

New publications

NMBMMR

***Atlas of major Rocky Mountain gas reservoirs**, by New Mexico Bureau of Mines and Mineral Resources et al., 1993, 206 pp., 10 sheets (scale 1:1,000,000), 3 diskettes \$99.75 (includes postage and handling)

This is the fourth in a series of atlases compiling geologic and engineering data on natural gas reservoirs in the major gas-producing regions of the United States. The other three are *Atlas of major Texas gas reservoirs*, 1989; *Atlas of major central and eastern Gulf Coast gas reservoirs*, 1992; and *Atlas of major midcontinent gas reservoirs*, 1993.

This atlas is the result of efforts by 34 authors and 20 technical staff members at four state geological surveys (New Mexico, Wyoming, Utah, and Colorado) and three private firms (INTERA Bergeson, Methane Resources Group, Ltd., and Barlow & Haun, Inc.). The project was funded principally by the Gas Research Institute and the U.S. Department of Energy.

The 861 reservoirs, each with cumulative gas production of at least 5 billion cubic feet (BCF), produced 56,788 TCF of gas by the end of 1990, 95% of the total gas produced in the region. New Mexico dominates the region with 60% of the cumulative total production from these major reservoirs. Comparable percentages in the other states are: Wyoming, 25%; Colorado, 9%; and Utah, 6%.

The 861 major reservoirs are organized into 66 geologically defined groups in the atlas. Compiled parameters include reservoir and lithologic data, production data, compositional analyses of produced gas, fundamental reservoir engineering parameters, estimates of proved developed reserves, and data on regional pipeline networks and market availability. In addition to the reservoir data, one section of the atlas presents a sequence stratigraphic framework that reconstructs source rock, reservoir rock, and hydrocarbon trap geometries of several important gas-bearing geologic intervals. Another section provides examples of engineering methods used to analyze reservoirs in the region; this section also summarizes pipeline systems, capacities, supplies, and demands in the Rocky Mountain region. Special sections detail coalbed methane and low-BTU gases.

The *Atlas of major Rocky Mountain gas reservoirs* consists of 206 (17 × 22") text pages with approximately 700 figures and 100 tables; 10 (24 × 36") fold-out sheets; and three floppy diskettes containing an extensive computer database of geologic and engineering parameters of all 861 gas reservoirs as well as selected annotated references.

USGS

PROFESSIONAL PAPER

1523—**Chemistry of the subalkalic silicic obsidians**, by R. Macdonald, R. L. Smith, and J. E. Thomas, 1992, 214 pp.

WATER-RESOURCES INVESTIGATIONS

WRI-91-4082—**Geohydrology and potential effects of development of freshwater resources in the northern part of the Hueco Bolson, Doña Ana and Otero Counties, New Mexico, and El Paso County, Texas**, by B. R. Orr and D. W. Risser, 1992, 42 pp.

WRI-91-4155—**Simulation of ground-water flow in the Mesilla Basin, Doña Ana County, New Mexico, and El Paso County, Texas**, by P. F. Frenzel, 1992, 157 pp.

DIGITAL DATA SERIES

DDS-1—**National Geochemical Data Base; National Uranium Resource Evaluation data for the conterminous western United States**, by J. D. Hoffman, G. B. Gunnells, and J. M. McNeal, 1991, one CD-ROM.

DDS-6—**Stratigraphic nomenclature databases for the United States, its possessions, and territories**, 1992, one CD-ROM.

DDS-7—**Digitized strong-motion accelerograms of North and Central American earthquakes 1933-1986**, by L. C. Seekins, A. G. Brady, C. Carpenter, and N. Brown, 1992, one CD-ROM.

DDS-8—**Photographs from the U.S. Geological Survey Photographic Library (earthquakes, volcanoes, geologic hazards, and other phenomena)**, by J. K. McGregor and C. C. Abston, 1992, one CD-ROM.

Other publications

Anthony, E. Y., 1993, Dating techniques for Quaternary lavas: EOS, *Transactions, American Geophysical Union*, v. 74, no. 31, p. 350.

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Austin, G. S., Brandvold, L. A., Hawley, J. W., and Renault, J., 1993, Lead contamination at an old smelter site at Socorro, New Mexico: Part I—Particle size and depth of contamination: *Mining Engineering*, v. 45, no. 4, pp. 389-395.

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Dart, S. W., Jr., 1992, Evaluation of San Juan Basin fractured reservoirs from surface data; in Schmoker, J. W., Coalson, E. B., and Brown, C. A. (eds.), *Geological studies relevant to horizontal drilling: Examples from western North America*: Rocky Mountain Association of Geologists, pp. 95-114.

