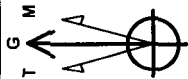


Devon Energy

Project: Eddy County, NM (NAD-83)
 Site: Spud Muffin 31-30
 Well: Spud Muffin 31-30 735H
 Wellbore: OH
 Design: Plan #1

2962.7 GE + 25 KB @ 2987.70usft
 Ground Level: 2962.70



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

30-015-44754

**NM OIL CONSERVATION
 ARTESIA DISTRICT**

FEB 27 2018

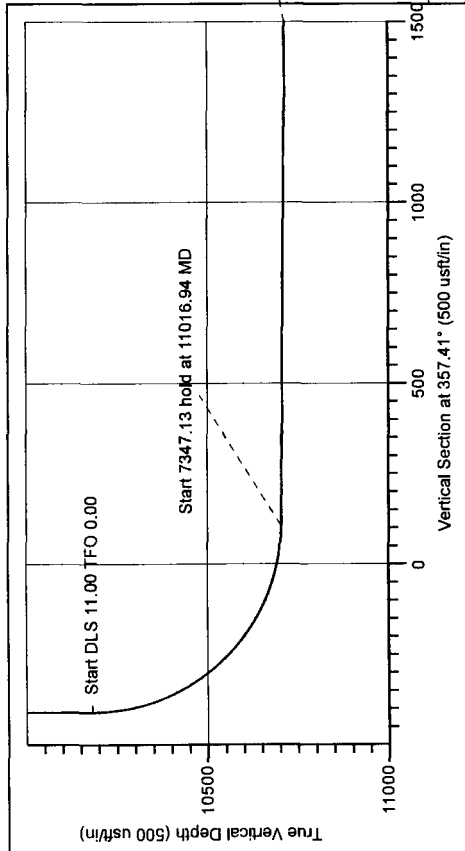
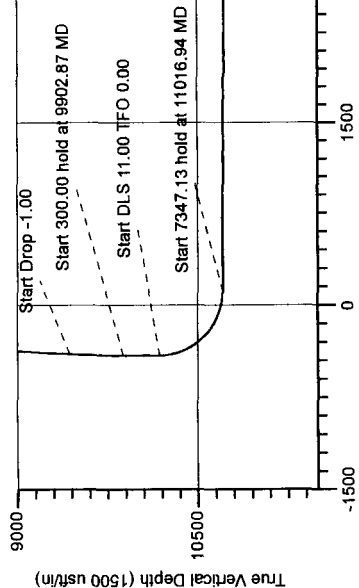
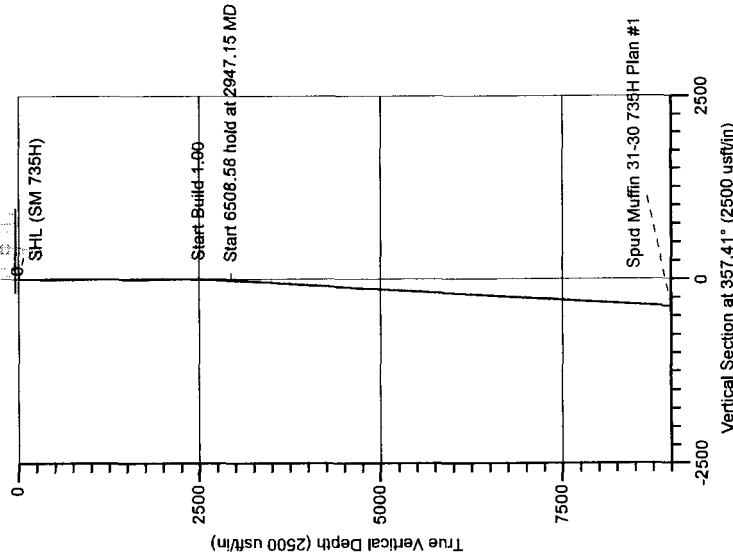
RECEIVED

SECTION DETAILS

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	
2947.15	4.47	218.40	2946.69	-13.67	0.00	0.00	0.00	0.00	
9455.72	4.47	218.40	9435.46	-11.33	-326.02	1.00	218.40	-13.16	
9902.87	0.00	0.00	9882.15	-425.00	-336.85	1.00	0.00	-396.16	
10202.87	89.55	0.00	10182.15	-425.00	-336.85	1.00	180.00	-409.33	
11016.94	89.55	0.00	10703.00	91.76	-336.85	11.00	0.00	-106.90	
18364.07	89.55	0.00	10761.00	7438.66	-336.85	0.00	0.00	7446.28	

