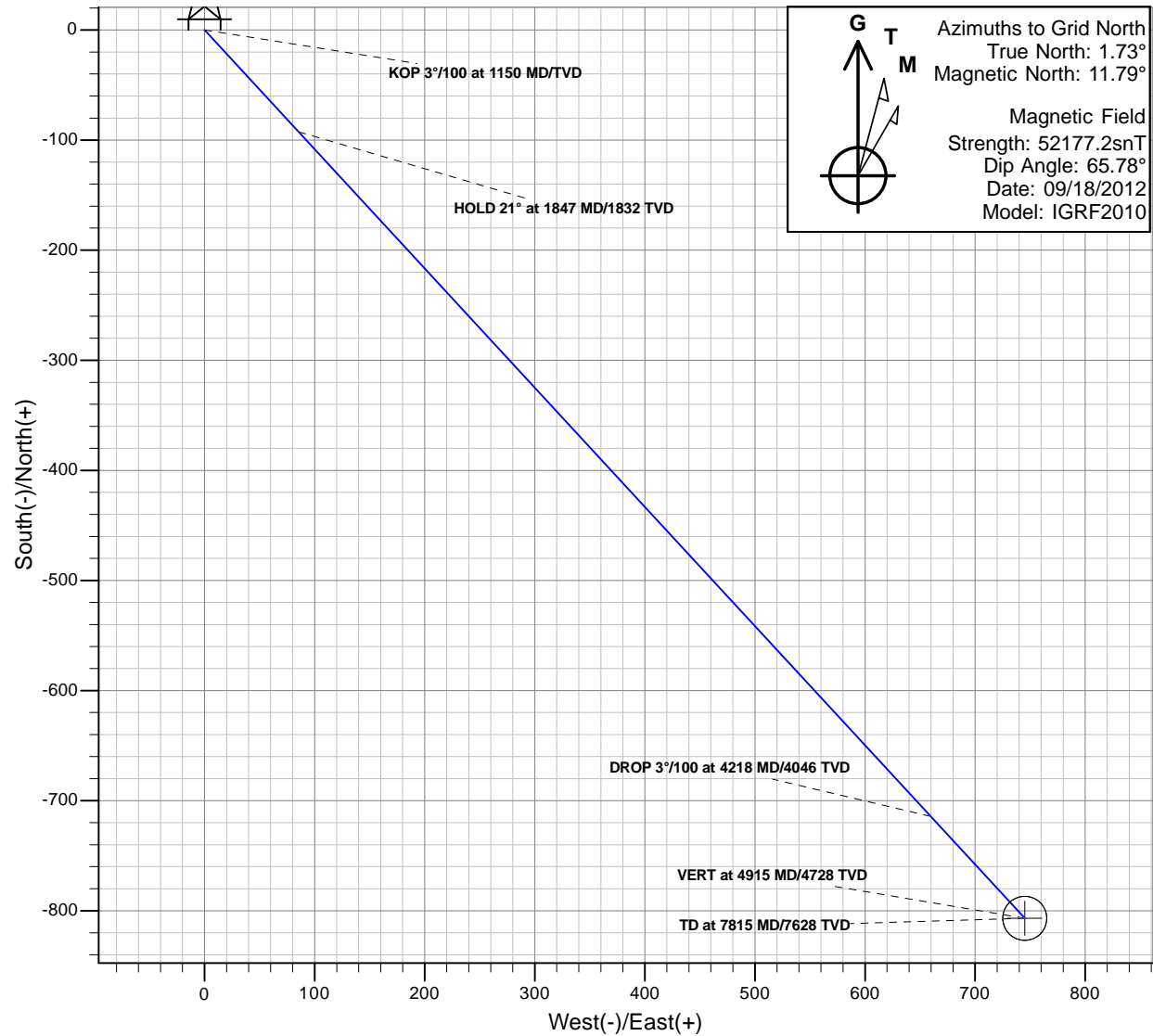
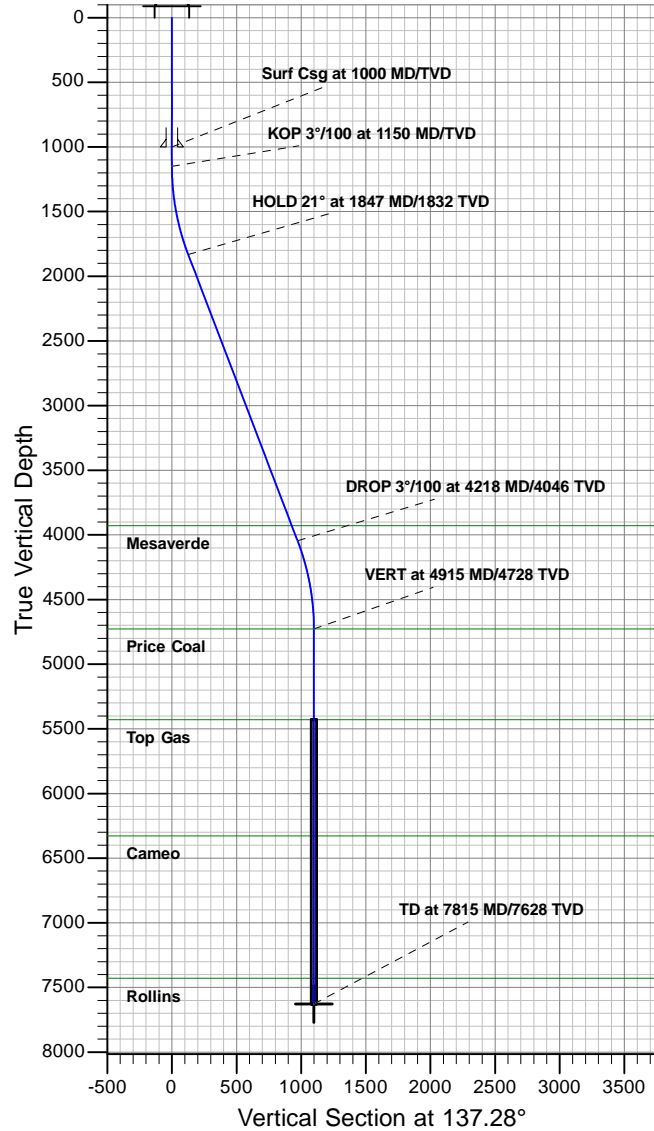




