



30-045-31634

**Williams Production Company
New Mexico
San Juan County
Rosa Unit #273A Pilot Hole Single-Shot
Survey**

Sperry-Sun

Survey Report

10 October, 2003

Survey Ref: svy6251

HALLIBURTON

Survey Report for Rosa Unit #273A Pilot Hole Single-Shot Survey

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
0.00	0.000	0.000	0.00	0.00 N	0.00 E	0.00	
133.00	0.250	321.000	133.00	0.23 N	0.18 W	-0.22	0.188
253.00	1.000	225.000	252.99	0.31 S	1.09 W	-1.01	0.880
743.00	1.750	199.000	742.85	10.41 S	6.55 W	-4.43	0.195
1272.00	1.250	221.000	1271.67	22.40 S	12.96 W	-8.43	0.143
1766.00	0.750	241.000	1765.60	28.04 S	19.33 W	-13.59	0.122
2203.00	0.750	271.000	2202.56	29.37 S	24.69 W	-18.60	0.089
2642.00	0.750	299.000	2641.53	27.93 S	30.07 W	-24.16	0.083
3216.00	0.750	299.000	3215.48	24.29 S	36.64 W	-31.31	0.000

All data is in Feet (US Survey) unless otherwise stated. Directions and coordinates are relative to True North.
Vertical depths are relative to Well. Northings and Eastings are relative to Well.

The Dogleg Severity is in Degrees per 100 feet (US Survey).
Vertical Section is from Well and calculated along an Azimuth of 101.050° (True).

Based upon Minimum Curvature type calculations, at a Measured Depth of 3216.00ft.,
The Bottom Hole Displacement is 43.96ft., in the Direction of 236.464° (True).

Comments

Measured Depth (ft)	TVD (ft)	Station Coordinates		Comment
		Northings (ft)	Eastings (ft)	
133.00	133.00	0.23 N	0.18 W	Surveys from 133' through 2642' are Single-Shot Surveys Survey Projection to TD of Pilot Hole
3216.00	3215.48	24.29 S	36.64 W	