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MS Directional Survey Data Certification

MS Directional Job Number: MSMO-60703
Survey Type: MWD
Operating Company: Matador Production Co.
Well Name & Number: Irvin Wall State COM #132H
Location: Lea County, NM
API Number: 30-025-45430
Tie In Depth: Surface
Surveyed Depths: 142' – 16,689' MD
Projected TD Survey: 16,747' MD
Dates Performed: 01/06/2019 – 02/14/2019

HOBBS OCD
SEP 06 2019
RECEIVED

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: Jason Fulton

Date: 02-22-2019

Email: Jason.Fulton@msdir.com

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Company:		Matador Production Co.												
Well Name:		Irvin Wall State COM #132H												
Location:		Lea County, NM												
Rig:		Patterson #810					Magnetic Declination:		6.27		REFERENCED TO GRID NORTH			
Job Number:		MSMO-60703												
API #:		30-025-45430												
Vertical Section Azimuth:					359.45			Proposed Direction:		359.45				
Survey Calculation Method:					Minimum Curvature									
PTB:	MD		INC		AZM		TVD		N/S		E/W		VS	
	16,747		92.5		0.5		11734.26		4894.4		-736.48		4901.24	
#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure		DLS/ 100	BUR/ 100'			
								Distance	Azm					
TIE IN	0	0.00	0.00	0.00	0.00	0.00			0.00					
1	142	0.20	36.70	142.00	0.20	0.15	0.20	0.25	36.70	0.14	0.14			
2	332	0.90	38.10	331.99	1.64	1.27	1.63	2.07	37.71	0.37	0.37			
3	514	0.50	6.00	513.98	3.55	2.23	3.53	4.20	32.13	0.30	-0.22			
4	697	0.90	342.20	696.96	5.72	1.88	5.70	6.02	18.17	0.27	0.22			
5	882	1.00	328.80	881.94	8.48	0.60	8.47	8.50	4.02	0.13	0.05			
6	1,069	0.80	316.40	1068.91	10.82	-1.15	10.83	10.88	353.93	0.15	-0.11			
7	1,259	1.20	308.10	1258.89	13.01	-3.63	13.04	13.51	344.41	0.22	0.21			
8	1,449	1.10	302.00	1448.85	15.20	-6.74	15.27	16.63	336.08	0.08	-0.05			
9	1,545	1.40	292.80	1544.82	16.15	-8.61	16.23	18.30	331.94	0.38	0.31			
