REPORT ON

AEROMAGNETIC SURVEY

LAKE TIMAGAMI PROPERTY,

VOGT TOWNSHIP, ONTARIO

for

RAND REEF MINES LIMITED

by

PATERSON, GRANT & WATSON LIMITED

FEBRUARY 23, 1976 TORONTO, ONTARIO

TABLE OF CONTENTS

010C

1. INTRODUCTION

This report describes the results of an aeromagnetic survey conducted over 172 claims held by Rand Reef Mines Limited in Vogt Township, Sudbury Mining district, Ontario. The airborne survey was carried out by Aerodat Limited of Toronto in December 1975 and the interpretation of the magnetic data was done by Paterson, Grant & Watson Limited of Toronto.

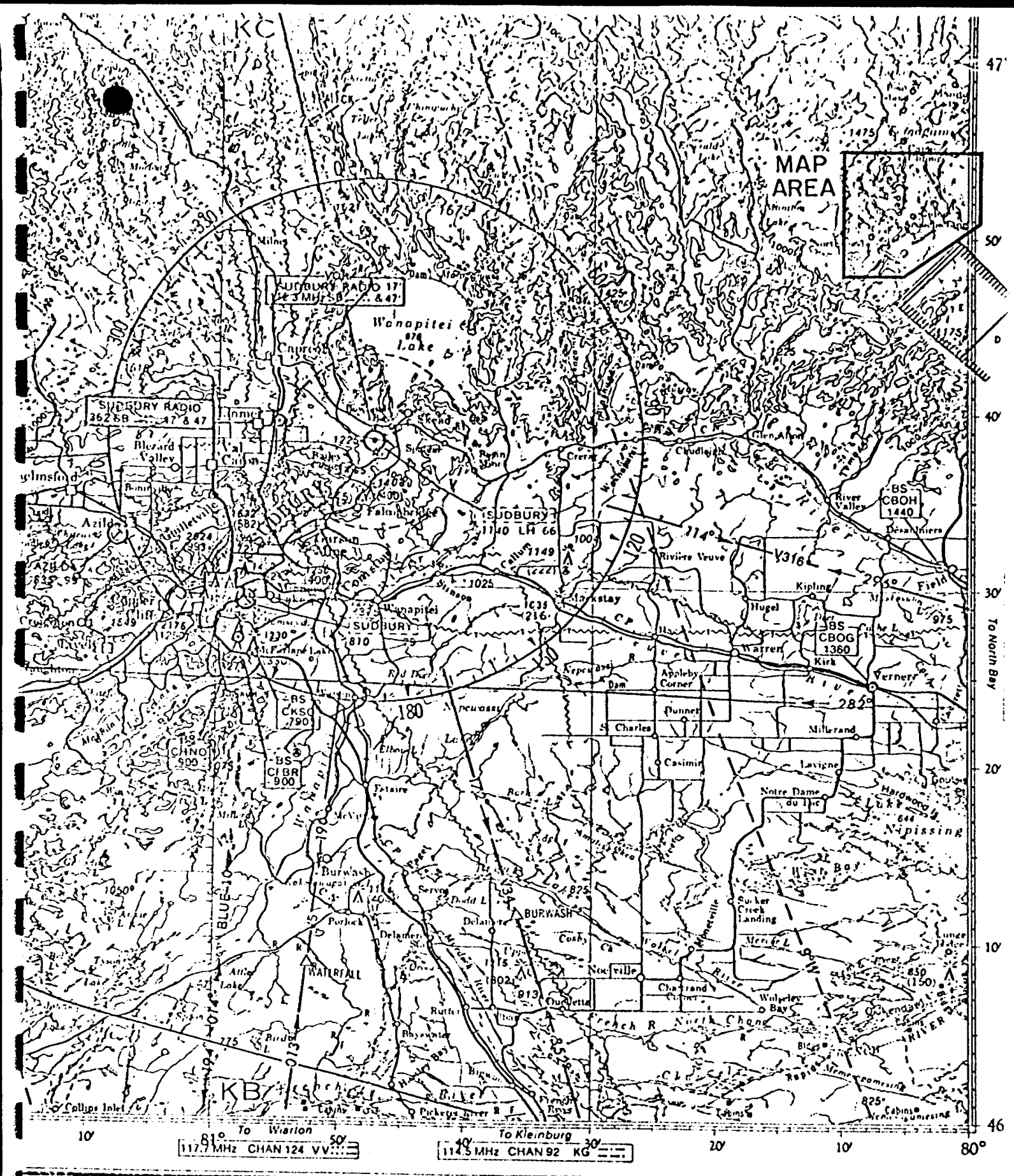
2. PURPOSE OF SURVEY

Part of the prospecting strategy in this area is based on the belief that gold and uranium minerals are present in the basal conglomerate formation lying at the bottom of the Gowganda sediments and that there is a spatial relationship between these minerals and the location of Keewatin iron formation which forms part of the Archean basement. It was decided to use aeromagnetic survey information to:

(a) outline all occurrences of the iron formation and

(b) make depth calculations where possible on aeromagnetic anomalies which lay in the area of interest and which were assumed to originate at the surface of the Archean basement.

Aeromagnetic maps of this area exist at a scale of 1 mile per inch but it was found that the flying height of 1,000 ft. and the flight line interval of ½ mile were too large for the detailed examination and accuracy that was desired.



LOCATION MAP

SCALE

0 4 8 Mls.

T 152 Feb. 1976

Accordingly a new survey was designed, using a helicopter borne magnetometer flying at close line intervals (1/16th mile) and low altitude (150-200 feet). Anomalies were analysed using computer model techniques to provide depths and percent of magnetite content. The survey was extended north and east of the claim group at a flight line interval of 1/8 mile to cover a larger part of the basin.

