

NOBLE ENERGY, INC

Location: COLORADO Slot: SLOT#10 BENELLI FEDERAL LC22-760 (400'FNL&1649'FWL,SEC.22)
Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: BENELLI FEDERAL LC22-760
Facility: SEC.22-T08N-R59W Wellbore: BENELLI FEDERAL LC22-760 PWB

Comments

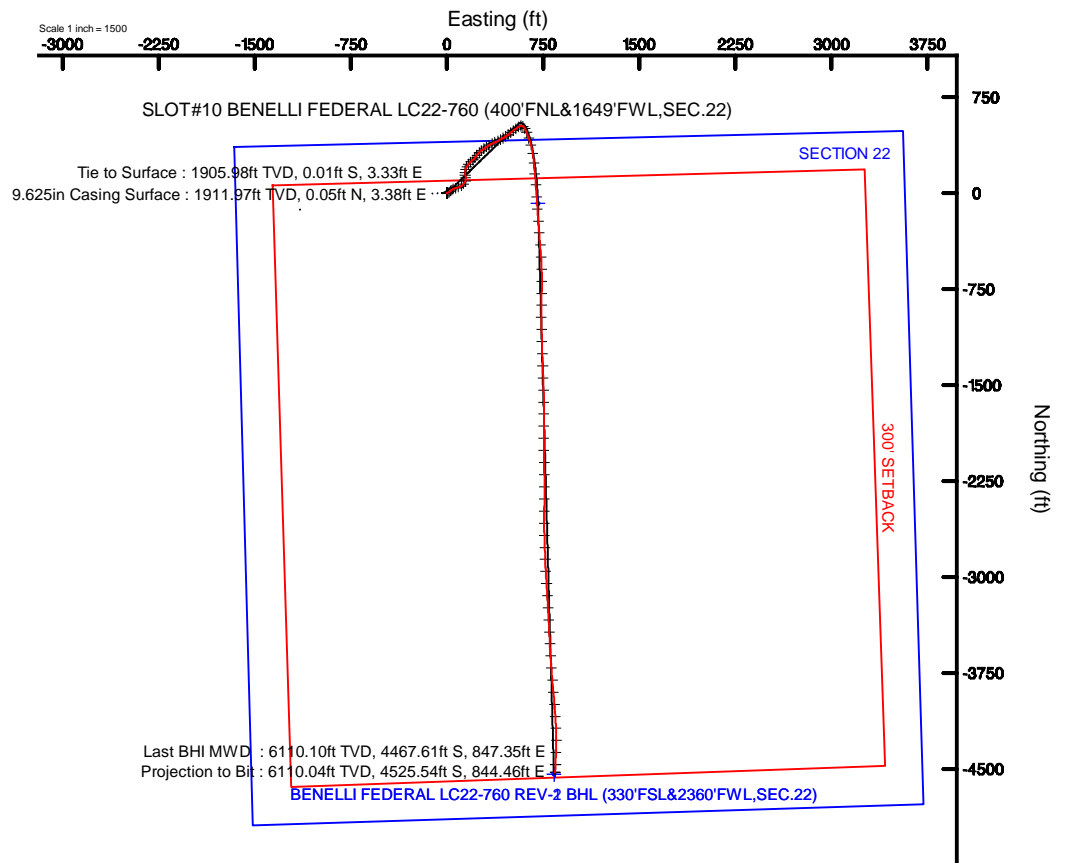
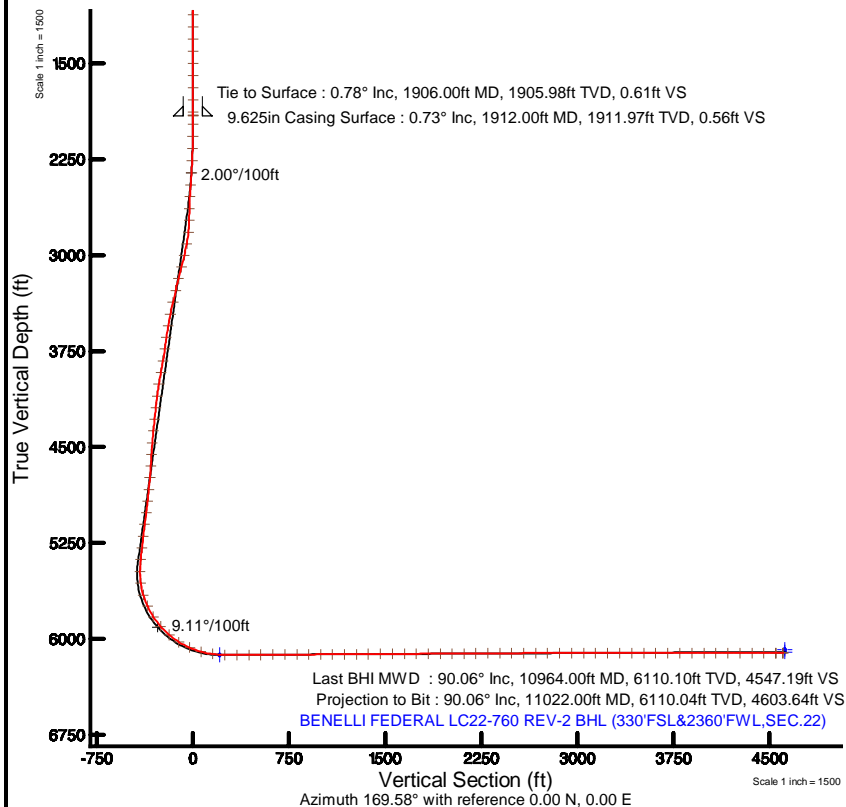
SHL:
Lat: 40.74234 N
Long: 103.96768 W
API#: 05-123-42977



