

NM OIL CONSERVATION

ARTESIA DISTRICT

NOV 15 2016

RECEIVED

15-43899

Matador Resources
Matador, Eddy County, New Mexico (NAD 27)
Ann COM 15-24S-28E RB
#221H
Ms Mwd
Survey Date: Wednesday, September 28,
2016

MS Energy Services

Survey Report

Friday, October 14, 2016

Surface Coordinates: +444829.00, +578087.99 (32° 13' 21.7192" N, 104° 04' 50.9535" W)
Grid Coordinate System: NAD27 New Mexico State Planes, Eastern Zone, US Foot

Surface Coordinates relative to Well: 0.00, 0.00 (Grid)

RKB Elevation: 3044.00ft above Mean Sea Level
RKB Elevation: 29.00ft above Ground Level
Ground Level: 3015.00ft above Mean Sea Level

Survey Ref: svy58

Survey Report for Ann COM 15-24S-28E RB, #221H, Ms Mwd

Survey Depth (ft)	Incl. (°)	(Grid) Azim. (°)	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	
198.00	0.20	256.52	198.00	-0.08	-0.34	-0.34	0.101
390.00	0.31	93.53	390.00	-0.19	-0.14	-0.14	0.263
558.00	0.70	26.20	557.99	+0.70	+0.76	0.77	0.385
699.00	1.90	17.90	698.95	+3.70	+1.86	1.88	0.859
880.00	1.40	24.30	879.88	+8.57	+3.69	3.73	0.294
1067.00	4.90	328.80	1066.60	+17.49	+0.50	0.56	2.281
1254.00	7.20	315.50	1252.55	+32.68	-11.86	-11.74	1.432
1441.00	8.10	300.40	1437.90	+47.71	-31.44	-31.26	1.173
1628.00	7.00	301.20	1623.28	+60.28	-52.55	-52.33	0.591
1815.00	7.10	300.00	1808.87	+71.96	-72.30	-72.04	0.095
2002.00	7.40	304.60	1994.37	+84.57	-92.22	-91.91	0.349
2189.00	7.80	307.80	2179.73	+99.19	-112.16	-111.80	0.311
2376.00	7.60	298.80	2365.05	+112.93	-133.03	-132.61	0.653
2563.00	8.30	298.50	2550.25	+125.32	-155.72	-155.26	0.375
2740.00	7.80	299.30	2725.51	+137.30	-177.43	-176.92	0.289
2927.00	10.60	308.10	2910.09	+154.12	-202.03	-201.47	1.672
3113.00	13.70	306.60	3091.90	+177.82	-233.19	-232.53	1.675
3300.00	15.80	301.40	3272.74	+204.29	-272.70	-271.95	1.326
3487.00	15.30	298.10	3452.90	+229.17	-316.20	-315.35	0.543
3674.00	17.10	297.60	3632.47	+253.54	-362.33	-361.40	0.965
3861.00	17.50	297.20	3811.01	+279.12	-411.70	-410.67	0.223
4048.00	16.30	295.60	3989.93	+303.32	-460.37	-459.26	0.688
4235.00	15.90	299.30	4169.60	+327.19	-506.38	-505.18	0.589
4421.00	16.90	303.30	4348.03	+354.50	-551.20	-549.89	0.811
4608.00	16.50	303.00	4527.15	+383.89	-596.19	-594.78	0.219
4795.00	15.40	299.30	4706.95	+410.51	-640.11	-638.60	0.801
4982.00	13.30	303.10	4888.11	+434.41	-679.79	-678.19	1.230
5169.00	11.50	298.70	5070.74	+455.11	-714.16	-712.49	1.086
5356.00	9.80	304.90	5254.52	+473.17	-743.57	-741.83	1.095
5543.00	8.80	301.20	5439.06	+489.68	-768.86	-767.06	0.623
5730.00	7.20	303.80	5624.24	+503.61	-790.83	-788.98	0.877
5917.00	5.60	307.20	5810.07	+515.65	-807.84	-805.95	0.879
6010.00	4.10	307.70	5902.73	+520.43	-814.09	-812.17	1.614
6104.00	1.60	285.50	5996.61	+522.83	-818.01	-816.09	2.859
6198.00	1.50	283.90	6090.57	+523.48	-820.47	-818.54	0.116
6291.00	1.20	265.50	6183.55	+523.69	-822.62	-820.70	0.563
6385.00	1.20	214.90	6277.53	+522.81	-824.17	-822.24	1.091
6478.00	0.30	98.20	6370.52	+521.98	-824.48	-822.56	1.464
6572.00	0.70	113.60	6464.52	+521.71	-823.71	-821.79	0.445
6666.00	0.50	142.90	6558.52	+521.15	-822.94	-821.02	0.383
6759.00	0.90	116.30	6651.51	+520.51	-822.04	-820.13	0.543
6853.00	1.70	82.10	6745.48	+520.37	-820.00	-818.08	1.150
6946.00	1.60	32.40	6838.45	+521.66	-817.93	-816.02	1.494
7040.00	1.60	341.60	6932.42	+524.01	-817.64	-815.72	1.460

