



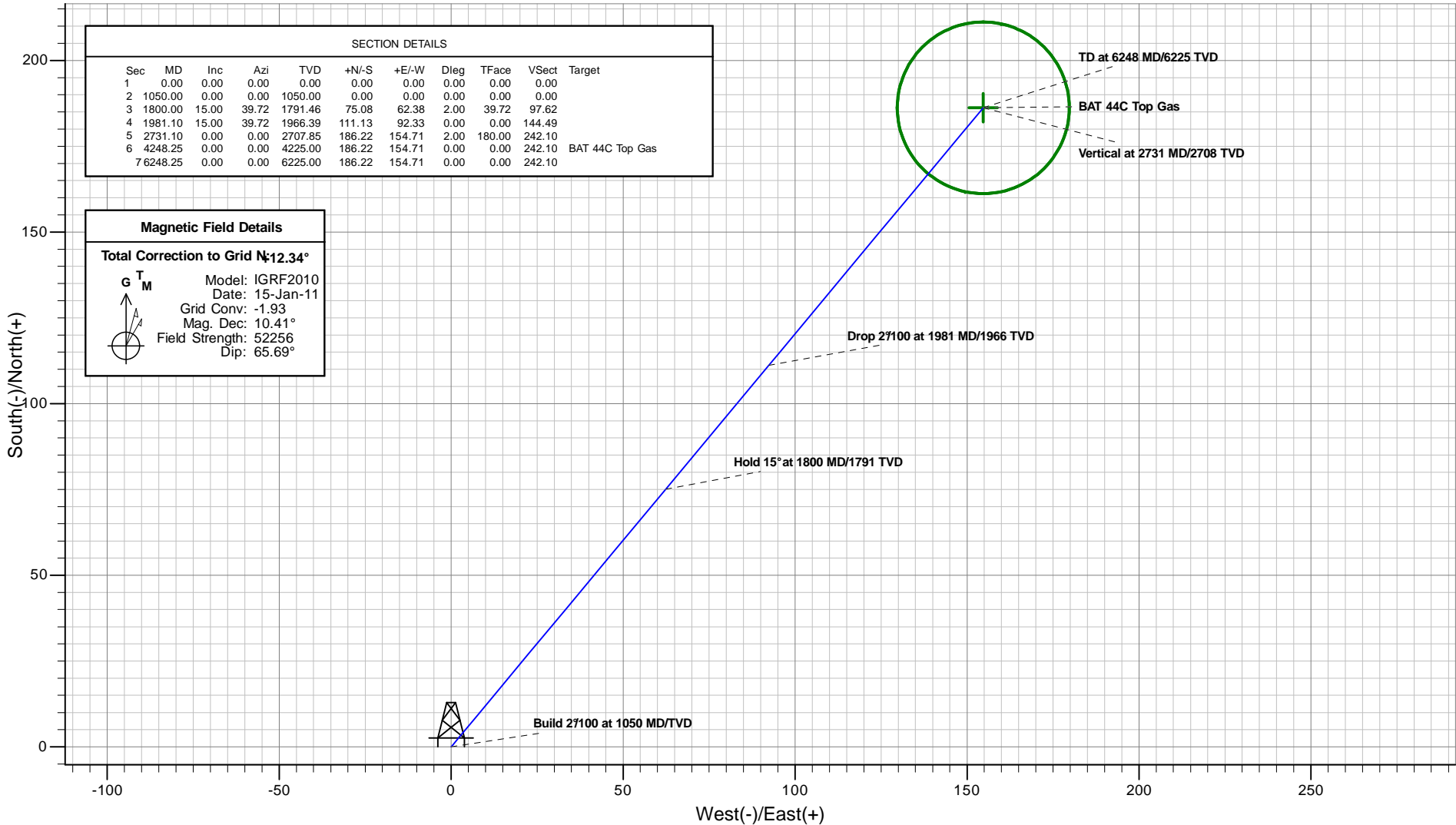
# Antero Resources

BAT 44C-18-07-95 (111283)



