PLUG AND ABANDOMENT PROCEDURE

Dillon 44-15

| 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 Automation Removal Group at least 24 hr prior to rig move. Request they catch plunger, isolate production equipment and remove any automation prior to rig MIRU. |
| 2 | Check and report surface casing pressure. If surface casing is not accessible at ground level, re-plumb so valve is at ground level. |
| 3 | Prepare location for base beam equipped rig. Install perimeter fence as needed. |
| 4 | MIRU, kill well as necessary using clean fresh water with biocide. ND WH. NU BOP. |
| 5 | PU 2.06" IJ-55 tbg to tag fill. 223 jts 2.06" tbg landed @ 7268'. |
| 6 | POH and stand back 7230' tbg. |
| 7 | MIRU Warrior WL. RIH w/ gauge ring for 3 1/2" 7.7# tbg to 7250'. RIH 3 1/2" CIBP and set at 7230' (59' above top Nio perf) to abandon Niobrara and Codell perfs. Note: No PT due to open Sussex perfs. |
| 8 | Run a gyro directional survey from CIBP to surface with 100' stops. Forward results to Sabrina Frantz in Evans. |
| 9 | RIH 2.06" IJ tbg open-ended to CIBP @ 7230'. Hydro-test tbg to 3000 psi. |
| 10 | RU cementers and equalize a balanced plug above CIBP from 7230' to 6558' as follows: 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. (34.5 cuft of slurry). |
| 11 | PU tbg to ~6000' and reverse circulate clean w/fresh water treated with biocide. WOC per cementing company recommendation. |
| 12 | Tag plug, TOC must be at 6800' or higher. If not, consult Evans Engineering before proceeding. |
| 13 | TOOH and stand back 4330' 2.06" tbg. LD remainder. |
| 14 | PU CICR and 2.06 tubing. TIH and set Retainer at 4,330'. Pressure test casing and CICR to 1000 psi. |
| 15 | Establish injection rate into Sussex perfs. Cement squeeze Sussex Perfs with 70 sx class "G" w/ 0.4% CD-32, 0.4% ASA-301 mixed at 15.8 ppg and 1.15 cf/sk. (80.5 cuft of slurry). Use no cello-flake in this cement due to small squeeze perfs. Underdisplace with fresh water by 3 bbls (calculated to leave cement top @ ~4000' in 3 1/2"). Unsting and dump remaining cement on retainer. |
| 16 | POH to 3500' and circulate clean. Continue to TOOH standing back with 1020' of tbg. LD remainder. Shut well in and WOC per cementing company recommendations. |

17 ND BOP and wellhead. Install BOP on surface casing head with 3 1/2" pipe rams. Install 3000 psi ball valves on both casing head outlets. Install a choke or choke manifold on one outlet.

18 RU WL, RIH w/ jet cutter and cut 3 1/2" casing at 1020'. Circulate bottoms up using drilling mud and continue circulating to remove any gas from wellbore. RD WL.

PU and LD 3-1/2" casing, TIH with 2.06" tbg to 1020'.

19 RU cementers. Pump 10 bbl SAPP (Sodium Acid Pyrophosphate) followed by 20 bbl (min) fresh water spacer immediately preceding cement.

20 Pump a balanced plug 1020'-410': 265 sx (352 cuft.) Type III cement w/ 0.25 pps cello flake and CaCl2 as deemed necessary mixed at 14.8 ppg and 1.33 cf/sk (design to fill 404' in 9.5'' OH + 40% excess and 206' in 8 5/8"surface casing ).

21 POH w/2.06" tbg to 200' and circulate clean. WOC per cementing company recommendation. Tag plug with 2.06 tbg; TOC should be 410' or higher. If not, Consult Evans engineering before proceeding.

22 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.

23 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.

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

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

26 Excavate hole around surface casing enough to allow welder to cut 8 5/8” casing minimum 5’ below ground level.

27 Welder cut 8 5/8'' casing minimum 5' below ground level.

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

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

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

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

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

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

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