

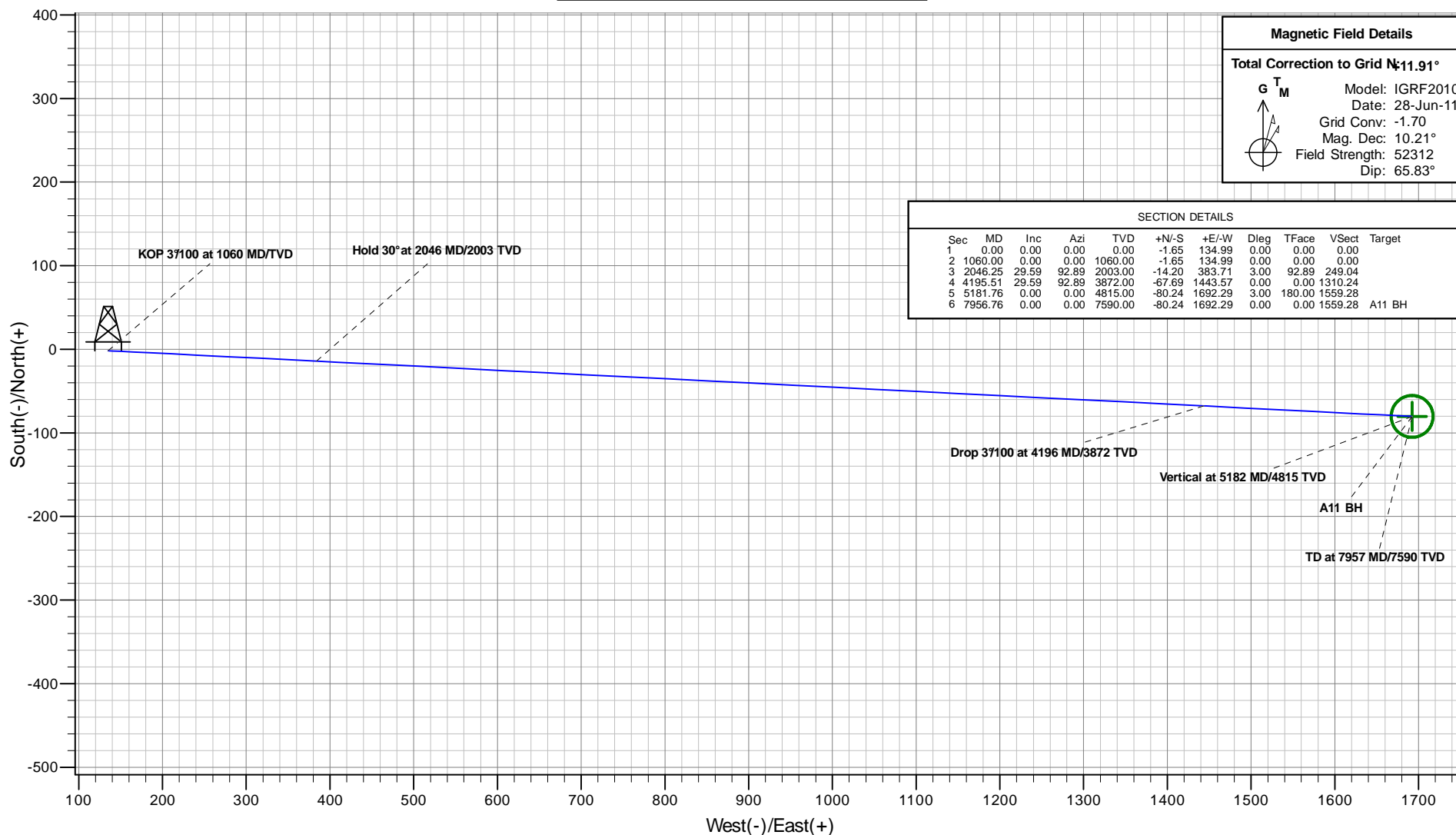


PLAN VIEW

Antero Resources

McPherson A11 (111363)

Project: McPherson
Site: McPherson A Pad
Well: McPherson A11 (111363)
Wellbore: A11
Design: A11 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°

