

D R I L L S T E M T E S T

DST No. 1 - San Andres 5159-5190 (31'). Results of DST No. 1 - tool open 1 hr. TC 1", BC 5/8", tool opened w/weak blow, died in 15 mins. Recovered 4' drlg. mud. IFP 0#, FFP 0#, 15 min SIP 0#, MCP, in 2385, out 2385.

DST No. 2 - Bone Springs 8345-8370 (25'). Results of DST No. 2 - TC 1", BC 5/8", tool open 1 hr., no blow when tool opened, reset tool twice, no blow. Recovered 10' drlg. mud, IFP 0#, FFP 0#, SIP 0#, 30 min., MCP 3820#.

DST No. 3 - Bone Springs 8628-8679 (51'); results of DST No. 3 - tool open 4 hrs., TC 1", BC 5/8", tool opened w/fair blow & continued throughout test. Air immed., no gas. Recovered 1500' gas, 50' slightly oil & gas cut sulfur water (3½ drlg. pipe). Water 2000 ppm Cl₂. IFP 0#, FFP 0#, 30 min SIP 0#, MCP 3980#.

DST No. 4 - Bone Springs 9554-9593 (39'). Results of DST No. 4 - TC 1", BC 5/8", tool opened w/fair blow increased to strong blow in 5 mins., tool open 2½ hrs. Recovered 190' mud cut oil (3½ drlg. pipe). Plus 300' oil & gas cut mud below circ. sub. IFP 90#, FFP 260#, 30 min SIP 1140#, MCP in 4540#, MCP out 4460# (too much emulsion to get a gravity).

DST No. 5 - Bone Springs 9746-9783 (37'). Results of DST No. 5 - tool open 1 hr., TC 1", BC 5/8", tool opened w/weak blow, died after 45 mins. Recovered 40' drlg. mud (3½ drlg. pipe). IFP 0#, FFP 20#, 30 min SIP 30#, MCP 4565#.

DST No. 6 - Bone Springs 9930-9989' (59'). Results of DST No. 6 - tool open 2 hrs., air immed., no gas. Recovered 2360' gas, 1620' oil & gas cut mud, 90' oil & mud cut salt water & 240' salt water (109,000 ppm Cl₂) IFP 100#, FFP 340#, 60 min SIP 3680#. MCP in 4560#, MCP out 4580# (tool opened weak blow increased to strong after 6 mins.)

DST No. 7 - Bone Springs 10,014-10,050' (36'). Results DST No. 7 - TC 1", BC 5/8", tool open 1½ hrs., air immed., no gas to surface, tool opened w/weak blow increased strong blow in 2 mins., started decline in 35 mins. to weak blow at end of test. Recovered 2360' gas, 120' slightly oil & gas cut mud, 1 pt. free oil. IFP 0#, FFP 50#, 60 min SIP 965#, MCP in 4755#, MCP out 4775#.

DST No. 8 - Hueco 10,438-10,481' (43'). Results DST No. 8 - tool open 4 hrs., TC 1", BC 5/8", tool opened w/weak blow increased to strong 2½ mins. Air immed., gas in 8 mins. (sweet). Recovered 2570' gas reversed out 1554' (21 bbls.) mud, gas & water cut (15%) oil 2442' (33 bbls.) salt water (130,000 ppm cl) plus 270' (2 bbls.) salt water below circ. sub. SFP 36#, IFP 200#, FFP 2260#, 30 min SIP 3920#, MCP in 4840#, MCP out 4840#, oil gravity 3514, gas rate 20.3 MCF/D.

DST No. 9 - Hueco 10,486-10,519' (33'). Results DST No. 9 - tool open 1 hr. 37 mins., TC 1", BC 5/8", tool opened w/weak blow increased to strong blow 3½ mins., decreased to fair in 1 hr., remained fair rest of test. Recovered 540' mud & gas cut salt water (75,000 ppm) 680 gas cut salt water (130,000 ppm cl). SFP 0#, IFP 420#, FFP 4030#, 30 min SIP 4030#, MCP in 4810#, MCP out 4840#.

