ALGOMA ORE PROPERTIES

EXPLORATION

(GROUND FOLLOW UP)

A.C.R. NORTHERN TOWNSHIPS

1961

COPY

January 26, 1962

Introduction

During the summer of 1961 electromagnetic and magnetic surveys were conducted on certain anomalies in the townships of Way, Landry, Templeton, Franz and Derry.

During the original work in the northern townships (1957) prospective anomalies were chosen on the basis of:

1. High E.M. ratio
11. E.M. and magnetic relationship

During the summer of 1961 anomalies were chosen for survey on the basis of (1) and (11) and also on:

111. Magnetic configuration

1V. Isolation (location with respect to other anomalies)

Diamond Drilling

In the fall of 1961 two anomalies were drilled, No. 13 and No. 55. Drill logs and sections are attached to the individual reports.

Two other anomalies No. 9 and No. 52B were suggested for drilling but because of freezing-up approaching and the fact that further work in the northern townships was stopped, these were not worked on further.

Instruments Used

1. McPhar, Vertical Loop, R.E.M. 5,000 C.P.S. 1,000 C.P.S.
2. Ronka Horizontal Loop
3. Sharpe - A_2 - Magnetometer scale constant 35 gammas per scale division.

"V. R. Venn"

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V. R. Venn

Northern Townships

Anomaly # 3

Location

Northern Block
Sheet # 2
Twp. of Way

Line Cutting

Two base lines were cut on this anomaly.
Base Line A, 1,400' long, Azim. 326°
Base Line B, 800' long, Azim. 056°

Cross lines were cut at 200' intervals and at 90° to both base lines to form a box work grid of squares 200' on a side.

Surveys Completed

(1) Magnetometer
(11) Vertical loop (R.E.M.)
(111) Horizontal loop (E.M.)

Magnetics

Two areas of anomalous magnetics were encountered. The first area is located 200' west of base line "A". It is about 75-100' wide and strikes parallel to base line "A".

The second area of magnetics is located south of 4+00N on base line "B" the band is from 25'-100' wide and very irregular in shape.

The peak intensity on the first zone is 3,000 gammas and on the second zone is 2,500 gammas. Background in both areas is around 2,200 gammas.

Vertical E.M.

A series of weak cross-overs parallel to the east side of the first band.

Horizontal E.M.

No positive indications.

(continued .....)

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Conclusions

The band of magnetics paralleling the west side of base line "A" is probably caused by a diabase dike. The cross-overs which are indicated by the vertical loop probably represent a contact relationship between the diabase and the country rock.

The irregularly shaped magnetics located in the S. E. corner of the grid are the result of disseminated magnetite in the country rock. There is no E. M. associated with it.

Recommendations

No further work warranted.

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October 20, 1961

Northern Townships

Anomaly # 5

Location

Northern Block
Sheet # 2
Twp. of Way

Line Cutting

A base line 3,400 feet long was cut from the A.C.R. track at an azim. of 090°. Four cross-lines were cut 2,400' S at 90° to base line.

Surveys Completed

(1) Magnetometer
(11) Vertical E.M.
(111) Horizontal E.M.

Magnetometer Survey

The magnetometer survey indicates a band of magnetics about 100' wide striking north westerly across the grid. The peak intensity is 2,700 gammas, background being about 2,000 gammas.

Electromagnetic Surveys

Neither the vertical or horizontal E.M. surveys show any conductive trends of consequence.

Geology

An outcrop of diorite is located on line 34+00E; 25+00S. The diorite is part of a dike striking at 085°.

Conclusions

1. The magnetic trend crossing the property is caused by a diorite dike.

2. The lack of positive E.M. results indicate that there are no conductive bodies of consequence associated with the magnetic trend.

Recommendations

No further work is warranted.

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Northern Townships

Anomaly # 9

Location

Northern Block
Township of Way
Sheet # 3

Line Cutting

A base line was cut at an azimuth of 327° for a distance of 2,000'. Cross lines were cut at 200 foot intervals and at 90° to the base line.

Surveys Completed

(1) Magnetometer
(11) Vertical E.M.
(111) Horizontal E.M.

Magnetometer Survey

The magnetometer survey indicates a plum of magnetics about 800' long and 650' wide lying in a N.W. - S.E. direction. Background readings are approximately 2,100 gammas, with a peak intensity over the anomaly of 3,700 gammas.

Vertical E.M.

Little to no indication of any conductive bodies. A small cross-over occurs on line 10+00N, 0+75E.

Horizontal E.M.

Two indications of conductivity were picked up on this survey. They occur on lines 12+00N and 10+00N. In both cases the results coincide with a small creek flowing through the property. Coincidently the ground E.M. indications occur exactly where the airborne indications show it to be.

Conclusions

1. The poor E.M. results indicate that the anomaly is not caused by the massive sulphides.

2. The magnetics indicate a body containing a low percent of magnetite.

Recommendations

Since the actual cause of the anomaly has not been completely ascertained and because of the possible occurrence of secondary asbestos or disseminated sulphides, more ground work is advisable.

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Northern Townships

Anomaly #13

Location

Northern Block
Sheets 3 and 4
Twp. of Way

Line Cutting

A base line 1,800' was cut in a north-south direction. Cross lines were cut at 200' intervals and at 90° to the base line.

Surveys Completed

(1) Magnetometer
(11) Vertical E.M.
(111) Horizontal E.M.

Magnetometer Survey

The survey shows strikings 20° west of north. The band is about 200' in width. The higher intensity readings are represented by the 5,000 gamma contour line. Background is about 2,600 gammas.

Vertical E.M.

A conductor was indicated about 200 feet west of the west side of the magnetic band and striking parallel to it.

Horizontal E.M.

The results obtained with the horizontal loop are coincidental with the higher magnetics, showing them to be weakly conductive.

Geology

An outcrop of diorite, located on the tie line into the anomaly lies on strike with the magnetic trend. It contains about 5-10% magnetite.

Conclusions

The magnetic highs on the anomaly are the result of disseminated magnetite in the diorite. The vertical E.M. conductor is caused by the contact relationship between the intrusive diorite and the country rock.

On line 2+00N and 2+00W there is a relationship between all three surveys. There is a possibility that mineralization has been introduced along this contact zone.

Recommendations

The zone at 2+00N, 2+00W should be checked with a drill hole.

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Exploration Department

Diamond Drill Hole No.	1		Property	Anomaly # 13
Location of Collar	2+00N.	1+15E	Elev.	
Azimuth at Collar	090°			
Dip At Collar	45°			
Vertical Section No.		Length 260'	Core Size	Ex

Rec. in Min. Zone Logged By V.R.V. Started Nov. 24/61 Finished Nov. 26/61

Footage	Description	Sampling From	To	Rec.	Analyses
0-19	Casing				
19-26	Coarse white granite pegmatite				
26-29	Biotite schist				
29-30	Coarse white granite pegmatite				
30-47	Biotite schist				
47-55	Coarse white pegmatite				
55-105	Biotite schist				
105-108	Pegmatite (white granite)				
108-126	Medium grained, grey granite				
126-260	Gabbro intrusive				
	5% iron as magnetite				
	Dip Tests 50' - 50°				
	250' - 49°				

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Northern Townships

Anomaly #23

Location

Northern Block
Sheet #2
Township of Way

Line Cutting

A Base line was cut at an azimuth of 032°. Cross section lines were cut at 200' intervals and at 90° to the base line.

Surveys

(1) Magnetometer
(11) Horizontal E.M.

Magnetometer Survey

The magnetometer survey shows a magnetic striking at N60°W., and crossing the base line at 5+50 south. The magnetic high is 3,150 gammas and background is about 2,500 gammas.

Horizontal E.M. Survey

The survey was completed with essentially poor results. The proximity of the C.N.R. tracks and telephone lines caused a great deal of interference. However, the survey line which was run along the base line and directly across the magnetic high indicated that there was no conductive body present. At this point no interference from telephone lines is indicated by the E.M. machine.

Conclusions

The magnetic trend is caused by a dike containing a small percentage of magnetite.

Recommendations

No further work is warranted.

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Northern Townships

Anomaly #24

Location

Northern Block
Sheet No. 2
Township of Way

Line Cutting

Two base lines were cut at azimuths of 323° and 53°. Cross lines were cut on both base lines at 200' intervals to form a square grid.

Surveys Completed

(1) Magnetometer
(11) Vertical E.M.
(111) Horizontal E.M.

Magnetometer Survey

The magnetometer survey revealed a circular shaped magnetic anomaly similar to that shown on the airborne magnetic sheet. The highest magnetic intensity is 2,800 gammas, background being 2,200 gammas.

Horizontal E.M.

The horizontal E.M. survey gives no indications that a conductor is associated with the magnetics.

Vertical E.M.

The Vertical E.M. verifies the results of the Horizontal E.M. No conductor of consequence was indicated.

Conclusions

The good correlation between the two E.M. surveys suggests that there are no conductors of importance associated with the magnetic anomaly. The magnetic anomaly is thought to be caused by a faulted segment of dike material containing a low percentage of magnetite.

Recommendations

No further work is warranted.

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Northern Townships

Anomaly # 28

Location

Northern Block
Sheet # 4
Township of Way

Line Cutting

A base line was cut at an azimuth of 0°00' for a distance of 1,400'. Three cross lines were cut at 200' intervals along the base line and at 90° to it.

Surveys Completed

(1) Magnetometer
(11) Vertical E.M.
Note No Horizontal E.M. because of the number of wire fences.

Magnetometer Survey

The magnetometer survey results showed a small plum of magnetics with a peak intensity of 3,700 gammas. The background is about 2,600 gammas. The anomaly lies along the west side of the base line and strikes parallel to it.

Vertical E.M.

A weak E.M. conductor is indicated on the east side of the base line. It parallels the magnetic trend.

Conclusions

There is no correlation between the magnetic trend and the E.M. conductor. Neither of the surveys are significant.

Recommendations

No further work is warranted.

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Northern Townships

Anomaly # 30

Location

Northern Block
Sheet # 4
Township of Landry

Line Cutting

A base line 1,600' was cut at an azim. of 310°. Cross lines were cut at 400' intervals and 90° to the base line.

Surveys Completed

(1) Magnetometer
(11) Horizontal E.M.

Magnetics

No magnetics of any consequence were located.

E.M.

No conductors located.

Conclusions

The survey results indicate nothing of interest on the anomaly.

Recommendations

No further work is warranted.

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Northern Townships

Anomaly # 52B

Location

Central Block
Sheet # 16
Twp. of Derry

Line Cutting

Base line 4,400' long
Azimuth 109°
Cross lines 400' intervals

Surveys

(1) Magnetometer
(11) Vertical E.M. (R.E.M.)
(111) Horizontal Loop (E.M.)

Magnetics

A plum shaped anomaly (magnetic) 1,000' long and 700' wide was outlined by the survey. The shape of the ground magnetic anomaly is the same as the airborne. The peak intensity over the anomaly on the ground survey is 6,500 gammas, background being 2,500 - 3,000 gammas. The plum of magnetics trends parallel to the base line.

Vertical E.M.

Four weak cross-overs were located on the south side of the base line, striking north westerly. The zone probably represents a contact relationship or fault plane.

Horizontal E.M.

No results of interest.

Geology

On line 32+00E - 900' south 2 diabase dikes, striking parallel to each other are found cutting the greenstone. The greenstone, (Qtz., biot, Hbd, schist) strikes east-west and dips 85° N. The diabase dikes 50 - 60' wide strike N-W toward the magnetic zone. The diabase contains 5-10% magnetite.

(continued .....)

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Conclusions

The E.M. surveys do not indicate any conductive body that might represent a sulphide zone. The absence of conductivity leaves the anomaly to be explained only by the presence of very disseminated sulphides (pyrrhotite) or low concentrations of magnetite.

The anomaly could be explained by the fact that the magnetics along the greenstone band have been re-enforced by the diabase, which is relatively magnetic, at the point of intersection of the diabase and the greenstone.

There is also a possibility that small deposits of asbestos have been formed at the intersection of the greenstone and the diabase.

Recommendations

Further instrument work and a diamond drill hole are warranted.

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Northern Townships

Anomaly 52C

Location

Central Block
Sheet # 15
Twp. of Derry

Line Cutting

Base line 4,000'
Azimuth 307°
Cross lines 400' intervals

Surveys

(1) Magnetometer
(11) Horizontal E.M.

Magnetics

Small plums of magnetics with peak intensities around 6,000 gammas were located. They strike to north west.

E.M.

No results of interest

Geology

Country Rock - greenstone basic intrusive - diabase (5-10% mag.)

Conclusions

The anomalous magnetics are probably caused by the diabase, high in magnetite, re-enforcing the magnetic field at the junction of the diabase and greenstone.

Recommendations

No further work is warranted.

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Northern Townships

Anomaly # 55

Location

Central Block
Sheet #
Twp. of Templeton

Line Cutting

A base line 2,800 feet long was cut at an azim. of 136°. Cross lines were cut at 90° to the base line and at 200' and 400' intervals.

Surveys

(1) Magnetometer
(11) Horizontal E.M.

Magnetics

A band of magnetics 600' long and 50' wide was located. The band strikes to the north west and has a peak intensity of 6,000 gammas. Background is approximately 2,600 gammas.

Horizontal E.M.

The horizontal loop gives a small indication of conductivity on the south side of the magnetic band.

Drilling

A diamond drill hole was put down on line 16+00E; 50'N at 45° to the north. The hole was 322' long. The rock type was a meta sediment composed of Qtz., Hbd., biotite, schist, through much of the core there occurs disseminated magnetite (5-10%).

Conclusions

The magnetic anomaly is caused by disseminated magnetite in the metasediments.

Recommendations

No further work warranted.

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Exploration Department

Diamond Drill Hole No.	1	Property	Anomaly #55
Location of Collar	1600E-50: N		
Azimuth at Collar	46°		
Dip at Collar	45°		
Vertical Section No.	Length 322'	Core Size	Ex.

Logged By V.R.V. Started Dec. 3/61 Finished Dec. 5/61 am pm

Footage	Description	Sampling From	To	Rec.	Analyses
0-12'	Casing				
12-322'	Alternating bands of light gray to dark gray Qtz. biot. gneiss and Qtz. biot., Hbd., gneiss. The bands vary from a few inches to a foot in thickness. A few unaltered bands appear as a greywacke where the amphibole is plentiful the rock approaches an amphibolite schist.				
	Some of the sections of the core are magnetic, containing magnetite and minor sulphides.				
61-78	5-10% Magnetic				
110-117	5-10% Magnetic				
120-128	10-15% Magnetic				
147-150	5-10% Magnetic				
261-268	5-10% Magnetic				
	Core angle varies between 50° and 55° with the axis of the core.				
	Dip 51° corrected 50'				
	Dip 51° corrected 300'				

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Northern Townships

Anomalies #61 and 61A

Location

Central Block
Sheet #14
Twp. of Franz (south 1/2)

Line Cutting

A base line 5,200' long was cut on #61 at an azim. of 090°. Cross lines were cut at 400' intervals. A second grid was cut on anomaly #61A by employing line 40+00E on the north side of the base line of anomaly #61. Cross lines were cut at 90° to the base line and at 400' intervals.

Surveys Completed

(1) Magnetometer 61
(11) Vertical E.M. 61
(111) Horizontal E.M. 61 and 61A

Magnetometer Survey

The magnetometer survey shows a band of low magnetics trending east - west. The peak intensity over the anomaly is 3,000 gammas, background is about 2,500 gammas.

Vertical E.M. Survey

No conductors indicated.

Horizontal E.M. Survey

No conductors indicated.

Re anomaly #61A

This anomaly appears as an E.M. anomaly on the airborne survey sheets. Because of its proximity to the magnetics on anomaly #61 a grid was cut on it. Only a horizontal E.M. survey was run on the grid with negative results.

Conclusions

The magnetic highs on #61 are caused either by basic intrusives or by disseminated magnetite in the country rock.

Recommendations

No further work is warranted.

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A STUDY OF AIRBORNE GEOPHYSICAL DATA and SUBSEQUENT GROUND INVESTIGATIONS NINE A.C.R. TOWNSHIPS SAULT STE. MARIE MINING DIVISION ONTARIO

INTRODUCTION

At the request of Mr. Donald E. Smith of Franc. R. Joubin & Associates, Ltd., the writer has examined the results of airborne and ground geophysical investigations, and of some geologic mapping and drilling which were carried out on the following nine townships in the Sault Ste. Marie Mining Division, Ontario: Way, Landry, Templeton, Alderson, Franz (S 1/2), Derry, Martin, Mildred and Glasgow (W 1/2). The townships lie close to the track of the Algoma Central and Hudson Bay Railway.

The airborne surveys consisted of total intensity aeromagnetic and dual frequency out-of-phase electromagnetic measurements, made along lines which were nominally 1/8 mile apart, oriented due north-south, at a mean terrain clearance of 500'. These surveys were flown and compiled over the period of October, 1956 - May, 1957.

An initial stage of ground investigation was carried out in 1957 and a second stage in 1961, entailing geological mapping, magnetometer and electromagnetic surveys and four diamond drill holes. Ground recovery of airborne conductors proved to be very poor, with less than 25% of the targets investigated being confirmed on the ground.

GENERAL COMMENTS

Airborne Surveys

The electromagnetic system employed on these surveys measured relative phase angles at 400 c.p.s. and 2300 c.p.s. Theory predicts, and experience has shown, that this type of syste

emphasizes a middle range of conductors, suppressing both very strong and very weak conductors. Highly conducting, massive sulphide bodies have been known to give rather insignificant response, whereas clays and lake-bed sediments in Canada often give very large responses. Some degree of discrimination is provided by comparing the ratio of the low frequency to high frequency phase angles. For homogeneous bodies, a ratio of 1 or greater implies high conductivity, whereas a ratio of less than 0.5 generally implies low conductivity. Sometimes, however, a large massive sulphide body has a disseminated halo around it, and it is the latter which primarily gives rise to the observed phase angles, resulting in a low ratio.

Other criteria by which one may select conductors of possible economic interest include

(a) Shape of anomaly - sulphide bodies of interest are usually tabular and less than one mile in strike length. Thus the resultant conductive indications should be rather sharply peaked and not too long.

(b) Magnetic correlation - at least 50% of all base metal sulphide ore bodies in the Precambrian Shield have an appreciable magnetic expression due to their pyrrhotite or magnetite content. Thus direct magnetic correlation is encouraging, although it is neither necessary nor really sufficient for a conductor to be of base metal interest. Graphitic shear zones often carry some associated pyrrhotite.

The above remarks are intended to emphasize the limitations of the present type of airborne electromagnetic survey and of the interpretation of results therefrom. The proof lies in the record of A.O.P. ground investigations based on these airborne data: of about 40 "conductors" investigated only 10 were really confirmed on the ground.

Four categories of conductive indication may be observed on these sheets:

(a) True bed-rock conduction - relatively rare

(b) Overburden conduction - the bulk of the indications

(c) Power line effects - particularly in Way Twp.

and (d) Instrumental malfunctioning - certain lines in Way and Martin Twps., for example, show conduction along their entire length, often with good ratios, whereas the adjacent lines show nothing. Whereas some of this may be due to differences in terrain clearance, others can only be caused by equipment noises.

It is unfortunate that the A.O.P. ground investigators did not discriminate as much as they could have done between the four categories of conductors, thus giving rise to the very poor recovery ratio.

Judging by the trends indicated by the aeromagnetic maps, the regional geologic strike is often within a few degrees of the flight line direction. The detectibility of this system for a conductor striking in such a direction is poor.

On several counts, therefore, one can conclude that the present airborne electromagnetic survey has not provided a complete and adequate investigation of these areas for bed-rock conductors.

Ground Surveys

The bulk of the ground electromagnetic surveys have been carried out using a portable vertical loop system with a parallel line reconnaissance technique. No indication of transmitter location is given and no detail (fixed transmitter set-ups) surveys have been done to pin down conductor positions with precision. This has resulted in some waste of drilling footage.

On the few conductors which have been confirmed by the ground surveys, the tendency has been to do much too much work. For example, in Templeton Twp. one conductor was followed for nine miles on the ground, whereas this continuity was already apparent from the A.E.M. results, and thereafter only one hole was drilled on it!

COMMENTS BY TOWNSHIP

Way Twp.

The airborne electromagnetic (A.E.M.) results are characterized by considerable overburden effects, tempered by changes in aircraft elevation from line to line. There are also conductive effects from power lines along farm roads.

The A.O.P. ground investigation included seven "conductors", none of which was really confirmed on the ground. One hole was drilled on "conductor" #13, and, of course, revealed no cause for the very weak tilt angles observed.

Three new A.E.M. conductors have been designated A, B and C by the writer. These are selected as being possibly due to bed-rock conduction and each has a ratio of 0.7 or greater.

Conductor A strikes generally E-W, parallel to a road, and crosses the A.C.R. track just west of the town of Hearst. There is a strong probability that it is due to a power line, but some contorted magnetic activity in the area suggests that bed-rock conduction is possible. In view of the ready access, it is recommended that the site should be examined and, if a correlating power line does not exist, ground electromagnetic and magnetometer surveys should be carried out.

Conductor B, in the south central portion of the township, might have been dismissed as an overburden effect except that it nicely correlates a 700-800 gammas ridge. The possibility here is for a basic intrusive body carrying asbestos or nickel. Ground follow-up is recommended on line 519.

Conductor C, lies at a bend of the A.C.R. track in the southeast quarter of the township, also on a road. Whereas power line and other man-made conductors are distinct possibilities here, the same road and track do not elsewhere give rise to such effects. Once again, in view of the ease of access, the writer suggests that this target should be examined on the ground.

Landry Twp.

There appears to be little of interest in the A.E.M. results. A fair amount of overburden conduction is in evidence, with the low frequency phase angle of up to 0.6° but with low ratios.

The A.O.P. investigated one area (#30) which is primarily a magnetic anomaly with no conduction, and no ground conductor was found.

Templeton Twp.

Two major east-west striking conductors lie in the middle of the sheet. The north zone is four miles long and is still open

to the east. The south zone is at least nine miles long and is open to the east and possibly to the west also. It splits into two conductors for about four miles of its length. The strongest phase angles are of the order of 0.8° and ratios are up to 0.8.

There is intermittent, weak magnetic correlation, of the order of 20-40 gammas on both conductors. A major cross-cutting shear or fault zone is indicated by the aeromagnetics in this vicinity.

A considerable amount of ground work has been carried out on these two conductors by A.O.P. In particular, the south zone has been covered by ground E.M., magnetometer and geologic surveys over its entire length: on lines 400' apart. Moderate-to-strong multiple conductors have been confirmed on the ground, with intermittent direct magnetic correlation: of up to several thousands of gammas.

According to the outcrop picture, the conduction generally occurs in metasediments, including schists of various types. A single drill hole intersected graphitic schist with some pyrite and pyrrhotite. Assays were negative.

In the 1961 program, anomaly #55 was investigated on the ground by A.O.P. As it was an aeromagnetic anomaly only, without any A.E.M. indication, it is not surprising that no significant conduction was encountered on the ground. It was, however, drilled by one hole, to reveal numerous sections of 5% - 10% magnetite in quartz biotite gneiss, but with only minor sulphides.

In conclusion, Templeton Twp. has been the scene of considerable and largely unnecessary ground investigations. The two major conducting zones are very likely due to cross-cutting shear structures containing graphite with some pyrite and pyrrhotite.

No other A.E.M. indications on the sheet are of sufficient promise for bed-rock conduction to warrant ground investigation.

Alderson Twp.

A long, irregular conducting zone crosses the northeast portion of the township. Phase angles of up to 0.6° and ratios of up to 1.5 suggest that bed-rock conduction exists, A second, shorter

zone lies to the south near the east boundary of the sheet. There appears to be no aeromagnetic correlation on these conductors. They are probably shear zones containing graphite, with at most minor sulphides. Although some geological mapping has been done in the central region of the main conductor, there is no evidence of any ground geophysical investigation.

As the south zone is of reasonable length, it may be worth a ground check at C, just west of Mawgi Lake, or, if more convenient, at C, just east of this lake and close to the A.C.R. track.

Two additional conductors exhibiting moderate electrical amplitude, good ratios and apparent direct magnetic correlation, have been indicated by the letters A and B. In neither case is the conductor strike well established, but it is possibly NW for A and EW for B. The former is really incompletely defined by the present survey as it lies on the south boundary. It is recommended that A and B should be subjected to ground investigations as well.

Franz Twp. (S 1/2)

A group of conductors exist in the northeast corner of the sheet, which have good ratios and reasonably sharply peaked curve forms. These have already been followed up on the ground as A.O.P. conductors 31A, B, C, and 32A. Good conductors with intermittent magnetic correlation were found on the ground. Conductor 31C was drilled to reveal graphite and pyrrhotite in biotite hornblende schist. Presumably the remainder are similar in origin.

One A.E.M. conductor remains of possible bed-rock origin. It is designated as A and lies in the NW corner of the sheet, within 1/4 mile of the Canadian National Railway track. It strikes northwest and coincides with the peak of a 200 gamma closure. The ratios are rather poor, but the magnetic correlation compensates, in the writer's opinion. Despite the fact that this may be an accidental coincidence, the writer recommends ground follow-up on this conductor.

Derry Twp.

With the exception of one line, which is probably equipment noise, the observed conductive effects have low ratios and occur largely in lakes. A total of eleven of these poor

indications have been investigated to date, and only one (#3) confirms a minor conducting zone. On this conductor there may be a coincidence with a 500 gammas magnetic anomaly.

It is recommended that conductor #3 should be rechecked at a convenient time under winter conditions, as it is under Lake Kabinakagami, to determine the extent of the conductor and confirm the magnetic correlation.

Two rather weak A.E.M. conductors remain, which, together, warrant ground investigation as they are only 3/4 mile apart. They are designated A and B and lie in the northwest quarter of the sheet, west of the Kabinakagami River. The strikes are WNW. Conductor A lies on or near the top of a 600 gammas ridge, which is possibly a basic intrusive. Asbestos and nickel possibilities would exist. It should be checked near lines 239-241. Conductor B has possibly weak negative magnetic correlation, and should be checked near lines 243-245.

Martin Twp.

Aside from abnormal effects on two lines, which the writer would attribute to instrumental noise, the indicated conductors are of low amplitude and ratio.

Eight conductors were investigated on the ground by A.O.P., all of which fall in the above category of probable instrumental noise. No conductors were confirmed on the ground.

There appears to be no further interest in these data.

Mildred Twp.

Only very minor A.E.M. conduction occurs, none of which exhibits significant magnetic correlation and most of which lies in lakes.

Glasgow Twp. (W 1/2)

Once again, the observed conduction is of low order and mainly in lakes. No probable bed-rock conductor indications are to be seen.

GENERAL GROUND FOLLOW-UP PROCEDURE

For the ten A.E.M. conductors on which further work has been recommended, the following ground follow-up procedure is suggested:

1. Cut or blaze two lines, 400' apart, for about 1000' long, across the probable conductor strike.

2. Traverse these lines with the parallel line technique, vertical loop E.M. system to locate the conductor, if present, on each line.

3. Cut a base line along the conductor for about 1600' total, and cut five cross lines, each 1000' long at 400' intervals, centred on the base line.

4. Carry out reconnaissance and detail E.M. surveys and magnetometer surveys on these lines.

5. Map the grid area geologically, paying special attention to the vicinity of the conductor trace, as determined by 4.

It is not generally necessary to extend the ground grid beyond what is indicated above, even if the conductors extend, on strike, beyond the grid limits. All that is required at this stage is a selective sampling of the A.E.M. conductor in a representative section. Extension would come only after drilling or trenching, etc., had established special interest in the conductor.

Respectfully submitted,

"Harold O. Seigel"

Harold C. Seigel, Ph.D., P.Eng.

Toronto, Ontario
March 23rd, 1963.

SUMMARY

A study of the results of the airborne geophysical surveys and subsequent ground investigations in these nine townships has revealed a total of ten indications which are possibly due to bed-rock conduction and which may be of base metal or asbestos interest. One of these has been partially investigated by A.O.P. and lies on a lake. The remainder are on land and it is recommended that they should be subjected to ground geophysical and geological investigation.

The A.O.P. ground program in this area has had a singularly poor record of conductor recovery, some of which is fundamental to the nature of the basic A.E.M. data but possibly more is attributable to improper selection of targets.

THE ALGOMA CENTRAL AND HUDSON BAY RAILWAY COMPANY

L. C. WAUGH
PRESIDENT AND GENERAL MANAGER

SAULT STE MARIE, ONT
October [illegible] 1963

Mr. D.P. Douglass, Esq.,
Deputy Minister of Mines,
Parliament Buildings,
Toronto 2, Ontario.

Dear Mr. Douglass:

RE: Surrender of mining rights by Algoma Central Railway on lands north of C.P.R.

As called for in letter agreement dated November 28th, 1960, and signed by the Honorable J.A. Maloney, Minister, we are releasing our mining rights covered in that agreement to the Province of Ontario as of October the first, 1963.

Under Paragraph (7) of the agreement we are required to submit any additional information obtained prior to October 1st, 1963, with respect to these lands. The information is attached to this letter in duplicate. Details of the material are as follows:

1961 Data by Algoma Ore Properties — Ground Follow Up

Township	No. of Copies	Anomaly Number	Description
Way	✓2	3	Ground Magnetometer & Horizontal loop E.M. Survey
	✓2	3	" " " Vertical " " "
	✓2	28	" " " " " " "
	✓2	24	" " "
	✓2	24	" Horizontal " " "
	✓2	24	" " " " "

Cont'd. Page 2 . . .

D.P. Douglass, Esq.,

1961 Data by Algoma Ore Properties - Ground FollowUp

Township	No. of Copies	Anomaly Number	Description
Way	✓2	24	Ground vertical loop E.M. Survey
	✓2	24	" " " " "
	✓2	23	" Magnetometer & horizontal " " "
	✓2	13	" " " vertical " " "
	✓2	13	" " " horizontal " " "
	✓2	5	" " " " " "
	✓2	5	" " " vertical " " "
	✓2	9	" " " horizontal " " "
	✓2	9	" " " vertical " " "
Landry	✓2	30	" " " horizontal " " "
Templeton	✓2	55	" " " " " "
Derry	✓2	52 C	" " " " " "
	✓2	52 B	" " " " " "
	✓2	52 B	" " " vertical " " "
Franz	✓2	61 A	" " " horizontal " " "
	✓2	61	" " " " " "
	✓2	61	" " " vertical " " "
Reports by V.R. Venn	✓2	Covering above mentioned anomalies	

1963 - Franc, R. Joubin & Associates

✓Reports by Dr. H.O. Seigel — 2 copies — Study of airborne and ground geophysical data on A.C.R. Northern townships.

Township	No. of Copies	Anomaly	Description
✓Irving	2	Akron	Geophysical & Geological reports by Dr. Seigel & H. Lien
	2	Area B	Location, Geological, magnetometer and E.M. Sketches
✓Alderson	2	Area A-B	(no geological sketch) "
✓Derry	2	Areas A-B	(") "
✓Franz	2	Area A	(") "
✓Alderson	2	Area A	(") "
	2	Area C	(") "
	2	Area C	(") "
✓Way	2	Area A	(") "
	2	Area C	(") "
	2	Area B	Report by H.O. Lien only

The aerial geophysical maps, on which are located the various anomaly numbers mentioned in the above list and in the reports, were included with other geophysical data sent to the Ontario Department of Mines by the Railway a couple of years ago. Consequently, additional prints of the aerial maps are not included in the enclosed material.

For the actual transfer of the mining rights including the descriptions, would you contact the Company General Counsel & Secretary, Mr. D.A. Berlis at Suite 914, 111 Richmond Street, West, Toronto. It is our hope that since the mining rights are being surrendered in their entirety blanket transfers for each township will be adequate. In so far as our right-of-way through the lands in question, it was resurveyed a few years ago and this survey is registered with the Master of Titles at Sault Ste. Marie and Cochrane as applicable.

Yours very truly,

cc: Mr. D.A. Berlis

RRI:bl
Enc:

COPY

FRANC. R. JOUBIN & ASSOCIATES

REPORT ON ANOMALY A

WAY TWP.

District of Algoma

INTRODUCTION

The source for Anomaly A in Way Twp. is an airborne, combined magnetometer and electromagnetic survey carried out by A.O.P. recently. A possible conductor was indicated by the survey, at Wyborn St., on the A.C.R. It was recommended by Dr. Harold O. Seigel that the anomaly be investigated on the ground.

THE SURVEY

Two lines 750 feet long and 400 feet apart were run with E.M. and magnetometer. The work was hampered by the railway tracks and several high tension transmission lines which cross the area.

OVERBURDEN

The area is flat and open farming country (clay) and no outcrops were seen.

"Hakon O. Lien"

Wyborn Station (A.C.R.)

June 2, 1963

COPY

FRANC. R. JOUBIN & ASSOCIATES

REPORT ON ANOMALY C

WAY TWP.

District of Algoma

INTRODUCTION

The source for Anomaly C in Way Twp. is an airborne, combined magnetometer and electromagnetic survey carried out by A.O.P. recently. A possible conductor was indicated by the survey just south of Joques Station on the A.C.R. It was recommended by Dr. Harold O. Seigel that the anomaly be investigated on the ground.

THE SURVEY

Two lines 600 feet long and one 800 feet long, 200 feet apart, were run with E.M. Only two lines were run with the magnetometer (600 feet apart). The railway as well as a high tension transmission line cross the surveyed area.

OVERBURDEN

The area is flat and open farming country, covered mainly by clay. No outcrops were seen.

"Hakon O. Lien"

Stavert Station, A.C.R.

June 2, 1963

COPY

FRANC. R. JOUBIN & ASSOCIATES

REPORT ON ANOMALY B

WAY TWP.

District of Algoma

An airborne geophysical survey carried out by A.O.P. some time ago, indicated a possible conductive zone in the southwestern portion of Way Township. It was recommended by Harold O. Seigel and Associates that the anomaly should be investigated on the ground.

A survey crew tried to reach the area June 3, but the ground work could not be carried out because the area was flooded. The flooding is believed to be caused by a beaver dam.

As no hydro power transmission lines or other man-made constructions could be seen in the area, it is recommended that the anomaly should be investigated during the winter months.

"Hakon O. Lien"

Stavert Station (A.C.R.)

June 3, 1963

COPY

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CONSULTING GEOPHYSICISTS
Suite 913, 25 Adelaide St. West
TORONTO 1, ONTARIO

CABLE:
"SEIGEO", TORONTO

TELEPHONE
364-2650

FRANC. R. JOUBIN & ASSOCIATES
GROUND INVESTIGATION REPORT
AREA C, WAY TWP.

INTRODUCTION

The source of interest here was an airborne E.M. indication selected by the writer on re-examination of the original A.E.M. data. The original comments regarding this conductor are as follows:

> "Conductor C lies at a bend of the C.N.R. track in the southeast quarter of the township, also on a road. Whereas power line and other man-made conductors are distinct possibilities here the same road and track do not elsewhere give rise to such effects. Once again, in view of the ease of access, the writer suggests that this target should be examined on the ground."

A copy of a report by Hakon O. Lien, which is attached, gives the description of the grid and the surface features.

DISCUSSION OF RESULTS

A maximum range of approximately 170 gammas was observed on the two lines run by magnetometer.

The electromagnetic survey was hampered by A.C. noise from the power line and railway line traversing the area. A wire fence also parallels the above two features. Strangely enough, little or no conduction was observed, although it is noted that eight stations in the immediate vicinity of the metal lines were not readible due to A.C. noise.

COPY

CONCLUSIONS & RECOMMENDATIONS

Whereas the present test cannot be regarded as conclusive because of the noise, the writer regards the source of the airborne indication to be likely due to the coincidence of the three man-made conductors.

No further action is recommended on Area C.

Respectfully submitted,

(signed) "Harold O. Seigel"

Harold O. Seigel, Ph.D., P.Eng.

Toronto, Ontario
June 15, 1953

COPY

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FRANC. R. JOUBIN & ASSOCIATES
GROUND INVESTIGATION REPORT
AREA A, WAY TWP.

INTRODUCTION

The basis of interest in this area was an airborne electromagnetic anomaly, indicated by an A.E.M. survey carried out on behalf of A.O.P. The following is the writer's original description of this anomaly:

> "Conductor A strikes generally E-W, parallel to a road, and crossed the A.C.R. track just west of the town of Hearst. There is a strong probability that it is due to a power line, but some contorted magnetic activity in the area suggests that bedrock conduction is possible. In view of the ready access, it is recommended that the site should be examined and, if a correlating power line does not exist, ground electromagnetic and magnetometer surveys should be carried out."

A copy of a report by Hakon O. Lien, which is appended hereto, describes the grid of two lines which were traversed by magnetometer and electromagnetic surveys.

DISCUSSION OF RESULTS

As the surface plan indicates, the anomalous area is traversed by the A.C.R. railway track and by no fewer than four intersecting power lines.

Due to A.C. noise, little useful E.M. information was obtained.

Approximately 700 gammas magnetic relief was observed, due mainly to one negative anomaly in the vicinity of the railway track.

COPY

CONCLUSIONS & RECOMMENDATIONS

The A.E.M. anomaly was undoubtedly due to the congregation of power lines and, in accordance with the original recommendations, the area could have been abandoned after a visual inspection.

No further investigation is recommended for this area.

Respectfully submitted,

(signed) "Harold O. Seigel"

Harold O. Seigel, Ph.D., P.Eng.

Toronto, Ontario
June 10th, 1963

FRANC. R. JOUBIN & ASSOCIATES

REPORT ON ANOMALY C^1

ALDERSON TOWNSHIP

District of Algoma

INTRODUCTION

An airborne geophysical survey carried out by A.O.P. some years ago indicated a possible conductor in the eastern portion of Alderson Township. Harold O. Seigel and Associates, Toronto, recommended the area to be investigated on the ground.

THE SURVEY

One sixteen hundred foot long baseline was cut, and 5 crosslines, respectively, 700, 2000, 2000, 1400 and 1400 feet long were blazed and chained, along which E.M. and magnetometer surveys were carried out.

OVERBURDEN

The surveyed area is flat, low ground covered by muskeg. No outcrops were seen. The bottom (along the shore line) of the lake to the west of the grid is covered by sand.

"Hakon O. Lien"

Kennedy Station, A.C.R.
June 13, 1963

COPY

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FRANC. R. JOUBIN & ASSOCIATES GROUND INVESTIGATION REPORT AREA C[1], ALDERSON TWP., ONT.

INTRODUCTION

The basis of interest in this area was a conductive indication obtained on an airborne electromagnetic survey previously carried out by A.O.P. For the writer's comments thereon, please refer to the report on Area C, Alderson Twp.

A copy of a brief report by Mr. Hakon O. Lien is attached, covering his surface examination of this area.

Five crosslines, oriented N 30° W, were set in at 400' intervals by pace and compass from a base line. One transverse line, generally parallel to the base line was also established. These lines were covered by magnetometer and electromagnetic surveys.

DISCUSSION OF RESULTS

The magnetometer survey results show a maximum relief of about 600 gammas. Unfortunately, the survey lines are almost parallel to the magnetic strike, so that line 16E is about 400 gammas above the regional level along most of its length. The strike as determined on grid C, on the other side of South Mawgi Lake, is about N 30° W.

The electromagnetic survey shows a maximum of 7° tilt angle relief. When the 3° bias is taken into account, three possible minor conductive indications are observed. The most prominent of these, on line 4E near the base line, has not been corroborated by a fixed transmitter set-up. Increased null widths, of up to 4°, are observed at various places on the grid.

COPY

Once again weak bedrock conduction, or more likely, overburden effects are the source of the very minor ground E.M. indications and the stronger airborne effects. The same remarks apply as for Area C, regarding the basic lack of discrimination of the A.E.M. out-of-phase system.

No further work is recommended on this target.

Respectfully submitted,

(signed) "Harold O. Seigel"

Harold O. Seigel, Ph.D., P.Eng.

Toronto, Ontario

June 15th, 1963

COPY

Once again weak bedrock conduction, or more likely, overburden effects are the source of the very minor ground E.M. indications and the stronger airborne effects. The same remarks apply as for Area C, regarding the basic lack of discrimination of the A.E.M. out-of-phase system.

No further work is recommended on this target.

Respectfully submitted,

(signed) "Harold O. Seigel"

Harold O. Seigel, Ph.D., P.Eng.

Toronto, Ontario

June 15th, 1963

COPY

FRANC. R. JOUBIN & ASSOCIATES

REPORT ON ANOMALY A

ALDERSON TOWNSHIP

DISTRICT OF ALGOMA

INTRODUCTION

An airborne geophysical survey carried out some years ago by A.O.P. indicated a possible conductor in the southeastern corner of Alderson Township. It was recommended by Harold O. Seigel and Associates that the area should be investigated on the ground.

THE SURVEY

Ground E.M. and magnetometer survey were carried out along seven lines, each 1000 feet long and with a spacing of 200 feet. The bearing of the base line is 120°.

OVERBURDEN

The surveyed area is located on a flat ridge (less than 50 feet high) in a swampy country. No outcrops were seen.

"Hakon O. Lien"

Norris Station, A.C.T.,
June 17, 1963.

COPY

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FRANC. R. JOUBIN & ASSOCIATES

GROUND INVESTIGATION REPORT
AREA C, ALDERSON TWP., ONTARIO

INTRODUCTION

The basis of interest in this area was an airborne electromagnetic indication obtained on a survey previously carried out on behalf of A.O.P. The writer's comments on this conductor, as embodied in his report dated March 23rd, 1963 are as follows:

> "A long, irregular conducting zone crosses the north-east portion of the township. Phase angles of up to 0.6° and ratios of up to 1.5 suggest that bedrock conduction exists. A second, shorter zone lies to the south near the east boundary of the sheet. There appears to be no aeromagnetic correlation on these conductors. They are probably shear zones containing graphite with, at most, minor sulphides. As the south zone is of reasonable length, it may be worth a ground check at C, just west of Mawgi Lake, or, if more convenient, at C^1, just east of this lake and close to the A.C.R. track".

Mr. Hakon O. Lien has inspected the area in question (C) and reports that "it is flat and covered by muskeg, and no outcrops were seen".

A base line striking 300° and three crosslines at 400' intervals, were established by blaze and compass. Two short crosslines were also put in. All lines were covered by magnetometer and parallel line electromagnetic traverses. One detail (fixed transmitter) traverse was run as well.

DISCUSSION OF RESULTS

The magnetometer survey indicates a feature of from 800-1500 gammas amplitude, striking NNW across the grid.

COPY

The electromagnetic survey has not revealed any clear-cut cross-overs or even tilt angles larger than 7°. A uniform 3° tilt bias seems apparent on the readings, and instructions have been sent to correct this. When this bias is taken into account, a minor conductor (6° peak-to-peak) appears on line 0, striking parallel to the magnetic feature. The increased null widths (8° - 10° rather than 4° - 5° normally) in this region also tend to confirm very weak conduction in this area.

This conduction may be a very weak shear or fault zone in the bedrock, or may be due to overburden effects. In either case it would undoubtedly show up more strongly on the out-of-phase airborne E.M. system than on the in-phase ground system. This is another instance of the lack of discrimination of this airborne E.M. system.

Anomaly C is deemed to be of no further interest, at least on the basis of the present information.

Respectfully submitted,

(signed) "Harold O. Seigel"

Harold O. Seigel, Ph.D., P.Eng.

Toronto, Ontario

June 18th, 1963

COPY

FRANC. R. JOUBIN & ASSOCIATES
REPORT ON ANOMALY A
FRANZ TOWNSHIP
DISTRICT OF ALGOMA

INTRODUCTION

An airborne geophysical survey carried out by A.O.P. some time ago, revealed a possible conductive zone in the western portion of Franz Twp., just north of Albany Forks Station on C.N.R. It was recommended by Harold O. Seigel and Associates that the anomaly should be investigated on the ground.

THE SURVEY

Five lines, 1000 feet long, 400 feet apart, and with a bearing of 65° were blazed and chained. A ground E.M. and magnetometer survey was carried out along the lines.

OVERBURDEN

The surveyed area is flat and covered mainly by swamp. The part of the area that lies between 1+00 E and 5+00 E (all crosslines) on the surveyed grid is underlain by semi-dry muskeg.

No outcrops were seen.

"Hakon O. Lien"

Edison Lake
June 24, 1963

COPY

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FRANC. R. JOUBIN & ASSOCIATES, LIMITED
GROUND INVESTIGATION REPORT
AREA A, ALDERSON TWP., ONTARIO

INTRODUCTION

The object of this ground investigation was a conductor indicated by an airborne electromagnetic survey carried out previously on behalf of A.O.P. The writer's description of this indication, as presented in his report of March 23rd, 1963, follows:

> "Two additional conductors exhibiting moderate electrical amplitude, good ratios and apparent direct magnetic correlation, have been indicated by the letters A and B. In neither case is the conductor strike well established, but it is possibly NW for A and EW for B. The former is really incompletely defined by the present survey as it lies on the south boundary. It is recommended that A and B should be subjected to ground investigation as well."

A report by Mr. Hakon O. Lien, which is attached, gives details of the grid of lines which was surveyed by magnetometer and electromagnetic methods, and describes the surface features of the area.

DISCUSSION OF RESULTS

The magnetometer survey has confirmed the aeromagnetic anomaly which was a large part of the interest in this conductor through its apparent correlation. This magnetic anomaly is visible on five lines (4E to 8W) and varies in amplitude from 300 to 1600 gammas. Depth interpretations based on these magnetic curve forms indicate that the depth of cover is not more than 30' on the west side of the grid (line 4W), but may deepen to as much as 90' on line 2E.

The electromagnetic survey shows no tilt angle conductive indications. The intercoil spacing was only 200' for the reconnaissance survey, which has a maximum depth of penetration of only about 100'. We cannot, however, attribute the lack of conductive effects to the thickness of overburden, as a maximum of only 30' is expected on the west side of the grid.

Since the magnetic feature has been located on the ground, we are reasonably assured that the grid is properly located.

The writer concludes that the A.E.M. conductor was due to a thickening (90' or so) of conductive overburden, over a fortuitously correlating magnetic feature.

No further investigation appears warranted on this area, based on the present data.

Respectfully submitted,

(signed) "Harold O. Seigel"

Harold O. Seigel, Ph.D., P.Eng.

Toronto, Ontario
June 20th, 1963

COPY

FRANC. R. JOUBIN & ASSOCIATES

REPORT ON ANOMALY B
DERRY TOWNSHIP
DISTRICT OF ALGOMA

INTRODUCTION

An airborne geophysical survey carried out some years ago by A.O.P. indicated a possible conductor in the northwestern portion of Derry Twp. It was recommended by Dr. Harold O. Seigel that the area should be investigated on the ground.

THE SURVEY

A ground E.M. and magnetometer survey was carried out along five lines, each 1000 feet long and with a spacing of 400 feet. The bearing of the lines is N-S.

GEOLOGY

Only one outcrop was seen in the area. It is located 50 feet east of 2 + 00 N on L. 16E, and consists of diabase. It was impossible to determine the strike direction of the dike.

OVERBURDEN

The surveyed area is flat and covered mostly by cedar swamp. A creek running E-W is located just south of the base line.

"Hakon O. Lien"

Kabinakagami Lake
July 1st, 1963

COPY

FRANC. R. JOUBIN & ASSOCIATES

REPORT ON ANOMALY A
DERRY TOWNSHIP
DISTRICT OF ALGOMA

INTRODUCTION

The source for Anomaly A in Derry Twp. is an airborne geophysical survey carried out by A.C.P. some time ago. A possible conductor was indicated by the survey in the north-western part of the Twp. It was recommended by Mr. Harold O. Seigel that the anomaly should be investigated on the ground.

THE SURVEY

Five lines 1000 feet long and 400 feet apart were cut, and surveyed with ground E.M. and magnetometer. The bearing of the lines is N-S.

OVERBURDEN

The surveyed area is flat and covered by glacial drift, with a cedar swamp in the western portion of the grid. No outcrops were seen. The overburden is believed to be heavy.

"Hakon O. Lien"

Kabinakagami Lake
July 1st, 1963

COPY

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FRANC. R. JOUBIN & ASSOCIATES, LIMITED
GROUND INVESTIGATION REPORT
AREA A, FRANZ TWP., ONTARIO

INTRODUCTION

Interest in this area is based on a conductive indication observed on an airborne electromagnetic survey carried out on behalf of A.O.P. The writer's comments thereon, excerpted from his report of March 23rd, 1963, follow:

> "One A.E.M. conductor remains of possible bed-rock origin. It is designated as A and lies in the NW corner of the sheet, within 1/4 mile of the Canadian National Railway track. It strikes northwest and coincides with the peak of a 200 gamma closure. The ratios are rather poor, but the magnetic correlation compensates, in the writer's opinion. Despite the fact that this may be an accidental coincidence, the writer recommends ground follow-up on this conductor."

A report by Hakon O. Lien is attached, describing the grid of lines surveyed and the surface features in the area.

DISCUSSION OF RESULTS

The magnetometer survey has confirmed the presence of a magnetic anomaly of about 1000 gammas peak amplitude, striking about N 30° W across the survey area. This is presumably the magnetic feature observed on the airborne survey.

The electromagnetic survey has failed to indicate the presence of tilt angle changes greater than about 1° from a mean (bias) level on each line. Since the indicated depth of overburden on lines 8 N to 16 N is less than 50', we must conclude that

(a) The magnetic feature, which formed a large part of the interest in this area, is not conductive; and

(b) The conduction is due to the overburden (there are null widths of up to 15°) and the magnetic correlation was accidental.

No further action is recommended for this area based on the above results.

Respectfully submitted,

(signed) "Harold O. Seigel"

Toronto, Ontario,
July 3rd, 1963

Harold C. Seigel, Ph.D., P.Eng.

COPY

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FRANC. R. JOUBIN & ASSOCIATES, LIMITED

GROUND INVESTIGATION REPORT
AREAS A & B, DERRY TWP., ONTARIO

INTRODUCTION

The basis of interest in these areas was a conductor indicated on an airborne electromagnetic survey carried out on behalf of A.O.P. The writer's comments on these conductors, in his report of March 23rd, 1963, follow:

> "Two rather weak A.E.M. conductors remain, which, together, warrant ground investigation as they are only 3/4 mile apart. They are designated A and B and lie in the northwest quarter of the sheet, west of the Kabinakagami River. The strikes are WNW. Conductor A lies on or near the top of a 600 gammas ridge, which is possibly a basic intrusive. Asbestos and nickel possibilities would exist. It should be checked near lines 239-241. Conductor B has possibly weak negative magnetic correlation, and should be checked near lines 243-245."

Reports by Mr. Hakon O. Lien are attached, describing the grid of lines traversed in each area and the surface features of these grids.

DISCUSSION OF RESULTS

Area A

The aeromagnetic anomaly referred to in this area has been confirmed on the ground as a broad zone striking generally east-west across the grid. The peak magnetic relief ranges up to 3300 gammas.

No electromagnetic tilt angles greater than about 1/2° from a mean were observed on the entire grid area. It is apparent that no part of the magnetic structure is appreciably

conducting. It is concluded that the observed airborne indication was due to overburden conduction, and that the magnetic correlation was fortuitous.

Area B

The magnatometer profiles show two areas of moderate relief, which are not interconnected.

No tilt angles in excess of 1° from a mean are to be seen on the electromagnetic survey.

It is concluded, once again, that the airborne conduction in this area was due to overburden effects.

No recommendations can be made for further investigation in either of these areas based on the present results.

Respectfully submitted,

(signed) "Harold O. Seigel"

Harold O. Seigel, Ph.D., P.Eng.

Toronto, Ontario.
July 5th, 1963

COPY

FRANC. R. JOUHIN & ASSOCIATES

REPORT ON ANOMALY B
ALDERSON TOWNSHIP

District of Algoma

INTRODUCTION

An airborne geophysical survey carried out a few years ago by A.O.P. indicated a possible conductor in the southwestern portion of Alderson Twp. It was recommended by Dr. Harold O. Seigel that the area should be investigated on the ground.

THE SURVEY

Six north-south oriented lines were blazed, each 300 feet to the south and 700 feet to the north of a base line, and 400 feet apart. The grid was surveyed with magnetometer and E.M.

OVERBURDEN

The surveyed area is fairly flat and covered by swamp in the northern part of the grid. A small creek runs parallel to L 12 E and turns toward NW at the northern end of the line. The base line cuts the north tip of a drumlin at L 8 E.

No outcrop was seen.

"Hakon O. Lien"

Norris Station, A.C.R.

July 12, 1963

COPY

HAROLD O. SKIGEL & ASSOCIATES, LIMITED

CONSULTING GEOPHYSICISTS

Suite 913, 25 Adelaide St. West

TORONTO 1, ONTARIO

CABLE: "SKIGEO", TORONTO

TELEPHONE 364-2650

FRANC. R. JOUBIN & ASSOCIATES, LIMITED
GROUND INVESTIGATION REPORT
AREA B, ALDERSON TWP., ONTARIO

INTRODUCTION

The source of interest in this area was a conductor indicated by an airborne electromagnetic survey carried out in 1956 on behalf of A.C.R. The following were the writer's comments on the airborne indication, as presented in his report of March 23rd, 1963:

> "Two additional conductors exhibiting moderate electrical amplitude, good ratios and apparent direct magnetic correlation have been indicated by the letters A and B. In neither case is the conductor strike well established, but it is possibly NW for A and EW for B. It is recommended that A and B should be subjected to ground investigations as well."

The accompanying report by Mr. Hakon O. Lien describes the grid of lines which were established, by blaze and compass, and which were traversed by electromagnetic and magnetometer surveys.

DISCUSSION OF RESULTS

The magnetometer survey has confirmed the presence of a magnetic ridge of about 300 gammas peak amplitude, striking EW through the centre of the grid, and a second ridge of up to 600 gammas relief lying in the southwest corner of the grid.

Based on the magnetic curves, the depth of overburden is less than 50' on most lines.

The electromagnetic results are singularly flat, with no tilt angle departing by more than 1° from a mean.

It is concluded that the airborne conduction was caused by overburden effects and that the apparent magnetic correlation was fortuitous.

No further investigation can be recommended, based on the present information.

Respectfully submitted,

(signed) "Harold O. Seigel"

Harold O. Seigel, Ph.D., P.Eng.

Toronto, Ontario

July 18th, 1963

COPY

FRANC. R. JOUBIN & ASSOCIATES LTD.

REPORT ON AKRON ANOMALY

IRVING TWP.

District of Algoma

INTRODUCTION

Asbestos is known to occur in serpentinized rocks in the northern portion of Irving Twp., about one mile north of Akron Station on the A.C.R. An airborne geophysical survey revealed a trend of magnetic activity in the area.

A Ground E.M. and magnetic survey was carried out along five lines, having a bearing of 55° of which two were 2000 feet long and three 1000 feet long. The grid is located on the east side of the railway, and the lines have a spacing of 400 feet.

GEOLOGY

Only a few outcrops were seen. In the western corner of the surveyed grid outcrops of granite and banded gneiss were seen. Gneiss was also found in the south-western corner of the surveyed area. In the central portion a few outcrops of serpentine occur.

OVERBURDEN

The central part of the surveyed area is covered by swamp. The remaining portions consist of poplar-ridges.

"Hakon O. Lien"

Langdon Station, A.C.R.

July 18, 1963

COPY

HAROLD O. SEIGEL & ASSOCIATES, LIMITED
CONSULTING GEOPHYSICISTS
Suite 913, 25 Adelaide St. West
TORONTO 1, ONTARIO

CABLE: "SEIGEO", TORONTO

TELEPHONE 364-2650

FRANC. R. JOUHIN & ASSOCIATES LIMITED
REPORT ON GROUND INVESTIGATION
AKRON ANOMALY, IRVING TWP. ONTARIO

INTRODUCTION

The basis of interest in this area was an aeromagnetic anomaly revealed by an earlier survey carried out on behalf of A.C.R. Asbestos is known to occur in serpentinized rocks in this general vicinity, and it was hoped that the serpentinized bodies would be revealed by the aeromagnetic data.

A geological report and plan by Mr. Hakon O. Lien is attached, showing as well, the grid of lines surveyed by magnetometer and electromagnetic methods.

DISCUSSION OF RESULTS

The ground magnetometer survey confirms the presence of a band of magnetic material, of sinuous form, striking generally north-south across the grid lines. The maximum magnetic relief on any line is only 2000 gammas, so that the average magnetic content is 2% or less by weight. This does not suggest a high degree of serpentinization of an ultrabasic intrusive.

Only very minor tilt angle activity was observed on the electromagnetic survey, the maximum being about 5° p-p on line O. Detail traverses on this line failed to corroborate any localized conduction.

Mr. Hakon O. Lien, has noted a few outcrops of serpentine lying within the region of the magnetic anomaly but no mention is made of any asbestos occurrences.

Conclusions and Recommendations

Although a basic intrusive has been confirmed on the ground, the present geological-geophysical picture does not, in the writer's opinion, foster further interest in the Akron Anomaly area, either for asbestos or for base metals.

No further investigation can be recommended on this basis.

Respectfully submitted,

signed "Harold O. Seigel"

Harold O. Seigel, Ph.D., P.Eng.
Consulting Geophysicist.

Toronto, Ontario
July 30, 1963.

ALGOMA ORE PROPERTIES LIMITED

EXPLORATION DEPARTMENT

DIAMOND DRILL HOLE NO. 1 PROPERTY Boon Anomaly I-E-G

LOCATION OF COLLAR B.L 22+00W 550' North ELEV.

AZIMUTH AT COLLAR.

DIP AT COLLAR. 45°

VERTICAL SECTION NO. LENGTH 650'8" CORE SIZE 7/8"

REC. IN MIN. ZONE. LOGGED BY. STARTED. FINISHED.

W. Hallessey Feb. 7 10.30 p.m. Feb. 16 2.30 p.m

FOOTAGE	DESCRIPTION	SAMPLING			ANALYSES
		FROM	TO	REC.	
0 - 27	Ax-casing				
27-89.5	Ex casing Note - some core recovered between 27-89.5				
27-29.2	Dark to light gray quartz biotite schist texture very fine				
29.2 30	Rusty biotite schist - very soft - lightly oxidized				
30-31.6	Lost core L.c.				
31.6 32.5	Biotite schist - not so rusty				
32.5 35	Lost core				
35 35.8	Rusty biotite schist				
35.8 37.6	Lost core				
37.6 38.6	same rusty schist				
38.6 40.7	Lost core				
40.7 41.8	Biotite schist				
41.8 47	Lost core				
47-48	Same rusty schist				
48-50	Lost core				
50 - 50.5	Rusty fragments and sludge				

ALGOMA ORE PROPERTIES LIMITED

EXPLORATION DEPARTMENT

DIAMOND DRILL HOLE NO. 1 PROPERTY Boon

CONTINUED

FOOTAGE	DESCRIPTION	SAMPLING			ANALYSES				
		FROM	TO	REC.					
50.3 52.7	Lost core								
52.7-53	Biotite schist								
53-54.5	Lost core								
54.5-55	Rusty biotite schist								
55-56.6	Lost core								
56.6 57.3	Biotite schist								
57.3 58.3	Lost core								
58.3-59	Biotite schist								
59-62.1	Lost core								
62.1 62.6	Rusty schist								
62.6-64	Lost core								
64-64.6	Biotite schist								
64.6 66.1	Lost core								
66.1 66.8	Rusty schist fragments								
66.8-68	Lost core								
68-68.5	Biotite schist								
68.5-70	Lost core								
70-71.3	Lost core								
71.3 72.2	Biotite schist								
72.2 73.8	Lost core								
73.8 74.2	Biotite schist								

ALGOMA ORE PROPERTIES LIMITED

EXPLORATION DEPARTMENT

DIAMOND DRILL HOLE NO. 1 PROPERTY Boon

CONTINUED

	DESCRIPTION	SAMPLING			ANALYSES				
		FROM	TO	SEC.					
	Lost core								
	Biotite schist								
77-78.2	Lost core								
78.2 78.8	Biotite schist								
78.8 79.5	Lost core								
79.5-80	Biotite schist								
80-82.8	Lost core								
82.8-84	Fine grain biotite schist								
84-86.2	Lost core								
86.2 86.8	Chloritized - biotite schist								
86.8-88	Lost core								
88-91	Very soft, chloritised biotite schist								
91-91.8	Lost core								
91.8 92.5	Biotite schist								
92.5 94.2	Lost core								
94.2 96.1	Biotite schist								
96.1 96.8	Lost core								
96.8 98.4	Biotite schist								
98.4-99	Lost core								
99-99.6	Biotite schist								
99.6 100	Lost core								

ALGOMA ORE PROPERTIES LIMITED

EXPLORATION DEPARTMENT

DIAMOND DRILL HOLE NO. 1 PROPERTY Boon

CONTINUED

DESCRIPTION	SAMPLING			ANALYSES				
	FROM	TO	REC.					
Fine grain biotite schist, light gray in color								
Lost core								
Fine biotite schist								
Lost core								
Biotite schist								
Lost core								
Chloritized biotite schist								
Lost core								
Chloritized biotite schist								
Lost core								
Light gray quartz biotite schist								
Weathered biotite schist - color from brown to pale green								
Quartz biotite schist increasing acidity becoming pegmetitic at 138'								
Lost core								
Pegmatite - very coarse texture								
Lost core								
Quartz biotite schist - light gray in color, sulfides present at 147' and also 149.9 - pyrite								

ALGOMA ORE PROPERTIES LIMITED

EXPLORATION DEPARTMENT

DIAMOND DRILL HOLE NO. 1 PROPERTY Boon

CONTINUED

C.P.-10420-81

FOOTAGE	DESCRIPTION	SAMPLING			ANALYSES
		FROM	TO	SEC.	
150-152	Lost core				
152-154	Light gray, very schistose, biotite contains a few disseminated sulfides - pyrite and pyrrhotite				
154-158	Biotite schist, altered to sericite banding quite prevalent, with colors altering from light gray to green				
158-165	Rock type graphitic schist - concentrated massive type at footage 158-160 also 164-165. Some graphite bears sulfides				
165-166	Biotite schist				
166-171	Garnetiferous schist biotite and hornblend garnet metacrysts are very small but abund .it				
171-175	Quartz biotite schist - light gray in color with a coarser texture				
175-180	Mixture of schist sulfides and graphite				
180-200	Predominately biotite - with little hornblend schist, coarser texture and darker - medium gray in color, also bears sprinkling of sulfides - pyrite				
200 - 211.4	Quartz biotite schist, fine grain and light gray				
211.4 - 212.2	Massive graphite bearing sulfides	211.4		212.2	
212.2 - 214.5	Biotite schist				
214.5 - 215	Concentrated massive pyrite and pyrrhotite				
215-222	Rock type quartz biotite schist bearing disseminated sulfides, richer portion assayed	218.9		221.6	

ALGOMA ORE PROPERTIES LIMITED

EXPLORATION DEPARTMENT

DIAMOND DRILL HOLE NO. 1 PROPERTY Boon

CONTINUED

O P.-1042G.S1

FOOTAGE	DESCRIPTION	SAMPLING			ANALYSES		
		FROM	TO	REC.			
222-225	Rocktype variety biotite hornblend schist						
225-230	Biotite schist						
230 - 253.6	Rocktype - varies - a mixture of biotite hornblend schist - medium gray in color						
253.6 - 254.5	Graphite schist						
254.5 - 280	Typical light gray biotite schist						
280 - 296.2	Garnetiferous schist-matic minerals hornblend and biotite						
296.2 - 297.1	Quartz stringer						
297.1 - 321	Garnetiferous schist - pinkish metacrysts in a pale gray to green background						
321-372	Biotite schist						
372 - 373.6	Lost core						
373.6 - 400	Fine textured biotite schist						
400-410	Garnetiferous schist - varying amounts hornblend and biotite, very fine grain						
410-415	Mixture biotite hornblend - very fine grain						
415-425	Same as above, however note increasing amount quartz stringers throughout core						
425-435	Hornblend biotite schist						
435-440	Crushed core fragments - same schist as rock type but more acidic and lighter gray						

ALGOMA ORE PROPERTIES LIMITED

EXPLORATION DEPARTMENT

DIAMOND DRILL HOLE NO. 1 PROPERTY Boon

CONTINUED

FOOTAGE	DESCRIPTION	SAMPLING			ANALYSES
		FROM	TO	REC.	
440-445	Hornblend (amphibole) schist, green to pale green color				
445-450	Hornblend schist, grayish color, increasing amount biotite				
450-451	Biotite schist				
451-455	Garnetiferous hornblend schist				
455-470	Biotite schist				
470-500	Garnetiferous hornblend schist				
500-525	Biotite schist				
525-530	Biotite "Sericitic" type schist				
530-531	Garnetiferous hornblend schist				
531-533.5	Biotite schist, bearing disseminated stringers pyrrhotite	532		533.5	
533.5 - 536.11	Chloritized garnetiferous schist bearing some disseminated sulfide-pyrrhotite				
536.11-541	Garnetiferous schist				
541-545	Hornblend biotite schist (542.4) pyrrhotite				
545-550	Mixture hornblend biotite schist				
550-555	Same as above but containing trace of few sulfides				
555-560	Hornblend biotite schist medium gray				
560-565	Dark biotite schist with pyrrhotite stringers				
565-570	Biotite schist contains disseminated pyrrhotite				
570 @ 573.5	Same schist, more massive bands of pyrrhotite				

ALGOMA ORE PROPERTIES LIMITED

EXPLORATION DEPARTMENT

DIAMOND DRILL HOLE NO. 1 PROPERTY Boon

CONTINUED

C.P. 10430-9f

FOOTAGE	DESCRIPTION	SAMPLING			ASSAYS			
		FROM	TO	REC.				
573.5 - 575	Hornblend biotite diminishing amount sulfides							
575 - 575.5	Hornblend schist							
575.5 - 576.10	Hornblend schist bearing disseminated pyrite and pyrrhotite							
576.10 - 578	Quartzitic rocktype bearing pyrrhotite - gray in color							
578-580	Hornblend schist more acidic - light gray appearance few sulfides							
580-585	Hornblend schist contains pyrrhotite sprinkled throughout core							
585-590	Mixture biotite hornblend schist							
590-600	Hornblend schist with traces of sulfides through core							
600 - 600.9	Hornblend schist							
600.9 - 601.2	Hornblend and pyrrhotite stringers							
601.2 - 604.2	Hornblend schist							
604.2 - 605	Hornblend (actinolite) schist - sulfides patchy							
605 - 605.10	More acidic hornblend schist, lighter ~~grain~~ gray in color							
605.11	Pyrrhotite							
605.11 - 610	Mixture of schist and quartzitic material bears trace of sulfides							
610 - 615.5	Hornblend schist							
615.5 - 616.4	Schist becomes more mineralized spots massive pyrrhotite							

ALGOMA ORE PROPERTIES LIMITED

EXPLORATION DEPARTMENT

DIAMOND DRILL HOLE NO. 1 PROPERTY Boon

CONTINUED

FOOTAGE	DESCRIPTION	SAMPLING			ANALYSES				
		FROM	TO	REC.					
615 - 620	Hornblend schist								
620 - 625.3	Increasing amount sulfides in schist	623.10		625					
625.3 - 628	Rocktype mixture schist and pegmatite bearing disseminated pyrite and pyrrhotite varying from 2-6% throughout core								
628-630	Core more schistose contains few sulfides								
630 - 632.10	Highly abundant sulfides in quartzitic rock type	627.8		632.9					
632.10 - 633.6	Decreasing amount of sulfides - core very schistose								
633.6 - 634.2	Graphitic amorphos schist bearing sulfides	633.7		634					
634.2 - 635	Increasing quantity graphite in core								
635 - 636.3	Graphite								
636.3 - 638	Schist notrace of graphite								
638-640	More acidid mixture hornblend biotite schist								
640 - 650.8	Normal biotite schist, light to dark gray, in color and medium grain texture								
	End of hole 650'.8"								
	Record acid test -								
	90' 46°								
	250' 41°								
	400' 35°								
	500' 32°								
	650' 29°								

WILLIAM HALLESSEY

ALGOMA ORE PROPERTIES LIMITED

EXPLORATION DEPARTMENT

DIAMOND DRILL HOLE NO. 1 Anomaly #31 PROPERTY Matawitchawan

LOCATION OF COLLAR BL 136+00 400' North ELEV.

AZIMUTH AT COLLAR.

SOUTH ½ FRANZ

DIP AT COLLAR -45° South

VERTICAL SECTION NO. LENGTH 410' CORE SIZE 7/8

REC. IN MIN. ZONE. LOGGED BY W. Hallessey STARTED Feb. 7 - 8 p.m. FINISHED Feb. 18-4.45pm

FOOTAGE	DESCRIPTION	SAMPLING FROM	TO	REC.	ANALYSES
0 17.6	Ex. casing				
17.6 26.4	Biotite schist light gray in color varying from fine to medium grain texture				
26.4 27	Pegmatite, coarse-grain-bearing muscovite				
27- 36.2	Biotite schist - same coarse texture				
36.2 38	Pegmatite very white color, bearing biotite and muscovite				
38 38.6	Lost core				
38.6 48.3	Pegmatite				
48.3 49.2	Lost core				
49.2 49.8	Pegmatite				
49.8 50.6	Lost core				
50.6 52	Pegmatite				
52 53.10	Lost core				
53.10 63.8	Pegmatite				
63.8 65	Lost core				
65 66.1	Biotite schist, light gray in color				
66.1 67.2	Lost core				

ALGOMA ORE PROPERTIES LIMITED

EXPLORATION DEPARTMENT

DIAMOND DRILL HOLE NO. 1 Anomaly #31 PROPERTY Matawitchawan

CONTINUED

FOOTAGE	DESCRIPTION	SAMPLING			ANALYSES			
		FROM	TO	REC.				
67.2 73	Quartz biotite schist very coarse texture							
73 - 75	Lost core							
75 - 77	Quartz biotite schist pale green in color							
77 77.8	Lost core							
77.8 81.9	Quartz biotite schist							
81.9 82.10	Lost core							
82.10 93.8	Same biotite schist							
93.8 94.7	Pegmatite							
94.7 95.6	Biotite schist							
95.6 96	Pegmatite							
96 103	Quartz biotite schist. color altering from a light gray to pale green - texture fine to medium grain.							
103-116	here rocktype changes to medium grain - black and white normal - biotite granite							
116-116.8	Lost core							
116.8 120	Quartz biotite schist							
120-125	Brecciated - pegmatite - regular coarse texture, with brecciation - very visible and pronounced also contains a little pyrite and graphite at 124.8'							
125-128	Biotite and hornblend fine grain mixture							

ALGOMA ORE PROPERTIES LIMITED

EXPLORATION DEPARTMENT

DIAMOND DRILL HOLE NO. 1 Anomaly #31 PROPERTY Matawitchawan

CONTINUED

C.P.-10430-51

FOOTAGE	DESCRIPTION	SAMPLING			ANALYSES			
		FROM	TO	REC.				
128 136.2	Schist and disseminated sulfides - pyrite - pyrrhotite	128		136.2				
136.2 150	Biotite schist - very coarse texture - light gray in color							
150-160	Mixture of hornblend biotite pegmatite general texture fine grain and having a greenish tint - also bearing a few disseminated sulfides							
160-170	Biotite - hornblend schist. very green in color							
170-175	Pegmatite - also evidence of brecciation in rock							
175-200	Chloritized - hornblend amphibole schist also contains small amount of biotite which is very fine grain							
200-210	Biotite schist. also bears little hornblend rocktype, very light gray in color							
210 219.8	Hornblend schist - dark gray dark gray in color							
219.8 220.1	Pyrrhotite stringer							
220.1 232	Amphibole schist varying from fine to medium grain							
232-236	Garnetiferous hornblend schist							
236-240	Mixture - hornblend biotite schist							
240-260	Amphibole schist - medium grain texture. light green in color. Note: lost core (256-257)							

ALGOMA ORE PROPERTIES LIMITED

EXPLORATION DEPARTMENT

DIAMOND DRILL HOLE NO. 1 Anomaly #31 PROPERTY Matawitchawan

CONTINUED

C.P.-10420-51

FOOTAGE	DESCRIPTION	SAMPLING			ANALYSES			
		FROM	TO	REC.				
260 263.5	Hornblend - biotite schist - very fine grain							
263.5 264.3	Massive pyrrhotite	263.5		264.3				
264.3 264.8	Biotite schist							
264.8 265.6	Pyrrhotite massive and disseminated	264.8		265.6				
265.6 270.2	Biotite hornblend schist							
270.2 270.6	Pegmatite							
270.6 275	Hornblend biotite schist							
275-282	Biotite schist							
282 - 286.6	Hornblend (amphibole) schist. pale green in color.							
286.6 288.6	Lost core							
286.6 300	Hornblend (amphibole) schist							
300 301.6	Same as above but bearing pyrrhotite at 301.6							
301.6 310	Hornblend (amphibole) schist, same as above.							
310-315	Rock grades into finer texture biotite schist							
315-325	Mixture - biotite hornblend schist at 324.10 - sprinkling of sulfides							
325 326.2	Leached and pitted sulfides in hornblend schist							
326 334	Biotite schist - rather medium grain and gray color							

ALGOMA ORE PROPERTIES LIMITED

EXPLORATION DEPARTMENT

DIAMOND DRILL HOLE NO. 1 Anomaly #31 PROPERTY Matawitchawan

LOCATION OF COLLAR ELEV.

AZIMUTH AT COLLAR.

DIP AT COLLAR

VERTICAL SECTION NO.

REC. IN MIN. ZONE. LOGGED BY. LENGTH STARTED. CORE SIZE. FINISHED.

