



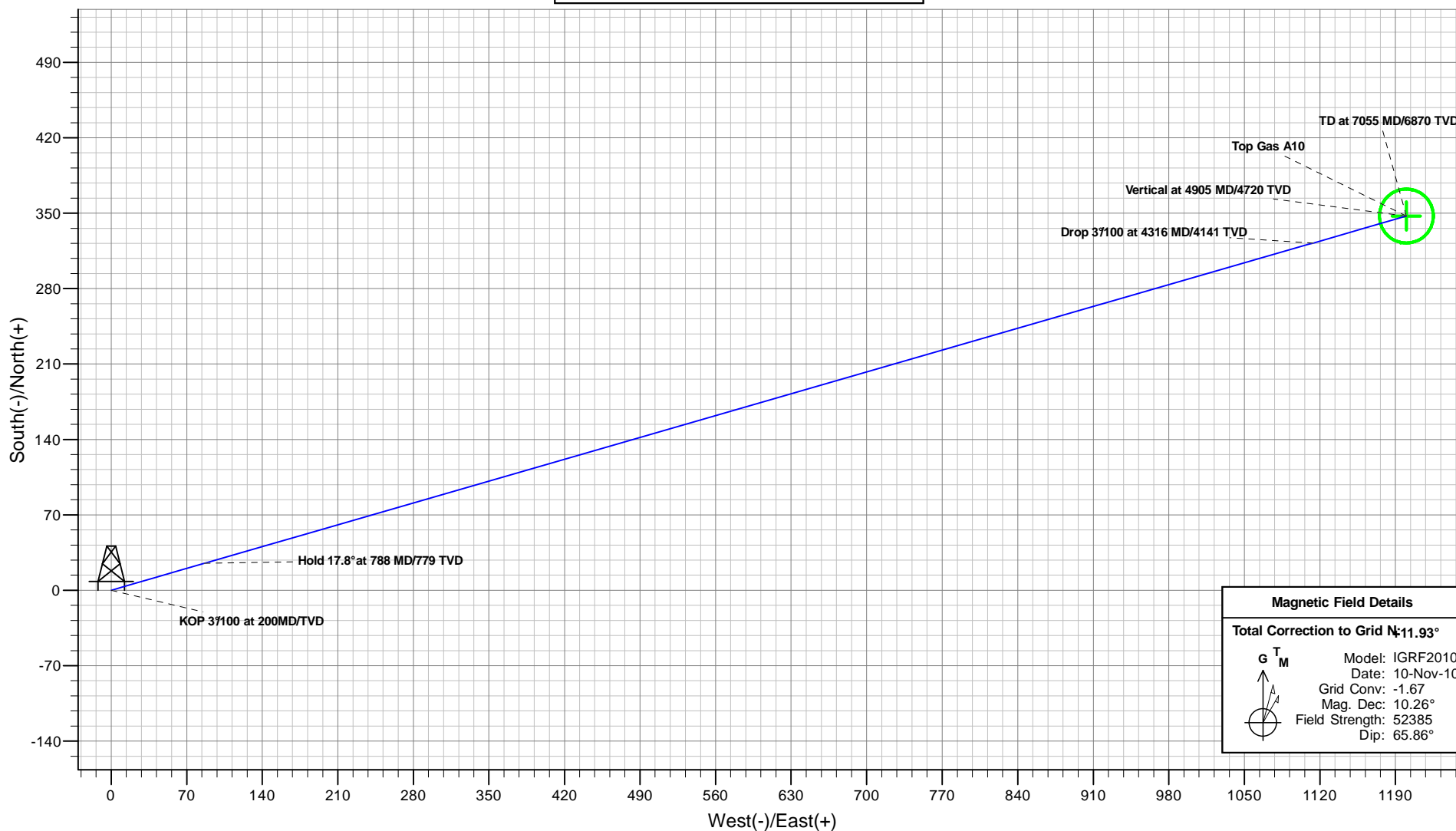
# Antero Resources



## Antero McLin A10

### PLAN VIEW

Project: McLin  
Site: McLin A  
Well: McLin A10 (111197)  
Wellbore: Antero McLin A10  
Design: Antero McLin A10 P01



Plan: Antero McLin A10 P01  
Created By: ARK Directional Services  
Date: 13:20, August 10 2010

PROJECT DETAILS: McLin

Geodetic System: Universal Transverse Mercator  
Datum: NAD83 Colorado - HARN  
Ellipsoid: GRS 1980  
Zone: Zone 13N (108 W to 102 W)  
System Datum: Mean Sea Level

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well McLin A10 (111197), Grid North  
Vertical (TVD) Reference: KB @ 5630.00ft (Original Well Elev)  
Section (VS) Reference: Slot - (0.00N, 0.00E)  
Measured Depth Reference: KB @ 5630.00ft (Original Well Elev)  
Calculation Method: Minimum Curvature

