

ABG™ At-Bit Gamma Sensor

REAL-TIME GEOSTEERING WITH THE GEO-PILOT® ROTARY STEERABLE SYSTEM

OVERVIEW

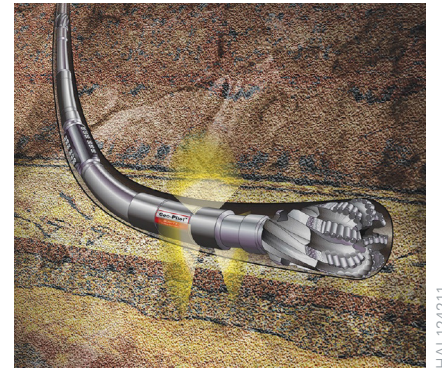
The ABG™ at-bit gamma sensor is an option on the Geo-Pilot® rotary steerable system (RSS). The ABG sensor is combined with the ABI™ at-bit inclination sensor, which is standard on Geo-Pilot systems, covering hole sizes from 5⅞ inches (149 mm) to 18½ inches (445 mm). The combined gamma and inclination package is located close to the bit, providing an early indication of formation changes during drilling.

In the Geo-Pilot RSS 7600 and 9600 series, the ABG sensor has three separate scintillation detectors, arranged symmetrically around the tool. Each detector works independently, providing both quality control and redundancy. The three detector measurements are combined into an azimuthal borehole image, which indicates differences between the rock types around the circumference of the borehole. Having multiple independent sensors provides confidence and consistency. Should one sensor fail, the remaining two will continue to provide valuable data. In the Geo-Pilot RSS 5200 series, the ABG sensor provides a single bulk gamma-ray measurement.

DRILL TO PRODUCE WITH HIGH-QUALITY, NEAR-BIT, GAMMA-RAY MEASUREMENTS

The ABG sensor is extremely robust and has an outstanding reliability track record. It provides an early warning of formation changes, while also indicating the orientation of bed boundaries relative to the boreholes. This provides the high-quality at-bit formation evaluation measurements needed to make quick decisions and to keep horizontal or high-angle wellbores in the pay, thus extending the length of the productive interval and helping to maximize asset value.

For more information, contact us at sperry@halliburton.com or visit us on the web at www.halliburton.com



The ABG™ sensor uses three independent detectors arranged symmetrically around the tool. Each sensor is focused, providing three unique directionally sensitive measurements that can help identify the location and orientation of formation changes relative to the Geo-Pilot® RSS system.

BENEFITS

Drill to Produce

- » Acquire early indications of formation changes with the ABG at-bit gamma sensor being located as little as 3 feet (1 meter) from the bit
- » Increase hydrocarbon recovery by extending the productive reservoir interval

Enhance Reservoir Understanding

- » Determine the position and orientation of bed boundaries from the ABG borehole image

Reduce Well Time

- » Ensure continuous drilling operations with three independent scintillation detectors in the ABG sensor

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