

BRADENHEAD SINGLE STAGE ANNULAR FILL

**Well Name:** WILSON 3-34A

Step    Description of Work

- 1 Well needs a single stage annular fill from 1096' to 516' due to high Bradenhead pressure.
- 2 Gyro was ran on 9/3/14.
- 3 Call Foreman and Field Coordinator 24 hours before rig up to communicate activity and to isolate any production equipment (remove plunger, wellhead automation, etc.). Prepare to move base beam rig onto location. Install perimeter fence if needed. NOTE: This well has a 2-stage plunger system located @ 4403'
- 4 Check and report surface casing pressure. If valves are not accessible at ground level, re-plumb so valve is at ground level.
- 5 MIRU slickline. RIH to retrieve production equipment (2-stage plunger system in well) and tag for fill (Last tag was @ 7555' on 5/10/2010). Note tagged depth in OpenWells. RDMO slickline.
- 6 MIRU WO rig. Spot 1500' (~52 jts) of 1.66" 2.33# J-55 10RD IJ tbg.
- 7 Kill well as necessary with water and biocide. Attach a hardline from the bradenhead/surface casing valve to a flowback tank and blow down any bradenhead pressure. (Last Form 17 was performed on 3/25/15. The initial bradenhead pressure was 244 psi and blew down to 95 psi. The surface casing produced 20 gallons of condensate during the test, which was stopped due to production of liquids. Pressure built back up to 158 psi in 15 min). If pressure does not blow down within 1 hour contact engineer, otherwise proceed.
- 8 ND wellhead. NU BOP.
- 9 PU 8-10' pup joint with TIW valve on top and screw into the tbg hanger. Back out the lock down pins and pull up on the tubing string to break any possible sand bridges. Unseat and LD the landing joint.
- 10 MIRU EMI services. EMI 2-3/8" tbg (235 joints landed at 7307') while TOO H and tally while standing back. Lay down any joints that have greater than 35% penetration or wall loss. Replace all joints that fail EMI testing. Document joint numbers and depth of bad tubing and create a Production Equipment Failure report in OpenWells. RDMO EMI services.
- 11 PU 10,000 psi rated from above and below RBP (4.5", 11.6#, I-80), retrieving head, and 2-3/8" tubing. Set RBP at +/- 6900' (collars located at 6879' and 6921').
- 12 Release tbg from RBP and circulate all gas out of the hole. Pumping water with biocide, pressure test RBP and production casing to 5000 psi for 15 minutes. If pressure test passes, proceed; otherwise contact engineering. (Last PT to 6000 psi on 4/15/08).
- 13 Circulate 2 sx of sand on top of RBP and TOO H and SB 2-3/8" tubing.
- 14 ND BOP. ND wellhead. Screw 4-1/2" pup joint into production casing and un-land 4-1/2" production casing. NU double entry flange and BOP. Install 1.66" pipe rams.
- 15 PU 1500' of 1.66" 2.33# J-55 10RD IJ tubing and TIH between the 4-1/2" production casing and 8-5/8" surface casing/open hole to 1500' while continuously circulating. Make 2 sweeps of DF2020 while TIH. (annular volume ~ 90 bbl @ 1500') If unable to make it to 1500' call Evans Engineering.
- 16 Circulate with the rig pump to condition the hole or until well is completely dead. Pump a final sweep of DF2020 at 1500' (annular volume ~ 90 bbls). Circulate a minimum of 1.5 times the annular volume and ensure well is dead. If not able to circulate dead, contact engineering.

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- 17 Spot 20 bbl of 10.0 ppg mud and TOO H to 1096'.
- 18 MIRU cementing services. Establish circulation and pump 30 bbl (5 bbls of water, 20 bbls of sodium metasilicate, and 5 bbls water) spacer, 125 sx (217.5 cuft) Control Set 'C' cement mixed at 13.5ppg 1.74 cuft/sx yield. (Based on estimated 8.5" hole size + 40% excess from 1096'-616' and from 616' to 516' between 8-5/8" 24# surface casing and 4-1/2" 11.6# production casing). Attempt to cement from 1096'-516'. Plan for 3 hour pump time.
- 19 TOO H with 1.66" 2.3# J-55 10RD IJ tubing until EOT is at 300' and LD extra tbg. Circulate with freshwater 1.5 times the hole volume or until returns are clean. RDMO cementing services.
- 20 TOO H and LD all 1.66" 2.3# J-55 10RD IJ tubing. ND BOP and double entry flange. Use 4-1/2" pup joint to re-land 4-1/2" casing. NU BOP. Install 2-3/8" pipe rams. Shut well in and WOC for a minimum of 24hrs.
- 21 MIRU wireline and run CCL-GR-CBL-VDL from +/- 3500' (below the original TOC) to surface. If the cement is not at or above 516', 100' over the surface casing shoe, contact engineer. RDMO wireline services. In addition to normal handling, of logs/job summaries, email copies of all cement job logs/job summaries and invoices to [DJVendors@anadarko.com](mailto:DJVendors@anadarko.com) within 24 hrs of the completion of the job.
- 22 PU and TIH with retrieving head and 2-3/8" tubing. Circulate sand off of RBP. Latch onto and release RBP at +/- 6900'. Circulate gas out of hole. TOO H standing back all 2-3/8" tubing and LD RBP.
- 23 PU 2-3/8" NC, 2-3/8" XN nipple (be sure to correctly input into OpenWells), 2-3/8" 4.7# J-55 tbg, 2-3/8" X-Profile nipple @ +/- 4405' (depending on where 2-Stage plunger system was found), and 2-3/8" 4.7# J-55 tbg to surface. Circulate and clean out fill down to 7591' (Top of sand plug) if necessary and land EOT at +/- 7291' (1 jt above top Codell perf).
- 24 RU rig lubricator. Broach tubing to XN seating nipple. RD rig lubricator. ND BOP.
- 25 Install 7-1/16" flanged 5000 psi tubing head adaptor with studded top, 2-1/16" flanged 5000 psi master valve, flanged 5000 psi 2-3/8" plunger lubricator (side outlets threaded). Make sure all wellhead valves are rated to 5,000 psi and all nipples are XXH. Document wellhead components in an OpenWells wellhead report.
- 26 Install 2-3/8" pup joint above the master valve. Pressure test the tubing head from below the tubing head through the master valve to 5,000 psi using hydrotester. If wellhead does not pressure test, replace wellhead/ wellhead valves as necessary with 5,000 psi rated equipment.
- 27 NU WH. RDMO WO rig. Return well to production team.