



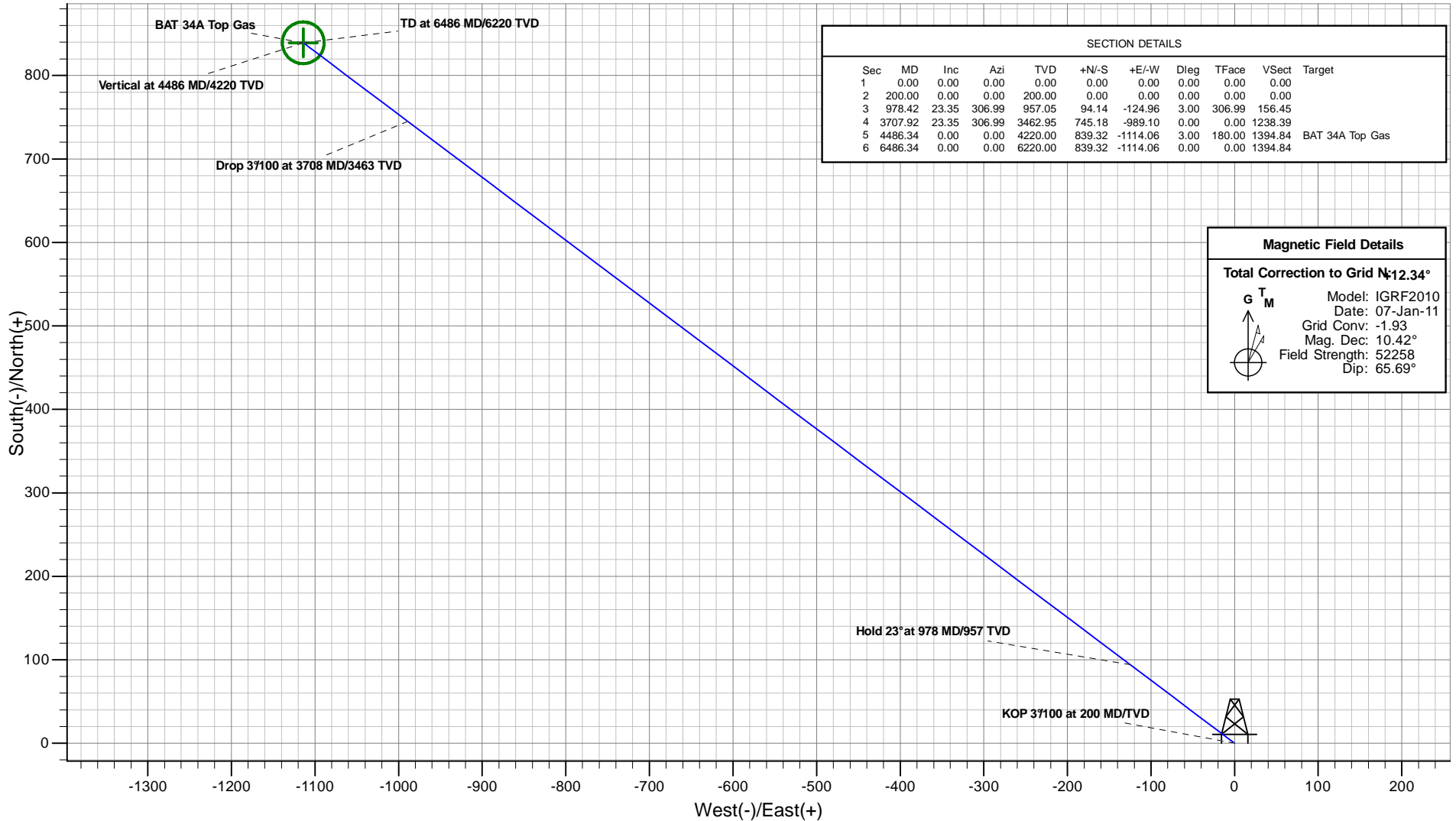
Antero Resources

BAT 34A-18-07-95 (111270)



PLAN VIEW

Project: Monument Ridge
 Site: Monument Ridge Pad
 Well: BAT 34A-18-07-95 (111270)
 Wellbore: BAT 34A
 Design: BAT 34A P01



