

Data Repository Item DRI2024013 ReadMe

Contents

1. An interactive GIS map (DRI2024013.aprx) for ESRI® ArcGIS Pro™ depicting the geology of the Cross Lake pegmatite field with point-and-click access to the station description.
2. Support files for interactive map.
3. ESRI® file geodatabase containing all the data for the interactive map. (DRI2024013_data.gdb).
4. Microsoft® Excel® workbook containing whole-rock geochemistry results (DRI2024013.xlsx).
5. This ReadMe (ReadMe_DRI2024013.pdf).

Files

ReadMe_DRI2024013.pdf – This file.

DRI2024013.aprx – Project file for use with ESRI® ArcGIS Pro™ software; used to display and interact with the GIS files in this project.

Symbology_DRI2024013.lyrx - ArcGIS Pro™ layer file, containing the symbology for all layers in the interactive map.

Default.atbx – Default ArcGIS Pro™ toolbox file; unused.

DRI2024013.xlsx – Whole-rock geochemistry results presented in a Microsoft® Excel® workbook. The data contained in the Table 1 worksheet is also duplicated within the Geochemistry feature class of the interactive map.

Folders

PRJ_DRI2024013 - ESRI® ArcGIS Pro™ project folder containing all GIS data and support files for the interactive GIS map.

DRI2024013_data.gdb –ESRI® file geodatabase containing layer data for the interactive GIS map.

HTML – Description of field stations by P. Lenton from the 1983-1986 field programs; this includes outcrop photographs for certain locations.

Requirements

To open/use this project, a computer running either Microsoft® Windows 10 or Windows 11 is required.

The interactive map was created using ESRI® ArcGIS Pro™ version 3.2.

Viewing the published map project file (DRI2024013.aprx) requires ArcGIS Pro™ version 3.2 or higher.

A web browser is required to view the HTML files attached to the station description layer.

Microsoft® Excel® or an XLSX viewer is required to access the Microsoft® Excel® workbook.

Note: Alternative software packages may support display of some datasets, but complete functionality is not guaranteed unless all of the above requirements have been met.

Accessing and using the interactive GIS map

The interactive map can be opened, either by double-clicking the DRI2024013.aprx project file or by starting ArcGIS Pro™, selecting Project, then open and then locating the DRI2024013.aprx file. The layers in the interactive map were named according to their content; full descriptions of these files can be found in the data notes section of this ReadMe. Layers can be toggled on or off by clicking the checkbox beside the layer title in ArcGIS Pro's contents

pane. Several layers have data within their attribute tables, which can be accessed by right-clicking on the layer title and selecting 'Attribute Table' from the drop-down menu.

The Station_description layer contains links to html files (station descriptions) attached via hotlink; the following are the steps to access them.

Enabling html file links in ESRI® ArcGIS Pro™

Step 1: Open the ArcGIS Pro™ Options and select Security from the list of Application options.

Step 2: Ensure Allow file links is checked.

Step 3: Expand the Supported file extensions option. Add .html to the list if it is missing.

Using the Explore tool

Step 1: Using the Explore tool, select one or more features in the Station_description layer.

Step 2: In the Pop-up window, choose the desired station from the list.

Step 3: Click the hyperlink present in the Hotlink field. The link will be displayed as /HTML/XXXX.html, where XXXX represents the station number.

From the Attribute Table

Step 1: Within the Station_description attributes table, Ctrl + Click the hyperlink present in the Hotlink field. The link will be displayed as /HTML/XXXX.html, where XXXX represents the station number.

Metadata

Data notes

All of the layers are provided in the datum NAD83 UTM 14N (WKID: 26914) and are listed in order of display.

Null indicators may be present within the provided attribute tables. These values represent the intentional absence of information, either where no data exists or, where it has intentionally been removed. These values vary based on field type, and are expressed as follows:

Numeric field:	-9999
Date field:	9999-01-01
Text field, length >= 9:	'Undefined'
Text field, length < 9:	'-'

Geodatabase layer descriptions

Water_anno_250k

Labels for hydrographic features (waterbodies, watercourses, islands, etc.) within the map extent. Labels were placed based on an interpretive scale of 1:250 000.

