

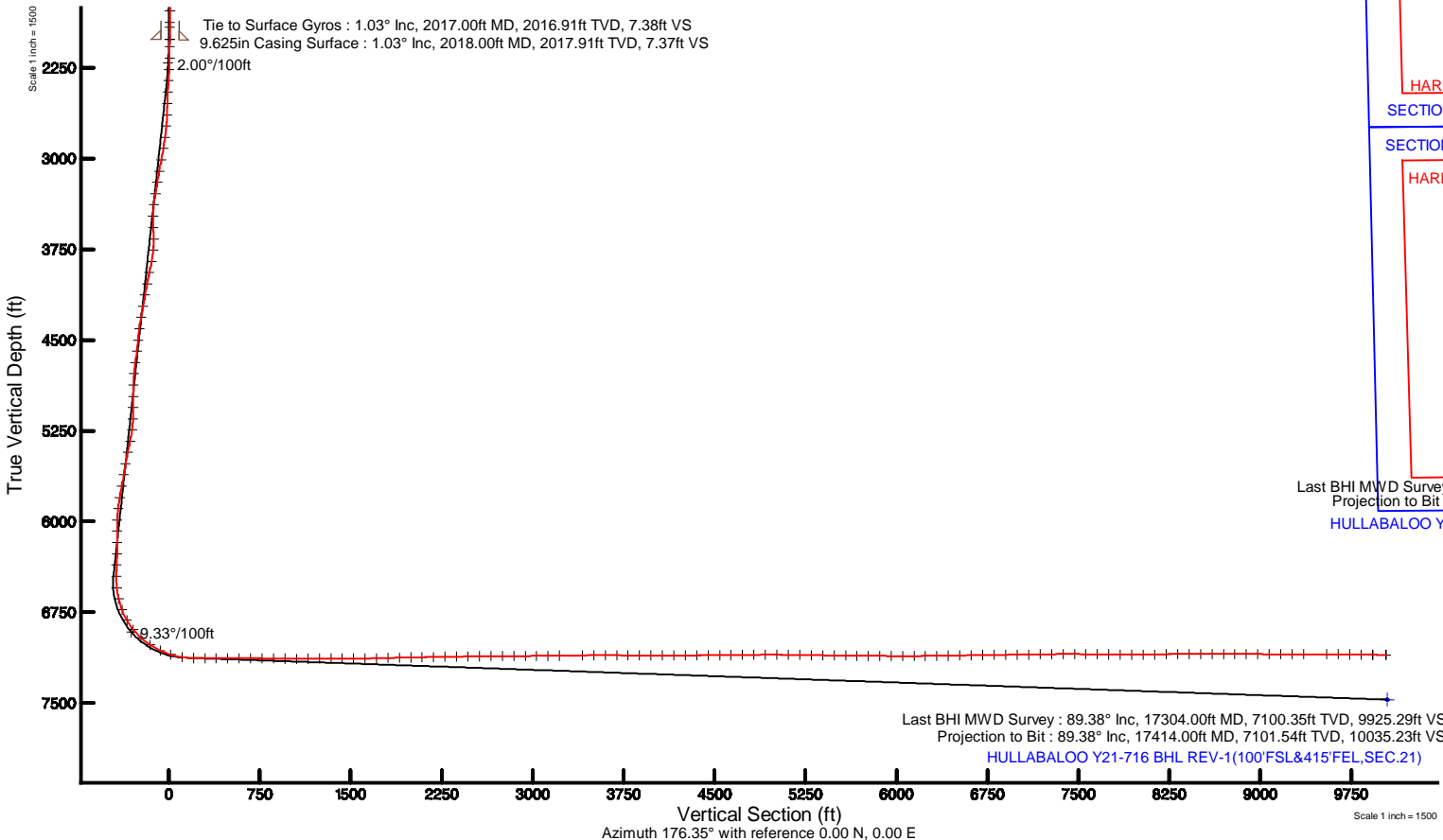
NOBLE ENERGY, INC

Location: COLORADO Slot: SLOT#10 HULLABALOO Y21-716(445'FNL&892'FEL,SEC.16)
Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: HULLABALOO Y21-716
Facility: SEC.16-T02N-R64W Wellbore: HULLABALOO Y21-716 PWB

Plot reference wellpath is HULLABALOO Y21-716 (REV-A.0) PWP	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to RIG (30'KB) (RKB)	* = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to RIG (30'KB) (RKB)	North Reference: Grid north
RIG (30'KB) to Mean Sea Level: 4976 feet	Scale: True distance
Mean Sea Level to Ground level (At Slot: SLOT#10 HULLABALOO Y21-716(445'FNL&892'FEL,SEC.16)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: guenaler on 2017-11-07
	Database: WA_DEN_Denver_Defn

