

63.1668

REPORT ON  
AIRBORNE GEOPHYSICAL SURVEY  
OF THE  
GEARY-MAHAFFY TOWNSHIPS AREA,  
ONTARIO,  
FOR  
SILVER-MEN MINES



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I. INTRODUCTION

This report pertains to the combined airborne EM and magnetometer survey flown on behalf of Silver-Men Mines Limited over a group of claims in Geary and Mahaffy Townships, District of Cochrane, Ontario. The survey flying was accomplished May 13, 1965 by the Canadian Aero Mineral Surveys Limited geophysically equipped Otter aircraft, (registration CF-IGM), based at Timmins.

The flight lines were oriented N 15° E and were spaced at 1/8 mile intervals. The geophysical data acquired totalled 90 line miles. The mean terrain clearance of the aircraft during survey was 150 feet or less.

*141 claims 1965-1966*

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

G. A. Curtis	-	Project Manager
Dale Smith	-	Pilot
D. J. Sarazin	-	Navigator
D. Graham	-	Operator
R. Sarsfield	-	Mechanic
G. Granger	-	Data Compiler
A. Martin	-	Draftsman
P. Tallyhoe	-	Data Chief

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

The EM data are presented on a plan map at the scale of 1 inch equals  $\frac{1}{4}$  mile. An uncontrolled airphoto mosaic served as the base for this map.

Appendix I is a complete listing of all EM anomalies detected.

Appendix II describes the equipment, the records, the survey and map compilation procedures and the data presentation system.

## II. GEOLOGY

According to the Ontario Department of Mines maps P.139 (1" = 2 miles) and 2046 (1" = 4 miles) there is no mapping in Geary and Mahaffy Townships.

## III. GEOPHYSICAL RESULTS

Although some 17 EM anomalies have been plotted within this area, there are no good prospects for massive sulphide mineralization. In fact, there may be no bedrock conductors of any sort.

Anomalies 1A, 7A, 28A, 30A, 31A, 33A, 34A, 35A, 45A, and 47A are all weak out-of-phase features with little or no in-phase components, and no coincident magnetic anomalies. A low conductivity source is indicated for such anomalies and most of them probably derive from conducting swamps or clays. On the other hand, since

they are all relatively narrow anomalies they could derive from weak bedrock conductivity contrasts. But even if some of these anomalies do indicate bedrock conductors, massive sulphides are improbable.

Anomalies 10A, 11A, 15A, 23A, 31B, and 34B are all questionable features, (x-category) suspected of being spurious effects resulting from air turbulence or sharp aircraft manoeuvres. One of them, anomaly 34B coincides with a 350 gamma magnetic high.

Anomaly 25A is probably the best prospect for a bedrock conductor but it cannot conclusively be interpreted as such. If the in-phase response is authentic a bedrock source is indicated clearly, but there is a fair chance that the in-phase reaction may have been caused by air turbulence. There is no magnetic support.

#### IV. RECOMMENDATIONS

Since no good prospect for massive sulphide mineralization is indicated and since there may be no bedrock conductors of any sort in this area, ground followup of the EM indications is not recommended unless one or more of these features occurs in an especially favourable geological environment.

If the exploration philosophy of Silver-Men Mines Limited dictates that some additional work should be done, we would recommend anomaly 25A as the best prospect for a bedrock conductor.

