

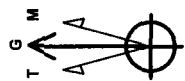


Company: Devon Energy
Field: Eddy County, New Mexico (NAD 83)
Location: Spud Muffin 31-30
Well: 737H
OH
Plan: Plan 1
GL 2960' + 32' KB @ 2992.00usft

PROJECT DETAILS: Eddy County, New Mexico (NAD 83)

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone

System Datum: Mean Sea Level

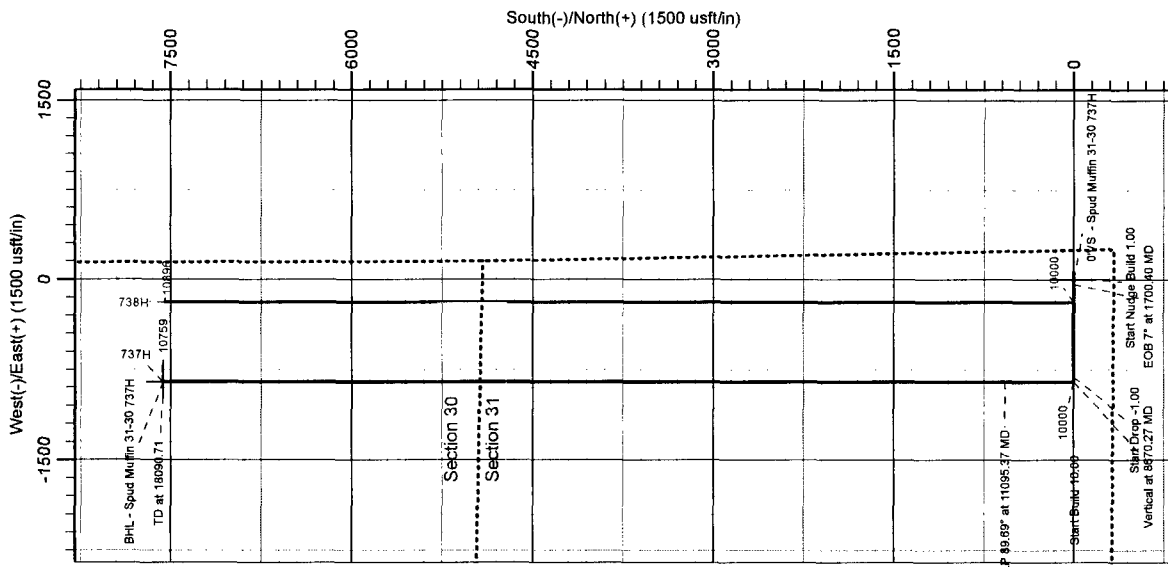


Azimuths to Grid North
True North: -0.17°
Magnetic North: 6.92°
Magnetic Field
Strength: 47846.3nT
Dip Angle: 60.01°
Date: 2/7/2018
Model: IGRF2015



30-015-44756

To convert a Magnetic Direction to a Grid Direction, Add 6.92°



WELL DETAILS: 737H

	+N/S	+E/W	Northing	Easting	Longitude
GL 2960' + 32' KB @ 2992.00usft	0.00	0.00	456885.34	639419.03	-104.016048
Latitude				32.255105	

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	DipAngle	DipDir
22.00	22.00	Top of Salt	0.31	0.00
2774.00	2783.83	Delaware	0.31	0.00
6470.00	6507.52	1st BSPG Lime	0.31	0.00
7489.00	7534.28	1st BSPG Sand	0.31	0.00
7744.00	7791.19	2nd BSPG Lime	0.31	0.00
8271.00	8321.05	2nd BSPG Sand	0.31	0.00
8716.00	8766.27	3rd BSPG Lime	0.31	0.00
9401.00	9451.27	3rd BSPG Sand	0.31	0.00
9760.00	9810.27	Wolfcamp	0.31	0.00

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/S	+E/W	Dleg	TFace	VSeal	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Nudge Build 1.00
2	1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	0.00	EOB 7° at 1700.40 MD
3	1700.40	7.00	270.00	1698.65	0.00	-42.76	1.00	270.00	4.78	Start Drop -1.00
4	7999.87	0.00	270.00	7921.35	0.00	-807.24	0.00	180.00	90.17	Vertical at 8670.27 MD
5	8670.27	0.00	0.00	8620.00	0.00	-850.00	1.00	180.00	94.95	Start Build 10.00
6	10198.47	0.00	0.00	10148.20	0.00	-850.03	0.00	360.00	861.24	LP 89.69° at 11095.37 MD
7	11095.37	89.69	360.00	10721.75	569.86	-850.03	10.00	360.00	7612.74	TD at 18090.71
8	18090.71	89.69	360.00	10759.00	7565.09	-850.44	0.00	0.00		

