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Education:

1982	Ph.D. Geology	Yale University
1979	M.Phil. Geology	Yale University
1979	M.S. Geology	Yale University
1977	B.A. Geology <i>cum laude</i>	Miami University
1977	B.S. Mineralogy <i>cum laude</i>	Miami University

Professional Experience:

Sept. 2004 to present	Chair & Edwin Bayer Branson Professor, Department of Geological Sciences, University of Missouri, Columbia, MO
Sept. 1995 to 2004	Professor and Director of Graduate Studies, Department of Geological Sciences, University of Missouri, Columbia, MO
Sept. 1989 to Aug. 1995	Associate Professor and Co-Director, Stable Isotope Geology & Geochemistry Group, Department of Geological Sciences, University of Missouri, Columbia, MO
Aug. 1983 to Aug. 1989	Assistant Professor, Department of Geological Sciences, University of Missouri, Columbia, MO
June to August 1983	Research Affiliate, Department of Geology and Geophysics, Yale University
Jan. 1982 to May 1983	Research Staff Scientist, Department of Geology and Geophysics, Yale University

Awards and Honors:

- 2007 Association of Professional Engineers, Geologists and Geophysicists of the Northwest Territories and Nunavut, Canada - Professional Award of Merit (joint award)
- 1997 American Association for the Advancement of Science - Co-Chair, Gordon Research Conference on Inorganic Geochemistry
- 1991 Society of Economic Geologists - Waldemar Lindgren Award for Excellence in Research
- 1991 Society of Economic Geologists - Life Fellow
- 1991 Korea Lectureship for Mineral Resources
- 1987 Society of Economic Paleontologists and Mineralogists - Best Presentation Award, Annual Midyear Meeting
- 1986 Univ. of MO-Columbia Arts and Science Alumni Research Award
- 1982 Yale University P.M. Orville Award for Research in Earth Science
- 1981 American Institute of Mining, Metallurgical and Petroleum Engineers Henry DeWitt Smith Scholarship (First Award)
- 1981 Yale University W.E. Ford Prize for Mineralogy
- 1977 Miami University Alumni Scholar-Athlete Award (Track and Field)
- 1976 Phi Beta Kappa
- 1975 Sigma Gamma Epsilon
- 1974 Phi Eta Sigma

Professional Affiliations:

- Geological Society of America
 - Symposium Organizer 1993, 2003, 2010
 - Associate Editor of *GSA Bulletin* 1991-1996
 - Chairman, Joint Technical Program Committee 1989
 - Program Committee 1988-1991
- Missouri Academy of Science
- Sigma Xi
- Society of Economic Geologists
 - Publications Committee 1993
 - Life Fellow 1991
 - Research Committee 1990-1992
 - Editorial Board Member of *Economic Geology* 1989-1994
- Society for Geology Applied to Mineral Deposits
 - Editorial Board Member of *Mineralium Deposita* 1993-1998
- Society for Sedimentary Geology (SEPM)
 - Co-Editor *SEPM Special Publication* 1997
 - Research Conference Organizer 1994

Refereed Publications (* indicates student or postdoctoral fellow):

Wenz, Z.J.*, Appold, M.S., **Shelton, K.L.**, and Tesfaye, S., 2012, Geochemistry of Mississippi Valley-type mineralizing fluids of the Ozark Plateau: A regional synthesis: *American Journal of Science*, v. 312, p. 22-80.

Gregg, J.M., and **Shelton, K.L.**, 2012, Mississippi Valley-type mineralization and ore deposits in the Cambro-Ordovician Great American Carbonate Bank: *in* Derby, J.R., Fritz, R.D., Longacre, S.A., Morgan, W.A., and Sternbach, C.A., eds., The Great American Carbonate Bank: The geology and petroleum potential of the Cambrian – Ordovician Sauk sequence of Laurentia: *American Association of Petroleum Geologists Memoir 98*, Chapter 8 (in press).

Shelton, K.L., Beasley, J.M.*, Gregg, J.M., Appold, M.S., Crowley, S.F., Hendry, J.P., and Somerville, I.D., 2011, Evolution of a Carboniferous carbonate-hosted sphalerite breccia deposit, Isle of Man: *Mineralium Deposita*, v. 46, p. 859-880.

Persellin, C.J.*, Gregg, J.M., **Shelton, K.L.**, Somerville, I.D., and Atekwana, E.A., 2010, Base-metal sulfide mineralization of Lower Carboniferous strata, northwest Ireland: *Exploration and Mining Geology*, v. 19, p. 35-54.

Shelton, K.L., Gregg, J.M., and Johnson, A.W.*, 2009, Replacement dolomites and ore sulfides as recorders of multiple fluids and fluid sources in the southeast Missouri MVT district, USA: Halogen-⁸⁷Sr/⁸⁶Sr- $\delta^{18}\text{O}$ - $\delta^{34}\text{S}$ systematics in the Bonneterre Dolomite: *Economic Geology*, v. 104, p. 733-748.

Johnson, A.W.*, **Shelton, K.L.**, Gregg, J.M., Somerville, I.D., Nagy, Zs., Wright, W.R., and Becker, S., 2009, Regional and localized fluid flow in the southern Irish Midlands: A hybrid fluid-flow model for the Rathdowney Trend, Ireland: Conference Proceedings, 10th Biennial Meeting of the Society for Geology Applied to Mineral Deposits, Townsville, Australia.

Johnson, A.W.*, **Shelton, K.L.**, Gregg, J.M., Somerville, I.D., Wright, W.R., and Nagy, Zs.R.*, 2009, Regional studies of dolomites and their included fluids: Recognizing multiple chemically distinct fluids during the complex diagenetic history of Lower carboniferous (Mississippian) rocks of the Irish Zn-Pb ore field: *Mineralogy and Petrology*, v. 96, p. 1-18.

Yuvan, J.*, **Shelton, K.L.**, and Falck, H., 2007, Geochemical investigations of high-grade quartz-scheelite veins of the Cantung mine, NWT, Canada. *in* Wright, D.F., Lemkow, D., and Harris, J.R., eds., Mineral and energy resource assessment of the South Nahanni watershed under consideration for the expansion of Nahanni National Park Reserve, Northwest Territories: *Geological Survey of Canada, Ottawa, Open File Report 5344*, p. 177-190.

van Hees, E.H.*, Kirkham, G.D., Sirbescu, M-L., **Shelton, K.L.**, Hauser, R., and Falck, H., 2006, Large lithogeochemical alteration halos around Yellowknife gold deposits and implications for fluid pathways. *in* Anglin, C.D., Falck, H., Wright, D.F., and Ambrose, E.J., eds., *Gold in the Yellowknife greenstone belt, Northwest Territories: Results of the EXTECH III multidisciplinary research project*, Geological Association of Canada, Mineral Deposits Division, Special Publication No. 3, p. 232-248.

van Hees, E.H.*, Sirbescu, M.C., Washington, G.D., Benda, K.J., **Shelton, K.L.**, Falck, H., and Trenama, R.T., 2006, Genesis of the Ptarmigan gold deposit: Is it of magmatic affinity. *in* Anglin, C.D., Falck, H., Wright, D.F., and Ambrose, E.J., eds., *Gold in the Yellowknife greenstone belt, Northwest Territories: Results of the EXTECH III multidisciplinary research project*, Geological Association of Canada, Mineral Deposits Division, Special Publication No. 3, p. 270-285.

