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Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
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District III
1000 Rio Brazos Road, Aztec, NM 87410
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District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

EMNRD-OCD ARTESIA
REC'D: 4/13/2020 Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office
☒ AMENDED REPORT
AS DRILLED

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-44757		² Pool Code 98220		³ Pool Name PURPLE SAGE; WOLFCAMP					
⁴ Property Code 320827		⁵ Property Name SPUD MUFFIN 31-30			⁶ Well Number 738H				
⁷ OGRID No. 6137		⁸ Operator Name DEVON ENERGY PRODUCTION COMPANY, L.P.			⁹ Elevation 2960.3				
¹⁰ Surface Location									
UL or lot no. P	Section 31	Township 23 S	Range 29 E	Lot Idn	Feet from the 335	North/South line SOUTH	Feet from the 455	East/West line EAST	County EDDY
¹¹ Bottom Hole Location If Different From Surface									
UL or lot no. A	Section 30	Township 23 S	Range 29 E	Lot Idn	Feet from the 32	North/South line NORTH	Feet from the 321	East/West line EAST	County EDDY
¹² Dedicated Acres 640		¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No. INFILL WELL			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

		17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature: <i>Erin Workman</i> Date: 04/02/2020 Printed Name: Erin Workman E-mail Address: Erin.Workman@dmn.com
		18 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. DECEMBER 19, 2018 Date of Survey Signature and Seal of Professional Surveyor: Certificate Number: 12797

Intent ☐ As Drilled ☒

API # 30-015-44755			
Operator Name: DEVON ENERGY PRODUCTION CO., L.P.		Property Name: SPUD MUFFIN 31-30	Well Number 738H

Kick Off Point (KOP)

UL P	Section 31	Township 23S	Range 29E	Lot	Feet 92	From N/S SOUTH	Feet 435	From E/W EAST	County EDDY
Latitude 32.2544424					Longitude 104.0166501				NAD 83

First Take Point (FTP)

UL P	Section 31	Township 23S	Range 29E	Lot	Feet 458	From N/S SOUTH	Feet 433	From E/W EAST	County EDDY
Latitude 32.2554486					Longitude 104.0166638				NAD 83

Last Take Point (LTP)

UL A	Section 30	Township 23S	Range 29E	Lot	Feet 206	From N/S NORTH	Feet 321	From E/W EAST	County EDDY
Latitude 32.2826150					Longitude 104.0165671				NAD 83

Is this well the defining well for the Horizontal Spacing Unit? ☐

Is this well an infill well? ☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API # 30-015-45268			
Operator Name: DEVON ENERGY PRODUCTION CO., LP		Property Name: SPUD MUFFIN 31-30	Well Number 624H

KZ 06/29/2018

Devon

SURVEY REPORT

Spud Muffin 31-30 738H

Cactus 103

I, Deanna Jacobs, certify the surveys supplied on
Spud Muffin 31-30 738H are correct and accurate to the best of my
knowledge and are supported by actual field data.

Deanna Jacobs

Date: 3/23/2020



Scientific Drilling

Devon Energy

Eddy County, NM (NAD83 NME)

Spud Muffin 31-30

738H

OH

Survey: SDI Survey #1

Standard Survey Report

07 January, 2020



Scientific Drilling

www.scientificdrilling.com



Company:	Devon Energy	Local Co-ordinate Reference:	Well 738H
Project:	Eddy County, NM (NAD83 NME)	TVD Reference:	KB = 32' @ 2992.00usft (Cactus 167)
Site:	Spud Muffin 31-30	MD Reference:	KB = 32' @ 2992.00usft (Cactus 167)
Well:	738H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland

Project	Eddy 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	Spud Muffin 31-30		
Site Position:		Northing:	456,686.87 usft
From:	Map	Easting:	639,208.90 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 15' 18.399 N
		Longitude:	104° 1' 0.221 W
		Grid Convergence:	0.17 °

Well	738H		
Well Position	+N/-S	0.00 usft	Northing: 456,686.87 usft
	+E/-W	0.00 usft	Easting: 639,208.90 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Latitude:	32° 15' 18.399 N
		Longitude:	104° 1' 0.221 W
		Ground Level:	2,960.00 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination (°)
	HDGM	12/4/2018	7.10
			Dip Angle (°)
			60.02
			Field Strength (nT)
			47,954.30000000

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)
	0.00	0.00	0.00
			Direction (bearing)
			0.07

