

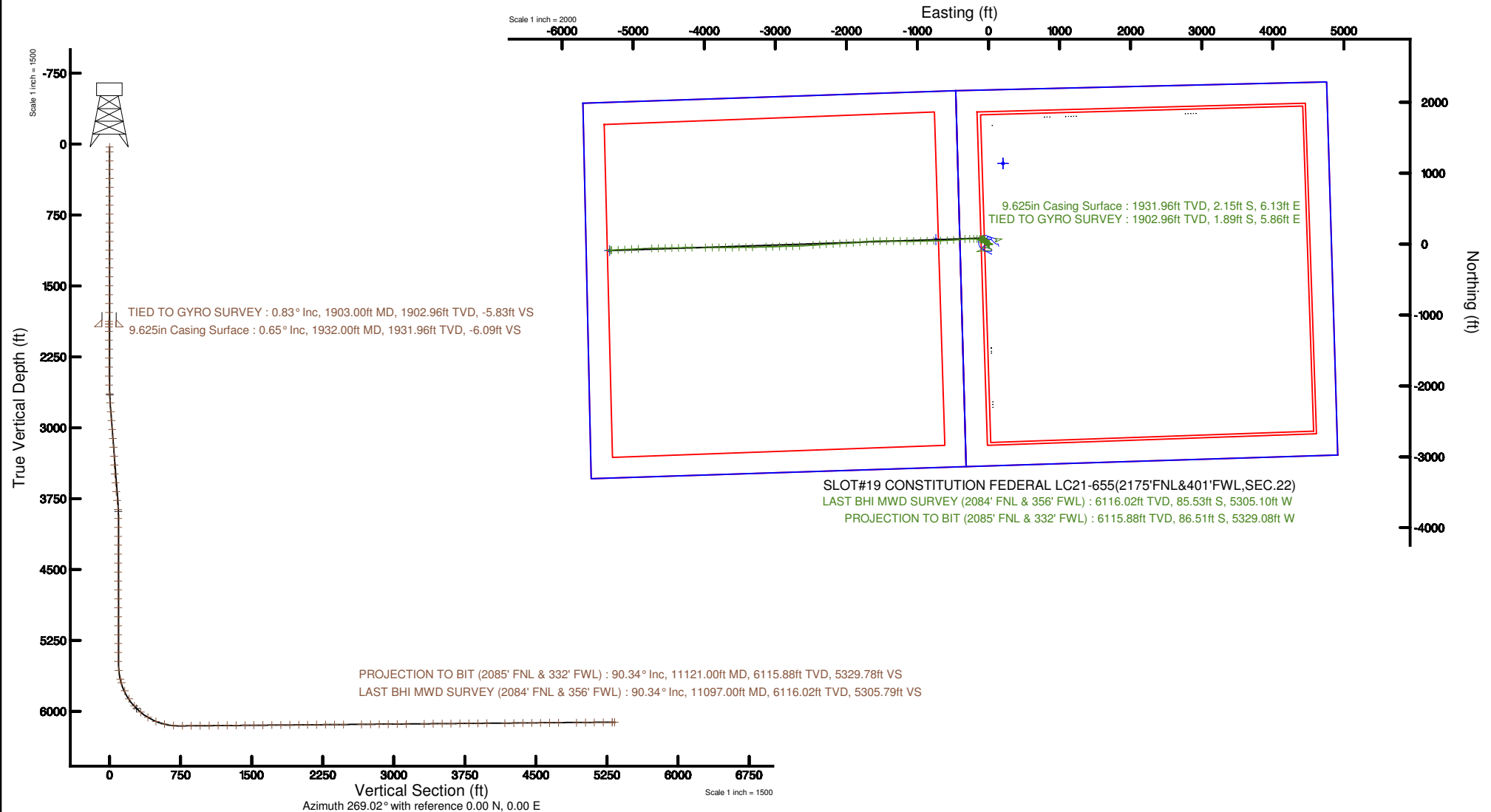
NOBLE ENERGY, INC

Location: COLORADO Slot: SLOT#19 CONSTITUTION FEDERAL LC21-655(2175'FNL&401'FWL,SEC.22)
 Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: CONSTITUTION FEDERAL LC21-655
 Facility: SEC.22-T09N-R59W Wellbore: CONSTITUTION FEDERAL LC21-655 PWB

