

Curriculum Vitae

Virgil W. Lueth

Senior Mineralogist / Economic Geologist

Director—Mineral Museum

Director — XRD Laboratory

New Mexico Bureau of Geology & Mineral Resources

New Mexico Tech

801 Leroy Place

Socorro NM 87801-4796

(575) 835-5140 ph

(575) 835-6333 fax

Virgil.Lueth@nmt.edu

EDUCATION

1988 Doctorate (Geology, Chemistry minor) UNIVERSITY OF TEXAS AT EL PASO

Dissertation: Studies of the Geochemistry of the Semimetal Elements: Arsenic, Antimony, and Bismuth.

1984 Masters (Geology, Metallurgical Engineering minor) UNIVERSITY OF TEXAS AT EL PASO

Thesis: Comparison of Copper Skarn Deposits in the Silver City Mining Region, New Mexico.

1981 Bachelors (Geology) UNIVERSITY OF WISCONSIN AT EAU CLAIRE

PROFESSIONAL EXPERIENCE

Senior Mineralogist/Economic Geologist and Director of the Mineral Museum: - current

Adjunct Professor: Earth & Environmental Science Department - New Mexico Tech: 2013-current

Mineralogist/Economic Geologist: 1994-2005

Assistant Director for Public Outreach: 2000-2004

Adjunct Curator: New Mexico Museum of Natural History & Science: 1995-current

Associate Professor: Tarleton State University - Texas A & M University System: 1992-1993

Assistant Professor: Tarleton State University - Texas A & M University System: 1988-1992

Assistant Instructor: University of Texas at El Paso – University of Texas System: 1984-1988

Teaching Assistant: University of Texas at El Paso – University of Texas System: 1982-1984

Geologic Field Assistant: United States Geological Survey: 1982

Laboratory Assistant: University of Wisconsin at Eau Claire: 1981

Geologic Field Assistant: Wisconsin Geological and Natural History Survey: 1979

AWARDS

Best Guidebook Award - Geoscience Information Society of the Geological Society of America, 2011

Best Guidebook Award - Geoscience Information Society of the Geological Society of America, 2007

Honorary Member - New Mexico Geological Society, 2005

Honorary Award- Rocky Mountain Federation of Mineralogical Societies - AFMS Scholarship Foundation, 1996

Bruce C. Davidson Memorial Award - Outstanding Graduate Student in Geosciences, UTEP 1985

New Mexico Geological Society- Student Research Award, 1985

National Association of Geology Teachers Outstanding Field Mapping Award Nomination, 1980

MEMBERSHIPS

Geological Society of America

Sigma Gamma Epsilon

New Mexico Geological Society

El Paso Geological Society

Society of Mineral Museum Professionals

Friends of Mineralogy

Geochemical Society

SME of AIME

Mineralogical Society of America

Texas Academy of Science

Mineralogical Society of Canada

JOURNAL AND BOOK PUBLICATIONS

Simmons, P. and Lueth, V.W., 2019, Wulfenite localities of New Mexico: The Famous and the Forgotten: Rocks and Minerals, v. 94, no. 1, p. 60-66.

DeVore, C.L., Rodriguez-Freire, L., Mehdi-Ali, A., Ducheneaux, C., Artyushkova, K., Gonzales, M., Lewis, J., Zhou, Z., Latta, D.E., Lueth, V.W., and Cerrato, J.M., 2019, Effect of bicarbonate and phosphate on arsenic release from mining-impacted sediments in the Cheyenne River (watershed), South Dakota: Environmental Science: Processes and Impacts, DOI: 10.1039/C8EM00461G.

Lueth, V.W., 2018, Calcite, the crystalline chameleon: Lite Geology, v. 42, p. 2-4.

Lueth, V.W., 2018, Calcite holds up to heat and pressure – Metamorphism: Lite Geology, v. 42, p. 6.

Lueth, V.W., 2018, Why Marble is used in Statuary: Lite Geology, v. 42, p. 7.

Lueth, V.W., 2018, Hydrothermal deposits – Calcite in Hot Water: Lite Geology, v. 42, p. 7.

Kurota, Alexander, Evan S. Sternberg, and Virgil W. Lueth, 2018, The Use of Quartz Crystals for Flaked Lithic Manufacture During the El Paso Phase of the Jornada Mogollon Period. In Archaeology of White Sands Missile Range: Evaluation of 36 Sites and Implementation of Site Protective Measures between Highway 70 and Nike Avenue, Otero and Dona Ana Counties, New Mexico; Volume 3, Analyses and Appendices, edited by Alexander Kurota, Evan S. Sternberg, and Robert Dello-Russo, pp. 52-1 to 52-12. OC/UNM Report No. 185-1150.

Lueth, V.W., Heizler, L., Zimmerer, M., and McNamara, K., 2017, Geo-ski-ology: A Photo Gallery: *Lite Geology* v. 41, p. 4

McLemore, V.T. and Lueth, V.W., 2017, *Metallic Mineral Deposits: New Mexico Bureau of Geology & Mineral Resources, Memoir 50D 79 p.*

Harris, S.K, Lucas, S.G., and Lueth, V.W., 2017, Lacustrine coprofauna from the Upper Pennsylvanian (Missourian) Tinajas Member of the Atrizado Formation, Socorro County, New Mexico, *in*, Lucas, S.G., DiMichele, W.A., and Krainer, K., eds., *Carboniferous-Permian transition in Socorro County, New Mexico: New Mexico Museum of Natural History and Science Bulletin 77*, p. 113-131.

Lueth, V.W., 2016, Adjustments in the margins – Dikes and contact metamorphism: *Lite Geology* v. 40, p. 4.

Lueth, V.W., 2016, New Mexico's most wanted mineral – Cordierite: *Lite Geology*, v. 39, p. 11.

Lueth, V.W., Dikes and Sills – Filling the Cracks: *Lite Geology*, v. 40, p. 2-3.

McNamara, K., and Lueth, V.W., 2016, Gemstones of New Mexico: *Earth Matters*, v. 16, No. 2, 4 p.

Lueth, V.W., 2016, Tellurium Minerals in New Mexico: *New Mexico Geology*, v. 38, p.17- 23.

Lueth, V.W., 2016, New Mexico's most wanted mineral – Andalusite: *Lite Geology*, v. 39, p. 11.

Koning, Daniel J.; Jochems, Andrew P.; Morgan, Gary S.; Lueth, Virgil; Peters, Lisa, 2016, Stratigraphy, gravel provenance, and age of early Rio Grande deposits exposed 1-2 km northwest of downtown Truth or Consequences, New Mexico, *in: The Geology of the Belen Area*, Frey, Bonnie A.; Karlstrom, Karl E.; Lucas, Spencer G.; Williams, Shannon; Zeigler, Kate; McLemore, Virginia; Ulmer-Scholle, Dana S., *ed(s)*, New Mexico Geological Society, Guidebook, 67th Field Conference, pp. 459-478.

Lueth, Virgil W.; Chamberlin, Richard; Peters, Lisa; Love, David W., 2016, An ⁴⁰Ar/³⁹Ar age and paleogeographic setting for the Riley Travertine, Socorro County, New Mexico, *in: The Geology of the Belen Area*, Frey, Bonnie A.; Karlstrom, Karl E.; Lucas, Spencer G.; Williams, Shannon; Zeigler, Kate; McLemore, Virginia; Ulmer-Scholle, Dana S., *ed(s)*, New Mexico Geological Society, Guidebook, 67th Field Conference, pp. 58-61.

Robinson, M., and Lueth, V.W., 2016, Lava Cap thunder eggs – unique specimens from Luna County, New Mexico: *Rock & Gem*, v. 45, n.4, p. 34-40.

Crook, J.C. and Lueth, V.W., 2014, A geological and geochemical study of a sedimentary-hosted turquoise deposit at the Iron Mask mine, Orogrande, New Mexico: *New Mexico Geological Society, 65th Fall Field Conference Guidebook*, p. 227-234.

Lueth, V.W., 2014, New Mexico's most wanted minerals – “Anhydrite”: *Lite Geology*, v. 35. p. 13.

