



Survey Certification Form

HOBBS OCD

SEP 15 2017

RECEIVED

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 03/14/2017 through 04/01/2017, conduct or supervise the taking of MWD Survey from a depth of 0' MD to 17,736' 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 Thistle Unit 131H 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



June 5, 2017

Devon Energy Production Company, LP
Well: Thistle Unit 131H
County/Parish: Lea County, NM

LEAM MWD: (OH) from 0' MD – 17,677' MD
Projection: 17,736'

This Borehole Survey taken between 03/14/2017 and 04/01/2017 had been conducted and calculated according to the highest professional standards and complies with all known State and Federal requirements.

Reviewed and Approved:

Date: June 5, 2017

LEAM Drilling Systems LLC

Survey Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 131H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3649.8' GE + 23.5' KB @ 3673.30usft (Original Well Elev)
Site:	Thistle Unit	MD Reference:	3649.8' GE + 23.5' KB @ 3673.30usft (Original Well Elev)
Well:	131H	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		Thistle Unit			
Site Position:		Northing:		468,026.90 usft	
From:		Easting:		780,722.56 usft	
Position Uncertainty:		Slot Radius:		13-3/16 "	
Map		Latitude:		32° 17' 3.494 N	
		Longitude:		103° 33' 31.335 W	
0.00 usft		Grid Convergence:		0.41 °	

Well	131H					
Well Position	+N/-S	0.00 usft	Northing:	457,531.12 usft	Latitude:	32° 15' 19.698 N
	+E/-W	0.00 usft	Easting:	779,877.06 usft	Longitude:	103° 33' 42.063 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	3,673.30 usft	Ground Level:	3,649.80 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	12/5/2016	6.90	60.05	48,215

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	359.93	

Survey Program	Date 6/5/2017			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
154.00	17,677.00	Survey #1 (OH)	LEAM MWD+HDGM	MWD+HDGM
17,736.00	17,736.00	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
154.00	0.80	248.40	153.99	-0.40	-1.00	-0.39	0.52	0.52	0.00
246.00	0.90	241.00	245.98	-0.98	-2.23	-0.98	0.16	0.11	-8.04
338.00	0.70	250.10	337.98	-1.52	-3.39	-1.52	0.26	-0.22	9.89
431.00	0.40	251.80	430.97	-1.82	-4.23	-1.81	0.32	-0.32	1.83
524.00	0.40	241.30	523.97	-2.08	-4.82	-2.07	0.08	0.00	-11.29
707.00	0.20	212.30	706.97	-2.65	-5.56	-2.65	0.13	-0.11	-15.85
798.00	0.50	222.30	797.96	-3.08	-5.91	-3.07	0.34	0.33	10.99

