



PRODIRECTIONAL



Garrett Fed Com No. 222H

Eddy County, NM

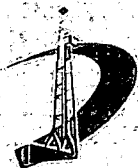
30-015-45182

November 27, 2018

Job No. LNM5184818

ORIGINAL

Survey Completion Report



PRODIRECTIONAL

Survey Certification Letter

November 27, 2018



Operator Name: Matador Resources
Well Name: Garrett Fed Com No. 222H
County/Parish: Eddy County,
State: NM
Rig Name: Patterson 274
Job Number: LNM5184818

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	701' MD – 15,646' MD	15,720' MD	09/18/18 – 10/29/18	MWD-OWSG

Sincerely,

Mike Coats
Regulatory Specialist
Professional Directional

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



Matador Resources

**Eddy County, NM
Garrett Fed Com
No. 222H
OH**

Survey: ProDirectional

Survey Report

27 November, 2018





ProDirectional
Survey Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well No: 222H
Project:	Eddy County, NM (NAD 83)	TVD Reference:	Well @ 2950.50usft
Site:	Garrett Fed Com	MD Reference:	Well @ 2950.50usft
Well:	No: 222H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Gyro-MWD-100-15646 Proj: 15720	Database:	WellPlanner1

Project: Eddy County, NM (NAD 83)			
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site:		Garrett Fed Com			
Site Position:		Northing:		429,558.00 usft	
From:	Map	Easting:		Latitude:	32.180528
Position Uncertainty:		0.00 usft		Longitude:	-104.013291
		Slot Radius:		Grid Convergence:	0.17 °

Well	No. 222H					
Well Position	+N/-S	0.00 usft	Northing:	427,497.00 usft	Latitude:	32.174862
	+E/-W	0.00 usft	Easting:	640,378.00 usft	Longitude:	-104.013227
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	2,922.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	HDGM	8/22/2018	7.07	59.93	47,968.40

Design:		Gyro-MWD-100-15646 Proj: 15720			
Audit Notes:					
Version:		1.0	Phase:	ACTUAL	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(usft)	(usft)	(usft)	(°)	
	0.00	0.00	0.00	90.10	



ProDirectional Survey Report



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Project:	Eddy County, NM (NAD 83)	TVD Reference:	Well @ 2950.50usft
Site:	Garrett Fed Com	MD Reference:	Well @ 2950.50usft
Well:	No. 222H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Gyro-MWD-100-15646 Proj: 15720	Database:	WellPlanner1

Survey Program	Date	From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
	11/27/2018	100.00	555.00	Survey #1 (OH)	GYRO-NS-CT	OWSG XYZ Accel with XY Static and Continuous Gyro
		701.00	15,720.00	Survey #2 (OH)	MWD+HDGM	OWSG MWD + HRGM

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	427,497.00	640,378.00
	100.00	0.75	235.73	100.00	-0.54	-0.37	-0.54	0.65	235.73	427,496.63	640,377.46
	200.00	1.40	211.93	199.98	-1.72	-1.77	-1.73	2.48	224.25	427,495.23	640,376.27
	300.00	0.90	250.58	299.96	-3.11	-3.07	-3.11	4.37	225.40	427,493.93	640,374.89
	400.00	1.91	311.45	399.93	-5.10	-2.23	-5.10	5.57	246.40	427,494.77	640,372.90
	500.00	1.91	320.27	499.88	-7.42	0.16	-7.42	7.42	271.20	427,497.16	640,370.58
	555.00	2.07	320.14	554.84	-8.64	1.62	-8.64	8.79	280.63	427,498.62	640,369.36
	701.00	2.30	327.30	700.74	-11.92	6.11	-11.91	13.39	297.16	427,503.11	640,366.09
Pro MWD First Survey: 701 MD											
	792.00	3.50	322.50	791.62	-14.61	9.85	-14.59	17.61	304.03	427,506.85	640,363.41
	882.00	5.50	316.10	881.34	-19.28	15.14	-19.26	24.49	308.18	427,512.14	640,358.74
	972.00	6.10	315.40	970.88	-25.64	21.65	-25.60	33.53	310.22	427,518.65	640,352.40
	1,062.00	5.80	320.10	1,060.39	-31.93	28.55	-31.88	42.79	311.84	427,525.55	640,346.12
	1,153.00	6.10	323.00	1,150.90	-37.80	35.94	-37.74	52.11	313.60	427,532.94	640,340.26
	1,245.00	5.50	322.20	1,242.43	-43.46	43.32	-43.38	61.31	314.96	427,540.32	640,334.62
	1,335.00	5.20	326.00	1,332.04	-48.39	50.11	-48.31	69.60	316.05	427,547.11	640,329.69
	1,430.00	7.30	319.70	1,426.47	-54.72	58.29	-54.62	79.88	316.86	427,555.29	640,323.38
	1,525.00	8.80	321.30	1,520.53	-63.18	68.56	-63.07	93.15	317.39	427,565.56	640,314.93
	1,621.00	8.80	327.00	1,615.40	-71.80	80.45	-71.66	107.73	318.31	427,577.45	640,306.34
	1,716.00	8.60	317.90	1,709.32	-80.54	91.82	-80.38	122.03	318.80	427,588.82	640,297.62
	1,811.00	9.00	320.90	1,803.20	-90.00	102.85	-89.82	136.55	318.87	427,599.85	640,288.18