Nagy, Zs.R*., Somerville, I.D., Gregg, J.M., Becker, S.P.*, and **Shelton, K.L.**, 2005, Sedimentology and stratigraphy of Upper Tournasian-Visean (Mississippian, Lower Carboniferous) carbonate rocks in south Co. Wexford, Ireland: an example of sedimentation in an actively tilting basin: *Sedimentology*, v. 52, p. 489-512.

Nagy, Zs.R*., Somerville, I.D., Gregg, J.M., Becker, S.P.*, and **Shelton, K.L.**, 2005, Lower Carboniferous peritidal carbonates and associated evaporites adjacent to the Leinster Massif, southeast Irish Midlands: *Geological Journal*, v. 40, p. 173-192.

Moore, T.E., Potter, C.J., O'Sullivan, P.B., **Shelton, K.L.**, and Underwood, M.B., 2004, Two stages of deformation and fluid migration in the central Brooks Range fold-and-thrust belt, northern Alaska. *in* Swennen, R., Roure, F., and Granath, J., eds., *Deformation, fluid flow and reservoir appraisal in foreland fold and thrust belts: American Association of Petroleum Geologists Memoir*, Chapter 8, p. 1-30.

Nagy, Zs.R*., Gregg, J.M., **Shelton, K.L.**, Becker, S.P.*, Somerville, I.D., and Johnson, A.W.*, 2004, Early dolomitisation and fluid migration through the Lower Carboniferous carbonate platform in the southeast Irish Midlands: Implications for reservoir attributes. *in* Braithwaite, C., Rizzi, G., and Darke, G., eds., *The Geometry and Petrogenesis of Dolomite Hydrocarbon Reservoirs*, Geological Society of London Special Publication 235, p. 367-392.

Shelton, K.L., McMenemy, T.A.*, van Hees, E.H.P.*, Falck, H., 2004, Deciphering the complex fluid history of a greenstone-hosted gold deposit: Fluid inclusion and stable isotope studies of the Giant mine, Northwest Territories, Canada: *Economic Geology*, v. 99, p. 1643-1663.

Wright, W.R.*, Somerville, I.D., Gregg, J.M., **Shelton, K.L.**, and Johnson, A.W.*, 2004, The petrogenesis of dolomite, regional patterns of dolomitization and fluid flow in the Lower Carboniferous of the Irish Midlands and Dublin Basin. Rizzi, G., Darke, G., and Braithwaite, C., eds., *The Geometry and Petrogenesis of Dolomite Hydrocarbon Reservoirs*, Geological Society of London Special Publications, Vol. 235, p. 75-97.

Moore, T.E., Potter, C.J., O'Sullivan, P.B., **Shelton, K.L.**, and Underwood, M.B., 2003, Association of deformation and fluid events in the Central Brooks Range fold-and-thrust belt, northern Alaska, United States Geological Survey Open-File Report, Vol. 03-327, 1 page and 2 posters.

Wright, W.R.*, Somerville, I.D., Gregg, J.M., Johnson, A.W.*, and **Shelton, K.L.**, 2003, Dolomitization and neomorphism of Irish Lower Carboniferous (Early Mississippian) limestones: Evidence from petrographic and isotopic data: *SEPM (Society for Sedimentary Geology) Special Publication 78* and *American Association of Petroleum Geologists Memoir 83*, p. 395-408.

So, C.S., Yun, S.T., and **Shelton, K.L.**, 2002, Geochemistry of the Youngbogari deposit, Republic of Korea: An unusual mesothermal gold-silver deposit of the Youngdong mining area: *Geochemical Journal*, v. 36, p. 155-171.

van Hees, E.*, and **Shelton, K.L.**, 2002, Miramar Con mine – Wallrock alteration. in Falck, H., ed., EXTECH III - The Yellowknife mining camp over 60 years of mining, *Geological Association of Canada Field Trip Guide B-4*, p. 91-96.

van Hees, E.*, and **Shelton, K.L.**, 2002, Giant mine - Cameron zone. in Falck, H., ed., EXTECH III - The Yellowknife mining camp over 60 years of mining, *Geological Association of Canada Field Trip Guide B-4*, p. 97-102.

Gregg, J.M., **Shelton, K.L.**, Johnson, A.W.*, Somerville, I.D., and Wright, W.R.*, 2001, Dolomitization of the Waulsortian Limestone (Lower Carboniferous) Irish Midlands: *Sedimentology*, v. 48, p. 745-766.

Johnson, A.W.*, **Shelton, K.L.**, Gregg, J.M., Somerville, I.D., and Wright, W.R.*, 2001, Fluid inclusion evidence for the presence of multiple fluids in Zn-Pb hosting Carboniferous carbonate rocks in the Irish Midlands: Initial Findings. in Hagni, R. D., ed., *Studies on Ore Deposits, Mineral Economics, and Applied Mineralogy: With Emphasis on Mississippi Valley-type Base Metal and Carbonatite-related Ore Deposits*, University of Missouri-Rolla Press, p. 18-30.

Wright, W.R.*, Somerville, I.D., Gregg, J. M., **Shelton, K.L.**, and Johnson, A.W.*, 2001, Application of regional dolomite microstratigraphy to the genesis of Zn-Pb mineralization in Lower Carboniferous rocks, Ireland. in Hagni, R. D., ed.,

Studies on Ore Deposits, Mineral Economics, and Applied Mineralogy: With Emphasis on Mississippi Valley-type Base Metal and Carbonatite-related Ore Deposits, University of Missouri-Rolla Press, p. 1-17.

Keller, T.J.*, Gregg, J.M., and **Shelton, K.L.**, 2000, Fluid migration and associated diagenesis in the greater Reelfoot Rift region, Midcontinent U.S.A.: *Geological Society of America Bulletin*, v. 112, p. 1680-1693.

Shelton, K.L., Costello, C.S.*, and van Hees, E.H., 2000, Contrasting styles of Archaean greenstone gold deposition: Colomac gold mine, Canadian Northwest Territories: *Journal of Geochemical Exploration*, v. 69-70, p. 303-307.

Wright, W.R.*, Johnson, A.W.*, **Shelton, K.L.**, Somerville, I.D., and Gregg, J.M., 2000, Fluid migration and rock interactions during dolomitization of the Dinantian Irish Midlands & Dublin Basin: *Journal of Geochemical Exploration*, v. 69-70, p. 159-164.

Yoo, C.M., Gregg, J.M., and **Shelton, K.L.**, 2000, Dolomitization and dolomite neomorphism: Trenton and Black River Limestones (Middle Ordovician) northern Indiana: *Journal of Sedimentary Research*, v. 70, p. 265-274.

Perfetta, P.J.*, **Shelton, K.L.**, and Stitt, J.H., 1999, Carbon isotope evidence for deep-water invasion at the Marjumiid-Pterocephaliid biomere boundary, Black Hills, U.S.A.: A common origin for biotic crises on Late Cambrian shelves: *Geology*, v. 27, p. 403-406.

Underwood, M.B., **Shelton, K.L.**, McLaughlin, R.J., Laughland, M.M.*, and Solomon, R.M.*, 1999, Middle Miocene paleotemperature anomalies within the Franciscan Complex of northern California: Thermo-tectonic responses near the Mendocino triple junction: *Geological Society of America Bulletin*, v. 111, p. 1448-1467.

van Hees, E.H.P.*, **Shelton, K.L.**, McMenemy, T.A.*, Ross, L.M., Jr., Cousens, B.L., Falck, H., Robb, M.E., and Canam, T.W., 1999, Metasedimentary influence on metavolcanic-rock-hosted greenstone deposits: Geochemistry of the Giant mine, Yellowknife, Northwest Territories, Canada: *Geology*, v. 27, p. 71-74.

