



30-025-44659

7821 Will Rogers Blvd.
Fort Worth, Texas 76140
817.568.1038 (office)
817.568.1499 (fax)
www.msdir.com

MS Directional Survey Data Certification

MS Directional Job Number: DDMO-180417
Survey Type: MWD
Operating Company: Matador Production Company
Well Name & Number: Irvin Wall State COM 131H
Location: Lea County, NM
API Number: 30-025-44659
Tie In Depth: Surface
Surveyed Depths: 201' – 16,419' MD
Projected TD Survey: 16,475' MD
Dates Performed: 04/25/2018 – 05/18/2018

HOBBS OCD
OCT 04 2018
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: Nathaniel LeBlanc
MWD Surveyor Name: Nate LeBlanc
Date: 06-07-2018
Email: nleblanc@msdir.com

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Company:		Matador Production Company												
Well Name:		Irwin Wall State COM 131H												
Location:		Lea County, NM												
Rig:		Patterson #282				Magnetic Declination:		6.35		REFERENCED TO GRID NORTH ▼				
Job Number:		DDMO-180417												
API #:		30-025-44659												
Vertical Section Azimuth:				359.45		Proposed Direction:		359.45						
Survey Calculation Method:				Minimum Curvature										
PTB:	MD		INC		AZM		TVD		N/S		E/W		VS	
	16,475		96.1		359.8		11790.84		4735.91		-303.46		4738.61	
#	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	201	1.10	99.20	200.99	-0.31	1.90	-0.33	1.93	99.20	0.55	0.55			
2	383	0.50	67.40	382.97	-0.28	4.36	-0.32	4.37	93.71	0.40	-0.33			
3	570	0.10	116.00	569.97	-0.04	5.26	-0.09	5.26	90.44	0.24	-0.21			
4	780	2.10	242.00	779.92	-1.93	2.03	-1.95	2.80	133.53	1.03	0.95			
5	880	2.60	238.70	879.84	-3.97	-1.53	-3.95	4.25	201.05	0.52	0.50			
6	1,037	3.90	235.10	1036.58	-8.87	-8.95	-8.78	12.60	225.25	0.84	0.83			
7	1,226	4.30	241.90	1225.10	-15.89	-20.47	-15.69	25.91	232.19	0.33	0.21			
8	1,415	6.10	232.40	1413.32	-25.35	-34.68	-25.02	42.96	233.83	1.05	0.95			
9	1,604	6.30	235.00	1601.21	-37.43	-51.13	-36.93	63.36	233.80	0.18	0.11			
