

ACIDIZING OR OTHER COMPLETION OPERATION

- #1. Cardinal Chemical Co. Acidize Perfs. in 7" OD 8456-8484' w/3000 Gals. 20% SLT, Time 3 hrs. 20 Min., Injection Rate 4 BPM, TP 4000-5000-4900-5000#, Swabbed 34 BLO (All) / 68 BAW 18 hrs. Swabbed 4 BFO / 4 BAW (All) 8 hrs.
- #2 Cardinal Chemical Co. Re-Acidized Perfs. in 7" OD 8456-8484' w/6000 Gals. 20% SLT, Time 61 Min. Inj. Rate 2.3 BPM, TP 4700-4800-3500#, C.P. Pkr. Swabbed 34 BLO (All) / 104 BAW 7 hrs. Flowed 50 BFO / 40 BAW 4 hrs. 3/4" choke.

DRILL STEM TEST

- #1 DST (Queen & Grayburg) 3166-3314' (Open Hole) Open 2 hrs. 5/8" X 1" Chokes, 2 Pkrs. Nothing to Surface, 900' Air Cut Mud Recovered. SFP 100-20#, BHFP 140-350#, 15 Min. SI BHP 1200#, HH 2010 in & Out. Air blow est. Vol. 594 MCF/Day.
- #2 DST (Yaso) 6935-7077' (Open Hole) Open 1 hr. 5/8" x 1" Chokes, 2 Pkrs. Nothing to Surface, Rec. 40' Drlg. Mud, No Shows, SFP Zero, BHFP 0-70#, 15 Min SI BHP 70#, HH 3220# in & Out.
- #3 DST (Wolfcamp) 8457-8508 (Open Hole) Open 1 hr. 5/8" x 1" Chokes, 2 Pkrs. Gas to Surface 35 Min. T.S.T.M. Rec. 250' Gas cut drlg. mud, 40' Heavily oil & gas cut mud, 10' free oil, SFP Zero, BHFP 30-55#, 15 Min. SI BHP 300#, HH 4320 in, 4250 Out.
- #4 DST (Wolfcamp) 8508-8558 (Open Hole) Open 1 hr. 5/8" X 1" Chokes, 2 Pkrs. Nothing to surface, Rec. 170' gas cut drlg. mud, w/light trace oil, SFP Zero, BHFP 35#, 15 Min. SI BHP 80#, HH 4370 in, 4310 Out.
- #5 DST (Wolfcamp) 8558-8608 (Open Hole) Open 1 hr. 5/8" X 1" Chokes, 2 Pkrs. Nothing to surface, Pkr. failed to set first 3 times, Rec. 2200' drlg mud, No Shows, SFP Zero, BHFP 1090-1117#, 15 min. SI BHP 1555#, HH 4425 in 4320 Out.
- #6 DST (Wolfcamp) 8588-8638 (Open Hole) Open 1 hr. 5/8" X 1" Chokes, 2 Pkrs. Nothing to surface, Rec. 70' Drlg Mud, no shows, SFP Zero, BHFP Zero, 15 Min. SI BHP Zero, HH 4300 in & Out.
- #7 DST (Wolfcamp) 8730-8758 (Open Hole) Open 2 hrs. 5/8" BHC & 1" SC, 2 Pkrs. Nothing to surface, Rec. 120' Gas cut drlg. mud, SFP Zero, BHFP Zero, 15 Min. SI BHP 45#, HH 4410 in & Out.

No Water Cushion in above Drill Stem Test.

DEVIATION SURVEY

<u>DEPTH</u>	<u>OFF VERTICAL</u>
940	1/2°
2697	1°
2990	1-1/4°
3600	1°
5945	1/2°
6359	3/4°
7212	1°
7690	3/4°
8448	1/2°
8638	1-1/4°
8928	3-1/4°
9020	3-1/2°