

SALAZAR 6-20

- 1 Provide 48 hour notice of MIRU to Mike Hickey (970.302.1024) via email at mike.hickey@state.co.us
- 2 Prepare location for base beam rig to move onto.
- 3 Call Foreman and/or Field Coordinator before rig up to remove any production equipment.
- 4 MI 114 joints of 2-3/8" 4.7# N-80 for working string.
- 5 MIRU WO rig. Kill well, as necessary using water w/ biocide. ND wellhead. NU BOP's. Unseat landing joint and lay down. (Put cementing services "on call" after moving in rig on location.
- 6 Reciprocate tubing to break any possible sand bridges. Do not exceed safety tensile load of 24.4K lbs. TOOH with 1-1/4" tbg.
- 7 MIRU slickline.
- 8 RIH with gauge ring to Niobrara perfs at 6995' KB. (2.347" drift in 2-7/8" 6.5# J-55 tubing) TOOH w/ gauge ring.
- 9 RIH with gyro to 6900' making stops every 100'. TOOH w/ gyro.
- 10 RDMO slickline. MIRU e-line.
- 11 RIH with 5K CIBP for 2-7/8" 4.7# J-55 tubing and set at 6880' KB, tie into CBL. Dump bail 2 sx of cement on top of CIBP to isolate Niobrara and Codell (Make multiple runs if necessary to dump entire 2 sx) and POOH.
- 12 Pressure test casing to 1000 psi w/ rig pump.
- 13 ND BOP's and tubing head. Unland 2-7/8" 6.5# J-55 casing from slips and work casing. Stack-out and relax casing. Pull casing. Measure stretch to calculate free pipe. TIH with jet cutter to cut csg in the middle of joint above 3590'. Bond log indicates TOC at 3690' KB. RDMO e-line.
- 14 Circulate 250 bbl of water to remove any gas from hole. TOOH and LD 2-7/8" casing. If unable to pull casing contact engineer/COGCC for plugging modifications.
- 15 TIH with 2-3/8" 4.7# N-80 working string to 2-7/8" casing stub to set plug across stub to 100' above stub.
- 16 MIRU cementing services.
- 17 Mix and pump (50 sx, Class G neat, 70% excess) 100 ft balanced plug across cement stub. Pump 10 bbl cement. 13 bbl water displacement. PUH 10 joints to ~ 3290' KB. Circulate 300 bbl water or until no cement in returns. If stub cut is at different depth, notify engineer, adjust plug/displacement as necessary.
- 18 TOOH w/ working string, SI WOC for at least 4 hours. TIH to tag plug. If TOC not at 3590' (50' above stub), re-pump cement.
- 19 PU w/ working string above cement plug and pump 164 bbl of used drilling mud.
- 20 PUH with 2-3/8" working string to 755' KB, which is 100' below surface casing shoe.
- 21 Mix and pump (100 sx Class G neat, 65% excess) 200 ft cement plug across shoe to 100' above at 555' KB. Pump 25 bbl cement slurry. Pump 0.5 bbl water displacement. PUH 10 jnts (~91'), circulate 30 bbl water or until no cement in returns.

- 22 TOO H w/ working string. SI WOC for at least 4 hours. TIH to tag plug. If TOC is below 605', re-pump cement.
- 23 PU above tag and pump 29 bbl of used drilling mud.
- 24 PUH to 100' and pump 5 bbl cement (25 sx Class G with 2% CaCl). TOO H.
- 25 RDMO WO rig.
- 26 Dig down and cut off surface casing head and surface casing at least 5' below ground level. If cement did not make it to surface, use 4500 psi compressive strength redi-mix cement to fill remaining casing to surface
- 27 Weld steel plate across top of surface casing cut off
- 28 Cover steel plate and backfill hole with native material removed
- 29 Properly abandon flowlines per Rule 1103.
- 30 Submit Form 6 to COGCC. Provide "As Plugged" wellbore diagram identifying the specific plugging completed.

2 3/8" 4.7# J-55 CSG = 0.387 BBL/100' ID=1.995" Drift=1.901"

Collapse=8100 psi; Burst=7700 psi

1 2/3" 2.33# J-55 IJ TBG = 0.185 BBL/100' ID=1.380" Drift=1.286"

Collapse=8490 psi; Burst=8120 psi

1" TBG-CSG Annulus = 0.12 BBL/100'; Drift = 0.115" at IJ