New Publications of the U.S. Geological Survey

Lists 1125–1127—Publications issued April–June 2002
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.


The quarterly catalog “New Publications of the U.S. Geological Survey” may be obtained free on request. Subscribers to this quarterly catalog are requested to provide notice for change of address promptly, giving new and old addresses and ZIP Codes. Those wishing to be placed on a free subscription list for the quarterly catalog “New Publications of the U.S. Geological Survey” or wishing to change their address should write to the U.S. Geological Survey, 903 National Center, Reston, VA 20192.

Prices of available publications, except reports released through the National Technical Information Service (NTIS), are given in current issues of the quarterly catalog “New Publications of the U.S. Geological Survey.” Limited quantities of Circulars and publications of general interest are free.


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.
New Publications of the U.S. Geological Survey

Lists 1125–1127 — Publications issued April–June 2002

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ANNOUNCEMENT

Payment of Shipping Costs by International Customers

International customers are responsible for shipping costs, customs fees, and any other charges associated with international shipping. Effective August 5, 2002, the USGS will require that international customers designate a preferred international carrier (FedEx, DHL, or UPS) and provide the USGS with a carrier account number and telephone number to use when making shipment. The general practice of charging $20 for shipping international orders of fewer than 50 items is discontinued. The actual shipping charges will be billed to the customer. A $5.00 handling charge is applicable on each order.

For customers who cannot obtain a carrier account number, other methods can be used (such as using a USGS carrier account number for shipping or determining the actual or estimated costs before shipment), as long as no customs or other fees are incurred by the USGS.

For additional information, refer to http://mapping.usgs.gov/esic/prices/ordering_info.html
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* No new publications in this series for this quarter.
**FACT SHEET 0049-02**


To better understand what happens on and near a fault before, during, and after an earthquake, the U.S. Geological Survey (USGS) and the California Geological Survey began the Parkfield Earthquake Experiment in the 1980's. Researchers from the USGS and collaborating institutions have created a dense network of instruments on the San Andreas Fault at Parkfield, California, where moderate earthquakes have occurred at fairly regular intervals. Data from these instruments are revealing the earthquake process in unprecedented detail and will aid in predicting the time and severity of future shocks. The USGS and the National Science Foundation plan to expand the Parkfield Experiment by drilling a deep borehole and installing instruments at the actual depths where earthquakes initiate, creating the San Andreas Fault Observatory at Depth.

**CIRCULAR 1221**


The importance of materials to the economy of the United States is described, including the levels of consumption and uses of materials. The paths (or flows) that materials take from extraction, through processing, to consumer products, and then final disposition are illustrated. Scarcity and environmental issues as they relate to the flow of materials are discussed. Examples for the three main themes of the report (material flows, scarcity, and the environment) are presented.

**CIRCULAR 1220**


The Chesapeake Bay is the Nation's largest estuary and historically supported one of the most productive fisheries in the world. In addition to supporting aquatic communities and wildlife, the bay's watershed serves the economic and recreational needs of 15 million people. The fertile soils of the watershed support significant agricultural production. Unfortunately, the commercial, economic, and recreational value of the bay and its watershed has been degraded by poor water quality, loss of habitat, and overharvesting of living resources. Since the early 1980's, the Chesapeake Bay Program, which is a partnership among Maryland, Virginia, Pennsylvania, the District of Columbia, the Federal Government, and the Chesapeake Bay Commission, has been formulating and implementing restoration goals to restore living resources, minimize habitat loss, and reduce the amount of nutrients, sediment, and toxic substances entering the bay. The U.S. Geological Survey has the critical role of providing unbiased scientific information to be used in helping to formulate, implement, and assess the effectiveness of restoration goals in the bay and its watershed.

**FACT SHEET 0025-02**


Coral reefs are home to 25 percent of all marine species. However, the tiny colonial animals that build these intricate limestone masses are dying at alarming rates. If this trend continues, in 20 years the living corals on many of the world's reefs will be dead and the ecosystems that depend on them severely damaged. As part of the effort to protect our Nation's extensive reefs, U.S. Geological Survey scientists are working to better understand the processes that affect the health of these ecologically and economically important ecosystems.
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.