NM OIL CONSERVATION
ARTESIA DISTRICT

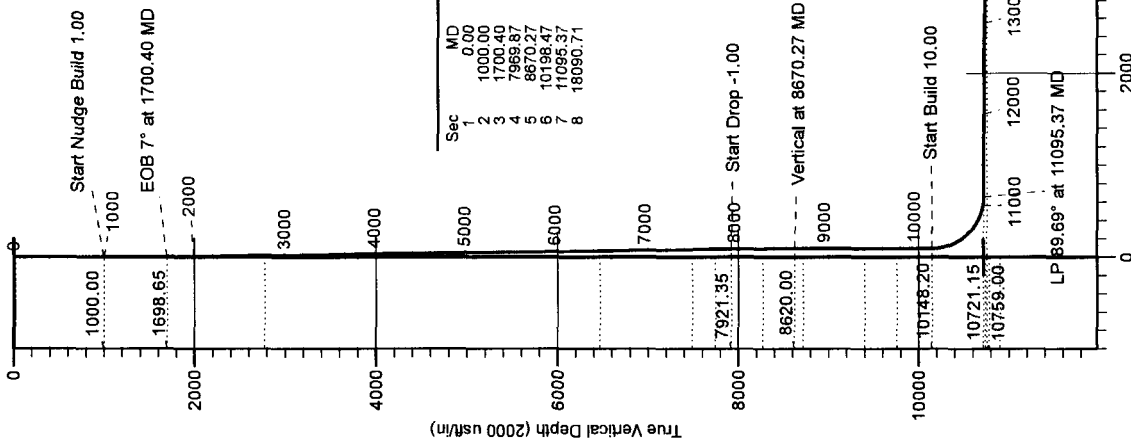
FEB 27 2018

RECEIVED

BHL - Spud Muffin 31-30 737H

TD at 18090.71

737H/Plan 1



Vertical Section at 353.59° (2000 usft/in)

Devon Energy

Eddy County, New Mexico (NAD 83)

Spud Muffin 31-30

737H

OH

Plan: Plan 1

Standard Planning Report

07 February, 2018

Planning Report

Database:	EDM 5000.14 Single User Db	Local Coordinate Reference:	Well 737H
Company:	Devon Energy	TVD Reference:	GL 2960' + 32' KB @ 2992.00usft
Project:	Eddy County, New Mexico (NAD 83)	MD Reference:	GL 2960' + 32' KB @ 2992.00usft
Site:	Spud Muffin 31-30	North Reference:	Grid
Well:	737H	Survey/Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1		

Project:	Eddy County, New Mexico (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:	456,685.34 usft	Latitude:	32.255105
From:	Map	Easting:	639,419.03 usft	Longitude:	-104.016048
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.17 °

Well	737H					
Well Position	+N-S	0.00 usft	Northing:	456,685.34 usft	Latitude:	32.255105
	+E-W	0.00 usft	Easting:	639,419.03 usft	Longitude:	-104.016048
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	2,960.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle (°)	Field Strength (nT)
	IGRF2015	2/7/2018	7.09	60.01	47,846.32681407

Design:	Plan 1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N-S	+E-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	353.59

Plan Survey Tool Program:	Date: 2/7/2018			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	18,090.71 Plan 1 (OH)	MWD	
			OWSG MWD - Standard	

Plan Sections:										
Measured	Inclination	Azimuth	Vertical	TVD	+N-S	Depth	MD	Turn	TFO	Target
Depth (usft)	(°)	(°)	Depth (usft)	(usft)	(usft)	(usft)	(usft)	Rate (°/100usft)	(°)	
0.00	0.00	0.00	0.00	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	
1,700.40	7.00	270.00	1,698.65	0.00	-42.76	1.00	1.00	0.00	270.00	
7,969.87	7.00	270.00	7,921.35	0.00	-807.24	0.00	0.00	0.00	0.00	
8,670.27	0.00	0.00	8,620.00	0.00	-850.00	1.00	-1.00	0.00	180.00	
10,198.47	0.00	0.00	10,148.20	0.00	-850.00	0.00	0.00	0.00	0.00	
11,095.37	89.69	360.00	10,721.15	569.86	-850.03	10.00	10.00	0.00	360.00	
18,090.71	89.69	360.00	10,759.00	7,565.09	-850.44	0.00	0.00	0.00	0.00	BHL - Spud Muffin 31-

