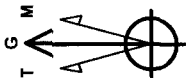


Devon Energy

Project: Eddy County, NM (NAD-83)
 Site: Spud Muffin 31-30
 Well: Spud Muffin 31-30 736H
 Wellbore: OH
 Design: Plan #1

2960.0' GE + 25' KB @ 2985.00usft
 Ground Level: 2960.00

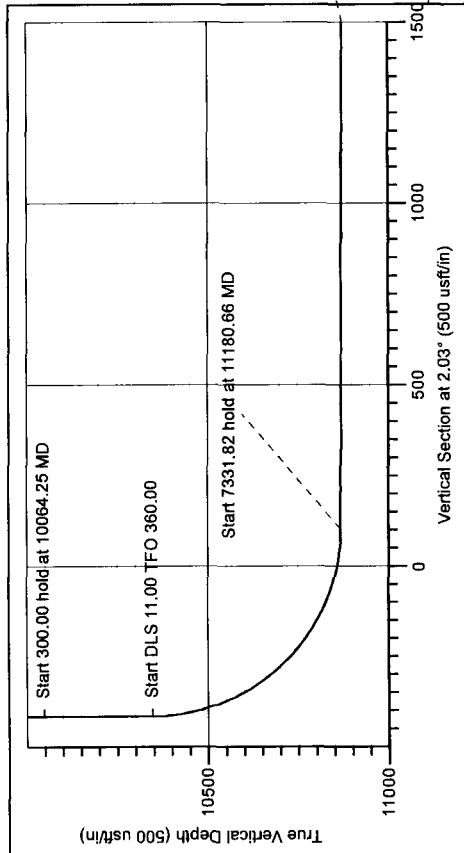
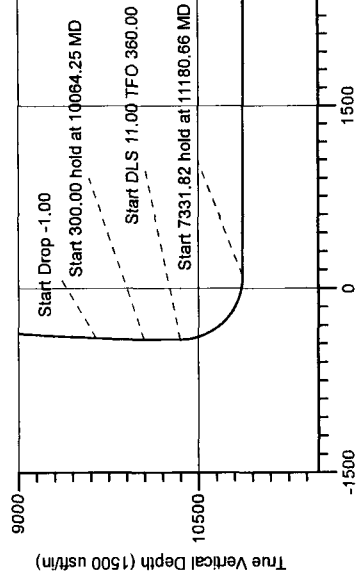
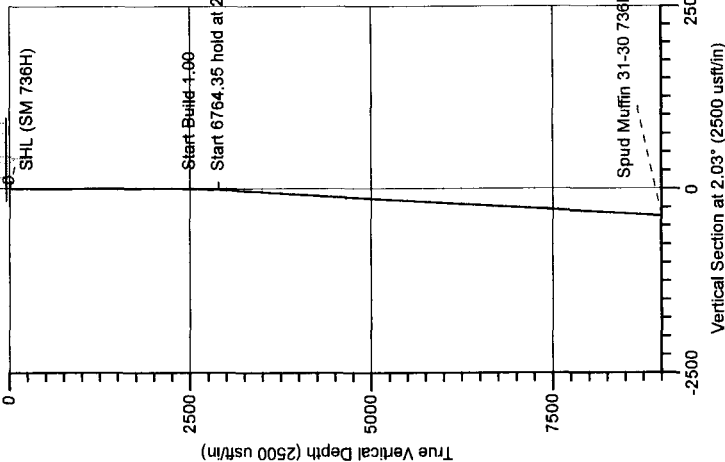


Azimuths to Grid North
 True North: -0.17°
 Magnetic North: 7.02°
 Magnetic Field
 Strength: 48047.5nT
 Dip Angle: 60.05°
 Date: 2/12/2018
 Model: HDGM

PROJECT DETAILS: Eddy County, NM (NAD-83)
 Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: New Mexico Eastern Zone

devon

30-015-44755



SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2500.00	0.00	0.00	2500.00	0.00	0.00	0.00	0.00	0.00
2899.95	4.00	148.27	2899.93	-11.87	7.34	0.00	148.27	-11.80
9664.30	4.00	148.27	9647.50	-413.13	265.50	0.00	0.00	-403.84
10064.25	0.00	0.00	10047.13	-425.00	262.84	1.00	180.00	-415.44
10364.25	0.00	0.00	10347.13	-425.00	262.84	0.00	0.00	-415.44
11180.66	89.80	360.00	10868.00	94.09	11.00	360.00	0.00	103.33
18512.48	89.80	360.00	10893.00	7425.87	262.84	0.00	0.00	7430.52

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL (SM 736H)	10893.00	7425.87	262.84	456837.83	637646.02	32° 15' 19.9379 N	104° 1' 18.4160 W
PBHL (SM 736H)				464263.70	637908.86	32° 16' 33.4157 N	104° 1' 15.1033 W

