

8. Pump 60 bbls (2520 gals) 15% HCl-NE-FE acid inhibited for 24 hrs @ 110°F dropping 3 ball sealers (1.3 S.G.) every 4 bbls pumped.  
A. Attempt to achieve ball out.
- Maximum injection pressure: 3000 psi  
NOTE: Monitor backside pressure during job.
9. Release packer at +6050' and run past perforations to knock off ball sealers.
10. Set packer @ +6050'.
- NOTE: Monitor backside pressure during job.
11. Acid frac the Tubb formation in 3 stages as follows:  
A. Pump 6048 gals (144 bbls) 40# gelled water pad.  
B. Pump 5376 gals (128 bbls) 28% HCl-NE-FE.  
C. Pump 3906 gals (93 bbls) 40# gelled water flush.  
D. Drop 10 ball sealers.  
E. Record ISIP and tubing pressure every 5 minutes for 15 minutes.  
F. SION.

NOTE: Monitor backside pressure during job.

Frac Pad Composition

2% KCL water  
40# per 1000 gals guar gum  
8 hr external breaker @ 110°F  
Bacteriacide  
Non-Emulsifier  
25# per 1000 gallons Adomite Aqua

Frac Acid Composition

28% HCl  
Non-Emulsifier  
Iron-sequestering agent  
Inhibitor (48 hrs @ 110°F)  
Friction reducer

Frac Flush Composition

2% KCL water  
40# per 1000 gallons guar gum  
8 hr external breaker @ 110°F  
Bacteriacide  
Non-Emulsifier

Optimum Pump Rate: 21 BPM

Estimated Surface Treating Pressure: 4700 psi

Maximum Surface Treating Pressure: See Pressure Rate Chart