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MS Directional Survey Data Certification

HOBBS OCD

APR 18 2019

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MS Directional Job Number: MSMO-56199
Survey Type: MWD
Operating Company: Matador Production Company
Well Name & Number: Florence State 23-23S-34E AR 121H
Location: Lea County, NM
API Number: 30-025-44361
Tie In Depth: Surface
Surveyed Depths: 196' – 15,078' MD
Projected TD Survey: 15,136' MD
Dates Performed: 09/22/2018 – 10/09/2018

I certify that the data is true, correct and complete and within the limitations of the tool set forth by MS Directional; 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 Directional.

Digitally signed by:

MWD Surveyor Name: Kevin Dueitt

Date: 11-09-2018

Email: kdueitt@msdir.com

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Company:	Matador Production Company		
Well Name:	Florence State 23-23S-34E AR 121H		
Location:	Lea County, NM		
Rig:	Patterson #810	Magnetic Declination:	6.35
Job Number:	MSMO-56199		
API #:	30-025-44361		

REFERENCED TO GRID NORTH ▼

Vertical Section Azimuth:	359.47	Proposed Direction:	359.47
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Survey Calculation Method:	Minimum Curvature
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PTB:	MD	INC	AZM	TVD	N/S	E/W	VS
	15,136	93.1	0.2	10150.27	5052.17	-46.97	5052.38

#	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	196	0.70	221.30	196.00	-0.90	-0.79	-0.89	1.20	221.30	0.36	0.36
2	342	0.70	210.80	341.98	-2.34	-1.84	-2.32	2.97	218.16	0.09	0.00
3	523	0.90	188.30	522.97	-4.69	-2.61	-4.67	5.37	209.06	0.20	0.11
4	703	0.90	185.40	702.94	-7.50	-2.94	-7.47	8.06	201.44	0.03	0.00
5	877	0.70	193.60	876.93	-9.89	-3.32	-9.86	10.43	198.57	0.13	-0.11
6	1,067	1.30	272.60	1066.91	-10.92	-5.75	-10.87	12.34	207.76	0.71	0.32
7	1,258	3.80	232.70	1257.71	-14.66	-12.95	-14.54	19.56	221.45	1.53	1.31
8	1,448	4.60	236.80	1447.20	-22.65	-24.33	-22.42	33.24	227.06	0.45	0.42
9	1,638	4.70	241.00	1636.58	-30.59	-37.52	-30.24	48.41	230.80	0.19	0.05
10	1,827	4.80	291.60	1825.01	-31.44	-51.65	-30.96	60.46	238.67	2.15	0.05
11	2,017	4.30	244.30	2014.47	-31.60	-65.46	-30.99	72.69	244.23	1.93	-0.26
12	2,207	4.80	221.50	2203.89	-40.64	-77.15	-39.93	87.20	242.22	0.98	0.26
13	2,398	4.80	227.80	2394.22	-52.00	-88.36	-51.18	102.53	239.53	0.28	0.00
14	2,586	4.80	233.50	2581.56	-61.96	-100.51	-61.03	118.07	238.35	0.25	0.00
15	2,777	4.60	238.00	2771.92	-70.77	-113.43	-69.72	133.70	238.04	0.22	-0.10
16	2,967	3.70	201.60	2961.45	-80.51	-122.15	-79.38	146.30	236.61	1.44	-0.47
17	3,157	3.60	211.50	3151.07	-91.30	-127.53	-90.11	156.84	234.40	0.34	-0.05
18	3,347	3.30	211.20	3340.72	-101.06	-133.48	-99.82	167.42	232.87	0.16	-0.16
19	3,537	3.10	195.90	3530.43	-110.68	-137.72	-109.40	176.68	231.21	0.46	-0.11
20	3,727	0.40	239.50	3720.33	-115.96	-139.69	-114.66	181.55	230.30	1.49	-1.42
21	3,916	0.60	138.30	3909.32	-117.03	-139.60	-115.73	182.17	230.03	0.41	0.11
22	4,106	1.30	72.30	4099.30	-117.12	-136.89	-115.85	180.15	229.45	0.63	0.37
23	4,297	1.40	109.40	4290.25	-117.23	-132.62	-116.00	177.01	228.52	0.45	0.05
24	4,487	2.70	122.50	4480.12	-120.41	-126.66	-119.23	174.76	226.45	0.72	0.68
25	4,677	2.70	97.90	4669.92	-123.43	-118.45	-122.33	171.07	223.82	0.61	0.00
26	4,867	1.20	78.90	4859.81	-123.66	-112.07	-122.62	166.89	222.18	0.85	-0.79
27	5,057	0.90	97.20	5049.77	-123.47	-108.64	-122.46	164.45	221.34	0.23	-0.16
28	5,150	0.90	98.10	5142.76	-123.66	-107.19	-122.66	163.65	220.92	0.02	0.00
29	5,340	1.00	107.60	5332.74	-124.37	-104.13	-123.40	162.21	219.94	0.10	0.05
30	5,531	1.90	210.60	5523.70	-127.60	-104.15	-126.63	164.71	219.22	1.22	0.47
31	5,721	2.10	211.10	5713.58	-133.29	-107.55	-132.29	171.27	218.90	0.11	0.11
32	5,911	2.00	206.50	5903.46	-139.24	-110.83	-138.21	177.97	218.52	0.10	-0.05
33	6,099	1.40	248.50	6091.38	-143.02	-114.43	-141.95	183.16	218.66	0.71	-0.32

