

NOBLE ENERGY, INC

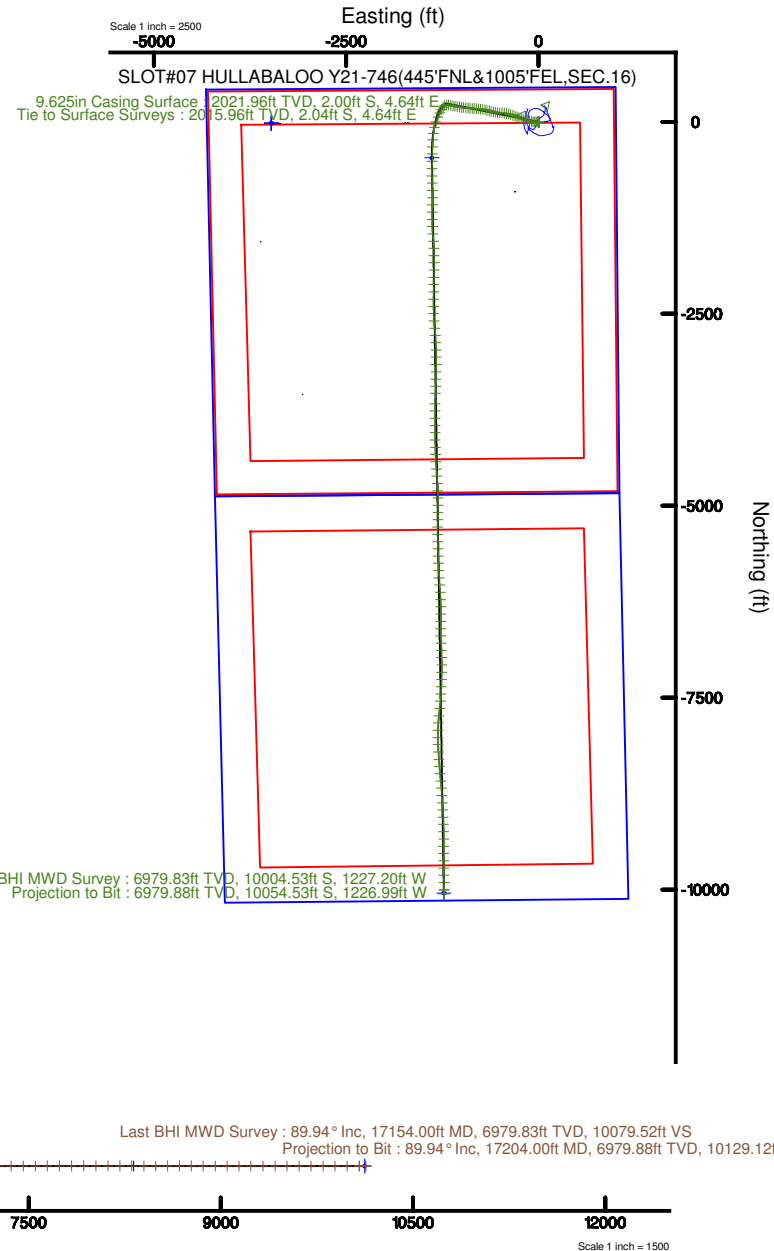
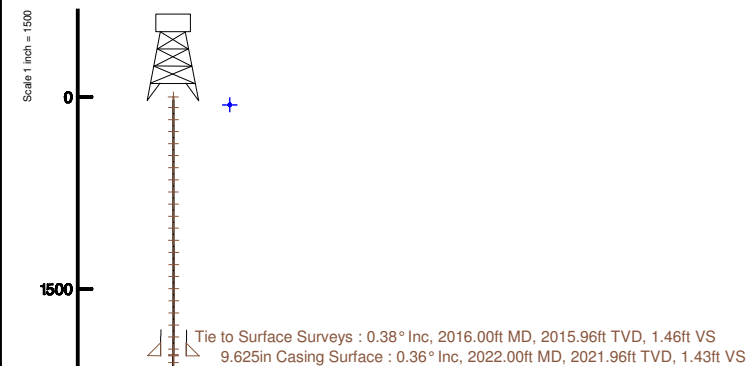
Location: COLORADO Slot: SLOT#07 HULLABALOO Y21-746(445°FNL&1005°FEL,SEC.16)
 Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: HULLABALOO Y21-746
 Facility: SEC.16-T02N-R64W Wellbore: HULLABALOO Y21-746 PWB

