1977
843-02	Kenogaming	4	P-500459 - P-500462	August 31, 1977



GEOPHYSICAL - GEOLOGICAL TECHNICAL DATA



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

Type of Survey(s) Electromagnetic, Magnetic

Township or Area Kenogaming Township

Claim Holder(s) Amax Potash Ltd.

Survey Company Amax Minerals Exploration

Author of Report J. F. Gillan

Address of Author 255 Algonquin Blvd. W. Timmins

Covering Dates of Survey October 1977 - January 1978
(linecutting to office)

Total Miles of Line Cut 4.4 miles

MINING CLAIMS TRAVERSED
List numerically

P 499500
(prefix) (number)
P 499501
P 500069
P 500070

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 40
--Magnetometer 20
--Radiometric
--Other
Geological
Geochemical

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

Magnetometer Electromagnetic Radiometric
(enter days per claim)

DATE: Feb. 24, 1978 SIGNATURE:
Author of Report or Agent

Res. Geol. Qualifications

Previous Surveys

Table with 4 columns: File No., Type, Date, Claim Holder

TOTAL CLAIMS 4

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 216 Number of Readings 216
Station interval 25 meters Line spacing 125 meter
Profile scale 1 cm = 50 m = 20%
Contour interval 500~~x~~, 1000~~x~~

MAGNETIC

Instrument Geometrics G 836 (Unimag) and Scintrex MP-2
Accuracy - Scale constant ±10~~x~~ ± 1~~x~~
Diurnal correction method Base Station Checks
Base Station check-in interval (hours) One hour
Base Station location and value Line 0 X Base Line, 60,000~~x~~

ELECTROMAGNETIC

Instrument McPhar VHEM
Coil configuration Horizontal
Coil separation 300 feet
Accuracy + 1%
Method: Fixed transmitter Shoot back In line Parallel line
Frequency 600 cps and 2400 cps
(specify V.L.F. station)
Parameters measured In phase and Out of phase

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 _____

Sewell Twp. M.1102

THE TOWNSHIP OF
2.2620 OF

KENO GAMING

DISTRICT OF
SUDBURY

PORCUPINE
MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

LEGEND

PATENTED LAND	● or ⊙
CROWN LAND SALE	C.S.
LEASES	⊙
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	⊙
PATENTED S.R.O.	⊙

NOTES

400' Surface Rights reservation along the shores of all lakes and rivers.

