

NOBLE ENERGY, INC

Location: COLORADO Slot: SLOT#01 HULLABALOO Y21-787(445'FNL&842'FWL,SEC.16)
Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: HULLABALOO Y21-787
Facility: SEC.16-T02N-R64W Wellbore: HULLABALOO Y21-787 PWB

Plot reference wellbore is HULLABALOO Y21-787 (REV A & PWB)	Grid System: NAD83 - Lambert Colorado SP, Northern Zone (2011), US feet
True vertical depths are referenced to RIG (2019B) (PWB)	True Wellbore was transformed from a different geoid datum
Measured depths are referenced to RIG (2019B) (PWB)	North Reference: Grid north
RIG (2019B) (PWB) to Mean Sea Level: 4523 feet	Scale: True distance
Mean Sea Level to Ground level (in Slot: SLOTHY HULLABALOO Y21-787(445'FNL&842'FWL,SEC.16))	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: cadogan on 2017-11-01
	Drawn: Danner



Location Information

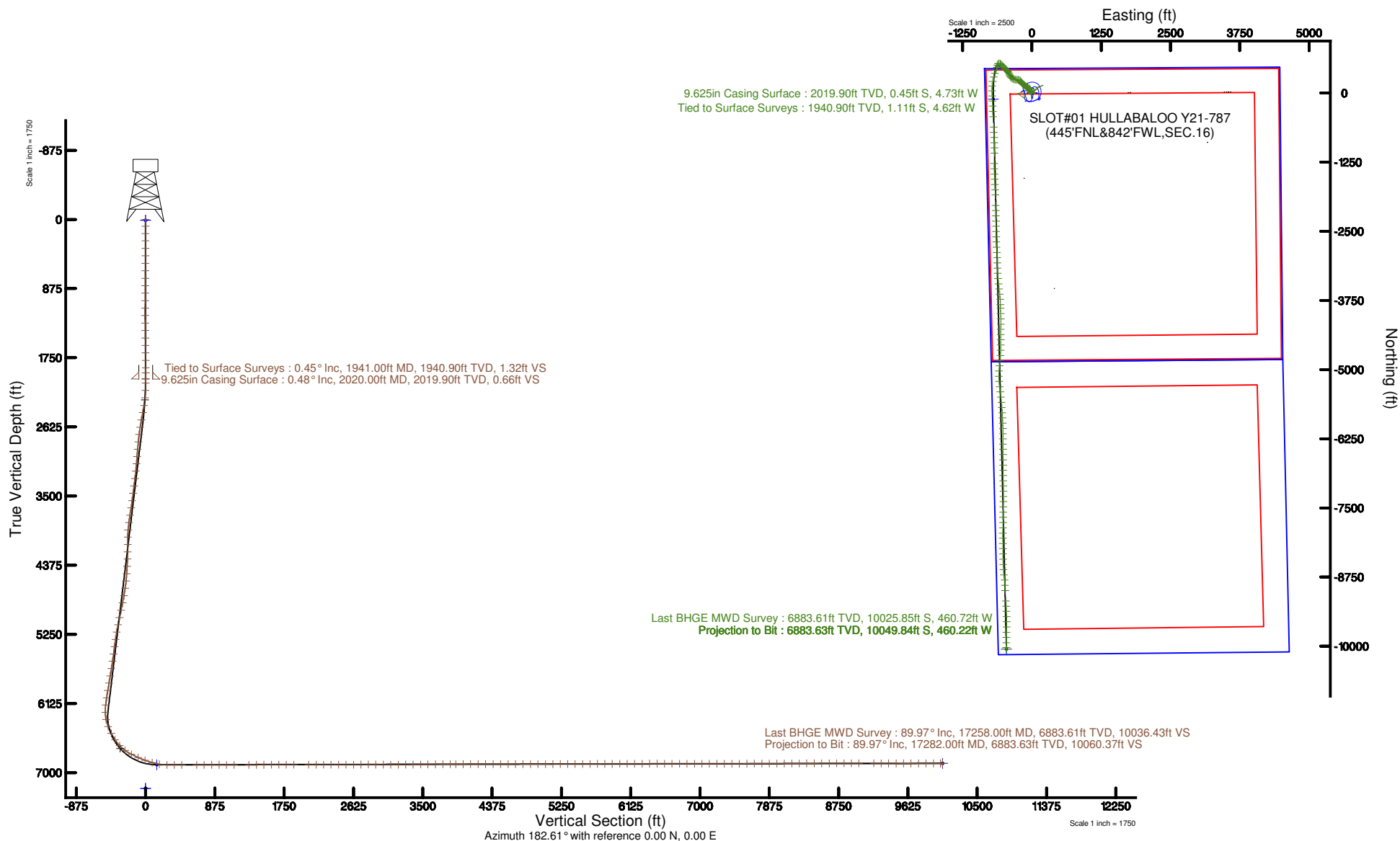
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.16-T02N-R64W	5481942.581	1098894.275	40°18'45.452"N	104°12'34.807"W
Site	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)
SLOTHY HULLABALOO Y21-787(445'FNL&842'FWL,SEC.16)	0.00	0.00	5481942.581	1098894.275
RIG (2019B) (PWB) to Ground level (in Slot: SLOTHY HULLABALOO Y21-787(445'FNL&842'FWL,SEC.16))				4523 feet
Mean Sea Level to Ground level (in Slot: SLOTHY HULLABALOO Y21-787(445'FNL&842'FWL,SEC.16))				4523 feet
RIG (2019B) (PWB) to Mean Sea Level				4523 feet

