

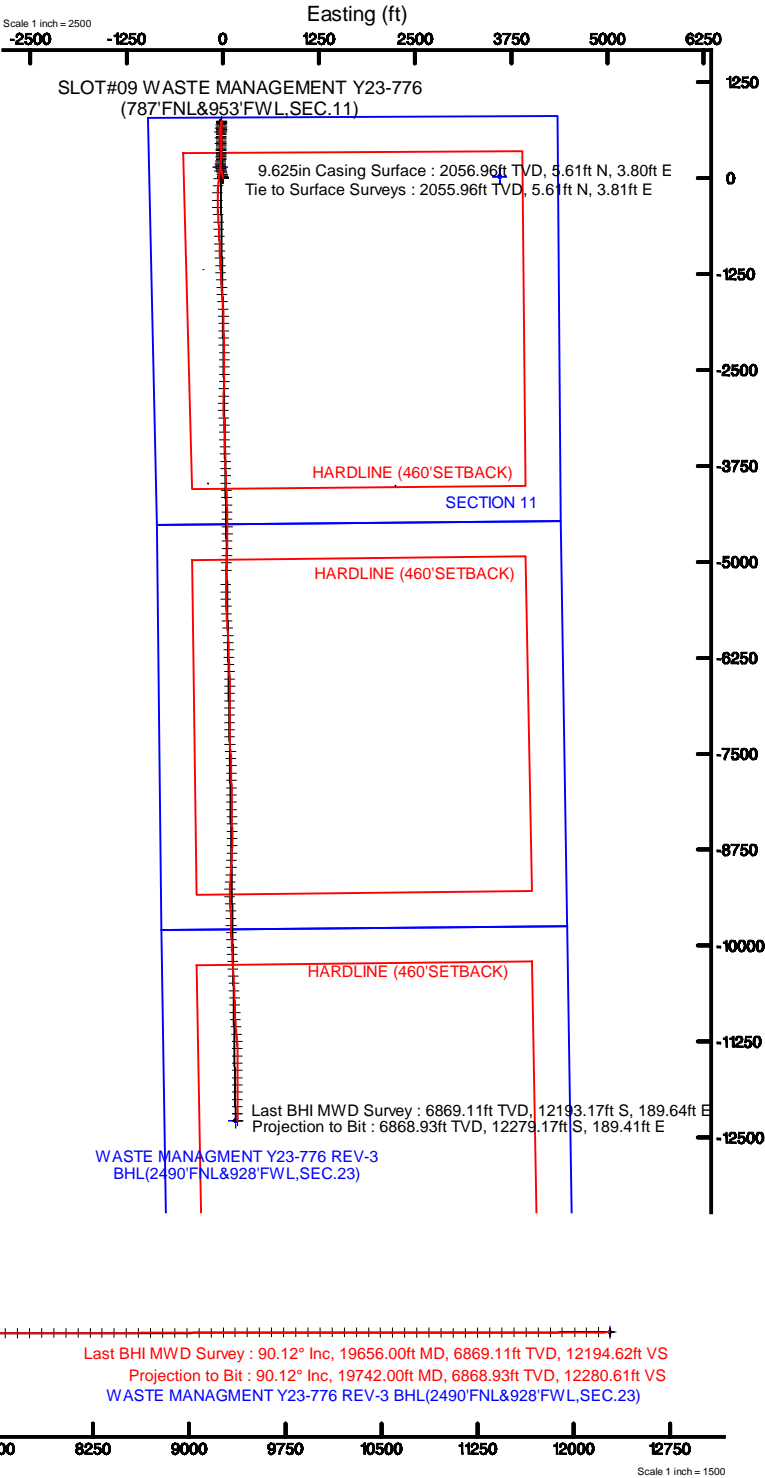
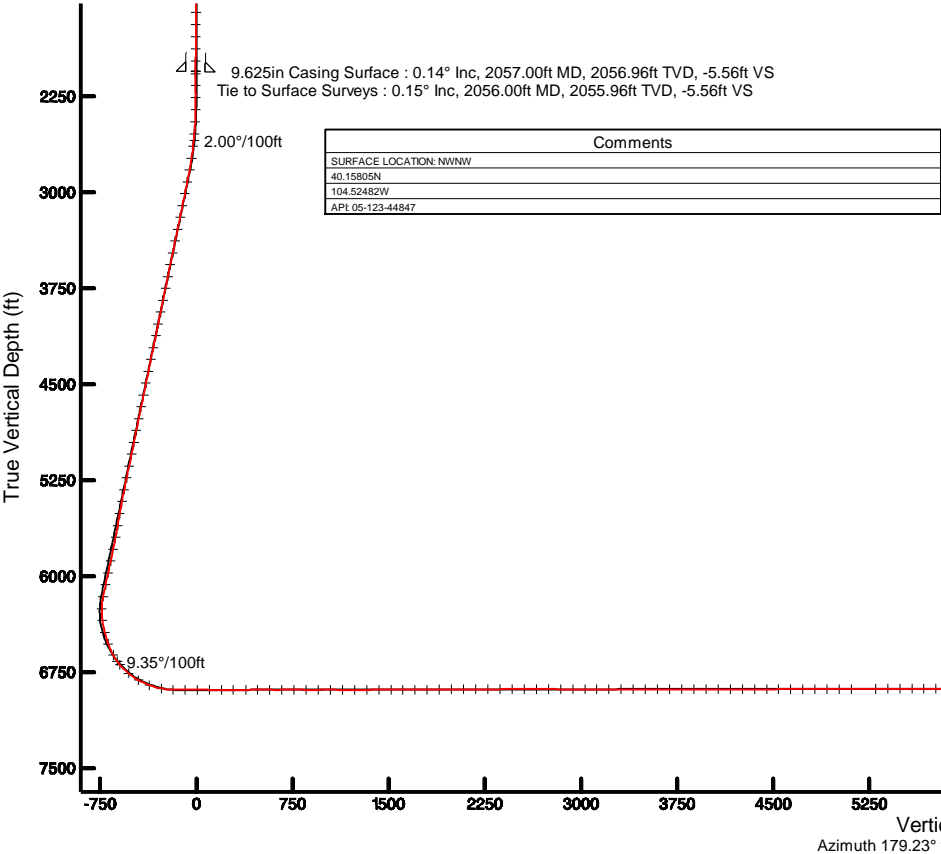
NOBLE ENERGY, INC

