



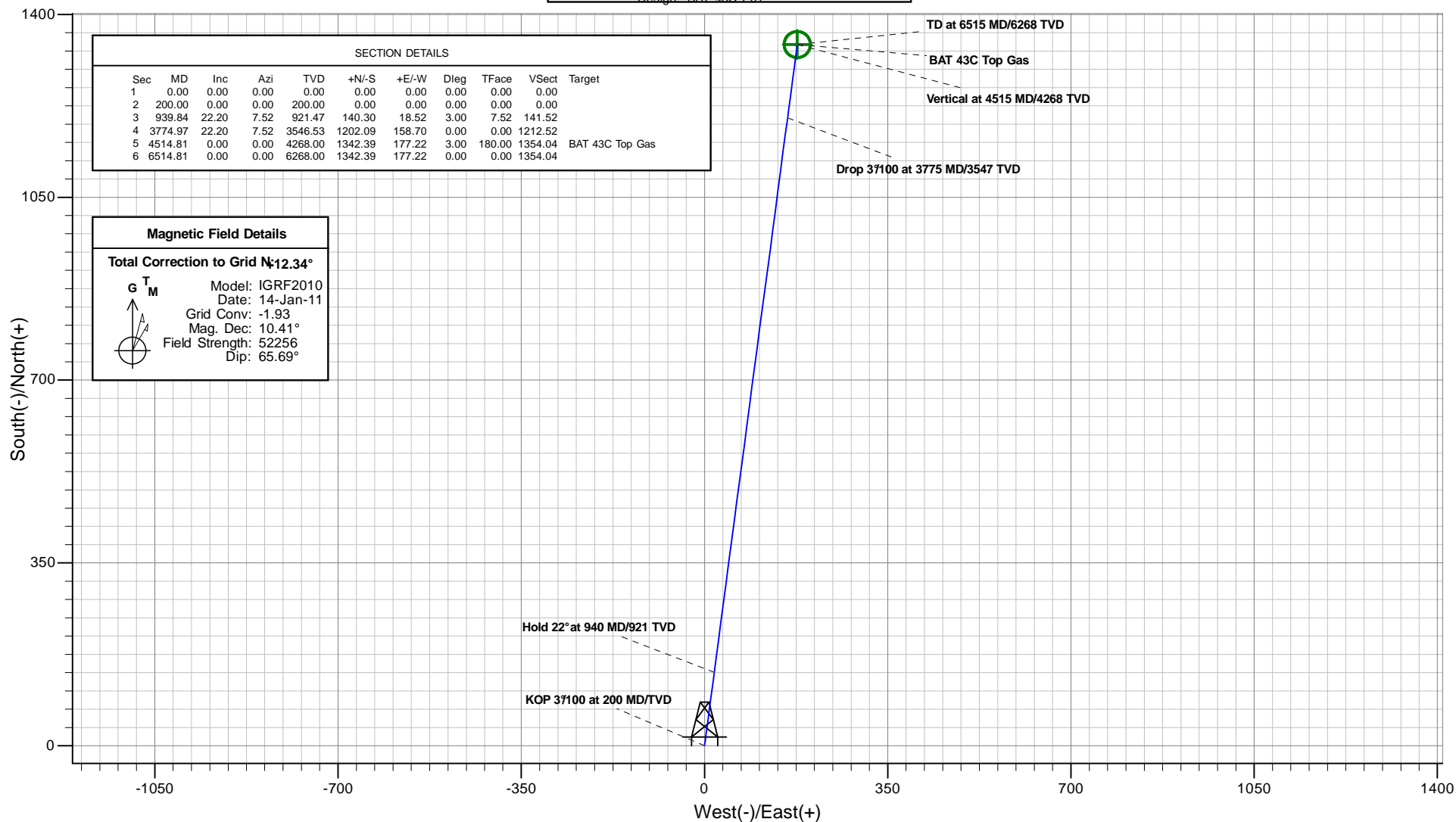
# Antero Resources

BAT 43C-18-07-95 (111280)



## PLAN VIEW

Project: Monument Ridge  
Site: Monument Ridge Pad  
Well: BAT 43C-18-07-95 (111280)  
Wellbore: BAT 43C  
Design: BAT 43C P01



Plan: BAT 43C P01  
Created By: ARK Directional Services  
Date: 9:19, October 14 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 43C-18-07-95 (111280), 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

