



VEXRAD
SEE A DEEPER TOMORROW

SUBSURFACE INTELLIGENCE. FROM THE SURFACE.

See beneath the surface. Decide with evidence. Drill with confidence.

VEXRAD uses Atomic Dielectric Resonance (ADR) to acquire electromagnetic measurements from the surface and build depth-referenced subsurface interpretations - including Virtual Boreholes - to support better-informed exploration and drilling decisions.

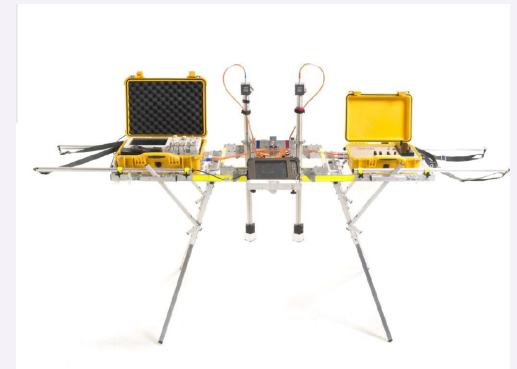
CRITICAL MINERALS

GEOTHERMAL

WATER

CCUS

ARCHAEOLOGY



SURFACE-DEPLOYED ADR SCANNING



From surface measurement to Virtual Borehole

ADR is surface-acquired. Its interpretation provides depth-referenced subsurface intelligence designed for comparison with independent ground truth.

1

SCOPE

Define the geological question and existing evidence.

2

ACQUIRE

Collect ADR data at selected surface locations.

3

PROCESS

Analyse energy, frequency, dielectric and related responses.

4

INTERPRET

Construct depth-referenced Virtual Borehole interpretations.

5

VALIDATE

Compare predictions with drilling, core, logs or other evidence.

What ADR measures

The source brochure describes ADR data acquisition in the time domain, converted into energy-and-frequency spectra, with dielectric permittivity, amplitude-time offsets and wave-return velocities among the measured or derived properties.

What VEXRAD interprets

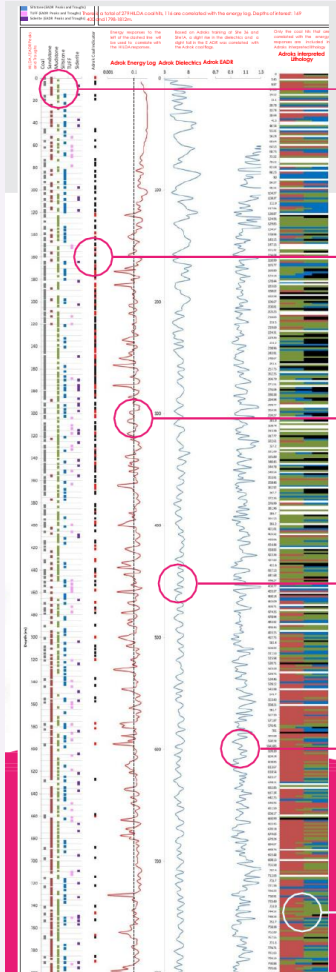
Project-dependent outputs can include stratigraphic or lithological interpretations, geological boundaries, dielectric-related changes, structural information and candidate intervals. Interpretation should be integrated with other geological evidence.

What it does not replace

A Virtual Borehole is not physical core, a laboratory assay, a mineral resource estimate or a guarantee of permeability, flow or drilling success. Drilling and independent subsurface measurements remain ground truth.



A real ADR Virtual Borehole



MULTI-TRACK INTERPRETATION

- **Rock database / typecasting**
Predetermined trained rock types relevant to the project.
- **Material-match indicator**
An algorithmic match indicator compared with field-measured data by depth.
- **Energy returns**
A depth-referenced representation of returned energy amplitude.
- **Dielectric measurements**
Dielectric-permittivity-related calculations derived from the ADR workflow.
- **Returned frequencies / E-ADR**
Frequency-response information used alongside the other tracks.
- **Interpreted lithology**
The final lithological interpretation based on the combined measurements and tracks.

LEGACY ADR DATASET - REPRODUCED BY VEXRAD

The plotted scientific content is preserved from the source brochure. VEXRAD carries the ADR technology and presents legacy evidence with its original technical context.



Where ADR can add another evidence layer

VEXRAD is most useful when there is a specific geological question, a decision that matters, and a credible route to independent validation.

CRITICAL MINERALS

Rank targets, investigate host geology and candidate mineralisation indicators before drilling.

GEOTHERMAL

Investigate lithology, boundaries and subsurface changes relevant to well targeting and characterisation.

WATER

Support groundwater and aquifer targeting by adding depth-referenced electromagnetic evidence.

CCUS

Support subsurface characterisation and monitoring concepts alongside established geological and geophysical datasets.

ARCHAEOLOGY

Investigate buried structures and stratigraphic changes where non-invasive methods are preferred.

HAVE A SUBSURFACE DECISION?

Start with a Project Fit Check. We will assess whether ADR and a Virtual Borehole are appropriate for your geological question.

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