



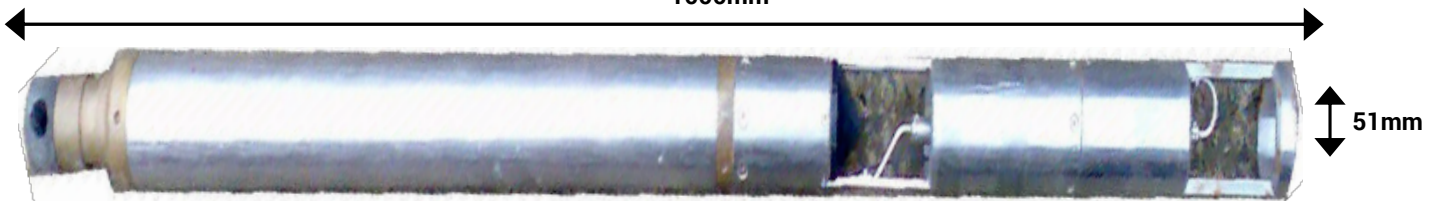
HEAT PULSE FLOWMETER TOOL

The heat pulse flowmeter consists of two very sensitive temperature sensors, one 5cm above and one 5cm below, a small heating element. The tool is positioned at a particular depth and left for a few minutes for the temperature sensors to stabilise.

A heat pulse is then generated and the temperature sensors monitored for a response. The time taken for the heat pulse to reach a given sensor is a function of the fluid velocity.

This tool is used in situations of very low fluid velocities where an impellor flow-meter would not be able to detect any flow.

1000mm



Specifications

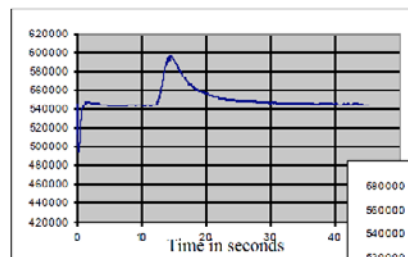
Size:	1000 x 52mm
Weight:	6.2kg
Measurement range:	1 - 50mm/s
Max.temperature:	80°C
Max.pressure:	20MPa

Borehole Conditions

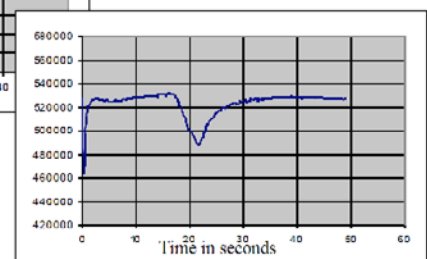
Minimum diameter 60mm
Water filled
Unlined, screened or cased
(detection or casing leaks)

Logging Conditions

Readings taken when tool held stationary



Left: Up flow detected at 13 seconds - 3.8mm/s up flow



Right: Down flow detected at 18 seconds - 2.7mm/s down flow

Fluid velocity measurements using a heat pulse flowmeter