



PRODIRECTIONAL



NM OIL CONSERVATION
ARTESIA DISTRICT

JUL 31 2017

RECEIVED

Heyco State No. 121H

Eddy County, NM
30-015-44083

May 19, 2017

Job No. LNM5137717

ORIGINAL

Survey Completion Report



PRODIRECTIONAL

Survey Certification Letter

May 19, 2017



Operator Name: Matador Resources
Well Name: Heyco State No. 121H
County/Parish: Eddy County,
State: NM
Rig Name: Patterson 809
Job Number: LNM5137717

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	599' MD – 13,123' MD	13,267' MD	04/20/17 – 04/28/17	MWD-QWSG

Sincerely,

Mike Coats
Well Planning
Professional Directional

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

prodirectional.com



Matador Resources

Eddy County, NM

Heyco State

121H

OH

Survey: ProDirectional

Survey Report

19 May, 2017





ProDirectional Survey Report



Company: Matador Resources
Project: Eddy County, NM
Site: Heyco State
Well: 121H
Wellbore: OH
Design: Gyro-MWD

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

Well 121H
Rig @ 3361.50usft (GL:3333'+KB:28.5'(Pat.809))
Rig @ 3361.50usft (GL:3333'+KB:28.5'(Pat.809))
Grid
Minimum Curvature
WellPlanner1

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

Site	Heyco State		
Site Position:			
From:	Map	Northing:	558,898.00 usft
Position Uncertainty:	0.00 usft	Easting:	603,002.00 usft
		Slot Radius:	13-3/16 "
		Latitude:	32° 32' 9.871 N
		Longitude:	103° 59' 56.777 W
		Grid Convergence:	0.18 °

Well	121H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft		Wellhead Elevation:
			usft
			Latitude:
			Longitude:
			Ground Level:

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	HDGM	4/6/2017	7.42
			Dip Angle
			60.40
			Field Strength
			48,258.70

Design	Gyro-MWD		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			179.80



ProDirectional Survey Report



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

Well 121H
Rig @ 3361.50usft (GL:3333'+KB:28.5'(Patt.809))
Rig @ 3361.50usft (GL:3333'+KB:28.5'(Patt.809))
Grid
Minimum Curvature
WellPlanner1

Survey Program		Date 4/28/2017			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
50.00	435.00	Gyro (OH)	GYD_DP_MS	Gyrodata gyro-compassing and drop	
506.00	13,267.00	Survey #2 (OH)	MWD - OWSG	MWD - OWSG	

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	558,898.00	603,002.00
50.00	0.40	194.53	50.00	0.17	-0.17	-0.04	0.17	194.53	558,897.83	603,001.96
100.00	0.68	232.10	100.00	0.52	-0.52	-0.32	0.61	211.74	558,897.48	603,001.68
150.00	0.97	248.58	149.99	0.85	-0.86	-0.95	1.28	227.94	558,897.14	603,001.05
200.00	1.38	254.63	199.98	1.16	-1.17	-1.92	2.25	238.68	558,896.83	603,000.08
250.00	1.90	262.70	249.96	1.42	-1.44	-3.33	3.62	246.65	558,896.56	602,998.67
300.00	1.92	267.38	299.93	1.56	-1.58	-4.99	5.23	252.42	558,896.42	602,997.01
350.00	1.93	265.18	349.91	1.67	-1.69	-6.66	6.87	255.78	558,896.31	602,995.34
400.00	2.10	264.53	399.87	1.82	-1.85	-8.41	8.61	257.62	558,896.15	602,993.59
435.00	2.16	262.85	434.85	1.96	-1.99	-9.71	9.91	258.41	558,896.01	602,992.29
506.00	1.70	256.70	505.81	2.36	-2.40	-12.06	12.29	258.75	558,895.60	602,989.94
Pro MWD First Survey: 506' MD										
599.00	2.10	293.50	598.76	1.98	-2.04	-14.96	15.10	262.25	558,895.96	602,987.04
692.00	4.40	311.40	691.61	-1.07	1.00	-19.20	19.23	272.99	558,899.00	602,982.80
783.00	6.60	309.30	782.18	-6.71	6.62	-25.87	26.70	284.36	558,904.62	602,976.13
876.00	7.10	306.90	874.52	-13.58	13.46	-34.60	37.13	291.26	558,911.46	602,967.40
969.00	6.60	312.60	966.86	-20.68	20.53	-43.13	47.77	295.45	558,918.53	602,958.87
1,062.00	5.40	319.10	1,059.35	-27.63	27.45	-49.93	56.98	298.80	558,925.45	602,952.07
1,156.00	4.80	321.30	1,152.97	-34.06	33.87	-55.29	64.83	301.49	558,931.87	602,946.71
1,249.00	5.30	318.40	1,245.61	-40.23	40.01	-60.68	72.69	303.40	558,938.01	602,941.32
1,343.00	4.80	307.60	1,339.25	-45.79	45.56	-66.79	80.85	304.30	558,943.56	602,935.21



