

# NOBLE ENERGY, INC

Location: COLORADO Slot: SLOT#07 BISON RIDGE Y22-756(2230'FSL&2130'FWL,SEC.10)  
Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: BISON RIDGE Y22-756  
Facility: SEC.10-T02N-R64W Wellbore: BISON RIDGE Y22-756 PWB

## Comments

SURFACE LOCATION: NESW  
40.15183N  
104.53944W  
API: 05-123-45370

## Survey Program

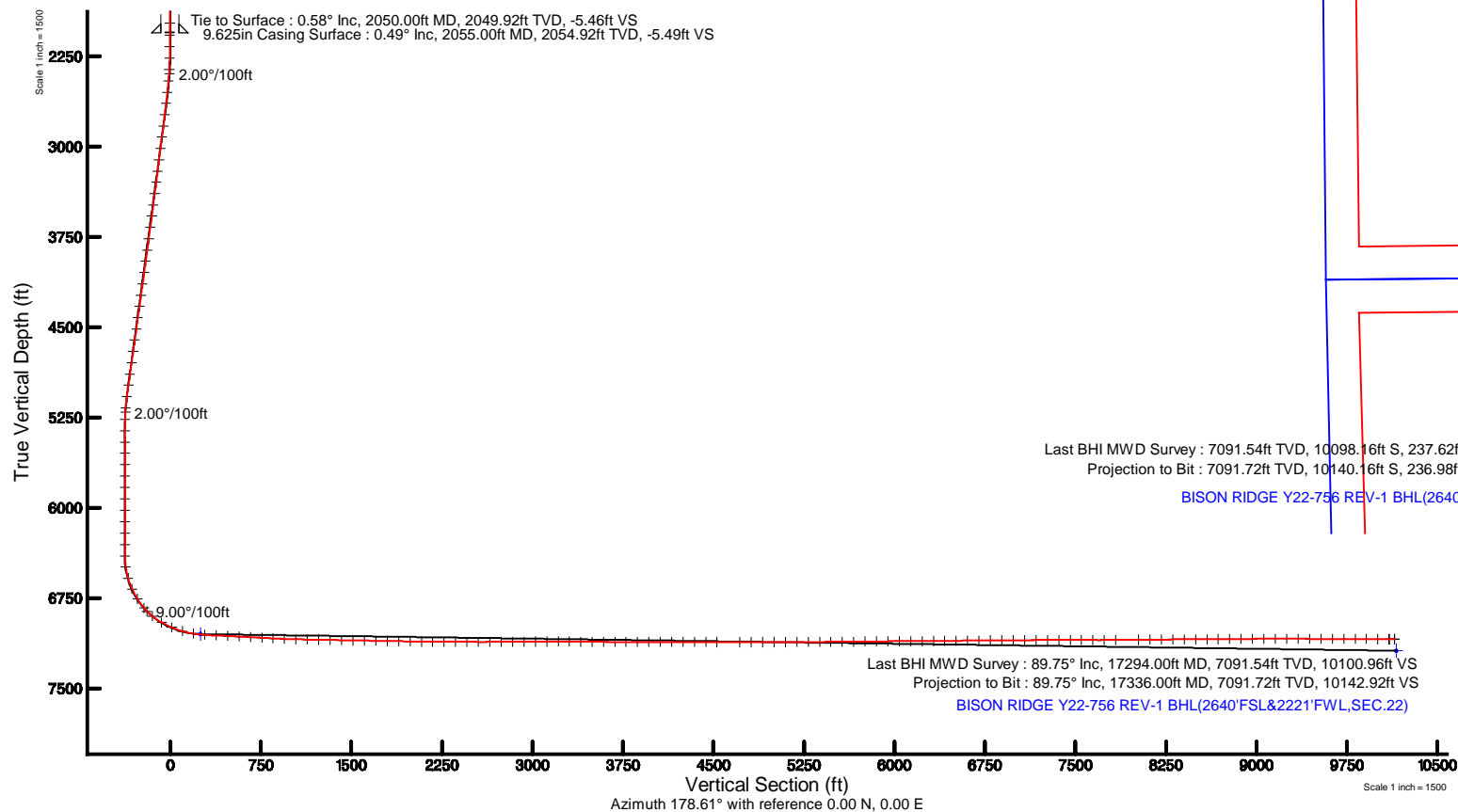
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
30.00	17339.21	OWSG MWD rev2	OWSG MWD rev2 + IFR1 + Multi-Station Correction		BISON RIDGE Y22-756 PWB



