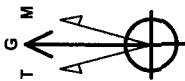


Devon Energy

Project: Eddy County, NM (NAD-83)
 Site: Spud Muffin 31-30
 Well: Spud Muffin 31-30 734H
 Wellbore: OH
 Design: Plan #1

2961.2 GE + 25 KB @ 2966.20usft
 Ground Level: 2961.20

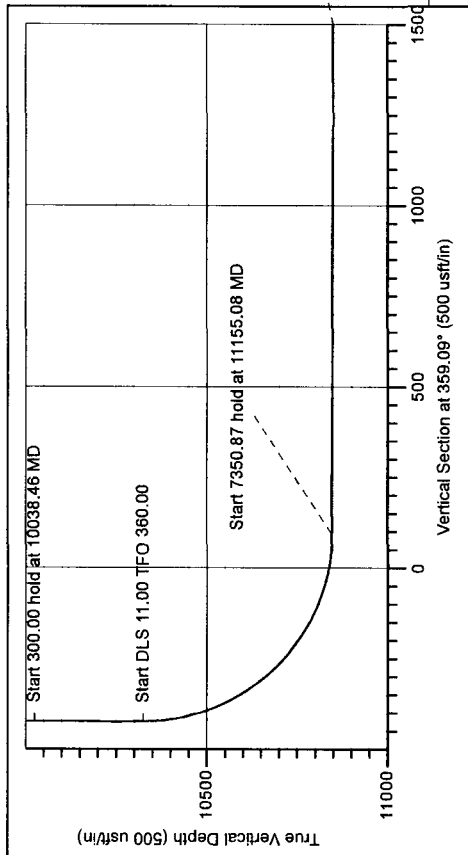
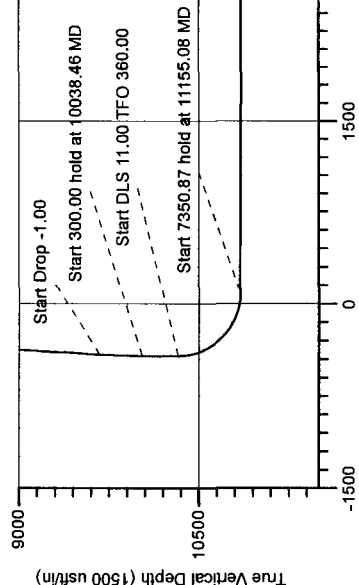
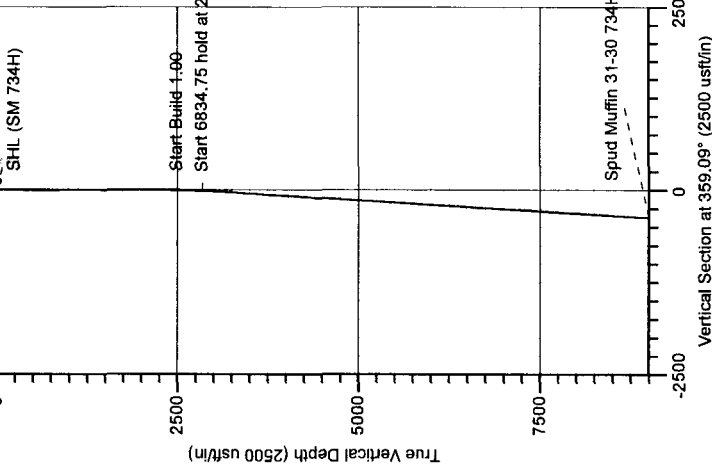


Azimuths to Grid North
 True North: -0.17°
 Magnetic North: 7.02°
 Magnetic Field
 Strength: 48047.25nT
 Dip Angle: 60.05°
 Date: 2/12/2018
 Model: HDGM

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

30-015-44753



SECTION DETAILS

MD	Inc	Azi	+N/-S	+E/-W	Dleg	TFace	VFace	Appellation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2851.85	3.52	195.51	-10.41	-2.89	1.00	195.51	-10.36	
9686.60	3.52	195.51	-114.59	-115.03	0.00	0.00	-412.72	
10038.46	0.00	0.00	-425.00	-117.92	1.00	180.00	-423.08	
10338.46	0.00	0.00	-425.00	-117.92	0.00	0.00	-423.08	
11155.08	89.83	360.00	94.31	-117.92	11.00	360.00	96.17	
18505.95	89.83	360.00	7445.15	-117.92	0.00	0.00	7446.08	

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL (SM 734H)	10868.00	0.00	0.00	456943.64	636815.39	32° 15' 20.0191 N	104° 1' 28.0890 W
PBHL (SM 734H)	10868.00	0.00	0.00	456943.64	636815.39	32° 15' 20.0191 N	104° 1' 28.0890 W
				454288.79	636697.47	32° 16' 33.6986 N	104° 1' 29.2130 W

