



Pro Directional
Survey Report

30-025-44722
 PRO DIRECTIONAL

Company:	Matador Resources	Local Co-ordinate Reference:	Well #233H
Project:	Lea County, NM	TVD Reference:	GL: 4084' + KB: 28.5 @ 4112.50usft (Patterson 809)
Site:	Northeast Kemnitz	MD Reference:	GL: 4084' + KB: 28.5 @ 4112.50usft (Patterson 809)
Well:	#233H	North Reference:	Grid
Wellbore:	OH/Pilot	Survey Calculation Method:	Minimum Curvature
Design:	Pilot Prelim A	Database:	WellPlanner1

Project	Lea County, NM		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site		Northeast Kemnitz				
Site Position:		Northing:	692,280.00 usft	Latitude:	32.9007	
From:	Map	Easting:	741,246.00 usft	Longitude:	-103.5473	
Position Uncertainty:		0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.43 °

Well	#233H					
Well Position	+N/-S	0.00 usft	Northing:	692,280.00 usft	Latitude:	32.9007
	+E/-W	0.00 usft	Easting:	741,246.00 usft	Longitude:	-103.5473
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft	Ground Level:	4,084.00 usft	

Wellbore	OH/Pilot				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	4/12/2018	6.60	60.80	48,221.20

Design	Pilot Prelim A			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	143.64

Survey Tool Program	Date 4/12/2018			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	12,250.00	Pilot Prelim A (OH/Pilot)	MWD+HDGM	OWSG MWD + HRGM

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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	1.00	139.77	599.99	-0.67	0.56	0.87	1.00	1.00	0.00
700.02	2.00	139.77	699.98	-2.67	2.25	3.48	1.00	1.00	0.00
800.00	2.00	139.77	799.90	-5.33	4.51	6.96	0.00	0.00	0.00



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Well:	#233H	North Reference:	Grid
Wellbore:	OH/Pilot	Survey Calculation Method:	Minimum Curvature
Design:	Pilot Prelim A	Database:	WellPlanner1