Plus reference wellpath is BISON RIDGE Y22-756 (REV-A-0) PWB	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (NAD), US Feet
True vertical depths are referenced to RIG (20KRS) (RKB)	* = Wellpath was transformed from a different geoidic datum
Measured depths are referenced to RIG (20KRS) (RKB)	North Reference: Grid north
RIG (20KRS) (RKB) to Mean Sea Level: 4861 feet	Scale: True distance
Mean Sea Level to Ground level (At Slot: SLOT#07 BISON RIDGE Y22-756(2230'FSL&2130'FWL,SEC.10): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: geowater on 2018-01-08
	Dataverse: WA_DEN_Denver.Den

## Location Information

Facility Name		Grid East (US F)	Grid North (US F)	Latitude	Longitude
SEC.10-T02N-R64W		3285724.271	1299518.916	40°09'05.552"N	104°32'08.216"W
Bit	Local N (F)	Local E (F)	Grid East (US F)	Grid North (US F)	Latitude
SLOT#07 BISON RIDGE Y22-756(2230'FSL&2130'FWL,SEC.10)	-8.85	-1224.36	3284849.362	1299505.265	40°09'05.588"N
RIG (20KRS) (RKB) to Ground level (At Slot: SLOT#07 BISON RIDGE Y22-756(2230'FSL&2130'FWL,SEC.10)	486111				
Mean Sea Level to Ground level (At Slot: SLOT#07 BISON RIDGE Y22-756(2230'FSL&2130'FWL,SEC.10)	01				
RIG (20KRS) (RKB) to Mean Sea Level	486111				





Actual Wellpath Report

BISON RIDGE Y22-756 AWP

Page 1 of 9



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#07 BISON RIDGE Y22-756(2230'FSL&2130'FWL,SEC.10)
Area	COLORADO	Well	BISON RIDGE Y22-756
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	BISON RIDGE Y22-756 AWB
Facility	SEC.10-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	0.999958	Report Generated	1/8/2018 at 1:49:53 PM
Convergence at slot	0.63° East	Database/Source file	WA_DEN_Denver_Defn/_BISON_RIDGE_Y22-756_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-9.65	-1224.36	3268499.96	1299609.27	40°09'06.588"N	104°32'21.984"W
Facility Reference Pt			3269724.27	1299618.92	40°09'06.552"N	104°32'06.216"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	4961.00ft
Horizontal Reference Pt	Slot	RIG (30'KB) (RKB) to Mean Sea Level	4961.00ft
Vertical Reference Pt	RIG (30'KB) (RKB)	RIG (30'KB) (RKB) to Ground Level at Slot (SLOT#07 BISON RIDGE Y22-756 (2230'FSL&2130'FWL,SEC.10))	4961.00ft
MD Reference Pt	RIG (30'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	178.66°



