

POGO PRODUCING INC.

Operator: POGO	Well Name: LOST TANK 33 FED 9
Project ID: NA	Location: SEC 4 T22S R31E

Design Parameters:

Mud weight (9.00 ppg) : 0.468 psi/ft
 Shut in surface pressure : 3000 psi
 Internal gradient (burst) : 0.099 psi/ft
 Annular gradient (burst) : 0.468 psi/ft
 Tensile load is determined using air weight
 Service rating is "Sweet"

Design Factors:

Collapse : 1.120
 Burst : 1.10
 8 Round : 1.25 (J)
 Buttress : 1.60 (J)
 Other : 1.50 (J)
 Body Yield : 1.30 (B)

Length (feet)	Size (in.)	Weight (lb/ft)	Grade	Joint	Depth (feet)	Drift (in.)	Cost
1 600	5.500	17.00	J-55	LT&C	600	4.767	
2 5,400	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)	Strgth (psi)	S.F.	Burst Load (psi)	Min Int Strgth (psi)	Yield S.F.	Tension Load (kips)	Strgth (kips)	S.F.
1	281	3123	9.999	3000	5320	1.77	180.45	247	1.37 J
2	2805	3438	1.226	2779	4810	1.73	170.25	217	1.27 J
3	3810	4599	1.207	791	5320	6.73	86.55	247	2.85 J

Prepared by : RLW, Midland, Texas

Date : 05-20-1997

Remarks :

PRODUCTION STRING

Minimum segment length for the 8,150 foot well is 600 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 9.000 ppg goes to zero.

The equivalent pore gradient at the seat is 4.36 ppg.

A tension preload of 50,000 lbs. was applied.

An annular mud weight of 9.000 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 1,963 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)