63.800

010

(8)

REPORT ON GEOLOGICAL AND GEOPHYSICAL OPERATIONS

TAMMINEN PROPERTY -

Lorne and Louise Townships - Ontario.

by Rio Canadian Exploration Ltd.

Introduction.

The following report is based upon the results of geological and geophysical investigations carried out by Personnel of Rio Canadian Exploration Ltd. on the Tamminen property, Lorne and Louise Twps., Ontario, between August 25th and September 29th, 1956.

The purpose of the present investigation was the location of nickel-copper deposits on a basic intrusive said to underlie the property.

Claims.

92545-92564 inclusive, and 85787 and 85785, covering Lot 1 and the N.3/4 of Lot 2, Concession 6, Lorne Twp. and the N.½ of Lot 12, Concession 6, Louise Twp. Claims were recorded in February 1956.

Location and Accessibility.

The nearest town is Whitefish on Highway 17, the property being located 6 miles to the west; the latter Highway passes 200 yards to the south of Post 92564 No. 2. C.P.R. is 1 mile to the north.

Water can only be obtained from a beaver lake in the extreme east of the property; the swamps are seasonal. Spruce and balsam trees occur in the swamp.

Geology.

The geological survey was carried out by Mr. John Ferguson between August 25th and September 14th; the report covering his examination is as follows :

"The claims cover a series of steeply dipping Missassagi quartzites which in places show a moderately strong shearing in a NE-SW trend, with secondary fractures occurring at right angles. The quartzite varies from a feldspathic to siliceous rock; in places coarse conglomerates and boulders are to be seen. Copper mineralisation was noted in the quartzites, but in view of the disturbed nature of the rocks, an economic deposit would be highly unlikely.

Two ages of intrusive occur; younger diabase dykes of maximum width 50 feet and diorite plugs.

The diabase dykes have a rough N.W. orientation. There is only one main occurrence of this intrusive located in the southern point of the property. No mineralisation was associated with this dyke.

Diorite of probable Killarnean age is the "ore" bearing host. Three apparently separate intrusives were noted which were of medium grained type. Scattered pyrite mineralisation was noted in all three intrusives, however, the only pyrrhotite noted occurred at the "showing" on line 2800 west 200 ft. south.

There is the possibility that this rock type underlies some of the swamps which have been traversed by picket lines.

Samples were taken from the pit blasted on line 2800W 200S.

#1363 .10 Ni. .19 Cu. 9.91 Fe. 2.29 S. "

Plate I, on a scale of 1" = 400', shows the results of his mapping.

Geophysical.

A base line was set in running N. 85°W. magnetic for about 6300' and picket lines, totalling approximately 24000' in length were cut at right angles to this base line at 400' intervals.

The following numbers of stations were occupied in the course of the geophysical work :

Electromagnetic	- 285
Magnetic	- 289
Self Potential	- 341

Magnetometer, self potential and electromagnetic surveys were carried out; a Watt magnetometer, with a scale constant of approx. 22 gammas per division was used in the magnetometer survey. Appropriate corrections for diurnal variations were made by tying back to a base at hourly intervals. The electromagnetic survey was of the vertical loop type, employing 1000 c.p.s. frequency. The results of this work are as follows :-

(a) Electromagnetic

Plate II shows the plot of the tilt angle data obtained from the electromagnetic survey. No significant conductors were observed on these lines.

(b) Magnetic Survey

Plate III shows in profile form the results of the magnetometer survey. Magnetic activity up to maximum of 2000 gamma is to be seen in the vicinity of the Killarnean diorite intrusives as mapped by Ferguson. These areas of increased magnetic activity

could be due to concentrations of magnetite and/or pyrrhotite associated with intrusives.

(c) Self Potential.

Plate IV gives the results of the self-potential survey in profile form. Only very minor negative anomalies, up to at most 50 millivolts in amplitude are to be seen on these profiles. The more prominent of these minor anomalies lie in the eastern portion of the property and correlate well with magnetic anomalies in that area. The most prominent of these lies on line 2E. on or near the outcrop of one of the diorite intrusives. A close examination of this immediate area by Dr. N.R. Schindler and Dr. E.L. Evans on October 4th was not encouraging, and it is concluded that the minor geophysical anomalies are due to at most unimportant amounts of sulphide mineralisation.