3. THE PROPERTY

The property occupies most of the southwest corner of Vogt Township, covering much of the southwest arm of Lake Timagami. The centre of the claim group is about 46 miles north 60°E of the city of Sudbury. The property is composed of 172 claims registered in the name of Rand Reef Mines Limited and comprise the following claim numbers:

396 956 to 984, 378 814 to 825, 397 096 to 125, 397 206 to 245, 397 345 to 374, 397 758 to 760, 369 668 to 692, 414 278, 279, and 424 997.

Access is by in highway to the Town of Timagami, and then by boat or snowmobile over Lake Timagami to the southwest.

4. GEOLOGY

The geology of the area has been mapped in detail at a scale of 1 inch to half a mile by the Ontario Department of Mines and is published on map 2048, Vogt-Hobbs area

and map 2057, Northwestern Timagami area. The Proterozoic Gowganda sediments, composed of argilites, quartzites, greywacke and a basal conglomerate lie in a depression or basin in the Archean basement. The Rand Reef claims lie at the south end of this basin and overlap onto the Archean basement. A sill and dykes of Nipissing diabase has intruded both the sediments and the basement. This unit has a strong magnetic expression and therefore can interfere with the depth calculations in places. Fortunately it lies outside the claim groups and only occupies minor parts of the survey area. Iron formation has been mapped in the Archean basement and has a clearly defined magnetic expression.

5. PREVIOUS EXPLORATION WORK

A number of geological and geophysical surveys have been carried out on parts of the property in the past and 23 drill holes totalling 7337 feet have been drilled since 1950. All work is in the O.D.M. assessment files.

6. SURVEY SPECIFICATIONS

Instrumentation

The survey was formed with a Barringer AM-104 proton precession magnetometer with a cycling time of 1.2 seconds. The instrument was mounted in a Bell Jet Ranger helicopter, registration CGLHL which flew at a nominal height of 250 ft. above ground surface. The magnetic sensing head trailed 50 ft. below the helicopter.

The flight lines were oriented north south to provide a proper intersection with the basement structure. The flight line interval was 1/16th of a mile over all of the claims and 1/8th of a mile over the rest of the survey area. The survey took seven separate flights and was carried out on December 9th, 10th and 11th, 1975. Two tie-lines were flown to provide a base for levelling the magnetic data.

A Dehavilland Mark VII 35 mm flight path camera was used to recover the flight path. A Bonzer radio altimeter monitored the height of the aircraft above ground surface. The magnetic data was recorded on a MFE dry pen 8-channel recorder. Channels 6 and 8 were used to display the magnetometer results at a scale of 100 gammas and 1,000 gammas respectively, full scale. Channel 1 was used to record the Bonzer altimeter data. Fiducial marks were made at approximately 2 mile intervals and tied into identifiable points on the flight mosaic.

Presentation of Results

Resulted are presented at a scale of ¼ of a mile to the inch on a map made from the photo mosaic base. The total magnetic field is contoured at 10 gamma intervals. Interpretation is shown on a separated map which used a screened copy of the magnetic map as a base.

INTERPRETATION

The survey provided considerably more detail than could be seen on the existing GSC aeromagnetic maps which were flown 800 ft.higher and with a ½ mile flight line spacing. The map geology was transcribed onto the magnetic map and it could be readily seen that the Nipissing diabase, the Archean iron formation, and a small section of the Gowganda sediments, numbered unit 10 in map 2048 and 5a in map 2057, had a clear magnetic expression.

The most prominent magnetic feature, aside from that caused by the outcropping iron formations, is a broad smooth gradient of 300-400 gammas per mile which extends approximately 1½ to 2 miles north of the main body of iron formation and about 1½ miles to the south of the western part of the iron formation. This feature is interpreted as caused by magnetite which has been eroded from the iron formation and forms part of the basal conglomerate which underlies the sediments. Its smooth character either represents great depth or extreme uniformity of composition. Its decreasing magnetic intensity away from the iron formation indicates increasing depth moving north and south from the iron formation. This is supported by the theory that the iron formation is erosionally resistive, forming a high point on the basement and that the basement eroded away on either side.

7.1 Depth Calculations

Within the sedimentary basement a number of small

anomalies are seen, and were examined for depth calculations on the assumption that they originate from magnetic rock units which terminate on the Archean surface. Unfortunate most of these are dominated by the strong magnetic gradient and accurate depth determinations are sometimes difficult to achieve. Most of the calculations were made using the MAGMOD method which is a computer fitting process developed by Dr. F. S. Grant of Paterson, Grant & Watson Limited. In this method a model is selected such as a tabular body, a ribbon, a prism or a step and at least squares fit is automatically made by the computer to the magnetic data. Parameters of the body so fitted are calculated and include depth to the top, width of the body, dip, magnetic susceptibility contrast with the surrounding rocks. The Peters half-slope method and the Vacquier second derivative index method was also used.

7.1.1 Analysis of Magnetic Gradient

The strong magnetic gradient mentioned earlier was modelled to a single dipping ribbon which should approximate the basal conglomerate configuration. A very good fit was obtained using the Magmod method and data from line 18. Fig. 1 shows the results. The ribbon 1½ miles long, lies 2200' below ground surface at the south end and 4300' at the north end. Dip

is 14.5° to the north. Assuming a thickness of 25 feet (the process gives a thickness times susceptibility and a thickness must be assumed) the susceptibility is 0.195 c.g.s. which is equivalent to a magnetite contact of 54±11% by volume.

In geological terms these figures are not realistic. The southern depth should be less than 300 feet since the conglomerate outcrops. The iron content should be closer to 2 or 3% according to estimates of surface exposures and drill hole interesections.

