



# ABI ( )

slimhole acoustic televiewer

Acoustic borehole scanner tools generate 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 formation (borehole wall).

In open hole, the purpose of the acoustic borehole imaging tool is to provide detailed, oriented caliper and structural information on the basis of high resolution, ultrasonic travel time and amplitude images. The travel time is used to determine exceptionally accurate borehole diameter data, which makes the tool ideal for borehole deformation description (stress field analysis). Travel time is also used for quality control of the amplitude measurement. The amplitude of the reflection from the borehole wall is representative of the acoustic (elastic) properties of the surrounding rock therefore, the tool is ideal for fracture detection and geotechnical rock classification. In cased hole, the tool is used for casing inspection.

Open hole applications are :

- fracture detection and evaluation
- detection of thin beds
- determination of bedding dip
- lithological characterization
- breakout analysis
- monitoring of earth stress field
- high resolution caliper measurements

Cased hole applications are :

- casing inspection
- Corrosion detection
- Detection of internal damage or deformation
- Casing thickness



# ABI40-GR QL40-ABI

slimhole acoustic televiewer



## Technical specifications

<b>Diameter</b>	40mm (1,575")
<b>Length (min/max)</b>	1,61/2,12 m (63/83")
<b>Weight (min/max)</b>	6,7/8,7 kgs (14,7/19,2 lbs)
<b>Max temp</b>	70°C
<b>Max pressure</b>	200 bar
<b>Borehole diameter</b>	<b>open-hole</b> : 2" x 20" depending on borehole conditions
<b>Logging speed</b>	variable function of resolution, wireline and surface system
<b>Cable type</b>	mono, four-conductor, seven-conductor, coax
<b>Digital data transmission Compatibility Telemetry</b>	Matrix - ALTlogger variable baudrate telemetry according to cable length/type
<b>Acoustic sensor</b>	fixed transducer and rotating focusing mirror
<b>Focusing</b>	optimized for 6" borehole
<b>Frequency</b>	1.2 MHz
<b>Rotation speed</b>	up to 35 revolutions per second
<b>Samples per revolution</b>	72, 144, 216, 288, 360 user selected
<b>Caliper resolution</b>	0.08mm (0,003")
<b>Deviation sensor</b>	APS 544 - 3 axis magnetometer, 3 accelerometers.
<b>Inclination accuracy</b>	+/- 0.5 degree
<b>Azimuth accuracy</b>	+/- 1.5 degree

## Options

- **Natural gamma sensor** integrated (ABI40-GR)  
or in line sub (QL40-GR)  
0,875" x 3" NaI (Ti)  
scintillation crystal
- **Centralisers** slip-over (bowsprings 3", 4", 5",  
6", 8", 10", 12", 14", 16")

**cased-hole** : 5" x 20"  
depending on borehole conditions  
with a minimum of 5 mm casing  
initial thickness



# QL43ABI

slimhole acoustic televiewer



## Technical specifications

<b>Diameter</b>	43mm (1"11/16)
<b>Length</b>	1,77 m (70")
<b>Weight</b>	10kgs
<b>Max temp</b>	125°C
<b>Max pressure</b>	800 bar
<b>Borehole diameter</b>	<b>open-hole</b> : 3" x 20" focus optimized for 8 ½" borehole depending on borehole conditions
<b>Logging speed</b>	variable function of resolution, wireline and surface system
<b>Cable type</b>	mono, four-conductor, seven- conductor, coax
<b>Digital data transmission Compatibility Telemetry</b>	Matrix - ALTlogger variable baudrate telemetry according to cable length/type
<b>Acoustic sensor</b>	fixed transducer and rotating focusing mirror
<b>Frequency</b>	1.2 MHz
<b>Rotation speed</b>	up to 20 revolutions per second
<b>Samples per revolution</b>	72, 144, 288 user selected
<b>Caliper resolution</b>	0.08mm (0,003")
<b>Deviation sensor</b>	APS 544 - 3 axis magnetometer, 3 accelerometers.
<b>Inclination accuracy</b>	+/- 0.5 degree
<b>Azimuth accuracy</b>	+/- 1.5 degree

## Options

- **Natural gamma Sensor** QL43 GR  
1" x 4" NaI (Ti) scintillation crystal
- **Centralisers** slip-over & in-line
- **Weight section** QL43 weight

**cased-hole**  
(field exchangeable acoustic head)

**QL43 ABI HEAD OHCO-L**  
5 ½" x 17" with a  
minimum of 5 mm thickness  
focus optimized for 8 ½" casing

**QL43 ABI HEAD CO-S**  
2" 7/8 x 5 ½" with a  
minimum of 3 mm thickness  
focus optimized for 4 ½" casing

**QL43 ABI HEAD CO-XS**  
2" 7/8 with a minimum of  
3 mm thickness  
focus optimized for 2 ½" casing



# QL85ABI

high temperature acoustic televiewer



## Technical specifications

	<b>ABI85</b>
<b>Diameter</b>	85 mm (3" 3/8)
<b>Length</b>	<b>With "inline" centralisers</b> 5,2 m (205") <b>Without "inline" centralisers</b> 3,7 m (145")
<b>Weight</b>	150kgs
<b>Max temp</b>	300°C for 14 hours
<b>Max pressure</b>	800 bar (12000 PSI)
<b>Borehole diameter</b>	<b>open-hole</b> : 4" to 15" depending on borehole conditions
<b>Logging speed</b>	variable function of resolution, wireline and surface system
<b>Cable type</b>	mono, four-conductor, seven-conductor, coax
<b>Digital data transmission Compatibility Telemetry</b>	ALTlogger variable baudrate telemetry according to cable length/type
<b>Acoustic sensor</b>	fixed transducer and rotating focusing mirror
<b>Focusing</b>	optimized for 8 ½" borehole
<b>Frequency</b>	1.2 MHz
<b>Rotation speed</b>	up to 5 revolutions per second
<b>Samples per revolution</b>	72, 144, 288 user selected
<b>Caliper resolution</b>	0.08mm (0,003")
<b>Deviation sensor</b>	APS 544 - 3 axis magnetometer, 3 accelerometers.
<b>Inclination accuracy</b>	+/- 0.5 degree
<b>Azimuth accuracy</b>	+/- 1.5 degree

## Options

- **Natural gamma** QL85 GR
- **Centralisers** slip-over & in-line

## ABI92

92 mm (3" 5/8)  
  
id  
id  
180kgs  
id  
1400 bar (20000 PSI)  
id  
  
id

