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Elliott Exploration Services Limited

REPORT ON
GEOPHYSICAL SURVEY
COLLEEN COPPER MINES LIMITED
AUDEN TOWNSHIP
ONTARIO

INTRODUCTION:

This report describes the results of magnetometer and electromagnetic surveys of the property of Colleen Copper Mines Limited. These surveys were conducted during June and July of 1965, and subsequent diamond drilling to investigate the anomalous areas was carried out in July of the same year.

DESCRIPTION OF PROPERTY:

The Colleen Copper Mines Limited property contains 34 contiguous unpatented mining claims located in the north-western corner of Auden Township, Sault Ste. Marie Mining Division, Province of Ontario.

The property contains an area of about 1,360 acres. The claims are numbered as follows:

SSM 66837 to 66845 inclusive
SSM 72216 to 72219 inclusive
SSM 72552 to 72556 inclusive
SSM 72561 to 72574 inclusive
SSM 72695 and 72696

GENERAL GEOLOGY:

Most of the outcropping in the area is confined mainly along the Nagagami River. The predominant rocks in the vicinity of the property consist of metasediments in the form of quartz-chlorite-biotite schists and gneisses, quartzites and conglomerates. Sulphide mineralization - predominantly pyrite and pyrrhotite - is known to occur within the quartzites and schists on the property of Colleen Copper Mines Limited, and chalcopyrite mineralization occurs within the conglomerates in the northern section of the latter Company's property. The general trend of the rock formations and sulphide mineralization of the area is in a direction slightly north of east.

GEOPHYSICAL PROGRAMME: Terms of Reference:

Control of the survey was gained from two base lines established in an east-west direction totalling 12,000 feet with lines cut at intervals of 200 feet in most of the area east of the Nagagami River, and 300-foot intervals west of the river.

Electromagnetic readings were taken at intervals of 100 feet along the picket lines, with magnetometer readings taken every 50 feet in areas indicated by conductors. The instruments used were the Sharpe MF-1 Fluxgate magnetometer, the Sharpe SE-300 Electromagnetic unit, and the Sheridan-Kelk Magniphase electromagnetic unit. This latter instrument is a horizontal loop electromagnetic unit and was used as a

check in the conductive zones indicated by the Sharpe SE-300. The "broadside" method of traversing was utilized with the Sharpe SE-300, that is, the transmitter and receiver operators were on separate lines and moved co-incidentally up or down the lines. The distance between the transmitter and receiver was maintained at 400 feet when the line interval was 200 feet, and 600 feet with line intervals of 300 feet. The "in-line" method of surveying was utilized with the Magniphase unit.

Results of Geophysical Survey:

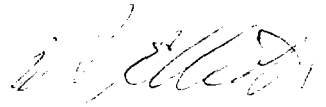
The magnetometer work outlined the general east-west trend of the rock formations, with the exception of northwesterly trending feature south of the base line on lines 12E to 24E. The most prominent magnetic feature is a series of magnetic highs extending from line 8W to the eastern boundary of the property. Located north of No. 1 baseline, this magnetic feature has an east-west trend and shows a right-hand offsetting movement at line 36E. A parallel, but weaker magnetic trend is present immediately south of No. 1 base line, but its eastern limit appears to be line 20E.

The conductive zones outlined by the electromagnetic survey shows good conformity with the magnetic feature, with by far the best response occurring to the west of the

would be higher. Two diamond drill holes in this section, therefore, appear warranted.

DATED January 12th, 1966.

Respectfully submitted,



W. J. Elliott, M.A.Sc., P.Eng.

Elliott Exploration Services Limited

Nagagami River. Three parallel conductors to the west of the river were diamond drilled and encountered massive pyrite and pyrrhotite mineralization to account for the high electromagnetic response. The pyrrhotite, together with appreciable amounts of magnetite in the core would account for the magnetic response.