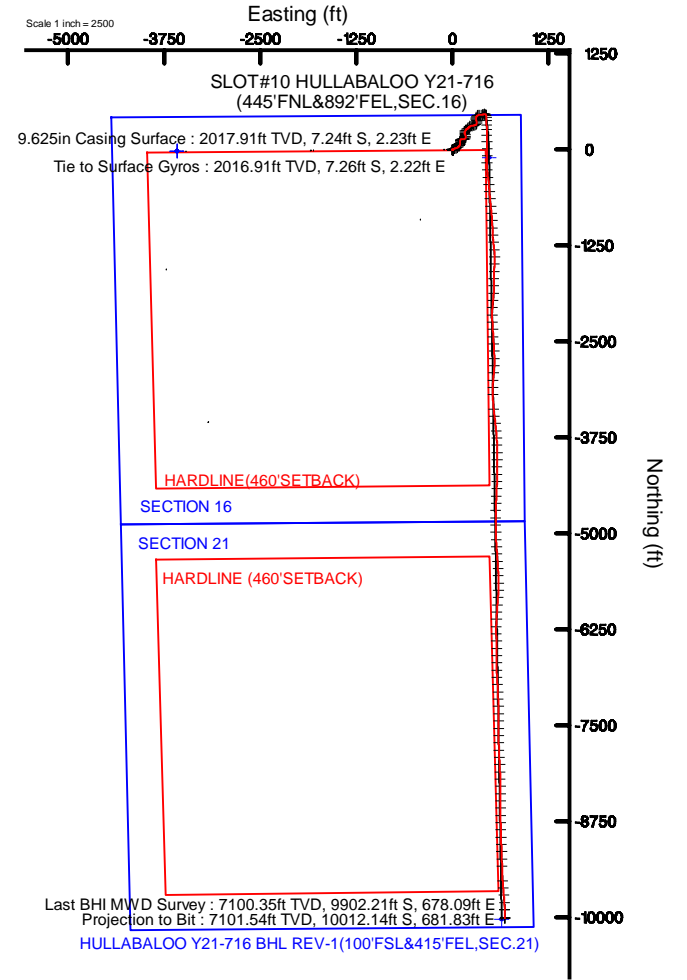
Comments

SURFACE LOCATION: NENE
40.14452 N
104.55018 W
API: 05-123-45232



Location Information

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.16-T02N-R64W			3261942.561	1296994.275	40°08'40.452"N	104°33'46.800"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#10 HULLABALOO Y21-716(445'FNL&892'FEL,SEC.16)	19.92	3584.10	3265526.508	1296914.191	40°08'40.272"N	104°33'00.648"W
RIG (30'KB) to Ground level (At Slot: SLOT#10 HULLABALOO Y21-716(445'FNL&892'FEL,SEC.16))					4976R	
Mean Sea Level to Ground level (At Slot: SLOT#10 HULLABALOO Y21-716(445'FNL&892'FEL,SEC.16))					0R	
RIG (30'KB) to Mean Sea Level					4976R	





Actual Wellpath Report
HULLABALOO Y21-716 AWP
Page 1 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#10 HULLABALOO Y21-716(445'FNL&892'FEL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-716
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-716 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	Guenaler
Scale	0.999959	Report Generated	11/7/2017 at 8:44:03 AM
Convergence at slot	0.62° East	Database/Source file	WA_DEN_Denver_Defn/HULLABALOO_Y21-716_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	19.92	3584.10	3265526.51	1296914.19	40°08'40.272"N	104°33'00.648"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	4976.00ft
Horizontal Reference Pt	Slot	RIG (30'KB) (RKB) to Mean Sea Level	4976.00ft
Vertical Reference Pt	RIG (30'KB) (RKB)	RIG (30'KB) (RKB) to Ground Level at Slot (SLOT#10 HULLABALOO Y21-716 (445'FNL&892'FEL,SEC.16))	4976.00ft
MD Reference Pt	RIG (30'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	176.35°



