



Scientific Drilling

Devon Energy

Lea County, NM (NAD83 NME)

Mean Green 23-25 Fed Com

1H

OH

Survey: SDI Surveys #1

Standard Survey Report

09 July, 2019



Scientific Drilling

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Scientific Drilling, Intl
Survey Report



Company:	Devon Energy	Local Co-ordinate Reference:	Well 1H
Project:	Lea County, NM (NAD83 NME)	TVD Reference:	KB = 26' @ 3219.00usft (H&P 466)
Site:	Mean Green 23-25 Fed Com	MD Reference:	KB = 26' @ 3219.00usft (H&P 466)
Well:	1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland District

Project	Lea County, NM (NAD83 NME)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		Using geodetic scale factor

Site	Mean Green 23-25 Fed Com		
Site Position:		Northing:	375,205.44 usft
From:	Map	Easting:	819,720.56 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 1' 42.017 N
		Longitude:	103° 26' 6.103 W
		Grid Convergence:	0.48 "

Well	1H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Latitude:	32° 1' 42.017 N
		Longitude:	103° 26' 6.103 W
		Ground Level:	3,193.00 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
			(°)
	HDGM	9/18/2018	6.67
			Dip Angle
			(°)
			59.68
			Field Strength
			(nT)
			47,738

Design	OH		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(bearing)
			180.27

Survey Program	Date 11/26/2018		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
138.00	23,240.00	SDI Surveys #1 (OH)	MWD+HDGM
			Description
			OWSG MWD + HDGM

Survey									
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn
Depth	(°)	(bearing)	Depth	(usft)	(usft)	Section	Rate	Rate	Rate
(usft)			(usft)			(usft)	(°/100usft)	(°/100usft)	(°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
138.00	0.48	203.48	138.00	-0.53	-0.23	0.53	0.35	0.35	0.00
271.00	0.46	158.75	270.99	-1.54	-0.26	1.54	0.27	-0.02	-33.63
364.00	0.47	170.77	363.99	-2.26	-0.06	2.26	0.11	0.01	12.92
426.00	0.84	179.49	425.99	-2.97	-0.02	2.97	0.62	0.60	14.06
518.00	0.81	190.63	517.98	-4.28	-0.13	4.28	0.18	-0.03	12.11
611.00	0.87	195.38	610.97	-5.61	-0.44	5.61	0.10	0.06	5.11
703.00	0.92	193.87	702.96	-7.00	-0.80	7.00	0.06	0.05	-1.64
796.00	1.00	195.82	795.94	-8.51	-1.20	8.51	0.09	0.09	2.10
888.00	0.91	195.87	887.93	-9.98	-1.62	9.99	0.10	-0.10	0.05



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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland District