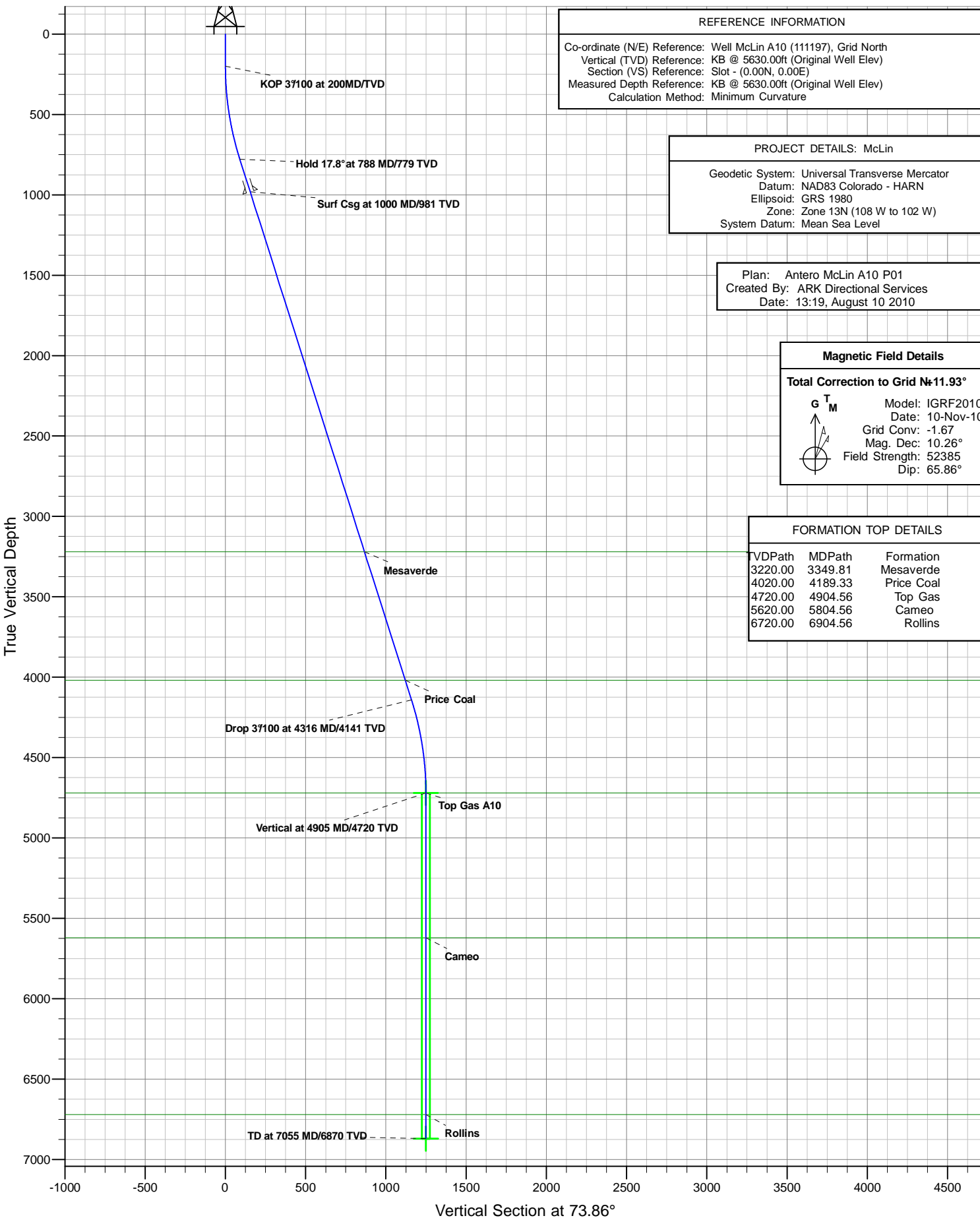


# Antero Resources

McLin A10 (111197)



## VERTICAL SECTION VIEW



# **Antero Resources**

**McLin**

**McLin A**

**McLin A10 (111197)**

**Antero McLin A10**

**Plan: Antero McLin A10 P01**

## **Standard Planning Report - Geographic**

**10 August, 2010**

# ARK Directional Services

## Planning Report - Geographic

|                  |                      |                                     |                                     |
|------------------|----------------------|-------------------------------------|-------------------------------------|
| <b>Database:</b> | EDM SERVER DB        | <b>Local Co-ordinate Reference:</b> | Well McLin A10 (111197)             |
| <b>Company:</b>  | Antero Resources     | <b>TVD Reference:</b>               | KB @ 5630.00ft (Original Well Elev) |
| <b>Project:</b>  | McLin                | <b>MD Reference:</b>                | KB @ 5630.00ft (Original Well Elev) |
| <b>Site:</b>     | McLin A              | <b>North Reference:</b>             | Grid                                |
| <b>Well:</b>     | McLin A10 (111197)   | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Wellbore:</b> | Antero McLin A10     |                                     |                                     |
| <b>Design:</b>   | Antero McLin A10 P01 |                                     |                                     |

