KLX DISSOLVABLE FRAC PLUG OUTPERFORMS ALL COMERS IN BATTLE BETWEEN DJ BASIN DISSOLVABLES

OBJECTIVE(S)

KLX Energy Services was invited to participate in a test for an operator in the DJ Basin on how effective dissolvable plugs are to save the cost of a clean out operation after fracturing a multi stage frac. The test consists of frac'ing the well, then performing a clean out only if production was not as expected. The test included comparing the performance of the different dissolvable plugs and service providers. A total of four vendors, including KLX Energy Services, were awarded one well per vendor on a pad. The key performance indicator was to be able to set the required number of plugs in the wellbore with less than two misruns. All dissolvable plug providers were on location at the same time providing service to supervise the installation of their plugs and make running recommendations as needed. As the test progressed the other three service providers and their dissolvable plugs were dismissed after having misruns, preset issues, or not holding pressure during the frac operations. KLX Energy Services ended up completing all wells on the pad with a total of 83 plugs installed successfully.

KLX APPROACH

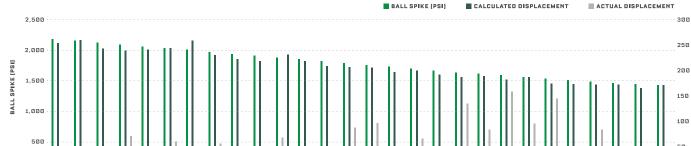
The KLX Dissolvable Frac Plug outperformed all other vendors with the plug's unique design which was able to withstand treating pressure and show all ball seat signatures during the frac operations. The job had field service supervisors on location to train wireline operators and to document all data for case history purposes. The KLX technical support group performed multiple dissolution tests as required with frac fluid provided by the operator to give the operator an estimated dissolve time. KLX also performed an acid dissolution test of a full plug to ensure the operator the ability to mitigate the concern of presetting a plug and not having to get coil on location to clean out. All data was documented proving the successful deployment of all dissolvable plugs.

VALUE TO CLIENT & FIELD RESULTS

The unique design of the KLX Dissolvable Frac Plug proved to be robust and reliable while handling pump down operations, treating pressure during frac operations, and effectively showed ball seat signature. The production levels are as expected per customer so there has not been any need for clean out. The operator was able to save the cost of drilling out plugs and get right to production. The KLX Dissolvable Frac Plug was reliable and consistent in performance; therefore, the operator not incurring any NPT or any failures during frac operations.

BALL SIGNATURE DATA

BALL SPIKE (PSI) CALCULATED DISPLACEMENT



Energy Service:

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REGION Denver-Julesburg Basin (DJ)

CASING SIZE 5-1/2" 20# (Casing ID 4.778")

BOTTOM HOLE TEMPERATURE 189°F

FLUID TYPE **Reclaimed Produced Fluid**

OF PLUGS INSTALLED 83

MAX PLUG SET DEPTH 11,871 FT

MAX LINE SPEED 499 FT/MIN

MAX PUMPDOWN RATE 14 BBL/MIN

MAX TREATING PRESSURE 8 775 PSI

NEXT LEVEL READINESS >

DISPLACE

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(BBLS