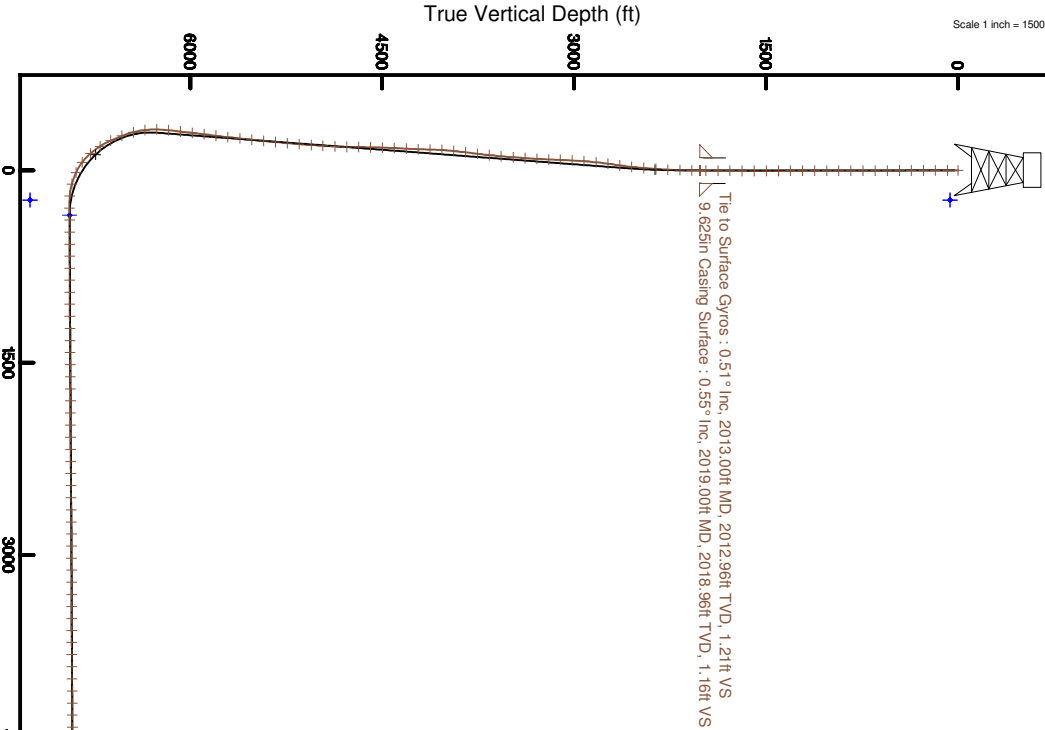


NOBLE ENERGY, INC

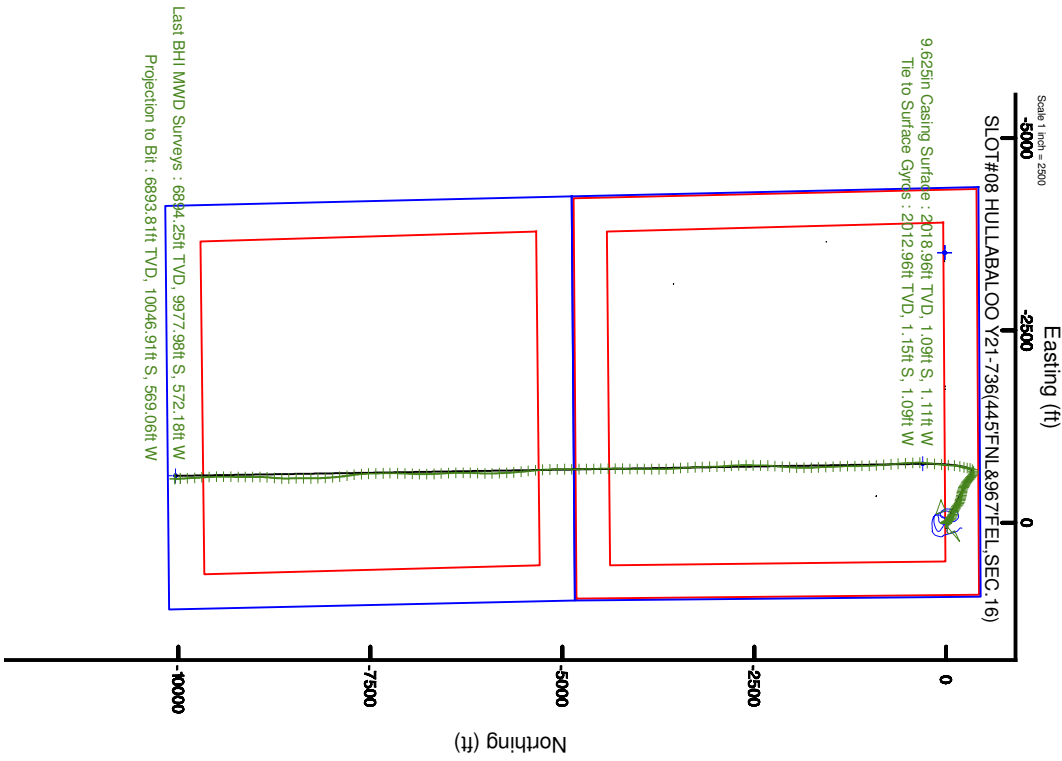
Location: COLORADO
Field: NOBLE COUNTY (NOBLE NAD 83 GRID)
Facility: SEC.16 T02N-R64W
Well: HULLABALOO Y21-736
Wellbore: HULLABALOO Y21-736 PWB



