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

GEOINDEX database on geologic maps accessible using GSSEARCH search and retrieval software

By H. Kit Fuller

and Gregory B. Gunnells

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This report is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards and stratigraphic nomenclature.

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INTRODUCTION

GEOINDEX is the U.S. Geological Survey (USGS) database of bibliographic information for published geologic maps. Bibliographic data in GEOINDEX is the same data (although more up-to-date) as that published in the USGS Geologic Map Indexes (GMI's) for all 50 States and several territories. The GMI's and GEOINDEX together are the primary USGS source of geologic-map information for the United States. As of June 1991, the database contains 20,659 records, which represent geologic maps published from 1842 to 1991.

GEOINDEX exists for two purposes: (1) To support searching of bibliographic data on published geologic maps in the United States, and (2) to support and facilitate the updating of published USGS Geologic Map Indexes.

Corrections to GEOINDEX data and suggestions and helpful criticism on this documentation are welcome and should be addressed to U.S. Geological Survey, Geologic Inquiries Group, Mail Stop 907, National Center, Reston, VA 22092; phone (703) 648-4383.

Geologic Map Indexes are available free from the U.S. Geological Survey, Books and Open-File Reports, Box 25425, Federal Center, Denver, CO 80225; phone (303) 236-7476.

GSSEARCH is a software system developed by the USGS for searching and retrieving information from fielded databases. For further information about the software contact USGS, Office of Scientific Publications, Mail Stop 904, National Center, Reston, VA 22092.

DISCLAIMERS

Although this program has been used by the U.S Geological Survey, no warranty, expressed or implied, is made by the USGS as to the accuracy and functioning of the program and related program material, nor shall the fact of distribution constitute any such warranty, and no responsibility is assumed by the USGS in connection therewith.

This report is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards. Any use of trade, product, or firm names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

LIST OF GEOINDEX AND GSSEARCH FILES INCLUDED IN OFR 91-575-B

File name	Date	Size	Description
GEOINDEX.GBG	7-10-91	7774315	GEOINDEX database
GEOINDEX.LV1	7-10-91	4998424	First level index
GEOINDEX.LV2	7-10-91	2284832	Second level index
GEOINDEX.LV3	7-10-91	2640	Third level index
GEOINDEX.LV4	7-10-91	180	Fourth level index
GEOINDEX.CFG	9-26-91	1453	Configuration data
GEOINDEX.HLP	9-26-91	27779	GEOINDEX help files
HELP.GBG	9-26-91	9342	GSSEARCH help files
GSSEARCH.EXE	10-09-91	273708	GSSEARCH software
README.1ST	11-04-91	10568	Start-up information
SYSTEM.DOC	11-04-91	35131	Documentation
INSTALL.HOW	10-16-91	1763	How to install

HARDWARE REQUIREMENTS

IBM-compatible microcomputer (AT style or newer recommended).
Hard disk with 16 megabytes (16,000,000 bytes) space available.
High density 5.25 inch floppy disk drive.
EGA color monitor.
512 K RAM.
System configuration: 20 files, 20 buffers.

SOFTWARE REQUIREMENTS

DOS 3.20 (or higher).

INSTALLATION INSTRUCTIONS

The GEOINDEX and GSSEARCH files named above were copied to floppy disks breaking the three largest files into 1.2 megabyte partial files. To load the files onto your hard disk you need about 16 megabytes of space available (16,000,000 bytes) on a single hard disk partition.

To install, type CD\
to begin at the root directory.

Then type [A]:INSTALL[A] [A] [C] \GEOINDEX

where [A, B, D, or I] is the high density floppy drive from which data is copied, and [C or D, etc.] is the hard disk with 16 mBytes available, and \GEOINDEX is the new directory created for the system. Use GEOINDEX as the directory name.

INSTALLA installs from floppy drive A.
INSTALLB installs from floppy drive B.
INSTALLD installs from floppy drive D.
INSTALLI installs from floppy drive I.

