While WOC change out collars and drillpipe to 3-1/2". WOC 12 hrs, run in hole with 8-1/2" cement mill and clean out to top of liner hanger, POH with mill and go in hole with 9-5/8" RTTS and set RTTS 150' above liner top. Pressure test liner top to 3000 psi for 30 minutes. If OK, pull RTTS out of hole. If liner top leaks, squeeze liner top thru RTTS, WOC 12 hours and repeat test. When liner top is satisfactory, clean out 7" liner with 6-1/8" cement mill and casing scraper to PBTD. POH and lay down mill & scraper. Go back in hole with bond log. After logging, GBIH with 6-1/8" bit, test pipe to 2400 psi for 30 minutes, and drill out casing shoe and 5' of formation. Circulate hole clean. If no gas is indicated circulate out mud with 10# brine water and circulate till hole is clean. Check for gas flow, if none indicated, start to unload hole with compressors. (Have new liquid mud on location treated for use in Morrow hole section should it be necessary to load hole in an emergency.) When hole dries up sufficiently, commence air drilling of Morrow section using 1100 CFM to start. Drill to 13200' carefully monitoring hole conditions while drilling. Blow hole clean with air and, if well conditions permit, log this section of hole before loading with fluid. If excessive gas flow exists, load hole with low fluid loss brine gel/KCL polymer mud prior to logging.

Run 1600' of 4-1/2" 13.50# N-80 SFJ Hydril liner with TIW rotating liner hanger set @ 11600'. Cement with 150 sxs Class "H" with .6% Halad 22A, .3% CFR-2, and 5# KCL/sx mixed at 15.8# for a yield of 1.2/sx. Calculated annular volume plus 50% excess.

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