Spud Muffin 31-30 736H Plan #1

Spud Muffin 31-30 736H Plan #1

TD at 18512.48

PBHL (SM 736H)

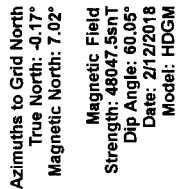


LEAM DRILLING SYSTEMS LLC
 2010 East Davis, Conroe, Texas 77301
 Phone: 936/756-7577, Fax: 936/756-7595

Plan: Plan #1 (Spud Muffin 31-30 736H/OH)
 Created By: Dustin Ault
 Date: 17:35, February 12 2018
 Approved: _____
 Date: _____

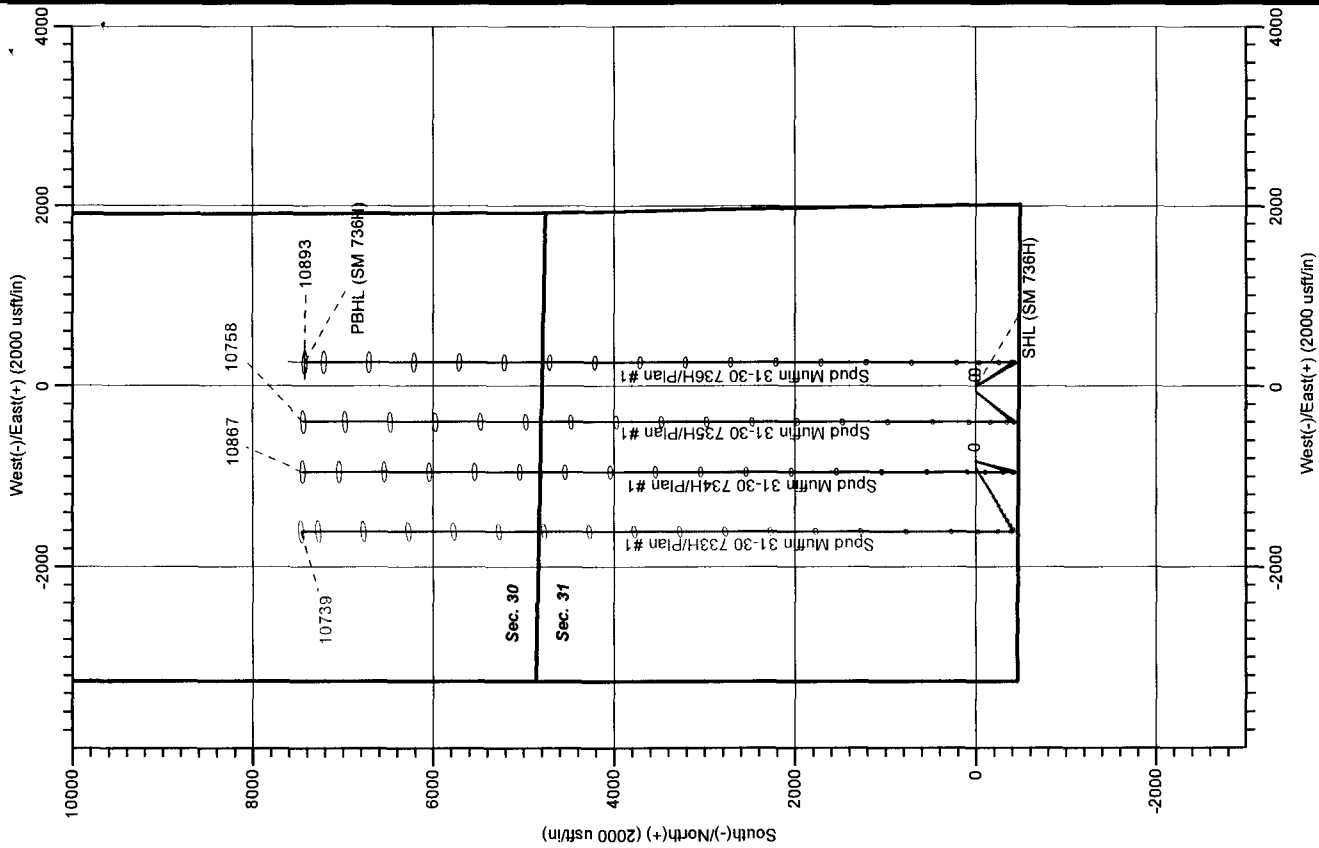
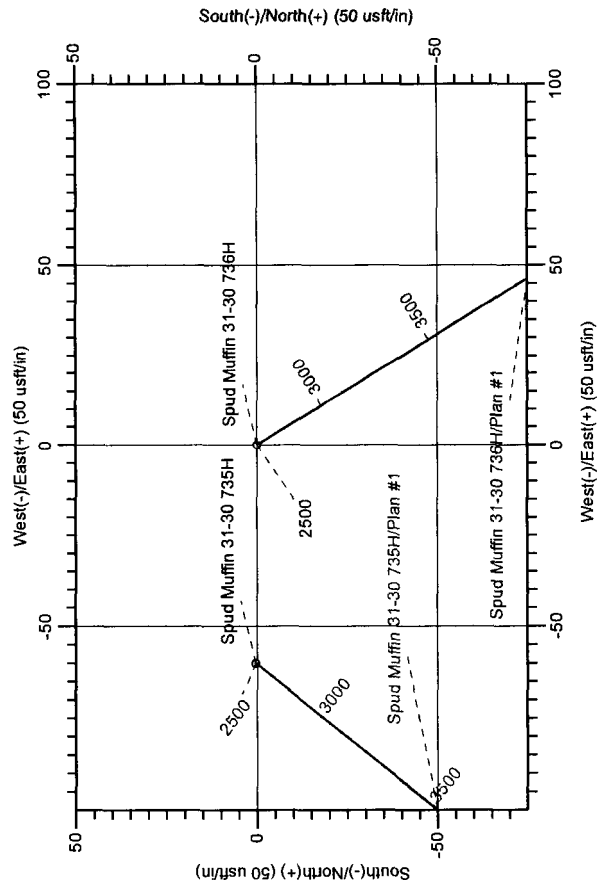
Project: Eddy County, NM (NAD-83)
Site: Spud Muffin 31-30
Well: Spud Muffin 31-30 736H
Wellbore: OH
Design: Plan #1