Howald, T., Person, M. Campbell, A., Lueth, V., Hofstra, A., Sweetkind, D., Gabel, C.W., Banerjee, A., Luijendijk, E., Crossey, L., Karlstrom, K., Kelley, S., and Phillips, F., 2014, Evidence for Long-time scale

(>10³ years) changes in hydrothermal activity induced by seismic events: *Geofluids*, 21 Nov 2014; DOI: 10.1111/gfl. 12113.

- Lueth, V.W., 2014, New Mexico's most wanted minerals – “Whewellite”: *Lite Geology*, v. 36. p. 17.
- Lueth, V.W., 2014, New Mexico's most wanted minerals: Anhydrite, *Lite Geology*, v. 35, pp. 13.
- Lueth, V.W., 2013, New Mexico's most wanted mineral - hydromagnesite: *Lite Geology*, v. 34, p. in press.
- Lueth, V.W., 2013, New Mexico's most wanted mineral - spinel: *Lite Geology*, v. 33, p.11.
- Lueth, V.W., 2012, The Ellis manganese deposits at Truth or Consequences, New Mexico: a link between hot springs and ore deposits: *New Mexico Geological Society, 63rd Fall Field Conference Guidebook*, p. 126-128.
- Samuels-Crow, K.E., Lueth, V.W., Peters, L., and McIntosh, W.C., 2012, 40Ar/39Ar geochronology of jarosite: the effectiveness of HF in removing silicate contaminants: *Chemical Geology*, v. 314-317, p. 23-32.
- Lueth, V.W., 2012, New Mexico's most wanted mineral - olivine: *Lite Geology*, v. 32, p. 8.
- Lueth, V.W., 2011, New Mexico's most wanted mineral – dolomite: *Lite Geology*, v. 31, p. 8.
- Lueth, V.W., 2011, Quartz Pseudomorphs after Anhydrite from the San Juan Mountains, Colorado: *Mineralogical Monographs*, v. 14. p. 44-45.
- Lueth, V.W., 2011, The evolution of magnification: *Lite Geology*, v. 29 p. 2-3.
- Lueth, V.W., 2011, The role of magnification in solving a geologic problem - The mystery of argentiferous galena: *Lite Geology*, v. 29, p. 3-5.
- Lueth, V.W., 2011, New Mexico's most wanted mineral – galena: *Lite Geology*, v. 29, p. 8.
- Lueth, V.W., and Frisch, P.L., 2010, Color in Smithsonite: *Mineralogical Monographs*, v. 13, p. 84-87.
- Eveleth, R.W., and Lueth, V.W., 2010, Smithsonite from the Land of Enchantment, New Mexico USA: *Mineralogical Monographs*, v. 13, p. 74-83.
- Eveleth, R.W. and Lueth, V.W., 2010, Gemstone deposits of the Four Corners region, USA: *New Mexico Geological Society Guidebook 61 – Geology of the Four Corners Country*, p. 221-230.
- Lueth, V.W., 2010, New Mexico's most wanted mineral – jarosite: *Lite Geology*, v. 27, p. 15.
- Lueth, V.W., and Gibbs, R.B. and North, R.M., 2009, A history of mineral collecting at the Chino Mine, Grant County, New Mexico: *Rocks & Minerals*, v. 84, no. 6, p. 492-500.

- Lueth, V.W., 2009, Temperature-pressure constraints on metamorphism and hydrothermal alteration of the Jones dike, Socorro County, New Mexico: New Mexico Geological Society, 60th Fall Field Conference Guidebook, p. 399-406.
- Lueth, V.W., 2009, A summary of age dating at the Hansonburg galena-barite-fluorite deposits, Socorro County, New Mexico: New Mexico Geological Society, 60th Fall Field Conference Guidebook, p. 28-29.
- Lueth, V.W. and Whitworth, T.M., 2009, A hyperfiltration model for copper mineralization at the Abo mine, Scholle district, New Mexico: New Mexico Geological Society, 60th Fall Field Conference Guidebook, p. 102-104.
- Eveleth, R.W., and Lueth, V.W., 2009, Mining history of the Jones district iron deposits, Socorro County, New Mexico: New Mexico Geological Society, 60th Fall Field Conference Guidebook, p. 30-32.
- Eveleth, R.W., Lueth, V.W., and Krukowski, S., 2009, Fraley limestone quarry and kilns: New Mexico Geological Society, 60th Fall Field Conference Guidebook, p. 40-42.
- Eveleth, R.W., and Lueth, V.W., 2009, Old Hansonburg, one of New Mexico's forgotten mining camps: New Mexico Geological Society, 60th Fall Field Conference Guidebook, p. 399-406.
- Eveleth, R.W., Chamberlin, R.M., and Lueth, V.W., 2009, Jerome copper prospects, San Lorenzo Canyon, Socorro County, New Mexico: New Mexico Geological Society, 60th Fall Field Conference Guidebook, p. 92-94.
- Partey, F., Lev, S., Casey, R., Widom, E., Lueth, V.W., and Rakovan, J., 2009, Source of fluorine and petrogenesis of the Rio Grande Rift-Type barite-fluorite-galena deposits: *Economic Geology*, v. 104, p. 505-520.
- Lueth, V.W., 2008, Research sampling of collections: Society of Mineral Museum Professionals Best Practices Report No. 1, <http://www.smmp.net/BestPractice1.pdf>
- Campbell, A.R., and Lueth, V.W., 2008, Isotopic and textural discrimination between hypogene, ancient supergene, and modern sulfates at the Questa Mine, New Mexico: *Applied Geochemistry* v. 23, p. 308-319.
- Eveleth, R.W. and Lueth, V.W., 2008, Magdalena, Socorro County, New Mexico, *in*, Gaestabler, G. (ed.). *American Mineral Treasures: Lithographie: East Hampton, Ct.*, p. 278-285.
- Papike, J.J., Burger, P.V., Karner, J.M., Shearer, C.K., and Lueth, V.W., 2007, Terrestrial analogs of martian jarosites: Major, minor element systematics and Na-K zoning in selected samples: *American Mineralogist*, v. 92, p. 444-447.
- McLemore, V. T., Donahue, K., Phillips, E., Dunbar, N., Smith, M., Tachie-Menson, S., Vitirbo, V., Lueth, V. W., Campbell, A. R. and Walker, B. M., 2006, Petrographic, mineralogical and chemical characterization of Goathill North Mine Rock Pile, Questa Molybdenum Mine, Questa, New Mexico:

2006 Billings Land Reclamation Symposium, June, 2006, Billings, Mt. Published by American Society of Mining and Reclamation, 3134 Montavesta Rd., Lexington, KY CD-ROM,

Lueth, V.W., Rye, R.O. and Peters, L., 2005, "Sour Gas" Hydrothermal jarosite: Ancient to modern acid sulfate mineralization in the southern Rio Grande Rift: *Chemical Geology*, v. 215, p. 339-360.

Lueth, V.W. and Goodell, P.C., 2005, Fluid inclusion analysis and manganese-iron oxide mineralogy of quartz-chalcedony geodes from the Parana basalts, Rio Grande do Sul, Brazil, *in*, Kile, D., Michalski, T., and Modreski, P., (eds.), *Proceedings of the Symposium on Agate and Cryptocrystalline Quartz, Friends of Mineralogy – Colorado Chapter, Golden, CO*, p. 53-59.

Lueth, V.W., Peters, Lisa, and Chamberlin, Richard, 2004, $^{40}\text{Ar}/^{39}\text{Ar}$ age dating of hydrothermal manganese mineralization in the Luis Lopez district, New Mexico: *New Mexico Bureau of Mines & Mineral Resources Bulletin 161*, p. 239-249.

McLemore, V.T., Lueth, V.W. and Walker, B.M., 2004, Alteration scars in the Red River valley, New Mexico: *New Mexico Geological Society, Guidebook 55*, p. 19.

Albright, J.L., and Lueth, V.W., 2003, Pecos diamonds - quartz and dolomite crystals from the Seven Rivers Formation outcrops of southeastern New Mexico: *New Mexico Geology*, v. 25, p. 63-74.

Lueth, V.W., Jones, R.W., 2003, Red garnets from the Sierra de Cruces, Coahuila: *Mineralogical Record*, v.33, p. 73-79; 95.

Goodell, P.C., Lueth, V.W. and Willsie, T., 2002, The Chess Draw depression, Otero County, New Mexico: An altered sublaccolithic, alkalic system: *New Mexico Geological Society, Guidebook 53*, p. 357-361.

