Gamma Ray – Casing Collar Locator Tool (HD Platform)

Provides accurate correlation of log depth to formation gamma ray and casing record

Applications

- Real-time depth control of cased-hole log data

Features and Benefits

- Versatile tool for simultaneous acquisition of background gamma ray and casing/tubing collars
- Compatible with all HD-platform tools

Tool Description

The Weatherford gamma ray and casing collar locator (CCL) tool (HD platform) is a combined gamma ray and CCL tool which provides a passive measurement of gamma radiation by means of a sodium iodine scintillation detector and identifies changes of metal thickness by means of a collar locator.

The telemetry control unit is the communications control center for the logging system. The tool controls the collection of data from the tools below and packages it for the transmission to the surface system.

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Specifications

Ratings and dimensions

	1-11/16 in.	2-3/4 in.
Maximum temperature	350°F (177°C) for 4 hours	350°F (177°C) for 4 hours
Maximum pressure	15,000 psi (103.4 MPa)	15,000 psi (103.4 MPa)
Outer diameter	1.69 in. (42.93 mm)	2.75 in. (69.9 mm)
Length	62.4 in. (1584.96 mm)	54.48 in. (1383.79 mm)
Weight	35.0 lb (15.9 kg)	55.0 lb (25.0 kg)
Minimum casing/tubing OD	2.38 in. (60.45 mm)	4.5 in. (115.0 mm)
Maximum casing/tubing OD	7.0 in. (178.0 mm)	7.0 in. (178.0 mm)
Tensile strength*	Tension: 65,000 lb Compression: 130,000 lb Torque:150 ft-lb	Tension: 65,000 lb Compression: 130,000 lb Torque:150 ft-lb
Measure Points	Gamma Ray: 6.84 in. (173.74 mm) Casing Collar Locator: 48.96 in. (1,243.58 mm)	Gamma Ray: 10.68 in. (271.27 mm) Casing Collar Locator: 43.56 in. (1,106.42 mm)

*Strengths apply to new tools at 70°F (21°C) and 0 psi.

Borehole conditions

	1-11/16 in.	2-3/4 in.
Logging speed	Recommended: 60 ft/min. (18.2 m/min) Maximum: 100 ft/min. (30.5 m/min) at 0.08 ft (.02 m) sample rate	
Tool positioning	Centralized | Eccentralized	

Hardware characteristics

	Gamma Ray	Casing Collar Locator
Sensor type	Sodium Iodide	Dual magnet, center coil
Combinability	HD	
Connections	GO or GOI options available	

Measurements

Principle	Natural gamma radiation	Magnetic flux lines
Range	0 to 10,000 cps	4.5 to 7.0 in. (115.0 to 178.0 mm)
Resolution	6.0 in. (152.5 mm)	N/A
Accuracy (1SD)	± 5%	N/A
Sensitivity	≈ 1.5 cps per API Unit	N/A
Primary curves	GR (API)	CCL (mV)
Secondary curves	Head Voltage, Internal Temperature (Telemetry Only)	

Calibrations (all configurations)

Primary	Houston API Pits
Wellsite Verifier	Thorium Blanket