Survey Report for Ann COM 15-24S-28E RB, #221H, Ms Mwd

Survey Depth (ft)	Incl. (°)	(Grid) Azim. (°)	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
7134.00	1.20	340.10	7026.39	+526.18	-818.39	-816.46	0.427
7227.00	0.90	5.40	7119.38	+527.82	-818.66	-816.72	0.586
7321.00	0.50	47.60	7213.37	+528.84	-818.28	-816.34	0.667
7414.00	0.50	320.10	7306.37	+529.42	-818.25	-816.30	0.744
7508.00	1.00	279.80	7400.36	+529.87	-819.32	-817.37	0.743
7601.00	1.00	233.10	7493.35	+529.53	-820.77	-818.82	0.852
7695.00	1.50	190.40	7587.32	+527.82	-821.64	-819.70	1.088
7789.00	2.50	177.60	7681.27	+524.56	-821.78	-819.85	1.159
7883.00	2.10	143.10	7775.20	+521.14	-820.66	-818.74	1.507
7976.00	2.10	71.10	7868.15	+520.33	-818.02	-816.11	2.654
8070.00	2.50	64.60	7962.07	+521.77	-814.54	-812.62	0.507
8164.00	1.10	25.20	8056.03	+523.46	-812.31	-810.38	1.906
8257.00	0.90	28.50	8149.01	+524.91	-811.58	-809.65	0.224
8351.00	0.70	43.80	8243.00	+525.97	-810.83	-808.89	0.310
8444.00	0.70	39.30	8336.00	+526.82	-810.07	-808.14	0.059
8538.00	1.40	36.70	8429.98	+528.19	-809.02	-807.08	0.746
8632.00	1.50	30.70	8523.95	+530.17	-807.71	-805.76	0.193
8725.00	1.00	22.30	8616.93	+531.96	-806.78	-804.83	0.571
8819.00	1.10	12.20	8710.91	+533.61	-806.28	-804.32	0.223
8912.00	1.40	356.30	8803.89	+535.61	-806.16	-804.20	0.490
9006.00	1.70	345.10	8897.85	+538.11	-806.60	-804.62	0.452
9099.00	1.80	333.50	8990.81	+540.75	-807.60	-805.62	0.395
9193.00	1.80	355.70	9084.77	+543.54	-808.37	-806.37	0.737
9286.00	1.80	1.20	9177.72	+546.46	-808.45	-806.44	0.186
9380.00	1.50	357.00	9271.68	+549.16	-808.48	-806.47	0.344
9474.00	1.30	2.30	9365.65	+551.45	-808.51	-806.48	0.253
9567.00	1.30	355.50	9458.63	+553.56	-808.55	-806.51	0.166
9661.00	1.10	352.30	9552.61	+555.52	-808.75	-806.71	0.224
9755.00	1.20	354.80	9646.59	+557.39	-808.96	-806.91	0.119
9848.00	0.80	335.90	9739.58	+558.95	-809.31	-807.26	0.552
9911.00	0.80	328.80	9802.57	+559.73	-809.72	-807.67	0.157
9971.00	1.00	337.10	9862.56	+560.57	-810.14	-808.08	0.397
10065.00	6.40	83.00	9956.37	+561.97	-805.26	-803.19	7.173
10111.00	11.00	84.20	10001.83	+562.72	-798.34	-796.27	10.007
10158.00	16.10	85.70	10047.51	+563.67	-787.38	-785.30	10.876
10205.00	20.00	90.20	10092.19	+564.13	-772.83	-770.76	8.806
10252.00	23.80	88.80	10135.79	+564.30	-755.31	-753.23	8.161
10299.00	28.20	91.50	10178.02	+564.21	-734.71	-732.64	9.692
10346.00	31.60	90.90	10218.76	+563.72	-711.29	-709.22	7.262
10392.00	35.40	92.70	10257.11	+562.90	-685.93	-683.86	8.538
10439.00	40.40	94.60	10294.19	+561.04	-657.13	-655.07	10.923
10486.00	45.80	92.10	10328.50	+559.20	-625.08	-623.03	12.049
10533.00	50.70	90.00	10359.79	+558.58	-590.04	-587.99	10.944
10579.00	54.40	87.10	10387.76	+559.53	-553.54	-551.49	9.472
10626.00	57.20	87.90	10414.17	+561.22	-514.71	-512.65	6.121

Matador Resources
Matador, Eddy County, New Mexico
(NAD 27)