ProDirectional
Survey Report



Company: Matador Resources
Project: Eddy County, NM (NAD83)
Site: Garrett Fed. Com.
Well: No. 222H
Wellbore: OH
Design: Gyro-MWD-100-15646, Proj. 15720

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

Well No. 222H
Well @ 2950.50usft
Well @ 2950.50usft
Grid
Minimum Curvature
Well Planner 1

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)
1,906.00	8.50	320.60	1,897.09	-99.17	114.04	-98.97	151.00	319.05	427,611.04	640,279.03
2,001.00	7.60	306.10	1,991.16	-108.72	123.17	-108.50	164.15	318.62	427,620.17	640,269.50
2,097.00	7.10	307.30	2,086.38	-118.58	130.51	-118.35	176.18	317.80	427,627.51	640,259.65
2,192.00	6.80	315.80	2,180.68	-127.18	138.10	-126.94	187.58	317.41	427,635.10	640,251.06
2,288.00	7.50	299.80	2,275.94	-136.59	145.29	-136.34	199.24	316.82	427,642.29	640,241.66
2,383.00	7.60	295.50	2,370.12	-147.66	151.07	-147.39	211.06	315.71	427,648.07	640,230.61
2,479.00	6.90	298.40	2,465.35	-158.47	156.55	-158.19	222.56	314.70	427,653.55	640,219.81
2,574.00	5.90	301.30	2,559.76	-167.67	161.80	-167.39	232.80	314.03	427,658.80	640,210.61
2,670.00	5.30	299.60	2,655.30	-175.75	166.55	-175.46	241.92	313.51	427,663.55	640,202.54
2,765.00	4.80	294.80	2,749.93	-183.18	170.39	-182.88	249.95	312.97	427,667.39	640,195.12
2,860.00	6.10	299.60	2,844.50	-191.18	174.55	-190.88	258.65	312.44	427,671.55	640,187.12
2,964.00	7.20	304.50	2,947.80	-201.37	180.97	-201.05	270.50	311.99	427,677.97	640,176.95
3,059.00	8.80	310.10	3,041.87	-211.85	189.02	-211.52	283.67	311.79	427,686.02	640,166.48
3,154.00	9.30	313.10	3,135.69	-223.03	198.95	-222.68	298.61	311.78	427,695.95	640,155.32
3,249.00	9.40	313.20	3,229.43	-234.31	209.50	-233.94	314.04	311.85	427,706.50	640,144.06
3,345.00	9.70	312.80	3,324.10	-245.98	220.37	-245.59	329.96	311.90	427,717.37	640,132.41
3,441.00	9.30	313.30	3,418.78	-257.58	231.18	-257.17	345.81	311.95	427,728.18	640,120.83
3,536.00	9.50	312.90	3,512.51	-268.92	241.78	-268.50	361.32	312.00	427,738.78	640,109.50
3,631.00	9.60	311.00	3,606.19	-280.66	252.32	-280.22	377.08	312.00	427,749.32	640,097.78
3,726.00	9.40	309.00	3,699.89	-292.69	262.39	-292.23	392.75	311.92	427,759.39	640,085.77
3,821.00	9.10	307.50	3,793.65	-304.69	271.85	-304.22	407.99	311.78	427,768.85	640,073.78
3,916.00	9.40	314.10	3,887.42	-316.24	281.82	-315.75	423.23	311.75	427,778.82	640,062.25
4,011.00	9.80	317.70	3,981.09	-327.28	293.20	-326.76	439.02	311.90	427,790.20	640,051.24
4,105.00	10.00	317.80	4,073.69	-338.16	305.16	-337.63	455.10	312.11	427,802.16	640,040.37
4,200.00	9.40	317.10	4,167.33	-349.00	316.96	-348.45	471.04	312.29	427,813.96	640,029.55
4,296.00	9.00	316.00	4,262.10	-359.58	328.10	-359.00	486.35	312.42	427,825.10	640,019.00
4,391.00	9.00	315.70	4,355.93	-369.95	338.77	-369.36	501.18	312.53	427,835.77	640,008.64