Location Information

| Facility Name | | Grid East (US N) | Grid North (US N) | Latitude | Longitude | |
|--|-------------|------------------|-------------------|-------------------|----------------|----------------|
| SEC.22-T08N-R59W | | 345851.400 | 103885.000 | 40°42'22.07"N | 103°57'43.20"W | |
| Site | Local N (S) | Local E (W) | Grid East (US N) | Grid North (US N) | Latitude | Longitude |
| SLOT#10 BENELLI FEDERAL LC22-760 (400'FNL&1649'FWL,SEC.22) | 16.15 | -1625.77 | 345865.400 | 103887.500 | 40°42'12.65"N | 103°57'33.64"W |
| PROJ.20826 (PWB) to Groundwater (in Slot) SLOT#10 BENELLI FEDERAL LC22-760 (400'FNL&1649'FWL,SEC.22) | | | | | 4460 | |
| Mean Sea Level to Groundwater (in Slot) SLOT#10 BENELLI FEDERAL LC22-760 (400'FNL&1649'FWL,SEC.22) | | | | | 0 | |
| PROJ.20826 (PWB) to Mean Sea Level | | | | | 4460 | |

| | |
|--|---|
| Site reference is equal to BENELLI FEDERAL LC22-760-REV-2 BHL PWB | Grid System: NAD83 / Lambert Conformal 87, Northern Zone 10N, US feet |
| True vertical depths are referenced to RIG (2018) (PWB) | " = 1000 feet are transformed from a different geoid datum |
| Adjusted depths are referenced to RIG (2018) (PWB) | North Reference: Grid north |
| RIG (2018) (PWB) to Mean Sea Level: 4460 feet | Scale: True distance |
| Mean Sea Level to Groundwater (in Slot) SLOT#10 BENELLI FEDERAL LC22-760 (400'FNL&1649'FWL,SEC.22): 0 feet | Depths are in feet |
| Coordinates are in feet referenced to Slot | Created by: gander on 2017-05-08 |
| | Database: 001_001_001 - 001 |





Actual Wellpath Report

BENELLI FEDERAL LC22-760 AWP

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| REFERENCE WELLPATH IDENTIFICATION | | | |
|-----------------------------------|---------------------------------|----------|--|
| Operator | NOBLE ENERGY, INC | Slot | SLOT#10 BENELLI FEDERAL LC22-760 (400'FNL&1649'FWL,SEC.22) |
| Area | COLORADO | Well | BENELLI FEDERAL LC22-760 |
| Field | WELD COUNTY (NOBLE NAD 83 GRID) | Wellbore | BENELLI FEDERAL LC22-760 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 | Guenaler |
| Scale | 0.999994 | Report Generated | 3/28/2017 at 12:32:51 PM |
| Convergence at slot | 1.00° East | Database/Source file | WA_DEN_Denver_Defn/BENELLI_FEDERAL_LC22-760_AWP.xml |

| WELLPATH LOCATION | | | | | | |
|-----------------------|-------------------|----------|------------------|-----------------|------------------------|-----------------|
| | Local coordinates | | Grid coordinates | | Geographic coordinates | |
| | North[ft] | East[ft] | Easting[US ft] | Northing[US ft] | Latitude | Longitude |
| Slot Location | -38.13 | -1570.77 | 3424590.69 | 1516947.80 | 40°44'32.424"N | 103°58'03.648"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 | 4945.00ft |
| Horizontal Reference Pt | Slot | RIG (30'KB) (RKB) to Mean Sea Level | 4945.00ft |
| Vertical Reference Pt | RIG (30'KB) (RKB) | RIG (30'KB) (RKB) to Ground Level at Slot (SLOT#10 BENELLI FEDERAL LC22-760 (400'FNL&1649'FWL,SEC.22)) | 4945.00ft |
| MD Reference Pt | RIG (30'KB) (RKB) | Section Origin | N 0.00, E 0.00 ft |
| Field Vertical Reference | Mean Sea Level | Section Azimuth | 169.58° |

| REFERENCE WELLPATH IDENTIFICATION | | | |
|-----------------------------------|---------------------------------|----------|--|
| Operator | NOBLE ENERGY, INC | Slot | SLOT#10 BENELLI FEDERAL LC22-760 (400'FNL&1649'FWL,SEC.22) |
| Area | COLORADO | Well | BENELLI FEDERAL LC22-760 |
| Field | WELD COUNTY (NOBLE NAD 83 GRID) | Wellbore | BENELLI FEDERAL LC22-760 AWB |
| Facility | SEC.22-T09N-R59W | | |