Comments
SURFACE LOCATION: NENE
40.14452 N
104.55058 W
API: 05-123-45235



Also reference wellbore in HULLABALOO Y21-746 (REV A) PWB	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (2011), US feet
True vertical depths are referenced to TIG (2016) (PWB)	Wellbore was transformed from a different geoidic datum
Measured depths are referenced to TIG (2016) (PWB)	North Reference: Grid north
TIG (2016) (PWB) to Mean Sea Level: 4674 feet	Scale: True distance
Mean Sea Level to Ground level (in Slot: SLOT#07 HULLABALOO Y21-746(445°FNL&1005°FEL,SEC.16))	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: Caribya on 2017-11-08
	Database Owner

Location Information					
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
SEC.16-T02N-R64W	3881943.591	129884.275	40°10'41.427"N	104°12'46.807"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Longitude
SLOT#07 HULLABALOO Y21-746(445°FNL&1005°FEL,SEC.16)	18.72	3472.28	3881943.591	129884.275	104°12'46.807"W
TIG (2016) (PWB) to Ground level (in Slot: SLOT#07 HULLABALOO Y21-746(445°FNL&1005°FEL,SEC.16))	4674				
Mean Sea Level to Ground level (in Slot: SLOT#07 HULLABALOO Y21-746(445°FNL&1005°FEL,SEC.16))	0				
TIG (2016) (PWB) to Mean Sea Level	4674				



Vertical Section (ft)
 Azimuth 186.98° with reference 0.00 N, 0.00 E

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#07 HULLABALOO Y21-746(445'FNL&1005'FEL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-746
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-746 AWB
Facility	SEC.16-T02N-R64W		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.0
North Reference	Grid	User	Cantryat
Scale	0.999959	Report Generated	11/8/2017 at 10:38:46 AM
Convergence at slot	0.62° East	Database/Source file	Denver/HULLABALOO_Y21-746_AWP.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	18.72	3472.28	3265414.69	1296912.99	40°08'40.272"N	104°33'02.088"W
Facility Reference Pt			3261942.56	1296894.28	40°08'40.452"N	104°33'46.800"W
Field Reference Pt			3000000.00	4454105.15	48°46'34.315"N	105°30'00.000"W

WELLPATH DATUM

Calculation method	Minimum curvature	RIG (30'KB) (RKB) to Facility Vertical Datum	4974.00ft
Horizontal Reference Pt	Slot	RIG (30'KB) (RKB) to Mean Sea Level	4974.00ft
Vertical Reference Pt	RIG (30'KB) (RKB)	RIG (30'KB) (RKB) to Ground Level at Slot (SLOT#07 HULLABALOO Y21-746 (445'FNL&1005'FEL,SEC.16))	4974.00ft
MD Reference Pt	RIG (30'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	186.98°

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Operator	NOBLE ENERGY, INC	Slot	SLOT#07 HULLABALOO Y21-746(445'FNL&1005'FEL,SEC.16)
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Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-746 AWB
Facility	SEC.16-T02N-R64W		

WELLPATH DATA (184 stations)									
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]
0.00	0.000	198.530	0.00	0.00	0.00	0.00	40°08'40.272"N	104°33'02.088"W	0.00
81.00	0.520	198.530	81.00	0.36	-0.35	-0.12	40°08'40.269"N	104°33'02.090"W	0.64
178.00	0.500	208.070	178.00	1.19	-1.14	-0.46	40°08'40.261"N	104°33'02.094"W	0.09
269.00	0.270	246.070	268.99	1.67	-1.58	-0.84	40°08'40.257"N	104°33'02.099"W	0.36
364.00	0.610	107.750	363.99	1.88	-1.82	-0.56	40°08'40.254"N	104°33'02.095"W	0.88
458.00	0.450	56.340	457.99	1.73	-1.77	0.22	40°08'40.254"N	104°33'02.085"W	0.51
553.00	0.350	318.360	552.99	1.29	-1.35	0.34	40°08'40.259"N	104°33'02.084"W	0.64
647.00	0.540	125.290	646.99	1.31	-1.39	0.51	40°08'40.258"N	104°33'02.082"W	0.94
742.00	0.460	127.020	741.98	1.72	-1.88	1.18	40°08'40.253"N	104°33'02.073"W	0.09
836.00	0.320	108.600	835.98	1.96	-2.19	1.73	40°08'40.250"N	104°33'02.066"W	0.20
931.00	0.260	102.720	930.98	2.04	-2.32	2.19	40°08'40.249"N	104°33'02.060"W	0.07
1025.00	0.130	128.560	1024.98	2.11	-2.43	2.48	40°08'40.248"N	104°33'02.056"W	0.16
1120.00	0.250	143.310	1119.98	2.32	-2.67	2.69	40°08'40.245"N	104°33'02.054"W	0.14
1215.00	0.740	142.910	1214.97	2.91	-3.32	3.19	40°08'40.239"N	104°33'02.047"W	0.52
1309.00	0.570	124.190	1308.97	3.56	-4.07	3.94	40°08'40.231"N	104°33'02.038"W	0.29
1403.00	0.220	85.900	1402.97	3.74	-4.32	4.51	40°08'40.229"N	104°33'02.031"W	0.45
1498.00	0.050	270.950	1497.96	3.71	-4.30	4.65	40°08'40.229"N	104°33'02.029"W	0.28
1593.00	0.130	327.490	1592.96	3.63	-4.21	4.55	40°08'40.230"N	104°33'02.030"W	0.12
1687.00	0.080	279.930	1686.96	3.54	-4.11	4.42	40°08'40.231"N	104°33'02.032"W	0.10
1782.00	0.310	344.480	1781.96	3.30	-3.85	4.29	40°08'40.233"N	104°33'02.033"W	0.30
1876.00	0.570	19.060	1875.96	2.61	-3.17	4.37	40°08'40.240"N	104°33'02.032"W	0.38
1971.00	0.440	11.780	1970.96	1.78	-2.36	4.60	40°08'40.248"N	104°33'02.029"W	0.15
2016.00	0.380	2.190	2015.96	1.46	-2.04	4.64	40°08'40.251"N	104°33'02.028"W	0.20
2075.00	0.850	279.390	2074.95	1.25	-1.78	4.22	40°08'40.254"N	104°33'02.034"W	1.50
2170.00	3.870	267.900	2169.86	1.73	-1.78	0.32	40°08'40.254"N	104°33'02.084"W	3.20
2264.00	6.090	268.570	2263.50	2.96	-2.02	-7.84	40°08'40.253"N	104°33'02.189"W	2.36
2358.00	7.860	267.600	2356.80	4.73	-2.41	-19.24	40°08'40.250"N	104°33'02.336"W	1.89
2453.00	9.970	269.840	2450.65	6.81	-2.71	-33.96	40°08'40.249"N	104°33'02.526"W	2.25
2548.00	11.300	274.500	2544.02	8.24	-2.00	-51.46	40°08'40.258"N	104°33'02.751"W	1.67
2642.00	12.610	278.180	2635.98	8.42	0.18	-70.80	40°08'40.281"N	104°33'03.000"W	1.61

