



30-039-27435

**Williams Production Company
New Mexico
Rio Arriba County
Rosa Unit 259A Single-Shot Survey**

Sperry-Sun

Survey Report

10 October, 2003

Survey Ref: svy6299



HALLIBURTON

Survey Report for Rosa Unit 259A 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	
101.00	0.500	248.700	101.00	0.16 S	0.41 W	-0.16	0.495
254.00	0.750	346.700	253.99	0.57 N	1.26 W	0.57	0.626
468.00	0.250	45.700	467.98	2.26 N	1.25 W	2.26	0.307
992.00	0.750	265.700	991.97	2.80 N	3.85 W	2.80	0.182
1489.00	1.000	308.700	1488.92	5.27 N	10.48 W	5.27	0.137
1988.00	0.750	307.700	1987.86	9.99 N	16.46 W	9.99	0.050
2486.00	1.250	299.700	2485.78	14.67 N	23.76 W	14.67	0.104
3174.00	0.500	283.700	3173.70	19.10 N	33.20 W	19.10	0.114
3221.00	0.500	283.700	3220.70	19.20 N	33.59 W	19.20	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 0.000° (True).

Based upon Minimum Curvature type calculations, at a Measured Depth of 3221.00ft., The Bottom Hole Displacement is 38.69ft., in the Direction of 299.750° (True).

Comments

Measured Depth (ft)	Station Coordinates			Comment
	TVD (ft)	Northings (ft)	Eastings (ft)	
101.00	101.00	0.16 S	0.41 W	First Single-Shot Survey
3174.00	3173.70	19.10 N	33.20 W	Final Single-Shot Survey
3221.00	3220.70	19.20 N	33.59 W	Survey Projection to TD