Location Information			
State	County	Section	Range
CO	NOBLE	16	202
Zone	Grid	Easting	Northing
12N	64W	1200000	1200000



Comments
SURFACE LOCATION NENE
NAD 83
APR 05 12:45:23



Vertical Section (ft)
Azimuth 183.47° with reference 0.00 N, 0.00 E

Last BHI MWD Surveys : 90.37° Inc, 17117.00ft MD, 6894.25ft TVD, 9994.32ft VS
Projection to Bit : 90.37° Inc, 17186.00ft MD, 6893.81ft TVD, 10062.98ft VS

Scale 1 inch = 1500

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#08 HULLABALOO Y21-736(445'FNL&967'FEL, SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-736
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-736 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 10:17:47 AM
Convergence at slot	0.62° East	Database/Source file	Denver/HULLABALOO_Y21-736_AWP.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	19.14	3511.42	3265453.83	1296913.41	40°08'40.272"N	104°33'01.584"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	4975.00ft
Horizontal Reference Pt	Slot	RIG (30'KB) (RKB) to Mean Sea Level	4975.00ft
Vertical Reference Pt	RIG (30'KB) (RKB)	RIG (30'KB) (RKB) to Ground Level at Slot (SLOT#08 HULLABALOO Y21-736 (445'FNL&967'FEL, SEC.16))	4975.00ft
MD Reference Pt	RIG (30'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	183.47°



Actual Wellpath Report
HULLABALOO Y21-736 AWP
Page 2 of 10



REFERENCE WELLPATH IDENTIFICATION					Slot	SLOT#08 HULLABALOO Y21-736(445°FNL&967°FEL,SEC.16)
Operator	NOBLE ENERGY, INC					
Area	COLORADO				Well	HULLABALOO Y21-736
Field	WELD COUNTY (NOBLE NAD 83 GRID)				Wellbore	HULLABALOO Y21-736 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	
0.00	0.000	182.660	0.00	0.00	0.00	0.00	40°08'40.272"N		104°33'01.584"W	
81.00	0.280	182.660	81.00	0.20	-0.20	-0.01	40°08'40.270"N		104°33'01.584"W	
178.00	0.150	61.010	178.00	0.37	-0.37	0.09	40°08'40.268"N		104°33'01.583"W	
269.00	0.290	183.970	269.00	0.53	-0.54	0.18	40°08'40.267"N		104°33'01.582"W	
364.00	0.460	149.450	364.00	1.09	-1.11	0.36	40°08'40.261"N		104°33'01.580"W	
458.00	0.250	176.600	458.00	1.61	-1.64	0.56	40°08'40.256"N		104°33'01.577"W	
553.00	0.490	128.700	552.99	2.05	-2.10	0.89	40°08'40.251"N		104°33'01.573"W	
647.00	0.460	271.030	646.99	2.29	-2.35	0.83	40°08'40.249"N		104°33'01.574"W	
742.00	0.140	314.430	741.99	2.23	-2.26	0.36	40°08'40.250"N		104°33'01.580"W	
836.00	0.230	284.430	835.99	2.12	-2.13	0.10	40°08'40.251"N		104°33'01.583"W	
931.00	0.180	0.270	930.99	1.94	-1.94	-0.09	40°08'40.253"N		104°33'01.585"W	
1025.00	0.070	119.790	1024.99	1.82	-1.82	-0.04	40°08'40.254"N		104°33'01.585"W	
1120.00	0.300	239.650	1119.99	1.98	-1.97	-0.20	40°08'40.253"N		104°33'01.587"W	
1215.00	0.740	162.000	1214.99	2.69	-2.68	-0.23	40°08'40.246"N		104°33'01.587"W	
1309.00	0.440	126.350	1308.98	3.45	-3.47	0.25	40°08'40.238"N		104°33'01.581"W	
1403.00	0.320	151.740	1402.98	3.87	-3.92	0.67	40°08'40.233"N		104°33'01.576"W	
1498.00	0.220	278.470	1497.98	4.08	-4.12	0.61	40°08'40.231"N		104°33'01.577"W	
1593.00	0.090	318.870	1592.98	4.01	-4.04	0.38	40°08'40.232"N		104°33'01.580"W	
1687.00	0.340	348.430	1686.98	3.69	-3.71	0.28	40°08'40.235"N		104°33'01.581"W	
1782.00	0.460	324.400	1781.98	3.12	-3.13	0.00	40°08'40.241"N		104°33'01.584"W	
1876.00	0.610	324.200	1875.97	2.44	-2.41	-0.51	40°08'40.248"N		104°33'01.591"W	
1971.00	0.600	340.010	1970.97	1.59	-1.54	-0.98	40°08'40.257"N		104°33'01.587"W	
2013.00	0.510	347.730	2012.96	1.21	-1.15	-1.09	40°08'40.261"N		104°33'01.598"W	
2079.00	0.960	333.920	2078.96	0.45	-0.36	-1.40	40°08'40.269"N		104°33'01.602"W	
2174.00	2.910	311.960	2173.90	-1.75	1.96	-3.54	40°08'40.292"N		104°33'01.629"W	
2268.00	3.840	321.820	2267.74	-5.58	6.03	-7.26	40°08'40.332"N		104°33'01.677"W	
2362.00	5.220	323.620	2361.44	-11.21	11.95	-11.75	40°08'40.391"N		104°33'01.734"W	
2457.00	6.330	322.300	2455.96	-18.47	19.57	-17.52	40°08'40.467"N		104°33'01.807"W	
2552.00	7.810	322.570	2550.23	-27.29	28.84	-24.65	40°08'40.560"N		104°33'01.887"W	
2646.00	9.920	328.510	2643.11	-38.76	40.81	-32.76	40°08'40.679"N		104°33'02.000"W	