| WELLPATH DATA (119 stations) | | | | | | | | | | |
|------------------------------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------|-----------------|------------------|----------------|
| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | Latitude | Longitude | DLS [°/100ft] | Comments |
| 0.00 | 0.000 | 18.380 | 0.00 | 0.00 | 0.00 | 0.00 | 40°44'32.424"N | 103°58'03.648"W | 0.00 | |
| 81.00 | 0.120 | 18.380 | 81.00 | -0.07 | 0.08 | 0.03 | 40°44'32.425"N | 103°58'03.648"W | 0.15 | |
| 175.00 | 0.150 | 61.550 | 175.00 | -0.20 | 0.23 | 0.17 | 40°44'32.426"N | 103°58'03.646"W | 0.11 | |
| 270.00 | 0.580 | 41.270 | 270.00 | -0.54 | 0.65 | 0.59 | 40°44'32.430"N | 103°58'03.640"W | 0.47 | |
| 365.00 | 0.560 | 28.300 | 364.99 | -1.20 | 1.42 | 1.13 | 40°44'32.438"N | 103°58'03.633"W | 0.14 | |
| 460.00 | 0.420 | 104.720 | 459.99 | -1.41 | 1.74 | 1.69 | 40°44'32.441"N | 103°58'03.626"W | 0.65 | |
| 554.00 | 0.220 | 97.370 | 553.99 | -1.21 | 1.63 | 2.20 | 40°44'32.440"N | 103°58'03.619"W | 0.22 | |
| 649.00 | 0.340 | 165.820 | 648.99 | -0.87 | 1.34 | 2.45 | 40°44'32.437"N | 103°58'03.616"W | 0.35 | |
| 743.00 | 0.530 | 155.100 | 742.99 | -0.17 | 0.67 | 2.70 | 40°44'32.430"N | 103°58'03.613"W | 0.22 | |
| 838.00 | 0.280 | 124.460 | 837.98 | 0.42 | 0.14 | 3.08 | 40°44'32.425"N | 103°58'03.608"W | 0.34 | |
| 932.00 | 0.210 | 315.390 | 931.98 | 0.44 | 0.13 | 3.14 | 40°44'32.425"N | 103°58'03.607"W | 0.52 | |
| 1027.00 | 0.220 | 216.480 | 1026.98 | 0.42 | 0.11 | 2.91 | 40°44'32.425"N | 103°58'03.610"W | 0.34 | |
| 1122.00 | 0.330 | 118.340 | 1121.98 | 0.71 | -0.16 | 3.05 | 40°44'32.422"N | 103°58'03.608"W | 0.44 | |
| 1216.00 | 0.060 | 185.350 | 1215.98 | 0.93 | -0.34 | 3.28 | 40°44'32.420"N | 103°58'03.605"W | 0.33 | |
| 1311.00 | 0.100 | 194.480 | 1310.98 | 1.05 | -0.47 | 3.25 | 40°44'32.419"N | 103°58'03.606"W | 0.04 | |
| 1406.00 | 0.070 | 154.350 | 1405.98 | 1.18 | -0.60 | 3.26 | 40°44'32.417"N | 103°58'03.606"W | 0.07 | |
| 1500.00 | 0.130 | 5.720 | 1499.98 | 1.14 | -0.55 | 3.29 | 40°44'32.418"N | 103°58'03.605"W | 0.21 | |
| 1595.00 | 0.130 | 244.970 | 1594.98 | 1.06 | -0.49 | 3.21 | 40°44'32.419"N | 103°58'03.606"W | 0.24 | |
| 1689.00 | 0.220 | 214.700 | 1688.98 | 1.22 | -0.68 | 3.01 | 40°44'32.417"N | 103°58'03.609"W | 0.13 | |
| 1784.00 | 0.080 | 323.780 | 1783.98 | 1.28 | -0.78 | 2.87 | 40°44'32.416"N | 103°58'03.611"W | 0.27 | |
| 1879.00 | 0.650 | 35.380 | 1878.98 | 0.85 | -0.29 | 3.14 | 40°44'32.421"N | 103°58'03.607"W | 0.66 | |
| 1906.00 | 0.780 | 35.560 | 1905.98 | 0.61 | -0.01 | 3.33 | 40°44'32.423"N | 103°58'03.605"W | 0.48 | Tie to Surface |
| 1979.00 | 0.210 | 7.340 | 1978.97 | 0.14 | 0.53 | 3.64 | 40°44'32.429"N | 103°58'03.601"W | 0.83 | |
| 2074.00 | 2.080 | 43.220 | 2073.95 | -1.05 | 1.95 | 4.84 | 40°44'32.442"N | 103°58'03.585"W | 2.01 | |
| 2168.00 | 4.650 | 66.340 | 2167.78 | -2.93 | 4.73 | 9.50 | 40°44'32.469"N | 103°58'03.524"W | 3.04 | |
| 2263.00 | 6.490 | 59.630 | 2262.33 | -5.64 | 8.99 | 17.66 | 40°44'32.510"N | 103°58'03.417"W | 2.05 | |
| 2357.00 | 7.440 | 44.270 | 2355.65 | -10.97 | 16.03 | 26.49 | 40°44'32.578"N | 103°58'03.300"W | 2.22 | |
| 2452.00 | 9.120 | 53.580 | 2449.66 | -17.83 | 24.91 | 36.85 | 40°44'32.664"N | 103°58'03.164"W | 2.26 | |
| 2547.00 | 10.400 | 63.300 | 2543.29 | -23.53 | 33.23 | 50.57 | 40°44'32.744"N | 103°58'02.984"W | 2.19 | |
| 2641.00 | 12.640 | 72.600 | 2635.39 | -27.16 | 40.12 | 67.97 | 40°44'32.809"N | 103°58'02.756"W | 3.09 | |



