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These data accompany:

Open File Report 6278, *Shale Resources of Southern Ontario: An Update*, which can be downloaded from:  
[http://www.geologyontario.mndm.gov.on.ca/mndmaccess/mndm\\_dir.asp?type=pub&id=OFR6278](http://www.geologyontario.mndm.gov.on.ca/mndmaccess/mndm_dir.asp?type=pub&id=OFR6278)

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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.

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Miscellaneous Release—Data 301

### **Geochemical, Mineralogical and Brick Testing Results for Shale Resources of Southern Ontario**

by D.J. Rowell

This digital release, released in conjunction with Open File Report (OFR) 6278, *Shale Resources of Southern Ontario: An Update*, contains brick testing results for the historical brick and tile manufacturing shale formations, collected and collated by the Ontario Geological Survey (OGS) over many years and at various locations throughout southern Ontario. Also contained in this release are the results of geochemical and mineralogical testing on these same shale formations. Many of these test results have been published in a variety of OGS reports; however, with the release of OFR 6278, it is important to provide this information digitally and in a single, summarized release. Some new and previously unpublished data is also provided.

The test results are provided in tables in Microsoft® Excel® (.xls) format. The digital release also includes an ESRI® ArcGIS® map that displays the geographic distribution and location of these samples. Both coverages linked to an ESRI® ArcGIS® geodatabase and to ESRI® ArcGIS® shapefiles are included. This map is also provided in portable document (.pdf) format. Data are provided in Universal Transverse Mercator (UTM) projection and grid system, Zone 17, North American Datum 1983 (NAD83).

This publication can be downloaded from

[http://www.geologyontario.mndm.gov.on.ca/mndmaccess/mndm\\_dir.asp?type=pub&id=MRD301](http://www.geologyontario.mndm.gov.on.ca/mndmaccess/mndm_dir.asp?type=pub&id=MRD301)

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## DESCRIPTION OF THE MRD CONTENT

The contents of MRD 301 are organized into folders based on data type. Folder names indicate the data type contained in each folder. The “readme” and “metadata” files are located in the root directory. The data can be transferred to the local computer’s hard drive, but it is very important to retain the folder names and file structure. The map documents are dependent upon the current file structure. The entire project folder can reside anywhere on the computer.

Data are organized into the following 2 folders:

1. Data Files
2. Final Map
  - a. MRD301.gdb
  - b. Shapefiles

## DATA FILES

The Data Files folder contains the following files (these tables also appear in the Appendix of OFR 6278):

1. Table A1 – Major Oxide Geochemistry, in Microsoft® Excel® (.xls) format. The results of major oxide geochemical analysis for the various shale formations are presented in this table.
2. Tables A2 and A3 – Trace Element Geochemistry, in Microsoft® Excel® (.xls) format. The results of trace element geochemical analysis (atomic absorption (flame) spectroscopy and inductively coupled plasma mass spectroscopy) for the various shale formations are presented in this table.
3. Table A4 – Mineralogy, in Microsoft® Excel® (.xls) format. The mineralogical results for the various shale formations are presented in this table.
4. Table A5 – Brick Testing Results, in Microsoft® Excel® (.xls) format. Brick testing results for the various shale formations are presented in this table.
5. Data Sources – Sources of the data presented in Tables A1 to A5.

## CAUTIONARY NOTE

Care should be exercised in extrapolating the brick testing and geochemical results for individual samples. Variations both laterally and vertically can occur within the shale formations, particularly when these formations can extend for hundreds of kilometres throughout southern Ontario.

**It is therefore always highly recommended that where shale extraction is contemplated, that extensive testing be conducted to verify quality and quantity. Site specific investigations provide greater detail on the nature of the local deposit.**

## GIS MAP FILES

### Map projection and base map information

The ESRI® ArcGIS® map provided with this release contains a complete set of data in UTM Projection, Zone 17, using North American Datum 1983 (NAD83). The digital base map was derived from data downloaded from Ontario Land Information Warehouse, Land Information Ontario with modifications by staff of the Ministry of Northern Development and Mines.

The map is also provided in a portable document (.pdf) format, a hard copy of which forms the back pocket of OFR 6278.

## GIS Data Layers

### a) Description of Geodatabase Data Sets (folders) and Feature Classes (shapefiles)

#### Base Files

BUILTUP_AREA	Polygons - small municipalities and other built up areas in southern Ontario
LAKES	Polygons - lakes and other water bodies in southern Ontario
NEATLINE	Polygons - boundary of study area
RIVERS	Polylines - rivers within study area
ROADS	Polylines - roads within study area

#### Compiled Data

DRIFT_THICKNESS	Polygons - drift thickness overlying important shale formations
GEOCHEM	Point data - sample sites where geochemistry has been completed
GEOLOGY	Polygons - shale formations as identified by geology layer
OUTCROPS	Point data - outcrop locations
SHALE_TESTING	Point data - sample sites where shale testing has been completed

### b) Description of the Map Document (.mxd) files:

1. MRD301\_9.3.mxd requires ArcGIS® 9.3 or newer and references data housed in a geodatabase.
2. MRD301\_8.3.mxd requires ArcGIS® 8.3 or newer and only references data housed in shapefiles.

#### Using Data With ArcGIS® 9.3

Users with ArcGIS® 9.3 or newer have access to a map document (.mxd) which references the data in geodatabase format (MRD301\_9.3.mxd). Users with ArcGIS® 8.3 or newer have access to a map document (MRD301\_8.3.mxd) which references the data in only shapefile format.

#### Using Data With Earlier Versions Of ESRI® Software:

Users with older versions of ArcGIS® or ArcView® 3.x can work with the shapefile data in MRD 301, but the map documents or projects will have to be reconstructed. Users will then have to manually symbolize all data in these shapefiles. The lithology polygons (*Geology* shapefile in the Compiled Data folder) can be manually coloured.

#### ACKNOWLEDGMENT

The author would like to acknowledge the tremendous contribution and effort of J.L. Webb to the final ESRI® ArcGIS® map product.

To enable the rapid dissemination of information, this map has not received a technical edit. Discrepancies may occur for which the Ontario Ministry of Northern Development and Mines does not assume liability. Users should verify critical information.