

REPORT ON

ELECTRICAL  
SURVEY  
CAIRO EAST GROUP



010

CAIRO TOWNSHIP, ONTARIO

FOR

GEO-SCIENTIFIC PROSPECTORS LIMITED

BY

GEOPHYSICAL ENGINEERING & SURVEYS LIMITED

PROPERTY

The property consists of seven mining claims MR23089 to MR23095 inclusive, located in Cairo township, district of Timiskaming, province of Ontario.

The claims are readily accessible, being traversed by highway No. 66.

GENERAL GEOLOGY

The southern section of the property is underlain by a complex of basic to ultrabasic intrusives which includes gabbro and peridotite. The northern portion is underlain by Keewatin-type volcanic rocks. A large granitic intrusive borders the northern boundary of the claim group.

Asbestos has been found in the ultrabasic rocks and disseminated pyrrhotite near the southern edge of the intrusive on adjoining claims.

GEOPHYSICAL SURVEYS

An electrical resistivity survey was carried out over the land portion of the property along north-south picket lines spaced 400 feet apart.

Sixty cycle alternating current was introduced into the earth through electrodes spaced two miles apart in a north-south direction. Voltage readings were taken between stations spaced

100 feet apart using a vacuum-tube voltmeter. The apparent average earth resistivity in the vicinity of each station was calculated and plotted logarithmically on Drawing No. 1161.

Electrical self potential surveys were made in the vicinity of areas of low resistivity near the southern boundary of the property.

#### DISCUSSION OF GEOPHYSICAL RESULTS


Local areas of low resistivity were indicated near the southern boundary of the property and within the area believed to be underlain by basic intrusive rocks. A self-potential survey was carried out in this section to check the resistivity anomalies for the possible presence of sulphides. No anomalies that suggested appreciable sulphide concentrations were noted.

#### CONCLUSIONS & RECOMMENDATIONS

The work completed to date was directed towards finding sulphide occurrences and the results must be considered as negative. There remains that portion of the property covered by the waters of St. Paul Lake which has not been surveyed. There is also the possibility of asbestos in the southern section of the property which has not been investigated.

It is recommended that developments be watched on adjoining properties, and that an electrical geophysical survey be carried out on St. Paul Lake.

Respectfully submitted,

  
J. C. Frantz

December 16, 1957  
North Bay, Ontario

GEOPHYSICAL ENGINEERING & SURVEYS LTD.

ELECTRICAL RESISTIVITY SURVEYOFCAIRO CENTRAL GROUPCAIRO TOWNSHIP, ONTARIOFORGEO-SCIENTIFIC PROSPECTORS LIMITEDBYGEOPHYSICAL ENGINEERING & SURVEYS LIMITEDPROPERTY

The property consists of eight mining claims MR23081 to MR23088 inclusive located in Cairo Township, district of Timiskaming, province of Ontario.

The claims are accessible by trail from highway No. 65, a distance of about  $\frac{1}{2}$  mile.

GENERAL GEOLOGY

Most of the property is underlain by Timiskaming-type sediments consisting of greywacke and quartzite. The northeastern claim is underlain by basic syenite. A north-south diabase dike traverses the central part of the property.

Flat-lying sediments of the Cobalt series rest on these older rocks in the southeast corner of the property.

Sulphide occurrences with some chalcopyrite and sphalerite occur to the north and northwest of the claims in Timiskaming-type sediments.

GEOPHYSICAL SURVEY

An electrical resistivity survey was carried out along north-south picket lines spaced 400 feet apart. Sixty cycle alternating current was introduced into the earth through electrodes spaced approximately two miles apart in a north-south direction.

Voltage drops were read between stations 100 feet apart using a vacuum-tube voltmeter. Apparent average earth resistivities, in the vicinity of the stations read, were calculated and plotted logarithmically on Drawing No. 1159 which accompanies this report.

DISCUSSION OF GEOPHYSICAL RESULTS

The survey revealed very uniform apparent resistivity over the claims and no sizeable sulphide concentrations can be expected near the lines traversed.

RECOMMENDATIONS

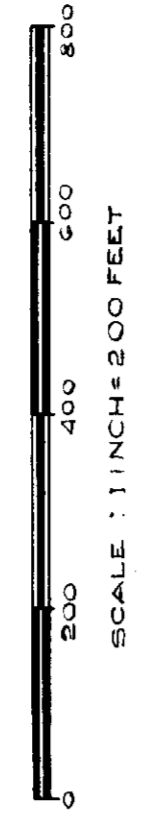
No further work is recommended.

