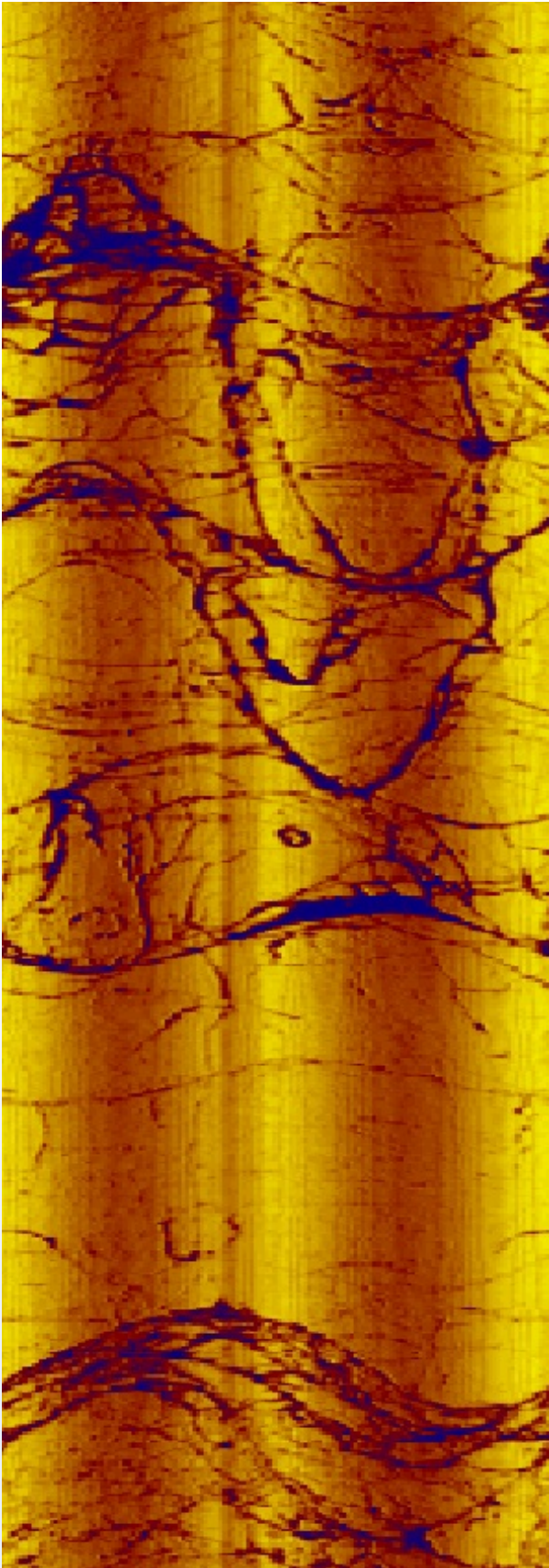


QL40-ABI-2G Data Sheet

The ABI40 is the next generation of the pioneering FAC40. Based on 20 years of experience and market leadership, the new system consists of the industry standard focused acoustical head with new deviation subsystem and completely redesigned electronics. The new electronic architecture uses a 14bits@10Mhz A/D converter directly coupled to a super-fast 75Mops DSP processor capable of performing complex data processing in real time on each individual ultrasonic wave train.



Typical acoustic log small rock fractures. Image courtesy of Mount Sopris Instruments.