Actual Wellpath Report

HULLABALOO Y21-716 AWP



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#10 HULLABALOO Y21-716(445'FNL&892'FEL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-716
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-716 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]	Comments
0.00	0.000	169.510	0.00	0.00	0.00	0.00	40°08'40.272"N		104°33'00.648"W		0.00	
81.00	0.750	169.510	81.00	0.53	-0.52	0.10	40°08'40.267"N		104°33'00.647"W		0.93	
178.00	0.730	170.070	177.99	1.77	-1.75	0.32	40°08'40.255"N		104°33'00.644"W		0.02	
269.00	0.400	204.380	268.99	2.63	-2.61	0.29	40°08'40.246"N		104°33'00.645"W		0.50	
304.00	0.420	79.120	303.98	2.72	-2.70	0.36	40°08'40.245"N		104°33'00.644"W		2.08	
458.00	0.520	127.650	457.98	3.11	-3.02	1.47	40°08'40.242"N		104°33'00.629"W		0.26	
553.00	0.640	116.810	552.98	3.66	-3.52	2.29	40°08'40.237"N		104°33'00.619"W		0.17	
647.00	0.660	97.950	646.97	4.04	-3.84	3.29	40°08'40.234"N		104°33'00.606"W		0.23	
742.00	0.520	135.480	741.96	4.47	-4.22	4.13	40°08'40.230"N		104°33'00.595"W		0.42	
836.00	0.220	233.450	835.96	4.89	-4.63	4.29	40°08'40.226"N		104°33'00.593"W		0.63	
931.00	0.500	164.480	930.96	5.40	-5.14	4.25	40°08'40.221"N		104°33'00.594"W		0.49	
1025.00	0.400	206.200	1024.96	6.08	-5.83	4.22	40°08'40.214"N		104°33'00.594"W		0.36	
1120.00	0.380	143.390	1119.96	6.64	-6.38	4.26	40°08'40.209"N		104°33'00.594"W		0.43	
1215.00	0.610	153.360	1214.95	7.37	-7.08	4.67	40°08'40.202"N		104°33'00.589"W		0.26	
1309.00	0.490	203.430	1308.95	8.19	-7.90	4.74	40°08'40.193"N		104°33'00.588"W		0.51	
1403.00	0.710	223.080	1402.94	8.94	-8.69	4.18	40°08'40.186"N		104°33'00.595"W		0.32	
1498.00	0.480	239.540	1497.94	9.53	-9.33	3.44	40°08'40.179"N		104°33'00.605"W		0.30	
1593.00	0.370	245.700	1592.94	9.81	-9.65	2.81	40°08'40.176"N		104°33'00.613"W		0.13	
1682.00	0.390	273.530	1681.93	9.88	-9.75	2.25	40°08'40.175"N		104°33'00.620"W		0.21	
1782.00	0.340	293.220	1781.93	9.70	-9.62	1.64	40°08'40.177"N		104°33'00.628"W		0.13	
1876.00	0.550	321.200	1875.93	9.21	-9.15	1.10	40°08'40.181"N		104°33'00.635"W		0.32	
1917.00	1.010	34.330	1916.93	8.76	-8.70	1.18	40°08'40.186"N		104°33'00.634"W		2.44	
2017.00	1.030	36.980	2016.91	7.38	-7.26	2.22	40°08'40.200"N		104°33'00.620"W		0.05	Tie to Surface Gyros
2075.00	0.880	65.240	2074.90	6.83	-6.65	2.93	40°08'40.206"N		104°33'00.611"W		0.84	
2170.00	1.580	92.280	2169.88	6.70	-6.40	4.90	40°08'40.208"N		104°33'00.586"W		0.94	
2264.00	5.060	43.250	2263.72	4.00	-3.43	9.04	40°08'40.237"N		104°33'00.532"W		4.46	
2359.00	6.690	43.160	2358.22	-2.65	3.66	15.70	40°08'40.306"N		104°33'00.445"W		1.72	
2453.00	6.750	58.970	2451.58	-8.94	10.50	24.18	40°08'40.373"N		104°33'00.335"W		1.96	
2548.00	7.290	77.030	2545.88	-12.49	14.73	34.84	40°08'40.414"N		104°33'00.197"W		2.38	
2642.00	9.630	75.970	2638.85	-14.87	17.98	48.28	40°08'40.445"N		104°33'00.024"W		2.49	