Location: COLORADO Slot: SLOT#09 WASTE MANAGEMENT Y23-776(787'FNL&953'FWL,SEC.11)
Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: WASTE MANAGEMENT Y23-776
Facility: SEC.11-T02N-R64W Wellbore: WASTE MANAGEMENT Y23-776 PWB

Plot reference wellpath is WASTE MANAGEMENT Y23-776 (REV-C.0) PWP	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to RIG(30KB) (RKB)	* = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to RIG(30KB) (RKB)	North Reference: Grid north
RIG(30KB) (RKB) to Mean Sea Level: 4981 feet	Scale: True distance
Mean Sea Level to Ground level (At Slot: SLOT#09 WASTE MANAGEMENT Y23-776(787'FNL&953'FWL,SEC.11)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: guenaler on 2017-11-20
	Database: WA_DEN_Denver_Deln

Location Information

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.11-T02N-R64W			3276161.567	1301937.555	40°09'28.764"N	104°30'42.984"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#09 WASTE MANAGEMENT Y23-776(787'FNL&953'FWL,SEC.11)	-18.00	-3600.20	3272561.528	1301919.580	40°09'28.980"N	104°31'29.352"W
RIG(30KB) (RKB) to Ground level (At Slot: SLOT#09 WASTE MANAGEMENT Y23-776(787'FNL&953'FWL,SEC.11))					4981ft	
Mean Sea Level to Ground level (At Slot: SLOT#09 WASTE MANAGEMENT Y23-776(787'FNL&953'FWL,SEC.11))					0ft	
RIG(30KB) (RKB) to Mean Sea Level					4981ft	



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#09 WASTE MANAGEMENT Y23-776(787'FNL&953'FWL,SEC.11)
Area	COLORADO	Well	WASTE MANAGEMENT Y23-776
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WASTE MANAGEMENT Y23-776 AWB
Facility	SEC.11-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	11/20/2017 at 2:35:57 PM
Convergence at slot	0.64° East	Database/Source file	WA_DEN_Denver_Defn/WASTE_MANAGEMENT_Y23-776_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-18.00	-3600.20	3272561.53	1301919.56	40°09'28.980"N	104°31'29.352"W
Facility Reference Pt			3276161.57	1301937.56	40°09'28.764"N	104°30'42.984"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	4981.00ft
Horizontal Reference Pt	Slot	RIG(30'KB) (RKB) to Mean Sea Level	4981.00ft
Vertical Reference Pt	RIG(30'KB) (RKB)	RIG(30'KB) (RKB) to Ground Level at Slot (SLOT#09 WASTE MANAGEMENT Y23-776 (787'FNL&953'FWL,SEC.11))	4981.00ft
MD Reference Pt	RIG(30'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	179.23°



Actual Wellpath Report
WASTE MANAGEMENT Y23-776 AWP
Page 2 of 11



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#09 WASTE MANAGEMENT Y23-776(787'FNL&953'FWL,SEC.11)
Area	COLORADO	Well	WASTE MANAGEMENT Y23-776
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WASTE MANAGEMENT Y23-776 AWB
Facility	SEC.11-T02N-R64W		

WELLPATH DATA (210 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	168.900	0.00	0.00	0.00	0.00	40°09'28.980"N	104°31'29.352"W	0.00	
83.27	0.320	168.900	83.27	0.23	-0.23	0.04	40°09'28.978"N	104°31'29.351"W	0.38	
178.88	0.190	136.180	178.88	0.61	-0.60	0.21	40°09'28.974"N	104°31'29.349"W	0.20	
273.48	0.290	223.810	273.48	0.89	-0.89	0.15	40°09'28.971"N	104°31'29.350"W	0.36	
367.36	0.300	331.600	367.36	0.84	-0.85	-0.13	40°09'28.972"N	104°31'29.354"W	0.51	
462.38	0.370	350.250	462.38	0.32	-0.32	-0.30	40°09'28.977"N	104°31'29.356"W	0.14	
557.09	0.510	52.160	557.08	-0.24	0.24	-0.02	40°09'28.982"N	104°31'29.352"W	0.49	
651.54	0.450	56.500	651.53	-0.69	0.70	0.62	40°09'28.987"N	104°31'29.344"W	0.07	
746.08	0.380	88.760	746.07	-0.89	0.91	1.24	40°09'28.989"N	104°31'29.336"W	0.25	
840.52	0.220	82.310	840.51	-0.92	0.94	1.74	40°09'28.989"N	104°31'29.330"W	0.17	
935.20	0.280	138.780	935.19	-0.76	0.79	2.07	40°09'28.988"N	104°31'29.325"W	0.26	
1029.79	0.320	150.160	1029.77	-0.36	0.39	2.35	40°09'28.984"N	104°31'29.322"W	0.08	
1124.14	0.030	54.070	1124.12	-0.14	0.17	2.50	40°09'28.981"N	104°31'29.320"W	0.34	
1218.70	0.250	46.680	1218.68	-0.29	0.33	2.67	40°09'28.983"N	104°31'29.318"W	0.23	
1313.24	0.550	1.330	1313.22	-0.89	0.93	2.83	40°09'28.989"N	104°31'29.315"W	0.44	
1407.72	0.390	22.320	1407.70	-1.64	1.68	2.97	40°09'28.996"N	104°31'29.314"W	0.25	
1502.12	0.540	13.450	1502.10	-2.36	2.41	3.19	40°09'29.003"N	104°31'29.311"W	0.18	
1596.09	0.490	11.850	1596.06	-3.18	3.23	3.38	40°09'29.012"N	104°31'29.308"W	0.06	
1691.26	0.460	14.360	1691.23	-3.95	4.00	3.56	40°09'29.019"N	104°31'29.306"W	0.04	
1785.57	0.400	19.920	1785.54	-4.62	4.67	3.76	40°09'29.026"N	104°31'29.303"W	0.08	
1880.01	0.250	27.000	1879.97	-5.11	5.17	3.97	40°09'29.031"N	104°31'29.300"W	0.16	
1974.39	0.170	321.600	1974.35	-5.41	5.46	3.97	40°09'29.034"N	104°31'29.300"W	0.25	
2056.00	0.150	299.210	2055.96	-5.56	5.61	3.81	40°09'29.035"N	104°31'29.302"W	0.08	Tie to Surface Surveys
2073.00	0.070	271.820	2072.96	-5.57	5.62	3.78	40°09'29.035"N	104°31'29.303"W	0.55	
2167.00	0.250	231.950	2166.96	-5.45	5.49	3.56	40°09'29.034"N	104°31'29.305"W	0.21	
2262.00	0.040	314.900	2261.96	-5.34	5.39	3.37	40°09'29.033"N	104°31'29.308"W	0.26	
2356.00	0.910	338.300	2355.96	-6.07	6.11	3.07	40°09'29.040"N	104°31'29.312"W	0.93	
2451.00	3.150	340.860	2450.89	-9.25	9.27	1.94	40°09'29.071"N	104°31'29.326"W	2.36	
2545.00	5.280	342.650	2544.63	-15.84	15.84	-0.20	40°09'29.137"N	104°31'29.352"W	2.27	
2640.00	6.750	346.060	2639.11	-25.47	25.43	-2.85	40°09'29.232"N	104°31'29.385"W	1.59	