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NM OIL CONSERVATION
 ARTESIA DISTRICT

FEB 27 2018

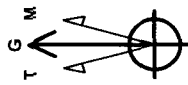


LEAM DRILLING SYSTEMS LLC
 2010 East Davis, Conroe, Texas 77301
 Phone: 936/756-7577, Fax: 936/756-7595

Plan: Plan #1 (Spud Muffin 31-30 734H/OH)
 Created By: Dustin Ault
 Date: 17.23. February 12 2018
 Approved: _____
 Date: _____

Devon Energy

Project: Eddy County, NM (NAD-83)
 Site: Spud Muffin 31-30
 Well: Spud Muffin 31-30 734H
 Wellbore: OH
 Design: Plan #1



Azimuths to Grid North
 True North: -0.17°
 Magnetic North: 7.02°
 Magnetic Field
 Strength: 48047.2snT
 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

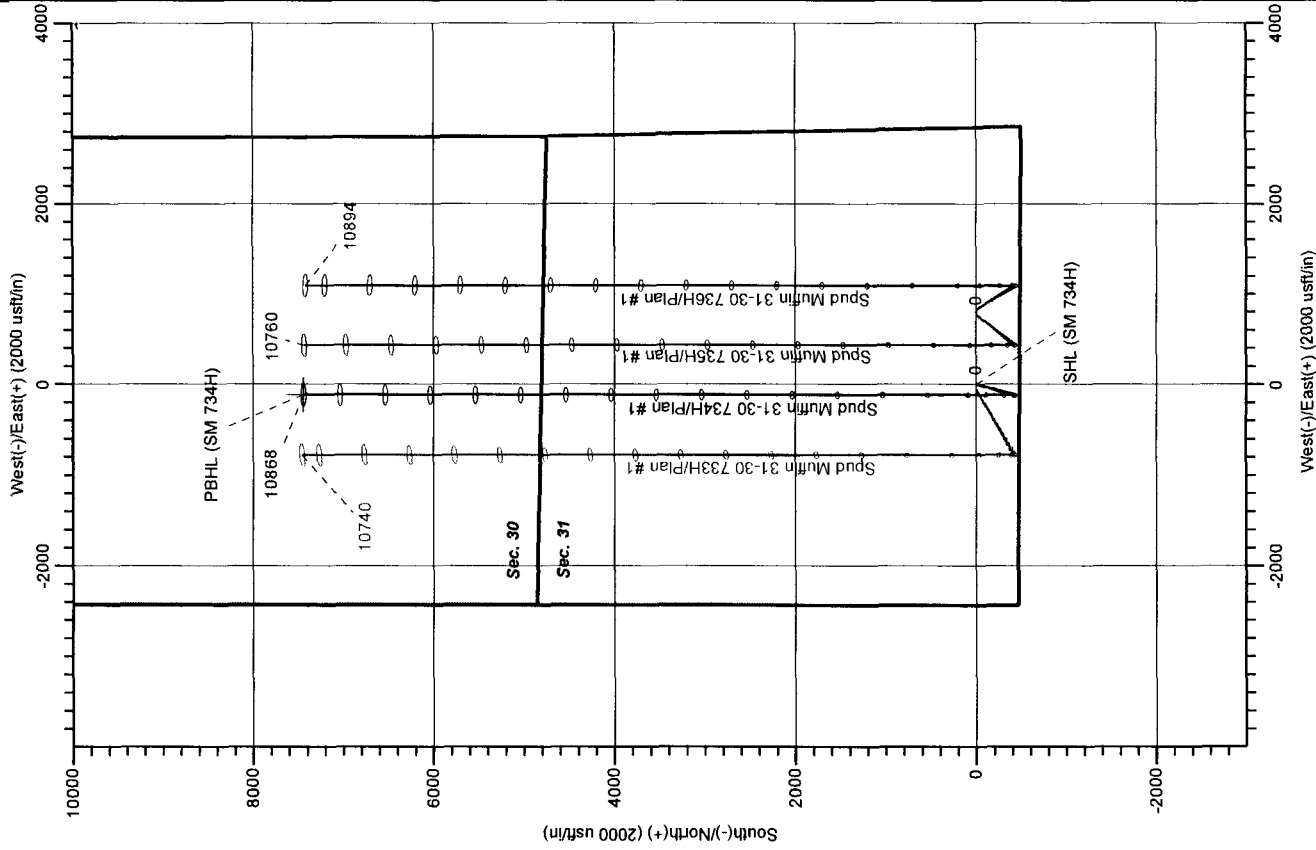
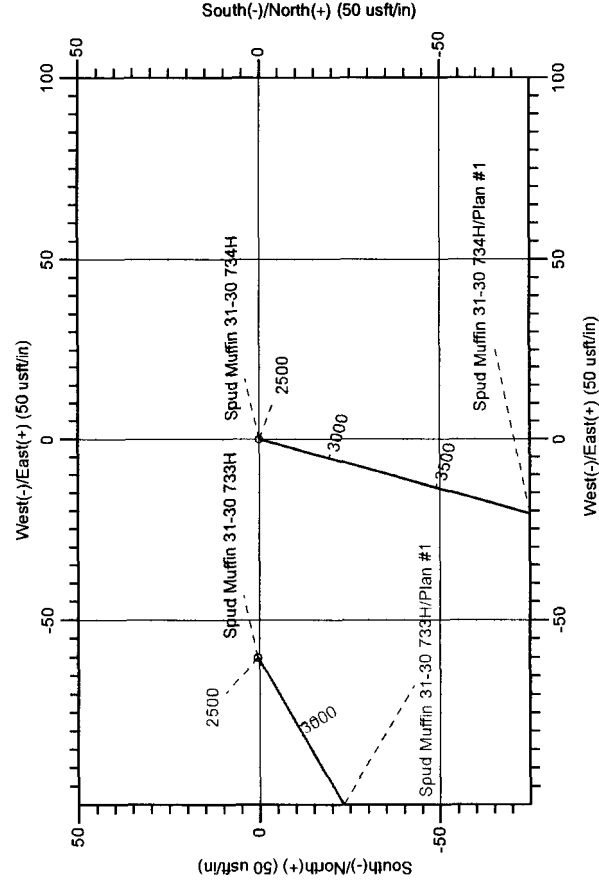
devon

