



Ross Sherlock

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Metal Earth Project; Progress to Date

ABSTRACT

Metal Earth is a seven-year, \$104M research program led by the Mineral Exploration Research Centre, at Laurentian University. It is funded by the Canada First Research Excellence Fund, Laurentian University, and Federal, Provincial, Territorial, Academic and Industry partners. Metal Earth is the largest mineral exploration research project ever conducted in Canada. It will focus on the Archean era, which represents about 80% of Earth history, 30% of Canada's Far North rock exposure, and almost 50% of Canada's metal wealth. Metal Earth will image entire ore and non-ore systems at full crust-mantle scale to determine the process responsible for Earth's differential metal endowment.

In Canada and similar jurisdictions, mineral resources are increasingly difficult and expensive to discover and develop. This is a function of established mining camps becoming increasingly mature which pushes exploration and development activities into remote and covered areas or deep exploration in mature camps. The end result of this global trend is fewer discoveries and increased discovery costs on a per ounce basis. To slow and reverse this trend, the research community and the minerals industry need to collaboratively develop predictive tools to increase exploration success both in mature mining camps and new districts. Inherent in this research will be an improved understanding of the processes that result in Earth's differential metal endowment across geologic time and how we explore for metals.

Metal Earth has completed its third full field season with over 50 geoscientists conducting targeted mapping in 2019 and completion of 1,000 km of reflection seismic, magnetotelluric and gravity surveys across variably endowed fault systems and volcanic centers of the Abitibi and Wabigoon subprovinces. This presentation will focus on progress to date and future plans for the project.

BIOGRAPHY

Ross joined HES in August 2017 as a Chair in Exploration Targeting and the Director of MERC. Ross is a professional geologist with over 30 years of experience in the mining industry and academic research. His career has spanned junior and senior mining companies, consulting and government surveys working nationally and internationally. Most recently, Ross was Vice President, Geoscience at Kinross Gold Corp. and Exploration Manager, North America at Gold Fields.

Ross completed a Post-Doctoral Fellowship at the Mineral Deposits Research Unit at UBC, Ph.D. at the University of Waterloo, M.Sc. at Lakehead University, and B.Sc. (Honours) at McMaster University, Canada. He is a member of the Professional Engineers and Geoscientists of BC (APEGBC) and Association of Professional Geoscientists of Ontario (APGO).



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