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AIRBORNE MAGNETIC AND ELECTROMAGNETIC SURVEY

NET LAKE AREA, STRATHY TOWNSHIP, ONTARIO

GOLDFIELDS MINING CORPORATION LIMITED

A. R. Clark.

ABSTRACT

Late in 1963 the claims were investigated as part of a larger area using combined airborne magnetic and electromagnetic methods.

The results are described in a three (3) page report with four (4) bound in maps (part of Dwgs. 1436, 1437, 1438 and 1439).

AIRBORNE MAGNETIC AND ELECTROMAGNETIC SURVEY

NET LAKE AREA, STRATHY TOWNSHIP, ONTARIO

GOLDFIELDS MINING CORPORATION LIMITED

INTRODUCTION

The Net Lake claims of the Goldfields Mining Corporation Limited were flown as part of a larger survey.

LOCATION AND ACCESS

The claims are situated northwest of Goward, Ontario and cover part of the northwest arm of Net Lake as well as the ground to the west.

Highway No. 11 passes close to the eastern boundary of the claims.

MINERALIZATION

The area is known to be mineralized with pyrite, pyrrhotite and chalcopyrite as evidenced by surface outcrops and drilling through the ice of the lake.

The survey was completed in the hope of outlining concentrations of sulphides which could be profitably mined.

GEOPHYSICAL SURVEY

The survey was carried out with electromagnetic and magnetic instruments in a Beaver aircraft.

(a) Method of Positioning

The flight path of the aircraft was recorded by photographing topographic features at selected spots along a line. Whenever a photo was taken a mark was

made on both the magnetic and electromagnetic record. Lines were 1000 feet apart and were flown in both a N-S and a E-W direction.

(b) Magnetic Instrument

The changes in total magnetic intensity was measured using a Varian Nuclear Precession Magnetometer. At the flying speed of the Beaver the instrument sampled the magnetic field every 80 feet.

The magnetic values could be read from the tape to an accuracy of ± 5 gammas.

(c) Electromagnetic Equipment

The electromagnetic unit consisted of a vertical 1100 cycle transmitting coil on one wing and a vertical receiving coil on the other wing.

The effect of the transmitted field at the receiver coil was kept balanced out to a few parts per million of the primary field.

The 1100 cycle residual field was divided into parts which were in and out of phase with the primary field and recorded separately.

PLOTTING RESULTS

- (a) The flight paths were plotted on F.R.I. sheets of scale 1 inch equals 1320 feet.
- (b) Changes in magnetic intensities above an arbitrary base level were plotted along the flight lines and contoured in a standard manner.
- (c) Since the out of phase trace of the electromagnetic method was the least noisy these values were plotted. The values used were parts per million of the primary field.

At the peak value of each anomaly the ratio of In Phase/Out of Phase was also calculated from the records and plotted.

DISCUSSION OF RESULTS

(a) Magnetic

Most of the high magnetic intensities lie just outside the claim boundaries.

The two magnetic maps illustrate the effect of a change in flight line direction on the shape of the contours.

(b) Electromagnetic

The mineralization under Net Lake was indicated by the N.W. - S.E. flight lines.

An anomaly with extremely poor ratio was outlined off the point extending into the east side of the claims.

The anomalies of poor ratio probably are caused by disseminated sulphides or overburden.

CONCLUSION

The survey failed to indicate that any large body of massive sulphides existed on the claim area.

Respectfully submitted,

GEOPHYSICAL ENGINEERING & SURVEYS LIMITED,


A. R. Clark.

Toronto, Ontario,
May 26, 1964.

LEGEND
(MAGNETIC)

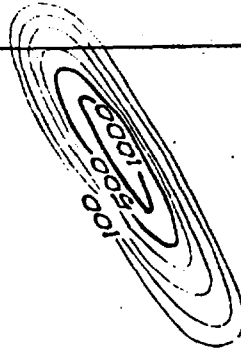
20 Flight line number:

121 ○ Fiducial

Contours at 100, 500 & 1000 gamma intervals, as noted.

122 ○ Fiducial

Flight line



LEGEND

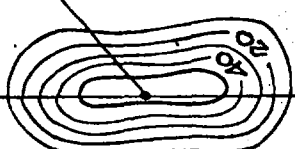
(ELECTRO MAGNETIC)

Flight line.

10

Ratio of IN PHASE/OUT OF PHASE component.