Lueth, V.W. and Whitworth, 2001, A geologic membrane-microbial metabolism mechanism for the origin of sedimentary copper deposits in the Pastura district, New Mexico: *New Mexico Geological Society, Guidebook 52*, p. 333-340.

Lueth, V.W., Megaw, P.K.M., Pingitore, N.E., and Goodell, P.C., 2000, Systematic variation in galena solid solution compositions at Santa Eulalia, Chihuahua, Mexico: *Economic Geology*, v. 95, pp. 1673-1687.

Lueth, V.W., 1999, Coronado's Treasure Chest – The mineral museum at the New Mexico Institute of Mining and Technology in Socorro, NM: *New Mexico Trails and Treasures*, v. 7, n. 1, p. 4.

Lueth, V.W., 1999, Antimony: Element and Geochemistry, *in*, Marshall, C.P. and Fairbridge, R.W. (eds.) *The Encyclopedia of Geochemistry*: London, Kluwer Academic Publishers, p.15-16.

Lueth, V.W., 1999, Bismuth: Element and Geochemistry, *in*, Fairbridge, R.W. (ed.) *The Encyclopedia of Geochemistry*: London, Kluwer Academic Publishers, p.43-44.

Lueth, V.W., 1998, Tellurium mineralization in the northern Organ district, Doña Ana County, New Mexico: *New Mexico Geological Society, Guidebook 49*, p. 265-270.

- Lueth, V.W. and Goodell, P. C., Heizler, M.T. and Peters, L., 1998, Geochemistry, geochronology, and tectonic implications of jarosite mineralization in the northern Franklin Mountains, Doña County, New Mexico: New Mexico Geological Society, Guidebook 49, p. 309-316.
- Lueth, V.W. and McLemore, V.T., 1998, A reinterpretation of zoning in the Organ district, Doña Ana County, New Mexico: New Mexico Geological Society, Guidebook 49, p. 279-286.
- McLemore, V.T., Giordano, T.H. Lueth, V.W., and Witcher, J.C., 1998, Origin of barite-fluorite-galena deposits in the Rio Grande rift, New Mexico: New Mexico Geological Society, Guidebook 49, p.251-264.
- Lueth, V.W. and Eveleth, R.W., 1998, The New Mexico Bureau of Mines & Mineral Resources - Mineral Museum, Socorro, New Mexico, USA: Mineralien Welt, Heft 6/98 , p. 61-67.
- Eveleth, R.W. and Lueth, V.W., 1997, A Rocky History: The first one hundred years of the Mineral Museum in New Mexico, USA: New Mexico Geology, v. 19, p. 65-75.
- McLemore, V.T. and Lueth, V.W., 1996, Carbonate-Hosted Lead-Zinc Deposits in New Mexico: in Sangster, D.F. (ed.) Carbonate Hosted Lead-Zinc Deposits, Society of Economic Geologists, Special Publication 4, p. 264-276.
- McLemore, V.T. and Lueth, V.W., Pease, T.C., and Guilinger, J.R., 1996, Petrology and mineral resources of the Wind Mountain laccolith, Cornudas Mountains, New Mexico and Texas: Canadian Mineralogist, v. 34, p. 335-347.
- Lueth, V. W. , 1996, Garnet Resource Potential in Southern New Mexico: Proceedings of the 31st Forum on the Geology of Industrial Minerals, New Mexico Bureau of Mines & Mineral Resources Bulletin 154, p. 137-146.
- Cetin, H., Walder, I.F., Lueth, V. W., and Gundiler, I.H., 1996, Garnet Recovery from Hanover Mine Tailings, Grant County, New Mexico: Proceedings of the 31st Forum on the Geology of Industrial Minerals, New Mexico Bureau of Mines & Mineral Resources Bulletin 154, 147-158.
- McLemore, V.T., Lueth, V. W., Guilinger, J. R., and Pease, T. C., 1996, Geology, Mineral Resources, and Marketing of the Wind Mountain Nepheline Syenite Porphyry, Cornudas Mountains, New Mexico and Texas: Proceedings of the 31st Forum on the Geology of Industrial Minerals, New Mexico Bureau of Mines & Mineral Resources Bulletin 154, p. 127-136.
- Lueth, V.W., Pingitore, N.E., Goodell, P.C., and Megaw, P.K.M., 1996, Compositional study of argentiferous galena from the West Camp of the Santa Eulalia mining district: in, Goodell, P.C., Reyes, I.A., Reyes, M., and Carreon, P.I., eds, VI Conferencia Internacional de Minería - Excursion geologica al Cenozoico de Chihuahua 1996, Facultad de Ingeniería U.A.Ch, Mexican Geological Society and Colegio de Ingenieros Geologos de México A.C., p. 63-73.

Wong, Virginia and Lueth, V.W., 1991, Contact metasomatism associated with a llanite dike, Llano County, Texas: Proceedings of the Texas Academy of Science, v.1, p. 153-158.

Lueth, V.W., Goodell, P.C., and Pingitore, N.E., 1990, Encoding an ore system in bismuthinite-stibnite compositions, Julcani, Peru: Economic Geology, v. 85, p. 1462-1472.

Goodell, P.C., Lueth, V.W., and Llavona, R., 1988, Sulfosalt minerals in the State of Chihuahua, Mexico: El Paso Geological Society Guidebook, v. 21, p. 151-157.

Lueth, V.W., Pearson, J., and Porter, E., 1986, Distribution of precious metal deposits in southwestern New Mexico: El Paso Geological Society Guidebook, v. 19, p. 95-104.

ABSTRACTS

Lueth, V.W., 2018, Light sensitive minerals: 39th Annual New Mexico Mineral Symposium Proceedings Volume, p. 34-35.

Demark, R.S., Katonak, T., Kline, J., and Lueth, V.W., 2018, New discoveries at Copper Hill, Taos County, New Mexico: 39th Annual New Mexico Mineral Symposium Proceedings Volume, p. 12-14.

Axen, G., Soundy, K., and Lueth V.W., 2017, Comparison of West Salton Detachment fault rocks between paleoseismogenic and paleocreeping(?) sites: Initial results from the West Salton detachment fault: Poster Presentaion (#116) at 2017 Annual Meeting of the Southern California Earthquake Center,

Sternberg, E., Kurota, A., and Lueth, V.W., 2017, *The Use of Quartz Crystals for the Manufacture of Flaked Lithic Tools During the El Paso Phase* (abs): 19th Biennial Jornada Mogollon Archeology Conference, Oct. 13-14, 2017, El Paso, TX.

Lueth, V.W. and McNamara, K., 2017, The evolution of uranium mineralization in New Mexico (abs): New Mexico Geological Society Annual Spring Meeting Proceedings Volume, p. 50.

Robison, A., McIntosh, W., and Lueth, V.W., 2017, $^{40}\text{Ar}/^{39}\text{Ar}$ geochronology of magmatism and alteration in the Gallinas Mountains, with implications for rare earth mineralization (abs): New Mexico Geological Society Annual Spring Meeting Proceedings Volume, p. 61.

Pearce, A., R., Walder, I.F., Frey, B., and Lueth, V.W., 2017, Sequential chemical extraction as a method to determine uranium mineral leachability and speciation (abs): New Mexico Geological Society Annual Spring Meeting Proceedings Volume, p. 57.

Lueth, V. W. and Simmons, P., 2016, Blue Ice: Halite and Associated minerals from the Carlsbad Potash district, New Mexico: FM-MSA-TGMS Symposium, Mineralogical Record, v. 47.

Lueth, V.W. and McNamara, K., 2016, The evolution of uranium mineralogy in New Mexico: 37th Annual New Mexico Mineral Symposium Proceedings Volume, p. 15.

