

12. Circulate casing capacity plus (in order to clear casing). Pump 1000 gals of Superflush 102 ahead of the cement. Cement First Stage of 4-1/2" w/450sx Premium cement w/4/10th of 1% Halad-22A, 3/10th of 1% CFR-2, & 5#/sx KCL. Slurry weight 15.8#/gal with a slurry volume of 1.2 cu ft/sx and a water ratio of 5.19 gals/sx. This amount is designed to circulate cement from 11,600' to 10,000' (DV tool). The DV tool should be opened and the well circulated six hours between stages.

Open DV tool and cement Second Stage through DV tool @ 10,000'± w/1150sx Halliburton Lite Premium cement w/5#/sx salt. Slurry weight 13.0#/gal w/a slurry volume of 1.82 cu ft/sx & a water ratio of 9.58 gals/sx. Tail-in w/625sx Premium cement w/4/10ths of 1% Halad-22A, 3/10ths of 1% CFR-2, and 5#/sx KCL. Slurry weight - 15.8#/gal w/a slurry volume of 1.20 cu ft/sx and a water ratio of 5.19 gal/sx. This amount is designed to bring cement from 10,000' to 3500' with top of best cement at 7800'±.

NOTE: These calculations incorporate 50% excess. A caliper will be ran and volumes adjusted accordingly. Estimated cement top - 3500' (tied back into intermediate casing). A Temperature Log will be ran to locate cement top.

13. Completion (perforations, acid job and/or additional stimulation) to be determined after drilling.