ProDirectional
Survey Report



Company: Matador Resources
Project: Eddy County, NM
Site: Heyco State
Well: 121H
Wellbore: OH
Design: Gyro-MWD

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

Well 121H
Rig @ 3361.50usft (GL:3333+KB:28.5(Patt.809))
Rig @ 3361.50usft (GL:3333+KB:28.5(Patt.809))
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)
1,436.00	5.80	292.60	1,431.86	-50.00	49.74	-74.21	89.34	303.83	558,947.74	602,927.79
1,529.00	5.40	290.30	1,524.41	-53.35	53.06	-82.65	98.22	302.70	558,951.06	602,919.35
1,623.00	6.00	293.90	1,617.95	-56.91	56.59	-91.29	107.41	301.79	558,954.59	602,910.71
1,716.00	7.00	297.90	1,710.35	-61.56	61.21	-100.75	117.88	301.28	558,959.21	602,901.25
1,810.00	6.00	297.40	1,803.74	-66.53	66.15	-110.17	128.50	300.98	558,964.15	602,891.83
1,903.00	6.10	294.60	1,896.22	-70.86	70.44	-118.98	136.27	300.63	558,968.44	602,883.02
1,996.00	7.00	291.40	1,988.62	-75.02	74.57	-128.75	148.78	300.08	558,972.57	602,873.25
2,090.00	6.40	292.20	2,081.97	-79.12	78.64	-138.93	159.64	299.51	558,976.64	602,863.07
2,183.00	5.60	294.60	2,174.46	-83.00	82.48	-147.86	169.31	298.16	558,980.48	602,854.14
2,277.00	5.00	296.80	2,268.06	-86.78	86.24	-155.68	177.97	298.98	558,984.24	602,846.32
2,370.00	4.50	298.10	2,360.74	-90.35	89.79	-162.52	185.67	298.92	558,987.79	602,839.48
2,464.00	5.10	294.60	2,454.41	-93.85	93.26	-169.57	193.53	298.81	558,991.26	602,832.43
2,556.00	7.10	288.90	2,545.89	-97.43	96.81	-178.67	203.21	298.45	558,994.81	602,823.33
2,650.00	6.90	288.00	2,639.19	-101.09	100.43	-189.54	214.50	297.92	558,998.43	602,812.46
2,743.00	6.50	289.60	2,731.55	-104.62	103.93	-199.81	225.22	297.48	559,001.93	602,802.19
2,836.00	5.80	289.70	2,824.02	-108.01	107.28	-209.19	235.09	297.15	559,005.28	602,792.81
2,929.00	6.10	287.90	2,916.52	-111.14	110.38	-218.32	244.63	296.82	559,008.38	602,783.68
3,022.00	7.40	288.20	3,008.87	-114.57	113.77	-228.71	255.44	296.45	559,011.77	602,773.29
3,116.00	7.00	286.60	3,102.13	-118.13	117.30	-239.95	267.08	296.05	559,015.30	602,762.05
3,210.00	6.60	285.10	3,195.47	-121.21	120.34	-250.65	278.04	295.65	559,018.34	602,751.35
3,303.00	6.40	284.60	3,287.87	-123.95	123.04	-260.83	288.39	295.25	559,021.04	602,741.17
3,397.00	6.00	285.70	3,381.32	-126.63	125.69	-270.63	298.39	294.91	559,023.69	602,731.37
3,491.00	5.70	285.70	3,474.83	-129.26	128.28	-279.85	307.85	294.63	559,026.28	602,722.15
3,584.00	6.10	287.20	3,567.34	-132.00	130.99	-289.02	317.32	294.38	559,028.99	602,712.98
3,678.00	6.60	290.30	3,660.76	-135.38	134.34	-298.86	327.66	294.20	559,032.34	602,703.14
3,771.00	6.20	291.20	3,753.18	-139.09	138.01	-308.55	338.01	294.10	559,036.01	602,693.45
3,865.00	6.00	291.30	3,846.65	-142.74	141.63	-317.86	347.99	294.02	559,039.63	602,684.14



