



30-025-41808



Mallon 27 Federal No. 3H(OH)

Lea County, NM

October 24, 2016

Job No. LNM5126716

HOBBS COO

JAN 30 2017

RECEIVED

ORIGINAL

Survey Completion Report



PRODIRECTIONAL

Survey Certification Letter

October 24, 2016



Operator Name: Matador Resources
Well Name: Mallon 27 Federal No. 3H(OH)
County/Parish: Lea County,
State: NM
Rig Name: Patterson 809
Job Number: LNM5126716

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:

Surveyor	Surveyed Depths	Projection to Bit	Dates Performed	Type of Survey
ProDirectional	170' MD – 18,205' MD	18,262' MD	09/21/16 – 10/11/16	MWD-OWSG

Sincerely,

Mike Coats
Well Planning
Professional Directional

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

prodirectional.com



Matador Resources

**Lea County, NM
Mallon 27 Federal
No. 3H
OH**

Survey: ProDirectional

Survey Report

24 October, 2016





ProDirectional Survey Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well No. 3H
Project:	Lea County, NM	TVD Reference:	Well @ 3737.50usft (GL: 3709' + KB: 28.5' (Patt809))
Site:	Mallon 27 Federal	MD Reference:	Well @ 3737.50usft (GL: 3709' + KB: 28.5' (Patt809))
Well:	No. 3H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	MWD	Database:	Well_Planner1

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	Mallon 27 Federal		
Site Position:		Northing:	591,992.00 usft
From:	Map	Easting:	743,820.00 usft
Position Uncertainty:	3.30 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 37' 29.971 N
		Longitude:	103° 32' 29.024 W
		Grid Convergence:	0.43 °

Well	No. 3H					
Well Position	+N/-S	0.00 usft	Northing:	591,874.00 usft	Latitude:	32° 37' 28.990 N
	+E/-W	0.00 usft	Easting:	741,277.00 usft	Longitude:	103° 32' 58.767 W
Position Uncertainty		1.10 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,709.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	9/22/2016	6.78	60.67	48,419

Design		MWD		
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth:
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	358.27

Survey Program		Date 10/11/2016		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
170.00	18,262.00	Survey #1 (OH)	MWD - OWSG	MWD - OWSG



ProDirectional Survey Report



Company: Matador Resources
Project: Lea County, NM
Site: Mallon 27 Federal
Well: No. 3H
Wellbore: OH
Design: MWD

Local Co-ordinate Reference: Well No. 3H
TVD Reference: Well @ 3737.50usft (GL: 3709' + KB: 28.5' (Patt809))
MD Reference: Well @ 3737.50usft (GL: 3709' + KB: 28.5' (Patt809))
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Well_Planner1

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	0.00	591,874.00	741,277.00
170.00	0.60	85.60	170.00	0.04	0.07	0.89	0.89	85.60	591,874.07	741,277.89	
Pro MWD First Survey: 170' MD											
232.00	0.60	88.30	231.99	0.06	0.10	1.54	1.54	86.17	591,874.10	741,278.54	
298.00	1.00	84.20	297.99	0.10	0.17	2.45	2.46	86.01	591,874.17	741,279.45	
393.00	0.60	87.90	392.98	0.16	0.27	3.78	3.79	85.86	591,874.27	741,280.78	
485.00	0.90	99.70	484.97	0.02	0.17	4.97	4.97	88.05	591,874.17	741,281.97	
581.00	0.60	89.70	580.96	-0.14	0.04	6.22	6.22	89.59	591,874.04	741,283.22	
674.00	0.70	89.10	673.96	-0.16	0.06	7.27	7.27	89.56	591,874.06	741,284.27	
768.00	0.40	70.60	767.95	-0.07	0.17	8.15	8.16	88.78	591,874.17	741,285.15	
862.00	0.30	88.80	861.95	0.03	0.29	8.71	8.71	88.10	591,874.29	741,285.71	
954.00	0.70	71.50	953.95	0.19	0.47	9.48	9.49	87.15	591,874.47	741,286.48	
1,047.00	0.70	78.40	1,046.94	0.45	0.77	10.58	10.61	85.86	591,874.77	741,287.58	
1,141.00	0.60	83.60	1,140.93	0.59	0.94	11.63	11.67	85.40	591,874.94	741,288.63	
1,235.00	0.20	114.00	1,234.93	0.55	0.92	12.27	12.30	85.69	591,874.92	741,289.27	
1,329.00	0.20	151.10	1,328.93	0.34	0.71	12.50	12.52	86.73	591,874.71	741,289.50	
1,423.00	0.20	249.80	1,422.93	0.14	0.51	12.42	12.43	87.63	591,874.51	741,289.42	
1,516.00	0.10	259.30	1,515.93	0.07	0.44	12.19	12.20	87.92	591,874.44	741,289.19	
1,609.00	0.30	270.00	1,608.93	0.07	0.43	11.87	11.88	87.94	591,874.43	741,288.87	
1,703.00	0.50	252.70	1,702.93	-0.03	0.31	11.23	11.23	88.44	591,874.31	741,288.23	
1,744.00	0.40	271.60	1,743.92	-0.07	0.26	10.92	10.92	88.65	591,874.26	741,287.92	
1,888.00	0.30	300.50	1,887.92	0.16	0.46	10.09	10.10	87.38	591,874.46	741,287.09	
1,982.00	0.10	50.30	1,981.92	0.34	0.64	9.94	9.96	86.32	591,874.64	741,286.94	
2,075.00	0.30	24.90	2,074.92	0.61	0.91	10.11	10.15	84.84	591,874.91	741,287.11	
2,169.00	0.20	179.00	2,168.92	0.66	0.97	10.21	10.26	84.57	591,874.97	741,287.21	
2,263.00	0.20	239.30	2,262.92	0.42	0.72	10.07	10.10	85.89	591,874.72	741,287.07	
2,356.00	0.30	358.10	2,355.92	0.58	0.88	9.93	9.97	84.91	591,874.88	741,286.93	