Actual Wellpath Report

HULLABALOO Y21-716 AWP



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#10 HULLABALOO Y21-716(445'FNL&892'FEL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-716
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-716 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]	Comments	
2737.00	11.060	57.890	2732.33	-20.65	24.75	63.71	40°08'40.510"N	104°32'59.824"W	3.71		
2832.00	10.880	43.000	2825.61	-31.15	36.15	77.55	40°08'40.621"N	104°32'59.645"W	2.98		
2926.00	12.350	37.870	2917.69	-44.77	50.58	89.77	40°08'40.762"N	104°32'59.485"W	1.91		
3021.00	11.800	8.130	3010.68	-61.90	68.23	97.39	40°08'40.936"N	104°32'59.385"W	6.50		
3116.00	9.570	2.390	3104.03	-79.26	85.74	99.09	40°08'41.109"N	104°32'59.360"W	2.60		
3210.00	9.690	355.440	3196.70	-94.94	101.43	98.79	40°08'41.264"N	104°32'59.362"W	1.24		
3305.00	9.510	15.180	3290.40	-110.37	116.98	100.21	40°08'41.417"N	104°32'59.342"W	3.45		
3399.00	8.680	37.790	3383.25	-123.04	130.08	106.59	40°08'41.546"N	104°32'59.258"W	3.88		
3494.00	7.990	74.230	3477.31	-129.81	137.55	117.34	40°08'41.619"N	104°32'59.118"W	5.51		
3588.00	8.250	109.160	3570.42	-128.57	137.11	130.01	40°08'41.613"N	104°32'58.955"W	5.18		
3683.00	9.720	96.660	3664.26	-124.49	133.94	144.41	40°08'41.580"N	104°32'58.770"W	2.56		
3778.00	10.880	55.530	3757.85	-127.65	138.09	159.79	40°08'41.620"N	104°32'58.571"W	7.67		
3872.00	12.530	19.160	3850.02	-141.62	152.77	170.47	40°08'41.764"N	104°32'58.432"W	7.90		
3966.00	12.260	343.700	3941.96	-160.78	172.00	171.01	40°08'41.954"N	104°32'58.422"W	7.98		
4061.00	10.710	333.040	4035.06	-178.73	189.56	164.18	40°08'42.128"N	104°32'58.508"W	2.76		
4156.00	10.700	352.500	4128.44	-195.64	206.17	159.02	40°08'42.292"N	104°32'58.572"W	3.79		
4251.00	10.680	8.810	4221.81	-213.04	223.62	159.22	40°08'42.465"N	104°32'58.567"W	3.17		
4345.00	10.690	26.250	4314.21	-229.11	240.05	164.41	40°08'42.627"N	104°32'58.498"W	3.43		
4440.00	10.650	39.700	4407.58	-243.14	254.71	173.92	40°08'42.771"N	104°32'58.373"W	2.62		
4535.00	10.590	56.190	4500.97	-253.91	266.32	186.78	40°08'42.884"N	104°32'58.206"W	3.19		
4629.00	11.150	49.740	4593.29	-263.67	277.01	200.90	40°08'42.988"N	104°32'58.023"W	1.42		
4724.00	10.320	34.830	4686.64	-275.81	289.93	212.77	40°08'43.114"N	104°32'57.868"W	3.04		
4818.00	9.390	56.980	4779.29	-286.17	301.02	224.01	40°08'43.223"N	104°32'57.722"W	4.12		
4913.00	10.520	79.670	4872.89	-290.98	306.80	239.05	40°08'43.278"N	104°32'57.528"W	4.27		
5008.00	10.600	77.450	4966.28	-293.35	310.26	256.11	40°08'43.311"N	104°32'57.308"W	0.44		
5102.00	9.290	83.950	5058.87	-295.00	312.94	272.09	40°08'43.335"N	104°32'57.101"W	1.83		
5197.00	10.640	80.750	5152.44	-296.18	315.15	288.38	40°08'43.356"N	104°32'56.891"W	1.54		
5291.00	12.770	50.680	5244.56	-303.09	323.14	304.99	40°08'43.433"N	104°32'56.676"W	6.78		
5385.00	13.380	17.200	5336.26	-319.34	340.14	316.26	40°08'43.600"N	104°32'56.529"W	7.97		
5480.00	12.060	340.080	5429.07	-339.17	360.00	316.13	40°08'43.796"N	104°32'56.528"W	8.56		



Actual Wellpath Report

HULLABALOO Y21-716 AWP



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#10 HULLABALOO Y21-716(445'FNL&892'FEL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-716
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-716 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]	Comments
5575.00	9.790	329.290	5522.36	-355.89	376.28	308.62	40°08'43.958"N	104°32'56.622"W	3.21	
5669.00	10.450	354.010	5614.94	-371.54	391.64	303.65	40°08'44.110"N	104°32'56.684"W	4.64	
5764.00	10.550	9.480	5708.36	-388.62	408.79	304.18	40°08'44.279"N	104°32'56.675"W	2.96	
5858.00	10.570	25.300	5800.79	-404.55	425.07	309.29	40°08'44.440"N	104°32'56.607"W	3.07	
5953.00	10.600	45.330	5894.21	-417.91	439.10	319.23	40°08'44.577"N	104°32'56.477"W	3.85	
6047.00	10.410	75.520	5986.70	-425.19	447.31	333.61	40°08'44.657"N	104°32'56.291"W	5.79	
6142.00	10.680	88.050	6080.11	-426.54	449.75	350.72	40°08'44.679"N	104°32'56.070"W	2.43	
6237.00	10.700	91.790	6173.46	-425.44	449.78	368.33	40°08'44.677"N	104°32'55.843"W	0.73	
6331.00	10.690	73.600	6265.85	-426.54	451.97	385.42	40°08'44.697"N	104°32'55.623"W	3.58	
6426.00	10.520	75.310	6359.23	-430.15	456.65	402.27	40°08'44.742"N	104°32'55.405"W	0.38	
6520.00	6.700	75.260	6452.16	-432.85	460.22	415.88	40°08'44.776"N	104°32'55.230"W	4.06	
6615.00	8.470	123.380	6546.41	-429.70	457.78	427.09	40°08'44.750"N	104°32'55.086"W	6.71	
6710.00	14.020	165.190	6639.69	-414.16	442.77	435.89	40°08'44.601"N	104°32'54.974"W	10.02	
6804.00	20.680	177.530	6729.39	-386.36	415.14	439.52	40°08'44.328"N	104°32'54.931"W	8.06	
6899.00	29.450	178.230	6815.36	-346.16	374.96	440.97	40°08'43.930"N	104°32'54.918"W	9.24	
6994.00	39.460	177.980	6893.60	-292.51	321.31	442.76	40°08'43.400"N	104°32'54.903"W	10.54	
7088.00	47.550	178.160	6961.72	-227.88	256.69	444.93	40°08'42.761"N	104°32'54.884"W	8.61	
7183.00	56.430	179.230	7020.17	-153.17	181.94	446.59	40°08'42.023"N	104°32'54.873"W	9.39	
7277.00	64.830	179.440	7066.23	-71.44	100.10	447.53	40°08'41.214"N	104°32'54.872"W	8.94	
7371.00	73.400	178.150	7099.71	16.22	12.38	449.41	40°08'40.347"N	104°32'54.860"W	9.21	
7466.00	81.730	181.680	7120.15	108.71	-80.30	449.50	40°08'39.431"N	104°32'54.871"W	9.49	
7561.00	88.740	181.230	7128.04	202.95	-174.88	447.10	40°08'38.497"N	104°32'54.915"W	7.39	
7655.00	89.880	175.370	7129.17	296.85	-268.79	449.89	40°08'37.568"N	104°32'54.892"W	6.35	
7750.00	90.150	170.920	7129.15	391.68	-363.08	461.22	40°08'36.635"N	104°32'54.759"W	4.69	
7844.00	89.940	174.940	7129.07	485.49	-456.35	472.79	40°08'35.712"N	104°32'54.623"W	4.28	
7939.00	89.970	175.710	7129.15	580.47	-551.03	480.53	40°08'34.776"N	104°32'54.537"W	0.81	
8033.00	89.660	174.700	7129.45	674.45	-644.70	488.39	40°08'33.850"N	104°32'54.449"W	1.12	
8128.00	88.800	174.090	7130.73	769.39	-739.24	497.67	40°08'32.914"N	104°32'54.342"W	1.11	
8222.00	89.380	174.660	7132.22	863.32	-832.77	506.88	40°08'31.989"N	104°32'54.236"W	0.87	
8317.00	89.450	176.920	7133.19	958.30	-927.51	513.85	40°08'31.052"N	104°32'54.160"W	2.38	



