



Company: Anadarko

Site: Morton

Well: 8-12

Project: Weld County, Colorado (NAD83)

Rig Name: Xtreme 11



Planning: 936.442.2510 Fax: 936.442.2515  
Operations: 936.442.2500 Fax: 936.442.2599

#### ANNOTATIONS

| MD      | Inc   | Azi    | TVD     | +N/-S   | +E/-W   | Vsect   | Departure | Annotation             |
|---------|-------|--------|---------|---------|---------|---------|-----------|------------------------|
| 250.00  | 0.00  | 0.00   | 250.00  | 0.00    | 0.00    | 0.00    | 0.00      | KOP, 2.00°/100' Build  |
| 550.00  | 6.00  | 116.61 | 549.45  | -7.03   | 14.03   | 15.69   | 15.69     | Begin 6.00° Tangent    |
| 967.84  | 6.00  | 116.61 | 965.00  | -26.60  | 53.08   | 59.37   | 59.37     | Begin 2.00°/100' Build |
| 1417.75 | 15.00 | 116.61 | 1406.92 | -63.28  | 126.30  | 141.27  | 141.27    | Begin 15.00° Tangent   |
| 5147.38 | 15.00 | 116.61 | 5009.50 | -495.66 | 989.22  | 1106.45 | 1106.45   | Begin 1.50°/100' Drop  |
| 6147.26 | 0.00  | 0.00   | 5998.00 | -553.95 | 1105.55 | 1236.57 | 1236.57   | Begin Vertical Hold    |
| 8189.26 | 0.00  | 0.00   | 8040.00 | -553.95 | 1105.55 | 1236.57 | 1236.57   | PBHL                   |



Azimuths to True North  
Magnetic North: 8.80°

Magnetic Field  
Strength: 52904.3snT  
Dip Angle: 66.75°  
Date: 12/16/2011  
Model: WMM\_2010

US State Plane 1983  
Colorado Northern Zone

Created By: Megan Pope  
Date: 7:59, December 21 2011  
Plan: Design #2

#### DESIGN TARGET DETAILS

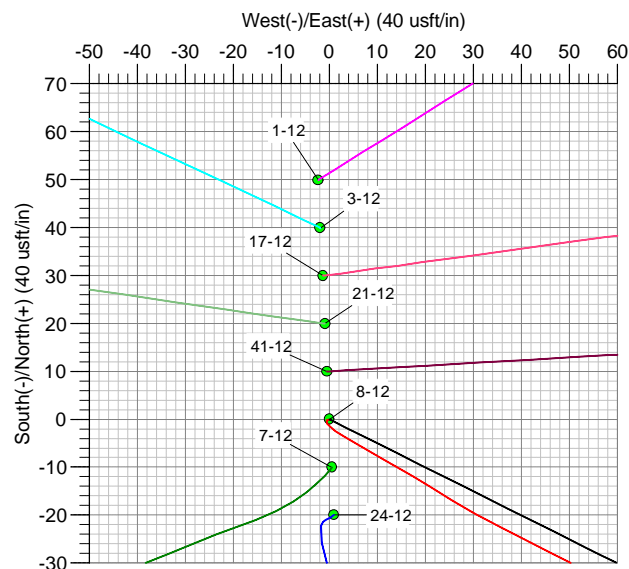
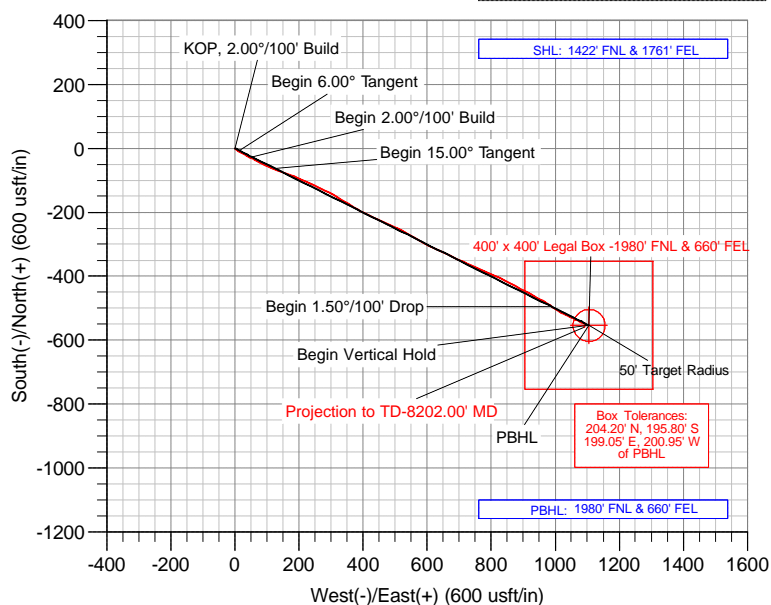
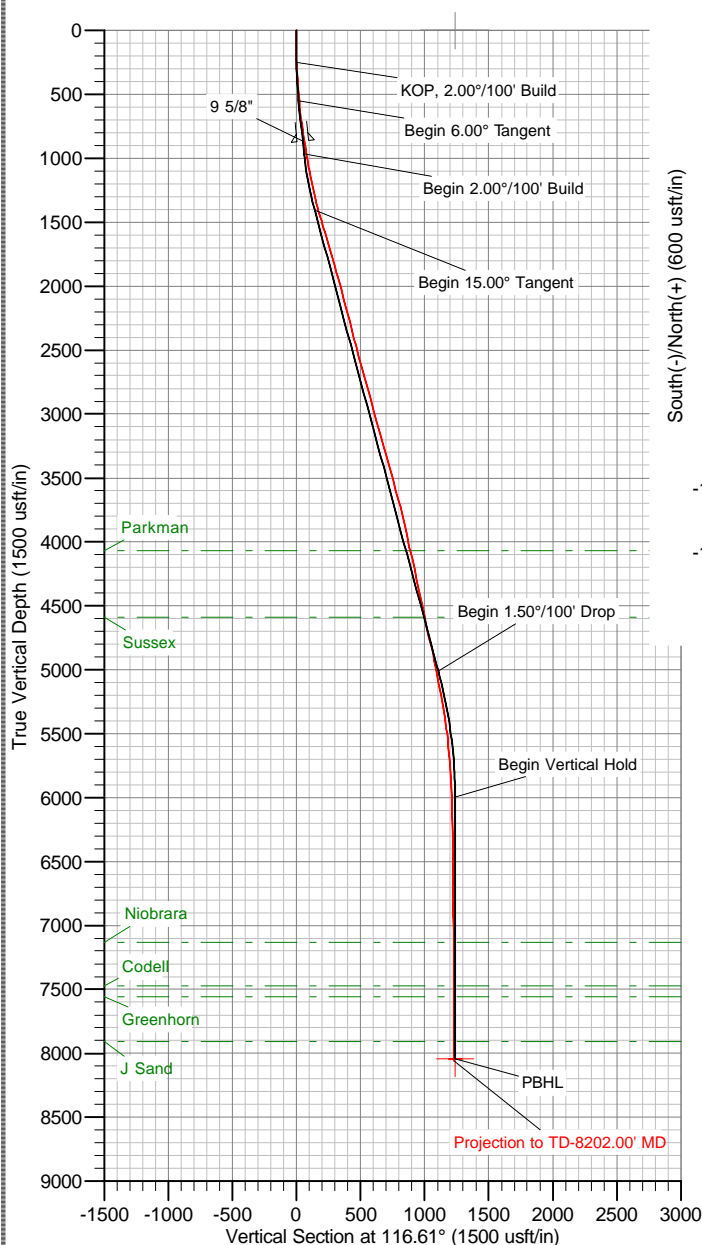
| Name                                                                 | TVD             | +N/-S              | +E/-W              | Latitude                           | Longitude                              |
|----------------------------------------------------------------------|-----------------|--------------------|--------------------|------------------------------------|----------------------------------------|
| 400' x 400' Legal Box -1980' FNL & 660' FEL<br>PBHL v2 - Morton 8-12 | 0.00<br>8040.00 | -552.68<br>-553.95 | 1104.59<br>1105.55 | 40° 4' 2.3459 N<br>40° 4' 2.3334 N | 104° 49' 55.916 W<br>104° 49' 55.903 W |