DATE OF ISSUE
MAR - 3 1978
SURVEYS AND MAPPING
BRANCH

PLAN NO.- M.967

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

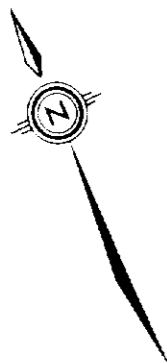
Penhorwood Twp. M. 1055

Pharand Twp. M. 306

Crothers Twp. M. 742

Regan Twp. M.1075





L-375 N

L-250 N

L-125 N

L-0

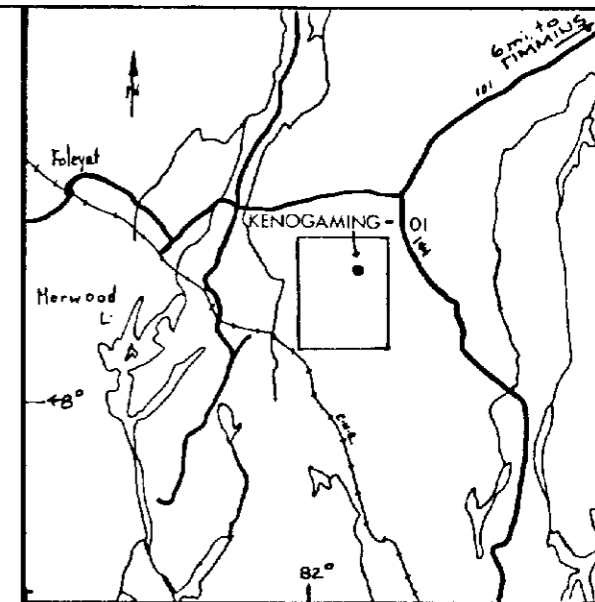
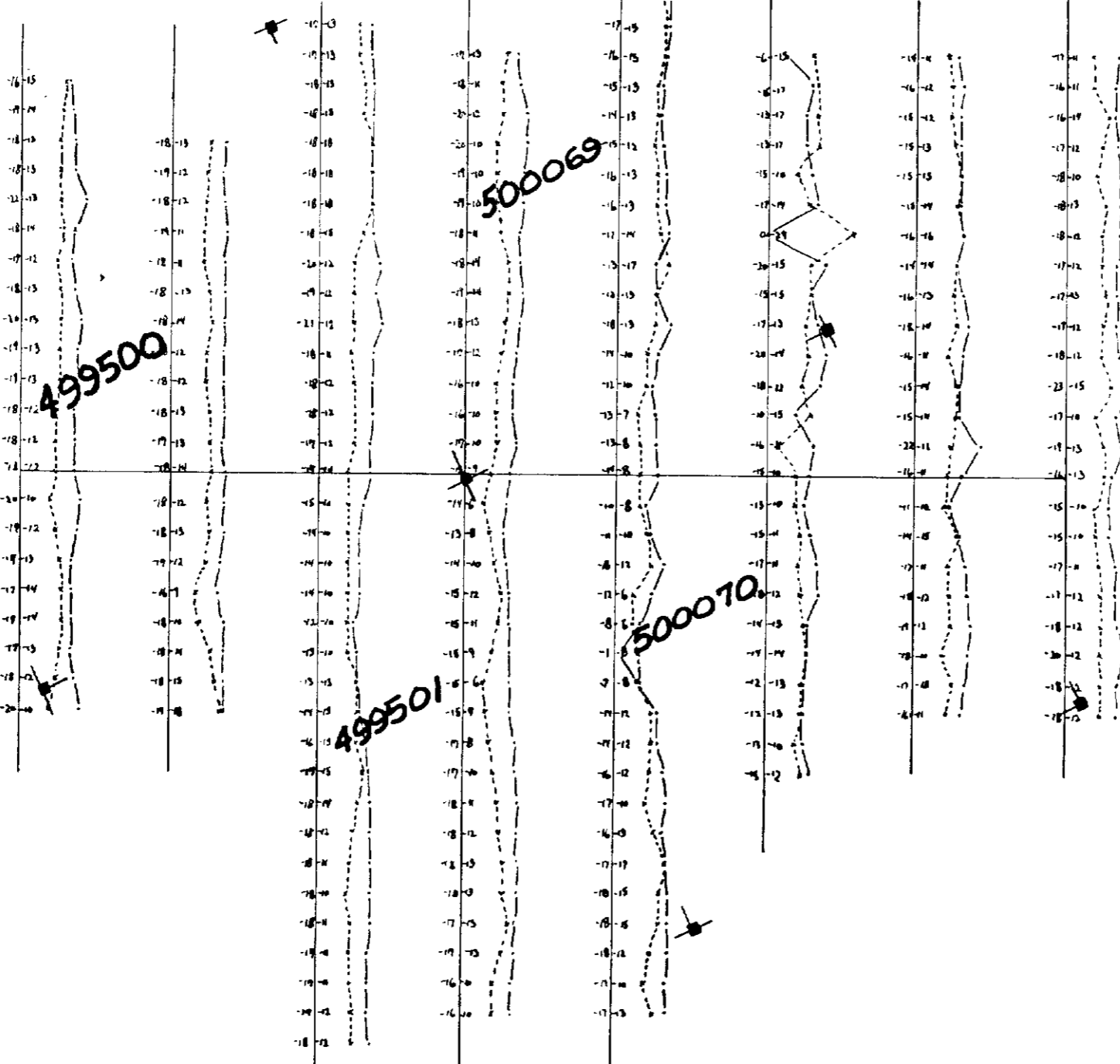
L-125 S

L-250 S

L-375 S

L-500 S

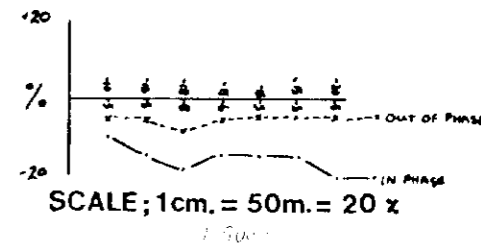
400 E
300 E
200 E
100 E
0
100 W
200 W
300 W
400 W
500 W



INDEX MAP
Scale: 1 in. = 16 mi.

