

HAROLD O. SEIGEL & ASSOCIATES, LIMITED
GEOPHYSICAL CONTRACTORS AND CONSULTANTS

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CANADIAN SUPERIOR EXPLORATION LIMITED
REPORT ON GROUND INVESTIGATIONS
CONDUCTOR #4, ADAIR BLOCK, ONTARIO

INTRODUCTION

An airborne electromagnetic survey had revealed the presence of a multiple conductor system at least eight miles in length, striking generally ESE. This system was composed of three distinct conducting horizons on most sections. The present ground investigation was devoted to determining the characteristics of this conductor system in the vicinity of lines 17, 18 and 19 of the airborne survey.

A base line oriented N70°W, 2800' long, was cut and 8 cross lines, at 400' intervals, were established at right angles to it. These cross lines ranged in length from 1400' to a maximum of 3600'. Electromagnetic (both reconnaissance and detail surveys) and magnetometer coverage was afforded to all lines with stations generally at 100' intervals and intermediate stations in regions of particular interest. Gravity traverses were executed on all or portions of three survey lines.

Plate 7L, on the scale of 1" = 2640', shows the grid location in respect of the local topographic features.

DISCUSSION OF RESULTS

Plate 7E, on the scale of 1" = 200', shows the results of both

the reconnaissance and detail electromagnetic surveys. Three quite long conductors have been confirmed, striking approximately N50°W across the grid lines and these conductors, for convenience, have been designated from north to south, numbers 1, 2 and 3. Conductor No. 1 is both the longest and the strongest indicated. It extends completely across the present grid and is still open both east and west. It attains peak amplitudes of as much as 70° of tilt. Conductor No. 2 would still be classed as strong. It has been confirmed over a minimum strike length of 2000' and is still open to the northwest off the present grid. Conductor No. 3 is of weak to moderate strength. It is at least 1800' long and also is still open to the west. The indicated conductor dip is steeply to the northeast.

Plate 7M, on the scale of 1" = 200', shows the results of the magnetometer survey in profile form. The profile scale is 1" = 300 gammas. The maximum observed magnetic relief is of the order of 4800 gammas positive and 600 gammas negative. Conductor No. 1 appears to have direct magnetic correlation of 600 gammas negative on line 4S, about 150 gammas positive on line 8S, and 600 gammas positive on line 16S. On the remainder of its sections there appears to be little or no magnetic relief. Conductor No. 2 appears to have approximately 200 gammas positive relief on line 0 and no more than approximately 100 gammas relief on line 4S, with little of interest on the remaining sections. Conductor No. 3 has a possible magnetic correlation only on line 4S and this would be about 200 gammas maximum amplitude. The most prominent magnetic features appear to have little relationship to the conductors and are likely due to narrow bands of basic

intrusives and some minor iron formation. Conductor No. 1 appears to cross-cut one of the main magnetic zones at a small angle.

Plate 7G presents the results of the gravity survey in profile form, with a horizontal scale of 1" = 200' and a vertical profile scale of 1" = 1 milligal. Conductors 1, 2 and 3 were covered by the gravity traverses on lines 0 and 4N, and conductor 2 alone was covered as well on line 8N. Conductors 1 and 3 have no apparent gravity correlation. Conductor No. 2 correlates with .1 to .2 milligals positive, but rather localized, gravity indications. These are one point indications and are not believed to be overly significant.

CONCLUSIONS AND RECOMMENDATIONS

The ground investigations have confirmed the presence of three parallel conductors across a width of about 2000'. All conductors are still open to the northwest off the present grid coverage and one conductor is still open to the southeast as well. Two of the three conductors have direct associated magnetic correlation on one or more sections suggesting, by association, the presence of some sulphide mineralization therein. The gravity traverses, however, indicate that at best only relatively narrow widths of high percentages of sulphides may be present.

It is concluded that these conductors are primarily due to graphitic horizons with, at best, modest amounts of total sulphide mineralization, primarily pyritic, but in places containing pyrrhotite. These conductors are hardly likely to be of economic interest along their full length and, therefore, the writer cannot make a strong recommendation for drilling investigation of any of these.

If it were, however, desired to sample these conductors on the most favourable or at least "special" sections then the writer would recommend the following holes:

On conductor No. 1 collar on line 4S at 650' grid east. Drill SW along the line for 300' at 45° inclination.

On conductor No. 2 collar on line 0 at 180' grid west. Drill SW along the line for 300' at an inclination of 45°.

Both of the above sections on which drilling has been suggested are characterized by relatively strong conduction (in particular conductor No. 1) and direct associated magnetic correlation. The depth of overburden in each case is believed to be less than 35'.

