

TECHNICAL DATA SHEET

HPHT PLT

HPHT Production Logging Tool

READ Cased Hole's HPHT Production Logging Tool (HPHT PLT) is deployable in both surface readout and memory modes. Engineered to withstand the harshest environments, all of the temperature sensitive components are enclosed in a high pressure flask that provides protection up to a maximum temperature of 572°F (300°C) for an in well period of up to 6 hours.

READ Cased Hole's HPHT technology combines a variety of sensors on a single string, including Casing Collar Locator, Gamma Ray, Quartz Pressure and Temperature. Additional sensors can also be added, tailoring the tool string to each specific scenario by also integrating Capacitance Water Hold-up, Density (inertial) and Full Bore or Caged Flowmeter.

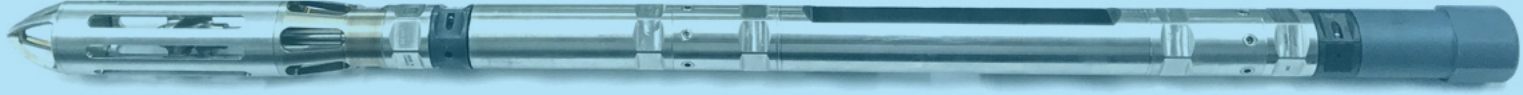
APPLICATIONS:

The HPHT PLT allows operators to:

- Monitor production in hostile environment wells
- Determine water hold-up, temperature and flow profiling
- Conduct leak detection surveys for well integrity assurance
- Use optimum spinner type for low-rate and high-rate flow logging
- Log vertical, deviated and horizontal wells

BENEFITS

- Production Logging for HPHT wells up to 300° C (572°F) and 20,000 psi
- Flexibility to be run with full-bore or caged spinners
- Deployable on Slickline, Electric line, Coil Tubing or Tractor
- High resolution downhole measurements



Specifications

Temperature Rating	572° F (300°C) - *428°F (220°C)	
Maximum duration at maximum temperature	6 Hours	
Pressure rating (Max)	20,000 psi (137.8MPa)	
Tool diameter	1.689" (42.9mm)	
Tool length		
HPHT Memory Data Controller	4.40 ft (1.34m)	
HPHT SRO Data Controller	6.53 ft (1.99m)	
Electronics inc. CCL, GR, QP and Temp	9.55 ft (2.91m)	
Capacitance *	1.39ft (0.42m)	
Density Inertial *	1.39ft (0.42m)	
Caged Flowmeter	1.09ft (0.33m)	
Full Bore Flowmeter	2.25ft (0.69m)	
Roller Centraliser	2.38ft (0.73m)	
Logging Time (8 Sensors @ 1 sec sample)	135 Hours (5.6 days) 128Mb	
Gamma Ray	Scintillation 0 - 10,000 API	
Temperature Accuracy / Resolution	± 1.8°F (1°C)	0.018°F (0.01°C)
Pressure Accuracy / Resolution Quarts	±3.0 psi	0.008 psi
Density Accuracy / Resolution	0.03 g/cc	0.01 g/cc
Capacitance Water Hold-Up Accuracy	2% (range 0% - 30%) 5% (range 30% - 60%)	
Capacitance Resolution	0.1%	
Flowmeter Output	8 pulses/rev (directional)	
Flowmeter threshold		
Fullbore	2 ft/min (oil flow)	
Caged	4 ft/min (oil flow)	
Housing Material	Inconel 718	

* Capacitance and density inertial meter temperature limits are limited to 428°F (220°C).