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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)
889.00	0.20	209.80	888.96	-3.51	-6.25	-3.50	0.34	-0.33	-13.74
982.00	0.40	180.50	981.96	-3.98	-6.34	-3.97	0.26	0.22	-31.51
1,074.00	0.50	199.80	1,073.96	-4.68	-6.48	-4.67	0.20	0.11	20.98
1,169.00	0.40	153.30	1,168.96	-5.36	-6.47	-5.35	0.39	-0.11	-48.95
1,236.00	0.30	166.60	1,235.96	-5.74	-6.32	-5.73	0.19	-0.15	19.85
1,380.00	0.40	94.40	1,379.95	-6.15	-5.73	-6.14	0.29	0.07	-50.14
1,544.00	0.40	61.70	1,543.95	-5.92	-4.66	-5.91	0.14	0.00	-19.94
1,639.00	0.40	44.60	1,638.95	-5.53	-4.13	-5.52	0.13	0.00	-18.00
1,735.00	0.40	34.30	1,734.94	-5.01	-3.71	-5.01	0.07	0.00	-10.73
1,831.00	0.20	24.40	1,830.94	-4.58	-3.45	-4.58	0.21	-0.21	-10.31
1,926.00	0.10	151.50	1,925.94	-4.50	-3.34	-4.50	0.29	-0.11	133.79
2,022.00	0.30	354.20	2,021.94	-4.33	-3.33	-4.32	0.41	0.21	-163.85
2,117.00	0.40	344.00	2,116.94	-3.76	-3.45	-3.76	0.12	0.11	-10.74
2,212.00	0.40	334.00	2,211.94	-3.14	-3.68	-3.14	0.07	0.00	-10.53
2,308.00	0.30	329.80	2,307.94	-2.63	-3.96	-2.62	0.11	-0.10	-4.38
2,404.00	0.30	227.10	2,403.94	-2.58	-4.27	-2.57	0.49	0.00	-106.98
2,499.00	1.10	178.90	2,498.93	-3.66	-4.43	-3.66	0.98	0.84	-50.74
2,595.00	1.80	161.20	2,594.90	-6.01	-3.93	-6.00	0.86	0.73	-18.44
2,691.00	2.80	149.80	2,690.82	-9.46	-2.26	-9.46	1.14	1.04	-11.88
2,786.00	3.70	150.50	2,785.67	-14.14	0.41	-14.14	0.95	0.95	0.74
2,882.00	4.40	150.50	2,881.43	-20.04	3.75	-20.04	0.73	0.73	0.00
2,978.00	5.50	150.60	2,977.07	-27.25	7.83	-27.26	1.15	1.15	0.10
3,073.00	6.20	154.70	3,071.57	-35.86	12.25	-35.87	0.86	0.74	4.32
3,169.00	6.20	160.80	3,167.01	-45.44	16.17	-45.46	0.69	0.00	6.35
3,264.00	6.20	169.10	3,261.46	-55.32	18.83	-55.34	0.94	0.00	8.74
3,360.00	6.30	177.20	3,356.89	-65.67	20.07	-65.70	0.92	0.10	8.44
3,455.00	6.30	178.80	3,451.31	-76.09	20.43	-76.11	0.18	0.00	1.68
3,551.00	6.20	180.20	3,546.74	-86.54	20.52	-86.56	0.19	-0.10	1.46
3,646.00	6.10	179.50	3,641.20	-96.72	20.55	-96.74	0.13	-0.11	-0.74
3,742.00	5.90	179.30	3,736.67	-106.75	20.65	-106.78	0.21	-0.21	-0.21
3,838.00	5.60	178.80	3,832.19	-116.37	20.81	-116.39	0.32	-0.31	-0.52
3,933.00	5.30	179.10	3,926.76	-125.39	20.98	-125.41	0.32	-0.32	0.32
4,029.00	5.50	180.70	4,022.33	-134.42	20.99	-134.45	0.26	0.21	1.67
4,125.00	5.20	181.70	4,117.91	-143.37	20.81	-143.40	0.33	-0.31	1.04
4,220.00	5.00	181.40	4,212.54	-151.81	20.58	-151.84	0.21	-0.21	-0.32
4,316.00	4.90	183.40	4,308.18	-160.09	20.23	-160.11	0.21	-0.10	2.08
4,412.00	4.80	180.90	4,403.84	-168.20	19.93	-168.22	0.24	-0.10	-2.60
4,507.00	4.90	175.10	4,498.50	-176.21	20.21	-176.24	0.53	0.11	-6.11
4,603.00	4.70	174.40	4,594.16	-184.21	20.94	-184.24	0.22	-0.21	-0.73
4,699.00	5.00	175.80	4,689.82	-192.30	21.64	-192.33	0.34	0.31	1.46
4,794.00	5.50	172.10	4,784.42	-200.94	22.56	-200.97	0.64	0.53	-3.89
4,890.00	5.80	175.20	4,879.95	-210.33	23.60	-210.36	0.45	0.31	3.23