Actual Wellpath Report
WASTE MANAGEMENT Y23-776 AWP
Page 3 of 11



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#09 WASTE MANAGEMENT Y23-776(787'FNL&953'FWL,SEC.11)
Area	COLORADO	Well	WASTE MANAGEMENT Y23-776
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WASTE MANAGEMENT Y23-776 AWB
Facility	SEC.11-T02N-R64W		

WELLPATH DATA (210 stations)											
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments	
2735.00	8.360	349.770	2733.28	-37.72	37.65	-5.42	40°09'29.353"N	104°31'29.416"W	1.77		
2829.00	10.570	349.860	2825.99	-52.97	52.86	-8.15	40°09'29.503"N	104°31'29.450"W	2.35		
2924.00	11.600	349.210	2919.22	-70.97	70.82	-11.48	40°09'29.681"N	104°31'29.490"W	1.09		
3018.00	11.640	347.070	3011.30	-89.55	89.35	-15.37	40°09'29.865"N	104°31'29.537"W	0.46		
3112.00	11.720	346.030	3103.35	-108.11	107.86	-19.79	40°09'30.048"N	104°31'29.592"W	0.24		
3207.00	11.620	350.370	3196.39	-126.96	126.65	-23.72	40°09'30.234"N	104°31'29.640"W	0.93		
3301.00	11.780	352.980	3288.43	-145.85	145.51	-26.48	40°09'30.421"N	104°31'29.672"W	0.59		
3396.00	11.830	357.530	3381.43	-165.23	164.86	-28.08	40°09'30.612"N	104°31'29.690"W	0.98		
3490.00	11.830	3.470	3473.43	-184.47	184.11	-27.92	40°09'30.802"N	104°31'29.685"W	1.29		
3585.00	11.610	4.550	3566.45	-203.70	203.36	-26.57	40°09'30.992"N	104°31'29.665"W	0.33		
3680.00	11.610	5.310	3659.51	-222.72	222.41	-24.93	40°09'31.180"N	104°31'29.642"W	0.16		
3774.00	11.570	8.390	3751.59	-241.43	241.15	-22.67	40°09'31.365"N	104°31'29.610"W	0.66		
3869.00	11.520	9.020	3844.67	-260.19	259.94	-19.80	40°09'31.551"N	104°31'29.570"W	0.14		
3963.00	11.560	6.470	3936.77	-278.78	278.57	-17.26	40°09'31.735"N	104°31'29.535"W	0.54		
4058.00	11.770	357.920	4029.82	-297.91	297.71	-16.54	40°09'31.924"N	104°31'29.523"W	1.83		
4152.00	11.720	351.750	4121.85	-316.96	316.74	-18.26	40°09'32.112"N	104°31'29.542"W	1.34		
4247.00	11.720	357.970	4214.88	-336.18	335.94	-19.99	40°09'32.302"N	104°31'29.562"W	1.33		
4341.00	11.770	0.790	4306.91	-355.30	355.06	-20.19	40°09'32.491"N	104°31'29.562"W	0.61		
4435.00	11.480	1.330	4398.98	-374.24	374.00	-19.84	40°09'32.678"N	104°31'29.555"W	0.33		
4530.00	11.630	1.650	4492.06	-393.25	393.03	-19.35	40°09'32.866"N	104°31'29.546"W	0.17		
4624.00	11.620	0.090	4584.13	-412.18	411.96	-19.06	40°09'33.053"N	104°31'29.539"W	0.33		
4719.00	11.470	358.790	4677.21	-431.19	430.97	-19.25	40°09'33.241"N	104°31'29.539"W	0.32		
4813.00	11.310	359.620	4769.35	-449.76	449.54	-19.50	40°09'33.424"N	104°31'29.540"W	0.24		
4907.00	11.270	358.980	4861.54	-468.16	467.94	-19.73	40°09'33.606"N	104°31'29.540"W	0.14		
5002.00	11.440	0.980	4954.68	-486.86	486.64	-19.73	40°09'33.791"N	104°31'29.537"W	0.45		
5097.00	11.450	3.910	5047.79	-505.67	505.47	-18.93	40°09'33.977"N	104°31'29.524"W	0.61		
5191.00	11.910	2.750	5139.84	-524.66	524.46	-17.83	40°09'34.164"N	104°31'29.507"W	0.55		
5286.00	11.730	359.970	5232.83	-544.10	543.91	-17.36	40°09'34.357"N	104°31'29.499"W	0.63		
5380.00	11.410	0.560	5324.92	-562.95	562.76	-17.28	40°09'34.543"N	104°31'29.495"W	0.36		
5475.00	10.620	1.670	5418.17	-581.09	580.91	-16.93	40°09'34.722"N	104°31'29.488"W	0.86		



