

<h1 style="text-align: center;">NOBLE ENERGY, INC</h1>	
Location:	COLORADO
Field:	WELD COUNTY (NOBLE NAD 83 GRID)
Facility:	SEC 10-TOWN-R64W
Slot:	SLOT#06 BISON RIDGE Y22-749(2230 FSL&2135FEL,SEC.10)
Well:	BISON RIDGE Y22-749
Wellbore:	BISON RIDGE Y22-749 PWR

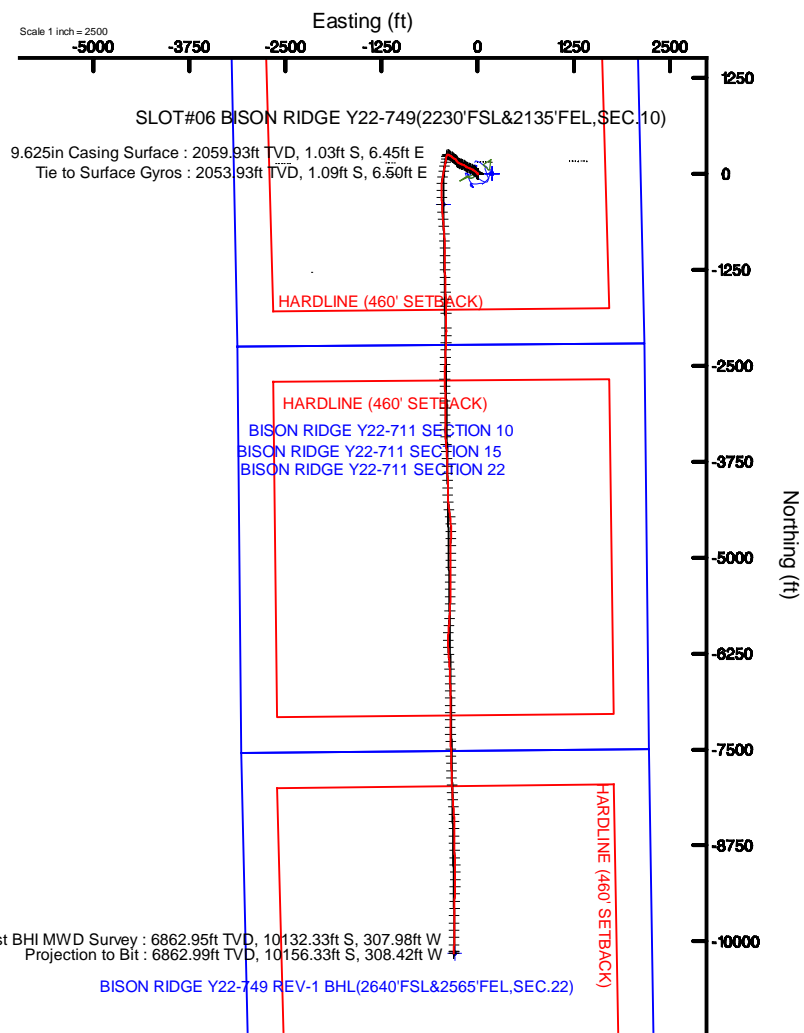
Comments
SURFACE LOCATION: NWSE
40.15182N
104.53573W
API: 05-123-45379

Survey Program				
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment
30.00	17012.75	OWSG MWD rev2	OWSG MWD rev2 + IFR1 + Multi-Station Correction	BISON RIDGE Y22-749 PWB



Plot reference surface is BGSIM RIDGE V22-NA5 (REV1-A), 1 PROP	Grid System: NAD83 / Lambert ConicAid, N. Hemisphere (DRT), US feet
True vertical depths are not referenced to RIG (2019S) (2019S)	" = Wadupit was transformed from a different geoidic datum
Measured depths are not referenced to RIG (2019S) (2019S)	North Reference: Grid north
RIG (2019S) depths to Mean Sea Level: 4355 feet	Scale: True distance
Mean Sea Level to Ground level is 46 feet SLUTHER BGSIM RIDGE V22-NA5 (22101 SLA11351 LF, SEC. 13) 0 feet	Depths are in feet
Coordinates are in feet referenced to Tait	Created by: gawronski on 2018-01-03
	Distributed: WIA, 2019S, Denver, Dept.

