REPORT ON

MAGNETOMETER AND VLF-EM SURVEYS

SKEAD TOWNSHIP, Ontario

by

R.A. MacGregor, P. Eng.

May 14, 1980

I. INTRODUCTION

Magnetometer and VLF-EM surveys were carried out over cut lines on a group of claims in north-east Skead township. Results are plotted on the enclosed maps.

II. LOCATION, ACCESS AND OWNERSHIP

The property is located in lots 10 and 11 Concessions 5 and 6 Skead Township, Ontario. There are 10 claims in the group numbered L467263; L476690 to 476691; L511632; L511637 to 511639; L512352; L523077 and L531349 recorded in the name of Superior Northwest Inc., Box 1110, Sault Ste. Marie, Ontario.

The claims may be reached by a bush road running east from Highway 624 about 8 miles south of Larder Lake, Ontario and which crosses the north-west part of the property. The bush road is usable by 4-wheel drive or bush vehicles in dry weather. Grace Lake which adjoins the north boundary and Mageau Lake adjoining the south boundary of the property are suitable for landing light float planes.

III. PREVIOUS EXPLORATION

The claims have been explored in the past for gold. A shaft reported to be 500 feet deep with some drifting on the 112' level is on claim L467263. This work was done during the 1920's. A number of other old pits and trenches may be seen about the claims. There is little information now available on this past work. More recently some stripping and a few short diamond drill holes were put down in the vicinity of the shaft during the early 1960's. Some interesting gold assays across narrow widths are reported.

VI. TOPOGRAPHY

The major part of the property is covered by Pleistocene drift, gravel and swamp. Rocky hills up to 20 feet above the surrounding area with fair to good rock exposure occur in a few areas of basalt and ultramafic outcrop. A large part of the claims are covered with drift, swamp or beaver ponds with scattered very small outcrops in some of the higher areas. The property is covered with a dense second growth of poplar, birch, alder and wild cherry with black spruce in the more swampy parts. With this is a thick growth of underbrush which makes the location of small outcrops difficult. A number of beaver ponds, or now dry beaver meadows cover many of the stream courses.

V. SURVEY PROCEDURE

A Baseline was laid out across the property at an Azimuth of approximately 315°. Crosslines were cut at 400 foot intervals perpendicular to the baseline north-east and south-west. The picket lines were chained and picketed every 100 feet. The pickets were marked with flourescent red paint for easier observation.

Magnetometer readings were taken with a Barringer GM-122 Proton Precession Magnetometer at 100 foot intervals along all lines. The looping method was used for control of diurnal variation. In this method a base station is selected, and readings taken along lines describing a loop, arriving back at the starting base station in less than two hours. A second loop is then started using either the same base station or another which is tied to the

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SURVEY PROCEDURE (Continued)

previous loop. Readings are then corrected for diurnal variation by assuming the time between readings is the same and distributing any variation equally among the intervening readings. No correction was applied less than the accuracy of the base station readings.

A VLF-EM survey was carried out using a Crone Radem instrument set to the signal from Annapolis, Maryland (21.4KHz) to check for north-south conductors. Readings were taken at 100 foot intervals using the procedure outlined in Appendix I. The looping method was used for control of variation, the same as described for the magnetometer survey excepting that the time was noted for each station.

VI. GEOLOGY

The property is underlain by a volcanic sequence of rocks intruded by a 400 foot wide Algoman felsic intrusive body trending northwest-southeast across the claims. Quartz veins carrying gold occur in the felsic intrusive near its contact with the volcanics. Sulphides have also been noted in the volcanics.

VII. CONCLUSIONS

Magnetometer

The magnetic survey shows a relatively flat magnetic profile excepting for local magnetic highs. At one location on Line 0 a lamprophyre dyke outcrops. The other locations are probably also narrow mafic or ultramafic dykes.

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VLF-EM

A fairly strong northwest-southeast trending anomaly which appears to split into 2 parallel anomalies to the south occurs some 700 feet east of the shaft. The anomaly should be further checked by a search for sulphides along its length.

A second anomaly occurs near the west boundary in the south central part of the claims and should also be checked on the ground.

Both anomalies appear to parallel the felsic intrusive a few hundred feet from its margin. The are worth checking for base metal sulphides.