PROJECT DETAILS: Eddy County, NM (NAD-83)
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone



Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
10893.00		7425.87	262.84	484263.70	637908.86	32° 16' 33.4157 N	104° 1' 15.1033 W
PBHL (SM 736H)	0.00	0.00	0.00	483764.02	637946.02	32° 15' 19.9379 N	104° 1' 18.4160 W
PBHL (SM 736H)	0.00	0.00	0.00	456837.83	637946.02	32° 15' 19.9379 N	104° 1' 18.4160 W

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2500.00	0.00	0.00	2500.00	0.00	0.00	0.00	0.00	0.00	
2899.95	4.00	148.27	2899.93	-11.87	7.34	1.00	148.27	-11.80	
9684.30	4.00	148.27	9647.50	-413.13	255.50	0.00	0.00	-403.84	
10064.25	0.00	0.00	10047.43	-425.00	262.84	1.00	180.00	-415.44	
10364.25	0.00	0.00	10347.13	-425.00	262.84	0.00	0.00	-415.44	
10364.25	0.00	0.00	10347.13	-425.00	262.84	1.00	360.00	103.33	
89.80	89.80	360.00	10868.00	94.09	262.84	0.00	0.00	7430.52	
18512.48	89.80	360.00	10893.00	7425.87	262.84	0.00	0.00	7430.52	



LEAM
Drilling Services

LEAM DRILLING SYSTEMS LLC
2010 East Davis, Conroe, Texas 77301
Phone: 936/756-7577, Fax: 936/756-7595

Plan: Plan #1 (Spud Muffin 31-30 736H0H)
Spud Muffin 31-30
Created By: Dustin Ault
Date: _____ Date: 17:37, February 12 2018
Approved: _____ Date: _____

Devon Energy

Eddy County, NM (NAD-83)

Spud Muffin 31-30

Spud Muffin 31-30 736H

OH

Plan: Plan #1

Standard Planning Report

12 February, 2018

LEAM Drilling Services

Planning Report

Database:	EDM 5000.1 Multi User Db	Local Co-ordinate Reference:	Well Spud Muffin 31-30 736H
Company:	Devon Energy	MD Reference:	2960.0' GE + 25' KB @ 2985.00usft
Project:	Eddy County, NM (NAD-83)	MD Reference:	2960.0' GE + 25' KB @ 2985.00usft
Site:	Spud Muffin 31-30	North Reference:	Grid
Well:	Spud Muffin 31-30 736H	Survey/Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project:	Eddy County, NM (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		Spud Muffin 31-30			
Site Position:		Northing:	456,837.83 usft	Latitude:	32° 15' 19.9379 N
From:	Map	Easting:	637,646.02 usft	Longitude:	104° 1' 18.4160 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.17 °

Well:	Spud Muffin 31-30 736H					
Well Position	+N-S	0.00 usft	Northing:	456,837.83 usft	Latitude:	32° 15' 19.9379 N
	+E-W	0.00 usft	Easting:	637,646.02 usft	Longitude:	104° 1' 18.4160 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	2,960.00 usft

Wellbore:	OH				
Magnetics:	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(kT)
	HDGM	2/12/2018	7.18	60.05	48,048

Design:	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N-S	+E-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	2.03