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL (SM 734H)	10868.00	7445.15	-117.92	484288.79	636897.47	32° 16' 33.6986 N	104° 1' 29.2130 W
SHL (SM 734H)	0.00	0.00	0.00	456843.64	636815.39	32° 15' 20.0191 N	104° 1' 28.0890 W

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	
2851.85	3.52	195.51	2851.63	-10.41	-2.89	1.00	195.51	-10.36	
9686.60	3.52	195.51	9673.50	-414.59	-115.03	0.00	0.00	-412.72	
10038.46	0.00	0.00	10025.13	-425.00	-117.92	1.00	180.00	-423.08	
10338.46	0.00	0.00	10325.13	-425.00	-117.92	0.00	0.00	-423.08	
11155.08	89.83	360.00	10846.00	94.31	-117.92	11.00	360.00	96.17	
18505.95	89.83	360.00	10868.00	7445.15	-117.92	0.00	0.00	7446.08	



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 734H/OH)
 Created By: Dustin Ault
 Date: 17 Feb 2018
 Approved: _____
 Date: _____

Devon Energy

Eddy County, NM (NAD-83)

Spud Muffin 31-30

Spud Muffin 31-30 734H

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 734H
Company:	Devon Energy	TVD Reference:	2961.2' GE + 25' KB @ 2986.20usft
Project:	Eddy County, NM (NAD-83)	MD Reference:	2961.2' GE + 25' KB @ 2986.20usft
Site:	Spud Muffin 31-30	North Reference:	Grid
Well:	Spud Muffin 31-30 734H	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 734H					
Well Position	+N/-S	5.81 usft	Northing:	456,843.64 usft	Latitude:	32° 15' 20.0191 N
	+E/-W	-830.63 usft	Easting:	636,815.39 usft	Longitude:	104° 1' 28.0890 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	2,961.20 usft

Wellbore:	OH				
Magnetics:	Magnetic Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	2/12/2018	7.18	60.05	48,047

Design:	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)
	0.00	0.00	0.00	359.09

Measured Depth (usft)	Indic. Depth (ft)	Altitude (ft)	Vertical Depth (usft)	N-S (usft)	E-W (usft)	Dogleg Rate (°/100usft)	Bulk Rate (°/100usft)	Turn Rate (°/100usft)	TFO (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	
2,851.85	3.52	195.51	2,851.63	-10.41	-2.89	1.00	1.00	0.00	195.51	
9,686.60	3.52	195.51	9,673.50	-414.59	-115.03	0.00	0.00	0.00	0.00	
10,038.46	0.00	0.00	10,025.13	-425.00	-117.92	1.00	-1.00	0.00	180.00	
10,338.46	0.00	0.00	10,325.13	-425.00	-117.92	0.00	0.00	0.00	0.00	
11,155.08	89.83	360.00	10,846.00	94.31	-117.92	11.00	11.00	0.00	360.00	
18,505.95	89.83	360.00	10,868.00	7,445.15	-117.92	0.00	0.00	0.00	0.00	PBHL (SM 734H)

