

# BONANZA CREEK OIL COMPANY

Location: COLORADO Slot: SLOT#01 NMU 11-12H (413°FNL & 1886°FEL, SEC.11)  
Field: JACKSON COUNTY Well: NMU 11-12H  
Facility: SEC.11-T9N-R79W Wellbore: NMU 11-12H PWB

Plot reference wellpath is NMU 11-12H (REV-B.1) PWP

True vertical depths are referenced to RIG (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to RIG (RKB)	North Reference: True north
RIG (RKB) to Mean Sea Level: 8182 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#01 NMU 11-12H (413°FNL & 1886°FEL, SEC.11)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: guenaler on 5/12/2014

## Location Information

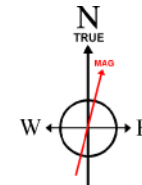
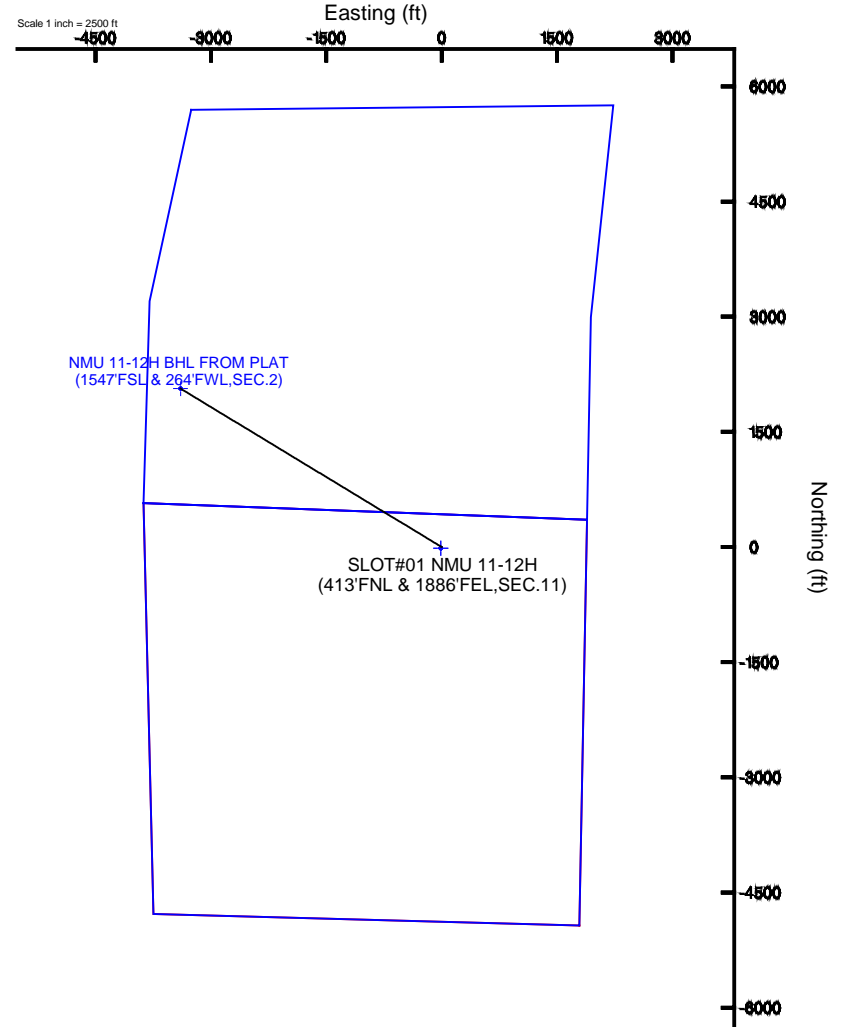
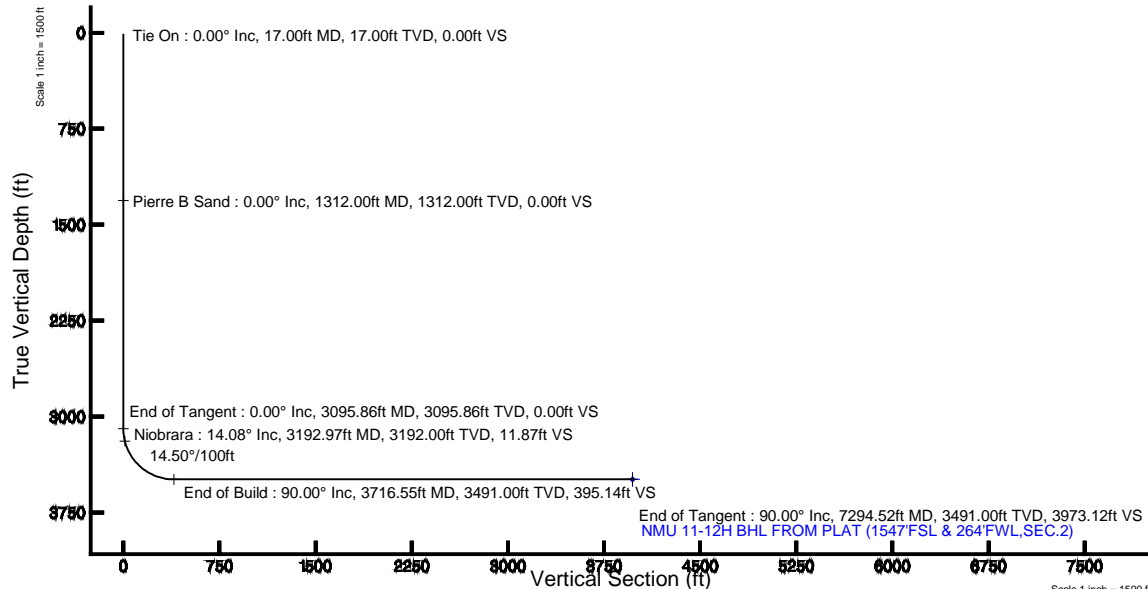
Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.11-T9N-R79W			2797802.553	1524804.245	40°46'18.080"N	106°13'48.025"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#01 NMU 11-12H (413°FNL & 1886°FEL, SEC.11)	16.40	11.31	2797813.997	1524820.546	40°46'18.242"N	106°13'47.878"W
RIG (RKB) to Mud line (At Slot: SLOT#01 NMU 11-12H (413°FNL & 1886°FEL, SEC.11))					8182ft	
Mean Sea Level to Mud line (At Slot: SLOT#01 NMU 11-12H (413°FNL & 1886°FEL, SEC.11))					0ft	
RIG (RKB) to Mean Sea Level					8182ft	

## Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	17.00	0.000	301.290	17.00	0.00	0.00	0.00	0.00
End of Tangent	3095.86	0.000	301.290	3095.86	0.00	0.00	0.00	0.00
End of Build	3716.55	90.000	301.290	3491.00	205.22	-337.67	14.50	395.14
End of Tangent	7294.52	90.000	301.290	3491.00	2063.51	-3395.23	0.00	3973.12

## Survey Program

Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
8182.00	8182.00	NaviTrak	NaviTrak (Standard)		NMU 11-12H PWB



BGGM (1945.0 to 2015.0) Dip: 66.99° Field: 52759.5 nT  
Magnetic North is 9.33 degrees East of True North (at 5/9/2014)

To correct azimuth from Magnetic to True add 9.33 degrees



# Planned Wellpath Report

NMU 11-12H (REV-B.1) PWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#01 NMU 11-12H (413'FNL & 1886'FEL,SEC.11)
Area	COLORADO	Well	NMU 11-12H
Field	JACKSON COUNTY	Wellbore	NMU 11-12H PWB
Facility	SEC.11-T9N-R79W		

## REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 4.0.0
North Reference	True	User	Guenaler
Scale	0.999998	Report Generated	5/12/2014 at 11:14:42 AM
Convergence at slot	n/a	Database/Source file	WA_Denver/NMU_11-12H_PWB.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	16.40	11.31	2797814.00	1524820.55	40°46'18.242"N	106°13'47.878"W
Facility Reference Pt			2797802.55	1524804.25	40°46'18.080"N	106°13'48.025"W
Field Reference Pt			2797802.54	1524804.29	40°46'18.080"N	106°13'48.025"W