Actual Wellpath Report
HULLABALOO Y21-736 AWP
Page 3 of 10



REFERENCE WELLPATH IDENTIFICATION					
Operator	NOBLE ENERGY, INC			Slot	SLOT#08 HULLABALOO Y21-736(445'FNL&967'FEL,SEC.16)
Area	COLORADO			Well	HULLABALOO Y21-736
Field	WELD COUNTY (NOBLE NAD 83 GRID)			Wellbore	HULLABALOO Y21-736 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	
2741.00	10.670	319.970	2736.58	-51.84	54.53	-42.69	40°08'40.815"N		104°33'02.126"W	
2835.00	10.970	306.160	2828.93	-62.99	66.47	-55.51	40°08'40.935"N		104°33'02.290"W	
2930.00	11.810	292.900	2922.07	-71.11	75.59	-71.77	40°08'41.027"N		104°33'02.498"W	
3025.00	11.820	288.730	3015.06	-76.90	82.50	-89.94	40°08'41.097"N		104°33'02.731"W	
3119.00	11.720	286.410	3107.08	-81.57	88.28	-108.22	40°08'41.156"N		104°33'02.965"W	
3212.00	11.250	285.850	3198.22	-86.64	93.43	-126.00	40°08'41.209"N		104°33'03.194"W	
3307.00	11.010	289.860	3291.44	-90.18	99.04	-143.45	40°08'41.266"N		104°33'03.417"W	
3401.00	11.190	293.640	3383.68	-95.86	105.75	-160.25	40°08'41.334"N		104°33'03.633"W	
3496.00	10.560	296.670	3476.97	-102.47	113.35	-176.47	40°08'41.411"N		104°33'03.841"W	
3591.00	10.300	301.840	3570.41	-109.93	121.74	-191.47	40°08'41.495"N		104°33'04.033"W	
3685.00	10.630	306.730	3662.84	-118.68	131.36	-205.55	40°08'41.592"N		104°33'04.213"W	
3760.00	11.340	311.770	3756.10	-129.28	142.82	-219.54	40°08'41.707"N		104°33'04.391"W	
3874.00	11.640	309.540	3848.22	-140.59	155.02	-233.75	40°08'41.829"N		104°33'04.572"W	
3969.00	11.770	303.580	3941.25	-151.09	166.48	-249.21	40°08'41.943"N		104°33'04.770"W	
4063.00	11.880	289.820	4033.27	-158.63	175.06	-266.30	40°08'42.030"N		104°33'04.989"W	
4158.00	11.250	281.190	4126.35	-162.63	180.18	-284.60	40°08'42.083"N		104°33'05.224"W	
4253.00	10.380	284.210	4219.66	-166.47	184.07	-301.98	40°08'42.123"N		104°33'05.447"W	
4347.00	11.060	289.720	4312.02	-169.57	189.20	-318.68	40°08'42.175"N		104°33'05.661"W	
4442.00	11.120	286.690	4405.25	-174.21	194.90	-336.03	40°08'42.233"N		104°33'05.884"W	
4537.00	11.160	283.170	4498.46	-177.86	199.63	-353.76	40°08'42.282"N		104°33'06.112"W	
4631.00	11.220	278.450	4590.68	-180.19	203.04	-371.67	40°08'42.318"N		104°33'06.342"W	
4726.00	11.100	277.090	4683.88	-181.57	205.53	-389.88	40°08'42.344"N		104°33'06.576"W	
4821.00	10.540	280.920	4777.19	-183.27	208.31	-407.49	40°08'42.373"N		104°33'06.802"W	
4915.00	10.260	286.620	4869.65	-186.29	212.33	-423.95	40°08'42.415"N		104°33'07.014"W	
5010.00	10.880	293.630	4963.04	-191.31	218.34	-440.27	40°08'42.476"N		104°33'07.223"W	
5102.00	9.870	296.910	5053.54	-197.44	225.39	-455.26	40°08'42.547"N		104°33'07.415"W	
5199.00	11.220	299.250	5148.90	-204.85	233.77	-470.91	40°08'42.632"N		104°33'07.615"W	
5293.00	11.500	298.010	5241.06	-212.72	242.64	-487.16	40°08'42.721"N		104°33'07.823"W	
5388.00	10.810	301.460	5334.26	-220.83	251.73	-503.12	40°08'42.813"N		104°33'08.028"W	
5482.00	10.470	304.680	5426.65	-229.40	261.19	-517.66	40°08'42.908"N		104°33'08.214"W	
									DLS [°/100ft]	



