

### DRILL STEM TESTS:

- DST # 1: Leonard from 8747' to 8845-1/2', 1" x 5/8" chokes, no water blanket, tool open 4 hours 40 minutes. Gas to surface in 8 minutes, oil in 1 hour 35 minutes, 5 minutes cleaned to pits. 3 hours flowed to test tank, first hour 14 bbls. oil, second hour 7-1/2 bbls. oil, third hour 7 bbls. oil, shake-out 6/10% BS, no water, gravity 36.4 deg. at 60 deg., gas-oil ratio 351 CF/B. Reversed out 18 bbls. oil, 2 bbls. black heavily oil and gas cut mud, no water. Pulled out of hole, recovered 170' of black heavily oil and gas cut mud. 30 minute initial shut in pressure 3470#, flowing pressure initial 300#, final 965#. 2 hours final shut in pressure 2335#, hydrostatic pressure initial and final 4155#.
- DST # 2: Leonard from 8843' to 8937', 5/8" x 1" chokes, tool open 7 hours, gas to surface in 8 minutes, 8 MCF/D, decreased to very small volume at end of test. Reversed out 28 bbls. oil, gravity 39.8 deg. at 60 deg., 7 bbls. of oil and gas cut mud, 16 bbls. of black slightly salty sulphur water and 170' of sulphur water below circulating sub. 30 minute initial shut in pressure 3765#, flowing pressure initial 805#, final 2385#, 2 hours final shut in pressure 3030#, hydrostatic pressure initial 4160#, final 4175#, bottom hole temperature 134 deg.
- DST # 3: Wolfcamp from 9650' to 9676', 1" x 5/8" chokes, tool open 4 hours, gas to surface in 8 minutes at rate of 164 MCF/D, decreased to too small to measure at end of test. Reversed out 32 bbls. oil, gravity 38.1 deg. at 60 deg., estimated 3 bbls. heavily oil cut mud. Recovered 135' of black heavily oil and gas cut mud below circulating sub, no formation water. 30 minute initial shut in pressure 3785#, flowing pressure initial 155#, final 1400#, hydrostatic pressure 4700# to 4715#, 2 hour shut in pressure 3380#. Bottom hole temperature 154 deg.
- DST # 4: Wolfcamp from 9743' to 9763', 1" x 5/8" chokes, no water blanket, tool open 4 hours, strong air blow immediately, gas to surface in 3-1/2 hours, volume too small to measure. Recovered 270' of gas, oil and salt water cut mud and 5130' of salt water. 30 minute initial shut in pressure 3840#, flowing pressure initial 140#, final 2705#, 1 hour final shut in pressure 3800#, hydrostatic pressure 4770#-4755#. Bottom hole temperature 152 deg.
- DST # 5: Wolfcamp from 10,024' to 10,045', 1" x 5/8" chokes, tool open 3 hours, had fair flow immediately, decreased to weak blow in 18 minutes and continued weak blow throughout test. Recovered 2500' of gas in drill pipe. 90' of oil and gas cut mud, no water. 30 minute initial shut in pressure 1470#, flowing pressure initial 75#, final 90#, 1 hour final shut in pressure 320#, hydrostatic pressure 4915#, bottom hole temperature 143 deg.
- DST # 6: Wolfcamp from 10,220' to 10,252', 1" x 5/8" chokes, no water blanket, tool open 3 hours, had very weak air blow immediately, decreased to no blow in 30 minutes. Recovered 5' of drilling mud, no oil, gas or water. 30 minute initial shut in pressure 75#. Flowing pressure initial 50#, final 50#, 1 hour final shut in pressure 50#, hydrostatic pressure 5025#-5040#, bottom hole temperature 146 deg.
- DST # 7: Strawn Sand from 10,722' to 10,791', 1" x 5/8" chokes, no water blanket, tool open 1 hour, very weak air blow for 17 minutes. Recovered 3' of drilling mud, no oil, gas or formation water. 30 minute initial shut in pressure 70#, 1 hour final shut in pressure 70#, flowing pressure initial 60#, final 60#, hydrostatic pressure 5535#-5505#, bottom hole temperature 160 deg.