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#07 HULLABALOO Y21-746(445'FNL&1005'FEL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-746
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-746 AWP
Facility	SEC.16-T02N-R64W		

WELLPATH DATA (184 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]
2737.00	14.540	280.500	2728.32	7.47	3.83	-92.79	40°08'40.320"N	104°33'03.282"W	2.11
2831.00	16.780	285.230	2818.83	4.80	9.55	-117.49	40°08'40.379"N	104°33'03.600"W	2.74
2926.00	17.170	287.640	2909.69	0.23	17.40	-144.09	40°08'40.459"N	104°33'03.941"W	0.85
3021.00	17.300	288.330	3000.43	-5.14	26.09	-170.86	40°08'40.548"N	104°33'04.284"W	0.26
3115.00	17.460	288.740	3090.13	-10.77	35.02	-197.48	40°08'40.639"N	104°33'04.626"W	0.21
3210.00	17.340	288.630	3180.79	-16.53	44.12	-224.39	40°08'40.732"N	104°33'04.971"W	0.13
3304.00	17.690	290.050	3270.43	-22.59	53.49	-251.08	40°08'40.827"N	104°33'05.314"W	0.59
3399.00	17.810	292.140	3360.91	-29.66	63.91	-278.10	40°08'40.933"N	104°33'05.660"W	0.68
3493.00	17.630	290.520	3450.45	-36.75	74.32	-304.74	40°08'41.039"N	104°33'06.002"W	0.56
3588.00	17.820	288.740	3540.94	-43.09	84.03	-331.98	40°08'41.137"N	104°33'06.351"W	0.60
3683.00	17.670	288.260	3631.42	-48.87	93.22	-359.44	40°08'41.231"N	104°33'06.703"W	0.22
3777.00	17.680	285.710	3720.98	-53.83	101.56	-386.73	40°08'41.316"N	104°33'07.054"W	0.82
3872.00	17.940	281.680	3811.43	-57.22	108.42	-414.95	40°08'41.387"N	104°33'07.416"W	1.33
3966.00	17.750	276.360	3900.92	-58.25	112.94	-443.37	40°08'41.435"N	104°33'07.781"W	1.75
4061.00	17.870	272.060	3991.37	-56.85	115.07	-472.33	40°08'41.459"N	104°33'08.154"W	1.39
4155.00	17.950	273.710	4080.81	-54.79	116.53	-501.19	40°08'41.476"N	104°33'08.525"W	0.55
4250.00	17.800	276.660	4171.23	-53.87	119.16	-530.22	40°08'41.506"N	104°33'08.899"W	0.97
4345.00	17.800	280.450	4261.69	-54.67	123.48	-558.93	40°08'41.551"N	104°33'09.268"W	1.22
4439.00	17.980	282.810	4351.14	-57.02	129.30	-587.20	40°08'41.612"N	104°33'09.631"W	0.79
4534.00	17.180	283.750	4441.70	-60.16	135.88	-615.13	40°08'41.680"N	104°33'09.990"W	0.89
4628.00	17.260	285.470	4531.49	-63.86	142.90	-642.06	40°08'41.752"N	104°33'10.336"W	0.55
4724.00	17.010	285.000	4623.23	-67.92	150.34	-669.35	40°08'41.828"N	104°33'10.686"W	0.30
4818.00	17.130	282.610	4713.09	-71.20	156.92	-696.14	40°08'41.896"N	104°33'11.030"W	0.76
4913.00	17.020	279.820	4803.90	-73.26	162.34	-723.49	40°08'41.953"N	104°33'11.381"W	0.87
5007.00	17.000	276.910	4893.79	-73.93	166.34	-750.69	40°08'41.995"N	104°33'11.731"W	0.91
5102.00	17.100	274.620	4984.62	-73.34	169.14	-778.40	40°08'42.026"N	104°33'12.087"W	0.71
5196.00	17.010	272.310	5074.49	-71.65	170.81	-805.91	40°08'42.045"N	104°33'12.441"W	0.73
5291.00	17.090	273.070	5165.31	-69.57	172.11	-833.73	40°08'42.061"N	104°33'12.800"W	0.25
5385.00	17.050	274.740	5255.17	-68.09	173.99	-861.26	40°08'42.082"N	104°33'13.154"W	0.52
5480.00	17.000	275.720	5346.01	-67.24	176.53	-888.96	40°08'42.110"N	104°33'13.510"W	0.31