Comments

SURFACE LOCATION: SWNW
 40.73745N
 103.97212W
 API #: 05-123-42632

| | |
|--|--|
| Plot reference wellpath is CONSTITUTION FEDERAL LC21-655 (REV-B.0) PWP | Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet |
| True vertical depths are referenced to RIG (30'KB) (RKB) | * - Wellpath was transformed from a different geodetic datum |
| Measured depths are referenced to RIG (30'KB) (RKB) | North Reference: Grid north |
| RIG (30'KB) (RKB) to Mean Sea Level: 4937 feet | Scale: True distance |
| Mean Sea Level to Ground level (At Slot: SLOT#19 CONSTITUTION FEDERAL LC21-655(2175'FNL&401'FWL,SEC.22)): 0 feet | Depths are in feet |
| Coordinates are in feet referenced to Slot | Created by: cantryat on 2017-07-07 |
| | Database: Denver |





Actual Wellpath Report

CONSTITUTION FEDERAL LC21-655 AWP
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| REFERENCE WELLPATH IDENTIFICATION | | | |
|-----------------------------------|---------------------------------|----------|--|
| Operator | NOBLE ENERGY, INC | Slot | SLOT#19 CONSTITUTION FEDERAL LC21-655(2175'FNL&401'FWL,SEC.22) |
| Area | COLORADO | Well | CONSTITUTION FEDERAL LC21-655 |
| Field | WELD COUNTY (NOBLE NAD 83 GRID) | Wellbore | CONSTITUTION FEDERAL LC21-655 AWB |
| Facility | SEC.22-T09N-R59W | | |

| REPORT SETUP INFORMATION | | | |
|--------------------------|---|----------------------|--|
| Projection System | NAD83 / Lambert Colorado SP, Northern Zone (501), US feet | Software System | WellArchitect® 5.0 |
| North Reference | Grid | User | Cantryat |
| Scale | 0.999993 | Report Generated | 7/7/2017 at 2:38:06 PM |
| Convergence at slot | 0.99° East | Database/Source file | Denver/CONSTITUTION_FEDERAL_LC21-655_AWP.xml |

| WELLPATH LOCATION | | | | | | |
|-----------------------|-------------------|----------|------------------|-----------------|------------------------|-----------------|
| | Local coordinates | | Grid coordinates | | Geographic coordinates | |
| | North[ft] | East[ft] | Easting[US ft] | Northing[US ft] | Latitude | Longitude |
| Slot Location | -1840.68 | -2770.24 | 3423391.23 | 1515145.26 | 40°44'14.820"N | 103°58'19.632"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 | 4937.00ft |
| Horizontal Reference Pt | Slot | RIG (30'KB) (RKB) to Mean Sea Level | 4937.00ft |
| Vertical Reference Pt | RIG (30'KB) (RKB) | RIG (30'KB) (RKB) to Ground Level at Slot (SLOT#19 CONSTITUTION FEDERAL LC21-655 (2175'FNL&401'FWL,SEC.22)) | 4937.00ft |
| MD Reference Pt | RIG (30'KB) (RKB) | Section Origin | N 0.00, E 0.00 ft |
| Field Vertical Reference | Mean Sea Level | Section Azimuth | 269.02° |



Actual Wellpath Report

CONSTITUTION FEDERAL LC21-655 AWP
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REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|---------------------------------|----------|--|
| Operator | NOBLE ENERGY, INC | Slot | SLOT#19 CONSTITUTION FEDERAL LC21-655(2175'FNL&401'FWL,SEC.22) |
| Area | COLORADO | Well | CONSTITUTION FEDERAL LC21-655 |
| Field | WELD COUNTY (NOBLE NAD 83 GRID) | Wellbore | CONSTITUTION FEDERAL LC21-655 AWB |
| Facility | SEC.22-T09N-R59W | | |

