

New Publications of the U.S. Geological Survey

IMPORTANT ANNOUNCEMENT FOR SUBSCRIBERS

Effective with the July-September 2003 issue, the U.S. Geological Survey will no longer print and distribute the quarterly version of "New Publications of the U.S. Geological Survey." The July-September 2003 and October-December 2003 issues will be released online through the USGS at <http://pubs.usgs.gov/publications/>

Comments concerning this change may be sent to the U.S. Geological Survey, 903 National Center, Reston, VA 20192.

Lists 1137–1139—Publications issued April–June 2003

AVAILABILITY OF U.S. GEOLOGICAL SURVEY CATALOGS

These permanent catalogs, as well as some others, are available under the conditions indicated below from USGS Information Services, Box 25286, Federal Center, Denver, CO 80225. A \$5 handling charge is applicable on each order. The catalogs are also available over the counter at any of the U.S. Geological Survey offices that sell books.

Permanent catalogs “Publications of the Geological Survey, 1879–1961” and “Publications of the Geological Survey, 1962–1970” may be purchased in paperback book form for \$6.

Permanent catalog “Publications of the U.S. Geological Survey, 1971 through 1981” may be purchased in paperback book form (two volumes, publications listing and index) for \$15.

Supplements for 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, and 2000 may be purchased in paperback book form and are priced as follows: 1982, \$3; 1983, \$3; 1984, \$3.25; 1985, \$3.75; 1986, \$4.25; 1987, \$4; 1988, \$3.75; 1989, \$4; 1990, \$4.50; 1991, \$4.25; 1992, \$5; 1993, \$7.50; 1994, \$7.50; 1995, \$7.50; 1996, \$7.50; 1997, \$7.50; 1998, \$7.50; 1999, \$7.50; 2000, \$7.50. The 2001 and 2002 Annual Supplements are free and available online only at <http://pubs.usgs.gov/publications/>.

“New Publications of the U.S. Geological Survey” is also available electronically through the USGS at <http://pubs.usgs.gov/publications/>.

The U.S. Geological Survey Publications Data Base includes comprehensive bibliographic information on USGS reports and maps published from 1880 to the present and references for non-USGS publications with USGS authors published from 1983 to date—a total of approximately 110,000 publications. Free public access to the data base is provided as a public service by the U.S. Geological Survey at <http://usgs-georef.cos.com> and through the USGS home page at <http://www.usgs.gov>.

**U.S. Department of the Interior
U.S. Geological Survey**

New Publications of the U.S. Geological Survey

Lists 1137-1139 —Publications issued April–June 2003

**Any use of trade, product, or firm names in this publication
is for descriptive purposes only and does not imply
endorsement by the U.S. Government**

NOTICE

The U.S. Geological Survey (USGS) will no longer print copies of the monthly, quarterly, and annual *Mineral Industry Surveys* for mailing list distribution. The report will continue to be available on the USGS Web site at <http://minerals.usgs.gov/minerals>.

If you would like to receive e-mail notification for future issues of the *Mineral Industry Surveys*, instructions are provided at <http://minerals.usgs.gov/minerals/pubs/listservices.html>.

NOTICE

Effective April 30, 2003, the Global Land Information System (GLIS) Web site will no longer be available. EarthExplorer, which now supports the Macintosh platform, replaces GLIS as the USGS tool for querying and ordering satellite images, aerial photographs, and cartographic products.

For more information on how to order these products, check the EarthExplorer Web site at <http://earthexplorer.usgs.gov> or contact your nearest Earth Science Information Center (ESIC). To locate the nearest ESIC, call 1-800-ASK-USGS or visit <http://www.usgs.gov>.

CONTENTS



New Publications of Special Interest.....	2
---	---



Formal Reports	4
Digital Data Series.....	4
Professional Papers	*
Bulletin.....	5
Water-Supply Papers	*
Circulars	5
Techniques of Water-Resources Investigation	*
General Interest Publications	*
Miscellaneous and Special Books	6
Geographic Names Information System	6
Catalog.....	6
Other Special Books	*
Fact Sheets	6



Minerals Information Periodicals.....	7
---------------------------------------	---



Informal Reports.....	8
Water-Resources Investigations Reports	8
Open-File Reports	11
Reports Available Only Through USGS Information Services	11
Reports Available Only Through Certain USGS Field Offices	*



Thematic Maps and Charts	22
Geologic Quadrangle Map.....	22
Miscellaneous Investigations Series Maps	*
Quaternary Geological Atlas of the United States	*
Geologic Investigations Series	22
Circum-Pacific Map Series.....	*
Miscellaneous Field Studies Maps	23
Special Geologic Maps	*
Hydrologic Investigations Atlas	*
Special Map	*



Outside Publications	24
Articles and Reports	24
Abstracts.....	44



Topographic Maps	62
------------------------	----



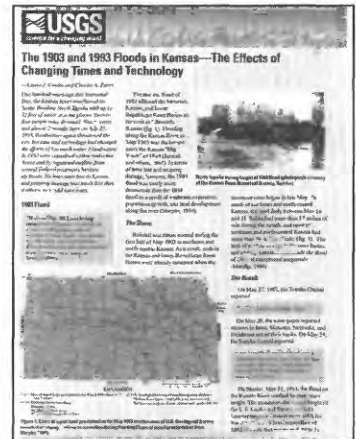
Ordering Forms and Information	following 72
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* No new publications in this series for this quarter.

Fact Sheet 0019-03

The 1903 and 1993 floods in Kansas; the effects of changing times and technology, by L. J. Combs and C. A. Perry. 2003. 4 p. Available on the web at <http://ks.water.usgs.gov/Kansas/pubs/fact-sheets/fs.019-03.pdf>

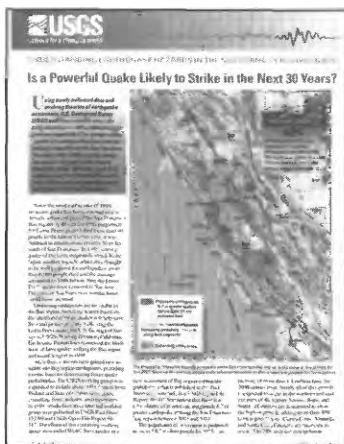
One hundred years ago this Memorial Day, the Kansas River overflowed its banks, flooding North Topeka with up to 12 feet of water in some places. Twenty-four people were drowned. Ninety years and almost 2 months later on July 25, 1993, floodwaters again threatened the city, but time and technology had changed the effects of too much water. Floodwaters in 1993 were contained within protective levees and by regulated outflow from several Federal reservoirs located upstream. No lives were lost in Kansas, and property damage was much less than it otherwise would have been..



Fact Sheet 0039-03

Is a powerful quake likely to strike in the next 30 years?, by A. J. Michael, S. L. Ross, R. W. Simpson, M. L. Zoback, D. P. Schwartz and M. L. Blanpied. 2003. 4 p. Available on the web at <http://geopubs.wr.usgs.gov/fact-sheet/fs039-03>

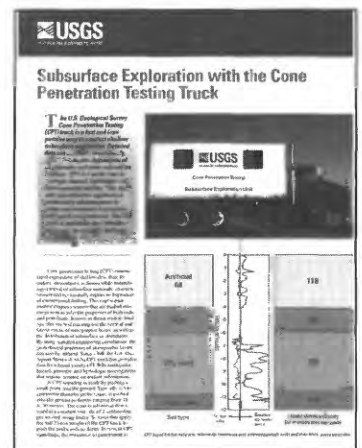
Using newly collected data and evolving theories of earthquake occurrence, the U.S. Geological Survey and other scientists now conclude that there is a 62% probability of at least one magnitude 6.7 or greater quake, capable of causing widespread damage, striking somewhere in the San Francisco Bay region before 2032. A major quake can occur in any part of this densely populated region. Therefore, there is an ongoing need for all communities in the Bay region to continue preparing for the quakes that will strike in the future.



Fact Sheet 0028-03

Subsurface exploration with the cone penetration testing truck, by T. E. Noce and T. L. Holzer. 2003. 2 p. Available on the web at <http://geopubs.wr.usgs.gov/fact-sheet/fs028-03/>

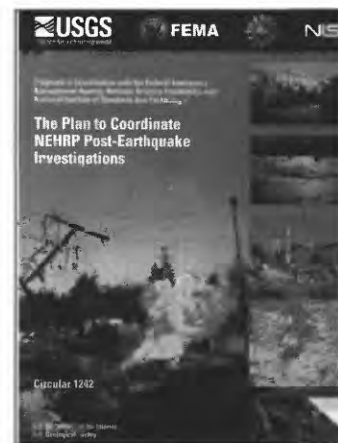
The U.S. Geological Survey Cone Penetration Testing (CPT) truck is a fast and inexpensive way to conduct shallow subsurface exploration. Detailed data are available immediately, permitting on-the-fly mapping of stratigraphy and other subsurface features. CPT is a useful tool in geologic-hazard, hydrologic, and environmental studies. This rapid and cost-effective approach is particularly advantageous in urban environments because no drill spoils are produced. The CPT truck is available on a reimbursable basis to all USGS staff and cooperators.



Circular 1242

The plan to coordinate NEHRP post-earthquake investigations, by T. L. Holzer, R. D. Borchardt, U.S. Geological Survey; C. D. Comartin, Comartin-Reis; R. D. Hanson, University of Michigan; C. R. Scawthorn, ABS Consulting; Kathleen Tierney, University of Delaware; and T. L. Youd, Brigham Young University. Prepared in coordination with the Federal Emergency Management Agency, National Science Foundation, and National Institute of Standards and Technology. 2003. 17 p. Available on the web at <http://geopubs.wr.usgs.gov/circular/c1242/>

This plan to coordinate domestic and foreign post-earthquake investigations addresses the National Earthquake Hazards Reduction Program agencies—the Federal Emergency Management Agency, the National Institute of Standards and Technology, the National Science Foundation, and the U.S. Geological Survey—and their partners. The plan, addressed in various time frames, includes measures for gaining rapid and general agreement on high-priority research opportunities and conducting the data gathering and field studies.





FORMAL REPORTS

DIGITAL DATA SERIES

The Digital Data Series encompasses a broad range of digital data, including computer programs, interpreted results of investigations, comprehensive reviewed data bases, spatial data sets, digital images and animation, and multimedia presentations that are not intended for printed release. Scientific reports in this series cover a wide variety of subjects on all facets of U.S. Geological Survey investigations and research that are of lasting scientific interest and value. Releases in the Digital Data Series offer access to scientific information that is available in digital form; the information is primarily for viewing, processing, and (or) analyzing by computer.

DDS-0069-B. UTAH, COLORADO. Petroleum systems and geologic assessment of oil and gas in the Uinta-Piceance Province, Utah and Colorado, by U. S. Geological Survey, Uinta-Piceance Assessment Team. 2003. One CD-ROM \$32. Available on the web at <http://pubs.usgs.gov/dds/dds-069/dds-069-b/>

This CD-ROM has been produced in accordance with the ISO 9660 Standard and is therefore capable of being read on any computing platform that has appropriate CD-ROM driver software installed. Use of the CD-ROM requires Adobe Acrobat Reader, version 5.0. Acrobat Reader installer for Windows and for Macintosh is included on this disc. MAC OS: Power PC processor, Mac OS 8.6, 9.0.4, 9.1, or OS X; 64 MB of RAM; and 24 MB of available hard drive space for installation. WINDOWS: Microsoft Windows Me, Windows 2000, or Windows NT 4.0 with Service Pack 5 or later, Windows 98 Second Edition, or Windows 95 Service Release 2; 64 MB of RAM; and 24 MB of available hard disk space.

The purpose of the U.S. Geological Survey's (USGS) National Oil and Gas Assessment is to develop geologically based hypotheses regarding the potential for additions to oil and gas reserves in priority areas of the United States, focusing on the distribution, quantity, and availability of oil and natural gas resources. The USGS has recently completed an assessment of the undiscovered oil and gas potential of the Uinta-Piceance Province of northeastern Utah and northwestern Colorado (USGS Province 5020). The Uinta-Piceance Province is a priority province for the National Assessment because of its potential for significant natural gas resources.

1. UTAH, COLORADO. Executive summary; assessment of undiscovered oil and gas resources of the Uinta-Piceance Province of Utah and Colorado, 2002, by U. S. Geological Survey, Uinta-Piceance Assessment Team. 3 p. Available on the web at http://pubs.usgs.gov/dds/dds-069/dds-069-b/REPORTS/Chapter_1.pdf

2. The Uinta-Piceance Province; introduction to a geologic assessment of undiscovered oil and gas resources, by U. S. Geological Survey, Uinta-Piceance Assessment Team. 27 p. Available on the web at http://pubs.usgs.gov/dds/dds-069/dds-069-b/REPORTS/Chapter_2.pdf

3. Petroleum systems of the Uinta and Piceance basins; geochemical characteristics of oil types, by P. G. Lillis, Augusta

Warden and J. D. King. 25 p. Available on the web at http://pubs.usgs.gov/dds/dds-069/dds-069-b/REPORTS/Chapter_3.pdf

4. UTAH, COLORADO. Thermal maturity and oil and gas generation history of petroleum systems in the Uinta-Piceance Province, Utah and Colorado, by V. F. Nuccio and L. N. R. Roberts. 35 p. Available on the web at http://pubs.usgs.gov/dds/dds-069/dds-069-b/REPORTS/Chapter_4.pdf

5. UTAH, COLORADO. Geology, depositional models, and oil and gas assessment of the Green River total petroleum system, Uinta-Piceance Province, eastern Utah and western Colorado, by R. F. Dubiel. 41 p. Available on the web at http://pubs.usgs.gov/dds/dds-069/dds-069-b/REPORTS/Chapter_5.pdf

6. UTAH, COLORADO. Geologic assessment of undiscovered oil and gas resources of the Mancos/Mowry total petroleum system, Uinta-Piceance Province, Utah and Colorado, by M. A. Kirschbaum. 42 p. Available on the web at http://pubs.usgs.gov/dds/dds-069/dds-069-b/REPORTS/Chapter_6.pdf

7. UTAH, COLORADO. The Mesaverde total petroleum system, Uinta-Piceance Province, Utah and Colorado, by R. C. Johnson and S. B. Roberts. 63 p. Available on the web at http://pubs.usgs.gov/dds/dds-069/dds-069-b/REPORTS/Chapter_7.pdf

8. UTAH. Petroleum assessment of the Ferron/Wasatch Plateau total petroleum system, Upper Cretaceous strata, Wasatch Plateau and Castle Valley, Utah, by M. E. Henry and T. M. Finn. 39 p. Available on the web at http://pubs.usgs.gov/dds/dds-069/dds-069-b/REPORTS/Chapter_8.pdf

9. UTAH, COLORADO. Geologic assessment of the Phosphoria total petroleum system, Uinta-Piceance Province, Utah and Colorado, by E. A. Johnson. 37 p. Available on the web at http://pubs.usgs.gov/dds/dds-069/dds-069-b/REPORTS/Chapter_9.pdf

10. UTAH, COLORADO. Depositional framework of the Upper Cretaceous Mancos Shale and the lower part of the Upper Cretaceous Mesaverde Group, western Colorado and eastern Utah, by R. C. Johnson. 24 p. Available on the web at http://pubs.usgs.gov/dds/dds-069/dds-069-b/REPORTS/Chapter_10.pdf

11. UTAH. Northwest to southeast cross section of Cretaceous and lower Tertiary rocks across the eastern part of the Uinta Basin, Utah, by R. C. Johnson. 6 p. Available on the web at http://pubs.usgs.gov/dds/dds-069/dds-069-b/REPORTS/Chapter_11.pdf

12. UTAH, COLORADO. Stratigraphy of the Upper Cretaceous Mancos Shale (upper part) and Mesaverde Group in the southern part of the Uinta and Piceance basins, Utah and Colorado, by R. D. Hettinger and M. A. Kirschbaum. 21 p. Available on the web at http://pubs.usgs.gov/dds/dds-069/dds-069-b/REPORTS/Chapter_12.pdf

13. UTAH. Depths to selected stratigraphic horizons in oil and gas wells for Upper Cretaceous and lower Tertiary strata of the Uinta Basin, Utah, by R. C. Johnson and L. N. R. Roberts. 30 p.



