



HOBBS OCD

FEB 20 2020

RECEIVED

Northeast Kemnitz Unit No. 13

Lea County, NM

30-025-46269

September 20, 2019

Job No. LNM5522219

ORIGINAL

Certified Report



PRODIRECTIONAL

Survey Certification Letter

September 20, 2019



Operator Name: Matador Resources
Well Name: Northeast Kemnitz Unit No. 13
County/Parish: Lea County,
State: NM
Rig Name: Patterson 809
Job Number: LNM5522219

This is to certify the surveys performed on the referenced well by Professional Directional Ent., Inc. are true and correct MWD Surveys, data provided as follows:

<u>Surveyor</u>	<u>Surveyed Depths</u>	<u>Projection to Bit</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
ProDirectional	195' MD – 11,100' MD	11,160' MD	08/16/19 – 08/25/19	MWD-HDGM

Sincerely,

Mike Coats
Regulatory Specialist
Professional Directional

850 Conroe Park West Drive | Conroe, TX 77303 | Phone: 936.441.7266

prodirectional.com

The Standard of Excellence in Directional Supervision



Matador Resources

**Lea County, NM
Northeast Kemnitz Unit
No. 13
OH**

Survey: ProDirectional

Survey Report

20 September, 2019





ProDirectional
Survey Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well No. 13
Project:	Lea County, NM (NAD83)	TVD Reference:	Well @ 4111.50usft
Site:	Northeast Kernitz	MD Reference:	Well @ 4111.50usft
Well:	No. 13	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	MWD	Database:	WellPlanner1

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	Northeast Kernitz		
Site Position:		Northing:	692,346.00 usft
From:	Map	Easting:	782,424.00 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32.900808
		Longitude:	-103.547839
		Grid Convergence:	0.43 °

Well	No. 13, LNM5522219					
Well Position	+N/-S	0.00 usft	Northing:	692,348.00 usft	Latitude:	32.900810
	+E/-W	0.00 usft	Easting:	782,613.00 usft	Longitude:	-103.547223
Position Uncertainty	0.00 usft		Wellhead Elevation:	usft	Ground Level:	4,083.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	8/7/2019	6.47	60.73	48,078.40

Design	MWD			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/W (usft)	Direction (°)
	0.00	0.00	0.00	294.14

Survey Program		Date 9/20/2019		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
195.00	11,160.00	Survey #1 (OH)	MWD+HDGM	OWSG MWD + HRGM



ProDirectional
Survey Report



Company: Matador Resources
Project: Lea County, NM (NAD83)
Site: Northeast Kernitz
Well: No. 13
Wellbore: OH
Design: MWD

