

NOBLE ENERGY, INC

Location: COLORADO Slot: SLOT#03 BISON RIDGE Y22-726(2230'FSL&2023'FEL,SEC.10)
Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: BISON RIDGE Y22-726
Facility: SEC.10-T02N-B64W Wellbore: BISON RIDGE Y22-726 PWB

Comments

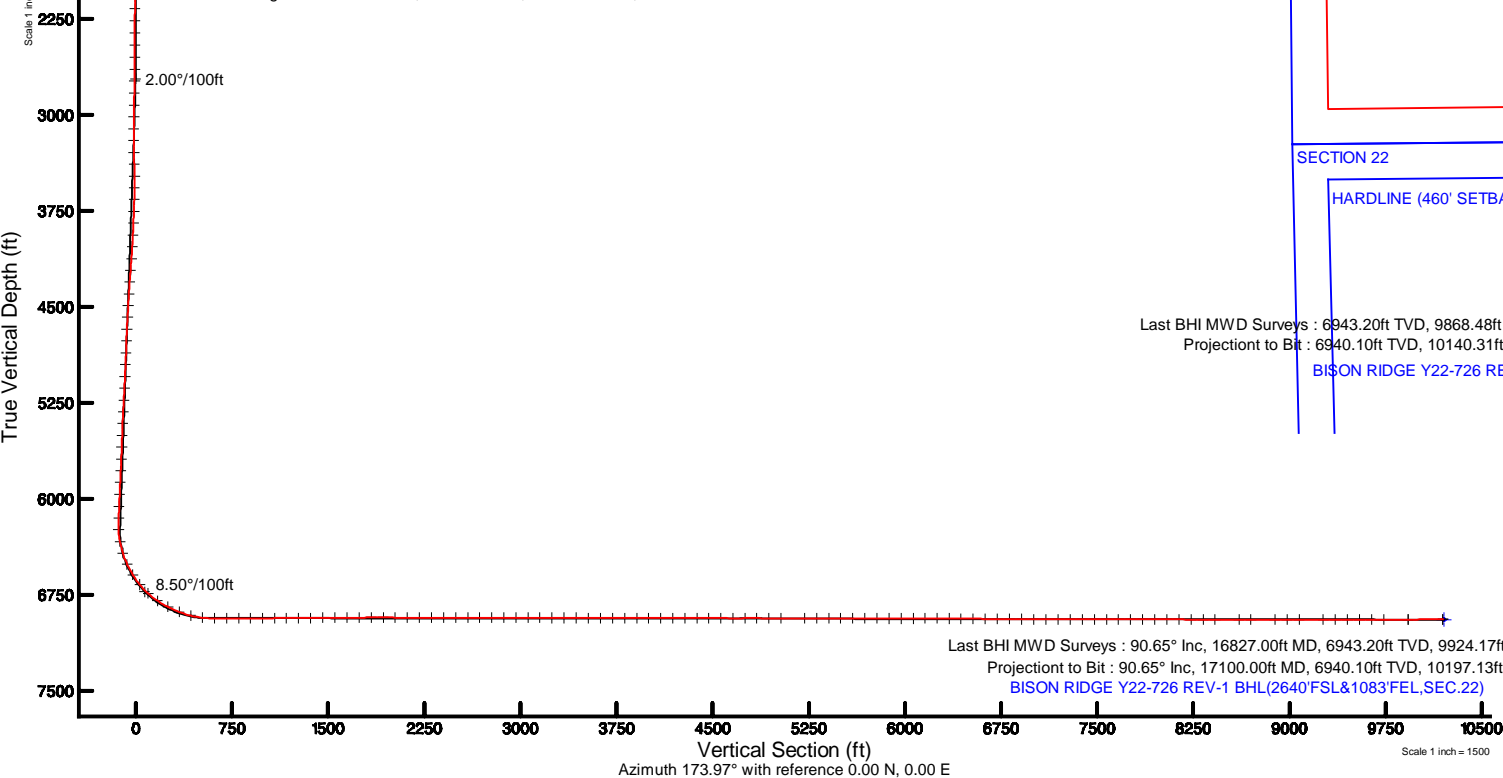
SURFACE LOCATION: NWSE
40.15182N
104.53533W
API: 05-123-45375