Available on the web at

http://pubs.usgs.gov/dds/dds-069/dds-069-b/REPORTS/Chapter_13.pdf

14. UTAH, COLORADO. Subsurface pressures from drill-stem tests, Uinta and Piceance basins, Utah and Colorado, by P. H. Nelson. 32 p. Available on the web at http://pubs.usgs.gov/dds/dds-069/dds-069-b/REPORTS/Chapter_14.pdf

15. COLORADO. A review of the multiwell experiment, Williams Fork and Iles formations, Garfield County, Colorado, by P. H. Nelson. 24 p. Available on the web at http://pubs.usgs.gov/dds/dds-069/dds-069-b/REPORTS/Chapter_15.pdf

16. UTAH, COLORADO. Structure contour map of the top of the Dakota Sandstone, Uinta-Piceance Province, Utah and Colorado, by L. N. R. Roberts. 11 p. Available on the web at http://pubs.usgs.gov/dds/dds-069/dds-069-b/REPORTS/Chapter_16.pdf

17. U. S. Geological Survey assessment concepts for continuous petroleum accumulations, by J. W. Schmoker. 7 p. Available on the web at http://pubs.usgs.gov/dds/dds-069/dds-069-b/REPORTS/Chapter_17.pdf

18. U. S. Geological Survey input-data form and operational procedure for the assessment of continuous petroleum accumulations, by T. R. Klett and J. W. Schmoker. 8 p. Available on the web at http://pubs.usgs.gov/dds/dds-069/dds-069-b/REPORTS/Chapter_18.pdf

19. U. S. Geological Survey assessment concepts for conventional petroleum accumulations, by J. W. Schmoker and T. R. Klett. 6 p. Available on the web at http://pubs.usgs.gov/dds/dds-069/dds-069-b/REPORTS/Chapter_19.pdf

20. U. S. Geological Survey input-data form and operational procedure for the assessment of conventional petroleum accumulations, by T. R. Klett, J. W. Schmoker and R. R. Charpentier. 7 p. Available on the web at http://pubs.usgs.gov/dds/dds-069/dds-069-b/REPORTS/Chapter_20.pdf

21. A Monte Carlo simulation method for the assessment of undiscovered, conventional oil and gas, by R. R. Charpentier and T. R. Klett. 5 p. Available on the web at http://pubs.usgs.gov/dds/dds-069/dds-069-b/REPORTS/Chapter_21.pdf

22. Analytic resource assessment method for continuous petroleum accumulations; the ACCESS assessment method, by R. A. Crovelli. 10 p. Available on the web at http://pubs.usgs.gov/dds/dds-069/dds-069-b/REPORTS/Chapter_22.pdf

23. Calculation of estimated ultimate recovery (EUR) for wells in continuous-type oil and gas accumulations of the Uinta-Piceance Province, by Troy Cook. 5 p. Available on the web at http://pubs.usgs.gov/dds/dds-069/dds-069-b/REPORTS/Chapter_23.pdf

24. Data sources and compilation, by T. R. Klett and J. W. Schmoker. 6 p. Available on the web at

http://pubs.usgs.gov/dds/dds-069/dds-069-b/REPORTS/Chapter_24.pdf

25. Glossary, by T. R. Klett, J. W. Schmoker, R. R. Charpentier, T. S. Ahlbrandt and G. F. Ulmishek. 2 p. Available on the web at http://pubs.usgs.gov/dds/dds-069/dds-069-b/REPORTS/Chapter_25.pdf

26. Abbreviations and acronyms, compiled by T. R. Klett. 2 p. Available on the web at http://pubs.usgs.gov/dds/dds-069/dds-069-b/REPORTS/Chapter_26.pdf

27. Conversion factors (approximate), compiled by T. R. Klett. 2 p. Available on the web at http://pubs.usgs.gov/dds/dds-069/dds-069-b/REPORTS/Chapter_27.pdf

28. Tabular data and graphical images in support of the U. S. Geological Survey National Oil and Gas Assessment; the Uinta-Piceance Province (5020), compiled by T. R. Klett, R. R. Charpentier and Phuong Anh Le. 16 p. Available on the web at http://pubs.usgs.gov/dds/dds-069/dds-069-b/REPORTS/Chapter_28.pdf

BULLETIN

Bulletins contain significant data and interpretations that are of lasting scientific interest but are generally more limited in scope or geographic coverage than Professional Papers. They include the results of resource studies and of geologic and topographic investigations, as well as collections of short papers related to a specific topic.

B 2184-E. Potential for deep basin-centered gas accumulation in Travis Peak (Hosston) Formation, Gulf Coastal Basin, by C. E. Bartberger, T. S. Dyman and S. M. Condon. 2003. 36 p. Available on the web at <http://pubs.usgs.gov/bul/b2184-e/>

The U.S. Geological Survey, in cooperation with the U.S. Department of Energy, is reevaluating the resource potential of selected basin-centered gas accumulations in the United States to accommodate changing geologic perceptions since completion of the USGS 1995 National Petroleum Assessment. In 1995, the USGS assessed three conventional plays within the trend of Cretaceous Travis Peak and Hosston fluvial-deltaic sandstones across the onshore northern Gulf Coast Basin. Evaluation of geologic and production data provides new insights into these Travis Peak and Hosston plays. Data favorable and unfavorable for the presence of continuous-type basin-centered gas accumulations are summarized.

CIRCULARS

Circulars present technical or nontechnical information of wide popular interest in a format designed for distribution at no cost to the public. They are published to disseminate administrative information or important scientific information of an ephemeral nature.

C 1196-C. Chromium recycling in the United States in 1998, by J. F. Papp. 2001. p. C1-C11. (Flow studies for recycling metal commodities in the United States.) Available on the web at <http://pubs.usgs.gov/circ/c1196c/>

In the United States in 1998, the major use of chromium was in the metallurgical industry to make stainless steel. In this study, the

only chromium recycling reported was that which was a part of stainless steel scrap reuse. In 1998, 20 percent of the U.S. apparent consumption of chromium was from recycling; the remaining 80 percent was based on net chromium commodity imports and stock adjustments. Chromite ore was not mined in the United States in 1998. In 1998, 75,300 metric tons (t) of chromium contained in old scrap was consumed in the United States; it was valued at \$66.4 million. Old scrap generated contained 132,000 t of chromium. The old scrap recycling efficiency was 87 percent, and the recycling rate was 20 percent.

- C 1196-D. Zinc recycling in the United States in 1998, by Jozef Plachy. 2001. p. D1-D8. (Flow studies for recycling metal commodities in the United States.) Available on the web at <http://pubs.usgs.gov/circ/c1196d/>

In 1998, about 426,000 metric tons (t) of zinc scrap was consumed in the United States; more than three-fourths (344,000 t) was new scrap, and the remainder (82,000 t) was old scrap. The main sources for old scrap were brass and bronze scrap, galvanizing residues, die-casting scrap, zinc sheet, and flue dust from steelworking electric arc furnaces. Old scrap was a small part of the supply because many uses of zinc are dissipative, long term, or not conducive to economic collection and recycling. In 1998, about 23 percent of zinc products were made for dissipative uses. The recycling efficiency of old scrap was about 19 percent. In recent years, new technology to dezinco galvanized steel has been developed. It should increase the relatively low recycling rate of old zinc scrap. The total zinc scrap recycling rate in 1998 was estimated to be 27 percent, although it may be higher.

- C 1242. The plan to coordinate NEHRP post-earthquake investigations, by T. L. Holzer, R. D. Borchardt, U.S. Geological Survey; C. D. Comartin, Comartin-Reis; R. D. Hanson, University of Michigan; C. R. Scawthorn, ABS Consulting; Kathleen Tierney, University of Delaware; and T. L. Youd, Brigham Young University. Prepared in coordination with the Federal Emergency Management Agency, National Science Foundation, and National Institute of Standards and Technology. 2003. 17 p. Available on the web at <http://geopubs.wr.usgs.gov/circular/c1242/>

This plan to coordinate domestic and foreign post-earthquake investigations addresses the National Earthquake Hazards Reduction Program agencies—the Federal Emergency Management Agency, the National Institute of Standards and Technology, the National Science Foundation, and the U.S. Geological Survey—and their partners. The plan, addressed in various time frames, includes measures for gaining rapid and general agreement on high-priority research opportunities and conducting the data gathering and field studies.

MISCELLANEOUS AND SPECIAL BOOKS

Geographic Names Information System (GNIS)

GNIS, developed by the Geographic Names Office, Mapping Applications Center, is the basis for the Digital Gazetteer of the United States (CD-ROM) and includes all names in the data base as of July 1999, as well as the necessary software for searching, analyzing, and exporting the data. The software must be installed onto an IBM-compatible hard disk before the data can be used. The CD-ROM, which can be purchased for \$57 plus \$5.00 shipping, contains the National Geographic Names Data Base (NGNDB), Antarctica Geographic Names Data Base (AGNDB), Topographic Map Names Data Base (TMNDB), and Reference Data Base (RDB). Each record in the

NGNDB, AGNDB, and TMNDB can contain a variety of location and description fields. All can be displayed, and most can be searched. Not all fields, however, contain data. The RDB contains one field—bibliography. The CD-ROM is no longer accompanied by a users manual. The installation procedures, readme file, and trouble shooting guide are provided in WordPerfect, HTML, and PDF formats. All necessary information regarding startup procedures are listed in the “Getting Started” directory on the CD.

The GNIS CD-ROM may be ordered from Information Services, U.S. Geological Survey, DFC, Building 810, MS 306, Denver, CO 80225, or by telephoning 1-888-ASK-USGS. Prepayment is required. Please make check or money order payable to Department of the Interior—USGS. VISA, MasterCard, American Express, and Discover Card are accepted. Prices are subject to change.

Information and Technical Specifications may be requested from U.S. Geological Survey, Manager GNIS, 523 National Center, Reston, VA 20192. 703-648-4544.

Catalog

Publications of the U.S. Geological Survey, 2002. 2003. 341 p. Available on the web at <http://pubs.usgs.gov/publications/2002/2002.pdf>

FACT SHEETS

Fact Sheets are used to disseminate timely information on scientific and technical programs of the U.S. Geological Survey and are available, at no cost, from USGS Information Services, Box 25286, Denver, CO 80225.

- FS 0101-02. “Hot water” in Lassen Volcanic National Park; fumaroles, steaming ground, and boiling mudpots, by M. A. Clynnne, C. J. Janik and L. J. P. Muffler. 2003. 4 p. Available on the web at <http://geopubs.wr.usgs.gov/fact-sheet/fs101-02/>

- FS 0151-02. Kamchatskaya gruppa reagirovaniya na vulkanicheskiye izverzheniya (KVERT) [The Kamchatkan Volcanic Eruption Response Team (KVERT)], by V. Y. Kir'yanov, K. E. Nil, Y. I. Gordeyev, O. A. Girina and T. P. Miller. 2003. 2 p.

- FS 0152-02. DELAWARE, MARYLAND. Adjustments to U. S. Geological Survey peak-flow magnitude-frequency relations in Delaware and Maryland following Hurricane Floyd, September 1999, by E. J. Doheny and J. J. A. Dillow. 2002. 8 p. Available on the web at <http://md.water.usgs.gov/publications/fs-152-02/index.html>

- FS 0013-03. NEBRASKA. Water-quality assessment of the central Nebraska basins; entering a new decade, by R. B. Zelt and J. D. Frankforter. 2003. 6 p. Available on the web at <http://water.usgs.gov/pubs/fs/fs-013-03/>

- FS 0019-03. KANSAS. The 1903 and 1993 floods in Kansas; the effects of changing times and technology, by L. J. Combs and C. A. Perry. 2003. 4 p. Available on the web at <http://ks.water.usgs.gov/Kansas/pubs/fact-sheets/fs.019-03.pdf>

One hundred years ago this Memorial Day, the Kansas River overflowed its banks, flooding North Topeka with up to 12 feet of water in some places. Twenty-four people were drowned. Ninety years and almost 2 months later on July 25, 1993, floodwaters again threatened the city, but time and technology had changed the effects of too much water. Floodwaters in 1993 were contained within protective levees and by regulated outflow from several Federal reservoirs located upstream. No lives were lost in Kansas,

and property damage was much less than it otherwise would have been.

FS 0024-03. CALIFORNIA. Bacterial contamination at Huntington Beach, California; is it from a local offshore wastewater outfall?, by Jingping Xu, Marlene Noble, Leslie Rosenfeld, John Largier, Peter Hamilton and Burt Jones. 2003. 4 p. Available on the web at <http://geopubs.wr.usgs.gov/fact-sheet/fs024-03/>

FS 0026-03. Geologic sequestration of carbon dioxide; an energy resource perspective, by R. C. Burruss and S. T. Brennan. 2003. 2 p. Available on the web at <http://pubs.usgs.gov/fs/fs026-03/>

FS 0028-03. Subsurface exploration with the cone penetration testing truck, by T. E. Noce and T. L. Holzer. 2003. 2 p. Available on the web at <http://geopubs.wr.usgs.gov/fact-sheet/fs028-03/>

The U.S. Geological Survey Cone Penetration Testing (CPT) truck is a fast and inexpensive way to conduct shallow subsurface exploration. Detailed data are available immediately, permitting on-the-fly mapping of stratigraphy and other subsurface features. CPT is a useful tool in geologic-hazard, hydrologic, and environmental studies. This rapid and cost-effective approach is particularly advantageous in urban environments because no drill spoils are produced. The CPT truck is available on a reimbursable basis to all USGS staff and cooperators.

FS 0037-03. UTAH. Drought conditions in Utah during 1999-2002; a historical perspective, by C. D. Wilkowske, D. V. Allen and J. V. Phillips. 2003. 6 p. Available on the web at <http://water.usgs.gov/pubs/fs/fs-037-03/>

FS 0039-03. Is a powerful quake likely to strike in the next 30 years?, by A. J. Michael, S. L. Ross, R. W. Simpson, M. L. Zoback, D. P. Schwartz and M. L. Blanpied. 2003. 4 p. Available on the web at <http://geopubs.wr.usgs.gov/fact-sheet/fs039-03/>

Using newly collected data and evolving theories of earthquake occurrence, the U.S. Geological Survey and other scientists now conclude that there is a 62% probability of at least one magnitude 6.7 or greater quake, capable of causing widespread damage, striking somewhere in the San Francisco Bay region before 2032. A major quake can occur in any part of this densely populated region. Therefore, there is an ongoing need for all communities in the Bay region to continue preparing for the quakes that will strike in the future.

States, and other publications. For information on CD-ROM products in this series, contact Roger Loebenstein at 703-648-4752.

Internet/World Wide Web: Text and graphics. Access via PC-based browsing software such as Netscape or Mosaic. The URL is <http://minerals.usgs.gov/minerals/>

Internet System Administrator: jgambogi@usgs.gov

METAL INDUSTRY INDICATORS

The Metal Industry Indicators (MII) is a monthly online newsletter that analyzes and forecasts the economic health of five metal industries with composite leading and coincident indexes. These industries are primary metals, steel, copper, primary and secondary aluminum, and aluminum mill products. Each month, these indexes are analyzed along with any economywide occurrences that would affect the metal industries. The MII also contains a leading index of metal prices that anticipates changes in the growth rate of a composite non-ferrous metals price index for primary aluminum, copper, lead, and zinc. The MII is available on the Internet at <http://minerals.usgs.gov/minerals/pubs/>. For more information contact Gail James 703-648-4915 or Ken Beckman 703-648-4916.

STONE, CLAY, GLASS, AND CONCRETE PRODUCTS INDUSTRY INDEXES

The Stone, Clay, Glass, and Concrete Products Industry Indexes is a monthly report that analyzes and forecasts the economic health of this broad manufacturing industry using composite leading and coincident indexes. These indexes are similar to the ones in the newsletter, Metal Industry Indicators. This report is available on the Internet (<http://minerals.usgs.gov/minerals/pubs/>). Historical data for the indexes are available back to 1948. For more information contact Gail James 703-648-4915 or Ken Beckman 703-648-4916.

MINERAL INDUSTRY SURVEYS

The Mineral Industry Surveys (MIS) are periodic online statistical and economic reports designed to provide timely statistical data on production, distribution, stocks, and consumption of significant mineral commodities. The surveys are issued monthly, quarterly, annually, or at other regular intervals, depending on the need for current data. The MIS are published by commodities as well as by States. MIS are available on the Internet at <http://minerals.usgs.gov/minerals/pubs/>.

MINERAL COMMODITY SUMMARIES

Published on an annual basis, the Mineral Commodity Summaries is the earliest Government publication to furnish estimates covering nonfuel mineral industry data. Data sheets contain information on the domestic industry structure, Government programs, tariffs, and 5-year salient statistics for over 90 individual minerals and materials. The 2001 edition is available from the Government Printing Office, stock number 024-004-02503-4, \$27.00 domestic; \$33.75 foreign. Data sheets are also available on the Internet (<http://minerals.usgs.gov/minerals/pubs/>).

MINERALS YEARBOOK

The Minerals Yearbook discusses the performance of the worldwide minerals and materials industry during a calendar year, and it provides background information to assist in interpreting that performance. Content of the individual Minerals Yearbook volumes follows:

Volume I, Metals and Minerals, contains chapters about virtually all metallic and industrial mineral commodities important to the U.S. economy. Chapters on survey methods, summary statistics for domestic nonfuel minerals, and trends in mining and quarrying in the metals and industrial minerals industries in the United States are also included.

Volume II, Area Reports: Domestic, contains a chapter on the minerals industry of each of the 50 States and Puerto Rico and the Administered Islands.

MINERALS INFORMATION PERIODICALS

Many Information Periodicals products are available through the systems or formats listed below:

CD-ROM: The U.S. Geological Survey's Minerals and Materials Information CD-ROM is updated three times a year (February, June, and October) and is sold by the U.S. Government Printing Office's Superintendent of Documents. The CD-ROM includes Minerals Yearbook chapters, Mineral Commodity Summaries, Statistical Compendium, Metal Prices in the United



This volume also has chapters on survey methods and summary statistics for domestic nonfuel minerals.

Volume III, Area Reports: International, is published as four separate reports. These reports collectively contain the latest available mineral data on more than 190 foreign countries and discuss the importance of minerals to the economies of these nations and the United States. Each report begins with an overview of the region's mineral industries during the year. It continues with individual country chapters that examine the mining, refining, processing, and utilization of minerals in each country of the region and how they relate to U.S. industry. Most chapters include production and industry structure tables, information about Government policies and programs affecting the country's minerals industry, and an outlook section.

For information on the latest products, please contact Linda Borden 703-648-4753. Information is also available on the Internet (<http://minerals.usgs.gov/minerals/pubs/>).



INFORMAL REPORTS

WATER-RESOURCES INVESTIGATIONS REPORTS

Water-resources investigations reports are interpretive publications made available to the public outside the formal USGS publications series.

The following WRI reports, priced as indicated, are available from USGS Information Services, Box 25286, Federal Center, Denver, CO 80225 (telephone 303-202-4700). For specific ordering instructions, please refer to "Availability of USGS Products by Mail," on the inside back cover. When ordering, use the WRI number preceding each item. A handling fee of \$5.00 per order applies.

