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30-025-43788

MS Energy Services Survey Data Certification

MS Energy Job Number: DDMO-170904
Survey Type: MWD
Operating Company: Devon Energy Production Co, LP
Well Name & Number: Arabian 30-19 FED COM 4H
Location: Lea County, NM
API Number: 30-025-43788
Tie In Depth: 1,059' MD
Surveyed Depths: 1,164' – 17,593' MD
Projected TD Survey: 17,650' MD
Dates Performed: 09/09/2017 – 09/24/2017

**HOBBS OCD
DEC 20 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:

MWD Surveyor Name:

Matt Wilson

Date:

10-13-2017

Email:

mwilson@msenergyservices.com

Company:	Devon Energy Production Co, LP	
Well Name:	Arabian 30-19 FED COM 4H	
Location:	Lea County, NM	
Rig:	Cactus #126	Magnetic Declination: 6
Job Number:	DDMO-170904	
API #:	30-025-43788	

Vertical Section Azimuth:	0.00	Proposed Direction: 0
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Survey Calculation Method:	Minimum Curvature	
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PTB:	MD	INC	AZM	TVD	N/S
	17,650	93.9	2.3	10212.93	7578.58

#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec
TIE IN	1,059	1.20	354.68	1058.89	2.75	7.06	2.75
1	1,164	1.30	345.40	1163.87	5.00	6.66	5.00
2	1,347	1.20	330.30	1346.82	8.67	5.19	8.67
3	1,439	0.80	323.60	1438.81	10.02	4.33	10.02
4	1,534	0.60	306.00	1533.80	10.85	3.53	10.85
5	1,628	0.40	317.40	1627.80	11.38	2.91	11.38
6	1,722	0.40	297.00	1721.79	11.77	2.40	11.77
7	1,816	0.40	282.50	1815.79	11.99	1.78	11.99
8	1,910	0.30	252.50	1909.79	11.99	1.23	11.99
9	2,004	0.40	241.80	2003.79	11.76	0.70	11.76
10	2,098	0.30	253.30	2097.79	11.53	0.18	11.53
11	2,192	0.30	239.80	2191.79	11.34	-0.27	11.34
12	2,286	0.30	198.70	2285.79	10.98	-0.56	10.98
13	2,380	0.20	215.50	2379.78	10.62	-0.73	10.62
14	2,474	0.30	178.00	2473.78	10.24	-0.82	10.24
15	2,568	0.40	200.80	2567.78	9.68	-0.93	9.68
16	2,663	0.70	207.30	2662.78	8.86	-1.31	8.86
17	2,757	0.90	222.40	2756.77	7.80	-2.07	7.80
18	2,851	1.20	216.80	2850.75	6.47	-3.16	6.47
19	2,945	0.90	172.80	2944.74	4.95	-3.66	4.95
20	3,039	1.50	137.80	3038.72	3.31	-2.74	3.31
21	3,133	1.50	124.80	3132.69	1.69	-0.90	1.69
22	3,228	1.80	99.70	3227.65	0.73	1.59	0.73
23	3,322	3.10	89.90	3321.56	0.49	5.59	0.49
24	3,416	4.00	87.50	3415.38	0.63	11.40	0.63
25	3,510	5.00	86.60	3509.09	1.02	18.77	1.02
26	3,604	5.90	80.90	3602.66	2.03	27.63	2.03
27	3,698	7.00	81.70	3696.07	3.62	38.07	3.62
28	3,792	7.10	86.60	3789.36	4.79	49.53	4.79
29	3,886	6.80	89.10	3882.67	5.22	60.90	5.22
30	3,980	5.90	89.00	3976.09	5.39	71.29	5.39
31	4,074	6.50	90.70	4069.54	5.41	81.44	5.41
32	4,168	6.80	93.20	4162.91	5.04	92.32	5.04
33	4,262	7.10	94.10	4256.21	4.31	103.67	4.31

Company:	Devon Energy Production Co, LP	
Well Name:	Arabian 30-19 FED COM 4H	
Location:	Lea County, NM	
Rig:	Cactus #126	Magnetic Declination: 6
Job Number:	DDMO-170904	
API #:	30-025-43788	

Vertical Section Azimuth:	0.00	Proposed Direction: 0
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Survey Calculation Method:	Minimum Curvature	
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PTB:	MD	INC	AZM	TVD	N/S
	17,650	93.9	2.3	10212.93	7578.58

