

FWS TECHNICAL SPECIFICATIONS

System Requirement	ALT logger / Logger20
Diameter	50 mm / 68mm
Length	up to 3.20m (dependant on configuration)
Weight	up to 35 kg
Max. pressure	200 bars = 2900psi
Max. temp.	70° C
Power supply	70-140 V
Variable Spacing	All traces synchronously and simultaneously recorded
Frequency of wave	15KHz
Sample rate	configurable 2 µSec ->50 µSec
Wave length	configurable up to 1024 samples per receiver
Dynamic range	12 bits plus configurable 4 bits gain incl.AGC
Logging speeds	5m/min @ 5cm sample rate
Logging Mode	centralised
Log pre conditions	Water or mud filled wells

LOG PARAMETERS

Full Wave Form Sonic FWS

APPLICATIONS

From an ultrasonic transmitter a signal in the range of 10 – 20 kHz is created and is registered at a minimum of two receivers during a fixed time interval. From these gathered data the travel time of the p and s- waves of the surrounding rocks can be calculated. A Sonic tool that includes one transmitter and receiver in each of the upper and lower parts of the tool is called a Compensated Sonic Tool. If the tool records information over the whole of the wave arrival time then it is known as a Full Wave Sonic tool.

Logging with a Full Wave Sonic is essential for the derivation of the elastic parameter and for the estimation of permeability and porosity. The results can be easily added to seismic methods.

Using a Full Wave Sonic tool, later reflections and close boundaries or inhomogeneities (faults, etc.) will also be detected. From this information from an area up to 3 – 5 m around the well can be obtained. From this it can be seen that the Full Wave Sonic tool is a valuable supplement to tomography methods, to get a close up of the well.

In the case of the presence of a casing the Full Wave Sonic can be used as a control log for the cementation or the clay sealing (Cement Bond Log).

