



PRODIRECTIONAL

RECEIVED

SEP 19 2019

DISTRICT 7/ARTESIA CO. CD.



General Kehoe 02-24S-28E RB No. 217H
Eddy County, NM

August 08, 2019

Job No. LNM5210219

ORIGINAL

Certified Report



PRODIRECTIONAL

Survey Certification Letter

August 08, 2019



RECEIVED

SEP 19 2019

DISTRICT 7 - ARTESIA O.C.D.

Operator Name: Matador Resources
Well Name: General Kehoe 02-24S-28E RB No. 217H
County/Parish: Eddy County,
State: NM
Rig Name: Patterson 297
Job Number: LNM5210219

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	490' MD – 10,006' MD	10,060' MD	05/17/19 – 05/23/19	MWD

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

General Kehoe 02-24S-28E RB

No. 217H

OH

Survey: ProDirectional

Survey Report

08 August, 2019





ProDirectional Survey Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well No. 217H
Project:	Eddy County, NM (NAD 83)	TVD Reference:	Well @ 3026.50usft
Site:	General Kehoe 02-24S-28E RB	MD Reference:	Well @ 3026.50usft
Well:	No. 217H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	MWD-118.7'-10006', PTB: 10060'	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:	General Kehoe 02-24S-28E RB				
Site Position:		Northing:	456,137.00 usft	Latitude:	32.253680
From:	Map	Easting:	628,716.00 usft	Longitude:	-104.050676
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.15 °

Well:	No. 217H, LNM5210219					
Well Position	+N/-S	0.00 usft	Northing:	456,015.00 usft	Latitude:	32.253355
	+E/-W	0.00 usft	Easting:	627,280.00 usft	Longitude:	-104.055322
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft	Ground Level:	2,998.00 usft	

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	HDGM	5/20/2019	7.08	59.98	47,904.20

Design:	MWD-118.7'-10006', PTB: 10060'				
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	180.12	



ProDirectional Survey Report



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Well:	No. 217H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	MWD-118.7'-10006', PTB: 10060'	Database:	WellPlanner1

Survey Program		Date	8/8/2019		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
118.70	425.70	Survey #1 (OH)	MWD+HRGM	OWSG MWD + HRGM	
490.00	10,060.00	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	456,015.00	627,280.00	
118.70	1.20	258.95	118.69	0.24	-0.24	-1.22	1.24	258.95	456,014.76	627,278.78	
199.70	0.40	281.95	199.68	0.35	-0.34	-2.33	2.35	261.64	456,014.66	627,277.67	
281.70	1.00	248.95	281.68	0.55	-0.54	-3.28	3.32	260.64	456,014.46	627,276.72	
375.70	0.70	245.95	375.67	1.08	-1.07	-4.57	4.69	256.83	456,013.93	627,275.43	
425.70	0.90	242.95	425.66	1.38	-1.37	-5.20	5.37	255.21	456,013.63	627,274.80	
490.00	0.50	248.10	489.96	1.72	-1.71	-5.91	6.15	253.89	456,013.29	627,274.09	
Pro MWD First Survey: 490' MD											
672.00	0.80	282.10	671.95	1.75	-1.74	-7.88	8.07	257.58	456,013.26	627,272.12	
762.00	1.30	289.10	761.93	1.29	-1.27	-9.46	9.55	262.36	456,013.73	627,270.54	
853.00	1.80	308.70	852.90	0.06	-0.04	-11.55	11.55	269.81	456,014.96	627,268.45	
945.00	2.10	340.20	944.85	-2.42	2.45	-13.25	13.48	280.48	456,017.45	627,266.75	
1,035.00	1.80	341.40	1,034.79	-5.31	5.34	-14.26	15.23	290.53	456,020.34	627,265.74	
1,125.00	2.40	32.90	1,124.74	-8.24	8.26	-13.69	15.99	301.12	456,023.26	627,266.31	
1,216.00	2.00	25.30	1,215.67	-11.27	11.30	-11.98	16.47	313.33	456,026.30	627,268.02	
1,308.00	1.50	28.40	1,307.63	-13.79	13.81	-10.72	17.48	322.19	456,028.81	627,269.28	
1,397.00	1.50	22.80	1,396.60	-15.89	15.91	-9.71	18.64	328.60	456,030.91	627,270.29	
1,491.00	1.90	30.80	1,490.56	-18.36	18.38	-8.44	20.23	335.34	456,033.38	627,271.56	
1,585.00	2.70	49.00	1,584.48	-21.16	21.17	-5.97	22.00	344.26	456,036.17	627,274.03	
1,678.00	2.60	65.80	1,677.38	-23.47	23.47	-2.39	23.60	354.18	456,038.47	627,277.61	
1,772.00	2.90	88.90	1,771.28	-24.40	24.39	1.93	24.47	4.53	456,039.39	627,281.93	



