

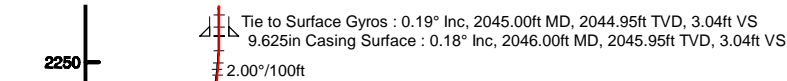
# NOBLE ENERGY, INC

Location: COLORADO Slot: SLOT#08 WASTE MANAGEMENT Y23-768(787°FNL&991°FWL,SEC.11)  
Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: WASTE MANAGEMENT Y23-768  
Facility: SEC.11-T02N-R64W Wellbore: WASTE MANAGEMENT Y23-768 PWB

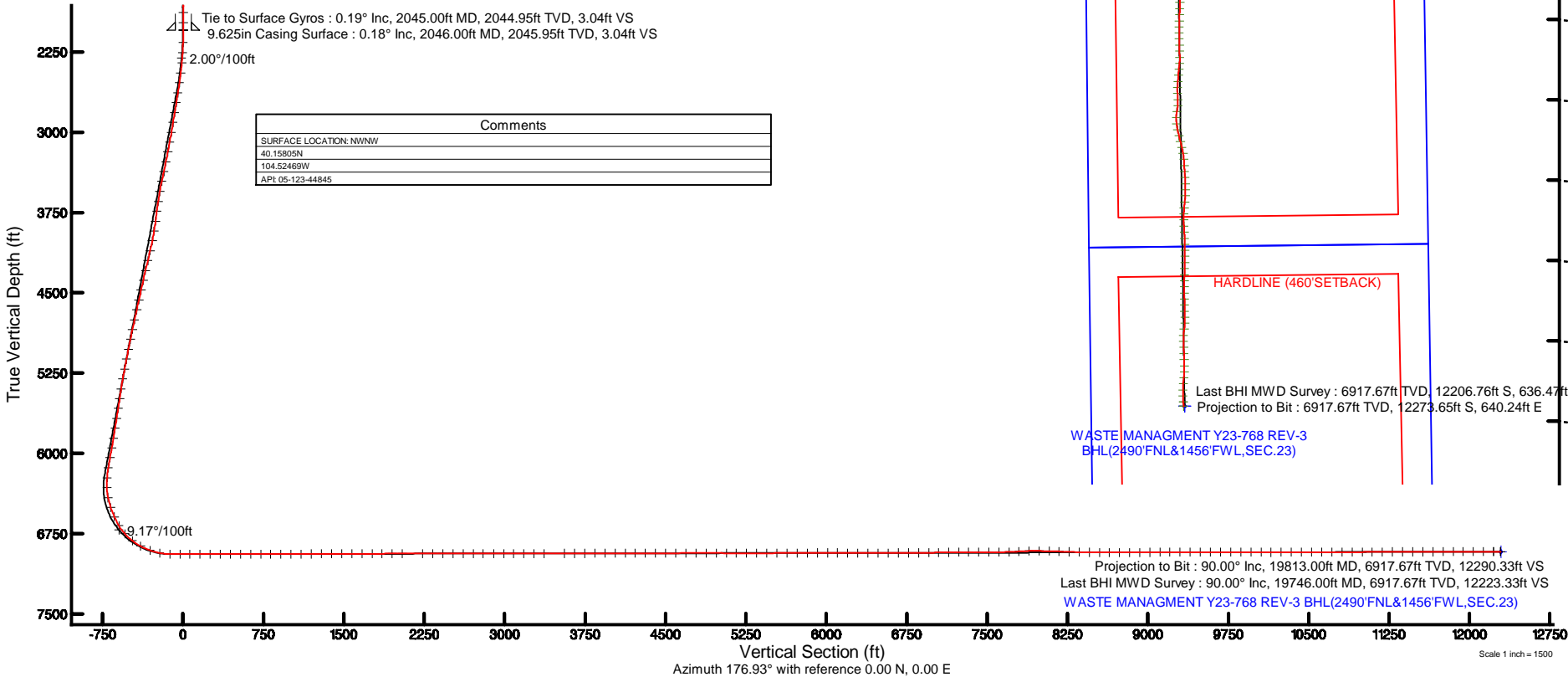
Plot reference wellpath is WASTE MANAGEMENT Y23-768 (REV-C.0) PWP	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to RIG(30KB) (RKB)	* = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to RIG(30KB) (RKB)	North Reference: Grid north
RIG(30KB) (RKB) to Mean Sea Level: 4980 feet	Scale: True distance
Mean Sea Level to Ground level (At Slot: SLOT#08 WASTE MANAGEMENT Y23-768(787°FNL&991°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

