



Devon Energy

Lea Co., NM (Nad83 - East Zone)

Flagler 8 Fed

#39H

OH

Design: OH

End Of Well Report

12 November, 2019

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Wellbenders End Of Well Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well #39H
Project:	Lea Co., NM (Nad83 - East Zone)	TVD Reference:	RKB=30' @ 3476.80usft (Cactus 108)
Site:	Flagler 8 Fed	MD Reference:	RKB=30' @ 3476.80usft (Cactus 108)
Well:	#39H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	WBDS_SQL_2

Project	Lea Co., NM (Nad83 - East Zone)		
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 Fed			
Site Position:		Northing:	414,851.30 usft	Latitude: 32.138349
From:	Lat/Long	Easting:	769,983.95 usft	Longitude: -103.594633
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence: 0.393 °

Well	#39H			
Well Position	+N-S	0.00 usft	Northing:	415,051.47 usft
	+E-W	0.00 usft	Easting:	770,012.60 usft
Position Uncertainty	0.00 usft		Wellhead Elevation:	usft
			Latitude:	32.138899
			Longitude:	-103.594536
			Ground Level:	3,446.80 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	10/29/2019	6.701	59.950	47,641.86360994

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	359.62

Survey Program	Date 11/12/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
262.00	14,480.00	Survey #1 (OH)	MWD+IGRF	OWSG MWD + IGRF or WMM



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North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WBDS_SQL_2

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	CL (usft)	CL Azi (°)	DLeg (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
262.00	0.84	271.30	261.99	0.04	-1.92	0.06	262.00	271.30	0.32
355.00	1.19	271.21	354.98	0.08	-3.57	0.10	93.00	271.25	0.38
447.00	0.84	267.96	446.96	0.08	-5.20	0.11	92.00	269.87	0.39
540.00	0.92	266.82	539.95	0.01	-6.62	0.05	93.00	267.36	0.09
633.00	1.27	267.43	632.93	-0.08	-8.40	-0.02	93.00	267.17	0.38
725.00	1.41	271.47	724.91	-0.09	-10.55	-0.02	92.00	269.56	0.18
816.00	1.32	271.39	815.88	-0.04	-12.72	0.04	91.00	271.43	0.10
908.00	1.41	255.65	907.86	-0.30	-14.87	-0.20	92.00	263.26	0.42
1,000.00	1.54	266.20	999.83	-0.66	-17.20	-0.54	92.00	261.16	0.33
1,079.00	1.41	259.61	1,078.80	-0.90	-19.22	-0.78	79.00	263.05	0.27
1,247.00	1.05	236.58	1,246.76	-2.12	-22.53	-1.97	168.00	249.80	0.36
1,340.00	0.84	190.79	1,339.75	-3.26	-23.37	-3.11	93.00	216.37	0.82
1,433.00	0.79	219.71	1,432.74	-4.43	-23.91	-4.27	93.00	204.80	0.44
1,525.00	0.70	228.67	1,524.73	-5.28	-24.74	-5.12	92.00	223.92	0.16
1,618.00	0.57	202.74	1,617.73	-6.09	-25.34	-5.92	93.00	217.05	0.34
1,713.00	0.57	207.05	1,712.72	-6.94	-25.74	-6.77	95.00	204.90	0.05
1,807.00	0.62	231.92	1,806.72	-7.67	-26.35	-7.50	94.00	220.02	0.28
1,901.00	1.27	207.58	1,900.71	-8.91	-27.24	-8.73	94.00	215.51	0.80
1,995.00	1.93	208.28	1,994.67	-11.23	-28.47	-11.04	94.00	208.00	0.70
2,090.00	2.29	204.85	2,089.60	-14.36	-30.02	-14.16	95.00	206.42	0.40
2,184.00	3.34	207.75	2,183.49	-18.49	-32.09	-18.27	94.00	206.57	1.13
2,279.00	4.00	205.29	2,278.29	-23.93	-34.79	-23.70	95.00	206.41	0.71
2,373.00	4.84	206.96	2,372.01	-30.43	-37.99	-30.18	94.00	206.20	0.90
2,467.00	5.19	211.36	2,465.65	-37.60	-42.00	-37.32	94.00	209.24	0.55
2,562.00	6.37	213.47	2,560.17	-45.66	-47.14	-45.35	95.00	212.52	1.26
2,656.00	6.59	218.04	2,653.57	-54.26	-53.34	-53.90	94.00	215.79	0.60