Actual Wellpath Report
HULLABALOO Y21-736 AWP
Page 4 of 10



REFERENCE WELLPATH IDENTIFICATION					
Operator	NOBLE ENERGY, INC			Slot	SLOT#08 HULLABALOO Y21-736(445'FNL&967'FEL,SEC.16)
Area	COLORADO			Well	HULLABALOO Y21-736
Field	WELD COUNTY (NOBLE NAD 83 GRID)			Wellbore	HULLABALOO Y21-736 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]
5577.00	10.300	308.900	5520.09	-238.79	271.44	-531.37	40°08'43.010"N	104°33'08.389"W	0.82
5671.00	10.190	310.570	5612.59	-248.68	282.12	-544.23	40°08'43.117"N	104°33'08.563"W	0.34
5766.00	9.970	311.980	5706.13	-258.87	293.09	-556.73	40°08'43.227"N	104°33'08.712"W	0.35
5861.00	11.580	315.650	5799.45	-270.39	305.41	-569.50	40°08'43.350"N	104°33'08.875"W	1.84
5955.00	11.770	308.660	5891.51	-282.26	318.14	-583.59	40°08'43.477"N	104°33'09.056"W	1.52
6050.00	11.440	304.080	5984.57	-292.94	329.48	-598.96	40°08'43.591"N	104°33'09.251"W	1.03
6144.00	11.780	308.740	6076.65	-302.92	340.71	-614.16	40°08'43.704"N	104°33'09.445"W	1.06
6239.00	11.670	300.970	6169.67	-312.96	351.72	-629.97	40°08'43.814"N	104°33'09.647"W	1.66
6334.00	11.940	281.490	6262.70	-318.77	358.62	-647.84	40°08'43.884"N	104°33'09.876"W	4.19
6428.00	15.220	246.510	6354.21	-314.53	355.64	-668.73	40°08'43.857"N	104°33'10.146"W	9.23
6523.00	17.760	223.980	6445.39	-297.84	340.22	-690.25	40°08'43.707"N	104°33'10.425"W	7.19
6617.00	22.360	190.760	6533.94	-269.10	312.24	-703.59	40°08'43.432"N	104°33'10.601"W	12.86
6712.00	23.290	186.580	6621.51	-232.42	275.82	-709.12	40°08'43.072"N	104°33'10.677"W	1.97
6807.00	33.400	193.130	6705.03	-187.76	231.58	-717.23	40°08'42.636"N	104°33'10.787"W	11.12
6901.00	40.820	194.970	6779.94	-132.07	176.62	-731.07	40°08'42.095"N	104°33'10.973"W	7.98
6996.00	53.320	183.960	6844.63	-63.16	108.24	-741.78	40°08'41.420"N	104°33'11.120"W	15.62
7091.00	65.530	182.670	6892.86	18.47	26.74	-746.44	40°08'40.615"N	104°33'11.192"W	12.91
7185.00	74.076	187.000	6925.30	106.55	-61.05	-753.96	40°08'39.748"N	104°33'11.300"W	10.06
7279.00	85.660	185.140	6941.81	198.83	-152.91	-763.70	40°08'38.842"N	104°33'11.438"W	12.48
7374.00	91.480	186.470	6944.18	293.68	-247.35	-773.30	40°08'37.910"N	104°33'11.575"W	6.28
7468.00	90.310	180.530	6942.71	387.62	-341.12	-779.04	40°08'36.984"N	104°33'11.662"W	6.44
7563.00	90.120	178.130	6942.36	482.37	-436.10	-777.93	40°08'36.045"N	104°33'11.661"W	2.53
7658.00	90.180	176.390	6942.11	576.81	-530.99	-773.38	40°08'35.107"N	104°33'11.615"W	1.83
7752.00	89.850	175.000	6942.08	669.94	-624.72	-766.33	40°08'34.180"N	104°33'11.537"W	1.52
7847.00	90.250	175.490	6942.00	763.96	-719.40	-758.45	40°08'33.243"N	104°33'11.448"W	0.67
7941.00	90.120	175.470	6941.70	857.05	-813.10	-751.05	40°08'32.317"N	104°33'11.366"W	0.14
8036.00	90.156	177.020	6941.47	951.29	-907.90	-744.82	40°08'31.379"N	104°33'11.299"W	1.63
8130.00	90.030	178.080	6941.33	1044.79	-1001.81	-740.81	40°08'30.451"N	104°33'11.260"W	1.13
8225.00	90.250	178.530	6941.09	1139.41	-1096.77	-738.00	40°08'29.512"N	104°33'11.237"W	0.53
8319.00	90.550	179.320	6940.44	1233.11	-1190.75	-736.23	40°08'28.583"N	104°33'11.228"W	0.90

