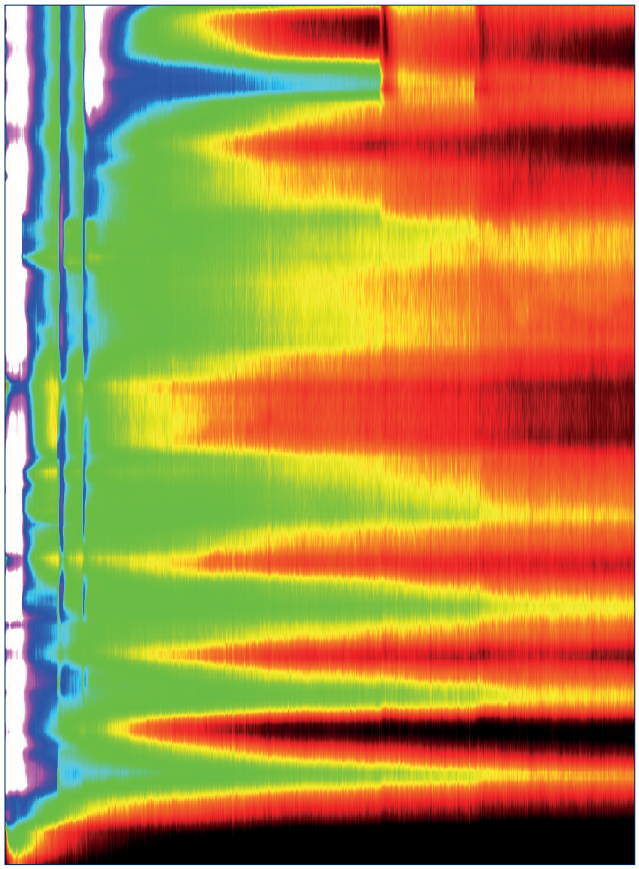
GR Energy Services

Diagnostix Downhole Services

Fiber Optic Intervention Answers



Post-injection DTS warmback survey used to establish a relative injectivity profile.

Answers from downhole measurements made with fiber optic cables deployed with traditional wireline- or tractor-conveyed cement bond, corrosion and production logging tools can dramatically improve drilling, completion and production decisions.

GR Energy Services offers a range of efficient and cost-effective Diagnostix* services by combining multiple optical fibers and a copper wire electrical conductor in the same armored cable. The electrical conductor enables the cable to be tractor deployed in deviated and horizontal wellbores, and allows for the real-time acquisition from traditional logging sensors. The optical fibers enable distributed temperature sensing (DTS) and distributed acoustic sensing (DAS) surveys to be conducted. Unlike conventional wireline measurements, DTS/DAS technology permits the entire wellbore to be simultaneously surveyed in real time. This unique ability allows the technology to detect and monitor downhole events that standard wireline-conveyed logging tools may not identify.

Diagnostix services include:

- Leak detection
- Well integrity monitoring
- Enhanced production logging
- Production and injection well profiling
- Artificial lift optimization
- Well interference

Rated to 300°F, the cable used to convey Diagnostix downhole services is compatible with standard wireline pressure control equipment, monoconductor cased hole and PL tools and downhole tractors.

*Mark of GR Energy Services

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