Actual Wellpath Report

BISON RIDGE Y22-756 AWP



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#07 BISON RIDGE Y22-756(2230'FSL&2130'FWL,SEC.10)
Area	COLORADO	Well	BISON RIDGE Y22-756
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	BISON RIDGE Y22-756 AWB
Facility	SEC.10-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	264.950	0.00	0.00	0.00	0.00	40°09'06.588"N	104°32'21.984"W	0.00		
79.30	0.420	264.950	79.30	0.02	-0.03	-0.29	40°09'06.588"N	104°32'21.988"W	0.53		
174.90	0.570	242.230	174.90	0.25	-0.28	-1.06	40°09'06.585"N	104°32'21.998"W	0.26		
269.00	0.660	270.790	268.99	0.44	-0.49	-2.02	40°09'06.583"N	104°32'22.010"W	0.34		
364.10	1.030	288.810	364.08	0.13	-0.21	-3.37	40°09'06.586"N	104°32'22.027"W	0.47		
458.50	0.820	279.740	458.47	-0.30	0.18	-4.84	40°09'06.590"N	104°32'22.046"W	0.27		
553.00	0.430	280.850	552.96	-0.50	0.36	-5.86	40°09'06.592"N	104°32'22.059"W	0.41		
647.70	0.400	223.620	647.66	-0.34	0.19	-6.43	40°09'06.591"N	104°32'22.067"W	0.42		
742.40	0.350	315.650	742.36	-0.32	0.16	-6.86	40°09'06.590"N	104°32'22.072"W	0.57		
837.00	0.690	289.180	836.95	-0.73	0.55	-7.60	40°09'06.594"N	104°32'22.082"W	0.43		
931.70	0.670	273.490	931.65	-0.98	0.77	-8.69	40°09'06.597"N	104°32'22.096"W	0.20		
1026.20	0.630	279.140	1026.14	-1.12	0.89	-9.76	40°09'06.598"N	104°32'22.110"W	0.08		
1120.80	0.490	297.040	1120.74	-1.40	1.16	-10.63	40°09'06.601"N	104°32'22.121"W	0.24		
1215.60	0.410	8.920	1215.54	-1.93	1.68	-10.94	40°09'06.606"N	104°32'22.125"W	0.56		
1309.90	0.360	357.700	1309.83	-2.56	2.30	-10.90	40°09'06.612"N	104°32'22.124"W	0.10		
1404.50	0.520	335.370	1404.43	-3.25	2.99	-11.09	40°09'06.619"N	104°32'22.126"W	0.24		
1499.10	0.450	326.010	1499.03	-3.96	3.69	-11.48	40°09'06.626"N	104°32'22.131"W	0.11		
1593.70	0.180	338.150	1593.63	-4.41	4.14	-11.74	40°09'06.630"N	104°32'22.135"W	0.29		
1688.10	0.090	345.370	1688.03	-4.62	4.35	-11.81	40°09'06.632"N	104°32'22.136"W	0.10		
1782.70	0.070	262.950	1782.63	-4.69	4.41	-11.89	40°09'06.633"N	104°32'22.137"W	0.11		
1877.30	0.100	2.890	1877.23	-4.76	4.49	-11.94	40°09'06.634"N	104°32'22.137"W	0.14		
1971.90	0.320	310.870	1971.82	-5.02	4.74	-12.14	40°09'06.636"N	104°32'22.140"W	0.29		
2050.00	0.580	313.030	2049.92	-5.45	5.15	-12.59	40°09'06.640"N	104°32'22.145"W	0.33	Tie to Surface	
2075.00	0.220	7.970	2074.92	-5.58	5.29	-12.68	40°09'06.642"N	104°32'22.147"W	1.95		
2169.00	0.160	118.790	2168.92	-5.69	5.40	-12.54	40°09'06.643"N	104°32'22.145"W	0.33		
2264.00	1.080	0.660	2263.92	-6.52	6.23	-12.41	40°09'06.651"N	104°32'22.143"W	1.23		
2359.00	2.500	3.560	2358.87	-9.48	9.20	-12.27	40°09'06.680"N	104°32'22.141"W	1.50		
2453.00	5.040	10.310	2452.66	-15.57	15.31	-11.41	40°09'06.740"N	104°32'22.129"W	2.74		
2548.00	7.600	15.100	2547.07	-25.68	25.48	-9.02	40°09'06.841"N	104°32'22.097"W	2.75		
2642.00	6.480	22.800	2640.36	-36.49	36.37	-5.35	40°09'06.948"N	104°32'22.048"W	1.56		



Actual Wellpath Report

BISON RIDGE Y22-756 AWP



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#07 BISON RIDGE Y22-756(2230'FSL&2130'FWL,SEC.10)
Area	COLORADO	Well	BISON RIDGE Y22-756
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	BISON RIDGE Y22-756 AWB
Facility	SEC.10-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	7.580	26.560	2734.65	-46.92	46.92	-0.47	40°09'07.052"N	104°32'21.984"W	1.25	
2831.00	7.650	13.330	2827.83	-58.45	58.55	3.75	40°09'07.166"N	104°32'21.928"W	1.86	
2926.00	7.700	341.030	2922.02	-70.64	70.73	3.13	40°09'07.287"N	104°32'21.934"W	4.48	
3020.00	7.400	341.510	3015.20	-82.42	82.43	-0.83	40°09'07.403"N	104°32'21.983"W	0.33	
3115.00	7.500	11.200	3109.44	-94.33	94.31	-1.57	40°09'07.520"N	104°32'21.991"W	4.01	
3209.00	7.730	25.130	3202.62	-105.97	106.06	2.31	40°09'07.636"N	104°32'21.939"W	1.97	
3304.00	7.610	22.140	3296.77	-117.46	117.67	7.39	40°09'07.750"N	104°32'21.872"W	0.44	
3398.00	8.250	18.000	3389.87	-129.54	129.85	11.82	40°09'07.870"N	104°32'21.814"W	0.91	
3493.00	8.000	13.700	3483.91	-142.35	142.75	15.49	40°09'07.997"N	104°32'21.765"W	0.69	
3587.00	7.790	17.660	3577.02	-154.69	155.18	18.98	40°09'08.119"N	104°32'21.718"W	0.62	
3682.00	8.140	16.790	3671.11	-167.17	167.75	22.87	40°09'08.243"N	104°32'21.666"W	0.39	
3777.00	7.980	16.190	3765.17	-179.85	180.52	26.65	40°09'08.369"N	104°32'21.616"W	0.19	
3871.00	8.160	17.350	3858.24	-192.39	193.16	30.46	40°09'08.493"N	104°32'21.565"W	0.26	
3966.00	8.120	15.290	3952.28	-205.21	206.06	34.24	40°09'08.621"N	104°32'21.514"W	0.31	
4060.00	8.260	9.930	4045.32	-218.19	219.12	37.16	40°09'08.749"N	104°32'21.475"W	0.83	
4155.00	8.130	5.670	4139.36	-231.55	232.53	39.00	40°09'08.882"N	104°32'21.449"W	0.65	
4250.00	7.640	10.120	4233.46	-244.41	245.43	40.77	40°09'09.009"N	104°32'21.425"W	0.82	
4344.00	7.930	10.980	4326.59	-256.87	257.94	43.10	40°09'09.132"N	104°32'21.393"W	0.33	
4439.00	8.060	8.050	4420.67	-269.84	270.97	45.28	40°09'09.261"N	104°32'21.363"W	0.45	
4534.00	7.890	7.330	4514.75	-282.86	284.03	47.05	40°09'09.390"N	104°32'21.339"W	0.21	
4628.00	8.240	1.810	4607.82	-295.96	297.17	48.08	40°09'09.519"N	104°32'21.323"W	0.90	
4723.00	7.880	357.600	4701.88	-309.27	310.48	48.03	40°09'09.651"N	104°32'21.322"W	0.73	
4817.00	8.000	356.610	4794.98	-322.25	323.44	47.37	40°09'09.779"N	104°32'21.329"W	0.19	
4912.00	7.700	352.530	4889.09	-335.18	336.35	46.15	40°09'09.907"N	104°32'21.343"W	0.67	
5006.00	8.130	352.640	4982.20	-348.05	349.19	44.48	40°09'10.034"N	104°32'21.362"W	0.46	
5101.00	7.080	350.690	5076.36	-360.53	361.63	42.67	40°09'10.157"N	104°32'21.384"W	1.14	
5195.00	4.500	357.810	5169.87	-369.96	371.03	41.60	40°09'10.250"N	104°32'21.397"W	2.84	
5290.00	2.230	30.050	5264.71	-375.26	376.36	42.38	40°09'10.302"N	104°32'21.386"W	3.02	
5384.00	0.130	99.650	5358.69	-376.81	377.92	43.40	40°09'10.318"N	104°32'21.372"W	2.33	
5479.00	0.140	192.790	5453.69	-376.67	377.79	43.48	40°09'10.316"N	104°32'21.371"W	0.21	



