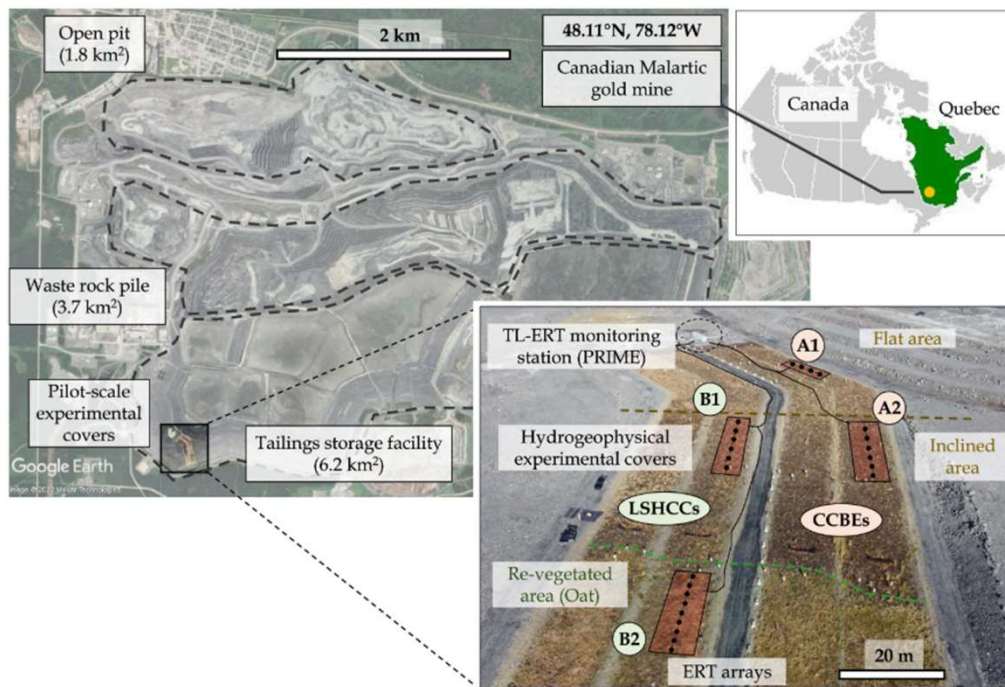


# Case Study - Resistivity for monitoring moisture dynamics in mine tailings reclamation cover systems



Canadian Malartic Mine Quebec, Canada. Pilot-scale experimental survey over multi-layer covers with capillary barrier effects (CCBEs) and low saturated hydraulic conductivity covers (LSHCCs).

**Non-invasive:** Time-lapse ERT autonomously monitors moisture in engineered tailings cover systems.

**Performance:** Assesses cover effectiveness as oxygen barriers and limits water infiltration.

**Cost-effective:** Combines geoelectrical monitoring with conventional sensors to reduce costs and improve spatial resolution.

**Environmental:** Prevent acid mine drainage by providing early warning through continuous monitoring.

**Scalable:** Micro-tests show potential for large-area coverage in environmental management.

Source: A. Dimech, et al, Canadian Geotechnical Journal  
<https://doi.org/10.1139/cgj-2023-0112>