

NGGDPP Final Technical Report

Name of State Geologic Survey: Idaho Geological Survey

Award number: G13AP20092

Project Title: Data Preservation

Principal Investigator: Reed Lewis
Idaho Geological Survey
875 Perimeter Drive, MS3014
University of Idaho
Moscow, Idaho 83844-3014
Phone: (208) 885-7472
FAX: (208) 885-5826
reedl@uidaho.edu

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Reed S. Lewis
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ABSTRACT

The Idaho Geological Survey successfully completed the National Geologic and Geophysical Data Preservation Program (NGGDPP) award number G13AP20092 administered by the U.S. Geological Survey. For FY 2013, the Idaho Geological Survey cataloged three collections of “at risk” data and generated metadata for the National Catalog of Geological and Geophysical Data. These collections are: (1) donated mineral exploration files from the Bunker Hill and Sunshine mine collections that were added to our Mineral Property Files; (2) donated mineral exploration files and maps from the miscellaneous collections that were also added to our Mineral Property Files; and (3) whole-rock geochemical records from the Fitzgerald Collection. In addition, geochemical data presently in spreadsheet form were migrated to a newly developed statewide geochemical database. We also migrated more data to the digital realm by scanning a portion of our Mineral Property Files. In addition to generating metadata for the NGGDPP National Catalog, an updated version of the Idaho Geological Survey Mines and Prospects Database was created.

PRODUCTS/REPORTS

The overall management of the project was under the direction of Reed Lewis. Work began September 9, 2013 and took 15 months to complete. The original work plan called for a one-year project, but unexpected administrative duties for the PI required a three-month no-cost extension.

Mineral Property Files

The Mineral Property Files consist of consultants’ reports, maps, drill logs, and geophysical and geochemical results from over 2,600 mines or prospects in the state and are indexed in our searchable statewide Mines and Prospects database. The effort for FY2013 added 370 donated files from 245 mines and prospects to the collection and appropriate metadata was derived. Susan Jones, Alyson Kral, and Reed Lewis completed this part of the project, which focused in part on collections from the Bunker Hill and Sunshine mines, two large inactive mines in the Coeur d’Alene mining district of northern Idaho. A scanning project of 10 percent of the collection was successfully completed by Alyson Kral and Susan Jones. Including in this scanning effort was our collection of flat mine maps. Over 1500 maps have been scanned thus far, with funding for that effort coming from both the NGGDPP and Idaho Department of Lands. A new

mine map collection was created this year for the NGGDP catalog and we reported the following metadata:

1. The collection identification number.
2. The mine location number, which is a unique number for each site in the Mines and Prospects Database, and the name of the mine.
3. The latitude and longitude of the mine.
4. The description of the type of mine map.
5. The date of the map (if known).
6. The web address of the IGS webmap with the “mines” tab.
7. The date for this submission.

Roughly 35 percent of the Bunker Hill and Sunshine mine files were found to be related to personnel or other historical aspects that are not part of the IGS mission. These files were transferred to the Special Collections division of the University of Idaho Library. Another 45 percent were found to be publications that are available in libraries and (or) on line. These were pulled and the remaining files were integrated into the IGS Mineral Property Files. Miscellaneous donated files were also indexed and added to the Mineral Property Files. After discussions with Natalie Latysh at the USGS, it was decided that the most appropriate action was to replace (not update) the existing NGDDP metadata for the entire Mines and Prospects database for which we have records. The following metadata were derived:

1. The collection identification number.
2. The mine location number, which is a unique number for each site in the Mines and Prospects Database.
3. The latitude and longitude of the mine.
4. The name of the mine.
5. The description of the type of data.
6. The web address of the IGS webmap with the “mines” tab.
7. The date for this revision of the database.

Whole-rock Geochemical Data

The first effort was to index the Fitzgerald collection of geochemical data and derive appropriate metadata. Jim Fitzgerald, a UI Ph.D. candidate, was killed by the 1980 Mount St. Helens eruption. Prior to this he had been mapping in western Idaho. His field maps, notes, and analyses are archived at the IGS. The notes and maps were utilized to obtain locations on 410 volcanic rock samples for which major-element XRF analysis had been completed. A few of the samples were collected in Oregon. Locations for 14 additional samples could not be determined. Beads for these samples are archived at Washington State University and are being re-analyzed for trace elements in order to assist with current geologic mapping projects. The following metadata were derived:

1. The collection identification number.
2. The unique site number indicating where the rock sample was obtained.

3. The latitude and the longitude of the site.
4. The rock name and type of chemical data available for the sample.
5. The approximate year of sample collection.
6. Contact information for additional information regarding this sample.

The second effort was to create a geochemical database that can be accessed via our website (www.idahogeology.org). Dennis Feeney and Dean Garwood headed this part of the project and they were assisted by Reed Lewis. The database brings an assortment of excel files in variable formats together and allows queries and downloads from an on-line map application on the IGS website. The resulting Access database now consists of over 2,900 published and unpublished major and trace elements analyses. The following metadata were derived:

1. The collection identification number.
2. The sample number
3. The sample rock name, age, and analysis type.
4. The latitude and the longitude of the site.
5. The year of the sample collection.
6. The web address of the data set.

All of the above metadata were provided to the National Catalog in flat files (*.csv file).

Success Stories

The biggest success story from the 2013 NGGDP effort was with the cataloging of the Jim Fitzgerald geochemical data. His thesis area overlapped significantly with one of three active STATEMAP project areas in Idaho, with 240 of the 410 samples having been collected in the project area. Because of this, less sampling time was needed on the STATEMAP project, and considerable expense was avoided in analytical analyses. The XRF beads have been located at Washington State University and are being analyzed for \$15/bead to provide trace element data not previously obtained. This is a savings of \$45 per sample, or a total savings of \$11,250 for the STATEMAP project area. It is more difficult to quantify the money saved by not having to collect the samples, but it may equal or exceed the savings on analytical analyses.