Location Information						
Facility Name		East East (SIS-1)	Grid North (SIS-1)	Latitude	Longitude	
SEC 10-100-0000		100000.0 271	100000.0 271	40°00'00.00" N	100°00'00.00" W	
Site	Local N (S)	Local E (S)	Grid East (SIS-1)	Grid North (SIS-1)	Latitude	Longitude
SLOWING BROWN RIDGE Y-22-746220ZFSLA2J3TPEL SEC-100	-0.04	-187.28	326550.0 807	129961.0 876	40°00'00.00" N	100°00'00.00" W
SLOWING BROWN RIDGE Y-22-746220ZFSLA2J3TPEL SEC-100						45000
When Site Level to Ground Level (M) Site SLOWING BROWN RIDGE Y-22-746220ZFSLA2J3TPEL SEC-100						01
SLOWING BROWN RIDGE Y-22-746220ZFSLA2J3TPEL SEC-100						45000





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BISON RIDGE Y22-749 AWP  
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REFERENCE WELLPATH IDENTIFICATION			
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Area	COLORADO	Well	BISON RIDGE Y22-749
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	BISON RIDGE Y22-749 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 1:37:07 PM
Convergence at slot	0.63° East	Database/Source file	WA_DEN_Denver_Defn/BISON_RIDGE_Y22-749_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-2.04	-187.28	3269537.00	1299616.88	40°09'06.552"N	104°32'08.628"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	4955.00ft
Horizontal Reference Pt	Slot	RIG (30'KB) (RKB) to Mean Sea Level	4955.00ft
Vertical Reference Pt	RIG (30'KB) (RKB)	RIG (30'KB) (RKB) to Ground Level at Slot (SLOT#06 BISON RIDGE Y22-749 (2230'FSL&2135'FEL,SEC.10))	4955.00ft
MD Reference Pt	RIG (30'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	181.68°



Actual Wellpath Report

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Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	BISON RIDGE Y22-749 AWB
Facility	SEC.10-T02N-R64W		

WELLPATH DATA (182 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	59.010	0.00	0.00	0.00	0.00	40°09'06.552"N	104°32'08.628"W	0.00	
78.00	0.100	59.010	78.00	-0.04	0.04	0.06	40°09'06.552"N	104°32'08.627"W	0.13	
177.00	0.440	181.340	177.00	0.30	-0.30	0.12	40°09'06.549"N	104°32'08.626"W	0.51	
269.00	0.610	154.410	269.00	1.09	-1.10	0.33	40°09'06.541"N	104°32'08.624"W	0.32	
363.00	0.340	213.160	362.99	1.77	-1.78	0.39	40°09'06.534"N	104°32'08.623"W	0.56	
458.00	0.760	176.720	457.99	2.64	-2.65	0.27	40°09'06.526"N	104°32'08.625"W	0.55	
553.00	0.400	235.360	552.98	3.46	-3.46	0.04	40°09'06.518"N	104°32'08.628"W	0.68	
647.00	0.310	129.120	646.98	3.81	-3.81	-0.04	40°09'06.514"N	104°32'08.629"W	0.61	
742.00	0.730	137.200	741.98	4.40	-4.42	0.57	40°09'06.508"N	104°32'08.621"W	0.45	
836.00	0.450	122.860	835.97	5.02	-5.06	1.29	40°09'06.502"N	104°32'08.612"W	0.33	
931.00	0.090	106.420	930.97	5.23	-5.28	1.68	40°09'06.500"N	104°32'08.607"W	0.38	
1026.00	0.330	112.420	1025.97	5.34	-5.40	2.00	40°09'06.498"N	104°32'08.603"W	0.25	
1120.00	0.620	58.260	1119.97	5.16	-5.24	2.68	40°09'06.500"N	104°32'08.594"W	0.54	
1215.00	0.870	72.420	1214.96	4.64	-4.75	3.81	40°09'06.505"N	104°32'08.580"W	0.32	
1310.00	0.740	70.200	1309.95	4.18	-4.33	5.07	40°09'06.509"N	104°32'08.563"W	0.14	
1404.00	0.560	56.360	1403.95	3.69	-3.87	6.03	40°09'06.513"N	104°32'08.551"W	0.25	
1499.00	0.510	22.650	1498.94	3.02	-3.22	6.57	40°09'06.519"N	104°32'08.544"W	0.33	
1593.00	0.340	69.830	1592.94	2.53	-2.74	7.00	40°09'06.524"N	104°32'08.538"W	0.40	
1688.00	0.140	77.520	1687.94	2.40	-2.61	7.38	40°09'06.525"N	104°32'08.533"W	0.21	
1783.00	0.220	11.210	1782.94	2.19	-2.41	7.52	40°09'06.527"N	104°32'08.531"W	0.22	
1877.00	0.170	303.010	1876.94	1.94	-2.16	7.44	40°09'06.530"N	104°32'08.532"W	0.24	
1972.00	0.480	323.630	1971.94	1.55	-1.76	7.09	40°09'06.534"N	104°32'08.537"W	0.34	
2054.00	0.770	316.280	2053.93	0.89	-1.09	6.50	40°09'06.541"N	104°32'08.544"W	0.37	Tie to Surface Gyros
2075.00	0.710	314.810	2074.93	0.71	-0.89	6.31	40°09'06.543"N	104°32'08.547"W	0.30	
2170.00	3.070	313.470	2169.87	-1.39	1.27	4.05	40°09'06.564"N	104°32'08.576"W	2.48	
2264.00	6.070	313.540	2263.56	-6.39	6.43	-1.38	40°09'06.616"N	104°32'08.645"W	3.19	
2359.00	6.560	306.980	2357.99	-12.87	13.15	-9.36	40°09'06.683"N	104°32'08.747"W	0.92	
2453.00	7.040	303.590	2451.32	-19.02	19.57	-18.44	40°09'06.747"N	104°32'08.863"W	0.67	
2548.00	6.970	304.910	2545.62	-25.26	26.09	-28.02	40°09'06.813"N	104°32'08.985"W	0.18	
2642.00	6.750	311.600	2638.94	-31.93	33.02	-36.83	40°09'06.882"N	104°32'09.098"W	0.88	