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
981.00	0.93	201.80	980.92	-11.39	-2.10	11.40	0.10	0.02	6.38
1,008.00	0.95	209.89	1,007.92	-11.79	-2.30	11.80	0.50	0.07	29.96
1,163.00	0.42	218.46	1,162.90	-13.35	-3.29	13.36	0.35	-0.34	5.53
1,256.00	0.24	202.05	1,255.90	-13.80	-3.58	13.81	0.22	-0.19	-17.65
1,348.00	0.10	207.76	1,347.90	-14.04	-3.68	14.06	0.15	-0.15	6.21
1,440.00	0.29	261.43	1,439.90	-14.15	-3.95	14.17	0.27	0.21	58.34
1,532.00	0.11	109.95	1,531.90	-14.22	-4.10	14.23	0.42	-0.20	-164.65
1,624.00	0.24	278.53	1,623.90	-14.22	-4.21	14.24	0.38	0.14	183.24
1,716.00	0.27	187.40	1,715.90	-14.40	-4.43	14.42	0.40	0.03	-99.05
1,810.00	0.27	173.41	1,809.90	-14.84	-4.43	14.86	0.07	0.00	-14.88
1,904.00	0.29	217.09	1,903.90	-15.25	-4.55	15.27	0.22	0.02	46.47
1,998.00	0.24	185.21	1,997.90	-15.64	-4.71	15.66	0.16	-0.05	-33.91
2,093.00	0.29	105.57	2,092.90	-15.90	-4.49	15.92	0.36	0.05	-83.83
2,187.00	0.85	321.24	2,186.89	-15.42	-4.70	15.44	1.17	0.60	-153.54
2,280.00	1.92	313.35	2,279.86	-13.81	-6.27	13.84	1.17	1.15	-8.48
2,375.00	3.19	306.17	2,374.77	-11.16	-9.56	11.21	1.38	1.34	-7.56
2,468.00	4.36	313.80	2,467.57	-7.19	-14.20	7.25	1.37	1.26	8.20
2,562.00	5.63	318.27	2,561.21	-1.27	-19.85	1.37	1.41	1.35	4.76
2,657.00	6.05	315.91	2,655.71	5.80	-26.43	-5.68	0.51	0.44	-2.48
2,751.00	6.08	316.69	2,749.19	12.98	-33.29	-12.82	0.09	0.03	0.83
2,846.00	7.06	315.97	2,843.56	20.84	-40.80	-20.65	1.04	1.03	-0.76
2,940.00	6.82	314.58	2,936.87	28.91	-48.79	-28.68	0.31	-0.26	-1.48
3,034.00	6.88	316.84	3,030.20	36.93	-56.62	-36.67	0.29	0.06	2.40
KOP (3034.00' MD)									
3,128.00	7.51	306.97	3,123.47	44.74	-65.38	-44.43	1.47	0.67	-10.50
3,223.00	7.81	308.76	3,217.62	52.51	-75.37	-52.16	0.40	0.32	1.88
3,317.00	7.22	314.54	3,310.81	60.65	-84.56	-60.25	1.02	-0.63	6.15
3,411.00	6.26	306.86	3,404.16	67.87	-92.87	-67.43	1.40	-1.02	-8.17
3,506.00	6.64	306.24	3,498.56	74.22	-101.45	-73.75	0.41	0.40	-0.65
3,600.00	6.94	299.84	3,591.90	80.26	-110.76	-79.74	0.87	0.32	-6.81
3,694.00	6.58	297.63	3,685.25	85.59	-120.46	-85.02	0.47	-0.38	-2.35
3,788.00	6.73	304.07	3,778.62	91.17	-129.79	-90.56	0.81	0.16	6.85
3,882.00	6.59	301.14	3,871.98	97.04	-138.97	-96.39	0.39	-0.15	-3.12
3,976.00	6.30	299.93	3,965.39	102.41	-148.05	-101.71	0.34	-0.31	-1.29
4,071.00	5.87	298.62	4,059.85	107.34	-156.84	-106.59	0.48	-0.45	-1.38
4,165.00	5.48	305.71	4,153.39	112.26	-164.70	-111.48	0.85	-0.41	7.54
4,259.00	6.16	302.14	4,246.91	117.56	-172.62	-116.75	0.82	0.72	-3.80
4,353.00	7.29	299.46	4,340.26	123.18	-182.08	-122.32	1.25	1.20	-2.85
4,447.00	7.32	299.80	4,433.50	129.09	-192.47	-128.18	0.06	0.03	0.36
4,542.00	6.50	300.73	4,527.81	134.84	-202.34	-133.89	0.87	-0.86	0.98
4,636.00	5.42	295.31	4,621.30	139.46	-210.93	-138.46	1.29	-1.15	-5.77
4,730.00	5.76	298.79	4,714.85	143.63	-219.08	-142.59	0.51	0.36	3.70
4,825.00	7.32	307.21	4,809.23	149.58	-228.08	-148.51	1.92	1.64	8.86
4,919.00	6.91	306.73	4,902.51	156.59	-237.38	-155.47	0.44	-0.44	-0.51

