

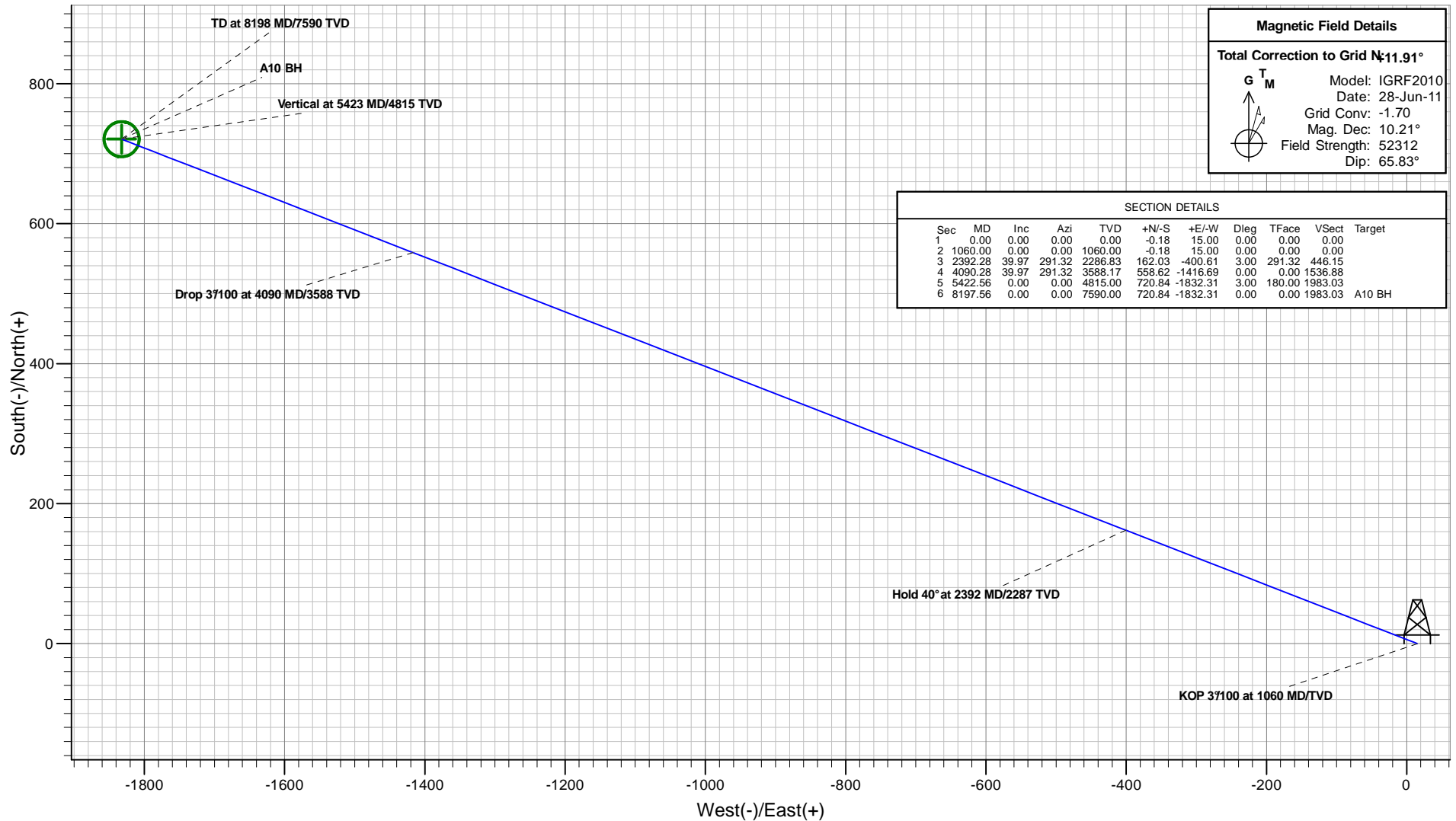


PLAN VIEW

Antero Resources

McPherson A10 (111362)

Project: McPherson
 Site: McPherson A Pad
 Well: McPherson A10 (111362)
 Wellbore: A10
 Design: A10 P01