Actual Wellpath Report

BISON RIDGE Y22-749 AWP



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#06 BISON RIDGE Y22-749(2230'FSL&2135'FEL,SEC.10)
Area	COLORADO	Well	BISON RIDGE Y22-749
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	BISON RIDGE Y22-749 AWB
Facility	SEC.10-T02N-R64W		

WELLPATH DATA (182 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2737.00	6.940	312.670	2733.27	-39.28	40.62	-45.22	40°09'06.958"N	104°32'09.205"W	0.24	
2831.00	6.930	306.500	2826.58	-46.24	47.84	-53.96	40°09'07.031"N	104°32'09.316"W	0.79	
2925.00	6.760	298.240	2919.91	-51.95	53.83	-63.39	40°09'07.091"N	104°32'09.437"W	1.06	
3020.00	6.830	293.620	3014.25	-56.56	58.74	-73.49	40°09'07.140"N	104°32'09.566"W	0.58	
3115.00	6.870	290.920	3108.57	-60.55	63.03	-83.98	40°09'07.184"N	104°32'09.701"W	0.34	
3209.00	6.800	290.040	3201.90	-64.15	66.95	-94.46	40°09'07.224"N	104°32'09.835"W	0.13	
3304.00	6.760	290.870	3296.24	-67.76	70.87	-104.96	40°09'07.264"N	104°32'09.970"W	0.11	
3398.00	6.810	293.180	3389.58	-71.62	75.03	-115.26	40°09'07.306"N	104°32'10.102"W	0.30	
3493.00	6.760	292.290	3483.91	-75.65	79.37	-125.61	40°09'07.350"N	104°32'10.234"W	0.12	
3587.00	6.810	294.430	3577.25	-79.76	83.77	-135.80	40°09'07.394"N	104°32'10.365"W	0.27	
3682.00	6.550	296.230	3671.61	-84.19	88.50	-145.79	40°09'07.442"N	104°32'10.493"W	0.35	
3776.00	6.110	305.130	3765.04	-89.17	93.75	-154.69	40°09'07.495"N	104°32'10.607"W	1.14	
3871.00	6.780	316.730	3859.44	-95.93	100.74	-162.67	40°09'07.565"N	104°32'10.709"W	1.54	
3965.00	6.810	306.490	3952.78	-103.04	108.09	-170.95	40°09'07.638"N	104°32'10.814"W	1.29	
4060.00	6.950	290.780	4047.11	-108.13	113.48	-180.86	40°09'07.693"N	104°32'10.941"W	1.98	
4155.00	6.690	280.690	4141.44	-110.88	116.55	-191.67	40°09'07.724"N	104°32'11.080"W	1.29	
4249.00	6.630	289.860	4234.81	-113.43	119.41	-202.15	40°09'07.754"N	104°32'11.214"W	1.13	
4344.00	6.660	297.840	4329.17	-117.57	123.84	-212.18	40°09'07.799"N	104°32'11.343"W	0.97	
4438.00	6.760	293.750	4422.53	-122.05	128.62	-222.07	40°09'07.847"N	104°32'11.470"W	0.52	
4532.00	6.440	289.210	4515.91	-125.72	132.58	-232.11	40°09'07.887"N	104°32'11.598"W	0.65	
4627.00	6.780	301.350	4610.28	-130.10	137.25	-241.93	40°09'07.934"N	104°32'11.724"W	1.51	
4721.00	6.490	301.800	4703.65	-135.51	142.94	-251.18	40°09'07.991"N	104°32'11.843"W	0.31	
4816.00	6.700	310.180	4798.02	-141.66	149.34	-259.98	40°09'08.056"N	104°32'11.955"W	1.04	
4910.00	6.540	318.570	4891.40	-148.98	156.89	-267.71	40°09'08.131"N	104°32'12.053"W	1.04	
5005.00	6.830	341.530	4985.77	-158.23	166.31	-273.08	40°09'08.225"N	104°32'12.121"W	2.81	
5099.00	6.760	335.290	5079.11	-168.44	176.64	-277.17	40°09'08.327"N	104°32'12.172"W	0.79	
5194.00	6.760	300.130	5173.49	-176.11	184.53	-284.34	40°09'08.406"N	104°32'12.264"W	4.29	
5289.00	6.790	292.600	5267.83	-180.78	189.49	-294.36	40°09'08.456"N	104°32'12.392"W	0.93	
5383.00	6.850	304.540	5361.17	-185.81	194.81	-304.11	40°09'08.510"N	104°32'12.517"W	1.51	
5478.00	6.670	310.910	5455.51	-192.37	201.63	-312.95	40°09'08.578"N	104°32'12.630"W	0.81	



