

Deciphering Baltic D

N Szumylo¹, B Lafrance¹

¹Department of Earth Sciences, Laurentian University, Sudbury, Ontario

The study area is located in the Michipicoten greenstone belt, approximately 80km NE of Wawa and 25km E of Missanabie. The Renabie mine, which hosted the past production, was mined primarily for gold with minor silver; it began operations in 1941, and closed in 1991, with a final production value of just over 1,000,000 ounces of gold. The study area is situated in the Missinabi Lake batholith, the composition of which ranges from tonalitic to granodioritic, with minor granitic to syenitic phases. Later diabase dykes cross-cut the batholith and have a NNW and ENE trend. The Baltic D outcrop consists of a foliated tonalite, with a few localized alkali-feldspar rich zones. There is also a small strongly altered zone, where microscopy will be used to establish the true nature of the mineralogy. The Baltic D outcrop is reported as a mineral occurrence, with anomalous values for gold, silver, and copper. The Baltic D outcrop measures 45m by 55m, and was mapped with a 5m grid, laid with north trending and easting trending lines, and the purpose and goal for the Baltic D outcrop is to determine its kinematic history, with emphasis on establishing the paragenesis of the complex fold system. The entire outcrop has been mapped in detail, with careful documentation of structural features and mineralogy. Samples have been collected for thin section analysis, with the purpose of establishing primary and alteration mineralogy and document microstructures. Several samples have been collected from sulfide rich areas on the outcrop, and will be assayed for gold and silver to determine the distribution of gold on the outcrop. There has also been analysed for As, Sb, Bi, Se to test for possible correlation between these indicator trace metals and the gold.