

Sperry-Sun Drilling Services

Survey Report for Avalon 1 Federal #4 - MWD SURVEY

New Mexico

**Eddy County
Sec. 1-T21S-R26E**

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
8777.00	15.900	228.900	8469.35	1383.13 S	1304.24 W	1900.96	1.04
8871.00	14.700	229.200	8560.01	1399.39 S	1322.97 W	1925.66	1.28
8965.00	13.100	230.000	8651.26	1414.03 S	1340.16 W	1948.14	1.71
9060.00	11.000	234.500	8744.16	1426.22 S	1355.79 W	1967.76	2.42
9124.00	9.800	227.300	8807.11	1433.46 S	1364.76 W	1979.20	2.76
9219.00	8.700	232.400	8900.88	1443.32 S	1376.40 W	1994.38	1.44
9313.00	7.200	231.500	8993.97	1451.33 S	1386.64 W	2007.25	1.60
9406.00	6.300	230.800	9086.32	1458.18 S	1395.16 W	2018.09	0.97
9500.00	5.200	231.500	9179.85	1464.09 S	1402.49 W	2027.44	1.17
9585.00	4.000	218.800	9264.58	1468.80 S	1407.36 W	2034.21	1.84
9608.00	3.750	217.000	9287.52	1470.03 S	1408.31 W	2035.75	1.21
9707.00	2.750	230.000	9386.36	1474.14 S	1412.08 W	2041.33	1.25
9801.00	2.750	247.000	9480.26	1476.47 S	1415.89 W	2045.65	0.86
9895.00	2.500	260.000	9574.16	1477.71 S	1419.98 W	2049.38	0.69
10020.00	2.250	273.000	9699.05	1478.05 S	1425.11 W	2053.19	0.47

All data is in feet 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.

Vertical Section is from Well and calculated along an Azimuth of 223.955° (True).

Based upon Minimum Curvature type calculations, at a Measured Depth of 10020.00ft., The Bottom Hole Displacement is 2053.19ft., in the Direction of 223.955° (True).