#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec
34	4,359	6.80	91.80	4352.50	3.70	115.39	3.70
35	4,453	6.20	91.90	4445.90	3.36	126.02	3.36
36	4,547	6.80	89.20	4539.29	3.27	136.66	3.27
37	4,641	7.00	88.60	4632.61	3.49	147.95	3.49
38	4,735	6.80	87.50	4725.93	3.87	159.24	3.87
39	4,829	6.90	86.80	4819.26	4.43	170.44	4.43
40	4,923	6.80	87.70	4912.59	4.96	181.63	4.96
41	5,017	6.60	87.70	5005.95	5.40	192.59	5.40
42	5,111	6.60	86.80	5099.32	5.92	203.38	5.92
43	5,205	7.80	86.50	5192.58	6.61	215.14	6.61
44	5,299	7.90	85.30	5285.70	7.53	227.95	7.53
45	5,393	7.70	84.70	5378.83	8.64	240.66	8.64
46	5,487	7.40	85.00	5472.02	9.75	252.96	9.75
47	5,581	7.50	84.20	5565.22	10.90	265.09	10.90
48	5,675	7.20	84.50	5658.45	12.08	277.06	12.08
49	5,769	7.40	84.40	5751.69	13.24	288.95	13.24
50	5,864	7.50	84.60	5845.89	14.42	301.21	14.42
51	5,958	7.40	85.80	5939.09	15.44	313.35	15.44
52	6,052	7.50	84.10	6032.30	16.52	325.49	16.52
53	6,146	7.60	90.80	6125.49	17.06	337.81	17.06
54	6,240	7.40	88.80	6218.68	17.10	350.08	17.10
55	6,334	7.20	89.40	6311.92	17.29	362.02	17.29
56	6,428	7.00	89.70	6405.20	17.38	373.64	17.38
57	6,522	6.80	89.00	6498.52	17.51	384.93	17.51
58	6,616	7.70	88.20	6591.77	17.80	396.79	17.80
59	6,710	7.70	89.50	6684.92	18.05	409.38	18.05
60	6,804	7.60	90.40	6778.08	18.07	421.89	18.07
61	6,898	6.90	93.00	6871.33	17.73	433.75	17.73
62	6,992	6.60	93.90	6964.68	17.06	444.78	17.06
63	7,086	7.40	93.50	7057.98	16.33	456.21	16.33
64	7,180	6.30	93.70	7151.30	15.62	467.40	15.62
65	7,275	6.60	93.70	7245.70	14.94	478.05	14.94
66	7,369	6.10	94.10	7339.13	14.23	488.42	14.23
67	7,463	6.30	90.30	7432.58	13.85	498.56	13.85

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Job Number:		DDMO-170904					
API #:		30-025-43788					
Vertical Section Azimuth:				0.00		Proposed Direction:	0
Survey Calculation Method:				Minimum Curvature			
PTB:	MD	INC		AZM	TVD	N/S	
	17,650	93.9		2.3	10212.93	7578.58	
#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec
68	7,557	6.00	92.70	7526.04	13.59	508.62	13.59
69	7,651	5.50	92.70	7619.56	13.14	518.03	13.14
70	7,745	6.40	91.40	7713.06	12.80	527.77	12.80
71	7,839	6.70	91.60	7806.44	12.52	538.49	12.52
72	7,933	6.60	93.60	7899.81	12.03	549.36	12.03
73	8,028	6.30	95.00	7994.21	11.23	560.00	11.23
74	8,121	5.70	96.60	8086.70	10.26	569.67	10.26
75	8,215	5.20	95.40	8180.27	9.32	578.55	9.32
76	8,310	4.60	95.90	8274.93	8.52	586.63	8.52
77	8,404	4.10	97.50	8368.65	7.70	593.71	7.70
78	8,498	2.50	103.70	8462.50	6.77	599.03	6.77
79	8,592	2.20	110.70	8556.42	5.65	602.71	5.65
80	8,686	1.70	106.50	8650.36	4.62	605.73	4.62
81	8,780	1.10	101.70	8744.33	4.04	607.95	4.04
82	8,874	1.10	93.10	8838.32	3.81	609.74	3.81
83	8,968	1.40	80.90	8932.29	3.94	611.77	3.94
84	9,062	1.60	71.70	9026.26	4.53	614.15	4.53
85	9,156	1.20	83.80	9120.23	5.05	616.38	5.05
86	9,250	0.50	134.20	9214.22	4.87	617.65	4.87
87	9,344	0.40	142.50	9308.22	4.32	618.14	4.32
88	9,439	0.50	159.10	9403.22	3.67	618.49	3.67
89	9,533	0.60	162.60	9497.21	2.82	618.79	2.82
90	9,627	0.40	156.70	9591.21	2.05	619.07	2.05
91	9,721	0.70	173.90	9685.21	1.18	619.26	1.18
92	9,813	3.60	355.70	9777.15	3.50	619.10	3.50
93	9,907	15.20	351.60	9869.73	18.69	617.07	18.69
94	10,001	24.70	354.90	9958.00	50.51	613.52	50.51
95	10,095	36.20	0.20	10038.91	98.00	611.86	98.00
96	10,189	46.50	0.90	10109.38	160.01	612.50	160.01
97	10,283	56.20	355.80	10168.04	233.26	610.16	233.26
98	10,377	68.50	356.20	10211.58	316.16	604.38	316.16
99	10,471	76.80	0.10	10239.60	405.74	601.56	405.74
100	10,565	83.10	1.00	10255.99	498.25	602.45	498.25
101	10,676	87.50	1.60	10265.09	608.82	604.97	608.82

