



HOBBS OCD
MAR 29 2017
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January 18, 2016

Devon Energy Production Company, L.P.
Well: Fighting Okra 18-19 Fed 71H (OH)
County/Parish: Lea County, NM

LEAM MWD: (OH) from 5,236' MD – 22,533' MD
Projection: 22,587' MD

This Borehole Survey taken between 12/20/2015 and 01/14/2016 had been conducted and calculated according to the highest professional standards and complies with all known State and Federal requirements.

Reviewed and Approved:

Date: January 18, 2016

*Physical & Mailing: 303 Longmire Dr., Suite 801, Conroe, TX 77304
936-756-7577 • www.lead.net • 1 (800) 756-7504*



Survey Certification Form

State of NM

Lea County

I, Randy W. Rakowitz, certify that; I am employed by LEAM Drilling Systems LLC, that I did on the day(s) of December 20, 2015 through January 14, 2016, conduct or supervise the taking of MWD Survey from a depth of 5,236' MD to 22,587' MD; that the data is true, correct, complete and within the limitations of the tools as set forth by LEAM Drilling Systems LLC, that I am authorized and qualified to make this report; that this survey was conducted at the request of Devon Energy Production Company, L.P. for the Fighting Okra 18-19 Fed 71H (OH) in Lea County, NM; and that I reviewed this report and find that it conforms to the principals and procedures as set forth by LEAM Drilling Systems LLC.

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 Systems LLC

Survey Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 71H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3354.2' GL + 30' RKB @ 3384.20usft
Site:	Fighting Okra 18-19 Fed	MD Reference:	3354.2' GL + 30' RKB @ 3384.20usft
Well:	71H	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	Fighting Okra 18-19 Fed		
Site Position:		Northing:	382,937.52 usft
From:	Map	Easting:	794,421.25 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 3' 0.516 N
		Longitude:	103° 30' 59.292 W
		Grid Convergence:	0.43 °

Well	71H		
Well Position	+N/-S	0.00 usft	Northing: 382,937.52 usft
	+E/-W	0.00 usft	Easting: 794,421.25 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	3,384.20 usft
		Ground Level:	3,354.20 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2015	10/12/15	7.20	59.99	48,091

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	181.98	

Survey Program	Date 01/18/16				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
166.00	5,129.00	Survey #1 (OH)	MWD-ISCWSA	MWD - Standard	
5,236.00	22,533.00	Survey #2 (OH)	LEAM MWD+HDGM	MWD+HDGM	
22,587.00	22,587.00	Survey #3 (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	
166.00	0.48	155.66	166.00	-0.63	0.29	0.62	0.29	0.29	0.00	
297.00	1.32	107.05	296.98	-1.58	1.96	1.51	0.81	0.64	-37.11	
481.00	1.58	100.55	480.92	-2.66	6.48	2.44	0.17	0.14	-3.53	
665.00	1.32	123.97	664.87	-4.31	10.73	3.94	0.35	-0.14	12.73	
864.00	0.79	245.17	863.85	-6.17	11.38	5.77	0.93	-0.27	60.90	
968.00	0.62	264.55	967.84	-6.52	10.17	6.17	0.28	-0.16	18.63	
1,152.00	0.79	287.05	1,151.83	-6.24	7.97	5.97	0.17	0.09	12.23	
1,337.00	0.70	295.18	1,336.81	-5.39	5.73	5.19	0.07	-0.05	4.39	