10	1,793	5.30	243.10	1789.24	-47.32	-67.41	-46.67	82.36	234.93	0.68	-0.53			
11	1,982	5.60	226.70	1977.40	-57.60	-81.91	-56.81	100.13	234.88	0.84	0.16			
12	2,171	4.40	237.40	2165.68	-67.83	-94.73	-66.92	116.51	234.39	0.80	-0.63			
13	2,360	4.50	213.80	2354.13	-77.90	-104.96	-76.89	130.71	233.42	0.96	0.05			
14	2,550	3.60	211.40	2543.65	-89.18	-112.21	-88.10	143.34	231.52	0.48	-0.47			
15	2,739	3.60	210.00	2732.28	-99.39	-118.27	-98.25	154.49	229.96	0.05	0.00			
16	2,928	4.20	218.80	2920.84	-109.92	-125.57	-108.71	166.89	228.80	0.45	0.32			
17	3,117	3.30	218.80	3109.44	-119.55	-133.32	-118.27	179.07	228.12	0.48	-0.48			
18	3,305	3.10	222.00	3297.14	-127.55	-140.11	-126.20	189.47	227.69	0.14	-0.11			
19	3,494	2.00	229.70	3485.95	-133.48	-146.05	-132.07	197.85	227.57	0.61	-0.58			
20	3,684	0.80	222.50	3675.89	-136.60	-149.47	-135.16	202.49	227.58	0.64	-0.63			
21	3,875	2.50	228.80	3866.81	-140.33	-153.51	-138.85	207.98	227.57	0.89	0.89			
22	4,064	4.90	232.60	4055.40	-147.95	-163.02	-146.38	220.15	227.78	1.28	1.27			
23	4,253	5.50	237.30	4243.62	-157.74	-177.06	-156.04	237.13	228.30	0.39	0.32			
24	4,442	5.70	233.90	4431.72	-168.17	-192.26	-166.31	255.43	228.82	0.20	0.11			
25	4,630	3.80	225.50	4619.07	-178.03	-204.25	-176.07	270.95	228.92	1.07	-1.01			
26	4,818	1.80	202.50	4806.84	-185.13	-209.83	-183.11	279.82	228.58	1.20	-1.06			
27	5,007	3.70	215.40	4995.61	-192.84	-214.49	-190.78	288.44	228.04	1.05	1.01			
28	5,195	4.60	222.40	5183.12	-203.36	-223.09	-201.20	301.87	227.65	0.55	0.48			
29	5,246	4.60	222.10	5233.96	-206.38	-225.84	-204.21	305.94	227.58	0.05	0.00			
30	5,394	4.20	219.90	5381.52	-214.94	-233.30	-212.70	317.22	227.34	0.29	-0.27			
31	5,489	4.20	217.80	5476.27	-220.36	-237.66	-218.07	324.10	227.16	0.16	0.00			
32	5,679	4.30	217.10	5665.74	-231.54	-246.22	-229.17	337.99	226.76	0.06	0.05			
33	5,868	4.40	233.10	5854.21	-241.55	-256.29	-239.07	352.18	226.70	0.64	0.05			

