DESCRIPTION OF DIGITAL FILES FOR GEOLOGIC MAP OF THE HELENA 7.5-MINUTE QUADRANGLE, SHELBY COUNTY, ALABAMA

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INTRODUCTION

This readme document serves to introduce and describe the digital files that are available for this publication. They are available for downloading at *http://www.gsa.state.al.us/* and include both Geographic Information System (GIS) software files (both raster and vector data) that are viewable with an Environmental Systems Research Institute (ESRI)-compatible commercial GIS (or with ESRI's ArcReader utility, a free map viewer with no editing capabilities) as well as Portable Document Format (PDF) files that are viewable with a reader or web browser plug-in available at no cost on the internet. Two download packages are available (see the section entitled "Quadrangle Series Map 14 Digital Contents" for details) depending on the resources available to the user. For those interested only in a paper plot of the quadrangle series map, please see the section entitled "Obtaining Paper Copies."

This digital map publication, generated from new mapping by the map authors, shows the general distribution of bedrock and surficial deposits in the Helena 7.5-minute quadrangle. Together with the accompanying geologic description booklet (available by purchase only), the map presents current knowledge of the geologic structure and stratigraphy of the area covered. The database identifies map units that are classified by general age and lithology following the stratigraphic nomenclature used by the Geological Survey of Alabama. The scale of the source map limits the spatial resolution of the database to 1:24,000 or smaller. The content and character of the digital publication, as well as methods of obtaining the digital files, are described below.

QUADRANGLE SERIES MAP 14 DIGITAL CONTENTS

The digital data for this quadrangle series map consist of:

1) A **Geodatabase** package that contains geologic vector and table data stored as data objects within an ESRI personal geodatabase format, raster data stored as ESRI format DRG-TIFF, an ESRI map document for use with ArcGIS 9.3, which allows full control of editing and rendering of the data sources, and an ESRI-published map document for use with ArcReader, which allows viewing and querying of the source data along with metadata and an ArcGIS style for symbolizing the map.
2) A **Shapefile** package that contains shapefiles exported from the personal geodatabase and the same ESRI DRG-TIFF as in the Geodatabase package along with supporting files. This package does not contain annotation layers included in the Geodatabase package due to software limitations.
3) A **txt** file with metadata for the entire database. (Metadata are also included within the GIS files.)
4) A **PDF** file of the map sheet and a PDF file of the cross section and map explanation.

If you:

- Have access to ArcGIS 9.3, download the Geodatabase package and open the map document (.mxd extension) from ArcGIS.
- Have access to ArcView 3.x (or a GIS that can read shapefiles), download the Shapefile package.
- Do not have access to a GIS but wish to view and query the data, download the Geodatabase package and open the published map document (.pmf extension) from ArcReader (free download from *http://www.esri.com*).
- Do not have access to a GIS and only wish to print the map sheet or parts of it, download the PDF package and open them from Adobe Reader 5.0 or later (free download from *http://www.adobe.com*). Note that the map sheet will require a large-format plotter.
- Only wish to have a paper copy of the quadrangle series map, see the section entitled "Obtaining Paper Copies."

1) GEODATABASE PACKAGE

(QS14_DB.ZIP, 14.3 MB COMPRESSED, 168 MB UNCOMPRESSED)

Geodatabase data objects	Description
Helena.mdb	An ESRI personal geodatabase with simple feature classes
Feature Classes	
HelenaContacts	A line feature class representing the geologic contacts and faults
HelenaCrossSectionLine	A line feature class representing the cross section line
HelenaStructureLines	A line feature class representing the geologic fold axes
HelenaGeologyPolygons	A polygon feature class representing geologic units
HelenaStructurePts	A point feature class representing bedding measurements
HelenaControlPts	A point feature class representing contact control points
HelenaGeologyPolygons Anno	An annotation feature class (feature-linked) representing the map unit symbols of the geologic units
HelenaStructurePtsAnno	An annotation feature class (feature-linked) representing the dip of beds
HelenaContactsAnno	An annotation feature class (feature-linked) representing the names of specific geologic contacts and faults
HelenaStructureLinesAnno	An annotation feature class (feature-linked) representing the names of specific geologic folds

