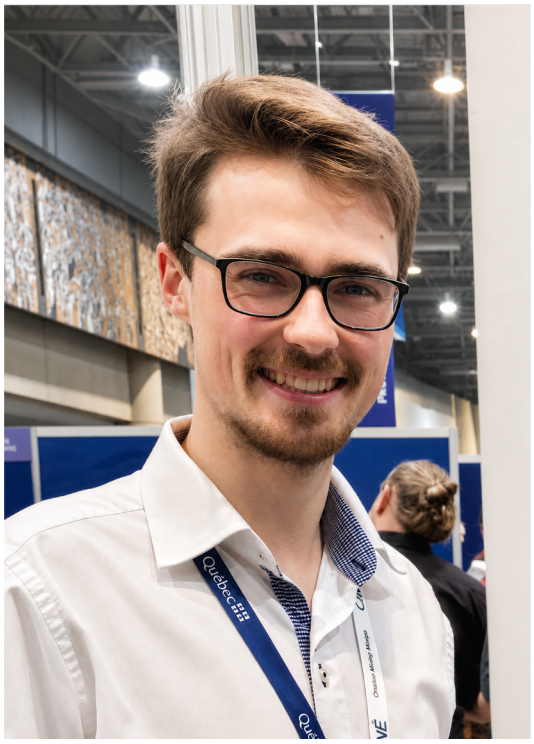
Marc-André Boies, Institut national de la recherche scientifique (INRS), Quebec City, Quebec, Canada for their project: *Structural controls and relative timing of gold mineralization of the Wesmeg-North deposit, Nunavut*.



The Wesmeg North gold deposit, located within the Meliadine gold district in Nunavut (Rankin Inlet Greenstone Belt), represents a significant (>1 Moz Au) Paleoproterozoic volcanic-hosted gold system and is the district's only non-BIF-associated gold system found so far. Despite its recent transition to production and growing importance to the mine, the geological controls and timing of mineralization at Wesmeg North remain poorly understood. This project aims to define the controls on gold mineralization and to establish the relative chronology of mineralizing events.

Preliminary work completed during 2025 included detailed drill-core logging, underground mapping, lithogeochemical sampling, and petrographic analysis. These investigations have revealed a previously unrecognized footwall architecture composed of multiple basalt units and a distinctive calc-alkaline gabbro sill. Whole-rock geochemistry has demonstrated that several volcanic units can be reliably distinguished and traced across the deposit, providing a robust chemostratigraphic framework. Gold-bearing quartz-carbonate veins are preferentially developed within an intensely altered deformation corridor and the competent calc-alkaline gabbro sill.

Ongoing work integrates petrography, lithogeochemistry, and electron microprobe (EPMA) analyses of hydrothermal minerals to characterize alteration vectors.

This study will improve geological models, exploration targeting, and resource evaluation at Wesmeg North while providing new insights into volcanic-hosted orogenic gold systems within the belt.