



Scientific Drilling

Devon Energy

Eddy County, NM (NAD83 NME)
Spud Muffin 31-30
624H

OH

Survey: SDI Surveys #1

Standard Survey Report

10 January, 2020



Scientific Drilling

www.scientificdrilling.com

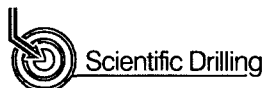
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EMNRD-OCD ARTESIA

30-015-452108

A Certified Directional Survey
requested as required by NMOCD
Rule 19.15.16.14 NMAC



Scientific Drilling, Intl
Survey Report



Company:	Devon Energy	Local Co-ordinate Reference:	Well 624H
Project:	Eddy County, NM (NAD83 NME)	TVD Reference:	KB=26 @ 2986.00usft (Cactus 167)
Site:	Spud Muffin 31-30	MD Reference:	KB=26 @ 2986.00usft (Cactus 167)
Well:	624H	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:	32.25511
		Longitude:	-104.01673
		Grid Convergence:	0.17 °

Well	624H		
Well Position	+N/-S	0.00 usft	Northing: 456,835.38 usft
	+E/-W	0.00 usft	Easting: 639,410.99 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Latitude:	32.25552
		Longitude:	-104.01608
		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)	47,954.70000000

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 (°)	358.91

Survey Program	Date 2/11/2019		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name
269.00	20,008.00	SDI Surveys #1 (OH)	MWD+HDGM
			Description
			OWSG MWD + HDGM

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
269.00	0.41	352.30	269.00	0.95	-0.13	0.96	0.15	0.15	0.00
292.00	0.72	357.21	292.00	1.18	-0.15	1.18	1.36	1.35	21.35
420.00	0.71	20.64	419.99	2.73	0.09	2.72	0.23	-0.01	18.30
511.00	0.85	18.48	510.98	3.89	0.51	3.88	0.16	0.15	-2.37
603.00	1.08	34.14	602.97	5.26	1.21	5.23	0.38	0.25	17.02
693.00	0.98	38.51	692.95	6.56	2.16	6.52	0.14	-0.11	4.86
784.00	1.23	45.99	783.93	7.85	3.35	7.78	0.32	0.27	8.22
876.00	0.36	283.92	875.93	8.61	3.78	8.53	1.58	-0.95	-132.68
967.00	0.22	309.26	966.93	8.78	3.37	8.72	0.21	-0.15	27.85

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Design:	OH	Database:	Midland