LEAM Drilling Systems LLC

Survey Report

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Well:	131H	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)
4,986.00	6.20	180.90	4,975.43	-220.35	23.93	-220.37	0.75	0.42	5.94
5,074.00	5.80	183.70	5,062.94	-229.53	23.57	-229.56	0.56	-0.45	3.18
5,173.00	5.50	183.90	5,161.46	-239.26	22.92	-239.29	0.30	-0.30	0.20
5,269.00	4.80	184.60	5,257.08	-247.85	22.28	-247.88	0.73	-0.73	0.73
5,364.00	4.50	184.00	5,351.76	-255.53	21.71	-255.56	0.32	-0.32	-0.63
5,460.00	4.20	181.40	5,447.49	-262.80	21.36	-262.83	0.37	-0.31	-2.71
5,555.00	4.00	180.70	5,542.24	-269.60	21.23	-269.62	0.22	-0.21	-0.74
5,651.00	3.80	179.60	5,638.02	-276.12	21.21	-276.15	0.22	-0.21	-1.15
5,747.00	3.40	177.20	5,733.83	-282.15	21.37	-282.17	0.45	-0.42	-2.50
5,842.00	3.30	175.80	5,828.67	-287.69	21.71	-287.72	0.14	-0.11	-1.47
5,938.00	2.80	179.60	5,924.53	-292.79	21.93	-292.82	0.56	-0.52	3.96
6,034.00	3.40	184.20	6,020.39	-297.97	21.74	-298.00	0.68	0.63	4.79
6,129.00	3.70	183.20	6,115.21	-303.84	21.36	-303.87	0.32	0.32	-1.05
6,225.00	4.90	187.40	6,210.94	-311.00	20.66	-311.03	1.29	1.25	4.38
6,321.00	4.70	186.30	6,306.60	-318.98	19.70	-319.00	0.23	-0.21	-1.15
6,416.00	5.10	188.10	6,401.25	-327.03	18.68	-327.05	0.45	0.42	1.89
6,512.00	4.70	187.70	6,496.90	-335.15	17.55	-335.17	0.42	-0.42	-0.42
6,608.00	5.50	188.40	6,592.52	-343.60	16.35	-343.62	0.84	0.83	0.73
6,704.00	5.00	186.10	6,688.12	-352.31	15.23	-352.33	0.56	-0.52	-2.40
6,799.00	4.70	183.50	6,782.78	-360.31	14.56	-360.33	0.39	-0.32	-2.74
6,895.00	4.60	180.70	6,878.46	-368.08	14.27	-368.10	0.26	-0.10	-2.92
6,990.00	4.40	180.20	6,973.17	-375.54	14.21	-375.56	0.21	-0.21	-0.53
7,086.00	4.70	181.60	7,068.87	-383.15	14.09	-383.17	0.33	0.31	1.46
7,182.00	5.20	181.40	7,164.51	-391.43	13.87	-391.45	0.52	0.52	-0.21
7,277.00	5.00	180.90	7,259.13	-399.88	13.70	-399.89	0.22	-0.21	-0.53
7,373.00	4.70	179.50	7,354.79	-407.99	13.67	-408.01	0.34	-0.31	-1.46
7,468.00	4.30	177.20	7,449.50	-415.44	13.88	-415.46	0.46	-0.42	-2.42
7,564.00	4.60	179.60	7,545.21	-422.89	14.08	-422.90	0.37	0.31	2.50
7,660.00	5.60	178.40	7,640.83	-431.42	14.24	-431.43	1.05	1.04	-1.25
7,755.00	4.90	178.40	7,735.43	-440.11	14.48	-440.12	0.74	-0.74	0.00
7,851.00	4.50	177.30	7,831.10	-447.97	14.77	-447.98	0.43	-0.42	-1.15
7,947.00	4.20	175.40	7,926.83	-455.23	15.23	-455.25	0.35	-0.31	-1.98
8,047.00	5.00	182.30	8,026.50	-463.24	15.35	-463.26	0.97	0.80	6.90
8,142.00	5.10	181.90	8,121.14	-471.59	15.05	-471.61	0.11	0.11	-0.42
8,238.00	4.40	182.80	8,216.81	-479.54	14.72	-479.55	0.73	-0.73	0.94
8,333.00	4.20	183.50	8,311.54	-486.65	14.33	-486.67	0.22	-0.21	0.74
8,429.00	4.00	184.00	8,407.29	-493.50	13.89	-493.51	0.21	-0.21	0.52
8,524.00	3.60	184.70	8,502.08	-499.78	13.41	-499.79	0.42	-0.42	0.74
8,620.00	3.30	181.70	8,597.91	-505.54	13.08	-505.56	0.36	-0.31	-3.13
8,715.00	2.80	178.10	8,692.77	-510.59	13.08	-510.61	0.56	-0.53	-3.79
8,811.00	1.80	192.30	8,788.70	-514.41	12.83	-514.43	1.19	-1.04	14.79
8,906.00	1.20	207.80	8,883.66	-516.75	12.05	-516.76	0.76	-0.63	16.32