Survey Program	Date	5/1/2019		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
208.00	21,084.00	SDI Survey #1 (OH)	MWD+HDGM	OWSG MWD + HDGM

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)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
208.00	0.85	356.65	207.99	1.54	-0.09	1.54	0.41	0.41	0.00	
291.00	0.77	2.17	290.98	2.71	-0.11	2.71	0.13	-0.10	6.65	
451.00	1.56	350.82	450.95	5.94	-0.41	5.94	0.51	0.49	-7.09	
511.00	1.59	359.57	510.93	7.58	-0.55	7.57	0.40	0.05	14.58	
601.00	1.41	358.67	600.90	9.93	-0.58	9.93	0.20	-0.20	-1.00	
693.00	0.96	358.97	692.88	11.83	-0.62	11.83	0.49	-0.49	0.33	
785.00	0.28	198.97	784.87	12.39	-0.71	12.39	1.33	-0.74	-173.91	
874.00	0.39	316.44	873.87	12.40	-0.99	12.40	0.65	0.12	131.99	
965.00	0.57	328.57	964.87	13.02	-1.44	13.01	0.23	0.20	13.33	

Company:	Devon Energy	Local Co-ordinate Reference:	Well 738H
Project:	Eddy County, NM (NAD83 NME)	TVD Reference:	KB = 32' @ 2992.00usft (Cactus 167)
Site:	Spud Muffin 31-30	MD Reference:	KB = 32' @ 2992.00usft (Cactus 167)
Well:	738H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland

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)
1,055.00	0.40	329.80	1,054.87	13.67	-1.83	13.67	0.19	-0.19	1.37
1,146.00	0.49	358.57	1,145.86	14.33	-2.00	14.33	0.26	0.10	31.62
1,237.00	0.95	31.93	1,236.86	15.36	-1.61	15.36	0.66	0.51	36.66
1,329.00	0.29	116.94	1,328.85	15.90	-1.00	15.90	1.05	-0.72	92.40
1,419.00	0.63	69.77	1,418.85	15.97	-0.33	15.97	0.54	0.38	-52.41
1,510.00	0.88	82.52	1,509.84	16.24	0.83	16.24	0.33	0.27	14.01
1,600.00	1.49	113.85	1,599.82	15.85	2.58	15.86	0.97	0.68	34.81
1,690.00	1.31	127.72	1,689.80	14.75	4.47	14.76	0.42	-0.20	15.41
1,781.00	1.43	117.25	1,780.77	13.59	6.30	13.60	0.30	0.13	-11.51
1,876.00	1.28	126.03	1,875.74	12.43	8.21	12.44	0.27	-0.16	9.24
1,970.00	1.61	104.22	1,969.71	11.48	10.34	11.50	0.68	0.35	-23.20
2,065.00	1.47	105.43	2,064.68	10.83	12.81	10.85	0.15	-0.15	1.27
2,160.00	1.49	121.68	2,159.65	9.86	15.04	9.88	0.44	0.02	17.11
2,254.00	2.70	135.38	2,253.58	7.64	17.63	7.66	1.38	1.29	14.57
