



53B09NW0024 53B09NW0015 ZEEMEL LAKE

010

MAGNETOMETER SURVEY  
KENPAT MINES LIMITED  
OPAPIMISKAN LAKE

Ringsleben & Burns  
Toronto, Ontario

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**TO FOLLOW**

October 2, 1963

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KENPAT MINES LIMITED  
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INTRODUCTION

A Magnetometer survey was started in January 1963 on the claims of Kenpat Mines Limited at Opapimiskan Lake, Northwestern Ontario. The survey was undertaken to try and trace the three gold bearing zones that had been found on the property, and to assist in further exploration.

Sixty one claims were wholly or partly covered by the survey, see map 1. They are: Pa 31398 to 401 inclusive, Pa 31405 to 434 inclusive, Pa 31436 - 437, -438, Pa 31441 to 451 inclusive, Pa 31453, - 54, - 55, and Pa 31459 to 468 inclusive.

THE SURVEY

The northern part of the survey from line 76 North to line 40 South was done with a Sharp A-2 magnetometer with a scale constant of 20 gammas per scale division. The southern part of the survey from line 40 South to line 92 South, where there are wide fluctuations in readings, was done with a Sharpe Fluxgate Magnetometer. Base stations were maintained, and the readings with the two instruments were correlated by their use. There were no special problems in this correlation. The fluxgate model MF-1 magnetometer has the following scale constants:

<u>RANGE</u>	<u>DIVISIONS</u>	<u>SCALE CONSTANT</u>
0- 1,000 gammas	50	20 gammas
0- 3,000 "	60	50 "
0- 10,000 "	50	200 "
0- 30,000 "	60	500 "
0-100,000 "	50	2000 "

Readability of the fluxgate is between  $\frac{1}{4}$  to  $\frac{1}{2}$  a scale division.

The survey was conducted on lines generally spaced 400 ft apart, but 100 ft apart where detail was taken. The lines were cut at right angles to a base line bearing  $329\frac{1}{2}^{\circ}$ A, or to sub base lines which were parallel to the main base line. Tie lines were cut at or near the end of picket lines, and picket lines were tied into them. A total of 63 miles of lines was cut. Magnetic readings were taken each 100 ft along the picket lines over most of the survey, but were taken each 25 ft

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or 50 ft were greater detail was required. A total of 3544 magnetic stations were read.

Mr. J.T. Meigher was the magnetometer operator.

#### CONTOURING

Draughting of results and contouring of the magnetic readings on sheets M-1 to M-4 inclusive was done by J.T.Meigher. On sheet M-5 Mr. Meigher draughted the magnetic readings, but the writer did the magnetic contouring.

#### INTERPRETATIONS OF THE MAGNETIC SURVEY

The interpretation of the survey which follows is the writer's but D.W. Smellie, P. Eng. consulted on results on sheet M-5 near the gold showings on the iron formation, proposing dips and strikes of the iron formations. The writer's geological knowledge of the area is used in this interpretation.

On the land area northwest of Opapimiskan Lake magnetic contours show a predominantly northwesterly trend. This includes the part around the Northwest Gold Showing near the base line at Line 56 North. Here detailed work on lines 100 ft apart shows a slight irregularity in the trend of the contours, but the overall northwesterly strike is maintained. Magnetic highs of 11,000 gammas at Line 76 N 550 East and Line 62 N 350 West, upon examination, appear to be caused by magnetite in andesite. Most of the highs generally range from 4500 to 6000 gammas, and the lows from (-) 3000 to (-) 5000 gammas.

The northwest-southeasterly trend of magnetics continues southeasterly from the land into Opapimiskan Lake to an east-westerly line joining Line 52 N 2500 W with Line 4 N 1900 E. This line, or linear, separates the northwesterly trend on the north from an area to the south which becomes more complex as the southeast side of the Lake is approached.

At Line 20 S 900 E at the point on the shore of the Lake a broad nose in the contours extends westerly to line 12N 1750 West. It probably represents a northwesterly plunging anticline. South and southeast of the broad nose the magnetics are more complex, with much folded iron formation indicated.

Iron formation probably is indicated by readings greater than 15,000 gammas, but where magnetite is scarce the readings may be much less.

South of and near the point on the Lake on Line 20 is 900 E is an anticlinal nose of a fold in iron formation. The

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northeasterly limb strikes  $120^{\circ}$  for over 5200 ft to a point where it passes off the claims. The other limb strikes southerly, subparallel to the shoreline, and pinches out, or is faulted off on a possible fault extending west-northwesterly from near line 56 S 2000 E.

Near Line 40 S 2000 E magnetics show the anticlinal nose of two layers of iron formation. The one limb extends on a strike of  $120^{\circ}$  for 4000 ft to the edge of the property, and is highly drag folded for the first 2000 ft. The other limb curves south and easterly, in drag folds, around to line 51 S 1950 East, where #1 gold showing in iron formation occurs. The layers are then folded southerly to #2 gold showing in iron formation, about 1000 ft from #1 showing. From #2 showing iron formation trends west-northwesterly in numerous folds to Line 48 S 75 E and beyond, and iron formation also extends south-easterly, is interrupted for a couple of hundred feet. Then it is folded near the base line at Line 58 S and Line 62 S, from which points it trends westerly and west-northwesterly to Line 48 S 1300 and 1400 W. The same layer probably is represented by high magnetic readings at Line 64 S 500 and 1000 W, and at Line 60 S 1025 W.

High magnetic readings at Line 56 S 2500 W, Line 48 S 2100 and 2500 W, Line 44 S 2200 W probably are iron formation.

Some of the iron formation appears to lense out along strike.

Ringsleben and Burns

C.A. Burns.

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Toronto, Ontario.

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Toronto, Ontario.



October 2, 1963

PEOPLE EMPLOYED IN MAGNETOMETER SURVEY

J.T.Meigher,	Halifax, N.S.	Mag operator,	89 days
		draughtsman, office	
A.W.Musselwhite,	Toronto, Ont.	Mag assistant	12 "
S.Morisseau,	Nipigon, Ont.	Mag assistant	39 "
D.W.Smellie,	Vancouver, B.C.	Consultant in	
		office	3 "
C.A.Burns,	Toronto, Ont.	Office, consulting	13 "
L.B.Staines,	Bissett, Man.	Draughting	12 "
E.Edwards,	Toronto, Ont.	Typing	1 "
Subtotal field, office, consulting			<u>169 "</u>
Credits 169 x 4 = 676 days			

Dates

J.T.Meigher, Jan 2 to Mar 31 inclusive  
 A.W.Musselwhite, Jan 14-25, 1963  
 S.Morisseau, Jan 26-Mar 5, 1963  
 D.W.Smellie, May 22, June 27-28, 1963  
 C.A.Burns, Jan 2,4, Feb 11 to 15, Mar 18 to 22, Oct 2,3,4, 1963  
 L.B.Staines, June 22-30, July 2-4, 1963  
 E.Edwards, Oct.2, 1963