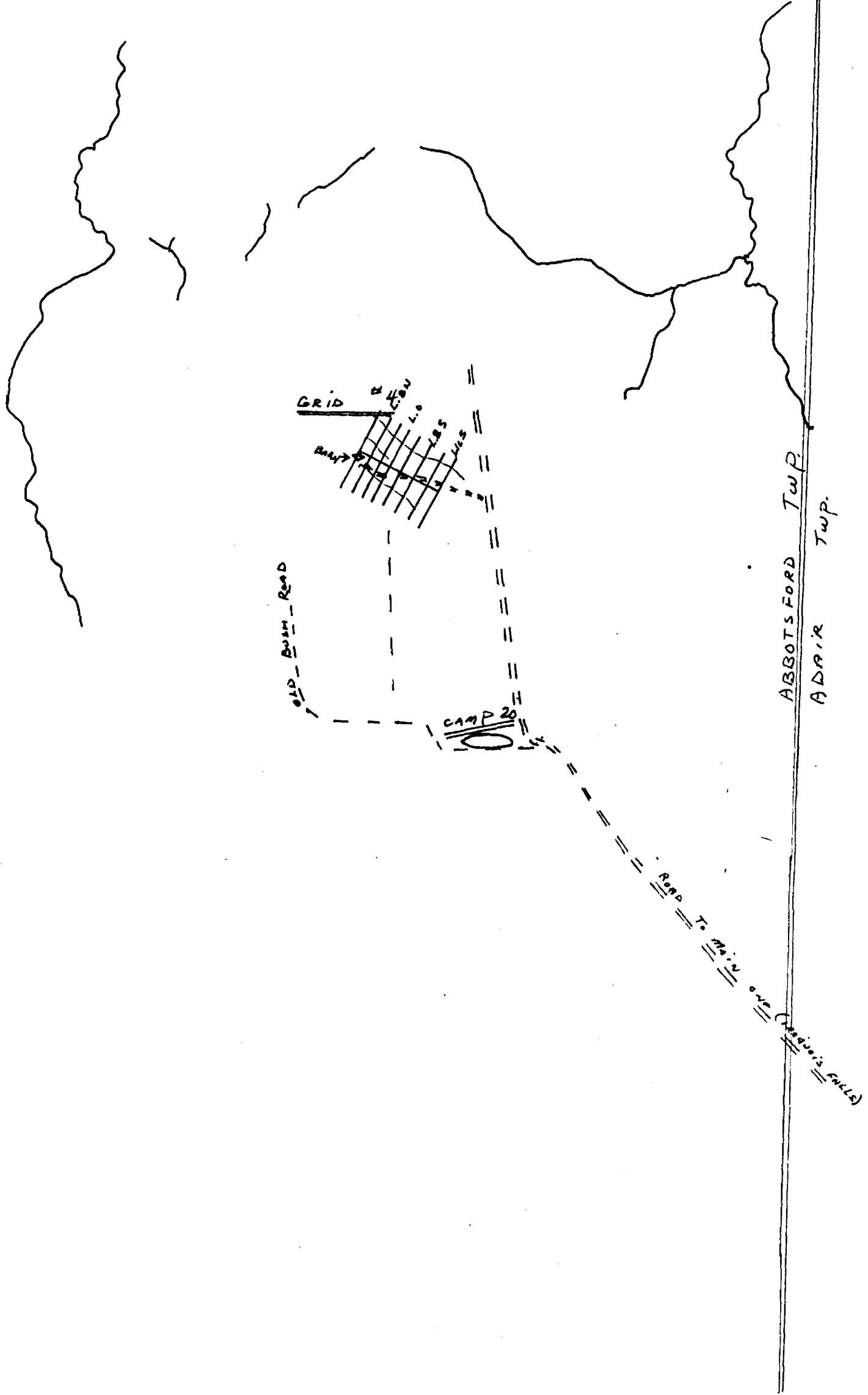
Conductor No. 3 appears to be quite undistinguished in so far as the geophysical results are concerned and no special section which might warrant drilling can be selected on it.

The above holes are shown on Plate 7E.

Respectfully submitted,


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

Toronto, Ontario.
June 24th, 1965.



HAROLD O. SEIGEL & ASSOCIATES, LIMITED

PROJECT CANADIAN SUPERIOR EXP. LTD.