Plan Sections										
Measured	Depth	Inclination	Azimuth	Vertical	N/S	E/W	Depth	Build	Turn	TPO
(usft)	(°)	(°)	(usft)	(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
	2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
	2,899.95	4.00	148.27	2,899.63	-11.87	7.34	1.00	1.00	0.00	148.27
	9,664.30	4.00	148.27	9,647.50	-413.13	255.50	0.00	0.00	0.00	0.00
	10,064.25	0.00	0.00	10,047.13	-425.00	262.84	1.00	-1.00	0.00	180.00
	10,364.25	0.00	0.00	10,347.13	-425.00	262.84	0.00	0.00	0.00	0.00
	11,180.66	89.80	360.00	10,868.00	94.09	262.84	11.00	11.00	0.00	360.00
	18,512.48	89.80	360.00	10,893.00	7,425.87	262.84	0.00	0.00	0.00	0.00 PBHL (SM 736H)

LEAM Drilling Services

Planning Report

Database:	EDM 5000.1 Multi User Db	Local Co-ordinate Reference:	Well Spud Muffin 31-30 736H
Company:	Devon Energy	TVD Reference:	2960.0' GE + 25' KB @ 2985.00usft
Project:	Eddy County, NM (NAD-83)	MD Reference:	2960.0' GE + 25' KB @ 2985.00usft
Site:	Spud Muffin 31-30	North Reference:	Grid
Well:	Spud Muffin 31-30 736H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	ΔN (usft)	ΔE (usft)	Vertical Section (usft)	Dogleg Rate (1/100usft)	Build Rate (1/100usft)	Turn Rate (1/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SHL (SM 736H)									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	1.00	148.27	2,599.99	-0.74	0.46	-0.73	1.00	1.00	0.00
2,700.00	2.00	148.27	2,699.96	-2.97	1.84	-2.90	1.00	1.00	0.00
2,800.00	3.00	148.27	2,799.86	-6.68	4.13	-6.53	1.00	1.00	0.00
2,899.95	4.00	148.27	2,899.63	-11.87	7.34	-11.60	1.00	1.00	0.00
3,000.00	4.00	148.27	2,999.43	-17.80	11.01	-17.40	0.00	0.00	0.00
3,100.00	4.00	148.27	3,099.19	-23.73	14.68	-23.20	0.00	0.00	0.00
3,200.00	4.00	148.27	3,198.94	-29.67	18.35	-29.00	0.00	0.00	0.00
3,300.00	4.00	148.27	3,298.70	-35.60	22.02	-34.80	0.00	0.00	0.00
3,400.00	4.00	148.27	3,398.46	-41.53	25.68	-40.60	0.00	0.00	0.00
3,500.00	4.00	148.27	3,498.21	-47.46	29.35	-46.39	0.00	0.00	0.00
3,600.00	4.00	148.27	3,597.97	-53.39	33.02	-52.19	0.00	0.00	0.00
3,700.00	4.00	148.27	3,697.73	-59.33	36.69	-57.99	0.00	0.00	0.00
3,800.00	4.00	148.27	3,797.48	-65.26	40.36	-63.79	0.00	0.00	0.00
3,900.00	4.00	148.27	3,897.24	-71.19	44.03	-69.59	0.00	0.00	0.00
4,000.00	4.00	148.27	3,997.00	-77.12	47.70	-75.39	0.00	0.00	0.00
4,100.00	4.00	148.27	4,096.75	-83.05	51.37	-81.19	0.00	0.00	0.00
4,200.00	4.00	148.27	4,196.51	-88.99	55.03	-86.98	0.00	0.00	0.00
4,300.00	4.00	148.27	4,296.27	-94.92	58.70	-92.78	0.00	0.00	0.00
4,400.00	4.00	148.27	4,396.02	-100.85	62.37	-98.58	0.00	0.00	0.00
4,500.00	4.00	148.27	4,495.78	-106.78	66.04	-104.38	0.00	0.00	0.00
4,600.00	4.00	148.27	4,595.54	-112.72	69.71	-110.18	0.00	0.00	0.00
4,700.00	4.00	148.27	4,695.29	-118.65	73.38	-115.98	0.00	0.00	0.00
4,800.00	4.00	148.27	4,795.05	-124.58	77.05	-121.78	0.00	0.00	0.00
4,900.00	4.00	148.27	4,894.80	-130.51	80.71	-127.57	0.00	0.00	0.00
5,000.00	4.00	148.27	4,994.56	-136.44	84.38	-133.37	0.00	0.00	0.00
5,100.00	4.00	148.27	5,094.32	-142.38	88.05	-139.17	0.00	0.00	0.00
5,200.00	4.00	148.27	5,194.07	-148.31	91.72	-144.97	0.00	0.00	0.00

