Database for the Geologic Map of the Skykomish River 30-Minute by 60-Minute Quadrangle, Washington (I-1963)

By R.W. Tabor, V.A. Frizzell, Jr., D.B. Booth, R.B. Waitt, J.T. Whetten, and R.E. Zartman

2006

U.S. Geological Survey Data Series 222

Digital Database Description for USGS Geologic Investigation Series, I-1963

Introduction

The original geologic map for this database was published in 1993, based on geologic mapping and compilation by the authors during 1975 through 1987. The digital database was prepared from drafted publication materials and published materials, converted to PDFs or vector ARC/INFO coverages by R.W. Tabor from 2003-2005. Together with the geologic pamphlet, the database provides georeferenced information on the geologic structure and stratigraphy of the area covered. The database delineates map units that are identified by general age and lithology following the stratigraphic nomenclature of the U.S. Geological Survey. The spatial resolution (scale) of the database is 1:100,000 or smaller. The content and character of the database, as well as two methods of obtaining the database, are described below.

Digital database and metadata package (DS-222)

The database and metadata package includes geologic map database files for the Skykomish River 30 x 60 minute quadrangle. The digital maps, or coverages, along with their associated INFO directory have been converted to uncompressed ARC/INFO export files. ARC export files promote ease of data handling, and are usable by some Geographic Information Systems in addition to ARC/INFO (see below for a discussion of working with export files). There is no raster data in this package. The ARC export files and associated ARC/INFO coverages, as well as the additional digital material included in the database, are described below:

ARC/INFO export file	Resultant Coverage	Description of Coverage
skygeology.e00	skygeology	geologic contacts, faults, rock units
skylines.e00	skylines	icecap margin, fold axes, and cross section lines, and metamorphic mineral isograds
skypoints.e00	skypoints	locations of age samples, fossils, small masses of ultramafic rock or limestone or marble, and approx. center of morainal embankments

skystructure.e00	skystructure	structural symbols: bedding, foliation, lineation, fault-balls (showing normal fault side down); these symbols will not show on screen or plot without appropriate symbol sets available in Alacarte
skyrocksamp.e00	skyrocksamp	locations of rocks samples archived with North Cascade National Park, Marblemount, WA

The database package <u>also</u> includes the following files: PDF files of: Description of Map Units (DMU), of metadata and of this readme.

Also available from a linked site (http://pubs.gov/imap/i1963/) in separate downloadable PDF files are the geologic map pamphlet, colored geologic map which include a correlation chart (CMU), Description of Map Units (DMU), cross sections, and generalized geologic . A related site (http://geology.wr.usgs.gov/wgmt/pacnw/nc/sky1.html) contains further information about the Skykomish River geologic map.

info   INFO directory containing files supporting the databases.

Tar files

The four export files described above are stored in tar (UNIX tape archive) files. A tar utility is required to extract the database from the tar file. This utility is included in most UNIX systems, and can be obtained free of charge over the Internet from Internet Literacy's Common Internet File Formats Webpage (http://www.matisse.net/files/formats.html). The tar files have been compressed, and may be uncompressed with **gzip**, which is available free of charge over the Internet via links from the USGS Public Domain Software page (http://edcwww.cr.usgs.gov/doc/edchome/ndcdb/public.html). For software that enables the user to uncompress and extract the database files on a Windows or Macintosh computer, go to the U.S. Geological Central Region server (http://cpg.cr.usgs.gov/pub/software.html) or WinZip (http://www.winzip.com). When the tar file is uncompressed and the data is extracted from the tar file, a directory is produced that contains the data in the package as described above. The specifics of the tar files are listed below:

Size:

skycovers.tar.gz is about 1.3 MB.

Uncompressed and untarred the ARC/INFO export files are:

skygeology.e00	3.4 MB
skylines.e00	60 KB
skypoints.e00	44 KB
skystructure.e00	848 KB
skyrocksamp.e00	76 KB
sky_readme.pdf	264 KB
skymetadata .pdf	228 KB
skyDMU.pdf	92 KB

PDF plot files

Adobe Acrobat PDF (Portable Document Format) files are similar to PostScript plot files in that they contain all the information needed to produce a paper copy of a map or pamphlet and they are platform independent. Their principal advantage is that they require less memory to store and are therefore quicker to download from the Internet. In addition, PDF files allow for printing of portions of a map image on a printer smaller than that required to print the entire map without the purchase of expensive additional software. In test plots we have found that paper maps created with PDF files contain almost all the detail of the published maps We recommend the published maps for greatest definition.

