



Kiruna, Sweden during 2002 field work in Norbotten (Lapland)

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Broadly stated, my teaching and research interests relate to understanding how materials are distributed in the Earth's crust, how they move, and what are their practical consequences. My focus is on economic geology and geochemistry, however my interests span other fields including petrology, mineralogy, and tectonics.

Research topics range from studies of particular ore deposit types, to regional metallogeny and tectonics, to the general mass and energy transfer processes associated with magmatism and metamorphism. Primary research tools include geologic mapping, lab-based petrology and geochemistry, and theoretical approaches. Most projects are collaborative involving the mining industry, geological surveys, and others.

I teach a variety of **courses**. These include Physical Geology (251), Mineralogy (306), Field Camp (412), Economic Mineral Deposits (446/546), Advanced Ore Deposits (646), and topical seminars (596). All include a field component. Many of these courses plus workshops and short courses are part of the **Lowell Program in Economic Geology**. I also actively **advise graduate and undergraduate students** interested in petrology and mineral deposits, and facilitate independent research by students and post-docs.

My group, part of the larger **Mineral Resources program**, involves undergraduate and graduate students, post-docs and staff scientists, other faculty, and colleagues from industry, government, and other academic institutions. The **Center for Mineral Resources** represents a key, ongoing collaborative effort between the UA, the USGS, and outside partners.



Teaching
Physical Geology, Mineralogy, & Field Camp
to Ore Deposits & Advanced Mapping



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