LEAM Drilling Services

Planning Report

Database:	EDM 5000.1 Multi User Db	Local Co-ordinate Reference:	Well Spud Muffin 31-30 736H
Company:	Devon Energy	MD Reference:	2960.0' GE + 25' KB @ 2985.00usft
Project:	Eddy County, NM (NAD-83)	MD Reference:	2960.0' GE + 25' KB @ 2985.00usft
Site:	Spud Muffin 31-30	North Reference:	Grid
Well:	Spud Muffin 31-30 736H	Survey Station Name/Label:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	N/S (usft)	W/E (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,300.00	4.00	148.27	5,293.83	-154.24	95.39	-150.77	0.00	0.00	0.00	
5,400.00	4.00	148.27	5,393.59	-160.17	99.06	-156.57	0.00	0.00	0.00	
5,500.00	4.00	148.27	5,493.34	-166.10	102.73	-162.37	0.00	0.00	0.00	
5,600.00	4.00	148.27	5,593.10	-172.04	106.40	-168.16	0.00	0.00	0.00	
5,700.00	4.00	148.27	5,692.86	-177.97	110.06	-173.96	0.00	0.00	0.00	
5,800.00	4.00	148.27	5,792.61	-183.90	113.73	-179.76	0.00	0.00	0.00	
5,900.00	4.00	148.27	5,892.37	-189.83	117.40	-185.56	0.00	0.00	0.00	
6,000.00	4.00	148.27	5,992.13	-195.76	121.07	-191.36	0.00	0.00	0.00	
6,100.00	4.00	148.27	6,091.88	-201.70	124.74	-197.16	0.00	0.00	0.00	
6,200.00	4.00	148.27	6,191.64	-207.63	128.41	-202.96	0.00	0.00	0.00	
6,300.00	4.00	148.27	6,291.39	-213.56	132.08	-208.75	0.00	0.00	0.00	
6,400.00	4.00	148.27	6,391.15	-219.49	135.74	-214.55	0.00	0.00	0.00	
6,500.00	4.00	148.27	6,490.91	-225.42	139.41	-220.35	0.00	0.00	0.00	
6,600.00	4.00	148.27	6,590.66	-231.36	143.08	-226.15	0.00	0.00	0.00	
6,700.00	4.00	148.27	6,690.42	-237.29	146.75	-231.95	0.00	0.00	0.00	
6,800.00	4.00	148.27	6,790.18	-243.22	150.42	-237.75	0.00	0.00	0.00	
6,900.00	4.00	148.27	6,889.93	-249.15	154.09	-243.55	0.00	0.00	0.00	
7,000.00	4.00	148.27	6,989.69	-255.08	157.76	-249.34	0.00	0.00	0.00	
7,100.00	4.00	148.27	7,089.45	-261.02	161.43	-255.14	0.00	0.00	0.00	
7,200.00	4.00	148.27	7,189.20	-266.95	165.09	-260.94	0.00	0.00	0.00	
7,300.00	4.00	148.27	7,288.96	-272.88	168.76	-266.74	0.00	0.00	0.00	
7,400.00	4.00	148.27	7,388.72	-278.81	172.43	-272.54	0.00	0.00	0.00	
7,500.00	4.00	148.27	7,488.47	-284.74	176.10	-278.34	0.00	0.00	0.00	