FOOTAGE	DESCRIPTION	SAMPLING FROM	SAMPLING TO	SAMPLING REC.	ANALYSES
334-358	Pegmatite				
358-359X	Lost core				
358-359	Hornblend amphibole schist, with trace of sulfides				
359-360	Lost core				
360 371.2	Hornblend - amphibole schist				
371.2 371.8	Schist and leached sulfides				
371.8 372.11	Fine grain - schist				
372.11 373.2	Schist and pyrrhotite stringers				
373.2 375	Hornblend schist				
376 376.2	Graphite - massive				
376.2 377	Hornblend schist				
377 378.3	Schist and disseminated	377	378.3		
378.3 380	Lost core				
380 381.5	Schist and trace of sulfides				
381.5 383.7	Lost core				
387-388	Graphite schist				

ALGOMA ORE PROPERTIES LIMITED

EXPLORATION DEPARTMENT

DIAMOND DRILL HOLE NO. 1 Anomaly #31 PROPERTY Matawitchawan

CONTINUED

C.P.-10420-51

FOOTAGE	DESCRIPTION	SAMPLING			ANALYSES
		FROM	TO	REC.	
388-390	Schist and graphite				
390-393	Graphite-bearing sulfides and remnants of schist				
393-395	Hornblend schist				
395 397.8	Hornblend schist and graphite				
397.8 398.2	Graphite				
398.2 399.8	More acidic hornblend schist				
399.8 400.8	Schist and graphite				
400.8 402	Lost core				
402 402.8	Blocky, brecciated schist and rock bearing graphite				
402.8 403.5	Lost core				
403.5 407.6	Pegmatite				
407.6 410	Pegmatite				

Final Depth 410'

Acid test

100' 42°

200' 43°

300' 43°

William Hallessey.

Township	Map Title	Type of Survey	Scale	Work Done	Who Did Work
Alderson		Aeromagnetic	1 inch = 1320 ft.	Oct.,1956 - May, 1957	Aeromagnetic Surveys
"		Aero Electromagnetic	" "	Oct.,1956 - Apr.,1957	" "
"	Anomaly 4 & 6, Central Area	Geology	1 inch = 200 ft.	Aug., 1957	Algoma Ore Properties Exploration Dept.
"	Anomaly 6-A, Central Area	Soil Sampling	E-W 1 inch = 200 ft. N-S 1 inch = 400 ft.		
Derry		Aeromagnetic	1 inch = 1320 ft.	Oct.,1956 - May, 1957	Aeromagnetic Surveys
"		Aero Electromagnetic	" "	Oct.,1956 - Apr., 1957	" "
"	Anomaly No.50 A, Central Area	Magnetometer	1 inch = 200 ft.	April, 1960	Algoma Ore Properties, Exploration Dept.
"	" "	Electromagnetic	" "	" "	" "
"	Anomaly No.52, Block "B"	Magnetometer	1 inch = 100 ft.	" "	" "
"	" "	Electromagnetic	" "	" "	" "
"	Anomaly 2, Block "C"	Magnetometer	1 inch = 200 ft.	June, 1958	" "
"	" "	Electromagnetic	" "	" "	" "
"	Anomaly 3, Block "C"	Magnetometer	" "	" "	" "
"	" "	Electromagnetic	" "	May, 1958	" "
"	Anomaly 5, Block "C"	Magnetometer	" "	June, 1958	" "
"	" "	Electromagnetic	" "	" "	" "
"	Anomaly 6, Block "C"	Electromagnetic	" "	" "	" "
"	Anomaly 12, Block "C"	Magnetometer	" "	" "	" "
"	" "	Electromagnetic	" "	" "	" "
"	Anomaly 13, Block "C"	Magnetometer	" "	" "	" "
"	" "	Electromagnetic	" "	" "	" "
"	Anomaly No.54, Block "C"	Magnetometer	1 inch = 100 ft.	April, 1960	" "
"	" "	Electromagnetic	" "	" "	" "

Township	Map Title	Type of Survey	Scale	Work Done	Who Did Work
1/2 Franz		Aeromagnetic	1 inch = 1320 ft.	Oct.,1956 - Apr., 1957	Aeromagnetic Surv.
"		Aero Electromagnetic	" "	Oct.,1956 - May, 1957	" "
"	Anomalies 31-A-B-C	Magnetometer	1 inch = 200 ft.	Nov. 30, 1957	Algoma Ore Prop.
"	Anomalies 31-A-B-C	Electromagnetic	" "	Nov. 25, 1957	" " "
"	Anomaly 31C	Magnetometer	" "	Nov. 27, 1957	" " "
"	Anomaly 31-C	Electromagnetic	" "	Nov. 30, 1957	" " "
"	Anomaly 31C	Magnetometer	" "	June, 1958	
"	Anomaly 32A	Electromagnetic	1 inch = 200 ft.	Nov.30, 1957	Algoma Ore Props.Ltd Exploration Dept.
S.½ Franz	Anomaly #31	Drill Hole No.1	Length 410ft.	Feb., 1957	Algoma Ore Props.Ltd
1/2 Glasgow		Aeromagnetic	1 inch = 1320 ft.	Oct.,1956 - May, 1957	Algoma Ore Props.Ltd Exploration Dept.
Glasgow		Aero Electromagnetic	" "	Oct.,1956 - May, 1957	Aeromagnetic Surveys
Landry		Aeromagnetic	" "	Oct.,1956 - May, 1957	" "
Landry		Aero Electromagnetic	" "	Oct.,1956 - May, 1957	" "
Martin		Aeromagnetic	" "	Oct.,1956 - May, 1957	" "
"		Aero-Electromagnetic	" "	Oct.,1956 - May, 1957	" "
"	Anomaly No.35, Block "C"	Magnetometer	1 inch = 200 ft.	July, 1958	Algoma Ore Props.Ltd Exploration Dept.
"	Anomaly No.35, Block "C'	Electromagnetic Survey	" "	July, 1958	" "
"	Anomaly 36-A-B-C, Block "C"	Magnetometer	" "	May, 1958	" "
"	" "	Electromagnetic	" "	May, 1958	" "
"	Anomaly 37-A, Block "C"	Magnetometer	" "	May, 1958	" "
"	" "	Electromagnetic	" "	May, 1958	" "
"	Anomaly 37-B, "	Magnetometer	" "	May, 1958	" "
"	Anomaly 38, Block "C"	Magnetometer	" "	May, 1958	" "
"	" "	Electromagnetic	" "	May, 1958	" "
"	Anomaly 39A & 39B,Blk. "C"	Magnetometer	" "	May, 1958	" "
"	" " "	Electromagnetic Survey	" "	May, 1958	" "
"	Anomaly 37-B, Block "C"	Electromagnetic	" "	May, 1958	" "

Township	Map Title	Type of Survey	Scale	Work Done	Who Did Work
Mildred		Aeromagnetic	1 inch = 1320 ft.	Oct.,1956 - May, 1957	Aeromagnetic Surveys
"		Aero Electromagnetic	" "	Oct.,1956 - May, 1957	" "
Templeton		Aeromagnetic	" "	Oct.,1956 - May, 1957	" "
"		Aero Electromagnetic	" "	Oct.,1956 - May, 1957	" "
"	Anomalies 1 & 2 (9)	Geology	1 inch = 200 ft.	June, 1958	Algoma Ore Props. Ltd Exploration Dept.
"	" (10)	Geology	" "	" "	" "
"	" (11)	Geology	" "	" "	" "
"	" (14)	Geology	" "	" "	" "
"	" (9)	Magnetometer	" "	Jan., 1958	Algoma Ore Props. Ltd
"	" (10)	Magnetometer	" "	" "	" "
"	" (11)	Magnetometer	" "	" "	" "
"	" (12)	Magnetometer	" "	" "	" "
"	" (13)	Magnetometer	" "	" "	" "
"	" (14)	Magnetometer	" "	" "	" "
"	" (11)	Electromagnetic	" "	" "	" "
"	" (12)	Electromagnetic	" "	" "	" "
"	" (13)	Electromagnetic	" "	" "	" "
"	" (14)	Electromagnetic	" "	" "	" "
"	Anomaly 1-G (9)	Electromagnetic	" "	Dec., 1958	" "
"	Anomaly 1-F.G.2-C (10)	Electromagnetic	" "	Dec., 1957	" "
"	Anomaly 1-F-G (Boon)	Drill Hole No.1	Length 650 ft. 8 ins	Feb.,	" "
"	Anomaly 3 B	Magnetometer	1 inch = 200 ft.	Feb., 1958	" "
"	"	Electromagnetic	" "	" "	" "
Way		Aeromagnetic	1 inch = 1320 ft.	Oct.,1956 - May, 1957	Aeromagnetic Surveys
"		Aero Electromagnetic	" "	Oct.,1956 - May, 1957	" "

ALGOMA ORE PROPERTIES LTD.

Geological Legend

1. Acid to Intermediate Volcanics --- A - Massive
   B - Tuff - Fine Grained Pyroclastic
   C - Banded
   E - Quartz Eyes
   F - Feldspar Porphyry

2. Sediments ---------- A - Shale, Argillite
   B - Greywacke
   CGL.- Conglomerate
   GRAPH.- Graphitic
   PY.- Pyritiferous

3. Iron Formation ---------- A - Chert
   B - Siderite
   C - Pyrite
   D - Magnetite
   H - Hematite

4. Basic to Intermediate Volcanics -- A - Massive
   B - Pillows
   C - Banded
   D - Pyroclastic i.e. Tuffaceous
   E - Chlorite Schist

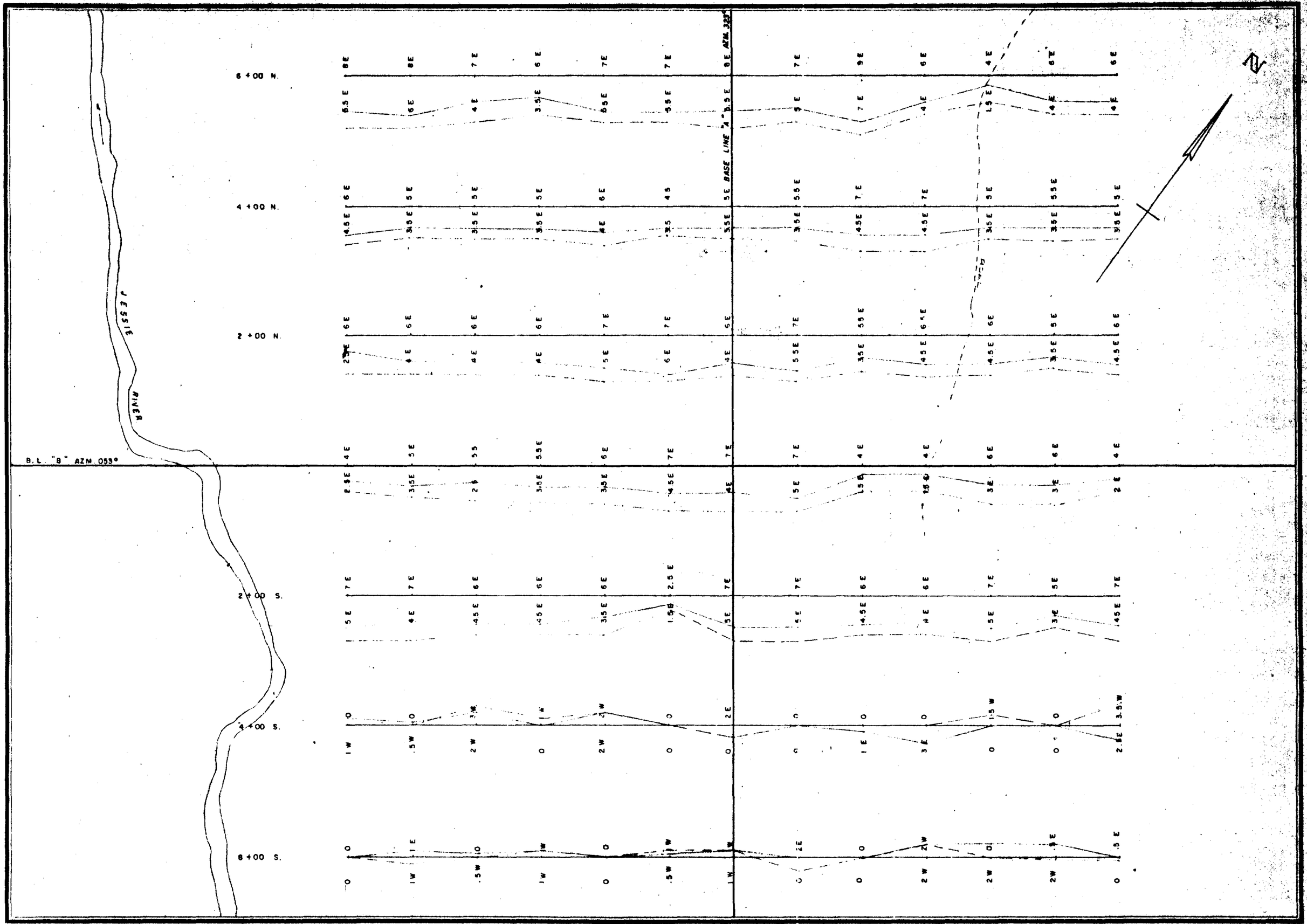
5. Metasediments ---------- A - Quartz Schist
   B - Biotite - Qtz. Schist
   C - Hornblende Schist
   D - Garnet Schist

6. Basic to Intermediate ---------- A - Diorite
   B - Gabbro
   C - Lamprophyre - "Mica Dike"
   D - Peridotite, Pyroxenite, etc.

7. Acid Intrusives ---------- A - Granite - Massive
   B - Granite - Gneissic
   C - Granite - Porphyritic
   D - Granite - Felsitic
   E - Pegmatite
   F - Aplite
   G - Syenite
   H - Granodiorite

8. Diabase ---------- A - Massive
   B - Porphoritic

Composed by A. M. Goodwin



GLASGOW-0013 1

INSTRUMENT: McPHAR R.E.M.
METHOD: BROADSIDE 200' SPREAD
LEGEND: C.P.S. ——— 1000
C.P.S. - - - - 9000.
DIP ANGLES 2N | 5N
(1000 C.P.S.) | (9000 C.P.S)
CROSS — OVERS
SCALE 1" = 10°

ALGOMA ORE PROPERTIES LIMITED
EXPLORATION DEPARTMENT

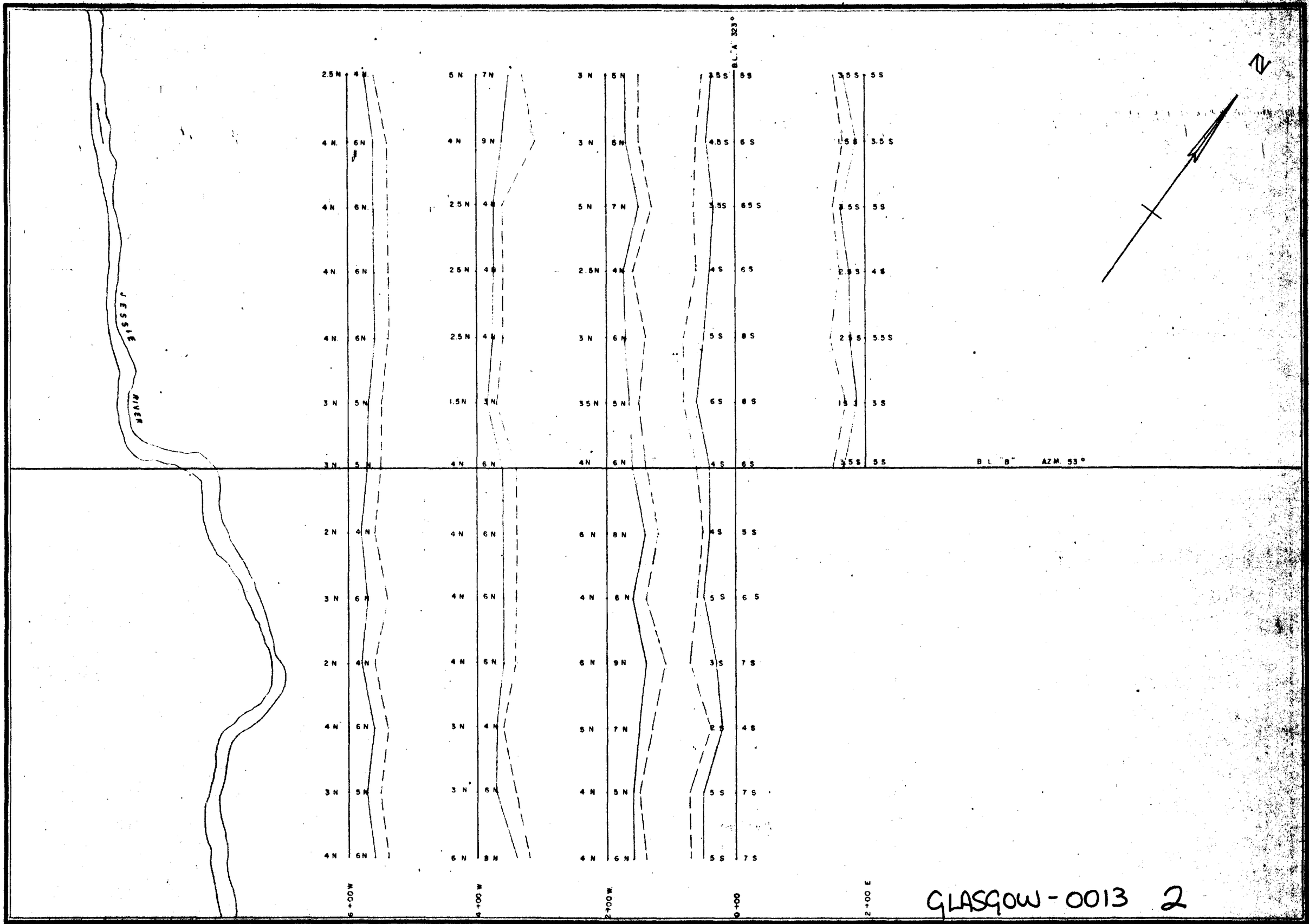
ANOMALY NO. 24 NORTH AREA

VERTICAL LOOP ELECTROMAGNETIC SURVEY

SCALE 1" = 100' NOV. 15, 1961

WAY TWP.

D. J. TROMBRACCI



GLASGOW-0013 2

INSTRUMENT: McPHAR R.E.M.
METHOD: BROADSIDE 200' SPREAD
LEGEND: C.P.S ——— 1000
C.P.S - - - - - 5000
DIP ANGLES 2N 5N
(1000 C.P.S) (5000 C.P.S.)
CROSS OVERS
SCALE 1" = 10°

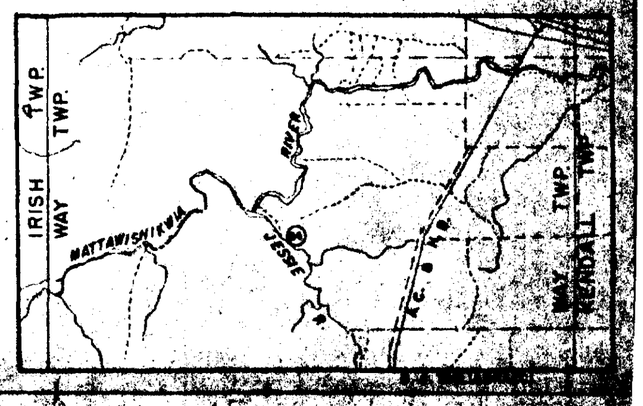
ALGOMA ORE PROPERTIES LIMITED
EXPLORATION DEPARTMENT

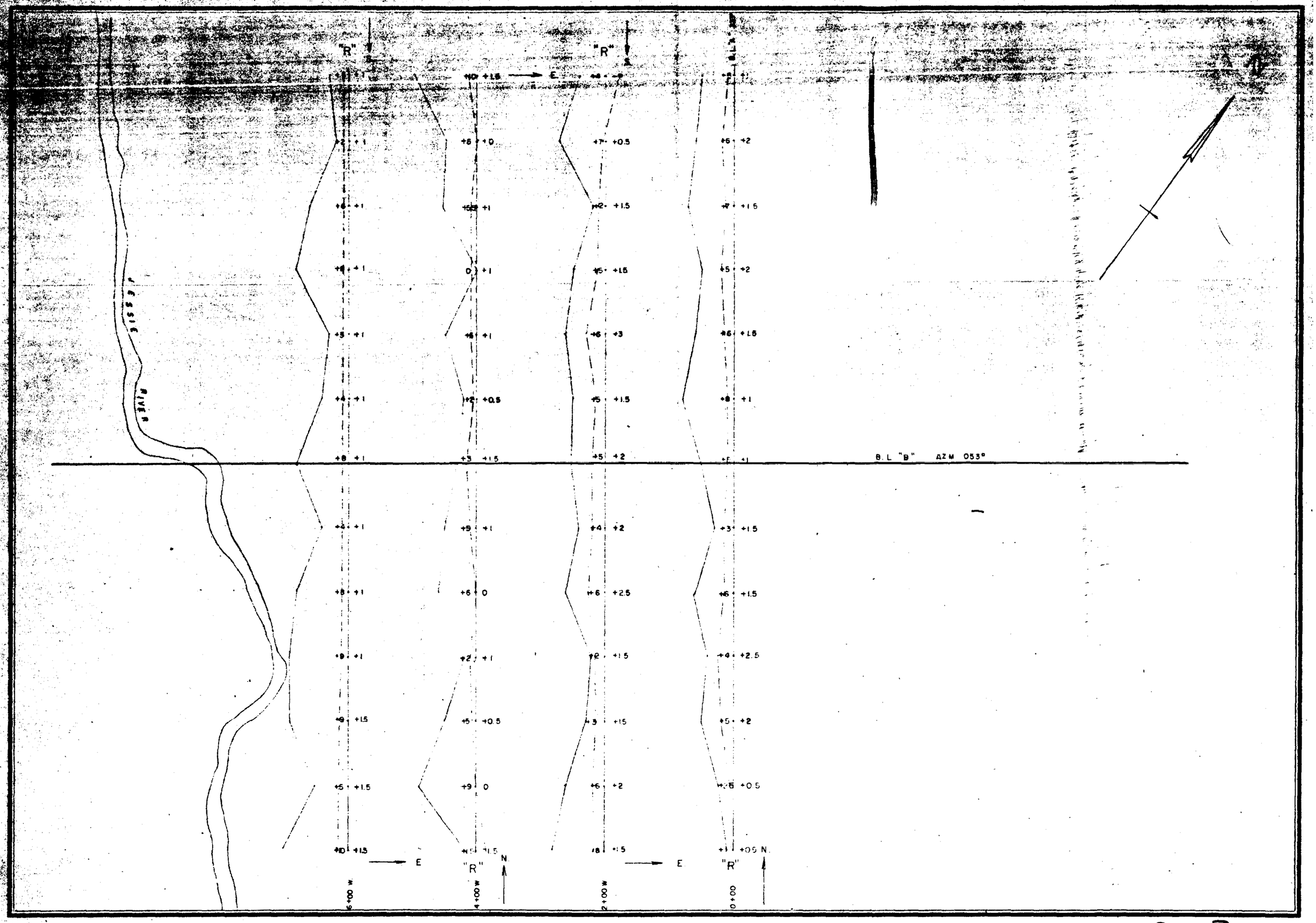
ANOMALY NO. 24 NORTH AREA

VERTICAL LOOP ELECTROMAGNETIC SURVEY

SCALE 1" = 100' NOV. 16, 1961

WAY TWP.





GLASGOW - 0013 3

INSTRUMENT RONKA MARK IV
METHOD IN LINE 200' SPREAD
LEGEND IN PHASE READINGS ———
OUT OF PHASE READINGS - - - -

+8 IN PHASE	+6 OUT OF PHASE

"R" POSITION OF RECEIVER AT START OF LINE
DIRECTION IN WHICH LINE WAS RUN
1" = 20% OF PRIMARY FIELD

ALGOMA ORE PROPERTIES LIMITED
EXPLORATION DEPARTMENT

ANOMALY NO. 24 NORTH AREA

HORIZONTAL LOOP ELECTROMAGNETIC SURVEY

SCALE 1" = 100' NOV. 14, 1961

WAY TWP.

202

15, 1961

D. J. TAGLIABRACCI

N

ROAD

CANADIAN

NATIONAL

RAILWAY

TRANS

CANADA

HIGHWAY

ALGOMA CENTRAL RAILWAY

BASE LINE

INSTRUMENT SHARPE MODEL A-2 MAGNETOMETER

INSTRUMENT ROWEA MARK IV
METHOD IN LINE 200 SPREAD
LEGEND IN PHASE READINGS ———
OUT OF PHASE READINGS - - - -
+5 = IN / OUT OF PHASE / PHASE
"R" POSITION OF RECEIVER AT START OF LINE
D DIRECTION IN WHICH LINE AND BLN
SEN OF PRIMARY FIELD

203

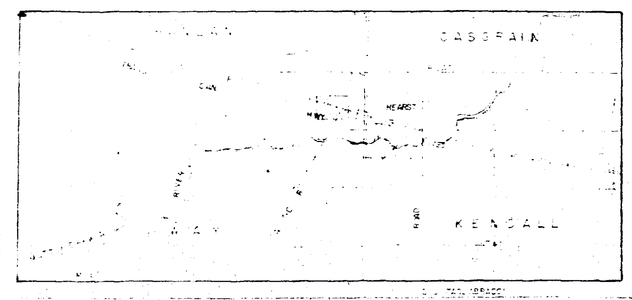
ALGOMA ORE PROPERTIES LTD.

EXPLORATION DEPARTMENT

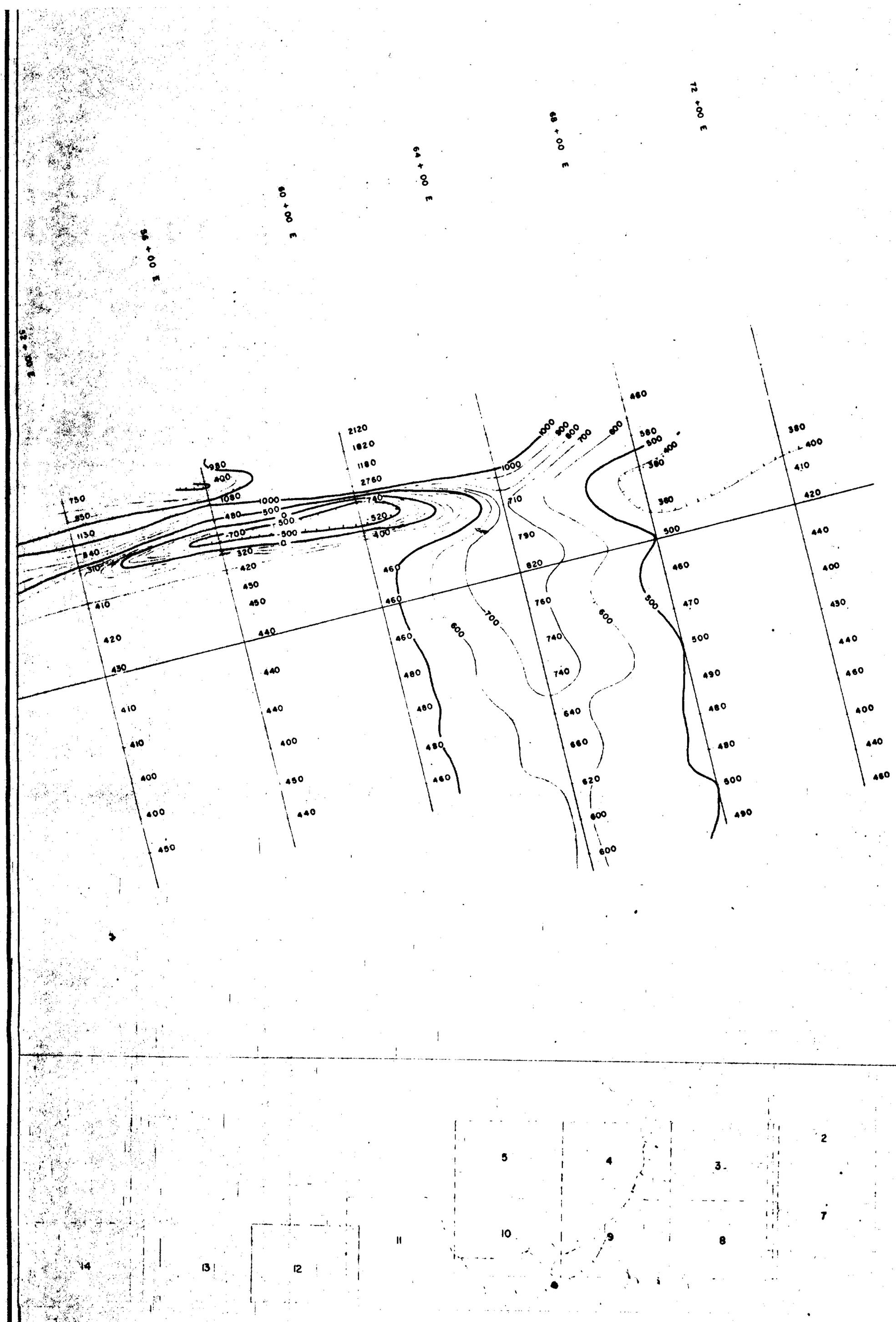
MAGNETOMETER & HORIZONTAL LOOP ELECTROMAGNETIC SURVEY

ANOMALY NO. 23 NORTH AREA

DEC 27 1 IVAN TWP



GLASGOW - 0013 4



ALGOMA ORE PROPERTIES LTD.

MAGNETOMETER SURVEY

ANOMALY 1 & 2

SCALE: 1" = 200' JAN. 31 / 58.

GLASGOW-0013 5

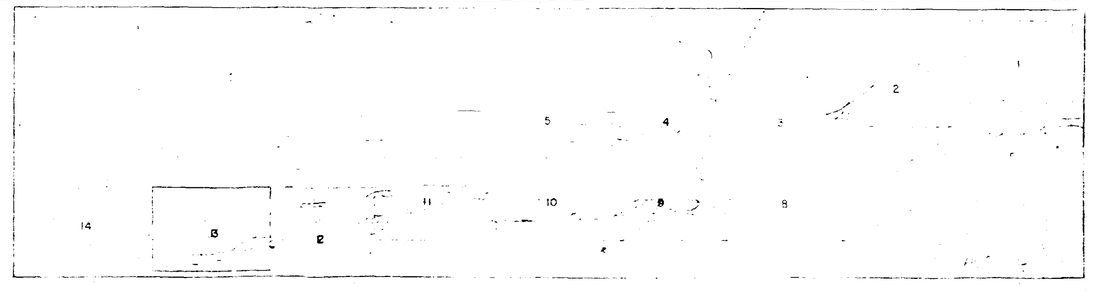
ANOMALY 1 & 2

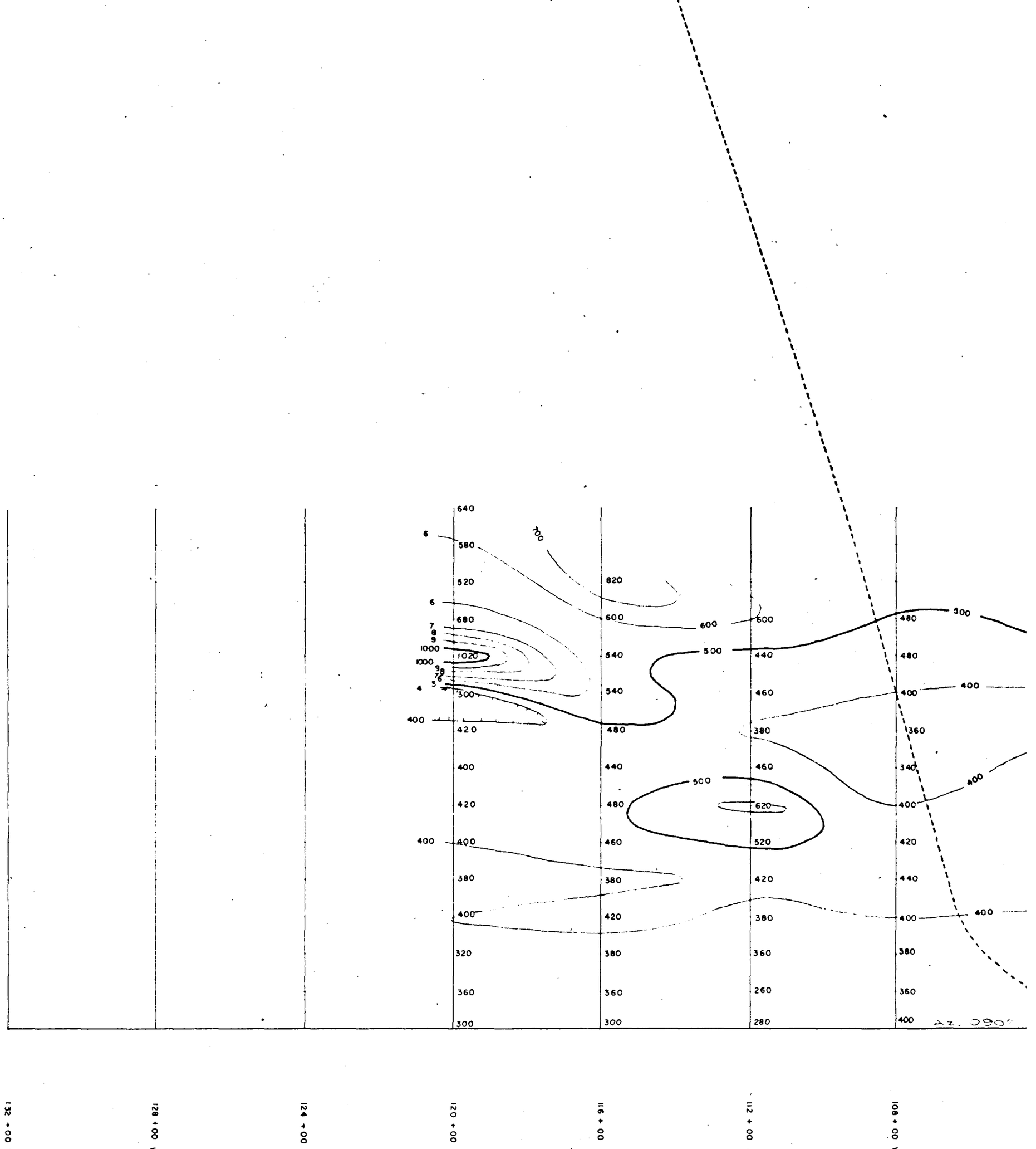
ALGOMA ORE PROPERTIES LTD.

MAGNETOMETER SURVEY

ANOMALY 1 & 2

SCALE: 1" = 200' JAN. 31/58.





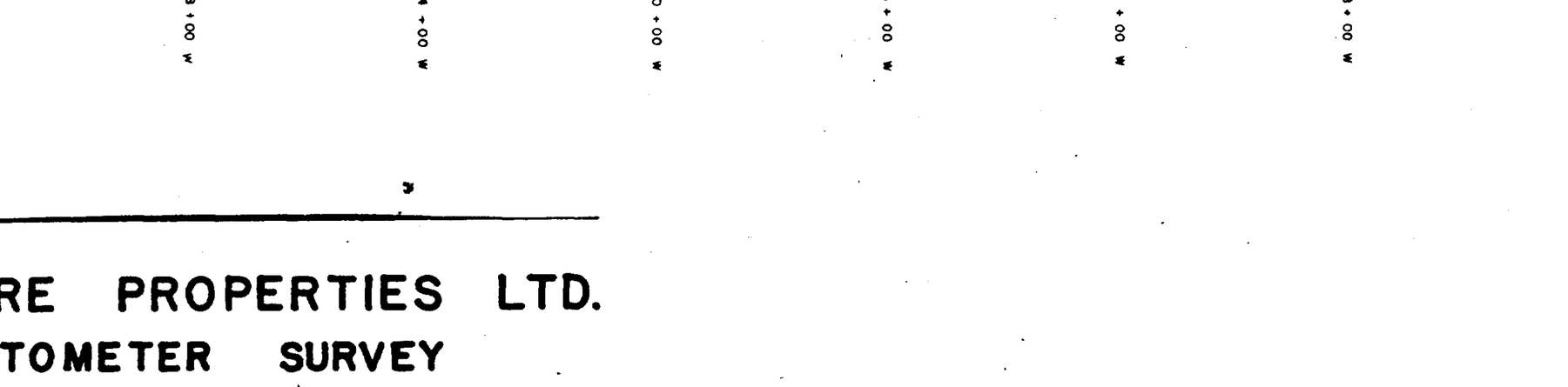
ALGOMA ORE PROPERTIES LTD.

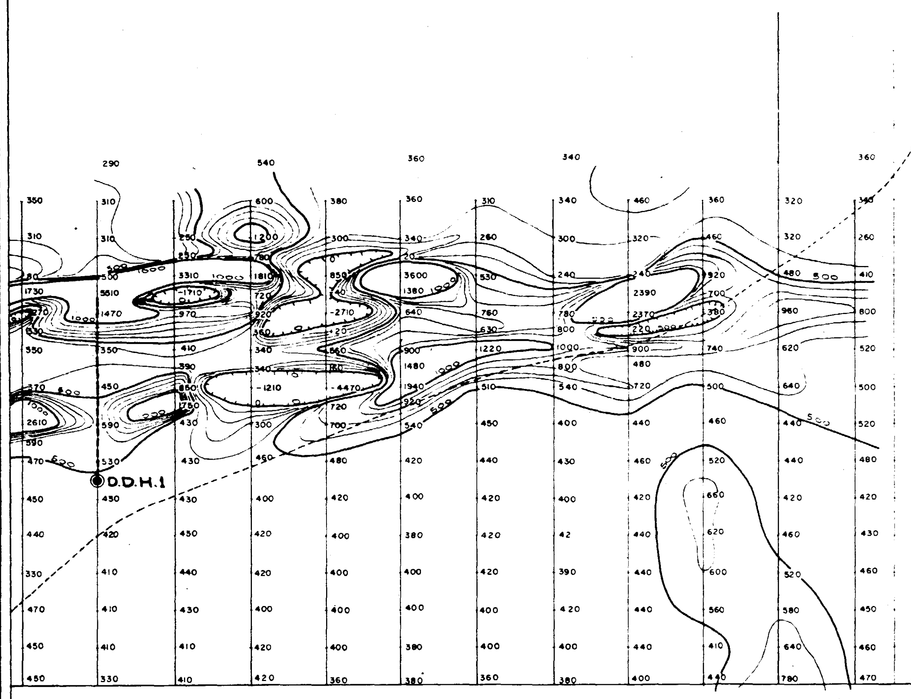
MAGNETOMETER SURVEY

ANOMALY 1 & 2

SCALE: 1" = 200' JAN. 29 / 58.

GLASGOW - 0013 7



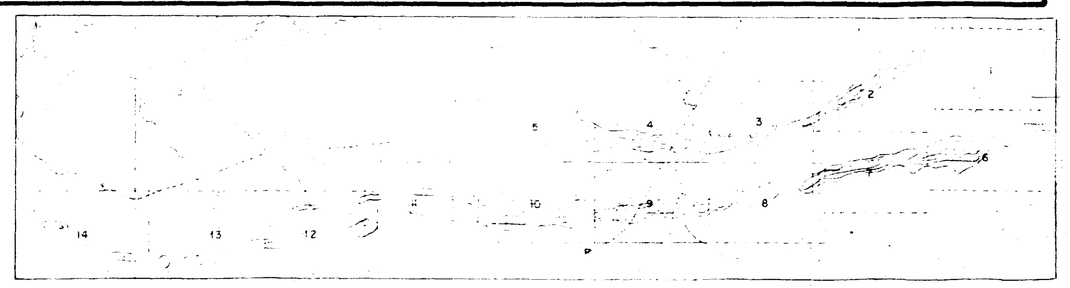


ALGOMA ORE PROPERTIES LTD.

MAGNETOMETER SURVEY

ANOMALY 1 & 2

SCALE: 1" = 200' JAN 29/58



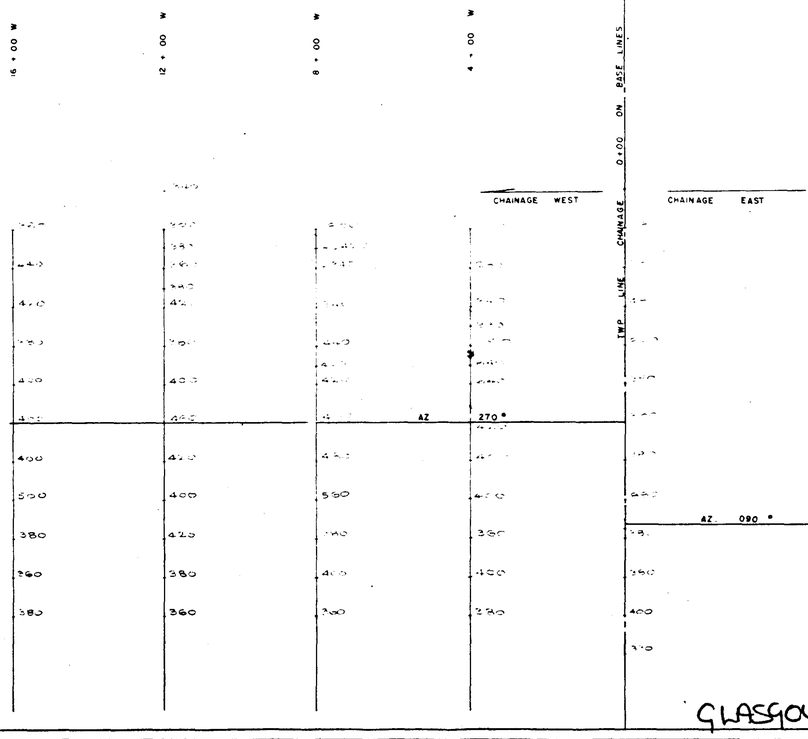
GLASGOW-0013 8

ALGOMA ORE PROPERTIES LTD.

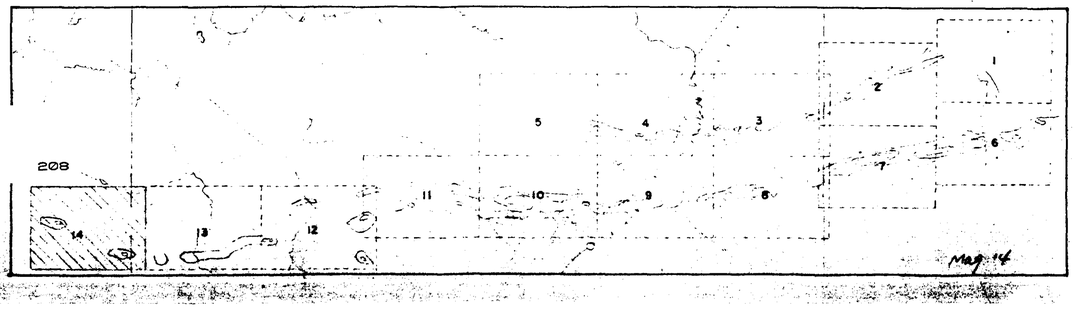
MAGNETOMETER SURVEY

ANOMALY 1 & 2

SCALE: 1" = 200' JAN. 31 / 58.



GLASGOW-0013 9



Map 14

LEGEND

RONKA- (HORIZONTAL)		Mc PHAR (VERTICAL)	
IN PHASE +4	OUT PHASE +2	1000 CPS 2N	5000 CPS 3N
——— IN PHASE		——— 1000 C.P.S.	
- - - - - - OUT OF PHASE		- - - - - - 5000 C.P.S.	

RONKA - IN LINE METHOD - 300' SPREAD
Mc PHAR - BROADSIDE METHOD - 400' SPREAD

SCALE

RONKA - 1" = 20% PRIMARY FIELD
Mc PHAR - 1" = 20°

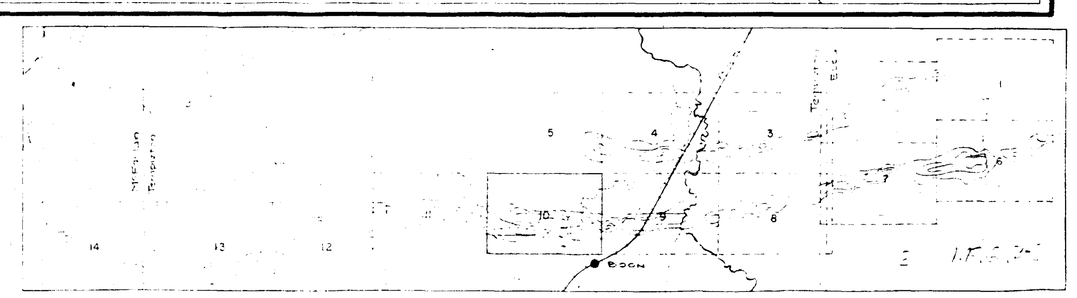
ALGOMA ORE PROPERTIES LTD.

ELECTROMAGNETIC SURVEY

ANOMALY 1-F-G, 2-C.

TEMPLETON TWP.

Scale: 1" = 200' Dec. 16, 1957.



GLASGOW -0013 10

D.D.H. 1

24+00W 22+00W 20+00W 18+00W 16+00W 14+00W 12+00W 10+00W 8+00W 6+00W 4+00W 2+00W

LEGEND

RONKA- (HORIZONTAL)		Mc PHAR (VERTICAL)	
IN PHASE -4	OUT PHASE +2	1000 CPS 2N	5000 CPS 3N

IN PHASE ——— 1000 C P S

OUT OF PHASE - - - - - - - - 5000 C P S

RONKA - IN LINE METHOD - 300' SPREAD
Mc PHAR - BROADSIDE METHOD - 400' SPREAD

SCALE

1" = 20% PRIMARY FIELD
1 - 1" = 20°

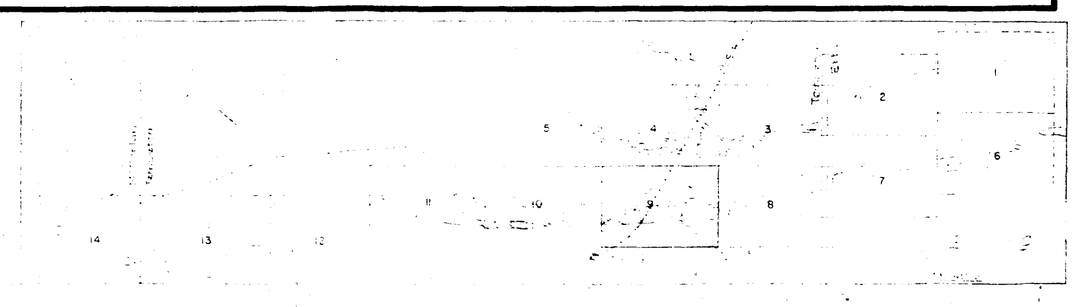
ALGOMA ORE PROPERTIES LTD.

ELECTROMAGNETIC SURVEY

ANOMALY 1-G

TEMPLETON TWP.

Scale 1" = 200' Dec. 16, 1957.



GLASGOW-0013 12

211

LEGEND

- METASEDIMENTS - QUARTZ SCHIST-2A -, QUARTZ-BIOTITE SCHIST-2B -, BIOTITE-QUARTZ SCHIST-2C-, HORNBLENDE-BIOTITE-QUARTZ SCHIST-2D-, HORNBLENDE SCHIST-2E-, GARNET-HORNBLENDE SCHIST-2F-, GARNET-BIOTITE SCHIST-2G-, GNEISSOID-2GN
- BASIC VOLCANIC - PILLOW LAVA - 4A -, SCHISTOSE GREENSTONE - 4E
- ACID VOLCANICS - MASSIVE -6A-, PYROCLASTIC-6B-, TUFF, FINE GRAINED, BANDED-6C
- DIORITE — MASSIVE-64-, SCHISTOSE-65-, MAGNETIC-MAG
- LAMPROPHYRE - 5 -
- GRANITE — MASSIVE -7A-, GNEISS-7B-, PEGMATITE-7C-, APLITE -7D-,
- DIABASE - MASSIVE -8A-, PORPHYRITIC -8C-

SYMBOLS

- BEDDING, STRIKE AND DIP
- GNEISSOSITY
- SCHISTOSITY, STRIKE AND DIP
- SHEAR ZONE OR FAULT

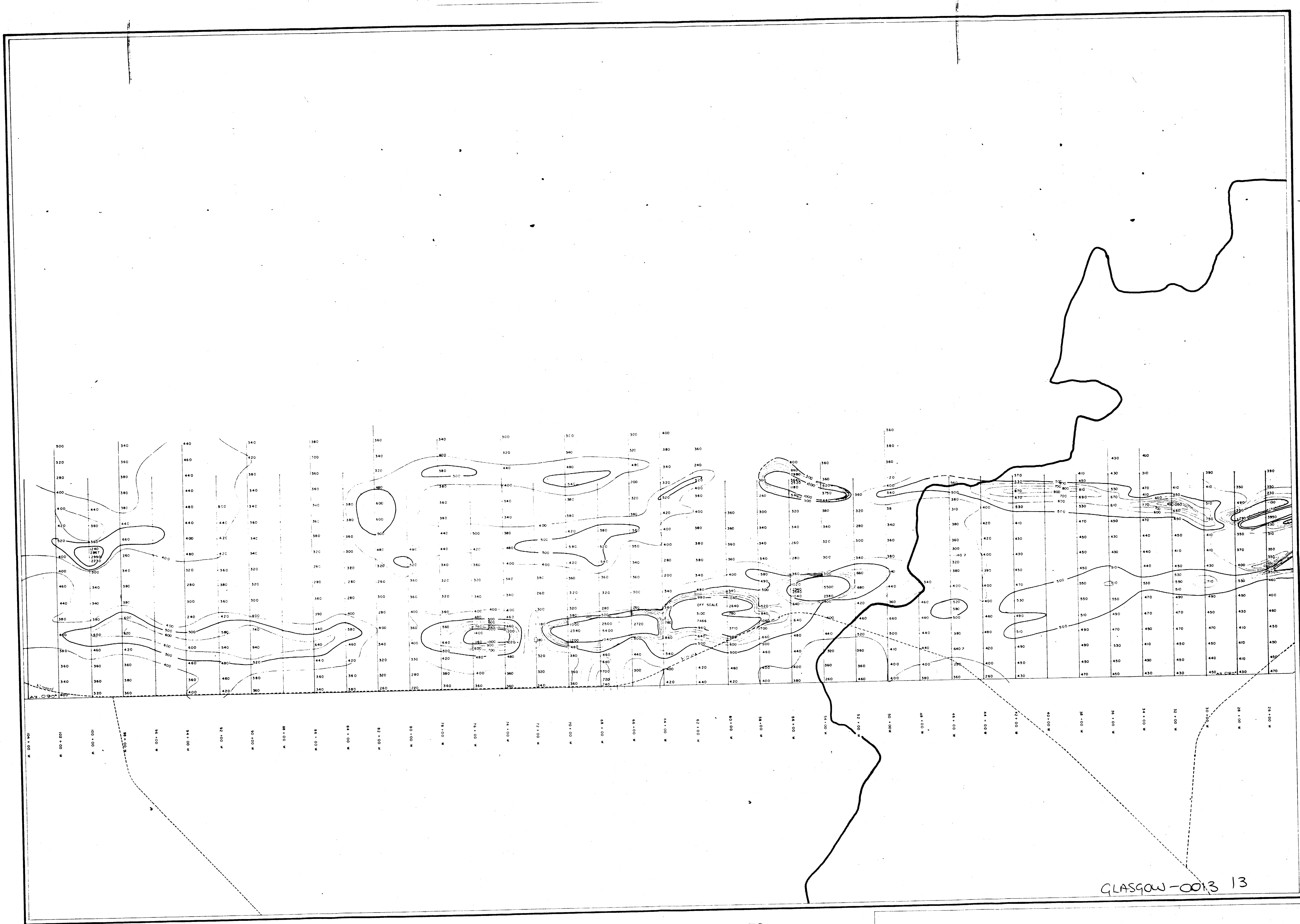
ALGOMA ORE PROPERTIES LTD.

EXPLORATION DEPARTMENT

GEOLOGY

ANOMALIES 1 & 2

SCALE 1" = 200' JUNE 1958



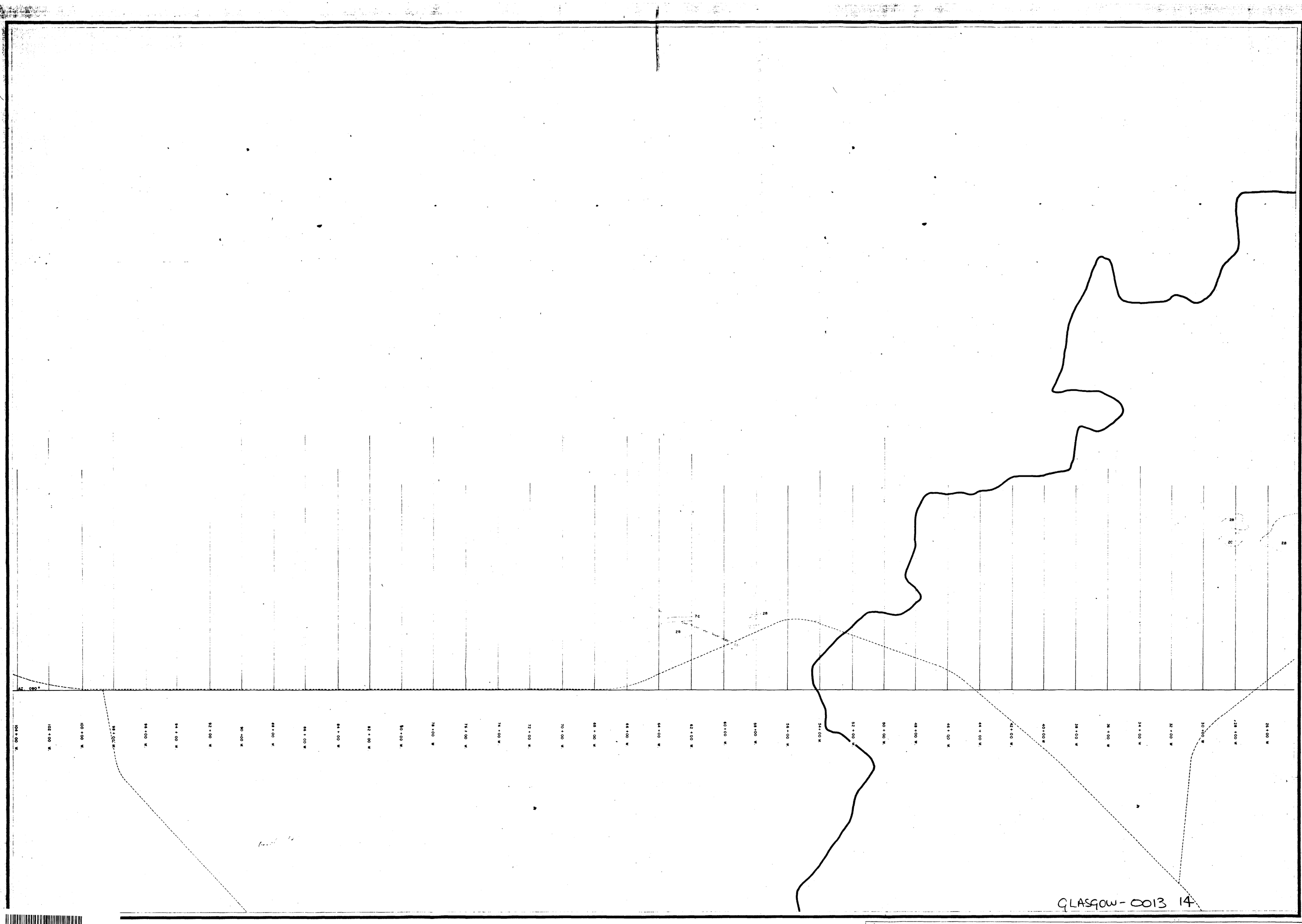
ALGOMA ORE PROPERTIES LTD.

MAGNETOMETER SURVEY

ANOMALY 1 & 2

SCALE 1" = 200'   JAN. 29/58

212



GLASGOW-0013 14

213

LEGEND

- METASEDIMENTS – QUARTZ SCHIST -2A-, QUARTZ-BIOTITE SCHIST -2B-, BIOTITE-QUARTZ SCHIST -2C-, HORNBLEND-BIOTITE-QUARTZ SCHIST -2D-, HORNBLEND SCHIST -2E-, GARNET-HORNBLEND SCHIST -2F-, GARNET-BIOTITE SCHIST -2G-, GNEISSIC -2GN-
- BASIC VOLCANIC – PILLOW LAVA -4A-, SCHISTOSE "GREENSTONE" -4E-
- ACID VOLCANICS – MASSIVE -1A-, PYROCLASTIC -1B-, TUFF, FIRE GRAINED, BANDED -1C-
- DIORITE – MASSIVE -6A-, SCHISTOSE -6B-, MAGNETIC -MAG-
- LAMPROPHYRE -5-
- GRANITE – MASSIVE -7A-, GNEISS -7B-, PEGMATITE -7C-, APLITE -7D-,
- DIABASE – MASSIVE -8A-, PORPHYRITIC -8D-

SYMBOLS

- 72° BEDDING, STRIKE AND DIP
- GNEISSOSITY
- 40° SCHISTOSITY; STRIKE AND DIP
- SHEAR ZONE OR FAULT

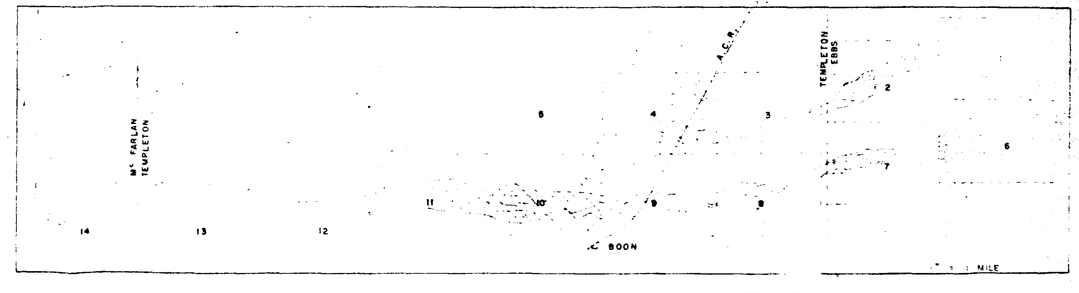
ALGOMA ORE PROPERTIES LTD.

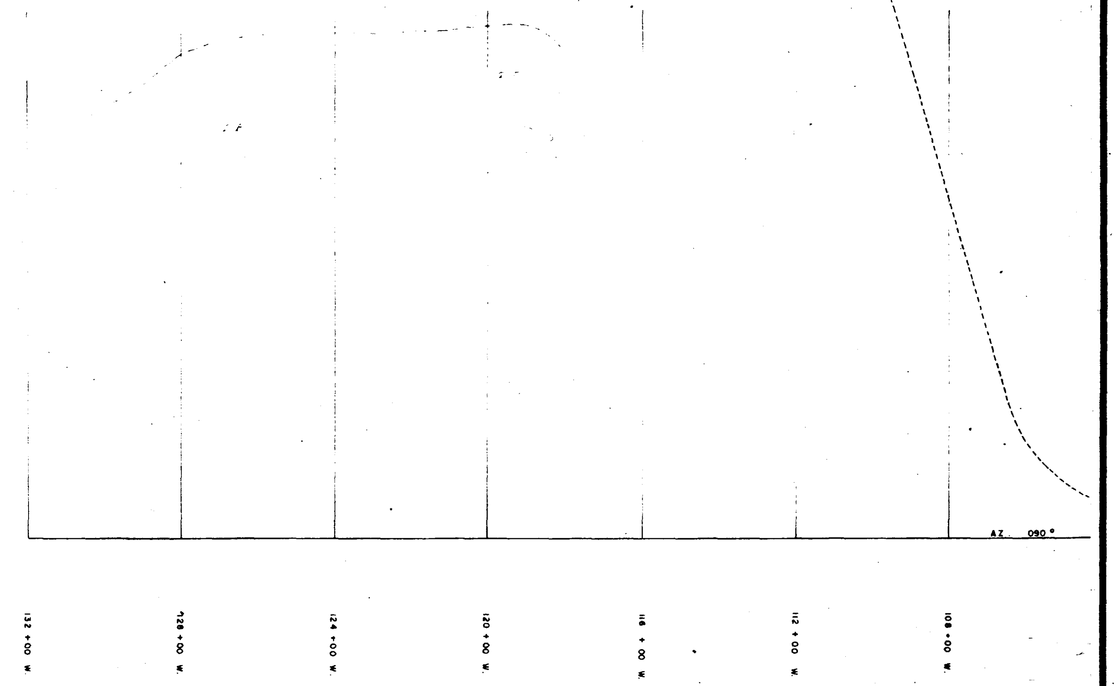
EXPLORATION DEPARTMENT

GEOLOGY /

ANOMALIES 1 & 2

SCALE 1" = 200' JUNE 1958





GLASGOW-0013 15

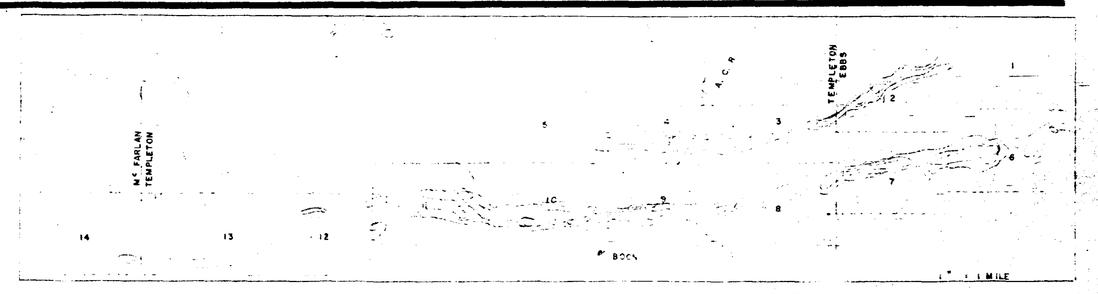
ALGOMA ORE PROPERTIES LTD.

EXPLORATION DEPARTMENT

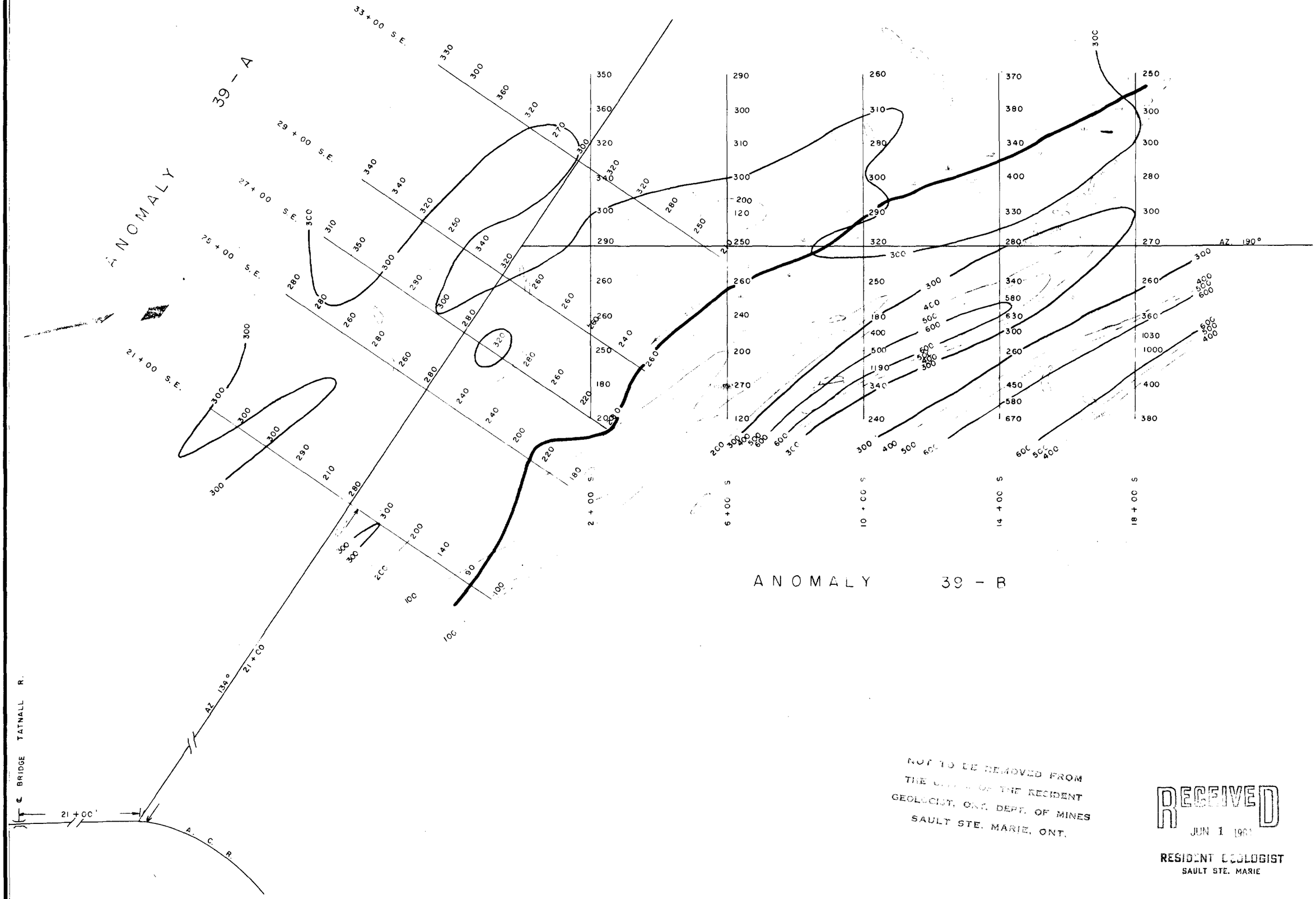
GEOLOGY

ANOMALIES 1 & 2

SCALE 1" = 200' JUNE 1959



214



ANOMALY 39 - B

DIABASE

GRANITE AND GRANITE PEGMATITE

SWAMP

ALGOMA ORE PROPERTIES LIMITED
EXPLORATION DEPARTMENT
BLOCK "C"
ANOMALY 39A & 39B
MARTIN TWP.
MAGNETOMETER SURVEY
SCALE 1" = 200 ' MAY 1958

0 + 00 E		4 + 00 E		8 + 00 E		12 + 00 E		16 + 00 E		20 + 00 E	
3N	5N	3N	5N	3N	5N	2N	3N	4N	6N	3S	5S
4N	6N	3N	4N	1N	1.5N	3N	4N	3N	4N	4S	6S
4N	6N	1N	1.5N	1N	2.5N	3N	4N	2N	3.5N	4S	5S
0	5S	4N	6N	1N	3N	2N	3N	2N	3N	3S	4S
1S	1.5S	4N	6N	3N	6N	3N	5N	2N	3N	4S	5S
3N	4N	2N	3N	3N	5N	3N	4N	1N	2N	1S	2S
2N	3N	1N	3N	2N	3N	2N	3N	1N	2N	3S	4S
4N	6N	2N	3N	2N	3N	4N	6N	4N	6N	3S	4S
4N	6N	4N	6N	5N	7N	5N	6N	3N	5N	4S	6S
5N	7N	3N	4N	2N	3N	3N	4N	5N	7N	2S	3S
5N	6N	2N	3N	4N	6N	3N	5N	4N	6N	9S	10S

AZ. 149°

NOT TO BE REMOVED FROM
THE OFFICE OF THE RESIDENT
GEOLOGIST, ONT. DEPT. OF MINES
SAULT STE. MARIE, ONT.

216

LEGEND

Mc PHAR R. E. M.

1000 C.P.S. | 5000 C.P.S.

——— 1000 C.P.S.

– – – – – 5000 C.P.S.

● CONDUCTOR

SURVEYED BY BROADSIDE METHOD
TRANSMITTER 400' EAST OF RECEIVER
TRANSMITTER 400' WEST OF RECEIVER ON LINE 20+00

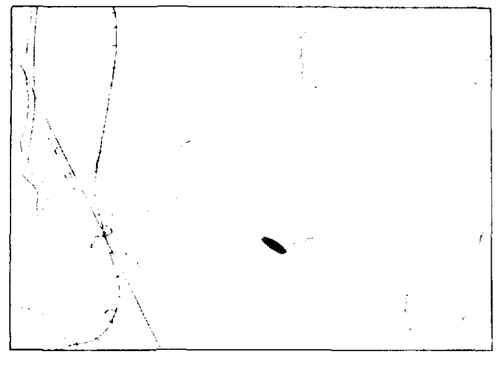
ALGOMA ORE PROPERTIES LIMITED
EXPLORATION DEPARTMENT
BLOCK "C"
ANOMALY 38
MARTIN TWP.

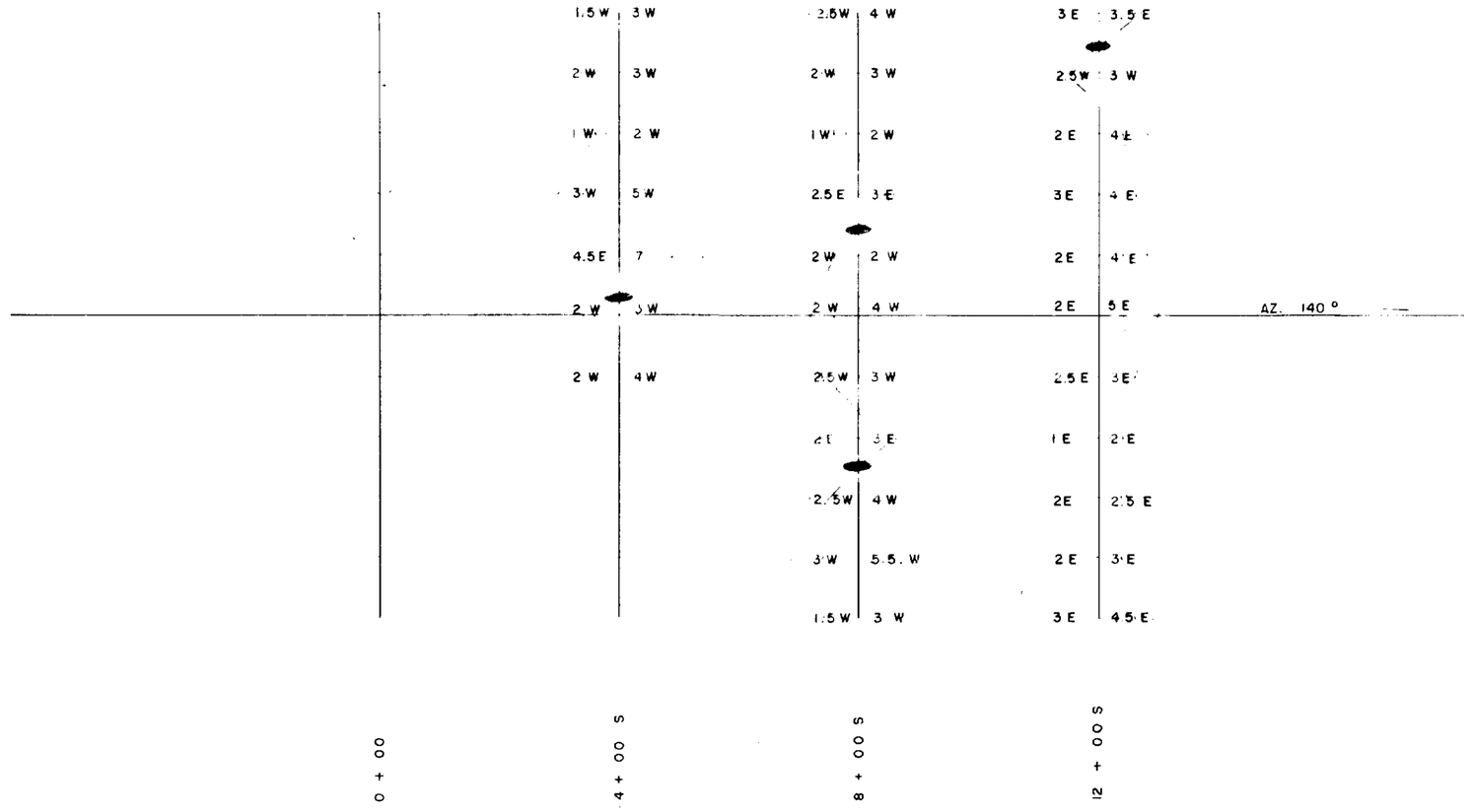
ELECTROMAGNETIC SURVEY

SCALE 1" = 200' MAY 1958

EM
a 38.
1" = 200'

Glasgow 42G13 #17





LEGEND

Mc PHAR R. E. M.

