



REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well Dixon A10 (112025) - Slot A10, Grid North
Vertical (TVD) Reference: KB @ 5559.00ft (Original Well Elev)
Section (VS) Reference: Slot - A10(0.00N, 0.00E)
Measured Depth Reference: KB @ 5559.00ft (Original Well Elev)
Calculation Method: Minimum Curvature

PROJECT DETAILS: Dixon

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	VSec	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1350.00	0.00	0.00	1350.00	0.00	0.00	0.00	0.00	0.00	
1550.00	6.00	170.00	1549.63	-10.30	1.82	3.00	170.00	7.75	
2746.17	40.00	213.93	2638.40	-403.83	-208.87	3.00	49.54	453.02	
4031.89	40.00	213.93	3623.26	-1089.61	-670.21	0.00	0.00	1279.16	
5365.37	0.00	213.93	4851.00	-1460.42	-919.67	3.00	180.00	1725.87	
8243.37	0.00	213.93	7729.00	-1460.42	-919.67	0.00	213.93	1725.87	BH A10



Antero Resources

Dixon

Dixon A

Dixon A10 (112025) - Slot A10

Dixon A10

Plan: Dixon A10 P01

Standard Planning Report - Geographic

24 May, 2012



Database:	EDM5000-New	Local Co-ordinate Reference:	Well Dixon A10 (112025) - Slot A10
Company:	Antero Resources	TVD Reference:	KB @ 5559.00ft (Original Well Elev)
Project:	Dixon	MD Reference:	KB @ 5559.00ft (Original Well Elev)
Site:	Dixon A	North Reference:	Grid
Well:	Dixon A10 (112025)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dixon A10		
Design:	Dixon A10 P01		

Project	Dixon		
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	Dixon A					
Site Position:		Northing:	14,366,922.96 usft	Latitude:	39.529609988°N	
From:	Map	Easting:	877,460.93 usft	Longitude:	107.705677999°W	
Position Uncertainty:		0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.72 °

Well	Dixon A10 (112025) - Slot A10					
Well Position	+N/-S	0.00 ft	Northing:	14,366,923.35 usft	Latitude:	39.529608574°N
	+E/-W	0.00 ft	Easting:	877,430.78 usft	Longitude:	107.705784853°W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,535.00 ft

Wellbore	Dixon A10				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	08/23/12	10.07	65.79	52,189

Design	Dixon A10 P01			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	212.20

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	
1,350.00	0.00	0.00	1,350.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,550.00	6.00	170.00	1,549.63	-10.30	1.82	3.00	3.00	0.00	170.00	
2,746.17	40.00	213.93	2,638.40	-403.83	-208.87	3.00	2.84	3.67	49.54	
4,031.89	40.00	213.93	3,623.26	-1,089.61	-670.21	0.00	0.00	0.00	0.00	
5,365.37	0.00	213.93	4,851.00	-1,460.42	-919.67	3.00	-3.00	0.00	180.00	
8,243.37	0.00	213.93	7,729.00	-1,460.42	-919.67	0.00	0.00	0.00	213.93	BH A10

