

Re-Entry PLUG and ABANDONMENT PROCEDURE

Francis M Rutt Gas Unit 1

API# 05-123-07413

Wins#

1. Well is being re-entered to P&A well to current standards due to it being offset to upcoming fracs.
2. Provide 48 hour notice to COGCC prior to rig up per request on approved Form 6 (e.g. submit Form 42, etc.).
3. Locate and expose 8 5/8" casing stub. Extend stub to 12" below GL and install 8 5/8"x 11" SOW, 3M casing head with 3000 psi ball valves in both outlets.
4. Prepare location for base beam equipped rig. Install perimeter fence as needed. Spot in 235 jts of 3-1/2" work string (WS) to location.
5. MIRU Spud rig. NU 9" 3000 psi BOP stack on casing head. PT BOP and casing head. Function test BOP. Install a choke manifold on casing outlet. NU rotating head on BOP. Hook up return line to shale shaker. Ensure full opening 3-1/2" TIW on rig floor.
6. PU 7-7/8" PDC bit, 6-1/2" mud motor, X-Over to workstring.
7. TIH and drill through 10 sx cement plug at surface. Once past cement plug and no cement is seen in returns, perform flow test.
8. Continue drilling to next 30 sx cement plug. TOC estimated to be at 41'. Once past cement plug and no cement is seen in returns, perform flow test.
9. Continue drilling to next 25 sx cement plug. TOC estimated to be at 926'. Once past cement plug and no cement is seen in returns, perform flow test.
10. Continue drilling until workstring tags casing cut estimated at 6120'. If no tag, stop drilling at this depth and contact engineering.
11. TOOH. LD Workstring. Remove bit and mud motor. TIH workstring with mule shoe to previous TD.
12. RU Cementers. Pump Casing Stub Balanced Plug: 180 sx (275 cf, 49bbl) 15.8 ppg & 1.55 cf/sk cement with 0.25 lb/sk Polyflake. Volume is based on 400' in the 7-7/8" drill bit size with 100% excess. Cement will be from 6120-5720. RD cementers.
13. Slowly pull out of the cement and PUH to 5500. Circulate to ensure no cement is left in the WS.
14. WOC per cement company recommendation. TIH and tag cement. Cement top needs to be at or above 5720'. Call Engineering if tag is lower.
15. LD WS while TOOH to 4288.
16. RU Cementers. Pump Sussex Balanced Plug: 240 sx (425 cf, 76bbl) 12 ppg with GasBlok & 1.79 cf/sk cement with 0.25 lb/sk Polyflake. Volume is based on 628' in the 7-7/8" drill bit size with 100% excess. Cement will be from 4288-3660. RD cementers.
17. Slowly pull out of the cement and PUH to 3400. Circulate to ensure no cement is left in the WS.
18. WOC per cement company recommendation. TIH and tag cement. Cement top needs to be at or above 3660'. Call Engineering if tag is lower.
19. LD WS while TOOH to 629'.
20. RU Cementers. Pump Surface Shoe Plug: 315 sx (358 cf, 64 bbl) 14 ppg with GasBlok & 1.15 cf/sk cement with 0.25 lb/sk Polyflake. Volume is based on 504' in the 7-7/8" drill bit size with 100% excess and 50' inside 8-5/8", 24#/ft surface casing with no excess. Cement will be from 629-75. RDMO Cementers
21. Slowly pull out of the cement and PUH to 60'. Circulate to ensure no cement is left in the WS or above 60' in the casing.

Re-Entry PLUG and ABANDONMENT PROCEDURE

Francis M Rutt Gas Unit 1

API# 05-123-07413

Wins#

22. TOOH, laying down remainder of WS.
23. WOC per cement company recommendation.
24. MIRU WL. RIH and tag cement top at +/-75'. Record depth of tag in OpenWells. Cement top needs to be at or above 75'. Call engineering if tag is lower.
25. PU and RIH 8-5/8", 24# CIBP to 50'. RDMO WL and spud 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 Platteville 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 to 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.