1000 C.P.S.	5000 C.P.S.
———	1000 C.P.S.
- - - - -	5000 C.P.S.

CONDUCTOR

SURVEYED BY BROADSIDE METHOD

217

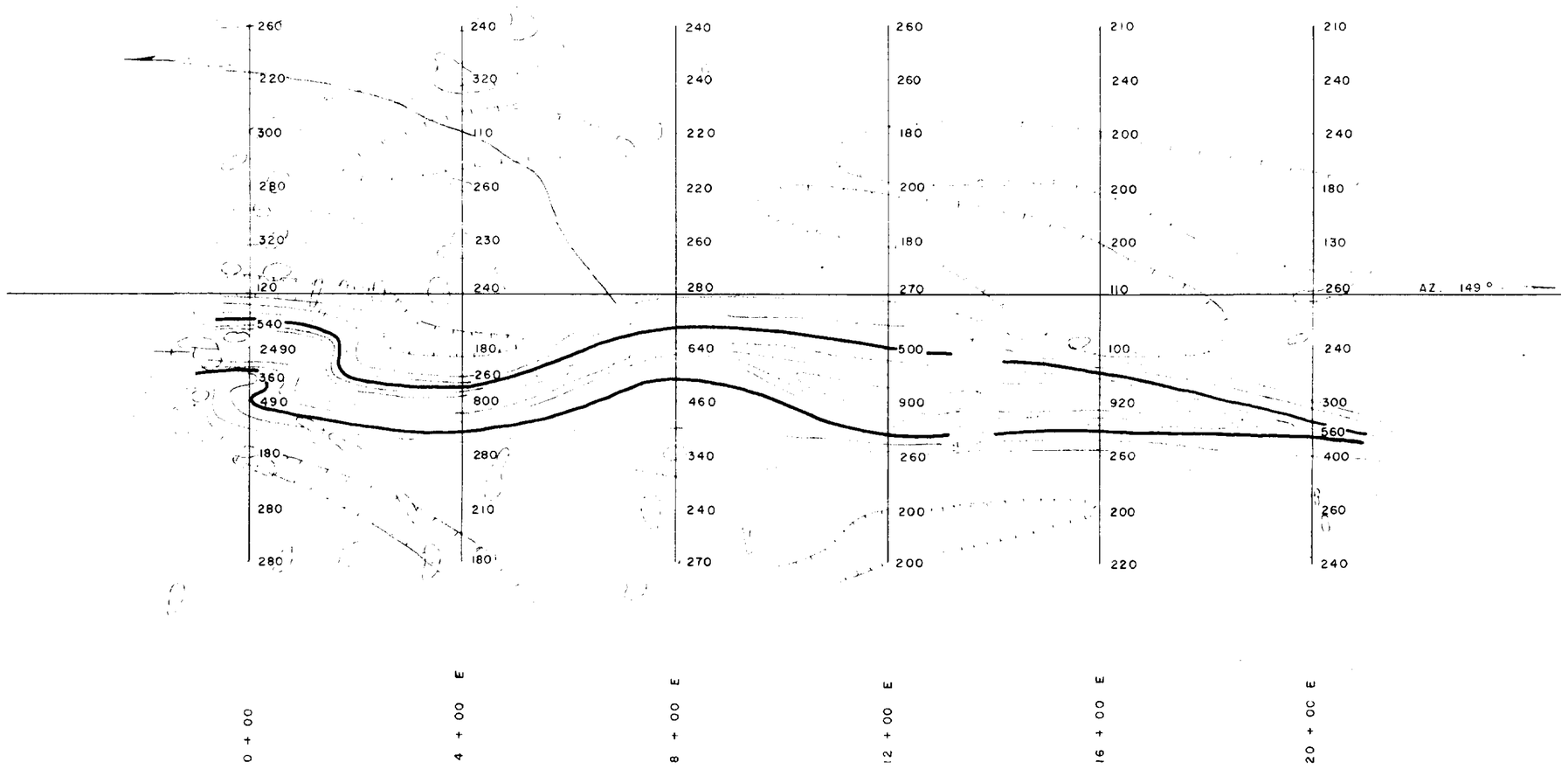
ALGOMA ORE PROPERTIES LIMITED
EXPLORATION DEPARTMENT
BLOCK "C"
ANOMALY 37-B
MARTIN TWP.

ELECTROMAGNETIC SURVEY

SCALE 1" = 200 ' MAY 1958

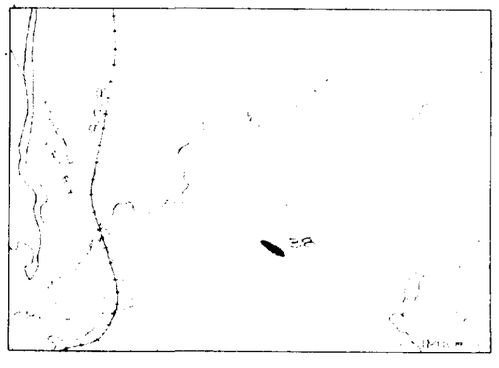
EM
A. 37B.
1" 200'

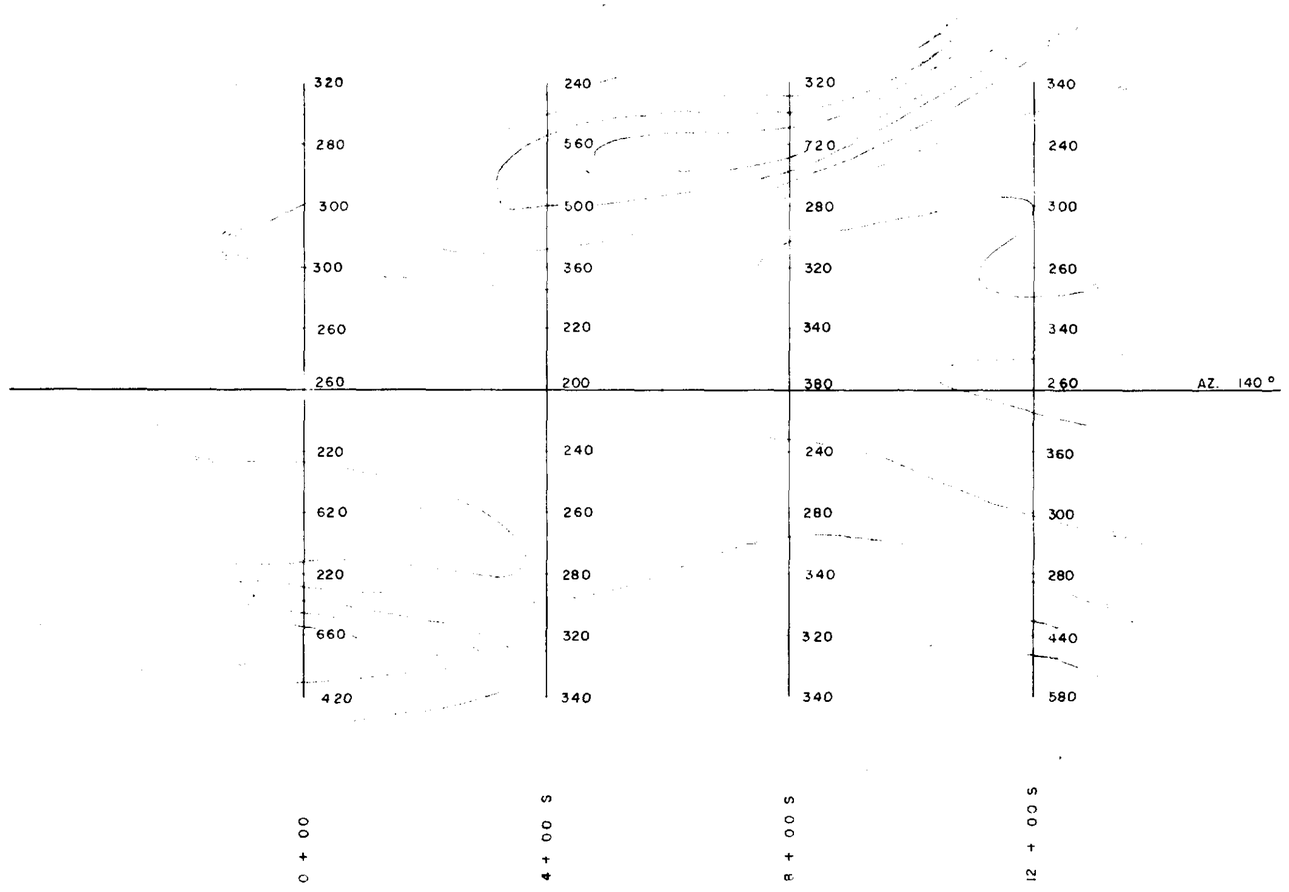
GLASGOW 0013 NE



ALGOMA ORE PROPERTIES LIMITED
EXPLORATION DEPARTMENT
BLOCK "C"
ANOMALY 38
MARTIN TWP.

MAGNETOMETER SURVEY
SCALE 1" = 200' MAY 1958





ALGOMA ORE PROPERTIES LIMITED
EXPLORATION DEPARTMENT

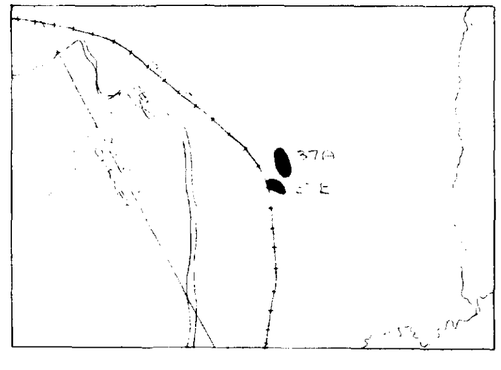
BLOCK "C"

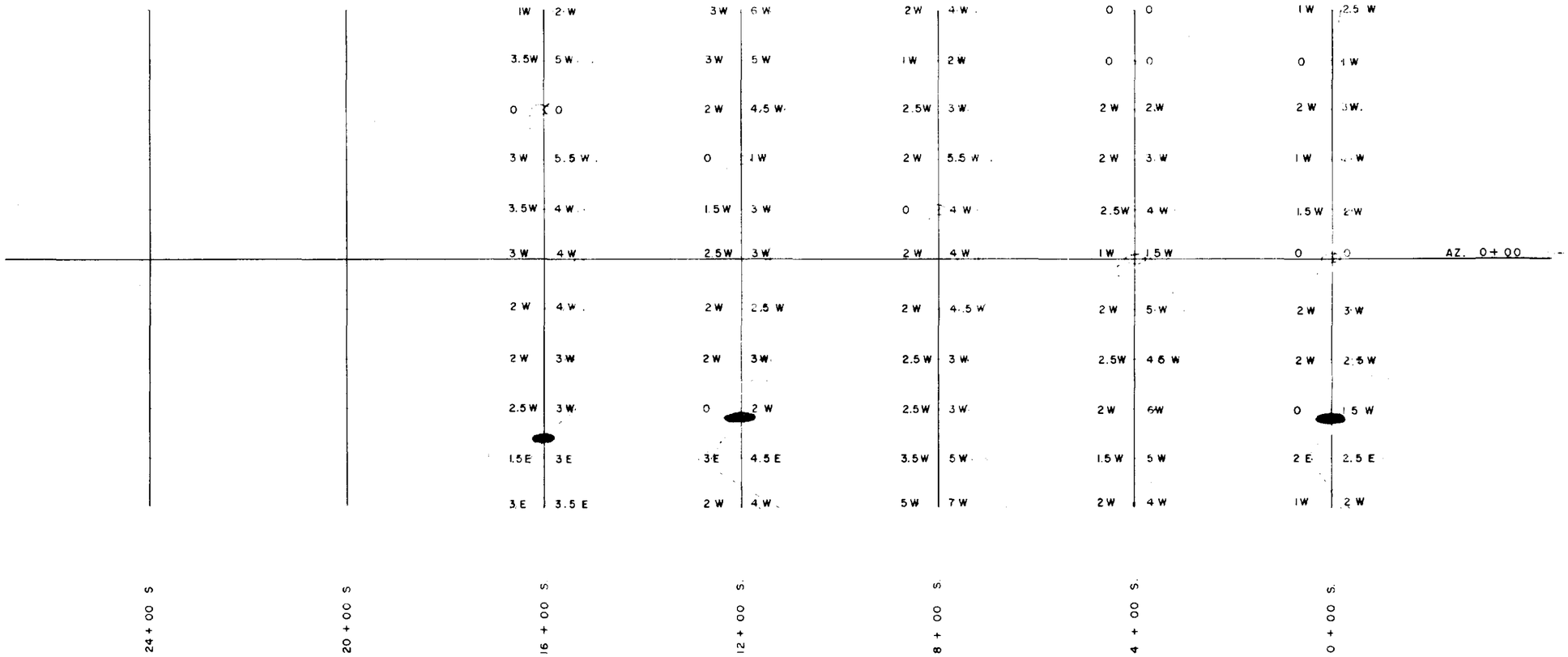
ANOMALY 37-B

MARTIN TWP

MAGNETOMETER SURVEY

SCALE 1" = 200' MAY 1958





NOT TO BE REMOVED FROM
THE OFFICE OF THE RESIDENT
GEOLOGIST, ONT. DEPT. OF MINES
SAULT STE. MARIE, ONT.

220

LEGEND

Mc PHAR R. E. M.

1000 C.P.S. | 5000 C.P.S.

——— 1000 C.P.S.

– – – – – 5000 C.P.S.

CONDUCTOR

SURVEYED BY BROADSIDE METHOD
TRANSMITTER 400' SOUTH OF RECEIVER

ALGOMA ORE PROPERTIES LIMITED
EXPLORATION DEPARTMENT
BLOCK "C"
ANOMALY 37-A

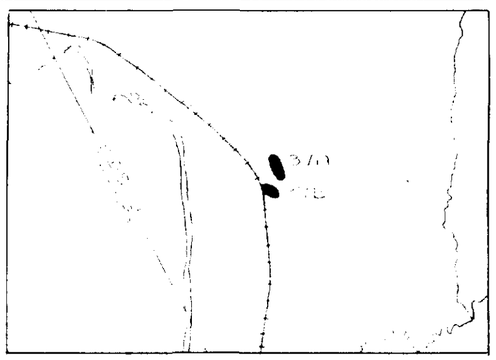
MARTIN TWP.

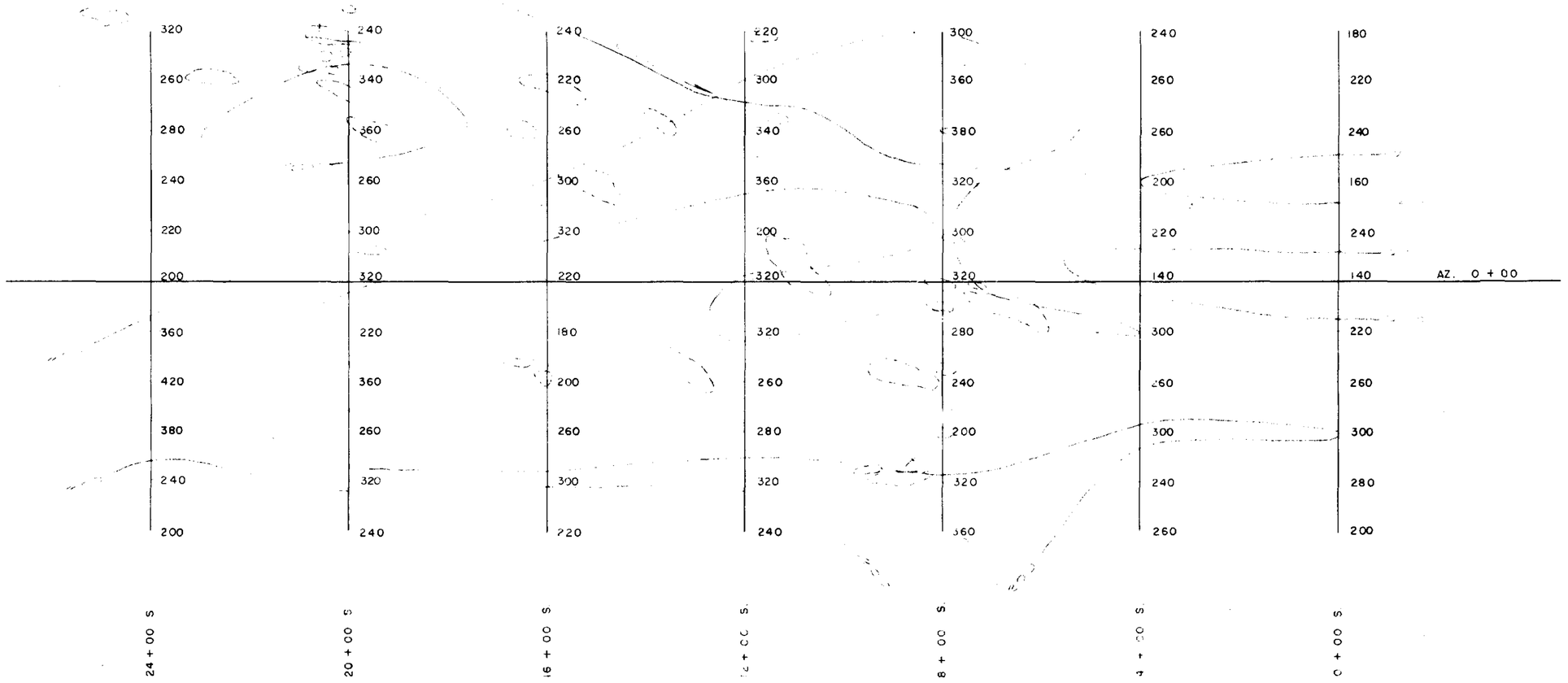
ELECTROMAGNETIC SURVEY

SCALE 1" = 200' MAY 1958

F.M.
A. 37A
1 Rec'

GLASGOW 002 NE21





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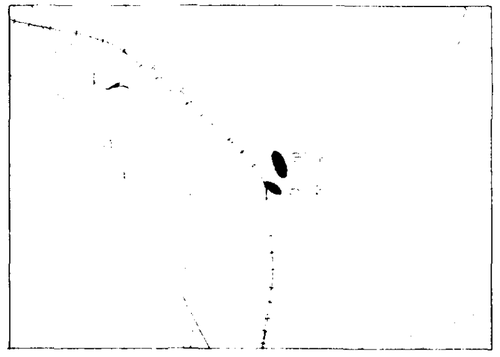
SAULT STE. MARIE, ONT.

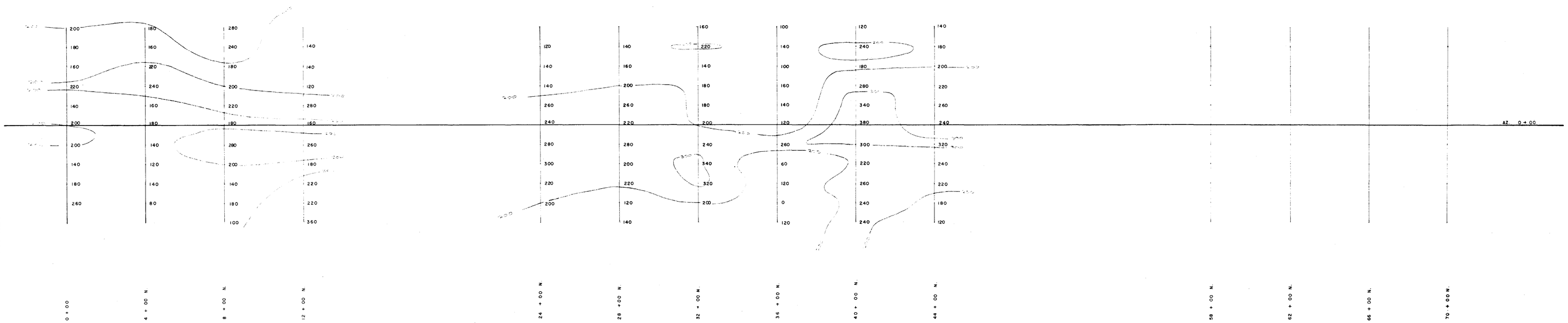
ALGOMA ORE PROPERTIES LIMITED
EXPLORATION DEPARTMENT
BLOCK "C"
ANOMALY 37-A
MARTIN TWP.

MAGNETOMETER SURVEY
SCALE 1" = 200' MAY 1958



Map A 37A

Glasgow 0013-22



ANOMALY 36 — C

ANOMALY 36 - B

ANOMALY 36 - A

MAG.
a. 36A,B,C
1" = 200'

Glasgow 0013 #23

ALGOMA ORE PROPERTIES LTD.

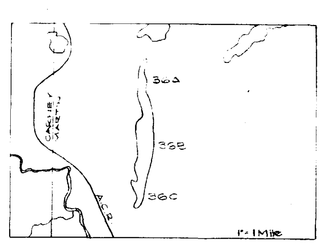
EXPLORATION DEPARTMENT

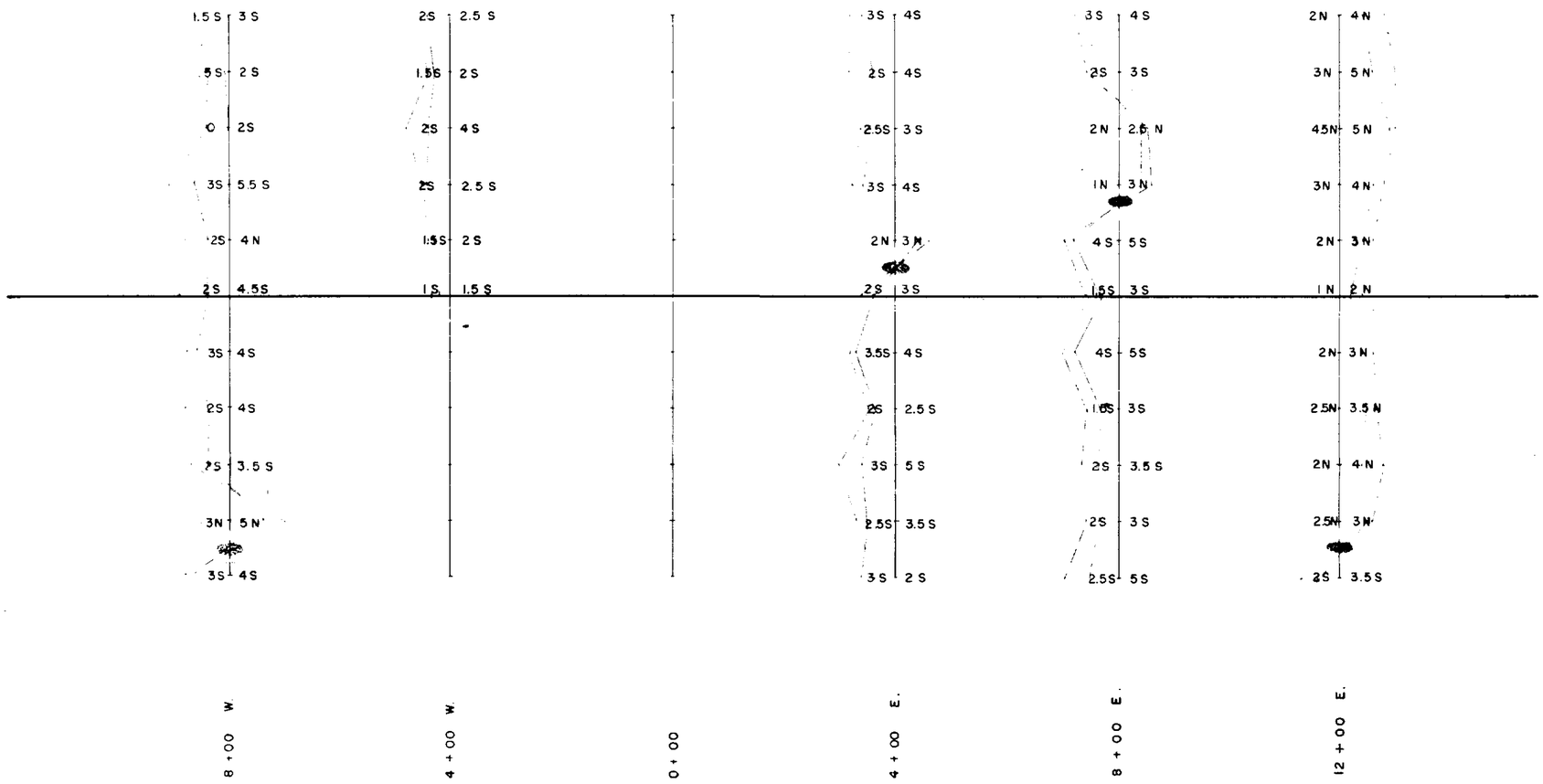
BLOCK "C"

ANOMALY 36 - A - B - C
MARTIN TWP.

MAGNETOMETER SURVEY

SCALE 1" = 200' MAY 1958





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GEOLOGIST, ONT. DEPT. OF MINES
SAULT STE. MARIE, ONT.

LEGEND

Mc PHAR R. E. M.

1000 C.P.S.	5000 C.P.S.

——— 1000 C.P.S.

– – – – – 5000 C.P.S.

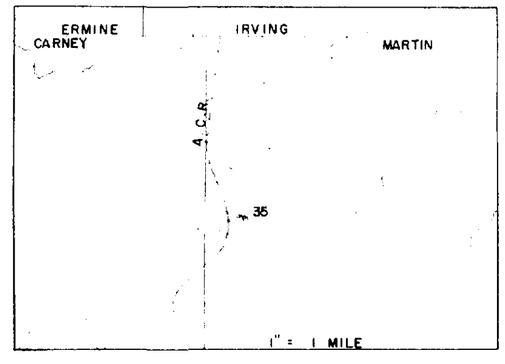
● CONDUCTOR

SURVEYED BY BROADSIDE METHOD

ALGOMA ORE PROPERTIES LIMITED
EXPLORATION DEPARTMENT
BLOCK " C "
ANOMALY NO. 35
MARTIN TWP.

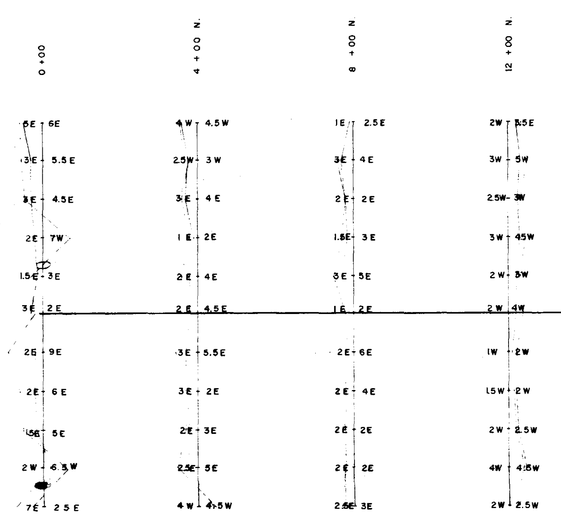
ELECTROMAGNETIC SURVEY

SCALE 1" = 200 ' JULY 1958

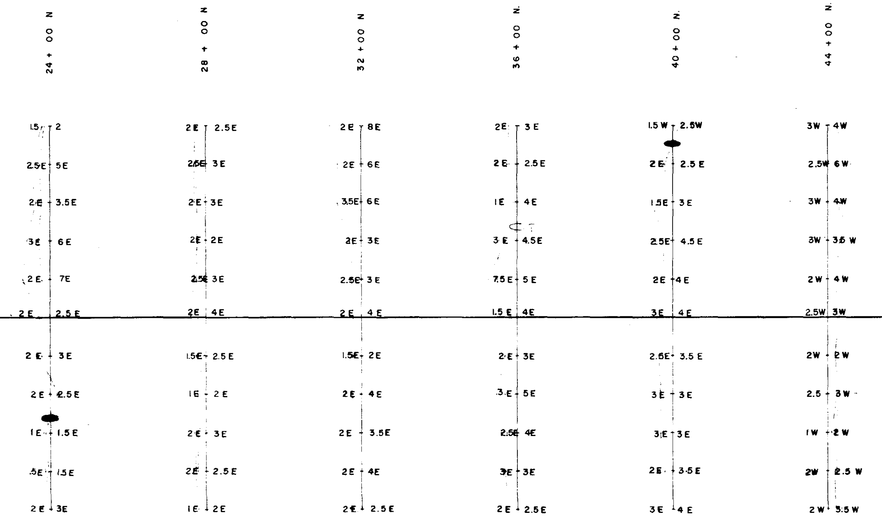


EM
35
1 - 200

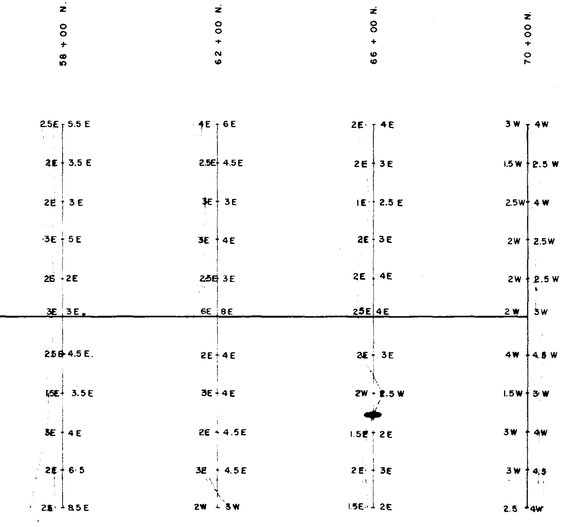
GLASGOW 0013 #24



36 C



36 B



36 A

E.M.
A. 36 A, B, C
GLASSON 0013 1"=2" 1"=200'

LEGEND

Mc PHAR	R. E. M.
1000 C.P.S.	5000 C.P.S.
——— 1000 C.P.S.	
- - - - - 5000 C.P.S.	

● CONDUCTOR

SURVEYED BY BROADSIDE METHOD
TRANSMITTER 400' NORTH OF RECEIVER ON LINES 5800 - 6600
40+00 - 24+00
8+00 - 0+00

TRANSMITTER 400' SOUTH OF RECEIVER ON LINES 70+00
44+00
12+00

ALGOMA ORE PROPERTIES LTD.

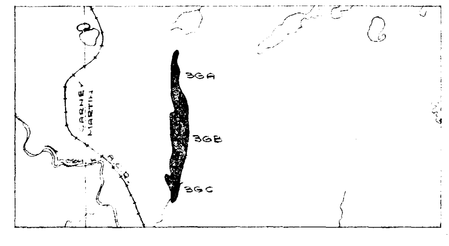
EXPLORATION DEPARTMENT

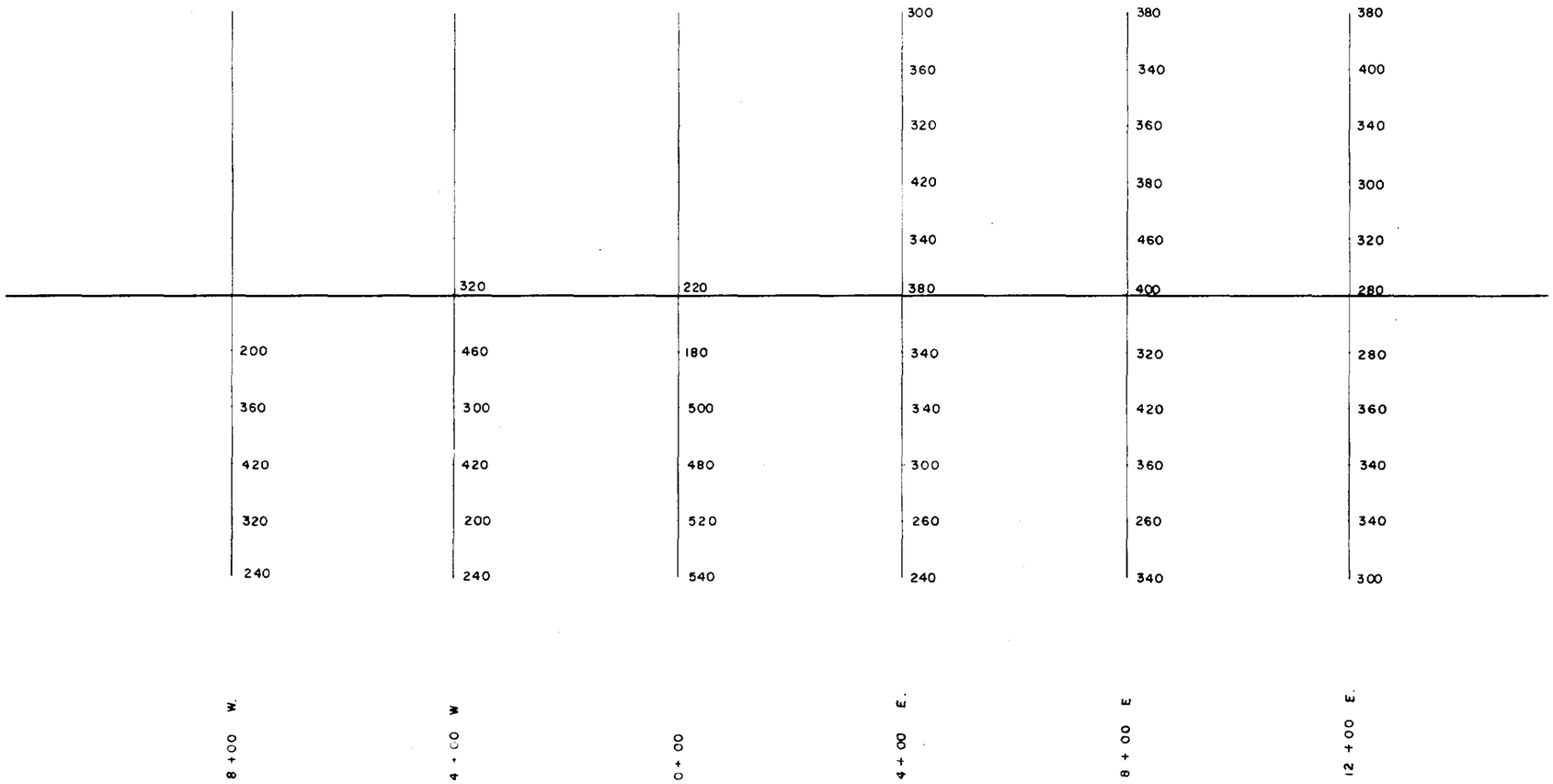
BLOCK "C"

ANOMALY 36 - A - B - C
MARTIN TWP.

ELECTROMAGNETIC SURVEY

SCALE 1" = 200' MAY 1961





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THE OFFICE OF THE RESIDENT
GEOLOGIST, ONT. DEPT. OF MINES
SAULT STE. MARIE, ONT.

ALGOMA ORE PROPERTIES LIMITED
EXPLORATION DEPARTMENT
BLOCK " C "

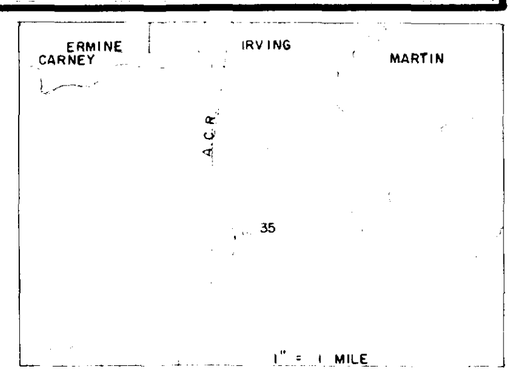
ANOMALY NO. 35
MARTIN TWP

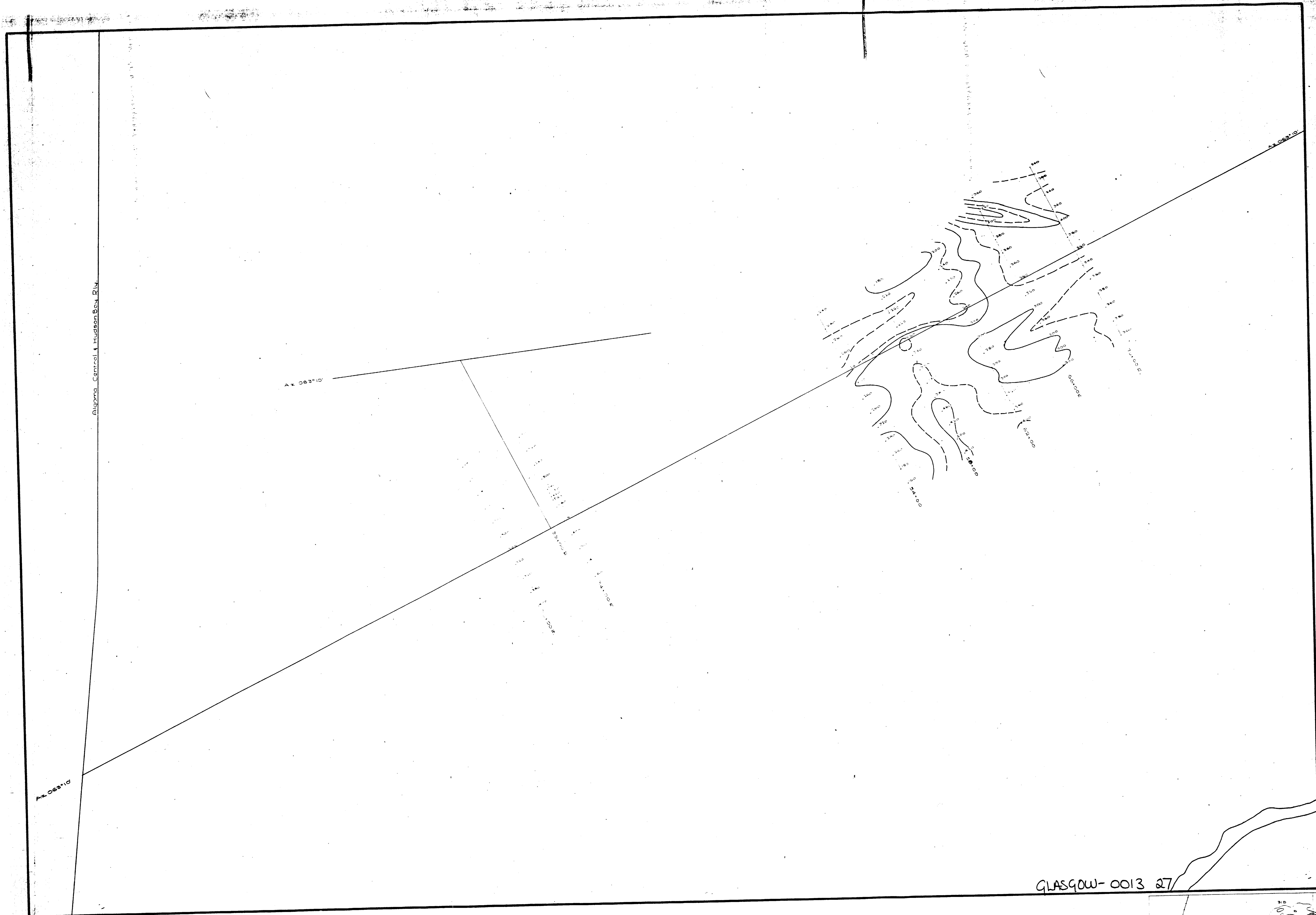
MAGNETOMETER SURVEY

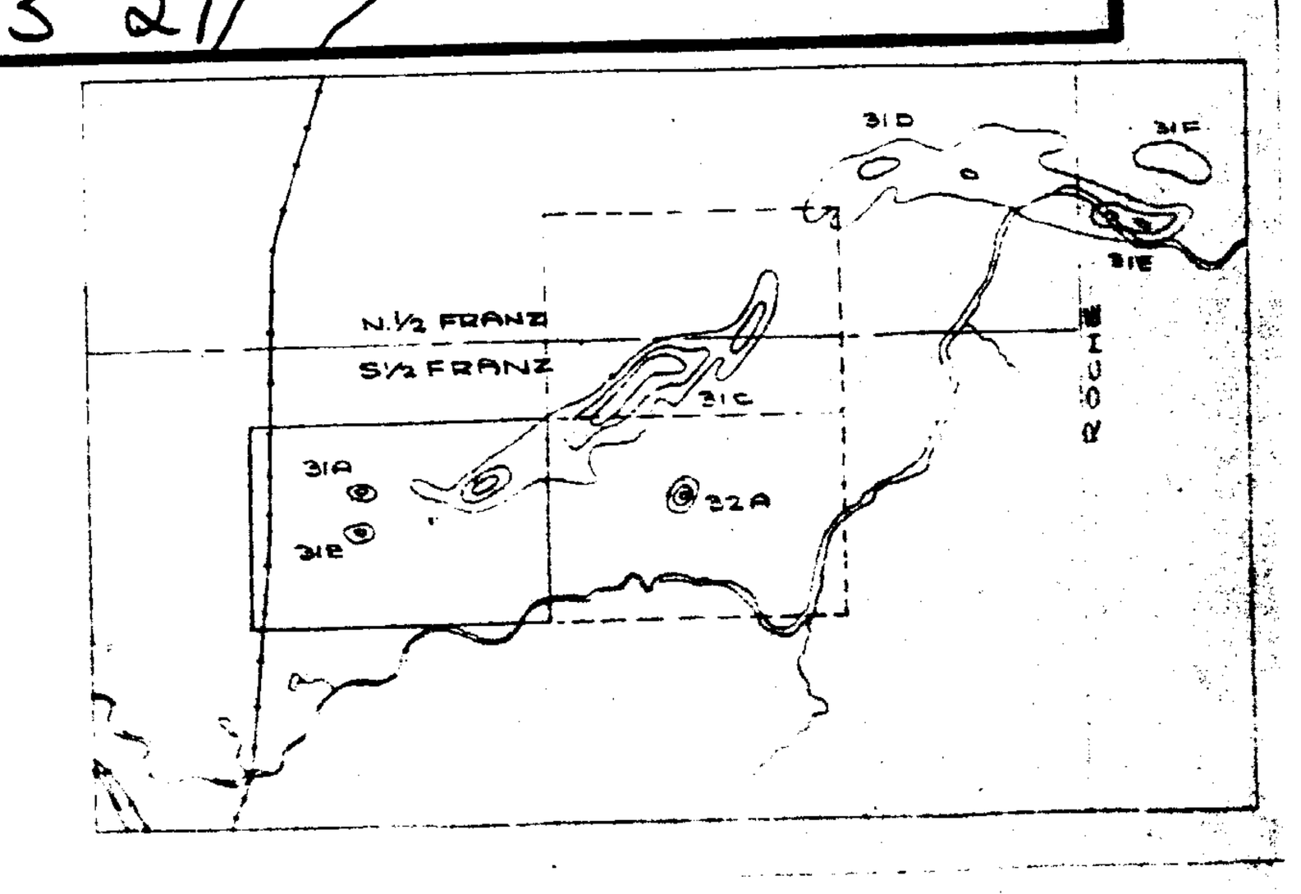
SCALE 1" = 200' JULY 1958

Mag.
C 35
1-2-10

Glasgow 0013 #26







ALGOMA ORE PROPERTIES LTD.
MAGNETOMETER SURVEY
ANOMALIES 31·A·B·C

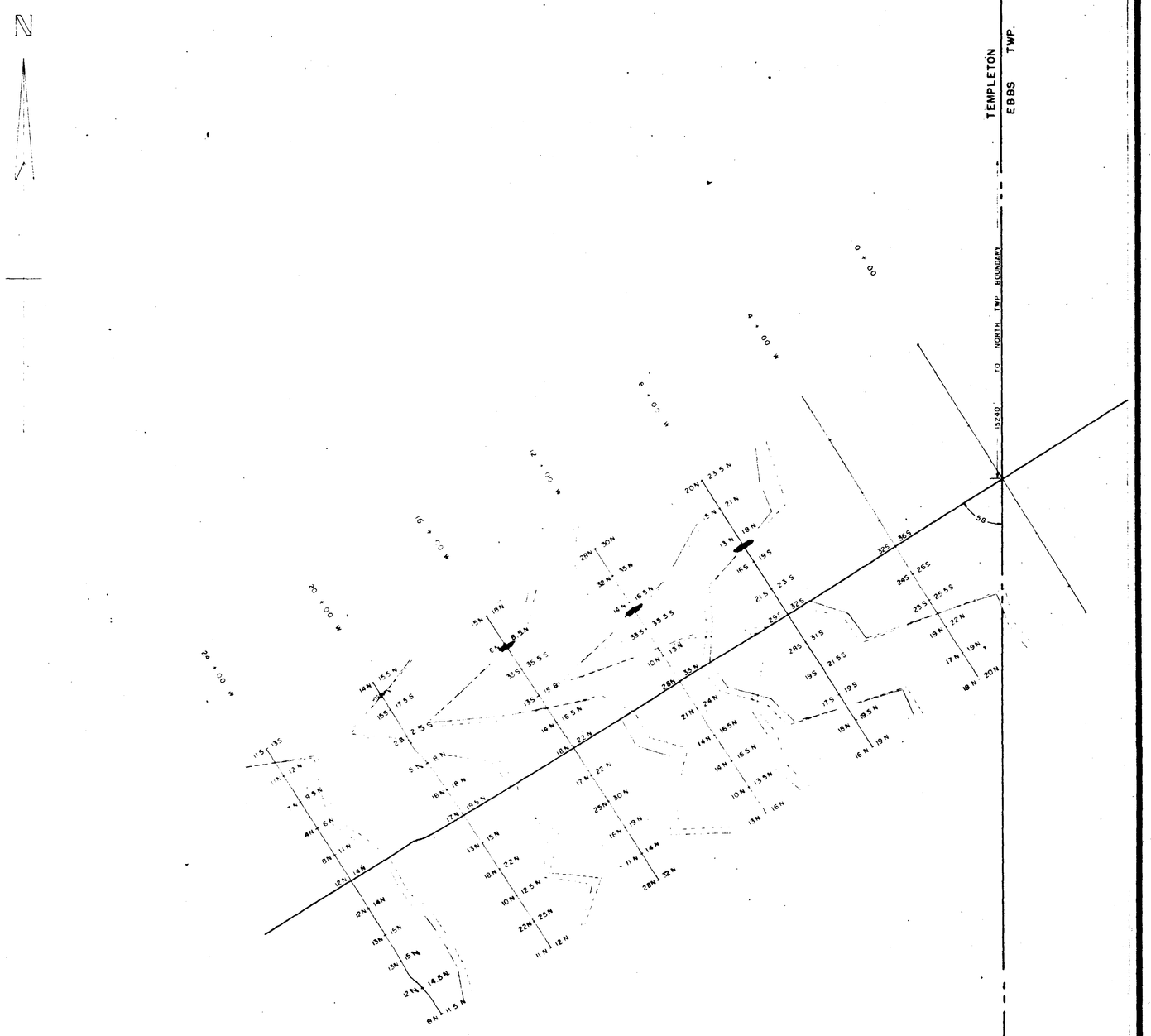
FRANZ TWP.

Scale: 1" = 200'   Nov. 30 1957

G.H.

42G12NE0002 0013 GLASGOW

226



GLASGOW-0013 28

INSTRUMENT : Mc PHAR VERTICAL LOOP R.E.M.
METHOD : BROADSIDE — 400' SPREAD
LEGEND : C.P.S. ——— 1000
C.P.S. – – – – 5000
DIP ANGLES 2N | 3N
(1000 C.P.S.) (5000 C.P.S.)
CROSS-OVERS :
SCALE : 1" = 20'

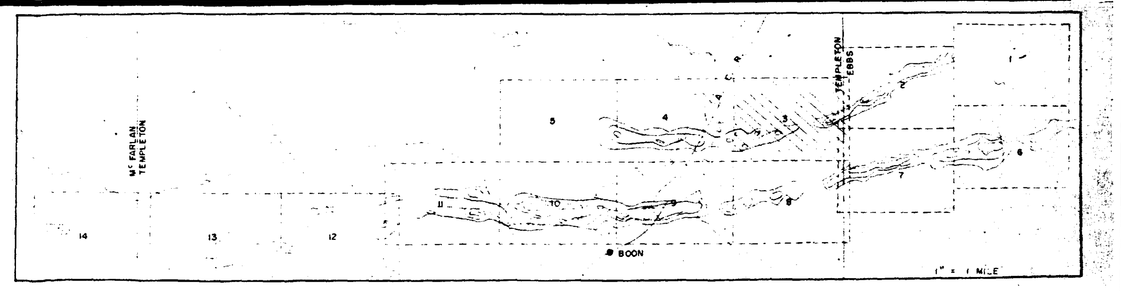
ALGOMA ORE PROPERTIES LTD.

EXPLORATION DEPARTMENT

ELECTROMAGNETIC SURVEY

ANOMALY 3 B

SCALE 1" = 200' FEBRUARY, 1958



ALGOMA ORE PROPERTIES LTD.

ELECTROMAGNETIC SURVEY

ANOMALY 1 & 2

SCALE: 1" = 200' JAN. 31 / 58.

LEGEND

RONKA- (HORIZONTAL)		Mc PHAR (VERTICAL)	
IN PHASE +4	OUT PHASE +2	1000 C.P.S. 2N	5000 C.P.S. 3N

IN PHASE — 4000 C.P.S.

OUT OF PHASE — 5000 C.P.S.

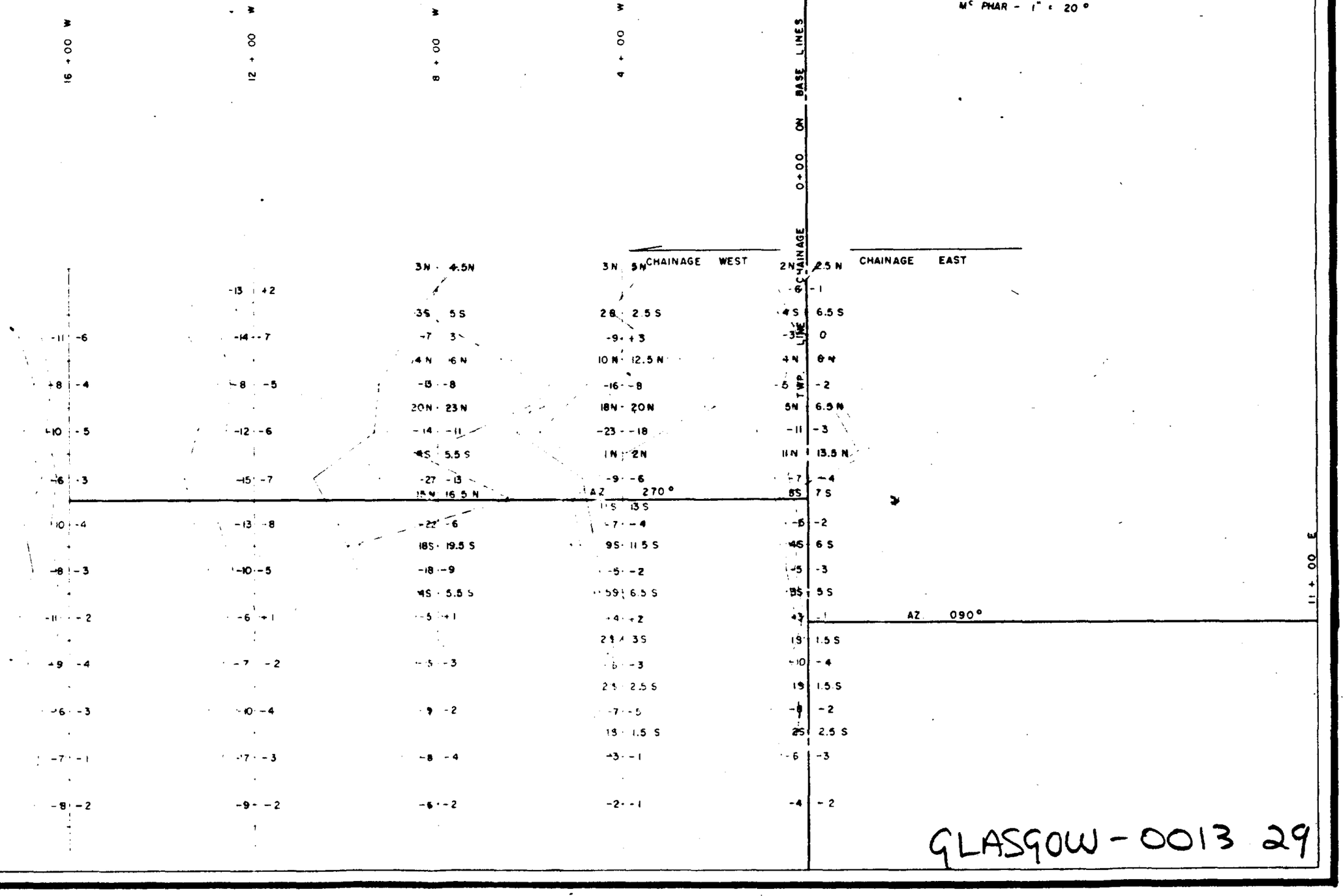
RONKA - IN LINE METHOD - 300' SPREAD

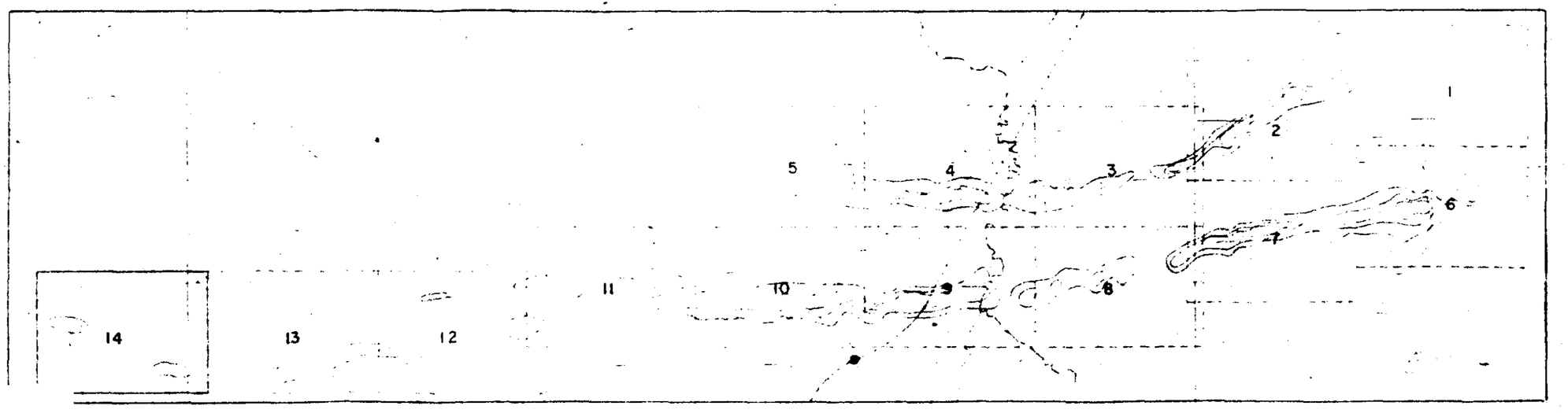
Mc PHAR - BROADSIDE METHOD - 400' SPREAD

SCALE

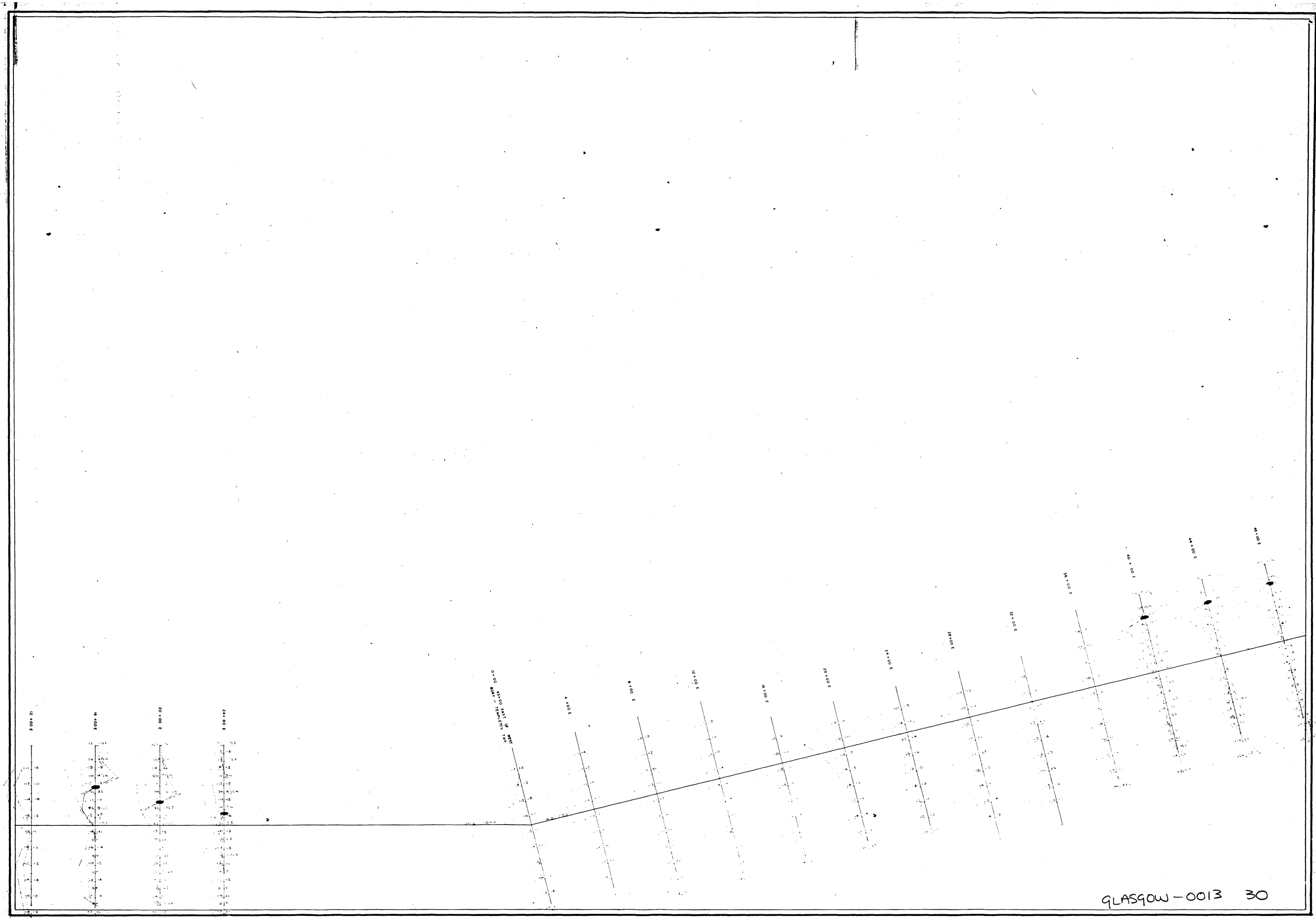
RONKA - 1" = 20 % PRIMARY FIELD

Mc PHAR - 1" = 20°





GLASGOW-0013 29



LEGEND

RONKA- (HORIZONTAL)		Mc PHAR (VERTICAL)	
IN PHASE -4	OUT PHASE +2	1000 C.P.S 2N	5000 C.P.S 3N
IN PHASE		1000 C.P.S	
OUT OF PHASE		5000 C.P.S	

RONKA - IN LINE METHOD - 300' SPREAD
Mc PHAR - BROADSIDE METHOD - 400' SPREAD

SCALE

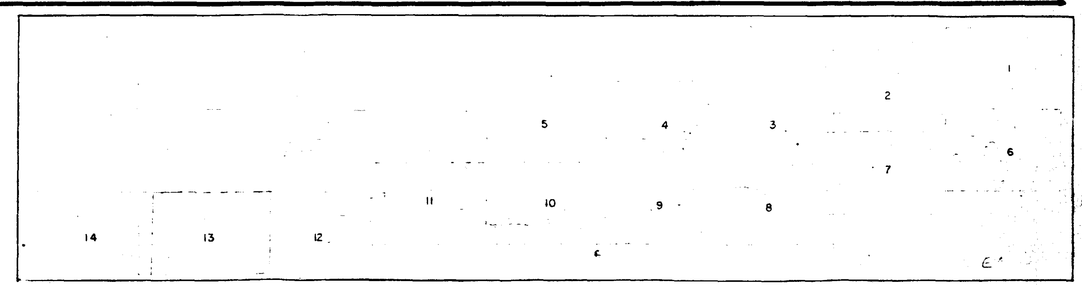
RONKA- 1" = 20% PRIMARY FIELD
Mc PHAR- 1" = 20°

ALGOMA ORE PROPERTIES LTD.

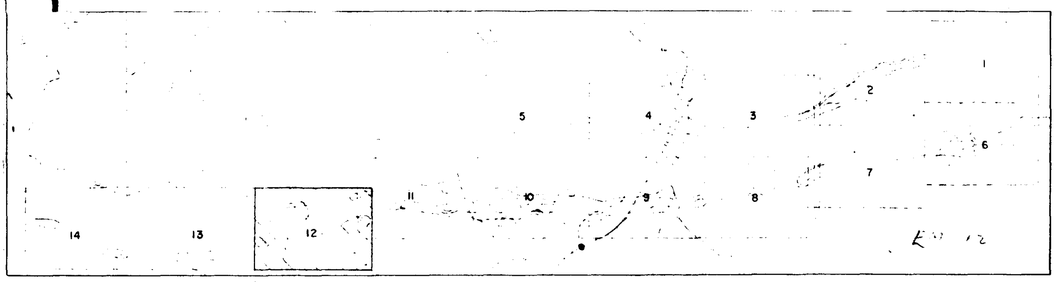
ELECTROMAGNETIC SURVEY

ANOMALY 1 & 2

SCALE: 1" = 200' JAN. 31 / 58.



GLASGOW-0013 30



ALGOMA ORE PROPERTIES LTD.

ELECTROMAGNETIC SURVEY

ANOMALY 1 & 2

SCALE 1" = 200' JAN. 31 / 58.

LEGEND

RONKA- (HORIZONTAL)		Mc PHAR (VERTICAL)	
IN PHASE +4	OUT PHASE +2	1000 C.P.S. 2N	5000 C.P.S. 3N

——— IN PHASE ——— 1000 C.P.S.

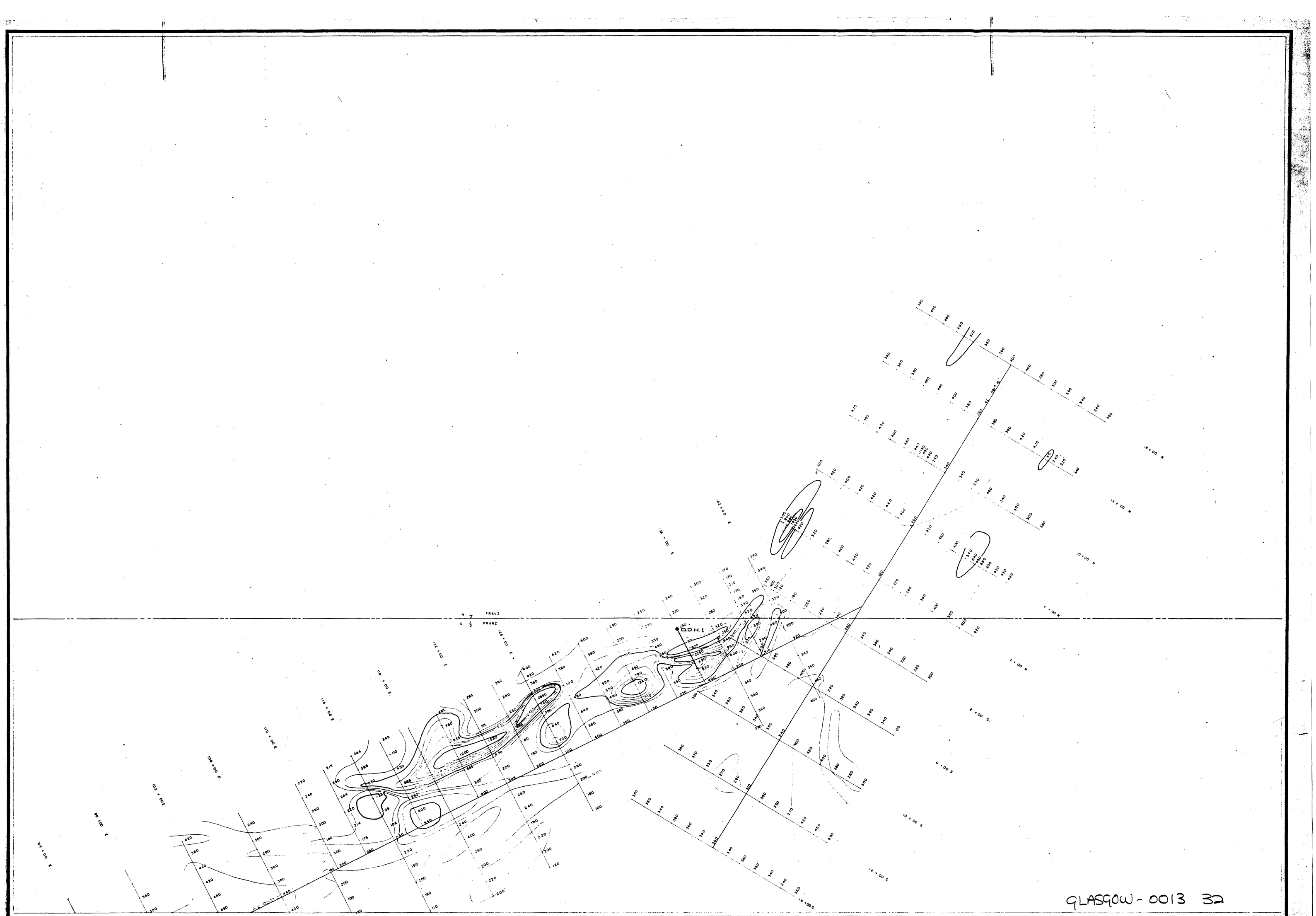
- - - - - - - - OUT OF PHASE - - - - - - - - - 5000 C.P.S.

RONKA - IN LINE METHOD - 300' SPREAD
Mc PHAR - BROADSIDE METHOD - 400' SPREAD

SCALE

RONKA - 1" = 20 % PRIMARY FIELD
Mc PHAR - 1" = 20 °

GLASGOW-0013 31



GLASGOW - 0013 32

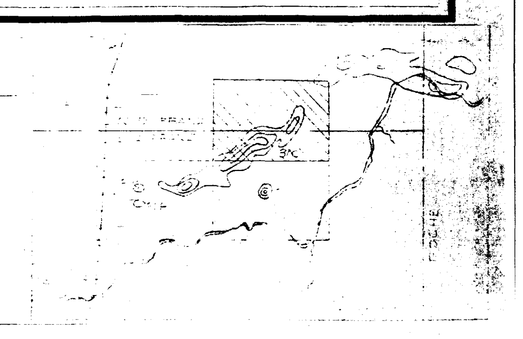
ALGOMA ORE PROPERTIES LTD.

EXPLORATION DEPARTMENT

MAGNETOMETER SURVEY

ANOMALY 31 C

SCALE 1" = 200' JUNE 1958



LEGEND

RONKA- (HORIZONTAL)		Mc PHAR (VERTICAL)	
IN PHASE +4	-OUT PHASE +2	1000 C.P.S. 2 M	5000 C.P.S. 3 M
IN PHASE		1000 C.P.S.	
OUT OF PHASE		5000 C.P.S.	

RONKA - IN LINE METHOD - 300' SPREAD
Mc PHAR - BROADSIDE METHOD - 400' SPREAD

SCALE

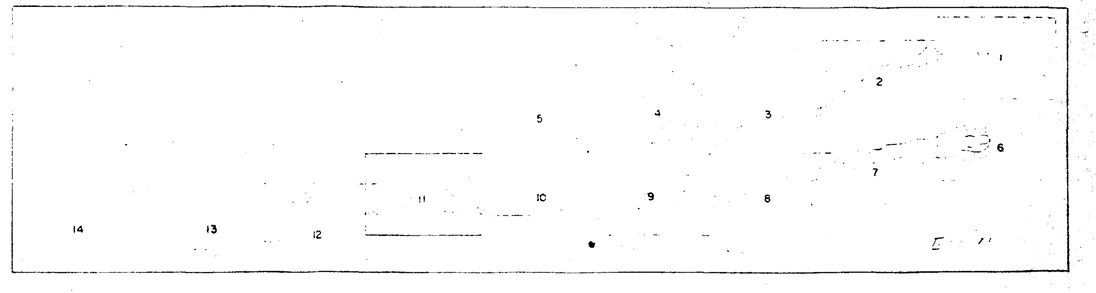
RONKA - 1" = 20% PRIMARY FIELD
Mc PHAR - 1" = 20°

ALGOMA ORE PROPERTIES LTD.

ELECTROMAGNETIC SURVEY

ANOMALY 1 & 2

SCALE: 1" = 200' JAN. 31 / 58.



GLASGOW-0013 34

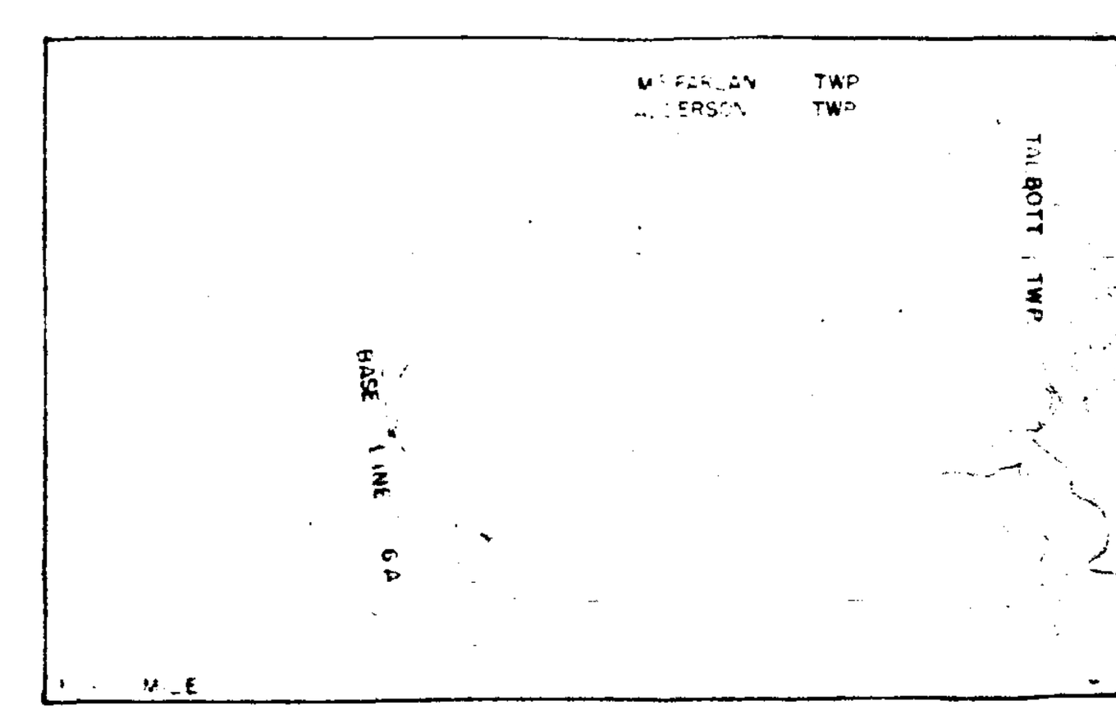
METHOD TOTAL HEAVY METAL TEST USING "MPHAR" KIT
RESULTS RECORDED IN PARTS PER MILLION

ALGOMA ORE PROPERTIES LTD.

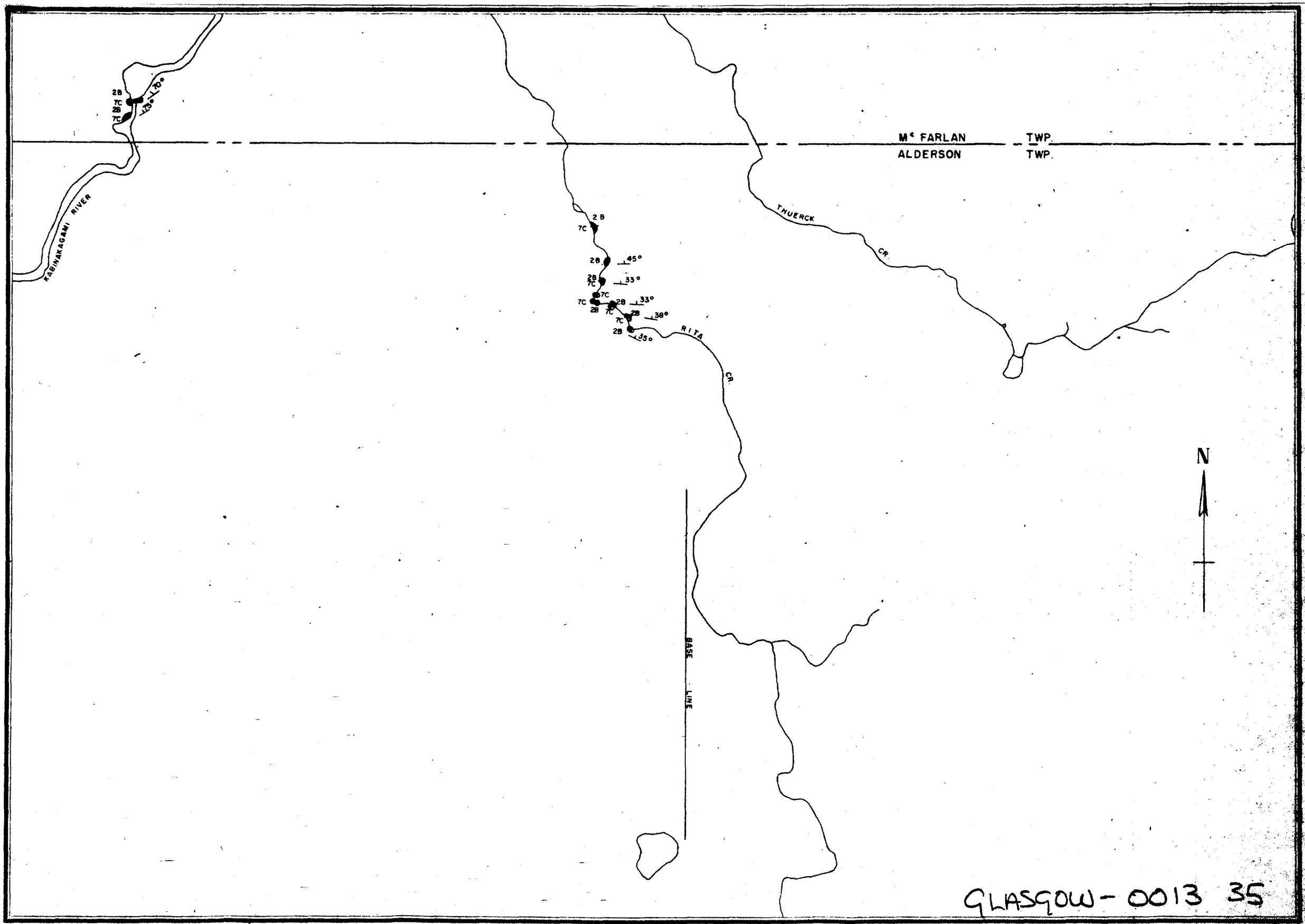
EXPLORATION DEPARTMENT

SOIL SAMPLING

ANOMALY 6-A CENTRAL AREA



233



GLASGOW-0013 35

LEGEND

- QUARTZ BIOTITE SCHIST
- PEGMATITE

ALGOMA ORE PROPERTIES LIMITED
EXPLORATION DEPARTMENT
ANOMALY 4 & 6 CENTRAL AREA
GEOLOGY

SCALE 1" = 200' AUGUST 1957

TRACED BY D.V. TAGLIABRACCI

LEGEND

1000 C.P.S. 5000 C.P.S.

1000 C.P.S.

5000 C.P.S.

conductor

Surveyed by broadside method -400' spread.

