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MS Directional Survey Data Certification

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APR 25 2019

DISTRICT II-ARTESIA O.C.D.

MS Directional Job Number: MSMO-58106
Survey Type: MWD
Operating Company: Matador Production Company
Well Name & Number: Larry Wolfish 01-23S-27E RB #206H
Location: Eddy County, NM
API Number: 30-015-45270
Tie In Depth: Surface
Surveyed Depths: 93' – 14,304' MD
Projected TD Survey: 14,365' MD
Dates Performed: 11/10/2018 – 11/24/2018

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: Nathaniel LeBlanc

MWD Surveyor Name: Nate LeBlanc

Date: 12-10-2018

Email: nleblanc@msdir.com

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Company:		Matador Production Company										
Well Name:		Larry Wolfish 01-23S-27E RB #206H										
Location:		Eddy County, NM										
Rig:		Patterson #282					Magnetic Declination:		7.04		REFERENCED TO GRID NORTH	
Job Number:		MSMO-58106										
API #:		30-015-45270										
Vertical Section Azimuth:		180.33					Proposed Direction:		180.33			
Survey Calculation Method:		Minimum Curvature										
PTB:	MD		INC		AZM	TVD	N/S	E/W	VS			
	14,365		91.7		182.8	9291.96	-5734.99	224.97	5733.6			
#	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	93	0.13	214.16	93.00	-0.09	-0.06	0.09	0.11	214.16	0.14	0.14	
2	183	0.15	294.84	183.00	-0.12	-0.22	0.12	0.25	241.31	0.20	0.02	
3	271	0.33	314.83	271.00	0.10	-0.51	-0.10	0.52	281.66	0.22	0.20	
4	363	0.98	306.81	362.99	0.76	-1.33	-0.76	1.53	299.92	0.71	0.71	
5	475	1.60	306.70	474.96	2.27	-3.35	-2.25	4.04	304.17	0.55	0.55	
6	659	1.40	318.00	658.90	5.48	-6.91	-5.44	8.82	308.40	0.19	-0.11	
7	843	1.20	231.80	842.87	5.96	-9.93	-5.90	11.58	300.96	0.97	-0.11	
8	1,030	2.40	153.50	1029.79	1.24	-9.72	-1.18	9.80	277.27	1.31	0.64	
9	1,219	2.30	146.10	1218.64	-5.45	-5.84	5.48	7.99	226.98	0.17	-0.05	
10	1,407	4.70	147.80	1406.27	-15.10	0.37	15.10	15.10	178.59	1.28	1.28	
11	1,596	6.10	148.80	1594.43	-30.24	9.70	30.19	31.76	162.22	0.74	0.74	
12	1,784	7.00	144.70	1781.20	-48.14	21.49	48.01	52.72	155.94	0.54	0.48	
13	1,972	7.60	138.90	1967.68	-66.85	36.29	66.64	76.07	151.51	0.51	0.32	
14	2,162	5.50	138.90	2156.43	-83.19	50.53	82.89	97.33	148.72	1.11	-1.11	
15	2,300	4.70	140.90	2293.88	-92.56	58.45	92.22	109.47	147.73	0.59	-0.58	
16	2,349	4.80	145.80	2342.71	-95.81	60.86	95.46	113.51	147.57	0.85	0.20	
17	2,444	4.50	162.10	2437.40	-102.64	64.24	102.27	121.09	147.96	1.42	-0.32	
18	2,632	6.80	152.40	2624.48	-119.53	71.67	119.11	139.37	149.05	1.32	1.22	
19	2,820	7.30	147.70	2811.06	-139.49	83.21	139.01	162.42	149.18	0.41	0.27	
20	3,007	7.80	147.60	2996.44	-160.24	96.36	159.69	186.98	148.98	0.27	0.27	
21	3,195	6.20	150.60	3183.03	-179.86	108.18	179.24	209.89	148.98	0.87	-0.85	
22	3,384	8.20	142.90	3370.54	-199.51	121.32	198.80	233.50	148.70	1.17	1.06	
23	3,573	7.40	144.10	3557.79	-220.12	136.59	219.33	259.05	148.18	0.43	-0.42	
24	3,761	6.60	143.90	3744.38	-238.65	150.05	237.78	281.90	147.84	0.43	-0.43	
25	3,950	7.00	143.30	3932.05	-256.66	163.33	255.72	304.23	147.53	0.21	0.21	
26	4,139	6.90	143.70	4119.67	-275.05	176.94	274.02	327.04	147.25	0.06	-0.05	
27	4,325	5.80	140.70	4304.52	-291.32	189.50	290.23	347.54	146.96	0.62	-0.59	
28	4,513	7.00	143.60	4491.35	-307.90	202.32	306.73	368.42	146.69	0.66	0.64	
29	4,702	5.70	142.80	4679.18	-324.64	214.83	323.40	389.29	146.51	0.69	-0.69	
30	4,889	6.50	143.00	4865.12	-340.49	226.81	339.18	409.12	146.33	0.43	0.43	
31	5,077	5.80	143.70	5052.04	-356.65	238.84	355.27	429.23	146.19	0.37	-0.37	
32	5,264	5.60	142.80	5238.12	-371.53	249.95	370.08	447.78	146.07	0.12	-0.11	
33	5,453	2.90	166.90	5426.59	-383.53	256.61	382.05	461.46	146.21	1.68	-1.43	

