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**New Mexico Bureau of Mines & Mineral Resources**

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# Bibliography of New Mexico geology and mineral technology 1986

by Jane C. Love, Carol A. Hjellming, and Nyleen H. Troxel

*New Mexico Bureau of Mines and Mineral Resources, Socorro, New Mexico 87801*

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## Preface

The 1927 law that established the Bureau of Mines and Mineral Resources for the State of New Mexico included among the Bureau's responsibilities, "to collect a library and bibliography of literature pertaining to the progress of geology, mining, milling, smelting and the production of oil and natural gas and refining the same in New Mexico." Appropriately, Bulletin 5, *Geologic literature of New Mexico*, was published in 1930. Eleven other bibliographies of New Mexico geology and mineral technology have been published by the Bureau since 1930. This volume, Bulletin 130, is a compilation of approximately 1200 references to New Mexico geology published during 1986. These bibliographies provide researchers with a way to search comprehensively the geologic literature of the state published since the middle of the 19th century. The bibliographic literature of the Bureau also includes topical and annotated bibliographies available as published bulletins or as reproducible open-file reports (see listing on reverse side of front cover).

The bibliography cites literature that (1) deals directly with the geology of New Mexico, (2) describes geology outside of the state pertinent to New Mexico, and (3) includes New Mexico in a regional study of the Southwest. Bureau bibliographies reflect the growth of the geosciences, expanding to include geophysical, geochemical, geothermal, and paleontological investigations; the quantity, quality, and protection of water resources; geologic hazards and engineering geology; the safe disposal of hazardous and radioactive wastes; technology supporting economical and enhanced recovery of mineral and energy resources; and site reclamation.

References include articles published in scientific journals; reports, serials, and monographs published by federal and state agencies, professional societies, research institutions, and scientific publishers; abstracts of papers presented at professional meetings; and research papers, theses, and dissertations completed as part of M.S. and Ph.D. degree requirements. Additional information regarding publication elsewhere of the same paper or its abstract and

information regarding the availability of a report through a distributing agency are appended to the reference when known.

This volume comprises (1) a list of publications, from which references were compiled, and their abbreviations and a guide to the identification of acronyms that the reader may encounter; (2) the references arranged alphabetically by senior author; junior authors with cross references to the senior author are included in this alphabetical arrangement; and (3) an index, in which each reference is listed one or more times by subject, geographic location, age, and/or rock-stratigraphic unit.

Since 1981 the New Mexico Bureau of Mines and Mineral Resources has been compiling and maintaining its own annual bibliographic computer data files. These data files are continuously updated, and retrieval of data not yet published can be requested through the Bureau's Editing Department.

**Acknowledgments**—Significant contributions were made by many at the New Mexico Bureau of Mines and Mineral Resources. We are grateful to the geologists who brought to our attention those items not widely known or distributed. The cooperative exchange of information with other agencies of the State of New Mexico as well as those of neighboring states was an important contribution. We are grateful to the librarians on the campus of New Mexico Institute of Mining and Technology for alerting us to acquisitions relevant to our volume. Without this kind of support the thoroughness of our work would be jeopardized. We also thank Theresa Borzillo, Toby Click, Michael Coburn, Nicky Fatherly, James Gridley, Beth Seagren, and Gayla Williford.

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Socorro, New Mexico  
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New Mexico Bureau of Mines  
and Mineral Resources