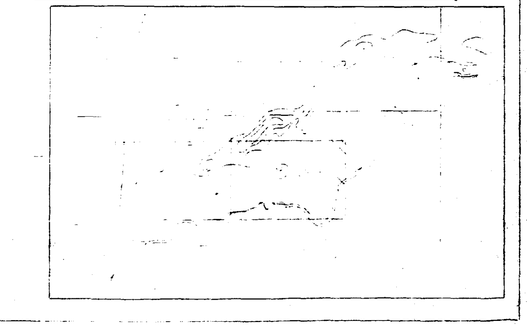
ALGOMA ORE PROPERTIES LTD.

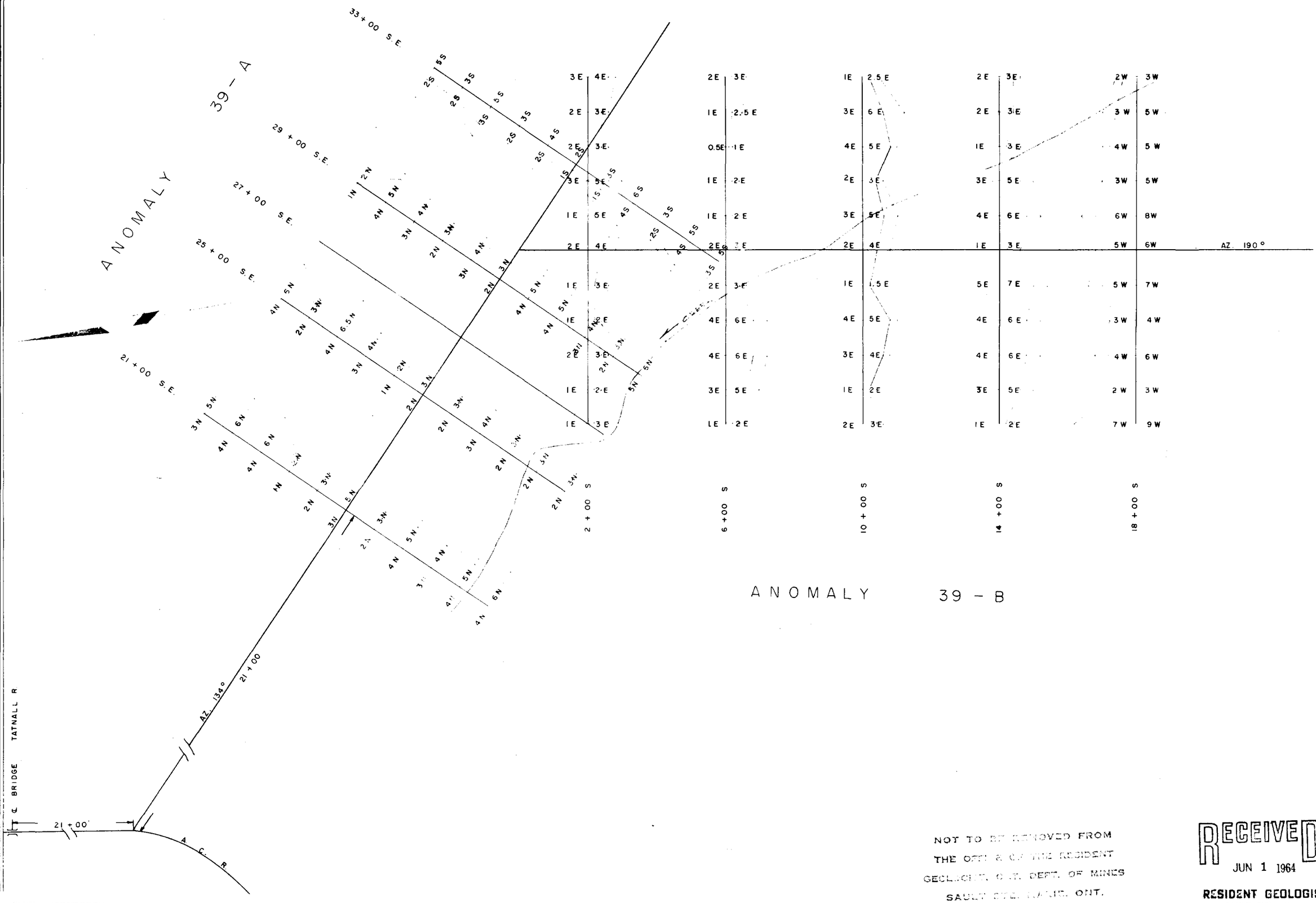
ELECTROMAGNETIC SURVEY

ANOMALY 32 A

FRANZ TWP.

Scale: 1" = 200' Nov. 30/1957





ANOMALY 39 - B

236

LEGEND

Mc PHAR R. E. M.

1000 C.P.S.	5000 C.P.S.
——— 1000 C.P.S.	
- - - - - 5000 C.P.S.	
CONDUCTOR	

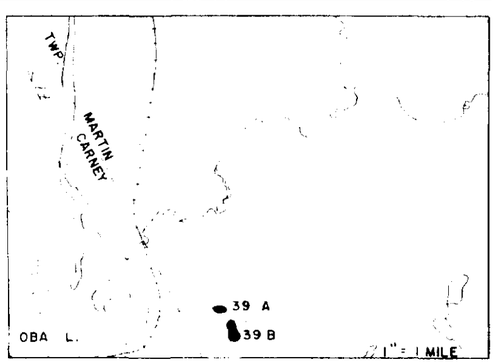
SURVEYED BY BROADSIDE METHOD

TRANSMITTER 400' EAST ON LINE 2100, 25000 AND 2900
TRANSMITTER 400' WEST ON LINE 3300
TRANSMITTER 400' SOUTH ON LINE 200, 600, 1000 AND 1400
TRANSMITTER 400' NORTH ON LINE 1800

ALGOMA ORE PROPERTIES LIMITED
EXPLORATION DEPARTMENT
BLOCK "C"
ANOMALY 39A & 39B
MARTIN TWP.
ELECTROMAGNETIC SURVEY
SCALE 1" = 200' MAY 1958

EM
A. 39B

Glasgow - 0013 #37



Algoma Central & Hudson Bay Rly.

Az. 063°10'

Az. 243°10'

Mattawitchewan R.

GLASGOW-0013

38

LEGEND

1000 C.P.S. | 3000 C.P.S.

1000 C.P.S.

3000 C.P.S.

Conductor

Surveyed by probable methods 400 scale

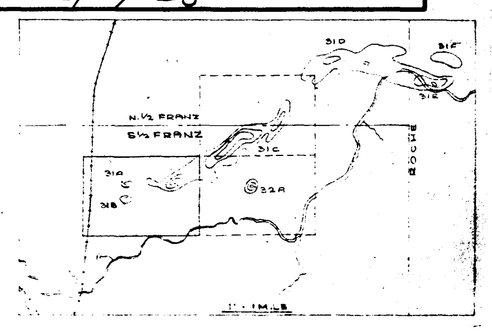
ALGOMA ORE PROPERTIES LTD.

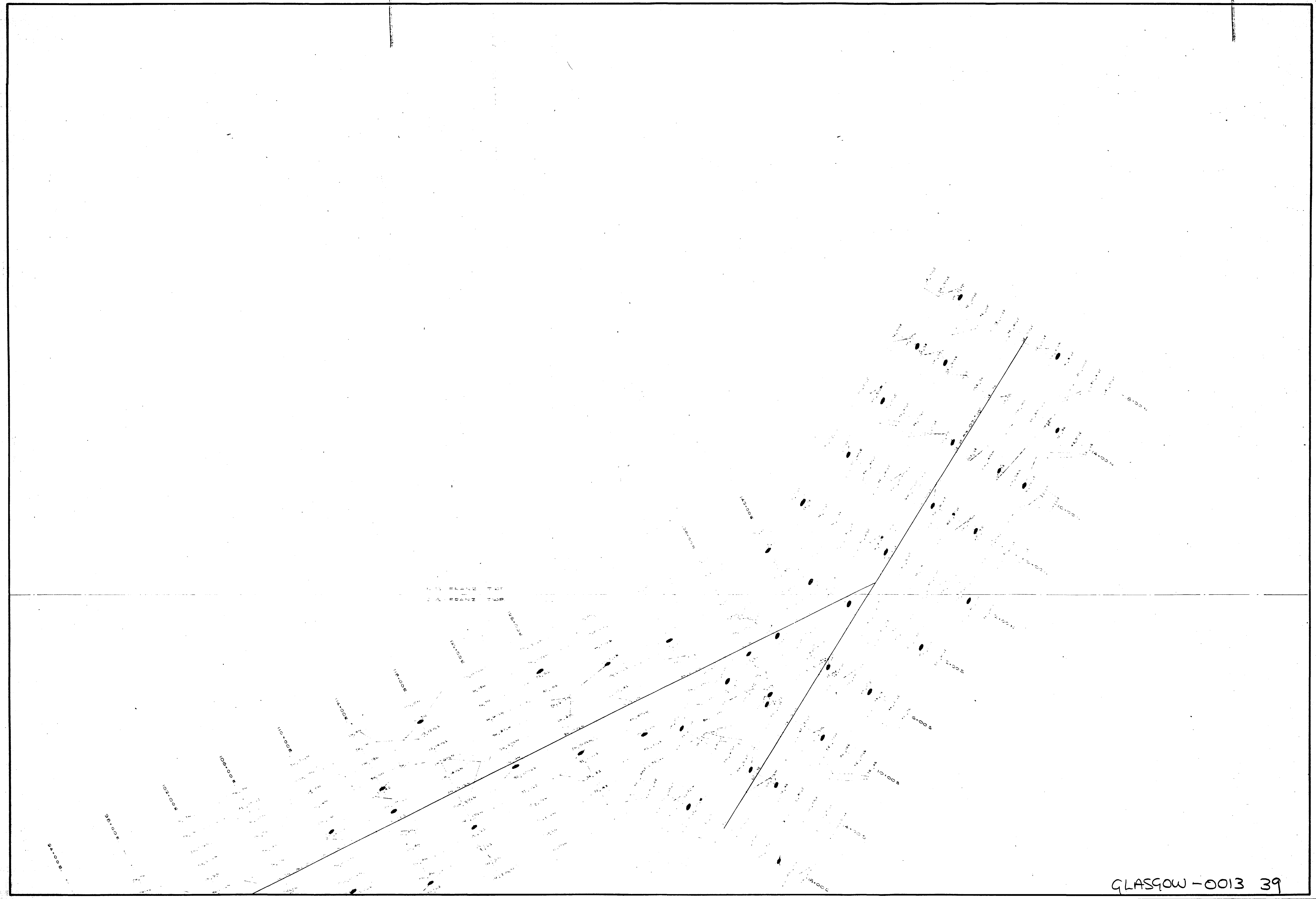
ELECTROMAGNETIC SURVEY

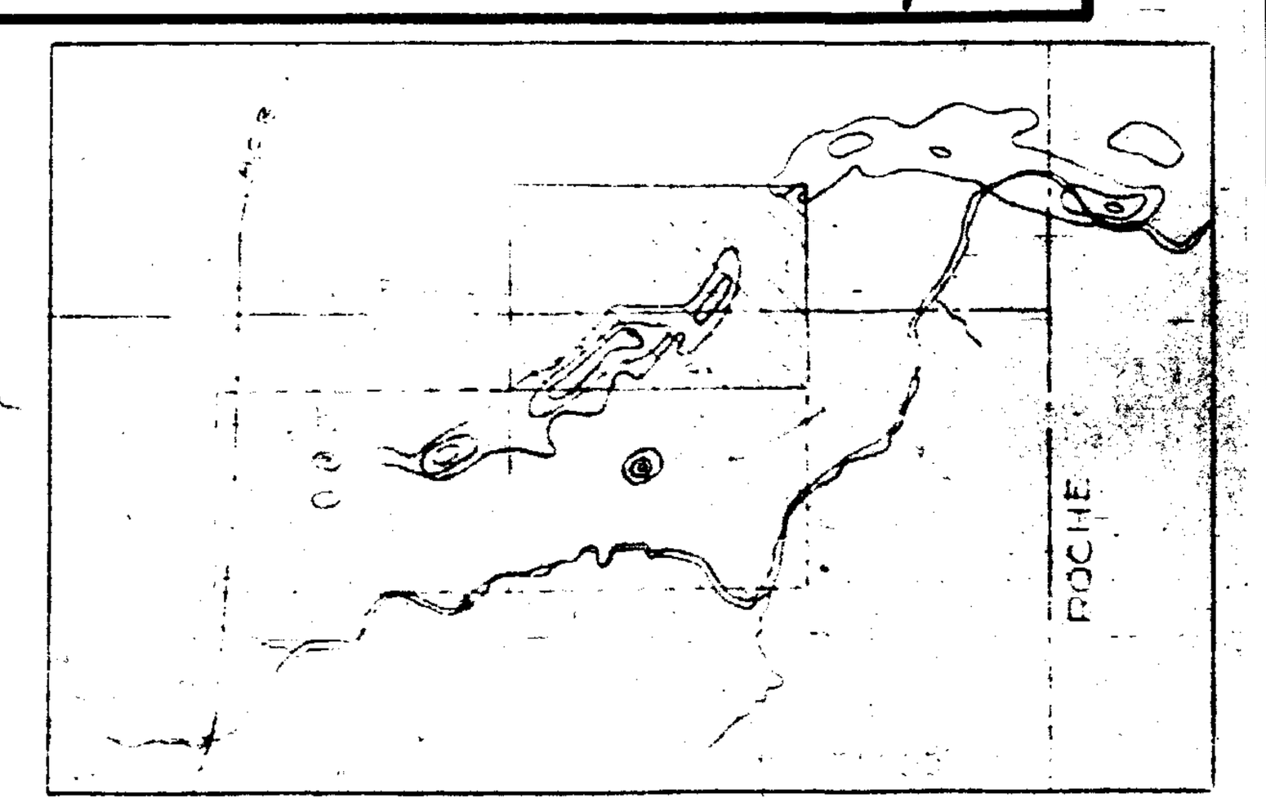
ANOMALIES 31-A-B-C.

FRANZ TWP.

Scale: 1" = 200' Nov. 25 1957







LEGEND

1000 C.P.S. 5000 C.P.S.

1000 C.P.S.

5000 C.P.S.

conductor

Surveyed by broadside method - 400' spread.

ALGOMA ORE PROPERTIES LTD.
ELECTROMAGNETIC SURVEY
ANOMALY 31-C
FRANZ TWP.

Scale: 1" = 200' Nov. 30/1957

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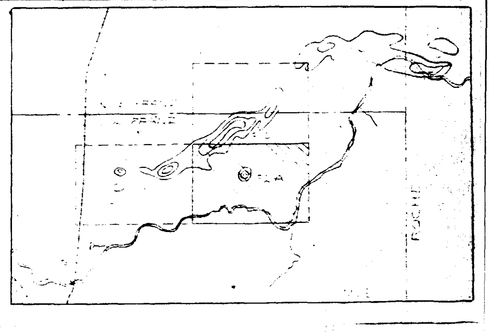
ALGOMA ORE PROPERTIES LTD.

MAGNETOMETER SURVEY

ANOMALY 31C

FRANZ TWP.

Scale: 1" = 200' Nov. 27, 1957.



N

TEMPLETON TWP.

EBBS TWP.

TO NORTH TWP. BOUNDARY

LEGEND

INSTRUMENT : "SHARPE" MODEL A-2 MAGNETOMETER
READINGS IN GAMMAS

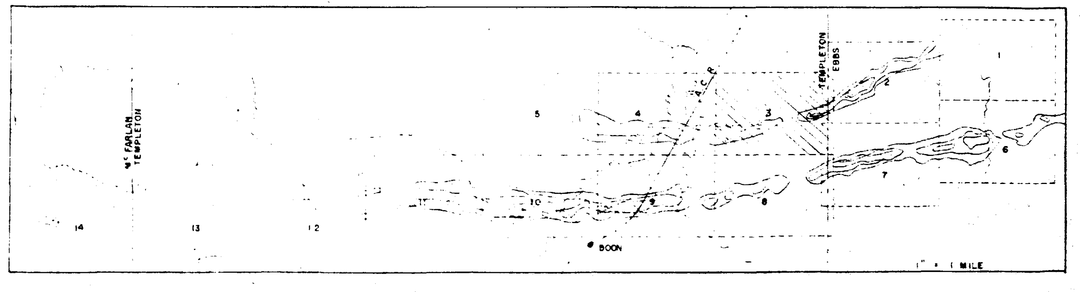
ALGOMA ORE PROPERTIES LTD.

EXPLORATION DEPARTMENT

MAGNETOMETER SURVEY

ANOMALY 3 B

SCALE 1" = 200' FEBRUARY, 1958



KABINAKAGAMI LAKE

LIPTON
DERRY

0+00
2+00 E
4+00 E
6+00 E
8+00 E

Az 090°
500'

KABINAKAGAMI LAKE

GLASGOW-0013 42

LEGEND

Mc PHAR R. E. M.

1000 C.P.S. | 5000 C.P.S.

——— 1000 C.P.S.

- - - - - 5000 C.P.S.

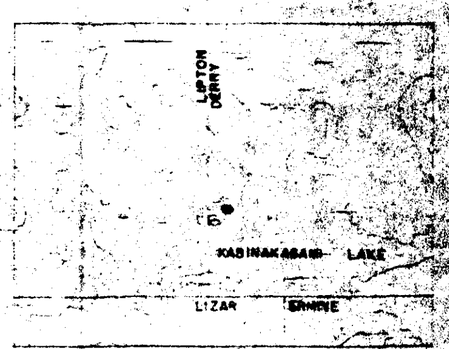
CONDUCTOR

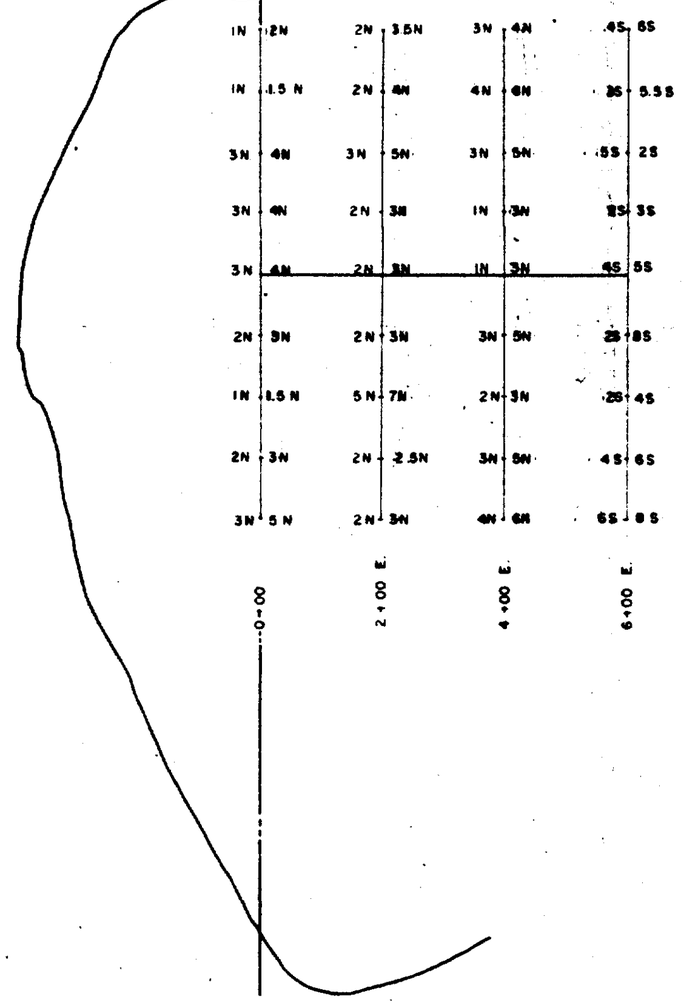
SURVEYED BY BROADSIDE METHOD
TRANSMITTER 400' EAST OF RECEIVER
TRANSMITTER 400' WEST ON LINE 8+00

42G12NE0002 0013 GLASGOW

241

ALGOMA ORE PROPERTIES LIMITED
EXPLORATION DEPARTMENT
BLOCK "C"
ANOMALY — 6
DERRY TWP.
ELECTROMAGNETIC SURVEY
SCALE 1" = 200' JUNE 1958.





GLASGOW-0013 43

242

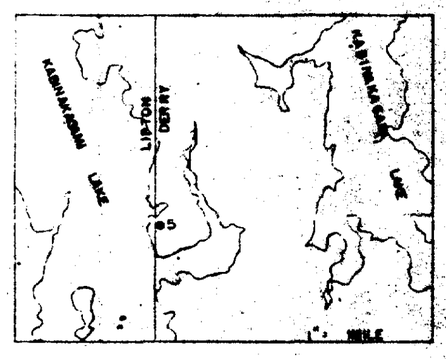
LEGEND

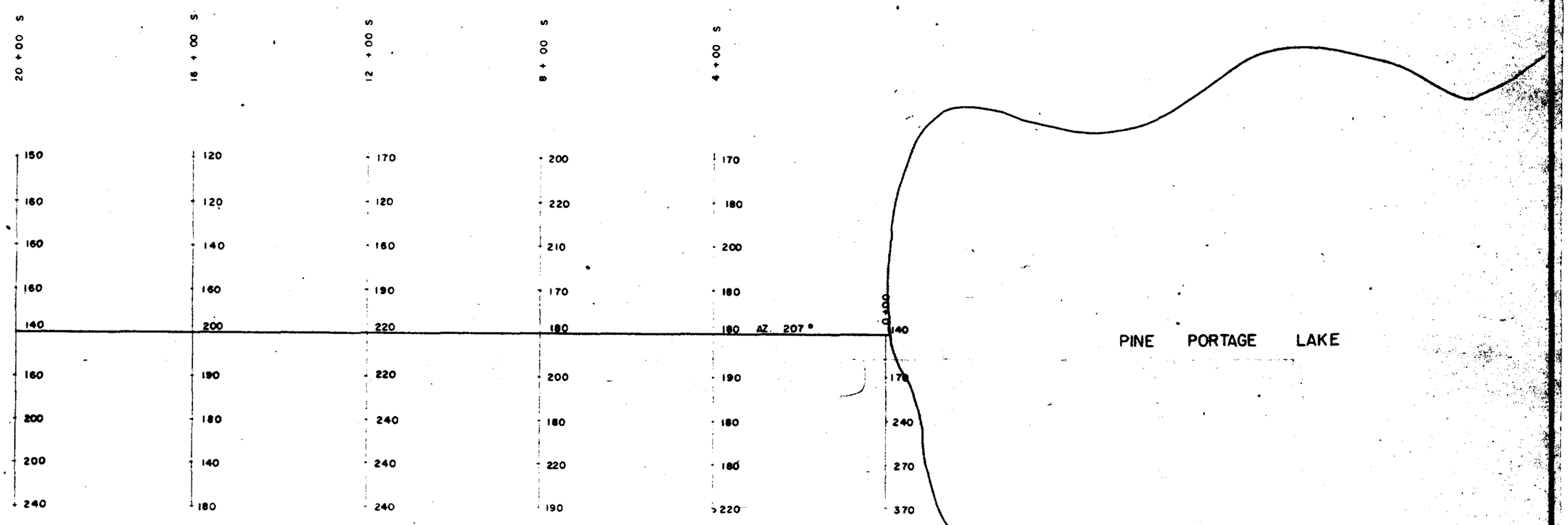
Mc PHAR R. E. M.

1000 C.P.S	5000 C.P.S
—— 1000 C.P.S	
- - - - - 5000 C.P.S.	
CONDUCTOR	

SURVEYED BY BROADSIDE METHOD
TRANSMITTER 200' EAST OF RECEIVER ON LINES 0+00, 2+00, 4+00
TRANSMITTER 200' WEST OF RCEIVER ON LINE 6+00

ALGOMA ORE PROPERTIES LIMITED
EXPLORATION DEPARTMENT
BLOCK "C"
ANOMALY - 5
DERRY TWP.
ELECTROMAGNETIC SURVEY
SCALE 1" = 200' JUNE 1968





GLASGOW-0013 44

ALGOMA ORE PROPERTIES LIMITED
EXPLORATION DEPARTMENT

BLOCK "C"

ANOMALY - 12

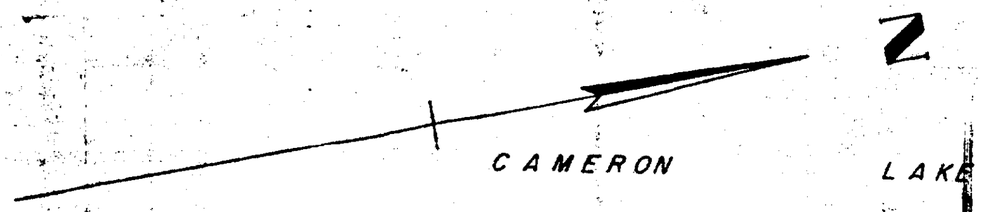
DERRY TWP.

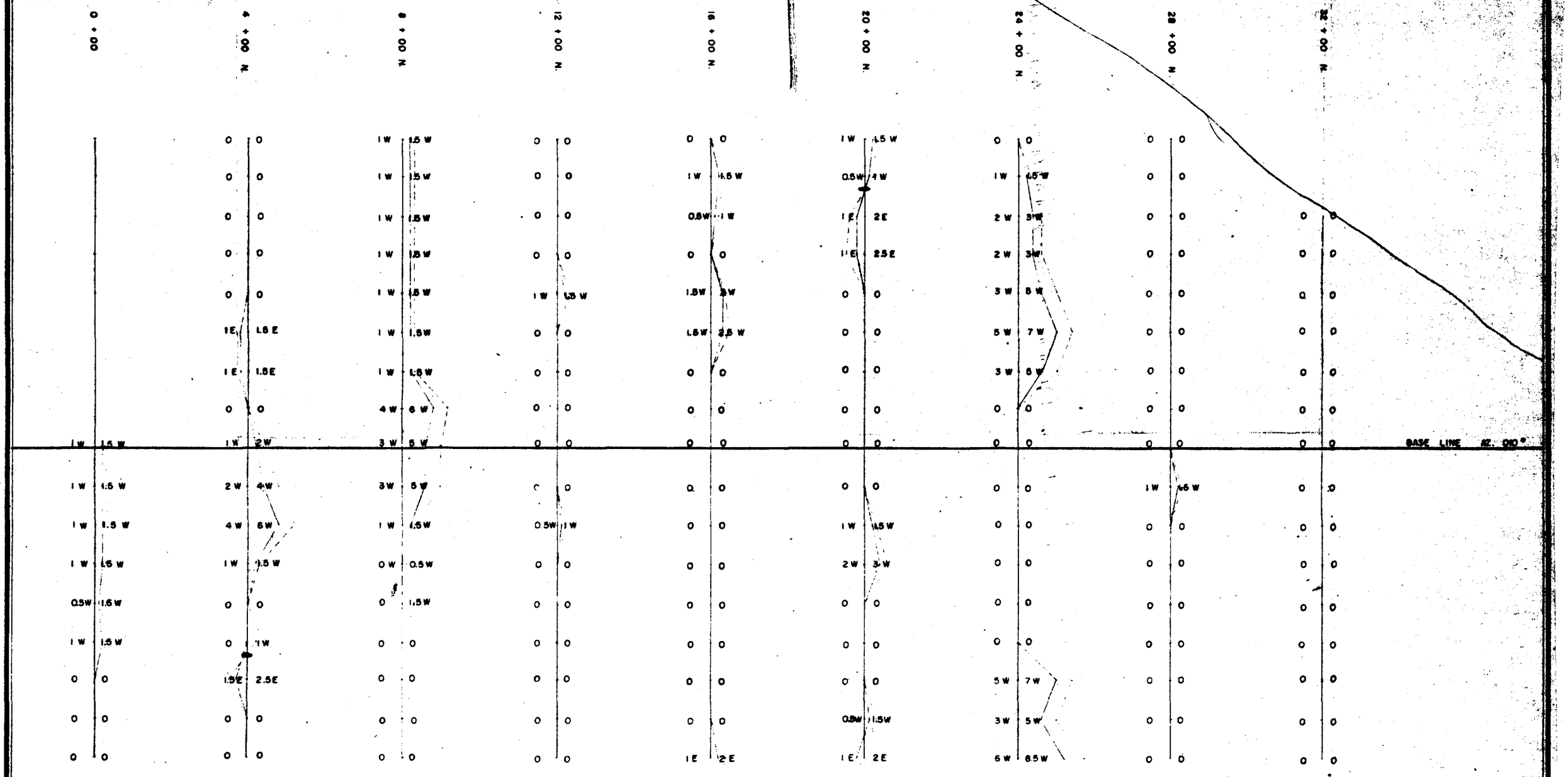
MAGNETOMETER SURVEY

SCALE 1" = 200' JUNE 1958

12

DERRY
ERMINE





GLASGOW-001345

244

INSTRUMENT : Mc PHAR VERTICAL LOOP R.E.M.

METHOD : BROADSIDE — 400' SPREAD

LEGEND :

C.P.S. ——— 1000

C.P.S. - - - - - - 5000

DIP ANGLES 2N | 3N

(1000 C.P.S.) | (5000 C.P.S.)

CROSS - OVERS

SCALE 1" = 10°

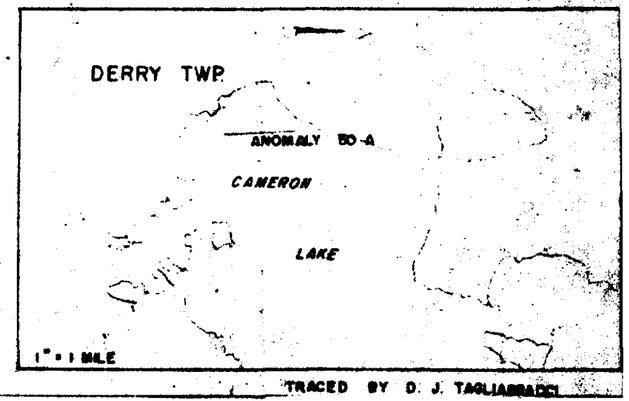
INSTRUMENT MAN J. GRAY FEB. 9, 1960

ALGOMA ORE PROPERTIES LIMITED
EXPLORATION DEPARTMENT

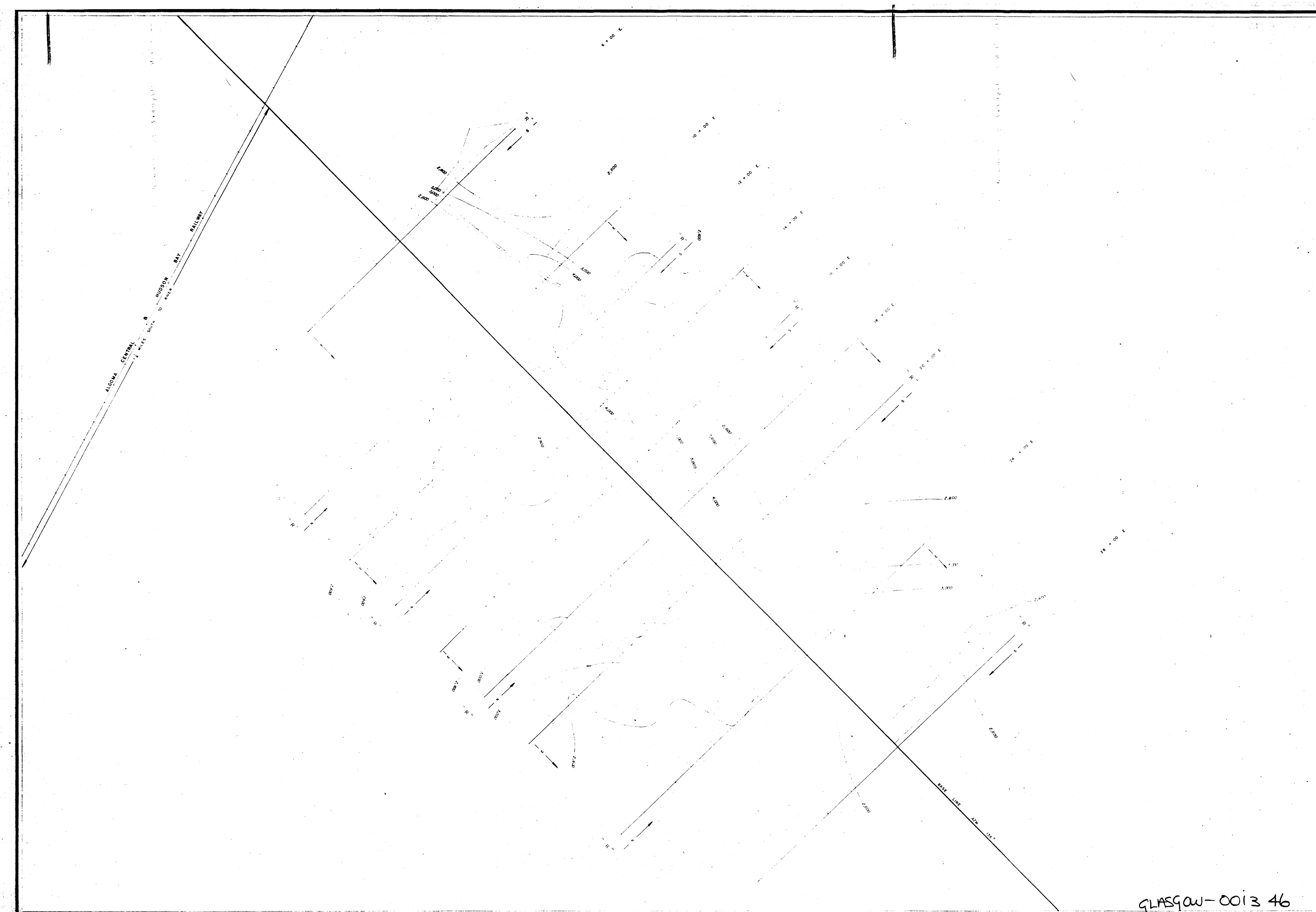
ANOMALY NO. 50-A CENTRAL AREA

ELECTROMAGNETIC SURVEY

SCALE 1" = 200' APRIL 27, 1960



TRACED BY D. J. TAGLIABRACCI



INSTRUMENT: SHARP MODEL A-2 MAGNETOMETER

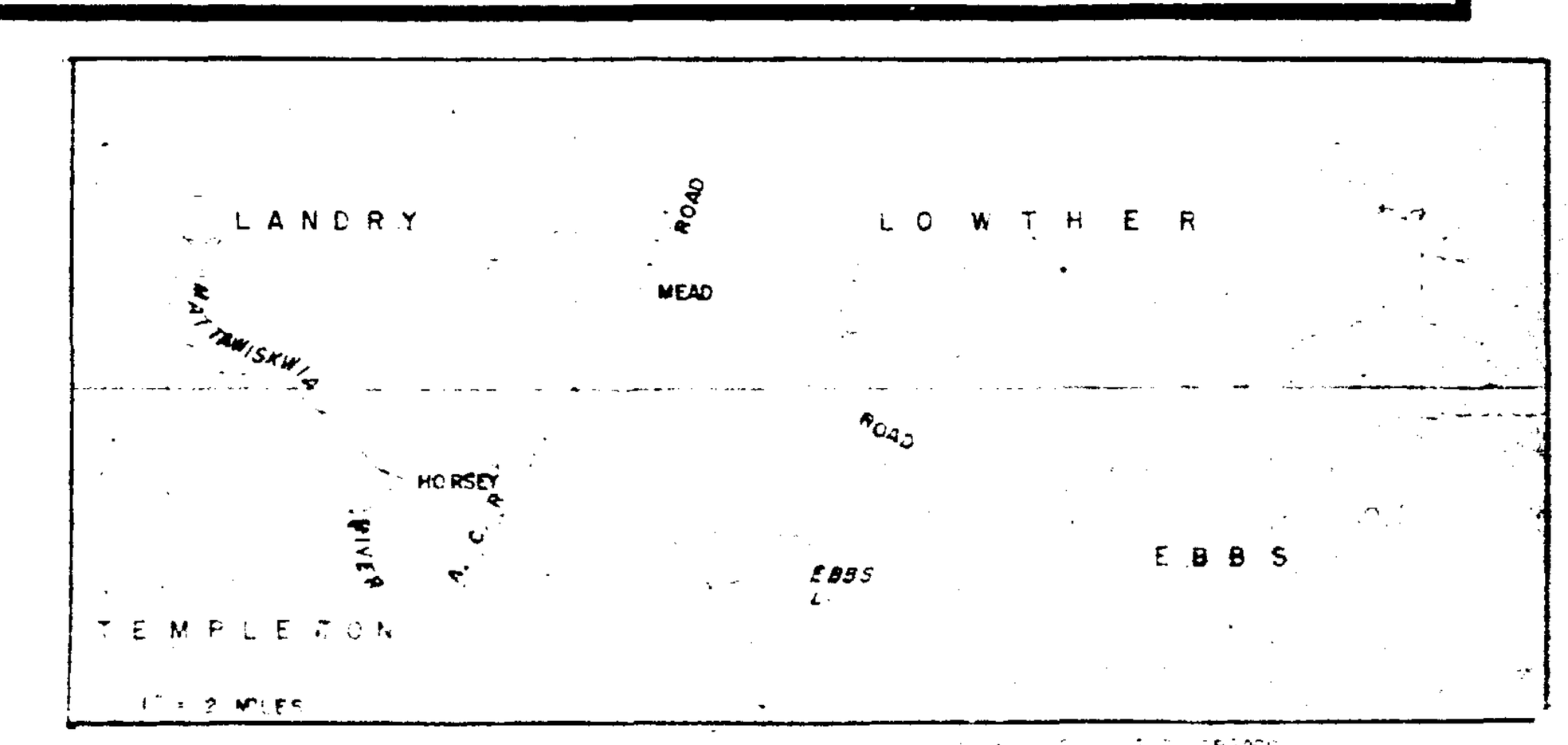
INSTRUMENT: RONKA MARK IV
METHOD: IN LINE 300' SPREAD
LEGEND: IN PHASE READINGS
OUT OF PHASE READINGS
"R" POSITION OF RECEIVER AT START OF LINE
DIRECTION IN WHICH LINE WAS RUN
% OF PRIMARY FIELD

CONDUCTOR

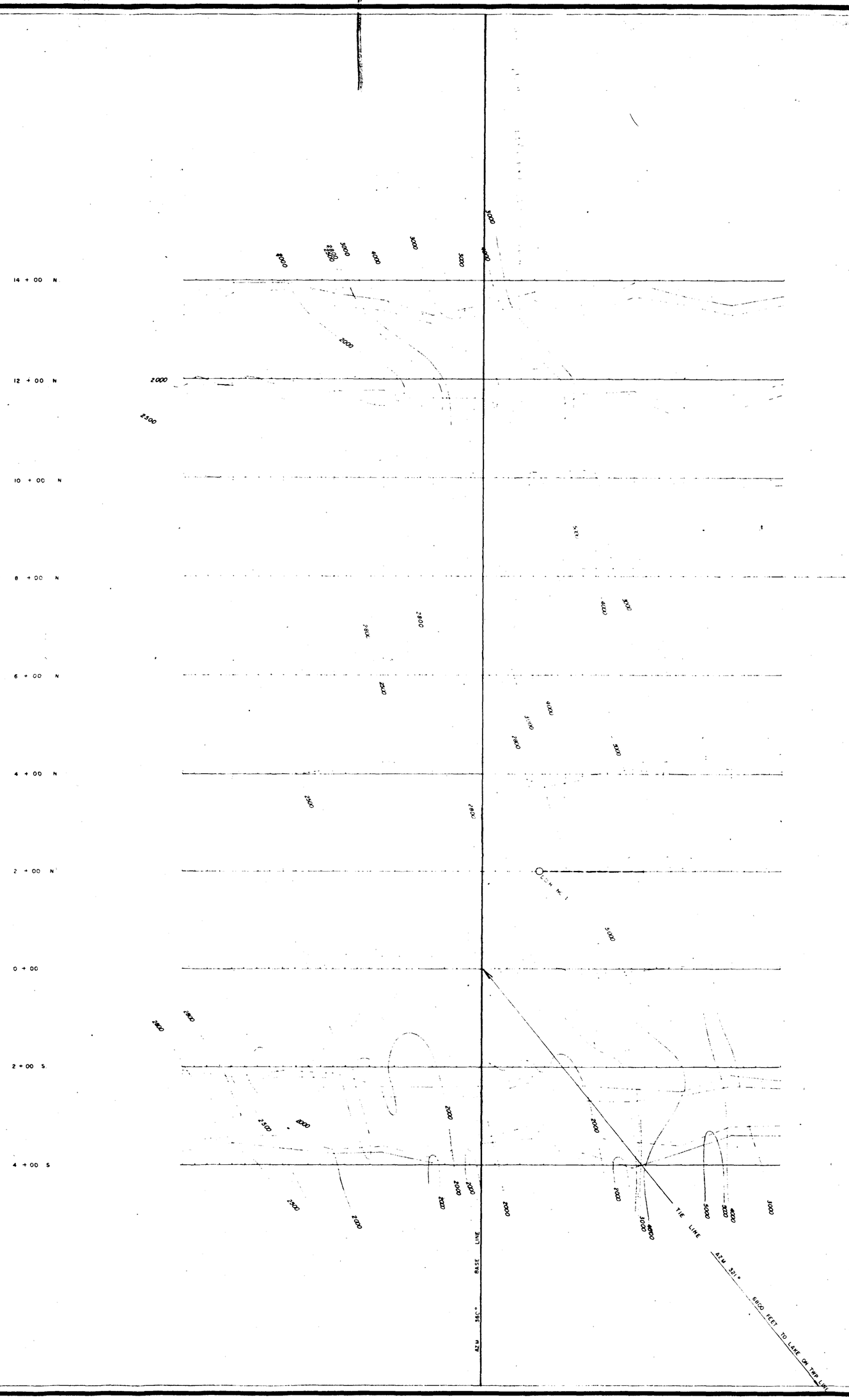
ALGOMA ORE PROPERTIES LTD.

EXPLORATION DEPARTMENT
MAGNETOMETER &
HORIZONTAL LOOP ELECTROMAGNETIC SURVEY
ANOMALY NO. 55 CENTRAL AREA

SCALE: 1" = 100' DEC. 5 1961



245



GLASGOW-0013 47

INSTRUMENT SHARP MODEL A-2 MAGNETOMETER

INSTRUMENT SHARP R E M
METHOD: BROADSIDE 200 SPREAD
LEGEND: C.P.S. ——— 1000
C.P.S. - - - - - 5000
D.P. ANGLES PA (-) PA
(1000 C.P.S.) (5000 C.P.S.)

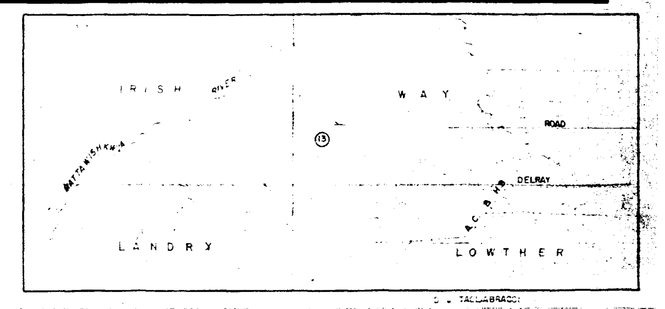
CROSS - OVERS —
SCALE 1" = 100'

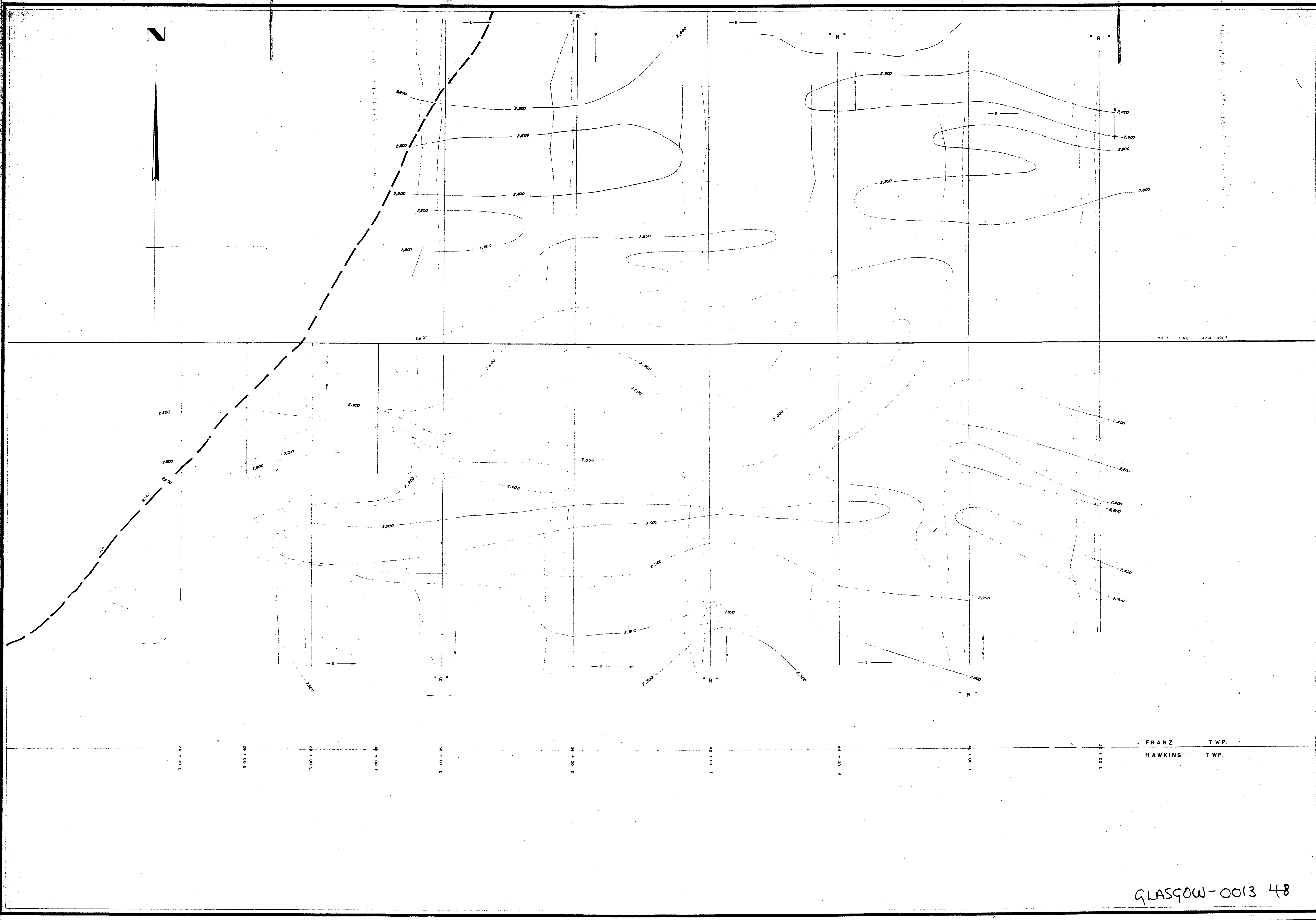
ALGOMA ORE PROPERTIES LTD.

EXPLORATION DEPARTMENT
MAGNETOMETER &
VERTICAL LOOP ELECTROMAGNETIC SURVEY
ANOMALY NO. 13 NORTH AREA

SCALE: 1" = 100' NOV. 20, 1961.

WAY Tp.





GLASGOW-0013 48

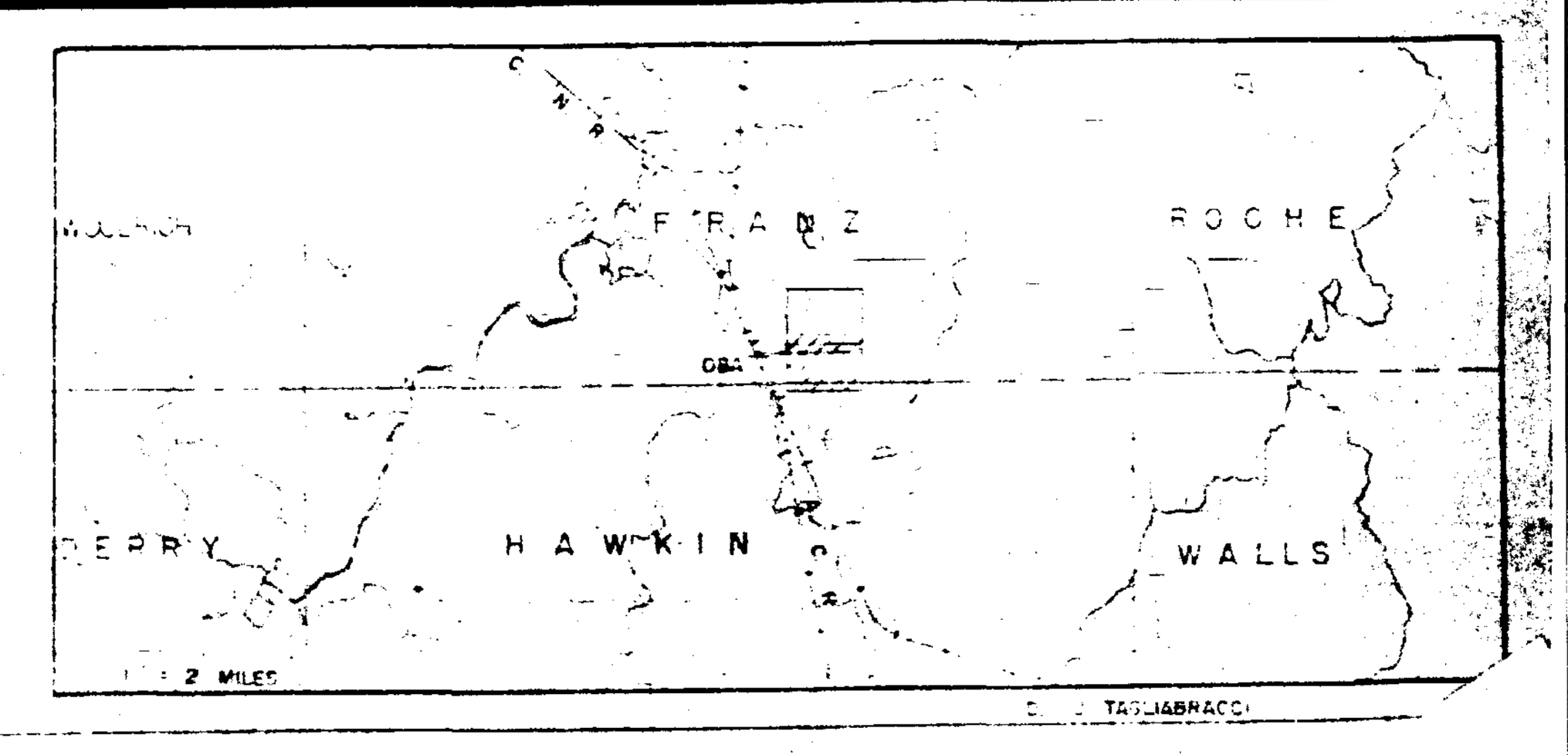
INSTRUMENT "SHARP" MODEL A-2 MAGNETOMETER

INSTRUMENT RONKA MARK IV
METHOD IN LINE 300' SPREAD
LEGEND, IN PHASE READINGS ——
OUT OF PHASE READINGS - - - -
+5 | +6
IN | OUT OF
PHASE | PHASE
"R" POSITION OF RECEIVER AT START OF LINE
DIRECTION IN WHICH LINE WAS RUN
E
% 10% OF PRIMARY FIELD

CONDUCTOR

17, 1961

247



ALGOMA ORE PROPERTIES LTD.

EXPLORATION DEPARTMENT

MAGNETOMETER & HORIZONTAL LOOP ELECTROMAGNETIC SURVEY

ANOMALY NO. 61 CENTRAL AREA

SCALE 1" = 100' DEC 29, 1961

FRANZ TWP.

N

BASE LINE AZM 090°

INSTRUMENT "SHARP" MODEL E-2 MAGNETOMETER

INSTRUMENT M^PHAR R.E.M.
METHOD BROADSIDE 400' SPREAD
LEGEND CRS ——— 1000
CRS. – – – – 2000 (not read)
DIP ANGLES S N 0 %
(1000 C.P.S.) (5000 C.P.S.)

CROSS - OVERS
SCALE 1" = 40'

ALGOMA ORE PROPERTIES LTD.

EXPLORATION DEPARTMENT

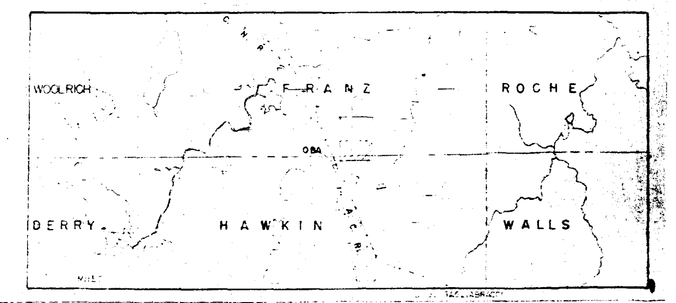
MAGNETOMETER &

VERTICAL LOOP ELECTROMAGNETIC SURVEY

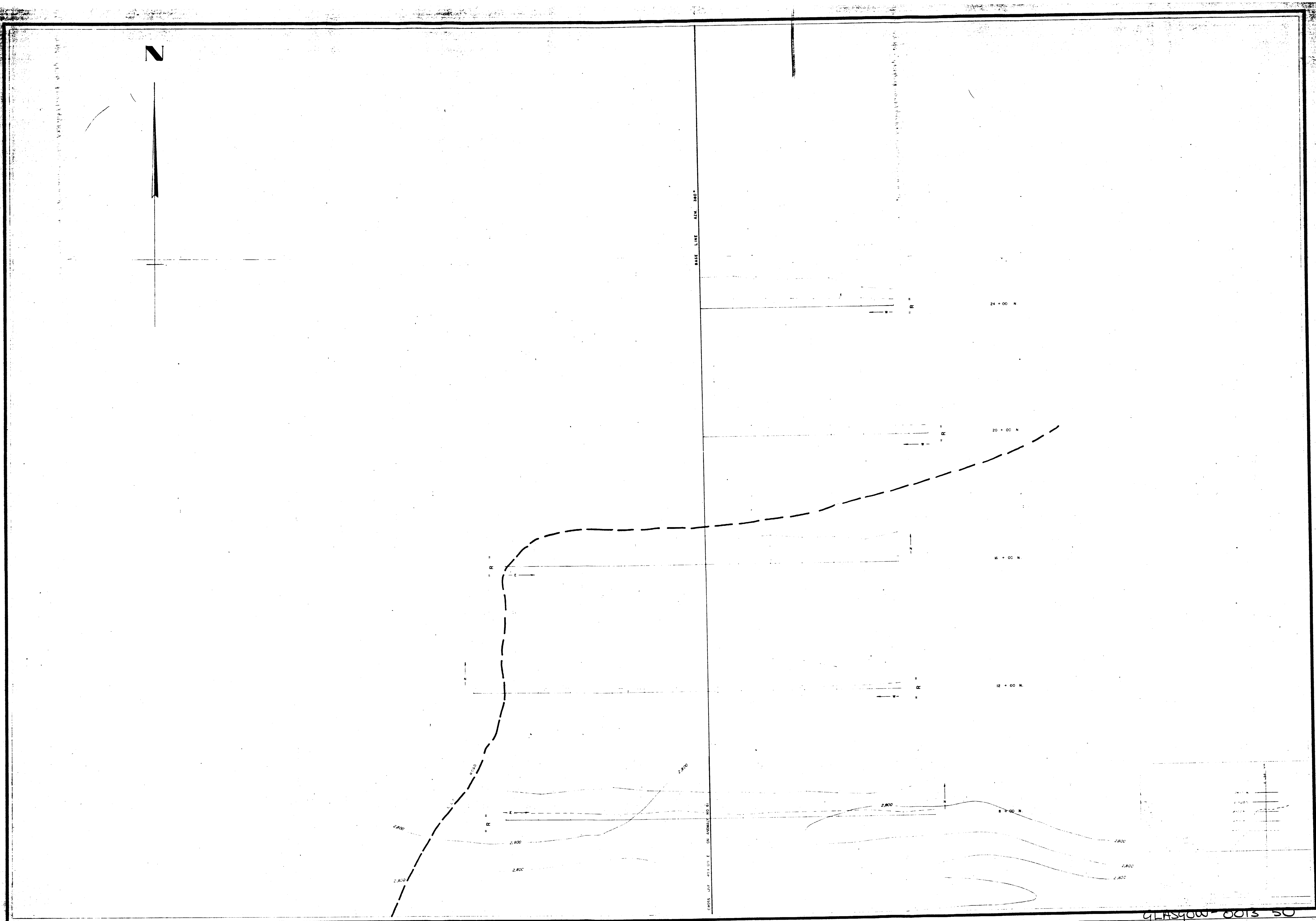
ANOMALY NO. 61 CENTRAL AREA

SCALE 1" = 100' DEC 29, 1961

F.R.L. N.Z. T.M.P.



GLASGOW-0013 49



INSTRUMENT SHARPE MODEL A-2 MAGNETOMETER

INSTRUMENT: RONKA MARK IV
METHOD: IN LINE 200' SPREAD
LEGEND: IN PHASE READINGS ————
OUT OF PHASE READINGS — — — —
+8 | +6
IN PHASE | OUT OF PHASE
"R" POSITION OF RECEIVER AT START OF LINE
DIRECTION IN WHICH LINE WAS RUN
1" = 10% OF PRIMARY FIELD

CONDUCTOR

42G12NE0002 0013 GLASGOW

249

ALGOMA ORE PROPERTIES LTD.

EXPLORATION DEPARTMENT

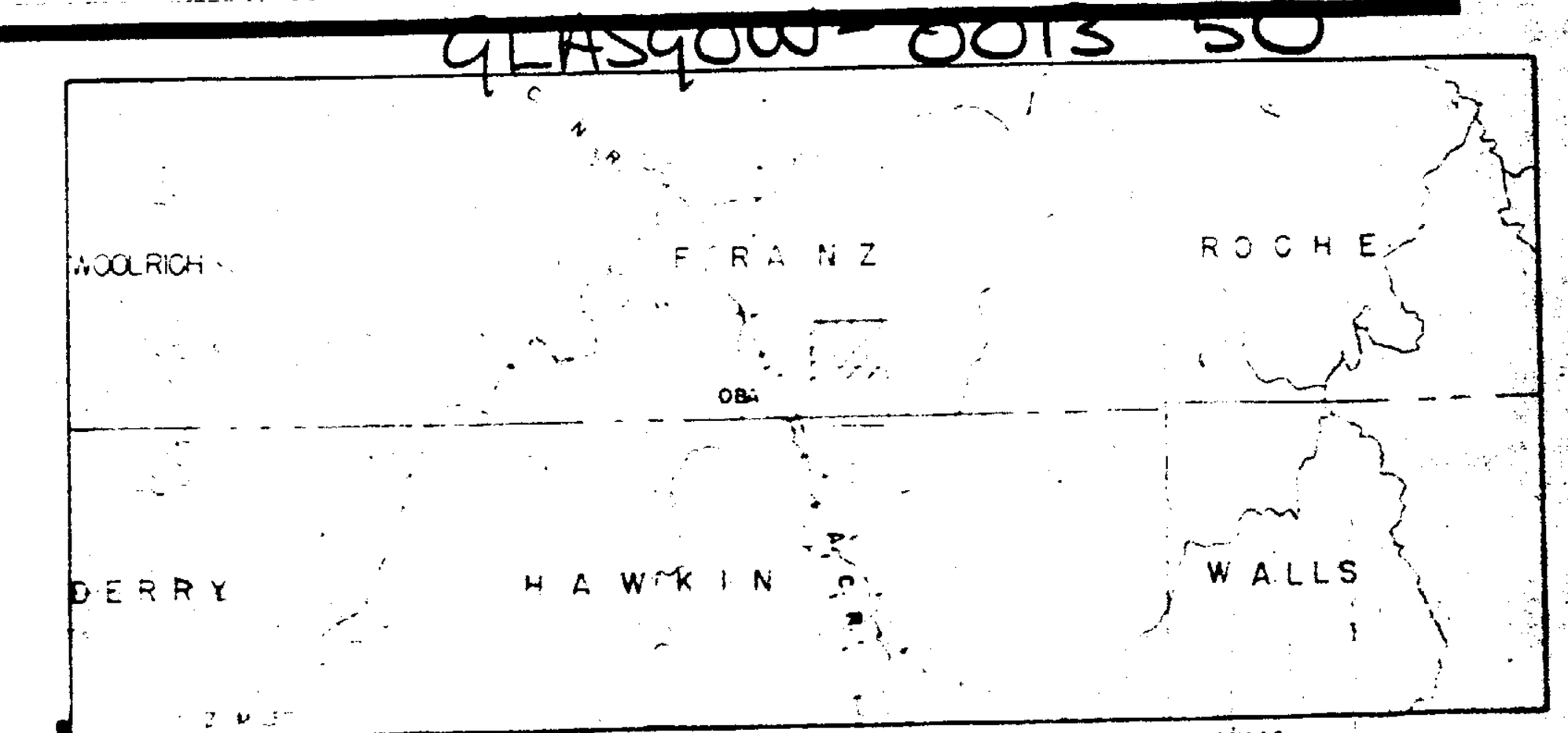
MAGNETOMETER &

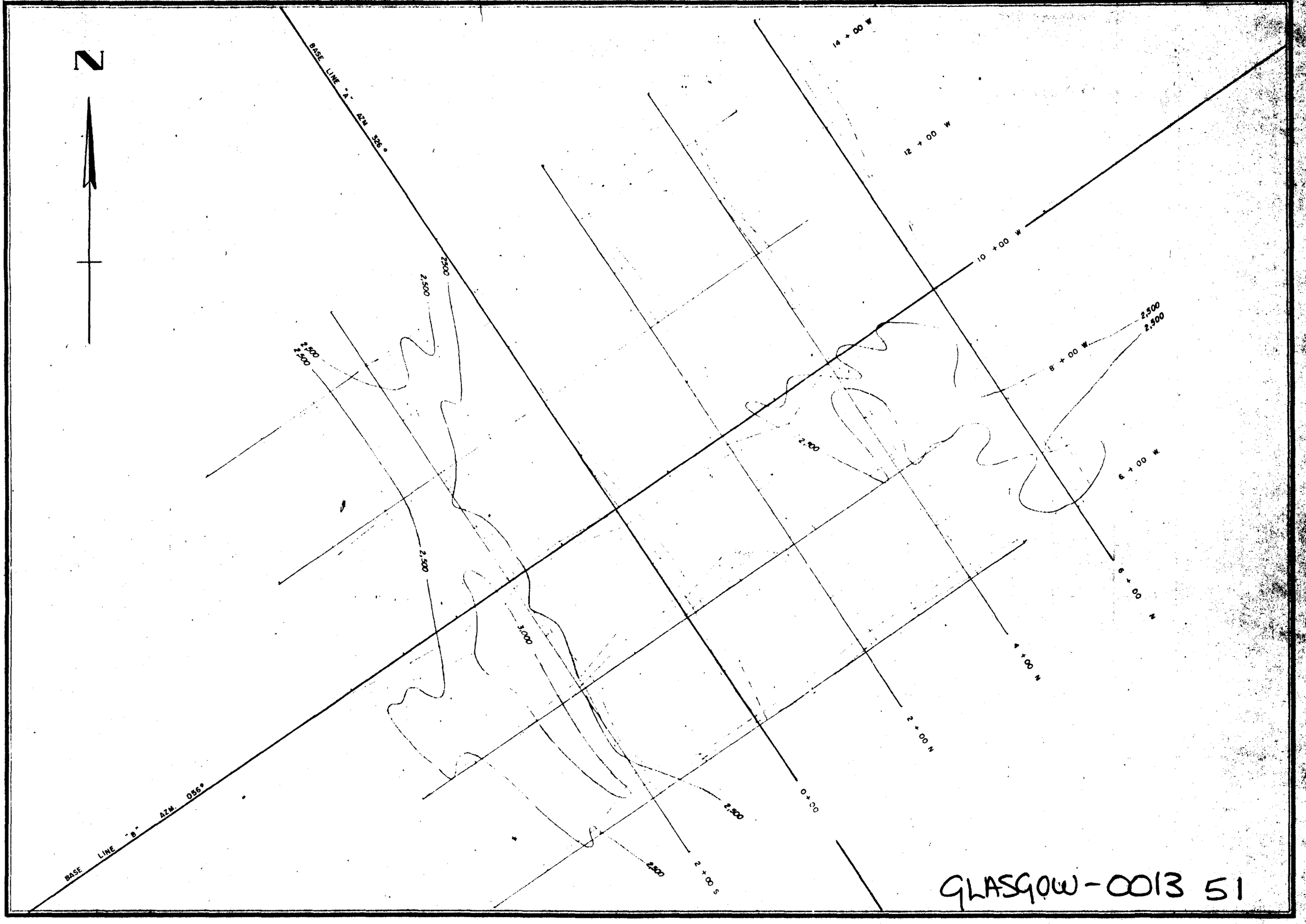
HORIZONTAL LOOP ELECTROMAGNETIC SURVEY

ANOMALY NO. 6IA CENTRAL AREA

FRANZ TWP.

GLASGOW-0013 50





GLASGOW-0013 51

INSTRUMENT "SHARP" MODEL A-2 MAGNETOMETER

INSTRUMENT McPHAR R.E.M
METHOD BROADSIDE 200' SPREAD
LEGEND C.P.S. ——— 1000
C.P.S. - - - - - 2000
DIP ANGLES 2N | 3N
(1000 C.P.S.) (2000 C.P.S.)

CROSS — OVERS
SCALE : 1" = 8"

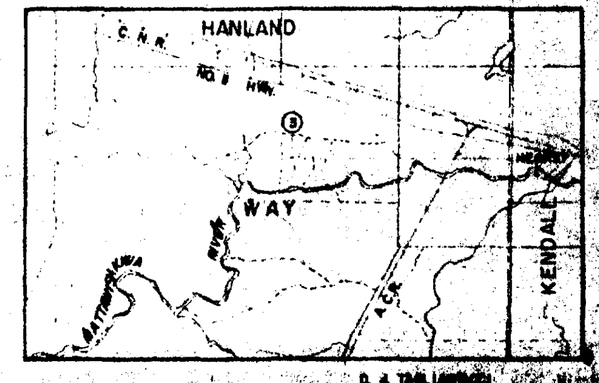
ALGOMA ORE PROPERTIES LIMITED
EXPLORATION DEPARTMENT

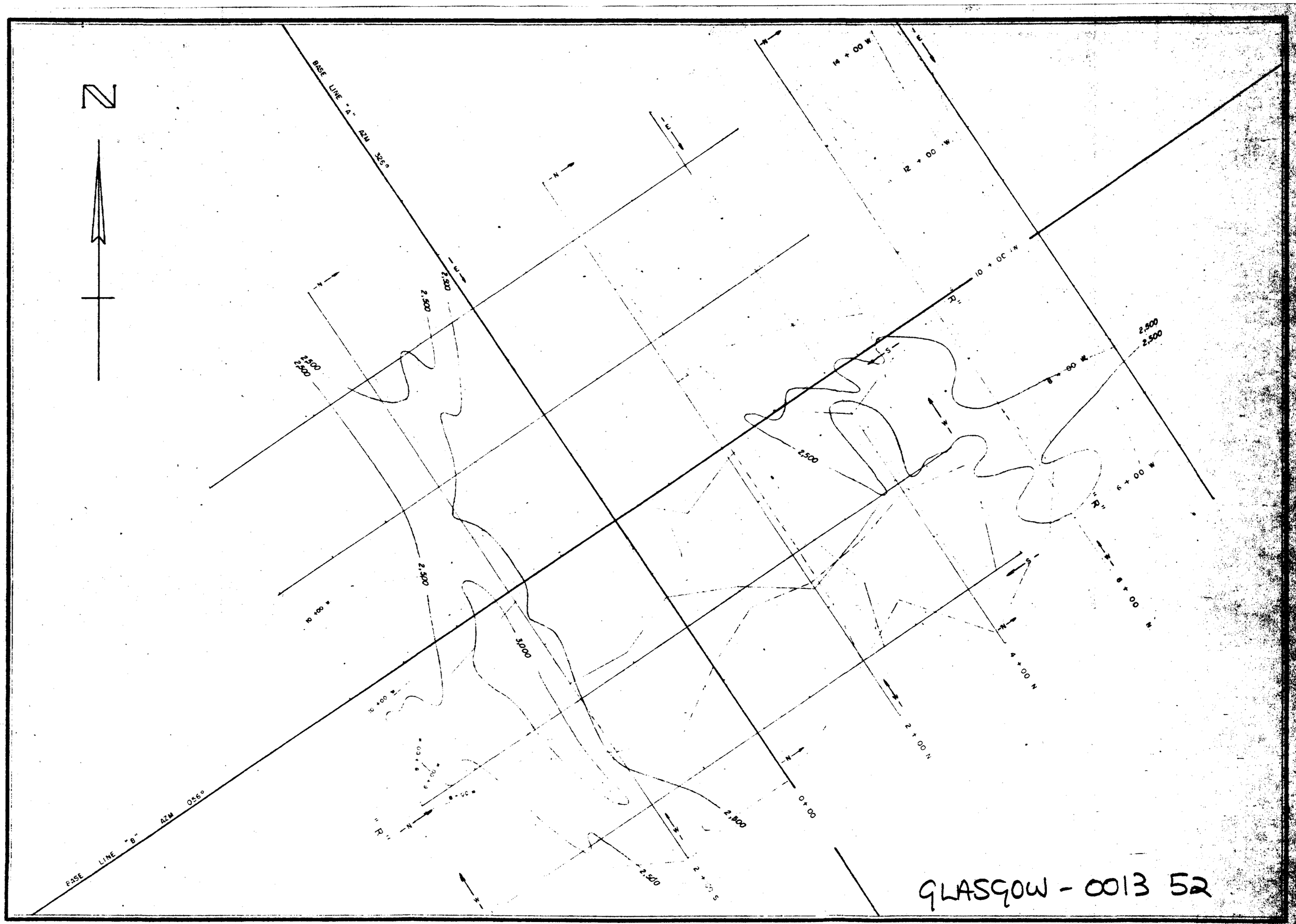
MAGNETOMETER &
VERTICAL LOOP ELECTROMAGNETIC SURVEY

ANOMALY NO. 8 NORTH AREA

SCALE 1" = 400' 400' 0 400'

WAY TWP.





GLASGOW - 0013 52

INSTRUMENT "SHARP" MODEL A-2 MAGNETOMETER

INSTRUMENT RONKA MARK IV
METHOD IN LINE 300' SPREAD
LEGEND IN PHASE READINGS ————
OUT OF PHASE READINGS — — — —
+5 IN PHASE | +C OUT OF PHASE
"R" POSITION OF RECEIVER AT START OF LINE
DIRECTION IN WHICH LINE WAS RUN
1" = 10% OF PRIMARY FIELD

ALGOMA ORE PROPERTIES LIMITED
EXPLORATION DEPARTMENT

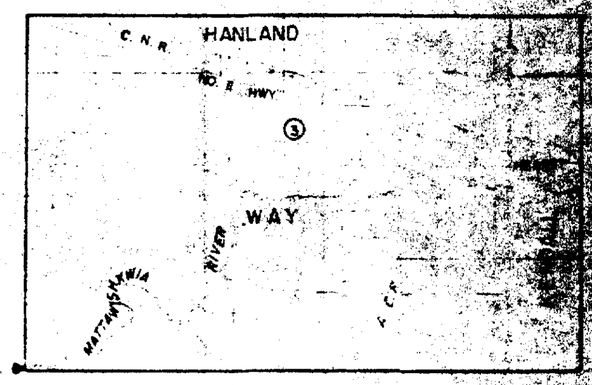
MAGNETOMETER 8

HORIZONTAL LOOP ELECTROMAGNETIC SURVEY

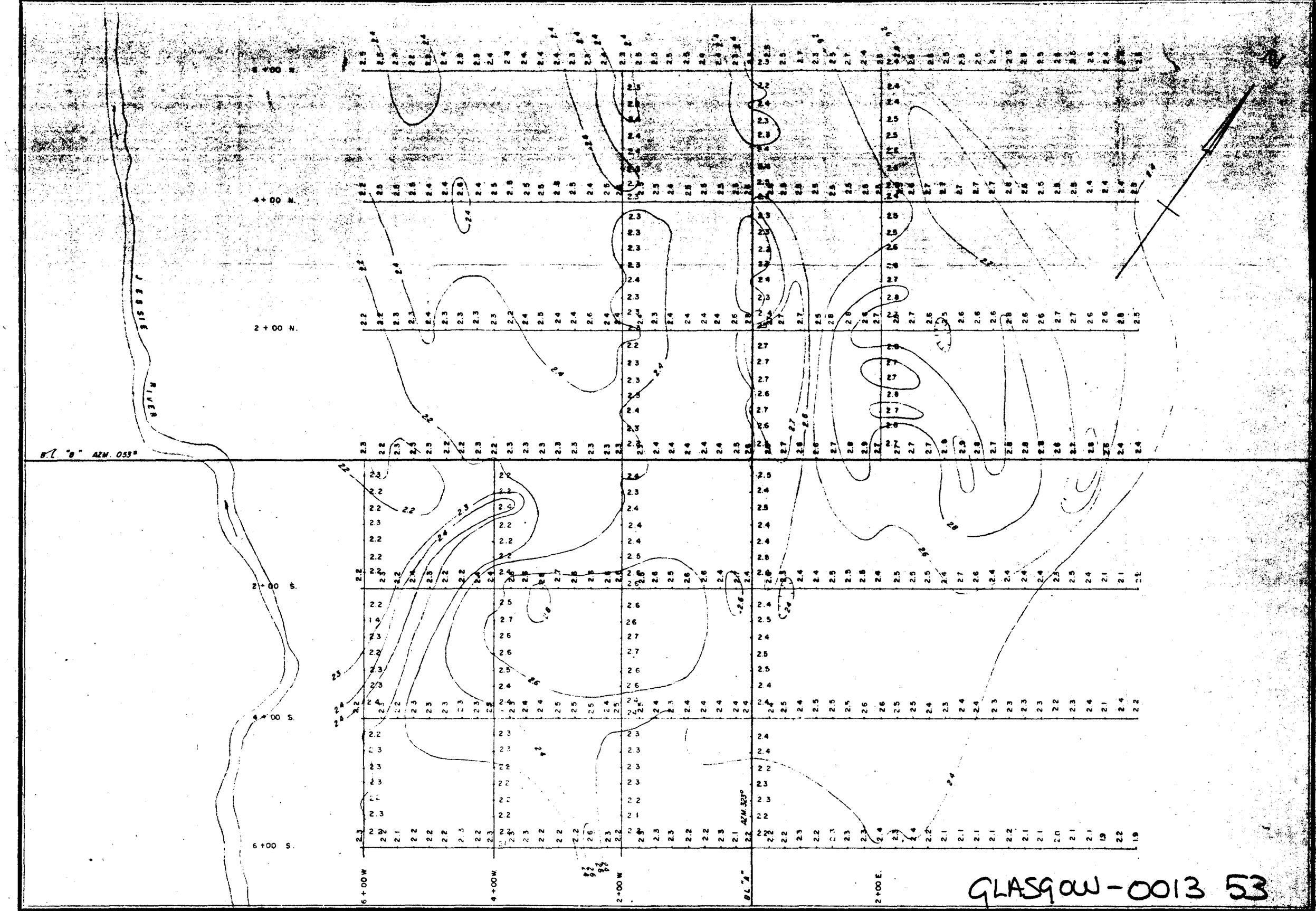
ANOMALY NO. 3 NORTH AREA

SCALE 1" = 100' DEC. 11, 1961

WAY TWP.



