

RMR Operating, LLC

Lea County, NM (NAD83)

Madera 24 Federal

#5H

OH

Plan: Design #1

Standard Planning Report

17 June, 2015

Wellplanning

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well #5H
Company:	RMR Operating, LLC	TVD Reference:	WELL @ 3250.0usft (Original Well Elev)
Project:	Lea County, NM (NAD83)	MD Reference:	WELL @ 3250.0usft (Original Well Elev)
Site:	Madera 24 Federal	North Reference:	Grid
Well:	#5H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Design #1		

Project	Lea County, NM (NAD83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Madera 24 Federal				
Site Position:		Northing:	377,677.38 usft	Latitude:	32° 2' 6.351 N
From:	Lat/Long	Easting:	821,249.40 usft	Longitude:	103° 25' 48.105 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.48 °

Well	#5H					
Well Position	+N/-S	-4,927.8 usft	Northing:	372,749.61 usft	Latitude:	32° 1' 17.575 N
	+E/-W	185.9 usft	Easting:	821,435.28 usft	Longitude:	103° 25' 46.425 W
Position Uncertainty	0.0 usft		Wellhead Elevation:	Ground Level:		3,227.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/14/2014	7.08	59.94	48,169

Design	Design #1				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	0.0	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	359.50	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
8,605.5	0.00	0.00	8,605.5	0.0	0.0	0.00	0.00	0.00	0.00	
9,355.6	90.00	359.50	9,083.0	477.5	-4.2	12.00	12.00	0.00	359.50	
13,807.2	90.00	359.50	9,083.0	4,929.0	-43.0	0.00	0.00	0.00	0.00	PBHL(M24#5)

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 Project: Lea County, NM (NAD83)
 Site: Madera 24 Federal
 Well: #5H
 Wellbore: OH
 Design: Design #1

Local Co-ordinate Reference: Well #5H
 TVD Reference: WELL @ 3250.0usft (Original Well Elev)
 MD Reference: WELL @ 3250.0usft (Original Well Elev)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00

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5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0.00
6,100.0	0.00	0.00	6,100.0	0.0	0.0	0.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,300.0	0.0	0.0	0.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,400.0	0.0	0.0	0.0	0.00	0.00	0.00
6,500.0	0.00	0.00	6,500.0	0.0	0.0	0.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,600.0	0.0	0.0	0.0	0.00	0.00	0.00
6,700.0	0.00	0.00	6,700.0	0.0	0.0	0.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,800.0	0.0	0.0	0.0	0.00	0.00	0.00
6,900.0	0.00	0.00	6,900.0	0.0	0.0	0.0	0.00	0.00	0.00
7,000.0	0.00	0.00	7,000.0	0.0	0.0	0.0	0.00	0.00	0.00
7,100.0	0.00	0.00	7,100.0	0.0	0.0	0.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7,200.0	0.0	0.0	0.0	0.00	0.00	0.00
7,300.0	0.00	0.00	7,300.0	0.0	0.0	0.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,400.0	0.0	0.0	0.0	0.00	0.00	0.00
7,500.0	0.00	0.00	7,500.0	0.0	0.0	0.0	0.00	0.00	0.00
7,600.0	0.00	0.00	7,600.0	0.0	0.0	0.0	0.00	0.00	0.00
7,700.0	0.00	0.00	7,700.0	0.0	0.0	0.0	0.00	0.00	0.00
7,800.0	0.00	0.00	7,800.0	0.0	0.0	0.0	0.00	0.00	0.00
7,900.0	0.00	0.00	7,900.0	0.0	0.0	0.0	0.00	0.00	0.00
8,000.0	0.00	0.00	8,000.0	0.0	0.0	0.0	0.00	0.00	0.00
8,100.0	0.00	0.00	8,100.0	0.0	0.0	0.0	0.00	0.00	0.00
8,200.0	0.00	0.00	8,200.0	0.0	0.0	0.0	0.00	0.00	0.00
8,300.0	0.00	0.00	8,300.0	0.0	0.0	0.0	0.00	0.00	0.00
8,400.0	0.00	0.00	8,400.0	0.0	0.0	0.0	0.00	0.00	0.00
8,500.0	0.00	0.00	8,500.0	0.0	0.0	0.0	0.00	0.00	0.00
8,605.5	0.00	0.00	8,605.5	0.0	0.0	0.0	0.00	0.00	0.00
KOP - 8605.5 *MD, 0.00° INC, 0.00° AZI									
8,625.0	2.34	359.50	8,625.0	0.4	0.0	0.4	12.00	12.00	0.00
8,650.0	5.34	359.50	8,649.9	2.1	0.0	2.1	12.00	12.00	0.00
8,675.0	8.34	359.50	8,674.8	5.0	0.0	5.0	12.00	12.00	0.00
8,700.0	11.34	359.50	8,699.4	9.3	-0.1	9.3	12.00	12.00	0.00
8,725.0	14.34	359.50	8,723.8	14.9	-0.1	14.9	12.00	12.00	0.00
8,750.0	17.34	359.50	8,747.8	21.7	-0.2	21.7	12.00	12.00	0.00
8,775.0	20.34	359.50	8,771.5	29.8	-0.3	29.8	12.00	12.00	0.00
8,800.0	23.34	359.50	8,794.7	39.1	-0.3	39.1	12.00	12.00	0.00
8,825.0	26.34	359.50	8,817.4	49.6	-0.4	49.6	12.00	12.00	0.00
8,850.0	29.34	359.50	8,839.5	61.2	-0.5	61.2	12.00	12.00	0.00
8,875.0	32.34	359.50	8,860.9	74.1	-0.6	74.1	12.00	12.00	0.00
8,900.0	35.34	359.50	8,881.7	88.0	-0.8	88.0	12.00	12.00	0.00
8,925.0	38.34	359.50	8,901.7	103.0	-0.9	103.0	12.00	12.00	0.00
8,950.0	41.34	359.50	8,920.9	119.0	-1.0	119.0	12.00	12.00	0.00
8,975.0	44.34	359.50	8,939.2	136.0	-1.2	136.0	12.00	12.00	0.00
9,000.0	47.34	359.50	8,956.6	153.9	-1.3	153.9	12.00	12.00	0.00
9,025.0	50.34	359.50	8,973.1	172.7	-1.5	172.7	12.00	12.00	0.00
9,050.0	53.34	359.50	8,988.5	192.4	-1.7	192.4	12.00	12.00	0.00
9,075.0	56.34	359.50	9,002.9	212.8	-1.9	212.8	12.00	12.00	0.00

