

**RÉSUMÉ**  
**STEVEN M. CATHER**

PERSONAL DATA:                    Born July 25, 1953 in Woodland Hills, California  
    U. S. Citizenship  
    Married, no children

HOME ADDRESS:                    P.O. Box 201  
    San Antonio, New Mexico 87832

BUSINESS ADDRESS:                New Mexico Bureau of Geology  
    and Mineral Resources  
    New Mexico Institute of Mining  
    and Technology  
    801 Leroy Pl., Socorro, New Mexico 87801

BUSINESS TELEPHONE:            (505) 835-5153 (voice)  
    (505) 835-6333 (fax)

E-MAIL:                              steve@gis.nmt.edu

EDUCATION:

Ph.D. Geology	The University of Texas at Austin, 1986
M.A. Geology	The University of Texas at Austin, 1980
B.S. Geology	New Mexico Institute of Mining and Technology, 1976 (California State University, Northridge, 1971-1974)

PROFESSIONAL EXPERIENCE:

New Mexico Bureau of Mines and Mineral Resources, New Mexico Institute of Mining and Technology (September 1987 to present). *Field Geologist (Senior Field Geologist as of 1996) and Adjunct Faculty* at New Mexico Tech and Colorado State University. Field-oriented stratigraphic, hydrogeologic, structural and tectonic research.

New Mexico Petroleum Recovery Research Center and New Mexico Bureau of Mines and Mineral Resources, New Mexico Institute of Mining and Technology (Split appointment; August 1986 to September 1987). *Postdoctoral Fellow*. Diagenesis research.

New Mexico Petroleum Recovery Research Center, New Mexico Institute of Mining and Technology (January 1986-August 1986). *Consultant*. Diagenetic studies of tight gas sands.

Geoscience Department, New Mexico Institute of Mining and Technology (January 1986-May

1986). *Sabbatical Leave Replacement* for Dr. J. MacMillan.

New Mexico Bureau of Mines, New Mexico Institute of Mining and Technology (February 1980-October 1980). *Field Geologist*. Coal evaluation mapping.

Department of Geological Sciences, The University of Texas at Austin (September 1977-May 1983). *Teaching Assistant*.

Houston Oil and Minerals Corporation (May 1977-August 1977). *Geologist*. Uranium exploration.

Kerr-McGee Corporation (June 1976-January 1977). *Uranium Grade-control Geologist*.

#### PROFESSIONAL SOCIETIES:

Geological Society of America  
New Mexico Geological Society  
Rocky Mountain Association of Geologists

#### PH.D. DISSERTATION:

Cather, S.M., 1986, *Volcano-sedimentary evolution and tectonic implications of the Datil Group (latest Eocene-early Oligocene), west-central New Mexico*, 486 p. (The University of Texas at Austin; R.L. Folk, supervisor).

#### MASTER'S THESIS:

Cather, S.M., 1980, *Petrology, diagenesis, and genetic stratigraphy of the Eocene Baca Formation, Alamo Navajo Reservation and vicinity, Socorro County, New Mexico*, 240 p. (The University of Texas at Austin; R.L. Folk, supervisor).

#### REVIEWED PUBLICATIONS:

Chapin, C.E., and Cather, S.M., 1981, Eocene tectonics and sedimentation in the Colorado Plateau-Rocky Mountain area, in Dickinson, W.R. and Payne, W.D., eds., *Relation of tectonics to ore deposits in the southern Cordillera*: Arizona Geological Society Digest, v. 14, p. 173-198. (Reprinted 1983 in Lowell, J.D., ed., *Rocky Mountain foreland basins and uplifts*: Rocky Mountain Association of Geologists, p. 33-56).

Cather, S.M., 1982, Lacustrine sediments of Baca Formation (Eocene), western Socorro County, New Mexico: *New Mexico Geology*, v. 4, p. 1-6.

Cather, S.M., 1983, Arroyo-fill facies of Baca Formation: *New Mexico Geological Society Guidebook 34*, p. 27.

Cather, S.M., 1983, Laramide Sierra uplift: Evidence for major pre-rift uplift in central and southern New Mexico: New Mexico Geological Society Guidebook 34, p. 99-101.

Cather, S.M., 1983, Lacustrine deposits of the Eocene Baca Formation, western Socorro County, New Mexico: New Mexico Geological Society Guidebook 34, p. 179-185.

Cather, S.M., and Johnson, B.D., 1984, Eocene tectonics and depositional setting of west-central New Mexico and eastern Arizona: New Mexico Bureau of Mines and Mineral Resources Circular 192, 33 p.

Cather, S.M., and Johnson, B.D., 1986, Eocene depositional setting and tectonic framework of west-central New Mexico and eastern Arizona, in Peterson, J.A., ed., *Paleotectonics and sedimentation in the Rocky Mountain region*: American Association of Petroleum Geologists Memoir 41, p. 623-652.

Cather, S.M., McIntosh, W.C., and Chapin, C.E., 1987, Stratigraphy, age, and rates of deposition of the Datil Group (upper Eocene-lower Oligocene), west-central New Mexico: New Mexico Geology, v. 9, p. 50-54.

Lucas, S.G., Cather, S.M., Sealey, P., and Hutchison, J.H., 1989, Stratigraphy, paleontology and depositional systems of the Eocene Cub Mountain Formation, Lincoln County, New Mexico: A preliminary report: New Mexico Geology, v. 11, p. 11-17.

Cather, S.M., and Chapin, C.E., 1989, Field guide to upper Eocene and lower Oligocene volcanoclastic rocks of the northern Mogollon-Datil field, in Chapin, C.E., and Zidek, J., eds., *Field excursions to volcanic terranes in the western United States, volume I: Southern Rocky Mountain region*: New Mexico Bureau of Mines and Mineral Resources Memoir 46, p. 60-68.

Cather, S.M., 1989, Post-Laramide tectonic and volcanic transition in west-central New Mexico: New Mexico Geological Society Guidebook 40, p. 91-97.

Cather, S.M., and Chapin, C.E., 1990, Paleogeographic and paleotectonic setting of Laramide sedimentary basins in the central Rocky Mountain region: Alternative interpretation and reply: Geological Society of America Bulletin, v. 102, p. 256-260.

Cather, S.M., 1990, Reconnaissance geology of the Santa Fe Group near Amalia, New Mexico: New Mexico Geological Society Guidebook 41, p. 337-340.