## WELLPATH DATUM

Calculation method	Minimum curvature	RIG (RKB) to Facility Vertical Datum	8182.00ft
Horizontal Reference Pt	Slot	RIG (RKB) to Mean Sea Level	8182.00ft
Vertical Reference Pt	RIG (RKB)	RIG (RKB) to Mud Line at Slot (SLOT#01 NMU 11-12H (413'FNL & 1886'FEL,SEC.11))	8182.00ft
MD Reference Pt	RIG (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	301.29°



# Planned Wellpath Report

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#01 NMU 11-12H (413'FNL & 1886'FEL,SEC.11)
Area	COLORADO	Well	NMU 11-12H
Field	JACKSON COUNTY	Wellbore	NMU 11-12H PWB
Facility	SEC.11-T9N-R79W		

## WELLPATH DATA (79 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	301.290	0.00	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	
17.00	0.000	301.290	17.00	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	Tie On
117.00†	0.000	301.290	117.00	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	
217.00†	0.000	301.290	217.00	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	
317.00†	0.000	301.290	317.00	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	
417.00†	0.000	301.290	417.00	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	
517.00†	0.000	301.290	517.00	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	
617.00†	0.000	301.290	617.00	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	
717.00†	0.000	301.290	717.00	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	
817.00†	0.000	301.290	817.00	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	
917.00†	0.000	301.290	917.00	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	
1017.00†	0.000	301.290	1017.00	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	
1117.00†	0.000	301.290	1117.00	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	
1217.00†	0.000	301.290	1217.00	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	
1312.00†	0.000	301.290	1312.00	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	Pierre B Sand
1317.00†	0.000	301.290	1317.00	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	
1417.00†	0.000	301.290	1417.00	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	
1517.00†	0.000	301.290	1517.00	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	
1617.00†	0.000	301.290	1617.00	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	
1717.00†	0.000	301.290	1717.00	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	
1817.00†	0.000	301.290	1817.00	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	
1917.00†	0.000	301.290	1917.00	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	
2017.00†	0.000	301.290	2017.00	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	
2117.00†	0.000	301.290	2117.00	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	
2217.00†	0.000	301.290	2217.00	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	
2317.00†	0.000	301.290	2317.00	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	
2417.00†	0.000	301.290	2417.00	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	
2517.00†	0.000	301.290	2517.00	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	
2617.00†	0.000	301.290	2617.00	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	
2717.00†	0.000	301.290	2717.00	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	



# Planned Wellpath Report

NMU 11-12H (REV-B.1) PWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#01 NMU 11-12H (413'FNL & 1886'FEL,SEC.11)
Area	COLORADO	Well	NMU 11-12H
Field	JACKSON COUNTY	Wellbore	NMU 11-12H PWB
Facility	SEC.11-T9N-R79W		