Actual Wellpath Report

BISON RIDGE Y22-756 AWP



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#07 BISON RIDGE Y22-756(2230'FSL&2130'FWL,SEC.10)
Area	COLORADO	Well	BISON RIDGE Y22-756
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	BISON RIDGE Y22-756 AWB
Facility	SEC.10-T02N-R64W		

WELLPATH DATA (184 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5573.00	0.140	298.510	5547.69	-376.62	377.73	43.35	40°09'10.316"N	104°32'21.373"W	0.24	
5668.00	0.170	97.730	5642.69	-376.65	377.77	43.39	40°09'10.316"N	104°32'21.373"W	0.32	
5762.00	0.170	124.060	5736.69	-376.55	377.67	43.65	40°09'10.315"N	104°32'21.369"W	0.08	
5857.00	0.180	128.800	5831.69	-376.37	377.50	43.88	40°09'10.314"N	104°32'21.366"W	0.02	
5952.00	0.170	133.300	5926.69	-376.18	377.31	44.10	40°09'10.312"N	104°32'21.363"W	0.02	
6046.00	0.190	349.210	6020.68	-376.23	377.37	44.17	40°09'10.312"N	104°32'21.363"W	0.36	
6140.00	0.320	101.110	6114.68	-376.33	377.47	44.40	40°09'10.313"N	104°32'21.360"W	0.46	
6235.00	0.180	76.590	6209.68	-376.31	377.45	44.80	40°09'10.313"N	104°32'21.354"W	0.18	
6329.00	2.410	92.810	6303.65	-376.19	377.39	46.92	40°09'10.312"N	104°32'21.327"W	2.38	
6424.00	0.150	236.710	6398.63	-375.98	377.23	48.81	40°09'10.310"N	104°32'21.303"W	2.67	
6519.00	7.530	174.730	6493.35	-369.70	370.95	49.28	40°09'10.248"N	104°32'21.298"W	7.85	
6613.00	16.580	185.470	6585.19	-350.19	351.42	48.57	40°09'10.055"N	104°32'21.310"W	9.88	
6708.00	25.200	190.150	6673.87	-316.85	317.96	43.70	40°09'09.725"N	104°32'21.377"W	9.24	
6802.00	32.220	191.860	6756.26	-272.79	273.68	35.01	40°09'09.289"N	104°32'21.495"W	7.52	
6897.00	40.280	185.760	6832.84	-217.55	218.23	26.71	40°09'08.742"N	104°32'21.610"W	9.29	
6991.00	50.220	172.400	6899.08	-151.17	151.88	28.45	40°09'08.086"N	104°32'21.597"W	14.58	
7086.00	61.860	168.210	6952.08	-73.40	74.40	41.88	40°09'07.319"N	104°32'21.434"W	12.78	
7180.00	66.980	169.980	6992.65	10.18	-8.83	57.89	40°09'06.495"N	104°32'21.240"W	5.71	
7275.00	73.530	173.530	7024.74	98.88	-97.26	70.65	40°09'05.619"N	104°32'21.088"W	7.74	
7369.00	81.660	176.870	7044.92	190.43	-188.66	78.28	40°09'04.715"N	104°32'21.002"W	9.32	
7464.00	85.380	178.860	7055.64	284.80	-282.96	81.79	40°09'03.783"N	104°32'20.970"W	4.43	
7558.00	88.400	179.550	7060.74	378.64	-376.80	83.09	40°09'02.856"N	104°32'20.967"W	3.30	
7653.00	86.860	178.360	7064.67	473.55	-471.70	84.82	40°09'01.918"N	104°32'20.958"W	2.05	
7748.00	87.320	178.490	7069.49	568.43	-566.54	87.43	40°09'00.980"N	104°32'20.937"W	0.50	
7842.00	86.800	179.660	7074.31	662.30	-660.40	88.94	40°09'00.053"N	104°32'20.931"W	1.36	
7937.00	86.860	180.160	7079.57	757.13	-755.26	89.09	40°08'59.115"N	104°32'20.942"W	0.53	
8031.00	86.890	179.580	7084.69	850.97	-849.12	89.30	40°08'58.188"N	104°32'20.952"W	0.62	
8126.00	87.660	181.630	7089.21	945.81	-944.00	88.30	40°08'57.250"N	104°32'20.979"W	2.30	
8221.00	88.580	182.670	7092.32	1040.58	-1038.88	84.74	40°08'56.313"N	104°32'21.038"W	1.46	
8315.00	88.950	181.930	7094.35	1134.36	-1132.78	80.97	40°08'55.386"N	104°32'21.099"W	0.88	



