FRAC PROCEDURE WELL: Stonewall DS-2 DATE: 5-13-93

OBJECTIVE: Frac DS 6310-6418' as shown below at 40-45 BPM.
Zone will be fraced with 77600 gal. 30# XL + 159800 # 20/40 brady + 40200 # 16/30 rc

FRAC SCHEDULE:

Stage	Fluid Volume (gal.)	Proppant Conc. (ppg)	Lbs. Proppant	Proppant Type	Clean Volume (bbls.)	Dirty Volume (bbls.)	Cumul. Dirty Volume
Pad	27000	0	0		643	643	643
1	6600	2	13200	2040 br	157	171	814
2	13300	3	39900	2040 br	317	360	1174
3	13300	4	53200	2040 br	317	374	1549
4	10700	5	53500	2040 br	255	313	1862
5	6700	6	40200	1630 rc	160	203	2065
Flush	5900		0		140	140	2205
	83500		200000		1988	2205	

ADDITIVES:

159800 lbs. 20/40 Brady sand
40200 lbs. 16/30 resin coated sand
2084 bbls. clean 2% KCl water (incl. tank bottoms, flush)
24 lbs. Frac-Cide 20 biocide (6#/frac tank premixed)
2626 lbs. J-4 low residue, high yield guar gel (30 #/1000 gal premixed)
1751 lbs. Aquaseal-2 FLA (20 #/1000 gal. premixed)
_____ gal. Buffer 5L (1.5 gal./1000 gal. on the fly)
___ lbs. B-5 ammonium persulfate breaker (premixed as necessary)
____ gals. CL-30 crosslinker (1 gal./1000 gal.)
___ lbs. Ultra Perm breaker (as necessary)
175 gal. Nine-40 nonemulsifier (2 gal./1000 gal. premixed)
40.2 gal. Acfrac activator for resin coated sand (6 gal./1000 gal. prop laden)

COMMENTS:

1. Pump job at 40-45 BPM down 5-1/2" casing.
   Limit treating pressure to 4000 psi.
2. Use clean frac tank. Add bactericide to water when filling tank.
3. Have service company engineer run breaker tests to determine actual breaker loading
   required at 135 deg. F the night before job is to be pumped. Use water
   from actual frac tank and chemicals, including activator, that will actually be pumped.
4. When sand runs out, bypass blender tub and begin flush. DON'T WANT
   SAND CONCENTRATION DILUTED AT END OF JOB.
5. Displace frac 3 bbls. short of top perf with base gel.
   DO NOT OVERFLUSH FRAC.

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