Plan: BAT 34A P01
 Created By: ARK Directional Services
 Date: 10:40, October 07 2010

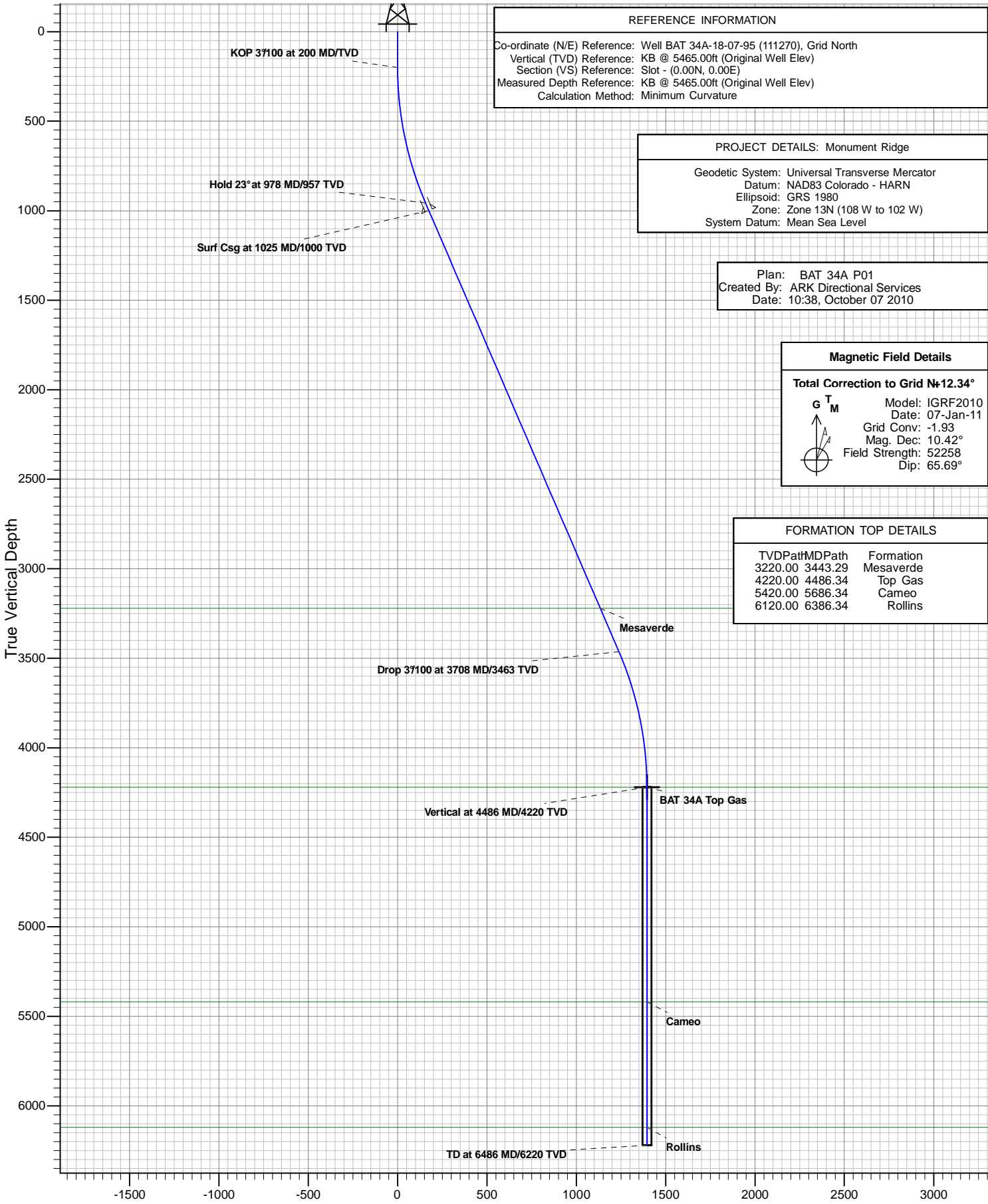
PROJECT DETAILS: Monument Ridge

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 34A-18-07-95 (111270), 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 34A-18-07-95 (111270), 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 34A P01
Created By:	ARK Directional Services
Date:	10:38, October 07 2010

