

## PLUG AND ABANDONMENT PROCEDURE

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### DECHANT 29-1

Step	Description of Work
1	Provide 48 hr notice to COGCC prior to rig up per request on approved Form 6 (e.g. call field coordinator, submit Form 42, etc.). Call Automation Removal Team at least 24 hr prior to rig move. Request they catch the plunger and isolate production equipment and remove any automation prior to rig MIRU.
2	MIRU slickline services. Pull bumper spring and tag bottom. RDMO slickline services.
3	Prepare location for base beam equipped rig. Install perimeter fence as needed.
4	Check and record Bradenhead pressure. If Bradenhead valve is not accessible, re-plumb so that valve is above GL.
5	MIRU. ND WH. NU BOP. Unseat landing jt. Release production packer set at 6543'.
6	Kill as necessary using clean fresh water with biocide. POOH and stand back 2-3/8" tbgt. (landed at 7274'). Lay down packer.
7	MIRU wireline. RIH with gauge ring for 4-1/2" 11.6# to 7700'.
8	PU 4-1/2" CIBP RIH and set at 7680'. POOH RIH and dump bail 2 sk of type G cement on top of CIBP set at 7680'.
9	PU 4-1/2" CIBP RIH and set at 7240'. POOH Pressure test to 1000 psi. RDMO wireline.
10	RIH with 2-3/8" tbgt while hydro testing to 3000 psi to CIBP at 7240'.
11	MIRU cementers. Establish circulation. Pump Nio balanced plug: Pump 60 sks (16.1 bbl) of Cement Blend: Thermal 35 + 0.5% CFR-2 + 0.25% FMC to achieve 3:28 pump time mixed at 15.6 ppg and 1.51 cuft/sk. Designed for coverage from 7240' to 6300' inside 4-1/2" casing.
12	PUH to 6000' and circulate hole clean with fresh water and biocide. POOH standing back 4180' of tubing.
13	MIRU WL. PU two 3-1/8" perf guns w/ 0.59" diam, 120 phasing and shoot 1' of squeeze holes at 4560' and 2' of squeeze holes at 4150'. RDMO WL.
14	PU 4-1/2" CICR on 2-3/8" tbgt. RIH and Set CICR at 4180'. Establish circulation through sqz holes.
15	RU Cementers. Establish circulation. Pump Sussex Suicide plug: Pump 5 bbls fresh water followed by 20 bbls sodium metasilicate followed by 5 bbls fresh water ahead of cement: 260 sks (51.9 bbls) 1:1 'Poz:G + 0.6% CFL-2 + 0.5% CFR + 0.6% SMS + 0.2% SPC-2 + 0.1% LTR, mixed at 14.6 ppg and 1.12 cuft/sk. Underdisplace by 3 bbls and unsting from CICR. Spot final 3 bbls on top of CICR and sqz holes. Volume based on 10" x 4-1/2" annulus with 40% excess from 4560' to 4150', and 4-1/2" casing from 4560' to 3750'. RD Cementers.
16	PUH to 3500' and circulate hole clean. WOC per cementing company recommendation
17	POOH standing back 840' of tubing.
18	MIRU WL. PU two 3-1/8" perf guns w/ 0.59" diam, 120 phasing and shoot 1' of squeeze holes at 1590' and 2' of squeeze holes at 810'. RDMO WL.
19	PU 4-1/2" CICR on 2-3/8" tbgt. RIH and Set CICR at 840'. Establish circulation through sqz holes.

- 20 MIRU Cementers. Establish circulation, get bottoms up and pump Fox Hills Suicide plug: Pump mud flush of 10 bbls SAPP followed by 20 bbls water ahead of 530 sks (126.5 bbls) Type III + 0.3% CFL-3 + 0.3% CFR-2 + 1% CaCl<sub>2</sub> + 0.25 lb/sk Polyflake, mixed at 14.8 ppg and 1.34 cuft/sk. Underdisplace by 60 sks, sting out of CICR and place remaining cement ontop to surface. POH and WOC per cementing company recommendation. Plug size is based on 4-1/2" casing from 1590' to surface and 10" hole with 40% excess covering 1590' to 810'. TOH and WOC per cement company recommendation.
- 21 RIH and tag top of plug. Plug needs to be tagged at 50' or shallower. POOH and LD 2-3/8" tbg.
- 22 Instruct cementing and wireline contractors to e-mail copies of all job logs/job summaries to rscDJVendors@anadarko.com within 24 hrs of completion of the job.
- 23 Supervisor submit paper copies of all invoices, logs, and reports to Evans specialist.
- 24 Excavation crew to notify One Call to clear excavation area around wellhead and for flowlines.
- 25 Excavate hole around surface casing enough to allow welder to cut casing minimum 5' below ground level.
- 26 Welder cut casing minimum 5' below ground level.
- 27 Fill casing to surface using 4500 psi compressive strength cement, (NO gravel).
- 28 Spot weld on steel marker plate. Marker should contain Well name, Well number, legal location (1/4 1/4 descriptor) and API number.
- 29 Properly abandon flowlines per Rule 1103. File electronic Form 42 once abandonment complete.
- 30 Back fill hole with fill. Clean location, level.
- 31 Submit Form 6 to COGCC ensuring to provide 'As performed' WBD identifying operations completed.