In the water-resources investigations report and the open-file report listings that follow, offices where reports may be inspected but not purchased are identified by the symbols listed below:

- A Earth Science Information Center, Rm. 101, 4230 University Dr., Anchorage, AK 99508-4664.
- Da Library, Rm. C2002, Bldg. 20, Denver Federal Center, Lakewood, CO 80225.
- F Library, 2255 North Gemini Dr., Flagstaff, AZ 86001.
- M Library, 345 Middlefield Rd., Menlo Park, CA 94025.
- NC Library, Rm. 1C402, National Center, 12201 Sunrise Valley Dr., Reston, VA 20192.

WRI 97-4054-C. ILLINOIS, WISCONSIN. Altitude, depth, and thickness of the Galena-Platteville bedrock unit in the subcrop area of Illinois and Wisconsin, by T. A. Brown, C. P. Dunning and J. B. Sharpe. Prepared in cooperation with the U.S. Environmental Protection Agency. 2000. 4 over-size sheets. Available on the web at http://il.water.usgs.gov/pubs/wrir97_4054C_1.pdf
http://il.water.usgs.gov/pubs/wrir97_4054C_2.pdf
http://il.water.usgs.gov/pubs/wrir97_4054C_3.pdf
http://il.water.usgs.gov/pubs/wrir97_4054C_4.pdf

WRI 01-4066. NEW JERSEY, NEW YORK, PENNSYLVANIA. Trends in concentrations of polychlorinated biphenyls in fish tissue from selected sites in the Delaware River basin in New Jersey, New York, and Pennsylvania, 1999-98, by Karen Riva-Murray, R. A. Brightbill and M. D. Bilger. 2003. 19 p. (NC, Da, M.) \$4.

WRI 01-4122. COLORADO. Hydrologic and sedimentologic response of two burned watersheds in Colorado, by J. A. Moody and D. A. Martin. Prepared in cooperation with the Denver Water Department and the U.S. Forest Service. 2001. 139 p. (NC, Da, M.) \$4.

WRI 02-4013. CALIFORNIA. Long-term sand supply to Coachella Valley fringe-toed lizard habitat in the northern Coachella Valley, California, by P. G. Griffiths, R. H. Webb, Nicholas Lancaster, C. A. Kaehler and S. C. Lundstrom. Prepared in cooperation with the U.S. Fish and Wildlife Service. 2002. 50 p. (NC, Da, M.) Available on the web at <http://water.usgs.gov/pubs/wri/wri024013/>

WRI 02-4015. OREGON. Geologic framework of the regional ground-water flow system in the upper Deschutes Basin, Oregon, by K. E. Lite, Jr. and M. W. Gannett. Prepared in cooperation with Oregon Water Resources Department; Cities of Bend, Redmond, and Sisters; Deschutes and Jefferson counties; the Confederated Tribes of the Warm Springs Reservation of Oregon; and U.S. Environmental Protection Agency. 2002. 44 p., 1 over-size sheet. (NC, Da, M.) \$4.

WRI 02-4067. DISTRICT OF COLUMBIA. Water quality, sediment quality, and stream-channel classification of Rock Creek, Washington, D.C., 1999-2000, by A. L. Anderson, C. V. Miller, L. D. Olsen, E. J. Doheny and D. J. Phelan. Prepared in cooperation with the National Park Service. 2002. 91 p. (NC, Da, M.) \$4.

WRI 02-4084. Occurrence and temporal variability of methyl tert-butyl ether (MTBE) and other volatile organic compounds in select sources of drinking water; results of the focused survey, by G. C. Delzer and Tamara Ivahnenko. Prepared in cooperation with the Metropolitan Water District of Southern California; Oregon Health and Science University; American Water Works Association Research Foundation. 2003. 65 p. (NC, Da, M.) \$4.

WRI 02-4108. TEXAS. Simulated ground-water flow in the Hueco Bolson, an alluvial-basin aquifer system near El Paso, Texas, by C. E. Heywood and R. M. Yager. Prepared in cooperation with El Paso Water Utilities; U.S. Army Fort Bliss. 2003. 73 p. (NC, Da, M.) \$4.

WRI 02-4170. IDAHO. Estimating the magnitude of peak flows at selected recurrence intervals for streams in Idaho, by Charles Berenbrock. Prepared in cooperation with Idaho Transportation Department, Idaho Bureau of Disaster Services, U.S. Army Corps of Engineers. 2002. 59 p. (NC, Da, M.) Available on the web at <http://id.water.usgs.gov/PDF/wri024170/index.html>

WRI 02-4173. Occurrence of volatile organic compounds in drinking water from the United States; results from archived chromatograms and water samples, 1989-2000, by S. D. Shapiro, L. N. Plummer, M. J. Focazio, Eurybiades Busenberg, Wandee Kirkland and Mario Fernandez, Jr. Prepared in cooperation with the U.S. Environmental Protection Agency, Office of Ground Water and Drinking Water. 2003. 20 p., one CD-ROM. (NC, Da, M.) \$4.

This CD-ROM has been produced in accordance with the ISO 9660 Standard and is therefore capable of being read on any computing platform that has appropriate CD-ROM driver software installed.



- WRI 02-4183. IDAHO, WASHINGTON. Occurrence and transport of cadmium, lead, and zinc in the Spokane River basin, Idaho and Washington, water years 1999-2001, by G. M. Clark. National Water-Quality Assessment Program. 2003. 37 p. (NC, Da, M.) \$4. Available on the web at <http://id.water.usgs.gov/PDF/ofr024183/index.html>
- WRI 02-4200. NEW MEXICO. Simulation of ground-water flow in the middle Rio Grande Basin between Cochiti and San Acacia, New Mexico, by D. P. McCada and Peggy Barroll. Prepared in cooperation with the New Mexico Office of the State Engineer; City of Albuquerque Public Works Department. 2002. 81 p. (NC, Da, M.) \$4. Available on the web at <http://nm.water.usgs.gov/publications/abstracts/wrir02-4200.html>
- WRI 02-4210. Periphyton communities in streams of the Ozark Plateaus and their relations to selected environmental factors, by J. C. Petersen and S. R. Femmer. National Water-Quality Assessment Program. 2002. 77 p. (NC, Da, M.) \$4. Available on the web at http://ar.water.usgs.gov/LOCAL_REPORTS/WRIR_02-4210.pdf
- WRI 02-4218. OREGON. Estimating water temperature in small streams in western Oregon using neural network models, by J. C. Risley, E. A. Roehl, Jr. and P. A. Conrads. Prepared in cooperation with the Oregon Watershed Enhancement Board. 2003. 60 p. (NC, Da, M.) \$4. Available on the web at <http://water.usgs.gov/pubs/wri/wri024218/>
- WRI 02-4232. OREGON. Phosphorus and *E. coli* and their relation to selected constituents during storm runoff conditions in Fanno Creek, Oregon, 1998-99, by C. W. Anderson and S. A. Rounds. Prepared in cooperation with Clean Water Services. 2003. 35 p. (NC, Da, M.) Available on the web at <http://water.usgs.gov/pubs/wri/wri024232/>
- WRI 02-4237. NEW MEXICO, TEXAS. Chemistry and age of ground water in the southwestern Hueco Bolson, New Mexico and Texas, by S. K. Anderholm and C. E. Heywood. Prepared in cooperation with El Paso Water Utilities. 2003. 16 p. (NC, Da, M.) \$4. Available on the web at <http://nm.water.usgs.gov/publications/abstracts/wrir02-4237.html>
- WRI 02-4245. MAINE. Trends in streamflow, river ice, and snowpack for coastal river basins in Maine during the 20th century, by R. W. Dudley and G. A. Hodgkins. Prepared in cooperation with the Maine Atlantic Salmon Commission. 2002. 26 p. (NC, Da, M.) \$4. Available on the web at <http://me.water.usgs.gov/wrir02-4245.pdf>
- WRI 02-4246. OHIO. Water and bed-sediment quality in the vicinity of Berlin Lake, Ohio, 2001, by R. A. Darner. Prepared in cooperation with the U.S. Department of the Interior, Bureau of Land Management. 2002. 31 p. (NC, Da, M.) \$4. Available on the web at <http://oh.water.usgs.gov/reports/Abstracts/wrir02-4246.html>
- WRI 02-4248. TEXAS. Subsurface evaluation of the west parking lot and landfill 3 areas of Air Force Plant 4, Fort Worth, Texas, using two-dimensional direct-current resistivity profiling, by C. L. Braun and S. A. Jones. Prepared in cooperation with the U.S. Air Force, Aeronautical Systems Center, Environmental Management Directorate, Wright-Patterson Air Force Base, Ohio. 2002. 10 p., 15 over-size sheets. (NC, Da, M.) \$4.
- WRI 02-4254. FLORIDA. Extent of areal inundation of riverine wetlands along Cypress Creek and the Peace, Alafia, North Prong Alafia, and South Prong Alafia rivers, west-central Florida, by B. R. Lewelling. Prepared in cooperation with the Southwest Florida Water Management District. 2003. 91 p. (NC, Da, M.) \$4. Available on the web at http://fl.water.usgs.gov/Abstracts/wri02-4254_lewelling.html
- WRI 02-4255. NEW YORK. Trends in nitrogen concentration and nitrogen loads entering the South Shore Estuary Reserve from streams and ground-water discharge in Nassau and Suffolk counties, Long Island, New York, by Jack Monti, Jr. and M. P. Scorca. Prepared in cooperation with the New York State Department of State. 2003. 36 p. (NC, Da, M.) \$4. Available on the web at <http://ny.usgs.gov/pubs/wri/wri024255/>
- WRI 02-4257. OKLAHOMA. Possible sources of nitrate in ground water at swine licensed-managed feeding operations in Oklahoma, 2001, by M. F. Becker, K. D. Peter and J. R. Masoner. Prepared in cooperation with the Oklahoma Department of Agriculture, Food, and Forestry. 2003. 71 p. (NC, Da, M.) Available on the web at <http://water.usgs.gov/pubs/wri/wri024257/>
- WRI 02-4264. CALIFORNIA. Simulation of ground-water flow in the Irwin Basin aquifer system, Fort Irwin National Training Center, California, by J. N. Densmore. Prepared in cooperation with the Fort Irwin National Training Center. 2003. 70 p. Available on the web at <http://water.usgs.gov/pubs/wri/wri024264/>
- WRI 02-4268. ALABAMA, TENNESSEE. Response of fish communities to cropland density and natural environmental setting in the Eastern Highland Rim Ecoregion of the lower Tennessee River basin, Alabama and Tennessee, 1999, by J. R. Powell. 2003. 48 p. (NC, Da, M.) \$4.
- WRI 02-4276. UTAH. Hydrology and water quality of an urban stream reach in the Great Basin-Little Cottonwood Creek near Salt Lake City, Utah, water years 1999-2000, by S. J. Gerner and K. M. Waddell. National Water-Quality Assessment Program. 2003. 46 p. (NC, Da, M.) \$4.
- WRI 02-4280. NEW JERSEY. Hydrology of the unconfined aquifer system, Rancocas Creek area; Rancocas, Crosswicks, Assunpink, Blacks, and Crafts Creek basins, New Jersey, 1996, by M. K. Watt, A. C. Kane, E. G. Charles and D. A. Storck. 2003. 5 over-size sheets. (NC, Da, M.) \$4.
- WRI 02-4281. GEORGIA. Does land use affect our streams? A watershed example from Gwinnett County, Georgia, 1998-2001, by M. N. Landers, P. D. Ankcom, K. W. McFadden and M. B. Gregory. 2002. 6 p. (NC, Da, M.) \$4. Available on the web at <http://ga.usgs.gov/publications/wrir02-4281/>
- WRI 02-4285. OHIO. *Escherichia coli* at Ohio bathing beaches; distribution, sources, wastewater indicators, and predictive modeling, by D. S. Francy, A. M. Gifford and R. A. Darner. Prepared in cooperation with the Ohio Water Development Authority, Northeast Ohio Regional Sewer District, Ohio Lake Erie Office, Cuyahoga County Board of Health, Cuyahoga County Sanitary Engineers, and Cuyahoga River Community Planning Organization. 2003. 120 p. (NC, Da, M.) \$4. Available on the web at <http://oh.water.usgs.gov/reports/Abstracts/wrir02-4285.html>



- WRI 02-4288. NEW JERSEY. Estimating spatial variability of recharge in southern New Jersey from unsaturated-zone measurements, by A. L. Baehr, L. J. Kauffman, Kimberlie Perkins and B. T. Nolan. 2003. 31 p. (NC, Da, M.) \$4.
- WRI 02-4290. MASSACHUSETTS. Delineation of water sources for public-supply wells in three fractured-bedrock aquifer systems in Massachusetts, by F. P. Lyford, C. S. Carlson and B. P. Hansen. Prepared in cooperation with the Massachusetts Department of Environmental Protection; Massachusetts Department of Environmental Management. 2003. 113 p. (NC, Da, M.) \$4.
- WRI 02-4293. Anthropogenic constituents in shallow ground water in the upper Illinois River basin, by W. S. Morrow. 2003. 34 p. (NC, Da, M.) \$4.
- WRI 02-4295. FLORIDA. Effects of recharge, upper Floridan Aquifer heads, and time scale on simulated ground-water exchange with Lake Starr, a seepage lake in central Florida, by Amy Swancar and T. M. Lee. Prepared in cooperation with the Southwest Florida Water Management District. 2003. 53 p. (NC, Da, M.) \$4. Available on the web at http://fl.water.usgs.gov/Abstracts/wri02_4295_swancar.html
- WRI 02-4297. OHIO. Nitrogen and phosphorus in streams of the Great Miami River basin, Ohio, 1998-2000, by D. C. Reutter. National Water-Quality Assessment Program. 2003. 67 p. (NC, Da, M.) \$4.
- WRI 02-4299. IDAHO. Estimating the magnitude of the 100-year peak flow in the Big Lost River at the Idaho National Engineering and Environmental Laboratory, Idaho, by J. E. Hortness and J. P. Rousseau. Prepared in cooperation with the U.S. Department of Energy. 2003. 36 p. (NC, Da, M.) \$4. Available on the web at <http://idaho.usgs.gov/PDF/wri024299/index.html>
- WRI 02-4306. MASSACHUSETTS. Phosphorus in a ground-water contaminant plume discharging to Ashumet Pond, Cape Cod, Massachusetts, 1999, by T. D. McCobb, D. R. LeBlanc, D. A. Walter, K. M. Hess, D. B. Kent and R. L. Smith. Prepared in cooperation with the Air Force Center for Environmental Excellence. 2003. 69 p. (NC, Da, M.) \$4.
- WRI 03-4001. IDAHO. Two-station comparison of peak flows to improve flood-frequency estimates for seven streamflow-gaging stations in the Salmon and Clearwater River basins, central Idaho, by Charles Berenbrock. Prepared in cooperation with the U.S. Forest Service. 2003. 27 p. (NC, Da, M.) Available on the web at <http://idaho.usgs.gov/PDF/wri034001/index.html>
- WRI 03-4010. TEXAS. Geologic framework and hydrogeologic characteristics of the Edwards Aquifer, Uvalde County, Texas, by A. K. Clark. Prepared in cooperation with the Edwards Aquifer Authority. 2003. 17 p., 1 over-size sheet. (NC, Da, M.) \$4.
- WRI 03-4014. PENNSYLVANIA, MARYLAND. Development of regional curves of bankfull-channel geometry and discharge for streams in the non-urban, Piedmont physiographic province, Pennsylvania and Maryland, by P. J. Cinotto. Prepared in cooperation with the Pennsylvania Department of Environmental Protection. 2003. 27 p. (NC, Da, M.) \$4. Available on the web at <http://pa.water.usgs.gov/reports/wrir03-4014.pdf>
- WRI 03-4016. CALIFORNIA. Simulation of ground-water flow and land subsidence in the Antelope Valley ground-water basin, California, by D. A. Leighton and S. P. Phillips. Prepared in cooperation with the Antelope Valley Water Group. 2003. 107 p. (NC, Da, M.) Available on the web at <http://water.usgs.gov/pubs/wri/wrir034016/text.html>
- WRI 03-4017. MASSACHUSETTS. Reactive-transport simulation of phosphorus in the sewage plume at the Massachusetts Military Reservation, Cape Cod, Massachusetts, by D. L. Parkhurst, K. G. Stollenwerk and J. A. Colman. Prepared in cooperation with the Air Force Center for Environmental Excellence. 2003. 33 p. (NC, Da, M.) \$4.
- WRI 03-4023. NEW HAMPSHIRE. A stream-gaging network analysis for the 7-day, 10-year annual low flow in New Hampshire streams, by R. H. Flynn. Prepared in cooperation with the New Hampshire Department of Environmental Services. 2003. 31 p. (NC, Da, M.) Available on the web at <http://water.usgs.gov/pubs/wri/wrir03-4023/>
- WRI 03-4025. KANSAS. Sediment deposition and occurrence of selected nutrients, other chemical constituents, and diatoms in bottom sediment, Perry Lake, Northeast Kansas, 1969-2001, by K. E. Juracek. Prepared in cooperation with the Kansas Department of Health and Environment. 2003. 56 p. (NC, Da, M.) \$4.
- WRI 03-4033. PENNSYLVANIA, WEST VIRGINIA. Relations of biological indicators to nutrient data for lakes and streams in Pennsylvania and West Virginia, 1990-98, by R. A. Brightbill and E. H. Koerkle. Prepared in cooperation with the Pennsylvania Department of Environmental Protection and the U.S. Environmental Protection Agency. 2003. 67 p. (NC, Da, M.) Available on the web at <http://pa.water.usgs.gov/reports/wrir03-4033.pdf>
- WRI 03-4034. COLORADO. Hydrologic conditions and assessment of water resources in the Turkey Creek watershed, Jefferson County, Colorado, 1998-2001, by C. R. Bossong, J. S. Caine, D. I. Stannard, J. L. Flynn, M. R. Stevens and J. S. Heiny-Dash. Prepared in cooperation with the Jefferson County Planning and Zoning Department. 2003. 140 p. (NC, Da, M.) \$4. Available on the web at <http://pubs.water.usgs.gov/wri03-4034>
- WRI 03-4041. NEW HAMPSHIRE. Effectiveness of the New Hampshire stream-gaging network in providing regional streamflow information, by S. A. Olson. Prepared in cooperation with the New Hampshire Department of Environmental Services. 2003. 64 p. (NC, Da, M.) Available on the web at <http://water.usgs.gov/pubs/wri/wrir03-4041/>
- WRI 03-4042. WASHINGTON. Determination of upstream boundary points on southeastern Washington streams and rivers under the requirements of the Shoreline Management Act of 1971, by J. L. Higgins. Prepared in cooperation with Washington State Department of Ecology. 2003. 18 p., 1 over-size sheet. (NC, Da, M.) Available on the web at <http://water.usgs.gov/pubs/wri/wri034042/>
- WRI 03-4048. IDAHO. Measurement of sedimentary interbed hydraulic properties and their hydrologic influence near the Idaho Nuclear Technology and Engineering Center at the Idaho National Engineering and Environmental Laboratory, by K. S. Perkins. Prepared in cooperation with the U.S. Department of Energy. 2003. 19 p. (NC, Da, M.) \$4.
- WRI 03-4051. NORTH CAROLINA. Hydrogeology and ground-water quality of Brunswick County, North Carolina, by S. L.



