

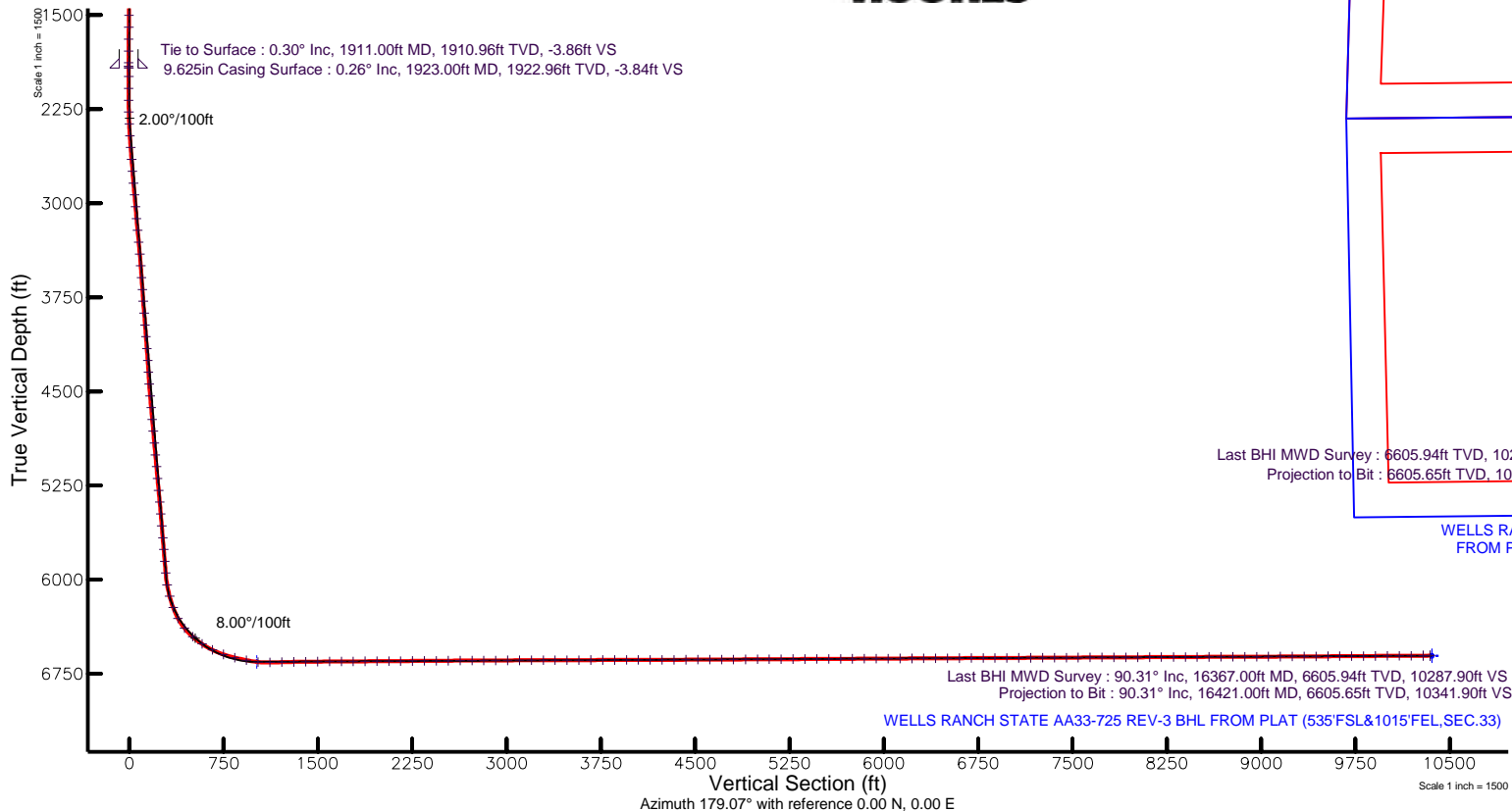
NOBLE ENERGY, INC

Location: COLORADO Slot: SLOT#16 WELLS RANCH STATE AA33-725 (255'FSL&1168'FEL,SEC.21)
Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: WELLS RANCH STATE AA33-725
Facility: SEC.21-T06N-R63W Wellbore: WELLS RANCH STATE AA33-725 PWB

| | |
|--|--|
| Plot reference wellpath is WELLS RANCH STATE AA33-725 (REV-C.O) PWP | Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet |
| True vertical depths are referenced to H&P RIG (30KB) (RKB) | * = Wellpath was transformed from a different geodetic datum |
| Measured depths are referenced to H&P RIG (30KB) (RKB) | North Reference: Grid north |
| H&P RIG (30KB) (RKB) to Mean Sea Level: 4772 feet | Scale: True distance |
| Mean Sea Level to Mud line (At Slot: SLOT#16 WELLS RANCH STATE AA33-725 (255'FSL&1168'FEL,SEC.21)): 0 feet | Depths are in feet |
| Coordinates are in feet referenced to Slot | Created by: zubabila on 2017-04-13 |
| | Database: WellArchitect |