ProDirectional Survey Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well No. 3H
Project:	Lea County, NM	TVD Reference:	Well @ 3737.50usft (GL: 3709' + KB: 28.5' (Patt809))
Site:	Mallon 27 Federal	MD Reference:	Well @ 3737.50usft (GL: 3709' + KB: 28.5' (Patt809))
Well:	No. 3H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	MWD	Database:	Well_Planner1

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)	
2,450.00	1.10	163.80	2,449.92	-0.04	0.26	10.17	10.17	88.52	591,874.26	741,287.17	
2,544.00	3.40	164.10	2,543.84	-3.62	-3.28	11.18	11.66	106.36	591,870.72	741,288.18	
2,637.00	5.70	166.10	2,636.54	-10.81	-10.42	13.05	16.70	128.61	591,863.58	741,290.05	
2,730.00	6.60	167.00	2,729.00	-20.57	-20.11	15.36	25.31	142.63	591,853.89	741,292.36	
2,824.00	6.00	166.60	2,822.43	-30.68	-30.15	17.72	34.97	149.57	591,843.85	741,294.72	
2,917.00	5.80	159.90	2,914.94	-39.90	-39.30	20.46	44.30	152.50	591,834.70	741,297.46	
3,011.00	5.60	155.40	3,008.48	-48.63	-47.93	24.00	53.60	153.40	591,826.07	741,301.00	
3,105.00	5.40	150.00	3,102.04	-56.75	-55.93	28.12	62.60	153.31	591,818.07	741,305.12	
3,198.00	5.10	151.60	3,194.65	-64.30	-63.35	32.27	71.10	153.00	591,810.65	741,309.27	
3,292.00	5.10	149.30	3,288.28	-71.69	-70.62	36.39	79.45	152.74	591,803.38	741,313.39	
3,385.00	4.50	147.90	3,380.96	-78.45	-77.27	40.44	87.21	152.37	591,796.73	741,317.44	
3,479.00	5.00	159.60	3,474.64	-85.51	-84.23	43.83	94.95	152.51	591,789.77	741,320.83	
3,573.00	5.10	164.40	3,568.27	-93.45	-92.09	46.38	103.11	153.27	591,781.91	741,323.38	
3,667.00	4.40	163.40	3,661.95	-100.99	-99.57	48.54	110.77	154.01	591,774.43	741,325.54	
3,760.00	6.20	171.00	3,754.55	-109.42	-107.95	50.34	119.11	155.00	591,766.05	741,327.34	
3,854.00	5.20	171.20	3,848.08	-118.69	-117.18	51.79	128.11	156.16	591,756.82	741,328.79	
3,947.00	4.70	177.40	3,940.73	-126.68	-125.15	52.60	135.75	157.20	591,748.85	741,329.60	
4,041.00	5.40	168.50	4,034.37	-134.89	-133.33	53.66	143.72	158.08	591,740.67	741,330.66	
4,135.00	6.10	164.60	4,127.90	-144.10	-142.48	55.87	153.04	158.59	591,731.52	741,332.87	
4,229.00	5.60	164.90	4,221.41	-153.41	-151.72	58.39	162.57	158.95	591,722.28	741,335.39	
4,322.00	5.10	166.30	4,314.00	-161.87	-160.12	60.55	171.18	159.29	591,713.88	741,337.55	
4,416.00	4.50	167.40	4,407.67	-169.58	-167.78	62.34	178.98	159.62	591,706.22	741,339.34	
4,509.00	3.80	167.60	4,500.43	-176.19	-174.35	63.80	185.65	159.90	591,699.65	741,340.80	
4,602.00	3.70	166.30	4,593.23	-182.16	-180.27	65.17	191.69	160.12	591,693.73	741,342.17	
4,696.00	3.20	170.80	4,687.06	-187.73	-185.81	66.31	197.29	160.36	591,688.19	741,343.31	
4,790.00	3.00	166.50	4,780.92	-192.73	-190.79	67.31	202.31	160.57	591,683.21	741,344.31	
4,884.00	2.60	172.40	4,874.81	-197.26	-195.29	68.16	206.85	160.76	591,678.71	741,345.16	