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9,002.00	1.20	206.20	8,979.64	-518.54	11.14	-518.55	0.03	0.00	-1.67
9,098.00	1.10	225.30	9,075.62	-520.09	10.04	-520.10	0.41	-0.10	19.90
9,193.00	0.90	244.00	9,170.61	-521.06	8.72	-521.07	0.40	-0.21	19.68
9,289.00	0.40	232.40	9,266.60	-521.59	7.78	-521.60	0.54	-0.52	-12.08
9,385.00	0.40	222.30	9,362.60	-522.05	7.29	-522.05	0.07	0.00	-10.52
9,430.00	0.60	234.30	9,407.60	-522.30	6.99	-522.31	0.50	0.44	26.67
9,483.00	0.90	338.50	9,460.60	-522.07	6.61	-522.08	2.26	0.57	196.60
9,530.00	5.70	6.80	9,507.51	-519.41	6.75	-519.42	10.48	10.21	60.21
9,579.00	10.60	11.80	9,556.00	-512.58	7.96	-512.59	10.09	10.00	10.20
9,626.00	15.80	10.90	9,601.74	-502.06	10.06	-502.07	11.07	11.06	-1.91
9,675.00	20.30	7.90	9,648.32	-487.08	12.49	-487.09	9.37	9.18	-6.12
9,723.00	24.80	5.60	9,692.64	-468.80	14.62	-468.82	9.55	9.38	-4.79
9,770.00	28.60	3.90	9,734.62	-447.76	16.35	-447.78	8.25	8.09	-3.62
9,818.00	33.60	4.60	9,775.71	-423.05	18.19	-423.07	10.44	10.42	1.46
9,866.00	38.30	5.40	9,814.55	-394.98	20.66	-395.01	9.84	9.79	1.67
9,914.00	44.40	5.60	9,850.57	-363.43	23.70	-363.46	12.71	12.71	0.42
9,962.00	49.90	4.70	9,883.20	-328.40	26.85	-328.43	11.54	11.46	-1.88
10,010.00	54.90	1.20	9,912.48	-290.44	28.76	-290.47	11.91	10.42	-7.29
10,057.00	57.90	357.30	9,938.50	-251.31	28.23	-251.34	9.41	6.38	-8.30
10,105.00	62.50	356.10	9,962.35	-209.74	25.82	-209.77	9.83	9.58	-2.50
10,153.00	67.30	357.00	9,982.70	-166.36	23.21	-166.39	10.14	10.00	1.88
10,201.00	70.60	358.10	9,999.94	-121.61	21.30	-121.64	7.20	6.88	2.29
10,238.00	74.10	358.90	10,011.16	-86.37	20.38	-86.40	9.68	9.46	2.16
10,270.00	76.80	358.90	10,019.20	-55.41	19.79	-55.43	8.44	8.44	0.00
10,301.00	79.90	358.40	10,025.46	-25.06	19.07	-25.08	10.12	10.00	-1.61
10,333.00	81.00	358.10	10,030.76	6.48	18.11	6.46	3.56	3.44	-0.94
10,365.00	81.80	357.90	10,035.55	38.10	17.00	38.08	2.58	2.50	-0.63
10,398.00	83.60	356.80	10,039.74	70.80	15.49	70.78	6.38	5.45	-3.33
10,430.00	84.70	356.30	10,043.00	102.57	13.57	102.56	3.77	3.44	-1.56
10,462.00	84.90	356.30	10,045.90	134.37	11.52	134.36	0.63	0.63	0.00
10,493.00	85.10	356.60	10,048.61	165.20	9.61	165.19	1.16	0.65	0.97
10,525.00	85.20	356.60	10,051.31	197.03	7.71	197.02	0.31	0.31	0.00
10,557.00	85.60	357.00	10,053.88	228.87	5.93	228.87	1.76	1.25	1.25
10,589.00	85.50	358.10	10,056.36	260.75	4.57	260.74	3.44	-0.31	3.44
10,621.00	85.70	358.10	10,058.82	292.64	3.51	292.63	0.63	0.63	0.00
10,653.00	85.80	358.10	10,061.19	324.53	2.45	324.53	0.31	0.31	0.00
10,685.00	85.90	358.10	10,063.50	356.43	1.40	356.43	0.31	0.31	0.00
10,717.00	86.50	358.60	10,065.62	388.34	0.48	388.34	2.44	1.88	1.56
10,748.00	88.60	359.80	10,066.95	419.31	0.04	419.31	7.80	6.77	3.87
10,780.00	90.40	0.50	10,067.23	451.31	0.13	451.31	6.04	5.63	2.19
10,812.00	91.10	0.30	10,066.81	483.30	0.35	483.30	2.28	2.19	-0.63
10,844.00	90.70	0.30	10,066.31	515.30	0.52	515.30	1.25	-1.25	0.00

