

UPRR 22 PAN AM U 2: Bradenhead & replace WH Procedure

API 05-123-14612

- 1 Well needs dual stage annular fill from 4780' to 3650' and 1300' - 570' due to Bradenhead pressure and needs a packer set for upcoming HZ frac.
- 2 Well has Gyro survey 9/3/14.
- 3 Call Automation Removal Group 24 hours before rig up to isolate any production equipment (remove plunger, wellhead automation, etc.). Prepare to move base beam rig onto location. Install fence if needed.
- 4 Check and report surface casing pressure. If valve is not accessible at ground level, re-plumb so valve is at ground level.
- 5 MIRU slickline. RIH to retrieve production equipment and tag for fill. Note tagged depth in OpenWells. RDMO slickline.
- 6 MIRU WO rig. Spot 4880' of 1.66" 2.33# J-55 10RD IJ tbg. 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. (Bradenhead pressure: Form 17 performed on 11/25/2014. Surface casing pressure started at 453 psi, blew down to 95psi and built back up to 147 psi). If pressure does not blow down within 1 hour contact engineer, otherwise proceed.
- 7 ND wellhead. NU BOP.
- 8 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.
- 9 MIRU EMI services. EMI 2-3/8" tbg while TOO H and tally while standing back. Lay down 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.
- 10 PU 10,000 psi rated from above and below RBP (5.5", 17.0#), retrieving head, and 2-3/8" tubing. Set RBP at +/- 6300' (collars located at 6280' and 6324').
- 11 Release tbg from RBP and circulate all gas out of the hole. Pumping water with biocide, pressure test RBP and production casing to 1,000 psi for 15 minutes. If pressure test passes, proceed; otherwise contact engineering.
- 12 Circulate 2 sx of sand on top of RBP and TOO H with 2-3/8" tubing.
- 13 ND BOP. ND wellhead. Screw 5-1/2" pup joint into production casing and un-land 5-1/2" production casing. NU double entry flange and BOP. Install 1.66" pipe rams.
- 14 PU 4880' of 1.66" 2.33# J-55 10RD IJ tubing and TIH between the 5-1/2" production casing and 8-5/8" surface casing/open hole to +/- 4880'. 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 4880', and circulate until well is dead. Make sure no pressure is present on bradenhead. If gas is detected contact engineering.
- 15 Contact Ed Asuchak at 970-515-1170 for mud (min of 24hrs in advance). Pump 20 bbl of 10.0 ppg mud at 4780'. Leave 1.66" tbg full of mud to avoid wet trip and PUH to 4780' to place cement in annulus and LD extra tbg.
- 16 MIRU cementing services. Establish circulation and pump 5 bbls of water, 20 bbls of sodium metasilicate, and 5 bbls water ahead of cement. Proceed to cement with 330 sx Class G cement with 0.25 pps cello flake, 0.4% CD-32 and 0.4% ASA-301 mixed at 15.8 ppg and 1.15 cf/sx (cement volume based on 9" hole size + 20% excess from 4780'-3650'). Attempt to cement from 4780' to 3650'.
- 17 TOO H with 1.66" 2.3# J-55 10RD IJ tubing until EOT is at 3450' and LD extra tbg. Circulate with freshwater 1.5 times the hole volume or until returns are clean.
- 18 TOO H with 1.66" 2.3# J-55 10RD IJ tubing until EOT is at 1300' and LD extra tubing.

Well has Bradenhead pressure and needs a dual stage annular fill and needs a packer set for upcoming HZ frac

Well is to be worked on in preparation for Milky Way Campaign HZ PADS SKIM 35-21HZ, MILK 14-21HZ, CREAM 27-28HZ 191' away
TOC: 6130'; NB Top 6926'

Earliest Primary Constraint Date: 5/28/15

no known wellbore integrity issues

Prep and Produce

Has Gyro survey 9/3/14

STIPS: pasture

UPRR 22 PAN AM U 2: Bradenhead & replace WH Procedure

API 05-123-14612

- 19 Pump 210 sx Type III cement with 0.25pps cello flake and CaCL₂, mixed at 14.8 ppg and 1.33 cuft/sx (based on 9" hole size + 40% excess from 1300'-693'). Attempt to cement from 1300' to 590'.
- 20 TOO H with 1.66" 2.3# J-55 10RD IJ tubing until EOT is at 390' and LD extra tbg. Circulate with freshwater 1.5 times the hole volume or until returns are clean. RDMO cementing services.
- 21 TOO H and LD all 1.66" 2.3# J-55 10RD IJ tubing. ND BOP and double entry flange. Use 5-1/2" pup joint to re-land 5-1/2" casing.
- 22 Install a new or refurbished 5000 psi 5-1/2" bottom threaded tubing head with 7-1/16" flanged top, 5000 psi wellhead valves and XXH nipples. NU BOP. Install 2-3/8" pipe rams. Shut well in and WOC for at least 24 hrs.
- 23 MIRU wireline and run CCL-GR-CBL-VDL from +/- 6300' to surface. **If the cement is not at or above 590' 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 rscDJVendors@anadarko.com within 24 hrs of the completion of the job.
- 24 PU and TIH with retrieving head and 2-3/8" tubing. Circulate sand off of RBP. Latch onto and release RBP at +/- 6300'. TOO H standing back all 2-3/8" tubing and LD RBP.
- 25 PU 2-3/8" NC, 2-3/8" XN nipple (be sure nipple is correctly input into OpenWells), 39 joints 2-3/8" 4.7# J-55 tbg, Arrowset AS-1X packer rated to 10,000 psi, and 2-3/8" 4.7# J-55 tbg to surface. Hydrotest tubing to 6000 psi while TIH. Set packer at +/- 6300' (collars at 6280' and 6324'). Land EOT at +/- 7625' (1 joint above the top JSand perfs).
- 26 Load 2-3/8" x 5-1/2" annulus with biocide treated water and pressure test to 1000 psi for 15 minutes to be sure packer is set properly.
- 27 RU rig lubricator. Broach tubing to XN seating nipple. RD rig lubricator. ND BOP.
- 28 Install 7-1/16" flanged 5000 psi tubing 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). Make sure all wellhead valves are rated to 5,000 psi and all nipples are XXH. Document wellhead components in an OpenWells wellhead report.
- 29 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.
- 30 NU WH. RDMO WO rig. Return well to production team.

Well has Bradenhead pressure and needs a dual stage annular fill and needs a packer set for upcoming HZ frac

Well is to be worked on in preparation for Milky Way Campaign HZ PADS SKIM 35-21HZ, MILK 14-21HZ, CREAM 27-28HZ 191' away
TOC: 6130'; NB Top 6926'

Earliest Primary Constraint Date: 5/28/15

no known wellbore integrity issues

Prep and Produce

Has Gyro survey 9/3/14

STIPS: pasture