Planning Report

Database:	EDM 5000.14 Single User Db	Local Coordinates Reference:	Well 737H
Company:	Devon Energy	North Reference:	GL 2960' + 32' KB @ 2992.00usft
Project:	Eddy County, New Mexico (NAD 83)	North Reference:	GL 2960' + 32' KB @ 2992.00usft
Site:	Spud Muffin 31-30	North Reference:	Grid
Well:	737H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1		

Measured Depth (ft)	Inclination (°)	True Vertical Depth (ft)	Vertical Depth (ft)	WOB (lb)	TAW (lb)	WOB (lb)	Depth Rate (ft/100usft)	Build Rate (ft/100usft)	Turn Rate (ft/100usft)
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Nudge Build 1.00									
1,100.00	1.00	270.00	1,099.99	0.00	-0.87	0.10	1.00	1.00	0.00
1,200.00	2.00	270.00	1,199.96	0.00	-3.49	0.39	1.00	1.00	0.00
1,300.00	3.00	270.00	1,299.86	0.00	-7.85	0.88	1.00	1.00	0.00
1,400.00	4.00	270.00	1,399.68	0.00	-13.96	1.56	1.00	1.00	0.00
1,500.00	5.00	270.00	1,499.37	0.00	-21.80	2.44	1.00	1.00	0.00
1,600.00	6.00	270.00	1,598.90	0.00	-31.39	3.51	1.00	1.00	0.00
1,700.00	7.00	270.00	1,698.26	0.00	-42.71	4.77	1.00	1.00	0.00
1,700.40	7.00	270.00	1,698.65	0.00	-42.76	4.78	1.00	1.00	0.00
EOB 7° at 1700.40 MD									
1,800.00	7.00	270.00	1,797.51	0.00	-54.90	6.13	0.00	0.00	0.00
1,900.00	7.00	270.00	1,896.77	0.00	-67.10	7.49	0.00	0.00	0.00
2,000.00	7.00	270.00	1,996.02	0.00	-79.29	8.86	0.00	0.00	0.00
2,100.00	7.00	270.00	2,095.28	0.00	-91.48	10.22	0.00	0.00	0.00
2,200.00	7.00	270.00	2,194.53	0.00	-103.68	11.58	0.00	0.00	0.00
2,300.00	7.00	270.00	2,293.78	0.00	-115.87	12.94	0.00	0.00	0.00
2,400.00	7.00	270.00	2,393.04	0.00	-128.06	14.31	0.00	0.00	0.00
2,500.00	7.00	270.00	2,492.29	0.00	-140.26	15.67	0.00	0.00	0.00
2,600.00	7.00	270.00	2,591.54	0.00	-152.45	17.03	0.00	0.00	0.00
2,700.00	7.00	270.00	2,690.80	0.00	-164.65	18.39	0.00	0.00	0.00
2,800.00	7.00	270.00	2,790.05	0.00	-176.84	19.75	0.00	0.00	0.00
2,900.00	7.00	270.00	2,889.31	0.00	-189.03	21.12	0.00	0.00	0.00
3,000.00	7.00	270.00	2,988.56	0.00	-201.23	22.48	0.00	0.00	0.00
3,100.00	7.00	270.00	3,087.81	0.00	-213.42	23.84	0.00	0.00	0.00
3,200.00	7.00	270.00	3,187.07	0.00	-225.61	25.20	0.00	0.00	0.00