V09.04.02

Company:		Matador Production Company												
Well Name:		Larry Wolfish 01-23S-27E RB #206H												
Location:		Eddy County, NM												
Rig:		Patterson #282				Magnetic Declination:		7.04		REFERENCED TO GRID NORTH				
Job Number:		MSMO-58106												
API #:		30-015-45270												
Vertical Section Azimuth:					180.33		Proposed Direction:		180.33					
Survey Calculation Method:					Minimum Curvature									
PTB:	MD		INC		AZM		TVD		N/S		E/W		VS	
	14,365		91.7		182.8		9291.96		-5734.99		224.97		5733.6	
#	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	5,641	1.60	172.90	5614.44	-390.77	258.01	389.28	468.27		146.56	0.70	-0.69		
35	5,828	0.10	350.90	5801.42	-393.20	258.31	391.71	470.46		146.70	0.91	-0.80		
36	6,015	1.80	258.80	5988.39	-393.61	255.40	392.13	469.21		147.02	0.97	0.91		
37	6,203	0.90	218.00	6176.34	-395.35	251.60	393.89	468.62		147.53	0.67	-0.48		
38	6,390	0.30	185.90	6363.33	-396.99	250.64	395.54	469.49		147.73	0.36	-0.32		
39	6,577	0.40	267.60	6550.33	-397.51	249.94	396.06	469.55		147.84	0.25	0.05		
40	6,765	1.20	258.80	6738.31	-397.92	247.35	396.48	468.53		148.13	0.43	0.43		
41	6,953	2.90	251.20	6926.18	-399.83	240.92	398.44	466.81		148.93	0.91	0.90		
42	7,141	1.80	297.20	7114.03	-400.01	233.79	398.66	463.32		149.70	1.12	-0.59		
43	7,328	1.40	175.40	7301.00	-400.95	231.36	399.61	462.91		150.01	1.50	-0.21		
44	7,515	0.80	78.80	7487.97	-402.97	232.83	401.62	465.40		149.98	0.90	-0.32		
45	7,702	1.90	41.10	7674.92	-400.38	236.15	399.02	464.83		149.47	0.73	0.59		
46	7,890	1.60	32.20	7862.83	-395.81	239.59	394.43	462.68		148.81	0.21	-0.16		
47	8,079	1.40	27.00	8051.77	-391.52	242.05	390.12	460.30		148.27	0.13	-0.11		
48	8,267	1.50	54.20	8239.71	-388.04	245.09	386.62	458.95		147.72	0.37	0.05		
49	8,455	0.20	167.10	8427.69	-386.92	247.15	385.49	459.12		147.43	0.84	-0.69		
50	8,639	0.10	158.40	8611.69	-387.38	247.29	385.95	459.58		147.45	0.06	-0.05		
51	8,679	0.10	112.40	8651.69	-387.43	247.33	385.99	459.64		147.45	0.20	0.00		
52	8,773	13.40	186.90	8744.83	-398.32	246.09	396.90	468.21		148.29	14.23	14.15		
53	8,868	23.30	192.10	8834.90	-427.69	240.82	426.30	490.83		150.62	10.55	10.42		
54	8,962	30.50	190.60	8918.67	-469.37	232.52	468.03	523.81		153.65	7.69	7.66		
55	9,057	37.10	187.70	8997.58	-521.53	224.24	520.23	567.69		156.73	7.15	6.95		
56	9,151	43.10	185.20	9069.45	-581.66	217.52	580.40	621.00		159.50	6.61	6.38		
57	9,246	51.20	180.00	9134.03	-651.14	214.57	649.90	685.59		161.76	9.42	8.53		
58	9,340	58.20	174.50	9188.34	-727.67	218.41	726.40	759.74		163.29	8.84	7.45		
59	9,434	68.20	177.00	9230.67	-811.23	224.54	809.92	841.73		164.53	10.90	10.64		
60	9,459	72.40	177.50	9239.10	-834.73	225.67	833.42	864.70		164.87	16.91	16.80		
61	9,555	84.50	176.20	9258.29	-928.47	230.85	927.13	956.74		166.04	12.67	12.60		
62	9,649	87.40	175.70	9264.93	-1021.99	237.47	1020.61	1049.22		166.92	3.13	3.09		
63	9,743	87.70	177.50	9268.94	-1115.74	243.04	1114.32	1141.90		167.71	1.94	0.32		
64	9,837	87.20	178.50	9273.13	-1209.58	246.32	1208.15	1234.41		168.49	1.19	-0.53		
65	9,931	87.40	180.00	9277.55	-1303.47	247.55	1302.02	1326.77		169.25	1.61	0.21		
66	10,026	89.80	179.70	9279.88	-1398.43	247.79	1396.98	1420.22		169.95	2.55	2.53		
67	10,120	90.00	179.50	9280.04	-1492.43	248.45	1490.98	1512.97		170.55	0.30	0.21		

