

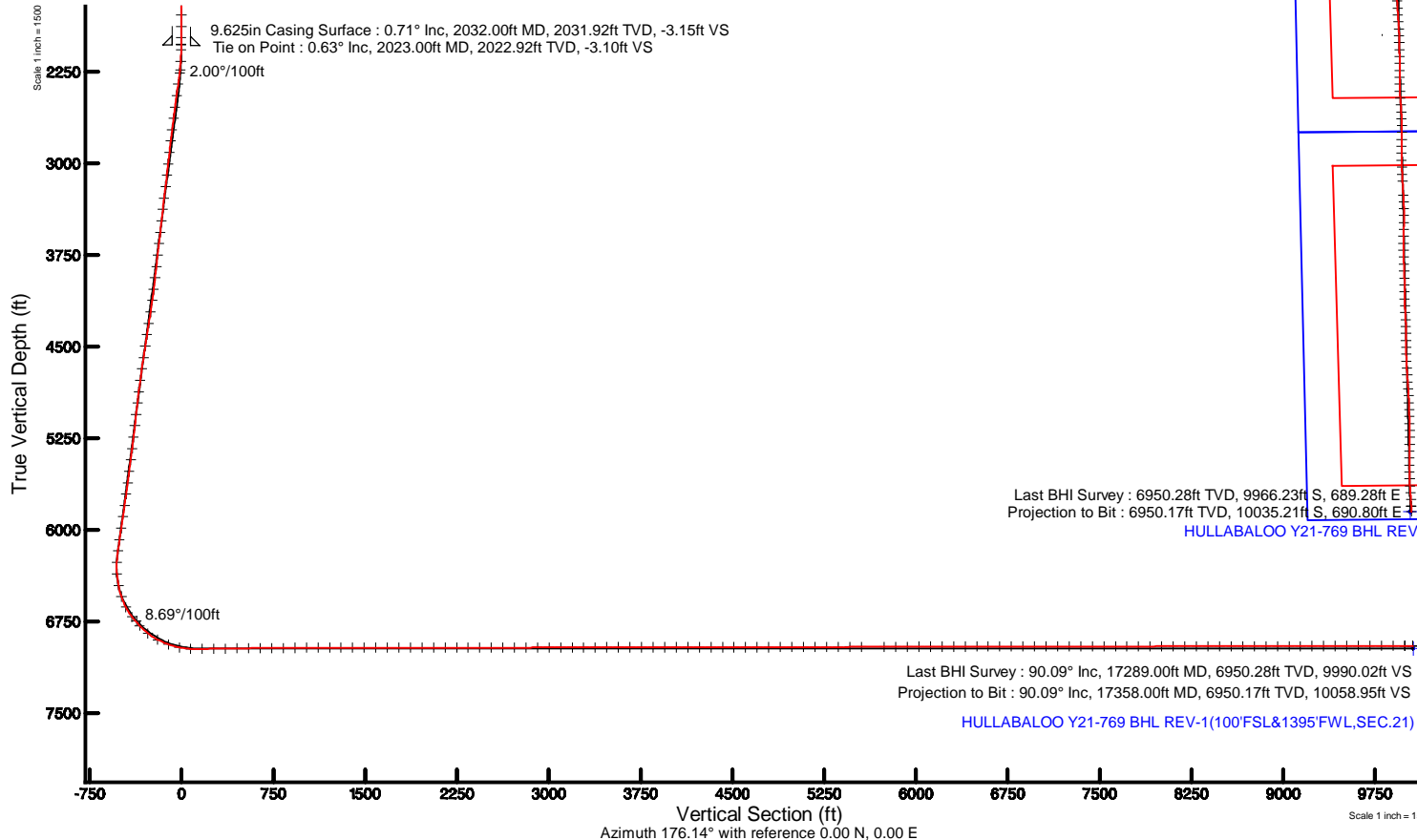
# NOBLE ENERGY, INC

Location: COLORADO Slot: SLOT#04 HULLABALOO Y21-769(445'FNL&955'FWL,SEC.16)  
Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: HULLABALOO Y21-769  
Facility: SEC.16-T02N-R64W Wellbore: HULLABALOO Y21-769 PWB

Plot reference wellpath is HULLABALOO Y21-769 (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) (RKB) to Mean Sea Level: 4923 feet	Scale: True distance
Mean Sea Level to Ground level (At Slot: SLOT#04 HULLABALOO Y21-769(445'FNL&955'FWL,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