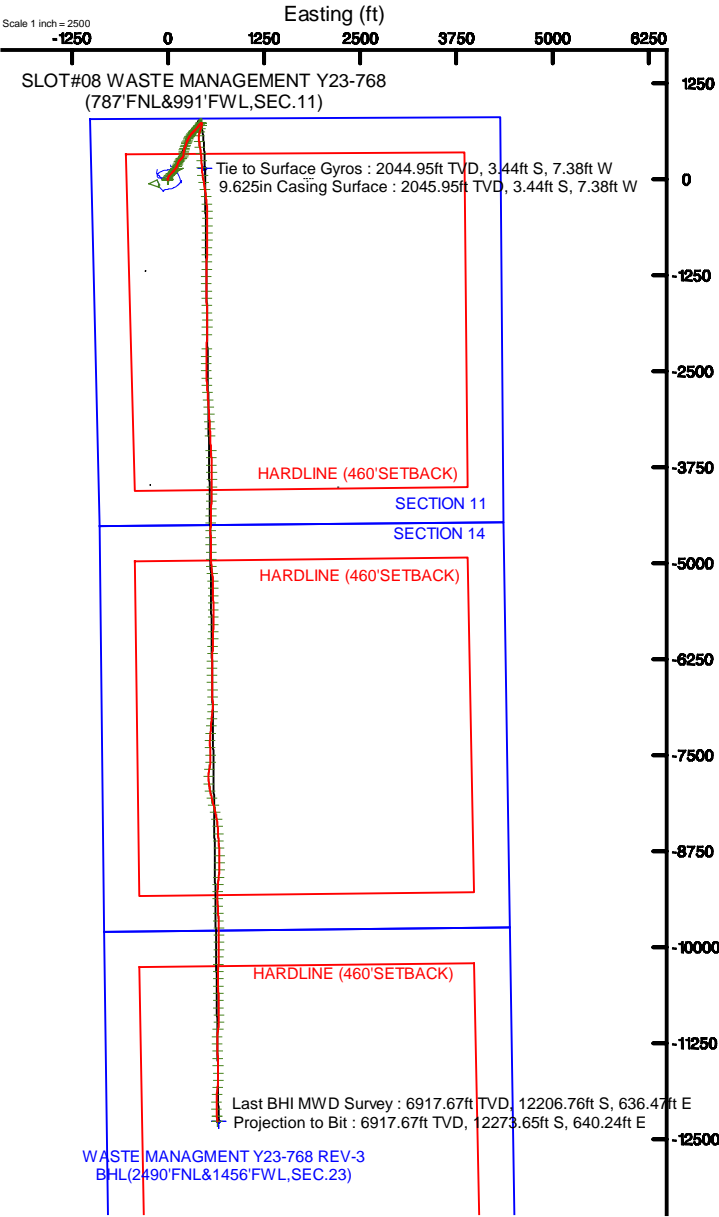
Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.11-T02N-R64W			3276161.567	1301937.555	40°09'28.764"N	104°30'42.984"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#08 WASTE MANAGEMENT Y23-768(787°FNL&991°FWL,SEC.11)	-17.80	-3563.86	3272597.862	1301919.959	40°09'28.980"N	104°31'28.884"W
RIG(30KB) (RKB) to Ground level (At Slot: SLOT#08 WASTE MANAGEMENT Y23-768(787°FNL&991°FWL,SEC.11))					4980ft	
Mean Sea Level to Ground level (At Slot: SLOT#08 WASTE MANAGEMENT Y23-768(787°FNL&991°FWL,SEC.11))					0ft	
RIG(30KB) (RKB) to Mean Sea Level					4980ft	



Comments
SURFACE LOCATION: NWNW
40.15805N
104.52469W
APt 05-123-44845



Vertical Section (ft)  
Azimuth 176.93° with reference 0.00 N, 0.00 E



Last BHI MWD Survey : 6917.67ft TVD, 12206.76ft S, 636.47ft E  
Projection to Bit : 6917.67ft TVD, 12273.65ft S, 640.24ft E  
WASTE MANAGEMENT Y23-768 REV-3  
BHL(2490°FNL&1456°FWL,SEC.23)  
Projection to Bit : 90.00° Inc, 19813.00ft MD, 6917.67ft TVD, 12290.33ft VS  
Last BHI MWD Survey : 90.00° Inc, 19746.00ft MD, 6917.67ft TVD, 12223.33ft VS  
WASTE MANAGEMENT Y23-768 REV-3 BHL(2490°FNL&1456°FWL,SEC.23)

Scale 1 inch = 1500



Actual Wellpath Report

WASTE MANAGEMENT Y23-768 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#08 WASTE MANAGEMENT Y23-768(787'FNL&991'FWL,SEC.11)
Area	COLORADO	Well	WASTE MANAGEMENT Y23-768
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WASTE MANAGEMENT Y23-768 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 2:50:51 PM
Convergence at slot	0.64° East	Database/Source file	WA_DEN_Denver_Defn/WASTE_MANAGEMENT_Y23-768_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-17.60	-3563.86	3272597.86	1301919.96	40°09'28.980"N	104°31'28.884"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	4980.00ft
Horizontal Reference Pt	Slot	RIG(30'KB) (RKB) to Mean Sea Level	4980.00ft
Vertical Reference Pt	RIG(30'KB) (RKB)	RIG(30'KB) (RKB) to Ground Level at Slot (SLOT#08 WASTE MANAGEMENT Y23-768 (787'FNL&991'FWL,SEC.11))	4980.00ft
MD Reference Pt	RIG(30'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	176.93°



Actual Wellpath Report  
WASTE MANAGEMENT Y23-768 AWP  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#08 WASTE MANAGEMENT Y23-768(787'FNL&991'FWL,SEC.11)
Area	COLORADO	Well	WASTE MANAGEMENT Y23-768
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WASTE MANAGEMENT Y23-768 AWB
Facility	SEC.11-T02N-R64W		

