

HOBBS OFFICE O.C.C.

Drilled 17,244' to 17,575'. Ran DST #5 17,464' to 17,575', 3/8" bottom, 1/4" top chokes, 7500' water blanket with nitrogen blanket, flowed 3-1/2 hours through various chokes, maximum gas flow 7000 MCF/D, decreasing to 2400 MCF/D after tool open 4 hours, black sulfur water produced with gas. Recovered 1860' muddy sulfur water, no more than 600' of recovered sulfur water was formation water, based on chloride content profile. BHP measurements, IHP 8262#, 1 hour ISIP 7561#, IFP 5719#, FFP 897#, 2 hour FSIP 7561#, HP out 8262#. Cut Core #2 15,575' to 15,584', recovered 8-1/2' broken, light gray dolomite, scattered pinpoint porosity, trace of stain, trace of fluorescence, too tight to analyze. Cut Core #3 17,584' to 17,610', recovered 25' light gray dolomite, dense to finely crystalline, highly fractured, some fractures open with few scattered vugs and scattered pinpoint porosity. Cut Core #4 17,610' to 17,638', recovered 20-1/2' white to light gray dolomite, finely crystalline, up to 9% porosity, fractured, pinpoint and vuggy porosity. Ran DST #6 17,597' to 17,638', 3/4" surface choke, 3500' water cushion, pressured up to 3000# with nitrogen, tool open 4 hours, gas to surface in 2 hours 8 minutes, very weak blow increased to 478 MCF/D, decreasing to weak blow at 2 hours 53 minutes. Put well on 1/8" choke, FP increased from 5# to 185# in 4 hours open. Final flow rate 64 MCF/D. Recovered 1984' heavily gas cut black sulfur water. 1 hour ISIP 7561#, IFP 5456#, FFP 1864#, 1 hour FSIP 7605#, HP in 8437#, out 8349#, BHT 246 Deg. Cut Core #5 17,638' to 17,672', recovered 32-1/2' dolomite, light gray to white, dense to coarse crystalline, mostly dense and tight with approximately 9' scattered pinpoint and vuggy porosity, vertical fracturing present but closed, no oil stain, no fluorescence, no sulfur odor. Cut Core #6 17,672' to 17,687', recovered 8' core badly broken, dolomite, light gray, dense to fine crystalline, trace of fractures, scattered vugs. Cut Core #7 17,687' to 17,693', recovered 5' core badly broken, dolomite, light gray, dense to fine crystalline, scattered fractures, traces pinpoint porosity, scattered vugs. Ran DST #7 17,469' to 17,693', 3/4" surface choke, no water or nitrogen blanket, tool open 7 hours, gas at 3000 MCF/D with 12 barrels black, salty, sulfur water per hour. Recovered 1580' sulfur water. Bottom bomb readings: 1 hour ISIP 7561#, IFP 2127#, FFP 2829#, 3 hour FSIP 7561#, IHP and FHP 8349#, BHT 248 deg. Drilled 17,693' to 18,700'. Ran DST #8 18,555' to 18,700', 2000' water cushion, loaded drill pipe with 1500# surface pressure nitrogen. Recovered 170 barrels salty formation water and 13 barrels fresh water blanket out of drill pipe. Bottom bomb: ISIP 8087#, IFP 7868#, FFP 8087#, FSIP 8087#, IHP 9047#, FHP 8960#, BHT 252 deg. Drilled 18,710' to 20,232'. Cut Core #9 20,232' to 20,246', recovered 6', all of core badly broken in small pieces, dolomite, gray white, fine crystalline to dense, fractured throughout, mostly closed fractures with a few apparently open, no visible vuggy porosity. Cut Core #10 20,246' to 20,262', recovered 15' dolomite, gray to dark brown, finely crystalline to dense, scattered closed fractures throughout, trace of open fractures, no visible vuggy porosity. Drilled 20,262' to 20,391'. Cut Core #11 20,391' to 20,411', recovered 18' dolomite, gray, brown, tan, fine crystalline to dense, closed fractures throughout with traces of open fractures, trace of vuggy porosity at 20,396'. Drilled 20,411' to 20,472'. Cut Core #12 20,472' to 20,532', recovered 14' dolomite, gray to white, fine to medium crystalline, closed fractures throughout with a trace of hairline open fractures, no vuggy porosity. Ran DST #9 20,198' to 20,532', 3/8" bottom choke, various surface chokes 1/4" to 1", 1500# surface pressure nitrogen blanket, opened tool, trace of gas to surface in 2-1/2 hours, too small to measure or sample. Recovered 1400' heavily gas cut mud, no water. Bottom tool readings: 30 minute ISIP 3225#, IFP 2242#, FFP 420#, 1-1/2 hour FSIP 1008#, HP in and out 8742#, BHT 278 deg. Drilled 20,532' to 20,890'. Cut core #13 20,890' to 20,922', recovered 27-1/2' dolomite, brown, gray, mottled, dense to very slight pinpoint porosity, occasional hairline fractures, last 6' composed of granular, finely crystalline dolomite with slight intercrystalline porosity, bleeding gas slightly from pinpoint porosity. Cut Core #14 from 20,922' to 20,936', recovered 12': 1-1/2' dolomite, gray to brown, vuggy to pinpoint porosity, slight bleeding of gas; 10-1/2' dolomite, gray, dense, cherty, no fluorescence, no show. Ran DST #10 20,443' to 20,936', loaded drill pipe with nitrogen 1125# surface pressure, tool open 4 hours, gas to surface in 2 hours 12 minutes, volume too small to measure. Recovered 3100' gas and salt water cut mud. Bottom tool readings: 1 hour ISIP 7251.1#, IFP 2404.3#, FFP 1042.6#, 2 hour FSIP 1723.4#, IHP 9033.8#, FHP 8864.4#, BHT 271 deg. Drilled 20,936' to 21,000'.

