

# Application of Downhole Temperature Measurement Optical Cable in the Philippines



## Overview

A fiber-optic cable was permanently installed along the 18 5/8-in. casing and the 21-in.-hole section of a geothermal well. During the cementing operations, the temperature was continuously recorded using distributed temperature sen. A fiber-optic cable was permanently installed along the 18 5/8-in. casing and the 21-in.-hole section of a geothermal well. During the cementing operations, the temperature was continuously recorded using distributed temperature sensing (DTS) technology to monitor the cement placement. During the drilling and injection testing phases carried out in. The DTS data acquired during a cementing operation enabled evaluation of the pumping and setting stages, showing an interval with a different thermal signature, as depicted in Figure 2. Temperature data indicate nonoptimal cement bonding. The same interval correlates with a higher CBL amplitude, which also points to nonoptimal cement bonding. This. Instead of using the traditional memory gauge tools, which require days to retrieve the data from downhole memory gauges, and a jet pump as an artificial lift system, which implies that the

process data and evaluation take a long time, an operator in South America realized that this static process of collecting the data was unable to reveal unexpect. The drilling and completion of horizontal wells allows to increase the reservoir contact and thus achieve a productivity increase. This increase in horizontal length also allows the contact with heterogeneous formation, and varying reservoir properties, such as permeability and pressure, among others. Most permeable layers, under the same pressure. An operator in Mexico used the distributed temperature sensing (DTS) run with coil tubing to record temperature profiles along the carbonate reservoir being stimulated to reduce near-wellbore damage. To support the DTS system, a modular BHA containing pressure, temperature, and depth correlation sensors was deployed. In cases where high permeable c.

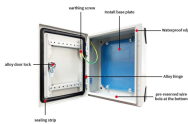
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Our proven fiber optics technologies also support point measurement pressure/temperature gauges to monitor downhole pressure and temperature changes for ESP monitoring and sub-cool optimization.



Explore how fiber optic sensing is transforming downhole monitoring for safer, more efficient oil and gas operations.



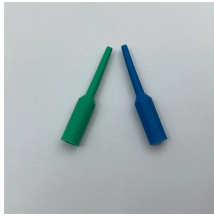
Not only can DTS fiber optic cable be deployed over a long distance but it also provides a high resolution profile of the area as well as accurate and precise temperature measurement over that ...



Fiber optic instrumentation designed for downhole monitoring and mining projects. To meet the challenges of demanding conditions related to geotechnical applications, Opsens Solutions designed ...



Monitoring systems include custom fiber optic cables suitable for any downhole environment; along with cable protection and a variety of temporary and permanent surface data acquisition systems that ...



Utilizing Multi-mode Fiber Optic cables, Distributed Temperature Sensing (DTS) provides quality downhole temperature data and is applicable in a wide variety of applications.



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



Permanent downhole fiber-optic cables are critical infrastructure in wellbore monitoring systems, ensuring reliable transmission of data for applications such as distributed temperature, acoustic, and ...



The field cases presented showed some applications of the fiber optic monitoring system, which helped identify situations that otherwise would not be possible to detect.



A carbon-coated and bellow-packaged optical fiber sensor for high pressure and high temperature monitoring in downhole applications is developed and successfully field-applied in an oil ...

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