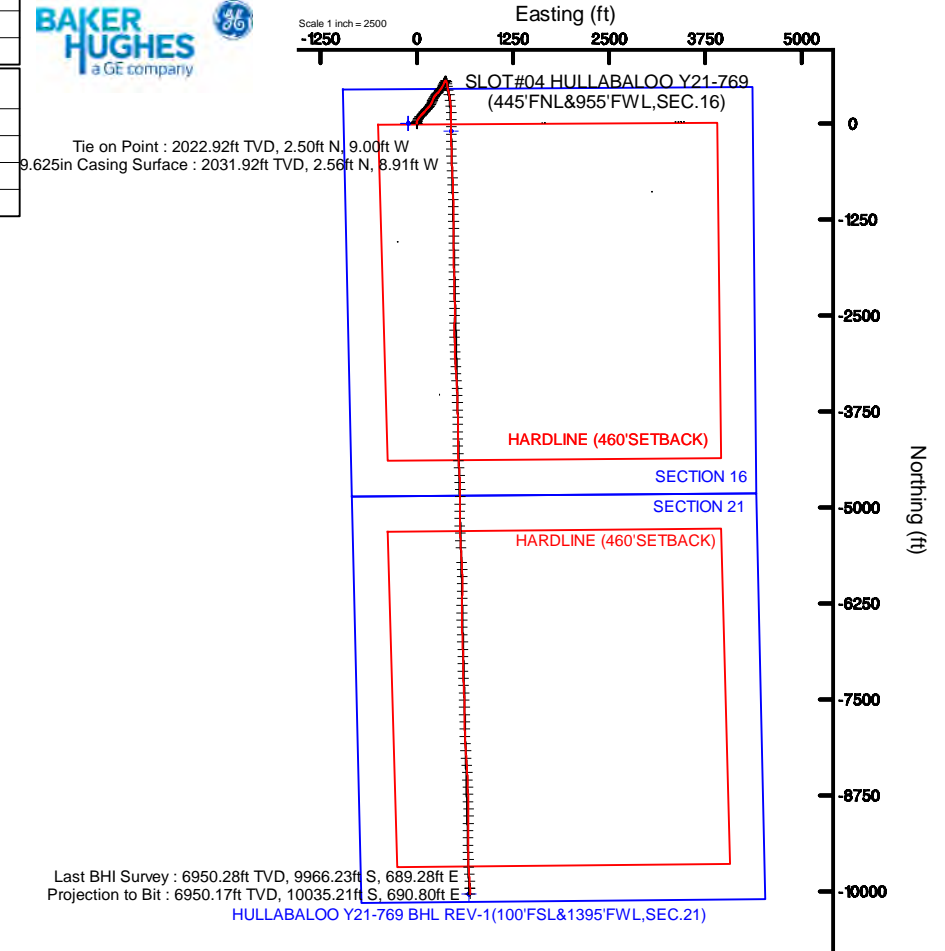
## Comments

SURFACE LOCATION: NWNW  
40.14456 N  
104.56260 W  
API: 05-123-45237



## Location Information

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.16-T02N-R64W			3261942.561	1296894.275	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#04 HULLABALOO Y21-769(445'FNL&955'FWL,SEC.16)	-2.46	111.86	3262054.417	1296891.815	40°08'40.416"N	104°33'45.360"W
RIG (30'KB) (RKB) to Ground level (At Slot: SLOT#04 HULLABALOO Y21-769(445'FNL&955'FWL,SEC.16))					4923ft	
Mean Sea Level to Ground level (At Slot: SLOT#04 HULLABALOO Y21-769(445'FNL&955'FWL,SEC.16))					0ft	
RIG (30'KB) (RKB) to Mean Sea Level					4923ft	





Actual Wellpath Report

HULLABALOO Y21-769 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#04 HULLABALOO Y21-769(445'FNL&955'FWL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-769
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-769 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 10:27:46 AM
Convergence at slot	0.61° East	Database/Source file	WA_DEN_Denver_Defn/HULLABALOO_Y21-769_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-2.46	111.86	3262054.42	1296891.82	40°08'40.416"N	104°33'45.360"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	4923.00ft
Horizontal Reference Pt	Slot	RIG (30'KB) (RKB) to Mean Sea Level	4923.00ft
Vertical Reference Pt	RIG (30'KB) (RKB)	RIG (30'KB) (RKB) to Ground Level at Slot (SLOT#04 HULLABALOO Y21-769 (445'FNL&955'FWL,SEC.16))	4923.00ft
MD Reference Pt	RIG (30'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	176.14°



Actual Wellpath Report

HULLABALOO Y21-769 AWP



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#04 HULLABALOO Y21-769(445'FNL&955'FWL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-769
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-769 AWB
Facility	SEC.16-T02N-R64W		