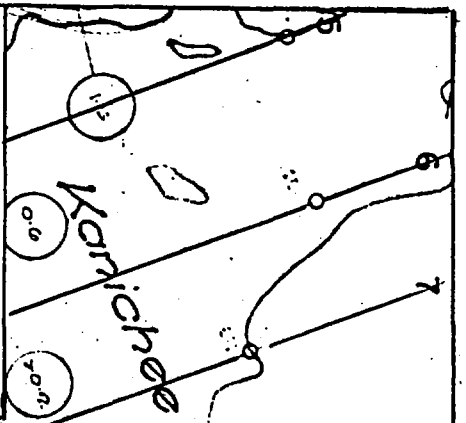
Isodynamic contours at 10 unit intervals, of 'out of phase' components



120 Fiducial.

24 Flight line number.

AIRBORNE ELECTROMAGNETIC SURVEY
NW-SE LINES
NET LAKE AREA STRATHY TWP.

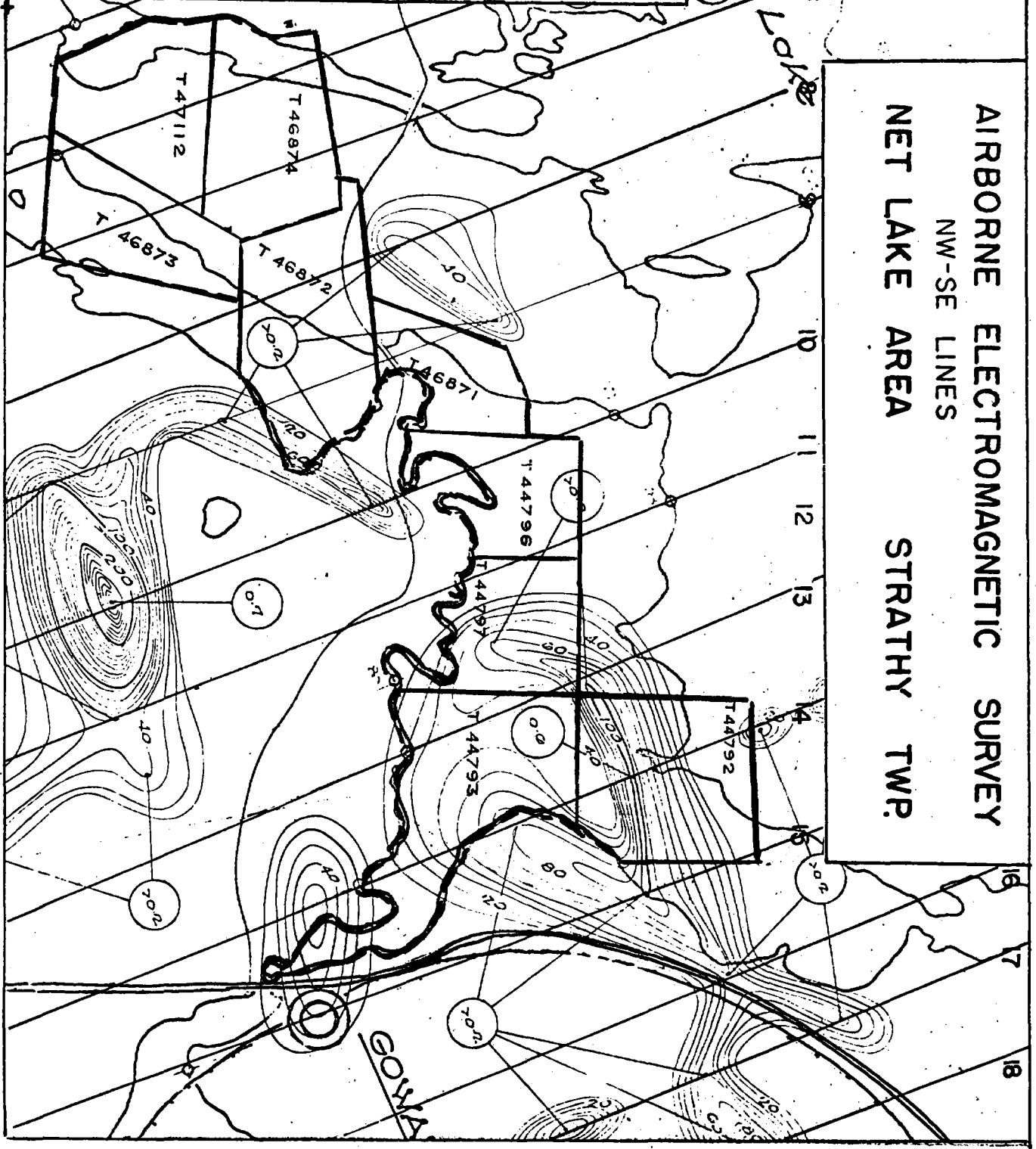


Port of dwg
2438



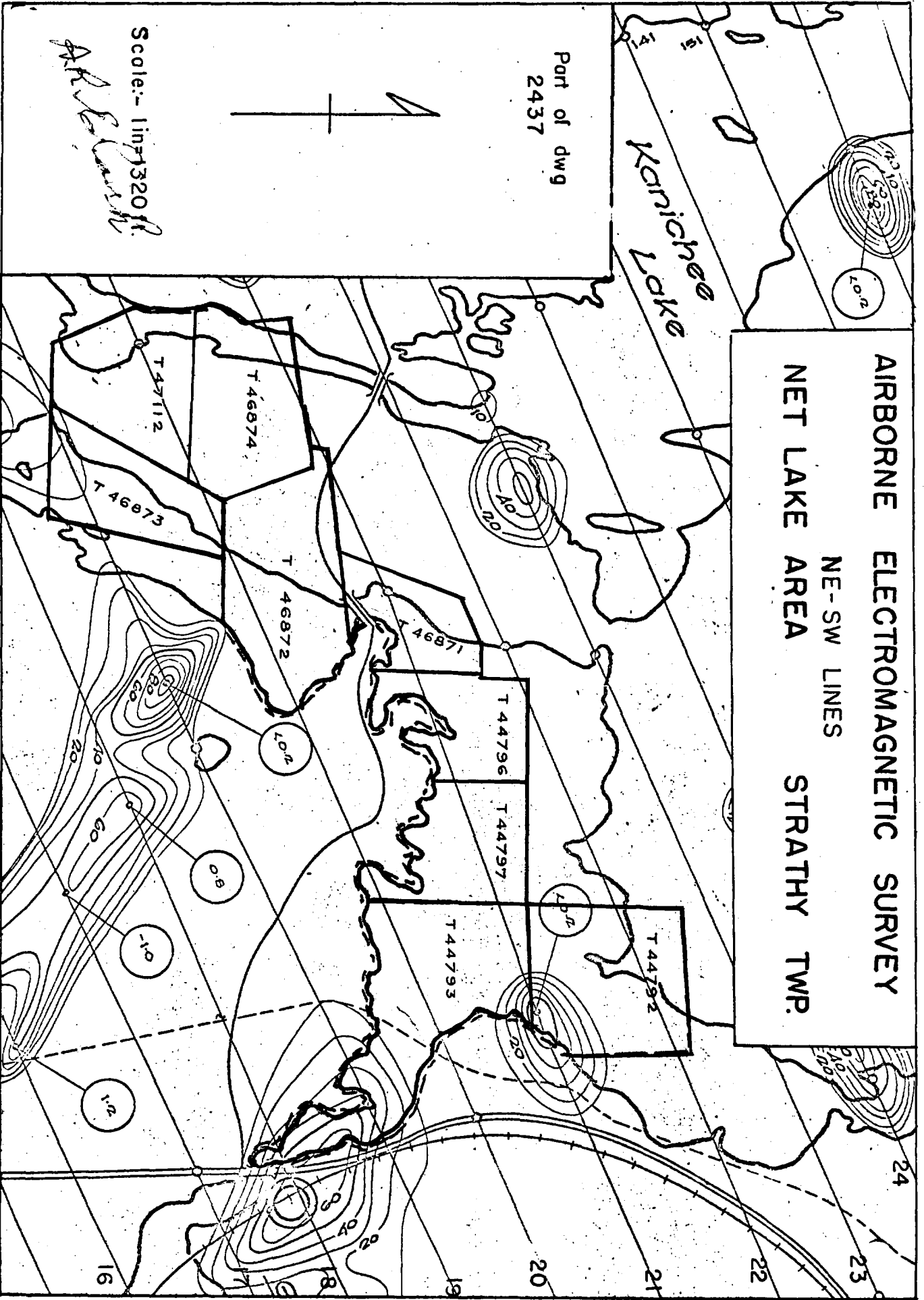
Scale 1in.=1320ft.