WELLPATH DATA (209 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	148.800	0.00	0.00	0.00	0.00	40°09'28.980"N	104°31'28.884"W	0.00	
83.27	0.290	148.800	83.27	0.19	-0.18	0.11	40°09'28.978"N	104°31'28.883"W	0.35	
178.88	0.280	145.780	178.88	0.60	-0.58	0.37	40°09'28.974"N	104°31'28.879"W	0.02	
273.48	0.080	75.180	273.48	0.78	-0.75	0.56	40°09'28.972"N	104°31'28.877"W	0.28	
367.86	0.340	117.550	367.86	0.91	-0.87	0.87	40°09'28.971"N	104°31'28.873"W	0.30	
462.38	0.420	237.920	462.38	1.22	-1.18	0.83	40°09'28.968"N	104°31'28.874"W	0.70	
557.09	0.620	291.800	557.08	1.18	-1.18	0.06	40°09'28.968"N	104°31'28.883"W	0.53	
651.54	0.400	217.400	651.53	1.21	-1.25	-0.62	40°09'28.968"N	104°31'28.892"W	0.68	
746.08	0.540	196.750	746.07	1.88	-1.94	-0.95	40°09'28.961"N	104°31'28.896"W	0.23	
840.52	0.550	216.710	840.50	2.65	-2.73	-1.35	40°09'28.953"N	104°31'28.902"W	0.20	
935.20	0.610	275.050	935.18	2.93	-3.05	-2.12	40°09'28.950"N	104°31'28.912"W	0.60	
1029.79	0.680	273.750	1029.76	2.79	-2.96	-3.18	40°09'28.951"N	104°31'28.925"W	0.08	
1124.14	0.620	272.540	1124.11	2.67	-2.91	-4.25	40°09'28.952"N	104°31'28.939"W	0.07	
1218.70	0.340	273.500	1218.66	2.59	-2.87	-5.04	40°09'28.952"N	104°31'28.949"W	0.30	
1313.24	0.490	262.390	1313.20	2.59	-2.90	-5.72	40°09'28.952"N	104°31'28.958"W	0.18	
1407.72	0.470	269.200	1407.68	2.61	-2.96	-6.51	40°09'28.951"N	104°31'28.968"W	0.06	
1502.10	0.340	215.420	1502.06	2.81	-3.19	-7.06	40°09'28.949"N	104°31'28.975"W	0.41	
1596.67	0.190	235.930	1596.62	3.11	-3.51	-7.35	40°09'28.946"N	104°31'28.979"W	0.19	
1691.26	0.090	277.740	1691.21	3.18	-3.59	-7.55	40°09'28.945"N	104°31'28.982"W	0.14	
1785.57	0.150	5.650	1785.52	3.04	-3.46	-7.62	40°09'28.947"N	104°31'28.983"W	0.18	
1880.01	0.280	87.360	1879.96	2.92	-3.32	-7.37	40°09'28.948"N	104°31'28.979"W	0.32	
1974.39	0.110	231.450	1974.34	2.98	-3.37	-7.21	40°09'28.948"N	104°31'28.977"W	0.40	
2045.00	0.190	254.090	2044.95	3.04	-3.44	-7.38	40°09'28.947"N	104°31'28.980"W	0.14	Tie to Surface Gyros
2163.00	2.090	9.240	2162.93	0.98	-1.37	-7.22	40°09'28.967"N	104°31'28.977"W	1.85	
2258.00	4.150	17.700	2257.78	-3.92	3.61	-5.90	40°09'29.016"N	104°31'28.959"W	2.22	
2352.00	5.900	19.240	2351.42	-11.57	11.42	-3.27	40°09'29.093"N	104°31'28.925"W	1.87	
2447.00	7.780	25.790	2445.74	-21.72	21.82	1.13	40°09'29.195"N	104°31'28.866"W	2.14	
2541.00	9.840	32.110	2538.63	-33.86	34.35	8.17	40°09'29.319"N	104°31'28.774"W	2.42	
2636.00	11.760	38.080	2631.94	-47.79	48.85	18.46	40°09'29.461"N	104°31'28.639"W	2.34	
2730.00	13.240	42.330	2723.71	-62.56	64.35	31.62	40°09'29.612"N	104°31'28.468"W	1.85	



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WASTE MANAGEMENT Y23-768 AWP  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#08 WASTE MANAGEMENT Y23-768(787'FNL&991'FWL,SEC.11)
Area	COLORADO	Well	WASTE MANAGEMENT Y23-768
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WASTE MANAGEMENT Y23-768 AWB
Facility	SEC.11-T02N-R64W		

WELLPATH DATA (209 stations)											
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments	
2825.00	13.280	43.140	2816.18	-77.75	80.35	46.40	40°09'29.769"N	104°31'28.275"W	0.20		
2919.00	13.290	43.040	2907.66	-92.71	96.13	61.16	40°09'29.923"N	104°31'28.083"W	0.03		
3014.00	13.390	39.480	3000.10	-108.39	112.60	75.61	40°09'30.084"N	104°31'27.894"W	0.87		
3108.00	13.250	36.880	3091.58	-124.67	129.62	88.99	40°09'30.251"N	104°31'27.720"W	0.65		
3203.00	13.280	32.750	3184.04	-141.86	147.50	101.43	40°09'30.426"N	104°31'27.557"W	1.00		
3297.00	13.300	27.060	3275.53	-159.97	166.21	112.19	40°09'30.610"N	104°31'27.416"W	1.39		
3392.00	13.260	21.850	3367.99	-179.30	186.06	121.22	40°09'30.805"N	104°31'27.297"W	1.26		
3486.00	12.830	18.920	3459.57	-198.75	205.93	128.61	40°09'31.001"N	104°31'27.198"W	0.84		
3581.00	10.970	23.690	3552.52	-216.61	224.19	135.67	40°09'31.181"N	104°31'27.105"W	2.21		
3675.00	10.250	33.970	3644.92	-231.27	239.32	143.93	40°09'31.329"N	104°31'26.996"W	2.15		
3770.00	10.950	42.560	3738.31	-244.33	252.98	154.76	40°09'31.463"N	104°31'26.855"W	1.82		
3864.00	12.360	49.120	3830.37	-256.74	266.14	168.41	40°09'31.592"N	104°31'26.677"W	2.06		
3959.00	13.340	46.220	3922.99	-270.12	280.38	184.01	40°09'31.731"N	104°31'26.475"W	1.23		
4053.00	13.330	29.600	4014.49	-286.32	297.31	197.19	40°09'31.896"N	104°31'26.302"W	4.06		
4148.00	13.760	4.640	4106.93	-306.76	318.11	203.52	40°09'32.101"N	104°31'26.218"W	6.12		
4242.00	13.220	359.320	4198.34	-328.58	340.00	204.30	40°09'32.317"N	104°31'26.205"W	1.44		
4337.00	13.240	9.300	4290.83	-350.06	361.60	205.93	40°09'32.531"N	104°31'26.181"W	2.40		
4431.00	13.170	10.980	4382.34	-370.96	382.74	209.71	40°09'32.739"N	104°31'26.129"W	0.41		
4525.00	13.470	20.230	4473.83	-391.41	403.52	215.53	40°09'32.944"N	104°31'26.051"W	2.29		
4620.00	13.320	20.870	4566.24	-411.57	424.13	223.26	40°09'33.147"N	104°31'25.949"W	0.22		
4714.00	13.280	16.970	4657.72	-431.61	444.58	230.27	40°09'33.348"N	104°31'25.855"W	0.96		
4809.00	12.890	16.920	4750.26	-451.82	465.15	236.54	40°09'33.551"N	104°31'25.772"W	0.41		
4903.00	13.130	22.350	4841.85	-471.32	485.06	243.65	40°09'33.747"N	104°31'25.677"W	1.32		
4998.00	13.160	23.550	4934.36	-490.73	504.95	252.07	40°09'33.942"N	104°31'25.566"W	0.29		
5093.00	12.770	25.690	5026.94	-509.60	524.32	260.94	40°09'34.133"N	104°31'25.449"W	0.65		
5187.00	13.140	31.550	5118.55	-527.50	542.79	271.04	40°09'34.314"N	104°31'25.316"W	1.45		
5282.00	13.190	32.940	5211.05	-545.16	561.09	282.58	40°09'34.494"N	104°31'25.165"W	0.34		
5376.00	12.670	35.020	5302.67	-561.95	578.53	294.33	40°09'34.665"N	104°31'25.011"W	0.74		
5471.00	12.250	41.720	5395.43	-577.30	594.59	307.02	40°09'34.822"N	104°31'24.846"W	1.58		
5565.00	12.510	43.910	5487.25	-591.32	609.37	320.71	40°09'34.967"N	104°31'24.667"W	0.57		