2,348.00	2.66	160.81	2,347.48	4.01	19.90	4.03	1.26	-0.04	27.05
2,443.00	4.07	185.68	2,442.32	-1.43	20.29	-1.41	2.10	1.48	26.18
2,538.00	3.51	179.91	2,537.12	-7.69	19.97	-7.67	0.71	-0.59	-6.07
2,632.00	3.26	185.48	2,630.95	-13.23	19.71	-13.21	0.44	-0.27	5.93
2,727.00	3.09	182.98	2,725.81	-18.48	19.32	-18.45	0.23	-0.18	-2.63
2,823.00	2.73	182.38	2,821.68	-23.35	19.09	-23.32	0.38	-0.38	-0.63
2,918.00	2.34	187.25	2,916.59	-27.53	18.76	-27.51	0.47	-0.41	5.13
3,012.00	2.06	187.13	3,010.52	-31.11	18.30	-31.09	0.30	-0.30	-0.13
3,107.00	1.79	184.88	3,105.47	-34.28	17.97	-34.26	0.30	-0.28	-2.37
3,203.00	1.82	180.24	3,201.42	-37.30	17.83	-37.28	0.16	0.03	-4.83
3,298.00	3.05	172.58	3,296.33	-41.32	18.15	-41.29	1.34	1.29	-8.06
3,394.00	4.50	173.62	3,392.12	-47.59	18.90	-47.57	1.51	1.51	1.08
3,489.00	4.87	173.87	3,486.80	-55.31	19.74	-55.28	0.39	0.39	0.26
3,584.00	4.56	177.11	3,581.48	-63.09	20.37	-63.06	0.43	-0.33	3.41
3,679.00	4.05	175.90	3,676.21	-70.20	20.80	-70.18	0.55	-0.54	-1.27
3,775.00	3.73	174.27	3,771.99	-76.69	21.35	-76.67	0.35	-0.33	-1.70
3,870.00	3.85	170.70	3,866.78	-82.92	22.17	-82.89	0.28	0.13	-3.76
3,966.00	3.54	168.49	3,962.58	-89.00	23.29	-88.97	0.36	-0.32	-2.30
4,061.00	3.62	169.64	4,057.40	-94.82	24.41	-94.79	0.11	0.08	1.21
4,157.00	3.36	168.12	4,153.22	-100.56	25.54	-100.53	0.29	-0.27	-1.58
4,252.00	2.93	164.81	4,248.08	-105.63	26.74	-105.59	0.49	-0.45	-3.48
4,348.00	3.08	165.92	4,343.95	-110.50	28.01	-110.46	0.17	0.16	1.16
4,443.00	4.46	166.87	4,438.74	-116.57	29.47	-116.53	1.45	1.45	1.00
4,538.00	5.14	167.74	4,533.40	-124.32	31.22	-124.29	0.72	0.72	0.92
4,633.00	4.96	160.12	4,628.04	-132.34	33.52	-132.30	0.73	-0.19	-8.02
4,729.00	5.04	164.33	4,723.67	-140.31	36.07	-140.26	0.39	0.08	4.39
4,824.00	5.21	158.49	4,818.29	-148.34	38.78	-148.29	0.58	0.18	-6.15
4,921.00	5.06	156.36	4,914.90	-156.35	42.11	-156.30	0.25	-0.15	-2.20
5,016.00	4.93	158.27	5,009.54	-163.98	45.30	-163.93	0.22	-0.14	2.01
5,112.00	4.70	161.73	5,105.20	-171.55	48.06	-171.49	0.39	-0.24	3.60

