



November 13, 2018

Devon Energy Production Company, LP
Well: Flagler 8 Fed Com 2H
County/Parish: Lea County, NM

HOBBS OCD
JUN 14 2019
RECEIVED

LEAM MWD: (OH) from 0' MD – 17,241' MD
Projection; 17,295' MD

This Borehole Survey taken between 09/30/18 and 11/09/18 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 13, 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 09/30/2018 through 11/09/2018, conduct or supervise the taking of MWD Survey from a depth of 0' MD to 17,295' 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 2H 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 read 'Randy W. Rakowitz', is written over a 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 2H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3466.9' GE + 23.5' KB @ 3490.40usft
Site:	Flagler 8 Federal	MD Reference:	3466.9' GE + 23.5' KB @ 3490.40usft
Well:	Flagler 8 Fed Com 2H	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 2H					
Well Position	+N/-S	0.00 usft	Northing:	414,837.26 usft	Latitude:	32° 8' 18.0669 N
	+E/-W	0.00 usft	Easting:	767,794.19 usft	Longitude:	103° 36' 6.1477 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,466.90 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 11/20/2018				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
174.00	17,241.00	Survey #1 (OH)	LEAM MWD+HDGM	MWD+HDGM	
17,295.00	17,295.00	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	
174.00	0.60	135.90	174.00	-0.65	0.63	-0.66	0.34	0.34	0.00	
268.00	0.60	131.70	267.99	-1.34	1.34	-1.34	0.05	0.00	-4.47	
364.00	0.60	133.60	363.99	-2.02	2.08	-2.03	0.02	0.00	1.98	
456.00	0.50	134.70	455.98	-2.63	2.72	-2.65	0.11	-0.11	1.20	
548.00	0.40	131.90	547.98	-3.13	3.24	-3.15	0.11	-0.11	-3.04	
642.00	0.30	154.90	641.98	-3.57	3.59	-3.59	0.18	-0.11	24.47	
736.00	0.20	191.60	735.98	-3.95	3.66	-3.98	0.20	-0.11	39.04	
829.00	0.20	248.60	828.98	-4.17	3.48	-4.19	0.21	0.00	61.29	
922.00	0.40	342.50	921.98	-3.92	3.23	-3.94	0.49	0.22	100.97	