SUBJECT ADAIR BLOCK, CONDUCTOR # 4

SURVEY LOCATION PLAN

Scales:

1" = 2640'

Legend:

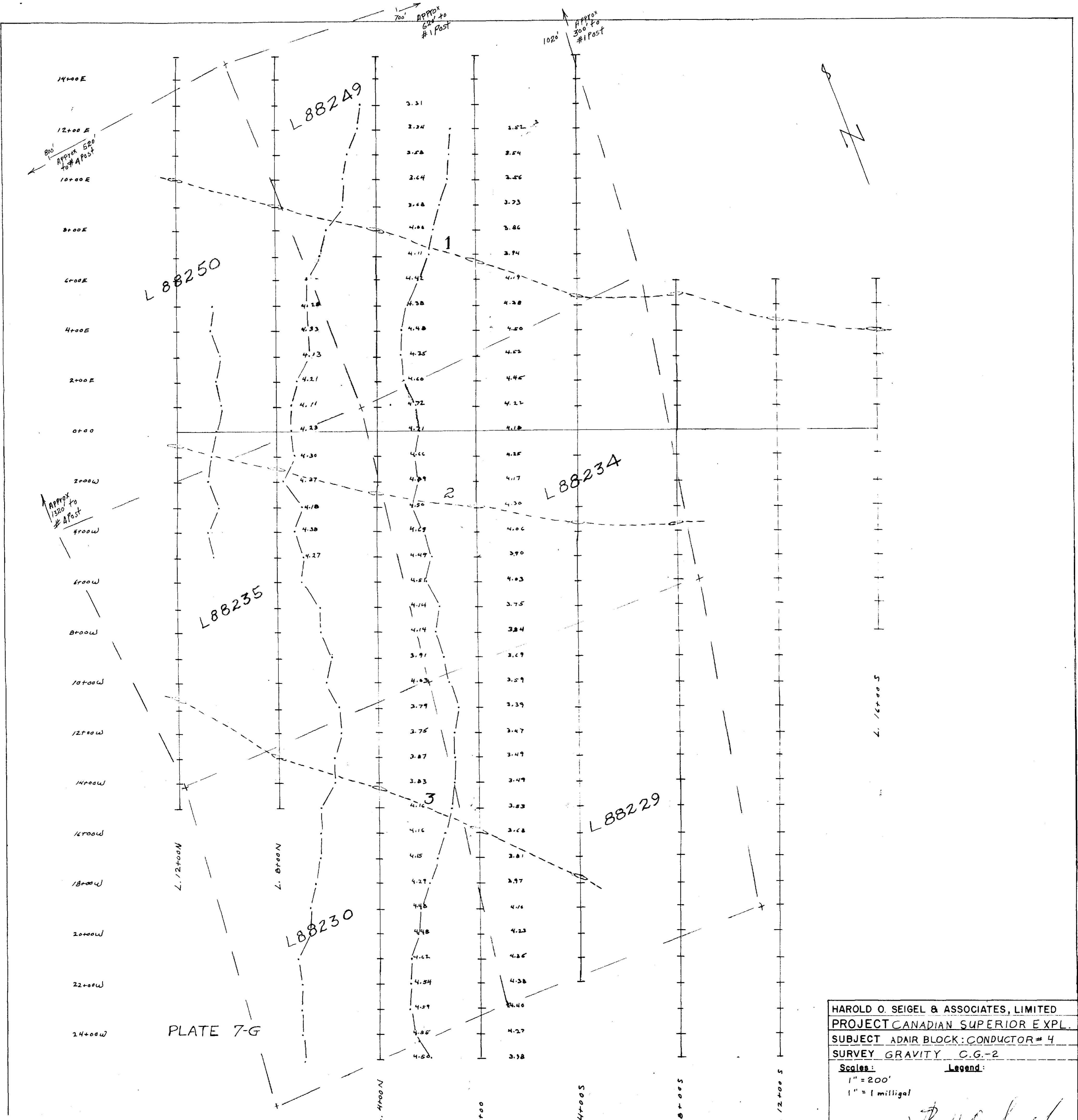
Harold O. Seigel

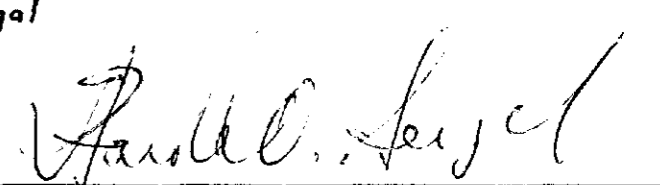
PLATE 7-L

WORK BY: G.T.

PLOT BY: G.T.

