13 3/8 INCH SURFAC. CASING AND HOLE DATA:

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Hole Depth - 330'
Casing Size - 13 3/8"
Casing Depth - 330'
Hole Size - 17 1/2"
Fill-up Required - 330' (circulate cement)
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Recommendation:

Install floating equipment, run 13 3/8" casing to bottom and circulate required hours to condition hole for cementing surface casing.

Mix 350 sacks of the following cement blend:

Class "C" Cement containing 2% Calcium Chloride

Slurry Weight:	14.8 lbs./gal.
Slurry Volume:	1.32 cu. ft./sk.
Water Ratio:	6.3 gals./sk.

This cement blend was designed to fill from 330 feet to ground level. The calculations incorporate 100 percent excess cement over a 13  $3/8'' \ge 17 1/2''$  annulus and experience in general area indicated cement should circulate.

Floating equipment should consist of:

One (1) Guide Shoe One (1) Insert Float Valve One (1) Centralizer Two (2) Pounds Weld-A One (1) Top 5 Wiper Plug

## 13 3/8" SURFACE CASING CEMENTING COST ESTIMATE:

Cement:

350 sacks Class "C" cement, 2% Calcium Chloride	\$1,994.66
(including service charge)	
17.78 ton-miles cement (60 miles)	576.07
	\$2,570.73

Service Equipment:

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Pump Service (330') plus mileage (60 miles,
estimate) $421.50
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