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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)
1,057.00	0.26	36.61	1,056.93	9.06	3.36	8.99	0.37	0.04	97.06
1,147.00	0.40	56.92	1,146.92	9.39	3.74	9.32	0.20	0.16	22.57
1,237.00	0.68	56.63	1,236.92	9.86	4.45	9.77	0.31	0.31	-0.32
1,326.00	0.76	131.23	1,325.91	9.76	5.34	9.66	0.98	0.09	83.82
1,417.00	1.32	146.70	1,416.90	8.49	6.36	8.36	0.68	0.62	17.00
1,508.00	1.22	130.19	1,507.88	6.98	7.68	6.84	0.42	-0.11	-18.14
1,601.00	1.31	131.02	1,600.85	5.65	9.24	5.47	0.10	0.10	0.89
1,692.00	0.67	160.65	1,691.84	4.46	10.20	4.27	0.88	-0.70	32.56
1,783.00	0.42	158.37	1,782.84	3.65	10.50	3.45	0.28	-0.27	-2.51
1,877.00	0.91	117.15	1,876.83	2.99	11.29	2.78	0.70	0.52	-43.85
1,972.00	0.59	175.74	1,971.82	2.16	12.00	1.93	0.83	-0.34	61.67
2,067.00	0.11	87.68	2,066.82	1.67	12.13	1.44	0.63	-0.51	-92.69
2,162.00	1.15	86.03	2,161.82	1.74	13.17	1.49	1.09	1.09	-1.74
2,258.00	0.97	87.77	2,257.80	1.84	14.94	1.56	0.19	-0.19	1.81
2,353.00	0.67	248.00	2,352.80	1.67	15.23	1.38	1.70	-0.32	168.66
2,449.00	1.63	209.05	2,448.78	0.26	14.05	-0.01	1.24	1.00	-40.57
2,544.00	2.42	189.88	2,543.72	-2.90	13.05	-3.14	1.08	0.83	-20.18
2,640.00	2.37	186.90	2,639.63	-6.86	12.46	-7.10	0.14	-0.05	-3.10
2,735.00	1.98	188.53	2,734.56	-10.44	11.98	-10.66	0.42	-0.41	1.72
2,831.00	1.62	184.83	2,830.52	-13.43	11.62	-13.65	0.39	-0.38	-3.85
2,926.00	2.60	184.82	2,925.45	-16.91	11.33	-17.13	1.03	1.03	-0.01
3,021.00	3.44	185.87	3,020.32	-21.90	10.85	-22.10	0.89	0.88	1.11
3,116.00	3.93	183.46	3,115.12	-27.98	10.36	-28.17	0.54	0.52	-2.54
3,212.00	5.06	182.36	3,210.83	-35.49	9.99	-35.68	1.18	1.18	-1.15
3,307.00	5.16	182.61	3,305.45	-43.95	9.62	-44.12	0.11	0.11	0.26
3,403.00	5.84	185.29	3,401.01	-53.12	8.98	-53.29	0.76	0.71	2.79
3,498.00	6.95	185.46	3,495.41	-63.66	7.99	-63.80	1.17	1.17	0.18
3,594.00	7.16	185.13	3,590.69	-75.40	6.90	-75.52	0.22	0.22	-0.34
3,689.00	6.68	186.64	3,684.99	-86.78	5.73	-86.88	0.54	-0.51	1.59
3,784.00	6.01	184.69	3,779.41	-97.23	4.68	-97.30	0.74	-0.71	-2.05
3,880.00	6.15	186.80	3,874.87	-107.34	3.66	-107.39	0.27	0.15	2.20
3,975.00	6.97	188.09	3,969.25	-118.10	2.25	-118.13	0.88	0.86	1.36
4,071.00	6.76	188.30	4,064.56	-129.46	0.62	-129.45	0.22	-0.22	0.22
4,166.00	6.50	188.29	4,158.92	-140.32	-0.97	-140.27	0.27	-0.27	-0.01
4,261.00	6.04	187.46	4,253.36	-150.59	-2.39	-150.52	0.49	-0.48	-0.87
4,357.00	5.61	187.76	4,348.86	-160.25	-3.68	-160.15	0.45	-0.45	0.31
4,452.00	6.13	183.04	4,443.36	-169.92	-4.58	-169.80	0.75	0.55	-4.97
4,548.00	6.65	179.04	4,538.77	-180.59	-4.76	-180.47	0.71	0.54	-4.17
4,643.00	6.44	179.05	4,633.15	-191.42	-4.58	-191.30	0.22	-0.22	0.01
4,738.00	6.50	181.52	4,727.54	-202.12	-4.63	-202.00	0.30	0.06	2.60
4,833.00	6.39	180.76	4,821.94	-212.78	-4.84	-212.65	0.15	-0.12	-0.80
4,929.00	6.49	180.76	4,917.34	-223.55	-4.98	-223.41	0.10	0.10	0.00
5,024.00	6.21	181.26	5,011.75	-234.06	-5.17	-233.91	0.30	-0.29	0.53
5,119.00	5.90	179.88	5,106.22	-244.07	-5.27	-243.93	0.36	-0.33	-1.45

