

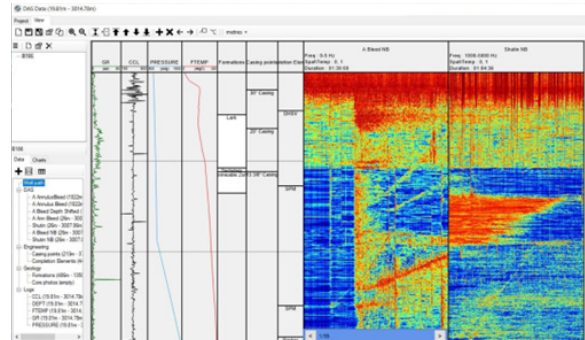
# Well Intervention

## Distributed Fibre Optic Sensing (DFOS)

Distributed Fibre Optic Sensing (DFOS) uses two main types of surface instrument, the Distributed Acoustic Sensor (DAS) and the Distributed Temperature Sensor (DTS). These units acquire the data from the fibre-enabled slickline, which is processed to reveal a wide range of well issues and conditions.

Temperature and acoustic data is collected from every metre along the cable simultaneously. With these distributed measurements updating rapidly, a continuous and dynamic view of the full well can be observed over any specified survey duration.

Additionally, conventional logging tools can be deployed on the fibre-enabled slickline to provide the more conventional single point/time measurements if required.



### DFOS applications

- Leak detection
- Flow/injection monitoring
- Artificial lift assessment
- Behind-casing crossflows
- Sand production
- Pre-abandonment surveys
- Slug detection/monitoring
- Clean-up monitoring

### DFOS applications

- Well life extension
- Restoration of production
- Monitor dynamic behaviours (e.g. intermittent leaks)
- Rapid processing and interpretation
- Onsite decision making in hours or survey
- Immune to EM effects
- Ideal for HP/HT applications

# Well Intervention

## Linear Pro Series N4426A - Distributed Temperature Sensor

Technical specifications	
Range (max measurable cable length)	8km
Minimum spatial resolution	1m
Minimum sampling interval	0.25m
Temperature resolution (10 min survey)	0.28°C
Survey time	30s to 24hrs
Temperature repeatability	0.3°C
Fibre type	Single mode 9/125 µm
Optical connector	E2000/APC SM
Power supply	10v – 30v DC / 20W typical
Computer interface	USB, Ethernet



19" Rack Mount



Rear View

## Linear Pro Series N5226A - Distributed Acoustic Sensor

Technical specifications	
Range (max measurable cable length)	12km
Minimum spatial sampling	1.25m
Gauge length	5m
Maximum acoustic sampling rate	0.28°C
Onboard data storage	3 x 7.7TB SSD drives
Fibre type	Single mode 9/125 µm
Optical connector	E2000/APC SM
Power supply (interrogator)	10v – 30v DC / 30W typical
Power supply (data processor unit)	100v – 240v AC / 250W operating
Dimensions / weight (interrogator) (mm)	88H x 483W x 370D 7kg
Dimensions / weight (data processor unit) (mm)	177H x 427W x 451D 19kg

