Table 1. Names and brief description of the folders, subfolders, spatial data files, and other selected files included on this compact disc. All geospatial data are projected in UTM, Zone 12, NAD27, spheroid Clarke1866; units are in meters. NA = Not applicable, AGRC = Automated Geographic Reference Center, UGS = Utah Geological Survey (Dept. Natural Resources), USCB = U.S. Census Bureau

Folder	Subfolder	File	Description	Scale	Date	Agency	Internet Location for Updates
coverage	dikes	all files	ARC/Info coverage of igneous dikes	1:500,000	12/06/99	UGS	not available
coverage	utgeomap	all files	ARC/Info coverage of geologic map	1:500,000	12/06/99	UGS	not available
coverage	vcones	all files	ARC/Info coverage of volcanic (basaltic) cones	1:500,000	12/06/99	UGS	not available
e00	NA	contacts.e00	ARC/Info export file containing the geologic map	1:500,000	12/06/99	UGS	not available
e00	NA	dikes.e00	ARC/Info export file containing igneous dikes	1:500,000	12/06/99	UGS	not available
e00	NA	labann.e00	ARC/Info export file containing selected map labels	1:500,000	12/06/99	UGS	not available
e00	NA	vcones.e00	ARC/Info export file containing volcanic (basaltic) cones	1:500,000	12/06/99	UGS	not available
images	NA	*.tif	Logos	NA		UGS	not available
images	basemap	statemap	Georeferenced version of the Topographic Map of Utah	1:500,000	12/06/99	UGS	not available
images	plate2	PL2_larg.bmp	High resolution version of plate 2	NA	12/06/99	UGS	not available
images	plate2	PL2_med.bmp	Medium resolution version of plate 2	NA	12/06/99	UGS	not available
images	plate2	PL2_smal.bmp	Low resolution version of plate 2	NA	12/06/99	UGS	not available
images	plate2	plate2.zip	Zip file containing all three versions of plate2	NA	12/06/99	UGS	not available
shapes	cities	utcities	Shapefile of Utah cities and towns	unknown	10/20/98	USCB	http://ftp.census.gov/geo/www/gazetteer/places.html
shapes	contours	hpcon	Shapefile of topography	1:500,000	02/04/99	AGRC	http://www.its.state.ut.us/agrc/
shapes	county	aocbo	Shapefile of county boundaries	1:500,000	07/15/98	AGRC	http://www.its.state.ut.us/agrc/
shapes	county	statebnd	Shapefile of state boundary	1:500,000	12/06/99	UGS	not available
shapes	geomap	fm_abbrv.dbf	Map unit names that can be linked to coverage and themes	NA	12/06/99	UGS	not available
shapes	geomap	fm_compl.pdf	Complete list map unit names	NA	12/06/99	UGS	not available
shapes	geomap	units_colors	Text file of colors values for the geologic map and plate 2	NA	12/06/99	UGS	not available
shapes	geomap	units.avl	ArcView legend file	NA	12/06/99	UGS	not available
shapes	geomap/contacts	contacts	Line shapefile of the map units	1:500,000	12/06/99	UGS	not available
shapes	geomap/dikes	dikes	Line shapefile of igneous dikes	1:500,000	12/06/99	UGS	not available
shapes	geomap/faults	faults	Line shapefile of the faults	1:500,000	12/06/99	UGS	not available
shapes	geomap/faults	thrust_teeth	Line shapefile of the teeth for thrust faults	1:500,000	12/06/99	UGS	not available
shapes	geomap/geolines	geology	Line shapefile of map units, faults, markers, and gilsonite veins	1:500,000	12/06/99	UGS	not available
shapes	geomap/mapunits	mapunits	Polygon shapefile of the map units	1:500,000	12/06/99	UGS	not available
shapes	geomap/markers	markers	Line shapefile of the marker beds (Mahogany Shale)	1:500,000	12/06/99	UGS	not available
shapes	geomap/vcones	vcones	Point shapefile of volcanic (basaltic) cones	1:500,000	12/06/99	UGS	not available
shapes	geomap/veins	vein	Line shapefile of the gilsonite veins	1:500,000	12/06/99	UGS	not available
shapes	lat_long	graticul	Shapefile of Lat-Long tic	1:100,000	12/22/98	UGS	not available
shapes	lat_long	rslal	Shapefile of Lat-long grid	1:500,000	02/25/98	AGRC	http://www.its.state.ut.us/agrc/
shapes	mapindex	index10	Shapefile of 30' x 60' quadrangle index	1:500,000	09/16/98	AGRC	http://www.its.state.ut.us/agrc/
shapes	mapindex	index24	Shapefile of 7.5-minute quadrangle index	1:500,000	09/16/98	AGRC	http://www.its.state.ut.us/agrc/
shapes	plssgrid	rspls	Shapefile of the public land survey system grid w/o sections	1:500,000	09/12/97	AGRC	http://www.its.state.ut.us/agrc/
shapes	plssgrid	secgrid	Shapefile of the public land survey system grid w/ sections	1:500,000	07/10/97	original source unknown	
shapes	roads	mainroad	Shapefile of selected paved and gravel roads	1:100,000	12/06/99	UGS	not available
shapes	roads	trrds	Shapefile of all roads	1:100,000	10/02/98	AGRC	http://www.its.state.ut.us/agrc/