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Well #5H
WELL @ 3250.0usft (Original Well Elev)
WELL @ 3250.0usft (Original Well Elev)
Grid
Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,100.0	59.34	359.50	9,016.2	234.0	-2.0	234.0	12.00	12.00	0.00
9,125.0	62.34	359.50	9,028.4	255.8	-2.2	255.8	12.00	12.00	0.00
9,150.0	65.34	359.50	9,039.4	278.2	-2.4	278.2	12.00	12.00	0.00
9,175.0	68.33	359.50	9,049.3	301.2	-2.6	301.2	12.00	12.00	0.00
9,200.0	71.33	359.50	9,057.9	324.7	-2.8	324.7	12.00	12.00	0.00
9,225.0	74.33	359.50	9,065.3	348.6	-3.0	348.6	12.00	12.00	0.00
9,250.0	77.33	359.50	9,071.4	372.8	-3.3	372.8	12.00	12.00	0.00
9,275.0	80.33	359.50	9,076.2	397.3	-3.5	397.3	12.00	12.00	0.00
9,300.0	83.33	359.50	9,079.8	422.1	-3.7	422.1	12.00	12.00	0.00
9,325.0	86.33	359.50	9,082.0	446.9	-3.9	447.0	12.00	12.00	0.00
9,350.0	89.33	359.50	9,083.0	471.9	-4.1	471.9	12.00	12.00	0.00
9,355.6	90.00	359.50	9,083.0	477.5	-4.2	477.5	12.00	12.00	0.00
EOC- 9355.6 'MD, 90.00° INC, 359.50° AZI									
9,400.0	90.00	359.50	9,083.0	521.9	-4.6	521.9	0.00	0.00	0.00
9,500.0	90.00	359.50	9,083.0	621.9	-5.4	621.9	0.00	0.00	0.00
9,600.0	90.00	359.50	9,083.0	721.9	-6.3	721.9	0.00	0.00	0.00
9,700.0	90.00	359.50	9,083.0	821.9	-7.2	821.9	0.00	0.00	0.00
9,800.0	90.00	359.50	9,083.0	921.9	-8.0	921.9	0.00	0.00	0.00
9,900.0	90.00	359.50	9,083.0	1,021.9	-8.9	1,021.9	0.00	0.00	0.00
10,000.0	90.00	359.50	9,083.0	1,121.9	-9.8	1,121.9	0.00	0.00	0.00
10,100.0	90.00	359.50	9,083.0	1,221.9	-10.7	1,221.9	0.00	0.00	0.00
10,200.0	90.00	359.50	9,083.0	1,321.9	-11.5	1,321.9	0.00	0.00	0.00
10,300.0	90.00	359.50	9,083.0	1,421.9	-12.4	1,421.9	0.00	0.00	0.00
10,400.0	90.00	359.50	9,083.0	1,521.9	-13.3	1,521.9	0.00	0.00	0.00
10,500.0	90.00	359.50	9,083.0	1,621.9	-14.2	1,621.9	0.00	0.00	0.00
10,600.0	90.00	359.50	9,083.0	1,721.9	-15.0	1,721.9	0.00	0.00	0.00
10,700.0	90.00	359.50	9,083.0	1,821.9	-15.9	1,821.9	0.00	0.00	0.00
10,800.0	90.00	359.50	9,083.0	1,921.9	-16.8	1,921.9	0.00	0.00	0.00
10,900.0	90.00	359.50	9,083.0	2,021.9	-17.6	2,021.9	0.00	0.00	0.00
11,000.0	90.00	359.50	9,083.0	2,121.9	-18.5	2,121.9	0.00	0.00	0.00
11,100.0	90.00	359.50	9,083.0	2,221.9	-19.4	2,221.9	0.00	0.00	0.00
11,200.0	90.00	359.50	9,083.0	2,321.9	-20.3	2,321.9	0.00	0.00	0.00
11,300.0	90.00	359.50	9,083.0	2,421.9	-21.1	2,421.9	0.00	0.00	0.00
11,400.0	90.00	359.50	9,083.0	2,521.8	-22.0	2,521.9	0.00	0.00	0.00
11,500.0	90.00	359.50	9,083.0	2,621.8	-22.9	2,621.9	0.00	0.00	0.00
11,600.0	90.00	359.50	9,083.0	2,721.8	-23.8	2,721.9	0.00	0.00	0.00
11,700.0	90.00	359.50	9,083.0	2,821.8	-24.6	2,821.9	0.00	0.00	0.00
11,800.0	90.00	359.50	9,083.0	2,921.8	-25.5	2,921.9	0.00	0.00	0.00
11,900.0	90.00	359.50	9,083.0	3,021.8	-26.4	3,021.9	0.00	0.00	0.00
12,000.0	90.00	359.50	9,083.0	3,121.8	-27.2	3,121.9	0.00	0.00	0.00
12,100.0	90.00	359.50	9,083.0	3,221.8	-28.1	3,221.9	0.00	0.00	0.00
12,200.0	90.00	359.50	9,083.0	3,321.8	-29.0	3,321.9	0.00	0.00	0.00
12,300.0	90.00	359.50	9,083.0	3,421.8	-29.9	3,421.9	0.00	0.00	0.00
12,400.0	90.00	359.50	9,083.0	3,521.8	-30.7	3,521.9	0.00	0.00	0.00
12,500.0	90.00	359.50	9,083.0	3,621.8	-31.6	3,621.9	0.00	0.00	0.00
12,600.0	90.00	359.50	9,083.0	3,721.8	-32.5	3,721.9	0.00	0.00	0.00
12,700.0	90.00	359.50	9,083.0	3,821.8	-33.4	3,821.9	0.00	0.00	0.00
12,800.0	90.00	359.50	9,083.0	3,921.8	-34.2	3,921.9	0.00	0.00	0.00
12,900.0	90.00	359.50	9,083.0	4,021.8	-35.1	4,021.9	0.00	0.00	0.00
13,000.0	90.00	359.50	9,083.0	4,121.8	-36.0	4,121.9	0.00	0.00	0.00
13,100.0	90.00	359.50	9,083.0	4,221.8	-36.8	4,221.9	0.00	0.00	0.00
13,200.0	90.00	359.50	9,083.0	4,321.8	-37.7	4,321.9	0.00	0.00	0.00
13,300.0	90.00	359.50	9,083.0	4,421.8	-38.6	4,421.9	0.00	0.00	0.00
13,400.0	90.00	359.50	9,083.0	4,521.8	-39.5	4,521.9	0.00	0.00	0.00