V09.04.02

Company:		Matador Production Company												
Well Name:		Larry Wolfish 01-23S-27E RB #206H												
Location:		Eddy County, NM												
Rig:		Patterson #282					Magnetic Declination:		7.04		REFERENCED TO GRID NORTH			
Job Number:		MSMO-58106												
API #:		30-015-45270												
Vertical Section Azimuth:					180.33		Proposed Direction:		180.33					
Survey Calculation Method:					Minimum Curvature									
PTB:	MD		INC		AZM		TVD		N/S		E/W		VS	
	14,365		91.7		182.8		9291.96		-5734.99		224.97		5733.6	
#	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	10,214	91.40	180.00	9278.89	-1586.42	248.86	1584.96	1605.82	171.08	1.58	1.49			
69	10,309	88.70	179.90	9278.81	-1681.41	248.94	1679.95	1699.74	171.58	2.84	-2.84			
70	10,403	89.40	180.20	9280.37	-1775.40	248.86	1773.94	1792.76	172.02	0.81	0.74			
71	10,498	87.90	179.10	9282.60	-1870.37	249.44	1868.90	1886.93	172.40	1.96	-1.58			
72	10,592	87.50	178.50	9286.38	-1964.27	251.41	1962.79	1980.29	172.71	0.77	-0.43			
73	10,687	89.80	179.70	9288.62	-2059.22	252.90	2057.73	2074.69	173.00	2.73	2.42			
74	10,781	90.50	179.20	9288.37	-2153.22	253.80	2151.72	2168.12	173.28	0.92	0.74			
75	10,875	90.20	178.70	9287.79	-2247.20	255.53	2245.69	2261.68	173.51	0.62	-0.32			
76	10,970	90.10	179.90	9287.55	-2342.19	256.69	2340.67	2356.21	173.75	1.27	-0.11			
77	11,063	89.50	179.00	9287.87	-2435.18	257.58	2433.66	2448.77	173.96	1.16	-0.65			
78	11,158	90.80	181.30	9287.62	-2530.17	257.33	2528.65	2543.23	174.19	2.78	1.37			
79	11,252	89.40	180.10	9287.46	-2624.16	256.18	2622.64	2636.64	174.42	1.96	-1.49			
80	11,347	92.20	181.10	9286.13	-2719.14	255.19	2717.62	2731.09	174.64	3.13	2.95			
81	11,442	92.60	180.30	9282.15	-2814.05	254.03	2812.54	2825.49	174.84	0.94	0.42			
82	11,536	92.30	179.90	9278.14	-2907.96	253.86	2906.45	2919.02	175.01	0.53	-0.32			
83	11,630	90.60	178.70	9275.76	-3001.92	255.01	3000.40	3012.73	175.14	2.21	-1.81			
84	11,724	90.30	178.70	9275.02	-3095.89	257.14	3094.36	3106.55	175.25	0.32	-0.32			
85	11,819	90.30	179.70	9274.52	-3190.88	258.47	3189.34	3201.33	175.37	1.05	0.00			
86	11,913	89.50	179.50	9274.68	-3284.88	259.13	3283.33	3295.08	175.49	0.88	-0.85			
87	12,008	90.40	180.90	9274.77	-3379.87	258.80	3378.33	3389.77	175.62	1.75	0.95			
88	12,102	89.80	180.80	9274.60	-3473.86	257.40	3472.32	3483.38	175.76	0.65	-0.64			
89	12,196	88.00	179.90	9276.41	-3567.84	256.83	3566.30	3577.07	175.88	2.14	-1.91			
90	12,291	90.00	180.80	9278.07	-3662.82	256.25	3661.28	3671.77	176.00	2.31	2.11			
91	12,385	89.80	180.90	9278.23	-3756.80	254.85	3755.27	3765.44	176.12	0.24	-0.21			
92	12,479	91.10	181.20	9277.49	-3850.78	253.13	3849.26	3859.09	176.24	1.42	1.38			
93	12,574	89.90	181.50	9276.66	-3945.75	250.89	3944.24	3953.72	176.36	1.30	-1.26			
94	12,668	87.70	182.10	9278.63	-4039.68	247.94	4038.18	4047.28	176.49	2.43	-2.34			
95	12,763	87.60	182.00	9282.53	-4134.54	244.54	4133.06	4141.76	176.62	0.15	-0.11			
96	12,857	89.20	183.60	9285.15	-4228.38	239.95	4226.93	4235.19	176.75	2.41	1.70			
97	12,952	87.90	183.10	9287.56	-4323.19	234.40	4321.77	4329.54	176.90	1.47	-1.37			
98	13,046	91.00	184.30	9288.46	-4416.97	228.34	4415.59	4422.87	177.04	3.54	3.30			
99	13,140	92.50	184.00	9285.59	-4510.68	221.54	4509.33	4516.12	177.19	1.63	1.60			
100	13,234	89.50	180.50	9283.95	-4604.57	217.85	4603.24	4609.72	177.29	4.90	-3.19			
101	13,328	88.40	180.20	9285.67	-4698.55	217.28	4697.22	4703.57	177.35	1.21	-1.17			