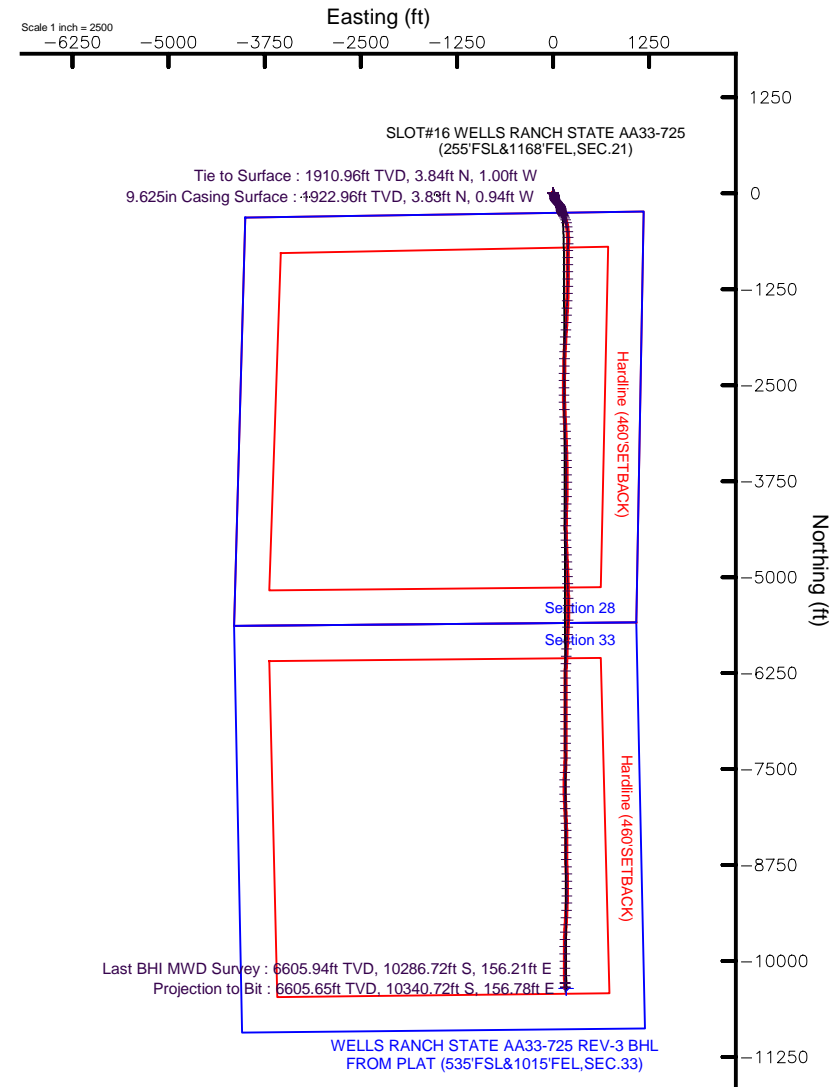
Location Information

| Facility Name | | | Grid East (US ft) | Grid North (US ft) | Latitude | Longitude |
|--|--------------|--------------|-------------------|--------------------|----------------|-----------------|
| SEC.21-T06N-R63W | | | 3295551.084 | 1415076.401 | 40°28'04.418"N | 104°26'02.872"W |
| Slot | Local N (ft) | Local E (ft) | Grid East (US ft) | Grid North (US ft) | Latitude | Longitude |
| SLOT#16 WELLS RANCH STATE AA33-725 (255'FSL&1168'FEL,SEC.21) | -857.73 | -615.49 | 3295935.616 | 1414218.708 | 40°27'56.016"N | 104°26'10.968"W |
| H&P RIG (30KB) (RKB) to Mud line (At Slot: SLOT#16 WELLS RANCH STATE AA33-725 (255'FSL&1168'FEL,SEC.21)) | | | | | 4772ft | |
| Mean Sea Level to Mud line (At Slot: SLOT#16 WELLS RANCH STATE AA33-725 (255'FSL&1168'FEL,SEC.21)) | | | | | 0ft | |
| H&P RIG (30KB) (RKB) to Mean Sea Level | | | | | 4772ft | |



Comments

Surface Location: SESE
40.46556 N
104.43638 W
API#: 05-123-43917



| REFERENCE WELLPATH IDENTIFICATION | | | |
|-----------------------------------|---------------------------------|----------|--|
| Operator | NOBLE ENERGY, INC | Slot | SLOT#16 WELLS RANCH STATE AA33-725 (255'FSL&1168'FEL,SEC.21) |
| Area | COLORADO | Well | WELLS RANCH STATE AA33-725 |
| Field | WELD COUNTY (NOBLE NAD 83 GRID) | Wellbore | WELLS RANCH STATE AA33-725 AWB |
| Facility | SEC.21-T06N-R63W | | |

| REPORT SETUP INFORMATION | | | |
|--------------------------|---|----------------------|--|
| Projection System | NAD83 / Lambert Colorado SP, Northern Zone (501), US feet | Software System | WellArchitect® 5.0 |
| North Reference | Grid | User | Zubabila |
| Scale | 0.999964 | Report Generated | 4/13/2017 at 9:42:26 AM |
| Convergence at slot | 0.69° East | Database/Source file | WellArchitect/WELLS_RANCH_STATE_AA33-725_AWP.xml |

| WELLPATH LOCATION | | | | | | |
|-----------------------|-------------------|----------|------------------|-----------------|------------------------|-----------------|
| | Local coordinates | | Grid coordinates | | Geographic coordinates | |
| | North[ft] | East[ft] | Easting[US ft] | Northing[US ft] | Latitude | Longitude |
| Slot Location | -857.73 | -615.49 | 3295935.62 | 1414218.71 | 40°27'56.016"N | 104°26'10.968"W |
| Facility Reference Pt | | | 3296551.08 | 1415076.40 | 40°28'04.418"N | 104°26'02.872"W |
| Field Reference Pt | | | 3000000.00 | 4454105.15 | 48°46'34.315"N | 105°30'00.000"W |

| WELLPATH DATUM | | | |
|--------------------------|-----------------------|--|-------------------|
| Calculation method | Minimum curvature | H&P RIG (30'KB) (RKB) to Facility Vertical Datum | 4772.00ft |
| Horizontal Reference Pt | Slot | H&P RIG (30'KB) (RKB) to Mean Sea Level | 4772.00ft |
| Vertical Reference Pt | H&P RIG (30'KB) (RKB) | H&P RIG (30'KB) (RKB) to Mud Line at Slot (SLOT#16 WELLS RANCH STATE AA33-725 (255'FSL&1168'FEL,SEC.21)) | 4772.00ft |
| MD Reference Pt | H&P RIG (30'KB) (RKB) | Section Origin | N 0.00, E 0.00 ft |
| Field Vertical Reference | Mean Sea Level | Section Azimuth | 179.07° |

REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|---------------------------------|----------|--|
| Operator | NOBLE ENERGY, INC | Slot | SLOT#16 WELLS RANCH STATE AA33-725 (255'FSL&1168'FEL,SEC.21) |
| Area | COLORADO | Well | WELLS RANCH STATE AA33-725 |
| Field | WELD COUNTY (NOBLE NAD 83 GRID) | Wellbore | WELLS RANCH STATE AA33-725 AWP |
| Facility | SEC.21-T06N-R63W | | |