Wellplanning

Planning Report

Database: EDM 5000.1 Single User Db
 Company: RMR Operating, LLC
 Project: Lea County, NM (NAD83)
 Site: Madera 24 Federal
 Well: #5H
 Wellbore: OH
 Design: Design #1

Local Co-ordinate Reference: Well #5H
 TVD Reference: WELL @ 3250.0usft (Original Well Elev)
 MD Reference: WELL @ 3250.0usft (Original Well Elev)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Planned Survey

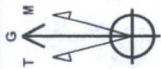
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,500.0	90.00	359.50	9,083.0	4,621.8	-40.3	4,621.9	0.00	0.00	0.00
13,600.0	90.00	359.50	9,083.0	4,721.8	-41.2	4,721.9	0.00	0.00	0.00
13,700.0	90.00	359.50	9,083.0	4,821.8	-42.1	4,821.9	0.00	0.00	0.00
13,807.2	90.00	359.50	9,083.0	4,929.0	-43.0	4,929.2	0.00	0.00	0.00
TD at 13807.2 - PBHL(M24#5)									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL(M24#5)	0.00	0.00	9,083.0	4,929.0	-42.8	377,678.58	821,392.53	32° 2' 6.351 N	103° 25' 46.442 W
- plan misses target center by 0.3usft at 13807.2usft MD (9083.0 TVD, 4929.0 N, -43.0 E)									
- Point									

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
8,605.5	8,605.5	0.0	0.0	KOP - 8605.5 'MD, 0.00° INC, 0.00° AZI
9,355.6	9,083.0	477.5	-4.2	EOC- 9355.6 'MD, 90.00° INC, 359.50° AZI
13,807.2	9,083.0	4,929.0	-43.0	TD at 13807.2



Azimuths to Grid North
True North: 0.48°
Magnetic North: 6.60°
Strength: 48168.9nT
Dip Angle: 59.94°
Date: 11/14/2014
Magnetic Declination: 6.60°
To convert a Magnetic Direction to a Grid Direction, Add 6.60°
To convert a True Direction to a Grid Direction, Subtract 0.48°

