



41016SW0037 63.1074 MARION

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# MODERN GEOPHYSICAL LIMITED

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TORONTO - ONTARIO

GEOPHYSICAL SURVEYS  
ELECTROMAGNETIC  
(VERTICAL & HORIZONTAL)  
RESISTIVITY  
MAGNETIC  
GRAVIMETRIC  
SELF-POTENTIAL

TELEPHONE:  
EMPIRE 2-3756-57

REPORT ON A MAGNETOMETER SURVEY  
FOR  
STACKPOOL MINES LIMITED  
MARION TOWNSHIP ONT.

## INTRODUCTION

The following report is based on the results of a magnetometer survey carried out on claims held by Stackpool Mines Limited in Marion Township, Ont.

## PROPERTY - LOCATION

The claims covered are numbered as follows:

108054 - 108079

109206 - ~~109207~~

*109207*

This group covers an area approximately two and one half miles in length by three quarters miles in width, and lie between the Rush River on the East and the Woman River on the West.

## ACCESS

Float or ski equipped aircraft can land on some of the straight portions of Woman River within Marion Township. The claims may also be reached by canoe from Stackpool (CHR). They are located some 30 miles from the railway and are approximately 110 miles NNW of Sudbury.

## TOPOGRAPHY

The area generally is featured by gently rolling hills covered by dense bush with numerous windfalls. Between the Woman and Rush Rivers,

in the area covered by the survey, there is one small pond. There are no small creeks in the area.

GENERAL GEOLOGY OF THE AREA: (Composite map appended)

The area covered by the claim group herein under discussion has to our knowledge never been mapped or reported on in detail.

Those portions of Marion Township however, which lie immediately to the East of Rush River, are shown on the geological map (1" -  $\frac{1}{2}$  mile) accompanying O.D.M. Report Vol. XXXV, Part 2 - 1926 by E.S. Moore.

The area lying immediately to the West of Marion Township (to the West of Woman River) has also been mapped (map 41c, scale 1" - 1 mile) and reported by G. D. Furse in Vol. XLI, Part 3 Ontario Department of Mines Report, 1932.

The Heenan - Marion Townships area is shown on these maps as underlain by east west striking basic and acid Keewatin type lavas with younger diorites and gabbros (Haileyburian?) occupying the north portion of Heenan Township and with granites (Algonian?) in the central eastern parts of Marion Township.

IRON FORMATION:

The Southeast corner of Heenan Township is traversed by an NE-SW striking iron formation, being part of the "Woman River Iron Range" described on pages 48 to 51 in the above mentioned O.D.M. Report by G. Furse. The same iron range traverses the NE corner of Marion and NW corner of Genoa Townships, where it contains the well known Jefferson Mine (O.D.M. Report Vol XXXV, Part 2) described in detail by E. S. Moore.

Ten holes known to have been drilled in this Jefferson Mine area have shown this iron formation to be a sulphide type, high in magnetite, pyrrhotite

and pyrite without present economic value. The Presence of uneconomic but significant amounts of lead and zinc were also reported.

The iron formation as indicated by the ground magnetometer survey on the Blackpool group of claims lies in strike with the iron formation described above (Hechen and Marion Townships) and is believed to be part of the "Woman River Iron Range".)

#### WORK COMPLETED

During the period August 10th to September 10th 1960 the following work was completed:

(a) Line cuttings: a base line extending from Rush River to the West over a distance of approximately two miles.

29 cross lines spaced at 500 foot intervals (250' across the main anomalies) in a north southerly direction. A total of 23 line miles were cut and surveyed.

(b) Ground magnetometer survey: readings were taken at 100' intervals with a Sharpe Magnetometer. The values converted to gammas are shown on the accompanying map with contour lines at 200 gamma intervals.

Line cutting and magnetometer survey were under the supervision of our field engineer M. Channing.

#### DESCRIPTION OF MAGNETICS:

The ground magnetometer survey undertaken by Modern Geophysical Limited indicates a series of roughly parallel and East West striking anomalies with a magnetic intensity relief varying from a few 1000 gammas up to approximately 60,000 gammas.

The two strongest anomalies in the area occur on lines 43 West (60,100 gammas) and 5 West (58550 gammas). On line 43 West the approximate dimension

of the high magnetic zone is 100 feet by 300 feet with a zone of lesser intensity of approximately 1200 feet in length.

On line 5 West the strong magnetic anomaly occurs between 900 and 1000 South and strikes NE across lines 250 West and O and O. This zone is approximately 150 feet by 1000 feet.

Another zone of medium intensity lies across the base line between lines O and O and 10 East with a narrow zone striking NE-SW immediately to the north.

