



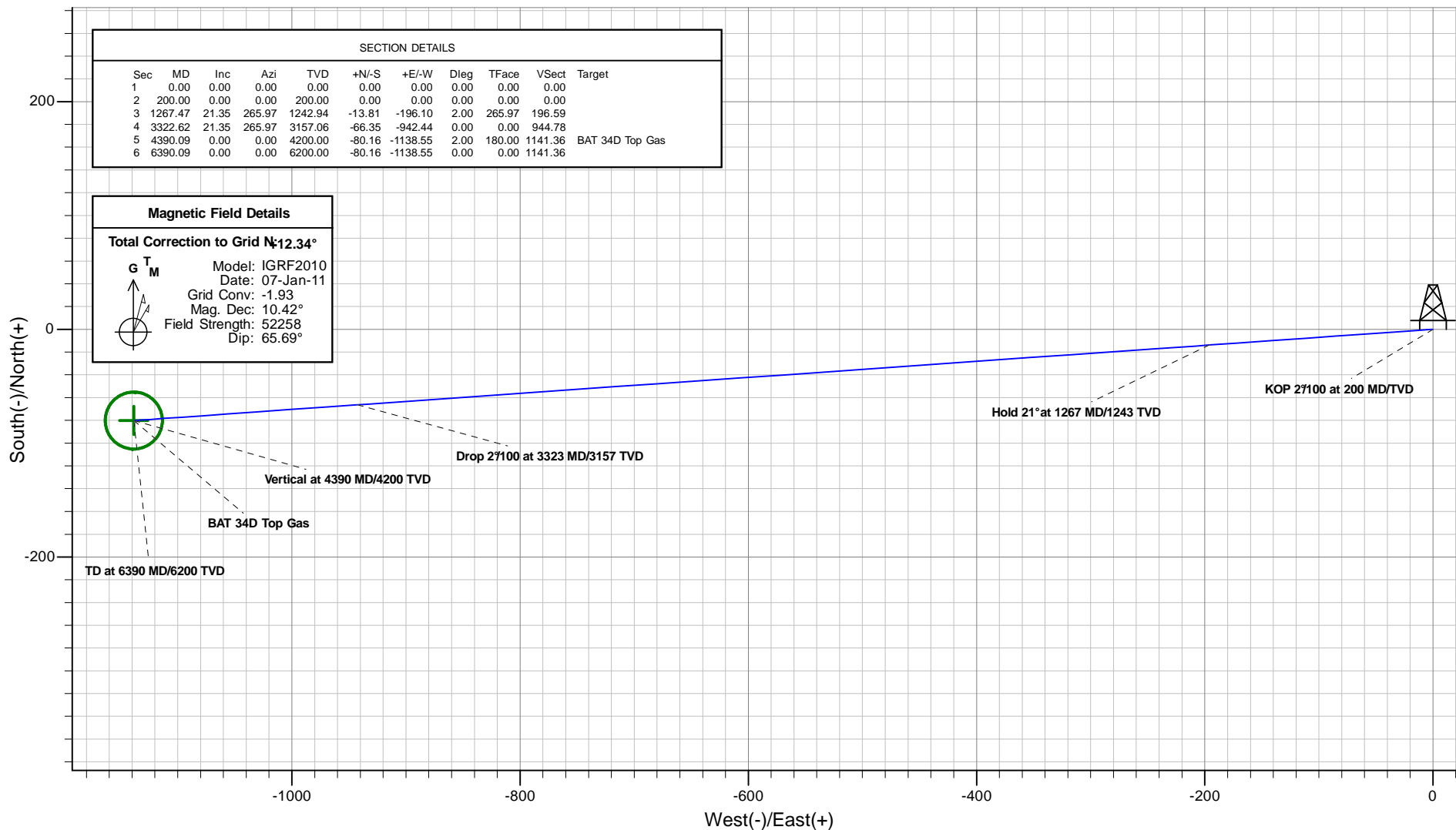
Antero Resources

BAT 34D-18-07-95 (111273)



PLAN VIEW

Project: Monument Ridge
Site: Monument Ridge Pad
Well: BAT 34D-18-07-95 (111273)
Wellbore: BAT 34D
Design: BAT 34D P01



Plan: BAT 34D P01
Created By: ARK Directional Services
Date: 12:18, 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 34D-18-07-95 (111273), 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

