



Kugel W 4-8

API# 05-123-15194
SENE Sec. 4-T2N-R66W
Weld County, Colorado

Re-Entry P&A Procedure

April 16, 2018

Engineer:

Nate Kurczewski

Workover Superintendent:

Matt Rohret

Prep Well and Location

1. Contractor to obtain Line locates for ground disturbance. Locate well or casing stump. Have surveyor gather an as built survey of well location for records.
2. Submit Form 6 for approval of re-plug prior to hydraulic stimulation of proposed horizontal well; include proof of surface owner consent and 4 site photos in all cardinal directions; each photograph shall be identified by: date taken, well name, and direction of view. Refer to all COA's from approval from the COGCC.
3. Construct approved location and temporary access for the site after approvals have been made.
4. Submit Form 42 electronically to COGCC 48 hours prior to MIRU. Notify COGCC Inspector 24 hours prior to MIRU.
5. Dig up stump of original surface casing. Create bell hole to provide safe working area for welder. Cut off marker and prep for a slip-on collar with pup joint to get surface flange to ground level. Install 8-5/8", 3K, flange with adapter spool to go to 11" BOP, 3K Flange on top.
6. Back fill area and prep for service rig.

Drill Out to Stub Plug

7. MIRU service rig and auxiliary equipment and 2-3/8 PH6 work string.
8. Install 11", 3K BOP, including pipe rams for work string, blind rams, annular, circulating head, mud cross with 3" line to choke manifold and 3" flow line to fluid system. Rig up a 2" kill line on bottom spool below Blind Rams. Test all equipment with a function test and a pressure test against test plug. Test surface casing patch to 1000 psi.
9. RU Power swivel. Pick up 7-7/8" PDC bit, bit sub, and drill collars. Gather measurements for all BHA components before they are picked up.
10. Drill out surface plug to ~32'.
11. TIH to the next plug, expected top of 579'. Report the actual tag depth. Circulate hole clean.
12. Drill out next plug from 579' to 679'.
13. TIH to the next plug, expected top of 3750'. Report the actual tag depth. Circulate hole clean.
14. TOH. LD bit and collars.

Set New Plugs

15. PU notched collar. TIH to 3750' (or top of plug as found).
16. Pump SAPP sweep and spot 85 sks class G plug fr/ 3,750' to 3,650'. PU and reverse circulate tbq clean.
17. Spot 170 sks class G balance plug fr/ 1,850' to 1,650'.
18. Spot 85 sks class G plug fr/ 679' to 529'.
19. WOC 3hrs and tag TOC. Verify TOC' is at least 100' inside 8-5/8" casing shoe. TOH.
20. PU 8-5/8" CIBP. TIH and set above top of cement. Pump 1-2 bbl cement on top of CIBP. Pressure test plug to 250 psi for 15mins.

21. TOH to spot balanced Type III cement plug from 60' to surface. TOH laying down all tubing. Top off as necessary.
22. ND BOP, RDMO pulling unit.

Abandon Surface and Paperwork

23. Per ground disturbance procedure/policy, excavate around wellhead. Notify Environmental Department for surface review and inspection while digging.
24. Cut off casing 4 ft below ground level.
25. Weld on metal plate and dry hole marker.
26. Restore surface location.
27. Ensure all pressure charts, CBLs, cement and wireline tickets are emailed to the office for subsequent reporting. Emails shall be sent to Production Engineer, Workover Coordinator, and Production Technician.
28. Submit Form 6 Subsequent Report of Abandonment documenting the P&A to COGCC.