Cather, S.M., 1990, Stress and volcanism in the northern Mogollon-Datil field, New Mexico: Effects of the post-Laramide tectonic transition: Geological Society of America Bulletin, v. 102, p. 1447-1458.

Cather, S.M., and Folk, R.L., 1991, Pre-diagenetic sedimentary fractionation of andesitic detritus in a semiarid climate: An example from the Eocene Datil Group, New Mexico, in Fisher, R.V., and Smith, G.A., eds., *Sedimentation in volcanic settings*: Society of Economic Paleontologists and Mineralogists Special Paper 45, p. 211-226.

Cather, S.M., 1991, Tectonic overview of the Ruidoso region: New Mexico Geological Society Guidebook 42, p. 37-39.

Cather, S.M., 1991, Stratigraphy and provenance of Upper Cretaceous and Paleogene strata of the western Sierra Blanca basin, New Mexico: New Mexico Geological Society Guidebook 42, p. 265-275.

Reiter, M., Barroll, M.W., and Cather, S.M., 1992, Rotational buoyancy tectonics and models of simple half-graben formation: *Journal of Geophysical Research*, v. 97, p. 8917-8926.

Cather, S.M., 1992, Suggested revisions to the Tertiary tectonic history of north-central New Mexico: New Mexico Geological Society Guidebook 43, p. 109-122.

Chapin, C.E., and Cather, S.M., 1994, Tectonic setting of the axial basins of the northern and central Rio Grande rift, in Keller, G.R., and Cather, S.M., eds., *Basins of the Rio Grande rift: Structure, stratigraphy, and tectonic setting*: Geological Society of America Special Paper 291, p. 5-25.

Cather, S.M., Chamberlin, R.M., Chapin, C.E., and McIntosh, W.C., 1994, Stratigraphic consequences of episodic extension in the Lemitar Mountains, central Rio Grande rift, in Keller, G.R., and Cather, S.M., eds., *Basins of the Rio Grande rift: Structure, stratigraphy, and tectonic setting*: Geological Society of America Special Paper 291, p. 157-170.

Cather, S.M., 1994, Local misapplication of the term Eagar to Upper Cretaceous strata in eastern Arizona: New Mexico Geological Society Guidebook 45, p. 68-69.

Cather, S.M., and McIntosh, W.C., 1994, The Plio-Pleistocene Quemado Formation of west-central New Mexico: New Mexico Geological Society Guidebook 45, p. 279-281.

Cather, S.M., Chamberlin, R.M., and Ratté, J.C., 1994, Tertiary stratigraphy and nomenclature for western New Mexico and eastern Arizona: New Mexico Geological Society Guidebook 45, p. 259-266.

McIntosh, W.C., and Cather, S.M., 1994,  $^{40}\text{Ar}/^{39}\text{Ar}$  geochronology of basaltic rocks and constraints on late Cenozoic stratigraphy and landscape development in the Red Hill - Quemado area, New Mexico: New Mexico Geological Society Guidebook 45, p. 209-224.

Chamberlin, R.M., and Cather, S.M., 1994, Definition of the Mogollon slope, west-central New Mexico: New Mexico Geological Society Guidebook 45, p. 5-6.

Abbott, J.C., Cather, S.M., and Goodwin, L.B., 1995, Paleogene synorogenic sedimentation in the Galisteo basin related to the Tijeras-Cañoncito fault system: New Mexico Geological Society Guidebook 46, p. 271-278.

Cather, S.M., 1997, Toward a hydrogeologic classification of map units in the Santa Fe Group, Rio Grande rift, New Mexico: *New Mexico Geology*, v. 19, p. 15-21.

Lucas, S.G., Cather, S.M., Abbott, J.C., and Williamson, T.E., 1997, Stratigraphy and tectonic

implications of lower Tertiary strata in the Laramide Galisteo basin, north-central New Mexico: *New Mexico Geology*, v. 19, p. 89-95.

Cather, S.M., 1999, Implications of Jurassic, Cretaceous, and Proterozoic piercing lines for Laramide oblique-slip faulting in New Mexico and rotation of the Colorado Plateau: *Geological Society of America Bulletin*, v. 111, p. 849-868.

Roy, M., Karlstrom, K., Kelley, S., Pazzaglia, F., and Cather, S., 1999, Topographic setting of Rio Grande rift, New Mexico: Assessing the role of flexural "rift-flank uplift" in the Sandia Mountains: *New Mexico Geological Society Guidebook 50*, p. 167-174.

Karlstrom, K.E., Cather, S.M., Kelley, S.A., Heizler, M.T., Pazzaglia, F.J., and Roy, M., 1999, Sandia Mountains and Rio Grande rift: Ancestry of structures and history of deformation: *New Mexico Geological Society Guidebook 50*, p. 155-165.

Connell, S.D., Koning, D.J., and Cather, S.M., 1999, Revisions to the stratigraphic nomenclature of the Santa Fe group, northwestern Albuquerque basin, New Mexico: *New Mexico Geological Society Guidebook 50*, p. 337-353.

Cather, S.M., 2000, Implications of Jurassic, Cretaceous, and Proterozoic piercing lines for Laramide oblique-slip faulting in New Mexico and rotation of the Colorado Plateau: Discussion and reply: *Geological Society of America Bulletin*, v. 112, p. 785-788.

Cather, S.M., and Karlstrom, K.E., 2000, Implications of Jurassic, Cretaceous, and Proterozoic piercing lines for Laramide oblique-slip faulting in New Mexico and rotation of the Colorado Plateau: Discussion and reply: *Geological Society of America Bulletin*, v. 112, p. 790-795.

Cather, S.M., 2000, Implications of Jurassic, Cretaceous, and Proterozoic piercing lines for Laramide oblique-slip faulting in New Mexico and rotation of the Colorado Plateau: Discussion and reply: *Geological Society of America Bulletin*, v. 112, p. 797-798.

Connell, S.D., and Cather, S.M., 2001, Stratigraphy of the lower Santa Fe Group, Hagan embayment, north-central New Mexico: Preliminary results, in Connell, S.D., Lucas, S.G., and Love, D.W., eds., *Stratigraphy and tectonic development of the Albuquerque Basin, central Rio Grande rift*: New Mexico Bureau of Mines and Mineral Resources Open-file Report 454B, p. 49-56.

Cather, S.M., and Harrison, R.W., 2002, Tectonic implications of isopach patterns of lower Paleozoic units in southern New Mexico: *New Mexico Geological Society Guidebook 53*, p. 85-101.

