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24–25TH MARCH,
ABERDEEN

FIBER-OPTIC SENSING FOR FIELD DEVELOPMENT
ASSET INTEGRITY & OPTIMIZATION WORKSHOP

CONFERENCE PROGRAMME

24–25TH MARCH, ABERDEEN

Fiber-Optic Sensing for Field Development

Asset Integrity & Optimization Workshop

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Distributed Fiber-Optic Sensing (DFOS) systems now provide comprehensive downhole monitoring for production allocation, injection conformance, stimulation effectiveness, time-lapse seismic measurements, and well integrity protection. Recent advances in fibers, cables, sensors, deployment methods, and data processing have delivered superior quantitative monitoring results, with growing applications in low-carbon energy and storage projects. These improvements create value from early development through full asset lifetime.

This workshop addresses fiber-optic monitoring advances for optimizing reservoir and field operations through field case studies. It will interest professionals in reservoir engineering, production engineering, well engineering, geology, and geophysics.

Booking Information

<p>MEMBERS</p> <p>£400 +VAT BOTH DAYS</p>	<p>NON-MEMBERS</p> <p>£500 +VAT BOTH DAYS</p>	<p>STUDENTS, UNEMPLOYED, RETIRED</p> <p>£100 +VAT BOTH DAYS</p>
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CHAIRPERSONS

CHAIR	Steven Mathias, Interpretive Software
CO-CHAIR	Dennis Dria, Myden Energy Consulting
CO-CHAIR	Richard Tøndel, Equinor
CO-CHAIR	Michael Webster, Expro

PROGRAMME COMMITTEE

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Samantha Grandi, Shell
Mikko Jaaskelainen, Halliburton
Pierpaolo Marchesini, bp
Jane Mason, ADNOC
Euan Murdoch, Aramco
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Brian Seabrook, ExxonMobil
Sam Gorgi, Consultant

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Call +44(1224) 646311

MONDAY, 23 MARCH - EVENING

18:00–19:30 Welcome Reception

TUESDAY, 24 MARCH - MORNING

07:30–08:00 Registration Check-in

08:00–08:15 Chairperson's Welcome and Introduction

08:15–09:00 The untapped potential of Fiber Optic Monitoring in the Upstream

James T. Ritchie Vice President of
Upstream Technology, ExxonMobil

09:00–10:30 **Session 1: CCS and New Energies DFOS Applications**

Fiber optic sensing is emerging as a pivotal enabler for CCS projects and the broader energy transition. This session will explore how various distributed fiber optic measurements can be leveraged to monitor CO₂ injection, plume migration, caprock integrity, and long-term storage security. Beyond CCS, we welcome contributions dealing in hydrogen storage, geothermal operations, and renewable integration, where fiber optics provides real-time, scalable surveillance in challenging environments.

CHAIRS
Mikko Jaaskelainen, Halliburton and
Jane Mason, ADNOC

Presentation 1 New Energies DFOS Applications: From Oil & Gas Upstream to Energy Diversification

Lena Urmantseva, AP Sensing

Presentation 2 Geothermal Case study

Vasiliy Skutin, Expro

Presentation 3 DAS VSP Data from Well Tubing Versus Well Casing in CO₂ Injector and Monitor Well

Oscar Barrios-Lopez, Halliburton

10:30–11:00 **Networking & Exhibition**

11:00–12:30 **Session 2: Production and Injection Monitoring: What value does Fiber bring?**

Production and injection has been measured with conventional sensors for decades. What added value does fiber bring? What information can fiber contribute that cannot be achieved by conventional sensors? This session explores fibers unique contribution and value to production and injection monitoring.