Actual Wellpath Report

HULLABALOO Y21-716 AWP



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#10 HULLABALOO Y21-716(445'FNL&892'FEL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-716
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-716 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]	Comments
8411.00	89.970	177.380	7133.67	1052.29	-1021.39	518.53	40°08'30.124"N	104°32'54.113"W	0.74	
8506.00	90.460	176.770	7133.31	1147.28	-1116.26	523.38	40°08'29.186"N	104°32'54.063"W	0.82	
8601.00	90.650	173.750	7132.39	1242.25	-1210.92	531.22	40°08'28.250"N	104°32'53.975"W	3.19	
8695.00	89.940	174.010	7131.91	1336.16	-1304.38	541.25	40°08'27.325"N	104°32'53.859"W	0.80	
8789.00	89.910	179.280	7132.03	1430.13	-1398.19	546.74	40°08'26.398"N	104°32'53.801"W	5.61	
8884.00	89.940	182.350	7132.15	1524.83	-1493.17	545.39	40°08'25.459"N	104°32'53.832"W	3.23	
8978.00	90.830	183.190	7131.52	1618.23	-1587.06	540.85	40°08'24.532"N	104°32'53.903"W	1.30	
9073.00	91.940	180.540	7129.22	1712.76	-1681.97	537.76	40°08'23.595"N	104°32'53.956"W	3.02	
9168.00	91.080	179.440	7126.72	1807.53	-1776.93	537.78	40°08'22.656"N	104°32'53.969"W	1.47	
9262.00	90.950	183.810	7125.06	1901.10	-1870.86	535.11	40°08'21.728"N	104°32'54.016"W	4.65	
9357.00	91.540	186.020	7122.99	1995.01	-1965.48	526.98	40°08'20.794"N	104°32'54.134"W	2.41	
9452.00	90.860	183.990	7121.00	2088.90	-2060.09	518.69	40°08'19.860"N	104°32'54.254"W	2.25	
9546.00	91.230	179.860	7119.29	2182.42	-2154.00	515.53	40°08'18.933"N	104°32'54.308"W	4.41	
9641.00	90.550	176.690	7117.81	2277.35	-2248.93	518.39	40°08'17.994"N	104°32'54.284"W	3.41	
9736.00	90.980	176.620	7116.54	2372.34	-2343.76	523.93	40°08'17.057"N	104°32'54.226"W	0.46	
9830.00	91.020	176.730	7114.90	2466.32	-2437.59	529.39	40°08'16.129"N	104°32'54.168"W	0.12	
9925.00	90.650	176.390	7113.52	2561.31	-2532.41	535.09	40°08'15.191"N	104°32'54.108"W	0.53	
10020.00	90.400	176.750	7112.65	2656.30	-2627.23	540.77	40°08'14.254"N	104°32'54.048"W	0.46	
10114.00	90.400	178.670	7111.99	2750.27	-2721.15	544.53	40°08'13.325"N	104°32'54.013"W	2.04	
10209.00	90.000	181.870	7111.66	2845.04	-2816.14	544.08	40°08'12.387"N	104°32'54.032"W	3.39	
10304.00	90.620	185.990	7111.14	2939.18	-2910.89	537.57	40°08'11.451"N	104°32'54.128"W	4.39	
10398.00	90.680	184.670	7110.08	3032.03	-3004.48	528.84	40°08'10.527"N	104°32'54.254"W	1.41	
10493.00	90.650	181.260	7108.97	3126.37	-3099.33	523.92	40°08'09.590"N	104°32'54.330"W	3.59	
10587.00	90.620	178.990	7107.93	3220.16	-3193.32	523.72	40°08'08.662"N	104°32'54.346"W	2.41	
10777.00	90.550	173.830	7105.99	3410.08	-3382.87	535.61	40°08'06.787"N	104°32'54.219"W	2.72	
10871.00	90.000	172.810	7105.54	3503.95	-3476.23	546.55	40°08'05.864"N	104°32'54.091"W	1.23	
10966.00	90.180	173.930	7105.39	3598.82	-3570.59	557.51	40°08'04.930"N	104°32'53.963"W	1.19	
11060.00	89.660	175.010	7105.52	3692.77	-3664.16	566.57	40°08'04.005"N	104°32'53.859"W	1.28	
11154.00	89.720	176.250	7106.03	3786.76	-3757.88	573.73	40°08'03.078"N	104°32'53.780"W	1.32	
11249.00	89.720	178.070	7106.50	3881.74	-3852.76	578.44	40°08'02.140"N	104°32'53.732"W	1.92	