Lines

Chris. Lawson,	Pickle Lake, Ont.	Jan. 5-25/63	21 days
Thos. Shingapish,	" " "	Jan. 5-19/63	15 "
Mac. Lawson,	" " "	Jan. 5-31	27 "
Jean Tremblay,	" " "	Jan. 7-31	25 "
Ben Ohman,	" " "	Jan. 7-Mar.9	62 "
Thos. Shingapish,	" " "	Feb. 1-7	7 "
Mac. Lawson,	" " "	Feb. 15-Mar.1	15 "
Frank Kaminawaish	" " "	Mar. 6-17	12 "
John Wassaykeesik	" " "	Mar. 6-17	12 "
John Monroe,	Central Patricia,		
	Ontario	Mar. 18-23	6 "
Temus Tate,	" " "	Mar. 18-23	6 "

Subtotal man days 12 hours 208 days  
2496 hours  
312 days  
 Credits 208 x 4 = 832 days

Allowance for 53 mineral claims covered (see next page)

53 x 5 = 265 days

Total Credits: Field, office, consulting 676  
 Line cutting 265

TOTAL

**DUPLICATE COPY  
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 TO FOLLOW**

941

October 2, 1963

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S. Morisseau,	Nipigon, Ont.	Mag assistant	39 "
D.W. Smellie,	Vancouver, B.C.	Consultant in office	3 "
C.A. Burns,	Toronto, Ont.	Office, consulting	13 "
L.B. Staines,	Bissett, Man.	Draughting	12 "
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 Total 941

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CLAIMES COVERED BY MAGNETOMETER SURVEY

<u>Claim</u>	<u>Part Covered</u>	<u>Claim</u>	<u>Part Covered</u>
Pa 31398	1 claim	Pa 31438	$\frac{1}{2}$ claim
99	1 "	41	$\frac{3}{4}$ claim
400	1 "	42	1 "
01	$\frac{1}{2}$ "	43	1 "
05	1 "	44	1 "
06	1 "	45	$\frac{1}{2}$ "
07	1 "	46	1 "
08	1 "	47	1 "
09	1 "	48	$\frac{1}{2}$ "
10	1 "	49	1 "
11	1 "	50	1 "
12	1 "	51	$\frac{1}{2}$ "
13	1 "	53	$\frac{1}{2}$ "
14	1 "	54	$\frac{3}{4}$ "
15	1 "	55	1 "
16	1 "	59	$\frac{1}{2}$ "
17	1 "	60	1 "
18	1 "	61	1 "
19	1 "	62	1 "
20	$\frac{1}{2}$ "	63	1 "
21	1 "	64	1 "
22	1 "	65	1 "
23	1 "	66	1 "
24	$\frac{1}{2}$ "	67	1 "
25	1 "	68	1 "
26	1 "		
27	1 "	TOTAL	<u>53 claims</u>
28	1 "		
29	1 "		
30	1 "		
31	1 "		
32	1 "		
33	1 "		
34	$\frac{1}{2}$ "		
36	$\frac{1}{2}$ "		
37	$\frac{1}{2}$ "		

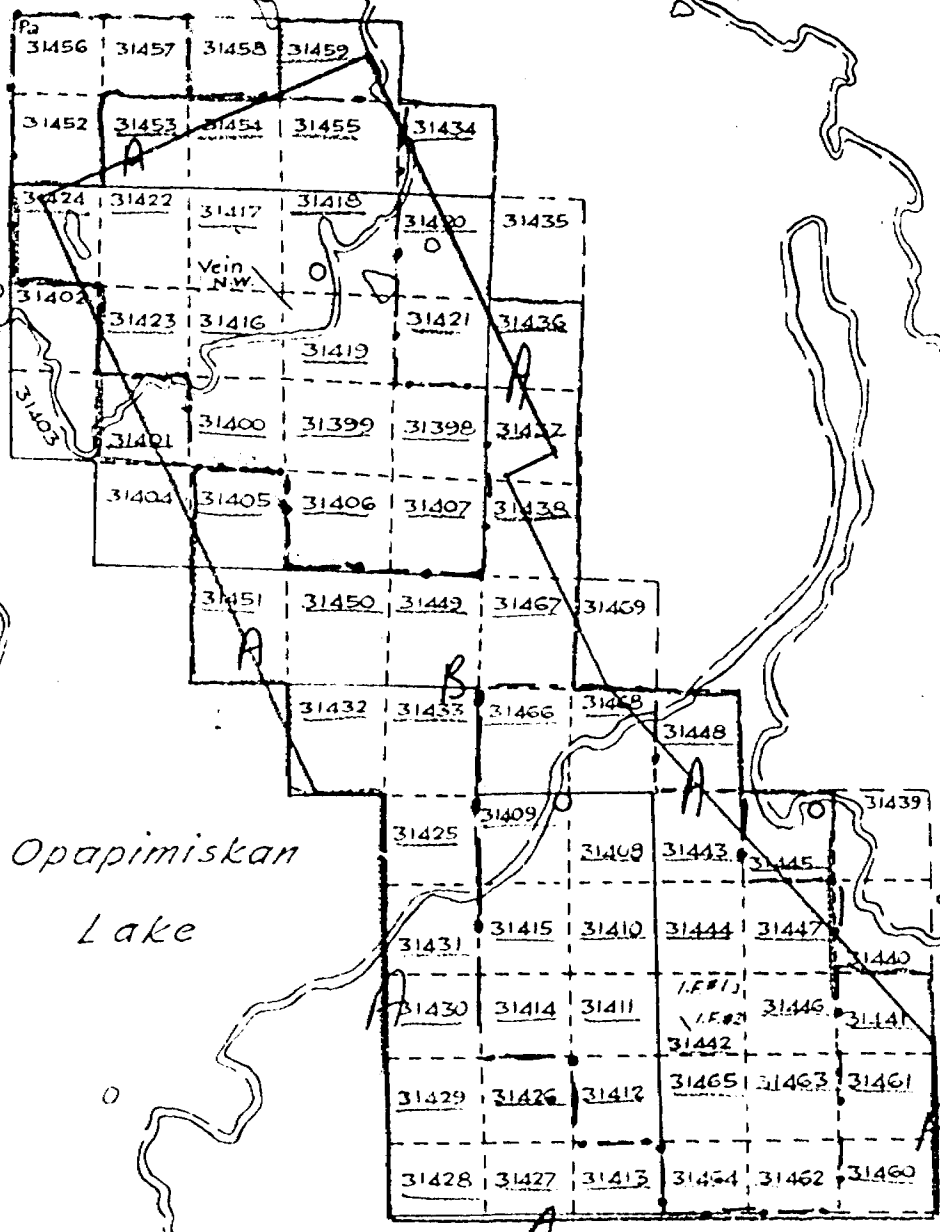
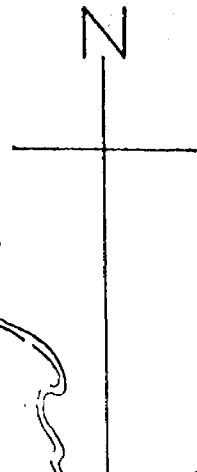
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Kenpat Mines Limited

October 2, 1963.