D. W. TAGLIABRACCI



GLASGOW-0013 53

LEGEND

INSTRUMENT "SHARPE" MODEL A-2 MAGNETOMETER
READINGS IN GAMMAS

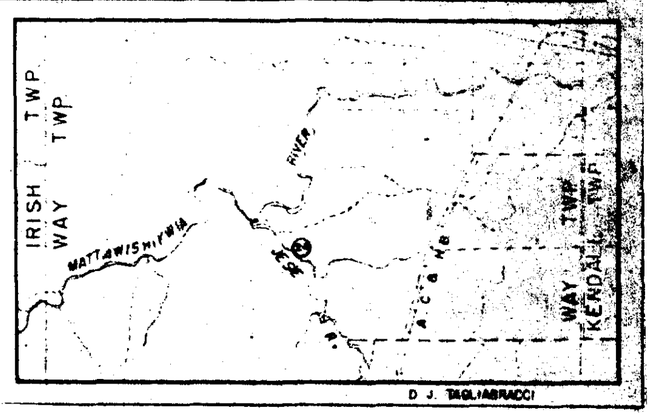
ALGOMA ORE PROPERTIES LIMITED
EXPLORATION DEPARTMENT

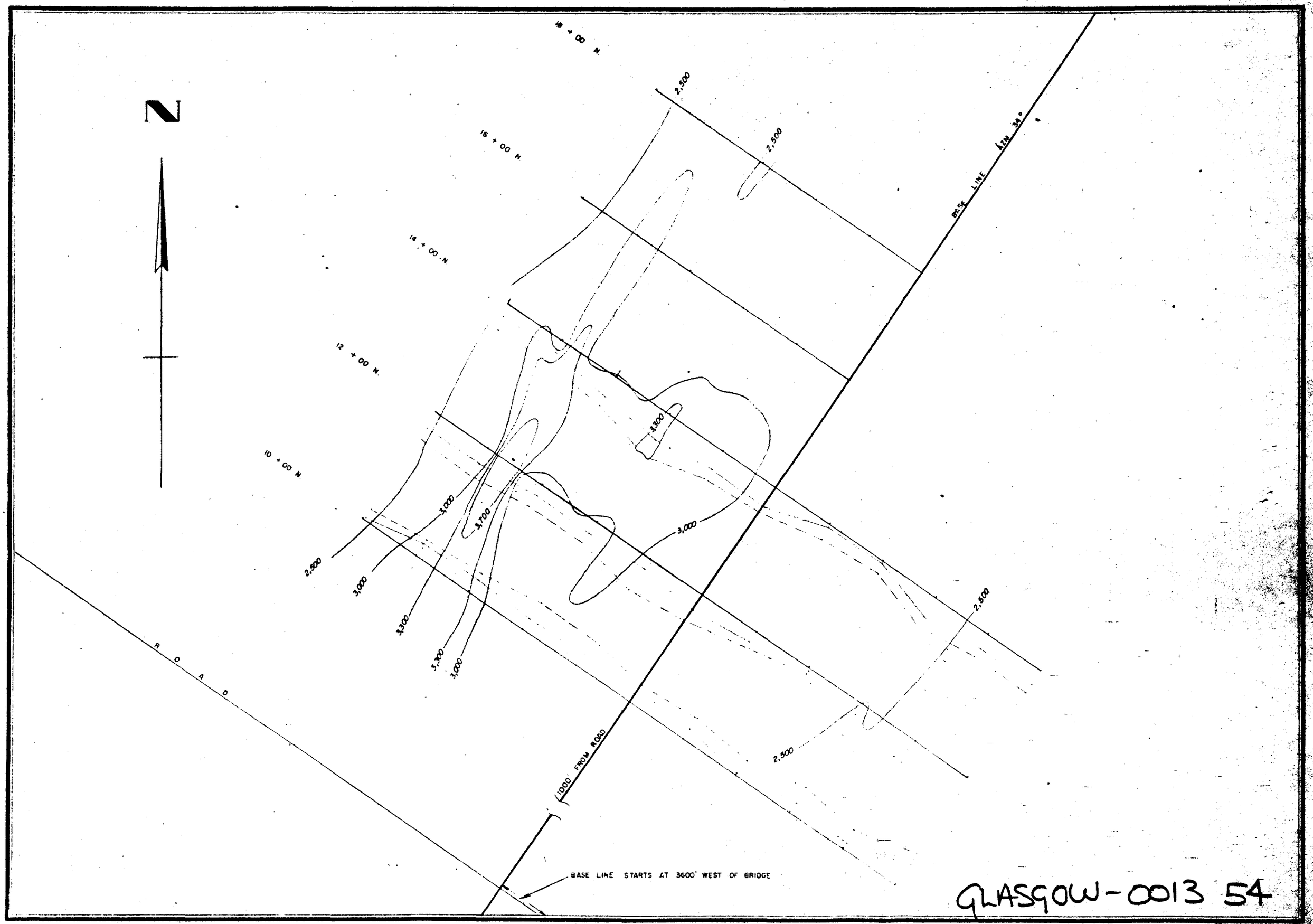
ANOMALY NO. 24 NORTH AREA

MAGNETOMETER SURVEY

SCALE 1" = 100' NOV. 14, 1961

WAY TWP.





GLASGOW-0013 54

INSTRUMENT "SHARP" MODEL A – 2 MAGNETOMETER

INSTRUMENT McPHAR REM
METHOD BROADSIDE 200' SPREAD
LEGEND CPS ——— 1000
CPS – – – – 5000
DIP ANGLES 2N 3N
(1000 CPS) (5000 CPS)
CROSS – OVERS

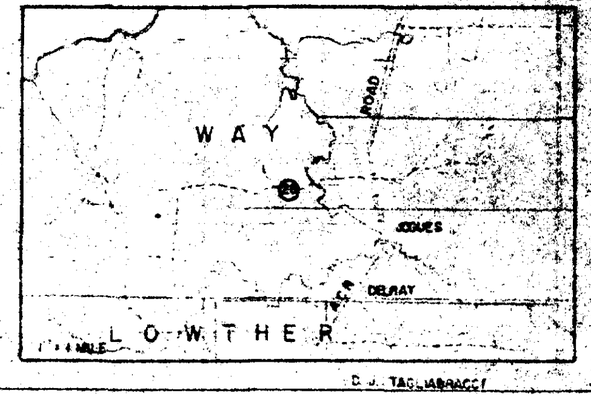
ALGOMA ORE PROPERTIES LIMITED
EXPLORATION DEPARTMENT

MAGNETOMETER & VERTICAL LOOP ELECTROMAGNETIC SURVEY

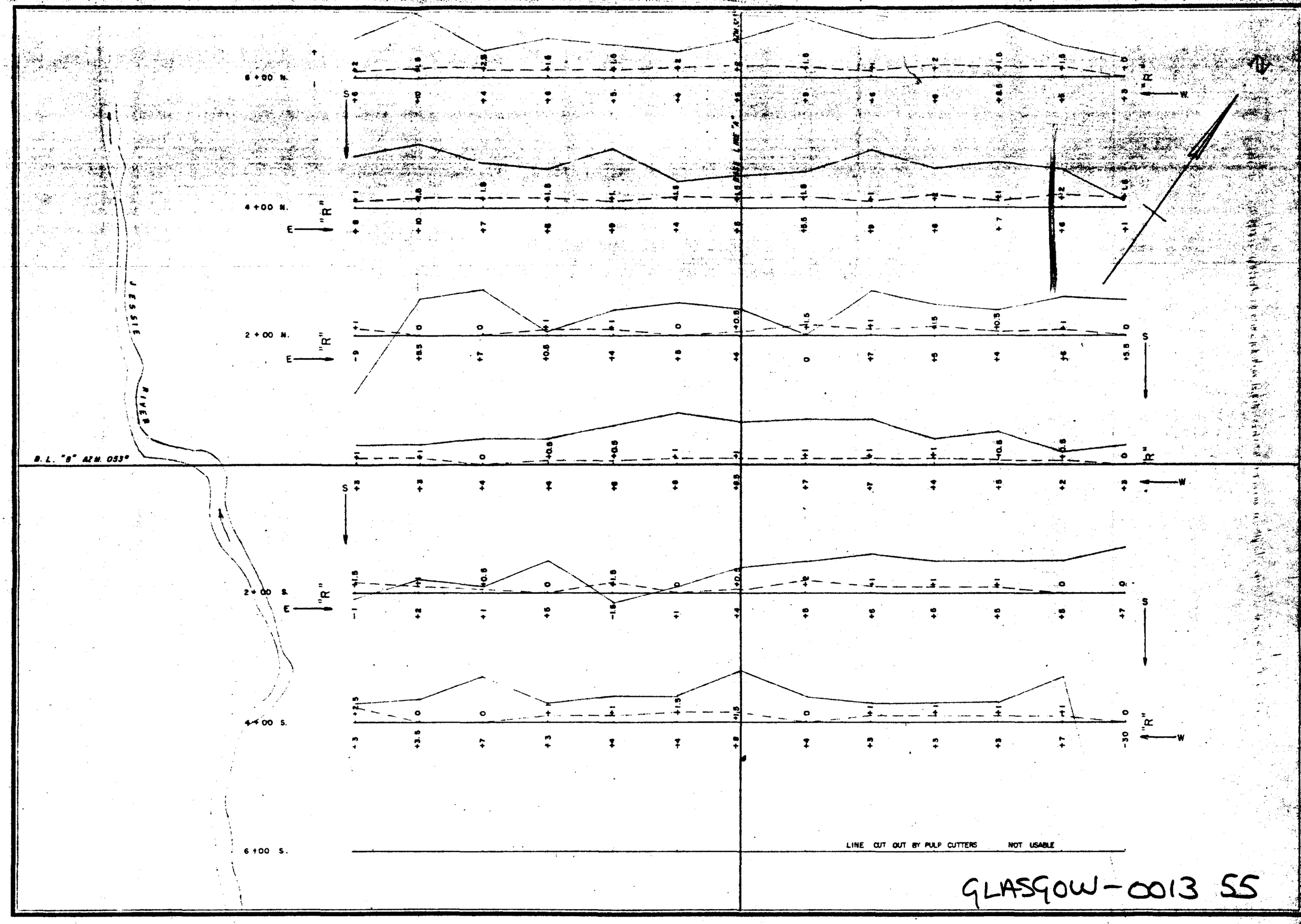
ANOMALY NO. 28 NORTH AREA

SCALE 1" = 100' DEC 12, 1961

WAY TWP



D. J. TAGLIABRACCI



INSTRUMENT: RONKA MARK IV
METHOD: IN LINE 200' SPREAD
LEGEND: IN PHASE READINGS ———
OUT OF PHASE READINGS – – – –
+5 IN PHASE | +6 OUT OF PHASE
"R" POSITION OF RECEIVER AT START OF LINE
DIRECTION IN WHICH LINE WAS RUN
1" = 10% OF PRIMARY FIELD

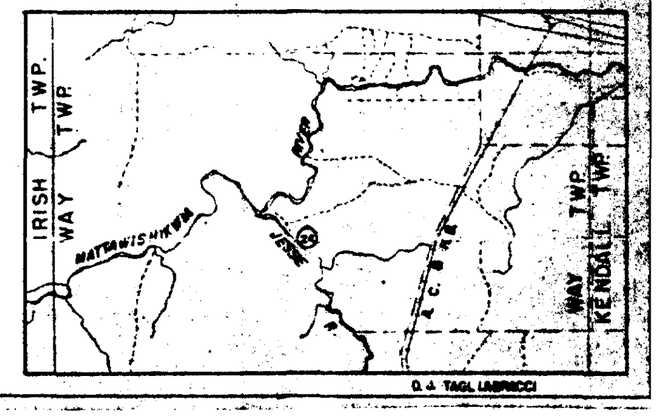
ALGOMA ORE PROPERTIES LIMITED
EXPLORATION DEPARTMENT

ANOMALY NO. 24 NORTH AREA

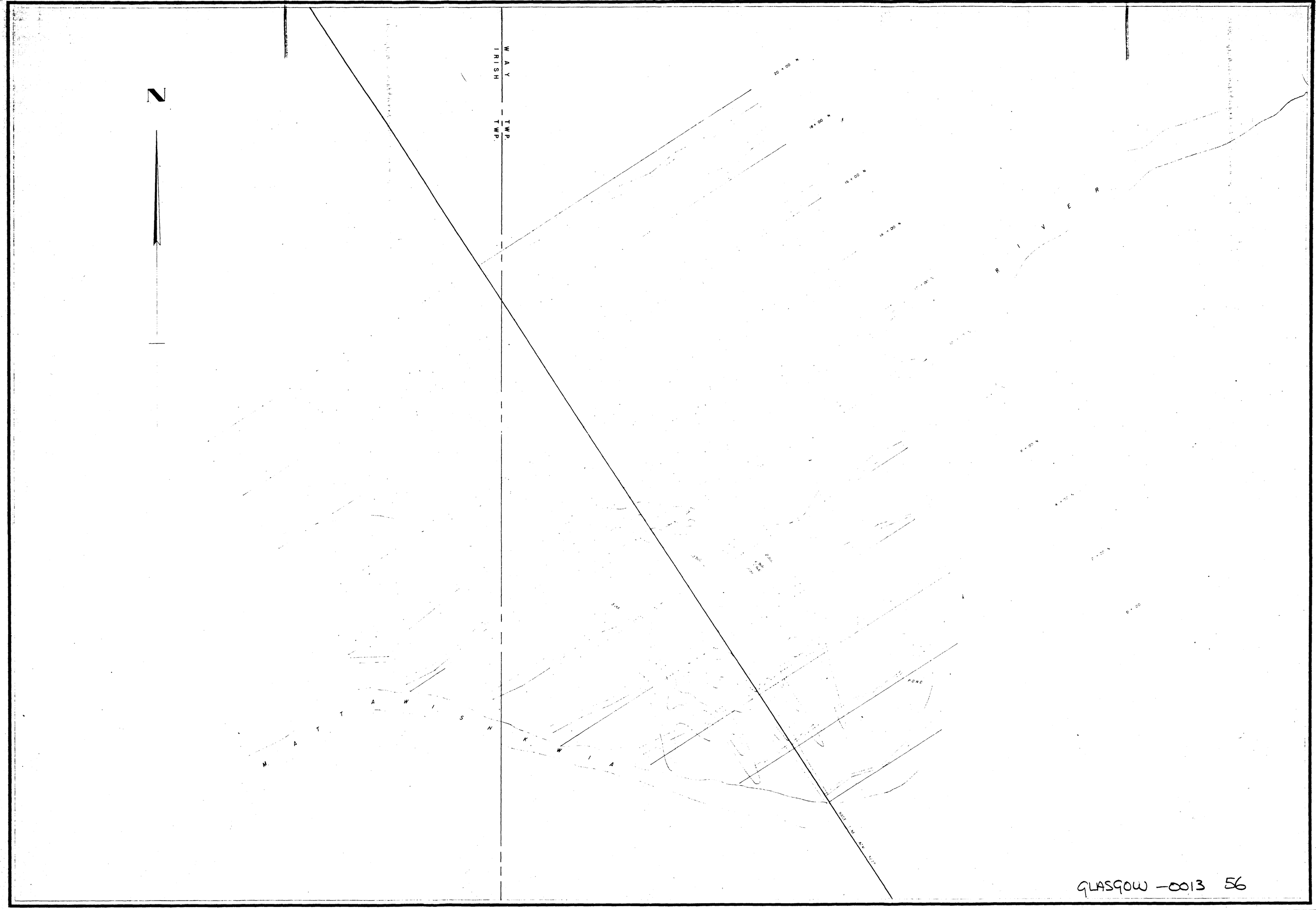
HORIZONTAL LOOP ELECTROMAGNETIC SURVEY

SCALE 1" = 100' NOV. 14, 1961

WAY Twp.



GLASGOW-0013 SS



GLASGOW –0013 56

INSTRUMENT "SHARP" MODEL A – 2 MAGNETOMETER

INSTRUMENT WITHAM G.E.M.
METHOD BROADSIDE 200' SPREAD
LEGEND C.P.S. ——— 1000 ~
C.P.S. – – – – 5000 ~
DIP ANGLES IN / S N
(1000 C.P.S.) (5000 C.P.S.)
CROSS — OVERB
SCALE 1" = 10°

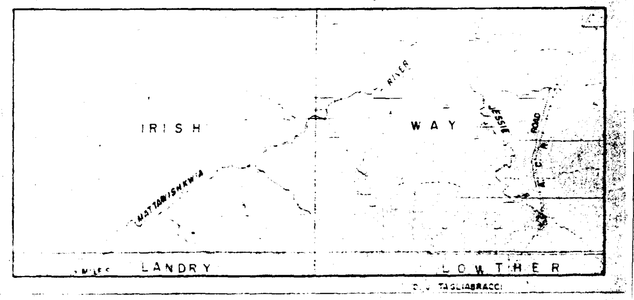
255

ALGOMA ORE PROPERTIES LTD.

EXPLORATION DEPARTMENT
MAGNETOMETER &
VERTICAL LOOP ELECTROMAGNETIC SURVEY
ANOMALY NO. 9 NORTH AREA

SCALE 1" = 10' NOV 29 1961

WAY TWP.



INSTRUMENT SHARP MODEL MAGNETOMETER

INSTRUMENT: RONKA MARK IV
METHOD: IN LINE 200 SPREAD
LEGEND: IN PHASE READINGS ———
OUT OF PHAS READINGS - - - -
IN PHASE, OUT OF PHASE
"R" POSITION OF RECEIVER AT START OF LINE
E DIRECTION IN WHICH LINE WAS RUN
1" = 10% OF PRIMARY FIELD
CONDUCTOR

ALGOMA ORE PROPERTIES LTD.

EXPLORATION DEPARTMENT

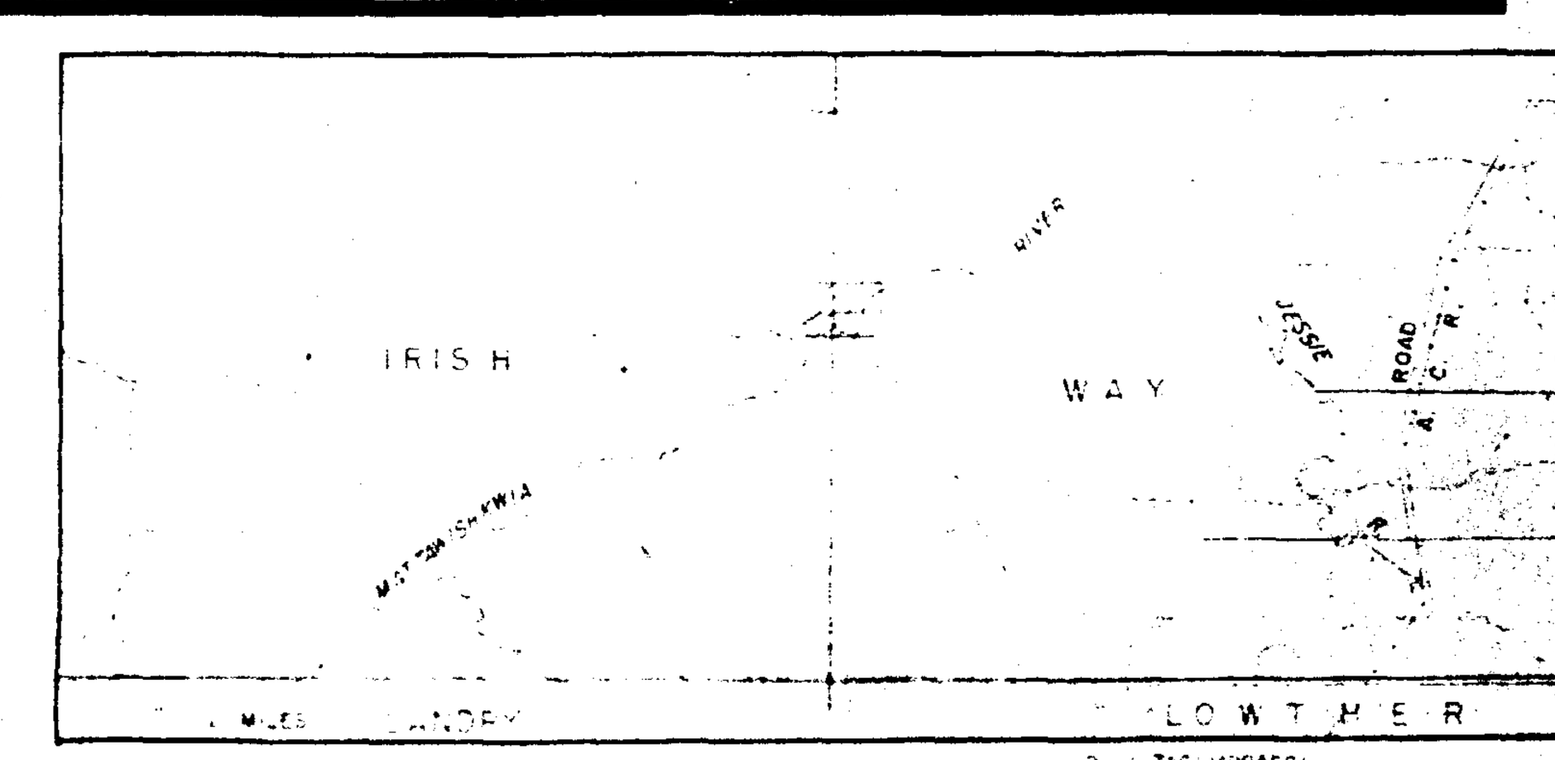
MAGNETOMETER &

HORIZONTAL LOOP ELECTROMAGNETIC SURVEY

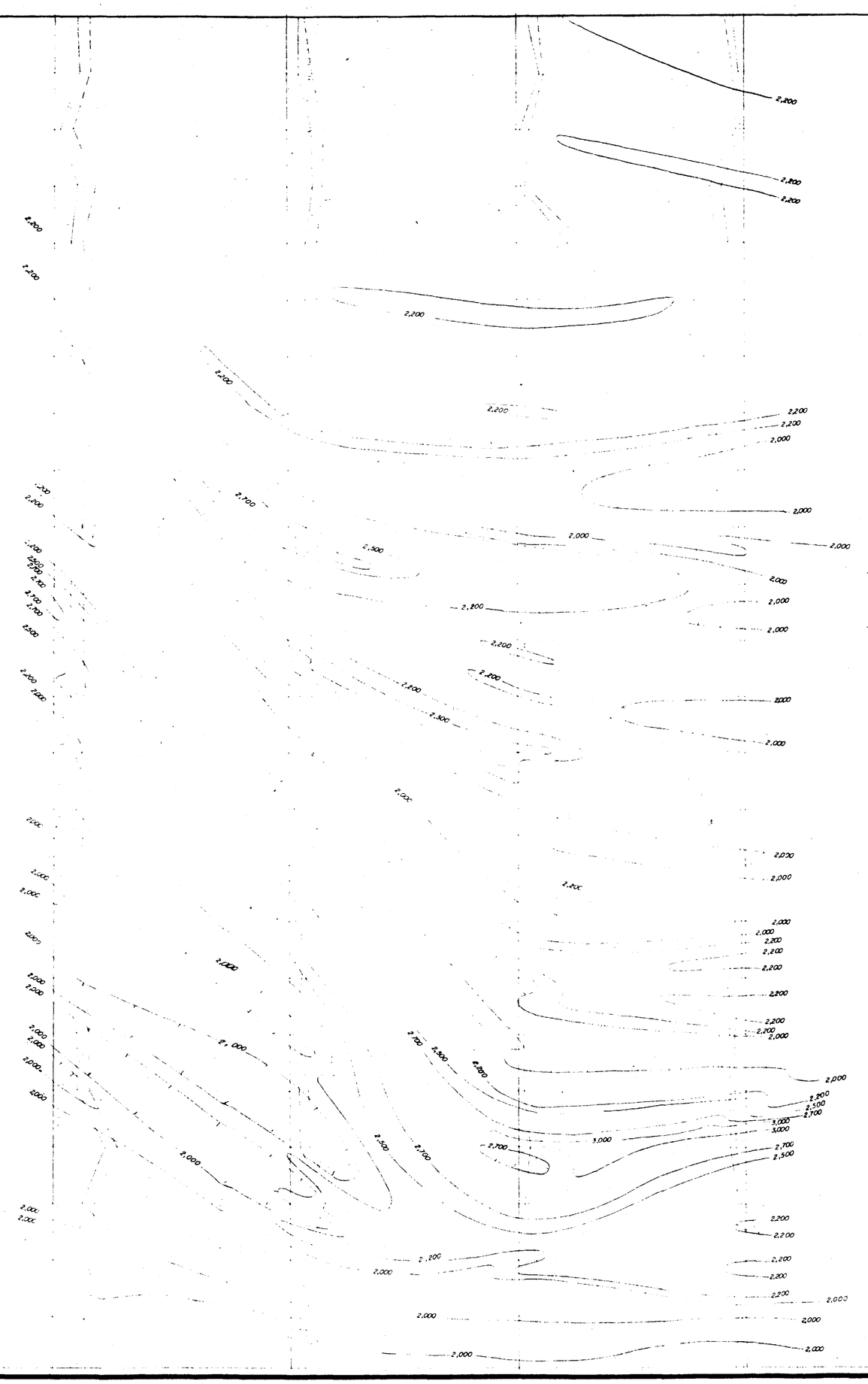
ANOMALY NO. 9 NORTH AREA

SCALE 1" = 100' NOV. 30, 196

Way Twp.



256



GLASGOW-0013 58

INSTRUMENT "SHARP" MODEL A-2 MAGNETOMETER

INSTRUMENT: MPHAR R.E.M.
METHOD: BROADSIDE 400' SPREAD
LEGEND: CPS ——— 000
CPS - - - - - 5000
DIP ANGLES ZN - 3A
(1000 CPS) (5000 CPS)

CROSS - OVERS
SCALE 1" = 100'

ALGOMA ORE PROPERTIES LTD.

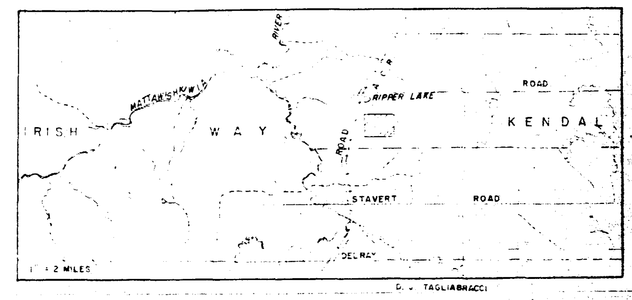
EXPLORATION DEPARTMENT

MAGNETOMETER & VERTICAL LOOP ELECTROMAGNETIC SURVEY

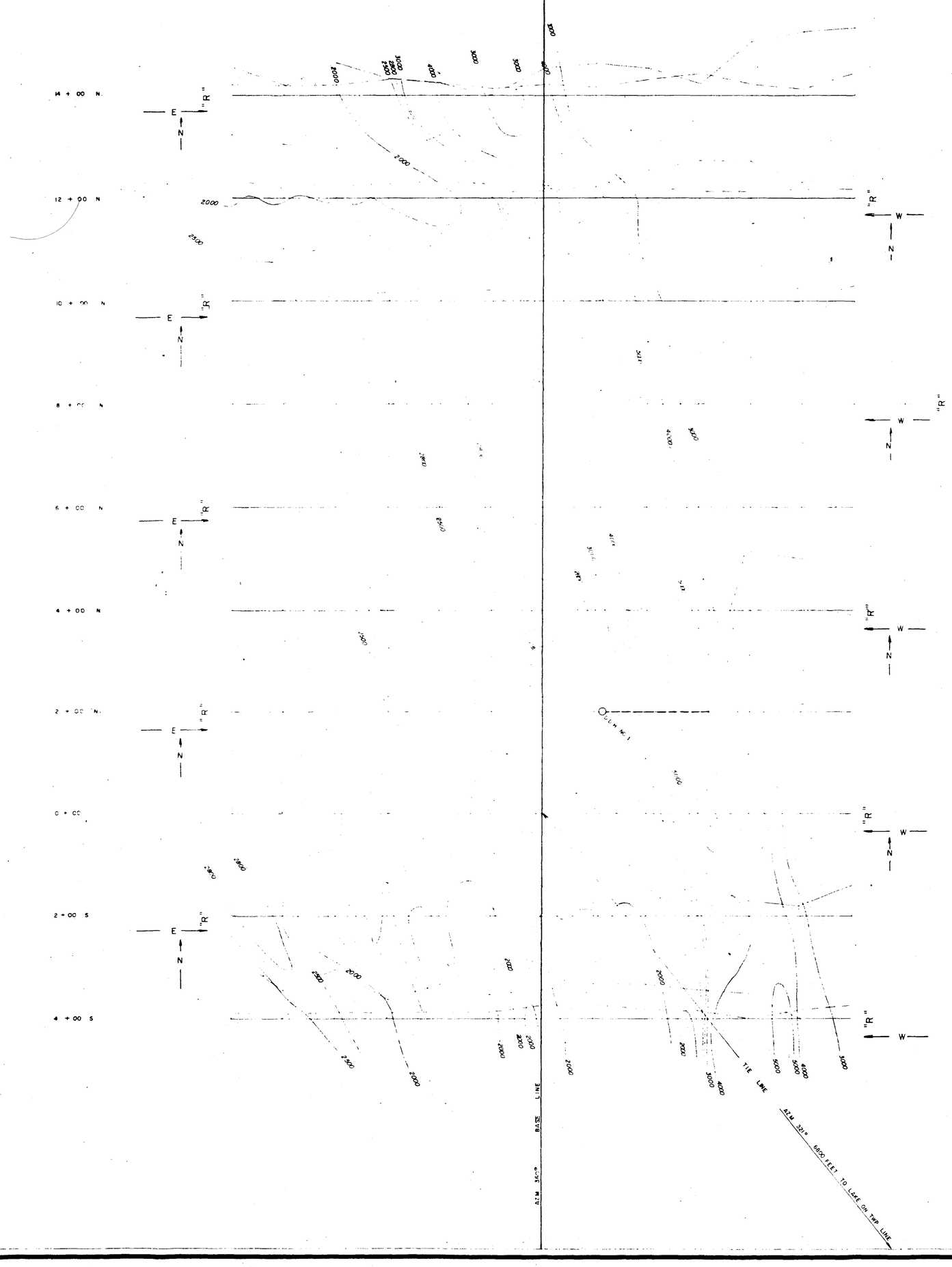
ANOMALY NO. 5 NORTH AREA

SCALE 1" = 100' DEC 22, 1961

WAY T.P



D. J. TAGLIABRACCI



GLASGOW-0013 59

INSTRUMENT SHARP MODEL AV-2 MAGNETOMETER

INSTRUMENT RONKA MARK II
METHOD: IN LINE 200' SPREAD
LEGEND: IN PHASE READINGS ———
OUT OF PHASE READINGS - - - -
+5 | +5 OUT OF PHASE PHASE
"R" POSITION OF RECEIVER AT START OF LINE
DIRECTION IN WHICH LINE WAS RUN
10% OF PRIMARY FIELD

ALGOMA ORE PROPERTIES LTD.

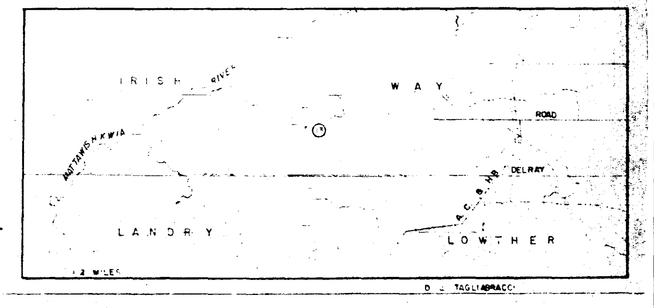
EXPLORATION DEPARTMENT

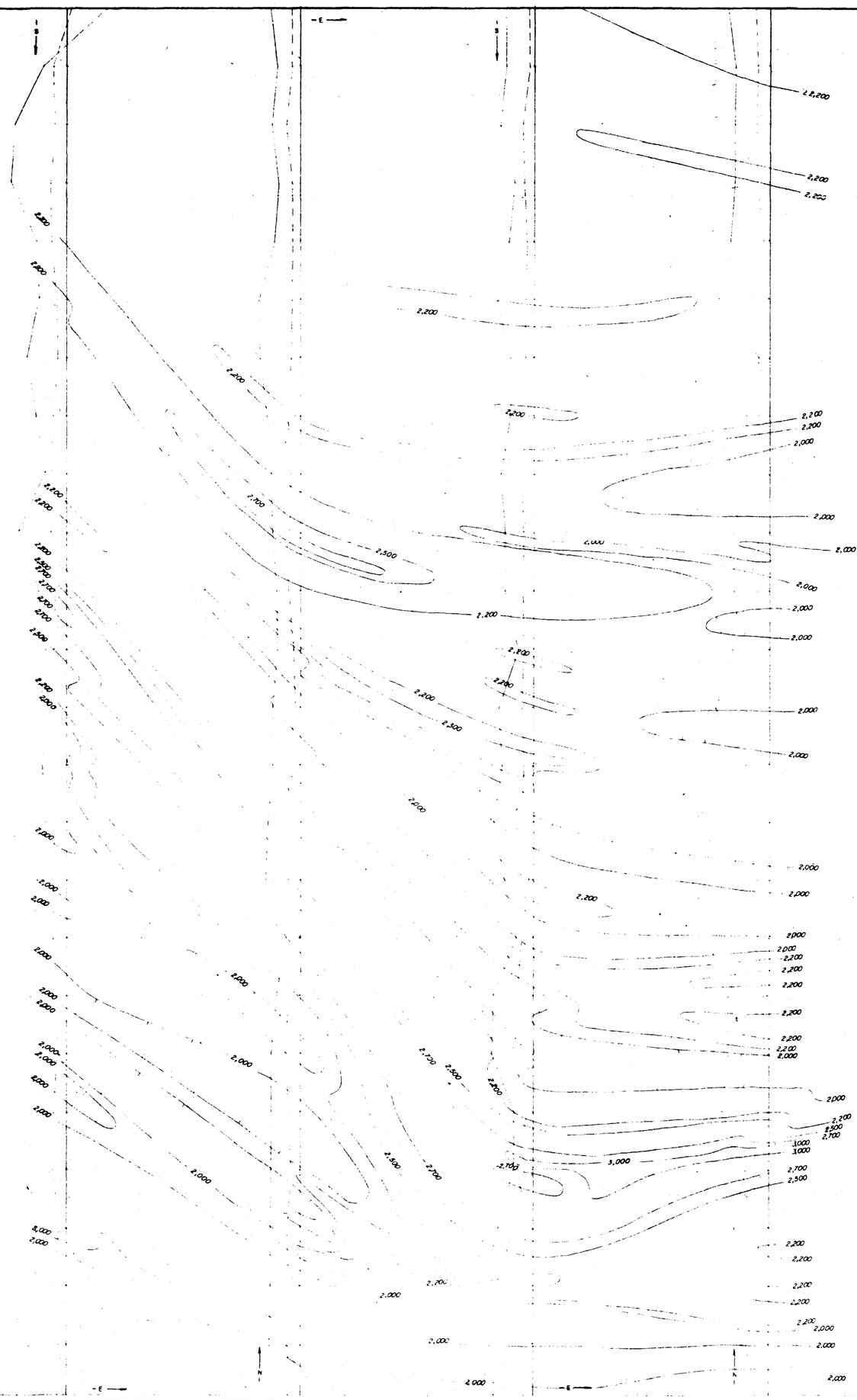
MAGNETOMETER &
HORIZONTAL LOOP ELECTROMAGNETIC SURVEY

ANOMALY NO. 13 NORTH AREA

SCALE 1" = 100' NOV. 20, 1961

Way Twp





INSTRUMENT "SHARP" MODEL A-2 MAGNETOMETER

INSTRUMENT — SCINTREX MARK IV
METHOD — IN LINE 200' SPREAD
LEGEND — IN PHASE READINGS ———
OUT OF PHASE READINGS – – – –
49 | 23 OF
PHASE | PHASE
"R" POSITION OF RECEIVER AT START OF LINE
DIRECTION IN WHICH LINE WAS RUN
1" = 10 % OF PRIMARY FIELD

CONDUCTOR

DIABASE

ALGOMA ORE PROPERTIES LTD.

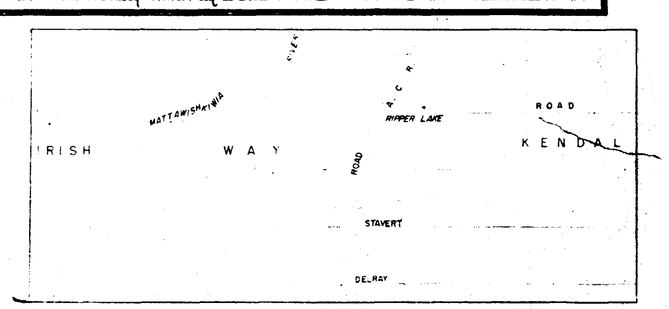
EXPLORATION DEPARTMENT

MAGNETOMETER & HORIZONTAL LOOP ELECTROMAGNETIC SURVEY

ANOMALY NO. 5 NORTH AREA

SCALE 1" = 200' DEC. 21, 1961

Way Twp



GLASGOW-0013 60

DERRY TWP.

LIPTON TWP.

	0+00 E.	2+00 E.	4+00 E.	6+00 E.	8+00 E.	10+00 E.	12+00 E.
	2N - 3N	4N - 6N	8N - 10N	3N - 4N	3N - 5N	1.5N - 4N	2S - 4S
	2N - 3N	1N - 2N	5N - 6N	5N - 7N	4N - 6.5N	1.5N - 3.5N	1.5S - 2S
	4N - 6N	5N - 6.5N	3N - 4N	6N - 7.5N	5N - 7N	3N - 6N	2S - 4S
	3N - 5N	5N - 6N	5N - 7N	5N - 6N	2N - 4N	1.5N - 4N	3S - 5S
AZ. 120°	2N - 3N	1N - 2N	4N - 6.5N	4N - 5N	5N - 7N	2N - 3N	1S - 1.5S
	1N - 1.5N	0.5N - 4N	4N - 6.5N	3N - 4N	4N - 6.5N	2N - 5N	2S - 4S
	1N - 1.5N	1N - 2N	4N - 6.5N	5N - 7N	4N - 6.5N	2N - 3N	1S - 3S
	1N - 2N	1N - 1.5N	3N - 6N	1.5N - 2N	5N - 6.5N	2N - 3N	4S - 6S
	2N - 3N	1N - 2N	5N - 7N	2N - 3N	3N - 4N	1N - 2N	3S - 6S

GLASGOW - 0013 61

260

LEGEND

Mᶜ PHAR R. E. M.

1000 C.P.S. | 5000 C.P.S.

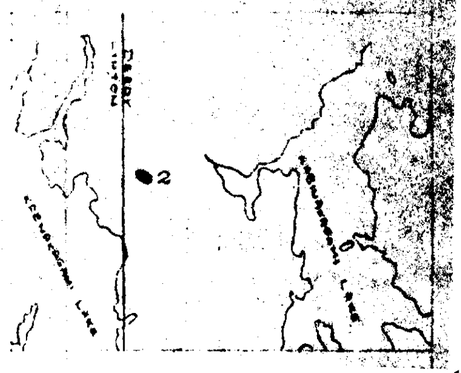
——— 1000 C.P.S

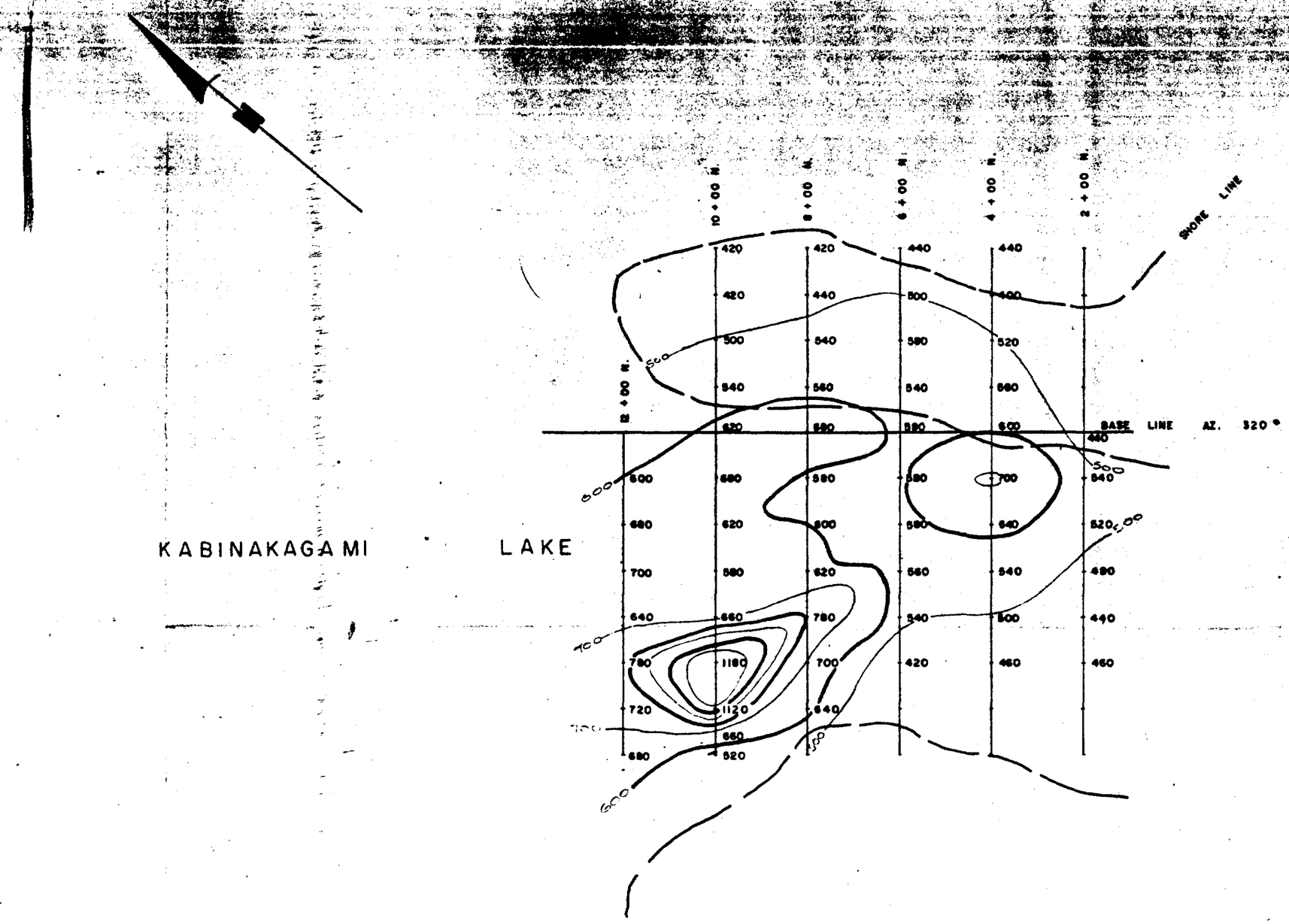
– – – – 5000 C.P.S.

● CONDUCTOR

SURVEYED BY BROADSIDE METHOD
TRANSMITTER 400' EAST OF RECEIVER
TRANSMITTER 400' WEST ON LINE 12+00

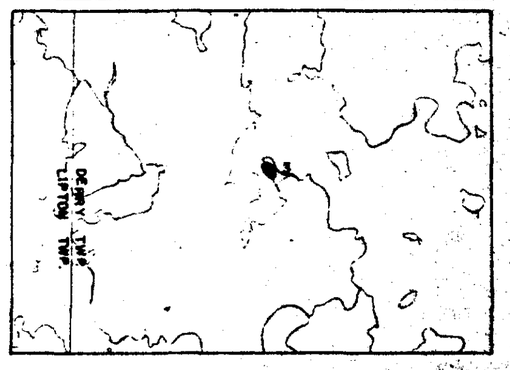
ALGOMA ORE PROPERTIES LIMITED
EXPLORATION DEPARTMENT
BLOCK "C"
ANOMALY - 2
DERRY TWP.
ELECTROMAGNETIC SURVEY
SCALE 1" = 200' JUNE 1958.





GLASGOW-0013 62

ALGOMA ORE PROPERTIES LIMITED
EXPLORATION DEPARTMENT
BLOCK "C"
ANOMALY 3
DERRY TWP.
MAGNETOMETER SURVEY
SCALE 1" = 200' JUNE 1958



N

INSTRUMENT "SHARP" MODEL A-2 MAGNETOMETER

INSTRUMENT: BORKA MARK IV
METHOD: IN LINE 200' SPREAD
LEGEND: IN PHASE READINGS ———
OUT OF PHASE READINGS – – – –
+5 | 0.0 | -5
PHASE | POINT OF | PHASE
"R" POSITION OF RECEIVER AT START OF LINE
DIRECTION IN WHICH LINE WAS RUN
1" = 10% OF PRIMARY FIELD

DIABASE
GREENSTONE

42G12NE0002 0013 GLASGOW

262

OPERATORS TONY PARADIS & G. SISISMONDI NOV. 1, 1961

ALGOMA ORE PROPERTIES LTD.

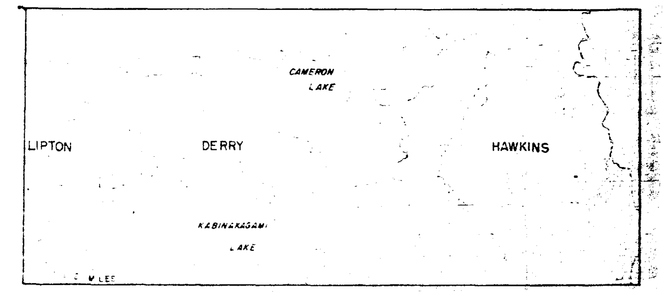
EXPLORATION DEPARTMENT

MAGNETOMETER & HORIZONTAL LOOP ELECTROMAGNETIC SURVEY

ANOMALY NO. 52 C CENTRAL AREA

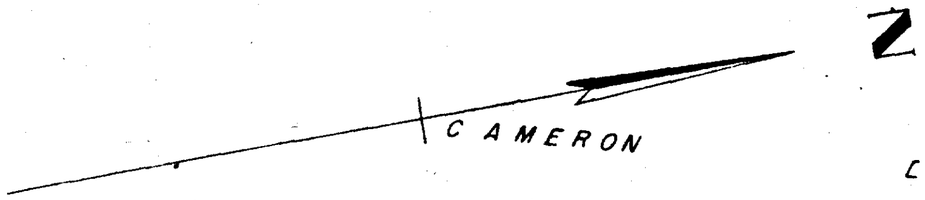
SCALE 1" = 100' DEC. 20, 196

DERRY TWP.



GLASGOW - 0013 63

File # 63-1253 (1961-63)



0 + 00 N	4 + 00 N	8 + 00 N	12 + 00 N	16 + 00 N	20 + 00 N	24 + 00 N	28 + 00 N	32 + 00 N
	3440	2100	1920	1760	3150	3270	2710	
	3920	2100	1820	1680	3070	3150	2570	
	2820	2060	1700	1940	2990	3130	2480	1370
	2700	2100	1600	2020	3090	3070	2410	1510
	2660	2100	1560	2020	3010	2970	2390	1670
	2840	2040	1660	2060	2930	2910	2390	1870
	2980	1920	1760	2220	2970	2670	2230	2670
	3180	1960	1880	2280	3090	2490	2150	3150
1580	3220	1960	2080	2380	3190	2490	2310	2990 BASE LINE AZ. 090°
1500	3360	2000	2200	2320	3150	2310	2430	2910
1440	3440	2120	2280	2460	2970	2490	2330	2610
1420	3340	2240	2260	2360	2870	2750	2210	2670
1440	2940	2340	2200	2460	2390	2910	2190	2610
1440	2640	2380	2120	2400	2510	3010	2010	2310
1420	2400	2400	2120	2520	2930	3010	2180	2070
1520	2320	2440	2220	2560	2970 3170	2680	2410	1930
1420	2240	2500	2320	2700	3210 3270	2330	2070	1960

GLASGOW-0013 6A

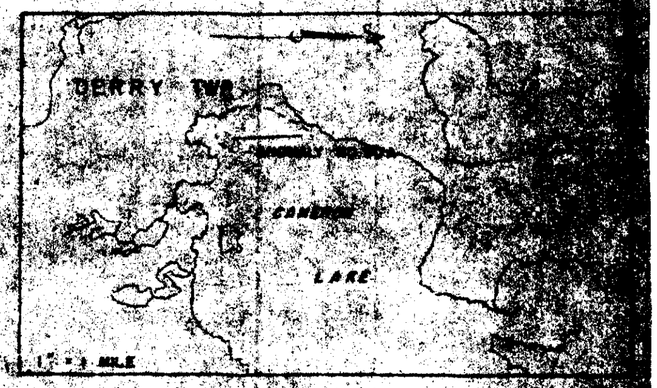
LEGEND

INSTRUMENT "SHARPE" MODEL A-2 MAGNETOMETER
READINGS IN GAMMAS

ALGOMA ORE PROPERTIES LIMITED
EXPLORATION DEPARTMENT

ANOMALY NO. 50 A CENTRAL AREA
MAGNETOMETER SURVEY

SCALE 1" = 200' APRIL 27, 1960



KABINAKAGAMI LAKE

N

28+00W	24+00W	20+00W	16+00W	12+00W	8+00W	4+00W	0+00
1N - 1.5N	1.5N - 3N	1.5N - 3N	1N - 1.5N	2N - 3N	2N - 4N	2.5N - 3N	3S - 4S
2.5N - 4N	1N - 1.5N	5N - 7N	1N - 1.5N	2N - 3N	5N - 7N	3N - 5N	3.5S - 4S
2N - 3N	2.5N - 3N	3N - 4N	3N - 4N	3N - 5N	4N - 6N	5N - 7N	1N - 1.5N
3.5N - 4N	1N - 1.5N	3N - 5N	0.5N - 1N	1N - 1.5N	3N - 5N	3N - 5N	1.5S - 2.5S
2N - 3N	1.5N - 3N	2.5N - 3N	1N - 1.5N	6N - 7N	0N - 0.5S	3N - 4N	2S - 3S
BASE LINE AZ 270° 3N - 5N	3N - 5N	3N - 4N	1N - 1.5N	5N - 7N	3.5N - 4N	1N - 1.5N	1S - 1.5S
3N - 4N	3N - 5N	3N - 4N	2.5N - 3N	3N - 5N	3N - 5N	3N - 5N	4S - 7S
3.5N - 4N	1.5N - 2.5N	2N - 3N	1.5N - 2N	0.5N - 1.5N	2.5N - 10N	1.5N - 2N	4S - 9S
4N - 6N	2.5N - 3N	1N - 1.5N	1.5N - 2N	1N - 1.5N	1N - 1.5N	1.5N - 2N	2S - 3S
1N - 1.5N	2N - 3N	4N - 6N	2.5N - 3N	3.5N - 4N	0.5N - 1.0N	2N - 3N	3S - 4S
2N - 3N	1N - 3N	2N - 3N	1N - 1.5N	2N - 3N	1N - 1.5N	2N - 4N	2S - 3S

GLASGOW-0013 65

LEGEND

1000 C.P.S. | 5000 C.P.S.

—— 1000 C.P.S.

------ 5000 C.P.S.

CONDUCTOR

SCALE 1" = 10°

INSTRUMENT : Mc PHAR VERTICAL LOOP R.E.M

METHOD BROADSIDE — 400' SPREAD

ALGOMA ORE PROPERTIES LTD.

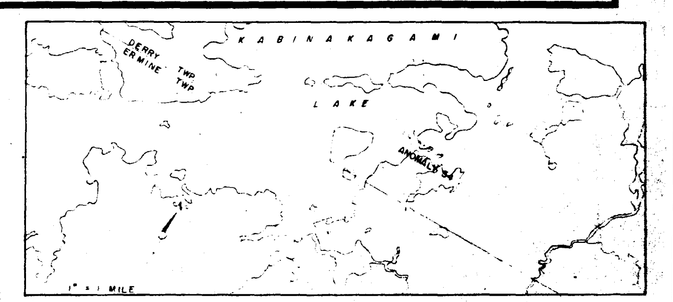
EXPLORATION DEPARTMENT

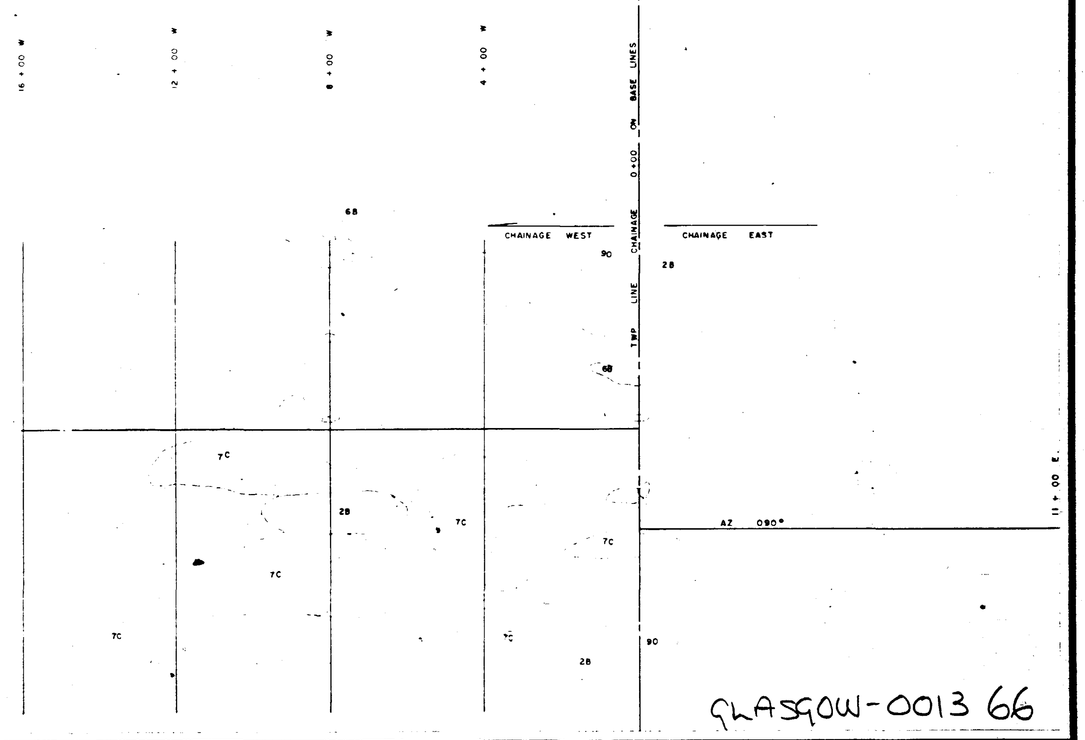
ELECTROMAGNETIC SURVEY

ANOMALY NO. 54 BLOCK "C"

SCALE 1" = 100' APRIL 28, 1960

TRACED BY D. J. TAGLIABRACCI





LEGEND

- METASEDIMENTS — QUARTZ SCHIST -2A-, QUARTZ-BIOTITE SCHIST -2B-, BIOTITE - QUARTZ SCHIST 2C-, HORNBLEND-BIOTITE-QUARTZ SCHIST -2D-, HORNBLEND SCHIST -2E-, GARNET-HORNBLEND SCHIST 2F-, GARNET-BIOTITE SCHIST-2G-, GNEISSIC-2GN-
- BASIC VOLCANIC — PILLOW LAVA - 4A-, SCHISTOSE "GREENSTONE" -4E-
- ACID VOLCANICS — MASSIVE -1A-, PYROCLASTIC -1B-, TUFF, FINE GRAINED, BANDED -1C-
- DIORITE — MASSIVE -6A-, SCHISTOSE -6B-, MAGNETIC -MAG-
- LAMPROPHYRE — 5
- GRANITE — MASSIVE -7A-, GNEISS -7B-, PEGMATITE-7C-, APLITE -7D-,
- DIABASE — MASSIVE -8A-, PORPHYRITIC -8D-

SYMBOLS

- BEDDING, STRIKE AND DIP
- GNEISSOSITY,
- SCHISTOSITY, STRIKE AND DIP
- SHEAR ZONE OR FAULT

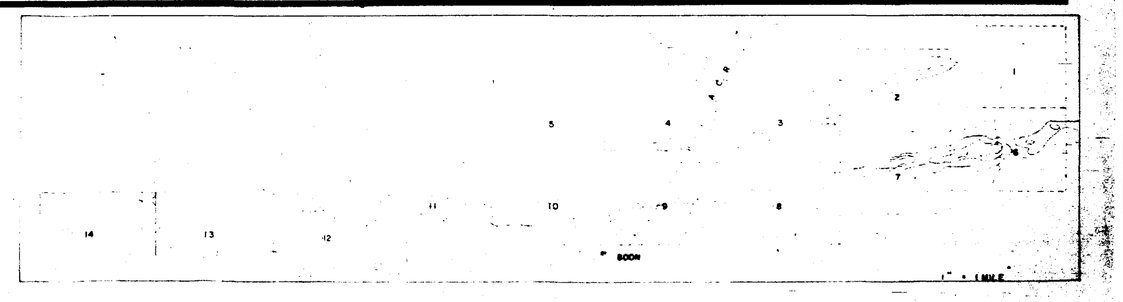
ALGOMA ORE PROPERTIES LTD.

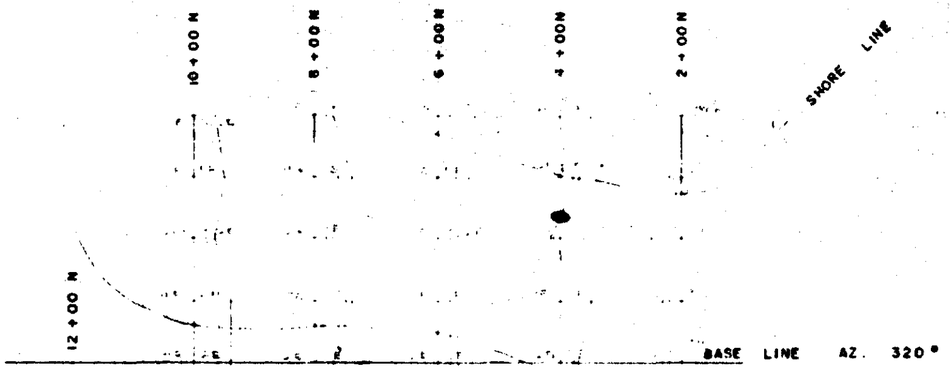
EXPLORATION DEPARTMENT

GEOLOGY

ANOMALIES 1 & 2

SCALE 1" = 200' JUNE 1958





KABINAKAGAMI LAKE

266

LEGEND

Mª PHAR R. E. M.

1000 C.P.S.	5000 C.P.S.
——— 1000 C.P.S.	
- - - - - 5000 C.P.S.	
● CONDUCTOR	

SURVEYED BY BROADSIDE METHOD
TRANSMITTER 400' SOUTH OF RECEIVER

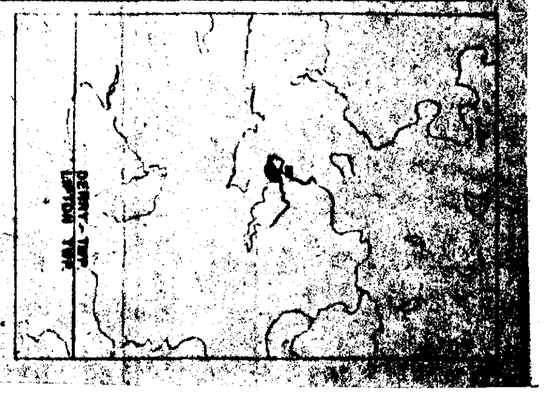
ALGOMA ORE PROPERTIES LIMITED
EXPLORATION DEPARTMENT

BLOCK "C"

ANOMALY 3
DERRY TWP.

ELECTROMAGNETIC SURVEY

SCALE 1" = 200' MAY 1958



N

C A M E R O N L A K E

ISLAND

ISLAND

BASE LINE AZ 082°

HUB MARKED 35+00

GLASGOW-0013 68

LEGEND

1000 C.P.S.	5000 C.P.S.

1000 C.P.S.

5000 C.P.S.

CONDUCTOR

SCALE 1" = 10°

INSTRUMENT : Mc PHAR VERTICAL LOOP RE.M

METHOD : BROADSIDE — 400' SPREAD

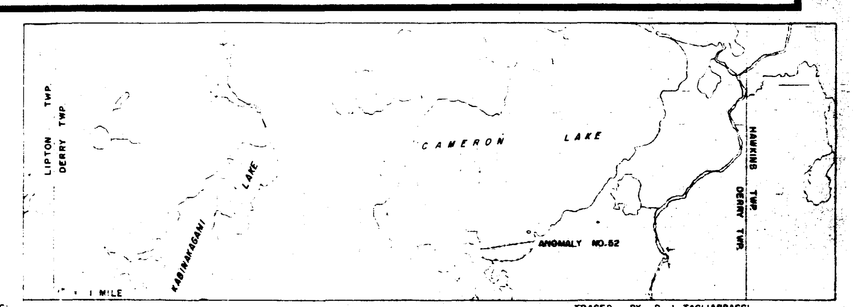
ALGOMA ORE PROPERTIES LTD.

EXPLORATION DEPARTMENT

ELECTROMAGNETIC SURVEY

ANOMALY NO. 52 BLOCK "B"

SCALE 1" = 100 APR. 28 1960



TRACED BY C. J. TAGLIABRACCI

TRACED BY D. J. TAGLIABRACCI

1960

267

N

C A M E R O N L A K E

ISLAND

ISLAND

BASE LINE AZ 082°

HUB MARKED 36+50

0 + 00 E

4 + 00 E

8 + 00 E

12 + 00 E

16 + 00 E

20 + 00 E

24 + 00 E

28 + 00 E

32 + 00 E

GLASGOW-0013 69

LEGEND

INSTRUMENT : "SHARPE" MODEL A-2 MAGNETOMETER

READINGS IN GAMMAS

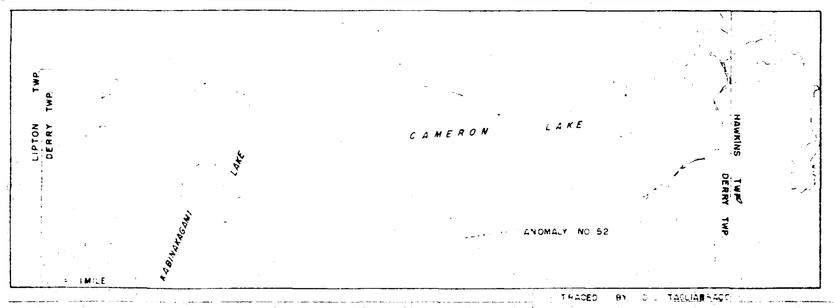
ALGOMA ORE PROPERTIES LTD.

EXPLORATION DEPARTMENT

MAGNETOMETER SURVEY

ANOMALY NO. 52 BLOCK "B"

SCALE 1" = 100' APRIL, 1960



TRACED BY D. TAGLIABRACCI

42G12NE0002 0013 GLASGOW

268 T FEB 7, 1960

GLASGOW-0013 70

File # 63-1255 (1961-63)

INSTRUMENT: "SHARPE" MODEL [illegible] MAGNETOMETER

INSTRUMENT: RONKA MARK IV
METHOD: IN LINE 200' SPREAD
LEGEND: IN PHASE READING: ———
OUT OF PHASE READING: - - - -
AT 90° TO PHASE
"R" POSITION OF RECEIVER AT START OF LINE
D DIRECTION IN WHICH LINE WAS RUN
S
17.0% OF PRIMARY FIELD

CONDUCTOR
FORESTRY PHONE LINE [illegible]

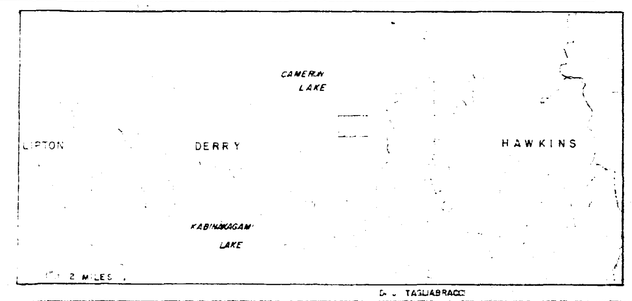
B SUBBASE
A [illegible]

ALGOMA ORE PROPERTIES LTD.

EXPLORATION DEPARTMENT
MAGNETOMETER & HORIZONTAL LOOP ELECTROMAGNETIC SURVEY
ANOMALY NO. 52 B CENTRAL AREA

SCALE 1" = 100' DEC. [illegible]

Jeffery Twp?



GLASGOW-0013 71

Ex #65-1255 (101-63)

INSTRUMENT "SHARP" MODEL A-2 MAGNETOMETER

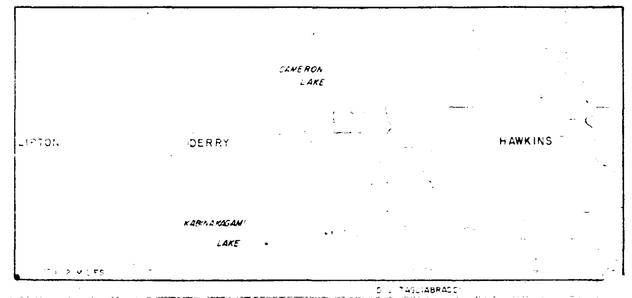
INSTRUMENT: McPHAR R.E.M.
METHOD: BROADSIDE 400' SPREAD
LEGEND: CPS ——— 1000
CPS - - - - 5000
DIP ANGLES: 2N | 3N
(1000 C.P.S.) (5000 C.P.S.)

CROSS - OVERS
SCALE - 1" = 10°

ALGOMA ORE PROPERTIES LTD.

EXPLORATION DEPARTMENT
MAGNETOMETER &
VERTICAL LOOP ELECTROMAGNETIC SURVEY
ANOMALY NO. 52 B CENTRAL AREA

SCALE 1" = 100' DEC. 5, 1962



GLASGOW-0013 72

INSTRUMENT "SHARP" MODEL A - 2 MAGNETOMETER

INSTRUMENT: RONKA MARK IV
METHOD: IN LINE 300' SPREAD
LEGEND: IN PHASE READINGS ———
OUT OF PHASE READINGS - - - -
+S IN PHASE | +S OUT OF PHASE
" R " POSITION OF RECEIVER AT START OF LINE
DIRECTION IN WHICH LINE WAS RUN

ALGOMA ORE PROPERTIES LIMITED
EXPLORATION DEPARTMENT

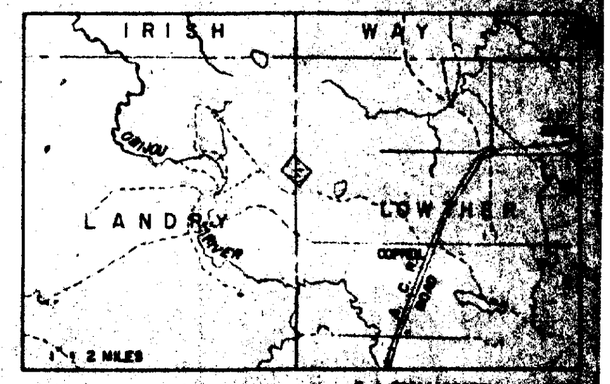
MAGNETOMETER B

HORIZONTAL LOOP ELECTROMAGNETIC SURVEY

ANOMALY NO. 30 NORTH AREA

SCALE: 1" = 100' DEC. 26, 1951

LANDRY TWP.



Flown and Compiled in OCTOBER 1956 - MAY 1957

GLASGOW-0013 73

ELECTROMAGNETIC CONTOUR

MEAN FLIGHT LINE SPACING ... 660 FEET

MEAN TERRAIN CLEARANCE ... 500 FEET

RADIOMETRIC ANOMALY

FIDUCIAL POINTS ... 2690

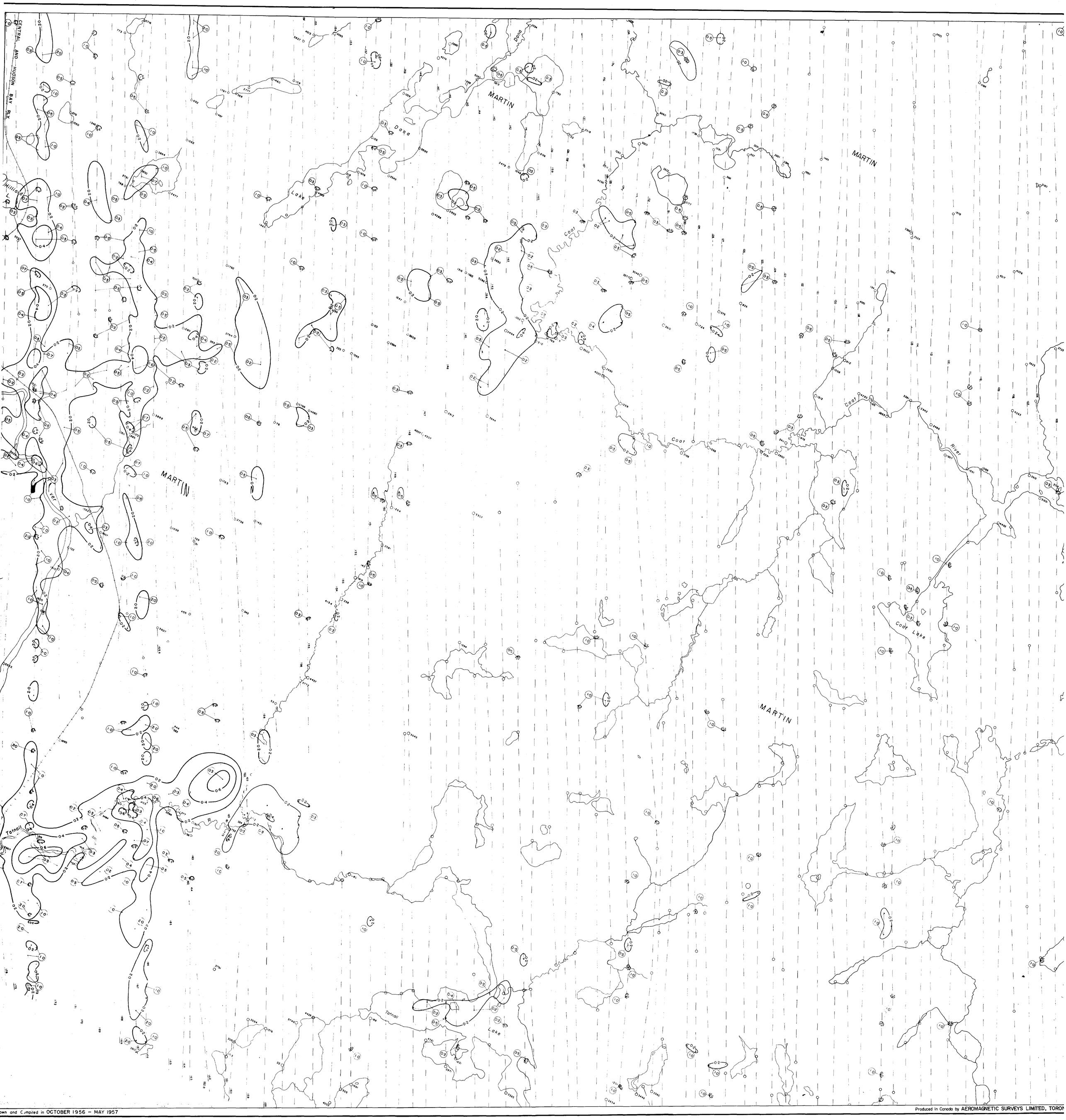
1 TO 73

TOWNSHIP OF GLASGOW
DISTRICT OF ALGOMA

SCALE

1000 FEET 0 1000 2000 3000 4000 5000 FEET

1 Inch to 1320 Feet



Produced in Canada by AERIAL SURVEYS LIMITED, TORONTO

Flown and Compiled in OCTOBER 1956 - MAY 1957

MAGNETIC CONTOUR ~

FLIGHT LINE SPACING 660 FEET

TERRAIN CLEARANCE 500 FEET

METRIC ANOMALY

FIX POINTS

LINES

TOWNSHIP OF MARTIN

SCALE

1000 FEET 0 1000 2000 3000 4000 5000 FEET

1 inch to 1320 Feet

RECEIVED
JUN 1 1964
RESIDENT GEOLOGIST
SAULT STE. MARIE

Contours indicate out of phase comp of the secondary fields induced by a C.P.S. primary field.

