



November 30, 2018

Devon Energy Production Company, LP
Well: Flagler 8 Fed Com 6H
County/Parish: Lea County, NM

LEAM MWD: (OH) from 0' MD – 17,294' MD
Projection; 17,349' MD

This Borehole Survey taken between 10/01/18 and 11/23/18 had been conducted and calculated according to the highest professional standards and complies with all known State and Federal requirements.

Reviewed and Approved:

Date: November 30, 2018



Survey Certification Form

State of New Mexico

Lea County

I, Randy W. Rakowitz, certify that; I am employed by LEAM Drilling Services, that I did on the day(s) of 10/01/2018 through 11/23/2018, conduct or supervise the taking of MWD Survey from a depth of 0' MD to 17,349' MD; that the data is true, correct, complete and within the limitations of the tools as set forth by LEAM Drilling Services, that I am authorized and qualified to make this report; that this survey was conducted at the request of Devon Energy Production Company, LP for the Flagler 8 Fed Com 6H in Lea County, New Mexico; and that I reviewed this report and find that it conforms to the principals and procedures as set forth by LEAM Drilling Services.

A handwritten signature in black ink, appearing to be 'RWR', is written over a solid horizontal line.

Randy W. Rakowitz
MWD Operations Coordinator

LEAM Drilling Services

Survey Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well Flagler 8 Fed Com 6H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3467.1' GE + 23.5' KB @ 3490.60usft
Site:	Flagler 8 Federal	MD Reference:	3467.1' GE + 23.5' KB @ 3490.60usft
Well:	Flagler 8 Fed Com 6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Multi User Db

Project	Lea County, NM (NAD-83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Flagler 8 Federal				
Site Position:		Northing:	414,857.70 usft	Latitude:	32° 8' 18.0547 N
From:	Map	Easting:	770,963.69 usft	Longitude:	103° 35' 29.2852 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.39 °

Well	Flagler 8 Fed Com 6H					
Well Position	+N/-S	0.00 usft	Northing:	414,837.07 usft	Latitude:	32° 8' 18.0671 N
	+E/-W	0.00 usft	Easting:	767,764.20 usft	Longitude:	103° 36' 6.4965 W
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,467.10 usft	

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	8/31/2018	6.75	59.80	47,887

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	359.61	

Survey Program	Date	12/6/2018			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
175.00	17,294.00	Survey #1 (OH)	LEAM MWD+HDGM	MWD+HDGM	
17,349.00	17,349.00	Survey #2 (OH)	Project	Projection	

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
175.00	1.20	131.90	174.99	-1.22	1.36	-1.23	0.69	0.69	0.00	
267.00	1.20	134.20	266.97	-2.54	2.77	-2.56	0.05	0.00	2.50	
358.00	1.00	141.40	357.95	-3.82	3.95	-3.85	0.27	-0.22	7.91	
450.00	1.00	141.90	449.94	-5.08	4.95	-5.12	0.01	0.00	0.54	
542.00	0.80	144.30	541.92	-6.24	5.82	-6.28	0.22	-0.22	2.61	
633.00	0.40	152.40	632.92	-7.03	6.33	-7.08	0.45	-0.44	8.90	
725.00	0.30	196.20	724.92	-7.55	6.42	-7.59	0.30	-0.11	47.61	
817.00	0.30	259.80	816.92	-7.82	6.11	-7.86	0.34	0.00	69.13	
908.00	0.40	296.40	907.92	-7.72	5.59	-7.76	0.26	0.11	40.22	