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5,214.00	5.47	180.38	5,200.76	-253.49	-5.29	-253.34	0.46	-0.45	0.53
5,309.00	4.86	180.54	5,295.37	-262.04	-5.36	-261.89	0.64	-0.64	0.17
5,404.00	4.86	177.54	5,390.03	-270.08	-5.22	-269.93	0.27	0.00	-3.16
5,499.00	5.14	176.09	5,484.67	-278.35	-4.76	-278.21	0.32	0.29	-1.53
5,594.00	4.91	175.47	5,579.30	-286.65	-4.15	-286.52	0.25	-0.24	-0.65
5,689.00	4.66	176.61	5,673.97	-294.55	-3.60	-294.43	0.28	-0.26	1.20
5,784.00	5.13	179.78	5,768.62	-302.65	-3.36	-302.53	0.57	0.49	3.34
5,880.00	5.16	179.77	5,864.24	-311.26	-3.32	-311.14	0.03	0.03	-0.01
5,975.00	4.99	180.43	5,958.86	-319.66	-3.34	-319.54	0.19	-0.18	0.69
6,071.00	4.72	180.59	6,054.52	-327.79	-3.41	-327.66	0.28	-0.28	0.17
6,166.00	4.44	178.26	6,149.22	-335.37	-3.34	-335.25	0.35	-0.29	-2.45
6,261.00	4.22	177.67	6,243.94	-342.54	-3.08	-342.42	0.24	-0.23	-0.62
6,356.00	3.98	179.13	6,338.70	-349.33	-2.89	-349.21	0.28	-0.25	1.54
6,450.00	3.74	176.67	6,432.49	-355.65	-2.66	-355.54	0.31	-0.26	-2.62
6,546.00	3.45	182.21	6,528.30	-361.66	-2.59	-361.55	0.47	-0.30	5.77
6,641.00	2.82	191.22	6,623.16	-366.81	-3.16	-366.69	0.84	-0.66	9.48
6,737.00	1.91	191.84	6,719.08	-370.69	-3.95	-370.55	0.95	-0.95	0.65
6,832.00	1.71	197.08	6,814.03	-373.60	-4.69	-373.44	0.27	-0.21	5.52
6,927.00	1.64	212.76	6,908.99	-376.10	-5.84	-375.92	0.49	-0.07	16.51
7,021.00	1.41	230.33	7,002.95	-377.97	-7.46	-377.76	0.55	-0.24	18.69
7,116.00	0.72	227.10	7,097.94	-379.12	-8.79	-378.88	0.73	-0.73	-3.40
7,211.00	0.66	246.37	7,192.93	-379.74	-9.73	-379.49	0.25	-0.06	20.28
7,306.00	0.89	252.23	7,287.92	-380.19	-10.94	-379.91	0.26	0.24	6.17
7,402.00	1.34	248.89	7,383.90	-380.82	-12.69	-380.51	0.47	0.47	-3.48
7,497.00	1.48	243.20	7,478.88	-381.77	-14.83	-381.42	0.21	0.15	-5.99
7,593.00	1.64	243.52	7,574.84	-382.95	-17.16	-382.55	0.17	0.17	0.33
7,688.00	1.66	241.92	7,669.80	-384.20	-19.59	-383.76	0.05	0.02	-1.68
7,784.00	1.72	240.24	7,765.76	-385.57	-22.07	-385.08	0.08	0.06	-1.75
7,879.00	1.85	244.60	7,860.71	-386.93	-24.69	-386.39	0.20	0.14	4.59
7,975.00	2.08	240.89	7,956.66	-388.45	-27.61	-387.85	0.27	0.24	-3.86
8,070.00	2.17	242.40	8,051.59	-390.12	-30.71	-389.46	0.11	0.09	1.59
8,166.00	1.91	234.07	8,147.53	-391.90	-33.62	-391.19	0.41	-0.27	-8.68
8,261.00	1.89	216.12	8,242.48	-394.09	-35.83	-393.34	0.62	-0.02	-18.89
8,356.00	1.76	215.84	8,337.43	-396.54	-37.60	-395.75	0.14	-0.14	-0.29
8,452.00	1.39	224.63	8,433.39	-398.57	-39.29	-397.75	0.46	-0.39	9.16
8,547.00	1.44	224.81	8,528.36	-400.23	-40.94	-399.38	0.05	0.05	0.19
8,642.00	1.27	223.16	8,623.34	-401.85	-42.50	-400.97	0.18	-0.18	-1.74
8,738.00	1.47	234.67	8,719.31	-403.34	-44.23	-402.42	0.35	0.21	11.99
8,833.00	1.27	236.51	8,814.28	-404.62	-46.10	-403.67	0.22	-0.21	1.94
8,928.00	0.96	221.70	8,909.27	-405.80	-47.51	-404.82	0.44	-0.33	-15.59
9,022.00	0.93	218.50	9,003.25	-406.98	-48.51	-405.98	0.06	-0.03	-3.40
9,036.00	0.92	215.96	9,017.25	-407.16	-48.64	-406.16	0.30	-0.07	-18.14
9,117.00	0.75	201.82	9,098.24	-408.18	-49.22	-407.17	0.33	-0.21	-17.46

