Coal Mining

Products & Services
Application Suitability

Water Drainage Testing & Management

Excelsior Energy can provide Water Drainage Forecasting through conventional Drill Stem Testing in vertical wells or through Injection Fall Off Testing in horizontal and vertical wells. Testing will quantify and forecast expected water release from coals during mining.

This testing can be conducted in vertical exploration boreholes during planning phase or in horizontal boreholes during active mining operations. In conjunction with Drainage Testing, we offer expandable standpipes that can be installed into horizontal boreholes to control and direct water drainage from the coals.

Methane Emission Testing

In conjunction with Coal Desorption Analysis, conventional Drill Stem Testing can quantify and forecast the release of methane gas during coal mining operations for the purpose of environmental reporting and workplace health and safety improvements. Testing is performed in combination with Water Drainage Testing in a single test.

Expandable standpipes installed into vertical and horizontal boreholes can improve mining safety by safely redirecting methane gas emissions from open boreholes into water gas separators. Mine safety is drastically improved by flaring excess gas to reduce harmful emissions.

Coal Drainage Stimulation

Through our tool configurations, targeted Coal Fracture Stimulation can be performed stand-alone or in conjunction with Water Drainage and Methane Emission Testing during a single trip in well.

Coal stimulations will improve coal drainage characterisation in both water and methane and accelerate the drainage process, allowing for swifter and safer mining of the coal.

Quantification of the improved drainage characterisation of the coals can be evaluated through back-to-back water drainage and methane emission testing.

Interference (Groundwater) Testing

Coal mining can directly impact groundwater resources through connected faults within the immediate lithology. Draining such coal seams during normal mining operations may deplete valuable water resources for local communities, herders and crops.

Through Interference Testing and Permeability Testing, communication between coal seams and groundwater can be investigated and quantified during the planning and operational phases.

Based on the data obtained, mitigating operations such as cement squeeze and fault shut offs can be implemented to protect the valuable water resource and allow mining operations to proceed without adverse environmental and social impacts.

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