



Geologic map of the Fifteenmile Valley 7.5' quadrangle, San Bernardino County , California

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Prepared in cooperation with
CALIFORNIA DIVISION OF MINES AND GEOLOGY

Open-File Report OF 01-132

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U. S. DEPARTMENT OF THE INTERIOR
U. S. GEOLOGICAL SURVEY

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INTRODUCTION

General

Open-File Report OF 01-132 contains a digital geologic map database of the Fifteenmile Valley 7.5' quadrangle, San Bernardino County, California that includes:

1. ARC/INFO (Environmental Systems Research Institute, <http://www.esri.com>) version 7.2.1 coverages of the various elements of the geologic map
2. A PostScript file to plot the geologic map on a topographic base, and containing a Correlation of Map Units diagram, a Description of Map Units, an index map, and a regional structure map.
3. Portable Document Format (.pdf) files of:
 - a. This Readme; includes in Appendix I, data contained in fif_met.txt
 - b. The same graphic as plotted in 2 above. (Test plots have not produced 1:24,000-scale map sheets. Adobe Acrobat pagesize setting influences map scale.)

The Correlation of Map Units and Description of Map Units is in the editorial format of USGS Miscellaneous Investigations Series (I-series) maps. Within the geologic map data package, map units are identified by standard geologic map criteria such as formation-name, age, and lithology. Even though this is an author-prepared report, every attempt has been made to closely adhere to the stratigraphic nomenclature of the U. S. Geological Survey. Descriptions of units can be obtained by viewing or plotting the .pdf file (3b above) or plotting the postscript file (2 above). If roads in some areas, especially forest roads that parallel topographic contours, do not show well on plots of the geologic map, we recommend use of the USGS Fifteenmile Valley 7.5' topographic quadrangle in conjunction with the geologic map.

This README file describes the digital data, such as types and general contents of files making up the database, and includes information on how to extract and plot the map and accompanying graphic file. Metadata information can be accessed at <http://geo-nsdi.er.usgs.gov/cgi-bin/publication?map-of> and is included in Appendix I, Readme.

HOW TO OBTAIN PAPER PLOTS

For those having access to large-format plotters such as HP650C, HP755C, and HP2500C, plots may be made directly from the included plot file. For those needing paper plots of the geologic map and accompanying text, but who do not have access to large-format plotters, please contact the U.S. Geological Survey Plot-on-demand facility.

Phone: 1-888-ASK-USGS (1-888-275-87477)

DATABASE CONTENTS

The files constituting the geologic map database of this Open-File Report are listed below along with the interchange files from which they are extracted.

Data Package

All files listed below are in a compressed tar file named **fif.tar.gz** (4MB); see section below titled, SOFTWARE UTILITIES.

<u>ARC/INFO interchange files</u>	<u>Fifteenmile Valley files</u>	<u>Contains</u>
fif_geo.e00	fif_geo	Contacts, faults, geologic unit labels
fif_str.e00	fif_str	Attitudes and their dip or plunge values. Dip or plunge values plotted as annotation.
fif_orn.e00	fif_orn	line ornamentation
fif_ldr.e00	fif_ldr	unit label leaders
lines.rel.e00	lines.rel	Line dictionary
points.rel.e00	points.rel	Point dictionary
scamp2.shd.e00	scamp2.shd	SCAMP shade set

The directory, info/, is produced in the process of importing interchange files to ARC coverages in ARC/INFO. The **fif** (Fifteenmile Valley) info/ directory contains:

Feature Attribute tables

Polygon attribute table	fif_geo.pat
Arc attribute tables	fif_geo.aat fif_ldr.aat
Point attribute tables	fif_str.pat fif_orn.pat

Additional tables

lines.rel	Dictionary, contains all SCAMP line codes (Matti and others, 1998a)
points.rel	Dictionary, contains all SCAMP point codes (Matti and others, 1998a)

others, 1998b)

<u>Raster file</u>	<u>Resultant image</u>	<u>Contains</u>
fif.tif	Fifteenmile Valley base map	Topographic base from 500dpi scan of USGS Fifteenmile Valley 7.5' quadrangle, 1971. Geotiff format

Plot Package

PostScript plot files of the geologic map and CMU/DMU; please see section below titled, SOFTWARE UTILITIES for additional information.

<u>Compressed file</u>	<u>Resultant image</u>	<u>Contains</u>
fif_map.ps.gz	fif_map.ps	PostScript plot file of geologic map and CMU/DMU

PostScript files are compressed UNIX files requiring gzip to uncompress them.

The uncompressed PostScript file **fif_map.ps** will plot a 1:24,000 scale, full color geologic map of the Fifteenmile Valley quadrangle on a topographic base. A detailed CMU diagram, a DMU, and a regional structure map are included on the sheet. This sheet is in the editorial format of the U.S. Geological Survey's Miscellaneous Investigations (I) map series, and is approximately 45 X 32 inches in size. The map sheet has been successfully plotted on Hewlett-Packard large-format plotters, models HP650C, HP755CM, and HP2500C.

Other files

Readme.pdf	This document in .pdf format
fif_map.pdf	Geologic map, DMU, CMU, and sketch maps

SOFTWARE UTILITIES

Files which have .gz file extension were compressed using gzip. Gzip utilities are available free of charge via the internet at the gzip home page, <http://www.gzip.org>

The data package is additionally bundled into a single tar (tape archive) file. Individual files must be extracted using a tar utility, available free of charge via the internet through links on the Common Internet File Formats page, <http://www.matisse.net/files/formats.html>. One such utility is WinZip, available at <http://www.winzip.com> (WinZip can also decompress files).

Files in the plot package have been prepared to produce optimum plots using the shade, and marker sets listed below. The marker, line and shade (pattern) sets may be obtained at the web site <http://wrgis.wr.usgs.gov/docs/ncgm/scamp/scamp.html>.

Geogeo font group may be obtained at the following web site

Server: onyx.wr.usgs.gov
UserID: anonymous
Password: Your e-mail address
Directory: pub/wpg/supplies/geogeo

geoscamp2.lin	Lines
geoscamp2.mrk	Points
scamp2.shd	Colors (included in data package)
geology2.shd	Patterns

HOW TO OBTAIN THE DIGITAL FILES

The export files, and subsequently the data and plot files, constituting the geologic map database of this Open-File Map may be obtained in two ways, both over the Internet.

1. The files can be obtained via the Web from Western Region Geologic Information Server. Go to the web page at <http://geopubs.wr.usgs.gov/open-file/of01-132> and follow the directions to download the files.
2. The files can also be obtained by anonymous ftp over the Internet from wrgis.wr.usgs.gov. The files are located in the directory /pub/open-file/of01-132. Be sure to use binary transfer mode or ASCII mode for individual .e00 files (ARC interchange file format).

