

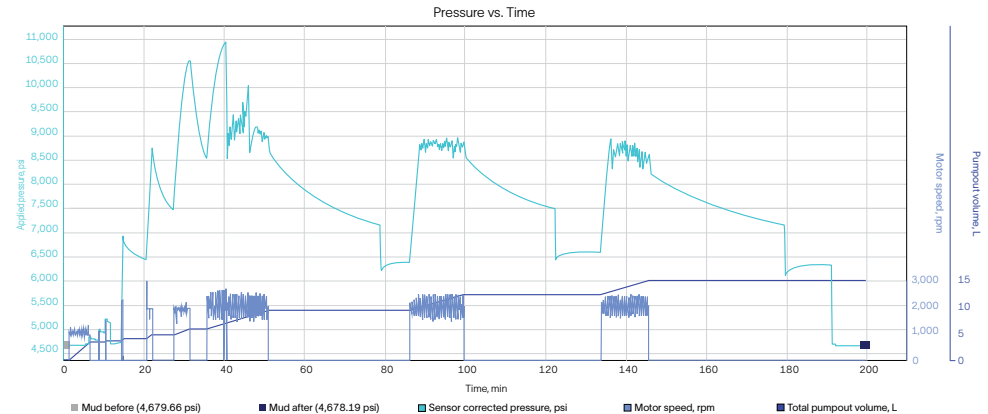
Background

Forecasting subsurface geothermal energy extraction capability requires knowledge of in situ stresses and fracture breakdown pressure. To acquire this data, SLB uses the MDT* modular formation dynamics tester for downhole stress testing. Faced with high-pressure fracturing requirements on one Northeastern US project, SLB introduced its new high-pressure dual-packer system, rated to 10,000-psi differential pressure.

Technology

MDT modular formation dynamics tester

Powerful new dual-packer system enables geothermal fracturing where previous technology was ineffective



Previous technology could not break down the formation, but the new SLB high-pressure wireline dual-packer system achieved the stress test objectives. The chart shows how the pressure was ramped up in cycles until breakdown pressure was achieved at 11,000 psi (~6,400-psi differential pressure). Successive fracture propagation and falloff cycles were performed once breakdown was achieved.

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