



42A14SW0118 63.1615 THORBURN

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AIRBORNE GEOPHYSICAL SURVEY  
OF THE  
EDWARDS, REID AND THORBURN TOWNSHIP AREAS,  
FOR  
CANADIAN JAVELIN LTD.



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I. INTRODUCTION

A combined airborne EM and magnetometer survey has been completed for Canadian Javelin Ltd. over three blocks of ground in the Timmins area of Ontario. The aircraft employed was the Canadian Aero Mineral Surveys Limited geophysically-equipped de Havilland Otter, registration CF-IGM.

The areas surveyed are described as the Edwards Township, Reid Township and Thorburn Township blocks. The final areas laid out by Canadian Javelin field personnel differ somewhat from the original areas described in the contract of May 12, 1964, especially the Edwards block which was enlarged appreciably. The final line-mileage flown totals 700.2 line-miles, distributed as follows:

Edwards Township block	-	358.8	line-miles
Reid Township block	-	225.7	line-miles
Thorburn Township block	-	115.7	line-miles

In all three areas, the line-spacing was 1/8-mile and the mean terrain clearance, 150 feet.

The survey began on May 16, 1964, and was completed on July 11, 1964.

Canadian Aero Mineral Surveys Limited field personnel associated with this project were as follows:

G. A. Curtis	--	Electronic Technician and Project Manager
E. Jensen	--	Pilot
D. Smith	--	Pilot
T. Appleton	--	Pilot
J. D. Lloyd	--	Aircraft Mechanic
R. Sarsfield	--	Aircraft Mechanic
K. McLeod	--	Navigator
D. Graham	--	Electronic Operator
D. J. Sarazin	--	Data Analyst
G. Granger	--	Draftsman

The project was supervised by A. R. Rattew, P.Eng., author of this report.

Details of the equipment carried on the Otter and an explanation of the recorder charts are provided in Appendix II. Appendix III describes our anomaly rating and anomaly listing procedures.

The airborne EM data are presented on three separate sheets at the scale of one inch equals  $\frac{1}{4}$ -mile. An air-photo laydown provides the base for the EM maps.

## II. GEOLOGY

Geological information on these areas is scarce. They are deeply covered by drift for the most part.

The Reid and Thorburn areas are covered by the Ontario Department of Mines preliminary map P.139 at the scale of one inch equals two miles. Most of the Edwards Township block is covered by D.D.M. preliminary maps P.152 and P.153 at one inch equals  $\frac{1}{2}$ -mile.

In the few outcrops which do exist a wide variety of Precambrian rocks have been mapped. They include acidic to basic volcanics, acidic and basic intrusives, quartzite, amphibolite and various gneissic rocks.

One sulphide showing with minor chalcopyrite is reported in the western part of Edwards Township.

### III. RESULTS

All EM anomalies have been assigned numbers which are shown on the maps and in the anomaly list, Appendix I. These numbers consist of the line upon which the anomaly occurs, plus letters A, B, C, etc., from south to north or from east to west. Additionally, the main zones of conductivity are assigned reference numbers on the map sheets to facilitate discussion in this report (numbers 1, 2, 3, etc.).

The "x" category of anomaly rating is reserved for questionable anomalies and for anomalies which are suspected of being due to surface conductors. Because the Timmins area has great economic potential, we include on the maps, any feature from the EM charts which has a reasonable chance of being a legitimate anomaly.

In many parts of the Timmins area, the overburden has a fairly high conductivity, yielding substantial quadrature anomalies. Most of these quadrature anomalies are broad and smooth and many correlate clearly with swamps; these are readily discarded. The sharper quadrature anomalies could derive from either low-conductivity bedrock conductors or narrow, conducting swamps.

Many of these features are included on the maps, and attention is drawn to the possibility of a surface conductor in the "Comments" column of the anomaly listing or in the text of this report.

#### Edwards Township Area

Seven zones of anomalous conductivity have been numbered on this sheet. All of them but one, (zone 3), consist of single-line anomalies. Additionally, there are eleven "x-type" anomalies designated only by their anomaly numbers.

Zone 1 is a triple-peaked anomaly occurring in the vicinity of known sulphide mineralization. The direct magnetic correlation on the centre anomaly suggests an appreciable pyrrhotite content, and there may be a slight magnetic anomaly on the northern peak as well.

Zone 2 is a very weak, multiple anomaly, but it is probably legitimate. The O.D.M. geology map shows a north-easterly strike in this vicinity, suggesting that 1 and 2 may, in fact, be the same conductive zone.

The only extensive zone of bedrock conductivity is zone 3, a 3/4-mile-long, multiple-conductor belt. The width of the zone changes drastically from line to line and there is

magnetic correlation with many of the EM anomalies. Chances are good that sulphides will be found in this belt, probably in combination with graphite. The strongest EM response within zone 3 is anomaly 6B.

Zones 4, 5, 6, and 7 consist of single-line, broad, quadrature anomalies. The possibility exists that surface conductors are the source of one or all of these anomalies, but in all cases, there are reasons to suspect some bedrock conductivity contrast. Therefore, in a thorough follow-up programme, these conductors should be explored.

Any of the eleven questionable, "x-type", anomalies could warrant exploration if the geological environment is sufficiently encouraging. Strictly on the basis of the anomaly characteristics, our preference among the questionable features is for anomalies FA, 6A, 24A, 24B, and 34A.

#### Reid Township Area

Nine zones of anomalous conductivity have been numbered and there are four other "x-type" anomalies shown.

Zones 1, 5, 6, 7, 8, and 9 are definite bedrock conductors. Of these, 5, 6, and 9 appear to be related. Note



that information on zone 9 is incomplete and its position is somewhat uncertain, because it occurs at the end of the lines outside the job boundary.

Zone 8 is a good sulphide prospect, a localized feature of high conductivity with a coincident magnetic anomaly.

Although zone 2 consists of a single, questionable anomaly, we consider that it has a fair chance of being a legitimate bedrock conductor.

Zone 3 is a definite anomaly, but it could derive from a surface conductor rather than a bedrock source.

Zone 4, consisting of strong, broad, quadrature anomalies, is probably a surface conductor. It is stronger than most, however, and is therefore included on the map.

The three "x-type" anomalies 52A, 53A, and 55A, all have similar characteristics: they are in-phase anomalies related to terrain. We consider them poor prospects for bedrock conductivity. Anomaly 60A is also a probable surface effect.

Thorburn Township Area

Five zones of anomalous conductivity have been numbered on this sheet. Of these, we consider zones 1, 2, and 3 definite bedrock conductors, and zones 4 and 5 good possibilities.

Although both the anomalies in zone 4 are questionable, they tend to support each other.

The characteristics of zone 5 are such that it is questioned as a possible surface conductor.

The remaining ten "x-type" anomalies plotted on this sheet are all strongly suspected of being surface effects or noise effects. Our preference among these is anomaly 10A.

IV. SUMMARY AND RECOMMENDATIONS

Due to the economic potential of this area, all definite bedrock conductors warrant exploration. Furthermore, if the local geological environment is considered sufficiently encouraging, any of the questionable anomalies could be worth examination.

The definite bedrock conductors are as follows:

Edwards - 1 and 3.

Reid - 1, 5, 6, 7, 8, and 9.

Thorburn - 1, 2, and 3.

A number of other zones have a good chance of being bedrock conductors and we recommend that they be included on the list for mandatory followup. They are as follows:

Edwards - 2, 4, 5, 6, and 7.

Reid - 2 and 3.

Thorburn - 4 and 5.

There is a considerable variation in characteristics among the more questionable anomalies which we include on the maps.

Strictly on the basis of their geophysical properties, we prefer the following from this group:

Edwards anomalies FA, 6A, 24A, 24B, and 34A.

Thorburn anomaly 10A.

Respectfully submitted,



OTTAWA, Ontario,  
July 28, 1964.