Contour interval ..... 0·2 d

The numbers shown thus ..... (1·5) ar ratios of $\frac{400 \text{ CYCLE RESPONSE}}{2300 \text{ CYCLE RESPONSE}}$ and measure of the relative conductivity o energized bodies.

273

GLASGOW 0013 #74

Martin Twp
airborne EM

TOWNSHIP OF MARTIN

Flown and Compiled in OCTOBER 1956 - MAY 1957

Produced in Canada by AEROMAGNETIC SURVEYS LIMITED, TOR

CONTOUR INTERVAL ..... 20 GAMMA
FLIGHT LINE SPACING ..... 660 FEET
TERRAIN CLEARANCE ..... 500 FEET
GAMMA CONTOUR .....
GAMMA CONTOUR .....
GAMMA CONTOUR .....
MAGNETIC LOW .....
CONTROL POINTS ..... 3690 ○
LINES 150 TO 177

SCALE

1000 0 1000 2000 3000 4000 5000 FEET

1 inch to 1320 Feet

Martin Twp
aeromag
GLASGOW 0013 #75 1" = ¼ mile

Flown and Compiled in OCTOBER 1956 - MAY 1957

GLASGOW – 0013 76

275

ELECTROMAGNETIC CONTOUR

MEAN FLIGHT LINE SPACING ..... 660 FEET

MEAN TERRAIN CLEARANCE ..... 500 FEET

RADIOMETRIC ANOMALY .....

FIDUCIAL POINTS 3690

FLIGHT LINES ..... 1 TO 73

TOWNSHIP OF GLASGOW
DISTRICT OF ALGOMA

SCALE

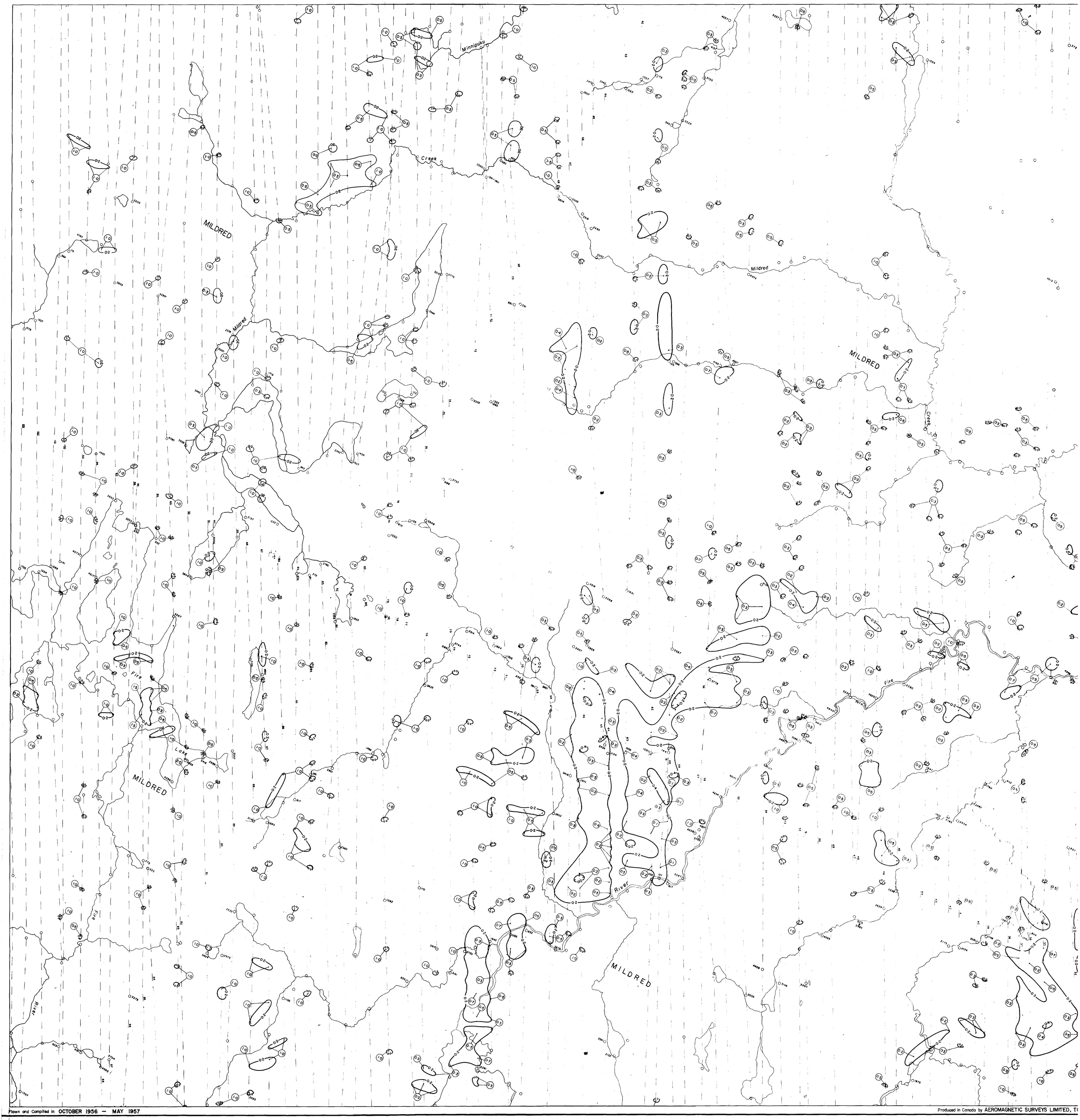
1000 FEET 0 1000 2000 3000 4000 5000 FEET

1 Inch to 1320 Feet

Contours indicate out of phase component of the secondary fields induced by a 400 C.P.S. primary field.

Contour interval ..... 0·2 degrees

The numbers shown thus ..... 1·5 are the ratios of $\frac{400 \text{ CYCLE RESPONSE}}{2300 \text{ CYCLE RESPONSE}}$ and are a measure of the relative conductivity of the energized bodies.



Flown and Compiled in OCTOBER 1956 — MAY 1957

Produced in Canada by AEROMAGNETIC SURVEYS LIMITED, TO

ELECTROMAGNETIC CONTOUR

MEAN FLIGHT LINE SPACING ..... 660 FEET

MEAN TERRAIN CLEARANCE ..... 500 FEET

RADIOMETRIC ANOMALY

FIDUCIAL POINTS 3690

FLIGHT LINES

TOWNSHIP OF MILDRED

SCALE

1000 FEET 0 1000 2000 3000 4000 5000 FEET

1 inch to 1320 Feet

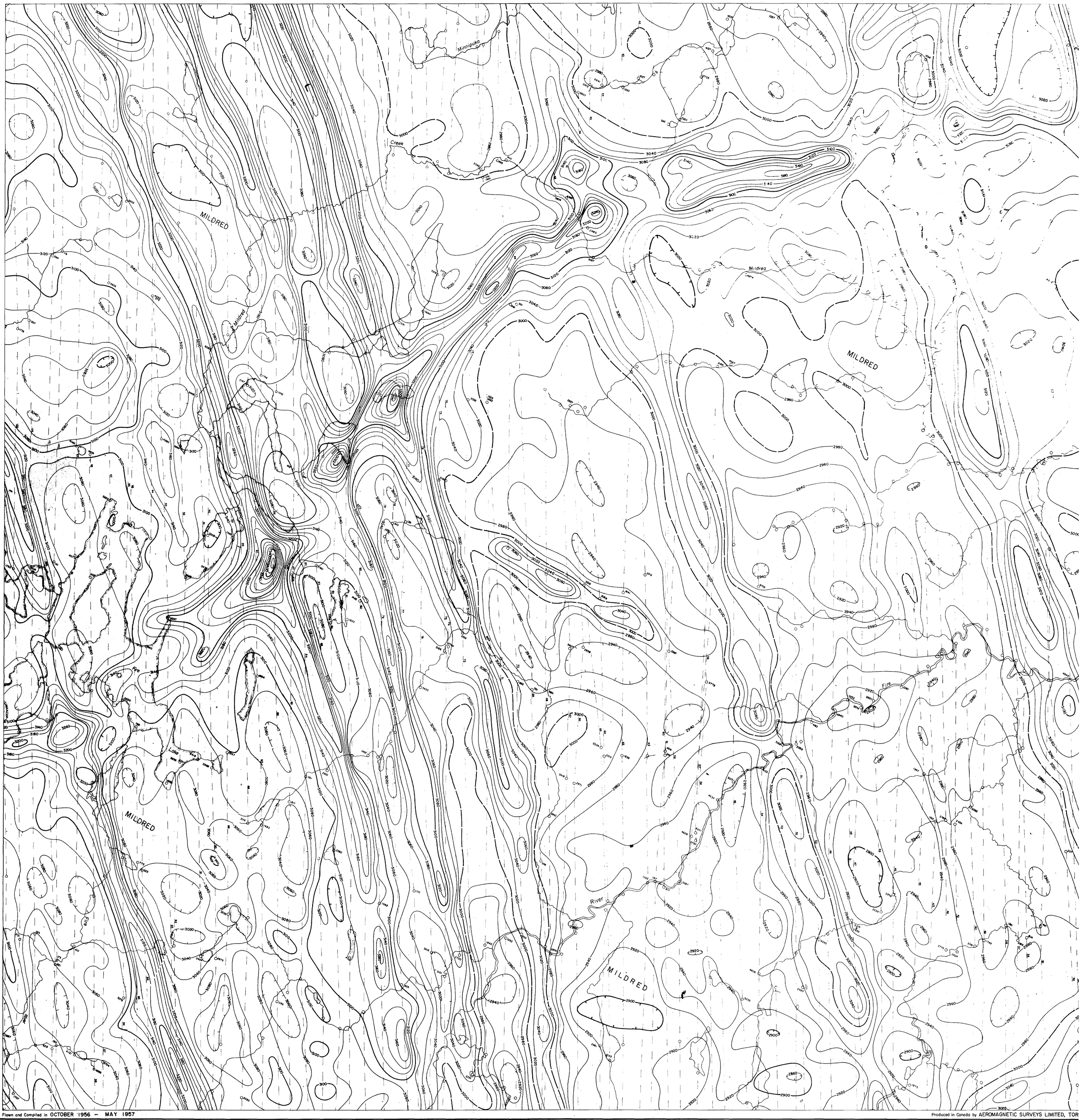
Contours indicate out of phase c
of the secondary fields induced by
C.P.S. primary field.

Contour interval ..... O

The numbers shown thus ..... (1

ratios of 400 CYCLE RESPONSE / 2300 CYCLE RESPONSE a
measure of the relative conductivity
energized bodies.

276



Flown and Compiled in OCTOBER 1956 - MAY 1957

Produced in Canada by AEROMAGNETIC SURVEYS LIMITED, TOR

CONTOUR INTERVAL ..... 20 GAMMA
MEAN FLIGHT LINE SPACING ..... 660 FEET
MEAN TERRAIN CLEARANCE ..... 500 FEET
100 GAMMA CONTOUR
50 GAMMA CONTOUR
10 GAMMA CONTOUR
MAGNETIC LOW
FIDUCIAL POINTS 3880 O
FLIGHT LINE

42G12NE0002 0013 GLASGOW

277

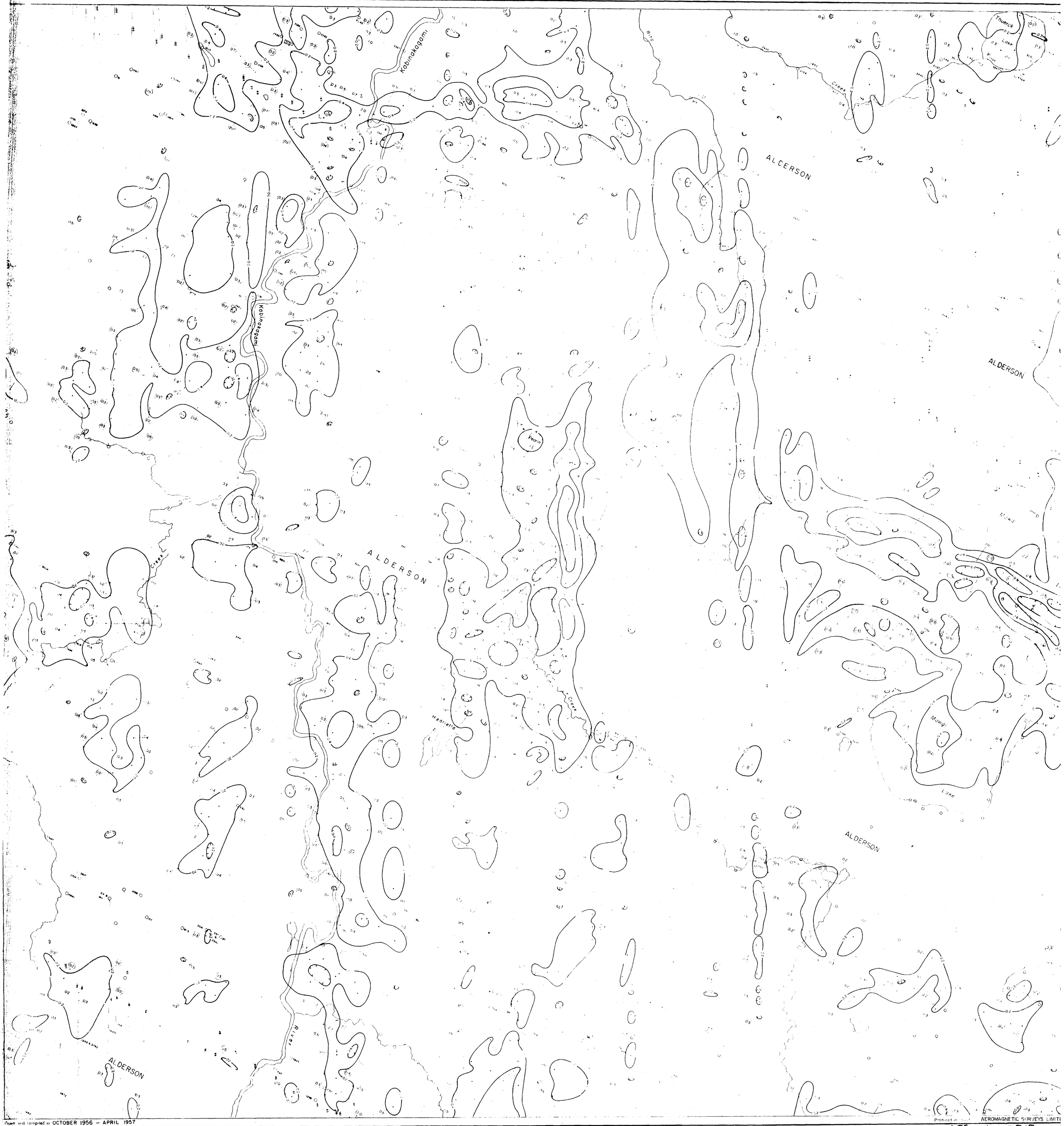
TOWNSHIP OF MILDRED

SCALE

1000 FEET 0 1000 2000 3000 4000 5000 FEET

1 Inch to 1320 Feet

GLASGOW 0013 #7



Flown and compiled in OCTOBER 1956 – APRIL 1957

Produced in [illegible] AEROMAGNETIC SURVEYS LIMITE

GLASGOW-0013 79

WEST SHEET

TOWNSHIP OF ALDERSON

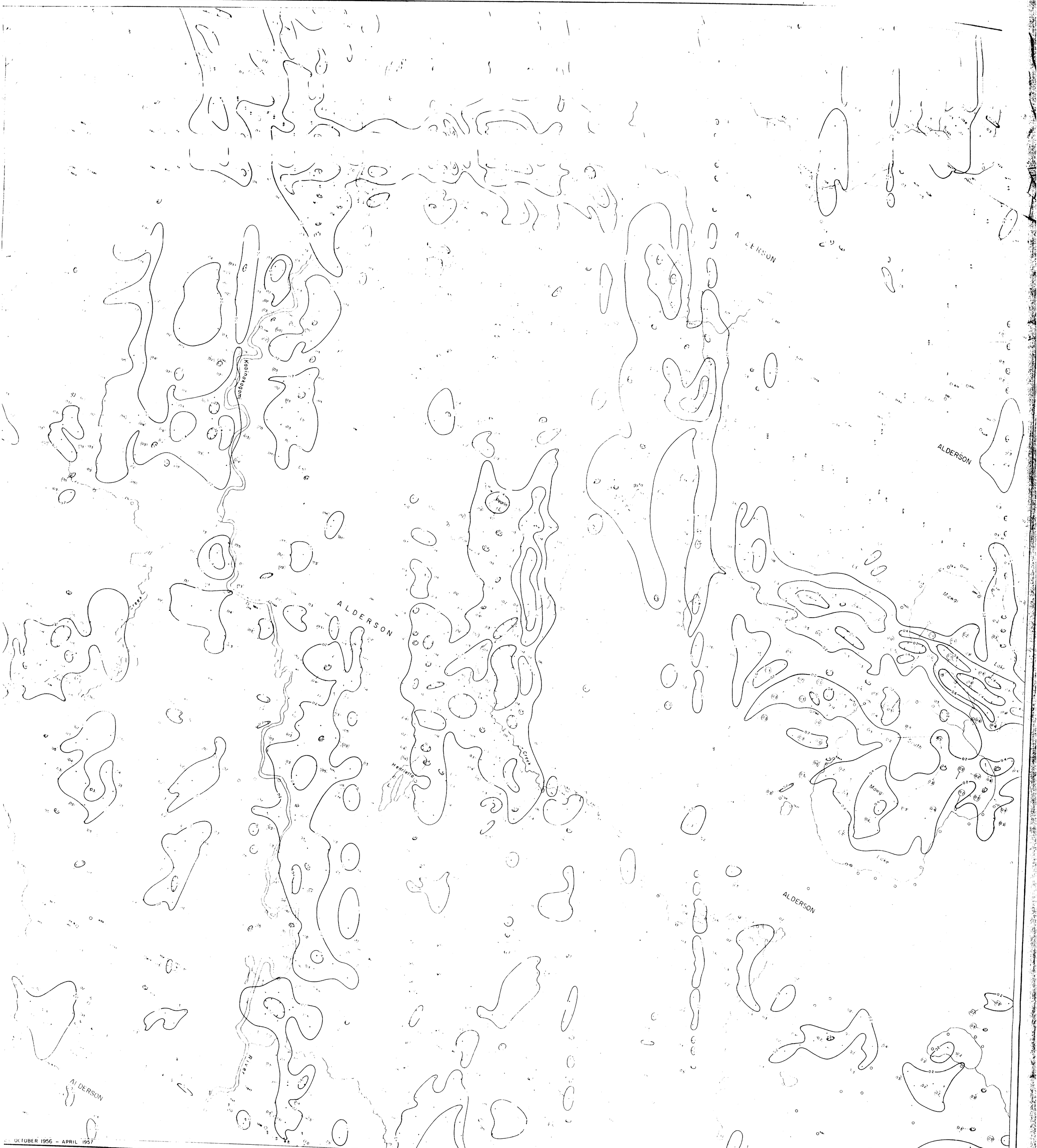
SCALE

1000 FEET — 0 — 1000 — 2000 — 3000 — 4000 — 5000 FEET

1 Inch to 1320 Feet

CTROMAGNETIC CONTOUR	~
N: FLIGHT LINE SPACING	660 FEET
N: TERRAIN CLEARANCE	500 FEET
IOMETRIC ANOMALY	
XIAL POINTS	1890
DOT LINES	

Contours indicate out of pha
of the secondary fields induce
C.P.S primary field
Contour interval
The numbers shown thus
ratios of 400 CYCLE RESPONS
2300 CYCLE RESPONS
measure of the relative condu
energized bodies.



OCTOBER 1956 – APRIL 1957

660 FEET
500 FEET

TOWNSHIP OF ALDERSON

SCALE

1 inch to 1320 Feet

Produced in Canada by AERO MAGNETIC SURVEYS LIMITED, TORONTO

GLASGOW-0013 79

Contours indicate out of phase component of the secondary fields induced by a 400 C.P.S. primary field.

Contour interval 0·2 degrees

The numbers shown thus (1·5 are the ratios of $\frac{400 \text{ CYCLE RESPONSE}}{2300 \text{ CYCLE RESPONSE}}$ and are a measure of the relative conductivity of the energized bodies.

42G12NE0002 0013 GLASGOW

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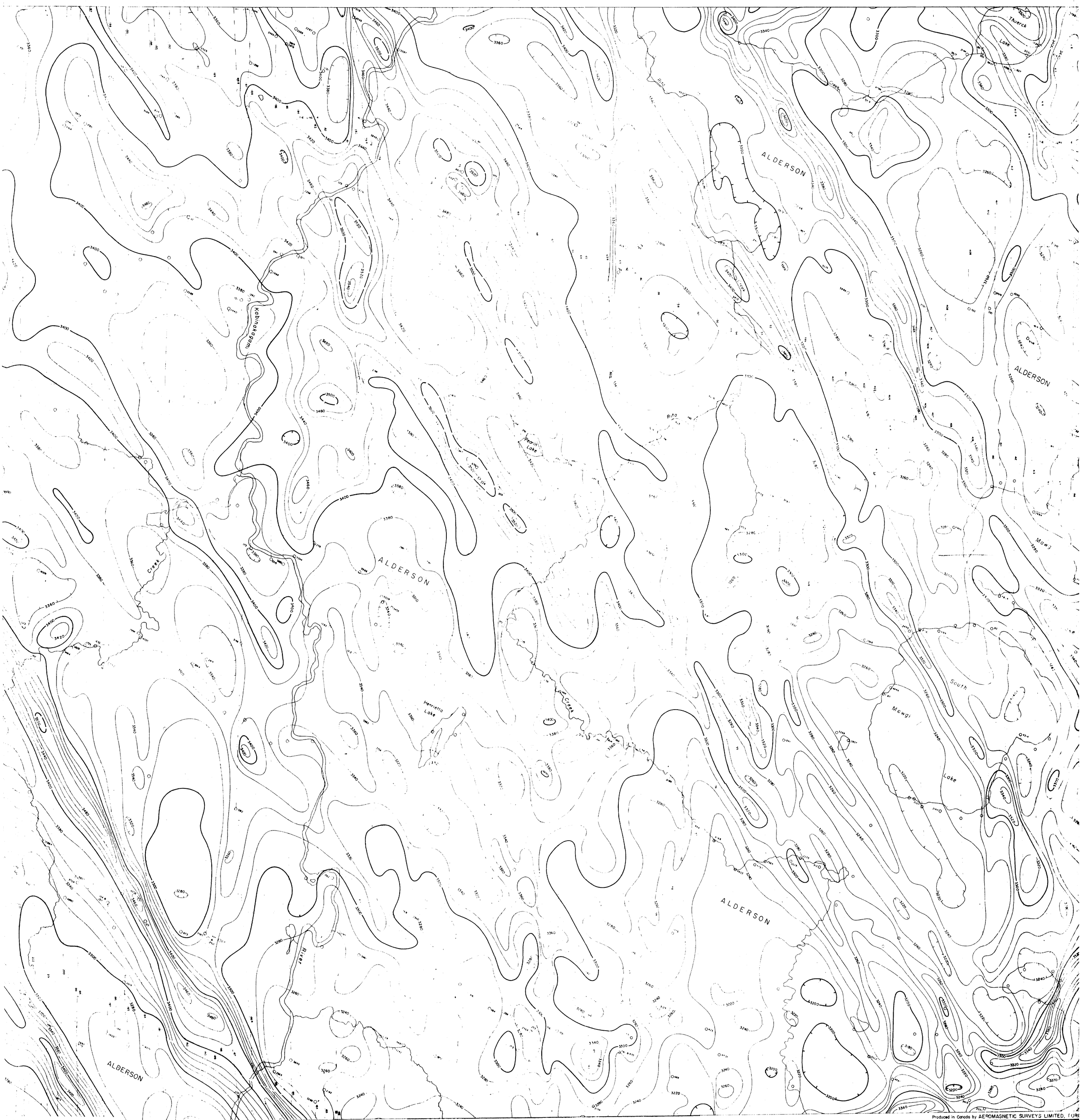


CONTOUR INTERVAL 20 GAMMA
MIN. FLIGHT LINE SPACING 660 FEET
MIN. TERRAIN CLEARANCE 500 FEET
GAMMA CONTOUR
GAMMA CONTOUR
GAMMA CONTOUR
MAGNETIC LOW
SPECIAL POINTS 3880 O
FLIGHT LINES

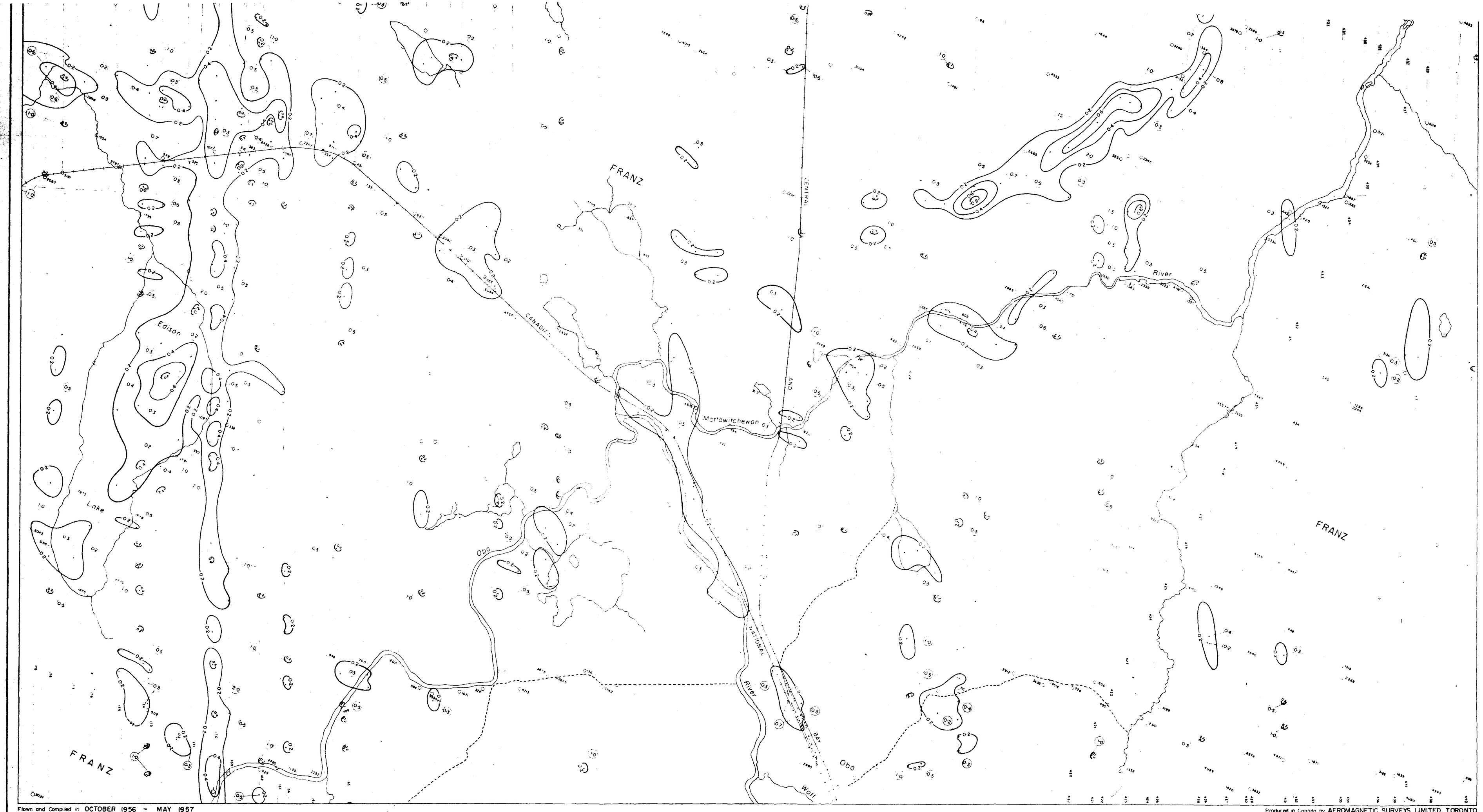
TOWNSHIP OF ALDERSON

SCALE

1000 FEET 0 1000 2000 3000 4000 5000 FEET

1 inch to 1320 Feet

Produced in Canada by AEROMAGNETIC SURVEYS LIMITED, TORO



Flown and Compiled in OCTOBER 1956 - MAY 1957

Produced in Canada by AEROMAGNETIC SURVEYS LIMITED, TORONTO

ELECTROMAGNETIC CONTOUR
MEAN FLIGHT LINE SPACING ..... 660 FEET
MEAN TERRAIN CLEARANCE ..... 500 FEET
RADIOMETRIC ANOMALY
FIDUCIAL POINTS 3000
FLIGHT LINES

TOWNSHIP OF FRANZ

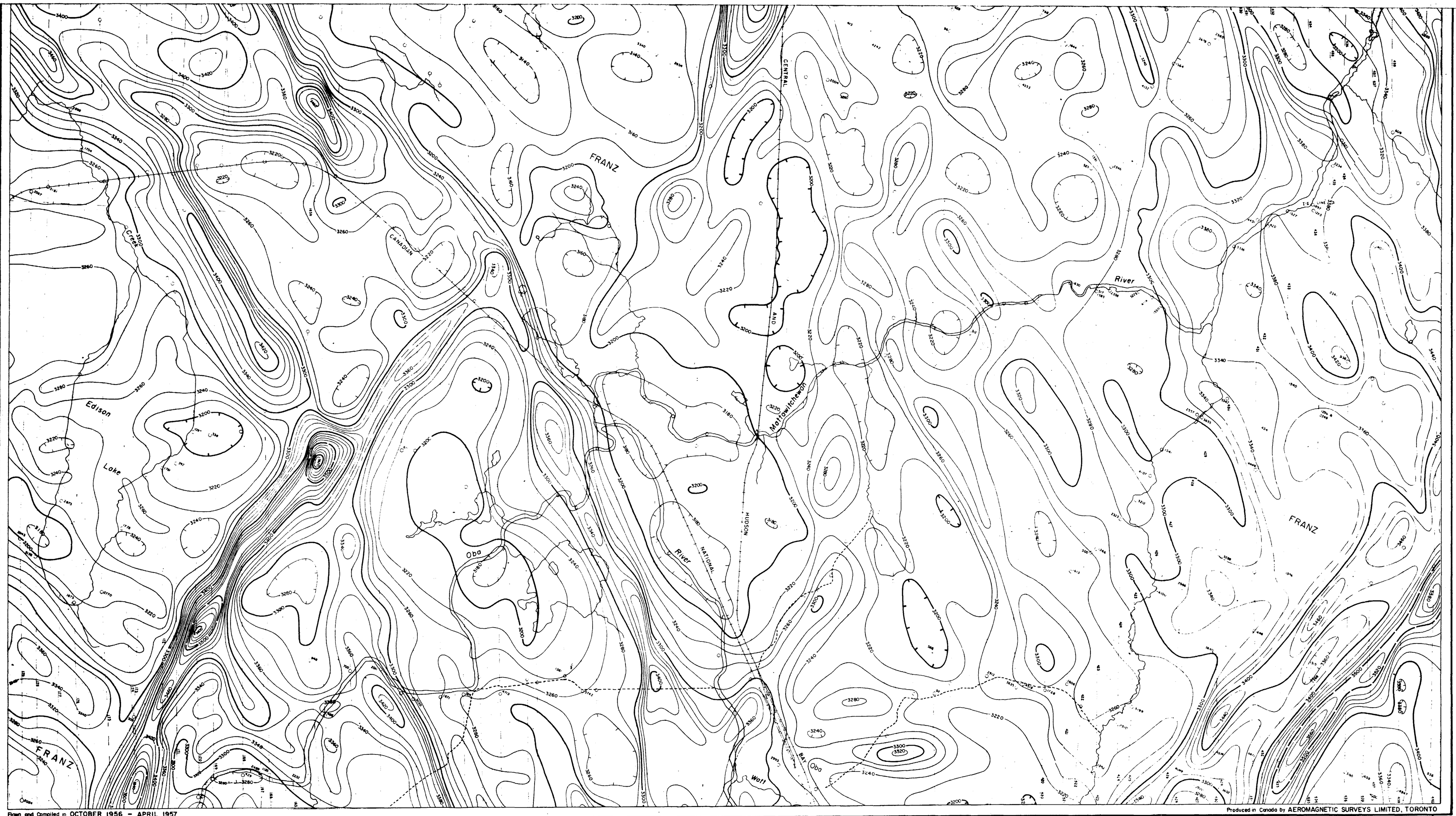
SCALE

1000 FEET — 0 — 1000 — 2000 — 3000 — 4000 — 5000 FEET

1 inch to 1320 Feet

GLASGOW - 001381

Contours indicate out of phase component of the secondary fields induced by a 400 C.P.S. primary field.
Contour interval ..... 0.2 degrees
The numbers shown thus ..... (1.8) are the ratios of 400 CYCLE RESPONSE and are a measure of the relative conductivity of the energized bodies



Flown and Compiled in OCTOBER 1956 - APRIL 1957

Produced in Canada by AEROMAGNETIC SURVEYS LIMITED, TORONTO

GLASGOW-0013 82

CONTOUR INTERVAL ..... 20 GAMMA
MEAN FLIGHT LINE SPACING ..... 660 FEET
MEAN TERRAIN CLEARANCE ..... 500 FEET
500 GAMMA CONTOUR .....
100 GAMMA CONTOUR .....
20 GAMMA CONTOUR .....
MAGNETIC LOW .....
FIDUCIAL POINTS ..... 3680 O
FLIGHT LINES. — — — —

TOWNSHIP OF FRANZ

SCALE

1000 FEET 0 1000 2000 3000 4000 5000 FEET

1 Inch to 1320 Feet

Drawn and Compiled in OCTOBER 1956—MAY 1957

Produced in Canada by AEROMAGNETIC SURVEYS LIMITED

CONTOUR INTERVAL ..... 20 GAMMA
FLIGHT LINE SPACING ..... 660 FEET
TERRAIN CLEARANCE ..... 500 FEET
GAMMA CONTOUR .....
GAMMA CONTOUR .....
MAGNETIC LOW .....
FINAL POINTS .....
TIE LINES .....

TOWNSHIP OF LANDRY

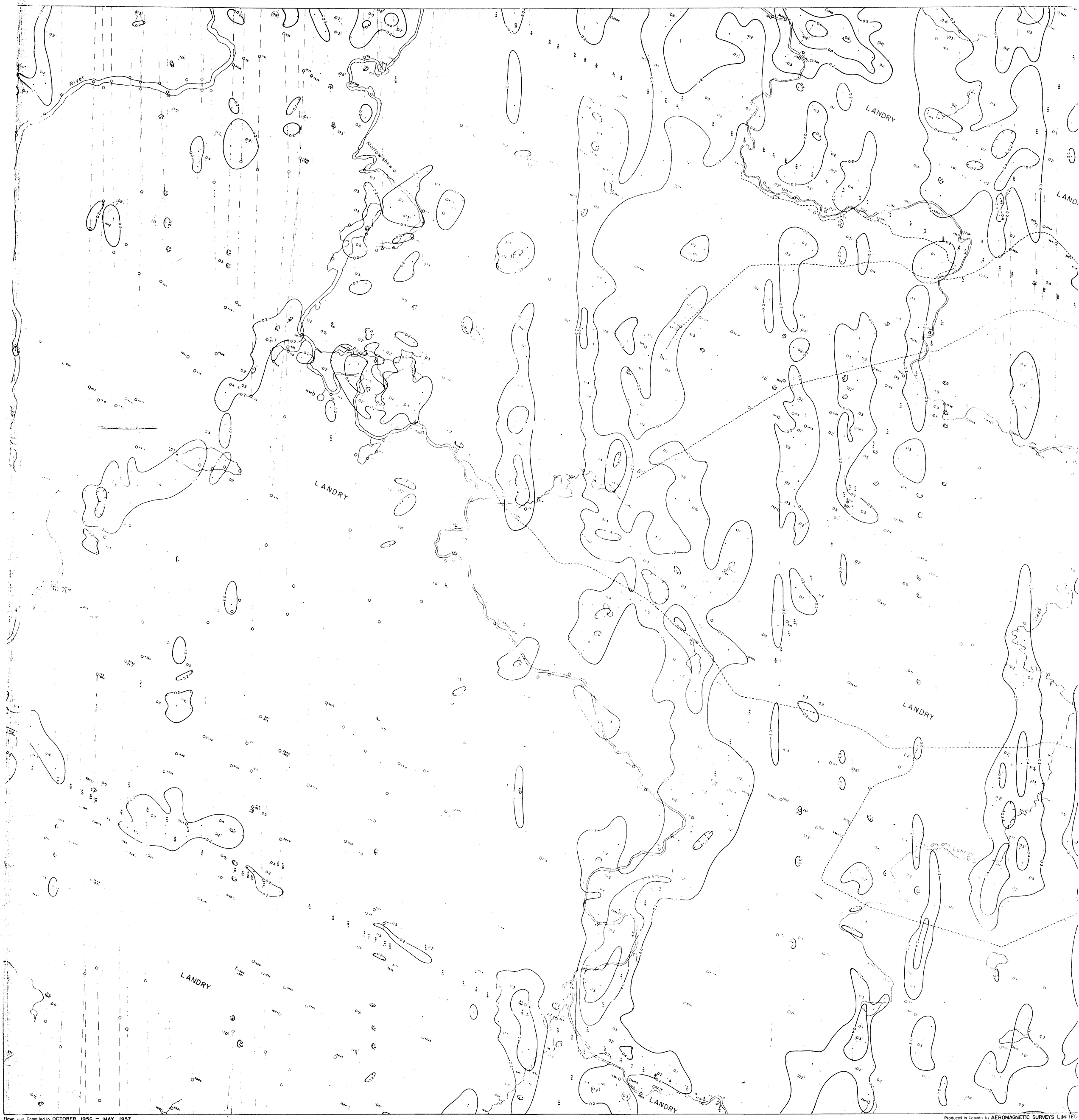
MAG

SCALE

1000 FEET 0 1000 2000 3000 4000 5000 FEET

1 Inch to 1320 Feet

GLASGOW- 0013



TOWNSHIP OF LANDRY

SCALE

1000 FEET — 0 — 1000 — 2000 — 3000 — 4000 — 5000 FEET

1 Inch to 1320 Feet

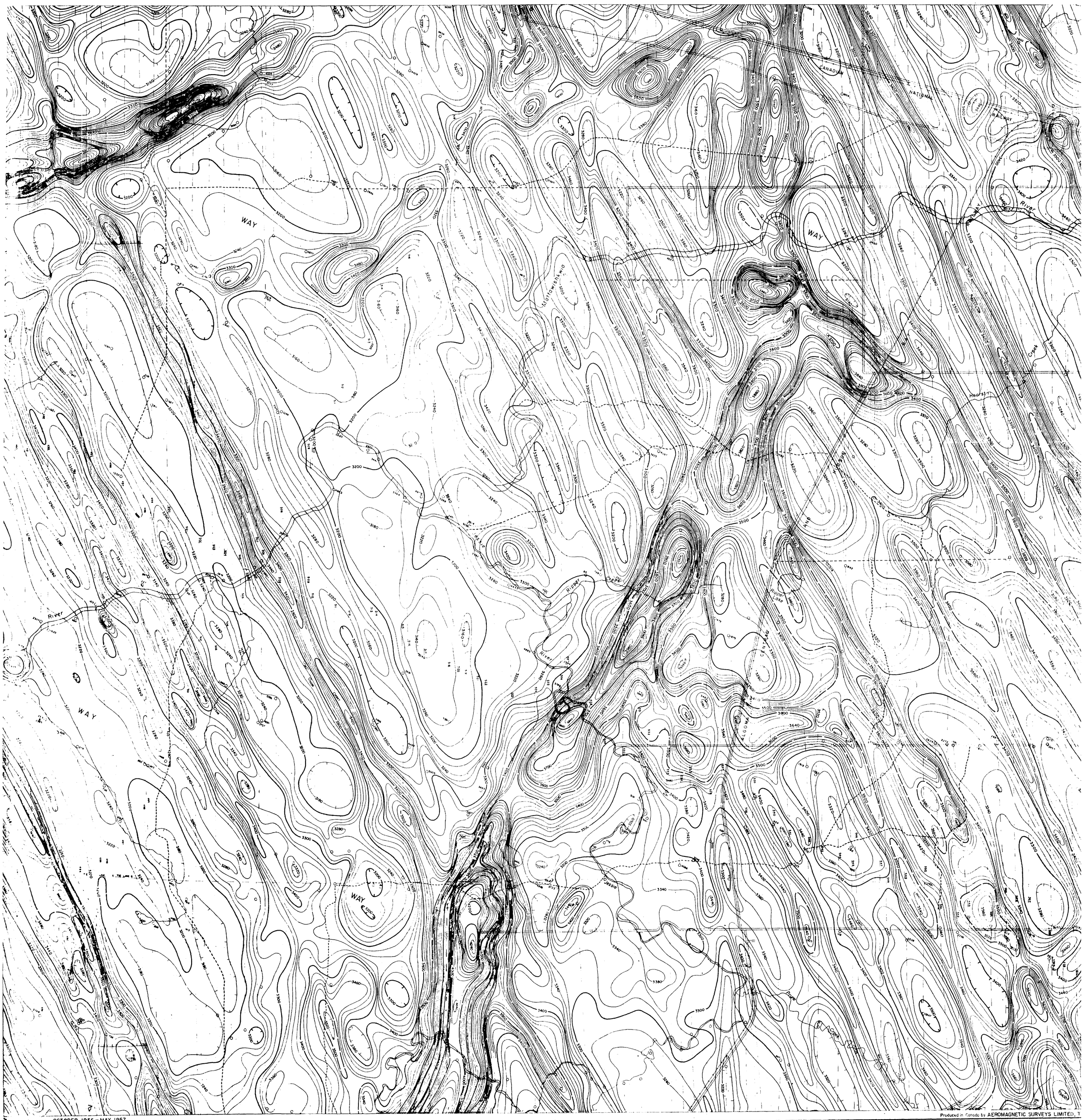
Flown and Compiled in OCTOBER 1956 - MAY 1957

Produced in Canada by AEROMAGNETIC SURVEYS LIMITED

GLASGOW-0013 8

AEROMAGNETIC CONTOUR
FLIGHT LINE SPACING ..... 660 FEET
TERRAIN CLEARANCE ..... 500 FEET
GEOLOGICAL ANOMALY
FINAL POINTS 3890
HYDRO LINES

Contours indicate out of phase component of the secondary fields induced by the E.M.P.S primary field.
Contour interval.
The numbers shown thus.
ratios of 400 CYCLE RESPONSE / 2300 CYCLE RESPONSE measure of the relative conductivity of energized bodies.



Flown and Compiled in OCTOBER 1956 – MAY 1957

Produced in Canada by AEROMAGNETIC SURVEYS LIMITED, T

CONTOUR INTERVAL ..... 20 GAMMA
FLIGHT LINE SPACING ..... 660 FEET
TERRAIN CLEARANCE ..... 500 FEET
GAMMA CONTOUR .....
GAMMA CONTOUR .....
GAMMA CONTOUR .....
MAGNETIC LOW .....
SPECIAL POINTS 3000

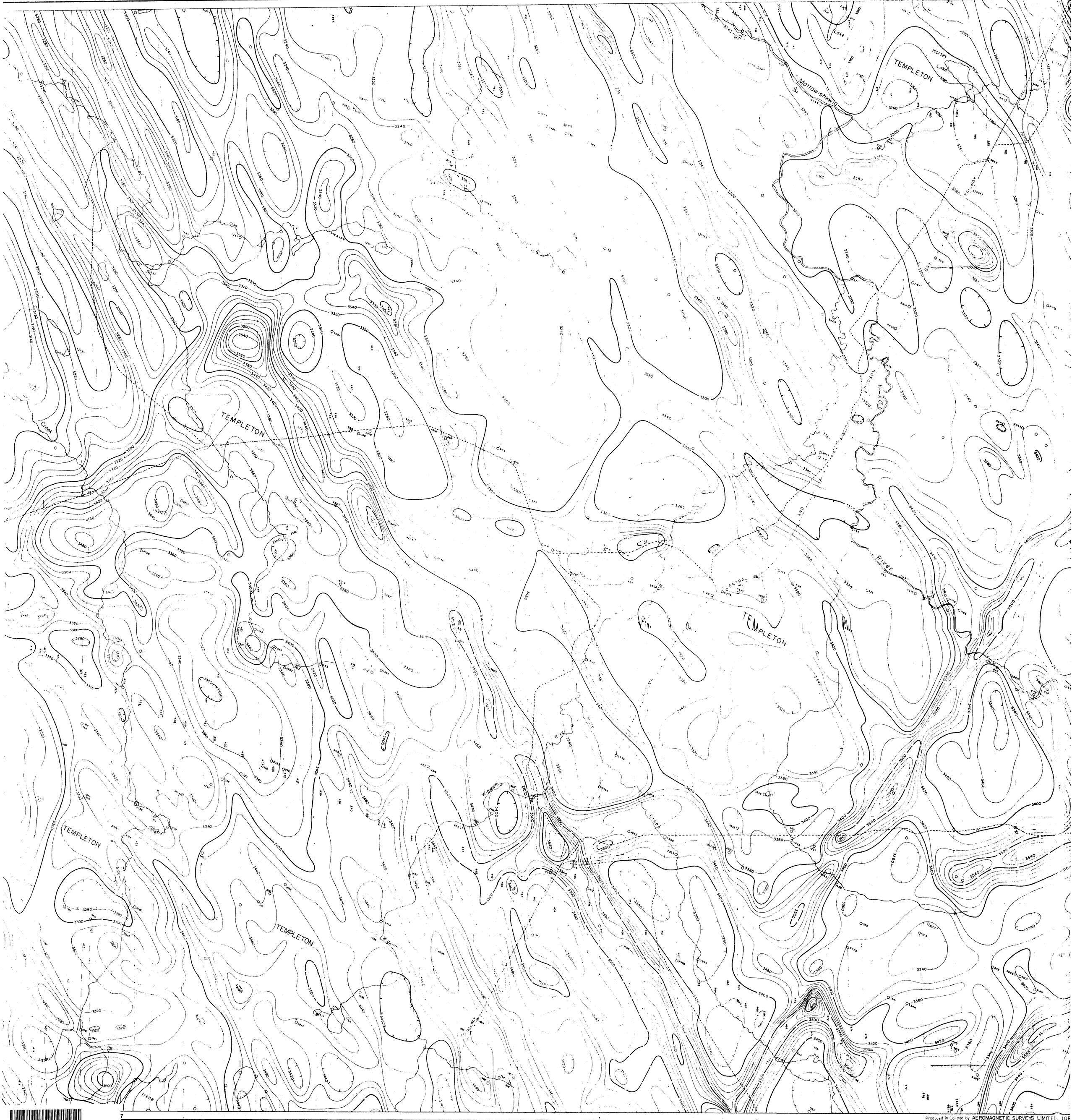
TOWNSHIP OF WAY

SCALE

1000 FEET 0 1000 2000 3000 4000 5000 FEET

1 Inch to 1320 Feet

GLASGOW-0013-#85



R INTERVAL ..... 20 GAMMA
FLIGHT LINE SPACING ..... 660 FEET
TERRAIN CLEARANCE ..... 500 FEET
MMA CONTOUR ..... ~~~
MMA CONTOUR ..... ~~~
MMA CONTOUR ..... ~~~
IC LOW ..... ⊂
AL POINTS 5680
LINES

TOWNSHIP OF TEMPLETON

SCALE

1000 FEET 0 1000 2000 3000 4000 5000 FEET

1 inch to 1320 Feet

Produced in Canada by AEROMAGNETIC SURVEYS LIMITED, TOR

TOWNSHIP OF TEMPLETON

SCALE

1 inch to 1320 Feet

AEROMAGNETIC CONTOUR
FLIGHT LINE SPACING 660 FEET
TERRAIN CLEARANCE 500 FEET
ANOMALY
POINTS
LINES

Contours indicate ...
of the secondary field ...
C.P.S. primary field
Contour interval
The numbers shown thus
ratios of ... CYCLE ... / ... CYCLE ...
measure of the relative ...
energized bodies.

flown and compiled in OCTOBER 1956 – MAY 1957

produced in ... by AEROMAGNETIC SURVEYS LIMITED

GLASGOW-0013-287

Flown and Compiled in OCTOBER 1956 - MAY 1957

Produced in Canada by AERONAGNETIC SURVEYS LIMITED

GLASGOW - 0013 88

ELECTROMAGNETIC CONTOUR .....
FLIGHT LINE SPACING .....660 FEET
TERRAIN CLEARANCE .....500 FEET
MAGNETIC ANOMALY .....
TOPOGRAPHICAL POINTS 3000
FLIGHT LINES .....

TOWNSHIP OF WAY

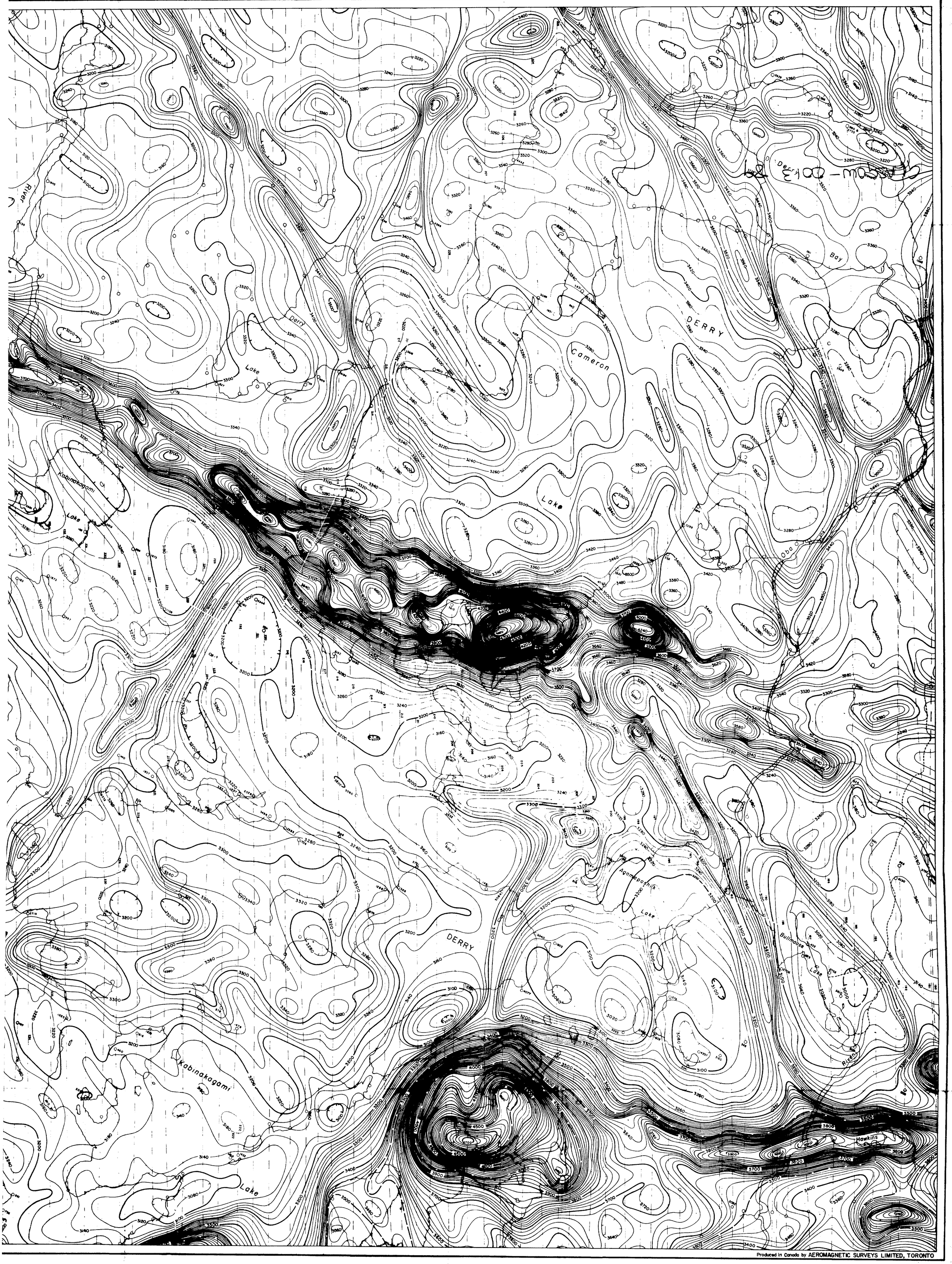
SCALE

1000 FEET 0 1000 2000 3000 4000 5000 FEET

1 Inch to 1320 Feet

Aux EM

Contours indicate out of pha
of the secondary fields induce
C.P.S primary field
Contour interval.
The numbers shown thus
ratios of 400 CYCLE RESPONS
3300 CYCLE RESPONS
measure of the relative condu
energized bodies



Produced in Canada by AEROMAGNETIC SURVEYS LIMITED, TORONTO

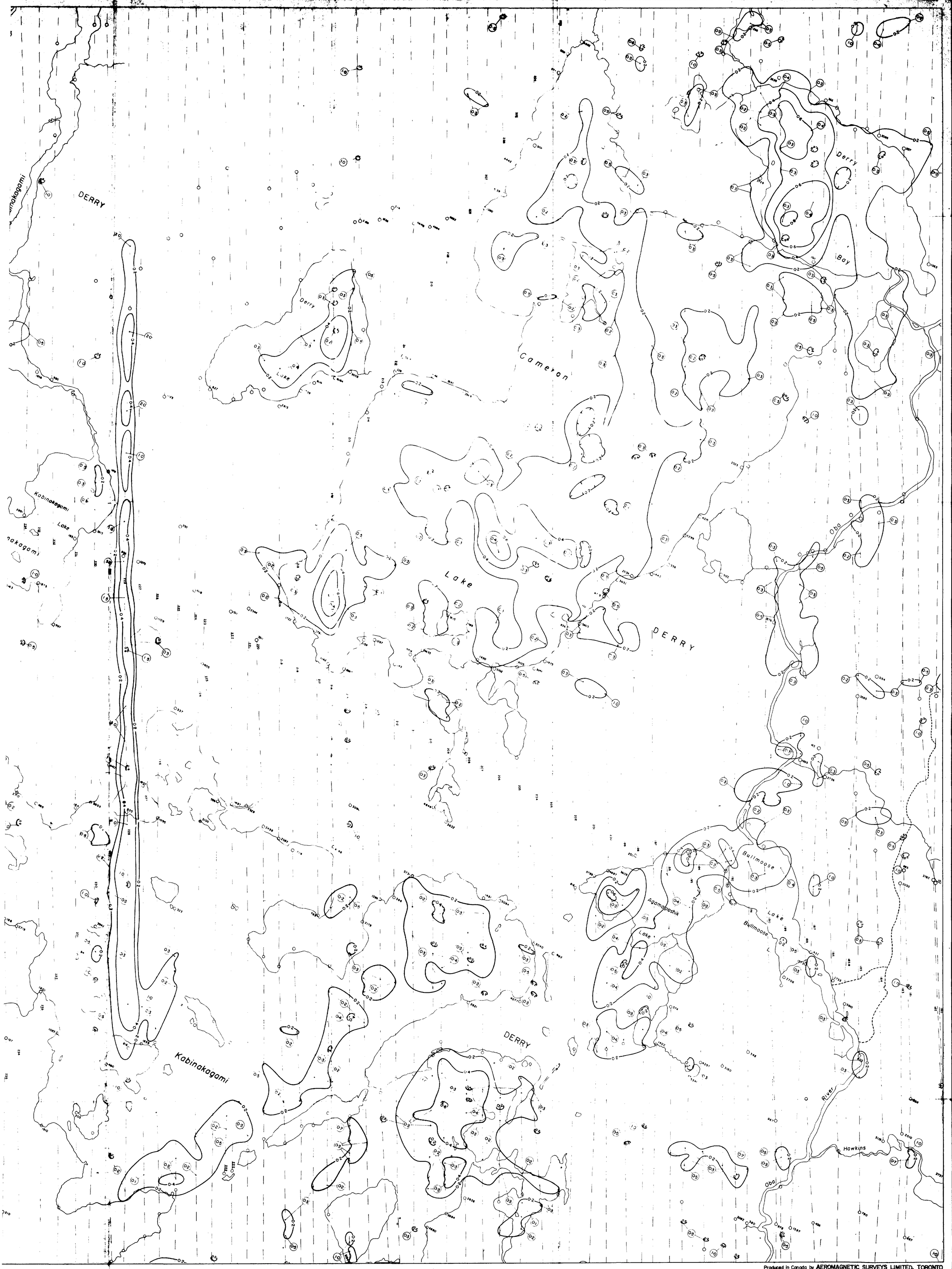
TOWNSHIP OF DERRY

SCALE

1000 FEET 0 1000 2000 3000 4000 5000 FEET

1 Inch to 1320 Feet

File # 63-1253 (1956-'58)



E100 - W0252 SP

TOWNSHIP OF DERRY

SCALE

1000 0 1000 2000 3000 4000 5000 FEET

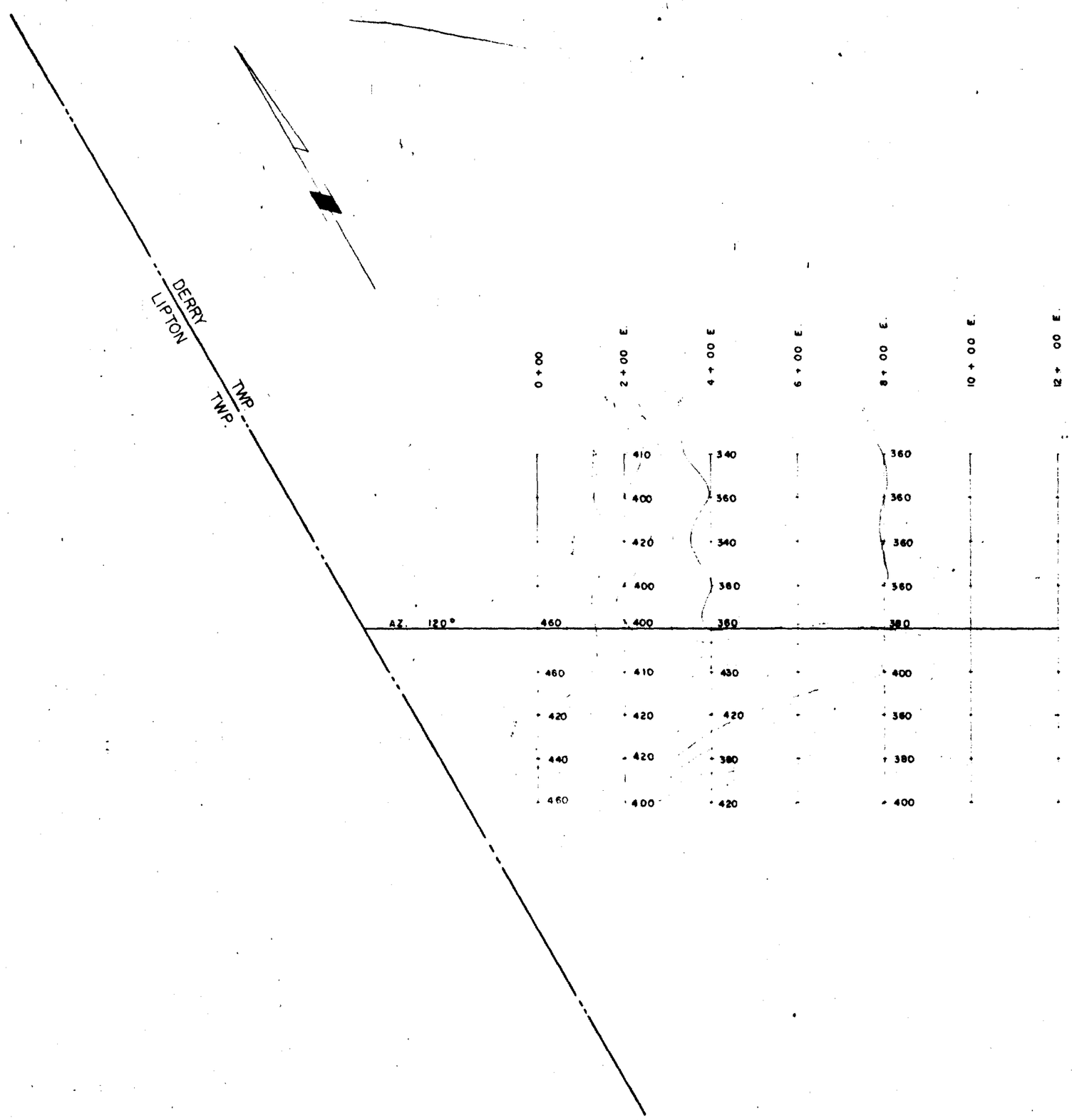
1 inch to 1320 Feet

File # 63-1253 (1956-'58)

Contours indicate out of phase component of the secondary fields induced by a 400 C.P.S. primary field.

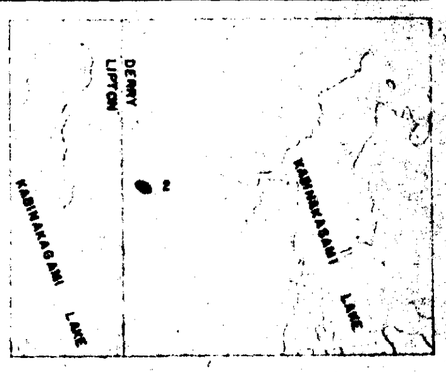
Contour interval ---------- 0·2 degrees.

The numbers shown thus ---------- 1·5 are the ratios of $\frac{400 \text{ CYCLE RESPONSE}}{2300 \text{ CYCLE RESPONSE}}$ and are a measure of the relative conductivity of the energized bodies.



GLASGOW - 001391

ALGOMA ORE PROPERTIES LIMITED
EXPLORATION DEPARTMENT
BLOCK "C"
ANOMALY – 2
DERRY TWP.
MAGNETOMETER SURVEY
SCALE 1" = 200' JUNE 1958.



KABINAKAGAMI

LAKE

N

NORTH CONTINUATION OF CROSS LINE 16 + 00 W.

28 + 00 W

24 + 00 W

20 + 00 W

16 + 00 W

12 + 00 W

8 + 00 W

4 + 00 W

0 + 00

BASE LINE AZ 090°

GLASGOW-0013 92

LEGEND

INSTRUMENT "SHARPE" MODEL A-2 MAGNETOMETER
READINGS IN GAMMAS

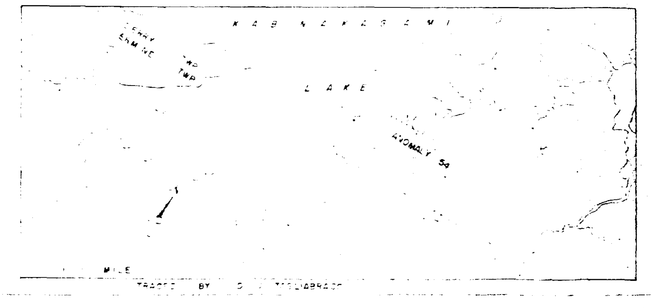
ALGOMA ORE PROPERTIES LTD.

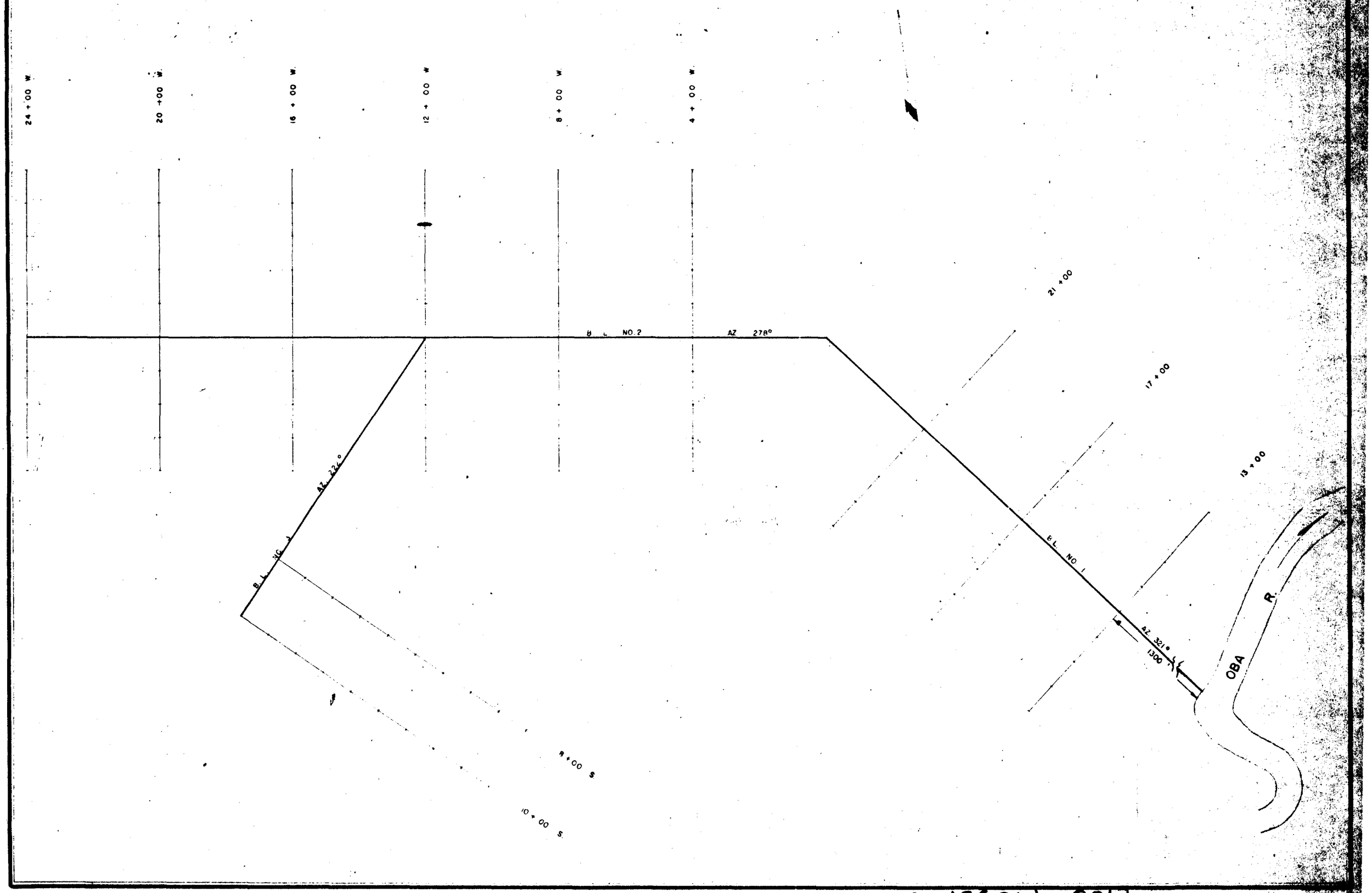
EXPLORATION DEPARTMENT

MAGNETOMETER SURVEY

ANOMALY NO. 54 BLOCK "C"

SCALE 1" = 100' APRIL, 1960





LEGEND

Mc PHAR R. E. M.

900 C.P.S.	5000 C.P.S.
——— 1000 C.P.S.	
- - - - - 5000 C.P.S.	
⬬ CONDUCTOR	

SURVEYED BY BROADSIDE METHOD

42G12NE0002 0013 GLASGOW

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ALGOMA ORE PROPERTIES LIMITED
EXPLORATION DEPARTMENT

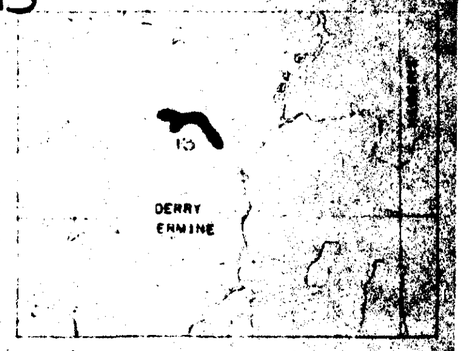
BLOCK "C"

ANOMALY - 13
DERRY TWP.

ELECTROMAGNETIC SURVEY

SCALE 1" = 200' JUNE 1958

GLASGOW - 0013
93



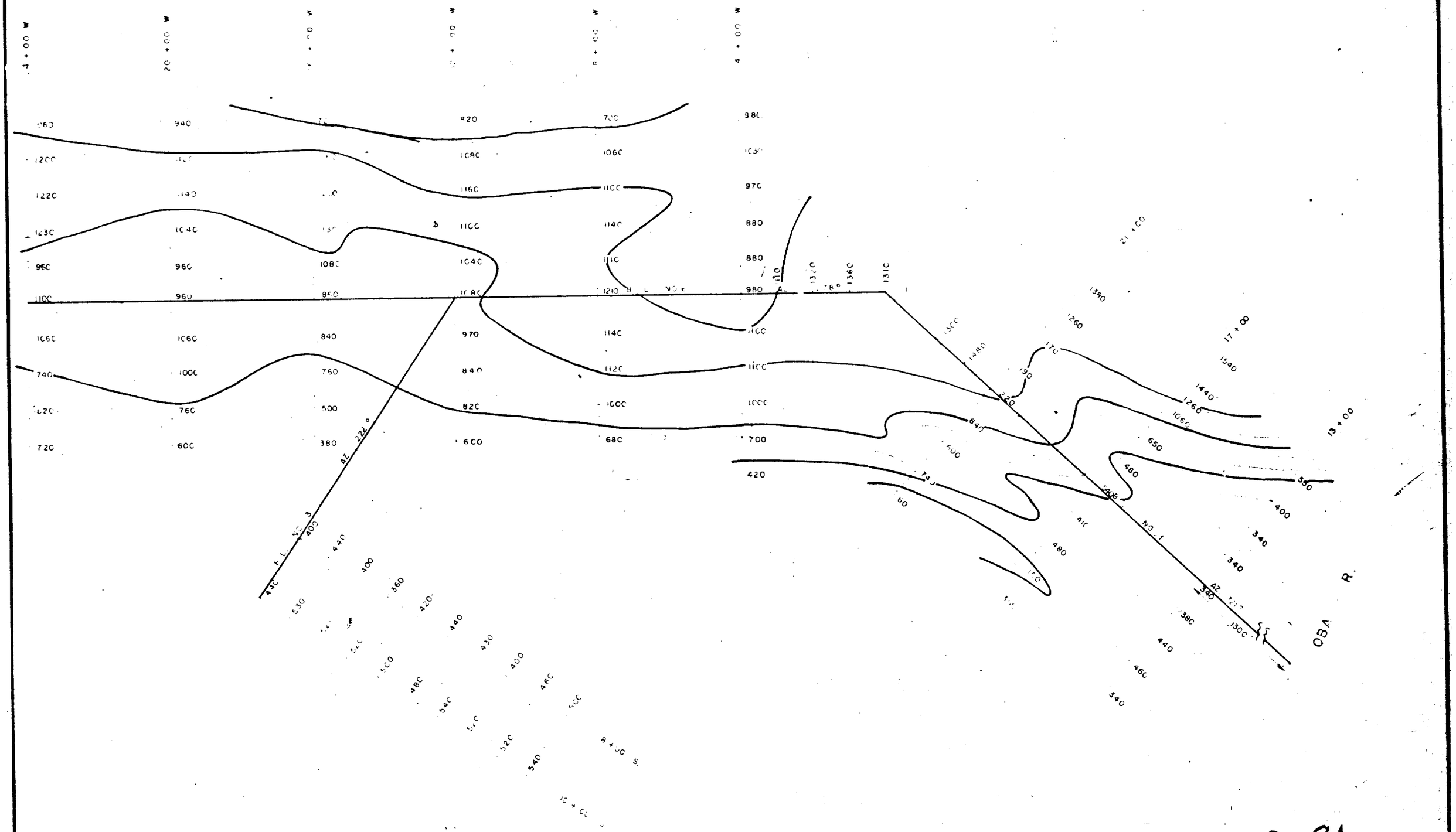
ALGOMA ORE PROPERTIES LIMITED
EXPLORATION DEPARTMENT

BLOCK "C"

ANOMALY - 13
DERRY TWP

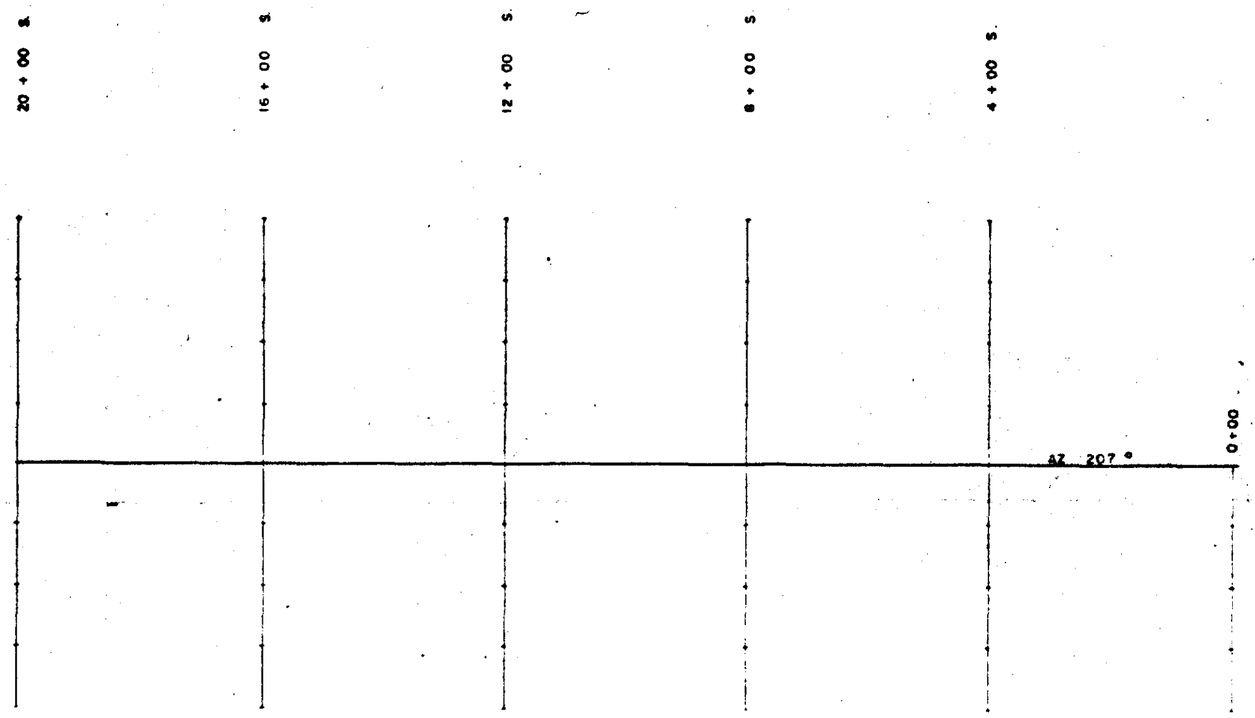
MAGNETOMETER SURVEY

JUNE 195



DERRY
ERMINE

GLASGOW-0013 94



PINE PORTAGE LAKE

GLASGOW-0013 95

LEGEND

Mc·PHAR R. E. M.