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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#08 WASTE MANAGEMENT Y23-768(787'FNL&991'FWL,SEC.11)
Area	COLORADO	Well	WASTE MANAGEMENT Y23-768
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WASTE MANAGEMENT Y23-768 AWB
Facility	SEC.11-T02N-R64W		

WELLPATH DATA (209 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5660.00	12.270	45.300	5580.04	-605.05	623.88	335.02	40°09'35.108"N	104°31'24.481"W	0.40	
5754.00	13.110	42.010	5671.74	-619.21	638.83	349.26	40°09'35.255"N	104°31'24.295"W	1.18	
5848.00	12.570	41.540	5763.39	-634.02	654.40	363.18	40°09'35.407"N	104°31'24.114"W	0.59	
5943.00	12.330	40.000	5856.16	-648.79	669.91	376.55	40°09'35.559"N	104°31'23.940"W	0.43	
6037.00	12.960	35.960	5947.88	-664.32	686.13	389.19	40°09'35.718"N	104°31'23.774"W	1.15	
6132.00	12.670	36.160	6040.51	-680.66	703.17	401.60	40°09'35.885"N	104°31'23.612"W	0.31	
6227.00	11.850	33.560	6133.34	-696.56	719.71	413.14	40°09'36.047"N	104°31'23.461"W	1.04	
6321.00	8.680	58.130	6225.87	-707.73	731.50	424.50	40°09'36.162"N	104°31'23.313"W	5.68	
6416.00	7.070	97.730	6320.04	-710.09	734.50	436.39	40°09'36.191"N	104°31'23.160"W	5.82	
6510.00	12.700	185.850	6413.02	-698.74	723.39	441.10	40°09'36.080"N	104°31'23.101"W	15.22	
6605.00	18.960	195.700	6504.38	-673.78	698.11	435.85	40°09'35.831"N	104°31'23.172"W	7.15	
6699.00	25.410	198.010	6591.38	-640.47	664.20	425.47	40°09'35.497"N	104°31'23.310"W	6.92	
6794.00	32.390	196.460	6674.50	-597.42	620.36	411.94	40°09'35.065"N	104°31'23.491"W	7.39	
6888.00	41.740	185.800	6749.50	-542.59	564.90	401.61	40°09'34.518"N	104°31'23.632"W	12.04	
6983.00	52.210	172.240	6814.39	-473.57	495.88	403.50	40°09'33.836"N	104°31'23.617"W	15.13	
7077.00	61.520	169.130	6865.73	-395.44	418.33	416.33	40°09'33.068"N	104°31'23.463"W	10.28	
7172.00	70.700	175.030	6904.19	-309.02	332.42	428.12	40°09'32.218"N	104°31'23.323"W	11.20	
7266.00	78.100	176.160	6929.45	-218.57	242.21	435.06	40°09'31.326"N	104°31'23.247"W	7.96	
7361.00	89.850	176.180	6939.40	-124.27	148.11	441.36	40°09'30.396"N	104°31'23.179"W	12.37	
7456.00	90.000	171.830	6939.53	-29.42	53.65	451.28	40°09'29.461"N	104°31'23.065"W	4.58	
7550.00	89.940	170.600	6939.58	64.11	-39.24	465.63	40°09'28.542"N	104°31'22.893"W	1.31	
7644.00	89.970	171.080	6939.65	157.58	-132.04	480.60	40°09'27.623"N	104°31'22.713"W	0.51	
7739.00	89.880	172.680	6939.77	252.21	-226.09	494.01	40°09'26.692"N	104°31'22.554"W	1.69	
7834.00	89.780	174.960	6940.06	347.06	-320.53	504.24	40°09'25.758"N	104°31'22.436"W	2.40	
7928.00	90.030	178.920	6940.21	441.04	-414.38	509.26	40°09'24.830"N	104°31'22.384"W	4.22	
8023.00	89.910	180.270	6940.26	535.94	-509.37	509.93	40°09'23.891"N	104°31'22.389"W	1.43	
8117.00	90.150	179.780	6940.21	629.80	-603.37	509.89	40°09'22.962"N	104°31'22.403"W	0.58	
8212.00	89.970	179.960	6940.11	724.68	-698.37	510.10	40°09'22.024"N	104°31'22.414"W	0.27	
8306.00	89.940	181.100	6940.19	818.49	-792.37	509.23	40°09'21.095"N	104°31'22.438"W	1.21	
8401.00	90.250	180.650	6940.03	913.26	-887.35	507.78	40°09'20.156"N	104°31'22.470"W	0.58	