LEAM Drilling Services

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Project:	Lea County, NM (NAD-83)	TVD Reference:	3466.9' GE + 23.5' KB @ 3490.40usft
Site:	Flagler 8 Federal	MD Reference:	3466.9' GE + 23.5' KB @ 3490.40usft
Well:	Flagler 8 Fed Com 2H	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)
1,015.00	0.40	268.60	1,014.97	-3.62	2.81	-3.64	0.52	0.00	-79.46
1,078.00	0.40	283.00	1,077.97	-3.58	2.37	-3.59	0.16	0.00	22.86
1,150.00	0.40	222.20	1,149.97	-3.70	1.96	-3.72	0.56	0.00	-84.44
1,240.00	0.40	134.50	1,239.97	-4.16	1.97	-4.17	0.62	0.00	-97.44
1,331.00	0.20	206.00	1,330.97	-4.52	2.13	-4.54	0.42	-0.22	78.57
1,421.00	0.40	218.50	1,420.97	-4.91	1.86	-4.92	0.23	0.22	13.89
1,516.00	0.60	254.90	1,515.96	-5.30	1.18	-5.31	0.38	0.21	38.32
1,610.00	0.40	201.10	1,609.96	-5.73	0.58	-5.74	0.52	-0.21	-57.23
1,706.00	0.40	228.20	1,705.96	-6.27	0.21	-6.27	0.20	0.00	28.23
1,801.00	0.90	236.80	1,800.95	-6.90	-0.66	-6.89	0.53	0.53	9.05
1,896.00	0.90	241.70	1,895.94	-7.66	-1.94	-7.65	0.08	0.00	5.16
1,990.00	0.60	227.70	1,989.93	-8.34	-2.95	-8.32	0.37	-0.32	-14.89
2,085.00	0.50	153.80	2,084.93	-9.05	-3.14	-9.03	0.70	-0.11	-77.79
2,180.00	0.50	70.70	2,179.93	-9.28	-2.56	-9.27	0.70	0.00	-87.47
2,274.00	0.60	93.20	2,273.92	-9.18	-1.68	-9.16	0.25	0.11	23.94
2,369.00	0.60	102.20	2,368.92	-9.31	-0.70	-9.30	0.10	0.00	9.47
2,464.00	0.40	71.20	2,463.91	-9.31	0.10	-9.31	0.35	-0.21	-32.63
2,558.00	0.70	66.80	2,557.91	-8.98	0.94	-8.98	0.32	0.32	-4.68
2,653.00	1.20	50.70	2,652.90	-8.12	2.24	-8.13	0.59	0.53	-16.95
2,748.00	1.50	97.10	2,747.87	-7.64	4.24	-7.67	1.16	0.32	48.84
2,842.00	1.60	95.50	2,841.84	-7.92	6.77	-7.96	0.12	0.11	-1.70
2,937.00	1.80	74.70	2,936.80	-7.65	9.53	-7.72	0.68	0.21	-21.89
3,031.00	1.70	79.30	3,030.75	-7.00	12.32	-7.09	0.18	-0.11	4.89
3,126.00	2.30	71.40	3,125.69	-6.13	15.52	-6.24	0.69	0.63	-8.32
3,220.00	2.60	70.70	3,219.61	-4.83	19.32	-4.96	0.32	0.32	-0.74
3,315.00	2.50	71.40	3,314.51	-3.45	23.31	-3.61	0.11	-0.11	0.74
3,410.00	2.70	66.50	3,409.42	-1.90	27.33	-2.09	0.31	0.21	-5.16
3,503.00	2.50	60.90	3,502.32	-0.04	31.11	-0.25	0.35	-0.22	-6.02
3,597.00	2.30	57.70	3,596.24	1.96	34.50	1.73	0.26	-0.21	-3.40
3,691.00	2.00	62.60	3,690.17	3.73	37.55	3.47	0.37	-0.32	5.21
3,785.00	2.60	67.90	3,784.10	5.28	40.98	5.00	0.68	0.64	5.64
3,880.00	3.40	88.80	3,878.97	6.15	45.79	5.84	1.41	0.84	22.00
3,976.00	4.20	97.10	3,974.76	5.78	52.13	5.42	1.01	0.83	8.65
4,071.00	4.60	103.20	4,069.48	4.48	59.29	4.07	0.65	0.42	6.42
4,165.00	5.10	104.40	4,163.14	2.58	67.00	2.12	0.54	0.53	1.28
4,259.00	5.90	110.90	4,256.71	-0.18	75.56	-0.70	1.08	0.85	6.91
4,354.00	7.40	114.80	4,351.07	-4.49	85.68	-5.08	1.65	1.58	4.11
4,448.00	7.60	112.00	4,444.26	-9.36	96.94	-10.02	0.44	0.21	-2.98
4,543.00	7.80	113.20	4,538.41	-14.25	108.69	-14.99	0.27	0.21	1.26
4,638.00	8.20	115.70	4,632.48	-19.73	120.72	-20.55	0.56	0.42	2.63
4,732.00	8.50	117.80	4,725.49	-25.88	132.90	-26.78	0.46	0.32	2.23
4,827.00	8.00	116.60	4,819.50	-32.11	145.02	-33.10	0.56	-0.53	-1.26
4,921.00	6.90	115.50	4,912.71	-37.47	155.97	-38.53	1.18	-1.17	-1.17