The discrepancy is explained best by noting that the single ribbon is overly simple for the actual anomaly which is caused by two ribbons sloping away from a central core of steeply dipping iron formation even when examining one side only as was done in this study. What remains to be done is to first compare the anomaly for the complex structure outlined above and compare it with the observed anomaly. If it has a basic similarity then the parameters could be adjusted for a best fit. If, however the complex structure gives an anomaly which is basically different from the

observed one then a new model must be used. This work on complex structures is beyond the scope of this present study and will form a later study.

7.1.2 Isolated Anomalies

The results of the rest of the depth determinations are shown in table I below. Each computation is graded A B C or D which is empirically translated to a rough degree of accuracy ranging from 10% for A to about 50% for D.

Many of the anomalies were found to originate from ground surface and are probably beds of the magnetic argilite quartzite formation. A prominent steep gradient in the east central part of the survey area was modelled as a contact or very deep step although it could be the north edge of the magnetic part of the basal conglomerate. Half slope and Vacquier depths were calculated here ranging from 925 to 500 ft. below ground surface. Other depth determinations were made on weak anomalies which were modelled to dykes with relatively short strike lengths. However, in general, the number of anomalies that could be analysed was disappointingly small,

and not enough are available to form an adequate definition of the basin surface.

Anomaly 17 produced a good fit to a narrow tabular body dipping 19°N which suggests a magnetic bed within the sediments rather than a unit in the basement.

TABLE I

Parameters of Magnetic Units

Anomaly No.	Method	Degree of fit	Depth	Width	Dip	Susceptibility
1	Ribbon	A	-266'		77°N	.0022 x w
1	Tabular	A	-255'	70'	77°N	.0040
2	Tabular	A	-625'	624'	65°N	.00093
3	Tabular	A	-265'	206'	40°N	.0020
4	Tabular	A	-215'	152'	72°N	.00075
5	½ slope	na	surface	na	na	na
9	Tabular	A	-20'	526'	69°S	.00091
10	Ribbon	D	-205'		63°N	.0027 x w
10	Tabular	D	-174'	202'	75°N	.0018
14	½ slope	na	surface	na	90°(a)	na
16	Tabular	C	-300'	946'	50°N	.0018
17	Tabular	A	-100'	120'	19°N	.0098
18	½ slope	na	surface			
19	½ slope	na	surface			
20	Tabular	C	-275'	320'	77°N	.00032
21	Tabular	B	-30'	377'	84°N	.00036
22	Tabular	A	0		83°N	.0002
23	Step	A+	-810'	na	83°S	.0014
24	½ slope	P00-	-500'	na	90°(a)	na
25	½ slope	na	-925'	na	90°(a)	na
26	½ slope	na	-680'	na	90°(a)	na
27	Vacquier	C	-820'	na	90°(a)	na

7.2 Interpretation Map

Interpreted contacts of magnetic rock types, and depths and other parameters of subsurface magnetic units are shown on the Interpretation map in the rear jacket of this report. The depths range from surface to 900 feet below ground surface with the majority falling in the 200-300 foot range. Where modelled to a tabular body a symbol shows the width and Dip in degrees. Magnetite content was computed from the susceptibility contrast using the formula $K = .00116\ V^{1.39}$ (Grant & West, p369). Units having more than 2% magnetite are assumed to be Iron Formation and are cross hatched on the map.

Exposed iron formation was found to have a susceptibility contrast ranging from .01 to .025 c.g.s. units. This corresponds to between 6 and 9% magnetite by volume using conversion methods provided by Grant & West. A number of rather strong magnetic anomalies which show more than 2% magnetite by volume have been outlined and marked as iron formation.

8. CONCLUSIONS AND RECOMMENDATIONS

From this study we can draw the following tentative conclusions:

1. There is some indication that the Gowganda Sediments are 800-900 feet deep a mile north of their south contact and 200-300 feet deep in the west part of the claim

group between two iron formation units. This is based on the assumption that the origin of the anomalies lies in the Archean basement. If they originate from magnetic material in the sediments the depth to the basement will be greater than that calculated. But magnetic material in the Gowganda sediments is most likely eroded from the informations and may well be concentration within the basal conglomerate. In this case the depths would be increased since modelling a steeply dipping tabular body to a narrow thin beach type deposit would produce shallower depth than is correct.

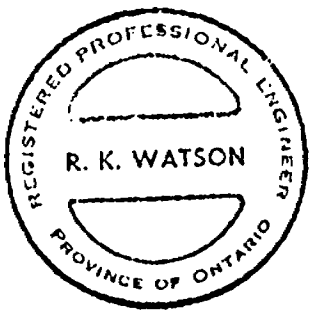
2. The analysis of the large magnetic gradient is incomplete and must wait for some additional development of modelling methods to produce more accurate depth and size calculations. It can be concluded that the unit represented by this magnetic feature is closer to surface than is shown in figure 1, possibly 2,000 feet at its north end, and at or near surface at its south end.

It is recommended that a new analysis be made of the magnetic gradient feature when the proper methods are developed and that the small isolated anomalies be analyzed using a flat beach-type model when this model is developed.