ProDirectional Survey Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well No. 217H
Project:	Eddy County, NM (NAD 83)	TVD Reference:	Well @ 3026.50usft
Site:	General Kehoe 02-24S-28E RB	MD Reference:	Well @ 3026.50usft
Well:	No. 217H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	MWD-118.7'-10006', PTB: 10060'	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)	
1,865.00	3.30	100.50	1,864.14	-23.97	23.95	6.92	24.93	16.10	456,038.95	627,286.92	
1,958.00	3.80	104.50	1,956.97	-22.72	22.69	12.53	25.92	28.91	456,037.69	627,292.53	
2,052.00	3.80	94.40	2,050.76	-21.71	21.67	18.65	28.59	40.72	456,036.67	627,298.65	
2,145.00	4.50	90.20	2,143.52	-21.48	21.42	25.37	33.21	49.82	456,036.42	627,305.37	
2,239.00	5.20	98.90	2,237.18	-20.82	20.75	33.27	39.21	58.05	456,035.75	627,313.27	
2,332.00	5.80	103.30	2,329.75	-19.11	19.02	42.01	46.11	65.64	456,034.02	627,322.01	
2,425.00	6.70	101.20	2,422.20	-16.99	16.88	51.90	54.58	71.98	456,031.88	627,331.90	
2,519.00	6.50	93.20	2,515.58	-15.65	15.52	62.59	64.49	76.07	456,030.52	627,342.59	
2,612.00	5.80	94.60	2,608.04	-15.00	14.85	72.53	74.04	78.43	456,029.85	627,352.53	
2,691.00	5.50	97.60	2,686.66	-14.20	14.03	80.26	81.48	80.08	456,029.03	627,360.26	
2,805.00	5.70	97.70	2,800.11	-12.74	12.55	91.29	92.15	82.17	456,027.55	627,371.29	
2,899.00	5.80	87.30	2,893.64	-12.36	12.15	100.66	101.39	83.12	456,027.15	627,380.66	
2,992.00	5.90	73.60	2,986.16	-13.95	13.72	109.94	110.79	82.89	456,028.72	627,389.94	
3,086.00	6.50	56.70	3,079.62	-18.25	18.00	119.02	120.38	81.40	456,033.00	627,399.02	
3,179.00	7.20	49.20	3,171.96	-24.97	24.70	127.83	130.20	79.06	456,039.70	627,407.83	
3,273.00	8.20	46.30	3,265.11	-33.47	33.18	137.14	141.10	76.40	456,048.18	627,417.14	
3,366.00	8.60	47.80	3,357.11	-42.74	42.44	147.09	153.09	73.91	456,057.44	627,427.09	
3,459.00	8.60	47.00	3,449.07	-52.18	51.85	157.32	165.65	71.76	456,066.85	627,437.32	
3,553.00	7.80	45.20	3,542.10	-61.49	61.14	166.99	177.83	69.89	456,076.14	627,446.99	
3,647.00	7.90	47.40	3,635.22	-70.37	70.00	176.27	189.66	68.34	456,085.00	627,456.27	
3,740.00	7.90	45.20	3,727.34	-79.22	78.83	185.51	201.57	66.98	456,093.83	627,465.51	
3,834.00	8.10	45.80	3,820.43	-88.41	88.00	194.84	213.79	65.69	456,103.00	627,474.84	
3,927.00	8.80	49.30	3,912.42	-97.64	97.21	204.93	226.82	64.62	456,112.21	627,484.93	
4,021.00	8.80	51.90	4,005.31	-106.79	106.33	216.04	240.79	63.79	456,121.33	627,496.04	
4,114.00	8.60	53.00	4,097.24	-115.38	114.91	227.19	254.60	63.17	456,129.91	627,507.19	
4,208.00	8.00	52.80	4,190.26	-123.59	123.09	238.02	267.96	62.65	456,138.09	627,518.02	
4,301.00	8.40	52.50	4,282.31	-131.66	131.14	248.56	281.03	62.18	456,146.14	627,528.56	



