

OCCIDENTAL PETROLEUM CORPORATION

Please contact your area engineer with any questions concerning this procedure.

2/22/2022

PLUG and ABANDONMENT PROCEDURE

UPRR PAN AM B 1 41

API: 05-123-07225

VS:



Step Description

1	Well is being re-entered to P&A well to current standards due to it being offset to upcoming fracs.
2	Provide 48 hour notice to COGCC prior to rig up per request on approved Form 6 (i.e. submit Form 42, etc.)
3	Perform pre-job safety meeting and review JSA. Ensure all parties know their roles and responsibilities and can identify hazards.
4	Follow all Rockies Well Servicing guidelines.
5	Stop and complete new JSA prior to all barrier changes.
6	Attempt to leave kill string in the hole every evening/weekend. If this is not possible, discuss with foreman/engineer.
7	Locate and expose 8-5/8" casing stub.
8	Tie into and weld on 8-5/8" 24# casing stub above GL.
9	Install 8-5/8" 3K Q92 well head with ball valves on both outlets.
10	Check and record surface casing pressure.
11	MIRU rig/ equipment/tanks/pumps.
12	Perform negative test and ensure well is dead. Wait 15-30 minutes to verify (cement is at surface).
13	Pressure test BOPE, annular and 2" 1509 iron to API standards. Chart and record pressure tests. Please refer to Testing Procedures and Testing Table listed in the APPENDIX tab. All tests are performed on stump. Note: ensure BOPE accumulator controls are properly placed and pressurized.
14	NU and torque BOPE to casing head. The BOP consists of the following components: 7-1/16" double gate BOP with blind rams and pipe rams (for 4.5" DP), annular bag, 2 TIW valves accessible with change overs if applicable (i.e. drill collars).
15	Test TIW valves. Chart tests and document accordingly.
16	Spot in a pipe rack for 4.5" DP.
17	MIRU power swivel and kelly cock valve.
18	PU and TIH with 7-7/8" drag drill bit and 4.5" DP. Mud motor and agitator can by utilized after drilling out the first joint. Note: have changeovers accessible when drill collars are used.
19	Drill 10 sx cement plug from surface through estimated BOC at 30'. Continue drilling out 20 sx cement plug at shoe from estimated 370'. Use directional assembly to hold vertical through shoe plug until no more cement returns. IF WE BEGIN TO SEE INDICATION OF FORMATION BEING DRILLED, STOP AND DISCUSS W/ FOREMAN/ENGINEER. Continue drillout out 15 sx cement plug from estimated TOC at 4628' through BOC at 4763'. Continue drilling out 40 sx cement plug from estimated TOC at 7778'. Conventionally circulate to clean up cuttings while drilling. Consider using gel sweeps to help clean up cuttings.
20	Circulate with biocide treated fresh water to clean the hole. Pump until returns are clean.
21	TOOH, LD drill bit, mud motor, agitator, and drill collars. SB all 4.5" DP.
22	PU and TIH with 8-5/8" bit and scraper. Clean surface casing from surface to 334'. Run scraper over 90' to 110' 2-3 times to ensure casing is clean for CIBP. TOOH, LD bit and scraper, SB all DP.
23	TIH with diverter tool on 4.5" DP to 7300'. Establish circulation to surface with biocide treated fresh water and pump at least three hole-volumes to clean up wellbore. Start at a low rate, then once returns are clean, slowly increase rate to 4 bpm.
24	MIRU cementers. Pump 10 bbls (min) of pre-flush, followed by 5 bbls fresh water spacer. Pump Squeeze: 140 sx (37.7 bbl or 211 cf) of the AGM Nio blend: 0.4% Latex, 0.4% Fluid Loss, 0.2% Retarder, 35% Silica Flour, 0.3% Dispersant. Volume based on 500' in 7.875" bit size open hole with 25% excess factor. Cement will be from 7300'-6800'. Collect wet and dry samples of cement to be left on rig. RDMO Cementers. Notify engineering if circulation is ever lost during job.
25	Pull out of cement. TOOH to 6800'. Forward circulate tbg clean for a minimum of 2 bottoms up. SB 4.5" DP, LD remaining. WOC.