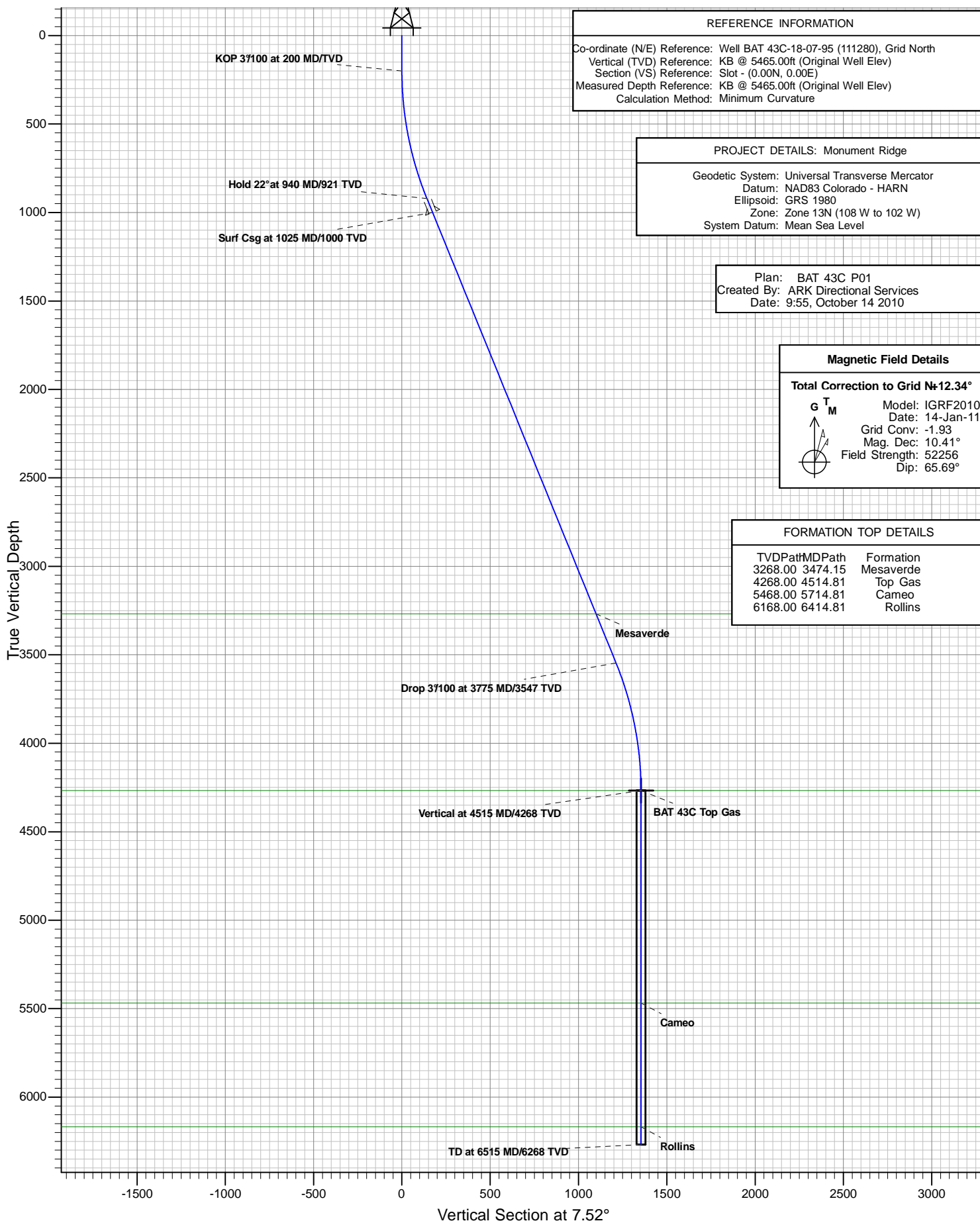


# Antero Resources

BAT 43C-18-07-95 (111280)



## VERTICAL SECTION VIEW



# **Antero Resources**

**Monument Ridge**

**Monument Ridge Pad**

**BAT 43C-18-07-95 (111280)**

**BAT 43C**

**Plan: BAT 43C P01**

## **Standard Planning Report - Geographic**

**14 October, 2010**

# ARK Directional Services

## Planning Report - Geographic

<b>Database:</b>	EDM SERVER DB	<b>Local Co-ordinate Reference:</b>	Well BAT 43C-18-07-95 (111280)
<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 43C-18-07-95 (111280)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	BAT 43C		
<b>Design:</b>	BAT 43C 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>From:</b>	Lat/Long	<b>Easting:</b>	783,868.932 usft
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.20 in
		<b>Latitude:</b>	39.431305000°N
		<b>Longitude:</b>	108.033251000°W
		<b>Grid Convergence:</b>	-1.93 °