Comments

SURFACE LOCATION: NWNW
40.14457 N
104.1563 W
HYPERLINK "FacilityDetail.asp?facid=12345238&type=WELL"05-123-45238

Survey Program

Start MD (ft)	End MD (ft)	Total	Model	Log Name/Comment	Wellbore
30.00	17280.79	OWSG MWD rev2	OWSG MWD rev2 - 8F11 - Multi-Station Connection		HULLABALOO Y21-787 PWB



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#01 HULLABALOO Y21-787(445'FNL&842'FWL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-787
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-787 AWP
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	11/1/2017 at 2:26:59 PM
Convergence at slot	0.61° East	Database/Source file	Denver/HULLABALOO_Y21-787_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	3261942.56	1296894.28	40°08'40.452"N	104°33'46.800"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#01 HULLABALOO Y21-787(445'FNL&842'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	182.61°

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Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-787 AWB
Facility	SEC.16-T02N-R64W		

WELLPATH DATA (183 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	110.060	0.00	0.00	0.00	0.00	40°08'40.452"N	104°33'46.800"W	0.00	
84.53	0.190	110.060	84.53	0.04	-0.05	0.13	40°08'40.452"N	104°33'46.798"W	0.22	
179.34	0.350	56.390	179.34	-0.08	0.06	0.52	40°08'40.453"N	104°33'46.793"W	0.30	
271.04	0.680	19.270	271.04	-0.77	0.73	0.93	40°08'40.459"N	104°33'46.788"W	0.49	
365.41	0.300	312.070	365.40	-1.46	1.42	0.93	40°08'40.466"N	104°33'46.788"W	0.67	
460.05	0.440	291.610	460.04	-1.74	1.72	0.41	40°08'40.469"N	104°33'46.794"W	0.20	
554.80	0.400	319.290	554.79	-2.10	2.11	-0.14	40°08'40.473"N	104°33'46.802"W	0.22	
649.23	0.180	30.810	649.22	-2.47	2.48	-0.28	40°08'40.477"N	104°33'46.803"W	0.41	
743.93	0.360	351.220	743.92	-2.89	2.90	-0.25	40°08'40.481"N	104°33'46.803"W	0.26	
838.53	0.460	338.580	838.51	-3.53	3.55	-0.43	40°08'40.487"N	104°33'46.805"W	0.14	
933.01	0.360	357.660	932.99	-4.17	4.20	-0.58	40°08'40.494"N	104°33'46.807"W	0.18	
1027.70	0.480	349.140	1027.68	-4.85	4.89	-0.67	40°08'40.500"N	104°33'46.808"W	0.14	
1122.13	0.320	348.670	1122.11	-5.49	5.54	-0.80	40°08'40.507"N	104°33'46.810"W	0.17	
1216.48	0.180	123.420	1216.46	-5.67	5.71	-0.73	40°08'40.509"N	104°33'46.809"W	0.49	
1310.92	0.670	140.440	1310.89	-5.19	5.20	-0.25	40°08'40.503"N	104°33'46.803"W	0.53	
1405.40	0.760	168.680	1405.37	-4.17	4.16	0.23	40°08'40.493"N	104°33'46.797"W	0.38	
1499.88	1.030	214.200	1499.84	-2.84	2.85	-0.13	40°08'40.480"N	104°33'46.801"W	0.78	
1594.53	0.750	203.980	1594.47	-1.54	1.58	-0.86	40°08'40.468"N	104°33'46.811"W	0.34	
1688.93	1.030	224.770	1688.86	-0.33	0.41	-1.71	40°08'40.456"N	104°33'46.822"W	0.45	
1783.00	1.160	231.500	1782.92	0.92	-0.78	-3.05	40°08'40.445"N	104°33'46.839"W	0.19	
1878.11	0.530	273.260	1878.02	1.55	-1.36	-4.24	40°08'40.439"N	104°33'46.855"W	0.89	
1941.00†	0.449	339.623	1940.90	1.32	-1.11	-4.62	40°08'40.442"N	104°33'46.860"W	0.86	Tied to Surface Surveys
1941.18	0.450	339.800	1941.08	1.32	-1.11	-4.62	40°08'40.442"N	104°33'46.860"W	0.86	
2014.00	0.530	357.480	2013.90	0.72	-0.50	-4.73	40°08'40.448"N	104°33'46.861"W	0.23	
2069.00	0.120	34.100	2068.90	0.41	-0.20	-4.71	40°08'40.451"N	104°33'46.861"W	0.80	
2164.00	2.380	342.270	2163.87	-1.52	1.76	-5.26	40°08'40.470"N	104°33'46.867"W	2.43	
2258.00	6.250	332.200	2257.59	-7.76	8.15	-8.24	40°08'40.533"N	104°33'46.905"W	4.18	
2353.00	9.350	337.410	2351.70	-19.21	19.85	-13.61	40°08'40.650"N	104°33'46.973"W	3.34	
2447.00	11.270	345.930	2444.18	-34.92	35.81	-18.78	40°08'40.808"N	104°33'47.037"W	2.60	
2541.00	11.300	340.000	2536.37	-52.22	53.38	-24.16	40°08'40.982"N	104°33'47.104"W	1.23	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#01 HULLABALOO Y21-787(445'FNL&842'FWL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-787
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-787 AWB
Facility	SEC.16-T02N-R64W		

