A potential erosional nonconformity in the Swayze Area, Abitibi Greenstone Belt

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This poster presents preliminary results from the Metal Earth 2017 transect research mapping in the Swayze area, during which a unit of polymictic, predominantly clast-supported conglomerate was encountered on the southern part of the transect. The conglomerate covers a large area (at least 500 by 700 m), visibly in contact with a mafic unit at two exposures. This potential erosional nonconformity lies within the Swayze area, thought to be the western extension of the larger Abitibi Greenstone Belt (AGB). This study is part of the multiyear Metal Earth project carried out by MERC (Mineral Exploration Research Centre, Laurentian University, Sudbury) to refine geological interpretation of the AGB. The overall goal of the present study is to characterize the contact relationship between the conglomerate and the underlying mafic unit. The questions to be addressed are: Is the conglomerate of Timiskaming age (~ 2675-2680 Ma) or is it older? What is the protolith of the mafic unit? Does this contact represent a subaerial erosion surface and, if so, was a weathering profile developed in the underlying mafic unit? Finding the answers to these questions will not only be of importance in establishing a stratigraphy in the Swayze area, but also in shedding light on the nature of the conglomerate and, ultimately, the weathering regime in the Neoarchean.