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 to directly measure the gas content of coals – Core Desorption, Chip Desorption, and Gas Content Without Coring.

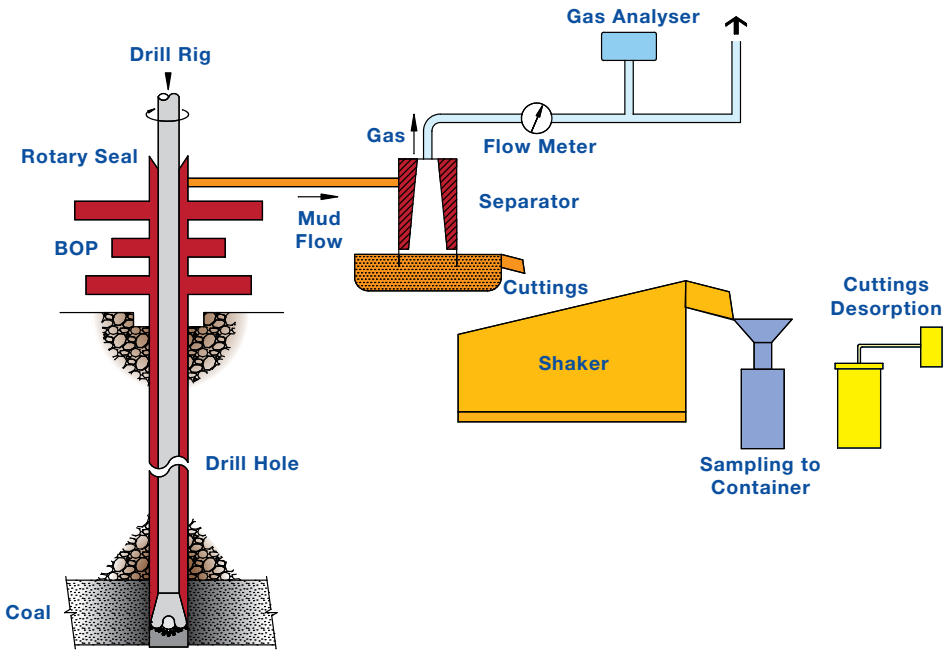
Gas Content Without Coring

Sigra is able to determine the gas content of coals and other strata, such as shales, using a system to collect all gas released during overbalanced drilling with mud. This process involves using a (rotary) seal at the well head allowing all fluids produced from the well to be 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 measured. The mud and cuttings pass from the cyclone. In high-flow operations the mud and cuttings will move on to a shale shaker from which the cuttings can be sampled and tested using the same process as that described for chip desorption. Alternatively, in lower flow operations the cuttings may be detained to allow desorption, or passed over a sieve bend to permit sampling of the cuttings.

Following drilling, the hole should be geophysically logged to determine the volume and nature of the material drilled. By careful monitoring of drilling rate, depth 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



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