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Azimuths to Grid North

True North: 1.72°

Magnetic North: 11.81°

Magnetic Field

Strength: 52197.2snT

Dip Angle: 65.79°

Date: 07/25/2012

Model: IGRF2010

REFERENCE INFORMATION	
ordinate (N/E) Reference: Well Dixon A08 (112014) - Slot A08, Grid North	
vertical (TVD) Reference: KB @ 5559.00ft (Original Well Elev)	
Section (VS) Reference: Slot - A08(0.00N, 0.00E)	
asured 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
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
1599.02	13.47	254.86	1594.90	-13.72	-50.72	3.00	254.86
4559.68	13.47	254.86	4474.10	-193.63	-716.46	3.00	254.86
5008.70	0.00	254.86	4918.00	-207.55	-767.18	3.00	180.00
7908.70	0.00	254.86	7819.00	-207.55	-767.18	0.00	254.86
							794.76
							BH A08

Antero Resources

Dixon

Dixon A

Dixon A08 (112014) - Slot A08

Dixon A08

Plan: Dixon A08 P01

Standard Planning Report - Geographic

26 April, 2012

Planning Report - Geographic

Database:	EDM5000-New	Local Co-ordinate Reference:	Well Dixon A08 (112014) - Slot A08
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 A08 (112014)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dixon A08		
Design:	Dixon A08 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 A08 (112014) - Slot A08					
Well Position	+N/-S	0.00 ft	Northing:	14,366,924.15 usft	Latitude:	39.529606630°N
	+E/-W	0.00 ft	Easting:	877,380.79 usft	Longitude:	107.705962033°W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,535.00 ft

Wellbore	Dixon A08				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	07/25/12	10.08	65.79	52,197

Design	Dixon A08 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	254.86

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	
1,599.02	13.47	254.86	1,594.90	-13.72	-50.72	3.00	3.00	0.00	254.86	
4,559.68	13.47	254.86	4,474.10	-193.83	-716.46	0.00	0.00	0.00	0.00	
5,008.70	0.00	254.86	4,919.00	-207.55	-767.18	3.00	-3.00	0.00	180.00	
7,908.70	0.00	254.86	7,819.00	-207.55	-767.18	0.00	0.00	0.00	254.86	BH A08