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Location:		Lea County, NM														
Rig:		Patterson #282					Magnetic Declination:		6.35			REFERENCED TO GRID NORTH				
Job Number:		DDMO-180417														
API #:		30-025-44659														
Vertical Section Azimuth:					359.45					Proposed Direction:		359.45				
Survey Calculation Method:					Minimum Curvature											
PTB:	MD		INC		AZM		TVD		N/S		E/W		VS			
	16,475		96.1		359.8		11790.84		4735.91		-303.46		4738.61			
#	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	6,056	4.40	225.50	6041.65	-250.93	-267.20	-248.35	366.56	226.80	0.31	0.00					
35	6,244	4.20	223.00	6229.12	-261.02	-277.04	-258.35	380.64	226.71	0.15	-0.11					
36	6,433	4.30	222.10	6417.60	-271.34	-286.51	-268.58	394.61	226.56	0.06	0.05					
37	6,623	1.60	243.70	6607.34	-277.80	-293.67	-274.97	404.25	226.59	1.51	-1.42					
38	6,812	1.40	252.30	6796.27	-279.67	-298.23	-276.80	408.85	226.84	0.16	-0.11					
39	7,001	1.10	255.20	6985.23	-280.84	-302.19	-277.92	412.54	227.10	0.16	-0.16					
40	7,189	0.20	4.50	7173.22	-280.97	-303.91	-278.04	413.89	227.25	0.63	-0.48					
41	7,377	0.30	31.70	7361.22	-280.23	-303.62	-277.30	413.17	227.29	0.08	0.05					
42	7,566	0.30	333.00	7550.21	-279.36	-303.59	-276.44	412.56	227.38	0.16	0.00					
43	7,754	0.30	271.50	7738.21	-278.91	-304.30	-275.98	412.78	227.49	0.16	0.00					
44	7,942	0.70	217.60	7926.21	-279.81	-305.49	-276.86	414.27	227.51	0.31	0.21					
45	8,131	1.10	185.90	8115.18	-282.53	-306.39	-279.57	416.77	227.32	0.33	0.21					
	8,320	0.60	174.20	8304.16	-285.32	-306.47	-282.36	418.73	227.05	0.28	-0.26					
47	8,509	2.00	323.60	8493.13	-283.65	-308.33	-280.67	418.95	227.39	1.34	0.74					
48	8,698	2.00	325.00	8682.01	-278.29	-312.18	-275.28	418.21	228.28	0.03	0.00					
49	8,886	1.40	326.40	8869.93	-273.69	-315.33	-270.65	417.54	229.04	0.32	-0.32					
50	9,075	1.00	32.50	9058.90	-270.38	-315.72	-267.33	415.67	229.42	0.71	-0.21					
51	9,264	0.40	341.50	9247.88	-268.36	-315.05	-265.32	413.85	229.58	0.43	-0.32					
52	9,453	0.50	315.80	9436.88	-267.14	-315.83	-264.10	413.66	229.77	0.12	0.05					
53	9,640	0.50	103.60	9623.88	-266.75	-315.61	-263.71	413.23	229.80	0.51	0.00					
54	9,828	0.90	273.30	9811.87	-266.86	-316.28	-263.81	413.82	229.84	0.74	0.21					
55	10,016	1.90	98.90	9999.84	-267.25	-314.68	-264.22	412.85	229.66	1.49	0.53					
56	10,205	2.00	91.30	10188.73	-267.81	-308.28	-264.84	408.37	229.02	0.15	0.05					
57	10,394	1.50	15.20	10377.67	-265.50	-304.34	-262.57	403.87	228.90	1.16	-0.26					
58	10,581	2.20	338.80	10564.57	-259.79	-304.99	-256.85	400.64	229.58	0.71	0.37					
59	10,770	3.30	313.40	10753.36	-252.67	-310.26	-249.68	400.13	230.84	0.86	0.58					
60	10,958	2.40	287.00	10941.13	-247.80	-317.96	-244.74	403.12	232.07	0.83	-0.48					
61	11,116	1.10	206.60	11099.07	-248.19	-321.80	-245.09	406.39	232.36	1.56	-0.82					
62	11,169	0.90	229.20	11152.07	-248.92	-322.34	-245.81	407.27	232.32	0.83	-0.38					
63	11,216	6.40	17.20	11198.98	-246.66	-321.85	-243.55	405.49	232.53	15.27	11.70					
64	11,264	13.60	12.40	11246.22	-238.58	-319.84	-235.50	399.02	233.28	15.09	15.00					
65	11,311	18.30	16.50	11291.40	-226.10	-316.56	-223.05	389.01	234.46	10.28	10.00					
66	11,359	21.30	12.80	11336.56	-210.37	-312.48	-207.36	376.70	236.05	6.77	6.25					
67	11	25.70	10.70	11379.65	-192.02	-308.70	-189.05		238.12	9.53	9					

