Palaeoplacer gold deposits in the Huronian Supergroup, Canada

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Summary
The 2.45 to 2.2 Ga Huronian Basin in Ontario, Canada, has been thought to contain many similarities with the famous Witwatersrand goldfields in South Africa. Recent discoveries suggest the Huronian Basin may contain Witwatersrand-type gold deposits. The gold mineralization has been discovered within separate conglomeratic stratigraphy of both the Mississagi and Matinenda formations. These discoveries have developed into what is now known as the Pardo project in Pardo Township 65km northeast of the famous Sudbury mining camp. The basal Mississagi cobble to boulder conglomerates can contain values up to 542 g/t Au. The Pardo project is located in the eastern portion of the Huronian Basin known as the Southern Cobalt Embayment. The western portion of the basin, which is most analogous to the Witwatersrand, is historically known for its uraniferous quartz-pebble conglomerates of the Matinenda Formation at Elliot Lake. This investigation plans to examine and compare the mineralogy, chemistry and distribution of gold in both the Mississagi and Matinenda Formations. This will provide insight as to the reasons for gold occurring in the Matinenda Formation at Pardo, which is not seen elsewhere in the basin. The study will also examine the Mississagi sedimentary environment and study its provenance, by examining a comprehensive selection of clasts to determine their source(s) and whether they contributed gold to the Mississagi Formation. Detailed lithofacies analysis of both diamond drill core and outcrop exposures will provide valuable information regarding the channelized nature of the conglomerates as well as to provide a framework for gold resource analysis.

Publications: