

PLUG AND ABANDON PROCEDURE

Engineer: Daniel Notary
303-913-2592

Scottsdale Ranch 14-35

- 1 WELL NEEDS GYRO
- 2 Provide 48 hr notice to COGCC prior to rig up per request on approved Form 6. Submit Form 42 and call Automation Removal Group at least 24 hr 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.
- 3 If unable to catch plunger, MIRU SL. Fish plunger and bumper spring and tag PBMD (should be 7960'). Enter tag depth in OpenWells. RDMO WL.
- 4 Prepare location for base beam rig.
- 5 Check and record Bradenhead pressure. If Bradenhead valve is not accessible, re-plumb so that valve is above GL. Contact engineer if Bradenhead pressure is greater than 0 psi. NOTE: Well has history of 300+ psi Bradenhead pressure. Multiple blow-downs may be necessary before cut csg in step 20.
- 6 Spot 25 jts of 2-1/16" 3.25# J-55 tbg.
- 7 MIRU WO rig. Attempt to circulate and kill well with fresh water and biocide. If unable to circulate, load csg and tbg with water. ND WH, NU BOP.
- 8 PU tbg to break any possible sand bridges. Do not exceed 80% of tubing tensile strength, or 39,200 lb. LD landing jt. TOO H with 2-1/16" tbg and LD.
- 9 Notify cementers of the needed volumes: 20 sx of Thermal 35 cement with 0.5% CFR-2, 0.25% FMC mixed at 15.6 ppg and 1.51 cf/sk (Niobrara plug); 195 sx of 0:1:0 Class G cement with 0.5% CFR-2, 0.2% FMC, 0.5% LWA, 0.25 pps polyflake mixed at 15.8 ppg and 1.15 cf/sk (Sussex sqz); 115 sx of Type III cement with 0.3% CFL-3, 0.3% CFR-2, 0.25 pps polyflake and CaCl₂ mixed at 14.8 ppg and 1.33 cf/sk (FHM stub plug).
- 10 MIRU WL. RIH gauge ring for 3-1/2" 7.7# csg to 7650'.
- 11 Run gyro from 7650' to surface, making stops every 100'.
- 12 RIH with 3-1/2" CIBP (3-1/2" 7.7#). Set CIBP at +/- 7650' (Collars at 7636' and 7676') and pressure test CIBP to 1000 psi for 15 minutes. If pressure test passes, RDMO WL.
- 13 RIH with 2-1/16" tbg while hydrotesting to 3000 psi and tag CIBP. PU and circulate thoroughly to remove gas from hole.
- 14 MIRU cement company. Spot 20 sx of Thermal 35 cement with 0.5% CFR-2, 0.25% FMC mixed at 15.6 ppg and 1.51 cf/sk (cement from 7650' to 7100' in 3-1/2" csg).
- 15 PUH to 6900'. Circulate fresh water with biocide to clear tbg.
- 16 TOO H. Stand back 920' of 2-1/16" tbg and LD remainder.
- 17 MIRU WL. PU and RIH with perf gun and CCL inside 3-1/2" csg (2-1/2", 3 spf, "Big Hole" 0.6" EHD, 7" penetration, 120 deg phasing, 1' net, 3 total holes). Shoot squeeze holes at 4230'. POOH, RDMO WL.
- 18 Establish circulation with fresh water and biocide. If unable to circulate, contact Evans Engineering and make plans to cut and pull csg at 4230'.

- 19 MIRU cement company. Pump 5 bbls fresh water, 20 bbls sodium metasilicate, and 5 bbls fresh water followed with 195 sx of 0:1:0 Class G cement with 0.5% CFR-2, 0.2% FMC, 0.5% LWA, 0.25 pps polyflake mixed at 15.8 ppg and 1.15 cf/sk into squeeze holes. Run wiper plug and displace to 3800' (cement from 4230' to 3800' inside and outside 3.5" csg, 8.5" avg open hole from offset caliper, 40% excess).
- 20 MIRU WL. PU jet cutter and RIH to 3800', tag wiper plug (if below 3800', contact Engineering). PUH to 820', cut 3-1/2" csg. Circulate to remove any gas from wellbore. RDMO WL.
- 21 ND BOP, ND tbg head. NU BOP on surface csg with 3-1/2" pipe rams. Install 3000 psi ball valves on csg head outlets. Install choke or choke manifold on one outlet.
- 22 TOOH with 3-1/2" csg and LD.
- 23 Uninstall 3-1/2" pipe rams on BOP and install 2-1/16" pipe rams.
- 24 TIH with 2-1/16" tbg to +/- 920', 100' inside 3-1/2" csg stub.
- 25 MIRU cement company. Establish circulation with fresh water and biocide. Pump 10 bbls SAPP, 20 bbls fresh water and biocide followed with 115 sx of Type III cement with 0.3% CFL-3, 0.3% CFR-2, 0.25 pps polyflake and CaCl₂ mixed at 14.8 ppg and 1.33 cf/sk (cement from 920' to 470' over Fox Hills, 9" avg hole from offset caliper, adding 40% excess).
- 26 TOOH with 2-1/16" tbg. WOC 4 hrs, tag plug. Tag needs to be 570' or higher. TOOH.
- 27 MIRU WL. RIH with 8-5/8" CIBP and set at 80'. Pressure test to 1000 psi for 15 min. If pressure holds, RDMO WL and RDMO WO rig.
- 28 Instruct cementing and wireline contractors to e-mail copies of all job logs/job summaries and invoices to rscDJVendors@anadarko.com within 24 hrs of the completion of the job.
- 29 Supervisor submit paper copies of all invoices, logs, and reports to Evans Engineering Specialist.
- 30 Excavation crew to notify One Call to clear excavation area around wellhead and for flowlines.
- 31 Excavate hole around surface casing enough to allow welder to cut 8-5/8" casing minimum 5' below ground level.
- 32 Welder cut 8-5/8" casing minimum 5' below ground level.
- 33 MIRU Redi Cement mixer. Use 4500 psi compressive strength cement, (NO gravel) to fill stubout.
- 34 Spot weld on steel marker plate. Marker should contain Well name, Well number, legal location (1/4 1/4 descriptor) and API number.
- 35 Properly abandon flowlines per Rule 1103.
- 36 Obtain GPS location data as per COGCC Rule 215 and send to rscDJVendors@anadarko.com.
- 37 Back fill hole with fill. Clean location, level.
- 38 Submit Form 6 to COGCC ensuring to provide 'As performed' WBD identifying operations completed.