WELLPATH DATA (183 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2636.00	11.370	324.340	2629.54	-68.17	69.74	-32.81	40°08'41.145"N	104°33'47.213"W	3.23	
2730.00	11.330	310.860	2721.72	-81.16	83.31	-45.20	40°08'41.280"N	104°33'47.371"W	2.82	
2825.00	11.190	303.270	2814.89	-91.64	94.47	-59.96	40°08'41.392"N	104°33'47.559"W	1.57	
2920.00	11.230	297.600	2908.08	-100.25	103.81	-75.87	40°08'41.486"N	104°33'47.763"W	1.16	
3014.00	11.370	294.230	3000.26	-107.53	111.86	-92.43	40°08'41.567"N	104°33'47.975"W	0.72	
3108.00	11.280	299.240	3092.43	-115.06	120.15	-108.90	40°08'41.651"N	104°33'48.186"W	1.05	
3203.00	11.010	303.360	3185.64	-123.86	129.68	-124.59	40°08'41.746"N	104°33'48.387"W	0.88	
3297.00	11.230	309.030	3277.88	-133.89	140.38	-139.19	40°08'41.854"N	104°33'48.573"W	1.19	
3392.00	11.230	313.100	3371.06	-145.38	152.52	-153.13	40°08'41.975"N	104°33'48.751"W	0.83	
3486.00	10.300	317.170	3463.41	-157.22	164.94	-165.53	40°08'42.099"N	104°33'48.909"W	1.28	
3581.00	9.540	322.220	3556.99	-169.18	177.39	-176.13	40°08'42.223"N	104°33'49.044"W	1.22	
3675.00	10.590	327.940	3649.54	-182.22	190.87	-185.49	40°08'42.357"N	104°33'49.162"W	1.54	
3770.00	11.830	321.470	3742.73	-196.73	205.89	-196.19	40°08'42.507"N	104°33'49.298"W	1.86	
3864.00	11.820	312.600	3834.75	-210.17	219.94	-209.28	40°08'42.647"N	104°33'49.465"W	1.93	
3959.00	12.000	297.740	3927.72	-220.62	231.13	-225.18	40°08'42.759"N	104°33'49.668"W	3.22	
4053.00	11.720	277.500	4019.76	-225.59	236.92	-243.30	40°08'42.819"N	104°33'49.901"W	4.41	
4148.00	11.480	271.390	4112.82	-226.21	238.41	-262.32	40°08'42.835"N	104°33'50.145"W	1.32	
4243.00	11.840	274.940	4205.86	-226.40	239.48	-281.48	40°08'42.848"N	104°33'50.392"W	0.84	
4337.00	11.670	282.780	4297.90	-228.47	242.42	-300.36	40°08'42.879"N	104°33'50.635"W	1.71	
4431.00	11.240	287.940	4390.03	-232.57	247.34	-318.35	40°08'42.929"N	104°33'50.866"W	1.18	
4526.00	11.730	293.770	4483.13	-238.50	254.09	-336.00	40°08'42.998"N	104°33'51.092"W	1.33	
4620.00	13.110	301.030	4574.93	-247.03	263.43	-353.88	40°08'43.092"N	104°33'51.321"W	2.21	
4715.00	12.740	310.390	4667.53	-258.57	275.78	-371.09	40°08'43.216"N	104°33'51.541"W	2.24	
4810.00	12.090	327.600	4760.34	-273.14	290.97	-384.41	40°08'43.367"N	104°33'51.710"W	3.94	
4904.00	12.640	338.510	4852.17	-290.60	308.85	-393.45	40°08'43.545"N	104°33'51.824"W	2.55	
4999.00	12.840	336.580	4944.84	-309.57	328.21	-401.45	40°08'43.737"N	104°33'51.925"W	0.49	
5093.00	12.840	341.960	5036.49	-328.73	347.73	-408.84	40°08'43.931"N	104°33'52.017"W	1.27	
5188.00	12.610	332.560	5129.17	-347.58	366.97	-416.89	40°08'44.122"N	104°33'52.118"W	2.19	
5282.00	12.520	321.260	5220.93	-364.11	384.03	-427.99	40°08'44.291"N	104°33'52.259"W	2.61	
5377.00	12.680	314.030	5313.65	-378.74	399.31	-441.94	40°08'44.444"N	104°33'52.436"W	1.67	