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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#08 WASTE MANAGEMENT Y23-768(787'FNL&991'FWL,SEC.11)
Area	COLORADO	Well	WASTE MANAGEMENT Y23-768
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WASTE MANAGEMENT Y23-768 AWB
Facility	SEC.11-T02N-R64W		

WELLPATH DATA (209 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8496.00	90.370	181.160	6939.51	1008.03	-982.34	506.28	40°09'19.218"N	104°31'22.503"W	0.55	
8590.00	90.310	181.310	6938.96	1101.77	-1076.32	504.26	40°09'18.290"N	104°31'22.543"W	0.17	
8685.00	90.400	181.740	6938.37	1196.46	-1171.28	501.73	40°09'17.351"N	104°31'22.589"W	0.46	
8779.00	90.000	180.540	6938.04	1290.20	-1265.26	499.86	40°09'16.423"N	104°31'22.626"W	1.35	
8874.00	90.090	179.610	6937.97	1385.06	-1360.26	499.73	40°09'15.484"N	104°31'22.641"W	0.98	
8968.00	90.090	179.110	6937.82	1478.98	-1454.25	500.78	40°09'14.555"N	104°31'22.641"W	0.53	
9063.00	90.370	178.570	6937.44	1573.92	-1549.23	502.71	40°09'13.617"N	104°31'22.630"W	0.64	
9157.00	90.340	178.210	6936.85	1667.89	-1643.19	505.35	40°09'12.688"N	104°31'22.609"W	0.38	
9252.00	90.180	177.850	6936.42	1762.87	-1738.14	508.61	40°09'11.749"N	104°31'22.580"W	0.41	
9346.00	90.220	179.850	6936.09	1856.81	-1832.11	510.50	40°09'10.821"N	104°31'22.569"W	2.13	
9441.00	90.030	180.920	6935.89	1951.64	-1927.11	509.86	40°09'09.882"N	104°31'22.591"W	1.14	
9536.00	90.090	181.600	6935.79	2046.37	-2022.08	507.77	40°09'08.944"N	104°31'22.632"W	0.72	
9725.00	89.940	182.070	6935.74	2234.67	-2210.99	501.72	40°09'07.078"N	104°31'22.736"W	0.26	
9819.00	90.030	181.670	6935.76	2328.33	-2304.94	498.65	40°09'06.150"N	104°31'22.789"W	0.44	
9914.00	90.060	180.420	6935.69	2423.08	-2399.92	496.92	40°09'05.211"N	104°31'22.825"W	1.32	
10009.00	89.910	178.460	6935.71	2517.98	-2494.91	497.85	40°09'04.273"N	104°31'22.826"W	2.07	
10103.00	90.150	176.720	6935.66	2611.97	-2588.82	501.80	40°09'03.344"N	104°31'22.789"W	1.87	
10198.00	90.090	175.800	6935.47	2706.97	-2683.62	508.00	40°09'02.407"N	104°31'22.722"W	0.97	
10292.00	90.250	175.760	6935.19	2800.95	-2777.36	514.92	40°09'01.480"N	104°31'22.647"W	0.18	
10387.00	90.120	176.050	6934.88	2895.93	-2872.12	521.70	40°09'00.543"N	104°31'22.573"W	0.33	
10482.00	89.910	176.100	6934.85	2990.92	-2966.90	528.20	40°08'59.605"N	104°31'22.503"W	0.23	
10576.00	90.220	176.730	6934.75	3084.91	-3060.71	534.08	40°08'58.678"N	104°31'22.440"W	0.75	
10671.00	89.880	176.410	6934.67	3179.91	-3155.54	539.76	40°08'57.740"N	104°31'22.380"W	0.49	
10766.00	90.180	177.110	6934.62	3274.91	-3250.39	545.13	40°08'56.802"N	104°31'22.325"W	0.80	
10860.00	90.250	177.050	6934.26	3368.91	-3344.27	549.92	40°08'55.874"N	104°31'22.276"W	0.10	
11049.00	90.120	177.110	6933.65	3557.91	-3533.02	559.55	40°08'54.008"N	104°31'22.179"W	0.08	
11143.00	90.090	177.850	6933.48	3651.90	-3626.93	563.68	40°08'53.079"N	104°31'22.139"W	0.79	
11238.00	90.220	178.750	6933.22	3746.88	-3721.89	566.50	40°08'52.141"N	104°31'22.116"W	0.96	
11333.00	90.150	179.460	6932.92	3841.81	-3816.87	567.98	40°08'51.202"N	104°31'22.111"W	0.75	
11427.00	90.150	179.990	6932.67	3935.69	-3910.87	568.44	40°08'50.273"N	104°31'22.118"W	0.56	





Actual Wellpath Report  
WASTE MANAGEMENT Y23-768 AWP  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#08 WASTE MANAGEMENT Y23-768(787'FNL&991'FWL,SEC.11)
Area	COLORADO	Well	WASTE MANAGEMENT Y23-768
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WASTE MANAGEMENT Y23-768 AWB
Facility	SEC.11-T02N-R64W		