This CD-ROM has been produced in accordance with the ISO 9660 Standard and is therefore capable of being read on any computer platform that has appropriate CD-ROM driver software installed. System requirements are: compatible computers (all computers must have a CD-ROM drive and be capable of displaying at least 256 colors): IBM-compatible running Windows 95 or higher or NT 4.0 or higher with an Intel Pentium or equivalent processor, or Macintosh running Mac OS 8.6 or later with a Power PC or equivalent processor. Software requirements are Adobe Acrobat Reader 4.5 or higher and ArcInfo or ArcView or any software that is capable of importing ArcInfo export files or ArcView shape files.

This product consists of Adobe Acrobat .PDF format documents for 10 surficial geologic strip maps along the Animas River watershed from its major headwater tributaries, south to Durango, Colorado. The Animas River originates in the San Juan Mountains north of the historic mining town of Silverton, Colorado. The surficial geologic maps identify surficial deposits, such as floodplain and terrace gravels, alluvial fans, glacial till, talus, colluvium, landslides, and bogs. Sixteen primary units were mapped that included human-related deposits and structures, eight alluvial, four colluvial, one glacial, travertine deposits, and undifferentiated bedrock. Each of the surficial geologic strip maps has .PDF links to surficial geology photographs, which enable the user to take a virtual tour of these deposits. Geochemical data collected from mapped surficial deposits that pre- and postdate mining activity have aided in determining the geochemical baseline in the watershed. Several photographs with their corresponding geochemical baseline profiles are accessible through .PDF links from several of the maps. A single coverage for all surficial deposits mapped is included as an ArcInfo shape file as an Arc Export format .e00 file. A gradient map for major headwater tributary streams to the Animas River is also included. The gradient map has stream segments that are color-coded based on relative variations in slope and .PDF format links to each stream gradient profile. Stream gradients were derived from U.S. Geological Survey 10-m digital elevation model data. This project was accomplished in support of the U. S. Geological Survey's Abandoned Mine Lands Initiative in the San Juan Mountains, Colorado.


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. Adobe Acrobat Reader 5.0 is required to access the written report. Installers for Reader 5.0 are contained in the Acrobat folder at the root directory of this CD-ROM for Windows and Macintosh platforms (these are the only platforms for which Reader 5.0 is presently available). Data files are located in the Data folder at the root directory of this CD-ROM and are provided in both Microsoft Excel and CSV (comma separated value) formats. Microsoft Excel or Word is required to view files with a .xls extension, and files with a .csv extension can be viewed by most word-processing programs.

This report describes reconnaissance hydrogeochemical investigations of 22 mining districts on the Western Slope of Colorado in the Gunnison and Uncompahgre National Forests and adjacent public lands administered by the Bureau of Land Management. Sources and fates of contaminants from historic mines, mine waste, and mill tailings are interpreted from chemical analyses for 190 samples of surface waters; 185 samples of mined rocks, mill tailings, and altered rocks; and passive leach analyses of 116 samples of those mineralized materials. Short reaches of several headwater streams show relatively low level effects of historic mining; the headwaters of the Uncompahgre River are highly contaminated by mines and unmined altered rocks in the Red Mountain district. There is encouraging evidence that natural processes attenuate mine-related contamination in most districts.


System requirements: A web browser, Adobe Acrobat Reader, and ArcExplorer (Windows platform only). These CD-ROMs have been produced in accordance with the ISO 9660 Standard and are therefore capable of being read on any computing platform that has appropriate CD-ROM driver software installed.

This report contains photographic images and data from petroleum exploration wells drilled within and near the National Petroleum Reserve-Alaska (NPRA). The volume is organized into six chapters, each of which contains images and well data (including a GIS project of public domain cores) pertinent to the geology and petroleum potential of NPRA. This product is a compilation of data not available elsewhere and contains limited interpretive material.

1. Introduction, by D. W. Houseknecht.


5. Subsurface oil and gas indications in and adjacent to the NPRA, by D. O. Hayba, K. J. Bird and C. P. Garrity.


PROFESSIONAL PAPERS

Professional Papers are mainly comprehensive scientific reports of wide and lasting interest and importance to professional scientists and engineers. Included are reports on the results of resource studies, and of topographic, hydrologic, and geologic investigations. They also include collections of related papers addressing different aspects of a single scientific topic.