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Well:	Flagler 8 Fed Com 6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Multi User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,000.00	0.40	308.50	999.91	-7.38	5.05	-7.42	0.09	0.00	13.15
1,077.00	0.40	304.70	1,076.91	-7.06	4.62	-7.09	0.03	0.00	-4.94
1,234.00	0.50	295.90	1,233.91	-6.45	3.56	-6.47	0.08	0.06	-5.61
1,324.00	0.30	275.00	1,323.90	-6.26	2.97	-6.28	0.27	-0.22	-23.22
1,415.00	0.20	321.40	1,414.90	-6.11	2.63	-6.13	0.24	-0.11	50.99
1,509.00	0.40	304.80	1,508.90	-5.80	2.26	-5.81	0.23	0.21	-17.66
1,603.00	0.20	283.00	1,602.90	-5.57	1.83	-5.59	0.24	-0.21	-23.19
1,699.00	0.40	285.50	1,698.90	-5.45	1.34	-5.46	0.21	0.21	2.60
1,794.00	0.20	325.80	1,793.90	-5.22	0.93	-5.23	0.29	-0.21	42.42
1,889.00	0.40	317.30	1,888.90	-4.84	0.61	-4.84	0.22	0.21	-8.95
1,984.00	0.60	333.00	1,983.89	-4.15	0.16	-4.15	0.25	0.21	16.53
2,079.00	0.70	327.90	2,078.89	-3.22	-0.37	-3.22	0.12	0.11	-5.37
2,173.00	0.90	320.80	2,172.88	-2.16	-1.14	-2.15	0.24	0.21	-7.55
2,268.00	1.00	321.70	2,267.87	-0.93	-2.13	-0.92	0.11	0.11	0.95
2,363.00	1.20	338.80	2,362.85	0.65	-3.00	0.67	0.40	0.21	18.00
2,457.00	1.40	336.30	2,456.82	2.62	-3.82	2.64	0.22	0.21	-2.66
2,552.00	1.70	335.10	2,551.79	4.96	-4.88	4.99	0.32	0.32	-1.26
2,646.00	1.10	335.40	2,645.76	7.04	-5.84	7.08	0.64	-0.64	0.32
2,741.00	0.60	344.40	2,740.75	8.35	-6.36	8.39	0.54	-0.53	9.47
2,836.00	0.90	352.80	2,835.74	9.57	-6.58	9.61	0.34	0.32	8.84
2,930.00	0.50	55.80	2,929.74	10.53	-6.34	10.58	0.86	-0.43	67.02
3,025.00	0.50	67.70	3,024.73	10.92	-5.61	10.96	0.11	0.00	12.53
3,120.00	1.20	46.60	3,119.72	11.76	-4.50	11.79	0.80	0.74	-22.21
3,214.00	1.50	45.00	3,213.69	13.31	-2.92	13.33	0.32	0.32	-1.70
3,308.00	1.40	37.30	3,307.66	15.09	-1.35	15.10	0.23	-0.11	-8.19
3,403.00	1.30	66.50	3,402.64	16.45	0.34	16.44	0.72	-0.11	30.74
3,497.00	0.40	131.30	3,496.63	16.66	1.56	16.64	1.26	-0.96	68.94
3,591.00	0.40	164.20	3,590.63	16.12	1.90	16.11	0.24	0.00	35.00
3,685.00	0.40	162.80	3,684.62	15.49	2.09	15.48	0.01	0.00	-1.49
3,779.00	1.00	79.50	3,778.62	15.33	2.99	15.31	1.10	0.64	-88.62
3,874.00	2.00	75.40	3,873.59	15.90	5.41	15.86	1.06	1.05	-4.32
3,969.00	1.50	111.30	3,968.54	15.86	8.17	15.81	1.24	-0.53	37.79
4,064.00	0.30	205.90	4,063.53	15.19	9.22	15.13	1.63	-1.26	99.58
4,159.00	0.40	231.50	4,158.53	14.76	8.85	14.70	0.19	0.11	26.95
4,253.00	0.60	138.90	4,252.53	14.18	8.92	14.12	0.78	0.21	-98.51
4,347.00	1.90	118.90	4,346.50	13.06	10.61	12.99	1.44	1.38	-21.28
4,441.00	1.50	129.90	4,440.46	11.52	12.92	11.43	0.55	-0.43	11.70
4,537.00	1.20	144.50	4,536.44	9.89	14.46	9.79	0.47	-0.31	15.21
4,632.00	2.00	151.70	4,631.40	7.62	15.83	7.52	0.87	0.84	7.58
4,726.00	2.30	165.60	4,725.33	4.35	17.07	4.24	0.64	0.32	14.79
4,820.00	1.10	233.10	4,819.30	1.98	16.82	1.87	2.27	-1.28	71.81
4,914.00	1.10	250.30	4,913.28	1.14	15.25	1.03	0.35	0.00	18.30
5,009.00	0.80	263.00	5,008.27	0.75	13.73	0.66	0.38	-0.32	13.37