Actual Wellpath Report
WASTE MANAGEMENT Y23-776 AWP
Page 4 of 11



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#09 WASTE MANAGEMENT Y23-776(787'FNL&953'FWL,SEC.11)
Area	COLORADO	Well	WASTE MANAGEMENT Y23-776
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WASTE MANAGEMENT Y23-776 AWB
Facility	SEC.11-T02N-R64W		

WELLPATH DATA (210 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5570.00	9.740	1.330	5511.67	-597.86	597.69	-16.49	40°09'34.888"N	104°31'29.480"W	0.93	
5664.00	10.220	0.320	5604.25	-614.15	613.98	-16.26	40°09'35.049"N	104°31'29.474"W	0.54	
5758.00	10.810	359.660	5696.67	-631.30	631.14	-16.26	40°09'35.218"N	104°31'29.472"W	0.64	
5853.00	11.260	0.700	5789.91	-649.48	649.32	-16.20	40°09'35.398"N	104°31'29.469"W	0.52	
5947.00	11.960	1.220	5881.99	-668.39	668.23	-15.88	40°09'35.585"N	104°31'29.462"W	0.75	
6042.00	12.090	4.450	5974.90	-688.13	687.99	-14.90	40°09'35.780"N	104°31'29.446"W	0.72	
6136.00	11.910	3.090	6066.85	-707.61	707.49	-13.61	40°09'35.973"N	104°31'29.427"W	0.36	
6231.00	11.590	359.260	6159.86	-726.94	726.83	-13.21	40°09'36.164"N	104°31'29.419"W	0.89	
6326.00	2.540	336.950	6254.05	-738.45	738.33	-14.16	40°09'36.277"N	104°31'29.430"W	9.78	
6420.00	9.000	192.280	6347.72	-733.20	733.05	-16.55	40°09'36.225"N	104°31'29.461"W	11.88	
6515.00	14.620	194.660	6440.68	-714.39	714.17	-21.16	40°09'36.039"N	104°31'29.523"W	5.94	
6609.00	20.240	198.140	6530.33	-687.55	687.22	-29.24	40°09'35.774"N	104°31'29.631"W	6.08	
6704.00	29.150	189.650	6616.58	-649.16	648.70	-38.25	40°09'35.394"N	104°31'29.753"W	10.07	
6798.00	40.010	179.050	6693.93	-596.22	595.72	-41.60	40°09'34.871"N	104°31'29.803"W	13.17	
6893.00	50.530	175.180	6760.70	-528.91	528.44	-38.00	40°09'34.206"N	104°31'29.767"W	11.44	
6987.00	60.900	175.970	6813.58	-451.50	451.11	-32.05	40°09'33.441"N	104°31'29.701"W	11.05	
7082.00	69.920	177.400	6853.07	-365.29	364.96	-27.10	40°09'32.589"N	104°31'29.649"W	9.59	
7176.00	79.380	182.140	6877.94	-274.78	274.45	-26.82	40°09'31.695"N	104°31'29.659"W	11.17	
7271.00	89.510	184.830	6887.13	-180.62	180.20	-32.58	40°09'30.764"N	104°31'29.746"W	11.03	
7365.00	89.660	185.860	6887.81	-87.16	86.61	-41.34	40°09'29.840"N	104°31'29.872"W	1.11	
7460.00	89.570	185.850	6888.45	7.20	-7.89	-51.03	40°09'28.908"N	104°31'30.010"W	0.10	
7554.00	89.660	185.180	6889.08	100.63	-101.45	-60.06	40°09'27.984"N	104°31'30.140"W	0.72	
7649.00	90.120	183.350	6889.26	195.26	-196.19	-67.13	40°09'27.049"N	104°31'30.244"W	1.99	
7743.00	90.000	180.030	6889.16	289.16	-290.13	-69.90	40°09'26.121"N	104°31'30.293"W	3.53	
7838.00	90.120	176.850	6889.06	384.14	-385.08	-67.31	40°09'25.182"N	104°31'30.273"W	3.35	
7932.00	90.030	175.740	6888.94	478.02	-478.89	-61.24	40°09'24.255"N	104°31'30.208"W	1.18	
8027.00	89.910	176.550	6888.99	572.88	-573.67	-54.85	40°09'23.317"N	104°31'30.140"W	0.86	
8122.00	90.060	177.510	6889.02	667.81	-668.54	-49.93	40°09'22.379"N	104°31'30.090"W	1.02	
8216.00	90.000	178.030	6888.97	761.78	-762.47	-46.27	40°09'21.451"N	104°31'30.056"W	0.56	
8311.00	89.880	178.360	6889.07	856.76	-857.42	-43.28	40°09'20.512"N	104°31'30.031"W	0.37	

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Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WASTE MANAGEMENT Y23-776 AWB
Facility	SEC.11-T02N-R64W		