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9,176.00	0.71	194.81	9,157.24	-408.89	-49.46	-407.88	0.17	-0.07	-11.88	
9,313.00	6.58	355.90	9,293.96	-401.87	-50.24	-400.84	5.30	4.28	117.58	
9,360.00	15.64	7.40	9,340.04	-392.89	-49.61	-391.87	19.75	19.28	24.47	
9,408.00	22.12	3.94	9,385.43	-377.44	-48.16	-376.45	13.69	13.50	-7.21	
9,455.00	28.52	358.63	9,427.90	-357.37	-47.82	-356.39	14.44	13.62	-11.30	
9,503.00	31.98	356.33	9,469.36	-333.22	-48.91	-332.23	7.60	7.21	-4.79	
9,550.00	37.39	353.62	9,508.00	-306.59	-51.29	-305.56	11.97	11.51	-5.77	
9,598.00	42.86	350.52	9,544.69	-275.98	-55.60	-274.88	12.13	11.40	-6.46	
9,645.00	49.39	352.72	9,577.25	-242.48	-60.50	-241.29	14.30	13.89	4.68	
9,694.00	52.92	352.76	9,607.98	-204.63	-65.32	-203.35	7.20	7.20	0.08	
9,741.00	54.51	353.24	9,635.79	-167.03	-69.94	-165.67	3.48	3.38	1.02	
9,790.00	59.77	355.14	9,662.37	-126.09	-74.08	-124.66	11.22	10.73	3.88	
9,837.00	64.87	354.71	9,684.20	-84.65	-77.77	-83.16	10.88	10.85	-0.91	
9,886.00	66.40	353.34	9,704.41	-40.26	-82.42	-38.69	4.03	3.12	-2.80	
9,933.00	67.11	352.81	9,722.96	2.61	-87.62	4.28	1.83	1.51	-1.13	
9,980.00	67.03	352.50	9,741.27	45.54	-93.16	47.30	0.63	-0.17	-0.66	
10,027.00	66.79	352.23	9,759.71	88.39	-98.90	90.26	0.73	-0.51	-0.57	
10,075.00	66.49	352.82	9,778.74	132.08	-104.64	134.05	1.29	-0.63	1.23	
10,122.00	70.68	353.78	9,795.90	175.53	-109.73	177.58	9.12	8.91	2.04	
10,156.24	72.81	354.30	9,806.62	207.87	-113.11	209.99	6.40	6.23	1.53	
FTP[SM624H]										
10,170.00	73.67	354.51	9,810.59	220.98	-114.39	223.12	6.40	6.23	1.50	
10,217.00	75.12	353.68	9,823.23	266.01	-119.05	268.22	3.52	3.09	-1.77	
10,265.00	77.31	354.17	9,834.67	312.36	-123.98	314.66	4.67	4.56	1.02	
10,312.00	77.84	354.20	9,844.78	358.02	-128.63	360.40	1.13	1.13	0.06	
10,361.00	82.18	353.19	9,853.28	405.97	-133.93	408.45	9.09	8.86	-2.06	
10,408.00	86.95	354.10	9,857.73	452.46	-139.11	455.03	10.33	10.15	1.94	
10,456.00	88.56	353.64	9,859.61	500.15	-144.23	502.80	3.49	3.35	-0.96	
10,552.00	87.19	353.45	9,863.17	595.47	-155.02	598.31	1.44	-1.43	-0.20	
10,647.00	88.16	354.84	9,867.02	689.90	-164.70	692.90	1.78	1.02	1.46	
10,742.00	87.92	353.67	9,870.27	784.36	-174.20	787.53	1.26	-0.25	-1.23	
10,837.00	88.96	355.96	9,872.86	878.93	-182.78	882.25	2.65	1.09	2.41	
10,928.00	90.23	357.51	9,873.50	969.78	-187.97	973.18	2.20	1.40	1.70	
11,019.00	89.66	356.78	9,873.59	1,060.66	-192.50	1,064.13	1.02	-0.63	-0.80	
11,110.00	88.46	356.72	9,875.08	1,151.50	-197.66	1,155.05	1.32	-1.32	-0.07	
11,201.00	91.68	358.76	9,874.97	1,242.41	-201.24	1,246.02	4.19	3.54	2.24	
11,292.00	92.05	359.13	9,872.01	1,333.35	-202.92	1,336.97	0.57	0.41	0.41	
11,383.00	89.70	0.38	9,870.62	1,424.33	-203.31	1,427.94	2.92	-2.58	1.37	
11,474.00	90.70	0.18	9,870.30	1,515.33	-202.86	1,518.91	1.12	1.10	-0.22	
11,564.00	89.46	0.83	9,870.18	1,605.32	-202.07	1,608.88	1.56	-1.38	0.72	
11,654.00	88.06	0.73	9,872.12	1,695.29	-200.85	1,698.80	1.56	-1.56	-0.11	
11,743.00	88.42	0.55	9,874.86	1,784.24	-199.85	1,787.72	0.45	0.40	-0.20	
11,834.00	87.68	359.92	9,877.95	1,875.19	-199.48	1,878.64	1.07	-0.81	-0.69	
11,925.00	87.41	359.33	9,881.85	1,966.10	-200.07	1,969.55	0.71	-0.30	-0.65	