- Demark, R.S., and Lueth V.W., 2016, A New Mexico occurrence of sidwillite and other molybdenum secondary minerals: 37th Annual New Mexico Mineral Symposium Proceedings Volume, p. 9.
- Lueth, Virgil, 2015, Mineral Museum's GRAND OPENING, *Lite Geology*, v. 38, pp. 7.
- Lueth, V.W., 2014, Tales from the Crypt(omelane): 35th Annual New Mexico Mineral Symposium, Socorro, NM., Nov. 8-9.
- Lueth, V.W. and Eveleth, 2014, The past, present, and future of the New Mexico Bureau of Geology & Mineral Resources – Mineral Museum: 35th Annual New Mexico Mineral Symposium, Socorro, NM., Nov. 8-9.
- Lueth, V.W., 2013, Age and duration of ancient and modern geothermal/hydrothermal systems in the southern Rio Grande Rift: Geological Society of America, 2013 Annual Meeting, Denver, v. 45, n. 7.
- Lueth, V.W., 2013, New Mexico Fluorite – Over 10 million years of mineralization that continues today: FM-MSA-TGMS Symposium, *Mineralogical Record*, v. 44.
- Lueth, V.W. and Peters, L., 2013, Age and duration of ancient and modern geothermal/hydrothermal systems in the southern Rio Grande rift: Geological Society of America, 2013 Annual Meeting, Abstracts with Program, v. 45, n. 7.
- Lueth, V.W., 2012, Exploring hydrologic connections in the upper crusts - the ore deposits of the Rio Grande Rift: Geological Society of America, Rocky Mountain Section Meeting, Abstracts with Programs, v. 44, n. 6., p. 79.
- Lueth, V.W., 2012, Casa de Cobre - The geologic history of copper mineralization in New Mexico: Proceedings of the 33rd Annual New Mexico Mineral Symposium, p. 21.
- Lueth, V.W., 2012, Exploring hydrologic connections in the upper crust - the ore deposits of the Rio Grande rift: Geological Society of America, Rocky Mountain Section Meeting, Abstracts and Programs, v. 44, no. 6, p. 79.
- Lueth, V.W., Peters, L., and Casey, H., 2011, New application of manganese oxide mineralization as a pathfinder to magmatic-hydrothermal sulfide mineralization: Geological Society of America Abstracts and Programs, v. 43, no. 5.
- Lueth, V.W., Peters, L., and Samuels, K.E., 2009, ⁴⁰Ar/³⁹Ar geochronology of manganese oxide minerals: A mineralogical basis for successful analysis: New Mexico Geological Society, Spring Meeting, Abstracts and Programs, *New Mexico Geology*, v. 31. p. 43
- Samuels, K.E., Lueth, V.W., Peters, L., McIntosh, W.C., 2009, ⁴⁰Ar/³⁹Ar geochronology of jarosite: The effectiveness of HF in removing silicate contaminants: New Mexico Geological Society, Spring Meeting, Abstracts and Programs, *New Mexico Geology*, v. 31. p.51-52.

- Samuels, K.E., Lueth, V.W., Campbell, A.R., and Peters, L., 2008, Landscape evolution of northern New Mexico as recorded in jarosite: 18th Annual Goldschmidt Conference, Vancouver, Canada, Special Supplement of *Geochemica et Cosmochimica Acta*, v. 12, n. 12S, p. A821.
- Campbell, A.R., Lueth, V.W., Graf, G.J., and Logsdon, M.J., 2008, Mineralogy of weathering at Questa Mo Mine, NM: 2. Stable isotopes and geochemical modeling: 18th Annual Goldschmidt Conference, Vancouver, Canada, Special Supplement of *Geochemica et Cosmochimica Acta*, v. 12, n. 12S, p. A133.
- Graf, G.J., Lueth, V.W., Campbell, A.R., and Donahue, K.M., 2008, Mineralogy of weathering at Questa Mo Mine, NM: 1. Natural Analogs: 18th Annual Goldschmidt Conference, Vancouver, Canada, Special Supplement of *Geochemica et Cosmochimica Acta*, v. 12, n. 12S, p. A322.
- Lueth, V.W., 2008, Encoding of water-rock-atmosphere interactions in jarosite: Implications for Mars., *in*, Workshop on Ground Truth from Mars: Science Payoff from a Sample Return Mission: Lunar Planetary Institute Contribution No. 1401, p. 51-52.
- Lueth, V.W., Campbell, A.R. and Papike, J.J., 2008, Stable isotope characterization of a terrestrial Kieserite with comparisons to other sulfate minerals., *in*, Workshop on Ground Truth from Mars: Science Payoff from a Sample Return Mission: Lunar Planetary Institute Contribution No. 1401, p. 53.
- Lueth, V.W., Dunbar, N. and Rosemeyer, T., 2007, Clues to the coloration of Michigan datolite: 28th New Mexico Mineral Symposium, p. 24-25.
- Lueth, V.W., 2006, Textural and Stable Isotope Discrimination of Hypogene and Supergene Jarosite and Environment of Formation Effects on ⁴⁰Ar/³⁹Ar Geochronology: Workshop on Martian Sulfates as Recorders of Atmospheric-Fluid-Rock Interactions, Lunar and Planetary Institute Contribution 1331, p. 51.
- Lueth, V.W., 2006, Extraterrestrial mineralogy – An update on Martian Minerals: 27th New Mexico Mineral Symposium, p. 24-25.
- Lueth, V.W. 2006, Natural Zeolite Occurrences in New Mexico, *in*, Bowman, R.S. and Delap, S.E. (eds), *Zeolite '06 – 7th International Conference on the Occurrence, Properties, and Utilization of Natural Zeolites*, Book of Abstracts, p. 165.
- Lueth, V.W., Peters, L., Campbell, A.R., Donahue, K., McLemore, V.T., and Walker, B.M., 2005, ⁴⁰Ar/³⁹Ar age and geomorphic development of hydrothermal alteration scars in the Red River valley, New Mexico: Geological Society of America, Abstracts and Programs, v. 37, n. 7, p. 231 .
- Campbell, A.R., Lueth, V.W. and Pandey, S., 2005, Stable isotope discrimination of hypogene and supergene sulfate minerals in rock piles at the Questa Molybdenum mine, New Mexico: Geological Society of America, Abstracts and Programs, v. 37, n. 7, p. 394.
- Phillips, E.H., Lueth, V.W., Campbell, A.R., McLemore, V.T., and Tachie-Menson, S., 2005, Stratigraphy and weathering history of the Goathill North mine rock pile, Questa Molybdenum Mine, New

Mexico - Some initial results: Geological Society of America Abstracts with Programs, Vol. 37, No. 7, p. 510

Donahue, K.M., Dunbar, N.D., McLemore, V.T., Lueth, V.W., Hauff, P.L., and Heizler, L., 2005, Clay mineralogy of the Goathill North mine rock pile and Goathill and Straight Creek hydrothermal alteration scars, Questa area, New Mexico: Geological Society of America Abstracts with Programs, Vol. 37, No. 7, p. 394

Pandy, S., Campbell, A.W., and Lueth, V.W., 2005, Stable isotope studies of ancient and modern acid sulfate minerals in rock piles at the Questa mine, Taos County, New Mexico: Society of Mining Engineers Annual Meeting, Salt Lake City, UT, p.49.

Party, F., Lev, S., Casey, R., Widom, E., Lueth, V. and Rakovan, J., 2005, Source of fluorine and petrogenesis of the Rio Grande Rift type barite-fluorite-galena deposits: Goldschmidt Conference, Abs. No. 1207.

Phillips, E.H., Lueth, V.W., Campbell, A.W., McLemore, V.T., Walker, B.M. and Tachie-Menson, S., 2005, Soil petrography of a sample traverse from a portion of the Goathill North Rock Pile, Questa mine, New Mexico: New Mexico Geological Society 2005 Spring Meeting, Abstracts and Programs and New Mexico Geology, v. 27, n. 2, p. 47.

Donahue, K.M., Hauff, P.L., Dunbar, N.W., Lueth, V.W., McLemore, V.T. and Heizler, L., 2005, Clay mineralogy of alteration scars and rock piles, Questa area, New Mexico: New Mexico Geological Society 2005 Spring Meeting, Abstracts and Programs and New Mexico Geology, v. 27, n.2, p. 50.

Tachie-Menson, S., White, T., McLemore, V.T., Lueth, V.W., Walker, B.M., 2005, Variation of temperature and pore oxygen and carbon dioxide in rock piles at the Molycorp Questa Mine, New Mexico: New Mexico Geological Society 2005 Spring Meeting, Abstracts and Programs and New Mexico Geology, v. 27, n.2 p. 47.

Lueth, V.W., 2004, Early commercial mineral collecting in New Mexico as represented in the Mineral Collector (1894-1909), Proceedings of the 25th Annual New Mexico Mineral Symposium, p.5

North, R.M. and Lueth, 2004, Gemstones of New Mexico, Proceedings of the 25th Annual New Mexico Mineral Symposium, p. 8-9.

