SureVIEW sDAS

Fiber optic acoustic monitoring for subsea wells

The **SureVIEW™ seismic distributed acoustic sensing (sDAS) interrogator** offers all of the benefits of fiber optic acoustic monitoring—from flow monitoring and optimization, sand detection and stimulation optimization, to seismic and microseismic monitoring—combined in a single interrogator unit.

Unlike other DAS interrogators, SureVIEW sDAS utilizes Baker Hughes SureVIEW **CoreBright™ optical fiber**, a proprietary fiber specifically designed for durable oil and gas deployments. This allows operators to monitor high value assets through the life of the well, from well-centric to reservoir focused scales.

The combination of SureVIEW sDAS with **CoreBright™ enhanced backscatter fiber (EBF)** permits the acquisition of data in subsea wells located long distances from the data acquisition unit. Testing shows that a vertical seismic profile (VSP) can be acquired from the shore, or host facility up to 50 miles (80 km) away.

The SureVIEW sDAS interrogator can output various formats, suitable for various applications, and has the ability to break down the raw data, as well as compute attributes on-the-fly (frequency-band energy, individual spectra). It can also record data either in continuous or trigger mode, and is equipped with an independent global positioning system (GPS)–thus permitting clock synchronization and clock drift control.

SureVIEW sDAS delivers high fidelity data readily available to processing and answer solution teams. The system may also be remotely operated through a connection to the Baker Hughes cloud services, and is compliant with HDF5 data format.

From seismic processing, reservoir characterization, data visualization and advanced modelling and interpretation, we deliver answers, not just data.

Contact a Baker Hughes representative today to learn how we can help you take energy forward.

Applications

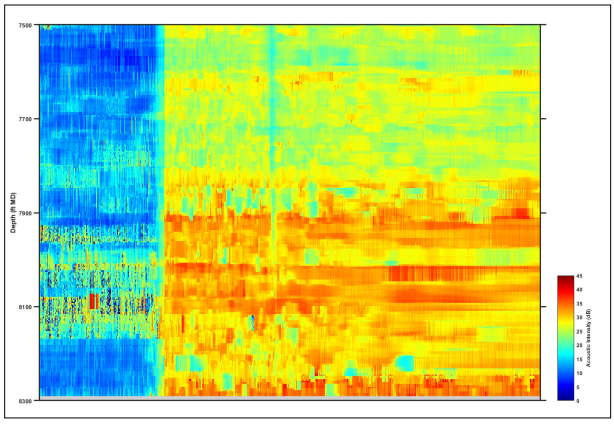
- Subsea and land wells
- Permanent reservoir monitoring
  - Flow monitoring
  - Sand detection
  - Leak detection
  - Stimulation optimization
  - Microseismic monitoring
  - Vertical seismic profiling (VSP)

Benefits

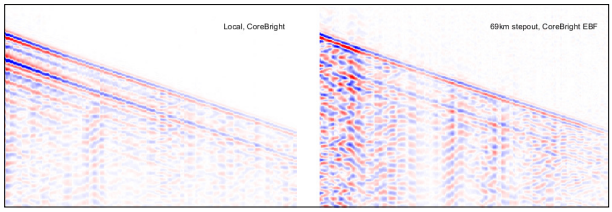
- Delivers an integrated solution from subsurface equipment to remote visualization and analytics that saves time and cost
- Simplifies handling and management of data reducing IT integration time
- Offers a better understanding of the wellbore/reservoir enabling sustained and/or incremental production of your asset
- Enables understanding of the entire completion when coupled with Baker Hughes SureCONNECT™ downhole intelligent wet-connect system
- Provides a long-term well and reservoir monitoring solution while reducing operating costs by minimizing/eliminating unnecessary interventions

Technical Specifications

Technology Supported	SureVIEW DAS VSP
Type	Rackmount
Number of Channels	8
Rack Unit Dimensions	6U
Certifications	CE, TUV
Supply Voltage	110-240 Volts AC, 50 or 60Hz
Typical Power Consumption	Up to 400W
Operating Temperature Range	0°C to +40°C / 32°F to +104°F
Optical Connectors	F3000/APC
Interface Connections	Ethernet, GPS, USB (Geophones) DC Trigger Pulse (GPS Synced)
File Formats	PRODML/HDF5/SEG-Y
Data Storage	960GB (Internal) 8TB (NAS)
Maximum Distance Range	Up to 12 miles (20 km) with CoreBright fiber Up to 50 miles (80 km) with CoreBright EBF
Fiber Type	Single Mode
Spatial Resolution	1.5 meter
Minimum Sampling Interval	0.33 meter
Gauge Length	Selectable 3, 7, 15, 31 meters
Maximum Pulse Rate	10 kHz
Dynamic Range	0.24 nε (over full bandwidth) 1.5pε (narrowband) Up to 1 με



This Distributed Acoustic Sensing (DAS) Frequency Band Energy (FBE) shows acoustic energy acquired in a multi-zone injection well. This information was used to estimate zonal flow allocation.



This side-by-side comparison shows a raw vertical seismic profile (VSP) shot point acquired above the well (left) versus VSP from 43 miles (69 km) from the wellhead (right). The "local" (left) case uses CoreBright only. The "remote" (right) case uses a 69km CoreBright lead-in, 3dB attenuation and subsea amplifier, and CoreBright EBF inside the well.

Baker Hughes