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Well:	71H	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)
1,528.00	0.31	305.86	1,527.80	-4.59	4.25	4.44	0.21	-0.20	5.59
1,716.00	0.40	278.66	1,715.80	-4.19	3.19	4.08	0.10	0.05	-14.47
1,906.00	0.22	263.76	1,905.80	-4.13	2.17	4.06	0.10	-0.09	-7.84
2,096.00	0.09	222.37	2,095.80	-4.28	1.71	4.22	0.09	-0.07	-21.78
2,286.00	0.00	145.29	2,285.80	-4.39	1.61	4.34	0.05	-0.05	0.00
2,475.00	0.31	32.26	2,474.79	-3.96	1.88	3.89	0.16	0.16	0.00
2,664.00	0.62	60.56	2,663.79	-3.03	3.04	2.92	0.20	0.16	14.97
2,857.00	0.88	57.97	2,856.77	-1.73	5.21	1.55	0.14	0.13	-1.34
3,045.00	1.19	71.46	3,044.74	-0.34	8.29	0.05	0.21	0.16	7.18
3,235.00	2.11	71.58	3,234.66	1.39	13.47	-1.86	0.48	0.48	0.06
3,425.00	2.42	78.66	3,424.51	3.29	20.73	-4.00	0.22	0.16	3.73
3,612.00	2.20	78.97	3,611.36	4.75	28.12	-5.72	0.12	-0.12	0.17
3,803.00	2.59	78.75	3,802.19	6.29	35.95	-7.53	0.20	0.20	-0.12
3,993.00	2.42	78.36	3,992.01	7.94	44.09	-9.46	0.09	-0.09	-0.21
4,181.00	2.20	71.68	4,179.86	9.87	51.40	-11.64	0.18	-0.12	-3.55
4,371.00	1.71	73.87	4,369.75	11.81	57.59	-13.79	0.26	-0.26	1.15
4,561.00	1.71	67.06	4,559.66	13.70	62.92	-15.87	0.11	0.00	-3.58
4,751.00	1.89	79.46	4,749.57	15.38	68.61	-17.74	0.23	0.09	6.53
4,940.00	2.50	90.57	4,938.43	15.91	75.80	-18.52	0.39	0.32	5.88
5,129.00	2.29	94.27	5,127.27	15.59	83.69	-18.47	0.14	-0.11	1.96
5,236.00	2.00	89.20	5,234.19	15.45	87.69	-18.47	0.32	-0.27	-4.74
5,331.00	1.70	91.00	5,329.14	15.45	90.75	-18.58	0.32	-0.32	1.89
5,426.00	1.70	89.60	5,424.10	15.44	93.57	-18.66	0.04	0.00	-1.47
5,521.00	1.80	87.80	5,519.06	15.50	96.47	-18.83	0.12	0.11	-1.89
5,616.00	2.60	89.60	5,613.98	15.58	100.12	-19.03	0.85	0.84	1.89
5,710.00	2.60	85.00	5,707.89	15.78	104.37	-19.37	0.22	0.00	-4.89
5,805.00	3.10	89.00	5,802.77	16.01	109.09	-19.77	0.57	0.53	4.21
5,900.00	2.90	92.70	5,897.64	15.94	114.06	-19.87	0.29	-0.21	3.89
5,995.00	3.80	84.30	5,992.48	16.14	119.59	-20.26	1.08	0.95	-8.84
6,090.00	4.20	86.40	6,087.25	16.67	126.19	-21.02	0.45	0.42	2.21
6,185.00	5.00	89.40	6,181.94	16.93	133.81	-21.55	0.88	0.84	3.16
6,280.00	4.90	87.60	6,276.58	17.15	142.00	-22.04	0.19	-0.11	-1.89
6,374.00	4.60	88.70	6,370.26	17.40	149.78	-22.56	0.33	-0.32	1.17
6,469.00	4.60	86.40	6,464.96	17.73	157.39	-23.15	0.19	0.00	-2.42
6,564.00	4.70	84.60	6,559.64	18.33	165.07	-24.02	0.19	0.11	-1.89
6,659.00	4.70	84.30	6,654.32	19.08	172.81	-25.04	0.03	0.00	-0.32
6,754.00	4.90	84.50	6,748.99	19.86	180.72	-26.09	0.21	0.21	0.21
6,849.00	5.30	82.90	6,843.61	20.79	189.12	-27.31	0.45	0.42	-1.68
6,943.00	5.20	82.30	6,937.22	21.90	197.65	-28.71	0.12	-0.11	-0.64
7,038.00	5.40	81.30	7,031.81	23.15	206.33	-30.27	0.23	0.21	-1.05
7,133.00	5.10	80.80	7,126.42	24.50	214.92	-31.91	0.32	-0.32	-0.53
7,228.00	5.20	79.90	7,221.03	25.93	223.32	-33.63	0.14	0.11	-0.95
7,323.00	5.20	79.70	7,315.64	27.46	231.80	-35.45	0.02	0.00	-0.21

