

HSR-Federal 5-36 (73739)

P&A

1. Call Foreman or Lead Operator at least 24 hr prior to rig move. Request that they remove plunger, isolate production equipment and remove any automation equipment prior to the rig showing up. Install perimeter fence as needed.
2. Provide 24 hr notice of MIRU to COGCC as specified on approved Form 6.
3. Notify CDC when rig moves on location to generate workorder for flowline removal and one call for line locates.
4. Prepare location for base beam rig to move onto.
5. MIRU WO rig. Kill well as necessary w/ water containing biocide. ND WH, NU BOP.
6. Unseat and LD landing joint.
7. PU w/ 1-1/4" tbg (2.3#, J-55, Integral Joint) to break any sand bridges. Do not exceed the safety tensile load of **17,088 lbs** (80% of upset yield strength). TOO H and SB 1-1/4" tbg.
8. MIRU Wireline. PU and RIH w/ gauge ring to tag sand plug @ +/- 7,163' (+/- 235 jts).
RDMO Wireline.
9. MIRU hydrotester. PU CIBP for 2-7/8" csg (6.5#, J-55, 8rd EUE) on 1-1/4" tbg and TIH to +/- 7,150' (+/- 235 jts). Hydrotest each jnt to 3,000 psi while TIH. Set CIBP @ +/- 7,150'. RDMO hydrotester.
10. MIRU cement services. Spot 15 sx of 1:1:3 Poz:G:Gel' + 20% silica flour + 0.4% CFL-2 + 0.1% SMS + 0.05% CR-4 to achieve a 4:19 pump time mixed at 13.5 ppg and 1.66 cuft/sk from 7,150' to 6,440'. RDMO cement services.

11. TOO H w/ 1-1/4" tbg to +/- 6,000' (+/- 38 jts) and circulate to clean tbg. Load hole w/ 9.0 ppg mud. TOO H and SB 1-1/4" tbg. Let cement set overnight.
12. MIRU E-line. PU and RIH 1-2' perf guns (2", 8 spf, 60* phase 18.7" penetration 0.23" EHD perforating gun) to 5,300' for 2-7/8" csg. Perf squeeze holes in prod csg. TOO H perf gun.
13. Test sqz holes for circulation. If cannot establish circulation contact Engineering in Evans (cannot do suicide sqz since CICR's are not common for 2-7/8" csg, so needs wiper plug)
14. Pump down 2-7/8" 20 bbls of metasilicate followed by 265 sx of 1:2:4 Poz:III:Gel + 3% (BWOW) KCl + 1% SMS + 0.4% CR-4 + 0.2% SPC-2 + 2 lb/sk PS Flake mixed at 12.5 ppg to achieve 1.93 cuft/sk with a pump time of 3:12 from 5,300' to 4,270' followed by a wiper plug. Displace w/ 24 bbls of water so wiper plug is +/- 1,030' above sqz holes. Let cement set for 4 hrs or overnight.
15. TIH w/ 1-1/4" tbg to +/- 4,270 and tag TOC. TOO H and SB tbg.
16. MIRU E-line. PU jet cutter and cut prod csg (2-7/8", 6.5#, J-55, 8rd EUE) at +/- 1,300'. POOH and LD jet cutter and prod csg. RDMO E-line.
17. MIRU hydrotester. MIRU cement services. RIH 1-1/4" tbg inside csg to +/- 1,400'. Hydrotest each jnt to 3,000 psi while TIH. RDMO hydrotester. Pump 20 bbls of metasilicate followed by 220 sx of Typel III + 0.2% SPC-2 w/ 2 lb/sk of cello-flake mixed at 14.2 ppg to obtain a 2:49 pump time with 1.46 cuft/sk from 1,400' stub plug to 570'. POOH tbg and circulate clean. RDMO cement services. SB tbg. Let cement set for 4 hrs or overnight.

18. RIH 1-1/4" tbg and tag TOC (estimated at +/- 570'). If cement is deeper than 670' contact engineering for possible further cement work. POOH and SB 8 jts of tbg, LD remainder.
19. PU CIBP for 8-5/8" csg on 1-1/4" tbg and RIH to +/- 100'. Set CIBP and pressure test to 1000 psi for 15 min. TOOH and LD 1-1/4" tbg.
20. RDMO WO rig.
21. Wellsite supervisor should turn all paper copies of cementing reports/invoices and logs into Sabrina Frantz.
22. NOTE: During the job, wellsite supervisor should instruct the logging and cementing contractors to e-mail all logs, job reports/invoices to Sabrina Frantz.
23. Have excavation contractor notify One-Call to clear for digging around wellhead and flowline removal.
24. MIRU ready cement mixer. Fill the last 100' inside the 4-1/2" 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.
25. Check top of cement inside 8-5/8" surface casing at least 5' below ground level.
26. Have welder spot weld on steel marker plate. (Note: marker shall be labeled with well name and number, legal location (1/4 1/4 description) and API number.
27. Properly abandon flowlines as per rule 1103.
28. Have excavation contractor back fill hole with native material. Clean up location and have leveled to plant any vegetation required.
29. Submit Form 6 to COGCC. Provide "As Plugged" wellbore diagram identifying the specific plugging completed.