Service/News

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New Publications

NMBMMR

***Circular 199**—Epithermal deposits in New Mexico, compiled by T. L. Eggleston, 1985, 56 pp. $4.50

This volume contains six papers and 14 abstracts that resulted from a symposium on epithermal-ore deposits in New Mexico. The symposium, which was held at the 1984 spring meeting of the New Mexico Geological Society, focused attention on the high-grade, generally shallow mineral deposits found at Mogollon, Kingston, Whiteoaks, Chloride, Pinos Altos, and Hermosa. The rest of the abstracts given at the 1984 meeting were published in *New Mexico Geology*, v. 6, no. 4, pp. 83–86.

USGS

BULLETIN

1641–A—The Lower Cretaceous Ammonite *Schloenbachia leonensis* Conrad var. *equidistans* Cragin, by W. A. Cobban, 1985, 6 pp.

CIRCULARS

0904–B—Geologic and hydrologic characterization and evaluation of the Basin and Range Province relative to the disposal of high-level radioactive waste—part II, Geologic and hydrologic characterization, by K. A. Sargent and M. S. Bedinger, 1985, 30 pp.

0904–C—Geologic and hydrologic characterization and evaluation of the Basin and Range Province relative to the disposal of high-level radioactive waste—part III, Geologic and hydrologic evaluation, by M. S. Bedinger, K. A. Sargent, and B. T. Brady, 1985, 27 pp.

MISCELLANEOUS FIELD STUDIES MAPS

MF–1631–B—Geologic map of the Sandia Mountain Wilderness, Bernalillo and Sandoval Counties, New Mexico, by D. C. Hedlund, 1985, 1:50,000.

MF–1631–D—Aeromagnetic map of the Sandia Mountain Wilderness, Bernalillo and Sandoval Counties, New Mexico, by D. C. Hedlund and L. E. Cordell, 1985, 1:50,000.

***MF–1782**—Geologic map of Bear Mountain quadrangle, Grant County, New Mexico, by W. E. Brooks and J. C. Ratté, 1985, 1:24,000.

MF–1788—Preliminary geologic map of the Pretty Rock quadrangle, San Juan County, New Mexico, by J. D. Strobell, Jr., R. B. O'Sullivan, J. W. Mytton, and M. F. Erpenbeck, 1985, 1:24,000.

PROFESSIONAL PAPER

1400–B—Geohydrology of the High Plains aquifer in parts of Colorado, Kansas, Nebraska, New Mexico, Oklahoma, South Dakota, Texas, and Wyoming, by E. D. Gutentag, F. J. Heimes, N. C. Krothe, R. R. Luckey, and J. B. Weeks, 1984, 63 pp.

WATER RESOURCES INVESTIGATIONS

84–4176—Wireline-rotary air coring of the Bandelier Tuff, Los Alamos, New Mexico, by W. E. Teasdale and R. R. Pemberton, 1984, 9 pp.

WATER SUPPLY PAPER

2206—Simulation of an aquifer test of the Tesuque Pueblo grant, New Mexico, by G. A. Hearne, 1985, 24 pp.

U.S. Bureau of Mines

INFORMATION CIRCULAR

9007—Subsidence information for underground mines—literature assessment and annotated bibliography, by A. J. Fejes, R. C. Dyni, J. A. Magers, and L. B. Swatek, 1985, 86 pp.

New Mexico Energy Research and Development Institute

2–73–4622—Gas and oil production wastewater disposal alternatives for the San Juan Basin, by S. J. Zygmunt, T. L. Andrews, and J. H. Siegel, 1985, 105 pp.

2–68–2210(A)—On-farm production and utilization of alcohol and stillage, by R. E. Finkner and S. W. Burnett, 1985, final report, 47 pp.

New Mexico Water Resources Research Institute

MR–14—Water directory—where to get water information in New Mexico, edited by L. G. Harris, 1984.

Other publications

Amalgamated interdune deposits, White Sands, New Mexico, by E. L. Simpson and D. B. Loope, 1985: Journal of Sedimentary Petrology, v. 55, no. 3, pp. 361–365.

Derivation of the original isotropic composition of Permian marine cements, by R. K. Given and K. C. Lohmann, 1985: Journal of Sedimentary Petrology, v. 55, no. 3, pp. 403–439.

Ground-water quality in the El Llano area of the Española Valley, by D. Earp, 1985: New Mexico Environmental Improvement Division, 23 pp.

Producing characteristics and depositional environments of Lower Pennsylvanian reservoirs, Parkway–Empire South area, Eddy County, New Mexico, by A. D. James, 1985: American Association of Petroleum Geologists, v. 69, no. 7, pp. 1043–1063.