ProDirectional
Survey Report



Company: Matador Resources
Project: Eddy County, NM
Site: Heyco State
Well: 121H
Wellbore: OH
Design: Gyro-MWD

Local Co-ordinate Reference: Well 121H
TVD Reference: Rig @ 3361.50usft (GL:3333*+KB:28.5'(Palt.809))
MD Reference: Rig @ 3361.50usft (GL:3333*+KB:28.5'(Palt.809))
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

MD (usft)	Incl (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
3,959.00	5.80	292.10	3,940.15	-146.34	145.20	-326.84	357.64	293.95	559,043.20	602,675.16
3,987.00	5.70	291.80	3,968.01	-147.40	146.25	-329.44	360.45	293.94	559,044.25	602,672.58
4,057.00	5.50	291.70	4,037.67	-149.96	148.78	-335.79	367.27	293.90	559,046.78	602,666.21
4,151.00	5.30	288.90	4,131.26	-153.06	151.86	-344.08	376.10	293.81	559,049.86	602,657.92
4,244.00	7.30	296.30	4,223.69	-157.10	155.87	-353.44	386.28	293.80	559,053.87	602,648.56
4,338.00	8.30	299.40	4,316.82	-163.11	161.84	-364.70	399.00	293.93	559,059.84	602,637.30
4,431.00	8.30	299.70	4,406.85	-169.78	168.46	-376.38	412.36	294.11	559,066.46	602,625.62
4,525.00	8.20	298.70	4,501.87	-176.40	175.04	-388.16	425.80	294.27	559,073.04	602,613.84
4,618.00	8.00	296.50	4,593.95	-182.51	181.12	-399.77	438.88	294.37	559,079.12	602,602.23
4,712.00	7.80	296.40	4,687.05	-188.31	186.87	-411.33	451.79	294.43	559,084.87	602,590.67
4,805.00	7.10	296.50	4,779.27	-193.71	192.24	-422.13	463.84	294.49	559,090.24	602,579.87
4,899.00	6.80	296.00	4,872.58	-198.78	197.27	-432.33	475.21	294.53	559,095.27	602,569.67
5,086.00	6.10	297.00	5,058.39	-208.21	206.64	-451.13	498.21	294.61	559,104.64	602,550.87
5,180.00	5.80	295.30	5,151.89	-212.54	210.94	-459.88	505.95	294.64	559,108.94	602,542.12
5,367.00	7.60	282.70	5,337.61	-219.37	217.69	-480.49	527.50	294.37	559,115.69	602,521.51
5,553.00	7.20	283.70	5,522.06	-224.91	223.16	-503.81	551.02	293.89	559,121.16	602,498.19
5,740.00	7.00	283.60	5,707.63	-230.45	228.61	-526.27	573.78	293.48	559,126.61	602,475.73
5,834.00	6.80	282.20	5,800.95	-233.01	231.14	-537.28	584.88	293.28	559,129.14	602,464.72
5,927.00	6.40	281.60	5,893.33	-235.25	233.34	-547.74	595.37	293.07	559,131.34	602,454.26
6,020.00	6.10	278.70	5,985.78	-237.08	235.13	-557.70	605.24	292.86	559,133.13	602,444.30
6,207.00	6.10	279.20	6,171.72	-240.24	238.22	-577.33	624.55	292.42	559,136.22	602,424.67
6,301.00	5.80	276.20	6,265.21	-241.58	239.53	-586.98	633.97	292.20	559,137.53	602,415.02
6,394.00	5.70	274.70	6,357.75	-242.50	240.42	-596.25	642.90	291.96	559,138.42	602,405.75
6,488.00	5.40	273.90	6,451.31	-243.21	241.10	-605.32	651.57	291.72	559,139.10	602,396.68
6,581.00	4.10	269.60	6,543.99	-244.65	242.52	-612.82	659.06	291.59	559,140.52	602,389.18
6,674.00	3.50	287.60	6,636.78	-246.65	244.49	-618.66	665.21	291.56	559,142.49	602,383.34
6,768.00	2.60	281.20	6,730.65	-247.95	245.77	-623.48	670.17	291.51	559,143.77	602,378.52