To use PDF files, the user must get and install a copy of Adobe Acrobat Reader. This software is available free from the Adobe website (http://www.adobe.com/products/acrobat/readstep2.html). Please follow the instructions given at the website to download and install this software. Once installed, the Acrobat Reader software contains an on-line manual and tutorial.

There are two ways to use Acrobat Reader in conjunction with the Internet. One is to use the PDF reader plug-in with your Internet browser. This allows for interactive viewing of PDF file images within your browser. This is a very handy way to quickly look at PDF files without downloading them to your hard disk. The second way is to download the PDF file to your local hard disk, and then view the file with Acrobat Reader. **We strongly recommend that large map images be handled by downloading to your hard disk, because viewing them within an Internet browser tends to be very slow.**

To print a smaller portion of a PDF map image using Acrobat Reader, it is necessary to cut out the portion desired using Acrobat Reader and the standard cut and paste tools for your platform, and then to paste the portion of the image into a file generated by another software program that can handle images. Most word processors (such as Microsoft Word) will suffice. The new file can then be printed. Image conversion in the cut and paste process, as well as changes in the scale of the map image, may result in loss of image quality. However, test plots have proven adequate.

Digital database format

The databases in this report were compiled in ARC/INFO, a commercial Geographic Information System (Environmental Systems Research Institute, Redlands, California), with version 3.0 of the menu interface ALACARTE (Fitzgibbon and Wentworth, 1991, Fitzgibbon, 1991, Wentworth and Fitzgibbon, 1991). The files are in COVERAGE (ARC/INFO vector data) format. Coverages are stored in uncompressed ARC export format (ARC/INFO version 9.1 for Unix). ARC/INFO export files (files with the .e00 extension) can be converted into ARC/INFO coverages in ARC/INFO (see below) and can be read by some other Geographic Information Systems. The digital compilation was done in version 9.1 of ARC/INFO for Unix.

Obtaining the Digital Database and Plotfile Packages

The digital data can be obtained in one of two ways:

        a. From the Western Region Geologic Information Web Page.
        b. Sending a CD with request

To obtain tar files of database or plot file packages from the USGS web pages:

The U.S. Geological Survey now 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 USGS is http://www.usgs.gov

The Web server for digital publications from the U.S. Geological Survey is http://www.usgs.gov/pubprod/digitaldata.html

Go to http://pubs.usgs.gov/imap/i1963/ to access this publication.

To obtain tar files of database or plot file packages on CD:

Database files, PostScript plot files, and related files can be obtained by sending a CD with request and return address to:

> Karen Wheeler
> c/o Database Coordinator
> U.S. Geological Survey
> 345 Middlefield Road, M/S 973
> Menlo Park, CA 94025

Do not omit any part of this address!

NOTE: Be sure to include with your request the exact names, as listed above, of the tar files you require. The compressed tar file will be returned on the CD.

Obtaining hard copy of I-1963

> **USGS Information Services**
> **Box 25286**
> **Denver Federal Center**
> **Denver, CO 80225-0046**
>
> **(303) 202-4200**
> **1-800-USA-MAPS**
> **FAX: (303) 202-4695**
> **e-mail:** infoservices@usgs.gov

Acknowledgments

We wish to thank Karen Wheeler for the digital review of this material.

References Cited

For references cited in the metadata, consult the pamphlet with the printed map or downloadable documents at http://pubs.gov/imap/i1963/

Fitzgibbon, T.T., 1991, ALACARTE installation and system manual (version 1.0): U.S. Geological Survey Open-File Report 91-587B.

Fitzgibbon, T.T., and Wentworth, C.M., 1991, ALACARTE user interface - AML code and demonstration maps (version 1.0): U.S. Geological Survey Open-File Report 91-587A.

Wentworth, C.M., and Fitzgibbon, T.T., 1991, ALACARTE user manual (version 1.0): U.S. Geological Survey Open-File Report 91-587C.