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79	1 "	41	3/4 "
400	1 "	42	1 "
01	1/2 "	43	1 "
65	1 "	44	1 "
06	1 "	45	1/4 "
07	1 "	46	1 "
08	1 "	47	1 "
09	1 "	48	1/4 "
10	1 "	49	1 "
11	1 "	50	1 "
12	1 "	51	1/2 "
13	1 "	53	1/4 "
14	1 "	54	3/4 "
15	1 "	55	1 "
16	1 "	59	1/4 "
17	1 "	60	1 "
18	1 "	61	1 "
19	1 "	62	1 "
20	1/2 "	63	1 "
21	1 "	64	1 "
22	1 "	65	1 "
23	1 "	66	1 "
24	1/2 "	67	1 "
25	1 "	68	1 "
26	1 "		
27	1 "	Total	53 claims
28	1 "		
29	1 "		
30	1 "		
31	1 "		
32	1 "		
33	1 "		
34	1/4 "		
36	1/4 "		
37	1/2 "		



Opapimiskan  
Lake

MAP 1

**LEGEND**

○ CAMP

B RETAINED

A Survey

GOLD SHOWINGS  
E.G. I.F. 1 - IRON FORMATION #1

1" = 1/2 mi.

**OPAPIMISKAN LAKE AREA  
PATRICIA MINING DIVISION  
72 CLAIMS**

1" = 1/2 MILE

1963

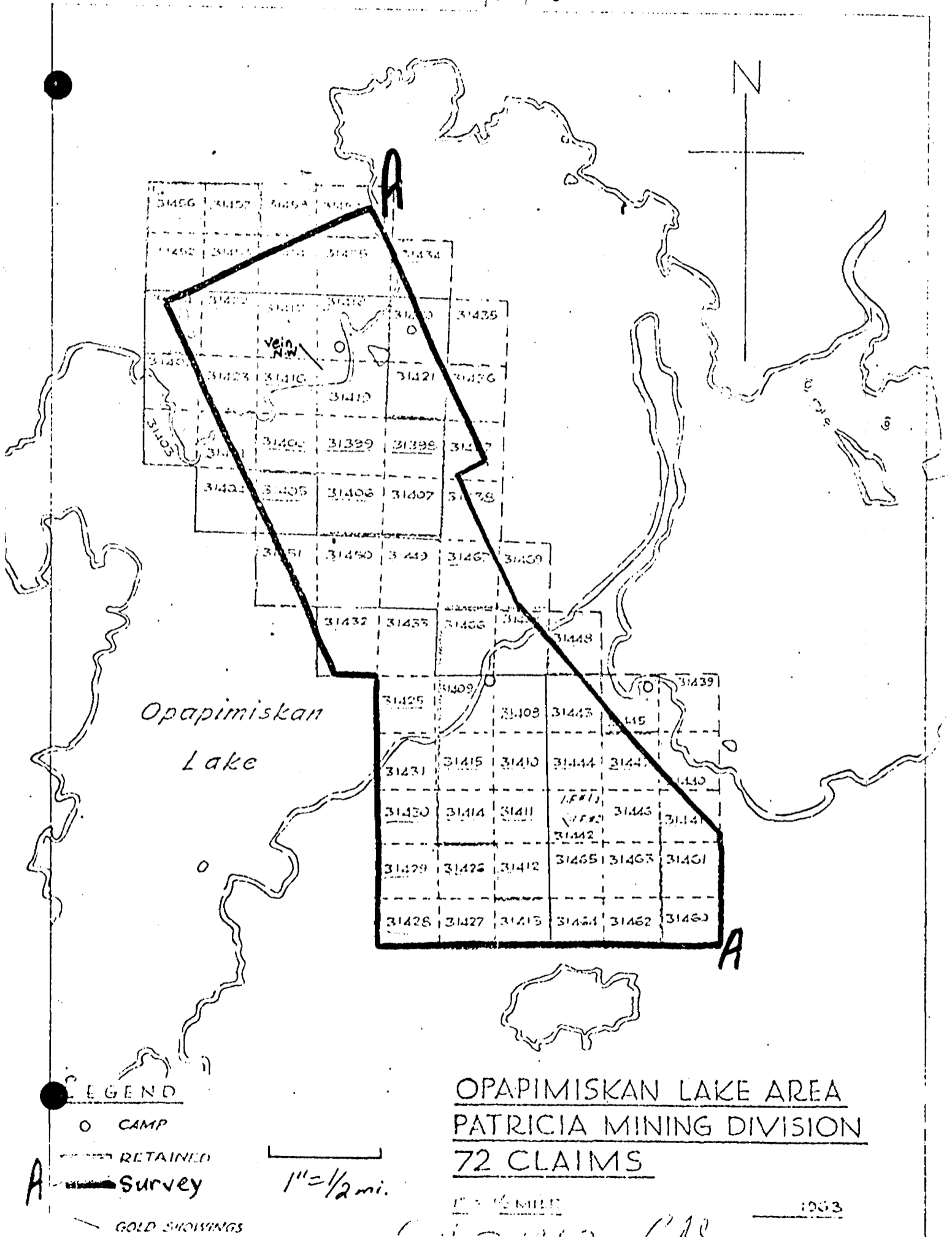
Oct 2, 1963 *Chadburn*

To 538/NE

ESE/9

63.1248

63.1248



LEGEND

O CAMP

RETAINED

Survey

GOLD SHOWINGS

1" = 1/2 mi.

OPAPIMISKAN LAKE AREA  
PATRICIA MINING DIVISION  
72 CLAIMS

1" = 1/2 MILE

1903

63.1248



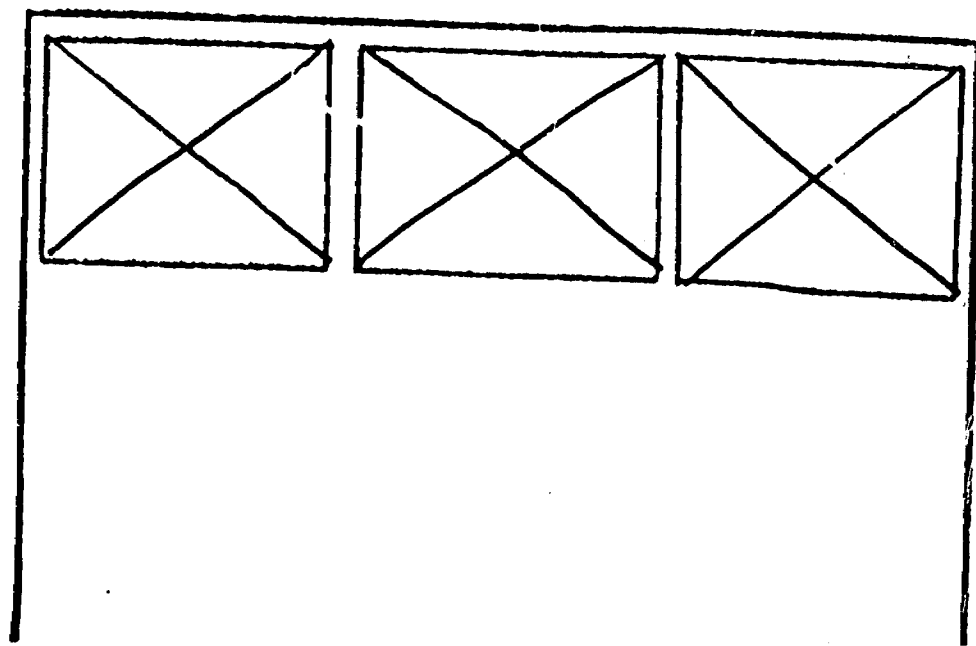
53B09NW0024 53B09NW0015 ZEEMEL LAKE

900

NOTE: FOR FURTHER INFORMATION  
CONCERNING THIS FILE, AND SPECIFICALLY  
THE GEOLOGY OF FOUR CLAIMS, ZEEMEL  
LAKE, SEE 53B/09SW-0022-C1

