

## Dunklee 3 P&A

Mike Sax  
Production Engineer  
970-339-1449 office; 310-613-1637 cell

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 the Automation Removal Group at least 24 hr prior to rig move. Request they catch and remove plunger, isolate production equipment and remove any automation prior to rig MIRU.
2. MIRU slickline services & VES. Pull bumper spring and tag bottom (SN @ +/- 6,940'; 4.7# 2-3/8" tbg). Run Gyro from SN to surface with measurements every 100'. Run pressure recorder and obtain pressure gradient survey from surface to 6,980' making gradient stops every 1,000'. Forward the pressure bomb results to Evans Engineering. RDMO slickline services. NOTE: The BHP survey must be run before the well is blown down or killed with fluid.
3. Prepare location for base beam equipped rig. Install perimeter fence as needed.
4. Check and record Bradenhead pressure. If Bradenhead valve is not accessible, re-plumb so that valve is above GL.
5. MIRU WO rig. Kill well as necessary w/ water containing biocide. ND WH, NU BOP.
6. PU the 2-3/8" tbg (4.7#) to break any sand bridges. Do not exceed the safety tensile load of 57,600 lbs (80% of upset yield strength).
7. TOOH. SB +/- 6,700' of tbg, LD the remainder.
8. PU csg scraper for 4-1/2", 11.6# csg on 2-3/8" tbg and TIH to +/- 6,700'. TOOH and SB tbg, LD csg scraper.
9. MIRU Wireline. PU CIBP for 4-1/2" csg (11.6#, FC-70, LTC). RIH and set CIBP at 6,630'. POOH and LD the setting tool.
10. TIH w/ 2-3/8" tbg to 3,000', load the hole, and circulate out the gas for the CBL. TOOH w/ 2-3/8" tbg.
11. PU CBL-CCL and Log from 6,630' to Surface. Notify Evans Engineering of the log results prior to proceeding and send log to Evans Engineering Specialist. NOTE: Calculated TOC is 6,004' and the procedure may change depending on log results. RDMO Wireline.
12. Pressure test the CIBP to 1,000 psi for 15 min.
13. TIH w/ 2-3/8" tbg while hydrotesting to 3,000 psi and tag CIBP. PU 5' feet from tag.
14. MIRU Cementing Services. Spot 25 sx (+/- 37.8 cuft) of cmt (Thermal 35 + 0.5% CFR-2 + 0.25% FMC) mixed at 15.6 ppg with a yield of 1.51 cuft/sk for a 3:28 thickening time from 6,630' to 6,290' in the 4-1/2" csg. RDMO Cementing Services.
15. POOH and SB 3,650' of 2-3/8" tbg, LD the remainder.
16. MIRU Wireline. PU and RIH two perf guns (3-1/8", 6 spf, 0.42" EHD, 7" penetration, 60° phasing, 3' net, 18 total holes) to 4,220' and shoot 1' of bottom perfs in the 4-1/2" prod csg. PUH to 3,620' and shoot 2' of top perfs. POOH and LD perf gun. RDMO Wireline.
17. PU CICR for 4-1/2" 11.6# csg on 2-3/8" tbg. TIH and set CICR at +/- 3,650'.
18. Establish circulation w/ water containing biocide.
19. MIRU Cementing Services. Pump 20 bbls of metasilicate then 10 bbls of fresh water followed by 480 sx (+/- 552 cuft) of cmt (Class G + 0.5% CFR-2 + 0.2% FMC + 0.5% LWA + 0.25 lb/sk polyflake) mixed at 15.8 ppg and 1.15 cuft/sk for a 4:47 thickening

- time from 4,220' to 3,620' in 12":4-1/2" annulus (12" from caliper, + 20% excess) and 4,220' to 3,520' in the 4-1/2" prod csg. Under displace by 3 bbls, sting out of the retainer and dump 3 bbls of cmt on top of the CICR. RDMO Cementing Services.
20. POOH and SB +/- 800' of tbq, LD the remainder.
  21. MIRU Wireline. PU jet cutter for 4-1/2" 11.6# csg. RIH and cut csg at 650'. POOH and LD jet cutter. RDMO Wireline. Circulate to remove any gas from the wellbore.
  22. ND BOP and tbq head. NU BOP on the surface csg head w/ 4-1/2" pipe rams. Install 3,000 psi rated ball valves on both surface csg outlets. Install a choke or a choke manifold on one of the outlets.
  23. TOO and LD 4-1/2" csg.
  24. Remove the 4-1/2" pipe rams and install 2-3/8" pipe rams on the BOP.
  25. TIH w/ 2-3/8" tbq to 750' (100' past the csg stub).
  26. MIRU Cementing Services. Establish circulation with water containing biocide and get bottoms up. Pump 10 bbls of SAPP (Sodium Acid pyrophosphate) followed by 20 bbls of fresh water containing biocide. Spot 280 sx (+/- 372.4 cuft) of cmt (Type III + 0.3% CFL-3 + 0.3% CFR-2 + 0.25 lb/sk polyflake + 0.5% CaCl<sub>2</sub> as deemed necessary) mixed at 14.8 ppg and 1.33 cuft/sk from 750' to 650' inside 4-1/2" csg stub; 650' to 385' in 12" OH (from closest caliper, + 40% excess); and from 385' to 180' inside 8-5/8" csg. RDMO Cementing Services.
  27. SB +/- 180' of tbq. PUH to 100' and circulate clean. WOC for 4 hrs.
  28. TIH w/ tbq and tag TOC. If cement is deeper than 280' contact Engineering in Evans.
  29. MIRU wireline. PU CIBP on wireline for 8-5/8" (24#) csg and TIH to +/- 80'. Set CIBP and test to 1000 psi for 15 min. POOH and LD wireline. RDMO wireline.
  30. RDMO WO rig.
  31. NOTE: Instruct cementing & wireline contractors to email copies of all job logs/job summaries & invoices to [rsdJVVendors@anadarko.com](mailto:rsdJVVendors@anadarko.com) within 24 hours of the completion of the job.
  32. Wellsite supervisor should turn all paper copies of cementing reports/invoices and logs into Evans Engineering Specialist.
  33. Have excavation contractor notify One-Call to clear for digging around wellhead and flowline removal.
  34. Excavate hole around surface casing enough to allow welder to cut 8-5/8" casing minimum 5' below ground level.
  35. Welder cut 8-5/8" casing minimum 5' below ground level.
  36. MIRU ready cement mixer. Fill the last 80' inside the 8-5/8" prod. casing until 10' below surface. Use 4,500 psi compressive strength redi-mix cement (Sand and Cement only, no gravel) to finish filling surface casing to top of cut off.
  37. Have welder spot weld on steel marker plate. (Note: marker shall be labeled with well name and number, legal location (¼ ¼ description) and API number.
  38. Properly abandon flowlines as per rule 1103.
  39. Have excavation contractor back fill hole with native material. Clean up location and have leveled to plant any vegetation required.
  40. Submit Form 6 to COGCC. Provide "As Plugged" wellbore diagram identifying the specific plugging completed.