

OBI 40

Slimhole optical televiewer

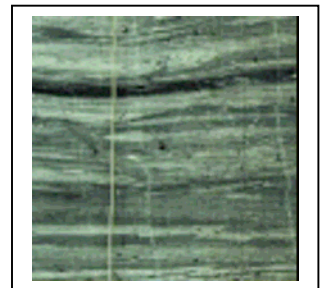
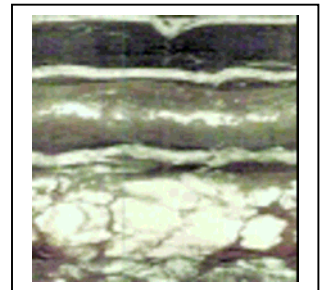


The tool generates a continuous oriented 360° image of the borehole wall using an optical imaging system. (downhole CCD camera which views an image of the borehole wall in a prism). The tool includes an orientation device consisting of a precision 3 axis magnetometer and 3 accelerometers thus allowing accurate borehole deviation data to be obtained during the same logging run (accurate and precise orientation of the image).

Optical and acoustic televiewer data are complimentary tools especially when the purpose of the survey is structural analysis.

A common data display option is the projection on a virtual core that can be rotated and viewed from any orientation.

Actually, an optical televiewer image will complement and even replace coring survey and its associated problem of core recovery and orientation. The optical televiewer is fully downhole digital and can be run on any standard wire line (mono, four-conductor, seven-conductor). Resolution is user definable (up to 0.5mm vertical resolution and 720 pixels azimuthal resolution)



Applications:

The purpose of the optical imaging tool is to provide detailed, oriented, structural information. Possible applications are:

- fracture detection and evaluation
- detection of thin beds
- bedding dip
- lithological characterization
- casing inspection



Technical specifications

Diameter	40mm
Length	approx. 1.7m
Weight	approx 7 kgs
Max temp	50°C
Max pressure	200 bars
Borehole diameter	1 3/4" to 24" depending on borehole conditions
Logging speed	variable function of resolution and wire line

Cable:

Cable type	mono, four-conductor, seven-conductor
Digital data transmission	up to 500 Kbps depending on wire line, real-time compressed
Compatibility	Abox- MGXII (limited to 41 Kbps) and Matrix

Sensor:

Sensor type	downhole DSP based digital CCD camera
Optics	plain polycarbonate conic prism system
Azimuthal resolution	user definable 90/180/360 or 720 pixels /360°
Vertical resolution	user definable, depth or time sampling rate
Color resolution	24-bit RGB value
White balance	automatic or user adjustable
Aperture & Shutter	automatic or user adjustable
Special functions	User configurable real time digital edge enhancing User configurable ultra low light condition mode
Orientation	3-axis magnetometer and 3 accelerometers
Inclination accuracy	0.5 degree
Azimuth accuracy	1.0 degree

Logging parameters:

- 360° RGB orientated optical image
- Borehole azimuth and dip
- Tool internal Temperature