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#07 HULLABALOO Y21-746(445'FNL&1005'FEL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-746
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-746 AWB
Facility	SEC.16-T02N-R64W		

WELLPATH DATA (184 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]
5575.00	17.130	276.880	5436.83	-66.91	179.59	-916.67	40°08'42.143"N	104°33'13.866"W	0.38
5669.00	17.000	276.220	5526.69	-66.71	182.73	-944.07	40°08'42.177"N	104°33'14.219"W	0.25
5764.00	17.000	276.140	5617.54	-66.32	185.72	-971.68	40°08'42.210"N	104°33'14.574"W	0.02
5858.00	17.550	276.630	5707.30	-66.04	188.83	-999.42	40°08'42.243"N	104°33'14.931"W	0.61
5952.00	17.580	277.910	5796.91	-66.18	192.42	-1027.56	40°08'42.282"N	104°33'15.293"W	0.41
6047.00	17.460	280.590	5887.51	-67.31	197.01	-1055.78	40°08'42.330"N	104°33'15.655"W	0.86
6141.00	17.470	281.850	5977.17	-69.40	202.50	-1083.45	40°08'42.387"N	104°33'16.011"W	0.40
6236.00	17.330	281.230	6067.83	-71.66	208.19	-1111.29	40°08'42.447"N	104°33'16.368"W	0.24
6331.00	17.480	281.150	6158.48	-73.75	213.70	-1139.16	40°08'42.504"N	104°33'16.727"W	0.16
6425.00	17.160	279.950	6248.22	-75.50	218.83	-1166.67	40°08'42.558"N	104°33'17.080"W	0.51
6520.00	16.710	266.850	6339.13	-73.82	220.50	-1194.12	40°08'42.577"N	104°33'17.433"W	4.04
6614.00	16.750	238.710	6429.30	-63.04	212.71	-1219.23	40°08'42.503"N	104°33'17.758"W	8.54
6710.00	20.870	210.810	6520.33	-38.77	190.78	-1239.86	40°08'42.288"N	104°33'18.026"W	10.18
6804.00	26.970	209.250	6606.22	-3.70	157.78	-1258.87	40°08'41.964"N	104°33'18.276"W	6.52
6899.00	33.970	208.540	6688.05	40.98	115.61	-1282.11	40°08'41.550"N	104°33'18.581"W	7.38
6993.00	42.390	202.490	6761.90	96.05	63.15	-1306.83	40°08'41.034"N	104°33'18.906"W	9.79
7088.00	49.720	199.070	6827.79	162.44	-0.78	-1330.96	40°08'40.405"N	104°33'19.226"W	8.14
7182.00	54.540	192.630	6885.52	235.69	-72.12	-1351.07	40°08'39.702"N	104°33'19.494"W	7.45
7277.00	60.920	187.090	6936.24	315.83	-151.19	-1364.67	40°08'38.922"N	104°33'19.680"W	8.33
7371.00	69.720	184.430	6975.46	401.13	-236.08	-1373.16	40°08'38.084"N	104°33'19.801"W	9.71
7466.00	77.400	181.920	7002.33	491.97	-326.99	-1378.17	40°08'37.186"N	104°33'19.878"W	8.47
7560.00	86.120	181.140	7015.79	584.49	-419.89	-1380.64	40°08'36.269"N	104°33'19.923"W	9.31
7655.00	90.430	181.120	7018.65	678.93	-514.81	-1382.51	40°08'35.331"N	104°33'19.960"W	4.54
7750.00	90.370	180.720	7017.98	773.39	-609.79	-1384.04	40°08'34.392"N	104°33'19.993"W	0.43
7844.00	90.520	178.900	7017.25	866.65	-703.79	-1383.73	40°08'33.464"N	104°33'20.002"W	1.94
7938.00	90.400	177.900	7016.50	959.60	-797.75	-1381.10	40°08'32.535"N	104°33'19.981"W	1.07
8033.00	90.310	179.360	7015.91	1053.59	-892.71	-1378.83	40°08'31.596"N	104°33'19.964"W	1.54
8128.00	90.340	179.230	7015.37	1147.73	-987.71	-1377.66	40°08'30.657"N	104°33'19.962"W	0.14
8222.00	90.430	181.540	7014.74	1241.10	-1081.70	-1378.29	40°08'29.729"N	104°33'19.983"W	2.46
8317.00	90.250	181.750	7014.17	1335.69	-1176.65	-1381.02	40°08'28.791"N	104°33'20.032"W	0.29