WELLPATH DATA (210 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8405.00	90.150	177.920	6889.04	950.74	-951.37	-40.23	40°09'19.583"N	104°31'30.005"W	0.55	
8500.00	89.940	177.480	6888.97	1045.71	-1046.30	-36.42	40°09'18.645"N	104°31'29.969"W	0.51	
8595.00	89.850	176.630	6889.14	1140.64	-1141.17	-31.53	40°09'17.707"N	104°31'29.920"W	0.90	
8689.00	90.060	176.420	6889.21	1234.53	-1235.00	-25.84	40°09'16.779"N	104°31'29.860"W	0.32	
8784.00	90.120	177.070	6889.07	1329.45	-1329.84	-20.44	40°09'15.841"N	104°31'29.804"W	0.69	
8878.00	90.090	176.470	6888.89	1423.36	-1423.69	-15.15	40°09'14.913"N	104°31'29.749"W	0.64	
8973.00	90.000	176.170	6888.82	1518.24	-1518.50	-9.05	40°09'13.976"N	104°31'29.684"W	0.33	
9067.00	90.060	175.790	6888.77	1612.08	-1612.26	-2.46	40°09'13.049"N	104°31'29.612"W	0.41	
9162.00	89.940	176.170	6888.77	1706.93	-1707.03	4.20	40°09'12.112"N	104°31'29.540"W	0.42	
9256.00	90.830	178.110	6888.14	1800.86	-1800.91	8.89	40°09'11.183"N	104°31'29.493"W	2.27	
9351.00	90.950	179.110	6886.66	1895.84	-1895.87	11.19	40°09'10.245"N	104°31'29.476"W	1.06	
9445.00	90.860	179.470	6885.18	1989.83	-1989.85	12.36	40°09'09.316"N	104°31'29.475"W	0.39	
9540.00	89.850	178.630	6884.59	2084.83	-2084.83	13.93	40°09'08.377"N	104°31'29.468"W	1.38	
9634.00	90.120	178.390	6884.61	2178.82	-2178.80	16.38	40°09'07.449"N	104°31'29.450"W	0.38	
9729.00	90.220	178.750	6884.33	2273.81	-2273.77	18.75	40°09'06.510"N	104°31'29.433"W	0.39	
9824.00	90.120	179.470	6884.05	2368.81	-2368.75	20.22	40°09'05.571"N	104°31'29.427"W	0.77	
9918.00	90.030	179.820	6883.93	2462.81	-2462.75	20.81	40°09'04.642"N	104°31'29.433"W	0.38	
10013.00	90.000	180.320	6883.90	2557.80	-2557.75	20.69	40°09'03.703"N	104°31'29.448"W	0.53	
10107.00	90.000	181.350	6883.90	2651.76	-2651.74	19.32	40°09'02.775"N	104°31'29.479"W	1.10	
10202.00	89.970	183.480	6883.93	2746.61	-2746.65	15.32	40°09'01.837"N	104°31'29.544"W	2.24	
10297.00	89.850	182.660	6884.08	2841.39	-2841.51	10.23	40°09'00.901"N	104°31'29.623"W	0.87	
10391.00	89.880	180.920	6884.30	2935.30	-2935.46	7.29	40°08'59.973"N	104°31'29.674"W	1.85	
10486.00	90.060	177.700	6884.35	3030.28	-3030.44	8.44	40°08'59.034"N	104°31'29.672"W	3.39	
10580.00	90.060	175.820	6884.25	3124.19	-3124.29	13.75	40°08'58.106"N	104°31'29.617"W	2.00	
10675.00	89.970	178.120	6884.22	3219.11	-3219.15	18.77	40°08'57.168"N	104°31'29.566"W	2.42	
10770.00	89.970	178.160	6884.27	3314.09	-3314.10	21.86	40°08'56.229"N	104°31'29.540"W	0.04	
10864.00	89.880	178.240	6884.40	3408.08	-3408.05	24.81	40°08'55.301"N	104°31'29.515"W	0.13	
10959.00	89.940	177.860	6884.55	3503.06	-3503.00	28.04	40°08'54.362"N	104°31'29.487"W	0.40	
11053.00	90.000	177.720	6884.59	3597.03	-3596.93	31.67	40°08'53.434"N	104°31'29.454"W	0.16	
11148.00	90.000	178.400	6884.59	3692.01	-3691.87	34.88	40°08'52.495"N	104°31'29.426"W	0.72	



Actual Wellpath Report
WASTE MANAGEMENT Y23-776 AWP



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#09 WASTE MANAGEMENT Y23-776(787'FNL&953'FWL,SEC.11)
Area	COLORADO	Well	WASTE MANAGEMENT Y23-776
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WASTE MANAGEMENT Y23-776 AWB
Facility	SEC.11-T02N-R64W		