ProDirectional
Survey Report



Company: Matador Resources
Project: Eddy County, NM (NAD 83)
Site: Garrett Fed Com
Well: No. 222H
Wellbore: OH
Design: Gyro-MWD-100-15646 Proj: 15720

Local Co-ordinate Reference: Well No. 222H
TVD Reference: Well @ 2950.50usft
MD Reference: Well @ 2950.50usft
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)	
4,485.00	7.90	312.40	4,448.91	-379.87	348.38	-379.26	514.99	312.57	427,845.38	639,998.74	
4,581.00	7.60	311.60	4,544.03	-389.50	357.05	-388.88	527.93	312.56	427,854.05	639,989.12	
4,676.00	7.90	312.10	4,638.16	-399.06	365.60	-398.42	540.74	312.54	427,862.60	639,979.58	
4,772.00	8.30	311.20	4,733.20	-409.18	374.58	-408.53	554.27	312.52	427,871.58	639,969.47	
4,867.00	8.50	311.80	4,827.18	-419.59	383.78	-418.92	568.14	312.49	427,880.78	639,959.08	
4,963.00	8.50	311.50	4,922.13	-430.21	393.21	-429.53	582.33	312.47	427,890.21	639,948.47	
5,058.00	7.50	307.60	5,016.20	-440.40	401.64	-439.70	595.53	312.41	427,898.64	639,938.30	
5,154.00	7.50	307.10	5,111.38	-450.37	409.25	-449.66	608.01	312.31	427,906.25	639,928.34	
5,249.00	7.20	306.10	5,205.60	-460.14	416.49	-459.41	620.10	312.19	427,913.49	639,918.59	
5,345.00	6.80	305.10	5,300.89	-469.66	423.31	-468.93	631.73	312.07	427,920.31	639,909.07	
5,440.00	6.20	300.90	5,395.28	-478.68	429.17	-477.93	642.34	311.92	427,926.17	639,900.07	
5,535.00	6.20	299.20	5,489.72	-487.57	434.31	-486.81	652.39	311.74	427,931.31	639,891.19	
5,630.00	5.60	295.90	5,584.22	-496.22	438.84	-495.46	661.86	311.53	427,935.84	639,882.54	
5,726.00	5.40	294.90	5,679.78	-504.54	442.79	-503.77	670.70	311.31	427,939.79	639,874.23	
5,820.00	5.10	291.80	5,773.38	-512.44	446.20	-511.66	678.89	311.09	427,943.20	639,866.34	
5,915.00	5.10	291.90	5,868.00	-520.28	449.34	-519.50	686.87	310.86	427,946.34	639,858.50	
6,010.00	4.90	290.40	5,962.64	-528.01	452.33	-527.22	694.67	310.63	427,949.33	639,850.78	
6,105.00	4.80	287.60	6,057.30	-535.60	454.95	-534.81	702.14	310.39	427,951.95	639,843.19	
6,200.00	4.40	284.40	6,152.00	-542.92	457.06	-542.13	709.09	310.13	427,954.06	639,835.87	
6,295.00	2.80	286.00	6,246.81	-548.69	458.60	-547.89	714.49	309.93	427,955.60	639,830.11	
6,390.00	2.10	289.40	6,341.72	-552.56	459.82	-551.76	718.24	309.81	427,956.82	639,826.24	
6,485.00	2.10	286.00	6,436.66	-555.88	460.88	-555.08	721.47	309.70	427,957.88	639,822.92	
6,580.00	1.40	342.40	6,531.62	-557.91	462.47	-557.10	724.04	309.70	427,959.47	639,820.90	
6,675.00	2.20	26.10	6,626.57	-557.46	465.21	-556.65	725.45	309.89	427,962.21	639,821.35	
6,771.00	2.40	21.80	6,722.50	-555.91	468.73	-555.09	726.52	310.18	427,965.73	639,822.91	
6,866.00	2.30	13.70	6,817.42	-554.72	472.43	-553.90	728.01	310.46	427,969.43	639,824.10	
6,962.00	2.30	24.50	6,913.34	-553.48	476.05	-552.65	729.41	310.74	427,973.05	639,825.35	