## PLAN VIEW

Project: Monument Ridge  
 Site: Monument Ridge Pad  
 Well: BAT 44C-18-07-95 (111283)  
 Wellbore: BAT 44C  
 Design: BAT 44C P01



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1050.00	0.00	0.00	1050.00	0.00	0.00	0.00	0.00	0.00	
3	1800.00	15.00	39.72	1791.46	75.08	62.38	2.00	39.72	97.62	
4	1981.10	15.00	39.72	1966.39	111.13	92.33	0.00	0.00	144.49	
5	2731.10	0.00	0.00	2707.85	186.22	154.71	2.00	180.00	242.10	
6	4248.25	0.00	0.00	4225.00	186.22	154.71	0.00	0.00	242.10	BAT 44C Top Gas
7	6248.25	0.00	0.00	6225.00	186.22	154.71	0.00	0.00	242.10	

**Magnetic Field Details**

Total Correction to Grid N: **12.34°**

Model: IGRF2010  
 Date: 15-Jan-11  
 Grid Conv: -1.93  
 Mag. Dec: 10.41°  
 Field Strength: 52256  
 Dip: 65.69°

Plan: BAT 44C P01  
 Created By: ARK Directional Services  
 Date: 9:02, October 15 2010

PROJECT DETAILS: Monument Ridge

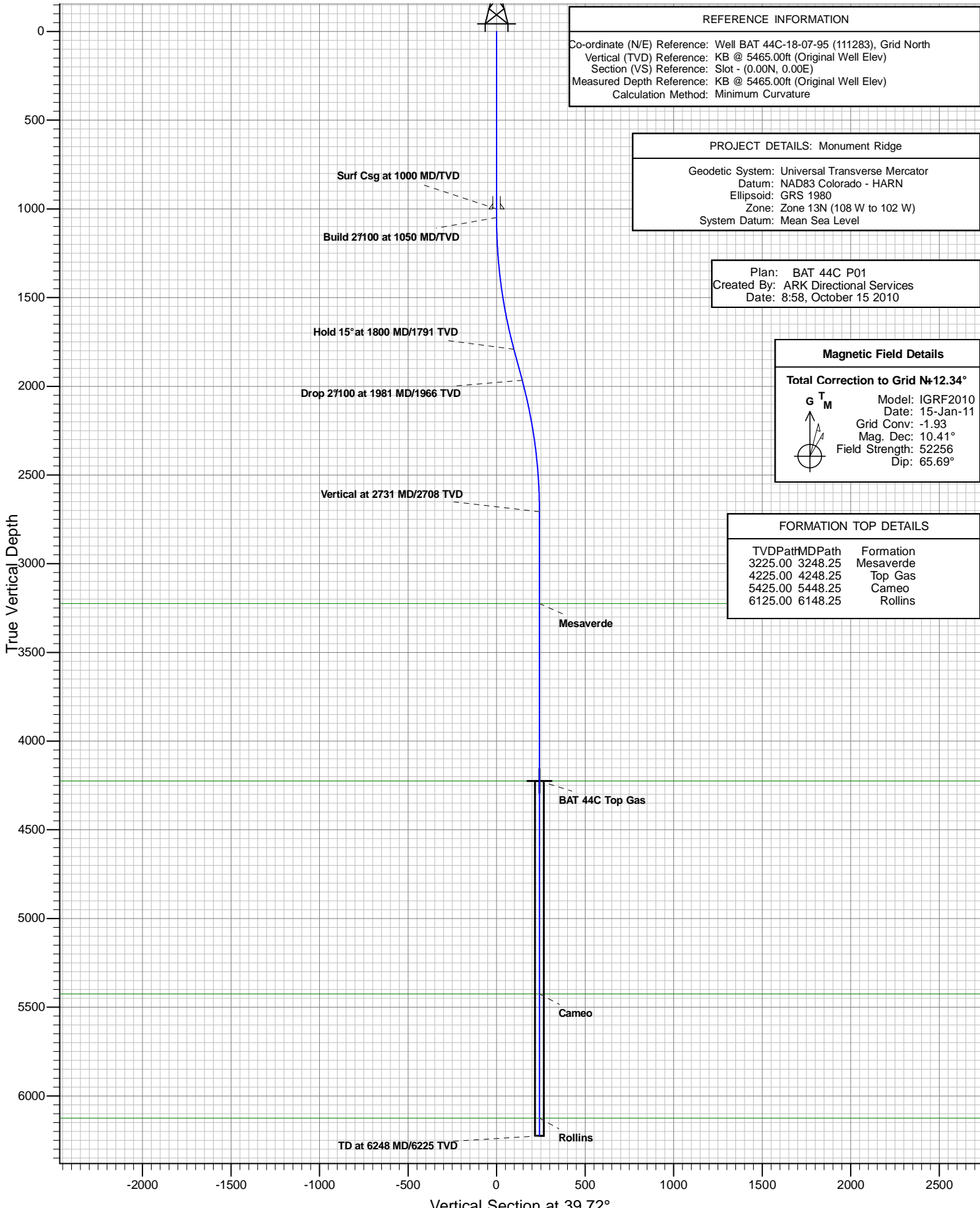
Geodetic System: Universal Transverse Mercator  
 Datum: NAD83 Colorado - HARN  
 Ellipsoid: GRS 1980  
 Zone: Zone 13N (108 W to 102 W)  
 System Datum: Mean Sea Level

