

GAS CONTENT MEASUREMENT IN COALS BY DIRECT MEASUREMENT

The direct measurement of gas content in coals is one of the most basic and important measurements in determining a coal seam gas resource. Sigra uses three techniques directly measure the gas content of coals – Core Desorption, Chip Desorption and Gas Content Without Coring.

Gas Content Without Coring

Sigra can determine the gas content of coals and other strata, such as shales using a system to collect all gas released during overbalanced drilling with muds. This process involves using a (rotary) seal at the well head so that all fluids produced from the well are captured and directed to a separator, usually in the form of a hydrocyclone.

The gas released from the cuttings is collected from the separator and its volume and composition is measured. The mud and cuttings pass from below the cyclone. In high flow operations the mud and cuttings will usually pass on to a shale shaker from which the cuttings can be sampled and tested in the same process as that described for chip desorption. Alternatively in lower flow operations the cuttings may be detained in a vessel of suitable size to permit substantial desorption or passed over a sieve bend for separation of mud from cuttings so as to permit the sampling of cuttings.

Following drilling the hole may be geophysically logged to determine the volume and nature of the material drilled. By careful monitoring of drilling depth, rate and the mud flow rate Sigra can determine the origin of the cuttings. The method is inherently more accurate than core desorption because there is no reliance on lost gas determination – all gas released is captured.

Example Gas Content Without Coring Process

