

CURRICULUM VITAE
Sarah Penniston-Dorland

Department of Geology
University of Maryland
College Park, MD 20742
Website: <http://www.geol.umd.edu/~sarahpd/>

Telephone: (301) 405-6239
Fax: (301) 405-3597
E-mail: sarahpd@geol.umd.edu

Education

PhD	2005	Earth and Planetary Sciences, Johns Hopkins Univ.
MA	1999	Earth and Planetary Sciences, Johns Hopkins Univ.
MS	1997	Geological Sciences, The University of Texas, Austin
EdM	1990	Graduate School of Education, Harvard University
BA	1986	History and Science, <i>cum laude</i> , Harvard College

Employment

2007-present	Assistant Professor, Department of Geology, University of Maryland
2005-2007	Research Associate, Department of Geology, University of Maryland
2004-2005	Lecturer, Department of Geology, University of Maryland

Publications

Penniston-Dorland, Sarah C., Wing, Boswell A., Nex, Paul A.M., Kinnaird, Judith A., Farquhar, James, Brown, Michael, and Sharman, Elizabeth R., 2008. Multiple sulfur isotopes reveal a primary magmatic origin for the Platreef PGE deposit, Bushveld Complex, South Africa: *Geology*, v. 36, p. 979-982.

Penniston-Dorland, Sarah C. and Ferry, John M., 2008. Element mobility and scale of mass transport in the formation of quartz veins during regional metamorphism of the Waits River Formation, east-central Vermont: *American Mineralogist*, v. 93, p. 7-21.

Penniston-Dorland, Sarah C. and Ferry, John M., 2006. Development of spatial variations in reaction progress during regional metamorphism of micaceous carbonate rocks, Northern new England: *American Journal of Science*, v. 306, p. 475-524.

Ferry, John M., Rumble, Douglas III, Wing, Boswell, A. and Penniston-Dorland, Sarah C., 2005. A new interpretation of centimeter-scale variations in the progress of infiltration-driven metamorphic reactions: Case study of carbonated metaperidotite, Val d'Efra, Central Alps, Switzerland. *Journal of Petrology*, v. 46, no. 8, p. 1725-1746.

Penniston-Dorland, Sarah C. and Ferry, John M., 2005. Coupled dichotomies of apatite and fluid composition during contact metamorphism of siliceous carbonate rocks. *American Mineralogist*, v. 90, no. 10, p. 1606-1618.

Ferry, John M., Wing, Boswell A., Penniston-Dorland, Sarah C. and Rumble, Douglas III, 2002. The direction of fluid flow during contact metamorphism of siliceous carbonate rocks: new data for the Monzoni and Predazzo aureoles, northern Italy, and a global review. *Contributions to Mineralogy and Petrology*, v. 142, p. 679-699.

Penniston-Dorland, Sarah C., 2001. Illumination of vein quartz textures in a porphyry copper ore deposit using scanned cathodoluminescence: Grasberg Igneous Complex, Irian Jaya, Indonesia. *American Mineralogist*, v. 86, no. 5-6, p. 652-666.

Teaching, Mentoring, and Advising

Courses Taught in the Last Five Years

University of Maryland

Environmental Geology

Optical Mineralogy

Gems and Gemstones

Recent Advances in Geology: Igneous and Metamorphic Petrology

Undergraduate students

Supriya Khadke – working on lithium isotope analysis of subduction zone rocks of the Franciscan Complex, CA, 2007 to present.

Whitney Ford – worked through LSAMP program on dehydration reactions in the Bergell ultramafic contact aureole, Italy, 2007-2008.

Cory Hanson – senior honors thesis student – “Vein Related Mass Transport in the Ritter Range Roof Pendant during Late Cretaceous Contact Metamorphism”, 2008-2009

Graduate student

Rachel Potter, M.S. Candidate

2006-present

"Diffusion of oxygen and lithium isotopes at a contact between the Bushveld and metasediments: Implications for diapiric rise of the Phepane Dome". Rachel received a GSA Research Grant in 2007 for her research and was additionally granted *Outstanding Mention* (one of the top 20 recipients).