McLemore, V.T., Lueth, V.W., Rowe, A., Walker, B.M., DeMark, R.S. and Hlava, P. F., 2004, Minerals of the Questa Mine, Taos County, New Mexico Proceedings of the 25th Annual New Mexico Mineral Symposium, p.12.

Eveleth, R.W. and Lueth, V.W., 2004, New Mexico Gold throughout history: Proceedings of the 25th Annual New Mexico Mineral Symposium, p. 19.

McGlasson, J., Megaw, P.K. and Lueth, V.W., 2004, The wealth of New Spain: Conquistador silver in Mexico: Proceedings of the 25th Annual New Mexico Mineral Symposium, p. 20-23.

- Partey, F.K., Widom, E., Lueth, V.W., Lev, S., and Rakovan, J., 2004, Tracing the source of fluorine in the fluorite mineralization of the southern Rio Grande Rift: Geological Society of America Cordilleran and Rocky Mountain Section Meeting,
- Lueth, V.W. and Rye, R.O., 2003, Sulfuric and hydrofluoric acid speleogenesis associated with fluorite-jarosite mineralization along the Rio Grande rift, New Mexico: New Mexico Geological Society 2003 Spring Meeting, Abstracts and Programs and New Mexico Geology, v. 25, p. 42.
- Lueth, V.W., 2002, Red Garnets from Lake Jaco, Mexico and the chemical controls of color in garnet: New Mexico Geology, v.24, p. 133.
- Frisch, P.L. and Lueth, V.W. and Hlava, P., 2002, The colors of smithsonite: a microchemical investigation: New Mexico Geology, v.24, p. 132-133.
- North, R.M. and Lueth, V.W., 2002, History of native copper specimens from the Chino mine, Santa Rita, New Mexico: New Mexico Geology, v.24, 133-134.
- Whitworth, T.M. and Lueth, V.W., 2002, Microbial/clay membrane interactions and the origin of sedimentary copper deposits in the Pastura district, Guadalupe County, New Mexico: Clay Minerals Society, 39th Annual Meeting, Boulder, Co., Program and Abstracts, p.178.
- Whitworth, T.M. and Lueth, V.W., 2002, Microbial and clay membrane processes and the origin of sedimentary copper deposits in the Pastura district, Guadalupe County, New Mexico: 16th International Conference on Basement Tectonics, Rolla, Mo., p. 52.
- Lueth, V.W., Peters, Lisa, and Chamberlin, Richard, 2001, Age of hydrothermal manganese mineralization in the Luis Lopez Manganese district determined by $^{40}\text{Ar}/^{39}\text{Ar}$ Dating of Cryptomelane: New Mexico Geological Society 2001 Spring Meeting, Abstracts and Programs and New Mexico Geology, v. 23, p. 51.
- Chavez, W.X., Jr., Lambert, J., and Lueth, V.W., 2001, Application of ore mineralogy to the processing of high-grade copper ores, Bolivian Altiplano region, Western Bolivia: SME Annual Meeting, Abstracts and Program, p.62.
- Lueth, V.W., Rye, R.O., and Peters, L., 2000, Hydrothermal "Sour Gas" Jarosite: Ancient and modern acid sulfate mineralization events in the Rio Grande Rift: Geological Society of America, 2000 Annual Meeting, Abstracts and Programs, p. A-49.
- Lueth, V.W., Rye, R.O., and Peters, L., 2000, The origin and natural destruction of an ore deposit as recorded by jarosite: Hansonburg Mining District, New Mexico: Geological Society of America, 2000 Annual Meeting, Abstracts and Programs, p. A-109.
- Lueth, V.W., Rye, R.O., and Peters, L., 1999, Age and stable isotope geochemistry of hydrothermal jarosite at the Copiapo Jarosite Mine, New Mexico: Geological Society of America, 1999 Annual Meeting, Abstracts and Programs, p. A403.

- Lueth, V.W., Rye, R.O., and Peters, L., 1999, The applications of jarosite geochronology and stable isotope geochemistry to ore deposit genesis and weathering – some examples from the Rio Grande Rift: *New Mexico Geology*, v.21, p. 32-33.
- Goodell, P.C., Lueth, V.W., Peters, L., and Reyes-Cortes, I., 1999, Giant jarosite crystals from the Peña Blanca Uranium district, Chihuahua, Mexico: *Mineralogical Record*, v. 30, p. 85.
- Lueth, V.W. and Eveleth, R.W., 1998, "Science and Service," the New Mexico Bureau of Mines and Mineral Resources - Mineral Museum, Socorro, New Mexico, USA: Abstracts and programs of the International Mineralogical Association, Toronto, p.A137.
- Lueth, V.W. and Goodell, P.C., 1998, A fluid inclusion study of geodes from the Rio Grande do Sul, Brazil: Implications for the origin of quartz geodes: *Pan American Conference on Research on Fluid Inclusions*, Nevada Bureau of Mines and Geology, Open-file Report 98-4, p. 43.
- Lueth, V.W., 1998, Two diverse origins for turquoise at the Orogrande mining district, Otero County, New Mexico: *New Mexico Geology*, v. 20, n. 2, p. 64-65.
- Goodell, P.C. and Lueth, V.W., 1998, Lazulite occurrences in southern New Mexico: *New Mexico Geology*, v. 20, n. 2, p. 65.
- McLemore, V.T., Glines, J. and Lueth, V.W., 1998, Quartz epimorphs from the Hermosa district, Sierra County, New Mexico: *New Mexico Geology*, v. 20, n. 2, p. 63-64.
- Eveleth, R.W. and Lueth, V.W., 1998, A Rocky History - The first 100 years of the Mineral Museum in Socorro, New Mexico, USA: *New Mexico Geology*, v. 20, n. 2, p. 62.
- Lueth, V.W. and Heizler, M.T., 1997, $^{40}\text{Ar}/^{39}\text{Ar}$ age and origin of jarosite mineralization at the Hansonburg district, New Mexico: *New Mexico Geology*, v.19, p.51.
- Lueth, V.W., Megaw, P.K.M., Pingitore, N.E. and Goodell, P.C., 1997, Variation in galena solid-solution compositions at Santa Eulalia, Chihuahua, Mexico - Implications for metal zoning: *Geological Society of America, 1997 Rocky Mountain and South-Central Meeting, Abstracts and Programs*, p.37.
- Goodell, P.C., Lueth, V.W. and Heizler, M.T., 1997, $^{40}\text{Ar}/^{39}\text{Ar}$ Age of Rio Grande Rift tectonism in the north Franklin Mountains, west Texas and southern New Mexico: *Geological Society of America, 1997 Rocky Mountain and South-Central Meeting, Abstracts and Programs*, p.11.
- DeRosa, G., Whitworth, T.M. and Lueth, V.W., 1997, Experimental evidence for potential natural remediation of heavy metal plumes: *Proceedings on the Joint Conference on the Environment*, WERC and HSRC, Albuquerque, NM, p. 285-288.
- Lueth, V.W., DeMark, R., and Hlava, P., 1996, New mineral occurrences in New Mexico - Reported at the open forum of the 17th Annual New Mexico Mineral Symposium: *New Mexico Geology*, v.19, p.28.
- Lueth, V.W., 1996, Secondary bismuth minerals from the Apache mine, Hidalgo County, New Mexico: *New Mexico Geology*, v. 19, p.11.