|                    |                               |                      |                |
|--------------------|-------------------------------|----------------------|----------------|
| <b>Project</b>     | McLin                         |                      |                |
| <b>Map System:</b> | Universal Transverse Mercator | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | NAD83 Colorado - HARN         |                      |                |
| <b>Map Zone:</b>   | Zone 13N (108 W to 102 W)     |                      |                |

|                              |         |                          |                     |
|------------------------------|---------|--------------------------|---------------------|
| <b>Site</b>                  | McLin A |                          |                     |
| <b>Site Position:</b>        |         | <b>Northing:</b>         | 14,368,868.520 usft |
| <b>From:</b>                 | Map     | <b>Easting:</b>          | 902,523.601 usft    |
| <b>Position Uncertainty:</b> | 0.00 ft | <b>Slot Radius:</b>      | 13.20 in            |
|                              |         | <b>Latitude:</b>         | 39.536981937°N      |
|                              |         | <b>Longitude:</b>        | 107.617087010°W     |
|                              |         | <b>Grid Convergence:</b> | -1.67 °             |

|                             |                    |                            |                  |
|-----------------------------|--------------------|----------------------------|------------------|
| <b>Well</b>                 | McLin A10 (111197) |                            |                  |
| <b>Well Position</b>        | <b>+N/-S</b>       | 0.00 ft                    | <b>Northing:</b> |
|                             | <b>+E/-W</b>       | 0.00 ft                    | <b>Easting:</b>  |
| <b>Position Uncertainty</b> | 0.00 ft            | <b>Wellhead Elevation:</b> |                  |
|                             |                    | <b>Latitude:</b>           | 39.536981937°N   |
|                             |                    | <b>Longitude:</b>          | 107.617087010°W  |
|                             |                    | <b>Ground Level:</b>       | 5,606.00 ft      |

|                  |                   |                    |                    |                  |                       |
|------------------|-------------------|--------------------|--------------------|------------------|-----------------------|
| <b>Wellbore</b>  | Antero McLin A10  |                    |                    |                  |                       |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination</b> | <b>Dip Angle</b> | <b>Field Strength</b> |
|                  |                   |                    | (°)                | (°)              | (nT)                  |
|                  | IGRF2010          | 2010/11/10         | 10.26              | 65.86            | 52,385                |

|                          |                         |              |                      |                  |
|--------------------------|-------------------------|--------------|----------------------|------------------|
| <b>Design</b>            | Antero McLin A10 P01    |              |                      |                  |
| <b>Audit Notes:</b>      |                         |              |                      |                  |
| <b>Version:</b>          | <b>Phase:</b>           | PROTOTYPE    | <b>Tie On Depth:</b> | 0.00             |
| <b>Vertical Section:</b> | <b>Depth From (TVD)</b> | <b>+N/-S</b> | <b>+E/-W</b>         | <b>Direction</b> |
|                          | (ft)                    | (ft)         | (ft)                 | (°)              |
|                          | 0.00                    | 0.00         | 0.00                 | 73.86            |

|                      |                    |                |                 |              |              |               |              |             |            |               |
|----------------------|--------------------|----------------|-----------------|--------------|--------------|---------------|--------------|-------------|------------|---------------|
| <b>Plan Sections</b> |                    |                |                 |              |              |               |              |             |            |               |
| <b>Measured</b>      | <b>Inclination</b> | <b>Azimuth</b> | <b>Vertical</b> | <b>+N/-S</b> | <b>+E/-W</b> | <b>Dogleg</b> | <b>Build</b> | <b>Turn</b> | <b>TFO</b> | <b>Target</b> |
| <b>Depth</b>         | (°)                | (°)            | <b>Depth</b>    | (ft)         | (ft)         | <b>Rate</b>   | <b>Rate</b>  | <b>Rate</b> | (°)        |               |
| (ft)                 |                    |                | (ft)            |              |              | (°/100ft)     | (°/100ft)    | (°/100ft)   |            |               |
| 0.00                 | 0.00               | 0.00           | 0.00            | 0.00         | 0.00         | 0.00          | 0.00         | 0.00        | 0.00       |               |
| 200.00               | 0.00               | 0.00           | 200.00          | 0.00         | 0.00         | 0.00          | 0.00         | 0.00        | 0.00       |               |
| 788.27               | 17.65              | 73.86          | 779.02          | 24.99        | 86.34        | 3.00          | 3.00         | 0.00        | 73.86      |               |
| 4,316.29             | 17.65              | 73.86          | 4,140.98        | 322.35       | 1,113.77     | 0.00          | 0.00         | 0.00        | 0.00       |               |
| 4,904.56             | 0.00               | 0.00           | 4,720.00        | 347.34       | 1,200.11     | 3.00          | -3.00        | 0.00        | 180.00     | Top Gas A10   |
| 7,054.56             | 0.00               | 0.00           | 6,870.00        | 347.34       | 1,200.11     | 0.00          | 0.00         | 0.00        | 0.00       |               |

