POGO PRODUCING INC.

Operator: POGO PRODUCING CO	Well Name: LOST TANK 3 FED #2
Project ID:	Location: SEC 3 T22S R31E

Design Parameters:

Mud weight (8.40 ppg)	: 0.436	psi/ft
Shut in surface pressure	: 3000	psi
Internal gradient (burst)	: 0.068	psi/ft
Annular gradient (burst)	: 0.436	psi/ft

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

Design Factors:

Collapse	: 1.125	
Burst	: 1.12	
8 Round	: 1.50	(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	1,000	5.500	17.00	J-55	LT&C	1,000	4.767	
2	5,000	5.500	15.50	J-55	LT&C	6,000	4.825	
3	2,150	5.500	17.00	J-55	LT&C	8,150	4.767	

	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	436	3696	8.477	3000	5320	1.77	151.05	247	1.64 J
2	2618	3702	1.414	2632	4810	1.83	134.05	217	1.62 J
3	3556	4804	1.351	791	5320	6.73	56.55	247	4.37 J

Prepared by : *B.L. SMITH, Midland, Texas*
Date : 06-11-1997
Remarks :

CASING DESIGN

Minimum segment length for the 8,150 foot well is 1,000 feet.
String type: Production
For burst purposes, lost circulation occurs behind the pipe at 4,200 ft, above which point, the annular mud weight of 8.400 ppg goes to zero. The equivalent pore gradient at the seat is 4.07 ppg.
A tension preload of 20,000 lbs. was applied.
An annular mud weight of 8.400 ppg was used for burst purposes. The differential mud gradient below any lost-circulation depth is -0.368 psi/ft and the bottom hole pressure load is 1,832 psi.

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)