ProDirectional
Survey Report



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Project:	Lea County, NM	TVD Reference:	Well @ 3737.50usft (GL: 3709' + KB: 28.5' (Patt809))
Site:	Mallon 27 Federal	MD Reference:	Well @ 3737.50usft (GL: 3709' + KB: 28.5' (Patt809))
Well:	No. 3H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	MWD	Database:	Well_Planner1

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)	
4,978.00	2.20	174.50	4,968.73	-201.18	-199.20	68.62	210.69	160.99	591,674.80	741,345.62	
5,071.00	2.10	175.30	5,061.66	-204.67	-202.68	68.93	214.08	161.22	591,671.32	741,345.93	
5,165.00	1.80	175.10	5,155.61	-207.86	-205.87	69.20	217.18	161.42	591,668.13	741,346.20	
5,259.00	1.50	176.10	5,249.57	-210.57	-208.56	69.41	219.81	161.59	591,665.44	741,346.41	
5,352.00	1.40	176.60	5,342.54	-212.92	-210.91	69.56	222.09	161.75	591,663.09	741,346.56	
5,446.00	1.40	174.90	5,436.51	-215.21	-213.20	69.73	224.32	161.89	591,660.80	741,346.73	
5,553.00	1.60	176.30	5,543.47	-218.01	-216.00	69.94	227.04	162.06	591,658.00	741,346.94	
5,657.00	1.40	168.50	5,647.44	-220.71	-218.69	70.29	229.71	162.18	591,655.31	741,347.29	
5,750.00	1.20	166.00	5,740.41	-222.78	-220.75	70.75	231.81	162.23	591,653.25	741,347.75	
5,844.00	0.90	168.60	5,834.40	-224.47	-222.43	71.13	233.52	162.27	591,651.57	741,348.13	
5,937.00	0.60	173.70	5,927.39	-225.68	-223.63	71.33	234.73	162.31	591,650.37	741,348.33	
6,031.00	0.20	160.50	6,021.39	-226.33	-224.27	71.44	235.37	162.33	591,649.73	741,348.44	
6,124.00	0.10	154.50	6,114.39	-226.55	-224.50	71.53	235.62	162.33	591,649.50	741,348.53	
6,219.00	0.10	165.00	6,209.39	-226.71	-224.65	71.58	235.78	162.33	591,649.35	741,348.58	
6,313.00	0.20	222.70	6,303.39	-226.91	-224.85	71.49	235.94	162.36	591,649.15	741,348.49	
6,406.00	0.30	236.50	6,396.38	-227.15	-225.11	71.18	236.09	162.45	591,648.89	741,348.18	
6,500.00	1.50	129.40	6,490.37	-228.09	-226.02	71.93	237.19	162.35	591,647.98	741,348.93	
6,593.00	2.20	131.40	6,583.32	-230.11	-227.98	74.21	239.75	161.97	591,646.02	741,351.21	
6,687.00	2.20	131.30	6,677.26	-232.58	-230.36	76.91	242.86	161.54	591,643.64	741,353.91	
6,780.00	2.10	129.30	6,770.19	-234.91	-232.62	79.57	245.85	161.11	591,641.38	741,356.57	
6,874.00	2.30	128.00	6,864.12	-237.25	-234.87	82.39	248.90	160.67	591,639.13	741,359.39	
6,967.00	2.30	126.60	6,957.05	-239.60	-237.13	85.36	252.03	160.20	591,636.87	741,362.36	
7,060.00	2.30	126.30	7,049.97	-241.91	-239.35	88.36	255.14	159.74	591,634.65	741,365.36	
7,153.00	2.30	128.10	7,142.90	-244.25	-241.60	91.34	258.29	159.29	591,632.40	741,368.34	
7,247.00	2.40	135.90	7,236.82	-246.91	-244.18	94.19	261.72	158.91	591,629.82	741,371.19	
7,340.00	2.50	142.80	7,329.73	-250.00	-247.19	96.77	265.46	158.62	591,626.81	741,373.77	
7,434.00	2.50	148.30	7,423.64	-253.45	-250.57	99.09	269.45	158.42	591,623.43	741,376.09	