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Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,013.00	6.08	309.18	4,995.91	163.11	-245.77	-161.95	0.93	-0.88	2.61
5,107.00	6.53	305.24	5,089.34	169.34	-253.99	-168.14	0.66	0.48	-4.19
5,202.00	5.57	301.58	5,183.81	174.87	-262.33	-173.64	1.09	-1.01	-3.85
5,296.00	4.98	303.65	5,277.41	179.52	-269.61	-178.25	0.66	-0.63	2.20
5,390.00	6.16	296.93	5,370.96	184.07	-277.51	-182.76	1.43	1.26	-7.15
5,484.00	7.39	294.65	5,464.31	188.88	-287.50	-187.52	1.34	1.31	-2.43
5,578.00	7.31	293.11	5,557.53	193.74	-298.49	-192.33	0.23	-0.09	-1.64
5,672.00	7.09	296.68	5,650.79	198.70	-309.18	-197.24	0.53	-0.23	3.80
5,766.00	7.50	293.56	5,744.03	203.75	-319.98	-202.24	0.61	0.44	-3.32
5,861.00	7.58	289.28	5,838.21	208.30	-331.58	-206.73	0.60	0.08	-4.51
5,955.00	8.23	292.94	5,931.32	212.97	-343.63	-211.35	0.87	0.69	3.89
6,049.00	8.18	289.37	6,024.36	217.81	-356.13	-216.13	0.54	-0.05	-3.80
6,143.00	7.80	288.81	6,117.44	222.08	-368.48	-220.35	0.41	-0.40	-0.60
6,237.00	7.82	287.73	6,210.57	226.09	-380.61	-224.29	0.16	0.02	-1.15
6,332.00	8.01	292.65	6,304.67	230.61	-392.88	-228.75	0.74	0.20	5.18
6,426.00	8.14	303.60	6,397.74	236.81	-404.46	-234.90	1.64	0.14	11.65
6,520.00	8.00	302.66	6,490.81	244.02	-415.51	-242.06	0.20	-0.15	-1.00
6,614.00	7.97	306.31	6,583.90	251.41	-426.27	-249.40	0.54	-0.03	3.88
6,709.00	7.94	307.84	6,677.99	259.34	-436.76	-257.28	0.23	-0.03	1.61
6,803.00	8.52	308.65	6,771.02	267.67	-447.33	-265.56	0.63	0.62	0.86
6,898.00	8.66	307.48	6,864.95	276.42	-458.50	-274.25	0.24	0.15	-1.23
6,992.00	8.86	308.50	6,957.86	285.23	-469.78	-283.01	0.27	0.21	1.09
7,086.00	8.28	303.80	7,050.81	293.50	-481.07	-291.23	0.97	-0.62	-5.00
7,180.00	6.84	307.29	7,143.99	300.66	-491.15	-298.34	1.61	-1.53	3.71
7,274.00	6.08	310.06	7,237.39	307.25	-499.41	-304.90	0.87	-0.81	2.95
7,369.00	5.26	308.59	7,331.93	313.21	-506.67	-310.82	0.88	-0.86	-1.55
7,463.00	4.04	302.51	7,425.61	317.67	-512.83	-315.25	1.40	-1.30	-6.47
7,558.00	3.84	299.69	7,520.39	321.05	-518.41	-318.60	0.29	-0.21	-2.97
7,652.00	4.46	302.47	7,614.14	324.57	-524.23	-322.10	0.69	0.66	2.96
7,746.00	3.54	313.72	7,707.92	328.54	-529.41	-326.04	1.28	-0.98	11.97
7,840.00	3.89	308.79	7,801.72	332.54	-533.99	-330.02	0.50	0.37	-5.24
7,935.00	3.14	309.52	7,896.54	336.22	-538.51	-333.67	0.79	-0.79	0.77
8,029.00	2.74	294.79	7,990.42	338.80	-542.54	-336.24	0.91	-0.43	-15.67
8,123.00	2.98	305.41	8,084.30	341.15	-546.57	-338.57	0.62	0.26	11.30
8,217.00	1.57	291.74	8,178.22	343.05	-549.76	-340.45	1.60	-1.50	-14.54
8,311.00	1.91	298.76	8,272.18	344.28	-552.33	-341.67	0.43	0.36	7.47
8,405.00	1.59	272.57	8,366.14	345.09	-555.00	-342.47	0.91	-0.34	-27.86
8,499.00	1.20	286.50	8,460.11	345.43	-557.25	-342.80	0.55	-0.41	14.82
8,594.00	1.14	258.65	8,555.09	345.52	-559.13	-342.89	0.60	-0.06	-29.32
8,688.00	1.11	254.42	8,649.07	345.10	-560.92	-342.45	0.09	-0.03	-4.50
8,782.00	0.72	260.86	8,743.06	344.76	-562.38	-342.10	0.43	-0.41	6.85
8,877.00	1.28	241.43	8,838.05	344.16	-563.90	-341.49	0.68	0.59	-20.45
8,971.00	0.66	258.24	8,932.03	343.54	-565.36	-340.87	0.72	-0.66	17.88

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Design:	OH	Database:	Midland District

