

PLUG AND ABANDONMENT PROCEDURE

HSR-B/R D 7-20

Engineer: David Dalton
Cell: 970-590-6245

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 the 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	The 1.66" production tbg was removed from this well 8/19/2014 when it was prepped to P&A. A 1.66" work string will be needed.
3	Check and report surface casing pressure. If surface casing is not accessible at ground level, re-plumb so valve is at ground level.
4	Prepare location for base beam equipped rig. Install perimeter fence as needed.
5	MIRU ,bleed well down. All perms have been abandoned with CIBP and cement plug. ND WH. NU BOP.
6	PU and TIH with 1.66" work string open-ended to CIBP. NOTE: CIBP reported left in hole @ 5937'. Hydro-test WS to 3000 psi on TIH. Report tag depth to Evans Engineering.
7	PT casing to 2500 psi for 15 minutes.
8	RU cementers. Place a balanced cement plug above CIBP as follows: 20 sx class "G" w/ 0.5% CFR-2, 0.2% FMC, 0.5% LWA mixed at 15.8 ppg and 1.15 cf/sk. (23 cuft of slurry). Coverage equals 700' in 2 7/8" csg.
9	TOH to 4500' and circulate biocide-treated water to clear tbg and casing. WOC per cementing company recommendation.
10	TIH to tag cement plug and report tag depth.
11	TOOH and LD 1.66" tbg.
12	RU WL, RIH w/ chemical cutter or jet cutter and cut 2 7/8" casing at 4300'. Circulate bottoms up and continue circulating to remove any gas from wellbore. RD WL.
13	ND BOP and wellhead. Install BOP on surface casing head with 2 7/8" pipe rams. Install 3000 psi ball valves on both casing head outlets. Install a choke or choke manifold on one outlet. NOTE: If 2 7/8" csg did not pass PT in step #7, TOOH and hydro-test in to 3000 psi before proceeding to step 14.
14	RU Cementers. Establish circulation down 2 7/8" csg taking returns on surface csg. Pump 5 bbl water w/ biocide, 20 bbl Sodium Metasilicate, and another 5 bbl spacer immediately preceding cement. Note: If unable to circulate, consult Evans Engineering.

- 15 Pump a balanced cement plug from 4300' to 3850': 210 sx class "G" w/0.25 lb/sk Polyflake 0.5% CFR-2, 0.2% FMC, 0.5% LWA mixed at 15.8 ppg and 1.15 cf/sk. (242 cuft of slurry). Cement volume based on 450' coverage in 9" open hole with 20% excess. Caliper log on file.
- 16 TOH to 2000' and circulate to clear 2 7/8" and wellbore. WOC per cementing company recommendation.
- 17 TIH and tag top of plug @ 3850'. LD 2 7/8" tbg to place EOT at 980'.
- 18 RU cementers. Establish circulation and pump 10 bbl SAPP (Sodium Acid Pyrophosphate) followed by 20 bbl (min) fresh water spacer immediately preceding cement.
- 19 Pump a balanced plug 980'-460': 180 sx (240 cuft.) Type III cement w/ 0.25 pps Polyflake, 0.3% CFR-2, 0.3% CFL-3 and 0.5% CaCl₂ mixed at 14.8 ppg and 1.33 cf/sk. Design to fill 317' in 9" OH + 20% excess and 203' in 8 5/8" surface casing. Caliper log on file.
- 20 TOOH and LD 2 7/8" tbg. WOC per cementing company recommendation. Tag plug; TOC should be 563' or higher. If not, Consult Evans Engineering before proceeding.
- 21 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.
- 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 Engineering 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 8 5/8" casing minimum 5' below ground level.
- 26 Welder cut 8 5/8" 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 Obtain GPS location data as per COGCC Rule 215 and send to rscDJVendors@anadarko.com.
- 30 Properly abandon flowlines per Rule 1103. File electronic Form 42 once abandonment complete.
- 31 Back fill hole with fill. Clean location, level.
- 32 Submit Form 6 to COGCC ensuring to provide 'As performed' WBD identifying operations completed.

Gyro completed 8/20/2014
Bald Eagle Nest 1/2 mile

