

# Distributed Fiber Optic Sensing

A new era in well integrity



From evaluation to remediation, we can give you a more in-depth insight into your well.

Monitoring oil and gas wells requires state of the art sensing technologies. Fiber optic has become an increasing part of surveillance in the industry, which has been driven by technological enhancements and greater knowledge of what it can do.

Our Distributed Fiber Optic Sensing (DFOS) gives us the capability to monitor your entire well. It enables you to observe dynamic behaviors in the well, giving you a more accurate diagnosis of your well and reservoir issues.

We work to extend your wells' lifespan while reducing time and costs.



**Contact:**

[wellintervention@exprogroup.com](mailto:wellintervention@exprogroup.com)

**or visit:**

[www.exprogroup.com/products-services/well-intervention/well-technology/distributed-fiber-optic-sense](http://www.exprogroup.com/products-services/well-intervention/well-technology/distributed-fiber-optic-sense)

## Key applications

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

## Features and benefits

- Fiber is thin, low cost and is resistant to hostile environments
- Well life extension
- Restoration of production
- Monitor dynamic behavior
- Rapid processing and interpretation
- Enables on-site decision making in house
- Immune to EM effects
- Ideal for HP/HT applications
- Ease of use
- Fast processing
- Gives a clear picture of what is happening and allows you to react instantly

# Complete investigative solution using Distributed Fiber Optic Sensing (DFOS) for your wells

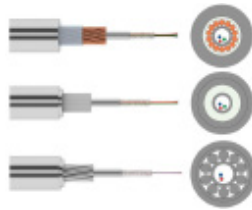
Integrated DFOS intervention, data acquisition and interpretation from a global service company.

### Standard slickline

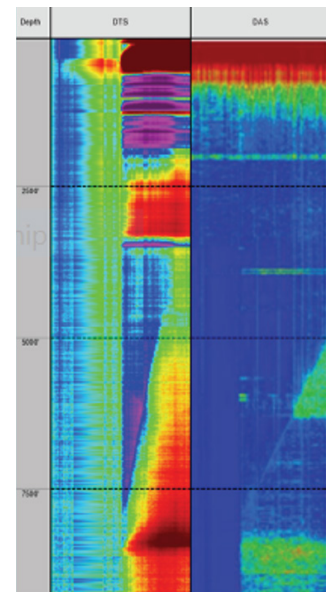
- Same crew - same rig-up
- Single run
- Deeper insights for well performance & integrity issues



### Fiber enabled slickline



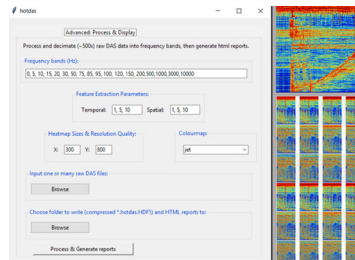
### Log the whole wellbore at the same time



### Interrogation box



Our unparalleled user-friendly software enables you to intelligently view your well's data

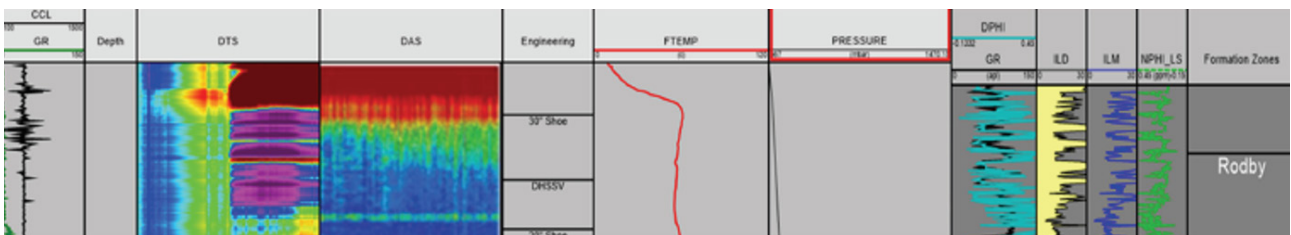


Results integrated with other well information to provide a powerful surveillance capability in one view

Combines with conventional slickline memory logging tools



Reporting within hours allowing operational decision making on-site



## Specifications

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Design details		
FIMT diameter	0.071" / 0.55"	1.8 / 1.4 mm
Protection tube outer diameter	0.157"	4.0 mm
Protection tube total wall thickness	0.020"	0.5 mm
Cable weight	0.042 lb/ft	62 kg / km
FIMT optical fibers (number x type)	2 x SM1250 (10.4 / 125) HT or CHT	

Operating parameters		
Operating temperature	-40°F to 300°F	-40°C to 150°C
Rated tensile strength	1,300 lb	5,8 kN
Maximum operating tension	800 lb	3,5 kN
Rated collapse pressure of protection tube	17,300 psi	1195 bar
Minimum bending radius without tensile load	3.1"	80 mm
Minimum sheave diameter for maximum operating tension	11.8"	300 mm

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