WELLPATH DATA (185 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	211.470	0.00	0.00	0.00	0.00	40°08'40.416"N	104°33'45.360"W	0.00	
81.00	0.090	211.470	81.00	0.05	-0.05	-0.03	40°08'40.415"N	104°33'45.360"W	0.11	
178.00	0.170	234.920	178.00	0.19	-0.20	-0.19	40°08'40.414"N	104°33'45.362"W	0.10	
272.00	0.600	339.810	272.00	-0.21	0.18	-0.47	40°08'40.418"N	104°33'45.366"W	0.71	
367.00	0.760	299.860	366.99	-1.04	0.96	-1.19	40°08'40.426"N	104°33'45.375"W	0.51	
461.00	0.570	14.090	460.99	-1.83	1.72	-1.62	40°08'40.433"N	104°33'45.381"W	0.87	
556.00	0.700	308.820	555.98	-2.67	2.55	-1.96	40°08'40.441"N	104°33'45.385"W	0.73	
650.00	0.600	271.740	649.98	-3.11	2.92	-2.90	40°08'40.445"N	104°33'45.397"W	0.45	
745.00	0.890	268.830	744.97	-3.19	2.92	-4.13	40°08'40.445"N	104°33'45.413"W	0.31	
839.00	0.970	278.440	838.96	-3.40	3.02	-5.65	40°08'40.446"N	104°33'45.432"W	0.19	
934.00	0.520	284.960	933.95	-3.71	3.25	-6.86	40°08'40.449"N	104°33'45.448"W	0.48	
1029.00	0.280	302.390	1028.95	-3.98	3.49	-7.47	40°08'40.451"N	104°33'45.456"W	0.28	
1123.00	0.280	246.030	1122.94	-4.04	3.52	-7.88	40°08'40.452"N	104°33'45.461"W	0.28	
1217.00	0.280	163.220	1216.94	-3.74	3.20	-8.02	40°08'40.449"N	104°33'45.463"W	0.39	
1312.00	0.140	204.740	1311.94	-3.41	2.88	-8.00	40°08'40.445"N	104°33'45.463"W	0.21	
1406.00	0.490	223.550	1405.94	-3.04	2.48	-8.33	40°08'40.441"N	104°33'45.467"W	0.38	
1501.00	0.470	191.310	1500.94	-2.38	1.80	-8.68	40°08'40.435"N	104°33'45.472"W	0.28	
1595.00	0.340	198.550	1594.94	-1.75	1.16	-8.85	40°08'40.428"N	104°33'45.474"W	0.15	
1690.00	0.340	241.440	1689.93	-1.38	0.76	-9.18	40°08'40.424"N	104°33'45.478"W	0.26	
1785.00	0.400	304.240	1784.93	-1.46	0.81	-9.71	40°08'40.425"N	104°33'45.485"W	0.41	
1879.00	0.520	9.920	1878.93	-2.08	1.42	-9.90	40°08'40.431"N	104°33'45.487"W	0.54	
1971.00	0.630	47.880	1970.93	-2.80	2.17	-9.46	40°08'40.438"N	104°33'45.481"W	0.42	
2023.00	0.630	59.890	2022.92	-3.10	2.50	-9.00	40°08'40.442"N	104°33'45.476"W	0.25	Tie on Point
2069.00	1.040	47.320	2068.92	-3.48	2.91	-8.47	40°08'40.446"N	104°33'45.469"W	0.97	
2164.00	4.090	23.650	2163.81	-7.02	6.60	-6.48	40°08'40.482"N	104°33'45.443"W	3.33	
2258.00	7.350	19.310	2257.33	-15.53	15.35	-3.14	40°08'40.568"N	104°33'45.398"W	3.50	
2353.00	9.190	23.670	2351.34	-27.84	28.03	1.91	40°08'40.693"N	104°33'45.332"W	2.04	
2447.00	9.150	27.220	2444.14	-40.90	41.55	8.34	40°08'40.826"N	104°33'45.247"W	0.60	
2542.00	8.990	29.680	2537.95	-53.55	54.72	15.47	40°08'40.955"N	104°33'45.153"W	0.44	
2636.00	9.080	34.000	2630.79	-65.53	67.25	23.26	40°08'41.078"N	104°33'45.051"W	0.73	



Actual Wellpath Report  
HULLABALOO Y21-769 AWP  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#04 HULLABALOO Y21-769(445'FNL&955'FWL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-769
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-769 AWB
Facility	SEC.16-T02N-R64W		