WELLPATH DATA (210 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11242.00	90.120	179.030	6884.50	3786.00	-3785.85	36.99	40°08'51.566"N	104°31'29.412"W	0.68	
11337.00	90.090	178.650	6884.32	3881.00	-3880.83	38.91	40°08'50.627"N	104°31'29.401"W	0.40	
11431.00	89.970	177.960	6884.27	3974.99	-3974.79	41.69	40°08'49.699"N	104°31'29.378"W	0.75	
11526.00	90.030	176.870	6884.27	4069.94	-4069.69	45.98	40°08'48.761"N	104°31'29.336"W	1.15	
11620.00	89.970	177.700	6884.27	4163.89	-4163.58	50.43	40°08'47.832"N	104°31'29.292"W	0.89	
11715.00	89.850	178.130	6884.42	4258.86	-4258.52	53.89	40°08'46.894"N	104°31'29.261"W	0.47	
11809.00	90.120	178.730	6884.45	4352.85	-4352.49	56.46	40°08'45.965"N	104°31'29.241"W	0.70	
11904.00	90.150	179.160	6884.22	4447.85	-4447.47	58.21	40°08'45.026"N	104°31'29.232"W	0.45	
11998.00	90.150	179.910	6883.98	4541.85	-4541.46	58.97	40°08'44.097"N	104°31'29.236"W	0.80	
12092.00	90.150	180.140	6883.73	4635.84	-4635.46	58.93	40°08'43.168"N	104°31'29.250"W	0.24	
12187.00	90.180	181.200	6883.46	4730.81	-4730.46	57.82	40°08'42.230"N	104°31'29.277"W	1.12	
12281.00	90.280	181.520	6883.08	4824.74	-4824.43	55.59	40°08'41.302"N	104°31'29.319"W	0.36	
12376.00	90.250	181.870	6882.64	4919.65	-4919.39	52.78	40°08'40.364"N	104°31'29.369"W	0.37	
12471.00	90.090	181.900	6882.36	5014.55	-5014.33	49.66	40°08'39.426"N	104°31'29.423"W	0.17	
12565.00	90.150	182.240	6882.16	5108.43	-5108.27	46.26	40°08'38.498"N	104°31'29.480"W	0.37	
12754.00	90.220	181.090	6881.55	5297.26	-5297.19	40.77	40°08'36.632"N	104°31'29.577"W	0.61	
12849.00	90.490	180.060	6880.96	5392.23	-5392.18	39.82	40°08'35.693"N	104°31'29.603"W	1.12	
12943.00	90.180	178.700	6880.41	5486.22	-5486.17	40.83	40°08'34.764"N	104°31'29.603"W	1.48	
13038.00	90.120	177.120	6880.16	5581.19	-5581.10	44.30	40°08'33.826"N	104°31'29.572"W	1.66	
13132.00	90.090	176.240	6879.99	5675.10	-5674.95	49.74	40°08'32.898"N	104°31'29.515"W	0.94	
13227.00	90.250	176.360	6879.71	5769.98	-5769.75	55.87	40°08'31.960"N	104°31'29.450"W	0.21	
13321.00	89.970	176.740	6879.53	5863.87	-5863.58	61.53	40°08'31.033"N	104°31'29.390"W	0.50	
13416.00	90.220	176.420	6879.37	5958.77	-5958.41	67.20	40°08'30.095"N	104°31'29.331"W	0.43	
13510.00	90.220	177.210	6879.01	6052.69	-6052.26	72.42	40°08'29.167"N	104°31'29.277"W	0.84	
13605.00	90.250	177.960	6878.62	6147.65	-6147.17	76.42	40°08'28.229"N	104°31'29.238"W	0.79	
13699.00	90.060	179.100	6878.37	6241.64	-6241.14	78.83	40°08'27.300"N	104°31'29.221"W	1.23	
13794.00	90.180	177.650	6878.17	6336.62	-6336.10	81.53	40°08'26.361"N	104°31'29.199"W	1.53	
13889.00	90.220	177.390	6877.84	6431.58	-6431.01	85.64	40°08'25.423"N	104°31'29.160"W	0.28	
13983.00	90.120	177.360	6877.56	6525.53	-6524.91	89.94	40°08'24.495"N	104°31'29.118"W	0.11	
14078.00	89.970	179.930	6877.48	6620.52	-6619.88	92.19	40°08'23.556"N	104°31'29.102"W	2.71	



Actual Wellpath Report
WASTE MANAGEMENT Y23-776 AWP
Page 7 of 11



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#09 WASTE MANAGEMENT Y23-776(787'FNL&953'FWL,SEC.11)
Area	COLORADO	Well	WASTE MANAGEMENT Y23-776
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WASTE MANAGEMENT Y23-776 AWB
Facility	SEC.11-T02N-R64W		

WELLPATH DATA (210 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
14172.00	90.090	180.970	6877.43	6714.50	-6713.87	91.45	40°08'22.627"N	104°31'29.125"W	1.11	
14267.00	90.060	180.340	6877.31	6809.47	-6808.87	90.36	40°08'21.689"N	104°31'29.153"W	0.66	
14361.00	90.060	179.370	6877.21	6903.46	-6902.86	90.60	40°08'20.760"N	104°31'29.163"W	1.03	
14456.00	89.940	180.090	6877.21	6998.45	-6997.86	91.05	40°08'19.821"N	104°31'29.171"W	0.77	
14550.00	90.250	180.680	6877.06	7092.43	-7091.86	90.42	40°08'18.892"N	104°31'29.192"W	0.71	
14645.00	90.280	180.670	6876.62	7187.40	-7186.85	89.30	40°08'17.954"N	104°31'29.220"W	0.03	
14739.00	89.820	179.680	6876.53	7281.39	-7280.85	89.01	40°08'17.025"N	104°31'29.237"W	1.16	
14834.00	89.910	176.180	6876.76	7376.35	-7375.77	92.44	40°08'16.086"N	104°31'29.206"W	3.69	
14928.00	90.180	174.120	6876.68	7470.11	-7469.43	100.39	40°08'15.160"N	104°31'29.117"W	2.21	
15023.00	90.000	177.670	6876.53	7564.93	-7564.17	107.19	40°08'14.223"N	104°31'29.043"W	3.74	
15117.00	90.090	178.730	6876.46	7658.91	-7658.13	110.14	40°08'13.295"N	104°31'29.018"W	1.13	
15212.00	90.090	179.240	6876.31	7753.91	-7753.11	111.83	40°08'12.356"N	104°31'29.010"W	0.54	
15307.00	90.120	179.650	6876.14	7848.91	-7848.10	112.75	40°08'11.417"N	104°31'29.012"W	0.43	
15401.00	90.250	179.470	6875.83	7942.91	-7942.10	113.47	40°08'10.488"N	104°31'29.016"W	0.24	
15495.00	90.030	179.430	6875.60	8036.91	-8036.10	114.37	40°08'09.559"N	104°31'29.017"W	0.24	
15590.00	90.090	180.110	6875.51	8131.90	-8131.10	114.75	40°08'08.620"N	104°31'29.026"W	0.72	
15685.00	90.150	178.650	6875.31	8226.90	-8226.09	115.78	40°08'07.682"N	104°31'29.026"W	1.54	
15779.00	90.180	178.350	6875.04	8320.89	-8320.05	118.24	40°08'06.753"N	104°31'29.008"W	0.32	
15874.00	90.250	178.790	6874.68	8415.89	-8415.02	120.61	40°08'05.814"N	104°31'28.991"W	0.47	
15968.00	90.180	179.460	6874.33	8509.88	-8509.01	122.05	40°08'04.885"N	104°31'28.986"W	0.72	
16063.00	90.180	179.990	6874.03	8604.88	-8604.01	122.50	40°08'03.946"N	104°31'28.993"W	0.56	
16157.00	90.180	180.700	6873.73	8698.86	-8698.01	121.94	40°08'03.018"N	104°31'29.014"W	0.76	
16252.00	90.180	182.380	6873.43	8793.78	-8792.97	119.38	40°08'02.080"N	104°31'29.060"W	1.77	
16347.00	90.180	183.390	6873.14	8888.58	-8887.85	114.60	40°08'01.143"N	104°31'29.135"W	1.06	
16441.00	90.220	183.010	6872.81	8982.36	-8981.70	109.35	40°08'00.216"N	104°31'29.216"W	0.41	
16536.00	90.430	184.240	6872.27	9077.07	-9076.51	103.35	40°07'59.280"N	104°31'29.307"W	1.31	
16630.00	89.880	183.120	6872.01	9170.79	-9170.31	97.31	40°07'58.353"N	104°31'29.398"W	1.33	
16725.00	90.860	182.400	6871.40	9265.60	-9265.20	92.74	40°07'57.416"N	104°31'29.470"W	1.28	
16819.00	89.970	179.210	6870.72	9359.55	-9359.17	91.42	40°07'56.488"N	104°31'29.500"W	3.52	
16914.00	90.060	175.210	6870.69	9454.47	-9454.04	96.04	40°07'55.550"N	104°31'29.454"W	4.21	