Actual Wellpath Report

BISON RIDGE Y22-756 AWP



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#07 BISON RIDGE Y22-756(2230'FSL&2130'FWL,SEC.10)
Area	COLORADO	Well	BISON RIDGE Y22-756
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	BISON RIDGE Y22-756 AWB
Facility	SEC.10-T02N-R64W		

WELLPATH DATA (184 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8410.00	88.680	180.760	7096.31	1229.24	-1227.73	78.74	40°08'54.448"N	104°32'21.141"W	1.26	
8504.00	89.260	179.970	7098.00	1323.18	-1321.71	78.14	40°08'53.519"N	104°32'21.162"W	1.04	
8599.00	88.950	179.430	7099.49	1418.15	-1416.70	78.64	40°08'52.580"N	104°32'21.169"W	0.66	
8694.00	89.020	179.030	7101.17	1513.13	-1511.68	79.91	40°08'51.642"N	104°32'21.166"W	0.43	
8788.00	88.800	178.930	7102.96	1607.11	-1605.65	81.59	40°08'50.713"N	104°32'21.157"W	0.26	
8883.00	88.800	178.250	7104.95	1702.09	-1700.60	83.92	40°08'49.775"N	104°32'21.141"W	0.72	
8977.00	89.140	176.950	7106.64	1796.06	-1794.50	87.86	40°08'48.846"N	104°32'21.103"W	1.43	
9072.00	89.020	177.200	7108.16	1891.01	-1889.36	92.71	40°08'47.908"N	104°32'21.054"W	0.29	
9166.00	89.050	176.780	7109.75	1984.96	-1983.22	97.64	40°08'46.980"N	104°32'21.003"W	0.45	
9261.00	89.230	176.370	7111.17	2079.88	-2078.04	103.32	40°08'46.043"N	104°32'20.944"W	0.47	
9355.00	89.480	176.640	7112.23	2173.81	-2171.85	109.05	40°08'45.115"N	104°32'20.883"W	0.39	
9450.00	89.820	177.080	7112.81	2268.76	-2266.71	114.25	40°08'44.177"N	104°32'20.829"W	0.59	
9544.00	89.690	176.070	7113.21	2362.70	-2360.54	119.87	40°08'43.250"N	104°32'20.770"W	1.08	
9639.00	89.940	175.630	7113.52	2457.58	-2455.29	126.74	40°08'42.313"N	104°32'20.695"W	0.53	
9733.00	89.600	175.900	7113.90	2551.46	-2549.03	133.68	40°08'41.385"N	104°32'20.618"W	0.46	
9828.00	90.550	177.420	7113.77	2646.40	-2643.87	139.22	40°08'40.448"N	104°32'20.560"W	1.89	
9922.00	90.250	180.590	7113.12	2740.38	-2737.84	140.85	40°08'39.519"N	104°32'20.552"W	3.39	
10017.00	90.520	182.230	7112.48	2835.27	-2832.80	138.51	40°08'38.581"N	104°32'20.596"W	1.75	
10112.00	90.250	180.320	7111.84	2930.16	-2927.77	136.40	40°08'37.643"N	104°32'20.636"W	2.03	
10206.00	90.370	178.850	7111.33	3024.15	-3021.77	137.08	40°08'36.714"N	104°32'20.640"W	1.57	
10301.00	89.940	176.380	7111.07	3119.12	-3116.68	141.03	40°08'35.775"N	104°32'20.603"W	2.64	
10395.00	90.370	170.980	7110.82	3212.73	-3210.07	151.38	40°08'34.852"N	104°32'20.483"W	5.76	
10489.00	89.380	172.710	7111.02	3306.06	-3303.12	164.71	40°08'33.931"N	104°32'20.324"W	2.12	
10584.00	89.380	176.950	7112.05	3400.82	-3397.70	173.27	40°08'32.995"N	104°32'20.227"W	4.46	
10678.00	89.570	180.320	7112.91	3494.81	-3491.66	175.51	40°08'32.066"N	104°32'20.211"W	3.59	
10773.00	89.420	182.960	7113.75	3589.66	-3586.61	172.79	40°08'31.128"N	104°32'20.260"W	2.78	
10867.00	89.970	185.290	7114.25	3683.23	-3680.36	166.03	40°08'30.203"N	104°32'20.360"W	2.55	
10961.00	90.180	187.170	7114.13	3776.41	-3773.80	155.83	40°08'29.281"N	104°32'20.504"W	2.01	
11056.00	89.820	185.920	7114.13	3870.51	-3868.17	145.00	40°08'28.349"N	104°32'20.657"W	1.37	
11150.00	89.600	184.140	7114.60	3963.92	-3961.81	136.76	40°08'27.425"N	104°32'20.776"W	1.91	