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)
900.00	2.00	139.77	899.84	-7.99	6.76	10.45	0.00	0.00	0.00
1,000.00	2.00	139.77	999.78	-10.66	9.02	13.93	0.00	0.00	0.00
1,100.00	2.00	139.77	1,099.72	-13.32	11.27	17.41	0.00	0.00	0.00
1,200.00	2.00	139.77	1,199.65	-15.99	13.52	20.89	0.00	0.00	0.00
1,300.00	2.00	139.77	1,299.59	-18.65	15.78	24.38	0.00	0.00	0.00
1,400.00	2.00	139.77	1,399.53	-21.32	18.03	27.86	0.00	0.00	0.00
1,500.00	2.00	139.77	1,499.47	-23.98	20.29	31.34	0.00	0.00	0.00
1,600.00	2.00	139.77	1,599.41	-26.65	22.54	34.82	0.00	0.00	0.00
1,650.00	2.00	139.77	1,649.38	-27.98	23.67	36.56	0.00	0.00	0.00
13 3/8"									
1,700.00	2.00	139.77	1,699.35	-29.31	24.79	38.31	0.00	0.00	0.00
1,800.00	2.00	139.77	1,799.29	-31.98	27.05	41.79	0.00	0.00	0.00
1,900.00	2.00	139.77	1,899.23	-34.64	29.30	45.27	0.00	0.00	0.00
2,000.00	2.00	139.77	1,999.17	-37.31	31.56	48.75	0.00	0.00	0.00
2,100.00	2.00	139.77	2,099.11	-39.97	33.81	52.24	0.00	0.00	0.00
2,200.00	2.00	139.77	2,199.05	-42.64	36.06	55.72	0.00	0.00	0.00
2,300.00	2.00	139.77	2,298.98	-45.30	38.32	59.20	0.00	0.00	0.00
2,400.00	2.00	139.77	2,398.92	-47.97	40.57	62.68	0.00	0.00	0.00
2,500.00	2.00	139.77	2,498.86	-50.63	42.83	66.16	0.00	0.00	0.00
2,600.00	2.00	139.77	2,598.80	-53.30	45.08	69.65	0.00	0.00	0.00
2,700.00	2.00	139.77	2,698.74	-55.96	47.33	73.13	0.00	0.00	0.00
2,800.00	2.00	139.77	2,798.68	-58.63	49.59	76.61	0.00	0.00	0.00
2,900.00	2.00	139.77	2,898.62	-61.29	51.84	80.09	0.00	0.00	0.00
3,000.00	2.00	139.77	2,998.56	-63.96	54.10	83.58	0.00	0.00	0.00
3,100.00	2.00	139.77	3,098.50	-66.62	56.35	87.06	0.00	0.00	0.00
3,200.00	2.00	139.77	3,198.44	-69.29	58.60	90.54	0.00	0.00	0.00
3,300.00	2.00	139.77	3,298.38	-71.95	60.86	94.02	0.00	0.00	0.00
3,400.00	2.00	139.77	3,398.31	-74.62	63.11	97.51	0.00	0.00	0.00
3,500.00	2.00	139.77	3,498.25	-77.28	65.37	100.99	0.00	0.00	0.00
3,600.00	2.00	139.77	3,598.19	-79.95	67.62	104.47	0.00	0.00	0.00
3,700.00	2.00	139.77	3,698.13	-82.61	69.87	107.95	0.00	0.00	0.00
3,800.00	2.00	139.77	3,798.07	-85.28	72.13	111.43	0.00	0.00	0.00
3,900.00	2.00	139.77	3,898.01	-87.94	74.38	114.92	0.00	0.00	0.00
4,000.00	2.00	139.77	3,997.95	-90.61	76.64	118.40	0.00	0.00	0.00
4,100.00	2.00	139.77	4,097.89	-93.27	78.89	121.88	0.00	0.00	0.00
4,200.00	2.00	139.77	4,197.83	-95.94	81.14	125.36	0.00	0.00	0.00
4,300.00	2.00	139.77	4,297.77	-98.60	83.40	128.85	0.00	0.00	0.00
4,400.00	2.00	139.77	4,397.71	-101.26	85.65	132.33	0.00	0.00	0.00
4,437.46	2.00	139.77	4,435.14	-102.26	86.50	133.63	0.00	0.00	0.00
4,500.00	1.06	139.77	4,497.66	-103.54	87.58	135.30	1.50	-1.50	0.00
4,570.81	0.00	0.00	4,568.46	-104.04	88.00	135.96	1.50	-1.50	0.00
4,600.00	0.00	0.00	4,597.66	-104.04	88.00	135.96	0.00	0.00	0.00



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Well:	#233H	North Reference:	Grid
Wellbore:	OH/Pilot	Survey Calculation Method:	Minimum Curvature
Design:	Pilot Prelim A	Database:	WellPlanner1

