OVERVIEW
As a part of the Sperry Drilling measurement-while-drilling/logging-while-drilling (M/LWD) suite, the compensated thermal neutron (CTN™) family of second-generation LWD sensors provides accurate measurements of formation porosity while helping to distinguish between fluid types. This information helps operators improve their real-time decision making and gain a clearer understanding of the petrophysical characteristics of the reservoir.

The CTN sensor responds primarily to the hydrogen content in the formation, yielding accurate porosity measurements in liquid-filled reservoir formations. When combined with density measurements from the ALD™ azimuthal lithodensity sensor, or acoustic measurements from the QBAT™ or XBAT™ sensors, the CTN sensor helps to detect and evaluate gas-bearing formations, and to delineate complex lithologies.

REDUCE WELL TIME WITH ACCURATE HOLE-SIZE MEASUREMENTS
CTN sensors employ the latest electronics and processors, including redundant He³ neutron detectors, for added reliability and superior measurement quality. Porosity is computed from the He³ detector count rate ratio between the near and far detector arrays, with robust environmental corrections for hole size, standoff, mud weight, mud salinity, formation salinity, temperature, and pressure.

The 6¼-inch and 8-inch CTN-C™ sensors incorporate a triaxial AcoustiCaliper™ sensor, which can log boreholes between 8¾ and 16 inches in diameter. The CTN-C sensor can provide valuable real-time hole size information for monitoring borehole stability, evaluating the performance of bi-center bits, hole openers, and underreamers, and facilitating accurate borehole corrections and quality control for other M/LWD measurements.

BENEFITS
Drill to Produce
» Improve reserves estimates by distinguishing between fluid types
» Evaluate gas-bearing zones by combining with ALD azimuthal lithodensity sensors, or with QBAT or XBAT sonic sensors

Enhance Reservoir Understanding
» Delineate complex lithologies and identify target zones in real time
» Confidently identify pay zones for optimal completion design

Reduce Well Time
» Improve wellbore control by using real-time caliper and hole-shape measurements
» Eliminate potentially costly wireline runs

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

Sales of Halliburton products and services will be in accord solely with the terms and conditions contained in the contract between Halliburton and the customer that is applicable to the sale.

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