REFERENCE WELLPATH IDENTIFICATION					
Operator	NOBLE ENERGY, INC			Slot	SLOT#08 HULLABALOO Y21-736(445°FNL&967°FEL,SEC.16)
Area	COLORADO			Well	HULLABALOO Y21-736
Field	WELD COUNTY (NOBLE NAD 83 GRID)			Wellbore	HULLABALOO Y21-736 AWB
Facility	SEC.16-T02N-R64W				

WELLPATH DATA (184 stations)									
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Latitude	Longitude	DLS
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]			[°/100ft]
8414.00	90.460	178.990	6939.60	1327.83	-1285.73	-734.83	40°08'27.645"N	104°33'11.223"W	0.36
8508.00	90.400	177.470	6938.90	1421.44	-1379.68	-731.93	40°08'26.716"N	104°33'11.198"W	1.62
8603.00	90.520	177.880	6938.13	1515.95	-1474.60	-728.07	40°08'25.778"N	104°33'11.162"W	0.45
8697.00	90.580	177.420	6937.23	1609.46	-1568.52	-724.22	40°08'24.849"N	104°33'11.125"W	0.49
8792.00	90.370	177.040	6936.44	1703.89	-1663.40	-719.63	40°08'23.911"N	104°33'11.079"W	0.46
8866.00	89.820	177.500	6936.29	1797.34	-1757.30	-715.15	40°08'22.983"N	104°33'11.034"W	0.76
8981.00	89.570	180.020	6936.72	1882.01	-1852.26	-713.10	40°08'22.044"N	104°33'11.021"W	2.67
9076.00	90.520	182.920	6936.72	1986.94	-1947.22	-715.53	40°08'21.106"N	104°33'11.066"W	3.21
9170.00	90.460	183.440	6935.91	2080.94	-2041.07	-720.75	40°08'20.179"N	104°33'11.145"W	0.56
9265.00	90.460	184.750	6935.15	2175.93	-2135.83	-727.53	40°08'19.244"N	104°33'11.245"W	1.38
9360.00	90.680	184.880	6934.22	2270.90	-2230.49	-735.50	40°08'18.309"N	104°33'11.361"W	0.27
9454.00	90.520	182.760	6933.22	2364.89	-2324.27	-741.77	40°08'17.383"N	104°33'11.455"W	2.26
9549.00	90.550	180.490	6932.34	2459.83	-2419.22	-744.46	40°08'16.445"N	104°33'11.502"W	2.39
9643.00	90.650	180.760	6931.35	2553.70	-2513.21	-745.49	40°08'15.516"N	104°33'11.528"W	0.31
9738.00	90.740	180.020	6930.20	2648.56	-2608.20	-746.13	40°08'14.578"N	104°33'11.550"W	0.78
9833.00	90.800	178.540	6928.92	2743.29	-2703.18	-744.94	40°08'13.639"N	104°33'11.548"W	1.56
9927.00	90.310	175.670	6928.01	2836.70	-2797.04	-740.19	40°08'12.711"N	104°33'11.499"W	3.10
10022.00	89.780	175.740	6927.94	2930.83	-2891.78	-733.08	40°08'11.774"N	104°33'11.421"W	0.56
10117.00	89.940	177.920	6928.17	3025.19	-2986.62	-727.82	40°08'10.837"N	104°33'11.366"W	2.30
10211.00	90.250	179.160	6928.01	3118.84	-3080.59	-725.43	40°08'09.908"N	104°33'11.348"W	1.36
10306.00	90.150	178.610	6927.68	3213.53	-3175.57	-723.58	40°08'08.969"N	104°33'11.338"W	0.59
10401.00	90.280	177.560	6927.32	3308.11	-3270.52	-720.41	40°08'08.030"N	104°33'11.310"W	1.11
10495.00	90.310	176.360	6926.84	3401.51	-3364.39	-715.50	40°08'07.102"N	104°33'11.259"W	1.17
10590.00	90.220	176.460	6926.40	3495.79	-3459.20	-709.55	40°08'06.165"N	104°33'11.196"W	0.14
10684.00	89.910	176.150	6926.29	3589.05	-3553.00	-703.41	40°08'05.237"N	104°33'11.130"W	0.40
10779.00	90.340	177.490	6926.09	3683.41	-3647.85	-698.14	40°08'04.299"N	104°33'11.075"W	1.48
10873.00	90.220	179.640	6925.63	3777.06	-3741.81	-695.79	40°08'03.371"N	104°33'11.058"W	2.29
10968.00	90.580	180.760	6924.96	3871.90	-3836.81	-696.12	40°08'02.432"N	104°33'11.075"W	1.24
11062.00	90.650	180.340	6923.96	3965.77	-3930.80	-697.02	40°08'01.503"N	104°33'11.099"W	0.45
11157.00	90.550	180.240	6922.96	4060.62	-4025.79	-697.51	40°08'00.565"N	104°33'11.119"W	0.15