WELLPATH DATA (118 stations) † = interpolated/extrapolated station

| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | DLS ["/100ft] | Comments |
|---------|-----------------|-------------|----------|----------------|------------|-----------|---------------|---------------------|
| 0.00† | 0.000 | 272.830 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 30.00 | 0.000 | 272.830 | 30.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 82.00 | 0.470 | 272.830 | 82.00 | 0.21 | 0.01 | -0.21 | 0.90 | |
| 177.00 | 0.280 | 275.870 | 177.00 | 0.83 | 0.05 | -0.83 | 0.20 | |
| 268.00 | 0.330 | 284.100 | 268.00 | 1.31 | 0.14 | -1.31 | 0.07 | |
| 362.00 | 0.330 | 291.490 | 361.99 | 1.82 | 0.31 | -1.82 | 0.05 | |
| 457.00 | 0.230 | 43.430 | 456.99 | 1.94 | 0.54 | -1.95 | 0.49 | |
| 551.00 | 0.390 | 72.590 | 550.99 | 1.50 | 0.78 | -1.51 | 0.23 | |
| 646.00 | 0.110 | 169.600 | 645.99 | 1.17 | 0.78 | -1.19 | 0.44 | |
| 741.00 | 0.410 | 112.300 | 740.99 | 0.85 | 0.57 | -0.86 | 0.38 | |
| 835.00 | 0.310 | 121.390 | 834.99 | 0.32 | 0.30 | -0.33 | 0.12 | |
| 930.00 | 0.450 | 148.210 | 929.99 | -0.09 | -0.15 | 0.09 | 0.23 | |
| 1024.00 | 0.380 | 94.130 | 1023.98 | -0.59 | -0.48 | 0.59 | 0.41 | |
| 1119.00 | 0.270 | 102.300 | 1118.98 | -1.12 | -0.55 | 1.13 | 0.13 | |
| 1213.00 | 0.110 | 325.330 | 1212.98 | -1.28 | -0.53 | 1.29 | 0.38 | |
| 1308.00 | 0.320 | 83.880 | 1307.98 | -1.50 | -0.42 | 1.50 | 0.41 | |
| 1403.00 | 0.490 | 89.810 | 1402.98 | -2.17 | -0.39 | 2.17 | 0.18 | |
| 1497.00 | 0.660 | 105.400 | 1496.98 | -3.09 | -0.54 | 3.10 | 0.24 | |
| 1592.00 | 0.410 | 109.920 | 1591.97 | -3.93 | -0.80 | 3.94 | 0.27 | |
| 1686.00 | 0.210 | 128.070 | 1685.97 | -4.38 | -1.02 | 4.40 | 0.23 | |
| 1781.00 | 0.380 | 109.840 | 1780.97 | -4.81 | -1.23 | 4.83 | 0.20 | |
| 1876.00 | 0.680 | 126.720 | 1875.96 | -5.55 | -1.68 | 5.58 | 0.35 | |
| 1903.00 | 0.830 | 126.440 | 1902.96 | -5.83 | -1.89 | 5.86 | 0.56 | TIED TO GYRO SURVEY |
| 1980.00 | 0.620 | 191.900 | 1979.96 | -6.18 | -2.63 | 6.23 | 1.04 | |
| 2074.00 | 0.690 | 345.940 | 2073.95 | -5.94 | -2.57 | 5.98 | 1.36 | |
| 2169.00 | 0.030 | 247.440 | 2168.95 | -5.79 | -2.03 | 5.82 | 0.73 | |
| 2263.00 | 0.040 | 27.450 | 2262.95 | -5.78 | -2.01 | 5.81 | 0.07 | |
| 2358.00 | 0.030 | 154.030 | 2357.95 | -5.81 | -2.00 | 5.84 | 0.07 | |
| 2452.00 | 0.040 | 135.370 | 2451.95 | -5.84 | -2.05 | 5.87 | 0.02 | |
| 2547.00 | 2.060 | 306.770 | 2546.93 | -4.51 | -1.05 | 4.53 | 2.21 | |



