

# ACTive GR

## CT real-time gamma ray logging tool

### APPLICATIONS

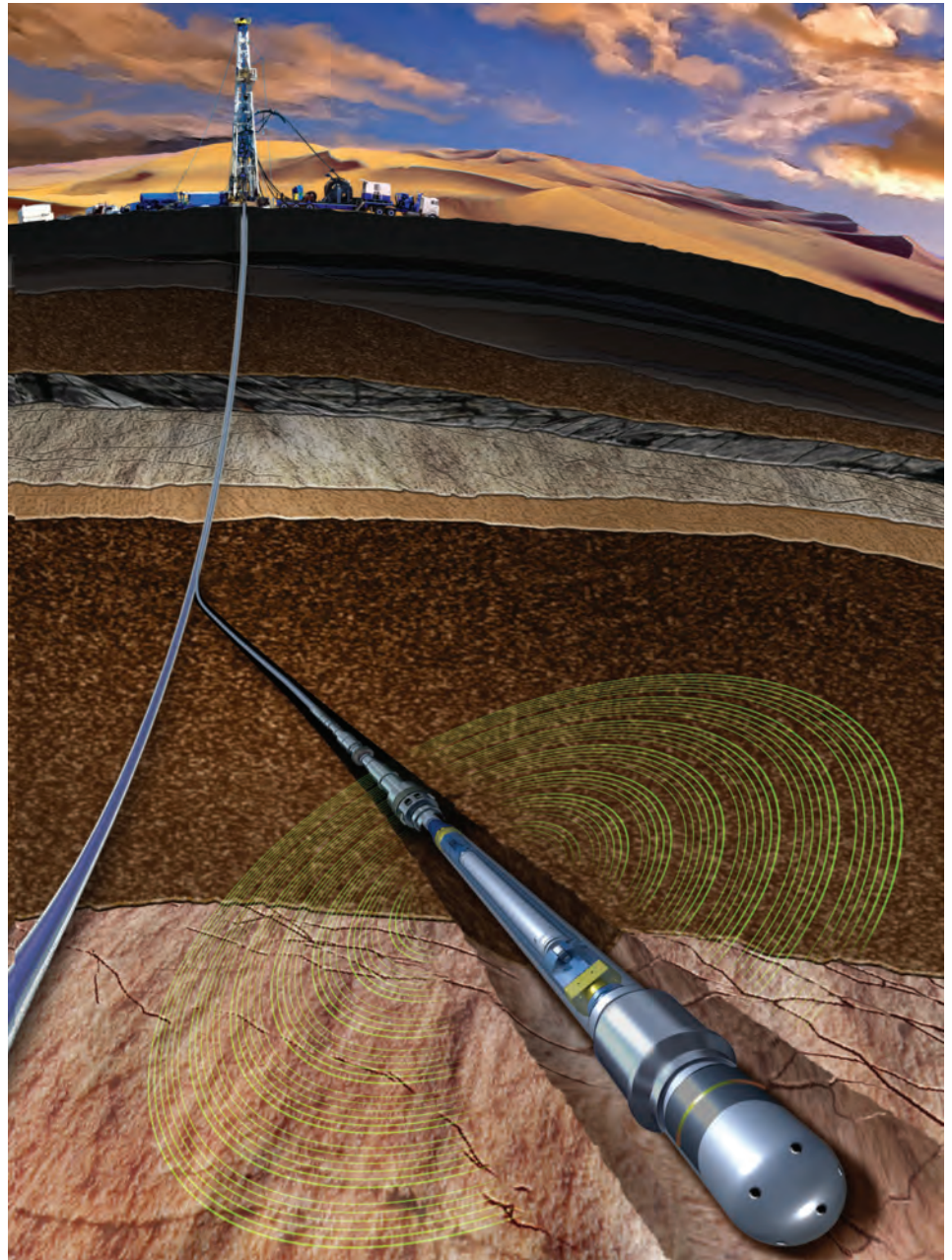
- Accurate depth correlation in real time during a CT intervention
- Qualitative evaluation of lithology and shale content
- Radioactive tracer monitoring for stimulation applications

### BENEFITS

- Improves performance and reduces risk with precise tool positioning
- Enhances operational efficiency by providing downhole data in real time

### FEATURES

- Ruggedized version for use during perforating operations
- Pump-through capability for CT intervention and gamma ray (GR) log in the same run
- Ball-drop capability through the tool for activation of tools below
- Plug-and-play combination with enhanced ACTive\* real-time downhole coiled tubing services



*Gamma ray measurements of subsurface formations gathered in real time while maintaining pump-through capability.*

### Accurate depth correlation

GR measurements are available with the ACTive services which provide downhole measurements in real time, conveyed on CT that is enabled by fiber-optic telemetry. The ACTive GR\* CT real-time gamma ray logging tool detects naturally occurring gamma rays in the formations adjacent to the wellbore, while maintaining pump-through capability for CT intervention. The service provides you with an industry-standard measurement for depth correlation in real time.

# ACTive GR

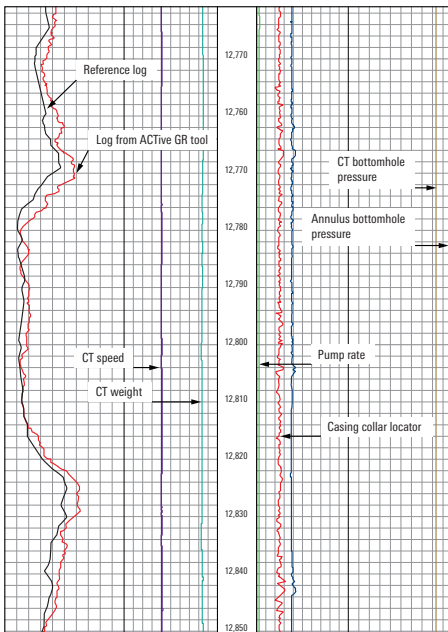
The optional GR tool enhances other ACTive services when run in combination. For instance, ACTive Perf\* CT real-time perforating service is further enhanced by enabling accurate depth control and perforating the target zone in a single run, while monitoring the hydrostatic balance with the integral pressure sensor. ACTive Matrix\* CT real-time stimulation and conformance service can further enhance fluid placement by combining distributed temperature measurements with monitoring of radioactive tracers in stimulation fluids.

## ACTive GR Tool Specifications

Model	GRSM	GRNM
Equipment specifications		
OD, in	2.500	2.375
Makeup length, in	39.88	37.52
Total weight, lbm	20	20
Max ball drop size, in	7/16	5/8
Flow path diameter, in	0.500	0.688
Material	NACE compliant	NACE compliant
Operational specifications		
Operating temperature, degF	300	300
Pressure rating, psi	12,500 (at max. tensile rating)	12,500 (at max. tensile rating)
Tensile strength, lbf	45,000 (at max. pressure rating)	45,000 (at max. pressure rating)
Max. torque, ft.lbf	800	800
Max. flow rate, bbl/min	1.5	2
Fluid compatibility	All common treating fluids including acid and H <sub>2</sub> S	All common treating fluids including acid and H <sub>2</sub> S
Shock rating	12,000 shocks at 250 gn/ms 40 shocks at 3,800 gn/0.3 ms	12,000 shocks at 250 gn/ms
Rated for perforation jobs	Yes	No

GRSM: Gamma ray shock model

GRNM: Gamma ray nonshock model



HPHT ACTive services CT perforation report.

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