LEAM Drilling Systems LLC

Survey Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 131H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3649.8' GE + 23.5' KB @ 3673.30usft (Original Well Elev)
Site:	Thistle Unit	MD Reference:	3649.8' GE + 23.5' KB @ 3673.30usft (Original Well Elev)
Well:	131H	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)
10,941.00	88.80	359.60	10,066.73	612.29	0.44	612.29	2.09	-1.96	-0.72
11,036.00	88.50	359.10	10,068.97	707.26	-0.64	707.26	0.61	-0.32	-0.53
11,132.00	88.10	359.60	10,071.82	803.21	-1.73	803.21	0.67	-0.42	0.52
11,227.00	88.00	359.60	10,075.05	898.15	-2.39	898.16	0.11	-0.11	0.00
11,323.00	88.00	0.01	10,078.40	994.10	-2.72	994.10	0.42	0.00	0.42
11,418.00	88.50	0.01	10,081.30	1,089.05	-2.72	1,089.05	0.53	0.53	0.00
11,514.00	88.60	0.30	10,083.73	1,185.02	-2.46	1,185.02	0.32	0.10	0.31
11,609.00	88.70	0.20	10,085.97	1,279.99	-2.05	1,279.99	0.15	0.11	-0.11
11,705.00	89.30	0.20	10,087.64	1,375.98	-1.71	1,375.98	0.63	0.63	0.00
11,801.00	88.30	0.20	10,089.65	1,471.95	-1.38	1,471.95	1.04	-1.04	0.00
11,896.00	88.40	0.50	10,092.39	1,566.91	-0.80	1,566.91	0.33	0.11	0.32
11,992.00	88.50	0.70	10,094.99	1,662.87	0.21	1,662.87	0.23	0.10	0.21
12,088.00	88.50	0.30	10,097.50	1,758.84	1.05	1,758.83	0.42	0.00	-0.42
12,183.00	88.50	0.50	10,099.99	1,853.80	1.71	1,853.80	0.21	0.00	0.21
12,279.00	87.90	0.30	10,103.00	1,949.75	2.38	1,949.75	0.66	-0.63	-0.21
12,375.00	89.90	0.01	10,104.84	2,045.73	2.63	2,045.72	2.11	2.08	-0.31
12,470.00	90.70	0.01	10,104.35	2,140.73	2.64	2,140.72	0.84	0.84	0.00
12,566.00	91.50	0.20	10,102.50	2,236.71	2.81	2,236.70	0.86	0.83	0.20
12,661.00	90.80	0.70	10,100.60	2,331.68	3.56	2,331.68	0.91	-0.74	0.53