Actual Wellpath Report

CONSTITUTION FEDERAL LC21-655 AWP
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| REFERENCE WELLPATH IDENTIFICATION | | | |
|-----------------------------------|---------------------------------|----------|--|
| Operator | NOBLE ENERGY, INC | Slot | SLOT#19 CONSTITUTION FEDERAL LC21-655(2175'FNL&401'FWL,SEC.22) |
| Area | COLORADO | Well | CONSTITUTION FEDERAL LC21-655 |
| Field | WELD COUNTY (NOBLE NAD 83 GRID) | Wellbore | CONSTITUTION FEDERAL LC21-655 AWB |
| Facility | SEC.22-T09N-R59W | | |

| WELLPATH DATA (118 stations) | | | | | | | | |
|------------------------------|--------------------|----------------|-------------|-------------------|---------------|--------------|------------------|----------|
| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | DLS [°/100ft] | Comments |
| 2642.00 | 4.950 | 308.630 | 2641.74 | 0.00 | 2.53 | -0.04 | 3.04 | |
| 2736.00 | 5.710 | 308.990 | 2735.34 | 6.70 | 8.01 | -6.84 | 0.81 | |
| 2831.00 | 5.620 | 307.770 | 2829.87 | 13.95 | 13.83 | -14.19 | 0.16 | |
| 2925.00 | 5.680 | 307.950 | 2923.42 | 21.16 | 19.51 | -21.50 | 0.07 | |
| 3020.00 | 5.510 | 308.230 | 3017.96 | 28.35 | 25.22 | -28.79 | 0.18 | |
| 3115.00 | 5.520 | 308.810 | 3112.52 | 35.40 | 30.91 | -35.93 | 0.06 | |
| 3209.00 | 5.540 | 312.360 | 3206.09 | 42.17 | 36.80 | -42.81 | 0.36 | |
| 3304.00 | 6.210 | 334.120 | 3300.60 | 47.67 | 44.51 | -48.44 | 2.43 | |
| 3398.00 | 6.320 | 335.860 | 3394.04 | 51.85 | 53.81 | -52.78 | 0.23 | |
| 3493.00 | 6.310 | 328.810 | 3488.46 | 56.53 | 63.05 | -57.62 | 0.82 | |
| 3587.00 | 6.330 | 315.940 | 3581.90 | 62.67 | 71.19 | -63.90 | 1.50 | |
| 3682.00 | 6.540 | 282.520 | 3676.33 | 71.51 | 76.13 | -72.82 | 3.89 | |
| 3776.00 | 6.950 | 233.280 | 3769.75 | 81.34 | 73.89 | -82.62 | 5.98 | |
| 3871.00 | 4.300 | 204.030 | 3864.31 | 87.51 | 67.19 | -88.68 | 4.03 | |
| 3965.00 | 2.440 | 202.350 | 3958.14 | 89.79 | 62.12 | -90.87 | 1.98 | |
| 4060.00 | 0.070 | 301.440 | 4053.11 | 90.64 | 60.28 | -91.69 | 2.58 | |
| 4155.00 | 0.030 | 150.020 | 4148.11 | 90.68 | 60.29 | -91.73 | 0.10 | |
| 4249.00 | 0.030 | 40.780 | 4242.11 | 90.65 | 60.29 | -91.70 | 0.05 | |
| 4344.00 | 0.040 | 346.150 | 4337.11 | 90.64 | 60.34 | -91.69 | 0.04 | |
| 4438.00 | 0.120 | 64.950 | 4431.11 | 90.56 | 60.41 | -91.61 | 0.13 | |
| 4533.00 | 0.070 | 108.300 | 4526.11 | 90.42 | 60.44 | -91.46 | 0.09 | |
| 4628.00 | 0.110 | 50.790 | 4621.11 | 90.29 | 60.48 | -91.34 | 0.10 | |
| 4722.00 | 0.260 | 27.690 | 4715.11 | 90.12 | 60.72 | -91.17 | 0.18 | |
| 4817.00 | 0.070 | 149.520 | 4810.11 | 89.98 | 60.86 | -91.04 | 0.32 | |
| 4911.00 | 0.030 | 175.720 | 4904.11 | 89.95 | 60.79 | -91.01 | 0.05 | |
| 5006.00 | 0.040 | 105.630 | 4999.11 | 89.92 | 60.76 | -90.97 | 0.04 | |
| 5100.00 | 0.040 | 279.570 | 5093.11 | 89.92 | 60.75 | -90.98 | 0.08 | |
| 5195.00 | 0.060 | 165.730 | 5188.11 | 89.94 | 60.71 | -91.00 | 0.09 | |
| 5289.00 | 0.090 | 203.470 | 5282.11 | 89.96 | 60.60 | -91.01 | 0.06 | |
| 5384.00 | 0.040 | 87.000 | 5377.11 | 89.96 | 60.53 | -91.01 | 0.12 | |