Survey Program

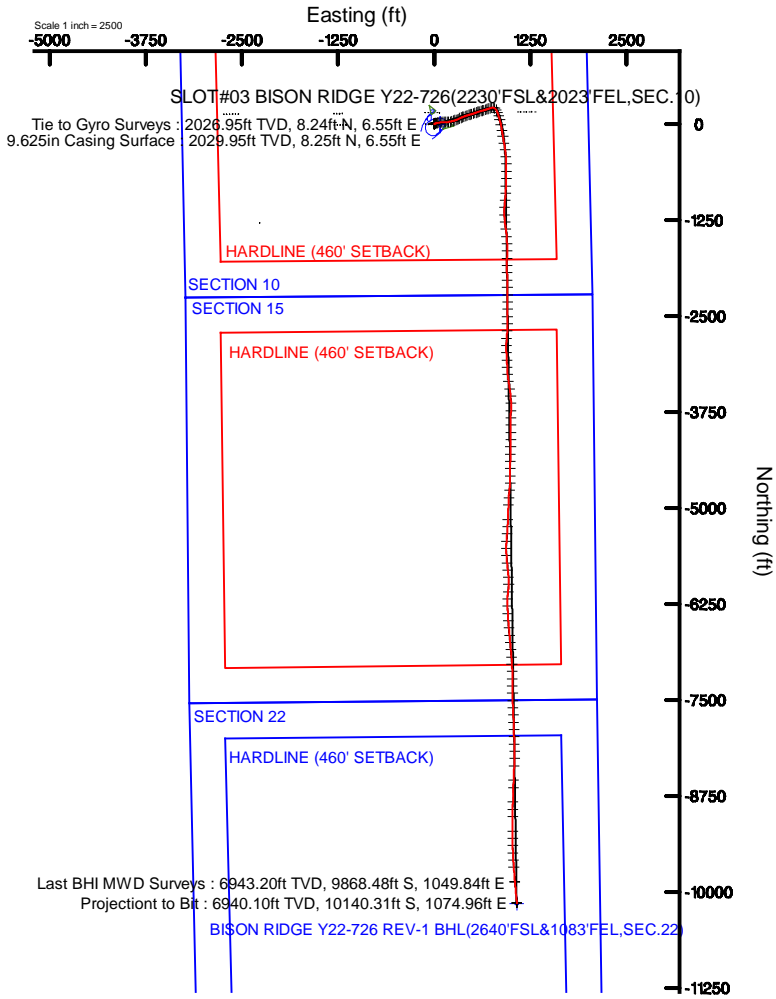
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
30.00	17101.62	OWSG MWD rev2	OWSG MWD rev2 + IFR1 + Multi-Station Correction		BISON RIDGE Y22-726 PWB



Tie to Gyro Surveys : 0.09° Inc, 2027.00ft MD, 2026.95ft TVD, -7.51ft VS
9.625in Casing Surface : 0.10° Inc, 2030.00ft MD, 2029.95ft TVD, -7.51ft VS



Last BHI MWD Surveys : 90.65° Inc, 16827.00ft MD, 6943.20ft TVD, 9924.17ft VS
Projection to Bit : 90.65° Inc, 17100.00ft MD, 6940.10ft TVD, 10197.13ft VS
BISON RIDGE Y22-726 REV-1 BHL(2640'FSL&1083'FEL,SEC.22)



Tie to Gyro Surveys : 2026.95ft TVD, 8.24ft N, 6.55ft E
9.625in Casing Surface : 2029.95ft TVD, 8.25ft N, 6.55ft E

HARDLINE (460' SETBACK)

SECTION 10

SECTION 15

HARDLINE (460' SETBACK)

SECTION 22

HARDLINE (460' SETBACK)

Last BHI MWD Surveys : 6943.20ft TVD, 9868.48ft S, 1049.84ft E
Projection to Bit : 6940.10ft TVD, 10140.31ft S, 1074.96ft E

BISON RIDGE Y22-726 REV-1 BHL(2640'FSL&1083'FEL,SEC.22)

Location Information

Facility Name	Grid East (US F)	Grid North (US F)	Latitude	Longitude
SEC 10-T02N-B64W	3089794.271	12881618.916	47°09'05.552"N	104°32'05.216"W
Bit	Local N (F)	Local E (F)	Grid East (US F)	Grid North (US F)
SLOT#03 BISON RIDGE Y22-726(2230'FSL&2023'FEL,SEC.10)	-5.82	-75.47	3089698.802	12881618.085
RIG (DINIS) (RIG) to Ground level (At Slot: SLOT#03 BISON RIDGE Y22-726(2230'FSL&2023'FEL,SEC.10))				495041
Mean Sea Level to Ground level (At Slot: SLOT#03 BISON RIDGE Y22-726(2230'FSL&2023'FEL,SEC.10))				01
RIG (DINIS) (RIG) to Mean Sea Level				495041



Actual Wellpath Report

BISON RIDGE Y22-726 AWP

Page 1 of 9



REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#03 BISON RIDGE Y22-726(2230'FSL&2023'FEL,SEC.10)
Area	COLORADO	Well	BISON RIDGE Y22-726
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	BISON RIDGE Y22-726 AWP
Facility	SEC.10-T02N-R64W		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Bushjamh
Scale	0.999958	Report Generated	1/3/2018 at 3:54:32 PM
Convergence at slot	0.62° East	Database/Source file	Denver/BISON_RIDGE_Y22-726_AWP.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-0.82	-75.47	3269648.80	1299618.10	40°09'06.552"N	104°32'07.188"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	4954.00ft
Horizontal Reference Pt	Slot	RIG (30'KB) (RKB) to Mean Sea Level	4954.00ft
Vertical Reference Pt	RIG (30'KB) (RKB)	RIG (30'KB) (RKB) to Ground Level at Slot (SLOT#03 BISON RIDGE Y22-726(2230'FSL&2023'FEL,SEC.10))	4954.00ft
MD Reference Pt	RIG (30'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	173.95°