V09.04.02

Company:	Matador Production Company		
Well Name:	Irwin Wall State COM 131H		
Location:	Lea County, NM		
Rig:	Patterson #282	Magnetic Declination:	6.35
Job Number:	DDMO-180417		
API #:	30-025-44659		
Vertical Section Azimuth:	359.45	Proposed Direction:	359.45
Survey Calculation Method:	Minimum Curvature		

PTB:	MD	INC	AZM	TVD	N/S	E/W	VS				
	16,475	96.1	359.8	11790.84	4735.91	-303.46	4738.61				
#	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	11,453	28.90	10.00	11421.41	-170.82	-304.83	-167.88	349.43	240.74	6.84	6.81
69	11,500	37.00	7.20	11460.82	-145.56	-301.08	-142.66	334.42	244.20	17.53	17.23
70	11,547	41.20	6.00	11497.29	-116.12	-297.69	-113.25	319.53	248.69	9.08	8.94
71	11,594	44.60	5.60	11531.71	-84.29	-294.46	-81.46	306.29	254.03	7.26	7.23
72	11,641	49.30	5.10	11563.78	-50.10	-291.26	-47.31	295.54	260.24	10.03	10.00
73	11,688	53.60	5.00	11593.07	-13.50	-288.03	-10.73	288.35	267.32	9.15	9.15
74	11,736	55.70	2.50	11620.84	25.56	-285.48	28.30	286.62	275.12	6.10	4.38
75	11,783	58.40	1.20	11646.40	64.98	-284.22	67.70	291.55	282.88	6.20	5.74
76	11,830	62.60	0.90	11669.54	105.87	-283.47	108.58	302.59	290.48	8.95	8.94
77	11,877	67.80	1.90	11689.25	148.50	-282.42	151.21	319.08	297.74	11.23	11.06
78	11,925	72.30	2.70	11705.62	193.57	-280.60	196.26	340.89	304.60	9.50	9.38
79	11,972	75.90	2.00	11718.50	238.73	-278.75	241.40	367.01	310.58	7.79	7.66
80	12,019	80.90	0.60	11727.95	284.74	-277.71	287.40	397.75	315.72	11.03	10.64
81	12,066	82.60	0.50	11734.69	331.25	-277.27	333.90	431.98	320.07	3.62	3.62
82	12,113	85.30	0.30	11739.64	377.99	-276.94	380.63	468.58	323.77	5.76	5.74
83	12,160	88.00	359.10	11742.39	424.90	-277.19	427.54	507.32	326.88	6.28	5.74
84	12,208	90.30	358.90	11743.10	472.88	-278.03	475.53	548.56	329.55	4.81	4.79
85	12,303	92.30	358.20	11740.95	567.82	-280.43	570.49	633.30	333.72	2.23	2.11
86	12,397	91.00	358.20	11738.24	661.74	-283.38	664.43	719.86	336.82	1.38	-1.38
87	12,478	89.90	357.80	11737.60	742.68	-286.21	745.40	795.92	338.92	1.45	-1.36
88	12,572	91.30	357.60	11736.62	836.60	-289.98	839.34	885.43	340.88	1.50	1.49
89	12,666	90.60	358.70	11735.06	930.54	-293.01	933.31	975.58	342.52	1.39	-0.74
90	12,760	88.90	358.90	11735.47	1024.51	-294.98	1027.29	1066.13	343.94	1.82	-1.81
91	12,855	88.30	358.50	11737.79	1119.46	-297.14	1122.26	1158.22	345.13	0.76	-0.63
92	12,948	89.90	358.40	11739.25	1212.41	-299.65	1215.23	1248.89	346.12	1.72	1.72
93	13,043	89.10	359.10	11740.08	1307.38	-301.72	1310.22	1341.75	347.00	1.12	-0.84
94	13,137	88.20	358.50	11742.30	1401.33	-303.69	1404.18	1433.86	347.77	1.15	-0.96
95	13,231	89.00	358.20	11744.59	1495.26	-306.40	1498.14	1526.33	348.42	0.91	0.85
96	13,325	87.20	358.20	11747.71	1589.16	-309.35	1592.06	1618.99	348.98	1.91	-1.91
97	13,420	85.80	356.00	11753.51	1683.86	-314.14	1686.79	1712.91	349.43	2.74	-1.47
98	13,514	87.80	358.00	11758.76	1777.57	-319.05	1780.55	1805.98	349.82	3.01	2.13
99	13,609	88.30	359.50	11761.99	1872.49	-321.12	1875.49	1899.83	350.27	1.66	0.53
100	13,703	87.90	0.90	11765.11	1966.44	-320.80	1969.42	1992.43	350.73	1.55	-0.43
101	13,797	88.70	0.60	11767.89	2060.39	-319.57	2063.36	2085.02	351.18	0.91	0.85