LEAM Drilling Services

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Survey

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5,015.00	6.10	116.20	5,006.10	-42.11	165.55	-43.23	0.86	-0.85	0.74
5,110.00	6.70	109.90	5,100.51	-46.22	175.29	-47.41	0.97	0.63	-6.63
5,205.00	6.50	110.90	5,194.88	-50.03	185.52	-51.29	0.24	-0.21	1.05
5,299.00	7.20	103.60	5,288.21	-53.31	196.22	-54.64	1.19	0.74	-7.77
5,393.00	7.60	100.40	5,381.43	-55.82	208.06	-57.23	0.61	0.43	-3.40
5,487.00	7.20	102.20	5,474.65	-58.18	219.93	-59.68	0.49	-0.43	1.91
5,582.00	6.60	99.70	5,568.96	-60.36	231.13	-61.93	0.71	-0.63	-2.63
5,676.00	6.90	99.20	5,662.31	-62.18	242.03	-63.82	0.33	0.32	-0.53
5,770.00	7.10	99.70	5,755.60	-64.06	253.33	-65.78	0.22	0.21	0.53
5,865.00	6.70	97.80	5,849.92	-65.80	264.61	-67.60	0.48	-0.42	-2.00
5,960.00	6.20	98.10	5,944.32	-67.27	275.18	-69.15	0.53	-0.53	0.32
6,055.00	6.80	93.70	6,038.70	-68.36	285.87	-70.30	0.82	0.63	-4.63
6,150.00	6.60	92.50	6,133.06	-68.96	296.93	-70.98	0.26	-0.21	-1.26
6,244.00	7.10	87.70	6,226.39	-68.96	308.14	-71.06	0.81	0.53	-5.11
6,339.00	6.90	87.00	6,320.68	-68.43	319.70	-70.60	0.23	-0.21	-0.74
6,434.00	6.90	84.10	6,414.99	-67.54	331.08	-69.80	0.37	0.00	-3.05
6,528.00	6.90	89.20	6,508.31	-66.88	342.34	-69.21	0.65	0.00	5.43
6,623.00	7.20	99.30	6,602.59	-67.77	353.92	-70.17	1.34	0.32	10.63
6,717.00	6.80	97.40	6,695.89	-69.44	365.25	-71.92	0.49	-0.43	-2.02
6,812.00	6.90	104.80	6,790.22	-71.62	376.35	-74.18	0.93	0.11	7.79
6,907.00	6.60	104.40	6,884.56	-74.43	387.15	-77.07	0.32	-0.32	-0.42
7,002.00	6.40	101.80	6,978.95	-76.87	397.62	-79.58	0.37	-0.21	-2.74
7,097.00	6.90	105.10	7,073.31	-79.44	408.32	-82.22	0.66	0.53	3.47
7,191.00	8.00	105.10	7,166.51	-82.62	420.08	-85.48	1.17	1.17	0.00
7,286.00	7.70	103.70	7,260.62	-85.85	432.65	-88.79	0.37	-0.32	-1.47
7,380.00	7.60	104.60	7,353.79	-88.91	444.78	-91.93	0.17	-0.11	0.96
7,474.00	7.40	103.20	7,446.98	-91.85	456.69	-94.96	0.29	-0.21	-1.49
7,568.00	6.90	104.80	7,540.25	-94.68	468.04	-97.86	0.57	-0.53	1.70
7,663.00	6.80	107.80	7,634.57	-97.86	478.92	-101.11	0.39	-0.11	3.16
7,756.00	6.40	105.50	7,726.96	-100.92	489.15	-104.25	0.52	-0.43	-2.47
7,850.00	6.80	101.50	7,820.34	-103.43	499.65	-106.83	0.65	0.43	-4.26
7,945.00	6.40	101.10	7,914.71	-105.57	510.36	-109.05	0.42	-0.42	-0.42
8,040.00	7.20	99.50	8,009.04	-107.58	521.43	-111.12	0.87	0.84	-1.68
8,133.00	7.00	99.90	8,101.32	-109.51	532.76	-113.14	0.22	-0.22	0.43
8,228.00	6.60	101.50	8,195.66	-111.60	543.81	-115.30	0.47	-0.42	1.68
8,323.00	7.20	99.70	8,289.97	-113.69	555.03	-117.46	0.67	0.63	-1.89
8,417.00	6.90	98.80	8,383.26	-115.54	566.42	-119.40	0.34	-0.32	-0.96
8,512.00	6.50	99.90	8,477.61	-117.34	577.35	-121.27	0.44	-0.42	1.16
8,607.00	6.10	98.10	8,572.03	-118.98	587.65	-122.98	0.47	-0.42	-1.89
8,702.00	5.90	99.70	8,666.51	-120.51	597.46	-124.58	0.27	-0.21	1.68
8,795.00	5.40	100.10	8,759.06	-122.08	606.48	-126.21	0.54	-0.54	0.43
8,890.00	4.30	100.90	8,853.72	-123.54	614.38	-127.72	1.16	-1.16	0.84
8,984.00	3.40	102.20	8,947.51	-124.80	620.56	-129.02	0.96	-0.96	1.38