Wright, W.R.*, Somerville, I.D., Gregg, J.M., and **Shelton, K.L.**, 1999, Dolomite CL and $\delta^{18}\text{O}$ - $\delta^{13}\text{C}$ data from Irish Midlands and Dublin Basin, Carboniferous: in Stanley, et al., eds., Mineral Deposits: Processes to Processing, Proceedings of the Fifth Biennial SGA Meeting and the Tenth Quadrennial IAGOG Symposium, London, UK, 1999, v. 2, p. 913-916.

Choi, S.H., So, C.S., Youm, S.J., and **Shelton, K.L.**, 1998, Geochemistry and

genesis of hydrothermal Cu deposits in the Gyeongchang Basin, Korea: Masan mineralized area: *Neues Jahrbuch für Mineralogie Abhandlungen*, v. 173, p. 189-206.

Gregg, J.M., and **Shelton, K.L.**, 1997, Fluid flow and mineralization in Cambro-Ordovician rocks of southern Missouri, USA: A summary of recent advances: *Geofluids II, Second International Conference on Fluid Evolution, Migration and Interaction in Sedimentary Basins and Orogenic Belts*, Belfast, UK, p. 179-181.

He, Z.* , Gregg, J.M., **Shelton, K.L.**, and Palmer, J.R., 1997, Sedimentary facies control of fluid flow and mineralization in Cambro-Ordovician strata, southern Missouri: in Montanez, I., Gregg, J.M., and **Shelton, K.L.**, eds., *Basin-Wide Diagenetic Patterns: Integrated Petrologic, Geochemical, and Hydrologic Considerations: SEPM (Society for Sedimentary Geology) Special Publication 57*, p. 81-99.

Keller, T.J.* , **Shelton, K.L.**, and Gregg, J.M., 1997, Fluid-rock interactions and fluid migration in the Reelfoot Rift system, midcontinent USA: *Geofluids II, Second International Conference on Fluid Evolution, Migration and Interaction in Sedimentary Basins and Orogenic Belts*, Belfast, UK, p.187-189.

So, C.S., Choi, S.H., and **Shelton, K.L.**, 1997, Geochemistry and genesis of hydrothermal Cu deposits in the Gyeongsang Basin (Andong Area), Korea: A link between porphyry and epithermal systems: *Neues Jarbuch für Mineralogie Abhandlungen*: v. 171, p. 281-307.

Somerville, I.D., Strogon, P., Gregg, J.M., and **Shelton, K.L.**, 1997, Fluid flow, dolomitization, and mineralization in Lower Carboniferous carbonate rocks, southern Irish Midlands: A preliminary report: *Geofluids II, Second International Conference on Fluid Evolution, Migration and Interaction in Sedimentary Basins and Orogenic Belts*, Belfast, UK, p. 209-212.

Shelton, K.L., Underwood, M.B., Burstein, I.B.* , Haeussler, G.T.* , and Howell, D.G., 1996, Stable isotopic and fluid inclusion studies of hydrothermal quartz and calcite veins from the Kandik thrust belt of east-central Alaska: Implications for thermo-tectonic history and terrane analysis: *U. S. Geological Survey Bulletin* 2142, p. 111-131.

Underwood, M.B., Laughland, M.M.* , **Shelton, K.L.**, and Sedlock, R.L., 1995, Thermal maturity trends within Franciscan rocks near Big Sur, California: Implications for offset along the San Gregorio-San Simeon-Hosgri fault zone: *Geology*, v. 23, p. 839-842.

Shelton, K.L., Burstein, I.B.* , Hagni, R.D., Vierrether, C.B.* , Grant, S.K., Hennigh, Q.T.* , Bradley, M.F., and Brandom, R.T., 1995, Sulfur isotope evidence for

penetration of MVT fluids into igneous basement rocks, southeast Missouri, U.S.A.: *Mineralium Deposita*, v. 30, p. 339-350.

Shelton, K.L., Underwood, M.B., Burstein, I.B.*, Haeussler, G.T.*, and Howell, D.G., 1995, Stable isotopic and fluid inclusion studies of hydrothermal quartz and calcite veins from the Kandik thrust belt of east-central Alaska: Implications for thermo-tectonic history and terrane analysis: *U. S. Geological Survey Bulletin* 2142, p. 111-131.

So, C.S., Yun, S.T., and **Shelton, K.L.**, 1995, Mesothermal gold mineralization of the Samdong mine, Youngdong mining district, Republic of Korea: A geochemical study: *Mineralium Deposita*, v. 30, p. 384-396.

So, C.S., Dunchenko, V.Y., Yun, S.T., Park, M.E., Youm, S.J., and **Shelton, K.L.**, 1995, Te and Se-bearing epithermal Au-Ag mineralisation in the Prasolovskoye ore field, Kunashir Island, Kuril island arc: *Economic Geology*, v. 90, p. 105-117.

Murowchick, J.B., Coveney, R.M., Jr., Grauch, R.I., Eldridge, C.S., and **Shelton, K.L.**, 1994, Cyclic variations of sulfur isotopes in Cambrian stratabound Ni-Mo-(PGE-Au) ores of southern China: *Geochimica et Cosmochimica Acta*, v. 58, p. 1813-1823.

Shelton, K.L., Bauer, R.M.*, and Gregg, J.M., 1993, Fluid inclusion studies of regionally extensive epigenetic dolomites, Bonnetterre Dolomite (Cambrian), southeast Missouri: Evidence of multiple fluids during dolomitization and lead-zinc mineralization: Reply: *Geological Society of America Bulletin*, v. 105, p. 972-978.

Yun, S.T., So, C.S., Choi, S.H., **Shelton, K.L.**, and Koo, J.H., 1993, Genetic environment of germanium-bearing gold-silver vein ores from the Wolyu mine, Republic of Korea: *Mineralium Deposita*, v. 28, p. 107-121.

Shelton, K.L., Burstein, I.B.*, Gregg, J.M., and Hagni, R.D., 1993, In the absence of a regional thermal gradient, does the Viburnum Trend fit into a common regional hydrologic flow model with other Ozark region MVT deposits?: *In Shelton, K.L.*, and Hagni, R.D., eds., *Geology and Geochemistry of Mississippi Valley-type Ore Deposits: Proceedings Volume*, Univ. Missouri-Rolla Press, p. 17-30.

Burstein, I.B.*, **Shelton, K.L.**, Gregg, J.M., and Hagni, R.D., 1993, Complex, multiple ore fluids in the world class southeast Missouri Pb-Zn-Cu deposits: Sulfur isotope evidence: *In Shelton, K.L.*, and Hagni, R.D., eds., *Geology and Geochemistry of Mississippi Valley-type Ore Deposits: Proceedings Volume*, Univ. MO-Rolla Press, p. 1-16.

Gregg, J.M., **Shelton, K.L.**, Keller, T.J.*, and Palmer, J.R., 1993, Petrology,

geochemistry, and fluid/rock interactions in Cambro-Ordovician carbonates from the Reelfoot Rift: Initial findings: In **Shelton, K.L.**, and Hagni, R.D., eds., *Geology and Geochemistry of Mississippi Valley-type Ore Deposits: Proceedings Volume*, Univ. Missouri-Rolla Press, p. 75-88.

