

Matador Mallon 27 Federal Com 2H MWD 0ft to update Survey Report

(Non-Def Survey)

Report Date: September 15, 2016 - 02:52 PM
 Client: Matador Resource Company
 Field: NM Lea County (NAD 27)
 Structure / Slot: Matador Mallon 27 Federal Com 2H / Mallon 27 Federal Com 2H
 Well: Matador Mallon 27 Federal Com 2H
 Borehole: Original Borehole
 UWI / API#: Patterson 809 / 30025423150000
 Survey Name: Matador Mallon 27 Federal Com 2H MWD 0ft to update
 Survey Date: August 24, 2016
 Tort / AHD / DOI / ERD Ratio: 284.150' / 8126.070 ft / 6.590 / 0.748
 Coordinate Reference System: NAD27 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 37' 29.92905", W 103° 32' 44.31835"
 Location Grid N/E Y/X: N 591978.000 RUS, E 742512.000 RUS
 CRS Grid Convergence Angle: 0.4247 °
 Grid Scale Factor: 0.99997644
 Version / Patch: 2.9.365.0

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 0.110 ° (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: RKB = 28.5 ft
 TVD Reference Elevation: 3742.500 ft above
 Seabed / Ground Elevation: 3714.000 ft above
 Magnetic Declination: 6.797 °
 Total Gravity Field Strength: 998.5077mgn (9.80665 Based)
 Gravity Model: GARM
 Total Magnetic Field Strength: 48430.298 nT
 Magnetic Dip Angle: 60.668 °
 Declination Date: August 24, 2016
 Magnetic Declination Model: HDGM 2016
 North Reference: Grid North
 Grid Convergence Used: 0.4247 °
 Total Corr Mag North->Grid North: 6.3720 °
 Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	DLS (°/100ft)	TR (°/100ft)	BR (°/100ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	TF (°)
Surface	0.00	0.00	0.00	0.00	N/A	N/A	N/A	0.00	0.00	0.00	0.00	0.00	184.1M
	141.00	1.30	184.10	140.99	0.92	0.00	0.92	-1.60	-1.60	-0.11	1.60	184.10	190.8M
	203.00	1.80	190.80	202.97	0.86	10.81	0.81	-3.25	-3.25	-0.35	3.27	186.09	203.7M
	269.00	1.90	203.70	268.93	0.65	19.55	0.15	-5.28	-5.27	-0.98	5.36	190.54	203.6M
	334.00	1.40	203.60	333.90	0.77	-0.15	-0.77	-6.99	-6.99	-1.73	7.20	193.92	170.9M
	395.00	1.20	170.90	394.89	1.24	-53.61	-0.33	-8.31	-8.30	-1.93	8.52	193.08	128.4M
	455.00	0.50	128.40	454.88	1.50	-70.83	-1.17	-9.09	-9.08	-1.62	9.23	190.14	142.8M
	521.00	0.70	142.80	520.88	0.38	21.82	0.30	-9.59	-9.58	-1.16	9.65	186.87	83.7M
	584.00	0.30	83.70	583.88	0.96	-93.81	-0.63	-9.87	-9.87	-0.76	9.90	184.40	114.2M
	679.00	0.50	114.20	678.87	0.30	32.11	0.21	-10.02	-10.02	-0.13	10.02	180.76	131.5M
	773.00	0.30	131.50	772.87	0.25	18.40	-0.21	-10.35	-10.35	0.42	10.36	177.65	268.9M
	866.00	0.20	268.90	865.87	0.50	147.74	-0.11	-10.51	-10.51	0.44	10.52	177.58	184.2M
	960.00	0.50	184.20	959.87	0.55	-90.11	0.32	-10.92	-10.92	0.25	10.93	178.68	125.8M
	1054.00	0.30	125.80	1053.87	0.45	-62.13	-0.21	-11.48	-11.48	0.42	11.48	177.90	73.4M
	1148.00	0.10	73.40	1147.87	0.27	-55.74	-0.21	-11.60	-11.60	0.70	11.62	176.55	215.1M
	1242.00	0.40	215.10	1241.87	0.51	150.74	0.32	-11.84	-11.84	0.59	11.86	177.15	65.8M
	1335.00	0.20	65.80	1334.87	0.62	-160.54	-0.22	-12.04	-12.04	0.55	12.05	177.39	349M
	1429.00	0.30	349.00	1428.87	0.34	-81.70	0.11	-11.73	-11.73	0.65	11.75	176.82	291.3M
	1522.00	0.40	291.30	1521.86	0.38	-62.04	0.11	-11.37	-11.38	0.30	11.38	178.47	247.5M
	1616.00	0.50	247.50	1615.86	0.37	-46.60	0.11	-11.41	-11.41	-0.38	11.42	181.91	275.9M
	1711.00	0.60	275.90	1710.86	0.30	29.89	0.11	-11.52	-11.52	-1.26	11.59	186.24	306.6M
	1789.00	0.50	306.60	1788.85	0.39	39.36	-0.13	-11.28	-11.28	-1.94	11.44	189.75	283.7M
	1899.00	0.30	283.70	1898.85	0.23	-20.82	-0.18	-10.93	-10.92	-2.60	11.23	193.41	348.2M
	1992.00	0.20	348.20	1991.85	0.30	69.35	-0.11	-10.71	-10.70	-2.87	11.08	195.02	342.1M
	2086.00	0.20	342.10	2085.85	0.02	-6.49	0.00	-10.39	-10.39	-2.96	10.80	195.89	329.6M
	2180.00	0.20	329.60	2179.85	0.05	-13.30	0.00	-10.10	-10.09	-3.09	10.55	197.03	180.6M
	2273.00	0.80	180.60	2272.85	1.05	-160.22	0.65	-10.61	-10.60	-3.18	11.07	196.70	168.4M
	2367.00	3.00	168.40	2366.79	2.37	-12.98	2.34	-13.67	-13.67	-2.69	13.93	191.14	171.4M
	2461.00	5.10	171.40	2460.55	2.24	3.19	2.23	-20.21	-20.21	-1.57	20.27	184.45	171.5M
	2555.00	5.60	171.50	2554.14	0.53	0.11	0.53	-28.87	-28.87	-0.27	28.88	180.53	172.1M