Survey Report for Ann COM 15-24S-28E RB, #221H, Ms Mwd

Survey Depth (ft)	Incl. (°)	(Grid) Azim. (°)	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
10673.00	60.40	90.20	10438.52	+561.87	-474.53	-472.46	7.992
10720.00	64.00	91.00	10460.43	+561.43	-432.96	-430.90	7.806
10767.00	68.50	93.10	10479.36	+559.88	-389.98	-387.93	10.411
10814.00	72.40	93.90	10495.09	+557.17	-345.78	-343.74	8.451
10889.00	78.90	93.90	10513.66	+552.23	-273.33	-271.30	8.667
10982.00	84.40	93.90	10527.16	+545.98	-181.56	-179.56	5.914
11076.00	86.00	93.20	10535.03	+540.18	-88.08	-86.10	1.857
11170.00	88.10	91.70	10539.87	+536.17	+5.70	7.67	2.744
11265.00	90.50	90.80	10541.03	+534.10	+100.67	102.62	2.698
11358.00	87.50	89.40	10542.65	+533.93	+193.64	195.59	3.560
11452.00	91.30	90.00	10543.63	+534.42	+287.61	289.57	4.093
11546.00	88.40	88.50	10543.88	+535.66	+381.59	383.55	3.473
11641.00	90.10	89.30	10545.12	+537.48	+476.56	478.53	1.978
11734.00	86.80	88.70	10547.64	+539.10	+569.50	571.47	3.607
11828.00	88.00	88.50	10551.90	+541.39	+663.38	665.36	1.294
11922.00	92.00	90.50	10551.90	+542.21	+757.35	759.33	4.757
12016.00	91.20	91.10	10549.28	+540.90	+851.30	853.28	1.064
12111.00	85.20	88.30	10552.26	+541.40	+946.20	948.18	6.968
12205.00	90.10	91.10	10556.12	+541.88	+1040.08	1042.06	6.002
12299.00	87.80	89.20	10557.84	+541.64	+1134.06	1136.03	3.173
12394.00	89.70	90.50	10559.91	+541.88	+1229.03	1231.00	2.423
12488.00	88.30	87.30	10561.55	+543.69	+1322.98	1324.96	3.715
12582.00	89.80	87.80	10563.11	+547.71	+1416.88	1418.88	1.682
12676.00	92.00	89.40	10561.63	+550.00	+1510.83	1512.84	2.894
12771.00	91.70	88.90	10558.57	+551.41	+1605.77	1607.78	0.614
12864.00	90.90	88.80	10556.46	+553.28	+1698.73	1700.74	0.867
12959.00	90.70	89.40	10555.13	+554.77	+1793.70	1795.73	0.666
13053.00	86.20	87.10	10557.67	+557.64	+1887.60	1889.63	5.376
13147.00	88.50	88.00	10562.02	+561.65	+1981.40	1983.45	2.627
13242.00	89.20	90.10	10563.93	+563.22	+2076.36	2078.41	2.330
13337.00	87.70	88.00	10566.50	+564.80	+2171.31	2173.36	2.716
13431.00	87.80	88.30	10570.19	+567.83	+2265.19	2267.25	0.336
13525.00	90.80	92.00	10571.33	+567.58	+2359.15	2361.22	5.067
13620.00	90.20	93.10	10570.51	+563.36	+2454.05	2456.10	1.319
13713.00	87.30	90.30	10572.53	+560.60	+2546.97	2549.01	4.334
13807.00	86.90	88.50	10577.29	+561.58	+2640.84	2642.88	1.959
13901.00	89.90	85.60	10579.92	+566.42	+2734.66	2736.72	4.438
13996.00	87.50	85.10	10582.07	+574.11	+2829.31	2831.40	2.581
14090.00	89.00	90.90	10584.94	+577.39	+2923.17	2925.27	6.370
14185.00	90.10	93.60	10585.69	+573.66	+3018.08	3020.17	3.069
14279.00	89.40	92.10	10586.10	+568.99	+3111.96	3114.03	1.761
14372.00	88.30	90.60	10587.97	+566.80	+3204.92	3206.97	2.000
14467.00	89.40	91.70	10589.87	+564.89	+3299.87	3301.92	1.637
14561.00	87.70	91.60	10592.25	+562.18	+3393.80	3395.84	1.812
14655.00	86.90	91.60	10596.68	+559.56	+3487.66	3489.69	0.851

Survey Report for Ann COM 15-24S-28E RB, #221H, Ms Mwd

Survey Depth (ft)	Incl. (°)	(Grid) Azim. (°)	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
14749.00	87.10	91.10	10601.60	+557.35	+3581.50	3583.52	0.572
14843.00	89.30	93.60	10604.55	+553.50	+3675.37	3677.37	3.542
14937.00	89.80	91.50	10605.29	+549.32	+3769.26	3771.25	2.296
15032.00	87.30	88.00	10607.70	+549.73	+3864.21	3866.20	4.526
15126.00	88.50	86.60	10611.14	+554.15	+3958.04	3960.04	1.961
15220.00	88.90	83.80	10613.27	+562.02	+4051.68	4053.71	3.008
15293.00	89.90	84.40	10614.04	+569.52	+4124.28	4126.34	1.597

Bit Projection

15364.00	89.90	84.40	10614.16	+576.45	+4194.95	4197.03	0.000
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All data is in Feet (US Survey) unless otherwise stated. Directions and coordinates are relative to Grid North. Vertical depths are relative to RKB. Northings and Eastings are relative to Well.

