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Azar, B. 2021. Geochemical, geophysical and geological data related to the Wabassi River area, Fort Hope–Miminiska greenstone belt, northwestern Ontario; Ontario Geological Survey, Miscellaneous Release—Data 389.

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These data accompany:

Preliminary Map P.3829, *Precambrian Geology of the Wabassi River Area, Fort Hope–Miminiska Greenstone Belt, Northwestern Ontario*, scale 1:100 000.

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Miscellaneous Release—Data 389

Geochemical, Geophysical and Geological Data Related to the Wabassi River 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=MRD389

This digital data release consists of geochemical data, magnetic susceptibility data, geological information, structural data and selected field photographs for the Wabassi River area of the Fort Hope–Miminiska greenstone belt, which were collected during the 2017 field season. This release contains whole-rock geochemistry (major element, trace element, rare earth element) and assay data, quality control information, magnetic susceptibility data, drill hole data and field notes. These data augment the associated Preliminary Map P.3829, *Precambrian Geology of the Wabassi River Area, Fort Hope–Miminiska Greenstone Belt, Northwestern Ontario*; from which the marginal notes and the geological legend were extracted and are provided as 2 separate portable document format (.pdf) files. Additional information includes the associated *Summary of Field Work and Other Activities* article 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 the Wabassi River area.

MRD389_Wabassi_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.

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

MRD389_Wabassi_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. Some of the interpretations changed with geochemical information and additional review; these changes are reflected in this document under the “DESCRIPTION” column and a brief note 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.

MRD389_Wabassi_Geochemistry.xlsx. This file contains 4 worksheets: “Whole Rock”, contains whole-rock chemical data for each mapped area. Worksheet, “Assay” contains assay data from the study area and worksheet “Abbreviations” provides an explanation for the abbreviations and acronyms used in the 4th row of the “Whole Rock” and “Assay” worksheets called METHODS, and explains all additional abbreviations used in the workbook. The final worksheet “Quality Control Issues” explains the quality control issues identified during whole-rock analyses for the yellow highlighted samples in the worksheet “Whole Rock”. 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.

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.

MRD389_Wabassi_Petrography.pdf is a summary of the observations for all the thin sections reviewed in 2020. The thin section descriptions include those of samples collected in the Wabassi River study area and for the Makokibatan Lake area, *see* Azar and Bellrose (2021a and 2021b). They are listed in alphabetical order and include modal abundances of the interpreted mineralogy.

P3829_Wabassi_Geology.pdf is the geological legend extracted from the Ontario Geological Survey (OGS) Preliminary Map P.3829, *Precambrian Geology of the Wabassi River Area, Fort Hope–Miminiska Greenstone Belt, Northwestern Ontario* (Azar, Hakimian and Zammit 2021). Rock descriptions in the geochemical data set, *MRD389_Wabassi_Geochemistry.xlsx*, refer to rock units in the legend.

P3829_Wabassi_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.3829, *Precambrian Geology of the Wabassi River Area, Fort Hope–Miminiska Greenstone Belt, Northwestern Ontario* (Azar, Hakimian and Zammit 2021).

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

MRD389_Wabassi_Magnetic_Susceptibility.xlsx contains 2 worksheets.

“Wabassi” 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 0.01×10^{-3} SI units; the largest value is 999×10^{-3} SI units. Location information is given in UTM co-ordinates, NAD83, Zone 16.

“Missing Readings” worksheet contains a list of 13 units that are described in the *MRD389_Wabassi_Rocktype_Descriptions.xlsx* listed under “Field Notes” that did not have corresponding magnetic susceptibility measurements.

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

MRD389_Wabassi_Photo_Captions.xlsx contains 1 worksheet.

The “Photo_Captions” worksheet provides descriptions and location information for the 2017 Wabassi River area photos.

The folder, “Photographs Wabassi River” 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 and Other Activities* article written in 2017 after the field season. This article may be referenced as shown below.

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. and Bellrose, J.R. 2021a. Precambrian geology of the Makokibatan Lake area, Fort Hope–Miminiska greenstone belt, northwestern Ontario—west sheet; Ontario Geological Survey, Preliminary Map P.3843, scale 1:50 000.
- Azar, B. and Bellrose, J.R. 2021b. Precambrian geology of the Makokibatan Lake area, Fort Hope–Miminiska greenstone belt, northwestern Ontario—east sheet; Ontario Geological Survey, Preliminary Map P.3844, scale 1:50 000.
- Azar, B., Hakimian, M.N. and Zammit, K. 2021. Precambrian geology of the Wabassi River area, Fort Hope–Miminiska greenstone belt, northwestern Ontario; Ontario Geological Survey, Preliminary Map P.3829, scale 1:100 000.