WELLPATH DATA (209 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11521.00	90.180	180.280	6932.40	4029.55	-4004.87	568.21	40°08'49.344"N	104°31'22.135"W	0.31	
11616.00	90.120	181.060	6932.15	4124.34	-4099.86	567.10	40°08'48.406"N	104°31'22.162"W	0.82	
11710.00	90.000	181.910	6932.05	4218.05	-4193.83	564.67	40°08'47.477"N	104°31'22.207"W	0.91	
11805.00	90.120	180.670	6931.95	4312.77	-4288.80	562.53	40°08'46.539"N	104°31'22.248"W	1.31	
11899.00	90.090	182.850	6931.78	4406.43	-4382.75	559.64	40°08'45.611"N	104°31'22.299"W	2.32	
11994.00	90.250	181.450	6931.50	4501.03	-4477.68	556.08	40°08'44.673"N	104°31'22.358"W	1.48	
12088.00	90.180	180.360	6931.15	4594.80	-4571.67	554.59	40°08'43.745"N	104°31'22.390"W	1.16	
12183.00	90.120	178.390	6930.90	4689.71	-4666.66	555.63	40°08'42.806"N	104°31'22.391"W	2.07	
12277.00	90.150	177.710	6930.68	4783.69	-4760.61	558.83	40°08'41.877"N	104°31'22.363"W	0.72	
12372.00	90.000	179.540	6930.55	4878.65	-4855.57	561.11	40°08'40.939"N	104°31'22.347"W	1.93	
12466.00	90.060	179.870	6930.50	4972.54	-4949.57	561.59	40°08'40.010"N	104°31'22.354"W	0.36	
12561.00	88.650	175.420	6931.57	5067.50	-5044.46	565.49	40°08'39.072"N	104°31'22.317"W	4.91	
12655.00	89.970	171.580	6932.70	5161.30	-5137.83	576.13	40°08'38.148"N	104°31'22.193"W	4.32	
12750.00	89.880	178.320	6932.83	5256.19	-5232.41	584.49	40°08'37.213"N	104°31'22.099"W	7.10	
12844.00	90.490	179.720	6932.53	5350.13	-5326.39	586.10	40°08'36.284"N	104°31'22.092"W	1.62	
12939.00	90.550	178.900	6931.66	5445.04	-5421.38	587.24	40°08'35.345"N	104°31'22.091"W	0.87	
13033.00	90.430	179.200	6930.86	5538.97	-5515.36	588.80	40°08'34.416"N	104°31'22.084"W	0.34	
13128.00	90.430	179.400	6930.15	5633.89	-5610.35	589.96	40°08'33.477"N	104°31'22.082"W	0.21	
13222.00	90.490	179.340	6929.39	5727.80	-5704.34	590.99	40°08'32.548"N	104°31'22.082"W	0.09	
13317.00	89.970	181.290	6929.01	5822.63	-5799.33	590.47	40°08'31.610"N	104°31'22.103"W	2.12	
13412.00	90.220	182.790	6928.85	5917.25	-5894.27	587.09	40°08'30.672"N	104°31'22.160"W	1.60	
13506.00	90.000	180.780	6928.67	6010.91	-5988.22	584.16	40°08'29.744"N	104°31'22.211"W	2.15	
13601.00	89.880	181.620	6928.77	6105.64	-6083.20	582.17	40°08'28.806"N	104°31'22.250"W	0.89	
13695.00	89.720	182.540	6929.10	6199.26	-6177.14	578.76	40°08'27.878"N	104°31'22.307"W	0.99	
13790.00	90.370	181.120	6929.03	6293.91	-6272.08	575.73	40°08'26.940"N	104°31'22.360"W	1.64	
13884.00	89.690	180.790	6928.98	6387.68	-6366.07	574.16	40°08'26.011"N	104°31'22.393"W	0.80	
13979.00	90.060	179.570	6929.18	6482.52	-6461.07	573.86	40°08'25.073"N	104°31'22.410"W	1.34	
14073.00	90.120	178.950	6929.04	6576.45	-6555.06	575.08	40°08'24.144"N	104°31'22.408"W	0.66	
14168.00	90.310	179.170	6928.68	6671.38	-6650.05	576.63	40°08'23.205"N	104°31'22.401"W	0.31	
14263.00	90.060	178.370	6928.37	6766.33	-6745.02	578.67	40°08'22.266"N	104°31'22.389"W	0.88	



Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#08 WASTE MANAGEMENT Y23-768(787'FNL&991'FWL,SEC.11)
Area	COLORADO	Well	WASTE MANAGEMENT Y23-768
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WASTE MANAGEMENT Y23-768 AWB
Facility	SEC.11-T02N-R64W		

