

# GREEN VALLEY L6-1

## PLUG AND ABANDON PROCEDURE

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Gyro run 12/6/2014.

- 1 Provide 48 hr notice to COGCC prior to rig up per request on approved Form 6. Submit Form 42 and call Automation Removal Group at least 24 hr prior to rig move. If not already completed, request that they isolate production equipment and remove any automation equipment prior to the rig showing up. Install perimeter fence as needed.
- 2 MIRU SL. Fish tools and tag PBMD (should be 7381'), enter tag depth in OpenWells. RDMO SL.
- 3 Prepare location for base beam rig.
- 4 Check and record Bradenhead pressure. If Bradenhead valve is not accessible, re-plumb so that valve is above GL. Blow down Bradenhead and re-check pressure the next day. Repeat until pressure stays at 0 psi. Contact Evans Engineering if pressure does not blow down to 0 and stay at 0.
- 5 Spot 25 jts of 1.66" 2.3# J-55 tbg.
- 6 MIRU WO rig. Kill well w/ fresh water and biocide. If unable to circulate, load tbg and csg with fresh water and biocide. ND WH, NU BOP.
- 7 Notify cementers of the needed volumes: 20 sx of Thermal 35 cement w/ 0.5% CFR-2, 0.25% FMC mixed at 15.6 ppg and 1.51 cf/sk (Niobrara plug); 25 sx of 0:1:0 Class G cement w/ 0.5% CFR-2, 0.2% FMC, 0.5% LWA, mixed at 15.8 ppg and 1.15 cf/sk (Sussex plug); 490 sx of Type III cement w/ 0.3% CFL-3, 0.3% CFR-2, 0.25 pps polyflake and CaCl<sub>2</sub> mixed at 14.8 ppg and 1.33 cf/sk (FHM stub plug).
- 8 PU tbg out of landing bowl. Do not exceed 80% of tubing tensile strength, or 17,088 lb. LD landing jt. TOOH with 1.66" tbg, SB 7230' and LD remainder.
- 9 MIRU WL. RIH gauge ring for 2-7/8" 6.5# csg to 7250'.
- 10 RIH with 2-7/8" CIBP (2-7/8" 6.5#). Set CIBP at +/- 7230' (Collars at 7206' and ~7238') and pressure test CIBP to 3000 psi for 15 minutes (2-7/8" will be used as workstring later). If pressure test passes, RDMO WL.
- 11 RIH with 1.66" tbg while hydrotesting to 3000 psi and tag CIBP. PU and circulate thoroughly to remove gas from hole.
- 12 MIRU cement company. Spot 20 sx of Thermal 35 cement w/ 0.5% CFR-2, 0.25% FMC mixed at 15.6 ppg and 1.51 cf/sk (cement from 7230' to 6300' in 2-7/8" csg).
- 13 PUH to 6100'. Circulate fresh water w/ biocide to clear tbg.
- 14 PUH to 4940' w/ 1.66" tbg while LD.
- 15 Spot 25 sx of 0:1:0 Class G cement w/ 0.5% CFR-2, 0.2% FMC, 0.5% LWA, mixed at 15.8 ppg and 1.15 cf/sk (cement to cover prior csg patch from 5300' to 4580' in 2-7/8" csg).
- 16 PUH to 4400'. Circulate fresh water w/ biocide to clear tbg. WOC per cementing company's recommendation.
- 17 TIH w/ 1.66" tbg, tag balanced plug. Tag needs to be 4580' or higher.
- 18 TOOH, LD all 1.66" tbg.

- 19 MIRU WL. PU jet cutter and RIH to 880', cut 2-7/8" csg. Circulate to remove any gas from wellbore. RDMO WL.
- 20 ND BOP, ND tbg head. NU BOP on surface csg w/ 2-7/8" pipe rams. Install 3000 psi ball valves on csg head outlets. Install choke or choke manifold on one outlet.
- 21 Establish circulation down 2-7/8" csg w/ fresh water and biocide and get bottoms up. No need to remove cut end since flare on 2-7/8" csg will be small.
- 22 Establish circulation w/ fresh water and biocide and get bottoms up. MIRU cement company. Pump 10 bbls SAPP, 20 bbls fresh water and biocide followed w/ 490 sx of Type III cement w/ 0.3% CFL-3, 0.3% CFR-2, 0.25 pps polyflake and CaCl<sub>2</sub> mixed at 14.8 ppg and 1.33 cf/sk (cement from 880' to 100', assume 11.5" avg hole from nearest SX caliper, adding 40% excess).
- 23 TOO H w/ 2-7/8" csg. WOC 4 hrs, tag plug. Tag needs to be 166' or higher. TOO H, LD.
- 24 MIRU WL. RIH w/ 8-5/8", 24# CIBP and set at 80'. Pressure test to 1000 psi for 15 min. If pressure holds, RDMO WL and RDMO WO rig.
- 25 Instruct cementing and wireline contractors to e-mail copies of all job logs/job summaries and invoices to rscDJVendors@anadarko.com w/in 24 hrs of the completion of the job.
- 26 Supervisor submit paper copies of all invoices, logs, and reports to Evans Engineering Specialist.
- 27 Excavation crew to notify One Call to clear excavation area around wellhead and for flowlines.
- 28 Excavate hole around surface casing enough to allow welder to cut 8-5/8" casing minimum 5' below ground level.
- 29 Welder cut 8-5/8" casing minimum 5' below ground level.
- 30 MIRU Redi Cement mixer. Use 4500 psi compressive strength cement, (NO gravel) to fill stubout.
- 31 Spot weld on steel marker plate. Marker should contain Well name, Well number, legal location (1/4 1/4 descriptor) and API number.
- 32 Properly abandon flowlines per Rule 1103.
- 33 Obtain GPS location data as per COGCC Rule 215 and send to rscDJVendors@anadarko.com.
- 34 Back fill hole w/ fill. Clean location, level.
- 35 Submit Form 6 to COGCC ensuring to provide 'As performed' WBD identifying operations completed.