10	1,640	2.60	277.80	1639.77	16.89	-11.81	17.00	20.61	325.04	1.37	1.26			
11	1,734	4.00	268.00	1733.61	17.06	-17.20	17.23	24.23	314.77	1.60	1.49			
12	1,829	4.00	265.80	1828.38	16.71	-23.82	16.93	29.09	305.05	0.16	0.00			
13	1,924	4.20	259.20	1923.13	15.81	-30.54	16.10	34.39	297.37	0.54	0.21			
14	2,020	3.90	257.10	2018.89	14.42	-37.17	14.78	39.87	291.21	0.35	-0.31			
15	2,115	4.50	253.90	2113.64	12.67	-43.90	13.09	45.69	286.10	0.68	0.63			
16	2,210	5.60	250.20	2208.27	10.06	-51.84	10.56	52.81	280.99	1.21	1.16			
17	2,305	5.90	248.60	2302.79	6.71	-60.75	7.30	61.12	276.31	0.36	0.32			
18	2,400	6.40	247.40	2397.24	2.90	-70.19	3.57	70.25	272.36	0.54	0.53			
19	2,590	5.80	248.40	2586.17	-4.71	-88.89	-3.85	89.01	266.97	0.32	-0.32			
20	2,781	6.00	249.10	2776.16	-11.82	-107.19	-10.79	107.84	263.71	0.11	0.10			
21	2,971	5.60	251.80	2965.18	-18.26	-125.27	-17.06	126.59	261.71	0.25	-0.21			
22	3,161	4.80	251.10	3154.40	-23.73	-141.60	-22.37	143.57	260.49	0.42	-0.42			
23	3,352	4.00	245.40	3344.84	-29.09	-155.22	-27.60	157.92	259.38	0.48	-0.42			
24	3,542	6.30	237.10	3534.06	-37.51	-170.00	-35.88	174.09	257.56	1.27	1.21			
25	3,732	5.40	230.10	3723.07	-48.91	-185.61	-47.13	191.95	255.24	0.60	-0.47			
26	3,923	7.50	245.20	3912.86	-59.91	-203.82	-57.95	212.44	253.62	1.40	1.10			
27	4,113	6.60	252.10	4101.43	-68.46	-225.47	-66.30	235.64	253.11	0.65	-0.47			
28	4,303	5.50	249.20	4290.37	-75.05	-244.37	-72.70	255.64	252.93	0.60	-0.58			
29	4,492	7.00	256.10	4478.24	-81.04	-264.02	-78.50	276.18	252.94	0.89	0.79			
30	4,682	7.70	262.30	4666.68	-85.52	-287.87	-82.76	300.31	253.45	0.56	0.37			
31	4,872	6.80	265.90	4855.16	-88.03	-311.71	-85.04	323.90	254.23	0.53	-0.47			
32	5,062	5.50	268.50	5044.06	-89.08	-332.03	-85.89	343.77	254.98	0.70	-0.68			
33	5,252	7.40	259.20	5232.86	-91.61	-353.15	-88.21	364.84	255.46	1.14	1.00			

