

Halliburton \ Sperry-Sun Drilling Services

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Survey Report

Date: 08/19/1999

Time: 2:27 pm

Wellpath ID: SURVEY

Date Created: 07/13/1999

Last Revision: 08/19/1999

Calculated using the Minimum Curvature Method

Computed using PDS VER2.2.6

Vertical Section Plane: 270.00 deg.

Survey Reference: WELLHEAD

Reference World Coordinates: Lat. 32.4667 N - Lon. 104.5503 W

Reference GRID System: LAMBERT Zone: Texas Central

Reference GRID Coordinates: 699357.33 X 1043104.15 Y

North Aligned to: TRUE NORTH

Vertical Section Reference: WELLHEAD

Closure Reference: WELLHEAD

TVD Reference: WELLHEAD

SANTA FE ENERGY

ROARING SPRINGS #14-5

EDDY COUNTY, NEW MEXICO

SEC. 14 - T21S - R23E

SURVEYS

Measured Depth (ft)	Incl (deg.)	Drift Dir. (deg.)	Course Length (ft)	TVD (ft)	Vertical Section (ft)	T O T A L Rectangular Offsets (ft) (ft)		DLS (dg/100ft)
TIE IN GYRO								
7700.00	2.41	94.44	0.00	7698.10	-7.63	14.70 N	7.63 E	0.00
BHA #1 @ 7781' 4 3/4" MOTORx3.76° BEND-EDT-537-CS								
7782.00	1.80	275.60	82.00	7780.08	-8.07	14.69 N	8.07 E	5.13
7800.00	7.70	288.00	18.00	7798.01	-6.64	15.09 N	6.64 E	33.08
7815.00	6.50	321.30	15.00	7812.90	-5.15	16.07 N	5.15 E	28.13
7824.00	10.10	303.80	9.00	7821.81	-4.18	16.90 N	4.18 E	48.43
7829.00	11.80	300.00	5.00	7826.72	-3.37	17.40 N	3.37 E	36.92
7846.00	16.80	301.70	17.00	7843.19	0.23	19.56 N	0.23W	29.51
7856.00	19.80	303.50	10.00	7852.68	2.87	21.26 N	2.87W	30.52
BHA #2 & #3 @ 7864' 4 3/4" MOTOR x 4.0°-EDT-537-CS								
7871.00	25.20	306.00	15.00	7866.53	7.58	24.54 N	7.58W	36.55
7889.00	31.60	306.10	18.00	7882.36	14.49	29.58 N	14.49W	35.56
7899.00	35.40	304.90	10.00	7890.69	18.99	32.78 N	18.99W	38.57
7935.00	50.80	300.20	36.00	7916.91	39.73	45.84 N	39.73W	43.67
7966.00	63.30	297.50	31.00	7933.74	62.48	58.33 N	62.48W	40.97
7983.00	68.60	296.20	17.00	7940.66	76.33	65.34 N	76.33W	31.95
8004.00	76.50	294.30	21.00	7946.96	94.44	73.87 N	94.44W	38.59
8014.00	80.60	293.00	10.00	7948.94	103.41	77.80 N	103.41W	42.93
8046.00	92.00	291.40	32.00	7951.00	132.93	89.84 N	132.93W	35.97