SEE ACCOMPANYING  
MAP(S) IDENTIFIED AS  
53B/09NW-0015, #1, #2

LOCATED IN THE MAP  
CHANNEL IN THE FOLLOWING  
SEQUENCE (X)

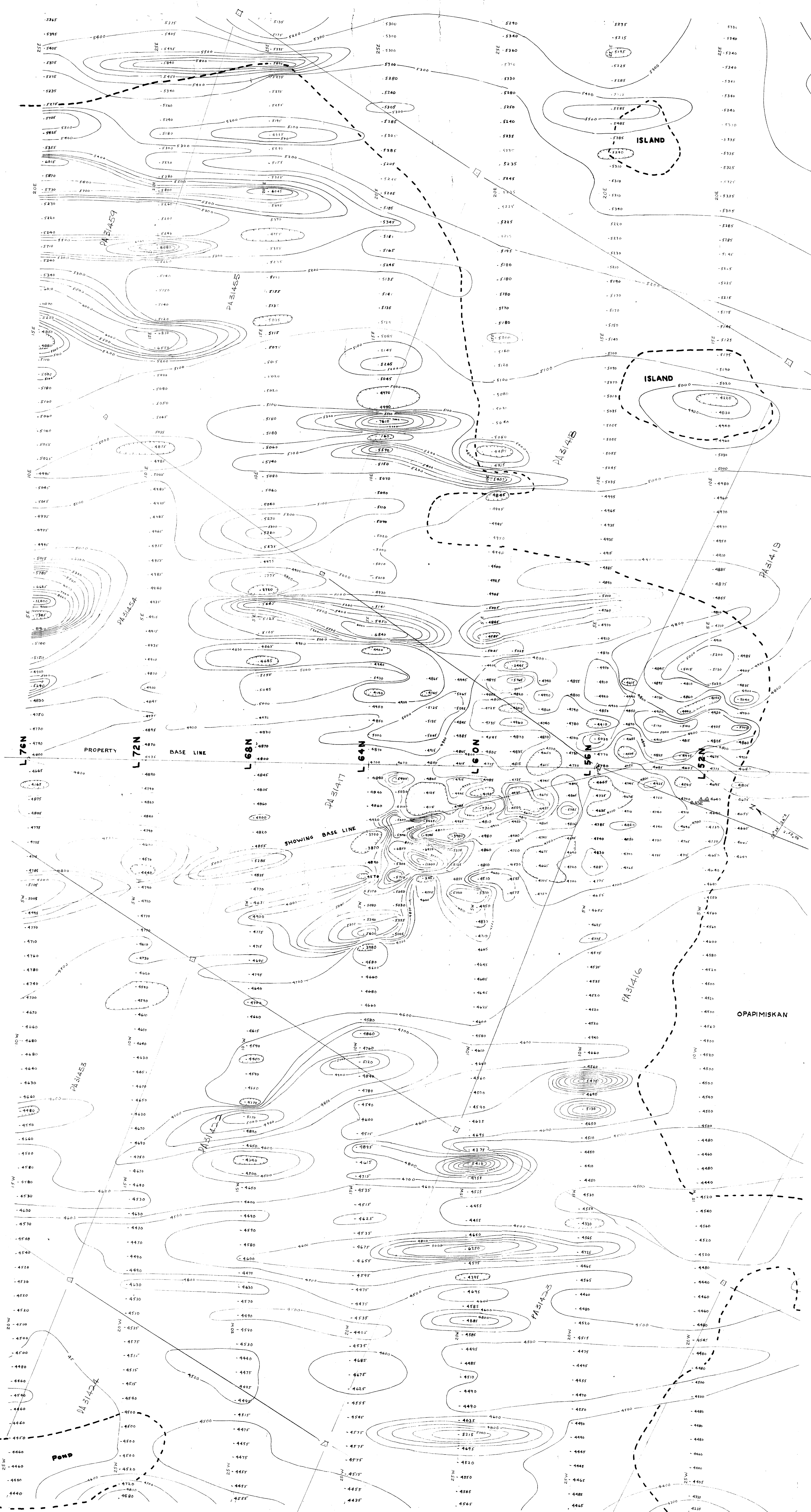




FOR ADDITIONAL  
INFORMATION

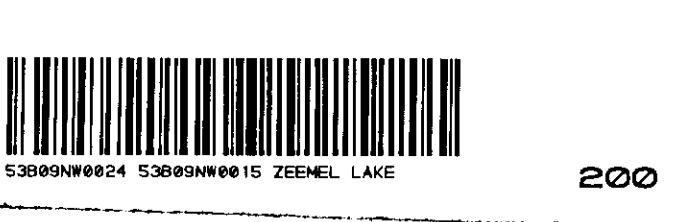
SEE MAPS:

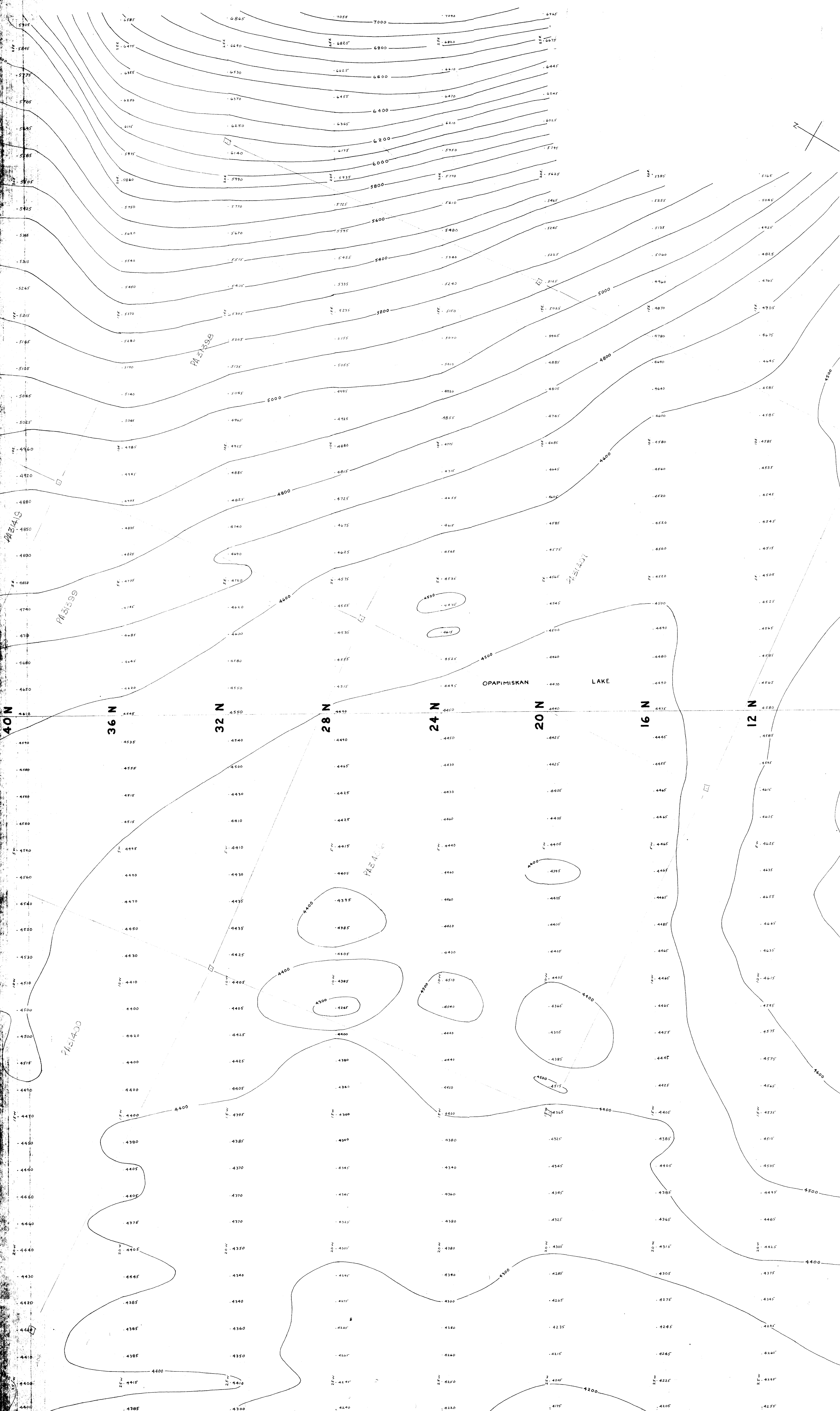
53B/09NW-0015 ~~#3~~ → 5



KENPAT MINES  
OPAPIMISKAN LAKE PROPERTY  
MAGNETOMETER SURVEY  
SCALE 1"=100'

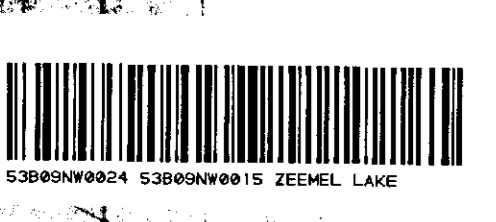
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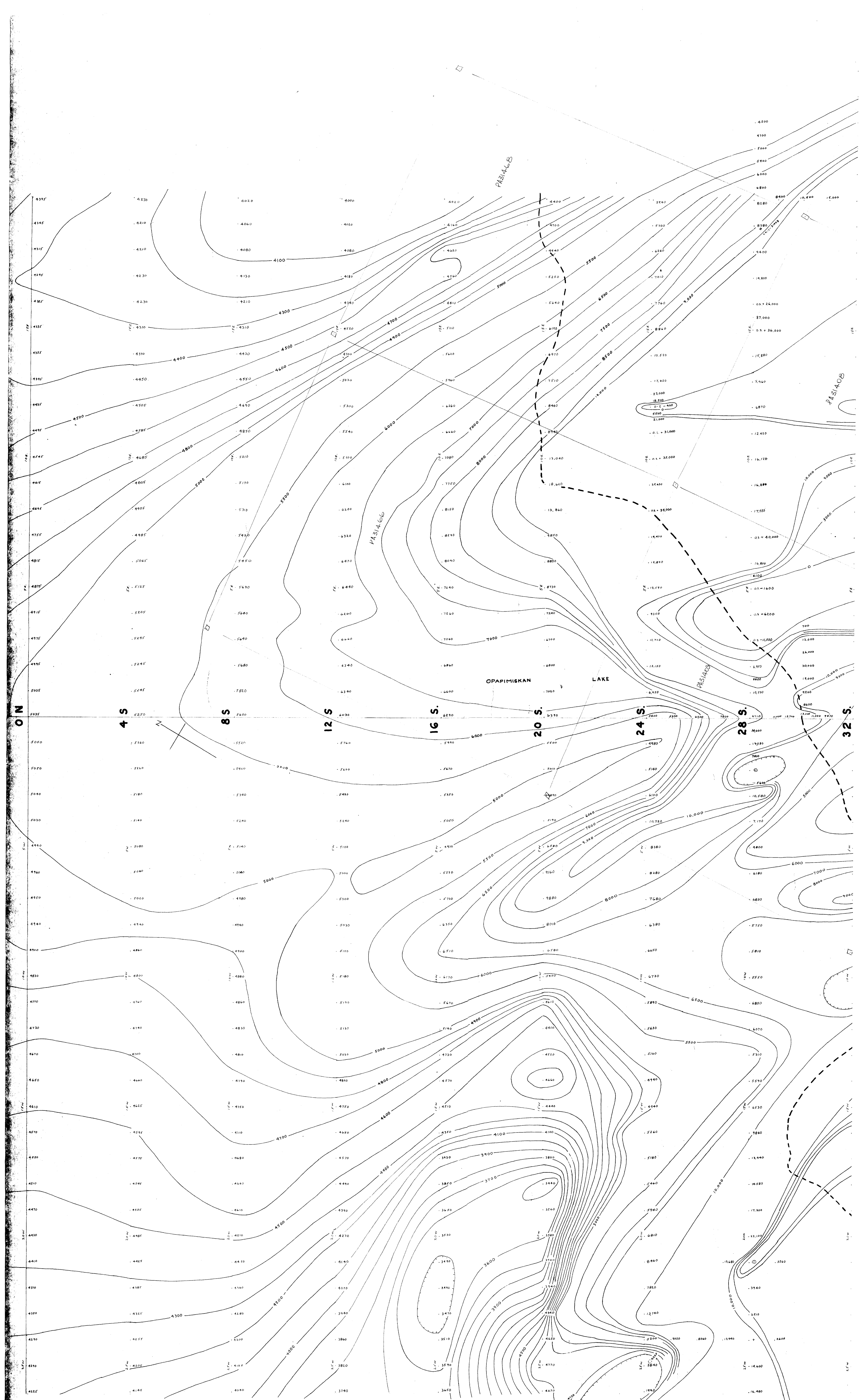