Planning Report - Geographic

Database:	EDM5000-New	Local Co-ordinate Reference:	Well Dixon A08 (112014) - Slot A08
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 A08 (112014)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dixon A08		
Design:	Dixon A08 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	14,366,924.15	877,380.79	39.529606630°N	107.705962033°W
Wasatch									
100.00	0.00	0.00	100.00	0.00	0.00	14,366,924.15	877,380.79	39.529606630°N	107.705962033°W
200.00	0.00	0.00	200.00	0.00	0.00	14,366,924.15	877,380.79	39.529606630°N	107.705962033°W
300.00	0.00	0.00	300.00	0.00	0.00	14,366,924.15	877,380.79	39.529606630°N	107.705962033°W
400.00	0.00	0.00	400.00	0.00	0.00	14,366,924.15	877,380.79	39.529606630°N	107.705962033°W
500.00	0.00	0.00	500.00	0.00	0.00	14,366,924.15	877,380.79	39.529606630°N	107.705962033°W
600.00	0.00	0.00	600.00	0.00	0.00	14,366,924.15	877,380.79	39.529606630°N	107.705962033°W
700.00	0.00	0.00	700.00	0.00	0.00	14,366,924.15	877,380.79	39.529606630°N	107.705962033°W
800.00	0.00	0.00	800.00	0.00	0.00	14,366,924.15	877,380.79	39.529606630°N	107.705962033°W
900.00	0.00	0.00	900.00	0.00	0.00	14,366,924.15	877,380.79	39.529606630°N	107.705962033°W
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,366,924.15	877,380.79	39.529606630°N	107.705962033°W
Surf Csg at 1000 MD/TVD									
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,366,924.15	877,380.79	39.529606630°N	107.705962033°W
1,150.00	0.00	0.00	1,150.00	0.00	0.00	14,366,924.15	877,380.79	39.529606630°N	107.705962033°W
KOP 3°/100 at 1150 MD/TVD									
1,200.00	1.50	254.86	1,199.99	-0.17	-0.63	14,366,923.98	877,380.16	39.529606109°N	107.705964253°W
1,300.00	4.50	254.86	1,299.85	-1.54	-5.68	14,366,922.61	877,375.11	39.529601943°N	107.705962002°W
1,400.00	7.50	254.86	1,399.29	-4.27	-15.77	14,366,919.88	877,365.02	39.529593622°N	107.706017452°W
1,500.00	10.50	254.86	1,498.04	-8.35	-30.87	14,366,915.80	877,349.92	39.529581170°N	107.706070506°W
1,599.02	13.47	254.86	1,594.90	-13.72	-50.72	14,366,910.43	877,330.07	39.529564802°N	107.706140244°W
Hold 13° at 1599 MD/1595 TVD									
1,600.00	13.47	254.86	1,595.85	-13.78	-50.94	14,366,910.37	877,329.85	39.529564621°N	107.706141017°W
1,700.00	13.47	254.86	1,693.10	-19.86	-73.42	14,366,904.29	877,307.37	39.529546076°N	107.706220029°W
1,800.00	13.47	254.86	1,790.35	-25.95	-95.91	14,366,898.20	877,284.88	39.529527531°N	107.706299040°W
1,900.00	13.47	254.86	1,887.59	-32.03	-118.40	14,366,892.12	877,262.39	39.529508986°N	107.706378052°W
2,000.00	13.47	254.86	1,984.84	-38.11	-140.88	14,366,886.03	877,239.91	39.529490442°N	107.706457083°W
2,100.00	13.47	254.86	2,082.09	-44.20	-163.37	14,366,879.95	877,217.42	39.529471897°N	107.706536075°W
2,200.00	13.47	254.86	2,179.34	-50.28	-185.86	14,366,873.87	877,194.94	39.529453352°N	107.706615086°W
2,300.00	13.47	254.86	2,276.59	-56.36	-208.34	14,366,867.78	877,172.45	39.529434807°N	107.706694098°W
2,400.00	13.47	254.86	2,373.84	-62.45	-230.83	14,366,861.70	877,149.96	39.529416262°N	107.706773109°W
2,500.00	13.47	254.86	2,471.09	-68.53	-253.32	14,366,855.62	877,127.48	39.529397717°N	107.706852120°W
2,600.00	13.47	254.86	2,568.34	-74.61	-275.80	14,366,849.53	877,104.99	39.529379171°N	107.706931132°W
2,700.00	13.47	254.86	2,665.59	-80.70	-298.29	14,366,843.45	877,082.50	39.529360626°N	107.707010143°W
2,800.00	13.47	254.86	2,762.84	-86.78	-320.77	14,366,837.37	877,060.02	39.529342081°N	107.707089154°W
2,900.00	13.47	254.86	2,860.08	-92.86	-343.26	14,366,831.28	877,037.53	39.529323536°N	107.707168165°W
3,000.00	13.47	254.86	2,957.33	-98.95	-365.75	14,366,825.20	877,015.04	39.529304990°N	107.707247176°W
3,100.00	13.47	254.86	3,054.58	-105.03	-388.23	14,366,819.12	876,992.56	39.529286445°N	107.707326187°W
3,200.00	13.47	254.86	3,151.83	-111.12	-410.72	14,366,813.03	876,970.07	39.529267899°N	107.707405198°W
3,300.00	13.47	254.86	3,249.08	-117.20	-433.21	14,366,806.95	876,947.59	39.529249354°N	107.707484209°W
3,400.00	13.47	254.86	3,346.33	-123.28	-455.69	14,366,800.87	876,925.10	39.529230808°N	107.707563220°W
3,500.00	13.47	254.86	3,443.58	-129.37	-478.18	14,366,794.78	876,902.61	39.529212263°N	107.707642231°W
3,600.00	13.47	254.86	3,540.83	-135.45	-500.67	14,366,788.70	876,880.13	39.529193717°N	107.707721242°W
3,700.00	13.47	254.86	3,638.08	-141.53	-523.15	14,366,782.62	876,857.64	39.529175171°N	107.707800252°W
3,800.00	13.47	254.86	3,735.32	-147.62	-545.64	14,366,776.53	876,835.15	39.529156625°N	107.707879263°W
3,900.00	13.47	254.86	3,832.57	-153.70	-568.12	14,366,770.45	876,812.67	39.529138079°N	107.707958274°W
4,000.00	13.47	254.86	3,929.82	-159.78	-590.61	14,366,764.37	876,790.18	39.529119534°N	107.708037284°W
4,100.00	13.47	254.86	4,027.07	-165.87	-613.10	14,366,758.28	876,767.70	39.529100988°N	107.708116295°W
4,194.53	13.47	254.86	4,119.00	-171.62	-634.35	14,366,752.53	876,746.44	39.529083456°N	107.708190983°W
Mesaverde									
4,200.00	13.47	254.86	4,124.32	-171.95	-635.58	14,366,752.20	876,745.21	39.529082442°N	107.708195306°W
4,300.00	13.47	254.86	4,221.57	-178.03	-658.07	14,366,746.12	876,722.72	39.529063896°N	107.708274316°W
4,400.00	13.47	254.86	4,318.82	-184.12	-680.56	14,366,740.03	876,700.24	39.529045349°N	107.708353327°W
4,500.00	13.47	254.86	4,416.07	-190.20	-703.04	14,366,733.95	876,677.75	39.529026803°N	107.708432337°W

