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DISTRICT II-ARTESIA O.C.D.

Devon Energy

Eddy County, New Mexico (NAD 83)

Lusitano 27-34 FED COM

235H - Slot 235H

30,015-44424

OH

Design: OH

**Provide Signature Page for
Directional Survey**

Standard Survey Report

10 August, 2018

*This survey does not
go to total depth*

Survey Report

Company: Devon Energy	Local Co-ordinate Reference: Well 235H - Slot 235H
Project: Eddy County, New Mexico (NAD 83)	TVD Reference: GL 3336' + 26' KB @ 3362.00usft
Site: Lusitano 27-34 FED COM	MD Reference: GL 3336' + 26' KB @ 3362.00usft
Well: 235H	North Reference: Grid
Wellbore: OH	Survey Calculation Method: Minimum Curvature
Design: OH	Database: EDM 5000.14 Single User Db

Project	Eddy County, New Mexico (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	Lusitano 27-34 FED COM			
Site Position:		Northing:	403,270.15 usft	Latitude: 32.107364
From:	Map	Easting:	719,382.96 usft	Longitude: -103.758304
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence: 0.31 °

Well	235H - Slot 235H			
Well Position	+N/-S	0.00 usft	Northing:	403,270.15 usft
	+E/-W	0.00 usft	Easting:	719,382.96 usft
Position Uncertainty	0.00 usft		Wellhead Elevation:	0.00 usft
			Ground Level:	3,336.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	3/29/2018	6.95	59.92	47,769.52031026

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	180.00	

Survey Program	Date 8/10/2018				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
175.00	1,014.00	Invictus (OH)	MWD	OWSG MWD - Standard	
1,064.00	17,527.00	Legacy MWD (OH)	MWD	OWSG MWD - Standard	

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
175.00	0.70	108.71	175.00	-0.34	1.01	0.34	0.40	0.40	0.00
264.00	0.40	117.71	263.99	-0.66	1.80	0.66	0.35	-0.34	10.11
360.00	0.30	98.71	359.99	-0.86	2.35	0.86	0.16	-0.10	-19.79
549.00	0.40	230.71	548.99	-1.35	2.33	1.35	0.34	0.05	69.84
643.00	0.50	206.71	642.99	-1.92	1.89	1.92	0.22	0.11	-25.53
737.00	0.80	210.71	736.98	-2.85	1.37	2.85	0.32	0.32	4.26
831.00	0.80	198.71	830.97	-4.04	0.82	4.04	0.18	0.00	-12.77
1,014.00	0.80	213.71	1,013.95	-6.31	-0.30	6.31	0.11	0.00	8.20
1,064.00	1.26	218.70	1,063.94	-7.03	-0.83	7.03	0.94	0.92	9.98