Magnetic Field Details	
Total Correction to Grid N: 11.91°	
G T M	Model: IGRF2010
	Date: 28-Jun-11
	Grid Conv: -1.70
	Mag. Dec: 10.21°
	Field Strength: 52312
	Dip: 65.83°

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	-0.18	15.00	0.00	0.00	0.00	
2	1060.00	0.00	0.00	1060.00	-0.18	15.00	0.00	0.00	0.00	
3	2392.28	39.97	291.32	2286.83	162.03	-400.61	3.00	291.32	446.15	
4	4090.28	39.97	291.32	3588.17	558.62	-1416.69	0.00	0.00	1536.88	
5	5422.56	0.00	0.00	4815.00	720.84	-1832.31	3.00	180.00	1983.03	
6	8197.56	0.00	0.00	7590.00	720.84	-1832.31	0.00	0.00	1983.03	A10 BH

Plan: A10 P01
 Created By: ARK Directional Services
 Date: 9:47, March 30 2011

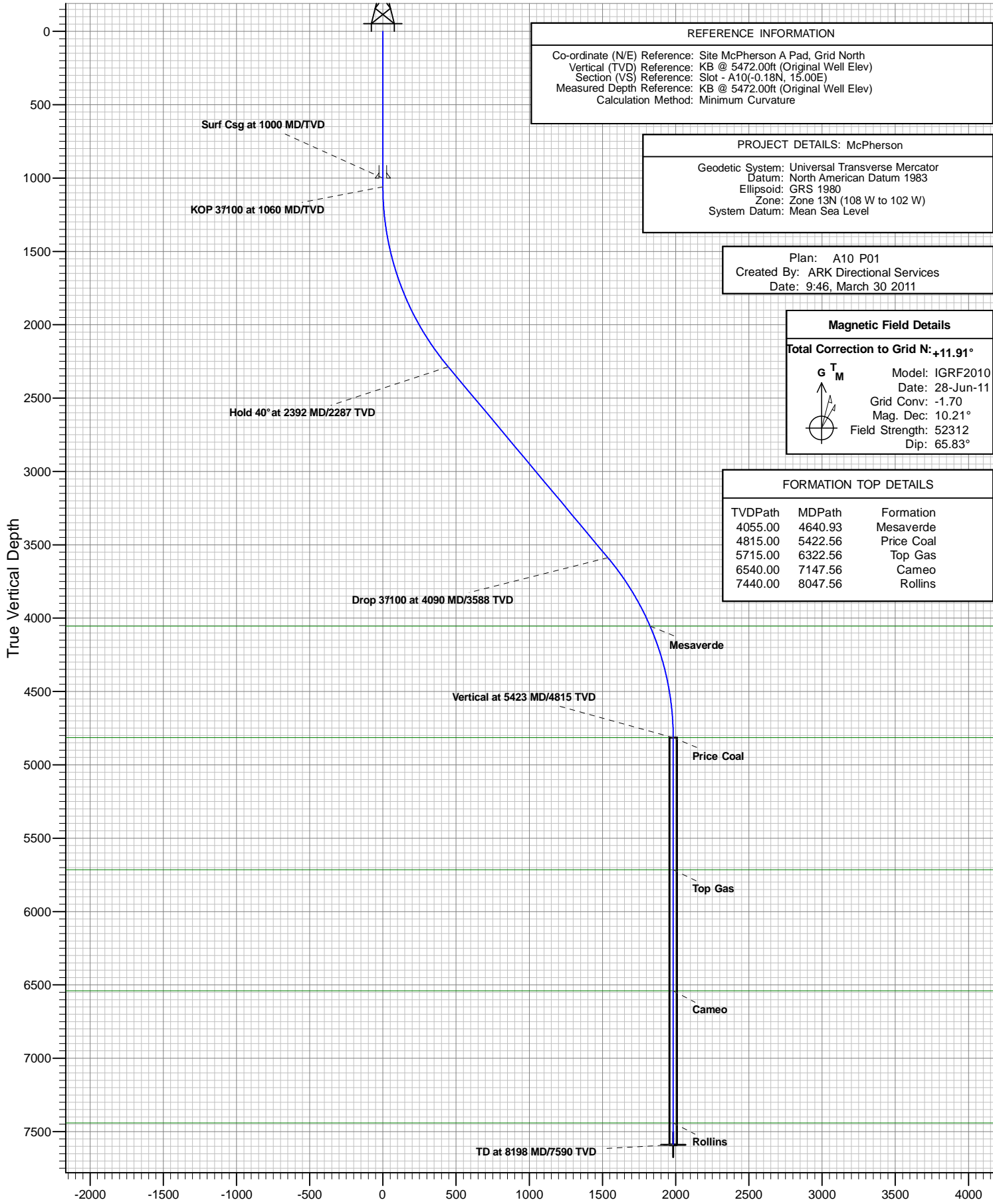
PROJECT DETAILS: McPherson
 Geodetic System: Universal Transverse Mercator
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: Zone 13N (108 W to 102 W)
 System Datum: Mean Sea Level