## Publications and abbreviations

- Am. Assoc. Petroleum Geologists, Bull.; Mem.; Studies in Geology: American Association of Petroleum Geologists, Bulletin; Memoir; Studies in Geology. Tulsa, Oklahoma
- Am. Assoc. Stratigraphic Palynologists, 19th Ann. Mtg., Program and Abs.: American Association of Stratigraphic Palynologists, 19th Annual Meeting, Program and Abstracts, American Geological Institute. Alexandria, Virginia
- Am. Ceramic Soc., Advances in Ceramics: American Ceramic Society, Advances in Ceramics, American Ceramic Society, Inc. Westerville, Ohio
- Am. Geophys. Union (EOS), Trans.; Geodynamics Series: American Geophysical Union (EOS), Transactions; Geodynamics Series. Washington, D.C.
- Am. Inst. Mining, Metall., and Petroleum Engineers, Soc. Mining Engineers; Soc. Petroleum Engineers: American Institute of Mining, Metallurgical, and Petroleum Engineers, Society of Mining Engineers; Society of Petroleum Engineers. New York, New York
- Am. Jour. Sci.: American Journal of Science, Yale University. New Haven, Connecticut
- Am. Mineralogist: American Mineralogist, Journal of the Mineralogical Society of America. Washington, D.C.
- Am. Soc. Civil Engineers, Ground-water Symp.: American Society of Civil Engineers, Ground-water Symposium. New York, New York
- Applied Geochemistry: Journal of the International Association of Geochemistry and Cosmochemistry, Pergamon Press. Oxford, England
- Arizona Bureau Geology Mineral Tech., Open-file Rept.: Arizona Bureau of Geology and Mineral Technology, Open-file Report. Tucson, Arizona
- Arizona Geol. Soc., Digest: Arizona Geological Society, Digest. Tucson, Arizona
- Assoc. Eng. Geologists, 29th Ann. Mtg., Abs. and Program: Association of Engineering Geologists, 29th Annual Meeting, Abstracts and Program. Sudbury, Massachusetts
- Baylor Geol. Studies, Bull.: Baylor Geological Studies, Bulletin, Baylor University. Waco, Texas
- Botanical Gazette: Botanical Society of America, University of Chicago Press. Chicago, Illinois
- Brevoria: Harvard University Museum of Comparative Zoology. Cambridge, Massachusetts
- Brookhaven Natl. Lab., Rept.: Brookhaven National Laboratory, Report. Long Island, New York
- Bulletin de la Société Géologique de France, Huitieme Serie. Paris, France
- California Mining Jour.: California Mining Journal. Aptos, California
- Canberra, Australia, Bureau Mineral Resources, Geology, Geophysics: Canberra, Australia, Bureau of Mineral Resources, Geology, and Geophysics
- Carnegie Museum, Annals. Pittsburgh, Pennsylvania
- Chihuahuan Desert Research Inst.: Chihuahuan Desert Research Institute. Alpine, Texas
- Clays and Clay Minerals: Journal of the Clay Minerals Society. Oxford, England
- Climatic Change: D. Reidel Publishing Company, Dordrecht, The Netherlands
- Colorado Geol. Survey, Spec. Publ.: Colorado Geological Survey, Special Publication. Denver, Colorado
- Univ. Colorado (Denver), Geol. Dept. Mag.: University of Colorado (Denver), Geology Department Magazine. Denver, Colorado
- Compass: The Compass of Sigma Gamma Epsilon, School of Geology and Geophysics, University of Oklahoma. Norman, Oklahoma
- Contr. Mineralogy and Petrology: Contributions to Mineralogy and Petrology, Springer-Verlag. New York, New York
- CSPG Reservoir: Canadian Society of Petroleum Geologists. Calgary, Alberta, Canada
- Current Research in the Pleistocene: Center for the Study of Early Man, University of Maine. Orono, Maine
- Denver Region Exploration Geologists Soc., Symp. Proc.: Denver Region Exploration Geologists Society, Symposium Proceedings. Wheat Ridge, Colorado
- Dissert. Abs. Internat.: Dissertation Abstracts International, University Microfilms. Ann Arbor, Michigan
- Earth and Planet. Sci. Letters: Earth and Planetary Science Letters, Elsevier Scientific Publishing Company. Amsterdam, The Netherlands
- Econ. Geology: Economic Geology and the Bulletin of the Society of Economic Geologists. New Haven, Connecticut
- El Paso Geol. Soc., Guidebook: El Paso Geological Society, Guidebook, University of Texas (El Paso). El Paso, Texas
- Eng. and Mining Jour.: Engineering and Mining Journal, McGraw-Hill Publishing Company. New York, New York
- Environ. Sci. and Tech.: Environmental Science and Technology, American Chemical Society. Washington, D.C.
- First Internat. Brachiopod Congress, CNRS: First International Brachiopod Congress, Centre National de la Recherche Scientifique. Brest, France
- First Internat. Symp. on Dinosaur Tracks and Traces, Abs. with Program: First International Symposium on Dinosaur Tracks and Traces, Abstracts with Program
- Friends of Mineralogy, Colorado Pegmatite Symp. Proc.: Friends of Mineralogy, Colorado Pegmatite Symposium Proceedings
- Geochim. et Cosmochim. Acta: Geochimica et Cosmochimica Acta, Journal of the Geochemical Society and the Meteoritical Society, Pergamon Press. Oxford, England
- Geographie Physique et Quaternaire: Les Presses de l'Université de Montreal. Montreal, Quebec, Canada
- Geol. Assoc. Canada, Mineral. Assoc. Canada, Canadian Geophys. Union, Joint Ann. Mtg.; Program with Abs.: Geological Association of Canada, Mineralogical Association of Canada, Canadian Geophysical Union, Joint Annual Meeting, Program with Abstracts, University of Newfoundland. St. John's, Newfoundland, Canada