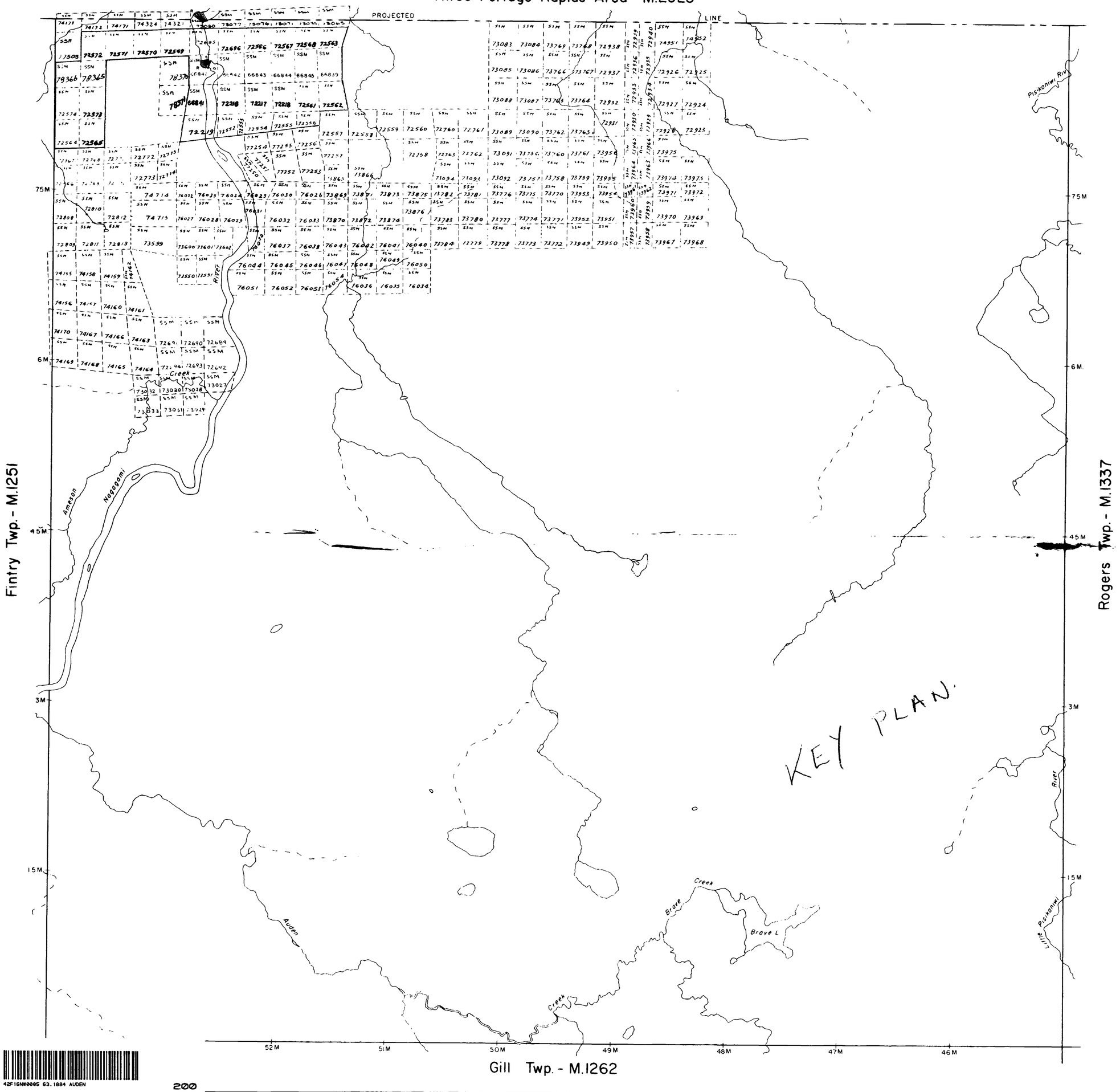
The extensions of the conductive zones to the east were not drilled and are assumed to be extensions of the bands of paragneiss encountered in the drilling. As the electromagnetic responses are considerably weaker in this section, it is considered that a higher magnetite content rather than the sulphide content of the rock is the main contributing factor to the high magnetic readings.

CONSLUSIONS AND RECOMMENDATIONS:

The conductors investigated by diamond drilling result from the presence of massive pyrite and pyrrhotite, the latter mineral, together with the presence of magnetite causing the magnetic highs. Very minor chalcopyrite mineralization was noted, so that the sulphides encountered are not of economic proportions.