ProDirectional Survey Report



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Site: Heyco State
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Wellbore: OH
Design: Gyro-MWD

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

Well 121H
Rig @ 3361.50ust (GL:3333'+KB:28.5'(Pat:809))
Rig @ 3361.50ust (GL:3333'+KB:28.5'(Pat:809))
Grid
Minimum Curvature
WellPlanner1

Survey

MD (ust)	Inc (°)	Azi (azimuth) (°)	TVD (ust)	V. Sec (ust)	N/S (ust)	E/W (ust)	Closure Distance (ust)	Closure Azimuth (°)	Northing (ust)	Easting (ust)
6,862.00	2.20	272.60	6,824.57	-248.46	246.27	-627.38	673.98	291.43	559,144.27	602,374.62
6,955.00	2.50	287.60	6,917.49	-249.16	248.96	-631.09	677.69	291.37	559,144.96	602,370.91
7,049.00	2.10	286.90	7,011.41	-250.30	248.08	-634.69	681.46	291.35	559,146.08	602,367.31
7,142.00	1.90	287.40	7,104.36	-251.26	249.04	-637.80	684.69	291.33	559,147.04	602,364.20
7,236.00	2.00	288.90	7,198.30	-252.27	250.04	-640.83	687.89	291.31	559,148.04	602,361.17
7,329.00	1.90	294.00	7,291.25	-253.43	251.19	-643.78	691.05	291.31	559,149.19	602,358.22
7,423.00	1.80	293.90	7,385.20	-254.68	252.42	-646.55	694.08	291.33	559,150.42	602,355.45
7,516.00	1.70	287.10	7,478.16	-255.68	253.42	-649.21	696.91	291.32	559,151.42	602,352.79
7,610.00	2.20	291.10	7,572.10	-256.75	254.48	-652.22	700.11	291.31	559,152.48	602,349.78
7,703.00	1.90	294.20	7,665.04	-258.04	255.75	-655.29	703.43	291.32	559,153.75	602,346.71
7,796.00	1.60	288.90	7,758.00	-259.10	256.80	-657.93	706.27	291.32	559,154.80	602,344.07
7,890.00	1.00	284.10	7,851.97	-259.73	257.43	-659.97	708.40	291.31	559,155.43	602,342.03
7,979.00	4.50	183.30	7,940.88	-256.44	254.13	-660.92	708.09	291.03	559,152.13	602,341.08
8,026.00	11.00	175.50	7,987.43	-250.12	247.81	-660.67	705.62	290.56	559,145.81	602,341.33
8,072.00	17.30	170.20	8,032.01	-238.99	236.69	-659.16	700.37	289.75	559,134.69	602,342.84
8,119.00	23.40	169.30	8,076.06	-222.90	220.61	-656.24	692.33	288.58	559,118.61	602,345.76
8,166.00	28.00	172.60	8,118.40	-202.77	200.49	-653.08	683.16	287.07	559,098.49	602,348.92
8,213.00	33.80	172.30	8,158.71	-178.84	176.57	-649.91	673.47	285.20	559,074.57	602,352.09
8,259.00	37.80	172.40	8,196.01	-152.17	149.91	-646.33	663.49	283.06	559,047.91	602,355.67
8,306.00	40.60	172.30	8,232.43	-122.72	120.47	-642.37	653.57	280.62	559,018.47	602,359.63
8,353.00	40.60	172.60	8,268.12	-92.38	90.15	-638.35	644.69	278.04	558,988.15	602,363.65
8,400.00	39.80	179.50	8,304.03	-62.15	59.93	-636.25	639.07	275.38	558,957.93	602,365.75
8,447.00	42.20	185.20	8,339.51	-31.38	29.15	-637.55	638.22	272.62	558,927.15	602,364.45
8,494.00	47.30	185.90	8,372.88	1.53	-3.77	-640.76	640.77	269.66	558,894.23	602,361.24
8,498.00	47.50	185.68	8,375.59	4.46	-6.70	-641.06	641.09	269.40	558,891.30	602,360.94
HL Xing: 8498' MD										
8,540.00	49.60	183.50	8,403.39	35.83	-38.07	-643.57	644.69	266.61	558,859.93	602,358.43