## WELLPATH DATA (79 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2817.00†	0.000	301.290	2817.00	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	
2917.00†	0.000	301.290	2917.00	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	
3017.00†	0.000	301.290	3017.00	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	
3095.86	0.000	301.290	3095.86	0.00	0.00	0.00	40°46'18.242"N	106°13'47.878"W	0.00	End of Tangent
3117.00†	3.066	301.290	3116.99	0.57	0.29	-0.48	40°46'18.245"N	106°13'47.884"W	14.50	
3192.97†	14.082	301.290	3192.00	11.87	6.17	-10.15	40°46'18.303"N	106°13'48.010"W	14.50	Niobrara
3217.00†	17.566	301.290	3215.11	18.43	9.57	-15.75	40°46'18.337"N	106°13'48.083"W	14.50	
3317.00†	32.066	301.290	3305.64	60.28	31.31	-51.52	40°46'18.551"N	106°13'48.548"W	14.50	
3417.00†	46.566	301.290	3382.80	123.47	64.13	-105.51	40°46'18.876"N	106°13'49.249"W	14.50	
3517.00†	61.066	301.290	3441.68	203.97	105.94	-174.30	40°46'19.289"N	106°13'50.143"W	14.50	
3617.00†	75.566	301.290	3478.53	296.65	154.07	-253.50	40°46'19.764"N	106°13'51.173"W	14.50	
3716.55	90.000	301.290	3491.00	395.14	205.22	-337.67	40°46'20.270"N	106°13'52.267"W	14.50	End of Build
3717.00†	90.000	301.290	3491.00	395.60	205.46	-338.06	40°46'20.272"N	106°13'52.272"W	0.00	
3817.00†	90.000	301.290	3491.00	495.60	257.40	-423.51	40°46'20.785"N	106°13'53.383"W	0.00	
3917.00†	90.000	301.290	3491.00	595.60	309.33	-508.97	40°46'21.298"N	106°13'54.493"W	0.00	
4017.00†	90.000	301.290	3491.00	695.60	361.27	-594.42	40°46'21.812"N	106°13'55.604"W	0.00	
4117.00†	90.000	301.290	3491.00	795.60	413.21	-679.88	40°46'22.325"N	106°13'56.715"W	0.00	
4217.00†	90.000	301.290	3491.00	895.60	465.14	-765.33	40°46'22.838"N	106°13'57.825"W	0.00	
4317.00†	90.000	301.290	3491.00	995.60	517.08	-850.79	40°46'23.351"N	106°13'58.936"W	0.00	
4417.00†	90.000	301.290	3491.00	1095.60	569.02	-936.24	40°46'23.864"N	106°14'00.047"W	0.00	
4517.00†	90.000	301.290	3491.00	1195.60	620.95	-1021.70	40°46'24.377"N	106°14'01.157"W	0.00	
4617.00†	90.000	301.290	3491.00	1295.60	672.89	-1107.15	40°46'24.891"N	106°14'02.268"W	0.00	
4717.00†	90.000	301.290	3491.00	1395.60	724.83	-1192.61	40°46'25.404"N	106°14'03.379"W	0.00	
4817.00†	90.000	301.290	3491.00	1495.60	776.76	-1278.06	40°46'25.917"N	106°14'04.490"W	0.00	
4917.00†	90.000	301.290	3491.00	1595.60	828.70	-1363.52	40°46'26.430"N	106°14'05.600"W	0.00	
5017.00†	90.000	301.290	3491.00	1695.60	880.64	-1448.97	40°46'26.943"N	106°14'06.711"W	0.00	
5117.00†	90.000	301.290	3491.00	1795.60	932.57	-1534.43	40°46'27.456"N	106°14'07.822"W	0.00	
5217.00†	90.000	301.290	3491.00	1895.60	984.51	-1619.88	40°46'27.969"N	106°14'08.933"W	0.00	
5317.00†	90.000	301.290	3491.00	1995.60	1036.45	-1705.34	40°46'28.483"N	106°14'10.043"W	0.00	
5417.00†	90.000	301.290	3491.00	2095.60	1088.39	-1790.79	40°46'28.996"N	106°14'11.154"W	0.00	



# Planned Wellpath Report

NMU 11-12H (REV-B.1) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#01 NMU 11-12H (413'FNL & 1886'FEL,SEC.11)
Area	COLORADO	Well	NMU 11-12H
Field	JACKSON COUNTY	Wellbore	NMU 11-12H PWB
Facility	SEC.11-T9N-R79W		

