

Cross Dipole Sonic (CDS)

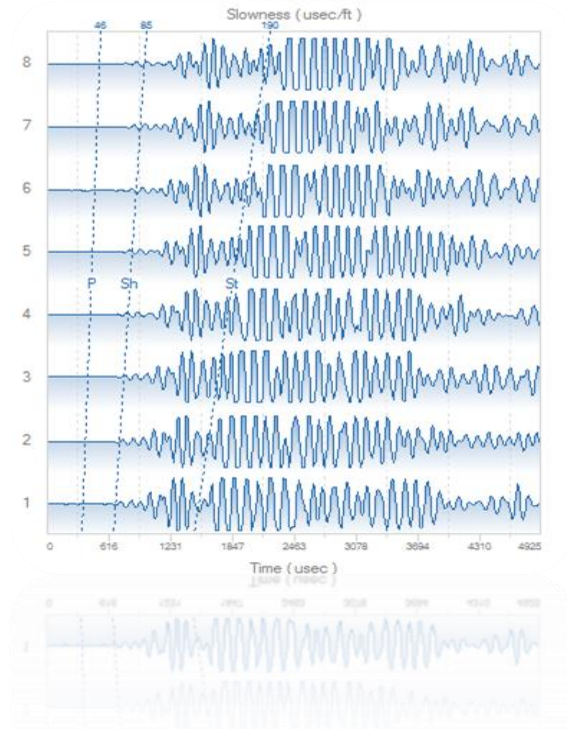
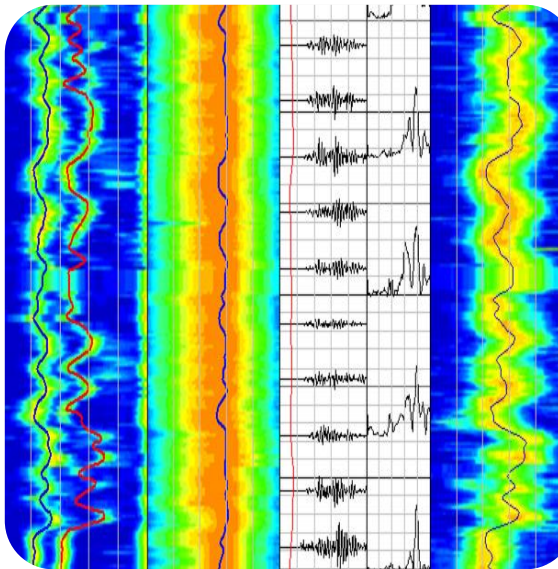
The Cross Dipole Sonic (CDS) tool measures the formation compressional and shear slowness in both fast and slow formations and records full waveform data from which shear anisotropy, geomechanical and geophysical properties, permeability and fractures can be detected and quantified.

Description

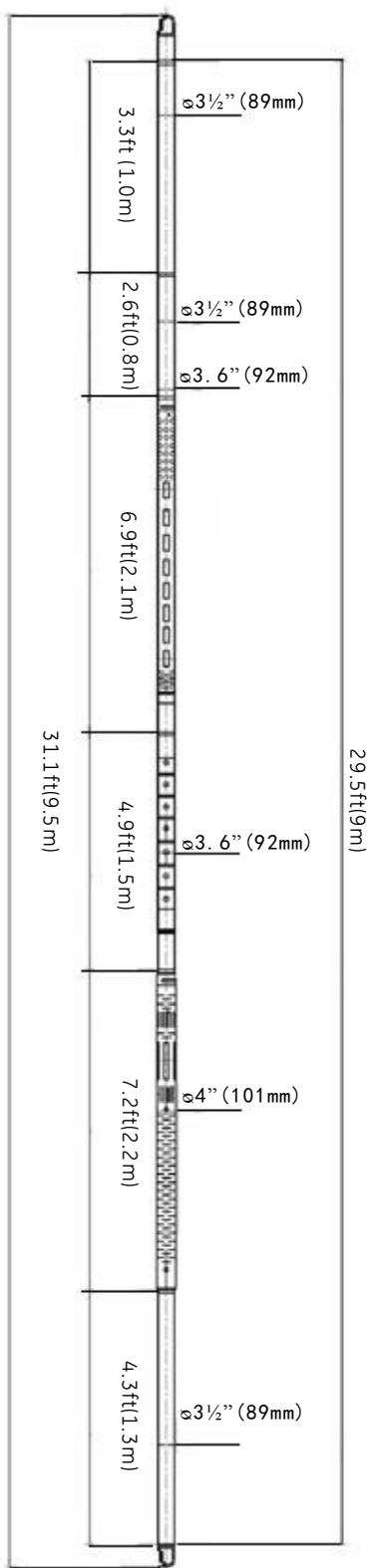
The CDS is a multi-mode acoustic logging tool with four user-selectable modes that can be run together on a single pass: high frequency monopole (for compressional and fast shear determination), low frequency monopole (for Stoneley analysis), X-Y dipole (for shear determination in both fast and slow formations) with in-line and off-line receivers (for shear anisotropy analysis). The dipoles can be run at one of three frequencies in order to optimise data quality in different slowness ranges.

Features

- Dipole waveforms for shear and anisotropy evaluation
- Monopole Compressional, Shear and Stoneley waveforms
- Four user-selectable modes (as described above)
- Eight receivers spaced 6" (152.4mm) apart, each with four azimuthal segments separated by 90deg
- Co-located X and Y dipole transmitters.
- A unique isolator design minimises any signals travelling up the tool from transmitter to receiver.
- Selectable Waveform gain, sample rate and waveform length
- Fully compatible with Sondex Ultrawire* tools for Open Hole and Cased Hole applications
- Easy to transport – can be broken down into sections less than 10 ft
- CE compliant



Cross Dipole Sonic (CDS)



Specifications

Maximum OD	4 in (101.6 mm)
Makeup length	29.72 ft (9.06 m)
Weight	670.2 lb (304 kg)
Maximum temperature	302°F (150 °C)
Maximum pressure	20 kpsi (138 Mpa)
Minimum hole	6 in (152 mm)
Receivers	32 - (8 receivers spaced 6" apart, each with 4 azimuthal segments)
Transmitters	Low frequency Monopole (1-2 kHz) High frequency Monopole (6-15 kHz) X-Y dipole (1.2 kHz, 1.5 kHz, 2.3 kHz)

Borehole Conditions

Borehole fluids	fresh, salt, oil
Maximum logging speed	30 ft/min (9 m/min)
Tool position	Centralized

Measurement

Accuracy	+/- 2usec/ft or 2%
Vertical resolution	6 in (standard processing)
Sample Rate	10, 20, 40 usec (selectable)
Range	Compressional slowness: 40-250 usec/ft Shear slowness: 75-700 usec/ft Stoneley slowness: 160-700 usec/ft
Primary curves	Compressional, Shear and Stoneley slowness
Secondary curves	Monopole & Dipole waveforms

Hardware and Power Requirements

Tool bus	Ultrawire
Power	18VDC (200 mA)



imagination at work

Visit us online at:

www.geoilandgas.com/wireline

*Denotes a trademark of General Electric Company.
Copyright ©2015 General Electric Company.

All rights reserved.