LEAM Drilling Services

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Survey

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5,104.00	1.10	257.40	5,103.25	0.47	12.19	0.39	0.33	0.32	-5.89
5,198.00	0.80	256.50	5,197.24	0.12	10.67	0.05	0.32	-0.32	-0.96
5,292.00	0.90	261.20	5,291.23	-0.15	9.30	-0.21	0.13	0.11	5.00
5,386.00	0.70	269.20	5,385.22	-0.27	8.00	-0.32	0.24	-0.21	8.51
5,481.00	0.40	311.70	5,480.22	-0.05	7.17	-0.10	0.51	-0.32	44.74
5,575.00	0.60	285.30	5,574.21	0.29	6.45	0.25	0.32	0.21	-28.09
5,670.00	0.40	302.90	5,669.21	0.60	5.69	0.57	0.26	-0.21	18.53
5,764.00	0.50	320.00	5,763.21	1.10	5.15	1.06	0.18	0.11	18.19
5,859.00	0.40	274.10	5,858.20	1.44	4.55	1.41	0.38	-0.11	-48.32
5,953.00	0.30	267.70	5,952.20	1.45	3.98	1.42	0.11	-0.11	-6.81
6,048.00	0.10	297.80	6,047.20	1.48	3.66	1.46	0.23	-0.21	31.68
6,143.00	0.40	304.10	6,142.20	1.71	3.31	1.68	0.32	0.32	6.63
6,238.00	0.40	290.80	6,237.20	2.01	2.73	1.99	0.10	0.00	-14.00
6,332.00	0.70	314.20	6,331.19	2.53	2.01	2.51	0.39	0.32	24.89
6,427.00	0.50	313.10	6,426.19	3.21	1.29	3.20	0.21	-0.21	-1.16
6,522.00	0.80	333.50	6,521.18	4.09	0.69	4.09	0.39	0.32	21.47
6,616.00	0.80	335.90	6,615.17	5.28	0.13	5.28	0.04	0.00	2.55
6,711.00	0.90	332.80	6,710.16	6.55	-0.48	6.55	0.12	0.11	-3.26
6,805.00	0.70	338.80	6,804.15	7.74	-1.03	7.74	0.23	-0.21	6.38
6,901.00	0.40	184.10	6,900.15	7.95	-1.26	7.96	1.12	-0.31	-161.15
6,996.00	0.50	190.80	6,995.15	7.21	-1.37	7.22	0.12	0.11	7.05
7,090.00	0.70	172.80	7,089.14	6.24	-1.37	6.25	0.29	0.21	-19.15
7,185.00	0.50	180.90	7,184.14	5.25	-1.30	5.26	0.23	-0.21	8.53
7,280.00	0.80	196.70	7,279.13	4.20	-1.50	4.21	0.36	0.32	16.63
7,374.00	0.60	209.20	7,373.13	3.14	-1.93	3.15	0.27	-0.21	13.30
7,468.00	0.50	198.10	7,467.12	2.32	-2.30	2.34	0.15	-0.11	-11.81
7,562.00	0.40	188.10	7,561.12	1.61	-2.47	1.62	0.13	-0.11	-10.64
7,656.00	0.70	200.10	7,655.11	0.74	-2.71	0.76	0.34	0.32	12.77
7,750.00	0.70	224.70	7,749.11	-0.20	-3.32	-0.18	0.32	0.00	26.17
7,844.00	0.80	226.40	7,843.10	-1.06	-4.19	-1.04	0.11	0.11	1.81
7,939.00	1.30	231.40	7,938.08	-2.19	-5.52	-2.16	0.53	0.53	5.26
8,033.00	0.90	239.80	8,032.07	-3.23	-6.99	-3.18	0.46	-0.43	8.94
8,127.00	0.90	238.70	8,126.05	-3.99	-8.26	-3.93	0.02	0.00	-1.17
8,221.00	1.00	221.00	8,220.04	-4.99	-9.43	-4.92	0.33	0.11	-18.83
8,320.00	0.80	223.30	8,319.03	-6.14	-10.47	-6.07	0.21	-0.20	2.32
8,414.00	1.00	206.20	8,413.02	-7.36	-11.28	-7.28	0.35	0.21	-18.19
8,509.00	1.10	214.00	8,508.00	-8.86	-12.16	-8.77	0.18	0.11	8.21
8,604.00	0.70	175.60	8,602.99	-10.19	-12.62	-10.11	0.74	-0.42	-40.42
8,699.00	0.70	192.70	8,697.98	-11.34	-12.70	-11.25	0.22	0.00	18.00
8,793.00	0.80	181.30	8,791.98	-12.55	-12.84	-12.46	0.19	0.11	-12.13
8,887.00	0.70	181.10	8,885.97	-13.78	-12.87	-13.69	0.11	-0.11	-0.21
8,981.00	0.90	170.20	8,979.96	-15.08	-12.76	-15.00	0.27	0.21	-11.60
9,075.00	1.00	174.20	9,073.95	-16.63	-12.55	-16.54	0.13	0.11	4.26