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 5/8"									
4,700.00	0.00	0.00	4,697.66	-104.04	88.00	135.96	0.00	0.00	0.00
4,800.00	0.00	0.00	4,797.66	-104.04	88.00	135.96	0.00	0.00	0.00
4,900.00	0.00	0.00	4,897.66	-104.04	88.00	135.96	0.00	0.00	0.00
5,000.00	0.00	0.00	4,997.66	-104.04	88.00	135.96	0.00	0.00	0.00
5,100.00	0.00	0.00	5,097.66	-104.04	88.00	135.96	0.00	0.00	0.00
5,200.00	0.00	0.00	5,197.66	-104.04	88.00	135.96	0.00	0.00	0.00
5,300.00	0.00	0.00	5,297.66	-104.04	88.00	135.96	0.00	0.00	0.00
5,400.00	0.00	0.00	5,397.66	-104.04	88.00	135.96	0.00	0.00	0.00
5,500.00	0.00	0.00	5,497.66	-104.04	88.00	135.96	0.00	0.00	0.00
5,600.00	0.00	0.00	5,597.66	-104.04	88.00	135.96	0.00	0.00	0.00
5,700.00	0.00	0.00	5,697.66	-104.04	88.00	135.96	0.00	0.00	0.00
5,800.00	0.00	0.00	5,797.66	-104.04	88.00	135.96	0.00	0.00	0.00
5,900.00	0.00	0.00	5,897.66	-104.04	88.00	135.96	0.00	0.00	0.00
6,000.00	0.00	0.00	5,997.66	-104.04	88.00	135.96	0.00	0.00	0.00
6,100.00	0.00	0.00	6,097.66	-104.04	88.00	135.96	0.00	0.00	0.00
6,200.00	0.00	0.00	6,197.66	-104.04	88.00	135.96	0.00	0.00	0.00
6,300.00	0.00	0.00	6,297.66	-104.04	88.00	135.96	0.00	0.00	0.00
6,400.00	0.00	0.00	6,397.66	-104.04	88.00	135.96	0.00	0.00	0.00
6,500.00	0.00	0.00	6,497.66	-104.04	88.00	135.96	0.00	0.00	0.00
6,600.00	0.00	0.00	6,597.66	-104.04	88.00	135.96	0.00	0.00	0.00
6,700.00	0.00	0.00	6,697.66	-104.04	88.00	135.96	0.00	0.00	0.00
6,800.00	0.00	0.00	6,797.66	-104.04	88.00	135.96	0.00	0.00	0.00
6,900.00	0.00	0.00	6,897.66	-104.04	88.00	135.96	0.00	0.00	0.00
7,000.00	0.00	0.00	6,997.66	-104.04	88.00	135.96	0.00	0.00	0.00
7,100.00	0.00	0.00	7,097.66	-104.04	88.00	135.96	0.00	0.00	0.00
7,200.00	0.00	0.00	7,197.66	-104.04	88.00	135.96	0.00	0.00	0.00
7,300.00	0.00	0.00	7,297.66	-104.04	88.00	135.96	0.00	0.00	0.00
7,400.00	0.00	0.00	7,397.66	-104.04	88.00	135.96	0.00	0.00	0.00
7,500.00	0.00	0.00	7,497.66	-104.04	88.00	135.96	0.00	0.00	0.00
7,600.00	0.00	0.00	7,597.66	-104.04	88.00	135.96	0.00	0.00	0.00
7,700.00	0.00	0.00	7,697.66	-104.04	88.00	135.96	0.00	0.00	0.00
7,800.00	0.00	0.00	7,797.66	-104.04	88.00	135.96	0.00	0.00	0.00
7,900.00	0.00	0.00	7,897.66	-104.04	88.00	135.96	0.00	0.00	0.00
8,000.00	0.00	0.00	7,997.66	-104.04	88.00	135.96	0.00	0.00	0.00
8,100.00	0.00	0.00	8,097.66	-104.04	88.00	135.96	0.00	0.00	0.00
8,200.00	0.00	0.00	8,197.66	-104.04	88.00	135.96	0.00	0.00	0.00
8,300.00	0.00	0.00	8,297.66	-104.04	88.00	135.96	0.00	0.00	0.00
8,400.00	0.00	0.00	8,397.66	-104.04	88.00	135.96	0.00	0.00	0.00
8,500.00	0.00	0.00	8,497.66	-104.04	88.00	135.96	0.00	0.00	0.00
8,600.00	0.00	0.00	8,597.66	-104.04	88.00	135.96	0.00	0.00	0.00
8,700.00	0.00	0.00	8,697.66	-104.04	88.00	135.96	0.00	0.00	0.00



Pro Directional Survey Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well #233H
Project:	Lea County, NM	TVD Reference:	GL: 4084' + KB: 28.5 @ 4112.50usft (Patterson 809)
Site:	Northeast Kemnitz	MD Reference:	GL: 4084' + KB: 28.5 @ 4112.50usft (Patterson 809)
Well:	#233H	North Reference:	Grid
Wellbore:	OH/Pilot	Survey Calculation Method:	Minimum Curvature
Design:	Pilot Prelim A	Database:	WellPlanner1