Harden, J. M. Fine and T. B. Spruill. Prepared in cooperation with Brunswick County, North Carolina. 2003. 90 p., 9 over-size sheets. (NC, Da, M.) \$4.

WRI 03-4053. MASSACHUSETTS. Simulation of advective flow under steady-state and transient recharge conditions, Camp Edwards, Massachusetts Military Reservation, Cape Cod, Massachusetts, by D. A. Walter and J. P. Masterson. Prepared in cooperation with the National Guard Bureau. 2003. 51 p. (NC, Da, M.) \$4.

WRI 03-4054. Development of health-based screening levels for use in State- or local-scale water-quality assessments, by Patricia Toccalino, Lisa Nowell, William Wilber, J. S. Zogorski, Joyce Donohue, Catherine Eiden, Sandra Krietzman and Gloria Post. National Water-Quality Assessment Program; prepared in cooperation with the Oregon Health and Science University. 2003. 22 p. (NC, Da, M.) \$4.

WRI 03-4074. KANSAS. Estimated flood-inundation maps for Cowskin Creek in western Wichita, Kansas, by S. E. Studley. 2003. 18 p. (NC, Da, M.) \$4.

WRI 03-4078. NORTH DAKOTA. Reconnaissance of mercury in lakes, wetlands, and rivers in the Red River of the North basin, North Dakota, March through August 2001, by S. K. Sando, G. J. Wiche, R. F. Lundgren and B. A. Sether. Prepared in cooperation with the U.S. Army Corps of Engineers. 2003. 52 p. (NC, Da, M.) \$4. Available on the web at <http://nd.water.usgs.gov/pubs/wri/wri034078/index.html>

WRI 03-4081. TEXAS. Geologic framework and hydrogeologic features of the Glen Rose Limestone, Camp Bullis Training Site, Bexar County, Texas, by A. K. Clark. Prepared in cooperation with the U.S. Army. 2003. 9 p., 1 over-size sheet. (NC, Da, M.) \$4.

WRI 03-4094. NORTH DAKOTA. Water-quality trend analysis and sampling design for streams in North Dakota, 1971-2000, by A. V. Vecchia. Prepared in cooperation with the North Dakota Department of Health. 2003. 73 p. (NC, Da, M.) \$4. Available on the web at <http://nd.water.usgs.gov/pubs/wri/wri034094/index.html>

WRI 03-4101. WASHINGTON. Estimating ground-water recharge from precipitation on Whidbey and Camano islands, Island County, Washington, water years 1998 and 1999, by S. S. Sumioka and H. H. Bauer. Prepared in cooperation with Island County Health Department. 2003. 49 p. (NC, Da, M.) Available on the web at <http://water.usgs.gov/pubs/wri/wri034101/>

OPEN-FILE REPORTS

Open-file reports include unpublished manuscript reports, maps, and other material that are made available for public consultation at depositories. They are a nonpermanent form of publication that may be cited in other publications as sources of information.

Most open-file reports are available from USGS Information Services, Box 25286, Federal Center, Denver, CO 80225 (telephone: 1-888-ASK-USGS or 303-202-4700; fax: 303-202-4693). The following listing of open-file reports is subdivided to show which reports are available from the Denver facility and which ones are not. Specific instructions for ordering and availability of reports are given under each sublisting.

Open-file reports are also available for inspection only, **not for purchase**, at additional locations indicated in each open-file listing. Symbols for these locations are defined in the water-resources investigations reports listings.

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OF 03-0138. NEVADA, CALIFORNIA, UTAH. Dust deposition in Nevada, California, and Utah, 1984-2002, by M. C. Reheis. 11 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012; Nevada Bur. of Mines & Geol., Univ. of Nevada-Reno, Reno, NV 89557-0088; Utah Geol. Surv., 1594 West North Temple, Suite 3110, P.O. Box 141600, Salt Lake City, UT 84114-6100.) Available on the web at
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OF 03-0141. seg2_edit; a program for editing and manipulating SEG-2 files, by K. J. Ellefsen. 11 p. (NC, Da, M.) Available on the web at
<http://pubs.usgs.gov/of/2003/ofr-03-141/>

OF 03-0149. COLORADO. Electrical property measurements of mine waste from the Sunday #2 and Venir mines, Leadville, Colorado, by R. J. Horton. 29 p. (NC, M, Da; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203-2277; Chief, Geotechnical Services Branch, Office of the State Engineer, 1313 Sherman St., Room 818, Denver, CO 80203-2277.)

Available on the web at
<http://pubs.usgs.gov/of/2003/ofr-03-149/>

OF 03-0153. CALIFORNIA. Geologic map of the Cuddy Valley Quadrangle, Kern and Ventura counties, California, by K. S. Kellogg. 17 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.) (Map-on-demand.) \$20. Available on the web at
<http://pubs.usgs.gov/of/2003/ofr-03-153/>

OF 03-0154. ALASKA. Descriptions of mineral occurrences and interpretation of mineralized rock geochemical data in the Stikine geophysical survey area, Southeastern Alaska, by C. D. Taylor. 51 p. (NC, M, Da, A; Div. of Geol. & Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645; U.S. Dep. of Interior, Alaska Resources Library, 3150 C St. #100, Anchorage, AK 99502-3916.) Available on the web at
<http://pubs.usgs.gov/of/2003/ofr-03-154/>

OF 03-0155. Four models used for numerical simulation of a borehole radar antenna, by K. J. Ellefsen and D. L. Wright. 15 p. (NC, Da, M.) Available on the web at
<http://pubs.usgs.gov/of/2003/ofr-03-155/>

OF 03-0156. LOUISIANA. Archive of chirp seismic reflection data collected during USGS cruises 00SCC02 and 00SCC04, Barataria Basin, Louisiana, May 12-31 and June 17-July 2, 2000, by Karynna Calderon, S. V. Dadisman, J. L. Kindinger, J. G. Flocks, D. S. Wiese, Mark Kulp, Shea Penland, L. D. Britsch and G. R. Brooks. Four discs. DVD-R disc-on-demand. (NC, Da, M.) Single disc \$60; each additional \$30.

These discs have been produced in accordance with the UDF Standard and are therefore capable of being read on any computing platform that has a DVD drive.

OF 03-0158. Data report of aftershocks of the 03 November 2002, Mw 7.9 Denali Fault earthquake recorded near the fault rupture at the Richardson Highway and Alyeska Pipeline, by David Carver, Timothy Plucinski, A. D. Frankel and Erdal Safak. (NC, Da, M.) Available on the web at
<http://pubs.usgs.gov/of/2003/ofr-03-158/>

OF 03-0159. Additional information for "TREMOR; a wireless, MEMS accelerograph for dense arrays" (Evans et al., 2003), by J. R. Evans, R. H. Hamstra, Jr., Paul Spudich, Christoph Kundig, Patrick Camina and J. A. Rogers. 13 p. (NC, Da, M; USGS, Library, 2255 North Gemini Dr., Flagstaff, AZ 86001.) Available on the web at
<http://geopubs.wr.usgs.gov/open-file/of03-159/>

OF 03-0160. WASHINGTON. Wide-angle seismic recording from the 2002 Georgia Basin Geohazards Initiative, northwestern Washington and British Columbia, by T. M. Brocher, T. L. Pratt, G. D. Spence, Michael Riedel and R. D. Hyndman. 34 p. (NC, Da, M; Washington DNR/Geol. & Earth Resources Library, 1111 Washington St., S.E., Olympia, WA 98501.) Available on the web at
<http://geopubs.wr.usgs.gov/open-file/of03-160/>

OF 03-0161. TEXAS. Selected hydrogeologic datasets for the Antlers Aquifer, Texas, by N. A. Houston, C. A. Garcia and E. W.



Strom. Prepared in cooperation with the Texas Commission on Environmental Quality. One CD-ROM. (NC, Da, M.) \$32.

This CD-ROM has been produced in accordance with the ISO 9660 Standard and is therefore capable of being read on any computing platform that has appropriate CD-ROM driver software installed.

OF 03-0162. TEXAS. Selected hydrogeologic datasets for the Glen Rose Aquifer, Texas, by N. A. Houston, C. A. Garcia and E. W. Strom. Prepared in cooperation with the Texas Commission on Environmental Quality. One CD-ROM. (NC, Da, M.) \$32.

This CD-ROM has been produced in accordance with the ISO 9660 Standard and is therefore capable of being read on any computing platform that has appropriate CD-ROM driver software installed.

OF 03-0163. TEXAS. Selected hydrogeologic datasets for the Paluxy Aquifer, Texas, by N. A. Houston, C. A. Garcia and E. W. Strom. Prepared in cooperation with the Texas Commission on Environmental Quality. One CD-ROM. (NC, Da, M.) \$32.

This CD-ROM has been produced in accordance with the ISO 9660 Standard and is therefore capable of being read on any computing platform that has appropriate CD-ROM driver software installed.

OF 03-0164. TEXAS. Selected hydrogeologic datasets for the Twin Mountain-Travis Peak Aquifer, Texas, by N. A. Houston, C. A. Garcia and E. W. Strom. Prepared in cooperation with the Texas Commission on Environmental Quality. One CD-ROM. (NC, Da, M.) \$32.

This CD-ROM has been produced in accordance with the ISO 9660 Standard and is therefore capable of being read on any computing platform that has appropriate CD-ROM driver software installed.

OF 03-0165. TEXAS. Selected hydrogeologic datasets for the Woodbine Aquifer, Texas, by N. A. Houston, C. A. Garcia and E. W. Strom. Prepared in cooperation with the Texas Commission on Environmental Quality. One CD-ROM. (NC, Da, M.) \$32.

This CD-ROM has been produced in accordance with the ISO 9660 Standard and is therefore capable of being read on any computing platform that has appropriate CD-ROM driver software installed.

OF 03-0173. Methods of analysis by the U. S. Geological Survey Organic Geochemistry Research Group; using online solid-phase extraction and liquid chromatography/mass spectrometry, by E. A. Lee and A. P. Strahan. 17 p. (NC, Da, M.) \$5. Available on the web at <http://ks.water.usgs.gov/Kansas/pubs/abstracts/of.03-173.html>

OF 03-0185. WYOMING. Suspended-sediment concentration and pool sedimentation data for the Gibbon River, Yellowstone National Park, Wyoming, September 2000 through October 2001, by P. R. Wright and R. B. Zelt. 16 p. (NC, Da, M.) Available on the web at <http://water.usgs.gov/pubs/of/2003/ofr03185>

OF 03-0186. INDIANA. Channel-bank conditions and accumulations of large woody debris along White River between Anderson and Indianapolis, Indiana, 2002, by B. A. Robinson. 19 p. (NC, Da, M.) Available on the web at <http://in.water.usgs.gov/newreports/bankerosion/>

OF 03-0187. CALIFORNIA. Preliminary paleomagnetic results from the Coyote Creek Outdoor Classroom drill hole, Santa Clara Valley, California, by E. A. Mankinen and C. M. Wentworth. 32 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.) Available on the web at <http://geopubs.wr.usgs.gov/open-file/of03-187/>

OF 03-0188. CALIFORNIA. Preliminary geologic map of the Winchester 7.5' quadrangle, Riverside County, California, by D. M. Morton. Prepared in cooperation with the California Geological Survey. 18 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.) Available on the web at <http://geopubs.wr.usgs.gov/of03-188/>

OF 03-0189. CALIFORNIA. Preliminary geologic map of the Murrieta 7.5' quadrangle, Riverside County, California, by M. P. Kennedy and D. M. Morton. Prepared in cooperation with the California Geological Survey. 17 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.) Available on the web at <http://geopubs.wr.usgs.gov/open-file/of03-189/>

OF 03-0191. A compendium of *P*- and *S*-wave velocities from surface-to-borehole logging; summary and reanalysis of previously published data and analysis of unpublished data, by D. M. Boore. 13 p. (NC, Da, M.) Available on the web at <http://geopubs.wr.usgs.gov/open-file/of03-191/>

OF 03-0192. Generation and migration of petroleum in Iraq; a 2D/3D modeling study of Jurassic source rocks, by J. K. Pitman, D. W. Steinshouer and M. D. Lewan. 19 p. (NC, Da, M.) Available on the web at <http://pubs.usgs.gov/of/2003/ofr-03-192/>

OF 03-0203. Preliminary publications Book 2 from Project on mineral resources, metallogenesis, and tectonics of northeastern Asia, edited by W. J. Nokleberg, R. J. Miller, V. V. Naumova, A. I. Khanchuk, L. M. Parfenov, M. I. Kuzmin, T. M. Bounaeva, A. A. Obolenskiy, S. M. Rodionov, Z. V. Seminskiy, M. F. Diggles, Sodov Ariunbileg, Gombosuren Badarch, Valentina Belichenko, N. A. Berzin, G. V. Birul'kin, A. N. Bulgatov, Jamba Byamba, A. V. Deikunenko, Gunchin Dejiddmaa, Y. V. V. Davydov, E. G. Distanov, Dong Yongsheng, Dangindorjiin Dorjgotov, S. I. Dril, V. Y. Fridovskiy, I. V. Gordienko, G. N. Gamyanin, Ochir Gerel, Ayurzana Gotovsuren, D. H. Hwang, B. I. Kim, A. P. Kochnev, E. A. Korago, M. K. Kos'ko, A. V. Kostin, S. A. Letunov, Li Jiliang, Li Xujun, G. D. Malceva, V. D. Melnikov, V. M. Nikitin, Masatsugu Ogasawara, Demberel Orolmaa, V. S. Oxman, L. I. Popeko, N. V. Popov, A. V. Prokopiev, V. V. Ratkin, S. N. Rudnev, V. I. Shpikerman, E. V. Sklyarov, V. I. Sotnikov, A. P. Smelov, A. V. Spiridonov, V. A. Stepanov, V. V. Stogniy, Sadahisa Sudo, Sun Fengyue, Sun Jiapeng, Sun Weizhi, V. M. Supletsov, O. I. Suprunenko, V. F. Timofeev, Onongin Tomurtogoo, F. F. Tret'yakov, O. A. Tyan, V. A. Vernikovskiy, V.



