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SAFETY PREP PROCEDURE  
Fox Hills Squeeze (Aquifer), Packer, WH Change

COSSLETT HEIRS UU 1-5JI

Description

1. Well needs a single stage fox hills squeeze from 1215' - 735' to cover aquifers, packer, and WH change.
2. Well has gyro survey on 11/22/2014.
3. MIRU Slickline. Pull production equipment and tag bottom. Record tag depth in OpenWells. RD Slickline.
4. Prepare location for base beam equipped rig. Install perimeter fence as needed. Evaluate location for enclosed flare or open-top tanks as described in "Flaring During P&A Operations" SOP on file with COGCC.
5. Check and record bradenhead pressure. If bradenhead valve is not accessible, re-plumb so that valve is above GL. Blow down bradenhead and re-check pressure the next day. Repeat until pressure stays at 0 psi.
6. MIRU WO rig.
7. Kill well as necessary with biocide treated freshwater. ND WH, NU BOP.
8. PU 8-10' pup joint with TIW valve on top and screw into the tbg hanger. Unseat and LD the landing joint.
9. MIRU EMI services. EMI 2-3/8" tbg (landed at 8064') 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. MIRU WL. PU and RIH with (4.5", 11.6#) Gauge Ring to 7240'. POOH.
11. PU and RIH with (4.5", 11.6#) CIBP. Set CIBP at +/- 7000'. POOH. RDMO WL.
12. Pumping biocide treated fresh water, circulate gas out, pressure test CIBP and production casing to 1000 psi for 15 minutes. If test fails, contact Engineering.
13. PU and RIH with one 1' 3-1/8" perf gun with 3 spf, 0.5" EHD, 120° phasing. Shoot 1' of squeeze holes at 1215'. POOH. RDMO WL.
14. PU and TIH with (4.5", 11.6#) CICR on 2-3/8" tbg while hydrotesting to 4000 psi and set at +/- 1185'. Establish circulation through squeeze holes with biocide treated freshwater and circulate a minimum of 150 bbls through squeeze holes. Max pressure with water shall be 500 psi.
15. MIRU Cementing. Establish circulation and pump 20 bbls (5 bbls of water, 10 bbls of sodium silicate, and 5 bbls water) spacer, 240 sx Fox Hills Squeeze cement (276 cf, 49.2 bbls) 14 ppg, 1.15 yld. Underdisplace by 1 bbl. Calculations based on 426' in the annulus between 7.88" hole and 4.5" casing with 100% excess and 30' below CICR inside production casing and 1 bbl on top of CICR. Attempt to cement from 1215' to 585'. Max pressure with full column of cement shall be 340 psi.
16. PUH to 1000' and reverse circulate tbg clean to ensure no cement is left in tbg. TOO H, SB all tbg. LD stinger. WOC 24 hours.
17. PU and TIH with 3-7/8" bit and appropriate number of 3-1/2" drill collars on 2-3/8" tbg. Time drill cement above CICR (~65'). If ROP is faster than 2 min/ft, SD and WOC 24 hours and repeat. Drill down to CICR located at +/- 1185'. Drill CICR and cement past lower perf at 1215' and pressure test to 500 psi for 5 minutes.

18. TOOH and SB tbg, LD drill collars, LD bit.
19. MIRU WL and run CCL-GR-CBL-VDL from +/-2000' to surface. RDMO WL. In addition to normal handling, of logs/job summaries, email copies of all cement job logs/job summaries and invoices to DJVendors@anadarko.com within 24 hours of the completion of the job.
20. PU and TIH with bit on 2-3/8" tbg. Drillout CIBP at +/- 7000' and chase down to 8273'.
21. TOOH. SB all tbg. LD bit.
22. PU 2-3/8" NC, 2-3/8" XN nipple, ~29 jts of 2-3/8" tbg (to set packer at 7230' and land tubing at 8144'), 4-1/2" Arrowset AS-1X packer (10k rated above and below), and 2-3/8" 4.7# J-55 tbg to surface.
23. Set packer at +/- 7230'. Load backside with packer fluid and test to 500 psi.
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 2-1/16" 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 2-1/16" 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.