

# ABI40 Acoustic Televiewer



ABIM Solutions supplies high quality, client-focused, downhole geotechnical mapping services to the West Australian mining industry. Applying some of the most sophisticated technology currently available worldwide, our focus is on providing timely and accurate downhole geotechnical data tailored to our client's needs.

Utilising Advanced Logic Technology's latest generation ABI40 Acoustic Televiewer and a customised logging vehicle, ABIM Solutions can conduct Acoustic Televiewer wireline surveys in both underground and surface mining operations and civil construction projects.

The ABI40 Acoustic Televiewer generates an image of the drillhole wall by transmitting ultrasound pulses from a rotating sensor and recording the amplitude and travel time of the signals reflected from the drillhole wall. Data is transferred back to the surface via a wireline in real time.

The tool is ideal for geological definition, geotechnical rock mass characterisation, determination of fracture frequency and orientation and primary stress orientation .

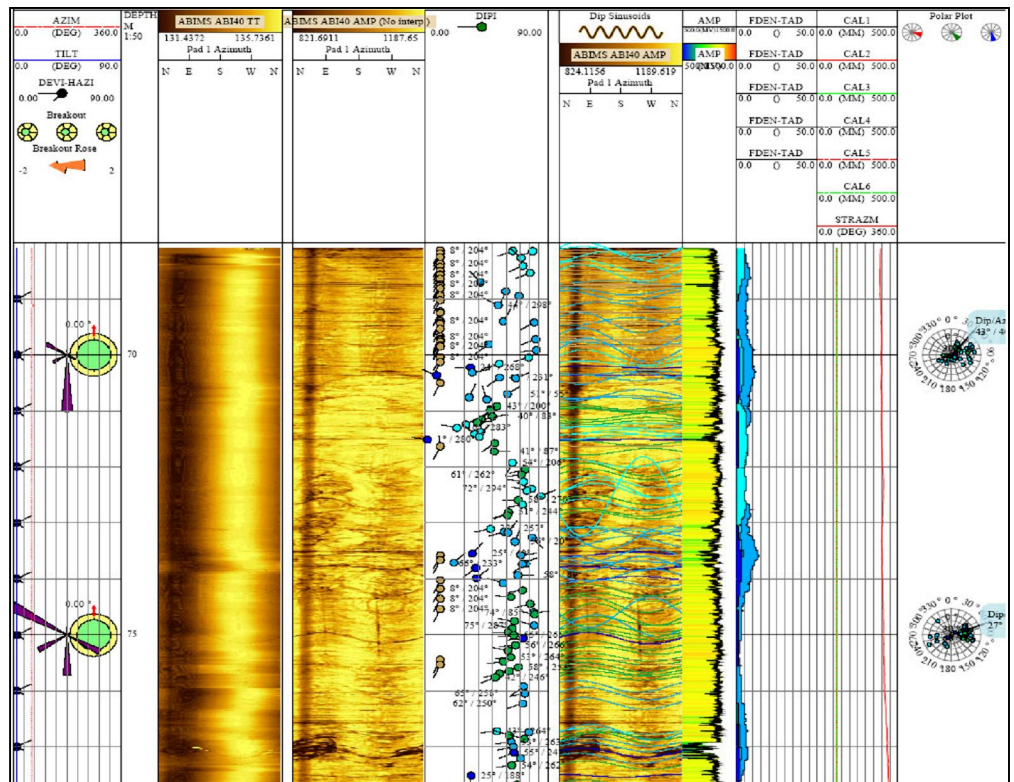
The key advantages of using the ABI40 Acoustic Televiewer:

- Measurement of every structure - 1.5mm wide acoustic beam can produce sub-millimetre fracture measurements
- Data has multiple uses – geological definition, geotechnical rock mass characterisation, determination of fracture frequency and orientation, primary stress orientation etc.
- Full structural log of each hole in digital format
- Digital data acquisition - manual data transformation errors eliminated
- Logs can be calibrated to give rock strength and RMR values
- Highly accurate, orientated, calliper measurements for breakout analysis - 0.08mm resolution

**Peter Bowman**  
Operations Manager  
ABIM Solutions  
130 Fauntleroy Avenue,  
Redcliffe WA 6104  
Mob: +61 4577 57194  
[pbowman@abims.com.au](mailto:pbowman@abims.com.au)  
[www.abims.com.au](http://www.abims.com.au)



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The ABI40 operates by recording the reflected amplitude and travel time of ultrasonic pulses at the interface between the fluid within the hole and the borehole wall. It is critical to its operation that the drillhole be diamond cored. The rough surface of the hole wall in a reverse circulation drilled hole scatters the pulse, making it difficult to distinguish between naturally occurring features and the impact of the drill bit.

For successful Acoustic Televiewer logging, the following minimum hole requirements must be met:

- Fluid filled, Diamond cored drill hole
- Minimum hole diameter 60mm
- Maximum hole diameter 530mm
- Hole inclination  $-10^{\circ}$  or greater
- Maximum hole depth 2000m
- Maximum hole temperature  $70^{\circ}\text{C}$

### ABI40 Tool Specifications

- Length: 1.6m
- Diameter: 40mm (57mm with centralisers)
- Weight: 6kg
- Acoustic beam width: 1.5mm
- Caliper resolution: 0.08mm
- Samples per revolution: 72, 144 or 288

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