3,300.00	7.00	270.00	3,286.32	0.00	-237.81	26.56	0.00	0.00	0.00
3,400.00	7.00	270.00	3,385.57	0.00	-250.00	27.93	0.00	0.00	0.00
3,500.00	7.00	270.00	3,484.83	0.00	-262.20	29.29	0.00	0.00	0.00
3,600.00	7.00	270.00	3,584.08	0.00	-274.39	30.65	0.00	0.00	0.00
3,700.00	7.00	270.00	3,683.34	0.00	-286.58	32.01	0.00	0.00	0.00
3,800.00	7.00	270.00	3,782.59	0.00	-298.78	33.37	0.00	0.00	0.00
3,900.00	7.00	270.00	3,881.84	0.00	-310.97	34.74	0.00	0.00	0.00
4,000.00	7.00	270.00	3,981.10	0.00	-323.17	36.10	0.00	0.00	0.00
4,100.00	7.00	270.00	4,080.35	0.00	-335.36	37.46	0.00	0.00	0.00
4,200.00	7.00	270.00	4,179.60	0.00	-347.55	38.82	0.00	0.00	0.00
4,300.00	7.00	270.00	4,278.86	0.00	-359.75	40.19	0.00	0.00	0.00
4,400.00	7.00	270.00	4,378.11	0.00	-371.94	41.55	0.00	0.00	0.00
4,500.00	7.00	270.00	4,477.37	0.00	-384.13	42.91	0.00	0.00	0.00
4,600.00	7.00	270.00	4,576.62	0.00	-396.33	44.27	0.00	0.00	0.00
4,700.00	7.00	270.00	4,675.87	0.00	-408.52	45.63	0.00	0.00	0.00
4,800.00	7.00	270.00	4,775.13	0.00	-420.72	47.00	0.00	0.00	0.00
4,900.00	7.00	270.00	4,874.38	0.00	-432.91	48.36	0.00	0.00	0.00
5,000.00	7.00	270.00	4,973.63	0.00	-445.10	49.72	0.00	0.00	0.00
5,100.00	7.00	270.00	5,072.89	0.00	-457.30	51.08	0.00	0.00	0.00
5,200.00	7.00	270.00	5,172.14	0.00	-469.49	52.44	0.00	0.00	0.00
5,300.00	7.00	270.00	5,271.40	0.00	-481.68	53.81	0.00	0.00	0.00
5,400.00	7.00	270.00	5,370.65	0.00	-493.88	55.17	0.00	0.00	0.00
5,500.00	7.00	270.00	5,469.90	0.00	-506.07	56.53	0.00	0.00	0.00
5,600.00	7.00	270.00	5,569.16	0.00	-518.27	57.89	0.00	0.00	0.00
5,700.00	7.00	270.00	5,668.41	0.00	-530.46	59.26	0.00	0.00	0.00
5,800.00	7.00	270.00	5,767.66	0.00	-542.65	60.62	0.00	0.00	0.00
5,900.00	7.00	270.00	5,866.92	0.00	-554.85	61.98	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.14 Single User Db	Local Coordinate Reference:	Well 737H
Company:	Devon Energy	TVD Reference:	GL 2960' + 32' KB @ 2992.00usft
Project:	Eddy County, New Mexico (NAD 83)	MD Reference:	GL 2960' + 32' KB @ 2992.00usft
Site:	Spud Muffin 31-30	North Arrow:	Grid
Well:	737H	Survey Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1		

