

CASE HISTORY

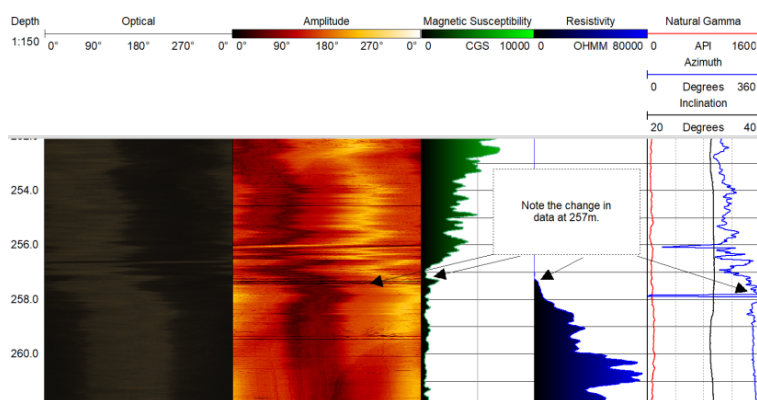
Application: **Mining**

Technology: **Logging inclined exploration boreholes underground**

Location: **Sweden**

The client had drilled 3 inclined boreholes 1.3 km below ground level with each hole averaging 500m in depth. This is the largest underground iron ore mine in the world. These were exploratory holes with the objective of locating iron ore deposits.

To achieve this, Robertson Geo ran Optical and Acoustic Televiewers, Magnetic Susceptibility, Resistivity and Natural Gamma probes.



The composite log above clearly displays a change in data readings across four separate measurements at the same depth indicating the presence of iron ore.

1. The image and azimuth readings produced by the Televiewers are orientated to magnetic north with the probe able to deduce the direction in which the magnetic field is strongest. when the probe encounters magnetic materials such as iron ore the data becomes swirled.
2. The Magnetic Susceptibility data increases dramatically at this point: The probe is able to detect ferromagnetic materials such as iron and nickel.
3. Resistivity readings decrease now as the probes detectors pass from the resistive formation and on through a more conductive layer of ore.

End value to client:

The Magnetic Susceptibility gave very good and clear results of the iron deposits within the boreholes, as did the Resistivity probe. The ability of these probes to provide the client with this data with exact depths was key to locating the iron ore deposits.