Magnetic Field Details		
Total Correction to Grid N=12.34°		
	Model:	IGRF2010
	Date:	07-Jan-11
	Grid Conv:	-1.93
	Mag. Dec:	10.42°
	Field Strength:	52258
Dip:	65.69°	

FORMATION TOP DETAILS		
TVDPathMDPath	Formation	
3220.00 3443.29	Mesaverde	
4220.00 4486.34	Top Gas	
5420.00 5686.34	Cameo	
6120.00 6386.34	Rollins	

Vertical Section at 306.99°

Antero Resources

**Monument Ridge
Monument Ridge Pad
BAT 34A-18-07-95 (111270)**

BAT 34A

Plan: BAT 34A P01

Standard Planning Report - Geographic

07 October, 2010

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well BAT 34A-18-07-95 (111270)
Company:	Antero Resources	TVD Reference:	KB @ 5465.00ft (Original Well Elev)
Project:	Monument Ridge	MD Reference:	KB @ 5465.00ft (Original Well Elev)
Site:	Monument Ridge Pad	North Reference:	Grid
Well:	BAT 34A-18-07-95 (111270)	Survey Calculation Method:	Minimum Curvature
Wellbore:	BAT 34A		
Design:	BAT 34A P01		

Project	Monument Ridge		
Map System:	Universal Transverse Mercator	System Datum:	Mean Sea Level
Geo Datum:	NAD83 Colorado - HARN		
Map Zone:	Zone 13N (108 W to 102 W)		

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

Well	BAT 34A-18-07-95 (111270)					
Well Position	+N/-S	0.00 ft	Northing:	14,334,017.076 usft	Latitude:	39.431168000°N
	+E/-W	0.00 ft	Easting:	783,868.665 usft	Longitude:	108.033246000°W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,441.00 ft

Wellbore	BAT 34A				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2011/01/07	10.42	65.69	52,258

Design	BAT 34A P01				
Audit Notes:					
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	4,220.00	0.00	0.00	306.99	

Plan Sections										
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	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
978.42	23.35	306.99	957.05	94.14	-124.96	3.00	3.00	0.00	306.99	
3,707.92	23.35	306.99	3,462.95	745.18	-989.10	0.00	0.00	0.00	0.00	
4,486.34	0.00	0.00	4,220.00	839.32	-1,114.06	3.00	-3.00	0.00	180.00	BAT 34A Top Gas
6,486.34	0.00	0.00	6,220.00	839.32	-1,114.06	0.00	0.00	0.00	0.00	

