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PLUG and ABANDONMENT PROCEDURE

PEAKS 14-2

Description

1. Provide 48 hour notice to COGCC prior to rig up per request on approved Form 6 (e.g. call field coordinator, submit Form 42, etc.). Notify Automation Removal Group at least 24 hours prior to rig move. Request they catch and remove plunger, isolate production equipment, and remove any automation prior to rig MIRU.
2. MIRU Slickline. Pull production equipment and tag bottom. Record tag depth in Open Wells. Directional Survey was run on 05/18/11. RDMO Slickline.
3. Prepare location for base beam equipped rig. Install perimeter fence as needed.
4. Verify COAs before RU.
5. Upon RU, 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.
6. MIRU WO rig. Kill well as necessary using biocide treated fresh water. Verifty BOP and wellhead rating, inspect for appropriate API standards, pressure test BOP according to VWP BOP testing guidelines. ND WH. NU BOP. Unland tbg using unlanding joint and LD.
7. TOOH and SB 7550’ 2-3/8" tbg. LD any remainder.
8. MIRU WL. PU and RIH with (4-1/2", 11.6#) gauge ring to 8240'. POOH.
9. PU and RIH with (4-1/2", 11.6#) CIBP and set at +/- 8230' (collars at 8206' & 8250'). POOH. RIH and dump 2 sx cement on CIBP. POOH.
10. PU and RIH with (4-1/2", 11.6#) CIBP and set at +/- 7550' (collars at 7538' & 7580'). POOH. RDMO WL.
11. TIH with 2-3/8" tbg to 7550’
12. Load hole with biocide treated fresh water and circulate all gas out of well. PT CIBP to 1000 psi for 15 minutes.
13. MIRU Cementers. Pump Niobrara Balance Plug: Pump 25 sx (6.9 bbl or 39 cf) Class G Cement, assuming 15.8 ppg & 1.53 cf/sk. Volume based on 420’ inside 4-1/2", 11.6# production casing with no excess. Cement will be from 7550'-7130'. Collect wet and dry samples of cement to be left on rig.
14. Pull out of cement at a rate of 1 jt/min. TOOH to 4435' 2-3/8" tbg. LD remaining tbg. Pump 10 sx (2.7 bbl or 1.53 cf) Class G Cement, assuming 15.8 ppg & 1.53 cf/sk. Volume based on 100’ inside 4-1/2", 11.6# production casing with no excess. Cement will be from 4435'-4335'.RDMO Cementers.
15. Pull out of cement at a rate of 1 jt/min. TOOH, SB 2550' 2-3/8" tbg. LD remaining tbg.
16. RIH and jet cut 4-1/2", 11.6# casing at 2500'. RDMO WL.
17. Attempt to establish circulation and circulate (100 bbl) with fresh water containing biocide to remove any gas.
18. ND BOP. ND TH. Un-land casing using a casing spear, not a lifting sub. Rig max pull shall be 100,000#. Max pull over string weight shall be 50,000#. If unable to unland, contact Engineering.
19. Install BOP on casing head with 4-1/2", 11.6# pipe rams.
20. TOOH and LD all 4-1/2", 11.6# casing. Remove 4-1/2", 11.6# pipe rams and install 2-3/8" pipe rams.
21. TIH with mule shoe and 2-3/8" tubing to 2550'.

22. Establish circulation to surface with biocide treated fresh water and pump at least two hole-volumes (499 bbl) to circulate all gas out of the well. Contact engineering if evidence of gas migration persists.
23. RU Cementers. Pump 10 bbls (min) of pre-flush, followed by 5 bbls fresh water spacer. Pump Stub Plug: 50 sx (13.8 bbl or 77.5 cf) Class G cement with 0.25 lb/sk Polyflake, assuming 14 ppg & 1.55 cf/sk. Volume is based on 50' in 4-1/2", 11.6# production casing with no excess. 200' in 7.88" bit size open hole with 100% excess factor. The plug is designed to cover 2550'-2400'. Collect wet and dry samples of cement to be left on rig. Notify engineering if circulation is ever lost during job.
24. Pull out of cement at a rate of 1 jt/min. TOOH to 1130' 2-3/8" tbg. LD remaining tbg.
25. Pump 10 bbls (min) of pre-flush, followed by 5 bbls fresh water spacer. Pump Stub Plug: 135 sx (37.3 bbl or 210 cf) Class G cement with 0.25 lb/sk Polyflake, assuming 14 ppg & 1.55 cf/sk. Volume is based on 204' in 7.88" bit size open hole with 100% excess factor. 201' in the 8-5/8", 24# surface casing with no excess. The plug is designed to cover 1130'-725'. Collect wet and dry samples of cement to be left on rig. RDMO Cementers. Notify engineering if circulation is ever lost during job.
26. Pull out of cement at a rate of 1 jt/min. TOOH to 320'. Reverse circulate using biocide treated fresh water to ensure the tubing is clean. TOOH, SB 830' 2-3/8" tbg. WOC.
27. TIH with mule shoe on 2-3/8" tbg and tag cement to verify appropriate coverage above the surface casing shoe. Pressure test casing to 500 psi and hold for 15 minutes. TOOH to 150', LD 2-3/8" tbg.
28. MIRU Cementers. Pump Surface Plug: Pump 50 sx (10.5 bbl or 58 cf) Class G cement, assuming 15.8 ppg & 1.15 cf/sk. Volume based on 150’ inside 8-5/8", 24# surface casing with no excess. Cement will be from 150' to surface. Verify and document cement to surface. Collect wet and dry samples of cement to be left on rig. RDMO Cementers.
29. Pull out of cement at a rate of 1 jt/min. TOOH, LD all 2-3/8" tbg. Tag cement as needed to verify cement to surface. RDMO WO rig.
30. 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.
31. Supervisor submit paper copies of all invoices, logs, and reports to VWP Engineering Specialist.
32. Excavation crew to notify One Call to clear excavation area around wellhead and for flow lines.
33. Excavate hole around surface casing enough to allow welder to cut casing a minimum 5’ below ground level.
34. Welder cut casing minimum 5' below ground level.
35. Spot weld on steel marker plate. Marker should contain Well name, Well number, legal location (1/4 1/4 descriptor) and API number.
36. Obtain GPS location data as per COGCC Rule 215 and send to rscDJVendors@anadarko.com.
37. Properly abandon flow lines per Rule 1103. File electronic Form 42 once abandonment is complete.
38. Back fill hole with fill. Clean location, and level.
39. Submit Form 6 to COGCC ensuring to provide 'As performed' WBD identifying operations completed.