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9,170.00	1.00	182.70	9,168.93	-18.28	-12.50	-18.19	0.16	0.00	8.95
9,264.00	0.80	199.00	9,262.92	-19.72	-12.75	-19.63	0.34	-0.21	17.34
9,359.00	0.60	188.80	9,357.91	-20.84	-13.05	-20.75	0.25	-0.21	-10.74
9,453.00	1.00	181.80	9,451.90	-22.15	-13.15	-22.06	0.44	0.43	-7.45
9,548.00	1.20	183.70	9,546.89	-23.97	-13.24	-23.88	0.21	0.21	2.00
9,642.00	1.30	151.70	9,640.86	-25.89	-12.80	-25.80	0.74	0.11	-34.04
9,737.00	1.10	149.30	9,735.84	-27.62	-11.82	-27.54	0.22	-0.21	-2.53
9,831.00	1.20	149.30	9,829.83	-29.24	-10.86	-29.17	0.11	0.11	0.00
9,925.00	1.50	164.40	9,923.80	-31.27	-10.02	-31.21	0.49	0.32	16.06
10,017.00	3.10	166.10	10,015.72	-34.85	-9.10	-34.79	1.74	1.74	1.85
10,113.00	3.30	154.20	10,111.57	-39.86	-7.28	-39.81	0.72	0.21	-12.40
10,208.00	4.70	147.30	10,206.34	-45.59	-3.98	-45.57	1.56	1.47	-7.26
10,302.00	4.50	143.50	10,300.04	-51.80	0.29	-51.80	0.39	-0.21	-4.04
10,397.00	4.50	141.50	10,394.74	-57.71	4.83	-57.74	0.17	0.00	-2.11
10,491.00	3.30	150.50	10,488.53	-62.95	8.46	-63.01	1.43	-1.28	9.57
10,586.00	5.20	151.00	10,583.26	-69.10	11.89	-69.18	2.00	2.00	0.53
10,681.00	5.10	152.10	10,677.88	-76.59	15.95	-76.70	0.15	-0.11	1.16
10,776.00	4.70	157.70	10,772.53	-83.93	19.41	-84.06	0.66	-0.42	5.89
10,868.00	4.20	173.50	10,864.26	-90.76	21.22	-90.90	1.43	-0.54	17.17
10,963.00	4.10	174.20	10,959.01	-97.60	21.95	-97.74	0.12	-0.11	0.74
11,058.00	3.60	177.90	11,053.79	-103.96	22.41	-104.11	0.59	-0.53	3.89
11,152.00	3.40	174.80	11,147.62	-109.68	22.77	-109.83	0.29	-0.21	-3.30
11,247.00	2.40	176.70	11,242.49	-114.47	23.14	-114.63	1.06	-1.05	2.00
11,341.00	1.70	191.50	11,336.43	-117.80	22.97	-117.96	0.93	-0.74	15.74
11,436.00	0.70	208.50	11,431.41	-119.70	22.41	-119.85	1.11	-1.05	17.89
11,531.00	0.50	2.80	11,526.41	-119.79	22.16	-119.94	1.23	-0.21	162.42
11,626.00	0.50	350.70	11,621.41	-118.97	22.11	-119.12	0.11	0.00	-12.74
11,720.00	0.30	241.20	11,715.41	-118.68	21.83	-118.83	0.71	-0.21	-116.49
11,748.00	0.40	246.30	11,743.41	-118.76	21.68	-118.90	0.37	0.36	18.21
11,822.00	2.40	15.10	11,817.39	-117.36	21.84	-117.51	3.61	2.70	174.05
11,915.00	16.50	11.60	11,908.89	-102.47	25.02	-102.64	15.17	15.16	-3.76
11,962.00	23.80	14.10	11,952.99	-86.71	28.68	-86.91	15.64	15.53	5.32
12,009.00	29.60	14.40	11,994.96	-66.26	33.88	-66.49	12.34	12.34	0.64
12,041.00	30.30	13.40	12,022.68	-50.75	37.72	-51.00	2.69	2.19	-3.13
12,072.00	32.40	11.30	12,049.16	-35.00	41.16	-35.27	7.64	6.77	-6.77
12,104.00	33.30	8.50	12,076.04	-17.90	44.14	-18.20	5.52	2.81	-8.75
12,136.00	33.90	7.10	12,102.70	-0.36	46.54	-0.67	3.06	1.88	-4.38
12,167.00	37.10	5.00	12,127.93	17.54	48.42	17.21	11.05	10.32	-6.77
12,198.00	40.30	3.00	12,152.12	36.87	49.76	36.53	11.08	10.32	-6.45
12,230.00	40.40	2.50	12,176.51	57.57	50.75	57.22	1.06	0.31	-1.56
12,261.00	40.10	1.80	12,200.17	77.58	51.51	77.23	1.75	-0.97	-2.26
12,293.00	41.50	0.60	12,224.39	98.49	51.94	98.13	5.01	4.38	-3.75
12,324.00	44.80	359.70	12,247.01	119.69	51.99	119.33	10.83	10.65	-2.90
12,355.00	47.00	359.20	12,268.58	141.95	51.78	141.59	7.19	7.10	-1.61