Reconnaissance seismic refraction-reflection surveys in northwestern New Mexico, by L. H. Jaksha and D. H. Evans, 1984: Bulletin of the Seismological Society of America, v. 74, no. 4, pp. 1263–1274.

Recognition of interstitial anhydrite dissolution—a cause of secondary porosity, San Andres Limestone, New Mexico, and Upper Minnelusa Formation, Wyoming, by C. J. Schenk and R. W. Richardson, 1985: American Association of Petroleum Geologists, Bulletin, v. 69, no. 7, pp. 1064–1076.

Remotely sensed limonite anomaly on Lordsburg Mesa, New Mexico—possible implications for uranium deposits, by G. L. Raines, J. A. Erdman, J. H. McCarthy, and G. M. Reimer, 1985: Economic Geology, v. 80, no. 3, pp. 575–590.

Open-file reports

NMBMMR

***226**—El Llano and vicinity geotechnical study—final report, by G. D. Johnpeer, D. W. Love, J. W. Hawley, D. J. Bobrow, M. Hemingway, and R. F. Reimers, 1985, 578 pp., 4 vol., 23 tables, 82 figs., 12 photographs, 23 appendices, 11 trench logs, 3 over-sized geophysical profiles, 12 oversized maps (may be purchased in parts). $135.95

USGS

***85–232**—Geology, mines, and prospects of the Tyrone stock and vicinity, Grant County, New Mexico, by D. C. Hedlund, 1985, 33 pp., 1 plate (nonreproducible).

***85–456**—Economic geology of some selected mines in the Hillsboro and San Lorenzo quadrangles, Grant and Sierra Counties, New Mexico, by D. C. Hedlund, 1985, 81 pp., 11 plates (nonreproducible).

USGS

TOPOGRAPHIC MAPS—NEW (scale 1:24,000)

	yr	lat.	long.	contour (ft)
*Pagosa Junction (NM–CO)	1978–84	37°	107°7′30″	40

INTERMEDIATE TOPOGRAPHIC MAPS (scale 1:100,000; + = BLM map)

	yr	lat.	long.	contour (m)
*Alamo Hueco Mountains	1983–84	31°	108°	50
*Canyon de Chelly (NM–AZ)	1980–84	36°	109°	50
*Carrizozo	1979–81	33°30′	105°	50
*Nutrioso (NM–AZ)+	1978–81	33°30′	109°	40
*Santa Rosa	1978–84	34°30′	104°	—
*Springerville (NM–AZ)	1973–81	34°	109°	20
*Vaughn	1978–84	34°30′	105°	—

REVISED TOPOGRAPHIC MAPS (scale 1:24,000)

	yr	lat.	long.	contour (ft)
*Valle Bonito NE (NM–AZ)	1978–84	34°37′30″	109°	20

Elephant Butte at Truth or Consequences, New Mexico.

New Mexico Geological Society news

New Mexico Geological Society members will be electing their 1986 officers in the near future. A November mailing to the membership will include a ballot, a publication list with prices, and a notice of a guidebook sale to be held in January.

1986 NMGS fall field conference

Truth or Consequences country—middle Rio Grande rift

The next New Mexico Geological Society fall field conference will be held in Truth or Consequences, New Mexico, in 1986. The diverse and complex geology in this area will provide the subject matter for three days of traditional hands-on-the-outcrop dust-up-the-nose field trips. Much excellent work has been done in the area since the last NMGS conference held there in 1955. Papers are being solicited now on any phase of the geology of this area. If you would like to contribute a paper please contact one of the people listed below and give them the title and the approximate length of your paper as soon as possible. See you in T or C in 1986. Organizers: Bob Osburn (General Chairman), New Mexico Bureau of Mines and Mineral Resources, Socorro, NM 87801, (505) 835-5147; Russ Clemons and Greg Mack (Guidebook Editors), Department of Earth Sciences, Box 3AB, New Mexico State University, Las Cruces, New Mexico, (505) 646–1033 or 646–1343.

Call for papers

The West Texas Geological Society has issued a call for papers for publication in its monthly bulletin. Articles are invited on all aspects of Permian Basin geology. Of special interest are papers emphasizing petroleum geology, Paleozoic stratigraphy, structure, tectonics, and sedimentation. Style of the manuscripts should follow guidelines set by the *AAPG Bulletin* or that of articles published in back issues of the *WTGS Bulletin*. The length of papers should be 10–20 double-spaced typewritten pages including figures, references, and abstract. Figures must be camera-ready. Please submit manuscripts or inquiries to Ms. Chris Chandler, Editor, Fina Oil and Chemical Company, P.O. Box 2990, Midland, Texas 79702, (915) 687–0575.