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)
8,800.00	0.00	0.00	8,797.66	-104.04	88.00	135.96	0.00	0.00	0.00
8,900.00	0.00	0.00	8,897.66	-104.04	88.00	135.96	0.00	0.00	0.00
9,000.00	0.00	0.00	8,997.66	-104.04	88.00	135.96	0.00	0.00	0.00
9,100.00	0.00	0.00	9,097.66	-104.04	88.00	135.96	0.00	0.00	0.00
9,200.00	0.00	0.00	9,197.66	-104.04	88.00	135.96	0.00	0.00	0.00
9,300.00	0.00	0.00	9,297.66	-104.04	88.00	135.96	0.00	0.00	0.00
9,400.00	0.00	0.00	9,397.66	-104.04	88.00	135.96	0.00	0.00	0.00
9,500.00	0.00	0.00	9,497.66	-104.04	88.00	135.96	0.00	0.00	0.00
9,600.00	0.00	0.00	9,597.66	-104.04	88.00	135.96	0.00	0.00	0.00
9,700.00	0.00	0.00	9,697.66	-104.04	88.00	135.96	0.00	0.00	0.00
9,800.00	0.00	0.00	9,797.66	-104.04	88.00	135.96	0.00	0.00	0.00
9,900.00	0.00	0.00	9,897.66	-104.04	88.00	135.96	0.00	0.00	0.00
10,000.00	0.00	0.00	9,997.66	-104.04	88.00	135.96	0.00	0.00	0.00
10,100.00	0.00	0.00	10,097.66	-104.04	88.00	135.96	0.00	0.00	0.00
10,200.00	0.00	0.00	10,197.66	-104.04	88.00	135.96	0.00	0.00	0.00
10,300.00	0.00	0.00	10,297.66	-104.04	88.00	135.96	0.00	0.00	0.00
10,400.00	0.00	0.00	10,397.66	-104.04	88.00	135.96	0.00	0.00	0.00
10,500.00	0.00	0.00	10,497.66	-104.04	88.00	135.96	0.00	0.00	0.00
10,600.00	0.00	0.00	10,597.66	-104.04	88.00	135.96	0.00	0.00	0.00
10,700.00	0.00	0.00	10,697.66	-104.04	88.00	135.96	0.00	0.00	0.00
10,800.00	0.00	0.00	10,797.66	-104.04	88.00	135.96	0.00	0.00	0.00
10,900.00	0.00	0.00	10,897.66	-104.04	88.00	135.96	0.00	0.00	0.00
11,000.00	0.00	0.00	10,997.66	-104.04	88.00	135.96	0.00	0.00	0.00
11,010.81	0.00	0.00	11,008.46	-104.04	88.00	135.96	0.00	0.00	0.00
11,100.00	2.68	179.48	11,097.62	-106.12	88.02	137.64	3.00	3.00	0.00
11,110.81	3.00	179.48	11,108.41	-106.66	88.02	138.08	3.00	3.00	0.00
11,200.00	3.00	179.48	11,197.49	-111.33	88.07	141.86	0.00	0.00	0.00
11,210.81	3.00	179.48	11,208.28	-111.89	88.07	142.32	0.00	0.00	0.00
11,300.00	2.11	179.48	11,297.38	-115.87	88.11	145.54	1.00	-1.00	0.00
11,400.00	1.11	179.48	11,397.34	-118.67	88.13	147.82	1.00	-1.00	0.00
11,500.00	0.11	179.48	11,497.34	-119.73	88.14	148.68	1.00	-1.00	0.00
11,510.81	0.00	0.00	11,508.14	-119.74	88.14	148.69	1.00	-1.00	-1,661.08
11,600.00	0.00	0.00	11,597.34	-119.74	88.14	148.69	0.00	0.00	0.00
11,700.00	0.00	0.00	11,697.34	-119.74	88.14	148.69	0.00	0.00	0.00
11,800.00	0.00	0.00	11,797.34	-119.74	88.14	148.69	0.00	0.00	0.00
11,900.00	0.00	0.00	11,897.34	-119.74	88.14	148.69	0.00	0.00	0.00
12,000.00	0.00	0.00	11,997.34	-119.74	88.14	148.69	0.00	0.00	0.00
12,100.00	0.00	0.00	12,097.34	-119.74	88.14	148.69	0.00	0.00	0.00
12,200.00	0.00	0.00	12,197.34	-119.74	88.14	148.69	0.00	0.00	0.00
12,250.00	0.00	0.00	12,247.34	-119.74	88.14	148.69	0.00	0.00	0.00