Service

Professional

Membership in Professional Societies

Geological Society of America

Mineralogical Society of America

American Geophysical Union

The Geochemical Society

Association for Women Geoscientists

Member of MSA Lecture Program Committee, 2007 to present.

Co-convener of session entitled “Sulfur in the Earth and Planets” at the American Geophysical Union’s 2006 Joint Assembly

Co-convener of session entitled “Applications of light stable isotopes to high-temperature problems” at the 2007 Goldschmidt Conference

Guest co-editor of Special Issue of Chemical Geology “Applications of non-traditional stable isotopes in high-temperature geology” following on the session in the 2007 Goldschmidt Conference session, v. 258, Issues 1-2, 2009.

Co-convenor of session entitled “Fluids, melts and wall rocks: Processes of metal enrichment in magmatic-hydrothermal ore deposits” at the 2009 Goldschmidt Conference

Campus

Departmental

Graduate Admissions Committee

Geology Colloquium Coordinator

Collaborators

Richard Ash, University of Maryland; Michael Brown, University of Maryland; James Farquhar, University of Maryland; Maureen Feineman, Pennsylvania State University; John Ferry, Johns Hopkins University; Judith Kinnaird, University of Witwatersrand; Iain McDonald, Cardiff University; Phil Piccoli, University of Maryland; Roberta Rudnick, University of Maryland; Elizabeth Sharman, McGill University; Sorena Sorensen, Smithsonian Institution; Boswell Wing, McGill University.

Talks Presented

Invited Talks

American Museum of Natural History, Department of Earth and Planetary Sciences, January 8, 2009, Multiple sulfur isotopes reveal a magmatic origin for the Platreef PGE deposit, Bushveld Complex.

American Geophysical Union, December 16, 2008, Fluid flow in subduction zone high-grade blocks of the Franciscan Complex, CA: Evidence from Li and Li isotopes.

Geological Society of Washington, September 24, 2008, Multiple sulfur isotopes reveal a magmatic origin for the Platreef PGE deposit, Bushveld Complex, South Africa

SUNY Geneseo, Department of Geology, November 30, 2007, A new approach to understanding ore formation processes: Multiple sulfur isotope analysis of sulfide minerals of the Bushveld Complex.

Imperial College of London, Student Chapter of the Society of Economic Geologists, November 23, 2007, A new approach to understanding ore formation processes: Multiple sulfur isotope analysis of sulfide minerals of the Bushveld Complex.

Geological Society of Washington, March 8, 2006, Do veins represent large-scale or local mass transfer during regional metamorphism? – Evidence from the Waits River Formation, Vermont.

Abstracts

- Penniston-Dorland, S.C., Khadke, S.V., and Sorensen, S.S., 2008, Fluid flow in subduction zone high grade blocks of the Franciscan Complex, CA: Evidence from Li and Li isotopes: *Eos Trans., AGU, 89(53), Fall Meet. Suppl., Abstract V34B-01.*
- Penniston-Dorland S, Wing B, Farquhar J, Brown M, Nex P, Sharman-Harris E, and Kinnaird, J, 2007, A new approach to understanding of ore formation processes: Multiple sulfur isotope analysis of sulfide minerals of the Bushveld Complex: *Geological Society of America Abstracts with Programs*, v. 39, No. 6, p. 275.
- Penniston-Dorland, Sarah, Wing, Boswell, Farquhar, James, Brown, Michael, and Nex, Paul, 2007, Mass-independent sulfur isotopes trace magma-wall rock interactions in the Bushveld Complex, *Geochimica et Cosmochimica Acta*, v. 71, 15, suppl. 1, p. A775.
- Penniston-Dorland, Sarah C. and Ferry, John M., 2006. Do veins represent large-scale or local mass transfer during regional metamorphism?: Evidence from the Waits River Formation, East-central Vermont, *Geological Society of America Abstracts with Programs*, v. 38, No. 7, p. 207.
- Penniston-Dorland, Sarah, Wing, Boswell, Brown, Michael, Farquhar, James, Baker, Margaret Ann, and Nex, Paul, 2006. A petrologic investigation of the Platereef, Bushveld Complex, South Africa, using anomalously fractionated sulfur isotopes as a tracer. *Eos Trans. AGU, 87(36), Jt. Assem. Suppl.*, Abstract V43B-06.
- Penniston-Dorland, Sarah C. and Ferry, John M., 2005. Coupled dichotomies of apatite and fluid composition in contact metamorphosed siliceous carbonates. *Geochimica et Cosmochimica Acta*, v. 69, Issue 10, p. 21.
- Penniston-Dorland, Sarah C. and Ferry, John M., 2004. Reinterpretation of reaction progress as a record of the geometry of fluid flow during metamorphism: Waits River Formation, east-central Vermont. *Geological Society of America Abstracts with Programs*, v. 36, no. 5, p. 202.
- Ferry, John M., Penniston-Dorland, Sarah C., and Wing, Boswell A., 2004. Reinterpretation of reaction progress as a record of the geometry of fluid flow during metamorphism: Waterville Limestone, south-central Maine and some generalizations. *Geological Society of America Abstracts with Programs*, v. 36, no. 5, p. 202.
- Ferry, John M., Rumble, Douglas III, Wing, Boswell, A., and Penniston-Dorland, Sarah C., 2003. A new interpretation of cm-scale variations in reaction progress produced by infiltration-driven metamorphism. *Geological Society of America Abstracts with Programs*, v. 35, no. 6, p. 225.