CHAIRS
Pierpaolo Marchesini, bp and
Mike Webster, Expro

Presentation 1 Insights into CO₂ Injection-Induced Flow Mechanisms from the Project Poseidon Injection Test with Distributed Acoustic Sensing

Aurelien Cherubini, FEBUS Optics

TUESDAY, 24 MARCH - AFTERNOON

Presentation 2	DTS Value in Gas Injection Wells	Fuad Atakishiyev , bp
Presentation 3	Integrated DAS and DTS for Production and Injection Monitoring: Understanding Dynamic Fluid Behavior Across the Full Wellbore	Erick Jimenez , Silixa
12:30–13:30	Lunch	
13:30–15:00	<p>Session 3: Well Integrity; Recent deployments of DFOS to address, identify, diagnose or forecast all integrity issues</p> <p>This session presents deployments of DFOS technologies or analysis of data that has been used to diagnose potential well integrity issues and ideally optimize a responses to address any identified causes or mitigate potential risks.</p>	<p>CHAIRS Euan Murdoch, Aramco and Mahmoud Farhadiroushan, Silixa</p>
Presentation 1	Enhancing Well Integrity with Disposable Fiber Optic Systems	Andrew Garioch , WellSense
Presentation 2	In-wellbore & behind-casing DTS in CO2 Injection wells	Mehdi Zaidouni , LSU
Presentation 3	Examples of in-well applications based on DTS data	Kevin Constable , Equinor
15:00–15:30	Networking & Exhibition	
15:30–17:00	<p>Session 4: Emerging and Enabling Technology Advancements</p> <p>The growth of Distributed Fiber-Optic Sensing (DFOS) has been significantly influenced by new and emerging technologies which have broadened its applications and enhanced its effectiveness. The intersection of advanced materials and hardware, data analytics, and IoT technologies is driving the evolution of DFOS, making it more versatile and indispensable across various applications, from energy production to environmental conservation. This session is presenting some of the latest developments in this domain.</p>	<p>CHAIRS Hilde Nakstad, ASN and Dennis Dria, Myden Energy Consulting</p>
Presentation 1	Enabling Reliable Fiber-Optic Connectivity in Subsea Completions Using an Opto-Electric Wetmate System	Dmitry Kortukov , SLB
Presentation 2	Fiber Optic Sensors for Distributed Sensing of Electromagnetic Parameters	Anbo Wang , Sentek Instrument
Presentation 3	Field validation of 3-C Optical seismic sensing array in a borehole deployment	Jakob Haldorsen , MagiQ Technologies
18:30–20:30	Networking - Reception/Dinner	

WEDNESDAY 25 MARCH - MORNING

07:30–09:30

Session 5: Beyond the wiggles: DFOS for geophysical applications

Distributed Fiber Optic Sensing (DFOS) is rapidly transforming geophysical workflows—from borehole to surface and hybrid survey geometries, from conventional seismic measurements to advanced reservoir and fluid properties. The technology is progressing from interpreting wiggles to quantifying pressure and deformation, and from manual data analysis to scalable automation.

As our understanding of DFOS deepens, we now focus on extracting attributes, performing inversions, and integrating fiber optic data with other geoscience datasets to enhance subsurface characterization and reduce uncertainty. Equally critical are innovations in hardware and instrumentation—such as optimized cable designs, interrogator units tailored for seismic acquisition, and improved coupling methods—that underpin reliable data acquisition and broaden DFOS applicability.

This session invites contributions that showcase innovative workflows for DFOS data processing or interpretation, demonstrate its value in integrating geosciences for reservoir monitoring, management, and optimization, or present advances in hardware that enable robust and scalable deployment.

CHAIRS

Samantha Grandi, Shell and
P.F. Roux, Baker Hughes

Presentation 1

Knowledge-sharing on use of DFOS technology for induced seismicity monitoring

Estelle Rebel, TotalEnergies

Presentation 2

Smart interrogation for 4D DAS reservoir monitoring

Per Eivind Dhelie, AkerBP

Presentation 3

Reflection Imaging and Full Waveform Inversion of Seabed DAS Data: Insights from the Ekofisk PRM

