

Bemnet Abebe, The University of British Columbia, Okanagan Campus, Kelowna, British Columbia, Canada for their project: *Effects of Deformation and Metamorphism on Volcanogenic Sulphide Minerals*.

I am a first-year PhD student in Earth and Environmental Science at the University of British Columbia Okanagan, working under the supervision of Dr. Tarryn K. Cawood. My research focuses on understanding how deformation and metamorphism modify volcanogenic massive sulphide (VMS) ore minerals and the critical and precious metals they contain. By combining petrography, microstructural analysis, and mineral chemistry, I investigate how deformation and metamorphic reactions influence sulphide mineral textures and metal redistribution in ore systems.

My project examines two Canadian VMS deposits: the Restigouche deposit in the Bathurst Mining Camp (New Brunswick) and the Brabant deposit in Saskatchewan. These deposits record contrasting deformation and metamorphic histories, allowing me to test how pressure-temperature affects sulphide mineral stability and trace-element retention. Through detailed mineralogical and microstructural characterization, I aim to determine whether deformation enhances or diminishes concentrations of economically important metals, and how these processes impact exploration strategies in metamorphosed terranes.

Support from the Lipman Student Research Grant will help fund analytical costs for mineral chemistry and microstructural work, travel for field. This award will allow me to advance my goal of resolving how post-mineralization processes shape ore mineral systems and the distribution of critical metals in Canada's VMS deposits.

I earned my BSc in Geology and my MSc in Mineral Deposit (Ore Geology) in Ethiopia before beginning my doctoral studies at UBC Okanagan. I am grateful to the Howard and Jean Lipman Foundation and the Geological Society of America for supporting my research.