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL (SM 735H)	0.00	0.00	0.00	456838.31	637585.99	32° 15' 19.9444 N	104° 1' 19.1151 W
PBHL (SM 735H)	10761.00	7438.66	-336.85	464276.97	637249.14	32° 16' 33.5659 N	104° 1' 22.7874 W

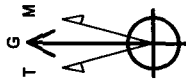


LEAM DRILLING SYSTEMS LLC
 2010 East Davis, Conroe, Texas 77301
 Phone: 936/756-7577, Fax: 936/756-7595

Plan: Plan #1 (Spud Muffin 31-30 735H/OH)
 Created By: Dustin Ault
 Date: 17:30, February 12 2018
 Approved: _____
 Date: _____

Devon Energy
 Project: Eddy County, NM (NAD-83)
 Site: Spud Muffin 31-30
 Well: Spud Muffin 31-30 735H
 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



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

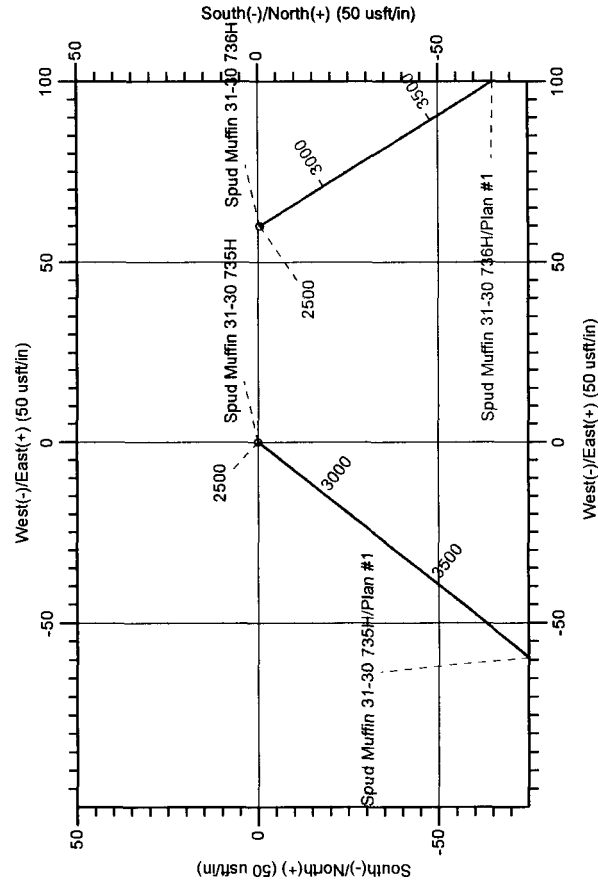
devon

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL (SM 735H)	10761.00	7438.66	-336.85	464276.97	637249.14	32° 16' 33.5659 N	104° 1' 22.7874 W
SHL (SM 735H)	0.00	0.00	0.00	456838.31	637585.99	32° 15' 19.9444 N	104° 1' 19.1151 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSecl	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	
2947.15	4.47	218.40	2946.69	-13.67	-10.83	1.00	218.40	-13.16	
9455.72	4.47	218.40	9435.46	-411.33	-326.02	0.00	0.00	-396.16	
9902.87	0.00	0.00	9882.15	-425.00	-336.85	1.00	180.00	-409.33	
10202.87	0.00	0.00	10182.15	-425.00	-336.85	0.00	0.00	-409.33	
11016.94	89.55	0.00	10703.00	91.76	-336.85	11.00	0.00	106.90	
18364.07	89.55	0.00	10761.00	7438.66	-336.85	0.00	0.00	7446.28	



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 735H/OH)
 Created By: Dustin Ault
 Date: 17:32, February 12 2018
 Approved: _____
 Date: _____

Devon Energy

Eddy County, NM (NAD-83)