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,065.00	0.75	242.98	9,026.03	343.15	-566.43	-340.48	0.22	0.10	-16.23
9,159.00	1.24	239.45	9,120.01	342.36	-567.86	-339.68	0.53	0.52	-3.76
9,253.00	1.33	236.47	9,213.99	341.24	-569.64	-338.55	0.12	0.10	-3.17
9,348.00	1.24	233.32	9,308.96	340.01	-571.39	-337.32	0.12	-0.09	-3.32
9,442.00	0.60	237.89	9,402.95	339.14	-572.62	-336.44	0.68	-0.68	4.86
9,536.00	0.38	247.16	9,496.95	338.76	-573.32	-336.06	0.25	-0.23	9.86
9,630.00	0.72	249.86	9,590.94	338.44	-574.17	-335.73	0.36	0.36	2.87
9,725.00	0.72	256.77	9,685.94	338.10	-575.31	-335.38	0.09	0.00	7.27
9,829.00	0.99	255.87	9,789.92	337.73	-576.81	-335.00	0.26	0.26	-0.87
9,923.00	0.95	86.95	9,883.92	337.57	-576.82	-334.85	2.05	-0.04	-179.70
10,017.00	0.64	125.86	9,977.91	337.30	-575.62	-334.59	0.64	-0.33	41.39
10,111.00	1.11	214.21	10,071.90	336.24	-575.71	-333.53	1.35	0.50	93.99
10,206.00	0.47	120.94	10,166.90	335.28	-575.89	-332.56	1.29	-0.67	-98.18
10,300.00	0.95	76.33	10,260.89	335.27	-574.80	-332.56	0.74	0.51	-47.46
10,395.00	1.13	42.88	10,355.87	336.14	-573.40	-333.43	0.66	0.19	-35.21
10,489.00	1.52	22.11	10,449.85	337.97	-572.30	-335.27	0.65	0.41	-22.10
10,584.00	2.38	2.09	10,544.79	341.11	-571.75	-338.42	1.14	0.91	-21.07
10,678.00	2.75	357.07	10,638.70	345.32	-571.80	-342.62	0.46	0.39	-5.34
10,773.00	2.70	338.19	10,733.59	349.67	-572.74	-346.97	0.94	-0.05	-19.87
10,867.00	1.98	345.08	10,827.52	353.29	-573.99	-350.59	0.82	-0.77	7.33
10,962.00	1.05	10.67	10,922.48	355.74	-574.25	-353.03	1.19	-0.98	26.94
11,056.00	1.43	20.02	11,016.46	357.68	-573.69	-354.98	0.46	0.40	9.95
11,150.00	1.63	23.55	11,110.43	360.01	-572.75	-357.31	0.24	0.21	3.76
11,245.00	1.46	7.46	11,205.39	362.45	-572.05	-359.75	0.49	-0.18	-16.94
11,339.00	1.24	27.22	11,299.37	364.54	-571.43	-361.84	0.54	-0.23	21.02
11,434.00	0.61	144.05	11,394.36	365.05	-570.67	-362.35	1.69	-0.66	122.98
11,528.00	1.64	138.07	11,488.34	363.64	-569.47	-360.95	1.10	1.10	-6.36
11,622.00	3.81	129.68	11,582.23	360.65	-566.17	-357.97	2.34	2.31	-8.93
11,716.00	4.12	133.14	11,676.00	356.34	-561.30	-353.69	0.42	0.33	3.68
11,808.00	4.98	132.93	11,767.71	351.36	-555.97	-348.74	0.93	0.93	-0.23
11,905.00	4.99	121.32	11,864.35	346.30	-549.28	-343.71	1.04	0.01	-11.97
11,999.00	4.54	137.73	11,958.03	341.42	-543.29	-338.86	1.52	-0.48	17.46
12,093.00	3.60	135.01	12,051.79	336.58	-538.70	-334.04	1.02	-1.00	-2.89
12,187.00	3.60	140.19	12,145.60	332.23	-534.72	-329.71	0.35	0.00	5.51
12,269.00	6.67	140.37	12,227.27	326.58	-530.03	-324.08	3.74	3.74	0.22
12,314.00	13.12	135.32	12,271.57	320.93	-524.77	-318.46	14.45	14.33	-11.22
12,364.00	16.75	130.35	12,319.88	312.23	-515.29	-309.80	7.69	7.26	-9.94
12,409.00	17.08	122.60	12,362.94	304.47	-504.77	-302.09	5.06	0.73	-17.22
12,458.00	19.77	114.46	12,409.43	297.16	-491.16	-294.84	7.58	5.49	-16.61
12,489.00	20.89	112.79	12,438.50	292.85	-481.30	-290.58	4.07	3.61	-5.39
12,519.00	23.55	113.86	12,466.27	288.35	-470.88	-286.13	8.97	8.87	3.57
12,549.00	27.49	110.00	12,493.34	283.56	-458.89	-281.39	14.25	13.13	-12.87
12,585.00	34.14	109.29	12,524.24	277.37	-441.53	-275.29	18.50	18.47	-1.97
12,617.00	39.01	110.64	12,549.93	270.85	-423.62	-268.85	15.42	15.22	4.22

Company:	Devon Energy	Local Co-ordinate Reference:	Well 1H
Project:	Lea County, NM (NAD83 NME)	TVD Reference:	KB = 26' @ 3219.00usft (H&P 466)
Site:	Mean Green 23-25 Fed Com	MD Reference:	KB = 26' @ 3219.00usft (H&P 466)
Well:	1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland District

