OCCIDENTAL PETROLEUM CORPORATION
Please contact your area engineer with any questions concerning this procedure.
2/23/2023
PLUG and ABANDONMENT PROCEDURE
HANKINS 1 API: 05-123-07416

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 WO rig, equipment, tanks and 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" drill bit and 4.5" DP. Note: have changeovers accessible when drill collars are used.
19	Drill 10 sx cement plug from surface through estimated BOC at 33'. Continue drilling out 40 sx cement plug at shoe, BOC estimated 275'. Use directional assembly to hold vertical through shoe plug until no more cement returns. IF WE BEGIN TO SEE INIDCATION OF NEW FORMATION BEING DRILLED, STOP AND DISCUSS W/ FOREMAN/ENGINEER. Continue drillout to 5997' and tag existing plug. If not at depth, continue drilling until cement tag or contact casing cut at 6200'. We will not need to drillout the 7594' CIBP.
20	Circulate with biocide treated fresh water to clean the hole. Pump until returns are clean.
21	MIRU WL. Run gyro. RDMO WL.
22	TOOH, LD drill bit and drill collars. SB all 4.5" DP.
23	PU and TIH with 8-5/8" bit and scraper. Clean surface casing from surface to 225'. Run scraper over 120' to 90' 2-3 times to ensure casing is clean for CIBP. TOOH, LD bit and scraper, SB all DP.
24	TIH with diverter tool on 4.5" DP to 5997'. 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.
25	MIRU Cementers. Pump Plug: Pump 145 sx (39.2 bbl or 220 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’ with 30% excess. Cement will be from 5997' to 5497'. Verify and document cement to surface. Collect wet and dry samples of cement to be left on rig.
26	Pull out of cement. TOOH to 5300'. Forward circulate tbg clean for a minimum of 2 bottoms up. SB 4.5" DP, LD remaining. WOC.

27	TIH with diverter tool on 4.5" DP to 4900'. 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.
28	**COA: Confirm and document static conditions in the well before placing the next plug. If there is evidence of pressure or fluid migration at any time after placing the Nio plug, contact Engineering.**
29	MIRU Cementers. Pump Plug: Pump 260 sx (54.8 bbl or 308 cf) of the AGM SX blend: 2% Gypsum, 0.4% Latex, 0.25% Fluid Loss, 0.3% Dispersant. Volume based on 700' with 30% excess. Cement will be from 4900' to 4200. Verify and document cement to surface. Collect wet and dry samples of cement to be left on rig.
30	Pull out of cement. TOOH to 4100'. Forward circulate tbg clean. SB 4.5" DP, LD remaining. WOC.
31	TIH with diverter tool on 4.5" DP to 1600'. 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.
32	MIRU Cementers. Pump Plug: Pump 260 sx (54.8 bbl or 308 cf) of the AGM Upr blend: 1.5% CaCl, 4% Gypsum, 0.4% Latex. Volume based on 700' with 30% excess. Cement will be from 1600' to 900. Verify and document cement to surface. Collect wet and dry samples of cement to be left on rig.
33	Pull out of cement. TOOH to 800'. Forward circulate tbg clean. SB 4.5" DP, LD remaining. WOC.
34	**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.**
35	TIH with diverter tool on 4.5" DP to 400'. 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.
36	Load hole with 40 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.
37	MIRU cementers. Pump Surface Casing Shoe Plug: Pump 70 sx (15.1 bbl or 85 cf) of the Upper AGM blend: Class G with 0.4% B547 Gas Block (Latex) and 1.5% S001 CC (Calcium Chloride) and 4% D053 Expansion (Gyp). Volume is based on 225' in the 8-5/8", 24# surface casing with no excess. The plug is designed to cover 400'-175'. Collect wet and dry samples of cement to be left on rig. RDMO Cementers.
38	Pull out of cement. TOOH to 140'. Reverse circulate tbg clean with fresh water. WOC.
39	**COA: If cement was not circulated to surface, then WOC 4 hours. Tag TOC. TOC must be 175' or shallower. If tag is too deep or there is evidence of pressure or fluid migration, contact Engineering.**
40	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.
41	PU and RIH with 8-5/8" 24# CIBP. Set CIBP at 110'. POOH. RDMO WL.
42	TIH with diverter tool on 4.5" DP to 110'.
43	MIRU Cementers. Pump Surface Plug: Pump 35 sx (7.6 bbl or 43 cf) of the Surface AGM blend: Class G with 0.4% B547 Gas Block (Latex) and 2% S001 CC (Calcium Chloride) and 4% D053 Expansion (Gyp). Volume based on 110' inside 8-5/8", 24# surface casing with no excess. Cement will be from 110' to surface. Verify and document cement to surface. Collect wet and dry samples of cement to be left on rig.
44	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.
45	Instruct cementing and wireline contractors to e-mail copies of all job logs/job summaries to rscDJVendors@oxy.com within 24 hours of completion of the job.
46	Supervisor submit paper copies of all invoices, logs, and reports to Well Services Engineering Specialist.
47	Excavation crew to notify One Call to clear excavation area around wellhead and for flow lines.
48	Excavate hole around surface casing enough to allow welder to cut casing a minimum 5' below ground level.
49	Welder cut casing minimum 5' below ground level.
50	Spot weld on steel marker plate. Marker should contain Well name, Well number, legal location (1/4 1/4 descriptor) and API number.
51	Obtain GPS location data and provide to GPS Teams page and OXY GIS database.
52	Back fill hole with fill. Clean location, and level.

53	Submit Form 6 Subsequent Report to COGCC ensuring to provide 'As performed' WBD identifying operations completed.