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well BAT 44C-18-07-95 (111283), Grid North  
 Vertical (TVD) Reference: KB @ 5465.00ft (Original Well Elev)  
 Section (VS) Reference: Slot - (0.00N, 0.00E)  
 Measured Depth Reference: KB @ 5465.00ft (Original Well Elev)  
 Calculation Method: Minimum Curvature



**VERTICAL SECTION VIEW**



REFERENCE INFORMATION
Co-ordinate (N/E) Reference: Well BAT 44C-18-07-95 (111283), Grid North
Vertical (TVD) Reference: KB @ 5465.00ft (Original Well Elev)
Section (VS) Reference: Slot - (0.00N, 0.00E)
Measured Depth Reference: KB @ 5465.00ft (Original Well Elev)
Calculation Method: Minimum Curvature

PROJECT DETAILS: Monument Ridge
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

Plan: BAT 44C P01
Created By: ARK Directional Services
Date: 8:58, October 15 2010

Magnetic Field Details												
<b>Total Correction to Grid N=12.34°</b>												
<table border="0"> <tr> <td><b>G</b></td> <td>Model: IGRF2010</td> </tr> <tr> <td><b>T</b></td> <td>Date: 15-Jan-11</td> </tr> <tr> <td><b>M</b></td> <td>Grid Conv: -1.93</td> </tr> <tr> <td></td> <td>Mag. Dec: 10.41°</td> </tr> <tr> <td></td> <td>Field Strength: 52256</td> </tr> <tr> <td></td> <td>Dip: 65.69°</td> </tr> </table>	<b>G</b>	Model: IGRF2010	<b>T</b>	Date: 15-Jan-11	<b>M</b>	Grid Conv: -1.93		Mag. Dec: 10.41°		Field Strength: 52256		Dip: 65.69°
<b>G</b>	Model: IGRF2010											
<b>T</b>	Date: 15-Jan-11											
<b>M</b>	Grid Conv: -1.93											
	Mag. Dec: 10.41°											
	Field Strength: 52256											
	Dip: 65.69°											

FORMATION TOP DETAILS	
TVDPathMDPath	Formation
3225.00 3248.25	Mesaverde
4225.00 4248.25	Top Gas
5425.00 5448.25	Cameo
6125.00 6148.25	Rollins