Connell, S.D., Cather, S.M., McIntosh, W.C., and Dunbar, N.W., 2002, Stratigraphy of the Tanos and Blackshare formations (lower Santa Fe Group), Hagan embayment, Rio Grande rift, New Mexico: *New Mexico Geology*, v. 24, p. 107-120.

Howell, A.W., Erslev, E.A., and Cather, S.M., 2002, Evidence for Pennsylvanian transpression from preliminary kinematic fault analyses in the Sacramento Mountains, New Mexico: *New Mexico Geological Society Guidebook 53*, p. 103-106.

Cather, S.M., 2002, The Sierra Blanca Basin: New Mexico Geological Society Guidebook 53, p.21.

Cather, S.M., 2003, The Laramide Defiance uplift: New Mexico Geological Society Guidebook 54, p. 6-7.

Cather, S.M., 2003, Polyphase Laramide tectonics and sedimentation in the San Juan Basin, New Mexico: New Mexico Geological Society Guidebook 54, p. 119-132.

Lucas, S.G., and Cather, S.M., 2003, Stratigraphy of the Paleogene Chuska Sandstone, New Mexico-Arizona: New Mexico Geological Society Guidebook 54, p. 389-395.

Cather, S.M., Peters, L., Dunbar, N.W., and McIntosh, W.C., 2003, Genetic stratigraphy, provenance, and new age constraints for the Chuska Sandstone (upper Eocene-lower Oligocene), New Mexico-Arizona: New Mexico Geological Society Guidebook 54, p. 397-412.

Harrison, R.W., and Cather, S.M., 2004, The Hot Springs fault system of southern New Mexico: Evidence for the northward translation of the Colorado Plateau during the Laramide orogeny, *in* Cather, S.M., Kelley, S.A, and McIntosh, W.C., eds., *Tectonics, geochronology, and volcanism in the southern Rocky Mountains and the Rio Grande rift*: New Mexico Bureau of Geology and Mineral Resources Bulletin 160, p. 161-179.

Cather, S.M., 2004, The Laramide orogeny in central and northern New Mexico and southern Colorado, *in* Mack, G.H., and Giles, K.A., eds., *The Geology of New Mexico, A Geologic History*: New Mexico Geological Society Special Publication 11, p.203-248.

Roy, M., Kelley, S., Pazzaglia, F., Cather, S., and House, M., 2004, Middle Tertiary buoyancy modification and its relationship to rock exhumation, cooling, and subsequent extension at the eastern margin of the Colorado Plateau: *Geology*, v. 32, p. 925-928.

Erslev, E.A., Fankhauser, S.D., Heizler, M.T., Sanders, R.E., and Cather, S.M., 2004, Strike-slip tectonics and thermochronology of northern New Mexico: A field guide to critical exposures in the southern Sangre de Cristo Mountains, *in* Nelson, E.P., and Erslev, E.A., eds., *Field trips to the southern Rocky Mountains, USA*; Geological Society of America Field Guide 5, p. 15–40.

Cather, S.M., Timmons, J.M., and Karlstrom, K.E., 2005, Regional inferences for the 1.4 Ga–Holocene lateral slip history of the Picuris–Pecos and related faults, northern New Mexico: New Mexico Geological Society, Guidebook 56, p.93–104.

Cather, S.M., 2005, A model for Laramide tectonic development of the Nacimiento–Gallina region: New Mexico Geological Society, Guidebook 56, p.29–34.

Cather, S.M., Karlstrom, K.E., Timmons, J.M., and Heizler, M.T., 2006, Palispastic reconstruction of Proterozoic basement-related aeromagnetic features in north-central New Mexico: Implications for Mesoproterozoic to Late Cenozoic tectonism: *Geosphere*, v. 2, p. 299-323.

Cather, S.M., Connell S.D., Chamberlin R.M., McIntosh W.C., Jones G.E., Potochnik A.R., Lucas S.G., and Johnson P.S., 2008, The Chuska erg: paleogeomorphic and paleoclimatic implications of

an Oligocene sand sea on the Colorado Plateau: *Geological Society of America Bulletin*, v. 120, p. 13-33.

Cather, S.M., Dunbar, N.W., McDowell, F.W., McIntosh, W.C., and Scholle, P.A., 2009, Climate forcing by iron fertilization from repeated ignimbrite eruptions: The icehouse-silicic large igneous province (SLIP) hypothesis: *Geosphere*, v. 5; p. 315-324.

Cather, S.M., 2009, Tectonics of the Chupadera Mesa region, central New Mexico: *New Mexico Geological Society Guidebook 60*, p. 127-137.

Cather, S.M., 2009, Stratigraphy and structure of the Laramide Carthage-La Joya Basin, central New Mexico: *New Mexico Geological Society Guidebook 60*, p. 227-234.

Cather, S.M., 2009, The Montosa fault, *New Mexico Geological Society Guidebook 60*, p. 73-74.

Cather, S.M., and Heizler, M.T., 2009, Geologic relationships and new  $^{40}\text{Ar}/^{39}\text{Ar}$  age of lavas in the Broken Back Crater area, *New Mexico Geological Society Guidebook 60*, p.43-44.

Cather, S.M., and McIntosh, W.C., Flood deposits of lower Bandelier pumice and ash near Bosquecito, central New Mexico: *New Mexico Geological Society Guidebook 60*, p. 44-45.

Kelley, S.A., Chapin, C.E., Cather, S.M., and Person, M., 2009, Thermal history of the eastern Socorro Basin, Socorro County, New Mexico, based on apatite fission-track thermochronology: *New Mexico Geological Society Guidebook 60*, p. 347-358.

Love, D.W., McCraw, D.J., Chamberlin, R.M., Reiter, M., Connell, S.D., Cather, S.M., and Majkowski, M., 2009, Progress report on tracking Rio Grande terraces across the uplift of the Socorro magma body: *New Mexico Geological Society Guidebook 60*, p. 415-424.

Lucas, S.G., Sullivan, R.M., Cather, S.M., Jasinski, S.E., Fowler, D.W., Heckert, A.B., Spielmann, J.A. and Hunt, A.P., 2009, No definitive evidence of Paleocene dinosaurs in the San Juan basin: *Palaeontologia Electronica*, article number 12.2.8A.

Cather, S.M., 2011, Late Oligocene-early Miocene deep erosion on the southern Colorado Plateau and southern Great Plains: *U.S. Geological Survey Open-file Report 2011-1210*, p.46-45.