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,644.00	44.28	113.31	12,570.10	264.12	-407.00	-262.20	20.59	19.52	9.89
12,680.00	50.90	116.80	12,594.37	252.83	-382.95	-251.03	19.73	18.39	9.69
12,711.00	56.12	120.99	12,612.80	240.77	-361.17	-239.07	20.03	16.84	13.52
12,741.00	59.35	125.30	12,628.82	226.89	-339.95	-225.29	16.23	10.77	14.37
12,772.00	64.01	130.81	12,643.53	210.06	-318.49	-208.56	21.69	15.03	17.77
12,800.00	68.37	134.27	12,654.84	192.74	-299.64	-191.33	19.24	15.57	12.36
12,831.00	72.67	137.49	12,665.17	171.76	-279.31	-170.45	16.98	13.87	10.39
12,861.00	74.80	138.98	12,673.58	150.28	-260.13	-149.06	8.55	7.10	4.97
12,895.00	77.20	142.04	12,681.80	124.83	-239.15	-123.70	11.23	7.06	9.00
12,926.00	79.19	145.78	12,688.15	100.31	-221.29	-99.26	13.44	6.42	12.06
12,956.00	80.14	149.01	12,693.53	75.45	-205.39	-74.48	11.06	3.17	10.77
12,989.00	81.80	152.64	12,698.71	47.00	-189.51	-46.10	11.97	5.03	11.00
13,020.00	82.56	155.37	12,702.93	19.40	-176.05	-18.57	9.06	2.45	8.81
13,050.00	83.04	156.45	12,706.69	-7.78	-163.90	8.55	3.91	1.60	3.60
13,083.00	83.91	158.14	12,710.44	-38.02	-151.24	38.73	5.73	2.64	5.12
13,115.00	85.99	160.32	12,713.26	-67.82	-139.94	68.48	9.40	6.50	6.81
13,146.00	88.08	162.89	12,714.86	-97.19	-130.18	97.81	10.68	6.74	8.29
13,178.00	88.99	165.35	12,715.68	-127.96	-121.42	128.53	8.19	2.84	7.69
13,209.00	90.30	167.93	12,715.87	-158.12	-114.26	158.65	9.33	4.23	8.32
13,238.00	90.98	171.32	12,715.55	-186.64	-109.04	187.15	11.92	2.34	11.69
13,274.53	90.59	174.71	12,715.05	-222.89	-104.60	223.38	9.33	-1.07	9.27
FTP (13274.53' MD)									
13,283.00	90.50	175.49	12,714.97	-231.32	-103.87	231.81	9.33	-1.07	9.27
13,333.00	88.69	178.34	12,715.32	-281.24	-101.18	281.72	6.75	-3.62	5.70
13,430.00	87.55	178.96	12,718.50	-378.16	-98.90	378.62	1.34	-1.18	0.64
13,524.00	86.97	178.70	12,723.00	-472.04	-96.98	472.49	0.68	-0.62	-0.28
13,618.00	87.48	178.62	12,727.55	-565.90	-94.79	566.34	0.55	0.54	-0.09
13,713.00	89.03	179.45	12,730.44	-660.84	-93.19	661.27	1.85	1.63	0.87
13,807.00	88.28	179.25	12,732.65	-754.80	-92.12	755.23	0.83	-0.80	-0.21
13,901.00	88.72	179.23	12,735.11	-848.76	-90.87	849.18	0.47	0.47	-0.02
13,995.00	89.93	178.35	12,736.21	-942.73	-88.89	943.14	1.59	1.29	-0.94
14,090.00	90.30	177.76	12,736.02	-1,037.68	-85.66	1,038.07	0.73	0.39	-0.62
14,184.00	90.54	178.16	12,735.33	-1,131.62	-82.32	1,131.99	0.50	0.26	0.43
14,278.00	90.00	178.38	12,734.89	-1,225.57	-79.48	1,225.93	0.62	-0.57	0.23
14,373.00	89.03	178.42	12,735.70	-1,320.53	-76.83	1,320.88	1.02	-1.02	0.04
14,466.00	90.70	176.66	12,735.91	-1,413.44	-72.84	1,413.76	2.61	1.80	-1.89
14,561.00	90.27	177.18	12,735.11	-1,508.30	-67.73	1,508.60	0.71	-0.45	0.55
14,655.00	90.23	178.44	12,734.70	-1,602.22	-64.14	1,602.51	1.34	-0.04	1.34
14,749.00	90.00	179.22	12,734.51	-1,696.20	-62.22	1,696.48	0.87	-0.24	0.83
14,843.00	89.19	179.49	12,735.18	-1,790.20	-61.16	1,790.46	0.91	-0.86	0.29
14,938.00	91.24	179.34	12,734.82	-1,885.18	-60.19	1,885.45	2.16	2.16	-0.16
15,032.00	91.18	179.79	12,732.83	-1,979.16	-59.48	1,979.42	0.48	-0.06	0.48
15,126.00	89.70	179.41	12,732.11	-2,073.15	-58.82	2,073.41	1.63	-1.57	-0.40