Gregg, J.M., Laudon, P.R.*, Woody, R.E.*, and **Shelton, K.L.**, 1993, Porosity evolution of the Bonneterre Dolomite (Cambrian), southeastern Missouri, U. S. A.: *Sedimentology*, v. 40, p. 1153-1169.

Shelton, K.L., Bauer, R.M.*, and Gregg, J.M., 1992, Fluid inclusion studies of regionally extensive epigenetic dolomites, Bonneterre Dolomite (Cambrian), southeast Missouri: Evidence of multiple fluids during dolomitization and lead-zinc mineralization: *Geological Society of America Bulletin*, v. 104, p. 675-683.

Shelton, K.L., and So, C.S., 1992, A hydrogen and oxygen isotope study of the Sambo Pb-Zn-barite mine, Republic of Korea: *Mining Geology*, v. 42, p. 353-359.

Shelton, K.L., Underwood, M.B., Bergfeld, D.*, and Howell, D.G., 1992, Isotopic variations in calcite veins from the Kandik region of east-central Alaska: *United States Geological Survey Bulletin* 2041, p. 213-221.

Choi, S.H., So, C.S., and **Shelton, K.L.**, 1992, Skarn evolution and tungsten mineralization at the Dongmyeong mine, Republic of Korea: *Neues Jahrbuch für Mineralogie Abhandlungen*, v. 164, p. 57-93.

Gregg, J.M., **Shelton, K.L.**, and Bauer, R.M.*, 1992, Geochemical and fluid inclusion evidence for regional alteration of Upper Cambrian carbonates by basinal fluids in southern Missouri: *Oklahoma Geological Survey Circular*, v. 93, p. 313-320.

So, C.S., **Shelton, K.L.**, Chi, S.J., and Yun, S.T., 1991, Geochemical studies of the Gyeongchang W-Mo mine, Republic of Korea: Progressive meteoric water inundation of a magmatic hydrothermal system: *Economic Geology*, v. 86, p. 750-767.

Shelton, K.L., So, C.S., Haeussler, G.T.*, Chi, S.J., and Lee, K.Y., 1990, Geochemical studies of the Tongyoung gold-silver deposits, Republic of Korea: Evidence of meteoric water dominance in a Te-bearing epithermal system: *Economic Geology*, v. 85, p. 1114-1132.

Gregg, J.M., and **Shelton, K.L.**, 1990, Dolomitization and dolomite neomorphism in the back reef facies of the Bonneterre and Davis Formations (Cambrian), southeastern Missouri: *Journal of Sedimentary Petrology*, v. 60, p. 549-562.

Shelton, K.L., 1989, Mineral deposits and resources of the Ouachita Mountains: *Geological Society of America Decade of North American Geology (DNAG) The Appalachian/Ouachita Orogen in the United States*, v. F-2, p. 729-737.

Gregg, J.M., and **Shelton, K.L.**, 1989, Geochemical and petrographic evidence for fluid sources and pathways during dolomitization and lead-zinc mineralization in southeast Missouri: A review: *Carbonates and Evaporites*, v. 4, p. 153-175.

Gregg, J.M., and **Shelton, K.L.**, 1989, Minor- and trace-element distributions in the Bonneterre Dolomite (Cambrian), southeast Missouri: Evidence for possible multiple-basin fluid sources and pathways during lead-zinc mineralization: *Geological Society of America Bulletin*, v. 101, p. 221-230.

So, C.S., Choi, S.H., Chi, S.J., Choi, S.G., and **Shelton, K.L.**, 1989, Geochemical studies on Au-Ag hydrothermal vein deposits, Republic of Korea: Goryeong-Waegwan mineralized area: *Journal of the Korean Institute of Mining Geology*, v. 22, p. 221-235.

So, C.S., Choi, S.H., Lee, K.Y., and **Shelton, K.L.**, 1989, Geochemical studies of hydrothermal gold deposits, Republic of Korea: Yangpyeong-Weonju area: *Journal of the Korean Institute of Mining Geology*, v. 22, p. 1-16.

So, C.S., Yun, S.T., Choi, S.H., and **Shelton, K.L.**, 1989, Geochemical studies of hydrothermal gold-silver deposits, Republic of Korea: Youngdong Mining District: *Mining Geology*, v. 39, p. 9-19.

Shelton, K.L., and Lofstrom, D.M.*, 1988, Stable isotope and fluid inclusion studies of W-Sn-Ag deposits, Silver Mine District, southeastern Missouri: Tectonic control of water-rock interaction in a magmatic-meteoric hydrothermal system: *Proceedings North American Conference on Tectonic Control of Ore Deposits and the Vertical and Horizontal Extent of Ore Systems*, University of Missouri-Rolla Press, p. 368-377.

Shelton, K.L., So, C.S., and Chang, J.S., 1988, Gold-rich mesothermal vein deposits of the Republic of Korea: Geochemical studies of the Jungwon gold area: *Economic Geology*, v. 83, p. 1221-1237.

Balogh, S.K.*, **Shelton, K.L.**, and Hagni, R.D., 1988, Sulfur isotope and minor element geochemistry of the silver-tungsten-tin deposits in the Silver Mine district, Missouri: *Proceedings North American Conference on Tectonic Control of Ore Deposits and the Vertical and Horizontal Extent of Ore Systems*, University of Missouri-Rolla Press, p. 386-395.

Haefner, R.J., Mancuso, J.J., Frizado, J.P., **Shelton, K.L.**, and Gregg, J.M., 1988,

Crystallization temperatures and stable isotope compositions of Mississippi Valley-type carbonates and associated sulfides of the Trenton Limestone, Wyandot County, Ohio: *Economic Geology*, v. 83, p. 1061-1069.

Nuelle, L.M., and **Shelton, K.L.**, 1988, Sediment-hosted barite of the Appalachian-basin Valley and Ridge province - A product of tectonic influence on sedimentation: *Proceedings North American Conference on Tectonic Control of Ore Deposits and the Vertical and Horizontal Extent of Ore Systems*, University of Missouri-Rolla Press, p. 501-511.

So, C.S., **Shelton, K.L.**, Chi, S.J., and Choi, S.H., 1988, Stable isotope and fluid inclusion studies of gold-silver-bearing hydrothermal vein deposits, Cheonan-Cheongyang-Nonsan mining district, Republic of Korea: Cheongyang area: *Journal of the Korean Institute of Mining Geology*, v. 21, p. 149-164.

Shelton, K.L., Taylor, R.P., and So, C.S., 1987, Stable isotope studies of the Dae Hwa tungsten-molybdenum mine, Republic of Korea: Evidence of progressive meteoric water interaction in a tungsten-bearing hydrothermal system: *Economic Geology*, v. 82, p. 471-481.

So, C.S., Chi, S.J., Yu, J.S., and **Shelton, K.L.**, 1987, Stable isotope and fluid inclusion studies of gold-silver-bearing vein deposits, Cheonan-Cheongyang-Nonsan mining district, Republic of Korea: Nonsan area: *Neues Jahrbuch für Mineralogie Abhandlungen*, v. 158, p. 47-65.

So, C.S., Chi, S.J., Yu, J.S., and **Shelton, K.L.**, 1987, The Jeoneui gold-silver mine, Republic of Korea: A geochemical study: *Mining Geology*, v. 37, p. 313-322.

So, C.S., and **Shelton, K.L.**, 1987, Stable isotope and fluid inclusion studies of Au-Ag-bearing hydrothermal vein deposits in the Cheonan-Cheongyang-Nonsan mining district, Republic of Korea: Cheonan area: *Economic Geology*, v. 82, p. 987-1000.