LEAM Drilling Services

Survey Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well Flagler 8 Fed Com 6H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3467.1' GE + 23.5' KB @ 3490.60usft
Site:	Flagler 8 Federal	MD Reference:	3467.1' GE + 23.5' KB @ 3490.60usft
Well:	Flagler 8 Fed Com 6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Multi User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,387.00	49.20	359.50	12,289.95	165.76	51.51	165.41	6.91	6.88	0.94
12,419.00	52.10	0.00	12,310.24	190.50	51.40	190.15	9.14	9.06	1.56
12,450.00	55.00	1.30	12,328.65	215.43	51.69	215.08	9.94	9.35	4.19
12,482.00	56.60	2.10	12,346.64	241.89	52.48	241.52	5.41	5.00	2.50
12,513.00	59.70	2.80	12,362.99	268.19	53.60	267.82	10.18	10.00	2.26
12,545.00	64.10	3.70	12,378.06	296.37	55.21	295.98	13.97	13.75	2.81
12,576.00	66.00	4.30	12,391.14	324.40	57.17	324.01	6.38	6.13	1.94
12,595.00	67.80	4.80	12,398.59	341.82	58.56	341.42	9.78	9.47	2.63
12,653.00	71.00	5.00	12,419.00	395.91	63.20	395.47	5.53	5.52	0.34
12,685.00	75.90	4.40	12,428.11	426.47	65.71	426.01	15.42	15.31	-1.88
12,716.00	80.50	4.10	12,434.45	456.72	67.95	456.25	14.87	14.84	-0.97
12,747.00	82.50	3.90	12,439.03	487.31	70.09	486.82	6.48	6.45	-0.65
12,779.00	83.50	3.90	12,442.93	519.00	72.25	518.49	3.13	3.13	0.00
12,810.00	84.80	3.20	12,446.09	549.77	74.16	549.26	4.76	4.19	-2.26
12,842.00	85.80	2.10	12,448.71	581.63	75.64	581.10	4.64	3.13	-3.44
12,873.00	87.50	0.70	12,450.52	612.57	76.39	612.03	7.10	5.48	-4.52
12,905.00	90.10	358.40	12,451.19	644.55	76.14	644.02	10.85	8.13	-7.19
12,967.00	92.10	356.70	12,450.00	706.48	73.49	705.96	4.23	3.23	-2.74
13,061.00	89.70	356.50	12,448.53	800.30	67.92	799.82	2.56	-2.55	-0.21