ProDirectional
Survey Report



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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	MWD	Database:	Well_Planner1

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)
7,527.00	2.50	154.20	7,516.55	-257.06	-254.12	101.04	273.47	158.32	591,619.88	741,378.04
7,621.00	2.30	154.60	7,610.47	-260.66	-257.67	102.74	277.40	158.26	591,616.33	741,379.74
7,714.00	2.20	154.90	7,703.40	-264.01	-260.98	104.30	281.04	158.22	591,613.02	741,381.30
7,808.00	2.10	156.50	7,797.33	-267.26	-264.19	105.75	284.57	158.18	591,609.81	741,382.75
7,902.00	1.90	162.00	7,891.28	-270.36	-267.25	106.92	287.84	158.20	591,606.75	741,383.92
7,996.00	1.90	165.30	7,985.23	-273.37	-270.24	107.79	290.95	158.25	591,603.76	741,384.79
8,090.00	1.50	167.90	8,079.18	-276.10	-272.95	108.45	293.70	158.33	591,601.05	741,385.45
8,183.00	1.30	169.80	8,172.16	-278.34	-275.18	108.89	295.94	158.41	591,598.82	741,385.89
8,277.00	1.10	174.00	8,266.14	-280.29	-277.13	109.17	297.85	158.50	591,596.87	741,386.17
8,370.00	0.70	278.00	8,359.13	-281.09	-277.93	108.70	298.44	158.64	591,596.07	741,385.70
8,464.00	1.00	283.70	8,453.12	-280.77	-277.66	107.34	297.69	158.86	591,596.34	741,384.34
8,557.00	1.00	278.50	8,546.10	-280.41	-277.35	105.75	296.82	159.13	591,596.65	741,382.75
8,650.00	1.00	296.40	8,639.09	-279.89	-276.87	104.22	295.83	159.37	591,597.13	741,381.22
8,744.00	1.30	313.00	8,733.07	-278.75	-275.78	102.70	294.28	159.57	591,598.22	741,379.70
8,838.00	1.50	294.10	8,827.04	-277.46	-274.55	100.80	292.46	159.84	591,599.45	741,377.80
8,932.00	1.30	250.70	8,921.02	-277.25	-274.40	98.67	291.60	160.22	591,599.60	741,375.67
9,025.00	1.60	217.90	9,013.99	-278.57	-275.77	96.88	292.29	160.64	591,598.23	741,373.88
9,119.00	1.00	263.60	9,107.97	-279.65	-276.90	95.26	292.82	161.02	591,597.10	741,372.26
9,213.00	1.20	276.10	9,201.95	-279.58	-276.88	93.46	292.23	161.35	591,597.12	741,370.46
9,306.00	1.40	272.00	9,294.93	-279.37	-276.74	91.36	291.43	161.73	591,597.26	741,368.36
9,401.00	1.00	324.20	9,389.91	-278.61	-276.03	89.71	290.24	162.00	591,597.97	741,366.71
9,495.00	0.70	354.10	9,483.90	-277.36	-274.79	89.17	288.90	162.02	591,599.21	741,366.17
9,588.00	0.50	300.00	9,576.89	-276.58	-274.02	88.76	288.04	162.05	591,599.98	741,365.76
9,682.00	0.70	283.00	9,670.89	-276.22	-273.69	87.85	287.44	162.20	591,600.31	741,364.85
9,776.00	0.80	271.00	9,764.88	-276.04	-273.55	86.63	286.94	162.43	591,600.45	741,363.63
9,870.00	0.50	301.10	9,858.87	-275.78	-273.32	85.63	286.42	162.61	591,600.68	741,362.63
9,963.00	0.80	63.30	9,951.87	-275.29	-272.82	85.86	286.01	162.53	591,601.18	741,362.86



