

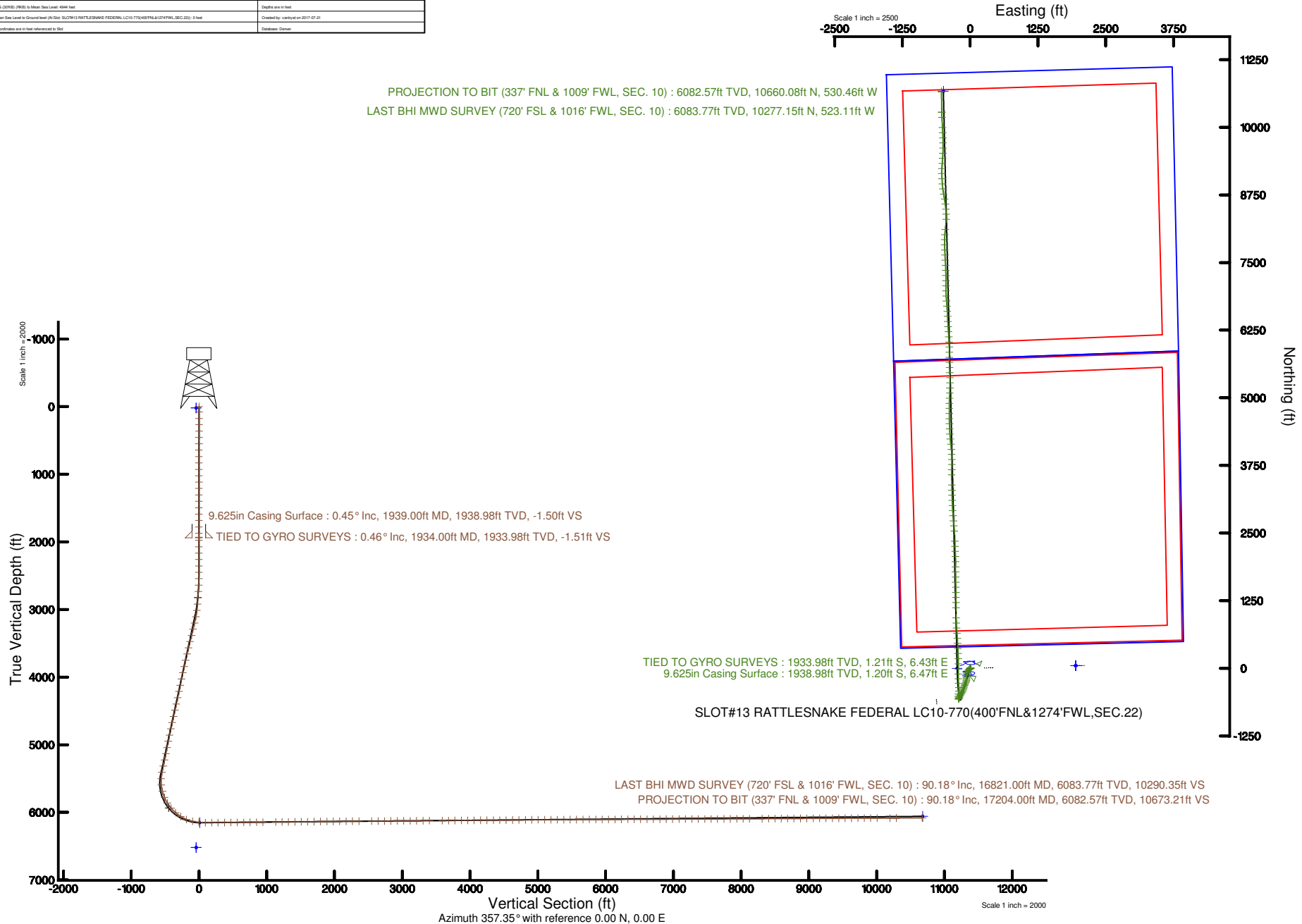
# NOBLE ENERGY, INC

Location: COLORADO Slot: SLOT#13 RATTLESNAKE FEDERAL LC10-770(400'FNL&1274'FWL,SEC.22)  
Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: RATTLESNAKE FEDERAL LC10-770  
Facility: SEC.22-T09N-R59W Wellbore: RATTLESNAKE FEDERAL LC10-770 PWB

