

Iraq Well Logging Fiber Optic Technology



Overview

This paper proposes a reflective fiber-optic sensor network for multiparameter state monitoring in oil and gas wells. The network is composed of a ground-based sensing signal demodulation system, a fault detection module, and an underground optical fiber sensing topology. In June, CNLC Iraq Branch, in collaboration with CNLC Huabei Branch, successfully completed the first fully autonomous Coiled Tubing Fiber Optic Logging operation at Well AD-XXX in Iraq's Ahdab Oilfield. This operation introduced an innovative solution to a long-standing technical. This study presents a comparative analysis between these conventional approaches and the latest distributed fiber-optic sensing (DFOS) technologies. Specifically, we highlight the diagnostic power of distributed temperature sensing (DTS) and distributed acoustic sensing (DAS) in two real-world. FOWell, a distributed fiber optic sensing well monitoring solution, enables for real-time detection of leaks or deformations in the tubing or casing structure. Facilitating the quick implementation of solutions, it minimizes the environmental and production impact of well issues.

Article Content

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Common well integrity problems where fiber optics can be effectively deployed include identifying sources of sustained annulus pressure, confirming packer integrity, pinpointing leak locations, and

Fiber-Optic Sensing Technology Providing Well, Reservoir ...

Technology Update Fiber-optic sensing is known in the oil and gas industry as a technology that allows continuous temperature profiling along entire well paths. However, surveillance

Application of Fiber Optics for Completion Design Optimization: A ...

This study investigates the application of fiber optic technology to optimize completion design in a hydraulic fracture stimulation for Marcellus Shale Reservoir. With a focus on improving

Fiber Optic Technology Allows Real-Time Production Logging Well ...

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The Optic Oil Field: Deployment and Application of Permanent In-well ...

This paper presents several recent deployments of in-well fiber optic monitoring systems, including descriptions of the downhole sensor assemblies, installations, and measured data.

News and Insights

In June, CNLC Iraq Branch, in collaboration with CNLC Huabei Branch, successfully completed the first fully autonomous Coiled Tubing Fiber Optic Logging operation at Well AD-XXX in

Pioneering Well Logging: The Role of Fiber Optics in Modern

These results demonstrate that fiber optics represents a paradigm shift in well integrity assessment, transitioning from interpretive and reactive methodologies to real-time, high-resolution, and proactive

Distributed Fiber

1 Introduction Fiber-optic sensing technology has long been used in single-well hydraulic fracturing analysis, and its focus has been on the advantages of distributed temperature sensing (DTS) and

Optiq Fiber-Optic Solutions | SLB

The use of fiber-optic sensing and its capabilities are being maximized now more than ever within the energy industry. Traditional measurements typically rely on discrete sensors that measure at certain

Distributed Fiber Optic Vibration Signal Logging Well Production Fluid ...

Distributed fiber optic vibration signal logging is a technology that uses fiber optics to sense the vibration signals returned from different formations or well walls to analyze the surrounding

Pioneering Well Logging: The Role of Fiber Optics in Modern

The integration of fiber-optic sensing not only delivered superior diagnostic clarity but also reduced the diagnostic timeline by over 85%. These results demonstrate that fiber optics represents

In June, CNLC Iraq Branch, in collaboration with CNLC Huabei

This operation introduced an innovative solution to a long-standing technical challenge: performing production logging in horizontal wells, where conventional wireline PLT tools were not...

Real-time fiber-optic interpretation and analysis

Real-time visibility without the wait Interpret and analyze fiber-optic data as it's captured, using edge automation that eliminates delays and manual

Application of fiber optic sensing technology in oil and gas field ...

<p>Distributed fiber optic sensing technology holds unparalleled advantages in oil and gas development this paper, we delve into the fundamental principles of distributed fiber optic sensing

Well and reservoir surveillance | FOWell | FEBUS Optics

Our FOWell solution is a Measurement, Monitoring, and Verification (MMV) technology based on distributed fiber optic sensing, that ensures real-time and continuous monitoring of reservoir integrity

Application of Fiber Optics for Completion Design Optimization: A ...

The methodology comprises a comprehensive analysis of completion and stimulation reports, fiber optics, microseismic data, and well logs.

Application of fiber optics in oil and gas field development ...

Keywords Fiber optics · Oil eld development · Distributed acoustic sensing · Distributed temperature sensing · Distributed strain sensing Introduction Background of the study The conventional approach

Reflective optical fiber sensing network for monitoring in well logging

This paper proposes a reflective fiber-optic sensor network for multiparameter state monitoring in oil and gas wells. The network is composed of a ground-based sensing signal

Production logging via coiled tubing fiber optic ...

According to the optical fiber production profile testing technology with continuous tubing as the carrier, the main production layer and the bottom hole liquid condition can be found clearly under the ultra

Application of Coiled Tubing Distributed Optical Fiber Temperature ...

Combined with the casing collar magnetic locator (CCL) and the optical fiber to calibrate the depth, the temperature difference of the whole wellbore was analyzed to determine the location

Design and Experimental Research of a Fiber-Optic Communication

Download Citation | Design and Experimental Research of a Fiber-Optic Communication Module for Well Logging | Fiber-optic transmission has been applied in oil and gas industry over the

Lessons Learned from In-well Fiber-optic DAS/DTS Deployment

Abstract. Fiber-optic sensing technology has gradually become one of the pervasive tools in the monitoring and surveillance toolkit for reservoir and production engineers. Traditionally,

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