Local Co-ordinate Reference:
TVD Reference: Well @ 4111.50usft
MD Reference: Well @ 4111.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	692,348.00	782,613.00	
195.00	0.40	91.80	195.00	-0.63	-0.02	0.68	0.68	91.80	692,347.98	782,613.68	
Pro MWD First Survey: 195' MD											
317.00	0.50	105.90	316.99	-1.55	-0.18	1.62	1.63	96.37	692,347.82	782,614.62	
411.00	0.40	118.60	410.99	-2.28	-0.45	2.30	2.34	101.07	692,347.55	782,615.30	
502.00	0.30	139.00	501.99	-2.82	-0.78	2.74	2.85	105.95	692,347.22	782,615.74	
592.00	0.20	151.10	591.99	-3.16	-1.10	2.97	3.16	110.30	692,346.90	782,615.97	
684.00	1.00	284.00	683.99	-2.49	-1.04	2.26	2.49	114.74	692,346.96	782,615.26	
775.00	2.20	283.80	774.95	0.01	-0.43	-0.20	0.48	204.92	692,347.57	782,612.80	
866.00	2.30	285.10	865.88	3.53	0.46	-3.66	3.69	277.12	692,348.46	782,609.34	
959.00	1.90	277.50	958.82	6.85	1.14	-6.99	7.08	279.30	692,349.14	782,606.01	
1,052.00	1.90	273.50	1,051.76	9.77	1.44	-10.06	10.16	278.15	692,349.44	782,602.94	
1,145.00	2.00	271.80	1,144.71	12.71	1.59	-13.22	13.31	276.84	692,349.59	782,599.78	
1,239.00	1.90	275.60	1,238.66	15.71	1.79	-16.41	16.51	276.22	692,349.79	782,596.59	
1,332.00	1.90	277.10	1,331.60	18.64	2.13	-19.47	19.59	276.24	692,350.13	782,593.53	
1,425.00	1.70	273.80	1,424.56	21.41	2.41	-22.38	22.51	276.15	692,350.41	782,590.62	
1,519.00	1.20	264.90	1,518.53	23.58	2.42	-24.75	24.87	275.58	692,350.42	782,588.25	
1,591.00	1.00	260.30	1,590.52	24.76	2.24	-26.12	26.22	274.91	692,350.24	782,586.88	
1,705.00	0.70	239.00	1,704.50	25.98	1.72	-27.70	27.75	273.55	692,349.72	782,585.30	
1,798.00	0.60	240.50	1,797.50	26.59	1.19	-28.61	28.64	272.37	692,349.19	782,584.39	
1,892.00	0.50	259.00	1,891.49	27.22	0.86	-29.44	29.45	271.68	692,348.86	782,583.56	
1,985.00	3.40	295.60	1,984.43	30.31	1.98	-32.33	32.39	273.50	692,349.98	782,580.67	
2,078.00	4.20	298.80	2,077.23	36.46	4.81	-37.80	38.10	277.25	692,352.81	782,575.20	
2,172.00	4.30	302.80	2,170.97	43.38	8.38	-43.78	44.57	280.83	692,356.38	782,569.22	
2,265.00	4.60	303.90	2,263.69	50.50	12.35	-49.80	51.31	283.92	692,360.35	782,563.20	
2,358.00	4.90	307.50	2,356.37	58.04	16.85	-56.05	58.53	286.73	692,364.85	782,556.95	
2,452.00	5.20	308.90	2,450.00	66.06	21.96	-62.55	66.29	289.35	692,369.96	782,550.45	



ProDirectional
Survey Report



Company: Matador Resources
Project: Lea County, NM (NAD83)
Site: Northeast Kernitz
Well: No. 13
Wellbore: OH
Design: MWD

Local Co-ordinate Reference:
TVD Reference: Well No. 13
MD Reference: Well @ 4111.50usft
North Reference: Well @ 4111.50usft
Survey Calculation Method: Grid
Database: Minimum Curvature
WellPlanner1

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
2,545.00	5.40	309.40	2,542.60	74.36	27.39	-69.21	74.43	291.59	692,375.39	782,543.79
2,639.00	5.60	309.90	2,636.17	83.04	33.14	-76.15	83.05	293.52	692,381.14	782,536.85
2,732.00	5.70	312.30	2,728.72	91.80	39.16	-83.05	91.81	295.24	692,387.16	782,529.95
2,825.00	5.70	312.90	2,821.26	100.56	45.41	-89.84	100.67	296.81	692,393.41	782,523.16
2,918.00	5.70	311.50	2,913.80	109.34	51.61	-96.69	109.60	298.09	692,399.61	782,516.31
3,012.00	5.60	312.90	3,007.34	118.14	57.83	-103.54	118.60	299.18	692,405.83	782,509.46
3,105.00	5.50	313.30	3,099.91	126.64	63.97	-110.11	127.34	300.16	692,411.97	782,502.89
3,199.00	6.70	299.10	3,193.38	136.36	69.73	-118.18	137.22	300.54	692,417.73	782,494.82
3,292.00	8.00	297.60	3,285.61	148.23	75.37	-128.66	149.11	300.36	692,423.37	782,484.34
3,385.00	7.60	297.40	3,377.75	160.83	81.20	-139.85	161.71	300.14	692,429.20	782,473.15
3,478.00	7.30	296.80	3,469.97	172.87	86.69	-150.59	173.76	299.93	692,434.69	782,462.41
3,572.00	6.90	296.40	3,563.25	184.48	91.89	-160.97	185.36	299.72	692,439.89	782,452.03
3,665.00	6.60	296.10	3,655.60	195.40	96.73	-170.78	196.27	299.53	692,444.73	782,442.22
3,759.00	8.60	289.00	3,748.77	207.80	101.39	-182.27	208.58	299.09	692,449.39	782,430.73
3,852.00	9.20	287.00	3,840.65	222.10	105.83	-195.96	222.71	298.37	692,453.83	782,417.04
3,946.00	8.70	285.80	3,933.51	236.59	109.96	-209.99	237.04	297.64	692,457.96	782,403.01
4,039.00	8.00	286.90	4,025.52	249.97	113.76	-222.95	250.29	297.03	692,461.76	782,390.05
4,133.00	7.50	285.50	4,118.66	262.53	117.30	-235.12	262.75	296.51	692,465.30	782,377.88
4,226.00	8.50	288.50	4,210.76	275.37	121.10	-247.48	275.53	296.07	692,469.10	782,365.52
4,320.00	9.20	288.30	4,303.64	289.76	125.67	-261.21	289.86	295.69	692,473.67	782,351.79
4,413.00	9.00	289.00	4,395.47	304.40	130.37	-275.14	304.47	295.35	692,478.37	782,337.86
4,506.00	8.60	289.90	4,487.37	318.58	135.11	-288.56	318.62	295.09	692,483.11	782,324.44
4,600.00	8.40	288.10	4,580.34	332.41	139.63	-301.69	332.44	294.84	692,487.63	782,311.31
4,694.00	8.30	287.00	4,673.34	345.97	143.75	-314.71	345.98	294.55	692,491.75	782,298.29
4,786.00	8.30	287.70	4,764.38	359.16	147.71	-327.38	359.16	294.28	692,495.71	782,285.62
4,880.00	10.20	287.30	4,857.15	374.17	152.25	-341.80	374.17	294.01	692,500.25	782,271.20
4,974.00	11.10	286.20	4,949.53	391.39	157.25	-358.43	391.41	293.69	692,505.25	782,254.57