ProDirectional
Survey Report



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Project: Eddy County, NM
Site: Heyco State
Well: 121H
Wellbore: OH
Design: Gyro-MWD

Local Co-ordinate Reference:
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Well 121H
Rig @ 3361.50usft (GL:3333+KB:28.5'(Pat.809))
Rig @ 3361.50usft (GL:3333+KB:28.5'(Pat.809))
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)
8,587.00	53.20	180.30	8,432.72	72.52	-74.77	-844.76	649.08	263.39	558,823.23	602,357.24
8,634.00	55.30	179.00	8,460.17	110.66	-112.91	-644.52	654.34	260.06	558,785.09	602,357.48
8,681.00	59.00	179.10	8,485.67	150.14	-152.38	-643.87	661.65	256.68	558,745.62	602,358.13
8,728.00	64.00	180.20	8,508.09	191.43	-193.67	-643.62	672.13	253.25	558,704.33	602,358.38
8,775.00	68.30	181.20	8,527.09	234.40	-236.65	-644.16	686.25	249.83	558,661.35	602,357.84
8,821.00	72.50	181.60	8,542.51	277.70	-279.96	-645.22	703.33	246.54	558,618.04	602,356.78
8,868.00	76.00	182.10	8,555.27	322.90	-325.16	-646.68	723.82	243.31	558,572.84	602,355.32
8,914.00	77.20	180.90	8,565.93	367.63	-369.89	-647.85	746.01	240.28	558,528.11	602,354.15
8,961.00	79.70	179.40	8,575.34	413.67	-415.94	-647.97	769.98	237.30	558,482.06	602,354.03
9,007.00	86.10	180.30	8,581.02	459.29	-461.56	-647.85	795.45	234.53	558,436.44	602,354.15
9,054.00	86.90	179.90	8,583.89	506.21	-508.47	-647.93	823.62	231.88	558,389.53	602,354.07
9,100.00	87.10	179.80	8,586.30	552.14	-554.41	-647.81	852.66	229.44	558,343.59	602,354.19
9,194.00	87.30	180.10	8,590.89	646.03	-648.29	-647.73	916.43	224.97	558,249.71	602,354.27
9,287.00	87.40	180.30	8,595.19	738.93	-741.19	-648.05	984.55	221.16	558,156.81	602,353.95
9,380.00	89.90	180.40	8,597.38	831.89	-834.16	-648.62	1,056.86	217.87	558,063.84	602,353.38
9,473.00	89.30	179.90	8,598.03	924.89	-927.16	-648.86	1,131.66	214.99	557,970.84	602,353.14
9,566.00	89.80	179.80	8,598.76	1,017.88	-1,020.15	-648.62	1,208.89	212.45	557,877.85	602,353.38
9,659.00	89.80	179.80	8,599.09	1,110.88	-1,113.15	-648.30	1,288.17	210.22	557,784.85	602,353.70
9,753.00	89.80	179.90	8,599.41	1,204.88	-1,207.15	-648.05	1,370.10	208.23	557,690.85	602,353.85
9,846.00	89.10	179.60	8,600.31	1,297.88	-1,300.15	-647.64	1,452.52	206.48	557,597.85	602,354.36
9,940.00	89.10	179.50	8,601.78	1,391.86	-1,394.13	-646.91	1,536.91	204.89	557,503.87	602,355.09
10,033.00	89.00	179.70	8,603.32	1,484.85	-1,487.12	-646.26	1,621.47	203.49	557,410.88	602,355.74
10,127.00	89.90	180.50	8,604.23	1,578.84	-1,581.11	-646.42	1,708.15	202.24	557,316.89	602,355.58
10,220.00	89.30	180.10	8,604.88	1,671.84	-1,674.11	-646.91	1,794.75	201.13	557,223.89	602,355.09
10,314.00	89.00	179.60	8,606.27	1,765.83	-1,768.09	-646.66	1,882.64	200.09	557,129.91	602,355.34
10,408.00	89.30	180.00	8,607.67	1,859.82	-1,862.08	-646.33	1,971.07	199.14	557,035.92	602,355.67
10,502.00	89.40	180.10	8,608.73	1,953.81	-1,956.08	-646.42	2,060.12	198.29	556,941.92	602,355.58



