PLUG AND ABANDOMENT PROCEDURE (RE-ENTER)

ZEILER 1

Step	Description of Work
1	Locate and expose 8 5/8" casing stub. Extend stub to surface and install 8 5/8"x 11" SOW, 3M casing head with 3000 psi ball valves in both outlets. Prepare location for workover rig. Install perimeter fence as needed.
2	Provide 48 hour notice to COGCC prior to rig up per request on approved Form 6 (e.g. call field coordinator, submit Form 42, etc.).
3	Prepare location for base beam equipped rig. Install perimeter fence as needed.
4	MIRU workover rig. NU 9" 3000 psi BOP stack on casing head. PT BOP and csg head per approved Form 2. Function test BOPE . NU rotating head on BOP. Hook up return line to shale shaker on flat tank
5	PU 7 7/8" mill tooth bit, necessary drill collars and drill pipe/work string (WS). Drill through existing cement plugs at surface (15 sk) and at the base of surface casing (60sk plug ~255'-370') using fresh water with biocide.
6	Once surface cement plugs are drilled, Displace hole with drilling mud and continue going in hole. Drill out (50 sk) cement plug at 1205'-1300'.
7	RIH to stub of 4 1/2" casing @ 6006'. TOOH and LD drill collars and bit.
8	RIH WS open-ended to 5990'. Circulate and condition hole for additional cement plug.
9	MIRU slickline. Run gyro survey from casing stub to surface. RDMO slickline services.
10	RIH 100' past casing stub to 6100'. RU Cementers.
11	Pump Niobrara plug: 210 sx (242 cu-ft) “G” w/ 0.4% CD-32, 0.4% ASA-301. Mixed at 15.8 ppg and 1.15 cu-ft/sk. Calculated top of plug at 5700' assuming a 10" OH with 40% excess. Nearest caliper reading at 5500'.
12	POH to ~5000' and circulate clean. WOC per cement company recommendation.
13	RIH, tag top of plug at 5700' or shallower. If not, consult Evans Engineering.
14	POH to 4400' and LD WS. Precede cement with sodium metasilicate mixed in 20 bbls water per cementing company recomendation.
15	Pump Shannon/Sussex plug: 380 sx (437 cu-ft) "G" w/0.25pps cello flake, 0.4% CD-32, 0.4% ASA-301. Mixed at 15.8 ppg, 1.15 cuft/sack. Calculated top of plug at 3850' using 11" OH from caliper with 20% excess.
16	POH to ~3000' and circulate clean. WOC per cement company recommendation.
17	RIH, tag top of plug at 3850' or shallower.

18 POH to 800' and LD WS. Precede cement with 10 bbls SAPP and 20 bbls fresh water spacer.

19 Pump Surface plug: 380 sx (505 cu-ft) Type III w/cello flake and CaCl2 as deemed necessary, mixed at 14.8 ppg and 1.33 cu-ft/sk. Calculated top of plug 130' assuming an 11" OH with 40% and 8 5/8" S/C.

20 POH to ~100 and circulate clean. WOC per cement company recommendation.

21 RIH tag top of plug. Plug needs to be tagged at 200' or shallower. If not, consult Evan Engineering. TOOH and LD WS.

22 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.

23 RDMO workover rig.

24 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.

25 Supervisor submit paper copies of all invoices, logs, and reports to Joleen Kramer.

26 Excavation crew to notify One Call to clear excavation area around wellhead and for flowlines.

27 Excavate hole around surface casing enough to allow welder to cut casing minimum 5’ below ground level.

28 Welder cut casing minimum 5' below ground level.

29 Fill casing to surface using 4500 psi compressive strength cement, (NO gravel).

30 Spot weld on steel marker plate. Marker should contain Well name, Well number, legal location (1/4 1/4 descriptor) and API number.

31 Obtain GPS location data as per COGCC Rule 215 and send to rscDJVendors@anadarko.com.

32 Properly abandon flowlines per Rule 1103. File electronic Form 42 once abandonment complete.

33 Back fill hole with fill. Clean location, level.

34 Submit Form 6 to COGCC ensuring to provide 'As performed' WBD identifying operations completed.

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