

## Platte 23-2 – Bradenhead Procedure

- 1 Call Foreman or Lead Operator at least 24 hr prior to rig move. If not already completed, request that they catch and remove plunger, isolate production equipment and remove any automation equipment prior to the rig showing up. Install perimeter fence as needed.
- 2 MIRU Slick line. Fish plunger if necessary and tag for PBTD (should be at 7392').
- 3 Prepare location for base beam rig.
- 4 Spot 12 jts of 2-3/8" 4.7# J-55 8RD EUE tbg.
- 5 Spot 84 jts of 1-1/4" 2.33# J-55 IJ tbg.
- 6 MIRU WO rig. Kill well with fresh water with biocide. ND wellhead, NU BOPs.
- 7 Run two 2" or one 3" line(s) from starting head to return tanks (need to be able to circulate at highest rate possible).
- 8 PU 8-10' landing joint with TIW safety valve on top and screw into the tbg hanger. Back out the lock down pins and pull up on the tbg string to break any possible sand bridges. Do not exceed 80% of tubing tensile strength, or 57,384-lb.
- 9 Unseat tbg hanger and LD tbg hanger and landing joint. Install rubber wiper in stripping head.
- 10 MIRU EMI equipment. TOOH with 2-3/8" tbg. EMI tbg while TOOH. Lay down joints with wall loss or penetrations >35%. Replace joints as necessary. Keep yellow and blue band tubing. Note joint number and depth of tubing leak(s) on production equipment failure report in OpenWells. Clearly mark all junk (red band) tubing sent to yard.
- 11 PU and TIH with 2-3/8" tbg and 4.5" RBP (4.5" 11.6# I-80). Set RBP at +/- 6900' (Collars at 6875' and 6920').
- 12 Pressure test RBP to 5,000 psi for 15 minutes. (Pressure test to make sure plug is set correctly)
- 13 Spot 2sx sand on top of RBP. TOOH, SB tbg.
- 14 ND BOP, ND tubing head. Un land 4-1/2" 11.6# I-80 csg. NU double-entry flange. NU BOP.
- 15 TIH with 84 jts of 1-1/4" 2.33# J55 tbg to +/- 2500'. If 2500' cannot be reached, get as far below 1500' as possible before circulating (Want to try and get as much hydrostatic on top of existing cement as possible).
- 16 MIRU mud company with 10.0 ppg drilling mud. Circulate at least 1x annular volume (~115 bbls).
- 17 TOOH with 34 jts of 1-1/4" 2.33# J55 to +/- 1500'.
- 18 MIRU Cement company. Commence pumping cement job at maximum rate achievable consisting of 5 bbl fresh water; 50 bbl (180 sx) of Type III cement mixed at 14.0 ppg and 1.53 cuft/sk. Cement should be blended for a 3 hour pump time (Cement from 1500' to 627'). Have cementer email cement job plot to engineer when job is completed.
- 19 TOOH with 1-1/4" 2.33# and LD.
- 20 Break lines and clean up with fresh water. RMDO cement company.
- 21 ND BOP, ND dual entry flange. Re-land 4-1/2" csg with 20,500-lb (3,000-lb over string weight from 1500'), NU BOP.
- 22 Leave well shut in for minimum of 24 hours.
- 23 MIRU wire line and run CCL-GR-CBL-VDL from 1600' to 100'. If cement is not above 627', contact engineering for further instructions. Email CBL to engineer. RDMO wire line.
- 24 TIH with 2-3/8" XN SN and 2-3/8" 4.7# J55 EUE tbg. Land tbg @ +/- 7236' (1 jt above top J-Sand perf). Broach tbg to XN nipple.

- 25 ND BOP, NU master valve.
- 26 Install 7 1/16" x 5,000 psi tubing head adaptor with new 5,000 psi master valve threaded 2 3/8" connection. Make sure all wellhead valves are rated to 5,000 psi.
- 27 Pressure test the tubing head from below the tubing head through the master valve to 5,000 psi with hydro tester. NU 5,000 psi wellhead. If existing wellhead is not 5,000 psi rated, install one that is.
- 28 RMDO WO rig. Return well to production team.
- 29 Clean location and swab well back to production. Notify field foreman/field coordinator of finished work and turn well back over to production team.

Existing

KB=10'  
Platte 23-2  
API #0512325712

8-5/8" 24#/ft J-55 STC  
12-1/4"

Surface casing 727

Fox Hills Base 149

627

TOC 3900

Sussex	No perfs
Top	4158
Shannon	No perfs
Base	4830

Niobrara	6980-7144
Top	6964
Codeil	7266-7284
Top	7241

4-1/2" 11.6 #/ft L-80 LTC 7392

Type III

Sh/Sx Cement

Wellbore Diameter (in) 8.25

Hole/Csg Capacity (ft3/ft) 0.26

Cement Coverage Height (ft) 873

Cement Volume (ft3) 228

20% Excess (ft3) 273

Cement Vol (bbl) 49

Sx 179

Circ volume (bbl) 116

1500

2500

6900

Mud
Existing cement
Sand Plug
RBP
New Cement
Fresh Water w/ Bio