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 Site: Lusitano 27-34 FED COM
 Well: 235H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well 235H - Slot 235H
 TVD Reference: GL 3336' + 26' KB @ 3362.00usft
 MD Reference: GL 3336' + 26' KB @ 3362.00usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14 Single 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)
1,158.00	0.35	201.76	1,157.93	-8.10	-1.59	8.10	0.99	-0.97	-18.02
1,252.00	0.54	99.59	1,251.93	-8.44	-1.26	8.44	0.75	0.20	-108.69
1,345.00	1.13	77.76	1,344.92	-8.32	0.07	8.32	0.71	0.63	-23.47
1,438.00	1.63	49.24	1,437.90	-7.27	1.97	7.27	0.90	0.54	-30.67
1,532.00	2.50	37.59	1,531.83	-4.77	4.23	4.77	1.02	0.93	-12.39
1,623.00	3.39	39.72	1,622.71	-1.13	7.16	1.13	0.99	0.98	2.34
1,716.00	4.22	38.33	1,715.51	3.67	11.04	-3.67	0.90	0.89	-1.49
1,811.00	4.57	33.43	1,810.23	9.57	15.30	-9.57	0.54	0.37	-5.16
1,905.00	4.81	30.79	1,903.91	16.08	19.38	-16.08	0.34	0.26	-2.81
2,000.00	5.16	23.25	1,998.56	23.43	23.10	-23.43	0.78	0.37	-7.94
2,095.00	5.54	15.24	2,093.14	31.78	25.99	-31.78	0.88	0.40	-8.43
2,191.00	5.27	13.95	2,188.72	40.53	28.27	-40.53	0.31	-0.28	-1.34
2,286.00	4.99	12.73	2,283.34	48.80	30.24	-48.80	0.32	-0.29	-1.28
2,381.00	5.32	18.88	2,377.95	56.99	32.57	-56.99	0.68	0.35	6.47
2,476.00	5.16	20.65	2,472.55	65.16	35.50	-65.16	0.24	-0.17	1.86
2,571.00	4.98	20.93	2,567.18	73.01	38.48	-73.01	0.19	-0.19	0.29
2,667.00	4.86	22.12	2,662.83	80.67	41.50	-80.67	0.16	-0.13	1.24
2,762.00	4.84	19.00	2,757.49	88.18	44.32	-88.18	0.28	-0.02	-3.28
2,857.00	4.56	21.04	2,852.17	95.50	46.98	-95.50	0.34	-0.29	2.15
2,952.00	4.75	17.54	2,946.86	102.77	49.53	-102.77	0.36	0.20	-3.68
3,047.00	5.11	16.29	3,041.50	110.58	51.90	-110.58	0.40	0.38	-1.32
3,142.00	5.12	24.31	3,136.13	118.51	54.83	-118.51	0.75	0.01	8.44
3,238.00	5.43	22.44	3,231.72	126.61	58.33	-126.61	0.37	0.32	-1.95
3,332.00	5.17	22.87	3,325.32	134.62	61.67	-134.62	0.28	-0.28	0.46
3,428.00	4.86	19.93	3,420.95	142.43	64.74	-142.43	0.42	-0.32	-3.06
3,523.00	4.34	19.92	3,515.65	149.59	67.33	-149.59	0.55	-0.55	-0.01
3,619.00	4.37	19.78	3,611.37	156.45	69.81	-156.45	0.03	0.03	-0.15
3,714.00	4.48	24.71	3,706.09	163.23	72.59	-163.23	0.42	0.12	5.19
3,809.00	4.75	20.08	3,800.78	170.29	75.49	-170.29	0.48	0.28	-4.87
3,904.00	5.28	17.19	3,895.41	178.16	78.13	-178.16	0.62	0.56	-3.04
3,999.00	4.74	19.44	3,990.05	186.04	80.73	-186.04	0.60	-0.57	2.37
4,094.00	4.85	21.84	4,084.72	193.47	83.53	-193.47	0.24	0.12	2.53
4,189.00	4.67	19.51	4,179.39	200.84	86.31	-200.84	0.28	-0.19	-2.45
4,284.00	5.08	18.71	4,274.05	208.47	88.95	-208.47	0.44	0.43	-0.84
4,358.00	5.00	18.96	4,347.76	214.62	91.05	-214.62	0.11	-0.11	0.34
4,465.00	4.82	16.20	4,454.37	223.35	93.82	-223.35	0.28	-0.17	-2.58
4,559.00	5.56	24.51	4,547.98	231.29	96.81	-231.29	1.12	0.79	8.84
4,654.00	5.14	26.95	4,642.57	239.27	100.65	-239.27	0.50	-0.44	2.57
4,749.00	5.54	22.01	4,737.16	247.31	104.30	-247.31	0.64	0.42	-5.20
4,844.00	4.89	16.16	4,831.76	255.45	107.14	-255.45	0.88	-0.68	-6.16
4,938.00	4.25	14.98	4,925.46	262.67	109.16	-262.67	0.69	-0.68	-1.26
5,033.00	5.02	23.05	5,020.15	269.89	111.70	-269.89	1.06	0.81	8.49
5,127.00	4.86	24.14	5,113.81	277.31	114.93	-277.31	0.20	-0.17	1.16