Penniston-Dorland, Sarah C. and Ferry, John M., 2001. Mechanism and geometry of fluid flow during regional metamorphism recorded by variations in reaction progress in layered carbonate rocks, Waits River Formation, Vermont. *Geological Society of America, Abstracts with Programs*, v. 33, no. 6, p. 17-18.

Penniston-Dorland, Sarah C., 1997. Scanned cathodoluminescence of quartz and interpretation of textures in quartz-sulfide veins in the Grasberg Igneous Complex, a porphyry copper ore deposit. *Geological Society of America, Abstracts with Programs*, v. 29, no. 6, p. 61.

Penniston-Dorland, Sarah C. and Cloos, Mark, 1996. Veins and associated alteration halos in the Grasberg Igneous Complex, Irian Jaya, Indonesia: *Geological Society of America, Abstracts with Programs*, v. 28, no. 7, p. 334.

Workshop presentations

Penniston-Dorland S, Wing B, Nex, P.A.M., Kinnaird, J., Farquhar J, Brown M, and Sharman E, 2008, Multiple sulfur isotopes reveal a primary magmatic origin for the Platreef PGE deposit, Bushveld Complex, South Africa: *3rd Platreef Workshop, Society of Economic Geologists-Geological Society of South Africa Meeting*.

Penniston-Dorland S, Wing B, Nex, P, Kinnaird, J, Farquhar J, Brown M, and Sharman E, 2008, A new approach to understanding ore formation processes: Multiple sulfur isotope analysis of sulfide minerals from the Bushveld Complex, South Africa: *Gordon Research Conference, Geochemistry of Mineral Deposits*.

Other

Doctoral Dissertation

Penniston-Dorland, Sarah C., 2005, Sources, mechanisms, and pathways of chemically reactive fluid transport during metamorphism from analysis of geochemical tracers: Doctoral Dissertation, Johns Hopkins University, 155 pp.

Master's Thesis

Penniston-Dorland, Sarah C., 1997, Veins and Alteration Envelopes in the Grasberg Igneous Complex, Gunung Bijih (Ertsberg) District, Irian Jaya, Indonesia: Master's Thesis, The University of Texas at Austin, 402 pp.

Fellowships, Prizes and Awards

- 1994 Undergraduate Petrography Contest Winner, The University of Texas at Austin
- 1995 NSF Graduate Research Fellowship
- 1996 Best Technical Presentation, The University of Texas at Austin
- 2002 Dean's Teaching Fellowship, Johns Hopkins University
- 2008 General Research Board Summer Award, University of Maryland

Reviewing Activities

Geology

Journal of Metamorphic Geology

Chemical Geology

Geochimica et Cosmochimica Acta

Journal of Petrology

Contributions to Mineralogy and Petrology

Geochemistry, Geophysics, Geosystems (G³)

NSF-EAR: Petrology and Geochemistry.