Company:	Matador Production Company		
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Job Number:	MSMO-56199		
API #:	30-025-44361		

REFERENCED TO GRID NORTH

Vertical Section Azimuth:	359.47	Proposed Direction:	359.47
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Survey Calculation Method:	Minimum Curvature
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PTB:	MD	INC	AZM	TVD	N/S	E/W	VS
	15,136	93.1	0.2	10150.27	5052.17	-46.97	5052.38

#	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	6,288	1.40	244.10	6280.33	-144.87	-118.66	-143.77	187.26	219.32	0.06	0.00
35	6,479	0.50	37.00	6471.31	-145.23	-120.26	-144.11	188.55	219.63	0.97	-0.47
36	6,669	0.40	10.60	6661.30	-143.91	-119.63	-142.80	187.15	219.74	0.12	-0.05
37	6,858	0.40	351.80	6850.30	-142.61	-119.61	-141.50	186.13	219.99	0.07	0.00
38	7,048	0.10	335.50	7040.30	-141.80	-119.77	-140.69	185.62	220.19	0.16	-0.16
39	7,237	0.10	348.10	7229.30	-141.49	-119.87	-140.38	185.44	220.27	0.01	0.00
40	7,427	0.30	277.00	7419.30	-141.27	-120.40	-140.15	185.62	220.44	0.15	0.11
41	7,617	0.60	241.70	7609.29	-141.68	-121.77	-140.55	186.82	220.68	0.21	0.16
42	7,806	0.70	253.60	7798.28	-142.48	-123.75	-141.33	188.72	220.98	0.09	0.05
43	7,996	0.90	267.10	7988.26	-142.88	-126.35	-141.70	190.73	221.49	0.14	0.11
44	8,186	0.90	280.30	8178.24	-142.69	-129.31	-141.49	192.57	222.18	0.11	0.00
45	8,377	0.60	342.40	8369.22	-141.47	-131.09	-140.25	192.87	222.82	0.43	-0.16
46	8,567	0.90	333.00	8559.21	-139.19	-132.07	-137.96	191.87	223.50	0.17	0.16
47	8,757	1.00	329.10	8749.18	-136.44	-133.60	-135.19	190.95	224.40	0.06	0.05
48	8,948	1.20	342.80	8940.15	-133.10	-135.04	-131.84	189.61	225.42	0.17	0.10
49	9,138	1.80	356.50	9130.08	-128.22	-135.82	-126.95	186.78	226.65	0.37	0.32
50	9,328	1.90	12.10	9319.98	-122.16	-135.34	-120.90	182.32	227.93	0.27	0.05
51	9,518	1.50	343.80	9509.90	-116.69	-135.37	-115.43	178.72	229.24	0.48	-0.21
52	9,613	1.60	351.40	9604.87	-114.19	-135.92	-112.92	177.51	229.97	0.24	0.11
53	9,708	8.50	12.90	9699.45	-106.02	-134.54	-104.77	171.30	231.76	7.41	7.26
54	9,803	19.70	20.20	9791.44	-84.08	-127.43	-82.90	152.66	236.58	11.91	11.79
55	9,851	26.50	24.00	9835.57	-66.68	-120.27	-65.57	137.52	240.99	14.50	14.17
56	9,898	29.10	24.30	9877.14	-46.68	-111.30	-45.65	120.69	247.25	5.54	5.53
57	9,993	37.10	21.50	9956.67	1.11	-91.26	1.96	91.26	270.70	8.57	8.42
58	10,041	41.50	16.30	9993.81	29.87	-81.48	30.62	86.78	290.13	11.44	9.17
59	10,089	44.20	10.80	10029.01	61.58	-73.88	62.26	96.18	309.81	9.61	5.63
60	10,136	49.40	9.70	10061.17	95.29	-67.80	95.91	116.95	324.57	11.19	11.06
61	10,183	54.80	9.40	10090.04	131.85	-61.65	132.41	145.55	334.94	11.50	11.49
62	10,231	58.00	9.80	10116.59	171.26	-54.98	171.76	179.87	342.20	6.70	6.67
63	10,278	63.50	9.30	10139.55	211.69	-48.18	212.12	217.10	347.18	11.74	11.70
64	10,326	68.90	8.10	10158.91	255.08	-41.55	255.46	258.45	350.75	11.48	11.25
65	10,373	72.80	7.10	10174.33	299.08	-35.69	299.40	301.21	353.20	8.54	8.30
66	10,421	75.70	9.30	10187.36	344.80	-29.09	345.06	346.03	355.18	7.48	6.04
67	10,468	77.60	10.60	10198.21	389.84	-21.19	390.02	390.42	356.89	4.86	4.04