	2648.00	5.10	172.10	2646.73	0.54	0.65	-0.54	-37.45	-37.46	0.97	37.47	178.52	171.6M
	2742.00	4.80	171.60	2740.38	0.32	-0.53	-0.32	-45.48	-45.49	2.12	45.53	177.33	169M
	2836.00	4.40	169.00	2834.08	0.48	-2.77	-0.43	-52.91	-52.92	3.38	53.02	176.34	162.5M
	2929.00	3.90	162.50	2926.84	0.74	-6.99	-0.54	-59.42	-59.43	5.01	59.64	175.18	156.1M
	3023.00	3.90	156.10	3020.62	0.46	-6.81	0.00	-65.39	-65.41	7.27	65.81	173.66	155.6M
	3117.00	5.80	155.60	3114.28	2.02	-0.53	2.02	-72.63	-72.65	10.53	73.41	171.76	155.7M
	3210.00	5.40	155.70	3206.84	0.43	0.11	-0.43	-80.89	-80.92	14.27	82.17	170.00	161.7M
	3305.00	5.10	161.70	3301.44	0.66	6.32	-0.32	-88.97	-89.00	17.43	90.70	168.92	153M
	3400.00	4.80	153.00	3396.08	0.85	-9.16	-0.32	-96.52	-96.56	20.56	98.72	167.98	169.2M
	3495.00	5.60	169.20	3490.70	1.75	17.05	0.84	-104.61	-104.65	23.24	107.20	167.48	168.5M
	3591.00	4.50	168.50	3586.32	1.15	-0.73	-1.15	-112.89	-112.94	24.87	115.65	167.58	167.4M
	3686.00	3.70	167.40	3681.08	0.85	-1.16	-0.84	-119.54	-119.59	26.28	122.44	167.61	166.5M
	3780.00	4.30	166.50	3774.85	0.64	-0.96	0.64	-125.92	-125.97	27.76	129.00	167.57	167M
	3876.00	5.20	167.00	3870.52	0.94	0.52	0.94	-133.65	-133.71	29.58	136.94	167.53	169.2M
	3970.00	4.40	169.20	3964.19	0.87	2.34	-0.85	-141.34	-141.40	31.21	144.81	167.55	173.6M
	4066.00	5.30	173.60	4059.84	1.01	4.58	0.94	-149.36	-149.43	32.40	152.90	167.77	177.6M
	4161.00	7.10	177.60	4154.29	1.95	4.21	1.89	-159.59	-159.65	33.13	163.06	168.28	179.4M
	4254.00	6.90	179.40	4246.59	0.32	1.94	-0.22	-170.92	-170.98	33.43	174.22	168.94	180.3M
	4348.00	6.70	180.30	4339.93	0.24	0.96	-0.21	-182.05	-182.11	33.46	185.16	169.59	180.6M
	4441.00	6.50	180.60	4432.31	0.22	0.32	-0.22	-192.74	-192.80	33.38	195.67	170.18	182.2M
	4535.00	6.20	182.20	4525.74	0.37	1.70	-0.32	-203.13	-203.19	33.13	205.88	170.74	182.6M
	4629.00	6.00	182.60	4619.21	0.22	0.43	-0.21	-213.11	-213.17	32.71	215.67	171.28	183.5M
	4722.00	5.70	183.50	4711.72	0.34	0.97	-0.32	-222.58	-222.64	32.21	224.96	171.77	171.1M
	4816.00	5.00	171.10	4805.31	1.43	-13.19	-0.74	-231.28	-231.35	32.56	233.63	171.99	164.4M
	4910.00	5.20	164.40	4898.94	0.67	-7.13	0.21	-239.43	-239.50	34.34	241.94	171.84	172M
	5004.00	5.10	172.00	4992.56	0.73	8.09	-0.11	-247.67	-247.74	36.06	250.35	171.72	173.1M
	5098.00	4.80	173.10	5086.21	0.33	1.17	-0.32	-255.71	-255.78	37.12	258.46	171.74	175.2M
	5191.00	4.30	175.20	5178.92	0.57	2.26	-0.54	-263.04	-263.11	37.88	265.83	171.81	172.6M
	5285.00	4.40	172.60	5272.65	0.24	-2.77	0.11	-270.13	-270.20	38.64	272.95	171.86	173.5M
	5378.00	4.00	173.50	5365.40	0.44	0.97	-0.43	-276.89	-276.96	39.46	279.76	171.89	173.6M
	5472.00	4.10	173.60	5459.17	0.11	0.11	0.11	-283.48	-283.56	40.21	286.40	171.93	167M
Int. 1 Casing Point	5551.00	4.60	167.00	5537.94	0.89	-8.35	0.63	-289.37	-289.45	41.24	292.38	171.89	164.56M
First Survey	5688.00	4.12	164.56	5674.54	0.38	-1.78	-0.35	-299.47	-299.55	43.78	302.73	171.68	168.67M
	5782.00	3.93	168.67	5768.31	0.37	4.37	-0.20	-305.88	-305.96	45.31	309.30	171.58	167.83M
	5875.00	3.52	167.83	5861.11	0.44	-0.90	-0.44	-311.79	-311.88	46.54	315.33	171.51	152.74M
	5969.00	3.04	152.74	5954.96	1.05	-16.05	-0.51	-316.82	-316.92	48.29	320.57	171.34	162.86M
	6062.00	2.89	162.86	6047.84	0.58	10.88	-0.16	-321.25	-321.35	50.11	325.23	171.14	151.3M
	6156.00	2.55	151.30	6141.73	0.68	-12.30	-0.36	-325.35	-325.45	51.82	329.55	170.95	158.51M
	6249.00	2.02	158.51	6234.66	0.65	7.75	-0.57	-328.68	-328.79	53.41	333.10	170.77	166.86M
	6343.00	1.65	166.86	6328.61	0.48	8.88	-0.39	-331.54	-331.65	54.32	336.07	170.70	172.35M
	6436.00	1.46	172.35	6421.57	0.26	5.90	-0.20	-334.02	-334.12	54.79	338.59	170.69	170.32M
	6530.00	1.88	170.32	6515.53	0.45	-2.16	0.45	-336.72	-336.83	55.21	341.32	170.69	170.14M
	6624.00	1.75	170.14	6609.49	0.14	-0.19	-0.14	-339.66	-339.76	55.71	344.30	170.69	169.64M
	6717.00	1.39	169.64	6702.45	0.39	-0.54	-0.39	-342.17	-342.27	56.16	346.85	170.68	162.21M
	6811.00	1.36	162.21	6796.43	0.19	-7.90	-0.03	-344.35	-344.46	56.70	349.09	170.65	164.78M
	6904.00	1.64	164.78	6889.39	0.31	2.76	0.30	-346.68	-346.79	57.39	351.51	170.60	178.1M
	6998.00	1.51	178.10	6983.36	0.41	14.17	-0.14	-3					