Actual Wellpath Report

BISON RIDGE Y22-726 AWP

Page 2 of 9

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Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	BISON RIDGE Y22-726 AWP
Facility	SEC.10-T02N-R64W		

WELLPATH DATA (176 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	350.910	0.00	0.00	0.00	0.00	40°09'06.552"N	104°32'07.188"W	0.00	
84.00	0.650	350.910	84.00	-0.48	0.47	-0.08	40°09'06.557"N	104°32'07.189"W	0.77	
179.00	0.510	22.520	178.99	-1.39	1.39	0.00	40°09'06.566"N	104°32'07.188"W	0.36	
271.00	0.300	34.200	270.99	-1.93	1.97	0.29	40°09'06.571"N	104°32'07.184"W	0.24	
366.00	0.310	37.620	365.99	-2.30	2.38	0.59	40°09'06.575"N	104°32'07.180"W	0.02	
460.00	0.590	79.200	459.99	-2.53	2.67	1.22	40°09'06.578"N	104°32'07.172"W	0.44	
555.00	0.150	76.320	554.98	-2.59	2.79	1.82	40°09'06.579"N	104°32'07.164"W	0.46	
649.00	0.560	16.860	648.98	-3.02	3.26	2.08	40°09'06.584"N	104°32'07.161"W	0.53	
744.00	0.740	13.700	743.98	-4.03	4.30	2.36	40°09'06.594"N	104°32'07.157"W	0.19	
839.00	0.830	44.390	838.97	-5.05	5.39	2.98	40°09'06.605"N	104°32'07.149"W	0.45	
933.00	0.650	47.260	932.96	-5.80	6.24	3.85	40°09'06.613"N	104°32'07.138"W	0.20	
1028.00	0.620	40.750	1027.95	-6.47	6.99	4.58	40°09'06.621"N	104°32'07.128"W	0.08	
1122.00	0.120	5.750	1121.95	-6.92	7.48	4.92	40°09'06.625"N	104°32'07.124"W	0.56	
1217.00	0.110	32.000	1216.95	-7.09	7.65	4.98	40°09'06.627"N	104°32'07.123"W	0.06	
1312.00	0.140	155.050	1311.95	-7.05	7.62	5.08	40°09'06.627"N	104°32'07.122"W	0.23	
1406.00	0.070	265.660	1405.95	-6.94	7.52	5.07	40°09'06.626"N	104°32'07.122"W	0.19	
1501.00	0.120	117.300	1500.95	-6.89	7.47	5.10	40°09'06.625"N	104°32'07.121"W	0.19	
1596.00	0.130	62.500	1595.95	-6.87	7.47	5.28	40°09'06.625"N	104°32'07.119"W	0.12	
1690.00	0.150	37.260	1689.95	-7.00	7.62	5.45	40°09'06.627"N	104°32'07.117"W	0.07	
1785.00	0.290	55.450	1784.95	-7.21	7.85	5.73	40°09'06.629"N	104°32'07.113"W	0.16	
1880.00	0.280	75.380	1879.95	-7.35	8.05	6.15	40°09'06.631"N	104°32'07.108"W	0.10	
1974.00	0.150	59.980	1973.95	-7.44	8.17	6.48	40°09'06.632"N	104°32'07.103"W	0.15	
2027.00	0.090	15.250	2026.95	-7.51	8.24	6.55	40°09'06.633"N	104°32'07.103"W	0.20	Tie to Gyro Surveys
2074.00	0.220	335.300	2073.95	-7.63	8.36	6.52	40°09'06.634"N	104°32'07.103"W	0.34	
2169.00	0.070	28.270	2168.95	-7.85	8.58	6.47	40°09'06.636"N	104°32'07.103"W	0.20	
2263.00	0.180	281.770	2262.95	-7.94	8.66	6.35	40°09'06.637"N	104°32'07.105"W	0.22	
2358.00	0.110	259.200	2357.95	-7.98	8.67	6.12	40°09'06.637"N	104°32'07.108"W	0.09	
2452.00	0.880	84.920	2451.94	-7.96	8.72	6.75	40°09'06.637"N	104°32'07.100"W	1.05	
2547.00	2.680	77.400	2546.90	-8.20	9.27	9.64	40°09'06.643"N	104°32'07.063"W	1.91	
2641.00	3.810	77.000	2640.74	-8.83	10.45	14.83	40°09'06.654"N	104°32'06.996"W	1.20	



Actual Wellpath Report

BISON RIDGE Y22-726 AWP

Page 3 of 9



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Area	COLORADO	Well	BISON RIDGE Y22-726
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	BISON RIDGE Y22-726 AWB
Facility	SEC.10-T02N-R64W		

