

API# 05-123-13073  
Rig/ Sup Bohler/Eisenach  
Job Type Re-entry P&A  
AFE# 2023CO72-79 Split



Month of November 2023  
Location: NSW 36 1N 65W 6

## State #36-2

### Well Info

- Surface: 9-5/8" 36# @ 220'. Cement: Surface VISU
- Production: 4-1/2" 11.6# @ 7,920'. Top: 604'. 7-7/8" OH
- KB: 10'. Last W/O 7/3/1990 (P&A)
- Using 20% excess cement for all open hole/behind pipe plugs

### Procedure

**\*\* Verdad will be using a closed-loop recirculating returns system consisting of shaker tank, mud tank, cuttings bin, and a utility tank to divert fluid to for solids to settle out, fluid for disposal, etc. \*\***

1. File Form 42 2 days prior for P&A ops, notify COGCC field engineer of ops commencing
2. Familiarize all personnel with allowed access to location and areas allowed to be disturbed
3. Secure permission to access area and identify prospective well locations via satellite and survey data
4. Verify well location and excavate well
5. Once permission to begin work is secure, excavate area around well to sufficient size for safe access of casing, verify casing size, cut off cap, weld on slip collar w/ wellhead and riser, set cellar ring and back-fill
6. MIRU WO rig and beam, BOP, accumulator, rig pump, shaker tank, rig tank, 9.5ppg water-based mud, pipe float, 3-1/8" collars, 2-3/8" EUE work string, power swivel
7. Rig up tubing tools, NU BHA and function test
8. Make up BHA consisting of: 2-3/8" EUE string, 2x 3-1/8" drill collars, float, and 7-7/8" roller-cone bit
9. RIH and drill out previous cement plug from estimated 0-70'
10. Wash or ream in 9-5/8" cased hole to 125'
11. Tag surface shoe cement plug and drill out plug from 125' – 240'
12. Wash or ream in 7-7/8" open hole to 464', drill cement from 464' - 604'. Tag casing stub to confirm depth
13. Circulate and condition hole
14. TOOH to pick up dressing bit consisting of: 2-3/8" EUE string, 2x 3-1/8" drill collars, float, and 7-5/8" skirted mill bit
15. RIH to 604' and dress off 2' top of casing
16. Circulate and condition hole. POOH w/ tubing and milling assembly
17. MU casing tools and run 5-1/2" 15.5# casing with full open overshot with grapple and packoff set for 4-1/2" casing to 604'
18. Stab onto casing stub with overshot and work over casing. Engage overshot and land casing
19. Make up BHA consisting of: 2-3/8" EUE string, float, 3-7/8" tricone mill and RIH to bottom of well @ 6,955', tagging top of cement plug
20. Circulate and condition hole. POOH w/ tubing and bit



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21. RU WL, load hole and run CBL from deepest point (6,955') to surface, this will determine where and if we need to annulus cement coverage. Review CBL with engineer and State. Once confirmed where cement is needed, proceed with procedure or agreed upon plan
22. Assuming annular cement is 50' above Niobrara top and sliding sleeve @ 1,210 shows adequate bonding over Fox Hills, proceed with following steps:
23. TIH to 6,955, circulate and condition hole. MIRU cementers and pump 30 sks of Class G, 15.8 ppg, 1.15 yield cement from 6,955' – 6,655' to isolate the Niobrara and J Sand Formation. Displace and POOH through cement and release cementers and TOO H w/ tubing
24. RU WL and TIH w/ perforating guns and shoot 4 holes @ 2,550'. TOO H w/ perf guns. TIH w/ 4-1/2" 11.6# CICR and set @ 2,500' MD. TOO H w/ setting tool and RD WL
25. TIH w/ tbg and sting into CICR. Mix and pump 60 sks of Class G, 15.8 ppg, 1.15 yield cement into CICR. Pull out of CICR and leave 20 sks of Class G, 15.8 ppg, 1.15 yield cement on top of CICR. This will isolate the Upper Pierre Formation
26. POOH to 1,210', circulate and condition hole
27. Prior to placing the Fox Hills Aquifer plug, verify that all fluid (liquid and gas) migration has been eliminated. If evidence of fluid migration or pressure remains, contact engineer to verify with the COGCC for an update to plugging orders
28. If no fluid migration, RU cementers and pump 30 sks of Class G, 15.8 ppg, 1.15 yield cement from 1,210' – 910' to isolate the Fox Hills Aquifer. Displace and POOH to surface
29. WOC 4 hours or otherwise advised by cementers and tag cement. If not tagged at or above 925', contact engineer. May require additional cement
30. POOH w/ tubing
31. ND WH, unland casing and back off grapple and TOO H w/ 604' 5-1/2" 15.5# casing, NU WH
32. MU 4-3/4" Tricone mill, XO, string float, 2-3/8" EUE string and TIH to 604'
33. Circulate and condition hole. RU cementers and pump 135 sks of Class G, 15.8 ppg, 1.15 yield cement from 604' – 220' to isolate the surface shoe. POOH w/ tubing
34. WOC 4 hours or otherwise advised by cementers and tag cement
35. At tag depth, RU cementers and pump cement until returns taken to surface, est 85 sks of Class G, 15.8 ppg, 1.15 yield cement estimated. Once good returns taken, SD cement and POOH. Top off as necessary
36. RDMO cementers, rig, and supporting equipment. Tidy location and prep for reclamation
37. After 5 days, verify TOC is within 5' of surface. Top off if needed. Excavate cellar ring and wellhead, cut off casing 6' below ground level and weld on cap with full legal description welded onto plate. Back fill hole
38. Reclaim location
39. Submit Form 6 Subsequent and Form 42 for completion of COA