LEAM Drilling Services

Survey Report

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9,078.00	3.20	103.60	9,041.35	-126.00	625.84	-130.26	0.23	-0.21	1.49
9,173.00	2.60	104.30	9,136.23	-127.16	630.50	-131.45	0.63	-0.63	0.74
9,267.00	2.10	96.40	9,230.15	-127.88	634.28	-132.19	0.63	-0.53	-8.40
9,362.00	0.90	91.40	9,325.12	-128.09	636.75	-132.42	1.27	-1.26	-5.26
9,455.00	0.90	81.40	9,418.10	-128.00	638.21	-132.34	0.17	0.00	-10.75
9,544.00	0.80	131.00	9,507.10	-128.30	639.37	-132.65	0.81	-0.11	55.73
9,638.00	0.60	162.30	9,601.09	-129.20	640.01	-133.55	0.45	-0.21	33.30
9,733.00	0.40	349.80	9,696.09	-129.35	640.10	-133.70	1.05	-0.21	-181.58
9,827.00	0.40	314.90	9,790.08	-128.79	639.81	-133.15	0.26	0.00	-37.13
9,922.00	0.90	302.70	9,885.08	-128.16	638.95	-132.50	0.54	0.53	-12.84
10,017.00	0.40	323.30	9,980.07	-127.49	638.12	-131.83	0.57	-0.53	21.68
10,113.00	0.40	333.50	10,076.07	-126.92	637.77	-131.26	0.07	0.00	10.63
10,207.00	0.60	271.60	10,170.07	-126.61	637.14	-130.95	0.58	0.21	-65.85
10,302.00	0.80	251.60	10,265.06	-126.81	636.01	-131.13	0.33	0.21	-21.05
10,396.00	0.40	238.20	10,359.05	-127.19	635.11	-131.51	0.45	-0.43	-14.26
10,491.00	1.00	249.10	10,454.05	-127.66	634.05	-131.97	0.64	0.63	11.47
10,586.00	1.50	275.10	10,549.02	-127.84	632.04	-132.14	0.78	0.53	27.37
10,680.00	1.30	271.10	10,643.00	-127.71	629.75	-132.00	0.24	-0.21	-4.26
10,774.00	1.40	271.60	10,736.97	-127.66	627.53	-131.93	0.11	0.11	0.53
10,868.00	0.90	268.30	10,830.95	-127.65	625.65	-131.91	0.54	-0.53	-3.51
10,963.00	1.30	282.30	10,925.93	-127.44	623.85	-131.69	0.50	0.42	14.74
11,058.00	0.80	256.50	11,020.92	-127.37	622.15	-131.60	0.71	-0.53	-27.16
11,152.00	1.40	216.80	11,114.90	-128.44	620.83	-132.66	1.00	0.64	-42.23
11,247.00	1.60	189.90	11,209.87	-130.68	619.90	-134.89	0.76	0.21	-28.32
11,342.00	1.60	218.00	11,304.83	-133.03	618.86	-137.24	0.82	0.00	29.58
11,436.00	1.30	238.20	11,398.80	-134.62	617.14	-138.82	0.63	-0.32	21.49
11,531.00	0.40	285.50	11,493.79	-135.10	615.91	-139.29	1.13	-0.95	49.79
11,626.00	2.10	1.10	11,588.77	-133.27	615.62	-137.46	2.14	1.79	79.58
11,721.00	3.90	5.80	11,683.64	-128.32	615.98	-132.51	1.91	1.89	4.95
11,815.00	4.70	3.40	11,777.37	-121.30	616.53	-125.49	0.87	0.85	-2.55
11,938.00	14.10	357.20	11,898.59	-101.26	616.10	-105.45	7.68	7.64	-5.04
12,031.00	29.70	5.80	11,984.63	-66.80	617.89	-71.00	17.08	16.77	9.25
12,078.00	37.20	10.60	12,023.82	-41.21	621.68	-45.44	16.91	15.96	10.21
12,125.00	42.20	10.40	12,059.97	-11.70	627.15	-15.97	10.64	10.64	-0.43
12,172.00	45.00	6.20	12,094.01	20.36	631.79	16.06	8.57	5.96	-8.94
12,220.00	49.10	3.20	12,126.72	55.36	634.64	51.04	9.69	8.54	-6.25
12,267.00	52.70	1.80	12,156.35	91.80	636.22	87.46	8.00	7.66	-2.98
12,314.00	55.50	0.70	12,183.91	129.85	637.04	125.52	6.25	5.96	-2.34
12,361.00	59.00	359.50	12,209.33	169.38	637.11	165.04	7.75	7.45	-2.55
12,408.00	62.30	359.00	12,232.37	210.33	636.57	206.00	7.08	7.02	-1.06
12,455.00	67.30	359.00	12,252.37	252.84	635.82	248.51	10.64	10.64	0.00
12,501.00	71.60	357.70	12,268.52	295.88	634.58	291.56	9.71	9.35	-2.83
12,548.00	72.10	357.70	12,283.16	340.51	632.79	336.19	1.06	1.06	0.00
12,596.00	78.10	0.20	12,295.50	386.86	631.95	382.55	13.47	12.50	5.21