WELLPATH DATA (176 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2735.00	5.280	70.760	2734.45	-10.19	12.58	21.96	40°09'06.674"N	104°32'06.903"W	1.65	
2830.00	6.960	71.400	2828.90	-12.44	15.85	31.54	40°09'06.705"N	104°32'06.780"W	1.77	
2924.00	10.730	79.130	2921.77	-14.41	19.32	45.54	40°09'06.738"N	104°32'06.599"W	4.20	
3019.00	12.990	81.800	3014.74	-15.56	22.51	64.79	40°09'06.767"N	104°32'06.350"W	2.45	
3114.00	12.710	82.900	3107.36	-16.15	25.33	85.73	40°09'06.793"N	104°32'06.080"W	0.39	
3208.00	13.030	85.560	3199.00	-16.04	27.43	106.56	40°09'06.812"N	104°32'05.812"W	0.72	
3303.00	12.620	88.030	3291.63	-15.00	28.61	127.61	40°09'06.821"N	104°32'05.541"W	0.72	
3397.00	12.360	94.640	3383.41	-12.40	28.15	147.90	40°09'06.814"N	104°32'05.279"W	1.54	
3492.00	12.770	84.670	3476.14	-10.38	28.30	168.49	40°09'06.814"N	104°32'05.014"W	2.32	
3586.00	12.330	79.700	3567.90	-11.00	31.06	188.71	40°09'06.839"N	104°32'04.754"W	1.24	
3680.00	13.130	79.050	3659.59	-12.65	34.89	209.07	40°09'06.874"N	104°32'04.491"W	0.86	
3775.00	13.180	74.560	3752.10	-15.34	39.82	230.10	40°09'06.921"N	104°32'04.219"W	1.08	
3870.00	13.280	72.410	3844.58	-19.29	46.00	250.94	40°09'06.980"N	104°32'03.950"W	0.53	
3964.00	13.280	72.550	3936.06	-23.58	52.50	271.53	40°09'07.042"N	104°32'03.684"W	0.03	
4059.00	13.320	70.010	4028.51	-28.38	59.51	292.23	40°09'07.109"N	104°32'03.417"W	0.62	
4154.00	13.020	63.610	4121.02	-34.73	68.01	312.10	40°09'07.190"N	104°32'03.159"W	1.57	
4248.00	13.000	65.270	4212.61	-41.80	77.14	331.19	40°09'07.279"N	104°32'02.912"W	0.40	
4343.00	12.970	65.410	4305.18	-48.61	86.05	350.59	40°09'07.365"N	104°32'02.661"W	0.05	
4437.00	13.110	69.140	4396.76	-54.69	94.23	370.14	40°09'07.443"N	104°32'02.408"W	0.91	
4531.00	12.820	69.680	4488.36	-59.98	101.65	389.88	40°09'07.515"N	104°32'02.153"W	0.33	
4626.00	12.920	69.720	4580.97	-65.19	108.99	409.73	40°09'07.585"N	104°32'01.896"W	0.11	
4720.00	12.270	70.600	4672.71	-70.08	115.95	429.01	40°09'07.652"N	104°32'01.647"W	0.72	
4815.00	12.220	74.940	4765.55	-73.99	121.92	448.24	40°09'07.708"N	104°32'01.399"W	0.97	
4909.00	12.970	75.250	4857.29	-77.14	127.19	468.04	40°09'07.758"N	104°32'01.143"W	0.80	
5004.00	12.930	72.750	4949.87	-80.82	133.05	488.51	40°09'07.814"N	104°32'00.879"W	0.59	
5098.00	12.910	72.390	5041.49	-84.96	139.35	508.56	40°09'07.874"N	104°32'00.620"W	0.09	
5193.00	12.990	71.840	5134.08	-89.33	145.89	528.82	40°09'07.937"N	104°32'00.358"W	0.15	
5288.00	12.900	69.270	5226.66	-94.26	152.97	548.88	40°09'08.004"N	104°32'00.098"W	0.61	
5382.00	12.440	68.730	5318.38	-99.57	160.36	568.13	40°09'08.075"N	104°31'59.849"W	0.51	
5477.00	12.470	74.840	5411.14	-103.88	166.75	587.57	40°09'08.137"N	104°31'59.598"W	1.39	



Actual Wellpath Report

BISON RIDGE Y22-726 AWP

Page 4 of 9



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Operator	NOBLE ENERGY, INC	Slot	SLOT#03 BISON RIDGE Y22-726(2230'FSL&2023'FEL,SEC.10)
Area	COLORADO	Well	BISON RIDGE Y22-726
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	BISON RIDGE Y22-726 AWB
Facility	SEC.10-T02N-R64W		

