

Green XX 8-6 Perforate and Install Packers for Pressure Monitoring

- 1 Give COGCC 10 day notice prior to starting work that MIT test is to be performed.
- 2 Level location for base beam rig.
- 3 MIRU WO Rig. Control well with biocide treated water. ND WH and NU BOPE.
- 4 Unland 2-3/8" tbg and LD landing joint.
- 5 Note: RBP with 2 sks of sand has been set at 7950' already and pressure tested to 1000 psi. All tubing was EMI'd and landed at 7902' with retrieving head 9/22/15.
- 6 Fill and circulate well using fresh water. Perform MIT test on casing by pressure testing against the plug at 7950' to 500 psi and monitoring pressure for a minimum of 15 min. If positive results obtained continue to next step.
- 7 TOOH standing back.
- 8 MIRU wireline. PU five 2ft, 3 spf, 0.37" EHD perforating guns. RIH and shoot 2-ft clusters in two runs at the depths seen below. Correlate depths to the USIT log ran 9/24/15. RDMO wireline.

Perf Depth	Zone
7001'	Niobrara
7089'	Niobrara
7113'	Niobrara
7145'	Niobrara
7173'	Niobrara
7199'	Niobrara
7218'	Niobrara
7255'	Niobrara
7317'	Fort Hays
7348'	Codell

- 9 PU pressure isolating packers for 4-1/2" 11.6# casing on 2-3/8" tbg. Isolate each cluster individually and pressure up through the tubing string to confirm communication into the perforations. Pump ~1-2 bbls to breakdown and confirm communication. Repeat for each perf cluster. POOH
- 10 PU scraper for 4-1/2" 11.6# casing and RIH to 7700'. Reciprocate across interval at 7000' to 7400'. POOH
- 11 RIH with retrieving head to RBP set at 7950'. Circulate sand off of plug, latch on to plug, release and POOH.
- 12 MIRU wireline. PU 4-1/2" Production packer with upper seal bore and dual magnum disk below, RIH and set at ~7373' correlating depth with the CCL. POOH RDMO wireline
- 13 Make up BHA consisting of 10 hydraulic set packers and TEC line connecting 10 pressure guages back to surface on a new string of 2-3/8" L-80 tubing. RIH until latched into the upper seal bore of the production packer, pressure up internally against dual magnum disk and set packers.
- 14 Land tubing string WH and components
- 15 RIH with weight bar on slick line to broach tubing and knock out dual magnum disks at the bottom of the string. This shall re-establish communication with the J Sand Perfs
- 16 ND BOP. NU wellhead.
- 17 Install **2-3/8"** pup joint above master valve. Pressure test tbg head from below tbg head through master valve with hydrotester to 5,000psi.
- 18 RDMO WO rig
- 19 Return well to production team. BHA shall be removed in roughly 2-3 year time frame.