Cather, S.M., Read, A.S., Dunbar, N.W., Kues, B.S., Krainer, K., Lucas, S.G., and Kelley, S.A., 2011, Provenance evidence for major post-Early Pennsylvanian dextral slip on the Picuris–Pecos fault, northern New Mexico: *Geosphere*, v. 7, p. 1175-1193.

#### ROAD LOGS:

Smith, C.T., Osburn, G.R., Chapin, C.E., Hawley, J.W., Osburn, J.C., Anderson, O.J., Rosen, S.D., Eggleston, T.L., and Cather, S.M., 1983, First-day road log from Socorro to Mesa del Yeso, Joyita Hills, Johnson Hill, Cerros de Amado, Lomas de las Cañas, Jornada de Muerto, Carthage, and return to Socorro: *New Mexico Geological Society Guidebook 34*, p. 1-28.

Chamberlin, R.M., Osburn, G.R., Chapin, C.E., Machette, M.N., Barker, J.M., Hawley, J.W., Cather, S.M., Osburn, J.C., and Anderson, O.J., 1983, Second-day road log from Socorro to Lemitar Mountains, La Jencia Basin, Baca Canyon, Riley, Jeter mine, and San Lorenzo Canyon: New Mexico Geological Society, Guidebook 34, p. 29-59.

Bauer, P.W., Pillmore, C.L., Mawer, C.K., Hayden, S. Lucas, S.G., Meyer, J., Czamanske, G.K., Grambling, J.A., Barker, J.M., Cather, S.M., Walker, J., and Young, J.N., 1990, First-day road log, from Red River to Questa, Costilla, Valle Vidal, Cimarron, and Philmont: New Mexico Geological Society Guidebook 41, p. 1-43.

Cather, S.M., Lucas, S.G., McLemore, V.T., and Colpitts, R.M., Jr., 1991, Second-day road log, from Inn of the Mountain Gods to Hondo, Lincoln, Capitan, and return to Inn of the Mountain Gods: New Mexico Geological Society Guidebook 42, p. 27-46.

Cather, S.M., and Elston, W.E., 1991, Supplemental road log, from junction of US-380 and NM-37 to Capitan: New Mexico Geological Society Guidebook 42, p. 71-75.

Lucas, S.G., McLemore, V.T., Hunt, A.P., Allen, M.S., Cather, S.M., and Ouimette, M., 1991, Third-day road log, from Inn of the Mountain Gods to Nogal, Carrizozo, White Oaks and Valley of Fires: New Mexico Geological Society Guidebook 42, p. 47-70.

Chamberlin, R.M., Cather, S.M., McIntosh, W.C., Anderson, O.J., and Ratté, J.C., 1994, First-day road log from Socorro to Magdalena, Datil, western Crosby Mountains, Sawtooth Mountains, Pie Town, Quemado, and Quemado Lake: New Mexico Geological Society Guidebook 45, p. 1-45.

Cather, S.M., Chamberlin, R.M., McIntosh, W.C., Witcher, J., Ratté, J.C., and Anderson, O.J., 1994, Second-day road log from Quemado Lake to Magdalena, Tejana Mesa, Red Hill, Springerville and Alpine, Arizona: New Mexico Geological Society Guidebook 45, p. 47-77.

Ratté, J.C., Bove, D.J., Cather, S.M., Chamberlin, R.M., Crews, S.G., and McIntosh, W.C., 1994, Third-day road log from Alpine Country Club, Alpine, Arizona, to Luna, Reserve, Apache Creek, Horse Springs and Datil, New Mexico: New Mexico Geological Society Guidebook 45, p. 79-111.

Pazzaglia, F.J., Lucas, S.G., Estep, J.W., Connell, S.D., Karlstrom, K.E., Black, B.A., Smith, G.A., Hawley, J.W., Johnson, P., Cather, S., and Stearns, C., 1999, First-day road log from Albuquerque to Placitas, Hagan basin, and Espinaso Ridge: New Mexico Geological Society Guidebook 50, p. 1-26.

Pazzaglia, F.J., Connell, S.D., Hawley, J.W., Tedford, R.H., Personius, S., Smith, G.A., Cather, S.M., Lucas, S.G., Hester, P., Gilmore, J., and Woodward, L.A., 1999, Second-day trip 2 road log, Albuquerque to San Ysidro, Loma Creston, La Ceja, and Sand Hill fault: New Mexico Geological Society Guidebook 50, p. 47-66.

Chamberlin, R.M., Lueth, V.W., Lucas, S.G., Cather, S.M., Hook, S.C., Krainer, K., and Spielmann, J.A., 2009, First-day road log from Socorro to Chupadera Mesa via San Antonio, Carthage, Bingham, Jones Camp, Broken Back Crater, and Fraley: New Mexico Geological Society Guidebook 60, p. 1-20.

Lucas, S.G., Cather, S.M., Chamberlin, R.M., Lueth, V.W., Krainer, K., and Spielmann, J., 2009,

Second-day road log from Socorro to Buffalo Well via Arroyo de la Parida, and Cañoncito de la Uva: New Mexico Geological Society Guidebook 60, p. 47-66.

Lueth, V.W., Lucas, S.G., Cather, S.M., Chamberlin, R.M., Love, D., McGraw, D., Luther, A., Krainer, K., and Spielmann, J.A., 2009, Third-day road log from Socorro to Gran Quivira via Abo Pass: New Mexico Geological Society Guidebook 60, p. 75-92.

#### ABSTRACTS:

Cather, S.M. and Johnson, B.D., 1980, Genetic stratigraphy and provenance of the Baca Formation of New Mexico and Eagar Formation and Mogollon Rim gravels of Arizona: American Association of Petroleum Geologists Bulletin, v. 64, p. 688-689.

Chapin, C.E. and Cather, S.M., 1983, Eocene paleotectonics and sedimentation in the Rocky Mountain-Colorado Plateau region: American Association of Petroleum Geologists Bulletin, v. 67, p. 1331-1332.

Cather, S.M., 1986, Diagenesis and source of coloration of andesite-derived sediments of the Datil Group (latest Eocene - early Oligocene), west-central New Mexico: American Association of Petroleum Geologists Bulletin, v. 70, p. 1034.

Cather, S.M., 1986, Tectonic and petrogenetic implications of the Datil Group (late Eocene - early Oligocene), west-central New Mexico: Geological Society of America Abstracts with Programs, v. 18, p. 560.

