POGO PRODUCING INC.

Operator: POGO	Well Name: LOST 33 FED #9
Project ID:	Location: SEC 33 T22S R31E

Design Parameters:

Mud weight (10.00 ppg)	: 0.519	psi/ft
Shut in surface pressure	: 2720	psi
Internal gradient (burst)	: 0.120	psi/ft
Annular gradient (burst)	: 0.000	psi/ft

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

Design Factors:

Collapse	: 1.125	
Burst	: 1.00	
8 Round	: 1.80	(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	4,000	7.625	26.40	K-55	ST&C	4,000	6.844	

	Collapse Load (psi)	Collapse Strgth (psi)	S.F.	Burst Load (psi)	Min Int Yield Strgth (psi)	S.F.	Tension Load (kips)	Tension Strgth (kips)	S.F.
1	2078	2890	1.391	3200	4140	1.29	105.60	342	3.24 J

Prepared by : , *Midland, Texas*
Date : 05-20-1997
Remarks :

Minimum segment length for the 4,000 foot well is 1,500 feet.
String type: Intermediate - Drlg
Next string will set at 8,150 ft. with 9.00 ppg mud (pore pressure of 3,810 psi.) The frac gradient of 0.800 psi/ft at 4,000 feet results in an injection pressure of 3,200 psi Effective BHP (for burst) is 3,200 psi.
The minimum specified drift diameter is 6.750 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 - (uniaxial) burst, 1.8 - API 8rd tension, 1.6 - buttress tension, 1.5 - body yield tension, and 1.6 - EUE 8rd tension. 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 1.07)