

## Morton 9-1 – Remedial Cement

- 1 Well needs Fox Hills remedial cement coverage due to Form 17 results ahead of the Fort Lupton Campaign.
- 2 Directional survey from drilling to 8,158'.
- 3 Call Foreman or Lead Operator 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 plunger from lubricator. RIH and pull the bumper spring and standing valve if necessary. RIH with sinker bars and tag bottom (last cleaned out to 8128' 3/23/2012). Report findings. RDMO slickline.
- 5 Prepare location for base beam rig.
- 6 Spot a minimum of 30 jts of 2-3/8", 4.7#, J-55, EUE tbg for replacement and 50 jts 1.66", 2.33#/ft, J-55, 10rd IJ for annular cement job.
- 7 MIRU WO rig and auxiliary equipment. Kill well with fresh water and biocide. ND tree and adapter flange, NU BOP's.
- 8 Unland 2-3/8" tbg and lay down landing joint.
- 9 MIRU EMI services. EMI 2-3/8" tbg while TOOH and tally while standing back, do not exceed safety tensile load of 53,000 lbs. Lay down joints that have greater than 35% penetration or wall loss. Clearly mark and replace all joints that fail EMI testing as red band. Document joint numbers and depth of bad tubing and create a Production Equipment Failure report in OpenWells. RDMO EMI services.
- 10 MIRU wireline. RIH with gauge ring (4-1/2", 11.6#) to 7000' and POOH. RIH on wireline with CCL and 4-1/2" 10,000 psi rated from above and below RBP. Set RBP @ +/- 6345', (collars at 6324' and 6366') and POOH. Dump bail 2 sx of sand on top of RBP. Pressure test RBP to 1000 psi for 15 minutes.
- 11 MIRU wireline services. PU and RIH with CCL-GR-CBL-VDL. Log from +/- 4000' to surface while holding +/- 1,000 psi on casing to verify cement coverage at surface. The following steps assume no cement signatures to ~1,500'.
- 12 Bleed off pressure. ND BOP's, ND wellhead, Un-land 4 1/2" casing, NU dual entry flange, NU BOP.
- 13 PU 1.66" 2.3#/ft J-55 10rd IJ tubing, and TIH outside 4-1/2" casing in open hole to ~1500', if unable to make depth, contact engineering to discuss plan moving forward.. Circulate with the rig pump while TIH to clean up the annulus. Use two sweeps of Alcomer 74L while TIH and a final sweep at 1500'. Make sure no pressure is present on bradenhead before moving on to the next step. If gas is detected, contact engineering to discuss plan moving forward.
- 14 Contact Imperial mud (min of 24hrs. in advance) to bring out 40bbbls of 10.0ppg mud. Pump 40bbbls of mud at 1500'. Leave 1.66" tbg full of mud to avoid wet trip and to 1400' PUH to place cement in annulus.
- 15 MIRU cement services. Pump 10 bbl fresh water followed by **150sx (~46.5bbbls)** of 13.5 ppg

Provide Bradenhead remediation based on FM17 results

Nio top: 7238'; TOC: 3856'; FHM: 1299'

Future HZ Activity: Burge - 1/2016 (Fort Lupton Campaign)

Full Circle

Directional Survey to 8,158'.

Premium Lite Cement w/ noise to up to ~700' – Spud 11/11/11

(1.74 cuft/sk) Control Set "C" w/ ¼ lb/sk cello-flake. Design is for coverage from ~1500' to ~780' using 8-1/2" hole size (caliper) and 20% excess.

- 16 TOOH ~36 joints to ~400' and circulate 1.5 times the hole volume of water or until no cement returns are seen. TOOH with 1.66" tubing.
- 17 RDMO cementing company.
- 18 ND BOP. ND dual entry flange and crossover. Pick up and land 4-1/2" casing in slips.
- 19 Install new GE 5000 psi 4-1/2" bottom threaded tbg head with 7-1/16" flanged top, 7-1/16" flanged 5000 psi tbg head adaptor with 2-1/16" studded top, 2-1/16" flanged 5000 psi master valve, flanged 5000 psi 2-3/8" plunger lubricator (side outlets threaded). All valves, fittings, plugs on well head need to be rated for 5000 psi. NU BOP.
- 20 Leave well shut in for ~24hrs.
- 21 MIRU wireline and run CCL-GR-CBL-VDL from **3600' to surface**. If new top of cement is below 780' notify Engineering. In addition to normal handling of logs/job summaries, email copies of all cement job logs/job summaries and invoices to [rscDJVendors@anadarko.com](mailto:rscDJVendors@anadarko.com) within 24 hours of the completion of the job.
- 22 RDMO wireline.
- 23 PU and TIH with 2-3/8" tbg and retrieving head. Circulate sand off RBP at @ +/-6345'. TOOH with RBP and SB tbg.
- 24 TIH with 2-3/8" NC, 2-3/8" XN SN and 2-3/8" 4.7# J55 EUE tbg, circulate out fill if necessary to 7850'. Land tbg @ +/- 7525' (1 jt above top Codell perf).
- 25 Broach tubing to seating nipple. ND BOP's, NU master valve and tubing head adaptor.
- 26 GE should pressure test tbg head through test port on side of tbg head adaptor flange to 5000 psi for 15 mins.
- 27 RDMO WO rig.
- 28 Clean location and swab well back to production. Notify Field Foreman/Field Coordinator of finished work and turn well back over to production team.

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