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#01 HULLABALOO Y21-787(445°FNL&842°FWL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-787
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-787 AWB
Facility	SEC.16-T02N-R64W		

WELLPATH DATA (183 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5472.00	12.830	309.880	5406.30	-392.03	413.32	-457.53	40°08'44.584"N	104°33'52.635"W	0.98	
5566.00	11.460	312.790	5498.20	-404.37	426.35	-472.39	40°08'44.714"N	104°33'52.825"W	1.60	
5660.00	11.780	315.970	5590.27	-416.98	439.59	-485.91	40°08'44.847"N	104°33'52.997"W	0.76	
5755.00	12.250	321.090	5683.19	-431.19	454.41	-498.98	40°08'44.994"N	104°33'53.163"W	1.23	
5849.00	12.810	319.740	5774.96	-446.29	470.12	-511.98	40°08'45.151"N	104°33'53.328"W	0.67	
5944.00	12.690	320.690	5867.61	-461.77	486.23	-525.40	40°08'45.312"N	104°33'53.499"W	0.25	
6038.00	12.990	317.420	5959.26	-476.90	502.00	-539.09	40°08'45.469"N	104°33'53.673"W	0.84	
6133.00	13.070	312.590	6051.82	-491.33	517.13	-554.22	40°08'45.620"N	104°33'53.866"W	1.15	
6227.00	12.850	302.990	6143.44	-503.44	530.02	-570.81	40°08'45.749"N	104°33'54.078"W	2.30	
6322.00	13.510	272.690	6236.04	-508.81	536.30	-590.78	40°08'45.813"N	104°33'54.334"W	7.22	
6416.00	15.960	222.660	6327.30	-498.89	527.27	-610.59	40°08'45.726"N	104°33'54.590"W	13.35	
6511.00	21.240	195.870	6417.46	-472.07	501.05	-624.18	40°08'45.468"N	104°33'54.769"W	10.44	
6606.00	28.220	193.190	6503.70	-433.20	462.58	-634.02	40°08'45.089"N	104°33'54.901"W	7.44	
6700.00	35.020	197.120	6583.71	-385.18	415.11	-647.05	40°08'44.621"N	104°33'55.075"W	7.56	
6795.00	43.900	198.290	6656.98	-326.96	357.67	-665.45	40°08'44.056"N	104°33'55.320"W	9.38	
6889.00	53.780	197.770	6718.77	-258.81	290.45	-687.30	40°08'43.394"N	104°33'55.610"W	10.52	
6984.00	63.540	189.180	6768.19	-179.28	211.68	-705.85	40°08'42.617"N	104°33'55.860"W	12.84	
7079.00	66.800	183.910	6808.10	-93.31	126.07	-715.62	40°08'41.772"N	104°33'55.997"W	6.09	
7173.00	69.660	180.060	6842.97	-6.05	38.85	-718.61	40°08'40.911"N	104°33'56.048"W	4.87	
7268.00	73.520	177.750	6872.97	83.87	-51.24	-716.87	40°08'40.020"N	104°33'56.037"W	4.67	
7362.00	80.720	177.210	6893.91	175.08	-142.73	-712.84	40°08'39.116"N	104°33'55.998"W	7.68	
7457.00	89.450	178.450	6902.04	269.31	-237.22	-709.26	40°08'38.182"N	104°33'55.965"W	9.28	
7551.00	89.940	177.720	6902.55	363.01	-331.16	-706.12	40°08'37.253"N	104°33'55.937"W	0.94	
7646.00	90.150	175.440	6902.47	457.48	-425.99	-700.46	40°08'36.316"N	104°33'55.877"W	2.41	
7835.00	90.280	177.610	6901.76	645.40	-614.63	-689.00	40°08'34.450"N	104°33'55.755"W	1.15	
7930.00	90.250	177.070	6901.32	740.00	-709.52	-684.59	40°08'33.512"N	104°33'55.711"W	0.57	
8024.00	90.060	177.420	6901.07	833.58	-803.41	-680.07	40°08'32.584"N	104°33'55.666"W	0.42	
8118.00	89.850	178.080	6901.14	927.24	-897.34	-676.38	40°08'31.655"N	104°33'55.631"W	0.74	
8213.00	89.750	179.850	6901.47	1022.05	-992.32	-674.67	40°08'30.717"N	104°33'55.622"W	1.87	
8307.00	90.090	181.650	6901.60	1115.99	-1086.31	-675.90	40°08'29.788"N	104°33'55.650"W	1.95	

