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Drift prospecting: What you need to understand to explore effectively in a glaciated landscape

ABSTRACT

Effective and efficient mineral exploration in glaciated terrain calls for a thorough knowledge of the sampling methods as well as the glacial geology of the area concerned. Drift exploration in Manitoba can be hampered by a highly variable overburden thickness, paucity of outcrop and a complex glacial and deglacial history, with at least three separate glacial events. Till deposition could have occurred during older phases or younger phases, or a mix of both. This results in reworking and removal of older tills (overprinting) and/or minimal reworking and high preservation (inheritance) – both of which affect how dispersal trains are used to target the source mineralization.

This talk will present an overview of drift-exploration methodology, some of the pitfalls to avoid, and examples of dispersal trains that have led to the discovery of new mineral deposits.

BIOGRAPHY

Michelle Gauthier is a Quaternary geologist working at the Manitoba Geological Survey. Her research focuses on understanding the landscape left behind by past ice sheets. The scope of her work varies from regional to detailed project sites. She is also interested in understanding how material (till) is transported, deposited and deformed beneath a glacier. Before coming to the MGS, she worked with both industry and environmental consulting. She obtained her PhD at the University of Waterloo in 2013.



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