Planned Survey										
Depth (usft)	Balliston (ft)	Azimuth (°)	Depth (usft)	WOB (usft)	WOB (usft)	Vertical Motion (usft)	Logan Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
6,000.00	7.00	270.00	5,966.17	0.00	-567.04	63.34	0.00	0.00	0.00	
6,100.00	7.00	270.00	6,065.43	0.00	-579.24	64.70	0.00	0.00	0.00	
6,200.00	7.00	270.00	6,164.68	0.00	-591.43	66.07	0.00	0.00	0.00	
6,300.00	7.00	270.00	6,263.93	0.00	-603.62	67.43	0.00	0.00	0.00	
6,400.00	7.00	270.00	6,363.19	0.00	-615.82	68.79	0.00	0.00	0.00	
6,500.00	7.00	270.00	6,462.44	0.00	-628.01	70.15	0.00	0.00	0.00	
6,600.00	7.00	270.00	6,561.69	0.00	-640.20	71.51	0.00	0.00	0.00	
6,700.00	7.00	270.00	6,660.95	0.00	-652.40	72.88	0.00	0.00	0.00	
6,800.00	7.00	270.00	6,760.20	0.00	-664.59	74.24	0.00	0.00	0.00	
6,900.00	7.00	270.00	6,859.46	0.00	-676.79	75.60	0.00	0.00	0.00	
7,000.00	7.00	270.00	6,958.71	0.00	-688.98	76.96	0.00	0.00	0.00	
7,100.00	7.00	270.00	7,057.96	0.00	-701.17	78.32	0.00	0.00	0.00	
7,200.00	7.00	270.00	7,157.22	0.00	-713.37	79.69	0.00	0.00	0.00	
7,300.00	7.00	270.00	7,256.47	0.00	-725.56	81.05	0.00	0.00	0.00	
7,400.00	7.00	270.00	7,355.72	0.00	-737.75	82.41	0.00	0.00	0.00	
7,500.00	7.00	270.00	7,454.98	0.00	-749.95	83.77	0.00	0.00	0.00	
7,600.00	7.00	270.00	7,554.23	0.00	-762.14	85.14	0.00	0.00	0.00	
7,700.00	7.00	270.00	7,653.49	0.00	-774.34	86.50	0.00	0.00	0.00	
7,800.00	7.00	270.00	7,752.74	0.00	-786.53	87.86	0.00	0.00	0.00	
7,900.00	7.00	270.00	7,851.99	0.00	-798.72	89.22	0.00	0.00	0.00	
7,969.87	7.00	270.00	7,921.35	0.00	-807.24	90.17	0.00	0.00	0.00	
Start Drop -1.00										
8,000.00	6.70	270.00	7,951.26	0.00	-810.84	90.57	1.00	-1.00	0.00	
8,100.00	5.70	270.00	8,050.67	0.00	-821.64	91.78	1.00	-1.00	0.00	
8,200.00	4.70	270.00	8,150.26	0.00	-830.71	92.79	1.00	-1.00	0.00	
8,300.00	3.70	270.00	8,249.99	0.00	-838.04	93.61	1.00	-1.00	0.00	
8,400.00	2.70	270.00	8,349.83	0.00	-843.63	94.24	1.00	-1.00	0.00	
8,500.00	1.70	270.00	8,449.75	0.00	-847.47	94.67	1.00	-1.00	0.00	
8,600.00	0.70	270.00	8,549.73	0.00	-849.57	94.90	1.00	-1.00	0.00	
8,670.27	0.00	0.00	8,620.00	0.00	-850.00	94.95	1.00	-1.00	0.00	
Vertical at 8670.27 MD										
8,700.00	0.00	0.00	8,649.73	0.00	-850.00	94.95	0.00	0.00	0.00	
8,800.00	0.00	0.00	8,749.73	0.00	-850.00	94.95	0.00	0.00	0.00	
8,900.00	0.00	0.00	8,849.73	0.00	-850.00	94.95	0.00	0.00	0.00	
9,000.00	0.00	0.00	8,949.73	0.00	-850.00	94.95	0.00	0.00	0.00	
9,100.00	0.00	0.00	9,049.73	0.00	-850.00	94.95	0.00	0.00	0.00	
9,200.00	0.00	0.00	9,149.73	0.00	-850.00	94.95	0.00	0.00	0.00	
9,300.00	0.00	0.00	9,249.73	0.00	-850.00	94.95	0.00	0.00	0.00	
9,400.00	0.00	0.00	9,349.73	0.00	-850.00	94.95	0.00	0.00	0.00	
9,500.00	0.00	0.00	9,449.73	0.00	-850.00	94.95	0.00	0.00	0.00	
9,600.00	0.00	0.00	9,549.73	0.00	-850.00	94.95	0.00	0.00	0.00	
9,700.00	0.00	0.00	9,649.73	0.00	-850.00	94.95	0.00	0.00	0.00	
9,800.00	0.00	0.00	9,749.73	0.00	-850.00	94.95	0.00	0.00	0.00	
9,900.00	0.00	0.00	9,849.73	0.00	-850.00	94.95	0.00	0.00	0.00	
10,000.00	0.00	0.00	9,949.73	0.00	-850.00	94.95	0.00	0.00	0.00	
10,100.00	0.00	0.00	10,049.73	0.00	-850.00	94.95	0.00	0.00	0.00	
10,198.47	0.00	0.00	10,148.20	0.00	-850.00	94.95	0.00	0.00	0.00	
Start Build 10.00										
10,200.00	0.15	360.00	10,149.73	0.00	-850.00	94.95	10.00	10.00	0.00	
10,300.00	10.15	360.00	10,249.20	8.97	-850.00	103.86	10.00	10.00	0.00	
10,400.00	20.15	360.00	10,345.60	35.08	-850.00	129.81	10.00	10.00	0.00	
10,500.00	30.15	360.00	10,436.00	77.53	-850.00	171.99	10.00	10.00	0.00	
10,600.00	40.15	360.00	10,517.66	135.03	-850.01	229.13	10.00	10.00	0.00	