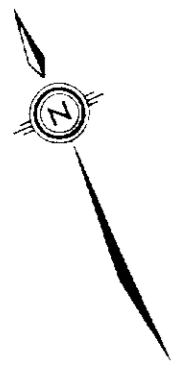
LEGEND

INSTRUMENT; MCPHAR H.E.M.
FREQ; 2400 c.p.s. 300 ft cable
OPERATORS; S.S., S.S.
DATE; NOV. 15, 1977



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AMAX EXPLORATION INC.		
TYPE OF SURVEY MCPHAR VHEM		
AREA KENOGAMING TWP.		
LOCATION 843-01		
DRAWN BY S.S.	SCALE: 1cm : 50m	DATE Nov 15/77
TRACED BY	MAP No. 1 N.T.S. REF 42-A-4	REVISED
TO ACCOMPANY Geophysical Report		
BY J. Gillen DATE Jan. 24/78		



L - 375 N

L - 250 N

L - 125 N

L - 0

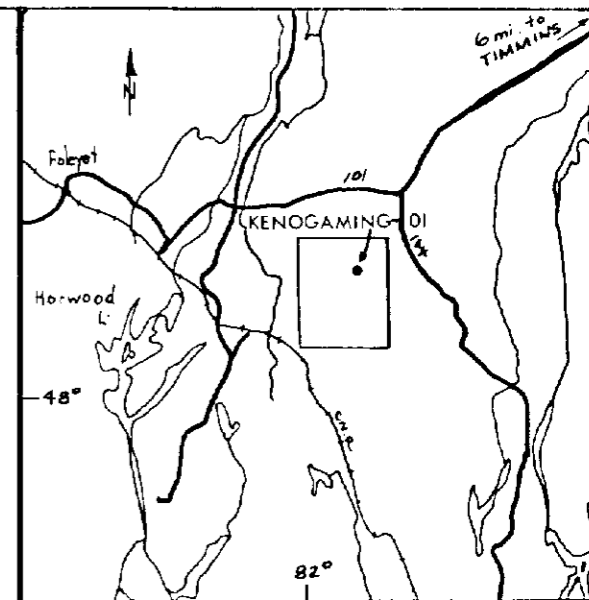
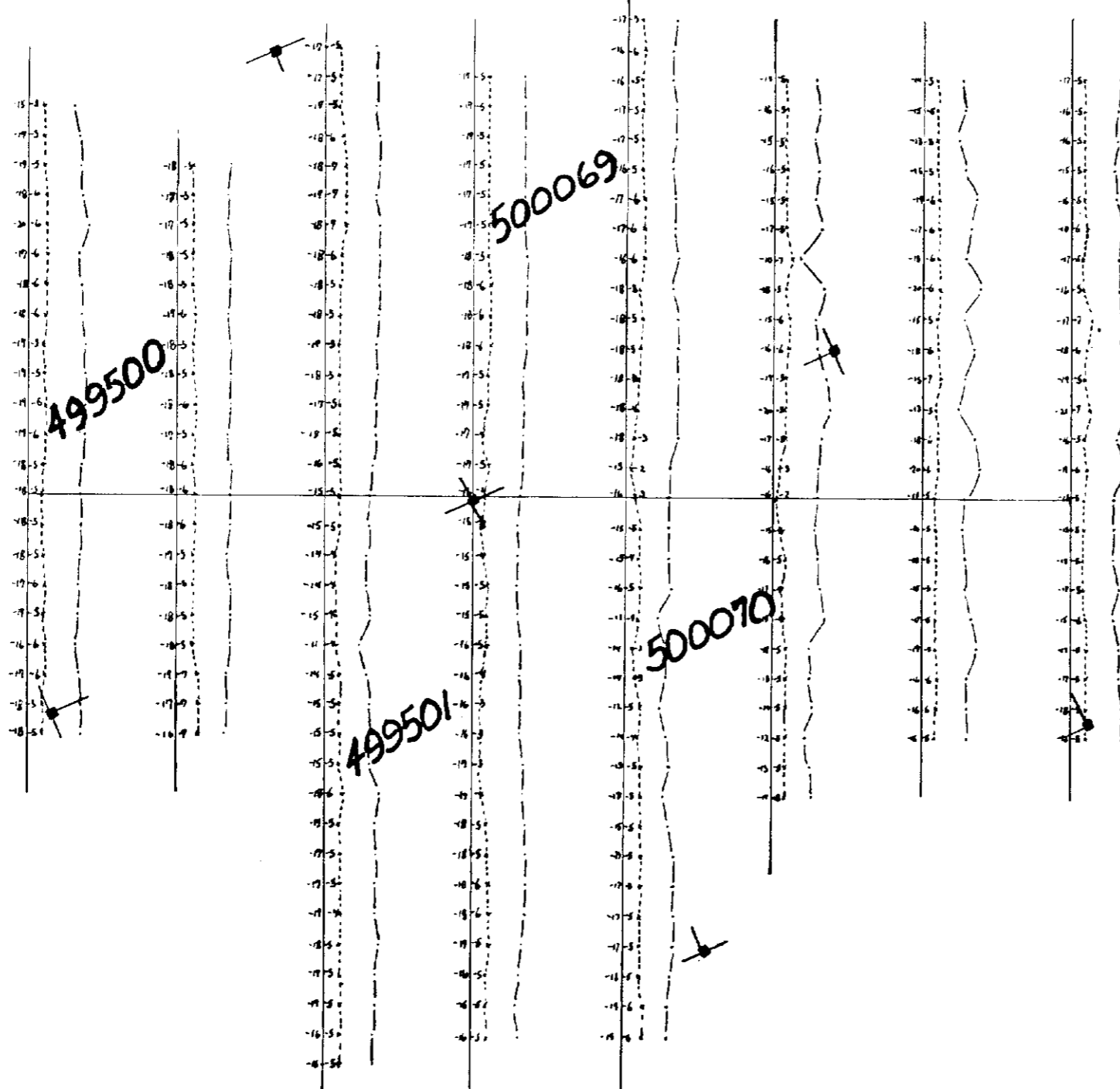
L - 125 S