HOW TO EXTRACT THE GEOLOGIC MAP DATABASE FROM THE TAR FILE

After downloading the files, they must be uncompressed using a gzip utility such as gzip itself or WinZip. The data files must then be extracted using a tar utility.

Digital database

<u>To do this</u>	<u>Type this at the Unix command prompt</u>
Make a 17.5 MB tar file named fif.tar	gzip -d fif.tar.gz (or use gzip utility of choice)
Go to the directory that will hold the directory fif (if different from local_directory)	cd local_directory
Extract the fif directory from the tar file	tar -xvfv {path to tar file} fif.tar (or use tar utility of choice)

This process will create a directory, **fif**, that contains the ARC/INFO interchange files and supporting files. The directory should contain the following files:

- fif/**
- fif_geo.e00**
- fif_str.e00**
- fif_orn.e00**
- fif_ldr.e00**
- scamp2.shd.e00**
- lines.rel.e00**
- points.rel.e00**
- fif.tif** Fifteenmile Valley base map

The following are not included in the database tar file, and are downloaded separately

- Readme.pdf** This document in .pdf format
- fif_map.pdf** Geologic map, DMU, CMU, and sketch maps

PostScript plot files

Make a 46 MB uncompressed file, **fif_map.ps** by typing `gzip -d fif_map.ps.gz` (or use gzip utility of choice)

Portable Document Format (.pdf) files

PDF files are not stored as gzip files. They are accessed using Adobe Acrobat Reader software, available free from the Adobe website <http://www.adobe.com>. Follow instructions at the website to download and install the software. Acrobat Reader contains an on-line manual and tutorial.

HOW TO CONVERT THE ARC/INFO INTERCHANGE (EXPORT) FILES

The ARC interchange (.e00) files are converted to ARC coverages using the ARC command IMPORT.

ARC interchange files can also be read by some other Geographic Information Systems, including ArcView (ESRI) and MapInfo (<http://www.mapinfo.com>) (Environmental Systems Research Institute, Inc, 1991). Please consult your GIS documentation to see if you can use ARC interchange files and the procedure to import them.

DIGITAL GEOLOGIC MAP SPECIFICATIONS

Digital and geologic compilation of geologic map

The geologic map was compiled from 1:24,000 geologic mapping on aerial photographs and topographic quadrangle maps, transferred visually to a base-stable cronoflex copy of the Fifteenmile Valley 7.5' quadrangle, and the linework scribed from the cronoflex map. The scribe guide was used to make a 0.007"-thick blackline clear-film, which was scanned at 1200 DPI and auto-vectorized by Optronics Specialty Company, Northridge, California; minor hand-digitized additions were made at the USGS. Lines, points, and polygons were subsequently edited at the USGS using standard ARC/INFO commands. Digitizing and editing artifacts significant enough to display at a scale of 1:24,000 were corrected.

Base map

The base map image (fif.tif, Geotiff format) was prepared by scanning a scale-stable clear film of the U.S Geological Survey, 1:24,000 Fifteenmile Valley 7.5' quadrangle (1971) topographic map. Scanning was done using an Anatech Eagle 4080 monochrome 800 dpi scanner at a resolution of 500 dpi. The raster scan was converted to a monochromatic image in ARC/INFO, and registered and rectified to the Fifteenmile Valley 7.5' quadrangle. No elements of the base layer are attributed. The base map is provided for reference only.

Spatial resolution

Use of this digital geologic map database 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 fact that this database was edited at a scale of 1:24,000 means that higher resolution information is not generally present in the dataset. Plotting at scales larger than 1:24,000 will not yield greater *real* detail, although it may reveal fine-scale irregularities above the intended resolution of the database. Similarly, although higher resolution data is incorporated at some places, the resolution of the combined output will be limited by the lower resolution data.

Map accuracy standards

Until uniform National geologic map accuracy standards are developed and adopted, lines and points on SCAMP 1:24,000 scale geologic maps that are located to within 15 meters, relative to accurately located features on the base map, are considered to meet map accuracy standards. Dashed lines, indicated in the database coding as not meeting map accuracy standards, are generally located to within 30 meters, relative to accurately located features on the base map.

Database specifics

General—The map database consists of ARC/INFO format coverages which are stored in polyconic projection (Table 1), and a series of data tables. Digital tics define a 7.5-minute grid of latitude and longitude in the geologic coverages corresponding to the 7.5-minute tic grid on the topographic base map.

Table 1—Map Projection

Projection	Polyconic
Datum	NAD27
Zunits	No
Units	Meters
Spheroid	Clark 1866
X shift	0.0000000000
Y shift	0.0000000000
Parameters	-117 3 45.000 longitude of central meridian 34 22 30 latitude of projection's origin 0.00000 false easting (meters) 0.00000 false northing (meters)

The content of the geologic database can be described in terms of feature classes that include lines, points, and areas that comprise the map. See the metadata text file (Appendix I) for detailed descriptions. Although Version 1.0 of the Fifteenmile Valley 7.5' quadrangle does not contain coded, detailed, geologic attribute data, the items L-TAG (lines) and P-TAG (structural point data) do serve as relate items allowing users to establish a relate environment with and access to complete descriptions of the geologic entities contained in the line and point dictionaries (Matti and others, 1998a, 1998b). The following is an example of how to establish a simple relate environment and the ARC/INFO dialogue the user will encounter:

At the Arc prompt, type: relate add

Dialogue for ADD

Relation name: alphanumeric name of relate you want to establish
 Table identifier: pathname or database table name of the related file
 Database name: name of the database in which the related file is stored
 Info item: the item name in an INFO data file from which the relate is performed
 Relate column: the field in the related table which is related to the INFO item
 Relate type: the type of relate performed—one of the following four: LINEAR, ORDERED, LINK, TABLE. LINEAR is the slowest, but the simplest to apply. (Please consult ARC/INFO online help topic such as 'working with tables' for help on selection of relate type)
 Relation access: the access rights to the related file: RW, or RO, or AUTO

Example (lines):

Arc: relate add
 Relation name: line_dictionary
 Table identifier: lines.rel
 Database name: info
 INFO item: l-tag
 Relate column: l-tag
 Relate type: linear
 Relate access: rw

Lines—Lines are recorded as strings of arcs and are described in an arc attribute (.aat) table. Complete lists of the line types (L-TAG) used in the quadrangle are available in Appendix I. They represent contacts and faults which define the boundaries of map units and map boundaries.