#### FORMATION TOP DETAILS

| TVDPath | MDPath  | Formation |
|---------|---------|-----------|
| 4070.00 | 4174.74 | Parkman   |
| 4590.00 | 4713.08 | Sussex    |
| 7130.00 | 7279.26 | Niobrara  |
| 7470.00 | 7619.26 | Codell    |
| 7555.00 | 7704.26 | Greenhorn |
| 7905.00 | 8054.26 | J Sand    |

#### SURFACE LOCATION

Northing: 1268617.39  
Easting: 3185791.76  
Latitude: 40° 4' 7.8081 N  
Longitude: 104° 50' 10.124 W  
Ground Elevation: 4905.00  
WELL @ 4920.00usft (Xtreme 11)



The customer should only rely on this document after independently verifying all paths, targets, coordinates, lease and hard lines represented. Any decisions made or wells drilled utilizing this or any other information supplied by MS Energy are at the sole risk and responsibility of the customer. MS Energy is not responsible for the accuracy of this schematic or the information contained herein.



## **Anadarko**

**Weld County, Colorado (NAD83)**

**Morton**

**8-12**

**Wellbore #1**

**Survey: MS MWD**

## **Standard Survey Report**

**21 December, 2011**

|                  |                               |                                     |                                |
|------------------|-------------------------------|-------------------------------------|--------------------------------|
| <b>Company:</b>  | Anadarko                      | <b>Local Co-ordinate Reference:</b> | Well 8-12                      |
| <b>Project:</b>  | Weld County, Colorado (NAD83) | <b>TVD Reference:</b>               | WELL @ 4920.00usft (Xtreme 11) |
| <b>Site:</b>     | Morton                        | <b>MD Reference:</b>                | WELL @ 4920.00usft (Xtreme 11) |
| <b>Well:</b>     | 8-12                          | <b>North Reference:</b>             | True                           |
| <b>Wellbore:</b> | Wellbore #1                   | <b>Survey Calculation Method:</b>   | Minimum Curvature              |
| <b>Design:</b>   | Surveys                       | <b>Database:</b>                    | Southern Region                |

|                    |                               |                      |                |
|--------------------|-------------------------------|----------------------|----------------|
| <b>Project</b>     | Weld County, Colorado (NAD83) |                      |                |
| <b>Map System:</b> | US State Plane 1983           | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | North American Datum 1983     |                      |                |
| <b>Map Zone:</b>   | Colorado Northern Zone        |                      |                |

|                      |       |           |                     |                   |               |                   |
|----------------------|-------|-----------|---------------------|-------------------|---------------|-------------------|
| Well                 | 8-12  |           |                     |                   |               |                   |
| Well Position        | +N/-S | 0.00 usft | Northing:           | 1,268,617.39 usft | Latitude:     | 40° 4' 7.8081 N   |
|                      | +E/-W | 0.00 usft | Easting:            | 3,185,791.76 usft | Longitude:    | 104° 50' 10.124 W |
| Position Uncertainty |       | 0.00 usft | Wellhead Elevation: | usft              | Ground Level: | 4,905.00 usft     |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | Wellbore #1       |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | WMM_2010          | 12/16/11           | 8.80                   | 66.75                | 52,904                     |