The dogleg severity is in Degrees per 100 feet (US Survey).
Vertical Section is from Well calculated along an azimuth of 89.79° (Grid).

Based upon minimum curvature calculations, at a measured depth of 15293.00ft, the bottom hole displacement is 4163.42ft, in the direction of 82.14° (Grid).

The along-hole displacement is 6005.23ft. The total accumulated dogleg is 250.382°. The measured tortuosity is 1.670°/100ft. The directional difficulty index is 5.8.

The survey penetrates target PBHL - Ann COM 15-24S-28E RB #221H at a measured depth of 15260.93ft at a distance of 103.69ft from the target centre. The survey penetrates target VP - Ann COM 15-24S-28E RB #221H at a measured depth of 9325.12ft at a distance of 3216.82ft from the target centre.

Comments associated with #221H, Ms Mwd

Station Coordinates						
Survey Depth (ft)	Incl. (°)	(Grid) Azimuth (°)	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Comment
198.00	0.20	256.52	198.00	-0.08	-0.34	Teledrift
390.00	0.31	93.53	390.00	-0.19	-0.14	Teledrift
558.00	0.70	26.20	557.99	+0.70	+0.76	Teledrift

Survey Tool Program for #221H, Ms Mwd

From		To		Survey Tool Description
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	
0.00	0.00	15293.00	10614.04	MWD

Survey Report for Ann COM 15-24S-28E RB, #221H, Ms Mwd

Targets associated with #221H, Ms Mwd

Target Name	Vertical Depth (ft)	Sub-Sea Depth (ft)	Target Entry Coordinates		Target Type (Shape)
			Northings (ft)	Eastings (ft)	
PBHL - Ann COM 15-24S-28E	10627.92	7583.92	+566.32	+4195.11	[N/A] (Point)
			+445395.32	+582283.10	(Map Coordinates)
			32° 13' 27.2235" N	104° 04' 02.1011" W	(Geographical Coordinates)
VP - Ann COM 15-24S-28E R	6000.00	2956.00	+547.64	-807.54	[N/A] (Point)
			+445376.64	+577280.45	(Map Coordinates)
			32° 13' 27.1575" N	104° 05' 00.3394" W	(Geographical Coordinates)



SURVEY CALCULATION PROGRAM

10/21/16 11:50

Company:		Matador Production Company												
Well Name:		Ann Com 15-24S-28E RB 221H												
Location:		Eddy County, NM												
Rig:		Patterson #297				Magnetic Declination:		7.19		REFERENCED TO GRID NORTH				
Job Number:		DDMO-160427												
API #:		30-015-43899												
Vertical Section Azimuth:				89.79		Proposed Direction:		89.79						
Survey Calculation Method:				Minimum Curvature										
PTB:	MD		INC		AZM		TVD		N/S		E/W		VS	
	15,364		89.9		84.4		10614.16		576.45		4194.95		4197.03	
#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure Distance		Azm	DLS/ 100	BUR/ 100'		
TIE IN	0	0.00	0.00	0.00	0.00	0.00		0.00						
1	198	0.20	256.52	198.00	-0.08	-0.34	-0.34	0.35	256.52	0.10	0.10			
2	390	0.31	93.53	390.00	-0.19	-0.14	-0.14	0.24	216.97	0.26	0.06			
3	558	0.70	26.20	557.99	0.70	0.76	0.77	1.04	47.39	0.39	0.23			
4	699	1.90	17.90	698.95	3.70	1.86	1.88	4.14	26.72	0.86	0.85			
5	880	1.40	24.30	879.88	8.57	3.69	3.73	9.33	23.32	0.29	-0.28			
6	1,067	4.90	328.80	1066.60	17.49	0.50	0.56	17.49	1.62	2.28	1.87			
7	1,254	7.20	315.50	1252.55	32.68	-11.86	-11.74	34.76	340.06	1.43	1.23			
8	1,441	8.10	300.40	1437.90	47.71	-31.44	-31.26	57.13	326.62	1.17	0.48			
9	1,628	7.00	301.20	1623.28	60.28	-52.55	-52.33	79.97	318.92	0.59	-0.59			
10	1,815	7.10	300.00	1808.87	71.96	-72.30	-72.04	102.01	314.86	0.10	0.05			
11	2,002	7.40	304.60	1994.37	84.57	-92.22	-91.91	125.13	312.52	0.35	0.16			
12	2,189	7.80	307.80	2179.73	99.19	-112.16	-111.80	149.73	311.49	0.31	0.21			
13	2,376	7.60	298.80	2365.05	112.93	-133.03	-132.61	174.49	310.33	0.65	-0.11			
14	2,563	8.30	298.50	2550.25	125.32	-155.72	-155.26	199.89	308.83	0.37	0.37			
15	2,740	7.80	299.30	2725.51	137.30	-177.43	-176.92	224.35	307.73	0.29	-0.28			
16	2,927	10.60	308.10	2910.09	154.12	-202.03	-201.47	254.11	307.34	1.67	1.50			
17	3,113	13.70	306.60	3091.90	177.82	-233.19	-232.53	293.25	307.33	1.68	1.67			
18	3,300	15.80	301.40	3272.74	204.29	-272.70	-271.95	340.73	306.84	1.33	1.12			
19	3,487	15.30	298.10	3452.90	229.17	-316.20	-315.35	390.51	305.93	0.54	-0.27			
20	3,674	17.10	297.60	3632.47	253.54	-362.33	-361.40	442.22	304.98	0.97	0.96			
21	3,861	17.50	297.20	3811.01	279.12	-411.70	-410.67	497.40	304.14	0.22	0.21			
22	4,048	16.30	295.60	3989.93	303.32	-460.37	-459.26	551.31	303.38	0.69	-0.64			
23	4,235	15.90	299.30	4169.60	327.19	-506.38	-505.18	602.89	302.87	0.59	-0.21			
24	4,421	16.90	303.30	4348.03	354.50	-551.20	-549.89	655.36	302.75	0.81	0.54			
25	4,608	16.50	303.00	4527.15	383.89	-596.19	-594.78	709.09	302.78	0.22	-0.21			
26	4,795	15.40	299.30	4706.95	410.51	-640.11	-638.60	760.43	302.67	0.80	-0.59			
27	4,982	13.30	303.10	4888.11	434.41	-679.79	-678.19	806.74	302.58	1.23	-1.12			
28	5,169	11.50	298.70	5070.74	455.11	-714.16	-712.49	846.85	302.51	1.09	-0.96			
29	5,356	9.80	304.90	5254.52	473.17	-743.57	-741.83	881.35	302.47	1.10	-0.91			
30	5,543	8.80	301.20	5439.06	489.68	-768.86	-767.06	911.56	302.49	0.62	-0.53			
31	5,730	7.20	303.80	5624.24	503.61	-790.83	-788.98	937.57	302.49	0.88	-0.86			
32	5,917	5.60	307.20	5810.07	515.65	-807.84	-805.95	958.38	302.55	0.88	-0.86			