WELLPATH DATA (185 stations)											
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments	
2731.00	9.370	38.990	2724.56	-77.12	79.48	32.32	40°08'41.198"N	104°33'44.933"W	0.90		
2825.00	9.440	42.950	2817.30	-88.01	91.07	42.38	40°08'41.311"N	104°33'44.802"W	0.69		
2920.00	9.410	42.790	2911.02	-98.67	102.47	52.97	40°08'41.423"N	104°33'44.664"W	0.04		
3014.00	9.440	41.470	3003.75	-109.37	113.88	63.29	40°08'41.535"N	104°33'44.530"W	0.23		
3108.00	9.440	41.520	3096.47	-120.20	125.43	73.51	40°08'41.648"N	104°33'44.396"W	0.01		
3203.00	9.400	41.320	3190.19	-131.14	137.09	83.79	40°08'41.762"N	104°33'44.262"W	0.05		
3298.00	9.340	41.500	3283.93	-142.03	148.69	94.02	40°08'41.875"N	104°33'44.129"W	0.07		
3392.00	9.420	43.460	3376.67	-152.60	159.99	104.37	40°08'41.986"N	104°33'43.994"W	0.35		
3487.00	9.340	42.900	3470.40	-163.16	171.28	114.96	40°08'42.096"N	104°33'43.856"W	0.13		
3581.00	9.340	41.390	3563.15	-173.75	182.59	125.20	40°08'42.207"N	104°33'43.723"W	0.26		
3675.00	9.320	39.550	3655.91	-184.65	194.18	135.09	40°08'42.321"N	104°33'43.594"W	0.32		
3770.00	8.930	39.220	3749.71	-195.63	205.82	144.65	40°08'42.435"N	104°33'43.469"W	0.41		
3865.00	9.020	44.080	3843.55	-206.00	216.88	154.49	40°08'42.543"N	104°33'43.341"W	0.80		
3959.00	9.290	42.550	3936.35	-216.17	227.77	164.75	40°08'42.649"N	104°33'43.208"W	0.39		
4054.00	9.680	36.990	4030.05	-227.50	239.80	174.74	40°08'42.767"N	104°33'43.077"W	1.05		
4148.00	9.630	31.420	4122.72	-239.90	252.82	183.60	40°08'42.895"N	104°33'42.962"W	0.99		
4243.00	9.440	24.570	4216.41	-253.23	266.68	190.98	40°08'43.031"N	104°33'42.865"W	1.21		
4337.00	9.720	18.450	4309.10	-267.36	281.22	196.69	40°08'43.174"N	104°33'42.789"W	1.12		
4432.00	9.530	21.110	4402.77	-281.90	296.17	202.06	40°08'43.321"N	104°33'42.718"W	0.51		
4526.00	9.660	22.340	4495.45	-296.03	310.72	207.87	40°08'43.465"N	104°33'42.641"W	0.26		
4621.00	9.720	24.540	4589.10	-310.24	325.39	214.23	40°08'43.609"N	104°33'42.557"W	0.39		
4715.00	9.670	27.700	4681.76	-323.95	339.60	221.19	40°08'43.749"N	104°33'42.466"W	0.57		
4810.00	9.630	33.000	4775.41	-337.11	353.33	229.23	40°08'43.883"N	104°33'42.360"W	0.94		
4905.00	9.680	38.290	4869.07	-349.39	366.26	238.50	40°08'44.010"N	104°33'42.239"W	0.94		
4999.00	9.490	41.640	4961.76	-360.68	378.25	248.55	40°08'44.128"N	104°33'42.108"W	0.63		
5094.00	9.780	47.870	5055.42	-371.16	389.52	259.74	40°08'44.238"N	104°33'41.963"W	1.14		
5188.00	9.910	46.040	5148.04	-381.32	400.49	271.48	40°08'44.345"N	104°33'41.810"W	0.36		
5283.00	9.600	41.610	5241.66	-392.14	412.09	282.63	40°08'44.459"N	104°33'41.665"W	0.85		
5377.00	9.590	37.170	5334.35	-403.55	424.19	292.56	40°08'44.577"N	104°33'41.535"W	0.79		
5472.00	9.470	34.320	5428.04	-415.66	436.95	301.75	40°08'44.702"N	104°33'41.415"W	0.51		



Actual Wellpath Report

HULLABALOO Y21-769 AWP



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#04 HULLABALOO Y21-769(445'FNL&955'FWL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-769
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-769 AWB
Facility	SEC.16-T02N-R64W		