A third anomaly occurs along the long lines to the northeast 16 SW to 24 SW. It should be traced out by further surveying along adjacent lines.

Respectfully submitted

R. MacGregor

May 14, 1980

R.A. MacGregor, P. Eng.

Ontario

Ministry of Nat

GEOPHYSICAL – GEOLO(
TECHNICAL DA'

32D04SE0370 2.3329 SKEAD

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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) Magnetometer, VLF-EM

Township or Area Skead

Claim Holder(s) Superior Northwest Inc.
Box 1110, Sault Ste. Marie, Ontario

Survey Company Colex Explorations Inc.

Author of Report R.A. MacGregor,

Address of Author 134 Palace Dr. SAULT STE. MARIE

Covering Dates of Survey February - May 1980
(linecutting to office)

Total Miles of Line Cut

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	20
--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: May 14/80 SIGNATURE: R. MacGregor
Author of Report or Agent

Res. Geol. _____ Qualifications 2.1102 + on this file

Previous Surveys

File No.	Type	Date	Claim Holder
			V.D.

OFFICE USE ONLY

MINING CLAIMS TRAVERSED
List numerically

(prefix)	MAG	EM	(number)
L511638	O.K.	O.K.	
L476690	O.K	O.K.	
L512352	✓ - 2/4	O.K.	
L511639	O.K.	O.K.	
L523077	✓ -5/4	-1/4	
L442050	✓ -3/4	-3/4	

If space insufficient, attach list

TOTAL CLAIMS 6

837 (5/79)

GEOPHYSICAL TECHNICAL DATA

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

VLF-EM - 219

Number of Stations _____ Number of Readings Mag - 240

Station interval 100 feet Line spacing 400 feet

Profile scale 1" = 40°

Contour interval 500 gammas

MAGNETIC

Instrument Barringer GM-122

Accuracy – Scale constant 1 gamma

Diurnal correction method Looping method

Base Station check-in interval (hours) 2 hours or less

Base Station location and value Various along baseline

ELECTROMAGNETIC

Instrument Crone Radem

Coil configuration N/A

Coil separation N/A

Accuracy ± ½°

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

Frequency Annapolis, Maryland 21.4KHz
(specify V.L.F. station)

Parameters measured Dip angel of the Resultant Field

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 _____

NOTES

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

All unpatented mining claims accepted subject to survey, Section 118 of the Mining Act (R.S.O. 1970).

SAND and GRAVEL

(9) M.T.C. PIT No. 1230

Areas withdrawn from staking under Section 43 of the Mining Act. (R.S.O. '70)

	Order No.	File	Date	Disposition
(R1)	W11/79	188522	June 19 '79	surface & mining rights

HEARST TP. M.354

CATHARINE TP. M.336

RATTRAY TP. M.384

BAYLY TP. M.323

Benson

St. Anthony

Lake

Montague L.

Miron L.

Flanagan Cr.

Grace

Mageau

Costello

Kearney

Larder River

Skead

Ginn

Falls

M. R. 3

Skidoo

VI V IV III II I

1 2 3 4 5 6 7 8 9 10 11 12

47° 55' 37" Approx.

79° 38' 00"

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)