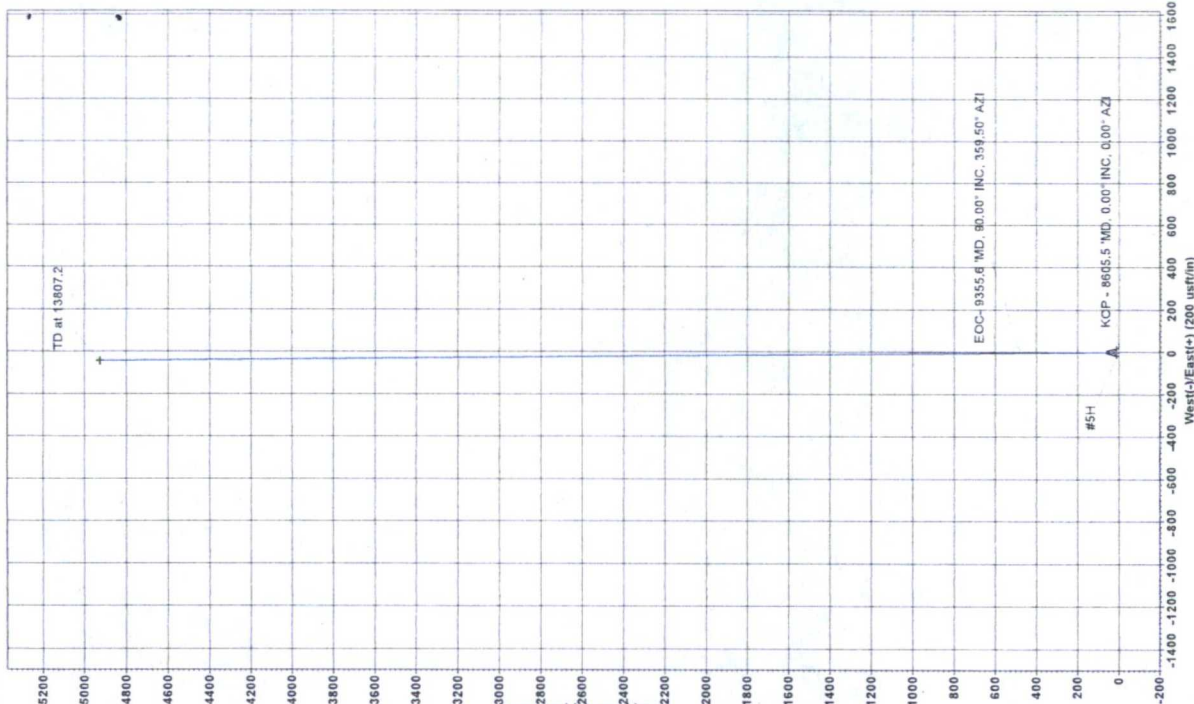
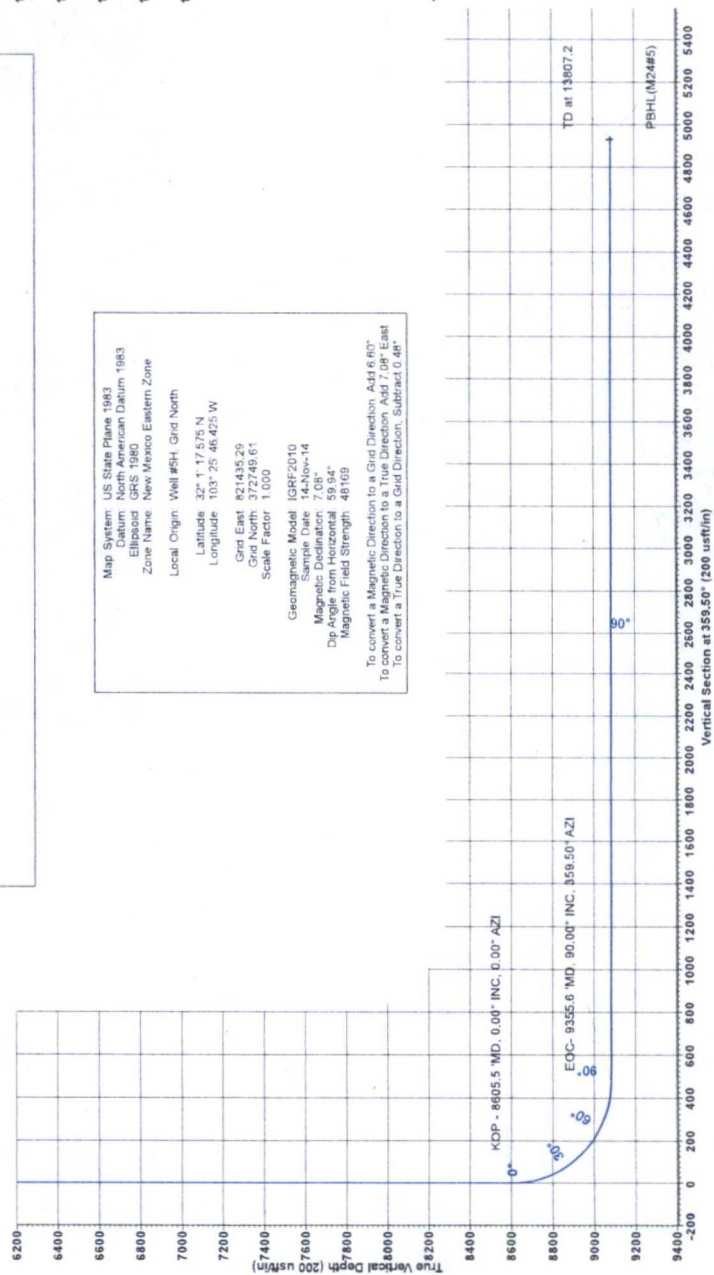
WELL DETAILS:				
WELL @ 3250.0usft (Original Well Elev)				
	+N/-S	+E/-W	Northing	Easting
	0.0	0.0	372749.51	821435.28
			32° 1' 17.575 N	103° 25' 46.425 W

SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSeet	Target
0.0	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.0	
8605.5	0.00	0.00	8605.5	0.0	0.00	0.00	0.00	0.0	
9355.6	90.00	359.50	9083.0	477.5	-4.2	12.00	359.50	477.5	
13807.2	90.00	359.50	9083.0	4925.0	-43.0	0.00	0.00	4925.2	PBHL(M24#5)

DESIGN TARGET DETAILS				
Name	TVD	+N/-S	+E/-W	Easting
PBHL(M24#5)	9083.0	4925.0	-42.8	821352.53