# Antero Resources

Dever A05 (112034)  
Dever A05 P01



## REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Site Dever A, Grid North  
Vertical (TVD) Reference: RKB @ 5596.00ft  
Section (VS) Reference: Slot - (0.00N, 0.00E)  
Measured Depth Reference: RKB @ 5596.00ft  
Calculation Method: Minimum Curvature

## PROJECT DETAILS: Dever

Geodetic System: Universal Transverse Mercator  
Datum: North American Datum 1983  
Ellipsoid: GRS 1980  
Zone: Zone 13N (108 W to 102 W)  
System Datum: Mean Sea Level

## SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1150.00	0.00	0.00	1150.00	0.00	0.00	0.00	0.00	0.00	
1847.44	20.92	137.28	1832.05	-92.52	85.44	3.00	137.28	125.94	
4217.65	20.92	137.28	4045.95	-714.38	659.69	0.00	0.00	972.38	
4915.09	0.00	137.28	4728.00	-806.90	745.13	3.00	180.00	1098.32	
7815.09	0.00	137.28	7628.00	-806.90	745.13	0.00	137.28	1098.32	A5 BH



# **Antero Resources**

**Dever**

**Dever A**

**Dever A05 (112034)**

**Dever A05**

**Plan: Dever A05 P01**

## **Standard Planning Report - Geographic**

**21 June, 2012**



<b>Database:</b>	EDM5000	<b>Local Co-ordinate Reference:</b>	Site Dever A
<b>Company:</b>	Antero Resources	<b>TVD Reference:</b>	RKB @ 5596.00ft
<b>Project:</b>	Dever	<b>MD Reference:</b>	RKB @ 5596.00ft
<b>Site:</b>	Dever A	<b>North Reference:</b>	Grid
<b>Well:</b>	Dever A05 (112034)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Dever A05		
<b>Design:</b>	Dever A05 P01		

Project	Dever		
Map System:	Universal Transverse Mercator	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Zone 13N (108 W to 102 W)		

Site	Dever A				
Site Position:		Northing:	14,364,188.06 usft	Latitude:	39.522029499°N
From:	Map	Easting:	876,519.77 usft	Longitude:	107.708720443°W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.72 °

Well	Dever A05 (112034)					
Well Position	+N/-S	0.00 ft	Northing:	14,364,188.06 usft	Latitude:	39.522029499°N
	+E/-W	0.00 ft	Easting:	876,519.77 usft	Longitude:	107.708720443°W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,572.00 ft

