UNCONVENTIONALS

CASE STUDY

AccessFrac® Stimulation Service Allows Recovery of Stranded Reserves

SUCCESSFUL STIMULATION ENABLES OPERATOR TO REALIZE FULL PRODUCTION CAPABILITY OF LATERAL SECTION IN PROBLEM WELL

UTICA SHALE PLAY, APPALACHIAN BASIN, PENNSYLVANIA

CHALLENGE

- Operator unable to get casing to bottom in horizontal section of unconventional well, leaving approximately 1,200 feet (366 meters) of open hole below casing shoe – negatively impacting production and well's economic viability

SOLUTION

- AccessFrac® stimulation service included biodegradable diverting agent to stimulate openhole section and rescue stranded reserves

RESULTS

- Successful stimulation of openhole section
- Based on this success, Halliburton awarded additional well stimulation program

OVERVIEW

Traditionally, when problematic zonal isolation jobs occur in horizontal shale wells, customers have had to either conduct expensive remediation operations that limit the ability to effectively stimulate the repaired area, or abandon the problem section and accept the loss of production. In this case study, AccessFrac® stimulation service was deployed for a client in the Northeast US to effectively and economically remediate a problem well and recover the reserves for the client.

STRANDED PRODUCTION realized from 1,200-ft OPENHOLE SECTION

HAL110077

CHALLENGE

In the Utica shale play, XTO Energy was unable to get casing to bottom in a horizontal section of an unconventional well, leaving approximately 1,200 feet (366 meters) of open hole below the casing shoe – a situation that could possibly decrease production by 20 percent and, thus, significantly impact the economic viability of the well.

SOLUTION

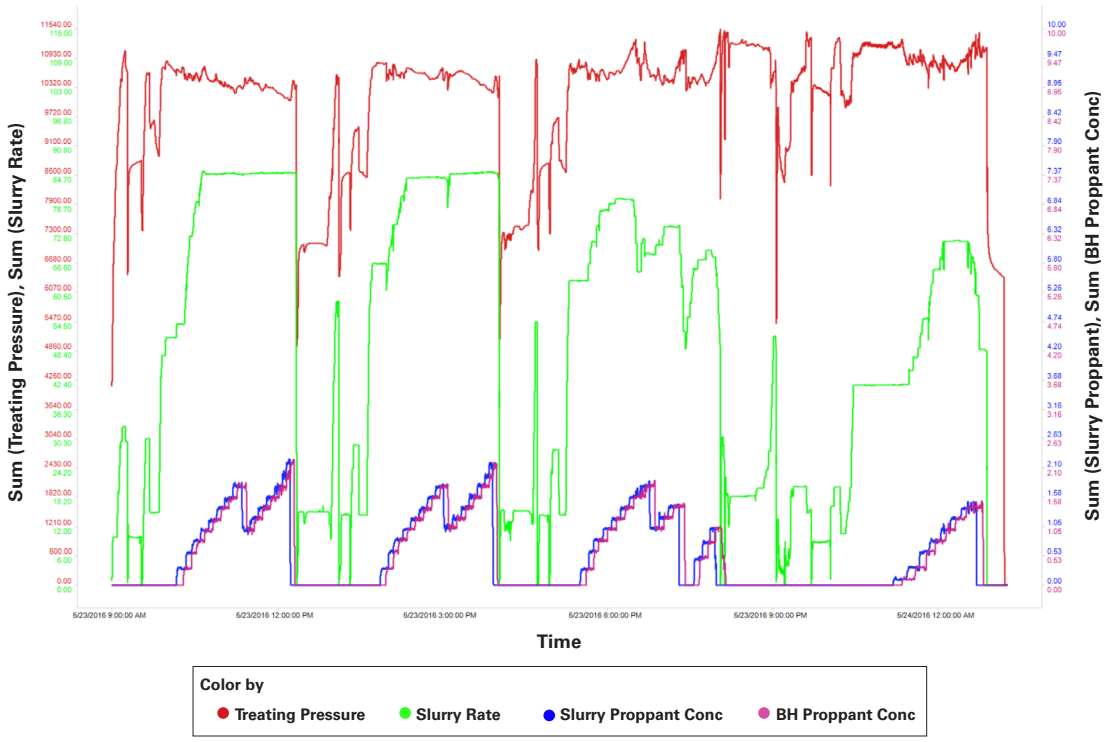
Halliburton proposed an AccessFrac® stimulation design to segment the long openhole section into four stages, to effectively stimulate the entire open lateral portion. The AccessFrac service uses a biodegradable diverting agent to effectively seal off areas of the wellbore that were receiving the treatment and to force the fluid and proppant to areas that were not being stimulated.

RESULTS

The exposed lateral section of the well was successfully stimulated with four designed stages, separated by diversion drops to allow the redistribution of fluid and proppant to new areas of the openhole section. As can be seen from the treatment charts, pressure response of each stage indicates that new rock was treated after each diversion drop effectively sealed off the previous stage's fracture initiation points.

Based on the success of this operation, the customer awarded Halliburton another "well rescue" operation where the client has been unable to reach total depth (TD) with the casing. In addition, the company awarded Halliburton another 10-well pad based on our operational and technology performance.

AccessFrac® service was able to stimulate the exposed openhole section of the wellbore and rescue stranded reserves. The operation was performed with no nonproduction time (NPT) or health, safety, or environmental (HSE) incidents.



www.halliburton.com

HALLIBURTON