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5,222.00	4.02	23.26	5,208.52	284.04	117.90	-284.04	0.89	-0.88	-0.93
5,316.00	4.62	21.42	5,302.25	290.59	120.58	-290.59	0.66	0.64	-1.96
5,412.00	3.95	18.65	5,397.98	297.32	123.05	-297.32	0.73	-0.70	-2.89
5,506.00	3.56	18.72	5,491.78	303.16	125.02	-303.16	0.41	-0.41	0.07
5,601.00	3.33	15.99	5,586.61	308.60	126.73	-308.60	0.30	-0.24	-2.87
5,696.00	2.43	5.33	5,681.49	313.26	127.67	-313.26	1.10	-0.95	-11.22
5,791.00	1.60	10.09	5,776.43	316.57	128.09	-316.57	0.89	-0.87	5.01
5,885.00	0.40	38.20	5,870.41	318.12	128.53	-318.12	1.34	-1.28	29.90
5,980.00	0.45	27.28	5,965.41	318.71	128.90	-318.71	0.10	0.05	-11.49
6,075.00	0.33	32.87	6,060.41	319.27	129.22	-319.27	0.13	-0.13	5.88
6,170.00	0.12	51.74	6,155.41	319.57	129.45	-319.57	0.23	-0.22	19.86
6,265.00	0.08	277.43	6,250.41	319.64	129.46	-319.64	0.19	-0.04	-141.38
6,360.00	0.19	271.90	6,345.41	319.65	129.24	-319.65	0.12	0.12	-5.82
6,454.00	0.24	255.34	6,439.41	319.60	128.89	-319.60	0.08	0.05	-17.62
6,549.00	0.28	202.90	6,534.41	319.34	128.61	-319.34	0.24	0.04	-55.20
6,644.00	0.28	224.07	6,629.41	318.96	128.36	-318.96	0.11	0.00	22.28
6,739.00	0.38	265.81	6,724.40	318.77	127.88	-318.77	0.27	0.11	43.94
6,834.00	0.51	233.18	6,819.40	318.49	127.23	-318.49	0.29	0.14	-34.35
6,929.00	0.65	220.86	6,914.40	317.83	126.54	-317.83	0.20	0.15	-12.97
7,024.00	0.12	244.71	7,009.39	317.38	126.10	-317.38	0.57	-0.56	25.11
7,119.00	0.14	183.83	7,104.39	317.22	126.00	-317.22	0.14	0.02	-64.08
7,214.00	0.26	154.76	7,199.39	316.91	126.08	-316.91	0.16	0.13	-30.60
7,308.00	0.37	171.84	7,293.39	316.42	126.22	-316.42	0.15	0.12	18.17
7,403.00	0.54	165.82	7,388.39	315.68	126.37	-315.68	0.19	0.18	-6.34
7,498.00	0.14	273.52	7,483.39	315.26	126.36	-315.26	0.63	-0.42	113.37
7,592.00	0.21	225.00	7,577.39	315.14	126.13	-315.14	0.17	0.07	-51.62
7,687.00	0.20	197.39	7,672.39	314.86	125.95	-314.86	0.10	-0.01	-29.06
7,782.00	0.29	167.08	7,767.39	314.47	125.96	-314.47	0.16	0.09	-31.91
7,877.00	0.31	47.28	7,862.39	314.41	126.20	-314.41	0.55	0.02	-126.11
7,971.00	0.26	84.25	7,956.38	314.60	126.60	-314.60	0.20	-0.05	39.33
8,066.00	0.71	9.71	8,051.38	315.20	126.91	-315.20	0.72	0.47	-78.46
8,161.00	0.53	9.77	8,146.38	316.22	127.09	-316.22	0.19	-0.19	0.06
8,256.00	0.40	324.18	8,241.37	316.92	126.97	-316.92	0.40	-0.14	-47.99
8,351.00	0.43	304.72	8,336.37	317.39	126.48	-317.39	0.15	0.03	-20.48
8,445.00	0.34	290.12	8,430.37	317.69	125.93	-317.69	0.14	-0.10	-15.53
8,540.00	0.55	339.48	8,525.37	318.21	125.50	-318.21	0.44	0.22	51.96
8,635.00	1.00	337.26	8,620.36	319.40	125.02	-319.40	0.47	0.47	-2.34
8,730.00	1.12	270.64	8,715.34	320.18	123.78	-320.18	1.23	0.13	-70.13
8,824.00	1.46	260.73	8,809.32	319.99	121.67	-319.99	0.43	0.36	-10.54
8,919.00	0.50	289.28	8,904.30	319.94	120.09	-319.94	1.10	-1.01	30.05
9,014.00	0.18	201.30	8,999.30	319.93	119.64	-319.93	0.55	-0.34	-92.61
9,108.00	0.17	46.08	9,093.30	319.89	119.69	-319.89	0.36	-0.01	-165.13
9,202.00	0.09	41.28	9,187.30	320.05	119.84	-320.05	0.09	-0.09	-5.11