A. R. Rattew, P.Eng.,  
Geophysicist.

## APPENDIX I

PROJECT NO. 4026 - EDWARDS TOWNSHIP AREA

<u>Anomaly</u>	<u>Fiducials</u>	<u>In-Phase Quad</u>	<u>Altitude</u>	<u>Magnetics</u>	<u>Rate</u>	<u>Comments</u>
FA	5974/7	-/80	130	nil	x	
DA	5334/8	-/50	135	nil	x	Probable swamp effect
DB	5391/7	-/60	140	nil	x	Probable swamp effect
CA	5127/33	-/70	125	nil	3	Double, ore peak sharp
BA	5011/3	-/40	145	nil	x	Probable swamp effect
BB	5028/34	-/50	140	Assoc? 40g	3	Possible swamp effect
AA	6582/94	-/100	135	Assoc? broad 200g	3	
AB	6543/7	-/60	140	nil	x	
1 A	2857/61	120/60	140	Dir? 15g	3	Double, strong
1 B	285/5	40/50	135	Dir.broad 30g	3	Broad - Broader quad
2 A	3018/22	60/120	140	Dir: 40g	3	Double, strong broad quad
2 B	3024/9	-/70	150	Dir:? 60g	3	Broad quad - Double ?
3 A	3343/7	80/60	125	Dir. to N 130g	3	

PROJECT NO. 4026 - EDWARDS TOWNSHIP AREA

<u>Anomaly</u>	<u>Fiducials</u>	<u>In-Phase Quad</u>	<u>Altitude</u>	<u>Magnetics</u>	<u>Rate</u>	<u>Comments</u>
3 B	3340/3	40/200	135	Dir: 150g	3	Strong quad
3 C	3336/40	-/180	135	Dir.broad 120g	3	Strong quad
3 D	3333/6	-/170	140	Dir? 70g	3	
4 A	3508/12	-/90	150	N.Flank 80g	3	Broad - No IP
4 B	3654/65	-/150	145	nil	3	Multiple quad, surface conductor ?
5 A	3828/32	50/40	140	Dir? 20g	3	Double ?
6 A	3978/84	60/-	150	nil	x	Probable manoeuvre noise
6 B	3992/6	120/220	145	Dir. 15g	2A	
6 C	3996/400	40/40	150	Dir. 230g	3	Broad, weak
7 A	4317/21	40/70	150	S.edge 180g Possibly some direct mag.	3	Poor IP, Double ?
11 A	5451/5	40/-	130	Dir. 25g	x	Probable turbulence noise
20 A	8053/60	60/-	120-160	Dir. C 80g	x	No quad. Broad multiple
21 A	8261/4	140/20?	150	S.Flank 100g	2B	

PROJECT NO. 4026 - EDWARDS TOWNSHIP AREA

<u>Anomaly</u>	<u>Fiducials</u>	<u>In-Phase Quad</u>	<u>Altitude</u>	<u>Magnetics</u>	<u>Rate</u>	<u>Comments</u>
21 B	8264/6	80/20?	150	Dir: 300g	3	Sharp mag.
21 C	8266/8	50/20?	150	Dir: 15g	3	
23 A	8881/4	30/-	150	nil	x	Doubtful
24 A	9063/6	40/-	150	S.Flank 20g	x	
24 B	8938/41	40/-	150	N.Flank 60g	x	
34 A	2126/9	-/50	140	nil	x	Possible surface effect.

PROJECT NO. 4026 - REID TOWNSHIP AREA

<u>Anomaly</u>	<u>Fiducials</u>	<u>In-Phase Quad</u>	<u>Altitude</u>	<u>Magnetics</u>	<u>Rate</u>	<u>Comments</u>
39 A	4677/80	20/30	160	N. side 80g	x	Weak
40 A	4526/9	30/30	155	N. edge 60g	3	Weak
40 B	4523/6	30/-	150	Dir: 40g	x	IP only, weak
50 A	2602/5	40/-	155	Dir. broad 300g	x	Good shape
52 A	2357/64	100/-	145	Assoc? 100g	x	Probable surface effect
53 A	2051/6	90/-	140	nil	x	Probable surface effect
53 AB	1995/9	-/80	135	N. Flank 600g	3	Possible surface conductor
54 A	1741/4	-/120	145	nil	3	Possible surface conductor
54 B	1814/9	-/80	135	nil	3	Probable surface conductor
54 C	1861/6	60/20?	145	N. Flank 200g	3	Double ?
55 A	1524/30	80/-	140	nil	x	Probable surface effect
55 B	1501/12	-/140	125	nil	3	Probable surface conductor



PROJECT NO. 4026 - REID TOWNSHIP AREA

<u>Anomaly</u>	<u>Fiducials</u>	<u>In-Phase Quad</u>	<u>Altitude</u>	<u>Magnetics</u>	<u>Rate</u>	<u>Comments</u>
57 A	930/3	207/40	125	N.Flank 120g	3	Weak
57AA	3313/8	-/120	140	nil	3	Possible surface conductor
57AB	3256/60	60/207	165	nil	x	Double?
58 A	533/6	60/20	125	nil	3	Broader and weak quad
58 B	520/3	40/40	130	Dir? broad 25g	3	
59 A	447/50	40/30	125	N.edge 60g	3	Broader quad
60 A	0050/3	10/30	130	nil	3	Weak
60 B	0024/9	-/40	125	nil	x	Probable surface effect
65 A	8867/70	40/40	140	Dir. 120g	3	Weak
66AA	7492/5	80/20	135	N.Flank 80g	3	
66 A	3035/8	60/20	155	Dir. 60g	3	Strong
67 A	7481/5	70/40	135	N.Flank 60g	3	

PROJECT No. 4026 - THORBURN TOWNSHIP AREA

<u>Anomaly</u>	<u>Fiducials</u>	<u>In-Phase Quad</u>	<u>Altitude</u>	<u>Magnetics</u>	<u>Rate</u>	<u>Comments</u>
1 A	0137/41	-/50	110	Dir. 100g	x	Probable surface effect
2 A	0211/5	-/50	140	nil	x	Possible surface conductor
4 A	0479/82	-/20	130	Dir. 15g	x	
5 A	0544/7	-/40	130	Dir. 150g	3	
6 A	0697/0701	-/40	140	Dir? 30g	x	
6 B	0712/5	-/30	145	N.Flank 150g	x	
7 A	0754/7	107/40	145	nil	x	
8 A	987/90	50/20	160	Dir? broad 15g	3	
9 A	1013/6	20/50	140	E.Flank 30g	3	
10 A	1220/3	60/-	135	nil	x	
10 B	1289/92	-/40	160	nil	x	
11 A	1394/7	-/50	115	nil	x	Possible surface effect
12 A	7495/8	90/-	150	Dir. 50g	x	Probable manoeuvre noise
17 A	2648/51	40/40	140	E.edge 150g	3	
18 A	2953/6	40/70	140	E.edge 70g	3	

PROJECT NO. 4026 - THORBURN TOWNSHIP AREA

<u>Anomaly</u>	<u>Fiducials</u>	<u>In-Phase Quad</u>	<u>Altitude</u>	<u>Magnetics</u>	<u>Rate</u>	<u>Comments</u>
19 A	8270/3	20/30	155	Dir? 10g	x	
22 A	8875/8	40/-	160	nil	x	
23 A	8945/8	-/40	150	Dir? broad 40g	x	
29 A	4796/4800	-/40	150	nil	x	Possible surface conductor
29 B	4834/7	-/30	140	Dir. 50g	x	Possible surface conductor
30 A	4900/3	-/40	135	E.Flank 100g	x	
32 A	5148/51	-/50	140	nil	x	Possible surface effect.



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INDEX  
OF  
ELECTROMAGNETIC SURVEYS  
CANADIAN JAVELIN LTD.  
THORNHILL AREA, ONT.

CONTENTS

The following report covers electromagnetic surveys carried out on four separate properties in the Thornhill area for Canadian Javelin Ltd. Two of these were detail surveys carried out on properties previously surveyed in Reid township. The original surveys are described in reports by the writer dated July 1971 and August 1968.

The other surveys described in the report consist of a detail survey in Murphy township to outline a conductor on the Clemens property and a survey carried out in Reid township.

PROPERTY AND TOWNSHIP

The location of the properties in Reid township

are described in earlier reports. The areas surveyed in Murphy township is shown on the location map.

The property in Kidd township is classed as Claim Group E-1 and includes the north half of lot 2, Concession 1.

#### GEOPHYSICAL SURVEY RESULTS AND INTERPRETATION

Three of the surveys described in this report were carried out using the Ronka Mark IV horizontal loop unit with a 500 foot coil interval. One of the detail surveys in Kidd township was to check a Ronka conductor and vertical loop equipment was used.

A description of the results of each survey follows:

##### GROUP E-1

This is a detail survey of anomaly "C" on Claim Group E-1 in Kidd township. A previous vertical loop survey had also detailed this conductor. It is a fairly definite conductor and the writer understands that drilling has already indicated that graphite is the cause of the conductor.

VERTICAL LOOP SURVEY - BIRD TOWNSHIP

This survey was to check "A" anomaly indicated in a previous horizontal loop survey. In the vertical loop survey "A" anomaly shows a greater length and a stronger conductor. This is probably due to the greater penetration of the equipment.