Follow the prompts, loading the floppy disks in numerical order.

When the restore is complete you are ready to go!

To search you must be in the \GEOINDEX directory, as you are immediately after installing the system. When in the \GEOINDEX directory, start the system by typing GSSEARCH GEOINDEX C (or the hard drive letter onto which this system was copied).

ACKNOWLEDGMENTS

This product is the result of decades of data compilation and years of computer programming, involving many, many people. Those directly involved with the planning, development, and realization of this product include John M. Aaron, Virginia L. Major, Jerry McFaul, Dave Traudt, Diane Weixler, George Knapp, Darwin Alt, Steve Schindler, Tom Walsh, Wai-See Moy, Lynn McIntosh, Morrow Eister, Yula Sakss, Ann France, Beth Weisnet, Jane Jenness, Randy Orndorff, Valerie Pearson, and Tammy Polk. Their contributions (time, ideas, skills, and encouragement) are greatly appreciated. Of course, any errors (whether of commission or omission) are the fault of the authors, who will seek to correct them as you bring them to their attention.

GEOINDEX DOCUMENTATION

FIELDS IN THE GEOINDEX DATABASE

Field name	Data type	Width	Searchable?
ID	numeric	4	Y
State	character	20	Y
Author	character	180	N
Year	numeric	4	Y
Title	character	240	Y
County	character	60	Y
Publisher	character	60	Y
Series	character	60	Y
Emphasis	character	60	N
Area	numeric	8	N
Nlat	numeric	8	Y
Slat	numeric	8	Y
Wlong	numeric	8	Y
Elong	numeric	8	Y
Clat	numeric	8	Y
Clong	numeric	8	Y
Depository	character	60	N
Geology	character	10	N
Plate	character	30	N
FIPS	numeric	2	N
Scale	numeric	8	Y
SUBID	numeric	2	N
Ibound	numeric	6	N
Ispan	numeric	6	N
Remarks	character	30	N

DESCRIPTION OF GEOINDEX FIELDS

Each GEOINDEX record contains up to 25 kinds of data, organized into separate fields as described below. In the database, fields with no data are either left blank or filled with a zero (if numeric). The fields are described below in the order in which they appear in the database.

ID--The identification number within a USGS Geologic Map Index for a publication containing one or more geologic maps. Maps that extend beyond a State boundary are also indexed in the other State(s) in which they occur, with different ID's in each State.

STATE--The State or U.S. Territory in which lies the area mapped. A single State is entered for each record. A map that overlaps into adjacent States would be entered as a separate record in each State. In addition to States, the District of Columbia, Guam, American Samoa, Puerto Rico, and the U.S. Virgin Islands are included in GEOINDEX.

AUTHOR--Authors' names in the order they appear on the publication, shown in USGS bibliographic style. Where authorship of a map in a book- or journal-style publication differs from that of the publication, the publication authorship is cited. In some cases authorship is not clear--for example, in some journals, monographs, and guidebooks. Where individual articles show no authorship, author data would come from the next higher level of organization of the publication (ie. the section, chapter, part, fieldtrip, etc.) Citation of editors, compilers, etc., in the author field is only done in absence of a cited author.

YEAR--The four-digit year in which the publication was published. If the date on the map or report is not the same as the year of publication, the date on the map is generally used.

TITLE--Title that corresponds to author data as shown on the publication. A title from a subsection of a publication may be followed by the word "in" and the title of the publication, a common occurrence with guidebooks and other multi-chapter reports.

COUNTY--The county or counties in which lies the area mapped. If data would overrun the 60-character limit, counties with the least area mapped may be deleted, or a general term (ie. northeastern) may be used instead of county names. A record for a map that overlaps into other States shows only the counties in that State. (i.e. A map of Uintah County, Utah, and Moffat County, Colorado, would be represented by a Colorado

record that would list Moffat in the county field, and a Utah record that would list Uintah in the county field.)