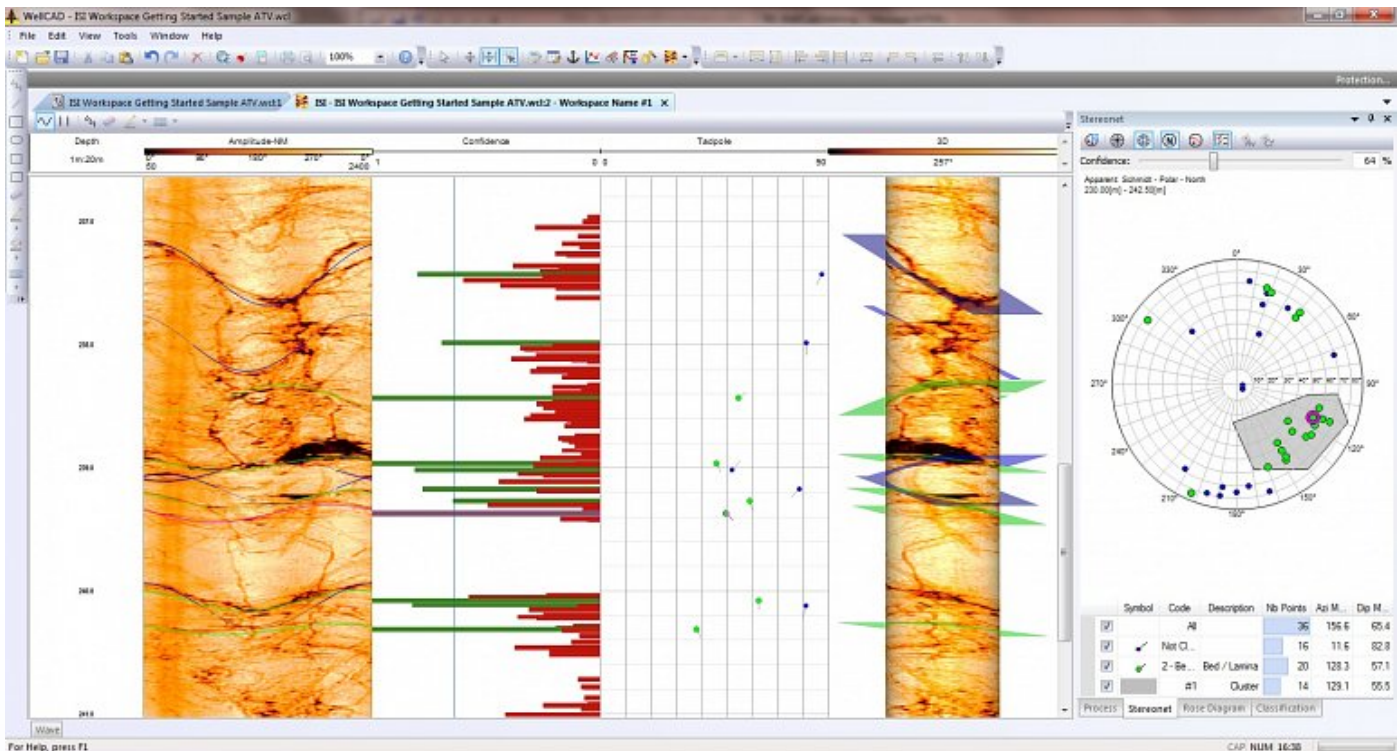
The ABI40 tool generates an image of the borehole wall by transmitting ultrasound pulses from a rotating sensor and recording the amplitude and travel time of the signals reflected at the interface between mud and borehole wall. The amplitude of these reflections is representative of the properties of the rock surrounding the borehole. The travel time represents the borehole shape and diameter and is used to provide exceptionally accurate borehole diameter measurements, which makes the tool ideal for casing inspection and structural geology.

Applications

- Detailed and oriented caliper and structural information
- Borehole deformation (stress field analysis)
- Fracture detection and evaluation
- Breakout analysis
- Detection of thin beds
- Determination of bedding dip
- Lithology characterisations
- Rock strength
- Casing inspection and corrosion evaluation
- Steel casing thickness

A built in high precision orientation package incorporating a 3 axis fluxgate magnetometer and 3 accelerometers allows orientation of the images to a global reference and determination of the borehole's azimuth and inclination. Sophisticated algorithms and real time processes are also implemented to extend the tool applications for casing thickness measurement, corrosion evaluation and measurement behind a PVC casing.

WellCAD Image & Structure Interpretation (ISI) Workspace



The Image & Structure Interpretation (ISI) module for WellCAD provides a comprehensive tool kit for analysing acoustic logs. Image courtesy of Mount Sopris Instruments.

Product Dimensions

Physical	Dimensions (L x W x H)	Weight
(instrument only)	161cm x 4.2cm x 4.2cm	6.7kg

Technical Specifications

Acoustic Sensor:	Fixed transducer, rotating focusing mirror. Focus optimized for 15.2 cm borehole.
Frequency:	1.2 MHz.
Acoustic Beam Width:	1.5 mm focal distance.
Rotation Speed:	Up to 35 Revolutions/sec.
Samples per Rev:	72, 144, 216, 288, and 360.
Measurement Range:	5 to 51 cm / 2" to 20" borehole.
Caliper Resolution:	0.08 mm / .003.

Orientation Sensor: APS 544, 3-Axis Magnetometer and Accelerometer.

Inclination Accuracy: $\pm 0.5^{\circ}$.

Azimuth Accuracy: $\pm 1.2^{\circ}$.