The survey also indicated another anomaly referred to as "B" which actually looks as though it could be the extension of anomaly "A". It extends off the property to the east.

*See Appendix to # 310,*

VERTICAL LOOP SURVEY

This was a detail survey to check a conductor on the property of Glencore Mines Ltd. The conductor was outlined for a length of approximately 2,000 feet and shows an extremely strong conductor. It appears to be almost vertical and has an east-west strike.

The presence of gossan over the conductor indicates that the conductor is probably due to sulphides.

GROUP I-3 - KIDD TOWNSHIP

The survey was carried out along both east-west and

north-south lines, as shown on the accompanying map. The only responses indicative of a conductor were found on the north-south lines O and 3W. These are shown as separate conductors but could actually represent a north-east zone. The responses are quite weak and unfortunately the best one is on the property boundary.

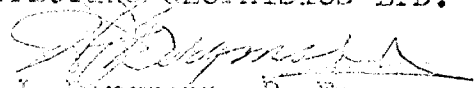
It will be noted that some irregular positive responses were obtained on line 3W. These have no economic significance as there was nothing picked up on the east-west lines.

CONCLUSIONS AND RECOMMENDATIONS

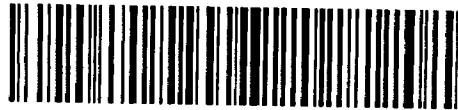
The detail surveys <sup>carried</sup> surveyed to check and in some cases further delineate the previously indicated conductors. Field data was given to the Company's geologist and at the time of writing this report these conductors have not checked.

The survey carried out on the Kidd township property indicated only a weak conductor close to the east boundary. It would seem advisable to check this with a vertical loop survey prior to any investigation by diamond drilling.

Respectfully submitted,  
PROSPECTING GEOPHYSICS LTD.

  
H.J. Bergmann, P. Eng.

London, Ont.,  
Nov. 13, 1964.



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REPORT  
ON  
ELECTROMAGNETIC SURVEY  
ON PROPERTY OF  
CANADIAN JAVELIN LTD.  
REID TOWNSHIP, ONT.

INTRODUCTION

An electromagnetic survey has been carried out on a property of Canadian Javelin Ltd. in Reid township, Timiskaming area of Ontario. The following report and accompanying map describes the results of this survey with an interpretation of the results.

PROPERTY AND LOCATION

The property surveyed is located in Concessions 58355, 58356 and 58357 of Reid township, Porcupine Mining Division, Ontario. It consists of the following claims registered with the Department of Mines as shown on the accompanying map.

- 58355 - 58353 inclusive
- 62015 - 62022       "
- 62032 - 62045       "



### CONCLUSIONS

Rock outcrops are relatively scarce in the area and to the writer's knowledge no outcrops were located during the geophysical survey. The ground is almost entirely low-lying mudrock.

Geological map 2046 published by the Ontario Department of Mines does not show any outcrops in Reid township. From the areal geology one would expect the property to be largely underlain by volcanic rocks.

### EMAGNETIC SURVEY RESULTS AND INTERPRETATION

The electromagnetic survey was carried out using a Rodin Mark IV electromagnetic unit along a network of north-south lines, as shown on the accompanying map. The results are plotted on a map on a scale of 400 feet to the inch.

An examination of the map shows a number of short consecutive zones in the vicinity of the Mattaganzi River. These are all relatively weak and it is difficult to clarify the trend as most of them are on one line only. They would appear to be roughly east-west or a little north of west.

The strongest reading was obtained on the east side of the river on line 8W but the full profile was not obtained because of the river. There is also an indication of this same zone on the west side of the river on line 10W.

On line 16W south of the base line there are three responses indicative of conductivity but the large out-of-phase readings and the wet conditions of the ground make one suspect that these responses may be due to conductive overburden.

The same applies to the conductor showing on line 24W and 26W. The responses here would appear to be more likely caused by conductive overburden than the underlying rocks.

Another similar one line anomaly exists on the west boundary of the property on line 56W. The broad out-of-phase readings are rather typical of conductive overburden.

There are a number of irregular responses, especially in the vicinity of the river but these are due to the wet conductive ground and not from anything in the underlying rocks.

SURVEY METHODS AND INSTRUMENT DATA

The electromagnetic survey was carried out using a Geonics Ltd. 10V horizontal loop equipment with a 300 foot coil interval.

In the horizontal loop type of survey, both the in-phase and out-of-phase components of the secondary fields are measured, whose special characteristics make possible a fairly accurate evaluation of the conductivity. A conductor caused by sulphide mineralization will produce a curve going from positive readings through zero to negative and back again to positive. Both the in-phase and out-of-phase readings show the same general curve. The ratio between the in-phase and out-of-phase readings over a conductor is an indication of the conductivity of the body. A good conductor would cause a greater deflection of the in-phase component than the out-of-phase component. The opposite is true of a poor conductor.

In some areas secondary currents are induced in swamps and lakes. These anomalies can usually be distinguished from a regular conductor as they cause a

response of the out-of-phase component with little or no deviation of the in-phase component. Any deviation in the in-phase component is usually a positive reading.

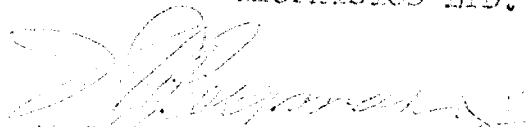
CONCLUSIONS AND RECOMMENDATIONS

The electromagnetic survey indicated several weak conductive responses, mostly concentrated close to the river. The ground is quite swampy and the readings are such that conductive overburden can be suspected.

The best looking of these responses is on the east side of the river where a ratio of almost 3:1 is obtained indicating good conductivity. Unfortunately, this is right at the river but there is a slight indication of a response on the other side of the river. This conductive zone definitely warrants further investigation which probably should be put off until winter. If this is drilled, the geological information may be of assistance in assessing the other responses.

Respectfully submitted,

PROSPECTING GEOPHYSICS LTD.

  
H.J. Bergman, P. Eng.

Montreal, Que.  
July 17, 1964

REPORT  
ON  
DETAIL ELECTROMAGNETIC SURVEY  
CANADIAN JAVELIN LTD.  
REID TOWNSHIP, ONT.

The following is an Appendix to the writer's report of July 17th on the property of Canadian Javelin Ltd. in Reid township, Ont.

The electromagnetic survey at that time indicated several weak conductive responses close to the river. Since that time some intermediate lines have been surveyed in an effort to more clearly define the conductors. The following report and accompanying map describes the results of this work.

ELECTROMAGNETIC SURVEY RESULTS AND INTERPRETATION

A total of 4.4 miles of detail survey was carried out and the results are plotted on the accompanying map on a scale of 200 feet to the inch. The results have clarified the picture somewhat and the various

conductors indicated have been lettered A, B, C, etc. for reference purposes.

"A" anomaly was originally indicated on one line only with a slight indication on the other side of the river. It now shows a length of 400 feet on the east side of the river and it still looks as though it could extend across the river which would give it an additional length of 800 feet. It also appears to show up on line 3W but 4W does not give a response. The strongest conductivity is close to the river so the portion under the river may be quite important.

Some detail work was also done to the south on the west side of the river where three separate conductors were indicated on line 16W. These zones are lettered B, D and E and show lengths of 200 to 300 feet. They have fairly broad weak responses suggestive of overburden or weak graphitic bands in sediments. "B" anomaly goes into the river and has the greatest length and is still open at both ends.

An additional conductor "C" was found in the detail survey and this likewise extends into the river.

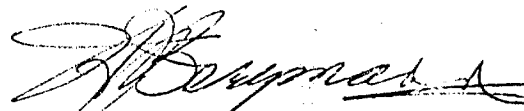
CONCLUSIONS AND RECOMMENDATIONS

The detail surveys were successful in outlining several conductive zones, three of which extend into the river and are still open in this regard. The most impressive of the conductors is "A" anomaly with a length of 400 feet and possibly another 800 feet under the river. Investigation of this conductor by diamond drilling should help determine the importance of the other zones.

If the diamond drilling is not carried out prior to freeze-up, it is recommended that the survey be extended to the river as the best portion of "A" anomaly may be under the river.