Wellbenders
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MD Reference: RKB=30' @ 3476.80usft (Cactus 108)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WBDS_SQL_2

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	CL (usft)	CL Azi (°)	DLeg (°/100ft)
2,750.00	7.52	220.41	2,746.86	-63.19	-60.65	-62.79	94.00	219.30	1.04
2,845.00	7.65	223.75	2,841.03	-72.49	-69.06	-72.03	95.00	222.09	0.48
2,940.00	8.00	229.73	2,935.14	-81.33	-78.47	-80.81	95.00	226.81	0.93
3,034.00	7.38	229.99	3,028.30	-89.44	-88.09	-88.86	94.00	229.85	0.66
3,129.00	7.34	231.57	3,122.51	-97.14	-97.52	-96.49	95.00	230.78	0.22
3,224.00	7.96	234.82	3,216.67	-104.70	-107.65	-103.98	95.00	233.28	0.80
3,318.00	7.21	236.49	3,309.85	-111.71	-117.89	-110.92	94.00	235.61	0.83
3,413.00	7.47	238.25	3,404.07	-118.25	-128.11	-117.39	95.00	237.39	0.36
3,507.00	7.38	235.53	3,497.28	-124.88	-138.28	-123.96	94.00	236.90	0.39
3,602.00	8.22	233.86	3,591.40	-132.34	-148.79	-131.35	95.00	234.65	0.92
3,697.00	9.41	231.04	3,685.28	-141.23	-160.32	-140.16	95.00	232.36	1.33
3,792.00	8.22	231.92	3,779.15	-150.30	-171.70	-149.16	95.00	231.45	1.26
3,886.00	7.47	231.66	3,872.27	-158.23	-181.79	-157.02	94.00	231.80	0.80
3,981.00	7.43	233.68	3,966.47	-165.70	-191.58	-164.43	95.00	232.67	0.28
4,075.00	7.38	235.44	4,059.69	-172.73	-201.45	-171.39	94.00	234.56	0.25
4,170.00	7.56	235.00	4,153.88	-179.77	-211.59	-178.36	95.00	235.22	0.20
4,264.00	6.46	232.98	4,247.18	-186.50	-220.88	-185.03	94.00	234.07	1.20
4,359.00	6.02	228.50	4,341.61	-193.02	-228.88	-191.50	95.00	230.82	0.69
4,453.00	5.89	224.72	4,435.11	-199.71	-235.96	-198.15	94.00	226.63	0.44
4,548.00	6.99	225.24	4,529.51	-207.25	-243.50	-205.63	95.00	225.00	1.16
4,642.00	6.29	213.82	4,622.88	-215.55	-250.42	-213.89	94.00	219.83	1.59
4,736.00	6.59	212.50	4,716.29	-224.38	-256.19	-222.68	94.00	213.14	0.36
4,831.00	6.90	222.69	4,810.63	-233.17	-262.99	-231.43	95.00	217.71	1.30
4,925.00	6.07	221.46	4,904.03	-241.05	-270.11	-239.25	94.00	222.11	0.90
4,976.00	5.76	221.46	4,954.76	-244.99	-273.59	-243.17	51.00	221.46	0.61
5,108.00	5.10	221.38	5,086.16	-254.35	-281.85	-252.48	132.00	221.42	0.50
5,203.00	6.42	231.13	5,180.69	-260.86	-288.78	-258.94	95.00	226.81	1.72