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Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-787 AWB
Facility	SEC.16-T02N-R64W		

WELLPATH DATA (183 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8496.00	90.150	180.460	6901.21	1304.92	-1275.27	-679.38	40°08'27.921"N	104°33'55.721"W	0.63	
8591.00	90.280	178.340	6900.85	1399.76	-1370.26	-678.38	40°08'26.982"N	104°33'55.721"W	2.24	
8686.00	90.180	177.130	6900.47	1494.42	-1465.19	-674.63	40°08'26.044"N	104°33'55.685"W	1.28	
8780.00	90.030	178.490	6900.30	1588.08	-1559.11	-671.04	40°08'25.116"N	104°33'55.652"W	1.46	
8875.00	90.310	177.760	6900.02	1682.79	-1654.06	-667.93	40°08'24.177"N	104°33'55.625"W	0.82	
8969.00	90.090	177.110	6899.69	1776.41	-1747.97	-663.72	40°08'23.249"N	104°33'55.583"W	0.73	
9064.00	89.910	177.350	6899.69	1870.99	-1842.86	-659.13	40°08'22.311"N	104°33'55.537"W	0.32	
9253.00	89.970	178.830	6899.89	2059.39	-2031.75	-652.83	40°08'20.443"N	104°33'55.482"W	0.78	
9347.00	89.880	178.480	6900.01	2153.17	-2125.72	-650.62	40°08'19.514"N	104°33'55.466"W	0.38	
9442.00	90.000	179.320	6900.11	2247.97	-2220.70	-648.80	40°08'18.576"N	104°33'55.455"W	0.89	
9536.00	90.190	179.470	6899.95	2341.82	-2314.70	-647.81	40°08'17.647"N	104°33'55.455"W	0.26	
9631.00	90.280	179.490	6899.56	2436.68	-2409.69	-646.95	40°08'16.708"N	104°33'55.457"W	0.10	
9725.00	90.250	179.110	6899.13	2530.52	-2503.68	-645.80	40°08'15.779"N	104°33'55.455"W	0.41	
9820.00	90.280	178.530	6898.69	2625.31	-2598.66	-643.84	40°08'14.840"N	104°33'55.443"W	0.61	
9914.00	90.490	177.790	6898.06	2719.02	-2692.61	-640.82	40°08'13.912"N	104°33'55.417"W	0.82	
10008.00	90.280	176.840	6897.43	2812.62	-2786.50	-636.42	40°08'12.983"N	104°33'55.373"W	1.04	
10103.00	89.660	176.400	6897.48	2907.10	-2881.34	-630.82	40°08'12.046"N	104°33'55.314"W	0.80	
10198.00	89.570	177.330	6898.11	3001.62	-2976.19	-625.62	40°08'11.108"N	104°33'55.260"W	0.98	
10293.00	90.090	178.630	6898.40	3096.31	-3071.13	-622.28	40°08'10.169"N	104°33'55.229"W	1.47	
10387.00	90.000	178.940	6898.32	3190.10	-3165.11	-620.28	40°08'09.241"N	104°33'55.216"W	0.34	
10482.00	90.220	177.160	6898.14	3284.79	-3260.05	-617.05	40°08'08.302"N	104°33'55.188"W	1.89	
10576.00	90.220	174.520	6897.78	3378.13	-3353.79	-610.23	40°08'07.375"N	104°33'55.113"W	2.81	
10671.00	90.680	174.420	6897.03	3472.16	-3448.35	-601.08	40°08'06.440"N	104°33'55.008"W	0.50	
10765.00	90.680	173.630	6895.92	3565.10	-3541.83	-591.29	40°08'05.515"N	104°33'54.894"W	0.84	
10860.00	90.460	173.360	6894.97	3658.90	-3636.21	-580.53	40°08'04.581"N	104°33'54.769"W	0.37	
10955.00	90.550	175.670	6894.13	3752.94	-3730.77	-571.45	40°08'03.646"N	104°33'54.665"W	2.43	
11049.00	90.520	177.900	6893.26	3846.45	-3824.61	-566.18	40°08'02.718"N	104°33'54.609"W	2.37	
11118.00	90.550	179.590	6892.61	3915.28	-3893.59	-564.67	40°08'02.036"N	104°33'54.599"W	2.45	
11213.00	90.090	178.080	6892.08	4010.07	-3988.56	-562.74	40°08'01.098"N	104°33'54.587"W	1.66	
11307.00	90.150	178.450	6891.88	4103.80	-4082.52	-559.89	40°08'00.169"N	104°33'54.563"W	0.40	