13,155.00	88.60	356.70	12,449.92	894.12	62.34	893.67	1.19	-1.17	0.21
13,250.00	89.80	359.30	12,451.25	989.04	59.03	988.62	3.01	1.26	2.74
13,344.00	90.50	0.00	12,451.00	1,083.04	58.45	1,082.62	1.05	0.74	0.74
13,437.00	92.50	1.30	12,448.57	1,176.00	59.51	1,175.56	2.56	2.15	1.40
13,531.00	90.50	0.60	12,446.11	1,269.94	61.07	1,269.50	2.25	-2.13	-0.74
13,626.00	89.70	358.40	12,445.94	1,364.93	60.24	1,364.49	2.46	-0.84	-2.32
13,721.00	87.80	1.10	12,448.01	1,459.90	59.82	1,459.46	3.47	-2.00	2.84
13,815.00	88.00	5.50	12,451.46	1,553.66	65.23	1,553.18	4.68	0.21	4.68
13,908.00	94.30	8.50	12,449.59	1,645.89	76.55	1,645.33	7.50	6.77	3.23
14,002.00	98.10	0.90	12,439.43	1,738.93	84.22	1,738.32	9.00	4.04	-8.09
14,094.00	92.20	353.70	12,431.16	1,830.36	79.88	1,829.77	10.09	-6.41	-7.83
14,188.00	89.80	355.50	12,429.52	1,923.92	71.04	1,923.39	3.19	-2.55	1.91
14,282.00	88.40	359.30	12,431.00	2,017.79	66.78	2,017.29	4.31	-1.49	4.04
14,376.00	88.40	1.10	12,433.63	2,111.75	67.11	2,111.24	1.91	0.00	1.91
14,470.00	89.00	1.10	12,435.76	2,205.71	68.91	2,205.19	0.64	0.64	0.00
14,563.00	87.50	355.80	12,438.60	2,298.59	66.40	2,298.09	5.92	-1.61	-5.70
14,657.00	88.70	359.30	12,441.72	2,392.44	62.38	2,391.96	3.93	1.28	3.72
14,751.00	89.10	0.00	12,443.52	2,486.42	61.81	2,485.94	0.86	0.43	0.74
14,846.00	86.50	2.70	12,447.17	2,581.31	64.04	2,580.81	3.94	-2.74	2.84
14,941.00	87.10	2.50	12,452.47	2,676.06	68.35	2,675.53	0.67	0.63	-0.21
15,035.00	84.10	358.40	12,459.69	2,769.75	69.09	2,769.21	5.39	-3.19	-4.36
15,129.00	85.00	357.00	12,468.61	2,863.24	65.33	2,862.73	1.76	0.96	-1.49
15,223.00	87.60	356.30	12,474.68	2,956.88	59.85	2,956.40	2.86	2.77	-0.74
15,318.00	91.10	357.00	12,475.76	3,051.70	54.30	3,051.26	3.76	3.68	0.74

