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M

A

A

Azimuths to Grid North

True North: 1.72°

Magnetic North: 11.81°

Magnetic Field

Strength: 52197.5snT

Dip Angle: 65.79°

Date: 07/24/2012

Model: IGRF2010

REFERENCE INFORMATION

rdinate (N/E) Reference: Well Dixon A01 (112007) - Slot A01, Grid North  
erical (TVD) Reference: KB @ 5559.00ft. (Original Well Elev)  
Section (VS) Reference: Slot - A01(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	VSect	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	
1664.23	15.43	306.51	1658.02	40.94	-55.30	3.00	306.51	65.81	
4572.00	15.43	306.51	4460.98	501.10	-678.97	0.00	0.00	842.25	
5086.43	0.00	306.51	4969.00	542.04	-732.27	3.00	180.00	911.06	BH A01
7986.14	0.00	306.51	7865.00	542.04	-732.27	0.00	306.51	911.06	

# **Antero Resources**

**Dixon**

**Dixon A**

**Dixon A01 (112007) - Slot A01**

**Dixon A01**

**Plan: Dixon A01 P01**

## **Standard Planning Report - Geographic**

**26 April, 2012**

Planning Report - Geographic

Database:	EDM5000-New	Local Co-ordinate Reference:	Well Dixon A01 (112007) - Slot A01
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:	Grd
Well:	Dixon A01 (112007)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dixon A01		
Design:	Dixon A01 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
From:	Map	Easting:	877,460.93 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in
		Grid Convergence:	-1.72 °

Well	Dixon A01 (112007) - Slot A01		
Well Position	+N/-S	0.00 ft	Northing:
	+E/-W	0.00 ft	Easting:
Position Uncertainty	0.00 ft	Wellhead Elevation:	

Wellbore	Dixon A01				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	07/24/12	10.08	65.79	52,197

Design	Dixon A01 P01			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.00	0.00	0.00	306.51

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	
1,664.21	15.43	306.51	1,658.02	40.94	-55.30	3.00	3.00	0.00	306.51	
4,571.93	15.43	306.51	4,460.98	501.10	-676.97	0.00	0.00	0.00	0.00	
5,086.14	0.00	306.51	4,969.00	542.04	-732.27	3.00	-3.00	0.00	180.00	
7,986.14	0.00	306.51	7,869.00	542.04	-732.27	0.00	0.00	0.00	306.51	BH A01