Company:	Devon Energy	Local Co-ordinate Reference:	Well 624H
Project:	Eddy County, NM (NAD83 NME)	TVD Reference:	KB=26 @ 2986.00usft (Cactus 167)
Site:	Spud Muffin 31-30	MD Reference:	KB=26 @ 2986.00usft (Cactus 167)
Well:	624H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland

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)
12,017.00	88.32	0.01	9,885.28	2,058.03	-200.60	2,061.48	1.23	0.99	0.74
12,109.00	90.47	0.22	9,886.25	2,150.02	-200.42	2,153.45	2.35	2.34	0.23
12,199.00	89.13	0.23	9,886.56	2,240.02	-200.06	2,243.42	1.49	-1.49	0.01
12,295.00	90.87	0.08	9,886.56	2,336.02	-199.81	2,339.40	1.82	1.81	-0.16
12,390.00	90.87	359.80	9,885.12	2,431.01	-199.90	2,434.37	0.29	0.00	-0.29
12,485.00	88.32	358.90	9,885.79	2,525.99	-200.98	2,529.35	2.85	-2.68	-0.95
12,580.00	89.33	359.14	9,887.74	2,620.95	-202.61	2,624.33	1.09	1.06	0.25
12,675.00	91.71	1.69	9,886.88	2,715.93	-201.92	2,719.28	3.67	2.51	2.68
12,770.00	90.37	0.40	9,885.16	2,810.90	-200.19	2,814.20	1.96	-1.41	-1.36
12,855.99	89.12	359.66	9,885.54	2,896.88	-200.14	2,900.16	1.69	-1.45	-0.86
T1[SM624H]									
12,865.00	88.99	359.58	9,885.69	2,905.89	-200.20	2,909.17	1.69	-1.45	-0.86
12,960.00	91.04	359.20	9,885.66	3,000.88	-201.21	3,004.17	2.19	2.16	-0.40
13,055.00	88.79	357.49	9,885.80	3,095.83	-203.96	3,099.15	2.97	-2.37	-1.80
13,151.00	90.00	357.98	9,886.82	3,191.75	-207.75	3,195.12	1.36	1.26	0.51
13,246.00	92.12	359.61	9,885.06	3,286.70	-209.75	3,290.10	2.81	2.23	1.72
13,341.00	92.51	359.46	9,881.22	3,381.62	-210.52	3,385.02	0.44	0.41	-0.16
13,437.00	93.86	0.59	9,875.89	3,477.47	-210.48	3,480.85	1.83	1.41	1.18
13,532.00	92.04	3.02	9,871.00	3,572.29	-207.49	3,575.59	3.19	-1.92	2.56
13,628.00	87.96	3.74	9,871.00	3,668.10	-201.83	3,671.27	4.32	-4.25	0.75
13,723.00	88.12	3.19	9,874.25	3,762.87	-196.09	3,765.92	0.60	0.17	-0.58
13,818.00	87.04	1.24	9,878.26	3,857.71	-192.42	3,860.67	2.34	-1.14	-2.05
13,913.00	87.48	2.01	9,882.80	3,952.56	-189.73	3,955.45	0.93	0.46	0.81
14,009.00	88.08	2.44	9,886.52	4,048.41	-186.01	4,051.22	0.77	0.63	0.45
14,104.00	89.66	1.60	9,888.39	4,143.33	-182.66	4,146.06	1.88	1.66	-0.88
14,199.00	89.10	1.25	9,889.42	4,238.30	-180.30	4,240.96	0.70	-0.59	-0.37
14,294.00	88.73	0.87	9,891.22	4,333.26	-178.54	4,335.88	0.56	-0.39	-0.40
14,389.00	88.29	0.10	9,893.69	4,428.23	-177.74	4,430.81	0.93	-0.46	-0.81
14,484.00	89.13	359.26	9,895.83	4,523.20	-178.27	4,525.77	1.25	0.88	-0.88
14,579.00	90.67	358.98	9,895.99	4,618.19	-179.73	4,620.77	1.65	1.62	-0.29
14,675.00	91.18	359.20	9,894.44	4,714.16	-181.25	4,716.76	0.58	0.53	0.23
14,770.00	91.28	358.74	9,892.40	4,809.12	-182.96	4,811.73	0.50	0.11	-0.48
14,866.00	91.48	358.60	9,890.09	4,905.07	-185.19	4,907.71	0.25	0.21	-0.15
14,961.00	91.81	359.45	9,887.37	5,000.02	-186.80	5,002.66	0.96	0.35	0.89
15,056.00	89.50	359.75	9,886.28	5,095.00	-187.46	5,097.65	2.45	-2.43	0.32
15,150.00	90.23	359.29	9,886.50	5,189.00	-188.25	5,191.64	0.92	0.78	-0.49
15,245.00	90.30	359.90	9,886.06	5,283.99	-188.92	5,286.63	0.65	0.07	0.64
15,340.00	90.50	0.12	9,885.40	5,378.99	-188.91	5,381.61	0.31	0.21	0.23
15,435.00	88.32	359.83	9,886.38	5,473.98	-188.95	5,476.58	2.31	-2.29	-0.31
15,531.00	88.19	358.85	9,889.30	5,569.93	-190.05	5,572.53	1.03	-0.14	-1.02
15,626.00	87.95	357.84	9,892.50	5,664.83	-192.80	5,667.48	1.09	-0.25	-1.06
15,722.00	87.65	357.85	9,896.18	5,760.69	-196.40	5,763.39	0.31	-0.31	0.01
15,817.00	89.80	358.70	9,898.30	5,855.62	-199.26	5,858.35	2.43	2.26	0.89

