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Fort Worth, Texas 76140

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Survey Company: MS Energy Services
MWD Surveyor Name: Tim Little
Survey Type: MWD
Operating Company: Matador Production Company
Well Name & Number: Kathy Coleman 14-23S-27E RB 208H
API Number: 30-015-44058
Surveyed Depths: 146' – 13,897' MD; PTB: 13,989'
Dates Performed: 05/24/2017 – 06/27/2017
Location: Eddy County, NM

NM OIL CONSERVATION
ARTESIA DISTRICT
SEP 29 2017
RECEIVED

I certify that the data is true, correct and complete and within the limitations of the tool set forth by MS Energy Services; that I am authorized and qualified to make this report and that I have reviewed this report and find it conforms to the principles and procedures as set forth by MS Energy Services.

Digitally signed by: Tim Little
Title: MWD Field Specialist
Date: 07-11-2017
Email: tlittle@msenergyservices.com

Company:		Matador Production Company										
Well Name:		Kathy Coleman 14-23S-27E RB 208H										
Location:		Eddy County, NM										
Rig:		Patterson #297					Magnetic Declination:		7.30		REFERENCED TO GRID NORTH	
Job Number:		DDMO-170456										
API #:		30-015-44058										
Vertical Section Azimuth:			269.86			Proposed Direction:		269.86				
Survey Calculation Method:			Minimum Curvature									
PTB:	MD		INC		AZM	TVD	N/S	E/W		VS		
	13,989		91.5		268.8	9138.92	-52.3	-4548.64		4548.76		
#	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	146	0.70	135.20	146.00	-0.63	0.63	-0.63	0.89	135.20	0.48	0.48	
2	238	0.60	68.40	237.99	-0.85	1.47	-1.47	1.70	120.12	0.78	-0.11	
3	385	0.40	104.10	384.99	-0.70	2.69	-2.68	2.77	104.53	0.25	-0.14	
4	513	0.20	136.00	512.98	-0.97	3.27	-3.27	3.41	106.43	0.20	-0.16	
5	696	0.20	32.30	695.98	-0.93	3.67	-3.66	3.78	104.16	0.17	0.00	
6	880	0.40	29.70	879.98	-0.10	4.16	-4.16	4.16	91.32	0.11	0.11	
7	1,067	1.90	111.90	1066.94	-0.69	7.36	-7.35	7.39	95.32	1.01	0.80	
8	1,254	2.50	109.70	1253.81	-3.22	14.07	-14.06	14.44	102.87	0.32	0.32	
9	1,441	2.80	109.00	1440.61	-6.08	22.23	-22.22	23.05	105.29	0.16	0.16	
10	1,628	5.90	109.80	1627.04	-10.82	35.60	-35.57	37.20	106.91	1.66	1.66	
11	1,815	5.10	109.20	1813.18	-16.81	52.49	-52.45	55.11	107.76	0.43	-0.43	
12	2,002	5.30	110.70	1999.41	-22.60	68.42	-68.36	72.05	108.28	0.13	0.11	
13	2,189	4.30	109.20	2185.75	-27.96	83.12	-83.05	87.69	108.59	0.54	-0.53	
14	2,388	3.10	112.70	2384.34	-32.49	95.13	-95.05	100.52	108.86	0.61	-0.60	
15	2,559	2.50	110.50	2555.13	-35.58	102.89	-102.80	108.86	109.07	0.36	-0.35	
16	2,653	4.00	105.60	2648.98	-37.18	107.96	-107.87	114.19	109.00	1.62	1.60	
17	2,840	6.00	104.10	2835.26	-41.31	123.73	-123.63	130.44	108.46	1.07	1.07	
18	3,028	7.70	107.70	3021.91	-47.53	145.26	-145.14	152.84	108.12	0.93	0.90	
19	3,215	7.00	106.10	3207.37	-54.50	168.14	-168.01	176.75	107.96	0.39	-0.37	
20	3,402	6.60	104.50	3393.06	-60.35	189.49	-189.34	198.87	107.67	0.24	-0.21	
21	3,589	8.30	101.90	3578.47	-65.83	213.10	-212.94	223.04	107.17	0.93	0.91	
22	3,776	7.40	101.20	3763.72	-70.95	238.13	-237.95	248.47	106.59	0.48	-0.48	
23	3,964	7.40	100.10	3950.15	-75.43	261.92	-261.74	272.56	106.06	0.08	0.00	
24	4,151	7.00	102.40	4135.68	-79.98	284.91	-284.71	295.92	105.68	0.26	-0.21	
25	4,338	5.90	99.00	4321.49	-83.94	305.53	-305.32	316.85	105.36	0.62	-0.59	
26	4,525	7.40	100.50	4507.23	-87.63	326.86	-326.65	338.41	105.01	0.81	0.80	
27	4,712	9.40	104.30	4692.21	-93.60	353.50	-353.27	365.69	104.83	1.11	1.07	
28	4,900	8.10	102.40	4878.02	-100.24	381.32	-381.07	394.27	104.73	0.71	-0.69	
29	5,087	6.70	103.00	5063.46	-105.52	404.82	-404.56	418.34	104.61	0.75	-0.75	
30	5,274	5.20	104.10	5249.45	-110.04	423.66	-423.39	437.72	104.56	0.80	-0.80	
31	5,461	4.20	104.30	5435.82	-113.79	438.52	-438.24	453.04	104.55	0.53	-0.53	
32	5,648	3.30	104.80	5622.41	-116.86	450.36	-450.07	465.27	104.55	0.48	-0.48	
33	5,836	1.10	106.10	5810.26	-118.74	457.33	-457.03	472.49	104.56	1.17	-1.17	

