

Application of optical fiber cable for downhole temperature measurement in North Africa

Preview

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 unexpec. 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.

Abstract We report on the fabrication of a high pressure extrinsic FabryâEUR"Perot interferometric (EFPI) fiber optic sensor for downhole applications by using a mechanical transducer.

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

Equipment: optical fibers, sensor cables **Deployment methods:** permanent, temporary/wireline **Applications, case studies** Distributed temperature sensing (DTS) Borehole and formation

Download Citation | Downhole temperatures from optical fiber | The development of fiber-optic technology has helped create interest in Distributed temperature sensing (DTS) applications. A

Utilizing Multi-mode Fiber Optic cables, Distributed Temperature Sensing (DTS) provides quality downhole

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temperature data and is applicable in a

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.

Fiber optic temperature sensors are now vital in oil and gas, offering continuous, accurate, and safe temperature data from wells to pipelines. Their EMI immunity, long-range

Monitoring systems include custom fiber optic cables suitable for any downhole environment; along with cable protection and a variety of temporary and

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FIBER OPTICS: Downhole Fiber-Optic Monitoring: An Evolving Technology It has been an impressive comeback for a technology that once

Recent challenges of the petroleum industry underscore the need to optimize oil and gas production. With the global demand for petroleum resources constantly increasing with an increasing

Distributed Temperature Sensing (DTS) Distributed Temperature Sensing (DTS) utilizes multi-mode Fiber Optic cables to measure distributed

Optiq solutions can be seamlessly integrated with any existing fiber-optic infrastructure (such as in pipeline integrity monitoring) or by using our unique temporary or permanent fiber-optic deployments.

In this study, fiber optic Bragg grating (FBG) measurement technology is utilized applied in an attempt to replace more expensive electronic sensors and to obtain more accurate downhole

High-Temperature Downhole Cable As the leading supplier of downhole fiber optic cable used in the oil and gas industry, AFL provides the largest portfolio of downhole products on the market. AFL's

Fiber Optics It has been an impressive comeback for a technology that once stood on the brink of failure. The upstream oil and gas industry has largely resolved crippling technical challenges

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