7,600.00	4.00	148.27	7,588.23	-290.68	179.77	-284.14	0.00	0.00	0.00	
7,700.00	4.00	148.27	7,687.99	-296.61	183.44	-289.93	0.00	0.00	0.00	
7,800.00	4.00	148.27	7,787.74	-302.54	187.11	-295.73	0.00	0.00	0.00	
7,900.00	4.00	148.27	7,887.50	-308.47	190.77	-301.53	0.00	0.00	0.00	
8,000.00	4.00	148.27	7,987.25	-314.41	194.44	-307.33	0.00	0.00	0.00	
8,100.00	4.00	148.27	8,087.01	-320.34	198.11	-313.13	0.00	0.00	0.00	
8,200.00	4.00	148.27	8,186.77	-326.27	201.78	-318.93	0.00	0.00	0.00	
8,300.00	4.00	148.27	8,286.52	-332.20	205.45	-324.73	0.00	0.00	0.00	
8,400.00	4.00	148.27	8,386.28	-338.13	209.12	-330.52	0.00	0.00	0.00	
8,500.00	4.00	148.27	8,486.04	-344.07	212.79	-336.32	0.00	0.00	0.00	
8,600.00	4.00	148.27	8,585.79	-350.00	216.45	-342.12	0.00	0.00	0.00	
8,700.00	4.00	148.27	8,685.55	-355.93	220.12	-347.92	0.00	0.00	0.00	
8,800.00	4.00	148.27	8,785.31	-361.86	223.79	-353.72	0.00	0.00	0.00	
8,900.00	4.00	148.27	8,885.06	-367.79	227.46	-359.52	0.00	0.00	0.00	
9,000.00	4.00	148.27	8,984.82	-373.73	231.13	-365.32	0.00	0.00	0.00	
9,100.00	4.00	148.27	9,084.58	-379.66	234.80	-371.11	0.00	0.00	0.00	
9,200.00	4.00	148.27	9,184.33	-385.59	238.47	-376.91	0.00	0.00	0.00	
9,300.00	4.00	148.27	9,284.09	-391.52	242.14	-382.71	0.00	0.00	0.00	
9,400.00	4.00	148.27	9,383.85	-397.45	245.80	-388.51	0.00	0.00	0.00	
9,500.00	4.00	148.27	9,483.60	-403.39	249.47	-394.31	0.00	0.00	0.00	
9,600.00	4.00	148.27	9,583.36	-409.32	253.14	-400.11	0.00	0.00	0.00	
9,664.30	4.00	148.27	9,647.50	-413.13	255.50	-403.84	0.00	0.00	0.00	
9,700.00	3.64	148.27	9,683.12	-415.16	256.75	-405.81	1.00	-1.00	0.00	
9,800.00	2.64	148.27	9,782.97	-419.82	259.64	-410.37	1.00	-1.00	0.00	
9,900.00	1.64	148.27	9,882.90	-423.00	261.60	-413.48	1.00	-1.00	0.00	
10,000.00	0.64	148.27	9,982.88	-424.69	262.65	-415.14	1.00	-1.00	0.00	
10,064.25	0.00	0.00	10,047.13	-425.00	262.84	-415.44	1.00	-1.00	0.00	
10,100.00	0.00	0.00	10,082.88	-425.00	262.84	-415.44	0.00	0.00	0.00	
10,200.00	0.00	0.00	10,182.88	-425.00	262.84	-415.44	0.00	0.00	0.00	
10,300.00	0.00	0.00	10,282.88	-425.00	262.84	-415.44	0.00	0.00	0.00	
10,364.25	0.00	0.00	10,347.13	-425.00	262.84	-415.44	0.00	0.00	0.00	

