

GIS Compilation of MN DNR Project 318: MINERAL POTENTIAL STUDY: Greenstone Belt Boulder Tracing

GIS Data Completed: January, 2014 by Wes Rutelonis

Original Data Completed: 1997

Authors: Tom Lawler and Darold Riihiluoma

Provided here is a general description of files that are found in 'mpes318_data.zip'

[Link to project webpage](#)

[Link to project report](#)

Abstract:

The zip file contains data for 165 samples extracted from 144 sample sites described in the Minnesota Department of Natural Resources (MnDNR), Division of Land and Minerals Report, "MINERAL POTENTIAL STUDY: Greenstone Belt Boulder Tracing: Ely – Bigfork Area, Northern Minnesota: Report 318," published in 1997. Each folder in the zip file contains data from the report in a different format. The data is presented in its original "Paradox Data Base files", a Microsoft Access database, dBase IV files, and ArcGIS File Geodatabase. The conversion of the original Paradox files to these formats was completed in January of 2014 and is described below. The eight data sets enumerating drill hole or core sample data contain geospatial information in the form of Universal Transverse Mercator (UTM) East and North coordinates. Additional information about the data fields can be found in the report listed above and under the section titled 'RAW_DATA'. The data is designed to be used as a supplement to the report and plates.

Folders and their contents:

ORIGINAL_SOURCE

- CABC&AL.DB
 - Duplicate samples analyzed by Bondar-Clegg to cross reference against ACTLABS data
- CBC&ALFA.DB
 - Lists same samples as 'CABC&AL.DB' but with only platinum group elements and gold
- P318AL1.DB
 - Samples 44-159 analyzed by ACTLABS including reference samples
- P318AL2.DB
 - Samples 160-164 analyzed by ACTLABS including reference samples
- P318AL3.DB
 - Samples resubmitted to ACTLABS to be run with Aqua Regia extraction ICP package with a lower detection limit for silver (.2 ppm)
- P318AL4.DB
 - Platinum group elements and gold for select samples
- P318BC1.DB
 - Samples 1-32 analyzed by Bondar Clegg including reference samples
- P318BC2.DB
 - Sample 33-43 analyzed by Bondar Clegg including reference samples
- P318MAGS.DB
 - Magnetic susceptibilities for granite and mafic volcanic boulders from all sites

- P318MCA.DB
 - Compilation of paradox analytical data
- P318MPA.DB
 - Appears to be same file as 'P318MCA' with difference decimals
- P318PEB.DB
 - Lists site number, UTM's, lithology with number of pebbles in each lithology and total pebble count in sample
- P318PEBD.DB
 - Distribution of lithologies by sites using increments of five.
- P318REF.DB
 - List of reference samples
- APM2007.DB
 - Samples 160-164

This is the original sourced data in "Paradox Data Base file" format. These files were used to create the Access files seen below.

ACCESS_DB

ACCESS_DB_FROM_RAW_DATA

This folder contains an access database into which the raw data was imported. Files were brought into Microsoft Access in order to assign proper field headings and proper data type, and then they were exported as dBase IV files to be brought into mapping software. At this point, all blank or "NULL" cells were replaced by "-999" to avoid replacement with zeroes. Detection limits used in the assessment files used a minus sign in place of a "less than" symbol. All negative numbers in these assessment files were universally replaced with half of their absolute value.

- report318.accdb
 - NOTE: the tables in this database with the suffix "_e" are the ones with data used in the spatial compilation

SHAPEFILES

One shape file was created using P318PEB.dbf (below) and its UTM coordinates were used to relate all other data to spatial points.

- PEB_318.shp

DBF_EXPORTED_FROM_ACCESS

The following were exported from the above Access file as ".dbf" files. These files were pulled into ArcGIS where spatial data was added using PEB_318.shp. Descriptions of the purposes of these tables can be found on pages 36 and 37 of the report.

- ACBCe.dbf
- ACT1e.dbf
- ACT2e.dbf

- ACT3e.dbf
- ACT4e.dbf
- BC1e.dbf
- BC2e.dbf
- P318MAGS.dbf
 - Field headings are abbreviated to ten characters and descriptions can be seen in design view within Access. GRANITE, MAFVOL, AVERAGE, OBSERVATION, and # were replaced with GR, MV, AV, OBS, and NUM, respectively.
- MPAe.dbf
- P318PEB.dbf

FILE _GEODATABASE

[Only viewable in ArcGIS 9.3 and above]

File name – mpes318_data.gdb

- **Feature Dataset – Features**
 - project318_actlabs_bondar_clegg_cross_reference
 - (Original_Source: CABCL&AL.DB)
 - project318_actlabs_one
 - (Original_Source: P318AL1.DB)
 - project318_actlabs_two
 - (Original_Source: P318AL2.DB)
 - project318_actlabs_three
 - (Original_Source: P318AL3.DB)
 - project318_actlabs_four
 - (Original_Source: P318AL4.DB)
 - project318_bondar_clegg_one
 - (Original_Source: P318BC1.DB)
 - project318_bondar_clegg_two
 - (Original_Source: P318BC2.DB)
 - project318_magnetic_susceptibilities_maficvolcanic_and_granite_boulders
 - (Original_Source: P318MAGS.DB)
 - project318_mineral_clast_area_map
 - (Original_Source: P318MPA.DB)
 - project318_site_numbers_and_utms_pebble_counts
 - (Original_Source: P318PEB.DB)

Any questions regarding the GIS compilation contact:

Kevin J Hanson
Geographer/GIS Specialist
 Mineral Potential Evaluation Section
 Aggregate Resource Mapping Program
 MN DNR - Division of Lands & Minerals
 Work Phone - 651-259-5429
 Work Email - kevin.hanson@state.mn.us