- Geol. Soc. America, Abs. with Programs; Bull.; Spec. Paper: Geological Society of America, Abstracts with Programs; Bulletin; Special Paper. Boulder, Colorado
- Geology: Geological Society of America. Boulder, Colorado
- Geophys. Research Letters: Geophysical Research Letters, American Geophysical Union. Washington, D.C.
- Geothermal Resources Coun., Bull.; Trans.: Geothermal Resources Council, Bulletin; Transactions. Davis, California
- Geothermics: Pergamon Press. Oxford, England
- Government Reports Announcements and Index: U.S. Department of Commerce, National Technical Information Service. Springfield, Virginia
- Ground Failure: National Research Council, Committee on Ground Failure Hazards. Washington, D.C.
- Health Physics: Journal of the Health Physics Society, Pergamon Press. Oxford, England
- Inst. for the Study of Earth and Man, conf. proc.: Institute for the Study of Earth and Man, conference proceedings
- Inst. Mining Metallurgy: Institution of Mining and Metallurgy. London, England
- Internat. Assoc. Eng. Geologists, Bull.: International Association of Engineering Geologists, Bulletin. Paris Cedex, France
- Internat. Assoc. Hydro. Sciences: International Association of Hydrological Sciences, International Union of Geodesy and Geophysics, American Geophysical Union. Washington, D.C.
- Internat. Assoc. of Volcanology and Chemistry of the Earth's Interior, Internat. Volcanological Congress: International Association of Volcanology and Chemistry of the Earth's Interior, International Volcanological Congress, International Union of Geodesy and Geophysics, American Geophysical Union. Washington, D.C.
- Internat. Basement Tectonics Assoc., 6th Internat. Conf. on Basement Tectonics, Abs. with Program: International Basement Tectonics Association, 6th International Conference on Basement Tectonics, Abstracts with Program, Basement Tectonics Committee, Inc. Denver, Colorado
- Internat. Jour. Environ. Analytical Chemistry: International Journal of Environmental Analytical Chemistry, Gordon & Breach Science Publishers, Inc. New York, New York
- Internat. Mineral. Assoc., 14th General Mtg., Abs. with Program: International Mineralogical Association, 14th General Meeting, Abstracts with Program, Institute of Mineralogy, University of Marburg. Marburg, Germany
- Internat. Symp. on Water-Rock Interaction, Extended Abs.: International Symposium on Water-Rock Interaction, Extended Abstracts
- Interstate Oil Compact Comm., Comm. Bull.: Interstate Oil Compact Commission, Committee Bulletin. Oklahoma City, Oklahoma
- Isochron/West: The Bulletin of Isotopic Geochronology, Nevada Bureau of Mines and Geology and New Mexico Bureau of Mines and Mineral Resources. Socorro, New Mexico
- Jour. Geology: Journal of Geology, University of Chicago Press. Chicago, Illinois
- Jour. Geophys. Research: Journal of Geophysical Research, American Geophysical Union. Washington, D.C.
- Jour. Herpetology: Journal of Herpetology, Department of Zoology, Miami University. Oxford, Ohio
- Jour. Mammalogy: Journal of Mammalogy, American Society of Mammalogists. Lawrence, Kansas
- Jour. Paleontology: Journal of Paleontology, Society of Economic Paleontologists and Mineralogists and The Paleontological Society. Tulsa, Oklahoma
- Jour. Petroleum Tech.: Journal of Petroleum Technology, Society of Petroleum Engineers of the American Institute of Mining, Metallurgical, and Petroleum Engineers. Richardson, Texas
- Jour. Sed. Petrology: Journal of Sedimentary Petrology, Society of Economic Paleontologists and Mineralogists. Tulsa, Oklahoma
- Jour. Volcanology and Geothermal Research: Journal of Volcanology and Geothermal Research, Elsevier Scientific Publishing Company. Amsterdam, The Netherlands
- Lawrence Berkeley Lab., Rept.: Lawrence Berkeley Laboratory, Report, University of California. Berkeley, California
- Lawrence Livermore Natl. Lab., Rept.: Lawrence Livermore National Laboratory, Report. Berkeley, California
- Los Alamos Natl. Lab., Rept.: Los Alamos National Laboratory, Report. Los Alamos, New Mexico
- Lunar and Planet. Inst., 17th Science Conf.: Lunar and Planetary Institute, 17th Science Conference. Houston, Texas
- Meteoritical Soc., 49th Ann. Mtg., Abs. and Program: Meteoritical Society, 49th Annual Meeting, Abstracts and Program, Department of Astronomy, University of Southern California. Los Angeles, California
- Meteoritics: Journal of the Meteoritical Society, Department of Astronomy, University of Southern California. Los Angeles, California
- Micropaleontology: Allen Press. Lawrence, Kansas
- Mineral. Mag.: Mineralogical Magazine, Mineralogical Society of Great Britain. London, England
- Mining Engineering: Society of Mining Engineers of the American Institute of Mining, Metallurgical, and Petroleum Engineers. Littleton, Colorado
- Natl. Tech. Inf. Serv., Rept.: National Technical Information Service, Report, U.S. Department of Commerce. Springfield, Virginia
- Natl. Speleological Soc., Bull.; Convention; News: National Speleological Society, Bulletin; Convention; News. Huntsville, Alabama
- Natl. Water Well Assoc.: National Water Well Association. Dublin, Ohio
- Neues Jahrbuch für Mineralogie–Abhandlungen: Neues Jahrbuch für Mineralogie–Abhandlungen, E. Schweizerbart'sche Verlag. Stuttgart, Germany
- New Mexico Bureau Mines Mineral Resources, Bull.; Circ.; Open-file Rept.; Resource Map: New Mexico Bureau of Mines and Mineral Resources, Bulletin; Circular; Open-file Report; Resource Map. Socorro, New Mexico
- New Mexico Energy Research and Develop. Inst., Rept.: New Mexico Energy Research and Development Institute, Report. Santa Fe, New Mexico
- New Mexico Geol. Soc., Guidebook; 1986 Spring Mtg., Abs. with Programs: New Mexico Geological Society, Guidebook; 1986 Spring