- Lueth, V.W. and Goodell, P.C., 1996, A remarkable deposit of jarosite: The product of rift basin dewatering: Geological Society of America, 1996 Annual Meeting, Abstracts and Programs, p. A-210.
- McLemore, V.T., Pease, T.C., and Lueth, V.W., 1996, Age and geology of the mineral deposits in the Organ Mountains district, Doña Ana County, New Mexico, *New Mexico Geology*, v. 18, p. 42-43.
- Lueth, V. W., Gibbs, R. B., and Beyers, J., 1995, Geology and tellurium mineralogy of the Lone Pine area, Wilcox district, Catron County, New Mexico: 16th Annual New Mexico Mineral Symposium, Socorro, NM. p. 20-21.
- Whitworth, T. M. and Lueth, V. W., 1995, On seafloor hydrology and the origin of manganese nodules: Geological Society of America, 1995 Annual Meeting, Abstracts and Programs, p. A-428
- McLemore, V.T. and Lueth, V.W., 1995, Carbonate-hosted lead-zinc deposits in New Mexico: Society of Economic Geologists, International Field Conference on Carbonated Hosted Lead-Zinc Deposits, St. Louis, Mo., p. 209-211.
- Lueth, V. W., 1995, Garnet Resource Potential in southern New Mexico: Abstracts and Programs of the 31st Forum on the Geology of Industrial Minerals, El Paso, Texas, p. 39-41.
- Cetin, H., Walder, I.F., Lueth, V. W., and Gundiler, I.H., 1995, Garnet Recovery from Hanover Mine Tailings, Grant County, New Mexico: Abstracts and Programs of the 31st Forum on the Geology of Industrial Minerals, El Paso, Texas, p. 16-17.
- McLemore, V.T., Lueth, V. W., Guilinger, J. R., and Pease, T. C., 1995, Geology, mineral resources, and marketing of the Wind Mountain nepheline syenite porphyry, Cornudas Mountains, New Mexico and Texas: Abstracts and Programs of the 31st Forum on the Geology of Industrial Minerals, El Paso, Texas, p. 42-43.
- Lueth, V. W., 1994, New Mexico garnets: mineralogical beauty and economic potential: 15th Annual New Mexico Mineral Symposium, Abstracts and program, Socorro, NM, p. 16-17.
- Goodell, P.C and Lueth, V. W., 1994, Geology and mineralogy of the Jarilla (Orogrande) mining district, New Mexico: 15th Annual New Mexico Mineral Symposium, Abstracts and program, Socorro, NM, p. 7-8.
- Lueth, V.W. and Whitworth, M.T., 1994, Geologic membrane effects and the origin of red bed copper deposits in New Mexico: Geological Society of America, 1994 Annual Meeting, Abstracts and Programs, p. A-310.
- Whitworth, M.T., and Lueth, V.W., 1994, Potential geologic membrane controls on heavy metal transport: Geological Society of America, 1994 Annual Meeting, Abstracts and Programs, p. A-200.
- Lueth, V.W. and Whitworth, M.T., 1994, Evidence for membrane effects at two New Mexico red bed copper districts: *New Mexico Geology*, v.12, p. 36.

- Whitworth, M.T. and Lueth, V.W., 1994, A geologic membrane mechanism for the origin of sedimentary copper deposits: *New Mexico Geology*, v.12, p. 36.
- Lueth, V.W., 1993, Lithologic control of magnetite contamination in the Upper Trinity Aquifer of north central Texas: Geological Society of America, south-central Section Meeting, Ft. Worth, TX, Abstracts and Programs, p. 36.
- Lueth, V.W., 1992, Origin of reversed textural features in a granite laccolith, Organ district, New Mexico: Geological Society of America, Rocky Mountain Section Meeting, Ogden, UT, Abstracts and Programs, v.24, p. 49.
- Wong, Virginia and Lueth, V.W., 1991, Contact metasomatism associated with the emplacement of a Llanite dike, Llano County, Texas: Texas Academy of Science, 94th Annual Meeting, p. 96
- Lueth, V.W., Brian, A.D., and Alford, P., 1990, Submicron magnetite of potential biologic origin in north-central Texas groundwater: Geological Society of America, 1990 Annual Meeting, Abstracts and Programs, p. A64.
- Lueth, V.W., Pingitore, N.E., and Goodell, P.C., 1990, Polygenetic ore mineralization in the Organ district, New Mexico: International Symposium on Mineral Resources of the Chihuahua Desert, El Paso, Texas, p. 12 (invited).
- Lueth, V.W., Pingitore, N.E., and Goodell, P.C., 1989, Characterization of tellurium mineralization in the Organ district, New Mexico: Geological Society of America, 1989 Annual Meeting, Abstracts and Program, p. A149.
- Lueth, V.W., Pingitore, N.E., and Goodell, P.C., 1989, Hot spring telluride mineralization overprinting base metal sulfide replacement deposits, Organ district, New Mexico: Texas Academy of Science, 92nd Annual Meeting, Abstract No. 144.
- Lueth, V.W., Goodell, P.C., Llavona, R., and Sandoval, J., 1989, Mineral inclusions in galena from the Organ district, Dona Ana County, New Mexico: *New Mexico Geology*, v.10, p. 20.
- Lueth, V.W., Goodell, P.C., and Pingitore, N.E., 1988, Compositional variation in the bismuthinite-stibnite solid solution with reference to metal zoning at Julcani, Peru: Geological Society of America, 1988 Annual Meeting, Abstracts and Programs, v. 20, p. A352.
- Lueth, V.W., Goodell, P.C., Llavona, R., Mertig, H., and Sharp, W., 1988, Tellurium minerals of the Organ district, Dona Ana County, New Mexico: *New Mexico Geology*, v.10, p. 18.
- Lueth, V.W. and Goodell, P.C., 1988, Sulfosalt and semimetal sulfide distribution in the southwestern United States: First International Symposium on Tectonics and Metallogeny of Diwa Regions, Changsha, China, p. 300-301 (Invited).
- Lueth, V.W. and Goodell, P.C., 1987, Distribution of semimetals in the southwestern United States and implications for metallogeny: Geological Society of America, 1987 Annual Meeting, Abstracts and Programs, v.19, p. 750.

Lueth, V.W., 1987, Mineralogic, petrologic, and fluid inclusion comparison of copper skarns in the Silver City mining region, New Mexico: Geological Society of America, 40th Annual Rocky Mountain Section Meeting, Abstracts with Programs, p. 316.

Lueth, V.W., Goodell, P.C., and Kropp, D.A., 1987, Sulfosalt and semimetal sulfide distribution in the southwestern United States: *New Mexico Geology*, v. 8, p. 28.

Lueth, V.W., 1984, Comparison of copper-bearing skarn deposits in the Central mining district, New Mexico: New Mexico Geological Society, 1984 Ann. Mtg., Socorro, NM, Abstracts and Program, p.28.

BOOK PUBLICATIONS EDITED

Lueth, V.W. and D'Ambrosio, G., 2018, *New Mexico Mineral Symposium Proceedings Vol. 37*, 37 p.

Lueth, V.W. and Arthur, R, 2017, *New Mexico Mineral Symposium Proceedings Vol. 37*, 33 p.

Lueth, V.W. and Arthur, R, 2016, *New Mexico Mineral Symposium Proceedings Vol. 37*, 29 p.

Lueth, V.W. and Arthur, R, 2015, *New Mexico Mineral Symposium Proceedings Vol. 36*, 25 p.

Lueth, V.W. and D'Ambrosio, G., 2014, *New Mexico Mineral Symposium Proceedings Vol. 35*, 27 p.

Lueth, V.W. and D'Ambrosio, G., 2013, *New Mexico Mineral Symposium Proceedings Vol. 34*.

Lucas, S.G., McLemore, V.T., Lueth, V.W., Spielmann, J.A., and Krainer, K. (eds.), 2012, *New Mexico Geological Society Guidebook 62 - Geology of the Warm Springs Region*, 580 p.

Koning, D.J., Karlstrom, K.E., Kelley, S.A., Lueth, V.W., and Aby, S.B., (eds), 2011, *New Mexico Geological Society Guidebook 62 – Geology of the Tusas Mountains and Ojo Caliente*, 418 p.

Fassett, J.E., Zeigler, K.E., and Lueth, V.W., (eds.), 2010, *New Mexico Geological Society Guidebook 61 – Geology of the Four Corners Country*, 256 p.

Lueth, V.W., Lucas, S.G., and Chamberlin, R.M. (eds.), 2009, *New Mexico Geological Society Guidebook 60 – Geology of the Chupadera Mesa*, 448 p.

Lueth, V.W. and Hicks, J., 2008-2012, *New Mexico Mineral Symposium Proceedings, Vol. 29-33*.

Kues, B.S., Kelley, S.A. and Lueth, V.W., 2007, *New Mexico Geological Society Guidebook 58 – Geology of the Jemez Region*, 499 p.

Lueth, V.W., Eyde, D., and Chavez, Jr., W.X., 2006, Zeolite deposits of southwestern New Mexico and southeastern Arizona: *Field Trip Guidebook, 7th International Conference on the Occurrence, Properties and Utilization of Natural Zeolites*, 30 p.