Respectfully submitted,

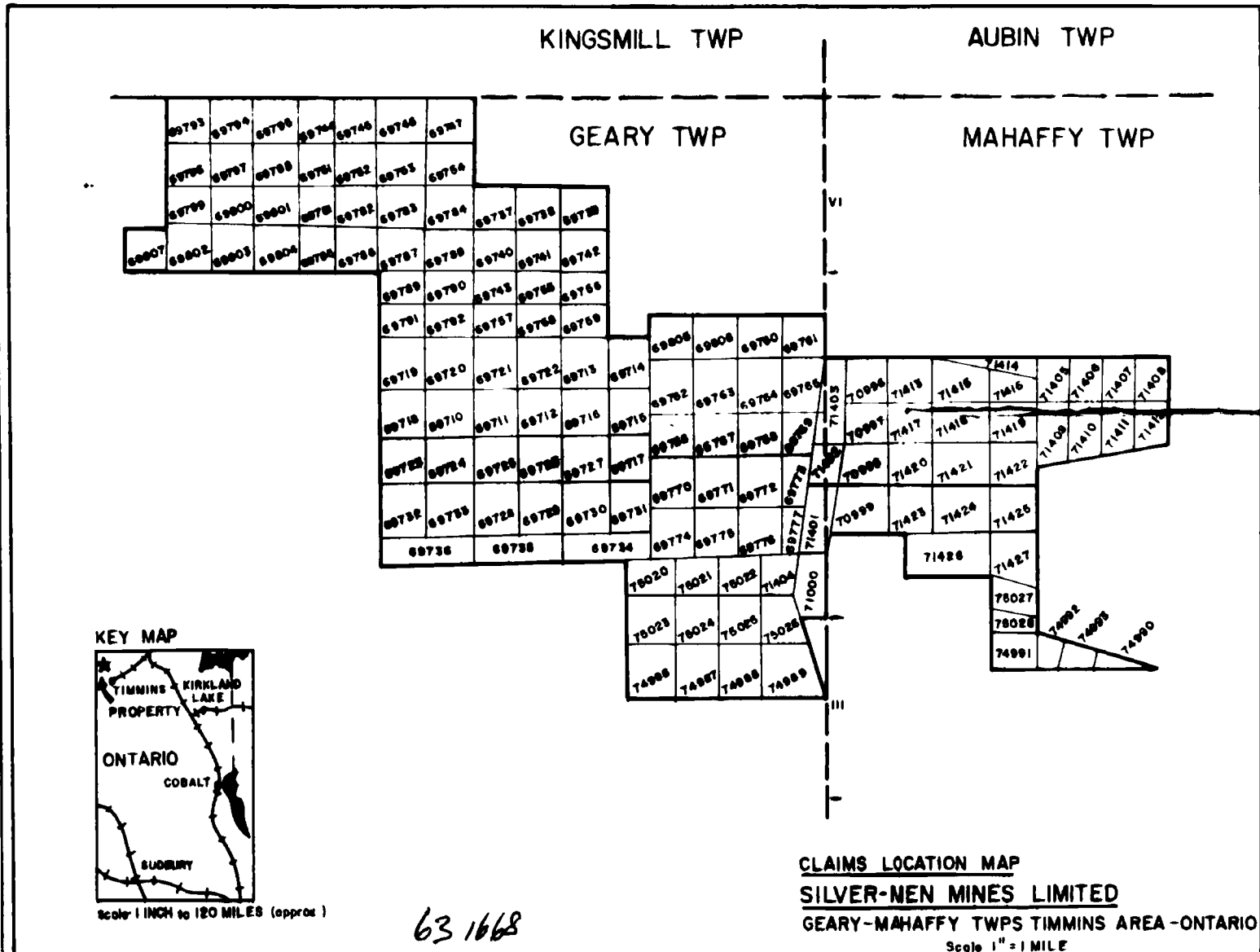
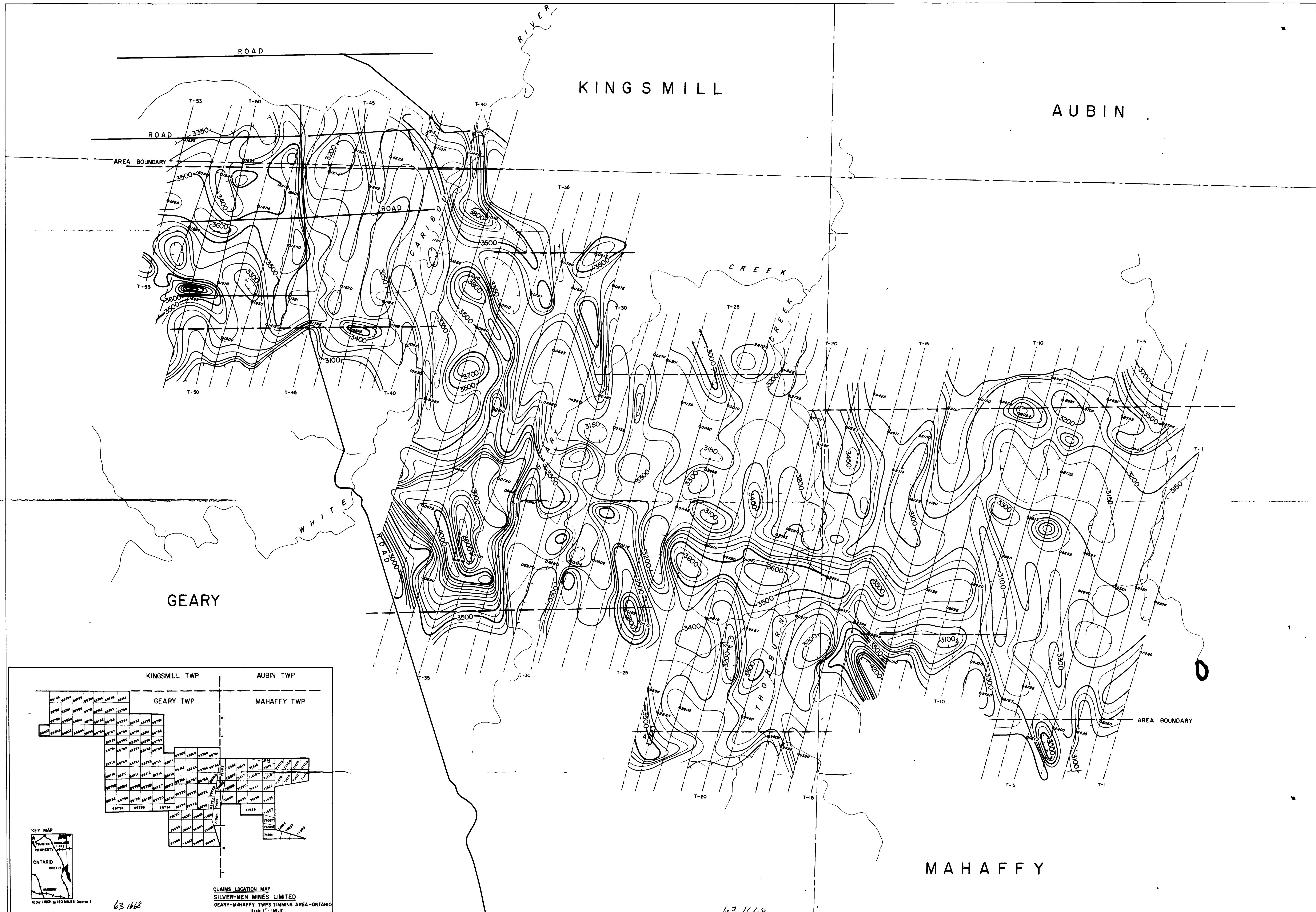