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 Wellbore: OH
 Design: OH

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9,297.00	0.77	232.40	9,282.30	319.71	119.38	-319.71	0.90	0.72	-177.77
9,392.00	0.89	280.74	9,377.29	319.46	118.15	-319.46	0.72	0.13	50.88
9,486.00	1.07	284.58	9,471.28	319.82	116.59	-319.82	0.20	0.19	4.09
9,580.00	1.37	312.10	9,565.26	320.79	114.90	-320.79	0.69	0.32	29.28
9,675.00	1.55	343.64	9,660.23	322.79	113.70	-322.79	0.85	0.19	33.20
9,770.00	1.63	18.49	9,755.19	325.30	113.76	-325.30	1.01	0.08	36.68
9,857.00	1.79	5.85	9,842.16	327.83	114.30	-327.83	0.47	0.18	-14.53
KOP 9857'MD / 9842.15'TVD									
9,918.00	1.85	293.63	9,903.13	329.17	113.49	-329.17	3.52	0.10	-118.39
9,962.00	6.35	248.93	9,947.02	328.58	110.57	-328.58	11.82	10.23	-101.59
10,057.00	18.22	232.27	10,039.70	317.56	93.85	-317.56	12.91	12.49	-17.54
10,152.00	33.12	218.61	10,125.15	288.00	65.73	-288.00	16.78	15.68	-14.38
10,247.00	44.00	211.54	10,199.36	239.43	32.16	-239.43	12.34	11.45	-7.44
10,341.00	51.49	206.64	10,262.54	178.62	-1.47	-178.62	8.85	7.97	-5.21
10,436.00	61.27	198.91	10,315.14	105.74	-31.74	-105.74	12.31	10.29	-8.14
10,450.00	62.22	198.67	10,321.76	94.07	-35.71	-94.07	6.94	6.78	-1.69
FTP 10450'MD / 10321.76'TVD									
10,499.55	65.58	197.87	10,343.56	51.81	-49.65	-51.81	6.94	6.79	-1.63
LP - 235H									
10,530.00	67.65	197.39	10,355.64	25.18	-58.12	-25.18	6.94	6.79	-1.56
10,626.00	74.02	191.32	10,387.17	-62.60	-80.48	62.60	8.92	6.64	-6.32
10,720.00	79.57	181.92	10,408.68	-153.36	-90.93	153.36	11.38	5.90	-10.00
10,815.00	88.63	178.18	10,418.44	-247.74	-90.99	247.74	10.31	9.54	-3.94
10,852.00	92.77	176.93	10,417.99	-284.70	-89.41	284.70	11.69	11.19	-3.38
10,897.00	93.31	176.68	10,415.60	-329.56	-86.91	329.56	1.32	1.20	-0.56
10,943.00	92.78	176.56	10,413.16	-375.42	-84.20	375.42	1.18	-1.15	-0.26
10,988.00	92.49	176.64	10,411.09	-420.29	-81.53	420.29	0.67	-0.64	0.18
11,035.00	90.11	177.92	10,410.02	-467.22	-79.30	467.22	5.75	-5.06	2.72
11,129.00	89.64	177.58	10,410.23	-561.15	-75.61	561.15	0.62	-0.50	-0.36
11,222.00	90.17	178.86	10,410.38	-654.10	-72.72	654.10	1.49	0.57	1.38
11,315.00	90.95	180.66	10,409.47	-747.09	-72.34	747.09	2.11	0.84	1.94
11,409.00	87.96	179.94	10,410.37	-841.08	-72.83	841.08	3.27	-3.18	-0.77
11,502.00	90.03	180.58	10,412.00	-934.06	-73.25	934.06	2.33	2.23	0.69
11,594.00	90.62	180.10	10,411.48	-1,026.05	-73.80	1,026.05	0.83	0.64	-0.52
11,688.00	91.15	179.84	10,410.02	-1,120.04	-73.75	1,120.04	0.63	0.56	-0.28
11,780.00	90.50	180.15	10,408.70	-1,212.03	-73.74	1,212.03	0.78	-0.71	0.34
11,872.00	89.86	180.83	10,408.41	-1,304.03	-74.52	1,304.03	1.02	-0.70	0.74
11,967.00	91.15	178.59	10,407.57	-1,399.01	-74.04	1,399.01	2.72	1.36	-2.36
12,062.00	88.91	181.35	10,407.52	-1,494.00	-73.99	1,494.00	3.74	-2.36	2.91
12,157.00	88.26	180.37	10,409.87	-1,588.96	-75.42	1,588.96	1.24	-0.68	-1.03
12,252.00	90.25	180.69	10,411.10	-1,683.94	-76.30	1,683.94	2.12	2.09	0.34
12,347.00	90.11	180.13	10,410.81	-1,778.94	-76.98	1,778.94	0.61	-0.15	-0.59
12,441.00	91.45	182.17	10,409.53	-1,872.90	-78.86	1,872.90	2.60	1.43	2.17
12,536.00	91.35	180.55	10,407.20	-1,967.84	-81.12	1,967.84	1.71	-0.11	-1.71

