



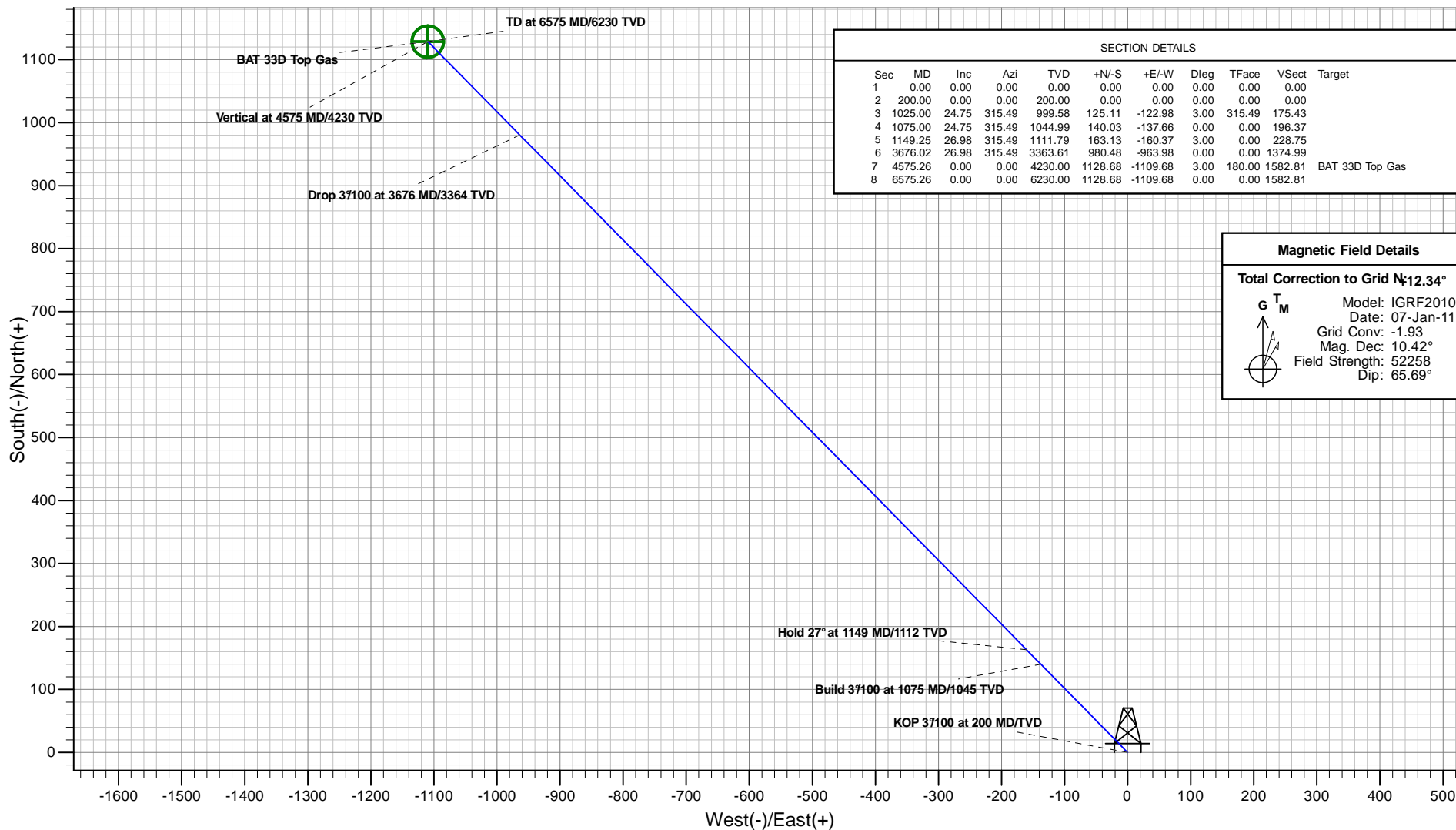
Antero Resources

BAT 33D-18-07-95 (111269)