COMPACT DISC CONTENTS AND ACCESSING THE FILES

The *Digital Geologic Map of Utah* is the Utah Geological Survey's (UGS) first release of Lehi F. Hintze's 1980 *Geologic Map of Utah* in a Geographic Information Systems (GIS) format. This compact disc (CD) contains several spatial data files (ArcInfo coverage files and ArcView GIS shape files) of Utah geology, including map units, faults, marker beds, igneous dikes, volcanic (basaltic) cinder cones, and gilsonite veins. Also included on the CD are image files (*.BMP) that depict Plate 2 of the published paper map. These image files include the stratigraphic columns and cross sections from different regions of Utah. Basic geographic spatial data are also included so the user can display the geologic resource themes or layers with familiar geographic themes such as county boundaries, 1:24,000 and 1:100,000-scale quadrangle map indexes, township and range grid, latitude and longitude grid, and roads using GIS software. Most all geographic spatial data were obtained from the AGRC. Updates of the included spatial data, as well as additional data, are available from AGRC's web site at www.its.state.ut.us/agrc/. More than 400 megabytes of data are included on this CD. In addition to the spatial data and image files, supporting documents and the software—if needed—to display documents and spatial data are included. In addition to the spatial data files, several program, PDF, text, and database files are included to help the user view and better understand the type and quality of the spatial data the UGS is providing.

The spatial data, associated metadata, and image files are organized into four folders: (1) coverage, (2) e00, (3) images, and (4) shapes. These folders, except e00, are further organized into subfolders where the spatial data reside. The metadata files

(*.met) of the geologic theme (or coverage) and most geographic themes are in the subfolders that contain their respective spatial data. These files are briefly described below and are listed in table 1.

Several programs located in the <u>software</u> folder can be installed on your computer to display data and document files. ArcExplorer 1.1 (Aeclient.exe) lets users— who do not already have access to ArcInfo, ArcView GIS, ArcExplorer, or other GIS software— display ArcInfo coverage and ArcView GIS shapefiles. This file is a self-extracting installation file. To use ArcExplorer, the Aeclient.exe file must be installed on your computer. Please read the ArcExplorer 1.1 user guide (Aeuserg.pdf) for information on how to install ArcExplorer. This version of ArcExplorer 1.1 can only be used on computers with Windows 95/98 or Windows NT 4.0 operating systems. The user guide also contains information on how to use the software once it is installed. An import utility file (Import71.exe) is also included. This utility will convert ArcInfo export files "e00" into ArcInfo coverage files. Additional information and help on using ArcExplorer 1.1 or the import utility may be obtained from the Environmental Systems Research Institute, Inc. (ESRI) web site at www.esri.com.

