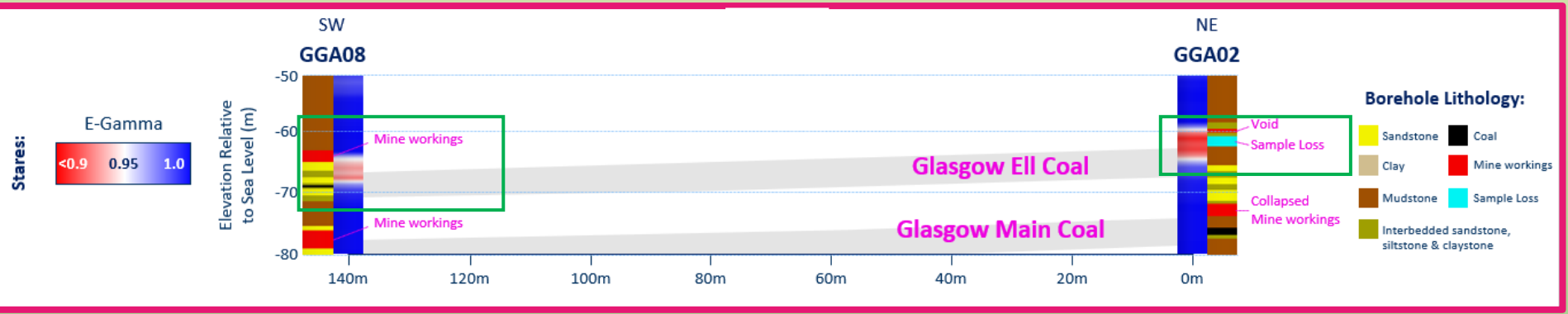
# Adrok detects former near surface mine workings

Adrok have applied their sub-surface heat detection methods to former mine workings at the British Geological Survey's Geoenergy Observatory in Glasgow in November 2021.

Two vertical scans were collected and are presented below. The aims were to detect anomalies that can be associated with former mine workings. These have been identified as source of heat which could contribute to the decarbonisation of the UK's energy generation (Monaghan *et al.* 2021).


## Method

Low values in the Energy Gamma (basic measure of energy reflectivity) component of the ADR Harmonics correspond to local high temperature anomalies beneath the ground.

## Results

Adrok has identified a thermal anomaly between 60-70m using the Energy Gamma component in both vertical scans. This corresponds to voids and former mine workings associated with the Glasgow Ell Coal.

## Benefits

Fast analysis, distinguishing between minor and major targets, potential to map abandoned mine workings and shallow thermal anomalies in urban areas, without destructive penetration.


Reference Monaghan et al., (2021) Drilling into mines for heat:geological synthesis of the UK Geoenergy Observatory in Glasgow and implications for mine water heat resources Quarterly Journal of Engineering Geology and Hydrogeology Vol. 55 https://doi.org/10.1144/qjegh2021-033





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