|                          |                                |                     |                     |                      |        |
|--------------------------|--------------------------------|---------------------|---------------------|----------------------|--------|
| <b>Design</b>            | Surveys                        |                     |                     |                      |        |
| <b>Audit Notes:</b>      |                                |                     |                     |                      |        |
| <b>Version:</b>          | 1.0                            | <b>Phase:</b>       | ACTUAL              | <b>Tie On Depth:</b> | 0.00   |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b> | <b>Direction (°)</b> |        |
|                          | 0.00                           | 0.00                | 0.00                |                      | 116.61 |

|                       |                  |                          |                  |                    |  |
|-----------------------|------------------|--------------------------|------------------|--------------------|--|
| <b>Survey Program</b> | <b>Date</b>      | 12/21/11                 |                  |                    |  |
| <b>From (usft)</b>    | <b>To (usft)</b> | <b>Survey (Wellbore)</b> | <b>Tool Name</b> | <b>Description</b> |  |
| 103.00                | 8,202.00         | MS MWD (Wellbore #1)     | MWD              | MWD - Standard     |  |

|                              |                        |                    |                              |                     |                     |                                |                                |                               |                              |  |
|------------------------------|------------------------|--------------------|------------------------------|---------------------|---------------------|--------------------------------|--------------------------------|-------------------------------|------------------------------|--|
| <b>Survey</b>                |                        |                    |                              |                     |                     |                                |                                |                               |                              |  |
| <b>Measured Depth (usft)</b> | <b>Inclination (°)</b> | <b>Azimuth (°)</b> | <b>Vertical Depth (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b> | <b>Vertical Section (usft)</b> | <b>Dogleg Rate (°/100usft)</b> | <b>Build Rate (°/100usft)</b> | <b>Turn Rate (°/100usft)</b> |  |
| 0.00                         | 0.00                   | 0.00               | 0.00                         | 0.00                | 0.00                | 0.00                           | 0.00                           | 0.00                          | 0.00                         |  |
| 103.00                       | 0.60                   | 251.60             | 103.00                       | -0.17               | -0.51               | -0.38                          | 0.58                           | 0.58                          | 0.00                         |  |
| 192.00                       | 0.90                   | 144.50             | 191.99                       | -0.89               | -0.55               | -0.09                          | 1.37                           | 0.34                          | -120.34                      |  |
| 282.00                       | 2.10                   | 123.60             | 281.96                       | -2.37               | 1.24                | 2.17                           | 1.44                           | 1.33                          | -23.22                       |  |
| 373.00                       | 3.80                   | 121.10             | 372.84                       | -4.85               | 5.21                | 6.83                           | 1.87                           | 1.87                          | -2.75                        |  |
| 463.00                       | 4.60                   | 119.40             | 462.60                       | -8.17               | 10.90               | 13.41                          | 0.90                           | 0.89                          | -1.89                        |  |
| 554.00                       | 5.00                   | 120.80             | 553.28                       | -11.99              | 17.49               | 21.01                          | 0.46                           | 0.44                          | 1.54                         |  |
| 645.00                       | 6.80                   | 122.00             | 643.79                       | -16.87              | 25.47               | 30.33                          | 1.98                           | 1.98                          | 1.32                         |  |
| 736.00                       | 7.80                   | 116.00             | 734.05                       | -22.44              | 35.59               | 41.87                          | 1.38                           | 1.10                          | -6.59                        |  |
| 827.00                       | 8.20                   | 118.50             | 824.17                       | -28.24              | 46.84               | 54.53                          | 0.58                           | 0.44                          | 2.75                         |  |
| 907.00                       | 8.30                   | 116.60             | 903.34                       | -33.55              | 57.02               | 66.00                          | 0.36                           | 0.13                          | -2.38                        |  |
| 984.00                       | 9.40                   | 119.00             | 979.42                       | -39.09              | 67.49               | 77.84                          | 1.51                           | 1.43                          | 3.12                         |  |
| 1,075.00                     | 10.60                  | 113.20             | 1,069.04                     | -45.99              | 81.68               | 93.62                          | 1.72                           | 1.32                          | -6.37                        |  |
| 1,149.00                     | 12.00                  | 113.90             | 1,141.60                     | -51.78              | 94.97               | 108.10                         | 1.90                           | 1.89                          | 0.95                         |  |
| 1,240.00                     | 12.70                  | 117.60             | 1,230.50                     | -60.25              | 112.48              | 127.56                         | 1.16                           | 0.77                          | 4.07                         |  |