A. R. Rattew, P.Eng.,  
Geophysicist.

OTTAWA, Ontario,  
June 28, 1965.

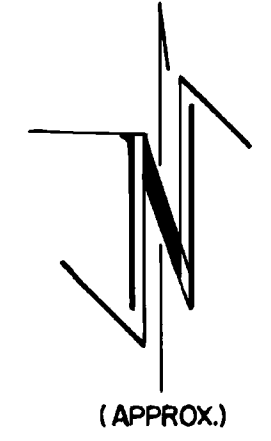
PROJECT NO. 5072 - GEARY-MAHAFFY TOWNSHIPS AREA

<u>Anomaly</u>	<u>Fiducials</u>	<u>In-Phase Quad</u>	<u>Altitude</u>	<u>Magnetics</u>	<u>Rate</u>	<u>Comments</u>
1 A	8245/7	20?/40	145	N.side 400g	3	Weak, poss. sur- face conductor
7 A	8699/8706	-/80	125	nil	3	Probable sur- face effect
10 A	8949/52	60/-	165	nil	x	Prob. turbulence noise
11 A	8972/6	100/-	150	nil	x	Prob. turbulence noise
15 A	9332/6	40/40	140	nil	x	Poor character
23 A	9946/50	80/-	140	N.Flank 300g	x	Probable manoeuvre noise
25 A	0032/5	70/50	135	nil	3	
28 A	0280/4	40/40	125	S.Flank 150g	3	Possible sur- face effect
30 A	0427/31	-/40	150	nil	3	Poss. surface conductor
31 A	0503/6	-/30	150	nil	3	Poss. surface conductor
31 B	0471/5	-/70	155	nil	x	Possible manoeuvre noise
33 A	0674/7	-/40	145	nil	3	Poss. surface conductor
34 A	0700/3	-/70	145	N.Flank 500g	3	Poss. surface conductor
34 B	0712/4	80/-	140	Dir. 350g	x	Possible manoeuvre noise
35A	0794/6	-/60	135	nil	3	Poss. surface conductor
45 A	1306/9	-/70	125	nil	3	Poss. surface conductor
47 A	1383/6	-/90	130	nil	3	Poss. surface conductor