Cather, S.M., 1987, Prediagenetic sedimentary fractionation of andesitic volcanoclastic detritus in a semiarid climate: An example from the Eocene Datil Group, New Mexico: Geological Society of America Abstracts with Programs, v. 19, p. 615.

Chapin, C.E., Cather, S.M., and McIntosh, W.C., 1987, Evolution of the Rio Grande rift: An outline: Geological Society of America Abstracts with Programs, v. 19, p. 617.

Morrow, N.R., Dange, V., Buckley, J.S., and Cather, S.M., 1987, Effects of drying on absolute and relative permeabilities of low permeability gas sands: Clay Mineral Society, 24th Annual Meeting Proceedings, p. 100.

Cather, S.M., and Chapin, C.E., 1988, Paleogene history of the southeastern Colorado Plateau margin in west-central New Mexico: Geological Society of America Abstracts with Programs, v. 20, p. 148-149.

Cather, S.M., 1988, Jemez-derived pumice near San Antonio, New Mexico: Depositional processes and implications: New Mexico Geology, v. 10, p. 65-66.

Lucas, S.G., Hunt, A.P., and Cather, S.M., 1988, Artiodactyl footprints from the Eocene Baca Formation, west-central, New Mexico: International Symposium on Vertebrate Behavior as Derived from the Fossil Record, Abstracts with Program, p. 16.

Cather, S.M., and McIntosh, W.C., 1990, Jemez-derived flood deposits near San Antonio, New Mexico: Depositional processes and implications: Geological Society of America Abstracts with Programs, v. 22, p. 13.

Cather S.M., and McIntosh, W.C., 1990, Volcanogenic flood deposits near San Antonio, New Mexico: Depositional processes and implications: International Association of Sedimentologists, 13th International Sedimentological Congress Abstracts of Papers, p. 80.

Cather, S.M., 1991, Late Laramide paleodrainage patterns and timing of sedimentation in the southern Rocky Mountains and northwest Gulf of Mexico: Geological Society of America Abstracts with Programs, v. 23, p. 10.

Cather, S.M., Chapin, C.E., Chamberlin, R.M., McIntosh, W.C., and Kunk, M.J., 1991, Stratigraphy and age of the Santa Fe Group near Socorro, New Mexico: Geological Society of America Abstracts with Programs, v. 23, p. 10.

Chapin, C.E., and Cather, S.M., 1994, Tectonic setting of the axial basins of the northern and central Rio Grande rift: American Association of Petroleum Geologists, 1994 Annual Meeting Program, v. 3, p. 120.

Cather, S.M., Chapin, C.E., McIntosh, W.C., and Chamberlin, R.M., 1994, Tectonic and stratigraphic consequences of episodic extension in the central and northern Rio Grande rift: Geological Society of America Abstracts with Programs, v. 26, p. 132.

Chapin, C.E., Cather, S.M., and Kelley, S.A., 1996, Overprinting of the Rio Grande rift on the southern Rocky Mountains: Geological Society of America Abstracts with Programs, v. 28, no. 7, p. 271.

Mailloux, B.J., Person, M., Strayer, L., Huddleston, P., Dunbar, N., Kelley, S., and Cather, S., 1996, Tectonic controls of hydrothermal evolution of the La Jencia and Socorro basins of the Rio Grande rift, Geological Society of America Abstracts with Programs, v. 28, no. 7, p. 225.

Cather, S.M., 1996, Laramide oblique-slip faulting in New Mexico - an overview: Geological Society of America Abstracts with Programs, v. 28, no. 7, p. 374.

Cather, S.M., 1997, Constraints of Mesozoic piercing lines on magnitude of northward Laramide translation of Colorado Plateau in north-central New Mexico: New Mexico Geology, v. 19, p.50.

Cather, S.M., 1997, Constraints of Mesozoic piercing lines on magnitude of northward Laramide translation of Colorado Plateau in north-central New Mexico: Geological Society of America Abstracts with Programs, v. 29, no. 2, p. 6.

Cather, S.M., 1999, Laramide faults in the southern Rocky Mountains—a role for strain partitioning and low frictional strength strike-slip faults?: Geological Society of America Abstracts with Programs, v. 31, no. 7, p. 186.

Cather, S.M., 2000, Kinematics and timing of Ancestral Rocky Mountain faults in New Mexico: Geological Society of America Abstracts with Programs, v. 32, no. 7, p. 465.

Cather, S.M., 2000, Preliminary analysis of the Fresnal fault system—a major dextral normal fault of Late Pennsylvanian age in south-central New Mexico: *American Association of Petroleum Geologists Bulletin*, v. 84, no. 8, p. 1237.

Cather, S.M., 2001, North-south differences in timing and style of ancestral Rocky Mountain deformation, southwestern North America: *Geological Society of America Abstracts with Programs*, v.33, no. 5, p. 45.

Love, D.W., Connell, S.D., Chamberlin, R.M., Cather, S.M., McIntosh, W.C., Dunbar, N., Smith, G.A., and Lucas, S.G., 2001, Constraints on the age of extensive fluvial facies of the upper Santa Fe group, Albuquerque and Socorro basins, central New Mexico: *Geological Society of America Abstracts with Programs*, v.33, no. 5, p. 48.

Connell, S.D., Love, D.W., Cather, S.M., Smith, G.A., and Lucas, S.G., 2001, Tectonics, climate, and the transition from aggradation to incision of the upper Santa Fe Group, Albuquerque Basin, central New Mexico: *Geological Society of America Abstracts with Programs*, v.33, no. 5, p. 48.

Cather, S.M., 2002, Early Laramide deformation in northern New Mexico and southern Colorado: *Geological Society of America Abstracts with Programs*, v. 34, no. 6, p.181-182.

Cather, S.M., and Harrison, R.W., 2002, Tectonic implications of isopach patterns of lower Paleozoic units in southern New Mexico: *American Association of Petroleum Geologists*, Abstract for Southwest Section meeting, Ruidoso, New Mexico.

Cather, S.M., 2002, Lower Paleozoic isopach maps of southern New Mexico and their implications for Laramide and Ancestral Rocky Mountain tectonism : *New Mexico Geology*, v. 24, p. 59.

Cather, S.M., Dunbar, N.W., McDowell, F.W., McIntosh, W.C., and Scholle, P.A., 2003, Early Oligocene global cooling, volcanic iron fertilization, and the ignimbrite flare-up of southwestern North America: *Geological Society of America Abstracts with Programs*, v.35, no. 6, p. 255.