Actual Wellpath Report
HULLABALOO Y21-736 AWP
Page 6 of 10



REFERENCE WELLPATH IDENTIFICATION					
Operator	NOBLE ENERGY, INC			Slot	SLOT#08 HULLABALOO Y21-736(445°FNL&967°FEL,SEC.16)
Area	COLORADO			Well	HULLABALOO Y21-736
Field	WELD COUNTY (NOBLE NAD 83 GRID)			Wellbore	HULLABALOO Y21-736 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]
11262.00	90.310	180.580	6922.25	4156.48	-4120.79	-698.19	40°07'59.626"N	104°33'11.141"W	0.44
11346.00	90.370	181.480	6921.69	4249.39	-4214.77	-699.87	40°07'58.698"N	104°33'11.175"W	0.96
11441.00	90.180	181.380	6921.23	4344.33	-4309.74	-702.25	40°07'57.759"N	104°33'11.219"W	0.23
11535.00	90.370	179.350	6920.78	4438.19	-4403.73	-702.84	40°07'56.831"N	104°33'11.239"W	2.17
11630.00	90.250	178.170	6920.27	4532.86	-4498.71	-700.79	40°07'56.892"N	104°33'11.226"W	1.25
11724.00	90.120	178.950	6919.97	4626.52	-4592.67	-698.43	40°07'54.963"N	104°33'11.208"W	0.84
11819.00	90.000	179.070	6919.87	4721.23	-4687.66	-696.79	40°07'54.024"N	104°33'11.200"W	0.18
11913.00	90.030	179.250	6919.84	4814.96	-4781.65	-695.41	40°07'53.096"N	104°33'11.196"W	0.19
12008.00	90.030	180.190	6919.79	4909.76	-4876.65	-694.94	40°07'52.157"N	104°33'11.203"W	0.99
12103.00	90.250	180.000	6919.56	5004.59	-4971.65	-695.10	40°07'51.218"N	104°33'11.218"W	0.31
12197.00	90.250	178.910	6919.15	5098.36	-5065.64	-694.21	40°07'50.289"N	104°33'11.219"W	1.16
12292.00	90.280	177.710	6918.71	5192.97	-5160.60	-691.40	40°07'49.351"N	104°33'11.196"W	1.26
12387.00	90.250	176.920	6918.27	5287.42	-5255.49	-686.95	40°07'48.412"N	104°33'11.152"W	0.83
12481.00	90.710	175.280	6917.48	5380.64	-5349.27	-680.56	40°07'47.485"N	104°33'10.981"W	1.81
12576.00	90.220	173.980	6916.71	5474.51	-5443.84	-671.67	40°07'46.550"N	104°33'10.987"W	1.46
12670.00	90.030	174.380	6916.51	5567.28	-5537.36	-662.14	40°07'46.624"N	104°33'10.871"W	0.47
12765.00	90.060	175.540	6916.43	5661.23	-5631.99	-653.79	40°07'44.688"N	104°33'10.777"W	1.22
12859.00	90.150	176.630	6916.26	5754.45	-5725.77	-647.38	40°07'43.761"N	104°33'10.707"W	1.16
12954.00	90.180	177.550	6915.99	5848.86	-5820.65	-642.55	40°07'42.823"N	104°33'10.658"W	0.97
13049.00	90.090	178.740	6915.76	5943.45	-5915.59	-639.48	40°07'41.885"N	104°33'10.631"W	1.26
13143.00	90.090	181.240	6915.61	6037.27	-6009.59	-639.46	40°07'40.956"N	104°33'10.644"W	2.66
13238.00	90.310	182.440	6915.28	6132.22	-6104.53	-642.51	40°07'40.018"N	104°33'10.697"W	1.28
13333.00	90.620	182.450	6914.51	6227.21	-6199.45	-646.56	40°07'39.080"N	104°33'10.762"W	0.33
13427.00	90.950	180.700	6913.22	6321.14	-6293.40	-649.15	40°07'38.152"N	104°33'10.808"W	1.89
13522.00	91.110	177.490	6911.52	6415.84	-6388.36	-647.65	40°07'37.214"N	104°33'10.802"W	3.38
13616.00	90.310	176.780	6910.35	6509.26	-6482.23	-642.95	40°07'36.286"N	104°33'10.754"W	1.14
13711.00	90.340	177.450	6909.81	6603.67	-6577.11	-638.17	40°07'35.348"N	104°33'10.706"W	0.71
13806.00	90.370	177.050	6909.22	6698.11	-6672.00	-633.61	40°07'34.409"N	104°33'10.660"W	0.42
13900.00	89.970	178.580	6908.94	6791.65	-6765.93	-630.03	40°07'33.481"N	104°33'10.627"W	1.68
13995.00	90.280	181.330	6908.74	6886.46	-6860.92	-629.95	40°07'32.542"N	104°33'10.639"W	2.91