PLAN VIEW

Project: Monument Ridge
Site: Monument Ridge Pad
Well: BAT 33D-18-07-95 (111269)
Wellbore: BAT 33D
Design: BAT 33D 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	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
3	1025.00	24.75	315.49	999.58	125.11	-122.98	3.00	315.49	175.43	
4	1075.00	24.75	315.49	1044.99	140.03	-137.66	0.00	0.00	196.37	
5	1149.25	26.98	315.49	1111.79	163.13	-160.37	3.00	0.00	228.75	
6	3676.02	26.98	315.49	3363.61	980.48	-963.98	0.00	0.00	1374.99	
7	4575.26	0.00	0.00	4230.00	1128.68	-1109.68	3.00	180.00	1582.81	BAT 33D Top Gas
8	6575.26	0.00	0.00	6230.00	1128.68	-1109.68	0.00	0.00	1582.81	

Magnetic Field Details

Total Correction to Grid N: 12.34°

G

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M

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Model: IGRF2010

Date: 07-Jan-11

Grid Conv: -1.93

Mag. Dec: 10.42°

Field Strength: 52258

Dip: 65.69°

Plan: BAT 33D P01
Created By: ARK Directional Services
Date: 8:45, 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 33D-18-07-95 (111269), 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

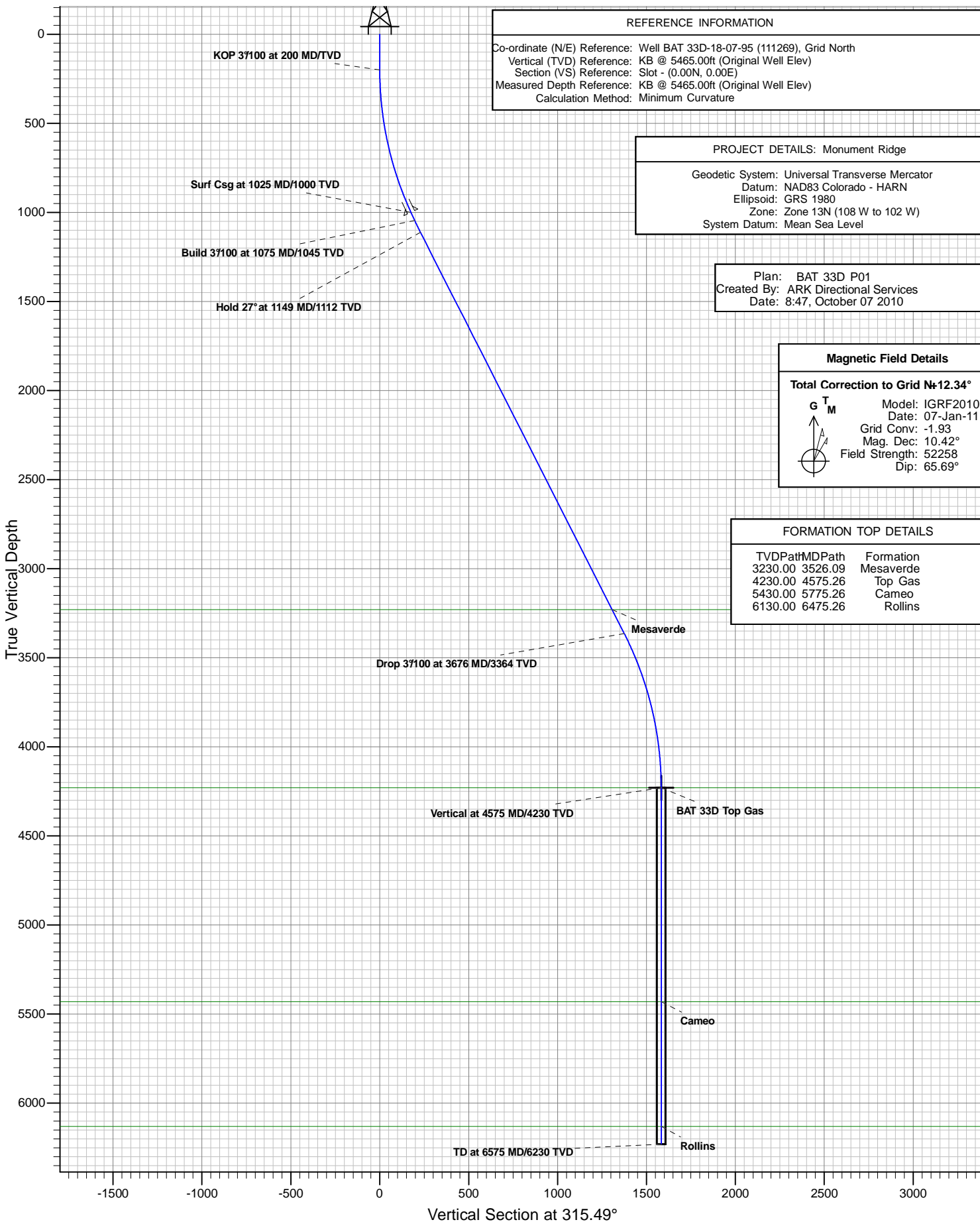


Antero Resources

BAT 33D-18-07-95 (111269)



VERTICAL SECTION VIEW



Antero Resources

Monument Ridge

Monument Ridge Pad

BAT 33D-18-07-95 (111269)

BAT 33D

Plan: BAT 33D P01