REFERENCE INFORMATION
 Co-ordinate (N/E) Reference: Site McPherson A Pad, Grid North
 Vertical (TVD) Reference: KB @ 5472.00ft (Original Well Elev)
 Section (VS) Reference: Slot - A10(-0.18N, 15.00E)
 Measured Depth Reference: KB @ 5472.00ft (Original Well Elev)
 Calculation Method: Minimum Curvature



VERTICAL SECTION VIEW

McPherson A10 (111362)



REFERENCE INFORMATION	
Co-ordinate (N/E) Reference:	Site McPherson A Pad, Grid North
Vertical (TVD) Reference:	KB @ 5472.00ft (Original Well Elev)
Section (VS) Reference:	Slot - A10(-0.18N, 15.00E)
Measured Depth Reference:	KB @ 5472.00ft (Original Well Elev)
Calculation Method:	Minimum Curvature

PROJECT DETAILS: McPherson	
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

Plan:	A10 P01
Created By:	ARK Directional Services
Date:	9:46, March 30 2011

Magnetic Field Details	
Total Correction to Grid N: +11.91°	
G_T_M	Model: IGRF2010
	Date: 28-Jun-11
	Grid Conv: -1.70
	Mag. Dec: 10.21°
	Field Strength: 52312
	Dip: 65.83°

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
4055.00	4640.93	Mesaverde
4815.00	5422.56	Price Coal
5715.00	6322.56	Top Gas
6540.00	7147.56	Cameo
7440.00	8047.56	Rollins

Vertical Section at 291.32°

Antero Resources

McPherson

McPherson A Pad

McPherson A10 (111362) - Slot A10

A10

Plan: A10 P01

Standard Planning Report - Geographic

30 March, 2011

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Site McPherson A Pad
Company:	Antero Resources	TVD Reference:	KB @ 5472.00ft (Original Well Elev)
Project:	McPherson	MD Reference:	KB @ 5472.00ft (Original Well Elev)
Site:	McPherson A Pad	North Reference:	Grid
Well:	McPherson A10 (111362)	Survey Calculation Method:	Minimum Curvature
Wellbore:	A10		
Design:	A10 P01		

Project	McPherson		
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	McPherson A Pad				
Site Position:	Northing:	14,367,218.623 usft	Latitude:	39.531108419°N	
From: Map	Easting:	885,836.083 usft	Longitude:	107.676038841°W	
Position Uncertainty:	0.00 ft	Slot Radius:	13.20 in	Grid Convergence:	-1.70 °

Well	McPherson A10 (111362) - Slot A10			
Well Position	+N/-S	-0.18 ft	Northing:	14,367,218.439 usft
	+E/-W	15.00 ft	Easting:	885,851.083 usft
Position Uncertainty		0.00 ft	Wellhead Elevation:	Ground Level:
				5,448.00 ft

Wellbore	A10				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2011/06/28	10.21	65.83	52,312

Design	A10 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	-0.18	15.00	291.32

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	-0.18	15.00	0.00	0.00	0.00	0.00	
1,060.00	0.00	0.00	1,060.00	-0.18	15.00	0.00	0.00	0.00	0.00	
2,392.28	39.97	291.32	2,286.83	162.03	-400.61	3.00	3.00	0.00	291.32	
4,090.28	39.97	291.32	3,588.17	558.62	-1,416.69	0.00	0.00	0.00	0.00	
5,422.56	0.00	0.00	4,815.00	720.84	-1,832.31	3.00	-3.00	0.00	180.00	
8,197.56	0.00	0.00	7,590.00	720.84	-1,832.31	0.00	0.00	0.00	0.00	A10 BH