Spud Muffin 31-30

Spud Muffin 31-30 735H

OH

Plan: Plan #1

Standard Planning Report

12 February, 2018

LEAM Drilling Services

Planning Report

Database:	EDM 5000.1 Multi User Db	Local Coordinates Reference:	Well Spud Muffin 31-30 735H
Company:	Devon Energy	TVL Reference:	2962.7' GE + 25' KB @ 2987.70usft
Project:	Eddy County, NM (NAD-83)	MD Reference:	2962.7' GE + 25' KB @ 2987.70usft
Site:	Spud Muffin 31-30	North Reference:	Grid
Well:	Spud Muffin 31-30 735H	Survey Calculations 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
From:	Map	Easting:	637,646.02 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 15' 19.9379 N
		Longitude:	104° 1' 18.4160 W
		Grid Convergence:	0.17 °

Well:	Spud Muffin 31-30 735H		
Well Position	+N-S	0.48 usft	Northing:
	+E-W	-60.03 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Latitude:	32° 15' 19.9444 N
		Longitude:	104° 1' 19.1151 W
		Ground Level:	2,962.70 usft

Wellbore:	OH		
Magnetic:	Model Name	Sample Date	Declination
	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 (TVL)	+N-S	Direction
	(usft)	(usft)	(°)
	0.00	0.00	357.41

Plan Section:										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	True Azimuth (°)	True Azimuth (°)	Position Error (ft)	Depth Error (ft)	Depth Error (ft)	Depth Error (ft)	Target
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	
2,947.15	4.47	218.40	2,946.69	-13.67	-10.83	1.00	1.00	0.00	218.40	
9,455.72	4.47	218.40	9,435.46	-411.33	-326.02	0.00	0.00	0.00	0.00	
9,902.87	0.00	0.00	9,882.15	-425.00	-336.85	1.00	-1.00	0.00	180.00	
10,202.87	0.00	0.00	10,182.15	-425.00	-336.85	0.00	0.00	0.00	0.00	
11,016.94	89.55	0.00	10,703.00	91.76	-336.85	11.00	11.00	0.00	0.00	
18,364.07	89.55	0.00	10,761.00	7,438.66	-336.85	0.00	0.00	0.00	0.00	PBHL (SM 735H)

LEAM Drilling Services

Planning Report

Database	EDM 5000.1 Multi User Db	Local Co-ordinate Reference	Well Spud Muffin 31-30 735H
Company	Devon Energy	W/O Reference	2962.7' GE + 25' KB @ 2987.70usft
Project	Eddy County, NM (NAD-83)	MD Reference	2962.7' GE + 25' KB @ 2987.70usft
Site	Spud Muffin 31-30	North Reference	Grid
Well	Spud Muffin 31-30 735H	Survey Method/Type	Minimum Curvature
Wellbore	OH		
Design	Plan #1		