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well BAT 34A-18-07-95 (111270)
Company:	Antero Resources	TVD Reference:	KB @ 5465.00ft (Original Well Elev)
Project:	Monument Ridge	MD Reference:	KB @ 5465.00ft (Original Well Elev)
Site:	Monument Ridge Pad	North Reference:	Grid
Well:	BAT 34A-18-07-95 (111270)	Survey Calculation Method:	Minimum Curvature
Wellbore:	BAT 34A		
Design:	BAT 34A 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	14,334,017.076	783,868.665	39.431168000°N	108.033246000°W	
100.00	0.00	0.00	100.00	0.00	0.00	14,334,017.076	783,868.665	39.431168000°N	108.033246000°W	
200.00	0.00	0.00	200.00	0.00	0.00	14,334,017.076	783,868.665	39.431168000°N	108.033246000°W	
KOP 3°/100 at 200 MD/TVD										
300.00	3.00	306.99	299.95	1.57	-2.09	14,334,018.651	783,866.575	39.431172127°N	108.033253581°W	
400.00	6.00	306.99	399.63	6.30	-8.36	14,334,023.372	783,860.309	39.431184495°N	108.033276303°W	
500.00	9.00	306.99	498.77	14.15	-18.78	14,334,031.225	783,849.885	39.431205071°N	108.033314103°W	
600.00	12.00	306.99	597.08	25.11	-33.33	14,334,042.189	783,835.332	39.431233799°N	108.033366878°W	
700.00	15.00	306.99	694.31	39.16	-51.98	14,334,056.235	783,816.688	39.431270599°N	108.033434483°W	
800.00	18.00	306.99	790.18	56.25	-74.66	14,334,073.323	783,794.007	39.431315371°N	108.033516733°W	
900.00	21.00	306.99	884.43	76.33	-101.32	14,334,093.407	783,767.349	39.431367992°N	108.033613403°W	
978.42	23.35	306.99	957.05	94.14	-124.96	14,334,111.216	783,743.709	39.431414655°N	108.033699127°W	
Hold 23° at 978 MD/957 TVD										
1,000.00	23.35	306.99	976.86	99.29	-131.79	14,334,116.364	783,736.877	39.431428141°N	108.033723903°W	
1,025.00	23.35	306.99	999.81	105.25	-139.70	14,334,122.327	783,728.962	39.431443764°N	108.033752605°W	
Surf Csg at 1025 MD/1000 TVD										
1,100.00	23.35	306.99	1,068.67	123.14	-163.45	14,334,140.216	783,705.217	39.431490634°N	108.033838710°W	
1,200.00	23.35	306.99	1,160.48	146.99	-195.11	14,334,164.067	783,673.558	39.431553127°N	108.033953517°W	
1,300.00	23.35	306.99	1,252.28	170.84	-226.77	14,334,187.919	783,641.898	39.431615620°N	108.034068832°W	
1,400.00	23.35	306.99	1,344.09	194.70	-258.43	14,334,211.771	783,610.239	39.431678113°N	108.034183131°W	
1,500.00	23.35	306.99	1,435.90	218.55	-290.09	14,334,235.623	783,578.579	39.431740605°N	108.034297939°W	
1,600.00	23.35	306.99	1,527.71	242.40	-321.75	14,334,259.475	783,546.920	39.431803098°N	108.034412747°W	
1,700.00	23.35	306.99	1,619.52	266.25	-353.41	14,334,283.326	783,515.260	39.431865590°N	108.034527555°W	
1,800.00	23.35	306.99	1,711.32	290.10	-385.07	14,334,307.178	783,483.601	39.431928082°N	108.034642363°W	
1,900.00	23.35	306.99	1,803.13	313.95	-416.72	14,334,331.030	783,451.941	39.431990574°N	108.034757171°W	
2,000.00	23.35	306.99	1,894.94	337.81	-448.38	14,334,354.882	783,420.282	39.432053066°N	108.034871979°W	
2,100.00	23.35	306.99	1,986.75	361.66	-480.04	14,334,378.733	783,388.622	39.432115558°N	108.034986788°W	
2,200.00	23.35	306.99	2,078.56	385.51	-511.70	14,334,402.585	783,356.963	39.432178050°N	108.035101597°W	
2,300.00	23.35	306.99	2,170.37	409.36	-543.36	14,334,426.437	783,325.304	39.432240542°N	108.035216406°W	
2,400.00	23.35	306.99	2,262.17	433.21	-575.02	14,334,450.289	783,293.644	39.432303033°N	108.035331216°W	
2,500.00	23.35	306.99	2,353.98	457.07	-606.68	14,334,474.141	783,261.985	39.432365524°N	108.035446025°W	
2,600.00	23.35	306.99	2,445.79	480.92	-638.34	14,334,497.992	783,230.325	39.432428016°N	108.035560835°W	
2,700.00	23.35	306.99	2,537.60	504.77	-670.00	14,334,521.844	783,198.666	39.432490507°N	108.035675645°W	
2,800.00	23.35	306.99	2,629.41	528.62	-701.66	14,334,545.696	783,167.006	39.432552998°N	108.035790455°W	
2,900.00	23.35	306.99	2,721.22	552.47	-733.32	14,334,569.548	783,135.347	39.432615489°N	108.035905265°W	
3,000.00	23.35	306.99	2,813.02	576.32	-764.98	14,334,593.399	783,103.687	39.432677979°N	108.036020076°W	
3,100.00	23.35	306.99	2,904.83	600.18	-796.64	14,334,617.251	783,072.028	39.432740470°N	108.036134886°W	
3,200.00	23.35	306.99	2,996.64	624.03	-828.30	14,334,641.103	783,040.368	39.432802961°N	108.036249697°W	
3,300.00	23.35	306.99	3,088.45	647.88	-859.96	14,334,664.955	783,008.709	39.432865451°N	108.036364508°W	
3,400.00	23.35	306.99	3,180.26	671.73	-891.62	14,334,688.807	782,977.049	39.432927941°N	108.036479320°W	
3,443.29	23.35	306.99	3,220.00	682.06	-905.32	14,334,699.132	782,963.345	39.432954992°N	108.036529020°W	
Mesaverde										
3,500.00	23.35	306.99	3,272.07	695.58	-923.28	14,334,712.658	782,945.390	39.432990431°N	108.036594131°W	
3,600.00	23.35	306.99	3,363.87	719.44	-954.94	14,334,736.510	782,913.730	39.433052921°N	108.036708943°W	
3,700.00	23.35	306.99	3,455.68	743.29	-986.60	14,334,760.362	782,882.071	39.433115411°N	108.036823755°W	
3,707.92	23.35	306.99	3,462.95	745.18	-989.10	14,334,762.251	782,879.563	39.433120361°N	108.036832849°W	
Drop 3°/100 at 3708 MD/3463 TVD										
3,800.00	20.59	306.99	3,548.34	765.90	-1,016.62	14,334,782.979	782,852.050	39.433174667°N	108.036932625°W	
3,900.00	17.59	306.99	3,642.83	785.58	-1,042.74	14,334,802.657	782,825.931	39.433226221°N	108.037027345°W	
4,000.00	14.59	306.99	3,738.90	802.26	-1,064.87	14,334,819.332	782,803.798	39.433269908°N	108.037107611°W	
4,100.00	11.59	306.99	3,836.29	815.88	-1,082.96	14,334,832.958	782,785.711	39.433305608°N	108.037173203°W	
4,200.00	8.59	306.99	3,934.73	826.42	-1,096.95	14,334,843.499	782,771.719	39.433333225°N	108.037223943°W	
4,300.00	5.59	306.99	4,033.96	833.85	-1,106.81	14,334,850.926	782,761.862	39.433352681°N	108.037259690°W	
4,400.00	2.59	306.99	4,133.69	838.14	-1,112.50	14,334,855.217	782,756.166	39.433363924°N	108.037280348°W	