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Location:	Lea County, NM				
Rig:	Cactus #126				Magnetic Declination: 6
Job Number:	DDMO-170904				
API #:	30-025-43788				

Vertical Section Azimuth:	0.00	Proposed Direction:	0
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Survey Calculation Method:	Minimum Curvature				
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PTB:	MD	INC	AZM	TVD	N/S
	17,650	93.9	2.3	10212.93	7578.58

#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec
102	10,770	86.70	0.10	10269.84	702.68	606.36	702.68
103	10,864	86.20	0.10	10275.66	796.50	606.52	796.50
104	10,958	87.50	359.10	10280.83	890.36	605.87	890.36
105	11,052	88.10	358.60	10284.44	984.27	603.98	984.27
106	11,146	88.10	358.90	10287.55	1078.19	601.93	1078.19
107	11,240	89.80	359.10	10289.27	1172.16	600.29	1172.16
108	11,334	89.60	359.30	10289.77	1266.15	598.98	1266.15
109	11,428	89.90	359.30	10290.18	1360.14	597.83	1360.14
110	11,522	89.40	359.30	10290.75	1454.13	596.68	1454.13
111	11,616	90.60	359.10	10290.75	1548.12	595.37	1548.12
112	11,710	90.90	359.30	10289.52	1642.10	594.06	1642.10
113	11,804	90.40	358.20	10288.45	1736.07	592.01	1736.07
114	11,898	91.60	359.30	10286.81	1830.03	589.96	1830.03
115	11,992	92.30	359.30	10283.62	1923.97	588.81	1923.97
116	12,087	94.00	0.80	10278.39	2018.82	588.89	2018.82
117	12,180	92.10	0.40	10273.45	2111.68	589.86	2111.68
118	12,275	90.10	0.90	10271.62	2206.65	590.94	2206.65
119	12,368	90.00	0.90	10271.54	2299.64	592.40	2299.64
120	12,462	90.10	1.10	10271.46	2393.63	594.04	2393.63
121	12,556	89.90	1.00	10271.46	2487.61	595.76	2487.61
122	12,651	89.70	1.60	10271.79	2582.58	597.92	2582.58
123	12,745	91.30	1.30	10270.97	2676.55	600.30	2676.55
124	12,839	91.50	0.90	10268.67	2770.50	602.10	2770.50
125	12,933	90.00	1.10	10267.44	2864.48	603.74	2864.48
126	13,027	90.10	1.50	10267.36	2958.45	605.88	2958.45
127	13,121	89.50	1.50	10267.69	3052.42	608.34	3052.42
128	13,215	90.00	0.80	10268.10	3146.40	610.22	3146.40
129	13,309	90.00	0.80	10268.10	3240.39	611.53	3240.39
130	13,403	90.50	0.20	10267.69	3334.38	612.36	3334.38
131	13,497	90.40	0.10	10266.95	3428.38	612.60	3428.38
132	13,591	90.40	0.40	10266.30	3522.38	613.01	3522.38
133	13,685	90.00	0.70	10265.97	3616.37	613.91	3616.37
134	13,779	88.00	0.30	10267.61	3710.35	614.73	3710.35
135	13,873	87.10	0.10	10271.63	3804.26	615.06	3804.26