Planning Report - Geographic

Database	EDM5000-New	Local Co-ordinate Reference:				Well Dixon A01 (112007) - Slot A01			
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 A01 (112007)	Survey Calculation Method:				Minimum Curvature			
Wellbore	Dixon A01								
Design	Dixon A01 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	14,366,924.63	877,350.79	39.529605471°N	107.706068362°W
Wasatch									
100.00	0.00	0.00	100.00	0.00	0.00	14,366,924.63	877,350.79	39.529605471°N	107.706068362°W
200.00	0.00	0.00	200.00	0.00	0.00	14,366,924.63	877,350.79	39.529605471°N	107.706068362°W
300.00	0.00	0.00	300.00	0.00	0.00	14,366,924.63	877,350.79	39.529605471°N	107.706068362°W
400.00	0.00	0.00	400.00	0.00	0.00	14,366,924.63	877,350.79	39.529605471°N	107.706068362°W
500.00	0.00	0.00	500.00	0.00	0.00	14,366,924.63	877,350.79	39.529605471°N	107.706068362°W
600.00	0.00	0.00	600.00	0.00	0.00	14,366,924.63	877,350.79	39.529605471°N	107.706068362°W
700.00	0.00	0.00	700.00	0.00	0.00	14,366,924.63	877,350.79	39.529605471°N	107.706068362°W
800.00	0.00	0.00	800.00	0.00	0.00	14,366,924.63	877,350.79	39.529605471°N	107.706068362°W
900.00	0.00	0.00	900.00	0.00	0.00	14,366,924.63	877,350.79	39.529605471°N	107.706068362°W
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,366,924.63	877,350.79	39.529605471°N	107.706068362°W
Surf Csg at 1000 MD/TVD									
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,366,924.63	877,350.79	39.529605471°N	107.706068362°W
1,150.00	0.00	0.00	1,150.00	0.00	0.00	14,366,924.63	877,350.79	39.529605471°N	107.706068362°W
KOP 3°/100 at 1150 MD/TVD									
1,200.00	1.50	306.51	1,199.99	0.39	-0.53	14,366,925.02	877,350.27	39.529606495°N	107.706070267°W
1,300.00	4.50	306.51	1,299.85	3.50	-4.73	14,366,928.13	877,346.06	39.529614689°N	107.706085499°W
1,400.00	7.50	306.51	1,399.29	9.72	-13.13	14,366,934.35	877,337.66	39.529631055°N	107.706115922°W
1,500.00	10.50	306.51	1,498.04	19.03	-25.70	14,366,943.66	877,325.09	39.529655547°N	107.706161451°W
1,600.00	13.50	306.51	1,595.85	31.40	-42.41	14,366,956.02	877,308.38	39.529688099°N	107.706221963°W
1,664.21	15.43	306.51	1,658.02	40.94	-55.30	14,366,965.57	877,295.49	39.529713209°N	107.706268642°W
Hold 15° at 1664 MD/1658 TVD									
1,700.00	15.43	306.51	1,692.52	46.60	-62.96	14,366,971.23	877,287.84	39.529728115°N	107.706296353°W
1,800.00	15.43	306.51	1,788.92	62.43	-84.34	14,366,987.05	877,266.46	39.529769766°N	107.706373780°W
1,900.00	15.43	306.51	1,885.32	78.25	-105.71	14,367,002.88	877,245.08	39.529811416°N	107.706451207°W
2,000.00	15.43	306.51	1,981.71	94.08	-127.09	14,367,018.71	877,223.70	39.529853067°N	107.706528635°W
2,100.00	15.43	306.51	2,078.11	109.90	-148.47	14,367,034.53	877,202.32	39.529894718°N	107.706606062°W
2,200.00	15.43	306.51	2,174.51	125.73	-169.85	14,367,050.36	877,180.94	39.529936368°N	107.706683490°W
2,300.00	15.43	306.51	2,270.90	141.55	-191.23	14,367,066.18	877,159.56	39.529978018°N	107.706760917°W
2,400.00	15.43	306.51	2,367.30	157.38	-212.61	14,367,082.01	877,138.18	39.530019669°N	107.706838345°W
2,500.00	15.43	306.51	2,463.70	173.21	-233.99	14,367,097.83	877,116.80	39.530061319°N	107.706915773°W
2,600.00	15.43	306.51	2,560.10	189.03	-255.37	14,367,113.66	877,095.42	39.530102969°N	107.706993201°W
2,700.00	15.43	306.51	2,656.49	204.86	-276.75	14,367,129.49	877,074.04	39.530144620°N	107.707070629°W
2,800.00	15.43	306.51	2,752.89	220.68	-298.13	14,367,145.31	877,052.66	39.530186270°N	107.707148057°W
2,900.00	15.43	306.51	2,849.29	236.51	-319.51	14,367,161.14	877,031.28	39.530227920°N	107.707225485°W
3,000.00	15.43	306.51	2,945.69	252.33	-340.89	14,367,176.96	877,009.90	39.530269570°N	107.707302914°W
3,100.00	15.43	306.51	3,042.08	268.16	-362.27	14,367,192.79	876,988.52	39.530311220°N	107.707380342°W
3,200.00	15.43	306.51	3,138.48	283.99	-383.65	14,367,208.61	876,967.14	39.530352870°N	107.707457771°W
3,300.00	15.43	306.51	3,234.88	299.81	-405.03	14,367,224.44	876,945.76	39.530394519°N	107.707535199°W
3,400.00	15.43	306.51	3,331.28	315.64	-426.41	14,367,240.27	876,924.38	39.530436169°N	107.707612628°W
3,500.00	15.43	306.51	3,427.67	331.46	-447.79	14,367,256.09	876,903.00	39.530477819°N	107.707690057°W
3,600.00	15.43	306.51	3,524.07	347.29	-469.17	14,367,271.92	876,881.62	39.530519469°N	107.707767485°W
3,700.00	15.43	306.51	3,620.47	363.11	-490.55	14,367,287.74	876,860.24	39.530561118°N	107.707844914°W
3,800.00	15.43	306.51	3,716.86	378.94	-511.93	14,367,303.57	876,838.86	39.530602768°N	107.707922343°W
3,900.00	15.43	306.51	3,813.26	394.77	-533.31	14,367,319.39	876,817.48	39.530644417°N	107.707999773°W
4,000.00	15.43	306.51	3,909.66	410.59	-554.69	14,367,335.22	876,796.10	39.530686067°N	107.708077202°W
4,100.00	15.43	306.51	4,006.06	426.42	-576.07	14,367,351.05	876,774.72	39.530727716°N	107.708154631°W
4,200.00	15.43	306.51	4,102.45	442.24	-597.45	14,367,366.87	876,753.34	39.530769366°N	107.708232060°W
4,269.03	15.43	306.51	4,169.00	453.17	-612.21	14,367,377.80	876,738.58	39.530798117°N	107.708285512°W
Mesaverde									
4,300.00	15.43	306.51	4,198.85	458.07	-618.83	14,367,382.70	876,731.96	39.530811015°N	107.708309490°W
4,400.00	15.43	306.51	4,295.25	473.89	-640.21	14,367,398.52	876,710.58	39.530852664°N	107.708386920°W
4,500.00	15.43	306.51	4,391.65	489.72	-661.59	14,367,414.35	876,689.20	39.530894313°N	107.708464349°W