Database:	EDM5000-New	Local Co-ordinate Reference:	Well Dixon A10 (112025) - Slot A10
Company:	Antero Resources	TVD Reference:	KB @ 5559.00ft (Original Well Elev)
Project:	Dixon	MD Reference:	KB @ 5559.00ft (Original Well Elev)
Site:	Dixon A	North Reference:	Grid
Well:	Dixon A10 (112025)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dixon A10		
Design:	Dixon A10 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	14,366,923.35	877,430.78	39.529608574°N	107.705784853°W
Wasatch									
100.00	0.00	0.00	100.00	0.00	0.00	14,366,923.35	877,430.78	39.529608574°N	107.705784853°W
200.00	0.00	0.00	200.00	0.00	0.00	14,366,923.35	877,430.78	39.529608574°N	107.705784853°W
300.00	0.00	0.00	300.00	0.00	0.00	14,366,923.35	877,430.78	39.529608574°N	107.705784853°W
400.00	0.00	0.00	400.00	0.00	0.00	14,366,923.35	877,430.78	39.529608574°N	107.705784853°W
500.00	0.00	0.00	500.00	0.00	0.00	14,366,923.35	877,430.78	39.529608574°N	107.705784853°W
600.00	0.00	0.00	600.00	0.00	0.00	14,366,923.35	877,430.78	39.529608574°N	107.705784853°W
700.00	0.00	0.00	700.00	0.00	0.00	14,366,923.35	877,430.78	39.529608574°N	107.705784853°W
800.00	0.00	0.00	800.00	0.00	0.00	14,366,923.35	877,430.78	39.529608574°N	107.705784853°W
900.00	0.00	0.00	900.00	0.00	0.00	14,366,923.35	877,430.78	39.529608574°N	107.705784853°W
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,366,923.35	877,430.78	39.529608574°N	107.705784853°W
Surf Csg at 1000 MD/TVD									
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,366,923.35	877,430.78	39.529608574°N	107.705784853°W
1,200.00	0.00	0.00	1,200.00	0.00	0.00	14,366,923.35	877,430.78	39.529608574°N	107.705784853°W
1,300.00	0.00	0.00	1,300.00	0.00	0.00	14,366,923.35	877,430.78	39.529608574°N	107.705784853°W
1,350.00	0.00	0.00	1,350.00	0.00	0.00	14,366,923.35	877,430.78	39.529608574°N	107.705784853°W
Nudge 3°/100 at 1350 MD/TVD									
1,400.00	1.50	170.00	1,399.99	-0.64	0.11	14,366,922.71	877,430.90	39.529606815°N	107.705784382°W
1,500.00	4.50	170.00	1,499.85	-5.80	1.02	14,366,917.56	877,431.80	39.529592752°N	107.705780614°W
1,550.00	6.00	170.00	1,549.63	-10.30	1.82	14,366,913.05	877,432.60	39.529580458°N	107.705777319°W
Build 3°/100 at 1550 MD/TVD									
1,600.00	7.07	179.32	1,599.31	-15.95	2.31	14,366,907.40	877,433.09	39.529565002°N	107.705774980°W
1,700.00	9.55	191.08	1,698.26	-30.25	0.78	14,366,893.11	877,431.57	39.529525657°N	107.705778849°W
1,800.00	12.27	197.86	1,796.45	-48.51	-4.07	14,366,874.85	877,426.71	39.529475163°N	107.705794104°W
1,900.00	15.09	202.18	1,893.60	-70.68	-12.25	14,366,852.67	877,418.54	39.529413658°N	107.705820701°W
2,000.00	17.97	205.15	1,989.46	-96.71	-23.72	14,366,826.65	877,407.06	39.529341311°N	107.705858569°W
2,100.00	20.88	207.32	2,083.76	-126.52	-38.46	14,366,796.84	877,392.33	39.529258319°N	107.705907603°W
2,200.00	23.82	208.97	2,176.24	-160.03	-56.42	14,366,763.33	877,374.36	39.529164911°N	107.705967670°W
2,300.00	26.76	210.28	2,266.64	-197.14	-77.56	14,366,726.21	877,353.22	39.529061342°N	107.706038603°W
2,400.00	29.72	211.35	2,354.73	-237.77	-101.82	14,366,685.59	877,328.96	39.528947895°N	107.706120209°W
2,500.00	32.69	212.24	2,440.25	-281.79	-129.13	14,366,641.57	877,301.66	39.528824883°N	107.706212265°W
2,600.00	35.66	213.00	2,522.98	-329.08	-159.41	14,366,594.28	877,271.37	39.528692642°N	107.706314516°W
2,700.00	38.63	213.66	2,602.68	-379.52	-192.59	14,366,543.84	877,238.19	39.528551535°N	107.706426684°W
2,746.17	40.00	213.93	2,638.40	-403.83	-208.87	14,366,519.53	877,221.92	39.528483496°N	107.706481738°W
Hold 40° at 2746 MD/2638 TVD									
2,800.00	40.00	213.93	2,679.63	-432.54	-228.18	14,366,490.82	877,202.60	39.528403139°N	107.706547099°W
2,900.00	40.00	213.93	2,756.23	-485.88	-264.06	14,366,437.48	877,166.72	39.528253852°N	107.706668528°W
3,000.00	40.00	213.93	2,832.83	-539.22	-299.94	14,366,384.14	877,130.84	39.528104565°N	107.706789955°W
3,100.00	40.00	213.93	2,909.43	-592.55	-335.83	14,366,330.80	877,094.96	39.527955278°N	107.706911383°W
3,200.00	40.00	213.93	2,986.03	-645.89	-371.71	14,366,277.46	877,059.07	39.527805991°N	107.707032809°W
3,300.00	40.00	213.93	3,062.63	-699.23	-407.59	14,366,224.12	877,023.19	39.527656704°N	107.707154236°W
3,400.00	40.00	213.93	3,139.23	-752.57	-443.47	14,366,170.79	876,987.31	39.527507416°N	107.707275661°W
3,500.00	40.00	213.93	3,215.83	-805.91	-479.36	14,366,117.45	876,951.43	39.527358128°N	107.707397087°W
3,600.00	40.00	213.93	3,292.43	-859.25	-515.24	14,366,064.11	876,915.54	39.527208841°N	107.707518511°W
3,700.00	40.00	213.93	3,369.03	-912.58	-551.12	14,366,010.77	876,879.66	39.527059553°N	107.707639935°W
3,800.00	40.00	213.93	3,445.63	-965.92	-587.00	14,365,957.43	876,843.78	39.526910265°N	107.707761359°W
3,900.00	40.00	213.93	3,522.23	-1,019.26	-622.88	14,365,904.10	876,807.90	39.526760977°N	107.707882782°W
4,000.00	40.00	213.93	3,598.83	-1,072.60	-658.77	14,365,850.76	876,772.02	39.526611689°N	107.708004205°W
4,031.89	40.00	213.93	3,623.26	-1,089.61	-670.21	14,365,833.75	876,760.57	39.526564082°N	107.708042925°W
Drop 3°/100 at 4032 MD/3623 TVD									
4,100.00	37.96	213.93	3,676.20	-1,125.16	-694.12	14,365,798.20	876,736.66	39.526464582°N	107.708123852°W
4,200.00	34.96	213.93	3,756.61	-1,174.46	-727.29	14,365,748.90	876,703.49	39.526326589°N	107.708236087°W
4,300.00	31.96	213.93	3,840.03	-1,220.20	-758.06	14,365,703.15	876,672.72	39.526198559°N	107.708340219°W

