

## BIRKLE 24-15L

- 1 Call foreman or lead operator at least 24 hr prior to rig move. Request that they catch and remove the plunger, isolate production equipment and remove any automation prior to rig showing up. Install perimeter fence as needed.
- 2 MIRU slickline services and VES. Pull bumper spring, tag bottom and run gyro survey from 7850' to surface with stops every 100'. Forward gyro survey data to Sabrina Frantz and invoices to Sabrina Frantz. RDMO slickline services and VES.
- 3 Provide notice of MIRU to COGCC field inspector as specified in approved Form 6.
- 4 Notify IOC when rig mobilizes to location to generate workorder for flowline removal and one call for line locates.
- 5 Prepare location for base beam equipped rig.
- 6 MIRU, kill as necessary using clean fresh water with biocide and circulate. ND WH. NU BOP. Unseat landing jt, LD.
- 7 Notify cementers to be on call. Provide volumes (40 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 cf/sk (inside 3.5"), 470 sx class "G", w/0.25 pps cello flake, 0.4% CD-32, 0.4% ASA-301 mixed at 15.8 ppg and 1.15 cf/sx (10"+20% Caliper Log in file); 290 sx Type III CaCl<sub>2</sub> cement mixed at 14.0 ppg and 1.53 cf/sx (9 1/2"+20% Caliper log in file)).
- 8 TOOH 2 1/16" production tubing. Stand back.
- 9 MIRU WL.
- 10 RIH gauge ring for 3.5" 7.7#/ft csg to 7400'.
- 11 RIH CIBP, set at 7390'. PT CIBP to 1000 psi. RD WL
- 12 TIH to 7390'+/- tag CIBP hydrotesting tubing in to 3000 psi. Roll hole using water containing biocide.
- 13 RU cement services.
- 14 Spot 40 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 cf/sk on top of CIBP.
- 15 PUH 26 stands. Circulate 55 BBL water containing biocide to clear tubing.
- 16 Place 9.0 ppg mud containing biocide from 5778' to 4910' (~10BBL). TOOH
- 17 RU WL. PU 2-1' 3-1/8" perf guns with 3 spf, 0.5" dia 120° phasing. Shoot 1' of squeeze holes at 4970' and at 4140'. RD WL.

- 18 PU CICR on production tubing and set at 4200'. Initiate circulation through CICR using water containing biocide. Note rate and pressure.
- 19 RU cement services.
- 20 Pump 20 bbl Sodium Metasilicate immediately preceding cement.
- 21 Pump 470 sx class "G", w/0.25 pps cello flake, 0.4% CD-32, 0.4% ASA-301 mixed at 15.8 ppg and 1.15 cuft/sx. Underdisplace by 3 bbls, unsting from retainer and dump remaining on top of CICR.
- 22 PUH 11 stands. Circulate 35 BBL water containing biocide to clear tubing.
- 23 Place 9.0 ppg mud containing biocide from 3518' to 1210' (~22BBL).
- 24 P&SB 1210' tbgs. LD remainder.
- 25 RU WL. Crack coupling or shoot off casing at 1110'. RDMO WL. Circulate hole using 110 BBL water containing biocide to remove any gas.
- 26 NDBOP, NDTH.
- 27 NU BOP on casing head, install 3-1/2" pipe rams.
- 28 TOOH with 3-1/2" casing, LD.
- 29 TIH into csg stub using production tubing to 1210'.
- 30 Spot 150 SX Type III CaCl<sub>2</sub> cement mixed at 14.0 ppg and 1.53 cuft/sx.
- 31 PUH to 200'. Circulate 13 BBLs water containing biocide to clear tubing.
- 32 TOOH. WOC 4 hrs.
- 33 TIH and tag. If cement is below 200', discuss with production engineer.
- 34 Fill casing with 9.0 ppg mud containing biocide from tag to 100'.
- 35 MIRU WL. RIH 8-5/8" CIBP to 100'. Set, PT to 1000 psi for 15 min. If tests, RDMO WL and WO rig.
- 36 Supervisor submit paper copies of all invoices, logs, and reports to Frantz, Sabrina.
- 37 Excavation crew to notify One Call to clear excavation area around wellhead and for flowlines.
- 38 Excavate hole around surface casing enough to allow welder to cut 8 5/8" casing minimum 5' below ground level.
- 39 Welder cut 8 5/8" casing minimum 5' below ground level.
- 40 MIRU ready cement mixer. Use 4500psi compressive strength cement, (NO gravel) fill stubout.

- 41 Weld on steel marker plate. Marker should contain Well name, Well number, legal location (1/4 1/4 descriptor) and API number
- 42 Properly abandon flowlines per Rule 1103.
- 43 Back fill hole with fill. Clean location, level.
- 44 Submit Form 6 to COGCC ensuring to provide "As performed" WBD identifying operations completed.