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NM OIL CONSERVATION
ARTESIA DISTRICT

NOV 15 2016

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SURVEY CALCULATION PROGRAM

10/21/16 11:50

Company:	Matador Production Company		
Well Name:	Ann Com 15-24S-28E RB 221H		
Location:	Eddy County, NM		
Rig:	Patterson #297	Magnetic Declination:	7.19
Job Number:	DDMO-160427		
API #:	30-015-43899		

Vertical Section Azimuth: 89.79 Proposed Direction: 89.79

Survey Calculation Method: Minimum Curvature

PTB:	MD		INC		AZM		TVD		N/S		E/W		VS	
	15,364		89.9		84.4		10614.16		576.45		4194.95		4197.03	
#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure Distance Azm		DLS/ 100	BUR/ 100'			
33	6,010	4.10	307.70	5902.73	520.43	-814.09	-812.17	966.22	302.59	1.61	-1.61			
34	6,104	1.60	285.50	5996.61	522.83	-818.01	-816.09	970.82	302.58	2.86	-2.66			
35	6,198	1.50	283.90	6090.57	523.48	-820.47	-818.54	973.24	302.54	0.12	-0.11			
36	6,291	1.20	265.50	6183.55	523.69	-822.62	-820.70	975.17	302.48	0.56	-0.32			
37	6,385	1.20	214.90	6277.53	522.81	-824.17	-822.24	976.00	302.39	1.09	0.00			
38	6,478	0.30	98.20	6370.52	521.98	-824.48	-822.56	975.82	302.34	1.46	-0.97			
39	6,572	0.70	113.60	6464.52	521.71	-823.71	-821.79	975.03	302.35	0.45	0.43			
40	6,666	0.50	142.90	6558.52	521.15	-822.94	-821.02	974.08	302.35	0.38	-0.21			
41	6,759	0.90	116.30	6651.51	520.51	-822.04	-820.13	972.97	302.34	0.54	0.43			
42	6,853	1.70	82.10	6745.48	520.37	-820.00	-818.08	971.17	302.40	1.15	0.85			
43	6,946	1.60	32.40	6838.45	521.66	-817.93	-816.02	970.12	302.53	1.49	-0.11			
44	7,040	1.60	341.60	6932.42	524.01	-817.64	-815.72	971.15	302.65	1.46	0.00			
45	7,134	1.20	340.10	7026.39	526.18	-818.39	-816.46	972.95	302.74	0.43	-0.43			
46	7,227	0.90	5.40	7119.38	527.82	-818.66	-816.72	974.06	302.81	0.59	-0.32			
47	7,321	0.50	47.60	7213.37	528.84	-818.28	-816.34	974.30	302.87	0.67	-0.43			
48	7,414	0.50	320.10	7306.37	529.42	-818.25	-816.30	974.58	302.90	0.74	0.00			
49	7,508	1.00	279.80	7400.36	529.87	-819.32	-817.37	975.73	302.89	0.74	0.53			
50	7,601	1.00	233.10	7493.35	529.53	-820.77	-818.82	976.76	302.83	0.85	0.00			
51	7,695	1.50	190.40	7587.32	527.82	-821.64	-819.70	976.57	302.72	1.09	0.53			
52	7,789	2.50	177.60	7681.27	524.56	-821.78	-819.85	974.93	302.55	1.16	1.06			
53	7,883	2.10	143.10	7775.20	521.14	-820.66	-818.74	972.15	302.42	1.51	-0.43			
54	7,976	2.10	71.10	7868.15	520.33	-818.02	-816.11	969.49	302.46	2.65	0.00			
55	8,070	2.50	64.60	7962.07	521.77	-814.54	-812.62	967.33	302.64	0.51	0.43			
56	8,164	1.10	25.20	8056.03	523.46	-812.31	-810.38	966.36	302.80	1.91	-1.49			
57	8,257	0.90	28.50	8149.01	524.91	-811.58	-809.65	966.53	302.89	0.22	-0.22			
58	8,351	0.70	43.80	8243.00	525.97	-810.83	-808.89	966.48	302.97	0.31	-0.21			
59	8,444	0.70	39.30	8336.00	526.82	-810.07	-808.14	966.31	303.04	0.06	0.00			
60	8,538	1.40	36.70	8429.98	528.19	-809.02	-807.08	966.18	303.14	0.75	0.74			
61	8,632	1.50	30.70	8523.95	530.17	-807.71	-805.76	966.16	303.28	0.19	0.11			
62	8,725	1.00	22.30	8616.93	531.96	-806.78	-804.83	966.38	303.40	0.57	-0.54			
63	8,819	1.10	12.20	8710.91	533.61	-806.28	-804.32	966.86	303.50	0.22	0.11			
64	8,912	1.40	356.30	8803.89	535.61	-806.16	-804.20	967.87	303.60	0.49	0.32			
65	9,006	1.70	345.10	8897.85	538.11	-806.60	-804.62	969.62	303.71	0.45	0.32			
66	9,099	1.80	333.50	8990.81	540.75	-807.60	-805.62	971.92	303.81	0.40	0.11			



SURVEY CALCULATION PROGRAM

10/21/16 11:50

Company:	Matador Production Company		
Well Name:	Ann Com 15-24S-28E RB 221H		
Location:	Eddy County, NM		
Rig:	Patterson #297	Magnetic Declination:	7.19
Job Number:	DDMO-160427		
API #:	30-015-43899		
Vertical Section Azimuth:	89.79	Proposed Direction:	89.79