# ARK Directional Services

## Planning Report - Geographic

|                  |                      |                                     |                                     |
|------------------|----------------------|-------------------------------------|-------------------------------------|
| <b>Database:</b> | EDM SERVER DB        | <b>Local Co-ordinate Reference:</b> | Well McLin A10 (111197)             |
| <b>Company:</b>  | Antero Resources     | <b>TVD Reference:</b>               | KB @ 5630.00ft (Original Well Elev) |
| <b>Project:</b>  | McLin                | <b>MD Reference:</b>                | KB @ 5630.00ft (Original Well Elev) |
| <b>Site:</b>     | McLin A              | <b>North Reference:</b>             | Grid                                |
| <b>Well:</b>     | McLin A10 (111197)   | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Wellbore:</b> | Antero McLin A10     |                                     |                                     |
| <b>Design:</b>   | Antero McLin A10 P01 |                                     |                                     |

| Planned Survey                         |                 |             |                     |            |            |                     |                    |                |                 |
|--|-----------------|-------------|---------------------|------------|------------|---------------------|--------------------|----------------|-----------------|
| Measured Depth (ft)                    | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Map Northing (usft) | Map Easting (usft) | Latitude       | Longitude       |
| 0.00                                   | 0.00            | 0.00        | 0.00                | 0.00       | 0.00       | 14,368,868.520      | 902,523.601        | 39.536981937°N | 107.617087010°W |
| 100.00                                 | 0.00            | 0.00        | 100.00              | 0.00       | 0.00       | 14,368,868.520      | 902,523.601        | 39.536981937°N | 107.617087010°W |
| 200.00                                 | 0.00            | 0.00        | 200.00              | 0.00       | 0.00       | 14,368,868.520      | 902,523.601        | 39.536981937°N | 107.617087010°W |
| <b>KOP 3°/100 at 200MD/TVD</b>         |                 |             |                     |            |            |                     |                    |                |                 |
| 300.00                                 | 3.00            | 73.86       | 299.95              | 0.73       | 2.51       | 14,368,869.247      | 902,526.115        | 39.536984134°N | 107.617078177°W |
| 400.00                                 | 6.00            | 73.86       | 399.63              | 2.91       | 10.05      | 14,368,871.428      | 902,533.651        | 39.536990719°N | 107.617051701°W |
| 500.00                                 | 9.00            | 73.86       | 498.77              | 6.54       | 22.59      | 14,368,875.057      | 902,546.188        | 39.537001675°N | 107.617007655°W |
| 600.00                                 | 12.00           | 73.86       | 597.08              | 11.60      | 40.09      | 14,368,880.122      | 902,563.691        | 39.537016970°N | 107.616946160°W |
| 700.00                                 | 15.00           | 73.86       | 694.31              | 18.09      | 62.51      | 14,368,886.612      | 902,586.112        | 39.537036564°N | 107.616867384°W |
| 788.27                                 | 17.65           | 73.86       | 779.02              | 24.99      | 86.34      | 14,368,893.509      | 902,609.943        | 39.537057389°N | 107.616783656°W |
| <b>Hold 17.8° at 788 MD/779 TVD</b>    |                 |             |                     |            |            |                     |                    |                |                 |
| 800.00                                 | 17.65           | 73.86       | 790.19              | 25.98      | 89.76      | 14,368,894.497      | 902,613.358        | 39.537060373°N | 107.616771659°W |
| 900.00                                 | 17.65           | 73.86       | 885.48              | 34.41      | 118.88     | 14,368,902.926      | 902,642.480        | 39.537085822°N | 107.616669341°W |
| 1,000.00                               | 17.65           | 73.86       | 980.78              | 42.83      | 148.00     | 14,368,911.354      | 902,671.602        | 39.537111270°N | 107.616567024°W |
| <b>Surf Csg at 1000 MD/981 TVD</b>     |                 |             |                     |            |            |                     |                    |                |                 |
| 1,100.00                               | 17.65           | 73.86       | 1,076.07            | 51.26      | 177.12     | 14,368,919.783      | 902,700.724        | 39.537136719°N | 107.616464707°W |
| 1,200.00                               | 17.65           | 73.86       | 1,171.36            | 59.69      | 206.25     | 14,368,928.212      | 902,729.846        | 39.537162167°N | 107.616362390°W |
| 1,300.00                               | 17.65           | 73.86       | 1,266.66            | 68.12      | 235.37     | 14,368,936.640      | 902,758.968        | 39.537187615°N | 107.616260072°W |
| 1,400.00                               | 17.65           | 73.86       | 1,361.95            | 76.55      | 264.49     | 14,368,945.069      | 902,788.090        | 39.537213063°N | 107.616157755°W |
| 1,500.00                               | 17.65           | 73.86       | 1,457.25            | 84.98      | 293.61     | 14,368,953.497      | 902,817.212        | 39.537238511°N | 107.616055437°W |
| 1,600.00                               | 17.65           | 73.86       | 1,552.54            | 93.41      | 322.73     | 14,368,961.926      | 902,846.334        | 39.537263959°N | 107.615953119°W |
| 1,700.00                               | 17.65           | 73.86       | 1,647.83            | 101.84     | 351.86     | 14,368,970.354      | 902,875.456        | 39.537289407°N | 107.615850802°W |
| 1,800.00                               | 17.65           | 73.86       | 1,743.13            | 110.26     | 380.98     | 14,368,978.783      | 902,904.578        | 39.537314855°N | 107.615748484°W |
