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Users of OGS products are encouraged to contact those Aboriginal communities whose traditional territories may be located in the mineral exploration area to discuss their project.

Miscellaneous Release—Data 240

Geological, Geochemical and Geophysical Data from Cavendish Township, Grenville Province, Ontario

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This publication can be downloaded from

http://www.geologyontario.mndm.gov.on.ca/mndmaccess/mndm_dir.asp?type=pub&id=MRD240

This release contains field photographs, whole-rock chemistry, assay, magnetic susceptibility and scintillometer data collected as part of the Cavendish Township mapping project that were collected between June 2007 and December 2009. Also included are copies of the *Summary of Field Work* articles for the project from 2007 to 2009, as well as the marginal notes for Preliminary Map P.3605. This release consists of 444 photographs as *.jpg* files, 4 tables as Microsoft® Excel 97® (*.xls*) files, 7 documents as Microsoft® Word 2003 (*.doc*) files, and 15 documents in portable document format (*.pdf*). The files are on one DVD-ROM. Data are organized into 5 folders, as follows:

1. Geology
2. Geochemistry
3. Geophysics
4. Photographs
5. Presentations

1. Geology Folder. This folder contains 3 *.doc*, 6 *.pdf*, and 1 *.xls* files.

This folder contains the following files: [SFW 6213-12.pdf](#) is the *Summary of Field Work* article on the project that appeared in 2007 in Ontario Geological Survey Open File Report 6213. [SFW 6226-14.pdf](#), [SFW 6226-15.pdf](#), and [SFW 6226-16.pdf](#) are different *Summary of Field Work* articles on the project that appeared in 2008 in Ontario Geological Survey Open File Report 6226. [SFW 6240-08.pdf](#) and [SFW 6240-09.pdf](#) are the *Summary of Field Work* articles on the project that appeared in 2009 in Ontario Geological Survey Open File Report 6240. [P3605 Legend.doc](#) is a copy of the legend for Ontario Geological Survey Map P.3605, *Precambrian Geology of Cavendish Township and Environs, Grenville Province, Ontario*. Material in the geochemical files and the photograph caption file (see *Geochemistry* and *Photograph* folders) are cross-referenced to map codes in the legend. [P3605 Marginal Notes.doc](#) is a copy of the marginal notes for Ontario Geological Survey Map P.3605, and includes additional information on the geology of the study area not presented in the *Summary of Field Work* articles. [Mineral Exploration Summary.doc](#) is a summary of assessment file work for Grimsthorpe and Tudor townships, which constitute the bulk of the study area, current as of July 13, 2010. This file constitutes Appendix 1 of Open File 6229 which describes the project results in detail. [Cavendish occurrences.xls](#) provides a listing of mineral occurrences in the township compiled from various sources, including the Mineral Deposit Inventory (MDI), with rationalization as to how the location of the occurrences shown on map P.3605 was determined.

2. Geochemistry Folder. This folder contains 1 *.xls* file.

[MRD 240 Chemistry and Assay.xls](#). This file consists of 3 work sheets. The worksheet “whole-rock” contains 128 whole-rock geochemical data from this study acquired from samples collected between 2007 and 2009 as well as another 67 samples from the literature. The worksheet “assay” contains assay data for 52 samples collected from the study area by the author between 2007 and 2009. The worksheet “LGC data” contains whole-rock geochemical data from the PETROCH database for the study area and areas adjacent to it that were collected during previous Ontario Geological Survey projects. All geochemical data collected by the mapping project was acquired by the Geoscience Laboratories, Ministry of Northern Development, Mines and Forestry, Sudbury. Sample location information in the assay and whole-rock worksheets is given in UTM zone 17 co-ordinates, NAD83 datum. Location information in the LGC data worksheet is given in UTM zone 17 co-ordinates, NAD27 datum.

3. Geophysics Folder. This folder contains 2 *.xls* files.

[MRD 240 Mag Susc Data.xls](#). Magnetic susceptibility data from the study area collected between 2007 and 2009. Measurements were collected using an Exploranium® KT-9 magnetic susceptibility meter. 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 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. Sample location information is given in UTM zone 17 co-ordinates, NAD83 datum.

[MRD 240 Scint Data.xls](#). Scintillometer data from the study area collected between 2007 and 2009, as well as regional data used in *Summary of Field Work* articles [SFW 6226-16.pdf](#) and [SFW 6240-8.pdf](#). All data were recorded using an Exploranium® GR-130 MiniSpec gamma ray spectrometer, serial number 4885, calibrated on February 22, 2006, using an NaI crystal and software version 501GEO. The instrument was stabilized daily, and data was recorded using the assay mode with a 5-minute count time. Quoted accuracy is 0.1% K, 0.4 ppm U, and 0.7 ppm Th for a sample with 2% K, 2 ppm U and 8 ppm Th. Sample location information is given in UTM zone 17 co-ordinates, NAD83 datum. [SFW 6240-9.pdf](#) provides precision and reproducibility data for the instrument, as does Banman (2008).

4. Photographs Folder. This folder contains 444 *.jpg* files and 1 *.doc* file.

This folder contain 444 field photographs taken between 2007 and 2009 as part of the mapping project. Photo caption and photo location information are provided in [MRD 240 photo caption.doc](#). Photo file names for the *.jpg* files are based on sample location, e.g. 07RME_0043_5 is photograph number 5, from station RME-0043 in 2007. Sample location information is given in UTM zone 17 co-ordinates, NAD83 datum.

5. Presentations Folder. This folder contains 3 *.doc* and 9 *.pdf* files.

Two poster and 7 oral presentations on the Cavendish Township mapping project, in *.pdf* format, are included in this folder

Posters were presented at the Ontario Exploration and Geoscience Symposium in Sudbury in December 2007 and 2008 ([OEGS 2007 poster Easton.pdf](#) and [OEGS 2008 poster Easton.pdf](#)).

The first talk ([GSA 2008.pdf](#)) was presented at the Geological Society of America annual meeting in Houston, Texas in 2008. The second talk ([AGU 2009.pdf](#)) was presented at the American Geophysical Union–Geological Association of Canada–Mineralogical Association of Canada Joint Annual Meeting in Toronto 2009. Both of the aforementioned talks summarize the geochronology results from the Cavendish project. Talks three and four were presented at Southwest Ontario Prospector’s Association meetings held in Actinolite, Ontario, in May 2008 and May 2010, respectively ([SWOPA May 2008.pdf](#) and [SWOPA May 2010.pdf](#)). Talks five and six were given in August 2007 and August 2009, respectively, to the Catchacoma Community Ratepayers Association ([CCRA August 2007. pdf](#) and [CCRA August 2009.pdf](#), respectively). The seventh talk ([FOG 2009.pdf](#)) was given as a briefing prior to the 2009 Friends of Grenville Field Trip to the Cavendish area in September 2009 (*see Easton and Carr 2009*).

Also included are 3 *.doc* files representing the abstracts for the 2 oral presentations (GSA 2008 and AGU-GAC 2009) as well as the abstract for the paper by Easton and Kamo that has been accepted for publication in the *Canadian Journal of Earth Sciences*.

REFERENCES

- Banman, S. 2009. Characterization of plutonic suites in Cavendish Township by in-situ geophysical measurements and geochemistry; unpublished BSc thesis, Carleton University, Ottawa, 51p.
- Easton, R.M. and Carr, S.D. 2009. Field trip guidebook, Precambrian geology of Cavendish Township and environs, Grenville Province, Friends of the Grenville 38th Annual Meeting and Field Trip; Ontario Geological Survey, Open File Report 6230, 59p.