ProDirectional Survey Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well No. 217H
Project:	Eddy County, NM (NAD 83)	TVD Reference:	Well @ 3026.50usft
Site:	General Kehoe 02-24S-28E RB	MD Reference:	Well @ 3026.50usft
Well:	No. 217H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	MWD-118.7'-10006', PTB: 10060'	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)	
4,395.00	8.30	51.70	4,375.31	-140.07	139.53	259.33	294.48	61.72	456,154.53	627,539.33	
4,488.00	8.60	53.40	4,467.30	-148.40	147.83	270.18	307.98	61.31	456,162.83	627,550.18	
4,582.00	8.60	51.90	4,560.24	-156.95	156.36	281.35	321.88	60.94	456,171.36	627,561.35	
4,675.00	8.60	51.20	4,652.20	-165.62	165.01	292.25	335.61	60.55	456,180.01	627,572.25	
4,769.00	8.50	54.20	4,745.15	-174.11	173.47	303.36	349.46	60.24	456,188.47	627,583.36	
4,862.00	7.90	55.10	4,837.20	-181.81	181.15	314.17	362.66	60.03	456,196.15	627,594.17	
4,956.00	7.60	54.70	4,930.34	-189.12	188.44	324.55	375.29	59.86	456,203.44	627,604.55	
5,049.00	6.80	54.70	5,022.61	-195.87	195.18	334.06	386.90	59.70	456,210.18	627,614.06	
5,142.00	5.90	52.00	5,115.04	-202.02	201.30	342.32	397.12	59.54	456,216.30	627,622.32	
5,236.00	5.40	55.10	5,208.58	-207.54	206.80	349.75	406.32	59.40	456,221.80	627,629.75	
5,329.00	6.20	56.90	5,301.10	-212.80	212.05	357.55	415.70	59.33	456,227.05	627,637.55	
5,422.00	6.60	59.40	5,393.52	-218.28	217.51	366.36	426.06	59.30	456,232.51	627,646.36	
5,515.00	6.30	58.30	5,485.94	-223.70	222.92	375.30	436.51	59.29	456,237.92	627,655.30	
5,609.00	7.50	58.60	5,579.25	-229.63	228.82	384.92	447.80	59.27	456,243.82	627,664.92	
5,702.00	7.80	58.10	5,671.43	-236.15	235.32	395.46	460.18	59.25	456,250.32	627,675.46	
5,795.00	7.40	60.20	5,763.61	-242.48	241.63	406.02	472.48	59.24	456,256.63	627,686.02	
5,889.00	7.30	60.90	5,856.84	-248.42	247.54	416.49	484.50	59.27	456,262.54	627,696.49	
5,982.00	7.80	61.10	5,949.03	-254.36	253.47	427.17	496.71	59.32	456,268.47	627,707.17	
6,075.00	6.80	60.80	6,041.27	-260.12	259.20	437.51	508.53	59.36	456,274.20	627,717.51	
6,169.00	6.40	64.00	6,134.65	-265.15	264.21	447.07	519.31	59.42	456,279.21	627,727.07	
6,262.00	5.70	61.30	6,227.13	-269.66	268.71	455.78	529.09	59.48	456,283.71	627,735.78	
6,355.00	4.70	58.10	6,319.75	-273.91	272.94	463.07	537.52	59.48	456,287.94	627,743.07	
6,448.00	3.50	54.90	6,412.51	-277.56	276.58	468.63	544.16	59.45	456,291.58	627,748.63	
6,541.00	4.10	58.70	6,505.31	-280.93	279.94	473.79	550.31	59.42	456,294.94	627,753.79	
6,635.00	2.20	79.20	6,599.16	-283.03	282.03	478.43	555.37	59.48	456,297.03	627,758.43	
6,728.00	1.50	99.90	6,692.11	-283.16	282.15	481.39	557.98	59.62	456,297.15	627,761.39	
6,821.00	0.40	53.20	6,785.10	-283.15	282.14	482.85	559.23	59.70	456,297.14	627,762.85	