LEAM Drilling Services

Survey Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well Flagler 8 Fed Com 2H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3466.9' GE + 23.5' KB @ 3490.40usft
Site:	Flagler 8 Federal	MD Reference:	3466.9' GE + 23.5' KB @ 3490.40usft
Well:	Flagler 8 Fed Com 2H	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)
12,643.00	81.50	1.40	12,303.82	433.11	632.60	428.79	7.66	7.23	2.55
12,684.00	85.30	1.60	12,308.53	473.81	633.66	469.49	9.28	9.27	0.49
12,778.00	90.00	0.00	12,312.38	567.70	634.97	563.36	5.28	5.00	-1.70
12,872.00	90.40	359.30	12,312.05	661.69	634.40	657.36	0.86	0.43	-0.74
12,966.00	90.50	358.30	12,311.32	755.67	632.43	751.35	1.07	0.11	-1.06
13,060.00	90.70	358.10	12,310.33	849.62	629.48	845.31	0.30	0.21	-0.21
13,154.00	89.50	358.80	12,310.17	943.58	626.94	939.29	1.48	-1.28	0.74
13,249.00	91.50	359.50	12,309.34	1,038.56	625.53	1,034.28	2.23	2.11	0.74
13,343.00	91.30	0.00	12,307.04	1,132.53	625.12	1,128.25	0.57	-0.21	0.53
13,436.00	88.40	359.50	12,307.29	1,225.52	624.71	1,221.24	3.16	-3.12	-0.54
13,530.00	89.10	359.90	12,309.34	1,319.50	624.22	1,315.22	0.86	0.74	0.43
13,625.00	90.40	1.40	12,309.75	1,414.48	625.30	1,410.20	2.09	1.37	1.58
13,720.00	88.10	0.20	12,310.99	1,509.46	626.62	1,505.16	2.73	-2.42	-1.26
13,814.00	87.70	0.20	12,314.44	1,603.40	626.95	1,599.09	0.43	-0.43	0.00
13,907.00	86.60	358.30	12,319.06	1,696.27	625.74	1,691.97	2.36	-1.18	-2.04
14,001.00	85.10	356.90	12,325.87	1,789.93	621.81	1,785.66	2.18	-1.60	-1.49
14,095.00	84.70	355.10	12,334.22	1,883.33	615.28	1,879.10	1.95	-0.43	-1.91
14,189.00	86.70	354.20	12,341.27	1,976.65	606.54	1,972.48	2.33	2.13	-0.96
14,283.00	89.20	353.20	12,344.63	2,070.01	596.23	2,065.91	2.86	2.66	-1.06
14,377.00	90.50	353.90	12,344.88	2,163.42	585.67	2,159.38	1.57	1.38	0.74
14,472.00	92.20	356.00	12,342.64	2,258.01	577.31	2,254.03	2.84	1.79	2.21
14,565.00	90.70	356.30	12,340.29	2,350.77	571.07	2,346.83	1.64	-1.61	0.32
14,659.00	88.10	357.20	12,341.27	2,444.60	565.74	2,440.70	2.93	-2.77	0.96
14,752.00	87.90	359.70	12,344.52	2,537.51	563.23	2,533.61	2.70	-0.22	2.69
14,847.00	90.40	359.70	12,345.93	2,632.49	562.73	2,628.60	2.63	2.63	0.00
14,941.00	94.30	0.00	12,342.07	2,726.39	562.48	2,722.50	4.16	4.15	0.32
15,035.00	94.30	358.80	12,335.03	2,820.12	561.50	2,816.23	1.27	0.00	-1.28
15,129.00	90.70	0.40	12,330.93	2,914.01	560.85	2,910.12	4.19	-3.83	1.70
15,223.00	89.20	358.30	12,331.01	3,007.99	559.78	3,004.11	2.75	-1.60	-2.23
15,317.00	90.40	358.40	12,331.34	3,101.95	557.08	3,098.09	1.28	1.28	0.11
15,412.00	91.90	359.70	12,329.43	3,196.92	555.50	3,193.06	2.09	1.58	1.37
15,506.00	92.50	0.40	12,325.82	3,290.84	555.58	3,286.99	0.98	0.64	0.74
15,600.00	91.30	2.30	12,322.70	3,384.76	557.80	3,380.89	2.39	-1.28	2.02
15,695.00	92.50	4.80	12,319.55	3,479.52	563.68	3,475.60	2.92	1.26	2.63
15,789.00	90.50	6.00	12,317.09	3,573.06	572.52	3,569.08	2.48	-2.13	1.28
15,884.00	87.70	3.70	12,318.59	3,667.69	580.55	3,663.66	3.81	-2.95	-2.42
15,978.00	88.30	2.50	12,321.87	3,761.50	585.63	3,757.42	1.43	0.64	-1.28
16,072.00	89.30	1.60	12,323.83	3,855.41	588.99	3,851.32	1.43	1.06	-0.96
16,166.00	89.00	0.90	12,325.23	3,949.38	591.04	3,945.27	0.81	-0.32	-0.74
16,260.00	88.40	359.30	12,327.36	4,043.35	591.20	4,039.24	1.82	-0.64	-1.70
16,354.00	87.80	357.70	12,330.48	4,137.27	588.75	4,133.16	1.82	-0.64	-1.70
16,447.00	87.00	356.20	12,334.70	4,230.03	583.80	4,225.96	1.83	-0.86	-1.61
16,542.00	89.90	355.10	12,337.27	4,324.71	576.60	4,320.69	3.26	3.05	-1.16

