

Job Title:

Geological Laboratory and Field Assistant

Job Description:

The Mineral Deposit Research Unit (MDRU), based at UBC's Department of Earth, Ocean & Atmospheric Sciences, seeks an organized, dedicated, and highly motivated student to assist with major economic geology project. The successful candidate will be primarily engaged in laboratory activities in support of research into the porphyry deposits of Central and Southern British Columbia. The role may also include a fieldwork component, conducting sampling in southern BC. The role will provide significant support to the lead Research Associate on the project, while enhancing the student's skillset to better prepare them for entry-level post-graduate work.

MDRU is an industry-funded research and education program housed within the broader EOAS Department, providing graduate student education, professional development to industry members, and global mineral deposit research conducted by full time researchers and faculty members. This project is part of a major initiative to better characterize the geological factors driving the formation of mineral-rich porphyry deposits. The student will join a dynamic research team that includes the Research Associate (Project Leader), faculty members, government geologists and members of the minerals industry.

Duties Include:

- Preparation, labelling, description, photographing, and cataloguing of rock samples
- Cutting and crushing rock samples for identification of minerals
- Identification of specific minerals through microscopy for mineralogical analysis
- Preparation of mineral separates for isotopic, mineralogical, or geochemical analysis
- Short-wave infrared spectroscopic analysis (ASD-Terraspec)
- Compilation and digitization of public geoscience data
- Maintenance of databases and creation of spatial data for GIS applications
- Collection of rock samples and geoscientific data in the field as needed
- Mineralogy work using binocular, petrographic and scanning electron (SEM) microscopes

Supervision

- The student will be supervised by the Project Leader for all components
- The student will be additionally supervised by the MDRU GIS specialist for any digital data components
- Bi-weekly meetings will be conducted to gauge progress with the overall project goals

Contributions to the Research Project

The student will be an important part of the program team by contributing scientific datasets of value to mineral exploration companies and the public sector, as well as providing direct support to our in-house staff and graduate students.

Qualifications:*Academic:*

- Currently enrolled in the 3rd or 4th year Geology Honours or Geology Major program
- Good rock description and mineral identification skills

Skills and Experience:

- Physically fit (lifting and hiking required)
- Mapping experience an asset

Qualities Needed:

- Self-motivated, inquisitive, and able to learn quickly
- Accurate and attentive to detail
- Neat and organized in rock handling and data recording
- Ability to work in both team and individual environments
- Superior oral and written communication skills
- Positive attitude in adverse conditions
- Proficiency in Microsoft Office suite; previous ArcGIS experience an asset

Certifications:

- Canadian Driver's License
- Bear awareness and First Aid Training for industry an asset

Student Learning Components

This position gives the student the opportunity to expand their classroom-based learning to real-world scenarios, and presents them with the types of projects and tasks that would be expected from junior geologists or junior consultants during office-based tasks. We believe the work conducted in this position would give the student worker a significant advantage over their peers in pursuing further post-graduate education, or seeking future employment with the exploration or consulting industries. Furthermore, in interacting with MDRU's diverse group of researchers and graduate students, the student benefits from immediate feedback, contributes to dynamic research projects, and has the opportunity to make lasting contacts in economic geology and academia.

Specific elements of the experience include:

Orientation and training:

- Tour of laboratory and rock preparation facilities that will include a review of safety policies and procedures, and a demonstration of the activities
- Introduction to other students and administrative and technical staff
- Software training as needed, including ESRI ArcGIS spatial mapping software
- Training in geological data management, rock sampling, and digital data collection
- Training for field situations, including safety, preparedness, and workflow management

Feedback and support:

- Regular review of tasks and priorities
- Regular discussion about scientific data and observations
- Regular feedback so the student learns from errors

Mentorship:

- Discussion about the relevance of the work experience to the student's educational and career aspirations
- Opportunities to engage with the Research Associate leading the project for developing a senior research project or independent study.

Personal and professional development:

- The student will learn the value of various laboratory techniques for rock characterization
- The student will learn important data analysis skills required in both public and private sectors

- The student will become familiar with the rocks and minerals characteristic of ore-forming settings
- The student will gain confidence in various work environments and in scientific communication
- The student will contribute to a research program that offers significant geoscientific and economic value to Canada

Networking

- Opportunities to interact with graduate students, researchers, and faculty, as well as industry and government research partners