Actual Wellpath Report

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Area	COLORADO	Well	BISON RIDGE Y22-749
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	BISON RIDGE Y22-749 AWB
Facility	SEC.10-T02N-R64W		

WELLPATH DATA (182 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5572.00	7.010	309.720	5548.84	-199.36	208.87	-321.48	40°09'08.650"N	104°32'12.739"W	0.39	
5667.00	6.850	308.700	5643.15	-206.34	216.12	-330.36	40°09'08.723"N	104°32'12.852"W	0.21	
5761.00	6.920	305.470	5736.47	-212.86	222.91	-339.35	40°09'08.791"N	104°32'12.967"W	0.42	
5856.00	7.040	304.520	5830.76	-219.20	229.53	-348.81	40°09'08.858"N	104°32'13.088"W	0.18	
5951.00	6.590	301.920	5925.09	-225.11	235.71	-358.23	40°09'08.920"N	104°32'13.208"W	0.57	
6045.00	6.940	301.400	6018.44	-230.64	241.52	-367.66	40°09'08.978"N	104°32'13.329"W	0.38	
6140.00	6.780	295.070	6112.76	-235.71	246.89	-377.64	40°09'09.032"N	104°32'13.456"W	0.81	
6234.00	6.900	272.120	6206.11	-237.96	249.45	-388.31	40°09'09.059"N	104°32'13.594"W	2.89	
6329.00	8.360	220.670	6300.37	-232.63	244.42	-398.52	40°09'09.010"N	104°32'13.726"W	7.09	
6423.00	15.880	189.320	6392.30	-214.53	226.50	-405.07	40°09'08.834"N	104°32'13.813"W	10.36	
6518.00	23.870	187.340	6481.57	-182.46	194.56	-409.64	40°09'08.518"N	104°32'13.876"W	8.44	
6612.00	31.480	192.740	6564.76	-139.38	151.68	-417.50	40°09'08.096"N	104°32'13.983"W	8.52	
6707.00	41.880	189.610	6640.85	-83.47	96.07	-428.29	40°09'07.547"N	104°32'14.130"W	11.12	
6802.00	50.420	191.070	6706.61	-15.82	28.75	-440.64	40°09'06.883"N	104°32'14.298"W	9.06	
6896.00	59.030	191.350	6760.84	59.79	-46.46	-455.55	40°09'06.142"N	104°32'14.501"W	9.16	
6990.00	64.720	183.660	6805.19	142.15	-128.54	-466.22	40°09'05.332"N	104°32'14.650"W	9.41	
7085.00	75.310	179.040	6837.63	231.27	-217.64	-468.20	40°09'04.452"N	104°32'14.688"W	12.04	
7180.00	83.650	178.620	6854.96	324.48	-310.94	-466.29	40°09'03.529"N	104°32'14.676"W	8.79	
7274.00	89.660	177.990	6860.44	418.11	-404.70	-463.51	40°09'02.603"N	104°32'14.653"W	6.43	
7369.00	89.600	175.540	6861.05	512.75	-499.54	-458.15	40°09'01.665"N	104°32'14.598"W	2.58	
7463.00	89.720	174.590	6861.61	606.13	-593.19	-450.06	40°09'00.739"N	104°32'14.507"W	1.02	
7558.00	89.750	175.550	6862.05	700.49	-687.83	-441.90	40°08'59.803"N	104°32'14.415"W	1.01	
7653.00	89.660	176.030	6862.54	794.99	-782.58	-434.93	40°08'58.866"N	104°32'14.338"W	0.51	
7747.00	89.780	177.350	6863.00	888.63	-876.42	-429.50	40°08'57.938"N	104°32'14.281"W	1.41	
7842.00	89.600	178.350	6863.51	983.41	-971.35	-425.93	40°08'56.999"N	104°32'14.249"W	1.07	
7936.00	90.150	179.500	6863.72	1077.30	-1065.33	-424.17	40°08'56.071"N	104°32'14.239"W	1.36	
8031.00	90.030	179.650	6863.57	1172.24	-1160.32	-423.47	40°08'55.132"N	104°32'14.243"W	0.20	
8125.00	90.250	180.290	6863.34	1266.20	-1254.32	-423.42	40°08'54.203"N	104°32'14.256"W	0.72	
8220.00	89.970	178.640	6863.16	1361.12	-1349.32	-422.53	40°08'53.264"N	104°32'14.258"W	1.76	
8315.00	90.180	178.280	6863.03	1455.97	-1444.28	-419.98	40°08'52.325"N	104°32'14.238"W	0.44	