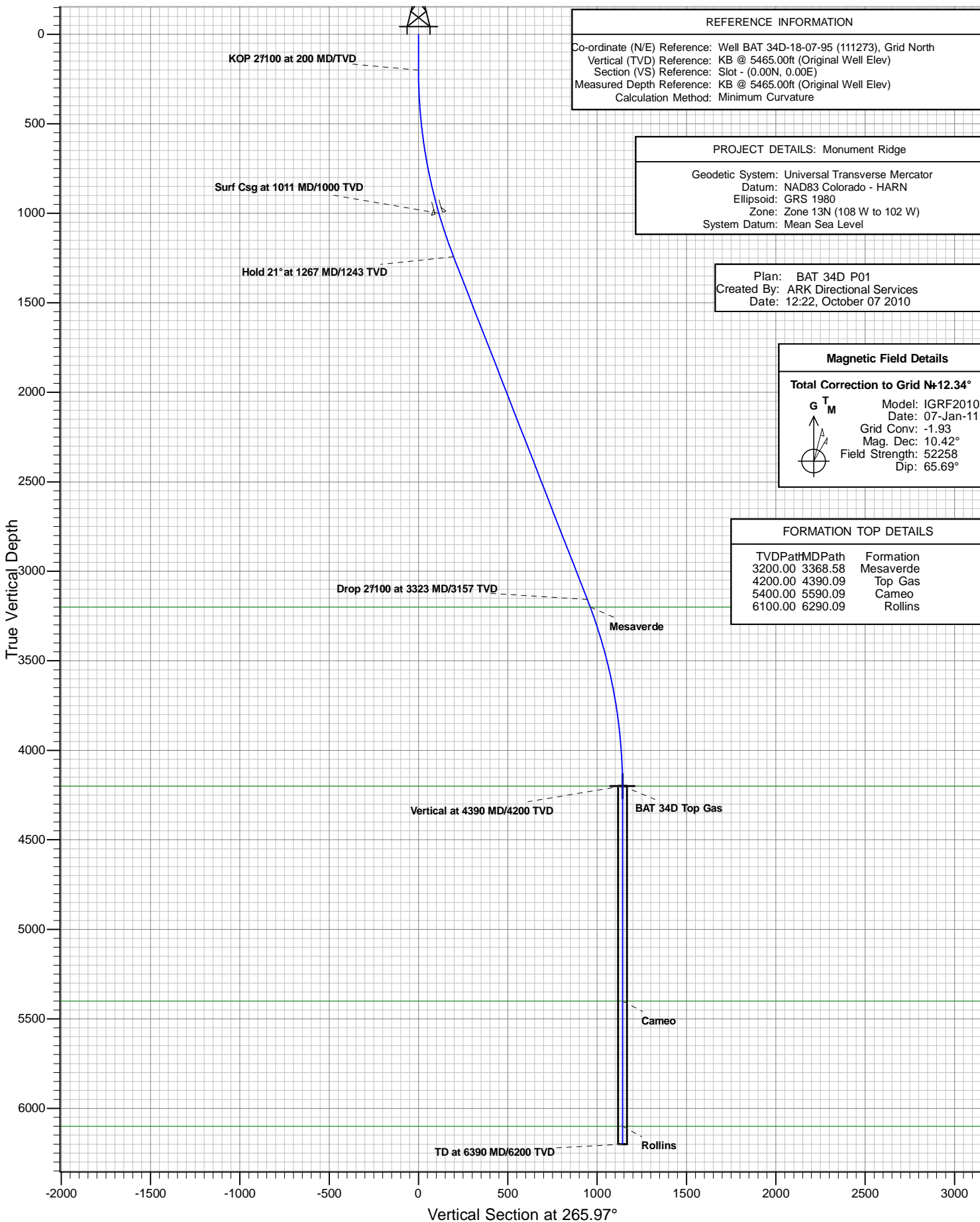


Antero Resources

BAT 34D-18-07-95 (111273)



VERTICAL SECTION VIEW



Antero Resources

Monument Ridge

Monument Ridge Pad

BAT 34D-18-07-95 (111273)

BAT 34D

Plan: BAT 34D P01

Standard Planning Report - Geographic

07 October, 2010

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well BAT 34D-18-07-95 (111273)
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 34D-18-07-95 (111273)	Survey Calculation Method:	Minimum Curvature
Wellbore:	BAT 34D		
Design:	BAT 34D 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
From:	Lat/Long	Easting:	783,868.932 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13.20 in
		Latitude:	39.431305000°N
		Longitude:	108.033251000°W
		Grid Convergence:	-1.93 °

Well	BAT 34D-18-07-95 (111273)		
Well Position	+N/-S	0.00 ft	Northing:
	+E/-W	0.00 ft	Easting:
Position Uncertainty	0.00 ft	Wellhead Elevation:	
		Latitude:	39.431065000°N
		Longitude:	108.033243000°W
		Ground Level:	5,441.00 ft