G. Vetluzhskikh, A. G. Vladimirov, Koji Wakita, Xi Aihua, Y. V. Yakovlev, Yan Hongquan, Ye Mao, A. N. Zedgenizov, V. I. Zhizhin, N. N. Zinchuk and L. M. Zorina. Prepared in collaboration with Russian Academy of Sciences; Mongolian Academy of Sciences; Jilin University (Changchun Branch); Korean Institute of Geology, Mining, and Materials; Geological Survey of Japan/AIST. (NC, Da, M.) Available on the web at <http://geopubs.wr.usgs.gov/open-file/of03-203/>

OF 03-0204. Preliminary metallogenic belt and mineral deposit maps for Northeast Asia, by S. M. Rodionov, A. A. Obolenskiy, E. G. Distanov, Gombosuren Badarch, Gunchin Dejiddmaa, D. H. Hwang, A. I. Khanchuk, Masatsugu Ogasawara, W. J. Nokleberg, L. M. Parfenov, A. V. Prokopiev, Z. V. Seminskiy, A. P. Smelov, Yan Hongquan, G. N. Birul'kin, Y. V. V. Davydov, V. Y. Fridovskiy, G. N. Gamyanin, Ochir Gerel, A. V. Kostin, S. A. Letunov, Li Xujun, V. M. Nikitin, Sadahisa Sudo, V. I. Sotnikov, A. V. Spiridonov, V. A. Stepanov, Sun Fengyue, Sun Jiapeng, Sun Weizhi, V. M. Supletsov, V. F. Timofeev, O. A. Tyan, V. G. Vetluzhskikh, Koji Wakita, Y. V. Yakovlev and L. M. Zorina. Prepared in collaboration with the Russian Academy of Sciences; Mongolian Academy of Sciences; Jilin University (Changchun Branch); Korean Institute of Geology, Mining, and Materials; Geological Survey of Japan/AIST. 104 p., 4 over-size sheets. (NC, Da, M; USGS, Library, 2255 North Gemini Dr., Flagstaff, AZ 86001.) (Map-on-demand.) \$80. Available on the web at <http://geopubs.wr.usgs.gov/open-file/of03-204/>

OF 03-0205. Preliminary Northeast Asia geodynamics map, compiled by L. M. Parfenov, A. I. Khanchuk, Gombosuren Badarch, R. J. Miller, V. V. Naumova, W. J. Nokleberg, Masatsugu Ogasawara, A. V. Prokopiev, Yan Hongquan, Valentina Belichenko, N. A. Berzin, A. N. Bulgatov, Jamba Byamba, A. V. Deikunenko, Dong Yongsheng, S. I. Dril, I. V. Gordienko, D. H. Hwang, B. I. Kim, E. A. Korago, M. K. Kos'ko, M. I. Kuzmin, Demberel Orolmaa, V. S. Oxman, L. I. Popeko, S. N. Rudnev, E. V. Sklyarov, A. P. Smelov, Sadahisa Sudo, O. I. Suprunenko, Sun Fengyue, Sun Jiapeng, Sun Weizhi, V. F. Timofeev, F. F. Tret'yakov, Onongin Tomurtogoo, V. A. Vernikovskiy, A. G. Vladimirov, Koji Wakita, Ye Mao and A. N. Zedgenizov. Prepared in collaboration with the Russian Academy of Sciences; Mongolian Academy of Sciences; Jilin University; Korean Institute of Geoscience and Minerals; Geological Survey of Japan/AIST. 2 over-size sheets. (NC, Da, M; USGS, Library, 2255 North Gemini Dr., Flagstaff, AZ 86001.) (Map-on-demand.) \$40. Available on the web at <http://geopubs.wr.usgs.gov/open-file/of03-205/>

OF 03-0211. WASHINGTON. An account of preliminary landslide damage and losses resulting from the February 28, 2001, Nisqually, Washington, earthquake, by L. M. Highland. 48 p. (NC, Da, M; Geol. & Earth Resources Div., Dep. of Natural Resources, P.O. Box 47007, Olympia, WA 98504-7007; David A. Johnson Cascade Volcano Observatory, 5400 MacArthur Blvd., Vancouver, WA 98661.) Available on the web at <http://pubs.usgs.gov/of/2003/ofr-03-211/>

OF 03-0214. Earthquake probabilities in the San Francisco Bay region; 2002-2031, by Working Group on California Earthquake Probabilities. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los

Angeles, CA 90012.) Available on the web at <http://geopubs.wr.usgs.gov/open-file/of03-214/>

OF 03-0230. Digital depth horizon compilations of the Alaskan North Slope and adjacent Arctic regions, by R. W. Saltus and K. J. Bird. 21 p. (NC, M, Da, A; Div. of Geol. & Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709; U.S. Dep. of Interior, Alaska Resources Library, 3150 C St. #100, Anchorage, AK 99503-3916.) Available on the web at <http://pubs.usgs.gov/of/2003/ofr-03-230/>

OF 03-0232. Earthquakes of the central United States, 1795-2002; construction of the earthquake catalog for an outreach map, by R. L. Wheeler. 14 p. (NC, Da, M.) Available on the web at <http://pubs.usgs.gov/of/2003/ofr-03-232/>



THEMATIC MAPS AND CHARTS

GEOLOGIC QUADRANGLE MAP

Multicolor geologic maps on topographic bases in 7 1/2- or 15-minute quadrangle units; scales mainly 1:24,000 or 1:62,500; show bedrock, surficial, or engineering geology. Maps are accompanied by brief texts and some maps by structure and columnar sections also.

GQ-1800. MARYLAND, VIRGINIA. Geologic map of the Buckeystown Quadrangle, Frederick and Montgomery counties, Maryland, and Loudoun County, Virginia, by Scott Southworth, U.S. Geological Survey; and D. K. Brezinski, Maryland Geological Survey. Prepared in cooperation with Maryland Geological Survey. 2003. Lat 39°15' to 39°22'30", long 77°22'30" to 77°30'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 40 by 57 inches (in color). \$7. Available on the web at <http://pubs.usgs.gov/gq/gq-1800/>

The Buckeystown Quadrangle is underlain mostly by rocks of the western Piedmont Province and a portion of the eastern Blue Ridge Province. The western Piedmont Province is underlain by late Proterozoic(?) and Lower Cambrian(?) metasedimentary rocks of the Westminster Terrane, Lower and Middle Cambrian metasedimentary rocks and Upper Cambrian to Lower Ordovician carbonate rocks of the Frederick Valley Synclinorium, Upper Triassic sedimentary rocks of the Mesozoic Culpeper Basin, and Early Jurassic dikes; Lower Cambrian metasedimentary rocks underlie the Blue Ridge Province. Cenozoic deposits, which overlie the bedrock, include high- and low-level alluvial terraces, residual gravel, colluvium, and alluvium. The map area includes the Chesapeake and Ohio Canal National Historical Park, and the Monocacy Natural Resources Area. Sugarloaf Mountain is a registered natural landmark.

GEOLOGIC INVESTIGATIONS SERIES

In August 1996, the I-map series name was changed from Miscellaneous Investigations Series Maps to Geologic Investigations Series. All geologic maps approved for publication after August 1996 will be published in the Geologic Investigations Series. The series definition remains the same. Maps on planimetric or topographic bases; regular and irregular areas; various scales; a wide variety of format and subject matter. The series also includes 7



1/2-minute quadrangle photogeologic maps on planimetric bases which show geology as interpreted from aerial photographs. Series also includes maps of Mars and the Moon.

I-2785. Topographic map of the Northwest Loire Valles region of Mars MTM 500k-15/337E OMKT. Prepared for the National Aeronautics and Space Administration. 2003. Lat -17.5° to -12.5°, long 340°E to 335°E. Scale 1:502,000 (1 mm = 502 m) at 330° E (30° W) longitude. Sheet 28 by 40 inches (in color). (Transverse Mercator projection.) Available on the web at <http://geopubs.wr.usgs.gov/i-map/i2785/>

This map is part of a series of topographic maps of areas of special scientific interest on Mars. The topography was compiled photogrammetrically using Viking Orbiter stereo image pairs. The contour interval is 250 meters. Horizontal and vertical control was established using the USGS Mars Digital Image Model 2.0 (MDIM 2.0) and data from the Mars Orbiter Laser Altimeter (MOLA).

I-2786. Topographic map of the Southeast Loire Valles region of Mars MTM 500k -20/347E OMKT. Prepared for the National Aeronautics and Space Administration. 2003. Lat -22.5° to -17.5°, and 350° E to 345° E. Scale 1:502,000 (1 mm = 502 m) at 350° E (10° W) longitude. Sheet 28 by 40 inches (in color). (Transverse Mercator projection.) Available on the web at <http://geopubs.wr.usgs.gov/i-map/i2786/>

This map is part of a series of topographic maps of areas of special scientific interest on Mars. The topography was compiled photogrammetrically using Viking Orbiter stereo image pairs. The contour interval is 250 meters. Horizontal and vertical control was established using the USGS Mars Digital Image Model 2.0 (MDIM 2.0) and data from the Mars Orbiter Laser Altimeter (MOLA).

I-2787. Topographic map of the Parana Valles region of Mars MTM 500k -25/337E OMKT. Prepared for the National Aeronautics and Space Administration. 2003. Lat -27.5° to -22.5°, long 350° E to 345° E. Scale 1:502,000 (1 mm = 502 m) at 350° E (10° W) longitude. Sheet 28 by 40 inches (in color). (Transverse Mercator projection.) Available on the web at <http://geopubs.wr.usgs.gov/i-map/i2787/>

This map is part of a series of topographic maps of areas of special scientific interest on Mars. The topography was compiled photogrammetrically using Viking Orbiter stereo image pairs. The contour interval is 250 meters. Horizontal and vertical control was established using the USGS Mars Digital Image Model 2.0 (MDIM 2.0) and data from the Mars Orbiter Laser Altimeter (MOLA).

MISCELLANEOUS FIELD STUDIES MAPS

Multicolor or black and white maps on topographic or planimetric bases; quadrangle or irregular areas; various scales. Pre-1971 maps show bedrock geology in relation to specific mining or mineral-deposit problems; the majority of post-1971 maps are preliminary black and white maps on various subjects such as environmental studies or Wilderness mineral investigations.

MF-2327-C. NEVADA. Geochemistry, geochronology, mineralogy, and geology suggest sources of and controls on mineral systems in the southern Toiyama Range, Nye County, Nevada; *with geochemistry maps of gold, silver, mercury, arsenic, antimony, zinc, copper, lead, molybdenum, bismuth, iron, titanium, vana-*

dium, cobalt, beryllium, boron, fluorine, and sulfur; *and with a section on lead associations, mineralogy and paragenesis, and isotopes*, by D. R. Shawe, J. D. Hoffman, D. R. Shawe, B. R. Doe, U.S. Geological Survey; E. E. Foord; H. J. Stein, Colorado State University; and R. A. Ayuso, U.S. Geological Survey. 2003. 5 sheets. Lat 38°30' to 38°45', long 116°45' to 117°07'30". Sheets 1-4, scale 1:48,000 (1 inch = 4,000 feet); sheet 5, scale 1:24,000 (1 inch = 2,000 feet). Sheets 1 and 2, 88 by 54 inches (in color); sheets 3 and 4, 66 by 54 inches (in color); sheet 5, 66 by 54 inches. (Accompanied by 65 page text.) (Map-on-demand.) Per sheet \$20. Available on the web at <http://pubs.usgs.gov/mf/2003/mf-2327-C>

MF-2397. NEW MEXICO. Geologic map of the Rio Puerco Quadrangle, Bernalillo and Valencia counties, New Mexico, by Florian Maldonado. 2003. Lat 34°45' to 34°52'30", long 106°52'30" to 107°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 35 by 29 inches (in color). (Accompanied by 7 page text.) (Map-on-demand.) \$20. Available on the web at <http://pubs.usgs.gov/mf/2003/mf-2397/>

MF-2406. COLORADO. Ferricrete, manganocrete, and bog iron occurrences with selected sedge bogs and active iron bogs and springs in the upper Animas River watershed, San Juan County, Colorado, by D. B. Yager, S. E. Church, P. L. Verplanck and Laurie Wirt. 2003. Lat 37°45' to 38°, long 107°30' to 107°52'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 54 by 42 inches (in color). (Accompanied by 10 page text.) (Map-on-demand.) \$20. Available on the web at <http://pubs.usgs.gov/mf/2002/mf-2406/>

MF-2407-A. NEVADA. Map showing scandium concentrations from stream sediments and soils throughout the Humboldt River basin and surrounding areas, northern Nevada, by D. B. Yager and H. W. Folger. 2003. Lat 38° to 42°, long 114° to 120°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 44 by 42 inches (in color). (Map-on-demand.) \$20. Available on the web at <http://pubs.usgs.gov/mf/2003/mf-2407/MF-2407-A.pdf>

MF-2407-B. NEVADA. Map showing iron concentrations from stream sediments and soils throughout the Humboldt River basin and surrounding areas, northern Nevada, by D. B. Yager and H. W. Folger. 2003. Lat 38° to 42°, long 114° to 120°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 44 by 42 inches (in color). (Map-on-demand.) \$20. Available on the web at <http://pubs.usgs.gov/mf/2003/mf-2407/MF-2407-B.pdf>

MF-2407-C. NEVADA. Map showing cobalt concentrations from stream sediments and soils throughout the Humboldt River basin and surrounding areas, northern Nevada, by D. B. Yager and H. W. Folger. 2003. Lat 38° to 42°, long 114° to 120°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 44 by 42 inches (in color). (Map-on-demand.) \$20. Available on the web at <http://pubs.usgs.gov/mf/2003/mf-2407/MF-2407-C.pdf>

MF-2407-D. NEVADA. Map showing nickel concentrations from stream sediments and soils throughout the Humboldt River basin and surrounding areas, northern Nevada, by D. B. Yager and H. W. Folger. 2003. Lat 38° to 42°, long 114° to 120°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 44 by 42 inches (in color). (Map-on-demand.) \$20. Available on the web at <http://pubs.usgs.gov/mf/2003/mf-2407/MF-2407-D.pdf>



MF-2407-E. NEVADA. Map showing copper concentrations from stream sediments and soils throughout the Humboldt River basin and surrounding areas, northern Nevada, by D. B. Yager and H. W. Folger. 2003. Lat 38° to 42°, long 114° to 120°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 44 by 42 inches (in color). (Map-on-demand.) \$20. Available on the web at <http://pubs.usgs.gov/mf/2003/mf-2407/MF-2407-E.pdf>

MF-2407-F. NEVADA. Map showing zinc concentrations from stream sediments and soils throughout the Humboldt River basin and surrounding areas, northern Nevada, by D. B. Yager and H. W. Folger. 2003. Lat 38° to 42°, long 114° to 120°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 44 by 42 inches (in color). (Map-on-demand.) \$20. Available on the web at <http://pubs.usgs.gov/mf/2003/mf-2407/MF-2407-F.pdf>

MF-2407-G. NEVADA. Map showing arsenic concentrations from stream sediments and soils throughout the Humboldt River basin and surrounding areas, northern Nevada, by D. B. Yager and H. W. Folger. 2003. Lat 38° to 42°, long 114° to 120°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 44 by 42 inches (in color). (Map-on-demand.) \$20. Available on the web at <http://pubs.usgs.gov/mf/2003/mf-2407/MF-2407-G.pdf>

MF-2407-H. NEVADA. Map showing selenium concentrations from stream sediments and soils throughout the Humboldt River basin and surrounding areas, northern Nevada, by D. B. Yager and H. W. Folger. 2003. Lat 38° to 42°, long 114° to 120°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 44 by 42 inches (in color). (Map-on-demand.) \$20. Available on the web at <http://pubs.usgs.gov/mf/2003/mf-2407/MF-2407-H.pdf>

MF-2407-I. NEVADA. Map showing silver concentrations for stream sediments and soils throughout the Humboldt River basin and surrounding areas, northern Nevada, by D. B. Yager and H. W. Folger. 2003. Lat 38° to 42°, long 114° to 120°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 44 by 42 inches (in color). (Map-on-demand.) \$20. Available on the web at <http://pubs.usgs.gov/mf/2003/mf-2407/MF-2407-I.pdf>

MF-2407-J. NEVADA. Map showing antimony concentrations from stream sediments and soils throughout the Humboldt River basin and surrounding areas, northern Nevada, by D. B. Yager and H. D. Folger. 2003. Lat 38° to 42°, long 114° to 120°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 44 by 42 inches (in color). (Map-on-demand.) \$20. Available on the web at <http://pubs.usgs.gov/mf/2003/mf-2407/MF-2407-J.pdf>

MF-2407-K. NEVADA. Map showing cerium concentrations from stream sediments and soils throughout the Humboldt River basin and surrounding areas, northern Nevada, by D. B. Yager and H. W. Folger. 2003. Lat 38° to 42°, long 114° to 120°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 44 by 42 inches (in color). (Map-on-demand.) \$20. Available on the web at <http://pubs.usgs.gov/mf/2003/mf-2407/MF-2407-K.pdf>

MF-2407-L. NEVADA. Map showing gold concentrations from stream sediments and soils throughout the Humboldt River basin and surrounding areas, northern Nevada, by D. B. Yager and H. W. Folger. 2003. Lat 38° to 42°, long 114° to 120°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 44 by 42 inches (in color). (Map-on-demand.) \$20. Available on the web at <http://pubs.usgs.gov/mf/2003/mf-2407/MF-2407-L.pdf>

MF-2407-M. NEVADA. Map showing lead concentrations from stream sediments and soils throughout the Humboldt River basin and surrounding areas, northern Nevada, by D. B. Yager and H. W. Folger. 2003. Lat 38° to 42°, long 114° to 120°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 44 by 42 inches (in color). (Map-on-demand.) \$20. Available on the web at <http://pubs.usgs.gov/mf/2003/mf-2407/MF-2407-M.pdf>



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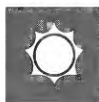
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ABSTRACTS

Abstracts are condensed but informative summaries of presentations made at meetings of scientific and professional organizations. Typically they summarize the principal conclusions of an author's current work but contain little supporting data. Non-USGS personnel who share authorship in abstracts with USGS personnel are indicated by an asterisk (*) immediately following the name. **These publications are not available from the U.S. Geological Survey.**

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TOPOGRAPHIC MAPS

The table below shows new and revised topographic maps printed by the USGS from April through June 2003.

Most USGS map series divide the United States into quadrangles bounded by two lines of latitude and two lines of longitude. The 1:24,000-scale series is usually published in 7.5-minute quadrangles. The 1:100,000-scale series is published in 30- by 60-minute quadrangles. The latitude and longitude that make up the map-bounding rectangle are shown in the table, along with the map name, State, scale, date, map type, and stock number (a unique number needed to process an order). Both an old stock number and a new stock number are listed for each map; when ordering, please use the new stock number.

The map type for 1:24,000-scale map revisions will always be a contour (topographic) edition. The 1:100,000-scale map type will be either Surface Management or Minerals Management.

Ordering forms are located at the back of the catalog. State topographic indexes and map lists are free on request. Each State index shows the areas mapped. The map lists group the map names alphabetically by scale and contain ordering information. Map lists are also available online at <http://mac.usgs.gov/mac/maplists/index.html>. For information on the new USGS initiative, The National Map, please visit <http://nationalmap.usgs.gov>.