WELLPATH DATA (209 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
14357.00	90.150	178.650	6928.20	6860.29	-6838.99	581.12	40°08'21.338"N	104°31'22.371"W	0.31	
14452.00	91.170	185.510	6927.10	6954.85	-6933.86	577.67	40°08'20.400"N	104°31'22.428"W	7.30	
14546.00	91.320	186.040	6925.06	7047.71	-7027.36	568.22	40°08'19.478"N	104°31'22.563"W	0.59	
14640.00	90.770	183.260	6923.35	7140.83	-7121.03	560.60	40°08'18.553"N	104°31'22.675"W	3.01	
14735.00	90.180	185.250	6922.56	7235.05	-7215.76	553.55	40°08'17.617"N	104°31'22.779"W	2.18	
14829.00	90.090	183.290	6922.34	7328.27	-7309.49	546.55	40°08'16.692"N	104°31'22.882"W	2.09	
14924.00	89.940	175.790	6922.31	7423.10	-7404.42	547.31	40°08'15.754"N	104°31'22.886"W	7.90	
15018.00	90.060	176.410	6922.31	7517.09	-7498.20	553.71	40°08'14.826"N	104°31'22.817"W	0.67	
15113.00	90.460	185.830	6921.88	7611.73	-7593.08	551.85	40°08'13.889"N	104°31'22.854"W	9.92	
15208.00	91.880	191.720	6919.94	7704.65	-7686.90	537.37	40°08'12.964"N	104°31'23.054"W	6.38	
15302.00	93.420	180.210	6915.58	7797.22	-7780.13	527.62	40°08'12.043"N	104°31'23.193"W	12.34	
15397.00	92.460	173.130	6910.70	7892.03	-7874.79	533.13	40°08'11.108"N	104°31'23.135"W	7.51	
15491.00	88.210	167.860	6910.15	7985.39	-7967.44	548.65	40°08'10.190"N	104°31'22.949"W	7.20	
15586.00	88.370	166.060	6912.99	8078.91	-8059.95	570.07	40°08'09.274"N	104°31'22.686"W	1.90	
15680.00	88.340	165.960	6915.68	8171.17	-8151.12	592.79	40°08'08.370"N	104°31'22.406"W	0.11	
15775.00	87.910	167.410	6918.79	8264.60	-8243.51	614.65	40°08'07.455"N	104°31'22.138"W	1.59	
15869.00	88.060	169.400	6922.10	8357.50	-8335.53	633.54	40°08'06.544"N	104°31'21.908"W	2.12	
15964.00	89.910	175.230	6923.78	8452.13	-8429.62	646.23	40°08'05.613"N	104°31'21.758"W	6.44	
16059.00	89.940	177.080	6923.91	8547.12	-8524.40	652.60	40°08'04.675"N	104°31'21.689"W	1.95	
16153.00	89.910	176.300	6924.03	8641.11	-8618.25	658.03	40°08'03.747"N	104°31'21.633"W	0.83	
16248.00	89.970	176.690	6924.13	8736.11	-8713.07	663.84	40°08'02.810"N	104°31'21.572"W	0.42	
16342.00	90.060	177.400	6924.10	8830.11	-8806.94	668.68	40°08'01.882"N	104°31'21.522"W	0.76	
16437.00	89.910	180.000	6924.13	8925.06	-8901.91	670.84	40°08'00.943"N	104°31'21.508"W	2.74	
16531.00	90.890	184.040	6923.47	9018.66	-8995.83	667.52	40°08'00.015"N	104°31'21.564"W	4.42	
16626.00	89.970	186.130	6922.76	9112.69	-9090.45	659.10	40°07'59.081"N	104°31'21.686"W	2.40	
16720.00	89.780	184.140	6922.97	9205.73	-9184.06	650.69	40°07'58.157"N	104°31'21.808"W	2.13	
16815.00	90.090	182.610	6923.07	9300.12	-9278.90	645.10	40°07'57.221"N	104°31'21.893"W	1.64	
16909.00	89.940	178.910	6923.05	9393.90	-9372.87	643.85	40°07'56.292"N	104°31'21.922"W	3.94	
17004.00	90.090	176.250	6923.02	9488.88	-9467.78	647.86	40°07'55.354"N	104°31'21.884"W	2.80	
17098.00	90.000	177.130	6922.95	9582.88	-9561.62	653.29	40°07'54.426"N	104°31'21.828"W	0.94	





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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#08 WASTE MANAGEMENT Y23-768(787'FNL&991'FWL,SEC.11)
Area	COLORADO	Well	WASTE MANAGEMENT Y23-768
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WASTE MANAGEMENT Y23-768 AWB
Facility	SEC.11-T02N-R64W		

WELLPATH DATA (209 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
17193.00	90.220	177.290	6922.77	9677.88	-9656.51	657.92	40°07'53.488"N	104°31'21.782"W	0.29	
17287.00	89.970	178.960	6922.61	9771.86	-9750.45	660.99	40°07'52.559"N	104°31'21.755"W	1.80	
17382.00	89.940	179.790	6922.69	9866.77	-9845.45	662.03	40°07'51.620"N	104°31'21.756"W	0.87	
17476.00	89.780	180.460	6922.92	9960.62	-9939.45	661.82	40°07'50.692"N	104°31'21.771"W	0.73	
17571.00	89.910	181.130	6923.17	10055.41	-10034.44	660.50	40°07'49.753"N	104°31'21.802"W	0.72	
17665.00	90.060	181.600	6923.20	10149.12	-10128.41	658.26	40°07'48.825"N	104°31'21.844"W	0.52	
17760.00	90.220	181.330	6922.97	10243.83	-10223.38	655.84	40°07'47.887"N	104°31'21.889"W	0.33	
17854.00	89.850	181.470	6922.91	10337.54	-10317.35	653.54	40°07'46.958"N	104°31'21.932"W	0.42	
17949.00	89.970	180.500	6923.06	10432.30	-10412.33	651.91	40°07'46.020"N	104°31'21.966"W	1.03	
18044.00	89.940	178.730	6923.13	10527.19	-10507.33	652.54	40°07'45.081"N	104°31'21.971"W	1.86	
18138.00	90.340	178.250	6922.90	10621.16	-10601.29	655.02	40°07'44.152"N	104°31'21.953"W	0.66	
18233.00	90.370	179.420	6922.31	10716.10	-10696.27	656.95	40°07'43.214"N	104°31'21.942"W	1.23	
18327.00	90.180	179.270	6921.86	10810.02	-10790.26	658.03	40°07'42.285"N	104°31'21.941"W	0.26	
18422.00	90.310	177.650	6921.46	10904.98	-10885.23	660.58	40°07'41.346"N	104°31'21.922"W	1.71	
18517.00	90.150	182.440	6921.07	10999.81	-10980.20	660.51	40°07'40.408"N	104°31'21.936"W	5.04	
18611.00	90.920	189.080	6920.20	11092.64	-11073.66	651.08	40°07'39.485"N	104°31'22.071"W	7.11	
18706.00	90.370	183.610	6919.13	11186.32	-11168.04	640.58	40°07'38.554"N	104°31'22.219"W	5.79	
18800.00	90.060	177.860	6918.77	11280.07	-11261.99	639.38	40°07'37.625"N	104°31'22.248"W	6.13	
18895.00	89.970	177.040	6918.75	11375.07	-11356.90	643.61	40°07'36.687"N	104°31'22.207"W	0.87	
18990.00	90.000	177.890	6918.77	11470.06	-11451.80	647.81	40°07'35.749"N	104°31'22.166"W	0.90	
19084.00	90.060	178.030	6918.72	11564.05	-11545.74	651.15	40°07'34.820"N	104°31'22.137"W	0.16	
19179.00	90.250	179.070	6918.47	11659.01	-11640.71	653.56	40°07'33.881"N	104°31'22.119"W	1.11	
19273.00	90.120	183.200	6918.16	11752.73	-11734.67	651.70	40°07'32.953"N	104°31'22.157"W	4.40	
19368.00	90.060	186.020	6918.01	11846.87	-11829.36	644.06	40°07'32.018"N	104°31'22.268"W	2.97	
19462.00	90.030	184.130	6917.94	11939.92	-11922.98	635.75	40°07'31.094"N	104°31'22.389"W	2.01	
19557.00	90.030	181.110	6917.89	12034.44	-12017.87	631.40	40°07'30.157"N	104°31'22.458"W	3.18	
19651.00	90.120	178.000	6917.77	12128.33	-12111.86	632.13	40°07'29.228"N	104°31'22.462"W	3.31	
19746.00	90.000	176.770	6917.67	12223.33	-12206.76	636.47	40°07'28.290"N	104°31'22.420"W	1.30	Last BHI MWD Survey
19813.00	90.000	176.770	6917.67	12290.33	-12273.65	640.24	40°07'27.629"N	104°31'22.380"W	0.00	Projection to Bit