Actual Wellpath Report

CONSTITUTION FEDERAL LC21-655 AWP
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| REFERENCE WELLPATH IDENTIFICATION | | | |
|-----------------------------------|---------------------------------|----------|--|
| Operator | NOBLE ENERGY, INC | Slot | SLOT#19 CONSTITUTION FEDERAL LC21-655(2175'FNL&401'FWL,SEC.22) |
| Area | COLORADO | Well | CONSTITUTION FEDERAL LC21-655 |
| Field | WELD COUNTY (NOBLE NAD 83 GRID) | Wellbore | CONSTITUTION FEDERAL LC21-655 AWB |
| Facility | SEC.22-T09N-R59W | | |

| WELLPATH DATA (118 stations) | | | | | | | | |
|------------------------------|--------------------|----------------|-------------|-------------------|---------------|--------------|------------------|----------|
| MD (ft) | Inclination [°] | Azimuth [°] | TVD (ft) | Vert Sect (ft) | North (ft) | East (ft) | DLS (°/100ft) | Comments |
| 5478.00 | 0.100 | 32.760 | 5471.11 | 89.88 | 60.60 | -90.93 | 0.09 | |
| 5573.00 | 7.840 | 282.810 | 5565.82 | 96.14 | 62.11 | -97.22 | 8.29 | |
| 5668.00 | 16.520 | 288.020 | 5658.59 | 115.24 | 67.73 | -116.42 | 9.20 | |
| 5707.00 | 18.560 | 283.810 | 5695.78 | 126.48 | 70.93 | -127.72 | 6.16 | |
| 5801.00 | 25.010 | 264.930 | 5783.12 | 160.85 | 72.75 | -162.12 | 10.05 | |
| 5896.00 | 32.580 | 272.360 | 5866.34 | 206.49 | 72.03 | -207.76 | 8.80 | |
| 5990.00 | 41.120 | 271.320 | 5941.49 | 262.75 | 73.78 | -264.05 | 9.11 | |
| 6085.00 | 49.840 | 265.540 | 6008.07 | 330.35 | 71.68 | -331.63 | 10.15 | |
| 6179.00 | 58.510 | 264.990 | 6063.03 | 406.33 | 65.37 | -407.51 | 9.24 | |
| 6274.00 | 67.160 | 266.330 | 6106.37 | 490.63 | 59.02 | -491.71 | 9.19 | |
| 6369.00 | 77.090 | 267.570 | 6135.49 | 580.87 | 54.24 | -581.88 | 10.53 | |
| 6463.00 | 86.060 | 268.270 | 6149.25 | 673.74 | 50.88 | -674.71 | 9.57 | |
| 6558.00 | 90.490 | 269.020 | 6152.11 | 768.67 | 48.63 | -769.62 | 4.73 | |
| 6652.00 | 90.460 | 267.830 | 6151.33 | 862.66 | 46.05 | -863.58 | 1.27 | |
| 6747.00 | 90.370 | 268.390 | 6150.64 | 957.65 | 42.92 | -958.52 | 0.60 | |
| 6841.00 | 90.430 | 269.830 | 6149.99 | 1051.64 | 41.46 | -1052.51 | 1.53 | |
| 6936.00 | 90.430 | 270.150 | 6149.27 | 1146.63 | 41.44 | -1147.50 | 0.34 | |
| 7030.00 | 90.460 | 269.830 | 6148.54 | 1240.61 | 41.42 | -1241.50 | 0.34 | |
| 7125.00 | 90.550 | 271.420 | 6147.71 | 1335.56 | 42.46 | -1336.49 | 1.68 | |
| 7220.00 | 90.460 | 270.710 | 6146.87 | 1430.50 | 44.23 | -1431.47 | 0.75 | |
| 7314.00 | 90.340 | 269.140 | 6146.21 | 1524.48 | 44.10 | -1525.46 | 1.68 | |
| 7408.00 | 90.280 | 267.140 | 6145.70 | 1618.47 | 41.05 | -1619.41 | 2.13 | |
| 7503.00 | 90.400 | 264.520 | 6145.14 | 1713.31 | 34.14 | -1714.14 | 2.76 | |
| 7597.00 | 90.460 | 265.100 | 6144.43 | 1807.05 | 25.64 | -1807.76 | 0.62 | |
| 7692.00 | 90.400 | 266.390 | 6143.72 | 1901.89 | 18.59 | -1902.49 | 1.36 | |
| 7787.00 | 90.520 | 267.680 | 6142.96 | 1996.83 | 13.68 | -1997.36 | 1.36 | |
| 7881.00 | 90.520 | 267.110 | 6142.10 | 2090.79 | 9.41 | -2091.26 | 0.61 | |
| 7976.00 | 90.520 | 266.710 | 6141.24 | 2185.72 | 4.29 | -2186.11 | 0.42 | |
| 8071.00 | 90.370 | 266.520 | 6140.50 | 2280.63 | -1.32 | -2280.95 | 0.25 | |
| 8165.00 | 90.180 | 265.770 | 6140.05 | 2374.51 | -7.64 | -2374.73 | 0.82 | |



