

Borehole Televiewer optical (OPTV) and acoustic (BHTV)

- Oriented image (360°)
- High resolution
- Starting at 75mm borehole diameter
- 100% colourfidelity (OPTV)

Borehole televiewing provides lithological characterisation of the borehole wall (clefts, stratum inclination, schistosity) or it is used to define the quality assurance of the drilling works. The probe is run into the borehole on a winch and is providing real-time digital values.

Structures can be viewed on the screen already during the scanning process on site. Afterwards, the client will receive high-resolution original images as well as an analysis as a PDF-file.

Optical Televiewer (OPTV)

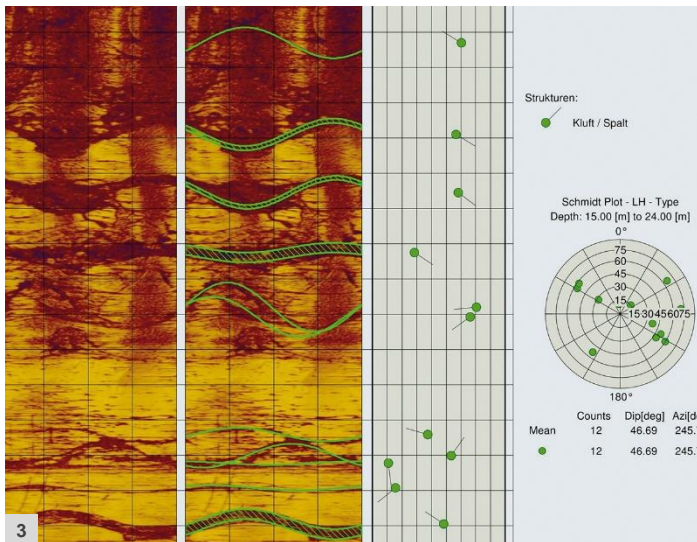
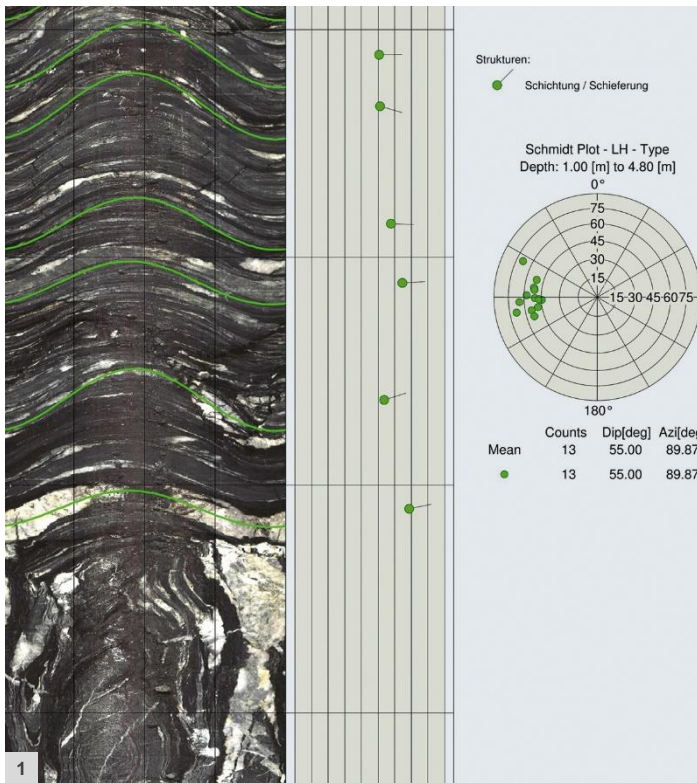
The borehole to be scanned with the optical televiewer must be dry or filled with clear water.

The televiewer provides a continuous high resolution image of the borehole wall rendering natural colours (see fig. 1). Structures are recognised and oriented easily by means of an integrated compass and an inclination sensor.

Acoustic Televiewer (BHTV)

The acoustic televiewer can be run in a borehole filled with either water or mud.

On one hand, the images show the transit time of the ultrasonic signal thus providing the diameter of the borehole (caliper-log) and clearly showing open clefts. On the other hand, they also show the intensity of the reflected signal, depending on the intensity with which the borehole wall absorbs or reflects the signal.



- 1) Analysis of an OPTV survey
- 2) OPTV-probe with spacers (above) and BHTV-probe
- 3) Analysis of a BHTV survey

Technical specifications

	OPTV	BHTV
Diameter	52 mm	42 mm
Length	163 cm	210 cm
Weight	5 kg	10 kg
Max. operation temperature	60°C	70°C
Max. operation pressure	100 bar	100 bar
Borehole diameter	75-500 mm	
Media in borehole	Air or clear water	Water or mud
Borehole orientation	horizontal or inclined	
Measuring of orientation	Inkination $\pm 0.5^\circ$, Azimuth $\pm 1.0^\circ$	
Cable length of winch	175 or 530 m	
Measuring principle	CMOS sensor 1280 x 1024 Pixel 24bit RGB colour resolution 20 to 60 lines per second 360° full rotation per line Focus 0 to endless	Piezocomposite sensor Rotating mirror up to 20 U/min Measuring frequency 1.5 MHz Gain 0 to 60dB Caliper resolution better than 0.1mm
Speed	typically 1.5-3 m/min. (depending on resolution and borehole diameter)	
Vertical resolution	Standard 1mm (others possible, depending on measuring speed)	Standard 3mm (others possible, depending on measuring speed)
Horizontal resolution	Standard 1mm (possible up to 1/1440 of the borehole circumference)	Standard 3mm (possible up to 1/360 of the borehole circumference)