

Tech Report

Eastern Shelf Permian Basin

TD 10,905 ft [3,324 m]

Background

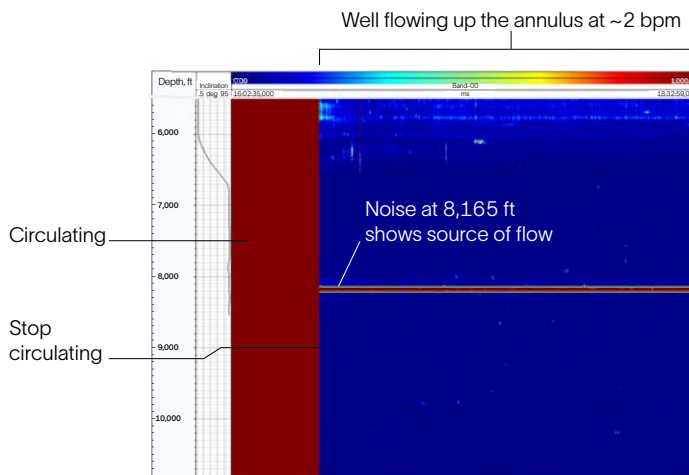
While drilling the lateral of an unconventional well in the Permian Basin, an operator observed a large inflow of water into the wellbore, impacting the mud system and raising concerns about excess water production after the well was completed.

Technology

Optiq StreamLINE™ polymer-locked fiber-optic wireline conveyance



Fiber optics identifies source of water entry



Optiq StreamLINE conveyance was pumped down the drillpipe to record a distributed acoustic sensing (DAS) and distributed temperature sensing (DTS) survey using fiber optics. A 60-ft interval in the lateral portion of the wellbore showed elevated noise levels and was identified as the source of the water flow. The surrounding interval was not completed to avoid excess water during production. This fiber-optic survey helped prevent the completion of a water zone, saving costs and improving production. The well met expectations with production volumes and water cuts in line with offset wells.