Polygons—Geologic map units (polygons) are described in the polygon attribute table (details in Appendix I). Using a system developed under the Southern California Areal Mapping Project (SCAMP), geologic maps can be encoded with detailed, polygon-specific geologic information on a polygon-by-polygon basis, so that within a quadrangle, lateral variations in a particular map unit can be recorded in the map database. Detailed encoding of polygons is not available in this version of the Fifteenmile Valley quadrangle, but will be in the next version. For traditional descriptions of the map units, see the Portable Document Format file **fif_map.pdf** or the Postscript map plot, **fif.ps**. A list of all map units in the database is given in Appendix I.

Points—Point information (attitudes of planar and linear features, and line ornamentation) is recorded as coordinate and related information. Complete lists of the point types (P-TAG) used in the point coverages are available in Appendix I.

REFERENCES

- Environmental Systems Research Institute, Inc, 1991, ARC/INFO command references 6.0: Proprietary software manual
- Matti, J.C., Powell, R.E., Miller, F.K., Kennedy, S.A., Ruppert, K.R., Morton, G.L., and Cossette, P.M., 1998a, Geologic-line attributes for digital geologic map databases produced by the Southern California Areal Mapping Project (SCAMP), Version 1.0: U.S. Geological Survey Open-File Report 97-861
- Matti, J.C., Miller, F.K., Powell, R.E., Kennedy, S.A., Bunyapanasarn, T.P., Koukladas, Catherine, Hauser, R.M., and Cossette, P.M., 1998b, Geologic-point attributes for digital geologic map databases produced by the Southern California Areal Mapping Project (SCAMP), Version 1.0: U.S. Geological Survey Open-File Report 97-859

APPENDIX I

(Original metadata text)

Identification_Information:

Citation:

Citation_Information:

Originator: F.K. Miller

Originator: J.C. Matti

Publication_Date: 2001

Title: Geologic map of the Fifteenmile Valley 7.5' quadrangle, San Bernardino County, California

Edition: Version 1.0

Geospatial_Data_Presentation_Form: vector digital data

Series_Information:

Series_Name: U.S. Geological Survey Open-File Report

Issue_Identification: USGS OF 01-132

Publication_Information:

Publication_Place: Menlo Park, California

Publisher: U.S. Geological Survey

Online_Linkage: URL:<http://geopubs.wr.usgs.gov/open-file/of01-132>

Description:

Abstract:

This data set maps and describes the geology of the Fifteenmile Valley 7.5' quadrangle, San Bernardino County, California. Created using Environmental Systems Research Institute's ARC/INFO software, the data base consists of the following items: (1) a map coverage containing geologic contacts and units, (2) attribute tables for geologic units (polygons), contacts (arcs), and site-specific data (points). In addition, the data set includes the following graphic and text products: (1) A PostScript graphic plot-file containing the geologic map, topography, cultural data, a Correlation of Map Units (CMU) diagram, a Description of Map Units (DMU), an index map, a regional geologic and structure map, and a key for point and line symbols; (2) PDF files of this Readme (including the metadata file as an appendix), Description of Map Units (DMU), and a screen graphic of the plot produced by the PostScript plot file.

The geologic map covers the northernmost part of the San Bernardino Mountains and the southern Granite Mountains. These two bedrock areas are separated by the wide, alluviated Fifteenmile Valley. Bedrock units in the San Bernardino Mountains are dominated by large Cretaceous granitic bodies ranging in composition from monzogranite to gabbro, and include lesser Triassic monzonite. The Granite Mountains are underlain chiefly by large Triassic monzonite bodies, and in the western part, by Cretaceous and possibly Jurassic monzogranite to monzodiorite. Spanning the Pleistocene in age, large alluvial fans, flank the north side of the San Bernardino Mountains, and are dominated by debris flow deposits. The central part of Fifteenmile Valley is covered by fine grained alluvial material deposited by streams flowing into Rabbit Lake and an unnamed dry lake in the northwestern part of the quadrangle. Young, south dipping reverse faults, some with moderately to well eroded fault scarps, discontinuously flank the northern edge of the San Bernardino Mountains. Young and old high-angle faults are mapped within both the San Bernardino and Granite Mountains.

The geologic map database contains original U.S. Geological Survey data generated by detailed field observation and by interpretation of aerial photographs. The map was compiled on a base-stable cronoflex copy of the Fifteenmile Valley 7.5' topographic base and then scribed. This scribe guide was used to make a 0.007 mil blackline clear-film, which was scanned at 1200 DPI by Optronics Specialty Company, Northridge, California; minor hand-digitized additions were made at the USGS. Lines, points, and polygons were subsequently edited at the USGS using standard ARC/INFO commands. Digitizing and editing artifacts significant enough to display at a scale of 1:24,000 were corrected. Within the database, geologic contacts are represented as lines (arcs), geologic units as polygons, and site-specific data as points. Polygon, arc, and point attribute tables (.pat, .aat, and .pat, respectively) uniquely identify each geologic datum.

Purpose:

The data set for the Fifteenmile Valley 7.5' quadrangle was prepared under the U.S. Geological Survey Southern California Areal Mapping Project (SCAMP) as part of an ongoing effort to develop a regional geologic framework of southern California, and to utilize a Geographical Information System (GIS) format to create regional digital geologic databases. These regional databases are being developed as contributions to the National Geologic Map Database of the National Cooperative Geologic Mapping Program of the USGS.

The digital geologic map database for the Fifteenmile Valley 7.5' quadrangle has been created as a general-purpose data set that is applicable to other land-related investigations in the earth and biological sciences. For example, it can be used for mineral resource evaluation studies, animal and plant habitat studies, and soil studies in the San

Bernardino National Forest. The database is not suitable for site-specific geologic evaluations.

Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 19970701

Ending_Date: 20000100

Currentness_Reference: New data

Status:

Progress: Complete

Maintenance_and_Update_Frequency: As Needed

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate: -117.12509313

East_Bounding_Coordinate: -116.99990687

North_Bounding_Coordinate: 34.49999996

South_Bounding_Coordinate: 34.37498407

Keywords:

Theme:

Theme_Keyword_Thesaurus: None

Theme_Keyword: geologic map

Theme_Keyword: geology

Theme_Keyword: bedrock geology

Theme_Keyword: surficial geology

Place:

Place_Keyword_Thesaurus: None

Place_Keyword: California

Place_Keyword: San Bernardino County

Place_Keyword: Fifteenmile Valley 7.5' quadrangle

Stratum:

Stratum_Keyword_Thesaurus: None

Stratum_Keyword: Triassic monzonite

Stratum_Keyword: Cataclasite

Access_Constraints: None

Use_Constraints:

The Fifteenmile Valley 7.5' geologic-map database should be used to evaluate and understand the geologic character of the Fifteenmile Valley 7.5' quadrangle 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 site-specific determinations.