ProDirectional Survey Report



Company: Matador Resources
Project: Lea County, NM (NAD83)
Site: Northeast Kemnitz
Well: No. 13
Wellbore: OH
Design: MWD

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:
Well No. 13
Well @ 4111.50usft
Well @ 4111.50usft
Grid
Minimum Curvature
WellPlanner1

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
5,066.00	11.20	286.40	5,039.80	409.02	162.24	-375.51	409.06	293.37	692,510.24	782,237.49
5,160.00	11.40	286.00	5,131.97	427.26	167.38	-393.19	427.34	293.06	692,515.38	782,219.81
5,253.00	11.40	284.30	5,223.14	445.42	172.18	-410.94	445.55	292.73	692,520.18	782,202.06
5,346.00	11.60	284.90	5,314.27	463.70	176.86	-428.88	463.91	292.41	692,524.86	782,184.12
5,440.00	11.70	284.40	5,406.34	482.42	181.66	-447.24	482.73	292.11	692,529.66	782,165.76
5,533.00	11.90	284.00	5,497.37	501.15	186.32	-465.68	501.57	291.81	692,534.32	782,147.32
5,627.00	11.90	284.30	5,589.35	520.24	191.06	-484.47	520.79	291.52	692,539.06	782,128.53
5,720.00	12.10	283.70	5,680.32	539.28	195.74	-503.24	539.96	291.25	692,543.74	782,109.76
5,813.00	12.40	284.00	5,771.20	558.69	200.46	-522.39	559.54	290.99	692,548.46	782,090.61
5,906.00	12.70	283.60	5,861.98	578.57	205.28	-542.02	579.59	290.74	692,553.28	782,070.98
6,000.00	11.50	291.20	5,953.90	598.09	211.10	-560.80	599.22	290.63	692,559.10	782,052.20
6,093.00	11.60	294.40	6,045.01	616.70	218.31	-577.96	617.82	290.69	692,566.31	782,035.04
6,186.00	11.30	293.60	6,136.16	635.16	225.82	-594.82	636.25	290.79	692,573.82	782,018.18
6,279.00	11.40	293.10	6,227.34	653.46	233.08	-611.63	654.53	290.86	692,581.08	782,001.37
6,372.00	11.30	302.80	6,318.53	671.66	241.62	-627.74	672.64	291.05	692,589.62	781,985.26
6,466.00	11.20	304.30	6,410.73	689.75	251.75	-643.02	690.55	291.38	692,599.75	781,969.98
6,559.00	10.40	302.70	6,502.08	706.94	261.38	-657.55	707.59	291.68	692,609.38	781,955.45
6,652.00	9.50	301.90	6,593.68	722.85	269.97	-671.13	723.39	291.91	692,617.97	781,941.87
6,746.00	8.90	301.10	6,686.47	737.75	277.82	-683.94	738.22	292.11	692,625.82	781,929.06
6,839.00	8.70	300.50	6,778.37	751.88	285.11	-696.16	752.28	292.27	692,633.11	781,916.84
6,932.00	8.50	300.00	6,870.33	765.71	292.12	-708.17	766.06	292.42	692,640.12	781,904.83
7,026.00	8.20	298.60	6,963.33	779.30	298.80	-720.08	779.61	292.54	692,646.80	781,892.92
7,119.00	9.70	297.90	7,055.20	793.73	305.64	-732.82	794.01	292.64	692,653.64	781,880.18
7,213.00	10.10	297.30	7,147.80	809.87	313.13	-747.15	810.11	292.74	692,661.13	781,865.85
7,306.00	9.90	297.60	7,239.38	825.99	320.57	-761.48	826.20	292.83	692,668.57	781,851.52
7,399.00	11.00	295.80	7,330.84	842.84	328.14	-776.55	843.03	292.91	692,676.14	781,836.45
7,492.00	10.80	294.60	7,422.16	860.42	335.62	-792.46	860.60	292.95	692,683.62	781,820.54