ProDirectional
Survey Report



Company: Matador Resources
Project: Eddy County, NM
Site: Hayco State
Well: 121H
Wellbore: OH
Design: Gyro-MWD

Local Co-ordinate Reference: Well 121H
TYD Reference: Rig @ 3361.50usft (GL:3333+KB:28.5(Patt.809))
MD Reference: Rig @ 3361.50usft (GL:3333+KB:28.5(Patt.809))
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TYD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
10,595.00	89.30	179.90	8,609.79	2,046.80	-2,049.07	-646.42	2,148.61	197.51	556,848.93	602,355.58
10,689.00	90.20	180.30	8,610.20	2,140.80	-2,143.07	-646.58	2,238.48	196.79	556,754.93	602,355.42
10,783.00	90.10	180.40	8,608.95	2,234.79	-2,237.07	-647.15	2,328.79	196.13	556,660.93	602,354.85
10,876.00	90.10	180.60	8,609.79	2,327.79	-2,330.06	-647.97	2,418.48	195.54	556,567.94	602,354.03
10,970.00	89.50	180.80	8,610.12	2,421.78	-2,424.06	-648.95	2,509.42	194.99	556,473.94	602,353.05
11,063.00	88.90	180.10	8,611.42	2,514.76	-2,517.04	-649.52	2,599.50	194.47	556,380.96	602,352.48
11,157.00	88.80	180.60	8,613.30	2,608.74	-2,611.02	-650.09	2,690.74	193.98	556,286.98	602,351.91
11,251.00	88.80	180.50	8,615.27	2,702.71	-2,705.00	-650.99	2,782.23	193.53	556,193.00	602,351.01
11,345.00	88.80	180.80	8,617.24	2,796.68	-2,798.97	-652.06	2,873.92	193.11	556,099.03	602,349.94
11,438.00	88.70	181.10	8,619.27	2,889.64	-2,891.94	-653.60	2,964.88	192.74	556,006.06	602,348.40
11,531.00	88.90	181.40	8,621.22	2,982.59	-2,984.89	-655.63	3,056.05	192.39	555,913.11	602,346.37
11,625.00	89.30	181.50	8,622.69	3,076.54	-3,078.85	-658.01	3,148.38	192.06	555,819.15	602,343.99
11,719.00	88.80	179.70	8,624.41	3,170.51	-3,172.83	-658.99	3,240.54	191.73	555,725.17	602,343.01
11,812.00	88.90	179.60	8,626.44	3,263.49	-3,265.80	-658.42	3,331.52	191.40	555,632.20	602,343.58
11,906.00	89.00	179.40	8,628.17	3,357.47	-3,359.78	-657.60	3,423.53	191.07	555,538.22	602,344.40
11,999.00	89.20	179.90	8,629.63	3,450.46	-3,452.77	-657.04	3,514.73	190.77	555,445.23	602,344.96
12,093.00	87.90	178.70	8,632.01	3,544.42	-3,546.73	-655.89	3,606.87	190.48	555,351.27	602,346.11
12,187.00	87.20	178.50	8,636.02	3,638.31	-3,640.61	-653.59	3,698.82	190.18	555,257.39	602,348.41