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well BAT 34A-18-07-95 (111270)
Company:	Antero Resources	TVD Reference:	KB @ 5465.00ft (Original Well Elev)
Project:	Monument Ridge	MD Reference:	KB @ 5465.00ft (Original Well Elev)
Site:	Monument Ridge Pad	North Reference:	Grid
Well:	BAT 34A-18-07-95 (111270)	Survey Calculation Method:	Minimum Curvature
Wellbore:	BAT 34A		
Design:	BAT 34A 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	
4,486.34	0.00	0.00	4,220.00	839.32	-1,114.06	14,334,856.391	782,754.607	39.433367000°N	108.037286000°W	
Vertical at 4486 MD/4220 TVD - Top Gas - BAT 34A Top Gas										
4,500.00	0.00	0.00	4,233.66	839.32	-1,114.06	14,334,856.391	782,754.607	39.433367000°N	108.037286000°W	
4,600.00	0.00	0.00	4,333.66	839.32	-1,114.06	14,334,856.391	782,754.607	39.433367000°N	108.037286000°W	
4,700.00	0.00	0.00	4,433.66	839.32	-1,114.06	14,334,856.391	782,754.607	39.433367000°N	108.037286000°W	
4,800.00	0.00	0.00	4,533.66	839.32	-1,114.06	14,334,856.391	782,754.607	39.433367000°N	108.037286000°W	
4,900.00	0.00	0.00	4,633.66	839.32	-1,114.06	14,334,856.391	782,754.607	39.433367000°N	108.037286000°W	
5,000.00	0.00	0.00	4,733.66	839.32	-1,114.06	14,334,856.391	782,754.607	39.433367000°N	108.037286000°W	
5,100.00	0.00	0.00	4,833.66	839.32	-1,114.06	14,334,856.391	782,754.607	39.433367000°N	108.037286000°W	
5,200.00	0.00	0.00	4,933.66	839.32	-1,114.06	14,334,856.391	782,754.607	39.433367000°N	108.037286000°W	
5,300.00	0.00	0.00	5,033.66	839.32	-1,114.06	14,334,856.391	782,754.607	39.433367000°N	108.037286000°W	
5,400.00	0.00	0.00	5,133.66	839.32	-1,114.06	14,334,856.391	782,754.607	39.433367000°N	108.037286000°W	
5,500.00	0.00	0.00	5,233.66	839.32	-1,114.06	14,334,856.391	782,754.607	39.433367000°N	108.037286000°W	
5,600.00	0.00	0.00	5,333.66	839.32	-1,114.06	14,334,856.391	782,754.607	39.433367000°N	108.037286000°W	
5,686.34	0.00	0.00	5,420.00	839.32	-1,114.06	14,334,856.391	782,754.607	39.433367000°N	108.037286000°W	
Cameo										
5,700.00	0.00	0.00	5,433.66	839.32	-1,114.06	14,334,856.391	782,754.607	39.433367000°N	108.037286000°W	
5,800.00	0.00	0.00	5,533.66	839.32	-1,114.06	14,334,856.391	782,754.607	39.433367000°N	108.037286000°W	
5,900.00	0.00	0.00	5,633.66	839.32	-1,114.06	14,334,856.391	782,754.607	39.433367000°N	108.037286000°W	
6,000.00	0.00	0.00	5,733.66	839.32	-1,114.06	14,334,856.391	782,754.607	39.433367000°N	108.037286000°W	
6,100.00	0.00	0.00	5,833.66	839.32	-1,114.06	14,334,856.391	782,754.607	39.433367000°N	108.037286000°W	
6,200.00	0.00	0.00	5,933.66	839.32	-1,114.06	14,334,856.391	782,754.607	39.433367000°N	108.037286000°W	
6,300.00	0.00	0.00	6,033.66	839.32	-1,114.06	14,334,856.391	782,754.607	39.433367000°N	108.037286000°W	
6,386.34	0.00	0.00	6,120.00	839.32	-1,114.06	14,334,856.391	782,754.607	39.433367000°N	108.037286000°W	
Rollins										
6,400.00	0.00	0.00	6,133.66	839.32	-1,114.06	14,334,856.391	782,754.607	39.433367000°N	108.037286000°W	
6,486.34	0.00	0.00	6,220.00	839.32	-1,114.06	14,334,856.391	782,754.607	39.433367000°N	108.037286000°W	
TD at 6486 MD/6220 TVD										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
BAT 34A Top Gas	0.00	360.00	4,220.00	839.32	-1,114.06	14,334,856.391	782,754.607	39.433367000°N	108.037286000°W	
- hit/miss target										
- Shape										
- plan hits target center										
- Circle (radius 25.00)										