LEAM Drilling Services

Survey Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well Flagler 8 Fed Com 2H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3466.9' GE + 23.5' KB @ 3490.40usft
Site:	Flagler 8 Federal	MD Reference:	3466.9' GE + 23.5' KB @ 3490.40usft
Well:	Flagler 8 Fed Com 2H	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)
16,636.00	91.50	354.60	12,336.12	4,418.33	568.16	4,414.36	1.78	1.70	-0.53
16,730.00	93.60	357.40	12,331.94	4,511.99	561.61	4,508.06	3.72	2.23	2.98
16,824.00	92.70	359.50	12,326.77	4,605.81	559.07	4,601.89	2.43	-0.96	2.23
16,919.00	90.70	2.50	12,323.95	4,700.73	560.73	4,696.81	3.79	-2.11	3.16
17,013.00	90.80	3.40	12,322.72	4,794.60	565.57	4,790.64	0.96	0.11	0.96
17,107.00	88.90	4.60	12,322.97	4,888.37	572.13	4,884.36	2.39	-2.02	1.28
17,201.00	88.60	3.90	12,325.02	4,982.08	579.09	4,978.03	0.81	-0.32	-0.74
17,241.00	88.10	3.70	12,326.17	5,021.98	581.74	5,017.90	1.35	-1.25	-0.50
17,295.00	88.10	3.70	12,327.96	5,075.84	585.22	5,071.74	0.00	0.00	0.00
Projection									