READ | CASED HOLE

Version 1

Image courtesy of GE oil & gas

TECHNICAL DATA SHEET

CTF

Capacitance/Temperature/Flow

The Capacitance/Temperature/Flow (CTF) combines a single electronics section with 3 sensors - water hold-up, fast response temperature and optimised flowmeter into a single compact tool.

Capacitance Water Hold-up: Hydrocarbons and water have different dielectric constants and the probe responds to the dielectric constant of the fluid in the well. From this the downhole water-hydrocarbon ratio can be derived.

Temperature: The platinum-resistance probe responds quickly and accurately to changes in fluid temperature.

Flowmeter electronics: Interchangeable spinner mechanical sections are fitted to the bottom of the CTF to match the well conditions and optimise flow measurements.

APPLICATIONS:

- Production logging for water hold-up, temperature and flow profiling
- Leak detection for well integrity assurance
- High deviation and horizontal well production logging
- Low-rate and high-rate flow logging utilising optimum spinner type
- Injection well flow profiling

BENEFITS

— Multiple sensor measurements combined in a single short toolstring

— Close sensor proximity provides definitive measurement of localised well fluid properties

— High resolution downhole fluid hold-up measurement

— Highly accurate and fast response temperature measurement

— Flexibility to be run with full-bore, caged or jewelled spinners

— Deployable on Slickline, Electric line, Coil Tubing and Tractor

Image courtesy of GE oil & gas

Specifications

Temperature rating	350°F (177°C)
Pressure rating	15,000 psi (103.4 MPa)
Tool diameter	$1\,{}^{11}/_{16}$ in (43mm)
Tool length	18.5 in (470 mm)
Tool weight	5.4 lb (2.45 kg)
Hold-up range	0 % - 45 % water hold-up
Hold-up resolution	1%
Temperature accuracy	±1°F (±0.56°C)
Temperature resolution	0.006°F (0.003°C)
Temperature response	0.5 seconds in turbulent fluid
CFB spinner threshold	1.7 ft/min (0.01 m/s)
CFS spinner threshold	5.0 ft/min (0.03 m/s)
Materials	Corrosion resistant throughout