DESCRIPTION OF THE CONTENT AND DIGITAL FILES FOR THE GEOLOGIC MAP OF THE SAN BERNARDINO AND SANTA ANA 30' x 60' QUADRANGLES, CALIFORNIA

U.S. GEOLOGICAL SURVEY OPEN FILE REPORT 2006-1217
http://pubs.usgs.gov/of/2006/1217/

By D. M. Morton and F. K. Miller
Combined database and cartography by Pamela M. Cossette

README – INTRODUCTION

This document serves to identify and describe the digital files that comprise this publication. Those files are available for download at http://pubs.usgs.gov/of/2006/1217/ and include both Geographic Information System (GIS) software files that are accessible with an Environmental Systems Research Institute (ESRI ®) compatible, commercial GIS (or with ESRI's ArcReader utility; a free map viewer with no editing capabilities) along with Portable Document Format (PDF) files that are viewable with a reader or web browser plug-in (freely available on the Internet). Three data packages are available (see "Open File Report 2006-1217 Digital Contents" below for details), the utility of each depending upon the resources available to the user. For those interested only in paper plot(s) of any of the four, oversize sheets included in the publication, please see the section "Obtaining Paper Plots" below.

This Open File Report (OFR) publication presents a complex compilation of geologic data that are the most comprehensive, current and detailed knowledge of the area encompassed by the combined extents of the San Bernardino and Santa Ana 30' x 60' quadrangles. The database identifies rock units that are classified by general age and lithology following the stratigraphic nomenclature used by the U.S. Geological Survey (USGS). This data set represents revisions of both of the following publications: Preliminary Geologic Map of the San Bernardino 30' x 60' quadrangle, California, USGS OF03-293 and Preliminary Digital Geologic Map of the Santa Ana 30' x 60' Quadrangle, southern California, version 2.0, USGS OFR 99-172.

The combined San Bernardino and Santa Ana 30'x 60' map(s) and spatial databases should be used to evaluate and understand the geologic character of the region as a whole. The data should not be used for purposes of site-specific land-use planning or site-specific geologic evaluations. The database is sufficiently detailed to identify and characterize geologic materials and structures. However, it is not sufficiently detailed for most site-specific determinations.
Use of these spatial databases and any derivative, digital geologic maps should not violate the spatial resolution of the data. Although the digital form of the data removes the constraint imposed by the scale of a paper map, the detail and accuracy inherent in map scale are also present in the digital data. The San Bernardino 30' x 60' database was compiled from many sources including: (1) 1:62,500 reconnaissance mapping, (2) mapping from 1:24,000 USGS Open-File releases, (3) unpublished 1:24,000 mapping (4) Quaternary mapping from interpretation of 1:24,000 aerial photography, and (5) detailed 1:9,600 and 1:12,000 mapping from California Geological Survey Open-File releases. The Santa Ana 30' x 60' database was similarly compiled from disparate sources. See Figure 4 (data package) for detailed sources of mapping and metadata for more comprehensive and detailed statements concerning process and data limitations.

The spatial data set for the combined San Bernardino and Santa Ana 30' x 60' quadrangles was prepared under the auspices of the U.S. Geological Survey Southern California Areal Mapping Project (SCAMP) (closed) and the Basins and Landscape Co-Evolution (BALANCE) project as part of an ongoing effort to develop and refine a regional geologic framework for southern California, and to utilize a GIS environment to create regional, spatial geologic databases. These regional databases are being developed as contributions to the National Geologic Map Database (NGMDB) of the National Cooperative Geologic Mapping Program of the USGS.

OPEN FILE REPORT 2006-1217 CONTENTS

The digital data for this Open File Report consist of:

1) sasb_geodatabase.zip   Geodatabase package that contains geologic vector and tabular data stored as data objects within an ESRI ArcGIS ® 9.1 personal geodatabase, an ESRI map document (.mxd) for use with ArcGIS 9.1 which allows full control of editing and rendering of the data sources, 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 that closely emulates the symbology referred to in (3)
2) sasb_shapefiles.zip   A Shapefile package (compressed) that contains shapefiles generated from the coverages. There have been slight modifications in the attribute labels to accommodate the conversion process. Those changes are self-evident and should not add any complexity to their utility
3) sasb.interchange_files.zip A data package (compressed) that contains coverage data model interchange (.e00) files that correspond to the shapefiles in (2) and supporting data files (.lut.e00) for the entire data. A symbols.zip folder is included for those who continue to use ESRI's coverage data model: that symbology is not readable by ArcGIS 9x. However, sasb1d.style is included in the symbols folder for use with ArcGIS9x.
4) sasb_metadata.txt   Federal Geographic Data Committee (FGDC) compliant geospatial metadata
5) of2006-1217_map (folder) of all map and data sheets which include: a geologic map, a map of the overall fault framework of the area, a second fault map showing faults that have a surface expression in young (<11,000 years) earth surface materials, a Correlation of Map Units (CMU), and a series of index figures (oversize pages)
6) of2006-1217_pamphlet_photos.zip compressed package of PDF files including a main PDF of comprehensive publication pamphlet containing a detailed Description of Map Units (DMU), and a discussion of the regional geologic framework including links to images of many exemplary rock unit outcrops and geologic features (expands to folder San Bernardino-Santa Ana geology and DMU, illustrated that contains folder   San Bernardino-Santa Ana, photographs linked to pamphlet that contains all photographs (.jpg format). These links are specific and the user should maintain the relationship between photograph folder and pamphlet in order to preserve those links. Both are contained in a separate folder, due to need to preserve links.
7) of2006-1217_pamphlet_nophotos.pdf   PDF file of the same comprehensive publication pamphlet containing a detailed Description of Map Units (DMU), and a discussion of the regional geologic framework without embedded photographs (in order to minimize file size and facilitate downloading)

HOW TO ACCESS THE DATA
Note: These datasets and plot files are large: e.g. once the data package/coverages (100MB) has been unzipped, the user will have a 440MB data file sasb.tar and the photo folder is 145MB.

If you:
- have access to ArcGIS 9x, download the Geodatabase package and open the map document (.mxd) from ArcGIS 9x

- have access to ArcInfo ® Workstation, download either the shapefile or the coverage data package

- have access to ArcView 3x, ArcGIS 8x, 9x or a GIS that can read shapefiles, download either the Shapefile or coverage legacy data 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(s) or parts thereof, download the PDF package and open the appropriate sheets in Adobe Reader 5.0 or later (free download from http://www.adobe.com). Note that the geologic map sheets are approximately 38 x 54 inches (1:100,000 scale) and will require a large-format plotter

- would simply like a paper copy of the OFR map,
  either procure the PDF package as a download or by requesting a CD of same and request a commercial vendor with CD- and PDF-capabilities to print the map
  or obtain a paper plot from the USGS print-on-demand service for digital products by contacting:

USGS Information Services
Box 25286
Denver Federal Center
Denver, CO 80225-0046

(303) 202-4200
1-888-ASK-USGS
FAX: (303) 202-USGS
e-mail: infoservices@usgs.gov

Please include the publication series identification with your request: Open File Report 2006-1217

DIGITAL COMPILATION

The San Bernardino Santa Ana 30' x 60' combined geologic database and map were initially compiled and edited in ArcInfo 8.1. Because we recognize that GIS users are working on a wide range of software and platforms, we have attempted to include as many data formats as time would allow. The ESRI ArcGis 9x data is preliminary in that we have not yet converted all of SCAMP's symbol sets to style formats. However, we have included the style that will allow the user to closely emulate the color representation of the published map sheets. Line and marker symbols are also preliminary: some symbols are not available and are simply represented by ESRI default symbols. The i-tool will allow the user to identify the attributes of those symbols. Text and labeling has not been embedded and packaged in the .pmf. For version 1, time and the many different user-demands suggest to us that labeling is best managed by the end-user.

Map projection is Universal Transverse Mercator, Zone 11, 1927 North American Datum
Units – meters
Map scale – 1:100,000

Note: Not all elements in the complete Open File Report 2006-1217 were prepared in an ESRI GIS environment. Some figures, including the CMU were built in Adobe® Illustrator® 10 and converted to Illustrator CS2. Differences between the appearance of the principal map (ArcInfo/ArcPlot) and the ArcMap™ .mxd/.pmf derived images are a consequence of changes in symbology only. Feature attribution is retained and remains unchanged.

BASE DATA

Base map reference data is included in three/per 30' x 60' quadrangle (hypsography, hydrography, transportation/cultural) datasets derived from USGS 1:100,000-scale DLGs (available on the Web at http://seamless.usgs.gov). These data are for reference only and have been minimally manipulated in the conversion process.

ACKNOWLEDGMENTS

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