- Meeting, Abstracts with Programs, New Mexico Bureau of Mines and Mineral Resources. Socorro, New Mexico
- New Mexico Geology: New Mexico Bureau of Mines and Mineral Resources. Socorro, New Mexico
- New Mexico Health and Environ. Dept., Environ. Improvement Div., rept.; Environ. Evaluation Group, Rept.; Ground Water/Hazardous Waste Bureau, Rept.: New Mexico Health and Environment Department, Environmental Improvement Division, report; Environmental Evaluation Group, Report; Ground Water/Hazardous Waste Bureau, Report. Santa Fe, New Mexico
- New Mexico Inst. Mining and Tech., Geophys. Research Center, Hydrology Research Program, Rept.; Geophysics Open-file Rept.; New Mexico Mineral Symp.: New Mexico Institute of Mining and Technology, Geophysical Research Center, Hydrology Research Program, Report; Geophysics Open-file Report; New Mexico Mineral Symposium. Socorro, New Mexico
- New Mexico Jour. Sci.: New Mexico Journal of Science, New Mexico Academy of Science, New Mexico Highlands University. Las Vegas, New Mexico
- New Mexico State Engineer, Map; rept.; Tech. Rept.: New Mexico State Engineer, Map; report; Technical Report. Santa Fe, New Mexico
- New Mexico State Univ., Agric. Exp. Station, Research Rept.; Water Resources Research Inst., Misc. Rept., Rept.: New Mexico State University, Agricultural Experiment Station, Research Report; Water Resources Research Institute, Miscellaneous Report, Report. Las Cruces, New Mexico
- Univ. New Mexico, Inst. Meteoritics, Spec. Publ.; unpublished rept.: University of New Mexico, Institute of Meteoritics, Special Publication; unpublished report. Albuquerque, New Mexico
- Oil and Gas Compact Bull.: Oil and Gas Compact Bulletin, Interstate Oil Compact Commission. Oklahoma City, Oklahoma
- Oil and Gas Jour.: Oil and Gas Journal, PennWell Publishing Company. Tulsa, Oklahoma
- Palaos: Society of Economic Paleontologists and Mineralogists. Tulsa, Oklahoma
- Paleoceanography: American Geophysical Union. Washington, D.C.
- Palynology: Journal of Palynology, Palynological Society of India. Kerala, India
- Petroleum Frontiers: Petroleum Information Corporation. Denver, Colorado
- Physical Geography: V. H. Winston and Sons. Silver Spring, Maryland
- Pollution Abs.: Pollution Abstracts, Cambridge Scientific Abstracts. Bethesda, Maryland
- Quart. Review of Methane from Coal Seams Tech.: Quarterly Review of Methane from Coal Seams Technology, Gas Research Institute. Chicago, Illinois
- Quaternary Research: Academic Press. New York, New York
- Radiocarbon: American Journal of Science, Yale University. New Haven, Connecticut
- Revista-Instituto de Geologia: Universidad Nacional Autónoma de México, Instituto de Geología. Mexico City, Mexico
- Rock and Gem: Behn-Miller Publishers, Inc. Encino, California
- Roswell Geol. Soc.: Roswell Geological Society. Roswell, New Mexico
- Sandia Natl. Lab., Rept.: Sandia National Laboratories, Report. Albuquerque, New Mexico
- Sed. Geology: Sedimentary Geology, Elsevier Scientific Publishing Company. Amsterdam, The Netherlands
- Sedimentology: Journal of the International Association of Sedimentologists, Blackwell Scientific Publications. Oxford, England
- Sel. Water Resources Abs.: Selected Water Resources Abstracts, U.S. Department of the Interior. Washington, D.C.
- Smithsonian Contr. Anthropology: Smithsonian Contributions to Anthropology, Smithsonian Institution. Washington, D.C.
- Soc. Econ. Paleontologists and Mineralogists, Gulf Coast Sec., 7th Ann. Research Conf., field guide, Program and Abs.; Midyear Mtg., Abs. with Programs; Permian Basin Sec., Publ.; Spec. Publ.: Society of Economic Paleontologists and Mineralogists, Gulf Coast Section, 7th Annual Research Conference, field guide, Program and Abstracts; Midyear Meeting, Abstracts with Programs; Permian Basin Section, Publication; Special Publication. Midland, Texas, and Tulsa, Oklahoma
- Soc. Mining Engineers (AIME), Trans.: Society of Mining Engineers (AIME), Transactions, Society of Mining Engineers of the American Institute of Mining, Metallurgical, and Petroleum Engineers. Littleton, Colorado
- Soc. Petroleum Engineers, Ann. California Regional Mtg., Proc.; Jour.; SPE/DOE 5th Symp. on Enhanced Oil Recovery, Proc.; Trans.: Society of Petroleum Engineers, Annual California Regional Meeting, Proceedings; Journal; SPE/DOE 5th Symposium on Enhanced Oil Recovery, Proceedings; Transactions, Society of Petroleum Engineers of the American Institute of Mining, Metallurgical, and Petroleum Engineers. Richardson, Texas
- Soil Sci. Soc. America, Jour.: Soil Science Society of America, Journal. Madison, Wisconsin
- Southwest Oil World: Hart Publications. Denver, Colorado (formerly Drill Bit)
- Southwestern Review: The Southwestern Review, Department of English, University of Southwestern Louisiana. Lafayette, Louisiana
- SPE Drilling Engineering: Society of Petroleum Engineers of the American Institute of Mining, Metallurgical, and Petroleum Engineers. Richardson, Texas
- SPE Formation Evaluation: Society of Petroleum Engineers of the American Institute of Mining, Metallurgical, and Petroleum Engineers. Richardson, Texas
- SPE Production Engineering: Society of Petroleum Engineers of the American Institute of Mining, Metallurgical, and Petroleum Engineers. Richardson, Texas
- Symp. on Rock Mechanics, Proc.: Symposium on Rock Mechanics, Proceedings
- Tectonics: American Geophysical Union. Washington, D.C.
- Tectonophysics: Elsevier Scientific Publishing Company. Amsterdam, The Netherlands
- Tohoku Univ., Science Repts., Series 3—Mineralogy, Petrology and Economic Geology: Tohoku University, Science Reports, Series 3—Mineralogy, Petrology and Economic Geology. Sendai, Japan
- Tree Ring Bull.: Tree Ring Bulletin, Tree Ring Laboratory, University of Arizona. Tucson, Arizona
- Univ. Texas (Austin), Bureau Econ. Geology, Bouguer Gravity Atlas Texas; Geol. Circ.; Guidebook; Open-file Rept.; Rept. Inv.: University of Texas (Austin), Bureau of Economic Geology, Bouguer