The conductive zones in the extreme eastern section of the property remain to be tested, as there is a possibility that the copper content within the sulphides

Three Portage Rapids Area - M.2925



THE TOWNSHIP OF

AUDEN

DISTRICT OF
COCHRANE

SAULT STE. MARIE
MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

LEGEND

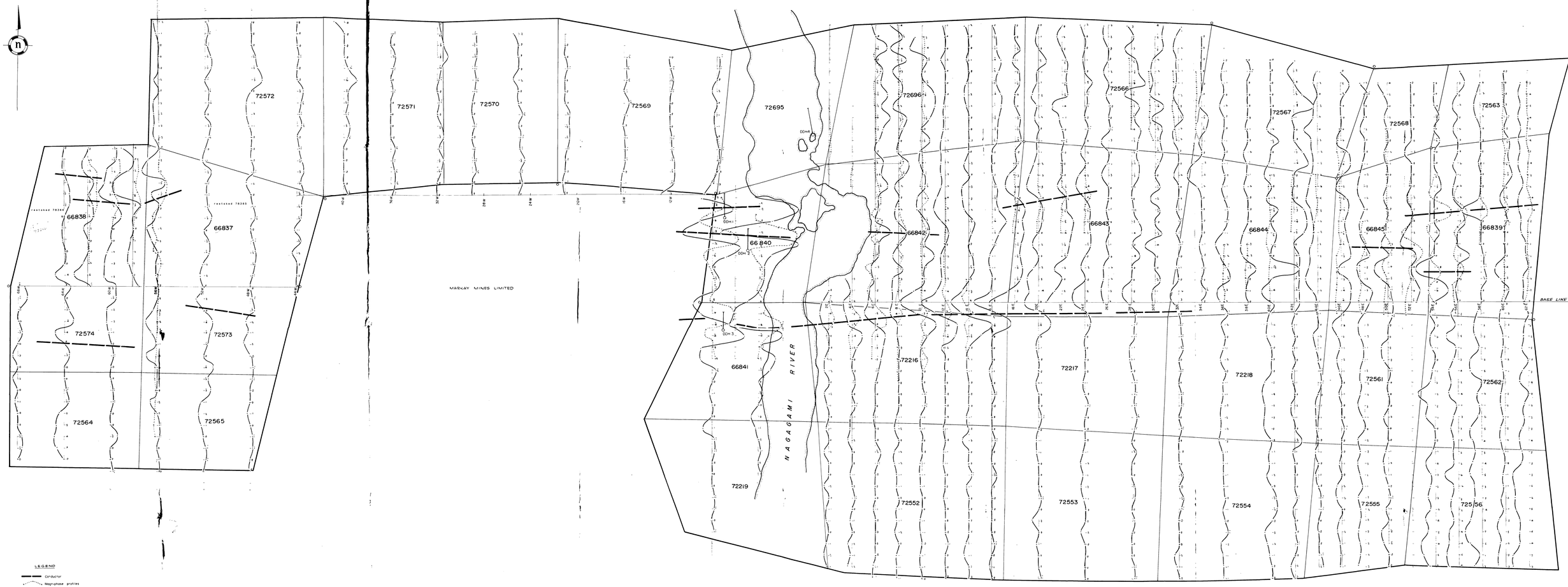
PATENTED LAND	(P)
CROWN LAND SALE	C.S.
LEASES	(L)
LOCATED LAND	Loc.
LICENSE OF OCCUPATION	L.O.
MINING RIGHTS ONLY	M.R.O.
SURFACE RIGHTS ONLY	S.R.O.
ROADS	
IMPROVED ROADS	
KING'S HIGHWAYS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
MINES	
CANCELLED	C.

NOTES

400' Surface Rights Reservation around all lakes and rivers

PLAN NO.- M.1139

DEPARTMENT OF MINES
– ONTARIO –



COLLEEN COPPER MINES LIMITED
PINTEY & JALDEN TWPS. ONTARIO, CAN.
SAULT STE MARIE MINING DIVISION

ELECTRO-MAGNETIC SURVEY

200 0 200 400 600 800
FEET

Survey by ELLIOTT EXPLORATION SERVICES LTD.

JULY, 1955

63/1884

n
MARKAY MINES LTD.
Nagagami River
DDH-4
DDH-3
E.M.
BELLEKENO
CL POST
LEGEND
1070 Relative magnetic readings in gammas.
CONTOUR INTERVAL
100 Gammas
500 "
5000 "
INSTRUMENT: Sharpes MF-1 Magnetometer
E.M. Conductors
42F16NW0005 63.1884 AUDEN
220
Survey by: ELLIOTT EXPLORATION SERVICES LTD.
COLLEEN COPPER MINES LIMITED
FINTRY & AUDEN TWPS., ONTARIO, CAN.
MAGNETOMETER SURVEY
200 0 200 400 600 800
FEET
JULY, 1965.