WELLPATH DATA (176 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5571.00	12.670	75.980	5502.89	-106.92	171.90	607.36	40°09'08.185"N	104°31'59.343"W	0.34	
5666.00	12.780	75.200	5595.56	-109.96	177.11	627.63	40°09'08.235"N	104°31'59.081"W	0.21	
5760.00	12.700	74.190	5687.24	-113.29	182.58	647.62	40°09'08.286"N	104°31'58.823"W	0.25	
5855.00	12.490	69.200	5779.96	-117.68	189.07	667.27	40°09'08.349"N	104°31'58.569"W	1.17	
5949.00	12.510	71.660	5871.73	-122.43	195.89	686.44	40°09'08.414"N	104°31'58.321"W	0.57	
6044.00	12.490	72.560	5964.48	-126.65	202.20	706.01	40°09'08.474"N	104°31'58.068"W	0.21	
6139.00	12.360	73.360	6057.26	-130.55	208.19	725.55	40°09'08.531"N	104°31'57.816"W	0.23	
6233.00	12.610	71.600	6149.03	-134.59	214.31	744.93	40°09'08.590"N	104°31'57.565"W	0.48	
6328.00	12.960	92.410	6241.73	-135.24	217.14	765.42	40°09'08.615"N	104°31'57.301"W	4.84	
6422.00	17.090	125.100	6332.65	-124.58	208.74	787.30	40°09'08.530"N	104°31'57.020"W	9.85	
6517.00	18.860	148.730	6423.13	-101.47	187.56	806.72	40°09'08.318"N	104°31'56.773"W	7.84	
6611.00	25.820	159.400	6510.06	-67.86	155.36	821.83	40°09'07.999"N	104°31'56.583"W	8.54	
6706.00	31.680	162.410	6593.32	-23.35	112.17	836.66	40°09'07.570"N	104°31'56.398"W	6.35	
6800.00	39.350	164.490	6669.77	30.31	59.85	852.11	40°09'07.052"N	104°31'56.207"W	8.26	
6895.00	47.840	168.330	6738.53	95.19	-3.78	867.32	40°09'06.421"N	104°31'56.020"W	9.36	
6989.00	56.540	171.440	6796.11	169.19	-76.83	880.23	40°09'05.698"N	104°31'55.864"W	9.62	
7084.00	63.580	170.730	6843.49	251.36	-158.10	893.00	40°09'04.894"N	104°31'55.711"W	7.44	
7179.00	68.360	169.410	6882.17	337.90	-243.54	907.97	40°09'04.048"N	104°31'55.530"W	5.19	
7273.00	75.470	172.020	6911.33	427.05	-331.66	922.34	40°09'03.175"N	104°31'55.357"W	8.01	
7368.00	83.340	176.060	6928.79	520.33	-424.45	931.98	40°09'02.257"N	104°31'55.246"W	9.28	
7462.00	90.150	178.790	6934.13	613.95	-518.14	936.19	40°09'01.331"N	104°31'55.205"W	7.80	
7557.00	90.120	180.300	6933.90	708.49	-613.14	936.94	40°09'00.392"N	104°31'55.209"W	1.59	
7651.00	90.310	181.040	6933.55	801.84	-707.13	935.84	40°08'59.464"N	104°31'55.236"W	0.81	
7746.00	90.180	182.090	6933.14	896.00	-802.09	933.25	40°08'58.526"N	104°31'55.283"W	1.11	
7841.00	90.370	184.200	6932.69	989.77	-896.94	928.04	40°08'57.589"N	104°31'55.363"W	2.23	
7935.00	90.370	184.650	6932.08	1082.21	-990.66	920.79	40°08'56.664"N	104°31'55.470"W	0.48	
8030.00	90.460	183.810	6931.39	1175.68	-1085.40	913.78	40°08'55.728"N	104°31'55.573"W	0.89	
8125.00	90.340	177.280	6930.73	1269.99	-1180.34	912.88	40°08'54.790"N	104°31'55.598"W	6.87	
8219.00	90.430	174.070	6930.10	1363.94	-1274.06	919.96	40°08'53.863"N	104°31'55.520"W	3.42	
8314.00	90.520	171.690	6929.31	1458.91	-1368.31	931.74	40°08'52.931"N	104°31'55.382"W	2.51	



