

## BASS ENTERPRISES

Operator: BASS ENTERPRISES	Well Name: JRU #70
Project ID:	Location: EDDY CO., NM

### Design Parameters:

Mud weight (10.00 ppg): 0.519 psi/ft  
 Shut in surface pressure : 5511 psi  
 Internal gradient (burst) : 0.129 psi/ft  
 Annular gradient (burst) : 0.519 psi/ft  
 Tensile load is determined using air weight  
 Service rating is "Sweet"

### Design Factors:

Collapse : 1.000  
 Burst : 1.25  
 3 Round : 1.60 (J)  
 Buttress : 1.60 (J)  
 Other : 1.60 (J)  
 Body Yield : 1.60 (B)

Length (feet)	Size (in.)	Weight (lb/ft)	Grade	Joint	Depth (feet)	Drift (in.)	Cost		
1 12,000	7.625	29.70	S-95	LT&C	12,000	6.750			
	Collapse			Burst Load (psi)	Min Int Strgth (psi)	Yield S.F.	Tension		
	Load (psi)	Strgth (psi)	S.F.				Load (kips)	Strgth (kips)	S.F.
1	6234	7150	1.147	5511	8180	1.48	356.40	668	1.87 J

Prepared by : BIL Midland, TX  
 Date : 05-02-1994  
 Remarks :

Minimum segment length for the 12,000 foot well is 1,000 feet.

SICP is based on the ideal gas law, a gas gravity of 0.65, and a mean gas temperature of 145°F (Surface 74°F, BHT 215°F & temp. gradient 1.000°/100 ft.)

#### Intermediate string:

Next string will set at 14,100 ft. with 10.00 ppg mud (pore pressure of 7,325 psi.) The frac gradient of 1.000 psi/ft at 12,000 feet results in an injection pressure of 12,000 psi Effective BHP (for burst) is 7,055 psi, the BHP load is 321 psi (using an annular mud of 10.00 ppg) and the differential gradient is -0.390 psi/ft.

**NOTE:** The design factors used in this casing string design are as shown above. As a general guide-line, Lone Star Steel recommends using minimum design factors of 1.125 - Collapse (with evacuated casing), 1.0 - Burst, 1.3 - 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)