Federal E #1

Top of Cement Calculation

Final mud properties = 11.8 ppg, 45 visc., FL 4, FC 1/32, pH 10.5

Casing 5-1/2" 23# set at 12,898'

Cement 550 sx. Class H w/.04 of 1% CFR2 (Fluid less additive)

Slurry Volume = 1.06 cu.ft./sx. = 583 cu. ft. of cement

Caliper averages:

8-5/8"	12,898'-11,782' @ .2407 cu. ft./ft.	268 cu. ft. - 28 * .019	267 cu. ft.
10-1/2"	11,782'-11,756' @ .4363		11 cu. ft.
8-5/8"	11,756'-11,526'	55 cu. ft. - ≈ 0	55 cu. ft.
9-1/2"	11,526'-11,504 @ .3272	7 cu. ft. - ≈ 0	7 cu. ft.
9"	11,504'-11,410' @ .2768	26 cu. ft.	26 cu. ft.
9-1/2"	11,410'-11,180'	75 cu. ft.	75 cu. ft.
9"	11,180'-10,666'	142 cu. ft.	141 cu. ft.
			582 cu. ft.

Displacement of couplings = .019 cu. ft./coupling.

TOC = 10,666'

Hydrostatic Pressure due to 11.8 ppg mud column @ top of Bone Spring Formation (8335') = 5106 psi

Predicted maximum reservoir pressure in the Bone Spring @ the E #1 wellbore while waterflooding = 3971 psi