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	DLS (°/100ft)	TR (°/100ft)	BR (°/100ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	TF (°)
	7746.00	1.27	62.43	7731.19	0.28	-0.37	-0.28	-356.40	-356.52	64.23	362.26	169.79	51.75M
	7840.00	1.27	51.75	7825.17	0.25	-11.36	0.00	-355.26	-355.39	65.97	361.46	169.48	27.41M
	7933.00	1.08	27.41	7918.15	0.57	-26.17	-0.20	-353.85	-353.98	67.19	360.30	169.25	21.69M
	8027.00	1.15	21.69	8012.13	0.14	-6.09	0.07	-352.18	-352.31	67.94	358.80	169.08	20.52M
	8120.00	1.07	20.52	8105.11	0.09	-1.26	-0.09	-350.50	-350.63	68.59	357.28	168.93	12.05M
	8213.00	1.11	12.05	8198.09	0.18	-9.11	0.04	-348.81	-348.94	69.09	355.71	168.80	9.06M
	8307.00	1.16	9.06	8292.08	0.08	-3.18	0.05	-346.97	-347.11	69.43	353.98	168.69	28.49M
	8401.00	1.52	28.49	8386.05	0.61	20.67	0.38	-344.94	-345.07	70.17	352.14	168.51	24.57M
	8494.00	1.09	24.57	8479.03	0.47	-4.22	-0.46	-343.05	-343.18	71.13	350.48	168.29	27.15M
	8588.00	1.17	27.15	8573.01	0.10	2.74	0.09	-341.38	-341.52	71.94	349.01	168.11	13.71M
	8681.00	1.48	13.71	8665.98	0.47	-14.45	0.33	-339.37	-339.51	72.65	347.19	167.92	23.42M
	8775.00	1.05	23.42	8759.96	0.51	10.33	-0.46	-337.39	-337.54	73.28	345.40	167.75	37.8M
	8869.00	0.69	37.80	8853.95	0.45	15.30	-0.38	-336.16	-336.30	73.97	344.34	167.59	30.86M
	8962.00	1.07	30.86	8946.94	0.42	-7.46	0.41	-334.97	-335.11	74.76	343.35	167.42	26.77M
	9055.00	1.66	26.77	9039.91	0.64	-4.40	0.63	-333.02	-333.16	75.81	341.68	167.18	10.24M
	9149.00	1.70	10.24	9133.87	0.52	-17.59	0.04	-330.43	-330.58	76.68	339.35	166.94	5.85M
	9242.00	1.04	5.85	9226.84	0.72	-4.72	-0.71	-328.23	-328.38	77.01	337.29	166.80	7.6M
	9334.00	1.25	7.60	9318.83	0.23	1.90	0.23	-326.40	-326.55	77.22	335.56	166.69	244.78M
	9428.00	1.81	244.78	9412.81	2.87	-130.66	0.60	-326.02	-326.17	76.02	334.91	166.88	219.2M
	9522.00	1.64	219.20	9506.77	0.83	-27.21	-0.18	-327.70	-327.84	73.82	336.05	167.31	206.46M
	9616.00	1.86	206.46	9600.72	0.47	-13.55	0.23	-330.11	-330.25	72.29	338.07	167.65	207.32M
	9709.00	2.14	207.32	9693.67	0.30	0.92	0.30	-333.01	-333.15	70.82	340.59	168.00	218.98M
	9803.00	2.71	218.98	9787.58	0.80	12.40	0.61	-336.30	-336.43	68.62	343.36	168.47	210.79M
	9896.00	3.09	210.79	9880.46	0.60	-8.81	0.41	-340.17	-340.29	65.95	346.63	169.03	199.03M
	9990.00	2.14	199.03	9974.37	1.16	-12.51	-1.01	-344.01	-344.13	64.09	350.05	169.45	193.19M
	10083.00	2.31	193.19	10067.30	0.30	-6.28	0.18	-347.48	-347.60	63.09	353.28	169.71	202.14M
	10177.00	2.92	202.14	10161.20	0.78	9.52	0.65	-351.54	-351.66	61.76	357.04	170.04	285.1M
	10277.00	1.76	285.10	10261.14	3.22	82.96	-1.16	-353.50	-353.62	59.31	358.56	170.48	336.44M
	10368.00	5.25	336.44	10292.08	14.10	165.61	11.26	-352.08	-352.19	58.29	356.98	170.60	345.46M
	10339.00	9.28	345.46	10322.82	13.47	29.10	13.00	-348.36	-348.47	57.09	353.12	170.70	20.28R
	10371.00	12.69	351.10	10354.23	11.16	17.63	10.66	-342.39	-342.50	55.90	347.03	170.73	8.95R
	10402.00	15.88	352.93	10384.27	10.39	5.90	10.29	-334.82	-334.93	54.85	339.39	170.70	3.98R
	10433.00	19.13	353.62	10413.83	10.51	2.23	10.48	-325.56	-325.67	53.76	330.07	170.63	1.26L
	10465.00	21.65	353.47	10443.83	7.88	-0.47	7.88	-314.49	-314.59	52.51	318.94	170.52	16.36R
	10513.00	24.78	355.65	10487.93	6.76	4.54	6.52	-295.66	-295.76	50.74	300.08	170.27	98.22L
	10558.00	24.70	354.21	10528.80	1.35	-3.20	-0.18	-278.90	-277.00	49.08	281.31	169.95	35.44R
	10606.00	27.01	357.76	10572.00	5.79	7.40	4.81	-256.03	-256.13	47.64	260.52	169.46	43.75R
	10651.00	31.32	5.29	10611.30	12.56	16.73	9.58	-234.16	-234.25	48.32	239.18	168.35	1.61L
	10700.00	37.39	5.01	10651.73	12.39	-0.57	12.39	-206.72	-206.72	50.79	212.87	166.20	4.76L
	10745.00	42.88	4.34	10686.12	12.24	-1.49	12.20	-177.72	-177.83	53.15	185.60	163.36	10.76R
	10788.00	47.55	5.54	10716.41	11.04	2.79	10.86	-147.32	-147.43	55.79	157.63	159.27	22.81R