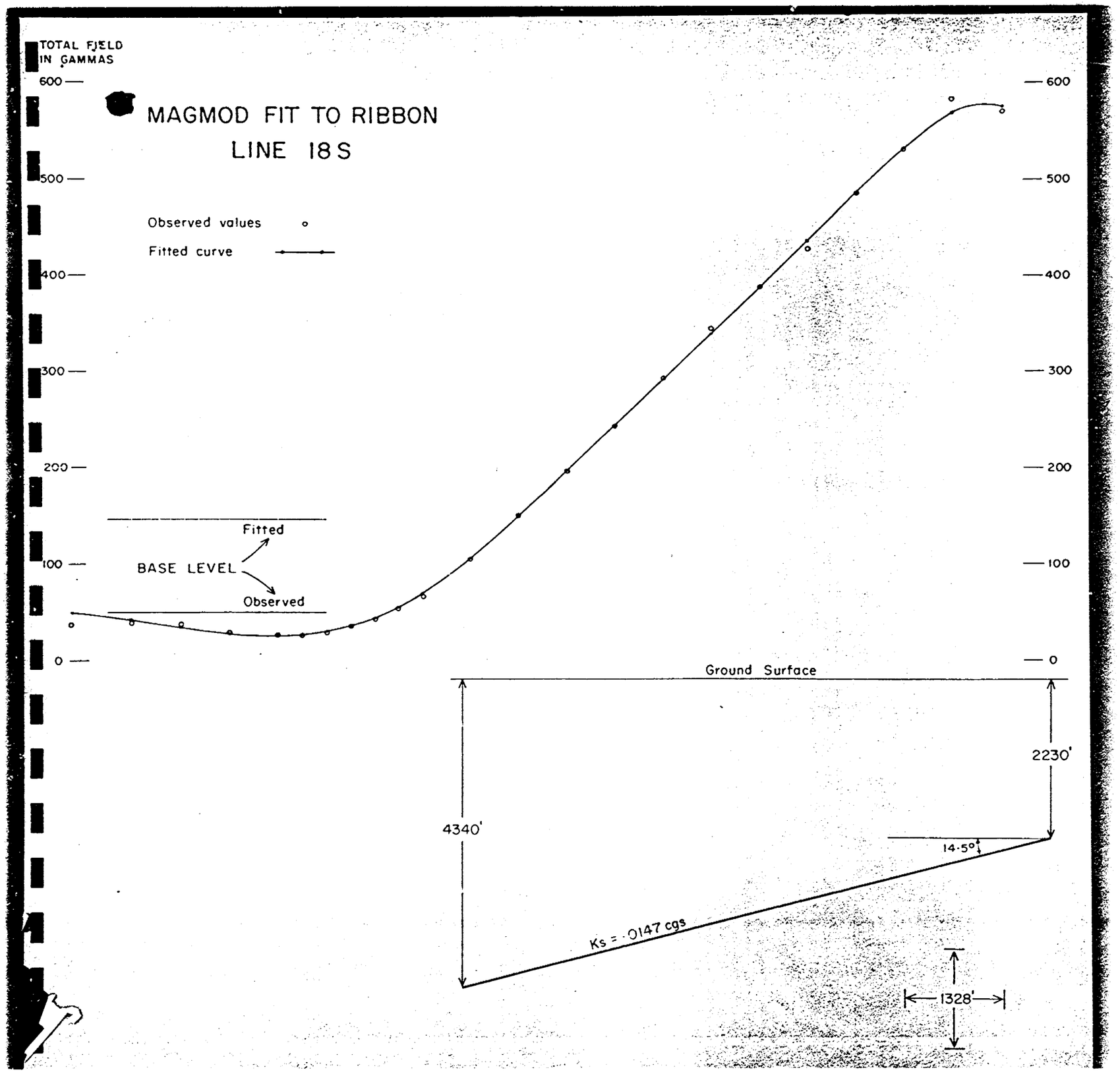
SUMMARY

An aeromagnetic survey was conducted to attempt to obtain information on the thickness of the Gowganda sediments overlying the Archean basement. The interpretation and analysis was of only limit success owing to the inability of present methods to cope with the complexity of the magnetic field found in the survey. Tentatively, the results indicate that the depths of the basal conglomerate may lie between 200 and 2,000 feet below ground surface in and near the claim group. It is recommended that additional analyses be carried out when further development of the methods of analysis will provide an adequate means of modelling the anomalies.

Respectfully submitted,
PATERSON, GRANT & WATSON LIMITED



Roger K. Watson, B.A.Sc., P.Eng.
Geophysicist


TOTAL FIELD IN GAMMAS
MAGMOD FIT TO RIBBON
LINE 18S
Observed values
Fitted curve
Fitted
BASE LEVEL
Observed
600
500
400
300
200
100
0
Ground Surface
2230'
4340'
14·5°
Ks = ·0147 cgs
1328'

900

RE: AIRBORNE GEOPHYSICAL CERTIFICATE File 2.2050

GEOPHYSICAL – GEOLOGICAL – GEOCHEMICAL
TECHNICAL DATA STATEMENT

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 AEROMAGNETIC
Township or Area VOGT TWP.
Claim holder(s) RAND REEF MINES LTD.

* Author of Report ROGER K WATSON
Address 20 BRIDGEVIEW RD. TORONTO
Covering Dates of Survey DEC. 11 TO FEB 27, 1976
(linecutting to office)
Total Miles of Line cut NIL

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
–Magnetometer
–Radiometric
–Other
Geological
Geochemical

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

Magnetometer Electromagnetic Radiometric
(enter days per claim)

DATE: JULY 7/76 SIGNATURE: Roger K Watson
Author of Report or Agent

PROJECTS SECTION

Res. Geol. Qualifications 63.1498

Previous Surveys

Checked by date

GEOLOGICAL BRANCH

Approved by date

GEOLOGICAL BRANCH

Approved by date

OFFICE USE ONLY

MINING CLAIMS TRAVERSED
List numerically

(prefix) (number)

S-461620 TO -687 INCL.
WHICH CLAIMS
MUST STAND IN
EARLY MARCH &
RECORDED MAR. 18
1976.

