

A Gyrodata Directional Survey

READ & STEVENS

Well: LIBERTY "4" #1, 4-1/2" DRILLPIPE

Location: PATTERSON "46", LEA COUNTY, NEW MEXICO

Job Number: MD0601GMW265

MEASURED INCL	DEPTH	deg.	deg.	BORE HOLE BEARING	DOGLEG SEVERITY	VERTICAL DEPTH	CLOSURE DIST.	AZIMUTH	HORIZONTAL COORDINATES
	feet			deg. min.	deg./100 ft.	feet	feet	deg.	feet
	9700.0	0.97	65.10	N 65 6 E	0.98	9698.1	101.3	83.5	11.56 N 100.67 E
9800 - 10690 FT RATE GYROSCOPIC MULTISHOT SURVEY RUN INSIDE 3-1/2" DRILLPIPE									
ALL MEASUREMENTS AND COORDINATES REFERENCED TO PATTERSON #46									
	9800.0	1.20	338.81	N 21 11 W	1.50	9798.1	101.9	82.7	12.89 N 101.06 E
	9900.0	5.97	287.22	N 72 47 W	5.31	9897.9	96.9	80.8	15.42 N 95.70 E
	10000.0	7.59	284.29	N 75 43 W	1.65	9997.2	86.4	77.6	18.59 N 84.33 E
	10100.0	7.50	276.91	N 83 6 W	0.97	10096.3	74.5	73.6	21.00 N 71.45 E
	10200.0	6.80	282.46	N 77 32 W	0.98	10195.5	63.5	68.7	23.06 N 59.19 E
	10300.0	6.53	281.48	N 78 31 W	0.30	10294.9	54.2	62.0	25.47 N 47.84 E
	10400.0	6.77	282.93	N 77 4 W	0.29	10394.2	46.0	52.6	27.92 N 36.53 E
	10500.0	6.43	286.88	N 73 7 W	0.56	10493.5	40.0	39.5	30.87 N 25.42 E
	10600.0	9.19	283.13	N 76 52 W	2.80	10592.6	36.4	19.7	34.31 N 12.28 E
	10690.0	8.51	286.39	N 73 37 W	0.94	10681.5	37.8	358.3	37.82 N 1.10 W

Final Station Closure: Distance: 37.83 ft Az: 358.33 deg.