	10839.00	52.47	8.13	10749.17	10.40	5.08	9.65	-108.54	-108.65	60.47	124.35	150.90	25.37L
	10886.00	57.45	5.35	10776.15	11.65	-9.81	10.80	-70.33	-70.45	64.95	95.83	137.33	9.57L
	10932.00	63.46	4.22	10798.83	13.24	-2.46	13.07	-30.46	-30.59	68.28	74.82	114.14	7.61R
	10977.00	70.24	5.18	10816.51	15.19	2.13	15.07	10.76	10.82	71.67	72.46	81.57	10.58L
	11026.00	74.00	4.45	10831.55	7.80	-1.49	7.67	57.22	57.08	75.58	94.72	52.94	11.41L
	11072.00	76.80	3.87	10843.14	6.21	-1.26	6.09	101.62	101.47	78.81	128.48	37.84	11.32L
	11119.00	80.50	3.12	10852.39	8.03	-1.60	7.87	147.61	147.46	81.62	168.54	28.96	5.05L
	11165.00	85.01	2.72	10858.19	9.84	-0.87	9.80	193.18	193.02	83.94	210.48	23.50	14.44L
	11213.00	88.35	1.86	10860.97	7.18	-1.79	6.96	241.06	240.89	85.86	255.74	19.62	18.01L
	11245.00	90.38	1.20	10861.33	6.67	-2.06	6.34	273.04	272.88	86.71	286.32	17.63	2.17L
	11306.00	91.17	1.17	10860.50	1.30	-0.05	1.30	334.03	333.86	87.97	345.26	14.76	87.85L
	11400.00	91.24	359.29	10858.52	2.00	-2.00	0.07	428.00	427.83	88.35	436.86	11.67	74.03L
	11533.00	91.68	357.75	10855.14	1.20	-1.16	0.33	560.90	560.74	84.91	567.14	8.61	71.27L
	11626.00	91.89	357.13	10852.24	0.70	-0.67	0.23	653.76	653.60	80.76	658.57	7.04	92.76L
	11720.00	91.79	355.08	10849.22	2.18	-2.18	-0.11	747.47	747.33	74.38	751.03	5.68	113.06L
	11814.00	90.34	351.68	10847.47	3.93	-3.62	-1.54	840.79	840.67	63.55	843.07	4.32	173.88L
	11908.00	85.87	351.20	10850.58	4.78	-0.51	-4.76	933.65	933.55	49.57	934.87	3.04	114.05R
	12001.00	84.21	354.96	10858.62	4.41	4.04	-1.78	1025.58	1025.51	38.40	1026.23	2.14	69.33R
	12094.00	86.00	359.67	10866.56	5.40	5.06	1.92	1118.10	1118.04	34.07	1118.56	1.75	48.21R
	12188.00	89.45	3.52	10870.30	5.50	4.10	3.67	1211.96	1211.90	36.69	1212.45	1.73	32.5R
	12281.00	91.82	5.03	10869.27	3.02	1.62	2.55	1304.70	1304.62	43.62	1305.35	1.91	32.75L
	12375.00	92.55	4.56	10865.68	0.92	-0.50	0.78	1398.32	1398.22	51.47	1399.17	2.11	75.55L
	12468.00	93.17	2.14	10861.04	2.68	-2.60	0.67	1491.05	1490.94	56.90	1492.03	2.19	93.27L
	12562.00	92.99	359.06	10855.99	3.28	-3.28	-0.19	1584.90	1584.79	57.88	1585.85	2.09	91.02L
	12636.00	92.96	357.44	10852.04	2.13	-2.13	-0.04	1660.75	1660.65	55.56	1661.58	1.92	140.38L
	12731.00	89.55	354.62	10850.01	4.76	-3.03	-3.67	1753.47	1753.38	49.13	1754.07	1.60	89.1R
	12825.00	89.59	357.14	10850.71	2.68	2.68	0.04	1847.21	1847.13	42.37	1847.61	1.31	84.19R
	12919.00	89.76	358.81	10851.25	1.79	1.78	0.18	1941.14	1941.06	39.05	1941.46	1.15	63.73R
	13012.00	90.14	359.58	10851.33	0.92	0.83	0.41	2034.12	2034.05	37.74	2034.40	1.06	83.41R
	13106.00	90.38	1.66	10850.90	2.23	2.21	0.26	2128.11	2128.04	38.76	2128.39	1.04	83.85R
	13199.00	90.45	2.31	10850.23	0.70	0.70	0.08	2221.06	2220.98	41.98	2221.38	1.08	78.04L
	13293.00	90.96	359.90	10849.07	2.62	-2.56	0.54	2315.03	2314.95	43.80	2315.37	1.08	143.02R
	13386.00	90.07	0.57	10848.23	1.20	0.72	-0.96	2408.03	2407.95	44.18	2408.35	1.05	51.76L
	13480.00	90.59	359.91	10847.69	0.89	-0.70	0.55	2502.02	2501.94	44.57	2502.34	1.02	87.42L
	13573.00	90.69	357.68	10846.65	2.40	-2.40	0.11	2594.99	2594.91	42.62	2595.26	0.94	99.73R
	13667.00	90.24	0.30	10845.89	2.83	2.79	-0.48	2689.96	2689.88	40.96	2690.20	0.87	55.43R
	13760.00	90.86	1.20	10845.00	1.18	0.97	0.67	2781.95	2781.87	42.18	2782.19	0.87	125.58R
	13854.00	90.03	2.36	10844.27	1.52	1.23	-0.88	2875.90	2875.82	45.10	2876.17	0.90	54.46L
	13947.00	90.83	1.24	10843.57	1.48	-1.20	0.86	2968.86	2968.77	48.02	2969.16	0.93	74.74L
	14041.00	90.86	1.13	10842.18	0.12	-0.12	0.03	3062.83	3062.74	49.96	3063.15	0.93	125.64R
	14134.00	90.48	1.66	10841.10	0.70	0.57	-0.41	3155.80	3155.70	52.22	3156.14	0.95	92.23R
	14228.00	90.45	2.43	10840.33	0.82	0.82	-0.03	3249.74	3249.64	55.58	3250.12	0.98	82.8L
	14321.00	90.58	1										