So, C.S., and **Shelton, K.L.**, 1987, Fluid inclusion and stable isotope studies of gold-silver-bearing hydrothermal vein deposits, Yeosu mining district, Republic of Korea: *Economic Geology*, v. 82, p. 1309-1318.

Shelton, K.L., Reader, J.M.*, Ross, L.M., Viele, G.W., and Seidemann, D.E., 1986, Ba-rich adularia from the Ouachita Mountains, Arkansas: Implications for a post-collisional hydrothermal system: *American Mineralogist*, v. 71, p. 916-923.

Shelton, K.L., So, C.S., Rye, D.M., and Park, M.E., 1986, Geologic, sulfur isotopic and fluid inclusion studies of the Sannae W-Mo mine, Republic of Korea: Comparison of sulfur isotope systematics in Korean W deposits: *Economic*

Geology, v. 81, p. 430-446.

Nuelle, L.M., and **Shelton, K.L.**, 1986, Geologic and geochemical evidence of possible bedded-barite deposits in Devonian rocks of the Valley and Ridge Province, Appalachian Mountains: *Economic Geology*, v. 81, p. 1408-1430.

So, C.S., Chi, S.J., **Shelton, K.L.**, and Skinner, B.J., 1985, Copper-bearing hydrothermal vein deposits in the Gyeongsang Basin, Republic of Korea: *Economic Geology*, v. 80, p. 43-56.

Shelton, K.L., 1984, Interpretation of characteristic mineral parageneses in tungsten-molybdenum vein-type deposits: *Neues Jahrbuch für Mineralogie Monatshefte*, v. 1984, p. 455-460.

So, C.S., Park, M.E., **Shelton, K.L.**, and Seidemann, D.E., 1984, Geology and geochemistry of the Sambo Pb-Zn deposit, Republic of Korea: *Economic Geology*, v. 79, p. 656-670.

Shelton, K.L., 1983, Composition and origin of ore-forming fluids in a carbonate-hosted porphyry copper and skarn deposit: A fluid inclusion and stable isotopic study of Mines Gaspé, Quebec: *Economic Geology*, v. 78, p. 387-421.

Landman, N.H., Rye, D.M., and **Shelton, K.L.**, 1983, Early ontogeny of Eutrophoceras compared to recent Nautilus: Evidence from light stable isotopes: *Paleobiology*, v. 9, p. 269-279.

So, C.S., Rye, D.M., and **Shelton, K.L.**, 1983, Carbon, hydrogen, oxygen and sulfur isotopic and fluid inclusion study of the Weolag W-Mo deposit, Republic of Korea: Fluid histories of metamorphic and ore-forming events: *Economic Geology*, v. 78, p. 1551-1573.

So, C.S., and **Shelton, K.L.**, 1983, Geologic, sulfur isotopic and fluid inclusion study of the Ssang Jeon tungsten mine, Republic of Korea: *Economic Geology*, v. 78, p. 157-163.

So, C.S., and **Shelton, K.L.**, 1983, A sulfur isotopic and fluid inclusion study of the Cu-W-bearing tourmaline breccia pipe, Ilkwang mine, Republic of Korea: *Economic Geology*, v. 78, p. 326-332.

So, C.S., **Shelton, K.L.**, Seidemann, D.E., and Skinner, B.J., 1983, The Dae Hwa W-Mo mine, Republic of Korea: A geochemical study: *Economic Geology*, v. 78, p. 920-930.

Shelton, K.L., and Rye, D.M., 1982, Sulfur isotopic compositions of ores from

Mines Gaspé, Quebec: An example of sulfate-sulfide isotopic disequilibria in ore-forming fluids with applications to other porphyry-type deposits: *Economic Geology*, v. 77, p. 1688-1709.

Shelton, K.L., 1981, Sulfur isotopes of iron sulfides in Devonian-Mississippian shales of the Appalachian Basin: Control by rate of sedimentation - A discussion: *American Journal of Science*, v. 281, p. 1240-1243.

Shelton, K.L., Merewether, P.A., and Skinner, B.J., 1981, Phases and phase relations in the system Pd-Pt-Sn: *Canadian Mineralogist*, v. 19, p. 599-605.

Shelton, K.L., and Orville, P.M., 1980, Formation of synthetic fluid inclusions in natural quartz: *American Mineralogist*, v. 65, p. 1233-1236.

Published Abstracts (last three years, * indicates student):

Hansen, E. *, **Shelton, K.L.**, and Falck, H., 2011, Geochemical studies of gold mineralizing events in the Clan Lake and Discovery areas of the Yellowknife greenstone belt: *39th Annual Yellowknife Geoscience Forum*, p. 104-105.

Smith, A. *, **Shelton, K.L.**, and Falck, H., 2010, Geochemical studies of gold and base-metal mineralization in the north end of the Yellowknife greenstone belt: *38th Annual Yellowknife Geoscience Forum*, p. 95.

Hendry, J.P., **Shelton, K.L.**, Beasley, J. *, Gregg, J.M., Crowley, S.F., and Somerville, I.D., 2010, Epigenetic dolomitisation and hydrothermal mineralization of Lower Carboniferous platform carbonates on the Isle of Man (Irish Sea Basin): *18th International Sedimentological Congress, Cordoba, Argentina*.

Hill, L. *, Smith, A. *, **Shelton, K.L.**, and Falck, H., 2010, Contrasting styles of gold and base-metal mineralization in the north end of the Yellowknife Greenstone Belt, NWT, Canada: *Geological Society of America Abstracts With Programs*, v. 42, no. 2, p. 55.

Johnson, A.W. *, **Shelton, K.L.**, Gregg, J.M., Somerville, I.D., Nagy, Zs., Wright, W.R., and Becker, S., 2009, Regional and localized fluid flow in the southern Irish Midlands: A hybrid fluid-flow model for the Rathdowney Trend, Ireland: *10th Biennial Meeting of the Society of Economic Geologists, Townsville, Australia*.

Ripple, A. *, **Shelton, K.L.**, and Falck, H., 2009, Fluid and thermal history of a breccia zone of the West Bay Fault, NWT: *37th Annual Yellowknife Geoscience Forum*, p. 88.

Smith, A. *, Hill, L. *, **Shelton, K.L.**, and Falck, H., 2009, Characterization of gold

and base-metal mineralization styles in the north end of the Yellowknife Greenstone Belt: *37th Annual Yellowknife Geoscience Forum*, p. 91.

External Research Grants and Contracts:

Principal Investigator, *NWT Geoscience (Canada)*, "Geochemical studies of the Ormsby and Clan Lake gold deposits, NWT, Canada," \$20,000, July 2011 – June 2012.

Principal Investigator, *NWT Geoscience (Canada)*, "Geochemical studies of gold deposits in the north end of the Yellowknife Greenstone Belt, Canada," \$20,000, July 2010 – June 2011.

Principal Investigator, *NWT Geoscience (Canada)*, "Geochemical studies of gold and base-metal showing, north end, Yellowknife Trend, Canada, NWT," \$12,000, Sept. 2009 – Aug. 2010.

Principal Investigator, *NASA*, "An experimental and theoretical study of biomolecules under hydrothermal conditions," \$30,000, Sept. 2009 – Aug. 2011.

Principal Investigator, *Evolving Gold Corp, USA*, "Geochemical Studies of the West Bay Fault, Yellowknife Gold District, Canada," \$4,500, Aug. 2007 – June 2008.