WELLPATH DATA (79 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5517.00†	90.000	301.290	3491.00	2195.60	1140.32	-1876.25	40°46'29.509"N	106°14'12.265"W	0.00	
5617.00†	90.000	301.290	3491.00	2295.60	1192.26	-1961.70	40°46'30.022"N	106°14'13.376"W	0.00	
5717.00†	90.000	301.290	3491.00	2395.60	1244.20	-2047.16	40°46'30.535"N	106°14'14.487"W	0.00	
5817.00†	90.000	301.290	3491.00	2495.60	1296.13	-2132.61	40°46'31.048"N	106°14'15.597"W	0.00	
5917.00†	90.000	301.290	3491.00	2595.60	1348.07	-2218.07	40°46'31.561"N	106°14'16.708"W	0.00	
6017.00†	90.000	301.290	3491.00	2695.60	1400.01	-2303.52	40°46'32.074"N	106°14'17.819"W	0.00	
6117.00†	90.000	301.290	3491.00	2795.60	1451.94	-2388.98	40°46'32.587"N	106°14'18.930"W	0.00	
6217.00†	90.000	301.290	3491.00	2895.60	1503.88	-2474.44	40°46'33.101"N	106°14'20.041"W	0.00	
6317.00†	90.000	301.290	3491.00	2995.60	1555.82	-2559.89	40°46'33.614"N	106°14'21.151"W	0.00	
6417.00†	90.000	301.290	3491.00	3095.60	1607.75	-2645.35	40°46'34.127"N	106°14'22.262"W	0.00	
6517.00†	90.000	301.290	3491.00	3195.60	1659.69	-2730.80	40°46'34.640"N	106°14'23.373"W	0.00	
6617.00†	90.000	301.290	3491.00	3295.60	1711.63	-2816.26	40°46'35.153"N	106°14'24.484"W	0.00	
6717.00†	90.000	301.290	3491.00	3395.60	1763.56	-2901.71	40°46'35.666"N	106°14'25.595"W	0.00	
6817.00†	90.000	301.290	3491.00	3495.60	1815.50	-2987.17	40°46'36.179"N	106°14'26.705"W	0.00	
6917.00†	90.000	301.290	3491.00	3595.60	1867.44	-3072.62	40°46'36.692"N	106°14'27.816"W	0.00	
7017.00†	90.000	301.290	3491.00	3695.60	1919.37	-3158.08	40°46'37.205"N	106°14'28.927"W	0.00	
7117.00†	90.000	301.290	3491.00	3795.60	1971.31	-3243.53	40°46'37.718"N	106°14'30.038"W	0.00	
7217.00†	90.000	301.290	3491.00	3895.60	2023.25	-3328.99	40°46'38.231"N	106°14'31.149"W	0.00	
7294.52	90.000	301.290	3491.00 <sup>1</sup>	3973.12	2063.51	-3395.23	40°46'38.629"N	106°14'32.010"W	0.00	End of Tangent



# Planned Wellpath Report

NMU 11-12H (REV-B.1) PWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#01 NMU 11-12H (413'FNL & 1886'FEL,SEC.11)
Area	COLORADO	Well	NMU 11-12H
Field	JACKSON COUNTY	Wellbore	NMU 11-12H PWB
Facility	SEC.11-T9N-R79W		

## TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
NMU 11-12H SECTION 11		0.00	-16.40	-11.31	2797802.55	1524804.24	40°46'18.080"N	106°13'48.025"W	polygon
NMU 11-12H SECTION 2		0.00	-16.40	-11.31	2797802.55	1524804.24	40°46'18.080"N	106°13'48.025"W	polygon
1) NMU 11-12H BHL FROM PLAT (1547'FSL & 264'FWL,SEC.2)	7294.52	3491.00	2063.51	-3395.23	2794435.88	1526911.93	40°46'38.629"N	106°14'32.010"W	point

## SURVEY PROGRAM - Ref Wellbore: NMU 11-12H PWB Ref Wellpath: NMU 11-12H (REV-B.1) PWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
8182.00	8182.00	NaviTrak (Standard)		NMU 11-12H PWB



# Planned Wellpath Report

NMU 11-12H (REV-B.1) PWP

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REFERENCE WELLPATH IDENTIFICATION			
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Area	COLORADO	Well	NMU 11-12H
Field	JACKSON COUNTY	Wellbore	NMU 11-12H PWB
Facility	SEC.11-T9N-R79W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1312.00	0.000	301.290	1312.00	Pierre B Sand
3192.97	14.082	301.290	3192.00	Niobrara

DESIGN COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
17.00	0.000	301.290	17.00	Tie On
3095.86	0.000	301.290	3095.86	End of Tangent
3716.55	90.000	301.290	3491.00	End of Build
7294.52	90.000	301.290	3491.00	End of Tangent