

**Well Name: Cassady 5-2**

**API: 05-123-07588**

**Procedure: Re-Entry P&A**

1. Prior to operations, get landowner permission to enter property to identify the exact location of the well.
2. 48 hours prior to commencement of operations, submit Form 42 and notify ECMC area engineer.
3. After 48-hour notice, return to the previously identified location to excavate around existing cut and capped well. Confirm the identification of the well on the cap and cut off. Confirm casing size and weld on slip collar to rig up wellhead and riser. After cellar ring has been set, backfill the excavated hole.
4. Mobilize rig to location, rig up, conduct pre-job safety meeting, and review specific job criteria based on the ECMC approved Form 6.
5. NU BOP and test.
6. Pickup BHA with 6.75in bit, TIH and drill out surface plug from depths 0-28ft.
7. Wash down in 8.75in surface casing to drill out the casing plug from depths 175-220ft.
8. Wash and ream in 7.875in openhole and tag bottom at 6,989ft.
9. Circulate and condition hole for a minimum of 3 BU. Ensure MW in is equal to MW out and hole is clean. Monitor for any gains, and do not TOO H until static.
10. TOO H and laydown BHA.
11. RIH in hole with 2.375in tubing.
12. TIH to a depth of 6,400ft.
13. Establish circulation and pump 2 BU.
14. Spot 145 sacks of Class G, 15.8ppg, 1.15 sacks/ft<sup>3</sup> cement from 6,400-5,900ft to isolate Niobrara.
15. Displace and TOH to 200ft above TOC.
16. Establish circulation and monitor returns. If no fluid migration present WOC for 4 hours, TIH to tag cement at 5,900ft.
17. TOH to 2,000ft. Establish circulation and pump 2 BU.
18. Spot 145 sacks of Class G, 15.8ppg, 1.15 sacks/ft<sup>3</sup> cement from 2,000-1,500ft to isolate Upper Pierre.
19. Displace and TOH to 200ft above TOC.
20. Establish circulation and monitor returns. If no fluid migration present WOC for 4 hours, TIH to tag cement at 1,500ft.
21. TOO H to 550ft. Establish circulation and pump 2 BU.
22. Spot 175 sacks of Class G, 15.8ppg, 1.15 sacks/ft<sup>3</sup> cement from 550ft to surface to isolate Fox Hills and entirety of surface casing. Pump until continuous cement returns established at surface.
23. Displace and TOH, top off cement as necessary.
24. RDMO location.
25. Wait 5 days and verify cement top. If not within 5ft of surface, top off. Rig down cellar ring, wellhead, and cut casing stub 6ft below ground level if needed.
26. Weld plate on casing stub with full legal well description.
27. Backfill excavated hole and reclaim location.
28. Submit Form 6 Subsequent and Form 42 for completion of any COA required.