

## PLUG AND ABANDONMENT PROCEDURE

### Carole Red V 1-15

1. Note: Production Casing = 3-1/2" OD, 7.7#/ft, N-80; Production Hole Drilled @ 7-7/8".
2. 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 Foreman or Field Coordinator at least 24 hr prior to rig move.
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. Arrange delivery of 2-1/16" work string for cementing operations: 4520' minimum.
6. MIRU. ND WH. NU and function test BOP.
7. Notify cementers to be on call. Provide volumes listed below:
  - 7.1 SX Plug: 23 cu ft/20 sx class "G" w/0.4% CD-32, 0.4% ASA-301 mixed at 15.8 ppg and 1.15 cf/sx (440' inside 2-7/8" casing, no excess).
  - 7.2 Stub Plug: 412 cu ft/310 sx Type III cement w/0.25 pps cello flake and CaCl<sub>2</sub> as deemed necessary mixed at 14.8 ppg and 1.33 cf/sx (100' in 3-1/2" production casing, 600' in 8.5" OH + 40% excess, and 200' in 8 5/8" surface casing). Nearest caliper reading at 3900'.
8. RIH open ended 2-1/16" tbg to 4520' while hydrotesting to 3000 psi.
9. RU Cementers. Pump SX Plug: 23 cu ft/20 sx class "G" w/0.4% CD-32, 0.4% ASA-301 mixed at 15.8 ppg and 1.15 cf/sx to place cement in 3-1/2" production casing from 4520' to 4080'.
10. PUH to 3600'. Circulate 40 bbls water containing biocide to clear tubing and cement. WOC per cement company's recommendations.
11. Tag TOC at or above 4080' w/ 2-1/16" tbg. Then, TOO and LD all but 1230' of tubing.
12. RU WL. Shoot off 3-1/2" casing at or below 1130'. RD WL. Circulate water containing biocide to remove any gas.
13. NDBOP, NDTH.
14. Install BOP on casing head with 3-1/2" pipe rams.
15. TOO with 3-1/2" casing, LD.
16. RIH with 2-1/16" tubing to 1230'.
17. RU Cementers. Pump 10 bbl SAPP with a minimum of 20 bbl fresh water spacer. Spot Stub Plug: 412 cu ft/310 sx Type III cement w/0.25 pps cello flake and CaCl<sub>2</sub> as deemed necessary mixed at 14.8 ppg and 1.33 cf/sx. Plug to cover from 1230' to 330'.
18. PUH to 200' and circulate 35 bbls water containing biocide to clear tubing.
19. TOO. WOC 4 hrs. Tag Cement. Cement top needs to be above 330'; Proceed assuming TOC is above 330'. Otherwise, call engineer.
20. MIRU WL. RIH 8-5/8" CIBP to 80'. Set and PT to 1000 psi for 15 min. If test holds, RDMO WL and WO rig.
21. Instruct cementing and wireline contractors to e-mail copies of all job logs/job summaries and invoices to rscDJVendors@anadarko.com within 24 hrs of the completion of the job.
22. Supervisor submit paper copies of all invoices, logs, and reports to Joleen Kramer.



23. Excavation crew to notify One Call to clear excavation area around wellhead and for flowlines.
24. Excavate hole around surface casing enough to allow welder to cut 8-5/8" casing minimum 5' below ground level.
25. Welder cut 8-5/8" casing minimum 5' below ground level.
26. MIRU ready cement mixer. Use 4500 psi compressive strength cement, (NO gravel) fill stubout.
27. Spot weld on steel marker plate. Marker should contain Well name, Well number, legal location (1/4 1/4 descriptor) and API number.
28. Properly abandon flowlines per Rule 1103.
29. Obtain GPS location data as per COGCC Rule 215 and send to [rscDJVendors@anadarko.com](mailto:rscDJVendors@anadarko.com).
30. Back fill hole with fill. Clean location, level.
31. Submit Form 6 to COGCC ensuring to provide 'As performed' WBD identifying operations completed. File electronic Form 42 once abandonment complete.