Use of this digital geologic map database 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 fact that this database was compiled and edited at a scale of 1:24,000 means that higher resolution information may not have been uniformly retained in the dataset. Plotting at scales larger than 1:24,000 will not yield greater real detail, although it may reveal fine-scale irregularities below the intended resolution of the database. Similarly, although higher resolution data is incorporated in most of the map, the resolution of the

combined output will be limited by the lower resolution data.

Point_of_Contact:

Contact_Information:

Contact_Person_Primary:

Contact_Person: F.K. Miller

Contact_Organization: U.S. Geological Survey, Western Region, Earth Surface Processes Team

Contact_Position: Project geologist

Contact_Address:

Address_Type: mailing address

Address:

U.S. Geological Survey

Room 202

West 904 Riverside Avenue

City: Spokane

State_or_Province: Washington

Postal_Code: 99201-1087

Country: USA

Contact_Voice_Telephone: (509) 368-3121

Contact_Facsimile_Telephone: (509) 368-3199

Contact_Electronic_Mail_Address: fmiller@usgs.gov

Browse_Graphic:

Browse_Graphic_File_Name: <http://geopubs.wr.usgs.gov/open-file/of01-132/images/fif_browse.jpg>

Browse_Graphic_File_Description:

Non-navigable .jpg image of the geologic map, topographic base, Correlation of Map Units, Description of Map Units and key to point and line symbols.

Browse_Graphic_File_Type: .jpg

Browse_Graphic:

Browse_Graphic_File_Name: <http://geopubs.wr.usgs.gov/open-file/of01-132/images/fif_map.pdf>

Browse_Graphic_File_Description:

Navigable portable document file (.pdf) image of the geologic map, topographic base, Correlation of Map Units, Description of Map Units and key to point and line symbols.

Browse_Graphic_File_Type: .pdf

Data_Set_Credit:

Technical review by Karl Kellog led to significant improvements that eventually were reflected in aspects of the database, the plot file, and in the description of the geologic units of the Fifteenmile Valley 7.5' quadrangle.

Geologic mapping and digital preparation of this report were sponsored jointly by (1) the National Cooperative Geologic Mapping Program of the U.S. Geological Survey, (2) the California Division of Mines and Geology, and (3) the Southern California Areal Mapping Project (SCAMP). In our digital preparation of the data set, carried out in the Geographic Information System laboratory of the Mineral Resources Program of the U.S. Geological Survey in Spokane, Washington by Pamela M. Cossette, we received valuable assistance from Paul C. Hyndman in Spokane, Washington, and from Rachel Alvarez at the SCAMP Geographic Information System laboratory in Riverside, California.

Native_Data_Set_Environment:

SunOS, 5.6, sun4u UNIX

ARC/INFO version 7.2.1

Cross_Reference:

Citation_Information:

Originator: Fred K. Miller

Originator: Jonathan C. Matti

Originator: Howard J. Brown

Publication_Date: 2000301

Title: Digital geologic map of the Butler Peak 7.5' quadrangle, San Bernardino County, California

Edition: Version 1.0

Geospatial_Data_Presentation_Form: vector digital data

Series_Information:

Series_Name: U.S. Geological Survey Open-File Report

Issue_Identification: USGS OF 00-145

Publication_Information:

Publication_Place: Menlo Park, California

Publisher: U.S. Geological Survey

Online_Linkage: <URL:http://geopubs.wr.usgs.gov/open-file/of00-145>

Data_Quality_Information:

Attribute_Accuracy:

Attribute_Accuracy_Report:

Geologic-map units in the Fifteenmile Valley quadrangle database were described using standard field methods. Consistent with these methods, the database author has assigned standard geologic attributes to geologic lines, points, and polygons identified in the database.

Nation-wide geologic-map accuracy standards have not been developed and adopted by the U.S. Geological Survey and other earth-science entities. Until such standards are adopted, the SCAMP project has developed internal map-accuracy standards for 1:24,000-scale geologic maps produced by the project.

Geologic lines and points on 1:24,000 scale geologic maps are judged to meet SCAMP's internal map-accuracy standards if they are located to within +/-15 meters, relative to topographic or cultural features on the base map.

Lines and points that meet (or may not meet) this SCAMP internal map-accuracy standard are identified both in the digital database and on derivative geologic-map plots. Within the database, line and point data that are judged to meet the SCAMP internal map-accuracy standard are denoted by the attribute code .MEE. (meets) in the appropriate data table; line and point data that may not meet the SCAMP internal map-accuracy standard are denoted by the attribute code .MNM. (may not meet).

On any derivative geologic-map plot, line data that are judged to meet the SCAMP internal map-accuracy standard are denoted by solid lines; line data that may not meet the SCAMP internal map-accuracy standard are denoted by dashed or dotted lines. There is no cartographic device for denoting the map-accuracy for geologic-point data (eg. symbols representing bedding, foliation, lineations, etc.).

Logical_Consistency_Report:

Polygon and chain-node topology present.

The areal extent of the map is represented digitally by an appropriately projected (polyconic projection), mathematically generated box. Consequently, polygons intersecting the lines that comprise the map boundary are closed by that boundary. Polygons internal to the map boundary are completely enclosed by line segments which are themselves a set of sequentially numbered coordinate pairs. Point data are represented by coordinate pairs.

Completeness_Report:

The geologic map and digital database of the Fifteenmile Valley 7.5' quadrangle contain new data that have been subjected to rigorous review and are a substantially complete representation of the current state of knowledge concerning the geology of the quadrangle.

Positional_Accuracy:

Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:

The maximum transformation RMS error acceptable for 7.5' quadrangle transformation and data input is 0.003 (1.8 meters). Horizontal positional accuracy was checked by visual comparison of hard-copy plots with base-stable source data.

Scale (X,Y) = (609.484,609.992) Skew (degrees) = (0.010) Rotation (degrees) = (0.001)
Translation = (-6431.841,-881.055) RMS Error (input,output) = (0.000,0.247)

Affine $X = Ax + By + C$

$Y = Dx + Ey + F$

A = 609.484 B = 0.099 C = -6431.841

D = 0.012 E = 609.992 F = -881.055

tic id	input x	input y	x error	y error
1	19.985	1.447		
	5748.683	1.770	0.215	-0.121
2	1.120	1.447		
	-5748.683	1.770	-0.215	0.121
3	1.131	24.178		
	-5740.129	13867.671	0.215	-0.122
4	19.967	24.178		
	5740.129	13867.671	-0.215	0.122

Lineage:

Process_Step:

Process_Description:

Field mapping and aerial photograph interpretation; iterative process (F.K. Miller and J.C. Matti).