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#01 HULLABALOO Y21-787(445°FNL&842°FWL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-787
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-787 AWB
Facility	SEC.16-T02N-R64W		

WELLPATH DATA (183 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11402.00	90.060	180.940	6891.71	4198.67	-4177.51	-559.39	40°07'59.230"N	104°33'54.570"W	2.62	
11496.00	89.880	180.920	6891.76	4292.63	-4271.50	-560.91	40°07'58.302"N	104°33'54.602"W	0.19	
11591.00	90.000	179.150	6891.86	4387.53	-4366.50	-560.97	40°07'57.363"N	104°33'54.616"W	1.87	
11685.00	90.000	180.570	6891.86	4481.42	-4460.49	-560.74	40°07'56.434"N	104°33'54.626"W	1.51	
11780.00	90.000	180.020	6891.86	4576.34	-4555.49	-561.23	40°07'55.495"N	104°33'54.645"W	0.58	
11874.00	89.910	181.260	6891.93	4670.28	-4649.48	-562.28	40°07'54.567"N	104°33'54.671"W	1.32	
11969.00	89.780	183.220	6892.19	4765.28	-4744.41	-565.99	40°07'53.629"N	104°33'54.732"W	2.07	
12063.00	89.690	186.370	6892.62	4859.19	-4838.06	-573.85	40°07'52.704"N	104°33'54.846"W	3.35	
12157.00	89.940	186.580	6892.93	4952.98	-4931.46	-584.45	40°07'51.783"N	104°33'54.995"W	0.35	
12252.00	90.250	184.090	6892.77	5047.87	-5026.04	-593.28	40°07'50.849"N	104°33'55.121"W	2.64	
12347.00	90.770	178.970	6891.92	5142.81	-5120.97	-595.82	40°07'49.911"N	104°33'55.167"W	5.42	
12441.00	90.710	173.840	6890.71	5236.22	-5214.75	-589.93	40°07'48.984"N	104°33'55.104"W	5.46	
12536.00	89.880	173.020	6890.22	5330.00	-5309.12	-579.06	40°07'48.050"N	104°33'54.977"W	1.23	
12630.00	90.090	173.690	6890.25	5422.78	-5402.49	-568.18	40°07'47.126"N	104°33'54.849"W	0.75	
12725.00	90.090	174.690	6890.10	5516.75	-5497.00	-558.56	40°07'46.191"N	104°33'54.738"W	1.05	
12820.00	90.220	175.020	6889.84	5610.88	-5591.62	-550.04	40°07'45.256"N	104°33'54.641"W	0.37	
12914.00	90.280	174.990	6889.43	5704.05	-5685.26	-541.86	40°07'44.329"N	104°33'54.549"W	0.07	
13009.00	90.150	176.140	6889.07	5798.33	-5779.97	-534.51	40°07'43.393"N	104°33'54.467"W	1.22	
13103.00	90.310	176.720	6888.70	5891.78	-5873.79	-528.66	40°07'42.465"N	104°33'54.404"W	0.64	
13198.00	90.310	177.580	6888.18	5986.35	-5968.67	-523.94	40°07'41.527"N	104°33'54.357"W	0.91	
13292.00	90.250	178.060	6887.72	6080.02	-6062.60	-520.36	40°07'40.598"N	104°33'54.323"W	0.51	
13387.00	90.180	180.730	6887.37	6174.86	-6157.59	-519.36	40°07'39.660"N	104°33'54.323"W	2.81	
13481.00	90.280	180.650	6886.99	6268.81	-6251.58	-520.49	40°07'38.731"N	104°33'54.351"W	0.14	
13575.00	90.250	179.470	6886.55	6362.71	-6345.58	-520.59	40°07'37.802"N	104°33'54.365"W	1.26	
13670.00	89.780	179.600	6886.53	6457.57	-6440.57	-519.82	40°07'36.863"N	104°33'54.368"W	0.51	
13764.00	90.060	179.420	6886.66	6551.44	-6534.57	-519.01	40°07'35.935"N	104°33'54.370"W	0.35	
13859.00	89.720	179.820	6886.84	6646.31	-6629.57	-518.38	40°07'34.996"N	104°33'54.375"W	0.55	
13954.00	89.910	179.700	6887.15	6741.19	-6724.57	-517.98	40°07'34.057"N	104°33'54.383"W	0.24	
14048.00	89.880	180.180	6887.32	6835.09	-6818.57	-517.89	40°07'33.128"N	104°33'54.394"W	0.51	
14143.00	90.180	179.380	6887.27	6929.97	-6913.56	-517.52	40°07'32.189"N	104°33'54.402"W	0.90	