<b>Well</b>	BAT 43C-18-07-95 (111280)		
<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>	39.431307000°N
		<b>Longitude:</b>	108.033172000°W
		<b>Ground Level:</b>	5,441.00 ft

<b>Wellbore</b>	BAT 43C				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	2011/01/14	10.41	65.69	52,256

<b>Design</b>	BAT 43C 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>	
	4,268.00	0.00	0.00	7.52	

<b>Plan Sections</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>	<b>TFO (°)</b>	<b>Target</b>
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	
939.84	22.20	7.52	921.47	140.30	18.52	3.00	3.00	0.00	7.52	
3,774.97	22.20	7.52	3,546.53	1,202.09	158.70	0.00	0.00	0.00	0.00	
4,514.81	0.00	0.00	4,268.00	1,342.39	177.22	3.00	-3.00	0.00	180.00	BAT 43C Top Gas
6,514.81	0.00	0.00	6,268.00	1,342.39	177.22	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 43C-18-07-95 (111280)
<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 43C-18-07-95 (111280)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	BAT 43C		
<b>Design:</b>	BAT 43C 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	14,334,066.997	783,891.269	39.431307000°N	108.033172000°W
100.00	0.00	0.00	100.00	0.00	0.00	14,334,066.997	783,891.269	39.431307000°N	108.033172000°W
200.00	0.00	0.00	200.00	0.00	0.00	14,334,066.997	783,891.269	39.431307000°N	108.033172000°W
<b>KOP 3°/100 at 200 MD/TVD</b>									
300.00	3.00	7.52	299.95	2.59	0.34	14,334,069.592	783,891.612	39.431314149°N	108.033171098°W
400.00	6.00	7.52	399.63	10.37	1.37	14,334,077.370	783,892.639	39.431335574°N	108.033168392°W
500.00	9.00	7.52	498.77	23.31	3.08	14,334,090.308	783,894.347	39.431371218°N	108.033163891°W
600.00	12.00	7.52	597.08	41.38	5.46	14,334,108.373	783,896.732	39.431420982°N	108.033157607°W
700.00	15.00	7.52	694.31	64.52	8.52	14,334,131.514	783,899.787	39.431484731°N	108.033149557°W
800.00	18.00	7.52	790.18	92.67	12.23	14,334,159.668	783,903.504	39.431562289°N	108.033139763°W
900.00	21.00	7.52	884.43	125.76	16.60	14,334,192.758	783,907.872	39.431653444°N	108.033128251°W
939.84	22.20	7.52	921.47	140.30	18.52	14,334,207.296	783,909.792	39.431693493°N	108.033123194°W
<b>Hold 22° at 940 MD/921 TVD</b>									
1,000.00	22.20	7.52	977.18	162.83	21.50	14,334,229.827	783,912.766	39.431755561°N	108.033115356°W
1,025.00	22.20	7.52	1,000.32	172.19	22.73	14,334,239.189	783,914.002	39.431781354°N	108.033112099°W
<b>Surf Csg at 1025 MD/1000 TVD</b>									
1,100.00	22.20	7.52	1,069.77	200.28	26.44	14,334,267.278	783,917.710	39.431858732°N	108.033102328°W
1,200.00	22.20	7.52	1,162.36	237.73	31.39	14,334,304.729	783,922.655	39.431961902°N	108.033089299°W
1,300.00	22.20	7.52	1,254.95	275.18	36.33	14,334,342.180	783,927.599	39.432065073°N	108.033076271°W
1,400.00	22.20	7.52	1,347.54	312.64	41.27	14,334,379.632	783,932.543	39.432168243°N	108.033063242°W
1,500.00	22.20	7.52	1,440.13	350.09	46.22	14,334,417.083	783,937.488	39.432271413°N	108.033050214°W
1,600.00	22.20	7.52	1,532.72	387.54	51.16	14,334,454.534	783,942.432	39.432374584°N	108.033037185°W