REFERENCE WELLPATH IDENTIFICATION					
Operator	NOBLE ENERGY, INC			Slot	SLOT#08 HULLABALOO Y21-736(445'FNL&967'FEL,SEC.16)
Area	COLORADO			Well	HULLABALOO Y21-736
Field	WELD COUNTY (NOBLE NAD 83 GRID)			Wellbore	HULLABALOO Y21-736 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]	
14090.00	90.650	183.840	6907.97	6981.44	-6955.81	-634.24	40°07'31.605"N	104°33'10.707"W	2.67	
14184.00	90.550	182.250	6906.98	7075.43	-7049.67	-639.23	40°07'30.678"N	104°33'10.784"W	1.69	
14279.00	90.740	180.930	6905.91	7170.37	-7144.62	-641.86	40°07'29.740"N	104°33'10.831"W	1.40	
14379.00	90.180	179.760	6905.11	7270.21	-7244.62	-642.47	40°07'28.752"N	104°33'10.853"W	1.30	
14468.00	90.340	179.660	6904.71	7359.02	-7333.61	-642.02	40°07'27.873"N	104°33'10.856"W	0.21	
14553.00	90.430	179.050	6904.07	7453.77	-7428.61	-640.95	40°07'26.934"N	104°33'10.856"W	0.65	
14658.00	90.550	177.190	6903.25	7548.35	-7523.55	-637.83	40°07'25.995"N	104°33'10.831"W	1.96	
14752.00	90.520	175.500	6902.38	7641.62	-7617.35	-631.84	40°07'25.068"N	104°33'10.761"W	1.80	
14847.00	90.620	172.540	6901.43	7735.32	-7711.82	-621.94	40°07'24.133"N	104°33'10.653"W	3.12	
14942.00	90.000	171.930	6900.92	7828.49	-7805.94	-609.11	40°07'23.202"N	104°33'10.500"W	0.92	
15036.00	89.940	173.800	6900.97	7920.88	-7899.21	-597.43	40°07'22.279"N	104°33'10.363"W	1.99	
15131.00	90.280	175.650	6900.78	8014.78	-7993.80	-588.70	40°07'21.343"N	104°33'10.264"W	1.98	
15225.00	89.970	176.330	6900.58	8107.98	-8087.57	-582.13	40°07'20.416"N	104°33'10.192"W	0.80	
15320.00	89.820	177.690	6900.75	8202.37	-8182.44	-577.17	40°07'19.478"N	104°33'10.141"W	1.44	
15415.00	89.970	180.410	6900.93	8297.08	-8277.42	-575.60	40°07'18.539"N	104°33'10.134"W	2.87	
15510.00	90.520	181.770	6900.52	8391.99	-8372.40	-577.40	40°07'17.601"N	104°33'10.170"W	1.54	
15604.00	90.580	178.250	6899.62	8485.80	-8466.38	-577.42	40°07'16.672"N	104°33'10.183"W	3.75	
15699.00	89.780	178.670	6899.32	8580.44	-8561.34	-574.87	40°07'15.734"N	104°33'10.164"W	0.95	
15794.00	89.970	181.750	6899.53	8675.27	-8656.33	-575.21	40°07'14.795"N	104°33'10.181"W	3.25	
15889.00	90.220	185.850	6899.37	8770.25	-8751.10	-581.51	40°07'13.859"N	104°33'10.275"W	4.32	
15983.00	90.370	183.560	6898.89	8864.22	-8844.78	-589.22	40°07'12.934"N	104°33'10.387"W	2.44	
16077.00	90.520	180.440	6898.16	8958.18	-8938.71	-592.50	40°07'12.007"N	104°33'10.442"W	3.32	
16172.00	90.310	180.330	6897.47	9053.04	-9033.70	-593.14	40°07'11.068"N	104°33'10.464"W	0.25	
16267.00	90.150	180.340	6897.09	9147.89	-9128.70	-593.69	40°07'10.129"N	104°33'10.484"W	0.17	
16361.00	90.250	180.730	6896.76	9241.77	-9222.69	-594.57	40°07'09.201"N	104°33'10.508"W	0.43	
16456.00	90.180	181.590	6896.40	9336.69	-9317.67	-596.49	40°07'08.262"N	104°33'10.546"W	0.91	
16550.00	90.250	180.250	6896.05	9430.60	-9411.66	-598.00	40°07'07.334"N	104°33'10.578"W	1.43	
16645.00	90.150	178.160	6895.72	9525.33	-9506.64	-596.68	40°07'06.395"N	104°33'10.574"W	2.20	
16739.00	90.150	177.500	6895.47	9618.87	-9600.57	-593.13	40°07'05.466"N	104°33'10.541"W	0.70	
16834.00	90.090	176.940	6895.27	9713.31	-9695.46	-588.52	40°07'04.528"N	104°33'10.495"W	0.59	