ProDirectional
Survey Report



Company: Matador Resources
Project: Lea County, NM (NAD83)
Site: Northeast Kernitz
Well: No. 13
Wellbore: OH
Design: MWD

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well No. 13
Well @ 4111.50usft
Well @ 4111.50usft
Grid
Minimum Curvature
WellPlanner1

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
7,586.00	11.30	294.10	7,514.42	878.44	343.05	-808.88	878.62	292.98	692,691.05	781,804.12
7,679.00	12.00	293.10	7,605.50	897.21	350.56	-826.09	897.39	292.99	692,698.56	781,786.91
7,773.00	11.60	291.70	7,697.52	916.43	357.89	-843.86	916.61	292.98	692,705.89	781,769.14
7,866.00	11.40	291.80	7,788.65	934.95	364.76	-861.08	935.15	292.96	692,712.76	781,751.92
7,960.00	11.20	290.70	7,880.83	953.35	371.44	-878.24	953.56	292.93	692,719.44	781,734.76
8,054.00	11.70	292.70	7,972.96	971.99	378.35	-895.58	972.21	292.90	692,726.35	781,717.42
8,147.00	11.60	293.80	8,064.04	990.76	385.76	-912.83	990.99	292.91	692,733.76	781,700.17
8,240.00	10.90	292.10	8,155.25	1,008.90	392.84	-929.53	1,009.13	292.91	692,740.84	781,683.47
8,333.00	10.20	290.50	8,246.68	1,025.91	399.03	-945.39	1,026.15	292.88	692,747.03	781,667.61
8,426.00	9.50	289.60	8,338.31	1,041.78	404.49	-960.33	1,042.04	292.84	692,752.49	781,652.67
8,519.00	10.00	294.70	8,429.97	1,057.50	410.44	-974.90	1,057.78	292.83	692,758.44	781,638.10
8,612.00	10.10	295.80	8,521.54	1,073.73	417.36	-989.58	1,073.99	292.87	692,765.36	781,623.42
8,706.00	9.90	294.90	8,614.11	1,090.05	424.35	-1,004.33	1,090.30	292.91	692,772.35	781,608.67
8,799.00	9.70	294.10	8,705.76	1,105.87	430.92	-1,018.73	1,106.12	292.93	692,778.92	781,594.27
8,892.00	8.20	296.10	8,797.62	1,120.34	437.03	-1,031.84	1,120.58	292.95	692,785.03	781,581.16
8,985.00	7.60	295.50	8,889.74	1,133.11	442.60	-1,043.35	1,133.34	292.99	692,790.60	781,569.65
9,079.00	7.30	296.30	8,982.95	1,145.30	447.92	-1,054.31	1,145.52	293.02	692,795.92	781,558.69
9,173.00	7.20	295.50	9,076.19	1,157.15	453.10	-1,064.98	1,157.36	293.05	692,801.10	781,548.02
9,266.00	7.00	295.20	9,168.48	1,168.65	458.02	-1,075.37	1,168.85	293.07	692,806.02	781,537.63
9,360.00	5.20	303.10	9,261.95	1,178.58	462.79	-1,084.12	1,178.77	293.12	692,810.79	781,528.88
9,453.00	4.80	303.50	9,354.59	1,186.58	467.24	-1,090.90	1,186.75	293.19	692,815.24	781,522.10
9,547.00	4.50	301.10	9,448.28	1,194.12	471.32	-1,097.34	1,194.27	293.24	692,819.32	781,515.66
9,640.00	2.60	307.80	9,541.10	1,199.80	474.49	-1,102.13	1,199.93	293.29	692,822.49	781,510.87
9,734.00	2.30	312.20	9,635.01	1,203.66	477.07	-1,105.21	1,203.78	293.35	692,825.07	781,507.79
9,827.00	2.20	309.10	9,727.94	1,207.16	479.45	-1,107.98	1,207.26	293.40	692,827.45	781,505.02
9,921.00	2.20	307.70	9,821.87	1,210.66	481.69	-1,110.80	1,210.75	293.44	692,829.69	781,502.20
10,015.00	2.20	306.20	9,915.80	1,214.18	483.86	-1,113.69	1,214.26	293.48	692,831.86	781,499.31