LEAM Drilling Services

Planning Report

Database:	EDM 5000.1 Multi User Db	Local Coordinate Reference:	Well Spud Muffin 31-30 734H
Company:	Devon Energy	VD Reference:	2961.2' GE + 25' KB @ 2986.20usft
Project:	Eddy County, NM (NAD-83)	MD Reference:	2961.2' GE + 25' KB @ 2986.20usft
Site:	Spud Muffin 31-30	North Reference:	Grid
Well:	Spud Muffin 31-30 734H	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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SHL (SM 734H)									
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	195.51	2,599.99	-0.84	-0.23	-0.84	1.00	1.00	0.00
2,700.00	2.00	195.51	2,699.96	-3.36	-0.93	-3.35	1.00	1.00	0.00
2,800.00	3.00	195.51	2,799.86	-7.57	-2.10	-7.53	1.00	1.00	0.00
2,851.85	3.52	195.51	2,851.63	-10.41	-2.89	-10.36	1.00	1.00	0.00
2,900.00	3.52	195.51	2,899.69	-13.25	-3.68	-13.19	0.00	0.00	0.00
3,000.00	3.52	195.51	2,999.50	-19.17	-5.32	-19.08	0.00	0.00	0.00
3,100.00	3.52	195.51	3,099.31	-25.08	-6.96	-24.97	0.00	0.00	0.00
3,200.00	3.52	195.51	3,199.12	-31.00	-8.60	-30.86	0.00	0.00	0.00
3,300.00	3.52	195.51	3,298.93	-36.91	-10.24	-36.74	0.00	0.00	0.00
3,400.00	3.52	195.51	3,398.75	-42.82	-11.88	-42.63	0.00	0.00	0.00
3,500.00	3.52	195.51	3,498.56	-48.74	-13.52	-48.52	0.00	0.00	0.00
3,600.00	3.52	195.51	3,598.37	-54.65	-15.16	-54.40	0.00	0.00	0.00
3,700.00	3.52	195.51	3,698.18	-60.56	-16.80	-60.29	0.00	0.00	0.00
3,800.00	3.52	195.51	3,797.99	-66.48	-18.44	-66.18	0.00	0.00	0.00
3,900.00	3.52	195.51	3,897.80	-72.39	-20.09	-72.06	0.00	0.00	0.00
4,000.00	3.52	195.51	3,997.61	-78.30	-21.73	-77.95	0.00	0.00	0.00
4,100.00	3.52	195.51	4,097.43	-84.22	-23.37	-83.84	0.00	0.00	0.00
4,200.00	3.52	195.51	4,197.24	-90.13	-25.01	-89.72	0.00	0.00	0.00
4,300.00	3.52	195.51	4,297.05	-96.05	-26.65	-95.61	0.00	0.00	0.00
4,400.00	3.52	195.51	4,396.86	-101.96	-28.29	-101.50	0.00	0.00	0.00
4,500.00	3.52	195.51	4,496.67	-107.87	-29.93	-107.39	0.00	0.00	0.00
4,600.00	3.52	195.51	4,596.48	-113.79	-31.57	-113.27	0.00	0.00	0.00
4,700.00	3.52	195.51	4,696.30	-119.70	-33.21	-119.16	0.00	0.00	0.00
4,800.00	3.52	195.51	4,796.11	-125.61	-34.85	-125.05	0.00	0.00	0.00
4,900.00	3.52	195.51	4,895.92	-131.53	-36.49	-130.93	0.00	0.00	0.00
5,000.00	3.52	195.51	4,995.73	-137.44	-38.13	-136.82	0.00	0.00	0.00
5,100.00	3.52	195.51	5,095.54	-143.36	-39.78	-142.71	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 734H
Company:	Devon Energy	TVD Reference:	2961.2' GE + 25' KB @ 2986.20usft
Project:	Eddy County, NM (NAD-83)	MD Reference:	2961.2' GE + 25' KB @ 2986.20usft
Site:	Spud Muffin 31-30	North Arrow:	Grid
Well:	Spud Muffin 31-30 734H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	TVS (usft)	FEW (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,200.00	3.52	195.51	5,195.35	-149.27	-41.42	-148.59	0.00	0.00	0.00
5,300.00	3.52	195.51	5,295.16	-155.18	-43.06	-154.48	0.00	0.00	0.00
5,400.00	3.52	195.51	5,394.98	-161.10	-44.70	-160.37	0.00	0.00	0.00
5,500.00	3.52	195.51	5,494.79	-167.01	-46.34	-166.26	0.00	0.00	0.00