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Site McPherson A Pad
Company:	Antero Resources	TVD Reference:	KB @ 5472.00ft (Original Well Elev)
Project:	McPherson	MD Reference:	KB @ 5472.00ft (Original Well Elev)
Site:	McPherson A Pad	North Reference:	Grid
Well:	McPherson A10 (111362)	Survey Calculation Method:	Minimum Curvature
Wellbore:	A10		
Design:	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	-0.18	15.00	14,367,218.439	885,851.083	39.531109138°N	107.675985680°W	
100.00	0.00	0.00	100.00	-0.18	15.00	14,367,218.439	885,851.083	39.531109138°N	107.675985680°W	
200.00	0.00	0.00	200.00	-0.18	15.00	14,367,218.439	885,851.083	39.531109138°N	107.675985680°W	
300.00	0.00	0.00	300.00	-0.18	15.00	14,367,218.439	885,851.083	39.531109138°N	107.675985680°W	
400.00	0.00	0.00	400.00	-0.18	15.00	14,367,218.439	885,851.083	39.531109138°N	107.675985680°W	
500.00	0.00	0.00	500.00	-0.18	15.00	14,367,218.439	885,851.083	39.531109138°N	107.675985680°W	
600.00	0.00	0.00	600.00	-0.18	15.00	14,367,218.439	885,851.083	39.531109138°N	107.675985680°W	
700.00	0.00	0.00	700.00	-0.18	15.00	14,367,218.439	885,851.083	39.531109138°N	107.675985680°W	
800.00	0.00	0.00	800.00	-0.18	15.00	14,367,218.439	885,851.083	39.531109138°N	107.675985680°W	
900.00	0.00	0.00	900.00	-0.18	15.00	14,367,218.439	885,851.083	39.531109138°N	107.675985680°W	
1,000.00	0.00	0.00	1,000.00	-0.18	15.00	14,367,218.439	885,851.083	39.531109138°N	107.675985680°W	
Surf Csg at 1000 MD/TVD										
1,060.00	0.00	0.00	1,060.00	-0.18	15.00	14,367,218.439	885,851.083	39.531109138°N	107.675985680°W	
KOP 3°/100 at 1060 MD/TVD										
1,100.00	1.20	291.32	1,100.00	-0.03	14.61	14,367,218.591	885,850.693	39.531109524°N	107.675987079°W	
1,200.00	4.20	291.32	1,199.87	1.68	10.22	14,367,220.303	885,846.305	39.531113864°N	107.676002804°W	
1,300.00	7.20	291.32	1,299.37	5.29	0.97	14,367,223.914	885,837.054	39.531123015°N	107.676035959°W	
1,400.00	10.20	291.32	1,398.21	10.79	-13.12	14,367,229.413	885,822.965	39.531136952°N	107.676086453°W	
1,500.00	13.20	291.32	1,496.12	18.16	-32.01	14,367,236.786	885,804.076	39.531155636°N	107.676154148°W	
1,600.00	16.20	291.32	1,592.83	27.39	-55.64	14,367,246.011	885,780.440	39.531179016°N	107.676238858°W	
1,700.00	19.20	291.32	1,688.09	38.44	-83.96	14,367,257.064	885,752.121	39.531207028°N	107.676340351°W	
1,800.00	22.20	291.32	1,781.62	51.29	-116.89	14,367,269.915	885,719.196	39.531239595°N	107.676458349°W	
1,900.00	25.20	291.32	1,873.18	65.91	-154.33	14,367,284.528	885,681.757	39.531276628°N	107.676592529°W	
2,000.00	28.20	291.32	1,962.51	82.24	-196.18	14,367,300.863	885,639.905	39.531318025°N	107.676742522°W	
2,100.00	31.20	291.32	2,049.36	100.25	-242.33	14,367,318.876	885,593.756	39.531363673°N	107.676907918°W	
2,200.00	34.20	291.32	2,133.50	119.89	-292.65	14,367,338.516	885,543.435	39.531413447°N	107.677088263°W	