LEAM Drilling Systems LLC

Survey Report

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Well:	71H	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)
7,418.00	5.10	81.10	7,410.26	28.88	240.21	-37.16	0.17	-0.11	1.47
7,513.00	5.10	80.60	7,504.88	30.22	248.54	-38.79	0.05	0.00	-0.53
7,607.00	5.10	79.70	7,598.51	31.65	256.78	-40.50	0.09	0.00	-0.96
7,702.00	4.90	81.30	7,693.15	33.02	264.94	-42.15	0.26	-0.21	1.68
7,797.00	4.80	82.30	7,787.81	34.17	272.89	-43.57	0.14	-0.11	1.05
7,892.00	4.90	84.10	7,882.47	35.12	280.87	-44.80	0.19	0.11	1.89
7,987.00	4.70	84.10	7,977.13	35.93	288.77	-45.89	0.21	-0.21	0.00
8,082.00	3.90	84.80	8,071.87	36.63	295.86	-46.83	0.84	-0.84	0.74
8,177.00	4.00	92.20	8,166.64	36.79	302.39	-47.22	0.55	0.11	7.79
8,272.00	4.70	97.10	8,261.37	36.18	309.56	-46.86	0.83	0.74	5.16
8,366.00	5.90	100.60	8,354.96	34.82	318.13	-45.79	1.32	1.28	3.72
8,461.00	6.10	103.60	8,449.44	32.73	327.84	-44.04	0.39	0.21	3.16
8,556.00	5.80	104.00	8,543.93	30.39	337.40	-42.03	0.32	-0.32	0.42
8,651.00	5.50	102.70	8,638.47	28.22	346.50	-40.18	0.34	-0.32	-1.37
8,745.00	5.30	105.20	8,732.05	26.10	355.09	-38.35	0.33	-0.21	2.66
8,840.00	4.70	106.80	8,826.69	23.82	363.05	-36.35	0.65	-0.63	1.68
8,935.00	4.70	104.50	8,921.37	21.72	370.54	-34.51	0.20	0.00	-2.42
9,030.00	4.60	107.30	9,016.06	19.61	377.95	-32.66	0.26	-0.11	2.95
9,125.00	4.10	108.00	9,110.79	17.43	384.81	-30.72	0.53	-0.53	0.74
9,220.00	4.10	107.50	9,205.54	15.36	391.28	-28.87	0.04	0.00	-0.53
9,314.00	4.00	104.10	9,299.31	13.55	397.67	-27.28	0.28	-0.11	-3.62
9,409.00	3.50	103.80	9,394.10	12.05	403.70	-25.99	0.53	-0.53	-0.32
9,504.00	3.00	105.40	9,488.95	10.70	408.91	-24.82	0.53	-0.53	1.68
9,599.00	2.40	107.30	9,583.84	9.45	413.20	-23.72	0.64	-0.63	2.00
9,694.00	1.80	110.10	9,678.78	8.34	416.50	-22.73	0.64	-0.63	2.95
9,789.00	1.20	94.50	9,773.75	7.75	418.90	-22.22	0.76	-0.63	-16.42
9,883.00	0.90	84.30	9,867.73	7.75	420.61	-22.28	0.37	-0.32	-10.85
9,978.00	0.00	137.70	9,962.73	7.82	421.36	-22.38	0.95	-0.95	0.00
10,073.00	0.80	65.50	10,057.73	8.10	421.96	-22.67	0.84	0.84	0.00
10,169.00	0.90	39.80	10,153.71	8.96	423.05	-23.57	0.41	0.10	-26.77
10,263.00	1.80	66.00	10,247.69	10.12	424.87	-24.80	1.14	0.96	27.87
10,358.00	1.50	56.70	10,342.65	11.41	427.28	-26.17	0.42	-0.32	-9.79
10,453.00	1.00	44.60	10,437.63	12.69	428.90	-27.50	0.59	-0.53	-12.74
10,547.00	0.40	57.00	10,531.62	13.45	429.75	-28.29	0.65	-0.64	13.19
10,642.00	2.10	208.70	10,626.60	12.10	429.19	-26.92	2.59	1.79	159.68
10,737.00	3.40	217.70	10,721.49	8.35	426.63	-23.08	1.44	1.37	9.47
10,832.00	4.00	216.10	10,816.29	3.44	422.96	-18.05	0.64	0.63	-1.68
10,927.00	3.50	208.40	10,911.09	-1.79	419.62	-12.71	0.75	-0.53	-8.11
11,022.00	3.40	208.00	11,005.92	-6.83	416.92	-7.58	0.11	-0.11	-0.42
11,116.00	2.90	221.60	11,099.77	-11.07	414.04	-3.25	0.95	-0.53	14.47
11,211.00	2.20	265.30	11,194.69	-13.01	410.62	-1.18	2.11	-0.74	46.00
11,306.00	1.00	299.40	11,289.65	-12.75	408.08	-1.35	1.56	-1.26	35.89
11,401.00	1.50	262.00	11,384.63	-12.52	406.13	-1.52	0.98	0.53	-39.37