5,600.00	3.52	195.51	5,594.60	-172.92	-47.98	-172.14	0.00	0.00	0.00
5,700.00	3.52	195.51	5,694.41	-178.84	-49.62	-178.03	0.00	0.00	0.00
5,800.00	3.52	195.51	5,794.22	-184.75	-51.26	-183.92	0.00	0.00	0.00
5,900.00	3.52	195.51	5,894.03	-190.67	-52.90	-189.80	0.00	0.00	0.00
6,000.00	3.52	195.51	5,993.84	-196.58	-54.54	-195.69	0.00	0.00	0.00
6,100.00	3.52	195.51	6,093.66	-202.49	-56.18	-201.58	0.00	0.00	0.00
6,200.00	3.52	195.51	6,193.47	-208.41	-57.82	-207.46	0.00	0.00	0.00
6,300.00	3.52	195.51	6,293.28	-214.32	-59.46	-213.35	0.00	0.00	0.00
6,400.00	3.52	195.51	6,393.09	-220.23	-61.11	-219.24	0.00	0.00	0.00
6,500.00	3.52	195.51	6,492.90	-226.15	-62.75	-225.13	0.00	0.00	0.00
6,600.00	3.52	195.51	6,592.71	-232.06	-64.39	-231.01	0.00	0.00	0.00
6,700.00	3.52	195.51	6,692.53	-237.97	-66.03	-236.90	0.00	0.00	0.00
6,800.00	3.52	195.51	6,792.34	-243.89	-67.67	-242.79	0.00	0.00	0.00
6,900.00	3.52	195.51	6,892.15	-249.80	-69.31	-248.67	0.00	0.00	0.00
7,000.00	3.52	195.51	6,991.96	-255.72	-70.95	-254.56	0.00	0.00	0.00
7,100.00	3.52	195.51	7,091.77	-261.63	-72.59	-260.45	0.00	0.00	0.00
7,200.00	3.52	195.51	7,191.58	-267.54	-74.23	-266.33	0.00	0.00	0.00
7,300.00	3.52	195.51	7,291.39	-273.46	-75.87	-272.22	0.00	0.00	0.00
7,400.00	3.52	195.51	7,391.21	-279.37	-77.51	-278.11	0.00	0.00	0.00
7,500.00	3.52	195.51	7,491.02	-285.28	-79.15	-283.99	0.00	0.00	0.00
7,600.00	3.52	195.51	7,590.83	-291.20	-80.80	-289.88	0.00	0.00	0.00
7,700.00	3.52	195.51	7,690.64	-297.11	-82.44	-295.77	0.00	0.00	0.00
7,800.00	3.52	195.51	7,790.45	-303.03	-84.08	-301.66	0.00	0.00	0.00
7,900.00	3.52	195.51	7,890.26	-308.94	-85.72	-307.54	0.00	0.00	0.00
8,000.00	3.52	195.51	7,990.07	-314.85	-87.36	-313.43	0.00	0.00	0.00
8,100.00	3.52	195.51	8,089.89	-320.77	-89.00	-319.32	0.00	0.00	0.00
8,200.00	3.52	195.51	8,189.70	-326.68	-90.64	-325.20	0.00	0.00	0.00
8,300.00	3.52	195.51	8,289.51	-332.59	-92.28	-331.09	0.00	0.00	0.00
8,400.00	3.52	195.51	8,389.32	-338.51	-93.92	-336.98	0.00	0.00	0.00
8,500.00	3.52	195.51	8,489.13	-344.42	-95.56	-342.86	0.00	0.00	0.00
8,600.00	3.52	195.51	8,588.94	-350.33	-97.20	-348.75	0.00	0.00	0.00
8,700.00	3.52	195.51	8,688.76	-356.25	-98.84	-354.64	0.00	0.00	0.00
8,800.00	3.52	195.51	8,788.57	-362.16	-100.49	-360.53	0.00	0.00	0.00
8,900.00	3.52	195.51	8,888.38	-368.08	-102.13	-366.41	0.00	0.00	0.00
9,000.00	3.52	195.51	8,988.19	-373.99	-103.77	-372.30	0.00	0.00	0.00
9,100.00	3.52	195.51	9,088.00	-379.90	-105.41	-378.19	0.00	0.00	0.00
9,200.00	3.52	195.51	9,187.81	-385.82	-107.05	-384.07	0.00	0.00	0.00
9,300.00	3.52	195.51	9,287.62	-391.73	-108.69	-389.96	0.00	0.00	0.00
9,400.00	3.52	195.51	9,387.44	-397.64	-110.33	-395.85	0.00	0.00	0.00
9,500.00	3.52	195.51	9,487.25	-403.56	-111.97	-401.73	0.00	0.00	0.00
9,600.00	3.52	195.51	9,587.06	-409.47	-113.61	-407.62	0.00	0.00	0.00
9,686.60	3.52	195.51	9,673.50	-414.59	-115.03	-412.72	0.00	0.00	0.00
9,700.00	3.38	195.51	9,686.87	-415.37	-115.25	-413.49	1.00	-1.00	0.00
9,800.00	2.38	195.51	9,786.74	-420.22	-116.59	-418.32	1.00	-1.00	0.00
