

# Botswana High-Temperature Logging Optical Cable Principle



## Overview

This paper reviews the sensing principle, structural design, and temperature measurement performance of fiber-optic high-temperature sensors, as well as recent significant progress in the transition of sensing solutions from glass to crystal fiber. Due to the influence of reservoir geological features and cementing quality, wellbore leakage and damage often occur. The traditional packer pressure test has many problems, such as complicated production process, long production period and low accuracy of leakage location, which have seriously. DTS allows the inference of an optical fiber's temperature at decimeter to meter resolution, depending on the design of the interrogator. The cables marked with Dry; They are a series of cables in which the typical water blocking the intermediate tubes (gelatin, water swelling tape or powder) is replaced with a solid foamed thermoplastic elastomer. 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 formation characteristics or downhole events, which has the advantages of strong real-time monitoring. Paper presented at the SPE Offshore Europe Conference & Exhibition, Aberdeen, Scotland, UK,

September 2023. Distributed Fiber Optic Sensing (DFOS) allowed us to continuously gather flow profile information from a high-temperature high-rate gas well. The objective of this case study is to. le length.

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The below plots show the separated downgoing and upgoing wavefields from a stack of 89 zero offset source shots taken with the well shut-in. Data acquisition occurred simultaneously at all depths ...



Because of dispersion of light along fiber optics, finite time for lasers to turn on and off, and limitations of optical detectors and their amplifiers to respond to changing signals, reported DTS temperatures are ...



Distributed temperature sensing systems (DTS) are optoelectronic devices which measure temperatures by means of optical fibres functioning as linear sensors. Temperatures are recorded along the optical ...



This paper reviews the sensing principle, structural design, and temperature measurement performance of fiber-optic high-temperature sensors, as well as recent significant progress in the transition of ...



Distributed fiber optic sensing technology is an important part of the fiber optic sensing field, which can continuously sense the spatial distribution and change information of physical ...



Abstract: Fiber optic cables have the advantages of high temperature resistance, high pressure resistance, corrosion resistance, and high accuracy in measuring temperature DTS data. They are ...



The range of cables for direct buried installation includes all our four basic designs: concentric core, grooved core tape, DryTech and tape in loose tubes. The cables are reinforced with corrugated steel ...



The distributed optical fiber temperature sensing (DTS) system is used to collect the high frequency temperature through the coiled tubing downhole optical fiber.



Distributed fiber optic sensing technology is an important part of the fiber optic sensing field, which can continuously sense the spatial distribution and ...



The objective of this case study is to demonstrate that Distributed Temperature and Distributed Acoustic data, thermal inversion modelling can be used to produce a Production Flow ...



In this study, we will investigate different failure patterns occurring on the well completion, as the production tubing or packers. On the first hand, we will see that the combination of DAS and...

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