Wellbore	Dever A05				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	09/18/12	10.06	65.78	52,177

Design	Dever A05 P01			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	137.28

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	
1,150.00	0.00	0.00	1,150.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,847.44	20.92	137.28	1,832.05	-92.52	85.44	3.00	3.00	0.00	137.28	
4,217.65	20.92	137.28	4,045.95	-714.38	659.69	0.00	0.00	0.00	0.00	
4,915.09	0.00	137.28	4,728.00	-806.90	745.13	3.00	-3.00	0.00	180.00	
7,815.09	0.00	137.28	7,628.00	-806.90	745.13	0.00	0.00	0.00	137.28	A5 BH

<b>Database:</b>	EDM5000	<b>Local Co-ordinate Reference:</b>	Site Dever A
<b>Company:</b>	Antero Resources	<b>TVD Reference:</b>	RKB @ 5596.00ft
<b>Project:</b>	Dever	<b>MD Reference:</b>	RKB @ 5596.00ft
<b>Site:</b>	Dever A	<b>North Reference:</b>	Grid
<b>Well:</b>	Dever A05 (112034)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Dever A05		
<b>Design:</b>	Dever A05 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	14,364,188.06	876,519.77	39.522029499°N	107.708720443°W
100.00	0.00	0.00	100.00	0.00	0.00	14,364,188.06	876,519.77	39.522029499°N	107.708720443°W
200.00	0.00	0.00	200.00	0.00	0.00	14,364,188.06	876,519.77	39.522029499°N	107.708720443°W
300.00	0.00	0.00	300.00	0.00	0.00	14,364,188.06	876,519.77	39.522029499°N	107.708720443°W
400.00	0.00	0.00	400.00	0.00	0.00	14,364,188.06	876,519.77	39.522029499°N	107.708720443°W
500.00	0.00	0.00	500.00	0.00	0.00	14,364,188.06	876,519.77	39.522029499°N	107.708720443°W
600.00	0.00	0.00	600.00	0.00	0.00	14,364,188.06	876,519.77	39.522029499°N	107.708720443°W
700.00	0.00	0.00	700.00	0.00	0.00	14,364,188.06	876,519.77	39.522029499°N	107.708720443°W
800.00	0.00	0.00	800.00	0.00	0.00	14,364,188.06	876,519.77	39.522029499°N	107.708720443°W
900.00	0.00	0.00	900.00	0.00	0.00	14,364,188.06	876,519.77	39.522029499°N	107.708720443°W
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,364,188.06	876,519.77	39.522029499°N	107.708720443°W
<b>Surf Csg at 1000 MD/TVD</b>									
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,364,188.06	876,519.77	39.522029499°N	107.708720443°W
1,150.00	0.00	0.00	1,150.00	0.00	0.00	14,364,188.06	876,519.77	39.522029499°N	107.708720443°W
<b>KOP 3°/100 at 1150 MD/TVD</b>									
1,200.00	1.50	137.28	1,199.99	-0.48	0.44	14,364,187.58	876,520.21	39.522028216°N	107.708718819°W
1,300.00	4.50	137.28	1,299.85	-4.33	3.99	14,364,183.73	876,523.76	39.522017963°N	107.708705833°W
1,400.00	7.50	137.28	1,399.29	-12.00	11.08	14,364,176.05	876,530.85	39.521997484°N	107.708679898°W
1,500.00	10.50	137.28	1,498.04	-23.50	21.70	14,364,164.56	876,541.46	39.521966836°N	107.708641083°W
1,600.00	13.50	137.28	1,595.85	-38.77	35.80	14,364,149.29	876,555.57	39.521926102°N	107.708589497°W
1,700.00	16.50	137.28	1,692.43	-57.78	53.36	14,364,130.28	876,573.12	39.521875394°N	107.708525279°W
1,800.00	19.50	137.28	1,787.52	-80.48	74.32	14,364,107.58	876,594.09	39.521814852°N	107.708448606°W