Company:		Matador Production Company												
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Location:		Eddy County, NM												
Rig:		Patterson #297					Magnetic Declination:		7.30		REFERENCED TO GRID NORTH			
Job Number:		DDMO-170456												
API #:		30-015-44058												
Vertical Section Azimuth:			269.86			Proposed Direction:		269.86						
Survey Calculation Method:			Minimum Curvature											
PTB:	MD		INC		AZM		TVD		N/S		E/W		VS	
	13,989		91.5		268.8		9138.92		-52.3		-4548.64		4548.76	
#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure Distance Azm		DLS/ 100	BUR/ 100'			
34	6,023	0.40	256.90	5997.25	-119.39	458.41	-458.12	473.71	104.60	0.78	-0.37			
35	6,210	0.90	269.80	6184.24	-119.54	456.31	-456.02	471.71	104.68	0.28	0.27			
36	6,398	0.50	271.00	6372.23	-119.53	454.01	-453.72	469.48	104.75	0.21	-0.21			
37	6,585	1.10	347.40	6559.21	-117.77	452.81	-452.52	467.87	104.58	0.59	0.32			
38	6,772	0.70	14.90	6746.19	-114.91	452.71	-452.43	467.06	104.24	0.31	-0.21			
39	6,960	0.10	285.90	6934.18	-113.76	452.85	-452.57	466.91	104.10	0.38	-0.32			
40	7,147	0.40	206.60	7121.18	-114.30	452.40	-452.12	466.61	104.18	0.21	0.16			
41	7,334	1.20	305.10	7308.17	-113.75	450.50	-450.22	464.64	104.17	0.71	0.43			
42	7,521	2.60	300.90	7495.06	-110.45	445.26	-444.99	458.75	103.93	0.75	0.75			
43	7,708	0.70	113.50	7682.01	-108.73	442.67	-442.40	455.82	103.80	1.76	-1.02			
44	7,802	0.50	99.00	7776.00	-109.02	443.60	-443.33	456.80	103.81	0.27	-0.21			
45	7,896	0.00	17.40	7870.00	-109.08	444.00	-443.74	457.21	103.80	0.53	-0.53			
46	8,083	0.30	140.90	8057.00	-109.46	444.31	-444.04	457.60	103.84	0.16	0.16			
47	8,270	0.40	51.80	8244.00	-109.44	445.13	-444.87	458.39	103.81	0.27	0.05			
48	8,457	0.80	141.10	8430.99	-110.05	446.47	-446.20	459.83	103.85	0.48	0.21			
49	8,593	0.80	189.00	8566.98	-111.73	446.91	-446.64	460.67	104.04	0.48	0.00			
50	8,672	1.00	252.50	8645.97	-112.48	446.17	-445.89	460.13	104.15	1.22	0.25			
51	8,719	6.30	292.80	8692.86	-111.60	443.40	-443.13	457.23	104.13	11.86	11.28			
52	8,765	13.20	297.40	8738.17	-108.21	436.40	-436.14	449.62	103.93	15.08	15.00			
53	8,812	19.00	290.60	8783.31	-103.04	424.47	-424.21	436.79	103.64	12.96	12.34			
54	8,859	24.00	281.90	8827.04	-98.37	407.94	-407.69	419.63	103.56	12.59	10.64			
55	8,906	29.30	272.00	8869.05	-96.00	387.06	-386.83	398.79	103.93	14.68	11.28			
56	8,952	32.70	272.40	8908.48	-95.08	363.39	-363.16	375.63	104.66	7.40	7.39			
57	8,999	36.20	274.20	8947.23	-93.53	336.86	-336.63	349.60	105.52	7.75	7.45			
58	9,046	39.40	273.80	8984.36	-91.53	308.13	-307.90	321.43	106.54	6.83	6.81			
59	9,093	42.90	274.00	9019.75	-89.42	277.27	-277.06	291.34	107.88	7.45	7.45			
60	9,140	46.10	275.60	9053.27	-86.65	244.46	-244.24	259.36	109.52	7.21	6.81			
61	9,186	48.70	276.70	9084.40	-83.02	210.79	-210.59	226.55	111.50	5.92	5.65			
62	9,233	53.00	276.30	9114.07	-78.90	174.59	-174.39	191.59	114.32	9.17	9.15			
63	9,280	57.20	275.10	9140.95	-75.08	136.24	-136.06	155.56	118.86	9.18	8.94			
64	9,327	61.60	273.30	9164.87	-72.13	95.91	-95.73	120.01	126.95	9.92	9.36			
65	9,374	65.70	270.30	9185.73	-70.83	53.82	-53.65	88.96	142.77	10.43	8.72			
66	9,421	69.30	268.80	9203.72	-71.18	10.41	-10.24	71.94	171.68	8.21	7.66			
67	9,467	73.90	269.40	9218.23	-71.86	-33.22	33.39	79.17	204.81	10.08	10.00			

