

10/03/91 MIRU Halliburton. Frac'd Delaware formation through perms @ 7569-79'. Pumped 5000 gallon pad of Hybor 40 Borate based x-linked gel followed by 30,000# of 16/30 Ottawa sand ramped 2-10 ppg in 5000 gals of gel containing standard & encapsulated breakers. Broke formation @ 2850 psi w/pad. Avg injection pressure 2900 psi @ 10 BPM. Pumped 135 gals of treated wtr flush when sudden pressure increase followed by decrease occurred. Surface injection pressure increased to 4204 psi. SD pumps. Job log indicates that frac screened out w/8 ppg stage in formation. Total sand in formation is 16,500#, remaining 13,500# in tbg & csg. RD Halliburton, RU flow back lines, well bled to 0 immediately.

10/04/91 SI waiting on coil tbg.

10/05/91 RU coil tbg, tagged sand @ 4000', washed to 6500'. POOH to 5000', circ. clean, change over from KCL wtr to nitrogen. RIH to 6500' & continue to wash out to 7700' & circ. clean. POOH w/coil tbg & SD.

10/06/91 MIRU swab unit. Tag FL @ 1100', had 2 bbls of free oil on top. Pulled a total of 36 runs, ending FL @ 5000'. Pulling from 6000' rec. 105 bbls, 1/2% oil w/formation sand.

10/07/91 SI

10/08/91 SITP 100#. RU swab, FL @ 1900', made 40 runs, rec. 120 bbls @ 99.5% wtr, ending FL @ 5500', pulling from 6000' avg entry @ 200'/hr.

10/09/91 SITP 30#, FL @ 4000'. Made 34 runs, rec. 110 bbls @ 100% wtr. Ending FL @ 6000', avg 500' of entry/hr.

10/10/91 SITP 30#, FL @ 4000', swab 23 bbls 100% wtr. RD MOL swab unit.

10/11/91 SI

10/12/91 MIRU rentals & service rig. NU BOP & POOH w/tbg & pkr.

10/13/91 RU Halliburton. Set CIBP @ 7500' w/35' cmt plug on top (verbal approval by Jack Johnston of BLM). PBTD @ 7465'. RIH w/tbg to 7436' & circ. hole w/2% KCL wtr. POOH w/tbg to 5660'.

10/14/91 SI

10/15/91 SI

10/16/91 RU Halliburton, spot 7-1/2% Acetic acid across perf area (5555-5490'). RU swab & swab down to 5200'. POOH w/tbg, RIH w/4" csg gun & perf 2 spf @ 5490-98'. RU hydrotesters & test tbg to 6000 psi, set pkr @ 5420' w/SN @ 5419'. Load & test csg to 1000#. RU swab & made 4 runs to SN, slight gas & wtr.

10/17/91 FL @ 5300' (100' of fluid). Rec. 10-15 gals of heavy oil w/some gas. Wait one hr, no entry. RU Dowell & acidize perms (5490-98') w/1200 gals 7-1/2% MSR w/additives & 20 ball sealers, displaced w/33 bbls of 2% KCL wtr. Had good ball action, max. psi 2100#, avg 2000#, final 2500#. RU swab & made 6 runs - recovered 30 bbls of load.

10/18/91 RU swab. FL @ 4400' (SN @ 5420') swab a total of 8 runs, 1 run/hr w/100' of entry/hr. Rec. 8 bbls total (oil cut approximately 50/50). Oil sample shows 34 deg. API gravity black oil.

10/19/91	SITP 50#, FL @ 4600' (800' overnight). Made total 6 bbls in 6 runs. Release pkr & swab 83 bbls of KCL wtr from backside.
10/20/91	SI
10/21/91	SI
10/22/91	RU & lower pkr to 5571', spot 200 gals 7-1/2% acid across perf area (5543-55'). Set pkr @ 5509', test pkr, swab tbg down. RU Halliburton & RIH w/tbg guns & perf 2 spf @ 5543-55'. RD Halliburton, made 2 swab runs @ SN, wait 45 mins, 400' entry. Made a total of 12 runs w/entry 100' each run for a total of 10 bbls, 100% wtr.
10/23/91	RIH w/swab. FL 2200', swab 100% wtr w/100' of entry per run, showing 84 BWPD rate. POOH w/swab, release pkr, POOH w/tbg & pkr. RU Halliburton & RIH w/CIBP & set @ 5530'. RU dump bailer & dump 20' plug on top of CIBP (PBTD 5510'). RD Halliburton, RU tester & test tbgs to 6000#.
10/24/91	RU & circ. hole w/2% KCL wtr, set pkr @ 5416'. Pressure backside to 1500# & held okay. RD wtr truck, RU & swab 29 bbls to SN. RD swab, release rig.
10/25/91 to 10/29/91	Well SI waiting on frac job.
10/30/91	MIRU Western. Frac Delaware perms (5490-98') as follows: Pumped 7000 gallon pad of Viking I-35 followed by 40,400# of 16/30 Ottawa sand ramped 2-8 ppg in 7000 gals of gel containing J-4L gelling agent, crosslinker, gel breaker, surfactant. Broke formation @ 3400 psi w/pad. Avg injection pressure 3325 psi @ 12 BPM. Pump 1350 gals of flush. SITP 1500 psi. RD Western, RU lines to flow back. TLTR 365 bbls. In one hr open well on 3/64" choke, in one hr rec. 10 bbls. Well died @ 0500 10/30/91, TLR 52 bbls.
10/31/91	RU swab unit, RIH (fluid @ surface). Swabbed total of 30 runs, rec. 147 bbls of load fluid w/trace oil. Last runs pulling from 3100' w/FL @ 2200'.
11/01/91	Swabbed 140 bbls with 20/30% oil cut, TLR 339 bbls.
11/02/91	Swabbed 145 bbls with 30/40% oil cut, total fluid rec. 484 bbls - 119 bbls over load. Avg. FL @ 2900' w/200' entry every 10-15 mins.
11/03/91 to 11/11/91	SI
11/12/91	MIRU, release pkr & POOH. RIH & circ. frac sand & ball sealers. POOH leaving 10 stands as kill string.
11/13/91	POOH w/kill string. PU CIBP & RIH on tbgs to 5408' & set. Release & test - held okay. RU & circ. hole w/2% KCL. Start out of hole, spotted 200 gals 7-1/2% acid across perf area. POOH to 5000', RU swab & swab csg down. RD swab & POOH w/tbg.
11/14/91	RU Halliburton. RIH w/csg guns, perf 2 spf @ 5112-28', 5138-52', 5164-74'. POOH w/guns, RD Halliburton. RU tbgs tester & test tbgs in hole to 6000#. Set pkr @ 5056'.
11/15/91	Swabbed 16 bbls, 100% wtr, w/200' of entry per hr.