Map System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone Name: New Mexico Eastern Zone
Local Origin: Well #5H, Grid North
Latitude: 32° 1' 17.575 N
Longitude: 103° 25' 46.425 W
Grid East: 821435.29
Grid North: 372749.51
Scale Factor: 1.000
Geomagnetic Model: IGRF2010
Sample Date: 14-Nov-14
Magnetic Declination: 7.08°
Dip Angle from Horizontal: 59.94°
Magnetic Field Strength: 48169
To convert a Magnetic Direction to a Grid Direction, Add 6.60°
To convert a True Direction to a Grid Direction, Subtract 0.48°

Madera 24 Federal #5H
Lea County, NM (NAD83)
Northing: (Y) 372749.61
Easting: (X) 821435.29
Design #1



>

H HEADER INFORMATION -----

H COMPANY : RMR Operating, LLC
 H FIELD : Lea County, NM (NAD83)
 H SITE : Madera 24 Federal
 H WELL : #5H
 H WELLPATH: OH
 H DEPTHUNT: usft
 H SURVDATE: 1/1/1990

H-----

H WELL INFORMATION

H WELL EW MAP : 821435.29
 H WELL NS MAP : 372749.61
 H DATUM ELEVN : 3250.00
 H VSECT ANGLE : 359.50
 H VSECT NORTH : 0.00
 H VSECT EAST : 0.00

H-----

H SURVEY TYPE INFORMATION

H 0.00 - 13807.21 DESIGN #1 :

H-----

H SURVEY LIST

H MD	INC	AZI	TVD	NS	EW
0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00
1000.00	0.00	0.00	1000.00	0.00	0.00
1100.00	0.00	0.00	1100.00	0.00	0.00
1200.00	0.00	0.00	1200.00	0.00	0.00
1300.00	0.00	0.00	1300.00	0.00	0.00
1400.00	0.00	0.00	1400.00	0.00	0.00
1500.00	0.00	0.00	1500.00	0.00	0.00
1600.00	0.00	0.00	1600.00	0.00	0.00
1700.00	0.00	0.00	1700.00	0.00	0.00
1800.00	0.00	0.00	1800.00	0.00	0.00
1900.00	0.00	0.00	1900.00	0.00	0.00
2000.00	0.00	0.00	2000.00	0.00	0.00
2100.00	0.00	0.00	2100.00	0.00	0.00
2200.00	0.00	0.00	2200.00	0.00	0.00
2300.00	0.00	0.00	2300.00	0.00	0.00
2400.00	0.00	0.00	2400.00	0.00	0.00
2500.00	0.00	0.00	2500.00	0.00	0.00
2600.00	0.00	0.00	2600.00	0.00	0.00
2700.00	0.00	0.00	2700.00	0.00	0.00
2800.00	0.00	0.00	2800.00	0.00	0.00
2900.00	0.00	0.00	2900.00	0.00	0.00
3000.00	0.00	0.00	3000.00	0.00	0.00
3100.00	0.00	0.00	3100.00	0.00	0.00
3200.00	0.00	0.00	3200.00	0.00	0.00
3300.00	0.00	0.00	3300.00	0.00	0.00
3400.00	0.00	0.00	3400.00	0.00	0.00
3500.00	0.00	0.00	3500.00	0.00	0.00

8875.00	32.34	359.50	8860.92	74.05	-0.65
8900.00	35.34	359.50	8881.68	87.97	-0.77
8925.00	38.34	359.50	8901.69	102.96	-0.90
8950.00	41.34	359.50	8920.88	118.97	-1.04
8975.00	44.34	359.50	8939.21	135.97	-1.19
9000.00	47.34	359.50	8956.63	153.90	-1.34
9025.00	50.34	359.50	8973.08	172.71	-1.51
9050.00	53.34	359.50	8988.53	192.37	-1.68
9075.00	56.34	359.50	9002.92	212.80	-1.86
9100.00	59.34	359.50	9016.23	233.96	-2.04
9125.00	62.34	359.50	9028.41	255.79	-2.23
9150.00	65.34	359.50	9039.44	278.22	-2.43
9175.00	68.33	359.50	9049.27	301.21	-2.63
9200.00	71.33	359.50	9057.89	324.67	-2.83
9225.00	74.33	359.50	9065.26	348.55	-3.04
9250.00	77.33	359.50	9071.38	372.79	-3.25
9275.00	80.33	359.50	9076.22	397.31	-3.47
9300.00	83.33	359.50	9079.77	422.05	-3.68
9325.00	86.33	359.50	9082.02	446.95	-3.90
9350.00	89.33	359.50	9082.97	471.93	-4.12
9355.56	90.00	359.50	9083.00	477.48	-4.17
9400.00	90.00	359.50	9083.00	521.92	-4.55
9500.00	90.00	359.50	9083.00	621.92	-5.43
9600.00	90.00	359.50	9083.00	721.92	-6.30
9700.00	90.00	359.50	9083.00	821.91	-7.17
9800.00	90.00	359.50	9083.00	921.91	-8.05
9900.00	90.00	359.50	9083.00	1021.91	-8.92
10000.00	90.00	359.50	9083.00	1121.90	-9.79
10100.00	90.00	359.50	9083.00	1221.90	-10.66
10200.00	90.00	359.50	9083.00	1321.89	-11.54
10300.00	90.00	359.50	9083.00	1421.89	-12.41
10400.00	90.00	359.50	9083.00	1521.89	-13.28
10500.00	90.00	359.50	9083.00	1621.88	-14.15
10600.00	90.00	359.50	9083.00	1721.88	-15.03
10700.00	90.00	359.50	9083.00	1821.88	-15.90
10800.00	90.00	359.50	9083.00	1921.87	-16.77
10900.00	90.00	359.50	9083.00	2021.87	-17.64
11000.00	90.00	359.50	9083.00	2121.86	-18.52
11100.00	90.00	359.50	9083.00	2221.86	-19.39
11200.00	90.00	359.50	9083.00	2321.86	-20.26
11300.00	90.00	359.50	9083.00	2421.85	-21.14
11400.00	90.00	359.50	9083.00	2521.85	-22.01
11500.00	90.00	359.50	9083.00	2621.84	-22.88
11600.00	90.00	359.50	9083.00	2721.84	-23.75
11700.00	90.00	359.50	9083.00	2821.84	-24.63
11800.00	90.00	359.50	9083.00	2921.83	-25.50
11900.00	90.00	359.50	9083.00	3021.83	-26.37
12000.00	90.00	359.50	9083.00	3121.83	-27.24
12100.00	90.00	359.50	9083.00	3221.82	-28.12
12200.00	90.00	359.50	9083.00	3321.82	-28.99
12300.00	90.00	359.50	9083.00	3421.81	-29.86
12400.00	90.00	359.50	9083.00	3521.81	-30.73
12500.00	90.00	359.50	9083.00	3621.81	-31.61
12600.00	90.00	359.50	9083.00	3721.80	-32.48
12700.00	90.00	359.50	9083.00	3821.80	-33.35
12800.00	90.00	359.50	9083.00	3921.80	-34.22
12900.00	90.00	359.50	9083.00	4021.79	-35.10
13000.00	90.00	359.50	9083.00	4121.79	-35.97
13100.00	90.00	359.50	9083.00	4221.78	-36.84
13200.00	90.00	359.50	9083.00	4321.78	-37.72
13300.00	90.00	359.50	9083.00	4421.78	-38.59