Actual Wellpath Report
HULLABALOO Y21-716 AWP
Page 6 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#10 HULLABALOO Y21-716(445'FNL&892'FEL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-716
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-716 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]	Comments
11344.00	89.690	179.940	7106.98	3976.63	-3947.74	580.09	40°08'01.201"N	104°32'53.724"W	1.97	
11438.00	89.820	180.160	7107.39	4070.44	-4041.74	580.01	40°08'00.272"N	104°32'53.738"W	0.27	
11533.00	90.520	180.620	7107.10	4165.20	-4136.73	579.36	40°07'59.333"N	104°32'53.760"W	0.88	
11627.00	90.400	180.570	7106.35	4258.94	-4230.72	578.39	40°07'58.405"N	104°32'53.785"W	0.14	
11722.00	90.400	180.940	7105.69	4353.66	-4325.71	577.13	40°07'57.466"N	104°32'53.815"W	0.39	
11816.00	90.520	181.680	7104.93	4447.30	-4419.69	574.99	40°07'56.538"N	104°32'53.855"W	0.80	
11911.00	90.650	183.240	7103.96	4541.76	-4514.59	570.91	40°07'55.601"N	104°32'53.921"W	1.65	
12006.00	90.520	183.270	7102.99	4636.06	-4609.43	565.51	40°07'54.664"N	104°32'54.003"W	0.14	
12100.00	90.520	180.320	7102.14	4729.63	-4703.37	562.57	40°07'53.736"N	104°32'54.054"W	3.14	
12195.00	90.620	179.480	7101.19	4824.44	-4798.37	562.74	40°07'52.797"N	104°32'54.065"W	0.89	
12290.00	90.180	180.000	7100.53	4919.27	-4893.36	563.17	40°07'51.858"N	104°32'54.073"W	0.72	
12384.00	89.750	179.520	7100.59	5013.10	-4987.36	563.56	40°07'50.930"N	104°32'54.081"W	0.69	
12479.00	89.780	177.160	7100.98	5108.04	-5082.31	566.31	40°07'49.991"N	104°32'54.058"W	2.48	
12573.00	88.550	176.010	7102.35	5202.02	-5176.13	571.91	40°07'49.063"N	104°32'53.999"W	1.79	
12668.00	89.050	175.950	7104.34	5297.00	-5270.88	578.57	40°07'48.126"N	104°32'53.927"W	0.53	
12763.00	89.480	176.260	7105.56	5391.99	-5365.65	585.02	40°07'47.189"N	104°32'53.857"W	0.56	
12857.00	89.320	176.290	7106.54	5485.99	-5459.45	591.13	40°07'46.262"N	104°32'53.791"W	0.17	
12952.00	89.320	177.430	7107.67	5580.97	-5554.30	596.33	40°07'45.324"N	104°32'53.737"W	1.20	
13046.00	89.480	179.350	7108.65	5674.91	-5648.25	598.97	40°07'44.395"N	104°32'53.716"W	2.05	
13141.00	89.510	182.920	7109.49	5769.56	-5743.21	597.09	40°07'43.457"N	104°32'53.754"W	3.76	
13236.00	89.570	184.570	7110.25	5863.76	-5838.00	590.89	40°07'42.521"N	104°32'53.846"W	1.74	
13330.00	89.570	183.250	7110.96	5956.94	-5931.78	584.48	40°07'41.595"N	104°32'53.942"W	1.40	
13425.00	90.220	184.220	7111.13	6051.15	-6026.58	578.29	40°07'40.659"N	104°32'54.035"W	1.23	
13519.00	90.030	183.480	7110.93	6144.35	-6120.36	571.98	40°07'39.733"N	104°32'54.129"W	0.81	
13614.00	90.460	182.290	7110.52	6238.73	-6215.24	567.20	40°07'38.796"N	104°32'54.204"W	1.33	
13709.00	90.830	177.810	7109.45	6333.50	-6310.21	567.11	40°07'37.857"N	104°32'54.218"W	4.73	
13803.00	90.340	176.820	7108.49	6427.48	-6404.10	571.52	40°07'36.929"N	104°32'54.174"W	1.18	
13898.00	91.540	179.470	7106.93	6522.41	-6499.03	574.59	40°07'35.991"N	104°32'54.148"W	3.06	
13993.00	90.920	180.510	7104.89	6617.20	-6594.00	574.61	40°07'35.052"N	104°32'54.161"W	1.27	
14087.00	91.170	179.990	7103.18	6710.96	-6687.99	574.20	40°07'34.124"N	104°32'54.179"W	0.61	