Planned Survey									
Measured Depth (usft)	Interval (ft)	Interval (ft)	Vertical Depth (usft)	W/O (usft)	W/O (usft)	W/O (usft)	Depth (usft)	Depth (usft)	W/O (usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SHL (SM 735H)									
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	218.40	2,599.99	-0.68	-0.54	-0.66	1.00	1.00	0.00
2,700.00	2.00	218.40	2,699.96	-2.74	-2.17	-2.63	1.00	1.00	0.00
2,800.00	3.00	218.40	2,799.86	-6.15	-4.88	-5.93	1.00	1.00	0.00
2,900.00	4.00	218.40	2,899.68	-10.94	-8.67	-10.53	1.00	1.00	0.00
2,947.15	4.47	218.40	2,946.69	-13.67	-10.83	-13.16	1.00	1.00	0.00
3,000.00	4.47	218.40	2,999.39	-16.90	-13.39	-16.27	0.00	0.00	0.00
3,100.00	4.47	218.40	3,099.08	-23.01	-18.23	-22.16	0.00	0.00	0.00
3,200.00	4.47	218.40	3,198.78	-29.12	-23.08	-28.04	0.00	0.00	0.00
3,300.00	4.47	218.40	3,298.47	-35.23	-27.92	-33.93	0.00	0.00	0.00
3,400.00	4.47	218.40	3,398.17	-41.34	-32.76	-39.81	0.00	0.00	0.00
3,500.00	4.47	218.40	3,497.86	-47.45	-37.60	-45.70	0.00	0.00	0.00
3,600.00	4.47	218.40	3,597.56	-53.56	-42.45	-51.58	0.00	0.00	0.00
3,700.00	4.47	218.40	3,697.25	-59.67	-47.29	-57.47	0.00	0.00	0.00
3,800.00	4.47	218.40	3,796.95	-65.78	-52.13	-63.35	0.00	0.00	0.00
3,900.00	4.47	218.40	3,896.65	-71.89	-56.98	-69.23	0.00	0.00	0.00
4,000.00	4.47	218.40	3,996.34	-78.00	-61.82	-75.12	0.00	0.00	0.00
4,100.00	4.47	218.40	4,096.04	-84.10	-66.66	-81.00	0.00	0.00	0.00
4,200.00	4.47	218.40	4,195.73	-90.21	-71.50	-86.89	0.00	0.00	0.00
4,300.00	4.47	218.40	4,295.43	-96.32	-76.35	-92.77	0.00	0.00	0.00
4,400.00	4.47	218.40	4,395.12	-102.43	-81.19	-98.66	0.00	0.00	0.00
4,500.00	4.47	218.40	4,494.82	-108.54	-86.03	-104.54	0.00	0.00	0.00
4,600.00	4.47	218.40	4,594.52	-114.65	-90.87	-110.43	0.00	0.00	0.00
4,700.00	4.47	218.40	4,694.21	-120.76	-95.72	-116.31	0.00	0.00	0.00
4,800.00	4.47	218.40	4,793.91	-126.87	-100.56	-122.20	0.00	0.00	0.00
4,900.00	4.47	218.40	4,893.60	-132.98	-105.40	-128.08	0.00	0.00	0.00
5,000.00	4.47	218.40	4,993.30	-139.09	-110.24	-133.96	0.00	0.00	0.00
5,100.00	4.47	218.40	5,092.99	-145.20	-115.09	-139.85	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 735H
Company:	Devon Energy	North American:	2962.7' GE + 25' KB @ 2987.70usft
Project:	Eddy County, NM (NAD-83)	MD Reference:	2962.7' GE + 25' KB @ 2987.70usft
Site:	Spud Muffin 31-30	North American:	Grid
Well:	Spud Muffin 31-30 735H	Curvature 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)	Depth Rate (ft/100usft)	Build Rate (ft/100usft)	Turn Rate (ft/100usft)	
5,200.00	4.47	218.40	5,192.69	-151.31	-119.93	-145.73	0.00	0.00	0.00	
5,300.00	4.47	218.40	5,292.38	-157.42	-124.77	-151.62	0.00	0.00	0.00	
5,400.00	4.47	218.40	5,392.08	-163.53	-129.61	-157.50	0.00	0.00	0.00	
5,500.00	4.47	218.40	5,491.78	-169.64	-134.46	-163.39	0.00	0.00	0.00	
5,600.00	4.47	218.40	5,591.47	-175.75	-139.30	-169.27	0.00	0.00	0.00	
5,700.00	4.47	218.40	5,691.17	-181.86	-144.14	-175.16	0.00	0.00	0.00	
5,800.00	4.47	218.40	5,790.86	-187.97	-148.99	-181.04	0.00	0.00	0.00	
5,900.00	4.47	218.40	5,890.56	-194.08	-153.83	-186.93	0.00	0.00	0.00	
6,000.00	4.47	218.40	5,990.25	-200.19	-158.67	-192.81	0.00	0.00	0.00	
