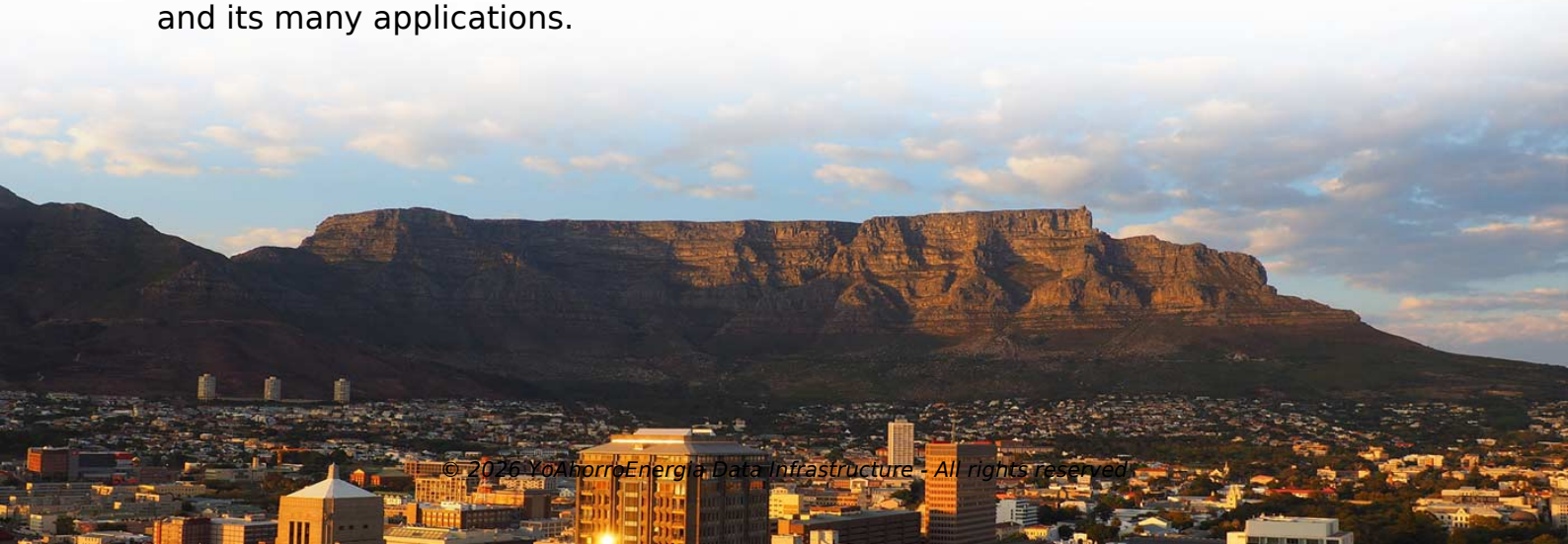
Uganda Well Logging Fiber Optic System

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. Specifically, we highlight the diagnostic power of distributed temperature sensing (DTS) and distributed acoustic sensing (DAS) in two real-world. This study presents a comparative analysis between these conventional approaches and the latest distributed fiber-optic sensing (DFOS) technologies. The FEBUS Optics interrogators have been developed and optimized to meet all the challenges of well monitoring and its many applications.



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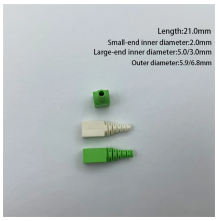


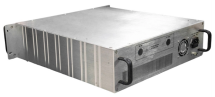
This paper proposes a reflective fiber-optic sensor network for multiparameter state monitoring in oil and gas wells. The network is composed of a ground-based sensing signal ...

An ultralow stretch armored cable containing 3 optical fibeRs and 8 electrical conductors has been developed for use in oil well logging operations. A mating cablehead termination, optical transmitter ...

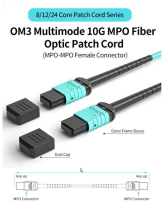
The distributed fiber optic vibration signal data extracted from the fiber optic sensor for injection well A were selected for processing, and the well was ...

This work not only validates fiber-optic sensing as a high-resolution diagnostic platform but demonstrates its readiness as an intervention enabler, offering a scalable methodology for complex ...

A complete well integrity monitoring system is created by combining the FEBUS A1 (DAS), the FEBUS T1-R (DTS) and the FEBUS G1-R (DSTS). Our solution offers highly sensitive devices, distributed ...



The distributed fiber optic vibration signal data extracted from the fiber optic sensor for injection well A were selected for processing, and the well was logged for the purpose of detecting ...



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 ...

The distributed fiber-optic sensors have proven their ability to provide significantly valuable information from drilling through the completion, production, and intervention stages of a well...

In this study, we installed two fiber optic cables with different designs into a new well, a soft-flat cable and a stainless-steel cable, for distributed fiber optic sensing in cementing and water ...

After an assessment of the project requirements, Weatherford experts proposed an in-country, fiber optic monitoring system with a proven record of reliability and backed by data from a gas well completion ...

Contact Us

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