

CWC PETRO LLC
Massive 19-16
Plug and Abandonment Procedure
January 10, 2023

LOCATION: SESE Sec 19, T2S, R46W
1,110' FSL & 720' FWL
Yuma County, CO

API: 05-125-11763

TD: 2,648' PBTD: 2,582' KB: 4,128' GL: 4,116'

PURPOSE of WORK: Pull tubing. Plug and abandon well.

CASING:

7", 20#, J-55 @ 543' in 9 7/8" hole
Cemented with 140 sxs. Circulated to surface.

4 1/2", 10.5#, J-55 @ 2,625' RKB in 6 1/4" hole
185 sxs circulated to surface
(TOC by CBL @ Surface 06-11-2010)

FORMATION TOPS:

Niobrara
Top Beecher Island 2,407'

PROCEDURE:

1. Find and test rig anchors. If necessary, set temporary anchors. Spot in tubing float to handle +/-78 joints 2-3/8" 4.7# N80 8RD EUE tubing.
2. MIRU workover rig. Install wellhead and BOPE
3. Bullhead +/- 20 BBLS freshwater
4. POOH laying down rods and pump. POOH standing back tubing and tallying tubing. LD SN and mud anchor.
5. MU CIBP for 4.5" 10.5# casing and TIH on tubing to set CIBP @ +/- 2,364'. Set CIBP within 50' of top perforation at 2,414'.
6. MU pump in sub. Load hole with freshwater and establish circulation.
7. Mix and pump 25 sxs class A cement (1.18 ft³/sx, 29.56 ft³ slurry volume). Spot cement from CIBP at +/- 2,364 up to +/-2,034'.

8. POOH laying down tubing up to 1,600'. Reverse circulate until returns are clean of cement.
9. POOH laying down tubing up to 593'. Load hole with freshwater and establish circulation.
10. Mix and pump 10 sxs class A cement ($1.18 \text{ ft}^3/\text{sx}$, 29.56 ft^3 slurry volume). Spot cement from +593' up to 493'.
11. POOH to +50'. Mix and pump 5 sxs class A cement ($1.18 \text{ ft}^3/\text{sx}$, 29.56 ft^3 slurry volume). Spot cement from +50' up to surface.
12. POOH laying down remaining tubing.
13. Dig up wellhead and cut off 4' below surface. Top off production casing as necessary with cement. Weld plate over casing stub. Plate to have well name, location, and API number.
14. Re-claim surface per lease agreement and state regulations.