Co-Principal Investigator (co-P.I., J. Gregg), *National Science Foundation*, "Deciphering the complex history of fluid flow in Lower Carboniferous carbonate rocks, Irish Midlands: Geochemistry of multiple dolomitizing and ore-forming events," \$95,000, July 2001 – July 2005.

Co-Principal Investigator (P.I., E. van Hees), *EXTECH III (Canada)*, "Chemistry of wallrock alteration zones in the Con mine, Yellowknife, NWT, Canada," \$8,000, Jan. 2001-December 2002.

Co-Principal Investigator (co-P.I., J. Gregg), *American Chemical Society - Petroleum Research Fund*, "Carbonate diagenesis in an extensional/compressional setting with a complex fluid flow history: Lower Carboniferous of the Irish Midlands," \$60,000, Sept. 2000 – Aug. 2004.

Co-Principal Investigator (co-P.I.s, C. Kelley, K. MacLeod, T. Lyons, C. Zhang), *National Science Foundation*, "Acquisition of multi-use isotope ratio mass spectrometer system," \$182,265, Jan. 2000 – Dec. 2001.

Co-Principal Investigator (P.I., J. Gregg), *BHP Minerals (Ireland)*, "Sr-isotope studies of Irish base-metal deposits," \$13,000, Jan. 1999 – Dec. 2000.

Co-Principal Investigator (P.I., E. van Hees), *EXTECH III* (Canada), "Geochemical and stable isotope studies of gold deposits in the Yellowknife greenstone belt: Developing exploration models and targets," \$8,000, April 1999 - March 2000.

Principal Investigator (co-P.I., E. van Hees), *Kinross Gold Corporation*, "Geochemical studies of the Goose Lake and Hoyle Pond gold deposits, Canada," \$9,000, Jan. 1999 - Sept. 2002.

Co-Principal Investigator (co-P.I., J. Gregg), *National Science Foundation*, "U.S.-Ireland Cooperative Research: Dolomitization and fluid flow in Lower Carboniferous carbonate rocks, Irish Midlands," \$21,480, May 1998 - April 2002.

Co-Principal Investigator (P.I., I. Somerville and co-P.I., J. Gregg) *Forbairt* (Ireland), "Fluid flow, dolomitisation and base metal mineralization in the Lower Carboniferous of the southern Irish Midlands," \$47,260, Oct. 1997 - Sept. 2000.

Co-Principal Investigator (co-P.I.s M. Reed and R. Schafer), *National Science Foundation*, "1997 Gordon Research Conference on geochemistry of metal ore-forming systems," \$8,000, Aug. 1997 - Sept. 1997.

Principal Investigator, *Royal Oak Mines Ltd.*, "Thesis support for geochemical studies of the Giant and Colomac gold mines, NWT," \$14,000, Jan. 1997 - Dec. 1998.

Co-Principal Investigator (co-P.I., e. van Hees), *Royal Oak Mines Ltd.*, "Geochemical studies of the Giant gold mine, Yellowknife, NWT, Canada," \$60,000, Sept. 1996 - Aug. 1998.

Co-Principal Investigator (P.I., E. van Hees), *Department of Indian and Northern Affairs, Canada*, "Dating of gold mineralization in the Yellowknife and Lupin mine areas, Slave Province, NWT," \$7,322, June 1996 - Dec. 1997.

Co-Principal Investigator (co-P.I., M. Underwood), *ARCO-British Petroleum*, "An integrated study of paleothermal structure, diagenetic history and fluid-rock interactions within the frontal Brooks Range-Colville Basin, Alaska," \$10,000, Mar. 1993 - Dec. 1996.

Co-Principal Investigator (co-P.I., J. Gregg), *American Chemical Society - Petroleum Research Fund*, "Diagenesis of Cambrian and Ordovician platform and basinal carbonates by basinal brines, Reelfoot graben," \$40,000, Sept. 1992 - Aug. 1995.

Principal Investigator (co-P.I., J. Gregg), *CONOCO*, "Petrographic and

geochemical studies of carbonates in the Reelfoot Rift, southeast Missouri," \$5,000, Aug. 1992 – July 1993.

Co-Principal Investigator (co-P.I., J. Gregg), *National Science Foundation*, "Petrology, porosity evolution and geochemistry of Upper Cambrian and Lower Ordovician strata, southern Missouri," \$99,426, July 1991 – Jan. 1995.

Principal Investigator (co-P.I., T. Freeman), *Texaco, USA*, "Reconstruction of basinal fluid pathways and late diagenetic alteration of platform dolomites," \$5,000, Jan. 1991 – December 1991.

Co-Principal Investigator (co-PI, J. Gregg), *MRAA (Missouri Research Assistance Act)*, "Alteration of sedimentary carbonate aquifers by basinal fluids in the Ozark region" \$7,636, Sept. 1990 – Aug. 1991.

Principal Investigator (co-P.I., R. Hagni), *National Science Foundation*, "Sulfur isotope studies of detailed mineral parageneses in MVT deposits, S.E. MO," \$73,656, June 1990 – November 1992.

Principal Investigator (co-P.I., J. Gregg), *American Chemical Society – Petroleum Research Fund*, "Chemical reconstruction of basinal fluid pathways using epigenetic dolomite," \$40,000, Sept. 1988 – Aug. 1992.

Co-Principal Investigator (P.I., M. Underwood), *National Science Foundation*, "Thermal maturity and fluid-rock interactions within Franciscan and related rocks: A test of the slab window hypothesis," \$90,000, June 1988 – Aug. 1991.

Principal Investigator (co-P.I., P. Nabelek), *National Science Foundation*, "Acquisition of a stable isotope mass spectrometer facility," \$90,000, July 1986 – Dec. 1987.

Principal Investigator, *National Science Foundation*, "Cooperative geochemical studies of hydrothermal gold deposits, Republic of Korea," \$50,000, Mar. 1986 – Aug. 1988.

Principal Investigator, *National Science Foundation*, "Short-term visit proposal: Cooperative geochemical studies of epithermal gold deposits, Republic of Korea," \$3,843, May 1985 – June 1985.

Principal Investigator, *American Chemical Society – Petroleum Research Fund*, "Geochemical studies of carbonate-hosted hydrothermal systems: Determining mass transfer and fluid flow patterns," \$15,000, Sept. 1984 – Aug. 1987.

Principal Investigator (co-P.I., T. Freeman), *Texaco, USA*, "Hydrodynamics of a

Mississippi Valley-type sulfide district deciphered from the petrography, fluid inclusions and isotope geochemistry of Bonnetterre dolostones, southeast Missouri," \$30,000, Aug. 1984 – July 1988.

Geologic Field and Analytical Support to K.L. Shelton and students:

Tyhee Gold Corp., "Field support for geochemical studies of the Clan Lake and Ormsby gold deposits, NWT, Canada," \$30,000, July-August 2011.

Tyhee Development Corp., "Field support for geochemical studies of gold deposits, NWT, Canada," \$10,000, June 2010.

Northwest Territories Geoscience Office, "Field studies of base metal and gold mineralization in the north end of the Yellowknife greenstone belt, NWT, Canada," \$30,000, Aug. 2009 – Sept. 2009.

Geological Survey of Canada, "Field support for geochemical studies of the fluid history of the West Bay Fault, Yellowknife, Northwest Territories, Canada," \$13,160, July 2006 – Aug. 2006.