Planning Report

Database:	EDM 5000.14 Single User Db	Well 737H
Company:	Devon Energy	GL 2960' + 32' KB @ 2992.00usft
Project:	Eddy County, New Mexico (NAD 83)	GL 2960' + 32' KB @ 2992.00usft
Site:	Spud Muffin 31-30	Grid
Well:	737H	Minimum Curvature
Wellbore:	OH	
Design:	Plan 1	

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Depth (usft)	N (usft)	E (usft)	Vertical Depth (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
10,645.57	44.71	360.00	10,551.29	165.77	-850.01	259.68	10.00	10.00	0.00	
OVS - Spud Muffin 31-30 737H										
10,700.00	50.15	360.00	10,588.09	205.84	-850.01	299.50	10.00	10.00	0.00	
10,800.00	60.15	360.00	10,645.16	287.80	-850.02	380.95	10.00	10.00	0.00	
10,900.00	70.15	360.00	10,687.13	378.43	-850.02	471.01	10.00	10.00	0.00	
11,000.00	80.15	360.00	10,712.72	474.97	-850.03	566.95	10.00	10.00	0.00	
11,095.37	89.69	360.00	10,721.15	569.86	-850.03	661.24	10.00	10.00	0.00	
LP 89.69° at 11095.37 MD										
11,100.00	89.69	360.00	10,721.18	574.48	-850.03	665.84	0.00	0.00	0.00	
11,200.00	89.69	360.00	10,721.72	674.48	-850.04	765.22	0.00	0.00	0.00	
11,300.00	89.69	360.00	10,722.26	774.48	-850.05	864.59	0.00	0.00	0.00	
11,400.00	89.69	360.00	10,722.80	874.48	-850.05	963.96	0.00	0.00	0.00	
11,500.00	89.69	360.00	10,723.34	974.48	-850.06	1,063.34	0.00	0.00	0.00	
11,600.00	89.69	360.00	10,723.88	1,074.48	-850.06	1,162.71	0.00	0.00	0.00	
11,700.00	89.69	360.00	10,724.42	1,174.48	-850.07	1,262.08	0.00	0.00	0.00	
11,800.00	89.69	360.00	10,724.96	1,274.47	-850.07	1,361.46	0.00	0.00	0.00	
11,900.00	89.69	360.00	10,725.51	1,374.47	-850.08	1,460.83	0.00	0.00	0.00	
12,000.00	89.69	360.00	10,726.05	1,474.47	-850.09	1,560.20	0.00	0.00	0.00	
12,100.00	89.69	360.00	10,726.59	1,574.47	-850.09	1,659.58	0.00	0.00	0.00	
12,200.00	89.69	360.00	10,727.13	1,674.47	-850.10	1,758.95	0.00	0.00	0.00	
12,300.00	89.69	360.00	10,727.67	1,774.47	-850.10	1,858.32	0.00	0.00	0.00	
12,400.00	89.69	360.00	10,728.21	1,874.47	-850.11	1,957.70	0.00	0.00	0.00	
12,500.00	89.69	360.00	10,728.75	1,974.46	-850.11	2,057.07	0.00	0.00	0.00	
12,600.00	89.69	360.00	10,729.29	2,074.46	-850.12	2,156.44	0.00	0.00	0.00	
12,700.00	89.69	360.00	10,729.83	2,174.46	-850.13	2,255.82	0.00	0.00	0.00	