Actual Wellpath Report

CONSTITUTION FEDERAL LC21-655 AWP
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| REFERENCE WELLPATH IDENTIFICATION | | | |
|-----------------------------------|---------------------------------|----------|--|
| Operator | NOBLE ENERGY, INC | Slot | SLOT#19 CONSTITUTION FEDERAL LC21-655(2175'FNL&401'FWL,SEC.22) |
| Area | COLORADO | Well | CONSTITUTION FEDERAL LC21-655 |
| Field | WELD COUNTY (NOBLE NAD 83 GRID) | Wellbore | CONSTITUTION FEDERAL LC21-655 AWB |
| Facility | SEC.22-T09N-R59W | | |

| WELLPATH DATA (118 stations) | | | | | | | | |
|------------------------------|--------------------|----------------|-------------|-------------------|---------------|--------------|------------------|--|
| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | DLS [°/100ft] | Comments |
| 8260.00 | 90.460 | 265.940 | 6139.52 | 2469.37 | -14.51 | -2469.48 | 0.34 | |
| 8449.00 | 90.370 | 267.590 | 6138.15 | 2658.21 | -25.17 | -2658.17 | 0.87 | |
| 8544.00 | 90.430 | 268.820 | 6137.49 | 2753.20 | -28.15 | -2753.12 | 1.30 | |
| 8638.00 | 90.370 | 268.700 | 6136.83 | 2847.19 | -30.18 | -2847.09 | 0.14 | |
| 8733.00 | 90.370 | 268.070 | 6136.22 | 2942.18 | -32.86 | -2942.05 | 0.66 | |
| 8827.00 | 90.550 | 268.350 | 6135.47 | 3036.17 | -35.80 | -3036.00 | 0.35 | |
| 8922.00 | 90.680 | 268.080 | 6134.45 | 3131.16 | -38.76 | -3130.95 | 0.32 | |
| 9112.00 | 90.620 | 269.290 | 6132.29 | 3321.14 | -43.12 | -3320.89 | 0.64 | |
| 9206.00 | 90.710 | 270.790 | 6131.20 | 3415.11 | -43.05 | -3414.88 | 1.60 | |
| 9301.00 | 90.800 | 267.940 | 6129.95 | 3510.09 | -44.10 | -3509.85 | 3.00 | |
| 9395.00 | 90.430 | 270.100 | 6128.94 | 3604.08 | -45.71 | -3603.83 | 2.33 | |
| 9490.00 | 90.400 | 270.240 | 6128.25 | 3699.06 | -45.43 | -3698.83 | 0.15 | |
| 9584.00 | 90.400 | 269.130 | 6127.59 | 3793.05 | -45.95 | -3792.82 | 1.18 | |
| 9679.00 | 90.370 | 269.060 | 6126.96 | 3888.05 | -47.45 | -3887.81 | 0.08 | |
| 9774.00 | 90.490 | 269.510 | 6126.24 | 3983.04 | -48.63 | -3982.80 | 0.49 | |
| 9963.00 | 90.490 | 269.430 | 6124.63 | 4172.03 | -50.38 | -4171.78 | 0.04 | |