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Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-746 AWB
Facility	SEC.16-T02N-R64W		

WELLPATH DATA (184 stations)									
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]
8411.00	90.150	178.940	7013.85	1429.05	-1270.64	-1381.59	40°08'27.862"N	104°33'20.052"W	2.99
8506.00	90.220	177.950	7013.54	1523.00	-1365.61	-1379.01	40°08'26.923"N	104°33'20.032"W	1.04
8600.00	90.550	174.630	7012.91	1615.35	-1459.39	-1372.93	40°08'25.996"N	104°33'19.966"W	3.55
8695.00	90.370	175.420	7012.14	1708.29	-1554.03	-1364.69	40°08'25.060"N	104°33'19.873"W	0.85
8789.00	90.490	176.520	7011.44	1800.56	-1647.80	-1358.08	40°08'24.133"N	104°33'19.801"W	1.18
8884.00	90.460	179.470	7010.65	1894.38	-1742.72	-1354.76	40°08'23.194"N	104°33'19.771"W	3.11
8978.00	90.550	180.690	7009.82	1987.69	-1836.72	-1354.89	40°08'22.265"N	104°33'19.786"W	1.30
9073.00	90.310	180.900	7009.11	2082.14	-1931.71	-1356.21	40°08'21.327"N	104°33'19.816"W	0.34
9168.00	90.370	180.640	7008.55	2176.58	-2026.70	-1357.49	40°08'20.388"N	104°33'19.845"W	0.28
9262.00	90.370	181.120	7007.94	2270.04	-2120.68	-1358.93	40°08'19.460"N	104°33'19.877"W	0.51
9357.00	90.250	181.240	7007.43	2364.56	-2215.66	-1360.89	40°08'18.522"N	104°33'19.915"W	0.18
9452.00	90.400	181.110	7006.89	2459.07	-2310.64	-1362.83	40°08'17.583"N	104°33'19.953"W	0.21
9546.00	90.280	179.220	7006.33	2552.40	-2404.63	-1363.11	40°08'16.654"N	104°33'19.969"W	2.01
9641.00	90.460	177.210	7005.72	2646.28	-2499.58	-1360.15	40°08'15.716"N	104°33'19.944"W	2.12
9736.00	90.490	176.010	7004.93	2739.73	-2594.41	-1354.53	40°08'14.778"N	104°33'19.885"W	1.26
9830.00	90.250	175.780	7004.32	2831.97	-2688.17	-1347.80	40°08'13.851"N	104°33'19.811"W	0.35
9924.00	90.520	176.110	7003.69	2924.23	-2781.93	-1341.15	40°08'12.924"N	104°33'19.738"W	0.45
10019.00	90.400	177.340	7002.93	3017.71	-2876.77	-1335.73	40°08'11.986"N	104°33'19.682"W	1.30
10114.00	90.430	178.200	7002.24	3111.49	-2971.69	-1332.03	40°08'11.048"N	104°33'19.647"W	0.91
10209.00	90.250	179.020	7001.67	3205.47	-3066.66	-1329.73	40°08'10.109"N	104°33'19.630"W	0.88
10303.00	90.430	180.130	7001.12	3298.69	-3160.66	-1329.03	40°08'09.180"N	104°33'19.634"W	1.20
10398.00	90.310	181.690	7000.50	3393.15	-3255.64	-1330.54	40°08'08.242"N	104°33'19.667"W	1.65
10493.00	90.250	182.360	7000.04	3487.79	-3350.58	-1333.89	40°08'07.304"N	104°33'19.723"W	0.71
10587.00	90.310	180.630	6999.58	3581.36	-3444.54	-1336.35	40°08'06.376"N	104°33'19.767"W	1.84
10678.00	90.550	182.150	6998.90	3671.92	-3535.51	-1338.55	40°08'05.477"N	104°33'19.808"W	1.69
10815.00	90.220	181.790	6997.98	3808.39	-3672.42	-1343.26	40°08'04.125"N	104°33'19.888"W	0.36
10909.00	90.460	179.900	6997.42	3901.85	-3766.41	-1344.65	40°08'03.196"N	104°33'19.918"W	2.03
11004.00	90.460	179.040	6996.66	3996.03	-3861.40	-1343.77	40°08'02.257"N	104°33'19.920"W	0.91
11098.00	90.520	181.040	6995.85	4089.34	-3955.39	-1343.84	40°08'01.329"N	104°33'19.934"W	2.13
11193.00	90.370	179.680	6995.11	4183.70	-4050.39	-1344.43	40°08'00.390"N	104°33'19.955"W	1.44