9,900.00	1.38	195.51	9,886.69	-423.39	-117.47	-421.47	1.00	-1.00	0.00
10,000.00	0.38	195.51	9,986.67	-424.88	-117.89	-422.96	1.00	-1.00	0.00
10,038.46	0.00	0.00	10,025.13	-425.00	-117.92	-423.08	1.00	-1.00	0.00
10,100.00	0.00	0.00	10,086.67	-425.00	-117.92	-423.08	0.00	0.00	0.00
10,200.00	0.00	0.00	10,186.67	-425.00	-117.92	-423.08	0.00	0.00	0.00
10,300.00	0.00	0.00	10,286.67	-425.00	-117.92	-423.08	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 734H
Company:	Devon Energy	TVD Reference:	2961.2' GE + 25' KB @ 2986.20usft
Project:	Eddy County, NM (NAD-83)	MD Reference:	2961.2' GE + 25' KB @ 2986.20usft
Site:	Spud Muffin 31-30	North Reference:	Grid
Well:	Spud Muffin 31-30 734H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	N/S (usft)	EW (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,338.46	0.00	0.00	10,325.13	-425.00	-117.92	-423.08	0.00	0.00	0.00
10,350.00	1.27	360.00	10,336.67	-424.87	-117.92	-422.95	11.00	11.00	0.00
10,400.00	6.77	360.00	10,386.53	-421.37	-117.92	-419.45	11.00	11.00	0.00
10,450.00	12.27	360.00	10,435.82	-413.10	-117.92	-411.18	11.00	11.00	0.00
10,500.00	17.77	360.00	10,484.10	-400.15	-117.92	-398.23	11.00	11.00	0.00
10,550.00	23.27	360.00	10,530.91	-382.63	-117.92	-380.71	11.00	11.00	0.00
10,600.00	28.77	360.00	10,575.82	-360.70	-117.92	-358.79	11.00	11.00	0.00
10,650.00	34.27	360.00	10,618.43	-334.57	-117.92	-332.66	11.00	11.00	0.00
10,700.00	39.77	360.00	10,658.33	-304.48	-117.92	-302.58	11.00	11.00	0.00
10,750.00	45.27	360.00	10,695.17	-270.70	-117.92	-268.80	11.00	11.00	0.00
10,800.00	50.77	360.00	10,728.60	-233.55	-117.92	-231.65	11.00	11.00	0.00
10,850.00	56.27	360.00	10,758.32	-193.36	-117.92	-191.47	11.00	11.00	0.00
10,900.00	61.77	360.00	10,784.05	-150.51	-117.92	-148.62	11.00	11.00	0.00
10,950.00	67.27	360.00	10,805.55	-105.39	-117.92	-103.51	11.00	11.00	0.00
11,000.00	72.77	360.00	10,822.63	-58.42	-117.92	-56.54	11.00	11.00	0.00
11,050.00	78.27	360.00	10,835.12	-10.02	-117.92	-8.15	11.00	11.00	0.00
11,100.00	83.77	360.00	10,842.92	39.34	-117.92	41.21	11.00	11.00	0.00
11,150.00	89.27	360.00	10,845.96	89.23	-117.92	91.09	11.00	11.00	0.00
11,155.08	89.83	360.00	10,846.00	94.31	-117.92	96.17	11.00	11.00	0.00
11,200.00	89.83	360.00	10,846.13	139.23	-117.92	141.08	0.00	0.00	0.00
11,300.00	89.83	360.00	10,846.43	239.23	-117.92	241.07	0.00	0.00	0.00
11,400.00	89.83	360.00	10,846.73	339.23	-117.92	341.06	0.00	0.00	0.00
11,500.00	89.83	360.00	10,847.03	439.23	-117.92	441.04	0.00	0.00	0.00
11,600.00	89.83	360.00	10,847.33	539.23	-117.92	541.03	0.00	0.00	0.00
11,700.00	89.83	360.00	10,847.63	639.23	-117.92	641.02	0.00	0.00	0.00
11,800.00	89.83	360.00	10,847.93	739.23	-117.92	741.01	0.00	0.00	0.00
11,900.00	89.83	360.00	10,848.23	839.23	-117.92	840.99	0.00	0.00	0.00
12,000.00	89.83	360.00	10,848.53	939.23	-117.92	940.98	0.00	0.00	0.00
12,100.00	89.83	360.00	10,848.83	1,039.23	-117.92	1,040.97	0.00	0.00	0.00
12,200.00	89.83	360.00	10,849.13	1,139.23	-117.92	1,140.95	0.00	0.00	0.00