2,300.00	37.20	291.32	2,214.70	141.11	-347.00	14,367,359.731	885,489.081	39.531467210°N	107.677283064°W	
2,392.28	39.97	291.32	2,286.83	162.03	-400.61	14,367,380.655	885,435.472	39.531520236°N	107.677475196°W	
Hold 40° at 2392 MD/2287 TVD										
2,400.00	39.97	291.32	2,292.74	163.84	-405.23	14,367,382.458	885,430.854	39.531524804°N	107.677491746°W	
2,500.00	39.97	291.32	2,369.38	187.19	-465.07	14,367,405.814	885,371.014	39.531583992°N	107.677706209°W	
2,600.00	39.97	291.32	2,446.02	210.55	-524.91	14,367,429.170	885,311.174	39.531643180°N	107.677920672°W	
2,700.00	39.97	291.32	2,522.66	233.90	-584.75	14,367,452.526	885,251.334	39.531702368°N	107.678135136°W	
2,800.00	39.97	291.32	2,599.30	257.26	-644.59	14,367,475.882	885,191.494	39.531761555°N	107.678349600°W	
2,900.00	39.97	291.32	2,675.94	280.62	-704.43	14,367,499.238	885,131.654	39.531820742°N	107.678564065°W	
3,000.00	39.97	291.32	2,752.58	303.97	-764.27	14,367,522.594	885,071.815	39.531879928°N	107.678778529°W	
3,100.00	39.97	291.32	2,829.22	327.33	-824.11	14,367,545.950	885,011.975	39.531939114°N	107.678992994°W	
3,200.00	39.97	291.32	2,905.86	350.68	-883.95	14,367,569.306	884,952.135	39.531998300°N	107.679207460°W	
3,300.00	39.97	291.32	2,982.50	374.04	-943.79	14,367,592.662	884,892.295	39.532057485°N	107.679421926°W	
3,400.00	39.97	291.32	3,059.14	397.40	-1,003.63	14,367,616.018	884,832.455	39.532116670°N	107.679636392°W	
3,500.00	39.97	291.32	3,135.78	420.75	-1,063.47	14,367,639.374	884,772.615	39.532175855°N	107.679850858°W	
3,600.00	39.97	291.32	3,212.42	444.11	-1,123.31	14,367,662.730	884,712.775	39.532235039°N	107.680065325°W	
3,700.00	39.97	291.32	3,289.06	467.46	-1,183.15	14,367,686.087	884,652.935	39.532294222°N	107.680279792°W	
3,800.00	39.97	291.32	3,365.70	490.82	-1,242.99	14,367,709.443	884,593.095	39.532353405°N	107.680494260°W	
3,900.00	39.97	291.32	3,442.34	514.18	-1,302.83	14,367,732.799	884,533.255	39.532412588°N	107.680708727°W	
4,000.00	39.97	291.32	3,518.98	537.53	-1,362.67	14,367,756.155	884,473.415	39.532471770°N	107.680923196°W	
4,090.28	39.97	291.32	3,588.17	558.62	-1,416.69	14,367,777.241	884,419.391	39.532525200°N	107.681116819°W	
Drop 3°/100 at 4090 MD/3588 TVD										
4,100.00	39.68	291.32	3,595.64	560.88	-1,422.49	14,367,779.504	884,413.593	39.532530935°N	107.681137601°W	
4,200.00	36.68	291.32	3,674.24	583.35	-1,480.07	14,367,801.975	884,356.021	39.532587874°N	107.681343941°W	
4,300.00	33.68	291.32	3,755.97	604.30	-1,533.73	14,367,822.919	884,302.360	39.532640944°N	107.681536265°W	
4,400.00	30.68	291.32	3,840.60	623.66	-1,583.33	14,367,842.280	884,252.757	39.532690000°N	107.681714045°W	
4,500.00	27.68	291.32	3,927.90	641.38	-1,628.74	14,367,860.003	884,207.348	39.532734909°N	107.681876792°W	
4,600.00	24.68	291.32	4,017.63	657.42	-1,669.83	14,367,876.041	884,166.257	39.532775546°N	107.682024063°W	