Standard Planning Report - Geographic

07 October, 2010

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well BAT 33D-18-07-95 (111269)
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 33D-18-07-95 (111269)	Survey Calculation Method:	Minimum Curvature
Wellbore:	BAT 33D		
Design:	BAT 33D 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 33D-18-07-95 (111269)		
Well Position	+N/-S	0.00 ft	Northing:
	+E/-W	0.00 ft	Easting:
Position Uncertainty	0.00 ft	Wellhead Elevation:	
		Latitude:	39.431202000°N
		Longitude:	108.033248000°W
		Ground Level:	5,441.00 ft

Wellbore	BAT 33D				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	2011/01/07	10.42	65.69	52,258

Design	BAT 33D P01				
Audit Notes:					
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	4,230.00	0.00	0.00	315.49	

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(ft)	(ft)	Rate	Rate	Rate	(°)	
(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	
1,025.00	24.75	315.49	999.58	125.11	-122.98	3.00	3.00	0.00	315.49	
1,075.00	24.75	315.49	1,044.99	140.03	-137.66	0.00	0.00	0.00	0.00	
1,149.25	26.98	315.49	1,111.79	163.13	-160.37	3.00	3.00	0.00	0.00	
3,676.02	26.98	315.49	3,363.61	980.48	-963.98	0.00	0.00	0.00	0.00	
4,575.26	0.00	0.00	4,230.00	1,128.68	-1,109.68	3.00	-3.00	0.00	180.00	BAT 33D Top Gas
6,575.26	0.00	0.00	6,230.00	1,128.68	-1,109.68	0.00	0.00	0.00	0.00	