Geological Survey of Canada & North American Tungsten, Inc., "Field support for studies of W-Sn-Au-Ag-Bi-Cu veins in the NWT-Yukon, Canada," \$22,400, July 2005 – Aug. 2005.

Geological Survey of Canada, "Isotope geochemistry of quartz-scheelite veins, Cantung mine area, NWT, Canada: Analytical support," \$1,620, Jan. 2005 – July 2005.

C.S. Lord Northern Geoscience Centre, "Geochemistry of veins and wallrocks, Cantung mine area, NWT, Canada: Analytical support," \$2,000, Sept. 2003 – Dec. 2003.

Department of Indian and Northern Development (Canada) & North American Tungsten, Inc., "Field support for studies of tungsten skarns in the NWT, Canada," \$23,210, July 2003 – Aug. 2003.

Royal Oak Mines Ltd., "Field support for studies of the Giant gold mine, NWT, Canada," \$8,900, Jan. 1998 – Dec. 1998.

Royal Oak Mines Ltd., "Field support for geochemical studies of gold deposits, NWT, Canada (Mirage Islands, Giant, Colomac)," \$18,352, Aug. 1997 – Sept. 1997.

Royal Oak Mines Ltd., "Field support for studies of gold deposits in the Canadian

NWT," \$17,900, Sept. 1997 – Oct. 1997.

Royal Oak Mines Ltd., "Field support for studies of various gold deposits in the NWT, Canada," \$4,000, Aug. 1996.

University of Missouri System and MU Campus Research Grants:

Principal Investigator, *University of Missouri Research Council*, "Role of granite-related fluids in the Cantung tungsten mine, Canada," \$6,706, Nov. 2003 - Jan. 2005.

Principal Investigator, *University of Missouri System - Research Board*, "Geochemistry of fluid flow in the Irish Midlands," \$23,560, June 2000 – May 2002.

Co-Principal Investigator (co-P.I.s, C. Kelley, K. MacLeod, T. Lyons, C. Zhang), *University of Missouri System – Research Board*, "Request to obtain carbonate device for new IRMS system," \$52,570, June 2000 – May 2001.

Principal Investigator, *University of Missouri System – Research Board*, "Origin of Archean gold deposits, Yellowknife, Canada," \$22,164, June 1996 – Dec. 1997.

Principal Investigator, *University of Missouri System - Research Board*, "Interaction of MVT ore fluids with igneous basement rocks, southeast Missouri," \$20,000, Sept. 1993 – Aug. 1994.

Principal Investigator, *University of Missouri System - Weldon Spring Grant*, "Petrographic and geochemical studies on the Bonnetterre Dolomite, MO," \$19,768, May 1989 – Aug. 1991.

Principal Investigator (co-P.I., R. Hagni), *University of Missouri System - Weldon Spring Grant*, "Cooperative geochemical studies of tungsten-silver-tin mineralization in southeast Missouri," \$26,302, May 1986 – April 1988.

Principal Investigator, *University of Missouri Research Council*, "Geochemical studies of the Mines Gaspé, Quebec molybdenum-copper deposits," \$6,350, June 1984 – August 1984.

Advising (as primary advisor or co-advisor):

- 2011 Natalie Gentry (M.S., Oklahoma State): “Geochemical studies of the southeast Davis zinc field, Oklahoma” (Co-Advisor with Jay M. Gregg, Ok. St. Univ.)
Current student.
- 2011 Emma Hansen (M.S.): “Geochemical studies of gold deposits in the Clan Lake-Discovery area, NWT, Canada”
Current student.
- 2011 Amanda Smith (M.S.): “Geochemical characterization of gold and base-metal mineralization styles in the north end of the Yellowknife greenstone belt, NWT, Canada”
Working for a gold exploration company in the Yukon.
- 2010 Logan Hill (B.S.): “Ore petrology of gold and base-metal mineralization in the north end of the Yellowknife greenstone belt, NWT, Canada”
In graduate school at the University of Arizona.
- 2008 Justin Beasley (M.S.): “Geochemical studies of vein-hosted mineralization and dolomitization in Carboniferous rocks of the Isle of Man”
Currently an environmental geologist for CH2M Hill in Chicago.
- 2007 Ashley Ripple (B.S.): “Fluid history of the Proterozoic West Bay Fault, Yellowknife, NWT, Canada”
Graduate student at Colorado State University.
- 2006 Jason Yuvan (M.S.): “Fluid inclusion and oxygen isotope studies of high-grade quartz-scheelite veins at the Cantung mine, Northwest Territories, Canada: Products of a late-stage magmatic-hydrothermal event”
Employed as a geologist for Stillwater Mining Company, WY.
- 2005 John Truesdale (B.S.): “Stable isotope and fluid inclusion studies of quartz-carbonate veins in Carboniferous outcrops at Howth, Malahide and Loughshinny, northeastern Ireland: Relationship to the regional Irish Zn-Pb ore system and evidence for interaction local hydrothermal systems”
Working as an environmental geologist in Missouri.
- 2004 Stephen Becker (M.S., UMR): “Relationship of evaporites to brine migration and carbonate-hosted Zn-Pb mineralization in the Lower Carboniferous of southeastern Ireland” (Co-Advisor with Jay M. Gregg, UM-Rolla)
Employed by Exxon-Mobil in Houston.
- 2004 Kelly Titkemeier (M.S.): “Rates of uranium (VI) reduction by wild-type and an Fe-hydrogenase mutant of *Desulfovibrio vulgaris*”

- strain Hildenborough: Implications for electron transport in the reduction of uranium (VI)"
Working as an environmental geologist in Oregon.
- 2003 Ry Stone (B.S.): "Halogen studies of fluid inclusions in the Bonneterre Dolomite, southeast Missouri"
Working as a coal geologist in Wyoming.
- 2003 Zsolt Nagy (Ph.D., UMR): "Contrasting styles of early dolomitization from the Lower Carboniferous platform carbonates of the Irish Midlands" (Co-Advisor with Ian Somerville, Univ. College-Dublin and Jay M. Gregg, UM-Rolla)
Employed by Schlumberger.
- 2003 Aaron Johnson (Ph.D.): "Recognizing ore-related hydrothermal fluids outside of mineralized areas: A regional study of fluid inclusion microthermometry-halogen geochemistry of dolomites in the Irish Zn-Pb ore field"
Assistant Professor at Northwest Missouri State University.
- 2001 William Baugaard (M.S., UMR): "Dolomitization patterns associated with sulfide mineralization in the Transvaal Group (Proterozoic) of South Africa (Co-Advisor with Jay M. Gregg, UM-Rolla)
Working as a mining geologist in the Republic of South Africa.
- 2001 Wayne Wright (Ph.D. University College-Dublin): "Dolomitization, fluid-flow and mineralization of the Lower Carboniferous rocks of the Irish Midlands and Dublin Basin Regions" (Co-Advisor with Ian Somerville, UCD and Jay M. Gregg, UM-Rolla)
Employed as a geologist at the Texas Bureau of Economic Geology.
- 1999 Carey Costello (M.S.): "Geochemical and fluid inclusion studies of the Colomac gold mine, NWT, Canada"
Employed as a geologist by the State of Missouri's Department of Natural Resources.
- 1999 Todd McMenemy (M.S.): "Geochemical studies of greenstone-hosted gold deposits of the Giant mine, NWT, Canada"
High school science teacher in St. Louis, MO.
- 1996 Timothy Keller (M.S.): "Thermal evolution, fluid/rock interactions and fluid migration in the Mississippi Embayment rift systems (Reelfoot-RoughCreek)" (co-advisor with Jay M. Gregg, UM-Rolla)
Employed as a geologist with Conoco-Phillips Inc.
- 1995 Zhenhao He (PhD, UM-Rolla): "Relationship between carbonate facies, fluid flow and epigenetic dolomite cementation in Cambro-Ordovician rocks in southern Missouri" (co-advisor with Jay M. Gregg, UM-Rolla)
- 1994 Richard Solomon (M.S.): "Hydrothermal mineralization and thermal anomalies in accretionary prisms: Fluid inclusion