Database:	EDM5000-New	Local Co-ordinate Reference:	Well Dixon A10 (112025) - Slot A10
Company:	Antero Resources	TVD Reference:	KB @ 5559.00ft (Original Well Elev)
Project:	Dixon	MD Reference:	KB @ 5559.00ft (Original Well Elev)
Site:	Dixon A	North Reference:	Grid
Well:	Dixon A10 (112025)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dixon A10		
Design:	Dixon A10 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
4,400.00	28.96	213.93	3,926.22	-1,262.26	-786.36	14,365,661.10	876,644.43	39.526080842°N	107.708435961°W
4,500.00	25.96	213.93	4,014.94	-1,300.52	-812.10	14,365,622.84	876,618.69	39.525973763°N	107.708523052°W
4,515.61	25.49	213.93	4,029.00	-1,306.14	-815.88	14,365,617.22	876,614.91	39.525958031°N	107.708535847°W
Mesaverde									
4,600.00	22.96	213.93	4,105.96	-1,334.87	-835.21	14,365,588.48	876,595.58	39.525877613°N	107.708601253°W
4,700.00	19.96	213.93	4,199.01	-1,365.23	-855.62	14,365,558.13	876,575.16	39.525792656°N	107.708670349°W
4,800.00	16.96	213.93	4,293.85	-1,391.50	-873.30	14,365,531.86	876,557.49	39.525719127°N	107.708730153°W
4,900.00	13.96	213.93	4,390.22	-1,413.61	-888.18	14,365,509.74	876,542.61	39.525657225°N	107.708780498°W
5,000.00	10.96	213.93	4,487.86	-1,431.51	-900.22	14,365,491.84	876,530.56	39.525607121°N	107.708821249°W
5,100.00	7.96	213.93	4,586.49	-1,445.15	-909.39	14,365,478.21	876,521.39	39.525568952°N	107.708852292°W
5,200.00	4.96	213.93	4,685.84	-1,454.49	-915.67	14,365,468.87	876,515.11	39.525542822°N	107.708873544°W
5,300.00	1.96	213.93	4,785.65	-1,459.49	-919.04	14,365,463.86	876,511.74	39.525528804°N	107.708884945°W
5,343.37	0.66	213.93	4,829.00	-1,460.32	-919.60	14,365,463.04	876,511.19	39.525526501°N	107.708886818°W
Price Coal									
5,365.37	0.00	213.93	4,851.00	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
Vertical at 5365 MD/4851 TVD									
5,400.00	0.00	213.93	4,885.63	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
5,500.00	0.00	213.93	4,985.63	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
5,600.00	0.00	213.93	5,085.63	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
5,700.00	0.00	213.93	5,185.63	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
5,800.00	0.00	213.93	5,285.63	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
5,900.00	0.00	213.93	5,385.63	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
6,000.00	0.00	213.93	5,485.63	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
6,043.37	0.00	213.93	5,529.00	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
Top Gas									
6,100.00	0.00	213.93	5,585.63	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
6,200.00	0.00	213.93	5,685.63	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
6,300.00	0.00	213.93	5,785.63	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
6,400.00	0.00	213.93	5,885.63	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
6,500.00	0.00	213.93	5,985.63	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
6,600.00	0.00	213.93	6,085.63	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
6,700.00	0.00	213.93	6,185.63	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
6,800.00	0.00	213.93	6,285.63	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
6,900.00	0.00	213.93	6,385.63	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
6,943.37	0.00	213.93	6,429.00	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
Cameo									
7,000.00	0.00	213.93	6,485.63	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
7,100.00	0.00	213.93	6,585.63	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
7,200.00	0.00	213.93	6,685.63	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
7,300.00	0.00	213.93	6,785.63	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
7,400.00	0.00	213.93	6,885.63	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
7,500.00	0.00	213.93	6,985.63	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
7,600.00	0.00	213.93	7,085.63	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
7,700.00	0.00	213.93	7,185.63	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
7,800.00	0.00	213.93	7,285.63	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
7,900.00	0.00	213.93	7,385.63	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
8,000.00	0.00	213.93	7,485.63	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
8,043.37	0.00	213.93	7,529.00	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
Rollins									
8,100.00	0.00	213.93	7,585.63	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
8,200.00	0.00	213.93	7,685.63	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
8,243.37	0.00	213.93	7,729.00	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
TD at 8243 MD/7729 TVD									