Land, L., Lueth, V.W., Raatz, W., Boston, P. and Love, D.W., 2006, New Mexico Geological Society Guidebook 57 – Caves and Karst of Southeastern New Mexico, 352 p.

Lucas, S.L., Zeigler, K.E., Lueth, V.W., and Owen, D.E., 2005, New Mexico Geological Society Guidebook 56 – Geology of the Chama Basin, 457 p.

Brister, B.S., Bauer, P.W., Read, A.S. and Lueth, V.W., 2004, New Mexico Geological Society Guidebook 55 – Geology of the Taos Region, 440 p.

Lueth, V.W. and D'Ambrosio, G., 2005-2007, New Mexico Mineral Symposium Proceedings Vol. 26 - 28.

Lueth, V.W. and Deardorff, J., 2000-2004, New Mexico Mineral Symposium Proceedings Volumes 20-25.

Lueth, V.W., Giles, K., Lucas, S.G., Kues, B.S., Myers, R.G. and Ulmer-Scholle, D.S., (eds.) 2002, New Mexico Geological Society Guidebook 53 – Geology of White Sands, 362 p.

Lueth V.W. and Hjellming, C., 1994-99, New Mexico Mineral Symposium, Proceedings Volumes 14-19.

MISCELLANEOUS PUBLICATIONS/REPORTS

Classroom Materials :

Welch, S., and Lueth, V.W., 2011, Larger than life: Magnification of Sand: Lite Geology, v. 29 p. 9-11.

Geometry, Explorations and Applications, 1998, Ch. 2, - McDougal Littrel Publishers - Interview and development of geometry problems.

Road Logs:

Chamberlin, R.M.; Love, D.W.; Harrison, B.J.; Lueth, V.W.; Frey, B.A.; Williams, S.; Connell, S.D., 2016, Day 0- West road log: Sevilleta west: Pre-meeting road log from Sevilleta National Wildlife Refuge visitor center to San Acacia, Cerritos de las Minas, west Mesa, and San Lorenzo Spring, *in*: The Geology of the Belen Area, Frey, Bonnie A.; Karlstrom, Karl E.; Lucas, Spencer G.; Williams, Shannon; Zeigler, Kate; McLemore, Virginia; Ulmer-Scholle, Dana S., *ed(s)*, New Mexico Geological Society, Guidebook, 67th Field Conference, pp. 37-58.

Lucas, S.G., Krainer, K., McLemore, V.T., Spielmann, J.A., and Lueth, V.W., 2012, Mud Springs Mountains, Third day road log from Truth or Consequences to Mud Mountain and Whiskey Canyon, *in*, Lucas, S.G., McLemore, V.T., Lueth, V.W., Krainer, K., and Spielmann, J.A., Geology of the Warm Springs Region: New Mexico Geological Society Fall Field Conference Guidebook 63, p. 97-162.

Lueth, V.W., Lucas, S.G., Cather, S.M., Chamberlin, R.M., Love, D.L., McGraw, D., Luther, A., Krainer, K., and Spielmann, J.A., 2009, Northern Chupadera Mesa, Third-day road log from Socorro to Gran Quivera via Abo Pass, Scholle, and Mountain Air: New Mexico Geological Society Guidebook 60, p. 75-104.

Lucas, S.G., Cather, S.M., Chamberlin, R.M., Lueth, V.W., Krainer, K., and Spielman, J.A., 2009, Quebradas Country, Second-day road log from Socorro to Buffalo Well via Arroyo de la Parida and Canoncito de la Uva: New Mexico Geological Society Guidebook 60, p. 49-74.

Chamberlin, R.M., Lueth, V.W., Lucas, S.G., Cather, S.M., Hook, S.C., Krainer, K., and Spielman, J.A., 2009, Southern Chupadera Mesa, 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. 1-48.

Lueth, V.W., Lucas, S.G., Giles, K.A., Kues, B.S., and Witcher, J., 2002, Third-day road log, from Alamogordo to White Sands, San Agustin Pass, Organ Quarry and Tortugas Mountain: New Mexico Geological Society Guidebook 53 – Geology of White Sands, 362 p

Lucas, S.G., Lueth, V.W., Kues, B.S., Myers, R.G. and Giles, K. A., 2002, First day road log, Alamogordo to Tularosa, Mockingbird Gap, Trinity Site, Oscuro and Three Rivers: New Mexico Geological Society Guidebook 53 – Geology of White Sands, 362 p.

Giles, K.A., Lucas, S.G., Lueth, V.W. and Myers, R.G., 2002, Second-day road log, from Alamogordo to Tularosa, Rhodes Canyon, Lake Lucero and return to Alamogordo: New Mexico Geological Society Guidebook 53 – Geology of White Sands, 362 p

Book Reviews:

New Mexico Rockhounding – Rocks & Minerals (2000) v. 72, p. 133.

Minerals of Arizona by Neil R. Bearce – New Mexico Geology (2000) v. 22, p.17.

Agate – Microstructure and Possible Origin by Terry Moxon – Rocks & Minerals (1999) v.74, p. 278.

Photographing Minerals, Fossils, & Lapidary Materials by Jeffrey Scovil - New Mexico Geology (1997) v.19, p.102.

Gem Trails of New Mexico by J.R. Mitchell - Rocks & Minerals (1997) v. 72, p.197.

PROFESSIONAL SERVICE

Consulting Editor - Rocks & Minerals magazine 2010-current

Board of Directors - New Mexico Geological Society Foundation - 2005-2011; President 2007-2011.

Board of Directors – Friends of Mineralogy: 2001 - current; Secretary 2002 - 2003; Vice-president 2003 - 2006; President 2006 - 2008.

Board of Directors - New Mexico Geological Society; Secretary 1998, Treasurer 1999, Vice-president 2000, President 2001, Past-president 2002.

Board of Directors - Society of Mineral Museum Professionals 1997 - current; President 2003 - 2013;
Secretary 2000 - 2002

Chairman of the Curators & Collections Committee - Society of Mineral Museum Professionals, 1996-
current

Member of the Education Committee - Society of Mineral Museum Professionals, 1995-96

SPONSOR OF STUDENT RESEARCH

2018 Camilo Uribe (NMT E&ES-Ph.D.), Samantha Caldwell (NMT Min Eng-MS), Alexandra Pearce (NMT
E&ES-Ph.D.)

2017 Alanna Robison (E&ES, *Research Advisor-NMT*) - *Geochronology of alkaline intrusive rocks and its
relationship to Fluorite-REE mineralization in the Gallinas Mountains, New Mexico*

2017 Michael Mathuri (MS-Geol. Sci. – University of Texas at El Paso), Katrina Soundy (NMT E&ES-MS)

2016 Philip Simmons (E&ES, *Research Advisor-NMT*) - *Temperature constraints and the effect of fluid
flow on the formation of the Jones Camp dike and associated rocks, Socorro County, New Mexico*

2012 Zachary Vance (E&ES, *Research Advisor-NMT*) - *REE Mineralization in the Gallinas Mountains, New
Mexico.*

2011 Heather Casey – (MS-E&ES, *Research Advisor-NMT*) - *Geochemistry of Manganese Oxides and Age
of Mineralization at the Santa Eulalia Mining District, Mexico;*

2010 Pedro Acosta; Daniel Amaokoh (MS Committee – Mineral Engineering-NMT)

2008 Kim Samuels (MS – E&ES research advisor-NMT) – *Weathering and landscape evolution recorded in
supergene jarosite, Red River valley, northern New Mexico;*

2008 Gabriel Graf (MS-E&ES research advisor-NMT) - *Mineralogical and geochemical changes associated
with sulfide and silicate weathering in natural alteration scars, Taos County, New Mexico;*

2007 Ismail Ozen (MS Committee – Mineral Engineering-NMT)

2006 Josh Crook; Roshelly Paliza (MS Committee – Mineral Engineering-NMT)

2005 David Birney - Mineralogy of the El Tesoro deposit, Chile: New Mexico Tech (MS - E&ES)

2005 Dylan Canales - The Akwatia Diamond Field, Ghana, West Africa: source rocks: New Mexico Tech (MS Committee - Earth & Environmental Science)

2004 Jason Odette - Quantitative mineralogic evaluation of the transition zone: ore characterization study at the Cerro Colorado Porphyry Cu- (Mo-) Deposit, Region I, northern Chile: New Mexico Tech (MS Committee - Earth & Environmental Science)

2004 Amber McIntosh - Stable isotopic evidence for fluid mixing in the tertiary alkalic-type epithermal Au-Te deposit, Cripple Creek, CO; New Mexico Tech (MS Committee - Earth & Environmental Science)

2003 Jessica Cox - Petrographic and geochemical characteristics of upper mantle xenoliths of the Southwestern United States: New Mexico Tech (MS Committee - Earth & Environmental Science)

2002 Chadwick Eastman – New Mexico Tech - MS Committee - Mineral & Environmental Engineering

2002 Jean-Marc Lambert - Red Bed Copper-Silver Deposits in Bolivia: New Mexico Tech (Ph.D. Committee - Mineral Science & Engineering)

2002 C. Wayne Sherwood - A comparison of extracurricular activities in science and engineering – Science Olympiad and Science Fair: New Mexico Tech (MST thesis director).

