

## GSR-1 Geochain Slim Receiver

### Main Features

- 1-11/16" diameter
- 3 component geophones or MEMS
- 200°C max. temperature rating
- 20,000psi pressure rating
- GO7 heads at both ends
- High locking force to weight ratio
- Dual tool plus gamma on 7 conductor wireline
- Simple conversion to digital mode for use in the GeochainSlim™ system.
- 7" arm opening as standard



### General

The GSR geophone is a compact three component electro-mechanical downhole geophone. It is designed for use in wells up to 20,000 psi and 200°C and provides a fast arm cycle time with an arm force to weight ratio of 5:1. It can be converted from analogue to digital in minutes for use in a dual tool analogue system or as part of a GeochainSlim™ system.

### Sensors

The GSR comes with a three component sensor pack as standard. Sensors can be either high temperature geophones or MEMS sensors giving a tool suited to either VSP or fracture monitoring surveys.

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### Functionality

The standard arm will accommodate boreholes from 1-7/8" to 7" and an extended arm can be used to increase this range to 13". The locking force is constant to within 20% throughout its operating range and will lock into 3-1/2" drill pipe in fifteen seconds.

The tool comes as standard with a three component fixed sensor pack using one high sensitivity OYO element per axis and with the option of a state of the art MEMS sensor pack. The sensor packs will work in any orientation from vertical through to horizontal.

The GSR is a development of the well tried and tested ESR tool and has been designed so as to require very little servicing. Routine maintenance can be performed in a few minutes and even a complete overhaul can be accomplished in less than an hour.

The arm mechanism has a fail safe feature to facilitate recovery of the tool in the event of downhole failure. In dual or digital mode all locking arms open in parallel to further reduce survey times.

The tool can be used in single or dual tool analogue mode and can be combined with our GRT-3 Gamma Ray tool for depth correlation. In digital mode the tool can be combined to a maximum of 24 levels with 200m spacing between levels. All using standard seven conductor wireline throughout. See our separate GeochainSlim™ brochure for further details.

*ITC-3 inter-tool cable*



*DCP-2 control panel*

### GSR-1 Specification

Length:	44" (1135 mm)
Diameter:	1-11/16" (43 mm)
Weight:	10 lbs (4.5 kg)
Locking range std:	7" standard..
Locking range ext:	13" with arm extender.
Temperature analogue:	400°F (204°C).
Temperature digital:	356°F (180°C).
Pressure:	20,000 psi (1400 bar)
Sensors:	OYO-2400 15Hz omni or MEMS
Well deviation:	0°-95°
Control panel analogue:	DCP-2 panel
Control panel digital:	Standard Geochain™ panels