6,100.00	4.47	218.40	6,089.95	-206.30	-163.51	-198.69	0.00	0.00	0.00	
6,200.00	4.47	218.40	6,189.65	-212.41	-168.36	-204.58	0.00	0.00	0.00	
6,300.00	4.47	218.40	6,289.34	-218.52	-173.20	-210.46	0.00	0.00	0.00	
6,400.00	4.47	218.40	6,389.04	-224.63	-178.04	-216.35	0.00	0.00	0.00	
6,500.00	4.47	218.40	6,488.73	-230.74	-182.88	-222.23	0.00	0.00	0.00	
6,600.00	4.47	218.40	6,588.43	-236.85	-187.73	-228.12	0.00	0.00	0.00	
6,700.00	4.47	218.40	6,688.12	-242.96	-192.57	-234.00	0.00	0.00	0.00	
6,800.00	4.47	218.40	6,787.82	-249.07	-197.41	-239.89	0.00	0.00	0.00	
6,900.00	4.47	218.40	6,887.52	-255.18	-202.25	-245.77	0.00	0.00	0.00	
7,000.00	4.47	218.40	6,987.21	-261.29	-207.10	-251.66	0.00	0.00	0.00	
7,100.00	4.47	218.40	7,086.91	-267.40	-211.94	-257.54	0.00	0.00	0.00	
7,200.00	4.47	218.40	7,186.60	-273.51	-216.78	-263.42	0.00	0.00	0.00	
7,300.00	4.47	218.40	7,286.30	-279.62	-221.62	-269.31	0.00	0.00	0.00	
7,400.00	4.47	218.40	7,385.99	-285.73	-226.47	-275.19	0.00	0.00	0.00	
7,500.00	4.47	218.40	7,485.69	-291.84	-231.31	-281.08	0.00	0.00	0.00	
7,600.00	4.47	218.40	7,585.38	-297.95	-236.15	-286.96	0.00	0.00	0.00	
7,700.00	4.47	218.40	7,685.08	-304.06	-240.99	-292.85	0.00	0.00	0.00	
7,800.00	4.47	218.40	7,784.78	-310.17	-245.84	-298.73	0.00	0.00	0.00	
7,900.00	4.47	218.40	7,884.47	-316.28	-250.68	-304.62	0.00	0.00	0.00	
8,000.00	4.47	218.40	7,984.17	-322.39	-255.52	-310.50	0.00	0.00	0.00	
8,100.00	4.47	218.40	8,083.86	-328.50	-260.37	-316.39	0.00	0.00	0.00	
8,200.00	4.47	218.40	8,183.56	-334.61	-265.21	-322.27	0.00	0.00	0.00	
8,300.00	4.47	218.40	8,283.25	-340.72	-270.05	-328.15	0.00	0.00	0.00	
8,400.00	4.47	218.40	8,382.95	-346.83	-274.89	-334.04	0.00	0.00	0.00	
8,500.00	4.47	218.40	8,482.65	-352.94	-279.74	-339.92	0.00	0.00	0.00	
8,600.00	4.47	218.40	8,582.34	-359.05	-284.58	-345.81	0.00	0.00	0.00	
8,700.00	4.47	218.40	8,682.04	-365.16	-289.42	-351.69	0.00	0.00	0.00	
8,800.00	4.47	218.40	8,781.73	-371.27	-294.26	-357.58	0.00	0.00	0.00	
8,900.00	4.47	218.40	8,881.43	-377.38	-299.11	-363.46	0.00	0.00	0.00	
9,000.00	4.47	218.40	8,981.12	-383.49	-303.95	-369.35	0.00	0.00	0.00	
9,100.00	4.47	218.40	9,080.82	-389.60	-308.79	-375.23	0.00	0.00	0.00	
9,200.00	4.47	218.40	9,180.51	-395.71	-313.63	-381.12	0.00	0.00	0.00	
9,300.00	4.47	218.40	9,280.21	-401.82	-318.48	-387.00	0.00	0.00	0.00	
9,400.00	4.47	218.40	9,379.91	-407.93	-323.32	-392.88	0.00	0.00	0.00	
9,455.72	4.47	218.40	9,435.46	-411.33	-326.02	-396.16	0.00	0.00	0.00	
9,500.00	4.03	218.40	9,479.61	-413.90	-328.06	-398.64	1.00	-1.00	0.00	
9,600.00	3.03	218.40	9,579.42	-418.73	-331.88	-403.29	1.00	-1.00	0.00	
9,700.00	2.03	218.40	9,679.32	-422.19	-334.62	-406.62	1.00	-1.00	0.00	
9,800.00	1.03	218.40	9,779.29	-424.28	-336.28	-408.63	1.00	-1.00	0.00	
9,902.87	0.00	0.00	9,882.15	-425.00	-336.85	-409.33	1.00	-1.00	0.00	
10,000.00	0.00	0.00	9,979.28	-425.00	-336.85	-409.33	0.00	0.00	0.00	
10,100.00	0.00	0.00	10,079.28	-425.00	-336.85	-409.33	0.00	0.00	0.00	
10,202.87	0.00	0.00	10,182.15	-425.00	-336.85	-409.33	0.00	0.00	0.00	
10,250.00	5.18	0.00	10,229.22	-422.87	-336.85	-407.20	11.00	11.00	0.00	
10,300.00	10.68	0.00	10,278.72	-415.97	-336.85	-400.31	11.00	11.00	0.00	