| 1,900.00                               | 17.65           | 73.86       | 1,838.42            | 118.69     | 410.10     | 14,368,987.212      | 902,933.700        | 39.537340303°N | 107.615646166°W |
| 2,000.00                               | 17.65           | 73.86       | 1,933.71            | 127.12     | 439.22     | 14,368,995.640      | 902,962.822        | 39.537365750°N | 107.615543848°W |
| 2,100.00                               | 17.65           | 73.86       | 2,029.01            | 135.55     | 468.34     | 14,369,004.069      | 902,991.944        | 39.537391198°N | 107.615441530°W |
| 2,200.00                               | 17.65           | 73.86       | 2,124.30            | 143.98     | 497.47     | 14,369,012.497      | 903,021.065        | 39.537416645°N | 107.615339212°W |
| 2,300.00                               | 17.65           | 73.86       | 2,219.59            | 152.41     | 526.59     | 14,369,020.926      | 903,050.187        | 39.537442093°N | 107.615236894°W |
| 2,400.00                               | 17.65           | 73.86       | 2,314.89            | 160.84     | 555.71     | 14,369,029.354      | 903,079.309        | 39.537467540°N | 107.615134575°W |
| 2,500.00                               | 17.65           | 73.86       | 2,410.18            | 169.26     | 584.83     | 14,369,037.783      | 903,108.431        | 39.537492987°N | 107.615032257°W |
| 2,600.00                               | 17.65           | 73.86       | 2,505.47            | 177.69     | 613.95     | 14,369,046.211      | 903,137.553        | 39.537518434°N | 107.614929939°W |
| 2,700.00                               | 17.65           | 73.86       | 2,600.77            | 186.12     | 643.08     | 14,369,054.640      | 903,166.675        | 39.537543881°N | 107.614827620°W |
| 2,800.00                               | 17.65           | 73.86       | 2,696.06            | 194.55     | 672.20     | 14,369,063.069      | 903,195.797        | 39.537569328°N | 107.614725301°W |
| 2,900.00                               | 17.65           | 73.86       | 2,791.36            | 202.98     | 701.32     | 14,369,071.497      | 903,224.919        | 39.537594775°N | 107.614622983°W |
| 3,000.00                               | 17.65           | 73.86       | 2,886.65            | 211.41     | 730.44     | 14,369,079.926      | 903,254.041        | 39.537620222°N | 107.614520664°W |
| 3,100.00                               | 17.65           | 73.86       | 2,981.94            | 219.84     | 759.56     | 14,369,088.354      | 903,283.163        | 39.537645668°N | 107.614418345°W |
| 3,200.00                               | 17.65           | 73.86       | 3,077.24            | 228.26     | 788.69     | 14,369,096.783      | 903,312.285        | 39.537671115°N | 107.614316026°W |
| 3,300.00                               | 17.65           | 73.86       | 3,172.53            | 236.69     | 817.81     | 14,369,105.211      | 903,341.407        | 39.537696562°N | 107.614213707°W |
| 3,349.81                               | 17.65           | 73.86       | 3,220.00            | 240.89     | 832.31     | 14,369,109.410      | 903,355.914        | 39.537709238°N | 107.614162737°W |
| <b>Mesaverde</b>                       |                 |             |                     |            |            |                     |                    |                |                 |
| 3,400.00                               | 17.65           | 73.86       | 3,267.82            | 245.12     | 846.93     | 14,369,113.640      | 903,370.529        | 39.537722008°N | 107.614111388°W |
| 3,500.00                               | 17.65           | 73.86       | 3,363.12            | 253.55     | 876.05     | 14,369,122.069      | 903,399.651        | 39.537747454°N | 107.614009069°W |
| 3,600.00                               | 17.65           | 73.86       | 3,458.41            | 261.98     | 905.17     | 14,369,130.497      | 903,428.773        | 39.537772900°N | 107.613906750°W |
| 3,700.00                               | 17.65           | 73.86       | 3,553.70            | 270.41     | 934.30     | 14,369,138.926      | 903,457.895        | 39.537798347°N | 107.613804430°W |
| 3,800.00                               | 17.65           | 73.86       | 3,649.00            | 278.84     | 963.42     | 14,369,147.354      | 903,487.017        | 39.537823793°N | 107.613702111°W |
| 3,900.00                               | 17.65           | 73.86       | 3,744.29            | 287.26     | 992.54     | 14,369,155.783      | 903,516.139        | 39.537849239°N | 107.613599791°W |
| 4,000.00                               | 17.65           | 73.86       | 3,839.58            | 295.69     | 1,021.66   | 14,369,164.211      | 903,545.261        | 39.537874684°N | 107.613497472°W |
| 4,100.00                               | 17.65           | 73.86       | 3,934.88            | 304.12     | 1,050.78   | 14,369,172.640      | 903,574.383        | 39.537900130°N | 107.613395152°W |
| 4,189.33                               | 17.65           | 73.86       | 4,020.00            | 311.65     | 1,076.80   | 14,369,180.169      | 903,600.396        | 39.537922860°N | 107.613303754°W |
| <b>Price Coal</b>                      |                 |             |                     |            |            |                     |                    |                |                 |
| 4,200.00                               | 17.65           | 73.86       | 4,030.17            | 312.55     | 1,079.91   | 14,369,181.069      | 903,603.504        | 39.537925576°N | 107.613292832°W |
| 4,300.00                               | 17.65           | 73.86       | 4,125.47            | 320.98     | 1,109.03   | 14,369,189.497      | 903,632.626        | 39.537951022°N | 107.613190513°W |
| 4,316.29                               | 17.65           | 73.86       | 4,140.98            | 322.35     | 1,113.77   | 14,369,190.870      | 903,637.369        | 39.537955165°N | 107.613173850°W |
| <b>Drop 3°/100 at 4316 MD/4141 TVD</b> |                 |             |                     |            |            |                     |                    |                |                 |