Company:	Devon Energy	Local Co-ordinate Reference:	Well 624H
Project:	Eddy County, NM (NAD83 NME)	TVD Reference:	KB=26 @ 2986.00usft (Cactus 167)
Site:	Spud Muffin 31-30	MD Reference:	KB=26 @ 2986.00usft (Cactus 167)
Well:	624H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland

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)
15,912.00	90.67	359.80	9,897.91	5,950.61	-200.51	5,953.35	1.48	0.92	1.16
16,007.00	90.40	359.67	9,897.02	6,045.60	-200.94	6,048.33	0.32	-0.28	-0.14
16,102.00	89.90	359.06	9,896.77	6,140.60	-202.00	6,143.33	0.83	-0.53	-0.64
16,198.00	89.40	359.74	9,897.36	6,236.59	-203.00	6,239.32	0.88	-0.52	0.71
16,294.00	88.26	359.95	9,899.32	6,332.57	-203.26	6,335.29	1.21	-1.19	0.22
16,387.00	91.71	0.61	9,899.34	6,425.55	-202.81	6,428.25	3.78	3.71	0.71
16,481.00	92.21	0.15	9,896.13	6,519.49	-202.18	6,522.16	0.72	0.53	-0.49
16,574.00	90.34	1.40	9,894.06	6,612.46	-200.93	6,615.08	2.42	-2.01	1.34
16,667.00	90.84	2.27	9,893.10	6,705.40	-197.95	6,707.96	1.08	0.54	0.94
16,761.00	90.10	2.35	9,892.33	6,799.32	-194.16	6,801.79	0.79	-0.79	0.09
16,855.00	88.89	1.47	9,893.16	6,893.26	-191.03	6,895.65	1.59	-1.29	-0.94
16,949.00	88.26	0.89	9,895.50	6,987.21	-189.09	6,989.55	0.91	-0.67	-0.62
17,043.00	87.79	1.24	9,898.74	7,081.14	-187.35	7,083.42	0.62	-0.50	0.37
17,137.00	89.13	1.79	9,901.26	7,175.07	-184.86	7,177.29	1.54	1.43	0.59
17,232.00	90.23	0.80	9,901.79	7,270.04	-182.72	7,272.20	1.56	1.16	-1.04
17,326.00	90.13	0.86	9,901.50	7,364.03	-181.35	7,366.15	0.12	-0.11	0.06
17,421.00	90.17	0.65	9,901.25	7,459.03	-180.10	7,461.10	0.23	0.04	-0.22
17,516.00	89.83	359.98	9,901.25	7,554.02	-179.58	7,556.07	0.79	-0.36	-0.71
17,611.00	89.97	359.27	9,901.42	7,649.02	-180.20	7,651.06	0.76	0.15	-0.75
17,707.00	89.46	359.22	9,901.89	7,745.01	-181.47	7,747.06	0.53	-0.53	-0.05
17,801.00	89.40	359.00	9,902.83	7,838.99	-182.93	7,841.06	0.24	-0.06	-0.23
17,896.00	90.81	359.12	9,902.65	7,933.98	-184.48	7,936.05	1.49	1.48	0.13
17,991.00	90.00	359.05	9,901.98	8,028.96	-186.00	8,031.05	0.86	-0.85	-0.07
18,085.00	94.10	358.16	9,898.62	8,122.85	-188.29	8,124.97	4.46	4.36	-0.95
18,179.00	92.55	358.77	9,893.17	8,216.66	-190.80	8,218.80	1.77	-1.65	0.65
18,274.00	90.77	355.82	9,890.42	8,311.50	-195.28	8,313.71	3.63	-1.87	-3.11
18,367.00	89.90	357.20	9,889.87	8,404.32	-200.94	8,406.62	1.75	-0.94	1.48
18,462.00	89.56	356.68	9,890.32	8,499.19	-206.01	8,501.57	0.65	-0.36	-0.55