Company:	Devon Energy	Local Co-ordinate Reference:	Well 1H
Project:	Lea County, NM (NAD83 NME)	TVD Reference:	KB = 26' @ 3219.00usft (H&P 466)
Site:	Mean Green 23-25 Fed Com	MD Reference:	KB = 26' @ 3219.00usft (H&P 466)
Well:	1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland District

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,220.00	92.59	181.69	12,730.23	-2,167.11	-59.72	2,167.37	3.92	3.07	2.43
15,314.00	91.21	181.86	12,727.12	-2,261.01	-62.63	2,261.28	1.48	-1.47	0.18
15,408.00	90.57	181.61	12,725.66	-2,354.96	-65.48	2,355.24	0.73	-0.68	-0.27
15,502.00	88.05	180.26	12,726.79	-2,448.93	-67.01	2,449.22	3.04	-2.68	-1.44
15,597.00	87.45	179.57	12,730.52	-2,543.86	-66.87	2,544.14	0.96	-0.63	-0.73
15,691.00	87.15	179.74	12,734.95	-2,637.75	-66.31	2,638.03	0.37	-0.32	0.18
15,786.00	88.45	179.26	12,738.59	-2,732.67	-65.48	2,732.95	1.46	1.37	-0.51
15,880.00	87.98	178.93	12,741.52	-2,826.62	-64.00	2,826.89	0.61	-0.50	-0.35
15,974.00	90.13	178.67	12,743.07	-2,920.58	-62.03	2,920.84	2.30	2.29	-0.28
16,068.00	92.15	178.86	12,741.20	-3,014.53	-60.00	3,014.78	2.16	2.15	0.20
16,162.00	93.09	179.01	12,736.91	-3,108.42	-58.26	3,108.66	1.01	1.00	0.16
16,256.00	90.37	178.49	12,734.07	-3,202.34	-56.21	3,202.57	2.95	-2.89	-0.55
16,351.00	88.56	178.94	12,734.95	-3,297.31	-54.08	3,297.53	1.96	-1.91	0.47
16,445.00	87.38	178.24	12,738.28	-3,391.22	-51.77	3,391.43	1.46	-1.26	-0.74
16,539.00	89.90	179.82	12,740.52	-3,485.17	-50.18	3,485.37	3.16	2.68	1.68
16,633.00	90.71	180.89	12,740.01	-3,579.16	-50.76	3,579.36	1.43	0.86	1.14
16,728.00	88.96	179.67	12,740.29	-3,674.16	-51.22	3,674.36	2.25	-1.84	-1.28
16,822.00	89.20	180.35	12,741.80	-3,768.14	-51.24	3,768.34	0.77	0.26	0.72
16,917.00	90.00	181.96	12,742.46	-3,863.12	-53.15	3,863.33	1.89	0.84	1.69
17,011.00	89.73	182.27	12,742.68	-3,957.05	-56.62	3,957.28	0.44	-0.29	0.33
17,105.00	90.03	182.70	12,742.88	-4,050.97	-60.70	4,051.21	0.56	0.32	0.46
17,200.00	90.50	182.29	12,742.44	-4,145.87	-64.83	4,146.13	0.66	0.49	-0.43
17,294.00	91.14	183.48	12,741.09	-4,239.74	-69.56	4,240.02	1.44	0.68	1.27
17,388.00	91.28	183.35	12,739.11	-4,333.56	-75.16	4,333.86	0.20	0.15	-0.14
17,483.00	90.23	182.51	12,737.86	-4,428.42	-80.02	4,428.75	1.42	-1.11	-0.88
17,577.00	89.03	181.05	12,738.46	-4,522.37	-82.94	4,522.71	2.01	-1.28	-1.55
17,672.00	89.53	180.88	12,739.66	-4,617.35	-84.54	4,617.69	0.56	0.53	-0.18
17,765.00	89.06	180.23	12,740.80	-4,710.34	-85.44	4,710.69	0.86	-0.51	-0.70
17,860.00	88.33	179.07	12,742.97	-4,805.31	-84.86	4,805.65	1.44	-0.77	-1.22
17,954.00	87.28	178.81	12,746.57	-4,899.22	-83.12	4,899.56	1.15	-1.12	-0.28
18,049.00	87.59	178.68	12,750.82	-4,994.10	-81.04	4,994.43	0.35	0.33	-0.14
18,054.85	87.70	178.67	12,751.06	-4,999.94	-80.91	5,000.27	1.87	1.85	-0.23
AP1[MG1H]									
18,143.00	89.33	178.46	12,753.34	-5,088.04	-78.70	5,088.35	1.87	1.85	-0.23
18,236.00	90.64	177.27	12,753.37	-5,180.97	-75.23	5,181.26	1.90	1.41	-1.28
18,331.00	91.11	177.54	12,751.92	-5,275.86	-70.93	5,276.13	0.57	0.49	0.28
18,425.00	91.75	178.14	12,749.57	-5,369.76	-67.39	5,370.02	0.93	0.68	0.64
18,519.00	91.61	177.64	12,746.82	-5,463.66	-63.93	5,463.90	0.55	-0.15	-0.53
18,614.00	91.51	176.76	12,744.23	-5,558.51	-59.29	5,558.72	0.93	-0.11	-0.93
18,708.00	96.05	175.93	12,738.03	-5,652.09	-53.32	5,652.28	4.91	4.83	-0.88
18,802.00	96.36	175.94	12,727.87	-5,745.30	-46.69	5,745.46	0.33	0.33	0.01
18,897.00	96.23	176.14	12,717.46	-5,839.50	-40.17	5,839.63	0.25	-0.14	0.21
18,992.00	94.12	176.21	12,708.89	-5,933.90	-33.86	5,933.99	2.22	-2.22	0.07
19,086.00	95.44	177.15	12,701.06	-6,027.41	-28.43	6,027.48	1.72	1.40	1.00

