Phillips

DRILL STEM TEST

- No. 1 Took Johnston DST Welfeamp formation 8989' to 9190'. 5/8" bettom, 1" top chokes. 1000' water blanket. Tool open 2 hours and 35 minutes. Air immediately, gas in 35 minutes, water blanket to surface in 1-1/2 hours, free oil in 1 hour 40 minutes. Flowed on 1/2" choke first 15 minutes, 8 barrels oil, second 15 minutes, 8 barrels oil and shut in. Shut in 15 minutes BHP buildup 3355#. Hydrostatic head 4150#. Flowing pressure 2800-2250#. GOR 344. Corrected Gravity 41.8. 1% mud, no water.
- No. 2 Johnston DST Wolfcamp formation 9210' to 9295', 5/8" bottom, 1" top chokes.
 1000' water blanket. Toel open 2-1/2 hours. Air immediately, gas in 1
 hour 47 minutes. Good blow throughout test. Did not flow. Recovered
 water blanket and 1275' clean oil. Initial flowing pressure 500#. Maximum
 flowing pressure 1000#. Shut in 15 minutes BHP 3350#. Hydrostatic pressure
 4250#.
- No. 3 Johnston DST Welfcamp formation from 9294' to 9501', 5/8" bottom, 1" top chokes. 1000' water blanket. Tool open 1 hour. Air immediately, weakened in 30 minutes and stopped after 40 minutes. Recovered 910' water blanket slightly cut with oil, 90' mud cut water blanket. 135' of heavy oil and gas cut mud. Shut in 15 minutes BHP 2100#. Initial flowing pressure 500#, maximum flowing pressure 505#. Hydrostatic pressure 4600#.
- No. 4 Johnston DST Devonian formation 11,465' to 11,650'. 5/8" bottom, 1/2" top chokes. 3150' water blanket. Tool open 3 hours, 25 minutes. Air immediately, gas lhour and 27 minutes, water blanket 1 hour and 40 minutes, oil 2 hours and 20 minutes. Flowed 1 hour to test tank 31 barrels oil. GOR 855. Gravity 45. 1.45 mud, 15 minutes shut in BHP 4950#. Maximum flow pressure 3200#. Initial flow pressure 1750#. Finial flow pressure 2200#. Hydrostatic pressure 5350#.
- No. 5 Johnston DST from 12,115' to 12,166' Devonian formation. 5/8" bottom, 1/4" top chokes. 3700' water blanket. Tool open 3 hours and 20 minutes. Air immediately, water blanket and gas in 1 hour and 25 minutes. Oil in 1 hour and 45 minutes. 1-1/2 hours test in tank 64 barrels clean oil. Hourly rate 42 barrels. Corrected gravity 46.5. GOR 894. Flowing BHP 2400#. Hydrostatic pressure 6100#. No shut in pressure. Tool failed.
- No. 6 Johnston DST Devonian formation 12,166' to 12,216'. 5/8" bottom, 1/4" top chokes. 3750' water blanket. Tool open 3 hours and 29 minutes. Air immediately, water blanket and gas 1 hour and 13 minutes, clean oil, 1 hour 37 minutes. 2 hour test in tank 59 barrels. Last hour 32 barrels. GOR 975. Corrected Gravity 45.3. Hydrostatic pressure 6025#. 15 minutes shut in BHP 4950#. Initial flow pressure 2025#. Final flow pressure 3600#. Maximum flow pressure 3600#.
- No. 7 Johnston DST Devonian formation 12,213' to 12,266'. 5/8" bottom, 1/4" top chokes. 3800' water blanket, tool open 5 hours and 28 minutes. Air inmediately, gas 2 hours and 10 minutes, water blanket 2 hours and 47 minutes. 0il in 3 hours and 17 minutes. Flowed 59 barrels oil. Last hour in test tank 31.63 barrels. Corrected gravity 45.8. GOR 986. 15 minutes shut in BHP 5000#. Initial flow pressure 3775#. Maximum flow pressure 3775#. Final flow pressure 1975#. Hydrostatic 6125#.

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