DATE OF ISSUE
JUN 11 1980
SURVEYS AND MAPPING BRANCH

SCALE : 1 INCH 40 CHAINS

FEET 0 500 1000 2000 4000 6000 8000

METRES 0 200 400 600 800 1 KM 2 KM

ACRES	HECTARES
40	16

TOWNSHIP

2.3329

SKEAD

DISTRICT

TIMISKAMING

MINING DIVISION

LARDER LAKE

Ministry of Natural Resources

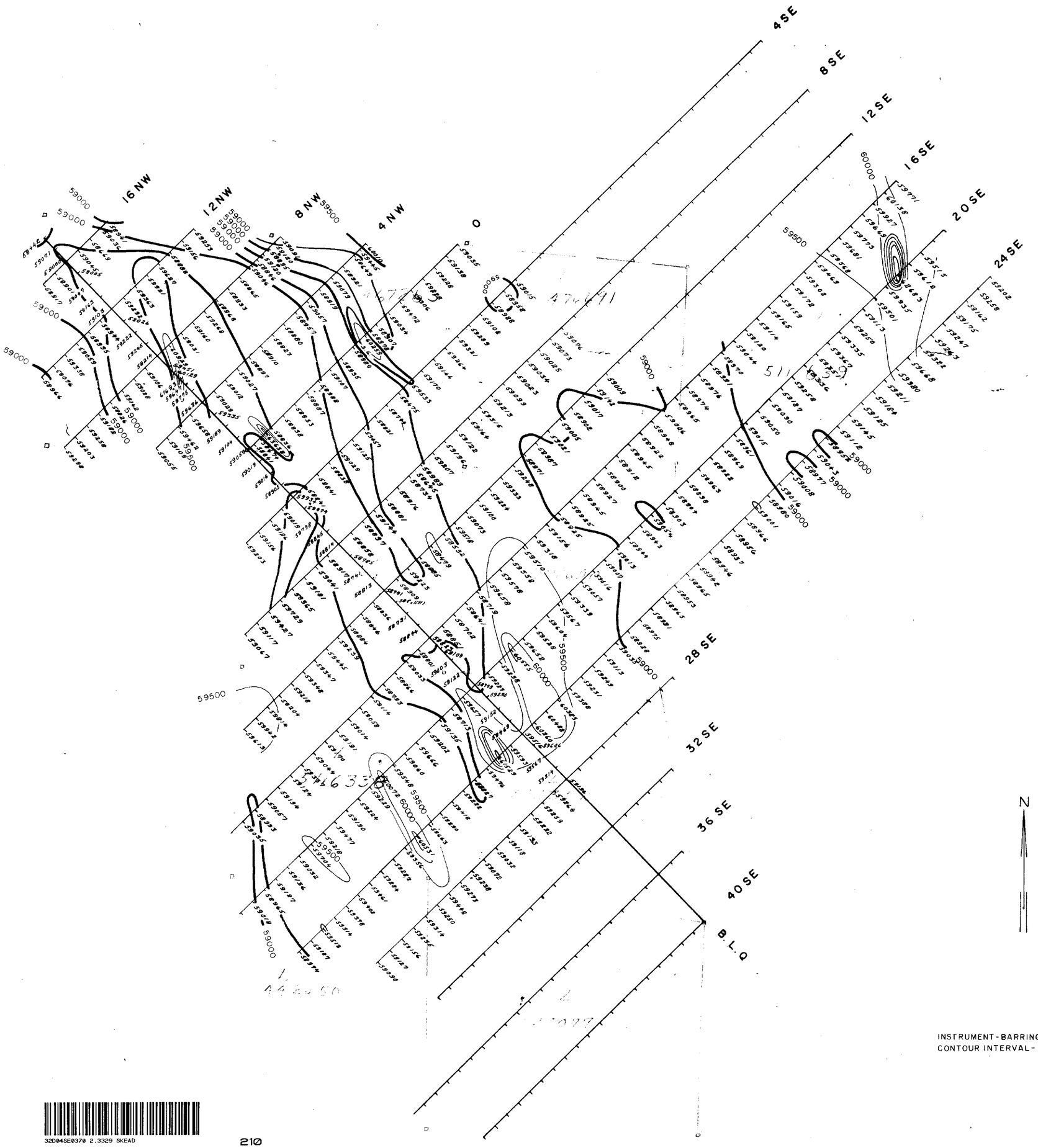
Ontario Surveys and Mapping Branch

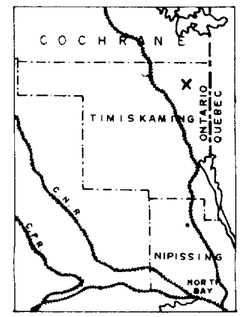
Date 10/4/74

Whitney Block
Queen's Park, Toronto

Plan No. M.387

A.T.V.





