

Field, Petrographic, and Structural Study of Brabant Lake Sulphide Mineralization: Preliminary Results

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Along strike of the Brabant-McKenzie VMS deposit in northern Saskatchewan is a previously unnamed gossan zone now known as the Tênikî showing. The showing is dominated by meta-sedimentary rocks, quartzo-feldspathic sulphidic and calc-silicate units. Less spatially significant units consist of metabasites and anatectic tonalites. The showing is of importance because there is good exposure of structural-stratigraphic relationships in relation to mineralization, allowing for characterization of the local geology within a regional context. This is important information for understanding mineral systems in the Brabant Lake area. This is especially so since the surface expression of the Brabant-McKenzie deposit is obscured by overlying glacial cover and vegetation, thereby hindering understanding of deposit characteristics and the geological context of mineralization. A 700 x 800 m map of the showing area and 10 x 50 m outcrop map of the Tênikî showing have been produced while multiple cross-sections through the map of the study area will be produced. Important units have been petrographically analyzed and characterized. These maps provide geological context for the sulphidic portion of the map area and aid in determining any important relationships amongst the map units. Studies to date suggest that units do not show any signs of structural imbrication and suggest temperature-pressure conditions of at least upper amphibolite facies. All samples collected from the Tênikî showing show varying extents of hydrothermal alteration.