# ARK Directional Services

## Planning Report - Geographic

|                  |                      |                                     |                                     |
|------------------|----------------------|-------------------------------------|-------------------------------------|
| <b>Database:</b> | EDM SERVER DB        | <b>Local Co-ordinate Reference:</b> | Well McLin A10 (111197)             |
| <b>Company:</b>  | Antero Resources     | <b>TVD Reference:</b>               | KB @ 5630.00ft (Original Well Elev) |
| <b>Project:</b>  | McLin                | <b>MD Reference:</b>                | KB @ 5630.00ft (Original Well Elev) |
| <b>Site:</b>     | McLin A              | <b>North Reference:</b>             | Grid                                |
| <b>Well:</b>     | McLin A10 (111197)   | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Wellbore:</b> | Antero McLin A10     |                                     |                                     |
| <b>Design:</b>   | Antero McLin A10 P01 |                                     |                                     |

| Planned Survey                                       |                 |             |                     |            |            |                     |                    |                |                 |
|--|-----------------|-------------|---------------------|------------|------------|---------------------|--------------------|----------------|-----------------|
| Measured Depth (ft)                                  | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Map Northing (usft) | Map Easting (usft) | Latitude       | Longitude       |
| 4,400.00   | 15.14           | 73.86       | 4,221.29            | 328.92     | 1,136.46   | 14,369,197.438      | 903,660.061        | 39.537974993°N | 107.613094120°W |
| 4,500.00   | 12.14           | 73.86       | 4,318.46            | 335.47     | 1,159.11   | 14,369,203.992      | 903,682.706        | 39.537994779°N | 107.613014559°W |
| 4,600.00   | 9.14            | 73.86       | 4,416.73            | 340.60     | 1,176.84   | 14,369,209.123      | 903,700.434        | 39.538010269°N | 107.612952270°W |
| 4,700.00   | 6.14            | 73.86       | 4,515.83            | 344.30     | 1,189.60   | 14,369,212.817      | 903,713.198        | 39.538021422°N | 107.612907424°W |
| 4,800.00   | 3.14            | 73.86       | 4,615.49            | 346.54     | 1,197.36   | 14,369,215.065      | 903,720.963        | 39.538028206°N | 107.612880144°W |
| 4,900.00   | 0.14            | 73.86       | 4,715.44            | 347.34     | 1,200.11   | 14,369,215.859      | 903,723.706        | 39.538030603°N | 107.612870506°W |
| 4,904.56   | 0.00            | 0.00        | 4,720.00            | 347.34     | 1,200.11   | 14,369,215.860      | 903,723.711        | 39.538030607°N | 107.612870488°W |
| Vertical at 4905 MD/4720 TVD - Top Gas - Top Gas A10 |                 |             |                     |            |            |                     |                    |                |                 |
| 5,000.00   | 0.00            | 0.00        | 4,815.44            | 347.34     | 1,200.11   | 14,369,215.860      | 903,723.711        | 39.538030607°N | 107.612870488°W |
| 5,100.00   | 0.00            | 0.00        | 4,915.44            | 347.34     | 1,200.11   | 14,369,215.860      | 903,723.711        | 39.538030607°N | 107.612870488°W |
| 5,200.00   | 0.00            | 0.00        | 5,015.44            | 347.34     | 1,200.11   | 14,369,215.860      | 903,723.711        | 39.538030607°N | 107.612870488°W |
| 5,300.00   | 0.00            | 0.00        | 5,115.44            | 347.34     | 1,200.11   | 14,369,215.860      | 903,723.711        | 39.538030607°N | 107.612870488°W |
| 5,400.00   | 0.00            | 0.00        | 5,215.44            | 347.34     | 1,200.11   | 14,369,215.860      | 903,723.711        | 39.538030607°N | 107.612870488°W |