WELLPATH DATA (185 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5566.00	9.600	34.780	5520.74	-427.86	449.77	310.58	40°08'44.828"N	104°33'41.300"W	0.16	
5661.00	9.510	35.030	5614.42	-440.16	462.70	319.60	40°08'44.955"N	104°33'41.182"W	0.10	
5755.00	9.550	32.170	5707.13	-452.51	475.66	328.21	40°08'45.082"N	104°33'41.069"W	0.51	
5849.00	9.540	29.160	5799.83	-465.35	489.07	336.16	40°08'45.214"N	104°33'40.965"W	0.53	
5944.00	9.500	24.280	5893.52	-478.86	503.09	343.22	40°08'45.351"N	104°33'40.872"W	0.85	
6038.00	9.520	23.020	5986.23	-492.64	517.31	349.45	40°08'45.491"N	104°33'40.790"W	0.22	
6133.00	9.340	25.620	6079.94	-506.35	531.49	355.86	40°08'45.631"N	104°33'40.706"W	0.49	
6227.00	9.560	25.800	6172.67	-519.78	545.40	362.55	40°08'45.767"N	104°33'40.617"W	0.24	
6322.00	6.840	59.070	6266.74	-529.21	555.42	370.84	40°08'45.866"N	104°33'40.509"W	5.64	
6417.00	7.430	129.760	6361.16	-527.55	554.40	380.43	40°08'45.854"N	104°33'40.386"W	8.69	
6511.00	10.950	168.260	6454.03	-514.50	541.75	386.93	40°08'45.729"N	104°33'40.304"W	7.33	
6606.00	17.820	175.380	6546.00	-490.99	518.40	389.94	40°08'45.498"N	104°33'40.268"W	7.45	
6700.00	27.570	170.350	6632.62	-454.88	482.53	394.76	40°08'45.143"N	104°33'40.211"W	10.57	
6795.00	37.390	166.590	6712.67	-404.44	432.67	405.16	40°08'44.649"N	104°33'40.084"W	10.55	
6890.00	43.850	168.020	6784.75	-343.35	372.36	418.69	40°08'44.052"N	104°33'39.918"W	6.87	
6984.00	51.750	171.640	6847.85	-274.20	303.87	430.84	40°08'43.374"N	104°33'39.771"W	8.87	
7079.00	62.460	175.250	6899.38	-194.65	224.74	439.78	40°08'42.591"N	104°33'39.667"W	11.71	
7173.00	70.220	177.980	6937.08	-108.63	138.86	444.80	40°08'41.742"N	104°33'39.614"W	8.67	
7268.00	78.130	179.580	6962.97	-17.40	47.56	446.72	40°08'40.839"N	104°33'39.602"W	8.48	
7362.00	88.250	180.930	6974.10	75.57	-45.65	446.29	40°08'39.918"N	104°33'39.620"W	10.86	
7457.00	90.830	179.730	6974.86	170.30	-140.64	445.74	40°08'38.980"N	104°33'39.640"W	3.00	
7552.00	90.890	179.230	6973.44	265.13	-235.62	446.61	40°08'38.041"N	104°33'39.642"W	0.53	
7646.00	90.990	178.710	6971.90	359.00	-329.59	448.30	40°08'37.112"N	104°33'39.633"W	0.56	
7741.00	90.990	178.110	6970.26	453.92	-424.54	450.93	40°08'36.174"N	104°33'39.612"W	0.63	
7835.00	90.340	177.640	6969.16	547.87	-518.47	454.42	40°08'35.245"N	104°33'39.580"W	0.85	
7930.00	90.490	177.070	6968.48	642.84	-613.37	458.80	40°08'34.307"N	104°33'39.536"W	0.62	
8024.00	90.340	177.200	6967.80	736.82	-707.25	463.50	40°08'33.379"N	104°33'39.488"W	0.21	
8119.00	90.370	178.110	6967.21	831.79	-802.17	467.39	40°08'32.441"N	104°33'39.451"W	0.96	
8213.00	90.280	178.570	6966.67	925.72	-896.12	470.11	40°08'31.512"N	104°33'39.429"W	0.50	
8308.00	90.430	178.610	6966.09	1020.63	-991.09	472.45	40°08'30.573"N	104°33'39.412"W	0.16	



Actual Wellpath Report

HULLABALOO Y21-769 AWP



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#04 HULLABALOO Y21-769(445'FNL&955'FWL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-769
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-769 AWB
Facility	SEC.16-T02N-R64W		

WELLPATH DATA (185 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8402.00	90.280	179.060	6965.50	1114.52	-1085.07	474.36	40°08'29.644"N	104°33'39.400"W	0.50	
8497.00	90.180	179.590	6965.12	1209.38	-1180.06	475.48	40°08'28.705"N	104°33'39.399"W	0.57	
8591.00	90.060	178.720	6964.92	1303.24	-1274.05	476.86	40°08'27.777"N	104°33'39.394"W	0.93	
8686.00	90.090	179.490	6964.80	1398.12	-1369.04	478.35	40°08'26.838"N	104°33'39.387"W	0.81	
8780.00	90.120	179.610	6964.63	1491.95	-1463.04	479.09	40°08'25.909"N	104°33'39.391"W	0.13	
8875.00	90.180	179.830	6964.38	1586.77	-1558.04	479.55	40°08'24.970"N	104°33'39.398"W	0.24	
8969.00	90.000	180.150	6964.23	1680.55	-1652.04	479.57	40°08'24.041"N	104°33'39.410"W	0.39	
9064.00	90.030	179.910	6964.21	1775.33	-1747.04	479.52	40°08'23.102"N	104°33'39.424"W	0.25	
9158.00	89.970	179.330	6964.21	1869.16	-1841.03	480.14	40°08'22.174"N	104°33'39.429"W	0.62	
9253.00	89.850	179.410	6964.36	1964.01	-1936.03	481.18	40°08'21.235"N	104°33'39.428"W	0.15	
9347.00	89.910	179.240	6964.55	2057.87	-2030.02	482.29	40°08'20.306"N	104°33'39.427"W	0.19	
9442.00	89.940	179.010	6964.68	2152.74	-2125.01	483.74	40°08'19.367"N	104°33'39.421"W	0.24	
9537.00	89.940	178.140	6964.78	2247.65	-2219.98	486.10	40°08'18.428"N	104°33'39.404"W	0.92	
9631.00	89.970	177.950	6964.85	2341.60	-2313.92	489.31	40°08'17.500"N	104°33'39.375"W	0.20	
9726.00	89.940	179.070	6964.93	2436.52	-2408.89	491.78	40°08'16.561"N	104°33'39.356"W	1.18	
9820.00	90.000	181.250	6964.97	2530.28	-2502.88	491.52	40°08'15.632"N	104°33'39.372"W	2.32	
9915.00	90.180	182.040	6964.83	2624.84	-2597.84	488.79	40°08'14.694"N	104°33'39.421"W	0.85	
10009.00	90.180	179.790	6964.53	2718.51	-2691.83	487.29	40°08'13.766"N	104°33'39.453"W	2.39	
10104.00	90.180	178.520	6964.23	2813.37	-2786.81	488.69	40°08'12.827"N	104°33'39.448"W	1.34	
10198.00	90.280	178.220	6963.85	2907.30	-2880.77	491.37	40°08'11.898"N	104°33'39.426"W	0.34	
10293.00	90.220	178.610	6963.44	3002.23	-2975.74	493.99	40°08'10.960"N	104°33'39.405"W	0.42	
10387.00	90.150	177.430	6963.14	3096.17	-3069.68	497.24	40°08'10.031"N	104°33'39.376"W	1.26	
10482.00	90.150	176.490	6962.89	3191.16	-3164.54	502.28	40°08'09.093"N	104°33'39.324"W	0.99	
10576.00	90.180	175.520	6962.62	3285.16	-3258.31	508.83	40°08'08.166"N	104°33'39.253"W	1.03	
10671.00	90.250	176.830	6962.26	3380.16	-3353.10	515.17	40°08'07.228"N	104°33'39.184"W	1.38	
10766.00	90.250	177.170	6961.85	3475.15	-3447.97	520.14	40°08'06.290"N	104°33'39.133"W	0.36	
10860.00	90.220	178.020	6961.46	3569.11	-3541.88	524.08	40°08'05.362"N	104°33'39.095"W	0.90	
10955.00	89.970	178.830	6961.30	3664.04	-3636.85	526.69	40°08'04.423"N	104°33'39.074"W	0.89	
11049.00	89.880	178.210	6961.43	3757.96	-3730.81	529.12	40°08'03.495"N	104°33'39.056"W	0.67	
11144.00	90.030	178.980	6961.50	3852.87	-3825.79	531.45	40°08'02.556"N	104°33'39.039"W	0.83	





