

PROCEDURE
Mudge A 11A

All water used in this procedure which will be exposed to the Mesaverde should contain 3% KCl.

1. MIRUSU.
2. Install BOP.
3. Clean out to 5390' (PBSD).
4. TIH with RBP and set at 4250', cap with 5 sacks of sand.
5. Pressure test casing and liner top to 1000 psig. Locate leaks if necessary.
 - a) If leaks exist inside 4 1/2" liner, conduct cement squeeze(s) until hole(s) will test to 1000 psig.
 - b) If leaks exist inside 7" casing, contact Paul Edwards in the Denver office before proceeding.
6. Reset RBP to 4250' and cap with 5 sacks of sand.
7. Run a GR/CBL from 3000' to surface and determine top of cement for 7" casing. Make additional passes at higher pressures if bonding is not clear.
8. Set a RBP 50' below TOC in 7" casing and cap with sand.
9. Perf 2 holes within 50' above the TOC.
10. Set a packer 50' above TOC in 7" casing. If leaks were found above this point, a different approach to the squeeze may be necessary.
11. Establish circulation to surface, calculate annular volume with a dye.
12. Pump a preflush for high fluid loss applications prior to the squeeze.
13. Pump 300% of annular volume of cement through squeeze perfs. Annular volume is estimated to be 28 bbl. Stage last 5 bbl and note returns throughout job.
14. WOC at least 24 hours.
15. Drill out cement to RBP.
16. Pressure test squeeze perfs to 1000 psi; run CBL if pressure holds.
17. Resqueeze until pressure test holds, and cement is to surface.
18. Retrieve both RBPs.
19. If several holes were shot in the 7" casing, contact office for the possibility of running 4 1/2" or 5 1/2" casing to the liner top, or even backing off of the 4 1/2" liner hanger and then tying 4 1/2" casing back to the surface.
20. TIH with open ended 2 3/8" tubing with a seating nipple one joint off bottom. Land tubing at 5330' KB.
21. Return well to production.