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Location:		Lea County, NM												
Rig:		Patterson #810					Magnetic Declination:		6.27		REFERENCED TO GRID NORTH			
Job Number:		MSMO-60703												
API #:		30-025-45430												
Vertical Section Azimuth:					359.45					Proposed Direction:		359.45		
Survey Calculation Method:					Minimum Curvature									
PTB:	MD		INC		AZM		TVD		N/S		E/W		VS	
	16,747		92.5		0.5		11734.26		4894.4		-736.48		4901.24	
#	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	5,356	7.10	260.10	5336.03	-93.97	-366.07	-90.45	377.93	255.60	0.31	-0.29			
35	5,531	6.80	256.80	5509.74	-98.19	-386.81	-94.48	399.07	255.76	0.29	-0.17			
36	5,720	6.80	256.30	5697.41	-103.40	-408.57	-99.47	421.45	255.80	0.03	0.00			
37	5,911	7.80	251.80	5886.86	-110.12	-431.87	-105.97	445.69	255.69	0.60	0.52			
38	6,101	7.40	251.30	6075.19	-118.07	-455.71	-113.69	470.76	255.47	0.21	-0.21			
39	6,291	7.10	248.70	6263.67	-126.26	-478.24	-121.67	494.62	255.21	0.23	-0.16			
40	6,481	7.20	248.60	6452.20	-134.87	-500.26	-130.06	518.13	254.91	0.05	0.05			
41	6,670	7.20	247.80	6639.71	-143.67	-522.26	-138.65	541.66	254.62	0.05	0.00			
42	6,860	7.10	248.30	6828.23	-152.51	-544.19	-147.28	565.16	254.34	0.06	-0.05			
43	7,050	6.90	247.60	7016.81	-161.20	-565.65	-155.76	588.17	254.09	0.11	-0.11			
44	7,240	6.70	247.90	7205.48	-169.72	-586.47	-164.08	610.54	253.86	0.11	-0.11			
45	7,430	6.30	247.80	7394.25	-177.83	-606.39	-172.00	631.93	253.66	0.21	-0.21			
46	7,620	5.70	250.80	7583.21	-184.87	-624.96	-178.86	651.73	253.52	0.36	-0.32			
47	7,808	6.50	249.60	7770.15	-191.65	-643.75	-185.46	671.67	253.42	0.43	0.43			
48	7,998	5.60	249.10	7959.09	-198.71	-662.49	-192.34	691.65	253.30	0.47	-0.47			
49	8,188	5.80	249.40	8148.15	-205.39	-680.14	-198.85	710.47	253.20	0.11	0.11			
50	8,378	4.70	248.00	8337.35	-211.68	-696.34	-204.99	727.81	253.09	0.58	-0.58			
51	8,568	4.10	246.30	8526.79	-217.33	-709.78	-210.51	742.30	252.98	0.32	-0.32			
52	8,758	3.90	245.30	8716.32	-222.76	-721.87	-215.82	755.46	252.85	0.11	-0.11			
53	8,948	3.60	240.70	8905.92	-228.38	-732.94	-221.33	767.70	252.69	0.22	-0.16			
54	9,138	2.20	253.20	9095.67	-232.35	-741.63	-225.22	777.18	252.60	0.80	-0.74			
55	9,328	1.10	247.40	9285.59	-234.11	-746.81	-226.93	782.64	252.59	0.58	-0.58			
56	9,519	0.10	290.80	9476.58	-234.75	-748.66	-227.56	784.60	252.59	0.54	-0.52			
57	9,709	1.60	264.20	9666.55	-234.96	-751.45	-227.74	787.33	252.64	0.80	0.79			
58	9,900	1.10	80.40	9857.53	-234.93	-752.30	-227.70	788.12	252.66	1.41	-0.26			
59	10,090	0.90	94.50	10047.50	-234.74	-749.01	-227.54	784.93	252.60	0.17	-0.11			
60	10,280	0.70	91.80	10237.48	-234.89	-746.36	-227.72	782.45	252.53	0.11	-0.11			
61	10,470	0.50	165.00	10427.48	-235.73	-744.99	-228.57	781.39	252.44	0.39	-0.11			
62	10,660	0.70	118.40	10617.47	-237.08	-743.75	-229.93	780.63	252.32	0.27	0.11			
63	10,850	1.70	64.90	10807.43	-236.44	-740.18	-229.32	777.03	252.28	0.74	0.53			
64	11,040	1.40	40.00	10997.36	-233.47	-736.13	-226.39	772.27	252.40	0.38	-0.16			
65	11,139	0.40	6.40	11096.35	-232.20	-735.32	-225.13	771.11	252.48	1.10	-1.01			
66	11,234	4.30	326.40	11191.25	-228.90	-737.25	-221.81	771.97	252.75	4.21	4.11			
67	11,282	8.10	353.70	11238.97	-224.04	-738.62	-216.94	771.85	253.13	9.81	7.92			

