

PENNZOIL UNITED, INC.

Mescalero Ridge Unit No. 1
Section 20, T-19-S, R-34-E
Lea County, New Mexico

DRILL STEM TEST DATA:

- DST #1 10,092-10,105': 30" pre-flow, weak blow - 90" ISIP - 90" FF, weak blow 120" FSIP - rec. 10' OCM, 50' FO, 40' XW (grav. 22 @ 60°) Spl. chamber cont. 10# press, 800cc wtr, 600cc gassy oil, .08 CFG (Water was 36,000 ppm - Res. was .16 @ 76°F) BHT 164° F - HPI & HPO 4560# - 30" IF 20# - 90" FF 25# - 90" ISIP 2295# - 120" FSIP 2244#
- DST #2 13,210-13,230': 2,000' WC, 15" pre-flow, weak blow - 90" ISIP - 2 hr 2nd flow, GTS 28" - Max gas volume 110 MCFGPD decr. to TSTM - 2 hr 2nd SI, 1 hr FF, G.V. 90 MCFGPD decr. to TSTM - 2 hr FSIP - R.O. 2,000' GCWC w/tr. of dist. - Spl. chamber cont. 800# press, 5.3 CFG, 770cc dist. (Grav. 52 @ 60° F) 430cc DM - HPI 6376# - HPO 6376# - ISIP 6303# - 2nd SI 5895# - FSIP 5786# - IF 836# - 2nd flow 836 FF 836# - BHT 180° F
- DST #3 13,235-13,263': 2,000' WB, 15" pre-flow, WTS 14", 1 ½ hr ISIP - Flwd 1 hr 41 min on 18/64" ck - last 33 min was fairly stable @ 1,010 MCFGPD - rec. no fluid @ surface-open choke to 30/64" for 19 min to complete 2 hr flow period - Rate 1.7 MMCFGPD decr. to 1.4 MMCFGPD in 17 min - Surf. FP 425 psig dropping - 2nd SIP 1324# - 2 hr FF - 1 hr flow incr. to 410,000 CFGPD - rec. no fluid @ surface - FSIP 3 hrs - R.O. 1.5 BD, 20 BWB - BHT 182° F - Spl. chamber cont. 3.26 CFG - 500 psi - 20cc GCM - HPI 6413# - 1 ½ hr ISIP 2744# - IF 2209# - 2nd FP 1177 - 2 hr 2nd SIP 1324# - 3rd FP 1029# - 3 hr FSIP 1048# - HPO 6413#
- DST #4 13,272-13,337': 3,000' NB & press to 2,000 psi - 20" pre-flow, very strong blow - 90" ISIP - GTS 15" (35" after opening tool) G.V. on 32/64" ck, 3,000 MCFGPD - opened on 32/64" ck gradually reduced to 13/64" ck - losing mud @ rate of 1 barrel per minute during 1st 40 min of flow period - G.V. on 13/64" ck w/1300# TP 6.2 MMCFGPD - Shut surface valve 90 min to repair separator dump which stopped up when mud was surfaced. SITP 4200# re-opened 90 min on 8/64" ck - G.V. 3.2 MMCFGPD w/1800# TP - 2 hr 2nd SI - 2 hr FF on 1/8" ck - TP 1600#, G.V. 3.2 MMCFGPD w/84 BD last 2 hrs - 8 hr FSIP - R.O. VHO&GCM - Spl. chamber failed due to having to jar packers loose - HPI 7385# - HPO 7205# - ISIP 6647# - 2nd SIP 6548# - FSIP 6548# - IF 2658# - 2nd flow 3564# - FF 3161# - BHT 182° F
- DST #5 13,480-13,516': Used 3,000' WB, 25" pre-flow, very strong blow, - WBTS 18" - GTS 25 min - 90" ISIP - 120" 2nd flow on 16/64" ck w/TP 700# - G.V. 2.9 MMCFGPD w/heavy spray of dist. last hour - 120" 2nd SI - 240" FF on 16/64" ck w/TP of 1,100 psi - G.V. 1.2 MMCFGPD to 2.75 MMCFGPD - Last 120" F/37.5 BF (15.6 dist. & 20.9 Wtr) Chl. 22,000 ppm - 6 hr FSIP - R.O. 34 BF (11.5 BD & 22.5 BW) Gravity 46.8 @ 60° F - Spl. chamber cont. 2200 psi, 15.9 CFG, 600cc wtr, 240 cc dist. - Wtr. chl. 20,000 ppm - res. 4.0 @ 70° F - HPI & HPO 7131# - ISIP 6486# - 2nd SIP 6505# - FSIP 6597# - IF 2006# - 2nd flow 1490# - FF 2083# - BHT 181° F