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Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	BISON RIDGE Y22-749 AWB
Facility	SEC.10-T02N-R64W		

WELLPATH DATA (182 stations)										
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8410.00	90.180	177.980	6862.73	1550.79	-1539.23	-416.88	40°08'51.387"N	104°32'14.212"W	0.32	
8504.00	90.090	178.710	6862.51	1644.63	-1633.19	-414.16	40°08'50.458"N	104°32'14.190"W	0.78	
8599.00	90.090	179.110	6862.36	1739.52	-1728.17	-412.35	40°08'49.519"N	104°32'14.180"W	0.42	
8693.00	90.000	178.750	6862.29	1833.41	-1822.16	-410.60	40°08'48.590"N	104°32'14.170"W	0.39	
8883.00	89.850	179.010	6862.54	2023.18	-2012.12	-406.89	40°08'46.713"N	104°32'14.149"W	0.16	
8977.00	90.090	181.280	6862.59	2117.14	-2106.11	-407.12	40°08'45.784"N	104°32'14.165"W	2.43	
9072.00	90.060	182.760	6862.46	2212.14	-2201.05	-410.47	40°08'44.846"N	104°32'14.222"W	1.56	
9167.00	90.090	182.860	6862.34	2307.12	-2295.94	-415.13	40°08'43.909"N	104°32'14.295"W	0.11	
9262.00	90.150	182.140	6862.14	2402.11	-2390.85	-419.27	40°08'42.972"N	104°32'14.361"W	0.76	
9356.00	89.970	182.280	6862.04	2496.10	-2484.78	-422.90	40°08'42.044"N	104°32'14.421"W	0.24	
9451.00	89.940	181.620	6862.11	2591.10	-2579.72	-426.13	40°08'41.106"N	104°32'14.476"W	0.70	
9545.00	89.940	179.710	6862.21	2685.08	-2673.71	-427.22	40°08'40.178"N	104°32'14.503"W	2.03	
9640.00	89.750	177.660	6862.47	2779.95	-2768.68	-425.04	40°08'39.239"N	104°32'14.489"W	2.17	
9735.00	91.020	178.790	6861.83	2874.77	-2863.63	-422.10	40°08'38.300"N	104°32'14.464"W	1.79	
9829.00	89.880	179.860	6861.09	2968.69	-2957.62	-420.99	40°08'37.372"N	104°32'14.463"W	1.66	
9924.00	89.880	180.140	6861.29	3063.64	-3052.61	-420.99	40°08'36.433"N	104°32'14.476"W	0.29	
10018.00	90.000	179.930	6861.39	3157.61	-3146.61	-421.05	40°08'35.504"N	104°32'14.490"W	0.26	
10113.00	90.030	179.290	6861.37	3252.54	-3241.61	-420.40	40°08'34.565"N	104°32'14.495"W	0.67	
10208.00	89.940	178.940	6861.39	3347.45	-3336.60	-418.94	40°08'33.626"N	104°32'14.489"W	0.38	
10302.00	89.970	177.900	6861.46	3441.29	-3430.56	-416.34	40°08'32.698"N	104°32'14.469"W	1.11	
10397.00	89.850	175.410	6861.61	3535.92	-3525.39	-410.80	40°08'31.760"N	104°32'14.411"W	2.62	
10491.00	89.970	175.640	6861.76	3629.38	-3619.11	-403.47	40°08'30.833"N	104°32'14.330"W	0.28	
10586.00	89.910	177.560	6861.86	3724.00	-3713.94	-397.83	40°08'29.896"N	104°32'14.270"W	2.02	
10680.00	89.970	177.780	6861.96	3817.77	-3807.86	-394.01	40°08'28.967"N	104°32'14.234"W	0.24	
10775.00	89.970	178.540	6862.01	3912.59	-3902.81	-390.96	40°08'28.028"N	104°32'14.208"W	0.80	
10870.00	89.880	179.430	6862.13	4007.49	-3997.79	-389.28	40°08'27.090"N	104°32'14.200"W	0.94	
10964.00	89.880	179.990	6862.33	4101.43	-4091.79	-388.80	40°08'26.161"N	104°32'14.207"W	0.60	
11059.00	89.940	178.950	6862.48	4196.36	-4186.78	-387.92	40°08'25.222"N	104°32'14.209"W	1.10	
11153.00	89.780	173.640	6862.71	4289.91	-4280.55	-381.85	40°08'24.295"N	104°32'14.144"W	5.65	
11248.00	89.880	172.490	6862.99	4383.83	-4374.86	-370.38	40°08'23.362"N	104°32'14.009"W	1.22	





