

PSC 23-9A – Annular Fill Prep Procedure

- 1 Well needs a dual stage annular fill.
- 2 Gyro survey completed on this well 11/4/2014.
- 3 Contact field foreman or field coordinator at least 24 hrs 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.
- 4 MIRU slickline. Fish PLE and tag fill (PBMD @ +/- 7659'). RDMO slickline.
- 5 Prepare location for base beam rig.
- 6 Spot 160 jts of 1.66" 2.33# J-55 IJ tubing.
- 7 Notify Aggregate Recycle Facility to have 10 ppg mud on standby.
- 8 MIRU WO rig. Kill well with biocide treated water. ND wellhead, NU BOP.
- 9 Run two 2" lines from starting head to return tanks.
- 10 PU 8-10' landing joint with TIW safety valve on top and screw into the tubing hanger. Back out the lock down pins and pull up on the tubing string to break any possible sand bridges. Do not exceed 80% of tubing tensile strength, or 39,256-lb.
- 11 Unseat tubing hanger and LD tubing hanger and landing joint. Install rubber wiper in stripping head.
- 12 MIRU EMI equipment. TOOH with 2 1/16" and 1.32" tubing. EMI tubing while TOOH. Lay down 2 1/16" joints with wall loss or penetrations >35% and all 1.32" joints. 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.
- 13 TIH 2 1/16" tubing with 3.5" RBP (3.5", 7.7#, WC-70). Set RBP at +/- 6750' (collars at 6730' and 6768').
- 14 Circulate gas out of well; pressure test RBP to 1,000 psi for 15 minutes (pressure test to make sure plug is set correctly).
- 15 Spot 2 sx sand on top of RBP. TOOH with 2 1/16" tubing, SB tubing.
- 16 ND BOP, un-land 3 1/2" casing, RU dual-entry flange, NU BOP. Stretch calcs show that with 17,000-lb pull weight there should be 24" of stretch. If casing cannot be safely un-landed, contact engineering for further support.
- 17 PU and TIH with 1.66" 2.33# IJ tubing to 4700'. While tripping in, pump Alcomer 74L sweeps periodically based on visual inspection of returns with a final sweep at 4700'.
- 18 Circulate at least 1.5x annular volume (~530 bbls) of biocide treated water with rig pump or until well is dead, spot ~40 bbls 10 ppg mud at the end.
- 19 TOOH 1.66" tubing to 4300'.

Well needs a dual stage annular fill

Offset to the **Goose 4-15HZ** Pad; ~700' from closest planned horizontal

Prep Type: Full Circle

Bald Eagle Winter Night Roost, Pasture

Gyro survey completed on this well 11/4/2014

Nio Top: 6787'; Sx Top: 4092'; FHM: 650; TOC: 6266'

Last casing pressure test: 6000 psi on 7/16/2010

- 20 MIRU cement company, establish circulation with biocide treated water and commence pumping cement job consisting of 5 bbls fresh water, 20 bbls sodium metasilicate, 5 bbls fresh water, and 39 bbl (190 sx) 0:1:0 'G' w/ ¼ lb/sk cello-flake, 0.5% CFR-2, 0.2% FMC, 0.5% LWA, mixed at 15.8 ppg and 1.15 cuft/sk blended for a 5 hr pump time (cement from 4300' to 3890'). Cement calculations based on 9.5" hole diameter with 20% excess.
- 21 TOOH 1.66" tubing to 3600' and circulate 1.5x annular volume or until returns are clean.
- 22 TOOH 1.66" tubing to 900'.
- 23 RU cement company, establish circulation with biocide treated water and commence pumping cement job consisting of 69 bbl (290 sx) Type III w/ ¼ lb/sk cello-flake, 0.3% CFL-3, 0.3% CFR-2, and CaCl₂ as necessary, mixed at 14.8 ppg and 1.33 cuft/sk blended for a 3 hr pump time (cement from 900' to 200'). Cement calculations based on 9.5" hole diameter with 40% excess.
- 24 TOOH 1.66" tubing to 100' and circulate 1.5x hole volume with biocide treated water to clean up. TOOH & LD remaining 1.66" tubing.
- 25 Break lines, clean up with fresh water, RMDO cement company.
- 26 ND BOP, ND dual entry flange, re-land 3 ½" casing. If needed, NU new WHI 7 1/16", 5,000 psi flanged tubing head complete w/ 5000 psi rated casing valves and NU BOP. Leave well shut in minimum of 24 hours.
- 27 MIRU WL and run CCL-GR-CBL-VDL from 6300' to 0'. If Sussex cement coverage is not above 3890' or Fox Hills cement coverage is not above 200', contact Evans Engineering for further instructions. Email logs to Evans Engineering and DJVendors@anadarko.com. RDMO WL.
- 28 TIH with 2 1/16" tubing and retrieving head and tag sand above RBP at +/- 6750'. Circulate sand off RBP. Latch onto RBP and release RBP. TOOH standing back 2 1/16" tubing and LD RBP.
- 29 PU and TIH with 2 1/16" notched collar, 2 1/16" XN nipple, and 2 1/16" 3.25# J-55 tubing. Clean out as necessary to top of liner at +/- 7139'. Land 2 1/16" tubing at +/- 7045' (1 joint above top Codell perf). Verify XN nipple size and enter in OpenWells.
- 30 RU rig lubricator. Broach tubing to XN nipple. RD rig lubricator.
- 31 ND BOP, NU 7 1/16", 5000 psi flanged tubing head adaptor w/ 2 1/16", 5000 psi flanged master valve.
- 32 MIRU hydrotester. Install 2 3/8" pup joint above master valve. Hydrotest wellhead to 5000 psi from below tubing head through master valve for 15 minutes.
- 33 RMDO WO rig. Return well to production team.
- 34 Clean location. Notify field foreman/field coordinator of finished work and turn well back over to production team.

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Bald Eagle Winter Night Roost, Pasture

Gyro survey completed on this well 11/4/2014

Nio Top: **6787'**; Sx Top: **4092'**; FHM: **650'**; TOC: **6266'**

Last casing pressure test: 6000 psi on 7/16/2010