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Rig:		Patterson #297					Magnetic Declination:		7.30		REFERENCED TO GRID NORTH ▼	
Job Number:		DDMO-170456										
API #:		30-015-44058										
Vertical Section Azimuth:				269.86		Proposed Direction:		269.86				
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PTB:	MD		INC		AZM	TVD	N/S	E/W		VS		
	13,989		91.5		268.8	9138.92	-52.3	-4548.64		4548.76		
#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure Distance Azm		DLS/ 100	BUR/ 100'	
68	9,581	81.30	270.00	9242.70	-72.44	-144.48	144.66	161.62	243.37	6.51	6.49	
69	9,612	84.80	270.40	9246.45	-72.33	-175.25	175.42	189.59	247.57	11.36	11.29	
70	9,644	85.00	270.90	9249.29	-71.97	-207.12	207.29	219.27	250.84	1.68	0.63	
71	9,675	87.60	270.60	9251.29	-71.56	-238.05	238.22	248.57	253.27	8.44	8.39	
72	9,706	91.10	270.50	9251.64	-71.27	-269.04	269.21	278.32	255.16	11.29	11.29	
73	9,738	91.60	270.60	9250.89	-70.96	-301.03	301.20	309.28	256.74	1.59	1.56	
74	9,769	91.60	270.50	9250.02	-70.66	-332.02	332.19	339.45	257.99	0.32	0.00	
75	9,863	91.80	270.40	9247.24	-69.92	-425.97	426.14	431.67	260.68	0.24	0.21	
76	9,958	91.20	269.80	9244.75	-69.76	-520.94	521.11	525.59	262.37	0.89	-0.63	
77	10,052	90.70	269.60	9243.19	-70.25	-614.92	615.09	618.92	263.48	0.57	-0.53	
78	10,146	93.10	270.40	9240.07	-70.25	-708.86	709.03	712.34	264.34	2.69	2.55	
79	10,240	93.00	271.00	9235.07	-69.10	-802.72	802.89	805.69	265.08	0.65	-0.11	
80	10,335	92.80	271.00	9230.27	-67.45	-897.59	897.75	900.12	265.70	0.21	-0.21	
81	10,429	91.70	270.60	9226.58	-66.14	-991.50	991.66	993.71	266.18	1.25	-1.17	
82	10,522	93.30	271.40	9222.52	-64.51	-1084.40	1084.55	1086.32	266.60	1.92	1.72	
83	10,617	92.10	271.00	9218.04	-62.53	-1179.27	1179.42	1180.93	266.96	1.33	-1.26	
84	10,711	92.50	271.40	9214.27	-60.56	-1273.17	1273.32	1274.61	267.28	0.60	0.43	
85	10,805	90.00	270.60	9212.22	-58.92	-1367.13	1367.27	1368.40	267.53	2.79	-2.66	
86	10,899	90.00	271.00	9212.22	-57.61	-1461.12	1461.25	1462.25	267.74	0.43	0.00	
87	10,994	89.50	271.60	9212.64	-55.45	-1556.09	1556.22	1557.08	267.96	0.82	-0.53	
88	11,088	89.80	271.70	9213.21	-52.75	-1650.05	1650.18	1650.89	268.17	0.34	0.32	
89	11,182	90.00	271.40	9213.37	-50.20	-1744.02	1744.13	1744.74	268.35	0.38	0.21	
90	11,276	91.50	272.30	9212.14	-47.17	-1837.96	1838.07	1838.56	268.53	1.86	1.60	
91	11,369	91.20	271.70	9209.95	-43.93	-1930.87	1930.97	1931.37	268.70	0.72	-0.32	
92	11,463	92.10	271.00	9207.25	-41.71	-2024.81	2024.90	2025.24	268.82	1.21	0.96	
93	11,557	90.50	269.10	9205.11	-41.63	-2118.77	2118.87	2119.18	268.87	2.64	-1.70	
94	11,652	90.80	269.20	9204.04	-43.04	-2213.76	2213.86	2214.18	268.89	0.33	0.32	
95	11,746	89.20	268.90	9204.04	-44.60	-2307.74	2307.84	2308.17	268.89	1.73	-1.70	
96	11,840	89.90	268.90	9204.77	-46.40	-2401.72	2401.83	2402.17	268.89	0.74	0.74	
97	11,934	89.70	268.90	9205.10	-48.21	-2495.70	2495.81	2496.17	268.89	0.21	-0.21	
98	12,028	94.60	270.60	9201.58	-48.62	-2589.60	2589.72	2590.06	268.92	5.52	5.21	
99	12,122	93.10	271.00	9195.26	-47.31	-2683.38	2683.49	2683.80	268.99	1.65	-1.60	
100	12,217	92.30	271.20	9190.79	-45.49	-2778.26	2778.36	2778.63	269.06	0.87	-0.84	
101	12,311	90.30	271.00	9188.66	-43.68	-2872.21	2872.31	2872.54	269.13	2.14	-2.13	