Actual Wellpath Report

BISON RIDGE Y22-749 AWP



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#06 BISON RIDGE Y22-749(2230'FSL&2135'FEL,SEC.10)
Area	COLORADO	Well	BISON RIDGE Y22-749
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	BISON RIDGE Y22-749 AWB
Facility	SEC.10-T02N-R64W		

WELLPATH DATA (182 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11342.00	89.880	172.910	6863.19	4476.68	-4468.10	-358.44	40°08'22.439"N	104°32'13.869"W	0.45	
11437.00	89.970	176.310	6863.31	4570.95	-4562.66	-349.51	40°08'21.504"N	104°32'13.767"W	3.58	
11532.00	89.850	180.640	6863.46	4665.77	-4657.60	-346.99	40°08'20.565"N	104°32'13.748"W	4.56	
11626.00	89.820	180.760	6863.73	4759.76	-4751.60	-348.14	40°08'19.637"N	104°32'13.776"W	0.13	
11721.00	90.120	181.080	6863.78	4854.75	-4846.58	-349.66	40°08'18.698"N	104°32'13.808"W	0.46	
11815.00	89.970	180.590	6863.71	4948.74	-4940.57	-351.03	40°08'17.769"N	104°32'13.839"W	0.55	
11910.00	90.000	179.930	6863.73	5043.71	-5035.57	-351.46	40°08'16.831"N	104°32'13.858"W	0.70	
12005.00	90.120	180.260	6863.63	5138.68	-5130.57	-351.62	40°08'15.892"N	104°32'13.873"W	0.37	
12099.00	89.940	181.270	6863.58	5232.66	-5224.56	-352.87	40°08'14.963"N	104°32'13.903"W	1.09	
12194.00	90.030	181.310	6863.61	5327.66	-5319.54	-355.01	40°08'14.025"N	104°32'13.943"W	0.10	
12288.00	90.090	179.720	6863.51	5421.64	-5413.53	-355.86	40°08'13.096"N	104°32'13.967"W	1.69	
12383.00	89.910	180.170	6863.51	5516.59	-5508.53	-355.77	40°08'12.158"N	104°32'13.980"W	0.51	
12478.00	89.880	181.270	6863.68	5611.58	-5603.52	-356.96	40°08'11.219"N	104°32'14.008"W	1.16	
12572.00	90.090	183.820	6863.71	5705.56	-5697.42	-361.13	40°08'10.292"N	104°32'14.075"W	2.72	
12667.00	89.970	183.520	6863.66	5800.50	-5792.23	-367.22	40°08'09.356"N	104°32'14.167"W	0.34	
12761.00	90.030	183.870	6863.66	5894.44	-5886.03	-373.27	40°08'08.429"N	104°32'14.258"W	0.38	
12856.00	89.940	184.750	6863.68	5989.34	-5980.76	-380.41	40°08'07.494"N	104°32'14.363"W	0.93	
12950.00	90.030	180.290	6863.71	6083.31	-6074.65	-384.54	40°08'06.567"N	104°32'14.429"W	4.75	
13045.00	90.060	176.840	6863.63	6178.15	-6169.60	-382.17	40°08'05.628"N	104°32'14.412"W	3.63	
13139.00	89.850	176.060	6863.71	6271.76	-6263.42	-376.35	40°08'04.700"N	104°32'14.350"W	0.86	
13234.00	89.910	176.060	6863.91	6366.31	-6358.20	-369.82	40°08'03.763"N	104°32'14.279"W	0.06	
13328.00	89.850	176.690	6864.10	6459.90	-6452.01	-363.87	40°08'02.836"N	104°32'14.216"W	0.67	
13423.00	90.000	177.890	6864.23	6554.62	-6546.90	-359.38	40°08'01.897"N	104°32'14.171"W	1.27	
13518.00	90.030	178.970	6864.20	6649.47	-6641.86	-356.78	40°08'00.959"N	104°32'14.151"W	1.14	
13612.00	89.850	179.580	6864.30	6743.38	-6735.86	-355.59	40°08'00.030"N	104°32'14.149"W	0.68	
13707.00	89.940	180.500	6864.48	6838.34	-6830.85	-355.66	40°07'59.091"N	104°32'14.163"W	0.97	
13801.00	90.030	180.160	6864.50	6932.32	-6924.85	-356.20	40°07'58.162"N	104°32'14.183"W	0.37	
13896.00	90.120	180.030	6864.38	7027.28	-7019.85	-356.36	40°07'57.224"N	104°32'14.198"W	0.17	
13991.00	90.280	179.470	6864.04	7122.23	-7114.85	-355.94	40°07'56.285"N	104°32'14.206"W	0.61	
14085.00	90.060	178.980	6863.77	7216.14	-7208.84	-354.67	40°07'55.356"N	104°32'14.203"W	0.57	