New Stock Number	Old Stock Number	Map Name	Scale	Date	Longitude West / East	Latitude South / North	State	Map Type
35019	TAK0841	CORDOVA C-5, AK	1:63,360	01/01/2000	-1455230 - -1453000	603000 - 604500	AK	Contours
38596	TAL0687	PAINT ROCK, AL	1:24,000	01/01/1997	-862230 - -861500	343730 - 344500	AL	Contours
40496	TAZ0044	ARIVACA, AZ	1:24,000	01/01/1996	-1112230 - -1111500	313000 - 313730	AZ	Contours
40540	TAZ0091	BAGDAD, AZ	1:100,000	01/01/1999	-1140000 - -1130000	343000 - 350000	AZ	Surface Management
40680	TAZ0231	CAPONERA PEAK, AZ-MEX	1:24,000	01/01/1996	-1114500 - -1113730	313000 - 313730	AZ	Contours
40770	TAZ0322	COBRE GRANDE MTN, AZ	1:24,000	01/01/1998	-1102230 - -1101500	325230 - 330000	AZ	Contours
40772	TAZ0324	COCHISE HEAD, AZ	1:24,000	01/01/1996	-1092230 - -1091500	320000 - 320730	AZ	Contours
40821	TAZ0373	CUMERO CANYON, AZ	1:24,000	01/01/1996	-1105230 - -1104500	312230 - 313000	AZ	Contours
40876	TAZ0431	DOUGLAS NE, AZ	1:24,000	01/01/1996	-1093730 - -1093000	312230 - 313000	AZ	Contours
40926	TAZ0481	FIFE PEAK, AZ	1:24,000	01/01/1996	-1093000 - -1092230	315230 - 320000	AZ	Contours
41012	TAZ0567	GRAND CANYON, AZ	1:100,000	01/01/2001	-1130000 - -1120000	360000 - 363000	AZ	Surface Management
41157	TAZ0712	JACKSON MOUNTAIN, AZ	1:24,000	01/01/1997	-1101500 - -1100730	325230 - 330000	AZ	Contours
41185	TAZ0740	KENNEDY PEAK, AZ	1:24,000	01/01/1996	-1102230 - -1101500	323730 - 324500	AZ	Contours
41202	TAZ0757	KLONDYKE, AZ	1:24,000	01/01/1998	-1102230 - -1101500	324500 - 325230	AZ	Contours
41247	TAZ0802	LITTLE WOOD CANYON, AZ	1:24,000	01/01/1996	-1092230 - -1091500	320730 - 321500	AZ	Contours
41371	TAZ0926	MONK DRAW, AZ	1:24,000	01/01/1996	-1094500 - -1093730	322230 - 323000	AZ	Contours
41455	TAZ1011	NINETYSIX HILLS NE, AZ	1:24,000	01/01/1997	-1110730 - -1110000	325230 - 330000	AZ	Contours
41473	TAZ1029	OAK GROVE CANYON, AZ	1:24,000	01/01/1996	-1103000 - -1102230	324500 - 325230	AZ	Contours
41485	TAZ1041	OUTLAW MOUNTAIN, AZ	1:24,000	01/01/1996	-1095230 - -1094500	313730 - 314500	AZ	Contours
41525	TAZ1081	PENA BLANCA LAKE, AZ	1:24,000	01/01/1996	-1110730 - -1110000	312230 - 313000	AZ	Contours
41596	TAZ1153	PRESUMIDO PEAK, AZ-MEX	1:24,000	01/01/1996	-1113730 - -1113000	313000 - 313730	AZ	Contours
41639	TAZ1196	RHODES PEAK, AZ	1:24,000	01/01/1996	-1103000 - -1102230	323730 - 324500	AZ	Contours
41643	TAZ1200	RIO RICO, AZ	1:24,000	01/01/1996	-1110000 - -1105230	312230 - 313000	AZ	Contours
41673	TAZ1230	RUSTLER PARK, AZ	1:24,000	01/01/1998	-1092230 - -1091500	315230 - 320000	AZ	Contours
41702	TAZ1259	SAN AGUSTIN, AZ	1:24,000	01/01/1996	-1120000 - -1115230	313000 - 313730	AZ	Contours
41709	TAZ1266	SAN MIGUEL, AZ-MEX	1:24,000	01/01/1996	-1115230 - -1114500	313000 - 313730	AZ	Contours



41720	TAZ1277	SASABE, AZ-MEX	1:24,000	01/01/1996	-1113730 - -1113000	312230 - 313000	AZ	Contours
41983	TAZ1543	VAMORI, AZ-MEX	1:24,000	01/01/1996	-1120000 - -1115230	313730 - 314500	AZ	Contours
42098	TAZ1658	YUMA WEST, AZ	1:24,000	01/01/1997	-1144500 - -1143730	323730 - 324500	AZ CA	Contours
42326	TAZ1919	BRADSHAW MOUNTAINS, AZ	1:100,000	01/01/2003	-1130000 - -1120000	340000 - 343000	AZ	Surface Management
42362	TAZ1957	GREASEWOOD MOUNTAIN, AZ	1:24,000	01/01/1996	-1095230 - -1094500	322230 - 323000	AZ	Contours
42373	TAZ1968	WEST OF GREASEWOOD MOUNTAIN, AZ	1:24,000	01/01/1996	-1100000 - -1095230	322230 - 323000	AZ	Contours
42380	TAZ1975	TURQUOISE MOUNTAIN, AZ	1:24,000	01/01/1996	-1095230 - -1094500	314500 - 315230	AZ	Contours
42384	TAZ1979	COCHISE, AZ	1:24,000	01/01/1996	-1100000 - -1095230	320000 - 320730	AZ	Contours
42386	TAZ1981	FERRY SWALE, AZ	1:24,000	01/01/1997	-1113730 - -1113000	365230 - 370000	AZ	Contours
42387	TAZ1982	LEES FERRY, AZ	1:24,000	01/01/1999	-1113730 - -1113000	364500 - 365230	AZ	Contours
42390	TAZ1986	PEARCE, AZ	1:24,000	01/01/1996	-1095230 - -1094500	315230 - 320000	AZ	Contours
42393	TAZ1989	WATER POCKETS, AZ	1:24,000	01/01/1997	-1114500 - -1113730	365230 - 370000	AZ	Contours
42394	TAZ1990	WRATHER ARCH, AZ	1:24,000	01/01/1997	-1115230 - -1114500	365230 - 370000	AZ	Contours
42470	TAZ2067	CHIRICAHUA PEAK, AZ	1:24,000	01/01/1997	-1092230 - -1091500	314500 - 315230	AZ	Contours
42474	TAZ2071	PEDREGOSA MOUNTAINS EAST, AZ	1:24,000	01/01/1996	-1092230 - -1091500	313000 - 313730	AZ	Contours
42479	TAZ2076	STANFORD CANYON, AZ	1:24,000	01/01/1996	-1093000 - -1092230	314500 - 315230	AZ	Contours
42480	TAZ2077	SULPHUR HILLS, AZ	1:24,000	01/01/1996	-1094500 - -1093730	315230 - 320000	AZ	Contours
42483	TAZ2080	ELFRIDA, AZ	1:24,000	01/01/1986	-1094500 - -1093730	313730 - 314500	AZ	Contours
42485	TAZ2082	PAT HILLS SOUTH, AZ	1:24,000	01/01/1996	-1093730 - -1093000	315230 - 320000	AZ	Contours
42486	TAZ2083	PEDREGOSA MOUNTAINS WEST, AZ	1:24,000	01/01/1996	-1093000 - -1092230	313000 - 313730	AZ	Contours
42488	TAZ2085	SQUARETOP HILLS WEST, AZ	1:24,000	01/01/1996	-1094500 - -1093730	314500 - 315230	AZ	Contours
42489	TAZ2086	SWEDE PEAK, AZ	1:24,000	01/01/1996	-1092230 - -1091500	313730 - 314500	AZ	Contours
42494	TAZ2091	BRUNO PEAK, AZ	1:24,000	01/01/1996	-1093000 - -1092230	313730 - 314500	AZ	Contours
42516	TAZ2114	APACHE, AZ	1:24,000	01/01/1996	-1091500 - -1090730	313730 - 314500	AZ	Contours
42524	TAZ2122	BAILEY PEAK, AZ-MEX	1:24,000	01/01/1996	-1123000 - -1122230	314500 - 315230	AZ	Contours
42529	TAZ2127	BEARGRASS BASIN, AZ	1:24,000	01/01/1997	-1101500 - -1100730	330000 - 330730	AZ	Contours
42547	TAZ2146	BLUE MOUNTAIN, AZ	1:24,000	01/01/1998	-1091500 - -1090730	320000 - 320730	AZ	Contours
42586	TAZ2186	CAPE SOLITUDE, AZ	1:24,000	01/01/1999	-1115230 - -1114500	360730 - 361500	AZ	Contours
42752	TAZ2353	LA LESNA MOUNTAINS, AZ-MEX	1:24,000	01/01/1996	-1121500 - -1120730	313730 - 314500	AZ	Contours
42796	TAZ2398	MT TURNBULL, AZ	1:24,000	01/01/1998	-1102230 - -1101500	330000 - 330730	AZ	Contours
42833	TAZ2435	PAPAGO FARMS, AZ	1:24,000	01/01/1996	-1122230 - -1121500	314500 - 315230	AZ	Contours
42854	TAZ2456	PORTAL, AZ	1:24,000	01/01/1998	-1091500 - -1090730	315230 - 320000	AZ	Contours
42855	TAZ2457	PORTAL NE, AZ-NM	1:24,000	01/01/1996	-1090730 - -1090000	315230 - 320000	AZ NM	Contours
42856	TAZ2458	PORTAL PEAK, AZ	1:24,000	01/01/1997	-1091500 - -1090730	314500 - 315230	AZ	Contours
42922	TAZ2527	SOUTH OF BAILEY PEAK, AZ-MEX	1:24,000	01/01/1996	-1123000 - -1122230	313730 - 314500	AZ	Contours
42924	TAZ2529	SOUTH OF PAPAGO FARMS, AZ-MEX	1:24,000	01/01/1996	-1122230 - -1121500	313730 - 314500	AZ	Contours



64 U.S. Geological Survey

42942	TAZ2548	TECOLOTE RANCH, AZ-MEX	1:24,000	01/01/1996	-1120730 --1120000	313730 - 314500	AZ	Contours
43248	TCA0014	AGUA CALIENTE SPRING, CA	1:24,000	01/01/1997	-1162230 --1161500	325230 - 330000	CA	Contours
43312	TCA0080	ARROYO TAPIADO, CA	1:24,000	01/01/1997	-1161500 --1160730	325230 - 330000	CA	Contours
43628	TCA0406	CAZADERO, CA	1:24,000	01/01/1998	-1230730 --1230000	383000 - 383730	CA	Contours
44134	TCA0921	GOOSE CREEK, CA	1:24,000	01/01/1997	-1210730 --1210000	381500 - 382230	CA	Contours
44171	TCA0958	GUALALA, CA	1:24,000	01/01/1998	-1233730 --1233000	384500 - 385230	CA	Contours
44202	TCA0990	HARPERS WELL, CA	1:24,000	01/01/1998	-1160000 --1155230	330000 - 330730	CA	Contours
44287	TCA1075	HOWARD RANCH, CA	1:24,000	01/01/1999	-1210730 --1210000	370730 - 371500	CA	Contours
44312	TCA1100	IN-KO-PAH GORGE, CA	1:24,000	01/01/1997	-1160730 --1160000	323730 - 324500	CA	Contours
44351	TCA1139	JACUMBA, CA	1:24,000	01/01/1997	-1161500 --1160730	323730 - 324500	CA	Contours
44387	TCA1175	KANE SPRING NW, CA	1:24,000	01/01/1998	-1160000 --1155230	330730 - 331500	CA	Contours
44563	TCA1357	LIVE OAK SPRINGS, CA	1:24,000	01/01/1997	-1162230 --1161500	323730 - 324500	CA	Contours
44777	TCA1575	MORRO BAY SOUTH, CA	1:24,000	01/01/1998	-1205230 --1204500	351500 - 352230	CA	Contours
45068	TCA1867	PISMO BEACH, CA	1:24,000	01/01/1998	-1204500 --1203730	350730 - 351500	CA	Contours
45075	TCA1874	PLACERVILLE, CA	1:100,000	01/01/2002	-1210000 --1200000	383000 - 390000	CA	Surface Management
45118	TCA1917	PORT SAN LUIS, CA	1:24,000	01/01/1998	-1205230 --1204500	350830 - 351500	CA	Contours
45159	TCA1959	RACKERBY, CA	1:24,000	01/01/2002	-1212230 --1211500	392230 - 393000	CA	Contours
45288	TCA2091	SALTON, CA	1:24,000	01/01/1998	-1160000 --1155230	332230 - 333000	CA	Contours
45347	TCA2154	SAN JUAN BAUTISTA, CA	1:24,000	01/01/1997	-1213730 --1213000	364500 - 365230	CA	Contours
45391	TCA2198	SANTA CATALINA NORTH, CA	1:24,000	01/01/1998	-1183000 --1182230	332230 - 333000	CA	Contours
45392	TCA2199	SANTA CATALINA SOUTH, CA	1:24,000	01/01/1998	-1183000 --1182230	331500 - 332230	CA	Contours
45541	TCA2351	SOLYO, CA	1:24,000	01/01/1999	-1212230 --1211500	373000 - 373730	CA	Contours
45542	TCA2352	SOMBRERO PEAK, CA	1:24,000	01/01/1997	-1162230 --1161500	324500 - 325230	CA	Contours
45620	TCA2431	SWEENEY PASS, CA	1:24,000	01/01/1997	-1161500 --1160730	324500 - 325230	CA	Contours
45727	TCA2539	TUMEY HILLS, CA	1:24,000	01/01/2000	-1204500 --1203730	363000 - 363730	CA	Contours
45932	TCA2746	YOSEMITE VALLEY, CA	1:100,000	01/01/2002	-1200000 --1190000	373000 - 380000	CA	Surface Management
45954	TCA2769	HAYFORK, CA	1:100,000	01/01/1983	-1240000 --1230000	403000 - 410000	CA	Surface Management
46487	TCA3319	TWENTYNINE PALMS MOUNTAIN, CA	1:24,000	01/01/1997	-1160000 --1155230	340000 - 340730	CA	Contours
47065	TCA3900	TELESCOPE PEAK, CA	1:24,000	01/01/1988	-1170730 --1170000	360730 - 361500	CA	Contours
49297	TCO1809	STEAMBOAT SPRINGS, CO	1:100,000	01/01/2002	-1070000 --1060000	400000 - 403000	CO	Minerals Management
49298	TCO1810	STEAMBOAT SPRINGS, CO	1:100,000	01/01/2002	-1070000 --1060000	400000 - 403000	CO	Surface Management
49487	TCO2000	WALDEN, CO	1:100,000	01/01/2002	-1070000 --1060000	403000 - 410000	CO WY	Minerals Management
49488	TCO2001	WALDEN, CO	1:100,000	01/01/2002	-1070000 --1060000	403000 - 410000	CO WY	Surface Management
50160	TFL0060	BAYARD, FL	1:24,000	01/01/1994	-813730 --813000	300730 - 301500	FL	Contours
50611	TFL0523	JACKSONVILLE HEIGHTS, FL	1:24,000	01/01/1994	-815230 --814500	300730 - 301500	FL	Contours