Adobe Acrobat Reader 4.05 for Windows 95/98 (rs40eng.exe) is also included on this CD in the <u>software</u> folder, and is needed to view PDF documents. Users need to install Acrobat Reader on their computers before it can be used. Users with an operating system other than Windows can download the appropriate version of the reader from Adobe's web site at www.adobe.com.

The UGS is providing ArcExplorer, the ArcExplorer Import Utility, and Acrobat Reader as a convenience; this does not imply a product endorsement. In addition, the

UGS does not provide any support for this software. Please contact the software companies for help or additional information regarding their products.

Supporting documents such as this document (map179dm.pdf), the ArcExplorer user guide (aeuserg.pdf), and the Acrobat help file (reader.pdf) reside in the docs folder. Other documents needed for the CD menu system also reside in the docs folder.

DESCRIPTION OF DIGITAL FILES

Below is a description of the ArcInfo coverage files. A listing and brief description of the ArcView GIS shapefiles and other selected files are shown in table 1. Metadata files (*.met) are included for most of the spatial datasets and are in the subfolders that contain their respective coverage or theme. Most of the basic geographic spatial data files were obtained from the AGRC and updates of these files may be downloaded from their web site at www.its.state.ut.us/agrc/. The Internet addresses to check for updates are also provided in table 1. The projection of the geospatial data included on this compact disc is UTM zone 12, North American Datum 1927, and spheroid Clarke 1866. Units are in meters.

Description of ArcInfo Coverage

The coverage folder contains three subfolders: utgeomap, dikes, and vcones. These folders contain the coverage for the *Digital Geologic Map of Utah* (utgeomap folder), igneous dikes (dikes folder), and volcanic cinder cones (vcones folder). Each

coverage is in a PC ARC/INFO format. ArcView GIS and ArcExplorer can read this coverage; however, your computer may lock up when ArcExplorer tries to display the coverage. We recommend that you use shapefiles with ArcExplorer.

The e00 folder contains four export files that comprise the ArcInfo coverage of the *Digital Geologic Map of Utah* and selected map labels. These files must be imported, using the Import71.exe application that is included on the CD or other import application, before they can be read by GIS software. The contact.e00 file includes all of the geologic map features except igneous dikes and volcanic cinder cones as a single coverage. The dikes.e00 and vcones.e00 files contain the coverages for igneous dikes and volcanic (basaltic) cinder cones, respectively. The labann.e00 file contains the labels for selected map units. After importing the contact.e00 file, the coverage will contain a polygon attribute table with the following attribute and topological items generated by ArcInfo**:**

FORMATION**:** width 5, type C

(map unit codes; see the file in shapes/geology/fm_abbrv.dbf for an explanation

of the map units codes)

The coverage from the contacts.e00 file will also contain an arc attribute table with the following items:

L_TYPE: width 12, type C

(contact, fault, marker bed, other, vein)

MODIFIER: width 20, type C

(gilsonite, mapboundary, normal, shoreline, thrust, water boundary)

ACCURACY: width 15, type C

(NA, certain, concealed, inferred)

FAULT_CON: width 4, type C

(NA, Yes, No)

SOURCE: width 2, type I

(0, 2)

LINE_DESCRIP: width 47, type C

(this field is a concatenation of the previous fields)

The labann.e00 file contains text labels for most polygons that have an area larger than 15 square kilometers, as topologically calculated under the UTM zone 12 projection. This annotation coverage was created for use in ArcView, ArcExplorer, or other GIS software.

Description of Shapefiles

ArcView shapefiles that comprise the *Digital Geologic Map of Utah* include line (Arc) and polygon files of the map units, faults, marker beds (the Mahogany Shale of the Green River Formation), and gilsonite veins. Other shapefiles include basis geographic spatial

data such as roads, map index, and coordinate grids. These and other selected files are briefly described in table 1. The metadata files also contain information that is helpful to users and are in the subfolders that contain their respective coverage or theme.