- Gravity Atlas of Texas; Geologic Circular; Guidebook; Open-file Report; Report of Investigation. Austin, Texas
- U.S. Bureau Land Management, Consult. rept.; Rept.: U.S. Bureau of Land Management, Consulting report; Report. Washington, D.C.
- U.S. Bureau Mines, Inf. Circ.; Mineral Yearbook; Open-file Rept.: U.S. Bureau of Mines, Information Circular; Mineral Yearbook; Open-file Report. Washington, D.C.
- U.S. Dept. Agriculture, Forest Serv., General Tech. Rept.; Soil Conserv. Serv., rept.: U.S. Department of Agriculture, Forest Service, General Technical Report; Soil Conservation Service, report. Washington, D.C.
- U.S. Dept. Energy, Rept.: U.S. Department of Energy, Report. Washington, D.C.
- U.S. Geol. Survey, Bull.; Circ.; Geol. Quad. Map; Hydrol. Inv. Atlas; Misc. Field Studies Map; Misc. Inv. Ser., Map; New Mexico District, rept.; Open-file Rept.; Prof. Paper; Water-resources Inv., Rept.; Water-supply Paper: U.S. Geological Survey, Bulletin; Circular; Geologic Quadrangle Map; Hydrologic Investigations Atlas; Miscellaneous Field Studies Map; Miscellaneous Investigation Series, Map; New Mexico District, report; Open-file Report; Professional Paper; Water-resources Investigation, Report; Water-supply Paper. Reston, Virginia
- U.S. Nuclear Regulatory Commission, Rept.: U.S. Nuclear Regulatory Commission, Report
- Water Resources Bull.: Water Resources Bulletin, American Water Resources Association. Bethesda, Maryland
- Water Resources Research: American Geophysical Union. Washington, D.C.
- West Texas Geol. Soc., Bull.: West Texas Geological Society, Bulletin. Midland, Texas
- Western Oil World: Hart Publications. Denver, Colorado (formerly Western Oil Reporter)
- Univ. Wyoming, Contr. Geol., Spec. Paper: University of Wyoming, Contributions to Geology, Special Paper. Laramie, Wyoming
- Yale Univ., Peabody Museum Natural History, Bull.: Yale University, Peabody Museum of Natural History, Bulletin. New Haven, Connecticut