A.R. B. Cook



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AIRBORNE ELECTROMAGNETIC SURVEY
 NE-SW LINES
 NET LAKE AREA
 STRATHY TWP.

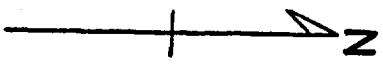
Part of dwg
 2437

Scale: - 1 in = 1320 ft.

A. H. ...

AIRBORNE MAGNETOMETER SURVEY
NW-SE LINES
NET LAKE AREA STRATHY TWP

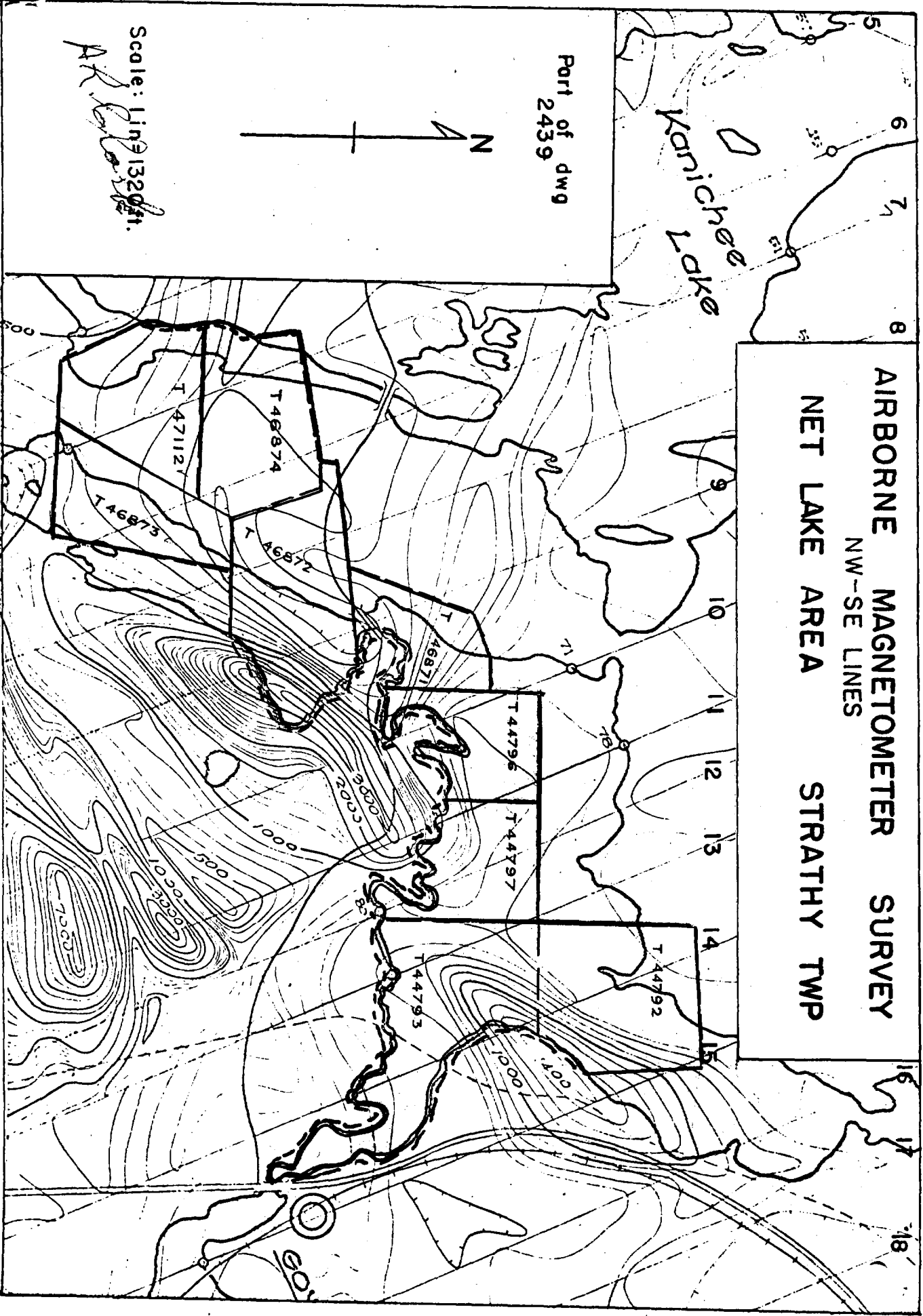
Part of dwg
2439



Scale: 1 in = 1320 ft.

