

900

1000

Depth (m)

● EG1-000

○ EG2-000

● EG1-050

○ EG2-050 ○ EG2-100

EG1-100

Adrok have been developing their sub-surface heat detection methods in various geothermal sites in North-East England. Low values in the Energy-Gamma (basic measure of energy reflectivity) component of the ADR Harmonics correspond to high

520-600m, respectively, within the Weardale Granite.

reflectivity) component of the ADR Harmonics correspond to high temperatures beneath the ground.

In Eastgate, the lowest 20 E-Gamma troughs from the 6 Virtual

Boreholes have identified two "hot spots" at depths of 400-500m &

How can ADR identify

sub-surface HEAT

These targets correlate directly with two high temperature readings in the Eastgate Borehole. In particular the target at 411m, where a hot influx of hot, saline water was encountered during drilling.

influx of hot, saline water was encountered during drilling. **Eastgate ADR Readings Eastgate Borehole Energy-Gamma** Temperature (°C) **Ground Level** 0.98 0.985 0.99 10 30 -100 Limestones & Sandstones -200 300 Weardale / Granite 400 500 600 **Drilling encountered** 700 an open fracture with a strong influx of hot, saline water at 411m depth. 800

Eastgate Borehole Temperature

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ADR can identify GEOTHERMAL GRADIENTS

Science Central, Newcastle

1 2 3 4

A O O O
B O O
C O O O
D O Science Central

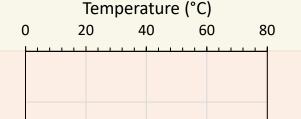
Adrok have been developing their sub-surface heat detection methods in various geothermal sites in North-East England.

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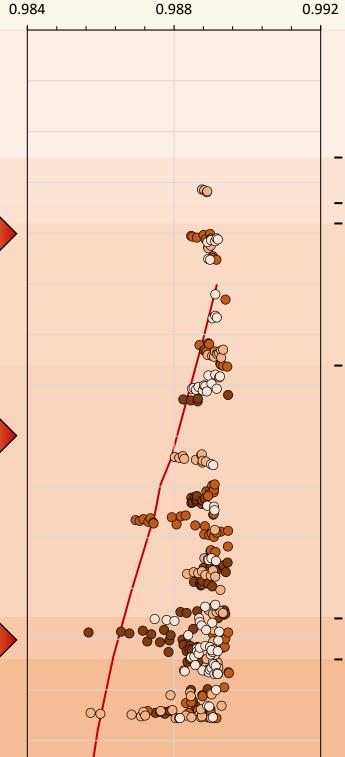
In Science Central, Newcastle, the lowest 20 E-Gamma troughs from the 16 Virtual Boreholes have identified the enhanced geothermal gradient with the E-Gamma troughs increasing in both quantity and significance with depth.

The increase in E-Gamma troughs with depth shows the same gradient as the Science Central Borehole temperature readings, with temperatures over 60°C at 1350m depth.

Science Central Borehole







Pennine Coal Measures Group Millstone Grit Group

Stainmore Formation

Alston Formation

Great Scar
Limestone Group

Unnamed Formation

Fell Sandstone Formation

-- 1600 Depth (m) Science Central

Drill Hole Temperature

- 100

-200

-300

-400

-500

-600

-700

-800

-900

-1000

-1100

-1200

-1300

-1400

-1500

● A1-A4 ● B1-B4 ○ C1-C4 ○ D1-D4

40

Temperature (°C)

20

80

⊕ ∧dr