12,757.00	90.70	0.01	10,099.34	2,427.67	4.15	2,427.67	0.73	-0.10	-0.72
12,853.00	89.60	359.60	10,099.09	2,523.67	3.82	2,523.66	1.22	-1.15	-0.42
12,948.00	89.40	0.90	10,099.92	2,618.66	4.23	2,618.66	1.38	-0.21	1.37
13,044.00	89.20	0.70	10,101.09	2,714.65	5.57	2,714.64	0.29	-0.21	-0.21
13,139.00	88.00	0.50	10,103.41	2,809.61	6.57	2,809.60	1.28	-1.26	-0.21
13,235.00	88.00	359.80	10,106.76	2,905.55	6.82	2,905.54	0.73	0.00	-0.73
13,330.00	89.10	359.50	10,109.17	3,000.52	6.24	3,000.51	1.20	1.16	-0.32
13,426.00	88.70	358.80	10,111.01	3,096.49	4.82	3,096.48	0.84	-0.42	-0.73
13,521.00	88.50	358.80	10,113.33	3,191.44	2.83	3,191.43	0.21	-0.21	0.00
13,617.00	88.80	358.80	10,115.59	3,287.39	0.82	3,287.39	0.31	0.31	0.00
13,712.00	88.90	358.90	10,117.50	3,382.35	-1.09	3,382.35	0.15	0.11	0.11
13,808.00	88.70	358.90	10,119.51	3,478.32	-2.93	3,478.32	0.21	-0.21	0.00
13,904.00	88.40	358.80	10,121.94	3,574.27	-4.86	3,574.27	0.33	-0.31	-0.10
13,999.00	89.30	358.80	10,123.85	3,669.22	-6.85	3,669.23	0.95	0.95	0.00
14,095.00	89.30	358.40	10,125.02	3,765.19	-9.19	3,765.20	0.42	0.00	-0.42
14,191.00	89.80	358.10	10,125.77	3,861.14	-12.12	3,861.15	0.61	0.52	-0.31
14,286.00	90.70	358.60	10,125.36	3,956.10	-14.86	3,956.11	1.08	0.95	0.53
14,382.00	91.90	358.80	10,123.18	4,052.05	-17.04	4,052.07	1.27	1.25	0.21
14,477.00	91.90	359.50	10,120.03	4,146.98	-18.44	4,147.00	0.74	0.00	0.74
14,573.00	91.60	359.10	10,117.10	4,242.93	-19.62	4,242.95	0.52	-0.31	-0.42
14,669.00	91.40	359.30	10,114.59	4,338.89	-20.96	4,338.91	0.29	-0.21	0.21
14,764.00	90.30	359.60	10,113.18	4,433.87	-21.87	4,433.90	1.20	-1.16	0.32
14,859.00	91.50	0.20	10,111.68	4,528.86	-22.03	4,528.88	1.41	1.26	0.63