| 10057.00 | 90.430 | 269.390 | 6123.87 | 4266.03 | -51.35 | -4265.77 | 0.08 | |
| 10152.00 | 90.460 | 269.030 | 6123.13 | 4361.02 | -52.66 | -4360.76 | 0.38 | |
| 10247.00 | 90.460 | 268.780 | 6122.37 | 4456.02 | -54.47 | -4455.74 | 0.26 | |
| 10341.00 | 90.460 | 268.630 | 6121.62 | 4550.02 | -56.60 | -4549.71 | 0.16 | |
| 10436.00 | 90.430 | 268.800 | 6120.88 | 4645.01 | -58.73 | -4644.69 | 0.18 | |
| 10530.00 | 90.490 | 268.490 | 6120.12 | 4739.01 | -60.95 | -4738.66 | 0.34 | |
| 10719.00 | 90.340 | 267.240 | 6118.76 | 4927.96 | -67.99 | -4927.52 | 0.67 | |
| 10814.00 | 90.400 | 267.480 | 6118.14 | 5022.92 | -72.37 | -5022.41 | 0.26 | |
| 10908.00 | 90.520 | 267.440 | 6117.39 | 5116.88 | -76.53 | -5116.32 | 0.13 | |
| 11003.00 | 90.400 | 266.990 | 6116.62 | 5211.83 | -81.15 | -5211.20 | 0.49 | |
| 11097.00 | 90.340 | 267.660 | 6116.02 | 5305.79 | -85.53 | -5305.10 | 0.72 | LAST BHI MWD SURVEY (2084' FNL & 356' FWL) |
| 11121.00 | 90.340 | 267.660 | 6115.88 | 5329.78 | -86.51 | -5329.08 | 0.00 | PROJECTION TO BIT (2085' FNL & 332' FWL) |



Actual Wellpath Report

CONSTITUTION FEDERAL LC21-655 AWP
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| REFERENCE WELLPATH IDENTIFICATION | | | |
|-----------------------------------|---------------------------------|----------|--|
| Operator | NOBLE ENERGY, INC | Slot | SLOT#19 CONSTITUTION FEDERAL LC21-655(2175'FNL&401'FWL,SEC.22) |
| Area | COLORADO | Well | CONSTITUTION FEDERAL LC21-655 |
| Field | WELD COUNTY (NOBLE NAD 83 GRID) | Wellbore | CONSTITUTION FEDERAL LC21-655 AWB |
| Facility | SEC.22-T09N-R59W | | |

| HOLE & CASING SECTIONS | | | | | | | | | |
|---|---------------|-------------|---------------|----------------|---|----------------|----------------|--------------|--------------|
| - Ref Wellbore: CONSTITUTION FEDERAL LC21-655 AWB | | | | | Ref Wellpath: CONSTITUTION FEDERAL LC21-655 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 | 1932.00 | 1902.00 | 30.00 | 1931.96 | 0.00 | 0.00 | -2.15 | 6.13 |
| 8.5in Open Hole | 30.00 | 11121.00 | 11091.00 | 30.00 | 6115.88 | 0.00 | 0.00 | -86.51 | -5329.08 |