Process_Date: 1997-1999

Process_Step:

Process_Description:

Transfer of geologic linework and point data from field maps and aerial photographs to a scale-stable cartographic base of quadrangle (scribeguide) (F.K. Miller and J.C. Matti).

Process_Date: 1999-2000

Process_Step:

Process_Description: Description of map units and correlation of map units (F.K. Miller).

Process_Date: 1999-2000

Process_Step:

Process_Description:

The geologic map information was scanned (initial raster scan in MS-DOS TIF format, 1200 dots per inch) from a clear-film, right-reading, 0.007 mil thickness, base-stable blackline positive (made by contact photograph from a scribeguide) of the author-prepared geologic map at 1:24,000 scale. The raster scan was auto-vectorized by Optronics Specialty Company, Inc.

Process_Date: 2000

Process_Step:

Process_Description:

ARC/INFO database established; cleanup of auto-vectorizing artifacts; polygon, arc, and point attribute tables established using model developed for SCAMP databases. Digitizing and editing artifacts significant enough to display at a scale of 1:24,000 were corrected (P.M. Cossette).

Process_Date: 2000

Process_Step:

Process_Description:

First draft of metadata created by cossette using FGDCMETA.AML ver. 1.2 05/14/98 on ARC/INFO data set /pool5/c/cossette2/15mile/fif_geo1127

Process_Date: 20001129

Spatial_Data_Organization_Information:

Direct_Spatial_Reference_Method: Vector

Point_and_Vector_Object_Information:

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Point

Point_and_Vector_Object_Count: 1033

SDTS_Point_and_Vector_Object_Type: String

Point_and_Vector_Object_Count: 2795

SDTS_Point_and_Vector_Object_Type: GT-polygon composed of chains

Point_and_Vector_Object_Count: 1033

Spatial_Reference_Information:

Horizontal_Coordinate_System_Definition:

Planar:

Map_Projection:

Map_Projection_Name: Polyconic

Polyconic:

Longitude_of_Central_Meridian: -117.0625

Latitude_of_Projection_Origin: 34.3750

False_Easting: 0.00000

False_Northing: 0.00000

Planar_Coordinate_Information:

Planar_Coordinate_Encoding_Method: coordinate pair

Coordinate_Representation:

Abscissa_Resolution: 0.000001

Ordinate_Resolution: 0.000001

Planar_Distance_Units: Meters

Geodetic_Model:

Horizontal_Datum_Name: North American Datum of 1927

Ellipsoid_Name: Clarke 1866

Semi-major_Axis: 6378206.4

Denominator_of_Flattening_Ratio: 294.98

Entity_and_Attribute_Information:

Overview_Description:

Entity_and_Attribute_Overview:

Version 1.0 of the Fifteenmile Valley 7.5' quadrangle comprises four ARC/INFO coverages, of which two contain geologic data and two contain cartographic features: fif_geo (geology), fif_str (structural point data), fif_orn (structural line ornamentation), and fif_ldr (annotation leaders). Two INFO tables, lines.rel and points.rel provide a full description of each of the geologic line and point features in the database. A full source citation is provided in the Entity_and Attribute_Detail_Citation section of this metadata document.

Geologic data represented by line entities and the polygons they delineate are contained in the coverage FIF_GEO. For display purposes, the geology coverage contains one annotation subclass: anno.geo contains unit labels.

Geological point data includes site-specific information describing the types and the orientation of bedding, foliation, and lineations. One annotation subclass is included in the geologic points coverage, FIF_STR: anno.attitude displays the respective dip and plunge

values associated with individual point data.

Entity_and_Attribute_Detail_Citation:

A complete description of the polygon, line, and point data coding schemes is available in U.S. Geological Survey Open-File Reports OFR 97-859, OFR 97-860, and OFR 97-861 (full source citations follow):

Matti, J.C., Miller, F.K., Powell, R.E., Kennedy, S.A., Bunyapanasarn, T.P., Koukladas, Catherine, Hauser, R.M., and Cossette, P.M., 1997b, Geologic-point attributes for digital geologic-map databases produced by the Southern California Areal Mapping Project (SCAMP), Version 1.0: U.S. Geological Survey Open-File Report 97-859

Matti, J.C., Miller, F.K., Powell, R.E., Kennedy, S.A., and Cossette, P.M., 1997c, Geologic-polygon attributes for digital geologic-map databases produced by the Southern California Areal Mapping Project (SCAMP), Version 1.0: U.S. Geological Survey Open-File Report 97-860

Matti, J.C., Powell, R.E., Miller, F.K., Kennedy, S.A., Ruppert, K.R., Morton, G.L., and Cossette, P.M., 1997a, Geologic-line attributes for digital geologic-map databases produced by the Southern California Areal Mapping Project (SCAMP), Version 1.0: U.S. Geological Survey Open-File Report 97-861

Detailed_Description:

Entity_Type:

Entity_Type_Label: fif_geo.pat

Entity_Type_Definition:

Geologic units (LABL) and their corresponding names (NAME) identified in the Fifteenmile Valley 7.5' quadrangle

Attribute:

Attribute_Label: TAG

Attribute_Definition:

a reference label for subgroups of polygons of the geologic-map unit identified by LABL

TAG is defined as LABL followed by an upper-case letter, e.g., QwA, QwB, or QwC, etc. All map units in the Fifteenmile Valley database have only one TAG designation, TAG A.