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Page 5 of 9



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Facility	SEC.10-T02N-R64W		

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8409.00	90.370	175.070	6928.57	1553.89	-1462.66	942.69	40°08'51.997"N	104°31'55.254"W	3.56	
8503.00	90.430	178.510	6927.92	1647.76	-1556.50	947.95	40°08'51.069"N	104°31'55.200"W	3.66	
8598.00	90.220	180.380	6927.38	1742.31	-1651.49	948.87	40°08'50.131"N	104°31'55.201"W	1.98	
8693.00	90.340	181.470	6926.91	1836.61	-1746.47	947.34	40°08'49.192"N	104°31'55.234"W	1.15	
8787.00	89.720	179.710	6926.86	1929.97	-1840.46	946.37	40°08'48.264"N	104°31'55.260"W	1.99	
8882.00	89.880	179.050	6927.19	2024.55	-1935.46	947.40	40°08'47.325"N	104°31'55.260"W	0.71	
8976.00	89.850	178.640	6927.42	2118.20	-2029.44	949.29	40°08'46.396"N	104°31'55.249"W	0.44	
9071.00	89.880	178.920	6927.64	2212.87	-2124.42	951.31	40°08'45.457"N	104°31'55.236"W	0.30	
9166.00	89.850	179.120	6927.86	2307.49	-2219.40	952.94	40°08'44.518"N	104°31'55.229"W	0.21	
9261.00	90.490	180.060	6927.58	2402.03	-2314.40	953.62	40°08'43.580"N	104°31'55.233"W	1.20	
9355.00	89.820	180.520	6927.33	2495.45	-2408.40	953.14	40°08'42.651"N	104°31'55.253"W	0.86	
9450.00	89.820	180.520	6927.63	2589.83	-2503.39	952.28	40°08'41.712"N	104°31'55.277"W	0.00	
9544.00	89.820	180.810	6927.92	2683.18	-2597.38	951.19	40°08'40.784"N	104°31'55.304"W	0.31	
9639.00	89.880	182.260	6928.17	2777.35	-2692.35	948.65	40°08'39.845"N	104°31'55.350"W	1.53	
9734.00	89.720	185.030	6928.50	2870.98	-2787.15	942.61	40°08'38.909"N	104°31'55.441"W	2.92	
9828.00	89.850	181.390	6928.85	2963.74	-2880.98	937.34	40°08'37.983"N	104°31'55.522"W	3.87	
9923.00	90.030	176.130	6928.95	3058.37	-2975.93	939.40	40°08'37.044"N	104°31'55.509"W	5.54	
10017.00	89.570	177.270	6929.28	3152.26	-3069.77	944.81	40°08'36.116"N	104°31'55.453"W	1.31	
10112.00	89.720	177.920	6929.87	3247.07	-3164.68	948.80	40°08'35.178"N	104°31'55.415"W	0.70	
10207.00	90.120	173.910	6930.00	3341.99	-3259.42	955.56	40°08'34.241"N	104°31'55.341"W	4.24	
10301.00	90.000	171.390	6929.91	3435.96	-3352.64	967.59	40°08'33.319"N	104°31'55.199"W	2.68	
10396.00	89.850	171.400	6930.03	3530.87	-3446.57	981.80	40°08'32.389"N	104°31'55.029"W	0.16	
10490.00	89.630	174.440	6930.46	3624.84	-3539.84	993.39	40°08'31.466"N	104°31'54.893"W	3.24	
10585.00	89.970	178.690	6930.79	3719.72	-3634.65	999.08	40°08'30.529"N	104°31'54.833"W	4.49	
10679.00	89.820	181.800	6930.96	3813.14	-3728.64	998.67	40°08'29.600"N	104°31'54.852"W	3.31	
10774.00	89.570	182.050	6931.47	3907.22	-3823.58	995.48	40°08'28.662"N	104°31'54.906"W	0.37	
10868.00	89.940	178.560	6931.87	4000.63	-3917.56	994.98	40°08'27.733"N	104°31'54.926"W	3.73	
10963.00	90.000	179.880	6931.92	4095.22	-4012.55	996.28	40°08'26.795"N	104°31'54.923"W	1.39	
11058.00	90.000	181.420	6931.92	4189.57	-4107.54	995.20	40°08'25.856"N	104°31'54.950"W	1.62	
11152.00	90.150	181.130	6931.79	4282.80	-4201.52	993.11	40°08'24.928"N	104°31'54.990"W	0.35	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#03 BISON RIDGE Y22-726(2230'FSL&2023'FEL,SEC.10)
Area	COLORADO	Well	BISON RIDGE Y22-726
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	BISON RIDGE Y22-726 AWB
Facility	SEC.10-T02N-R64W		