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11,496.00	1.70	282.00	11,479.59	-12.40	403.52	-1.55	0.62	0.21	21.05
11,590.00	1.90	253.00	11,573.55	-12.57	400.67	-1.28	0.98	0.21	-30.85
11,685.00	2.10	242.10	11,668.49	-13.84	397.62	0.10	0.45	0.21	-11.47
11,780.00	2.40	233.90	11,763.42	-15.83	394.48	2.19	0.46	0.32	-8.63
11,875.00	2.70	226.70	11,858.32	-18.53	391.24	5.01	0.46	0.32	-7.58
11,970.00	2.40	214.20	11,953.23	-21.71	388.49	8.28	0.66	-0.32	-13.16
12,065.00	2.40	218.20	12,048.15	-24.92	386.15	11.57	0.18	0.00	4.21
12,160.00	2.40	225.30	12,143.07	-27.88	383.50	14.62	0.31	0.00	7.47
12,255.00	2.90	227.00	12,237.96	-30.92	380.33	17.76	0.53	0.53	1.79
12,316.00	3.60	212.20	12,298.87	-33.60	378.18	20.51	1.78	1.15	-24.26
12,347.00	6.60	199.60	12,329.74	-36.10	377.06	23.05	10.27	9.68	-40.65
12,379.00	11.00	194.10	12,361.36	-40.79	375.70	27.79	13.98	13.75	-17.19
12,410.00	15.10	194.80	12,391.55	-47.57	373.95	34.62	13.24	13.23	2.26
12,442.00	19.00	195.20	12,422.14	-56.63	371.52	43.76	12.19	12.19	1.25
12,489.00	23.20	193.80	12,465.98	-73.01	367.30	60.28	9.00	8.94	-2.98
12,537.00	29.20	197.00	12,509.03	-93.41	361.62	80.86	12.84	12.50	6.67
12,584.00	34.80	192.20	12,548.88	-117.50	355.43	105.15	13.08	11.91	-10.21
12,631.00	37.30	185.20	12,586.89	-144.81	351.30	132.59	10.25	5.32	-14.89
12,679.00	41.20	184.30	12,624.05	-175.07	348.80	162.92	8.21	8.13	-1.88
12,726.00	47.00	184.10	12,657.79	-207.68	346.40	195.59	12.34	12.34	-0.43
12,774.00	54.10	184.70	12,688.27	-244.61	343.55	232.59	14.82	14.79	1.25
12,821.00	60.10	184.50	12,713.79	-283.93	340.39	272.00	12.77	12.77	-0.43
12,868.00	64.00	183.10	12,735.81	-325.34	337.65	313.48	8.70	8.30	-2.98
12,916.00	68.50	182.90	12,755.14	-369.21	335.35	357.40	9.38	9.38	-0.42
12,963.00	73.70	182.40	12,770.36	-413.61	333.30	401.85	11.11	11.06	-1.06
13,011.00	78.80	182.50	12,781.76	-460.18	331.31	448.45	10.63	10.63	0.21
13,040.00	81.60	182.20	12,786.70	-488.73	330.14	477.03	9.71	9.66	-1.03
13,116.00	86.90	182.00	12,794.31	-564.27	327.37	552.62	6.98	6.97	-0.26
13,210.00	89.40	181.50	12,797.35	-658.17	324.50	646.56	2.71	2.66	-0.53
13,305.00	88.70	179.20	12,798.92	-753.14	323.92	741.50	2.53	-0.74	-2.42
13,400.00	90.70	179.90	12,799.42	-848.13	324.66	836.41	2.23	2.11	0.74
13,495.00	91.10	180.40	12,797.93	-943.12	324.41	931.35	0.67	0.42	0.53
13,590.00	89.20	181.50	12,797.68	-1,038.10	322.84	1,026.33	2.31	-2.00	1.16
13,685.00	90.30	182.20	12,798.09	-1,133.05	319.77	1,121.33	1.37	1.16	0.74
13,780.00	93.20	183.90	12,795.19	-1,227.86	314.72	1,216.25	3.54	3.05	1.79
13,876.00	90.70	181.80	12,791.93	-1,323.67	309.95	1,312.17	3.40	-2.60	-2.19
13,971.00	88.50	180.40	12,792.59	-1,418.64	308.13	1,407.15	2.74	-2.32	-1.47
14,066.00	89.70	182.90	12,794.08	-1,513.58	305.39	1,502.13	2.92	1.26	2.63
14,161.00	89.50	182.50	12,794.74	-1,608.47	300.92	1,597.12	0.47	-0.21	-0.42
14,256.00	92.30	181.70	12,793.25	-1,703.39	297.44	1,692.09	3.07	2.95	-0.84
14,352.00	89.70	179.00	12,791.58	-1,799.35	296.85	1,788.02	3.90	-2.71	-2.81
14,447.00	89.40	180.40	12,792.32	-1,894.35	297.35	1,882.94	1.51	-0.32	1.47
14,542.00	89.80	184.80	12,792.99	-1,989.22	293.04	1,977.91	4.65	0.42	4.63
14,637.00	89.30	182.00	12,793.73	-2,084.04	287.41	2,072.87	2.99	-0.53	-2.95