V09.04.02

Company:	Matador Production Company		
Well Name:	Larry Wolfish 01-23S-27E RB #206H		
Location:	Eddy County, NM		
Rig:	Patterson #282	Magnetic Declination:	7.04
Job Number:	MSMO-58106		
API #:	30-015-45270		

Vertical Section Azimuth:	180.33	Proposed Direction:	180.33
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Survey Calculation Method:	Minimum Curvature
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PTB:	MD	INC	AZM	TVD	N/S	E/W	VS				
	14,365	91.7	182.8	9291.96	-5734.99	224.97	5733.6				
#	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	13,423	89.70	179.70	9287.24	-4793.54	217.36	4792.20	4798.46	177.40	1.47	1.37
103	13,517	91.30	180.30	9286.42	-4887.53	217.36	4886.20	4892.36	177.45	1.82	1.70
104	13,611	88.80	178.50	9286.34	-4981.51	218.35	4980.17	4986.29	177.49	3.28	-2.66
105	13,705	90.60	180.50	9286.83	-5075.50	219.17	5074.15	5080.23	177.53	2.86	1.91
106	13,799	89.00	179.20	9287.16	-5169.49	219.41	5168.14	5174.15	177.57	2.19	-1.70
107	13,894	88.40	178.30	9289.32	-5264.44	221.48	5263.08	5269.10	177.59	1.14	-0.63
108	13,988	89.00	177.50	9291.45	-5358.36	224.93	5356.97	5363.07	177.60	1.06	0.64
109	14,083	88.00	177.40	9293.94	-5453.23	229.15	5451.82	5458.04	177.59	1.06	-1.05
110	14,177	90.00	179.80	9295.58	-5547.17	231.45	5545.75	5552.00	177.61	3.32	2.13
111	14,272	91.20	182.60	9294.58	-5642.14	229.46	5640.72	5646.80	177.67	3.21	1.26
112	14,304	91.70	182.80	9293.77	-5674.09	227.95	5672.68	5678.67	177.70	1.68	1.56
PTB:	14,365	91.70	182.80	9291.96	-5734.99	224.97	5733.60	5739.40	177.75	0.00	0.00