L - 250 S

L - 375 S

L - 500 S

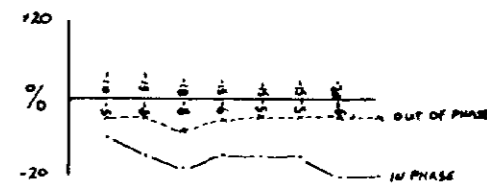
400 E
300 E
200 E
100 E
0
100 W
200 W
300 W
400 W
500 W



INDEX MAP
Scale: 1 in. = 16 mi.

LEGEND

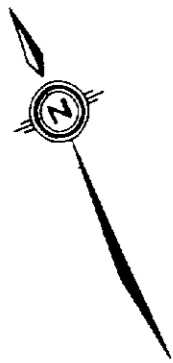
INSTRUMENT; MCPHAR H.E.M.
FREQ; 600 c.p.s. 300 ft cable
OPERATORS; S.S., S.S.
DATE; NOV. 15, 1977



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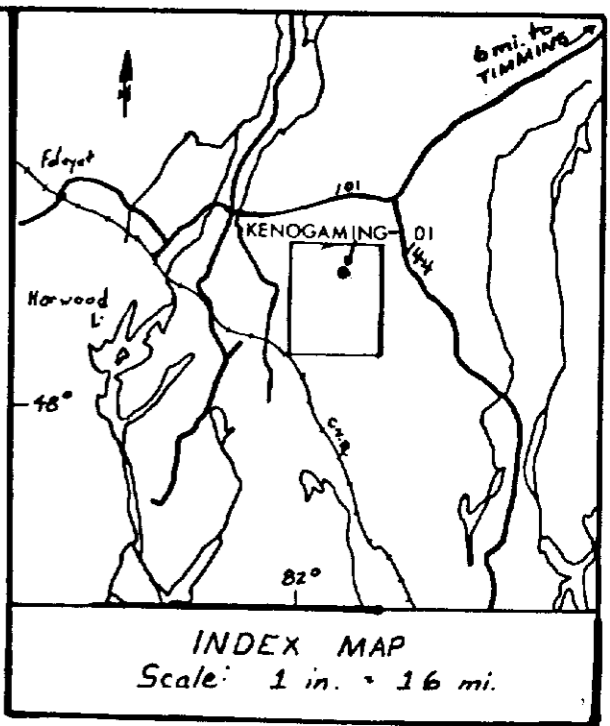
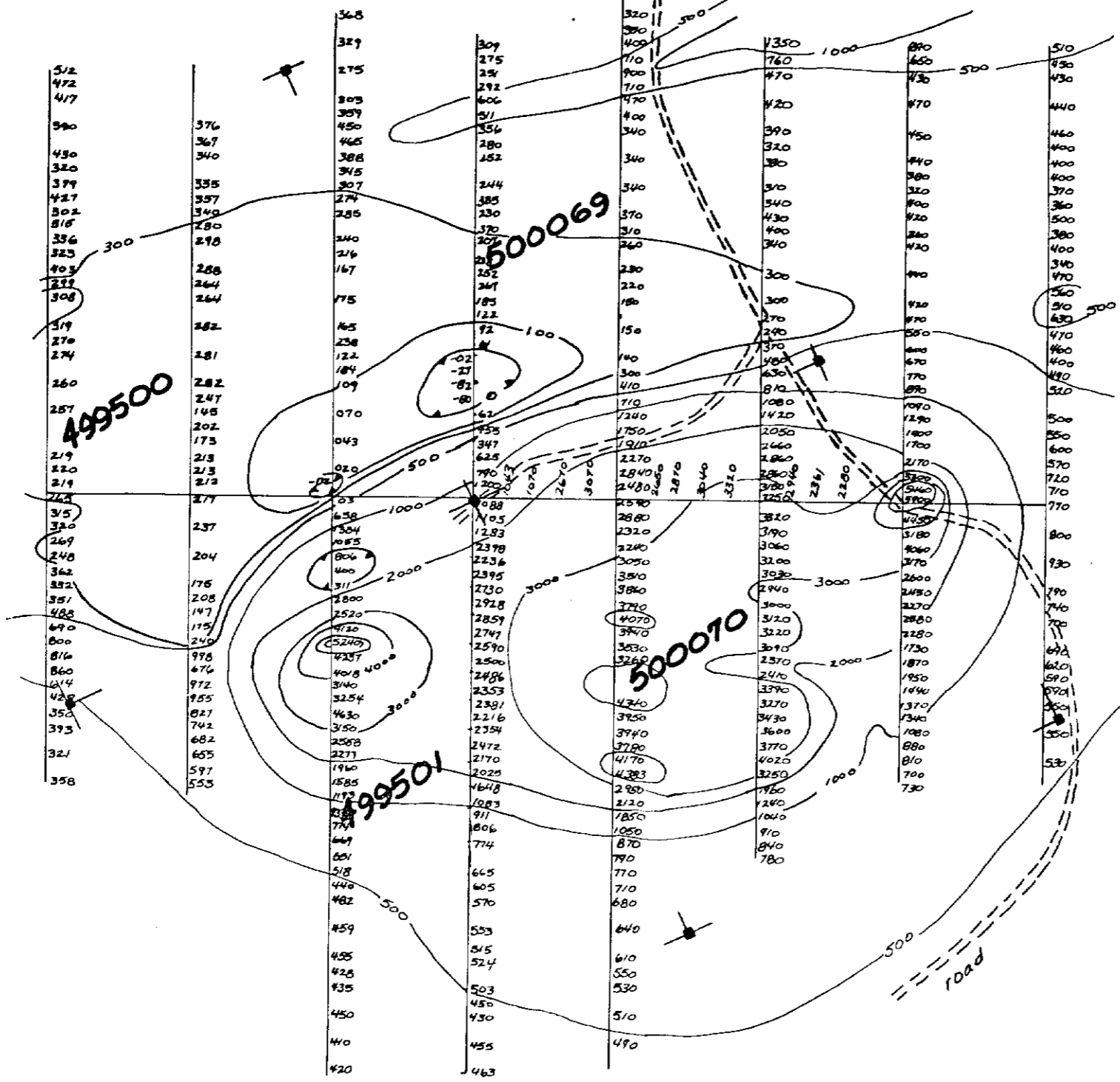
220

AMAX EXPLORATION INC.		
TYPE OF SURVEY MCPHAR VHEM		
AREA: KENOGAMING		
LOCATION: 843-01		
DRAWN BY S.S.	SCALE: 1cm : 50m	DATE Nov 15/77
TRACED BY	MAP No. 2	REVISED
	N.T.S REF 42-A-4	
TO ACCOMPANY: Geophysical Report		
BY: J. Gillen DATE: Jan. 24/78		



L-375 N
L-250 N
L-125 N
L-0
L-125 S
L-250 S
L-375 S
L-500 S

400 E
300 E
200 E
100 E
0
100 W
200 W
300 W
400 W
500 W



LEGEND

INSTRUMENT: Unimag Proton Mag
Scintrex Proton Mag
SURVEYED BY: S.S., S.S.
BACKGROUND: 59,000 γ



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AMAX EXPLORATION INC.		
TYPE OF SURVEY MAGNETOMETER		
AREA KENO GAMING TWP.		
LOCATION 843-01		
DRAWN BY	SCALE 1cm : 50m	DATE
S.S.		Nov 23/77
TRACED BY	MAP No 3	REVISED
S.G.	NTS REF 42-A-4	
TO ACCOMPANY Geophysical Report		
BY J. Gillen		DATE Jan 24/78