ProDirectional Survey Report



Company: Matador Resources
Project: Lea County, NM (NAD83)
Site: Northeast Kernitz
Well: No. 13
Wellbore: OH
Design: MWD

Local Co-ordinate Reference:
TVD Reference: Well No. 13
MD Reference: Well @ 4111.50usft
North Reference: Well @ 4111.50usft
Survey Calculation Method: Grid
Database: Minimum Curvature
 WellPlanner1

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
10,107.00	2.30	304.70	10,007.73	1,217.72	485.95	-1,116.63	1,217.79	293.52	692,833.95	781,496.37
10,201.00	2.20	302.60	10,101.66	1,221.36	488.00	-1,119.70	1,221.42	293.55	692,836.00	781,493.30
10,294.00	0.30	337.10	10,194.64	1,223.30	489.18	-1,121.30	1,223.36	293.57	692,837.18	781,491.70
10,388.00	0.40	70.60	10,288.63	1,223.24	489.52	-1,121.09	1,223.30	293.59	692,837.52	781,491.91
10,482.00	0.30	62.80	10,382.63	1,222.85	489.74	-1,120.56	1,222.90	293.61	692,837.74	781,492.44
10,575.00	0.30	32.90	10,475.63	1,222.66	490.05	-1,120.21	1,222.71	293.63	692,838.05	781,492.79
10,669.00	0.30	0.20	10,569.63	1,222.72	490.51	-1,120.07	1,222.77	293.65	692,838.51	781,492.93
10,762.00	0.40	326.30	10,662.63	1,223.10	491.02	-1,120.25	1,223.14	293.67	692,839.02	781,492.75
10,855.00	0.50	306.30	10,755.63	1,223.77	491.53	-1,120.76	1,223.81	293.68	692,839.53	781,492.24
10,948.00	0.50	287.90	10,848.62	1,224.57	491.90	-1,121.47	1,224.61	293.68	692,839.90	781,491.53
11,042.00	0.50	285.60	10,942.62	1,225.38	492.13	-1,122.26	1,225.42	293.68	692,840.13	781,490.74
11,100.00	0.60	264.70	11,000.62	1,225.90	492.17	-1,122.80	1,225.94	293.67	692,840.17	781,490.20
Last Survey: 11100' MD										
11,160.00	0.60	264.70	11,060.61	1,226.44	492.11	-1,123.43	1,226.49	293.66	692,840.11	781,489.57
PTB: 11160' MD										

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
195.00	195.00	-0.02	0.68	Pro MWD First Survey: 195' MD
11,100.00	11,000.62	492.17	-1,122.80	Last Survey: 11100' MD
11,160.00	11,060.61	492.11	-1,123.43	PTB: 11160' MD