

SHELL OIL COMPANY
 QUERECHO PLAINS DEEP UNIT # 2
 SE/4 SW/4, Sec. 27-188-32E
 LEA COUNTY, NEW MEXICO

Spudded @ 7:00, PM, MST, 2-7-58 w/17" bit. Reduced hole to 12 1/4" @ 475' - 700' to run ES. Mixed salt mud, conditioned hole, ran ES. Reamed to 17" and drilled to 755'. Cemented 13 3/8" casing @ 753' w/750 sx. regular cement. WOC. Tested casing, OK. Drilled out and tested formation. OK. Drilled ahead w/12 1/4" bit. DST # 1: 3385' - 3586' (201' Seven Rivers). Tool open 3 hours 15 minutes thru 5/8" BC, 1/4" TC, 4 1/2" DS. GTS in 25 minutes. Gas flow est. 20 MCF/D. Recovered 90' slt GCM, 90' HGCM, 90' HG&V slt OCM, & 90' VH&V slt OCM. 45 minutes ISIP 565 psi. FBHP 120 - 130 psi. 2 hour FSIP 1125 psi. HMH 2115 psi. Conclusive Test. Ran logs and cemented 9 5/8" casing @ 4548' w/1300 sx. (1100 sx. Incor w/40% Diacel D & 2% CaCl₂ + 200 sx. 4% Gel regular). WOC. Tested BGP and casing, OK. Drilled out and tested formation, OK. Drilled ahead w/8 3/4" bit. DST # 2: 6220' - 6331' (111' Delaware Mountain). Tool open 3 hours thru 5/8" BC, 1/2" TC, 4 1/2" DS. GTS 36 minutes. Est. gas flow @ 20 MCF/D. Recovered 990' slt MCO & 30' slt WCO. Water titrated 35,000 ppmCl⁻, pit mud titrated 2200 ppmCl⁻. 2 hour 45 minutes ISIP 2595 psi. FBHP 125 - 405 psi. 2 hour 45 minutes FSIP 1980 psi. HMH 2775 psi. Conclusive Test. DST # 3A: 6339' - 6409'. No packer seat, unsuccessful. Ran logs @ 6982'. DST # 3: 8530' - 8598' (68' Bone Spring). Tool open 3 hours thru 5/8" BC, 5/8" TC, 4 1/2" DS. GTS 1 hour 40 minutes. Est. gas flow 20 MCF/D. Recovered 150' V slt MCO, 330' HO&GCM, 120' slt O&HGCM, 90' slt MC salt water. 50 minutes ISIP 3470 psi. FBHP 100 - 245 psi. 105 minutes FSIP 3350 psi. HMH 3875 - 3800 psi. Conclusive Test. DST # 4: 11,720' - 11,902' (182' DesMoines). Tool open 52 minutes thru 5/8" BC, 4 1/2" DS. Blow died immediately. Bypassed packer twice and blow died each time. Recovered 95' mud w/traces gas cutting. 40 minutes ISIP 219 psi. FBHP 205 - 249 psi. 45 minutes FSIP 249 psi. HMH 6412 psi. Conclusive Test. DST # 5: 11,912' - 12,095' (183' Atoka). Tool open 4 hours 30 minutes thru 5/8" BC, 1" TC, 4 1/2" DS. GTS 10 minutes. Gas flow est. 440 MCF/D. Recovered 1020' oil, 180' slt MCO, 285' O&GCM, 45' V slt MC salt water. 25 minutes ISIP 5823 psi. FBHP 221 - 622 psi. 45 minutes FSIP 5544 psi. HMH 6283 - 6323 psi. Conclusive Test. DST # 6: 12,689' - 12,913' (224' Atoka). Tool open 4 hours thru 5/8" BC, 1" TC, 4 1/2" DS. GTS 6 minutes. MTS 33 minutes. Gas flowed @ 4.2 MMCF/D w/condensate @ 8 bbl./hr. Recovered 12 bbls. condensate in tank plus 280' condensate, 90' SO&WCM. 30 minutes ISIP 5957 psi. FBHP 2145 - 3338 psi. 1 hour 15 minutes FSIP 5417 psi. HMH 6929 - 6930 psi. Conclusive Test. Ran logs @ 13,068' after conditioning tight hole @ 12,290'. DST # 7: 12,700' - 12,849' (149' Atoka straddle test). Tool open 4 hours 5 minutes thru 5/8" BC, 1" TC, 4 1/2" DS. GTS 6 minutes. Gas flowed @ 4.6 MMCF/D w/condensate @ 8 bbl./hr. Recovered 25 bbls. condensate in tank plus 270' condensate, 180' HO&MCW, & 330' slt O&MCW which titrated 1200 ppmCl⁻ (pit mud titrated 700 ppmCl⁻). 45 minutes ISIP 5770 psi. FBHP 1235 - 2445 psi. 90 minutes FSIP 5280 psi. HMH 6935 - 6896 psi. Conclusive Test. DST # 8: 13,513' - 13,794' (281' Mississippian). Tool open 4 hours thru 5/8" BC, 4 1/2" DS. GTS 57 minutes. Gas flow TSTM. Recovered 45' V slt GCM. 42 minutes ISIP 270 psi. FBHP 200 - 200 psi. 65 minutes FSIP 210 psi. HMH 6790 psi. Conclusive Test. DST # 9: 14,084' - 14,230' (146' Devonian). Tool open 43 minutes thru 5/8" BC, 1" TC, 4 1/2" DS. No GTS. Air blow died in 38 minutes. Bypassed packer & blow died in 5 minutes. Recovered 180' mud. 50 minutes ISIP 5309 psi. FBHP 188 - 225 psi. 45 minutes FSIP 5170 psi. HMH 7265 - 7306 psi. Conclusive Test. DST # 10: 14,230' - 14,330' (100' Devonian). Tool open 1 hour 25 minutes thru 5/8" BC, 1" TC, 4 1/2" DS. Blow died after 1 hour 25 minutes. No GTS. Recovered 13,600' salty sulphur water. ISIP missed. FBHP 3378 - 6083 psi. 30 minutes FSIP 6083 psi. HMH 7150 psi. Conclusive Test. Ran logs @ 14,330'. Spotted cement plugs @ 13,980' - 14,330' & 13,014' - 13,200'. Cemented 5 1/2" casing @ 13,004' w/750 sx. Slo-set cement. Left 80.5' cement in casing. Temperature survey showed top of cement @ 10,935'. Released rig @ 7:00 AM, MST, 7-5-58. RUPU. Ran 2" tubing to FBTD 12,908' &