LEAM Drilling Systems LLC

Survey Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 71H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3354.2' GL + 30' RKB @ 3384.20usft
Site:	Fighting Okra 18-19 Fed	MD Reference:	3354.2' GL + 30' RKB @ 3384.20usft
Well:	71H	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)
14,733.00	90.00	179.60	12,794.32	-2,180.03	286.07	2,168.84	2.60	0.73	-2.50
14,828.00	87.10	177.80	12,796.72	-2,274.96	288.22	2,263.64	3.59	-3.05	-1.89
14,923.00	90.50	181.10	12,798.71	-2,369.90	289.13	2,358.50	4.99	3.58	3.47
15,018.00	91.20	180.10	12,797.30	-2,464.89	288.14	2,453.46	1.28	0.74	-1.05
15,113.00	89.30	177.60	12,796.89	-2,559.86	290.04	2,548.31	3.31	-2.00	-2.63
15,208.00	91.50	179.00	12,796.23	-2,654.80	292.86	2,643.10	2.74	2.32	1.47
15,303.00	91.10	178.00	12,794.07	-2,749.74	295.35	2,737.90	1.13	-0.42	-1.05
15,399.00	91.90	178.00	12,791.56	-2,845.65	298.70	2,833.63	0.83	0.83	0.00
15,494.00	95.40	180.10	12,785.51	-2,940.43	300.27	2,928.30	4.29	3.68	2.21
15,589.00	94.10	180.40	12,777.64	-3,035.10	299.86	3,022.92	1.40	-1.37	0.32
15,684.00	90.90	179.70	12,773.50	-3,129.99	299.78	3,117.77	3.45	-3.37	-0.74
15,780.00	92.00	182.40	12,771.07	-3,225.94	298.02	3,213.71	3.04	1.15	2.81
15,875.00	87.70	180.60	12,771.32	-3,320.88	295.53	3,308.68	4.91	-4.53	-1.89
15,971.00	87.40	180.30	12,775.42	-3,416.79	294.78	3,404.56	0.44	-0.31	-0.31
16,066.00	88.60	182.20	12,778.74	-3,511.70	292.71	3,499.49	2.36	1.26	2.00
16,161.00	88.50	181.80	12,781.14	-3,606.61	289.39	3,594.46	0.43	-0.11	-0.42
16,256.00	93.70	182.40	12,779.32	-3,701.50	285.91	3,689.41	5.51	5.47	0.63
16,351.00	93.00	182.20	12,773.77	-3,796.26	282.11	3,784.24	0.77	-0.74	-0.21
16,447.00	92.80	183.10	12,768.91	-3,892.03	277.68	3,880.11	0.96	-0.21	0.94