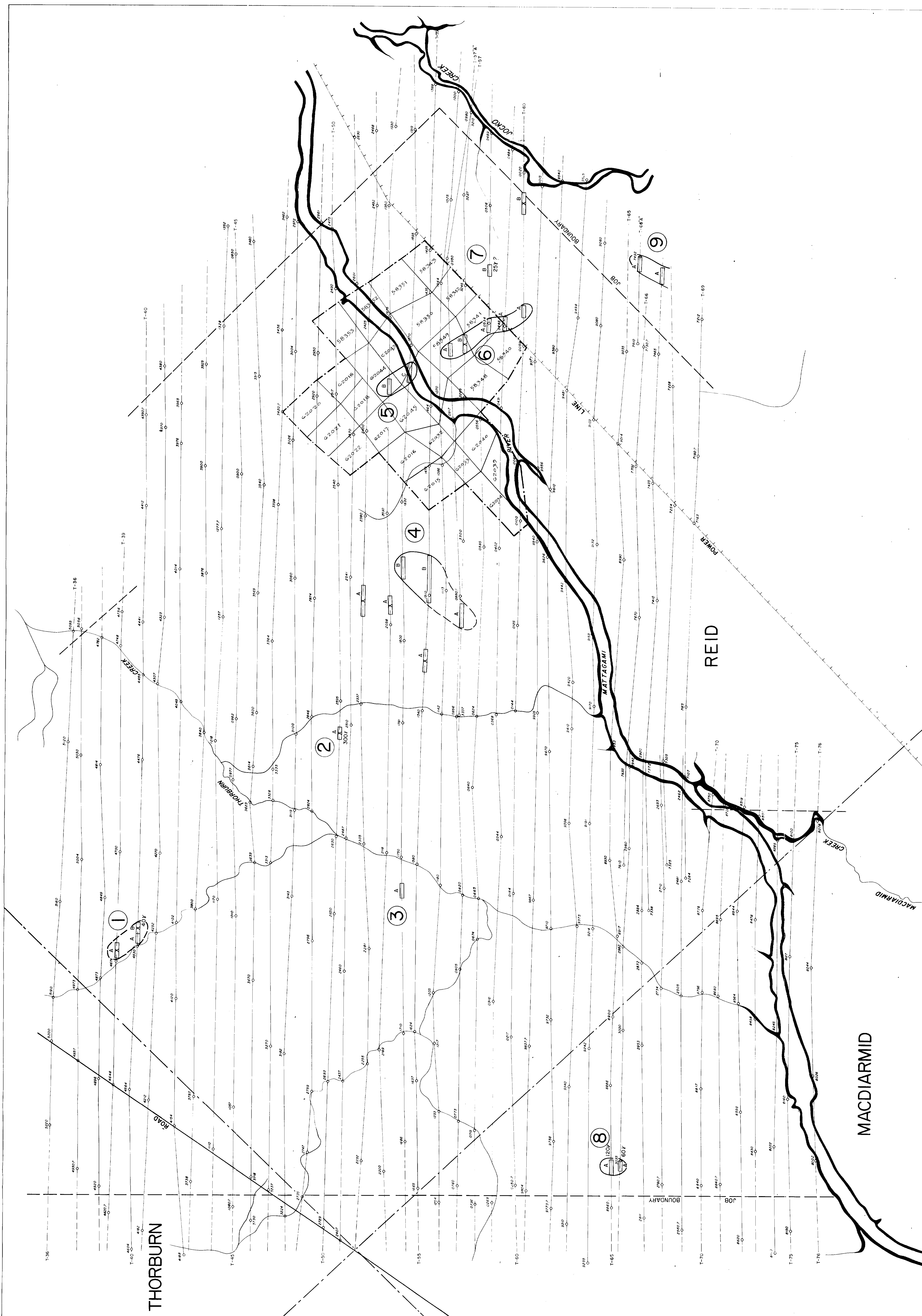
Respectfully submitted,

PROSPECTING GEOPHYSICS LTD.



H.J. Bergmann, P. Eng.

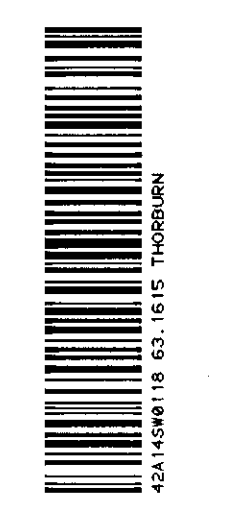
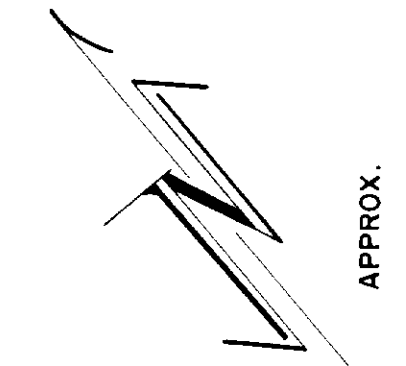
Montreal, Que.  
Sept. 8, 1964



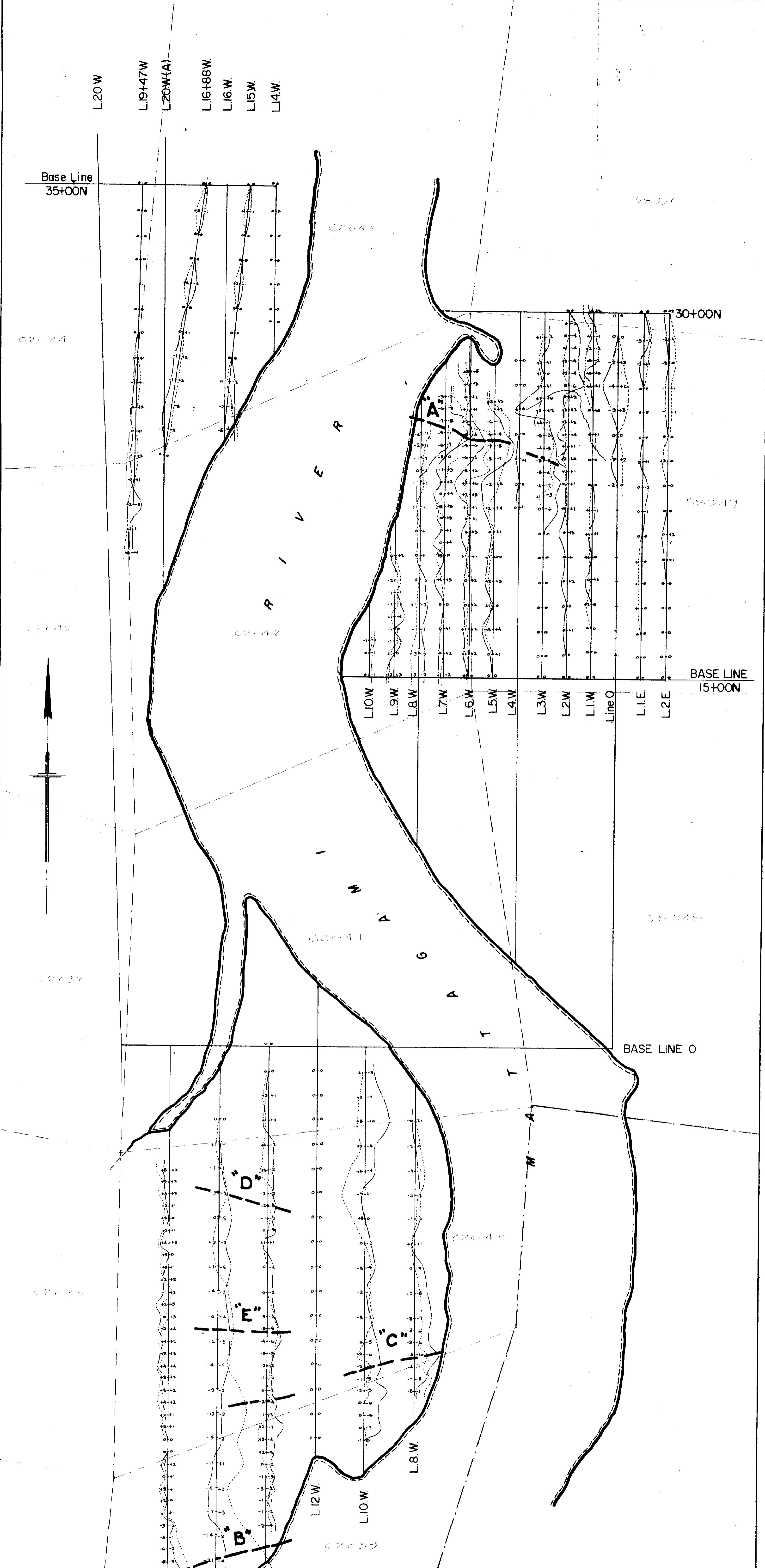
**LEGEND**

- 1 ANOMALY
- 2 ANOMALY
- 3 ANOMALY
- X 100' ANOMALY
- MEAN TERRAIN CLEARANCE ... 150 FEET
- FLIGHT LINE SPACING ... 1/8 MILE
- RIVERS AND LAKES
- HORIZONTAL CONTROL
- PHOTO LAYDOWN
- BASED ON

AIRBORNE ELECTROMAGNETIC SURVEY  
**REID TOWNSHIP AREA**  
 ONTARIO  
 CANADIAN JAVELIN LIMITED  
 SCALE 1 INCH = 1/4 MILE (APPROX.)







