

Gretchen Hough

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Education

- Graduate: University of Wyoming, Laramie, WY** September 2014-Present
Pursuing a Master of Science in Geology (expected graduation May 2016)
Research focus in Economic Geology and Petrology
- Post Baccalaureate: University of New Mexico, Albuquerque, NM** January 2013-June 2014
Completed core geology curriculum (A+ weighted GPA 4.15)
- Undergraduate Degree: Portland State University, Portland, OR** September 2005-August 2008
Bachelor of Science in Physics
Graduated Summa cum Laude (GPA 3.96)
Awarded Physics Senior of the Year 2008

Research and Teaching

- University of Wyoming, Laramie, WY** September 2014-Present
Wyoming roll-front deposits, Advisors Drs. Carol Frost and Susan Swapp
Proposed research to explore potential causes for varying grades of uranium in roll-front deposits. Currently examining the use of sulfur isotope fractionation in pyrite to assess extent of bacterial reduction versus chemical reduction and the relationship to vanadium contamination in uranium ore. Teaching assistant. Instructing laboratory sessions for Igneous and Metamorphic Petrology.
- University of New Mexico, Albuquerque, NM** September 2013-May 2014
Middle Ordovician orbital-scale climate trends, Advisor Dr. Maya Elrick
Conducted research on oxygen isotope ratios of Middle Ordovician marine apatite (conodonts) to investigate orbital-scale climate trends. Separated and collected conodonts from rock samples in a 40 meter sequence of sea-level cycles. Applied a series of chemical reduction techniques to isolate oxygen from apatite for analysis with a mass spectrometer.
- Planetary Power Inc., Albuquerque, NM** June 2009-January 2010
Carbon coking on reduced iron substrates, background research
Assembled research on producing graphite from CO₂ for use in creating synthetic fuels. Summarized previous research to avoid repeating experiments and raised questions and possible directions for further experimentation.

Experience

- US Peace Corps Volunteer, Namibia, Africa** August 2010-June 2012
Served as a Peace Corps volunteer teacher. Taught grades 8-10 English and mathematics. Created and implemented a school-wide discipline policy as an alternative to corporal punishment. Organized and led youth conferences to educate students about HIV/AIDS and living healthy lifestyles. Developed afterschool projects such as a theater and concessions group.
- Roane State Community College, Crossville, TN** January 2010-May 2010
Tutored students in writing and mathematics. Created a more collaborative and cohesive team and effective tutoring environment.

Foreign Language

Fluent in German
Participated in a high school exchange program (ASSE) for a ten month immersion in the language and culture. Received a 97% on the German fluency exam Zertifikat Deutsch.