

Scientific Drilling International Survey Report

Company: READ & STEVENS, INC.
Field: Wildcat
Site: Lea County, NM
Well: Liberty 4 Com. #1
Wellpath: DH - Job #32D061386

Date: 11/20/2001 Time: 15:41:51 Page: 1
Co-ordinate(N/E) Reference: Site: Lea County, NM, True North
Vertical (TVD) Reference: SITE 0.0 above Mean Sea Level
Section (VS) Reference: Well (0.0E,0.0N,90.0Azi)
Survey Calculation Method: Minimum Curvature

Survey: 6/27/04-7/12/01 Start Date: 8/30/2001
MWD 10761'-13474' (Tie-in supplied by Gyrodat

Company: SDI w/MWD
Tool:

Engineer: Sutton/Pearson

Survey	MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	ClSD ft	ClSA deg
	10690.0	8.51	286.40	10681.6	1.1	37.8	1.1	37.8	1.67
	10761.0	7.80	274.00	10751.9	-8.7	39.6	-8.7	40.6	347.55
	10792.0	6.80	271.90	10782.6	-12.7	39.8	-12.7	41.8	342.34
	10823.0	6.00	268.30	10813.4	-16.1	39.8	-16.1	43.0	337.95
	10854.0	5.40	259.90	10844.3	-19.2	39.5	-19.2	43.9	334.11
	10885.0	5.90	246.30	10875.1	-22.1	38.6	-22.1	44.5	330.25
	10917.0	5.90	233.60	10907.0	-24.9	37.0	-24.9	44.6	326.05
	10948.0	5.70	220.60	10937.8	-27.2	34.9	-27.2	44.2	322.06
	10963.0	5.40	213.00	10952.7	-28.1	33.7	-28.1	43.9	320.24
	10979.0	4.60	203.00	10968.7	-28.7	32.5	-28.7	43.4	318.53
	11011.0	3.80	199.80	11000.6	-29.6	30.3	-29.6	42.4	315.71
	11043.0	3.80	192.50	11032.5	-30.2	28.3	-30.2	41.4	313.16
	11073.0	3.60	192.90	11062.5	-30.6	26.4	-30.6	40.4	310.79
	11103.0	4.30	173.60	11092.4	-30.7	24.4	-30.7	39.2	308.46
	11135.0	4.40	164.30	11124.3	-30.2	22.0	-30.2	37.4	306.05
	11166.0	3.30	150.60	11155.2	-29.5	20.1	-29.5	35.7	304.27
	11197.0	1.80	115.40	11186.2	-28.6	19.1	-28.6	34.4	303.74
	11228.0	1.40	101.70	11217.2	-27.8	18.8	-27.8	33.5	304.10
	11260.0	1.00	102.60	11249.2	-27.1	18.7	-27.1	32.9	304.54
	11291.0	1.10	106.50	11280.2	-26.6	18.5	-26.6	32.4	304.88