These anomalous zones have an irregular pattern, possibly due to local structural features such as folding between lines 15E and 10 W and a possible N-S fault in the area of line 15W.

Between lines 30 W on the south base line and 10 W a medium intensity anomaly strikes roughly E.W. This zone has higher intensity areas within it on the order of 20,000 gamma.

These anomalies are believed to be caused by iron formation (mainly magnetite) being part of the above described "Woman River Iron Range".

The area located to the North and to the South of the main anomalous zone has a featureless pattern of low magnetic relief.

#### SUMMARY AND RECOMMENDATIONS:

The ground magnetometer survey undertaken by Modern Geophysical Ltd. on the property of Stackpool Mining Co. Ltd. in Marion Township of Ontario has indicated a series of high magnetic intensity anomalies believed to have been caused by magnetite, which is known to occur along the "Woman River Iron Range" to the NE and SW of Stackpool Mining Company's property.

In order to assess the economic worth and potential of the material causing these anomalies it is now recommended that:

- (1) The area of the strongest magnetic anomalies (between L. 5 E. and L. 5W. and along L. 43W) be checked, mapped and possibly sampled in detail by a geologist. It is our opinion that an experienced man could do such an investigation in 3 to 5 days time.
- (2) Any further recommendations such as diamond drill hole location etc. should be based on the results of such a field investigation.

If no outcrops are found in the area of the strongest anomalies, one or two drill holes intersecting the main anomalies along line 5E, 5W, or 43W should be considered.

All of which is respectfully submitted,

Ben.B.Brown B.Sc.