Actual Wellpath Report
BENELLI FEDERAL LC22-760 AWP
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|-----------------------------------|---------------------------------|----------|--|
| Operator | NOBLE ENERGY, INC | Slot | SLOT#10 BENELLI FEDERAL LC22-760 (400'FNL&1649'FWL,SEC.22) |
| Area | COLORADO | Well | BENELLI FEDERAL LC22-760 |
| Field | WELD COUNTY (NOBLE NAD 83 GRID) | Wellbore | BENELLI FEDERAL LC22-760 AWB |
| Facility | SEC.22-T09N-R59W | | |

| WELLPATH DATA (119 stations) | | | | | | | | | | | |
|------------------------------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------|-----------------|------------------|----------|--|
| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | Latitude | Longitude | DLS [°/100ft] | Comments | |
| 2736.00 | 14.300 | 75.320 | 2727.78 | -29.30 | 46.20 | 89.24 | 40°44'32.865"N | 103°58'02.479"W | 1.87 | | |
| 2831.00 | 14.990 | 56.340 | 2819.74 | -35.02 | 55.99 | 110.82 | 40°44'32.958"N | 103°58'02.196"W | 5.08 | | |
| 2925.00 | 17.290 | 43.330 | 2910.06 | -48.08 | 72.90 | 130.54 | 40°44'33.122"N | 103°58'01.936"W | 4.55 | | |
| 3020.00 | 15.490 | 20.650 | 3001.29 | -67.31 | 95.06 | 144.71 | 40°44'33.338"N | 103°58'01.747"W | 6.95 | | |
| 3115.00 | 13.900 | 352.180 | 3093.30 | -89.61 | 118.27 | 147.64 | 40°44'33.567"N | 103°58'01.704"W | 7.70 | | |
| 3209.00 | 13.680 | 345.390 | 3184.60 | -111.97 | 140.21 | 143.30 | 40°44'33.785"N | 103°58'01.755"W | 1.74 | | |
| 3304.00 | 13.730 | 3.990 | 3276.94 | -134.11 | 162.34 | 141.25 | 40°44'34.004"N | 103°58'01.777"W | 4.62 | | |
| 3398.00 | 14.680 | 16.320 | 3368.08 | -155.55 | 184.91 | 145.37 | 40°44'34.226"N | 103°58'01.718"W | 3.37 | | |
| 3493.00 | 14.730 | 28.260 | 3459.99 | -175.74 | 207.10 | 154.48 | 40°44'34.444"N | 103°58'01.595"W | 3.19 | | |
| 3588.00 | 14.740 | 41.030 | 3551.89 | -192.70 | 226.86 | 168.13 | 40°44'34.637"N | 103°58'01.413"W | 3.41 | | |
| 3683.00 | 14.650 | 49.760 | 3643.80 | -206.21 | 243.74 | 185.24 | 40°44'34.800"N | 103°58'01.187"W | 2.33 | | |
| 3777.00 | 15.030 | 47.570 | 3734.66 | -218.58 | 259.64 | 203.31 | 40°44'34.954"N | 103°58'00.949"W | 0.72 | | |
| 3872.00 | 15.090 | 36.260 | 3826.42 | -233.59 | 277.93 | 219.72 | 40°44'35.132"N | 103°58'00.732"W | 3.09 | | |
| 3967.00 | 15.130 | 38.430 | 3918.14 | -250.23 | 297.61 | 234.74 | 40°44'35.324"N | 103°58'00.532"W | 0.60 | | |
| 4061.00 | 15.130 | 43.030 | 4008.88 | -265.61 | 316.19 | 250.73 | 40°44'35.505"N | 103°58'00.320"W | 1.28 | | |
| 4156.00 | 15.070 | 50.610 | 4100.61 | -278.98 | 333.09 | 268.74 | 40°44'35.669"N | 103°58'00.082"W | 2.08 | | |
| 4250.00 | 15.120 | 55.880 | 4191.37 | -289.82 | 347.72 | 288.33 | 40°44'35.810"N | 103°57'59.825"W | 1.46 | | |
| 4345.00 | 15.070 | 57.930 | 4283.09 | -299.36 | 361.23 | 309.06 | 40°44'35.940"N | 103°57'59.552"W | 0.56 | | |
| 4439.00 | 15.110 | 56.310 | 4373.85 | -308.70 | 374.52 | 329.61 | 40°44'36.068"N | 103°57'59.282"W | 0.45 | | |
| 4534.00 | 15.040 | 62.580 | 4465.59 | -317.20 | 387.06 | 350.85 | 40°44'36.188"N | 103°57'59.004"W | 1.72 | | |
| 4628.00 | 15.080 | 68.350 | 4556.37 | -323.15 | 397.19 | 373.04 | 40°44'36.284"N | 103°57'58.713"W | 1.59 | | |
| 4723.00 | 15.040 | 65.600 | 4648.11 | -328.53 | 406.84 | 395.76 | 40°44'36.376"N | 103°57'58.416"W | 0.75 | | |
| 4818.00 | 15.080 | 58.950 | 4739.85 | -335.86 | 418.31 | 417.57 | 40°44'36.485"N | 103°57'58.130"W | 1.82 | | |
| 4912.00 | 15.000 | 58.880 | 4830.63 | -344.47 | 430.90 | 438.46 | 40°44'36.606"N | 103°57'57.856"W | 0.09 | | |
| 5007.00 | 15.090 | 57.070 | 4922.37 | -353.54 | 443.98 | 459.36 | 40°44'36.732"N | 103°57'57.581"W | 0.50 | | |
| 5101.00 | 15.020 | 50.910 | 5013.15 | -364.07 | 458.31 | 479.09 | 40°44'36.870"N | 103°57'57.322"W | 1.70 | | |
| 5196.00 | 14.850 | 48.470 | 5104.94 | -376.27 | 474.14 | 497.76 | 40°44'37.023"N | 103°57'57.076"W | 0.69 | | |
| 5290.00 | 15.030 | 55.790 | 5195.78 | -387.41 | 488.98 | 516.85 | 40°44'37.167"N | 103°57'56.824"W | 2.02 | | |
| 5385.00 | 15.070 | 56.340 | 5287.52 | -397.25 | 502.75 | 537.32 | 40°44'37.299"N | 103°57'56.555"W | 0.16 | | |
| 5480.00 | 14.780 | 52.890 | 5379.31 | -407.56 | 516.91 | 557.26 | 40°44'37.436"N | 103°57'56.293"W | 0.98 | | |