50771	TFL0685	MAYPORT, FL	1:24,000	01/01/1994	-813000 - -812230	302230 - 303000	FL	Contours
51094	TFL1025	TALLAHASSEE, FL	1:24,000	01/01/1999	-842230 - -841500	302230 - 303000	FL	Contours
51191	TFL1129	WOODVILLE, FL	1:24,000	01/01/1999	-841500 - -840730	301500 - 302230	FL	Contours
51353	TFL1317	FLORIDA SI W/TOPO (S/2 OF SET), FL	1:500,000	01/01/1989			FL	Water Contours
51494	TGA0055	AUSTELL, GA	1:24,000	01/01/1999	-844500 - -843730	334500 - 335230	GA	Contours
51678	TGA0247	CONYERS, GA	1:24,000	01/01/1999	-840730 - -840000	333730 - 334500	GA	Contours
51867	TGA0440	HAMPTON, GA	1:24,000	01/01/1999	-842230 - -841500	332230 - 333000	GA	Contours
52030	TGA0609	LUXOMNI, GA	1:24,000	01/01/1999	-840730 - -840000	335230 - 340000	GA	Contours
52088	TGA0670	MILSTEAD, GA	1:24,000	01/01/1999	-840000 - -835230	333730 - 334500	GA	Contours
52220	TGA0805	REDAN, GA	1:24,000	01/01/1999	-841500 - -840730	333730 - 334500	GA	Contours
52303	TGA0892	SNELLVILLE, GA	1:24,000	01/01/1999	-840730 - -840000	334500 - 335230	GA	Contours
52748	THI0075	KEANAE, HI	1:24,000	01/01/1992	-1561230 - -1560500	205000 - 205730	HI	Contours
52817	THI0144	WEST OF KOKOOLAU, HI (FORMER PU'U'OUO)	1:24,000	01/01/1993	-1554500 - -1553730	193000 - 193730	HI	Contours
55279	TID1138	REXBURG, ID	1:100,000	01/01/2003	-1120000 - -1110000	433000 - 440000	ID WY	Surface Management
55368	TID1232	SAWTELL PEAK, ID-MT	1:24,000	01/01/1997	-1113000 - -1112230	443000 - 443730	ID MT	Contours
55390	TID1254	SHEEP CREEK, ID	1:100,000	01/01/2002	-1160000 - -1150000	420000 - 423000	ID	Surface Management
55436	TID1300	SODA SPRINGS, ID	1:100,000	01/01/2003	-1120000 - -1110000	423000 - 430000	ID WY	Surface Management
56160	TIL0011	ALTAMONT WEST, IL	1:24,000	01/01/1998	-885230 - -884500	390000 - 390730	IL	Contours
56173	TIL0024	ARGENTA, IL	1:24,000	01/01/1998	-885230 - -884500	395230 - 400000	IL	Contours
56191	TIL0043	AVENA, IL	1:24,000	01/01/1998	-890000 - -885230	390000 - 390730	IL	Contours
56211	TIL0063	BEECHER CITY, IL	1:24,000	01/01/1998	-885230 - -884500	390730 - 391500	IL	Contours
56418	TIL0271	FANCHER, IL	1:24,000	01/01/1998	-885230 - -884500	391500 - 392230	IL	Contours
56508	TIL0361	HERRICK, IL	1:24,000	01/01/1998	-890000 - -885230	390730 - 391500	IL	Contours
56576	TIL0431	LAKEWOOD, IL	1:24,000	01/01/1998	-890000 - -885230	391500 - 392230	IL	Contours
56591	TIL0446	LIBERTYVILLE, IL	1:24,000	01/01/1998	-880000 - -875230	421500 - 422230	IL	Contours
56655	TIL0511	MIDDLESWORTH, IL	1:24,000	01/01/1999	-884500 - -883730	392230 - 393000	IL	Contours
56820	TIL0677	RAYMOND NE, IL	1:24,000	01/01/1998	-893730 - -893000	392230 - 393000	IL	Contours
56912	TIL0771	STEWARDSOON EAST, IL	1:24,000	01/01/1998	-883730 - -883000	391500 - 392230	IL	Contours
56913	TIL0772	STEWARDSOON WEST, IL	1:24,000	01/01/1998	-884500 - -883730	391500 - 392230	IL	Contours
56947	TIL0806	TOWER HILL, IL	1:24,000	01/01/1998	-890000 - -885230	392230 - 393000	IL	Contours
57010	TIL0871	WHEELING, IL	1:24,000	01/01/1998	-880000 - -875230	420730 - 421500	IL	Contours
57018	TIL0879	WINDSOR, IL	1:24,000	01/01/1998	-883730 - -883000	392230 - 393000	IL	Contours
57043	TIL0905	HINDSBORO, IL	1:24,000	01/01/1998	-881500 - -880730	393730 - 394500	IL	Contours
57056	TIL0918	LONGVIEW, IL	1:24,000	01/01/1998	-880730 - -880000	395230 - 400000	IL	Contours
57062	TIL0924	MURDOCK, IL	1:24,000	01/01/1998	-880730 - -880000	394500 - 395230	IL	Contours
57065	TIL0927	ASHMORE, IL	1:24,000	01/01/1998	-880730 - -880000	393000 - 393730	IL	Contours
57066	TIL0928	TOLONO, IL	1:24,000	01/01/1998	-882230 - -881500	395230 - 400000	IL	Contours
57068	TIL0930	IVESDALE, IL	1:24,000	01/01/1998	-883000 - -882230	395230 - 400000	IL	Contours
57081	TIL0943	SULLIVAN, IL	1:24,000	01/01/1998	-883730 - -883000	393000 - 393730	IL	Contours



66 U.S. Geological Survey

57083	TIL0945	CADWELL, IL	1:24,000	01/01/1998	-883730 - -883000	393730 - 394500	IL	Contours
57084	TIL0946	LOVINGTON, IL	1:24,000	01/01/1999	-884500 - -883730	393730 - 394500	IL	Contours
57085	TIL0947	ARTHUR, IL	1:24,000	01/01/1998	-883000 - -882230	393730 - 394500	IL	Contours
57088	TIL0950	FINDLAY, IL	1:24,000	01/01/1998	-885230 - -884500	393000 - 393730	IL	Contours
57090	TIL0952	COOKS MILLS, IL	1:24,000	01/01/1998	-883000 - -882230	393000 - 393730	IL	Contours
57091	TIL0953	DALTON CITY, IL	1:24,000	01/01/1998	-885230 - -884500	393730 - 394500	IL	Contours
57092	TIL0954	OAKLAND, IL	1:24,000	01/01/1998	-880730 - -880000	393730 - 394500	IL	Contours
57100	TIL0963	TUSCOLA, IL	1:24,000	01/01/1999	-882230 - -881500	394500 - 395230	IL	Contours
57101	TIL0964	OBED, IL	1:24,000	01/01/1998	-890000 - -885230	393000 - 393730	IL	Contours
57102	TIL0965	CERRO GORDO, IL	1:24,000	01/01/1999	-884500 - -883730	395230 - 400000	IL	Contours
57104	TIL0967	LA PLACE, IL	1:24,000	01/01/1999	-884500 - -883730	394500 - 395230	IL	Contours
57105	TIL0968	HAMMOND, IL	1:24,000	01/01/1998	-883730 - -883000	394500 - 395230	IL	Contours
57106	TIL0969	MACON EAST, IL	1:24,000	01/01/1998	-890000 - -885230	393730 - 394500	IL	Contours
57107	TIL0970	ATWOOD, IL	1:24,000	01/01/1998	-883000 - -882230	394500 - 395230	IL	Contours
57109	TIL0972	VILLA GROVE, IL	1:24,000	01/01/1998	-881500 - -880730	394500 - 395230	IL	Contours
57310	TIL1181	DANA, IL	1:24,000	01/01/1999	-890000 - -885230	405230 - 410000	IL	Contours
57343	TIL1219	NEOGA, IL	1:24,000	01/01/1998	-883000 - -882230	391500 - 392230	IL	Contours
57347	TIL1223	CHARLESTON SOUTH, IL	1:24,000	01/01/1998	-881500 - -880730	392230 - 393000	IL	Contours
57368	TIL1244	GREENUP, IL	1:24,000	01/01/1998	-881500 - -880730	390730 - 391500	IL	Contours
57374	TIL1250	YALE, IL	1:24,000	01/01/1998	-880730 - -880000	390000 - 390730	IL	Contours
57387	TIL1264	WHEELER, IL	1:24,000	01/01/1998	-882230 - -881500	390000 - 390730	IL	Contours
57392	TIL1269	WOODBURY, IL	1:24,000	01/01/1998	-882230 - -881500	390730 - 391500	IL	Contours
57393	TIL1271	ALTAMONT EAST, IL	1:24,000	01/01/1998	-884500 - -883730	390000 - 390730	IL	Contours
57394	TIL1272	DIETERICH, IL	1:24,000	01/01/1998	-883000 - -882230	390000 - 390730	IL	Contours
57397	TIL1275	SHUMWAY, IL	1:24,000	01/01/1998	-884500 - -883730	390730 - 391500	IL	Contours
57400	TIL1278	TEUTOPOLIS, IL	1:24,000	01/01/1998	-883000 - -882230	390730 - 391500	IL	Contours
57604	TIN0043	BELMONT, IN	1:24,000	01/01/1998	-862230 - -861500	390730 - 391500	IN	Contours
66763	TMN0325	CRANBERRY BAY, MN-CAN	1:24,000	01/01/1999	-930730 - -930000	483000 - 483730	MN	Contours
66901	TMN0466	ERICSBURG, MN	1:24,000	01/01/1999	-932230 - -931500	482230 - 483000	MN	Contours
67052	TMN0620	GRAND PORTAGE, MN	1:24,000	01/01/1999	-894500 - -893730	475500 - 480230	MN	Contours
67172	TMN0743	INTERNATIONAL FALLS, MN-CAN	1:24,000	01/01/1999	-933000 - -932230	483000 - 483730	MN	Contours
67184	TMN0755	ISLAND VIEW, MN	1:24,000	01/01/1999	-931500 - -930730	483000 - 483730	MN	Contours
67227	TMN0799	KEMPTON BAY, MN-can	1:24,000	01/01/1999	-925230 - -924500	483000 - 483730	MN	Contours
67237	TMN0809	KETTLE FALLS, MN	1:24,000	01/01/1999	-924500 - -923730	483000 - 483730	MN	Contours
67445	TMN1024	MINERAL CENTER, MN	1:24,000	01/01/1999	-895230 - -894500	475230 - 480000	MN ON	Contours
67624	TMN1208	PIGEON POINT, MN	1:24,000	01/01/1999	-893730 - -893000	475500 - 480230	MI MN ON	Contours
67681	TMN1269	RANIER, MN-CAN	1:24,000	01/01/1999	-932230 - -931500	483000 - 483730	MN	Contours
67837	TMN1429	SOLDIER POINT, MN	1:24,000	01/01/1999	-930000 - -925230	483000 - 483730	MN	Contours
70079	TMS0047	BENNDALE, MS	1:24,000	01/01/2000	-885230 - -884500	304500 - 305230	MS	Contours



71578	TMT0549	CUT BANK, MT	1:100,000	01/01/2002	-1130000 - -1120000	483000 - 490000	MT	Minerals Management
71579	TMT0550	CUT BANK, MT	1:100,000	01/01/2002	-1130000 - -1120000	483000 - 490000	MT	Surface Management
72846	TMT1847	RINGLING, MT	1:100,000	01/01/2002	-1110000 - -1100000	460000 - 463000	MT	Surface Management
72847	TMT1848	RINGLING, MT	1:100,000	01/01/2002	-1110000 - -1100000	460000 - 463000	MT	Surface Management
72959	TMT1962	SEELEY LAKE, MT	1:100,000	01/01/2002	-1140000 - -1130000	470000 - 473000	MT	Minerals Management
72960	TMT1963	SEELEY LAKE, MT	1:100,000	01/01/2002	-1140000 - -1130000	470000 - 473000	MT	Surface Management
73374	TMT2386	WINIFRED, MT	1:100,000	01/01/2002	-1100000 - -1090000	473000 - 480000	MT	Minerals Management
73375	TMT2388	WINIFRED, MT	1:100,000	01/01/2002	-1100000 - -1090000	473000 - 480000	MT	Surface Management
73563	TMT2590	EKALAKA, MT	1:100,000	01/01/2002	-1050000 - -1040000	453000 - 460000	MT ND SD	Surface Management
73564	TMT2591	EKALAKA, MT	1:100,000	01/01/2002	-1050000 - -1040000	453000 - 460000	MT ND SD	Minerals Management
74345	TMT3448	HEBGEN LAKE, MT	1:100,000	01/01/2002	-1120000 - -1110000	443000 - 450000	ID MT WY	Minerals Management
74346	TMT3449	HEBGEN LAKE, MT	1:100,000	01/01/2002	-1120000 - -1110000	443000 - 450000	ID MT WY	Surface Management
74406	TMT3510	LONESOME LAKE, MT	1:100,000	01/01/2002	-1110000 - -1100000	480000 - 483000	MT	Surface Management
74584	TNC0172	DAVIS, NC	1:24,000	01/01/2002	-763000 - -762230	344500 - 345230	NC	Contours
74613	TNC0201	EFLAND, NC	1:24,000	01/01/2002	-791500 - -790730	360000 - 360730	NC	Contours
74666	TNC0255	FRYING PAN, NC	1:24,000	01/01/2002	-760730 - -760000	354500 - 355230	NC	Contours
74681	TNC0270	GILREATH, NC	1:24,000	01/01/2000	-810730 - -810000	360000 - 360730	NC	Contours
74694	TNC0283	GRANDIN, NC	1:24,000	01/01/2000	-813000 - -812230	360000 - 360730	NC	Contours
74722	TNC0314	HARMONY, NC	1:24,000	01/01/2000	-805230 - -804500	355230 - 360000	NC	Contours
74728	TNC0320	HATTERAS, NC	1:24,000	01/01/2002	-754500 - -753730	351100 - 351830	NC	Contours
74753	TNC0345	HORSE GAP, NC	1:24,000	01/01/2000	-812230 - -811500	361500 - 362230	NC	Contours
74822	TNC0414	LITTLE KINNAKEET, NC	1:24,000	01/01/2002	-753400 - -752630	352230 - 353000	NC	Contours
74877	TNC0469	MIDDLETOWN, NC	1:24,000	01/01/2002	-760730 - -760000	352100 - 353000	NC	Contours
74892	TNC0484	MORAVIAN FALLS, NC	1:24,000	01/01/2000	-811500 - -810730	360000 - 360730	NC	Contours
74948	TNC0540	OCRA COKE, NC	1:24,000	01/01/2002	-760000 - -755230	350000 - 350730	NC	Contours
76121	TND0401	ELGIN, ND	1:100,000	01/01/2002	-1020000 - -1010000	460000 - 463000	ND	Minerals Management
76122	TND0402	ELGIN, ND	1:100,000	01/01/2002	-1020000 - -1010000	460000 - 463000	ND	Surface Management
77290	TND1578	BELFIELD, ND	1:100,000	01/01/2002	-1040000 - -1030000	463000 - 470000	ND	Surface Management
77291	TND1579	BELFIELD, ND	1:100,000	01/01/2002	-1040000 - -1030000	463000 - 470000	ND	Minerals Management
79449	TNM0082	APACHE PEAK, NM	1:24,000	01/01/1999	-1074500 - -1073730	330000 - 330730	NM	Contours



68 U.S. Geological Survey

79559	TNM0193	BLACK PEAK, NM	1:24,000	01/01/1999	-1085230 - -1084500	340000 - 340730	NM	Contours
79560	TNM0194	BLACK POINT, NM	1:24,000	01/01/1998	-1090000 - -1085230	312230 - 313000	NM	Contours
79629	TNM0263	C BAR RANCH, NM	1:24,000	01/01/1999	-1083000 - -1082230	322230 - 323000	NM	Contours
79781	TNM0421	CIRCLE MESA, NM	1:24,000	01/01/1992	-1083000 - -1082230	324500 - 325230	NM	Contours
79784	TNM0424	CLANTON DRAW, NM	1:24,000	01/01/1998	-1090000 - -1085230	313000 - 313730	NM	Contours
79915	TNM0555	DIABLO RANGE, NM	1:24,000	01/01/1999	-1083000 - -1082230	330730 - 331500	NM	Contours
79946	TNM0586	EAGLE PEAK, NM	1:24,000	01/01/1999	-1083730 - -1083000	333730 - 334500	NM	Contours
80113	TNM0754	GOLD HILL, NM	1:24,000	01/01/1999	-1083730 - -1083000	322230 - 323000	NM	Contours
80421	TNM1068	LOS ALAMOS, NM	1:100,000	01/01/2003	-1070000 - -1060000	353000 - 360000	NM	Minerals Management
80422	TNM1069	LOS ALAMOS, NM	1:100,000	01/01/2003	-1070000 - -1060000	353000 - 360000	NM	Surface Management
80576	TNM1223	MOUNT BALDY, NM	1:24,000	01/01/1997	-1090000 - -1085230	313730 - 314500	NM	Contours
80599	TNM1246	NAVAJO RESERVOIR, NM	1:100,000	01/01/2002	-1080000 - -1070000	363000 - 370000	CO NM	Minerals Management
80600	TNM1247	NAVAJO RESERVOIR, NM	1:100,000	01/01/2002	-1080000 - -1070000	363000 - 370000	CO NM	Surface Management
80816	TNM1466	READING MOUNTAIN, NM	1:24,000	01/01/1999	-1082230 - -1081500	325230 - 330000	NM	Contours
80858	TNM1508	ROSWELL, NM	1:100,000	01/01/2002	-1050000 - -1040000	330000 - 333000	NM	Minerals Management
80859	TNM1509	ROSWELL, NM	1:100,000	01/01/2002	-1050000 - -1040000	330000 - 333000	NM	Surface Management
81019	TNM1672	SLAUGHTER MESA, NM	1:24,000	01/01/1999	-1083000 - -1082230	340000 - 340730	NM	Contours
81043	TNM1696	SPRING CANYON, NM	1:24,000	01/01/1999	-1080730 - -1080000	332230 - 333000	NM	Contours
81410	TNM2067	FARMINGTON, NM	1:100,000	01/01/2003	-1090000 - -1080000	363000 - 370000	CO NM	Surface Management
81411	TNM2068	FARMINGTON, NM	1:100,000	01/01/2003	-1090000 - -1080000	363000 - 370000	CO NM	Minerals Management
81493	TNM2155	CARRIZOZO, NM	1:100,000	01/01/2003	-1060000 - -1050000	333000 - 340000	NM	Surface Management
81494	TNM2156	CARRIZOZO, NM	1:100,000	01/01/2003	-1060000 - -1050000	333000 - 340000	NM	Minerals Management
81557	TNM2220	HENDRICKS PEAK, NM	1:24,000	01/01/1999	-1080000 - -1075230	325230 - 330000	NM	Contours
81667	TNM2332	BRUSHY MOUNTAIN, NM	1:24,000	01/01/1999	-1084500 - -1083730	324500 - 325230	NM	Contours
81725	TNM2390	REDROCK, NM	1:24,000	01/01/1999	-1084500 - -1083730	323730 - 324500	NM	Contours
81770	TNM2437	RODEO, NM-AZ	1:24,000	01/01/1996	-1090730 - -1090000	314500 - 315230	AZ NM	Contours
82173	TNV0281	CRESCENT VALLEY, NV	1:100,000	01/01/2002	-1170000 - -1160000	400000 - 403000	NV	Surface Management
82952	TNV1092	RUBY LAKE, NV	1:100,000	01/01/2002	-1160000 - -1150000	400000 - 403000	NV	Surface Management
83179	TNV1323	TUSCARORA, NV	1:100,000	01/01/2002	-1170000 - -1160000	410000 - 413000	NV	Surface Management
83408	TNV1564	HIGH ROCK CANYON, NV	1:100,000	01/01/2003	-1200000 - -1190000	410000 - 413000	NV	Surface Management
94244	TTN0009	ANTIOCH, TN	1:24,000	01/01/1999	-864500 - -863730	360000 - 360730	TN	Contours
94273	TTN0038	BELLEVUE, TN	1:24,000	01/01/1997	-870000 - -865230	360000 - 360730	TN	Contours
94369	TTN0136	CLARKSVILLE, TN	1:24,000	01/01/1997	-872230 - -871500	363000 - 363730	TN	Contours
94474	TTN0241	FRANKLIN, TN	1:24,000	01/01/1997	-865230 - -864500	355230 - 360000	TN	Contours