**LEGEND**

- MEASUREMENT STATIONS ALONG PICKET LINES
- ELECTROMAGNETIC READINGS—In Phase Component (%)
- ELECTROMAGNETIC READINGS—Out of Phase Component (%)
- PROFILE—In Phase Component (Scale 1"=20%)
- PROFILE—Out of Phase Component (Scale 1"=20%)
- ELECTRICAL CONDUCTOR

**DETAIL  
ELECTROMAGNETIC SURVEY**

ON PART OF THE PROPERTY OF

**CANADIAN JAVELIN LIMITED**

REID TWP., ONTARIO

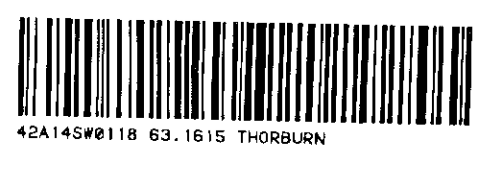
— by —

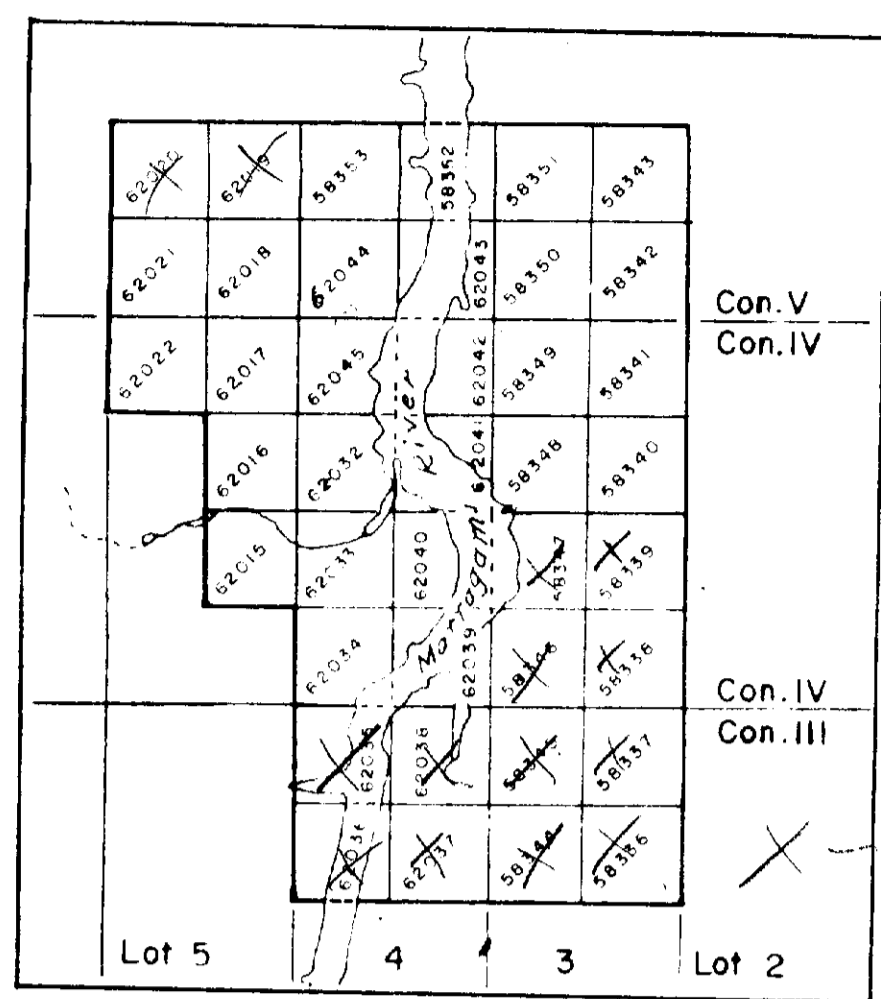
**PROSPECTING GEOPHYSICS LTD.**

SEPT. 1964

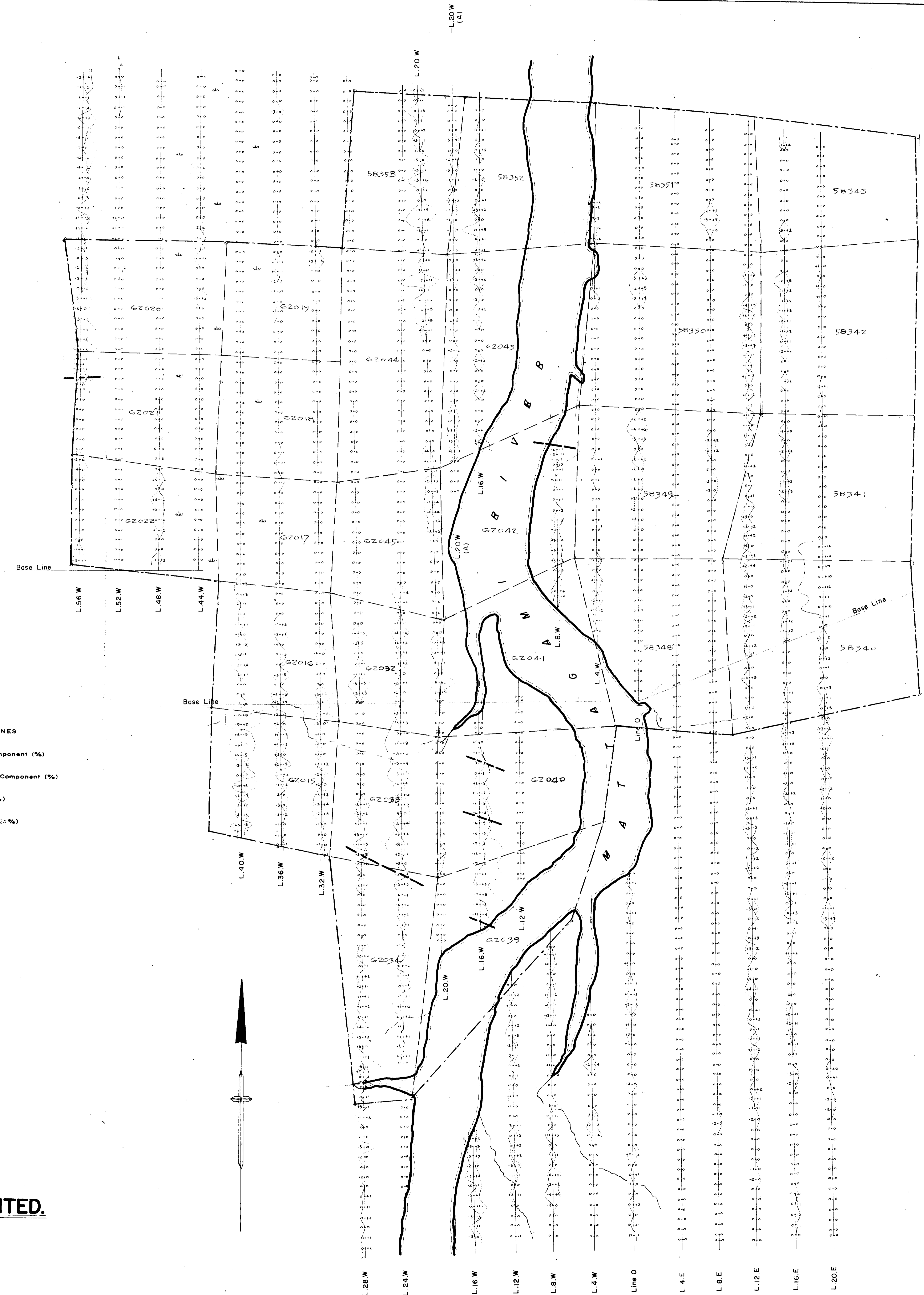
SCALE - 1"=200'

REPORT # 332





CLAIM GROUP  
1" = 1/2 Mi.