DST No. 10 - Hueco 10,545-10,587' (42'). Results DST No. 10 - tool open 14 mins., TC 1", BC 5/8", tool opened w/weak blow died in 5 mins., bypassed tool, weak blow for 1½ mins., died. Recovered 30' mud below circ. sub, titrates 2000 ppm cl. SFP 0#, IFP 0#, FFP 0#, 30 min SIP 155#, MCP in 4960#, MCP out 4935#.

DST No. 11 - Strawn 10,885-10,954' (69'). Results DST No. 11 - 1" TC, 5/8" BC, tool open 3 hrs., gas to surface 47 mins., sweet but TSTM. Weak blow throughout test. Rec. 210' slightly oil & heavy gas cut drlg. fluid. IFP 120#, FFP 120#, 30 min SIP 1000#, MCP 5100#.

DST No. 12 - Strawn 10,950-10,991' (41'). Results DST No. 12 - 1" TC, 5/8" BC, tool open 4 hrs. 6 mins., gas to surface 5 mins., oil in 14 mins. In 4 hrs. 16 mins. flowed 277 bbls. oil, no water. Gas rate 2242 MCF/D. Oil gravity 46 deg., collar rust or red brown. Flow rates 1st hr. 1" ck., 84.9 bbls., oil/hr. or 2037.6/day. 2nd hr. on 3/8" ck., 45.8 bbls. oil/hr. or 1099.2/day. FTP 1190#, gas oil ratio 1988. IFP 2230#, FFP 4100#, 2 hr. 14 min SIP 4650#, MCP in 5140#, MCP out 5140#.

DST No. 13 - Strawn 10,991-11,020' (29'). Results DST No. 13 - 1" TC, BC 5/8", 1000' WB, tool open 1 hr., tool opened w/weak blow, died in 10 mins. Air immed, no gas. Bypassed tool, same result. Rec. 910' WB, plus 90' WB, slightly gas cut, plus 10' drlg. mud WB, titrated 900 ppm cl. on top & 700 ppm cl. on bottom. SFP 0#, IFP 125#, FFP 125#, 30 min SIP 125#, MCP in 5785#, out 5785#.

DST No. 14 - Strawn 11,093-11,200' (107'), packer failed.

Drill Stem Test (Cont'd)

DST No. 15 - Strawn 11,155' to 11,200' (45'). Results DST No. 15 - TC 1", BC 5/8", tool open 1½ hrs., 1000' WB, tool opened w/weak blow increased to fair blow 26 mins., increased to strong in 38 mins., decreased to fair blow in 1 hr. 12 mins. Air to surface immed, no gas. Rec. 90' slightly oil (.2%) gas & mud cut WB, plus 900' gas cut WB, plus 270' slightly oil cut & gas cut mud. IFP 520#, FFP 520#, 30 min SIP 975#, MCP in 6210#, MCP out 6160#. Mud titrated 1500 ppm cl. before, 2000 ppm cl. after.

DST No. 16 - Devonian 12,210-12,260' (50'). Results DST No. 16 - tool open 1 hr., TC 1", BC 5/8", water cushion 930' tool open w/weak blow, died in 50 mins. Rec. in 3½" drlg. pipe 930' water cushion w/scum oil, 96' drlg. fluid, water titrated 150 ppm cl. SFP 0#, IFP 600#, FFP 600#, 30 min SIP 1020#, MCP in 6580#, MCP out 6580#.

DST No. 17 - Devonian 12,265-12,341 (76'). Results DST No. 17 - tool open 1 hr., TC 1", BC 5/8", water cushion, 1000', tool opened w/fair blow increased to strong in 7 mins., decreased to fair in 27 mins., decreased to weak in 34 mins., remained weak remainder of test. Rec. in 3½" drlg. pipe, 546' clear water cushion, 90' gas cut water cushion, 364' mud cut water cushion, 2366' sulfur water/trace of salt. SFP 0#, IFP 865#, FFP 1920#, 30 min SIP 4440#, MCP in 6800#, MCP out 6740#.