2002 Abraham Escalante - Geology, alteration and dating of Ojo de Agua breccia field, Sonora, Mexico , New Mexico Tech (M.S. committee - Mineral Science & Engineering)

2001 Marc G. Lambert - Mineralogy and genetic considerations for red-bed hosted Cu±Ag deposits of the Bolivian Altiplano, Cordillera Occidental, Bolivia: Lean-, New Mexico Tech (M.S. committee - Mineral Science & Engineering)

1999 Josh Crook, Origin of turquoise mineralization in a phosphatic shale at Orogrande, NM: New Mexico Tech (undergraduate Sr. Thesis director - Earth & Environmental Science).

1998 Virginia Wong - Gamma-ray characterization of Uranium-series nuclides and its application to the study of the Pena Blanca natural analogue site, Chihuahua, Mexico:, Ph.D. student, University of Texas at El Paso. (Ph.D. committee - Geosciences)

1993 William Crump - Geochemical effects of freshwater recharge by the Brazos River on the Hensel Aquifer system, Texas - Independent Study:, geology major, Tarleton State University.

1992 Jeff Stroebel - Statistical relationships of ground water chemistry to subsurface stratigraphy in north-central Texas aquifers. (Independent Study:, hydrology major, Tarleton State University).

1991 Denise Mouldenhauer - Aquifer stratigraphy and its relationship to bacteriogenic magnetite occurrences in north-central Texas. (Independent Study: , hydrology major, Tarleton State University).

1990 Virginia Wong - Contact metasomatism adjacent to a Llanite dike, Llano County, Texas – (Independent Study: , geology major, Tarleton State University).

1989 Anita Brian - Submicron magnetite of potential bacterial origin, north-central Texas. (Independent Study:, chemistry major, Tarleton State University).

GRANTS & CONTRACTS

2018 [Co-PI] NASA - Discovering biosignatures in manganese deposits on Mars with rover payload instruments

2013 [Co-PI] Chevron Mining Company - Questa: The use of sulfur isotopes in molybdenum exploration

2011 [Co-PI] DOE-AASG-AGS [Co PI] - Exploration for Blind Geothermal Systems

2003-2008 [Co-PI] Molycorp/Chevron Mining Company - The Effect of Weathering on the Geotechnical Stability of Rock Piles

1997 [PI] Cobre Mining Company - Mineralogical characterization of mine concentrates from the Continental Mine [contract]

1997 [PI] Phelps Dodge - Tyrone - Mineralogical characterization of mine tailings from the Tyrone operations [contract]

1997 [PI] Cobre Mining Company - Feasibility of Wollastonite recovery from the Continental mine. [contract]

1996 [PI] Frank Witzel Consulting - Mineralogical characterization of carbonatite [contract]

1996 [PI] Oglebay Norton, Inc. - Industrial applications of garnet from the Orogrande District. [contract]

1995 [PI] Institute of Museum Services - (IA-50001-95) National Institute for the Conservation of Cultural Property - Conservation Assessment Program

1993 National Science Foundation - (ESI-9353080): (co-PD A.R. Macon) Explorations in Environmental Science: An intervention program for talented high school students.

1993 Organized Research Grant (Equipment) - Tarleton State University. (co-PI: P. Murry and L. Peters) Mapping Early Cretaceous strata of north-central Texas: Development of a remote sensing laboratory with the Geosciences Division of the Department of Physical Sciences.

1992 Organized Research Grant - Tarleton State University: Hydrochemical identification of bacteriogenic magnetite contamination in the Lower Trinity Aquifers, Texas - a continuation and expansion.

1992 [PI] National Science Foundation - (USE-9251116): Introduction of advanced petrographic techniques for geology majors.

1991 Organized Research Grant - Tarleton State University: Hydrochemical identification of bacteriogenic magnetite contamination in the Lower Trinity Aquifers, north-central Texas.

1990 Organized Research Grant - Tarleton State University: Petrogenesis of an aplorhyolite laccolith/sill complex and its relationship to tellurium mineralization in the Organ district, New Mexico.

1989 Organized Research Grant - Tarleton State University: Geochemical studies of tellurium in the Organ Mining District, New Mexico.

1984 New Mexico Bureau of Mines and Mineral Resources - Comparison of copper skarn deposits in the Silver City Mining Region.

SHORT COURSES ATTENDED

Basic Research in Geomicrobiology and Subsurface Heterogeneity, Department of Energy, Germantown, MD., 1992

Welex Well-Logging Short Course, Tarleton State University, Stephenville, TX., 1989

Thermodynamic Modelling of Geological Materials: Minerals, Fluids, and Melts, Mineralogical Society of America, Phoenix AZ. 1987

Fluid Inclusion Short Course, Fluid Inc., University of Texas at El Paso, El Paso, TX., 1987

COURSES TAUGHT

New Mexico Institute of Mining & Technology

GEOL 572, X-ray Diffraction Analysis

GEOC 572, Ore Deposit Exploration

GEOL 572, Advanced Mineral Identification

Mines along the Rio Grande, Elderhostel 1996 - Geology and mining history of the State of New Mexico

Tarleton State University: 12 - 15 contact hours/semester (new developments and innovations)

GEOL 4113 Economic Geology (new lab section)

GEOL 3143 Geochemistry (new course with 3 hour lab section)

GEOL 3123 Structural Geology

GEOL 2063 Igneous and Metamorphic Petrology (new course with 3 hour lab section)

GEOL 2053 Introduction to Field Geology (new mapping projects)

GEOL 1064 Historical Geology

GEOL 1054 Physical Geology (new field laboratories)

ES 3503 Introduction to Environmental Science (new course)

ES 3403 Introduction to Oceanography

ES 3303 Introduction to Meteorology

ES 3203 Introduction to Astronomy

PSC 1014 Physical Science Survey

University of Texas at El Paso: 3 contact hours/semester

GEOL 3101 Physical Geology

GEOL 3102 Historical Geology

NEW PROGRAMS AND COURSES DEVELOPED

New Mexico Tech:

New Course:

2011 X-Ray Diffraction Analysis

2006 Advanced Mineral Identification Techniques

Tarleton State University:

New Programs:

1989 Bachelor of Science in Earth Science (co-developed with Drs. P. Murry and R. Walter)

1989 Bachelor of Science in Earth Science with Teaching Certification (co-developed as above)

New Courses:

1989 Geochemistry

1990 Introduction to Environmental Science

1990 Igneous and Metamorphic Petrology

1993 Groundwater Geology

UNIVERSITY SERVICE

New Mexico Institute of Mining & Technology - New Mexico Bureau of Mines & Mineral Resources

Curator of the New Mexico Bureau of Mines and Mineral Resources Mineral Museum:

Working Groups: Mineral Resources Educational Extension

Tarleton State University:

Committees:

Faculty Senate (Secretary/Treasurer, 2 terms)

Library Committee (Chair)

Faculty Advisory

Departmental Travel (Chair)

Gifted and Talented Student

Recycling

Instructional Media

University Planning Task Force

Master of Science - Environmental Science Planning

Advising

Geology and Earth Science

General Studies

Tarleton Geological Society Geology Internship Program

Students Against a Vanishing Environment

University of Texas at El Paso:

Committees:

Search Committee - President of the University (graduate student representative)

Search Committee - Vice-President of Academic Affairs (graduate student representative)