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

Design	BAT 34D P01				
Audit Notes:					
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	4,200.00	0.00	0.00	265.97	

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	
1,267.47	21.35	265.97	1,242.94	-13.81	-196.10	2.00	2.00	0.00	265.97	
3,322.62	21.35	265.97	3,157.06	-66.35	-942.44	0.00	0.00	0.00	0.00	
4,390.09	0.00	0.00	4,200.00	-80.16	-1,138.55	2.00	-2.00	0.00	180.00	BAT 34D Top Gas
6,390.09	0.00	0.00	6,200.00	-80.16	-1,138.55	0.00	0.00	0.00	0.00	

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well BAT 34D-18-07-95 (111273)
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 34D-18-07-95 (111273)	Survey Calculation Method:	Minimum Curvature
Wellbore:	BAT 34D		
Design:	BAT 34D 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	14,333,979.535	783,868.250	39.431065000°N	108.033243000°W
100.00	0.00	0.00	100.00	0.00	0.00	14,333,979.535	783,868.250	39.431065000°N	108.033243000°W
200.00	0.00	0.00	200.00	0.00	0.00	14,333,979.535	783,868.250	39.431065000°N	108.033243000°W
KOP 2°/100 at 200 MD/TVD									
300.00	2.00	265.97	299.98	-0.12	-1.74	14,333,979.412	783,866.509	39.431064503°N	108.033249142°W
400.00	4.00	265.97	399.84	-0.49	-6.96	14,333,979.045	783,861.289	39.431063014°N	108.033267561°W
500.00	6.00	265.97	499.45	-1.10	-15.65	14,333,978.433	783,852.595	39.431060532°N	108.033298234°W
600.00	8.00	265.97	598.70	-1.96	-27.81	14,333,977.577	783,840.439	39.431057063°N	108.033341124°W
700.00	10.00	265.97	697.47	-3.06	-43.42	14,333,976.478	783,824.835	39.431052610°N	108.033396178°W
800.00	12.00	265.97	795.62	-4.40	-62.45	14,333,975.138	783,805.802	39.431047178°N	108.033463329°W
900.00	14.00	265.97	893.06	-5.98	-84.89	14,333,973.559	783,783.364	39.431040774°N	108.033542497°W
1,000.00	16.00	265.97	989.64	-7.79	-110.70	14,333,971.741	783,757.547	39.431033406°N	108.033633583°W
1,011.00	16.22	265.97	1,000.21	-8.01	-113.75	14,333,971.527	783,754.502	39.431032537°N	108.033644325°W
Surf Csg at 1011 MD/1000 TVD									
1,100.00	18.00	265.97	1,085.27	-9.85	-139.87	14,333,969.688	783,728.384	39.431025082°N	108.033736478°W
1,200.00	20.00	265.97	1,179.82	-12.13	-172.34	14,333,967.402	783,695.909	39.431015814°N	108.033851055°W
1,267.47	21.35	265.97	1,242.94	-13.81	-196.10	14,333,965.729	783,672.147	39.431009032°N	108.033934893°W
Hold 21° at 1267 MD/1243 TVD									
1,300.00	21.35	265.97	1,273.24	-14.64	-207.92	14,333,964.897	783,660.334	39.431005660°N	108.033976571°W
1,400.00	21.35	265.97	1,366.37	-17.19	-244.23	14,333,962.340	783,624.018	39.430995295°N	108.034104700°W
1,500.00	21.35	265.97	1,459.51	-19.75	-280.55	14,333,959.784	783,587.703	39.430984930°N	108.034232828°W
1,600.00	21.35	265.97	1,552.65	-22.31	-316.86	14,333,957.227	783,551.387	39.430974565°N	108.034360956°W
1,700.00	21.35	265.97	1,645.79	-24.86	-353.18	14,333,954.670	783,515.072	39.430964199°N	108.034489085°W
