



42A12NE0563 63.1517 MACDIARMID

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Report on the Magnetic and Electromagnetic Surveys
on the Property of
NORTH RANKIN NICKEL MINES LIMITED
Macdiarmid Township - Porcupine Mining Division
Province of Ontario

SUMMARY

Detailed ground electromagnetic and magnetic surveys were conducted over the eight claim property, held under option, at a picket line interval of 200 feet.

The results of the surveys did not reveal any anomalous conditions which would be interpreted to be caused by metallic mineralization in the bedrock formations of the property.

CONCLUSIONS

Based upon the results of the geophysical surveys, additional expenditures on the property are not warranted.

RECOMMENDATIONS

It is recommended that the option be allowed to lapse.

PROPERTY, LOCATION, ACCESS, ETC.

This property of North Rankin Nickel Mines Limited is held under option and consists of eight contiguous, unsurveyed and unpatented mining claims. They are numbered P-61033 to P-61039 inclusive and P-58318. The area of the claim group totals 320 acres, more or less.

Although the subdivisions of Macdiarmid township have been annulled, the claims, more or less occupy parts of lots 7 and 8 concession 5 of this township. Porcupine Mining Division in the Province of Ontario.

The Mattagami river flows northeasterly through the east part of Claim P-61037.

The claim group can be reached easily from Timmins, Ontario by either float or ski equipped aircraft, by boat or helicopter. The distance from Timmins is about 19 air miles.

PROPERTY GEOLOGY

There are no rock outcrops on the property. However, from regional mapping and from results of recently completed exploration programs in the area, the bedrock geology appears to consist essentially of Keewatin-type volcanics and sediments. Younger intrusive rocks, of Keweenawan or Matchewan age, intrude the Keewatin-type rocks. These are diabase, peridotite and gabbro in composition. The strike of the rocks appear to be east-west, and dip of the formations are steep.

GEOPHYSICAL SURVEYS

Electromagnetic Survey - The survey was conducted using a Ronka Mark 4, Horizontal loop electromagnetic unit, utilizing a coil separation of 300 feet and a frequency of 876 c.p.s. This method measures in-phase and out-of-phase components of the secondary field in terms of percent of normal or uniform field. Ratios of the in-phase to out-of-phase readings are considered to give indications of conductivity of causative bodies. A coil separation of 300 feet was used, giving a depth penetration in the order of 125 to 150 feet.

No anomalies were revealed by the survey.

Magnetic Survey - The survey was performed using a MF-1 Fluxgate magnetometer. It measures the vertical component of the earth's magnetic field.

The magnetic relief over the property is quite flat, except for a marked change in susceptibility in the southeast corner of claim P-61037. This change is interpreted to be caused by an ultra-basic intrusive rock type, peridotite in composition. It forms part of a large body of peridotite located immediately to the south of the subject property. Nickel and asbestos minerals have been discovered in this body, but the size and grade of these occurrences are much too low to be of economic interest.

The subject acreage corners a very small portion of this large intrusive mass and which on the property, lies under the waters of the Mattagami River.

Respectfully submitted,

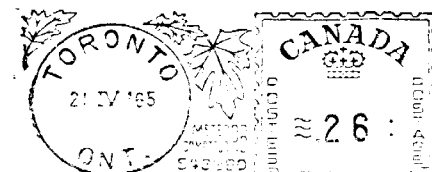
M. E. M. CONSULTANTS LTD.