Plot reference wellbore is RATTLESNAKE FEDERAL LC10-770 (REV A-0, PWB)	Grid System: NAD83   Lambert Colorado SP, Northern Zone (2011), US feet
True vertical depths are referenced to RIG DZNSB (PWB)	North Reference: Grid north
Measured depths are referenced to RIG DZNSB (PWB)	Scale: True distance
RIG DZNSB (PWB) is Mean Sea Level: 6844 feet	Depths are in feet
Mean Sea Level is Ground level (in Slot: SLOT#13 RATTLESNAKE FEDERAL LC10-770(400'FNL&1274'FWL,SEC.22): 0 feet	Created by: camryn on 2017-07-01
Coordinates are in feet referenced to Slot	Drawn: Denver



PROJECTION TO BIT (337' FNL & 1009' FWL, SEC. 10) : 6082.57ft TVD, 10660.08ft N, 530.46ft W  
LAST BHI MWD SURVEY (720' FSL & 1016' FWL, SEC. 10) : 6083.77ft TVD, 10277.15ft N, 523.11ft W





# Actual Wellpath Report

RATTLESNAKE FEDERAL LC10-770 AWP

Page n of nn



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#13 RATTLESNAKE FEDERAL LC10-770(400'FNL&1274'FWL,SEC.22)
Area	COLORADO	Well	RATTLESNAKE FEDERAL LC10-770
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	RATTLESNAKE FEDERAL LC10-770 AWB
Facility	SEC.22-T09N-R59W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Cantryat
Scale	0.999994	Report Generated	7/21/2017 at 2:26:36 PM
Convergence at slot	0.99° East	Database/Source file	Denver/RATTLESNAKE_FEDERAL_LC10-770_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-48.28	-1947.51	3424213.95	1516937.65	40°44'32.388"N	103°58'08.544"W
Facility Reference Pt			3426161.44	1516985.93	40°44'32.532"N	103°57'43.236"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	4944.00ft
Horizontal Reference Pt	Slot	RIG (30'KB) (RKB) to Mean Sea Level	4944.00ft
Vertical Reference Pt	RIG (30'KB) (RKB)	RIG (30'KB) (RKB) to Ground Level at Slot (SLOT#13 RATTLESNAKE FEDERAL LC10-770 (400'FNL&1274'FWL,SEC.22))	4944.00ft
MD Reference Pt	RIG (30'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	357.35°



# Actual Wellpath Report

RATTLESNAKE FEDERAL LC10-770 AWP

Page n of nn



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#13 RATTLESNAKE FEDERAL LC10-770(400'FNL&1274'FWL,SEC.22)
Area	COLORADO	Well	RATTLESNAKE FEDERAL LC10-770
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	RATTLESNAKE FEDERAL LC10-770 AWP
Facility	SEC.22-T09N-R59W		

WELLPATH DATA (176 stations)								
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
0.00	0.000	74.280	0.00	0.00	0.00	0.00	0.00	
78.00	0.540	74.280	78.00	0.08	0.10	0.35	0.69	
176.00	0.340	30.490	176.00	0.43	0.48	0.95	0.38	
267.00	0.280	45.770	266.99	0.80	0.86	1.24	0.11	
361.00	0.390	164.420	360.99	0.65	0.72	1.49	0.62	
455.00	0.600	122.860	454.99	0.05	0.14	1.99	0.43	
550.00	0.210	140.270	549.99	-0.38	-0.26	2.52	0.43	
644.00	0.260	120.420	643.99	-0.63	-0.50	2.82	0.10	
739.00	0.170	143.870	738.99	-0.87	-0.73	3.08	0.13	
833.00	0.140	67.410	832.99	-0.95	-0.80	3.27	0.21	
928.00	0.330	53.930	927.99	-0.76	-0.59	3.60	0.21	
1022.00	0.020	286.290	1021.99	-0.60	-0.43	3.80	0.36	
1117.00	0.150	65.110	1116.99	-0.55	-0.37	3.90	0.17	
1211.00	0.150	212.470	1210.98	-0.60	-0.42	3.95	0.31	
1306.00	0.440	71.020	1305.98	-0.60	-0.41	4.22	0.59	
1400.00	0.290	127.100	1399.98	-0.65	-0.43	4.76	0.39	
1495.00	0.150	120.390	1494.98	-0.87	-0.64	5.05	0.15	
1590.00	0.170	149.230	1589.98	-1.07	-0.83	5.23	0.09	
1684.00	0.190	107.170	1683.98	-1.24	-0.99	5.45	0.14	
1779.00	0.210	136.740	1778.98	-1.43	-1.16	5.72	0.11	
1873.00	0.260	85.720	1872.98	-1.55	-1.27	6.05	0.22	
1934.00	0.460	77.010	1933.98	-1.51	-1.21	6.43	0.34	TIED TO GYRO SURVEYS
1978.00	0.400	51.630	1977.98	-1.38	-1.07	6.72	0.45	
2072.00	0.500	40.030	2071.97	-0.89	-0.56	7.24	0.14	
2167.00	0.850	242.300	2166.97	-0.88	-0.57	6.89	1.40	
2261.00	0.820	55.560	2260.97	-0.83	-0.51	6.82	1.77	
2356.00	0.780	225.510	2355.97	-0.90	-0.58	6.92	1.68	
2450.00	0.030	350.340	2449.96	-1.30	-1.00	6.46	0.85	
2545.00	1.750	233.090	2544.95	-2.09	-1.85	5.30	1.86	
2639.00	3.450	229.730	2638.85	-4.63	-4.54	1.99	1.81	