**LEGEND**

- MEASUREMENT STATIONS ALONG PICKET LINES
- ELECTROMAGNETIC READINGS—In Phase Component (%)
- ELECTROMAGNETIC READINGS—Out of Phase Component (%)
- PROFILE—In Phase Component (Scale 1"=20%)
- PROFILE—Out of Phase Component (Scale 1"=20%)
- ELECTRICAL CONDUCTOR

ELECTROMAGNETIC SURVEY

**CANADIAN JAVELIN LIMITED.**

REID TWP., ONTARIO.

— by —

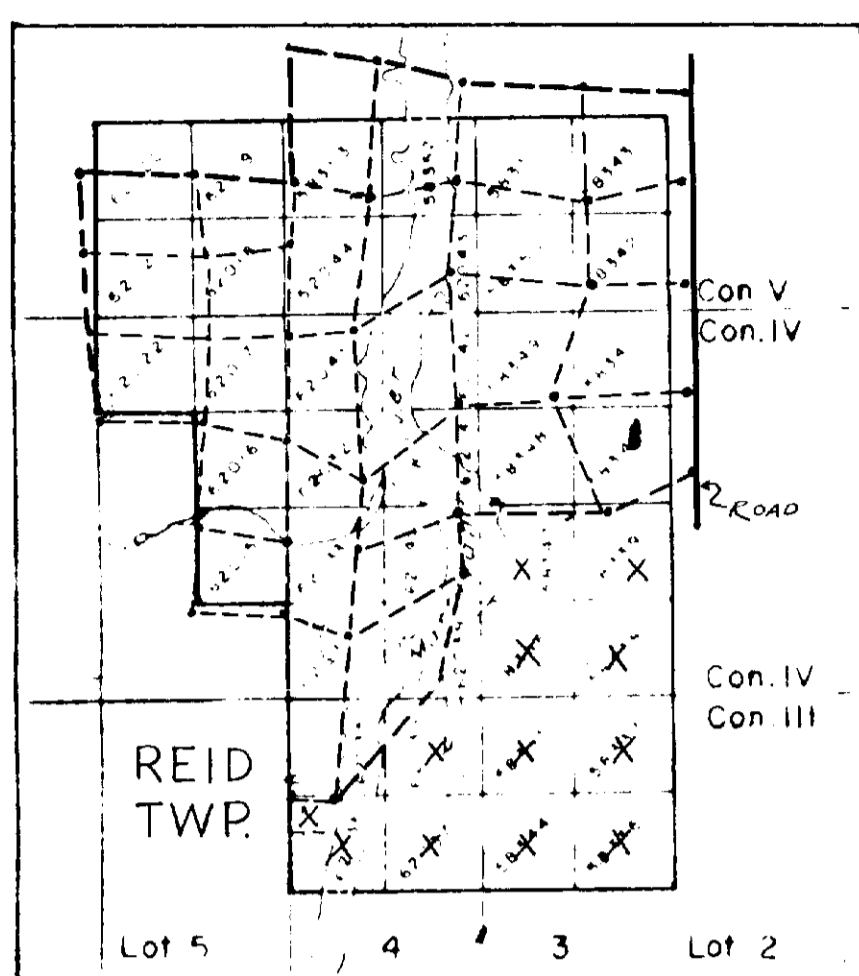
PROSPECTING GEOPHYSICS LTD.

JULY 1964

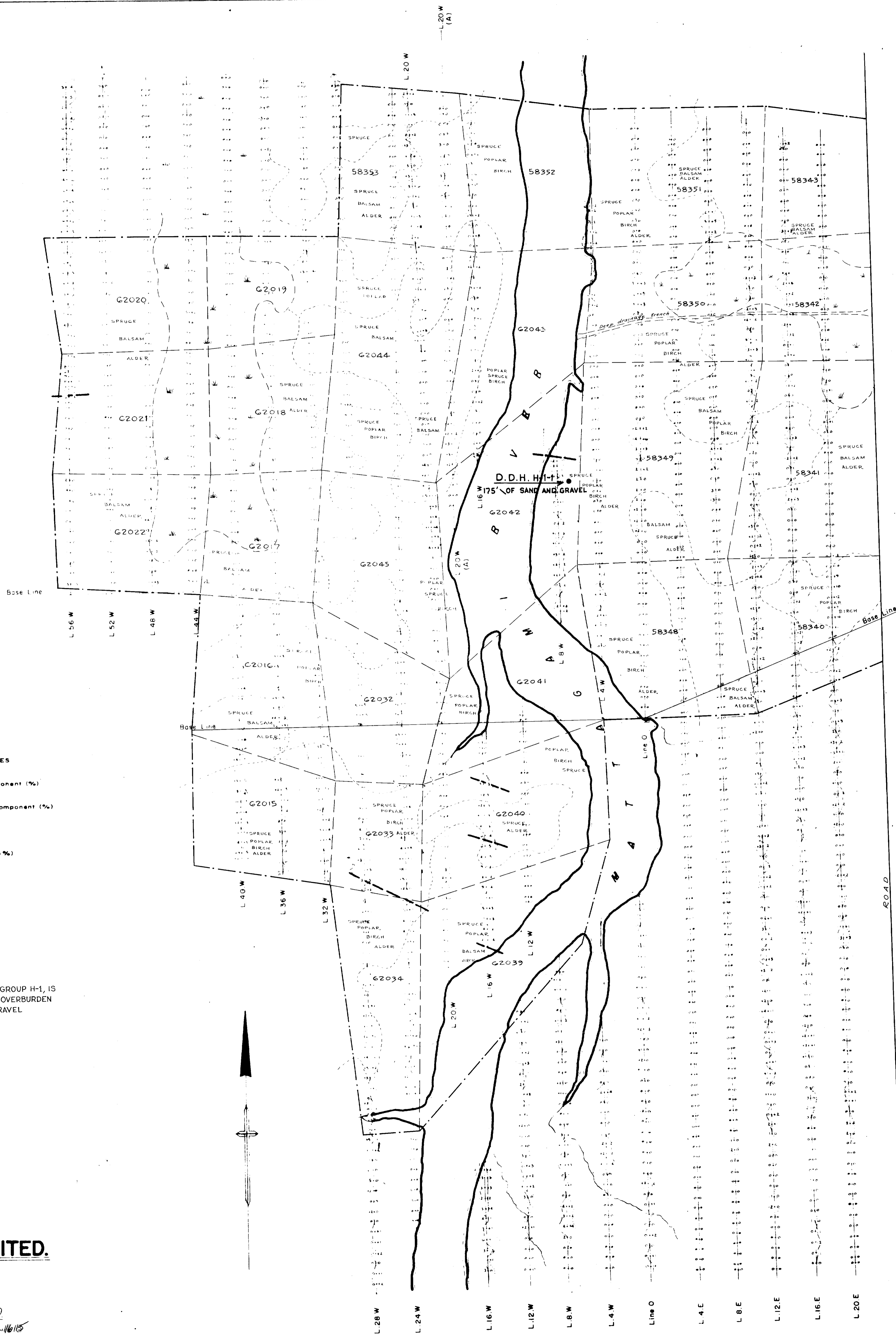
*W. J. Thomson*

SCALE - 1" = 400'

63-1615



CLAIM GROUP  
1" = 1/2 MI.



**LEGEND**

- MEASUREMENT STATIONS ALONG PICKET LINES
- ELECTROMAGNETIC READINGS - In Phase Component (%)
- ELECTROMAGNETIC READINGS - Out of Phase Component (%)
- PROFILE - In Phase Component (Scale 1" = 1%)
- PROFILE - Out of Phase Component (Scale 1" = 1%)
- ELECTRICAL CONDUCTOR
- CLAIM GROUP BOUNDARY

NOTE:  
ENTIRE CLAIM GROUP H-1, IS  
COVERED WITH OVERBURDEN  
OF SAND AND GRAVEL

SURFACE INFORMATION  
(REV'D. MAY 1966)

ELECTROMAGNETIC SURVEY

**CANADIAN JAVELIN LIMITED.**

REID TWP., ONTARIO.

— by —

PROSPECTING GEOPHYSICS LTD.

63-116115  
SCALE - 1" = 400'

JULY 1964



LEGEND

3Δ Transmitter set-up and number

○ Profile scale - 1" = 20'

○ Profile of E.M. readings from Transmitter set-up No.3

----- Electrical Conductor

ELECTROMAGNETIC SURVEY  
 VERTICAL LOOP  
 — ON PART OF THE PROPERTY OF —  
**CANADIAN JAVELIN LTD.**  
 REID TWP., ONTARIO  
 — by —  
 PROSPECTING GEOPHYSICS LTD.