## Acronyms

AAPG	American Association of Petroleum Geologists
AFC	assimilation-fractional crystallization
CARDEX	Caldera and Rift Deep Seismic Experiment
CFMS system	CaO-FeO-MgO-SiO <sub>2</sub> system
COCORP	Consortium for Continental Reflection Profiling
CRM	chemical remanent magnetization
DHLW	Defense High Level Waste
ERDA	Energy Research and Development Administration
NURE	National Uranium Resource Evaluation Program
NWWA	National Water Well Association
RARE	Roadless Area Review and Evaluation
RCRA	Resource Conservation and Recovery Act
SAG mill	semi-autogenous mill
TRU	transuranic
UMTRA	Uranium Mill Tailings Remedial Action
USGS	United States Geological Survey
VSP	vertical seismic profile
WIPP	Waste Isolation Pilot Plant
WSMR	White Sands Missile Range



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### Abeyta, Cynthia G.

1986 (and Delaney, Bruce M.) Annotated bibliography of the hydrology, geology, and geothermal research of the Jemez Mountains and vicinity, north-central New Mexico: U.S. Geol. Survey, Open-file Rept. 85-83, 155 p.

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1986 Geology of mid-Tertiary volcanic rocks of the east-central Black Range, Sierra County, New Mexico—implications for a double-cauldron complex in the Emory cauldron, *in* Truth or Consequences region, R. E. Clemons, W. E. King, and G. H. Mack, editors: New Mexico Geol. Soc., Guidebook 37th field conf., p. 161-166, 7 figs.

### Adams, Duane R.

*see* Williams, S. M., Adams, Dufford, Garvey, Gibson, Miller, Pausé, and Robbins, 1986

### Adams, Gerald E.

1986 (and Bishop, Finley C.) The olivine-clinopyroxene geobarometer—experimental results in the CFMS system and application to natural lherzolites (abs.): Geol. Soc. America, Abs. with Programs, v. 18, no. 6, p. 522

### Adams, S. S.

1986 Organic-related alteration and authigenesis associated with epigenetic-humate sandstone uranium deposit, San Juan Basin, New Mexico, *in* Organics and ore deposits, W. A. Dean, editor: Denver Region Exploration Geologists Soc., Symp. Proc., p. 205-212