These CD-ROMs have been produced in accordance with the ISO 9660 Standard and are therefore capable of being read on any computing platform that has appropriate CD-ROM driver software installed. Supported systems and minimum requirements to use the data with the software provided are as follows:

- IBM or compatible personal computer with (1) Windows 95 or higher operating system, (2) 16 megabytes (MB) or more of RAM, (3) CD-ROM drive, (4) Hard disk drive, (5) VGA color graphics system. Macintosh computer with 68020 (Macintosh II series) or greater processor. MacOS 7.0 or later, 24 megabytes (MB) RAM, and 20 MB hard-disc space. Sun SPARCstation, SunOS 4.1.3 or later, or Solaris 2.3 or later, Open Windows 3.0 or later, Motif 1.2.3 or later, OpenLook version 3.0 or Common Desktop Environment (CDE) 1.0, 12MB of available hard disk space, 32 MB RAM. HP workstation, 9000-series workstation model 700 or 800 HP-UX 9.0.3 or later, X Window System X11R5 with HP-VUE of CDE 1.0, 12 MB hard-disc space, 32 MB RAM. Silicon Graphics workstation, IRIX 5.3 or later, 12 MB of available hard-disc space, 32 MB RAM. IBM RS/6000 workstation, AIX(R) 4.1 or later operating system, Motif window manager, 12 MB hard-disc space, 32 MB RAM. HP workstation, 9000-series workstation model 700 or 800 HP-UX 9.0.3 or later, X Window System X11R5 with HP-VUE of CDE 1.0, 12 MB hard-disc space, 32 MB RAM. Silicon Graphics workstation, IRIX 5.3 or later, 12 MB of available hard-disc space, 32 MB RAM. IBM RS/6000 workstation, AIX(R) 4.1 or later operating system, Motif window manager, 12 MB of available hard-disc space, 32 MB RAM.

This report includes results of a digital assessment of six coal beds or zones in the Northern and Central Appalachian Basin coal regions that produce over 15 percent of the Nation’s coal. Other chapters include an executive summary, a report on geology and mining, a report summarizing other selected coal zones that were not assessed, and a report on USGS coal availability and recoverability studies in the Northern and Central Appalachian Basin coal regions.


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. This CD-ROM was designed to run on computers with Windows or Macintosh operating systems. Most of the text, illustrations, photographs, and tabular material presented can be read with any HTML-compatible browser. Interactive mapping and display software offers additional information and capabilities. LandView IV and ESRI's ArcExplorer are GIS mapping tools available (Windows only) for viewing these data and creating maps incorporating data from other sources.

Lake Pontchartrain, the largest estuary in southern Louisiana, is an important recreational, commercial, and environmental resource for New Orleans and southeastern Louisiana. This publication is part of a 5-year, cooperative program led by the USGS on the geological framework and sedimentary processes of the Lake Pontchartrain Basin. This presentation is divided into two main parts. The scientific sections include historical information on the sediment database with geological and chemical discussions of the region. The multimedia and resources sections include geographic information system (GIS) tools and data, a video demonstrating vibracore sampling techniques in Lake Pontchartrain, and abstracts from four Basics of the Basin symposia.


B. New field sampling techniques and data description, by J. G. Flocks, U.S. Geological Survey; with technical contributions from Marci Marot, U.S. Geological Survey; and Dana Weise, University of New Orleans; and Paul Connor, Jr., University of New Orleans; and Scott Noakes, University of Georgia.

C. The continuous sediment sampling and analysis system, by Scott Noakes, University of Georgia.


E. Satellite imagery; Lake Pontchartrain Basin and Gulf of Mexico, by R. P. Stumpf, NOAA.


G. Data visualization by use of geographic mapping tools (GIS), by Laura Hayes, Chris Polloni and E. J. McFaul, U.S. Geological Survey.


A robust method to estimate the number of undiscovered deposits is a form of mineral deposit model wherein numbers of deposits per unit area from well-explored regions are counted and the resulting frequency distribution is used either directly for an estimate or indirectly as a guideline in some other method. The 27 mineral deposit density estimates reported here for 13 different deposit types represent a start at compiling the estimates necessary to guide assessments.


An integrated earth science-economics model, developed within a geographic information system (GIS), combines a regional-scale nonpoint source vulnerability assessment with a specific remediation measure to avoid unnecessary agricultural production costs associated with the use of agrochemicals in the Pearl Harbor basin on the island of Oahu, Hawaii. This approach forms the core of a risk-based regulation for the application of agrochemicals and estimates the benefits of an information-based approach to decisionmaking.


A distinctive suite of Oligocene dacitic rocks is shown to transect major tectonic boundaries in the San Gabriel Mountains region of Southern California, thereby constraining the amount of late Cenozoic offset on several strike-slip faults.