OCT. 1964

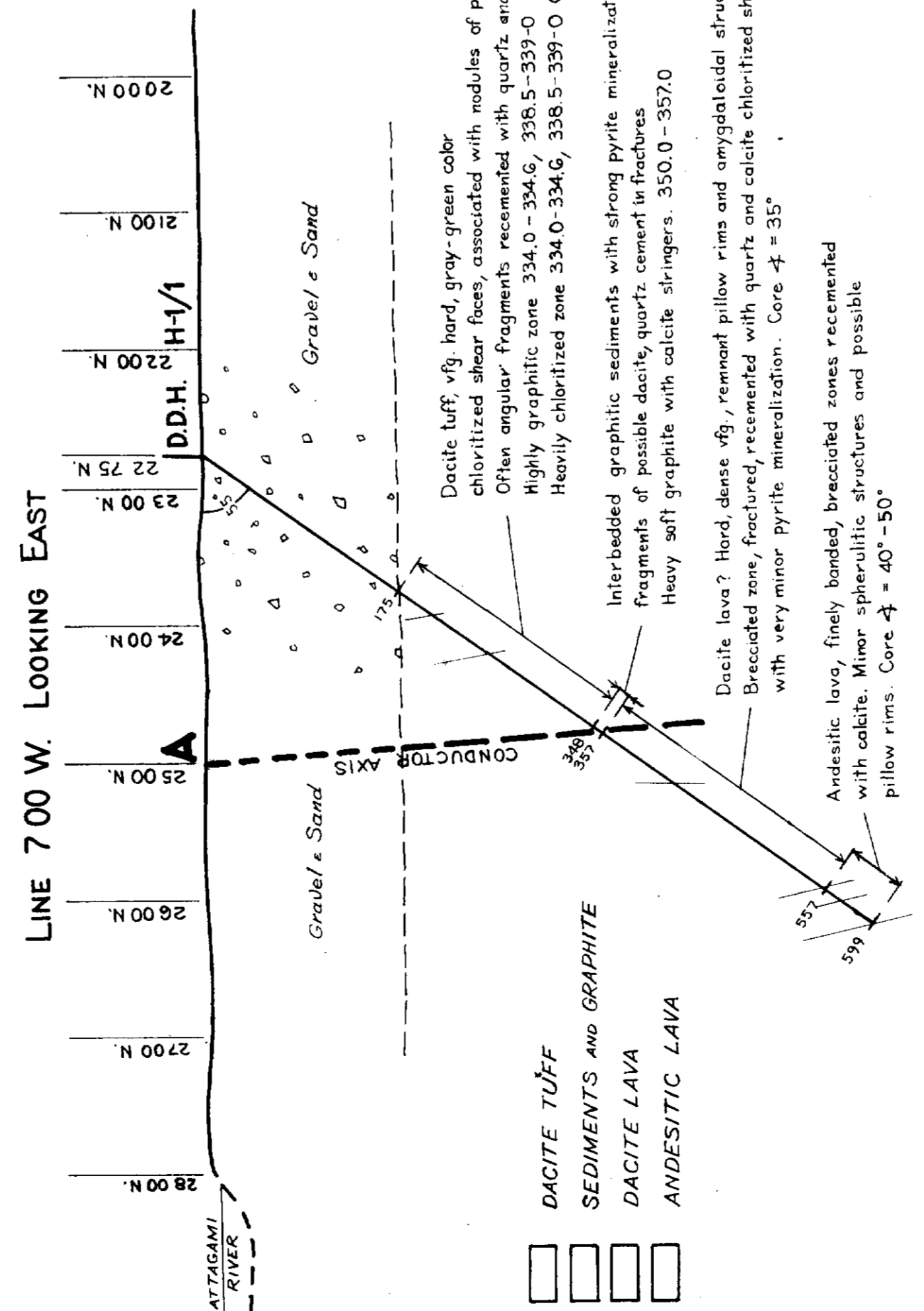
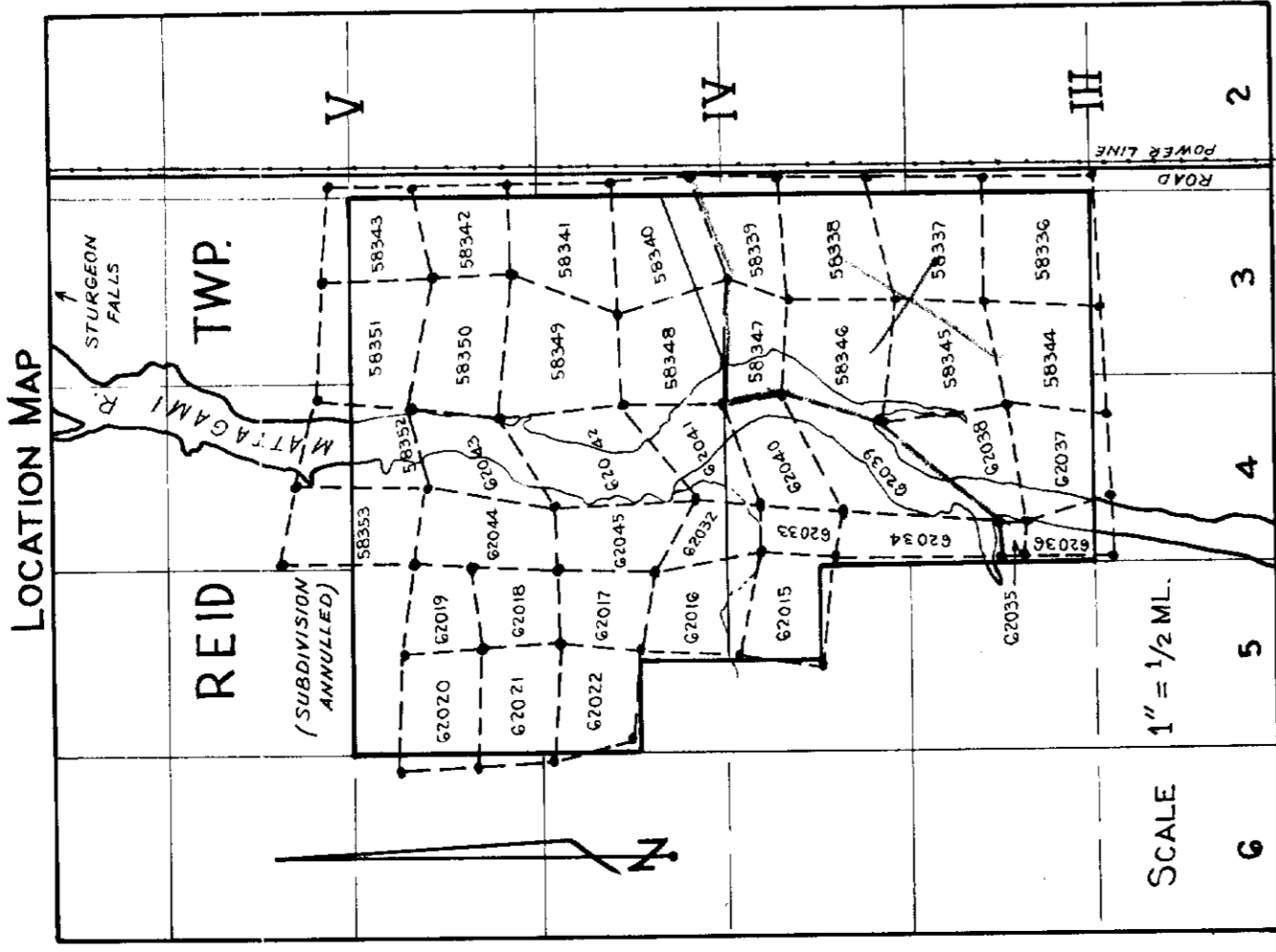
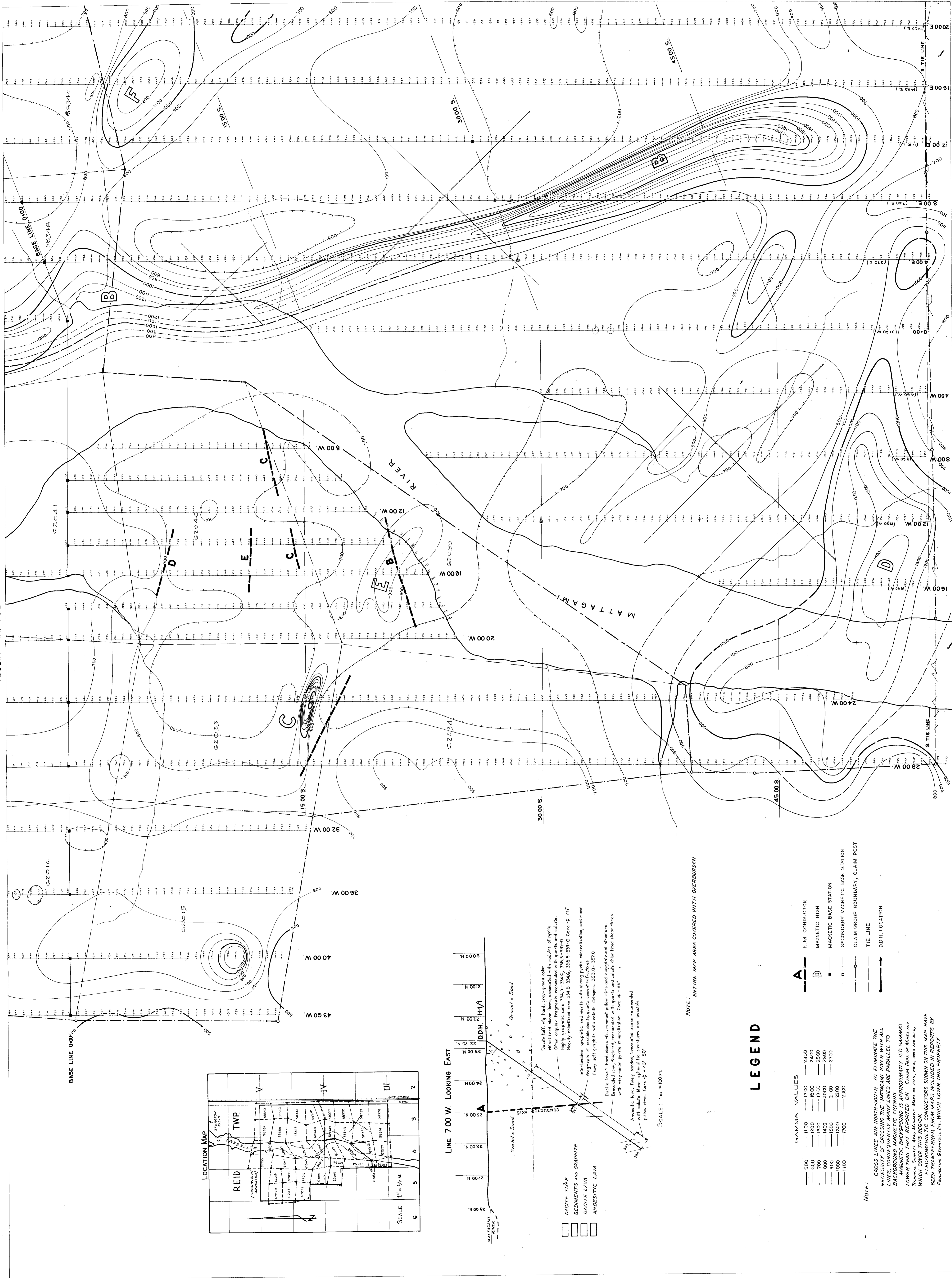
Report # 324  
*William B. Adams*  
*Geophysicist*