Actual Wellpath Report

HULLABALOO Y21-716 AWP



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#10 HULLABALOO Y21-716(445'FNL&892'FEL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-716
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-716 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]	Comments
14182.00	90.710	178.930	7101.62	6805.81	-6782.97	575.09	40°07'33.185"N	104°32'54.180"W	1.22	
14276.00	90.280	176.330	7100.81	6899.77	-6876.87	578.98	40°07'32.257"N	104°32'54.143"W	2.80	
14371.00	90.550	176.350	7100.12	6994.77	-6971.68	585.04	40°07'31.319"N	104°32'54.078"W	0.28	
14466.00	90.860	177.990	7098.95	7089.75	-7066.55	589.73	40°07'30.381"N	104°32'54.031"W	1.76	
14561.00	90.770	177.770	7097.60	7184.71	-7161.48	593.25	40°07'29.443"N	104°32'53.999"W	0.25	
14655.00	90.920	177.920	7096.21	7278.67	-7255.40	596.78	40°07'28.514"N	104°32'53.966"W	0.23	
14750.00	90.400	179.670	7095.12	7373.57	-7350.37	598.78	40°07'27.576"N	104°32'53.954"W	1.92	
14845.00	89.480	179.830	7095.22	7468.40	-7445.37	599.19	40°07'26.637"N	104°32'53.962"W	0.98	
14939.00	89.570	180.220	7096.00	7562.20	-7539.36	599.15	40°07'25.708"N	104°32'53.975"W	0.43	
15034.00	89.260	179.880	7096.97	7657.00	-7634.36	599.07	40°07'24.769"N	104°32'53.989"W	0.48	
15128.00	89.350	178.520	7098.11	7750.88	-7728.34	600.38	40°07'23.841"N	104°32'53.985"W	1.45	
15223.00	89.570	177.330	7099.00	7845.84	-7823.27	603.82	40°07'22.902"N	104°32'53.954"W	1.27	
15318.00	89.630	177.250	7099.67	7940.82	-7918.16	608.31	40°07'21.964"N	104°32'53.910"W	0.11	
15413.00	90.250	176.840	7099.77	8035.81	-8013.04	613.21	40°07'21.026"N	104°32'53.860"W	0.78	
15507.00	91.020	177.900	7098.72	8129.79	-8106.93	617.52	40°07'20.098"N	104°32'53.817"W	1.39	
15602.00	92.190	177.760	7096.06	8224.72	-8201.82	621.12	40°07'19.160"N	104°32'53.784"W	1.24	
15697.00	90.000	179.280	7094.25	8319.63	-8296.76	623.57	40°07'18.221"N	104°32'53.765"W	2.81	
15791.00	89.820	179.860	7094.40	8413.48	-8390.76	624.28	40°07'17.292"N	104°32'53.769"W	0.65	
15886.00	90.090	180.570	7094.47	8508.26	-8485.76	623.92	40°07'16.354"N	104°32'53.787"W	0.80	
15980.00	89.820	180.730	7094.54	8602.00	-8579.75	622.85	40°07'15.425"N	104°32'53.814"W	0.33	
16075.00	90.430	178.820	7094.34	8696.82	-8674.75	623.23	40°07'14.486"N	104°32'53.822"W	2.11	
16169.00	90.250	177.650	7093.78	8790.77	-8768.70	626.12	40°07'13.558"N	104°32'53.798"W	1.26	
16264.00	89.420	179.560	7094.05	8885.69	-8863.67	628.44	40°07'12.619"N	104°32'53.781"W	2.19	
16359.00	89.110	177.810	7095.27	8980.60	-8958.63	630.62	40°07'11.680"N	104°32'53.766"W	1.87	
16453.00	89.630	177.520	7096.30	9074.57	-9052.55	634.44	40°07'10.752"N	104°32'53.730"W	0.63	
16548.00	89.570	177.630	7096.97	9169.54	-9147.46	638.46	40°07'09.814"N	104°32'53.691"W	0.13	
16642.00	90.250	178.520	7097.12	9263.50	-9241.40	641.62	40°07'08.885"N	104°32'53.664"W	1.19	
16737.00	90.310	178.790	7096.65	9358.42	-9336.38	643.85	40°07'07.946"N	104°32'53.648"W	0.29	
16926.00	89.570	176.710	7096.85	9547.36	-9525.22	651.27	40°07'06.079"N	104°32'53.579"W	1.17	
17021.00	89.540	175.060	7097.59	9642.35	-9619.97	658.09	40°07'05.142"N	104°32'53.504"W	1.74	