*Ben B. Brown.*

NEWTON TWP

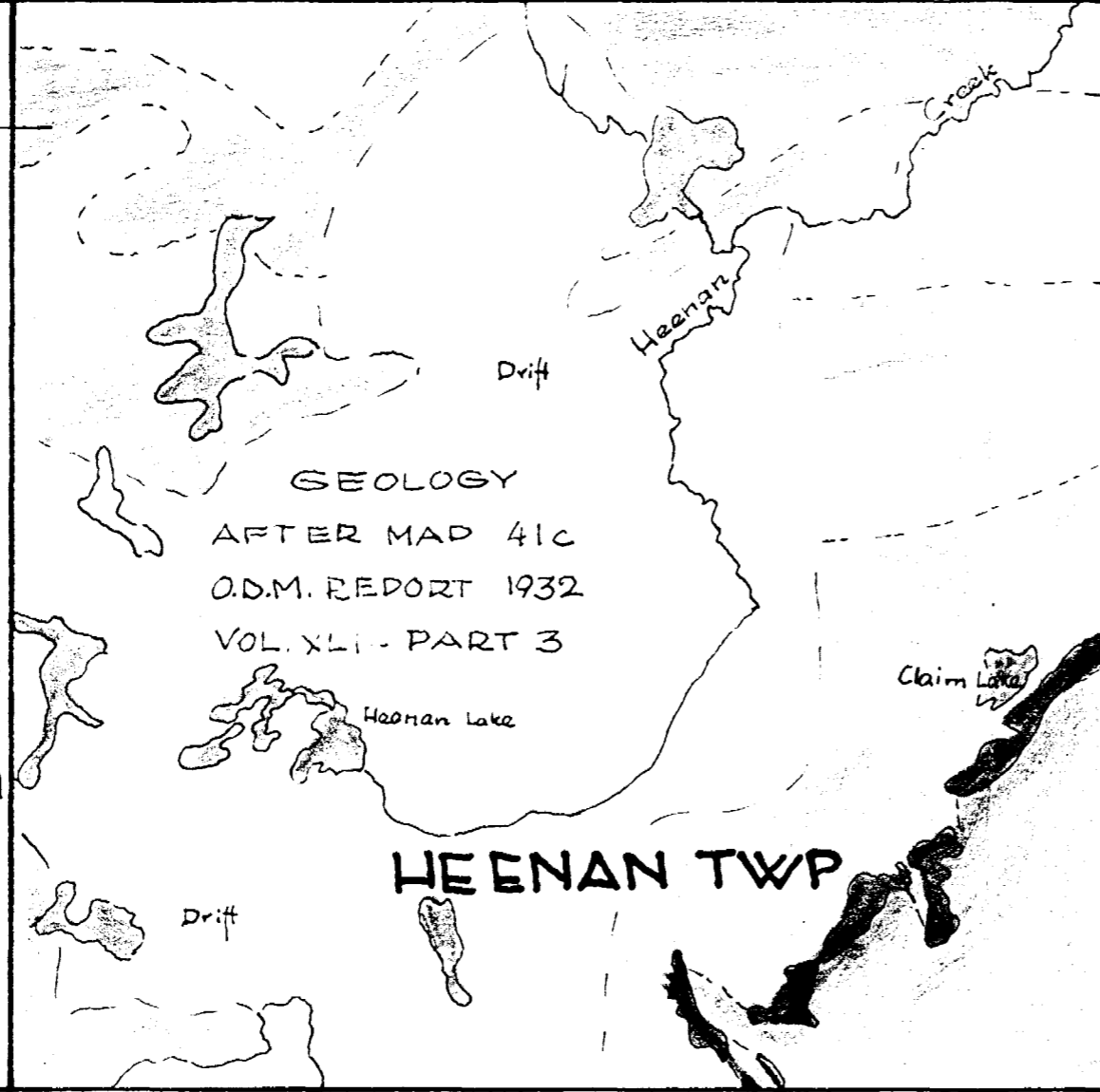
DALE TWP

47°50'

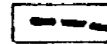


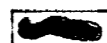


DORE TWP



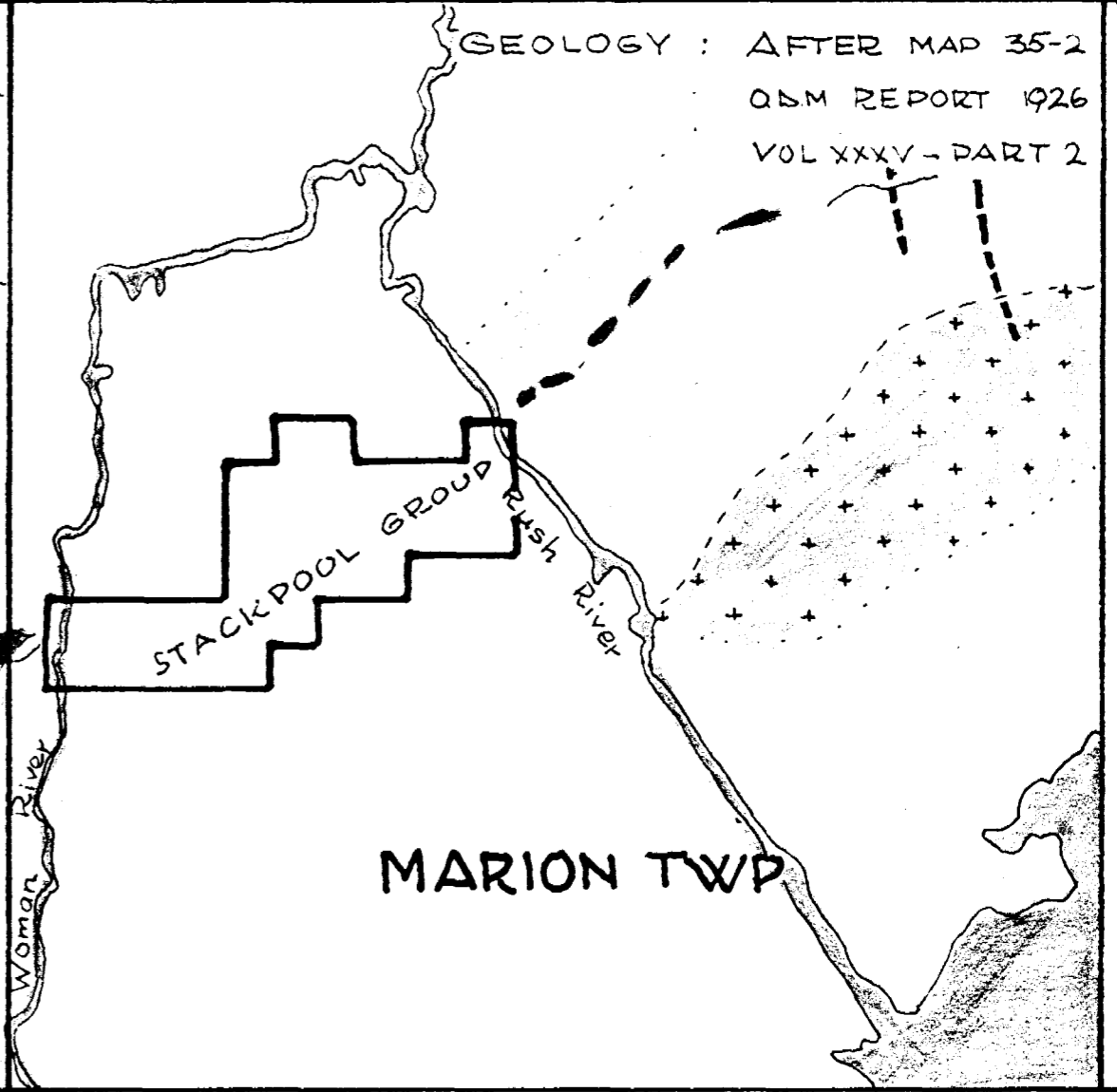
82°30'