WELLPATH DATA (176 stations)

| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | Latitude | Longitude | DLS [°/100ft] | Comments |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------|-----------------|------------------|----------------|
| 0.00 | 0.000 | 154.110 | 0.00 | 0.00 | 0.00 | 0.00 | 40°27'56.016"N | 104°26'10.968"W | 0.00 | |
| 85.00 | 0.310 | 154.110 | 85.00 | 0.21 | -0.21 | 0.10 | 40°27'56.014"N | 104°26'10.967"W | 0.36 | |
| 178.00 | 0.180 | 131.990 | 178.00 | 0.54 | -0.53 | 0.32 | 40°27'56.011"N | 104°26'10.964"W | 0.17 | |
| 273.00 | 0.280 | 126.440 | 273.00 | 0.78 | -0.77 | 0.62 | 40°27'56.008"N | 104°26'10.960"W | 0.11 | |
| 368.00 | 0.570 | 94.140 | 368.00 | 0.96 | -0.94 | 1.27 | 40°27'56.007"N | 104°26'10.952"W | 0.38 | |
| 462.00 | 0.170 | 123.050 | 461.99 | 1.08 | -1.05 | 1.86 | 40°27'56.005"N | 104°26'10.944"W | 0.46 | |
| 557.00 | 0.300 | 227.270 | 556.99 | 1.33 | -1.30 | 1.79 | 40°27'56.003"N | 104°26'10.945"W | 0.40 | |
| 652.00 | 0.330 | 31.310 | 651.99 | 1.26 | -1.23 | 1.75 | 40°27'56.004"N | 104°26'10.946"W | 0.66 | |
| 746.00 | 0.250 | 323.190 | 745.99 | 0.86 | -0.84 | 1.77 | 40°27'56.008"N | 104°26'10.945"W | 0.35 | |
| 841.00 | 0.370 | 320.350 | 840.99 | 0.46 | -0.43 | 1.45 | 40°27'56.012"N | 104°26'10.949"W | 0.13 | |
| 935.00 | 0.280 | 311.930 | 934.99 | 0.06 | -0.05 | 1.09 | 40°27'56.015"N | 104°26'10.954"W | 0.11 | |
| 1030.00 | 0.350 | 282.850 | 1029.99 | -0.16 | 0.17 | 0.63 | 40°27'56.018"N | 104°26'10.960"W | 0.18 | |
| 1124.00 | 0.400 | 297.330 | 1123.98 | -0.39 | 0.39 | 0.06 | 40°27'56.020"N | 104°26'10.967"W | 0.11 | |
| 1219.00 | 0.230 | 307.950 | 1218.98 | -0.66 | 0.66 | -0.39 | 40°27'56.023"N | 104°26'10.973"W | 0.19 | |
| 1313.00 | 0.420 | 321.510 | 1312.98 | -1.06 | 1.04 | -0.75 | 40°27'56.026"N | 104°26'10.978"W | 0.22 | |
| 1408.00 | 0.700 | 318.500 | 1407.98 | -1.77 | 1.75 | -1.35 | 40°27'56.033"N | 104°26'10.985"W | 0.30 | |
| 1502.00 | 0.460 | 337.450 | 1501.97 | -2.56 | 2.53 | -1.88 | 40°27'56.041"N | 104°26'10.992"W | 0.32 | |
| 1597.00 | 0.550 | 18.620 | 1596.97 | -3.34 | 3.31 | -1.88 | 40°27'56.049"N | 104°26'10.992"W | 0.38 | |
| 1692.00 | 0.420 | 45.870 | 1691.97 | -4.01 | 3.99 | -1.48 | 40°27'56.056"N | 104°26'10.987"W | 0.27 | |
| 1787.00 | 0.180 | 195.250 | 1786.97 | -4.11 | 4.09 | -1.27 | 40°27'56.057"N | 104°26'10.984"W | 0.61 | |
| 1881.00 | 0.230 | 109.480 | 1880.96 | -3.90 | 3.88 | -1.13 | 40°27'56.054"N | 104°26'10.982"W | 0.30 | |
| 1911.00 | 0.300 | 104.650 | 1910.96 | -3.86 | 3.84 | -1.00 | 40°27'56.054"N | 104°26'10.980"W | 0.24 | Tie to Surface |
| 1989.00 | 0.090 | 53.930 | 1988.96 | -3.84 | 3.83 | -0.75 | 40°27'56.054"N | 104°26'10.977"W | 0.32 | |
| 2084.00 | 0.030 | 305.100 | 2083.96 | -3.89 | 3.88 | -0.71 | 40°27'56.054"N | 104°26'10.977"W | 0.11 | |
| 2179.00 | 0.030 | 15.180 | 2178.96 | -3.93 | 3.92 | -0.73 | 40°27'56.055"N | 104°26'10.977"W | 0.04 | |
| 2273.00 | 1.030 | 152.070 | 2272.96 | -3.20 | 3.20 | -0.32 | 40°27'56.048"N | 104°26'10.972"W | 1.12 | |
| 2368.00 | 3.000 | 147.620 | 2367.90 | -0.32 | 0.34 | 1.41 | 40°27'56.019"N | 104°26'10.950"W | 2.08 | |
| 2463.00 | 4.580 | 147.130 | 2462.68 | 5.02 | -4.94 | 4.80 | 40°27'55.967"N | 104°26'10.907"W | 1.66 | |
| 2557.00 | 4.600 | 148.370 | 2556.38 | 11.44 | -11.30 | 8.81 | 40°27'55.903"N | 104°26'10.856"W | 0.11 | |
| 2652.00 | 5.130 | 156.020 | 2651.04 | 18.63 | -18.43 | 12.54 | 40°27'55.832"N | 104°26'10.809"W | 0.88 | |
| 2747.00 | 4.320 | 164.490 | 2745.72 | 26.00 | -25.76 | 15.22 | 40°27'55.760"N | 104°26'10.775"W | 1.12 | |
| 2841.00 | 5.250 | 167.040 | 2839.39 | 33.63 | -33.36 | 17.13 | 40°27'55.684"N | 104°26'10.752"W | 1.01 | |
| 2936.00 | 4.960 | 172.010 | 2934.01 | 41.96 | -41.66 | 18.68 | 40°27'55.602"N | 104°26'10.733"W | 0.56 | |
| 3030.00 | 4.950 | 171.470 | 3027.66 | 50.01 | -49.70 | 19.84 | 40°27'55.523"N | 104°26'10.719"W | 0.05 | |
| 3125.00 | 5.000 | 175.930 | 3122.31 | 58.21 | -57.88 | 20.74 | 40°27'55.442"N | 104°26'10.709"W | 0.41 | |
| 3219.00 | 5.250 | 178.240 | 3215.93 | 66.60 | -66.26 | 21.17 | 40°27'55.359"N | 104°26'10.704"W | 0.34 | |
| 3314.00 | 5.400 | 168.150 | 3310.52 | 75.33 | -74.98 | 22.22 | 40°27'55.272"N | 104°26'10.692"W | 1.00 | |
| 3409.00 | 5.310 | 159.320 | 3405.11 | 83.86 | -83.47 | 24.69 | 40°27'55.188"N | 104°26'10.662"W | 0.87 | |
| 3503.00 | 5.420 | 143.420 | 3498.70 | 91.56 | -91.10 | 28.87 | 40°27'55.112"N | 104°26'10.609"W | 1.58 | |
| 3598.00 | 5.410 | 134.550 | 3593.28 | 98.40 | -97.85 | 34.74 | 40°27'55.045"N | 104°26'10.534"W | 0.88 | |
| 3693.00 | 5.380 | 133.340 | 3687.86 | 104.70 | -104.05 | 41.17 | 40°27'54.983"N | 104°26'10.452"W | 0.12 | |
| 3787.00 | 5.350 | 142.300 | 3781.45 | 111.29 | -110.54 | 47.05 | 40°27'54.918"N | 104°26'10.376"W | 0.89 | |
| 3882.00 | 5.340 | 146.020 | 3876.04 | 118.54 | -117.71 | 52.23 | 40°27'54.847"N | 104°26'10.311"W | 0.36 | |
| 3976.00 | 5.330 | 143.380 | 3969.63 | 125.76 | -124.84 | 57.28 | 40°27'54.776"N | 104°26'10.246"W | 0.26 | |
| 4071.00 | 5.310 | 143.460 | 4064.22 | 132.92 | -131.91 | 62.53 | 40°27'54.705"N | 104°26'10.180"W | 0.02 | |

REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|---------------------------------|----------|--|
| Operator | NOBLE ENERGY, INC | Slot | SLOT#16 WELLS RANCH STATE AA33-725 (255'FSL&1168'FEL,SEC.21) |
| Area | COLORADO | Well | WELLS RANCH STATE AA33-725 |
| Field | WELD COUNTY (NOBLE NAD 83 GRID) | Wellbore | WELLS RANCH STATE AA33-725 AWP |
| Facility | SEC.21-T06N-R63W | | |

WELLPATH DATA (176 stations)

| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | Latitude | Longitude | DLS [°/100ft] | Comments |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------|-----------------|------------------|----------|
| 4166.00 | 5.550 | 140.890 | 4158.79 | 140.10 | -139.01 | 68.04 | 40°27'54.634"N | 104°26'10.109"W | 0.36 | |
| 4260.00 | 5.380 | 134.390 | 4252.37 | 146.81 | -145.62 | 74.06 | 40°27'54.568"N | 104°26'10.032"W | 0.68 | |
| 4355.00 | 5.250 | 125.840 | 4346.96 | 152.58 | -151.28 | 80.77 | 40°27'54.512"N | 104°26'09.947"W | 0.84 | |
| 4449.00 | 5.270 | 144.820 | 4440.57 | 158.72 | -157.33 | 86.74 | 40°27'54.451"N | 104°26'09.870"W | 1.84 | |
| 4544.00 | 5.260 | 158.680 | 4535.17 | 166.41 | -164.95 | 90.84 | 40°27'54.375"N | 104°26'09.818"W | 1.34 | |
| 4638.00 | 5.380 | 157.830 | 4628.77 | 174.55 | -173.05 | 94.07 | 40°27'54.295"N | 104°26'09.778"W | 0.15 | |
| 4733.00 | 5.420 | 159.980 | 4723.35 | 182.95 | -181.39 | 97.28 | 40°27'54.212"N | 104°26'09.738"W | 0.22 | |
| 4827.00 | 5.260 | 159.140 | 4816.94 | 191.19 | -189.58 | 100.34 | 40°27'54.131"N | 104°26'09.699"W | 0.19 | |
| 4922.00 | 5.320 | 163.060 | 4911.54 | 199.52 | -197.86 | 103.17 | 40°27'54.049"N | 104°26'09.664"W | 0.39 | |
| 5016.00 | 5.130 | 173.080 | 5005.15 | 207.89 | -206.21 | 104.95 | 40°27'53.966"N | 104°26'09.642"W | 0.99 | |
| 5111.00 | 5.390 | 182.160 | 5099.75 | 216.57 | -214.88 | 105.29 | 40°27'53.880"N | 104°26'09.639"W | 0.92 | |
| 5206.00 | 5.360 | 178.060 | 5194.33 | 225.46 | -223.77 | 105.27 | 40°27'53.792"N | 104°26'09.641"W | 0.41 | |
| 5300.00 | 5.210 | 164.700 | 5287.94 | 233.98 | -232.28 | 106.55 | 40°27'53.708"N | 104°26'09.626"W | 1.32 | |
| 5395.00 | 5.230 | 162.590 | 5382.54 | 242.31 | -240.57 | 108.98 | 40°27'53.626"N | 104°26'09.595"W | 0.20 | |
| 5489.00 | 5.360 | 159.000 | 5476.14 | 250.55 | -248.76 | 111.84 | 40°27'53.545"N | 104°26'09.560"W | 0.38 | |
| 5584.00 | 5.310 | 155.030 | 5570.73 | 258.73 | -256.89 | 115.28 | 40°27'53.464"N | 104°26'09.516"W | 0.39 | |
| 5679.00 | 5.270 | 152.730 | 5665.32 | 266.65 | -264.75 | 119.14 | 40°27'53.386"N | 104°26'09.468"W | 0.23 | |
| 5773.00 | 5.320 | 150.440 | 5758.92 | 274.35 | -272.38 | 123.27 | 40°27'53.310"N | 104°26'09.416"W | 0.23 | |
| 5868.00 | 5.390 | 149.810 | 5853.51 | 282.11 | -280.06 | 127.68 | 40°27'53.234"N | 104°26'09.360"W | 0.10 | |
| 5962.00 | 5.300 | 147.930 | 5947.10 | 289.67 | -287.56 | 132.21 | 40°27'53.159"N | 104°26'09.302"W | 0.21 | |
| 6057.00 | 10.930 | 151.180 | 6041.11 | 301.40 | -299.18 | 138.88 | 40°27'53.043"N | 104°26'09.218"W | 5.94 | |
| 6151.00 | 16.070 | 153.610 | 6132.48 | 321.04 | -318.65 | 148.97 | 40°27'52.850"N | 104°26'09.090"W | 5.50 | |
| 6246.00 | 21.140 | 159.510 | 6222.50 | 349.07 | -346.50 | 160.82 | 40°27'52.573"N | 104°26'08.941"W | 5.69 | |
| 6341.00 | 28.730 | 166.100 | 6308.60 | 387.53 | -384.77 | 172.32 | 40°27'52.194"N | 104°26'08.798"W | 8.50 | |
| 6435.00 | 38.850 | 171.110 | 6386.63 | 438.89 | -435.97 | 182.33 | 40°27'51.687"N | 104°26'08.677"W | 11.16 | |
| 6530.00 | 48.880 | 175.270 | 6455.05 | 504.28 | -501.25 | 189.91 | 40°27'51.041"N | 104°26'08.589"W | 10.98 | |
| 6624.00 | 56.450 | 179.100 | 6512.03 | 578.91 | -575.83 | 193.45 | 40°27'50.303"N | 104°26'08.555"W | 8.68 | |
| 6719.00 | 63.930 | 180.910 | 6559.23 | 661.26 | -658.20 | 193.39 | 40°27'49.490"N | 104°26'08.568"W | 8.04 | |
| 6814.00 | 70.640 | 181.030 | 6595.89 | 748.79 | -745.77 | 191.91 | 40°27'48.624"N | 104°26'08.601"W | 7.06 | |
| 6908.00 | 77.470 | 180.320 | 6621.70 | 839.09 | -836.09 | 190.85 | 40°27'47.732"N | 104°26'08.629"W | 7.30 | |
| 7003.00 | 78.220 | 180.050 | 6641.70 | 931.94 | -928.96 | 190.55 | 40°27'46.815"N | 104°26'08.647"W | 0.84 | |
| 7097.00 | 83.960 | 180.180 | 6656.26 | 1024.75 | -1021.78 | 190.37 | 40°27'45.897"N | 104°26'08.664"W | 6.11 | |
| 7192.00 | 91.480 | 180.220 | 6660.03 | 1119.59 | -1116.64 | 190.03 | 40°27'44.960"N | 104°26'08.683"W | 7.92 | |
| 7287.00 | 91.350 | 180.810 | 6657.69 | 1214.53 | -1211.61 | 189.18 | 40°27'44.022"N | 104°26'08.709"W | 0.64 | |
| 7381.00 | 91.350 | 181.750 | 6655.47 | 1308.43 | -1305.56 | 187.08 | 40°27'43.094"N | 104°26'08.750"W | 1.00 | |
| 7476.00 | 90.400 | 182.250 | 6654.02 | 1403.29 | -1400.49 | 183.77 | 40°27'42.156"N | 104°26'08.808"W | 1.13 | |
| 7570.00 | 90.370 | 182.620 | 6653.39 | 1497.13 | -1494.40 | 179.77 | 40°27'41.229"N | 104°26'08.874"W | 0.39 | |
| 7665.00 | 90.490 | 182.790 | 6652.68 | 1591.94 | -1589.29 | 175.29 | 40°27'40.292"N | 104°26'08.947"W | 0.22 | |
| 7760.00 | 90.340 | 182.880 | 6651.99 | 1686.73 | -1684.17 | 170.59 | 40°27'39.355"N | 104°26'09.023"W | 0.18 | |
| 7854.00 | 90.310 | 183.060 | 6651.45 | 1780.51 | -1778.04 | 165.72 | 40°27'38.428"N | 104°26'09.100"W | 0.19 | |
| 7949.00 | 90.430 | 183.380 | 6650.84 | 1875.26 | -1872.89 | 160.39 | 40°27'37.491"N | 104°26'09.184"W | 0.36 | |
| 8043.00 | 90.400 | 183.170 | 6650.16 | 1969.00 | -1966.74 | 155.02 | 40°27'36.565"N | 104°26'09.268"W | 0.23 | |
| 8138.00 | 90.460 | 182.700 | 6649.45 | 2063.78 | -2061.61 | 150.15 | 40°27'35.628"N | 104°26'09.346"W | 0.50 | |
| 8232.00 | 90.430 | 181.180 | 6648.72 | 2157.66 | -2155.55 | 146.97 | 40°27'34.700"N | 104°26'09.401"W | 1.62 | |
| 8327.00 | 90.340 | 180.710 | 6648.08 | 2252.60 | -2250.53 | 145.40 | 40°27'33.762"N | 104°26'09.436"W | 0.50 | |

REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|---------------------------------|----------|--|
| Operator | NOBLE ENERGY, INC | Slot | SLOT#16 WELLS RANCH STATE AA33-725 (255'FSL&1168'FEL,SEC.21) |
| Area | COLORADO | Well | WELLS RANCH STATE AA33-725 |
| Field | WELD COUNTY (NOBLE NAD 83 GRID) | Wellbore | WELLS RANCH STATE AA33-725 AWP |
| Facility | SEC.21-T06N-R63W | | |

WELLPATH DATA (176 stations)

| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | Latitude | Longitude | DLS [°/100ft] | Comments |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------|-----------------|------------------|----------|
| 8421.00 | 90.370 | 181.350 | 6647.50 | 2346.55 | -2344.52 | 143.71 | 40°27'32.833"N | 104°26'09.473"W | 0.68 | |
| 8516.00 | 90.460 | 181.450 | 6646.81 | 2441.47 | -2439.49 | 141.39 | 40°27'31.895"N | 104°26'09.518"W | 0.14 | |
| 8610.00 | 90.520 | 180.340 | 6646.00 | 2535.41 | -2533.47 | 139.92 | 40°27'30.967"N | 104°26'09.551"W | 1.18 | |
| 8705.00 | 90.400 | 179.170 | 6645.24 | 2630.40 | -2628.46 | 140.33 | 40°27'30.028"N | 104°26'09.561"W | 1.24 | |
| 8800.00 | 90.490 | 177.970 | 6644.50 | 2725.39 | -2723.43 | 142.70 | 40°27'29.089"N | 104°26'09.545"W | 1.27 | |
| 8894.00 | 90.120 | 177.290 | 6644.00 | 2819.36 | -2817.35 | 146.59 | 40°27'28.161"N | 104°26'09.509"W | 0.82 | |
| 8989.00 | 90.220 | 177.450 | 6643.72 | 2914.32 | -2912.25 | 150.95 | 40°27'27.223"N | 104°26'09.467"W | 0.20 | |
| 9083.00 | 90.220 | 177.200 | 6643.36 | 3008.27 | -3006.14 | 155.33 | 40°27'26.294"N | 104°26'09.425"W | 0.27 | |
| 9178.00 | 90.250 | 177.500 | 6642.97 | 3103.23 | -3101.04 | 159.73 | 40°27'25.356"N | 104°26'09.383"W | 0.32 | |
| 9272.00 | 90.250 | 178.120 | 6642.56 | 3197.21 | -3194.97 | 163.32 | 40°27'24.428"N | 104°26'09.351"W | 0.66 | |
| 9367.00 | 90.180 | 178.220 | 6642.20 | 3292.20 | -3289.92 | 166.35 | 40°27'23.489"N | 104°26'09.327"W | 0.13 | |
| 9461.00 | 90.280 | 178.140 | 6641.83 | 3386.18 | -3383.87 | 169.34 | 40°27'22.560"N | 104°26'09.303"W | 0.14 | |
| 9556.00 | 90.120 | 178.490 | 6641.50 | 3481.17 | -3478.83 | 172.13 | 40°27'21.622"N | 104°26'09.281"W | 0.41 | |
| 9651.00 | 90.220 | 178.760 | 6641.21 | 3576.17 | -3573.80 | 174.41 | 40°27'20.683"N | 104°26'09.266"W | 0.30 | |
| 9745.00 | 90.220 | 179.480 | 6640.85 | 3670.17 | -3667.79 | 175.85 | 40°27'19.754"N | 104°26'09.262"W | 0.77 | |
| 9840.00 | 90.120 | 180.050 | 6640.57 | 3765.16 | -3762.79 | 176.24 | 40°27'18.816"N | 104°26'09.272"W | 0.61 | |
| 9934.00 | 90.060 | 180.600 | 6640.42 | 3859.14 | -3856.79 | 175.71 | 40°27'17.887"N | 104°26'09.294"W | 0.59 | |
| 10029.00 | 90.150 | 181.480 | 6640.25 | 3954.08 | -3951.77 | 173.99 | 40°27'16.949"N | 104°26'09.331"W | 0.93 | |
| 10123.00 | 90.220 | 182.170 | 6639.95 | 4047.97 | -4045.72 | 170.99 | 40°27'16.021"N | 104°26'09.384"W | 0.74 | |
| 10218.00 | 90.340 | 182.080 | 6639.48 | 4142.83 | -4140.66 | 167.47 | 40°27'15.083"N | 104°26'09.444"W | 0.16 | |
| 10313.00 | 90.250 | 180.890 | 6638.99 | 4237.75 | -4235.62 | 165.01 | 40°27'14.145"N | 104°26'09.491"W | 1.26 | |
| 10407.00 | 90.280 | 180.160 | 6638.56 | 4331.71 | -4329.61 | 164.15 | 40°27'13.216"N | 104°26'09.517"W | 0.78 | |