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Rig:		Patterson #810					Magnetic Declination:		6.27			REFERENCED TO GRID NORTH		
Job Number:		MSMO-60703												
API #:		30-025-45430												
Vertical Section Azimuth:					359.45			Proposed Direction:		359.45				
Survey Calculation Method:					Minimum Curvature									
PTB:	MD		INC		AZM		TVD		N/S		E/W		VS	
	16,747		92.5		0.5		11734.26		4894.4		-736.48		4901.24	
#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure		DLS/ 100	BUR/ 100'			
								Distance	Azm					
68	11,329	8.80	346.60	11285.46	-217.25	-739.82	-210.14	771.06	253.64	2.67	1.49			
69	11,377	9.00	12.50	11332.90	-210.01	-739.86	-202.90	769.08	254.15	8.29	0.42			
70	11,424	10.30	5.30	11379.24	-202.23	-738.67	-195.13	765.86	254.69	3.77	2.77			
71	11,473	13.90	354.60	11427.15	-192.01	-738.82	-184.91	763.36	255.43	8.63	7.35			
72	11,520	17.60	357.30	11472.38	-179.29	-739.69	-172.18	761.11	256.38	8.02	7.87			
73	11,573	18.10	356.20	11522.82	-163.07	-740.61	-155.95	758.35	257.58	1.14	0.94			
74	11,615	24.20	359.50	11561.98	-147.93	-741.12	-140.81	755.74	258.71	14.79	14.52			
75	11,662	32.30	359.70	11603.35	-125.71	-741.27	-118.59	751.85	260.38	17.24	17.23			
76	11,710	38.90	3.20	11642.36	-97.80	-740.49	-90.69	746.92	262.48	14.39	13.75			
77	11,758	47.30	5.00	11677.37	-65.12	-738.11	-58.03	740.98	264.96	17.69	17.50			
78	11,805	54.30	6.10	11707.06	-28.90	-734.57	-21.84	735.14	267.75	15.00	14.89			
79	11,900	70.00	5.70	11751.30	54.40	-725.99	61.36	728.02	274.28	16.53	16.53			
80	11,948	77.40	5.90	11764.77	100.20	-721.33	107.12	728.26	277.91	15.42	15.42			
81	11,976	82.10	5.70	11769.75	127.60	-718.55	134.49	729.79	280.07	16.80	16.79			
82	12,000	86.30	5.30	11772.17	151.36	-716.26	158.23	732.08	281.93	17.58	17.50			
83	12,095	91.80	3.30	11773.75	246.04	-709.14	252.84	750.62	289.13	6.16	5.79			
84	12,190	93.00	359.90	11769.77	340.91	-706.49	347.67	784.44	295.76	3.79	1.26			
85	12,285	94.20	359.80	11763.80	435.72	-706.74	442.48	830.26	301.65	1.27	1.26			
86	12,381	95.20	359.80	11755.94	531.39	-707.08	538.16	884.50	306.93	1.04	1.04			
87	12,476	96.10	359.80	11746.58	625.93	-707.41	632.69	944.57	311.50	0.95	0.95			
88	12,571	94.40	359.10	11737.89	720.52	-708.31	727.29	1010.38	315.49	1.93	-1.79			
89	12,666	95.20	358.60	11729.94	815.17	-710.21	821.95	1081.16	318.94	0.99	0.84			
90	12,761	93.20	359.00	11722.98	909.89	-712.20	916.68	1155.48	321.95	2.15	-2.11			
91	12,856	90.20	359.10	11720.17	1004.82	-713.77	1011.63	1232.53	324.61	3.16	-3.16			
92	12,951	88.20	359.00	11721.49	1099.80	-715.35	1106.61	1311.97	326.96	2.11	-2.11			
93	13,047	88.70	359.20	11724.09	1195.75	-716.85	1202.57	1394.16	329.06	0.56	0.52			
94	13,142	89.40	359.30	11725.66	1290.73	-718.10	1297.56	1477.04	330.91	0.74	0.74			
95	13,236	88.40	359.70	11727.47	1384.70	-718.92	1391.54	1560.21	332.56	1.15	-1.06			
96	13,331	88.60	0.10	11729.96	1479.67	-719.08	1486.51	1645.15	334.08	0.47	0.21			
97	13,426	89.50	359.90	11731.53	1574.66	-719.08	1581.49	1731.08	335.46	0.97	0.95			
98	13,521	88.00	359.10	11733.60	1669.63	-719.91	1676.46	1818.22	336.68	1.79	-1.58			
99	13,616	88.10	358.10	11736.84	1764.54	-722.23	1771.39	1906.63	337.74	1.06	0.11			
100	13,710	87.80	357.00	11740.20	1858.40	-726.25	1865.28	1995.26	338.65	1.21	-0.32			
101	13,805	90.30	358.80	11741.77	1953.31	-729.73	1960.22	2085.16	339.52	3.24	2.63			