1,700.00	22.20	7.52	1,625.31	424.99	56.11	14,334,491.985	783,947.376	39.432477754°N	108.033024156°W
1,800.00	22.20	7.52	1,717.90	462.44	61.05	14,334,529.437	783,952.321	39.432580925°N	108.033011128°W
1,900.00	22.20	7.52	1,810.49	499.89	66.00	14,334,566.888	783,957.265	39.432684095°N	108.032998099°W
2,000.00	22.20	7.52	1,903.08	537.34	70.94	14,334,604.339	783,962.209	39.432787266°N	108.032985070°W
2,100.00	22.20	7.52	1,995.67	574.79	75.88	14,334,641.790	783,967.154	39.432890436°N	108.032972042°W
2,200.00	22.20	7.52	2,088.26	612.25	80.83	14,334,679.242	783,972.098	39.432993607°N	108.032959013°W
2,300.00	22.20	7.52	2,180.85	649.70	85.77	14,334,716.693	783,977.042	39.433096777°N	108.032945984°W
2,400.00	22.20	7.52	2,273.44	687.15	90.72	14,334,754.144	783,981.986	39.433199947°N	108.032932955°W
2,500.00	22.20	7.52	2,366.03	724.60	95.66	14,334,791.595	783,986.931	39.433303118°N	108.032919926°W
2,600.00	22.20	7.52	2,458.62	762.05	100.61	14,334,829.047	783,991.875	39.433406288°N	108.032906897°W
2,700.00	22.20	7.52	2,551.21	799.50	105.55	14,334,866.498	783,996.819	39.433509459°N	108.032893869°W
2,800.00	22.20	7.52	2,643.80	836.95	110.49	14,334,903.949	784,001.764	39.433612629°N	108.032880840°W
2,900.00	22.20	7.52	2,736.39	874.41	115.44	14,334,941.400	784,006.708	39.433715800°N	108.032867811°W
3,000.00	22.20	7.52	2,828.98	911.86	120.38	14,334,978.852	784,011.652	39.433818970°N	108.032854782°W
3,100.00	22.20	7.52	2,921.57	949.31	125.33	14,335,016.303	784,016.597	39.433922140°N	108.032841753°W
3,200.00	22.20	7.52	3,014.16	986.76	130.27	14,335,053.754	784,021.541	39.434025311°N	108.032828724°W
3,300.00	22.20	7.52	3,106.75	1,024.21	135.22	14,335,091.206	784,026.485	39.434128481°N	108.032815695°W
3,400.00	22.20	7.52	3,199.34	1,061.66	140.16	14,335,128.657	784,031.429	39.434231652°N	108.032802665°W
3,474.15	22.20	7.52	3,268.00	1,089.43	143.83	14,335,156.428	784,035.096	39.434308155°N	108.032793004°W
<b>Mesaverde</b>									
3,500.00	22.20	7.52	3,291.93	1,099.11	145.10	14,335,166.108	784,036.374	39.434334822°N	108.032789636°W
3,600.00	22.20	7.52	3,384.52	1,136.56	150.05	14,335,203.559	784,041.318	39.434437992°N	108.032776607°W
3,700.00	22.20	7.52	3,477.11	1,174.02	154.99	14,335,241.011	784,046.262	39.434541163°N	108.032763578°W
3,774.97	22.20	7.52	3,546.53	1,202.09	158.70	14,335,269.087	784,049.969	39.434618507°N	108.032753810°W
<b>Drop 3°/100 at 3775 MD/3547 TVD</b>									
3,800.00	21.44	7.52	3,569.76	1,211.32	159.92	14,335,278.311	784,051.187	39.434643918°N	108.032750601°W
3,900.00	18.44	7.52	3,663.76	1,245.13	164.38	14,335,312.124	784,055.651	39.434737066°N	108.032738838°W
4,000.00	15.44	7.52	3,759.40	1,274.02	168.20	14,335,341.014	784,059.465	39.434816652°N	108.032728787°W
4,100.00	12.44	7.52	3,856.45	1,297.91	171.35	14,335,364.902	784,062.618	39.434882457°N	108.032720476°W
4,200.00	9.44	7.52	3,954.62	1,316.73	173.83	14,335,383.722	784,065.103	39.434934302°N	108.032713929°W
4,300.00	6.44	7.52	4,053.65	1,330.43	175.64	14,335,397.422	784,066.912	39.434972044°N	108.032709162°W
4,400.00	3.44	7.52	4,153.26	1,338.97	176.77	14,335,405.965	784,068.040	39.434995579°N	108.032706190°W