### Adams, Warren H.

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- structural geology, Broadhead and King (1986)
- Tucumcari Shale**, Bint (1986); Kietzke (1986); Payne, Lucas, Kisucky, Kietzke, Kues, and Wright (1986); Scott, R. W. (1986)
- Tularosa Basin**
- alluvial-basin aquifers, Orr and Myers (1986)
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- seismology, Kirchoff, Johnston, and Cipar (1986)
- tungsten**, Watts, Hassemer, Forn, and Siems (1986i)
- Tusas Mountains**, Boadi (1986); Smith, S. S. (1986)
- U-Bar Formation**, Sandidge (1986)
- Union County**
- Capulin Mountain National Monument, Chronic (1986)
- carbon dioxide, Anonymous (1986)
- Clayton Lake State Park, Gillette (1986b); Lucas, Hunt, Kietzke, and Wolberg (1986); Lucas, Kietzke, Hunt, and Wolberg (1986)
- Cretaceous stratigraphy, Payne, Lucas, Kisucky, Kietzke, Kues, and Wright (1986)
- Dalhart 2° quadrangle, Keller and Aiken (1986b)
- Exeter Sandstone, Snoparsky (1986)
- Springer 30' × 60' quadrangle, Scott, G. R. (1986a)
- Tucumcari 2° quadrangle, Keller and Aiken (1986d)
- uranium**
- Ambrosia Lake uranium district, Granger and Santos (1986)
- Colorado Plateau, Wanty, Breit, and Goldhaber (1986)
- general, Chenoweth (1986); Odell (1986); Stubbs (1986)
- Grants uranium district, Adams, S. S. (1986); Alief, Kern, and Carpenter (1986); Fishman and Reynolds (1986a,b); Fishman and Turner-Peterson (1986); Gallaher and Cary (1986); Hansley (1986a,b); Hatcher, Spiker, Oren, Romankiv, Sgeverenyi, and Maciel (1986); Kirk and Condon (1986a,b); Miller, J. R., and Wells (1986a,b); Phelps, Zech, and Huffman (1986); Spirakis and Hansley (1986); Spirakis and Pierson (1986); Thomson, Longmire, and Brookins (1986); Turner-Peterson and Fishman (1986a); Turner-Peterson and Santos (1986); Turner-Peterson, Santos, and Fishman (1986); U.S. Bureau of Land Management (1986a); Whitney (1986)
- ground water, Gallaher and Cary (1986)
- humate, Fishman and Turner-Peterson (1986); Granger and Santos (1986); Hatcher, Spiker, Oren, Romankiv Sgeverenyi, and Maciel (1986); Roybal and Barker (1986)
- Morrison Formation, Breit (1986); Day and Bilodeau (1986); Fishman and Reynolds (1986a,b); Fishman and Turner-Peterson (1986); Granger and Santos (1986); Hansley (1986a,b); Kirk and Condon (1986a,b); McCammon, Finch, Kork, and Bridges (1986); Phelps, Zech, and Huffman (1986); Reynolds, Fishman, Scott, and Hudson (1986); Turner-Peterson (1986); Turner-Peterson and Fishman (1986a,c); Turner-Peterson and Santos (1986); Turner-Peterson, Santos, and Fishman (1986)
- NURE Program, McLemore and Chamberlin (1986)
- pegmatite, Modreski (1986b)
- Red Hills, McLemore (1986b)
- San Juan Basin, Turner-Peterson and Fishman (1986c); Whitney, Northrop, and Hansley (1986)
- San Miguel County, Almquist (1986b)
- Sandoval County, Tuftin (1986)
- Silver City 2° quadrangle, Hassemer, Watts, and Ficklin (1986)
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- surface water, Gallaher and Cary (1986)  
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- Vadito Group**, DeMark and Hlava (1986); Grambling and Williams (1986); Soegaard and Eriksson (1986b); Williams, M. L., Grambling, and Bowring (1986)
- Valencia County**  
 Fence Lake 30' × 60' quadrangle, Anderson, O. J. (1986)  
 Gabaldon badlands, Lozinsky (1986c); Lozinsky and Tedford (1986)  
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- Valles caldera**, Aldrich (1986); Ankeny, Braile, and Olsen (1986); Charles, Buden, and Goff (1986); Cooper, D. L. (1986); Cox and Bodvarsson (1986); Goff and Nielson (1986); Goff, Rowley, Gardner, Hawkins, Goff, Charles, Wachs, Maassen, and Heiken (1986); Heiken (1986); Heiken, Goff, Stix, Tamanyu, Shafiqullah, Garcia, and Hagan (1986); Hulen and Nielson (1986a,b); Moore, J. N., and Nielson (1986); Olsen and Ankeny (1986); Olsen, Braile, Stewart, Daudt, Keller, Ankeny, and Wolff (1986); Self, Goff, Gardner, Wright, and Kite (1986); Self, Wolff, Kircher, Ivanovich, and Kyle (1986); Tomczyk and Morgan (1986); Truesdell and Janik (1986a,b); Vuataz and Goff (1986); White, A. F. (1986); White, A. F., and Chuma (1986a,b); Wilt and Vonder Haar (1986)
- Valles Rhyolite**, *see* Tewa Group
- vanadium**, Dunn and Peacor (1986); Eveleth (1986d); Spirakis and Hansley (1986); Wanty, Breit, and Goldhaber (1986)
- volcanics**  
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 Basin and Range province, Elston (1986a); Henry and Price (1986a)  
 Black Mountain stock, Moore, S. L., Foord, Marvin, and Taggart (1986)  
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 Cerro Verde basalt flow, Phillips, F. M., Leavy, Jannik, Elmore, and Kubik (1986)  