Station_Anderson

This layer represents pegmatite sample locations from Anderson (1984). Each sample location has a corresponding pegmatite type abbreviated as follows: M, Minago series; NB, Nelson series; NBC, Northern series barren muscovite zone; NS, Northern series beryl-columbite zone; SB, Southern series barren biotite-peristerite zone; SS, Southern series spodumene zone.

Geochemistry

This layer is based on the lithogeochemical data from Table_1 - DRI2024013 (Martins et al., 2024). This geochemical data does not contain information regarding the laboratory where the samples were processed, the processing technique, detection limits, and quality assurance standards available. This data should be used with this information in mind.

Station_description

This layer contains station locations with an attached description by P.G. Lenton. Each description includes the field description, rock type, structural measurements and, for some locations, photos. These descriptions are attached by hotlink to this layer (embedded file links to the provided HTML files).

Station_location

This layer contains station locations from MGS projects between 1983 and 1988.

Molson_dike

This layer contains linear dike features, created by clipping the 1:250 000 scale Precambrian bedrock geology compilation to the study area.

CANVEC_road_segment

This layer was derived from the CanVec Series - Transport Features (Natural Resources Canada, 2018b). A subset of features within the study area were selected for use.

CANVEC_watercourse and CANVEC_waterbody

These layers were derived from the CanVec Series - Hydrographic Features (Natural Resources Canada, 2018a). Features have been clipped to the study area and waterbodies have been dissolved to form uninterrupted features.

Geological_unit

This layer contains unit polygons created by clipping the 1:250 000 scale Precambrian bedrock geology compilation to the study area.

Methods

The interactive map was created to help visualize geochemical and descriptive rock data within the Cross Lake pegmatite field. The map was created using data from field mapping projects between 1983 and 1988 with the included station layers (Station_description, Station_location and Station_Anderson) generated using georeferenced station maps. For some of the layers (Station_description and Geochemistry), additional attribute data was included for the interactive portion of the map. Within the Station_description layer, the Hotlink field was added, connecting the station data to its full description (an HTML file). The Geochemistry layer was generated with the 'Add XY data' feature in ArcMap™ using data from the DRI2024013 (Martins et al., 2024) Excel file and then exporting the data as a feature class. The data from Table_1 of DRI2024013 (Martins et al., 2024) has been integrated into the attribute table of the Geochemistry layer and can be viewed, for individual locations, by using the explore tool.

Intended Scale

The point data contained within the interactive map can be viewed across a broad range of scales. The contextual data provided for interpretation (Water_anno_250k, CANVEC layers, Molson dike and Geological_unit) were generated at a scale of 1:250 000. These layers are included to aid visualization of point features but, their scale should be considered when viewing the data at scales much larger or smaller than 1:250 000.

References

- Anderson, A. 1984: The geochemistry, mineralogy and petrology of the Cross Lake pegmatite field, Central Manitoba; MSc. Thesis, University of Manitoba, Winnipeg, Manitoba. 250 p., URL <http://hdl.handle.net/1993/29812> [October 2024].
- Manitoba Geological Survey 2022: New edition of the 1:250 000 scale Precambrian bedrock geology compilation map of Manitoba; Manitoba Natural Resources and Northern Development, Manitoba Geological Survey, GeoFile 3-2022, URL <https://manitoba.ca/iem/info/libmin/geofile3.zip> [October 2024].
- Natural Resources Canada 2018a: Lakes, Rivers and Glaciers in Canada - CanVec Series - Hydrographic Features; Natural Resources Canada, Esri® file geodatabase, scale 1:250 000, URL http://ftp.geogratis.gc.ca/pub/nrcan_rncan/vector/canvec/fgdb/Hydro/ [March 2018].

Natural Resources Canada 2018b: Transport Networks in Canada - CanVec Series - Transport Features; Natural Resources Canada, Esri® file geodatabase, scale 1:250 000, URL
<https://ftp.maps.canada.ca/pub/nrcan_rncan/vector/canvec/fgdb/Transport/> [February 2018].