1,847.44	20.92	137.28	1,832.05	-92.52	85.44	14,364,095.54	876,605.21	39.521782735°N	107.708407932°W
<b>HOLD 21° at 1847 MD/1832 TVD</b>									
1,900.00	20.92	137.28	1,881.14	-106.31	98.17	14,364,081.75	876,617.94	39.521745960°N	107.708361359°W
2,000.00	20.92	137.28	1,974.54	-132.55	122.40	14,364,055.51	876,642.17	39.521675986°N	107.708272741°W
2,100.00	20.92	137.28	2,067.95	-158.78	146.63	14,364,029.27	876,666.39	39.521606011°N	107.708184124°W
2,200.00	20.92	137.28	2,161.35	-185.02	170.86	14,364,003.04	876,690.62	39.521536037°N	107.708095507°W
2,300.00	20.92	137.28	2,254.76	-211.26	195.08	14,363,976.80	876,714.85	39.521466063°N	107.708006890°W
2,400.00	20.92	137.28	2,348.17	-237.49	219.31	14,363,950.57	876,739.08	39.521396088°N	107.707918273°W
2,500.00	20.92	137.28	2,441.57	-263.73	243.54	14,363,924.33	876,763.31	39.521326113°N	107.707829657°W
2,600.00	20.92	137.28	2,534.98	-289.97	267.77	14,363,898.09	876,787.53	39.521256139°N	107.707741041°W
2,700.00	20.92	137.28	2,628.38	-316.20	292.00	14,363,871.86	876,811.76	39.521186164°N	107.707652424°W
2,800.00	20.92	137.28	2,721.79	-342.44	316.22	14,363,845.62	876,835.99	39.521116189°N	107.707563808°W
2,900.00	20.92	137.28	2,815.20	-368.67	340.45	14,363,819.38	876,860.22	39.521046214°N	107.707475193°W
3,000.00	20.92	137.28	2,908.60	-394.91	364.68	14,363,793.15	876,884.45	39.520976239°N	107.707386577°W
3,100.00	20.92	137.28	3,002.01	-421.15	388.91	14,363,766.91	876,908.67	39.520906264°N	107.707297962°W
3,200.00	20.92	137.28	3,095.41	-447.38	413.14	14,363,740.68	876,932.90	39.520836289°N	107.707209346°W
3,300.00	20.92	137.28	3,188.82	-473.62	437.36	14,363,714.44	876,957.13	39.520766314°N	107.707120731°W
3,400.00	20.92	137.28	3,282.22	-499.86	461.59	14,363,688.20	876,981.36	39.520696338°N	107.707032116°W
3,500.00	20.92	137.28	3,375.63	-526.09	485.82	14,363,661.97	877,005.58	39.520626363°N	107.706943502°W
3,600.00	20.92	137.28	3,469.04	-552.33	510.05	14,363,635.73	877,029.81	39.520556387°N	107.706854887°W
3,700.00	20.92	137.28	3,562.44	-578.56	534.28	14,363,609.49	877,054.04	39.520486412°N	107.706766273°W
3,800.00	20.92	137.28	3,655.85	-604.80	558.50	14,363,583.26	877,078.27	39.520416436°N	107.706677658°W
3,900.00	20.92	137.28	3,749.25	-631.04	582.73	14,363,557.02	877,102.50	39.520346461°N	107.706589044°W
4,000.00	20.92	137.28	3,842.66	-657.27	606.96	14,363,530.79	877,126.72	39.520276485°N	107.706500431°W
4,091.36	20.92	137.28	3,928.00	-681.24	629.10	14,363,506.82	877,148.86	39.520212552°N	107.706419469°W
<b>Mesaverde</b>									
4,100.00	20.92	137.28	3,936.07	-683.51	631.19	14,363,504.55	877,150.95	39.520206509°N	107.706411817°W
4,200.00	20.92	137.28	4,029.47	-709.75	655.42	14,363,478.31	877,175.18	39.520136533°N	107.706323204°W
4,217.65	20.92	137.28	4,045.95	-714.38	659.69	14,363,473.68	877,179.45	39.520124185°N	107.706307567°W
<b>DROP 3°/100 at 4218 MD/4046 TVD</b>									
4,300.00	18.45	137.28	4,123.49	-734.76	678.51	14,363,453.30	877,198.28	39.520069824°N	107.706238728°W
4,400.00	15.45	137.28	4,219.13	-756.18	698.29	14,363,431.88	877,218.06	39.520012696°N	107.706166384°W



