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Digital Northern Ontario Engineering Geology Terrain Study (NOEGTS)

Getting Started

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Introduction:

This digital map data product of the Ontario Geological Survey, MNDM and the Northeast Science and Information Section, MNR comprises 2 CD-ROM disks containing the Northern Ontario Engineering Geology Terrain Study (NOEGTS) map data for northern Ontario, Canada. It is a geographic information system (GIS) – based map of engineering geology terrain studies, which are evaluations of near-surface geological conditions with a view to determining the engineering capability of the terrain. This intent was to allow all of the data on the NOEGTS maps to have specific uses in engineering. The original purpose of the cartographic maps was to provide:

- 1) Engineering geology terrain data at a scale of 1:100 000;
- 2) A written description of the terrain conditions in each map-area (not part of digital data and must be obtained through examination of the "studies" that accompany the paper maps);
- 3) Examples of the types of maps that can be derived from the basic engineering terrain data (not in the digital data set);
- 4) An information base that can be utilized by planners, engineers, exploration managers, administrators, and politicians to aid in formulating development strategies and plans for all parts of Ontario;
- 5) Databases that show the resource potential of the Quaternary (surficial) deposits.

The original data, as well as the digital version of NOEGTS, are at a reconnaissance level and designed to provide an overview of the terrain conditions. At this level of detail, the data are meant to provide a framework for regional planning studies and a database on which to undertake more site-specific studies.

This "readme" document is intended to help clients begin to use the data. The CDs also contain a more comprehensive "report" in the documentation folder. Some of the documentation is in "pdf" format, which may be read using Adobe ® Reader ® software available for download from Adobe's site at <http://www.adobe.com/products/acrobat/readmain.html>.

Contents of the CD-ROMs, map projections, scale and base map information:

There are 2 CD-ROM disks in the Northern Ontario Engineering Geology Terrain Study (NOEGTS) map data release. Disk 1 contains a complete set of data in geographic projection (decimal degrees, NAD 83 datum). Each of the 103 individual NOEGTS maps were appended together into one ArcInfo coverage. The tiled structure has been maintained. Please note that boundary faults exist between some of the adjacent NOEGTS map tiles. Edge matching of polygons was not completed.

Disk 2 contains the same data, but in the Universal Transverse Mercator (UTM) coordinate system, NAD 83 datum. Each NOEGTS exists as an individual tile. The NOEGTS tiles exist in UTM zones 15, 16, 17 and zone 18 datasets. UTM data may be processed relatively quickly because they are smaller than the full northern Ontario dataset. A NOEGTS viewer is provided as a .dll (NOEGTS_Distribution.dll) which must be loaded by the user into ArcMap. This simple viewer allows the user to select the desired NOEGTS from an index map and display it with a standard legend and symbology.

Tables 1 and 2 detail the contents of the CDs.

The scale of the NOEGTS data is 1:100 000.

The base map, which was used in assembling the data, is the Ministry of Natural Resources' Land Information Ontario, Natural Resource Values Information System base map.

Using the data with ArcGIS ® software:

The data may be accessed with ESRI ® ArcGIS ® 8.x software, including ArcView ® 8.x, as follows.

CD 1 - (Appended NOEGTS in geographic decimal degrees, NAD 83 datum)

- Copy the contents of the CD 1 (Folder called CD1) to your hard drive. The data will occupy about 600 MB of space.
- For each newly copied folder right-click and uncheck the Read-only option check box.
- The 'Fonts' folder provided on this CD contains a font file required by ArcGIS for symbolizing point features on the map. The font must be installed as follows, prior to viewing the data sets in ArcMap. In Windows ® 2000 ®, open the 'fonts' subdirectory in your 'winnt' directory, or click start, select Settings, then select 'Control Panel'. In the 'Control Panel' open the 'Fonts' folder, under 'File', click 'Install New Font' and map to the 'fonts' folder copied from the CD or simply copy the 'QUAT.TTF' file located in the 'fonts' folder and paste it into the 'fonts' subdirectory in your 'winnt' directory. For Windows ® XP ®, the font folder is located in c:\WINDOWS\Fonts. Click start, select Settings then select 'Control Panel'. In the 'Control Panel' open the 'Fonts' folder, under 'File' click 'Install New Font' and map to the 'fonts' folder copied from the CD.
- Use ArcGIS to open the project file "noegts.mxd", found in the folder named coverages. Open ArcMap and under file click 'open' and select noegts.mxd. The

user can simply click on or off whatever layers he/she chooses. The legends for each layer can be viewed by clicking the plus sign next to each layer. Please note that at full map extent, regeneration time for some layers may be slow.

The data can also be opened directly from CD 1. The Font file must be copied into the "Font" folder first.