DATE 19-6-65



HAROLD O. SEIGEL & ASSOCIATES, LIMITED		
PROJECT CANADIAN SUPERIOR EXPL.		
SUBJECT ADAIR BLOCK: CONDUCTOR # 4		
SURVEY GRAVITY C.G.-2		
Scale:	Legend:	
1" = 200'		
1" = 1 milligal		
		
WORK BY: G.T.	PLOT BY: G.T.	DATE: 12/16/65



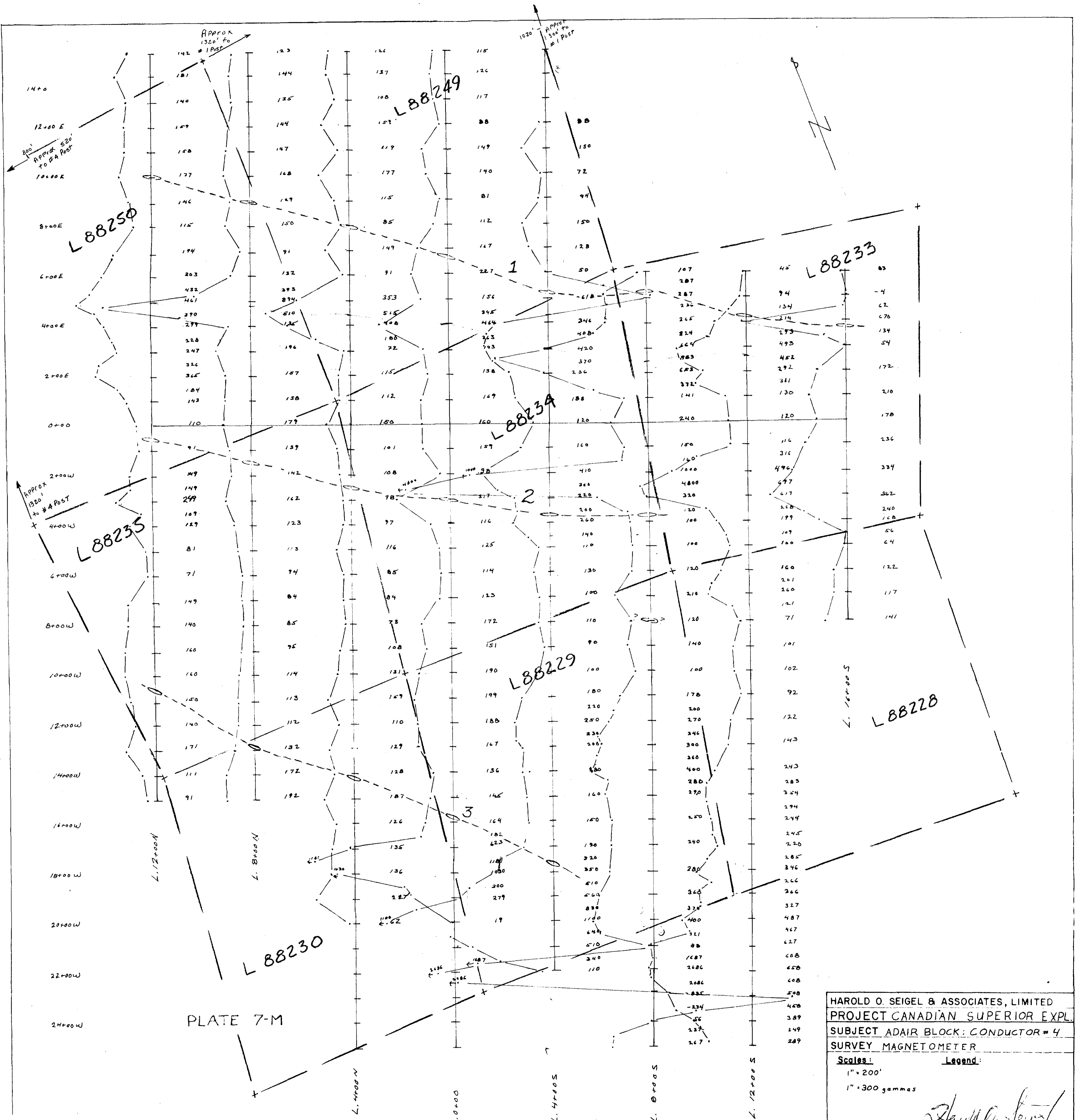


PLATE 7-M

HAROLD O. SEIGEL & ASSOCIATES, LIMITED		
PROJECT CANADIAN SUPERIOR EXPL.		
SUBJECT ADAIR BLOCK; CONDUCTOR # 4		
SURVEY MAGNETOMETER		
Scales:	Legend:	
1" = 200'		
1" = 300 gammas		
<i>Harold O. Seigel</i>		
WORK BY: G.T.	PLOT BY: G.T.	DATE: 18/6/65

