

BILL STEM TESTS (CONTINUED)

14 12-17-53 8638 8738 Open Hole 8638 1" 5/8" None 2 hours

Abo, 2 pkrs, gas to surface 21 min. too small to measure, rec. 360' oil and gas cut mud, 630' free oil, reversed out 630' oil above TP valve, 160' free oil below TP valve / 20' Sulphur Water, SFP: 0#, BHFP: 185-760#, 15 min. SIPressure 1615#, HH: 4590-4565#, Gr. 38.9° @ 60°.

15 12-20-53 8743 8779 Open Hole 8743 1" 5/8" None 2½ hrs

Abo, 2 pkrs, gas to surface 5 min, 100 MCF/da, rec. 200' gas cut mud, 1900' free oil, 780' sulphur water, oil 34.5° gravity @ 58.06°, SFP: 0#, BHFP: 120-1090#, 15 min. SIPressure: 2810#, HH: 4415-4360#.

16 12-22-53 8780 8814 Open Hole 8780 1" 5/8" None 2 hours

Abo, 2 pkrs, nothing to surface, rec. 100' drlg. mud, 2150' slightly salty sulphur water, SFP: 0#, BHFP: 105-1180#, 15 min. SIPressure: 3190#, HH: 4370-4305#.

DEVIATION SURVEY

<u>Depth</u>	<u>Degrees Off Vertical</u>	<u>Depth</u>	<u>Degrees Off Vertical</u>	<u>Depth</u>	<u>Degrees Off Vertical</u>
390	3/4	6285	3 1/2	8064	1 3/4
2179	1	6335	3 1/4	8158	3
2534	1 1/2	6385	2 3/4	8248	5
3355	1	6482	2 1/2	8303	4 1/2
4133	1/2	6562	2	8436	3 1/2
4562	1/4	6760	1 1/2	8738	3 1/4
4642	1/2	6172	2	9092	6 1/4
4707	1/4	7243	2 1/4	9193	5
4790	3/4	7410	2 1/2	9312	6
4911	1/2	7572	2 1/4	9340	5 3/4
5343	3/4	7695	1 3/4	9384	5 1/2
5527	1	7759	2	9450	5
5752	3/4	7807	1 3/4	9540	4 1/4
6065	1	7890	2 1/2	9660	3 1/4
6185	3	7969	2 1/4	9746	3 1/2

ACIDIZING OR OTHER COMPLETION OPERATION

- 1-11-54 Cardinal Chemical acidized perf 8714-8738 w/500 gals mud acid, time 62 min, inj rate .2 BPM, TP: 2500-3500-1800#, CP: pkr, swabbed 34 BLO (all) 2 hrs, 55 BFO / 12 BAW (all) / 50 bbl form. salt water 13 hrs. 2000' FIH, last hr 11 bbls. s/o 45 % water 5% BS, fair show gas.
- 1-13-54 Cardinal Chemical acidized perf 8669-8677 w/500 gals mud acid, time 47 min, inj rate .4 BPM, TP: 3500-2000#, swab 34 BLO 2 hrs, 36 BFO / 12 BAW / 122 BSW 14 hrs, s/o 10% SW at start of test, final s/o 100% SW w/occasional show formation oil, 3500' FIH, very little gas, 11 bbls last hr.
- 1-15-54 Cardinal Chemical acidized perf 8622-8652 w/1000 gals mud acid, time 85 min. inj rate .3 BPM, TP: 4000-3500-6000#, CP: pkr, swabbed 33 BLO 5 hrs, 11 BAW 5 hrs, last hr 1.37 BAW, s/o 100% AW, 50' FIH, no gas.
- 1-16-54 Cardinal Chemical acidized perf 8622-8652 w/2000 gals 15% SLT acid, time 128 min, inj rate .4 BPM, TP: 3000-3600-4000#, swabbed 34 BLO (all) 4 hrs, swabbed 36 BFO / 48 BAW (all) / 30 bbls form water, swabbed 1 bbl water last hr, s/o 100% water, no FIH, no gas, water analysis: 25,000 PPM salt, PH-5.
- 1-18-54 Cardinal Chemical acidized perf 8622-8652 w/4000 gals 15% XLST, time 118 min, inj rate .8 BPM, TP: 800-3400#, CP: pkr, swabbed 34 BLO (all) 3 hrs, 96 BAW / 18 bbl form water & BS / 4 BFO 16 hrs, last hr 3 bbls. Fluid s/o 85% water, 15% BS, 500' FIH, slight show gas (water sulphur).
- 1-27-54 Cardinal Chemical attempted to acidize perf 8624-8632 w/1000 gals 20% mud acid, acid on formation ½ hrs, TP: 5700#, no inj., CP: 3250#, w/pkr, swabbed 24 BAW (all) / 9 BLO 5 hrs, dry 1 hr.
- 1-28-54 Cardinal Chemical attempted to acidize perf 8624-8632 w/1000 gals 20% mud acid, TP: 5700#, hold 4 hrs, no inj., rev out and pulled tubing and pkr.,
- 1-31-54 Cardinal Chemical acidized perf 8624-8632 w/500 gals 15% LST acid, time 65 min, inj rate .2 BPM, TP: 5000-5700-4000#, swabbed 33 BLO 4 hrs, 12 BAW / 6 bbls sulphur water 6 hrs, 400' FIH, 5 bbls last hr, s/o 90% water, 4% BS, no gas.
- 2-1-54 Cardinal Chemical acidized perf 8582-8605 w/500 gals 15% XLST acid, time 52 min. inj rate .5 BPM, TP: 5700-4000#, CP: pkr, swab 33 BLO (all) 3 hrs, 12 BAW / 55 bbls sulphur water 4 hrs, 1200' FIH, last hr swabbed 8 bbls water, s/o 99% water, no gas.
- 2-3-54 Cardinal Chemical acidized perf 8543-8556 w/500 gals 15% XLST acid, time 78 min, inj. rate .3 BPM, TP: 5700-6300-5200#, CP: pkr, flowed 15 BLO 2 hrs & died, swabbed 18 BLO (all) 3 hrs, 12 BAW 3 hrs last hr, 2 BAW, s/o 99% AW, 1% BS, 150' FIH, no gas.