1000 C.P.S 5000 C.P.S

——— 1000 C.P.S.

- - - - - 5000 C.P.S.

CONDUCTOR

ALGOMA ORE PROPERTIES LIMITED

EXPLORATION DEPARTMENT

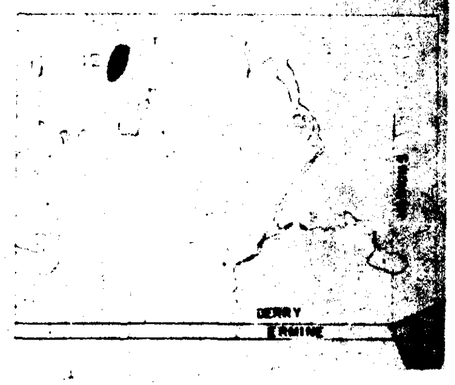
BLOCK "C"

ANOMALY – 12

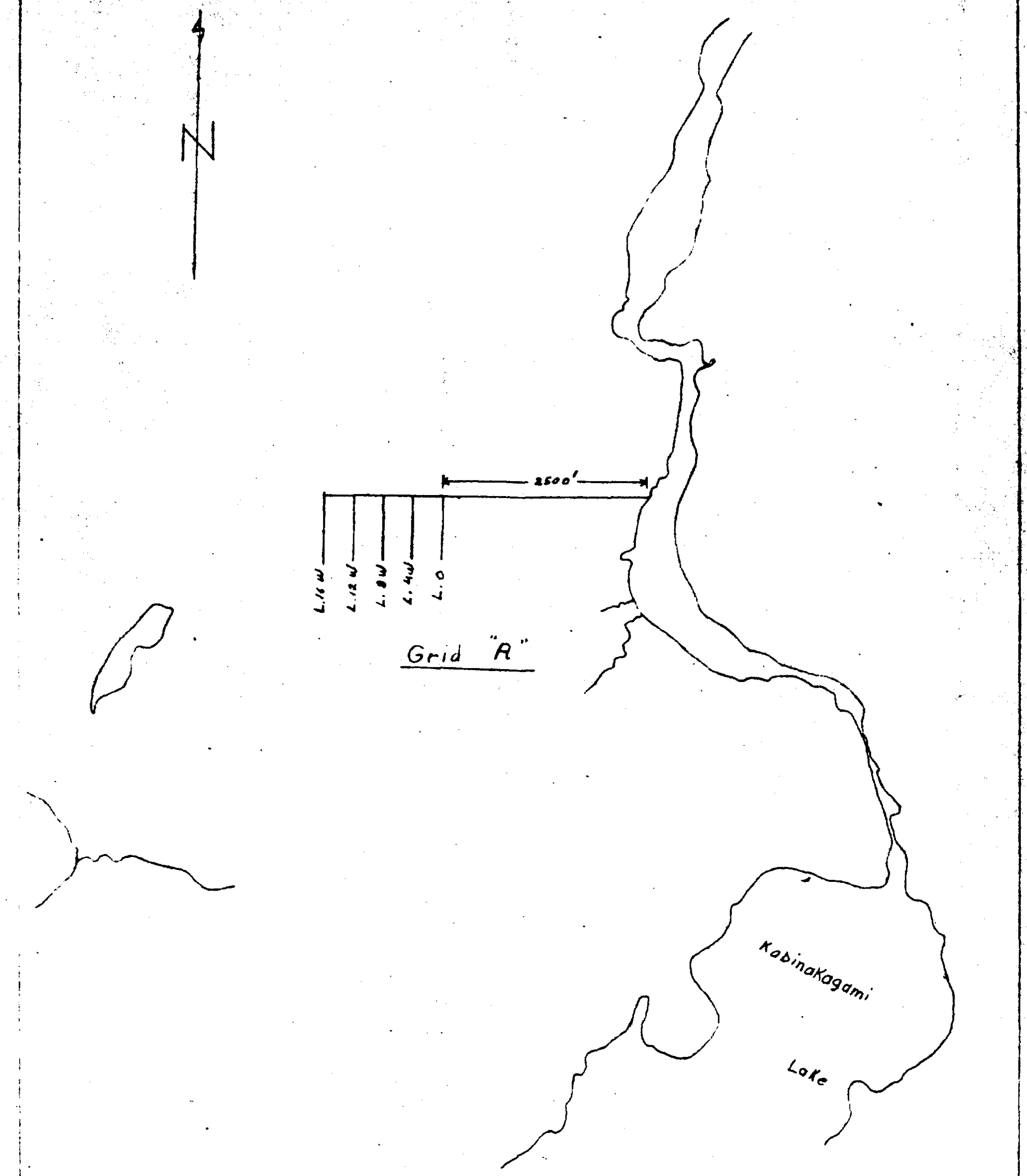
DERRY TWP

ELECTROMAGNETIC SURVEY

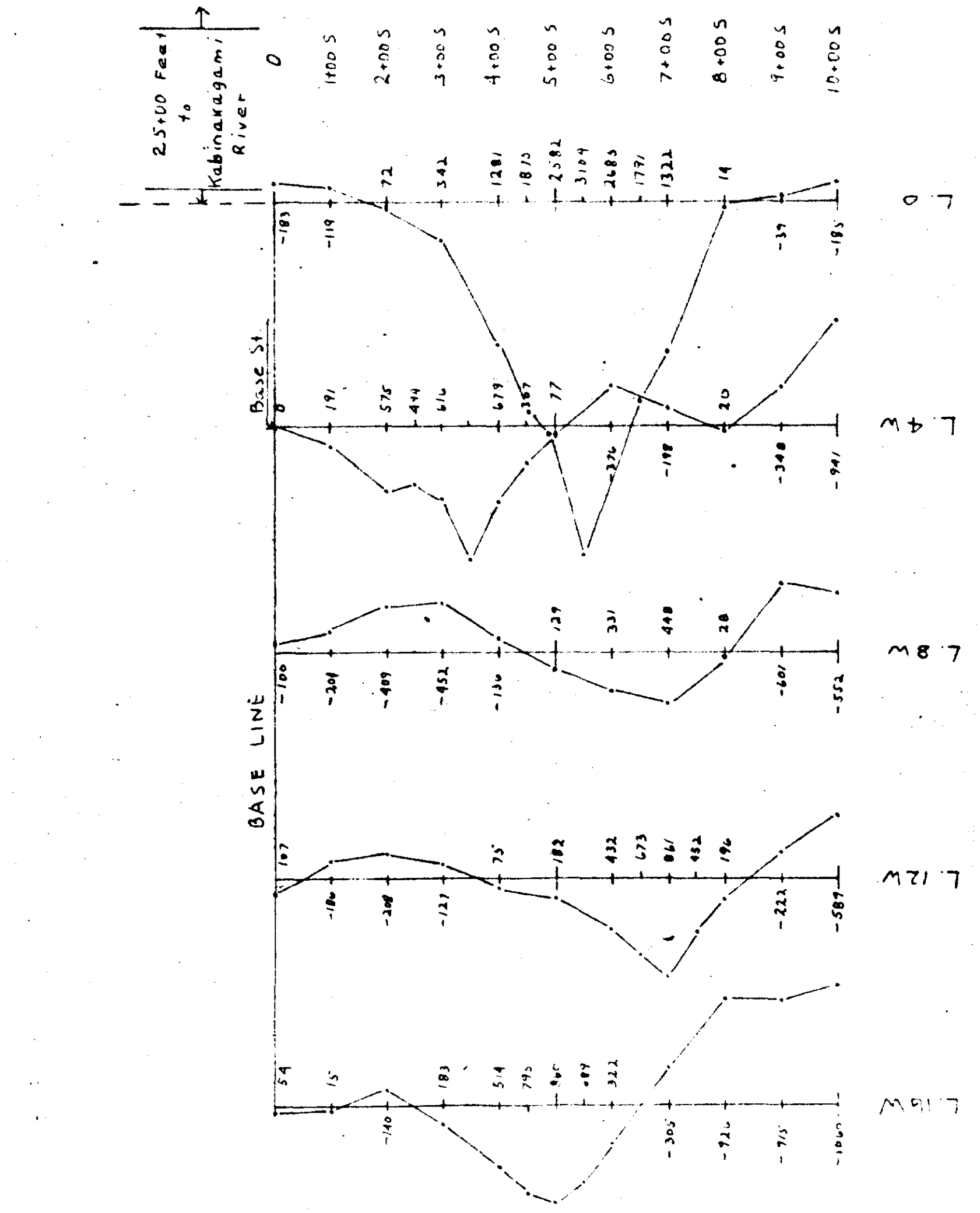
SCALE 1" = 200' JUNE 1958



42G12NE0002 0013 GLASGOW



HAROLD O SEIGEL & ASSOCIATES, LIMITED	
PROJECT: FRANC R. JOUBIN & ASSOCIATES LTD.	
SUBJECT : Anomaly A in Derry Twp.	
SURVEY : LOCATION	
Scales 1" = 1320'	Legend
WORK BY G.T & H.L. PLOTTED BY G.T.	DATE 30-6-63



HAROLD O. SEIGEL & ASSOCIATES, LIMITED

PROJECT Franz R Joubin and Associates

SUBJECT Anomaly A in Derry Twp.

SURVEY Magnetometer

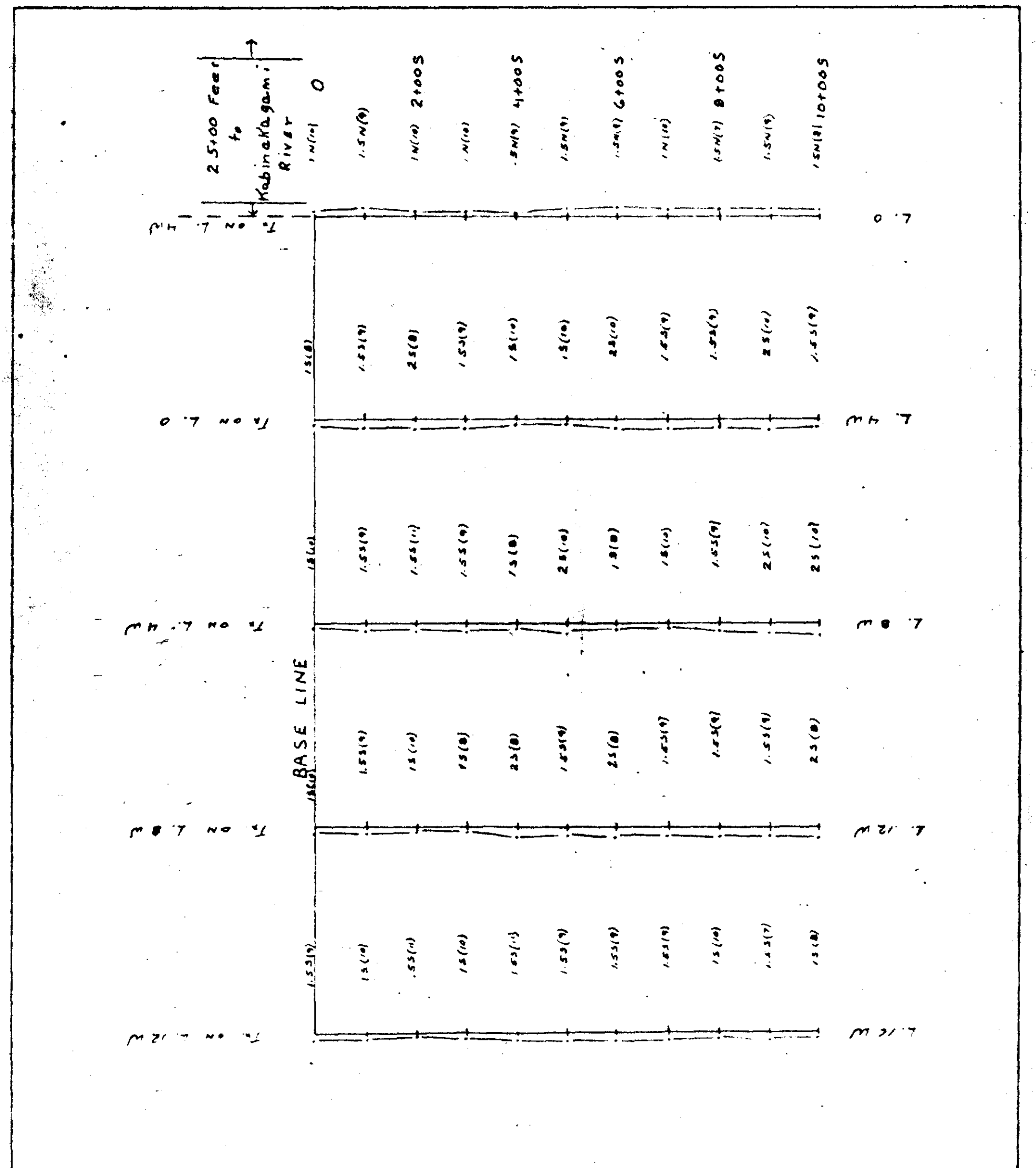
Scales:

1" = 200'

1" = 1000'

Legend:

* [illegible] June 30



HAROLD O. SEIGEL & ASSOCIATES, LIMITED

PROJECT: FRANC R JOUBIN & ASSOCIATES LTD.

SUBJECT: Anomaly A in Derry Twp.

SURVEY: E.M.

Scales:

1" = 200'

1" = 20°

Legend:

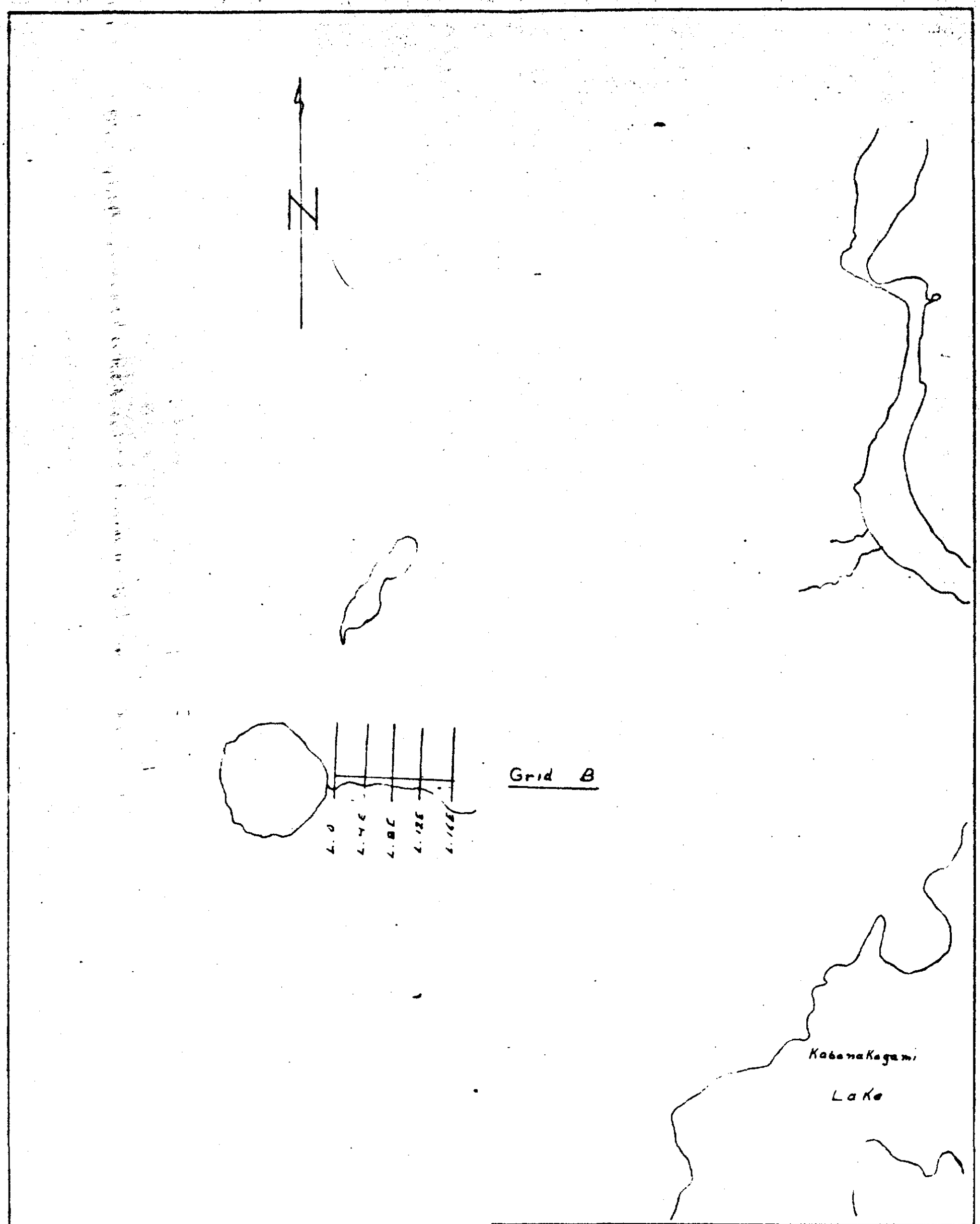
PARALLEL LINE RECCE. •——•

FIXED TRANSMITTER X----X

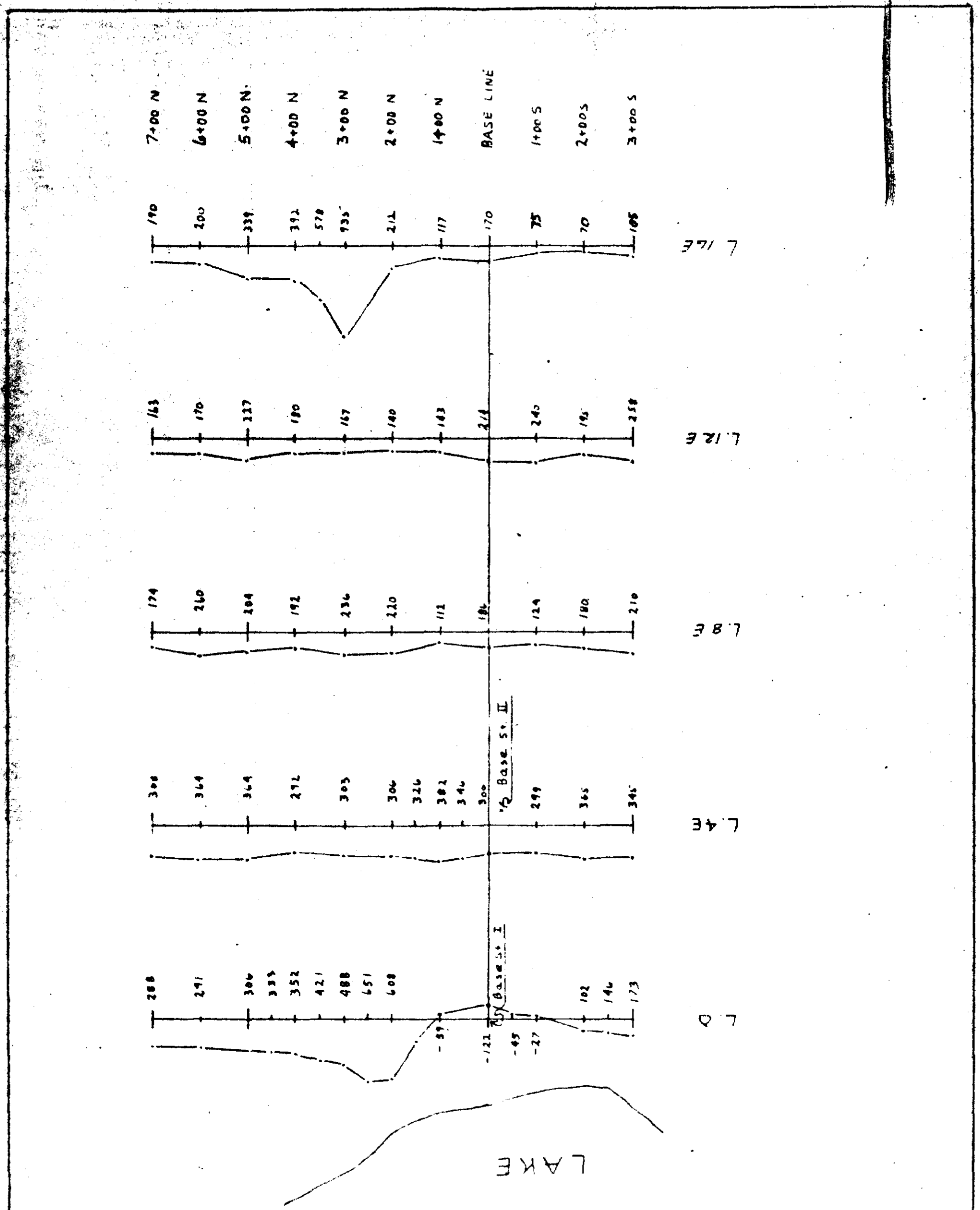
TRANSMITTER LOCATION △

CONVENTION: EAST TILTS ON NORTH SIDE OF LINES.

WORK BY: G.F. CHECKED BY: G.F. DATE: 30-6-63

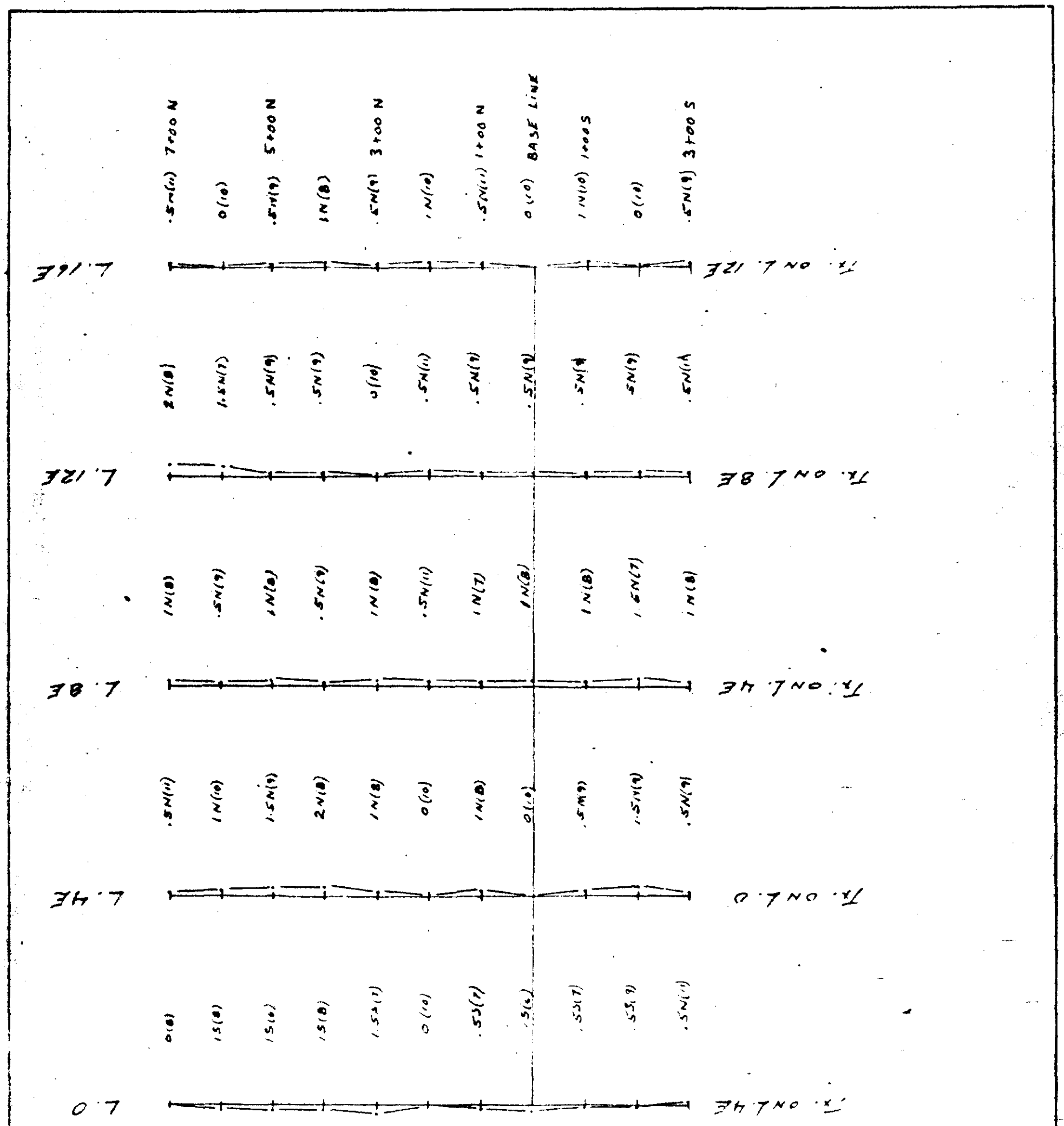


HAROLD O. SEIGEL & ASSOCIATES, LIMITED	
PROJECT: FRANC R. JOUBIN & ASSOCIATES LTD.	
SUBJECT: Anomaly B in Derry Twp.	
SURVEY: Location	
Scales: 1" = 1320'	Legend:
WORK BY G.T. & H.L.	PLOT BY G.T. DATE 30-6-66



HAROLD O. SEIGEL & ASSOCIATES, LIMITED		
PROJECT Franc R. Joubin and Associates		
SUBJECT Anomaly B in Derry Twp		
SURVEY Magnetometer		
Scales: 1" = 200' 1" = 1000 γ	Legend:	
WORK BY H.O.L.	PLOT BY H.O.L.	DATE June 30 1963

GLASGOW 0013 100



HAROLD O SEIGEL & ASSOCIATES, LIMITED

PROJECT: FRANC R. JOUBIN & ASSOCIATES LTD.

SUBJECT: Anomaly B in Derry Twp.

SURVEY: E.M.

Scales:

1" = 200'

1" = 20°

Legend:

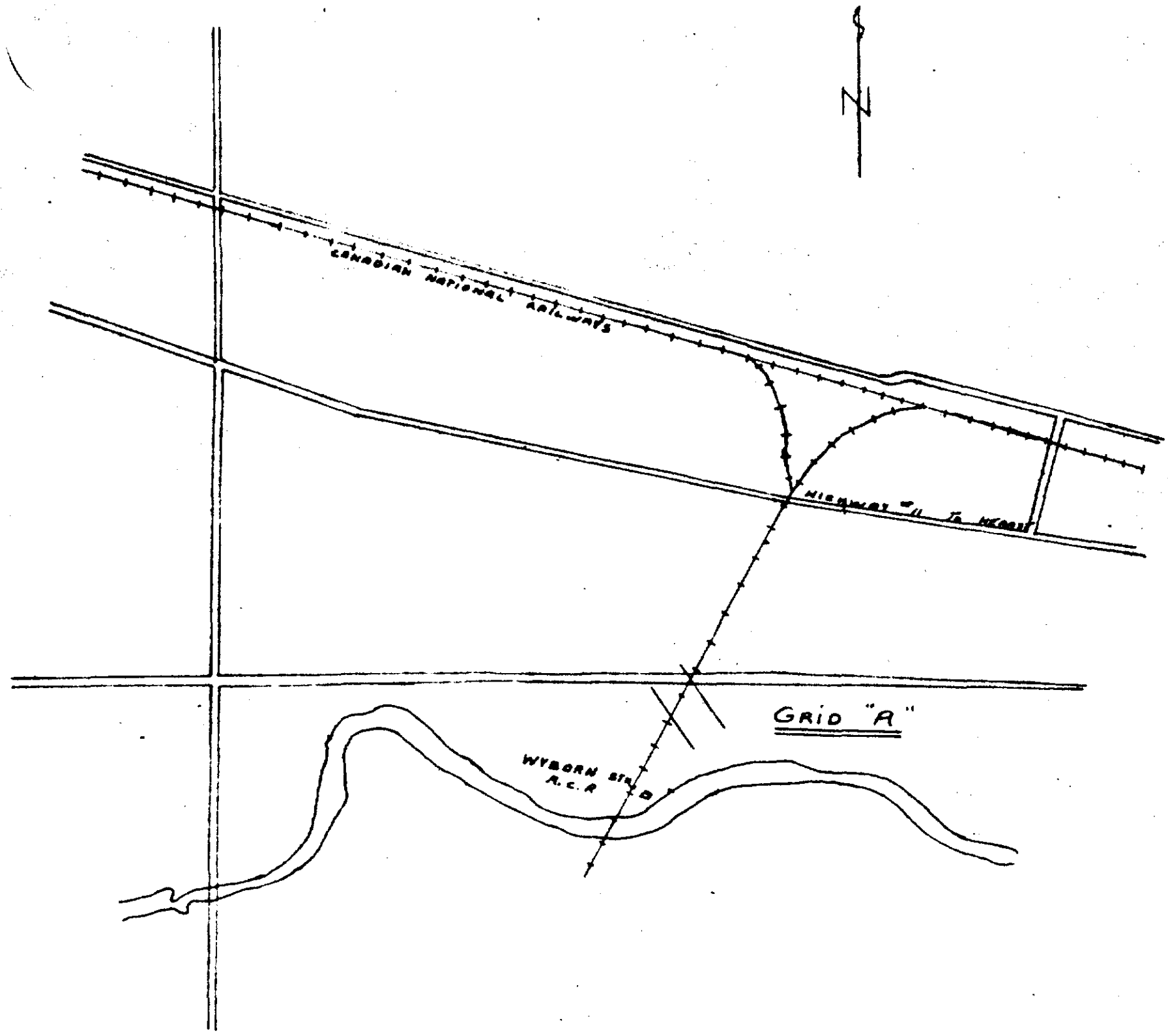
PARALLEL LINE RECCE. ·——·

FIXED TRANSMITTER X--- X

TRANSMITTER LOCATION △

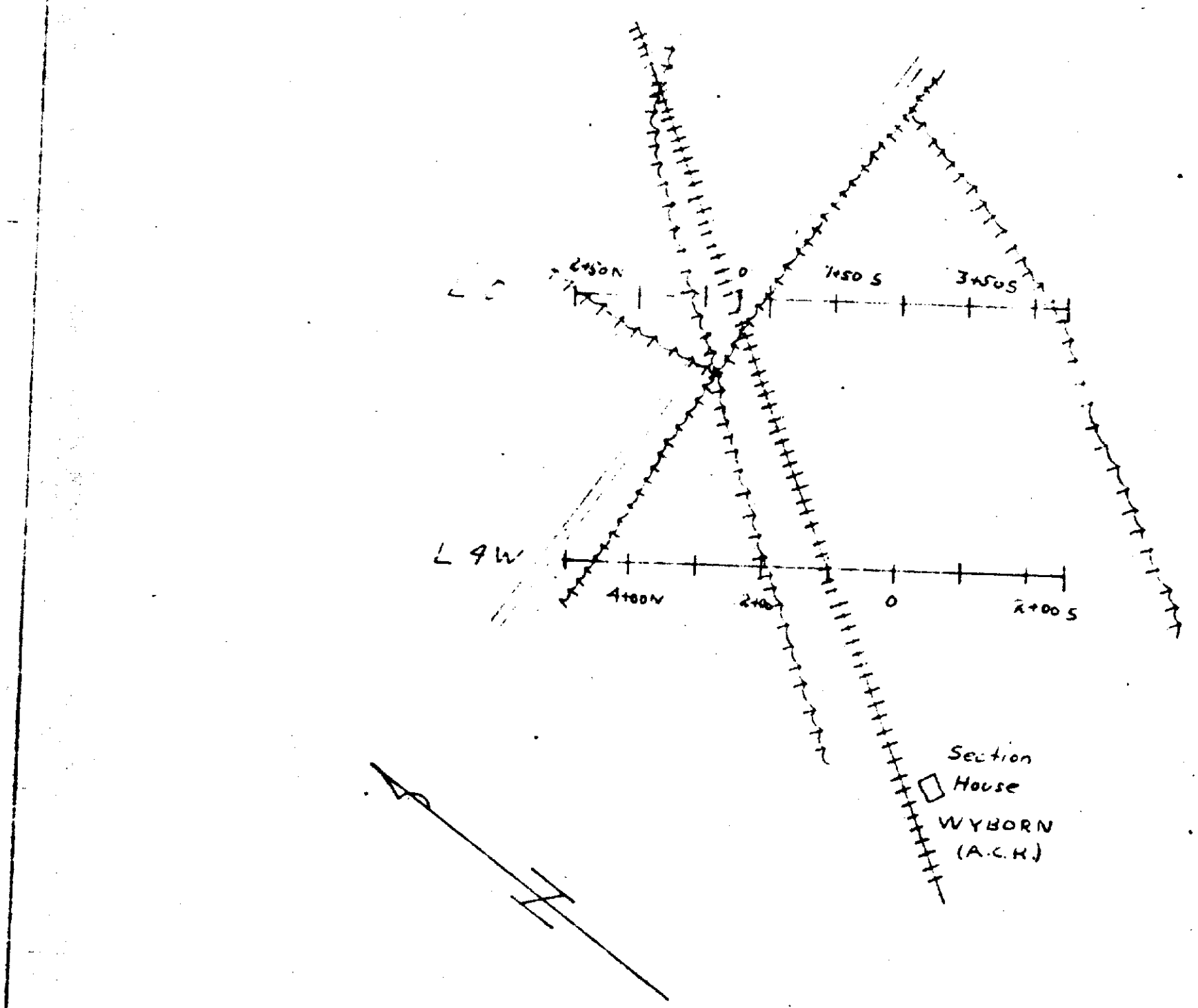
CONVENTION: EAST TILTS ON NORTH SIDE OF LINES.

WORK BY: G. F. ... G. F. DATE: 30-6-63



GLASGOW-0013 102

HAROLD O. SEIGEL & ASSOCIATES, LIMITED		
PROJECT: FRANC R. JOUBIN & ASSOCIATES LTD.		
SUBJECT GRID "A" IN WAY TWP.		
SURVEY LOCATION		
Scales: 1" = 1320'	Legend:	
WORK BY G.T.	PLOT BY G.T.	DATE 1-6-69



Legend

- Road
- Rail Road (A.C.R.)
- Hydro Power Transmission

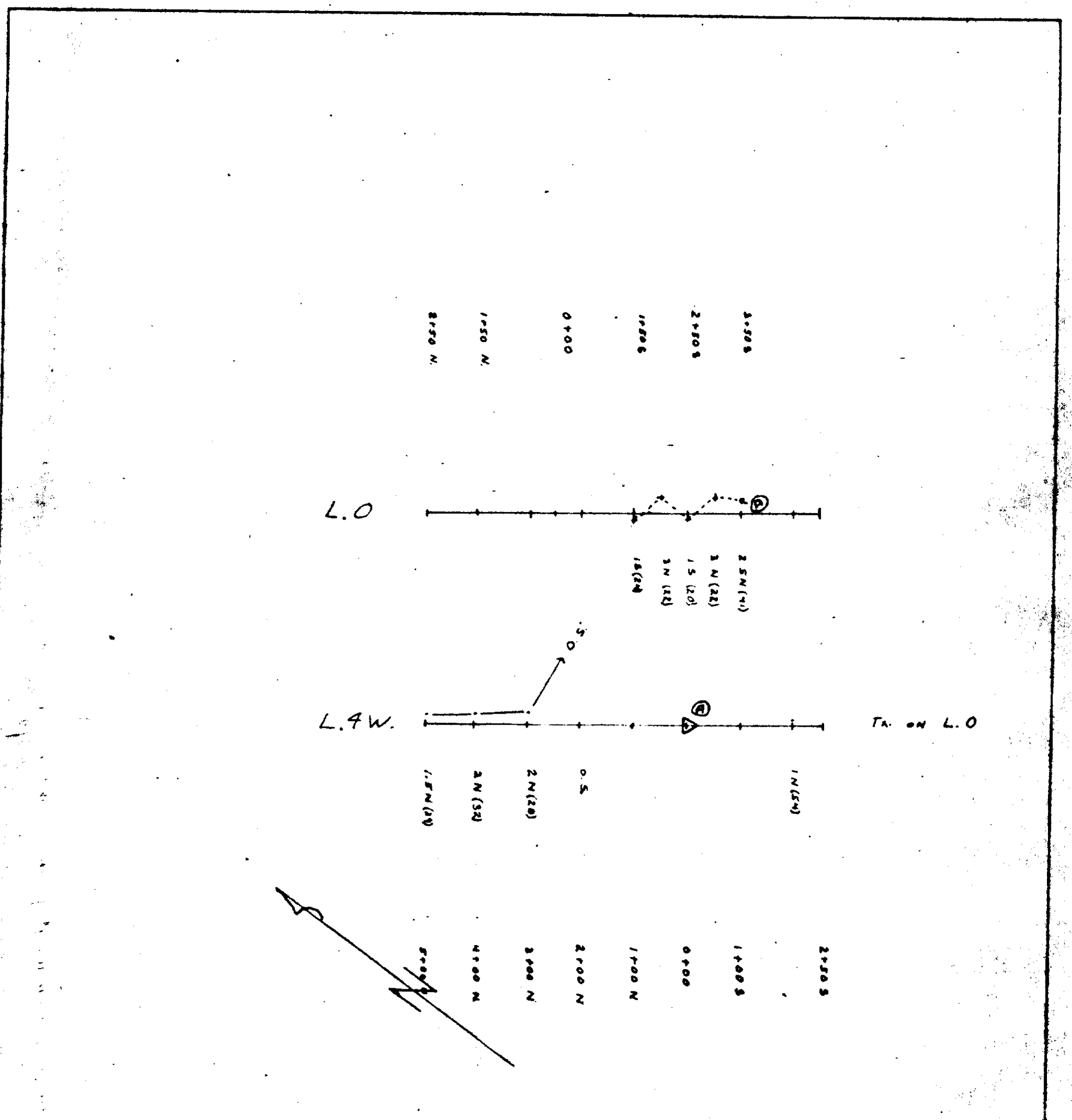
GLASGOW-0013 103

from A Survey and Traced

PLAN of ANOMALY A

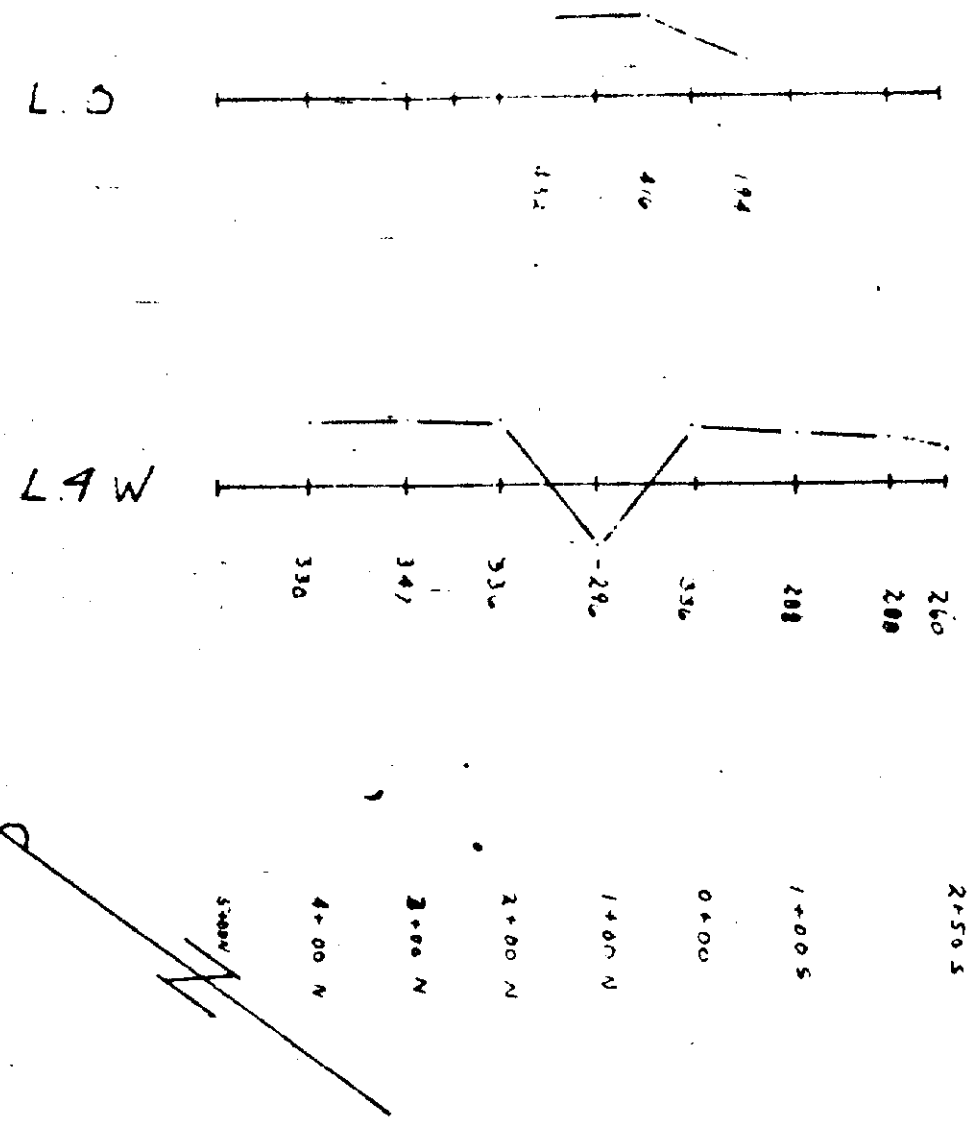
WAY TWP.

Scale 1" = 200'



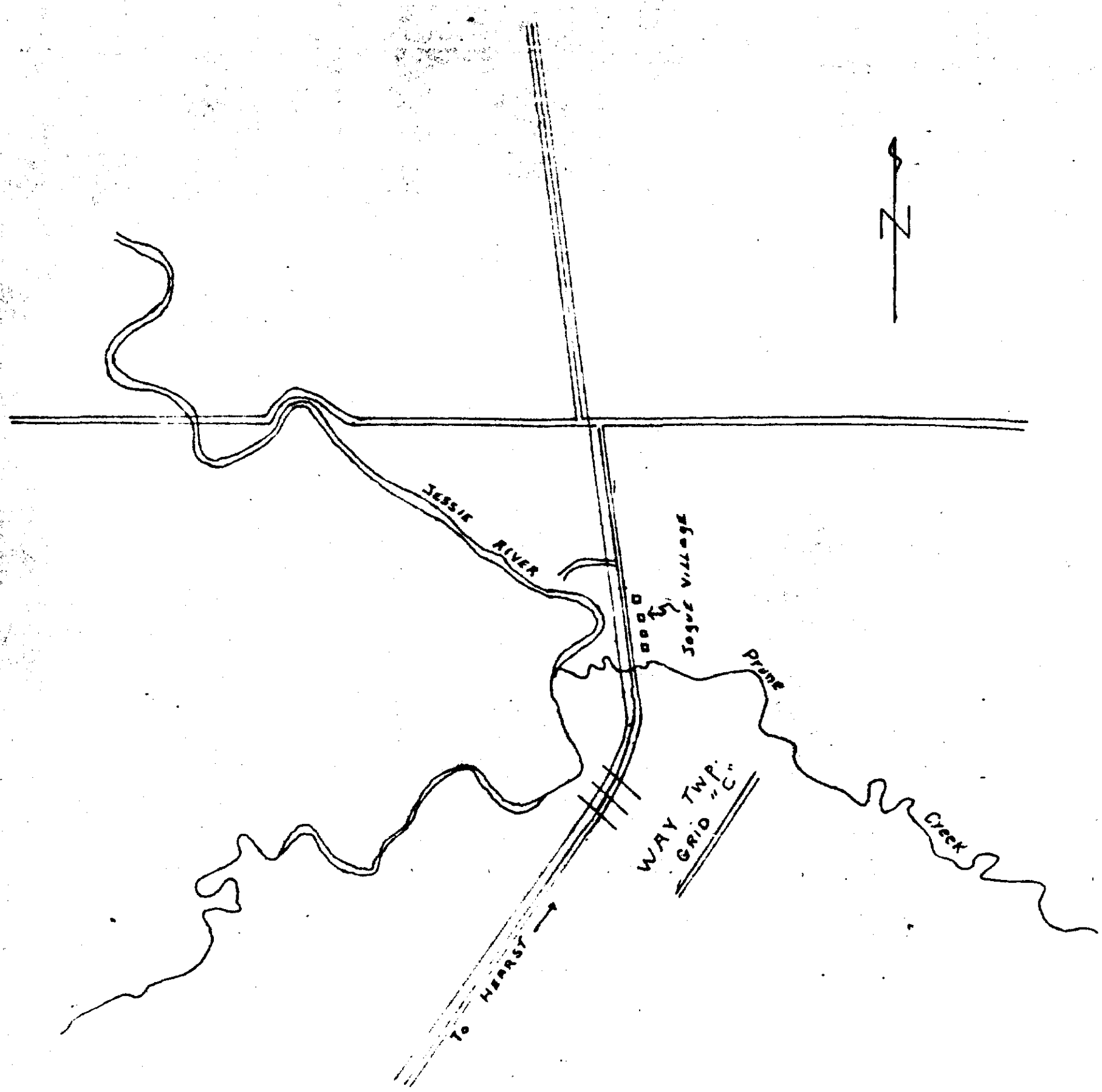
GLASGOW-0013 104

HAROLD O. SEIGEL & ASSOCIATES, LIMITED	
PROJECT FRANC R. JOUBIN & ASSOCIATES LTD	
SUBJECT GRID "A" IN WAY TWP.	
SURVEY E.M.	
Scales: 1" = 200' 1" = 20° ELECTROMAGNETIC	Legend: PARALLEL LINE RECCE. ·——· FIXED TRANSMITTER x- - -x TRANSMITTER LOCATION △ CONVENTION: EAST TILTS ON NORTH SIDE OF LINES
WORK BY: G.T.	PLOT BY G.T. DATE 1-6-63



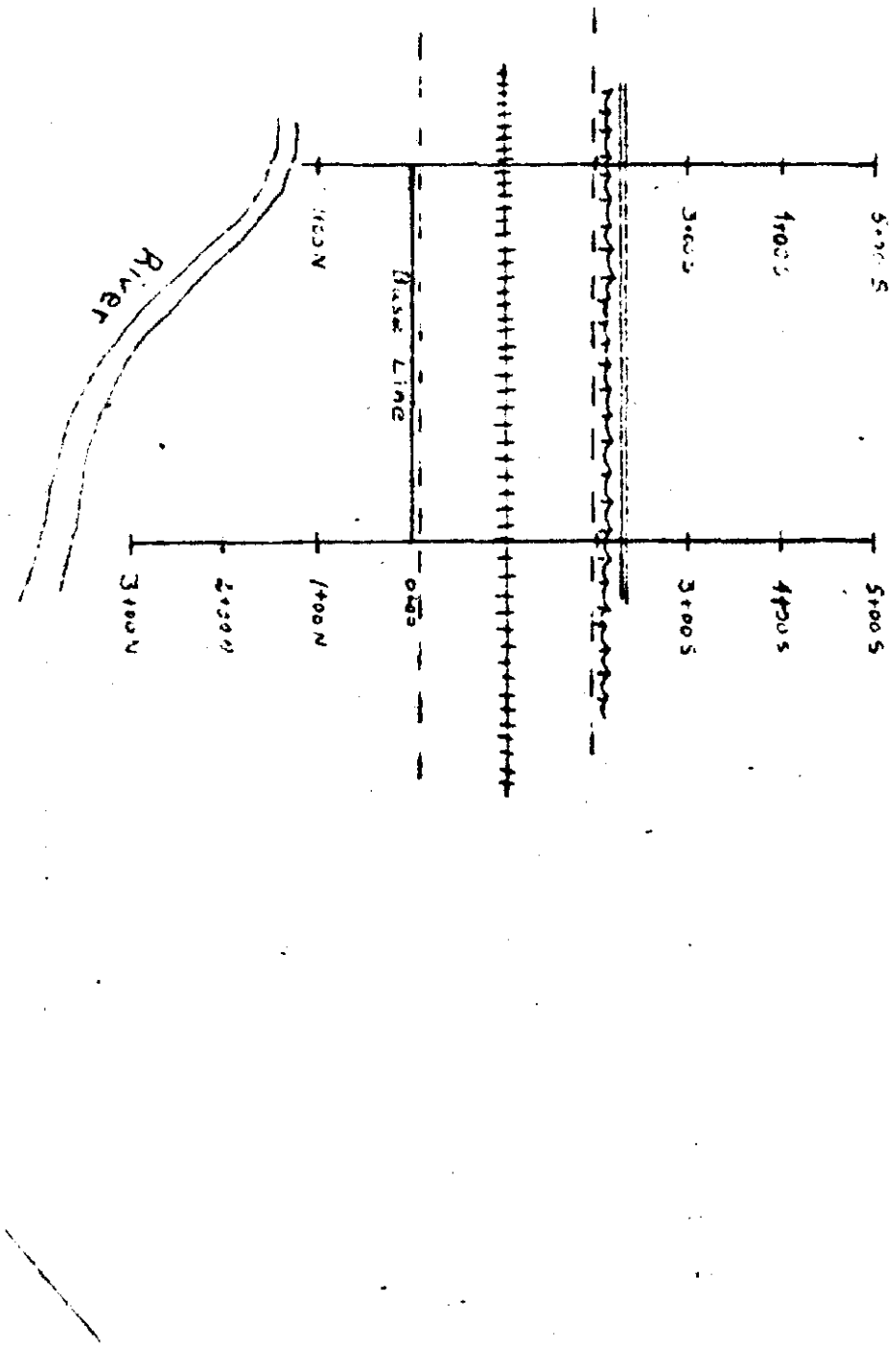
GLASGOW - 0013 105

HAROLD O. SEIGEL & ASSOCIATES, LIMITED		
PROJECT FRANCE R JOUBIN & ASSOCIATES LTD		
SUBJECT Grid A in VLF Inf		
SURVEY Main Limits		
Scales: 1" = 200' 1" = 1000'	Legend:	
WORK BY [illegible]	PLOT BY [illegible]	DATE 6-63



GLASGOW-0013 106

HAROLD O SEIGEL & ASSOCIATES, LIMITED			
PROJECT: FRANC A. JOUBIN & ASSOCIATES LTD			
SUBJECT GRID "C" IN WAY TWP.			
SURVEY LOCATION			
Scales: 1" = 1320'	Legend:		
WORK BY G.T.	PLOT BY G.T.	DATE 2-6-63	



Legend

- Rail Road (M.C.R.)
- Gravel Road
- Hydro Power Tr Line
- Fence

GLASGOW-0013 107

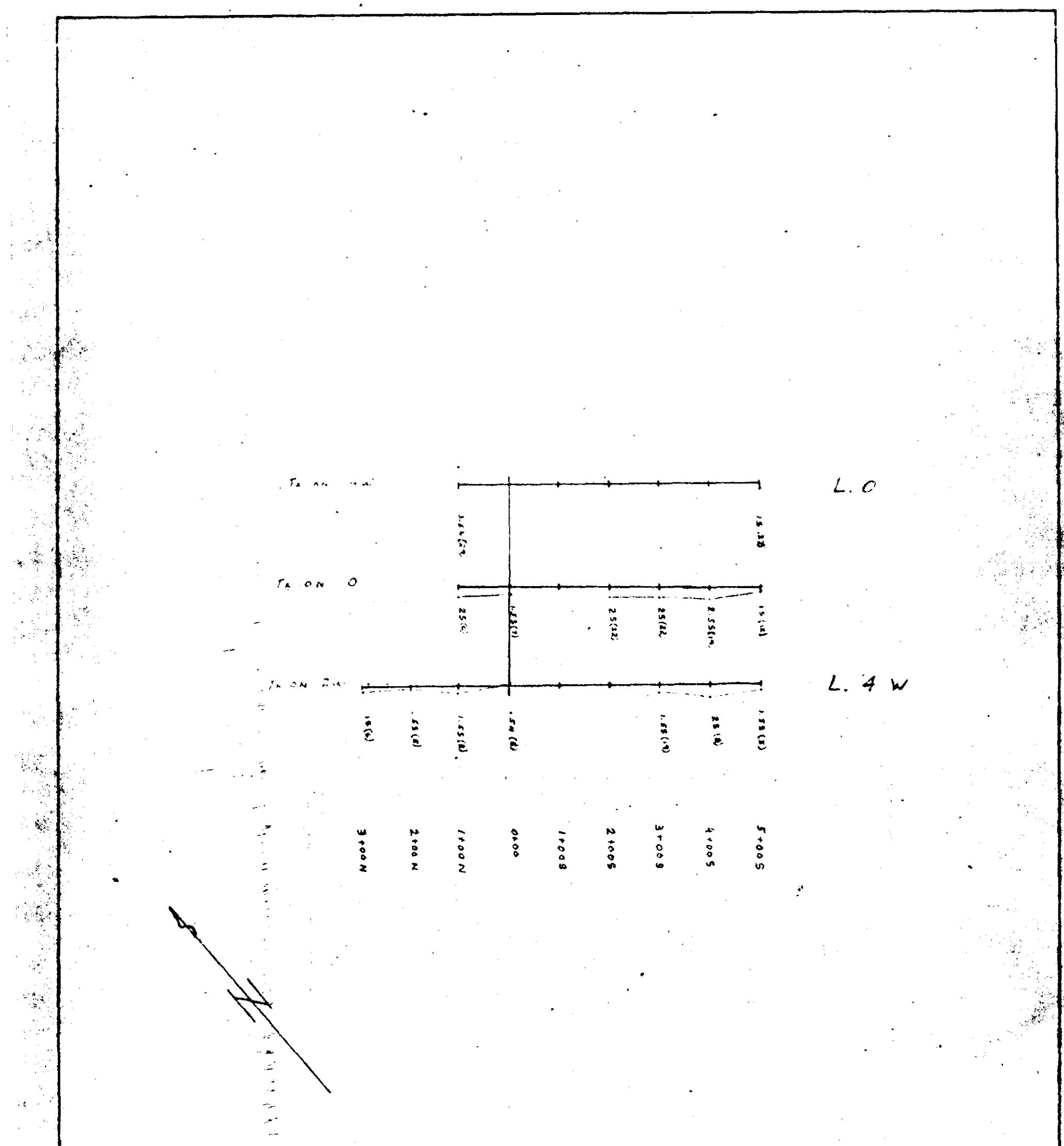
Franc R. Joubin and Assoc

PLAN of ANOMALY C.

WAY TWP.

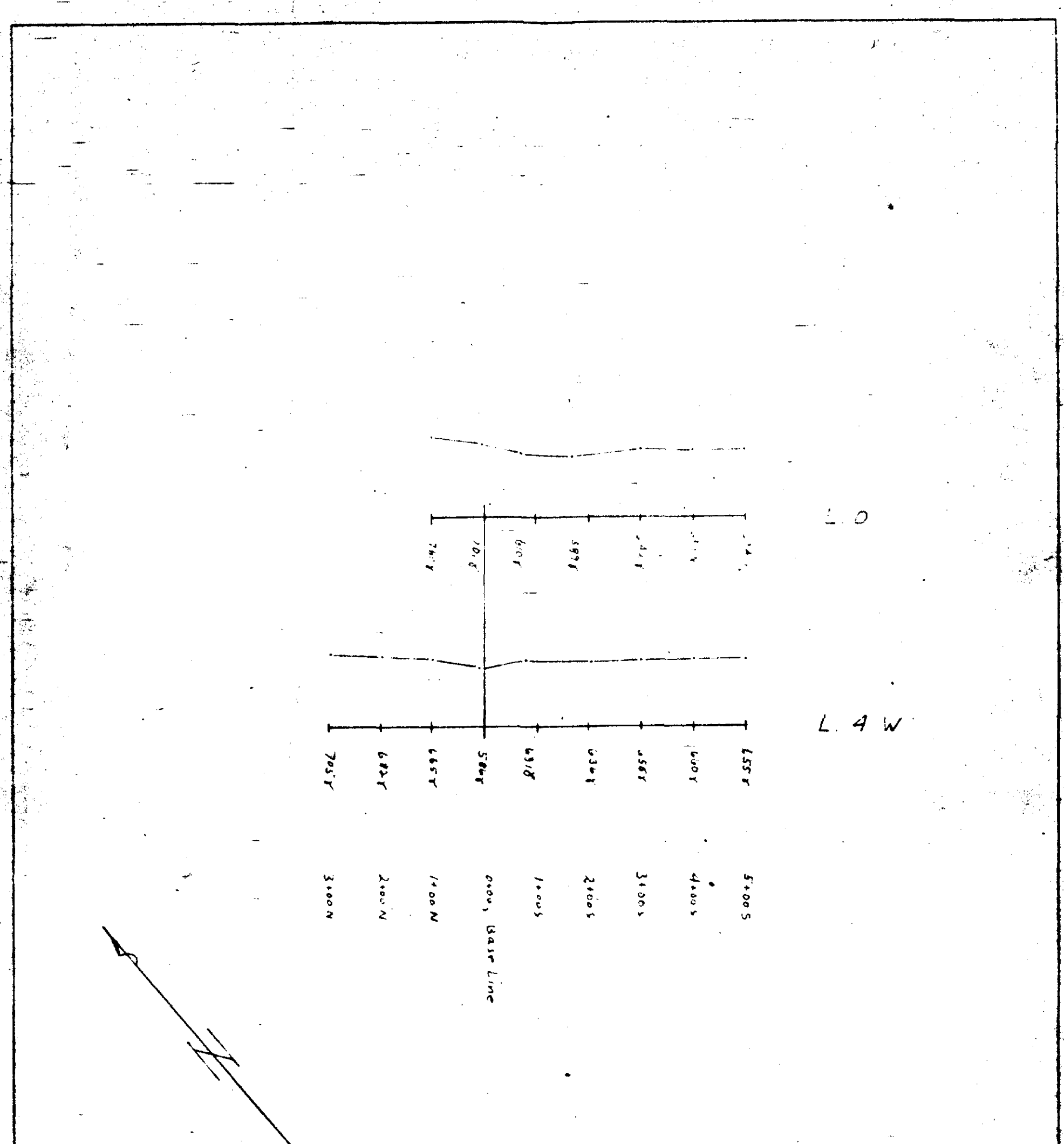
Scale 1" = 200'

June 1963
H.O.L.



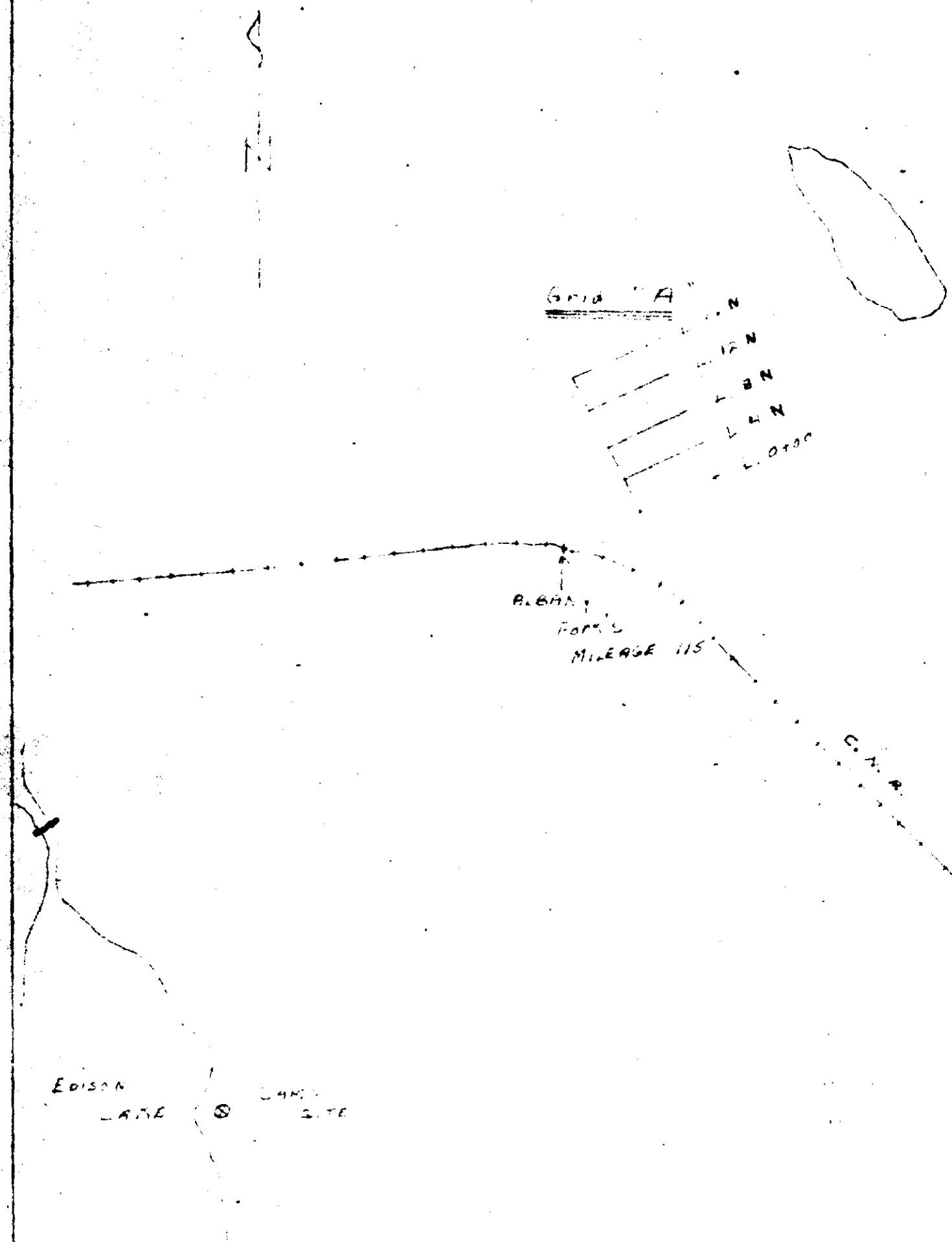
GLASGOW - 0013 108

HAROLD O. SEIGEL & ASSOCIATES, LIMITED	
PROJECT Franc P. Joubin & Assoc. LTD.	
SUBJECT Grid 1 in [illegible] Twp.	
SURVEY ELECTROMAGNETIC	
Scales: 1" = 200' ; 1" = 20° ELECTROMAGNETIC	**Legend:** PARALLEL LINE REGGE; FIXED TRANSMITTER; TRANSMITTER LOCATION △; CONVENTION: EAST FLIES ON NORTH SIDE OF LINES
WORK BY: G. T.	PLOT BY: G. T. DATE 2-1-63



GLASGOW-0013 109

HAROLD O. SEIGEL & ASSOCIATES, LIMITED	
PROJECT Franc. R. Joubin and Assoc	
SUBJECT Grid C in WAY Twp.	
SURVEY Magnetometer	
Scales: 1" = 200' 1" = 1000'	**Legend:**
WORK BY H.O.L.	PLOT BY H.O.L. DATE June 8. 1962.



GLASGOW - 0013 110

HAROLD O. SEIGEL & ASSOCIATES, LIMITED

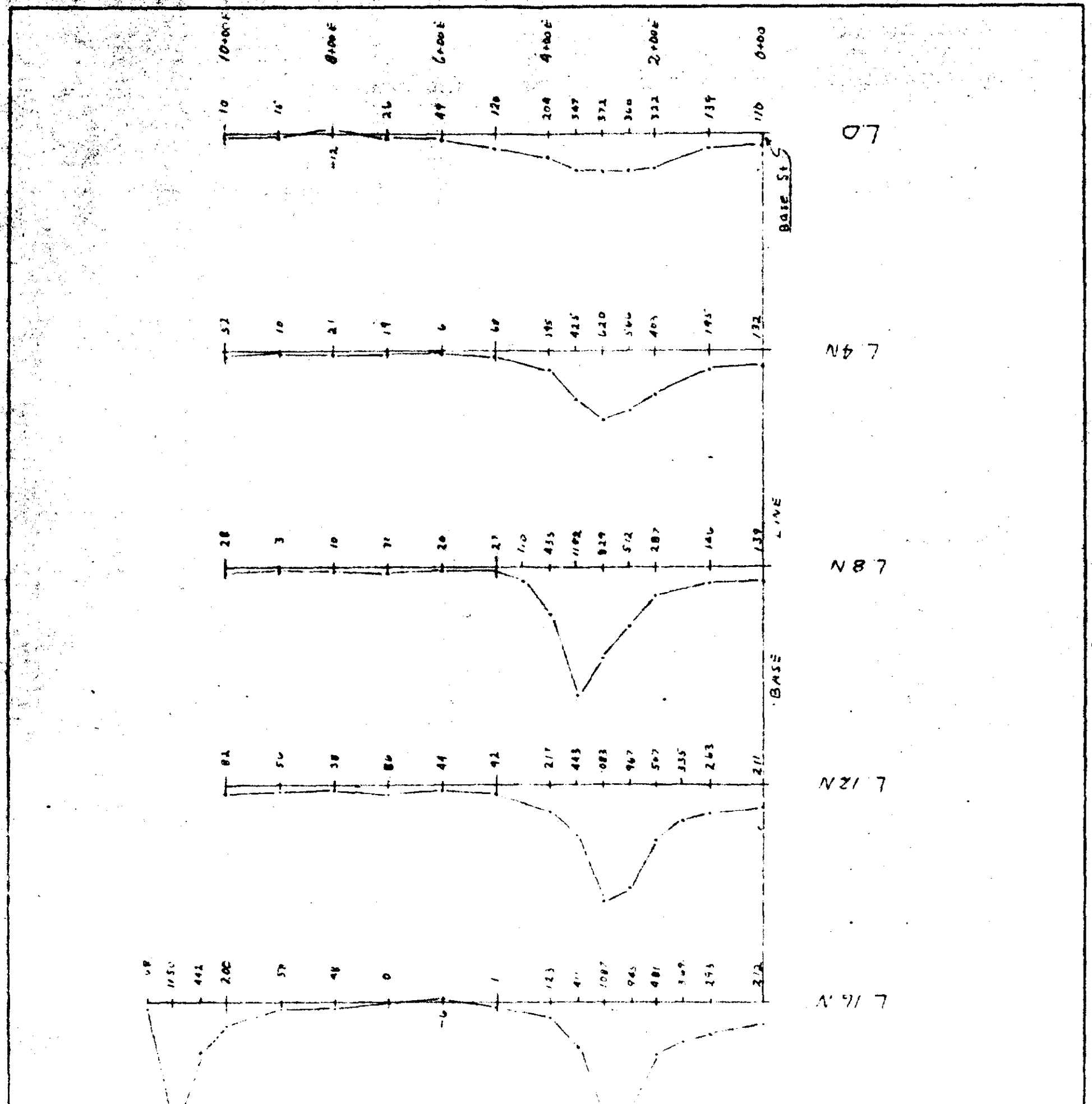
PROJECT:

SUBJECT: ANOMALY A in Franz Twp

SURVEY : LOCATION

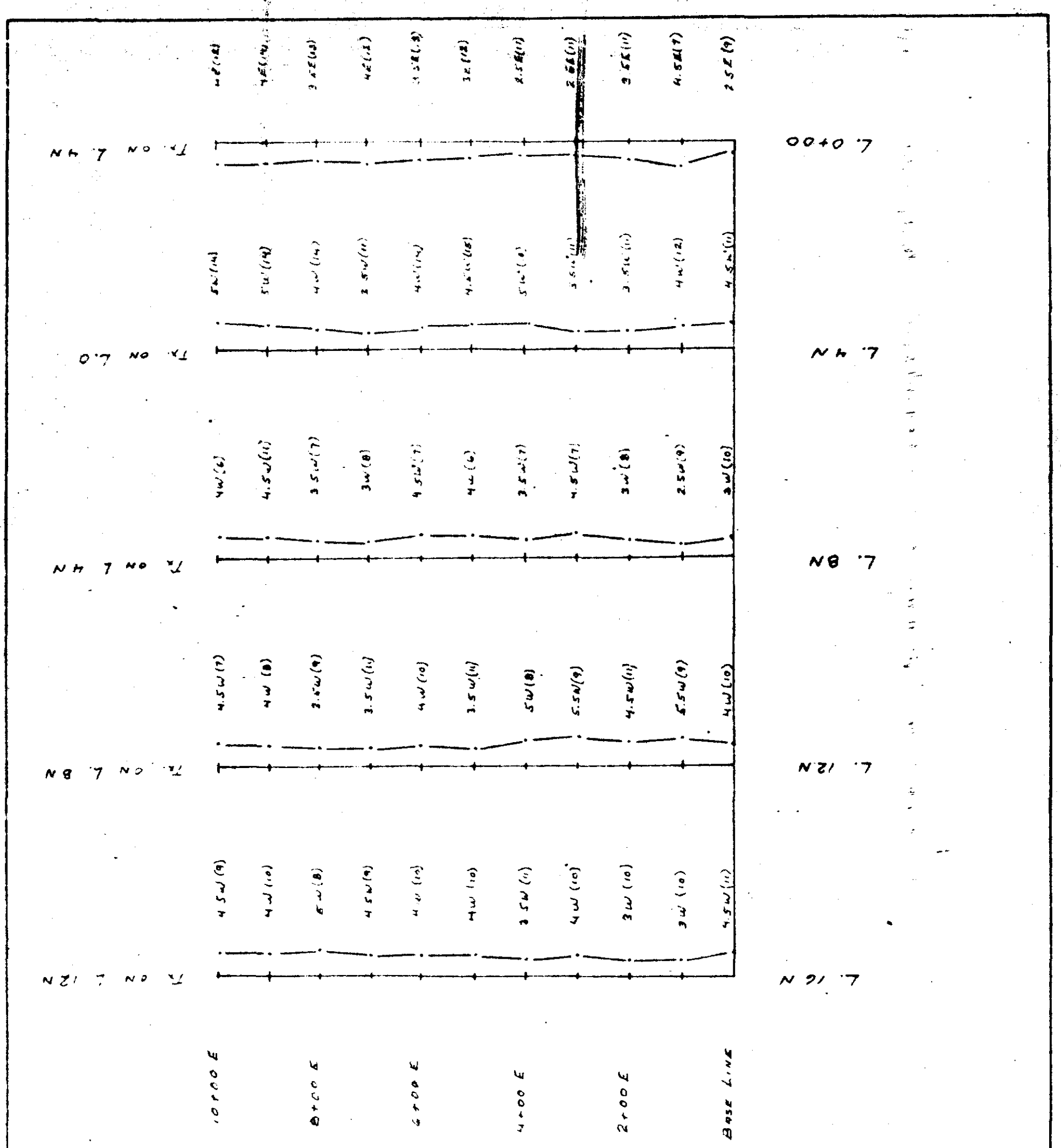
Scales: 1" = 1320'

Legend:



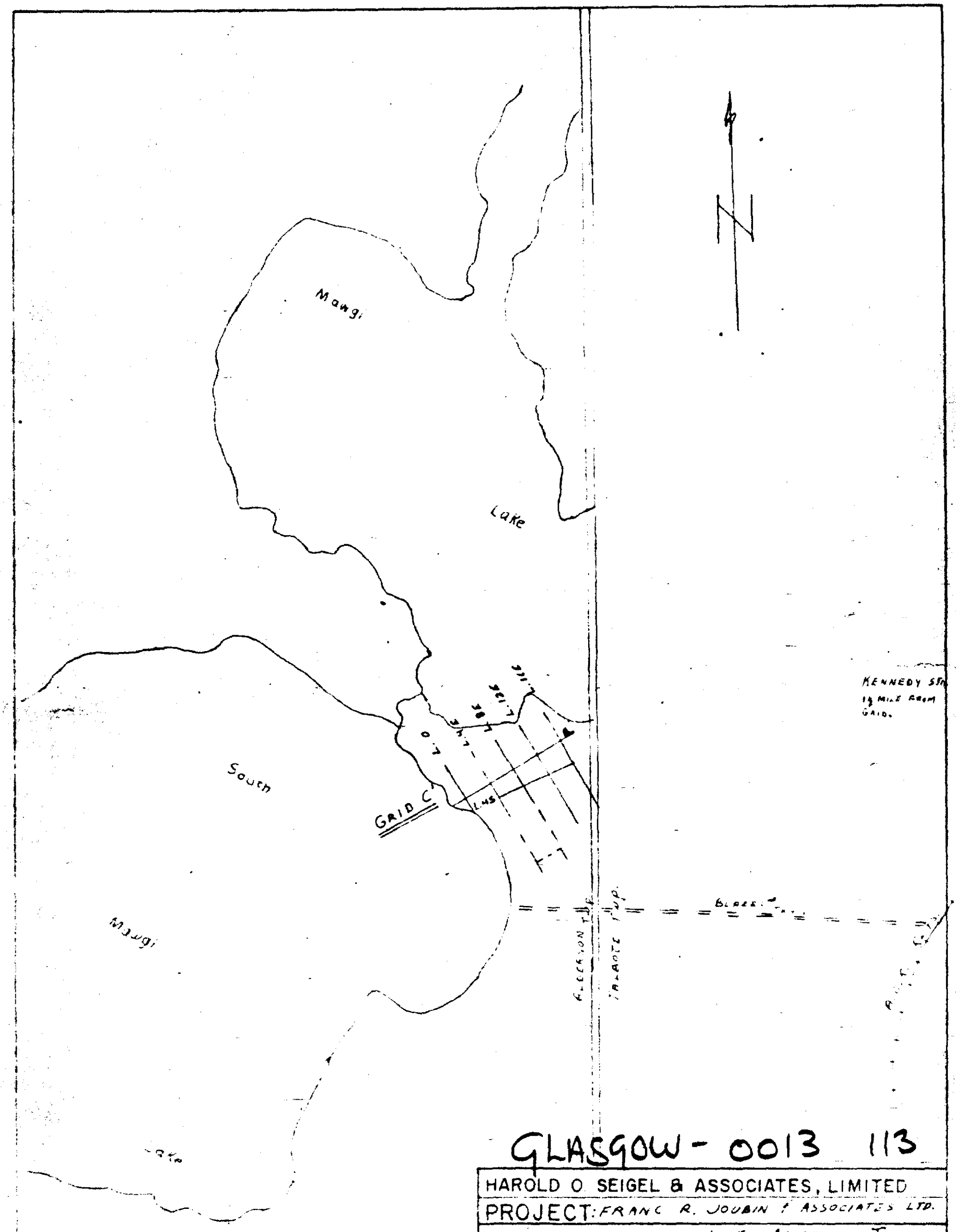
GLASGOW - 0013 111

HAROLD O. SEIGEL & ASSOCIATES, LIMITED	
PROJECT Fran. R Joubin and Associates	
SUBJECT ANOMALY A in Franz Twp	
SURVEY Magnetometer	
Scales: 1" = 200' 1" = 1000'	Legend:
WORK BY H O L	PLOT BY H O L DATE June 22 1963



GLASGOW-0013 112

HAROLD O. SEIGEL & ASSOCIATES, LIMITED		
PROJECT: FRANC R. JOUBIN & ASSOCIATES LTD.		
SUBJECT: ANOMALY A in Franz Twp.		
SURVEY: E.M.		
Scales: 1" = 200'; 1" = 20°	**Legend:** PARALLEL LINE RECCE. ·——·; FIXED TRANSMITTER X---X; TRANSMITTER LOCATION △; CONVENTION: NORTH TILTS ON EAST SIDE OF LINES.	
WORK BY G.T.	PLOT BY G.T.	DATE 24-6-68



GLASGOW - 0013 113

HAROLD O SEIGEL & ASSOCIATES, LIMITED

PROJECT: FRANC R. JOUBIN & ASSOCIATES LTD.