LEAM Drilling Services

Planning Report

Database:	EDM 5000.1 Multi User Db	Local Coordinates Reference:	Well Spud Muffin 31-30 736H
Company:	Devon Energy	TVD Reference:	2960.0' GE + 25' KB @ 2985.00usft
Project:	Eddy County, NM (NAD-83)	MD Reference:	2960.0' GE + 25' KB @ 2985.00usft
Site:	Spud Muffin 31-30	North Azimuth:	Grid
Well:	Spud Muffin 31-30 736H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned 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)
10,400.00	3.93	360.00	10,382.85	-423.77	262.84	-414.21	11.00	11.00	0.00
10,450.00	9.43	360.00	10,432.49	-417.96	262.84	-408.40	11.00	11.00	0.00
10,500.00	14.93	360.00	10,481.35	-407.41	262.84	-397.86	11.00	11.00	0.00
10,550.00	20.43	360.00	10,528.97	-392.23	262.84	-382.69	11.00	11.00	0.00
10,600.00	25.93	360.00	10,574.91	-372.55	262.84	-363.02	11.00	11.00	0.00
10,650.00	31.43	360.00	10,618.76	-348.57	262.84	-339.05	11.00	11.00	0.00
10,700.00	36.93	360.00	10,660.11	-320.49	262.84	-310.99	11.00	11.00	0.00
10,750.00	42.43	360.00	10,698.57	-288.57	262.84	-279.09	11.00	11.00	0.00
10,800.00	47.93	360.00	10,733.80	-253.12	262.84	-243.66	11.00	11.00	0.00
10,850.00	53.43	360.00	10,765.47	-214.45	262.84	-205.02	11.00	11.00	0.00
10,900.00	58.93	360.00	10,793.29	-172.93	262.84	-163.52	11.00	11.00	0.00
10,950.00	64.43	360.00	10,816.99	-128.93	262.84	-119.55	11.00	11.00	0.00
11,000.00	69.93	360.00	10,836.38	-82.86	262.84	-73.51	11.00	11.00	0.00
11,050.00	75.43	360.00	10,851.26	-35.14	262.84	-25.82	11.00	11.00	0.00
11,100.00	80.93	360.00	10,861.49	13.78	262.84	23.07	11.00	11.00	0.00
11,150.00	86.43	360.00	10,866.99	63.46	262.84	72.71	11.00	11.00	0.00
11,180.66	89.80	360.00	10,868.00	94.09	262.84	103.33	11.00	11.00	0.00
11,200.00	89.80	360.00	10,868.06	113.44	262.84	122.66	0.00	0.00	0.00
11,300.00	89.80	360.00	10,868.40	213.43	262.84	222.60	0.00	0.00	0.00
11,400.00	89.80	360.00	10,868.75	313.43	262.84	322.54	0.00	0.00	0.00
11,500.00	89.80	360.00	10,869.09	413.43	262.84	422.47	0.00	0.00	0.00
11,600.00	89.80	360.00	10,869.43	513.43	262.84	522.41	0.00	0.00	0.00
11,700.00	89.80	360.00	10,869.77	613.43	262.84	622.35	0.00	0.00	0.00
11,800.00	89.80	360.00	10,870.11	713.43	262.84	722.28	0.00	0.00	0.00
11,900.00	89.80	360.00	10,870.45	813.43	262.84	822.22	0.00	0.00	0.00
12,000.00	89.80	360.00	10,870.79	913.43	262.84	922.16	0.00	0.00	0.00
12,100.00	89.80	360.00	10,871.13	1,013.43	262.84	1,022.09	0.00	0.00	0.00
12,200.00	89.80	360.00	10,871.47	1,113.43	262.84	1,122.03	0.00	0.00	0.00
12,300.00	89.80	360.00	10,871.82	1,213.43	262.84	1,221.97	0.00	0.00	0.00
12,400.00	89.80	360.00	10,872.16	1,313.43	262.84	1,321.90	0.00	0.00	0.00
12,500.00	89.80	360.00	10,872.50	1,413.43	262.84	1,421.84	0.00	0.00	0.00
12,600.00	89.80	360.00	10,872.84	1,513.43	262.84	1,521.78	0.00	0.00	0.00
12,700.00	89.80	360.00	10,873.18	1,613.43	262.84	1,621.71	0.00	0.00	0.00
12,800.00	89.80	360.00	10,873.52	1,713.43	262.84	1,721.65	0.00	0.00	0.00
12,900.00	89.80	360.00	10,873.86	1,813.43	262.84	1,821.59	0.00	0.00	0.00
13,000.00	89.80	360.00	10,874.20	1,913.43	262.84	1,921.53	0.00	0.00	0.00
13,100.00	89.80	360.00	10,874.54	2,013.42	262.84	2,021.46	0.00	0.00	0.00
13,200.00	89.80	360.00	10,874.88	2,113.42	262.84	2,121.40	0.00	0.00	0.00
13,300.00	89.80	360.00	10,875.23	2,213.42	262.84	2,221.34	0.00	0.00	0.00
13,400.00	89.80	360.00	10,875.57	2,313.42	262.84	2,321.27	0.00	0.00	0.00
13,500.00	89.80	360.00	10,875.91	2,413.42	262.84	2,421.21	0.00	0.00	0.00
13,600.00	89.80	360.00	10,876.25	2,513.42	262.84	2,521.15	0.00	0.00	0.00
13,700.00	89.80	360.00	10,876.59	2,613.42	262.84	2,621.08	0.00	0.00	0.00
13,800.00	89.80	360.00	10,876.93	2,713.42	262.84	2,721.02	0.00	0.00	0.00
13,900.00	89.80	360.00	10,877.27	2,813.42	262.84	2,820.96	0.00	0.00	0.00
14,000.00	89.80	360.00	10,877.61	2,913.42	262.84	2,920.89	0.00	0.00	0.00
14,100.00	89.80	360.00	10,877.95	3,013.42	262.84	3,020.83	0.00	0.00	0.00
14,200.00	89.80	360.00	10,878.29	3,113.42	262.84	3,120.77	0.00	0.00	0.00
14,300.00	89.80	360.00	10,878.64	3,213.42	262.84	3,220.70	0.00	0.00	0.00
14,400.00	89.80	360.00	10,878.98	3,313.42	262.84	3,320.64	0.00	0.00	0.00
14,500.00	89.80	360.00	10,879.32	3,413.42	262.84	3,420.58	0.00	0.00	0.00
14,600.00	89.80	360.00	10,879.66	3,513.42	262.84	3,520.51	0.00	0.00	0.00
14,700.00	89.80	360.00	10,880.00	3,613.42	262.84	3,620.45	0.00	0.00	0.00
14,800.00	89.80	360.00	10,880.34	3,713.41	262.84	3,720.39	0.00	0.00	0.00

