

Case study

StarTrak LWD imaging service improved production up to 20% in unconventional plays

A customer needed to acquire high-resolution images to determine perforation placement for an well being fractured between two 600-ft offset wells.

The Baker Hughes **StarTrak™ LWD imaging service**, run in memory-only mode, helped optimize production by enabling the operator to see variations in the lateral section and adjust his production stages to group rock with the same properties together and to isolate hazards.

The completion optimization plot below shows an overview of the wellbore trajectory along with the high-definition image log, and the fracture characterization. The high level

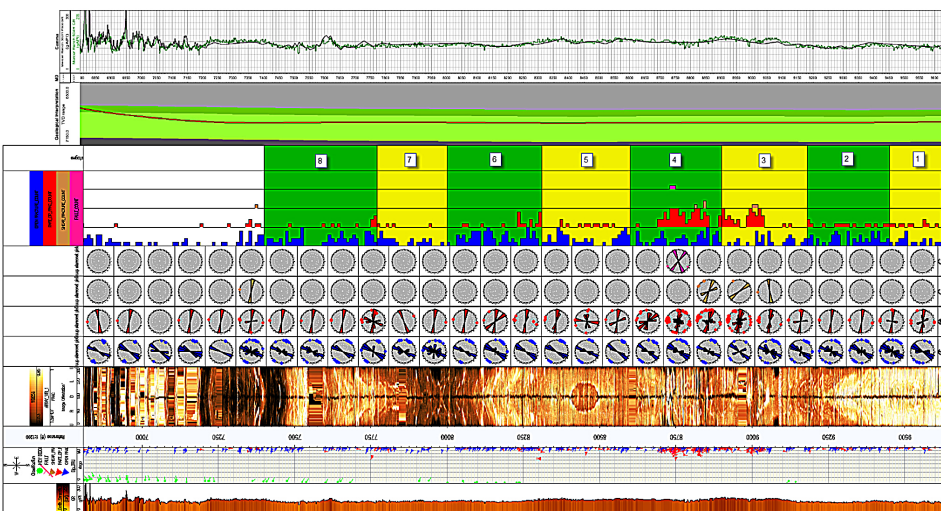
of conductive fractures (blue bars in the stage interval track) indicates that this well was drilled too close to offset wells. To access more untreated rock, a trajectory that placed the lateral deeper in the productive horizon would have been preferred. Based on the success of this operation, the customer decided to use the StarTrak service to place future unconventional wells and to optimize the completion and stimulation treatments. This method has been very effective, and provided production from acreage that would otherwise have been abandoned. The StarTrak service was used in over 300 wells and improved production by up to 20%.

Challenges

- Perform high-resolution logging-while-drilling (LWD)
- Understand and optimize production differences between wells in the same field

Results

- Provided post-well interpretation to optimize stage placement and fracture treatment
- Enabled operator to avoid nearby water zone during fracturing operations and identify other geological hazards
- Improved production by up to 20%



Completion optimization plot showing images and fracture characterization in the reservoir.