KENPAT MINES  
 OPAPIMISKAN LAKE PROPERTY  
 MAGNETOMETER SURVEY  
 SCALE 1" = 100'

53B/09NW-6





**KENPAT MINES**

OPAPIMISKAN LAKE PROPERTY  
 MAGNETOMETER SURVEY  
 SCALE 1"=100'

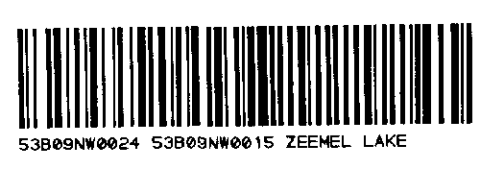
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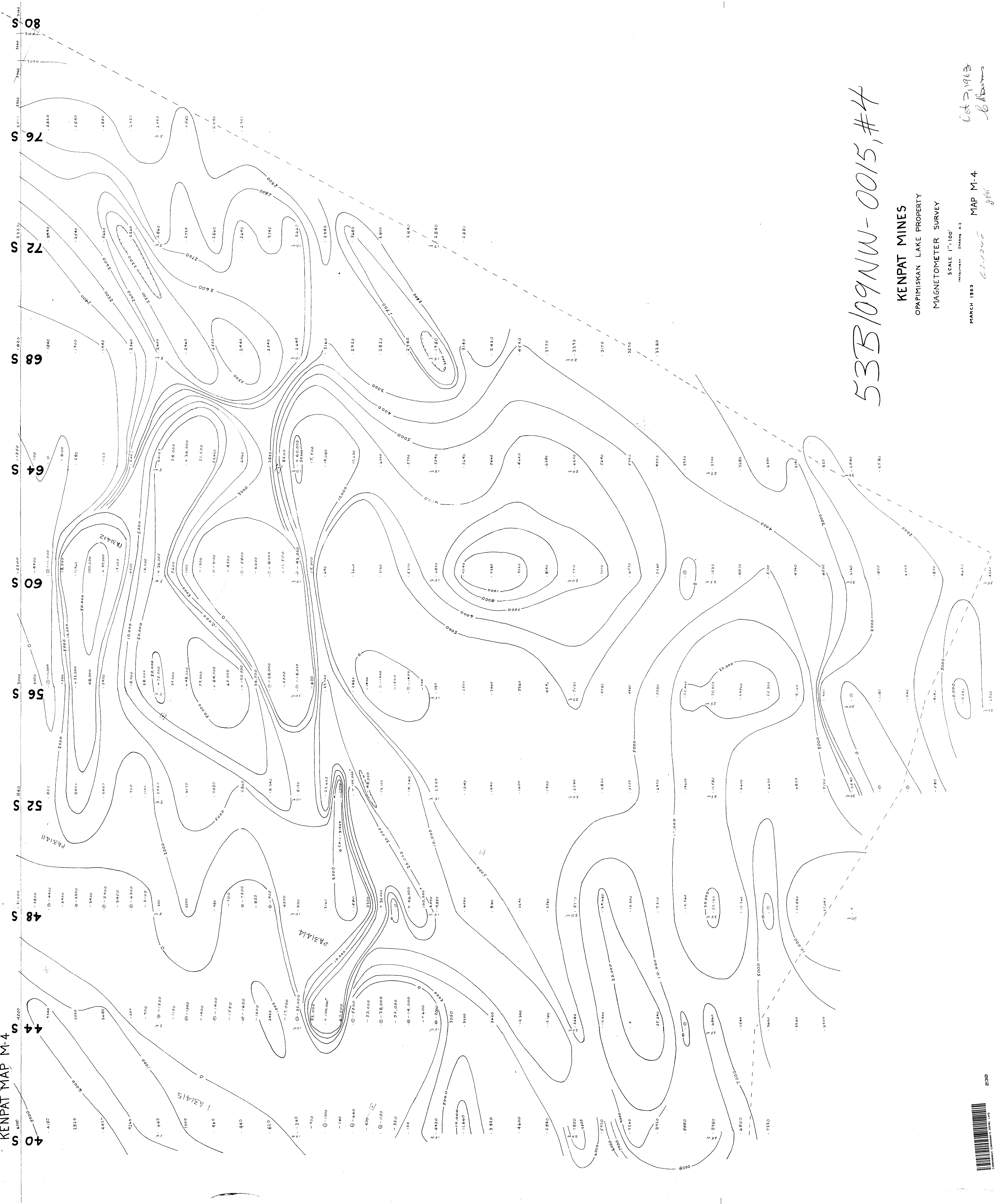
INSTRUMENT SHARPE A-2  
 MARCH 1963

MAP M-3.