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#08 HULLABALOO Y21-736(445'FNL&967'FEL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-736
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-736 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]
16929.00	90.030	176.990	6896.17	9807.60	-9790.28	-582.66	40°07'03.591"N	104°33'10.433"W	1.00
17023.00	90.360	176.910	6894.85	9900.89	-9884.10	-576.84	40°07'02.663"N	104°33'10.371"W	1.04
17117.00	90.370	177.410	6894.25	9994.32	-9977.98	-572.18	40°07'01.735"N	104°33'10.324"W	0.53
17186.00	90.370	177.410	6893.81	10062.93	-10046.91	-569.06	40°07'01.053"N	104°33'10.293"W	0.00

HOLE & CASING SECTIONS - Ref Wellbore: HULLABALOO Y21-736 AWB Ref Wellpath: HULLABALOO Y21-736 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	2019.00	1989.00	30.00	2018.96	-0.03	0.00	-1.09	-1.11
9.625in Casing Surface	30.00	2019.00	1989.00	30.00	2018.96	-0.03	0.00	-1.09	-1.11
8.5in Open Hole	2019.00	17186.00	15167.00	2018.96	6893.81	-1.09	-1.11	-10046.91	-569.06

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#08 HULLABALOO Y21-736(445'FNL&967'FEL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-736
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-736 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	62.00	-19.14	-3511.42	3261942.56	1296894.28	40°08'40.452"N	104°33'46.800"W	polygon
HULLABALOO Y21-787 SECTION 21	62.00	-19.14	-3511.42	3261942.56	1296894.28	40°08'40.452"N	104°33'46.800"W	polygon
HULLABALOO Y21-736 BHL REV-1 (100'FSL&1735'FEL,SEC.21)	6892.02	-10039.77	-608.52	3264845.33	1286874.08	40°07'01.128"N	104°33'10.800"W	point
HULLABALOO Y21-736 LANDING POINT(750'FNL&1735'FEL,SEC.16)	6943.00	-305.00	-765.00	3264688.86	1296608.43	40°08'37.339"N	104°33'11.476"W	point
HULLABALOO Y21-787 SECTION 16 HARDLINE (460'SETBACK)	7252.00	-19.14	-3511.42	3261942.56	1296894.28	40°08'40.452"N	104°33'46.800"W	polygon
HULLABALOO Y21-787 SECTION 21 HARDLINE(460'SETBACK)	7252.00	-19.14	-3511.42	3261942.56	1296894.28	40°08'40.452"N	104°33'46.800"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: HULLABALOO Y21-736 AWB Ref Wellpath: HULLABALOO Y21-736 AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	2013.00	Gyrodata standard - Drop gyro or Multi-shot	Surface Gyros <81-2013>	HULLABALOO Y21-736 AWB
2013.00	17117.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	BH/ATC OWSG MWD rev2+IFR1+MSA 8.5" Hole <2079-17117>	HULLABALOO Y21-736 AWB
17117.00	17186.00	Blind Drilling (std)	Projection to bit	HULLABALOO Y21-736 AWB



Actual Wellpath Report
HULLABALOO Y21-736 AWP

Page 10 of 10



REFERENCE WELLPATH IDENTIFICATION					
Operator	NOBLE ENERGY, INC	Slot	SLOT#08 HULLABALOO Y21-736(445'FNL&967'FEL,SEC.16)		
Area	COLORADO	Well	HULLABALOO Y21-736		
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-736 AWB		
Facility	SEC.16-T02N-R64W				

WELLPATH COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
2013.00	0.510	347.730	2012.96	Tie to Surface Gyros	
17117.00	90.370	177.410	6894.25	Last BHI MWD Surveys	
17186.00	90.370	177.410	6893.81	Projection to Bit	

COMMENTS	
Wellpath general comments	
SURFACE LOCATION: NENE	
40.14452 N	
104.55044 W	
API: 05-123-45233	