

Well name:	West Red Lake Area
Operator:	Devon Energy Corporation
String type:	Surface
Location:	Eddy County, NM

Design parameters:

Collapse

Mud weight: 9.630 ppg
Design is based on evacuated pipe.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature: 77 °F
Temperature gradient: 0.20 °F/100ft
Minimum section length: 1,150 ft

Burst

Max anticipated surface pressure: 717 psi
Internal gradient: 0.000 psi/ft
Calculated BHP 717 psi

No backup mud specified.

Tension:

8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on buoyed weight.
Neutral point: 984 ft

Non-directional string.

Re subsequent strings:

Next setting depth: 4,000 ft
Next mud weight: 9.630 ppg
Next setting BHP: 2,001 psi
Fracture mud wt: 12,000 ppg
Fracture depth: 1,150 ft
Injection pressure 717 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	1150	8.625	24.00	J-55	ST&C	1150	1150	7.972	55.4

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	575	1370	2.38	717	2950	4.12	24	244	10.33 J

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Date: March 12, 2001
Oklahoma City, Oklahoma

Remarks:

Collapse is based on a vertical depth of 1150 ft, a mud weight of 9.63 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.