26	TIH with diverter tool on 4.5" DP to 4600'. Establish circulation to surface with biocide treated fresh water and pump at least three hole-volumes to clean up wellbore. Start at a low rate, then once returns are clean, slowly increase rate to 4 bpm.
27	MIRU cementers. Pump 10 bbls (min) of pre-flush, followed by 5 bbls fresh water spacer. Pump Sussex Plug at 4-6 bpm: Pump 320 sx (67.8 bbl or 381 cf) of the Sussex AGM blend (15.8 ppg & 1.19 cf/sx). Volume based on 900' in 7.875" bit size open hole with 25% excess factor. Cement will be from 4600'-3700'. Collect wet and dry samples of cement to be left on rig. RDMO Cementers. Notify engineering if circulation is ever lost during job.
28	Pull out of cement. TOOH to 3500'. Forward circulate tbgs clean. SB 3700' 4.5" DP, LD remaining. WOC.
29	TIH with diverter tool on 4.5" DP to 3500'. Establish circulation to surface with biocide treated fresh water and pump at least three hole-volumes to clean up wellbore. Start at a low rate, then once returns are clean, slowly increase rate to 4 bpm.
30	MIRU cementers. Pump 10 bbls (min) of pre-flush, followed by 5 bbls fresh water spacer. Pump Upper Pierre Plug at 4-6 bpm: Pump 350 sx (75.3 bbl or 422.4 cf) of the Lower AGM blend (1% CaCl & 4% Gyp, 15.8 ppg & 1.21 cf/sx). Volume based on 1000' in 7.875" bit size open hole with 25% excess factor. Cement will be from 3500'-2500'. Collect wet and dry samples of cement to be left on rig. RDMO Cementers. Notify engineering if circulation is ever lost during job.
31	Pull out of cement. TOOH to 2000'. Forward circulate tbgs clean. SB 4.5" DP, LD remaining. WOC.
32	TIH with diverter tool on 4.5" DP to 2000'. Establish circulation to surface with biocide treated fresh water and pump at least three hole-volumes to clean up wellbore. Start at a low rate, then once returns are clean, slowly increase rate to 4 bpm.
33	MIRU cementers. Pump 10 bbls (min) of pre-flush, followed by 5 bbls fresh water spacer. Pump Upper Pierre Plug at 4-6 bpm: Pump 350 sx (75.3 bbl or 422.4 cf) of the Upper AGM blend (1% CaCl & 4% Gyp, 15.8 ppg & 1.21 cf/sx). Volume based on 1000' in 7.875" bit size open hole with 25% excess factor. Cement will be from 2000'-1000'. Collect wet and dry samples of cement to be left on rig. RDMO Cementers. Notify engineering if circulation is ever lost during job.
34	Pull out of cement. TOOH to 1000'. Forward circulate tbgs clean. SB 1200' 4.5" DP, LD remaining. WOC.
35	TIH with diverter tool and tag TOC at 1000'. Establish circulation to surface and pump at least three hole-volumes to clean up wellbore. Start at a low rate, then once returns are clean, slowly increase rate to 4 bpm.
36	COA: WOC 8 hours. If there is evidence of pressure or fluid migration, contact Engineering as there will need to be additional remediation attempts before the SC shoe plug.
37	Load hole with 75 bbls of heated surfactant to clean surface casing walls, wellhead, and surface valves/lines. Let soak for at least 2 hours. Circulate out heated surfactant with fresh water.
38	MIRU cementers. Pump 10 bbls (min) of pre-flush, followed by 5 bbls fresh water spacer. Pump Surface Casing Shoe Plug: Pump 376 sx (80.9 bbl or 454 cf) of the AGM Surf blend: 2% CaCl, 4% Gypsum, 0.4% Latex. Volume is based on 566' in 7.875 bit size open hole with 100% excess factor, 200' in the 8-5/8, 24# surface casing with no excess. The plug is designed to cover 900'-134'. Collect wet and dry samples of cement to be left on rig. RDMO Cementers. Notify engineering if circulation is ever lost during job.
39	Pull out of cement. TOOH to 100'. Reverse circulate tbgs clean with fresh water. WOC.
40	COA: If cement was not circulated to surface, then WOC 4 hours. Tag TOC. TOC must be 820' or shallower. If tag is too deep or there is evidence of pressure or fluid migration, contact Engineering.
41	ND BOP. NU 9" BOP.
42	MIRU WL. RIH and tag cement with gauge ring to verify appropriate coverage above the surface casing shoe. Notify engineering if tag is low. Pressure test TOC to 500psi for 15 minutes. Record and notify engineering and foreman of results.
43	PU and RIH with 8-5/8" 24# CIBP. Set CIBP at 100'. POOH. RDMO WL.
44	TIH with diverter tool on 4.5" DP to 100'. Swab well down.
45	MIRU Cementers. Pump Surface Plug: Pump 53 sx (11.4 bbl or 64 cf) of the AGM Surf blend: 2% CaCl, 4% Gypsum, 0.4% Latex. Volume based on 100' inside 8-5/8, 24# surface casing with no excess. Cement will be from 100' to surface. This includes 5 additional bbls for contamination. Verify and document cement to surface. Collect wet and dry samples of cement to be left on rig.
46	Pull out of cement. TOOH, LD all but one joint of 4.5" DP. Circulate clean with water to ensure TOC is low enough for C&C team. TOOH and LD final joint of 4.5" DP. RDMO cementers. ND BOP. Install night cap. RDMO WO rig.

47	Instruct cementing and wireline contractors to e-mail copies of all job logs/job summaries to rscDJVendors@anadarko.com within 24 hours of completion of the job.
48	Supervisor submit paper copies of all invoices, logs, and reports to VWP Engineering Specialist.
49	Excavation crew to notify One Call to clear excavation area around wellhead and for flow lines.
50	Excavate hole around surface casing enough to allow welder to cut casing a minimum 5' below ground level.
51	Welder cut casing minimum 5' below ground level.
52	Spot weld on steel marker plate. Marker should contain Well name, Well number, legal location (1/4 1/4 descriptor) and API number.
53	Obtain GPS location data as per COGCC Rule 215 and send to rscDJVendors@anadarko.com.
54	Properly abandon flow lines per Rule 1103. File electronic Form 42 once abandonment is complete.
55	Back fill hole with fill. Clean location, and level.
56	Submit Form 6 to COGCC ensuring to provide 'As performed' WBD identifying operations completed.