12,280.00	87.10	178.30	8,640.65	3,731.17	-3,733.46	-651.00	3,789.80	189.89	555,164.54	602,351.00
12,373.00	87.40	178.00	8,645.11	3,824.02	-3,826.31	-648.00	3,880.79	189.61	555,071.69	602,354.00
12,467.00	87.40	177.90	8,649.37	3,917.88	-3,920.15	-644.64	3,972.80	189.34	554,977.85	602,357.36
12,561.00	87.10	178.10	8,653.88	4,011.72	-4,013.99	-641.37	4,064.90	189.08	554,884.01	602,360.63
12,655.00	89.40	178.90	8,656.75	4,105.65	-4,107.90	-638.91	4,157.29	188.84	554,790.10	602,363.09
12,748.00	89.80	178.50	8,657.40	4,198.63	-4,200.88	-636.80	4,248.87	188.62	554,697.12	602,365.20
12,842.00	90.20	178.60	8,657.40	4,292.60	-4,294.85	-634.42	4,341.45	188.40	554,603.15	602,367.58
12,936.00	90.80	179.00	8,656.58	4,386.59	-4,388.82	-632.45	4,434.16	188.20	554,509.18	602,369.55
13,029.00	91.10	179.30	8,655.04	4,479.57	-4,481.80	-631.07	4,526.01	188.01	554,416.20	602,370.93



ProDirectional
Survey Report



Company: Matador Resources
Project: Eddy County, NM
Site: Heyoo State
Well: 121H
Wellbore: OH
Design: Gyro-MWD

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

Well 121H
Rig @ 3361.50usft (GL:3333'+KB:28.5'(Palt.809))
Rig @ 3361.50usft (GL:3333'+KB:28.5'(Palt.809))
Grid
Minimum Curvature
WellPlanner1

Vendor: Gyro-MWD		Database:									
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)	
13,123.00	91.70	179.80	8,652.74	4,573.54	-4,575.77	-630.33	4,618.98	187.84	554,322.23	602,371.67	
Last Survey: 13123' MD, 8652.74' TVD											
13,172.00	91.70	179.80	8,651.29	4,622.52	-4,624.74	-630.16	4,667.48	187.76	554,273.26	602,371.84	
HL Xing: 13172' MD											
13,267.00	91.70	179.80	8,648.47	4,717.47	-4,719.70	-629.83	4,761.54	187.60	554,178.30	602,372.17	
PTB: 13267' MD, 8648.47' TVD											

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
506.00	505.81	-2.40	-12.08	Pro MWD First Survey: 506' MD
8,498.00	8,375.59	-8.70	-841.08	HL Xing: 8498' MD
13,123.00	8,652.74	-4,575.77	-630.33	Last Survey: 13123' MD, 8652.74' TVD
13,172.00	8,651.29	-4,824.74	-630.16	HL Xing: 13172' MD
13,267.00	8,648.47	-4,719.70	-629.83	PTB: 13267' MD, 8648.47' TVD