

DRILL STEM TESTS - MILLER - FEDERAL WELL NO. 1

DST #1

Morrow - 11,344 to 11,510'; Tool open 45 Mins.; Had intended taking only 20 Mins. preflow but Halliburton had trouble getting tool closed; GTS in 35 Mins., water blanket to surface in 40 Mins; Mud & Wtr to surface in 50 Mins; SI 60 Mins.; Opened tool & surface choke was plugged; Took 35 Mins. to unplug choke; On 1" choke, unloaded mud & water w/ 1000 psi; Put on $\frac{1}{2}$ " choke for 1 Hr., FP 1850, Rate 6.3 MMCF, steady fine spray water. S.I. for 4 Hr. BHP build up; annulus was bubbling w/ gas from the start of test; When opened tool for 2nd flow, annulus started kicking; S.I. annulus for 5 Mins. w/ no pressure build up; Opened annulus w/ gas bubbling; After 4 Hr. S.I. pulled DP & test tool. Rec. 30' condensate, 309' GC condensate & mud & 221' water; Smplr was plugged, no recovery; IHP 5949 psi; FHP 5903 psi; 45 Min. preflow pressure 1906 to 2274 psi; 95 Min. ISIP 4711 psi, flat; 155 Min. FP 2136 to 2963 psi; 240 Mins. FSIP 4711 psi, flat;

DST #2

Atoka - Straddle Pkrs. 10,627 to 10,700'; Opened tool for 20 Min. preflow on $\frac{1}{2}$ " choke; GTS in 13 Mins; In 20 Mins. Surface pressure 56 psi @ 450 MCF rate; Closed tool & Pkrs started slipping down hole; Pulled up & re-inflated Pkrs. & finally got to hold; Worked w/ Pkrs. 44 Mins.; SI 60 Mins; lost some mud while working w/ Pkrs; Opened tool for 3 Hr. Flow test: $\frac{1}{2}$ " choke, Surf. Pressure 105 psi, MCF Rate 800; Closed tool for 6 Hrs S.I. Rec. 686' mud in DP; Chl. 5500 ppm; Pit Mud 5300 ppm; Smplr zero pressure, 2500 cc, Chl 5500; IHP 5520 psi; FHP 5212 psi; 20 Min. FP 199 to 203 psi; 60 Min. ISIP 5178 psi, flat; 180 Min. FP 336 to 339 psi; 360 Min. FSIP 5178 psi, flat;