# 7.4 MAGNETOTELLURICS IN DEEP MINING OPERATIONS: CASE STUDIES FROM NORTH AMERICA

**E.Erdogan[1*], Y. Avram[1], G. Hill[2], M. Moorkamp[3,1]**

*[1]Phoenix Geophysics Limited, Toronto, ON, Canada*
*[2]Czech Academy of Science, Prague, Czech Republic*
*[3]University of Munich, Germany*
**Corresponding author e-mail: eerdogan@phoenix-geophysics.com*

**ABSTRACT**

Over the past decade, the utilization of Magnetotellurics (MT) has experienced significant growth. By 2023, its applications have become critical in deep mining operations at deposit and regional scales, serving both commercial and research purposes, sometimes concurrently. The global demand for critical minerals has acted as a catalyst for the widespread adoption of MT techniques. Furthermore, large-scale national projects have emerged with the objective of comprehending the profound structure of the lithosphere and its impact on near-surface deposits. In this study, we have reviewed various case studies related to mining exploration in North America.

**KEYWORDS:** magnetotelluric, mining, exploration, ore deposits