

DRILL STEM TESTS

DST #1 11,284' to 11,730'

Lower Bone Springs, 3/8" bottom 1/2" surface choke, No WC, Tool open 1-1/2 hours, strong blow to surface throughout test, GTS in 12 minutes, maximum 103 MCFPD. After 30 minutes flow decreased to 72 MCFPD, maximum surface pressure 20 psi on 1/2" choke. Recovered 1,316' gas cut mud. 45 minutes ISIP 1873#, IFP 782#, FFP 736#, 2 hour FSIP 1306#, HP in and out 6011#, BHT 182 degrees.

DST #2 12,910' to 13,428'

Lower Wolfcamp, 5/8" bottom 1" surface choke, 5000' water blanket, Tool open 4 hrs, tool opened with slight blow, increased to good blow. GTS in 3 hrs. 45 minutes, TSTM. Recovered 5000' water blanket, 658' heavy gas cut mud. 45 minute ISIP 7713#, still climbing, IFP 2660#, FFP 2826#, 2 hour FSIP 8234, still climbing, HP in and out 9064#, BHT 183 degrees.

DST #3 14,113' to 14,356'

Strawn, 5/8" bottom and 1" surface choke, 5000' water blanket, Tool open 3 hours, tool opened with fair blow immediately, decreased to weak blow. GTS in 1 hour 45 minutes, 45 psi with 1/8" orifice, 26.8 MCFPD. Recovered 5000' water blanket and 720' gas cut mud. One hour ISIP 7387#, IFP 2794#, FFP 2849#, 1-1/2 hour FSIP 3688#, Still building, IHP 11,215#, FHP 11,179#, BHT 198 degrees.

DST #4 14,345' to 14,518'

Atoka; Packer Failure

DST #5 14,260' to 14,557'

Atoka, 5/8" bottom and 1" surface choke, 5000' water blanket and 98,700 cubic ft. of nitrogen (2000#), Tool open 3 hours, bled off to 0#, well dead, no blow. Recovered 5000' water blanket and 150' slightly gas cut mud. Two hour ISIP 7021#, IFP 5243#, FFP 2680#, 30 minute FSIP 3064#, IHP 11,258# and FHP 11,236#, BHT 201 degrees.

DST #6 15,121' to 15,389'

Morrow, 5/8" bottom and 1" surface choke, 6000' water blanket, and 2000# nitrogen, Tool open 2-1/2 hours, bled nitrogen to 0#, no blow. Recovered 6000' water blanket and 330' slightly gas cut mud. One hour ISIP 11,000#, IFP 6196#, FFP 3224#, 1-1/2 hour FSIP 5037#, IHP 11,735# and FHP 11,630#, BHT 208 degrees.

DST #7 15,408' to 15,658'

Morrow; Packer Failure

DST #8 17,302' to 17,352'

Devonian, 5/8" bottom and 1" surface choke, 2000# nitrogen, Tool open 3 hours 10 minutes, bled to 0#, then built up to 5# behind 3/4" and 1/4" choke, decreased to 1# and held throughout test. Recovered 90' slightly gas cut mud, 1280' salty sulphur water, 90' contaminated mud. Top water sample 35,000 PPM, bottom water 75,000 PPM. One hour ISIP 7449#, IFP 2378# and climbing, IHP 8663#, BHT 221 degrees, clocks stopped.

DST #9 17,304' to 17,397'

Devonian, 5/8" bottom and 1" surface choke, 1500# nitrogen, Tool open 3 hours, bled to 0#, no blow, Recovered 90' mud, 1300' salty sulphur water (65,000 PPM), and 90' of contaminated mud. Thirty minute ISIP 7437#, IFP 2799#, FFP 637#, 1-1/2 hour FSIP 7322#, IHP 8529#, FHP 8419#, BHT 221 degrees.

DST #10 17,408' to 17,649'

Devonian, 5/8" bottom and 1" surface choke, 1500# nitrogen, Tool open 3 hours, bled to weak blow, GTS in 2 hours 15 minutes TSTM. Recovered 350' gas cut and salty sulphur water cut mud, 15,350' salty sulphur water (50,000 - 70,000 PPM). Thirty minute ISIP 7223#, IFP 4856#, FFP 7191#, 27 minute FSIP 7407#, IHP 8273# FHP 8216#, BHT 256 degrees.