Vertical Section at 39.72°

# **Antero Resources**

**Monument Ridge  
Monument Ridge Pad  
BAT 44C-18-07-95 (111283)**

**BAT 44C**

**Plan: BAT 44C P01**

## **Standard Planning Report - Geographic**

**15 October, 2010**

# ARK Directional Services

## Planning Report - Geographic

<b>Database:</b>	EDM SERVER DB	<b>Local Co-ordinate Reference:</b>	Well BAT 44C-18-07-95 (111283)
<b>Company:</b>	Antero Resources	<b>TVD Reference:</b>	KB @ 5465.00ft (Original Well Elev)
<b>Project:</b>	Monument Ridge	<b>MD Reference:</b>	KB @ 5465.00ft (Original Well Elev)
<b>Site:</b>	Monument Ridge Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	BAT 44C-18-07-95 (111283)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	BAT 44C		
<b>Design:</b>	BAT 44C P01		

<b>Project</b>	Monument Ridge		
<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>	Monument Ridge Pad				
<b>Site Position:</b>		<b>Northing:</b>	14,334,067.020 usft	<b>Latitude:</b>	39.431305000°N
<b>From:</b>	Lat/Long	<b>Easting:</b>	783,868.932 usft	<b>Longitude:</b>	108.033251000°W
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.20 in	<b>Grid Convergence:</b>	-1.93 °

<b>Well</b>	BAT 44C-18-07-95 (111283)					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	14,334,029.446 usft	<b>Latitude:</b>	39.431204000°N
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	783,891.137 usft	<b>Longitude:</b>	108.033168000°W
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>		<b>Ground Level:</b>	5,441.00 ft

<b>Wellbore</b>	BAT 44C				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	2011/01/15	10.41	65.69	52,256

<b>Design</b>	BAT 44C 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) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	4,225.00	0.00	0.00	39.72	