 Chinle Formation, Stewart, Anderson, Haxel, Silver, and Wright (1986)  
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 El Cajete Member, Self, Wolff, Kircher, Ivanovich, and Kyle (1986)  
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 Mt. Withington cauldron, Ferguson and Osburn (1986); Osburn, G. R., and Ferguson (1986)  
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 Rio San Jose basalt, Phillips, F. M., Leavy, Jannik, Elmore, and Kubik (1986)  
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 Servilleta Formation, Dungan, Lindstrom, McMillan, Moorbath, Hoefs, and Haskin (1986); McMillan, N. J., and Dungan (1986)  
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 Sierra Blanca igneous complex, Moore, S. L., and Foord (1986); Moore, S. L., Foord, Marvin, and Taggart (1986)  
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 Sierra County, Kelly and Kudo (1986)  
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 South Canyon Tuff, Ferguson and Osburn (1986)  
 southern New Mexico, Hoffer (1986a)  
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- Taylor Creek Rhyolite, Duffield (1986); Lawrence (1986)
- Tertiary, Henry, McDowell, Price, and Smyth (1986)
- Three Rivers stock, Moore, S. L., Foord, Marvin, and Taggart (1986)
- Timber Mountain volcanic stratigraphy, Thompson, Dungan, and Lipman (1986)
- Toledo caldera, Heiken, Goff, Stix, Tamanyu, Shafiqullah, Garcia, and Hagan (1986); Self, Goff, Gardner, Wright, and Kite (1986)
- tonsteins, Marvin, Bohor, and Mehnert (1986)
- topaz rhyolites, Burt and Sheridan (1986); Christiansen, E. H., Sheridan, and Burt (1986); Ruiz, Duffield, Burt, and Reece (1986)
- Trans-Pecos magmatic province, Chavez, R. (1986); Henry and McDowell (1986); Henry, McDowell, Price, and Smyth (1986); Henry and Price (1986a); Price, Henry, Parker, and Barker (1986)
- Tschicoma Formation, Dethier, Aldrich, and Shafiqullah (1986); Sims and Loeffler (1986)
- Valles caldera, Ankeny, Braile, and Olsen (1986); Charles, Buden, and Goff (1986); Goff and Nielson (1986); Goff, Rowley, Gardner, Hawkins, Goff, Charles, Wachs, Maassen, and Heiken (1986); Heiken (1986); Heiken, Goff, Stix, Tamanyu, Shafiqullah, Garcia, and Hagan (1986); Olsen and Ankeny (1986); Olsen, Braile, Stewart, Daudt, Keller, Ankeny, and Wolff (1986); Self, Goff, Gardner, Wright, and Kite (1986); Self, Wolff, Kircher, Ivanovich, and Kyle (1986); Tomczyk and Morgan (1986)
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- xenoliths, Benoit and Mercier (1986); Bussod and Williams (1986); Kinsel (1986); Morgan, J. W. (1986); Padovani, Wandless, Reid, and Hart (1986); Roden (1986)
- Waste Isolation Pilot Plant**, Bartel (1986); Beauheim (1986); Bechtel National, Inc. (1986a-c); Brandshaug (1986); Brookins (1986c); Brookins and Lambert (1986); Bush and Lingle (1986); Bush and Piele (1986); Chapman (1986b); Chaturvedi (1986); Chaturvedi and Chapman (1986); Cheeseman (1986); Gerstle and Jones (1986); Glanzman (1986); Holt and Powers (1986); Hydro Geo Chem, Inc. (1986); Intera Technologies, Inc. (1986); Kelley, V. A., and Pickens (1986); Laskin (1986); Molecke and Beraun (1986); Molecke, Passchier, and Bosnjakovic (1986); Morgan, H. S., Stone, and Krieg (1986); Munson and Fossum (1986); Munson, Torres, and Blankenship (1986); Myers, J., and Colton (1986); Myers, J., and Korn (1986); Niou and Zurkoff (1986); Nowak (1986a,b); Peterson, E. W., Lagus, and Stormont (1986); Pfeifle (1986); Preece (1986); Reith, Prince, Fischer, Rodriguez, Uhland, and Winstanley (1986); Richey (1986); Sethi (1986); Stein and Krumhansl (1986); Stormont (1986a,b); Stormont and Howard (1986); Torres (1986); Uhland and Randall (1986); U.S. Department of Energy (1986a-c); Wawersik and Stone (1986); Wawersik and Zeuch (1986); Winstanley and Carrasco (1986)
- White Sands Missile Range**  
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- White Sands National Monument**, Chronic (1986); Fryberger (1986a); Schenk and Fryberger (1986)
- Wilderness Study Areas (WSAs)**, Almquist (1986a,b); Korzeb (1986a,b); Neubert (1986); Ryan (1986); Schreiner (1986a,b); Scott, D. C. (1986); Tuftin (1986); Wood, R. H. (1986); Zelten (1986)  
*see also* RARE II areas
- wolframite**, Robinson-Cook (1986); Robinson-Cook, Campbell, Kyle, and Renault (1986)
- Woodford Formation**, Comer (1986)
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- Yeso Formation**, Nelson and Hunter (1986)
- zeolites**, Bowie (1986); Bowie and Barker (1986); Sedenquist (1986)
- zinc**, Watts, Hassemer, Forn, and Siems (1986j)
- Zuni Basin**, Anderson, O. J. (1986b); Anderson, O. J., and Reddy (1986)
- Zuni Salt Lake**, Anderson, R. Y. (1986)
- Zuni uplift**, Aubrey (1986a)