1,800.00	21.35	265.97	1,738.93	-27.42	-389.49	14,333,952.114	783,478.756	39.430953834°N	108.034617213°W
1,900.00	21.35	265.97	1,832.06	-29.98	-425.81	14,333,949.557	783,442.441	39.430943468°N	108.034745341°W
2,000.00	21.35	265.97	1,925.20	-32.53	-462.13	14,333,947.000	783,406.125	39.430933102°N	108.034873470°W
2,100.00	21.35	265.97	2,018.34	-35.09	-498.44	14,333,944.443	783,369.810	39.430922736°N	108.035001598°W
2,200.00	21.35	265.97	2,111.48	-37.65	-534.76	14,333,941.887	783,333.494	39.430912370°N	108.035129726°W
2,300.00	21.35	265.97	2,204.61	-40.20	-571.07	14,333,939.330	783,297.179	39.430902004°N	108.035257854°W
2,400.00	21.35	265.97	2,297.75	-42.76	-607.39	14,333,936.773	783,260.863	39.430891637°N	108.035385982°W
2,500.00	21.35	265.97	2,390.89	-45.32	-643.70	14,333,934.217	783,224.548	39.430881271°N	108.035514110°W
2,600.00	21.35	265.97	2,484.03	-47.87	-680.02	14,333,931.660	783,188.232	39.430870904°N	108.035642238°W
2,700.00	21.35	265.97	2,577.17	-50.43	-716.34	14,333,929.103	783,151.916	39.430860537°N	108.035770366°W
2,800.00	21.35	265.97	2,670.30	-52.99	-752.65	14,333,926.547	783,115.601	39.430850170°N	108.035898494°W
2,900.00	21.35	265.97	2,763.44	-55.54	-788.97	14,333,923.990	783,079.285	39.430839803°N	108.036026621°W
3,000.00	21.35	265.97	2,856.58	-58.10	-825.28	14,333,921.433	783,042.970	39.430829436°N	108.036154749°W
3,100.00	21.35	265.97	2,949.72	-60.66	-861.60	14,333,918.877	783,006.654	39.430819068°N	108.036282877°W
3,200.00	21.35	265.97	3,042.85	-63.21	-897.91	14,333,916.320	782,970.339	39.430808701°N	108.036411004°W
3,300.00	21.35	265.97	3,135.99	-65.77	-934.23	14,333,913.763	782,934.023	39.430798333°N	108.036539132°W
3,322.62	21.35	265.97	3,157.06	-66.35	-942.44	14,333,913.185	782,925.809	39.430795988°N	108.036568115°W
Drop 2°/100 at 3323 MD/3157 TVD									
3,368.58	20.43	265.97	3,200.00	-67.50	-958.79	14,333,912.034	782,909.461	39.430791321°N	108.036625794°W
Mesaverde									
3,400.00	19.80	265.97	3,229.50	-68.26	-969.57	14,333,911.275	782,898.682	39.430788244°N	108.036663822°W
3,500.00	17.80	265.97	3,324.16	-70.52	-1,001.72	14,333,909.012	782,866.534	39.430779065°N	108.036777247°W
3,600.00	15.80	265.97	3,419.89	-72.55	-1,030.55	14,333,906.982	782,837.700	39.430770833°N	108.036878976°W
3,700.00	13.80	265.97	3,516.56	-74.35	-1,056.04	14,333,905.188	782,812.217	39.430763558°N	108.036968885°W
3,800.00	11.80	265.97	3,614.07	-75.90	-1,078.14	14,333,903.632	782,790.115	39.430757248°N	108.037046865°W
3,900.00	9.80	265.97	3,712.30	-77.22	-1,096.83	14,333,902.316	782,771.421	39.430751910°N	108.037112821°W
4,000.00	7.80	265.97	3,811.11	-78.29	-1,112.09	14,333,901.241	782,756.158	39.430747553°N	108.037166672°W
4,100.00	5.80	265.97	3,910.40	-79.13	-1,123.91	14,333,900.409	782,744.344	39.430744180°N	108.037208352°W
4,200.00	3.80	265.97	4,010.05	-79.71	-1,132.26	14,333,899.822	782,735.994	39.430741796°N	108.037237811°W
4,300.00	1.80	265.97	4,109.92	-80.06	-1,137.13	14,333,899.478	782,731.118	39.430740404°N	108.037255014°W