Scale 1 inch to 60 miles

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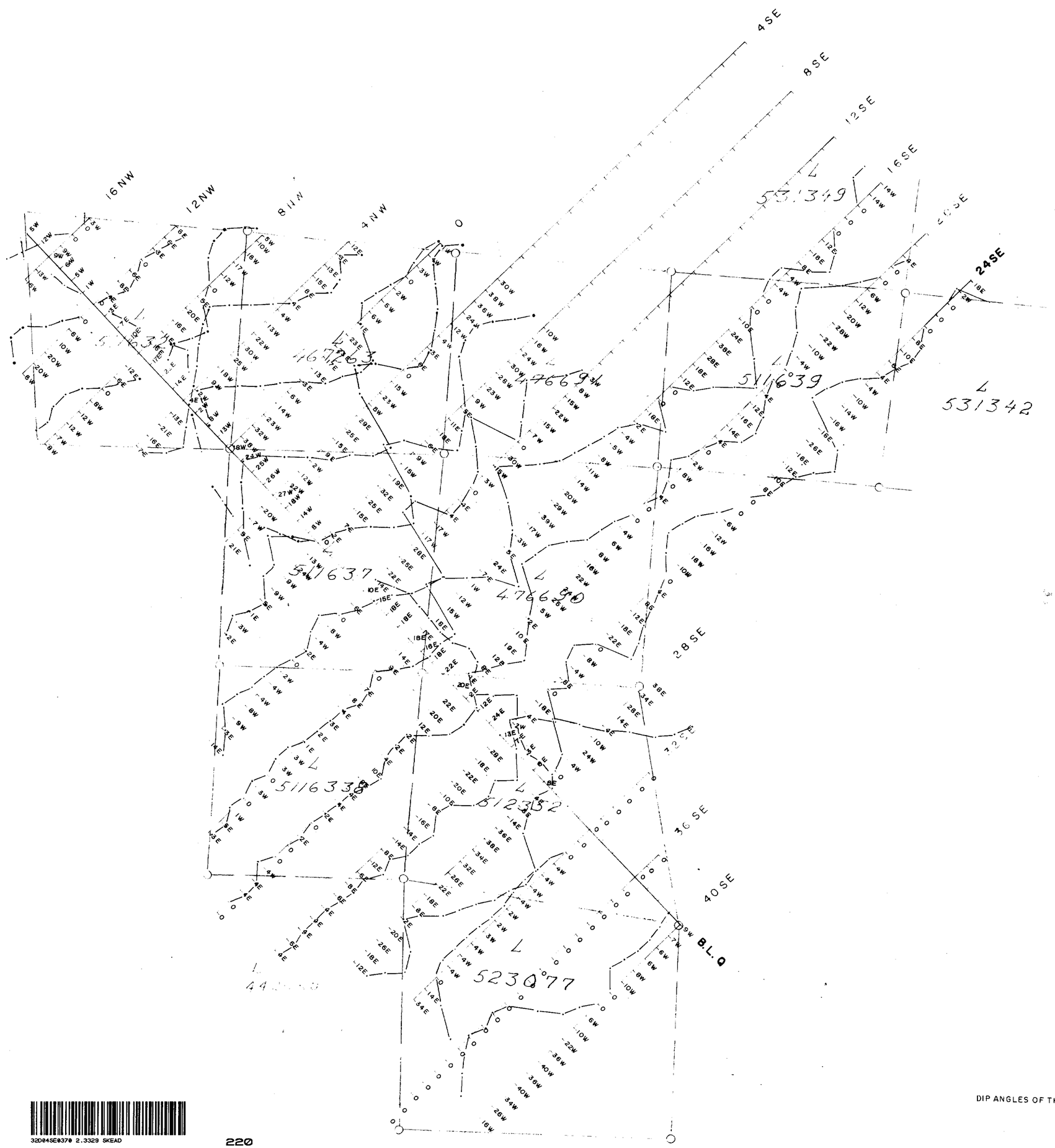
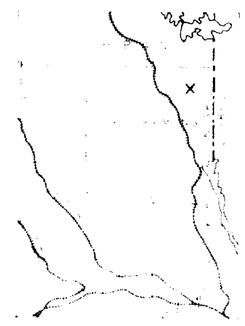
INSTRUMENT - BARRINGER GM-122
CONTOUR INTERVAL - 500 GAMMAS

MAGNETOMETER SURVEY
SKEAD TOWNSHIP
SCALE 1"=400'