LEAM Drilling Services

Planning Report

Database:	EDM 5000.1 Multi User Db	Local Co-ordinate Reference:	Well Spud Muffin 31-30 735H
Company:	Devon Energy	North Reference:	2962.7' GE + 25' KB @ 2987.70usft
Project:	Eddy County, NM (NAD-83)	North Reference:	2962.7' GE + 25' KB @ 2987.70usft
Site:	Spud Muffin 31-30	North Reference:	Grid
Well:	Spud Muffin 31-30 735H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey										
Measured Depth (ft)	Interval (ft)	Interval (ft)	Vertical Depth (ft)	True Vertical Depth (ft)	True Vertical Depth (ft)	Vertical Depth (ft)	Depth (ft)	Build Rate (ft/100ft)	Build Rate (ft/100ft)	Sum Rate (ft/100ft)
10,350.00	16.18	0.00	10,327.33	-404.36	-336.85	-388.71	11.00	11.00	0.00	0.00
10,400.00	21.68	0.00	10,374.61	-388.14	-336.85	-372.50	11.00	11.00	0.00	0.00
10,450.00	27.18	0.00	10,420.11	-367.46	-336.85	-351.85	11.00	11.00	0.00	0.00
10,500.00	32.68	0.00	10,463.43	-342.52	-336.85	-326.93	11.00	11.00	0.00	0.00
10,550.00	38.18	0.00	10,504.15	-313.55	-336.85	-297.99	11.00	11.00	0.00	0.00
10,600.00	43.68	0.00	10,541.91	-280.80	-336.85	-265.27	11.00	11.00	0.00	0.00
10,650.00	49.18	0.00	10,576.35	-244.58	-336.85	-229.09	11.00	11.00	0.00	0.00
10,700.00	54.68	0.00	10,607.17	-205.23	-336.85	-189.78	11.00	11.00	0.00	0.00
10,750.00	60.18	0.00	10,634.07	-163.11	-336.85	-147.71	11.00	11.00	0.00	0.00
10,800.00	65.68	0.00	10,656.82	-118.60	-336.85	-103.24	11.00	11.00	0.00	0.00
10,850.00	71.18	0.00	10,675.19	-72.12	-336.85	-56.81	11.00	11.00	0.00	0.00
10,900.00	76.68	0.00	10,689.02	-24.09	-336.85	-8.83	11.00	11.00	0.00	0.00
10,950.00	82.18	0.00	10,698.18	25.04	-336.85	40.25	11.00	11.00	0.00	0.00
11,000.00	87.68	0.00	10,702.60	74.83	-336.85	89.99	11.00	11.00	0.00	0.00
11,016.94	89.55	0.00	10,703.00	91.76	-336.85	106.90	11.00	11.00	0.00	0.00
11,100.00	89.55	0.00	10,703.66	174.82	-336.85	189.88	0.00	0.00	0.00	0.00
11,200.00	89.55	0.00	10,704.45	274.82	-336.85	289.77	0.00	0.00	0.00	0.00
11,300.00	89.55	0.00	10,705.24	374.81	-336.85	389.67	0.00	0.00	0.00	0.00
11,400.00	89.55	0.00	10,706.03	474.81	-336.85	489.56	0.00	0.00	0.00	0.00
11,500.00	89.55	0.00	10,706.82	574.81	-336.85	589.46	0.00	0.00	0.00	0.00
11,600.00	89.55	0.00	10,707.61	674.80	-336.85	689.35	0.00	0.00	0.00	0.00
11,700.00	89.55	0.00	10,708.40	774.80	-336.85	789.24	0.00	0.00	0.00	0.00
11,800.00	89.55	0.00	10,709.19	874.80	-336.85	889.14	0.00	0.00	0.00	0.00
11,900.00	89.55	0.00	10,709.98	974.79	-336.85	989.03	0.00	0.00	0.00	0.00
12,000.00	89.55	0.00	10,710.76	1,074.79	-336.85	1,088.93	0.00	0.00	0.00	0.00
12,100.00	89.55	0.00	10,711.55	1,174.79	-336.85	1,188.82	0.00	0.00	0.00	0.00
12,200.00	89.55	0.00	10,712.34	1,274.78	-336.85	1,288.72	0.00	0.00	0.00	0.00
12,300.00	89.55	0.00	10,713.13	1,374.78	-336.85	1,388.61	0.00	0.00	0.00	0.00