|                  |                               |                                     |                                |
|------------------|-------------------------------|-------------------------------------|--------------------------------|
| <b>Company:</b>  | Anadarko                      | <b>Local Co-ordinate Reference:</b> | Well 8-12                      |
| <b>Project:</b>  | Weld County, Colorado (NAD83) | <b>TVD Reference:</b>               | WELL @ 4920.00usft (Xtreme 11) |
| <b>Site:</b>     | Morton                        | <b>MD Reference:</b>                | WELL @ 4920.00usft (Xtreme 11) |
| <b>Well:</b>     | 8-12                          | <b>North Reference:</b>             | True                           |
| <b>Wellbore:</b> | Wellbore #1                   | <b>Survey Calculation Method:</b>   | Minimum Curvature              |
| <b>Design:</b>   | Surveys                       | <b>Database:</b>                    | Southern Region                |

| Survey                |                 |             |                       |              |              |                         |                         |                        |                       |  |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|--|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |  |
| 1,331.00              | 13.40           | 109.50      | 1,319.16              | -68.41       | 131.29       | 148.02                  | 2.15                    | 0.77                   | -8.90                 |  |
| 1,422.00              | 15.60           | 110.20      | 1,407.25              | -76.15       | 152.71       | 170.65                  | 2.43                    | 2.42                   | 0.77                  |  |
| 1,513.00              | 15.80           | 109.00      | 1,494.86              | -84.41       | 175.91       | 195.09                  | 0.42                    | 0.22                   | -1.32                 |  |
| 1,604.00              | 16.80           | 116.00      | 1,582.21              | -94.21       | 199.45       | 220.52                  | 2.42                    | 1.10                   | 7.69                  |  |
| 1,695.00              | 16.20           | 113.70      | 1,669.46              | -105.08      | 222.89       | 246.35                  | 0.97                    | -0.66                  | -2.53                 |  |
| 1,786.00              | 16.40           | 114.80      | 1,756.80              | -115.57      | 246.18       | 271.87                  | 0.40                    | 0.22                   | 1.21                  |  |
| 1,876.00              | 16.60           | 114.80      | 1,843.10              | -126.29      | 269.38       | 297.41                  | 0.22                    | 0.22                   | 0.00                  |  |
| 1,967.00              | 15.60           | 116.60      | 1,930.53              | -137.22      | 292.12       | 322.64                  | 1.23                    | -1.10                  | 1.98                  |  |
| 2,058.00              | 14.70           | 121.50      | 2,018.37              | -148.73      | 312.91       | 346.38                  | 1.72                    | -0.99                  | 5.38                  |  |
| 2,149.00              | 14.60           | 121.80      | 2,106.41              | -160.81      | 332.50       | 369.31                  | 0.14                    | -0.11                  | 0.33                  |  |
| 2,240.00              | 15.00           | 119.90      | 2,194.39              | -172.72      | 352.46       | 392.49                  | 0.69                    | 0.44                   | -2.09                 |  |
| 2,331.00              | 14.90           | 121.30      | 2,282.31              | -184.67      | 372.66       | 415.91                  | 0.41                    | -0.11                  | 1.54                  |  |
| 2,422.00              | 14.20           | 118.20      | 2,370.39              | -196.03      | 392.50       | 438.73                  | 1.15                    | -0.77                  | -3.41                 |  |
| 2,512.00              | 15.20           | 116.70      | 2,457.44              | -206.54      | 412.77       | 461.56                  | 1.19                    | 1.11                   | -1.67                 |  |
| 2,603.00              | 15.00           | 116.70      | 2,545.30              | -217.20      | 433.95       | 485.27                  | 0.22                    | -0.22                  | 0.00                  |  |
| 2,694.00              | 15.20           | 114.60      | 2,633.16              | -227.45      | 455.31       | 508.96                  | 0.64                    | 0.22                   | -2.31                 |  |
| 2,785.00              | 15.30           | 112.30      | 2,720.96              | -236.97      | 477.27       | 532.86                  | 0.67                    | 0.11                   | -2.53                 |  |
| 2,875.00              | 15.50           | 114.10      | 2,807.73              | -246.39      | 499.23       | 556.71                  | 0.58                    | 0.22                   | 2.00                  |  |
| 2,966.00              | 15.20           | 119.20      | 2,895.48              | -257.18      | 520.75       | 580.78                  | 1.52                    | -0.33                  | 5.60                  |  |