18,556.00	88.26	356.31	9,892.11	8,592.99	-211.76	8,595.46	1.44	-1.38	-0.39
18,651.00	87.92	356.35	9,895.27	8,687.74	-217.84	8,690.31	0.36	-0.36	0.04
18,745.00	87.95	357.45	9,898.66	8,781.54	-222.92	8,784.19	1.17	0.03	1.17
18,840.00	87.19	0.09	9,902.69	8,876.43	-224.96	8,879.10	2.89	-0.80	2.78
18,935.00	86.72	359.66	9,907.74	8,971.29	-225.16	8,973.95	0.67	-0.49	-0.45
19,029.00	87.59	0.96	9,912.40	9,065.17	-224.65	9,067.80	1.66	0.93	1.38
19,124.00	87.32	1.73	9,916.62	9,160.05	-222.43	9,162.62	0.86	-0.28	0.81
19,219.00	87.69	2.02	9,920.76	9,254.91	-219.32	9,257.41	0.49	0.39	0.31
19,314.00	87.69	1.34	9,924.59	9,349.79	-216.54	9,352.22	0.72	0.00	-0.72
19,410.00	88.79	1.11	9,927.53	9,445.72	-214.49	9,448.09	1.17	1.15	-0.24
19,505.00	90.10	1.14	9,928.45	9,540.70	-212.62	9,543.02	1.38	1.38	0.03
19,601.00	90.60	1.92	9,927.87	9,636.66	-210.06	9,638.91	0.97	0.52	0.81
19,696.00	91.17	1.75	9,926.40	9,731.60	-207.02	9,733.78	0.63	0.60	-0.18
19,792.00	90.94	1.34	9,924.63	9,827.55	-204.43	9,829.66	0.49	-0.24	-0.43
19,887.00	91.88	0.67	9,922.29	9,922.50	-202.76	9,924.57	1.21	0.99	-0.71

Company:	Devon Energy	Local Co-ordinate Reference:	Well 624H
Project:	Eddy County, NM (NAD83 NME)	TVD Reference:	KB=26 @ 2986.00usft (Cactus 167)
Site:	Spud Muffin 31-30	MD Reference:	KB=26 @ 2986.00usft (Cactus 167)
Well:	624H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland

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)
19,955.00	91.68	0.39	9,920.18	9,990.47	-202.13	9,992.51	0.51	-0.29	-0.41
FINAL MWD Survey (19955.00' MD)									
20,008.62	91.68	0.39	9,918.61	10,044.06	-201.77	10,046.08	0.00	0.00	0.00
BHL.Final[SM624H]									
20,020.00	91.68	0.39	9,918.28	10,055.44	-201.69	10,057.46	0.00	0.00	0.00
FINAL Proj. to Bit (20020.00' MD)									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
BHL.Final[SM624H]	-89.80	0.00	9,916.00	10,043.91	-191.23	466,878.49	639,219.78	32.28313	-104.01660
- survey misses target center by 10.86usft at 20008.62usft MD (9918.61 TVD, 10044.06 N, -201.77 E)									
- Rectangle (sides W100.00 H20.00 D9,000.00)									

Survey Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
19,955.00	9,920.18	9,990.47	-202.13	FINAL MWD Survey (19955.00' MD)	
20,020.00	9,918.28	10,055.44	-201.69	FINAL Proj. to Bit (20020.00' MD)	

Checked By: _____	Approved By: _____	Date: _____
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R:11/7/19