Sheet1

RMR Operating
#5H - Design #1

Lea County
Madera 24 Federal
Your Ref:

Measured Vertical VerticalDogleg
DepthIncl.Azim.DepthNorthingsEastingsSectionRate
(ft) (ft)(ft)(ft)(°/100ft)

0.00	0.000	0.000	0.00	0.00	0.00	0.00	0.00
100.00	0.000	0.000	100.00	0.00	0.00	0.00	0.00
200.00	0.000	0.000	200.00	0.00	0.00	0.00	0.00
300.00	0.000	0.000	300.00	0.00	0.00	0.00	0.00
400.00	0.000	0.000	400.00	0.00	0.00	0.00	0.00
500.00	0.000	0.000	500.00	0.00	0.00	0.00	0.00
600.00	0.000	0.000	600.00	0.00	0.00	0.00	0.00
700.00	0.000	0.000	700.00	0.00	0.00	0.00	0.00
800.00	0.000	0.000	800.00	0.00	0.00	0.00	0.00
900.00	0.000	0.000	900.00	0.00	0.00	0.00	0.00
1000.00	0.000	0.000	1000.00	0.00	0.00	0.00	0.00
1100.00	0.000	0.000	1100.00	0.00	0.00	0.00	0.00
1200.00	0.000	0.000	1200.00	0.00	0.00	0.00	0.00
1300.00	0.000	0.000	1300.00	0.00	0.00	0.00	0.00
1400.00	0.000	0.000	1400.00	0.00	0.00	0.00	0.00
1500.00	0.000	0.000	1500.00	0.00	0.00	0.00	0.00
1600.00	0.000	0.000	1600.00	0.00	0.00	0.00	0.00
1700.00	0.000	0.000	1700.00	0.00	0.00	0.00	0.00
1800.00	0.000	0.000	1800.00	0.00	0.00	0.00	0.00
1900.00	0.000	0.000	1900.00	0.00	0.00	0.00	0.00
2000.00	0.000	0.000	2000.00	0.00	0.00	0.00	0.00
2100.00	0.000	0.000	2100.00	0.00	0.00	0.00	0.00
2200.00	0.000	0.000	2200.00	0.00	0.00	0.00	0.00
2300.00	0.000	0.000	2300.00	0.00	0.00	0.00	0.00
2400.00	0.000	0.000	2400.00	0.00	0.00	0.00	0.00
2500.00	0.000	0.000	2500.00	0.00	0.00	0.00	0.00
2600.00	0.000	0.000	2600.00	0.00	0.00	0.00	0.00
2700.00	0.000	0.000	2700.00	0.00	0.00	0.00	0.00
2800.00	0.000	0.000	2800.00	0.00	0.00	0.00	0.00
2900.00	0.000	0.000	2900.00	0.00	0.00	0.00	0.00
3000.00	0.000	0.000	3000.00	0.00	0.00	0.00	0.00
3100.00	0.000	0.000	3100.00	0.00	0.00	0.00	0.00
3200.00	0.000	0.000	3200.00	0.00	0.00	0.00	0.00
3300.00	0.000	0.000	3300.00	0.00	0.00	0.00	0.00
3400.00	0.000	0.000	3400.00	0.00	0.00	0.00	0.00
3500.00	0.000	0.000	3500.00	0.00	0.00	0.00	0.00
3600.00	0.000	0.000	3600.00	0.00	0.00	0.00	0.00
3700.00	0.000	0.000	3700.00	0.00	0.00	0.00	0.00
3800.00	0.000	0.000	3800.00	0.00	0.00	0.00	0.00
3900.00	0.000	0.000	3900.00	0.00	0.00	0.00	0.00
4000.00	0.000	0.000	4000.00	0.00	0.00	0.00	0.00

