

of Halliburton Light Premium cement + 2% Calcium Chloride + 0.25 lbs/sack of chopped cellophane mixed w/11.02 gal/sk of fresh water for a slurry yield of 2.00 cf/sk at 12.40 lb/gal, followed by a tail slurry of 200 sacks of Premium Plus Cement + 2% Calcium Chloride mixed w/6.31 gal/sk of fresh water for a slurry yield of 1.34 cf/sack at 14.80 lb/gal..

3. The 9 5/8" intermediate casing will be set at approximately 5400 ft in 12 1/4" hole using a float shoe, a float collar, and about 20 centralizers. The slurry design will include a lead slurry of 1145 sacks of Interfill "C" cement + 0.25 lbs/sk of chopped cellophane mixed with 15.36 gal/sk of fresh water for a yield of 2.61 cf/sk at 11.70 lb/gal followed by a tail slurry of 200 sacks of Premium Plus Cement + 2% Calcium Chloride mixed with 6.31 gal/sk for a yield of 1.34 cf/sk at 14.80 lb/gal.
4. If run, the 4 1/2" production string will be set at about 11,950 ft in 7 7/8" hole. A float shoe, a float collar, and sufficient centralizers to centralize the casing through all prospective pay zones will be run. Sufficient slurry will be pumped to cover the uppermost prospective zone with at least 500 ft of cement using 50% excess slurry. Assuming a Morrow completion with casing set at 11,950 ft and a desired cement top of 9,550 ft, the casing would be cemented with 425 sacks of Super "H" Cement + 0.3% CFR-3 dispersant + 0.2% D-AIR 1 defoamer + 0.3% LAP-1 fluid loss + 3.0 lb/sk salt mixed w/8.46 gal/sk of fresh water for a yield of 1.63 cf/sack at 13.20 lb/gal. The slurry would be preceded by 1000 gals of Mud Flush.
5. Casing seats shown are at minimum depths and cement volumes are approximate. Actual volumes may vary depending upon hole conditions and actual casing setting depths.

6. Drilling Fluid Program

A. Fluid Characteristics by Interval

1. 0 to 500 ft. Fresh water, gel and lime.
 Weight 8.4 to 8.8 ppg
 Viscosity 34 - 36 sec/qt
 Fluid Loss NC
 ph 9.0 to 9.5
 LCM as needed
2. 500 to 5400 ft. Cut brine, salt gel, and lime.
 Weight 9.0 to 9.5 ppg
 Viscosity 28 to 30 sec/qt
 Fluid loss NC
 ph 9.5 - 10.0
 LCM as needed
3. 5400 to 8900. Cut brine, salt gel, and lime
 Weight 9.0 - 9.5 ppg
 Viscosity 28 to 32 sec/qt