# Actual Wellpath Report

RATTLESNAKE FEDERAL LC10-770 AWP

Page n of nn



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#13 RATTLESNAKE FEDERAL LC10-770(400'FNL&1274'FWL,SEC.22)
Area	COLORADO	Well	RATTLESNAKE FEDERAL LC10-770
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	RATTLESNAKE FEDERAL LC10-770 AWB
Facility	SEC.22-T09N-R59W		

WELLPATH DATA (176 stations)								
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
2734.00	5.150	226.580	2733.58	-9.16	-9.32	-3.28	1.81	
2828.00	6.210	226.840	2827.11	-15.21	-15.70	-10.06	1.13	
2923.00	8.090	238.940	2921.38	-21.73	-22.66	-19.53	2.53	
3018.00	10.740	226.910	3015.10	-30.66	-32.16	-31.73	3.46	
3113.00	14.270	211.290	3107.86	-46.12	-48.22	-44.28	5.11	
3207.00	13.500	195.810	3199.14	-66.14	-68.69	-53.29	4.02	
3302.00	13.270	193.040	3291.56	-87.16	-89.98	-58.77	0.72	
3397.00	14.050	194.220	3383.87	-108.69	-111.78	-64.06	0.87	
3491.00	14.880	189.840	3474.89	-131.40	-134.73	-68.93	1.46	
3586.00	13.850	173.660	3566.96	-154.66	-158.06	-69.76	4.35	
3680.00	12.370	174.850	3658.51	-175.95	-179.27	-67.61	1.60	
3775.00	12.880	180.580	3751.21	-196.69	-199.99	-66.81	1.42	
3870.00	12.420	187.350	3843.91	-217.32	-220.72	-68.22	1.63	
3964.00	12.860	191.310	3935.64	-237.43	-241.00	-71.57	1.03	
4059.00	13.120	202.850	4028.22	-257.42	-261.31	-77.83	2.74	
4153.00	13.350	211.400	4119.73	-276.04	-280.40	-87.62	2.09	
4248.00	13.330	204.950	4212.18	-294.84	-299.69	-97.96	1.57	
4342.00	13.160	200.640	4303.68	-314.27	-319.53	-106.30	1.07	
4437.00	13.230	193.360	4396.18	-334.65	-340.23	-112.63	1.75	
4531.00	13.410	192.830	4487.65	-355.50	-361.33	-117.53	0.23	
4626.00	13.140	197.930	4580.11	-376.22	-382.34	-123.30	1.26	
4720.00	13.280	203.270	4671.63	-395.93	-402.43	-130.86	1.31	
4815.00	13.230	202.320	4764.10	-415.60	-422.51	-139.30	0.24	
4910.00	13.110	206.860	4856.60	-434.83	-442.17	-148.29	1.10	
5004.00	12.790	211.530	4948.21	-452.72	-460.55	-158.55	1.16	
5099.00	13.300	209.650	5040.76	-470.65	-479.01	-169.46	0.70	
5193.00	13.250	210.110	5132.25	-488.85	-497.73	-180.21	0.12	
5288.00	12.880	207.170	5224.79	-507.19	-516.57	-190.51	0.80	
5382.00	13.230	199.220	5316.37	-526.27	-536.05	-198.83	1.94	
5476.00	11.880	188.320	5408.13	-545.75	-555.78	-203.77	2.89	