Planning Report - Geographic

Database:	EDM5000-New	Local Co-ordinate Reference:	Well Dixon A08 (112014) - Slot A08
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 A08 (112014)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dixon A08		
Design:	Dixon A08 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
4,559.68	13.47	254.86	4,474.10	-193.83	-716.46	14,366,730.32	876,664.33	39.529015735°N	107.708479489°W
Drop 3°/100 at 4560 MD/4474 TVD									
4,600.00	12.26	254.86	4,513.41	-196.17	-725.13	14,366,727.98	876,655.66	39.529008587°N	107.708509941°W
4,700.00	9.26	254.86	4,611.64	-201.05	-743.15	14,366,723.10	876,637.64	39.528993724°N	107.708573262°W
4,800.00	6.26	254.86	4,710.72	-204.58	-756.18	14,366,719.57	876,624.61	39.528982973°N	107.708619060°W
4,900.00	3.26	254.86	4,810.36	-206.74	-764.20	14,366,717.41	876,616.60	39.528976366°N	107.708647208°W
5,000.00	0.26	254.86	4,910.30	-207.55	-767.16	14,366,716.60	876,613.63	39.528973920°N	107.708657630°W
5,008.70	0.00	254.86	4,919.00	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
Vertical at 5009 MD/4919 TVD - Price Coal									
5,100.00	0.00	254.86	5,010.30	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
5,200.00	0.00	254.86	5,110.30	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
5,300.00	0.00	254.86	5,210.30	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
5,400.00	0.00	254.86	5,310.30	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
5,500.00	0.00	254.86	5,410.30	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
5,600.00	0.00	254.86	5,510.30	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
5,700.00	0.00	254.86	5,610.30	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
5,708.70	0.00	254.86	5,619.00	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
Top Gas									
5,800.00	0.00	254.86	5,710.30	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
5,900.00	0.00	254.86	5,810.30	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
6,000.00	0.00	254.86	5,910.30	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
6,100.00	0.00	254.86	6,010.30	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
6,200.00	0.00	254.86	6,110.30	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
6,300.00	0.00	254.86	6,210.30	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
6,400.00	0.00	254.86	6,310.30	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
6,500.00	0.00	254.86	6,410.30	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
6,600.00	0.00	254.86	6,510.30	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
6,608.70	0.00	254.86	6,519.00	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
Cameo									
6,700.00	0.00	254.86	6,610.30	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
6,800.00	0.00	254.86	6,710.30	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
6,900.00	0.00	254.86	6,810.30	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
7,000.00	0.00	254.86	6,910.30	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
7,100.00	0.00	254.86	7,010.30	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
7,200.00	0.00	254.86	7,110.30	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
7,300.00	0.00	254.86	7,210.30	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
7,400.00	0.00	254.86	7,310.30	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
7,500.00	0.00	254.86	7,410.30	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
7,600.00	0.00	254.86	7,510.30	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
7,700.00	0.00	254.86	7,610.30	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
7,708.70	0.00	254.86	7,619.00	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
Rollins									
7,800.00	0.00	254.86	7,710.30	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
7,900.00	0.00	254.86	7,810.30	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
7,908.70	0.00	254.86	7,819.00	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°W
TD at 7909 MD/7819 TVD									

Planning Report - Geographic

Database:	EDM5000-New	Local Co-ordinate Reference:	Well Dixon A08 (112014) - Slot A08
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 A08 (112014)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dixon A08		
Design:	Dixon A08 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 A08	0.00	360.00	7,819.00	-207.55	-767.18	14,366,716.60	876,613.61	39.528973904°N	107.708657697°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			
4,194.53	4,119.00	Mesaverde			
5,008.70	4,919.00	Price Coal			
5,708.70	5,619.00	Top Gas			
6,608.70	6,519.00	Cameo			
7,708.70	7,619.00	Rollins			

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
1,150.00	1,150.00	0.00	0.00	KOP 3°/100 at 1150 MD/TVD
1,599.02	1,594.90	-13.72	-50.72	Hold 13° at 1599 MD/1595 TVD
4,559.68	4,474.10	-193.83	-716.46	Drop 3°/100 at 4560 MD/4474 TVD
5,008.70	4,919.00	-207.55	-767.18	Vertical at 5009 MD/4919 TVD
7,908.70	7,819.00	-207.55	-767.18	TD at 7909 MD/7819 TVD