

Geochemistry: Unlocking downhole geothermal environments from surface

GEOLOG's **GeoRox** service (delivered via proprietary XRF and XRD technology) is easily deployed at rig-site and provides solutions for Geothermal wells to be drilled more efficiently and with greater understanding of the formations.

Differently from traditional oil & gas drilling, the elevated temperatures sought in the exploitation of Geothermal resources greatly limits the utilisation of downhole formation evaluation tools: temperatures outside recommended operating envelopes lead to rapid (and expensive) downhole tool failures.

GeoRox, coupled with GEOLOG's customised mineralogical interpretation software, allows a better understanding of the subsurface.

In collaboration with its **GEOTech** R&D department, GEOLOG utilises surface measurements to accurately identify formation mineralogy directly from cuttings samples. This includes the identification of temperature diagnostic minerals, allowing correlation of the formations encountered with available temperature logs.

Critical data acquisition is therefore achieved at lower cost whilst avoiding the risks of expensive downhole tool damage or failure, delivering a comprehensive understanding of the subsurface environment.