Company:

Matador Production Company

Well Name:

Kathy Coleman 14-23S-27E RB 208H

Location:

Eddy County, NM

Rig:

Patterson #297

Magnetic Declination:

7.30

REFERENCED TO GRID NORTH

Job Number:

DDMO-170456

API #:

30-015-44058

Vertical Section Azimuth:

269.86

Proposed Direction:

269.86

Survey Calculation Method:

Minimum Curvature

PTB:

MD

INC

AZM

TVD

N/S

E/W

VS

13,989

91.5

268.8

9138.92

-52.3

-4548.64

4548.76

#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure		DLS/ 100	BUR/ 100'
								Distance	Azm		
102	12,405	93.00	272.40	9185.95	-40.90	-2966.12	2966.21	2966.40	269.21	3.24	2.87
103	12,499	91.80	271.70	9182.01	-37.54	-3059.97	3060.06	3060.20	269.30	1.48	-1.28
104	12,593	91.30	270.60	9179.47	-35.65	-3153.92	3154.00	3154.12	269.35	1.29	-0.53
105	12,687	94.00	269.80	9175.13	-35.32	-3247.81	3247.88	3248.00	269.38	3.00	2.87
106	12,780	93.80	269.80	9168.80	-35.65	-3340.59	3340.67	3340.78	269.39	0.22	-0.22
107	12,874	92.30	269.80	9163.80	-35.97	-3434.46	3434.53	3434.64	269.40	1.60	-1.60
108	12,968	89.40	269.60	9162.40	-36.47	-3528.43	3528.51	3528.62	269.41	3.09	-3.09
109	13,062	90.40	270.20	9162.57	-36.63	-3622.43	3622.51	3622.62	269.42	1.24	1.06
110	13,156	92.40	270.00	9160.27	-36.47	-3716.40	3716.48	3716.58	269.44	2.14	2.13
111	13,251	89.00	268.50	9159.11	-37.71	-3811.37	3811.45	3811.55	269.43	3.91	-3.58
112	13,345	90.80	268.90	9159.28	-39.84	-3905.34	3905.42	3905.54	269.42	1.96	1.91
113	13,439	91.10	269.60	9157.72	-41.07	-3999.32	3999.41	3999.53	269.41	0.81	0.32
114	13,534	88.20	268.20	9158.30	-42.90	-4094.29	4094.38	4094.51	269.40	3.39	-3.05
115	13,628	93.40	268.90	9156.99	-45.27	-4188.21	4188.31	4188.46	269.38	5.58	5.53
116	13,722	93.20	268.70	9151.57	-47.24	-4282.04	4282.14	4282.30	269.37	0.30	-0.21
117	13,816	94.30	269.20	9145.43	-48.96	-4375.82	4375.92	4376.09	269.36	1.28	1.17
118	13,897	91.50	268.80	9141.33	-50.37	-4456.69	4456.80	4456.98	269.35	3.49	-3.46
PTB:	13,989	91.50	268.80	9138.92	-52.30	-4548.64	4548.76	4548.94	269.34	0.00	0.00