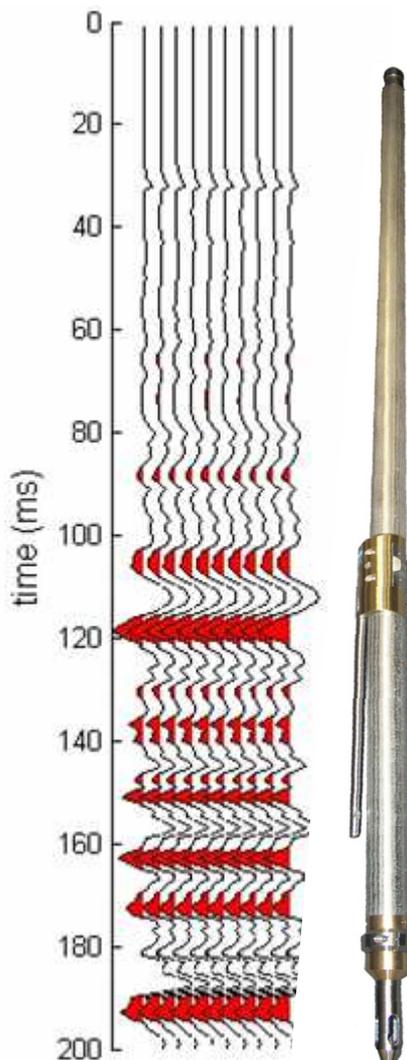
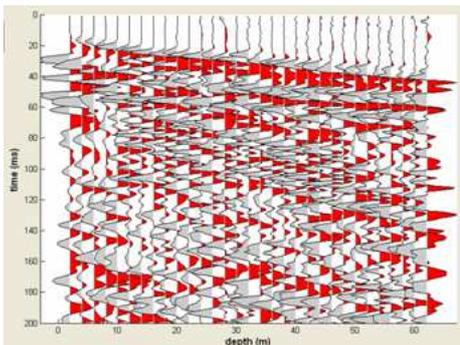


## Seismic Geophone

### Digital and Analogue Seismic Geophones

#### APPLICATIONS

- Seismic Profiling
- Correlation with surface Seismic
- Soil dynamic and elastic parameter evaluation



GeoVista supplies a Borehole Seismic Geophone with motorised caliper clamping arm and three SM24 geophones arranged in an X-Y-Z pattern. The motorised clamping arm allows for work in a range of borehole diameters, by ensuring adequate coupling for the seismic signal. The geophones are non-gimbaled, 3-axis devices, allowing for seismic energy to be measured in X and Y horizontal axis and in the vertical Z axis. Two methods of wireline communication are available.

#### OVERVIEW

**Digital:** The Geovista Borehole Geophone system includes a downhole digital sonde and a compact digital interface unit at the surface. There is no requirement for a seismograph. The sonde runs on single conductor cable on a standard logging winch. The digital interface unit at the surface has inputs for the downhole sonde, three surface geophones and the trigger. Collected data is output to a PC via the USB port. The acquisition software allows for data viewing and stacking. The generated SEG2 files can then be imported into most commercial seismic processing software.

**Analogue:** The Geovista Analogue version has the same geophone in the borehole, but sends up analogue signals to surface. This must be run on 4-core or 7-core cable and a surface seismograph is required. This option allows the geophone to be run in deeper boreholes.

**Monitoring Geophone:** GeoVista can also supply an analogue monitoring geophone.

#### SPECIFICATION

	Digital Version	Analogue Version
Weight / Length / Diameter	15 kg / 1.69 m / 64 mm	15 kg / 1.69 m / 64 mm
Clamping	Motorised Arm	Motorised Arm
Downhole Sensors	3 geophones with simultaneous recording. X-Y-Z SM24	3 geophones with simultaneous recording. X-Y-Z SM24
Seismic Source	Not included	Not included
Trigger	From suitable source (e.g surface geophone)	Depends on surface seismograph (not included)
Data Acquisition	Max 16s record length / 16 bit resolution on a 500µs sample interval. No Seismograph required. Surface box connects to PC with USB cable.	Requires surface seismograph (not included)
Output file format	Used with GV Seismic Software. Output SEG2	Depends on surface seismograph (not included)
Logging cable	1000m 3/16in mono or 4-core cable	2500m 4-core or 7-core cable
Surface inputs	3 surface geophones	Depends on surface seismograph (not included)
Depth measurement	Depth reading real time with connection to winch encoder	Third party system to read in depth from winch encoder
Pressure/Temperature	20 MPa / 80°C	20 MPa / 80°C
Combinability	Not combinable	Not combinable
Borehole	Water, Mud	Water, Mud
Comments	Open hole Ideal for boreholes <1000m VSP measurements as part of a complete wireline logging suite. No need for seismograph. Depth input from winch.	Open hole Ideal for deeper VSP surveys and a vibroseis source. Requires use of third party seismograph and surface setup.