12,300.00	89.83	360.00	10,849.43	1,239.23	-117.92	1,240.94	0.00	0.00	0.00
12,400.00	89.83	360.00	10,849.72	1,339.23	-117.92	1,340.93	0.00	0.00	0.00
12,500.00	89.83	360.00	10,850.02	1,439.23	-117.92	1,440.91	0.00	0.00	0.00
12,600.00	89.83	360.00	10,850.32	1,539.23	-117.92	1,540.90	0.00	0.00	0.00
12,700.00	89.83	360.00	10,850.62	1,639.23	-117.92	1,640.89	0.00	0.00	0.00
12,800.00	89.83	360.00	10,850.92	1,739.23	-117.92	1,740.88	0.00	0.00	0.00
12,900.00	89.83	360.00	10,851.22	1,839.23	-117.92	1,840.86	0.00	0.00	0.00
13,000.00	89.83	360.00	10,851.52	1,939.23	-117.92	1,940.85	0.00	0.00	0.00
13,100.00	89.83	360.00	10,851.82	2,039.22	-117.92	2,040.84	0.00	0.00	0.00
13,200.00	89.83	360.00	10,852.12	2,139.22	-117.92	2,140.82	0.00	0.00	0.00
13,300.00	89.83	360.00	10,852.42	2,239.22	-117.92	2,240.81	0.00	0.00	0.00
13,400.00	89.83	360.00	10,852.72	2,339.22	-117.92	2,340.80	0.00	0.00	0.00
13,500.00	89.83	360.00	10,853.02	2,439.22	-117.92	2,440.78	0.00	0.00	0.00
13,600.00	89.83	360.00	10,853.32	2,539.22	-117.92	2,540.77	0.00	0.00	0.00
13,700.00	89.83	360.00	10,853.62	2,639.22	-117.92	2,640.76	0.00	0.00	0.00
13,800.00	89.83	360.00	10,853.92	2,739.22	-117.92	2,740.75	0.00	0.00	0.00
13,900.00	89.83	360.00	10,854.21	2,839.22	-117.92	2,840.73	0.00	0.00	0.00
14,000.00	89.83	360.00	10,854.51	2,939.22	-117.92	2,940.72	0.00	0.00	0.00
14,100.00	89.83	360.00	10,854.81	3,039.22	-117.92	3,040.71	0.00	0.00	0.00
14,200.00	89.83	360.00	10,855.11	3,139.22	-117.92	3,140.69	0.00	0.00	0.00
14,300.00	89.83	360.00	10,855.41	3,239.22	-117.92	3,240.68	0.00	0.00	0.00
14,400.00	89.83	360.00	10,855.71	3,339.22	-117.92	3,340.67	0.00	0.00	0.00
14,500.00	89.83	360.00	10,856.01	3,439.22	-117.92	3,440.65	0.00	0.00	0.00
14,600.00	89.83	360.00	10,856.31	3,539.22	-117.92	3,540.64	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 734H
Company:	Devon Energy	TVD Reference:	2961.2' GE + 25' KB @ 2986.20usft
Project:	Eddy County, NM (NAD-83)	MD Reference:	2961.2' GE + 25' KB @ 2986.20usft
Site:	Spud Muffin 31-30	North Reference:	Grid
Well:	Spud Muffin 31-30 734H	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 (1/100usft)	Build Rate (1/100usft)	Turn Rate (1/100usft)	
14,700.00	89.83	360.00	10,856.61	3,639.22	-117.92	3,640.63	0.00	0.00	0.00	
14,800.00	89.83	360.00	10,856.91	3,739.22	-117.92	3,740.62	0.00	0.00	0.00	
14,900.00	89.83	360.00	10,857.21	3,839.22	-117.92	3,840.60	0.00	0.00	0.00	
15,000.00	89.83	360.00	10,857.51	3,939.22	-117.92	3,940.59	0.00	0.00	0.00	
15,100.00	89.83	360.00	10,857.81	4,039.22	-117.92	4,040.58	0.00	0.00	0.00	
15,200.00	89.83	360.00	10,858.11	4,139.22	-117.92	4,140.56	0.00	0.00	0.00	
15,300.00	89.83	360.00	10,858.40	4,239.21	-117.92	4,240.55	0.00	0.00	0.00	
15,400.00	89.83	360.00	10,858.70	4,339.21	-117.92	4,340.54	0.00	0.00	0.00	
15,500.00	89.83	360.00	10,859.00	4,439.21	-117.92	4,440.52	0.00	0.00	0.00	
15,600.00	89.83	360.00	10,859.30	4,539.21	-117.92	4,540.51	0.00	0.00	0.00	
15,700.00	89.83	360.00	10,859.60	4,639.21	-117.92	4,640.50	0.00	0.00	0.00	
