

Workover Procedure  
Archuleta Gas Com A #1A  
Sec.05-T29N-R09W  
San Juan County, NM

1. Contact Federal or State agency prior to starting repair work.
2. Catch gas and/or water sample off of bradenhead and casing, and have analyzed.
3. Install and/or test anchors.
4. MIRUSU. Check and record tubing, casing and bradenhead pressures.
5. Blow well down, kill well if necessary with 2% KCL.
6. Nipple down well head, nipple up and pressure test BOP's.
7. Trip in the hole and tag PBTD, check for fill, trip and tally out of hole with tubing checking condition of tubing.
8. Trip in the hole with bit and scraper for the intermediate casing and trip in to the top of the liner. Trip out of the hole with bit and scraper. Trip in hole with second bit and scraper and run from the top of the liner to the top of the perforations. A seating nipple and standing valve may be run in order to pressure test the tubing.
9. Trip in the hole with RBP and PKR. Set RBP 50-100 ft. above perforations. Trip out of hole one joint and set PKR and pressure test RBP to 1500 psi. Release PKR, spot sand on RBP and pressure test csg to 1000 psi. If no leak is found, trip out of hole with PKR and skip to step 11.
10. Trip out of hole isolating leak in liner, if any. If a liner leak is found, establish injection rate and check for circulation around liner top. Also, determine if there is a leak above the top of the liner. Trip out of hole with PKR.
11. Determine from well file and history, the interval a CBL needs to be run between the RBP and the surface. If a CBL is needed, run CBL over the interval necessary under 1000 psi and report results to Denver. Different size CBL tools may be required in the liner versus the intermediate casing.
12. If there are no casing leaks, skip to step 14.
13. If there is a leak in the liner and a leak above the top of the liner, trip in hole with a RBP that fits the liner and a PKR that fits the intermediate casing. Set RBP 30-60' below the top of the liner. Release PKR and trip out of hole isolating leak in the intermediate casing.
14. Based on the location of the leak, if any, and the results of the CBL, perforate casing if necessary with 4 JSPF and circulate dye if possible to determine cement volume. Depending on the depth of the hole and circulating pressure, a PKR or a cement retainer may be needed.