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,050.00	0.00	0.00	1,050.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,800.00	15.00	39.72	1,791.46	75.08	62.38	2.00	2.00	0.00	39.72	
1,981.10	15.00	39.72	1,966.39	111.13	92.33	0.00	0.00	0.00	0.00	
2,731.10	0.00	0.00	2,707.85	186.22	154.71	2.00	-2.00	0.00	180.00	
4,248.25	0.00	0.00	4,225.00	186.22	154.71	0.00	0.00	0.00	0.00	BAT 44C Top Gas
6,248.25	0.00	0.00	6,225.00	186.22	154.71	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 BAT 44C-18-07-95 (111283)
<b>Company:</b>	Antero Resources	<b>TVD Reference:</b>	KB @ 5465.00ft (Original Well Elev)
<b>Project:</b>	Monument Ridge	<b>MD Reference:</b>	KB @ 5465.00ft (Original Well Elev)
<b>Site:</b>	Monument Ridge Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	BAT 44C-18-07-95 (111283)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	BAT 44C		
<b>Design:</b>	BAT 44C 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	14,334,029.446	783,891.137	39.431204000°N	108.033168000°W	
100.00	0.00	0.00	100.00	0.00	0.00	14,334,029.446	783,891.137	39.431204000°N	108.033168000°W	
200.00	0.00	0.00	200.00	0.00	0.00	14,334,029.446	783,891.137	39.431204000°N	108.033168000°W	
300.00	0.00	0.00	300.00	0.00	0.00	14,334,029.446	783,891.137	39.431204000°N	108.033168000°W	
400.00	0.00	0.00	400.00	0.00	0.00	14,334,029.446	783,891.137	39.431204000°N	108.033168000°W	
500.00	0.00	0.00	500.00	0.00	0.00	14,334,029.446	783,891.137	39.431204000°N	108.033168000°W	
600.00	0.00	0.00	600.00	0.00	0.00	14,334,029.446	783,891.137	39.431204000°N	108.033168000°W	
700.00	0.00	0.00	700.00	0.00	0.00	14,334,029.446	783,891.137	39.431204000°N	108.033168000°W	
800.00	0.00	0.00	800.00	0.00	0.00	14,334,029.446	783,891.137	39.431204000°N	108.033168000°W	
900.00	0.00	0.00	900.00	0.00	0.00	14,334,029.446	783,891.137	39.431204000°N	108.033168000°W	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,334,029.446	783,891.137	39.431204000°N	108.033168000°W	
<b>Surf Csg at 1000 MD/TVD</b>										
1,050.00	0.00	0.00	1,050.00	0.00	0.00	14,334,029.446	783,891.137	39.431204000°N	108.033168000°W	
<b>Build 2°/100 at 1050 MD/TVD</b>										
1,100.00	1.00	39.72	1,100.00	0.34	0.28	14,334,029.782	783,891.416	39.431204946°N	108.033167054°W	
1,200.00	3.00	39.72	1,199.93	3.02	2.51	14,334,032.466	783,893.646	39.431212514°N	108.033159487°W	
1,300.00	5.00	39.72	1,299.68	8.39	6.97	14,334,037.831	783,898.103	39.431227640°N	108.033144361°W	
1,400.00	7.00	39.72	1,399.13	16.42	13.65	14,334,045.871	783,904.783	39.431250306°N	108.033121695°W	
1,500.00	9.00	39.72	1,498.15	27.13	22.54	14,334,056.575	783,913.676	39.431280484°N	108.033091517°W	
1,600.00	11.00	39.72	1,596.63	40.48	33.64	14,334,069.931	783,924.772	39.431318138°N	108.033053863°W	
1,700.00	13.00	39.72	1,694.44	56.48	46.92	14,334,085.922	783,938.058	39.431363222°N	108.033008780°W	
1,800.00	15.00	39.72	1,791.46	75.08	62.38	14,334,104.529	783,953.517	39.431415680°N	108.032956322°W	
<b>Hold 15° at 1800 MD/1791 TVD</b>										
1,900.00	15.00	39.72	1,888.05	94.99	78.92	14,334,124.436	783,970.057	39.431471805°N	108.032900197°W	
1,981.10	15.00	39.72	1,966.39	111.13	92.33	14,334,140.581	783,983.470	39.431517321°N	108.032854681°W	
<b>Drop 2°/100 at 1981 MD/1966 TVD</b>										
2,000.00	14.62	39.72	1,984.66	114.85	95.42	14,334,144.297	783,986.558	39.431527799°N	108.032844203°W	
2,100.00	12.62	39.72	2,081.85	132.97	110.47	14,334,162.411	784,001.608	39.431578868°N	108.032793134°W	
2,200.00	10.62	39.72	2,179.79	148.46	123.34	14,334,177.906	784,014.481	39.431622551°N	108.032749450°W	
2,300.00	8.62	39.72	2,278.38	161.32	134.03	14,334,190.761	784,025.162	39.431658795°N	108.032713206°W	
2,400.00	6.62	39.72	2,377.49	171.52	142.50	14,334,200.963	784,033.637	39.431687556°N	108.032684445°W	
2,500.00	4.62	39.72	2,477.00	179.05	148.76	14,334,208.498	784,039.897	39.431708798°N	108.032663203°W	
2,600.00	2.62	39.72	2,576.80	183.91	152.80	14,334,213.356	784,043.934	39.431722497°N	108.032649504°W	
2,700.00	0.62	39.72	2,676.75	186.09	154.61	14,334,215.533	784,045.743	39.431728634°N	108.032643366°W	
2,731.10	0.00	0.00	2,707.85	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
<b>Vertical at 2731 MD/2708 TVD</b>										
2,800.00	0.00	0.00	2,776.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
2,900.00	0.00	0.00	2,876.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
3,000.00	0.00	0.00	2,976.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
3,100.00	0.00	0.00	3,076.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
3,200.00	0.00	0.00	3,176.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
3,248.25	0.00	0.00	3,225.00	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
<b>Mesaverde</b>										
3,300.00	0.00	0.00	3,276.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
3,400.00	0.00	0.00	3,376.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
3,500.00	0.00	0.00	3,476.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
3,600.00	0.00	0.00	3,576.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
3,700.00	0.00	0.00	3,676.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
3,800.00	0.00	0.00	3,776.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
3,900.00	0.00	0.00	3,876.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
4,000.00	0.00	0.00	3,976.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
4,100.00	0.00	0.00	4,076.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
4,200.00	0.00	0.00	4,176.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	