ProDirectional
Survey Report



Company: Matador Resources
Project: Lea County, NM
Site: Mallon 27 Federal
Well: No. 3H
Wellbore: OH
Design: MWD

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:
Well No. 3H
Well @ 3737.50usft (GL: 3709' + KB: 28.5' (Patt809))
Well @ 3737.50usft (GL: 3709' + KB: 28.5' (Patt809))
Grid
Minimum Curvature
Well_Planner1

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)
10,057.00	1.70	71.20		10,045.85	-274.60	-272.08	87.77	285.88	162.12	591,601.92	741,364.77
10,151.00	1.90	74.20		10,139.80	-273.82	-271.20	90.58	285.93	161.53	591,602.80	741,367.58
10,243.00	1.50	77.20		10,231.76	-273.21	-270.52	93.23	286.14	160.99	591,603.48	741,370.23
10,306.00	6.20	4.90		10,294.62	-269.67	-266.95	94.32	283.12	160.54	591,607.05	741,371.32
10,337.00	10.20	359.80		10,325.30	-265.26	-262.53	94.46	279.01	160.21	591,611.47	741,371.46
10,384.00	16.70	359.00		10,370.98	-254.34	-251.61	94.32	268.71	159.45	591,622.39	741,371.32
10,431.00	20.70	1.00		10,415.50	-239.28	-236.54	94.35	254.67	158.25	591,637.46	741,371.35
10,478.00	25.00	2.20		10,458.80	-221.07	-218.31	94.88	238.03	156.51	591,655.69	741,371.88
10,525.00	28.90	0.10		10,500.69	-199.80	-197.02	95.28	218.84	154.19	591,676.98	741,372.28
10,571.00	33.50	359.70		10,540.02	-175.99	-173.19	95.23	197.65	151.20	591,700.81	741,372.23
10,618.00	37.90	0.60		10,578.18	-148.59	-145.77	95.31	174.17	146.82	591,728.23	741,372.31
10,665.00	42.70	1.20		10,614.02	-118.23	-115.39	95.80	149.97	140.30	591,758.61	741,372.80
10,712.00	46.70	1.00		10,647.42	-85.22	-82.34	96.43	126.80	130.49	591,791.66	741,373.43
10,759.00	49.70	358.90		10,678.74	-50.20	-47.31	96.39	107.37	116.14	591,826.69	741,373.39
10,806.00	52.40	356.30		10,708.29	-13.66	-10.80	94.84	95.45	96.50	591,863.20	741,371.84
10,850.00	54.41	354.96		10,734.52	21.62	24.42	92.14	95.32	75.16	591,898.42	741,369.14
HL Xing: 10850° MD											
10,852.00	54.50	354.90		10,735.68	23.25	26.04	92.00	95.61	74.20	591,900.04	741,369.00
10,899.00	58.80	356.00		10,761.51	62.45	65.17	88.89	110.22	53.76	591,939.17	741,365.89
10,946.00	62.90	357.00		10,784.40	103.47	106.13	86.40	136.85	39.15	591,980.13	741,363.40
10,993.00	65.10	358.00		10,805.01	145.71	148.33	84.56	170.74	29.69	592,022.33	741,361.56
11,039.00	68.20	359.00		10,823.24	187.93	190.54	83.46	208.02	23.65	592,064.54	741,360.46
11,086.00	71.70	358.70		10,839.35	232.08	234.68	82.57	248.78	19.38	592,108.68	741,359.57
11,133.00	77.10	358.10		10,851.98	277.33	279.91	81.30	291.48	16.20	592,153.91	741,358.30
11,180.00	83.50	358.50		10,859.90	323.63	326.19	79.93	335.84	13.77	592,200.19	741,356.93
11,273.00	92.40	358.50		10,863.22	416.48	419.01	77.50	426.12	10.48	592,293.01	741,354.50
11,338.00	92.00	358.30		10,860.73	481.43	483.94	75.69	489.82	8.89	592,357.94	741,352.69



ProDirectional
Survey Report



Company: Matador Resources
Project: Lea County, NM
Site: Mallon 27 Federal
Well: No. 3H
Wellbore: OH
Design: MWD

