

PLUG and ABANDONMENT PROCEDURE

HICKS 7-10J7

Step	Description of Work
------	---------------------

- | | |
|-----|--|
| 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 bumper spring and tag bottom. Record tag depth in Open Wells. Well has gyro from 02/07/2014. RDMO Slickline. |
| 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. Blow down bradenhead and re-check pressure the next day. Repeat until pressure stays at 0 psi. |
| 5. | MIRU WO rig. Order 2-1/16" 3.25# J-55 EUE tbg if necessary. Kill well with biocide treated fresh water. ND WH. NU BOP. |
| 6. | TOOH & SB 7110' of 2-1/16" tbg. LD remaining tbg, XN, and NC. |
| 7. | PU and TIH with (3-1/2", 7.7#) Bit and Scraper on 2-1/16" tbg to 7110'. TOOH & SB 7100' 2-1/16" tbg and LD remaining tbg and bit and scraper. |
| 8. | MIRU Wireline. RIH with (3-1/2", 7.7#) CIBP and set CIBP at +/- 7100'. POOH & RDMO WL. |
| 9. | TIH with 2-1/16" tbg to 7100'. Load hole with biocide treated fresh water and circulate all gas from well. PT CIBP to 1000 psi for 15 minutes. |
| 10. | TOOH and SB all 2-1/16" tbg. |
| 11. | MIRU WL. Well requires CBL. PU and RIH with CCL-GR-CBL-VDL. Run log from 7100' to surface and send results to Engineering. Contact Engineer to discuss if any change of scope is needed. RDMO WL. |
| 12. | TIH with 2-1/16" tbg to 7100'. |
| 13. | <u>MIRU Cementers.</u> Pump Niobrara/Codell Balance Plug: Pump 25 sxs (39 cf or 6.8 bbls) 15.8 ppg & 1.53 cf/sk. Volume based on 610' inside 3-1/2" production casing with no excess. Cement will be from 7100' – 6490'. RDMO Cementers. |
| 14. | Slowly pull out of the cement and LD all 2-1/16" tbg. |
| 15. | MIRU WL. RIH and jet cut 3-1/2" csg at +/- 4190'. POOH and RDMO WL. |
| 16. | ND BOP & WH. Unland 3-1/2" csg with csg spear and establish pipe movement. Rig max pull shall be 70,000#. NU appropriate spool and BOP on csg head. Change pipe rams accordingly. |
| 17. | Establish circulation to surface with biocide treated fresh water and circulate all gas out of the well (1 hole volume is ~350 bbls) |
| 18. | <u>RU Cementers.</u> Pump Sussex Balance Plug: Pump 10 bbls (min) SAPP, followed by 5 bbls fresh water spacer. Pump 125 sx (192 cf or 34 bbls) assuming 0.25 lb/sk Polyflake, 15.8 ppg & 1.53 cf/sk. Volume is based on 400' inside 8.5" OH from caliper log and 20% excess. Cement will be from 4190' – 3790'. RDMO Cementers. |
| 19. | Slowly pull out of the cement and PUH to 3300'. Reverse circulate to ensure no cement is left in the tbg. WOC per cement company recommendation. Tag cement if necessary. |
| 20. | TOOH and PU to 875' with 3-1/2" csg, LD remaining csg. |
| 21. | Establish circulation with biocide treated fresh water to remove any gas (1 hole volume is ~65 bbls) |

PLUG and ABANDONMENT PROCEDURE

HICKS 7-10J7

22. RU Cementers. Pump Stub Plug: Pump 10 bbls (min) SAPP, followed by 5 bbls fresh water spacer. Pump 165 sx (248 cf or 44 bbls) assuming 0.25 lb/sk Polyflake, 15.8 ppg & 1.50 cf/sk. Volume is based on 360' in 8" OH from caliper log w/ 40% excess factor, and 200' in 8-5/8" surface casing with no excess. The plug will cover 875' – 315'. RDMO Cementers.
23. Slowly pull out of the cement and PUH to 100'. Reverse circulate using biocide treated fresh water to ensure the tbg is clean. WOC per cement company recommendation.
24. MIRU WL. RIH and tag cement. Cement top needs to be at or above 465' (50' above surface casing shoe at 515'). Call Engineering if tag is lower than 465'. POOH.
25. PU and RIH with (8-5/8", 23#) CIBP to 80'. RDMO WL 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 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, 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.