

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.
15. Mix and pump sufficient cement (class B or equivalent with two hour setting time) to circulate to surface, if circulation to surface is possible. Shut bradenhead valve and attempt to obtain a squeeze pressure and WOC.
16. Trip out of hole. Trip in the hole with bit and scraper and drill out cement and pressure test casing. Re-squeeze leaks if casing fails pressure test.
17. If cement is not circulated to the surface, it may be necessary to run another CBL (and/or temperature survey 8-10 hours after cementing) and repeat steps 14 thru 16.
18. Trip in the hole with retrieving head for RBP, circulate sand off of RBP and trip out of hole with plug.
19. If there is a leak in the liner top, trip in hole with a PKR. If there is no leak in the liner top, skip to step 22.
20. Mix and pump sufficient cement (class B or equivalent with two hour setting time) to squeeze liner top. Attempt to obtain a squeeze pressure and WOC.
21. Trip in the hole with bit and scraper and drill out cement and pressure test casing. Re-squeeze leak if liner top fails pressure test.
22. If there is a second RBP in the liner, trip in the hole with a retrieving head, circulate sand off of the RBP and trip out of hole with the plug.
23. If there is a leak in the liner or squeeze work is required based on the CBL, perforate casing, if necessary with 4 JSPF. Trip in hole with a cement retainer and set above the leak or perforations.
24. Mix and pump sufficient cement (class B or equivalent with two hour setting time) and attempt to obtain a squeeze pressure and WOC.