15,800.00	89.83	360.00	10,859.90	4,739.21	-117.92	4,740.49	0.00	0.00	0.00	
15,900.00	89.83	360.00	10,860.20	4,839.21	-117.92	4,840.47	0.00	0.00	0.00	
16,000.00	89.83	360.00	10,860.50	4,939.21	-117.92	4,940.46	0.00	0.00	0.00	
16,100.00	89.83	360.00	10,860.80	5,039.21	-117.92	5,040.45	0.00	0.00	0.00	
16,200.00	89.83	360.00	10,861.10	5,139.21	-117.92	5,140.43	0.00	0.00	0.00	
16,300.00	89.83	360.00	10,861.40	5,239.21	-117.92	5,240.42	0.00	0.00	0.00	
16,400.00	89.83	360.00	10,861.70	5,339.21	-117.92	5,340.41	0.00	0.00	0.00	
16,500.00	89.83	360.00	10,862.00	5,439.21	-117.92	5,440.39	0.00	0.00	0.00	
16,600.00	89.83	360.00	10,862.30	5,539.21	-117.92	5,540.38	0.00	0.00	0.00	
16,700.00	89.83	360.00	10,862.59	5,639.21	-117.92	5,640.37	0.00	0.00	0.00	
16,800.00	89.83	360.00	10,862.89	5,739.21	-117.92	5,740.36	0.00	0.00	0.00	
16,900.00	89.83	360.00	10,863.19	5,839.21	-117.92	5,840.34	0.00	0.00	0.00	
17,000.00	89.83	360.00	10,863.49	5,939.21	-117.92	5,940.33	0.00	0.00	0.00	
17,100.00	89.83	360.00	10,863.79	6,039.21	-117.92	6,040.32	0.00	0.00	0.00	
17,200.00	89.83	360.00	10,864.09	6,139.21	-117.92	6,140.30	0.00	0.00	0.00	
17,300.00	89.83	360.00	10,864.39	6,239.21	-117.92	6,240.29	0.00	0.00	0.00	
17,400.00	89.83	360.00	10,864.69	6,339.21	-117.92	6,340.28	0.00	0.00	0.00	
17,500.00	89.83	360.00	10,864.99	6,439.20	-117.92	6,440.26	0.00	0.00	0.00	
17,600.00	89.83	360.00	10,865.29	6,539.20	-117.92	6,540.25	0.00	0.00	0.00	
17,700.00	89.83	360.00	10,865.59	6,639.20	-117.92	6,640.24	0.00	0.00	0.00	
17,800.00	89.83	360.00	10,865.89	6,739.20	-117.92	6,740.23	0.00	0.00	0.00	
17,900.00	89.83	360.00	10,866.19	6,839.20	-117.92	6,840.21	0.00	0.00	0.00	
18,000.00	89.83	360.00	10,866.49	6,939.20	-117.92	6,940.20	0.00	0.00	0.00	
18,100.00	89.83	360.00	10,866.79	7,039.20	-117.92	7,040.19	0.00	0.00	0.00	
18,200.00	89.83	360.00	10,867.08	7,139.20	-117.92	7,140.17	0.00	0.00	0.00	
18,300.00	89.83	360.00	10,867.38	7,239.20	-117.92	7,240.16	0.00	0.00	0.00	
18,400.00	89.83	360.00	10,867.68	7,339.20	-117.92	7,340.15	0.00	0.00	0.00	
18,505.95	89.83	360.00	10,868.00	7,445.15	-117.92	7,446.08	0.00	0.00	0.00	
PBHL (SM 734H)										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	N/S (usft)	E/W (usft)	Northing (usft)	Easting (usft)	Latitude		Longitude
SHL (SM 734H) - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	456,843.64	636,815.39	32° 15' 20.0191 N		104° 1' 28.0890 W
PBHL (SM 734H) - plan hits target center - Point	0.00	0.00	10,868.00	7,445.15	-117.92	464,288.79	636,697.47	32° 16' 33.6986 N		104° 1' 29.2130 W

LEAM Drilling Services

Planning Report

Database:	EDM 5000.1 Multi User Db	Local Co-ordinate Reference:	Well Spud Muffin 31-30 734H
Company:	Devon Energy	TVD Reference:	2961.2' GE + 25' KB @ 2986.20usft
Project:	Eddy County, NM (NAD-83)	MD Reference:	2961.2' GE + 25' KB @ 2986.20usft
Site:	Spud Muffin 31-30	North Reference:	Grid
Well:	Spud Muffin 31-30 734H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		