| REFERENCE WELLPATH IDENTIFICATION | | | |
|-----------------------------------|---------------------------------|----------|--|
| Operator | NOBLE ENERGY, INC | Slot | SLOT#10 BENELLI FEDERAL LC22-760 (400'FNL&1649'FWL,SEC.22) |
| Area | COLORADO | Well | BENELLI FEDERAL LC22-760 |
| Field | WELD COUNTY (NOBLE NAD 83 GRID) | Wellbore | BENELLI FEDERAL LC22-760 AWB |
| Facility | SEC.22-T09N-R59W | | |

| WELLPATH DATA (119 stations) | | | | | | | | | | |
|------------------------------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------|-----------------|------------------|----------|
| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | Latitude | Longitude | DLS [°/100ft] | Comments |
| 5575.00 | 10.240 | 79.640 | 5472.11 | -413.00 | 525.75 | 575.26 | 40°44'37.520"N | 103°57'56.058"W | 7.63 | |
| 5669.00 | 12.050 | 117.180 | 5564.45 | -407.00 | 522.77 | 592.23 | 40°44'37.488"N | 103°57'55.838"W | 7.80 | |
| 5764.00 | 17.960 | 150.250 | 5656.33 | -387.07 | 505.48 | 608.36 | 40°44'37.314"N | 103°57'55.632"W | 10.72 | |
| 5858.00 | 25.100 | 159.230 | 5743.74 | -353.73 | 474.20 | 622.64 | 40°44'37.003"N | 103°57'55.454"W | 8.35 | |
| 5953.00 | 33.120 | 159.870 | 5826.67 | -308.25 | 430.93 | 638.75 | 40°44'36.572"N | 103°57'55.254"W | 8.45 | |
| 6047.00 | 40.910 | 165.090 | 5901.69 | -252.16 | 376.97 | 655.54 | 40°44'36.036"N | 103°57'55.048"W | 8.93 | |
| 6142.00 | 49.190 | 171.410 | 5968.78 | -185.06 | 311.22 | 668.94 | 40°44'35.384"N | 103°57'54.889"W | 9.90 | |
| 6236.00 | 58.590 | 173.490 | 6024.12 | -109.31 | 236.02 | 678.82 | 40°44'34.640"N | 103°57'54.777"W | 10.16 | |
| 6331.00 | 66.170 | 175.460 | 6068.14 | -25.52 | 152.30 | 686.87 | 40°44'33.811"N | 103°57'54.692"W | 8.19 | |
| 6425.00 | 75.120 | 175.960 | 6099.26 | 62.57 | 63.95 | 693.49 | 40°44'32.937"N | 103°57'54.626"W | 9.53 | |
| 6519.00 | 81.810 | 176.010 | 6118.04 | 154.05 | -27.88 | 699.93 | 40°44'32.029"N | 103°57'54.563"W | 7.12 | |
| 6614.00 | 89.720 | 176.360 | 6125.05 | 248.08 | -122.33 | 706.23 | 40°44'31.095"N | 103°57'54.502"W | 8.33 | |
| 6709.00 | 90.310 | 175.520 | 6125.03 | 342.50 | -217.09 | 712.96 | 40°44'30.157"N | 103°57'54.436"W | 1.08 | |
| 6803.00 | 90.340 | 175.540 | 6124.50 | 435.99 | -310.80 | 720.28 | 40°44'29.230"N | 103°57'54.362"W | 0.04 | |