Submit To Appropriate District Office Two Copies District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Rd., Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505		RECEIVED JAN 14 2020 EMNRD-OCD ARTESIA State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505			Form C-105 Revised August 1, 2011					
WELL COMPLETION OR RECOMPLETION REPORT AND LOG										
4. Reason for filing: ☒ COMPLETION REPORT (Fill in boxes #1 through #31 for State and Fee wells only) ☐ C-144 CLOSURE ATTACHMENT (Fill in boxes #1 through #9, #15 Date Rig Released and #32 and/or #33; attach this and the plat to the C-144 closure report in accordance with 19.15.17.13.K NMAC)				5. Lease Name or Unit Agreement Name Spud Muffin 31-30						
7. Type of Completion: ☒ NEW WELL ☐ WORKOVER ☐ DEEPENING ☐ PLUGBACK ☐ DIFFERENT RESERVOIR ☐ OTHER				6. Well Number: 624H						
8. Name of Operator Devon Energy Production Company, L.P.				9. OGRID 6137						
10. Address of Operator 333 West Sheridan Avenue, Oklahoma City, OK 73102				11. Pool name or Wildcat PURPLE SAGE ; WOLFCAMP						
12. Location	Unit Ltr	Section	Township	Range	Lot	Feet from the	N/S Line	Feet from the	E/W Line	County
Surface:	P	31	23S	29E		485	South	250	East	EDDY
BH:	A	30	23S	29E		12	North	375	East	EDDY
13. Date Spudded 1/10/19	14. Date T.D. Reached 2/10/19		15. Date Rig Released 2/14/19		16. Date Completed (Ready to Produce) 10/10/19		17. Elevations (DF and RKB, RT, GR, etc.) 2960 GL			
18. Total Measured Depth of Well 20020 MD, 9918 TVD			19. Plug Back Measured Depth 19955		20. Was Directional Survey Made? Yes		21. Type Electric and Other Logs Run CBL			
22. Producing Interval(s), of this completion - Top, Bottom, Name 10221-19842, WOLFCAMP										
23. CASING RECORD (Report all strings set in well)										
CASING SIZE		WEIGHT LB./FT.		DEPTH SET		HOLE SIZE		CEMENTING RECORD		AMOUNT PULLED
13.375		54.5		367		17.5		625 SX CLC		
8.625		32		9223		10.625		990 SX CLC		
5.5		20		20005		7.875		2720 SX CLC		
24. LINER RECORD										
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN		25. TUBING RECORD				
						SIZE				
						DEPTH SET				
						PACKER SET				
26. Perforation record (interval, size, and number) 10221 - 19842, total 964 holes						27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC. DEPTH INTERVAL AMOUNT AND KIND MATERIAL USED 10221-19842 Acidize and frac in 49 stages. See detailed summary attached.				
28. PRODUCTION										
Date First Production 10/10/19		Production Method (Flowing, gas lift, pumping - Size and type pump) Flowing				Well Status (Prod. or Shut-in) Producing				
Date of Test 10/26/19	Hours Tested 24	Choke Size	Prod'n For Test Period	Oil - Bbl 1528	Gas - MCF 3407	Water - Bbl 5026	Gas - Oil Ratio 2229.71			
Flow Tubing Press. 2494 psi	Casing Pressure 1928 psi	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API - (Corr.)				
29. Disposition of Gas (Sold, used for fuel, vented, etc.) Sold						30. Test Witnessed By				
31. List Attachments Directional Survey, Logs										
32. If a temporary pit was used at the well, attach a plat with the location of the temporary pit.										
33. If an on-site burial was used at the well, report the exact location of the on-site burial:										
Latitude					Longitude			NAD 1927 1983		
I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief										
Signature 		Printed Name Erin Workman		Title Regulatory Analyst		Date 1/13/2020				
E-mail Address Erin.Workman@devn.com										

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well and not later than 60 days after completion of closure. When submitted as a completion report, this shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, items 11, 12 and 26-31 shall be reported for each zone.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

[illegible]

OIL OR GAS SANDS OR ZONES

No. 1, from..... N/A to..... N/A

No. 2, from..... N/A to..... N/A

No. 3, from N/A to N/A
No. 4, from N/A to N/A

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from to feet

No. 2, from to feet

No. 3, from to feet

LITHOLOGY RECORD (Attach additional sheet if necessary)

From	To	Thickness In Feet	Lithology

From	To	Thickness In Feet	Lithology