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These data accompany:

Preliminary Map P.3849, *Precambrian Geology of the Peninsular Lake Area, Fort Hope–Miminiska Greenstone Belt, Northwestern Ontario*, scale 1:50 000.

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Miscellaneous Release—Data 394

## **Geological, Geochemical and Geophysical Data related to the Peninsular Lake Area, Fort Hope–Miminiska Greenstone Belt, Northwestern Ontario**

by B. Azar

This publication can be downloaded from

[http://www.geologyontario.mndm.gov.on.ca/mndmaccess/mndm\\_dir.asp?type=pub&id=MRD394](http://www.geologyontario.mndm.gov.on.ca/mndmaccess/mndm_dir.asp?type=pub&id=MRD394)

This digital data release consists of geochemical data, magnetic susceptibility data, geological information, structural data and selected field photographs for the Fort Hope–Miminiska greenstone belt in the Peninsular Lake area, which were collected during the 2017 field season. This release contains whole-rock geochemistry (major element, trace element, rare earth element), quality control information, magnetic susceptibility data, drill hole data and field notes. These data are associated with Preliminary Map P.3849, *Precambrian Geology of the Peninsular Lake Area, Fort Hope–Miminiska Greenstone Belt, Northwestern Ontario*; the marginal notes and the geological legend (as 2 portable document format (.pdf) files) from the Preliminary Map are also provided. Additional information includes the associated summary of field work publication from 2017. Location data are provided in the Universal Transverse Mercator (UTM) projection and grid system, Zone 16, North American Datum 1983 (NAD83). This release consists of 5 Microsoft® Excel® for Office 365 (.xlsx) files; 103 photographs (.jpg format files), and 5 portable document format (.pdf) files.

## **CONTENTS**

The data is organized into 7 folders, as follows.

- Drill Holes
- Field Notes
- Geochemistry
- Geology
- Magnetic Susceptibility
- Photographs
- Publication

**Drill Holes.** This folder contains 1 Microsoft® Excel® for Office 365 (.xlsx) file providing relevant information about all the recorded drill holes in Peninsular Lake area.

*MRD394\_Peninsular\_Drill\_Holes.xlsx.* This file contains 1 worksheet. Worksheet, “Drill Holes” contains all the relevant information about bedrock and overburden drill holes presented on the map sheet including location data, whether the hole intersected bedrock, company information, azimuth and dip, assessment information, bedrock interpretation, and more. Location information is given in UTM co-ordinates, NAD83, Zone 16.

**Field Notes.** This folder contains 1 Microsoft® Excel® for Office 365 (.xlsx) file providing all the field notes collected during the 2017 field season.

*MRD394\_Peninsular\_rocktype\_descriptions.xlsx* This file contains 1 worksheet “Rock Type” providing field notes taken at every outcrop and recorded using a Trimble® handheld Global Positioning System (GPS) device. Notes have been edited to remove abbreviations and spelling errors, but otherwise are the original observations taken real-time and may contain typos and incomplete sentences as a result. Many of the interpretations changed with geochemical information and additional review; these changes are reflected in this document under the “FINAL DESCRIPTION” column and a brief note sometimes accompanies where re-interpretation of a rock type occurred. Location information is given in UTM co-ordinates, NAD83, Zone 16.

**Geochemistry.** This folder contains 1 Microsoft® Excel® for Office 365 (.xlsx) file providing all the geochemical results from 2017 field season and 1 portable document format (.pdf) describing laboratory methods.

*MRD394\_Peninsular\_Geochemistry.xlsx.* This file contains 2 worksheets: “Whole Rock”, contains whole-rock chemical data for each mapped area. The worksheet “Abbreviations” provides an explanation for the abbreviations and acronyms used in the 4<sup>th</sup> row of the “Whole Rock” worksheet called METHODS, and explains all additional abbreviations used in the workbook. Additional methods that were used in sample preparation are included in “Abbreviations” but are not represented on the other worksheets. Samples were processed by the Geoscience Laboratories (Geo Labs), Ontario Geological Survey, Sudbury, Ontario. Sample location information is given in UTM co-ordinates, NAD83, Zone 16. Please note that no specific quality assurance and control issues were noted in this data set.