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#07 HULLABALOO Y21-746(445'FNL&1005'FEL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-746
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-746 AWB
Facility	SEC.16-T02N-R64W		

WELLPATH DATA (184 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]
11287.00	90.340	178.270	6994.53	4276.78	-4144.37	-1342.75	40°07'59.461"N	104°33'19.946"W	1.50
11382.00	90.280	178.160	6994.02	4370.67	-4239.32	-1339.79	40°07'58.522"N	104°33'19.921"W	0.13
11477.00	90.370	178.020	6993.48	4464.53	-4334.26	-1336.63	40°07'57.584"N	104°33'19.893"W	0.18
11571.00	90.340	177.000	6992.90	4557.24	-4428.17	-1332.54	40°07'56.656"N	104°33'19.853"W	1.09
11665.00	90.340	175.880	6992.34	4649.66	-4521.99	-1326.71	40°07'55.728"N	104°33'19.791"W	1.19
11760.00	90.340	176.100	6991.77	4742.91	-4616.75	-1320.06	40°07'54.791"N	104°33'19.718"W	0.23
11854.00	90.250	176.810	6991.29	4835.33	-4710.57	-1314.25	40°07'53.863"N	104°33'19.657"W	0.76
11949.00	90.430	177.320	6990.73	4928.91	-4805.45	-1309.39	40°07'52.925"N	104°33'19.607"W	0.57
12044.00	90.400	178.450	6990.04	5022.71	-4900.38	-1305.88	40°07'51.987"N	104°33'19.575"W	1.19
12138.00	90.250	179.960	6989.51	5115.85	-4994.36	-1304.58	40°07'51.058"N	104°33'19.571"W	1.61
12233.00	90.370	179.820	6988.99	5210.12	-5089.36	-1304.39	40°07'50.119"N	104°33'19.582"W	0.19
12328.00	90.490	182.320	6988.28	5304.60	-5184.33	-1306.17	40°07'49.181"N	104°33'19.617"W	2.63
12422.00	90.370	181.100	6987.57	5398.20	-5278.29	-1308.97	40°07'48.253"N	104°33'19.666"W	1.30
12517.00	90.370	178.460	6986.96	5492.44	-5373.28	-1308.61	40°07'47.314"N	104°33'19.675"W	2.78
12612.00	90.430	180.500	6986.30	5586.62	-5468.27	-1307.75	40°07'46.375"N	104°33'19.677"W	2.15
12706.00	90.340	178.020	6985.66	5679.76	-5562.25	-1306.53	40°07'45.446"N	104°33'19.674"W	2.64
12801.00	90.280	177.740	6985.15	5773.57	-5657.18	-1303.02	40°07'44.508"N	104°33'19.642"W	0.30
12895.00	90.310	177.830	6984.67	5866.36	-5751.11	-1299.38	40°07'43.579"N	104°33'19.608"W	0.10
12990.00	90.370	177.530	6984.10	5960.11	-5846.03	-1295.54	40°07'42.641"N	104°33'19.571"W	0.32
13084.00	90.280	176.830	6983.57	6052.74	-5939.92	-1290.91	40°07'41.713"N	104°33'19.525"W	0.75
13179.00	90.220	175.620	6983.15	6146.07	-6034.71	-1284.66	40°07'40.775"N	104°33'19.457"W	1.28
13274.00	90.340	176.210	6982.69	6239.30	-6129.46	-1277.89	40°07'39.838"N	104°33'19.383"W	0.63
13368.00	90.400	177.440	6982.08	6331.82	-6223.32	-1272.69	40°07'38.910"N	104°33'19.329"W	1.31
13463.00	90.340	178.590	6981.47	6425.66	-6318.26	-1269.40	40°07'37.972"N	104°33'19.300"W	1.21
13558.00	90.280	180.040	6980.96	6519.81	-6413.24	-1268.26	40°07'37.033"N	104°33'19.298"W	1.53
13652.00	90.430	180.040	6980.37	6613.12	-6507.24	-1268.33	40°07'36.104"N	104°33'19.312"W	0.16
13747.00	90.400	179.650	6979.69	6707.38	-6602.24	-1268.07	40°07'35.166"N	104°33'19.321"W	0.41
13842.00	90.090	178.950	6979.28	6801.53	-6697.23	-1266.91	40°07'34.227"N	104°33'19.320"W	0.81
13936.00	90.120	177.930	6979.11	6894.49	-6791.19	-1264.35	40°07'33.298"N	104°33'19.299"W	1.09
14031.00	89.940	177.870	6979.06	6988.30	-6886.13	-1260.87	40°07'32.360"N	104°33'19.268"W	0.20

