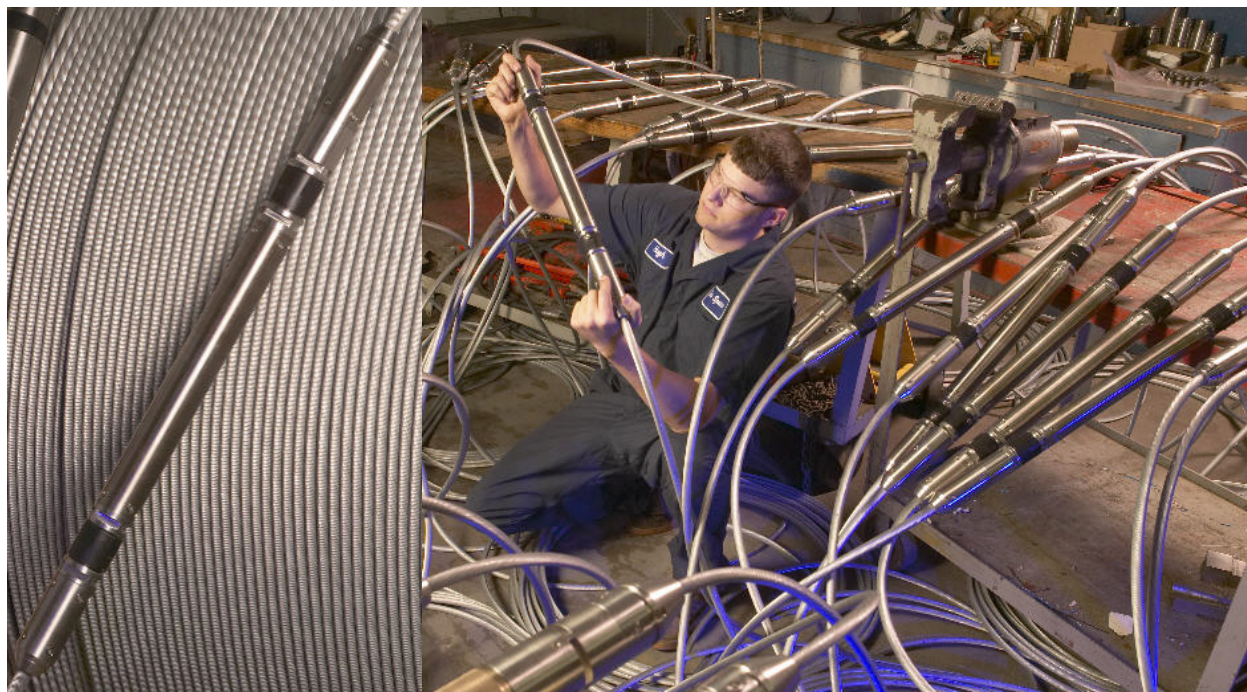


# GeoRes DownHole System

## "SLIMHOLE" DW150 ARRAY SYSTEM

### *Miniaturized Multi-Component Borehole Sonde String*



#### **Digital Module Features:**

- 24-bit x 3-channel Digitizer in each Shuttle.
- Ultra-Low-Noise Digitizer enables recording of low amplitude microseismic events, 3D-VSP, Crosswell Seismic Imaging, etc.
- Slim-hole sonde 1.6 inch OD (<41mm).
- 3C Sensor Packages available: 3C Tri-axis Orthogonal Geophone.
- OMNI-2400 High-output Geophone sensors.
- Machined stainless housing minimizes mechanical resonance for high-resolution, high-frequency recording.
- Direct connection sub-arrays, armored wireline, or rigid interconnects available with high-pressure multi-conductor booted connectors.
- Flexible or Rigid interconnects may be connected "back-to-back" to form longer intervals.
- Maximum distance between sonde modules: 100 meters.
- Maximum temperature rating: 150°C.
- Maximum pressure rating: 20,000 psi.
- Configurations for vertical, deviated, or horizontal wellbore deployments.
- Adaptable housing for user-defined, application-specific coupling devices.

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## MECHANICAL SPECIFICATIONS

<b>Outside Diameter</b>	1.6 inches	< 40.64 mm
<b>Length</b>	16 inches	406.4 mm
<b>Tool Weight</b>	5 lbs.	2.27 kg
<b>Anchoring System</b>	Mechanical on each shuttle (bow spring/magnetic)	Tubing mandrel Permanent (cemented)
<b>Anchor-to-Weight ratio</b>	7:1 (passive spring)	
<b>Tool Anchoring Range</b>	Custom adapters for dimension ranges	Sizes available upon request
<b>Points of Contact</b>	5 points, including opposing clamp axis	
<b>Sensor Package</b>	3C w/OMNI-2400, mutually orthogonal sensor set standard 2.26 Volts/inch/second Sensitivity	
<b>Interconnect Options</b>	Rigid Tubing	Flexible Armored Wireline Cable
<b>Standard Lengths</b>	3, 6, 9, 9, 12, 15, 20 meters	
<b>Maximum Temperature</b>	302°F	150°C
<b>Maximum Pressure</b>	20,000 psi	

## Digital Module 3-CH x 24-bit Digitizer SPECIFICATIONS

<b>Sampling Rates</b>	¼, ½, 1, 2, and 4 ms						
<b>Pre-amplifier Gains</b>	0dB	6 dB	12 dB	18 dB	24 dB	30 dB	36 dB
<b>Equivalent Input Noise @2ms</b>	1.13µV rms	0.58 µV rms	0.33 µV rms	0.22 µV rms	0.19 µV rms	0.18 µV rms	0.17 µV rms
<b>Maximum Input Signal</b>	1.8 V rms	0.9 Vrms	0.45 Vrms	0.225 Vrms	0.1125 Vrms	0.0562 Vrms	0.0281 Vrms
<b>Gain Accuracy</b>	< 1%						
<b>Frequency Response</b>	3 to 1.65 KHz						
<b>Anti-alias Filter</b>	83% Nyquist						
<b>Instant. Dynamic Range @2ms</b>	124 dB						
<b>Cross-feed Isolation</b>	>90 dB						
<b>THD</b>	0.001%						
<b>System Timing Accuracy</b>	Better than 1 PPM						

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