Plan: A11 P01
Created By: ARK Directional Services
Date: 9:51, 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

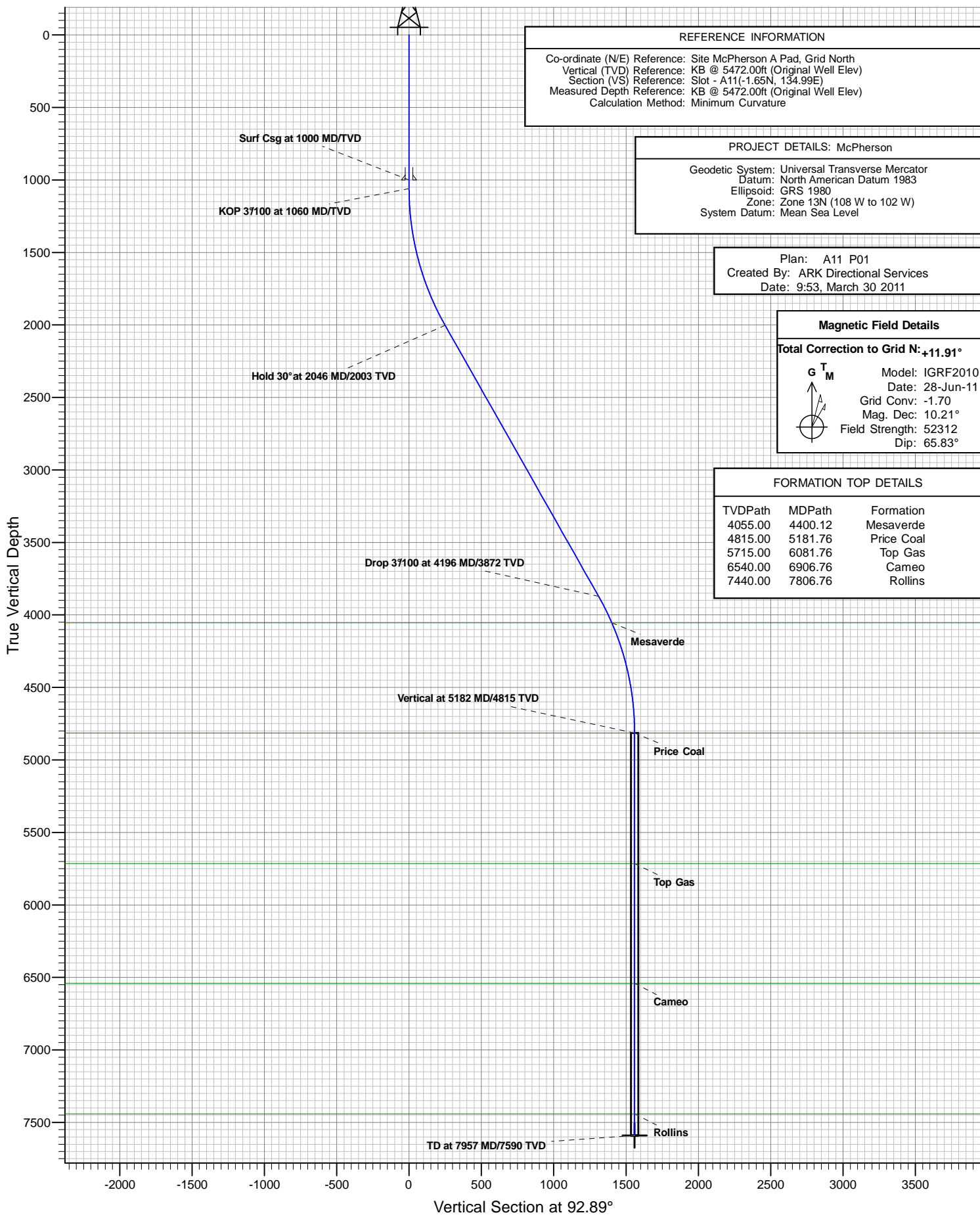
REFERENCE INFORMATION
Co-ordinate (N/E) Reference: Site McPherson A Pad, Grid North
Vertical (TVD) Reference: KB @ 5472.00ft (Original Well Elev)
Section (VS) Reference: Slot - A11(-1.65N, 134.99E)
Measured Depth Reference: KB @ 5472.00ft (Original Well Elev)
Calculation Method: Minimum Curvature