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Site McPherson A Pad
Company:	Antero Resources	TVD Reference:	KB @ 5472.00ft (Original Well Elev)
Project:	McPherson	MD Reference:	KB @ 5472.00ft (Original Well Elev)
Site:	McPherson A Pad	North Reference:	Grid
Well:	McPherson A10 (111362)	Survey Calculation Method:	Minimum Curvature
Wellbore:	A10		
Design:	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	
4,640.93	23.45	291.32	4,055.00	663.49	-1,685.37	14,367,882.108	884,150.713	39.532790919°N	107.682079775°W	
Mesaverde										
4,700.00	21.68	291.32	4,109.55	671.73	-1,706.49	14,367,890.350	884,129.598	39.532811801°N	107.682155451°W	
4,800.00	18.68	291.32	4,203.40	684.27	-1,738.62	14,367,902.889	884,097.471	39.532843574°N	107.682270599°W	
4,900.00	15.68	291.32	4,298.93	695.00	-1,766.12	14,367,913.626	884,069.963	39.532870778°N	107.682369189°W	
5,000.00	12.68	291.32	4,395.88	703.91	-1,788.94	14,367,922.530	884,047.150	39.532893339°N	107.682450951°W	
5,100.00	9.68	291.32	4,493.97	710.96	-1,806.99	14,367,929.577	884,029.095	39.532911195°N	107.682515662°W	
5,200.00	6.68	291.32	4,592.94	716.13	-1,820.24	14,367,934.748	884,015.847	39.532924296°N	107.682563144°W	
5,300.00	3.68	291.32	4,692.52	719.41	-1,828.64	14,367,938.028	884,007.442	39.532932608°N	107.682593267°W	
5,400.00	0.68	291.32	4,792.44	720.79	-1,832.18	14,367,939.409	884,003.904	39.532936107°N	107.682605947°W	
5,422.56	0.00	0.00	4,815.00	720.84	-1,832.31	14,367,939.457	884,003.780	39.532936230°N	107.682606392°W	
Vertical at 5423 MD/4815 TVD - Price Coal										
5,500.00	0.00	0.00	4,892.44	720.84	-1,832.31	14,367,939.457	884,003.780	39.532936230°N	107.682606392°W	
5,600.00	0.00	0.00	4,992.44	720.84	-1,832.31	14,367,939.457	884,003.780	39.532936230°N	107.682606392°W	
5,700.00	0.00	0.00	5,092.44	720.84	-1,832.31	14,367,939.457	884,003.780	39.532936230°N	107.682606392°W	
5,800.00	0.00	0.00	5,192.44	720.84	-1,832.31	14,367,939.457	884,003.780	39.532936230°N	107.682606392°W	
5,900.00	0.00	0.00	5,292.44	720.84	-1,832.31	14,367,939.457	884,003.780	39.532936230°N	107.682606392°W	
6,000.00	0.00	0.00	5,392.44	720.84	-1,832.31	14,367,939.457	884,003.780	39.532936230°N	107.682606392°W	
6,100.00	0.00	0.00	5,492.44	720.84	-1,832.31	14,367,939.457	884,003.780	39.532936230°N	107.682606392°W	
6,200.00	0.00	0.00	5,592.44	720.84	-1,832.31	14,367,939.457	884,003.780	39.532936230°N	107.682606392°W	
6,300.00	0.00	0.00	5,692.44	720.84	-1,832.31	14,367,939.457	884,003.780	39.532936230°N	107.682606392°W	
6,322.56	0.00	0.00	5,715.00	720.84	-1,832.31	14,367,939.457	884,003.780	39.532936230°N	107.682606392°W	
Top Gas										
6,400.00	0.00	0.00	5,792.44	720.84	-1,832.31	14,367,939.457	884,003.780	39.532936230°N	107.682606392°W	
6,500.00	0.00	0.00	5,892.44	720.84	-1,832.31	14,367,939.457	884,003.780	39.532936230°N	107.682606392°W	
6,600.00	0.00	0.00	5,992.44	720.84	-1,832.31	14,367,939.457	884,003.780	39.532936230°N	107.682606392°W	
6,700.00	0.00	0.00	6,092.44	720.84	-1,832.31	14,367,939.457	884,003.780	39.532936230°N	107.682606392°W	
6,800.00	0.00	0.00	6,192.44	720.84	-1,832.31	14,367,939.457	884,003.780	39.532936230°N	107.682606392°W	
6,900.00	0.00	0.00	6,292.44	720.84	-1,832.31	14,367,939.457	884,003.780	39.532936230°N	107.682606392°W	
7,000.00	0.00	0.00	6,392.44	720.84	-1,832.31	14,367,939.457	884,003.780	39.532936230°N	107.682606392°W	
7,100.00	0.00	0.00	6,492.44	720.84	-1,832.31	14,367,939.457	884,003.780	39.532936230°N	107.682606392°W	
7,147.56	0.00	0.00	6,540.00	720.84	-1,832.31	14,367,939.457	884,003.780	39.532936230°N	107.682606392°W	
Cameo										
7,200.00	0.00	0.00	6,592.44	720.84	-1,832.31	14,367,939.457	884,003.780	39.532936230°N	107.682606392°W	
7,300.00	0.00	0.00	6,692.44	720.84	-1,832.31	14,367,939.457	884,003.780	39.532936230°N	107.682606392°W	
7,400.00	0.00	0.00	6,792.44	720.84	-1,832.31	14,367,939.457	884,003.780	39.532936230°N	107.682606392°W	
7,500.00	0.00	0.00	6,892.44	720.84	-1,832.31	14,367,939.457	884,003.780	39.532936230°N	107.682606392°W	
7,600.00	0.00	0.00	6,992.44	720.84	-1,832.31	14,367,939.457	884,003.780	39.532936230°N	107.682606392°W	
7,700.00	0.00	0.00	7,092.44	720.84	-1,832.31	14,367,939.457	884,003.780	39.532936230°N	107.682606392°W	
7,800.00	0.00	0.00	7,192.44	720.84	-1,832.31	14,367,939.457	884,003.780	39.532936230°N	107.682606392°W	
7,900.00	0.00	0.00	7,292.44	720.84	-1,832.31	14,367,939.457	884,003.780	39.532936230°N	107.682606392°W	
8,000.00	0.00	0.00	7,392.44	720.84	-1,832.31	14,367,939.457	884,003.780	39.532936230°N	107.682606392°W	
8,047.56	0.00	0.00	7,440.00	720.84	-1,832.31	14,367,939.457	884,003.780	39.532936230°N	107.682606392°W	
Rollins										
8,100.00	0.00	0.00	7,492.44	720.84	-1,832.31	14,367,939.457	884,003.780	39.532936230°N	107.682606392°W	
8,197.56	0.00	0.00	7,590.00	720.84	-1,832.31	14,367,939.457	884,003.780	39.532936230°N	107.682606392°W	
TD at 8198 MD/7590 TVD										

