Procedure

Steps 1-10 need to be charged to ASD for abandonment of the Ellenburger interval.

- 1. Make plans to change from pumping "T" to flowing setup. Make battery changes needed.
- 2. Meet with <u>all parties</u> involved in this job to discuss procedures and planning.
- 3. MIRU PU.
- 4. Install BOP System
- 5. TIH w/ bit and scraper to $\sim 10,100$ '. TOH.
- 6. MIRU wireline truck.
- 7. TIH w/ 5 $\frac{1}{2}$ " CIBP and set ~10,100'.
- 8. Top CIBP with 35' cement.
- 9. TIH w/ tbg. and circulate hole with 2% KCL and corrosion inhibitor.
- 10. Test plug and obtain chart for NMOCD. These charges go on ASD estimate for TA of the Ellenburger zone.
- 11. TIH w/ 4" perforating gun and perforate the Abo interval as follows with 2 SPF using Hyper jet charges (100 holes). Utilize a lubricator during perforating procedures and have a full set of bolts on the flange. TOH.

6604-6606, 6614, 6621, 6639, 6649-6650, 6681, 6704-6706, 6712-6714, 6724, 6726, 6728, 6736, 6738, 6755-6757, 6778, 6826-6828, 6837, 6867, 6877, 6883, 6921, 6932, 6943-6947, 6955, 6961, 6981, 6999, 7005, 7035, 7039, 7047, 7055-7058 (100 holes)

- 12. TIH w/ 3 $\frac{1}{2}$ " treating string and treating packer. Set packer ~6500". Hydrostatic test tubing going in hole to 8500#.
- 13. Load and pressure backside to 500#.
- 14. Establish rate and pressure w/ 2% KCL and acidize w/ 4000 gals 15% NEFE HCL and 150 ball sealers as per Dowell recommendation.
- 15. Surge balls and allow to fall.
- 16. Acidize frac perforations with 15,000 gals 65 quality CO2 foamed 20 % HCL as per Engineer and Dowell recommendation.
- 17. Open well and flow back to test.
- 18. Test and obtain fluid and pressure data.
- 19. {Consult with Engineer on results of Abo test before adding Drinkard.}

- 20. TIH on wireline and set plug in packer assemble.
- 21. Release packer and TOH w/ treating packer and string.
- 22. Redress packer to use for the Drinkard zone.
- 23. TIH w/ RBP and set ~6540' to isolate the Abo perforations.
- 24. TIH w/ 4" perforating gun and perforate the Drinkard with 2 SPF using Hyper Jet charges (52 holes). Utilize a lubricator during perforating procedures and have a full set of bolts on the flange. TOH.
 - 6335, 6341, 6347, 6348, 6367, 6369, 6373, 6389, 6405, 6409, 6416, 6420, 6426, 6442-6444, 6449, 6457, 6473, 6478, 6483, 6490-6493
- 25. TIH w/ treating packer. Set packer ~6235'.
- 26. TIH w/ workstring and latch into packer. Hydrostatic test tubing going in hole to 8500#.
- 27. Load and pressure backside to 500#.
- 28. Establish rate and pressure w/ 2% KCL. Acidize perforations w/ 3000 gals 15% NEFE HCL w/ 78 balls.
- 29. Surge balls and allow to fall.
- 30. Acidize frac perforations with 10,000 gals 65 quality CO2 foamed 20 % HCL as per Engineer and Dowell recommendation.
- 31. Open well and flow back to test.
- 32. Evaluate and test Drinkard interval.
- 33. Retrieve the RBP above the Abo and commmingle the Abo and Drinkard intervals.
- 34. Obtain fluid and pressure data.
- 35. OPT test the well.