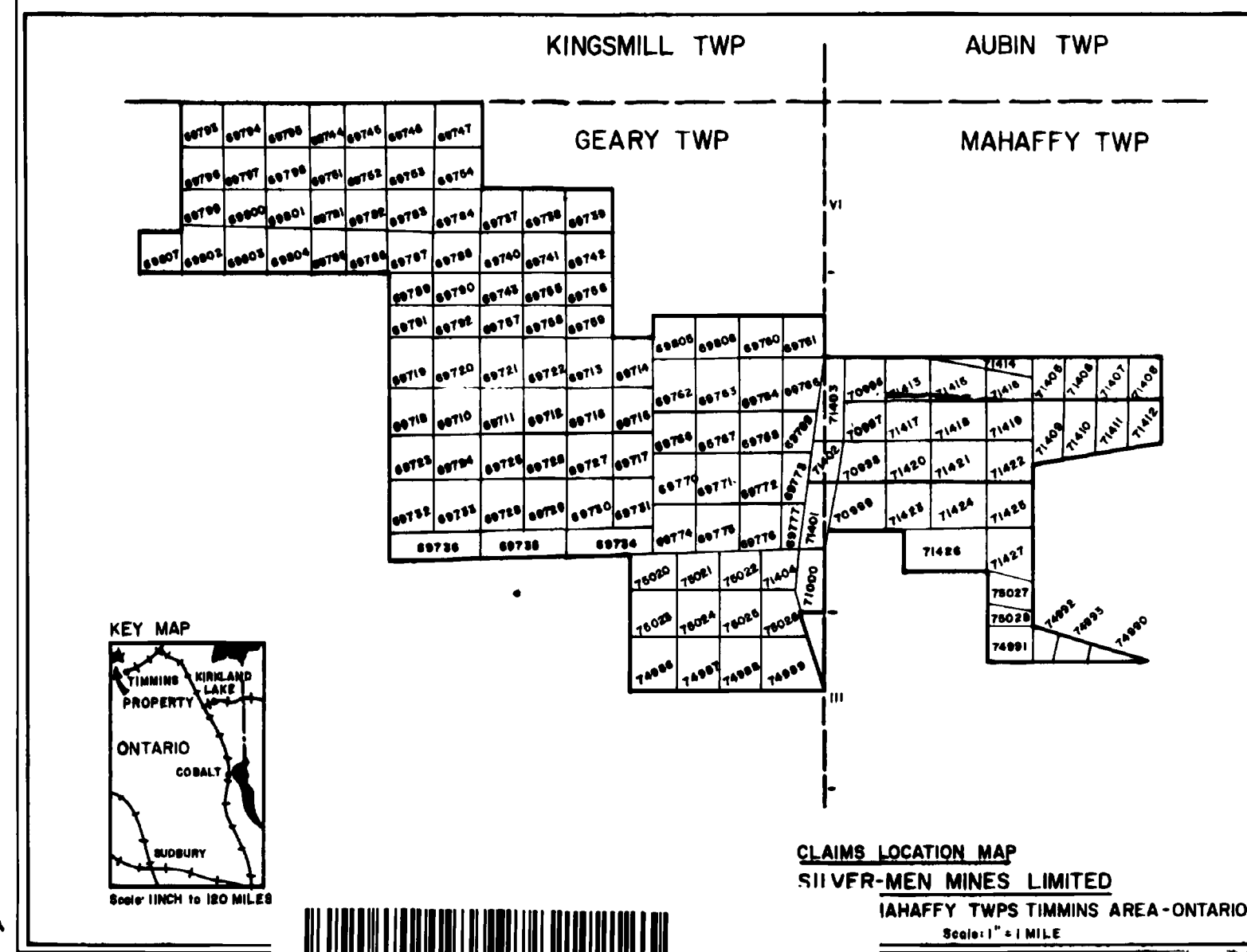
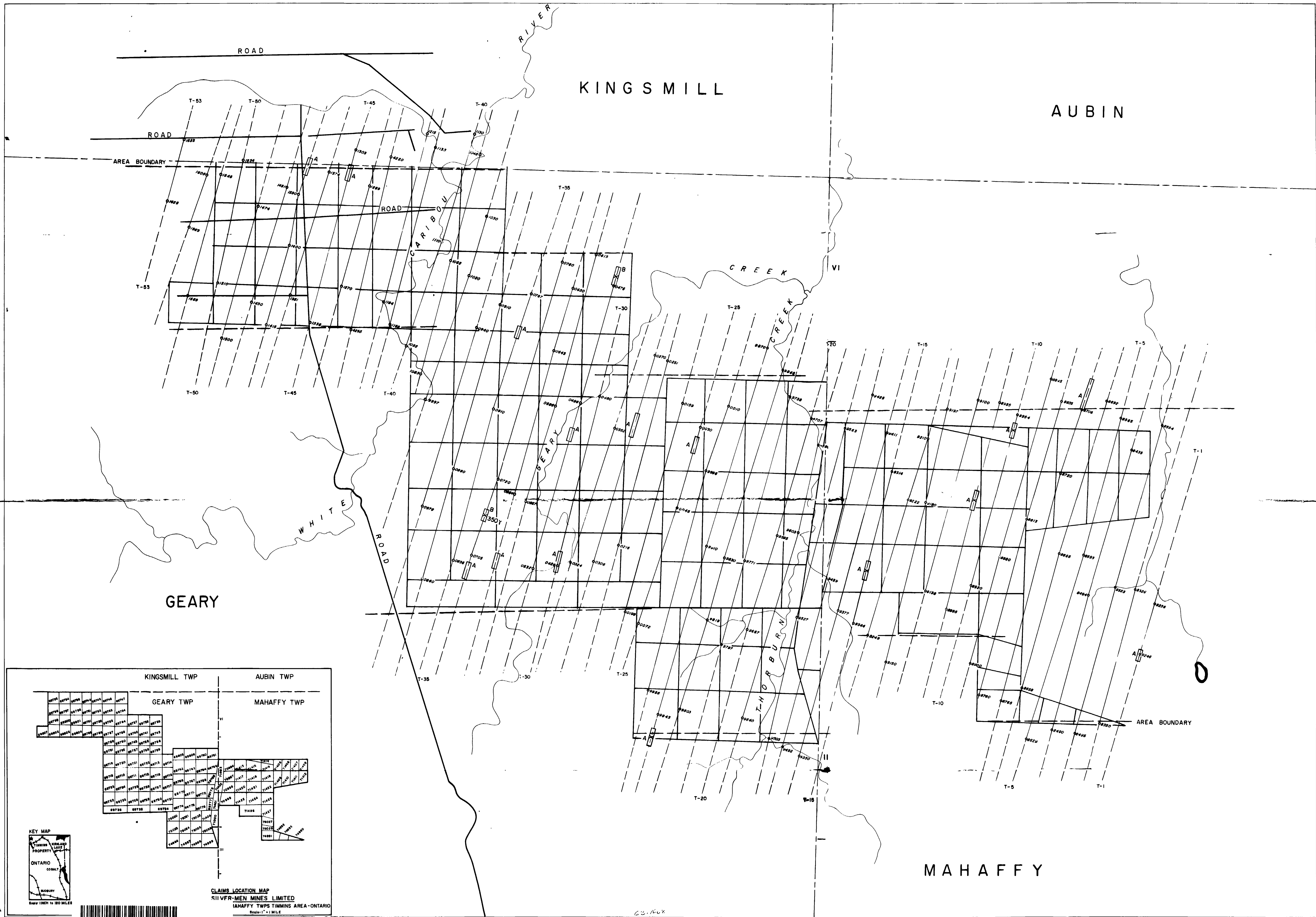
- LEGEND**
- CONTOUR INTERVAL...50 GAMMAS
  - 500 GAMMA CONTOUR... (line symbol)
  - 100 GAMMA CONTOUR... (line symbol)
  - 50 GAMMA CONTOUR... (line symbol)
  - MAGNETIC LOW... (line symbol)
  - MEAN TERRAIN CLEARANCE... 150 FEET
  - FLIGHT LINE SPACING... 1/8 MILE
  - RIVERS AND LAKES... (line symbol)
  - HORIZONTAL CONTROL... BASED ON PHOTO LAYDOWN