WELLPATH DATA (176 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11247.00	89.970	181.030	6931.70	4377.07	-4296.50	991.32	40°08'23.989"N	104°31'55.026"W	0.22	
11341.00	89.910	181.390	6931.79	4470.31	-4390.48	989.33	40°08'23.061"N	104°31'55.065"W	0.39	
11436.00	89.820	180.430	6932.02	4564.61	-4485.47	987.82	40°08'22.123"N	104°31'55.098"W	1.01	
11531.00	89.910	179.320	6932.24	4659.10	-4580.47	988.03	40°08'21.184"N	104°31'55.109"W	1.17	
11625.00	90.280	183.300	6932.09	4752.31	-4674.42	985.88	40°08'20.256"N	104°31'55.150"W	4.25	
11720.00	89.750	186.090	6932.06	4845.63	-4769.10	978.11	40°08'19.321"N	104°31'55.263"W	2.99	
11814.00	89.910	184.060	6932.34	4937.86	-4862.72	969.79	40°08'18.397"N	104°31'55.383"W	2.17	
11909.00	90.060	181.540	6932.36	5031.72	-4957.60	965.15	40°08'17.460"N	104°31'55.456"W	2.66	
12098.00	89.850	182.220	6932.51	5218.91	-5146.50	958.95	40°08'15.594"N	104°31'55.563"W	0.38	
12193.00	89.750	182.370	6932.84	5312.91	-5241.42	955.15	40°08'14.656"N	104°31'55.625"W	0.19	
12288.00	90.400	186.310	6932.72	5406.33	-5336.13	947.96	40°08'13.721"N	104°31'55.731"W	4.20	
12382.00	89.750	182.740	6932.60	5498.72	-5429.82	940.54	40°08'12.796"N	104°31'55.839"W	3.86	
12477.00	89.820	180.150	6932.95	5592.90	-5524.78	938.15	40°08'11.858"N	104°31'55.884"W	2.73	
12571.00	89.600	177.110	6933.43	5686.57	-5618.74	940.40	40°08'10.929"N	104°31'55.868"W	3.24	
12666.00	89.720	173.750	6933.99	5781.52	-5713.43	947.96	40°08'09.993"N	104°31'55.784"W	3.54	
12760.00	89.780	174.620	6934.40	5875.52	-5806.94	957.49	40°08'09.068"N	104°31'55.674"W	0.93	
12855.00	89.750	175.160	6934.79	5970.51	-5901.56	965.95	40°08'08.132"N	104°31'55.579"W	0.57	
12949.00	90.550	181.790	6934.55	6064.16	-5995.47	968.45	40°08'07.204"N	104°31'55.560"W	7.10	
13044.00	90.710	187.040	6933.50	6157.54	-6090.15	961.14	40°08'06.269"N	104°31'55.667"W	5.53	
13138.00	89.380	181.770	6933.43	6249.94	-6183.84	953.92	40°08'05.344"N	104°31'55.773"W	5.78	
13233.00	89.380	178.490	6934.46	6344.37	-6278.82	953.71	40°08'04.405"N	104°31'55.789"W	3.45	
13327.00	89.480	177.120	6935.39	6438.15	-6372.75	957.31	40°08'03.477"N	104°31'55.756"W	1.46	
13422.00	89.380	175.340	6936.34	6533.07	-6467.53	963.55	40°08'02.539"N	104°31'55.689"W	1.88	
13517.00	89.320	174.900	6937.41	6628.04	-6562.18	971.63	40°08'01.603"N	104°31'55.598"W	0.47	
13611.00	89.450	174.770	6938.42	6722.03	-6655.79	980.10	40°08'00.677"N	104°31'55.502"W	0.20	
13706.00	89.600	174.630	6939.21	6817.02	-6750.38	988.87	40°07'59.742"N	104°31'55.403"W	0.22	
13800.00	89.850	175.020	6939.66	6911.00	-6844.00	997.35	40°07'58.816"N	104°31'55.307"W	0.49	
13895.00	89.660	176.500	6940.07	7005.95	-6938.74	1004.37	40°07'57.879"N	104°31'55.230"W	1.57	
13989.00	90.060	176.290	6940.30	7099.87	-7032.55	1010.28	40°07'56.951"N	104°31'55.167"W	0.48	
14084.00	89.970	177.590	6940.27	7194.74	-7127.41	1015.35	40°07'56.013"N	104°31'55.115"W	1.37	

Actual Wellpath Report

BISON RIDGE Y22-726 AWP

Page 7 of 9

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#03 BISON RIDGE Y22-726(2230'FSL&2023'FEL,SEC.10)
Area	COLORADO	Well	BISON RIDGE Y22-726
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	BISON RIDGE Y22-726 AWP
Facility	SEC.10-T02N-R64W		