Map document files

Helena.mxd	Map document created in ArcGIS 9.3 containing the data rendering and symbolization information that was used in the production of the quadrangle series map sheet. A hyperlink to a PDF version of the cross section is included by selecting the hyperlink button and selecting the cross section line.
Helena.pmf	Published map document created from Helena.mxd for use with ArcReader. It contains all of the same rendering and symbolization information that is in the original .mxd. Features can be queried with the identify tool in the same way they could in the .mxd, but there are no editing capabilities with this utility. **Due to the structure of the ArcReader software, geologic polygon data appear stratigraphically incorrect in the left-hand side of the identify tool dialog box. The data for the individual feature are correct in the right-hand side of the dialog box.** A hyperlink to a PDF version of the cross section is included by accessing the hyperlink button and selecting the cross section line.
Helena.style	Custom style file used to symbolize lines, polygons, and points. Put file in C:\Program Files\ArcGIS\Styles.
Helena Topographic Map.tif	DRG base of USGS topographic map

aaagesl.ttf	A True Type font (AAAGES Light) is required for geologic time periods to display correctly. Place in "Fonts" folder in C:\WINDOWS or appropriate folder if this is not the default location for fonts.
033086C7.txt	USGS metadata for Helena Topographic Map (DRG)

2) SHAPEFILE PACKAGE
(QS14_SHP.ZIP, 5.6 MB COMPRESSED, 74.4 MB UNCOMPRESSED)

Shapefiles	Description
HelenaContacts.shp	A line shapefile of the HelenaContacts feature class exported from the geodatabase (see Geodatabase Package above)
HelenaCrossSectionLine .shp	A line shapefile of the HelenaCrossSectionLine feature class exported from the geodatabase (see Geodatabase Package above)
HelenaStructureLines .shp	A line shapefile of the HelenaStructureLines feature class exported from the geodatabase (see Geodatabase Package above)
HelenaGeologyPolygons .shp	A polygon shapefile of the HelenaGeologyPolygons feature class exported from the geodatabase (see Geodatabase Package above)
HelenaStructurePts.shp	A point shapefile of the HelenaStructurePts feature class exported from the geodatabase (see Geodatabase Package above)
HelenaControlPts.shp	A point shapefile of the HelenaControlPts feature class exported from the geodatabase (see Geodatabase Package above)

Map document files

Helena.style	Custom style file used to symbolize lines, polygons, and points. Put file in C:\Program Files\ArcGIS\Styles.
Helena Topographic Map.tif	DRG base of USGS topographic map.
aaagesl.ttf	A True Type font (AAAGES Light) is required for geologic time periods to display correctly. Place in fonts folder in C:\WINDOWS or appropriate folder if this is not the default location for fonts.
033086C7.txt	USGS metadata for Helena Topographic Map (DRG)

3) METADATA (.txt) (49 KB)

Files	Description
QS14-metadata.txt	Metadata created in ArcCatalog for this map

4) PORTABLE DOCUMENT FORMAT (ADOBE ACROBAT 7.0) FILES (10.9 MB)

Files	Description
QS14_Plate 1.pdf	A PDF file containing an image of the geologic map
QS14_Plate 2.pdf	A PDF file containing an image of the geologic cross sections and map explanation

OBTAINING THE DIGITAL DATA

TO OBTAIN THE FILES FROM THE GEOLOGICAL SURVEY OF ALABAMA WEB PAGES:

The Geological Survey of Alabama supports a set of graphical pages on the World Wide Web. Digital publications (including this one) can be accessed via these pages. The location of the main web page for the entire Geological Survey of Alabama is *http://www.gsa.state.al.us/*. The web server for digital publications is *http://www.gsa.state.al.us/gsa/gis_data.aspx*. To directly access files for this quadrangle series map report, go to *http://www.ogb.state.al.us/gsa/QS_results.aspx?PubID=QS14*.

OBTAINING PAPER COPIES

TO OBTAIN PAPER MAPS FROM THE GEOLOGICAL SURVEY OF ALABAMA:

Paper copies of the geologic map, explanation, and supporting text are available for purchase from the Geological Survey of Alabama. To obtain the publication, contact Publications Office at:

Geological Survey of Alabama Publications Office
PO BOX 869999
420 Hackberry Lane
Tuscaloosa, AL 35486-6999
(205) 247-3636

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