| TARGETS | | | | | | | | |
|---|----------|------------|-----------|-------------------|--------------------|----------------|-----------------|---------|
| Name | TVD [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude | Longitude | Shape |
| MAGPUL FEDERAL LC21-670 SECTION 21 | -1.00 | 1136.78 | 204.91 | 3423596.13 | 1516282.03 | 40°44'26.016"N | 103°58'16.716"W | polygon |
| MAGPUL FEDERAL LC21-670 SECTION 22 | -1.00 | 1136.78 | 204.91 | 3423596.13 | 1516282.03 | 40°44'26.016"N | 103°58'16.716"W | polygon |
| CONSTITUTION FEDERAL LC21-665 REV-1 BHL FROM PLAT (2090'FNL&330'FWL,SEC.21) | 6113.91 | -91.29 | -5331.13 | 3418060.14 | 1515053.98 | 40°44'14.820"N | 103°59'28.896"W | point |
| CONSTITUTION FEDERAL LC21-665 LANDING POINT (2090'FNL&330'FEL,SEC.21) | 6154.00 | 63.40 | -739.60 | 3422651.63 | 1515208.66 | 40°44'15.572"N | 103°58'29.224"W | point |
| MAGPUL FEDERAL LC21-670 SECTION 21 HARDLINE (300'SETBACK) | 6399.00 | 1136.78 | 204.91 | 3423596.13 | 1516282.03 | 40°44'26.016"N | 103°58'16.716"W | polygon |
| MAGPUL FEDERAL LC21-670 SECTION 22 HARDLINE (300'SETBACK) | 6399.00 | 1136.78 | 204.91 | 3423596.13 | 1516282.03 | 40°44'26.016"N | 103°58'16.716"W | polygon |

| WELLPATH COMPOSITION - Ref Wellbore: CONSTITUTION FEDERAL LC21-655 AWB | | | | | Ref Wellpath: CONSTITUTION FEDERAL LC21-655 AWP | |
|--|-------------|---|--|-----------------------------------|---|--|
| Start MD [ft] | End MD [ft] | Positional Uncertainty Model | Log Name/Comment | Wellbore | | |
| 30.00 | 1903.00 | Gyrodata standard - Drop gyro or Multi-shot | GYRODATA SURVEYS <82-1903> | CONSTITUTION FEDERAL LC21-655 AWB | | |
| 1903.00 | 11097.00 | OWSG MWD rev2 + IFR1 + Multi-Station Correction | BHI 8.5" Monobore surveys <1980'-11097'> | CONSTITUTION FEDERAL LC21-655 AWB | | |
| 11097.00 | 11121.00 | Blind Drilling (std) | Projection to bit | CONSTITUTION FEDERAL LC21-655 AWB | | |



Actual Wellpath Report
 CONSTITUTION FEDERAL LC21-655 AWP
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| REFERENCE WELLPATH IDENTIFICATION | | | |
|-----------------------------------|---------------------------------|----------|--|
| Operator | NOBLE ENERGY, INC | Slot | SLOT#19 CONSTITUTION FEDERAL LC21-655(2175'FNL&401'FWL,SEC.22) |
| Area | COLORADO | Well | CONSTITUTION FEDERAL LC21-655 |
| Field | WELD COUNTY (NOBLE NAD 83 GRID) | Wellbore | CONSTITUTION FEDERAL LC21-655 AWB |
| Facility | SEC.22-T09N-R59W | | |

| WELLPATH COMMENTS | | | | |
|-------------------|--------------------|----------------|-------------|--|
| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Comment |
| 1903.00 | 0.830 | 126.440 | 1902.96 | TIED TO GYRO SURVEY |
| 11097.00 | 90.340 | 267.660 | 6116.02 | LAST BHI MWD SURVEY (2084' FNL & 356' FWL) |
| 11121.00 | 90.340 | 267.660 | 6115.88 | PROJECTION TO BIT (2085' FNL & 332' FWL) |

| COMMENTS |
|--|
| Wellpath general comments SURFACE LOCATION: SWNW 40.73745N 103.97212W API #: 05-123-42632 |