Actual Wellpath Report
WASTE MANAGEMENT Y23-776 AWP
Page 8 of 11



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#09 WASTE MANAGEMENT Y23-776(787'FNL&953'FWL,SEC.11)
Area	COLORADO	Well	WASTE MANAGEMENT Y23-776
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WASTE MANAGEMENT Y23-776 AWB
Facility	SEC.11-T02N-R64W		

WELLPATH DATA (210 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
17008.00	89.970	176.340	6870.67	9548.30	-9547.78	102.97	40°07'54.623"N	104°31'29.378"W	1.21	
17103.00	90.060	178.180	6870.65	9643.24	-9642.67	107.51	40°07'53.685"N	104°31'29.333"W	1.94	
17197.00	89.940	179.680	6870.65	9737.24	-9736.65	109.27	40°07'52.756"N	104°31'29.324"W	1.60	
17292.00	90.000	178.660	6870.70	9832.24	-9831.64	110.64	40°07'51.817"N	104°31'29.320"W	1.08	
17386.00	90.000	177.390	6870.70	9926.21	-9925.58	113.88	40°07'50.888"N	104°31'29.291"W	1.35	
17481.00	89.970	177.070	6870.72	10021.16	-10020.47	118.47	40°07'49.950"N	104°31'29.246"W	0.34	
17575.00	90.060	176.930	6870.70	10115.09	-10114.34	123.39	40°07'49.022"N	104°31'29.196"W	0.18	
17670.00	89.910	177.110	6870.72	10210.02	-10209.21	128.33	40°07'48.084"N	104°31'29.145"W	0.25	
17764.00	89.880	176.900	6870.89	10303.94	-10303.08	133.24	40°07'47.156"N	104°31'29.095"W	0.23	
17859.00	90.000	176.790	6870.99	10398.86	-10397.94	138.47	40°07'46.218"N	104°31'29.042"W	0.17	
17953.00	89.750	176.050	6871.20	10492.75	-10491.76	144.34	40°07'45.290"N	104°31'28.979"W	0.83	
18048.00	89.880	177.240	6871.50	10587.65	-10586.59	149.90	40°07'44.353"N	104°31'28.921"W	1.26	
18142.00	89.940	178.210	6871.65	10681.62	-10680.52	153.63	40°07'43.424"N	104°31'28.886"W	1.03	
18237.00	89.970	178.650	6871.73	10776.61	-10775.48	156.23	40°07'42.485"N	104°31'28.866"W	0.46	
18332.00	89.910	178.650	6871.83	10871.60	-10870.45	158.47	40°07'41.547"N	104°31'28.851"W	0.06	
18426.00	89.820	176.460	6872.05	10965.56	-10964.36	162.48	40°07'40.618"N	104°31'28.813"W	2.33	
18521.00	90.090	174.990	6872.12	11060.38	-11059.09	169.56	40°07'39.681"N	104°31'28.735"W	1.57	
18615.00	90.150	174.030	6871.92	11154.06	-11152.66	178.56	40°07'38.756"N	104°31'28.632"W	1.02	
18710.00	90.120	176.110	6871.70	11248.80	-11247.31	186.72	40°07'37.820"N	104°31'28.541"W	2.19	
18805.00	90.120	178.590	6871.50	11343.74	-11342.20	191.11	40°07'36.882"N	104°31'28.498"W	2.61	
18899.00	90.150	181.230	6871.28	11437.73	-11436.19	191.26	40°07'35.953"N	104°31'28.509"W	2.81	
18994.00	90.180	180.220	6871.01	11532.69	-11531.18	190.06	40°07'35.014"N	104°31'28.538"W	1.06	
19088.00	90.180	180.120	6870.71	11626.68	-11625.18	189.78	40°07'34.085"N	104°31'28.555"W	0.11	
19183.00	90.120	180.050	6870.46	11721.67	-11720.18	189.64	40°07'33.147"N	104°31'28.570"W	0.10	
19278.00	90.180	179.980	6870.21	11816.66	-11815.18	189.61	40°07'32.208"N	104°31'28.584"W	0.10	
19372.00	90.090	179.920	6869.99	11910.65	-11909.18	189.69	40°07'31.279"N	104°31'28.596"W	0.12	
19467.00	90.180	179.890	6869.77	12005.64	-12004.18	189.85	40°07'30.340"N	104°31'28.608"W	0.10	
19561.00	90.250	180.110	6869.42	12099.64	-12098.18	189.85	40°07'29.412"N	104°31'28.621"W	0.25	
19656.00	90.120	180.150	6869.11	12194.62	-12193.17	189.64	40°07'28.473"N	104°31'28.637"W	0.14	Last BHI MWD Survey
19742.00	90.120	180.150	6868.93	12280.61	-12279.17	189.41	40°07'27.623"N	104°31'28.652"W	0.00	Projection to Bit