Actual Wellpath Report

BISON RIDGE Y22-756 AWP



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#07 BISON RIDGE Y22-756(2230'FSL&2130'FWL,SEC.10)
Area	COLORADO	Well	BISON RIDGE Y22-756
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	BISON RIDGE Y22-756 AWB
Facility	SEC.10-T02N-R64W		

WELLPATH DATA (184 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11245.00	90.000	181.080	7114.94	4058.68	-4056.70	132.43	40°08'26.488"N	104°32'20.845"W	3.25	
11340.00	89.750	181.490	7115.14	4153.58	-4151.67	130.30	40°08'25.549"N	104°32'20.885"W	0.51	
11434.00	89.880	182.750	7115.45	4247.41	-4245.61	126.82	40°08'24.622"N	104°32'20.943"W	1.35	
11529.00	89.850	183.960	7115.67	4342.09	-4340.44	121.26	40°08'23.685"N	104°32'21.028"W	1.27	
11623.00	89.940	183.680	7115.84	4435.71	-4434.23	115.00	40°08'22.759"N	104°32'21.122"W	0.31	
11718.00	89.820	182.430	7116.04	4530.43	-4529.09	109.94	40°08'21.822"N	104°32'21.200"W	1.32	
11907.00	90.030	179.750	7116.29	4719.24	-4718.04	106.34	40°08'19.955"N	104°32'21.273"W	1.42	
12001.00	90.120	177.920	7116.17	4813.24	-4812.02	108.26	40°08'19.026"N	104°32'21.261"W	1.95	
12096.00	89.970	177.070	7116.09	4908.21	-4906.93	112.41	40°08'18.088"N	104°32'21.221"W	0.91	
12190.00	89.780	175.600	7116.30	5002.13	-5000.73	118.42	40°08'17.161"N	104°32'21.157"W	1.58	
12285.00	90.280	175.620	7116.25	5097.00	-5095.45	125.69	40°08'16.224"N	104°32'21.076"W	0.53	
12379.00	90.340	175.800	7115.74	5190.87	-5189.19	132.72	40°08'15.297"N	104°32'20.999"W	0.20	
12473.00	90.370	174.400	7115.16	5284.69	-5282.84	140.75	40°08'14.371"N	104°32'20.909"W	1.49	
12568.00	90.620	174.420	7114.34	5379.42	-5377.39	150.00	40°08'13.435"N	104°32'20.803"W	0.26	
12662.00	90.520	176.310	7113.40	5473.26	-5471.07	157.60	40°08'12.509"N	104°32'20.718"W	2.01	
12757.00	90.310	178.100	7112.71	5568.22	-5565.95	162.23	40°08'11.571"N	104°32'20.672"W	1.90	
12851.00	90.680	178.810	7111.90	5662.22	-5659.91	164.76	40°08'10.642"N	104°32'20.652"W	0.85	
12946.00	90.710	181.170	7110.75	5757.18	-5754.90	164.78	40°08'09.703"N	104°32'20.665"W	2.48	
13040.00	90.490	183.240	7109.76	5850.99	-5848.82	161.16	40°08'08.776"N	104°32'20.725"W	2.21	
13135.00	90.520	182.490	7108.93	5945.73	-5943.69	156.42	40°08'07.839"N	104°32'20.799"W	0.79	
13229.00	90.280	183.290	7108.27	6039.47	-6037.57	151.68	40°08'06.912"N	104°32'20.873"W	0.89	
13324.00	90.430	182.670	7107.68	6134.20	-6132.44	146.74	40°08'05.975"N	104°32'20.950"W	0.67	
13418.00	90.310	181.130	7107.07	6228.04	-6226.38	143.62	40°08'05.047"N	104°32'21.003"W	1.64	
13513.00	90.680	178.590	7106.25	6323.01	-6321.37	143.85	40°08'04.108"N	104°32'21.014"W	2.70	
13607.00	90.550	178.630	7105.24	6417.00	-6415.34	146.13	40°08'03.179"N	104°32'20.997"W	0.14	
13702.00	90.550	180.320	7104.33	6511.99	-6510.33	147.00	40°08'02.240"N	104°32'20.999"W	1.78	
13797.00	90.680	181.340	7103.31	6606.91	-6605.31	145.63	40°08'01.302"N	104°32'21.030"W	1.08	
13891.00	90.580	180.740	7102.28	6700.82	-6699.29	143.92	40°08'00.374"N	104°32'21.065"W	0.65	
13986.00	90.220	179.590	7101.62	6795.79	-6794.29	143.65	40°07'59.435"N	104°32'21.082"W	1.27	
14080.00	90.550	178.460	7100.98	6889.78	-6888.27	145.25	40°07'58.506"N	104°32'21.075"W	1.25	