WELLPATH DATA (176 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
14179.00	89.910	180.210	6940.37	7289.37	-7222.39	1017.18	40°07'55.075"N	104°31'55.105"W	2.76	
14273.00	89.940	180.050	6940.50	7382.83	-7316.39	1016.96	40°07'54.146"N	104°31'55.121"W	0.17	
14368.00	89.910	178.610	6940.62	7477.40	-7411.38	1018.07	40°07'53.207"N	104°31'55.120"W	1.52	
14463.00	89.910	177.970	6940.77	7572.13	-7506.33	1020.91	40°07'52.268"N	104°31'55.097"W	0.67	
14557.00	89.940	177.500	6940.89	7665.93	-7600.26	1024.62	40°07'51.340"N	104°31'55.062"W	0.50	
14652.00	89.910	177.190	6941.02	7760.76	-7695.16	1029.03	40°07'50.402"N	104°31'55.019"W	0.33	
14746.00	89.910	177.860	6941.16	7854.57	-7789.07	1033.08	40°07'49.473"N	104°31'54.980"W	0.71	
14840.00	89.970	178.280	6941.26	7948.33	-7883.02	1036.25	40°07'48.544"N	104°31'54.952"W	0.45	
14935.00	89.660	178.390	6941.57	8043.05	-7977.98	1039.01	40°07'47.606"N	104°31'54.930"W	0.35	
15030.00	89.780	177.970	6942.03	8137.79	-8072.93	1042.03	40°07'46.667"N	104°31'54.904"W	0.46	
15124.00	89.820	178.820	6942.36	8231.51	-8166.89	1044.66	40°07'45.738"N	104°31'54.884"W	0.91	
15219.00	89.820	181.350	6942.66	8325.96	-8261.88	1044.52	40°07'44.800"N	104°31'54.899"W	2.66	
15314.00	89.880	182.710	6942.91	8420.01	-8356.82	1041.15	40°07'43.862"N	104°31'54.955"W	1.43	
15502.00	89.850	182.500	6943.35	8605.87	-8544.62	1032.61	40°07'42.007"N	104°31'55.092"W	0.11	
15597.00	89.970	182.050	6943.50	8699.87	-8639.55	1028.84	40°07'41.070"N	104°31'55.154"W	0.49	
15786.00	90.370	181.410	6942.94	8887.12	-8828.46	1023.13	40°07'39.203"N	104°31'55.254"W	0.40	
15881.00	90.120	180.410	6942.53	8981.42	-8923.44	1021.62	40°07'38.265"N	104°31'55.287"W	1.09	
15976.00	89.820	179.940	6942.58	9075.86	-9018.44	1021.33	40°07'37.326"N	104°31'55.304"W	0.59	
16165.00	90.000	179.770	6942.88	9263.86	-9207.44	1021.81	40°07'35.459"N	104°31'55.324"W	0.13	
16259.00	89.820	180.490	6943.03	9357.31	-9301.44	1021.60	40°07'34.530"N	104°31'55.340"W	0.79	
16354.00	89.820	179.490	6943.33	9451.78	-9396.44	1021.62	40°07'33.591"N	104°31'55.353"W	1.05	
16449.00	89.940	177.700	6943.53	9546.46	-9491.41	1023.94	40°07'32.652"N	104°31'55.336"W	1.89	
16543.00	89.910	176.390	6943.65	9640.32	-9585.28	1028.79	40°07'31.724"N	104°31'55.287"W	1.39	
16638.00	89.780	176.220	6943.91	9735.24	-9680.08	1034.91	40°07'30.787"N	104°31'55.222"W	0.23	
16827.00	90.650	174.720	6943.20	9924.17	-9868.48	1049.84	40°07'28.924"N	104°31'55.056"W	0.92	Last BHI MWD Surveys
17100.00	90.650	174.720	6940.10	10197.13	-10140.31	1074.96	40°07'26.235"N	104°31'54.771"W	0.00	Projection to Bit



Actual Wellpath Report

BISON RIDGE Y22-726 AWP

Page 8 of 9



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#03 BISON RIDGE Y22-726(2230'FSL&2023'FEL,SEC.10)
Area	COLORADO	Well	BISON RIDGE Y22-726
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	BISON RIDGE Y22-726 AWB
Facility	SEC.10-T02N-R64W		

HOLE & CASING SECTIONS - Ref Wellbore: BISON RIDGE Y22-726 AWB Ref Wellpath: BISON RIDGE Y22-726 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	2030.00	2000.00	30.00	2029.95	0.06	-0.01	8.25	6.55
9.625in Casing Surface	30.00	2030.00	2000.00	30.00	2029.95	0.06	-0.01	8.25	6.55
8.5in Open Hole	2030.00	17100.00	15070.00	2029.95	6940.10	8.25	6.55	-10140.31	1074.96

WELLPATH COMPOSITION - Ref Wellbore: BISON RIDGE Y22-726 AWB Ref Wellpath: BISON RIDGE Y22-726 AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	2027.00	Gyrodata standard - Drop gyro or Multi-shot	13.5" Surface Hole Gyro Surveys <84'-2027'>	BISON RIDGE Y22-726 AWB
2027.00	16827.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	BHI/ATC 8.5" Hole OWSG+MSA <2074'-16827'>	BISON RIDGE Y22-726 AWB
16827.00	17100.00	Blind Drilling (std)	Projection to bit	BISON RIDGE Y22-726 AWB



Actual Wellpath Report

BISON RIDGE Y22-726 AWP

Page 9 of 9



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#03 BISON RIDGE Y22-726(2230'FSL&2023'FEL,SEC.10)
Area	COLORADO	Well	BISON RIDGE Y22-726
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	BISON RIDGE Y22-726 AWB
Facility	SEC.10-T02N-R64W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
2027.00	0.090	15.250	2026.95	Tie to Gyro Surveys
16827.00	90.650	174.720	6943.20	Last BHI MWD Surveys
17100.00	90.650	174.720	6940.10	Projectiont to Bit

COMMENTS	
Wellpath general comments SURFACE LOCATION: NWSE 40.15182N 104.53533W API: 05-123-45375	