



## R-XYZ-CG 3-COMPONENT DOWN-HOLE ANALOG SEISMIC ARRAY



### KEY FEATURES

- ♦ **Adjustable gain:** 8 steps from 1-100
- ♦ Up to 24 modules
- ♦ Wide-band capability
- ♦ **44 mm** or **56 mm** versions
- ♦ **Rugged** field-proven construction
- ♦ Microcontroller driven **clamping system**
- ♦ **Independent clamping** of each module, current controlled
- ♦ **Interfaces** with Vibrators, VIBSIST, weight-drop and explosive sources

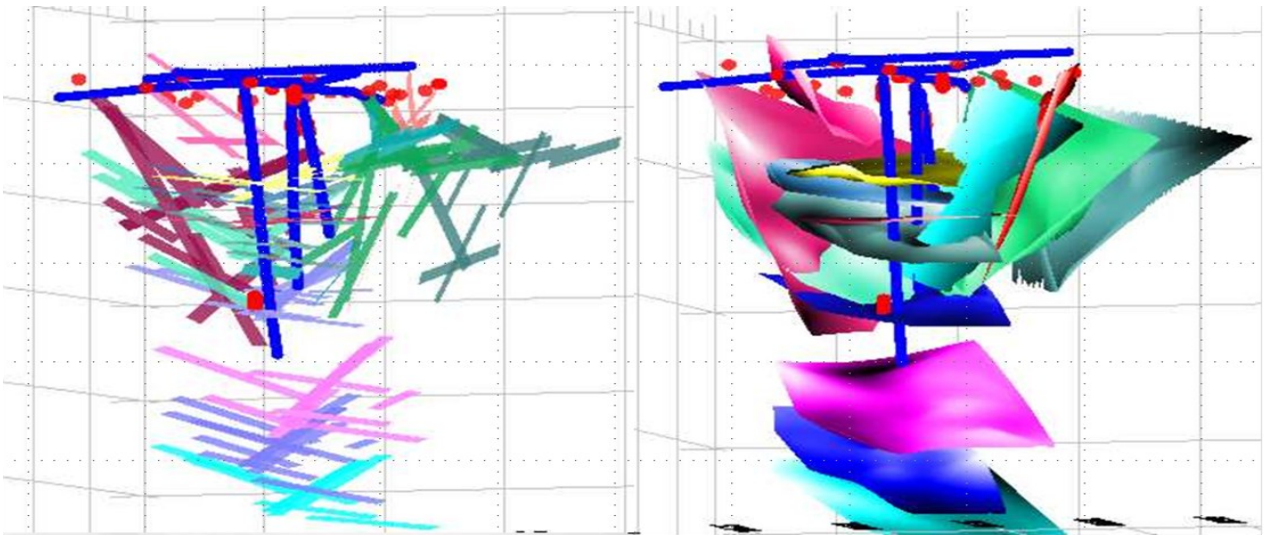
### APPLICATIONS

- ♦ **Oil and gas exploration**
- ♦ **Reservoir characterization**
- ♦ **Mineral exploration**
- ♦ **Resource delineation**
- ♦ **Hazardous waste geologic disposal**
- ♦ **Hydrogeological assessment**
- ♦ **Rock mechanical studies**
- ♦ **Research and education**