| 3,057.00              | 15.50           | 119.70      | 2,983.24              | -269.02      | 541.72       | 604.84                  | 0.36                    | 0.33                   | 0.55                  |  |
| 3,148.00              | 15.80           | 119.90      | 3,070.86              | -281.22      | 563.02       | 629.35                  | 0.33                    | 0.33                   | 0.22                  |  |
| 3,239.00              | 15.40           | 119.00      | 3,158.51              | -293.25      | 584.33       | 653.79                  | 0.51                    | -0.44                  | -0.99                 |  |
| 3,329.00              | 15.60           | 116.60      | 3,245.24              | -304.47      | 605.60       | 677.83                  | 0.75                    | 0.22                   | -2.67                 |  |
| 3,420.00              | 15.40           | 116.20      | 3,332.93              | -315.28      | 627.39       | 702.15                  | 0.25                    | -0.22                  | -0.44                 |  |
| 3,511.00              | 15.30           | 113.90      | 3,420.68              | -325.48      | 649.20       | 726.23                  | 0.68                    | -0.11                  | -2.53                 |  |
| 3,602.00              | 15.60           | 116.40      | 3,508.40              | -335.78      | 671.14       | 750.45                  | 0.80                    | 0.33                   | 2.75                  |  |
| 3,693.00              | 15.60           | 114.10      | 3,596.05              | -346.22      | 693.27       | 774.91                  | 0.68                    | 0.00                   | -2.53                 |  |
| 3,784.00              | 14.90           | 112.90      | 3,683.84              | -355.77      | 715.22       | 798.81                  | 0.84                    | -0.77                  | -1.32                 |  |
| 3,875.00              | 13.10           | 114.60      | 3,772.13              | -364.62      | 735.37       | 820.80                  | 2.03                    | -1.98                  | 1.87                  |  |
| 3,965.00              | 12.20           | 116.40      | 3,859.95              | -373.09      | 753.17       | 840.50                  | 1.09                    | -1.00                  | 2.00                  |  |
| 4,056.00              | 12.80           | 112.90      | 3,948.79              | -381.29      | 771.06       | 860.18                  | 1.06                    | 0.66                   | -3.85                 |  |
| 4,147.00              | 12.80           | 111.60      | 4,037.53              | -388.92      | 789.72       | 880.28                  | 0.32                    | 0.00                   | -1.43                 |  |
| 4,237.00              | 12.70           | 115.00      | 4,125.31              | -396.77      | 807.96       | 900.10                  | 0.84                    | -0.11                  | 3.78                  |  |
| 4,328.00              | 12.80           | 115.30      | 4,214.07              | -405.31      | 826.14       | 920.17                  | 0.13                    | 0.11                   | 0.33                  |  |
| 4,419.00              | 12.60           | 116.60      | 4,302.84              | -414.06      | 844.13       | 940.18                  | 0.38                    | -0.22                  | 1.43                  |  |
| 4,510.00              | 12.20           | 118.80      | 4,391.72              | -423.14      | 861.43       | 959.71                  | 0.68                    | -0.44                  | 2.42                  |  |
| 4,600.00              | 11.50           | 118.10      | 4,479.80              | -431.94      | 877.68       | 978.18                  | 0.79                    | -0.78                  | -0.78                 |  |
| 4,691.00              | 12.00           | 116.70      | 4,568.90              | -440.47      | 894.13       | 996.71                  | 0.63                    | 0.55                   | -1.54                 |  |
| 4,782.00              | 11.80           | 117.10      | 4,657.94              | -448.96      | 910.86       | 1,015.48                | 0.24                    | -0.22                  | 0.44                  |  |
| 4,873.00              | 12.80           | 118.30      | 4,746.85              | -457.97      | 928.02       | 1,034.86                | 1.13                    | 1.10                   | 1.32                  |  |
| 4,964.00              | 13.10           | 121.10      | 4,835.54              | -468.08      | 945.73       | 1,055.21                | 0.76                    | 0.33                   | 3.08                  |  |
| 5,054.00              | 11.30           | 119.90      | 4,923.50              | -477.75      | 962.11       | 1,074.19                | 2.02                    | -2.00                  | -1.33                 |  |
| 5,145.00              | 11.10           | 120.90      | 5,012.77              | -486.69      | 977.35       | 1,091.82                | 0.31                    | -0.22                  | 1.10                  |  |
| 5,236.00              | 11.00           | 126.20      | 5,102.08              | -496.31      | 991.88       | 1,109.12                | 1.12                    | -0.11                  | 5.82                  |  |