Planning Report - Geographic

Database:	EDM5000-New	Local Co-ordinate Reference:	Well Dixon A01 (112007) - Slot A01
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 A01 (112007)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dixon A01		
Design:	Dixon A01 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
4,571.93	15.43	306.51	4,460.98	501.10	-676.97	14,367,425.73	876,673.82	39.530924270°N	107.708520041°W
Drop 3°/100 at 4572 MD/4461 TVD									
4,600.00	14.58	306.51	4,488.10	505.43	-682.81	14,367,430.06	876,667.98	39.530935651°N	107.708541199°W
4,700.00	11.58	306.51	4,585.49	518.89	-701.01	14,367,443.52	876,649.79	39.530971092°N	107.708607089°W
4,800.00	8.58	306.51	4,683.93	529.31	-715.08	14,367,453.94	876,635.72	39.530998505°N	107.708658051°W
4,900.00	5.58	306.51	4,783.16	536.65	-724.99	14,367,461.27	876,625.80	39.531017812°N	107.708693946°W
5,000.00	2.58	306.51	4,882.89	540.88	-730.71	14,367,465.51	876,620.08	39.531028962°N	107.708714675°W
5,086.14	0.00	306.51	4,969.00	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
Vertical at 5086 MD/4969 TVD - Price Coal									
5,100.00	0.00	306.51	4,982.86	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
5,200.00	0.00	306.51	5,082.86	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
5,300.00	0.00	306.51	5,182.86	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
5,400.00	0.00	306.51	5,282.86	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
5,500.00	0.00	306.51	5,382.86	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
5,600.00	0.00	306.51	5,482.86	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
5,700.00	0.00	306.51	5,582.86	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
5,786.14	0.00	306.51	5,669.00	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
Top Gas									
5,800.00	0.00	306.51	5,682.86	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
5,900.00	0.00	306.51	5,782.86	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
6,000.00	0.00	306.51	5,882.86	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
6,100.00	0.00	306.51	5,982.86	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
6,200.00	0.00	306.51	6,082.86	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
6,300.00	0.00	306.51	6,182.86	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
6,400.00	0.00	306.51	6,282.86	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
6,500.00	0.00	306.51	6,382.86	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
6,600.00	0.00	306.51	6,482.86	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
6,686.14	0.00	306.51	6,569.00	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
Cameo									
6,700.00	0.00	306.51	6,582.86	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
6,800.00	0.00	306.51	6,682.86	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
6,900.00	0.00	306.51	6,782.86	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
7,000.00	0.00	306.51	6,882.86	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
7,100.00	0.00	306.51	6,982.86	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
7,200.00	0.00	306.51	7,082.86	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
7,300.00	0.00	306.51	7,182.86	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
7,400.00	0.00	306.51	7,282.86	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
7,500.00	0.00	306.51	7,382.86	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
7,600.00	0.00	306.51	7,482.86	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
7,700.00	0.00	306.51	7,582.86	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
7,786.14	0.00	306.51	7,669.00	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
Rollins									
7,800.00	0.00	306.51	7,682.86	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
7,900.00	0.00	306.51	7,782.86	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
7,986.14	0.00	306.51	7,869.00	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
TD at 7986 MD/7869 TVD									

Planning Report - Geographic

Database:	EDM5000-New	Local Co-ordinate Reference:	Well Dixon A01 (112007) - Slot A01
Company:	Antero Resources	TVD Reference:	KB @ 5558.00ft (Original Well Elev.)
Project:	Dixon	MD Reference:	KB @ 5559.00ft (Original Well Elev.)
Site:	Dixon A	North Reference:	Gnd
Well:	Dixon A01 (112007)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dixon A01		
Design:	Dixon A01 P01		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
- Shape									
BH A01	0.00	360.00	7,869.00	542.04	-732.27	14,367,466.67	876,618.52	39.531032003°N	107.708720328°W
- plan hits target center									
- Circle (radius 20.00)									

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

Formations					
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(ft)	(ft)			(°)	(°)
0.00	0.00	Wasatch			
4,269.03	4,169.00	Mesaverde			
5,086.14	4,969.00	Price Coal			
5,786.14	5,669.00	Top Gas			
6,686.14	6,569.00	Cameo			
7,786.14	7,669.00	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
1,664.21	1,658.02	40.94	-55.30	Hold 15° at 1664 MD/1658 TVD
4,571.93	4,460.98	501.10	-676.97	Drop 3°/100 at 4572 MD/4461 TVD
5,086.14	4,969.00	542.04	-732.27	Vertical at 5086 MD/4969 TVD
7,986.14	7,869.00	542.04	-732.27	TD at 7986 MD/7869 TVD