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Company: Devon Energy
 Project: Eddy County, New Mexico (NAD 83)
 Site: Lusitano 27-34 FED COM
 Well: 235H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well 235H - Slot 235H
 TVD Reference: GL 3336' + 26' KB @ 3362.00usft
 MD Reference: GL 3336' + 26' KB @ 3362.00usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14 Single 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)
12,631.00	91.43	180.45	10,404.90	-2,062.81	-81.95	2,062.81	0.13	0.08	-0.11
12,726.00	88.77	178.99	10,404.73	-2,157.80	-81.48	2,157.80	3.19	-2.80	-1.54
12,820.00	90.22	180.14	10,405.56	-2,251.79	-80.77	2,251.79	1.97	1.54	1.22
12,915.00	90.59	179.86	10,404.89	-2,346.79	-80.77	2,346.79	0.49	0.39	-0.29
13,010.00	93.11	180.68	10,401.82	-2,441.73	-81.22	2,441.73	2.79	2.65	0.86
13,104.00	94.57	180.55	10,395.53	-2,535.51	-82.22	2,535.51	1.56	1.55	-0.14
13,198.00	93.28	179.62	10,389.09	-2,629.28	-82.36	2,629.28	1.69	-1.37	-0.99
13,293.00	91.71	179.12	10,384.96	-2,724.18	-81.32	2,724.18	1.73	-1.65	-0.53
13,388.00	90.00	179.05	10,383.54	-2,819.16	-79.80	2,819.16	1.80	-1.80	-0.07
13,482.00	90.22	178.95	10,383.36	-2,913.14	-78.16	2,913.14	0.26	0.23	-0.11
13,577.00	89.22	178.75	10,383.83	-3,008.12	-76.25	3,008.12	1.07	-1.05	-0.21
13,672.00	89.52	180.01	10,384.87	-3,103.11	-75.23	3,103.11	1.36	0.32	1.33
13,767.00	89.13	179.86	10,385.99	-3,198.10	-75.12	3,198.10	0.44	-0.41	-0.16
13,862.00	90.11	181.27	10,386.62	-3,293.09	-76.06	3,293.09	1.81	1.03	1.48
13,957.00	91.46	181.22	10,385.32	-3,388.06	-78.12	3,388.06	1.42	1.42	-0.05
14,051.00	91.60	180.82	10,382.81	-3,482.01	-79.79	3,482.01	0.45	0.15	-0.43
14,146.00	92.22	180.37	10,379.64	-3,576.95	-80.78	3,576.95	0.81	0.65	-0.47
14,240.00	92.38	180.14	10,375.87	-3,670.87	-81.20	3,670.87	0.30	0.17	-0.24
14,335.00	90.14	180.09	10,373.78	-3,765.85	-81.39	3,765.85	2.36	-2.36	-0.05