HOLE & CASING SECTIONS - Ref Wellbore: WASTE MANAGEMENT Y23-776 AWB Ref Wellpath: WASTE MANAGEMENT Y23-776 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	2057.00	2027.00	30.00	2056.96	-0.03	0.01	5.61	3.80
9.625in Casing Surface	30.00	2057.00	2027.00	30.00	2056.96	-0.03	0.01	5.61	3.80
8.5in Open Hole	2057.00	19656.00	17599.00	2056.96	6869.11	5.61	3.80	-12193.17	189.64



Actual Wellpath Report

WASTE MANAGEMENT Y23-776 AWP

Page 9 of 11



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#09 WASTE MANAGEMENT Y23-776(787'FNL&953'FWL,SEC.11)
Area	COLORADO	Well	WASTE MANAGEMENT Y23-776
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WASTE MANAGEMENT Y23-776 AWB
Facility	SEC.11-T02N-R64W		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
WASTE MANAGMENT Y23-712 SECTION 11	56.00	18.00	3600.20	3276161.57	1301937.56	40°09'28.764"N	104°30'42.984"W	polygon
WASTE MANAGMENT Y23-712 SECTION 14	56.00	18.00	3600.20	3276161.57	1301937.56	40°09'28.764"N	104°30'42.984"W	polygon
WASTE MANAGMENT Y23-712 SECTION 23	56.00	18.00	3600.20	3276161.57	1301937.56	40°09'28.764"N	104°30'42.984"W	polygon
WASTE MANAGMENT Y23-712 SECTION 11 HARDLINE (460'SETBACK)	6756.00	18.00	3600.20	3276161.57	1301937.56	40°09'28.764"N	104°30'42.984"W	polygon
WASTE MANAGMENT Y23-712 SECTION 14 HARDLINE (460'SETBACK)	6756.00	18.00	3600.20	3276161.57	1301937.56	40°09'28.764"N	104°30'42.984"W	polygon
WASTE MANAGMENT Y23-712 SECTION 23 HARDLINE (460'SETBACK)	6756.00	18.00	3600.20	3276161.57	1301937.56	40°09'28.764"N	104°30'42.984"W	polygon
WASTE MANAGMENT Y23-776 REV-3 BHL (2490'FNL&928'FWL,SEC.23)	6868.32	-12279.34	165.81	3272727.33	1289640.76	40°07'27.624"N	104°31'28.956"W	point
WASTE MANAGMENT Y23-776 REV-2 BHL (2490'FNL&928'FWL,SEC.23)	6888.32	-12279.34	165.81	3272727.33	1289640.76	40°07'27.624"N	104°31'28.956"W	point
WASTE MANAGMENT Y23-776 REV-3 Landing Point	6890.00	140.00	-30.00	3272531.53	1302059.55	40°09'30.367"N	104°31'29.719"W	point
WASTE MANAGMENT Y23-776 REV-2 Landing Point	6910.00	140.00	-30.00	3272531.53	1302059.55	40°09'30.367"N	104°31'29.719"W	point
WASTE MANAGMENT Y23-776 REV-1 BHL (2490'FNL&928'FWL,SEC.23)	6942.48	-12279.34	165.81	3272727.33	1289640.76	40°07'27.624"N	104°31'28.956"W	point
WASTE MANAGMENT Y23-776 Landing Point	6975.00	140.00	-30.00	3272531.53	1302059.55	40°09'30.367"N	104°31'29.719"W	point



Actual Wellpath Report

WASTE MANAGEMENT Y23-776 AWP

Page 10 of 11



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#09 WASTE MANAGEMENT Y23-776(787'FNL&953'FWL,SEC.11)
Area	COLORADO	Well	WASTE MANAGEMENT Y23-776
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WASTE MANAGEMENT Y23-776 AWB
Facility	SEC.11-T02N-R64W		

WELLPATH COMPOSITION - Ref Wellbore: WASTE MANAGEMENT Y23-776 AWB Ref Wellpath: WASTE MANAGEMENT Y23-776 AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	2056.00	Gyrodatta standard - Drop gyro or Multi-shot	3rd Party Surface Gyros <83.27'-2056'>	WASTE MANAGEMENT Y23-776 AWB
2056.00	19656.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	BHI/ATC 8.5" Hole OWSG,MWD+IFR1+MSA <2073'-19656'>	WASTE MANAGEMENT Y23-776 AWB
19656.00	19742.00	Blind Drilling (std)	Projection to bit	WASTE MANAGEMENT Y23-776 AWB



Actual Wellpath Report

WASTE MANAGEMENT Y23-776 AWP

Page 11 of 11



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#09 WASTE MANAGEMENT Y23-776(787'FNL&953'FWL,SEC.11)
Area	COLORADO	Well	WASTE MANAGEMENT Y23-776
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WASTE MANAGEMENT Y23-776 AWB
Facility	SEC.11-T02N-R64W		

WELLPATH COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
2056.00	0.150	299.210	2055.96	Tie to Surface Surveys	
19656.00	90.120	180.150	6869.11	Last BHI MWD Survey	
19742.00	90.120	180.150	6868.93	Projection to Bit	

COMMENTS	
<div>Wellpath general comments</div> <div>SURFACE LOCATION: NWNW</div> <div>40.15805N</div> <div>104.52482W</div> <div>API: 05-123-44847</div>	