Casing Points						
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)		
1,025.00	999.81	Surf Csg at 1025 MD/1000 TVD	5.50	6.00		

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well BAT 34A-18-07-95 (111270)
Company:	Antero Resources	TVD Reference:	KB @ 5465.00ft (Original Well Elev)
Project:	Monument Ridge	MD Reference:	KB @ 5465.00ft (Original Well Elev)
Site:	Monument Ridge Pad	North Reference:	Grid
Well:	BAT 34A-18-07-95 (111270)	Survey Calculation Method:	Minimum Curvature
Wellbore:	BAT 34A		
Design:	BAT 34A P01		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,443.29	3,220.00	Mesaverde			
4,486.34	4,220.00	Top Gas			
5,686.34	5,420.00	Cameo			
6,386.34	6,120.00	Rollins			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
200.00	200.00	0.00	0.00	KOP 3°/100 at 200 MD/TVD	
978.42	957.05	94.14	-124.96	Hold 23° at 978 MD/957 TVD	
3,707.92	3,462.95	745.18	-989.10	Drop 3°/100 at 3708 MD/3463 TVD	
4,486.34	4,220.00	839.32	-1,114.06	Vertical at 4486 MD/4220 TVD	
6,486.34	6,220.00	839.32	-1,114.06	TD at 6486 MD/6220 TVD	