Sheet1

4100.00	0.000	0.000	4100.00	0.00	0.00	0.00	0.00
4200.00	0.000	0.000	4200.00	0.00	0.00	0.00	0.00
4300.00	0.000	0.000	4300.00	0.00	0.00	0.00	0.00
4400.00	0.000	0.000	4400.00	0.00	0.00	0.00	0.00
4500.00	0.000	0.000	4500.00	0.00	0.00	0.00	0.00
4600.00	0.000	0.000	4600.00	0.00	0.00	0.00	0.00
4700.00	0.000	0.000	4700.00	0.00	0.00	0.00	0.00
4800.00	0.000	0.000	4800.00	0.00	0.00	0.00	0.00
4900.00	0.000	0.000	4900.00	0.00	0.00	0.00	0.00
5000.00	0.000	0.000	5000.00	0.00	0.00	0.00	0.00
5100.00	0.000	0.000	5100.00	0.00	0.00	0.00	0.00
5200.00	0.000	0.000	5200.00	0.00	0.00	0.00	0.00
5300.00	0.000	0.000	5300.00	0.00	0.00	0.00	0.00
5400.00	0.000	0.000	5400.00	0.00	0.00	0.00	0.00
5500.00	0.000	0.000	5500.00	0.00	0.00	0.00	0.00
5600.00	0.000	0.000	5600.00	0.00	0.00	0.00	0.00
5700.00	0.000	0.000	5700.00	0.00	0.00	0.00	0.00
5800.00	0.000	0.000	5800.00	0.00	0.00	0.00	0.00
5900.00	0.000	0.000	5900.00	0.00	0.00	0.00	0.00
6000.00	0.000	0.000	6000.00	0.00	0.00	0.00	0.00
6100.00	0.000	0.000	6100.00	0.00	0.00	0.00	0.00
6200.00	0.000	0.000	6200.00	0.00	0.00	0.00	0.00
6300.00	0.000	0.000	6300.00	0.00	0.00	0.00	0.00
6400.00	0.000	0.000	6400.00	0.00	0.00	0.00	0.00
6500.00	0.000	0.000	6500.00	0.00	0.00	0.00	0.00
6600.00	0.000	0.000	6600.00	0.00	0.00	0.00	0.00
6700.00	0.000	0.000	6700.00	0.00	0.00	0.00	0.00
6800.00	0.000	0.000	6800.00	0.00	0.00	0.00	0.00
6900.00	0.000	0.000	6900.00	0.00	0.00	0.00	0.00
7000.00	0.000	0.000	7000.00	0.00	0.00	0.00	0.00
7100.00	0.000	0.000	7100.00	0.00	0.00	0.00	0.00
7200.00	0.000	0.000	7200.00	0.00	0.00	0.00	0.00
7300.00	0.000	0.000	7300.00	0.00	0.00	0.00	0.00
7400.00	0.000	0.000	7400.00	0.00	0.00	0.00	0.00
7500.00	0.000	0.000	7500.00	0.00	0.00	0.00	0.00
7600.00	0.000	0.000	7600.00	0.00	0.00	0.00	0.00
7700.00	0.000	0.000	7700.00	0.00	0.00	0.00	0.00
7800.00	0.000	0.000	7800.00	0.00	0.00	0.00	0.00
7900.00	0.000	0.000	7900.00	0.00	0.00	0.00	0.00
8000.00	0.000	0.000	8000.00	0.00	0.00	0.00	0.00
8100.00	0.000	0.000	8100.00	0.00	0.00	0.00	0.00
8200.00	0.000	0.000	8200.00	0.00	0.00	0.00	0.00
8300.00	0.000	0.000	8300.00	0.00	0.00	0.00	0.00
8400.00	0.000	0.000	8400.00	0.00	0.00	0.00	0.00
8500.00	0.000	0.000	8500.00	0.00	0.00	0.00	0.00
8605.50	0.000	0.000	8605.50	0.00	0.00	0.00	0.00
8625.00	2.340359.500	8624.99	0.40	0.00	0.40	12.00	
8650.00	5.340359.500	8649.94	2.07	-0.02	2.07	12.00	
8675.00	8.339359.500	8674.75	5.05	-0.04	5.05	12.00	
8700.00	11.339359.500	8699.38	9.32	-0.08	9.32	12.00	
8725.00	14.339359.500	8723.76	14.87	-0.13	14.88	12.00	
8750.00	17.339359.500	8747.80	21.70	-0.19	21.70	12.00	
8775.00	20.339359.500	8771.46	29.77	-0.26	29.77	12.00	
8800.00	23.338359.500	8794.67	39.07	-0.34	39.07	12.00	
8825.00	26.338359.500	8817.35	49.57	-0.43	49.57	12.00	
8850.00	29.338359.500	8839.46	61.24	-0.53	61.24	12.00	