| 5,500.00   | 0.00            | 0.00        | 5,315.44            | 347.34     | 1,200.11   | 14,369,215.860      | 903,723.711        | 39.538030607°N | 107.612870488°W |
| 5,600.00   | 0.00            | 0.00        | 5,415.44            | 347.34     | 1,200.11   | 14,369,215.860      | 903,723.711        | 39.538030607°N | 107.612870488°W |
| 5,700.00   | 0.00            | 0.00        | 5,515.44            | 347.34     | 1,200.11   | 14,369,215.860      | 903,723.711        | 39.538030607°N | 107.612870488°W |
| 5,800.00   | 0.00            | 0.00        | 5,615.44            | 347.34     | 1,200.11   | 14,369,215.860      | 903,723.711        | 39.538030607°N | 107.612870488°W |
| 5,804.56   | 0.00            | 0.00        | 5,620.00            | 347.34     | 1,200.11   | 14,369,215.860      | 903,723.711        | 39.538030607°N | 107.612870488°W |
| Cameo  |                 |             |                     |            |            |                     |                    |                |                 |
| 5,900.00   | 0.00            | 0.00        | 5,715.44            | 347.34     | 1,200.11   | 14,369,215.860      | 903,723.711        | 39.538030607°N | 107.612870488°W |
| 6,000.00   | 0.00            | 0.00        | 5,815.44            | 347.34     | 1,200.11   | 14,369,215.860      | 903,723.711        | 39.538030607°N | 107.612870488°W |
| 6,100.00   | 0.00            | 0.00        | 5,915.44            | 347.34     | 1,200.11   | 14,369,215.860      | 903,723.711        | 39.538030607°N | 107.612870488°W |
| 6,200.00   | 0.00            | 0.00        | 6,015.44            | 347.34     | 1,200.11   | 14,369,215.860      | 903,723.711        | 39.538030607°N | 107.612870488°W |
| 6,300.00   | 0.00            | 0.00        | 6,115.44            | 347.34     | 1,200.11   | 14,369,215.860      | 903,723.711        | 39.538030607°N | 107.612870488°W |
| 6,400.00   | 0.00            | 0.00        | 6,215.44            | 347.34     | 1,200.11   | 14,369,215.860      | 903,723.711        | 39.538030607°N | 107.612870488°W |
| 6,500.00   | 0.00            | 0.00        | 6,315.44            | 347.34     | 1,200.11   | 14,369,215.860      | 903,723.711        | 39.538030607°N | 107.612870488°W |
| 6,600.00   | 0.00            | 0.00        | 6,415.44            | 347.34     | 1,200.11   | 14,369,215.860      | 903,723.711        | 39.538030607°N | 107.612870488°W |
| 6,700.00   | 0.00            | 0.00        | 6,515.44            | 347.34     | 1,200.11   | 14,369,215.860      | 903,723.711        | 39.538030607°N | 107.612870488°W |
| 6,800.00   | 0.00            | 0.00        | 6,615.44            | 347.34     | 1,200.11   | 14,369,215.860      | 903,723.711        | 39.538030607°N | 107.612870488°W |
| 6,900.00   | 0.00            | 0.00        | 6,715.44            | 347.34     | 1,200.11   | 14,369,215.860      | 903,723.711        | 39.538030607°N | 107.612870488°W |
| 6,904.56   | 0.00            | 0.00        | 6,720.00            | 347.34     | 1,200.11   | 14,369,215.860      | 903,723.711        | 39.538030607°N | 107.612870488°W |
| Rollins  |                 |             |                     |            |            |                     |                    |                |                 |
| 7,000.00   | 0.00            | 0.00        | 6,815.44            | 347.34     | 1,200.11   | 14,369,215.860      | 903,723.711        | 39.538030607°N | 107.612870488°W |
| 7,054.56   | 0.00            | 0.00        | 6,870.00            | 347.34     | 1,200.11   | 14,369,215.860      | 903,723.711        | 39.538030607°N | 107.612870488°W |
| TD at 7055 MD/6870 TVD - TD A10                      |                 |             |                     |            |            |                     |                    |                |                 |

