

Geologic projects in New Mexico

Listed below are the responses we received to the questionnaire that was published in *New Mexico Geology* in November 1986. This survey of New Mexico geologic studies, which was also sent to each U.S. graduate school of geology, was intended to provide a reasonably comprehensive list of on-going geologic projects in the state. For further information about a particular

study, please contact the investigator(s) directly. **NMBMMR** = New Mexico Bureau of Mines and Mineral Resources, Socorro, NM 87801; **NMIMT** = New Mexico Tech, Socorro, NM 87801; **NMSU** = New Mexico State University, Las Cruces, NM 88003; **UNM** = University of New Mexico, Albuquerque, NM 87131; **USGS** = U.S. Geological Survey.

Legend for type of study:

EC Economic geology	GC Geochemistry	HY Hydrology	PT Petrology	SG Structural geology
EG Engineering geology	GM Geologic mapping	MN Mineralogy	QT Quaternary deposits	ST Stratigraphy
EV Environmental geology	GP Geophysics	PL Paleontology	SD Sedimentology	VC Volcanology

Investigator(s)	Organization	Title of study	Location	County (Counties)	Type of study	Scale of map
Abitz, R. & Elston, W.	UNM	Geology and petrogenesis of northern Emory cauldron	southwest NM	Grant, Sierra	GC, GM, VC	1:24,000
Anderholm, S. & Stone, W.	NMBMMR	Hydrogeology of Cuba 15' quadrangle	north-central NM	Sandoval, Rio Arriba	HY	1:62,500
Anderson, O.	NMBMMR	Geology and coal resources of Atarque Lake, Manuelito Canyon, Jones Ranch School, and Vanderwagen quadrangles	northwest NM	Cibola, McKinley	EC, GM	1:50,000 1:24,000
Armstrong, A.	U. Cincinnati	Paleontology and stratigraphy of Mississippian system	southwest, west-central NM		PL, ST	
Ash, S.	Weber State College	Upper Traissic biostratigraphy of North America	northern NM		PL, ST	
Austin, G.	NMBMMR	Magnesite and magnesia	southwest and south-central NM		EC	
Avery, D. & Giordano, T.	NMSU	Geology and mineralization of Mogollon mining district	south-central NM	Grant		
Bachhuber, F.	Univ. Nevada (Las Vegas)	Biostratigraphic (Quaternary) research, Estancia Basin	central NM	Torrance	EV, QT, ST	
Baldridge, W., Vaniman, D., & Olsen, K.	Los Alamos Natl. Lab.	Geochemical and geophysical study of Polvadera Group, Abiquiu 15' quadrangle	northeast Jemez Mountains	Rio Arriba	GC, GM, GP	1:48,000
Barker, J.	NMBMMR	Travertine, barite resources, and active mines and mills	statewide		EC	1:1,000,000
Barker, J. & Bowie, M.	NMBMMR	Stone resources, active sand and gravel operations, and commercial qualities of dimension and crushed stone	statewide		EC	1:1,000,000
Barker, J., Bowie, M., & Harris, M.	NMBMMR	Active mines and processing plants	statewide		EC	
Barker, J., et al.	NMBMMR	Barite and fluorite occurrences	statewide		EC	
Barker, J., et al.	NMBMMR	Obsidian, perlite, and pitchstone deposits	western 2/3 of NM		EC	1:1,000,000
Barnes, C.	Texas Tech. Univ.	Petrology of Christo Rey stock	south-central NM	Doña Ana	EC, GC	1:10,000
Barroll, M. & Reiter, M.	NMBMMR & NMIMT	Geothermal and hydrothermal studies, Socorro area	central NM	Socorro	GP, HY	
Bauer, P.	NMIMT & NMBMMR	Structural geology and geochronology of Proterozoic rocks, Picuris Range	northern NM	Taos	GM, SG	1:12,000
Behr, C. & Norman, D.	NMIMT	Geochemistry of epithermal ore fluids	southwest NM	Sierra	EC, GC	
Bikerman, M.	Univ. Pittsburgh	Isotopic geology of Mogollon-Datil volcanics	western NM	Catron, Grant	GC, VC	
Bornhorst, T.	Michigan Tech. Univ.	Geochemistry and mineralogy of volcanic rocks	southwest NM	Catron, Sierra, Grant, Socorro	GC, MN, VC	
Bowie, M.	NMBMMR	Geology of zeolite occurrences	statewide		EC	
Bowie, M., Barker, J., & Eggleston, T.	NMBMMR & NMIMT	Geology and commercial status of Gunnell-Schneider and Ramsey kaolin claims	Black Range, Continental Divide	Sierra	EC	
Bowring, S., Heatherington, A., & Chapin, C.	Washington Univ. (St. Louis)	Isotopic study of extensional regions in Socorro area	central NM	Socorro	GC, PT, VC	
Brandvold, L. & Brandvold, D.	NMBMMR & NMIMT	Trace metals in sediments and water in Rio Grande	Rio Grande and Rio Puerco		GC	
Broadhead, R.	NMBMMR	Geology of Bravo Dome CO ₂ field; petroleum potential of northwest NM	northeast NM	Union, Harding	EC	
Broadhead, R. & King, W.	NMBMMR	Petroleum geology of Estancia Basin and Pennsylvanian and Lower Permian strata in Tucumcari Basin	central NM; east-central NM		EC	
Campbell, F., Roybal, G., & Cook, K.	NMBMMR	Geologic mapping in Salt Lake coal field	west-central NM	Catron	GM	1:50,000
Cather, S. & Chapin, C.	NMBMMR	Depositional systems and diagenesis of Popotosa Formation	central NM	Socorro	GC, SD, ST	
Chamberlin, R. & Smith, L.	NMBMMR & UNM	Geochemistry, lithofacies, and provenance of San Jose Formation	San Juan Basin	Rio Arriba, San Juan	GC, MN, SD	1,1,000,000