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	DLS (°/100ft)	TR (°/100ft)	BR (°/100ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	TF (°)
	17337.00	93.30	358.51	10807.46	1.38	-0.17	1.37	6353.93	6353.78	79.83	6354.29	0.72	151.06R
	17431.00	91.89	359.29	10803.20	1.71	0.83	-1.50	6447.81	6447.67	78.03	6448.14	0.69	141.98R
	17525.00	90.79	0.15	10801.00	1.49	0.91	-1.17	6541.77	6541.64	77.57	6542.10	0.68	9.82R
	17618.00	92.06	0.37	10798.69	1.39	0.24	1.37	6634.74	6634.61	77.99	6635.06	0.67	98.37R
	17711.00	91.79	2.20	10795.57	1.99	1.97	-0.29	6727.67	6727.53	80.08	6728.00	0.68	21.43R
	17895.00	93.24	2.77	10787.49	0.85	0.31	0.79	6911.33	6911.17	88.05	6911.73	0.73	14.94R
	17990.00	94.10	3.00	10781.41	0.94	0.24	0.91	7006.02	7005.85	92.82	7006.47	0.76	1.46R
	18086.00	94.88	3.02	10773.90	0.81	0.02	0.81	7101.60	7101.43	97.84	7102.10	0.79	6.47R
	18236.00	96.37	3.19	10759.19	1.00	0.11	0.99	7250.67	7250.48	105.93	7251.26	0.84	HS
Proj TD VS	18297.00	96.37	3.19	10752.43	0.00	0.00	0.00	7311.21	7311.01	109.30	7311.83	0.86	

