

Graduate Research Projects in Igneous Petrology and Isotope Geochemistry

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Archean volcanism near Yellowknife, NT. The Yellowknife greenstone belt is one of the best mapped Archean volcanic belts in the world. Studies to date have focused on the geology around Yellowknife, but similar volcanic rocks are exposed on the east side of a major turbidite basin. The correlation of these eastern volcanic rocks with those at Yellowknife is enigmatic, but is critical for the interpretation of new seismic profiles across the turbidite basin. The area was well mapped several decades ago, and many rocks samples were collected for analysis, but no modern geochemical analysis of these eastern belt rocks has been performed. The samples are stored here in Ottawa, and these will serve as an initial sample set. Future field work will augment this data set, with support from the NWT Geoscience Office in Yellowknife.



Left: Huge pillow lavas, Giant Mine. Right: trench at the Kathleen Pb-Zn prospect (H. Falck).



Left: Crystal tuffs, Joliffe Island, Yellowknife Bay.

Right: Trapper Lake tuff, sandwiched between mafic flows and sills, Yellowknife.

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