Grossman, E. L., Mui, H.-S., and Yancey, T. E., 1993, Stable isotopes in Late Pennsylvanian brachiopods from the United States: Implications for Carboniferous paleoceanography: *Geological Society of America, Bulletin*, v. 105, no. 10, pp. 1284-1296.

Lucas, S. G., and Morales, M., editors, 1993, *The nonmarine Triassic*: Albuquerque, New Mexico Museum of Natural History and Science, Bulletin 3, 536 pp. *Transactions of the International Symposium and Field Trip on the Nonmarine Triassic, October 17-24, 1993, Albuquerque, New Mexico*.

*Lucas, S. G., and Zidek, J., editors, 1993, *Vertebrate paleontology in New Mexico*: Albuquerque, New Mexico Museum of Natural History and Science, Bulletin 2, 338 pp. *Prepared for the 53rd Annual Meeting of the Society of Vertebrate Paleontology, October 13-16, 1993, Albuquerque, New Mexico*.

McCammon, R. B., and Kork, J. O., 1992, One-level predictions; a numerical method for estimating undiscovered metal endowment: *Nonrenewable Resources*, v. 1, no. 2, pp. 139-147.

Polyak, V. J., and Cokendolpher, J. C., 1992, Recovery of microfossils from carbonate speleothems: *National Speleological Society, Bulletin*, v. 54, pp. 66-68.

Ulmer-Scholle, D. S., Scholle, P. A., and Brady, P. V., 1993, Silicification of evaporites in Permian (Guadalupian) back-reef carbonates of the Delaware Basin, west Texas and New Mexico: *Journal of Sedimentary Petrology*, v. 63, no. 5, pp. 955-965.

Van Metre, P. C., and Gray, J. R., 1992, Effects of uranium mining discharges on water quality in the Puerco River basin, Arizona and New Mexico: *Journal des Sciences Hydrologiques*, v. 37, no. 5, pp. 463-480.

Open-file reports

NMBMMR

*391—**Geomorphic setting and late Quaternary history of pluvial-lake basins in the southern New Mexico region**, by J. W. Hawley, 1993, 30 pp., 2 figs., 1 table. \$6.00

USGS

86-541—**Geologic logs for selected deep wells in parts of Oklahoma, Texas, and New Mexico**, by S. C. Christenson, R. B. Morton, J. S. Havens, and R. W. Fairchild, 1988, 161 pp.

*92-710—**A digital geologic map and explanation of San Antonio Mountain quadrangle, Rio Arriba and Taos Counties, New Mexico**, by R. A. Thompson and P. W. Lipman, 1992, 7 pp., one 5 1/4 inch diskette. *The dataset is distributed by NMBMMR on an IBM compatible 3 1/2 inch, 1.44 MB format diskette. This dataset requires GSMAP for proper execution of the files.* \$9.40

*92-711—**A digital geologic map and explanation of the Los Pinos quadrangle, Rio Arriba and Taos Counties, New Mexico, and Conejos County, Colorado**, by P. A. Thompson and R. W. Lipman, 1992, 7 pp., one 5 1/4 inch diskette. *The dataset is distributed by NMBMMR on an IBM compatible 3 1/2 inch, 1.44 MB format diskette. This dataset requires GSMAP for proper execution of the files.* \$9.40

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New Mexico Bureau of Mines and Mineral Resources staff notes

Michael Whitworth was hired as the Bureau's Hydrogeologist. Other staff changes: **Ann Lanning**, Executive Secretary; **Theresa Lopez**, Secretary/Receptionist; **Terry Telles**, Technical Secretary. **Patricia Rodgers** resigned from the Albuquerque office to take a position with Sandia Labs; **Jeannie Verploegh** resigned to take a position with the Geoscience Dept. Anniversaries of our staff with five or more years of service from September through November were: **Jacques Renault**, 29; **Charles Chapin**, 28; **Lynn Brandvold**, 27; **George Austin**, 19; **Dave Love**, 13; **Ron Broadhead**, 12; **Paul Bauer** and **Theresa Lopez**, 6.

The New Mexico Geological Society 44th annual field conference was to the Carlsbad area. **George Austin**, **Jim Barker**, **Ron Broadhead**, **Richard Chamberlin**, **John Hawley**, **Gretchen Hoffman**, **Dave Love**, and **Virginia McLemore** served on committees and compiled roadlogs.

Guidebook articles were written by **Orin Anderson**, **George Austin**, **James Barker**, **Lynn Brandvold**, **Ron Broadhead**, **John Hawley**, and **Virginia McLemore**. Other staff attending were **Paul Bauer**, **Steve Cather**, **Charles Chapin**, **Abe Gundiler**, **Frank Kottowski**, **Jane Love**, **Norma Meeks**, and **Neil Whitehead**.