Cather, S.M., and Lucas, S.G., 2004, Comparative stratigraphy of the Dakota Sandstone across the Picuris-Pecos fault system south of Lamy, New Mexico: Definitive evidence of Laramide strike-slip; *New Mexico Geology*, v.26, p.69.

Cather, S.M., and Lucas, S.G., 2004, Comparative stratigraphy of the Dakota Sandstone across the Picuris-Pecos fault system south of Lamy, New Mexico: Definitive evidence of Laramide strike-slip: *Geological Society of America Abstracts with Programs*, v.36, no. 5, p. 269.

Roy, M., Kelley, S., Pazzaglia, F., Cather, S., and House, M., 2004, Middle Tertiary buoyancy modification and its relationship to rock exhumation, cooling, and subsequent extension at the eastern margin of the Colorado Plateau: *Geological Society of America Abstracts with Programs*, v. 36, no. 5, p.119.

Cather, S.M., and Karlstrom, K.E., 2005, Constraints on Ancestral Rocky Mountain and Laramide dextral-oblique deformation in north-central New Mexico using regional aeromagnetic patterns and

structural balancing considerations: *New Mexico Geology*, v. 27, p. 50.

Cather, S.M., Chamberlin R.M., Connell, S.D., McIntosh W.C., and Jones G.E., 2006, The Chuska erg: paleogeomorphic and paleoclimatic implications of an Oligocene sand sea on the Colorado Plateau: *New Mexico Geology*, v. 28, p. 57.

Cather, S.M., Read, A.S., Krainer, K., Lucas, S.G., Kelley, S.A., Kues, B.S., Allen, B.D., and Timmons, J.M., 2007, Proximal syntectonic deposits yield definitive evidence of major post-Atokan slip on Picuris-Pecos fault, north-central New Mexico: *Geological Society of America, Abstracts with Programs*, v. 39, p. 230.

Cather, S.M., Read, A.S., Krainer, K., Lucas, S.G., Kelley, S.A., Kues, B.S., Allen, B.D., and Timmons, J.M., 2007, Proximal syntectonic deposits yield definitive evidence of major post-Atokan slip on Picuris-Pecos fault, north-central New Mexico: *New Mexico Geology*, v. 29, p. 57.

Cather, S.M., Read, A.S., Kelley, S.A., and Ulmer-Scholle, D., 2008, Genesis of fault breccia at Deer Creek—Implications for the slip history of the Picuris-Pecos fault: *New Mexico Geology*, v. 30, p. 55.

Love, D.W., McCraw, D.J., Chamberlin R.M., Connell, S.D., and Cather, S.M., 2008, Progress report on tracking of Rio Grande terraces across the uplift of the Socorro magma body: *New Mexico Geology*, v. 30, p. 58.

Cather, S.M., 2009, Stratigraphy and structure of the Laramide Carthage-La Joya Basin, central New Mexico: *New Mexico Geology*, v. 31, p. 44.

Dickinson, W.R., Cather, S.M., and Gehrels, G.E., 2009, U-Pb ages of detrital zircons from the Oligocene Chuska Sandstone (Arizona-New Mexico): Implications for sand provenance: *New Mexico Geology*, v. 31, p. 46.

Dunbar, N.W., and Cather, S.M., 2009, Detrital monazite geochronology of Ortega Quartzite clasts in Pennsylvanian strata of the northern Truchas uplift, northern New Mexico: Implications for the slip history of the Picuris-Pecos fault: *New Mexico Geology*, v. 31, p. 43.

Flores, S., Axen, G., and Cather, S.M., 2011, Neogene age of decollement-style faulting in Permian Yeso Formation, Sierra Larga, Socorro County, New Mexico: *New Mexico Geology*, v. 33, p. 50.

Cather, S.M., 2011, A north-flowing ancestral Pecos River in southeastern New Mexico: A record of late Paleogene-early Neogene epirogeny: *New Mexico Geology*, v. 33, p. 45.

#### BOOKS EDITED

*Southeastern Colorado Plateau*, 1989, *New Mexico Geological Society Guidebook 40*, 345 p. (with O.J. Anderson, S.G. Lucas, and D.W. Love).

*Basins of the Rio Grande rift: Structure, stratigraphy, and tectonic setting*, 1994, *Geological Society of America Special Paper 291*. (with G.R. Keller).

*Mogollon slope, west-central New Mexico and east-central Arizona*, 1994, New Mexico Geological Society Guidebook 45 (with R.M. Chamberlin, B.S. Kues, J. Barker, and W.C. McIntosh).

*Tectonics, volcanism, and geochronology in the southern Rocky Mountains and Rio Grande rift*, 2004, New Mexico Bureau of Geology and Mineral Resources, Bulletin 160 (with S.A. Kelley and W.C. McIntosh) (this Bulletin received the 2005 Outstanding Publication Award from the Association of Earth Science Editors).

#### BOOK REVIEWS:

Cather, S.M., 1999, review of *Continental transpressional and transtensional tectonics*, edited by R.E. Holdsworth, R.A. Strachan, and J. F. Dewey: *Journal of Structural Geology*, v. 21, p. 245-246.

#### GEOLOGIC MAPS:

Cather, S.M., 1988, Geologic map of the San Antonio pumice deposit, Socorro County, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-file Report 343, 5 p., one sheet.

Chamberlin, R.M., Cather, S.M., Anderson, O.J., and Jones, G., 1994, Reconnaissance geologic map of the Quemado 30' x 60' quadrangle, Catron County, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-file Report 406, scale 1:100,000.

Cather, S.M., 1995, Geologic map of the Santa Fe Group in the Mesa del Yeso 7.5' quadrangle, New Mexico, New Mexico Bureau of Mines and Mineral Resources Open-file Report 417a, scale 1:24,000.

Cather, S.M., 1995, Geologic map of the Santa Fe Group in the Loma de las Cañas 7.5' quadrangle, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-file Report 417b, scale 1:24,000.

Connell, S.D., Cather, S.M., Karlstrom, K.E., Read, A., Ilg, B., Menne, B., and Andronicos, C., 1996, Geology of the Placitas 7.5' quadrangle, Sandoval County, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-file Digital Geologic Map OF-DM 2, scale 1:12,000.

Love, D.W., Hitchcock, C., Thomas, E., Van Hart, D., Cather, S., Chamberlin, R., Anderson, O., Hawley, J., White, W., Nolev, J., Sawyer, T., Nyman, M., Harrison, B., and Colpitts, R., 1996, Geology of the Hubbell Spring 7.5' quadrangle, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-file Digital Geologic Map OF-DM 5, scale 1:12,000.