12,800.00	89.69	360.00	10,730.37	2,274.46	-850.13	2,355.19	0.00	0.00	0.00	
12,900.00	89.69	360.00	10,730.92	2,374.46	-850.14	2,454.56	0.00	0.00	0.00	
13,000.00	89.69	360.00	10,731.46	2,474.46	-850.14	2,553.94	0.00	0.00	0.00	
13,100.00	89.69	360.00	10,732.00	2,574.46	-850.15	2,653.31	0.00	0.00	0.00	
13,200.00	89.69	360.00	10,732.54	2,674.45	-850.16	2,752.68	0.00	0.00	0.00	
13,300.00	89.69	360.00	10,733.08	2,774.45	-850.16	2,852.06	0.00	0.00	0.00	
13,400.00	89.69	360.00	10,733.62	2,874.45	-850.17	2,951.43	0.00	0.00	0.00	
13,500.00	89.69	360.00	10,734.16	2,974.45	-850.17	3,050.80	0.00	0.00	0.00	
13,600.00	89.69	360.00	10,734.70	3,074.45	-850.18	3,150.18	0.00	0.00	0.00	
13,700.00	89.69	360.00	10,735.24	3,174.45	-850.18	3,249.55	0.00	0.00	0.00	
13,800.00	89.69	360.00	10,735.79	3,274.45	-850.19	3,348.92	0.00	0.00	0.00	
13,900.00	89.69	360.00	10,736.33	3,374.44	-850.20	3,448.30	0.00	0.00	0.00	
14,000.00	89.69	360.00	10,736.87	3,474.44	-850.20	3,547.67	0.00	0.00	0.00	
14,100.00	89.69	360.00	10,737.41	3,574.44	-850.21	3,647.04	0.00	0.00	0.00	
14,200.00	89.69	360.00	10,737.95	3,674.44	-850.21	3,746.42	0.00	0.00	0.00	
14,300.00	89.69	360.00	10,738.49	3,774.44	-850.22	3,845.79	0.00	0.00	0.00	
14,400.00	89.69	360.00	10,739.03	3,874.44	-850.23	3,945.16	0.00	0.00	0.00	
14,500.00	89.69	360.00	10,739.57	3,974.43	-850.23	4,044.54	0.00	0.00	0.00	
14,600.00	89.69	360.00	10,740.11	4,074.43	-850.24	4,143.91	0.00	0.00	0.00	
14,700.00	89.69	360.00	10,740.65	4,174.43	-850.24	4,243.28	0.00	0.00	0.00	
14,800.00	89.69	360.00	10,741.20	4,274.43	-850.25	4,342.66	0.00	0.00	0.00	
14,900.00	89.69	360.00	10,741.74	4,374.43	-850.25	4,442.03	0.00	0.00	0.00	
15,000.00	89.69	360.00	10,742.28	4,474.43	-850.26	4,541.40	0.00	0.00	0.00	
15,100.00	89.69	360.00	10,742.82	4,574.43	-850.27	4,640.78	0.00	0.00	0.00	
15,200.00	89.69	360.00	10,743.36	4,674.42	-850.27	4,740.15	0.00	0.00	0.00	
15,300.00	89.69	360.00	10,743.90	4,774.42	-850.28	4,839.52	0.00	0.00	0.00	
15,400.00	89.69	360.00	10,744.44	4,874.42	-850.28	4,938.90	0.00	0.00	0.00	
15,500.00	89.69	360.00	10,744.98	4,974.42	-850.29	5,038.27	0.00	0.00	0.00	
15,600.00	89.69	360.00	10,745.52	5,074.42	-850.30	5,137.64	0.00	0.00	0.00	