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#07 HULLABALOO Y21-746(445'FNL&1005'FEL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-746
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-746 AWP
Facility	SEC.16-T02N-R64W		

WELLPATH DATA (184 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]
14125.00	89.940	178.760	6979.16	7081.22	-6980.09	-1258.10	40°07'31.431"N	104°33'19.245"W	0.95
14220.00	89.970	179.660	6979.23	7175.35	-7075.08	-1256.79	40°07'30.492"N	104°33'19.241"W	0.95
14315.00	89.970	181.150	6979.28	7269.72	-7170.07	-1257.47	40°07'29.553"N	104°33'19.263"W	1.57
14409.00	90.180	181.030	6979.16	7363.23	-7264.06	-1259.25	40°07'28.625"N	104°33'19.299"W	0.26
14504.00	89.970	183.480	6979.03	7457.90	-7358.98	-1262.99	40°07'27.687"N	104°33'19.360"W	2.59
14599.00	90.150	183.930	6978.93	7552.74	-7453.78	-1269.13	40°07'26.751"N	104°33'19.452"W	0.51
14693.00	90.000	182.190	6978.81	7646.52	-7547.64	-1274.15	40°07'25.824"N	104°33'19.529"W	1.86
14788.00	90.150	186.820	6978.69	7741.40	-7642.32	-1281.61	40°07'24.889"N	104°33'19.638"W	4.88
14883.00	89.910	186.650	6978.64	7836.40	-7736.66	-1292.75	40°07'23.958"N	104°33'19.795"W	0.31
14977.00	89.940	183.260	6978.76	7930.33	-7830.30	-1300.87	40°07'23.034"N	104°33'19.912"W	3.61
15072.00	90.090	182.200	6978.73	8025.07	-7925.19	-1305.39	40°07'22.097"N	104°33'19.983"W	1.13
15167.00	90.090	180.020	6978.58	8119.57	-8020.17	-1307.23	40°07'21.158"N	104°33'20.020"W	2.29
15261.00	89.820	177.320	6978.66	8212.57	-8114.13	-1305.05	40°07'20.230"N	104°33'20.005"W	2.89
15356.00	90.030	175.800	6978.78	8306.00	-8208.96	-1299.35	40°07'19.292"N	104°33'19.944"W	1.62
15451.00	89.880	176.460	6978.86	8399.30	-8303.74	-1292.94	40°07'18.355"N	104°33'19.875"W	0.71
15545.00	90.150	175.860	6978.83	8491.63	-8397.53	-1286.64	40°07'17.427"N	104°33'19.807"W	0.70
15640.00	89.970	174.290	6978.73	8584.59	-8492.18	-1278.49	40°07'16.491"N	104°33'19.715"W	1.66
15735.00	90.120	175.050	6978.66	8677.41	-8586.76	-1269.66	40°07'15.556"N	104°33'19.614"W	0.82
15829.00	89.780	175.270	6978.74	8769.41	-8680.43	-1261.73	40°07'14.629"N	104°33'19.525"W	0.43
15924.00	89.970	176.250	6978.95	8862.60	-8775.17	-1254.71	40°07'13.692"N	104°33'19.447"W	1.05
16019.00	89.940	176.320	6979.02	8955.95	-8869.97	-1248.55	40°07'12.755"N	104°33'19.381"W	0.08
16113.00	89.940	176.510	6979.12	9048.35	-8963.78	-1242.68	40°07'11.827"N	104°33'19.318"W	0.20
16208.00	89.910	177.680	6979.25	9141.94	-9058.66	-1237.86	40°07'10.889"N	104°33'19.269"W	1.23
16302.00	89.750	177.900	6979.52	9234.74	-9152.59	-1234.24	40°07'09.961"N	104°33'19.236"W	0.29
16397.00	90.030	179.490	6979.71	9328.74	-9247.56	-1232.07	40°07'09.022"N	104°33'19.221"W	1.70
16492.00	90.060	180.550	6979.63	9423.04	-9342.56	-1232.11	40°07'08.083"N	104°33'19.234"W	1.12
16586.00	89.880	179.940	6979.68	9516.39	-9436.56	-1232.51	40°07'07.154"N	104°33'19.252"W	0.68
16681.00	90.060	179.320	6979.73	9610.61	-9531.56	-1231.89	40°07'06.216"N	104°33'19.257"W	0.68
16775.00	89.850	179.520	6979.80	9703.80	-9625.55	-1230.94	40°07'05.287"N	104°33'19.258"W	0.31
16870.00	90.060	179.580	6979.88	9798.00	-9720.55	-1230.20	40°07'04.348"N	104°33'19.262"W	0.23