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VLF-EM SURVEY

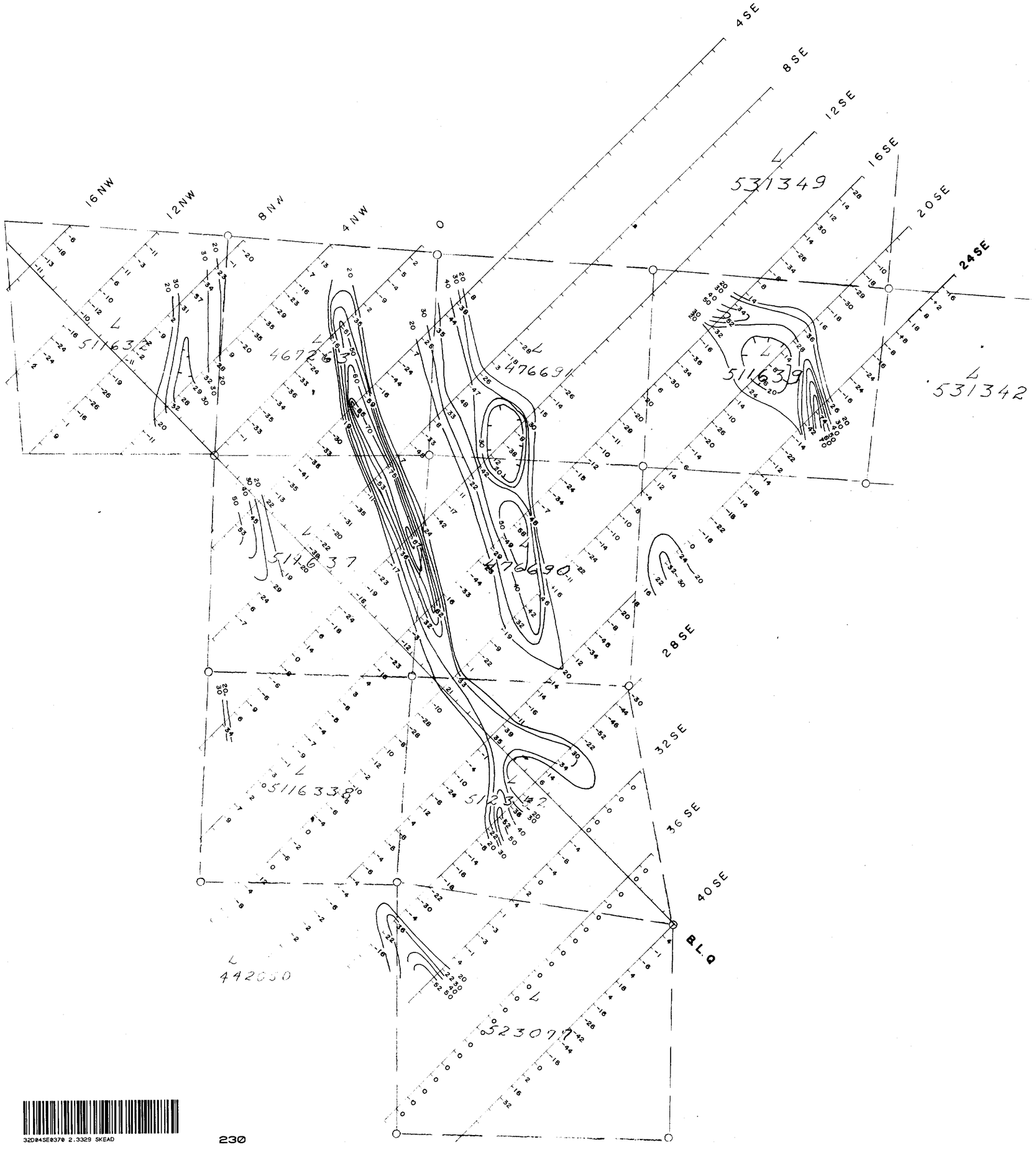
LOTS 10&11 CONCESSION 5 & 6

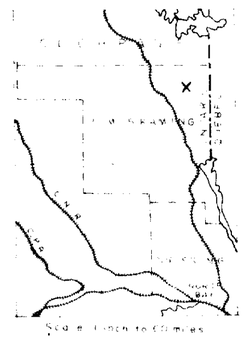
SKEAD TOWNSHIP

SCALE 1"=40'

DIP ANGLES OF THE RESULTAN FIELD

INSTRUMENT: CRONE RADEM
STATION: ANNAPOLIS, MARYLAND (21.4 KHz)
SCALE: 1"=40°





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VLF-EM SURVEY

FRAZER CONTOURS

SKEAD TOWNSHIP

SCALE 1"=400'

INSTRUMENT: CRONE RADEM
STATION: ANNAPOLIS, MARYLAND (21·4 KHz)