14,430.00	89.55	179.80	10,374.04	-3,860.84	-81.30	3,860.84	0.69	-0.62	-0.31
14,524.00	89.13	179.94	10,375.12	-3,954.84	-81.08	3,954.84	0.47	-0.45	0.15
14,619.00	90.31	179.92	10,375.58	-4,049.83	-80.97	4,049.83	1.24	1.24	-0.02
14,714.00	90.87	180.16	10,374.61	-4,144.83	-81.03	4,144.83	0.64	0.59	0.25
14,809.00	90.95	180.34	10,373.10	-4,239.82	-81.45	4,239.82	0.21	0.08	0.19
14,905.00	92.92	180.30	10,369.86	-4,335.76	-81.98	4,335.76	2.05	2.05	-0.04
14,999.00	93.62	180.11	10,364.49	-4,429.60	-82.32	4,429.60	0.77	0.74	-0.20
15,094.00	93.02	179.44	10,358.99	-4,524.44	-81.95	4,524.44	0.95	-0.63	-0.71
15,188.00	92.18	179.22	10,354.73	-4,618.34	-80.85	4,618.34	0.92	-0.89	-0.23
15,283.00	92.63	179.05	10,350.74	-4,713.24	-79.41	4,713.24	0.51	0.47	-0.18
15,377.00	93.17	178.85	10,345.99	-4,807.10	-77.69	4,807.10	0.61	0.57	-0.21
15,472.00	92.29	179.72	10,341.46	-4,901.99	-76.51	4,901.99	1.30	-0.93	0.92
15,567.00	91.21	179.26	10,338.56	-4,996.94	-75.67	4,996.94	1.24	-1.14	-0.48
15,662.00	90.28	179.74	10,337.33	-5,091.92	-74.84	5,091.92	1.10	-0.98	0.51
15,757.00	90.11	179.80	10,337.00	-5,186.92	-74.46	5,186.92	0.19	-0.18	0.06
15,851.00	90.50	180.53	10,336.50	-5,280.92	-74.73	5,280.92	0.88	0.41	0.78
15,946.00	91.23	179.94	10,335.07	-5,375.91	-75.12	5,375.91	0.99	0.77	-0.62
16,051.00	92.40	180.60	10,331.74	-5,480.85	-75.61	5,480.85	1.28	1.11	0.63
16,146.00	92.50	180.50	10,327.68	-5,575.76	-76.52	5,575.76	0.15	0.11	-0.11
16,241.00	91.00	180.20	10,324.78	-5,670.71	-77.10	5,670.71	1.61	-1.58	-0.32
16,335.00	90.40	180.60	10,323.63	-5,764.70	-77.76	5,764.70	0.77	-0.64	0.43
16,430.00	89.70	180.70	10,323.55	-5,859.69	-78.83	5,859.69	0.74	-0.74	0.11
16,524.00	90.70	179.40	10,323.22	-5,953.69	-78.92	5,953.69	1.74	1.06	-1.38
16,619.00	91.60	179.20	10,321.31	-6,048.66	-77.76	6,048.66	0.97	0.95	-0.21