Actual Wellpath Report  
HULLABALOO Y21-769 AWP  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#04 HULLABALOO Y21-769(445'FNL&955'FWL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-769
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-769 AWB
Facility	SEC.16-T02N-R64W		

WELLPATH DATA (185 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11238.00	89.880	179.780	6961.57	3946.72	-3919.78	532.47	40°08'01.627"N	104°33'39.038"W	0.87	
11333.00	89.910	180.480	6961.75	4041.49	-4014.78	532.25	40°08'00.688"N	104°33'39.054"W	0.74	
11428.00	90.060	180.970	6961.77	4136.18	-4109.77	531.05	40°07'59.750"N	104°33'39.083"W	0.54	
11522.00	89.970	178.910	6961.75	4229.97	-4203.77	531.15	40°07'58.821"N	104°33'39.094"W	2.19	
11616.00	90.000	176.940	6961.77	4323.92	-4297.70	534.55	40°07'57.892"N	104°33'39.063"W	2.10	
11711.00	90.090	175.520	6961.70	4418.92	-4392.49	540.80	40°07'56.955"N	104°33'38.996"W	1.50	
11805.00	90.030	175.560	6961.60	4512.91	-4486.21	548.11	40°07'56.028"N	104°33'38.914"W	0.08	
11900.00	90.000	176.780	6961.57	4607.91	-4580.99	554.45	40°07'55.091"N	104°33'38.846"W	1.28	
11994.00	90.090	178.050	6961.50	4701.89	-4674.89	558.69	40°07'54.162"N	104°33'38.804"W	1.35	
12089.00	90.220	179.560	6961.24	4796.78	-4769.87	560.67	40°07'53.224"N	104°33'38.791"W	1.60	
12183.00	90.310	180.600	6960.81	4890.56	-4863.87	560.54	40°07'52.295"N	104°33'38.806"W	1.11	
12278.00	90.150	180.750	6960.43	4985.26	-4958.86	559.42	40°07'51.356"N	104°33'38.833"W	0.23	
12373.00	90.180	180.910	6960.15	5079.94	-5053.85	558.05	40°07'50.418"N	104°33'38.864"W	0.17	
12467.00	90.220	179.820	6959.83	5173.68	-5147.85	557.45	40°07'49.489"N	104°33'38.884"W	1.16	
12562.00	90.090	178.550	6959.57	5268.55	-5242.83	558.80	40°07'48.550"N	104°33'38.880"W	1.34	
12656.00	90.180	177.950	6959.35	5362.48	-5336.79	561.67	40°07'47.622"N	104°33'38.856"W	0.65	
12751.00	90.220	177.630	6959.02	5457.44	-5431.72	565.33	40°07'46.683"N	104°33'38.822"W	0.34	
12846.00	90.280	176.050	6958.60	5552.43	-5526.57	570.57	40°07'45.745"N	104°33'38.767"W	1.66	
13035.00	90.220	176.800	6957.78	5741.43	-5715.20	582.35	40°07'43.880"N	104°33'38.641"W	0.40	
13129.00	90.220	177.770	6957.42	5835.41	-5809.09	586.81	40°07'42.952"N	104°33'38.597"W	1.03	
13223.00	90.180	178.160	6957.09	5929.36	-5903.03	590.15	40°07'42.023"N	104°33'38.566"W	0.42	
13318.00	90.220	180.120	6956.76	6024.22	-5998.02	591.57	40°07'41.085"N	104°33'38.561"W	2.06	
13412.00	90.090	181.280	6956.50	6117.92	-6092.01	590.42	40°07'40.156"N	104°33'38.589"W	1.24	
13506.00	90.030	182.120	6956.40	6211.48	-6185.96	587.63	40°07'39.228"N	104°33'38.637"W	0.90	
13601.00	90.030	180.810	6956.35	6306.07	-6280.93	585.21	40°07'38.290"N	104°33'38.681"W	1.38	
13696.00	90.120	180.360	6956.23	6400.78	-6375.93	584.24	40°07'37.351"N	104°33'38.707"W	0.48	
13791.00	90.090	179.430	6956.06	6495.58	-6470.93	584.41	40°07'36.412"N	104°33'38.718"W	0.98	
13885.00	90.090	178.640	6955.91	6589.46	-6564.91	585.99	40°07'35.483"N	104°33'38.710"W	0.84	
13980.00	90.090	177.460	6955.76	6684.41	-6659.85	589.23	40°07'34.545"N	104°33'38.681"W	1.24	
14074.00	90.060	177.290	6955.64	6778.38	-6753.76	593.53	40°07'33.616"N	104°33'38.639"W	0.18	



