



Plug and Perf through *FracPatch*

PROBLEM

While fracturing the 1st stage of a 29 stage completion, significant pressure drops were observed indicating possible casing integrity issues. The frac was suspended and after diagnosis with caliper logs and packer trips, it was discovered multiple frac sleeves had prematurely opened for unknown reasons.

SOLUTION

- Mohawk's premium cased hole patch system *FracPatch* was deployed across the upper 9 frac sleeves to isolate the open sleeves
- These 9 frac sleeves were drilled out to 3.800 in. ID to pass the 3.5 in. OD *FracPatch* system.
- The *FracPatch* system was configured to expand and seal across various ID restrictions in the wellbore.
- Frac sleeves did not have to be milled out to full casing drift ID
- Composite frac plugs were set in the 3.259 in. patch ID and guns perforated through both strings of pipe for complete access to the formation
- With Mohawk's premium expandable connections, the expandable patch can be as long or as short as required

RESULTS

- The expandable liner was successfully deployed and expanded in one trip with no shoe drill out required, keeping the frac sleeves below free of debris, saving further clean out trips.
- The patch was successfully pressured tested to 3,500 PSI and frac'ed through
- Frac balls were dropped to the lower 20 stages while frac plugs were set in the 1,100 ft patch for plug and perf operations.

PROJECT DETAILS

Location: Kansas

Date: November 2014

Well Measured Depth: 8,782 ft

KOP: 3,800 ft

Inclination: 90°

Casing: 4-1/2 in. 11.60 lb/ft

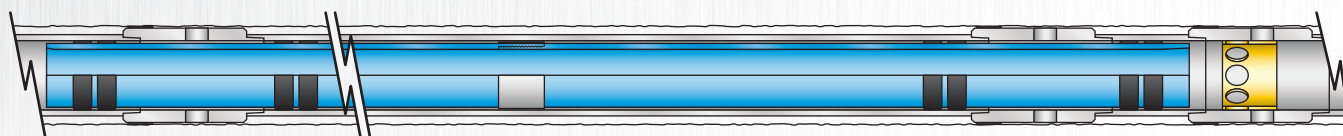
Patch Length: 1,100 ft

Installed Patch ID: 3.259 in.

Top of Patch: 5,235 ft

Bottom of Patch: 6,335 ft

EXPANDED LINER



PLUG, PERF AND FRAC

