

Endurance Test Report of the 26 # ROGUE Frac Plug Test Report # PFER_201903_06

TEST REPORT

BACKGROUND

A major national oil and gas company (NOC) in the Middle East requested to test the PetroQuip ROGUE™ for their Plug and Perf completions program. The test for the ROGUE Composite Frac Plug was to hold 10,000 psi at a temperature of 275°F. To ensure the ROGUE met and, in fact, exceeded the NOC's standards, PetroQuip conducted the 6 hour test with more cycles and higher temperatures than requested.

ENDURANCE QUALIFICATION TEST INCLUDED

The specific steps required for the test were as follows:

- Four cycles from 10,000 psi down to 5,000 psi at 300°F
- A 30 minute hold at 5,000 psi and 300°F
- Then a cycle back to 10,000 psi and hold at 300°F



TEST RESULTS

The ROGUE Composite Frac Plug successfully passed all testing parameters and at the end of the test the plug was in remarkable condition. The composite was inspected for cracking and none was visible. The slips properly embedded into the casing with no slippage.

CONCLUSION

The ROGUE design and material combination was fully validated for use at 275°F and 10,000 psi as per the customer requirements. To further prove the strength of the ROGUE Frac Plug the test was done at 300°F and 10,000 psi more than 6 hours with 4 pressure cycles in the middle of the test.