PUBLISHER--The organization who published or released the publication: generally a government agency, professional society, or commercial publisher, although universitites and even individuals have published geologic maps.

SERIES--The form of publication: generally the name of a series or group of similar publications, or the name of a journal (including volume, number, and pages, for recent references.)

EMPHASIS--Key topical terms that describe the kinds of geologic information conveyed on the map or in the publication. As many emphasis terms as apply are used, within a limit of 60 characters.

AREA--The calculation in square kilometers of the area of geologic mapping (not necessarily the area within the neat line of the map). Calculations, formerly calculated by computer from digitized boundaries, are now estimated during initial compilation and rounded to an appropriate number of significant figures. Accuracy varies; areas calculated by computer (no longer done) show more than an appropriate number of significant figures. Areas are now measured or estimated as each map is indexed; accuracy is plus or minus 5%. Smallest area is 1; areas of 0 indicate general publications whose map boundaries are not compiled and other special cases. Where a map includes parts of more than one State, the areas within each State are calculated separately and entered in the proper reference.

LAT and LONG--Latitudes represent the northernmost extent of the area mapped, southernmost extent, and a central point halfway between the extremes; longitudes represent the westernmost extent of the area mapped, easternmost extent, and a central point halfway between the extremes. In the "dddmmsss" format, the first two or three places represent degrees, the next two places represent minutes, and the last three places represent seconds (to the tenth of a second). (i.e. 41 degrees, 7.5 minutes would be written 4107300; 121 degrees and 45 minutes would be written 12145000.)

All latitudes are north of the equator (north latitude). All longitudes are west of the Greenwich Meridian (west longitude) except for a very few records in far western Alaska. Boundaries of very small areas are indicated by point symbols; for these records the latitude values are equal and the longitude values are equal.

Latitude and longitude values were formerly calculated by computer from digitized boundary data; these older records may have too many significant figures, and may incorporate error introduced in the digitizing process. Latitude and longitude values for records entered since 1980 are read from or estimated

from the geologic maps, and are accurate to at least the nearest half-minute. Records may lack latitude and longitude data for many miscellaneous reasons.

DEPOSITORY--Shown in parentheses, the abbreviations for USGS offices and State agencies to which were sent a copy of the USGS Open-File Report or Water-Resources Investigation Report. This field is only used in records of these two types of publication, and then only where these data are available. See Appendix I for USGS depository abbreviations and addresses; State survey addresses are shown in Appendix III.

GEOLOGY--A kind of broad emphasis category; all records in GEOINDEX now have "geology" in this field.

PLATE--The plate, sheet, or figure number of the geologic map, in some cases accompanied by a short title (to differentiate one map from another within a publication.)

SCALE--The denominator of a "representative fraction" scale, shown without punctuation. (i.e., inch-to-the-mile scale, 1:63,360, is shown 63360.)

FIPS--The Federal Information Processing Standard two-digit code for the State in which lies the area mapped. When used with ID and SUBID, identifies an individual map. See Appendix II for a list of FIPS codes used in GEOINDEX.

IDSUB--A second-level identification number used to differentiate one map from another within a publication.

IBOUND--The code that assigns a boundary number, linking the boundary of the area mapped to the bibliographic data in a GMI. Consists of two parts: up to 4 digits of ID data, followed by two digits of SUBID data. (For example, reference 12, which has only one map, would have an IBOUND of 1201; the third map in reference 1285 would have an IBOUND of 128503.)

ISPAN--A code used where more than one map shares a boundary on a published GMI. For this to occur the maps must be of the same area and be within the same scale range. This improves legibility of GMI index maps in areas with many maps. References within each span formerly were all in a numerical sequence; new references added to an old span will fall outside this sequence.

REMARKS--Other information about this map or report, or about related publications (for example, reports superseded or simultaneously published.) The standard phrase "also other maps" indicates that additional new geologic maps are in a publication but are not indexed individually.