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Chapin, C.	NMBMMR	Geology of northeast Mogollon-Datil volcanic field	Socorro, west to Datil	Socorro	EC, GM, VC	1:24,000 1:100,000
Chapin, C.	NMBMMR	Potassium metasomatism of volcanic rocks	Socorro-Magdalena area	Socorro	GC	
Clarkson, G. & Reiter, M.	NMBMMR & NMIMT	Thermal histories of San Juan Basin and San Juan Mts.	northwest NM	San Juan, Rio Arriba	GP	
Close, J.	Southern Illinois Univ.	Coal bed methane exploration/production model	Raton Basin, north-central NM	Colfax	SD	1:31,680
Coles, D. & Thompson, T.	Colorado State Univ.	Geology of western Ortiz land grant	north-central NM	Santa Fe	EC	1" = 100'
Contaldo, G.	NMSU	Earth fissures in the Deming area	southwest NM	Luna	EG	various
Cornell, W.	U. Texas (El Paso)	Biostratigraphy and thermal maturation in Cretaceous rocks	south-central NM	Doña Ana	GC, PL	
Dethier, D.	Williams College (Williamstown, MA)	Geology of White Rock Canyon area	north-central NM	Santa Fe, Los Alamos, Sandoval	GM, QT	1:24,000 1:100,000
Filsinger, B.	U. Texas (El Paso)	Palm Park and Horseshoe barite deposits	Caballo Mts.	Doña Ana	EC	1:10,000
Geissman, J. & Harlan, S.	UNM	Paleomagnetism	statewide		GP	
Giordano, T., Earl, R., & Kunkel, K.	NMSU	Physical environment of playas in Jornada del Muerto Basin	south-central NM	Doña Ana		
Goebel, K.	Univ. Nevada	Geomorphic study in Estancia Basin	central NM	Torrance	EV	
Goff, F.	Los Alamos Natl. Lab	Valles caldera scientific drilling program; hydrogeochemistry	north-central NM		EC, GC, HY, MN	1:24,000
Grambling, J.	UNM	Metamorphism, deformation, and stratigraphy of Proterozoic rocks	north-central NM	Taos, Colfax, Mora, San Miguel	GM, PT, ST, SG	1:12,000
Gramont, B. & Johnson, D.	NMIMT	Depositional environment of Upper Horquilla Formation	southwest NM	Hidalgo	SD	
Grimm, J.	UNM	Geomorphic history of Lobo Canyon area	west-central NM	Cibola	GM, QT	1:24,000
Gross, J. & Giordano, T.	NMSU	Geology and hydrogeochemistry of Las Cruces geothermal field	southern NM	Doña Ana	GC	
Harrison, R.	NMBMMR	Cenozoic stratigraphy, Chloride mining district	southwest NM	Sierra, Catron	EC, GM, ST, VC	1:24,000 1:100,000
Hatchell, B. & Blagbrough, J.	NM Energy & Minerals Dept.	Correlation of Abo Formation in Estancia Basin subsurface	central NM	Torrance	ST	1" = 3 mi
Hawley, J.	NMBMMR	Quaternary and Pliocene geology	statewide		GM, QT	various
Haynes, V.	Univ. of Arizona	Microstratigraphy and geochronology of Clovis-type site	eastern NM, Blackwater Draw	Roosevelt	QT	
Hoffer, J.	U. Texas (El Paso)	Potrillo volcanic field	south-central NM	Doña Ana, Luna	VC	
Holserand, W. & Magaritz, M.	Univ. of Oregon	Carbon isotope shifts in Upper Carboniferous time	Big Hatchet Mts., southwest NM	Hidalgo		
Jochems, T.	NMIMT	Geology of Jones Camp dike	central NM	Socorro	EC, GM	1:10,000
Johnpeer, G., et al.	NMBMMR	Superconducting Super Collider site verification	Estancia Valley, central NM	Torrance, Santa Fe	EG	1:24,000
Johnpeer, G., et al.	NMBMMR	El Llano and vicinity geotechnical study	north-central NM	Rio Arriba	EG	1:12,000
Kottlowski, F., et al.	NMBMMR	Revision of state geologic map	statewide		GM, ST	1:500,000
Kottlowski, F., et al.	NMBMMR & NMIMT	Quality assessment of strippable coals	San Juan Basin		EC	1:200,000
Kuellmer, F.	NMIMT	Trace-element distribution in NM coals	San Juan Basin and York Canyon		GC, PT	
Kues, B.	UNM	Stratigraphy and paleontology of Tucumcari Shale and Red Tanks Member	northeast NM; central NM	Quay, Guadalupe, San Miguel, Valencia	PL, ST	
Kues, B.	UNM	Bivalves and gastropods of Madera Formation and Flechado Formation	north-central NM	Sandoval, Taos	PL	
Kues, B.	UNM	Faunal studies in Lake Valley Formation and Madera Formation	southwest NM; central NM	Sierra, Bernalillo	PL	
Kues, B. & Lucas, S.	UNM	Stratigraphy and paleontology of Glencairn-Greenhorn interval	northeast NM	Union	PL, ST	
Lockley, M.	Univ. Colorado	Trace fossils of Cimmaron Valley region	northeast NM	Colfax, Union	PL, SD	
Loeffler, B.	Colorado College	Isotope systematics of Jemez volcanic field	north-central NM	Los Alamos, Rio Arriba	GC	
Loucks, R.	Purdue Univ.	Geochemistry and paleohydrology of St. Cloud-Chloride mining district	southwest NM	Sierra	GC, HY, MN, PT	
Love, D.	NMBMMR	Geology of Navajo and Acoma-Zuni sections of Colorado Plateau	northwest NM		QT, ST	
Love, D.	NMBMMR	Grain-size sorting in Rio Grande	central NM	Socorro	SD	
Love, D., et al.	NMBMMR	Monitoring of Rio Puerco	central NM	Valencia	EV, HY	
Lozinsky, R.	NMBMMR & NMIMT	Santa Fe Group, Albuquerque Basin	central NM	Socorro, Bernalillo, Sandoval, Valencia	PL, PT, SD, ST	1:24,000 1:100,000
McGrath, D. & Bowie, M.	NMBMMR	Mineralogy of Foster Canyon	south-central NM	Doña Ana	EC, MN	
McGovern, E.	UNM	untitled	southwest NM	Luna, Hidalgo	EC, EV	