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Project:	Lea County, NM	TVD Reference:	GL: 4084' + KB: 28.5 @ 4112.50usft (Patterson 809)
Site:	Northeast Kemnitz	MD Reference:	GL: 4084' + KB: 28.5 @ 4112.50usft (Patterson 809)
Well:	#233H	North Reference:	Grid
Wellbore:	OH/Pilot	Survey Calculation Method:	Minimum Curvature
Design:	Pilot Prelim A	Database:	WellPlanner1

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
1,650.00	1,649.38	13 3/8"		13-3/8	20
4,600.00	4,597.66	9 5/8"		9-5/8	12-1/4

Checked By: _____ Approved By: _____ Date: _____



Matador Resources
Lea County, NM
Northeast Kemnitz
#233H
Prelim A
Patterson 809



US State Plane 1927 (Exact solution)
NAD 1927 (NADCON CONUS)
Clarke 1866
New Mexico East 3001
Mean Sea Level

RKB Elevation: GL: 4084' + KB: 28.5 @ 4112.50usft (Patterson 809)

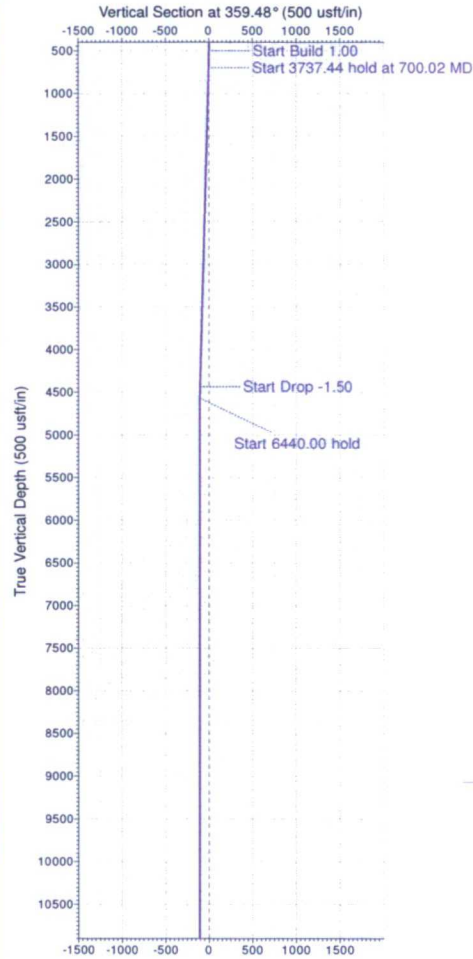
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	692280.00	741246.00	32.9007	-103.5473	

SECTION DETAILS - Pilot

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	Vsect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00
3	700.02	2.00	139.77	699.98	-2.67	2.25	1.00	3.48
4	4437.46	2.00	139.77	4435.14	-102.26	86.50	0.00	133.63
5	4570.80	0.00	0.00	4568.46	-104.04	88.00	1.50	135.96
6	11010.80	0.00	0.00	11008.46	-104.04	88.00	0.00	135.96
7	11110.80	3.00	179.48	11108.41	-106.66	88.02	3.00	138.08
8	11210.80	3.00	179.48	11208.28	-111.89	88.07	0.00	142.32
9	11510.81	0.00	0.00	11508.14	-119.74	88.14	1.00	148.69
10	12250.00	0.00	0.00	12247.34	-119.74	88.14	0.00	148.69

SECTION DETAILS - C&L

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	Vsect
1	11010.80	0.00	0.00	11008.46	-104.04	88.00	0.00	-104.83
2	11692.62	75.00	359.48	11511.58	282.00	84.50	11.00	281.23
3	11792.62	75.00	359.48	11537.46	378.59	83.62	0.00	377.82
4	12042.62	90.00	359.48	11570.00	625.74	81.38	6.00	624.97
5	16300.06	90.00	359.48	11570.00	4883.00	43.00	0.00	4882.41



Azimuths to Grid North
True North: -0.43°
Magnetic North: 6.17°

Magnetic Field
Strength: 48221.2nT
Dip Angle: 60.80°
Date: 4/12/2018
Model: HDGM

Azimuth Corrections
Total Magnetic Corr. (M to G): 6.17°
Declination (M to T): 6.60° East