Company:	Devon Energy	Local Co-ordinate Reference:	Well 738H
Project:	Eddy County, NM (NAD83 NME)	TVD Reference:	KB = 32' @ 2992.00usft (Cactus 167)
Site:	Spud Muffin 31-30	MD Reference:	KB = 32' @ 2992.00usft (Cactus 167)
Well:	738H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland

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)	
5,207.00	4.31	160.64	5,199.91	-178.61	50.46	-178.55	0.42	-0.41	-1.15	
5,302.00	3.83	158.29	5,294.67	-184.93	52.82	-184.87	0.53	-0.51	-2.47	
5,398.00	3.14	153.00	5,390.49	-190.25	55.20	-190.18	0.79	-0.72	-5.51	
5,493.00	3.25	165.04	5,485.35	-195.17	57.07	-195.10	0.71	0.12	12.67	
5,588.00	3.22	158.91	5,580.19	-200.26	58.73	-200.19	0.37	-0.03	-6.45	
5,684.00	3.02	163.98	5,676.05	-205.21	60.40	-205.14	0.35	-0.21	5.28	
5,779.00	2.65	163.32	5,770.94	-209.72	61.72	-209.64	0.39	-0.39	-0.69	
5,875.00	2.76	158.10	5,866.83	-213.99	63.22	-213.91	0.28	0.11	-5.44	
5,970.00	2.05	173.33	5,961.75	-217.80	64.27	-217.72	1.00	-0.75	16.03	
6,065.00	1.73	175.14	6,056.69	-220.92	64.59	-220.84	0.34	-0.34	1.91	
6,160.00	1.70	169.32	6,151.65	-223.73	64.97	-223.65	0.19	-0.03	-6.13	
6,255.00	1.47	156.96	6,246.62	-226.23	65.71	-226.15	0.43	-0.24	-13.01	
6,349.00	1.74	152.55	6,340.58	-228.61	66.84	-228.53	0.32	0.29	-4.69	
6,444.00	1.66	167.72	6,435.54	-231.24	67.80	-231.15	0.48	-0.08	15.97	
6,540.00	1.41	168.36	6,531.50	-233.75	68.33	-233.67	0.26	-0.26	0.67	
6,634.00	1.05	171.67	6,625.48	-235.74	68.69	-235.65	0.39	-0.38	3.52	
6,730.00	0.95	199.47	6,721.47	-237.36	68.55	-237.27	0.51	-0.10	28.96	
6,826.00	1.07	192.17	6,817.45	-238.98	68.10	-238.90	0.18	0.13	-7.60	
6,921.00	1.12	208.15	6,912.43	-240.67	67.47	-240.59	0.32	0.05	16.82	
7,016.00	1.92	219.63	7,007.40	-242.71	66.02	-242.63	0.90	0.84	12.08	
7,111.00	1.71	224.04	7,102.35	-244.96	64.02	-244.88	0.27	-0.22	4.64	
7,207.00	2.05	209.77	7,198.30	-247.48	62.17	-247.40	0.60	0.35	-14.86	
7,301.00	2.68	217.40	7,292.22	-250.68	60.00	-250.61	0.75	0.67	8.12	
7,396.00	2.54	231.78	7,387.12	-253.75	57.00	-253.68	0.70	-0.15	15.14	
7,492.00	2.60	229.80	7,483.03	-256.47	53.66	-256.41	0.11	0.06	-2.06	
7,587.00	2.23	224.57	7,577.94	-259.18	50.72	-259.12	0.45	-0.39	-5.51	
7,682.00	2.59	224.87	7,672.86	-262.02	47.91	-261.96	0.38	0.38	0.32	
7,776.00	2.59	226.49	7,766.76	-264.98	44.87	-264.93	0.08	0.00	1.72	
7,871.00	1.24	311.93	7,861.72	-265.78	42.55	-265.72	2.93	-1.42	89.94	
7,966.00	2.68	344.41	7,956.67	-262.95	41.19	-262.90	1.86	1.52	34.19	
8,060.00	2.49	306.82	8,050.58	-259.61	38.96	-259.56	1.78	-0.20	-39.99	
8,156.00	2.45	318.82	8,146.49	-256.81	35.94	-256.77	0.54	-0.04	12.50	
8,251.00	1.37	326.88	8,241.43	-254.33	33.98	-254.29	1.17	-1.14	8.48	
8,346.00	1.27	314.28	8,336.41	-252.65	32.61	-252.61	0.32	-0.11	-13.26	
8,441.00	0.74	320.53	8,431.39	-251.44	31.46	-251.40	0.57	-0.56	6.58	
8,537.00	0.50	313.10	8,527.39	-250.67	30.76	-250.64	0.26	-0.25	-7.74	
8,633.00	0.24	307.90	8,623.39	-250.27	30.30	-250.23	0.27	-0.27	-5.42	
8,728.00	0.31	294.80	8,718.39	-250.04	29.91	-250.00	0.10	0.07	-13.79	
8,824.00	0.24	246.70	8,814.38	-250.01	29.49	-249.97	0.24	-0.07	-50.10	
8,919.00	0.05	317.59	8,909.38	-250.05	29.28	-250.02	0.24	-0.20	74.62	
9,014.00	0.08	103.14	9,004.38	-250.04	29.32	-250.00	0.13	0.03	153.21	
9,110.00	0.19	175.03	9,100.38	-250.21	29.39	-250.18	0.19	0.11	74.89	
9,205.00	0.12	82.16	9,195.38	-250.36	29.51	-250.32	0.24	-0.07	-97.76	

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Well:	738H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland

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)
9,301.00	0.08	102.14	9,291.38	-250.36	29.67	-250.32	0.05	-0.04	20.81
9,396.00	0.29	167.79	9,386.38	-250.60	29.79	-250.57	0.28	0.22	69.11
9,491.00	0.32	169.70	9,481.38	-251.10	29.89	-251.06	0.03	0.03	2.01
9,518.00	0.20	157.01	9,508.38	-251.22	29.92	-251.18	0.49	-0.44	-47.00
9,778.00	0.53	227.35	9,768.38	-252.45	29.21	-252.42	0.19	0.13	27.05
9,874.00	0.50	202.74	9,864.37	-253.14	28.72	-253.10	0.23	-0.03	-25.64
9,969.00	0.35	181.92	9,959.37	-253.81	28.55	-253.78	0.22	-0.16	-21.92
10,065.00	0.48	211.31	10,055.37	-254.45	28.33	-254.41	0.26	0.14	30.61
10,160.00	0.93	218.60	10,150.36	-255.39	27.65	-255.36	0.48	0.47	7.67
10,255.00	1.31	223.05	10,245.34	-256.79	26.42	-256.75	0.41	0.40	4.68
10,350.00	3.55	344.78	10,340.28	-254.74	24.91	-254.71	4.61	2.36	128.14
10,382.00	7.05	358.79	10,372.14	-251.82	24.61	-251.79	11.58	10.94	43.78
10,446.00	13.90	2.39	10,435.04	-240.20	24.84	-240.17	10.75	10.70	5.63
10,493.00	19.34	358.31	10,480.06	-226.77	24.85	-226.74	11.83	11.57	-8.68
10,541.00	24.09	355.78	10,524.64	-209.04	23.89	-209.01	10.08	9.90	-5.27
10,588.00	28.74	355.16	10,566.73	-188.21	22.23	-188.18	9.91	9.89	-1.32
10,636.00	34.29	355.36	10,607.63	-163.21	20.17	-163.19	11.56	11.56	0.42
10,683.00	39.70	355.01	10,645.15	-135.04	17.79	-135.02	11.52	11.51	-0.74
10,732.00	43.12	358.22	10,681.90	-102.70	15.91	-102.68	8.21	6.98	6.55
10,779.00	46.56	359.95	10,715.23	-69.57	15.39	-69.55	7.77	7.32	3.68
10,826.00	49.70	0.54	10,746.59	-34.57	15.55	-34.56	6.75	6.68	1.26
10,873.00	53.88	0.28	10,775.66	2.35	15.81	2.37	8.90	8.89	-0.55
10,921.00	57.19	2.04	10,802.82	41.90	16.62	41.93	7.53	6.90	3.67
10,968.00	63.59	2.16	10,826.03	82.72	18.12	82.74	13.62	13.62	0.26
11,016.00	69.16	1.72	10,845.26	126.65	19.60	126.68	11.63	11.60	-0.92
11,063.00	74.34	1.38	10,859.97	171.26	20.81	171.28	11.04	11.02	-0.72
11,112.00	78.11	3.65	10,871.64	218.79	22.90	218.82	8.91	7.69	4.63
11,159.00	79.90	3.54	10,880.60	264.83	25.80	264.87	3.82	3.81	-0.23
11,207.00	81.06	3.35	10,888.54	312.09	28.64	312.12	2.45	2.42	-0.40
11,242.66	81.80	2.91	10,893.85	347.29	30.57	347.33	2.41	2.08	-1.23
FTP[SM\738H]									
11,255.00	82.06	2.76	10,895.58	359.50	31.17	359.54	2.41	2.08	-1.23
11,303.00	83.81	2.49	10,901.49	407.08	33.35	407.12	3.69	3.65	-0.56
11,350.00	84.24	1.96	10,906.38	453.79	35.17	453.83	1.45	0.91	-1.13
11,398.00	84.31	1.60	10,911.17	501.53	36.65	501.57	0.76	0.15	-0.75
11,446.00	86.23	2.78	10,915.13	549.33	38.48	549.37	4.69	4.00	2.46
11,494.00	87.75	1.04	10,917.65	597.23	40.08	597.28	4.81	3.17	-3.63
11,541.00	88.69	1.81	10,919.11	644.19	41.24	644.24	2.58	2.00	1.64
11,589.00	88.99	3.57	10,920.08	692.13	43.50	692.18	3.72	0.63	3.67
11,685.00	90.40	2.38	10,920.59	787.99	48.48	788.05	1.92	1.47	-1.24
11,780.00	89.70	359.28	10,920.51	882.97	49.85	883.03	3.35	-0.74	-3.26
11,876.00	89.16	358.61	10,921.46	978.95	48.09	979.01	0.90	-0.56	-0.70
11,971.00	91.48	358.76	10,920.93	1,073.92	45.91	1,073.97	2.45	2.44	0.16
12,066.00	91.68	359.08	10,918.31	1,168.86	44.12	1,168.92	0.40	0.21	0.34

Company:	Devon Energy	Local Co-ordinate Reference:	Well 738H
Project:	Eddy County, NM (NAD83 NME)	TVD Reference:	KB = 32' @ 2992.00usft (Cactus 167)
Site:	Spud Muffin 31-30	MD Reference:	KB = 32' @ 2992.00usft (Cactus 167)
Well:	738H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland

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)
12,162.00	91.61	358.97	10,915.56	1,264.81	42.48	1,264.86	0.14	-0.07	-0.11
12,257.00	88.19	356.99	10,915.72	1,359.73	39.14	1,359.78	4.16	-3.60	-2.08
12,351.00	88.49	358.25	10,918.45	1,453.61	35.23	1,453.65	1.38	0.32	1.34
12,447.00	89.16	358.52	10,920.41	1,549.55	32.53	1,549.59	0.75	0.70	0.28
12,542.00	90.03	1.49	10,921.09	1,644.54	32.54	1,644.58	3.26	0.92	3.13
12,637.00	89.50	1.16	10,921.48	1,739.51	34.73	1,739.55	0.66	-0.56	-0.35
12,732.00	87.31	358.34	10,924.12	1,834.46	34.32	1,834.50	3.76	-2.31	-2.97
12,828.00	88.02	358.68	10,928.03	1,930.34	31.83	1,930.38	0.82	0.74	0.35
12,923.00	89.09	359.09	10,930.43	2,025.29	29.98	2,025.33	1.21	1.13	0.43
13,019.00	88.52	358.80	10,932.43	2,121.26	28.21	2,121.29	0.67	-0.59	-0.30
13,114.00	89.90	359.42	10,933.74	2,216.23	26.74	2,216.26	1.59	1.45	0.65
13,209.00	90.74	358.33	10,933.21	2,311.21	24.87	2,311.24	1.45	0.88	-1.15
13,304.00	93.90	359.24	10,929.36	2,406.10	22.86	2,406.13	3.46	3.33	0.96
13,399.00	91.74	359.20	10,924.69	2,500.97	21.57	2,500.99	2.27	-2.27	-0.04
13,495.00	91.07	359.32	10,922.34	2,596.93	20.33	2,596.95	0.71	-0.70	0.13
13,590.00	91.07	1.35	10,920.56	2,691.91	20.88	2,691.93	2.14	0.00	2.14
13,685.00	88.39	1.70	10,921.01	2,786.87	23.41	2,786.89	2.85	-2.82	0.37
13,781.00	90.60	3.53	10,921.85	2,882.75	27.79	2,882.78	2.99	2.30	1.91
13,876.00	89.56	1.62	10,921.72	2,977.65	32.06	2,977.69	2.29	-1.09	-2.01
13,971.00	90.03	1.49	10,922.06	3,072.61	34.64	3,072.65	0.51	0.49	-0.14
14,066.00	88.99	1.13	10,922.87	3,167.58	36.81	3,167.63	1.16	-1.09	-0.38
14,162.00	90.17	1.84	10,923.58	3,263.55	39.30	3,263.59	1.43	1.23	0.74
14,257.00	87.85	359.54	10,925.22	3,358.51	40.44	3,358.56	3.44	-2.44	-2.42
14,353.00	87.92	359.54	10,928.76	3,454.44	39.67	3,454.49	0.07	0.07	0.00
14,448.00	90.60	0.12	10,929.99	3,549.43	39.39	3,549.47	2.89	2.82	0.61
14,542.00	90.91	358.02	10,928.75	3,643.40	37.86	3,643.45	2.26	0.33	-2.23
14,636.00	90.77	358.10	10,927.37	3,737.34	34.68	3,737.38	0.17	-0.15	0.09
14,729.00	89.87	356.56	10,926.85	3,830.23	30.35	3,830.27	1.92	-0.97	-1.66
14,821.00	89.66	356.78	10,927.23	3,922.08	25.00	3,922.10	0.33	-0.23	0.24
14,915.00	90.50	357.58	10,927.10	4,015.96	20.38	4,015.98	1.23	0.89	0.85
15,010.00	88.76	355.94	10,927.71	4,110.80	15.01	4,110.81	2.52	-1.83	-1.73
15,103.00	89.56	355.96	10,929.08	4,203.56	8.44	4,203.56	0.86	0.86	0.02
15,197.00	89.73	356.83	10,929.66	4,297.37	2.53	4,297.37	0.94	0.18	0.93
15,292.00	90.23	359.09	10,929.69	4,392.30	-0.85	4,392.30	2.44	0.53	2.38
15,386.00	90.17	0.63	10,929.36	4,486.30	-1.08	4,486.29	1.64	-0.06	1.64
15,480.00	90.60	0.85	10,928.73	4,580.29	0.14	4,580.28	0.51	0.46	0.23
15,575.00	90.67	1.80	10,927.68	4,675.25	2.33	4,675.25	1.00	0.07	1.00
15,670.00	91.07	2.91	10,926.24	4,770.16	6.24	4,770.17	1.24	0.42	1.17
15,766.00	90.70	2.09	10,924.75	4,866.06	10.42	4,866.07	0.94	-0.39	-0.85
15,861.00	90.84	2.41	10,923.48	4,960.98	14.15	4,960.99	0.37	0.15	0.34
15,955.00	89.70	1.43	10,923.03	5,054.92	17.30	5,054.94	1.60	-1.21	-1.04
16,050.00	88.96	359.88	10,924.15	5,149.90	18.39	5,149.92	1.81	-0.78	-1.63
16,145.00	89.73	0.39	10,925.23	5,244.90	18.61	5,244.91	0.97	0.81	0.54