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well BAT 33D-18-07-95 (111269)
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 33D-18-07-95 (111269)	Survey Calculation Method:	Minimum Curvature
Wellbore:	BAT 33D		
Design:	BAT 33D 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	14,334,029.478	783,868.517	39.431202000°N	108.033248000°W
100.00	0.00	0.00	100.00	0.00	0.00	14,334,029.478	783,868.517	39.431202000°N	108.033248000°W
200.00	0.00	0.00	200.00	0.00	0.00	14,334,029.478	783,868.517	39.431202000°N	108.033248000°W
KOP 3°/100 at 200 MD/TVD									
300.00	3.00	315.49	299.95	1.87	-1.83	14,334,031.345	783,866.682	39.431206950°N	108.033254712°W
400.00	6.00	315.49	399.63	7.46	-7.33	14,334,036.939	783,861.183	39.431221786°N	108.033274828°W
500.00	9.00	315.49	498.77	16.77	-16.48	14,334,046.246	783,852.033	39.431246467°N	108.033308293°W
600.00	12.00	315.49	597.08	29.76	-29.26	14,334,059.241	783,839.260	39.431280926°N	108.033355015°W
700.00	15.00	315.49	694.31	46.41	-45.62	14,334,075.886	783,822.896	39.431325068°N	108.033414868°W
800.00	18.00	315.49	790.18	66.66	-65.53	14,334,096.138	783,802.988	39.431378772°N	108.033487686°W
900.00	21.00	315.49	884.43	90.46	-88.93	14,334,119.940	783,779.590	39.431441892°N	108.033573269°W
1,000.00	24.00	315.49	976.81	117.75	-115.75	14,334,147.227	783,752.765	39.431514253°N	108.033671385°W
1,025.00	24.75	315.49	999.58	125.11	-122.98	14,334,154.585	783,745.532	39.431533764°N	108.033697841°W
Surf Csg at 1025 MD/1000 TVD									
1,075.00	24.75	315.49	1,044.99	140.03	-137.66	14,334,169.511	783,730.857	39.431573348°N	108.033751521°W
Build 3°/100 at 1075 MD/1045 TVD									
1,100.00	25.50	315.49	1,067.62	147.60	-145.10	14,334,177.081	783,723.415	39.431593420°N	108.033778741°W
1,149.25	26.98	315.49	1,111.80	163.13	-160.37	14,334,192.607	783,708.150	39.431634593°N	108.033834576°W
Hold 27° at 1149 MD/1112 TVD									
1,200.00	26.98	315.49	1,157.02	179.55	-176.51	14,334,209.023	783,692.009	39.431678126°N	108.033893613°W
1,300.00	26.98	315.49	1,246.14	211.89	-208.31	14,334,241.371	783,660.205	39.431763907°N	108.034009943°W
1,400.00	26.98	315.49	1,335.26	244.24	-240.12	14,334,273.719	783,628.401	39.431849688°N	108.034126273°W
1,500.00	26.98	315.49	1,424.38	276.59	-271.92	14,334,306.067	783,596.598	39.431935469°N	108.034242603°W
1,600.00	26.98	315.49	1,513.50	308.94	-303.72	14,334,338.415	783,564.794	39.432021249°N	108.034358933°W
1,700.00	26.98	315.49	1,602.62	341.28	-335.53	14,334,370.762	783,532.990	39.432107030°N	108.034475264°W
1,800.00	26.98	315.49	1,691.74	373.63	-367.33	14,334,403.110	783,501.186	39.432192810°N	108.034591595°W
1,900.00	26.98	315.49	1,780.85	405.98	-399.14	14,334,435.458	783,469.382	39.432278590°N	108.034707927°W