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MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	CL (usft)	CL Azi (°)	DLeg (°/100ft)
5,297.00	6.95	237.28	5,274.05	-267.23	-297.65	-265.25	94.00	234.33	0.95
5,392.00	7.16	237.37	5,368.33	-273.53	-307.48	-271.48	95.00	237.33	0.22
5,486.00	7.16	235.79	5,461.59	-279.98	-317.25	-277.87	94.00	236.58	0.21
5,580.00	6.90	235.26	5,554.89	-286.49	-326.74	-284.32	94.00	235.53	0.29
5,675.00	5.45	241.94	5,649.34	-291.87	-335.41	-289.63	95.00	238.21	1.70
5,770.00	5.10	248.89	5,743.93	-295.51	-343.33	-293.23	95.00	245.30	0.77
5,864.00	3.78	253.28	5,837.65	-297.91	-350.20	-295.58	94.00	250.76	1.45
5,958.00	2.99	265.94	5,931.49	-298.97	-355.61	-296.61	94.00	258.87	1.15
6,053.00	1.10	279.74	6,026.42	-298.99	-358.98	-296.60	95.00	269.64	2.04
6,147.00	0.70	348.03	6,120.41	-298.28	-359.99	-295.88	94.00	305.32	1.13
6,242.00	0.84	324.38	6,215.40	-297.14	-360.51	-294.75	95.00	335.11	0.36
6,336.00	0.79	316.12	6,309.40	-296.12	-361.36	-293.71	94.00	320.38	0.14
6,430.00	0.92	315.07	6,403.38	-295.11	-362.35	-292.71	94.00	315.56	0.14
6,525.00	1.10	316.91	6,498.37	-293.91	-363.51	-291.49	95.00	316.07	0.19
6,620.00	1.05	314.89	6,593.35	-292.63	-364.75	-290.20	95.00	315.92	0.07
6,714.00	1.05	322.01	6,687.34	-291.34	-365.89	-288.91	94.00	318.45	0.14
6,809.00	1.23	314.72	6,782.32	-289.94	-367.15	-287.50	95.00	318.08	0.24
6,903.00	1.36	306.45	6,876.29	-288.57	-368.76	-286.11	94.00	310.38	0.24
6,998.00	1.19	295.64	6,971.27	-287.47	-370.56	-285.01	95.00	301.41	0.31
7,092.00	1.14	302.24	7,065.25	-286.55	-372.23	-284.07	94.00	298.87	0.15
7,187.00	1.32	282.81	7,160.23	-285.80	-374.10	-283.31	95.00	291.81	0.48
7,282.00	1.45	282.64	7,255.20	-285.30	-376.33	-282.79	95.00	282.72	0.14
7,471.00	1.67	271.30	7,444.13	-284.71	-381.42	-282.17	189.00	276.57	0.20
7,566.00	1.58	275.60	7,539.09	-284.55	-384.11	-282.00	95.00	273.39	0.16
7,661.00	1.49	267.87	7,634.06	-284.47	-386.65	-281.90	95.00	271.85	0.24
7,756.00	1.49	259.17	7,729.03	-284.75	-389.09	-282.16	95.00	263.52	0.24
7,850.00	1.67	252.49	7,822.99	-285.39	-391.60	-282.78	94.00	255.64	0.27



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7,945.00	1.67	242.47	7,917.95	-286.44	-394.15	-283.82	95.00	247.48	0.31
8,039.00	1.32	250.12	8,011.92	-287.45	-396.38	-284.81	94.00	245.85	0.43
8,133.00	1.32	268.75	8,105.90	-287.84	-398.48	-285.19	94.00	259.44	0.45
8,227.00	1.32	266.90	8,199.87	-287.92	-400.65	-285.26	94.00	267.82	0.05
8,322.00	1.45	261.28	8,294.84	-288.16	-402.93	-285.48	95.00	263.96	0.20
8,417.00	1.27	264.09	8,389.82	-288.45	-405.16	-285.76	95.00	262.59	0.20
8,511.00	1.14	264.62	8,483.80	-288.65	-407.13	-285.94	94.00	264.34	0.14
8,606.00	1.23	268.40	8,578.78	-288.76	-409.09	-286.04	95.00	266.58	0.13
8,700.00	1.36	250.64	8,672.75	-289.16	-411.15	-286.43	94.00	259.07	0.45
8,795.00	1.45	252.31	8,767.72	-289.90	-413.36	-287.15	95.00	251.50	0.10
8,889.00	1.80	246.16	8,861.69	-290.86	-415.84	-288.09	94.00	248.90	0.42
8,984.00	1.76	240.80	8,956.64	-292.17	-418.48	-289.39	95.00	243.51	0.18
KOP @ 8984.00' MD 90.42' FSL 2149.28' FWL									
9,082.00	3.25	6.57	9,054.59	-290.15	-419.48	-287.36	98.00	333.82	4.60
9,176.00	16.48	5.96	9,146.99	-274.17	-417.78	-271.39	94.00	6.06	14.07
9,271.00	22.59	0.60	9,236.49	-242.49	-416.19	-239.72	95.00	2.88	6.70
9,365.00	34.07	3.67	9,319.10	-198.01	-414.31	-195.26	94.00	2.42	12.31
9,461.00	39.30	4.02	9,396.06	-140.81	-410.45	-138.08	96.00	3.86	5.45
9,555.00	51.91	1.91	9,461.69	-73.87	-407.12	-71.16	94.00	2.85	13.51
9,650.00	58.81	0.51	9,515.66	4.23	-405.51	6.92	95.00	1.18	7.36
9,663.32	60.00	0.52	9,522.44	15.69	-405.40	18.38	13.32	0.52	8.94
FTP @ 9663.32' MD 398.21' FSL 2164.40' FWL									
9,744.00	67.21	0.60	9,558.28	87.91	-404.70	90.59	80.68	0.56	8.94
9,838.00	75.82	1.47	9,588.06	176.96	-403.07	179.63	94.00	1.05	9.20
9,933.00	83.60	1.83	9,605.01	270.32	-400.38	272.97	95.00	1.65	8.20
10,026.00	89.36	2.18	9,610.72	363.05	-397.13	365.68	93.00	2.01	6.20
10,121.00	88.13	1.65	9,612.80	457.97	-393.96	460.58	95.00	1.92	1.41