94591	TTN0359	LA VERGNE, TN	1:24,000	01/01/1997	-863730 - -863000	360000 - 360730	TN	Contours
94706	TTN0475	NASHVILLE EAST, TN	1:24,000	01/01/1997	-864500 - -863730	360730 - 361500	TN	Contours
94726	TTN0495	OAK HILL, TN	1:24,000	01/01/1997	-865230 - -864500	360000 - 360730	TN	Contours
94824	TTN0594	SCOTTSBORO, TN	1:24,000	01/01/1997	-870000 - -865230	360730 - 361500	TN	Contours
101531	TUT0002	ABES KNOLL, UT	1:24,000	01/01/2001	-1115230 - -1114500	382230 - 383000	UT	Contours
101548	TUT0019	ANTELOPE RANGE, UT	1:24,000	01/01/2001	-1121500 - -1120730	383000 - 383730	UT	Contours
101570	TUT0041	AURORA, UT	1:24,000	01/01/2001	-1120000 - -1115230	385230 - 390000	UT	Contours
101621	TUT0092	BLUFF NW, UT	1:24,000	01/01/1996	-1094500 - -1093730	372230 - 373000	UT	Contours
101676	TUT0147	BURRVILLE, UT	1:24,000	01/01/2001	-1115230 - -1114500	383000 - 383730	UT	Contours
101720	TUT0191	CHAMPLIN PEAK, UT	1:24,000	01/01/2001	-1121500 - -1120730	393000 - 393730	UT	Contours
101728	TUT0199	CIRCLEVILLE, UT	1:24,000	01/01/2001	-1122230 - -1121500	380730 - 381500	UT	Contours
101729	TUT0200	CIRCLEVILLE MTN, UT	1:24,000	01/01/2001	-1123000 - -1122230	380730 - 381500	UT	Contours
101747	TUT0218	COFFEE PEAK, UT	1:24,000	01/01/2001	-1121500 - -1120730	390000 - 390730	UT	Contours
101794	TUT0265	DELANO PEAK, UT	1:24,000	01/01/2001	-1122230 - -1121500	381500 - 382230	UT	Contours
101857	TUT0328	ELSINORE, UT	1:24,000	01/01/2001	-1121500 - -1120730	383730 - 384500	UT	Contours
101895	TUT0366	FILLMORE, UT	1:24,000	01/01/2001	-1122230 - -1121500	385230 - 390000	UT	Contours
101898	TUT0369	FISH LAKE, UT	1:24,000	01/01/2001	-1114500 - -1113730	383000 - 383730	UT	Contours
101925	TUT0396	FORSYTH RESERVOIR, UT	1:24,000	01/01/2001	-1113730 - -1113000	383000 - 383730	UT	Contours
101949	TUT0420	GEYSER PEAK, UT	1:24,000	01/01/2001	-1113000 - -1112230	383000 - 383730	UT	Contours
101967	TUT0438	GOOSEBERRY CREEK, UT	1:24,000	01/01/2001	-1114500 - -1113730	384500 - 385230	UT	Contours
101993	TUT0464	GREENWICH, UT	1:24,000	01/01/2001	-1120000 - -1115230	382230 - 383000	UT	Contours
102043	TUT0514	HILGARD MTN, UT	1:24,000	01/01/2001	-1113730 - -1113000	383730 - 384500	UT	Contours
102089	TUT0560	JIMMIES POINT, UT	1:24,000	01/01/1998	-1110730 - -1110000	401500 - 402230	UT	Contours
102091	TUT0562	JOHNS PEAK, UT	1:24,000	01/01/2001	-1113000 - -1112230	383730 - 384500	UT	Contours
102103	TUT0574	KANE CANYON, UT	1:24,000	01/01/2001	-1123730 - -1123000	380730 - 381500	UT	Contours
102123	TUT0594	KOOSHAREM, UT	1:24,000	01/01/2001	-1120000 - -1115230	383000 - 383730	UT	Contours
102154	TUT0625	LOA, UT	1:24,000	01/01/2001	-1114500 - -1113730	382230 - 383000	UT	Contours
102185	TUT0658	MALMSTEN PEAK, UT	1:24,000	01/01/2001	-1120730 - -1120000	381500 - 382230	UT	Contours
102199	TUT0672	MARYSVALE, UT	1:24,000	01/01/2001	-1121500 - -1120730	382230 - 383000	UT	Contours
102200	TUT0673	MARYSVALE CANYON, UT	1:24,000	01/01/2001	-1122230 - -1121500	383000 - 383730	UT	Contours
102201	TUT0674	MARYSVALE PEAK, UT	1:24,000	01/01/2001	-1120730 - -1120000	382230 - 383000	UT	Contours
102231	TUT0704	MONROE PEAK, UT	1:24,000	01/01/2001	-1120730 - -1120000	383000 - 383730	UT	Contours
102251	TUT0724	MOUNT BELKNAP, UT	1:24,000	01/01/2001	-1123000 - -1122230	382230 - 383000	UT	Contours
102252	TUT0725	MOUNT BRIGHAM, UT	1:24,000	01/01/2001	-1122230 - -1121500	382230 - 383000	UT	Contours
102259	TUT0732	MT CATHERINE, UT	1:24,000	01/01/2001	-1121500 - -1120730	385230 - 390000	UT	Contours
102273	TUT0746	MT TERRILL, UT	1:24,000	01/01/2001	-1114500 - -1113730	383730 - 384500	UT	Contours
102322	TUT0797	OLD WOMAN PLATEAU, UT	1:24,000	01/01/2001	-1113000 - -1112230	384500 - 385230	UT	Contours
102348	TUT0823	PARKER KNOLL, UT	1:24,000	01/01/2001	-1120000 - -1115230	381500 - 382230	UT	Contours
102377	TUT0852	PIUTE RESERVOIR, UT	1:24,000	01/01/2001	-1121500 - -1120730	381500 - 382230	UT	Contours
102421	TUT0896	RASPBERRY KNOLL, UT	1:24,000	01/01/1998	-1110000 - -1105230	401500 - 402230	UT	Contours
102436	TUT0911	RED RIDGE, UT	1:24,000	01/01/2001	-1123000 - -1122230	383730 - 384500	UT	Contours
102445	TUT0920	REX RESERVOIR, UT	1:24,000	01/01/2001	-1115230 - -1114500	384500 - 385230	UT	Contours



70 U.S. Geological Survey

102480	TUT0955	SALINA, UT	1:24,000	01/01/2001	-1115230 - -1114500	385230 - 390000	UT	Contours
102503	TUT0978	SCIPPIO LAKE, UT	1:24,000	01/01/2001	-1120730 - -1120000	390000 - 390730	UT	Contours
102505	TUT0980	SCIPPIO PASS, UT	1:24,000	01/01/2001	-1121500 - -1120730	390730 - 391500	UT	Contours
102506	TUT0981	SCIPPIO SOUTH, UT	1:24,000	01/01/2001	-1120730 - -1120000	390730 - 391500	UT	Contours
102524	TUT0999	SHELLY BALDY PEAK, UT	1:24,000	01/01/2001	-1123000 - -1122230	381500 - 382230	UT	Contours
102650	TUT1125	TRAIL MOUNTAIN, UT	1:24,000	01/01/2001	-1123000 - -1122230	383000 - 383730	UT	Contours
102696	TUT1171	WALKER FLAT, UT	1:24,000	01/01/2001	-1112230 - -1111500	384500 - 385230	UT	Contours
102703	TUT1178	WATER CREEK CANYON, UT	1:24,000	01/01/2001	-1120000 - -1115230	383730 - 384500	UT	Contours
102704	TUT1179	WATER HOLLOW RIDGE, UT	1:24,000	01/01/2001	-1113730 - -1113000	385230 - 390000	UT	Contours
102755	TUT1230	YOGO CREEK, UT	1:24,000	01/01/2001	-1113730 - -1113000	384500 - 385230	UT	Contours
103121	TUT1600	FLAT TOP, UT	1:24,000	01/01/2001	-1113000 - -1112230	382230 - 383000	UT	Contours
103125	TUT1605	LYMAN, UT	1:24,000	01/01/2001	-1113730 - -1113000	382230 - 383000	UT	Contours
103131	TUT1611	TWIN ROCKS, UT	1:24,000	01/01/2001	-1112230 - -1111500	381500 - 382230	UT	Contours
103135	TUT1615	CATHEDRAL MOUNTAIN, UT	1:24,000	01/01/2001	-1112230 - -1111500	382230 - 383000	UT	Contours
103171	TUT1651	OAK CITY SOUTH, UT	1:24,000	01/01/2001	-1122230 - -1121500	391500 - 392230	UT	Contours
103175	TUT1655	WILLIAMS PEAK, UT	1:24,000	01/01/2001	-1121500 - -1120730	391500 - 392230	UT	Contours
103186	TUT1666	FOOL CREEK PEAK, UT	1:24,000	01/01/2001	-1121500 - -1120730	392230 - 393000	UT	Contours
103197	TUT1678	OAK CITY NORTH, UT	1:24,000	01/01/2001	-1122230 - -1121500	392230 - 393000	UT	Contours
103243	TUT1724	BEEHIVE PEAK, UT	1:24,000	01/01/2001	-1120730 - -1120000	385230 - 390000	UT	Contours
103297	TUT1778	COVE FORT, UT	1:24,000	01/01/2001	-1123730 - -1123000	383000 - 383730	UT	Contours
103313	TUT1794	DOG VALLEY PEAK, UT	1:24,000	01/01/2001	-1123730 - -1123000	383730 - 384500	UT	Contours
103318	TUT1799	DUGGINS CREEK, UT	1:24,000	01/01/2001	-1122230 - -1121500	390730 - 391500	UT	Contours
103506	TUT1989	RICHFIELD, UT	1:24,000	01/01/2001	-1120730 - -1120000	384500 - 385230	UT	Contours
103534	TUT2017	SUNSET PEAK, UT	1:24,000	01/01/2001	-1122230 - -1121500	384500 - 385230	UT	Contours
103595	TUT2078	WHITE PINE PEAK, UT	1:24,000	01/01/2001	-1121500 - -1120730	384500 - 385230	UT	Contours
103621	TUT2104	POLE MOUNTAIN, UT	1:24,000	01/01/2001	-1123730 - -1123000	382230 - 383000	UT	Contours
103622	TUT2105	BLACK RIDGE, UT	1:24,000	01/01/2001	-1123730 - -1123000	381500 - 382230	UT	Contours
103682	TUT2169	SPANISH BOTTOM, UT	1:24,000	01/01/1996	-1100000 - -1095230	380730 - 381500	UT	Contours
105270	TWA0020	ALGER, WA	1:24,000	01/01/1998	-1222230 - -1221500	483000 - 483730	WA	Contours
105281	TWA0031	ANACORTES NORTH, WA	1:24,000	01/01/1998	-1223730 - -1223000	483000 - 483730	WA	Contours
105557	TWA0308	EASTSOUND, WA	1:24,000	01/01/1997	-1230000 - -1225230	483730 - 484500	WA	Contours
105558	TWA0309	EATONVILLE, WA	1:24,000	01/01/1998	-1222230 - -1221500	464500 - 465230	OR WA	Contours
105645	TWA0396	GLACIATE BUTTE, WA	1:24,000	01/01/1998	-1213000 - -1212230	461500 - 462230	WA	Contours
105654	TWA0405	GOLDENDALE, WA	1:100,000	01/01/2003	-1210000 - -1200000	453000 - 460000	OR WA	Minerals Management
105655	TWA0406	GOLDENDALE, WA	1:100,000	01/01/2003	-1210000 - -1200000	453000 - 460000	OR WA	Surface Management
105768	TWA0519	KING MOUNTAIN, WA	1:24,000	01/01/1998	-1213000 - -1212230	460000 - 460730	WA	Contours
106249	TWA1001	SLEEPING BEAUTY, WA	1:24,000	01/01/1998	-1214500 - -1213730	460000 - 460730	WA	Contours
106375	TWA1127	TOPPENISH, WA	1:100,000	01/01/2002	-1210000 - -1200000	460000 - 463000	WA	Minerals Management



106376	TWA1128	TOPPENISH, WA	1:100,000	01/01/2002	-1210000 - -1200000	460000 - 463000	WA	Surface Management
106456	TWA1208	WENATCHEE, WA	1:100,000	01/01/2002	-1210000 - -1200000	470000 - 473000	WA	Minerals Management
106457	TWA1210	WENATCHEE, WA	1:100,000	01/01/2002	-1210000 - -1200000	470000 - 473000	WA	Surface Management
106524	TWA1279	GIFFORD PEAK, WA	1:24,000	01/01/1998	-1215230 - -1214500	455230 - 460000	WA	Contours
106525	TWA1280	TERMINATION POINT, WA	1:24,000	01/01/1998	-1220000 - -1215230	455230 - 460000	WA	Contours
106534	TWA1289	STABLER, WA	1:24,000	01/01/1998	-1220000 - -1215230	454500 - 455230	WA	Contours
106614	TWA1375	MOUNT ST HELENS, WA	1:24,000	01/01/1998	-1221500 - -1220730	460730 - 461500	WA	Contours
106623	TWA1386	VANSON PEAK, WA	1:24,000	01/01/1998	-1221500 - -1220730	462230 - 463000	WA	Contours
106736	TWA1502	BOBS MOUNTAIN, WA	1:24,000	01/01/2000	-1221500 - -1220730	453730 - 454500	WA	Contours
106737	TWA1503	LOOKOUT MTN, WA	1:24,000	01/01/1998	-1220730 - -1220000	454500 - 455230	WA	Contours
106742	TWA1508	GUMBOOT MTN, WA	1:24,000	01/01/1998	-1221500 - -1220730	454500 - 455230	WA	Contours
106745	TWA1511	LARCH MTN, WA	1:24,000	01/01/2000	-1222230 - -1221500	453730 - 454500	WA	Contours
106889	TWA1659	LAKE ROESIGER, WA	1:24,000	01/01/1997	-1220000 - -1215230	475230 - 480000	WA	Contours
107000	TWA1776	SPIRAL BUTTE, WA	1:24,000	01/01/2000	-1212230 - -1211500	463730 - 464500	WA	Contours
109383	TWV0660	CHERRY RUN, WV-MD-PA	1:24,000	01/01/1998	-780730 - -780000	393730 - 394500	MD PA WV	Contours
111111	TWY1733	SARATOGA, WY	1:100,000	01/01/2003	-1070000 - -1060000	410000 - 413000	CO WY	Surface Management
111112	TWY1734	SARATOGA, WY	1:100,000	01/01/2003	-1070000 - -1060000	410000 - 413000	WY	Minerals Management
111115	TWY1737	RENO JUNCTION, WY	1:100,000	01/01/2003	-1060000 - -1050000	433000 - 440000	WY	Minerals Management
111116	TWY1738	RENO JUNCTION, WY	1:100,000	01/01/2003	-1060000 - -1050000	433000 - 440000	WY	Surface Management
111531	USFS0039	COMANCHE NATIONAL GRASSLAND, CO	1:126,720	01/01/2003	-1040000 - -1021500	371500 - 380000	CO	No Contours
111544	USFS0053	SAN ISABEL NATIONAL FOREST, CO	1:126,720	01/01/2003	-1063000 - -1045230	371500 - 392230	CO	No Contours
111618	USFS0226	ROGUE RIVER NATIONAL FOREST MAP, OR	1:126,720	01/01/2003			OR	
111658	USFS0508	SAN ISABEL NATIONAL FOREST (PLASTIC), CO	1:126,720	01/01/2003	-1063000 - -1045230	371500 - 392230	CO	No Contours
111662	USFS0512	BIGHORN NATIONAL FOREST (PLASTIC), WY	1:126,720	01/01/2001	-1081500 - -1063730	440000 - 450000	WY	No Contours
111670	USFS0521	THUNDER BASIN NATIONAL GRASSLAND, WY	1:126,720	01/01/2003			WY	
112217	-	ANGELES NATIONAL FOREST-ENGLISH, CA	1:126,720	01/01/2002	-1185230 - -1173000	340730 - 344500	CA	No Contours
112257	-	TONTO NATIONAL FOREST, AZ	1:126,720	01/01/2001	-1120730 - -1103730	331500 - 343000	AZ	No Contours
112495	-	KANIKSU NATIONAL FOREST, ID	1:126,720	01/01/2003	-1170730 - -1160000	480000 - 490000	ID	
113605	-	LEWIS AND CLARK: A LEGACY OF SCIENCE	NO SCALE	01/01/2003	-1250000 - -900000	380000 - 480000		No Contours



72 U.S. Geological Survey

113657	-	KAIBAB NATIONAL FOREST, TUSAYAN RD, AZ	1:126,720	01/01/2003	-1123730 - -1114500	350000 - 361500	AZ	No Contours
114742		ISLAND OF POHNPEI, SOUTHEAST, FSM	1:25,000	01/01/2001	1581400 - 1582300	64500 - 65430		Contours
114746	TMT3510	LONESOME LAKE, MT	1:100,000	01/01/2002	-1110000 - -1100000	480000 - 483000	MT	Minerals Management
114927	-	SHAWNEE NATIONAL FOREST, IL	1:126,720	01/01/2002	-893730 - -880730	370730 - 374500	IL	No Contours
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