

Operator: ORYX ENERGY COMPANY	Well Name: MAVEETY-WEIR UNIT #1
Project ID:	Location: LEA COUNTY, N.M.

Design Parameters:

Mud weight (10.50 ppg) : 0.545 psi/ft
 Shut in surface pressure : 3330 psi
 Internal gradient (burst) : 0.100 psi/ft
 Annular gradient (burst) : 0.545 psi/ft
 Tensile load is determined using buoyed weight
 Service rating is "Sweet"

Design Factors:

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

Length (feet)	Size (in.)	Weight (lb/ft)	Grade	Joint	Depth (feet)	Drift (in.)	Cost		
1	3,700	5-1/2"	15.50	K-55	ST&C	3,700	4.825		
	Load	Collapse Strgth	S.F.	Burst Load	Min Int Strgth	Yield S.F.	Tension Load	Strgth	S.F.
	(psi)	(psi)		(psi)	(psi)		(kips)	(kips)	
1	2018	4040	2.002	3330	4810	1.44	48.14	222	4.61 J

Prepared by : B.J.LEWIS, Midland, Texas

Date : 12-06-1994

Remarks :

Design is for a Production - Frac string.

Minimum segment length for the 3,700 foot well is 1,000 feet.

Additional details regarding deeper string(s):

Next string will set at 3,700 ft. with 19.25 ppg mud (pore pressure of 3,700 psi.) The frac gradient of 1.000 at the casing seat results in an injection pressure of 3,700 psi. Effective BHP (for burst) is 3,700 psi, the BHP load is 1,682 psi (using an annular mud of 10.00 ppg) and the differential gradient is -0.450 psi/ft.

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 - Burst, 1.8 - 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 curves. Engineering responsibility for use of this design will be that of the purchaser. Costs for this design are based on a 1993 pricing model. (Version 1.0G)

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