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8875.00	32.338359.500	8860.92	74.05	-0.65	74.06	12.00
8900.00	35.337359.500	8881.68	87.97	-0.77	87.97	12.00
8925.00	38.337359.500	8901.69	102.96	-0.90	102.96	12.00
8950.00	41.337359.500	8920.88	118.97	-1.04	118.97	12.00
8975.00	44.337359.500	8939.21	135.97	-1.19	135.97	12.00
9000.00	47.337359.500	8956.63	153.90	-1.34	153.90	12.00
9025.00	50.336359.500	8973.08	172.71	-1.51	172.72	12.00
9050.00	53.336359.500	8988.53	192.37	-1.68	192.38	12.00
9075.00	56.336359.500	9002.92	212.80	-1.86	212.81	12.00
9100.00	59.336359.500	9016.23	233.96	-2.04	233.97	12.00
9125.00	62.335359.500	9028.41	255.79	-2.23	255.80	12.00
9150.00	65.335359.500	9039.44	278.22	-2.43	278.23	12.00
9175.00	68.335359.500	9049.27	301.21	-2.63	301.22	12.00
9200.00	71.335359.500	9057.89	324.67	-2.83	324.68	12.00
9225.00	74.335359.500	9065.26	348.55	-3.04	348.57	12.00
9250.00	77.334359.500	9071.38	372.79	-3.25	372.80	12.00
9275.00	80.334359.500	9076.22	397.31	-3.47	397.33	12.00
9300.00	83.334359.500	9079.77	422.05	-3.68	422.07	12.00
9325.00	86.334359.500	9082.02	446.95	-3.90	446.97	12.00
9350.00	89.333359.500	9082.97	471.93	-4.12	471.94	12.00
9355.56	90.000359.500	9083.00	477.48	-4.17	477.50	12.00
9400.00	90.000359.500	9083.00	521.92	-4.55	521.94	0.00
9500.00	90.000359.500	9083.00	621.92	-5.43	621.94	0.00
9600.00	90.000359.500	9083.00	721.92	-6.30	721.94	0.00
9700.00	90.000359.500	9083.00	821.91	-7.17	821.94	0.00
9800.00	90.000359.500	9083.00	921.91	-8.05	921.94	0.00
9900.00	90.000359.500	9083.00	1021.91	-8.92	1021.94	0.00
10000.00	90.000359.500	9083.00	1121.90	-9.79	1121.94	0.00
10100.00	90.000359.500	9083.00	1221.90	-10.66	1221.94	0.00
10200.00	90.000359.500	9083.00	1321.89	-11.54	1321.94	0.00
10300.00	90.000359.500	9083.00	1421.89	-12.41	1421.94	0.00
10400.00	90.000359.500	9083.00	1521.89	-13.28	1521.94	0.00
10500.00	90.000359.500	9083.00	1621.88	-14.15	1621.94	0.00
10600.00	90.000359.500	9083.00	1721.88	-15.03	1721.94	0.00
10700.00	90.000359.500	9083.00	1821.88	-15.90	1821.94	0.00
10800.00	90.000359.500	9083.00	1921.87	-16.77	1921.94	0.00
10900.00	90.000359.500	9083.00	2021.87	-17.64	2021.94	0.00
11000.00	90.000359.500	9083.00	2121.86	-18.52	2121.94	0.00
11100.00	90.000359.500	9083.00	2221.86	-19.39	2221.94	0.00
11200.00	90.000359.500	9083.00	2321.86	-20.26	2321.94	0.00
11300.00	90.000359.500	9083.00	2421.85	-21.14	2421.94	0.00
11400.00	90.000359.500	9083.00	2521.85	-22.01	2521.94	0.00
11500.00	90.000359.500	9083.00	2621.84	-22.88	2621.94	0.00
11600.00	90.000359.500	9083.00	2721.84	-23.75	2721.94	0.00
11700.00	90.000359.500	9083.00	2821.84	-24.63	2821.94	0.00
11800.00	90.000359.500	9083.00	2921.83	-25.50	2921.94	0.00
11900.00	90.000359.500	9083.00	3021.83	-26.37	3021.94	0.00
12000.00	90.000359.500	9083.00	3121.83	-27.24	3121.94	0.00
12100.00	90.000359.500	9083.00	3221.82	-28.12	3221.94	0.00
12200.00	90.000359.500	9083.00	3321.82	-28.99	3321.94	0.00
12300.00	90.000359.500	9083.00	3421.81	-29.86	3421.94	0.00
12400.00	90.000359.500	9083.00	3521.81	-30.73	3521.94	0.00
12500.00	90.000359.500	9083.00	3621.81	-31.61	3621.94	0.00
12600.00	90.000359.500	9083.00	3721.80	-32.48	3721.94	0.00
12700.00	90.000359.500	9083.00	3821.80	-33.35	3821.94	0.00
12800.00	90.000359.500	9083.00	3921.80	-34.22	3921.94	0.00

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12900.00	90.000359.500	9083.00	4021.79	-35.10	4021.94	0.00
13000.00	90.000359.500	9083.00	4121.79	-35.97	4121.94	0.00
13100.00	90.000359.500	9083.00	4221.78	-36.84	4221.94	0.00
13200.00	90.000359.500	9083.00	4321.78	-37.72	4321.94	0.00
13300.00	90.000359.500	9083.00	4421.78	-38.59	4421.94	0.00
13400.00	90.000359.500	9083.00	4521.77	-39.46	4521.94	0.00
13500.00	90.000359.500	9083.00	4621.77	-40.33	4621.94	0.00
13600.00	90.000359.500	9083.00	4721.76	-41.21	4721.94	0.00
13700.00	90.000359.500	9083.00	4821.76	-42.08	4821.94	0.00
13807.21	90.000359.500	9083.00	4928.97	-43.01	4929.16	0.00

All data are in feet unless otherwise stated. Directions and coordinates are relative to Grid 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 Slot and calculated along an Azimuth of 359.500° (Grid).

Coordinate System is North American Datum 1983 US State Plane 1983

Central meridian is -104.333°.

Grid Convergence at Surface is 0.479°.

Based upon Minimum Curvature type calculations
the Bottom Hole Displacement is 4929.16ft.

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LLC

NM (NAD83)

Sheet1

New Mexico Eastern Zone.

at a Measured Depth of 13807.21ft.
in the Direction of 359.500° (Grid).