Comments on the above visit by Dr. Schindler are as follows:

"The property was visited on October 4th by E.L. Evans and N.R. Schindler with the main object of examining the ground over and in the vicinity of the larger of the self-potential anomalies on claims 92560 and 92558; this anomaly is a weak one of the order of 40 millivolts, but it correlates with a magnetic anomaly and occurs over a small body of intrusive rock mapped by J. Ferguson as "Older (Nipissing) gabbro"; this identification of the rock type was confirmed. The line joining the S.P. anomaly picked up on picket lines 2E,00 4W and 8W passed over base outcrops in places and is everywhere else very close to outcrops of the older gabbro. No sign of alteration or mineralisation was observed in the gabbro. The cause of the S.P. anomaly is not apparent; that of the magnetic anomaly is most probably disseminated magnetite in the intrusive.

There was no S.P. response in the vicinity of the outcrop of gabbro on picket line 28W. where a minor showing of sulphides is reported, nor on the body of gabbro on line 44W. Although other bodies of gabbro may be present in the unmapped portion of the property there is no reason to suppose they would be of more interest ".

General Conclusions.

It is concluded that no further interest resides in the Tamminen option on the basis of the above investigations.

Respectfully submitted,

Harold O. Seigel, P.Eng.

HOS/mac
November 15th, 1956.

[illegible] OPTION

TIME DISTRIBUTION

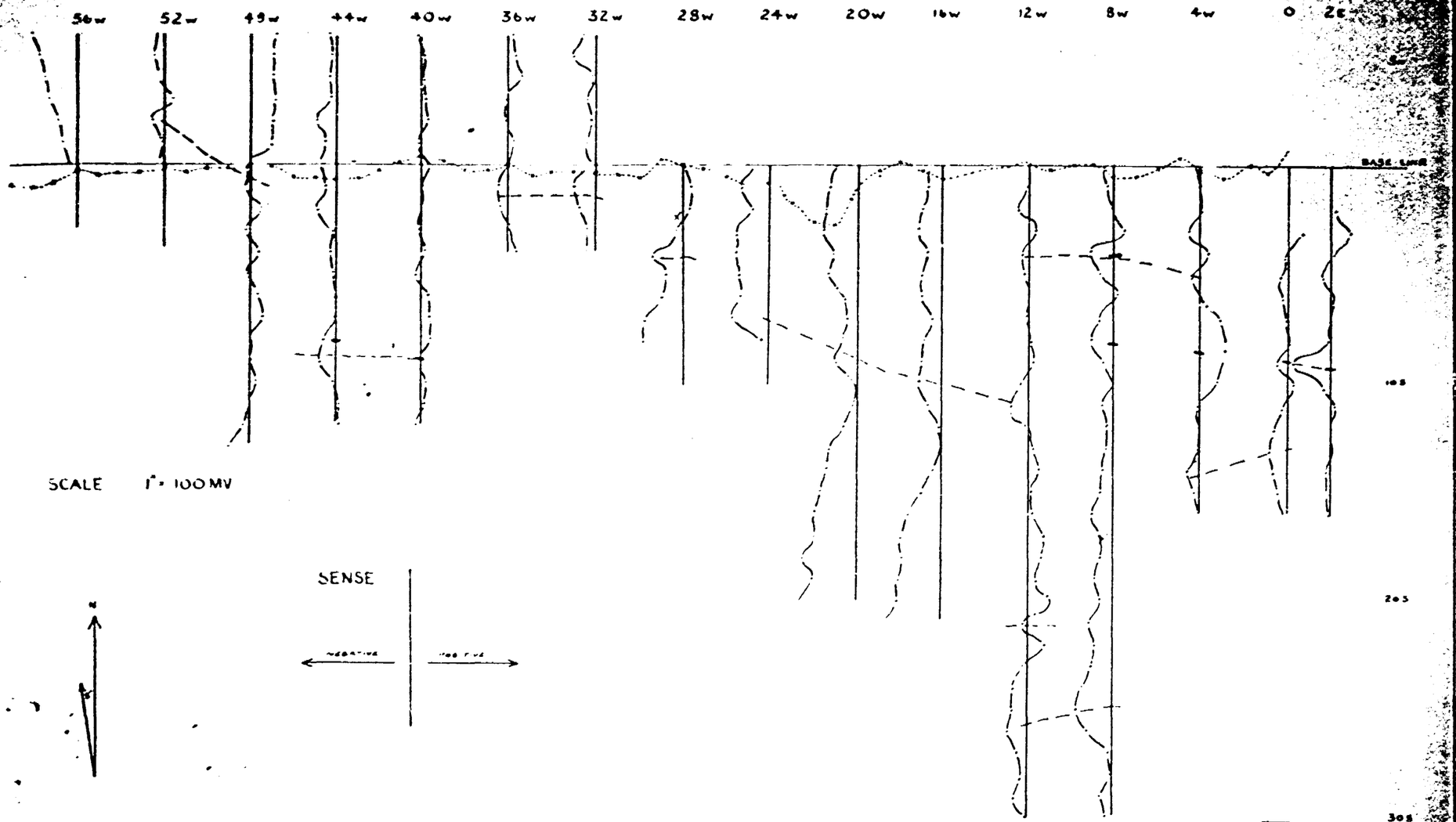
Geophysical Survey:

W. Wasylechko, P.O. Box 86, Noranda.	Sept. 10 - 20	10 days
J. P. Duval " " " "		10 days
Linecutting etc. two men supervised by J. Ferguson.	Aug. 28-Sept.4	14 days
Interpretation and Report -		
E.O. Seigel, 25 Adelaide St. Tor.		2 days
John Ferguson, 200 Bay St. Tor.		1 day
		37 days

Geological Survey:

John Ferguson	Aug. 25 - Sept. 14.	21 days
N. R. Schindler, 200 Bay St. Tor.	Oct. 4	1 day
E. L. Evans, 335 Bay St. Tor.	Oct. 4	1 day
Drafting -		
J. Ferguson		3 days
E. Seagraves, 335 Bay St. Tor.		2 days
		28 days.

TOTAL 65 Man-Days.



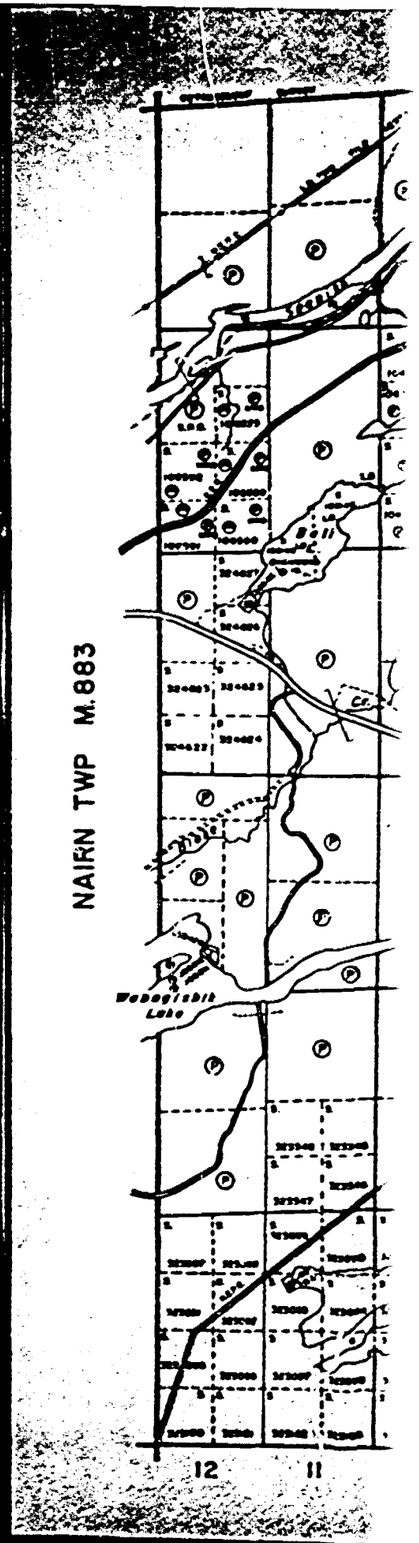
SCALE 1" = 100 MV

SENSE

Scale
1" = 400'

PLATE IV

RIO CANADIAN EXPLORATION LTD.			
TAMMINEN OPTION (T.M.C.) S.P. PROFILES			
TRACED BY E.S.	DATE:- 2-10-56	SCALE:- 1" = 400' HOR. 1" = 100 MV.	NORTH



900

DRURY TWP. M.765

NAIRN TWP M.883

LOUISE TWP. M.698

VI

V

IV

III

II

I

W.P.L. AGREEMENT No. 46

Vermilion

Wabocabie Lake

Ella Lake

Forsbala Lake

Ann Lake

Margaret Lake

TOWNSHIP OF

LORNE

DISTRICT OF
SUDBURY

SUDBURY
MINING DIVISION

SCALE : 1 INCH 40 CHAINS (1/2 MILE)