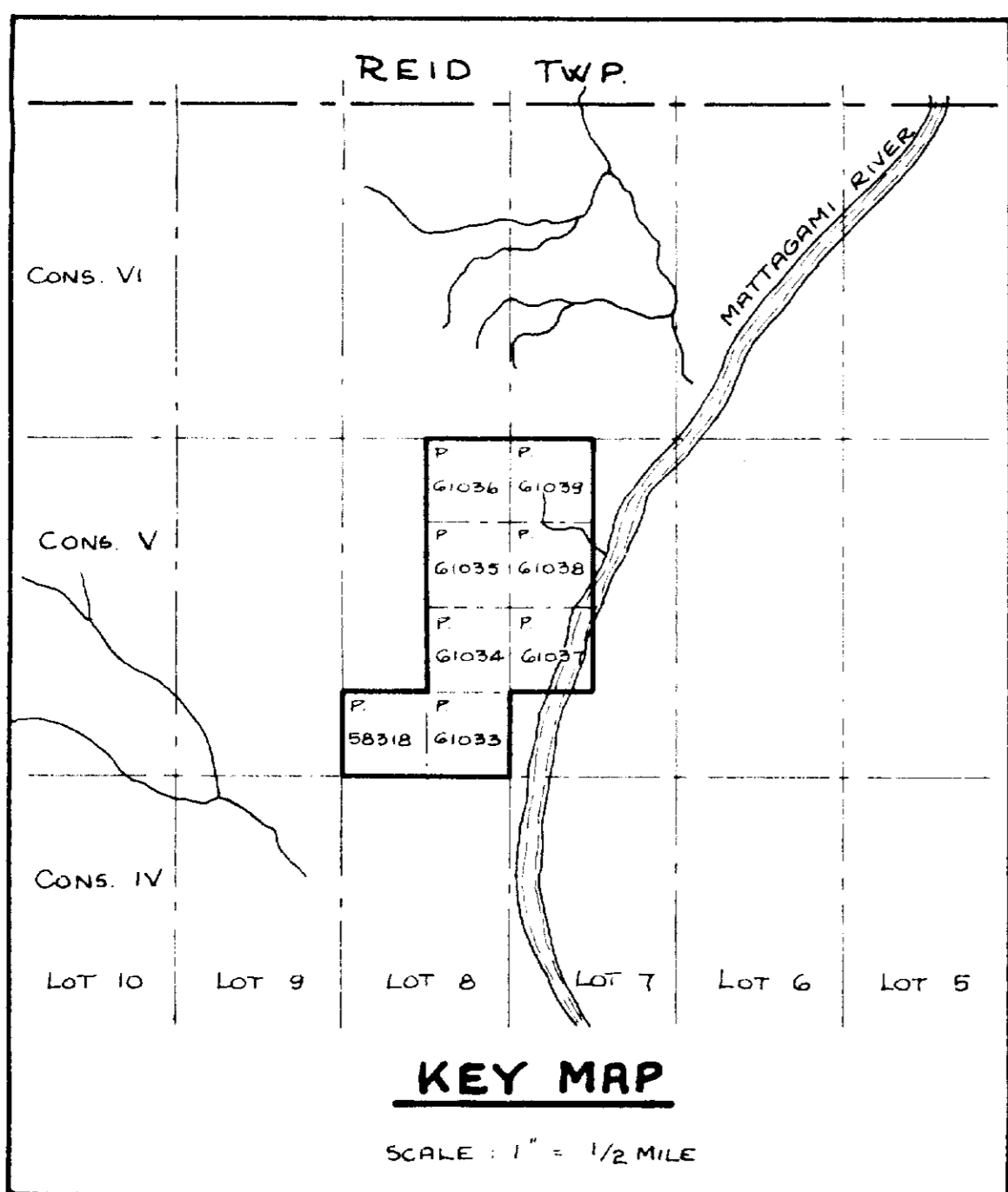
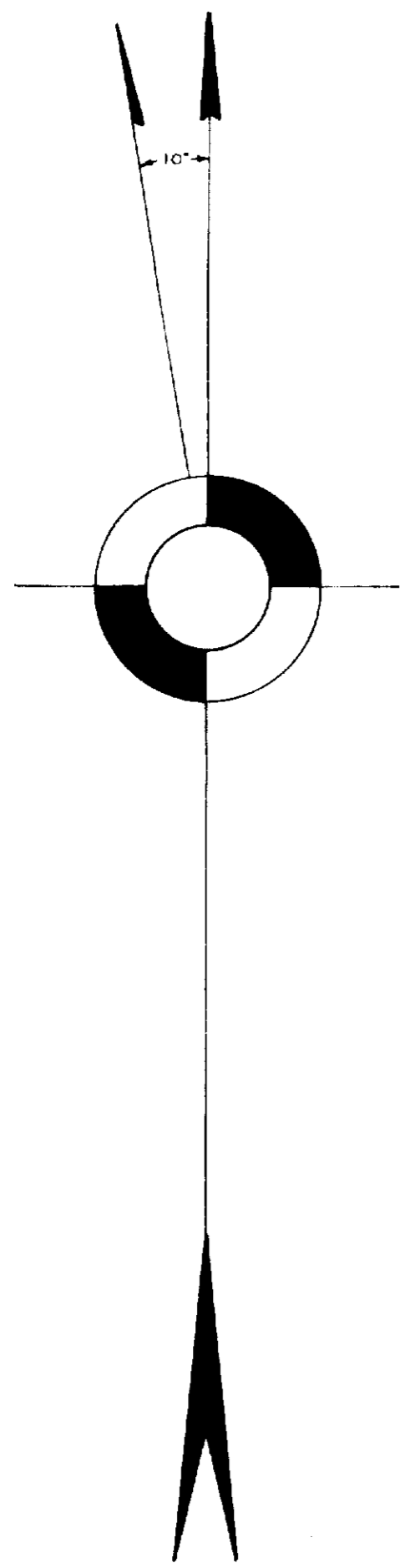
Toronto, Ontario.
April 20th, 1965.

