



Near-Surface Bedrock Structural Characterization Using Optical Televiewer Surveys

Project Overview

DGI completed Optical Televiewer (OTV) surveys to characterize shallow bedrock in Ontario. High-resolution borehole imaging identified key structural features within migmatitic rocks and biotite gneisses.

Challenges

- Required detailed characterization of shallow bedrock to better understand structural conditions.
- Needed accurate identification and orientation of fractures and other geological features beyond what conventional logging could provide.
- Required high-resolution data to support geological and geotechnical interpretation.

DGI Approach

- Performed Optical Televiewer (OTV) surveys in three boreholes to capture continuous, high-resolution, oriented images of the borehole walls.
- Processed and interpreted the imagery to map fractures, foliation, lithological contacts, and other structural features.
- Delivered depth-corrected structural data and interpreted geological information to support the client's site characterization.

Project Outcomes

- Successfully completed Optical Televiewer (OTV) surveys across all planned boreholes.
- Produced high-quality structural datasets that enhanced understanding of the site's bedrock conditions.
- Identified key structural features and fracture zones, improving confidence in geological interpretation and supporting future geotechnical and hydrogeological assessments.

PROJECT SNAPSHOT

- **Region:** Ontario, Canada
- **Rock Type:** Migmatitic rocks and layered biotite gneiss
- **Operation Type:** Near-surface geotechnical investigation
- **DGI Solution:** Optical Televiewer Borehole Imaging (OBI) & Structural Interpretation