Cretaceous intrusions hosted by the Proterozoic Newland Formation. The northern intrusion, centered on Boulder Baldy, consists of outer, intermediate, and core zones composed of aegirine-augite quartz monzonite, hornblende quartz monzodiorite, and biotite granodiorite, respectively. The southern intrusion, north of Mount Edith, is compositionally indistinguishable from the intermediate zone of the northern intrusion.

The Poison Creek Anticline is a major fold that occupies a large part of the western part of the Lemhi Range. The fold is now broken by normal faults, but removal of displacement on the normal faults permitted reconstruction of the anticline. The fold formed during late Mesozoic compressional deformation in the hinterland of the Cordilleran thrust belt. It is in the hanging wall of the Poison Creek thrust fault, a major fault in east-central Idaho, that displaced Proterozoic strata over lower Paleozoic rocks.

BULLETINS

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.


Persistent unrest in the Long Valley Caldera, characterized by recurring earthquake swarms, inflation of the resurgent dome in the central sections of the caldera, and emissions of magmatic carbon dioxide around Mammoth Mountain, during the last two decades and continuing into the 21st century emphasize that this geologically youthful volcanic system is capable of further volcanic activity. This document describes the U. S. Geological Survey’s (USGS) response plan for future episodes of unrest that might augur the onset of renewed volcanism in the caldera or along the Inyo-Mono Craters chain to the north. Central to this response plan is a four-level color code with successive conditions, GREEN (no immediate risk) through RED (eruption under way), reflecting progressively more intense activity levels as summarized in table I and 2 and described in detail in section II of this report.


The U.S. Geological Survey is conducting a study to investigate the mineral content of U.S. vermiculite deposits to determine if the amphibole asbestos minerals like those found in the Libby, Montana, deposits are common in other vermiculite deposits. Unusually high incidences of asbestos-related mortality and respiratory disease in Libby have been linked to amphibole mineral fibers intergrowth with the vermiculite deposits mined and milled near the town from 1923 to 1990.

WATER-SUPPLY PAPER

Water-Supply Papers are comprehensive reports that present significant interpretive results of hydrologic investigations of wide interest to professional geologists, hydrologists, and engineers. The series covers investigations in all phases of hydrology, including hydrogeology, availability of water, quality of water, and use of water.


With the exception of sewage and septic effluents, most nitrogen sources and soils contain larger proportions of organic and reduced forms of carbon, nitrogen, and sulfur than inorganic, oxidized forms. In contrast, most surface water and ground water contains larger proportions of dissolved inorganic carbon, nitrogen, and sulfur forms than organic forms. Data indicate that carbon, nitrogen, and sulfur are extensively processed in soils and streams.

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.


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**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.


**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 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
MENAL INDUSTRY INDICATORS

The Metal Industry Indicators (MI) is a monthly newsletter (free) 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. The MI was developed by the former U.S. Bureau of Mines in cooperation with the Center for International Business Cycle Research at Columbia University. In late 1996, the USGS assumed sole responsibility for producing the indexes and publishing the MI. Each month, these indexes are analyzed along with any economy-wide occurrences that would affect the metal industries. The MI also contains a leading index of metal prices that anticipates changes in the growth rate of a composite nonferrous metals price index for primary aluminum, copper, lead, and zinc. Order single copy from Publication Distribution, Pittsburgh Research Center, P.O. Box 18070, Pittsburgh, PA 15236 (send self-addressed label). Also available on the Internet (http://minerals.usgs.gov/minerals/pubs/). Mailing list additions or changes: USGS, Publication Services Section, 984 National Center, Reston, VA 20192. 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's) are periodic statistical and economic reports (free) 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's are published by commodities as well as by States. Order single copy from Publication Distribution, Pittsburgh Research Center, P.O. Box 18070, Pittsburgh, PA 15236 (send self-addressed label). Also available on the Internet (http://minerals.usgs.gov/minerals/pubs/). Mailing list additions or changes: USGS, Publication Services Section, 984 National Center, Reston, VA 20192.