VERTICAL SECTION VIEW

Antero Resources

McPherson A11 (111363)



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 - A11(-1.65N, 134.99E)
 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: A11 P01
 Created By: ARK Directional Services
 Date: 9:53, 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	4400.12	Mesaverde
4815.00	5181.76	Price Coal
5715.00	6081.76	Top Gas
6540.00	6906.76	Cameo
7440.00	7806.76	Rollins

Antero Resources

McPherson

McPherson A Pad

McPherson A11 (111363) - Slot A11

A11

Plan: A11 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 A11 (111363)	Survey Calculation Method:	Minimum Curvature
Wellbore:	A11		
Design:	A11 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 A11 (111363) - Slot A11					
Well Position	+N/-S	-1.65 ft	Northing:	14,367,216.972 usft	Latitude:	39.531114906°N
	+E/-W	134.99 ft	Easting:	885,971.074 usft	Longitude:	107.675560426°W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,448.00 ft

Wellbore	A11				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2011/06/28	10.21	65.83	52,312

Design	A11 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	-1.65	134.99	92.89	

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	-1.65	134.99	0.00	0.00	0.00	0.00	
1,060.00	0.00	0.00	1,060.00	-1.65	134.99	0.00	0.00	0.00	0.00	
2,046.25	29.59	92.89	2,003.00	-14.20	383.71	3.00	3.00	0.00	92.89	
4,195.51	29.59	92.89	3,872.00	-67.69	1,443.57	0.00	0.00	0.00	0.00	
5,181.76	0.00	0.00	4,815.00	-80.24	1,692.29	3.00	-3.00	0.00	180.00	
7,956.76	0.00	0.00	7,590.00	-80.24	1,692.29	0.00	0.00	0.00	0.00	A11 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 A11 (111363)	Survey Calculation Method:	Minimum Curvature
Wellbore:	A11		
Design:	A11 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	-1.65	134.99	14,367,216.972	885,971.074	39.531114906°N	107.675560426°W
100.00	0.00	0.00	100.00	-1.65	134.99	14,367,216.972	885,971.074	39.531114906°N	107.675560426°W
200.00	0.00	0.00	200.00	-1.65	134.99	14,367,216.972	885,971.074	39.531114906°N	107.675560426°W
300.00	0.00	0.00	300.00	-1.65	134.99	14,367,216.972	885,971.074	39.531114906°N	107.675560426°W
400.00	0.00	0.00	400.00	-1.65	134.99	14,367,216.972	885,971.074	39.531114906°N	107.675560426°W
500.00	0.00	0.00	500.00	-1.65	134.99	14,367,216.972	885,971.074	39.531114906°N	107.675560426°W
600.00	0.00	0.00	600.00	-1.65	134.99	14,367,216.972	885,971.074	39.531114906°N	107.675560426°W
700.00	0.00	0.00	700.00	-1.65	134.99	14,367,216.972	885,971.074	39.531114906°N	107.675560426°W
800.00	0.00	0.00	800.00	-1.65	134.99	14,367,216.972	885,971.074	39.531114906°N	107.675560426°W
900.00	0.00	0.00	900.00	-1.65	134.99	14,367,216.972	885,971.074	39.531114906°N	107.675560426°W
1,000.00	0.00	0.00	1,000.00	-1.65	134.99	14,367,216.972	885,971.074	39.531114906°N	107.675560426°W
Surf Csg at 1000 MD/TVD									
1,060.00	0.00	0.00	1,060.00	-1.65	134.99	14,367,216.972	885,971.074	39.531114906°N	107.675560426°W
KOP 3°/100 at 1060 MD/TVD									
1,100.00	1.20	92.89	1,100.00	-1.67	135.41	14,367,216.950	885,971.492	39.531114882°N	107.675558941°W