Cather, S.M., Connell, S.D., Heynekamp, M.R., and Goodwin, L.B., 1997, Geologic map of the Sky Village SE 7.5' quadrangle, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-file Digital Geologic Map OF-DM 9, scale 1:24,000.

Cather, S.M., and Connell, S.D., 1998, Geology of the San Felipe Pueblo 7.5' quadrangle, Sandoval County, New Mexico: New Mexico Bureau of Mines and Mineral Resources, Open-file Digital Geologic Map OF-DM 19, scale 1:24,000.

Koning, D., Pederson, J., Pazzaglia, F.J., and Cather, S.M., 1999, Geology of the Cerro Conejo 7.5' quadrangle: New Mexico Bureau of Mines and Mineral Resources Open-file Digital Geologic Map OF-DM 45, scale 1:24,000.

Cather, S.M., Connell, S.D., and Black, B.A., 2000, Geology of the San Felipe Pueblo NE 7.5' quadrangle, New Mexico Bureau of Mines and Mineral Resources Open-file Digital Geologic Map OF-DM 37.

Cather, S.M., 2000, Geologic map of the Santa Fe Group in the San Antonio 7.5' quadrangle, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-file Report 417c, scale 1:24,000.

Chamberlin, R.M., and Cather, S.M., 2001, Geology of the Lemitar 7.5' quadrangle, New Mexico: New Mexico Bureau of Mines and Mineral Resources Geologic Map, scale 1:24,000.

Cather, S.M., Connell, S.D., Lucas, S.G., Picha, M.G., and Black, B.A., 2002, Geology of the Hagan 7.5' quadrangle, New Mexico: New Mexico Bureau of Geology and Mineral Resources Open-file Digital Geologic Map OF-GM 50, scale 1:24,000.

Cather, S.M., 2002, Geology of the San Antonio 7.5' quadrangle, New Mexico: New Mexico Bureau of Geology and Mineral Resources Open-file Digital Geologic Map OF-GM 58, scale 1:24,000.

Cather, S.M., and Read, A.S., 2003, Geology of the Silver Creek 7.5' quadrangle, New Mexico: New Mexico Bureau of Geology and Mineral Resources Open-file Digital Geologic Map OF-GM 75, scale 1:24,000.

Cather, S.M., Colpitts, R.M., Jr., and Hook, S.C., 2004, Preliminary geologic map of the Mesa del Yeso 7.5' quadrangle, New Mexico: New Mexico Bureau of Geology and Mineral Resources Open-file Digital Geologic Map OF-GM 92, scale 1:24,000.

Cather, S.M., and Colpitts, R.M., Jr., 2005, Preliminary geologic map of the Loma de las Cañas 7.5' quadrangle, Socorro County, New Mexico: New Mexico Bureau of Geology and Mineral Resources Open-file Digital Geologic Map OF-GM 110, scale 1:24,000.

Cather, S.M., and Osburn, G.R., 2007, Preliminary geologic map of the Canon Agua Buena 7.5 minute quadrangle, Socorro County, N.M., New Mexico Bureau of Geology and Mineral Resources, Open-file Geologic Map OF-GM 146, scale 1:24,000.

Read, A.S., Chamberlin, R.M., Cather, S.M., Connell, S.D. and Karlstrom, K.E., 2007, Preliminary geologic map of the Ladron Peak 7.5-minute quadrangle, Socorro County, N.M., New Mexico Bureau of Geology and Mineral Resources, Open-file Geologic Map OF-GM 142, scale 1:24,000.

Cather, S.M. and Baldrige, W.S., 2008, Preliminary geologic map of the Table Mountain 7.5' quadrangle: New Mexico Bureau of Geology and Mineral Resources, Open-file Digital Geologic Map OF-GM 172, Scale 1:24,000.

Cather, S.M., 2010, Preliminary geologic map of the San Lucas dam quadrangle, McKinley County, New Mexico: New Mexico Bureau of Geology and Mineral Resources, Open-file Digital Geologic Map OF-GM 212, Scale 1:24,000.

Cather, S.M., 2011, Preliminary geologic map of the Dos Lomas quadrangle, McKinley County, New Mexico: New Mexico Bureau of Geology and Mineral Resources, Open-file Digital Geologic Map OF-GM 219, Scale 1:24,000

#### OTHER PUBLICATIONS:

Morrow, N.R., Ward, J.S., Brower, K.R., and Cather, S.M., 1986, Rock matrix and fracture analysis in western tight gas sands -- Quarterly technical progress report January-March 1986: New Mexico Petroleum Recovery Research Center Report 86-6, 18 p.

Morrow, N.R., Ward, J.S., Brower, K.R., and Cather, S.M., 1986, Rock matrix and fracture analysis in western tight gas sands -- Quarterly technical progress report April-June 1986: New Mexico Petroleum Recovery Research Center Report 86-11, 19 p.

Morrow, N.R., Ward, J.S., Brower, K.R., and Cather, S.M., 1986, Rock matrix and fracture analysis in western tight gas sands -- Quarterly technical progress report July-September 1986: New Mexico Petroleum Recovery Research Center Report 86-16, 34 p.

Morrow, N.R., Ward, J.S., Brower, K.R., and Cather, S.M., 1986, Rock matrix and fracture analysis in western tight gas sands -- Quarterly technical progress report October-December 1986: New Mexico Petroleum Recovery Research Center Report 87-1, 25 p.

Morrow, N.R., Ward, J.S., Cather, S.M., and Brower, K.R., 1987, Rock matrix and fracture analysis in western tight gas sands -- 1986 Annual report: New Mexico Petroleum Recovery Research Center Report 87-3, 46 p.

Morrow, N.R., Ward, J.S., Cather, S.M., and Brower, K.R., 1987, Rock matrix and fracture analysis in western tight gas sands -- Quarterly technical progress report, New Mexico Petroleum Recovery Research Center Report 87-5, January-March 1987, 15 p.

Morrow, N.R., Ward, J.S., Cather, S.M., and Brower, K.R., 1987, Rock matrix and fracture analysis in western tight gas sands -- Quarterly technical progress report, New Mexico Petroleum Recovery Research Center Report 87-7, April-June 1987, 15 p.

Morrow, N.R., Ward, J.S., Cather, S.M., and Brower, K.R., 1987, Rock matrix and fracture analysis in western tight gas sands -- Quarterly technical progress report, New Mexico Petroleum Recovery Research Center Report 87-10, July-September, 1987, 21 p.