CD 2 - (Tiled NOEGTS in Universal Transverse Mercator (UTM) coordinate system, NAD 83 datum)

- Copy the contents of CD 2 (Folder called CD2) to your hard drive. The data will occupy about 600 MB of space.
- For each newly copied folder right-click and uncheck the Read-only option check box.
- The 'Fonts' folder provided on this CD contains a font file required by ArcGIS for symbolizing point features on the map. The font must be installed as follows, prior to viewing the data sets in ArcMap. In Windows ® 2000 ®, open the 'fonts' subdirectory in your 'winnt' directory, or click start, select Settings, then select 'Control Panel'. In the 'Control Panel' open the 'Fonts' folder, under 'File', click 'Install New Font' and map to the 'fonts' folder copied from the CD or simply copy the 'QUAT.TTF' file located in the 'fonts' folder and paste it into the 'fonts' subdirectory in your 'winnt' directory. For Windows ® XP ®, the font folder is located in c:\WINDOWS\Fonts. Click start, select Settings then select 'Control Panel'. In the 'Control Panel' open the 'Fonts' folder, under 'File' click 'Install New Font' and map to the 'fonts' folder copied from the CD.
- Loading and running the NOEGTS viewer. Required to display the tiled NOEGTS maps with standard legend and symbology.

1) In ArcMap right click anywhere in the grey surround areas and select **customize**.

2) Click on the Commands tab (you will be adding **NOEGTS_Distribution.dll** as a new command)

3) If the user does not want to permanently save NOEGTS into ArcMap then, ensure that **Normal.mxd** is NOT selected in the "save as" pull down menu, (this would permanently save NOEGTS into ArcMap)

4) Click "**Add From File**", navigate to where the **NOEGTS_Distribution.dll** (located at the root of the folder named CD2) file is and select it.

5) Answer **YES** to the "Added Objects" prompt. NOEGTS will now appear in the categories and in the commands windows

6) Click on the **NOEGTS** in the **Commands** window and drag it to one of the existing **toolbars** on your ArcMap interface.

7) Now simply click on NOEGTS to run the program.

PLEASE NOTE THAT THE FILE STRUCTURE MUST BE MAINTAINED IN ORDER FOR THE VIEWER TO WORK.

Using the data without ArcGIS software:

For clients who have non-ESRI GIS software, all files are ArcInfo coverages. Most GIS software have import options available that will allow use of the data.

Data layers and attributes:

As can be seen in the ArcMap legend, there are several layers in the NOEGTS GIS map. Also, individual layers may have many attribute columns which can be used for visualizing or querying the data. The "layers" are ArcInfo "coverages".

Table 1: Contents of CD-ROM 1 (decimal degrees data)

Top Folder	Folder	File names	File description
CD1			
	Coverages	Index	NOEGTS index map
	All ArcInfo coverages.	Lakes	NRVIS lakes
		Major_roads	Major roads (NRVIS)
		Noegts_poly	NOEGTS polygonal data
		Noegts_line	NOEGTS linear features (ie eskers, moraines)
		Noegts_point	NOEGTS point features (ie gravel pits, dunes)
		Shade	
			noegts.mxd
	Documentation		
		report.doc	Project report
		report.pdf	
		MRD160metadata.html	Detailed metadata
		NOEGTS_manual.pdf	A pdf of the original NOEGTS user manual

	fonts	quat.TTF	Font file required for point symbology. Must be loaded by user.
	Layerfiles (ArcMap symbology)	lakes.lyr landform.lyr linefeatures.lyr noegts.style pointfeatures.lyr	Layer file used to symbolize the lakes coverage. Layer file used to symbolize the noegts_poly (polygonal) coverage. Layer file used to symbolize the noegts_line coverage. ArcMap style file for all symbology used. Layer file used to symbolize the noegts_point coverage.
prj.txt			Projection file
readme			How to use the data, and basic metadata

Table 2: Contents of CD-ROM 2 (UTM co-ordinate system data)

Top Folder	Folder	File names	File description
CD2			
	Documentation		
		Report.doc	Project report
		report.pdf	
		MRD160metadata.html	Detailed metadata
		NOEGTS_manual.pdf	A pdf of the original NOEGTS user manual
	fonts	quat.TTF	Font file required for point symbology. Must be loaded by user.
	Layerfiles (ArcMap symbology)	lakes.lyr landform.lyr linefeatures.lyr noegts.style pointfeatures.lyr	Layer file used to symbolize the lakes coverage. Layer file used to symbolize the noegts_NTS# (polygonal) coverage. Layer file used to symbolize the line_NTS# coverage.

		twp.lyr	<p>ArcMap style file for all symbology used.</p> <p>Layer file used to symbolize the point_NTS# coverage.</p> <p>Layer file used to symbolize the township coverage.</p>
	Maps (tiled NOEGTS)	Each NOEGTS map # (ie 31ksw) as folder name.	<p>Each NOEGTS may or may not include the following ArcInfo coverages. (Coverage name_NTS#)</p> <p>lakes_31ksw - NRVIS lakes</p> <p>line_31ksw - Noegts linear features (ie eskers, moraines)</p> <p>noegts_31ksw - Noegts polygonal data</p> <p>point_31ksw - Noegts point features (ie gravel pits, dunes)</p> <p>twp_31ksw - townships</p>
	NOEGTS_Distribution.dll		This .dll must be loaded in ArcMap to enable the NOEGTS viewer. (refer to user instructions for CD2 above)
	NOEGTS3.bmp		Image of location map required for viewer.
prj.txt			Projection file
readme			How to use the data, and basic metadata