Respectfully submitted,

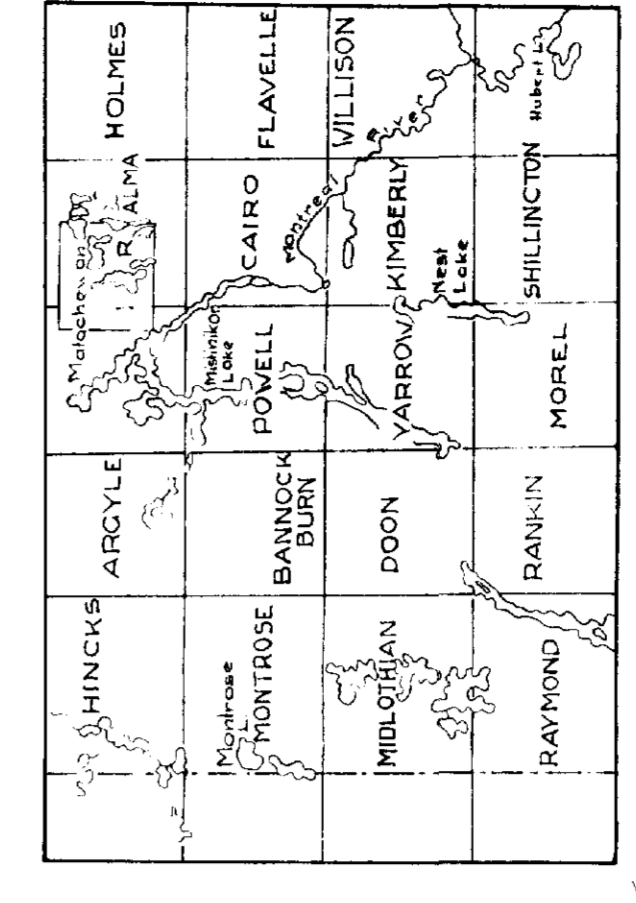
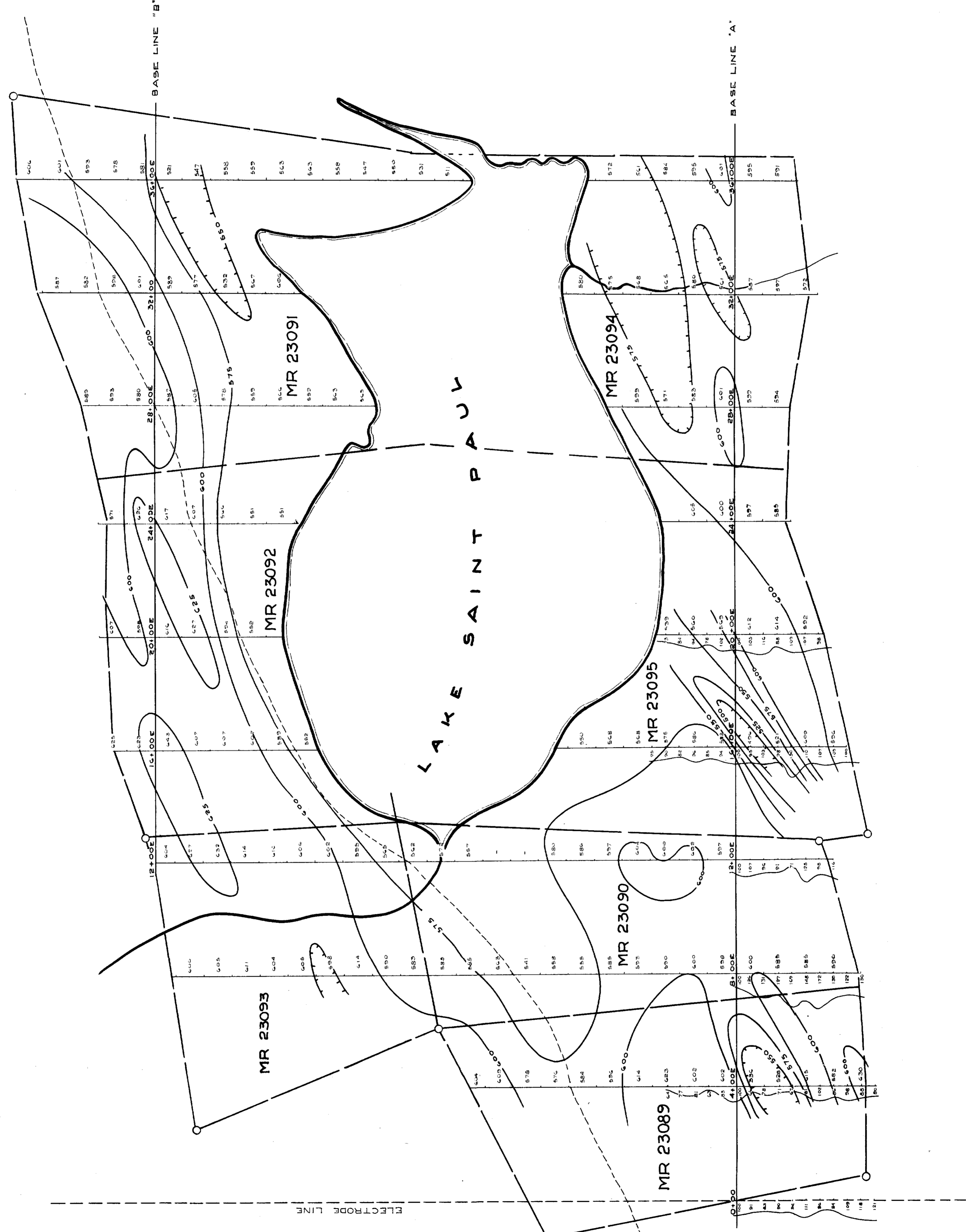
December 16, 1957  
North Bay, Ontario