| 10502.00 | 90.250 | 179.570 | 6638.12 | 4426.70 | -4424.61 | 164.37 | 40°27'12.278"N | 104°26'09.528"W | 0.62 | |
| 10596.00 | 90.220 | 178.110 | 6637.73 | 4520.70 | -4518.59 | 166.27 | 40°27'11.349"N | 104°26'09.518"W | 1.55 | |
| 10691.00 | 90.310 | 177.540 | 6637.29 | 4615.68 | -4613.52 | 169.88 | 40°27'10.410"N | 104°26'09.486"W | 0.61 | |
| 10786.00 | 90.400 | 177.670 | 6636.70 | 4710.64 | -4708.44 | 173.85 | 40°27'09.472"N | 104°26'09.450"W | 0.17 | |
| 10880.00 | 90.370 | 177.350 | 6636.07 | 4804.61 | -4802.34 | 177.93 | 40°27'08.544"N | 104°26'09.412"W | 0.34 | |
| 10975.00 | 90.340 | 177.160 | 6635.48 | 4899.56 | -4897.23 | 182.48 | 40°27'07.606"N | 104°26'09.368"W | 0.20 | |
| 11070.00 | 90.280 | 177.770 | 6634.97 | 4994.52 | -4992.14 | 186.68 | 40°27'06.667"N | 104°26'09.328"W | 0.65 | |
| 11164.00 | 90.370 | 178.710 | 6634.44 | 5088.51 | -5086.09 | 189.57 | 40°27'05.739"N | 104°26'09.305"W | 1.00 | |
| 11259.00 | 90.220 | 178.300 | 6633.95 | 5183.50 | -5181.06 | 192.05 | 40°27'04.800"N | 104°26'09.288"W | 0.46 | |
| 11353.00 | 90.340 | 178.320 | 6633.49 | 5277.49 | -5275.02 | 194.82 | 40°27'03.871"N | 104°26'09.267"W | 0.13 | |
| 11448.00 | 90.220 | 179.170 | 6633.02 | 5372.49 | -5369.99 | 196.90 | 40°27'02.933"N | 104°26'09.254"W | 0.90 | |
| 11543.00 | 90.310 | 181.390 | 6632.59 | 5467.46 | -5464.98 | 196.44 | 40°27'01.994"N | 104°26'09.275"W | 2.34 | |
| 11637.00 | 90.310 | 182.010 | 6632.08 | 5561.36 | -5558.94 | 193.65 | 40°27'01.066"N | 104°26'09.326"W | 0.66 | |
| 11732.00 | 90.400 | 182.760 | 6631.49 | 5656.20 | -5653.86 | 189.70 | 40°27'00.129"N | 104°26'09.392"W | 0.80 | |
| 11826.00 | 90.370 | 183.190 | 6630.86 | 5749.97 | -5747.73 | 184.82 | 40°26'59.202"N | 104°26'09.469"W | 0.46 | |
| 11921.00 | 90.340 | 182.760 | 6630.27 | 5844.75 | -5842.60 | 179.89 | 40°26'58.265"N | 104°26'09.548"W | 0.45 | |
| 12016.00 | 90.430 | 182.560 | 6629.63 | 5939.56 | -5937.49 | 175.48 | 40°26'57.328"N | 104°26'09.620"W | 0.23 | |
| 12111.00 | 90.280 | 182.090 | 6629.04 | 6034.41 | -6032.41 | 171.62 | 40°26'56.390"N | 104°26'09.684"W | 0.52 | |
| 12205.00 | 90.370 | 183.080 | 6628.51 | 6128.23 | -6126.31 | 167.38 | 40°26'55.463"N | 104°26'09.754"W | 1.06 | |
| 12300.00 | 90.250 | 181.980 | 6627.99 | 6223.05 | -6221.22 | 163.19 | 40°26'54.526"N | 104°26'09.823"W | 1.16 | |
| 12394.00 | 90.370 | 180.560 | 6627.48 | 6316.98 | -6315.19 | 161.11 | 40°26'53.598"N | 104°26'09.864"W | 1.52 | |
| 12489.00 | 90.400 | 180.000 | 6626.85 | 6411.95 | -6410.19 | 160.64 | 40°26'52.659"N | 104°26'09.885"W | 0.59 | |
| 12583.00 | 90.310 | 180.140 | 6626.26 | 6505.94 | -6504.19 | 160.53 | 40°26'51.730"N | 104°26'09.901"W | 0.18 | |

REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|---------------------------------|----------|--|
| Operator | NOBLE ENERGY, INC | Slot | SLOT#16 WELLS RANCH STATE AA33-725 (255'FSL&1168'FEL,SEC.21) |
| Area | COLORADO | Well | WELLS RANCH STATE AA33-725 |
| Field | WELD COUNTY (NOBLE NAD 83 GRID) | Wellbore | WELLS RANCH STATE AA33-725 AWP |
| Facility | SEC.21-T06N-R63W | | |