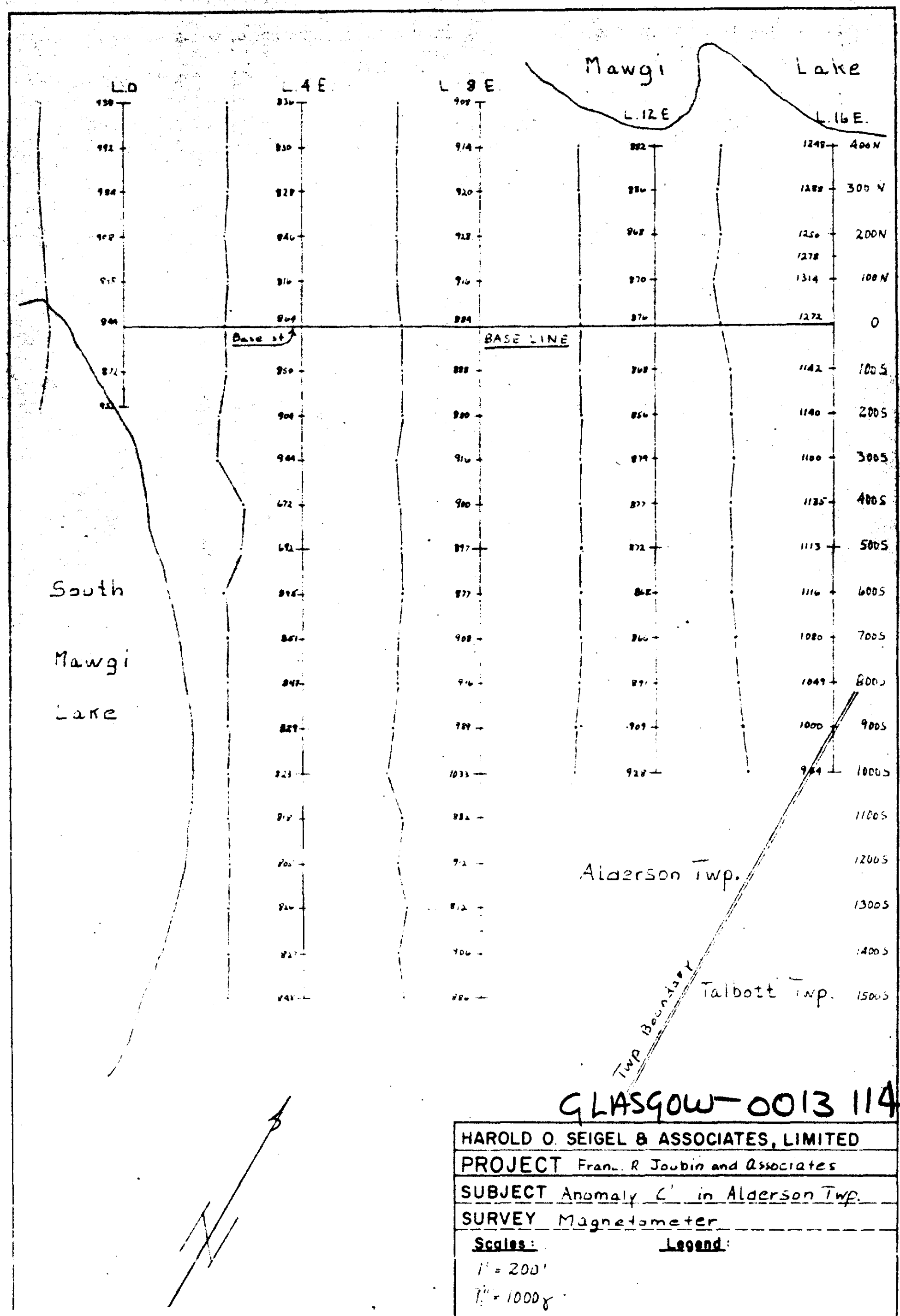
SUBJECT : Anomaly 'C' in Alderson Twp.

SURVEY : LOCATION

Scales : 1" = 1320'

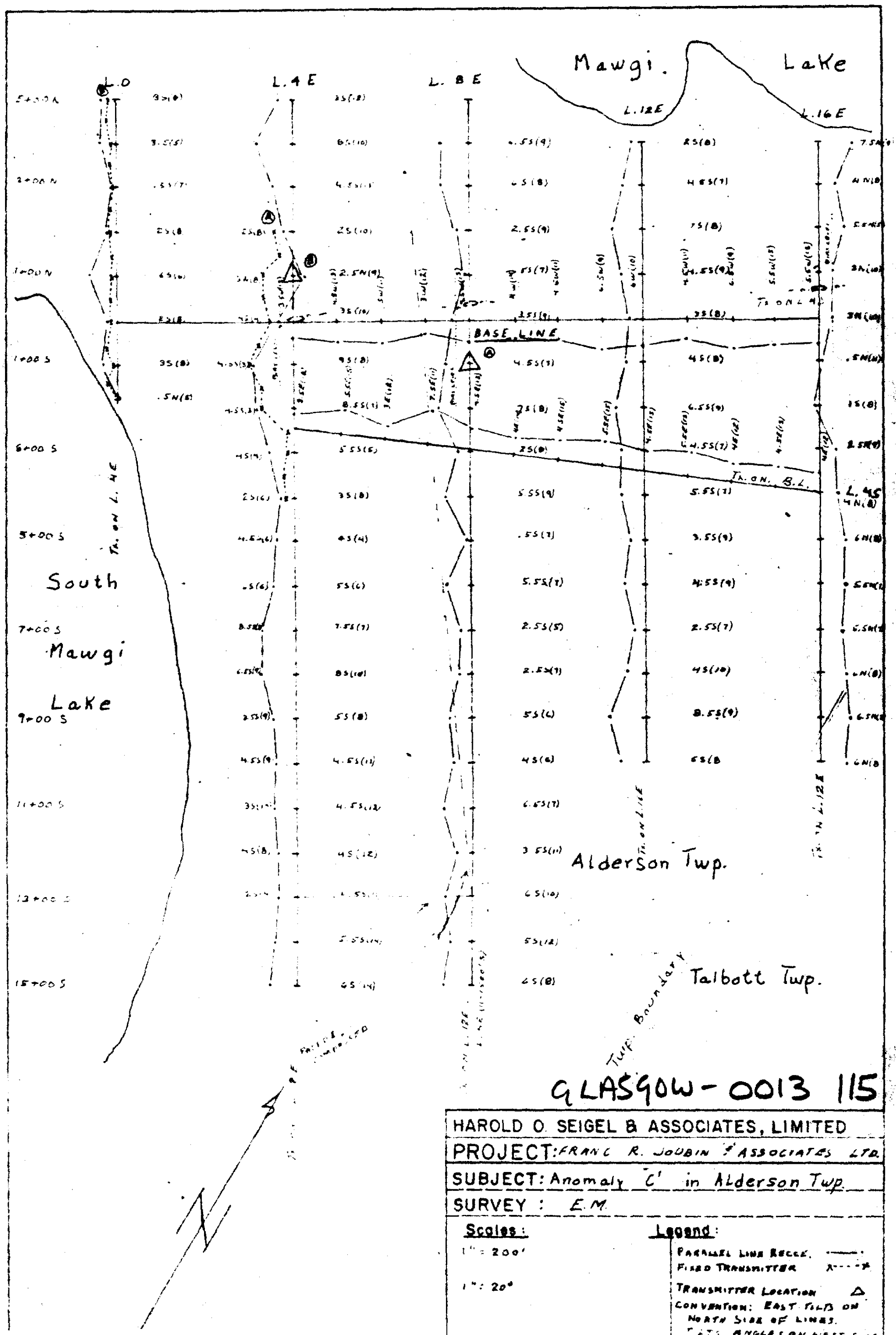
Legend :

WORK BY G.T. | PLOT BY G.T. | DATE 13-6-63



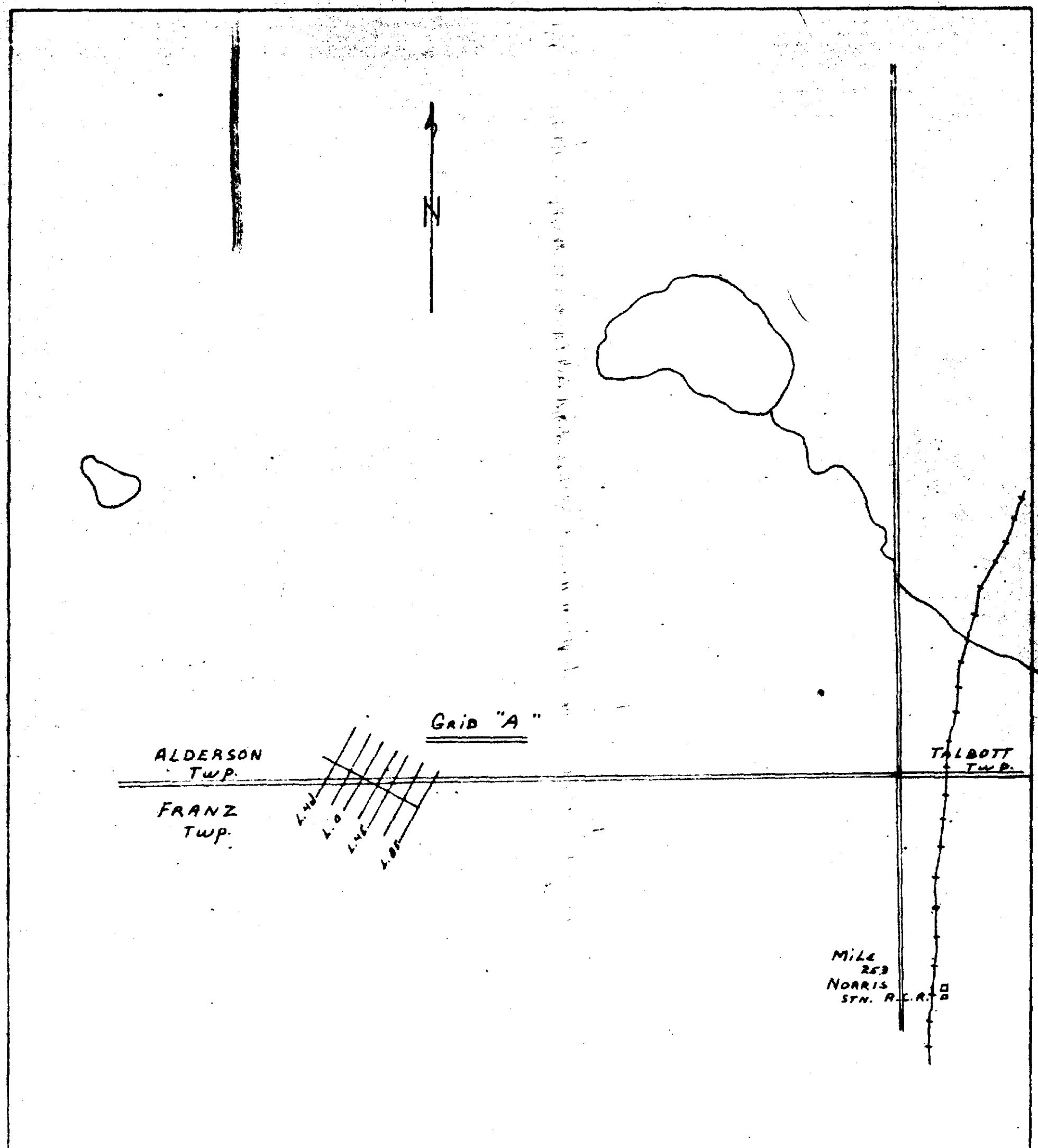
GLASGOW-0013 114

HAROLD O. SEIGEL & ASSOCIATES, LIMITED		
PROJECT Franc. R Joubin and Associates		
SUBJECT Anomaly C' in Alaerson Twp.		
SURVEY Magnetometer		
Scales: 1" = 200' 1" = 1000 g	Legend:	
WORK BY H.O.L.	PLOT BY H.O.L.	DATE June 12 1963



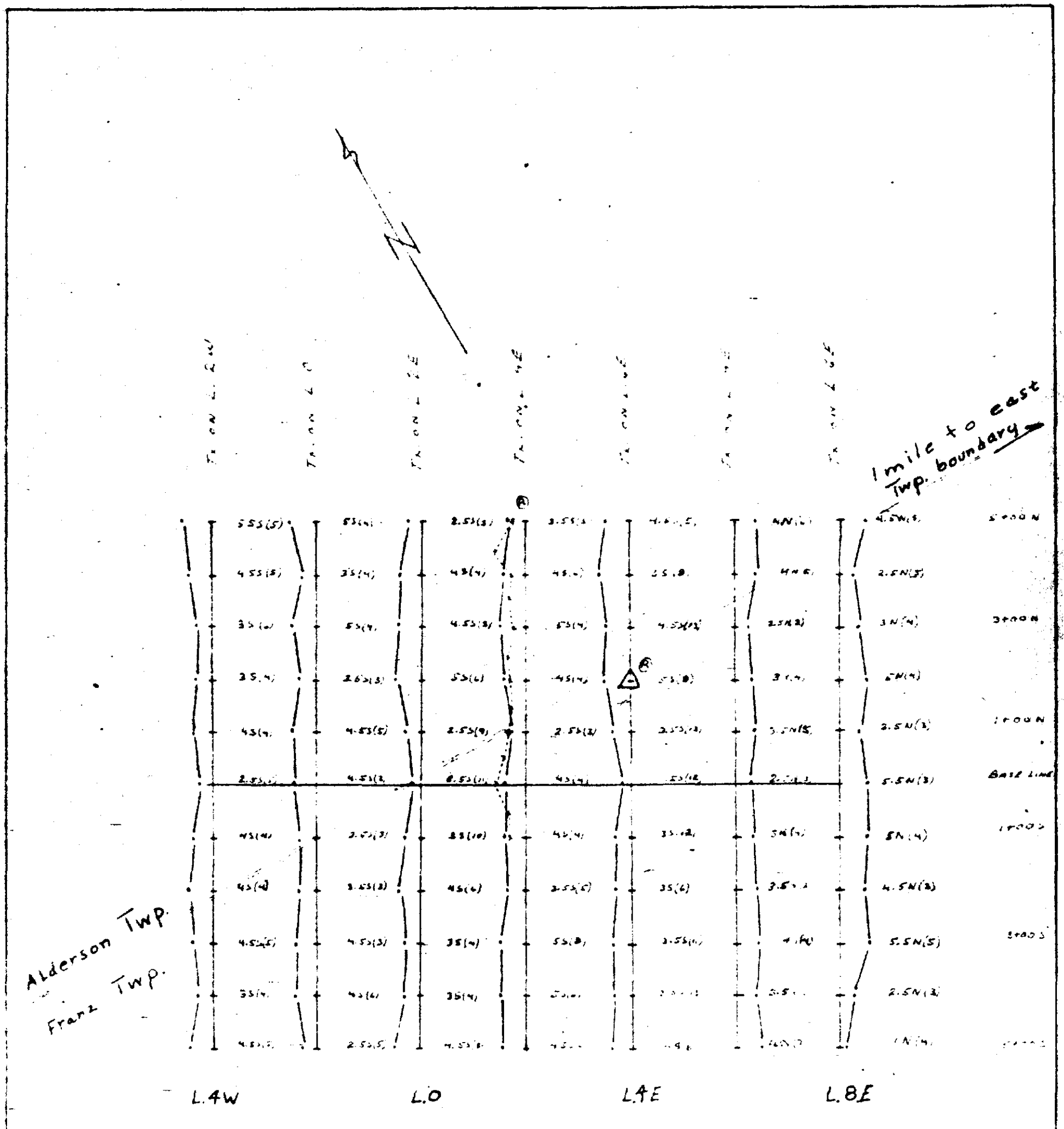
GLASGOW-0013 115

HAROLD O. SEIGEL & ASSOCIATES, LIMITED	
PROJECT: FRANC R. JOUBIN & ASSOCIATES LTD.	
SUBJECT: Anomaly 'C' in Alderson Twp.	
SURVEY : E.M.	
Scales: 1" = 200' ; 1" = 20°	**Legend:** Parallel Line Recce. ——— ; Fixed Transmitter x- - - -x ; Transmitter Location △ ; Convention: East Field on North Side of Lines. Tilt Angles on West Side of L. Ne Are From Reconnaissance
Plotted By: G. T.	Date: 13-6-63



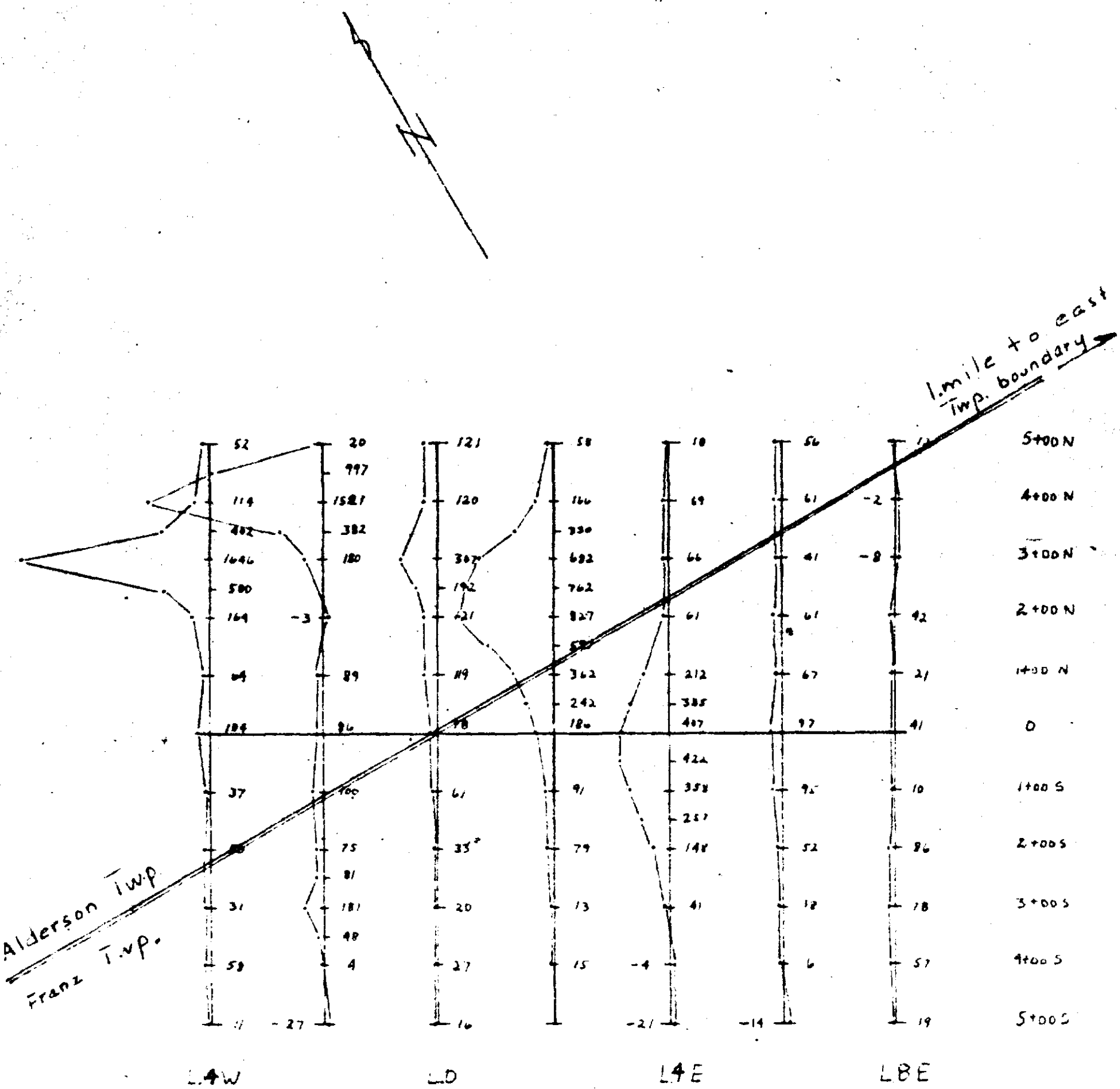
GLASGOW - 0013 116

HAROLD O. SEIGEL & ASSOCIATES, LIMITED		
PROJECT: FRANC R. JOUBIN & ASSOCIATES LTD.		
SUBJECT: Anomaly A in Alderson Twp.		
SURVEY: LOCATION		
Scales: 1" = 1320'	Legend:	
WORK BY: G. T.	PLOT BY G. T.	DATE 16-6-63



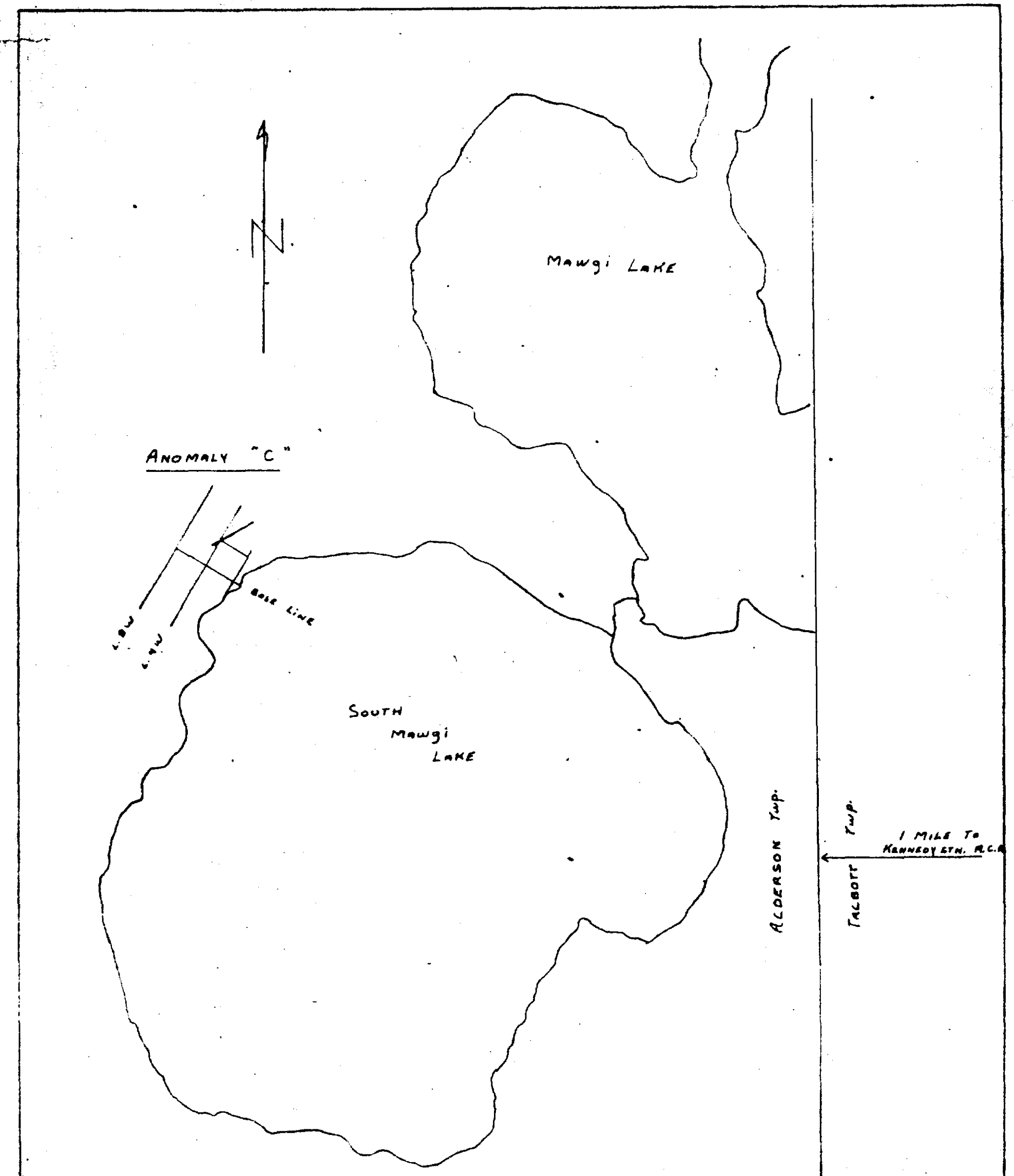
GLASGOW- 0013 117

HAROLD O SEIGEL & ASSOCIATES, LIMITED	
PROJECT: FRANZ R. JOUBIN & ASSOCIATES LTD.	
SUBJECT: Anomaly A in Alderson Twp.	
SURVEY : E. M.	
Scales: 1" = 200' 1" = 20°	Legend: PARALLEL LINE RECCE. ·——· FILED TRANSMITTER K- - -A TRANSMITTER LOCATION △ CONVENTION: DASH TICKS ON NORTH SIDE OF LINES.
WORK BY G.T. PLOT BY G.T. DATE 16-6-63	



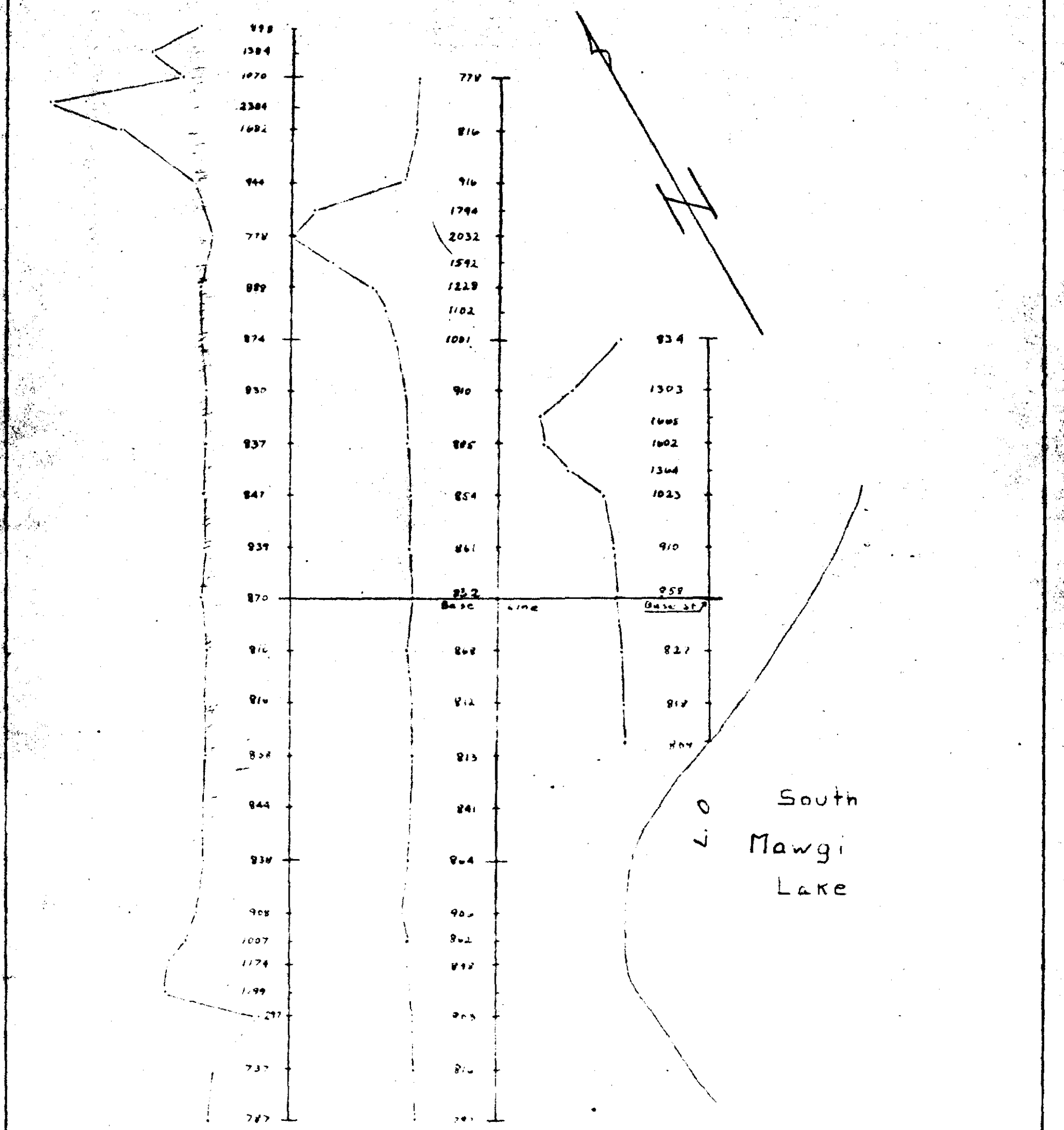
GLASGOW-0013 118

HAROLD O. SEIGEL & ASSOCIATES, LIMITED		
PROJECT Franc R. Joubin and Associates		
SUBJECT Anomaly A in Alderson Twp		
SURVEY Magnetometer		
Scales: 1" = 200' 1" = 1000γ	**Legend:** BASE LEVEL 800 GAMMAS REMOVED FROM OBSERVED VALUES.	
WORK BY H.O.L.	PLOT BY H.O.L.	DATE June 17, 1963



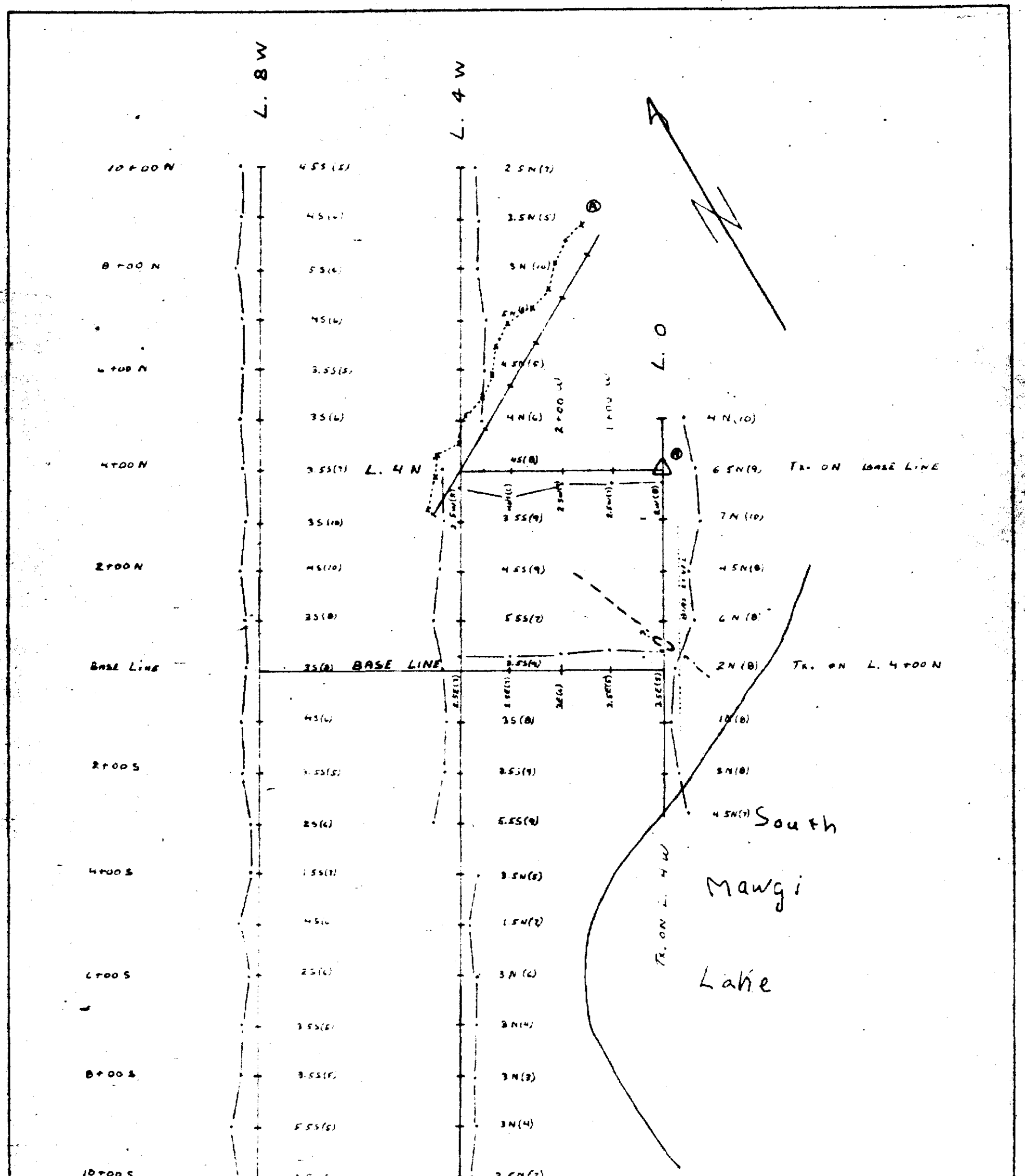
GLASGOW-0013 119

HAROLD O SEIGEL & ASSOCIATES, LIMITED	
PROJECT: FRANC R JOUBIN & ASSOCIATES LTD	
SUBJECT: ANOMALY "C" IN ALDERSON TWP.	
SURVEY: LOCATION	
Scales: 1" = 1320'	Legend:
WORK BY G.T.	PLOT BY G.T. DATE 10-6-63



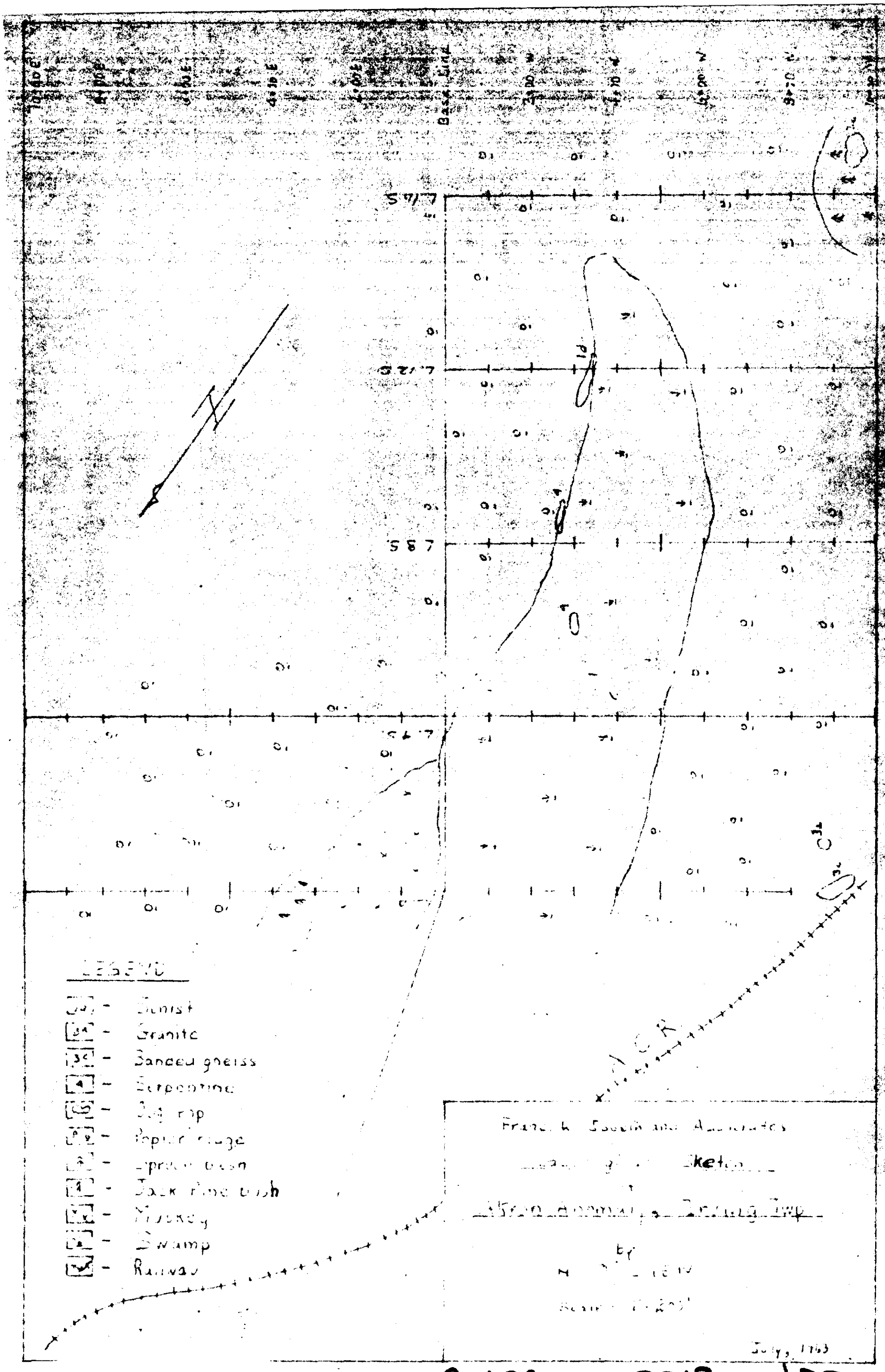
GLASGOW-0013 120

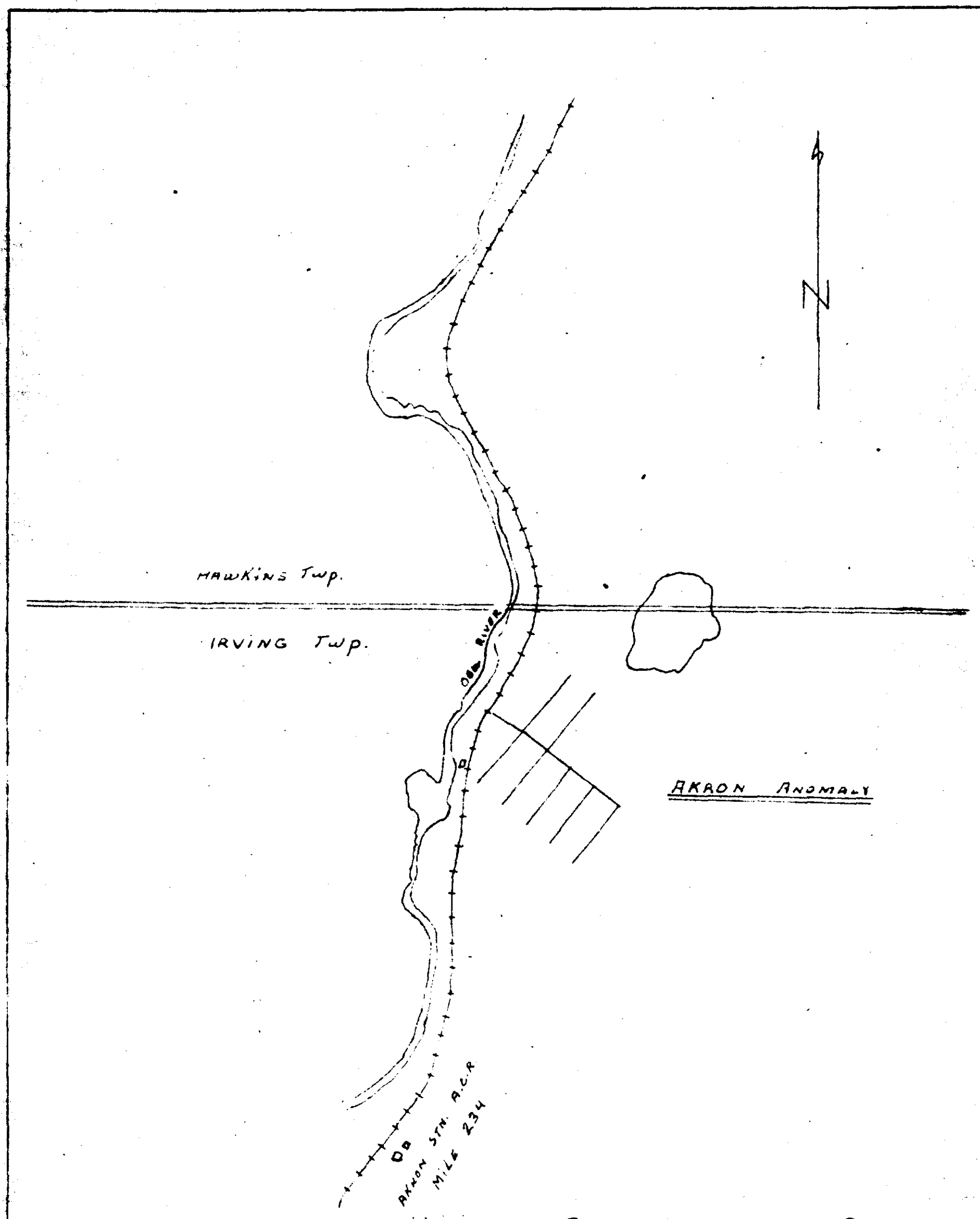
HAROLD O. SEIGEL & ASSOCIATES, LIMITED	
PROJECT Frank R. Joubin and Associates	
SUBJECT Anomaly "C" in Alderson Twp.	
SURVEY Magnetometer	
Scales: 1" = 200' 1" = 1000'	Legend:
WORK BY: H.O.L.	PLOT BY H.O.L. DATE June 9/63



GLASGOW-0013 121

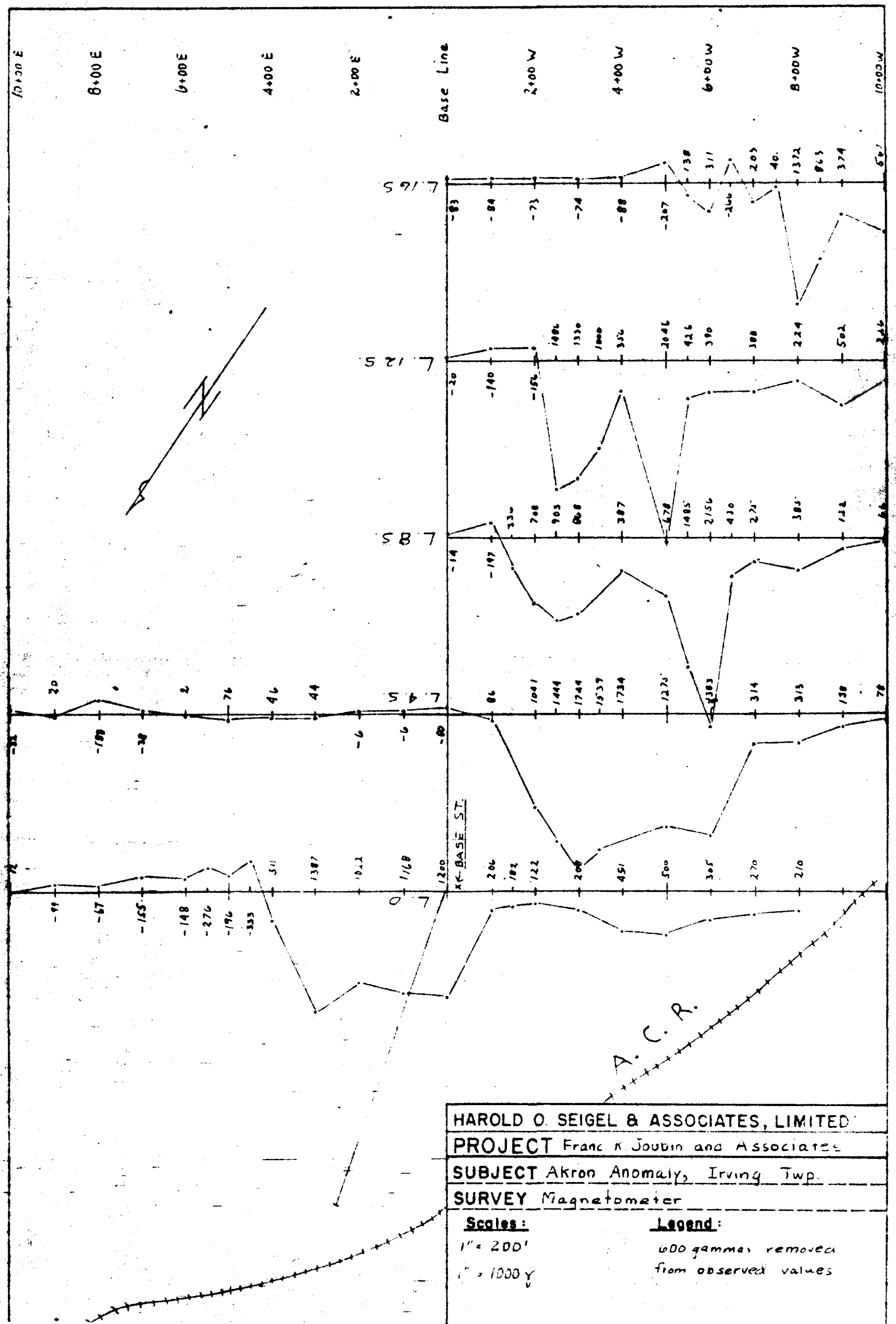
HAROLD O. SEIGEL & ASSOCIATES, LIMITED	
PROJECT FRANC R. JOUBIN & ASSOCIATES, LTD	
SUBJECT ANOMALY "C" IN ALDERSON TWP.	
SURVEY E.M.	
Scales: 1" = 200' ; 1" = 20°	Legend: PARALLEL LINE REGLE. ; FIXED TRANSMITTER X ; TRANSMITTER LOCATION △ ; CONVENTION EAST TILTS ON NORTH SIDE OF LINE
WORK BY G. T.	G. T. DATE 9-6-63





GLASGOW - 0013 123

HAROLD O. SEIGEL & ASSOCIATES, LIMITED	
PROJECT: Franc R. Joubin and Associates LTD.	
SUBJECT: AKron Anomaly, Irving Twp.	
SURVEY: Location	
Scales: 1" = 1320'	Legend:
WORK BY G.T.S. M.L.	DATE 17-7-73



HAROLD O. SEIGEL & ASSOCIATES, LIMITED

PROJECT Franc K Joubin and Associates

SUBJECT Akron Anomaly, Irving Twp.

SURVEY Magnetometer

Scales:

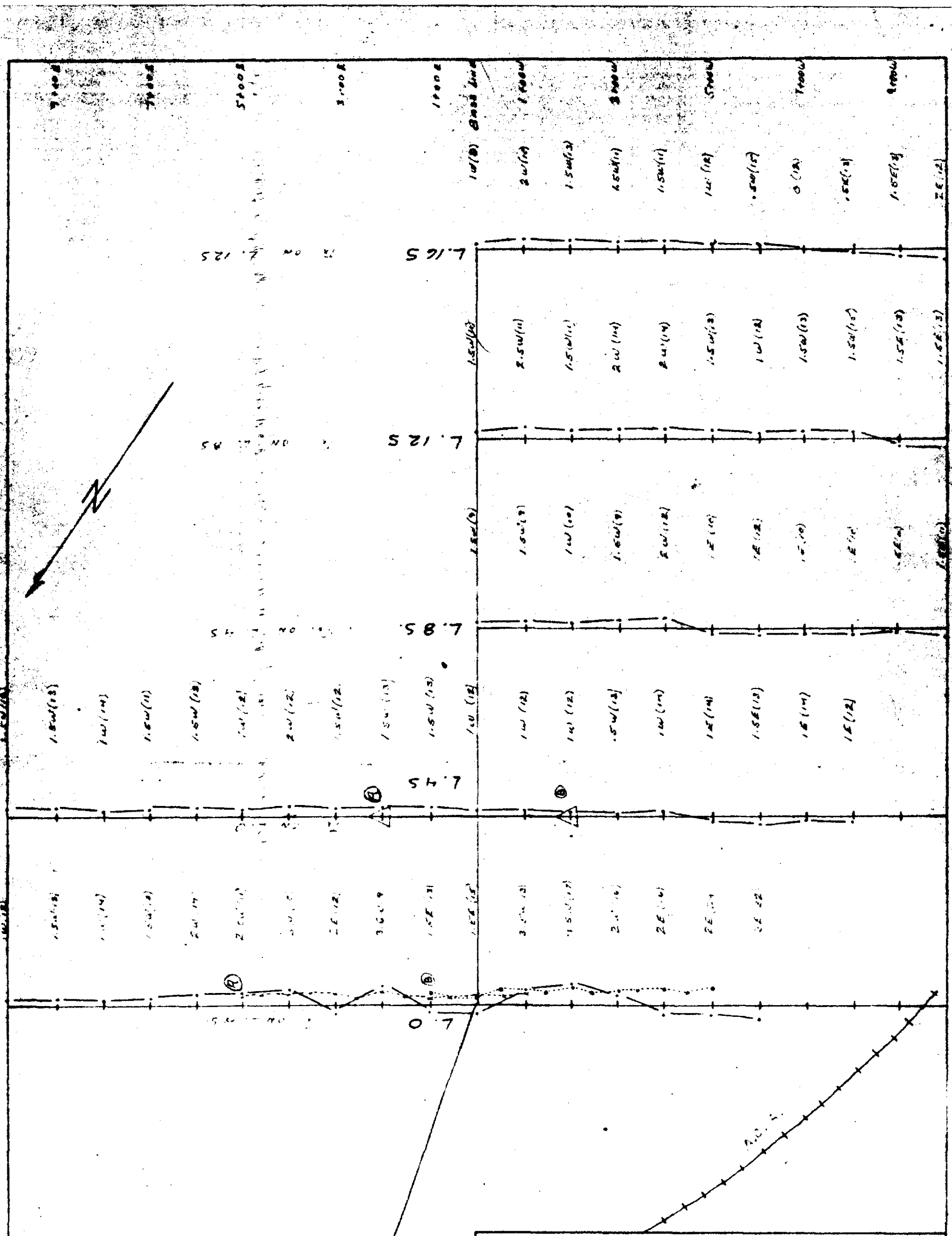
1" = 200'

1" = 1000 γ

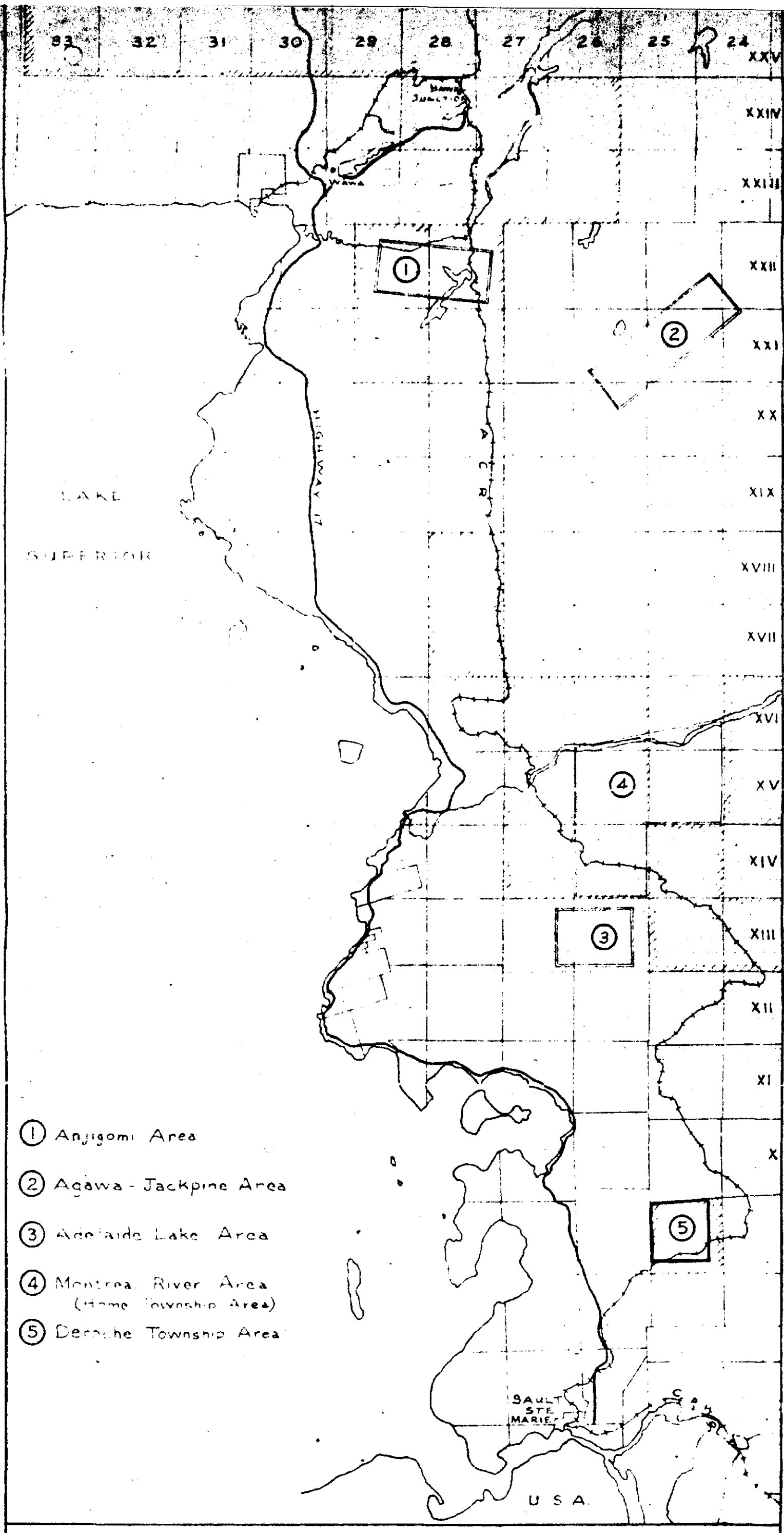
Legend:

600 gammas removed from observed values

WORK BY H.O.S. PLOT BY H.O.S. DATE July 23, 1962



GLASGOW - 0013 125



1. Anjigomi Area
2. Agawa - Jackpine Area
3. Adelaide Lake Area
4. Montreal River Area (Home Township Area)
5. Deroche Township Area

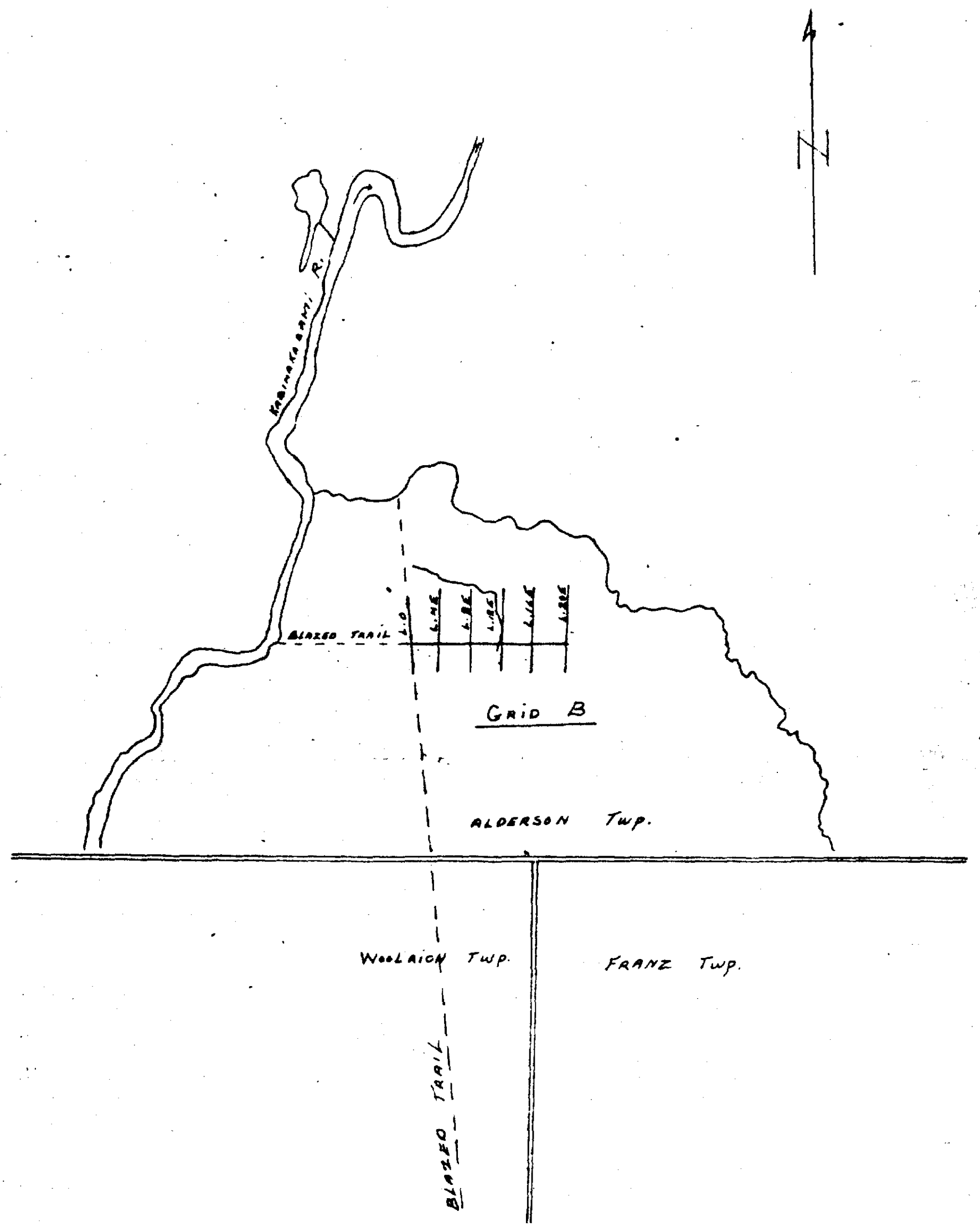
ALGOMA CENTRAL & HUDSON BAY RAILWAY CO.

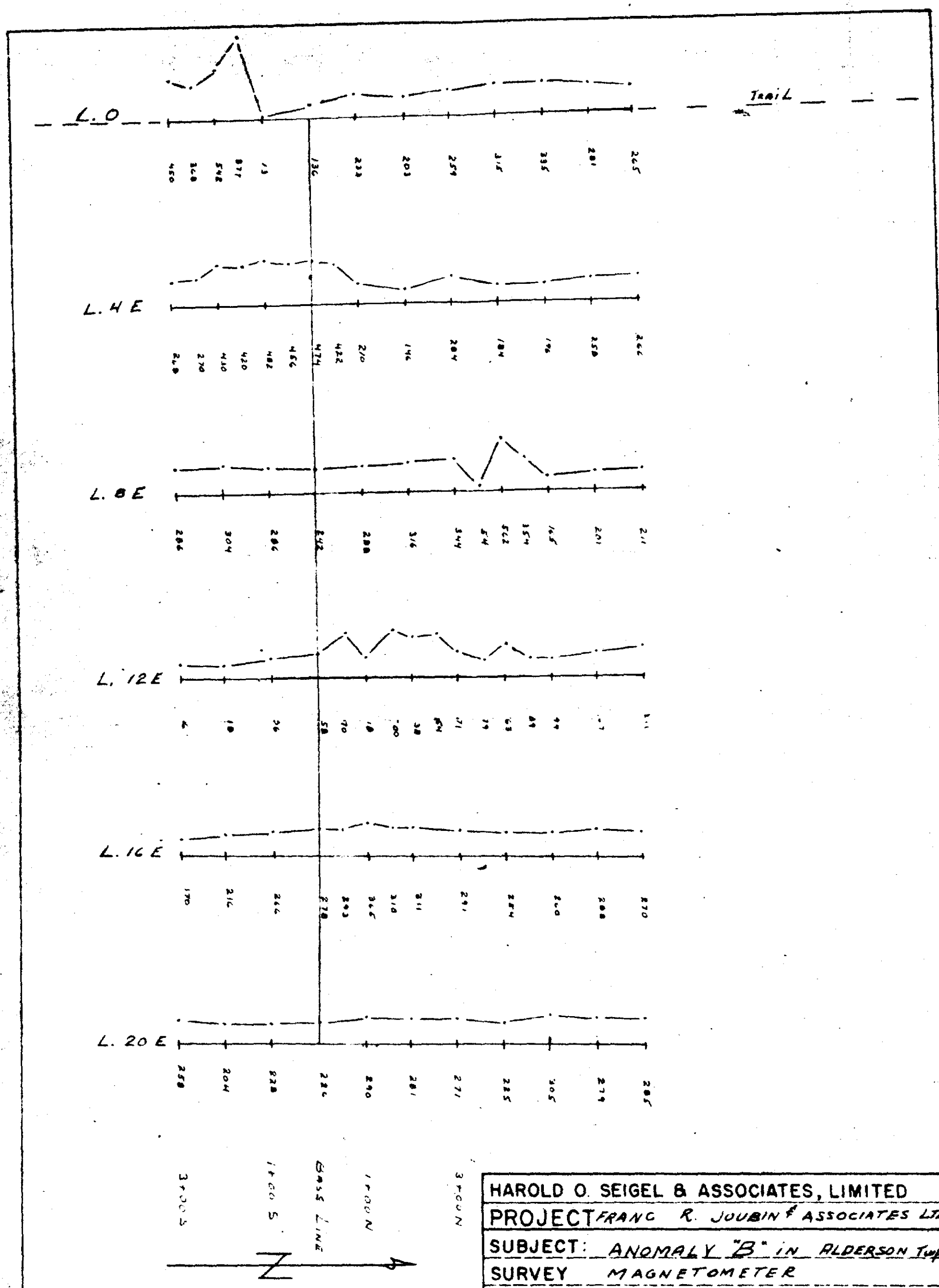
A C R Land Grant

Areas Covered by Airborne Geophysical Surveys (A.C.R.)

Scale 1 Inch = 8 Miles

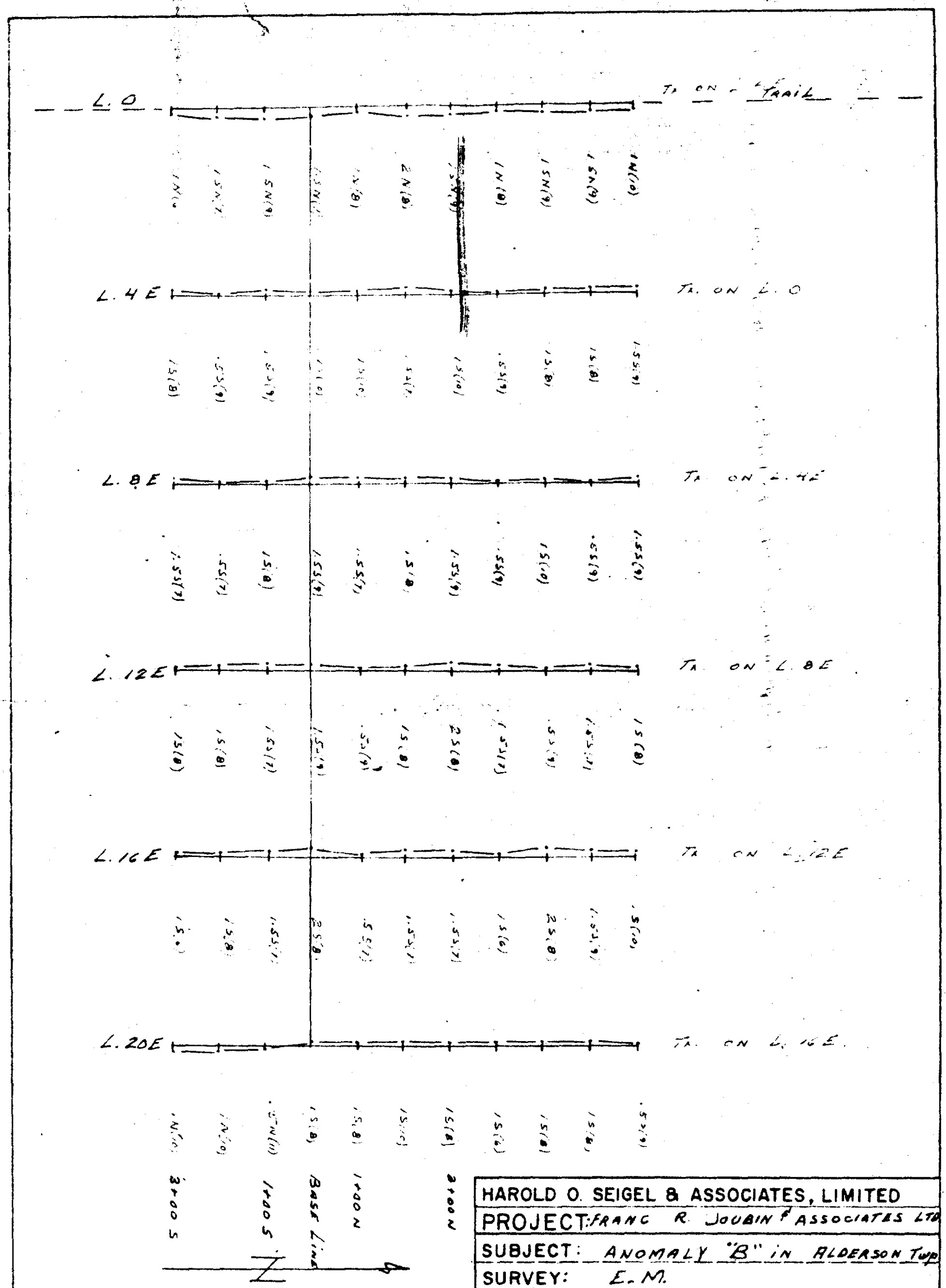
TNM OCT 1964





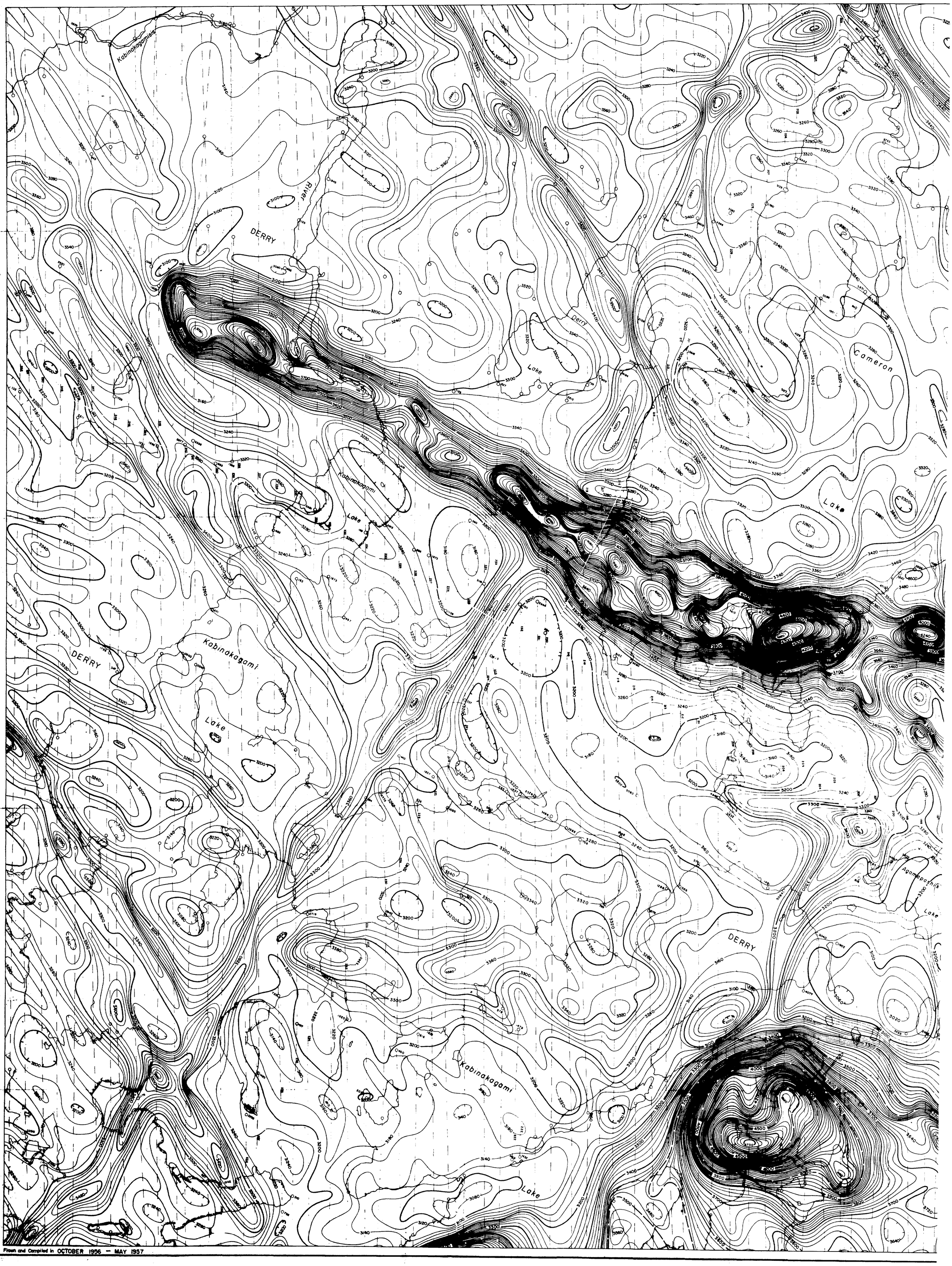
HAROLD O. SEIGEL & ASSOCIATES, LIMITED		
PROJECT FRANC R. JOUBIN & ASSOCIATES LTD		
SUBJECT: ANOMALY "B" IN ALDERSON Twp.		
SURVEY MAGNETOMETER		
Scales: 1" = 200' 1" = 1000 GAMMAS	**Legend:** BASE LEVEL 500 GAMMAS REMOVED FROM OBSERVED VALUES.	
WORK BY G. T.	PLOT BY G. T.	DATE 12-7-63

GLASGOW- 0013 128



HAROLD O. SEIGEL & ASSOCIATES, LIMITED	
PROJECT: FRANC R. JOUBIN & ASSOCIATES LTD	
SUBJECT: ANOMALY "B" IN ALDERSON Twp	
SURVEY: E.M.	
Scales: 1" = 200' 1" = 20°	**Legend:** PARALLEL LINE RECOR. ·——· FIXED TRANSMITTER x---x TRANSMITTER LOCATION △ CONVENTION: EAST TILTS ON NORTH SIDE OF LINES.
WORK BY: G.T.	PLOT BY: G.T. DATE: 12-7-63

GLASGOW-0013 129



Flown and Compiled in OCTOBER 1956 — MAY 1957

CONTOUR INTERVAL ..... 20 GAMMA
MEAN FLIGHT LINE SPACING ..... 660 FEET
MEAN TERRAIN CLEARANCE ..... 500 FEET
500 GAMMA CONTOUR .....
100 GAMMA CONTOUR .....
20 GAMMA CONTOUR .....
MAGNETIC LOW .....

TOWNSHIP OF DERRY

SCALE

1000 FEET 0 1000 2000 3000 4000 5000 FEET

1 Inch to 1320 Feet

Kabinakagami Lake

DERRY

Kabinakagami

Kabinakagami Lake

DERRY

Lake

Derry

Luke

Cameron

Lake

Kabinakagami

DERRY

Flown and Compiled in OCTOBER 1956 – APRIL 1957

ELECTROMAGNETIC CONTOUR

MEAN FLIGHT LINE SPACING 660 FEET

MEAN TERRAIN CLEARANCE 500 FEET

RADIOMETRIC ANOMALY

FIDUCIAL POINTS 1000

FLIGHT LINES

GLASGOW - 0013
#90

E100 - WOPZALP
OP

TOWNSHIP OF DERRY

SCALE

1000 0 1000 2000 3000 4000 5000 FEET

1 inch to 1320 Feet

42G12NE0002 0013 GLASGOW

290