LEAM Drilling Services

Survey Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well Flagler 8 Fed Com 6H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3467.1' GE + 23.5' KB @ 3490.60usft
Site:	Flagler 8 Federal	MD Reference:	3467.1' GE + 23.5' KB @ 3490.60usft
Well:	Flagler 8 Fed Com 6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Multi User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,412.00	91.90	356.50	12,473.30	3,145.51	48.97	3,145.11	1.00	0.85	-0.53
15,506.00	92.20	356.00	12,469.93	3,239.25	42.83	3,238.88	0.62	0.32	-0.53
15,600.00	89.70	354.40	12,468.38	3,332.90	34.97	3,332.58	3.16	-2.66	-1.70
15,695.00	90.00	356.00	12,468.62	3,427.56	27.02	3,427.30	1.71	0.32	1.68
15,790.00	92.20	2.50	12,466.80	3,522.48	25.77	3,522.22	7.22	2.32	6.84
15,884.00	91.20	1.10	12,464.01	3,616.39	28.72	3,616.11	1.83	-1.06	-1.49
15,978.00	90.90	0.20	12,462.29	3,710.36	29.79	3,710.07	1.01	-0.32	-0.96
16,073.00	90.00	359.30	12,461.54	3,805.36	29.37	3,805.07	1.34	-0.95	-0.95
16,166.00	91.30	359.30	12,460.49	3,898.34	28.24	3,898.06	1.40	1.40	0.00
16,260.00	89.60	358.60	12,459.75	3,992.32	26.52	3,992.05	1.96	-1.81	-0.74
16,354.00	89.50	359.50	12,460.49	4,086.30	24.96	4,086.04	0.96	-0.11	0.96
16,447.00	90.30	359.20	12,460.65	4,179.30	23.90	4,179.04	0.92	0.86	-0.32
16,542.00	91.00	0.00	12,459.57	4,274.29	23.24	4,274.03	1.12	0.74	0.84
16,636.00	89.30	0.20	12,459.32	4,368.28	23.40	4,368.02	1.82	-1.81	0.21
16,730.00	89.60	359.50	12,460.23	4,462.28	23.16	4,462.02	0.81	0.32	-0.74
16,825.00	89.30	355.30	12,461.14	4,557.15	18.85	4,556.92	4.43	-0.32	-4.42
16,919.00	88.60	354.40	12,462.86	4,650.76	10.41	4,650.58	1.21	-0.74	-0.96
17,013.00	91.00	357.40	12,463.19	4,744.50	3.69	4,744.36	4.09	2.55	3.19
17,107.00	90.80	356.70	12,461.71	4,838.36	-1.14	4,838.26	0.77	-0.21	-0.74
17,201.00	90.50	358.80	12,460.65	4,932.28	-4.83	4,932.20	2.26	-0.32	2.23
17,294.00	90.70	3.00	12,459.67	5,025.24	-3.37	5,025.15	4.52	0.22	4.52
17,349.00	90.70	3.00	12,459.00	5,080.16	-0.49	5,080.05	0.00	0.00	0.00
Projection									