



PSC 32-2 – P&A

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- 1 Directional Survey 5/8/2007
- 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 SV and tag PBMD (should be 7308'). Enter tag depth in OpenWells. Run pressure bomb and obtain pressure gradient survey from surface to 7054' (halfway between top and bottom perms of producing formation) making gradient stops every 1000'. NOTE: The BHP survey must be run before the well is blown down or killed with fluid. Forward pressure bomb results to Evans Engineering. RDMO slickline services.
- 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.
- 6 Spot 25 jts of 2-3/8" 4.7# J-55 EUE tbg (assume 4.7# J-55 EUE).
- 7 MIRU WO rig. Circulate and kill well with fresh water and biocide. ND WH, NU BOP.
- 8 PU tbg to break any possible sand bridges. Do not exceed 80% of tubing tensile strength, or 57,360 lb. LD landing jt. TOO H with 2-3/8" tbg.
- 9 Notify cementers of the needed volumes: 25 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); 35 sx of 0:1:0 Class G cement with 0.5% CFR-2, 0.2% FMC, 0.5% LWA mixed at 15.8 ppg and 1.15 cf/sk (Sussex plug); 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 (Fox Hills stub plug).
- 10 MIRU WL. RIH gauge ring for 4-1/2" 11.6# csg to 6850'.
- 11 RIH with 4-1/2" CIBP (4-1/2" 11.6#). Set CIBP at +/- 6840' (Collars at 6824' and 6855') RDMO WL.
- 12 RIH with 2-3/8" tbg while hydrotesting to 3000 psi and tag CIBP at 6840'. PU and circulate to remove gas from hole. Pressure test CIBP to 1000 psi for 15 minutes. If pressure test passes, proceed; otherwise, contact engineering.
- 13 MIRU cement company. Spot 25 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 6840' to 6490' in 4-1/2" csg).
- 14 PUH to 6200'. Circulate fresh water with biocide to clear tbg and remove gas from hole.
- 15 PUH to 4260' with 2-3/8" tbg and LD remainder.

TOC: 3350'

FHM Base 742'; Sussex top 4054'; Shannon Base 4722'; Niobrara Top 6896'

No nearby HZ's

Pasture, Bald Eagle ½ mi (10/15-7/31), BEWNR (11/15-3/15)

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- 16 MIRU cement company. Spot 35 sx of 0:1:0 Class G cement with 0.5% CFR-2, 0.2% FMC, 0.5% LWA mixed at 15.8 ppg and 1.15 cf/sk (cement from 4260' to 3850' in 4-1/2" csg).
- 17 PUH to 3600' and circulate fresh water with biocide to clear tbg. WOC to set up per cementing company recommendation.
- 18 PU & TIH with 2-3/8" tubing and tag cement plug at 3850'. If cement plug is not at 3850', contact engineering.
- 19 TOOH. Stand back 950' of tbg and LD remainder.
- 20 MIRU WL. PU jet cutter and RIH to 850', cut 4-1/2" csg. Circulate to remove any gas and old mud from wellbore. RDMO WL.
- 21 ND BOP, ND tbg head. NU BOP on surface csg with 4-1/2" pipe rams. Install 3000 psi ball valves on csg head outlets. Install choke or choke manifold on one outlet.
- 22 TOOH with 4-1/2" csg and LD.
- 23 Uninstall 4-1/2" pipe rams on BOP and install 2-3/8" pipe rams.
- 24 TIH with 2-3/8" tbg to +/- 950', 100' inside 4-1/2" 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 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 950' to 520', assuming 8.5" avg hole from nearest SX caliper, adding 40% excess).
- 26 TOOH with 2-3/8" tbg. WOC 4 hrs, tag plug. Tag needs to be 620' 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.

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