

- 1 Contact foreman or lead operator and request that they isolate production equipment, catch and remove plunger and remove automation equipment prior to workover rig mobilization. Install perimeter fence as needed.
- 2 RU slickline and VES. Pull bumper spring/standing valve. Run gyro from 7300' to surface.
- 3 Provide 48 hr notice of MIRU to COGCC as required.
- 4 MIRU workover rig. Haul in additional joints of 2 3/8" tubing for replacements.
- 5 Place cement services on "will call" when rig moves on location to rig up.
- 6 Circulate and control well with clean water treated with biocide. Remove upper wellhead and install BOP.
- 7 Unland 2 3/8" production tubing string. P&SB production tubing.
- 8 MIRU J-W Wireline. RIH with gauge ring for 2 7/8", 6.5# liner to 7750'. Run and set CIBP in 2 7/8" liner at +/- 7700'. Dump bail two 94# sacks of cement on CIBP (make as many runs as necessary). RIH with gauge ring for 4 1/2", 11.6# casing to 7300'. Run and set CIBP in 4 1/2" casing at 7230'. Dump bail two 94# sacks of cement on CIBP.
- 9 Perforate squeeze holes at 6714' (cement top is +/-6730'). Run CICR on wireline and set at 6614'. RDMO wireline.
- 10 Pick up stinger and RIH on 2 3/8" tubing. Hydrotest tubing to min 3000 psi while RIH.
- 11 RU cementer. Establish injection rate into the sqz perfs with water at max of 3000 psig. Note injection rate and pressure in OpenWells. Mix and pump 100 sks 50/50 Poz "G" cement containing 20% silica flour, 3% gel, 0.4% FL-52 and 0.1% sodium metasilicate (13.5 ppg & 1.71 cuft/sk). Displace cmt to 1.5 bbl above CICR. Sting out of CICR and pull four stands tubing. Reverse out cement with water and then circulate hole with min 9.0 ppg/36 vis mud treated with biocide.
- 12 P&SB about 4300' tubing, LD remainder.
- 13 RU J-W Wireline. Perforate squeeze holes at 4500'. Run CICR on wireline and set at +/-4300' depending on collar location. Standby wireline.
- 14 RU cementer. Establish injection rate into the sqz perfs with water at max of 2500 psig. Note injection rate and pressure in OpenWells. Precede cement with 20 bbl of sodium metasilicate. Mix and pump 160 sks Class "G" cement containing 0.25#/sk cello-flake (15.8 ppg & 1.15 cuft/sk). Volume assumes 8" hole and 50% excess. Displace cement to 2.0 bbl above CICR. Sting out of CICR and pull six stands tubing. Reverse out cement with mud and then circulate hole with min 9.0 ppg/36 vis mud treated with biocide. RD cementer and place on call for surface plugs.
- 15 P&SB about 950' tubing. LD remainder.
- 16 RU J-W Wireline. Shoot off (or break a coupling) at +/- 865'. Standby wireline.
- 17 Remove BOP and tubing head. Unland 4 1/2" casing. Re-install BOP with 4 1/2" OD pipe rams on surface casing head. Circulate hole with min 9.0 ppg mud treated with biocide. P&LD the 4 1/2" casing.
- 18 RIH with tubing to +/- 950'. RU cementer. Spot 165 sks Class "G" containing 1-2% CaCl₂ and 0.25#/sk cello-flake from 950' up to +/- 400'. Open hole volume assumes 8" hole and 50% excess. P&LD about 400' of tubing and LD remainder. Circulate as deemed necessary. WOC min 4 hrs.
- 19 RIH with tubing and tag plug, P&SB tubing. If cement is up into 8 5/8" surface casing, proceed. If cement is not up into surface casing, further plans will be made at this time.
- 20 MIRU J-W Wireline. Set CIBP in 8 5/8", 24# surface casing above top of cement plug. RD J-W Wireline.
- 21 RIH with tubing to 5' above the CIBP. RU cementer. Circulate hole with min 9.0 ppg/36 vis mud. Spot sufficient Class "G" cement containing 1-2% CaCl₂ to fill hole to 20' from surface.
- 22 RDMO cementer. TOOH while laying down tubing. Remove BOP. RDMO workover rig.
- 23 Wellsite supervisor turn all paper copies of cementing reports/invoices and logs to Sabrina Frantz. NOTE: During the job, wellsite supervisor should instruct the logging and cementing contractors to e-mail all logs, job reports/invoices to Sabrina Frantz.
- 24 Have excavation contractor notify One-Call to clear for digging around wellhead and flowline removal.
- 25 Excavate hole around surface casing to allow welder to cut off 8 5/8" surface casing 5' below ground level. Tag cement top with string line and record.
- 26 If cement is not up to 30', MIRU redi-mix cement mixer. Use 4,500 psi compressive strength redi-mix (cmt and sand only, no aggregate) to finish filling surface casing to top of cut off. RDMO ready cement mixer.
- 27 Weld steel plate across top of surface casing cut off. Information to be stamped on plate is: Well name and number, 1/4, 1/4 description of surface location and API number.
- 28 Cover steel plate and backfill hole with native material removed.
- 29 Properly abandon flowlines as per Rule 1103. Reclaim location/ROW as required by surface owner(s).
- 30 Submit Form 6 to COGCC. Provide "As Plugged" wellbore diagram identifying the specific plugging completed.