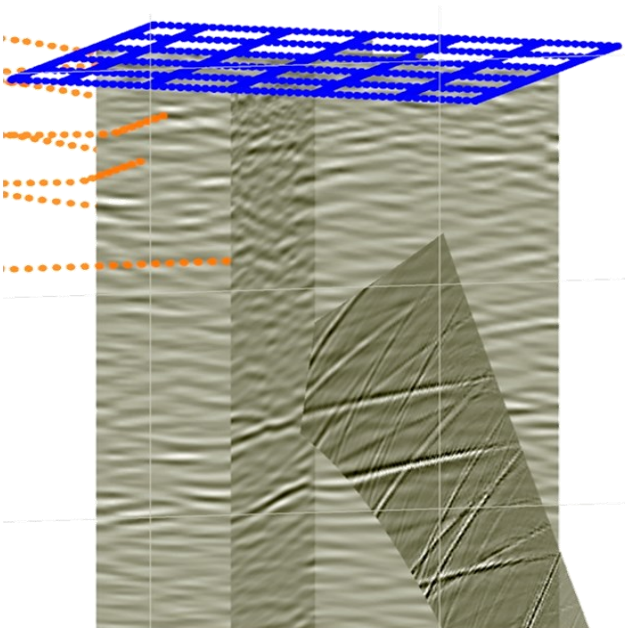


# MULTI-LEVEL 3-COMPONENT

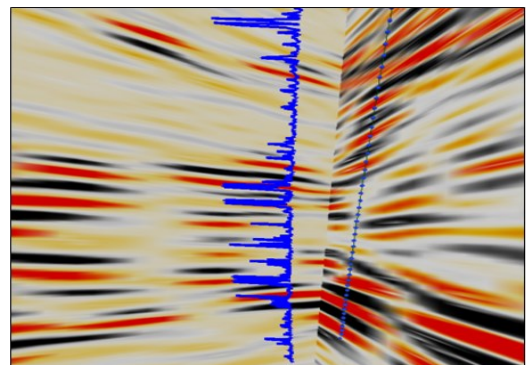
## ***3D reflection and VSP STRUCTURAL MAPPING. Olkiluoto Nuclear Waste Repository Site, Finland***



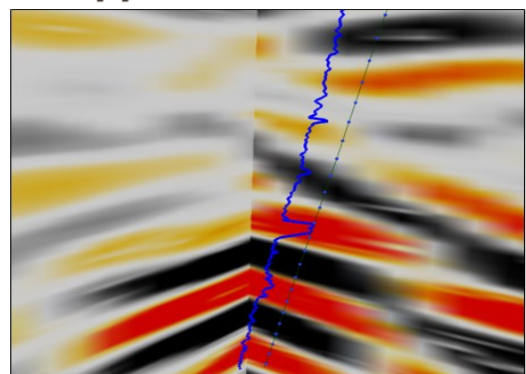
***VSP 3D cohesive geometrical model of the Olkiluoto site, 2002.***



***Inline and crossline slices through the 3D cube (2006) together with a 3D migrated VSP profile (2002). Very good match of sub-horizontal reflectors mapped by the two independent investigations.***



***Apparent reflectivity in hole matches well with reflectors mapped in the 3D cube***



***P-wave velocity variation in hole matches well with reflectors mapped in the 3D cube***



# ENTS ANALOG RECEIVERS

## SPECIFICATIONS

### System Modules

- **1 to 24 elements** with 3 axis oriented geophones and electronics
- **3 Components:** Double Differential-Element Orthogonal (15 Hz Natural Frequency, 0.52 V/cm/sec)
- **Level Spacing** **10 m**  
*Other spacing available on request*
- **Power supply & controller** for gain adjustment and clamping control.
- A variety of **seismographs** can be used, which include all industry-standard recording systems.

### Software controlled

- Gain adjustment
- Clamping

### Dynamic Range

$\geq 80 \text{ V}/\mu\text{s}$

### Total Harmonic Distortion

$\leq 130 \text{ dB}$  ( $22 * 10^{-6} \%$ )

### Common Mode Rejection Ratio

$\geq 80 \text{ dB}$

### Gain Accuracy between Channels

$\leq 0.5 \%$

### Analogue Low-Pass Filter

10 kHz 6 dB / Octave

### Operation Temperature Range

-40°C to +105°C

### Dimensions of one receiver unit

780 mm length,  
44 or 55 mm diameter

### Power

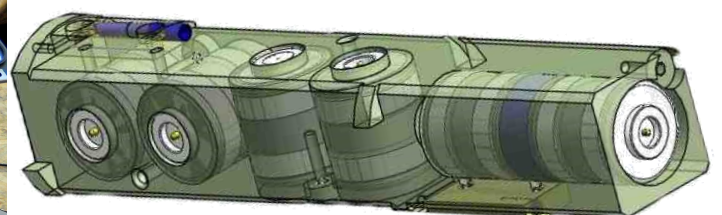
90-260 VAC

### Maximum Depth

2,000 m

### Frequency Range options:

**Version LF** 5 Hz - 500 Hz  
**Version SF** 16 Hz - 2000 Hz  
**Version HF** 40 Hz - 6000 Hz



ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE



**VIBROMETRIC**

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