

# 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 (10.00 ppg) : 0.519 psi/ft  
 Shut in surface pressure : 2093 psi  
 Internal gradient (burst) : 0.052 psi/ft  
 Annular gradient (burst) : 0.519 psi/ft  
 Tensile load is determined using air weight  
 Service rating is "Sweet"

## Design Factors:

Collapse : 1.150  
 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	8.625	32.00	J-55	ST&C	1,000	7.875	
2	1,100	8.625	24.00	J-55	ST&C	2,100	7.972	
3	1,900	8.625	32.00	J-55	ST&C	4,000	7.875	

  

	Collapse			Burst			Tension		
	Load	Strgth	S.F.	Load	Strgth	S.F.	Load	Strgth	S.F.
	(psi)	(psi)		(psi)	(psi)		(kips)	(kips)	
1	519	2380	4.586	2093	3930	1.88	119.20	372	3.12 J
2	1091	1297	1.189	1626	2950	1.81	87.20	244	2.80 J
3	2078	2530	1.218	1111	3930	3.54	60.80	372	6.12 J

Prepared by : B.L. SMITH, Midland, Texas

Date : 06-11-1997

Remarks :

### INTERMEDIATE CASING

Minimum segment length for the 4,000 foot well is 1,000 feet.

String type: Intermediate - Drlg

Next string will set at 8,150 ft. with 8.40 ppg mud (pore pressure of 3,556 psi.) The frac gradient of 0.550 psi/ft at 4,200 feet results in an injection pressure of 2,310 psi Effective BHP (for burst) is 2,300 psi, the BHP load is 222 psi (using an annular mud of 10.000 ppg) and the differential gradient is -0.470 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 - (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)