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:
Well No. 3H
Well @ 3737.50usft (GL: 3709' + KB: 28.5' (Patt809))
Well @ 3737.50usft (GL: 3709' + KB: 28.5' (Patt809))
Grid
Minimum Curvature
Well_Planner1

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)	
11,431.00	88.80	358.50	10,860.08	574.41	576.88	73.09	581.50	7.22	592,450.88	741,350.09	
11,525.00	91.30	359.80	10,859.99	668.39	670.86	71.70	674.68	6.10	592,544.86	741,348.70	
11,619.00	90.20	0.40	10,858.76	762.34	764.85	71.86	768.22	5.37	592,638.85	741,348.86	
11,713.00	89.20	359.70	10,859.26	856.29	858.85	71.94	861.86	4.79	592,732.85	741,348.94	
11,807.00	88.30	357.80	10,861.31	950.26	952.80	69.89	955.36	4.20	592,826.80	741,346.89	
11,900.00	90.20	358.50	10,862.52	1,043.24	1,045.74	66.89	1,047.88	3.66	592,919.74	741,343.89	
11,994.00	90.60	358.20	10,861.87	1,137.24	1,139.70	64.18	1,141.50	3.22	593,013.70	741,341.18	
12,088.00	89.90	356.50	10,861.46	1,231.22	1,233.59	59.84	1,235.04	2.78	593,107.59	741,336.84	
12,181.00	91.10	356.40	10,860.65	1,324.17	1,326.41	54.08	1,327.51	2.33	593,200.41	741,331.08	
12,274.00	93.00	357.60	10,857.32	1,417.08	1,419.22	49.22	1,420.07	1.99	593,293.22	741,326.22	
12,368.00	91.50	357.20	10,853.63	1,511.00	1,513.04	44.95	1,513.71	1.70	593,387.04	741,321.95	
12,461.00	89.60	356.10	10,852.74	1,603.95	1,605.88	39.52	1,606.36	1.41	593,479.88	741,316.52	
12,554.00	91.00	356.80	10,852.25	1,696.90	1,698.69	33.76	1,699.03	1.14	593,572.69	741,310.76	
12,648.00	89.80	357.50	10,851.59	1,790.88	1,792.57	29.09	1,792.81	0.93	593,666.57	741,306.09	
12,741.00	89.20	356.60	10,852.40	1,883.85	1,885.44	24.30	1,885.60	0.74	593,759.44	741,301.30	
12,834.00	91.20	357.60	10,852.08	1,976.82	1,978.32	19.60	1,978.42	0.57	593,852.32	741,296.60	
12,928.00	90.60	358.10	10,850.60	2,070.81	2,072.24	16.07	2,072.30	0.44	593,946.24	741,293.07	
13,021.00	92.80	359.10	10,847.84	2,163.76	2,165.16	13.80	2,165.21	0.37	594,039.16	741,290.80	
13,115.00	91.70	359.00	10,844.15	2,257.68	2,259.08	12.24	2,259.11	0.31	594,133.08	741,289.24	
13,208.00	90.40	357.80	10,842.45	2,350.66	2,352.02	9.65	2,352.04	0.24	594,226.02	741,286.65	
13,302.00	89.00	358.50	10,842.94	2,444.65	2,445.97	6.61	2,445.98	0.15	594,319.97	741,283.61	
13,396.00	91.00	359.50	10,842.94	2,538.64	2,539.95	4.97	2,539.95	0.11	594,413.95	741,281.97	
13,490.00	89.60	359.40	10,842.45	2,632.62	2,633.94	4.07	2,633.94	0.09	594,507.94	741,281.07	
13,584.00	90.50	359.20	10,842.37	2,726.60	2,727.93	2.92	2,727.93	0.06	594,601.93	741,279.92	
13,677.00	89.80	359.40	10,842.12	2,819.58	2,820.92	1.79	2,820.93	0.04	594,694.92	741,278.79	
13,771.00	90.30	359.80	10,842.04	2,913.56	2,914.92	1.13	2,914.92	0.02	594,788.92	741,278.13	
13,864.00	92.80	0.40	10,839.53	3,006.47	3,007.88	1.29	3,007.88	0.02	594,881.88	741,278.29	



ProDirectional Survey Report



Company: Matador Resources
Project: Lea County, NM
Site: Mallon 27 Federal
Well: No. 3H
Wellbore: OH
Design: MWD

Local Co-ordinate Reference:
TVD Reference: Well @ 3737.50usft (GL: 3709' + KB: 28.5' (Patt809))
MD Reference: Well @ 3737.50usft (GL: 3709' + KB: 28.5' (Patt809))
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Well_Planner1