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10,148.00	88.00	1.56	9,613.71	484.95	-393.20	487.54	27.00	1.61	0.59
10,242.00	90.99	0.51	9,614.54	578.92	-391.50	581.50	94.00	1.03	3.37
10,337.00	91.08	0.60	9,612.83	673.90	-390.58	676.47	95.00	0.55	0.13
10,432.00	91.56	0.07	9,610.64	768.87	-390.03	771.44	95.00	0.34	0.75
10,526.00	91.78	0.68	9,607.90	862.83	-389.41	865.39	94.00	0.37	0.69
10,621.00	90.90	359.72	9,605.68	957.80	-389.08	960.36	95.00	0.20	1.37
10,716.00	91.25	0.51	9,603.89	1,052.78	-388.89	1,055.34	95.00	0.11	0.91
10,811.00	91.65	0.42	9,601.49	1,147.75	-388.12	1,150.29	95.00	0.47	0.43
10,906.00	92.44	0.60	9,598.10	1,242.68	-387.27	1,245.22	95.00	0.51	0.85
11,000.00	90.81	359.89	9,595.43	1,336.64	-386.87	1,339.17	94.00	0.24	1.89
11,095.00	90.77	359.80	9,594.12	1,431.63	-387.13	1,434.17	95.00	359.84	0.10
11,190.00	88.48	358.84	9,594.75	1,526.61	-388.26	1,529.15	95.00	359.32	2.61
11,284.00	88.22	358.40	9,597.45	1,620.55	-390.52	1,623.10	94.00	358.62	0.54
11,379.00	88.35	357.96	9,600.30	1,715.46	-393.54	1,718.03	95.00	358.18	0.48
11,473.00	90.15	357.52	9,601.53	1,809.37	-397.24	1,811.97	94.00	357.74	1.97
11,568.00	90.42	356.64	9,601.05	1,904.24	-402.08	1,806.87	95.00	357.08	0.97
11,663.00	91.16	356.46	9,599.74	1,999.06	-407.80	2,001.72	95.00	356.55	0.80
11,757.00	91.82	355.67	9,597.30	2,092.81	-414.25	2,095.51	94.00	356.07	1.09
11,853.00	91.43	357.96	9,594.58	2,188.61	-419.58	2,191.35	96.00	356.82	2.42
11,947.00	92.09	357.78	9,591.69	2,282.51	-423.07	2,285.26	94.00	357.87	0.73
12,042.00	93.05	357.08	9,587.43	2,377.31	-427.32	2,380.09	95.00	357.43	1.25
12,137.00	91.43	358.84	9,583.72	2,472.17	-430.70	2,474.97	95.00	357.96	2.52
12,232.00	90.29	0.33	9,582.29	2,567.16	-431.39	2,569.96	95.00	359.59	1.97
12,327.00	90.42	0.60	9,581.70	2,662.15	-430.62	2,664.95	95.00	0.46	0.32
12,421.00	90.99	0.07	9,580.55	2,756.14	-430.07	2,758.93	94.00	0.34	0.83
12,516.00	90.77	359.45	9,579.09	2,851.13	-430.47	2,853.92	95.00	359.76	0.69
12,611.00	90.95	359.10	9,577.66	2,946.11	-431.67	2,948.91	95.00	359.28	0.41



