

PLUG AND ABANDONMENT PROCEDURE

BUSKER 11-28A

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 catch and remove plunger, isolate production equipment and remove any automation prior to rig MIRU.
2	MIRU slickline services. Pull bumper spring and tag bottom. RDMO slickline services.
3	Prepare location for base beam equipped rig. Install perimeter fence as needed.
4	Check and record Bradenhead pressure. If Bradenhead valve is not accessible, re-plumb so that valve is above GL.
5	MIRU, kill as necessary using clean fresh water with biocide. ND WH. NU BOP. Unseat landing jt, LD.
6	TOOH and stand back 2 3/8" production tubing (222 jts landed @ 8098').
7	MIRU WL. PU and RIH with 4-1/2" gauge ring to 8100'.
8	PU and RIH with 4-1/2" CIBP and set at 8050'. PT casing and CIBP to 1000 psi for 15 minutes. RDMO WL.
9	Notify cementers to be on call.
10	RIH 2-3/8" tbg while hydrotesting to 3000 psi. Tag CIBP at 8050' and pick up 5'.
11	RU Cementers. Pump Niobrara balanced plug on top of CIBP: 96.36 cu-ft & 70 sx) "G" w/ 20% silical 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 of plug in the 4-1/2" csg is 6950'.
12	PUH to leave end of tubing at 5400' and circulate hole clean with fresh water w/biocide.
13	Pump Sussex Balanced plug: 92 cu-ft (80 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. Calculated top of plug at 4300' based in the 4-1/2" csg covering the Stage Tool at 5328'.
14	PUH to ~4000' and circulate hole clean. WOC per cement company recommendation.
15	RIH and tag top of plug at 4300'. POOH, standing back 46 jts and laying down the rest.
16	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.
17	MIRU Wireline. Cut off 4-1/2" csg at 1350'. RDMO WL. Circulate using water and biocide to remove any gas from wellbore.
18	POOH and LD 4-1/2" csg. Remove the 4-1/2" pipe rams and Install 2-3/8" pipe rams.

- 19 RIH w/ 2-3/8" tbg open ended 100' past the 4-1/2" csg stub to 1450'.
- 20 RU Cementers. Pump mud flush of 10 bbls SAP followed by 20 bbls water spacer.
- 21 Pump Fox Hills Balanced plug: 412 cu-ft (310 sx) Type III w/cello flake and CaCl₂ as deemed necessary, mixed at 1.33 cf per sack, 14.8 ppg. Plug size is based on 9" hole with 20% excess covering 1350' to shoe of surface casing at 718' plus capacity of surface casing to 500'.
- 22 PUH to 150' and Circulate out any excess cmt. TOH and WOC per cement company recommendation.
- 23 RIH and tag top of plug. Plug needs to be tagged at 532' or shallower. Consult Evans Engineering to confirm tag. POOH and LD 2-3/8" tbg.
- 24 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.
- 25 RDMO workover rig.
- 26 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.
- 27 Supervisor submit paper copies of all invoices, logs, and reports to Joleen Kramer.
- 28 Excavation crew to notify One Call to clear excavation area around wellhead and for flowlines.
- 29 Excavate hole around surface casing enough to allow welder to cut casing minimum 5' below ground level.
- 30 Welder cut casing minimum 5' below ground level.
- 31 Fill casing to surface using 4500 psi compressive strength cement, (NO gravel).
- 32 Spot weld on steel marker plate. Marker should contain Well name, Well number, legal location (1/4 1/4 descriptor) and API number.
- 33 Obtain GPS location data as per COGCC Rule 215 and send to rscDJVendors@anadarko.com.
- 34 Properly abandon flowlines per Rule 1103. File electronic Form 42 once abandonment complete.
- 35 Back fill hole with fill. Clean location, level.
- 36 Submit Form 6 to COGCC ensuring to provide 'As performed' WBD identifying operations completed.

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