Company:	Matador Production Company		
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Location:	Lea County, NM		
Rig:	Patterson #810	Magnetic Declination:	6.35
Job Number:	MSMO-56199		
API #:	30-025-44361		

REFERENCED TO GRID NORTH

Vertical Section Azimuth:	359.47	Proposed Direction:	359.47
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Survey Calculation Method:	Minimum Curvature
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PTB:	MD	INC	AZM	TVD	N/S	E/W	VS
	15,136	93.1	0.2	10150.27	5052.17	-46.97	5052.38

#	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	10,517	80.00	10.90	10207.73	437.06	-12.22	437.15	437.23	358.40	4.93	4.90
69	10,564	82.20	8.00	10215.00	482.86	-4.60	482.88	482.88	359.45	7.69	4.68
70	10,612	85.10	4.60	10220.31	530.26	0.62	530.23	530.26	0.07	9.28	6.04
71	10,659	89.60	2.10	10222.48	577.12	3.37	577.06	577.13	0.33	10.95	9.57
72	10,746	93.10	359.80	10220.43	664.06	4.81	663.99	664.08	0.41	4.81	4.02
73	10,841	93.60	359.80	10214.88	758.90	4.48	758.82	758.91	0.34	0.53	0.53
74	10,935	94.10	359.60	10208.57	852.68	3.99	852.61	852.69	0.27	0.57	0.53
75	11,031	92.10	359.10	10203.38	948.53	2.90	948.46	948.54	0.18	2.15	-2.08
76	11,126	91.80	359.50	10200.15	1043.47	1.74	1043.41	1043.47	0.10	0.53	-0.32
77	11,221	92.00	359.60	10197.00	1138.41	0.99	1138.36	1138.41	0.05	0.24	0.21
78	11,316	90.40	359.20	10195.01	1233.38	0.00	1233.33	1233.38	360.00	1.74	-1.68
79	11,411	90.10	359.10	10194.59	1328.37	-1.41	1328.33	1328.37	359.94	0.33	-0.32
80	11,507	90.40	359.20	10194.17	1424.36	-2.84	1424.33	1424.36	359.89	0.33	0.31
81	11,602	90.30	359.40	10193.59	1519.35	-4.00	1519.32	1519.36	359.85	0.24	-0.11
82	11,697	90.60	359.70	10192.85	1614.35	-4.74	1614.32	1614.35	359.83	0.45	0.32
83	11,792	90.50	359.60	10191.94	1709.34	-5.32	1709.32	1709.35	359.82	0.15	-0.11
84	11,888	90.30	359.20	10191.27	1805.33	-6.33	1805.31	1805.34	359.80	0.47	-0.21
85	11,983	90.70	359.60	10190.44	1900.32	-7.32	1900.31	1900.34	359.78	0.60	0.42
86	12,078	91.60	359.20	10188.53	1995.30	-8.32	1995.29	1995.31	359.76	1.04	0.95
87	12,173	91.00	359.10	10186.37	2090.26	-9.73	2090.26	2090.28	359.73	0.64	-0.63
88	12,269	90.00	359.40	10185.54	2186.25	-10.98	2186.26	2186.28	359.71	1.09	-1.04
89	12,364	90.20	359.20	10185.37	2281.24	-12.14	2281.26	2281.27	359.70	0.30	0.21
90	12,459	90.40	359.40	10184.87	2376.23	-13.30	2376.25	2376.27	359.68	0.30	0.21
91	12,552	90.10	359.50	10184.47	2469.23	-14.20	2469.25	2469.27	359.67	0.34	-0.32
92	12,647	90.10	359.50	10184.30	2564.22	-15.03	2564.25	2564.27	359.66	0.00	0.00
93	12,743	91.30	359.20	10183.13	2660.21	-16.11	2660.24	2660.26	359.65	1.29	1.25
94	12,838	91.70	359.20	10180.64	2755.17	-17.44	2755.21	2755.22	359.64	0.42	0.42
95	12,933	91.90	359.10	10177.66	2850.11	-18.85	2850.16	2850.17	359.62	0.24	0.21
96	13,029	90.70	358.40	10175.48	2946.06	-20.94	2946.13	2946.13	359.59	1.45	-1.25
97	13,124	90.70	358.10	10174.32	3041.01	-23.84	3041.10	3041.10	359.55	0.32	0.00
98	13,219	90.90	358.30	10172.99	3135.95	-26.83	3136.07	3136.07	359.51	0.30	0.21
99	13,314	88.70	359.80	10173.33	3230.93	-28.40	3231.05	3231.05	359.50	2.80	-2.32
100	13,410	88.20	0.00	10175.92	3326.89	-28.57	3327.02	3327.02	359.51	0.56	-0.52
101	13,505	89.50	359.10	10177.83	3421.87	-29.32	3421.99	3421.99	359.51	1.66	1.37