| 6898.00 | 90.340 | 175.510 | 6123.93 | 530.47 | -405.51 | 727.69 | 40°44'28.293"N | 103°57'54.287"W | 0.03 | |
| 6992.00 | 90.370 | 176.380 | 6123.35 | 623.89 | -499.28 | 734.34 | 40°44'27.366"N | 103°57'54.222"W | 0.93 | |
| 7087.00 | 90.340 | 178.050 | 6122.76 | 718.04 | -594.16 | 738.96 | 40°44'26.428"N | 103°57'54.183"W | 1.76 | |
| 7181.00 | 90.400 | 180.070 | 6122.15 | 810.75 | -688.14 | 740.50 | 40°44'25.499"N | 103°57'54.184"W | 2.15 | |
| 7276.00 | 90.340 | 180.910 | 6121.54 | 904.03 | -783.13 | 739.69 | 40°44'24.561"N | 103°57'54.216"W | 0.89 | |
| 7370.00 | 90.400 | 181.430 | 6120.93 | 996.11 | -877.11 | 737.77 | 40°44'23.632"N | 103°57'54.262"W | 0.56 | |
| 7465.00 | 90.310 | 179.850 | 6120.34 | 1089.34 | -972.10 | 736.71 | 40°44'22.694"N | 103°57'54.297"W | 1.67 | |
| 7560.00 | 90.370 | 178.040 | 6119.78 | 1183.07 | -1067.08 | 738.45 | 40°44'21.756"N | 103°57'54.296"W | 1.91 | |
| 7654.00 | 90.340 | 178.120 | 6119.20 | 1276.03 | -1161.02 | 741.60 | 40°44'20.827"N | 103°57'54.276"W | 0.09 | |
| 7748.00 | 90.340 | 178.650 | 6118.64 | 1368.92 | -1254.98 | 744.25 | 40°44'19.898"N | 103°57'54.263"W | 0.56 | |
| 7843.00 | 90.340 | 178.000 | 6118.08 | 1462.82 | -1349.94 | 747.03 | 40°44'18.959"N | 103°57'54.248"W | 0.68 | |
| 7938.00 | 90.250 | 177.350 | 6117.59 | 1556.87 | -1444.86 | 750.88 | 40°44'18.021"N | 103°57'54.219"W | 0.69 | |
| 8032.00 | 90.430 | 178.530 | 6117.03 | 1649.86 | -1538.80 | 754.26 | 40°44'17.092"N | 103°57'54.197"W | 1.27 | |
| 8127.00 | 90.370 | 179.610 | 6116.37 | 1743.56 | -1633.78 | 755.80 | 40°44'16.154"N | 103°57'54.198"W | 1.14 | |
| 8221.00 | 90.340 | 180.080 | 6115.78 | 1836.05 | -1727.78 | 756.06 | 40°44'15.225"N | 103°57'54.216"W | 0.50 | |
| 8316.00 | 90.310 | 179.370 | 6115.25 | 1929.56 | -1822.78 | 756.51 | 40°44'14.286"N | 103°57'54.231"W | 0.75 | |

| REFERENCE WELLPATH IDENTIFICATION | | | |
|-----------------------------------|---------------------------------|----------|--|
| Operator | NOBLE ENERGY, INC | Slot | SLOT#10 BENELLI FEDERAL LC22-760 (400'FNL&1649'FWL,SEC.22) |
| Area | COLORADO | Well | BENELLI FEDERAL LC22-760 |
| Field | WELD COUNTY (NOBLE NAD 83 GRID) | Wellbore | BENELLI FEDERAL LC22-760 AWB |
| Facility | SEC.22-T09N-R59W | | |