Company:	Devon Energy	Local Co-ordinate Reference:	Well 738H
Project:	Eddy County, NM (NAD83 NME)	TVD Reference:	KB = 32' @ 2992.00usft (Cactus 167)
Site:	Spud Muffin 31-30	MD Reference:	KB = 32' @ 2992.00usft (Cactus 167)
Well:	738H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland

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)	
16,239.00	89.56	0.15	10,925.81	5,338.89	19.05	5,338.91	0.31	-0.18	-0.26	
16,333.00	90.13	0.35	10,926.07	5,432.89	19.46	5,432.91	0.64	0.61	0.21	
16,428.00	91.18	1.06	10,924.98	5,527.88	20.63	5,527.90	1.33	1.11	0.75	
16,522.00	90.37	0.83	10,923.71	5,621.85	22.18	5,621.88	0.90	-0.86	-0.24	
16,616.00	90.27	0.22	10,923.19	5,715.85	23.04	5,715.87	0.66	-0.11	-0.65	
16,711.00	89.63	359.46	10,923.27	5,810.85	22.78	5,810.87	1.05	-0.67	-0.80	
16,805.00	90.64	358.84	10,923.05	5,904.83	21.38	5,904.86	1.26	1.07	-0.66	
16,899.00	90.97	359.67	10,921.73	5,998.82	20.16	5,998.84	0.95	0.35	0.88	
16,994.00	91.14	0.38	10,919.98	6,093.80	20.20	6,093.82	0.77	0.18	0.75	
17,089.00	90.80	1.06	10,918.37	6,188.78	21.40	6,188.80	0.80	-0.36	0.72	
17,184.00	90.37	0.21	10,917.40	6,283.76	22.45	6,283.79	1.00	-0.45	-0.89	
17,278.00	91.07	0.21	10,916.22	6,377.76	22.79	6,377.78	0.74	0.74	0.00	
17,373.00	92.22	1.25	10,913.49	6,472.71	24.00	6,472.73	1.63	1.21	1.09	
17,468.00	91.64	1.35	10,910.29	6,567.63	26.16	6,567.65	0.62	-0.61	0.11	
17,564.00	88.83	0.53	10,909.90	6,663.60	27.73	6,663.63	3.05	-2.93	-0.85	
17,660.00	88.79	359.73	10,911.89	6,759.58	27.95	6,759.61	0.83	-0.04	-0.83	
17,755.00	88.86	0.13	10,913.84	6,854.56	27.83	6,854.59	0.43	0.07	0.42	
17,850.00	88.79	0.42	10,915.79	6,949.54	28.29	6,949.57	0.31	-0.07	0.31	
17,946.00	88.96	0.14	10,917.67	7,045.52	28.76	7,045.55	0.34	0.18	-0.29	
18,041.00	88.35	0.06	10,919.90	7,140.49	28.93	7,140.52	0.65	-0.64	-0.08	
18,137.00	88.05	0.02	10,922.92	7,236.45	28.99	7,236.48	0.32	-0.31	-0.04	
18,231.00	89.83	357.24	10,924.66	7,330.39	26.75	7,330.42	3.51	1.89	-2.96	
18,325.00	91.34	357.26	10,923.70	7,424.27	22.24	7,424.30	1.61	1.61	0.02	
18,397.67	91.47	357.41	10,921.92	7,496.84	18.86	7,496.86	0.28	0.18	0.21	
T1[SM738H]										
18,420.00	91.51	357.46	10,921.33	7,519.14	17.86	7,519.16	0.28	0.18	0.21	
18,522.00	91.07	356.82	10,919.04	7,620.99	12.77	7,621.00	0.76	-0.43	-0.63	
18,617.00	90.74	358.39	10,917.54	7,715.89	8.80	7,715.90	1.69	-0.35	1.65	
18,713.00	89.87	358.53	10,917.03	7,811.86	6.22	7,811.86	0.92	-0.91	0.15	
18,807.00	89.30	359.87	10,917.71	7,905.84	4.91	7,905.84	1.55	-0.61	1.43	
18,901.00	89.70	0.44	10,918.53	7,999.84	5.17	7,999.84	0.74	0.43	0.61	
18,995.00	89.90	0.65	10,918.86	8,093.83	6.06	8,093.83	0.31	0.21	0.22	
19,090.00	91.31	0.99	10,917.85	8,188.81	7.42	8,188.82	1.53	1.48	0.36	
19,183.00	91.41	2.39	10,915.65	8,281.75	10.16	8,281.75	1.51	0.11	1.51	
19,278.00	90.94	1.71	10,913.70	8,376.66	13.56	8,376.67	0.87	-0.49	-0.72	
19,373.00	90.84	1.85	10,912.22	8,471.61	16.51	8,471.62	0.18	-0.11	0.15	
19,468.00	90.17	1.39	10,911.38	8,566.56	19.19	8,566.58	0.86	-0.71	-0.48	
19,563.00	90.97	1.06	10,910.44	8,661.54	21.23	8,661.56	0.91	0.84	-0.35	
19,658.00	91.31	1.81	10,908.55	8,756.49	23.60	8,756.51	0.87	0.36	0.79	
19,753.00	90.91	1.60	10,906.71	8,851.43	26.43	8,851.45	0.48	-0.42	-0.22	
19,848.00	91.31	1.31	10,904.87	8,946.38	28.84	8,946.41	0.52	0.42	-0.31	
19,944.00	91.41	1.22	10,902.59	9,042.33	30.96	9,042.36	0.14	0.10	-0.09	
20,039.00	90.57	358.93	10,900.95	9,137.31	31.08	9,137.34	2.57	-0.88	-2.41	