Survey Calculation Method:		Minimum Curvature									
PTB:	MD	INC	AZM	TVD	N/S	E/W	VS				
	15,364	89.9	84.4	10614.16	576.45	4194.95	4197.03				
#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	Surface Vert Sec	Closure Distance	Azm	DLS/ 100	BUR/ 100'	
67	9,193	1.80	355.70	9084.77	543.54	-808.37	-806.37	974.12	303.92	0.74	0.00
68	9,286	1.80	1.20	9177.72	546.46	-808.45	-806.44	975.81	304.06	0.19	0.00
69	9,380	1.50	357.00	9271.68	549.16	-808.48	-806.47	977.36	304.19	0.34	-0.32
70	9,474	1.30	2.30	9365.65	551.45	-808.51	-806.48	978.66	304.30	0.25	-0.21
71	9,567	1.30	355.50	9458.63	553.56	-808.55	-806.51	979.89	304.40	0.17	0.00
72	9,661	1.10	352.30	9552.61	555.52	-808.75	-806.71	981.16	304.48	0.22	-0.21
73	9,755	1.20	354.80	9646.59	557.39	-808.96	-806.91	982.40	304.57	0.12	0.11
74	9,848	0.80	335.90	9739.58	558.95	-809.31	-807.26	983.58	304.63	0.55	-0.43
75	9,911	0.80	328.80	9802.57	559.73	-809.72	-807.67	984.35	304.65	0.16	0.00
76	9,971	1.00	337.10	9862.56	560.57	-810.14	-808.08	985.18	304.68	0.40	0.33
77	10,065	6.40	83.00	9956.37	561.97	-805.26	-803.19	981.96	304.91	7.17	5.74
78	10,111	11.00	84.20	10001.83	562.72	-798.34	-796.27	976.73	305.18	10.01	10.00
79	10,158	16.10	85.70	10047.51	563.67	-787.38	-785.30	968.34	305.60	10.88	10.85
80	10,205	20.00	90.20	10092.19	564.13	-772.83	-770.76	956.82	306.13	8.81	8.30
81	10,252	23.80	88.80	10135.79	564.30	-755.31	-753.23	942.83	306.76	8.16	8.09
82	10,299	28.20	91.50	10178.02	564.21	-734.71	-732.64	926.36	307.52	9.69	9.36
83	10,346	31.60	90.90	10218.76	563.72	-711.29	-709.22	907.59	308.40	7.26	7.23
84	10,392	35.40	92.70	10257.11	562.90	-685.93	-683.86	887.33	309.37	8.54	8.26
85	10,439	40.40	94.60	10294.19	561.04	-657.13	-655.07	864.05	310.49	10.92	10.64
86	10,486	45.80	92.10	10328.50	559.20	-625.08	-623.03	838.71	311.82	12.05	11.49
87	10,533	50.70	90.00	10359.79	558.58	-590.04	-587.99	812.50	313.43	10.94	10.43
88	10,579	54.40	87.10	10387.76	559.53	-553.54	-551.49	787.07	315.31	9.47	8.04
89	10,626	57.20	87.90	10414.17	561.22	-514.71	-512.65	761.51	317.48	6.12	5.96
90	10,673	60.40	90.20	10438.52	561.87	-474.53	-472.46	735.44	319.82	7.99	6.81
91	10,720	64.00	91.00	10460.43	561.43	-432.96	-430.90	708.99	322.36	7.81	7.66
92	10,767	68.50	93.10	10479.36	559.88	-389.98	-387.93	682.31	325.14	10.41	9.57
93	10,814	72.40	93.90	10495.09	557.17	-345.78	-343.74	655.75	328.18	8.45	8.30
94	10,889	78.90	93.90	10513.66	552.23	-273.33	-271.30	616.18	333.67	8.67	8.67
95	10,982	84.40	93.90	10527.16	545.98	-181.56	-179.56	575.38	341.61	5.91	5.91
96	11,076	86.00	93.20	10535.03	540.18	-88.08	-86.10	547.31	350.74	1.86	1.70
97	11,170	88.10	91.70	10539.87	536.17	5.70	7.67	536.20	0.61	2.74	2.23
98	11,265	90.50	90.80	10541.03	534.10	100.67	102.62	543.50	10.67	2.70	2.53
99	11,358	87.50	89.40	10542.65	533.93	193.64	195.59	567.96	19.93	3.56	-3.23



SURVEY CALCULATION PROGRAM

10/21/16 11:50

Company:	Matador Production Company		
Well Name:	Ann Com 15-24S-28E RB 221H		
Location:	Eddy County, NM		
Rig:	Patterson #297	Magnetic Declination:	7.19
Job Number:	DDMO-160427		
API #:	30-015-43899		