TOTAL CLAIMS 68

If space insufficient, attach list

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

_____

Corrections made _____

_____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(type, depth – include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

_____

Additional information (for understanding results) _____

_____

_____

AIRBORNE SURVEYS

Type of survey(s) MAGNETIC

Instrument(s) BARRINGER AM 104

(specify for each type of survey)

Accuracy 1 GAMMA

(specify for each type of survey)

Aircraft used BELL JET RANGER C-GLHL

Sensor altitude 150'-200' ABOVE GROUND

Navigation and flight path recovery method PHOTOMOSAIC AND FILM STRIP

_____

Aircraft altitude 200'-250' Line Spacing 1/16 & 1/8 MILE

Miles flown over total area 523.5 Over claims only 44

GRAND REEF CLAIMS
DEC 75

K-369668 = 20 DAYS
K-369669 = 20 "
K-369670 = 20 "
K-369671 = 20 "
K-369672 = 20 "
K-369673 = 20 "
K-369674 = 20 "
K-369675 = 20 "
K-369676 = 20 "
K-369677 = 20 "
K-369678 = 20 "
K-369679 = 20 "
K-369680 = 20 "
K-369681 = 20 "
K-369682 = 20 "
K-369683 = 20 "
K-369684 = 20 "
K-369685 = 20 "
K-369686 = 20 "
K-369687 = 20 "
K-369688 = 20 "
K-369689 = 20 "
K-369690 = 20 "
K-369691 = 20 "
K-369692 = 20 " ✓

VS-396956 = 20 "
VS-396957 = 20 "
VS-396958 = 20 "
VS-396959 = 20 "
VS-396960 = 20 "
VS-396961 = 20 "
VS-396962 = 20 "
VS-396963 = 20 "
VS-396964 = 20 "

= 34 CLAIMS ✓

VS-396965 = 20 DAYS
VS-396966 = 20 "
VS-396967 = 20 "
VS-396968 = 20 "
VS-396969 = 20 "
VS-396970 = 20 "
VS-396971 = 20 "
VS-396972 = 20 "
VS-396973 = 20 "
VS-396974 = 20 "
VS-396975 = 20 "
VS-396976 = 20 "
VS-396977 = 20 "
VS-396978 = 20 "
VS-396979 = 20 "
VS-396980 = 20 "
VS-396981 = 20 "
VS-396982 = 20 "
VS-396983 = 20 "
VS-396984 = 20 " ✓

VS-378814 = 20 "
VS-378815 = 20 "
VS-378816 = 20 "
VS-378817 = 20 "
VS-378818 = 20 "
VS-378819 = 20 "
VS-378820 = 20 "
VS-378821 = 20 "
VS-378822 = 20 "
VS-378823 = 20 "
VS-378824 = 20 "
VS-378825 = 20 " ✓

✓
= 32 CLAIMS

GRAND REEF CONTINUED

VS-397096 = 20 DAYS
VS-397097 = 20 "
VS-397098 = 20 "
VS-397099 = 20 "
VS-397100 = 20 "
VS-397101 = 20 "
VS-397102 = 20 "
VS-397103 = 20 "
VS-397104 = 20 "
VS-397105 = 20 "
VS-397106 = 20 "
VS-397107 = 20 "
VS-397108 = 20 "
VS-397109 = 20 "
VS-397110 = 20 "
VS-397111 = 20 "
VS-397112 = 20 "
VS-397113 = 20 "
VS-397114 = 20 "
VS-397115 = 20 "
VS-397116 = 20 "
VS-397117 = 20 "
VS-397118 = 20 "
VS-397119 = 20 "
VS-397120 = 20 "
VS-397121 = 20 "
VS-397122 = 20 "
VS-397123 = 20 "
VS-397124 = 20 "
VS-397125 = 20 " ✓

= 30 CLAIMS

VS-397345 = 20 DAYS
VS-397346 = 20 "
VS-397347 = 20 "
VS-397348 = 20 "
VS-397349 = 20 "
VS-397350 = 20 "
VS-397351 = 20 "
VS-397352 = 20 "
VS-397353 = 20 "
VS-397354 = 20 "
VS-397355 = 20 "
VS-397356 = 20 "
VS-397357 = 20 "
VS-397358 = 20 "
VS-397359 = 20 "
VS-397360 = 20 "
VS-397361 = 20 "
VS-397362 = 20 "
VS-397363 = 20 "
VS-397364 = 20 "
VS-397365 = 20 "
VS-397366 = 20 "
VS-397367 = 20 "
VS-397368 = 20 "
VS-397369 = 20 "
VS-397370 = 20 "
VS-397371 = 20 "
VS-397372 = 20 "
VS-397373 = 20 "
VS-397374 = 20 " ✓

= 30 CLAIMS

BAND REEF CLAIMS CONT.

VS-397206 = 20 DAYS
VS-397207 = 20 "
VS-397208 = 20 "
VS-397209 = 20 "
VS-397210 = 20 "
VS-397211 = 20 "
VS-397212 = 20 "
VS-397213 = 20 "
VS-397214 = 20 "
VS-397215 = 20 "
VS-397216 = 20 "
VS-397217 = 20 "
VS-397218 = 20 "
VS-397219 = 20 "
VS-397220 = 20 "
VS-397221 = 20 "
VS-397222 = 20 "
VS-397223 = 20 "
VS-397224 = 20 "
VS-397225 = 20 "
VS-397226 = 20 "
VS-397227 = 20 "
VS-397228 = 20 "
VS-397229 = 20 "
VS-397230 = 20 "
VS-397231 = 20 "
VS-397232 = 20 "
VS-397233 = 20 "
VS-397234 = 20 "
VS-397235 = 20 "
VS-397236 = 20 "
VS-397237 = 20 "
VS-397238 = 20 "
VS-397239 = 20 "
VS-397240 = 20 "

= 35 CLAIMS

VS-397241 = 20 DAYS
VS-397242 = 20 "
VS-397243 = 20 "
VS-397244 = 20 "
VS-397245 = 20 "

= 5 CLAIMS

VS397758
59
60
VS414278
79
VS424997

34
32
60
40
166

166

PHYLLIS TWP - M.567

6M.286

McLean

South

Arm

Southwest

Peninsula

Lake

Timagami

Lake

Outlet

Bay

Camp Whitewood

Camp Acouchiching

Austin Bay

Timagami

Bois Jeanne

Clear Lake

LINE

PROJECTED

Clement Twp. - M.449

RIGHTS ONLY RESERVED UNDER SEC. 42 OF MINING ACT. FILE - 01694

VOGT TWP.