LEAM Drilling Services

Planning Report

Database:	EDM 5000.1 Multi User Db	Local Coordinate Reference:	Well Spud Muffin 31-30 736H
Company:	Devon Energy	TVD Reference:	2960.0' GE + 25' KB @ 2985.00usft
Project:	Eddy County, NM (NAD-83)	MD Reference:	2960.0' GE + 25' KB @ 2985.00usft
Site:	Spud Muffin 31-30	North Reference:	Grid
Well:	Spud Muffin 31-30 736H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Assumed (°)	Vertical Depth (usft)	N/E (usft)	E/W (usft)	Vertical Depth (usft)	Degrees Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,900.00	89.80	360.00	10,880.68	3,813.41	262.84	3,820.33	0.00	0.00	0.00
15,000.00	89.80	360.00	10,881.02	3,913.41	262.84	3,920.26	0.00	0.00	0.00
15,100.00	89.80	360.00	10,881.36	4,013.41	262.84	4,020.20	0.00	0.00	0.00
15,200.00	89.80	360.00	10,881.70	4,113.41	262.84	4,120.14	0.00	0.00	0.00
15,300.00	89.80	360.00	10,882.05	4,213.41	262.84	4,220.07	0.00	0.00	0.00
15,400.00	89.80	360.00	10,882.39	4,313.41	262.84	4,320.01	0.00	0.00	0.00
15,500.00	89.80	360.00	10,882.73	4,413.41	262.84	4,419.95	0.00	0.00	0.00
15,600.00	89.80	360.00	10,883.07	4,513.41	262.84	4,519.88	0.00	0.00	0.00
15,700.00	89.80	360.00	10,883.41	4,613.41	262.84	4,619.82	0.00	0.00	0.00
15,800.00	89.80	360.00	10,883.75	4,713.41	262.84	4,719.76	0.00	0.00	0.00
15,900.00	89.80	360.00	10,884.09	4,813.41	262.84	4,819.69	0.00	0.00	0.00
16,000.00	89.80	360.00	10,884.43	4,913.41	262.84	4,919.63	0.00	0.00	0.00
16,100.00	89.80	360.00	10,884.77	5,013.41	262.84	5,019.57	0.00	0.00	0.00
16,200.00	89.80	360.00	10,885.11	5,113.41	262.84	5,119.50	0.00	0.00	0.00
16,300.00	89.80	360.00	10,885.46	5,213.41	262.84	5,219.44	0.00	0.00	0.00
16,400.00	89.80	360.00	10,885.80	5,313.41	262.84	5,319.38	0.00	0.00	0.00
16,500.00	89.80	360.00	10,886.14	5,413.40	262.84	5,419.31	0.00	0.00	0.00
16,600.00	89.80	360.00	10,886.48	5,513.40	262.84	5,519.25	0.00	0.00	0.00
16,700.00	89.80	360.00	10,886.82	5,613.40	262.84	5,619.19	0.00	0.00	0.00
16,800.00	89.80	360.00	10,887.16	5,713.40	262.84	5,719.12	0.00	0.00	0.00
16,900.00	89.80	360.00	10,887.50	5,813.40	262.84	5,819.06	0.00	0.00	0.00
17,000.00	89.80	360.00	10,887.84	5,913.40	262.84	5,919.00	0.00	0.00	0.00
17,100.00	89.80	360.00	10,888.18	6,013.40	262.84	6,018.94	0.00	0.00	0.00
17,200.00	89.80	360.00	10,888.52	6,113.40	262.84	6,118.87	0.00	0.00	0.00
17,300.00	89.80	360.00	10,888.87	6,213.40	262.84	6,218.81	0.00	0.00	0.00
17,400.00	89.80	360.00	10,889.21	6,313.40	262.84	6,318.75	0.00	0.00	0.00
17,500.00	89.80	360.00	10,889.55	6,413.40	262.84	6,418.68	0.00	0.00	0.00
17,600.00	89.80	360.00	10,889.89	6,513.40	262.84	6,518.62	0.00	0.00	0.00
17,700.00	89.80	360.00	10,890.23	6,613.40	262.84	6,618.56	0.00	0.00	0.00
17,800.00	89.80	360.00	10,890.57	6,713.40	262.84	6,718.49	0.00	0.00	0.00
17,900.00	89.80	360.00	10,890.91	6,813.40	262.84	6,818.43	0.00	0.00	0.00
18,000.00	89.80	360.00	10,891.25	6,913.40	262.84	6,918.37	0.00	0.00	0.00
18,100.00	89.80	360.00	10,891.59	7,013.40	262.84	7,018.30	0.00	0.00	0.00
18,200.00	89.80	360.00	10,891.93	7,113.39	262.84	7,118.24	0.00	0.00	0.00
18,300.00	89.80	360.00	10,892.28	7,213.39	262.84	7,218.18	0.00	0.00	0.00
18,400.00	89.80	360.00	10,892.62	7,313.39	262.84	7,318.11	0.00	0.00	0.00
18,500.00	89.80	360.00	10,892.96	7,413.39	262.84	7,418.05	0.00	0.00	0.00
18,512.48	89.80	360.00	10,893.00	7,425.87	262.84	7,430.52	0.00	0.00	0.00

PBHL (SM 736H)

Design Targets

Target Name	Dip Angle (°)	Dip Dir (°)	TVD (usft)	N/E (usft)	E/W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL (SM 736H) - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	456,837.83	637,646.02	32° 15' 19.9379 N	104° 1' 18.4160 W
PBHL (SM 736H) - plan hits target center - Point	0.00	0.00	10,893.00	7,425.87	262.84	464,263.70	637,908.86	32° 16' 33.4157 N	104° 1' 15.1033 W

LEAM Drilling Services

Planning Report

Database:	EDM 5000.1 Multi User Db	Local Coordinate Reference:	Well Spud Muffin 31-30 736H
Company:	Devon Energy	MD Reference:	2960.0' GE + 25' KB @ 2985.00usft
Project:	Eddy County, NM (NAD-83)	MD Reference:	2960.0' GE + 25' KB @ 2985.00usft
Site:	Spud Muffin 31-30	North Reference:	Grid
Well:	Spud Muffin 31-30 736H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		