PLUG AND ABANDOMENT PROCEDURE (Re-Enter)

BELL L 12-8

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 notice to COGCC prior to rig up per request on approved Form 6 (e.g. call field coordinator, submit Form 42, etc.).
3	MIRU workover rig equipped for openhole re-entry work. 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.
4	PU 7 7/8" mill tooth bit, necessary drill collars and drill pipe/work string (WS). Drill through existing cement plugs at surface (20 sk) and at the base of surface casing (120 sk plug ~291'-593') using fresh water with biocide.
5	Once surface cement plugs are drilled, displace hole with drilling mud and continue in hole.
6	RIH to 3185' and drill out 60 sk plug.
7	Continue to RIH, circulating and cleaning the hole to the 2-7/8" casing stub at 6704'. (During the last operation, the rig had difficulty getting through ~3350, but they were only circulating at ~1.5 bpm)
8	Run gyro survey through tubing from ~6700' to surface.
9	POOH and lay down drill bit and drill collars as necesary.
10	RIH open ended to the 2-7/8" casing stub @ 6704'. Circulate while RIH.
11	RU Cementers. Pump Nio balanced plug. Spot cement plug consisting of 248 cu-ft (180 sx) 50/50 Poz "G" w/ 20% silica flour, 3% gel, 0.1% sodium metasilicate and 0.4% FL-52. Mixed at 13.5 ppg and 1.71 cuft/ sk yield with 10" hole size and 40% excess. Calculated top of plug @ 6300'.
12	POOH to ~ 6000' and circulate clean. WOC per cement company recommendation. Tag plug at 6300'. LD WS to place end of WS at 4883'.
13	Pump Sussex balanced plug. Spot cement plug consisting of 449 cu-ft (390 sx) "G" w/0.25pps cello flake, 0.4% CD-32, 0.4% ASA-301 with CaCl2 as necessary. Mixed at 15.8 ppg, 1.15 cuft/sack. Cement to be preceded by sodium metasilicate mixed in 20 bbls water per cementing company recomendation. Calculated top of plug 4374' based on 11.5" hole with 20% excess.
14	POOH to ~ 4000' and circulate clean. WOC per cement company recommendation. Tag plug at 4365'. LD WS to place end of WS at 1375'.
15	Pump Fox Hills balanced plug. Spot cement plug consisting of 998 cu-ft (750 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 reccomendation. Plug size is based on 11.5" hole with 40% excess covering 1375' to shoe of surface casing at 502' plus capacity of surface casing to 300'. TOH and WOC per cement company recommendation

16 Tag top of plug at 300'. POOH and LD WS.

17 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.

18 RDMO workover rig.

19 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.

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

21 Excavate hole around surface casing of sufficient size to allow welder to cut off 8 5/8" casing at least 5' Below ground level (depending on land owner requirements).

22 Fill surface casing with cement (4500 psi compressive strength, no gravel).

23 Spot weld steel marker plate on top of sfc casing stub. Marker shall be labeled with well name, well number, legal location (1/4 1/4 descriptor) and API number.

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

25 Back fill hole with native material. Reclaim location to landowner specifications

26 Submit Form 6 to COGCC. Provide "As plugged" wellbore diagram identifying the specific plugging completed.

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