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 1, 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. 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:

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WRI 94-4197. NEBRASKA. Reconnaissance of ground-water quality in the Papio-Missouri River Natural Resources District, eastern


WRI 96-4129. MINNESOTA, NORTH DAKOTA, SOUTH DAKOTA. Sampling design for assessing water quality of the Red River of the North basin, Minnesota, North Dakota, and South Dakota, 1993-1995, by D. L. Lorenz and J. D. Stoner. National Water-Quality Assessment Program. 1996. 4 p., 2 over-size sheets, scale 1:750,000 (1 inch = about 12 miles) and scale 1:500,000 (1 inch = about 8 miles). (NC, Da, M.) $33.


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WRI 00-4143. NEW JERSEY, DELAWARE. Water levels in, and water withdrawals from ten confined aquifers, New Jersey and Delaware coastal plain, 1998, by P. J. Lacombe and Robert Rosman. Prepared in cooperation with the New Jersey Department of Environmental Protection. 2001. 10 over-size sheets. (NC, Da, M.) $4.


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McCrary. 4 over-size sheets, scale 1:500,000 (1 inch = about 8 miles). (NC, Da, M; Washington DNRR/Div. of Geol. & Earth Resources Library, 111 Washington St., S.E., Olympia, WA 98501; Oregon Dep. of Geol. and Geophys. Surv. Library, 1101 State St., Suite 100, Anchorage, AK 99503; U.S. Dep. of Interior, Alaska Resources Library, 1101 Washington Avenue, Suite 100, Anchorage, AK 99503.) (Map-on-demand.) $20.

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OF 00-0418-A. CALIFORNIA. Use of InSAR to identify land-surface displacements caused by aquifer-system compaction in the Paso Robles area, San Luis Obispo County, California, March to August 1997, by J. L. Section, D. L. Galloway and Falk Amelung. 1 CD-ROM. (NC, Da, M; USGS, WRD, Placer Hall, Suite 2012, 6000 J St., Sacramento, CA 95819-6129.) $32. Available on the web at http://water.usgs.gov/pubs/of/ofr00-418A/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.

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OF 01-0461. WYOMING. Map and data for Quaternary faults and folds in Wyoming, by R. L. Dart. 154 p., 1 over-size sheet, scale 1:750,000 (1 inch = about 12 miles). (NC, Da; Geol. Surv. of Wyoming, P.O. Box 3008, University Station, Laramie, WY 82071.) Available on the web at http://greenwood.cr.usgs.gov/pub/open-file-reports/ofr-01-0461/

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OF 02-0025. Digital archive; Report upon the Colorado River of the West explored in 1857 and 1858 by Lieutenant Joseph C. Ives, geological report with maps by John S. Newberry, edited by K. C. McKinney. One CD-ROM. (NC, Da, M) $32.

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OF 02-0049. TEXAS. Aeromagnetic survey of Medina and Uvalde counties, Texas, by D. V. Smith, B. D. Smith and P. L. Hill. (NC, Da, M; Bur. of Economic Geol., Univ. of Texas at Austin, University Station, Box X, Austin, TX 78713-7508.) Available on the web at http://greenwood.cr.usgs.gov/pub/open-file-reports/ofr-02-0049/


OF 02-0055. MISSOURI. Geologic cross sections showing the concentrations of As, Cd, Co, Cu, Cr, Fe, Mo, Ni, Pb, and Zn in acid-insoluble residues of Paleozoic rocks within the Doniphan/Eleven Point Ranger District of the Mark Twain National Forest, Missouri, USA, by Lopaka Lee and M. B. Goldhaber. 24 p. (NC, Da, M; Dep. of Natural Resources, Div. of Geol. & Land Surv., 111 Fairgrounds Rd., P.O. Box 250, Rolla, MO 65401.) Available on the web at http://greenwood.cr.usgs.gov/pub/open-file-reports/ofr-02-0055/


OF 02-0063. COLORADO. Directional borehole radar tests of an oil injection experiment at the Colorado School of Mines, Golden, Colorado, by J. D. Abraham, Craig Moulton and P. P. Brown, III. (NC, M; 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://greenwood.cr.usgs.gov/pub/open-file-reports/ofr-02-0063/


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OF 02-0174. WYOMING, MONTANA. Quality of economically extractable coal beds in the Gillette coal field as compared with other Tertiary coal beds in the Powder River basin, Wyoming and Montana, by M. S. Ellis. 20 p. (NC, M, Da; Geol. Surv. of Wyoming, P.O. Box 3008, University Station, Laramie, WY 82071; Montana Bur. of Mines & Geol., Montana Coll. of Mineral Sci. & Technol., Butte, MT 59701.) Available on the web at http://greenwood.cr.usgs.gov/pub/open-file-reports/ofr-02-0174/