Actual Wellpath Report

BISON RIDGE Y22-749 AWP



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#06 BISON RIDGE Y22-749(2230'FSL&2135'FEL,SEC.10)
Area	COLORADO	Well	BISON RIDGE Y22-749
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	BISON RIDGE Y22-749 AWB
Facility	SEC.10-T02N-R64W		

WELLPATH DATA (182 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
14180.00	90.030	178.470	6863.69	7311.01	-7303.82	-352.56	40°07'54.417"N	104°32'14.189"W	0.54	
14274.00	90.120	178.510	6863.57	7404.87	-7397.78	-350.08	40°07'53.488"N	104°32'14.170"W	0.10	
14369.00	90.090	178.560	6863.39	7499.72	-7492.75	-347.65	40°07'52.550"N	104°32'14.152"W	0.06	
14464.00	90.150	178.130	6863.20	7594.56	-7587.71	-344.91	40°07'51.611"N	104°32'14.130"W	0.46	
14558.00	90.460	178.520	6862.69	7688.40	-7681.67	-342.16	40°07'50.682"N	104°32'14.108"W	0.53	
14652.00	89.720	178.430	6862.55	7782.25	-7775.64	-339.66	40°07'49.754"N	104°32'14.089"W	0.79	
14747.00	90.060	177.840	6862.73	7877.07	-7870.59	-336.57	40°07'48.815"N	104°32'14.063"W	0.72	
14841.00	90.150	177.460	6862.56	7970.84	-7964.51	-332.71	40°07'47.886"N	104°32'14.026"W	0.42	
14936.00	90.150	176.520	6862.31	8065.52	-8059.37	-327.72	40°07'46.949"N	104°32'13.975"W	0.99	
15031.00	90.000	176.920	6862.18	8160.16	-8154.22	-322.29	40°07'46.011"N	104°32'13.918"W	0.45	
15125.00	89.970	175.310	6862.21	8253.72	-8248.00	-315.92	40°07'45.083"N	104°32'13.850"W	1.71	
15220.00	89.970	176.210	6862.26	8348.21	-8342.74	-308.90	40°07'44.146"N	104°32'13.772"W	0.95	
15315.00	90.000	178.810	6862.28	8442.95	-8437.64	-304.77	40°07'43.208"N	104°32'13.732"W	2.74	
15409.00	90.090	180.390	6862.21	8536.88	-8531.64	-304.11	40°07'42.279"N	104°32'13.737"W	1.68	
15503.00	90.180	179.280	6861.99	8630.83	-8625.63	-303.84	40°07'41.350"N	104°32'13.747"W	1.18	
15598.00	90.000	178.630	6861.84	8725.72	-8720.62	-302.11	40°07'40.412"N	104°32'13.738"W	0.71	
15693.00	90.030	178.540	6861.81	8820.59	-8815.59	-299.76	40°07'39.473"N	104°32'13.721"W	0.10	
15788.00	90.000	178.100	6861.79	8915.42	-8910.55	-296.98	40°07'38.534"N	104°32'13.698"W	0.46	
15882.00	90.060	178.760	6861.74	9009.27	-9004.51	-294.40	40°07'37.606"N	104°32'13.678"W	0.71	
15977.00	90.030	179.530	6861.67	9104.18	-9099.50	-292.98	40°07'36.667"N	104°32'13.673"W	0.81	
16072.00	90.000	180.420	6861.64	9199.13	-9194.50	-292.94	40°07'35.728"N	104°32'13.686"W	0.94	
16166.00	90.000	181.430	6861.64	9293.12	-9288.48	-294.46	40°07'34.799"N	104°32'13.719"W	1.07	
16261.00	89.780	181.550	6861.82	9388.12	-9383.45	-296.93	40°07'33.861"N	104°32'13.764"W	0.26	
16355.00	89.820	181.490	6862.15	9482.12	-9477.42	-299.42	40°07'32.933"N	104°32'13.809"W	0.08	
16450.00	89.880	181.330	6862.40	9577.12	-9572.39	-301.76	40°07'31.995"N	104°32'13.852"W	0.18	
16544.00	90.030	181.330	6862.47	9671.12	-9666.36	-303.94	40°07'31.066"N	104°32'13.894"W	0.16	
16639.00	89.880	180.460	6862.55	9766.11	-9761.35	-305.43	40°07'30.128"N	104°32'13.926"W	0.93	
16733.00	89.970	179.910	6862.67	9860.08	-9855.35	-305.73	40°07'29.199"N	104°32'13.943"W	0.59	
16828.00	90.030	180.050	6862.67	9955.04	-9950.35	-305.70	40°07'28.260"N	104°32'13.956"W	0.16	
16923.00	89.850	180.910	6862.77	10050.01	-10045.35	-306.49	40°07'27.322"N	104°32'13.979"W	0.92	