Michael Zurowski, B.Sc., P.Eng.

SUITE 509
25 ADELAIDE ST. WEST
TORONTO 1, ONTARIO



Mr. R. V. Scott,
Chief, Mining Lands Division,
Department of Mines,
Parliament Buildings,
TORONTO 2, Ontario.

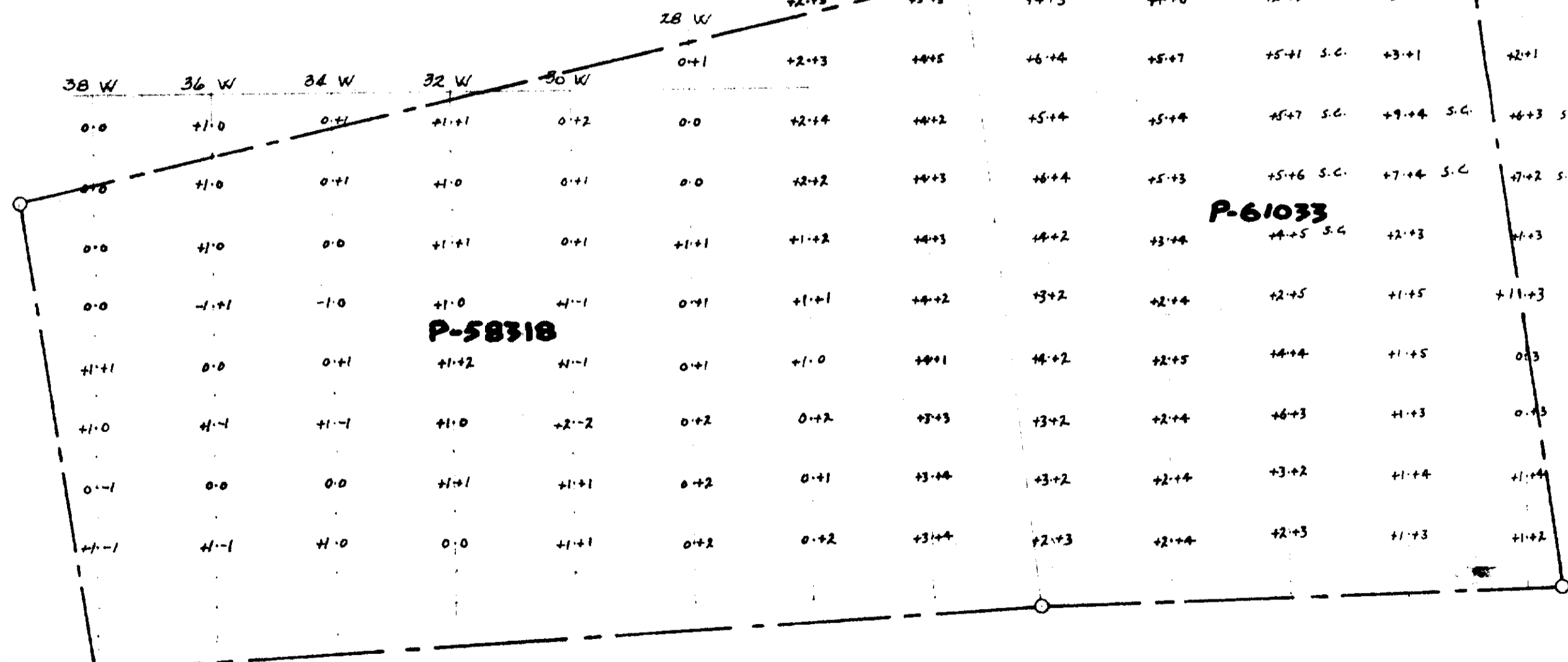
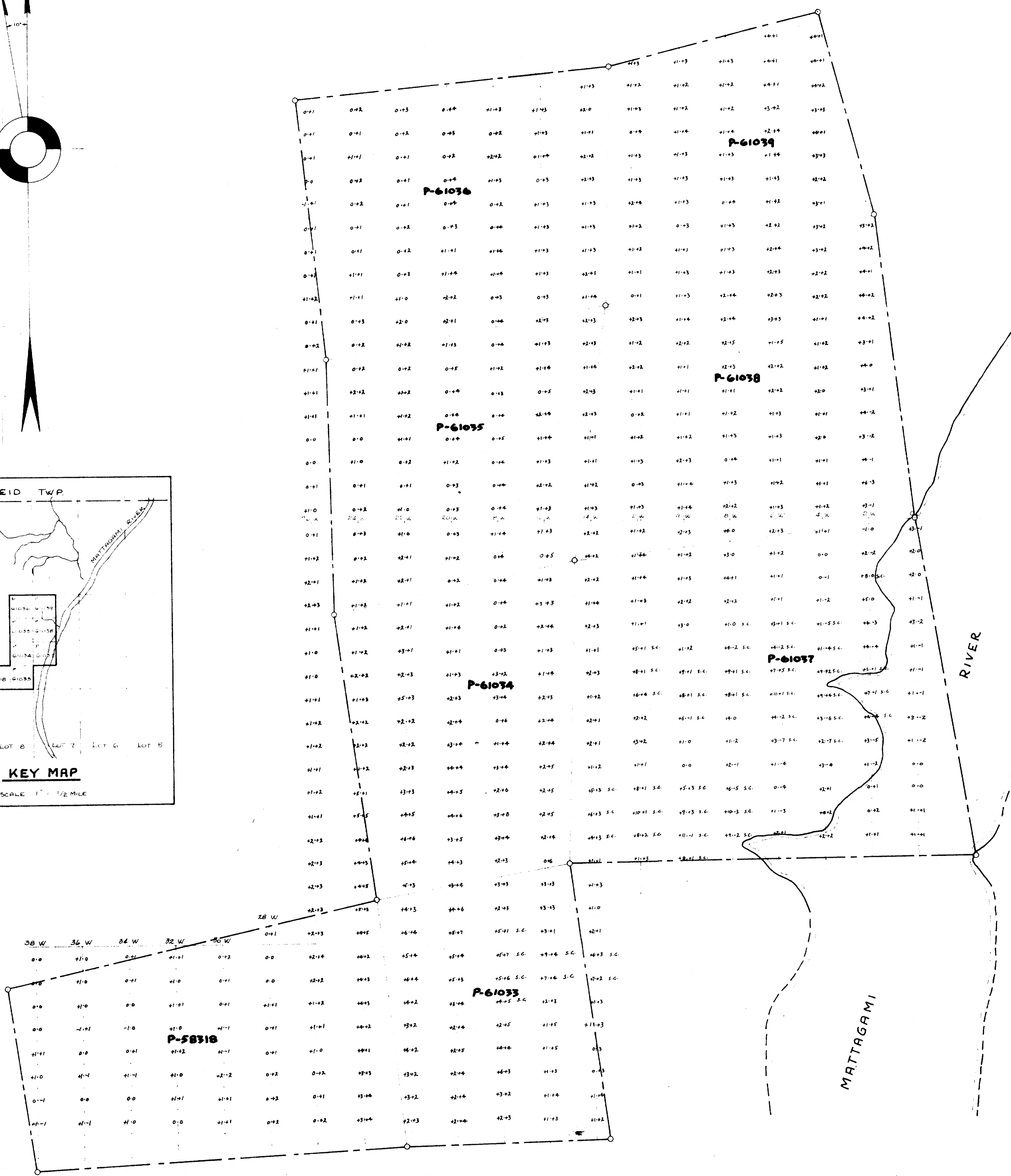
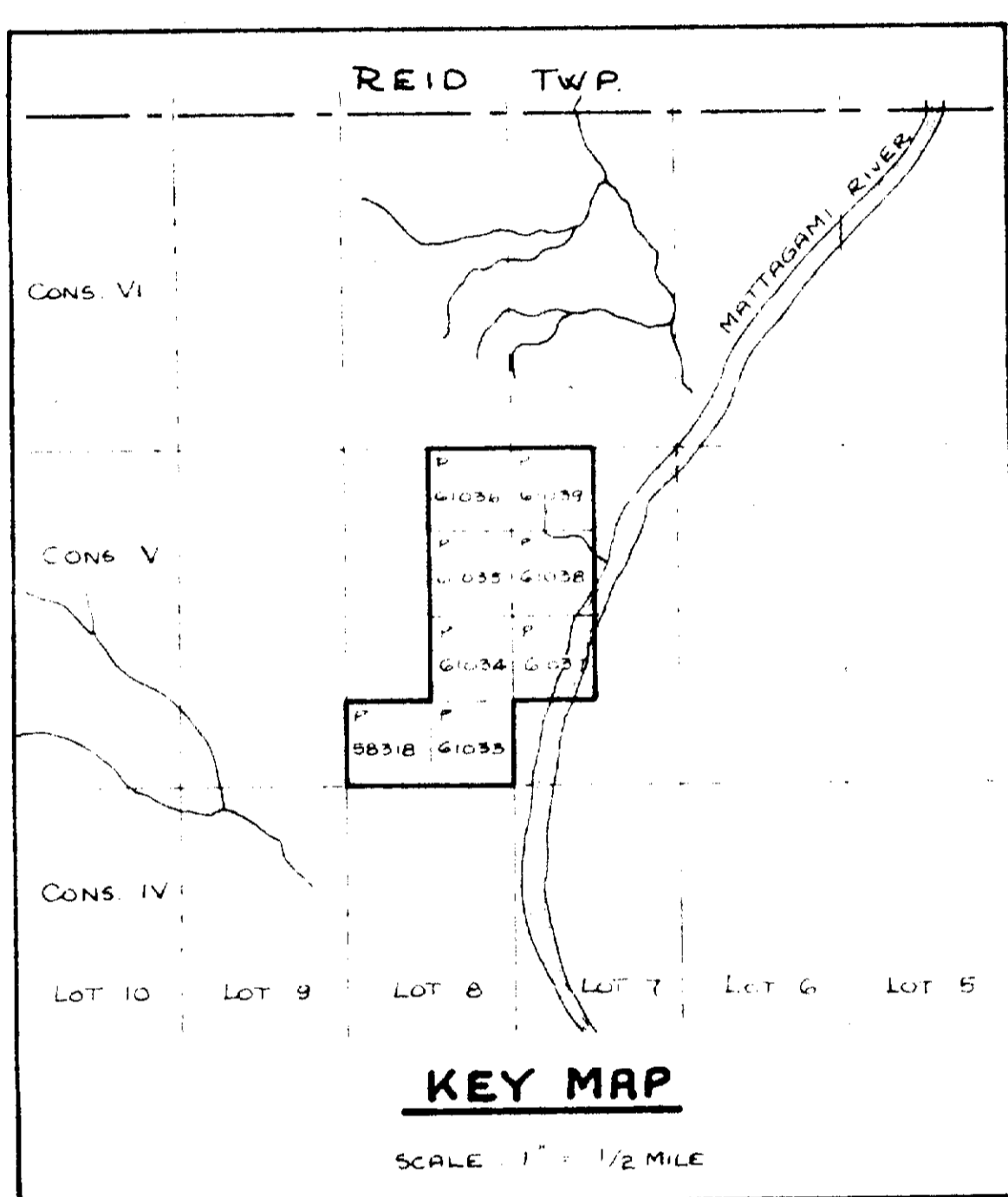