Oct 2, 1963  
 L.P. Brown

53B/09NW-0015, #3





53B/09NW-0015, #4

**KENPAT MINES**  
 OPAPIMISKAN LAKE PROPERTY  
 MAGNETOMETER SURVEY

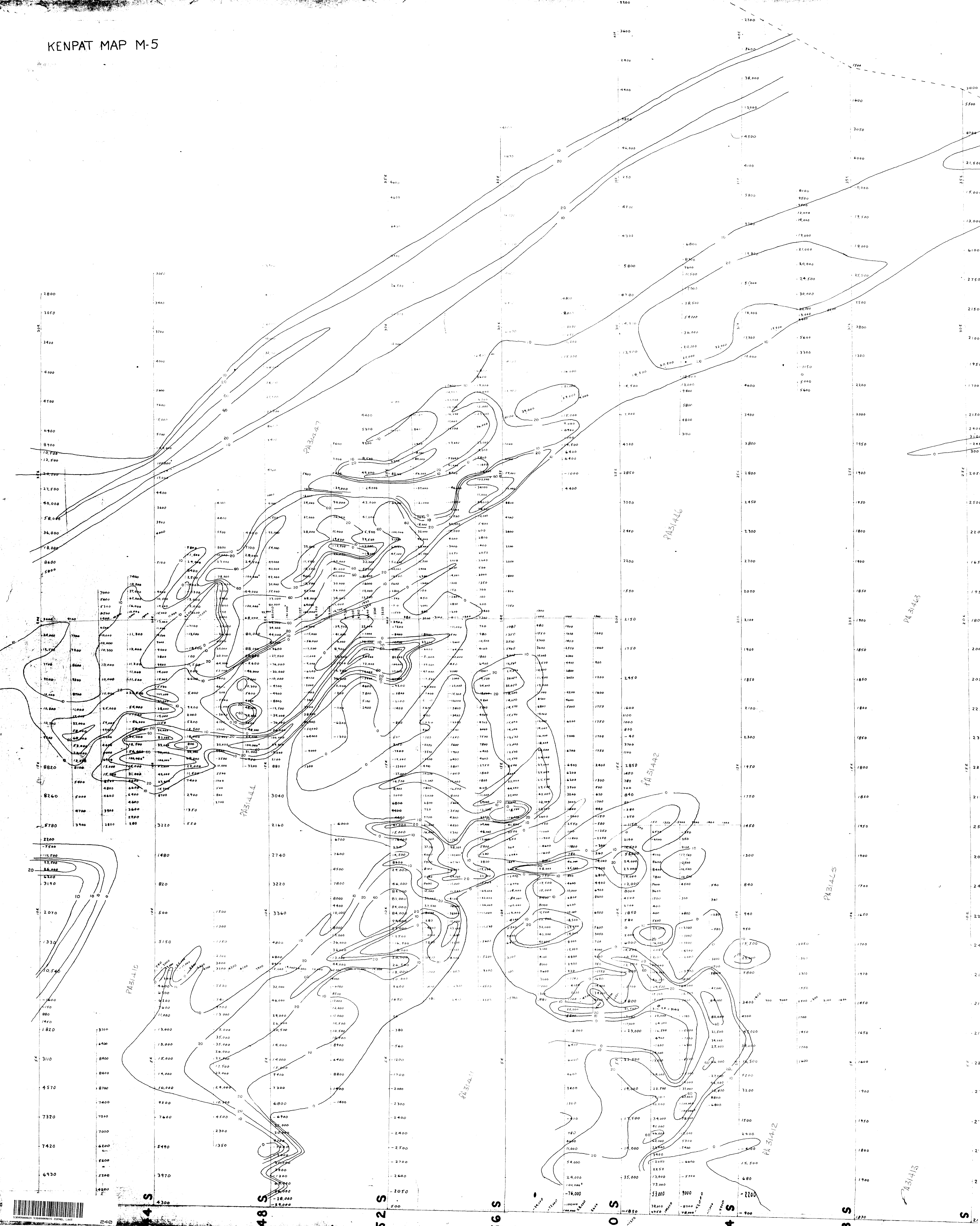
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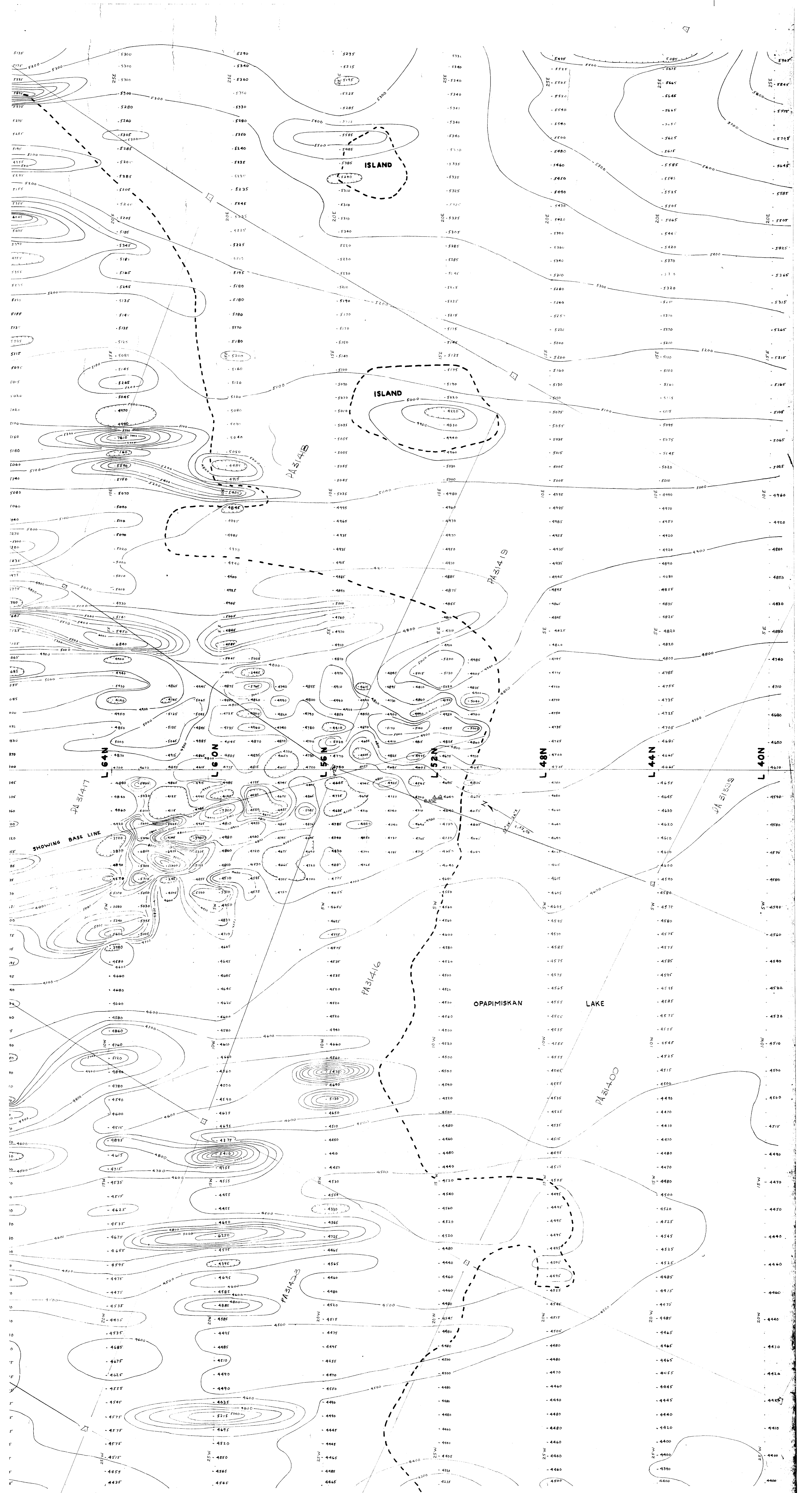
MARCH 1963  
 MAP M-4