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#07 HULLABALOO Y21-746(445'FNL&1005'FEL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-746
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-746 AWB
Facility	SEC.16-T02N-R64W		

WELLPATH DATA (184 stations)									
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]
16964.00	89.910	179.460	6979.90	9891.21	-9814.54	-1229.41	40°07'03.419"N	104°33'19.264"W	0.20
17059.00	90.120	179.060	6979.88	9985.34	-9909.54	-1228.18	40°07'02.480"N	104°33'19.262"W	0.48
17154.00	89.940	179.760	6979.83	10079.52	-10004.53	-1227.20	40°07'01.541"N	104°33'19.262"W	0.76
17204.00	89.940	179.760	6979.88	10129.12	-10054.53	-1226.99	40°07'01.047"N	104°33'19.266"W	0.00

HOLE & CASING SECTIONS - Ref Wellbore: HULLABALOO Y21-746 AWB Ref Wellpath: HULLABALOO Y21-746 AWP									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
13.5in Open Hole	30.00	2022.00	1992.00	30.00	2021.96	-0.05	-0.02	-2.00	4.64
9.625in Casing Surface	30.00	2022.00	1992.00	30.00	2021.96	-0.05	-0.02	-2.00	4.64
8.5in Open Hole	2022.00	17204.00	15182.00	2021.96	6979.88	-2.00	4.64	-10054.53	-1226.99

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#07 HULLABALOO Y21-746(445'FNL&1005'FEL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-746
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-746 AWB
Facility	SEC.16-T02N-R64W		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
HULLABALOO Y21-787 SECTION 16	61.00	-18.72	-3472.28	3261942.56	1296894.28	40°08'40.452"N	104°33'46.800"W	polygon
HULLABALOO Y21-787 SECTION 21	61.00	-18.72	-3472.28	3261942.56	1296894.28	40°08'40.452"N	104°33'46.800"W	polygon
HULLABALOO Y21-746 BHL REV-1 (100'FSL&2395'FEL,SEC.21)	6979.60	-10046.39	-1229.40	3264185.34	1286867.04	40°07'01.128"N	104°33'19.296"W	point
HULLABALOO Y21-746 LANDING POINT(905'FNL&2395'FEL,SEC.16)	7021.00	-470.00	-1385.00	3264029.75	1296443.01	40°08'35.774"N	104°33'19.986"W	point
HULLABALOO Y21-787 SECTION 16 HARDLINE (460'SETBACK)	7251.00	-18.72	-3472.28	3261942.56	1296894.28	40°08'40.452"N	104°33'46.800"W	polygon
HULLABALOO Y21-787 SECTION 21 HARDLINE(460'SETBACK)	7251.00	-18.72	-3472.28	3261942.56	1296894.28	40°08'40.452"N	104°33'46.800"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: HULLABALOO Y21-746 AWB					Ref Wellpath: HULLABALOO Y21-746 AWP	
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment		Wellbore	
0.00	2016.00	Gyrodata standard - Drop gyro or Multi-shot	Surface Gyros <81'-2016'>		HULLABALOO Y21-746 AWB	
2016.00	17154.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	BHI/ATC 8.5" Hole OWSG, MWD+IFR+MSA <2075'-17154'>		HULLABALOO Y21-746 AWB	
17154.00	17204.00	Blind Drilling (std)	Projection to bit		HULLABALOO Y21-746 AWB	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#07 HULLABALOO Y21-746(445'FNL&1005'FEL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-746
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-746 AWB
Facility	SEC.16-T02N-R64W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
2016.00	0.380	2.190	2015.96	Tie to Surface Surveys
17154.00	89.940	179.760	6979.83	Last BHI MWD Survey
17204.00	89.940	179.760	6979.88	Projection to Bit

COMMENTS	
Wellpath general comments SURFACE LOCATION: NENE 40.14452 N 104.55058 W API: 05-123-45235	