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6–28–85 gold, silver	Operator—Washington Load, Sundance Mining, P.O. Box 484, Cedar Crest, NM 87008; Gen. Mgr.—Jack Flannery, same address, phone: 281–1271.	Sandoval County; sec. 36, T18N, R4E; private land; directions to mine: take I–25 north from Albuquerque to the Cochiti Lake turnoff (left hand turn), take NM–22 west through Peña Blanca, continue through Cochiti to Bland Canyon road 268
7–17–85 gold, silver	Operator—Party House, Po Boy Explorations, P.O. Box 159, Tyrone, NM 88065; Gen. Mgr.—Kelly Green, same address. Property owner—Rex Green, Albuquerque, NM	Grant County; sec. 24, T20S, R16W; federal land; directions to mine: top of South-fork Gold Gulch
8–9–85 marble	Operator—Marble USA, Marble USA, Inc., c/o Daniel E. Duncan, 1921 Carlisle NE, Suite B, Albuquerque, NM 87110; Gen. Mgr.—V. K. Manaktala, Ph.D., same address, phone: 262–2668; Treasurer—Ronnie Pittman, same address; Secretary—Joseph Haldiman, same address. Property owner—Lloyd Golder, Box 130, RR #19, Tucson, AZ 85704; Marble USA is the owner of the mineral rights.	Valencia County; sec. 13, 23, 24, 26, 27, 28, 33, 34, 35, T5N, R3W; private land; directions to pit: 20 mi west of Belen, NM
8–21–85 gold, silver	Operator—Bart Lode Prospect, Ray L. Weber & Assoc., 3131 Stemmons Freeway, Dallas, TX 75247; Gen. Mgr.—Steve Herndon, 4621 Country Creek Dr., Dallas, TX 75236, phone: (214) 331–5379; Gen. Supt.—Lee Herriott, Jr., 1815 Mountain Lake, Dallas, TX 75208, phone: (214) 348–4577; Other officials—Ray Weber, 3131 Stemmons Freeway, Dallas, TX 75247, phone: (214) 263–0590. Property owner—Bureau of Land Management	Sierra County; sec. 10, T16S, R7W; federal land; directions to mine: from the north, proceed approximately 12 mi south of T or C, turn west on NM–90 to within 2 mi of Hillsboro; property is on the left

(continued next issue)

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Use your handy postage-paid envelope provided in this issue to renew your *New Mexico Geology* subscription. The price is still only $6.00 for four issues. Send your check by December in order to avoid interruption of your subscription in 1986.

New Mexico Geological Society (NMGS) members please note: your NMGS dues *will no longer* automatically include a subscription to *New Mexico Geology* in 1986. The NMGS executive committee voted in April to *discontinue* the policy that included free subscriptions to *New Mexico Geology* upon payment of NMGS dues. NMGS dues have been reduced to compensate for this change.

Send the renewal envelope and a check today for your 1986 subscription to *New Mexico Geology*.

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New Mexico Bureau of Mines and Mineral Resources staff notes

Mark Bowie and Kevin Cook joined us as Research Associate Geologists for the Coal Quality Project; Bonnie Pelletier was hired as the Coal Laboratory Technician for the same project. Danny Bobrow is now a Geologist/Paleontologist. Annette Gonzales joined us as Administrative Secretary replacing Jeanette Chavez, who was hired to work with Information Services. Guadalupe Williams left to become a technical secretary, and Brian Arkell moved to the Washington, D.C., area. Anniversaries from September to November of people who had five or more years of service were: Jacques Renault, 21; Lynn Brandvold, 20; George Austin, John Hawley, Bill Stone, Sam Thompson, and Jamie Robertson, 11; Bob North, 7; and Jo-Anne Osburn, 6.

At the national meeting of SME–AIME in Albuquerque in October, George Austin co-chaired the potash session and Jim Barker co-chaired the perlite session. Richard Chamberlin and Danny Bobrow gave a talk entitled "Geology and geochemistry of the Grefco perlite." Jim Barker gave a talk about perlite testing and Gretchen Roybal and Jim Barker gave a talk entitled "Geology and production of humates in New Mexico." George Austin, Jim Barker, and Mike Harris helped lead field trips connected with the meeting to the Mt. Taylor uranium mine, the Ortiz gold operations, and the Western Gypsum mine and mill.