# ARK Directional Services

## Planning Report - Geographic

<b>Database:</b>	EDM SERVER DB	<b>Local Co-ordinate Reference:</b>	Well BAT 43C-18-07-95 (111280)
<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 43C-18-07-95 (111280)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	BAT 43C		
<b>Design:</b>	BAT 43C 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
4,500.00	0.44	7.52	4,253.19	1,342.33	177.21	14,335,409.328	784,068.484	39.435004844°N	108.032705020°W
4,514.81	0.00	0.00	4,268.00	1,342.39	177.22	14,335,409.385	784,068.491	39.435005000°N	108.032705000°W
Vertical at 4515 MD/4268 TVD - Top Gas									
4,600.00	0.00	0.00	4,353.19	1,342.39	177.22	14,335,409.385	784,068.491	39.435005000°N	108.032705000°W
4,700.00	0.00	0.00	4,453.19	1,342.39	177.22	14,335,409.385	784,068.491	39.435005000°N	108.032705000°W
4,800.00	0.00	0.00	4,553.19	1,342.39	177.22	14,335,409.385	784,068.491	39.435005000°N	108.032705000°W
4,900.00	0.00	0.00	4,653.19	1,342.39	177.22	14,335,409.385	784,068.491	39.435005000°N	108.032705000°W
5,000.00	0.00	0.00	4,753.19	1,342.39	177.22	14,335,409.385	784,068.491	39.435005000°N	108.032705000°W
5,100.00	0.00	0.00	4,853.19	1,342.39	177.22	14,335,409.385	784,068.491	39.435005000°N	108.032705000°W
5,200.00	0.00	0.00	4,953.19	1,342.39	177.22	14,335,409.385	784,068.491	39.435005000°N	108.032705000°W
5,300.00	0.00	0.00	5,053.19	1,342.39	177.22	14,335,409.385	784,068.491	39.435005000°N	108.032705000°W
5,400.00	0.00	0.00	5,153.19	1,342.39	177.22	14,335,409.385	784,068.491	39.435005000°N	108.032705000°W
5,500.00	0.00	0.00	5,253.19	1,342.39	177.22	14,335,409.385	784,068.491	39.435005000°N	108.032705000°W
5,600.00	0.00	0.00	5,353.19	1,342.39	177.22	14,335,409.385	784,068.491	39.435005000°N	108.032705000°W
5,700.00	0.00	0.00	5,453.19	1,342.39	177.22	14,335,409.385	784,068.491	39.435005000°N	108.032705000°W
5,714.81	0.00	0.00	5,468.00	1,342.39	177.22	14,335,409.385	784,068.491	39.435005000°N	108.032705000°W
Cameo									
5,800.00	0.00	0.00	5,553.19	1,342.39	177.22	14,335,409.385	784,068.491	39.435005000°N	108.032705000°W
5,900.00	0.00	0.00	5,653.19	1,342.39	177.22	14,335,409.385	784,068.491	39.435005000°N	108.032705000°W
6,000.00	0.00	0.00	5,753.19	1,342.39	177.22	14,335,409.385	784,068.491	39.435005000°N	108.032705000°W
6,100.00	0.00	0.00	5,853.19	1,342.39	177.22	14,335,409.385	784,068.491	39.435005000°N	108.032705000°W
6,200.00	0.00	0.00	5,953.19	1,342.39	177.22	14,335,409.385	784,068.491	39.435005000°N	108.032705000°W
6,300.00	0.00	0.00	6,053.19	1,342.39	177.22	14,335,409.385	784,068.491	39.435005000°N	108.032705000°W
6,400.00	0.00	0.00	6,153.19	1,342.39	177.22	14,335,409.385	784,068.491	39.435005000°N	108.032705000°W
6,414.81	0.00	0.00	6,168.00	1,342.39	177.22	14,335,409.385	784,068.491	39.435005000°N	108.032705000°W
Rollins									
6,500.00	0.00	0.00	6,253.19	1,342.39	177.22	14,335,409.385	784,068.491	39.435005000°N	108.032705000°W
6,514.81	0.00	0.00	6,268.00	1,342.39	177.22	14,335,409.385	784,068.491	39.435005000°N	108.032705000°W
TD at 6515 MD/6268 TVD									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
BAT 43C Top Gas - plan hits target center - Circle (radius 25.00)	0.00	0.00	4,268.00	1,342.39	177.22	14,335,409.385	784,068.491	39.435005000°N	108.032705000°W

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,025.00	1,000.32	Surf Csg at 1025 MD/1000 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 43C-18-07-95 (111280)
<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 43C-18-07-95 (111280)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	BAT 43C		
<b>Design:</b>	BAT 43C P01		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,474.15	3,268.00	Mesaverde			
4,514.81	4,268.00	Top Gas			
5,714.81	5,468.00	Cameo			
6,414.81	6,168.00	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 200 MD/TVD	
939.84	921.47	140.30	18.52	Hold 22° at 940 MD/921 TVD	
3,774.97	3,546.53	1,202.09	158.70	Drop 3°/100 at 3775 MD/3547 TVD	
4,514.81	4,268.00	1,342.39	177.22	Vertical at 4515 MD/4268 TVD	
6,514.81	6,268.00	1,342.39	177.22	TD at 6515 MD/6268 TVD	