

Case Study

Packers Plus Toe-XT Hydraulic Sleeve provides flexibility for casing integrity test

UNITED STATES, EAGLEBINE
TREX SYSTEM, TOE-XT

An operator working in the Eaglebine formation used the Packers Plus Toe-XT™ Hydraulic Sleeve to successfully pressure test its casing at a high pressure before stimulating the toe stage. This cemented hydraulic toe sleeve provided the operator with the flexibility to test the casing at a higher pressure than required for the sleeve to function, while ensuring that stimulation operations for the entire system could be completed as designed.

Challenge

Hydraulic toe sleeves enable operators to stimulate the first stage of multi-stage horizontal wells without intervention. However, some toe sleeves are not designed for casing integrity pressure tests or require stimulation operations to begin immediately following the pressure test.

Well data	
True vertical depth (ft.)	10,532
Measured depth (ft.)	19,800
Bottom hole temperature (°F)	265
Casing test pressure (psi)	11,450
Casing size (in.)	5.5
Absolute pressure during pressure test (psi)	15,600

Solution

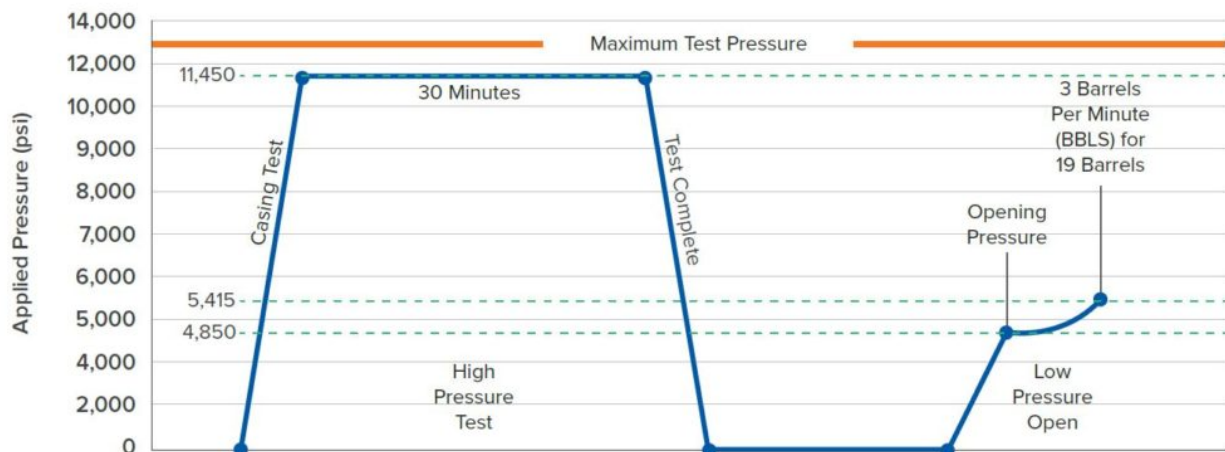
The Packers Plus Toe-XT Hydraulic Sleeve is a hydraulically activated tool used for the first stage of cemented liner completions. It enables the casing to be tested up to the desired maximum pressure and this pressure can be held for as long as desired. Casing integrity testing is independent of stimulation operations—this means that the operator can decide

to open the sleeve for stimulation at a later date after the pressure test has been completed, which can be the case if casing leaks are found. A dual pressure cycle also enables the sleeve to be opened at a much lower pressure than the testing pressure for stimulation operations.

Results

The operator successfully pressure tested the casing at 11,450 psi for 30 minutes a number of weeks after the Toe-XT Hydraulic Sleeve was installed and cemented in place. After bleeding back down to 0 psi, the sleeve was opened on the next cycle at 4,850 psi, followed by a stimulation injection rate of 3 bpm at 5,415 psi. A total of 19 bbls was injected into the formation.

Packers Plus TREX™ cemented product line provides innovative solutions to improve efficiency for cemented liner well completions.



Toe-XT Hydraulic Sleeve casing integrity test, sleeve opening and injection pressure chart