SCALE: 1" = 40CH

HOBBS TWP - M.937

1M.

2M.

3M.

4M.

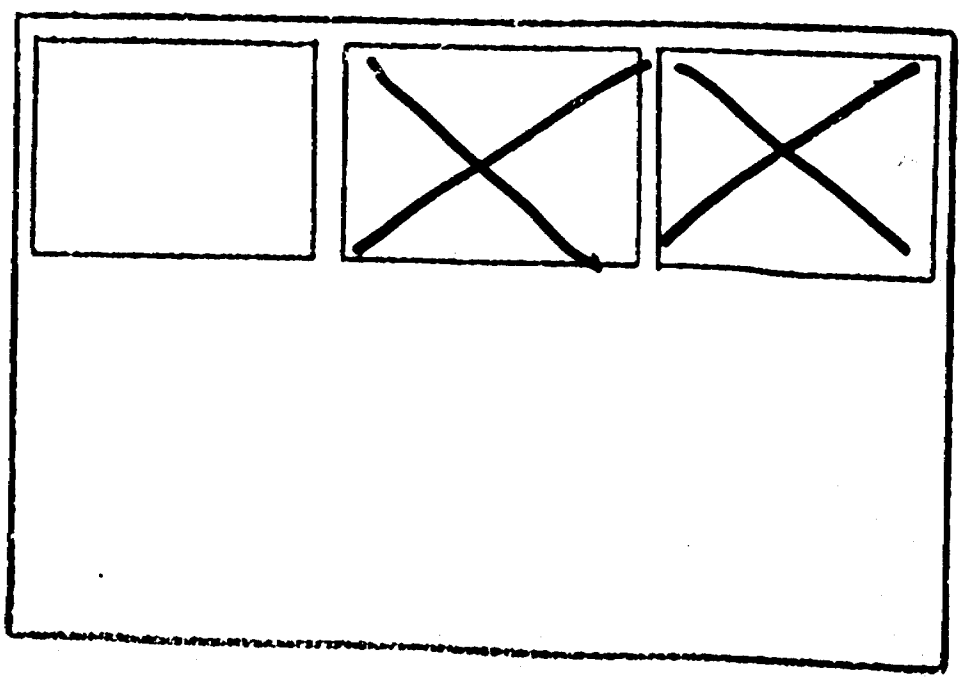
5M.