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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#04 HULLABALOO Y21-769(445'FNL&955'FWL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-769
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-769 AWB
Facility	SEC.16-T02N-R64W		

WELLPATH DATA (185 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
14169.00	90.120	178.350	6955.49	6873.34	-6848.69	597.14	40°07'32.678"N	104°33'38.605"W	1.12	
14264.00	90.090	179.570	6955.31	6968.22	-6943.67	598.87	40°07'31.739"N	104°33'38.596"W	1.28	
14358.00	90.030	179.950	6955.21	7062.04	-7037.67	599.26	40°07'30.810"N	104°33'38.604"W	0.41	
14453.00	90.090	178.670	6955.11	7156.89	-7132.66	600.41	40°07'29.872"N	104°33'38.602"W	1.35	
14547.00	90.060	177.760	6954.99	7250.83	-7226.61	603.33	40°07'28.943"N	104°33'38.577"W	0.97	
14642.00	90.220	176.740	6954.76	7345.81	-7321.50	607.89	40°07'28.005"N	104°33'38.531"W	1.09	
14737.00	90.090	177.610	6954.50	7440.79	-7416.38	612.57	40°07'27.067"N	104°33'38.484"W	0.93	
14831.00	90.090	177.480	6954.35	7534.76	-7510.30	616.60	40°07'26.138"N	104°33'38.445"W	0.14	
14926.00	90.030	180.600	6954.25	7629.63	-7605.27	618.19	40°07'25.200"N	104°33'38.437"W	3.28	
15020.00	90.000	179.660	6954.23	7723.40	-7699.27	617.98	40°07'24.271"N	104°33'38.453"W	1.00	
15115.00	90.060	178.620	6954.18	7818.27	-7794.26	619.40	40°07'23.332"N	104°33'38.448"W	1.10	
15209.00	90.060	178.680	6954.08	7912.18	-7888.23	621.62	40°07'22.403"N	104°33'38.432"W	0.06	
15304.00	90.120	177.790	6953.93	8007.12	-7983.19	624.54	40°07'21.465"N	104°33'38.407"W	0.94	
15398.00	90.150	176.970	6953.71	8101.09	-8077.09	628.84	40°07'20.536"N	104°33'38.365"W	0.87	
15493.00	90.120	176.170	6953.49	8196.09	-8171.92	634.53	40°07'19.599"N	104°33'38.304"W	0.84	
15588.00	90.120	175.770	6953.29	8291.09	-8266.68	641.20	40°07'18.661"N	104°33'38.231"W	0.42	
15682.00	90.000	176.300	6953.19	8385.09	-8360.45	647.70	40°07'17.734"N	104°33'38.161"W	0.58	
15777.00	90.180	176.500	6953.04	8480.09	-8455.27	653.67	40°07'16.797"N	104°33'38.097"W	0.28	
15872.00	90.060	178.050	6952.84	8575.06	-8550.16	658.18	40°07'15.858"N	104°33'38.052"W	1.64	
15966.00	90.120	178.460	6952.69	8669.00	-8644.11	661.05	40°07'14.930"N	104°33'38.028"W	0.44	
16061.00	90.060	178.020	6952.54	8763.94	-8739.07	663.96	40°07'13.991"N	104°33'38.003"W	0.47	
16155.00	90.120	178.510	6952.40	8857.87	-8833.02	666.81	40°07'13.062"N	104°33'37.979"W	0.53	
16250.00	90.150	178.580	6952.17	8952.79	-8927.99	669.22	40°07'12.124"N	104°33'37.961"W	0.08	
16344.00	90.060	180.670	6952.00	9046.61	-9021.99	669.84	40°07'11.195"N	104°33'37.966"W	2.23	
16439.00	90.060	181.500	6951.90	9141.25	-9116.97	668.04	40°07'10.256"N	104°33'38.002"W	0.87	
16533.00	90.060	181.470	6951.80	9234.85	-9210.94	665.60	40°07'09.328"N	104°33'38.046"W	0.03	
16628.00	90.030	180.150	6951.73	9329.53	-9305.92	664.26	40°07'08.390"N	104°33'38.076"W	1.39	
16722.00	90.060	179.070	6951.65	9423.36	-9399.92	664.90	40°07'07.461"N	104°33'38.081"W	1.15	
16817.00	90.340	179.110	6951.32	9518.23	-9494.91	666.41	40°07'06.522"N	104°33'38.075"W	0.30	
16911.00	90.030	178.730	6951.02	9612.12	-9588.89	668.18	40°07'05.593"N	104°33'38.065"W	0.52	





