



Z SEIS
Reservoir Seismic

Acquisition and QC Systems

Crosswell Seismic

Z-Seis crosswell acquisition systems are designed and engineered specifically for reliable and cost effective crosswell field data acquisition and are field proven with Z-Seis' unique full service operating experience.

- Both truck and skid-mounted units for onshore, offshore and remote operations
- Customized software specifically designed for crosswell geometries and processing
- Automated depth-driven data-acquisition for fast efficient, non-stop data recording
- Customized hardware for high frequency data acquisition
- Fiber optic source/receiver communications for synchronized data recording and safe operations
- Low system latency for fast acquisition at small source and receiver sampling intervals (< 1.5 m)
- Fully equipped specialized crosswell field QC system for in-field pre-processing, survey optimization and real-time data quality control checks
- Depth correlation equipment to ensure that the seismic data is acquired at the correct depth
- Multiply redundant systems in the field to minimize equipment failure risk.
- Simultaneous multi-profile acquisition with multiple receiver systems
- Programmable source control and monitoring from within acquisition system

Z-Seis uniquely offers complete and field proven crosswell seismic acquisition and processing systems, based on real-world experience. Z-Seis systems are fully integrated and provide efficient commercial services. Systems include:

- QC system
- Wireline winches and hoist units
- Wireline Cables
- Recorder cabs, generators, trailers
- Major maintenance – spares
- Installation
- Training
- Crosswell seismic processing software and hardware
- Crosswell sources
- Crosswell receivers.



Crosswell Recorder System

A/D Conversion	24 bit A/D process using 32 kHz over sampling, digital anti-alias and decimation to users selected sample rate
Dynamic Range	135 dB theoretical, 113 dB measured @ 2 ms, 3 to 150 Hz
Distortion	0.005% @ 2 ms, 3 to 150 Hz
Bandwidth	3.0 to 14 kHz,
Anti-alias Filters	Digital, automatically selected to correspond to sample rate. -3 dB corner frequency at 60% of Nyquist frequency, down 80 dB at Nyquist, except -74 dB when sampling at 16 kHz and none at 32 kHz.
Number of channels	12, 24, 36, 48, or 60 channels
OS	NT SP5
Controller	Dual CPU 900mHz, 512MB RAM, Rack-mount server
Storage	Dual Ultra2-LVD SCSI 10,000 rpm disk 9GB, Dual 4-mm DAT

Crosswell QC System

Computer	Dual CPU 900mHz, 1GB RAM, Rack-mount server
OS	Solaris 8.0
Disk	Dual Ultra2-LVD SCSI 10,000 rpm disk 18GB
Printer	HP LaserJet 6
Software	Z-Seis proprietary QC Software

Crosswell Depth/Trigger Acquisition Controller

Synchronization	Acquisition timing, sweep pilot, source control, source monitor, record initiation, source depth, receiver depth, voice.
Link type	Mil spec. surface fibre-optic; multi-mode T3. Land use Alternate wireless / infra-red. Offshore use.
Separation	2,000m std. 4,000m max.
Software	Z-Seis proprietary QC Software