

OmniSphere DN slimhole petrophysics evaluation-while-drilling service

Delivers high-quality measurements in any formation

Applications

Any formation with low-porosity and high-density rocks, such as tight carbonates, limestone, and anhydrite.

How it improves wells

Provides real-time apparent neutron porosity, average and azimuthal formation bulk density and photoelectric factor, density and photoelectric factor images, and caliper for reservoir characterization and geosteering.

Mechanical Specifications

Hole size, in [mm]	5¾ to 6¾ [146 to 171]
Nominal collar OD, in [mm]	5.25 in [133.35]
Length, ft [m]	23.66 [7.21]
Air weight, lbm [kg]	1,300 [589.67]
Thread connection (downhole and uphole)	NC 38 Box
Joint yield torque, lbf.ft [N.m]	17,570 [23,821.72]
Max. operating pressure, psi [MPa]	25,000 [172.37]
Max. operating temperature, degF [degC]	347 [175]
Max. flow rate, galUS/min [m³/min]	400 [1.51]
Pressure drop at max. flow rate	222 psi (with 11 lbm/galUS mud) [1,530.63 kPa (with 1.32 sg mud)]
Max. dogleg sliding, °ft [°/m]	30/100 [30/30.48]
Max. dogleg rotating, °ft [°/m]	15/100 [15/30.48]
Stabilizer	
Distance to tool bottom, ft [m]	3.8 [1.16]
OD, in [mm]	Slick, 6.25, 5.875, 5.75 [158.75, 149.22, 146]

Measurement Specifications

Neutron porosity [†]	
Range, %	0 to 100 porosity
Accuracy	+/- 0.5 pu (up to 10% porosity) +/- 5 pu (from 10 to 50% porosity)
Vertical resolution, in [mm]	12 [304.8]
Formation bulk density	
Range, g/cm ³	1.00 to 3.1
Accuracy, g/cm ³	+/- 0.015
Vertical resolution, in [mm]	6 [152.4]
Photoelectric factor	
Range	1 to 10 units
Accuracy	+/- 5%
Vertical resolution, in [mm]	2 [50.8]

[†] Uncorrected porosity

All specifications are subject to change without notice.

How it works

Ruggedized electronics ensures OmniSphere DN* slimhole petrophysics evaluation-while-drilling service is reliable under the most challenging drilling conditions, including high shock and vibrations, heavy and corrosive muds, and high temperatures. A new downhole algorithm enables the service to deliver high-quality measurements in any formation with improved accuracy in low-porosity and high-density rocks, such as tight carbonates, limestone, and anhydrite.



OmniSphere DN service features ruggedized electronics and enables high-quality, while-drilling petrophysics evaluation measurements in any formation type.