

Engineer: Jacob Roland
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ANNULAR FILL/Packer/WH Replacement

Matsushima 5-35A

- 1 Well needs a single stage annular fill (FH), packer, WH change & pressure test to 5K. Ensure form 42 has been filed with the state.
- 2 Well has GYRO from 09/16/2014.
- 3 The most recent bradenhead report (02/08/2017) shows 1 psi and no fluids produced.
- 4 Call foreman and/or field coordinator 24 hours before rig up to isolate any production equipment (remove plunger, wellhead automation, etc.). Prepare to move base beam rig onto location. Install perimeter fence if needed. Operations needs to bleed off the bradenhead pressure before the rig gets on location.
- 5 Check and report surface casing pressure. If valve is not accessible at ground level, re-plumb so valve is at ground level.
- 6 MIRU Slickline. RIH to retrieve production equipment and tag for fill. Note tagged depth in OpenWells. RDMO Slickline.
- 7 MIRU WO rig. Kill well as necessary with biocide treated fresh water. Spot in 25 jts of 2-3/8" 4.7# J-55 EUE tbg and 50 jts of 1.66" 2.33# J-55 10RD tbg. ND wellhead. NU 5,000 psi rated BOP. Unland 2-3/8" tbg, using unlanding joint and LD.
- 8 MIRU EMI services. TOOH testing tubing, and SB 7324' 2-3/8" tbg. LD remainder. LD all bad joints and record depths in OW.
- 9 PU and TIH with (4-1/2", 11.6#) bit and scraper on 2-3/8" tbg to 7020'. TOOH and SB all 2-3/8" tbg. LD bit and scraper.
- 10 PU and TIH with 10,000 psi rated (4-1/2", 11.6#) RBP on 2-3/8" tbg. Set RBP at 7020' (within 100' of top perfs at 7840').
- 11 Load hole with biocide treated fresh water and circulate all gas from well. Pressure test to 500psi at surface. If test confirms that plug is set, dump 2 sx of sand on top of RBP.
- 12 TOOH and SB all 2-3/8" tbg. LD setting tool.
- 13 ND BOP and WH. Un-land casing using a casing spear, not a lifting sub. Rig max pull shall be 100,000#. Max pull over string weight shall be 50,000#. If unable to unland, contact Engineering.
- 14 NU double entry flange and BOP. Install 1.66" pipe rams.
- 15 PU 1130' 1.66" 2.33# J-55 10RD tbg and TIH in annulus between production casing and surface casing/open hole to 1130' while continuously circulating. Circulate at least 2 sweeps of DF 20-20 (annular volume is 115 bbls based off 715' of 7.88" bit size OH with 100% excess and 415' of surface casing while not including the production casing's capacity).
- 16 Using the rig pump, circulate a minimum of 1.5 annular volumes to condition the hole and until well is dead. Pump a final sweep of DF 20-20 at 1130'. If unable to circulate dead, contact Engineering.
- 17 MIRU Cementers. Pump Fox Hills Annular Fill: Establish circulation and pump the following in sequential order: 5 bbls of water, 10 bbls of sodium silicate, and 5 bbls fresh water spacer. Pump 235 sx (350 cf, 63bbl) assuming 0.25 lb/sk polyflake 15.8 ppg & 1.50 cf/sk. Volume is based off 715' of 7.88" bit size OH with 100% excess and 100' of surface casing/production casing annulus. RDMO Cementers.
- 18 Slowly pull out of the cement and PUH to 100'. Reverse circulate tbg clean to ensure no cement is left in the tbg.

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- 19 TOOH and LD all 1.66" tbg. ND BOP and double entry flange. Use 4-1/2" casing spear to re-land 4-1/2" casing. NU new 5,000 psi rated flanged tbg head with 5,000 psi rated casing. NU BOP. Install 2-3/8" pipe rams. Shut in well and WOC for a minimum of 24 hours.
- 20 MIRU WL. Well needs CBL. PU and RIH with CCL-GR-CBL-VDL. Run log from 1500' to surface. Report cement tops in OpenWells. Email results to Engineering and DJVendors@anadarko.com within 24 hours of job completion. RDMO WL.
- 21 PU and TIH with retrieving head on 2-3/8" tbg.
- 22 Latch onto and release RBP at 7020'. TOOH and SB all 2-3/8" tbg. LD retrieving head and RBP.
- 23 MIRU Hydrotester. PU and TIH with 2-3/8" NC, 2-3/8" XN nipple, 9 joints of 2-3/8" tbg, Arrowset Packer, and 2-3/8" tubing to surface while hydrotesting to 3000 psi. Land EOT at +/-7325, with packer set at 7020'. RDMO Hydrotester.
- 24 Pressure test 2-3/8" x 4-1/2" to 500psi to ensure packer set.
- 25 RU rig lubricator. Broach tbg to XN nipple. RD rig lubricator.
- 26 ND BOP, NU 7-1/16" x 5,000 psi flanged tbg head adaptor with new 5,000 psi flanged master valve with flanged 2-3/8" connection. Make sure all wellhead valves are rated to 5,000 psi.
- 27 Install 2-3/8" pup joint above the master valve. Pressure test tbg head from below the tbg head through the master valve to 5,000 psi. If wellhead does not pressure test, replace wellhead/wellhead valves as necessary with 5,000 psi rated equipment.
- 28 RDMO WO rig. Return well to production team.