

QuickPulse™ Automated Directional Gamma Service

QUICK AND RELIABLE DOWNHOLE INFORMATION FOR FASTER WELL DELIVERY

OVERVIEW

In land operations, well economics drive operators to drill longer and more cost-effective laterals, faster and safer than ever before. The QuickPulse™ automated directional gamma service from Halliburton Sperry Drilling delivers quick and reliable downhole information in long-lateral drilling to help operators make sound decisions and reduce well time, maximizing their asset value. Obtaining quality data can be difficult due to poor detection caused by signal interference from friction reduction devices (FRDs), which often results in invisible non-productive time (NPT). By combining accurate directional and gamma sensors with a strong, fast mud pulse telemetry signal, the QuickPulse service delivers reliable downhole data to drill wells quicker.

QUICK AND CONSISTENT DATA TRANSMISSION AT EXTENDED DEPTHS

The QuickPulse service features a strong signal amplitude and advanced noise cancelation processing, allowing clear detection at greater depths without interference. The service provides downhole updates as fast as every 3 seconds and transmits surveys in as little as 24 seconds. Robust, automated, and consistent data decoding in various downhole conditions enhances drilling efficiency, reducing flat time on the drilling curve to deliver wells faster.

INCREASE DRILLING EFFICIENCY WITH REAL-TIME DRILLING DYNAMICS

Having the right data at the right time helps operators make the right steering decisions, minimize slide intervals, and deliver wells sooner. The QuickPulse service is engineered with intelligent firmware that prioritizes critical data such as toolface and inclination based on steering activity and downhole drilling conditions. The QuickPulse service can be integrated with the DDSr™ drillstring dynamics sensor with rotation to provide operators with vibration and stick-slip measurements, which are key components to improve drilling efficiency. With real-time downhole drilling dynamics, operators can drill to produce, improve bottomhole assembly (BHA) longevity, and increase rate of penetration (ROP).

REDUCE HSE EXPOSURE THROUGH RIGSITE AUTOMATION

The system is automated, intuitive, and safe. Its small-footprint design allows for up to 70 percent faster rig-up time, minimizing the number of required rig personnel, and also mitigating health, safety, and environmental (HSE) risks. Multiple safety features reduce risk, including well collision, and the surface kit and tooling are designed to reduce exposure to stored energy and BHA handling.



BENEFITS

Reduce Well Time

- » Obtain faster data rates
- » Minimize invisible NPT caused by FRDs
- » Increase BHA longevity for longer runs through automated detection
- » Reduce HSE risks and increase drilling efficiency with large flow rate ranges

Drill to Produce

- » Drill longer laterals with increased detection range
- » Prevent steering in the wrong direction unknowingly

Enhance Reservoir Understanding

- » Make better geosteering decisions from faster gamma updates

FEATURES

- » 24-second survey transmissions and 3-second toolface updates with robust, automated signal detection
- » Compatibility with FRDs maintains clear signal strength at extended depths
- » 70 percent faster rig-up time
- » Continuous inclination and vibration measurements for enhanced drilling efficiency
- » Unique keyed Halliburton landing sub and battery pressure relief valves for safe handling and collision avoidance

Technical Specifications: QuickPulse™ Automated Directional Gamma Service

Mechanical Specifications from Halliburton Landing Sub				
	4¾ in.		6¾ in.	8 in.
Nominal Tool Outside Diameter (OD)	4¾ in. / 121 mm		6¾ in. / 171 mm	8 in. / 203 mm
Maximum Body OD	5.00 in. / 127 mm		6.75 in. / 171 mm	8.00 in. / 203 mm
Hole Size Range	5.875 to 7.25 in. 149 to 184 mm		8.25 to 9.875 in. 210 to 251 mm	10.5 to 14.75 in. 267 to 375 mm
Collar Inside Diameter (ID)	2.813 in. / 31.8 mm		3.25 in. / 82.6 mm	
Probe Assembly Length*	27 ft / 8.2 m			
Connections	Standard industry connections available. Contact your local Halliburton representative for more information.			
Makeup Torque	9,900 to 10,900 lbf.ft 1340 to 1480 daN·m	20,300 to 24,400 lbf.ft 2752 to 3308 daN·m	30,000 to 33,000 lbf.ft 4070 to 4470 daN·m	53,000 to 58,000 lbf.ft 7190 to 7860 daN·m
Maximum Dogleg Severity	Rotating Nonrotating	14°/100 ft 30°/100 ft	10°/100 ft 21°/100 ft	8°/100 ft 14°/100 ft
Maximum Temperature*	302°F / 150°C			
Maximum Pressure**	20,000 psi / 1378 bar			
Maximum RPM	180 RPM			
Maximum Weight on Bit	25,000 lbf / 11 121 daN		45,000 lbf / 20 017 daN	60,000 lbf / 26 689 daN
Lateral / Axial Vibration	20 Grms (5–500 Hz)			
Telemetry Specifications				
Pulse Transmission	Positive			
Flow Rate Range	150–400 gpm 570–1500 lpm		250–800 gpm 950–3000 lpm	600–1,200** gpm 2270–4540 lpm
Maximum Mud Weight	18 ppg			
Maximum Mud Viscosity	50 cp			
Maximum Sand Content	2%			
Maximum Lost Circulation Material (LCM)	50 lb/bbl (114 kg/m³)			
Typical Data Rate (bps) at 15,000 Feet	2.0			
Telemetry Modes	7			
Noise Cancellation	Automated			
Survey	Pumps Off			
Vibration Measurement Specifications				
Peak Accelerations	0–100 G (3-axis)			
Average Accelerations	0–50 G (3-axis)			
Burst Data Sampling Rate	1,000 Hz			
Maximum Revolutions Per Minute (RPM)	0–2,000 RPM			

* The length is for a directional and gamma sonde assembly with one battery. Battery sondes can be added for increased downhole autonomy.

** High-flow configuration exists. Contact your local Halliburton Sperry Drilling representative for availability.

For more information, contact your local Halliburton representative or visit us on the web at www.halliburton.com

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