Company:	Devon Energy	Local Co-ordinate Reference:	Well 1H
Project:	Lea County, NM (NAD83 NME)	TVD Reference:	KB = 26' @ 3219.00usft (H&P 466)
Site:	Mean Green 23-25 Fed Com	MD Reference:	KB = 26' @ 3219.00usft (H&P 466)
Well:	1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland District

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
19,181.00	93.70	177.84	12,693.49	-6,122.02	-24.29	6,122.06	1.97	-1.83	0.73
19,275.00	92.28	178.77	12,688.58	-6,215.84	-21.52	6,215.88	1.81	-1.51	0.99
19,370.00	91.34	179.33	12,685.58	-6,310.78	-19.94	6,310.80	1.15	-0.99	0.59
19,464.00	90.60	181.14	12,683.99	-6,404.76	-20.33	6,404.79	2.08	-0.79	1.93
19,558.00	90.03	181.88	12,683.48	-6,498.73	-22.81	6,498.76	0.99	-0.61	0.79
19,653.00	90.77	182.00	12,682.81	-6,593.67	-26.02	6,593.72	0.79	0.78	0.13
19,747.00	90.27	182.99	12,681.96	-6,687.58	-30.12	6,687.64	1.18	-0.53	1.05
19,841.00	90.13	182.74	12,681.63	-6,781.46	-34.81	6,781.55	0.30	-0.15	-0.27
19,935.00	90.07	182.96	12,681.47	-6,875.34	-39.49	6,875.45	0.24	-0.06	0.23
20,030.00	92.46	184.27	12,679.37	-6,970.12	-45.47	6,970.26	2.87	2.52	1.38
20,124.00	90.60	183.56	12,676.86	-7,063.86	-51.89	7,064.03	2.12	-1.98	-0.76
20,219.00	90.47	183.39	12,675.97	-7,158.68	-57.65	7,158.88	0.23	-0.14	-0.18
20,313.00	92.89	184.21	12,673.22	-7,252.43	-63.87	7,252.65	2.72	2.57	0.87
20,407.00	90.64	184.69	12,670.32	-7,346.09	-71.16	7,346.35	2.45	-2.39	0.51
20,502.00	90.10	182.94	12,669.71	-7,440.88	-77.48	7,441.16	1.93	-0.57	-1.84
20,596.00	91.21	183.15	12,668.63	-7,534.74	-82.48	7,535.04	1.20	1.18	0.22
20,691.00	88.12	181.63	12,669.19	-7,629.64	-86.44	7,629.96	3.62	-3.25	-1.60
20,785.00	86.84	180.48	12,673.32	-7,723.53	-88.17	7,723.86	1.83	-1.36	-1.22
20,879.00	87.55	179.83	12,677.92	-7,817.41	-88.42	7,817.74	1.02	0.76	-0.69
20,973.00	88.39	178.82	12,681.25	-7,911.35	-87.31	7,911.67	1.40	0.89	-1.07
21,068.00	90.17	177.98	12,682.45	-8,006.30	-84.66	8,006.61	2.07	1.87	-0.88
21,162.00	92.88	179.00	12,679.94	-8,100.22	-82.19	8,100.52	3.08	2.88	1.09
21,257.00	90.94	177.57	12,676.78	-8,195.12	-79.34	8,195.40	2.54	-2.04	-1.51
21,351.00	93.33	177.53	12,673.28	-8,288.96	-75.33	8,289.22	2.54	2.54	-0.04
21,445.00	92.72	176.99	12,668.32	-8,382.72	-70.84	8,382.96	0.87	-0.65	-0.57
21,539.00	90.27	175.07	12,665.86	-8,476.45	-64.34	8,476.66	3.31	-2.61	-2.04