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Rig:	Patterson #810	Magnetic Declination:	6.35 REFERENCED TO GRID NORTH ▼
Job Number:	MSMO-56199		
API #:	30-025-44361		
Vertical Section Azimuth:	359.47	Proposed Direction:	359.47
Survey Calculation Method:	Minimum Curvature		

PTB:	MD	INC	AZM	TVD	N/S	E/W	VS				
	15,136	93.1	0.2	10150.27	5052.17	-46.97	5052.38				
#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure Distance	Azm	DLS/ 100	BUR/ 100'
102	13,600	89.10	359.10	10178.99	3516.85	-30.81	3516.98	3516.98	359.50	0.42	-0.42
103	13,695	88.50	359.60	10180.98	3611.82	-31.89	3611.96	3611.96	359.49	0.82	-0.63
104	13,790	90.90	359.10	10181.48	3706.81	-32.96	3706.95	3706.95	359.49	2.58	2.53
105	13,885	90.80	359.10	10180.07	3801.79	-34.46	3801.94	3801.94	359.48	0.11	-0.11
106	13,981	90.10	359.00	10179.31	3897.77	-36.05	3897.94	3897.94	359.47	0.74	-0.73
107	14,076	90.40	359.10	10178.90	3992.75	-37.62	3992.93	3992.93	359.46	0.33	0.32
108	14,171	90.90	359.40	10177.82	4087.74	-38.87	4087.92	4087.92	359.46	0.61	0.53
109	14,266	90.40	359.10	10176.74	4182.73	-40.11	4182.92	4182.92	359.45	0.61	-0.53
110	14,361	90.40	359.10	10176.08	4277.71	-41.60	4277.91	4277.91	359.44	0.00	0.00
111	14,457	90.60	359.10	10175.24	4373.70	-43.11	4373.91	4373.91	359.44	0.21	0.21
112	14,552	91.50	359.70	10173.50	4468.67	-44.10	4468.89	4468.89	359.43	1.14	0.95
113	14,647	91.70	359.10	10170.85	4563.63	-45.10	4563.85	4563.85	359.43	0.67	0.21
114	14,742	91.90	359.20	10167.86	4658.57	-46.51	4658.80	4658.81	359.43	0.24	0.21
115	14,838	92.10	359.90	10164.51	4754.51	-47.26	4754.74	4754.75	359.43	0.76	0.21
116	14,933	92.70	359.90	10160.54	4849.43	-47.43	4849.66	4849.66	359.44	0.63	0.63
117	15,028	92.80	0.20	10155.98	4944.32	-47.34	4944.54	4944.54	359.45	0.33	0.11
118	15,078	93.10	0.20	10153.40	4994.25	-47.17	4994.47	4994.47	359.46	0.60	0.60
PTB:	15,136	93.10	0.20	10150.27	5052.17	-46.97	5052.38	5052.38	359.47	0.00	0.00