Vertical Section Azimuth:	89.79	Proposed Direction:	89.79
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Survey Calculation Method:	Minimum Curvature
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PTB:	MD		INC		AZM		TVD		N/S		E/W		VS	
	15,364		89.9		84.4		10614.16		576.45		4194.95		4197.03	
#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure Distance Azm		DLS/ 100'	BUR/ 100'			
100	11,452	91.30	90.00	10543.63	534.42	287.61	289.57	606.90	28.29	4.09	4.04			
101	11,546	88.40	88.50	10543.88	535.66	381.59	383.55	657.68	35.47	3.47	-3.09			
102	11,641	90.10	89.30	10545.12	537.48	476.56	478.53	718.33	41.56	1.98	1.79			
103	11,734	86.80	88.70	10547.64	539.10	569.50	571.47	784.20	46.57	3.61	-3.55			
104	11,828	88.00	88.50	10551.90	541.39	663.38	665.36	856.26	50.78	1.29	1.28			
105	11,922	92.00	90.50	10551.90	542.21	757.35	759.33	931.44	54.40	4.76	4.26			
106	12,016	91.20	91.10	10549.28	540.90	851.30	853.28	1008.61	57.57	1.06	-0.85			
107	12,111	85.20	88.30	10552.26	541.40	946.20	948.18	1090.14	60.22	6.97	-6.32			
108	12,205	90.10	91.10	10556.12	541.88	1040.08	1042.06	1172.78	62.48	6.00	5.21			
109	12,299	87.80	89.20	10557.84	541.64	1134.06	1136.03	1256.76	64.47	3.17	-2.45			
110	12,394	89.70	90.50	10559.91	541.88	1229.03	1231.00	1343.18	66.21	2.42	2.00			
111	12,488	88.30	87.30	10561.55	543.69	1322.98	1324.96	1430.34	67.66	3.72	-1.49			
112	12,582	89.80	87.80	10563.11	547.71	1416.88	1418.88	1519.05	68.87	1.68	1.60			
113	12,676	92.00	89.40	10561.63	550.00	1510.83	1512.84	1607.83	70.00	2.89	2.34			
114	12,771	91.70	88.90	10558.57	551.41	1605.77	1607.78	1697.81	71.05	0.61	-0.32			
115	12,864	90.90	88.80	10556.46	553.28	1698.73	1700.74	1786.56	71.96	0.87	-0.86			
116	12,959	90.70	89.40	10555.13	554.77	1793.70	1795.73	1877.54	72.81	0.67	-0.21			
117	13,053	86.20	87.10	10557.67	557.64	1887.60	1889.63	1968.24	73.54	5.38	-4.79			
118	13,147	88.50	88.00	10562.02	561.65	1981.40	1983.45	2059.47	74.17	2.63	2.45			
119	13,242	89.20	90.10	10563.93	563.22	2076.36	2078.41	2151.40	74.82	2.33	0.74			
120	13,337	87.70	88.00	10566.50	564.80	2171.31	2173.36	2243.56	75.42	2.72	-1.58			
121	13,431	87.80	88.30	10570.19	567.83	2265.19	2267.25	2335.27	75.93	0.34	0.11			
122	13,525	90.80	92.00	10571.33	567.58	2359.15	2361.22	2426.47	76.47	5.07	3.19			
123	13,620	90.20	93.10	10570.51	563.36	2454.05	2456.10	2517.88	77.07	1.32	-0.63			
124	13,713	87.30	90.30	10572.53	560.60	2546.97	2549.01	2607.94	77.59	4.33	-3.12			
125	13,807	86.90	88.50	10577.29	561.58	2640.84	2642.88	2699.89	77.99	1.96	-0.43			
126	13,901	89.90	85.60	10579.92	566.42	2734.66	2736.72	2792.70	78.30	4.44	3.19			
127	13,996	87.50	85.10	10582.07	574.11	2829.31	2831.40	2886.98	78.53	2.58	-2.53			
128	14,090	89.00	90.90	10584.94	577.39	2923.17	2925.27	2979.65	78.83	6.37	1.60			
129	14,185	90.10	93.60	10585.69	573.66	3018.08	3020.17	3072.12	79.24	3.07	1.16			
130	14,279	89.40	92.10	10586.10	568.99	3111.96	3114.03	3163.55	79.64	1.76	-0.74			
131	14,372	88.30	90.60	10587.97	566.80	3204.92	3206.97	3254.65	79.97	2.00	-1.18			
132	14,467	89.40	91.70	10589.87	564.89	3299.87	3301.92	3347.88	80.29	1.64	1.16			



