Well name:	**Arco 7" csg**
Operator:	**Devon Energy Corporation (Nevada)** #20-2
String type:	Production
Location:	Section 20, T21S, R26E

Design parameters:

Collapse
Mud weight: 6.600 ppg
Design is based on evacuated pipe.

Burst
Max anticipated surface
pressure: 3,874 psi
Internal gradient: 0.000 psi/ft
Calculated BHP 3,874 psi

Annular backup: 9.60 ppg

Packer fluid details:
Fluid density: 8.400 ppg
Packer depth: 11,000 ft

Minimum design factors:

Collapse:
Design factor 1.125

Burst:
Design factor 1.00

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: 10,248 ft

Environment:
H2S considered? No
Surface temperature: 90 °F
Bottom hole temperature: 180 °F
Temperature gradient: 0.80 °F/100ft
Minimum section length: 450 ft

Directional Info - Build & Drop
Kick-off point 5700 ft
Departure at shoe: 494 ft
Maximum dogleg: 2 °/100ft
Inclination at shoe: 0 °

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)
4	3400	7	26.00	L-80	LT&C	3400	3400	6.151	178.2
3	1700	7	23.00	J-55	LT&C	5100	5100	6.25	78.6
2	3700	7	26.00	J-55	LT&C	8747	8800	6.151	194
1	2553	7	26.00	L-80	LT&C	11300	11353	6.151	133.8

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
4	1166	4658	4.00	3874	7240	1.87	260	511	1.97 J
3	1749	2587	1.48	3663	4360	1.19	172	313	1.82 J
2	2999	4089	1.36	3557	4980	1.40	132	367	2.77 J
1	3874	5410	1.40	3329	7240	2.17	38	511	13.57 J

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Date: June 14,1999
Oklahoma City, Oklahoma

Remarks:
Collapse is based on a vertical depth of 11300 ft, a mud weight of 6.6 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.
Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

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