

Sperry-Sun Drilling Services

Survey Report for Federal 1 Avalon #3 - 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)
5444.00	50.100	221.100	3948.76	1606.58 S	2229.91 W	2744.73	0.96
5539.00	49.600	220.700	4010.01	1661.47 S	2277.45 W	2816.16	0.62
5635.00	48.900	220.900	4072.68	1716.52 S	2324.97 W	2887.67	0.75
5731.00	48.700	220.600	4135.91	1771.24 S	2372.12 W	2958.69	0.31
5830.00	48.500	219.300	4201.38	1828.17 S	2419.80 W	3031.50	1.01
5922.00	46.800	219.500	4263.36	1880.70 S	2462.96 W	3098.03	1.85
6016.00	46.800	218.800	4327.71	1933.84 S	2506.22 W	3165.03	0.54
6112.00	45.400	217.800	4394.27	1988.12 S	2549.10 W	3232.43	1.64
6207.00	44.400	217.200	4461.56	2041.32 S	2589.92 W	3297.56	1.14
6300.00	43.000	216.500	4528.80	2092.73 S	2628.46 W	3359.79	1.59
6305.00	42.900	216.500	4532.46	2095.47 S	2630.48 W	3363.08	2.00
6368.00	42.790	216.800	4578.65	2129.84 S	2656.05 W	3404.53	0.37

All data is in feet unless otherwise stated. Directions and coordinates are relative to True North.
Vertical depths are relative to RKB. Northings and Eastings are relative to Wellhead.

The Dogleg Severity is in Degrees per 100 feet.
Vertical Section is from Wellhead and calculated along an Azimuth of 231.275° (True).

Based upon Minimum Curvature type calculations, at a Measured Depth of 6368.00ft.,
The Bottom Hole Displacement is 3404.53ft., in the Direction of 231.275° (True).

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