V09.04.02

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PTB:	MD		INC		AZM		TVD		N/S		E/W		VS	
	16,475		96.1		359.8		11790.84		4735.91		-303.46		4738.61	
#	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	13,892	87.50	0.30	11771.04	2155.33	-318.82	2158.29	2178.78	351.59	1.30	-1.26			
103	13,986	87.70	0.50	11774.98	2249.24	-318.16	2252.19	2271.64	351.95	0.30	0.21			
104	14,080	86.90	0.70	11779.41	2343.13	-317.18	2346.07	2364.50	352.29	0.88	-0.85			
105	14,174	87.90	1.10	11783.67	2437.02	-315.71	2439.94	2457.39	352.62	1.15	1.06			
106	14,269	88.60	1.20	11786.57	2531.96	-313.80	2534.86	2551.33	352.94	0.74	0.74			
107	14,364	89.20	1.20	11788.40	2626.92	-311.81	2629.79	2645.36	353.23	0.63	0.63			
108	14,458	88.00	0.70	11790.69	2720.88	-310.25	2723.73	2738.51	353.49	1.38	-1.28			
109	14,552	89.00	0.00	11793.15	2814.84	-309.68	2817.69	2831.83	353.72	1.30	1.06			
110	14,647	90.00	359.80	11793.98	2909.84	-309.85	2912.68	2926.29	353.92	1.07	1.05			
111	14,741	91.40	359.60	11792.84	3003.83	-310.34	3006.67	3019.82	354.10	1.50	1.49			
112	14,835	90.80	0.50	11791.03	3097.81	-310.26	3100.64	3113.31	354.28	1.15	-0.64			
113	14,929	89.20	0.40	11791.03	3191.80	-309.52	3194.63	3206.77	354.46	1.71	-1.70			
114	15,023	88.10	0.60	11793.25	3285.77	-308.70	3288.58	3300.24	354.63	1.19	-1.17			
115	15,119	86.40	0.40	11797.85	3381.65	-307.86	3384.45	3395.64	354.80	1.78	-1.77			
116	15,214	86.90	0.40	11803.40	3476.49	-307.20	3479.28	3490.03	354.95	0.53	0.53			
117	15,308	88.30	0.20	11807.34	3570.40	-306.71	3573.18	3583.55	355.09	1.50	1.49			
118	15,402	89.30	0.30	11809.31	3664.38	-306.30	3667.15	3677.16	355.22	1.07	1.06			
119	15,497	90.30	0.40	11809.64	3759.38	-305.72	3762.14	3771.79	355.35	1.06	1.05			
120	15,615	89.50	0.40	11809.84	3877.37	-304.89	3880.12	3889.34	355.50	0.68	-0.68			
121	15,710	88.70	0.00	11811.34	3972.36	-304.56	3975.10	3984.02	355.62	0.94	-0.84			
122	15,804	86.70	0.40	11815.11	4066.28	-304.23	4069.01	4077.64	355.72	2.17	-2.13			
123	15,898	87.80	0.50	11819.62	4160.16	-303.50	4162.89	4171.22	355.83	1.18	1.17			
124	15,991	90.10	0.30	11821.32	4253.14	-302.85	4255.85	4263.91	355.93	2.48	2.47			
125	16,085	91.60	0.00	11819.93	4347.13	-302.60	4349.83	4357.65	356.02	1.63	1.60			
126	16,180	92.90	359.90	11816.20	4442.05	-302.68	4444.75	4452.35	356.10	1.37	1.37			
127	16,274	94.50	359.90	11810.13	4535.85	-302.85	4538.55	4545.95	356.18	1.70	1.70			
128	16,368	95.50	359.80	11801.94	4629.49	-303.09	4632.19	4639.40	356.25	1.07	1.06			
129	16,419	96.10	359.80	11796.79	4680.23	-303.27	4682.93	4690.05	356.29	1.18	1.18			
PTB:	16,475	96.10	359.80	11790.84	4735.91	-303.46	4738.61	4745.63	356.33	0.00	0.00			