ProDirectional
Survey Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well No. 222H
Project:	Eddy County, NM (NAD83)	TVD Reference:	Well @ 2950.50usft
Site:	Garrett Fed Com	MD Reference:	Well @ 2950.50usft
Well:	No. 222H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Gyro-MWD-100-15646 Proj. 15720	Database:	WellPlanner1

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)
7,057.00	2.20	39.40	7,008.27	-551.53	479.20	-550.70	730.00	311.03	427,976.20	639,827.30
7,153.00	2.10	63.90	7,104.20	-548.79	481.39	-547.95	729.38	311.30	427,978.39	639,830.05
7,248.00	2.60	96.20	7,199.13	-545.08	481.93	-544.24	726.95	311.52	427,978.93	639,833.76
7,344.00	2.80	114.40	7,295.02	-540.78	480.72	-539.94	722.93	311.68	427,977.72	639,838.06
7,439.00	2.90	135.90	7,389.91	-536.99	478.04	-536.16	718.32	311.72	427,975.04	639,841.84
7,535.00	1.20	161.20	7,485.84	-534.97	475.34	-534.14	715.03	311.67	427,972.34	639,843.86
7,630.00	1.10	203.60	7,580.82	-535.01	473.57	-534.19	713.88	311.56	427,970.57	639,843.81
7,724.00	1.40	231.30	7,674.80	-536.27	472.02	-535.45	713.80	311.40	427,969.02	639,842.55
7,820.00	0.80	275.60	7,770.79	-537.85	471.35	-537.03	714.54	311.27	427,968.35	639,840.97
7,914.00	1.60	291.10	7,864.77	-539.73	471.89	-538.91	716.31	311.21	427,968.89	639,839.09
8,010.00	2.70	256.20	7,960.70	-543.17	471.83	-542.35	718.87	311.02	427,968.83	639,835.65
8,105.00	2.10	216.80	8,055.62	-546.39	469.91	-545.57	720.04	310.74	427,966.91	639,832.43
8,200.00	0.70	90.00	8,150.60	-546.85	468.51	-546.03	719.48	310.63	427,965.51	639,831.97
8,295.00	1.80	98.00	8,245.58	-544.79	468.30	-543.97	717.78	310.73	427,965.30	639,834.03
8,390.00	1.60	126.80	8,340.54	-542.25	467.30	-541.43	715.21	310.80	427,964.30	639,836.57
8,485.00	1.90	135.90	8,435.49	-540.09	465.38	-539.27	712.31	310.79	427,962.38	639,838.73
8,581.00	1.60	113.50	8,531.45	-537.75	463.70	-536.94	709.45	310.81	427,960.70	639,841.06
8,675.00	0.70	74.50	8,625.43	-535.09	463.33	-535.18	707.88	310.88	427,960.33	639,842.82
8,770.00	1.10	338.50	8,720.42	-535.77	464.33	-534.96	708.37	310.96	427,961.33	639,843.04
8,866.00	0.60	307.40	8,816.41	-536.50	465.50	-535.69	709.69	310.99	427,962.50	639,842.31
8,961.00	1.40	153.10	8,911.41	-536.37	464.76	-535.56	709.11	310.95	427,961.76	639,842.44
9,056.00	1.20	143.80	9,006.38	-535.26	462.93	-534.45	707.06	310.90	427,959.93	639,843.55
9,151.00	0.90	106.00	9,101.37	-533.95	461.92	-533.15	705.42	310.91	427,958.92	639,844.85
9,247.00	0.30	83.60	9,197.36	-532.98	461.74	-532.17	704.56	310.95	427,958.74	639,845.83
9,342.00	0.20	96.60	9,292.36	-532.56	461.75	-531.76	704.26	310.97	427,958.75	639,846.24
9,437.00	0.30	165.40	9,387.36	-532.34	461.49	-531.53	703.91	310.97	427,958.49	639,846.47
9,533.00	0.70	164.10	9,483.36	-532.11	460.68	-531.31	703.22	310.93	427,957.68	639,846.69



