

PLUG & ABANDONMENT PROCEDURE

HOLTON 16-5

Step	Description of Work
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1. Provide 48 hr notice to COGCC prior to rig up per request on approved Form 6 (e.g. call field coordinator, submit Form 42, etc.). Call Automation Removal Group at least 24 hr prior to rig move. Request they catch and remove the plunger, isolate production equipment and remove any automation prior to MIRU.
2. MIRU Slickline. Pull bumper spring and tag bottom. Record tag depth in Open Wells. RD slickline.
3. Prepare location for base beam equipped rig. Install perimeter fence as needed. Order a minimum of an additional **95 joints** of 2-3/8", 4.7# tbg, J-55 EUE.
4. Check and record bradenhead pressure. If bradenhead valve is not accessible, re-plumb so that valve is above GL. Blow down bradenhead and re-check pressure the next day. Repeat until pressure stays at 0 psi.
5. Contact the On-Call Engineer to discuss bradenhead pressure upon rig-up to determine if additional action needs to be taken beyond what the procedure proposes.
6. MIRU WO rig. Kill as necessary using clean fresh water with biocide. ND WH. NU BOP.
7. TOO H and SB all 2-3/8" tbg.
8. PU 4-1/2", 11.6# scraper and TIH with 2-3/8" tbg down to 4570'. TOO H and SB all 2-3/8" tbg.
9. RU hydrotesters. TIH OE to approximately 7200' while hydrotesting to 3000 psi. Tag CIBP (2 sx cement on top) and record depth in OW. RD hydrotesters.
10. RU cementers. **Pump Niobrara Balanced Plug:** Pump 25 sxs (86 cu.ft.) assumed at 15.8 ppg & 1.53 cf/sk. Volume based on 400' inside 4-1/2" production casing. RD cementers.
11. Slowly pull out of the cement and PUH to 6600'. Reverse circulate tubing clean to ensure no cement is left in the tubing. TOO H and SB 4560' of 2-3/8" tbg.
12. PU 4-1/2" 11.6# CIBP and TIH with 2-3/8" tbg. Set CIBP at 4560' (collars located at 4546' and 4588').
13. RU cementers. **Pump Sussex Balanced Plug:** 25 sx (94 cu.ft.) assumed at 15.8 ppg & 1.17 cf/sk. Volume based on 285' inside 4-1/2" casing. RD cementers.
14. Slowly pull out of cement and PUH to 4075'. Reverse circulate tubing clean to ensure no cement is left in tubing.
15. TOO H and SB 1565' of 2-3/8" tubing. LD remainder.
16. RU WL. RIH with jet cutter and cut 4-1/2" casing at 1465'. RD WL.
17. Circulate with fresh water containing biocide to remove any gas.
18. Un-land casing. ND BOP. ND TH. Install BOP on casing head with 4-1/2" pipe rams.
19. TOO H and LD 1465' of 4-1/2" casing. Remove 4-1/2" pipe rams and install 2-3/8" pipe rams.
20. TIH OE with 2-3/8" tbg to 1565'.
21. Establish circulation with biocide treated fresh water and get bottoms up twice.
22. RU Cementers. Precede cement with 10 bbls (min) SAPP, followed by 20 bbls fresh water spacer. **Pump Stub Plug:** 300 sxs (348 cu.ft.) assumed at 15.8 ppg and 1.16 cf/sk. Volume is based on 100' in 4-1/2" production casing with no excess, 654' of 8.5" OH from log with 20% excess, and 200' in 8-5/8" surface casing with no excess. The estimated plug will cover 1565' - 711'. RD cementers.

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23. Slowly pull out of the cement and PUH to 550'. Reverse circulate tubing clean to ensure no cement is left in the tubing.
24. WOC per cement company recommendation. Tag cement. Cement top needs to be at or above 861' (50' above surface casing shoe located at 911'). Contact the on-call engineer with tag depth to determine appropriate coverage. TOOH and LD remainder.
25. RU WL. RIH 8-5/8", 24# CIBP to 80'. RDMO wireline and WO rig.
26. Instruct cementing and wireline contractors to e-mail copies of all job logs/job summaries to rscDJVendors@anadarko.com within 24 hours of completion of the job.
27. Supervisor submit paper copies of all invoices, logs, and reports to Evans Engineering Specialist.
28. Excavation crew to notify One Call to clear excavation area around wellhead and for flow lines.
29. Capping crew will set and secure night cap on 8 5/8" casing head, restrain the casing head, pressure test CIBP to 500 psi with hydrotest pump, then remove night cap and casing head restraints.
30. Excavate hole around surface casing enough to allow welder to cut casing a minimum 5' below ground level.
31. Welder cut casing minimum 5' below ground level.
32. Fill casing to surface using 4500 psi compressive strength cement (NO gravel).
33. Spot weld on steel marker plate. Marker should contain Well name, Well number, legal location (1/4 1/4 descriptor) and API number.
34. Obtain GPS location data as per COGCC Rule 215 and send to rscDJVendors@anadarko.com.
35. Properly abandon flow lines per Rule 1103. File electronic Form 42 once abandonment is complete.
36. Back fill hole with fill. Clean location, and level.
37. Submit Form 6 to COGCC ensuring to provide 'As performed' WBD identifying operations completed.