Attribute:

Attribute_Label: LABL

Attribute_Definition: geologic map unit label, in plain text

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Qaf

Enumerated_Domain_Value_Definition: Artificial fill

Enumerated_Domain:

Enumerated_Domain_Value: Qdg

Enumerated_Domain_Value_Definition: Disturbed ground

Enumerated_Domain:

Enumerated_Domain_Value: Qw

Enumerated_Domain_Value_Definition: Very young wash deposits

Enumerated_Domain:

Enumerated_Domain_Value: Qw2

Enumerated_Domain_Value_Definition: Very young wash deposits, Unit 2

Enumerated_Domain:

Enumerated_Domain_Value: Qw1

Enumerated_Domain_Value_Definition: Very young wash deposits, Unit 1

Enumerated_Domain:

Enumerated_Domain_Value: Qf

Enumerated_Domain_Value_Definition: Very young alluvial fan deposits
Enumerated_Domain:
Enumerated_Domain_Value: Qf2
Enumerated_Domain_Value_Definition: Very young alluvial fan deposits, Unit 2
Enumerated_Domain:
Enumerated_Domain_Value: Qf1
Enumerated_Domain_Value_Definition: Very young alluvial fan deposits, Unit 1
Enumerated_Domain:
Enumerated_Domain_Value: Qa
Enumerated_Domain_Value_Definition: Very young alluvial-valley deposits
Enumerated_Domain:
Enumerated_Domain_Value: Qsw
Enumerated_Domain_Value_Definition: Very young slope wash deposits
Enumerated_Domain:
Enumerated_Domain_Value: Qc
Enumerated_Domain_Value_Definition: Very young colluvial deposits
Enumerated_Domain:
Enumerated_Domain_Value: Qt
Enumerated_Domain_Value_Definition: Very young talus deposits
Enumerated_Domain:
Enumerated_Domain_Value: Qls
Enumerated_Domain_Value_Definition: Very young landslide deposits
Enumerated_Domain:
Enumerated_Domain_Value: Qp
Enumerated_Domain_Value_Definition: Very young playa deposits
Enumerated_Domain:
Enumerated_Domain_Value: Qp1
Enumerated_Domain_Value_Definition: Very young playa deposits, Unit 1
Enumerated_Domain:
Enumerated_Domain_Value: Qe
Enumerated_Domain_Value_Definition: Very young eolian deposits
Enumerated_Domain:
Enumerated_Domain_Value: Qs
Enumerated_Domain_Value_Definition: Very young surficial deposits, undifferentiated
Enumerated_Domain:
Enumerated_Domain_Value: Qyw
Enumerated_Domain_Value_Definition: Young wash deposits
Enumerated_Domain:
Enumerated_Domain_Value: Qyf
Enumerated_Domain_Value_Definition: Young alluvial fan deposits
Enumerated_Domain:
Enumerated_Domain_Value: Qyf5
Enumerated_Domain_Value_Definition: Young alluvial fan deposits, Unit 5
Enumerated_Domain:
Enumerated_Domain_Value: Qyf4
Enumerated_Domain_Value_Definition: Young alluvial fan deposits, Unit 4
Enumerated_Domain:
Enumerated_Domain_Value: Qyf3
Enumerated_Domain_Value_Definition: Young alluvial fan deposits, Unit 3
Enumerated_Domain:
Enumerated_Domain_Value: Qyf2
Enumerated_Domain_Value_Definition: Young alluvial fan deposits, Unit 2
Enumerated_Domain:
Enumerated_Domain_Value: Qyf1
Enumerated_Domain_Value_Definition: Young alluvial fan deposits, Unit 1
Enumerated_Domain:

Enumerated_Domain_Value: Qysw
Enumerated_Domain_Value_Definition: Young slope wash deposits

Enumerated_Domain:
Enumerated_Domain_Value: Qyc
Enumerated_Domain_Value_Definition: Young colluvial deposits

Enumerated_Domain:
Enumerated_Domain_Value: Qyls
Enumerated_Domain_Value_Definition: Young landslide deposits

Enumerated_Domain:
Enumerated_Domain_Value: Qyp
Enumerated_Domain_Value_Definition: Young playa deposits

Enumerated_Domain:
Enumerated_Domain_Value: Qye
Enumerated_Domain_Value_Definition: Young eolian deposits

Enumerated_Domain:
Enumerated_Domain_Value: Qys
Enumerated_Domain_Value_Definition: Young surficial deposits, undifferentiated

Enumerated_Domain:
Enumerated_Domain_Value: Qof
Enumerated_Domain_Value_Definition: Old alluvial fan deposits

Enumerated_Domain:
Enumerated_Domain_Value: Qof3
Enumerated_Domain_Value_Definition: Old alluvial fan deposits, Unit 3

Enumerated_Domain:
Enumerated_Domain_Value: Qof2
Enumerated_Domain_Value_Definition: Old alluvial fan deposits, Unit 2

Enumerated_Domain:
Enumerated_Domain_Value: Qof1
Enumerated_Domain_Value_Definition: Old alluvial fan deposits, Unit 1

Enumerated_Domain:
Enumerated_Domain_Value: Qoc
Enumerated_Domain_Value_Definition: Old colluvial deposits

Enumerated_Domain:
Enumerated_Domain_Value: Qos
Enumerated_Domain_Value_Definition: Old surficial deposits, undifferentiated

Enumerated_Domain:
Enumerated_Domain_Value: Qvof
Enumerated_Domain_Value_Definition: Very old alluvial fan deposits

Enumerated_Domain:
Enumerated_Domain_Value: Qvof3
Enumerated_Domain_Value_Definition: Very old alluvial fan deposits, Unit 3

Enumerated_Domain:
Enumerated_Domain_Value: Qvof2
Enumerated_Domain_Value_Definition: Very old alluvial fan deposits, Unit 2

Enumerated_Domain:
Enumerated_Domain_Value: Qvof1
Enumerated_Domain_Value_Definition: Very old alluvial fan deposits, Unit 1

Enumerated_Domain:
Enumerated_Domain_Value: Qvosw
Enumerated_Domain_Value_Definition: Very old slope wash deposits

Enumerated_Domain:
Enumerated_Domain_Value: TKmg
Enumerated_Domain_Value_Definition: Mafic granodiorite

Enumerated_Domain:
Enumerated_Domain_Value: Mzu
Enumerated_Domain_Value_Definition: Granitic rocks, undivided

Enumerated_Domain:
Enumerated_Domain_Value: Kdp
Enumerated_Domain_Value_Definition: Monzogranite of Deadman Point

Enumerated_Domain:
Enumerated_Domain_Value: Khr
Enumerated_Domain_Value_Definition: Hybrid rocks

Enumerated_Domain:
Enumerated_Domain_Value: KTrmm
Enumerated_Domain_Value_Definition: Mixed monzogranite and leucocratic monzonite

Enumerated_Domain:
Enumerated_Domain_Value: Kaw
Enumerated_Domain_Value_Definition: Alaskitic rocks of western Granite Mountains

Enumerated_Domain:
Enumerated_Domain_Value: Krp
Enumerated_Domain_Value_Definition: Rattlesnake pluton of MacColl (1964), porphyritic monzogranite

Enumerated_Domain:
Enumerated_Domain_Value: Kr
Enumerated_Domain_Value_Definition: Rattlesnake pluton of MacColl (1964), even-grained monzogranite