16,542.00	91.90	183.20	12,765.01	-3,986.81	272.46	3,975.01	0.95	-0.95	0.11
16,637.00	90.10	182.50	12,763.36	-4,081.67	267.74	4,069.98	2.03	-1.89	-0.74
16,732.00	89.70	182.00	12,763.52	-4,176.60	264.01	4,164.98	0.67	-0.42	-0.53
16,827.00	90.00	182.50	12,763.77	-4,271.52	260.28	4,259.98	0.61	0.32	0.53
16,922.00	90.60	183.20	12,763.27	-4,366.40	255.55	4,354.97	0.97	0.63	0.74
17,017.00	89.80	182.90	12,762.94	-4,461.27	250.50	4,449.95	0.90	-0.84	-0.32
17,111.00	90.20	182.50	12,762.94	-4,555.16	246.07	4,543.94	0.60	0.43	-0.43
17,206.00	91.40	182.90	12,761.62	-4,650.05	241.60	4,638.92	1.33	1.26	0.42
17,302.00	91.40	182.20	12,759.27	-4,745.92	237.33	4,734.89	0.73	0.00	-0.73
17,397.00	89.40	180.40	12,758.61	-4,840.89	235.17	4,829.87	2.83	-2.11	-1.89
17,492.00	91.20	182.00	12,758.11	-4,935.86	233.18	4,924.85	2.54	1.89	1.68
17,587.00	91.50	182.90	12,755.87	-5,030.74	229.12	5,019.82	1.00	0.32	0.95
17,683.00	90.20	182.20	12,754.45	-5,126.63	224.85	5,115.80	1.54	-1.35	-0.73
17,778.00	90.00	182.20	12,754.28	-5,221.56	221.21	5,210.80	0.21	-0.21	0.00
17,873.00	89.60	183.60	12,754.61	-5,316.44	216.40	5,305.79	1.53	-0.42	1.47
17,968.00	90.50	185.40	12,754.53	-5,411.14	208.95	5,400.69	2.12	0.95	1.89
18,064.00	88.00	184.30	12,755.79	-5,506.78	200.83	5,496.55	2.85	-2.60	-1.15
18,159.00	88.50	182.70	12,758.69	-5,601.56	195.04	5,591.47	1.76	0.53	-1.68
18,254.00	91.30	184.30	12,758.85	-5,696.37	189.24	5,686.43	3.39	2.95	1.68
18,348.00	90.20	182.90	12,757.62	-5,790.17	183.34	5,780.38	1.89	-1.17	-1.49
18,443.00	88.30	181.80	12,758.87	-5,885.07	179.44	5,875.36	2.31	-2.00	-1.16
18,539.00	87.30	180.30	12,762.55	-5,980.98	177.68	5,971.27	1.88	-1.04	-1.56
18,634.00	86.80	179.60	12,767.44	-6,075.86	177.76	6,066.09	0.90	-0.53	-0.74
18,730.00	85.60	178.00	12,773.80	-6,171.62	179.77	6,161.72	2.08	-1.25	-1.67