Survey Report

Company: Devon Energy
Project: Eddy County, New Mexico (NAD 83)
Site: Lusitano 27-34 FED COM
Well: 235H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well 235H - Slot 235H
TVD Reference: GL 3336' + 26' KB @ 3362.00usft
MD Reference: GL 3336' + 26' KB @ 3362.00usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.14 Single 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)
16,714.00	91.60	179.40	10,318.66	-6,143.62	-76.60	6,143.62	0.21	0.00	0.21
16,809.00	91.50	179.40	10,316.09	-6,238.58	-75.60	6,238.58	0.11	-0.11	0.00
16,903.00	91.60	179.30	10,313.55	-6,332.54	-74.54	6,332.54	0.15	0.11	-0.11
16,998.00	91.70	180.10	10,310.81	-6,427.50	-74.04	6,427.50	0.85	0.11	0.84
17,093.00	91.70	180.10	10,307.99	-6,522.46	-74.20	6,522.46	0.00	0.00	0.00
17,186.00	91.60	180.00	10,305.32	-6,615.42	-74.29	6,615.42	0.15	-0.11	-0.11
17,280.00	91.60	180.10	10,302.69	-6,709.38	-74.37	6,709.38	0.11	0.00	0.11
17,374.00	91.90	180.20	10,299.82	-6,803.34	-74.61	6,803.34	0.34	0.32	0.11
17,468.00	92.00	180.00	10,296.62	-6,897.28	-74.78	6,897.28	0.24	0.11	-0.21
Last Survey 17468'MD / 10296.59'TVD									
17,527.00	92.00	180.00	10,294.56	-6,956.25	-74.78	6,956.25	0.00	0.00	0.00
PTB 17527'MD / 10294.56'TVD - BHL - 235H									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
9,857.00	9,842.16	327.83	114.30	KOP 9857'MD / 9842.15'TVD
10,450.00	10,321.76	94.07	-35.71	FTP 10450'MD / 10321.76'TVD
17,468.00	10,296.62	-6,897.28	-74.78	Last Survey 17468'MD / 10296.59'TVD
17,527.00	10,294.56	-6,956.25	-74.78	PTB 17527'MD / 10294.56'TVD

Checked By: _____ Approved By: _____ Date: _____

devon

Company: Devon Energy
 Field: Eddy County, New Mexico (NAD 83)
 Location: Lusitano 27-34 FED COM
 Well: 235H
 OH
 Plan: Plan 5
 GL 3336' + 26' KB @ 3362.00usft



Azimuths to Grid North
 True North: -0.31°
 Magnetic North: 6.64°
 Magnetic Field
 Strength: 47769.5snT
 Dip Angle: 59.92°
 Date: 3/29/2018
 Model: IGRF2015

LEGACY DIRECTIONAL

To convert a Magnetic Direction to a Grid Direction, Add 6.64°
 To convert a True Direction to a Grid Direction, Subtract 0.31°

PROJECT DETAILS: Eddy County, New Mexico (NAD 83)

Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: New Mexico Eastern Zone

System Datum: Mean Sea Level

WELL DETAILS: 235H

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.00	0.00	403270.15	719382.96	32.107363	-103.758304	235H