| Design Targets            |               |              |          |            |            |                 |                |                |                 |
|---------------------------|---------------|--------------|----------|------------|------------|-----------------|----------------|----------------|-----------------|
| Target Name               | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (usft) | Easting (usft) | Latitude       | Longitude       |
| - hit/miss target         |               |              |          |            |            |                 |                |                |                 |
| - Shape                   |               |              |          |            |            |                 |                |                |                 |
| Top Gas A10               | 0.00          | 360.00       | 4,720.00 | 347.34     | 1,200.11   | 14,369,215.860  | 903,723.711    | 39.538030607°N | 107.612870488°W |
| - plan hits target center |               |              |          |            |            |                 |                |                |                 |
| - Circle (radius 25.00)   |               |              |          |            |            |                 |                |                |                 |
| TD A10                    | 0.00          | 360.00       | 6,870.00 | 347.34     | 1,200.11   | 14,369,215.860  | 903,723.711    | 39.538030607°N | 107.612870488°W |
| - plan hits target center |               |              |          |            |            |                 |                |                |                 |
| - Circle (radius 25.00)   |               |              |          |            |            |                 |                |                |                 |

# ARK Directional Services

## Planning Report - Geographic

|                  |                      |                                     |                                     |
|------------------|----------------------|-------------------------------------|-------------------------------------|
| <b>Database:</b> | EDM SERVER DB        | <b>Local Co-ordinate Reference:</b> | Well McLin A10 (111197)             |
| <b>Company:</b>  | Antero Resources     | <b>TVD Reference:</b>               | KB @ 5630.00ft (Original Well Elev) |
| <b>Project:</b>  | McLin                | <b>MD Reference:</b>                | KB @ 5630.00ft (Original Well Elev) |
| <b>Site:</b>     | McLin A              | <b>North Reference:</b>             | Grid                                |
| <b>Well:</b>     | McLin A10 (111197)   | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Wellbore:</b> | Antero McLin A10     |                                     |                                     |
| <b>Design:</b>   | Antero McLin A10 P01 |                                     |                                     |

| Casing Points       |                     |                             |                      |                    |  |
|---------------------|---------------------|-----------------------------|----------------------|--------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Name                        | Casing Diameter (in) | Hole Diameter (in) |  |
| 1,000.00            | 980.78              | Surf Csg at 1000 MD/981 TVD | 5.50                 | 6.00               |  |

| Formations          |                     |            |           |         |                   |
|---------------------|---------------------|------------|-----------|---------|-------------------|
| Measured Depth (ft) | Vertical Depth (ft) | Name       | Lithology | Dip (°) | Dip Direction (°) |
| 3,349.81            | 3,220.00            | Mesaverde  |           |         |                   |
| 4,189.33            | 4,020.00            | Price Coal |           |         |                   |
| 4,904.56            | 4,720.00            | Top Gas    |           |         |                   |
| 5,804.56            | 5,620.00            | Cameo      |           |         |                   |
| 6,904.56            | 6,720.00            | Rollins    |           |         |                   |

| Plan Annotations    |                     |                   |            |                                 |  |
|---------------------|---------------------|-------------------|------------|---------------------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates |            |                                 |  |
|                     |                     | +N/-S (ft)        | +E/-W (ft) | Comment                         |  |
| 200.00              | 200.00              | 0.00              | 0.00       | KOP 3°/100 at 200MD/TVD         |  |
| 788.27              | 779.02              | 24.99             | 86.34      | Hold 17.8° at 788 MD/779 TVD    |  |
| 4,316.29            | 4,140.98            | 322.35            | 1,113.77   | Drop 3°/100 at 4316 MD/4141 TVD |  |
| 4,904.56            | 4,720.00            | 347.34            | 1,200.11   | Vertical at 4905 MD/4720 TVD    |  |
| 7,054.56            | 6,870.00            | 347.34            | 1,200.11   | TD at 7055 MD/6870 TVD          |  |