ProDirectional Survey Report



Company: Matador Resources
Project: Eddy County, NM (NAD 83)
Site: Garrett Fed. Com.
Well: No. 222H
Wellbore: OH
Design: Gyro-MWD-100-15646, Proj. 15720

Local Co-ordinate Reference: Well No. 222H
TVD Reference: Well @ 2950.50usft
MD Reference: Well @ 2950.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner

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)	
9,628.00	0.90	171.40	9,578.35	-531.84	459.38	-531.04	702.16	310.86	427,956.38	639,846.96	
9,724.00	1.00	163.20	9,674.33	-531.48	457.84	-530.68	700.88	310.79	427,954.84	639,847.32	
9,819.00	1.00	150.30	9,769.32	-530.83	456.32	-530.03	699.40	310.73	427,953.32	639,847.97	
9,915.00	1.00	144.80	9,865.30	-529.93	454.91	-529.13	697.80	310.69	427,951.91	639,848.87	
10,010.00	0.50	164.10	9,960.30	-529.33	453.83	-528.54	696.65	310.65	427,950.83	639,849.46	
10,105.00	0.80	232.90	10,055.29	-529.75	453.03	-528.96	696.45	310.58	427,950.03	639,849.04	
10,200.00	1.20	251.90	10,150.28	-531.22	452.33	-530.43	697.11	310.46	427,949.33	639,847.57	
10,232.00	1.20	253.30	10,182.27	-531.86	452.13	-531.07	697.46	310.41	427,949.13	639,846.93	
10,308.00	1.40	247.80	10,258.25	-533.48	451.55	-532.69	698.32	310.29	427,948.55	639,845.31	
10,403.00	1.30	40.40	10,353.24	-533.86	451.93	-533.07	698.86	310.29	427,948.93	639,844.93	
10,498.00	12.30	77.00	10,447.44	-523.27	455.03	-522.48	692.85	311.05	427,952.03	639,855.52	
10,593.00	19.40	83.20	10,538.78	-497.72	459.18	-496.92	676.59	312.74	427,956.18	639,881.08	
10,688.00	28.60	82.80	10,625.47	-459.42	463.91	-458.61	652.33	315.33	427,960.91	639,919.39	
10,784.00	40.20	77.90	10,704.56	-406.15	473.32	-405.33	623.16	319.42	427,970.32	639,972.67	
10,879.00	52.20	80.40	10,770.20	-338.94	486.05	-338.09	592.08	325.18	427,983.05	640,039.91	
10,975.00	62.90	82.80	10,821.64	-258.93	497.77	-258.06	560.69	332.60	427,994.77	640,119.94	
11,110.00	68.90	82.90	10,876.74	-136.74	513.10	-135.84	530.78	345.17	428,010.10	640,242.16	
11,205.00	76.00	81.90	10,905.37	-47.04	525.09	-46.12	527.11	354.98	428,022.09	640,331.88	
11,301.00	77.00	81.40	10,927.78	45.30	538.64	46.24	540.62	4.91	428,035.64	640,424.24	
11,396.00	77.10	82.30	10,949.07	136.92	551.77	137.88	568.74	14.03	428,048.77	640,515.88	
11,491.00	83.40	82.40	10,965.15	229.65	564.22	230.63	609.54	22.23	428,061.22	640,608.63	
11,586.00	86.80	81.90	10,973.26	323.38	577.15	324.38	662.06	29.34	428,074.15	640,702.38	
11,681.00	87.70	83.10	10,977.82	417.43	589.54	418.46	722.95	35.37	428,086.54	640,796.46	
11,775.00	89.60	85.70	10,980.04	510.93	598.70	511.97	787.76	40.53	428,095.70	640,889.97	
11,871.00	90.00	84.70	10,980.37	606.57	606.74	607.63	858.69	45.04	428,103.74	640,985.63	
11,965.00	88.00	88.70	10,982.01	700.37	612.15	701.44	930.99	48.89	428,109.15	641,079.44	
12,060.00	89.00	89.30	10,984.50	795.32	613.80	796.39	1,005.48	52.38	428,110.80	641,174.39	