

Open hole Cased hole

Modular Digital Equipment for Borehole Seismic



SCOPE OF APPLICATION

Performing in onshore and offshore wells in modes:

- VSP
- Offset VSP
- Walkaway VSP
- 3D VSP
- Fracking monitoring
- Cross-well seismic tomography
- Walkaround VSP

FEATURES AND ADVANTAGES

- Possibility to extend the number the receivers in the string, their interchangeability
- Can work with single-core logging cable
- Ultra-low level of equipment self-noise (not more than 0.1 μ V), enabling to record weak seismic signals and use seismic non-explosive sources of low energy; absence of industrial network interference;
- Availability of software-controlled calibrators in the receivers, allowing to control and take into account the change of calibration characteristics of electronic measuring channels and seismic receivers in real borehole conditions;
- Small dimensions and weight of receivers, the use of electromechanical (or magnetic) sidewall device, which ensures minimal influence of resonance «tool - borehole wall», as well as noise waves or undesirable waves (hydro-wave, cable waves) on the recorded seismic vibrations;
- Additional depth correlation and control with the built-in gamma ray log unit



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SPECIFICATIONS

Number of receivers in toolstring	up to 32
Quantity/seismic receivers design in a unit	3/6/9 / three-component orthogonal
Seismic receivers used	OMNI-1850; OMNI-2400, 15 HZ (omnidirectional)
Sampling rate of signals, msec	0,25/ 0,5/ 1,0/ 2,0
ADC bit rate	24, 32
Temperature, °C	120/ 150/ 175
Pressure, MPa	120
Receiving unit length, mm	1100
Receiving unit diameter, mm	50
Force at the end of arm of sidewall device, kg	not less than 85
Receiving unit weight, kg	max. 10
Length of interunit jumpers, m	5/10/20 (any according to the order of the customer)