



## Department of Geology – Saint Mary's University – MSc Project Available

The Department of Geology at Saint Mary's University invites applications for a fully funded (minimum \$30,000/year, which includes external funding and Teaching Assistantship) two-year MSc position to start in September 2024 (flexible) under the supervision of Dr. Erin Adlakha of the Mineral Imaging and Analysis Laboratory. This project is in collaboration with the TGI6 (Targeted Geoscience Initiative) program (Project 1: Volcanic, Sedimentary, and Hydrothermal Ore Systems) of the Geological Survey of Canada under Principal Investigators Drs. Rod Smith and Mike Gadd.

The research will investigate sphalerite as an indicator mineral for Pb-Zn deposits in the Mackenzie Mountains, NWT. Archival stream sediments, mineral separates, and ore deposit outcrop samples will be analyzed using micro-XRF (X-Ray Fluorescence) and SEM (scanning electron microscopy) for mineral mapping/characterization and elemental distribution, while LA-ICP-MS (laser-ablation-inductively coupled plasma mass spectrometry) will determine the trace elements concentrations of sphalerite. These results will be used to determine whether multi-element geochemical and petrological characterizations can discriminate the source and dispersion models for indicator minerals, as well as identify unknown Zn-Pb and other deposit type mineralization.

The ideal candidate has a BSc. Geology (hons) and a keen interest in mineral chemistry. Research experience in i) the field of sedimentary provenance and dispersion, ii) statistical methods including multi-variate analysis and/or iii) ArcGIS and/or other mapping software is considered an asset but not essential. Potential candidates should email [erin.adlakha@smu.ca](mailto:erin.adlakha@smu.ca) with their CV/resume, unofficial transcript, and details of their experience and interest in the project.

The Department of Geology hosts faculty members with a broad range of expertise as well as state-of-the-art analytical facilities for research in mineralogy, geochemistry, and ore deposits. In-house analytical instruments include a field emission scanning electron microscope, bench-top micro-X-Ray Fluorescence spectrometer, a state-of-the-art fluid inclusion microthermometry lab, a gas chromatograph and confocal laser Raman spectrometer.

Saint Mary's University is located in the historic port city of Halifax, Nova Scotia, a vibrant, urban community of over 350,000 people. Halifax is a major educational centre for Atlantic Canada and is home to five universities. It is conveniently located close to recreational areas and to other major urban centres in Canada and the northeastern United States. Our campus is based in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq, and is global in reach and influence



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Saint Mary's University hires based on merit and is committed to the principles of employment equity. Saint Mary's University encourages applications from qualified women, visible minorities, LGBTQ2+, Indigenous people, and people with disabilities. Preference be given to Canadian citizens and permanent residents of Canada, and the candidate must legally be able to study in Canada at the time of appointment.



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