WHAT MAPS ARE INCLUDED IN GEOINDEX?

- Geologic maps of areas in the United States and its territories.

- Geologic maps published by the USGS, other Federal agencies, State geological surveys, professional societies, universities, and commercial entities.

The maps above are evaluated, and those that meet the following criteria are indexed:

The map must be published. No theses, dissertations, open-file reports by State geological surveys*, or other unpublished maps are indexed. USGS Open-File Reports, however, are indexed.

The map must have geologic units and explain them in terms of lithology, stratigraphy, and age.

The map must be more detailed than the primary State geologic map (commonly 1:250,000 or 1:500,000 scale).

The map must be an original compilation, not a generalized version or reuse of a previously published map. Formal publication of a map that previously appeared in a thesis, dissertation, or an open-file report by a State survey is considered an original compilation.

The map must have scale and good geographic control such as latitude and longitude, township and range, a good base map, or an index map showing the precise location of the area mapped.

*The only exception to this rule is the series of Arizona Geological Survey open-file reports.

GSSEARCH DOCUMENTATION

GSSEARCH appears as a series of screens, each of which presents options from which you choose your course of action. GSSEARCH was developed to maximize search speeds, search options, and simplicity. You will be moving a highlight bar to select from options available, pressing ENTER to select your choice. Most users will not need to read further to understand the system, but will be fully capable after a few minutes of experimentation.

PRIMARY QUERY SCREEN

The first screen to appear is the blue-framed "primary query screen," where the basic program options appear as choices along the bottom.

ADD--To begin or continue building a query.

EDIT--To modify a condition.

CLEAR--To erase old conditions from the system.

SEARCH--To search on conditions in the database.

DISPLAY--To display results of a search.

OUTPUT--To send results of a search to printer or diskette.

QUIT--To quit GSSEARCH and exit to DOS.

A query begins by highlighting ADD and pressing ENTER. This puts you in the "index selection window."

INDEX SELECTION WINDOW

This window lists searchable fields, within which you set up your search conditions.

As you cursor down the list of fields, you can press F1 for help in using that data to define your search conditions.

To select an index press ENTER, and you open the "term selection window."

TERM SELECTION WINDOW

This window show the terms available for searching in the index you have chosen.

As you type each character, the index jumps to the nearest term that matches your character string so far, and highlights it. You may also move the highlight bar up and down with the up and down arrows.

When you have the term highlighted, you have four ways to proceed:

Press ENTER to select the term.

Press > to search on terms greater than or equal to...

Press < to search on terms less than or equal to...

Press ~ to begin a range search; select the second term and press ENTER

Now your search condition is ready, and you have moved back to the primary query screen. You now can ADD, EDIT, CLEAR, SEARCH, or QUIT. (DISPLAY and OUTPUT only function after a search.)

To search, press S and ENTER.

To display, press D and ENTER.

To add another condition to the search, highlight ADD, press ENTER, and follow the steps above.

When using more than one condition, you will be asked to join the conditions with AND, ADJ, OR, or NOT.

AND will select records that meet both conditions.

ADJ will select records where both conditions are adjacent.

OR will select records that meet either condition.

NOT will select records that meet the first condition, but not the second.

DISPLAY SCREENS

The first display screen presents each record on a single line in a greatly abbreviated form; this is the "summary display screen" in which you can quickly scan your retrieved records using up and down arrows and PGUP and PGDN. Fifteen records are displayed per summary display screen. The highlight bar moves to select a single record. To see the selected record in the "full record display screen" press ENTER.

ENTER toggles back and forth between the full record and summary display screens.

The "full record display screen" shows all fields in a record, often overruning the length of the screen; use the down arrow key to see the last fields in each record. PGDN and PGUP will move you to the next record and previous record. To return to the summary screen, press ENTER.

Press ESC to return to the primary query screen, where you can begin a new search, modify the search you just performed, or quit.