  
J. C. Frantz  
GEOPHYSICAL ENGINEERING & SURVEYS LTD.

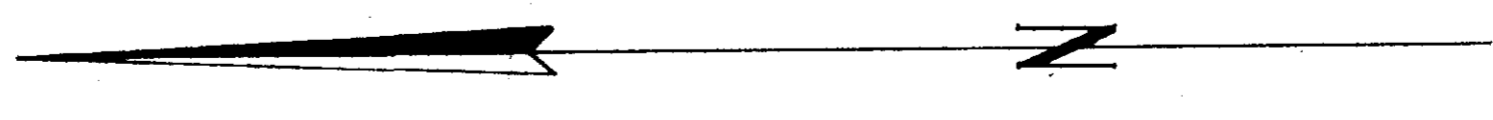
RESISTIVITY SURVEY  
 OF  
**EAST GROUP**  
 CAIRO TWP., ONT.  
 BY  
**GEO-SCIENTIFIC PROSPECTORS LIMITED.**  
 GEOPHYSICAL ENGINEERING & SURVEYS LTD.



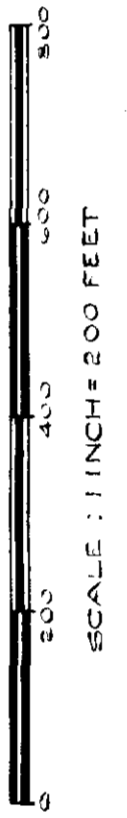
NOTE: VALUES ARE APPARENT AVERAGE  
 EARTH RESISTIVITIES AS  $100 \log_{10} \text{ohm-cm.}$   
 VALUES TO LEFT OF LINE ARE NEGATIVE  
 SELF-POTENTIALS IN MILLIVOLTS.  
