**Alaska Geochemical Database Version 2.0 (AGDB2)—Including "Best Value" Data Compilations for**

**Geochemical Data for Rock, Sediment, Soil, Mineral, and Concentrate Sample Media**

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U.S. Geological Survey Data Series 759

**INSTRUCTIONS FOR USE**

**READ ME FIRST!** The primary format used to deliver the database found in U.S. Geological Survey, 2013,

Alaska Geochemical Database Version 2.0 (AGDB2)--Including "Best Value" Data Compilations for

Geochemical Data for Rock, Sediment, Soil, Mineral, and Concentrate Sample Media, Data Series 759 is Microsoft Access. This database is made available in Access 2010 to assure compatibility. The minimum

system requirements needed to operate the database in Access are greater than those required to

operate the database in Excel or ASCII. See MINIMUM SYSTEM REQUIREMENTS section below.

The AGDB2 is provided as files on a DVD as well as data downloads at the USGS publications website

*http://pubs.usgs.gov/ds/759*. This database is 2.34 gigabytes in size when uncompressed.

The database is intended to be copied or downloaded to space on a hard drive.

Follow these steps for optimum usage.

1. Create folder "AGDB2" on your hard drive.

2. Copy or download database files to folder "AGDB2" on your hard drive.

3. To create the link between the databases "AGDB2.accdb" and "AGDB2\_Chem.accdb," open

 database "AGDB2.accdb" on your hard drive.

4. Click on the tab "External Data" at the top of the window.

5. Click on the Access icon in the "Import & Link" section to the left. This brings up the popup box

 "Get External Data - Access Database."

6. Click on "Browse" and find the AGDB2 folder.

7. Double-click on the file "AGDB2\_Chem.accdb."

8. Click on the button "Link to the data source by creating a linked table," and click on "OK". This

 brings up the "Link Tables" popup box.

9. Click on "Chem2", and click on "OK". The popup box disappears.

10. The link to "Chem2" table in the AGDB2\_Chem database has been created.

For more advanced functionality--not necessary, but useful--follow the remaining instructions.

11. Click on the tab "Database Tools" at the top of the window.

12. Click on the Relationships icon. This brings up the "Relationships" diagram. Maximize it.

13. Right-click in the Relationships diagram. This brings up a popup box. Select the “Show Table”

 option. This brings up the “Show Table” popup box.

14. Click on the “Chem2” table option, which adds the “Chem2” table to the “Relationships”

 diagram.

15. Click on the field name "LAB\_ID" in the "Geol2" table box and drag it to the field name "LAB\_ID"

 in the "Chem2" table box.

16. This brings up the popup box "Create Relationships". Click on "Create".

17. Click on the field name "ANALYTIC\_METHOD" in the "AnalyticMethod" table box (below

 "Geol2") and drag it to the field name "ANALYTIC\_METHOD" in the "Chem2" table box.

18. This brings up the popup box "Create Relationships". Click on "Create".

19. Click on the field name "PARAMETER" in the "Parameter" table box (below "Geol2") and drag it

 to the field name "PARAMETER" in the "Chem2" table box.

20. This brings up the popup box "Create Relationships". Click on "Create".

21. Click on the Save icon in the upper left of screen to save the relationships created.

This database was created in two other formats in order to facilitate wider usage for users who may

prefer formats other than Access.

DATABASE STRUCTURE

The AGDB2 comprises two linked databases, AGDB2.accdb and AGDB2\_Chem.accdb. The AGDB2

includes 9,699,962 results for 108,966 rock samples, 92,694 sediment samples, 6,869 soil samples, 7,470mineral, and 48,096 heavy-mineral concentrate samples. These entries contain quantitative, qualitative, or descriptive measurements. Data definition is provided through the use of 989 unique parameters, or measurement types. Data are contained in 12 tables. AGDB2 data are contained in six primary tables, Geol2, BestVal\_Ag\_Mo, BestVal\_Na\_Zr, BestVal\_WholeRock, Mnrlgy, and Chem2. Geol2 contains 264,095 records, and has 42 fields describing sample sites and the sample material collected at each site. Chem2 contains 9,699,962 records in 13 fields with laboratory and field analytical measurements, expressed as numeric values. The chemical data have been split into tables BestVal\_Ag\_Mo, BestVal\_Na\_Zr and BestVal\_WholeRock. These data are derived from all of the determinations in the Chem2 table of the AGDB2 and are presented in “best value” format. These "best value" tables each present the analytical data in the format of one "best value" per sample per species. Also provided are the analytical methods for these values, as well as secondary values and their methods. The Mnrlgy table contains 28 fields with optical mineralogical data for 18,138 nonmagnetic heavy-mineral concentrate samples. 18 fields record the occurrence of 18 discrete ore-related minerals; NORM field indicates that no ore-related minerals were observed. AnalyticMethod, Parameter, Parameter\_Rank, and AnalyticMethodBiblio are reference tables in the AGDB2. AnalyticMethod is a look-up table with additional information on the 85 field and laboratory techniques used for analysis of the various geologic materials. Parameter is a look-up table of analytical method parameters (Structure section of the accompanying report) used to describe measurement characteristics of chemical and physical data, and is linked by PARAMETER to the Chem2 table. There are 989 unique parameters in the AGDB2. The Parameter\_Rank table contains the analytical method parameters of the AGDB2 ranked by species. The FieldNameDictionary table contains the field name, size, definition, and general data type of the 496 fields used in the AGDB2 tables as well as the names of tables in which these fields appear. In this report, names of tables cited are in boldface; field names within tables are italicized.

DATABASE FORMATS

.ACCDB FORMAT

The dataset in .accdb format may be accessed using Microsoft Access 2007 or 2010.

.XLSX FORMAT

The dataset in .xlsx form may be accessed using Microsoft Excel 2010. The geospatial and chemical data

in the AGDB2 Access database were exported into Excel as five spreadsheets by sample media types

rock, sediment, concentrate, mineral, and soil. These spreadsheets each represent a unique dataset

containing spatial, geologic, and descriptive data, and contain "best value" data compilations. The

intended relationships between the spreadsheets and their fields (columns) can be best understood by

consulting figure 2 in the accompanying report. Table relationships are described in the Alaska

Geochemical Database Version 2.0, found in U.S. Geological Survey, 2013, Alaska Geochemical Database

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.TXT (ASCII) FORMAT

The dataset as ASCII UTF-8 encoded tab-delimited text files may be accessed using any text editor, but is

best used by loading each file into a relational database and re-establishing the links as shown in figure

2. Table relationships in the Alaska Geochemical Database, found in U.S. Geological Survey, 2013, Alaska

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METADATA

Metadata provides information about the geospatial data such as its content, quality, condition, and

other characteristics of data. Metadata has been provided (AGDB2\_metadata) as .txt, .xml, .html, and

.faq.html files to facilitate use by various software programs.

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