GSSEARCH TIPS

HELP is available throughout by pressing the F1 key. "Database help" is information on GEOINDEX; "system help" refers to GSSEARCH.

ESC will take you back one screen at a time; if you find yourself in the wrong index, or ahead of yourself somehow, press ESC to back up.

You can output retrieved records at any time to a printer or to a floppy or hard disk by pressing the F8 key and following the prompts.

OTHER INFORMATION

WHERE TO BUY GEOLOGIC MAPS

USGS PUBLICATIONS

USGS maps are available from:

USGS Map Sales
Box 25286 Federal Center
Denver, CO 80225
(303) 236-7477

USGS book products and open-file reports are available from:

USGS Books and Open-File Reports
Box 25425 Federal Center
Denver, CO 80225
(303) 236-7476

STATE PUBLICATIONS

Maps published by State geological surveys are available directly from these agencies, NOT from the USGS. A current list of State sources of State geological survey publications (as of September 1991) is included in the Appendix.

OTHER PUBLISHERS

For the address and phone number of other publishers, please ask a local librarian for information or contact

USGS Geologic Inquiries Group
907 National Center
Reston, VA 22092
(703) 648-4383

WHERE TO BORROW GEOLOGIC MAPS

Many older maps are out of print--no longer for sale. These maps should still be available in libraries, along with most of the more recent maps.

The best libraries with collections of geologic maps would be at State geological surveys and at universities and colleges. A local librarian can help direct you to one of these larger collections near you.

APPENDIX I

USGS DEPOSITORIES--USGS offices where selected USGS Open-File Reports and/or Water-Resources Investigations Reports may be inspected. State geological survey depositories are listed in Appendix III.

A USGS Earth Science Information Center, 4230 University Drive, Room 101, Anchorage, AK 99508-4664

Da USUS Library, Building 20, Room C2002, Federal Center, Denver, CO 80225

Db USGS Earth Science Information Center, 169 Federal Building, 1961 Stout Street, Denver, CO 80294

F USGS Library, 2255 North Gemini Drive, Flagstaff, AZ 86001

LA USGS Earth Science Information Center, Federal Building, Room 7638, 300 North Los Angeles Street, Los Angeles, CA 90012 (Closed.)

M USGS Library, 345 Middlefield Road, Menlo Park, CA 94025

NC USGS Library, Room 4A100, 950 National Center, 12201 Sunrise Valley Drive, Reston, VA 22092

S USGS Earth Science Information Center, 678 U.S. Courthouse, West 920 Riverside Avenue, Spokane, WA 99201

SF USGS Earth Science Information Center, 504 Customhouse, 555 Battery Street, San Francisco, CA 94111

T USGS Public Inquiries Office, Room 1C45, Federal Building, 1100 Commerce Street, Dallas, TX 75242 (Closed.)

U USGS Earth Science Information Center, 8105 Federal Building, 125 South State Street, Salt Lake City, UT 84138

Wa USGS Earth Science Information Center, U.S. Department of the Interior Building, Room 2650, 1849 C Street NW, Washington, DC 20244

Wb U.S. Department of Interior, Natural Resources Library, Gifts and Exchange Section, 18th and C Streets, NW, Washington, DC 20240

APPENDIX II

FIPS--The Federal Information Processing Standard two-digit code for U.S. States and Territories are shown below.