# Actual Wellpath Report

RATTLESNAKE FEDERAL LC10-770 AWP

Page n of nn



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#13 RATTLESNAKE FEDERAL LC10-770(400'FNL&1274'FWL,SEC.22)
Area	COLORADO	Well	RATTLESNAKE FEDERAL LC10-770
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	RATTLESNAKE FEDERAL LC10-770 AWB
Facility	SEC.22-T09N-R59W		

## WELLPATH DATA (176 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
5571.00	6.790	236.930	5501.97	-558.22	-568.55	-209.91	9.43	
5665.00	5.980	347.200	5595.65	-556.21	-566.80	-215.67	11.15	
5760.00	14.510	352.220	5689.05	-539.45	-550.15	-218.38	9.02	
5855.00	23.400	358.640	5778.82	-508.67	-519.44	-220.44	9.60	
5949.00	31.840	10.860	5862.10	-465.79	-476.31	-216.20	10.77	
6044.00	40.570	5.440	5938.70	-410.72	-420.83	-208.53	9.78	
6138.00	49.140	356.040	6005.35	-344.72	-354.74	-208.09	11.51	
6233.00	58.600	354.550	6061.30	-268.14	-278.36	-214.44	10.04	
6327.00	67.010	358.790	6104.23	-184.63	-194.99	-219.17	9.80	
6422.00	77.780	0.890	6132.93	-94.31	-104.58	-219.37	11.53	
6516.00	84.660	0.240	6147.27	-1.61	-11.74	-218.46	7.35	
6611.00	90.060	0.160	6151.64	93.13	83.12	-218.13	5.68	
6706.00	90.180	358.830	6151.44	188.06	178.12	-218.97	1.41	
6800.00	90.340	357.060	6151.02	282.05	272.05	-222.34	1.89	
6895.00	90.520	356.990	6150.30	377.05	366.92	-227.27	0.20	
6989.00	90.460	357.040	6149.50	471.04	460.79	-232.16	0.08	
7083.00	90.370	357.100	6148.82	565.04	554.66	-236.97	0.12	
7178.00	90.550	355.320	6148.06	660.02	649.45	-243.25	1.88	
7272.00	90.680	355.830	6147.05	753.96	743.16	-250.50	0.56	
7367.00	90.430	357.450	6146.13	848.95	837.99	-256.07	1.73	
7461.00	90.770	359.530	6145.14	942.92	931.95	-258.54	2.24	
7650.00	90.590	359.470	6142.90	1131.77	1120.93	-260.19	0.10	
7744.00	90.580	359.140	6141.94	1225.71	1214.92	-261.33	0.35	
7839.00	90.460	359.510	6141.08	1320.65	1309.91	-262.45	0.41	
7933.00	90.680	359.220	6140.14	1414.59	1403.90	-263.49	0.39	
8028.00	90.740	359.040	6138.96	1509.54	1498.88	-264.94	0.20	
8122.00	90.620	359.300	6137.85	1603.48	1592.86	-266.30	0.30	
8217.00	90.520	358.460	6136.90	1698.44	1687.84	-268.16	0.89	
8311.00	90.580	359.290	6136.00	1792.40	1781.81	-270.00	0.89	
8406.00	90.580	0.710	6135.04	1887.29	1876.81	-270.00	1.49	



# Actual Wellpath Report

RATTLESNAKE FEDERAL LC10-770 AWP

Page n of nn



## REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#13 RATTLESNAKE FEDERAL LC10-770(400'FNL&1274'FWL,SEC.22)
Area	COLORADO	Well	RATTLESNAKE FEDERAL LC10-770
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	RATTLESNAKE FEDERAL LC10-770 AWB
Facility	SEC.22-T09N-R59W		