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Site McPherson A Pad
Company:	Antero Resources	TVD Reference:	KB @ 5472.00ft (Original Well Elev)
Project:	McPherson	MD Reference:	KB @ 5472.00ft (Original Well Elev)
Site:	McPherson A Pad	North Reference:	Grid
Well:	McPherson A10 (111362)	Survey Calculation Method:	Minimum Curvature
Wellbore:	A10		
Design:	A10 P01		

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
A10 BH - hit/miss target - Shape	0.00	360.00	7,590.00	720.84	-1,832.31	14,367,939.457	884,003.780	39.532936230°N	107.682606392°W
- plan hits target center - Circle (radius 25.00)									

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	5.50	6.00	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,640.93	4,055.00	Mesaverde			
5,422.56	4,815.00	Price Coal			
6,322.56	5,715.00	Top Gas			
7,147.56	6,540.00	Cameo			
8,047.56	7,440.00	Rollins			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
1,060.00	1,060.00	-0.18	15.00	KOP 3°/100 at 1060 MD/TVD	
2,392.28	2,286.83	162.03	-400.61	Hold 40° at 2392 MD/2287 TVD	
4,090.28	3,588.17	558.62	-1,416.69	Drop 3°/100 at 4090 MD/3588 TVD	
5,422.56	4,815.00	720.84	-1,832.31	Vertical at 5423 MD/4815 TVD	
8,197.56	7,590.00	720.84	-1,832.31	TD at 8198 MD/7590 TVD	