| WELLPATH DATA (119 stations) | | | | | | | | | | |
|------------------------------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------|-----------------|------------------|-------------------|
| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | Latitude | Longitude | DLS [°/100ft] | Comments |
| 8410.00 | 90.340 | 180.350 | 6114.71 | 2022.05 | -1916.77 | 756.74 | 40°44'13.358"N | 103°57'54.249"W | 1.04 | |
| 8505.00 | 90.250 | 180.160 | 6114.22 | 2115.40 | -2011.77 | 756.32 | 40°44'12.419"N | 103°57'54.276"W | 0.22 | |
| 8599.00 | 90.250 | 178.100 | 6113.81 | 2208.09 | -2105.75 | 757.75 | 40°44'11.491"N | 103°57'54.279"W | 2.19 | |
| 8694.00 | 90.650 | 179.420 | 6113.07 | 2301.87 | -2200.73 | 759.80 | 40°44'10.552"N | 103°57'54.273"W | 1.45 | |
| 8789.00 | 90.310 | 179.850 | 6112.27 | 2395.41 | -2295.72 | 760.41 | 40°44'09.613"N | 103°57'54.287"W | 0.58 | |
| 8883.00 | 90.340 | 180.300 | 6111.74 | 2487.83 | -2389.72 | 760.29 | 40°44'08.685"N | 103°57'54.310"W | 0.48 | |
| 8978.00 | 90.370 | 180.720 | 6111.15 | 2581.11 | -2484.71 | 759.44 | 40°44'07.746"N | 103°57'54.342"W | 0.44 | |
| 9073.00 | 90.000 | 180.130 | 6110.84 | 2674.41 | -2579.71 | 758.74 | 40°44'06.808"N | 103°57'54.372"W | 0.73 | |
| 9167.00 | 89.940 | 178.150 | 6110.89 | 2767.10 | -2673.69 | 760.15 | 40°44'05.879"N | 103°57'54.375"W | 2.11 | |
| 9262.00 | 90.000 | 177.840 | 6110.94 | 2861.07 | -2768.64 | 763.47 | 40°44'04.941"N | 103°57'54.353"W | 0.33 | |
| 9356.00 | 90.120 | 177.950 | 6110.84 | 2954.08 | -2862.57 | 766.92 | 40°44'04.012"N | 103°57'54.330"W | 0.17 | |
| 9451.00 | 89.970 | 176.580 | 6110.77 | 3048.23 | -2957.46 | 771.46 | 40°44'03.074"N | 103°57'54.292"W | 1.45 | |
| 9545.00 | 90.000 | 176.370 | 6110.79 | 3141.55 | -3051.28 | 777.24 | 40°44'02.146"N | 103°57'54.238"W | 0.23 | |
| 9640.00 | 90.090 | 177.010 | 6110.72 | 3235.82 | -3146.12 | 782.72 | 40°44'01.208"N | 103°57'54.188"W | 0.68 | |
| 9737.00 | 90.000 | 176.340 | 6110.64 | 3332.07 | -3242.96 | 788.35 | 40°44'00.250"N | 103°57'54.137"W | 0.70 | |
| 9829.00 | 90.030 | 177.260 | 6110.62 | 3423.34 | -3334.82 | 793.48 | 40°43'59.342"N | 103°57'54.091"W | 1.00 | |
| 9924.00 | 90.000 | 177.200 | 6110.59 | 3517.49 | -3429.71 | 798.07 | 40°43'58.404"N | 103°57'54.053"W | 0.07 | |
| 10018.00 | 89.970 | 176.920 | 6110.62 | 3610.69 | -3523.58 | 802.90 | 40°43'57.475"N | 103°57'54.011"W | 0.30 | |
| 10113.00 | 90.030 | 176.180 | 6110.62 | 3704.99 | -3618.41 | 808.61 | 40°43'56.537"N | 103°57'53.958"W | 0.78 | |
| 10208.00 | 89.970 | 175.810 | 6110.62 | 3799.40 | -3713.18 | 815.25 | 40°43'55.600"N | 103°57'53.893"W | 0.39 | |
| 10302.00 | 90.030 | 175.210 | 6110.62 | 3892.89 | -3806.89 | 822.61 | 40°43'54.673"N | 103°57'53.819"W | 0.64 | |
| 10397.00 | 90.030 | 174.650 | 6110.57 | 3987.48 | -3901.52 | 831.00 | 40°43'53.737"N | 103°57'53.731"W | 0.59 | |
| 10491.00 | 90.000 | 175.480 | 6110.54 | 4081.04 | -3995.17 | 839.09 | 40°43'52.810"N | 103°57'53.647"W | 0.88 | |
| 10586.00 | 90.000 | 175.920 | 6110.54 | 4175.50 | -4089.90 | 846.21 | 40°43'51.873"N | 103°57'53.576"W | 0.46 | |
| 10680.00 | 90.090 | 177.820 | 6110.47 | 4268.74 | -4183.75 | 851.34 | 40°43'50.945"N | 103°57'53.530"W | 2.02 | |
| 10775.00 | 90.060 | 179.890 | 6110.35 | 4362.49 | -4278.73 | 853.24 | 40°43'50.006"N | 103°57'53.527"W | 2.18 | |
| 10869.00 | 90.090 | 182.190 | 6110.22 | 4454.61 | -4372.71 | 851.53 | 40°43'49.078"N | 103°57'53.570"W | 2.45 | |
| 10964.00 | 90.060 | 182.860 | 6110.10 | 4547.19 | -4467.61 | 847.35 | 40°43'48.141"N | 103°57'53.646"W | 0.71 | Last BHI MWD |
| 11022.00 | 90.060 | 182.860 | 6110.04 | 4603.64 | -4525.54 | 844.46 | 40°43'47.569"N | 103°57'53.697"W | 0.00 | Projection to Bit |