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HULLABALOO Y21-769 AWP  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#04 HULLABALOO Y21-769(445'FNL&955'FWL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-769
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-769 AWB
Facility	SEC.16-T02N-R64W		

WELLPATH DATA (185 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
17006.00	90.090	176.890	6950.92	9707.07	-9683.82	671.81	40°07'04.655"N	104°33'38.031"W	1.94	
17100.00	90.150	174.930	6950.72	9801.07	-9777.57	678.51	40°07'03.728"N	104°33'37.957"W	2.09	
17194.00	90.150	176.630	6950.48	9895.06	-9871.31	685.43	40°07'02.801"N	104°33'37.881"W	1.81	
17289.00	90.090	178.730	6950.28	9990.02	-9966.23	689.28	40°07'01.862"N	104°33'37.844"W	2.21	Last BHI Survey
17358.00	90.090	178.730	6950.17	10058.95	-10035.21	690.80	40°07'01.180"N	104°33'37.834"W	0.00	Projection to Bit

HOLE & CASING SECTIONS - Ref Wellbore: HULLABALOO Y21-769 AWB      Ref Wellpath: HULLABALOO Y21-769 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	2032.00	2002.00	30.00	2031.92	-0.01	0.00	2.56	-8.91	
9.625in Casing Surface	30.00	2032.00	2002.00	30.00	2031.92	-0.01	0.00	2.56	-8.91	
8.5in Open Hole	2032.00	17358.00	15326.00	2031.92	6950.17	2.56	-8.91	-10035.21	690.80	



Actual Wellpath Report

HULLABALOO Y21-769 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#04 HULLABALOO Y21-769(445'FNL&955'FWL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-769
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-769 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	10.00	2.46	-111.86	3261942.56	1296894.28	40°08'40.452"N	104°33'46.800"W	polygon
HULLABALOO Y21-787 SECTION 21	10.00	2.46	-111.86	3261942.56	1296894.28	40°08'40.452"N	104°33'46.800"W	polygon
HULLABALOO Y21-769 BHL REV-1(100'FSL&1395'FWL,SEC.21)	6970.00	-10037.02	676.70	3262731.08	1286855.23	40°07'01.164"N	104°33'38.016"W	point
HULLABALOO Y21-769 LANDING POINT(550'FNL&1395'FWL,SEC.21)	6970.00	-100.00	445.00	3262499.40	1296791.82	40°08'39.381"N	104°33'39.644"W	point
HULLABALOO Y21-787 SECTION 16 HARDLINE (460'SETBACK)	7200.00	2.46	-111.86	3261942.56	1296894.28	40°08'40.452"N	104°33'46.800"W	polygon
HULLABALOO Y21-787 SECTION 21 HARDLINE(460'SETBACK)	7200.00	2.46	-111.86	3261942.56	1296894.28	40°08'40.452"N	104°33'46.800"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: HULLABALOO Y21-769 AWB    Ref Wellpath: HULLABALOO Y21-769 AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	2023.00	Gyrodatta standard - Drop gyro or Multi-shot	Gyrodatta Surface Gyros <81'-2023'>	HULLABALOO Y21-769 AWB
2023.00	17289.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	BHI/ATC 8.5" Hole OWSG, MWD+IFR+MSA <2069'-17289'>	HULLABALOO Y21-769 AWB
17289.00	17358.00	Blind Drilling (std)	Projection to bit	HULLABALOO Y21-769 AWB



Actual Wellpath Report

HULLABALOO Y21-769 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#04 HULLABALOO Y21-769(445'FNL&955'FWL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-769
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-769 AWB
Facility	SEC.16-T02N-R64W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
2023.00	0.630	59.890	2022.92	Tie on Point
17289.00	90.090	178.730	6950.28	Last BHI Survey
17358.00	90.090	178.730	6950.17	Projection to Bit

COMMENTS
<div>Wellpath general comments</div> <div>SURFACE LOCATION: NWNW</div> <div>40.14456 N</div> <div>104.56260 W</div> <div>API: 05-123-45237</div>