## WELLPATH DATA (176 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
8501.00	90.740	359.920	6133.95	1982.16	1971.80	-269.48	0.85	
8595.00	90.800	358.460	6132.68	2076.10	2065.78	-270.81	1.55	
8690.00	90.680	356.760	6131.46	2171.09	2160.68	-274.77	1.79	
8784.00	90.310	357.710	6130.64	2265.08	2254.57	-279.30	1.08	
8879.00	90.310	358.610	6130.13	2360.07	2349.52	-282.35	0.95	
9068.00	90.460	355.640	6128.86	2549.04	2538.25	-291.83	1.57	
9163.00	90.220	354.910	6128.30	2643.98	2632.93	-299.66	0.81	
9257.00	90.580	355.130	6127.64	2737.90	2726.57	-307.82	0.45	
9351.00	90.400	355.960	6126.84	2831.85	2820.28	-315.12	0.90	
9446.00	90.520	356.040	6126.07	2926.82	2915.05	-321.74	0.15	
9541.00	90.250	357.600	6125.43	3021.81	3009.90	-327.01	1.67	
9635.00	90.550	357.790	6124.78	3115.81	3103.82	-330.79	0.38	
9730.00	90.340	358.550	6124.04	3210.79	3198.77	-333.83	0.83	
9825.00	90.250	358.460	6123.55	3305.77	3293.73	-336.31	0.13	
9919.00	90.430	358.590	6122.99	3399.75	3387.70	-338.73	0.24	
10108.00	90.430	359.700	6121.57	3588.65	3576.67	-341.55	0.59	
10203.00	90.310	1.060	6120.96	3683.51	3671.67	-340.92	1.44	
10297.00	90.370	0.600	6120.40	3777.34	3765.65	-339.55	0.49	
10392.00	90.520	359.480	6119.67	3872.23	3860.65	-339.49	1.19	
10486.00	90.680	358.270	6118.68	3966.19	3954.62	-341.33	1.30	
10580.00	90.250	354.570	6117.92	4060.15	4048.42	-347.20	3.96	
10674.00	90.400	354.120	6117.38	4154.02	4141.96	-356.46	0.50	
10769.00	90.310	354.600	6116.80	4248.89	4236.50	-365.80	0.51	
10864.00	90.460	356.230	6116.16	4343.83	4331.19	-373.39	1.72	
10958.00	90.520	357.510	6115.35	4437.83	4425.04	-378.53	1.36	
11053.00	90.740	358.550	6114.31	4532.81	4519.98	-381.79	1.12	
11147.00	90.490	358.870	6113.30	4626.78	4613.95	-383.91	0.43	
11242.00	90.520	0.020	6112.46	4721.71	4708.94	-384.83	1.21	
11337.00	90.490	0.170	6111.63	4816.60	4803.94	-384.67	0.16	
11431.00	90.620	0.890	6110.72	4910.45	4897.93	-383.80	0.78	



# Actual Wellpath Report

RATTLESNAKE FEDERAL LC10-770 AWP

Page n of nn



## REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#13 RATTLESNAKE FEDERAL LC10-770(400'FNL&1274'FWL,SEC.22)
Area	COLORADO	Well	RATTLESNAKE FEDERAL LC10-770
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	RATTLESNAKE FEDERAL LC10-770 AWB
Facility	SEC.22-T09N-R59W		