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)	
13,958.00	91.00	359.20	10,836.41	3,100.38	3,101.82	0.96	3,101.82	0.02	594,975.82	741,277.96	
14,051.00	89.30	356.40	10,836.17	3,193.36	3,194.74	-2.61	3,194.74	359.95	595,068.74	741,274.39	
14,145.00	90.20	355.80	10,836.58	3,287.29	3,288.52	-9.00	3,288.53	359.84	595,162.52	741,268.00	
14,238.00	91.80	357.20	10,834.95	3,380.23	3,381.33	-14.68	3,381.36	359.75	595,255.33	741,262.32	
14,332.00	90.20	357.00	10,833.31	3,474.19	3,475.19	-19.43	3,475.24	359.68	595,349.19	741,257.57	
14,426.00	91.00	356.60	10,832.33	3,568.16	3,569.04	-24.68	3,569.12	359.60	595,443.04	741,252.32	
14,519.00	89.70	357.50	10,831.76	3,661.13	3,661.91	-29.46	3,662.03	359.54	595,535.91	741,247.54	
14,613.00	91.50	358.20	10,830.78	3,755.12	3,755.83	-32.99	3,755.98	359.50	595,629.83	741,244.01	
14,707.00	89.70	358.70	10,829.79	3,849.11	3,849.79	-35.53	3,849.95	359.47	595,723.79	741,241.47	
14,800.00	91.80	359.10	10,828.58	3,942.09	3,942.76	-37.32	3,942.94	359.46	595,816.76	741,239.68	
14,894.00	92.10	358.10	10,825.38	4,036.03	4,036.68	-39.61	4,036.87	359.44	595,910.68	741,237.39	
14,987.00	91.30	357.30	10,822.62	4,128.98	4,129.56	-43.34	4,129.79	359.40	596,003.56	741,233.66	
15,080.00	88.30	357.30	10,822.94	4,221.96	4,222.44	-47.72	4,222.71	359.35	596,096.44	741,229.28	
15,174.00	89.60	357.80	10,824.66	4,315.93	4,316.34	-51.74	4,316.65	359.31	596,190.34	741,225.26	
15,268.00	91.80	358.80	10,823.52	4,409.92	4,410.28	-54.53	4,410.62	359.29	596,284.28	741,222.47	
15,362.00	90.50	357.30	10,821.63	4,503.90	4,504.21	-57.73	4,504.58	359.27	596,378.21	741,219.27	
15,455.00	91.80	357.40	10,819.76	4,596.86	4,597.09	-62.03	4,597.50	359.23	596,471.09	741,214.97	
15,549.00	90.10	358.20	10,818.20	4,690.84	4,691.00	-65.64	4,691.46	359.20	596,565.00	741,211.36	
15,643.00	91.30	359.10	10,817.06	4,784.83	4,784.96	-67.85	4,785.44	359.19	596,658.96	741,209.15	
15,737.00	89.80	358.70	10,816.15	4,878.82	4,878.94	-69.65	4,879.44	359.18	596,752.94	741,207.35	
15,830.00	90.60	359.00	10,815.83	4,971.81	4,971.92	-71.52	4,972.43	359.18	596,845.92	741,205.48	
15,924.00	90.50	357.90	10,814.93	5,065.81	5,065.88	-74.06	5,066.42	359.16	596,939.88	741,202.94	
16,018.00	88.60	357.80	10,815.67	5,159.80	5,159.81	-77.59	5,160.39	359.14	597,033.81	741,199.41	
16,112.00	89.50	358.80	10,817.22	5,253.78	5,253.75	-80.38	5,254.36	359.12	597,127.75	741,196.62	
16,205.00	90.90	359.10	10,816.90	5,346.77	5,346.73	-82.08	5,347.36	359.12	597,220.73	741,194.92	
16,299.00	90.00	359.10	10,816.16	5,440.76	5,440.72	-83.56	5,441.36	359.12	597,314.72	741,193.44	
16,393.00	91.10	359.30	10,815.26	5,534.74	5,534.70	-84.87	5,535.35	359.12	597,408.70	741,192.13	



ProDirectional Survey Report



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Wellbore: OH
Design: MWD

Local Co-ordinate Reference: Well No. 3H
TVD Reference: Well @ 3737.50usft (GL: 3709' + KB: 28.5' (Patt809))
MD Reference: Well @ 3737.50usft (GL: 3709' + KB: 28.5' (Patt809))
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Well_Planner1