Survey Type: Non-Def Survey



Mallon 27 Federal No. 2H

Lea County, NM

September 07, 2016

Job No. LNM5125816

ORIGINAL

Survey Completion Report



PRODIRECTIONAL

Survey Certification Letter

September 07, 2016



Operator Name: Matador Resources
Well Name: Mallon 27 Federal No. 2H
County/Parish: Lea County,
State: NM
Rig Name: Patterson 809
Job Number: LNM5125816

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	141' MD – 5,551' MD	5,610' MD	08/18/16 – 08/24/16	MWD-OWSG

Sincerely,

Mike Coats

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. 2H
OH**

Survey: ProDirectional

Survey Report

07 September, 2016





ProDirectional Survey Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well No. 2H
Project:	Lea County, NM	TVD Reference:	Well @ 3742.50usft (GL: 3714' + KB: 28.5' (Patt809))
Site:	Mallon 27 Federal	MD Reference:	Well @ 3742.50usft (GL: 3714' + KB: 28.5' (Patt809))
Well:	No. 2H	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. 2H					
Well Position	+N-S	0.00 usft	Northing:	591,978.00 usft	Latitude:	32° 37' 29.929 N
	+E-W	0.00 usft	Easting:	742,512.00 usft	Longitude:	103° 32' 44.318 W
Position Uncertainty		1.10 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,714.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	8/10/2016	6.80	60.67	48,428

Design		MWD		
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	0.11

Survey Program		Date 9/7/2016		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
141.00	5,610.00	Survey #1 (OH)	MWD - OWSG	MWD - OWSG



ProDirectional Survey Report



Company: Matador Resources
Project: Lea County, NM
Site: Mallon 27 Federal
Well: No. 2H
Wellbore: OH
Design: MWD