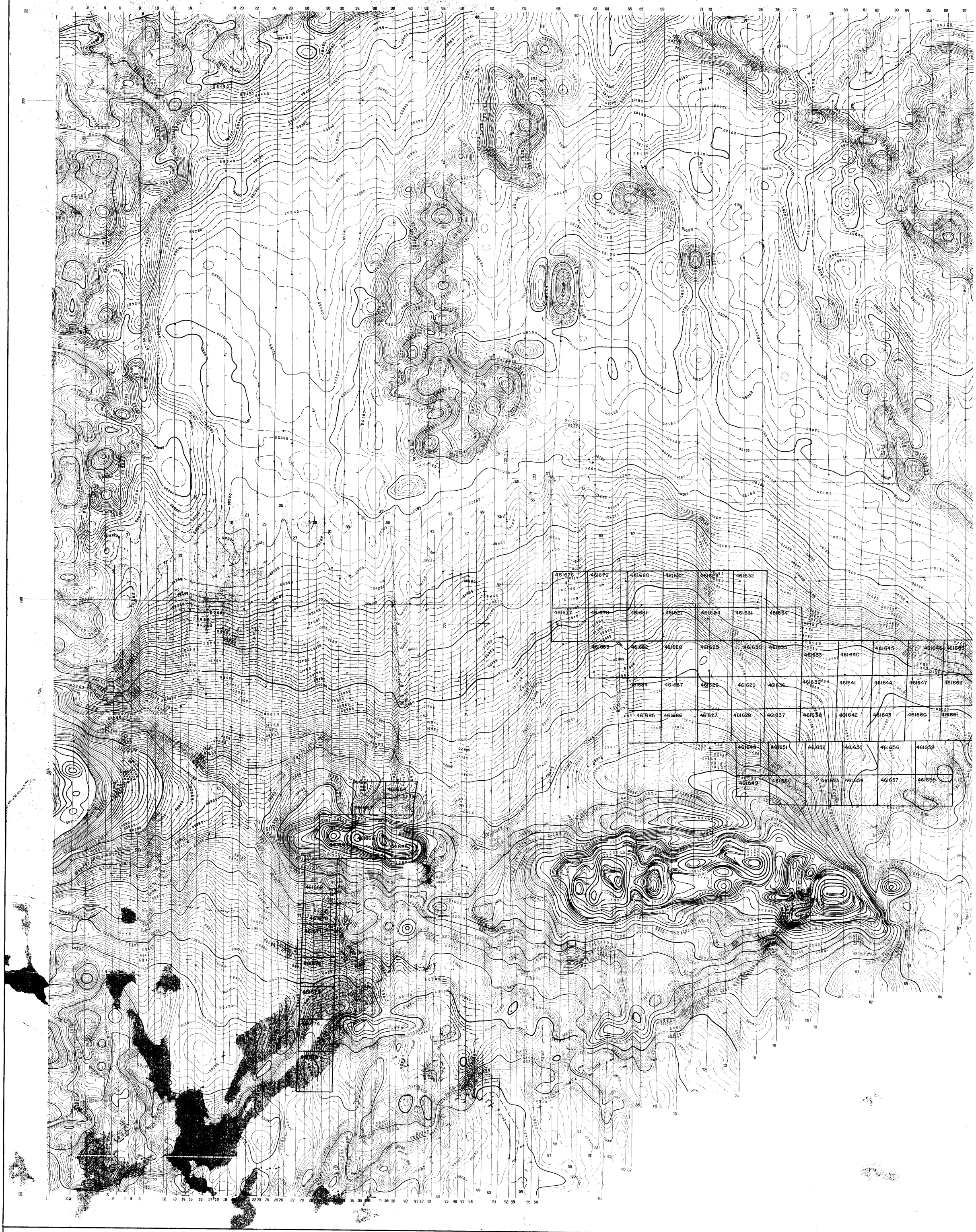
SEE ACCOMPANYING MAP(S) IDENTIFIED AS

VOGT-0013-B1-#1

#2

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





LEGEND

gammas .....

gammas .....

gammas .....

gammas .....

Horizontal control ..... based on photo laydown

Average bird height .....

Line spacing .....

Revised April, 1976
to show new claims
recorded March 18, 1976

AERODAT

Diabase

Nippissing diabase

Nippis

5a

Slate, argillite

5a

Argillite, quartzite

10

PHYLLIS TWP.

VOGT TWP.

MAP 2057
MAP 2048

15 Surface

19 Surface

14 Surface

18 Surface

10 75° 1·5% -175'

24 -500'?

25 -925'

26 -680'

23 -810' 83°

2 65° 0·46% Fe -625'

3 40° 1·5%

4 72° 0·4% Fe -215'

5 Surface

27 -820'

1 77° 1·4% -265'

At depth

6%

2%

9%

16 1·4% -300' 50°

17 19° 4·6% -100'

Diabase

VOGT TWP.
CLEMENT TWP.

VOGT TWP.
HOBBS TWP.

McCALLUM TWP.

397371 397372 397212 397213 397226 397227 397238 397239 397242 397243 397245
397370 397211 397225 397228 397237 397240 397241 397244 397120
397373 397214
397368 397369 397374 397210 397215 397224 397229 397236 397115 397116 397119 397121 397124
397367 397366 397365 397209 397216 397223 397230 397235 397114 397117 397118 397122 397123 397125
397361 397362 397363 397364 397208 397217 397222 397231 397234 397098 397099 397104 397105 397110 397111
397360 397359 397358 397357 397356 397218 397221 397232 97233 397097 397100 397103 397106 397109 397112
397207 397351 397352 397353 397355 397219 397220 397096 397101 397102 397107 397108 397113
397354
397206 397350 397349 397348 397347 397346 397345
369683 369684 369685 369686 369687
396959 396958 378825 378820 378819 378814
396958 396957 378824 378821 378818 378815
396960 396961 378823 378822 378817 378816
396964 396963 396962 396974 396965 396966
396977 396976 396975 396973 396967
396978
396979 396984 396972 396968
396980 396983 396971
396981 396982 396969
396970
397758 397759 397760
369679 369689 369680 369681 369682
369690 369692
369691 369688
369675 369676 369677 369678
369674 369673 369672 424997
369668 369669 369670
369671
414278 414279

LEGEND

2% Iron formation with calculated percent magnetite

—G——G— Contact transcribed from O.D.M. map 2048

Contact interpreted from magnetic pattern

(16) Anomalies examined for depth information

70° 0·5% -625' Calculated percent magnetite (vol.) Width and dip of model Depth below ground surface (feet)

Outer edge of magnetic basal conglomerate OR major contact in basement

LEGEND

500 gammas
100 gammas
20 gammas
10 gammas

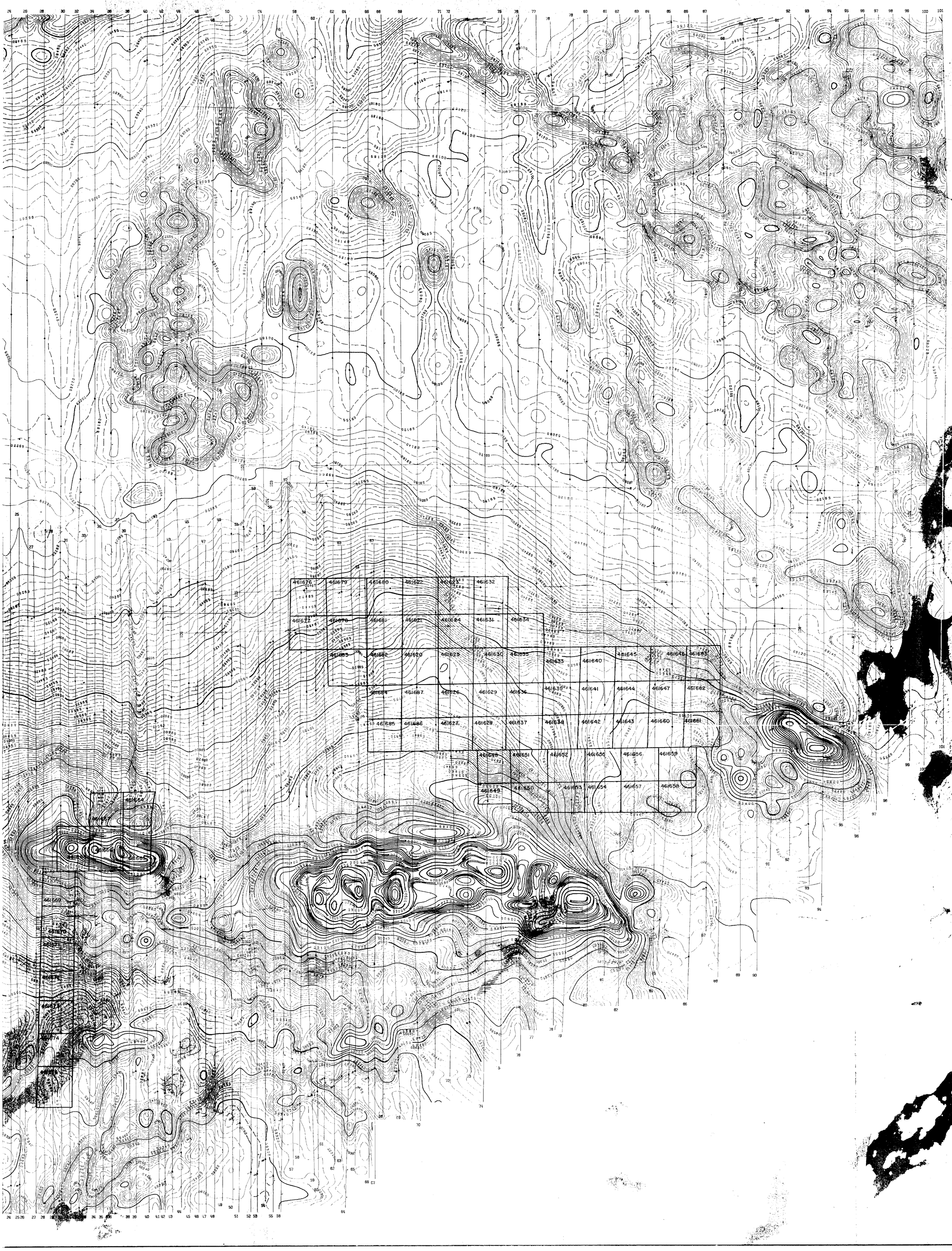
Horizontal control ..... based on photo laydown
Average bird height ..... 100 feet
Line spacing ..... 660 and 330 feet