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PTB:	MD		INC		AZM	TVD	N/S	E/W	VS		
	16,747		92.5		0.5	11734.26	4894.4	-736.48	4901.24		
#	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	13,901	92.10	359.30	11739.76	2049.27	-731.32	2056.19	2175.85	340.36	1.95	1.88
103	13,996	90.00	359.50	11738.02	2144.24	-732.31	2151.17	2265.85	341.14	2.22	-2.21
104	14,091	90.80	359.90	11737.36	2239.24	-732.81	2246.17	2356.10	341.88	0.94	0.84
105	14,186	91.20	359.80	11735.70	2334.22	-733.06	2341.15	2446.62	342.57	0.43	0.42
106	14,282	91.10	0.20	11733.77	2430.20	-733.06	2437.13	2538.36	343.21	0.43	-0.10
107	14,377	91.50	0.40	11731.62	2525.18	-732.56	2532.09	2629.29	343.82	0.47	0.42
108	14,472	89.20	0.30	11731.04	2620.17	-731.98	2627.07	2720.49	344.39	2.42	-2.42
109	14,567	90.00	0.40	11731.70	2715.16	-731.40	2722.06	2811.95	344.92	0.85	0.84
110	14,662	90.50	0.90	11731.29	2810.15	-730.32	2817.04	2903.51	345.43	0.74	0.53
111	14,757	91.00	0.30	11730.04	2905.14	-729.33	2912.01	2995.29	345.91	0.82	0.53
112	14,852	89.20	0.10	11729.88	3000.14	-729.00	3007.00	3087.43	346.34	1.91	-1.89
113	14,947	90.30	359.90	11730.29	3095.13	-729.00	3101.99	3179.83	346.75	1.18	1.16
114	15,043	90.50	0.20	11729.62	3191.13	-728.91	3197.98	3273.32	347.13	0.38	0.21
115	15,138	91.10	0.50	11728.30	3286.12	-728.33	3292.96	3365.87	347.50	0.71	0.63
116	15,233	89.50	0.10	11727.80	3381.11	-727.84	3387.94	3458.57	347.85	1.74	-1.68
117	15,328	88.20	359.80	11729.71	3476.09	-727.92	3482.92	3551.49	348.17	1.40	-1.37
118	15,423	88.00	359.30	11732.86	3571.04	-728.66	3577.87	3644.62	348.47	0.57	-0.21
119	15,518	88.90	359.50	11735.42	3666.00	-729.66	3672.83	3737.90	348.74	0.97	0.95
120	15,613	87.20	358.40	11738.66	3760.92	-731.40	3767.77	3831.38	348.99	2.13	-1.79
121	15,709	87.50	358.40	11743.10	3856.78	-734.08	3863.65	3926.02	349.22	0.31	0.31
122	15,804	88.50	359.10	11746.41	3951.70	-736.15	3958.58	4019.68	349.45	1.28	1.05
123	15,898	89.30	359.00	11748.22	4045.67	-737.71	4052.56	4112.37	349.67	0.86	0.85
124	15,994	89.70	359.30	11749.05	4141.65	-739.13	4148.56	4207.09	349.88	0.52	0.42
125	16,089	90.30	359.80	11749.05	4236.65	-739.88	4243.56	4300.77	350.09	0.82	0.63
126	16,184	91.20	359.80	11747.81	4331.64	-740.21	4338.54	4394.43	350.30	0.95	0.95
127	16,242	90.20	359.90	11747.10	4389.63	-740.36	4396.54	4451.63	350.43	1.73	-1.72
128	16,374	90.50	0.30	11746.30	4521.63	-740.13	4528.53	4581.80	350.70	0.38	0.23
129	16,468	91.40	0.60	11744.74	4615.61	-739.39	4622.50	4674.46	350.90	1.01	0.96
130	16,564	92.10	0.80	11741.81	4711.56	-738.22	4718.43	4769.04	351.10	0.76	0.73
131	16,659	92.40	0.40	11738.08	4806.48	-737.22	4813.34	4862.69	351.28	0.53	0.32
132	16,689	92.50	0.50	11736.79	4836.45	-736.99	4843.31	4892.28	351.34	0.47	0.33
PTB:	16,747	92.50	0.50	11734.26	4894.40	-736.48	4901.24	4949.50	351.44	0.00	0.00