Actual Wellpath Report
HULLABALOO Y21-716 AWP
Page 8 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#10 HULLABALOO Y21-716(445'FNL&892'FEL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-716
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-716 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]	Comments
17115.00	89.480	175.050	7098.39	9736.32	-9713.61	666.19	40°07'04.216"N	104°32'53.413"W	0.06	
17210.00	89.380	176.240	7099.34	9831.30	-9808.33	673.40	40°07'03.279"N	104°32'53.333"W	1.26	
17304.00	89.380	178.050	7100.35	9925.29	-9902.21	678.09	40°07'02.351"N	104°32'53.286"W	1.93	Last BHI MWD Survey
17414.00	89.380	178.050	7101.54	10035.23	-10012.14	681.83	40°07'01.265"N	104°32'53.253"W	0.00	Projection to Bit

HOLE & CASING SECTIONS - Ref Wellbore: HULLABALOO Y21-716 AWP Ref Wellpath: HULLABALOO Y21-716 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	2018.00	1988.00	30.00	2017.91	-0.07	0.01	-7.24	2.23
9.625in Casing Surface	30.00	2018.00	1988.00	30.00	2017.91	-0.07	0.01	-7.24	2.23
8.5in Open Hole	2017.00	17414.00	15397.00	2016.91	7101.54	-7.26	2.22	-10012.14	681.83



Actual Wellpath Report

HULLABALOO Y21-716 AWP

Page 9 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#10 HULLABALOO Y21-716(445'FNL&892'FEL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-716
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-716 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	63.00	-19.92	-3584.10	3261942.56	1296894.28	40°08'40.452"N	104°33'46.800"W	polygon
HULLABALOO Y21-787 SECTION 21	63.00	-19.92	-3584.10	3261942.56	1296894.28	40°08'40.452"N	104°33'46.800"W	polygon
HULLABALOO Y21-716 LANDING POINT(550'FNL&415'FEL,SEC.16)	7125.00	-105.00	475.00	3266001.49	1296809.20	40°08'39.184"N	104°32'54.546"W	point
HULLABALOO Y21-787 SECTION 16 HARDLINE (460'SETBACK)	7253.00	-19.92	-3584.10	3261942.56	1296894.28	40°08'40.452"N	104°33'46.800"W	polygon
HULLABALOO Y21-787 SECTION 21 HARDLINE(460'SETBACK)	7253.00	-19.92	-3584.10	3261942.56	1296894.28	40°08'40.452"N	104°33'46.800"W	polygon
HULLABALOO Y21-716 BHL REV-1(100'FSL&415'FEL,SEC.21)	7471.51	-10026.42	638.83	3266165.31	1286888.21	40°07'01.128"N	104°32'53.808"W	point

WELLPATH COMPOSITION - Ref Wellbore: HULLABALOO Y21-716 AWB Ref Wellpath: HULLABALOO Y21-716 AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	2017.00	Gyrodatab standard - Drop gyro or Multi-shot	3rd Party Gyro 13.5" Hole <81'-2017'>	HULLABALOO Y21-716 AWB
2017.00	17304.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	BHI/ATC OWSG MWD+IFR+MSA 8.5" Hole <2075'-17304'>	HULLABALOO Y21-716 AWB
17304.00	17414.00	Blind Drilling (std)	Projection to bit	HULLABALOO Y21-716 AWB



Actual Wellpath Report

HULLABALOO Y21-716 AWP

Page 10 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#10 HULLABALOO Y21-716(445'FNL&892'FEL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-716
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-716 AWB
Facility	SEC.16-T02N-R64W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
2017.00	1.030	36.980	2016.91	Tie to Surface Gyros
17304.00	89.380	178.050	7100.35	Last BHI MWD Survey
17414.00	89.380	178.050	7101.54	Projection to Bit

COMMENTS
<div>Wellpath general comments</div> <div>SURFACE LOCATION: NENE</div> <div>40.14452 N</div> <div>104.55018 W</div> <div>API: 05-123-45232</div>