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#01 HULLABALOO Y21-787(445'FNL&842'FWL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-787
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-787 AWB
Facility	SEC.16-T02N-R64W		

WELLPATH DATA (183 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
14238.00	90.000	178.670	6887.12	7024.78	-7008.55	-515.90	40°07'31.251"N	104°33'54.394"W	0.77	
14332.00	89.970	178.640	6887.15	7118.56	-7102.52	-513.70	40°07'30.322"N	104°33'54.379"W	0.05	
14427.00	90.090	179.700	6887.10	7213.38	-7197.51	-512.32	40°07'29.383"N	104°33'54.374"W	1.12	
14521.00	90.000	179.900	6887.02	7307.27	-7291.51	-511.99	40°07'28.454"N	104°33'54.382"W	0.23	
14616.00	90.060	181.160	6886.97	7402.21	-7386.51	-512.87	40°07'27.515"N	104°33'54.407"W	1.33	
14711.00	90.370	181.370	6886.62	7497.18	-7481.48	-514.97	40°07'26.577"N	104°33'54.446"W	0.39	
14805.00	90.250	181.500	6886.11	7591.16	-7575.45	-517.32	40°07'25.649"N	104°33'54.490"W	0.19	
14900.00	90.220	179.750	6885.72	7686.10	-7670.44	-518.36	40°07'24.710"N	104°33'54.516"W	1.84	
14994.00	90.120	181.170	6885.44	7780.03	-7764.43	-519.11	40°07'23.782"N	104°33'54.538"W	1.51	
15089.00	90.220	181.300	6885.16	7875.00	-7859.41	-521.16	40°07'22.843"N	104°33'54.577"W	0.17	
15184.00	90.250	180.910	6884.77	7969.97	-7954.39	-522.99	40°07'21.905"N	104°33'54.614"W	0.41	
15278.00	90.370	179.560	6884.26	8063.88	-8048.39	-523.38	40°07'20.976"N	104°33'54.632"W	1.44	
15373.00	90.030	179.670	6883.93	8158.75	-8143.39	-522.74	40°07'20.037"N	104°33'54.636"W	0.38	
15467.00	90.060	179.980	6883.85	8252.64	-8237.39	-522.45	40°07'19.108"N	104°33'54.645"W	0.33	
15562.00	90.210	178.950	6883.63	8347.49	-8332.38	-521.57	40°07'18.170"N	104°33'54.647"W	1.10	
15656.00	90.120	178.330	6883.36	8441.27	-8426.35	-519.34	40°07'17.241"N	104°33'54.631"W	0.67	
15751.00	90.120	177.690	6883.16	8535.96	-8521.29	-516.04	40°07'16.302"N	104°33'54.601"W	0.67	
15846.00	90.220	176.540	6882.88	8630.52	-8616.17	-511.26	40°07'15.364"N	104°33'54.553"W	1.22	
15940.00	90.280	173.150	6882.47	8723.64	-8709.78	-502.81	40°07'14.438"N	104°33'54.457"W	3.61	
16035.00	89.970	174.770	6882.26	8817.56	-8804.25	-492.82	40°07'13.504"N	104°33'54.341"W	1.74	
16129.00	89.970	177.000	6882.31	8910.91	-8898.00	-486.07	40°07'12.577"N	104°33'54.267"W	2.37	
16224.00	89.970	177.550	6882.36	9005.49	-8992.89	-481.55	40°07'11.639"N	104°33'54.221"W	0.58	
16413.00	89.810	175.070	6882.72	9193.34	-9181.48	-469.39	40°07'09.774"N	104°33'54.091"W	1.31	
16508.00	89.880	176.580	6882.98	9287.67	-9276.23	-462.48	40°07'08.837"N	104°33'54.014"W	1.59	
16602.00	89.970	177.300	6883.10	9381.21	-9370.09	-457.46	40°07'07.909"N	104°33'53.962"W	0.77	
16697.00	89.880	178.100	6883.23	9475.86	-9465.02	-453.65	40°07'06.970"N	104°33'53.926"W	0.85	
16791.00	90.000	180.120	6883.33	9569.68	-9559.00	-452.19	40°07'06.042"N	104°33'53.920"W	2.15	
16885.00	90.090	182.380	6883.25	9663.64	-9652.97	-454.24	40°07'05.113"N	104°33'53.959"W	2.41	
16980.00	89.750	182.410	6883.38	9758.64	-9747.89	-458.21	40°07'04.176"N	104°33'54.023"W	0.36	
17074.00	90.000	180.400	6883.59	9852.62	-9841.85	-460.51	40°07'03.247"N	104°33'54.066"W	2.15	