AIRBORNE MAGNETOMETER SURVEY  
**GEARY TOWNSHIP AREA**  
 ONTARIO  
**SILVER-MEN MINES LIMITED**  
 SCALE: 1 INCH = 1/4 MILE (approx)



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 OTTAWA & TORONTO, ONTARIO

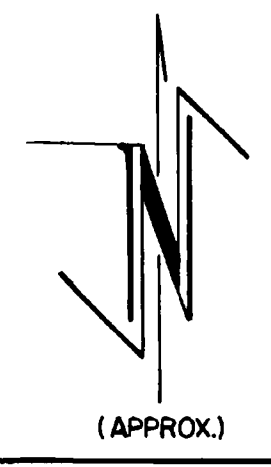




- LEGEND**
- 1 A ANOMALY
  - 1 B ANOMALY
  - 2 A ANOMALY
  - 2 B ANOMALY
  - 3 ANOMALY
  - x type ANOMALY

MEAN TERRAIN CLEARANCE...150 FEET  
 FLIGHT LINE SPACING...1/8 MILE  
 RIVERS AND LAKES  
 HORIZONTAL CONTROL...BASED ON PHOTO LAYDOWN

AIRBORNE ELECTROMAGNETIC SURVEY  
**GEARY TOWNSHIP AREA**  
 ONTARIO  
**SILVER-MEN MINES LIMITED**  
 SCALE: 1 INCH = 1/4 MILE (approx)



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