Local Co-ordinate Reference: Well No. 2H
TVD Reference: Well @ 3742.50usft (GL: 3714' + KB: 28.5' (Patt809))
MD Reference: Well @ 3742.50usft (GL: 3714' + 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	591,978.00	742,512.00
141.00	1.30	184.10	140.99	-1.60	-1.60	-0.11	1.60	184.10	591,976.40	742,511.89
Pro MWD First Survey: 141' MD										
203.00	1.80	190.80	202.97	-3.25	-3.25	-0.35	3.27	186.09	591,974.75	742,511.65
269.00	1.90	203.70	268.93	-5.28	-5.27	-0.98	5.36	190.54	591,972.73	742,511.02
334.00	1.40	203.60	333.90	-6.99	-6.99	-1.73	7.20	193.92	591,971.01	742,510.27
395.00	1.20	170.90	394.89	-8.31	-8.30	-1.93	8.52	193.08	591,969.70	742,510.07
455.00	0.50	128.40	454.88	-9.09	-9.08	-1.62	9.23	190.14	591,968.92	742,510.38
521.00	0.70	142.80	520.88	-9.59	-9.58	-1.16	9.65	186.87	591,968.42	742,510.84
584.00	0.30	83.70	583.88	-9.87	-9.87	-0.76	9.90	184.40	591,968.13	742,511.24
679.00	0.50	114.20	678.87	-10.02	-10.02	-0.13	10.02	180.76	591,967.98	742,511.87
773.00	0.30	131.50	772.87	-10.35	-10.35	0.42	10.36	177.65	591,967.65	742,512.42
866.00	0.20	268.90	865.87	-10.51	-10.51	0.44	10.52	177.58	591,967.49	742,512.44
960.00	0.50	184.20	959.87	-10.92	-10.92	0.25	10.93	178.68	591,967.08	742,512.25
1,054.00	0.30	125.80	1,053.87	-11.48	-11.48	0.42	11.48	177.90	591,966.52	742,512.42
1,148.00	0.10	73.40	1,147.87	-11.60	-11.60	0.70	11.62	176.55	591,966.40	742,512.70
1,242.00	0.40	215.10	1,241.87	-11.84	-11.84	0.59	11.86	177.15	591,966.16	742,512.59
1,335.00	0.20	65.80	1,334.87	-12.04	-12.04	0.55	12.05	177.39	591,965.96	742,512.55
1,429.00	0.30	349.00	1,428.87	-11.73	-11.73	0.65	11.75	176.82	591,966.27	742,512.65
1,522.00	0.40	291.30	1,521.86	-11.37	-11.38	0.30	11.38	178.47	591,966.62	742,512.30
1,616.00	0.50	247.50	1,615.86	-11.41	-11.41	-0.38	11.42	181.91	591,966.59	742,511.62
1,711.00	0.60	275.90	1,710.86	-11.52	-11.52	-1.26	11.59	186.24	591,966.48	742,510.74
1,789.00	0.50	306.60	1,788.85	-11.28	-11.28	-1.94	11.44	189.75	591,966.72	742,510.06
1,899.00	0.30	283.70	1,898.85	-10.93	-10.92	-2.60	11.23	193.41	591,967.08	742,509.40
1,992.00	0.20	348.20	1,991.85	-10.71	-10.70	-2.87	11.08	195.02	591,967.30	742,509.13
2,086.00	0.20	342.10	2,085.85	-10.39	-10.39	-2.96	10.80	195.89	591,967.61	742,509.04
2,180.00	0.20	329.60	2,179.85	-10.10	-10.09	-3.09	10.55	197.03	591,967.91	742,508.91



ProDirectional Survey Report



Company: Matador Resources
Project: Lea County, NM
Site: Mallon 27 Federal
Well: No. 2H
Wellbore: OH
Design: MWD