A.R. [Signature]

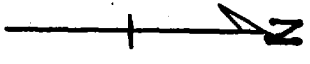
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63.1797

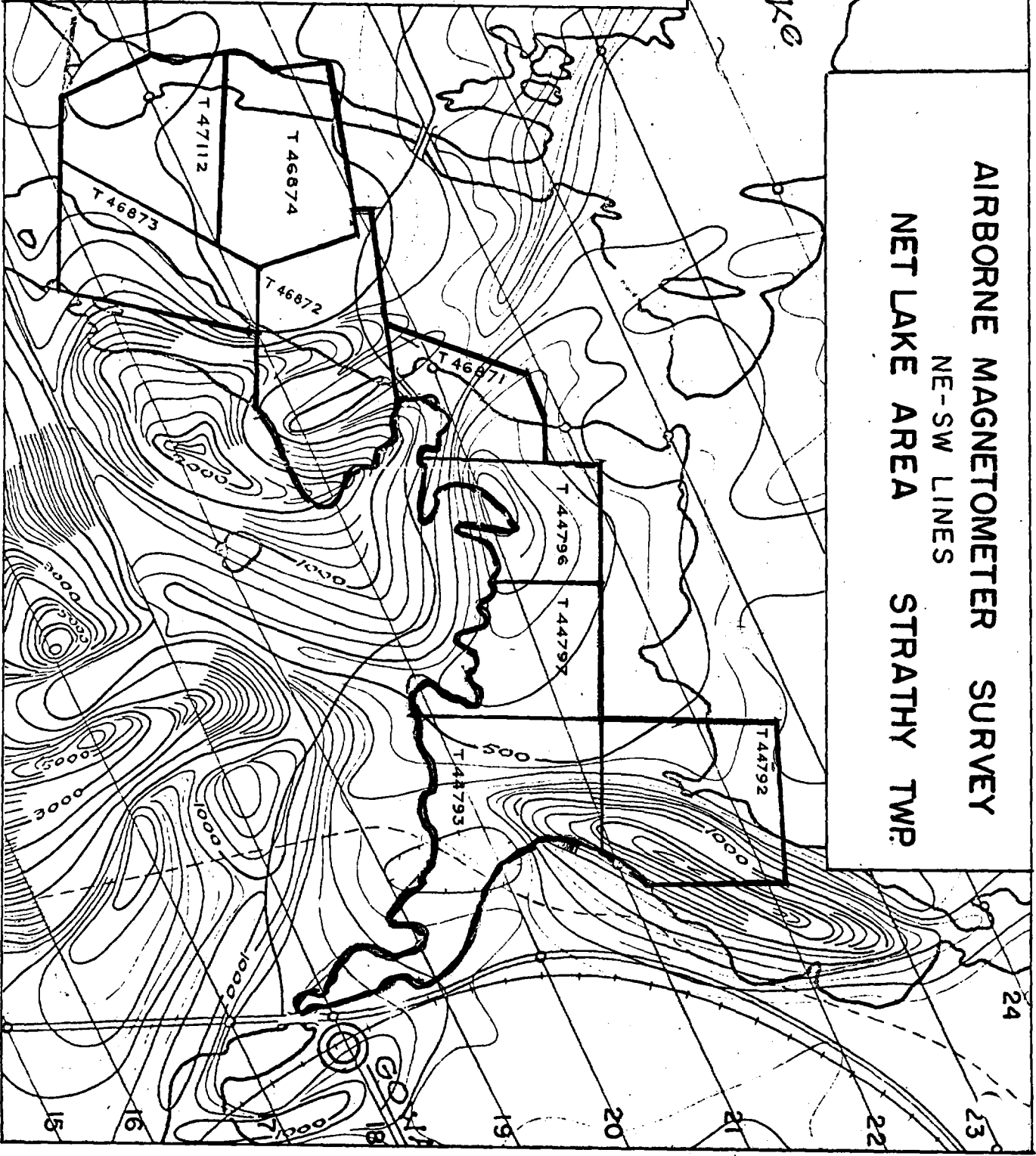
Scale: - 1 in = 1320 ft.
A. K. ...

PART OF DWG.
2436



Kanichsee Lake

AIRBORNE MAGNETOMETER SURVEY
NE-SW LINES
NET LAKE AREA STRATHY TWP.



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