## WELLPATH DATA (176 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
11526.00	90.550	2.620	6109.74	5005.16	4992.88	-380.89	1.82	
11621.00	90.250	2.170	6109.08	5099.79	5087.79	-376.92	0.57	
11715.00	90.220	1.150	6108.70	5193.52	5181.75	-374.20	1.09	
11810.00	90.220	0.410	6108.33	5288.35	5276.74	-372.91	0.78	
11904.00	90.340	359.140	6107.87	5382.26	5370.74	-373.28	1.36	
11999.00	90.400	357.400	6107.26	5477.24	5465.69	-376.14	1.83	
12093.00	90.250	357.920	6106.73	5571.24	5559.61	-379.98	0.58	
12188.00	90.280	358.840	6106.29	5666.22	5654.57	-382.67	0.97	
12283.00	90.000	359.980	6106.05	5761.16	5749.56	-383.64	1.24	
12377.00	90.550	359.950	6105.60	5855.06	5843.56	-383.70	0.59	
12472.00	90.120	358.090	6105.05	5950.01	5938.54	-385.33	2.01	
12566.00	90.280	356.800	6104.72	6044.01	6032.44	-389.52	1.38	
12661.00	90.280	356.520	6104.25	6139.00	6127.28	-395.05	0.29	
12755.00	90.460	356.210	6103.65	6232.98	6221.09	-401.01	0.38	
12850.00	90.400	356.630	6102.93	6327.97	6315.90	-406.94	0.45	
12944.00	90.370	357.450	6102.30	6421.96	6409.77	-411.80	0.87	
13039.00	90.150	357.710	6101.87	6516.96	6504.69	-415.81	0.36	
13134.00	90.250	356.160	6101.54	6611.96	6599.55	-420.89	1.63	
13229.00	90.180	354.830	6101.18	6706.90	6694.25	-428.35	1.40	
13323.00	90.310	356.010	6100.78	6800.85	6787.95	-435.86	1.26	
13417.00	90.180	356.750	6100.38	6894.83	6881.76	-441.79	0.80	
13512.00	90.150	358.000	6100.11	6989.83	6976.66	-446.14	1.32	
13606.00	90.220	0.050	6099.80	7083.78	7070.64	-447.74	2.18	
13701.00	90.280	359.780	6099.39	7178.69	7165.64	-447.88	0.29	
13796.00	90.120	359.610	6099.06	7273.61	7260.63	-448.39	0.25	
13890.00	90.180	358.430	6098.81	7367.57	7354.62	-449.99	1.26	
13985.00	90.150	356.810	6098.54	7462.56	7449.53	-453.94	1.71	
14079.00	90.340	356.510	6098.14	7556.55	7543.37	-459.42	0.38	
14174.00	90.310	357.580	6097.60	7651.55	7638.24	-464.31	1.13	
14268.00	90.400	357.470	6097.01	7745.55	7732.15	-468.37	0.15	



# Actual Wellpath Report

RATTLESNAKE FEDERAL LC10-770 AWP

Page n of nn



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#13 RATTLESNAKE FEDERAL LC10-770(400'FNL&1274'FWL,SEC.22)
Area	COLORADO	Well	RATTLESNAKE FEDERAL LC10-770
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	RATTLESNAKE FEDERAL LC10-770 AWP
Facility	SEC.22-T09N-R59W		

## WELLPATH DATA (176 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
14363.00	90.120	358.580	6096.58	7840.54	7827.09	-471.65	1.21	
14458.00	90.180	1.370	6096.33	7935.43	7922.08	-471.69	2.94	
14552.00	90.400	4.720	6095.86	8028.95	8015.94	-466.70	3.57	
14647.00	90.180	6.350	6095.38	8122.98	8110.49	-457.53	1.73	
14836.00	90.620	2.790	6094.06	8310.44	8298.85	-442.48	1.90	
14931.00	90.860	358.850	6092.83	8405.24	8393.82	-441.12	4.15	
15025.00	90.280	354.070	6091.89	8499.20	8487.61	-446.92	5.12	
15119.00	90.250	353.080	6091.46	8592.99	8581.01	-457.44	1.05	
15214.00	90.180	349.030	6091.10	8687.40	8674.84	-472.21	4.26	
15308.00	90.220	350.230	6090.77	8780.54	8767.30	-489.13	1.28	
15403.00	90.180	352.100	6090.44	8874.99	8861.17	-503.72	1.97	
15497.00	90.180	356.420	6090.15	8968.83	8954.67	-513.12	4.60	
15592.00	90.950	356.130	6089.21	9063.81	9049.47	-519.29	0.87	
15687.00	90.150	358.580	6088.30	9158.79	9144.35	-523.67	2.71	
15781.00	90.250	3.810	6087.97	9252.55	9238.30	-521.71	5.56	
15876.00	90.250	4.670	6087.56	9346.86	9333.04	-514.69	0.91	
15970.00	90.180	3.200	6087.20	9440.24	9426.81	-508.24	1.57	
16065.00	90.150	2.560	6086.93	9534.79	9521.69	-503.46	0.67	
16159.00	90.280	0.930	6086.58	9628.51	9615.65	-500.60	1.74	
16254.00	90.280	359.370	6086.11	9723.39	9710.64	-500.35	1.64	
16349.00	90.280	357.860	6085.65	9818.37	9805.61	-502.65	1.59	
16443.00	90.310	357.150	6085.16	9912.36	9899.52	-506.74	0.76	
16538.00	90.180	357.510	6084.76	10007.36	9994.41	-511.17	0.40	
16727.00	90.220	357.190	6084.10	10196.36	10183.21	-519.90	0.17	
16821.00	90.180	358.900	6083.77	10290.35	10277.15	-523.11	1.82	LAST BHI MWD SURVEY (720' FSL & 1016' FWL, SEC. 10)
17204.00	90.180	358.900	6082.57	10673.21	10660.08	-530.46	0.00	PROJECTION TO BIT (337' FNL & 1009' FWL, SEC. 10)





