

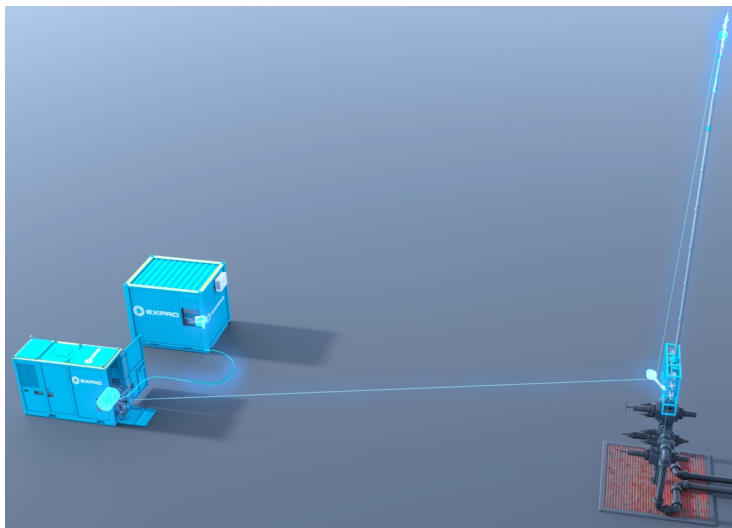
Distributed Fiber Optic Sensing (DFOS) Intervention

A new era in well surveillance

From **deployment** through **evaluation** and **assurance**, Expro delivers complete well surveillance by performing a DFOS intervention into your well

Surveillance is key to successful well and reservoir management and requires state of the art sensing technologies. Fiber optic sensing technology has become an increasing part of surveillance in the industry, driven by technological and data processing enhancements and greater knowledge of what it can do.

DFOS Intervention features a straightforward thru-tubing deployment with a Fiber Optic enabled Slickline or E-line cable. This enables continuous and distributed acquisition of temperature and acoustic data along the length of the well under surveillance.



The multiple and unique means of DFOS data processing utilized by Expro, including high definition eXDTs temperature processing, enhances the accuracy of fluid movement tracking and corresponding velocities. This enables analysis and interpretation of dynamic events within the well to a higher degree of confidence compared to other approaches. As a result, a better understanding of subsurface well performance and well integrity issues is gained.

Quick-look results are delivered within hours of the survey, this enables high quality data driven decisions to be made to assure well production and well integrity.

Key applications

- Gas lift surveillance and optimization
- Zonal contribution assessment
- Injectivity surveillance
- Pre-abandonment surveys
- Casing and completion integrity assurance
- Overburden assessment
- Behind casing flow detection
- Leak detection

Features and benefits

- **Deployment**
 - Operationally efficient thru-tubing deployment using a fiber optic enabled Slickline or E-Line cable
 - The cable also enables simultaneous deployment of logging tools during the DFOS survey, enabling efficient gathering of complementary data
 - Multi-drum intervention unit enables remediation activities to take place after the DFOS survey
 - DFOS system components can be integrated with existing well intervention packages for a rapid deployment capability
- **Evaluation**
 - Rapid data evaluation supported by on-site data processing and our global team of DFOS analysts
 - Quick look results are delivered within hours of the survey
- **Assurance**
 - Data driven decision making enables assurance of well production and well integrity

Distributed Fiber Optic Sensing (DFOS) Intervention

Straightforward deployment

- Small footprint crew
- Straightforward rig-up

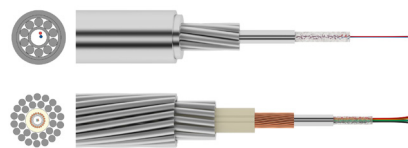


DAS and DTS acquisition units

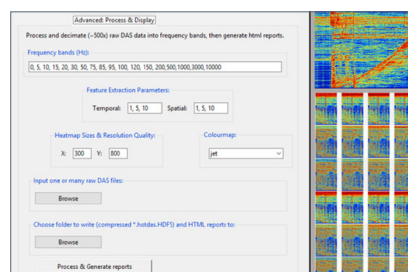


Fiber optic enabled slickline or E-line cable

- Cable can be used to deploy other logging tools and / or be tracted into high deviation sections