Actual Wellpath Report

BISON RIDGE Y22-749 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#06 BISON RIDGE Y22-749(2230'FSL&2135'FEL,SEC.10)
Area	COLORADO	Well	BISON RIDGE Y22-749
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	BISON RIDGE Y22-749 AWB
Facility	SEC.10-T02N-R64W		

WELLPATH DATA (182 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
17010.00	89.910	181.050	6862.95	10137.01	-10132.33	-307.98	40°07'26.462"N	104°32'14.011"W	0.18	Last BHI MWD Survey
17034.00	89.910	181.050	6862.99	10161.01	-10156.33	-308.42	40°07'26.225"N	104°32'14.020"W	0.00	Projection to Bit

HOLE & CASING SECTIONS - Ref Wellbore: BISON RIDGE Y22-749 AWB      Ref Wellpath: BISON RIDGE Y22-749 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	2060.00	2030.00	30.00	2059.93	0.01	0.01	-1.03	6.45
9.625in Casing Surface	30.00	2060.00	2030.00	30.00	2059.93	0.01	0.01	-1.03	6.45
8.5in Open Hole	2060.00	17034.00	14974.00	2059.93	6862.99	-1.03	6.45	-10156.33	-308.42



Actual Wellpath Report

BISON RIDGE Y22-749 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#06 BISON RIDGE Y22-749(2230'FSL&2135'FEL,SEC.10)
Area	COLORADO	Well	BISON RIDGE Y22-749
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	BISON RIDGE Y22-749 AWB
Facility	SEC.10-T02N-R64W		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
BISON RIDGE Y22-711 SECTION 10	2.00	2.04	187.28	3269724.27	1299618.92	40°09'06.552"N	104°32'06.216"W	polygon
BISON RIDGE Y22-711 SECTION 15	2.00	2.04	187.28	3269724.27	1299618.92	40°09'06.552"N	104°32'06.216"W	polygon
BISON RIDGE Y22-711 SECTION 22	2.00	2.04	187.28	3269724.27	1299618.92	40°09'06.552"N	104°32'06.216"W	polygon
BISON RIDGE Y22-749 LANDING POINT	6863.00	-400.00	-445.00	3269092.02	1299216.90	40°09'02.647"N	104°32'14.414"W	point
BISON RIDGE Y22-749 REV-1 BHL(2640'FSL&2565'FEL,SEC.22)	6863.00	-10156.76	-297.87	3269239.14	1289460.56	40°07'26.220"N	104°32'13.884"W	point
BISON RIDGE Y22-711 SECTION 10 HARDLINE (460' SETBACK)	7102.00	2.04	187.28	3269724.27	1299618.92	40°09'06.552"N	104°32'06.216"W	polygon
BISON RIDGE Y22-711 SECTION 15 HARDLINE (460' SETBACK)	7102.00	2.04	187.28	3269724.27	1299618.92	40°09'06.552"N	104°32'06.216"W	polygon
BISON RIDGE Y22-711 SECTION 22 HARDLINE (460' SETBACK)	7102.00	2.04	187.28	3269724.27	1299618.92	40°09'06.552"N	104°32'06.216"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: BISON RIDGE Y22-749 AWB    Ref Wellpath: BISON RIDGE Y22-749 AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	2054.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	3rd Party Surface Gyros <78'-2054'>	BISON RIDGE Y22-749 AWB
2054.00	17010.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	BHI/ATC OWSG, MWD+IFR+MSA 8.5" Hole <2075'-17010'>	BISON RIDGE Y22-749 AWB
17010.00	17034.00	Blind Drilling (std)	Projection to bit	BISON RIDGE Y22-749 AWB



Actual Wellpath Report

BISON RIDGE Y22-749 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#06 BISON RIDGE Y22-749(2230'FSL&2135'FEL,SEC.10)
Area	COLORADO	Well	BISON RIDGE Y22-749
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	BISON RIDGE Y22-749 AWB
Facility	SEC.10-T02N-R64W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
2054.00	0.770	316.280	2053.93	Tie to Surface Gyros
17010.00	89.910	181.050	6862.95	Last BHI MWD Survey
17034.00	89.910	181.050	6862.99	Projection to Bit

COMMENTS
<div>Wellpath general comments</div> <div>SURFACE LOCATION: NWSE</div> <div>40.15182N</div> <div>104.53573W</div> <div>API: 05-123-45379</div>