Planning Report

Database:	EDM 5000.14 Single User Db	Well:	Well 737H
Company:	Devon Energy	GL 2960' + 32' KB @ 2992.00usft	
Project:	Eddy County, New Mexico (NAD 83)	GL 2960' + 32' KB @ 2992.00usft	
Spud:	Spud Muffin 31-30	Grid	
Well:	737H	Minimum Curvature	
Wellbore:	OH		
Design:	Plan 1		

Planned Survey										
Measured Depth (usft)	Spud Rate (ft)	Annulus (ft)	Vertical (usft)	Horizontal (usft)	Depth (usft)	Vertical (usft)	Spud Rate (ft/1000usft)	Annulus (ft/1000usft)	Horizontal (ft/1000usft)	Turn Rate (ft/1000usft)
15,700.00	89.69	360.00	10,746.07	5,174.42	-850.30	5,237.02	0.00	0.00	0.00	0.00
15,800.00	89.69	360.00	10,746.61	5,274.42	-850.31	5,336.39	0.00	0.00	0.00	0.00
15,900.00	89.69	360.00	10,747.15	5,374.41	-850.31	5,435.76	0.00	0.00	0.00	0.00
16,000.00	89.69	360.00	10,747.69	5,474.41	-850.32	5,535.14	0.00	0.00	0.00	0.00
16,100.00	89.69	360.00	10,748.23	5,574.41	-850.32	5,634.51	0.00	0.00	0.00	0.00
16,200.00	89.69	360.00	10,748.77	5,674.41	-850.33	5,733.88	0.00	0.00	0.00	0.00
16,300.00	89.69	360.00	10,749.31	5,774.41	-850.34	5,833.26	0.00	0.00	0.00	0.00
16,400.00	89.69	360.00	10,749.85	5,874.41	-850.34	5,932.63	0.00	0.00	0.00	0.00
16,500.00	89.69	360.00	10,750.39	5,974.41	-850.35	6,032.00	0.00	0.00	0.00	0.00
16,600.00	89.69	360.00	10,750.93	6,074.40	-850.35	6,131.38	0.00	0.00	0.00	0.00
16,700.00	89.69	360.00	10,751.48	6,174.40	-850.36	6,230.75	0.00	0.00	0.00	0.00
16,800.00	89.69	360.00	10,752.02	6,274.40	-850.36	6,330.12	0.00	0.00	0.00	0.00
16,900.00	89.69	360.00	10,752.56	6,374.40	-850.37	6,429.50	0.00	0.00	0.00	0.00
17,000.00	89.69	360.00	10,753.10	6,474.40	-850.38	6,528.87	0.00	0.00	0.00	0.00
17,100.00	89.69	360.00	10,753.64	6,574.40	-850.38	6,628.24	0.00	0.00	0.00	0.00
17,200.00	89.69	360.00	10,754.18	6,674.40	-850.39	6,727.62	0.00	0.00	0.00	0.00
17,300.00	89.69	360.00	10,754.72	6,774.39	-850.39	6,826.99	0.00	0.00	0.00	0.00
17,400.00	89.69	360.00	10,755.26	6,874.39	-850.40	6,926.36	0.00	0.00	0.00	0.00
17,500.00	89.69	360.00	10,755.80	6,974.39	-850.41	7,025.74	0.00	0.00	0.00	0.00
17,600.00	89.69	360.00	10,756.35	7,074.39	-850.41	7,125.11	0.00	0.00	0.00	0.00
17,700.00	89.69	360.00	10,756.89	7,174.39	-850.42	7,224.48	0.00	0.00	0.00	0.00
17,800.00	89.69	360.00	10,757.43	7,274.39	-850.42	7,323.86	0.00	0.00	0.00	0.00
17,900.00	89.69	360.00	10,757.97	7,374.39	-850.43	7,423.23	0.00	0.00	0.00	0.00
18,000.00	89.69	360.00	10,758.51	7,474.38	-850.43	7,522.60	0.00	0.00	0.00	0.00
18,090.71	89.69	360.00	10,759.00	7,565.09	-850.44	7,612.74	0.00	0.00	0.00	0.00
TD at 18090.71 - BHL - Spud Muffin 31-30 737H										

Design Targets										
Target Name	Dip Angle (°)	Dip Slope (°)	TVD (usft)	WAB (usft)	BAW (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
0VS - Spud Muffin 31-3	0.00	0.00	10,718.00	0.00	0.00	456,685.34	639,419.03	32.255105	-104.016048	
- plan misses target center by 881.92usft at 10645.57usft MD (10551.29 TVD, 165.77 N, -850.01 E)										
- Point										
BHL - Spud Muffin 31-3C	0.00	0.00	10,759.00	7,565.09	-850.44	464,250.43	638,568.59	32.275907	-104.018728	
- plan hits target center										
- Point										

Planning Report

Database:	EDM 5000.14 Single User Db	Local Coordinate Reference:	Well 737H
Company:	Devon Energy	SVP Reference:	GL 2960' + 32' KB @ 2992.00usft
Project:	Eddy County, New Mexico (NAD 83)	MD Reference:	GL 2960' + 32' KB @ 2992.00usft
Site:	Spud Muffin 31-30	North Reference:	Grid
Well:	737H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1		

Formation						
Measured Depth (usft)	Vertical Depth (usft)	Notes	Depth (usft)	Dip (°)	Dip Direction (°)	
22.00	22.00	Top of Salt		0.31	0.00	
2,783.83	2,774.00	Delaware		0.31	0.00	
6,507.62	6,470.00	1st BSPG Lime		0.31	0.00	
7,534.28	7,489.00	1st BSPG Sand		0.31	0.00	
7,791.19	7,744.00	2nd BSPG Lime		0.31	0.00	
8,321.05	8,271.00	2nd BSPG Sand		0.31	0.00	
8,766.27	8,716.00	3rd BSPG Lime		0.31	0.00	
9,451.27	9,401.00	3rd BSPG Sand		0.31	0.00	
9,810.27	9,760.00	Wolfcamp		0.31	0.00	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	True Azimuth (usft)	True Dip (usft)	Remarks	
1,000.00	1,000.00	0.00	0.00	Start Nudge Build 1.00	
1,700.40	1,698.65	0.00	-42.76	EOB 7° at 1700.40 MD	
7,969.87	7,921.35	0.00	-807.24	Start Drop -1.00	
8,670.27	8,620.00	0.00	-850.00	Vertical at 8670.27 MD	
10,198.47	10,148.20	0.00	-850.00	Start Build 10.00	
11,095.37	10,721.15	569.86	-850.03	LP 89.69° at 11095.37 MD	
18,090.71	10,759.00	7,565.09	-850.44	TD at 18090.71	