GEOLOGY  
AFTER MAP 41C  
O.D.M. REPORT 1932  
VOL. XLI - PART 3

-  OLIVIN DIABASE
-  GRANITE
-  DIORITE - GABBRO
-  IRON FORMATION
-  VOLCANICS - ACID
-  VOLCANICS - BASIC

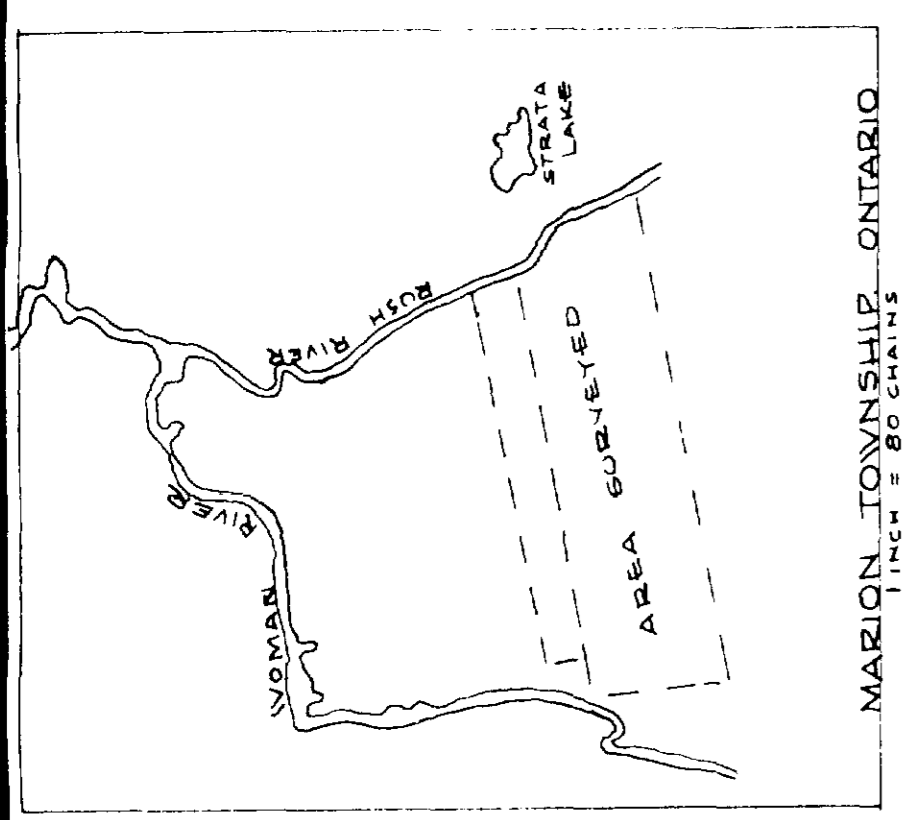
GEOLOGY : AFTER MAP 35-2  
O.D.M. REPORT 1926  
VOL XXXV - PART 2



STACKPOOL MINING CO LTD.  
MARION TWP CLAIM GROUP

SCALE : 1 INCH = 1 MILE  
DATE : SEPT 1960

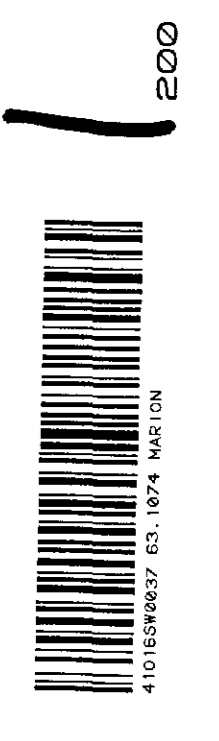
— MODERN GEOPHYSICS LTD. —



LEGEND

[Dark Shaded Box]	ABOVE 25000
[Medium Shaded Box]	10000 - 25000
[Light Shaded Box]	4000 - 10000
[White Box]	2000 - 4000
[Dotted Box]	1000 - 2000
[Horizontal Line Box]	BELCW 1000
[Vertical Line Box]	NEGATIVE

MODERN GEOPHYSICS LIMITED  
 STACKPOOL MINES LIMITED  
 MARION TOWNSHIP, ONTARIO  
 MAGNETOMETER SURVEY  
 SCALE 1" = 30.0 ft  
 AUGUST 1960



*M. Channing*