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#01 HULLABALOO Y21-787(445'FNL&842'FWL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-787
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-787 AWB
Facility	SEC.16-T02N-R64W		

WELLPATH DATA (183 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
17169.00	90.000	180.500	6883.59	9947.55	-9936.85	-461.26	40°07'02.309"N	104°33'54.088"W	0.11	
17258.00	89.970	178.810	6883.61	10036.43	-10025.85	-460.72	40°07'01.429"N	104°33'54.093"W	1.90	Last BHGE MWD Survey
17282.00	89.970	178.810	6883.63	10060.37	-10049.84	-460.22	40°07'01.192"N	104°33'54.090"W	0.00	Projection to Bit

HOLE & CASING SECTIONS - Ref Wellbore: HULLABALOO Y21-787 AWB Ref Wellpath: HULLABALOO Y21-787 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]
9.625in Casing Surface	30.00	2020.00	1990.00	30.00	2019.90	-0.01	0.02	-0.45	-4.73
8.5in Open Hole	30.00	17282.00	17252.00	30.00	6883.63	-0.01	0.02	-10049.84	-460.22

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#01 HULLABALOO Y21-787(445'FNL&842'FWL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-787
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-787 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	0.00	0.00	3261942.56	1296894.28	40°08'40.452"N	104°33'46.800"W	polygon
HULLABALOO Y21-787 SECTION 21	10.00	0.00	0.00	3261942.56	1296894.28	40°08'40.452"N	104°33'46.800"W	polygon
HULLABALOO Y21-787 BHL REV-1 (100'FSL&150'FWL,SEC.21)	6882.64	-10052.67	-458.77	3261483.81	1286842.05	40°07'01.164"N	104°33'54.072"W	point
HULLABALOO Y21-787 LANDING POINT (550'FNL&150'FWL,SEC.16)	6900.00	-110.00	-695.00	3261247.59	1296784.28	40°08'39.438"N	104°33'55.764"W	point
HULLABALOO Y21-787 SECTION 16 HARDLINE (460'SETBACK)	7200.00	0.00	0.00	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	0.00	0.00	3261942.56	1296894.28	40°08'40.452"N	104°33'46.800"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: HULLABALOO Y21-787 AWB				Ref Wellpath: HULLABALOO Y21-787 AWP	
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment		Wellbore
0.00	1941.18	Gyrodata standard - Drop gyro or Multi-shot	GYRODATA DIRECTIONAL SURVEY REPORT PROVIDED BY NOBLE <84.53'-1941.18">		HULLABALOO Y21-787 AWB
1941.18	17258.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	OWSG MWD REV2 + IFR1 + MULTI-STATION CORRECTION <2014'-17258">		HULLABALOO Y21-787 AWB
17258.00	17282.00	Blind Drilling (std)	Projection to bit		HULLABALOO Y21-787 AWB

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#01 HULLABALOO Y21-787(445'FNL&842'FWL,SEC.16)
Area	COLORADO	Well	HULLABALOO Y21-787
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HULLABALOO Y21-787 AWB
Facility	SEC.16-T02N-R64W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1941.00	0.449	339.623	1940.90	Tied to Surface Surveys
17258.00	89.970	178.810	6883.61	Last BHGE MWD Survey
17282.00	89.970	178.810	6883.63	Projection to Bit

COMMENTS

Wellpath general comments
 SURFACE LOCATION: NWNW
 40.14457 N
 104.563 W
 HYPERLINK "FacilityDetail.asp?facid=12345238&type=WELL"05-123-45238