12,400.00	89.55	0.00	10,713.92	1,474.78	-336.85	1,488.51	0.00	0.00	0.00	0.00
12,500.00	89.55	0.00	10,714.71	1,574.78	-336.85	1,588.40	0.00	0.00	0.00	0.00
12,600.00	89.55	0.00	10,715.50	1,674.77	-336.85	1,688.30	0.00	0.00	0.00	0.00
12,700.00	89.55	0.00	10,716.29	1,774.77	-336.85	1,788.19	0.00	0.00	0.00	0.00
12,800.00	89.55	0.00	10,717.08	1,874.77	-336.85	1,888.08	0.00	0.00	0.00	0.00
12,900.00	89.55	0.00	10,717.87	1,974.76	-336.85	1,987.98	0.00	0.00	0.00	0.00
13,000.00	89.55	0.00	10,718.66	2,074.76	-336.85	2,087.87	0.00	0.00	0.00	0.00
13,100.00	89.55	0.00	10,719.45	2,174.76	-336.85	2,187.77	0.00	0.00	0.00	0.00
13,200.00	89.55	0.00	10,720.24	2,274.75	-336.85	2,287.66	0.00	0.00	0.00	0.00
13,300.00	89.55	0.00	10,721.03	2,374.75	-336.85	2,387.56	0.00	0.00	0.00	0.00
13,400.00	89.55	0.00	10,721.82	2,474.75	-336.85	2,487.45	0.00	0.00	0.00	0.00
13,500.00	89.55	0.00	10,722.61	2,574.74	-336.85	2,587.35	0.00	0.00	0.00	0.00
13,600.00	89.55	0.00	10,723.39	2,674.74	-336.85	2,687.24	0.00	0.00	0.00	0.00
13,700.00	89.55	0.00	10,724.18	2,774.74	-336.85	2,787.14	0.00	0.00	0.00	0.00
13,800.00	89.55	0.00	10,724.97	2,874.73	-336.85	2,887.03	0.00	0.00	0.00	0.00
13,900.00	89.55	0.00	10,725.76	2,974.73	-336.85	2,986.92	0.00	0.00	0.00	0.00
14,000.00	89.55	0.00	10,726.55	3,074.73	-336.85	3,086.82	0.00	0.00	0.00	0.00
14,100.00	89.55	0.00	10,727.34	3,174.73	-336.85	3,186.71	0.00	0.00	0.00	0.00
14,200.00	89.55	0.00	10,728.13	3,274.72	-336.85	3,286.61	0.00	0.00	0.00	0.00
14,300.00	89.55	0.00	10,728.92	3,374.72	-336.85	3,386.50	0.00	0.00	0.00	0.00
14,400.00	89.55	0.00	10,729.71	3,474.72	-336.85	3,486.40	0.00	0.00	0.00	0.00
14,500.00	89.55	0.00	10,730.50	3,574.71	-336.85	3,586.29	0.00	0.00	0.00	0.00
14,600.00	89.55	0.00	10,731.29	3,674.71	-336.85	3,686.19	0.00	0.00	0.00	0.00
14,700.00	89.55	0.00	10,732.08	3,774.71	-336.85	3,786.08	0.00	0.00	0.00	0.00
14,800.00	89.55	0.00	10,732.87	3,874.70	-336.85	3,885.97	0.00	0.00	0.00	0.00
14,900.00	89.55	0.00	10,733.66	3,974.70	-336.85	3,985.87	0.00	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 735H
Company:	Devon Energy	NAD Reference:	2962.7' GE + 25' KB @ 2987.70usft
Project:	Eddy County, NM (NAD-83)	MD Reference:	2962.7' GE + 25' KB @ 2987.70usft
Site:	Spud Muffin 31-30	North Reference:	Grid
Well:	Spud Muffin 31-30 735H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	NVA (usft)	TEAN (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
15,000.00	89.55	0.00	10,734.45	4,074.70	-336.85	4,085.76	0.00	0.00	0.00	
15,100.00	89.55	0.00	10,735.23	4,174.69	-336.85	4,185.66	0.00	0.00	0.00	
15,200.00	89.55	0.00	10,736.02	4,274.69	-336.85	4,285.55	0.00	0.00	0.00	
15,300.00	89.55	0.00	10,736.81	4,374.69	-336.85	4,385.45	0.00	0.00	0.00	