James Richards, Viridien

Presentation 4

Acquisition of a Seabed DAS trial over Deepwater Subsalt Reservoirs

Samantha Grandi, Shell

09:30–10:00

Networking & Coffee

WEDNESDAY 25 MARCH - MORNING

10:00–12:00

Session 6: Interpretation & AI Applications

With sometimes TB of data to process and complex interpretation scenarios to validate, the task can quickly be daunting to provide timely, actionable insights based on distributed sensing. This session focuses on the tools and techniques recently developed (or revisited) to facilitate this process. Presenters will be encouraged to share the specific challenges associated to their interpretation field (e.g., geophysics, flow profiling, wellbore integrity) and explain how their methodology aims at addressing them, supported by examples of field applications. The goal is to foster the exchange of lessons learned and to encourage the audience to define best practices and new areas of development jointly, in an intimate and interactive environment.

CHAIRS

Pierre Ramondenc, SLB and
Sam Gorgi, Consultant

Presentation 1

From Raw to Insight: Unlocking Value with a Fiber Optic Data Platform

**Stefan Dümmer &
Johan-Fredrik Synnevåg**, Equinor

Presentation 2

Fiber Optic at the center of a multi-measurand Ecosystem: examples of deployments in various geographies and platforms

Theo Cuny, SLB

Presentation 3

Distributed Acoustic Sensing and Machine Learning: Challenges, Constraints, and SSL-Based Mitigation Strategies.

Camille Huynh, FEBUS Optics

Presentation 4

Offshore Success - Calibrated Temperature from Distributed Strain Sensing (DSS)

Sam Buist, bp

12:00–13:00

Lunch



WEDNESDAY 25 MARCH - AFTERNOON

13:00–14:30	<p>Session 7: Interventions & Stimulation</p> <p>The continuous drive to lower intervention costs, increase ultimate recovery and reduce emissions is fostering the development of novel, more efficient intervention and stimulation workflows. Reduce the number of runs, optimize well spacing, make decisions on the fly with 24/7 intelligent monitoring and computation at the edge, etc. This session aims at illustrating how DFO enables and underpins these new solutions.</p>	<p>CHAIRS Brian Seabrook, ExxonMobil and Isabelle Pellegrini, Archer</p>
Presentation 1	Development and Field Trial of a Single Use Bare Optical Fiber Conveyance System for Horizontal Wells	Annabel Green , WellSense
Presentation 2	Estimating Slippage Conditions Affecting Signal Quality in Retrievable Fiber Optic Sensing Cables for Wells of Arbitrary Trajectory	Michel LeBlanc , Halliburton
Presentation 3	Continuous DAS & DTS Monitoring for Complex Leak Detection	Ehsan Nikjoo , Weatherford
14:30–15:00	Networking & Coffee	
15:00–16:30	<p>Session 8: Project Valuation Realizing Value from Fiber Optic Sensing</p> <p>Distributed Optical Sensing (DFOS) technologies are becoming more widely deployed, and in parallel, general project valuation is increasingly challenged. This session will explore how value can be addressed, in order to justify cost and operational complexity, as well as the technical and organizational enablers to realize value from DFOS.</p>	<p>CHAIRS Richard Tøndel, Equinor and Steven Mathias, Interpretive Software</p>
Presentation 1	Seeing Beyond the Wellbore: Unlocking Reservoir Insight with 3D DAS VSP Imaging.	Sam Buist , bp
Presentation 2	Detecting Gas Lift Valve Chattering and Glass Plug Breakage with Fiber Optics	Salvador Ruz & Alireza Roostaei , Equinor
Presentation 3	Beyond Self-Noise: Characterizing the performance of Engineered Single-Mode Fibers per SEAFOM MSP-02 for Subsea DAS Applications	
16:30–16:35	Chairperson's closing remarks	

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WORKSHOP FORMAT

Workshops maximize the exchange of ideas among attendees and presenters through brief technical presentations followed by extended Q&A periods. Focused topics attract an informed audience eager to discuss issues critical to advancing both technology and best practices. Many of the presentations are in the form of case studies, highlighting engineering achievements and lessons learned. In order to stimulate frank discussion, no proceedings are published and members of the press are not invited to attend

