

CASE HISTORY

Application: **Mining**

Technology: **2000m Winch, Full Waveform Triple Sonic, Magnetic Susceptibility, 3-Arm Caliper**

Location: **Zinc and Lead Exploration, County Meath, Ireland**

Requirement:

Robertson Geo Services (RGS), a long-standing supplier to Boliden, was contracted to undertake a deep borehole survey (2,150m) as part of the latest mineral exploration project at the Boliden Tara Mine. The Boliden Tara Mine is Ireland's largest and most significant mine and the largest zinc mine in Europe, located in Navan, County Meath. The mine produces 200,000 tonnes of zinc concentrate and 40,000 tonnes of lead concentrate annually from underground ore bodies, with ambitious plans to expand the mine further.

Equipment:

A mining version of the Robertson Geo 2000m winch was used to deploy the following probes:

Magnetic Susceptibility: Shows high sensitivity to iron and its oxidation states and is a valuable indicator to the presence of other minerals.

3-Arm Caliper (natural gamma): Highlights hard/soft formations and features as well as lithology boundaries.

Full Waveform Triple Sonic: Provides P and S wave velocity data and estimates of porosity.

Operations:

RGS, highly experienced in deep metal exploration, deployed a mining version of the Robertson Geo 2000m Winch and a purpose-built 2WD logging vehicle, running the wireline cable over a sheave wheel attached to the drill rig.

Challenges and solutions:

Deep, small diameter boreholes typically found in mining exploration can present a challenge for the logging operation. Small rocks can be easily dislodged potentially blocking the passage of probes. To mitigate this extreme operator vigilance is required especially when "tripping in" and "tripping out" at speeds above normal logging speeds.



End value to client:

The high-quality, high-resolution data obtained was processed on-site with a rapid turnaround of field logs, enabling the client to make informed decisions regarding future drilling and underground mining development.