| HOLE & CASING SECTIONS - Ref Wellbore: BENELLI FEDERAL LC22-760 AWB Ref Wellpath: BENELLI FEDERAL LC22-760 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 | 1912.00 | 1882.00 | 30.00 | 1911.97 | 0.01 | 0.00 | 0.05 | 3.38 |
| 9.625in Casing Surface | 30.00 | 1912.00 | 1882.00 | 30.00 | 1911.97 | 0.01 | 0.00 | 0.05 | 3.38 |
| 8.5in Open Hole | 1912.00 | 11022.00 | 9110.00 | 1911.97 | 6110.04 | 0.05 | 3.38 | -4525.54 | 844.46 |

| TARGETS | | | | | | | | |
|---|-------------|---------------|--------------|----------------------|-----------------------|----------------|-----------------|---------|
| Name | TVD [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude | Longitude | Shape |
| DUKES FEDERAL LC10-745 SECTION 22 | 21.00 | 38.13 | 1570.77 | 3426161.44 | 1516985.93 | 40°44'32.532"N | 103°57'43.236"W | polygon |
| | | | | | | | | |
| BENELLI FEDERAL LC22-760 REV-1 BHL (330'FSL&2360'FWL,SEC.22) | 6081.60 | -4540.40 | 835.22 | 3425425.90 | 1512407.44 | 40°43'47.424"N | 103°57'53.820"W | point |
| | | | | | | | | |
| BENELLI FEDERAL LC22-760 REV-2 BHL (330'FSL&2360'FWL,SEC.22) | 6101.60 | -4540.40 | 835.22 | 3425425.90 | 1512407.44 | 40°43'47.424"N | 103°57'53.820"W | point |
| | | | | | | | | |
| BENELLI FEDERAL LC22-760 Landing/TPZ (500'FNL&2362'FWL,SEC.22) | 6105.00 | -80.00 | 710.00 | 3425300.68 | 1516867.80 | 40°44'31.512"N | 103°57'54.443"W | point |
| | | | | | | | | |

| TARGETS | | | | | | | | |
|---|-------------|---------------|--------------|----------------------|-----------------------|----------------|-----------------|---------|
| Name | TVD [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude | Longitude | Shape |
| BENELLI FEDERAL LC22-760 Landing/TPZ 2 (500'FNL&2362'FWL,SEC.22) | 6125.00 | -80.00 | 710.00 | 3425300.68 | 1516867.80 | 40°44'31.512"N | 103°57'54.443"W | point |
| | | | | | | | | |
| DUKES FEDERAL LC10-745 SECTION 22 300' SETBACK | 6521.00 | 38.13 | 1570.77 | 3426161.44 | 1516985.93 | 40°44'32.532"N | 103°57'43.236"W | polygon |
| | | | | | | | | |

| WELLPATH COMPOSITION - Ref Wellbore: BENELLI FEDERAL LC22-760 AWB Ref Wellpath: BENELLI FEDERAL LC22-760 AWP | | | | |
|---|----------------|---|---|------------------------------|
| Start MD [ft] | End MD [ft] | Positional Uncertainty Model | Log Name/Comment | Wellbore |
| 0.00 | 1906.00 | Gyrodata standard - Drop gyro or Multi-shot | Gyrodata Surface Surveys 13.5" Hole <81'-1906'> | BENELLI FEDERAL LC22-760 AWB |
| 1906.00 | 10964.00 | OWSG MWD rev2 + IFR1 + Multi-Station Correction | BHI/ATC OWSG MWD;REV2+IFR+MWD <1979'-10964'> | BENELLI FEDERAL LC22-760 AWB |
| 10964.00 | 11022.00 | Blind Drilling (std) | Projection to bit | BENELLI FEDERAL LC22-760 AWB |



Actual Wellpath Report

BENELLI FEDERAL LC22-760 AWP

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| REFERENCE WELLPATH IDENTIFICATION | | | |
|-----------------------------------|---------------------------------|----------|--|
| Operator | NOBLE ENERGY, INC | Slot | SLOT#10 BENELLI FEDERAL LC22-760 (400'FNL&1649'FWL,SEC.22) |
| Area | COLORADO | Well | BENELLI FEDERAL LC22-760 |
| Field | WELD COUNTY (NOBLE NAD 83 GRID) | Wellbore | BENELLI FEDERAL LC22-760 AWB |
| Facility | SEC.22-T09N-R59W | | |

| WELLPATH COMMENTS | | | | |
|-------------------|--------------------|----------------|-------------|-------------------|
| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Comment |
| 1906.00 | 0.780 | 35.560 | 1905.98 | Tie to Surface |
| 10964.00 | 90.060 | 182.860 | 6110.10 | Last BHI MWD |
| 11022.00 | 90.060 | 182.860 | 6110.04 | Projection to Bit |

| COMMENTS |
|--|
| <div>Wellpath general comments</div> <div>SHL:</div> <div>Lat: 40.74234 N</div> <div>Long: 103.96768 W</div> <div>API#: 05-123-42977</div> |