



Z-SEIS
Reservoir Seismic

Downhole Receivers
Crosswell Seismic

Z-Seis **TARS** multi-level receiver array is uniquely optimized for high resolution, large bandwidth crosswell acquisition

- High temperature, high pressure hydrophones specially developed by Z-Seis configured in noise canceling arrays
- High sensitivity – to -196dB
- Wide Frequency Range – 100Hz to 4000Hz
- Custom designed pre-amps at each level to maximize SNR
- Proprietary “acoustic window” technology protects hydrophone arrays – maximizing signal transmission
- Multiple receiver array configurations provide flexibility in acquisition
- Corrosion resistant all stainless steel construction
- Crosswell optimized spacing: Available 5ft or 10ft; or metric spacings.



Operating Specifications

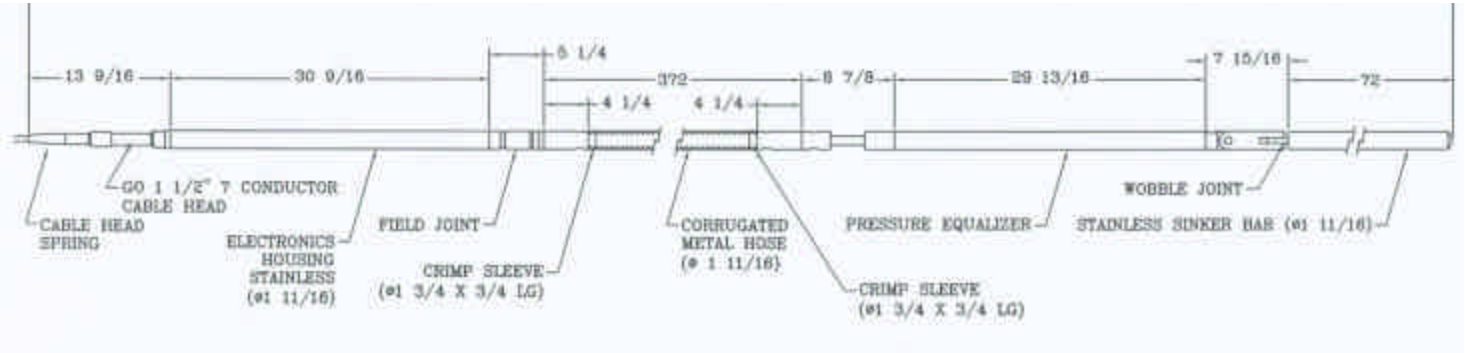
Levels	10	20
Hydrophones per level	8	8
Level spacing	1.5 m (5 ft)	1.5 m (5 ft)
Application	Shallow wells, and well limited by rig-up height	Medium to deep operations and larger well spacing.
Well operating environment	180°C (350°F) 68.9 MPa (10,000 psi)	180°C (350°F) 68.9 MPa (10,000 psi)
Mechanical specifications	42mm (1 11/16”) OD 20.7 m (68 ft) long 79.5 kg (175lbs)	42 mm (1 11/16”) OD 36 m (118 ft) long 113.6 kg (250lbs)
Wireline	12 conductor conventional copper cable	27 conductor or 12 conductor (10 level operation)

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TARS Receiver



TARS Hydrophone Specifications

Phone type	Z-Seis TS -11-49
Sensitivity @ 200Hz	-195.5 dBV re 1MicroPa +/- 1dB @ 40°C
Sensitivity Vs Depth (loss at 10,000ft)	0.8dB
Capacitance	4249pF +/- 10% @ 40C
Temperature (survivability)	180°C (350°F)
Pressure	> 68.9 MPa (10,000 psi)

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