Covering dates of survey: December 11, 197[illegible] to February 27, 1976

AERODAT

41116NE1102 001381 VOGT

210



LEGEND

gammas .....

gammas .....

gammas .....

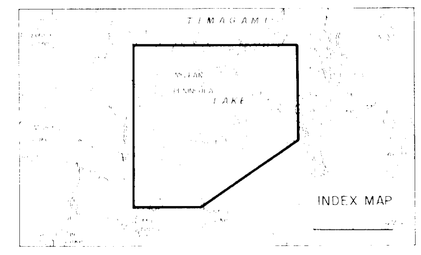
gammas .....

Horizontal control ..... based on photo laydown

Average bed height .....

Line spacing .....

Revised April, 1976
to show new claims
recorded March 18, 1976



TOTAL FIELD MAGNETIC MAP

TEMAGAMI LAKE AREA

(ONTARIO)

RAND REEF MINES LIMITED

0 500 1000 2000 3000 5000 Feet

DECEMBER 1975

VOGT-0013-BI-#1

Nippissing diabase

5a

Slate, argillite

5a

Argillite, quartzite

10

Nippising diabase

PHYLLIS TWP.
YATES TWP.

PHYLLIS TWP.
VOGT TWP.

MAP 2057
MAP 2048

15 Surface

19 Surface

14 Surface

18 Surface

24 -500'?

25 -810'

26 -925'

23 -680'

2 65° 0·46% Fe -625'

3 40° 1·5%

10 75° 1·5% -175'

21 84° 0·4% -30'

20 77° 0·4% -275'

9 69° 0·5% Fe -20'

22 0·2% surface 83°

VOGT TWP.
TORRINGTON TWP.

4 72° 0·4% Fe -215'

5 Surface

4·1%

6%

9%

2%

16 1·4% -300' 50°

Diabase

VOGT TWP.
HOBBS TWP.

McCALLUM TWP.

397226 397227 397238 397239 397242 397243 397245
397225 397228 397237 397240 397241 397244 397120
397224 397229 397236 397115 397116 397119 397121 397124
397223 397230 397235 397114 397117 397118 397122 397123 397125
397222 397231 397234 397098 397099 397104 397105 397110 397111
397221 397232 397233 397097 397100 397103 397106 397109 397112
397220 397096 397101 397102 397107 397108 397113
369683 369684 369685 369686 369687 397758
369679 369689 369680 369681 369682 397759 397760
369690 369692 369688 369691
369675 369676 369677 369678
369674 369673 369672 424997
369668 369669 369670 369671
414278 414279

EGEND

rmation with calculated percent magnetite

transcribed from O.D.M. map 2048

t interpreted from magnetic pattern

lies examined for depth information

ited percent magnetite (vol.)
and dip of model
below ground surface (feet)

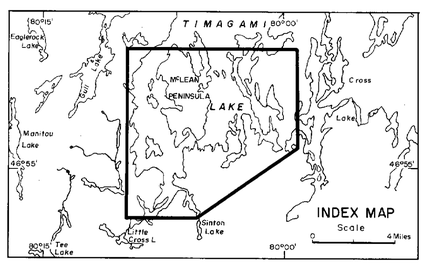
edge of magnetic basal conglomerate OR
contact in basement

LEGEND

500 gammas
100 gammas
20 gammas
10 gammas

Horizontal control ..... based on photo laydown
Average bird height ..... 100 feet
Line spacing ..... 660 and 330 feet

Covering dates of survey : December 11, 1975
to February 27, 1976



INTERPRETATION

TOTAL FIELD MAGNETIC MAP

TEMAGAMI LAKE AREA

(ONTARIO)

RAND REEF MINES LIMITED

0 660 1320 2640 3960 5280 Feet

DECEMBER 1975

REGISTERED PROFESSIONAL ENGINEER
R. K. WATSON
PROVINCE OF ONTARIO

2 2050

VOGT-0013-B1-#2