Company:	Devon Energy	Local Co-ordinate Reference:	Well 738H
Project:	Eddy County, NM (NAD83 NME)	TVD Reference:	KB = 32' @ 2992.00usft (Cactus 167)
Site:	Spud Muffin 31-30	MD Reference:	KB = 32' @ 2992.00usft (Cactus 167)
Well:	738H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland

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)	
20,134.00	91.27	358.64	10,899.42	9,232.27	29.07	9,232.30	0.80	0.74	-0.31	
20,229.00	90.50	358.21	10,897.96	9,327.22	26.46	9,327.25	0.93	-0.81	-0.45	
20,325.00	88.89	358.79	10,898.47	9,423.19	23.95	9,423.21	1.78	-1.68	0.60	
20,420.00	88.93	359.24	10,900.27	9,518.16	22.31	9,518.18	0.48	0.04	0.47	
20,514.00	88.79	359.76	10,902.14	9,612.13	21.49	9,612.15	0.57	-0.15	0.55	
20,608.00	88.69	0.10	10,904.21	9,706.11	21.38	9,706.13	0.38	-0.11	0.36	
20,702.00	88.63	359.57	10,906.41	9,800.08	21.11	9,800.10	0.57	-0.06	-0.56	
20,797.00	88.22	359.78	10,909.02	9,895.05	20.57	9,895.06	0.48	-0.43	0.22	
20,883.76	88.53	359.77	10,911.48	9,981.77	20.23	9,981.79	0.36	0.36	-0.01	
BHL[SM738H]										
20,892.00	88.56	359.77	10,911.69	9,990.01	20.20	9,990.02	0.36	0.36	-0.01	
20,987.00	87.89	0.19	10,914.63	10,084.96	20.16	10,084.98	0.83	-0.71	0.44	
21,014.90	87.39	0.07	10,915.78	10,112.84	20.23	10,112.85	1.83	-1.78	-0.44	
LTP Intercept // 100' FLL // (21014.90' MD)										
21,023.00	87.25	0.03	10,916.16	10,120.93	20.23	10,120.95	1.83	-1.78	-0.44	
FINAL MWD Survey (21023.00' MD)										
21,084.00	87.25	0.03	10,919.09	10,181.86	20.26	10,181.88	0.00	0.00	0.00	
FINAL Proj. to Bit (21084.00' MD) - BHL.NEW[SM738H]										

Survey Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
21,014.90	10,915.78	10,112.84	20.23	LTP Intercept // 100' FLL // (21014.90' MD)	
21,023.00	10,916.16	10,120.93	20.23	FINAL MWD Survey (21023.00' MD)	
21,084.00	10,919.09	10,181.86	20.26	FINAL Proj. to Bit (21084.00' MD)	

Checked By: _____	Approved By: _____	Date: _____
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