Actual Wellpath Report  
BISON RIDGE Y22-756 AWP  
Page 7 of 9



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#07 BISON RIDGE Y22-756(2230'FSL&2130'FWL,SEC.10)
Area	COLORADO	Well	BISON RIDGE Y22-756
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	BISON RIDGE Y22-756 AWB
Facility	SEC.10-T02N-R64W		

WELLPATH DATA (184 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
14174.00	90.310	177.270	7100.28	6983.77	-6982.20	148.75	40°07'57.578"N	104°32'21.043"W	1.29	
14269.00	90.550	175.920	7099.57	7078.70	-7077.03	154.39	40°07'56.640"N	104°32'20.983"W	1.44	
14364.00	90.400	176.400	7098.78	7173.61	-7171.81	160.75	40°07'55.703"N	104°32'20.915"W	0.53	
14458.00	90.460	175.990	7098.07	7267.52	-7265.60	166.99	40°07'54.775"N	104°32'20.847"W	0.44	
14552.00	90.310	176.090	7097.44	7361.42	-7359.37	173.48	40°07'53.848"N	104°32'20.777"W	0.19	
14647.00	90.150	175.600	7097.06	7456.30	-7454.12	180.37	40°07'52.911"N	104°32'20.702"W	0.54	
14741.00	89.380	175.190	7097.45	7550.15	-7547.82	187.91	40°07'51.984"N	104°32'20.617"W	0.93	
14836.00	89.230	175.530	7098.60	7644.98	-7642.50	195.60	40°07'51.048"N	104°32'20.532"W	0.39	
14930.00	90.620	177.940	7098.72	7738.92	-7736.34	200.95	40°07'50.120"N	104°32'20.476"W	2.96	
15025.00	90.490	179.190	7097.80	7833.91	-7831.30	203.33	40°07'49.181"N	104°32'20.459"W	1.32	
15214.00	90.580	180.190	7096.04	8022.87	-8020.29	204.35	40°07'47.314"N	104°32'20.472"W	0.53	
15308.00	90.400	180.220	7095.23	8116.83	-8114.28	204.01	40°07'46.385"N	104°32'20.489"W	0.19	
15403.00	90.370	179.950	7094.59	8211.80	-8209.28	203.87	40°07'45.446"N	104°32'20.504"W	0.29	
15497.00	90.620	179.840	7093.78	8305.78	-8303.28	204.05	40°07'44.517"N	104°32'20.515"W	0.29	
15591.00	90.490	180.850	7092.87	8399.73	-8397.27	203.48	40°07'43.589"N	104°32'20.536"W	1.08	
15686.00	90.150	181.110	7092.34	8494.65	-8492.25	201.86	40°07'42.650"N	104°32'20.570"W	0.45	
15781.00	90.460	180.750	7091.83	8589.58	-8587.24	200.31	40°07'41.712"N	104°32'20.603"W	0.50	
15875.00	90.520	179.810	7091.03	8683.53	-8681.23	199.85	40°07'40.783"N	104°32'20.622"W	1.00	
15969.00	90.250	178.440	7090.40	8777.53	-8775.22	201.29	40°07'39.854"N	104°32'20.617"W	1.49	
16064.00	90.430	176.530	7089.84	8872.50	-8870.12	205.46	40°07'38.916"N	104°32'20.576"W	2.02	
16159.00	90.550	175.140	7089.02	8967.38	-8964.86	212.36	40°07'37.979"N	104°32'20.501"W	1.47	
16253.00	90.180	175.530	7088.42	9061.22	-9058.55	220.00	40°07'37.052"N	104°32'20.415"W	0.57	
16348.00	90.150	174.380	7088.15	9156.02	-9153.18	228.36	40°07'36.116"N	104°32'20.321"W	1.21	
16442.00	90.000	175.330	7088.03	9249.81	-9246.80	236.79	40°07'35.190"N	104°32'20.225"W	1.02	
16537.00	89.600	176.610	7088.36	9344.70	-9341.56	243.46	40°07'34.253"N	104°32'20.153"W	1.41	
16632.00	89.750	177.830	7088.90	9439.67	-9436.45	248.07	40°07'33.315"N	104°32'20.107"W	1.29	
16726.00	89.880	178.890	7089.20	9533.66	-9530.41	250.76	40°07'32.386"N	104°32'20.085"W	1.14	
16821.00	89.850	180.230	7089.43	9628.65	-9625.40	251.49	40°07'31.448"N	104°32'20.089"W	1.41	
16915.00	89.780	181.390	7089.73	9722.58	-9719.39	250.16	40°07'30.519"N	104°32'20.119"W	1.24	
17010.00	89.570	182.180	7090.27	9817.44	-9814.34	247.20	40°07'29.581"N	104°32'20.170"W	0.86	



