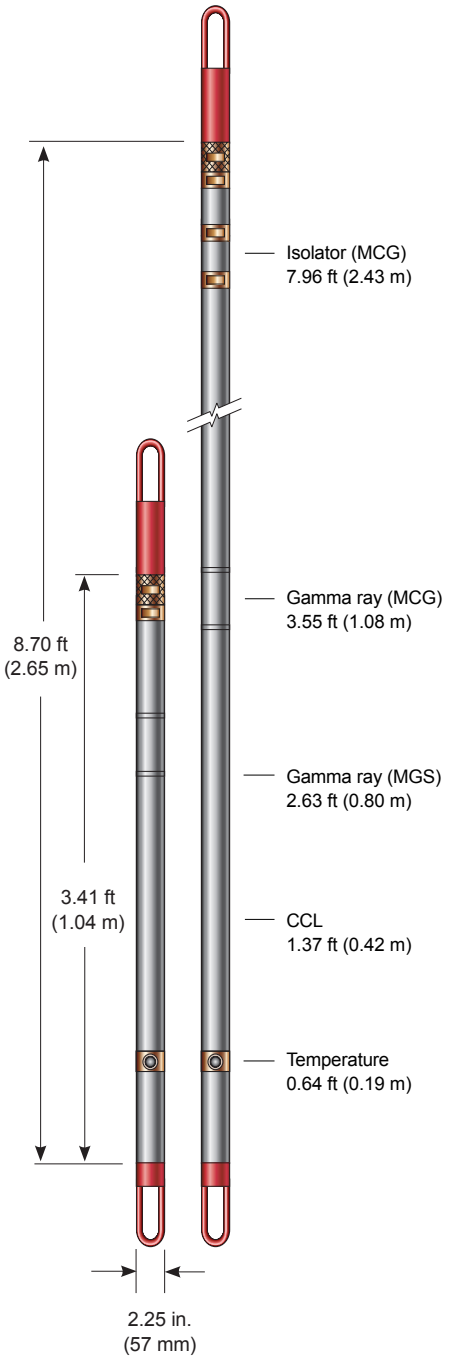
Compact™ Gamma Ray (MCG) Tool

Weatherford's *Compact* gamma ray (MCG) tool combines gamma ray, temperature, and casing-collar locator (CCL) logs with power conversion and surface communications for all other measurements in a *Compact* tool string. It is always the top tool in the string. The auxiliary gamma sub (MGS) is shorter and can be placed anywhere in the string, enabling gamma radiation and temperature to be recorded close to the bottom of the well.

An integral power conditioner in the MCG tool automatically converts a wide range of cablehead voltages to a standard value for all tools in the *Compact* string. This feature adds to the system's flexibility and reliability by eliminating the need to match surface power to particular logging cables.

The MCG tool also processes data from the following auxiliary measurements: spontaneous potential originating from the array induction (MAI) and dual laterolog (MDL) tools; tension from the tension cablehead (MCB-A and MCC); tension and compression from the tension compression sub (TCS); external temperature; and CCL.



Applications

- Determining the volume of shale content in simple lithologies, such as shaly sand
- Correlating well-to-well details in open and cased hole
- Providing primary log for depth correlation of other logging tools in the same well

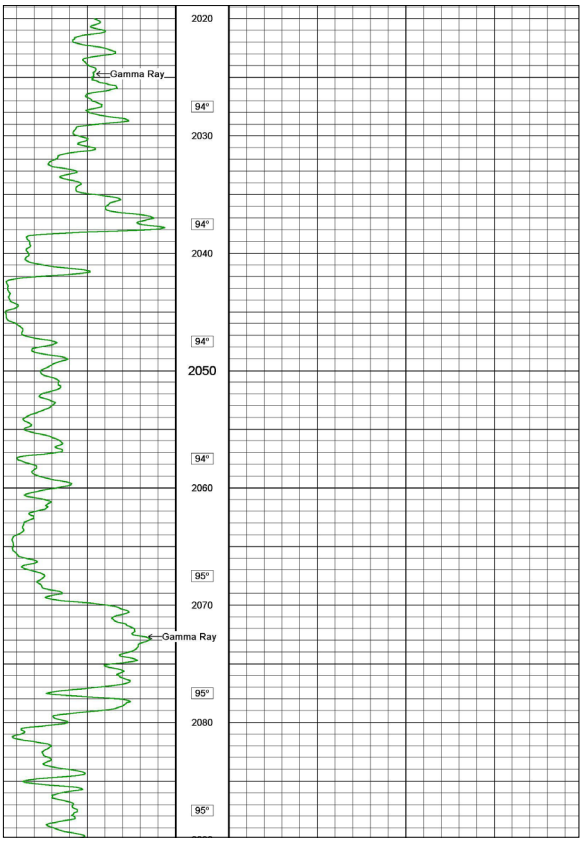
Features, Advantages and Benefits

- The NaI detector is rugged, reliable, and sensitive, providing a full range of accurate data for quantitative analysis and repeatability.
- The tool's 2- to 3-ft (0.61- to 0.91-m) depth of investigation enables the detection of gamma rays through several strings of casing.
- The tool's 3-ft (0.91-m) vertical resolution enables accurate identification of formation contacts and is widely used for well-to-well correlation and between log runs.

© 2006–2012 Weatherford. All rights reserved.

Compact™ Gamma Ray (MCG) Tool

Log Presentation



Specifications

Measurement specifications

Tool model	MCG	MGS
Data	Gamma count, temperature, CCL	Gamma count, temperature
Logging speed	3,600 ft/hr (1,100 m/hr)	
Measurement range	Gamma: 0 to no practical limit (API) Temperature: 320°F (160°C)	
Vertical resolution	36 inches (914 mm)	
Accuracy	Gamma: ± 5% Temperature: ± 3%	
Depth of investigation	24 in. (60 cm)	
Borehole fluids	WBM OBM Salt Air	

Mechanical specifications

Maximum outer diameter	2.25 in. (57 mm)	
Length	8.70 ft (2.65 m)	3.41 ft (1.04 m)
Total weight (in air)	64 lb (29 kg)	24 lb (11 kg)
Maximum temperature	320°F (160°C)	
Maximum pressure	15 kpsi (103 MPa)	
Maximum borehole diameter	15.70 in. (400 mm)	
Minimum borehole diameter	2.80 in. (70 mm)	

© 2006–2012 Weatherford. All rights reserved.

Weatherford products and services are subject to the Company's standard terms and conditions, available on request or at weatherford.com. For more information contact an authorized Weatherford representative. Unless noted otherwise, trademarks and service marks herein are the property of Weatherford and may be registered in the United States and/or other countries. Weatherford products named herein may be protected by one or more U.S. and/or foreign patents. For more information, contact patents@weatherford.com. Specifications are subject to change without notice. Weatherford sells its products and services in accordance with the terms and conditions set forth in the applicable contract between Weatherford and the client.