

## FV Larson B 13X P&A PROCEDURE:

1. Prep location. Have Vetco perform wellhead work. Notify COGCC of intent to P&A the well has begun.
2. MIRU workover rig and aux equipment. Kill well as required. N/D WH & N/U 7 1/16" 5K Class II modified BOPs & Test.
3. MIRU PLS & pull tubing plug @ 918'. Kill well as required.
4. Release 7" Loc-Set packer @ 910'. POOH & LD equipment (packer & bare tbg).
5. PU & TIH w/ 5 1/2" clean-out BHA & work string, Cleanout sand on top of RBP at 5481', POOH.
6. PU & TIH w/ retrieving head. Retrieve 5 1/2" RBP set at 5481'. TOH & LD RBP.
7. PU & TIH w/ clean-out BHA (4 3/4" bit) & try to clean-out to PBTD at 6460'. *Keep engineers informed on progress of clean-out.*

**NOTE: From CBL ran on 12/1963 showed the TOC @ 3775'**

8. MIRU PLS. RIH set a CICR @ ~5896' or 50' above top perforation.
9. RIH w/ WS. Sting into the CICR & establish injection rate.
10. Pump 21 bbls or 103 sxs of cement to plug from 5896' to PBTD (6460').
11. Pull out of the CICR & spot (2 bbls or 9 sxs) cement on top, pull above cement top and reverse tubing clean. Approximately 50' of cement on CICR.
12. RIH tag cement, circulate minimum 9 ppg PKR fluid (55 gal CRW132/ 100 bbl water) & POOH to 3825' to spot plug across 5 1/2" TOC (3775').
13. Spot minimum 100' balanced plug (3 bbls or 15 sxs) at 3825' - 3725', pull above cement top and reverse tubing clean, POOH.
14. RIH tag cement, circulate 9 ppg PKR fluid (55 gal CRW132/ 100 bbl water) & POOH.
15. R/U PLS & perforate 50' below surface shoe (713') @ 763', establish circulation or injection rate.
16. RIH with WS and spot minimum 100' Balanced plug (3 bbls or 15 sxs) across shoe (763'-663') after pumping 5 bbls or 23 sxs into annulus. Pull above cement top & reverse clean, POOH.
17. RIH, tag cement (50' above shoe), circulate 9 ppg PKR fluid & POOH
18. If you **cannot get a 1" x 60' stinger in the casing annulus**, perforate 50'+ below surface. Pump 3 bbls or 14 sxs into annulus.
19. N/D BOPs and N/U tubing top flange. Spot balanced plug at surface (3 bbls or 15 sxs).
20. RDMO workover rig. Provide the regulatory specialist with cementing reports and P&A'd wellbore diagram.
21. Roustabouts remove cellar, clean up location, flush and remove flowlines and re-seed as needed.
22. Have welder install P&A marker.