15,400.00	89.55	0.00	10,737.60	4,474.68	-336.85	4,485.34	0.00	0.00	0.00	
15,500.00	89.55	0.00	10,738.39	4,574.68	-336.85	4,585.24	0.00	0.00	0.00	
15,600.00	89.55	0.00	10,739.18	4,674.68	-336.85	4,685.13	0.00	0.00	0.00	
15,700.00	89.55	0.00	10,739.97	4,774.68	-336.85	4,785.03	0.00	0.00	0.00	
15,800.00	89.55	0.00	10,740.76	4,874.67	-336.85	4,884.92	0.00	0.00	0.00	
15,900.00	89.55	0.00	10,741.55	4,974.67	-336.85	4,984.81	0.00	0.00	0.00	
16,000.00	89.55	0.00	10,742.34	5,074.67	-336.85	5,084.71	0.00	0.00	0.00	
16,100.00	89.55	0.00	10,743.13	5,174.66	-336.85	5,184.60	0.00	0.00	0.00	
16,200.00	89.55	0.00	10,743.92	5,274.66	-336.85	5,284.50	0.00	0.00	0.00	
16,300.00	89.55	0.00	10,744.71	5,374.66	-336.85	5,384.39	0.00	0.00	0.00	
16,400.00	89.55	0.00	10,745.50	5,474.65	-336.85	5,484.29	0.00	0.00	0.00	
16,500.00	89.55	0.00	10,746.29	5,574.65	-336.85	5,584.18	0.00	0.00	0.00	
16,600.00	89.55	0.00	10,747.08	5,674.65	-336.85	5,684.08	0.00	0.00	0.00	
16,700.00	89.55	0.00	10,747.86	5,774.64	-336.85	5,783.97	0.00	0.00	0.00	
16,800.00	89.55	0.00	10,748.65	5,874.64	-336.85	5,883.87	0.00	0.00	0.00	
16,900.00	89.55	0.00	10,749.44	5,974.64	-336.85	5,983.76	0.00	0.00	0.00	
17,000.00	89.55	0.00	10,750.23	6,074.63	-336.85	6,083.65	0.00	0.00	0.00	
17,100.00	89.55	0.00	10,751.02	6,174.63	-336.85	6,183.55	0.00	0.00	0.00	
17,200.00	89.55	0.00	10,751.81	6,274.63	-336.85	6,283.44	0.00	0.00	0.00	
17,300.00	89.55	0.00	10,752.60	6,374.63	-336.85	6,383.34	0.00	0.00	0.00	
17,400.00	89.55	0.00	10,753.39	6,474.62	-336.85	6,483.23	0.00	0.00	0.00	
17,500.00	89.55	0.00	10,754.18	6,574.62	-336.85	6,583.13	0.00	0.00	0.00	
17,600.00	89.55	0.00	10,754.97	6,674.62	-336.85	6,683.02	0.00	0.00	0.00	
17,700.00	89.55	0.00	10,755.76	6,774.61	-336.85	6,782.92	0.00	0.00	0.00	
17,800.00	89.55	0.00	10,756.55	6,874.61	-336.85	6,882.81	0.00	0.00	0.00	
17,900.00	89.55	0.00	10,757.34	6,974.61	-336.85	6,982.70	0.00	0.00	0.00	
18,000.00	89.55	0.00	10,758.13	7,074.60	-336.85	7,082.60	0.00	0.00	0.00	
18,100.00	89.55	0.00	10,758.92	7,174.60	-336.85	7,182.49	0.00	0.00	0.00	
18,200.00	89.55	0.00	10,759.71	7,274.60	-336.85	7,282.39	0.00	0.00	0.00	
18,300.00	89.55	0.00	10,760.49	7,374.59	-336.85	7,382.28	0.00	0.00	0.00	
18,364.07	89.55	0.00	10,761.00	7,438.66	-336.85	7,446.28	0.00	0.00	0.00	
PBHL (SM 735H)										

Design Targets										
Target Name	Horizontal Target Shape	Dogleg (°)	Dip Pl (°)	NVA (usft)	TEAN (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
SHL (SM 735H)	- plan hits target center	0.00	0.00	0.00	0.00	456,838.31	637,585.99	32° 15' 19.9444 N	104° 1' 19.1151 W	
	- Point									
PBHL (SM 735H)	- plan hits target center	0.00	0.00	10,761.00	7,438.66	-336.85	464,276.97	32° 16' 33.5659 N	104° 1' 22.7874 W	
	- Point									