ProDirectional Survey Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well No. 217H
Project:	Eddy County, NM (NAD 83)	TVD Reference:	Well @ 3026.50usft
Site:	General Kehoe 02-24S-28E RB	MD Reference:	Well @ 3026.50usft
Well:	No. 217H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	MWD-118.7'-10006', PTB: 10060'	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)	
6,915.00	0.60	339.90	6,879.10	-283.81	282.80	482.94	559.65	59.65	456,297.80	627,762.94	
7,008.00	0.80	44.50	6,972.09	-284.73	283.72	483.23	560.36	59.58	456,298.72	627,763.23	
7,101.00	1.60	23.50	7,065.07	-286.38	285.37	484.20	562.04	59.49	456,300.37	627,764.20	
7,195.00	1.80	41.50	7,159.03	-288.70	287.68	485.70	564.50	59.36	456,302.68	627,765.70	
7,288.00	2.10	160.60	7,252.00	-288.18	287.17	487.24	565.56	59.49	456,302.17	627,767.24	
7,382.00	2.30	62.20	7,345.96	-287.44	286.42	489.48	567.12	59.67	456,301.42	627,769.48	
7,475.00	2.20	70.60	7,438.89	-288.91	287.88	492.81	570.74	59.71	456,302.88	627,772.81	
7,569.00	1.80	79.20	7,532.83	-289.80	288.76	495.96	573.90	59.79	456,303.76	627,775.96	
7,662.00	1.00	93.90	7,625.80	-290.02	288.98	498.21	575.95	59.88	456,303.98	627,778.21	
7,756.00	0.60	13.00	7,719.80	-290.45	289.40	499.14	576.97	59.89	456,304.40	627,779.14	
7,850.00	0.30	0.40	7,813.79	-291.17	290.13	499.25	577.43	59.84	456,305.13	627,779.25	
7,943.00	0.60	140.40	7,906.79	-291.04	290.00	499.56	577.63	59.86	456,305.00	627,779.56	
8,037.00	0.90	152.60	8,000.78	-290.01	288.96	500.21	577.68	59.99	456,303.96	627,780.21	
8,130.00	0.40	178.00	8,093.78	-289.04	287.99	500.56	577.49	60.09	456,302.99	627,780.56	
8,223.00	0.80	186.60	8,186.77	-288.07	287.02	500.50	576.96	60.17	456,302.02	627,780.50	
8,316.00	0.70	191.80	8,279.76	-286.86	285.82	500.31	576.19	60.26	456,300.82	627,780.31	
8,410.00	0.60	208.90	8,373.76	-285.87	284.82	499.95	575.39	60.33	456,299.82	627,779.95	
8,504.00	1.00	254.50	8,467.75	-285.22	284.17	498.92	574.18	60.34	456,299.17	627,778.92	
8,597.00	1.50	264.50	8,560.73	-284.88	283.84	496.93	572.28	60.27	456,298.84	627,776.93	
8,691.00	2.20	264.50	8,654.68	-284.58	283.55	493.91	569.52	60.14	456,298.55	627,773.91	
8,784.00	2.20	256.20	8,747.61	-283.98	282.95	490.40	566.17	60.02	456,297.95	627,770.40	
8,878.00	2.10	265.20	8,841.54	-283.40	282.38	486.93	562.88	59.89	456,297.38	627,766.93	
8,971.00	1.80	301.50	8,934.49	-284.01	283.00	483.99	560.65	59.68	456,298.00	627,763.99	
9,065.00	1.40	302.10	9,028.46	-285.39	284.38	481.76	559.43	59.45	456,299.38	627,761.76	
9,158.00	1.00	289.40	9,121.44	-286.26	285.25	480.03	558.39	59.28	456,300.25	627,760.03	
9,252.00	0.60	291.70	9,215.43	-286.71	285.71	478.80	557.56	59.17	456,300.71	627,758.80	
9,345.00	0.30	280.80	9,308.42	-286.93	285.93	478.11	557.08	59.12	456,300.93	627,758.11	



ProDirectional Survey Report



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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
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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)	
9,445.00	5.40	172.70	9,408.28	-282.31	281.31	478.45	555.02	59.55	456,296.31	627,758.45	
9,492.00	13.00	172.90	9,454.64	-274.87	273.86	479.38	552.09	60.26	456,288.86	627,759.38	
9,539.00	18.30	174.50	9,499.88	-262.27	261.26	480.74	547.15	61.48	456,276.26	627,760.74	
9,585.00	24.90	180.50	9,542.63	-245.38	244.37	481.35	539.83	63.08	456,259.37	627,761.35	
9,632.00	27.70	185.60	9,584.77	-224.60	223.60	480.20	529.71	65.03	456,238.60	627,760.20	
9,726.00	39.00	183.80	9,663.16	-173.17	172.17	476.09	506.27	70.12	456,187.17	627,756.09	
9,819.00	52.70	177.90	9,727.82	-106.66	105.66	475.51	487.11	77.47	456,120.66	627,755.51	
9,866.00	60.80	173.60	9,753.57	-67.52	66.52	478.48	483.09	82.09	456,081.52	627,758.48	
9,913.00	64.20	173.20	9,775.27	-26.12	25.11	483.28	483.93	87.03	456,040.11	627,763.28	
9,959.00	67.20	174.80	9,794.20	15.56	-16.58	487.65	487.93	91.95	455,998.42	627,767.65	
10,006.00	71.10	177.40	9,810.93	59.36	-60.39	490.63	494.33	97.02	455,954.61	627,770.63	
Last Survey: 10006' MD											
10,060.00	71.10	177.40	9,828.42	110.39	-111.42	492.94	505.38	102.74	455,903.58	627,772.94	
PTB: 10060' MD											

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
490.00	489.96	-1.71	-5.91	Pro MWD First Survey: 490' MD
10,006.00	9,810.93	-60.39	490.63	Last Survey: 10006' MD
10,060.00	9,828.42	-111.42	492.94	PTB: 10060' MD