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McGurk, B. & Stone, W.	NMBMMR	Hydrogeology of Cerro Prieto area	western NM	Catron, Cibola	HY	1:62,500
McIntosh, W. & Chapin, C.	NMBMMR	Mogollon-Datil volcanic field	southwest NM		ST, VC	
McLemore, V.	NMBMMR	Mineralization of El Cuervo Butte area	central NM	Santa Fe	EC	1:12,000
McLemore, V.	NMBMMR	Geology of syenites in Caballo Mountains	southwest NM	Sierra	EC	1:24,000
McLemore, V. & Bowie, M.	NMBMMR	Geology of Sugarite State Park	northeast NM	Colfax	GM	
McLemore, V., et al.	NMBMMR	Barite and fluorite deposits	statewide		EC	1:100,000,000
McMahon, T. & Giordano, T.	NMSU	Fluorite-barite deposits	Rio Grande rift, southern NM	Doña Ana		
Measures, E.	Sul Ross State Univ.	Montoya group of NM and west Texas	southwest NM		PT, ST	
Metcalfe, R. & Grambling, J.	UNM	Proterozoic migmatites, Aspen Basin	north-central NM	Santa Fe	PT	1:12,000
Meyer, J. & Fisher, R.	Univ. California (Santa Barbara)	Volcanic and tectonic history at Questa	north-central NM	Taos	EC, GM, SG, VC	1:24,000
Minier, J. & Reiter, M.	NMBMMR & NMIMT	Geothermal studies	west-central NM	Catron, Cibola, McKinley	GP	
Minier, J., et al.	NMBMMR & NMIMT	Geothermal studies in the Quemado area	west-central NM	Catron, Cibola	GP	
Mundy, M.	Sul Ross State Univ.	Petrography of Bliss Sandstone	southwest NM		PT	
Nelson, C., et al.	Long Lac Mineral Exploration	Gold exploration in Ortiz Mountains	north-central NM	Santa Fe	EC, GM, PT, SG	various
Nocita, B.	U. Southern Florida	Neogene sedimentation, Española Basin	north-central NM	Santa Fe, Taos, Rio Arriba	GM, SD, ST	1:10,000
Norman, D. & Eggleston, T.	NMIMT	Origin of tin deposits, Black Range	southwest NM	Catron, Socorro, Sierra	EC, GC, GM, PT	1:50,000 1:24,000
North, R.	NMBMMR	Mineral potential of Laughlin Peak area	northeast NM	Colfax	EC, GC	1:12,000
North, R.	NMBMMR	Minerals of New Mexico	statewide		MN	1:1,000,000
North, R.	NMBMMR	Mineralogy of Orogrande mining district	southern NM	Otero	EC, MN	1:24,000
North, R.	NMBMMR	Mineral collecting guide, Magdalena area	central NM	Socorro	MN	1:100,000
North, R. & DeMark, R.	NMBMMR & Zuni Minerals	Fluorite from Pine Canyon	southwest NM	Grant	MN	1:24,000
North, R., et al.	NMBMMR, et al.	Mineralogy of Bear Mountains prospects	central NM	Socorro	EC, MN	1:24,000
O'Brien, K. & Stone, W.	NMBMMR	Hydrogeology and water resources	southwest NM	Hidalgo	HY	
