HSR-Binder 5-15
PLUG AND ABANDON PROCEDURE

Daniel Notary - Engineer
(970) 506-5923 - Office
(303) 913-2592 - Cell
Daniel.Notary@anadarko.com

1 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 hrs 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 MIRU SL. Fish SV and tag PBMD (should be 7302'). Enter tag depth in OpenWells. RDMO SL.
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. Blow down Bradenhead and re-check pressure the next day. Repeat until pressure stays at 0 psi. Contact Evans Engineering if pressure does not blow down to 0 and stay at 0.
6 Spot 25 jts of 1.66" 2.3# J-55 NUE tbg.
7 MIRU WO rig. 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 29,416 lb. LD landing jt. TOOH with 1.66" tbg.
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); 115 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 (Shannon wiper plug squeeze); 175 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 PU and RIH w/ bit and scraper for 2-7/8" 6.5# csg and 1.66" tbg to 6860'. TOOH, LD bit and scraper.
11 MIRU WL, VES Gyro. RIH with 2-7/8" CIBP (2-7/8" 6.5# N-80, Big Boy Bridge Plug: 000-2100-002). Set CIBP at +/- 6850' (Collars at 6830' and 6863'). RUN GYRO from CIBP at 6850' to surface, making stops every 100'.
12 Pressure test CIBP to 3000 psi for 15 minutes (2-7/8" csg to be used as workstring later). If pressure test does not pass, contact Evans Engineering. Otherwise, RDMO WL.
13 RIH with 1.66" tbg while hydrotesting to 3000 psi and tag CIBP. PU and circulate to remove gas.
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 6850' to 5930' in 2-7/8" csg).
15 PUH to 5700'. Circulate fresh water with biocide to clear tbg.
16 TOOH and LD tbg.
17 MIRU WL. PU and RIH with 2" RTG perf gun with 3 spf, 0.5" dia, and 120 deg phasing. Shoot 2' of squeeze holes at 4760'. RDMO WL.
18 Establish circulation with fresh water and biocide. If unable to establish circulation to surface, contact Evans Engineering and make plans to cut and pull csg at 4760'.
19 RU cement company and pump 115 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 4510’ (cement from 4760’ to 4510’ inside and outside 2-7/8” csg, 9” avg hole from caliper, adding 20% excess).

20 MIRU WL. RIH and tag TOC. Notify engineer if depth is lower than 4510’. POOH.

21 PU jet cutter and RIH to 960’, cut 2-7/8” csg. Circulate to remove any gas from wellbore. RDMO WL.

22 ND BOP, ND tbg head. NU BOP on surface csg with 2-7/8” pipe rams. Install 3000 psi ball valves on csg head outlets. Install choke or choke manifold on one outlet.

23 RU cement company. Establish circulation with fresh water and biocide and get bottoms up. Using 2-7/8” csg as workstring, pump 10 bbls of SAPP (Sodium Acid Pyrophosphate) and 20 bbls fresh water followed by 175 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 960’ to 430’, 9” hole from caliper, adding 20%).

24 PUH to 80’ and circulate to clear csg. WOC 4 hrs, tag plug with csg. Tag needs to be 530’ or higher.

25 MIRU WL. RIH with 8-5/8” CIBP and set at 80’. RDMO WL and RDMO WO rig.

26 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.

27 Supervisor submit paper copies of all invoices, logs, and reports to Evans Engineering Specialist.

28 Excavation crew to notify One Call to clear excavation area around wellhead and for flowlines.

29 Capping crew will set and secure night cap on 8-5/8” casing head, restrain the casing head, pressure test CIBP to 500 psi with hydrotest pump, then remove night cap and casing head restraints.

30 Excavate hole around surface casing enough to allow welder to cut 8-5/8” casing minimum 5’ below ground level.

31 Welder cut 8-5/8'' casing minimum 5' below ground level.

32 MIRU Redi Cement mixer. Use 4500 psi compressive strength cement, (NO gravel) to fill stubout.

33 Spot weld on steel marker plate. Marker should contain Well name, Well number, legal location (1/4 1/4 descriptor) and API number.

34 Properly abandon flowlines per Rule 1103.

35 Obtain GPS location data as per COGCC Rule 215 and send to rscDJVendors@anadarko.com.

36 Back fill hole with fill. Clean location, level.

37 Submit Form 6 to COGCC ensuring to provide 'As performed' WBD identifying operations completed.