Enumerated_Domain:
Enumerated_Domain_Value: Klm
Enumerated_Domain_Value_Definition: Monzogranite of Luna Mountain

Enumerated_Domain:
Enumerated_Domain_Value: Kml
Enumerated_Domain_Value_Definition: Mixed mafic and leucocratic granitic rocks

Enumerated_Domain:
Enumerated_Domain_Value: Khl
Enumerated_Domain_Value_Definition: Heterogeneous leucocratic granitic rocks

Enumerated_Domain:
Enumerated_Domain_Value: Km
Enumerated_Domain_Value_Definition: Mixed granitic and metamorphic rocks

Enumerated_Domain:
Enumerated_Domain_Value: KJhb
Enumerated_Domain_Value_Definition: Hornblende-biotite granodiorite

Enumerated_Domain:
Enumerated_Domain_Value: KJdg
Enumerated_Domain_Value_Definition: Mixed diorite and gabbro

Enumerated_Domain:
Enumerated_Domain_Value: KJos
Enumerated_Domain_Value_Definition: Mixed granitic rocks of Oak Spring

Enumerated_Domain:
Enumerated_Domain_Value: Jcr
Enumerated_Domain_Value_Definition: Cataclastic rocks

Enumerated_Domain:
Enumerated_Domain_Value: Jsc
Enumerated_Domain_Value_Definition: Fine-grained rocks of Silver Canyon

Enumerated_Domain:
Enumerated_Domain_Value: Tra
Enumerated_Domain_Value_Definition: Alaskite of Sunset Cove

Enumerated_Domain:
Enumerated_Domain_Value: Trsp
Enumerated_Domain_Value_Definition: Quartz monzonite of Strawberry Peak

Enumerated_Domain:
Enumerated_Domain_Value: Trh
Enumerated_Domain_Value_Definition: Monzonite of Hill 4001

Enumerated_Domain:
Enumerated_Domain_Value: Trrl

Enumerated_Domain_Value_Definition: Monzonite of Rabbit Lake

Enumerated_Domain:

Enumerated_Domain_Value: Trfp

Enumerated_Domain_Value_Definition: Monzonite Fifteenmile Point

Enumerated_Domain:

Enumerated_Domain_Value: Trf

Enumerated_Domain_Value_Definition: Monzonite of Fawnskin

Enumerated_Domain:

Enumerated_Domain_Value: Trfl

Enumerated_Domain_Value_Definition: Leucocratic monzonite of Fawnskin

Enumerated_Domain:

Enumerated_Domain_Value: m

Enumerated_Domain_Value_Definition: Metasedimentary rocks, undivided

Attribute:

Attribute_Label: PLABL

Attribute_Definition:

Coded geologic map unit label used to generate plot labels with relevant stratigraphic symbols. The geologic units with LABL designating Mesozoic (Mz), and Triassic (Tr) have keystroke substitute characters, }, and ^ respectively, that call their corresponding symbols from the Geogage Font Group. Geologic map unit labels will plot on derivative map plots with appropriate stratigraphic symbols if PLABL is used as the source for unit labels. The Geogage Font Group is accessed through geofont.txt.

Attribute:

Attribute_Label: SHDPS

Attribute_Definition: polygon color (as integer value) from shadeset scamp2.shd (included in the data package)

Attribute:

Attribute_Label: SHDFIL

Attribute_Definition:

polygon fill pattern (as integer value) from shadeset geology2.shd (included in the data package)

Attribute:

Attribute_Label: NAME

Attribute_Definition: Geologic name of map unit (see list under LABL attribute)

Detailed_Description:

Entity_Type:

Entity_Type_Label: fif_geo.aat

Entity_Type_Definition:

Geologic features such as contacts and faults that bound rock-unit polygons (a complete description of each line type is available in the data table, lines.rel.)

Attribute:

Attribute_Label: L-TAG

Attribute_Definition:

Coded alpha-numerical symbol that relates arc to definition of line type in dictionary look-up table (lines.rel). For description of attributes in line classification dictionary, refer to USGS Open-File Report 97-861 (see Entity_and_Attribute_Detail_Citation)

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: C17

Enumerated_Domain_Value_Definition: Contact, landslide, location meets map accuracy standard

Enumerated_Domain:

Enumerated_Domain_Value: C19

Enumerated_Domain_Value_Definition: Contact, landslide, inferred, location may not meet map accuracy

standard

Enumerated_Domain:

Enumerated_Domain_Value: C29

Enumerated_Domain_Value_Definition: Contact, sedimentary, location meets map accuracy standard

Enumerated_Domain:
Enumerated_Domain_Value: C30
Enumerated_Domain_Value_Definition: Contact, sedimentary, location may not meet map accuracy standard

Enumerated_Domain:
Enumerated_Domain_Value: C31
Enumerated_Domain_Value_Definition: Contact, sedimentary, inferred, location may not meet map accuracy standard

Enumerated_Domain:
Enumerated_Domain_Value: C37
Enumerated_Domain_Value_Definition:
Contact, sedimentary, separates terraced alluvial units, location meets map accuracy standard

Enumerated_Domain:
Enumerated_Domain_Value: C49
Enumerated_Domain_Value_Definition: Contact, igneous, location meets map accuracy standard

Enumerated_Domain:
Enumerated_Domain_Value: C50
Enumerated_Domain_Value_Definition: Contact, igneous, location may not meet map accuracy standard

Enumerated_Domain:
Enumerated_Domain_Value: C51
Enumerated_Domain_Value_Definition: Contact, igneous, inferred, location may not meet map accuracy standard

Enumerated_Domain:
Enumerated_Domain_Value: C54
Enumerated_Domain_Value_Definition:
Contact, igneous, identity questionable, inferred, location may not meet map accuracy standard

Enumerated_Domain:
Enumerated_Domain_Value: C99
Enumerated_Domain_Value_Definition: Contact, igneous, scratch boundary

Enumerated_Domain:
Enumerated_Domain_Value: CL1
Enumerated_Domain_Value_Definition: Cartographic line, map boundary

Enumerated_Domain:
Enumerated_Domain_Value: F1
Enumerated_Domain_Value_Definition: Fault, high angle, slip unspecified, generic, location meets map accuracy standard

Enumerated_Domain:
Enumerated_Domain_Value: F7
Enumerated_Domain_Value_Definition: Fault, high angle, slip unspecified, location meets map accuracy standard

Enumerated_Domain:
Enumerated_Domain_Value: F14
Enumerated_Domain_Value_Definition:
Fault, high angle, strike slip, right lateral, inferred, location may not meet map accuracy standard