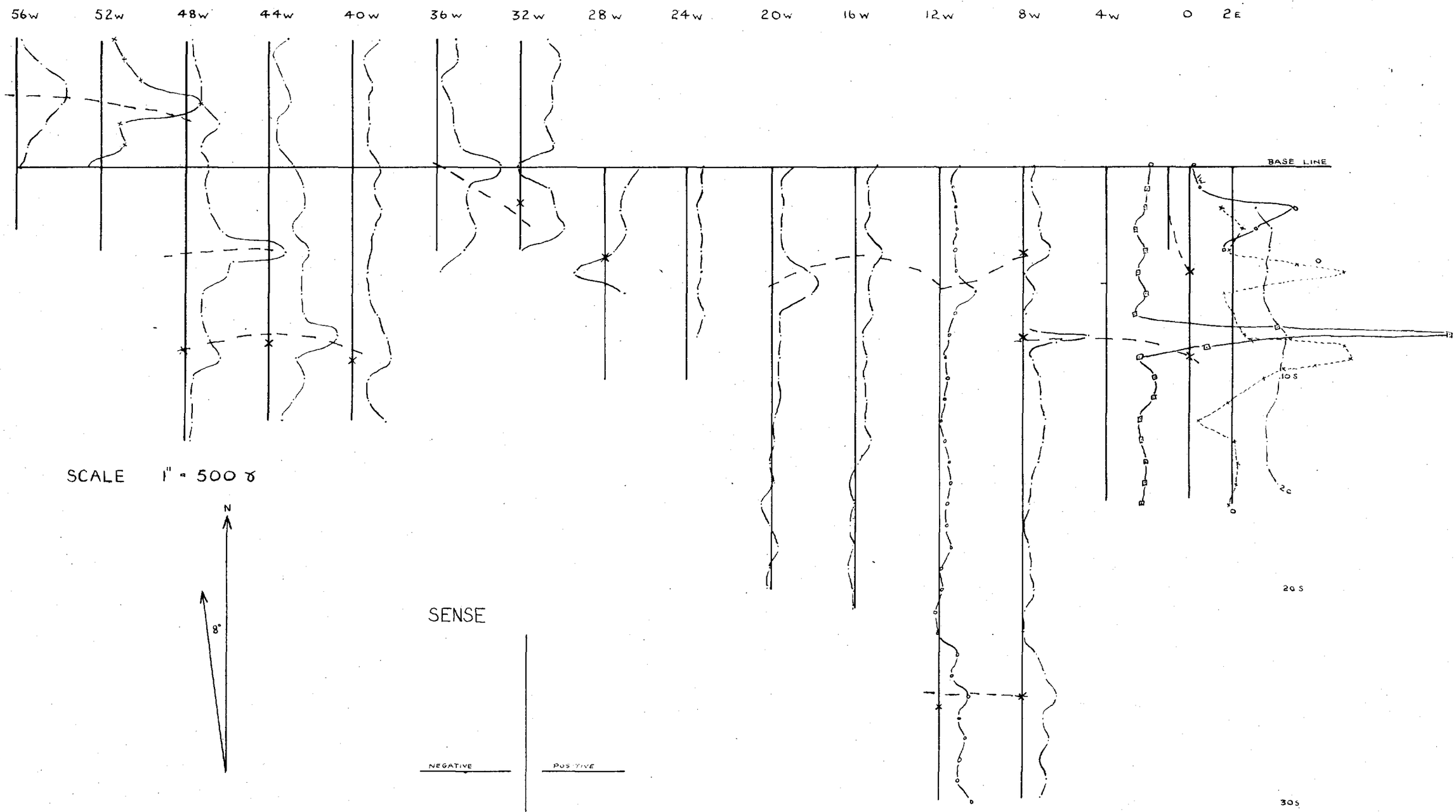
DRL

DATE MARCH 1971

PLAN NO M. 999

12 11 10 9 8 7 6 5 4 3 2 1

TRUMAN TWP. M.1164



SCALE 1" = 500 γ

SENSE

NEGATIVE | POSITIVE

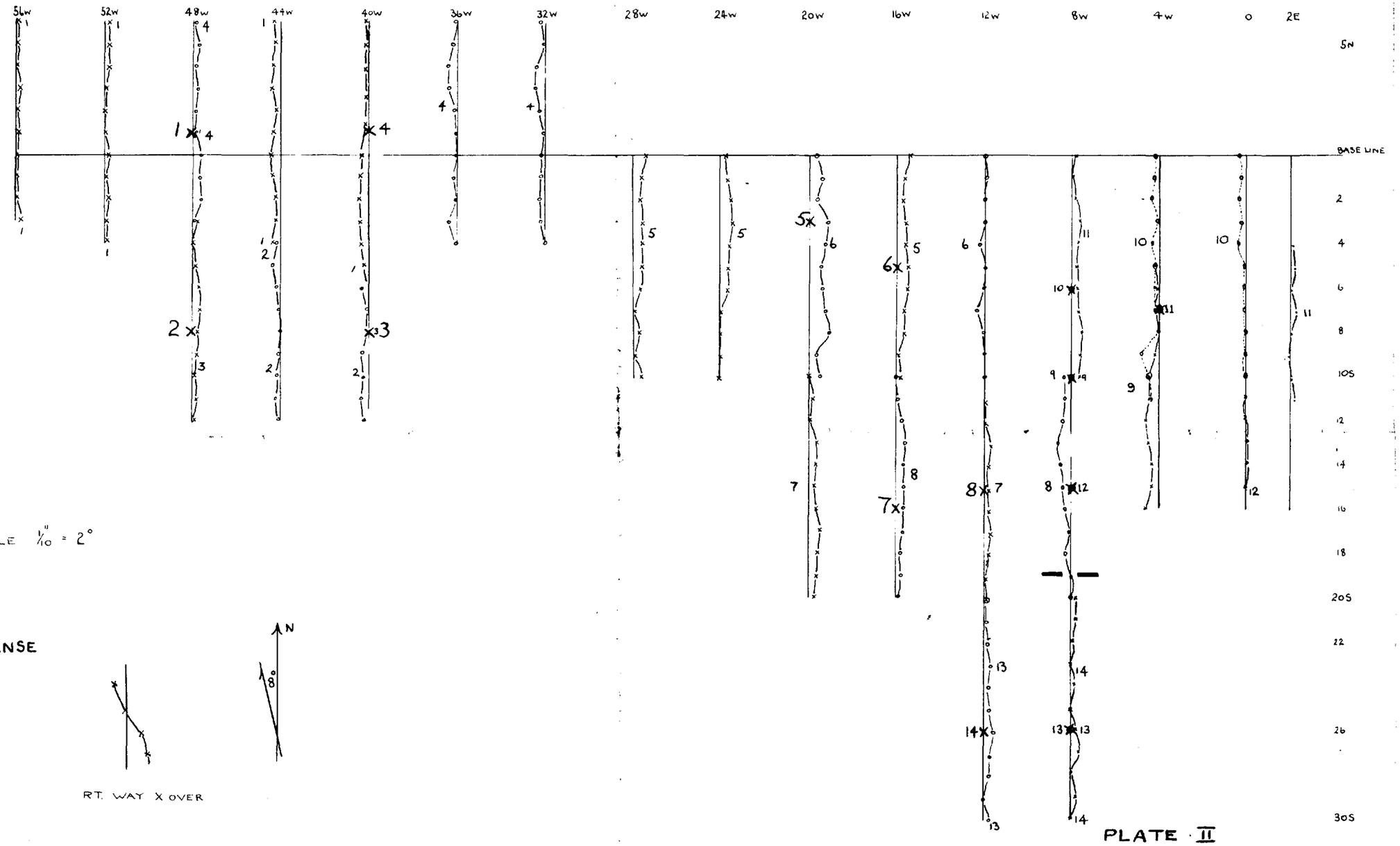
$L^S/2E - 4W$ LINE ≡ 0 γ

$L^S/4W - 56W$ LINE ≡ 100 γ

PLATE III

RIO CANADIAN EXPLORATION LTD.			
TAMMINEN OPTION (T.M.C.) ΔZ DATA MAGNETOMETER SURVEY			
TRACED BY E.S.	DATE :- 2-10-56	SCALE :- 1" = 400' 1" = 500 γ	NO.

LORNE-0012 #1



SCALE 1/10" = 2°

SENSE

PLATE II

RIO CANADIAN EXPLORATION LTD.			
TITLE TAMMINEN OPTION (T.M.C.) E.M. TILT ANGLE PROFILES			
DRAWN BY E.S.	DATE 9-10-56	SCALE - 1" = 400' 1/10 = 2°	No.

LORNE-0012 #2