OF 02-0199. UTAH. AVIRIS data calibration information; Wasatch Mountains and Park City region, Utah, by B. W. Rockwell, R. N. Clark, K. E. Livo, R. R. McDougal and R. F. Kokaly. (NC, M, Da; Utah Geol. Surv., 1594 West North Temple, Suite 3110, P.O. Box 146100, Salt Lake City, UT 84114-6100.) Available on the web at http://greenwood.cr.usgs.gov/pub/open-file-reports/of02-0199/

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I-2746. Geologic map transecting the highland/lowland boundary zone, Arabia Terra, Mars; quadrangles 30332, 35332, 40332, and 45332, by G. E. McGill, University of Massachusetts. Prepared for the National Aeronautics and Space Administration. 2002. Lat 27.5° to 47.5°, long 330° to 335°. Scale 1:1,004,000 (1 mm = 1,004 km) at 250° longitude. Sheet 56 1/2 by 39 inches (in color). (Transverse Mercator projection.) $7.


I-2762. Controlled color photomosaic map of Ganymede. Prepared for the National Aeronautics and Space Administration. 2002. Lat 180° to 180°, long -57° to 57°; Lat 180° to 180°, long 55° to 90°; Lat 180° to 180°, long -55° to -90°. Scale 1:15,000,000 (1 mm = 15 km) at 0° latitude, Mercator projection; 1:8,388,000 (1 mm = 8.39 km) at -56° and 56° latitude, Polar Stereographic projection; 1:9,172,068 (1 mm = 9.17 km) at -90° and 90° latitude, Polar Stereographic projection. Sheet 46 by 40 inches (in color). $7.

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SHEET 5. Mt. Madonna and southwestern part of the Gilroy quadrangles, by R. J. McLaughlin, E. J. Helley and C. J. Colón. Lat 37° to 37°07′30″, long 121°32′45.6″ to 121°45′. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 31 by 30 inches (in color).
Available on the web at


MF-2377. COLORADO. Generalized geologic map of part of the upper Animas River watershed and vicinity, Silverton, Colorado, by D. B. Yager and D. J. Bove. 2002. Lat 37°45' to 38°, long 107°30' to 107°52'30". Scale 1:48,000 (1 inch = 4,000 feet). Sheet 49 by 30 inches (in color). (Map-on-demand) $20. Available on the web at


MF-2391. NEBRASKA, IOWA. Surficial geologic map of the greater Omaha area, Nebraska and Iowa, by R. R. Shroba, T. R. Brandt and J. C. Blossom. 2001. Lat 41° to 41°22'30", long 95°52'30" to 96°15'30". Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 36 by 29 inches (in color). (Map-on-demand) $20. Available on the web at

HYDROLOGIC INVESTIGATIONS ATLASES

Multicolored or black and white maps on topographic or planimetric bases presenting a wide range of geohydrologic data; both regular and irregular areas.


The water resources of the Black Hills area are described, with emphasis on the Madison and Minnelusa aquifers. The quantity and quality of water from major aquifers in the Black Hills area, including the Inyan Kara, Minnekahta, Minnelusa, Madison, and Deadwood aquifers are characterized. Streamflow and surface-water quality are summarized. Precipitation data are summarized for 1931-98. Hydrologic budgets are presented for 1950-98 for ground water and surface water.

OUTSIDE PUBLICATIONS

ARTICLES AND REPORTS

Articles by USGS personnel in non-USGS publications recently cited in the GeoRef data base of the American Geological Institute are listed below. Non-USGS personnel who share authorship in articles with USGS personnel are indicated by an asterisk (*) immediately following the name. These publications are not available from the U.S. Geological Survey.


R. J. Anima, S. L. Eittreim, B. D. Edwards and A. J. Stevenson. CALIFORNIA. Nearshore morphology and late Quaternary geologic framework of the northern Monterey Bay Marine Sanctuary, California. Marine Geology, in Seafloor geology and natural envi-


S. Gao*, K. K. Tanji*, D. W. Peters* and M. J. Herbel, CALIFORNIA. Water selenium speciation and sediment fractionation in a


W. E. Sanford and S. Buapeng*. A comparison of groundwater ages based on carbon-14 data and three-dimensional advective transport modeling of the lower Chao Phraya Basin; effects of


**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.


R. D. Catchings, D. S. Powars, G. S. Gohn, M. R. Goldman, G. Gandhok and G. H. Johnson*. VIRGINIA. Subsurface images of the annular trough of the Chesapeake Bay impact structure, Virginia from seismic reflection/refraction data [abstr.] Abstracts of...