Local Co-ordinate Reference: Well No. 2H
TVD Reference: Well @ 3742.50usft (GL: 3714' + KB: 28.5' (Patt809))
MD Reference: Well @ 3742.50usft (GL: 3714' + 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)
2,273.00	0.80	180.60	2,272.85	-10.61	-10.60	-3.18	11.07	196.70	591,967.40	742,508.82
2,367.00	3.00	168.40	2,366.79	-13.67	-13.67	-2.69	13.93	191.14	591,964.33	742,509.31
2,461.00	5.10	171.40	2,460.55	-20.21	-20.21	-1.57	20.27	184.45	591,957.79	742,510.43
2,555.00	5.60	171.50	2,554.14	-28.87	-28.87	-0.27	28.88	180.53	591,949.13	742,511.73
2,648.00	5.10	172.10	2,646.73	-37.45	-37.46	0.97	37.47	178.52	591,940.54	742,512.97
2,742.00	4.80	171.60	2,740.38	-45.48	-45.49	2.12	45.53	177.33	591,932.51	742,514.12
2,836.00	4.40	169.00	2,834.08	-52.91	-52.92	3.38	53.02	176.34	591,925.08	742,515.38
2,929.00	3.90	162.50	2,926.84	-59.42	-59.43	5.01	59.64	175.18	591,918.57	742,517.01
3,023.00	3.90	156.10	3,020.62	-65.39	-65.41	7.27	65.81	173.66	591,912.59	742,519.27
3,117.00	5.80	155.60	3,114.28	-72.63	-72.65	10.53	73.41	171.76	591,905.35	742,522.53
3,210.00	5.40	155.70	3,206.84	-80.89	-80.92	14.27	82.17	170.00	591,897.08	742,526.27
3,305.00	5.10	161.70	3,301.44	-88.97	-89.00	17.43	90.70	168.92	591,889.00	742,529.43
3,400.00	4.80	153.00	3,396.08	-96.52	-96.56	20.56	98.72	167.98	591,881.44	742,532.56
3,495.00	5.60	169.20	3,490.70	-104.61	-104.65	23.24	107.20	167.48	591,873.35	742,535.24
3,591.00	4.50	168.50	3,586.32	-112.89	-112.94	24.87	115.65	167.58	591,865.06	742,536.87
3,686.00	3.70	167.40	3,681.08	-119.54	-119.59	26.28	122.44	167.61	591,858.41	742,538.28
3,780.00	4.30	166.50	3,774.85	-125.92	-125.97	27.76	129.00	167.57	591,852.03	742,539.76
3,876.00	5.20	167.00	3,870.52	-133.65	-133.71	29.58	136.94	167.53	591,844.29	742,541.58
3,970.00	4.40	169.20	3,964.19	-141.34	-141.40	31.21	144.81	167.55	591,836.60	742,543.21
4,066.00	5.30	173.60	4,059.84	-149.36	-149.43	32.40	152.90	167.77	591,828.57	742,544.40
4,161.00	7.10	177.60	4,154.29	-159.59	-159.65	33.13	163.06	168.28	591,818.35	742,545.13
4,254.00	6.90	179.40	4,246.59	-170.92	-170.98	33.43	174.22	168.94	591,807.02	742,545.43
4,348.00	6.70	180.30	4,339.93	-182.05	-182.11	33.46	185.16	169.59	591,795.89	742,545.46
4,441.00	6.50	180.60	4,432.31	-192.74	-192.80	33.38	195.67	170.18	591,785.20	742,545.38
4,535.00	6.20	182.20	4,525.74	-203.13	-203.19	33.13	205.88	170.74	591,774.81	742,545.13
4,629.00	6.00	182.60	4,619.21	-213.11	-213.17	32.71	215.67	171.28	591,764.83	742,544.71
4,722.00	5.70	183.50	4,711.72	-222.58	-222.64	32.21	224.96	171.77	591,755.36	742,544.21



ProDirectional Survey Report



Company: Matador Resources
Project: Lea County, NM
Site: Mallon 27 Federal
Well: No. 2H
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Local Co-ordinate Reference: Well No. 2H
TVD Reference: Well @ 3742.50usft (GL: 3714' + KB: 28.5' (Patt809))
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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)
4,816.00	5.00	171.10	4,805.31	-231.28	-231.35	32.56	233.63	171.99	591,746.65	742,544.56
4,910.00	5.20	164.40	4,898.94	-239.43	-239.50	34.34	241.94	171.84	591,738.50	742,546.34
5,004.00	5.10	172.00	4,992.56	-247.67	-247.74	36.06	250.35	171.72	591,730.26	742,548.06
5,098.00	4.80	173.10	5,086.21	-255.71	-255.78	37.12	258.46	171.74	591,722.22	742,549.12
5,191.00	4.30	175.20	5,178.92	-263.04	-263.11	37.88	265.83	171.81	591,714.89	742,549.88
5,285.00	4.40	172.60	5,272.65	-270.13	-270.20	38.64	272.95	171.86	591,707.80	742,550.64
5,378.00	4.00	173.50	5,365.40	-276.89	-276.96	39.46	279.76	171.89	591,701.04	742,551.46
5,472.00	4.10	173.60	5,459.17	-283.48	-283.56	40.21	286.40	171.93	591,694.44	742,552.21
5,551.00	4.60	167.00	5,537.94	-289.37	-289.45	41.24	292.38	171.89	591,688.55	742,553.24
Last Survey: 5551' MD, 5537.94' TVD										
5,610.00	4.60	167.00	5,596.75	-293.98	-294.06	42.30	297.09	171.81	591,683.94	742,554.30
PTB: 5610' MD, 5596.75' TVD										

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
141.00	140.99	-1.60	-0.11	Pro MWD First Survey: 141' MD
5,551.00	5,537.94	-289.45	41.24	Last Survey: 5551' MD, 5537.94' TVD
5,610.00	5,596.75	-294.06	42.30	PTB: 5610' MD, 5596.75' TVD