21,634.00	92.31	175.29	12,663.73	-8,571.09	-56.36	8,571.26	2.16	2.15	0.23
21,728.00	90.54	173.77	12,661.39	-8,664.62	-47.40	8,664.75	2.48	-1.88	-1.62
21,822.00	93.64	175.13	12,657.96	-8,758.11	-38.31	8,758.19	3.60	3.30	1.45
21,916.00	90.37	174.28	12,654.67	-8,851.64	-29.64	8,851.68	3.59	-3.48	-0.90
22,011.00	90.84	174.86	12,653.67	-8,946.20	-20.65	8,946.20	0.79	0.49	0.61
22,104.00	90.54	174.94	12,652.55	-9,038.83	-12.39	9,038.79	0.33	-0.32	0.09
22,199.00	90.87	174.96	12,651.38	-9,133.45	-4.03	9,133.37	0.35	0.35	0.02
22,293.00	92.56	175.48	12,648.57	-9,227.08	3.80	9,226.96	1.88	1.80	0.55
22,387.00	90.50	175.43	12,646.06	-9,320.75	11.25	9,320.59	2.19	-2.19	-0.05
22,482.00	90.34	174.67	12,645.36	-9,415.39	19.45	9,415.19	0.82	-0.17	-0.80
22,576.00	91.08	176.10	12,644.20	-9,509.07	27.01	9,508.84	1.71	0.79	1.52
22,670.00	88.83	175.28	12,644.27	-9,602.80	34.07	9,602.53	2.55	-2.39	-0.87
22,764.00	90.70	176.74	12,644.65	-9,696.57	40.61	9,696.27	2.52	1.99	1.55
22,858.00	91.28	176.64	12,643.03	-9,790.39	46.04	9,790.07	0.63	0.62	-0.11
22,953.00	90.67	176.63	12,641.41	-9,885.22	51.61	9,884.86	0.64	-0.64	-0.01
23,047.00	90.60	175.67	12,640.37	-9,979.00	57.93	9,978.61	1.02	-0.07	-1.02
23,064.26	90.70	175.71	12,640.18	-9,996.21	59.22	9,995.82	0.65	0.61	0.24



Scientific Drilling, Intl
Survey Report



Company:	Devon Energy	Local Co-ordinate Reference:	Well 1H
Project:	Lea County, NM (NAD83 NME)	TVD Reference:	KB = 26' @ 3219.00usft (H&P 466)
Site:	Mean Green 23-25 Fed Com	MD Reference:	KB = 26' @ 3219.00usft (H&P 466)
Well:	1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland District

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
BHL.Plat[MG1H]									
23,141.00	91.17	175.90	12,638.92	-10,072.73	64.83	10,072.31	0.65	0.61	0.24
23,182.00	91.04	176.49	12,638.13	-10,113.63	67.55	10,113.20	1.47	-0.32	1.44
FINAL MWD Survey (23182.00' MD)									
23,240.00	91.04	176.49	12,637.08	-10,171.51	71.10	10,171.07	0.00	0.00	0.00
FINAL Proj. to Bit (23240.00' MD) - BHL.FINAL[MG1H]									

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
3,034.00	3,030.20	36.93	-56.62	KOP (3034.00' MD)
13,274.53	12,715.05	-222.89	-104.60	FTP (13274.53' MD)
23,182.00	12,638.13	-10,113.63	67.55	FINAL MWD Survey (23182.00' MD)
23,240.00	12,637.08	-10,171.51	71.10	FINAL Proj. to Bit (23240.00' MD)

Checked By: _____ Approved By: _____ Date: _____