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Location:	Lea County, NM				
Rig:	Cactus #126			Magnetic Declination:	6
Job Number:	DDMO-170904				
API #:	30-025-43788				

Vertical Section Azimuth:	0.00	Proposed Direction:	0
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Survey Calculation Method:	Minimum Curvature
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PTB:	MD	INC	AZM	TVD	N/S
	17,650	93.9	2.3	10212.93	7578.58

#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec
136	13,967	87.70	359.40	10275.89	3898.16	614.65	3898.16
137	14,061	87.90	0.40	10279.50	3992.09	614.49	3992.09
138	14,155	89.00	359.80	10282.04	4086.06	614.65	4086.06
139	14,249	90.20	0.60	10282.70	4180.05	614.98	4180.05
140	14,343	90.00	359.30	10282.53	4274.05	614.90	4274.05
141	14,437	90.40	359.30	10282.21	4368.04	613.75	4368.04
142	14,531	90.90	359.80	10281.14	4462.03	613.01	4462.03
143	14,625	91.00	359.60	10279.58	4556.02	612.52	4556.02
144	14,719	91.60	0.00	10277.45	4649.99	612.19	4649.99
145	14,814	90.40	359.60	10275.79	4744.97	611.86	4744.97
146	14,908	90.50	0.10	10275.05	4838.97	611.61	4838.97
147	15,002	90.30	359.90	10274.40	4932.97	611.61	4932.97
148	15,096	90.50	0.40	10273.74	5026.97	611.86	5026.97
149	15,190	89.60	0.10	10273.66	5120.96	612.27	5120.96
150	15,284	90.00	1.10	10273.99	5214.96	613.25	5214.96
151	15,378	89.80	358.80	10274.15	5308.95	613.17	5308.95
152	15,472	89.10	359.10	10275.05	5402.93	611.45	5402.93
153	15,566	89.20	359.40	10276.45	5496.91	610.22	5496.91
154	15,660	89.70	359.90	10277.35	5590.90	609.65	5590.90
155	15,755	89.40	0.00	10278.09	5685.90	609.56	5685.90
156	15,849	89.40	0.10	10279.08	5779.90	609.64	5779.90
157	15,943	88.20	0.10	10281.05	5873.87	609.81	5873.87
158	16,037	89.20	359.30	10283.18	5967.85	609.32	5967.85
159	16,131	89.30	358.60	10284.41	6061.82	607.59	6061.82
160	16,225	91.00	358.80	10284.16	6155.79	605.46	6155.79
161	16,319	92.80	359.10	10281.05	6249.72	603.74	6249.72
162	16,413	92.90	359.60	10276.37	6343.60	602.67	6343.60
163	16,507	91.90	358.60	10272.44	6437.50	601.20	6437.50
164	16,601	93.00	359.20	10268.42	6531.40	599.40	6531.40
165	16,695	93.70	358.70	10262.93	6625.22	597.68	6625.22
166	16,789	93.90	358.70	10256.70	6718.99	595.55	6718.99
167	16,883	91.80	359.10	10252.02	6812.85	593.75	6812.85
168	16,977	92.40	359.50	10248.58	6906.78	592.60	6906.78
169	17,071	92.20	0.10	10244.81	7000.70	592.27	7000.70

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Job Number:		DDMO-170904					
API #:		30-025-43788					
Vertical Section Azimuth:				0.00		Proposed Direction:	0
Survey Calculation Method:				Minimum Curvature			
PTB:	MD	INC	AZM	TVD	N/S		
	17,650	93.9	2.3	10212.93	7578.58		
#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec
170	17,165	93.00	0.70	10240.54	7094.60	592.93	7094.60
171	17,259	93.20	1.30	10235.46	7188.45	594.56	7188.45
172	17,353	92.70	1.50	10230.62	7282.30	596.86	7282.30
173	17,447	93.20	1.80	10225.78	7376.13	599.56	7376.13
174	17,541	93.60	2.30	10220.21	7469.91	602.92	7469.91
175	17,593	93.90	2.30	10216.81	7521.75	605.00	7521.75