# ARK Directional Services

## Planning Report - Geographic

<b>Database:</b>	EDM SERVER DB	<b>Local Co-ordinate Reference:</b>	Well BAT 44C-18-07-95 (111283)
<b>Company:</b>	Antero Resources	<b>TVD Reference:</b>	KB @ 5465.00ft (Original Well Elev)
<b>Project:</b>	Monument Ridge	<b>MD Reference:</b>	KB @ 5465.00ft (Original Well Elev)
<b>Site:</b>	Monument Ridge Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	BAT 44C-18-07-95 (111283)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	BAT 44C		
<b>Design:</b>	BAT 44C 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	
4,248.25	0.00	0.00	4,225.00	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
<b>Top Gas</b>										
4,300.00	0.00	0.00	4,276.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
4,400.00	0.00	0.00	4,376.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
4,500.00	0.00	0.00	4,476.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
4,600.00	0.00	0.00	4,576.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
4,700.00	0.00	0.00	4,676.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
4,800.00	0.00	0.00	4,776.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
4,900.00	0.00	0.00	4,876.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
5,000.00	0.00	0.00	4,976.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
5,100.00	0.00	0.00	5,076.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
5,200.00	0.00	0.00	5,176.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
5,300.00	0.00	0.00	5,276.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
5,400.00	0.00	0.00	5,376.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
5,448.25	0.00	0.00	5,425.00	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
<b>Cameo</b>										
5,500.00	0.00	0.00	5,476.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
5,600.00	0.00	0.00	5,576.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
5,700.00	0.00	0.00	5,676.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
5,800.00	0.00	0.00	5,776.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
5,900.00	0.00	0.00	5,876.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
6,000.00	0.00	0.00	5,976.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
6,100.00	0.00	0.00	6,076.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
6,148.25	0.00	0.00	6,125.00	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
<b>Rollins</b>										
6,200.00	0.00	0.00	6,176.75	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	
6,248.25	0.00	0.00	6,225.00	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
BAT 44C Top Gas - hit/miss target - Shape - plan hits target center - Circle (radius 25.00)	0.00	360.00	4,225.00	186.22	154.71	14,334,215.663	784,045.851	39.431729000°N	108.032643000°W	

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

# ARK Directional Services

## Planning Report - Geographic

<b>Database:</b>	EDM SERVER DB	<b>Local Co-ordinate Reference:</b>	Well BAT 44C-18-07-95 (111283)
<b>Company:</b>	Antero Resources	<b>TVD Reference:</b>	KB @ 5465.00ft (Original Well Elev)
<b>Project:</b>	Monument Ridge	<b>MD Reference:</b>	KB @ 5465.00ft (Original Well Elev)
<b>Site:</b>	Monument Ridge Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	BAT 44C-18-07-95 (111283)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	BAT 44C		
<b>Design:</b>	BAT 44C P01		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,248.25	3,225.00	Mesaverde			
4,248.25	4,225.00	Top Gas			
5,448.25	5,425.00	Cameo			
6,148.25	6,125.00	Rollins			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
1,050.00	1,050.00	0.00	0.00		Build 2°/100 at 1050 MD/TVD
1,800.00	1,791.46	75.08	62.38		Hold 15° at 1800 MD/1791 TVD
1,981.10	1,966.39	111.13	92.33		Drop 2°/100 at 1981 MD/1966 TVD
2,731.10	2,707.85	186.22	154.71		Vertical at 2731 MD/2708 TVD
6,248.25	6,225.00	186.22	154.71		TD at 6248 MD/6225 TVD