|                  |                               |                                     |                                |
|------------------|-------------------------------|-------------------------------------|--------------------------------|
| <b>Company:</b>  | Anadarko                      | <b>Local Co-ordinate Reference:</b> | Well 8-12                      |
| <b>Project:</b>  | Weld County, Colorado (NAD83) | <b>TVD Reference:</b>               | WELL @ 4920.00usft (Xtreme 11) |
| <b>Site:</b>     | Morton                        | <b>MD Reference:</b>                | WELL @ 4920.00usft (Xtreme 11) |
| <b>Well:</b>     | 8-12                          | <b>North Reference:</b>             | True                           |
| <b>Wellbore:</b> | Wellbore #1                   | <b>Survey Calculation Method:</b>   | Minimum Curvature              |
| <b>Design:</b>   | Surveys                       | <b>Database:</b>                    | Southern Region                |

| Survey                       |                 |             |                       |             |             |                         |                         |                        |                       |  |
|------------------------------|-----------------|-------------|-----------------------|-------------|-------------|-------------------------|-------------------------|------------------------|-----------------------|--|
| Measured Depth (usft)        | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N-S (usft) | +E-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |  |
| 5,327.00                     | 10.40           | 123.90      | 5,191.50              | -506.02     | 1,005.70    | 1,125.83                | 0.81                    | -0.66                  | -2.53                 |  |
| 5,418.00                     | 9.80            | 121.30      | 5,281.09              | -514.63     | 1,019.13    | 1,141.69                | 0.83                    | -0.66                  | -2.86                 |  |
| 5,508.00                     | 8.80            | 114.40      | 5,369.91              | -521.45     | 1,031.95    | 1,156.21                | 1.66                    | -1.11                  | -7.67                 |  |
| 5,599.00                     | 7.50            | 112.90      | 5,459.99              | -526.64     | 1,043.76    | 1,169.09                | 1.45                    | -1.43                  | -1.65                 |  |
| 5,690.00                     | 6.30            | 113.40      | 5,550.33              | -530.93     | 1,053.81    | 1,180.00                | 1.32                    | -1.32                  | 0.55                  |  |
| 5,781.00                     | 5.20            | 117.80      | 5,640.87              | -534.84     | 1,062.04    | 1,189.11                | 1.30                    | -1.21                  | 4.84                  |  |
| 5,871.00                     | 4.00            | 115.00      | 5,730.58              | -538.07     | 1,068.50    | 1,196.33                | 1.36                    | -1.33                  | -3.11                 |  |
| 5,962.00                     | 3.50            | 118.30      | 5,821.38              | -540.73     | 1,073.82    | 1,202.27                | 0.60                    | -0.55                  | 3.63                  |  |
| 6,053.00                     | 2.70            | 114.30      | 5,912.25              | -542.92     | 1,078.22    | 1,207.19                | 0.91                    | -0.88                  | -4.40                 |  |
| 6,144.00                     | 2.20            | 115.30      | 6,003.17              | -544.55     | 1,081.75    | 1,211.08                | 0.55                    | -0.55                  | 1.10                  |  |
| 6,235.00                     | 1.80            | 117.60      | 6,094.11              | -545.96     | 1,084.60    | 1,214.26                | 0.45                    | -0.44                  | 2.53                  |  |