 ~~~~~ INDICATES S.P. PROFILE 1"=2000MV



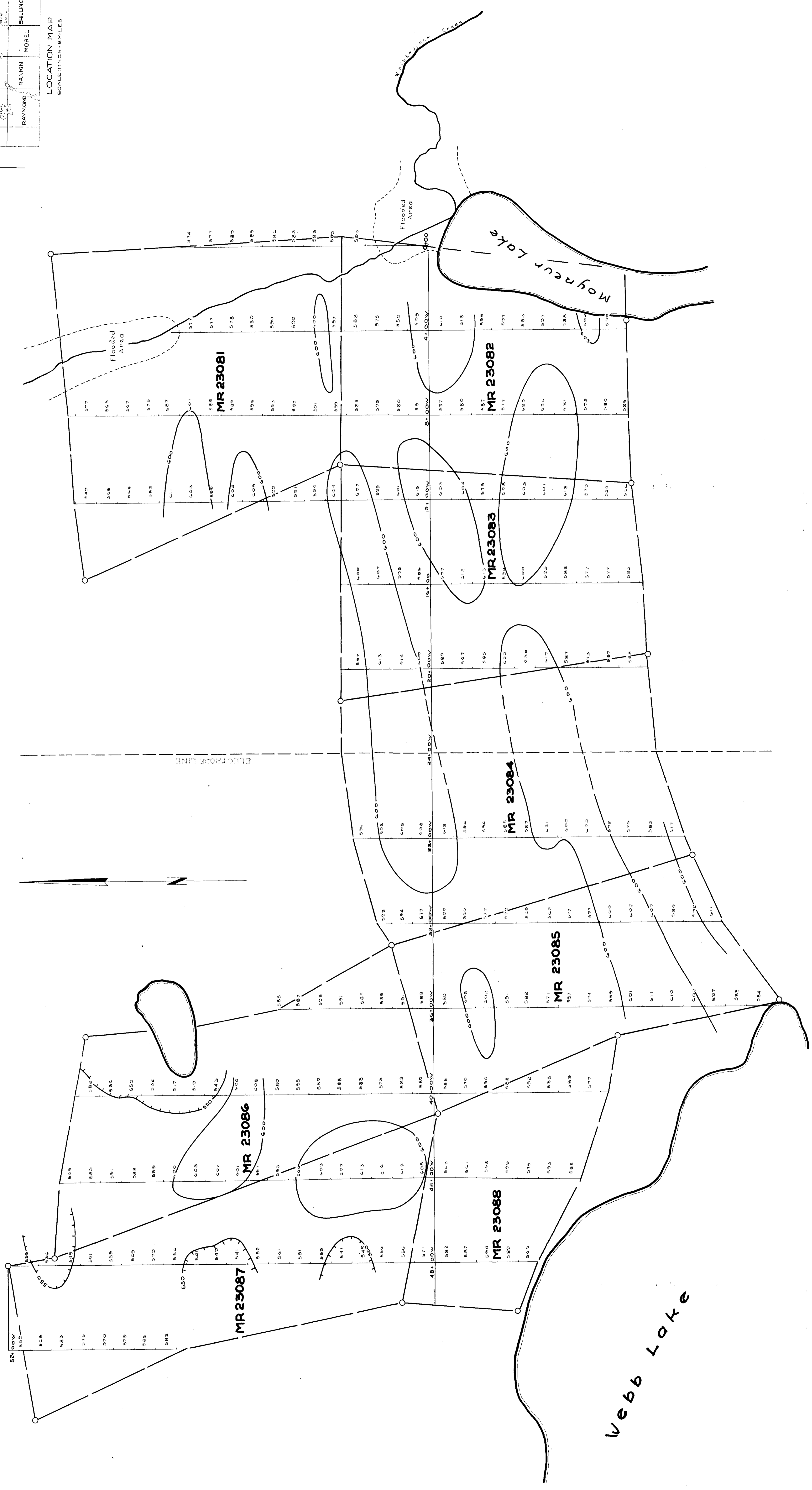
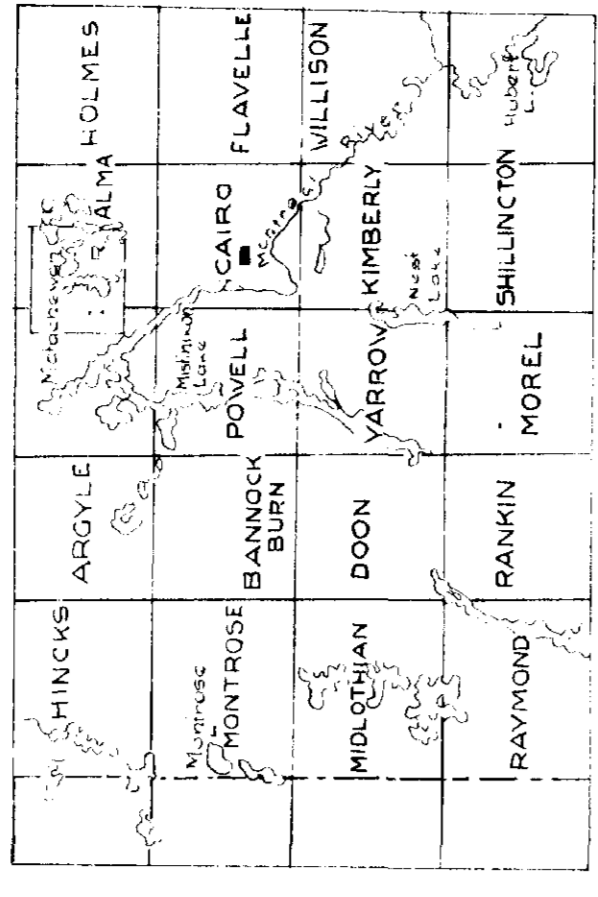
LOCATION MAP  
 SCALE: 1 INCH = 8 MILES



RESISTIVITY SURVEY  
 OF  
**CENTRAL GROUP**  
 CAIRO TWP., ONT.  
 FOR  
 BY  
**GEO-SCIENTIFIC PROSPECTORS LIMITED.**  
**GEO-PHYSICAL ENGINEERING & SURVEYS LTD.**



NOTE: VALUES ARE APPARENT AVERAGE  
 EARTH RESISTIVITIES AS 100 log<sub>10</sub> ohm-cm.



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