Morrow, N.R., Buckley, J.S., Cather, S.M., and Brower, K.R., 1987, Rock matrix and fracture analysis in western tight gas sands -- Quarterly technical progress report, New Mexico Petroleum Recovery Research Center Report 87-12, October-December, 1987, 17 p.

Morrow, N.R., Buckley, J.S., Cather, S.M., and Brower, K.R., 1987, Rock matrix and fracture analysis in western tight gas sands -- 1987 Annual Report, New Mexico Petroleum Recovery Research Center Report 87-11, 132 p.

Cather, S.M., 1998, Born of fire and water: Ancient flooding of the Rio Grande: *Lite Geology*, no. 19, p. 2-4.

Cather, S.M., 2002, Afield, horseback: *Lite Geology*, no. 24, p. 13-14.

#### OTHER PRESENTATIONS:

"Rock matrix and fracture analysis of flow in western tight gas sands", U. S. Department of Energy Contractor's Meeting, Morgantown, West Virginia, July 1987.

"Paleogene sedimentation and volcanism in west-central New Mexico: tectonic and economic implications", invited lecture at University of New Orleans, November 1987.

"Volcano-sedimentary evolution and tectonic implications of the Datil Group (upper Eocene-lower Oligocene), west-central New Mexico," invited lecture at New Mexico State University, March 1988.

"Comparison of depositional characteristics of non-volcanic and volcanoclastic sequences in two Eocene foreland basins, west-central New Mexico," invited poster presentation (with C.E. Chapin) at Penrose Conference on "Influences of volcanism on terrestrial sedimentation" at Vancouver, Washington, August 1988.

"Paleogene geologic history of west-central New Mexico", invited lecture at University of New Mexico, February 1989.

"Paleogene tectonism and volcanism in west-central New Mexico", invited lecture at Albuquerque Geological Society, March 1990.

"Strike-slip faulting in the Rocky Mountain area", invited address at AGU Chapman Conference on "Rocky Mountains: Plate Tectonic Puzzle", Santa Fe, New Mexico, October 1991.

"Neogene structure and stratigraphy in the central Rio Grande rift", invited lecture at NMSU, November 1992.

"Tectonics and sedimentation in the Rio Grande rift", invited lecture at Southern Methodist University, March 1993.

"Tectonics and sedimentation in the central and northern Rio Grande rift", invited lecture at

University of Texas, El Paso, November 1994.

“Laramide tectonics in central and northern New Mexico”, invited lecture at New Mexico State University, November 2000.

“Laramide tectonics in the southern Rocky Mountains”, invited lecture at the Keck fieldcamp in the Wet Mountains, Colorado, July 2001.

“The Chuska erg: paleogeomorphic and paleoclimatic implications of an Oligocene sand sea on the Colorado Plateau”, invited lecture at Four Corners Geological Society, May 2007.

“The Chuska erg: paleogeomorphic and paleoclimatic implications of an Oligocene sand sea on the Colorado Plateau”, invited lecture at the Albuquerque Geological Society, August 2007.

“Climate forcing by oceanic iron fertilization from repeated ignimbrite eruptions: The icehouse-silicic large igneous province (SLIP) hypothesis”, invited seminar presentation at the University of New Mexico, November 2009.

#### SERVICE WORK:

Leader of field trip for Shell, Sohio, and Elf Aquitaine geologists in Baca basin area, west-central New Mexico. May 1986.

Leader of helicopter flyover of Baca basin and vicinity for Amoco geologists. June 1987.

Participant and co-leader of Soviet-American tour of Rio Grande rift. May 1988.

Session chairman for 1989 New Mexico Geological Society Spring Meeting, Socorro, New Mexico.

Co-leader of 1989 IAVCEI field trip, Mogollon-Datil volcanic field, New Mexico.

Member of search committee for Director, New Mexico Bureau of Mines and Mineral Resources, 1991.

Contributor to upcoming USGS 1:500,000 scale geologic map of New Mexico.

Dissertation committee member for B.S. Brister (NMIMT, graduated 12/90).

Roadlog co-chairman of 1991 New Mexico Geological Society field conference.

Chairman of search committee for volcanologist, New Mexico Bureau of Mines and Mineral Resources.

Thesis advisor for S. Cross (NMIMT, graduated 12/94).

Thesis committee member for John Abbott (NMIMT, graduated 5/96).

Tenure committee chairman for W. C. McIntosh (NMBMMR & NMIMT).

Tenure committee member for M. Heizler (NMIMT).

Dissertation committee member for Robert Balch (NMIMT, graduated 5/97).

Roadlog co-chairman for 1994 New Mexico Geological Society field conference.

Thesis committee member for Ed Fry (NMIMT, left program 1996).

Tenure committee chairman for S.D. Connell.

Tenure committee chairman for B.D. Allen.

Chairman of editorial board for *New Mexico Geology* (1997-2000 ).

Thesis committee member for Jeffery Stone (NMIMT, graduated 12/97).

Thesis committee member for Dustin Smyth (NMIMT).

Thesis committee member for Rosie Behr (NMIMT, graduated 5/99).

Tenure committee member for Peggy Johnson.

Member of search committee for Director, New Mexico Bureau of Mines and Mineral Resources, 1999.

Tenure committee member for Harold Tobin.

Session co-chair, Rocky Mountain section of American Association of Petroleum Geologists meeting, Albuquerque, September 2000.

Tenure committee chairman for Bill Raatz.

Thesis committee member for Abby Howell (CSU, Graduated 12/02).

Co-leader of first day of 2003 NMGS Fall Field Conference

Thesis committee member for Seth Fankhauser (CSU, resigned 9/04).

Member of editorial board for *New Mexico Geology* (2000- ).

Thesis supervisor for Katherine Mason-Barton until 9/06.

Thesis committee member for Amy Luther, NMIMT

**COURSES TAUGHT:**

The University of Texas at Austin (September 1977 - May 1982) - Laboratory Teaching Assistant for Physical Geology, Historical Geology, Sediments and Sedimentary Rocks, Sandstone Petrology, Igneous Petrology, Carbonate Petrology, and Siliciclastic Depositional Systems.

New Mexico Tech (Spring semester, 1986) - Instructor (sabbatical replacement) for Geology 383, Sedimentation and Stratigraphy.

New Mexico Tech (Spring semester, 1992, 1994) - Instructor (with Peter Mozley) for Geol. 545, Sedimentary Petrology.

revised 1/08