Enumerated_Domain:
Enumerated_Domain_Value: F177
Enumerated_Domain_Value_Definition: Fault, low angle, thrust slip, older over younger, location meets map accuracy standard

Enumerated_Domain:
Enumerated_Domain_Value: F178
Enumerated_Domain_Value_Definition:
Fault, low angle, thrust slip, older over younger, location may not meet map accuracy standard

Enumerated_Domain:

Enumerated_Domain_Value: F180
Enumerated_Domain_Value_Definition:
Fault, low angle, thrust slip, older over younger, inferred beneath mapped covering unit,
location may not meet map accuracy standard
Enumerated_Domain:
Enumerated_Domain_Value: F183N
Enumerated_Domain_Value_Definition:
Fault, low angle, thrust slip, older over younger, existence questionable, inferred beneath
mapped covering unit, location may not meet map accuracy standard
Enumerated_Domain:
Enumerated_Domain_Value: F19
Enumerated_Domain_Value_Definition:
Fault, high angle, slip unspecified, inferred beneath mapped covering unit, location may not
meet map accuracy standard
Enumerated_Domain:
Enumerated_Domain_Value: F193
Enumerated_Domain_Value_Definition:
Fault, low angle, thrust slip, older over younger, thrust scarp, location meets map accuracy
standard
Enumerated_Domain:
Enumerated_Domain_Value: F195N
Enumerated_Domain_Value_Definition:
Fault, low angle, thrust slip, older over younger, thrust scarp, identity questionable,
location may not meet map accuracy standard
Enumerated_Domain:
Enumerated_Domain_Value: F2
Enumerated_Domain_Value_Definition: Fault, high angle, strike slip, right lateral, location meets map accuracy
standard
Enumerated_Domain:
Enumerated_Domain_Value: F31
Enumerated_Domain_Value_Definition:
Fault, high angle, slip unspecified, generic, existence questionable, location may not meet
map accuracy standard
Enumerated_Domain:
Enumerated_Domain_Value: GF7
Enumerated_Domain_Value_Definition:
Geomorphic feature, topographic scarp, origin unknown, location may not meet map accuracy
standard
Enumerated_Domain:
Enumerated_Domain_Value: LT2
Enumerated_Domain_Value_Definition: Lineament, aligned topographic saddles, location may not meet map
accuracy standard
Attribute:
Attribute_Label: L-SYMB
Attribute_Definition:
stores appropriate line symbol value from the lineset geoscamp2.lin (included in the data
package)
Detailed_Description:
Entity_Type:
Entity_Type_Label: fif_str.pat
Entity_Type_Definition:
Geological point data includes site-specific information describing the types and the
orientation of bedding, foliation, and lineations. One annotation subclass is included in
the geologic points coverage, FIF_STR: anno.attitude displays the respective dip and plunge
values associated with individual point data.
Attribute:

Attribute_Label: P-SYMB

Attribute_Definition:

Coded integer value that relates point to cartographic point symbol in markerset geoscamp2.mrk

Attribute:

Attribute_Label: P-TAG

Attribute_Definition:

Coded alpha-numerical value that relates point entity to definition of point type in dictionary INFO table, points.rel. For description of attributes in point classification dictionary, refer to USGS Open-File Report 97-859 (see Entity_and_Attribute_Detail_Citation)

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: B2

Enumerated_Domain_Value_Definition: Bedding, inclined, sedimentary rocks

Enumerated_Domain:

Enumerated_Domain_Value: FN13

Enumerated_Domain_Value_Definition: Foliation, primary igneous, inclined

Enumerated_Domain:

Enumerated_Domain_Value: FN14

Enumerated_Domain_Value_Definition: Foliation, primary igneous, vertical

Enumerated_Domain:

Enumerated_Domain_Value: L1

Enumerated_Domain_Value_Definition: Lineation, origin not determined

Attribute:

Attribute_Label: P-DIP

Attribute_Definition: Dip of planar feature

Attribute:

Attribute_Label: P-STRIKE

Attribute_Definition: Azimuthal strike of planar feature

Attribute:

Attribute_Label: P-DIPDIR

Attribute_Definition: Azimuthal direction of dip of planar feature

Attribute:

Attribute_Label: P-PLUNGE

Attribute_Definition: Plunge of linear feature

Attribute:

Attribute_Label: P-BEARING

Attribute_Definition: Azimuthal direction of plunge of linear feature

Detailed_Description:

Entity_Type:

Entity_Type_Label: fif_ptsorn.pat

Entity_Type_Definition: Line ornamentation

Attribute:

Attribute_Label: P-TAG

Attribute_Definition:

Coded alpha-numerical value that relates point to definition of point type in dictionary INFO table, points.rel. For description of attributes in point classification dictionary, refer to USGS Open-File Report 97-859 (see Entity_and_Attribute_Detail_Citation)

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: FC2

Enumerated_Domain_Value_Definition: Fault attribute, strike slip arrows, right lateral

Attribute:

Attribute_Label: P-SYMB

Attribute_Definition:

Coded integer symbol that relates point to cartographic point symbol in markerset

geoscamp2.mrk

Detailed_Description:

Entity_Type:

Entity_Type_Label: fif_ldr.aat

Entity_Type_Definition: Annotation leaders

Attribute:

Attribute_Label: P-SYMB

Attribute_Definition:

Coded integer value (1) that relates arcs to cartographic line symbol in lineset geoscamp2.lin

Distribution_Information:

Distributor:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: U.S. Geological Survey Information Services

Contact_Address:

Address_Type: mailing address

Address: Box 25286 Denver Federal Center

City: Denver

State_or_Province: CO

Postal_Code: 80225

Country: USA

Contact_Voice_Telephone: 303-202-4700

Contact_Facsimile_Telephone: 303-202-4693

Distribution_Liability:

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This digital, geologic map database of the Fifteenmile Valley 7.5' quadrangle, 1:24,000 map-scale, and any derivative maps thereof, is not meant to be used or displayed at any scale larger than 1:24,000 (e.g., 1:12,000).

Metadata_Reference_Information:

Metadata_Date: 20010517

Metadata_Review_Date: 2001

Metadata_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: U.S. Geological Survey

Contact_Person: Pamela M. Cossette

Contact_Position: Geographer

Contact_Address:

Address_Type: mailing address

Address:

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West 904 Riverside Avenue
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Postal_Code: 99201-1087
Country: USA
Contact_Voice_Telephone: 509-368-3123
Contact_Facsimile_Telephone: 509-368-3199
Contact_Electronic_Mail_Address: pcossette@usgs.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: Version of June 8, 1994
Metadata_Access_Constraints: none
Metadata_Use_Constraints: none