1	Alabama
2	Alaska
4	Arizona
5	Arkansas
6	California
8	Colorado
9	Connecticut
10	Delaware
11	District of Columbia
12	Florida
13	Georgia
14	Guam
15	Hawaii
16	Idaho
17	Illinois
18	Indiana
19	Iowa
20	Kansas
21	Kentucky
22	Louisiana
23	Maine
24	Maryland
25	Massachusetts
26	Michigan
27	Minnesota
28	Mississippi
29	Missouri
30	Montana
31	Nebraska
32	Nevada
33	New Hampshire
34	New Jersey
35	New Mexico
36	New York
37	North Carolina
38	North Dakota
39	Ohio
40	Oklahoma
41	Oregon
42	Pennsylvania
44	Rhode Island
45	South Carolina
46	South Dakota
47	Tennessee
48	Texas
49	Utah
50	Vermont

51	Virginia
52	U.S. Virgin Islands
53	Washington
54	West Virginia
55	Wisconsin
56	Wyoming
72	Puerto Rico

APPENDIX III

SOURCES OF STATE GEOLOGICAL SURVEY PUBLICATIONS--State offices that distribute publications of State geological surveys. Most of these offices also are depositories for selected USGS Open-File Reports.

Alabama Geological Survey, Box O, University, AL 35486. (205) 349-2852

Alaska Division of Geological and Geophysical Surveys, 794 University Avenue, Suite 200, Fairbanks, AK 99709-3645. (907) 474-7147

Arizona Geological Survey, 845 North Park Avenue, Suite 100, Tucson, AZ 85719. (602) 882-4795

Arkansas Geological Commission, Vardelle Parham Geology Center, 3815 West Roosevelt Road, Little Rock, AR 72204. (501) 324-9165

California Division of Mines and Geology, 1416 Ninth Street, Room 1341, Sacramento, CA 95814. (916) 445-1923

Colorado Geological Survey, 1313 Sherman Street, Room 715, Denver, CO 80203. (303) 866-2611

Connecticut Department of Environmental Protection, Maps and Publication Sales, Room 555, 165 Capital Avenue, Hartford, CT 06106. (203) 566-7719

Delaware Geological Survey, University of Delaware, DGS Building, Newark, DE 19716. (302) 451-2833

Florida Geological Survey, 903 West Tennessee Street, Tallahassee, FL 32304-7700. (904) 488-9380

Georgia Geologic Survey, Department of Natural Resources, 19 Martin Luther King, Jr., Drive, S.W., Room 406A, Atlanta, GA 30334. (404) 656-3214

Hawaii Division of Water Resource Management, P.O. Box 373, Honolulu, HI 96809. (808) 548-7533

Idaho Geological Survey, Room 332, Morrill Hall, University of Idaho Campus, Moscow, ID 83843. (208) 885-7991

Illinois Geological Survey, Natural Resources Building, 615 Peabody Drive, Champaign, IL 61820. (217) 333-4747

Indiana Geological Survey, 611 North Walnut Grove,
Bloomington, IN 47405. (812) 855-7636

Iowa Geological Survey Bureau, 123 North Capitol,
Iowa City, IA 52242. (319) 335-1575

Kansas Geological Survey, 1930 Constant Avenue,
University of Kansas, Lawrence, KS 66046. (913) 864-3965

Kentucky Geological Survey, 104 Mining and Mineral
Resources Building, University of Kentucky, Lexington, KY 40506.
(606) 257-3896

Louisiana Geological Survey, University Station, Box G,
Baton Rouge, LA 70893. (504) 388-5320

Maine Geological Survey, State House Station 22,
Augusta, ME 04333. (207) 289-2801

Maryland Geological Survey, 2300 St. Paul Street,
Baltimore, MD 21218. (301) 554-5505

Massachusetts Environmental Affairs Executive Office,
State Geologist, 100 Cambridge Street, 20th Floor,
Boston, MA 02202. (617) 727-9800, X213

Michigan Department of Natural Resources,
Information Services Center, Box 30028, Lansing, MI 48909.
(517) 373-1220

Minnesota Geological Survey, 2642 University Avenue,
St. Paul, MN 55114-1057. (612) 627-4782

Mississippi Department of Environmental Quality,
Office of Geology, Jackson, MS 39296. (601) 961-5523

Missouri Department of Natural Resources,
Division of Geology and Land Survey, 111 Fairgrounds Road,
P.O. Box 250, Rolla, MO 65401. (314) 368-2125