2,000.00	26.98	315.49	1,869.97	438.33	-430.94	14,334,467.806	783,437.578	39.432364370°N	108.034824259°W
2,100.00	26.98	315.49	1,959.09	470.68	-462.74	14,334,500.154	783,405.774	39.432450150°N	108.034940591°W
2,200.00	26.98	315.49	2,048.21	503.02	-494.55	14,334,532.502	783,373.970	39.432535930°N	108.035056923°W
2,300.00	26.98	315.49	2,137.33	535.37	-526.35	14,334,564.850	783,342.166	39.432621710°N	108.035173255°W
2,400.00	26.98	315.49	2,226.45	567.72	-558.16	14,334,597.197	783,310.362	39.432707489°N	108.035289588°W
2,500.00	26.98	315.49	2,315.57	600.07	-589.96	14,334,629.545	783,278.558	39.432793269°N	108.035405921°W
2,600.00	26.98	315.49	2,404.68	632.42	-621.76	14,334,661.893	783,246.754	39.432879048°N	108.035522255°W
2,700.00	26.98	315.49	2,493.80	664.76	-653.57	14,334,694.241	783,214.950	39.432964827°N	108.035638589°W
2,800.00	26.98	315.49	2,582.92	697.11	-685.37	14,334,726.589	783,183.147	39.433050606°N	108.035754923°W
2,900.00	26.98	315.49	2,672.04	729.46	-717.18	14,334,758.937	783,151.343	39.433136385°N	108.035871257°W
3,000.00	26.98	315.49	2,761.16	761.81	-748.98	14,334,791.285	783,119.539	39.433222164°N	108.035987591°W
3,100.00	26.98	315.49	2,850.28	794.16	-780.78	14,334,823.632	783,087.735	39.433307942°N	108.036103926°W
3,200.00	26.98	315.49	2,939.40	826.50	-812.59	14,334,855.980	783,055.931	39.433393721°N	108.036220261°W
3,300.00	26.98	315.49	3,028.51	858.85	-844.39	14,334,888.328	783,024.127	39.433479499°N	108.036336597°W
3,400.00	26.98	315.49	3,117.63	891.20	-876.20	14,334,920.676	782,992.323	39.433565278°N	108.036452933°W
3,500.00	26.98	315.49	3,206.75	923.55	-908.00	14,334,953.024	782,960.519	39.433651056°N	108.036569269°W
3,526.09	26.98	315.49	3,230.00	931.99	-916.30	14,334,961.463	782,952.222	39.433673433°N	108.036599618°W
Mesaverde									
3,600.00	26.98	315.49	3,295.87	955.90	-939.80	14,334,985.372	782,928.715	39.433736834°N	108.036685605°W
3,676.02	26.98	315.49	3,363.62	980.49	-963.98	14,335,009.963	782,904.538	39.433802042°N	108.036774044°W
Drop 3°/100 at 3676 MD/3364 TVD									
3,700.00	26.26	315.49	3,385.06	988.15	-971.51	14,335,017.624	782,897.006	39.433822357°N	108.036801596°W
3,800.00	23.26	315.49	3,475.85	1,018.01	-1,000.87	14,335,047.483	782,867.649	39.433901535°N	108.036908982°W
3,900.00	20.26	315.49	3,568.72	1,044.44	-1,026.86	14,335,073.912	782,841.663	39.433971619°N	108.037004035°W
4,000.00	17.26	315.49	3,663.40	1,067.36	-1,049.40	14,335,096.840	782,819.121	39.434032417°N	108.037086493°W
4,100.00	14.26	315.49	3,759.63	1,086.73	-1,068.44	14,335,116.203	782,800.084	39.434083762°N	108.037156131°W
4,200.00	11.26	315.49	3,857.15	1,102.47	-1,083.92	14,335,131.948	782,784.604	39.434125514°N	108.037212756°W