SCALE - 1" = 200'



BASE LINE 240

03.1615



NOTE: ENTIRE MAP AREA COVERED WITH OVERBURDEN

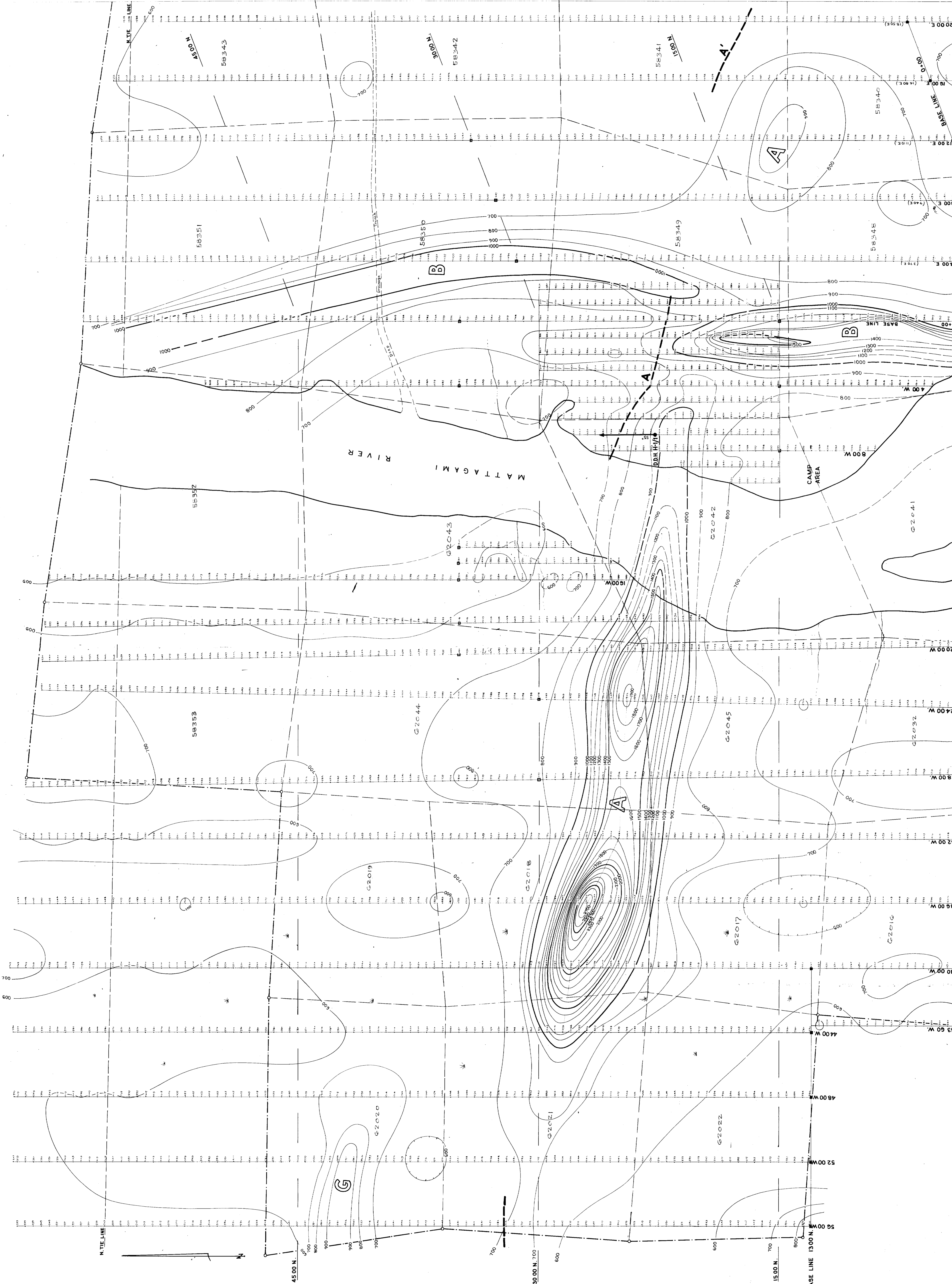
LEGEND

- A** E.M. CONDUCTOR
- D** MAGNETIC HIGH
- MAGNETIC BASE STATION
- SECONDARY MAGNETIC BASE STATION
- CLAIM GROUP BOUNDARY, CLAIM POST
- THE LINE
- D.D.H. LOCATION

GAMMA VALUES	
500	1100
600	1200
700	1300
800	1400
900	1500
1000	1600
1100	1700
1200	1800
1300	1900
1400	2000
1500	2100
1600	2200
1700	2300
1800	2400
1900	2500
2000	2600
2100	2700
2200	2800
2300	2900
2400	3000

NOTE: CROSS LINES ARE NORTH-SOUTH TO ELIMINATE THE EFFECT OF DIURNAL VARIATION. THE LINES CONSEQUENTLY MANY LINES ARE PARALLEL TO BACKGROUND MAGNETIC TRENDS. MAGNETIC BACKGROUND IS APPROXIMATELY 150 GAMMAS LOWER THAN THAT REPORTED ON Canada Dept. of Mines and Technical Surveys Memo. Memo. No. 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.





ADJOINS MAP No.1

SCALE: 1 in. = 200 FT.  
 DATE: FEB 1965  
 DRAWN BY: [Signature]  
 CHECKED BY: [Signature]  
 FILE NO. 2 OF 2

CANADIAN JAVELIN LIMITED  
 ISO-MAGNETIC MAP  
 SHOWING  
 E.M. RELATIONSHIP  
 REID TOWNSHIP ONT.  
 6.3/16.15