The NM Mining Association Convention was attended by **Virginia McLemore** who set up the NMBMMR exhibit and **George Austin** and **Jim Barker** who coauthored the talk "Industrial minerals review for New Mexico." **Charles Chapin**, **Frank Kottowski**, **Neil Whitehead**, and **Ron Broadhead** attended the annual meeting of NM Oil and Gas Association. **Ron Broadhead** also attended a DOE workshop for Independent Oil and Gas Producers and a hearing of the Senate Energy and Natural Resources Committee on Technology Transfer to the Oil and Gas Industry.

At the 14th New Mexico Mineral Symposium **Bob Eveleth** chaired the sessions; **Judy Vaiza** (assisted by **Theresa Lopez** and **Lois Gollmer**) handled registration; and **Norma Meeks** and **Debbie Goering** were responsible for publication sales.

Other meetings attended by NMBMMR staff were: Rocky Mountain Ground Water Conference (**John Hawley**, paper, "Hydrogeologic framework of the northern Albuquerque Basin"; **Mike Whitworth**; **Dave Love**; **Marshall Reiter**; and **Lynn Brandvold**); New Mexico Water Quality Control Commission (**Lynn Brandvold**); Arsenic in Groundwater seminar (**Mike Whitworth** and **Charles Chapin**); American Association of State Geologists, Liaison Committee (**Charles Chapin**); GSA annual meeting (**Paul Bauer**, talk, "Contribution of the 1.6 Ga Mazatzal orogeny to deformation and porphyroblast growth in the Picuris Mountains, northern New Mexico"); Clay Minerals Society annual meeting (**George Austin**); Central NM SME meeting and SME Board meeting (**George Austin**); SME Board of Directors meeting in San Francisco (**Jim Barker** presented SME strategic plan); international symposium in Albuquerque on the nonmarine Triassic (**Orin Anderson** and **Jiri Zidek**); Society of Vertebrate Paleontology (**Jiri Zidek** and **Norma Meeks** who sold publications); AAPG Rocky Mountain Section meeting (**Neil Whitehead**, two poster sessions, "Fluids in the Cretaceous System of the San Juan Basin, New Mexico and Colorado" and "Coal-bed methane in Utah, New Mexico, Colorado, and Wyoming: resources, reserves, and production"); Symposium on Ion Chromatography (**Sandy Swartz**); NM Math & Science Teachers annual conference (**Susie Welch** and **George Austin**, talk, "Minerals and rocks revisited"); NM Environmental Education Association (**Susie Welch**); Denver Gem & Mineral Show and Roswell Gem & Mineral Show (**Bob Eveleth**).

Articles by staff members are referenced in *Service/News*, other publications and open-file reports.

Upcoming geologic meetings

| Conference title | Dates | Location | Contact for more information |
|--|------------|--|--|
| Tucson Gem & Mineral Society show | Feb. 10-13 | Convention Center Tucson, AZ | TGM Show Comm. P.O. Box 42543 Tucson, AZ 85733 (602)322-5773 |
| Soc. Economic Geologists/ Soc. Mining, Metallurgy, & Exploration meeting | Feb. 14-17 | Convention Center Albuquerque, NM | Clay T. Smith Geoscience Dept., NMT Socorro, NM 87801 (505)835-0453 |
| V. E. McKelvey Forum on Mineral Resources | Feb. 22-25 | Convention Center Tucson, AZ | Warren C. Day U.S. Geol. Survey Box 25046, MS 905 Denver Fed. Center Denver, CO 80025 (303)236-5568 |
| Albuquerque Gem & Mineral Club show | Mar. 5-6 | UNM Continuing Ed. Conf. Center Albuquerque, NM | Albuquerque Gem & Mineral Club P.O. Box 13718 Albuquerque, NM 87192 (505)265-8788 |
| New Mexico Geological Society spring meeting | Apr. 8 | Macey Center Socorro, NM | Andrew Campbell Geoscience Dept., NMT Socorro, NM 87801 (505)835-5327 |
| SEPM Permian Basin Section field trip | Apr. 22-24 | Las Cruces, NM | Bob Lindsay PBS-SEPM Vice- Pres. (915)687-7233 or PBS-SEPM Office (915)683-1573 |
| AAPG Southwest Section meeting | Apr. 24-26 | Inn of the Mountain Gods Ruidoso, NM | George L. Scott, Jr. Roswell Geological Society P.O. Box 1171 Roswell, NM 88201 (505)622-5891 |
| Internat. Land Reclamation & Mine Drainage Conf. & Internat. Conf. on the Abatement of Acidic Drainage | Apr. 25-29 | David L. Lawrence Convention Center Pittsburgh, PA | Debbie Lowanse ASSMR P.O. Box 18070 Pittsburgh, PA 15236 (412)892-6708 |



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