| 6,371.00                     | 1.10            | 92.50       | 6,230.07              | -547.01     | 1,087.79    | 1,217.58                | 0.68                    | -0.51                  | -18.46                |  |
| 6,507.00                     | 0.80            | 90.40       | 6,366.05              | -547.07     | 1,090.05    | 1,219.63                | 0.22                    | -0.22                  | -1.54                 |  |
| 6,643.00                     | 0.80            | 125.50      | 6,502.04              | -547.63     | 1,091.77    | 1,221.42                | 0.35                    | 0.00                   | 25.81                 |  |
| 6,779.00                     | 0.40            | 145.20      | 6,638.03              | -548.57     | 1,092.81    | 1,222.77                | 0.33                    | -0.29                  | 14.49                 |  |
| 6,916.00                     | 0.60            | 177.20      | 6,775.02              | -549.68     | 1,093.12    | 1,223.54                | 0.25                    | 0.15                   | 23.36                 |  |
| 7,052.00                     | 0.70            | 199.30      | 6,911.01              | -551.18     | 1,092.88    | 1,224.00                | 0.20                    | 0.07                   | 16.25                 |  |
| 7,188.00                     | 0.90            | 201.60      | 7,047.00              | -552.95     | 1,092.21    | 1,224.20                | 0.15                    | 0.15                   | 1.69                  |  |
| 7,324.00                     | 0.60            | 203.20      | 7,182.99              | -554.60     | 1,091.54    | 1,224.33                | 0.22                    | -0.22                  | 1.18                  |  |
| 7,461.00                     | 0.70            | 211.50      | 7,319.98              | -555.97     | 1,090.82    | 1,224.30                | 0.10                    | 0.07                   | 6.06                  |  |
| 7,597.00                     | 0.30            | 186.00      | 7,455.97              | -557.04     | 1,090.35    | 1,224.36                | 0.33                    | -0.29                  | -18.75                |  |
| 7,733.00                     | 0.40            | 74.50       | 7,591.97              | -557.26     | 1,090.77    | 1,224.84                | 0.43                    | 0.07                   | -81.99                |  |
| 7,869.00                     | 0.10            | 262.10      | 7,727.97              | -557.15     | 1,091.11    | 1,225.09                | 0.37                    | -0.22                  | -126.76               |  |
| 8,005.00                     | 0.40            | 238.40      | 7,863.97              | -557.42     | 1,090.59    | 1,224.74                | 0.23                    | 0.22                   | -17.43                |  |
| 8,157.00                     | 0.40            | 202.00      | 8,015.97              | -558.19     | 1,089.94    | 1,224.51                | 0.16                    | 0.00                   | -23.95                |  |
| 8,202.00                     | 0.40            | 202.00      | 8,060.97              | -558.48     | 1,089.82    | 1,224.53                | 0.00                    | 0.00                   | 0.00                  |  |
| Projection to TD-8202.00' MD |                 |             |                       |             |             |                         |                         |                        |                       |  |

| Survey Annotations    |                       |                   |              |                              |  |
|-----------------------|-----------------------|-------------------|--------------|------------------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates |              | Comment                      |  |
|                       |                       | +N/-S (usft)      | +E/-W (usft) |                              |  |
| 8,202.00              | 8,060.97              | -558.48           | 1,089.82     | Projection to TD-8202.00' MD |  |