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)	
16,486.00	90.60	359.60	10,813.88	5,627.71	5,627.69	-85.76	5,628.34	359.13	597,501.69	741,191.24	
16,580.00	91.20	0.10	10,812.40	5,721.66	5,721.67	-86.01	5,722.32	359.14	597,595.67	741,190.99	
16,673.00	89.80	358.00	10,811.59	5,814.64	5,814.65	-87.55	5,815.31	359.14	597,688.65	741,189.45	
16,767.00	90.60	358.30	10,811.26	5,908.64	5,908.60	-90.59	5,909.29	359.12	597,782.60	741,186.41	
16,860.00	91.70	359.10	10,809.40	6,001.62	6,001.55	-92.69	6,002.27	359.12	597,875.55	741,184.31	
16,954.00	90.60	358.30	10,807.51	6,095.59	6,095.51	-94.83	6,096.25	359.11	597,969.51	741,182.17	
17,047.00	91.40	359.00	10,805.89	6,188.57	6,188.47	-97.02	6,189.23	359.10	598,062.47	741,179.98	
17,141.00	89.20	358.00	10,805.39	6,282.57	6,282.43	-99.48	6,283.21	359.09	598,156.43	741,177.52	
17,235.00	89.60	358.50	10,806.38	6,376.56	6,376.38	-102.35	6,377.20	359.08	598,250.38	741,174.65	
17,329.00	90.70	358.70	10,806.13	6,470.56	6,470.35	-104.65	6,471.19	359.07	598,344.35	741,172.35	
17,422.00	91.50	359.70	10,804.35	6,563.53	6,563.32	-105.94	6,564.17	359.08	598,437.32	741,171.06	
17,516.00	89.60	358.90	10,803.45	6,657.50	6,657.30	-107.09	6,658.16	359.08	598,531.30	741,169.91	
17,609.00	89.80	359.90	10,803.93	6,750.48	6,750.29	-108.07	6,751.16	359.08	598,624.29	741,168.93	
17,702.00	90.20	0.40	10,803.93	6,843.43	6,843.29	-107.82	6,844.14	359.10	598,717.29	741,169.18	
17,796.00	90.50	0.60	10,803.36	6,937.36	6,937.29	-107.00	6,938.11	359.12	598,811.29	741,170.00	
17,889.00	90.60	0.70	10,802.47	7,030.27	7,030.28	-105.95	7,031.08	359.14	598,904.28	741,171.05	
17,983.00	90.90	1.60	10,801.23	7,124.14	7,124.25	-104.06	7,125.01	359.16	598,998.25	741,172.94	
18,076.00	90.90	2.10	10,799.77	7,216.95	7,217.19	-101.06	7,217.90	359.20	599,091.19	741,175.94	
18,147.00	90.67	2.48	10,798.80	7,287.77	7,288.13	-98.22	7,288.79	359.23	599,162.13	741,178.78	
HL Xing: 18147' MD											
18,170.00	90.60	2.60	10,798.54	7,310.70	7,311.10	-97.20	7,311.75	359.24	599,185.10	741,179.80	
18,205.00	90.40	2.30	10,798.24	7,345.61	7,346.07	-95.71	7,346.69	359.25	599,220.07	741,181.29	
Last Survey: 18205' MD, 10798.24' TVD											
18,262.00	90.40	2.30	10,797.84	7,402.47	7,403.02	-93.42	7,403.61	359.28	599,277.02	741,183.58	
PTB: 18262' MD, 10797.84' TVD											



ProDirectional
Survey Report



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Site: Mallon 27 Federal
Well: No. 3H
Wellbore: OH
Design: MWD

Local Co-ordinate Reference:
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Survey Calculation Method:
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Well No. 3H
Well @ 3737.50usft (GL: 3709' + KB: 28.5' (Patt809))
Well @ 3737.50usft (GL: 3709' + KB: 28.5' (Patt809))
Grid
Minimum Curvature
Well_Planner1

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
170.00	170.00	0.07	0.89	Pro MWD First Survey: 170' MD
10,850.00	10,734.52	24.42	92.14	HL Xing: 10850' MD
18,147.00	10,798.80	7,288.13	-98.22	HL Xing: 18147' MD
18,205.00	10,798.24	7,346.07	-95.71	Last Survey: 18205' MD, 10798.24' TVD
18,262.00	10,797.84	7,403.02	-93.42	PTB: 18262' MD, 10797.84' TVD