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well BAT 34D-18-07-95 (111273)
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 34D-18-07-95 (111273)	Survey Calculation Method:	Minimum Curvature
Wellbore:	BAT 34D		
Design:	BAT 34D 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	
4,390.09	0.00	0.00	4,200.00	-80.16	-1,138.55	14,333,899.379	782,729.705	39.430740000°N	108.037260000°W	
Vertical at 4390 MD/4200 TVD - Top Gas - BAT 34D Top Gas										
4,400.00	0.00	0.00	4,209.91	-80.16	-1,138.55	14,333,899.379	782,729.705	39.430740000°N	108.037260000°W	
4,500.00	0.00	0.00	4,309.91	-80.16	-1,138.55	14,333,899.379	782,729.705	39.430740000°N	108.037260000°W	
4,600.00	0.00	0.00	4,409.91	-80.16	-1,138.55	14,333,899.379	782,729.705	39.430740000°N	108.037260000°W	
4,700.00	0.00	0.00	4,509.91	-80.16	-1,138.55	14,333,899.379	782,729.705	39.430740000°N	108.037260000°W	
4,800.00	0.00	0.00	4,609.91	-80.16	-1,138.55	14,333,899.379	782,729.705	39.430740000°N	108.037260000°W	
4,900.00	0.00	0.00	4,709.91	-80.16	-1,138.55	14,333,899.379	782,729.705	39.430740000°N	108.037260000°W	
5,000.00	0.00	0.00	4,809.91	-80.16	-1,138.55	14,333,899.379	782,729.705	39.430740000°N	108.037260000°W	
5,100.00	0.00	0.00	4,909.91	-80.16	-1,138.55	14,333,899.379	782,729.705	39.430740000°N	108.037260000°W	
5,200.00	0.00	0.00	5,009.91	-80.16	-1,138.55	14,333,899.379	782,729.705	39.430740000°N	108.037260000°W	
5,300.00	0.00	0.00	5,109.91	-80.16	-1,138.55	14,333,899.379	782,729.705	39.430740000°N	108.037260000°W	
5,400.00	0.00	0.00	5,209.91	-80.16	-1,138.55	14,333,899.379	782,729.705	39.430740000°N	108.037260000°W	
5,500.00	0.00	0.00	5,309.91	-80.16	-1,138.55	14,333,899.379	782,729.705	39.430740000°N	108.037260000°W	
5,590.09	0.00	0.00	5,400.00	-80.16	-1,138.55	14,333,899.379	782,729.705	39.430740000°N	108.037260000°W	
Cameo										
5,600.00	0.00	0.00	5,409.91	-80.16	-1,138.55	14,333,899.379	782,729.705	39.430740000°N	108.037260000°W	
5,700.00	0.00	0.00	5,509.91	-80.16	-1,138.55	14,333,899.379	782,729.705	39.430740000°N	108.037260000°W	
5,800.00	0.00	0.00	5,609.91	-80.16	-1,138.55	14,333,899.379	782,729.705	39.430740000°N	108.037260000°W	
5,900.00	0.00	0.00	5,709.91	-80.16	-1,138.55	14,333,899.379	782,729.705	39.430740000°N	108.037260000°W	
6,000.00	0.00	0.00	5,809.91	-80.16	-1,138.55	14,333,899.379	782,729.705	39.430740000°N	108.037260000°W	
6,100.00	0.00	0.00	5,909.91	-80.16	-1,138.55	14,333,899.379	782,729.705	39.430740000°N	108.037260000°W	
6,200.00	0.00	0.00	6,009.91	-80.16	-1,138.55	14,333,899.379	782,729.705	39.430740000°N	108.037260000°W	
6,290.09	0.00	0.00	6,100.00	-80.16	-1,138.55	14,333,899.379	782,729.705	39.430740000°N	108.037260000°W	
Rollins										
6,300.00	0.00	0.00	6,109.91	-80.16	-1,138.55	14,333,899.379	782,729.705	39.430740000°N	108.037260000°W	
6,390.09	0.00	0.00	6,200.00	-80.16	-1,138.55	14,333,899.379	782,729.705	39.430740000°N	108.037260000°W	
TD at 6390 MD/6200 TVD										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
BAT 34D Top Gas	0.00	0.00	4,200.00	-80.16	-1,138.55	14,333,899.379	782,729.705	39.430740000°N	108.037260000°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)	
1,011.00	1,000.21	Surf Csg at 1011 MD/1000 TVD	5.50	6.00	

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well BAT 34D-18-07-95 (111273)
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 34D-18-07-95 (111273)	Survey Calculation Method:	Minimum Curvature
Wellbore:	BAT 34D		
Design:	BAT 34D P01		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,368.58	3,200.00	Mesaverde			
4,390.09	4,200.00	Top Gas			
5,590.09	5,400.00	Cameo			
6,290.09	6,100.00	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 2°/100 at 200 MD/TVD
1,267.47	1,242.94	-13.81	-196.10	Hold 21° at 1267 MD/1243 TVD
3,322.62	3,157.06	-66.35	-942.44	Drop 2°/100 at 3323 MD/3157 TVD
4,390.09	4,200.00	-80.16	-1,138.55	Vertical at 4390 MD/4200 TVD
6,390.09	6,200.00	-80.16	-1,138.55	TD at 6390 MD/6200 TVD