*2018 Geo Labs Brochure.pdf* describes the analytical methods used at the Ontario Geological Survey Geoscience Laboratories for rocks analyzed during 2018.

**Geology.** This folder contains 3 portable document format (.pdf) files.

*MRD394\_Peninsular\_Petrography.pdf* is a summary of the observations for all the thin sections reviewed in 2020. The thin section descriptions are listed in alphabetical order and include modal abundances of the interpreted mineralogy.

*P3849\_Peninsular\_Marginal\_Notes.pdf* provides additional information on the geology of the study area from the marginal notes and 2 tables (Table 1 and “Occurrences” list) extracted from the Ontario Geological Survey (OGS) Preliminary Map, P.3849, *Precambrian Geology of the Peninsular Lake Area, Fort Hope–Miminiska Greenstone Belt, Northwestern Ontario*.

*P3849\_Peninsular\_Geology.pdf* provides the geological legend for the Ontario Geological Survey (OGS) Preliminary Map P.3849, *Precambrian Geology of the Peninsular Lake Area, Fort Hope–Miminiska Greenstone Belt, Northwestern Ontario*. Rock descriptions in the “*MRD394\_Peninsular\_Geochemistry.xlsx*” file geochemical description refer to rock units in this legend.

**Magnetic Susceptibility.** This folder contains 1 Microsoft® Excel® for Office 365 (.xlsx) file.

*MRD394\_Peninsular\_Magnetic\_Susceptibility.xlsx* contains 2 worksheets.

“Peninsular” worksheet contains magnetic susceptibility data from the study area collected during the summer of 2017. Measurements were collected using Exploranium® KT-10 magnetic susceptibility meters. Magnetic susceptibility is defined as the degree to which a substance can be magnetized and, in this case, is expressed as the ratio of the intensity of magnetization (k) to the ratio of the Earth’s magnetic field to the magnetic field induced by the susceptibility meter. The readings (k) are expressed as  $10^{-3}$  times the SI unit for susceptibility and are dimensionless. The minimum value that can be recorded by the meter is  $0.01 \times 10^{-3}$  SI units; the largest value is  $999 \times 10^{-3}$  SI units. Location information is given in UTM co-ordinates, NAD83, Zone 16.

“Missing Readings” worksheet contains a list of 27 stations or units that are described in the *MRD394\_Peninsular\_rocktype\_descriptions.xlsx* listed under “Field Notes” that did not have corresponding magnetic susceptibility measurements.

**Photographs.** This folder contains 1 photograph folder (as .jpg files) and 1 Microsoft® Excel® for Office 365 (.xlsx) file.

*MRD394\_Peninsular\_Photo Captions.xlsx* contains 1 worksheet.

The “Photo Captions” worksheet provides descriptions and location information for the 2017 Peninsular Lake area photos.

The folder, “Photographs Peninsular Lake” contains 103 selected photographs from the study area. Photo file names for the .jpg files are based on station location and number of photographs taken at that station. Station location information is given in UTM co-ordinates, NAD83, Zone 16.

**Publication.** This folder contains 1 portable document format (.pdf) file.

*Summary of Field Work 2017 6333-05 Azar.pdf* is the summary of field work article written in 2017 after the field season.

This article may be referenced as shown:

Azar, B. 2017. Preliminary results from geological mapping in the Wabassi River and Peninsular Lake areas, Fort Hope–Miminiska greenstone belt, eastern Uchi domain; *in* Summary of Field Work and Other Activities 2017, Ontario Geological Survey, Open File Report 6333, p.5-1 to 5-11.

## References

Azar, B. 2017. Preliminary results from geological mapping in the Wabassi River and Peninsular Lake areas, Fort Hope–Miminiska greenstone belt, eastern Uchi domain; *in* Summary of Field Work and Other Activities 2017, Ontario Geological Survey, Open File Report 6333, p.5-1 to 5-11.

Azar, B., Zammit, K and Hakimian, M.N. 2021. Precambrian geology of the Peninsular Lake area, Fort Hope–Miminiska greenstone belt, northwestern Ontario; Ontario Geological Survey, Preliminary Map P.3849, scale 1:50 000.