- studies of precious and base metal-bearing vein systems in Franciscan rocks of coastal California" (Co-advisor with Michael B. Underwood, MU)
- 1993 Isac B. Burstein (M.S.): "Sulfur isotope studies of detailed mineral parageneses in MVT-type Pb-Zn deposits, S.E. Missouri: A test of the involvement of multiple basinal fluid sources"
Head of exploration for a private Peruvian mining company.
- 1992 G. Ted Haeussler (M.S.): "Geochemical studies of the Tongyoung gold-silver deposits, Republic of Korea: Evidence of meteoric water dominance in a Te-bearing epithermal system"
Employed by MU Environmental Health and Safety.
- 1992 Peter R. Laudon (M.S., UM-Rolla): "Geochemical and petrologic studies of selected portions of the Bonneterre dolomite, southeast Missouri" (Co-advisor with Jay M. Gregg, UM-Rolla)
Employed by LaRoche Petroleum Consultants, Ltd.
- 1992 Jennifer McIntire (B.S.): "X-ray determinations of clay mineralogy in rocks of the foothills of the Brooks Range, Alaska" (McNair Scholar, co-advisor with Michael B. Underwood, MU)
- 1992 Steve Schmidt (B.S.): "Stable isotope and fluid inclusion studies of quartz-calcite veins in rocks of the foothills of the Brooks Range, Alaska" (McNair Scholar, co-advisor with Michael B. Underwood, MU)
- 1990 Marjorie S. Schulz (M.S.): "Hydrothermal manganese oxyhydroxide mineralization of volcanoclastic rocks from the Mariana and Izu-Bonin arcs" (Co-advisor with Michael B. Underwood, MU)
Employed as a geologist by the U.S. Geological Survey.
- 1989 Rita M. Bauer (M.S.): "Fluid inclusion study of the regionally extensive, epigenetic dolomite of the Bonneterre Formation, southeast Missouri"
Working as an environmental geologist in Massachusetts.
- 1988 Sandy K. Balogh (M.S., UM-Rolla): "Sulfur isotope and minor element geochemistry of sulfides from the Silver Mine district, southeastern Missouri" (Co-advisor with Richard D. Hagni, UM-Rolla)
- 1988 Stanley J. Perry (M.S.): "Fluid inclusion and stable isotope study of a mesothermal gold deposit, Boryeon mine, Republic of Korea"
Employed by the National Geospatial-Intelligence Agency.
- 1987 Dotty M. Lofstrom (M.S.): "Fluid inclusion and stable isotope studies of the Silver Mine district Sn-W-Pb-Zn-Ag deposits, southeast Missouri"
Employed by the California Environmental Protection Agency.

1986 Russell K. Murphy (M.S.): "Geochemistry of garnets and pyroxenes from skarn orebodies, Mines Gaspé, Quebec"
Employed by Kerr McGee Corporation.

Administrative and Committee Service to the University:

Campus-wide:

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|----------------|---|
| 2007 – Present | SPRAC (Strategic Planning and Resource Advisory Council)
The Chancellor and Provost's university-wide committee is charged with long-range planning for the institution. |
| 2008 – 2010 | Mentor, MU Focus on Faculty Mentorship Program
Mentoring mid-career female faculty members in the Arts and Social Sciences: Mentee, Prof. Jacquelyn Litt, formerly Chair, MU Department of Women and Gender Studies, now Dean of Douglas College at Rutgers University. |
| 2007 – 2008 | Mentor, MU ADVANCE Mentorship Program
Mentoring mid-career female faculty in STEM fields: Mentee, Prof. Sheryl Tucker, now Dean of the Graduate School at Oklahoma State University. |
| 2006 | Search Committee, Dean of the MU College of Arts and Science |
| 2003 – 2005 | Research Committee, MU PRIME Fund
The MU Prime Fund evaluates proposals and provides matching funds for major equipment and facilities proposals submitted to external funding agencies. |
| 2002 – 2003 | Selection Committee, Chancellor's Awards for Research and Creativity |
| 1993 – 1996 | Intercollegiate Athletics Committee
Advises the chancellor and Athletic Director in all matters relating to intercollegiate athletics at MU. |
| 1992 – 1994 | Phi Beta Kappa Selection Committee |
| 1983 – 2004 | Intercollegiate Track and Field Official
Head official, long jump & triple jump 1987-2004 |

College of Arts and Science:

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|----------------|---|
| 2009 – Present | Dean's Strategic Development Committee
Purpose: To provide ideas and feedback to the Dean regarding all issues that affect the College, in particular its future funding sources. |
| 2009 – 2011 | Committee on Diversity
Purpose: To develop and facilitate ways to ensure that College personnel become more aware of the ethnic and cultural diversity of our population. |
| 2009 – 2011 | Committee on Differential Tuition/Supplemental Fees
Purpose: To initiate policy recommendations on fee structures for courses in the College. |

2006 – 2008	Search Committee, Director of the MU School of Music
2003 – 2004	Faculty Awards Committee
2003	Selection Committee, MU Middlebush Chairs in Psychology and Social Sciences
2000 – 2003	Promotion and Tenure Committee Chair of the committee, 2002-2003 Primary responsibility for reviewing ~40 dossiers per year, presenting the cases to the committee, and communicating results to candidates and Chairs of their departments (including facilitating appeals of committee decisions).
1990 – 2003	Undergraduate Scholarship Committee
1985 – 1988	Status of Women Committee Developed the College's first policies regarding gender equity and sexual harassment.

Department:

2004 – Present	Department Chair
2004	Hydrogeology Faculty Search Committee
2002	Petrology Faculty Search Committee
2000 – 2001	Chair, Sedimentology Faculty Search Committee,
1999 – 2001	Salary Advisory Committee
1994 – Present	Chair, Doctoral Faculty Committee
1994 – 2004	Director of Graduate Studies
1994 – 2004	Chair, Curriculum Committee
1993 – 1994	Chair, Geochemistry Faculty Search Committee
1992 – 2004	Chair, Graduate Admissions Committee
1992	Geochemistry Faculty Search Committee
1991 – 1994	Salary Advisory Committee
1990 – 1997	Library Committee
1988 – Present	Undergraduate Scholarship Committee
1986 – 2001	Co-Director, Stable Isotope Geochemistry Laboratory
1986 – 1995	Chair, Speakers Committee
1985 – 1987	Curriculum Committee

Other Academic Service:

2004	External Evaluator, Department of Biology and Earth Science, Central Missouri University
1998	Advisory Board, Association for the Advancement of Science, Gordon Research Conferences
1997 – Present	Association of Public and Land-Grant Universities (formerly National Association of State Universities and Land-Grant Colleges), Mineral & Energy Resources Panel

1996 - 1998 Graduate Fellowship Panel, National Science Foundation,
Chemistry and Earth Science

1987 - 1988 Minority Fellowship Panel, National Science Foundation,
Chemistry and Earth Science