WELLPATH DATA (176 stations)

| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | Latitude | Longitude | DLS [°/100ft] | Comments |
|----------|-----------------|-------------|----------|----------------|------------|-----------|----------------|-----------------|---------------|---------------------|
| 12678.00 | 90.280 | 179.950 | 6625.77 | 6600.92 | -6599.18 | 160.45 | 40°26'50.792"N | 104°26'09.917"W | 0.20 | |
| 12772.00 | 90.310 | 179.610 | 6625.29 | 6694.91 | -6693.18 | 160.82 | 40°26'49.863"N | 104°26'09.926"W | 0.36 | |
| 12867.00 | 90.220 | 179.640 | 6624.85 | 6789.91 | -6788.18 | 161.44 | 40°26'48.924"N | 104°26'09.933"W | 0.10 | |
| 12961.00 | 90.280 | 179.560 | 6624.44 | 6883.90 | -6882.18 | 162.09 | 40°26'47.995"N | 104°26'09.939"W | 0.11 | |
| 13056.00 | 90.280 | 180.870 | 6623.98 | 6978.88 | -6977.17 | 161.74 | 40°26'47.057"N | 104°26'09.959"W | 1.38 | |
| 13150.00 | 90.310 | 179.990 | 6623.49 | 7072.85 | -7071.17 | 161.03 | 40°26'46.128"N | 104°26'09.982"W | 0.94 | |
| 13245.00 | 90.280 | 179.960 | 6623.00 | 7167.84 | -7166.17 | 161.07 | 40°26'45.189"N | 104°26'09.997"W | 0.04 | |
| 13340.00 | 90.370 | 179.650 | 6622.47 | 7262.83 | -7261.16 | 161.40 | 40°26'44.250"N | 104°26'10.007"W | 0.34 | |
| 13434.00 | 90.340 | 181.220 | 6621.88 | 7356.80 | -7355.16 | 160.68 | 40°26'43.322"N | 104°26'10.031"W | 1.67 | |
| 13529.00 | 90.310 | 181.680 | 6621.34 | 7451.71 | -7450.12 | 158.28 | 40°26'42.384"N | 104°26'10.077"W | 0.49 | |
| 13623.00 | 90.340 | 182.970 | 6620.81 | 7545.56 | -7544.04 | 154.47 | 40°26'41.456"N | 104°26'10.141"W | 1.37 | |
| 13718.00 | 90.310 | 181.530 | 6620.27 | 7640.41 | -7638.97 | 150.74 | 40°26'40.519"N | 104°26'10.204"W | 1.52 | |
| 13812.00 | 90.370 | 179.730 | 6619.71 | 7734.37 | -7732.95 | 149.70 | 40°26'39.590"N | 104°26'10.232"W | 1.92 | |
| 13907.00 | 90.180 | 178.560 | 6619.26 | 7829.36 | -7827.94 | 151.12 | 40°26'38.651"N | 104°26'10.228"W | 1.25 | |
| 14001.00 | 90.370 | 177.580 | 6618.81 | 7923.35 | -7921.89 | 154.29 | 40°26'37.723"N | 104°26'10.202"W | 1.06 | |
| 14096.00 | 90.180 | 177.470 | 6618.35 | 8018.31 | -8016.80 | 158.39 | 40°26'36.785"N | 104°26'10.163"W | 0.23 | |
| 14191.00 | 90.220 | 177.710 | 6618.02 | 8113.28 | -8111.71 | 162.38 | 40°26'35.846"N | 104°26'10.126"W | 0.26 | |
| 14285.00 | 90.340 | 177.730 | 6617.56 | 8207.25 | -8205.64 | 166.12 | 40°26'34.918"N | 104°26'10.093"W | 0.13 | |
| 14380.00 | 90.220 | 178.680 | 6617.10 | 8302.24 | -8300.59 | 169.10 | 40°26'33.979"N | 104°26'10.069"W | 1.01 | |
| 14475.00 | 90.340 | 179.720 | 6616.63 | 8397.24 | -8395.57 | 170.42 | 40°26'33.040"N | 104°26'10.066"W | 1.10 | |
| 14569.00 | 90.400 | 180.260 | 6616.02 | 8491.22 | -8489.57 | 170.44 | 40°26'32.112"N | 104°26'10.081"W | 0.58 | |
| 14664.00 | 90.340 | 180.190 | 6615.41 | 8586.20 | -8584.57 | 170.07 | 40°26'31.173"N | 104°26'10.100"W | 0.10 | |
| 14759.00 | 90.310 | 179.420 | 6614.87 | 8681.19 | -8679.57 | 170.39 | 40°26'30.234"N | 104°26'10.111"W | 0.81 | |
| 14853.00 | 90.250 | 177.270 | 6614.41 | 8775.18 | -8773.52 | 173.11 | 40°26'29.306"N | 104°26'10.090"W | 2.29 | |
| 14947.00 | 90.220 | 177.660 | 6614.03 | 8869.14 | -8867.43 | 177.26 | 40°26'28.377"N | 104°26'10.051"W | 0.42 | |
| 15042.00 | 90.220 | 179.570 | 6613.66 | 8964.13 | -8962.40 | 179.56 | 40°26'27.439"N | 104°26'10.036"W | 2.01 | |
| 15136.00 | 90.120 | 180.090 | 6613.38 | 9058.12 | -9056.39 | 179.84 | 40°26'26.510"N | 104°26'10.047"W | 0.56 | |
| 15231.00 | 90.310 | 180.900 | 6613.03 | 9153.09 | -9151.39 | 179.02 | 40°26'25.571"N | 104°26'10.073"W | 0.88 | |
| 15326.00 | 90.280 | 181.620 | 6612.54 | 9248.02 | -9246.36 | 176.93 | 40°26'24.633"N | 104°26'10.114"W | 0.76 | |
| 15420.00 | 90.370 | 182.970 | 6612.00 | 9341.87 | -9340.29 | 173.16 | 40°26'23.706"N | 104°26'10.178"W | 1.44 | |
| 15515.00 | 90.310 | 183.330 | 6611.44 | 9436.62 | -9435.14 | 167.94 | 40°26'22.769"N | 104°26'10.260"W | 0.38 | |
| 15610.00 | 90.400 | 183.200 | 6610.85 | 9531.37 | -9529.98 | 162.53 | 40°26'21.832"N | 104°26'10.344"W | 0.17 | |
| 15704.00 | 90.490 | 182.780 | 6610.12 | 9625.14 | -9623.85 | 157.63 | 40°26'20.906"N | 104°26'10.422"W | 0.46 | |
| 15799.00 | 90.370 | 181.630 | 6609.41 | 9720.00 | -9718.78 | 153.98 | 40°26'19.968"N | 104°26'10.484"W | 1.22 | |
| 15893.00 | 90.460 | 180.630 | 6608.73 | 9813.93 | -9812.76 | 152.12 | 40°26'19.040"N | 104°26'10.523"W | 1.07 | |
| 15988.00 | 90.220 | 179.490 | 6608.16 | 9908.91 | -9907.75 | 152.02 | 40°26'18.101"N | 104°26'10.539"W | 1.23 | |
| 16082.00 | 90.370 | 179.280 | 6607.68 | 10002.91 | -10001.75 | 153.03 | 40°26'17.172"N | 104°26'10.540"W | 0.27 | |
| 16177.00 | 90.310 | 179.390 | 6607.12 | 10097.91 | -10096.74 | 154.13 | 40°26'16.233"N | 104°26'10.541"W | 0.13 | |
| 16272.00 | 90.400 | 179.360 | 6606.53 | 10192.91 | -10191.73 | 155.17 | 40°26'15.295"N | 104°26'10.542"W | 0.10 | |
| 16367.00 | 90.310 | 179.390 | 6605.94 | 10287.90 | -10286.72 | 156.21 | 40°26'14.356"N | 104°26'10.544"W | 0.10 | Last BHI MWD Survey |
| 16421.00 | 90.310 | 179.390 | 6605.65 | 10341.90 | -10340.72 | 156.78 | 40°26'13.822"N | 104°26'10.545"W | 0.00 | Projection to Bit |

REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|---------------------------------|----------|--|
| Operator | NOBLE ENERGY, INC | Slot | SLOT#16 WELLS RANCH STATE AA33-725 (255'FSL&1168'FEL,SEC.21) |
| Area | COLORADO | Well | WELLS RANCH STATE AA33-725 |
| Field | WELD COUNTY (NOBLE NAD 83 GRID) | Wellbore | WELLS RANCH STATE AA33-725 AWB |
| Facility | SEC.21-T06N-R63W | | |

HOLE & CASING SECTIONS

- Ref Wellbore: WELLS RANCH STATE AA33-725 AWB Ref Wellpath: WELLS RANCH STATE AA33-725 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 | 1923.00 | 1893.00 | 30.00 | 1922.96 | -0.03 | 0.01 | 3.83 | -0.94 |
| 9.625in Casing Surface | 30.00 | 1923.00 | 1893.00 | 30.00 | 1922.96 | -0.03 | 0.01 | 3.83 | -0.94 |
| 8.5in Open Hole | 1923.00 | 16421.00 | 14498.00 | 1922.96 | 6605.65 | 3.83 | -0.94 | -10340.72 | 156.78 |

TARGETS

| Name | TVD [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude | Longitude | Shape |
|--|-------------|---------------|--------------|----------------------|-----------------------|----------------|-----------------|---------|
| WELLS RANCH STATE AA33-718 Section 28 | -1.00 | 0.47 | 38.95 | 3295974.57 | 1414219.18 | 40°27'56.016"N | 104°26'10.464"W | polygon |
| WELLS RANCH STATE AA33-718 Section 33 | -1.00 | 0.47 | 38.95 | 3295974.57 | 1414219.18 | 40°27'56.016"N | 104°26'10.464"W | polygon |
| WELLS RANCH STATE AA33-725 BHL FROM PLAT (535'FSL&1015'FEL,SEC.33) | 6603.00 | -10356.20 | 168.77 | 3296104.38 | 1403862.91 | 40°26'13.668"N | 104°26'10.392"W | point |
| WELLS RANCH STATE AA33-725 REV-3 BHL FROM PLAT (535'FSL&1015'FEL,SEC.33) | 6606.07 | -10356.20 | 168.77 | 3296104.38 | 1403862.91 | 40°26'13.668"N | 104°26'10.392"W | point |
| WELLS RANCH STATE AA33-725 REV-2 BHL FROM PLAT (535'FSL&1015'FEL,SEC.33) | 6611.05 | -10356.20 | 168.77 | 3296104.38 | 1403862.91 | 40°26'13.668"N | 104°26'10.392"W | point |
| WELLS RANCH STATE AA33-725 LANDING POINT (625'FNL&1012'FEL,SEC.28) | 6655.00 | -1011.30 | 142.00 | 3296077.61 | 1413207.45 | 40°27'46.007"N | 104°26'09.288"W | point |
| WELLS RANCH STATE AA33-718 Section 28 Hardline (460'SETBACK) | 6799.00 | 0.47 | 38.95 | 3295974.57 | 1414219.18 | 40°27'56.016"N | 104°26'10.464"W | polygon |
| WELLS RANCH STATE AA33-718 Section 33 Hardline (460'SETBACK) | 6799.00 | 0.47 | 38.95 | 3295974.57 | 1414219.18 | 40°27'56.016"N | 104°26'10.464"W | polygon |

WELLPATH COMPOSITION - Ref Wellbore: WELLS RANCH STATE AA33-725 AWB Ref Wellpath: WELLS RANCH STATE AA33-725 AWP

| Start MD [ft] | End MD [ft] | Positional Uncertainty Model | Log Name/Comment | Wellbore |
|------------------|----------------|---|---|--------------------------------|
| 0.00 | 1911.00 | Gyrodata standard - Drop gyro or Multi-shot | Surface Gyrodata Surveys 13.5" Hole <85'-1911'> | WELLS RANCH STATE AA33-725 AWB |
| 1911.00 | 16367.00 | OWSG MWD rev2 + IFR1 + Multi-Station Correction | BHI/ATC OWSG MWD+IFR+MSA 8.5" Hole <1989'-16367'> | WELLS RANCH STATE AA33-725 AWB |
| 16367.00 | 16421.00 | Blind Drilling (std) | Projection to bit | WELLS RANCH STATE AA33-725 AWB |



Actual Wellpath Report

WELLS RANCH STATE AA33-725 AWP

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| REFERENCE WELLPATH IDENTIFICATION | | | |
|-----------------------------------|---------------------------------|----------|--|
| Operator | NOBLE ENERGY, INC | Slot | SLOT#16 WELLS RANCH STATE AA33-725 (255'FSL&1168'FEL,SEC.21) |
| Area | COLORADO | Well | WELLS RANCH STATE AA33-725 |
| Field | WELD COUNTY (NOBLE NAD 83 GRID) | Wellbore | WELLS RANCH STATE AA33-725 AWB |
| Facility | SEC.21-T06N-R63W | | |

| WELLPATH COMMENTS | | | | |
|-------------------|--------------------|----------------|-------------|---------------------|
| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Comment |
| 1911.00 | 0.300 | 104.650 | 1910.96 | Tie to Surface |
| 16367.00 | 90.310 | 179.390 | 6605.94 | Last BHI MWD Survey |
| 16421.00 | 90.310 | 179.390 | 6605.65 | Projection to Bit |

| COMMENTS | |
|---------------------------|--|
| Wellpath general comments | |
| Surface Location: SESE | |
| 40.46556 N | |
| 104.43638 W | |
| API#: 05-123-43917 | |