Oct 2, 1963  
 B. Burns



KENPAT MAP M-5





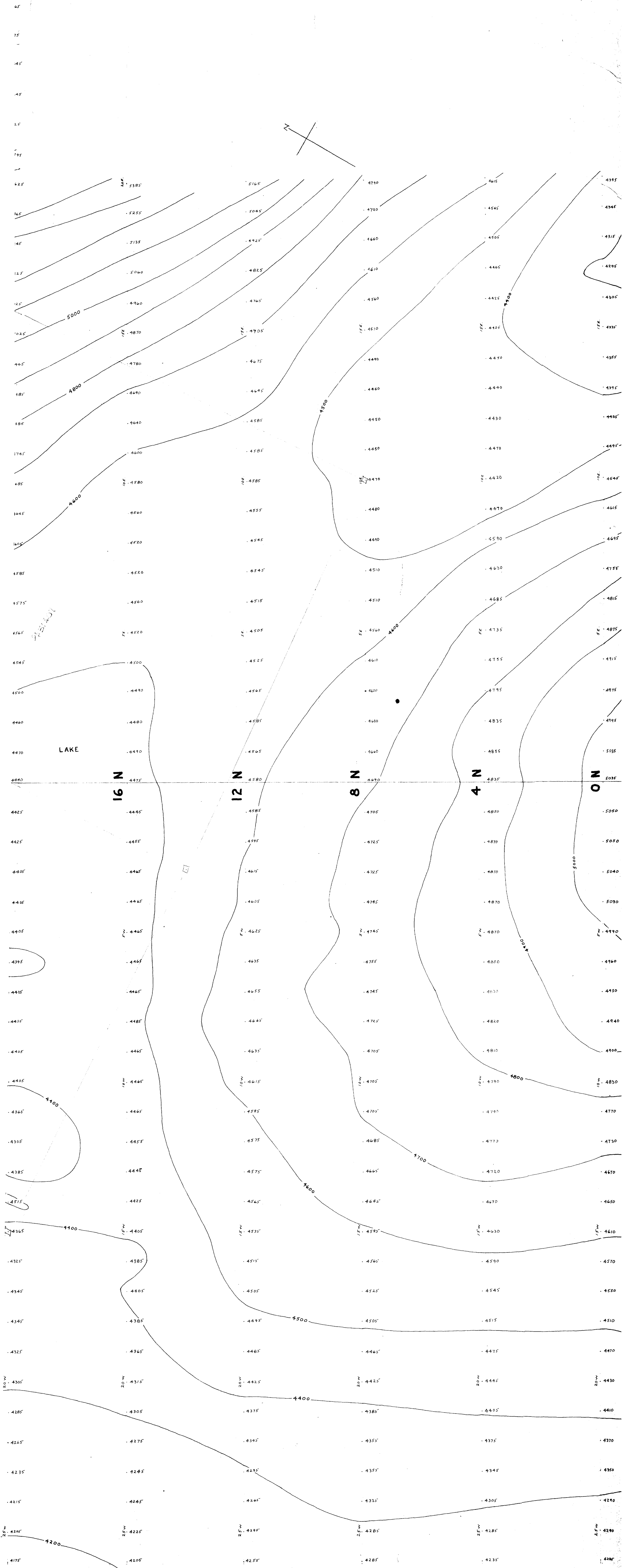
**KENPAT MINES**

OPAPIMISKAN LAKE PROPERTY  
MAGNETOMETER SURVEY  
SCALE 1"=100'

53B/09NW-0015, #1

INSTRUMENT - SHARPE A-2  
FEB. 1963  
J.M.

MAP M-1  
Oct 2, 1963  
L.M.S.  
25-245



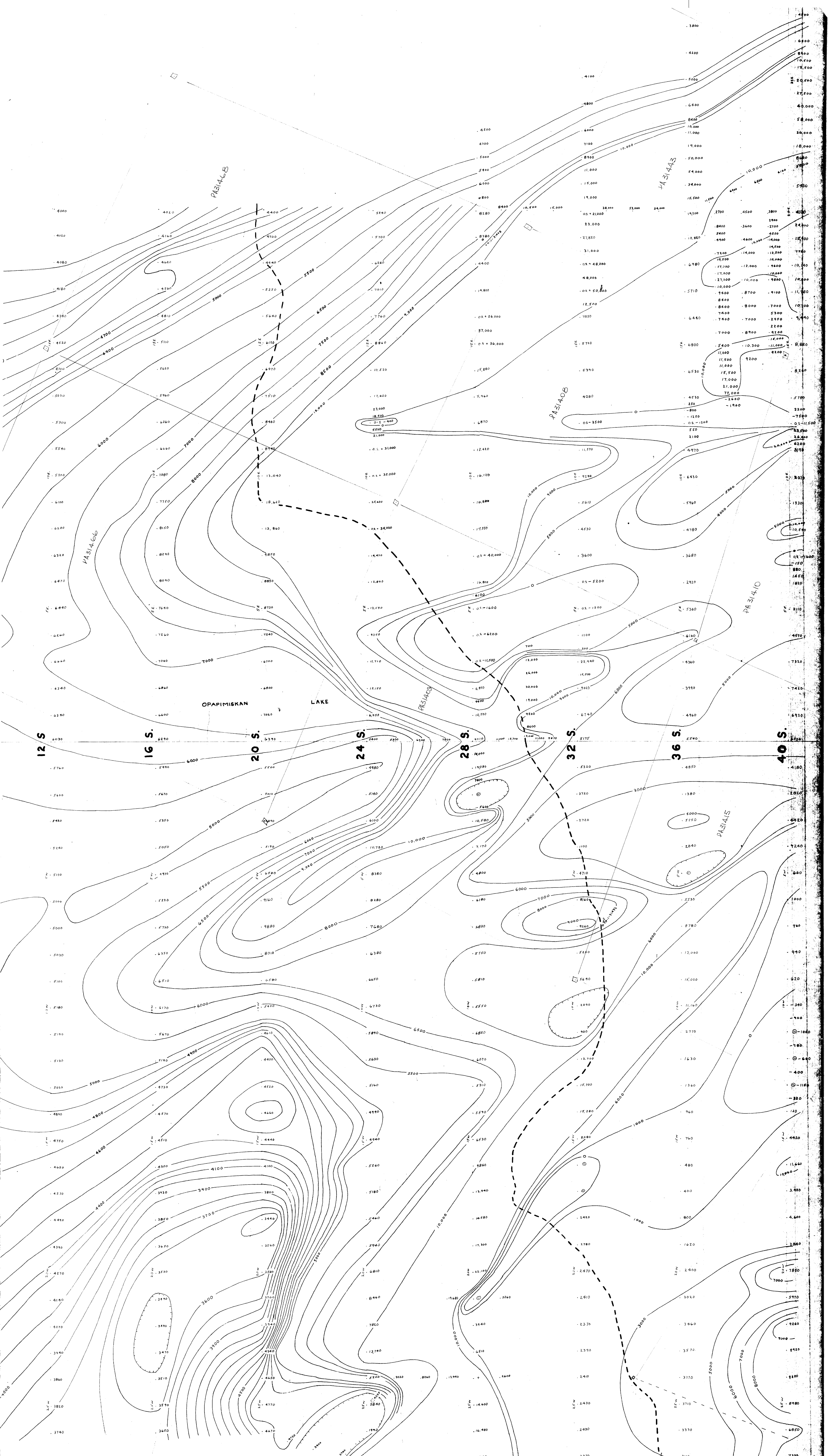
ENPAT MINES  
 IMISKAN LAKE PROPERTY  
 GNOMETR SURVEY  
 SCALE 1"=100'

INSTRUMENT SHARPE A-2.  
 MARCH 1963

MAP M-2  
 Oct 3, 1963  
*[Signature]*

53B/09NW-0015, #2





**KENPAT MINES**  
 OPAPIMISKAN LAKE PROPERTY  
 MAGNETOMETER SURVEY  
 SCALE 1"=100'

INSTRUMENT SHARPE A-2  
 MARCH 1963  
 MAP M-3.

Oct 2, 1963  
 Labrum  
 53B/09NW-0015, #3

M-3



53B/09NW-0015, #1

**KENPAT MINES**  
 OPAPIMISKAN LAKE PROPERTY  
 MAGNETOMETER SURVEY

SCALE 1" = 100'  
 INSTRUMENT SHARPE MF-1

MARCH 1963

MAP M-5

Oct 2, 1963  
 B. D. ...