Actual Wellpath Report

BISON RIDGE Y22-756 AWP



REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#07 BISON RIDGE Y22-756(2230'FSL&2130'FWL,SEC.10)
Area	COLORADO	Well	BISON RIDGE Y22-756
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	BISON RIDGE Y22-756 AWB
Facility	SEC.10-T02N-R64W		

WELLPATH DATA (184 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
17104.00	89.630	182.680	7090.92	9911.23	-9908.25	243.22	40°07'28.654"N	104°32'20.235"W	0.54	
17199.00	89.940	181.600	7091.28	10006.06	-10003.19	239.67	40°07'27.716"N	104°32'20.294"W	1.18	
17294.00	89.750	180.870	7091.54	10100.96	-10098.16	237.62	40°07'26.778"N	104°32'20.333"W	0.79	Last BHI MWD Survey
17336.00	89.750	180.870	7091.72	10142.93	-10140.16	236.98	40°07'26.363"N	104°32'20.347"W	0.00	Projection to Bit

HOLE & CASING SECTIONS - Ref Wellbore: BISON RIDGE Y22-756 AWB      Ref Wellpath: BISON RIDGE Y22-756 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	2055.00	2025.00	30.00	2054.92	0.00	-0.04	5.19	-12.63
9.625in Casing Surface	30.00	2055.00	2025.00	30.00	2054.92	0.00	-0.04	5.19	-12.63
8.5in Open Hole	2055.00	17336.00	15281.00	2054.92	7091.72	5.19	-12.63	-10140.16	236.98

WELLPATH COMPOSITION - Ref Wellbore: BISON RIDGE Y22-756 AWB      Ref Wellpath: BISON RIDGE Y22-756 AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	2050.00	Gyrodata standard - Drop gyro or Multi-shot	3rd Party Gyrodata Survey <79.3'-2050">	BISON RIDGE Y22-756 AWB
2050.00	17294.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	BHI/ATC 8.5" Hole OWSG MWD+IFR1+MSA <2075'-17294">	BISON RIDGE Y22-756 AWB
17294.00	17336.00	Blind Drilling (std)	Projection to bit	BISON RIDGE Y22-756 AWB



Actual Wellpath Report

BISON RIDGE Y22-756 AWP



REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#07 BISON RIDGE Y22-756(2230'FSL&2130'FWL,SEC.10)
Area	COLORADO	Well	BISON RIDGE Y22-756
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	BISON RIDGE Y22-756 AWB
Facility	SEC.10-T02N-R64W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
2050.00	0.580	313.030	2049.92	Tie to Surface
17294.00	89.750	180.870	7091.54	Last BHI MWD Survey
17336.00	89.750	180.870	7091.72	Projection to Bit

COMMENTS

Wellpath general comments SURFACE LOCATION: NESW 40.15183N 104.53944W API: 05-123-45370
---