Wellbenders
End Of Well Report

Company: Devon Energy
Project: Lea Co., NM (Nad83 - East Zone)
Site: Flagler 8 Fed
Well: #39H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #39H
TVD Reference: RKB=30' @ 3476.80usft (Cactus 108)
MD Reference: RKB=30' @ 3476.80usft (Cactus 108)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WBDS_SQL_2

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	CL (usft)	CL Azi (°)	DLeg (°/100ft)
12,706.00	89.41	0.60	9,577.36	3,041.10	-431.92	3,043.90	95.00	359.85	2.26
12,801.00	89.36	0.86	9,578.38	3,136.09	-430.71	3,138.88	95.00	0.73	0.28
12,895.00	89.14	0.95	9,579.61	3,230.07	-429.22	3,232.85	94.00	0.90	0.25
12,989.00	88.97	0.68	9,581.16	3,324.05	-427.89	3,326.81	94.00	0.82	0.34
13,084.00	88.35	0.07	9,583.38	3,419.02	-427.26	3,421.78	95.00	0.38	0.92
13,179.00	90.59	1.12	9,584.26	3,514.00	-426.28	3,516.75	95.00	0.60	2.60
13,274.00	91.21	1.65	9,582.77	3,608.96	-423.98	3,611.69	95.00	1.38	0.86
13,369.00	91.60	1.74	9,580.44	3,703.89	-421.17	3,706.60	95.00	1.69	0.42
13,463.00	92.18	2.35	9,577.34	3,797.78	-417.82	3,800.47	94.00	2.04	0.90
13,558.00	89.80	1.39	9,575.70	3,892.71	-414.72	3,895.37	95.00	1.87	2.70
13,653.00	89.67	0.95	9,576.14	3,987.69	-412.78	3,990.34	95.00	1.17	0.48
13,748.00	89.63	0.77	9,576.72	4,082.67	-411.36	4,085.31	95.00	0.86	0.19
13,843.00	89.89	0.51	9,577.12	4,177.67	-410.29	4,180.30	95.00	0.64	0.39
13,937.00	89.85	0.33	9,577.33	4,271.66	-409.61	4,274.29	94.00	0.42	0.20
14,032.00	89.80	0.07	9,577.62	4,366.66	-409.27	4,369.28	95.00	0.20	0.28
14,127.00	90.07	0.24	9,577.73	4,461.66	-409.02	4,464.28	95.00	0.16	0.34
14,221.00	90.68	359.72	9,577.11	4,555.66	-409.05	4,558.27	94.00	359.98	0.85
14,316.00	90.73	359.45	9,575.94	4,650.65	-409.74	4,653.26	95.00	359.59	0.29
14,420.00	90.68	359.89	9,574.66	4,754.64	-410.34	4,757.26	104.00	359.67	0.43
14,462.13	90.68	359.89	9,574.17	4,796.77	-410.42	4,799.38	42.13	359.89	0.00
LTP @ 14462.13' MD 100' FNL 2191.40' FWL									
14,480.00	90.68	359.89	9,573.95	4,814.64	-410.45	4,817.25	17.87	359.89	0.00
BHL @ 14480.00' MD 82.11' FNL 2191.60' FWL									



Wellbenders
End Of Well Report

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North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WBDS_SQL_2

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
8,984.00	8,956.64	-292.17	-418.48	KOP @ 8984.00' MD 90.42' FSL 2149.28' FWL
9,663.32	9,522.44	15.69	-405.40	FTP @ 9663.32' MD 398.21' FSL 2164.40' FWL
14,462.13	9,574.17	4,796.77	-410.42	LTP @ 14462.13' MD 100' FNL 2191.40' FWL
14,480.00	9,573.95	4,814.64	-410.45	BHL @ 14480.00' MD 82.11' FNL 2191.50' FWL

Checked By: _____ Approved By: _____ Date: _____



I **Larry Wright**, certify that I am employed by **Wellbenders Directional Services**. That I did on the day(s) of **10/30/19** thru **11/09/19** conduct or supervise the taking of a **MWD Survey** from a depth of **262'** to a depth of **14,480'**; that the data is true, correct, complete and within the limitations of the tool as set forth by **Wellbenders Directional Services**; that I am authorized and qualified to make this report; that this survey was conducted at the request of **Devon Energy** for the **Flagler 8 Fed Com #39H** API No. **30-025-45013** in **Lea County, New Mexico**; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by **Wellbenders Directional Services**.

Larry Wright

*13901 Hwy 105 W., Conroe, Texas
77304
PH 936-539-9602*