LEAM Drilling Systems LLC

Survey Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 71H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3354.2' GL + 30' RKB @ 3384.20usft
Site:	Fighting Okra 18-19 Fed	MD Reference:	3354.2' GL + 30' RKB @ 3384.20usft
Well:	71H	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)
18,825.00	89.60	177.60	12,777.78	-6,266.45	183.41	6,256.37	4.23	4.21	-0.42
18,920.00	91.50	179.40	12,776.87	-6,361.40	185.90	6,351.18	2.75	2.00	1.89
19,015.00	88.80	177.10	12,776.62	-6,456.34	188.80	6,445.96	3.73	-2.84	-2.42
19,110.00	89.50	179.00	12,778.03	-6,551.27	192.03	6,540.73	2.13	0.74	2.00
19,205.00	89.30	177.80	12,779.03	-6,646.23	194.68	6,635.53	1.28	-0.21	-1.26
19,300.00	90.20	179.70	12,779.44	-6,741.20	196.76	6,730.38	2.21	0.95	2.00
19,395.00	89.50	177.30	12,779.69	-6,836.16	199.24	6,825.19	2.63	-0.74	-2.53
19,491.00	89.50	176.00	12,780.53	-6,931.99	204.85	6,920.77	1.35	0.00	-1.35
19,586.00	90.70	178.70	12,780.36	-7,026.88	209.24	7,015.45	3.11	1.26	2.84
19,682.00	90.80	180.10	12,779.10	-7,122.86	210.25	7,111.34	1.46	0.10	1.46
19,778.00	90.20	178.30	12,778.27	-7,218.84	211.59	7,207.22	1.98	-0.63	-1.88
19,873.00	88.70	175.30	12,779.18	-7,313.68	216.89	7,301.82	3.53	-1.58	-3.16
19,968.00	92.00	181.00	12,778.60	-7,408.57	219.96	7,396.55	6.93	3.47	6.00
20,063.00	90.60	180.60	12,776.44	-7,503.54	218.63	7,491.50	1.53	-1.47	-0.42
20,158.00	91.80	181.00	12,774.45	-7,598.51	217.31	7,586.46	1.33	1.26	0.42
20,253.00	91.00	178.80	12,772.13	-7,693.47	217.47	7,681.36	2.46	-0.84	-2.32
20,348.00	91.10	179.70	12,770.39	-7,788.45	218.72	7,776.24	0.95	0.11	0.95
20,443.00	89.70	180.60	12,769.73	-7,883.44	218.47	7,871.18	1.75	-1.47	0.95
20,538.00	89.80	183.90	12,770.14	-7,978.35	214.74	7,966.17	3.48	0.11	3.47
20,633.00	90.70	184.50	12,769.73	-8,073.09	207.78	8,061.10	1.14	0.95	0.63
20,728.00	91.50	184.50	12,767.90	-8,167.78	200.33	8,155.99	0.84	0.84	0.00
20,823.00	92.00	183.20	12,765.00	-8,262.52	193.95	8,250.89	1.47	0.53	-1.37
20,919.00	91.50	181.30	12,762.07	-8,358.40	190.19	8,346.84	2.05	-0.52	-1.98
21,014.00	91.10	180.60	12,759.92	-8,453.36	188.61	8,441.80	0.85	-0.42	-0.74
21,109.00	90.10	179.70	12,758.92	-8,548.35	188.36	8,536.74	1.42	-1.05	-0.95
21,204.00	90.00	180.10	12,758.84	-8,643.35	188.53	8,631.68	0.43	-0.11	0.42
21,299.00	89.70	179.60	12,759.09	-8,738.35	188.78	8,726.61	0.61	-0.32	-0.53
21,395.00	90.70	182.00	12,758.75	-8,834.33	187.44	8,822.58	2.71	1.04	2.50
21,490.00	89.70	181.00	12,758.42	-8,929.30	184.95	8,917.58	1.49	-1.05	-1.05
21,585.00	89.40	180.30	12,759.17	-9,024.29	183.87	9,012.55	0.80	-0.32	-0.74
21,680.00	89.60	180.40	12,759.99	-9,119.28	183.29	9,107.51	0.24	0.21	0.11
21,775.00	88.50	179.70	12,761.57	-9,214.27	183.21	9,202.44	1.37	-1.16	-0.74
21,870.00	89.50	181.80	12,763.23	-9,309.24	181.97	9,297.39	2.45	1.05	2.21
21,965.00	89.40	182.90	12,764.14	-9,404.15	178.07	9,392.39	1.16	-0.11	1.16
22,061.00	89.40	183.80	12,765.15	-9,499.98	172.46	9,488.35	0.94	0.00	0.94
22,156.00	89.30	184.10	12,766.22	-9,594.75	165.92	9,583.29	0.33	-0.11	0.32
22,251.00	89.50	185.20	12,767.22	-9,689.43	158.22	9,678.18	1.18	0.21	1.16
22,346.00	89.70	186.10	12,767.88	-9,783.97	148.86	9,772.98	0.97	0.21	0.95
22,441.00	89.90	187.60	12,768.21	-9,878.28	137.53	9,867.64	1.59	0.21	1.58
22,533.00	89.50	188.20	12,768.69	-9,969.41	124.89	9,959.14	0.78	-0.43	0.65
22,587.00	89.50	188.20	12,769.17	-10,022.86	117.19	10,012.82	0.00	0.00	0.00
Projection									