Set 40' of 30" conductor with Redi-mix cement.

Spud 26" hole with fresh water gel/lime slurry with paper for seepage. A viscous gel will work best to keep hole clean. The possibility of severe loss of circulation exists. Drill to 475+'. Run & cement 450' of 20' H-40 94# ST&C casing with 1575 sxs of Class "C" w/ 2% CaCl. Mix at 14.8# yield 1.32 calculated annular fill plus 200%. Use inner string cementing method. WOC 8 hrs, nipple up, test pipe, and drill out shoe with 17-1/2" bit.

Drill 17-1/2" hole to top of Delaware Sand at  $2690\pm$  with poly brine fluid. Set 13-3/8" casing at  $2640\pm$  with 2465 sxs HLC with 10# salt and 1/4# Flocele per sx followed by 200 sxs Class "C" w/ 2% CaCl. HLC mixed at 12.6#/gal - yield 2.09 ft<sup>3</sup>/sx. Class "C" mixed at 14.8#/gal - yield of 1.32 ft<sup>3</sup>/sx. Calculated annular volume plus 200% excess. WOC 8 hrs, nipple up, test casing to 1500 psi for 30 minutes.

Drill 12-1/4" hole to  $11220\pm$ ' with a saturated brine mud, containing sepiolite, drispac, starch, etc. Maintaining a wt of 10 to 10.5#/gal. Use hole sweeps as needed. Gas kicks can be expected in the Wolfcamp formation. A light mud up with drispac/starch is recommended prior to running casing at 11,200'. Run 11,200' of 9-5/8 S95 casing using a differential fill guide shoe, differential fill float collar, top plug, and 22 centralizers. Two cement baskets can also be used. Cement in one stage using 4795 sxs Trinity Lite Wate containing 3/4 of 1% CFR-2 and 1/4# Flocele and .2% HR-7 per sx plus 150 sxs Class "H" with 3/4 of 1% CFR-2, .2% HR-7, and 5# KCL per sx. TLW mixed at 12#/gal - yield 1.75/sx. Class "H" mixed at 15.8#/gal - yield 1.2/sx. Calculated annular fill to bring cement top to 2000' (plus 200% excess).

WOC 12 hrs, run temp log, nipple up, and test casing to 1500# for 30 min. Drill out cement & guide shoe, drill 8-1/2" hole to 11,600' with existing fluid. At 11,600' mud up with sepiolite/drispac system increasing fluid density to 11.5 to 11.9 ppg with barite. Maintain water loss at less than 10cc. Drill to 11,900' and circulate clean. Run logs and tie back in to previous logs. Be alert for kicks in this section of the hole.

Run 1300' of 7" 28.7# S-95 SF JP liner with TIW rotating liner hanger at 10,600'. Cement with 225 sxs Class "H" with .6% Halad 22A and .3% CFR-2 and 5# KCL per sx. Mix at 14.8#/gal for a yeild of 1.2/sx calculated annular volume plus 50% excess.

While WOC change out collars and drill pipe 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 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 lcgging, GBIH with 6-1/8" bit and drill out casing shoe & drill to 13,200' with low fluid loss brine gel/KCL polymer mud. Run logs & tie back into previous logs. Run 1600' of 4-1/2" 13.50# N-80 SFJ Hydril liner with TIW rotating liner hanger set @ 11,600'. 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.