Burchfield 32-21 Bradenhead remedial cementing Workover

1 Level location for base beam equipped rig.
2 Call Foreman or Field Coordinator before slick line moves in and catch plunger in lubricator.
3 If surface casing is not accessible at ground level, re-plumb so valve is at ground level. Check and report surface casing (braden head) pressure.
4 Confirm with field operator/ foreman if plunger was retrieved otherwise MIRU slickline. Fish plunger from lubricator. RIH and pull the bumper spring and standing valve if necessary. RBIH with a sample bailer and tag bottom. Report findings. PBTD (should be at 7404'). RDMO slickline.
5 Before the rig moves in; Operations will check tubing and annulus pressure and blow the tubing and 2-3/8" x 4-1/2" annulus down to zero through the flow-line and into the oil stock tank. Shut in master valve and annulus valves. ND automation and plunger lift equipment and disconnect the flow lines. Isolate production equipment and LOTO.
6 Spot a minimum of 15 jts of 2-3/8", 4.7#, J-55, EUE tbg for replacement and 50 jts 1-1/4", 2.3#/ft, J-55, 10rd IJ for annular cement job.
7 MIRU WO rig and auxiliary equipment. Check pressures. Rig up a 2" line from the tubing head annulus to the work tank. Kill the well while pumping down the tubing with freshwater and biocide and taking returns to the work tank. ND 7-1/16" 3M x 2-3/8" 8rnd adapter flange. NU 7-1/16" 5M Double BOP with 2-3/8" pipe rams and a 1500 psi rated stripping head (without the rubber). Zero out the weight indicator while the blocks are hanging.
8 PU an 8' to 10' landing joint with TIW valve on top and screw into the tubing hanger. Back out the lockdown pins on the tubing head. Pull up on the tubing string to break any possible sand bridges. Unseat tubing hanger and lay down. Install rubber element in the striping head. **Note: Do not exceed a pull weight of 57,384 lbs.**
9 MIRU "UTI" equipment. TOOH with 2-3/8" tubing while measuring the wall thickness. Lay down joints with wall loss or penetrations >35%. Replace joints as necessary. **Keep yellow & blue band tubing. Note joint number and depth of tubing leak(s) on PRODUCTION EQUIPMENT FAILURE REPORT IN OPEN WELLS.(Clearly mark junk tubing being returned to yard).
10 PU a 4-1/2" RBP for 11.6# casing and setting tool. TIH with RBP on 2-3/8" tbg (Rabbit while TIH). Set RBP @ +/-4240', (collars are at 4224' and 4266'). Fill the casing with treated water. Close the pipe rams and pressure test the RBP and casing to 2000 psi.
11 TOOH with the 2-3/8" tubing and stand back the production string.
12 ND stripping head and BOP's. Disconnect the 2" return line from the tubing head and remove the 7-1/16" 3M x 4-1/2" 8rnd FE tubing head.
13 Connect the 2" flow line to the starting head annulus. Blow down the 8-5/8" x 4-1/2" annulus to the work tank then fill the annulus with 9.0 ppg mud.
14 Remove the compression nut on the starting head, the top plates, packing, and bottom plates. Tack weld the slip segments onto the casing. PU an 8' to 10' long 4-1/2" landing joint with collars on both ends and screw onto the casing. PU until the slips are out of the bowl then remove the slips.
15 Slack off to determine space out required in order to install the dual entry flange then reciprocate the casing to break up dehydrated mud in the annulus.

16 Install 10-3/4" 8rnd x 11" 3M drilling flange. Space out to allow 4-1/2" casing to set in compression and install dual entry flange. NU flow tee and BOP's on 2-3/8" side.
17 PU 1-1/4" 2.3#/ft J-55 10rd IJ tubing with mule shoe and TIH outside 4-1/2" casing and open hole to +-2660' to tag existing cement. Circulate with treated 9.0 ppg mud to clean up the bore hole.
18 Rig up cementing equipment. Continue to circulate until cement is ready to pump. Pump a 75 bbls freshwater spacer followed by 24 bbls of 15.6 ppg cement slurry with zero free water and low fluid loss (60 ml/30 min). Displace with 1.0 bbl of water. The cement is to be designed for 105 degree Fahrenheit BHCT and four hour pump time.
19 POOH with tubing up to +-800' and reverse circulate until returns are free of cement.
20 TOOH standing back the 1-1/4" string. ND BOP's and remove the dual entry flange.
21 PU 4-1/2" landing joint and connect to the casing. Reciprocate the casing and land in the slips with the same weight as before. Lay down landing joint. Install plate, packing, plate, and compression nut.
22 NU new 7-1/16" 5M x 4-1/2" 8rnd FE tubing head. Install adapter with 5K 2" master valve and shut in for 12 hours.
23 RU High pressure pump and pressure test the new wellhead to 4500 psig for 15 minutes. Bleed off.
24 ND adapter. NU 7-1/16" BOP's and stripping head. RU E-line. RIH with GR/CCL/CBL and log from 1600' to 600'. RD E-line. Report logging results to office.
25 TIH with 1-1/4" work string and lay down. Connect 2" flow line to tubing head annulus. PU retrieving tool and 2-3/8" tubing.
26 TIH and engage RBP, release, TOOH and LD RBP. TIH with 2-3/8" NC, 2-3/8" XN-Nipple, and 2-3/8" 4.7# J-55 EUE 8rd tubing. Circulate out fill if necessary then land tubing at +/- 7422' or 1 joint above the top Codell perforation (7454'-7474').
27 ND BOPE. NU WH. Ensure all valves on TBG head are rated to 5000 psi and ensure new TBG head adapter has a new R-46 ring gasket installed. Install a 2' double XX nipple above the master valve.
28 MIRU hydrotester and test all components: tubing, wellhead and xx nipple through master valve to 4500 psi for 15 min.
29 RDMO hydrotester.
30 RDMO WO Rig
31 Reconnect flow lines and automation equipment. Reinstall all plunger components.
32 Clean location and swab well back to production, if necessary. Notify Foreman/Field Coordinator of finished work and turn well over to production team.