LEAM Drilling Systems LLC

Survey Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 131H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3649.8' GE + 23.5' KB @ 3673.30usft (Original Well Elev)
Site:	Thistle Unit	MD Reference:	3649.8' GE + 23.5' KB @ 3673.30usft (Original Well Elev)
Well:	131H	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)	
14,955.00	91.00	0.70	10,109.59	4,624.83	-21.28	4,624.86	0.74	-0.52	0.52	
15,050.00	90.70	0.90	10,108.18	4,719.81	-19.95	4,719.83	0.38	-0.32	0.21	
15,146.00	89.30	0.70	10,108.18	4,815.80	-18.61	4,815.82	1.47	-1.46	-0.21	
15,241.00	87.80	0.01	10,110.58	4,910.77	-18.03	4,910.78	1.74	-1.58	-0.73	
15,336.00	88.80	359.60	10,113.40	5,005.72	-18.36	5,005.74	1.14	1.05	-0.43	
15,432.00	89.00	359.50	10,115.25	5,101.70	-19.11	5,101.72	0.23	0.21	-0.10	
15,527.00	88.80	358.80	10,117.07	5,196.67	-20.52	5,196.69	0.77	-0.21	-0.74	
15,623.00	91.00	359.60	10,117.24	5,292.66	-21.86	5,292.68	2.44	2.29	0.83	
15,718.00	91.30	0.20	10,115.33	5,387.64	-22.03	5,387.66	0.71	0.32	0.63	
15,814.00	92.00	1.20	10,112.57	5,483.59	-20.85	5,483.61	1.27	0.73	1.04	
15,908.00	90.70	1.00	10,110.35	5,577.54	-19.05	5,577.56	1.40	-1.38	-0.21	
16,003.00	91.70	1.00	10,108.36	5,672.51	-17.39	5,672.52	1.05	1.05	0.00	
16,098.00	93.00	1.40	10,104.47	5,767.40	-15.40	5,767.42	1.43	1.37	0.42	
16,194.00	92.60	2.40	10,099.78	5,863.23	-12.23	5,863.24	1.12	-0.42	1.04	
16,289.00	91.80	1.60	10,096.13	5,958.10	-8.91	5,958.11	1.19	-0.84	-0.84	
16,385.00	91.70	1.20	10,093.20	6,054.03	-6.57	6,054.03	0.43	-0.10	-0.42	
16,481.00	90.80	0.01	10,091.10	6,150.00	-5.56	6,150.00	1.56	-0.94	-1.24	
16,576.00	89.50	359.50	10,090.86	6,245.00	-5.97	6,245.00	1.47	-1.37	-0.53	
16,672.00	86.80	0.30	10,093.95	6,340.94	-6.14	6,340.94	2.93	-2.81	0.83	
16,767.00	87.80	359.80	10,098.43	6,435.83	-6.05	6,435.83	1.18	1.05	-0.53	
16,863.00	89.90	359.80	10,100.36	6,531.80	-6.39	6,531.81	2.19	2.19	0.00	
16,960.00	91.70	0.20	10,099.00	6,628.79	-6.39	6,628.79	1.90	1.86	0.41	
17,055.00	92.90	359.80	10,095.19	6,723.71	-6.39	6,723.72	1.33	1.26	-0.42	
17,151.00	91.80	359.50	10,091.25	6,819.63	-6.98	6,819.63	1.19	-1.15	-0.31	
17,246.00	94.40	358.60	10,086.12	6,914.47	-8.55	6,914.47	2.90	2.74	-0.95	
17,342.00	94.30	359.10	10,078.83	7,010.17	-10.47	7,010.18	0.53	-0.10	0.52	
17,437.00	94.40	358.80	10,071.63	7,104.88	-12.20	7,104.89	0.33	0.11	-0.32	
17,533.00	91.50	357.90	10,066.69	7,200.70	-14.97	7,200.72	3.16	-3.02	-0.94	
17,628.00	90.50	358.20	10,065.03	7,295.63	-18.20	7,295.65	1.10	-1.05	0.32	
17,677.00	91.00	358.20	10,064.39	7,344.60	-19.74	7,344.62	1.02	1.02	0.00	
17,736.00	91.00	358.20	10,063.36	7,403.57	-21.59	7,403.59	0.00	0.00	0.00	
Projection										