Owen, D.	Lamar Univ.	Correlation of Dakota Sandstone members	northwest NM		ST	
Poeter, A. & Campbell, A.	NMIMT	Nogal 7.5' quadrangle	south-central NM	Lincoln	EC	1:1,000
Reisinger, H. & Wagener, J.	UNM	Geology of Diamond Creek area	southwest NM	Sierra, Grant	GC, GM, PT, VC	1:24,000
Reiter, M. & Barroll, M.	NMBMMR & NMIMT	High heat flow in Jornada del Muerto	south-central NM	Sierra	GP	
Reiter, M., Barroll, M., & Minier, J.	NMBMMR & NMIMT	Heat flow in the southwest U.S. and northern Mexico	statewide		GP	
Reiter, M., et al.	NMBMMR & NMIMT	Terrestrial heat flow estimates along Rio Grande rift	central and southern NM		GP	
Renault, J.	NMBMMR	Geochemistry of Española Basin sediments	north-central NM		GC, MN	
Roybal, G.	NMBMMR	National Coal Resource Data System	San Juan Basin		EC	1:24,000
Roybal, G. & Beaumont, E.	NMBMMR	GSA field trip—Oct. 1987	western NM	McKinley, Cibola, Catron	EC, GM, PL, SG	
Sanderson, I. & Mitchell, D.	Purdue Univ.	Syn-depositional faulting and sedimentation patterns	northwest NM	San Juan	SD, SG, ST	
Scarborough, R.	Arizona Bureau of Geology	Uranium deposits of Carrizo Mts.	northwest NM	San Juan	EC	
Self, S.	Univ. Texas (Arlington)	Geology and volcanology of Jemez Mountains	north-central NM	Los Alamos, Sandoval	GC, GM, SD, VC	various
Smith, R. & Grambling, J.	UNM	Precambrian rocks around Cedro Canyon	north-central NM	Taos	GM, PT, SG, ST	1:12,000
Tanner, W.	Florida State Univ.	Permian-Cretaceous section	northern NM	San Miguel, Rio Arriba	SD	
Thompson, S., III	NMBMMR	Petroleum geology; petroleum geology of Paleozoic-Mesozoic section	southwest NM			various
Thompson, T.	Colorado State U.	Mineral deposits in Bonito-Nogal district	south-central NM	Lincoln	EC	
Toussinhthiphonexay, K. & Gardner, T.	Penn. State Univ.	Evolution of discontinuous arroyo systems	northwest and western NM		HY	
Wesling, J.	UNM	Sangre de Cristo Mountains	north-central NM	Santa Fe, San Miguel	QT	1:24,000
Williams, M. & Grambling, J.	UNM	Precambrian rocks in Tusas Mts.	north-central NM	Rio Arriba	GM, PT	1:50,000 1:12,000
Wolff, J.	U. Texas (Arlington)	Petrogenesis of Bandelier tuffs and Cerros del Rio lava field	north-central NM		GC, PT	
Wright, R.	UNM	Stratigraphy of San Juan Basin (Cretaceous)	northwest NM		SD, ST	
Wright, R., et al.	UNM	Mesa Rica Delta	east-central NM		SD, ST	