PLA NS PETROLEUM ›PER. CO.

Operator: PPOC	Well Name: E C HILL B FED #12
Project ID:	Location: 985' FSL 550' FEL

Design Parameters:

Mud Weight (10.20 ppg)	0.530	psi/ft	
Shut in casing pressure	1565	psi	
Internal gradient (burst)	0.008	psi/ft	
Annular gradient (burst)	0.530	psi/ft	

Tensile load is determined using buoyed weight
Service rating is "Sweet"

Design Factors:

Collapse	1.125	
Burst	1.10	
8 Round	1.75	(J)
Buttress	1.60	(J)
Other	1.50	(J)
Body Yield	1.50	(B)

	Length (feet)	Size (in.)	Weight (lb/ft)	Grade	Joint	Depth (feet)	Drift (in.)	Cost
1	100	8.625	32.00	K-55	ST&C	100	7.875	
2	2,100	8.625	24.00	K-55	ST&C	2,200	7.972	
3	800	8.625	32.00	K-55	ST&C	3,000	7.875	

	Collapse Load (psi)	Collapse Strgth (psi)	Collapse S.F.	Burst Load (psi)	Min Int Yield Strgth (psi)	Burst S.F.	Tension Load (kips)	Tension Strgth (kips)	Tension S.F.
1	53	2427	9.999	1565	3930	2.51	66.85	402	6.01 J
2	1166	1348	1.156	1513	2950	1.95	64.15	263	4.10 J
3	1590	2530	1.592	417	3930	9.41	21.61	402	18.61 J

Prepared by : *DJB, Midland, Texas*
Date : 09-19-1994
Remarks :

LEA COUNTY, NEW MEXICO
Minimum segment length for the 3,000 foot well is 100 feet.
SICP is based on the ideal gas law, a gas gravity of 0.15, and a mean gas temperature of 89°F (Surface 74°F , BHT 104°F & temp. gradient 1.000°/100 ft.)
Surface/Intermediate string:
Next string will set at 3,000 ft. with 8.80 ppg mud (pore pressure of 1,371 psi.) The frac gradient of 0.700 at the casing seat results in an injection pressure of 2,100 psi. Effective BHP (for burst) is 1,590 psi, the BHP load is 0 psi (using an annular mud of 10.00 ppg) and the differential gradient is -0.520 psi/ft.
The minimum specified drift diameter is 7.875 in.

NOTE: The design factors used in this casing string design are as shown above. As a general guideline, Lone Star Steel recommends using minimum design factors of 1.125 - Collapse (with evacuated casing), 1.0 - Burst, 1.8 - 8 Round Tension, 1.6 - Buttress Tension, and 1.5 - Body Yield. Collapse strength under axial tension was calculated based on the Westcott, Dunlop and Kemler curve. Engineering responsibility for use of this design will be that of the purchaser.
Costs for this design are based on a 1987 pricing model. (Version 1.06)