Gary Johnpeer, John Hawley, and Dave Love led a field trip for the Albuquerque chapter of the American Association of Civil Engineers to the Española collapsible-soil area. John Hawley visited Alamogordo to look at collapsible-soil problems in the eastern part of that city. The thick four-volume final report on the Española Subsidence Project was issued in late June and has been in reasonable demand ever since. Gary Johnpeer is preparing an invited paper for the journal *Ground Failure* entitled "Land subsidence caused by collapsible soils in northern New Mexico." Gary Johnpeer and Danny Bobrow's poster on "Collapsible soils in north-central New Mexico" was presented at the Association of Engineering Geologists' meeting in Winston–Salem, North Carolina, in October. At the same meeting John Hawley gave a talk and poster session entitled "Identification of possible sites in New Mexico for disposal of hazardous waste."

Jim Barker is our lead contact for the Memorandum of Understanding that we have with the U.S. Forest Service to cooperate with them on geologic and mineral resources issues that concern both agencies.

Don Wolberg's summer paleontology field course for high school teachers was taught for the second year and was mentioned in the Congressional Record. Bill Stone attended the September IAM Congress, Hydrogeology in the Service of Man, in Cambridge, England, and he presented a paper on "Assessing impact of surface mining on recharge" at the IMWA Congress in Granada, Spain. He also gave a talk on "Determining recharge in coal surface mining areas" at the October meeting of the American Society for Surface Mining and Reclamation in Denver. Bob Weber gave a seminar on lithic materials at the Archaeological Society of New Mexico–Museum of New Mexico field school at Redrock State Park.

Chuck Chapin's lectures for the AAPG Distinguished Lecture Tour are called "Two-stage Laramide orogeny in southwestern United States—tectonics and sedimentation." Orin Anderson and Richard Chamberlin were among the leaders of the Energy and Minerals Department (EMD) tour of abandoned uranium mines in the Ambrosia Lake district. Mike Harris checked the Jones Camp iron deposit to attempt beneficiation testing of the ore. Mike Gobla reviewed the Cimarron Mine Plan for the Energy and Minerals Department.

Marshall Reiter's poster was presented at the Conference on Heat and Detachment in Crustal Extension held at Sedona in October. Jiri Zidek published his paper "Growth in *Acanthodes* (Acanthodii: Pisces)—data and implications" in the German publication *Paläontologische Zeitschrift*. Volume II of *Reviews in Economic Geology*, edited by Jamie Robertson and called "Geology and geochemistry of epithermal systems," is in press.

John Hawley attended the organization conference on the Directory of North American Geology's Quaternary volume in Denver; he also gave a talk at the New Mexico Academy of Science meeting in Albuquerque called "The Ogallala Formation in eastern New Mexico." Bob North gave a talk in Taos on New Mexico mineral resources and led a field trip to the Harding mine for Ft. Hays State University classes.

Abstracts submitted to the GSA meeting in Orlando include Laura Kedzie, John Sutter, and Chuck Chapin's "High precision $^{40}Ar/^{39}Ar$ ages of widespread Oligocene ash-flow tuff sheets near Socorro" and Tom Kendrick, Fred Kuellmer, Phil Kyle, Frank Campbell, and Lynn Brandvold's "Trace-element distribution in Fruitland coal seams from northwestern New Mexico."

Frank Kottlowski participated in the New Mexico Mining Association Board of Directors' meeting in Grants and the field trip to Lee Ranch coal mine; he also began his year as President of the Association of American State Geologists, and he was appointed to the U.S. National Committee on Geology. The New Mexico Tech Sigma Xi Chapter's President is Lynn Brandvold; Frank Campbell serves on the Admissions Committee; Jacques Renault serves on the Nominations Committee. Judy Vaiza, Zana Wolf, Norma Meeks, Lynne McNeil, and Deborah Shaw attended the Governor's Career Development Conference for Women in State Government in September.

Peter Hanagan, New Mexico Oil and Gas Association, and Dick Stametz, New Mexico Oil Conservation Division, reported that the total amount of revenues, royalties, rentals, and other direct income received by the state in 1984 as a result of oil and gas production was $1,015,085,000, about 10% more than was received in 1983. The state's assessments on oil and gas production provide about one-half of the recurring revenues entering the State General Fund, a total of $544.8 million during the 1983–84 fiscal year. Oil production increased to 79.3 million barrels, and natural gas production increased to 946.7 billion ft^3. Natural gas reserves dropped by 711 billion ft^3, but oil reserves were up to 574 million barrels. Exploration and production drilling increased to an average of 78 rigs operating per day, and although the total number of well completions declined, the number of new oil wells increased. The average price of natural gas increased slightly to $2.77 per thousand ft^3, but the price of a barrel of oil dropped to $28.91. Production in the first half of 1985 showed a slight increase in both oil and natural gas.

New Mexico GEOLOGY
• Science and Service
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