# Actual Wellpath Report

RATTLESNAKE FEDERAL LC10-770 AWP

Page n of nn



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#13 RATTLESNAKE FEDERAL LC10-770(400'FNL&1274'FWL,SEC.22)
Area	COLORADO	Well	RATTLESNAKE FEDERAL LC10-770
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	RATTLESNAKE FEDERAL LC10-770 AWB
Facility	SEC.22-T09N-R59W		

HOLE & CASING SECTIONS									
- Ref Wellbore: RATTLESNAKE FEDERAL LC10-770 AWB					Ref Wellpath: RATTLESNAKE FEDERAL LC10-770 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]
9.625in Casing Surface	30.00	1939.00	1909.00	30.00	1938.98	0.01	0.05	-1.20	6.47
8.5in Open Hole	30.00	17204.00	17174.00	30.00	6082.57	0.01	0.05	10660.08	-530.46

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
DUKES FEDERAL LC10-745 SECTION 10	20.00	48.28	1947.51	3426161.44	1516985.93	40°44'32.532"N	103°57'43.236"W	polygon
DUKES FEDERAL LC10-745 SECTION 15	20.00	48.28	1947.51	3426161.44	1516985.93	40°44'32.532"N	103°57'43.236"W	polygon
RATTLESNAKE FEDERAL LC10-770 REV-1 BHL FROM PLAT (330'FNL&1045'FWL,SEC.10)	6058.87	10668.09	-494.47	3423719.48	1527605.65	40°46'17.868"N	103°58'12.576"W	point
RATTLESNAKE FEDERAL LC10-770 LANDING POINT (400'FNL&1045'FWL,SEC.22)	6152.00	0.00	-240.00	3423973.95	1516937.65	40°44'32.429"N	103°58'11.661"W	point
DUKES FEDERAL LC10-745 SECTION 10 300' SETBACK	6520.00	48.28	1947.51	3426161.44	1516985.93	40°44'32.532"N	103°57'43.236"W	polygon
DUKES FEDERAL LC10-745 SECTION 15 300' SETBACK	6520.00	48.28	1947.51	3426161.44	1516985.93	40°44'32.532"N	103°57'43.236"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: RATTLESNAKE FEDERAL LC10-770 AWB					Ref Wellpath: RATTLESNAKE FEDERAL LC10-770 AWP	
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment		Wellbore	
0.00	1934.00	BHI Generic gyro - northseeking (Standard)	Surface Gyros provided by Noble <78'-1934'>		RATTLESNAKE FEDERAL LC10-770 AWB	
1934.00	16821.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	BHI/ATC OWSG MWD+IFR+MSA <1978'-16821'>		RATTLESNAKE FEDERAL LC10-770 AWB	
16821.00	17204.00	Blind Drilling (std)	Projection to bit		RATTLESNAKE FEDERAL LC10-770 AWB	



# Actual Wellpath Report

RATTLESNAKE FEDERAL LC10-770 AWP

Page n of nn



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#13 RATTLESNAKE FEDERAL LC10-770(400'FNL&1274'FWL,SEC.22)
Area	COLORADO	Well	RATTLESNAKE FEDERAL LC10-770
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	RATTLESNAKE FEDERAL LC10-770 AWP
Facility	SEC.22-T09N-R59W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1934.00	0.460	77.010	1933.98	TIED TO GYRO SURVEYS
16821.00	90.180	358.900	6083.77	LAST BHI MWD SURVEY (720' FSL & 1016' FWL, SEC. 10)
17204.00	90.180	358.900	6082.57	PROJECTION TO BIT (337' FNL & 1009' FWL, SEC. 10)