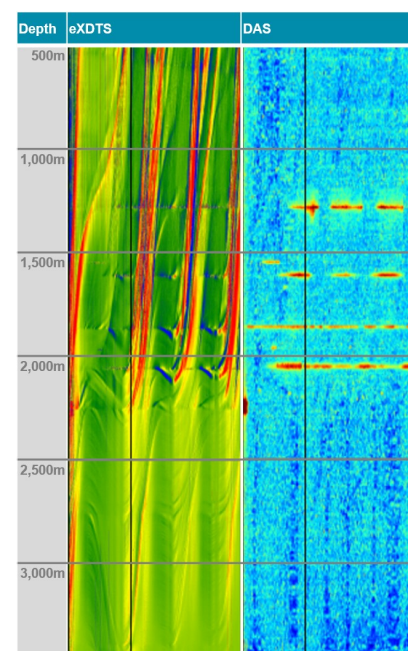


DFOS eXtract and eXDTs processing



Log the entire well simultaneously

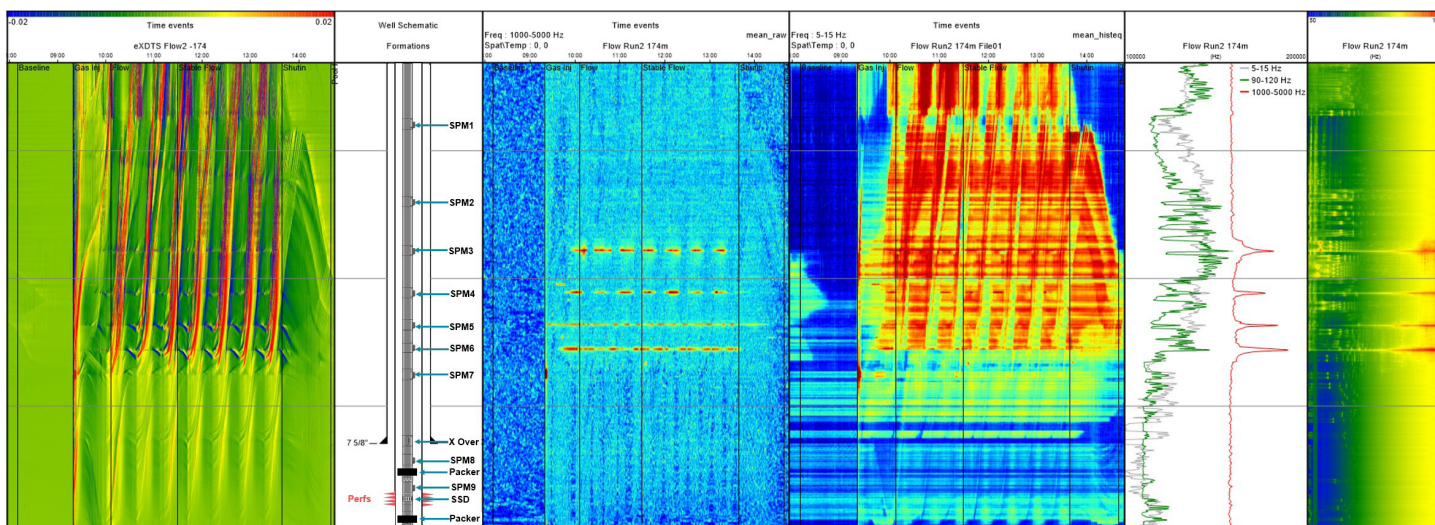
- Enables Complete Well Surveillance



Quick-look results are delivered within hours of the survey to enable data driven decision making



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



The DFOS Intervention service is complimented by a range of solutions that can unlock production, assure integrity and extend the life of your assets.

Find out more:

wellintervention@expro.com

or visit:

expro.com/products-services/well-intervention/cased-hole-intervention/distributed-fibre-optic-sense

