

PLUG AND ABANDONMENT PROCEDURE

JOHNSON UPRR 31-35

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 IOC (970-506-5980) at least 24 hr prior to rig move. Request they isolate production equipment and remove any automation prior to rig MIRU.
2	Prepare location for base beam equipped rig. Install perimeter fence as needed.
3	Check and record Bradenhead pressure. If Bradenhead valve is not accessible, re-plumb so that valve is above GL.
4	MIRU, kill as necessary using clean fresh water with biocide. ND WH. NU BOP. Unseat landing jt, LD.
5	PU 3 jts of 2-3/8" WS and hydrotest to 3000 psi while RIH to top of RBP w/ 2 sack sand cap at 6880'. Reverse Circulate sand off RBP, latch and release RBP. Circulate the hole to remove gas in preparation for CBL. POOH w/ RBP. LD RBP, retrieving head and XN nipple.
6	MIRU WL. Ensure hole is full and all gas was circulated out. Run CBL from 6900' to surface. Note: CCL and setting tool were left on top of CIBP. Tie in to Brandex CBL dated 10/18/1986. RDMO WL. Forward results to Reed.Boeger@Anadarko.com and Brent.Marchant@Anadarko.com
7	Notify Cementers to be on call.
8	RIH 2-3/8" WS opened while hydrotesting to 3000 psi and tag CIBP at ~6934'. Note: CCL and setting tool were left on top of CIBP. Tag CIBP and pick up 10'.
9	RU Cementers. Pump Niobrara plug consisting of 35 cu-ft (25 sx)"G" w/ 20% silica flour, 0.4% CD-32, 0.4% ASA-301 and R-3 to achieve 2:30 pump time mixed at 15.8 ppg and 1.38 cuft/sk. Calculated top in the 4-1/2" csg is 6500'.
10	PUH to 6000' and circulate hole clean. PUH to leave end of WS at 4740' laying down WS.
11	RU Cementers. Pump Sussex Balanced plug: 58 cu-ft (50 sks) "G" w/ 0.4% CD-32, 0.4% ASA-301 with CaCl ₂ as necessary. Mixed at 15.8 ppg, 1.15 cuft/sack. Volume is based in the 4-1/2" csg from 4740' to 4020' covering the Stage Tool at 4636'. PUH to ~3800' and circulate hole clean. WOC per cement company recommendation. RD Cementers.
12	RIH and tag top of plug at 4020'. POOH, standing back 37 jts and laying down the rest.
13	MIRU Wireline. Cut off 4-1/2" csg at 1050'. RDMO WL. Circulate using water and biocide to remove any gas from wellbore.
14	ND BOP and wellhead. Install a BOP on surface casing head with 4-1/2" pipe rams. Install 3000 psi ball valves on both casing head outlets. Install a choke or choke manifold on one outlet.
15	POOH and LD 4-1/2" csg. Remove the 4-1/2" pipe rams and Install 2-3/8" pipe rams.
16	RIH w/ 2-3/8" WS open ended 100' past the 4-1/2" csg stub to 1150'.

- 17 MIRU Cementers. Pump Fox Hills Balanced plug: Pump mud flush of 10 bbls SAPP followed by 20 bbls water ahead of 811 cu-ft (610 sx) Type III w/cello flake and CaCl₂ as deemed necessary, mixed at 1.33 cf per sack, 14.8 ppg. POH and WOC per cementing company recommendation. Plug size is based on 11.5" hole with 40% excess covering 1150' to shoe of surface casing at 346' plus capacity of surface casing to 140'. PUH to 100' and Circulate out any excess cmt. TOH and WOC per cement company recommendation.
- 18 RIH and tag top of plug. Plug needs to be tagged at 146' or shallower. POOH and LD 2-3/8" tbg.
- 19 RU wireline. Run and set CIBP in the 8 5/8", 24# surface casing at 80'. PT CIBP and surface casing to 1000 psi for 15 minutes. Assuming successful test, RD wireline. RDMO workover rig.
- 20 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.
- 21 Supervisor submit paper copies of all invoices, logs, and reports to Joleen Kramer.
- 22 Excavation crew to notify One Call to clear excavation area around wellhead and for flowlines.
- 23 Excavate hole around surface casing enough to allow welder to cut casing minimum 5' below ground level.
- 24 Welder cut casing minimum 5' below ground level.
- 25 Fill casing to surface using 4500 psi compressive strength cement, (NO gravel).
- 26 Spot weld on steel marker plate. Marker should contain Well name, Well number, legal location (1/4 1/4 descriptor) and API number.
- 27 Properly abandon flowlines per Rule 1103. File electronic Form 42 once abandonment complete.
- 28 Back fill hole with fill. Clean location, level.
- 29 Submit Form 6 to COGCC ensuring to provide 'As performed' WBD identifying operations completed.

Reed Boeger – Sr. Production Engineer
970-506-5987 – Office 512-217-1852 – Cell
Reed.boeger@anadarko.com