Montana Bureau of Mines and Geology,
c/o Montana Tech Publications Department, Butte, MT 59701.
(406) 496-4167

Nebraska Geological Survey, Conservation and Survey Division,
113 Nebraska Hall, University of Nebraska,
Lincoln, NE 68588-0517. (402) 472-7523

Nevada Bureau of Mines and Geology, Publications Office,
University of Nevada, Reno, NV 89557-0088. (702) 784-6691

University of New Hampshire, Department of Earth Sciences, Geology Unit, 117 James Hall, Durham, NH 03824. (603) 862-3160

New Jersey Geological Survey, Division of Water Resources, 29 Arctic Parkway, Box 029, Trenton, NJ 08625. (609) 292-1185

New Mexico Bureau of Mines and Mineral Resources, Campus Station, Socorro, NM 87801. (505) 835-5410

New York State Geological Survey, Room 3140, Cultural Education Center, Publication Unit, Albany, NY 12230. (518) 474-5816

North Carolina Geological Survey, P.O. Box 27687, Raleigh, NC 27611. (919) 733-2423

North Dakota Geological Survey, 600 East Boulevard Avenue, Bismark, ND 58505-0840. (701) 224-4109

Ohio Division of Geological Survey, Ohio Department of Natural Resources, 4383 Fountain Square Drive, Columbus, OH 43224-1362. (614) 265-6605

Oklahoma Geological Survey, University of Oklahoma, Energy Center, 100 East Boyd Street, Norman, OK 73019-0628. (405) 325-3031

Oregon Department of Geology and Mineral Industries, 910 State Office Building, Portland, OR 97201-5528. (503) 229-5580

Pennsylvania Bureau of Topographic and Geologic Survey, P.O. Box 2357, Harrisburg, PA 17102. (717) 787-2169

Puerto Rico Department of Natural Resources, Geology Division, P.O. Box 5887, Puerto de Tierra, San Juan, PR 00906. (809) 724-8774

University of Rhode Island, Department of Geology, Green Hall, Kingston, RI 02881. (401) 792-2265

South Carolina Geological Survey, State Development Board, 5 Geology Road, Columbia, SC 29210-9998. (803) 737-9440

South Dakota Geological Survey, USD Science Center, Vermillion, SD 57069-2390. (605) 677-5227

Tennessee Division of Geology, Department of Conservation, 701 Broadway, Nashville, TN 37243-0445. (615) 742-6706

Texas Bureau of Economic Geology, University of Texas, University Station, Box X, Austin, TX 78712. (512) 471-1534

Utah Geological and Mineral Survey, 2363 Foothill Drive,
Salt Lake City, UT 84109-1491. (801) 467-7970

Vermont State Geologist, 103 South Main Street, Center Building,
Waterbury, VT 05671-0301. (802) 244-5164

Virginia Division of Mineral Resources, Box 3667,
Charlottesville, VA 22903. (804) 293-5121

U.S. Virgin Islands Water Resources Research Center
Caribbean Research Institute
University of the Virgin Islands
St. Thomas, Virgin Islands 00802. (809) 776-9200 ext.1252

Washington Division of Geology and Earth Resources,
Department of Natural Resources, Mail Stop PY-12,
Olympia, WA 98504. (206) 459-6372

West Virginia Geological Survey, P.O. Box 879,
Morgantown, WV 26507-0879. (304) 594-2331

Wisconsin Geological and Natural History Survey,
Map and Publications Sales, 3817 Mineral Point Road,
Madison, WI 53705. (608) 263-7389

Geological Survey of Wyoming, P.O. Box 3008, University Station,
Laramie, WY 82071. (307) 766-2286

Thank you for using GEOINDEX. Comments, corrections, and other feedback is welcome.

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U.S. Geological Survey
Geologic Inquiries Group
907 National Center
Reston, VA 22092
(703) 648-4383