SURVEY CALCULATION PROGRAM

10/21/16 11:50

Company:		Matador Production Company													
Well Name:		Ann Com 15-24S-28E RB 221H													
Location:		Eddy County, NM													
Rig:		Patterson #297				Magnetic Declination:		7.19		REFERENCED TO GRID NORTH					
Job Number:		DDMO-160427													
API #:		30-015-43899													
Vertical Section Azimuth:				89.79		Proposed Direction:		89.79							
Survey Calculation Method:				Minimum Curvature											
PTB:	MD		INC		AZM		TVD		N/S		E/W		VS		
	15,364		89.9		84.4		10614.16		576.45		4194.95		4197.03		
#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure Distance		Azm	DLS/ 100	BUR/ 100'			
133	14,561	87.70	91.60	10592.25	562.18	3393.80	3395.84	3440.05		80.59	1.81	-1.81			
134	14,655	86.90	91.60	10596.68	559.56	3487.66	3489.69	3532.26		80.89	0.85	-0.85			
135	14,749	87.10	91.10	10601.60	557.35	3581.50	3583.52	3624.61		81.15	0.57	0.21			
136	14,843	89.30	93.60	10604.55	553.50	3675.37	3677.37	3716.81		81.44	3.54	2.34			
137	14,937	89.80	91.50	10605.29	549.32	3769.26	3771.25	3809.08		81.71	2.30	0.53			
138	15,032	87.30	88.00	10607.70	549.73	3864.21	3866.20	3903.12		81.90	4.53	-2.63			
139	15,126	88.50	86.60	10611.14	554.15	3958.04	3960.04	3996.64		82.03	1.96	1.28			
140	15,220	88.90	83.80	10613.27	562.02	4051.68	4053.71	4090.47		82.10	3.01	0.43			
141	15,293	89.90	84.40	10614.04	569.52	4124.28	4126.34	4163.42		82.14	1.60	1.37			



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Fort Worth, Texas 76140

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State of Texas

County of Tarrant

I, TIM LITTLE, certify that; I am employed by MS Energy Services;
that I did on the day(s) of 9/27/16 through 10/14/16 conduct or supervise
the taking of MWD survey(s) from a depth of 198 feet to a depth of 15,293
feet; that the data is true, correct, complete and within the limitations of the tool set forth by MS Energy
Services; that I am authorized and qualified to make this report; that this survey(s) was / were
conducted at the request of MATADOR PRODUCTION COMPANY,
for the ANNCON 15.245.28E RB ^{221A} API No. 30.015.43899
in Eddy County / Parish, NEW MEXICO; and that I have
reviewed this report and find that it conforms to the principles and procedures as set forth by
MS Energy Services.

Signature: Tim Little
Title: MWD Lead Specialist

MS Directional

MS Guidance

MS Survey

MS Wireline