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well BAT 33D-18-07-95 (111269)
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 33D-18-07-95 (111269)	Survey Calculation Method:	Minimum Curvature
Wellbore:	BAT 33D		
Design:	BAT 33D P01		

Planned Survey										
Measured			Vertical			Map	Map			
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)			
4,300.00	8.26	315.49	3,955.69	1,114.56	-1,095.80	14,335,144.032	782,772.723	39.434157557°N	108.037256216°W	
4,400.00	5.26	315.49	4,054.98	1,122.95	-1,104.05	14,335,152.422	782,764.474	39.434179805°N	108.037286391°W	
4,500.00	2.26	315.49	4,154.76	1,127.62	-1,108.64	14,335,157.095	782,759.879	39.434192197°N	108.037303197°W	
4,575.26	0.00	0.00	4,230.00	1,128.68	-1,109.68	14,335,158.152	782,758.840	39.434195000°N	108.037307000°W	
Vertical at 4575 MD/4230 TVD - Top Gas - BAT 33D Top Gas										
4,600.00	0.00	0.00	4,254.74	1,128.68	-1,109.68	14,335,158.152	782,758.840	39.434195000°N	108.037307000°W	
4,700.00	0.00	0.00	4,354.74	1,128.68	-1,109.68	14,335,158.152	782,758.840	39.434195000°N	108.037307000°W	
4,800.00	0.00	0.00	4,454.74	1,128.68	-1,109.68	14,335,158.152	782,758.840	39.434195000°N	108.037307000°W	
4,900.00	0.00	0.00	4,554.74	1,128.68	-1,109.68	14,335,158.152	782,758.840	39.434195000°N	108.037307000°W	
5,000.00	0.00	0.00	4,654.74	1,128.68	-1,109.68	14,335,158.152	782,758.840	39.434195000°N	108.037307000°W	
5,100.00	0.00	0.00	4,754.74	1,128.68	-1,109.68	14,335,158.152	782,758.840	39.434195000°N	108.037307000°W	
5,200.00	0.00	0.00	4,854.74	1,128.68	-1,109.68	14,335,158.152	782,758.840	39.434195000°N	108.037307000°W	
5,300.00	0.00	0.00	4,954.74	1,128.68	-1,109.68	14,335,158.152	782,758.840	39.434195000°N	108.037307000°W	
5,400.00	0.00	0.00	5,054.74	1,128.68	-1,109.68	14,335,158.152	782,758.840	39.434195000°N	108.037307000°W	
5,500.00	0.00	0.00	5,154.74	1,128.68	-1,109.68	14,335,158.152	782,758.840	39.434195000°N	108.037307000°W	
5,600.00	0.00	0.00	5,254.74	1,128.68	-1,109.68	14,335,158.152	782,758.840	39.434195000°N	108.037307000°W	
5,700.00	0.00	0.00	5,354.74	1,128.68	-1,109.68	14,335,158.152	782,758.840	39.434195000°N	108.037307000°W	
5,775.26	0.00	0.00	5,430.00	1,128.68	-1,109.68	14,335,158.152	782,758.840	39.434195000°N	108.037307000°W	
Cameo										
5,800.00	0.00	0.00	5,454.74	1,128.68	-1,109.68	14,335,158.152	782,758.840	39.434195000°N	108.037307000°W	
5,900.00	0.00	0.00	5,554.74	1,128.68	-1,109.68	14,335,158.152	782,758.840	39.434195000°N	108.037307000°W	
6,000.00	0.00	0.00	5,654.74	1,128.68	-1,109.68	14,335,158.152	782,758.840	39.434195000°N	108.037307000°W	
6,100.00	0.00	0.00	5,754.74	1,128.68	-1,109.68	14,335,158.152	782,758.840	39.434195000°N	108.037307000°W	
6,200.00	0.00	0.00	5,854.74	1,128.68	-1,109.68	14,335,158.152	782,758.840	39.434195000°N	108.037307000°W	
6,300.00	0.00	0.00	5,954.74	1,128.68	-1,109.68	14,335,158.152	782,758.840	39.434195000°N	108.037307000°W	
6,400.00	0.00	0.00	6,054.74	1,128.68	-1,109.68	14,335,158.152	782,758.840	39.434195000°N	108.037307000°W	
6,475.26	0.00	0.00	6,130.00	1,128.68	-1,109.68	14,335,158.152	782,758.840	39.434195000°N	108.037307000°W	
Rollins										
6,500.00	0.00	0.00	6,154.74	1,128.68	-1,109.68	14,335,158.152	782,758.840	39.434195000°N	108.037307000°W	
6,575.26	0.00	0.00	6,230.00	1,128.68	-1,109.68	14,335,158.152	782,758.840	39.434195000°N	108.037307000°W	
TD at 6575 MD/6230 TVD										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
BAT 33D Top Gas	0.00	0.00	4,230.00	1,128.68	-1,109.68	14,335,158.152	782,758.840	39.434195000°N	108.037307000°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	999.58	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 33D-18-07-95 (111269)
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 33D-18-07-95 (111269)	Survey Calculation Method:	Minimum Curvature
Wellbore:	BAT 33D		
Design:	BAT 33D P01		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,526.09	3,230.00	Mesaverde			
4,575.26	4,230.00	Top Gas			
5,775.26	5,430.00	Cameo			
6,475.26	6,130.00	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
1,075.00	1,044.99	125.11	-122.98	Build 3°/100 at 1075 MD/1045 TVD
1,149.25	1,111.79	140.03	-137.66	Hold 27° at 1149 MD/1112 TVD
3,676.02	3,363.61	163.13	-160.37	Drop 3°/100 at 3676 MD/3364 TVD
4,575.26	4,230.00	980.48	-963.98	Vertical at 4575 MD/4230 TVD
6,575.26	6,230.00	1,128.68	-1,109.68	TD at 6575 MD/6230 TVD