HOLE & CASING SECTIONS - Ref Wellbore: WASTE MANAGEMENT Y23-768 AWB      Ref Wellpath: WASTE MANAGEMENT Y23-768 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	2046.00	2016.00	30.00	2045.95	-0.02	0.01	-3.44	-7.38
9.625in Casing Surface	30.00	2046.00	2016.00	30.00	2045.95	-0.02	0.01	-3.44	-7.38
8.5in Open Hole	2046.00	19813.00	17767.00	2045.95	6917.67	-3.44	-7.38	-12273.65	640.24



Actual Wellpath Report

WASTE MANAGEMENT Y23-768 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#08 WASTE MANAGEMENT Y23-768(787'FNL&991'FWL,SEC.11)
Area	COLORADO	Well	WASTE MANAGEMENT Y23-768
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WASTE MANAGEMENT Y23-768 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	55.00	17.60	3563.86	3276161.57	1301937.56	40°09'28.764"N	104°30'42.984"W	polygon
WASTE MANAGMENT Y23-712 SECTION 14	55.00	17.60	3563.86	3276161.57	1301937.56	40°09'28.764"N	104°30'42.984"W	polygon
WASTE MANAGMENT Y23-712 SECTION 23	55.00	17.60	3563.86	3276161.57	1301937.56	40°09'28.764"N	104°30'42.984"W	polygon
WASTE MANAGMENT Y23-712 SECTION 11 HARDLINE (460'SETBACK)	6755.00	17.60	3563.86	3276161.57	1301937.56	40°09'28.764"N	104°30'42.984"W	polygon
WASTE MANAGMENT Y23-712 SECTION 14 HARDLINE (460'SETBACK)	6755.00	17.60	3563.86	3276161.57	1301937.56	40°09'28.764"N	104°30'42.984"W	polygon
WASTE MANAGMENT Y23-712 SECTION 23 HARDLINE (460'SETBACK)	6755.00	17.60	3563.86	3276161.57	1301937.56	40°09'28.764"N	104°30'42.984"W	polygon
WASTE MANAGMENT Y23-768 REV-1 BHL (2490'FNL&1456'FWL,SEC.23)	6873.33	-12273.92	657.99	3273255.82	1289646.58	40°07'27.624"N	104°31'22.152"W	point
WASTE MANAGMENT Y23-768 LANDING	6895.00	140.00	480.00	3273077.84	1302059.95	40°09'30.311"N	104°31'22.682"W	point
WASTE MANAGMENT Y23-768 REV-3 BHL (2490'FNL&1456'FWL,SEC.23)	6918.33	-12273.92	657.99	3273255.82	1289646.58	40°07'27.624"N	104°31'22.152"W	point
WASTE MANAGMENT Y23-768 REV-2 BHL (2490'FNL&1456'FWL,SEC.23)	6938.33	-12273.92	657.99	3273255.82	1289646.58	40°07'27.624"N	104°31'22.152"W	point
WASTE MANAGMENT Y23-768 REV-3 LANDING	6940.00	140.00	480.00	3273077.84	1302059.95	40°09'30.311"N	104°31'22.682"W	point
WASTE MANAGMENT Y23-768 REV-2 LANDING	6960.00	140.00	480.00	3273077.84	1302059.95	40°09'30.311"N	104°31'22.682"W	point



Actual Wellpath Report

WASTE MANAGEMENT Y23-768 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#08 WASTE MANAGEMENT Y23-768(787'FNL&991'FWL,SEC.11)
Area	COLORADO	Well	WASTE MANAGEMENT Y23-768
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WASTE MANAGEMENT Y23-768 AWB
Facility	SEC.11-T02N-R64W		

WELLPATH COMPOSITION - Ref Wellbore: WASTE MANAGEMENT Y23-768 AWB      Ref Wellpath: WASTE MANAGEMENT Y23-768 AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	2045.00	Gyrodatta standard - Drop gyro or Multi-shot	Gyrodatta Surface Surveys <83.27'-2045'>	WASTE MANAGEMENT Y23-768 AWB
2045.00	19746.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	ATC 8.5" Hole OWSG MWD rev2+IFR+MSA <2163'-19746'>	WASTE MANAGEMENT Y23-768 AWB
19746.00	19813.00	Blind Drilling (std)	Projection to bit	WASTE MANAGEMENT Y23-768 AWB



Actual Wellpath Report

WASTE MANAGEMENT Y23-768 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#08 WASTE MANAGEMENT Y23-768(787'FNL&991'FWL,SEC.11)
Area	COLORADO	Well	WASTE MANAGEMENT Y23-768
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WASTE MANAGEMENT Y23-768 AWB
Facility	SEC.11-T02N-R64W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
2045.00	0.190	254.090	2044.95	Tie to Surface Gyros
19746.00	90.000	176.770	6917.67	Last BHI MWD Survey
19813.00	90.000	176.770	6917.67	Projection to Bit

COMMENTS	
<div>Wellpath general comments</div> <div>SURFACE LOCATION: NWNW</div> <div>40.15805N</div> <div>104.52469W</div> <div>API: 05-123-44845</div>	