V. M. Heilweil and D. K. Solomon*. UTAH. Natural recharge to the Navajo Sandstone Aquifer of southwestern Utah [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 54th annual meeting. v. 34, no. 4, April 2002. p. 56.


G. H. Johnson*, D. S. Powars and T. S. Bruce*, VIRGINIA. Stratigraphic and geohydrologic anomalies around the Chesapeake Bay impact structure, eastern Virginia [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 49th annual meeting. v. 32, no. 2, March 2000. p. 28.


R. Krishnaswamy*, R. A. Hanger* and E. I. Robbins. VIRGINIA. 0.45μm filters, microbial contamination and acid mine drainage from the Piedmont of Virginia [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Cordilleran section, 94th annual meeting. v. 30, no. 5, March 1998. p. 49.

M. Kulow*, R. Hanson*, G. H. Girty*, M. S. Girty* and D. Hardwood. CALIFORNIA. Cretaceous plutonic rocks in the Donner Pass area, northern Sierra Nevada, California; field relations and zircon geochronology [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Cordilleran section, 94th annual meeting. v. 30, no. 5, March 1998. p. 49.


S. A. Leake. Natural aquifer recharge in the Southwest; how much do we know? [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 54th annual meeting. v. 34, no. 4, April 2002. p. 56.


M. C. Malin* and K. E. Herkenhoff. The 20001 Mars Descent Imager [abstr.] LPI Contribution, in Workshop on Mars 2001; Integrated science preparation for sample return and human explora-


P. J. Modreski and J. A. Murphy. COLORADO. Gemstone occurrences in Colorado [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 54th annual meeting. v. 34, no. 4, April 2002. p. 54.


R. H. Morin and W. Z. Savage. TEXAS. Linking crustal stresses with hydrogeologic properties determined from geophysical well logs near Alpine, Texas [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, South-Central Section, 36th annual meeting. v. 34, no. 3, March 2002. p. 32.


J. R. Morrow*, C. A. Sandberg and F. G. Poole. NEVADA. Deep-water deposits of Late Devonian Alamo impact breccia, northern Reveille and southern Hot Creek ranges, Nevada [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 54th annual meeting. v. 34, no. 4, April 2002. p. 52.


M. K. Nestell*, G. P. Nestell*, B. R. Wardlaw and L. L. Lambert*. TEXAS. Latest Guadalupian microfaunas (conodonts,


C. A. Sandberg, J. R. Morrow* and F. G. Poole. NEVADA. Middle to Upper Devonian basin-to-shelf correlations across the proto-Antler forebulge, central Nevada [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 54th annual meeting. v. 34, no. 4, April 2002. p. 52.


T. A. Schiappa* and B. R. Wardlaw. TEXAS. Biostratigraphic characterization in the type Cisuralian region (Lower Permian) and correlation to West Texas [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, South-Central Section, 36th annual meeting. v. 34, no. 3, March 2002. p. 30.


E. C. Spiker and P. L. Gori. A national strategy to reduce losses from

J. F. Slack, K. D. Kelley, V. M. Anderson, J. L. Clark* and R. A. P. K. Sims, J. M. O'Neill and Viki Bankey. MONTANA. Precam-


P. K. Sims, J. M. O'Neill and Viki Bankey. MONTANA. Precambrian basement geologic map of Montana; an interpretation of aeromagnetic anomaly map [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 54th annual meeting. v. 34, no. 4, April 2002. p. 49.


P. D. Warwick, R. M. Flores, D. J. Nichols and E. C. Murphy*. NORTH DAKOTA, SOUTH DAKOTA, MONTANA. Depositional sequences within the Fort Union Formation 1:100,000 quadrangle, the first completed prototype of the National Paleontologic Database [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, South-Central Section, 36th annual meeting. v. 34, no. 3, March 2002. p. 33.


B. R. Wardlaw, N. R. Stamm and D. R. Soller. Guadalupe Peak 1:100,000 quadrangle, the first completed prototype of the National Paleontologic Database [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, South-Central Section, 36th annual meeting. v. 34, no. 3, March 2002. p. 33.


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