PLUG AND ABANDOMENT PROCEDURE

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CHAMPLIN 31-10 #3

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 Group at least 24 hr prior to rig move. Request they isolate production equipment and remove any automation prior to rig MIRU.
2	Check and report surface casing pressure. If there is any bradenhead pressure present, blow down and check the next day. If pressure does not stay at zero, notify Evans engineering. If surface casing is not accessible at ground level, re-plumb so valve is at ground level.
3	Prepare location for base beam equipped rig. Install perimeter fence as needed.
4	MI trailer with an additional 25 joints of 2 3/8" tubing.
5	MIRU, kill as necessary using clean fresh water with biocide. ND WH.
6	NU ratigan and rod table on top of flow tee.
7	Unseat pump and TOOH with rod string. While TOOH, visually inspect rods for wear. Detail any rod wear in OpenWells daily summary, including rod number. Lay down all rods and have them sent to yard. NOTE: it will probably be necessary to hot oil the well prior to pulling rods.
8	ND ratigan, rod table, and flow tee. NU wellhead spool and BOP.
9	Install 2-3/8” lift sub to unland tubing string. Release tubing anchor. TOOH standing back 2 3/8" 4.7# tbg. Tbg is landed @ 5250' KB w/ 165 jts. Lay down tubing anchor and mud anchor.
10	MIRU slickline services. Run a gyro directional survey in casing from ~5200' to surface with 100' stations. Forward results of both surveys to Sabrina Frantz in Evans Engineering. RDMO slickline services.
11	PU 5 1/2'' casing scraper on 2 3/8'' tbg and RIH to 5250'. POOH and LD scraper.
12	RUWL. RIH and set 5.5" RBP at 4600' (~80' above top Sussex perf so we can keep the hole full while running CBL).
13	Circulate gas out of hole before running CBL. Pull and stand back ~4650' of tbg and LD remainder.
14	RIH with CCL-GR-CBL-VDL. Log from RBP set at ~4600' to surface to verify cement coverage. No CBL can be found. TOC is calculated to be at +/- 4125’. Contact engineering before proceeding to verify procedure. Remaining steps assume there is adequate cement coverage over the Sussex.
15	RIH and pull RBP set at ~4600'. RDMO wireline.
16	RU WL. RIH and set 5 1/2" CICR at 5120 to abandon Shannon perfs. PU dump bailer and spot 2 sxs cement on CIBP. RD WL.
17	PU tension set CICR on 2 3/8" tbg. RIH and set CICR at 4650'
18	Pump Shannon squeeze through existing perforations at 5180': 50 sx class "G" + 0.6% CFL‐2 + 0.5% CFR + 0.6% SMS + 0.2% SPC‐2 + 0.1% LTR mixed at 14.6ppg and 1.12 cuft/sx to place squeeze production perfs. Underdisplace and sting out of CICR to leave 3 bbls cement on top of retainer.
19	POH to ~4950' and circulate water containing biocide to clear tubing. POH standing back ~4650' of tbg.

20 PU tension set CICR on 2 3/8" tbg. RIH and set CICR at 4650'.

21 Pump Sussex squeeze through existing perforations at 4683': 50 sx class "G" + 0.6% CFL - 2 + 0.5% CFR + 0.6% SMS + 0.2% SPC - 2 + 0.1% LTR mixed at 14.6ppg and 1.12 cuft/sx to place squeeze production perfs. Sting out of CICR, circulate casing clean and spot 35 sxs of cement on CICR up to 4350' for Sussex coverage. You will use a total of 85 sxs for this interval.

22 POH to ~4280. Circulate water containing biocide to clear tubing. POOH standing back 1350' tbg.

23 RU WL. Crack coupling or cut casing at 1250'. RDMO WL. Circulate bottoms up and continue circulating to remove any gas from wellbore.

24 ND BOP and wellhead. Install BOP on surface casing head with 5 1/2" pipe rams. Install 3000 psi ball valves on both casing head outlets. Install a choke or choke manifold on one outlet.

25 TOOH and LD 1250' of 5 1/2'' casing.

26 RIH with 2 3/8'' tubing open-ended to 1350' (100' inside 5 1/2" stub).

27 RU cementers. Establish circulation with fresh water treated with biocide and get bottoms up. If circulation cannot be established contact Evans engineering before proceeding. Pump 10 bbl SAPP (Sodium Acid Pyrophosphate) followed by 20 bbl (min.) fresh water spacer immediately preceding cement.

28 Pump balanced Stub Plug from 1350' to 410' as follows: 410 sx Type III + 0.3% CFL - 3 + 0.3% CFR - 2 + 0.25 lb/sk Polyflake and and CaCl2 as deemed necessary mixed at 14.8 ppg and 1.33 cf/sx (546 cuft of slurry). Cement volume based on 100' in 5 1/2'' csg, 222' in 8 5/8" csg, and 129' in 10.5" OH + 20% excess.

29 TOOH. WOC per cementing company recommendation. Tag Cement. TOC should be at or above 510'. If not, consult Evans Engineering.

30 MIRU WL. RIH 8 5/8'' CIBP to 80'. Set and PT to 1000 psi for 15 min. If tests, RDMO WL and WO rig.

31 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.

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

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

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

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

36 Fill casing to surface using 4500 psi compressive strength cement, (NO gravel).

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

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

39 Properly abandon flowlines per Rule 1103. File electronic Form 42 once abandonment complete.

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

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