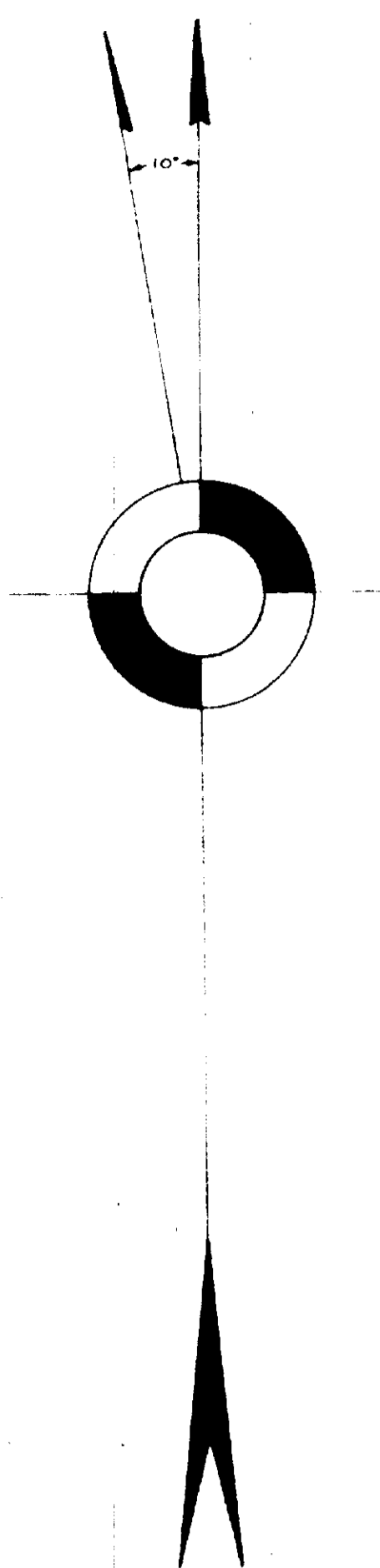


SYMBOLS
 1200 - Relative Value of the Vertical Component of Earth's Magnetic Field in Gauss.
 500 - Isomagnetic Line.
 P-61033 - claim Number.

63.1517 *[Signature]*

NORTH RANKIN NICKEL MINES LIMITED		
MACDIARMID TOWNSHIP, PORCUPINE MINING DIVISION ONTARIO		
PLAN OF MAGNETOMETER SURVEY		
DATE: APRIL 1 1965	SCALE: 1 INCH = 200 FEET	DRAWN BY: <i>A.E.M.</i>
M.E.M. CONSULTANTS LTD.		





SYMBOLS

- In phase component of secondary field plotted to left of line.
- Out of phase component of secondary field plotted to right of line.
- Axis of Electromagnetic Conductor

Note:
Survey conducted using Route Mark 4 Unit, frequency of 876 c.p.s and 300 foot coil separation.

NORTH RANKIN NICKEL MINES LIMITED
 MACDIARMID TOWNSHIP, PORCUPINE MINING DIVISION ONTARIO

PLAN OF ELECTROMAGNETIC SURVEY

DATE: APRIL 1 1965	SCALE: 1 INCH = 200 FEET	DRAWN BY: F.H.M.
M.E.M. CONSULTANTS LTD.		