Database:	EDM5000	Local Co-ordinate Reference:	Site Dever A
Company:	Antero Resources	TVD Reference:	RKB @ 5596.00ft
Project:	Dever	MD Reference:	RKB @ 5596.00ft
Site:	Dever A	North Reference:	Grid
Well:	Dever A05 (112034)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dever A05		
Design:	Dever A05 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	12.45	137.28	4,316.17	-773.89	714.65	14,363,414.17	877,234.41	39.519965455°N	107.706106561°W
4,600.00	9.45	137.28	4,414.34	-787.85	727.54	14,363,400.21	877,247.30	39.519928230°N	107.706059421°W
4,700.00	6.45	137.28	4,513.36	-798.01	736.92	14,363,390.05	877,256.69	39.519901122°N	107.706025095°W
4,800.00	3.45	137.28	4,612.98	-804.35	742.78	14,363,383.71	877,262.54	39.519884208°N	107.706003675°W
4,900.00	0.45	137.28	4,712.91	-806.85	745.09	14,363,381.21	877,264.85	39.519877532°N	107.705995221°W
4,915.09	0.00	137.28	4,728.00	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
VERT at 4915 MD/4728 TVD - Price Coal									
5,000.00	0.00	137.28	4,812.91	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
5,100.00	0.00	137.28	4,912.91	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
5,200.00	0.00	137.28	5,012.91	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
5,300.00	0.00	137.28	5,112.91	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
5,400.00	0.00	137.28	5,212.91	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
5,500.00	0.00	137.28	5,312.91	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
5,600.00	0.00	137.28	5,412.91	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
5,615.09	0.00	137.28	5,428.00	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
Top Gas									
5,700.00	0.00	137.28	5,512.91	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
5,800.00	0.00	137.28	5,612.91	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
5,900.00	0.00	137.28	5,712.91	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
6,000.00	0.00	137.28	5,812.91	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
6,100.00	0.00	137.28	5,912.91	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
6,200.00	0.00	137.28	6,012.91	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
6,300.00	0.00	137.28	6,112.91	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
6,400.00	0.00	137.28	6,212.91	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
6,500.00	0.00	137.28	6,312.91	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
6,515.09	0.00	137.28	6,328.00	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
Cameo									
6,600.00	0.00	137.28	6,412.91	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
6,700.00	0.00	137.28	6,512.91	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
6,800.00	0.00	137.28	6,612.91	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
6,900.00	0.00	137.28	6,712.91	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
7,000.00	0.00	137.28	6,812.91	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
7,100.00	0.00	137.28	6,912.91	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
7,200.00	0.00	137.28	7,012.91	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
7,300.00	0.00	137.28	7,112.91	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
7,400.00	0.00	137.28	7,212.91	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
7,500.00	0.00	137.28	7,312.91	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
7,600.00	0.00	137.28	7,412.91	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
7,615.09	0.00	137.28	7,428.00	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
Rollins									
7,700.00	0.00	137.28	7,512.91	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
7,800.00	0.00	137.28	7,612.91	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
7,815.09	0.00	137.28	7,628.00	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
TD at 7815 MD/7628 TVD - A5 BH									

<b>Database:</b>	EDM5000	<b>Local Co-ordinate Reference:</b>	Site Dever A
<b>Company:</b>	Antero Resources	<b>TVD Reference:</b>	RKB @ 5596.00ft
<b>Project:</b>	Dever	<b>MD Reference:</b>	RKB @ 5596.00ft
<b>Site:</b>	Dever A	<b>North Reference:</b>	Grid
<b>Well:</b>	Dever A05 (112034)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Dever A05		
<b>Design:</b>	Dever A05 P01		

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
A5 BH	0.00	0.01	7,628.00	-806.90	745.13	14,363,381.16	877,264.89	39.519877415°N	107.705995073°W
- plan hits target center									
- Circle (radius 20.00)									

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	5.500	6.000	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,091.36	3,928.00	Mesaverde			
4,915.09	4,728.00	Price Coal			
5,615.09	5,428.00	Top Gas			
6,515.09	6,328.00	Cameo			
7,615.09	7,428.00	Rollins			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,150.00	1,150.00	0.00	0.00	KOP 3°/100 at 1150 MD/TVD	
1,847.44	1,832.05	-92.52	85.44	HOLD 21° at 1847 MD/1832 TVD	
4,217.65	4,045.95	-714.38	659.69	DROP 3°/100 at 4218 MD/4046 TVD	
4,915.09	4,728.00	-806.90	745.13	VERT at 4915 MD/4728 TVD	
7,815.09	7,628.00	-806.90	745.13	TD at 7815 MD/7628 TVD	