

State "2" Well #1
Workover Procedure
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7. Continue in hole and clean out to TOC on CIBP @ 8850'. Circ. hole clean with 9.0 ppg brine water. POH.
8. Perf. Second Bone Springs w/ 4" csg. gun, select-fire at 8483', 8503', -09, -65, -70, -80, -90, -95, 8605', -10, -15, -25, -30 -45, -50, -55, -8725', -27, -45, and 8751' (20 holes).
9. TIH w/ retrievable packer and 2-7/8" tbg. to 8751'. Spot acid across perfs. PUH and set pkr. at 8400' $\pm$. Pressure annulus to 1000 psi and acidize Second Bone Springs perfs w/ 2000 gals. 15% HCL NEFE at 5-6 bpm. Drop 30-1.3 sg ball sealers (3 every 200 gals.). Displace to bottom perf. SI for 30 min. Swab test perfs. POH.
10. Frac Second Bone Springs perfs down 5-1/2" csg. w/ 80,000 gals. 40# gelled 2% KCL water X-L and carrying 234,000# sand. MXP-3600 psi. Displace to top perf. w/ slick water. SION.
11. TIH w/ retrievable pkr., SN and 2-7/8" tbg. Set pkr. at 8400' $\pm$. Swab test perf. (Evaluate for 1-2 weeks, estimated).
12. If Second Bone Springs is uneconomical, RU WL unit and set CIBP at 8430' and 6936'. Dump 35' of cement on top of CIBP at 6936'.
13. Perforate 1' 4 spf squeeze holes w/ 4" csg. gun at 4550'. RIH w/ pkr. on 2-7/8" tbg. and set at 4500' $\pm$. Pressure annulus to 1000 psi. Establish IR and IP into squeeze holes. Break circulation at surface in 5-1/2" x 8-5/8" annulus. POH.
14. TIH w/ CICR and set at 4450'. Squeeze cement w/ 750 sx Cl "H" .3% FR and 2% gel (14.9 ppg, 1.36 cuft/ sx, $\pm$ 3:30 hr. thickening time, 24 hr. comp. strength of 1800 psi). Dump 35 ft. of cement on top of CICR and reverse out. If cement does not circulate, run slickline temperature survey to determine TOC.
15. RU WL unit and run TDT-P/GR/CCL log f/ 4000'-2000'. Perforate Queen formation w/ 4" csg. gun at 1 spf f/ 3218'-38' (20 holes; actual perforations will be determined from TDT log).
16. TIH w/ retrievable pkr., SN and 2-7/8" tbg. Set pkr. at 3150' $\pm$. Pressure annulus to 1000 psi. Acidize Queen perfs w/ 2000 gals. 15% HCL NEFE at 5 bpm. Drop 30-1.3 sg ball sealers (3 every 200 gals.). Displace to bottom perf. w/ 2% KCL water. SI 30 min. Swab test perfs. (est. 2-3 days). POH. If economical, contact Midland for revised procedure. If uneconomical, proceed.
17. Set CIBP at 3200'.
18. Perforate Queen formation w/ 4" csg. gun, 1 spf approx. f/ 3100'-20' (20 holes). Actual perforations will be based upon GR/TDT-P log analysis.