

## CANNON FEDERAL 4-17A

- 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 GYRO complete DEC12.
- 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. ND WH. NU BOP. Unseat tubing hanger, LD.
- 7 Notify cementers to be on call. Provide volumes (30 sx G w/ 20% silica flour, 0.4% CD-32, 0.4% ASA-301 and R-3 to achieve 2:30 pump time mixed 15.8 ppg and 1.38 yield(In pipe only), 175 sx class G, 0.4% CD-32, 0.4% ASA-301 15.8ppg 1.15 yield (9"+20%), 405 sx Type III CaCl<sub>2</sub> cement 1.53 yield (9"+20%)).
- 8 TOOH 2-3/8" production tubing, SB.
- 9 MIRU WL. RIH gauge ring for 4-1/2" 11.6#/ft csg to 7800'.
- 10 RIH CIBP, set at 7758'. PT CIBP to 1000 psi. PU dump bailer, dump bail 2 sx class G cement on CIBP. RD WL
- 11 TIH using production tubing to 7091', hydrotesting tubing in to 3000 psi. Roll hole using water containing biocide.
- 12 RU cement services.
- 13 Spot 7.5 BBL (30 sx) G w/ 20% silica flour, 0.4% CD-32, 0.4% ASA-301 and R-3 to achieve 2:30 pump time mixed 15.8 ppg and 1.38 yield from 7091'-6691'. RD cementers.
- 14 PUH 6 stands from 6691'. Circulate hole volume using water containing biocide to clear tubing. WOC 4 hrs.
- 15 TIH and tag previously pumped plug. Note depth, if below 6691', discuss with production engineer.
- 16 Place 9.0 ppg mud containing biocide from tag to 5250'.
- 17 P&SB 5060' tubing, LD remainder.

- 18 RU WL. PU 2-1' 3-1/8" perf guns with 3 spf, 0.5" dia 120\* phasing. Shoot 1' of squeeze holes at 5250' and at 5000'. RD WL.
- 19 PU and TIH with CICR on production tubing. Set at 5060'.
- 20 Establish circulation noting rate and pressure using water containing biocide.
- 21 RU cementers.
- 22 Preflush using 5 BBLS water, 20BBLS sodium metasilicate, 5 BBLS water.
- 23 Pump ~36 BBL (175sx) class G, 0.4% CD-32, 0.4% ASA-301 with 1.15 cuft/sk yield. Underdisplace by 14.5 BBL. Unsting from retainer and spot from CICR to 4136'.
- 24 PUH 6 stands from 4136'. Circulate hole volume using water containing biocide to clear tubing.
- 25 TIH to 4250'. Place 9.0 ppg mud containing biocide from 4250' to 1800' (~38BBL).
- 26 TOOH, SB 1800' tubing, LD remainder.
- 27 ND BOP, NDTH.
- 28 NU BOP, changeover BOP pipe rams for 4-1/2" casing.
- 29 PU casing hanger, LD.
- 30 RU WL. Shoot off casing at 1700'. RD WL. Makeup circulation hose, circulate hole using 165 BBL water containing biocide to remove any gas.
- 31 TOOH with 4-1/2" 11.6 #/ft casing, LD.
- 32 Changeover BOP pipe rams for 2-3/8".
- 33 TIH into casing sub using production tubing to 1800'.
- 34 Spot 405 SX Type III CaCl<sub>2</sub> cement with 1.53cuft/sk yield.
- 35 PUH to 150', circulate 15 BBL water containing biocide to clear tubing.
- 36 TOOH. WOC 4 hrs.
- 37 TIH and tag. If cement is below 469', discuss with production engineer.
- 38 Fill casing with 9.0 ppg drilling mud containing biocide from tag to 100'.
- 39 RU WL. RIH 8-5/8" CIBP to 100'. Set, PT to 1000psi for 15 min. If tests, RDMO WL and WO rig.
- 40 Supervisor submit paper copies of all invoices, logs, and reports to Frantz, Sabrina.
- 41 Excavation crew to notify One Call to clear excavation area around wellhead and for flowlines.

- 42 Place Redi Mix cement on will call if cement top in 8 5/8" is more than 25' below surface.
- 43 Excavate hole around surface casing enough to allow welder to cut 8 5/8" casing minimum 5' below ground level.
- 44 Welder cut 8 5/8" casing minimum 5' below ground level.
- 45 MIRU redimix. Use 4500psi compressive strength cement, (NO gravel) fill stubout.
- 46 Spot weld on steel marker plate. Marker should contain Well name, Well number, legal location (1/4 ¼ descriptor) and API number
- 47 Properly abandon flowlines per Rule 1103.
- 48 Back fill hole with fill. Clean location, level.
- 49 Submit Form 6 to COGCC ensuring to provide "As performed" WBD identifying operations completed.