Database:	EDM5000-New	Local Co-ordinate Reference:	Well Dixon A10 (112025) - Slot A10
Company:	Antero Resources	TVD Reference:	KB @ 5559.00ft (Original Well Elev)
Project:	Dixon	MD Reference:	KB @ 5559.00ft (Original Well Elev)
Site:	Dixon A	North Reference:	Grid
Well:	Dixon A10 (112025)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dixon A10		
Design:	Dixon A10 P01		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
BH A10	0.00	360.00	7,729.00	-1,460.42	-919.67	14,365,462.93	876,511.12	39.525526207°N	107.708887057°W
- plan hits target center									
- Circle (radius 20.00)									

Casing Points					
Measured Depth	Vertical Depth			Casing Diameter	Hole Diameter
(ft)	(ft)	Name		(in)	(in)
1,000.00	1,000.00	Surf Csg at 1000 MD/TVD		5.500	6.000

Formations						
Measured Depth	Vertical Depth				Dip	Dip Direction
(ft)	(ft)	Name	Lithology		(°)	(°)
0.00	0.00	Wasatch				
4,515.61	4,029.00	Mesaverde				
5,343.37	4,829.00	Price Coal				
6,043.37	5,529.00	Top Gas				
6,943.37	6,429.00	Cameo				
8,043.37	7,529.00	Rollins				

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(ft)	(ft)	+N/-S	+E/-W	Comment	
(ft)	(ft)	(ft)	(ft)		
1,350.00	1,350.00	0.00	0.00	Nudge 3°/100 at 1350 MD/TVD	
1,550.00	1,549.63	-10.30	1.82	Build 3°/100 at 1550 MD/TVD	
2,746.17	2,638.40	-403.83	-208.87	Hold 40° at 2746 MD/2638 TVD	
4,031.89	3,623.26	-1,089.61	-670.21	Drop 3°/100 at 4032 MD/3623 TVD	
5,365.37	4,851.00	-1,460.42	-919.67	Vertical at 5365 MD/4851 TVD	
8,243.37	7,729.00	-1,460.42	-919.67	TD at 8243 MD/7729 TVD	