1,200.00	4.20	92.89	1,199.87	-1.91	140.11	14,367,216.713	885,976.196	39.531114615°N	107.675542251°W
1,300.00	7.20	92.89	1,299.37	-2.41	150.03	14,367,216.213	885,986.115	39.531114051°N	107.675507060°W
1,400.00	10.20	92.89	1,398.21	-3.17	165.14	14,367,215.450	886,001.220	39.531113192°N	107.675453466°W
1,500.00	13.20	92.89	1,496.12	-4.19	185.39	14,367,214.428	886,021.470	39.531112041°N	107.675381615°W
1,600.00	16.20	92.89	1,592.83	-5.47	210.73	14,367,213.149	886,046.811	39.531110600°N	107.675291705°W
1,700.00	19.20	92.89	1,688.09	-7.01	241.09	14,367,211.617	886,077.172	39.531108874°N	107.675183981°W
1,800.00	22.20	92.89	1,781.62	-8.79	276.39	14,367,209.836	886,112.470	39.531106867°N	107.675058739°W
1,900.00	25.20	92.89	1,873.18	-10.81	316.53	14,367,207.810	886,152.609	39.531104584°N	107.674916323°W
2,000.00	28.20	92.89	1,962.51	-13.08	361.40	14,367,205.546	886,197.479	39.531102032°N	107.674757122°W
2,046.25	29.59	92.89	2,003.00	-14.20	383.71	14,367,204.419	886,219.797	39.531100763°N	107.674677937°W
Hold 30° at 2046 MD/2003 TVD									
2,100.00	29.59	92.89	2,049.74	-15.54	410.22	14,367,203.082	886,246.303	39.531099255°N	107.674583891°W
2,200.00	29.59	92.89	2,136.70	-18.03	459.53	14,367,200.593	886,295.615	39.531096450°N	107.674408927°W
2,300.00	29.59	92.89	2,223.66	-20.52	508.85	14,367,198.105	886,344.927	39.531093645°N	107.674233963°W
2,400.00	29.59	92.89	2,310.62	-23.01	558.16	14,367,195.616	886,394.240	39.531090840°N	107.674058999°W
2,500.00	29.59	92.89	2,397.58	-25.50	607.47	14,367,193.127	886,443.552	39.531088034°N	107.673884034°W
2,600.00	29.59	92.89	2,484.54	-27.98	656.78	14,367,190.639	886,492.864	39.531085228°N	107.673709070°W
2,700.00	29.59	92.89	2,571.50	-30.47	706.10	14,367,188.150	886,542.177	39.531082422°N	107.673534106°W
2,800.00	29.59	92.89	2,658.46	-32.96	755.41	14,367,185.662	886,591.489	39.531079615°N	107.673359142°W
2,900.00	29.59	92.89	2,745.42	-35.45	804.72	14,367,183.173	886,640.801	39.531076809°N	107.673184178°W
3,000.00	29.59	92.89	2,832.38	-37.94	854.03	14,367,180.684	886,690.113	39.531074001°N	107.673009214°W
3,100.00	29.59	92.89	2,919.34	-40.43	903.34	14,367,178.196	886,739.426	39.531071194°N	107.672834250°W
3,200.00	29.59	92.89	3,006.30	-42.92	952.66	14,367,175.707	886,788.738	39.531068387°N	107.672659286°W
3,300.00	29.59	92.89	3,093.26	-45.40	1,001.97	14,367,173.218	886,838.050	39.531065579°N	107.672484321°W
3,400.00	29.59	92.89	3,180.22	-47.89	1,051.28	14,367,170.730	886,887.363	39.531062771°N	107.672309357°W
3,500.00	29.59	92.89	3,267.18	-50.38	1,100.59	14,367,168.241	886,936.675	39.531059962°N	107.672134393°W
3,600.00	29.59	92.89	3,354.14	-52.87	1,149.91	14,367,165.753	886,985.987	39.531057154°N	107.671959429°W
3,700.00	29.59	92.89	3,441.10	-55.36	1,199.22	14,367,163.264	887,035.299	39.531054345°N	107.671784465°W
3,800.00	29.59	92.89	3,528.06	-57.85	1,248.53	14,367,160.775	887,084.612	39.531051536°N	107.671609501°W
3,900.00	29.59	92.89	3,615.02	-60.34	1,297.84	14,367,158.287	887,133.924	39.531048726°N	107.671434537°W
4,000.00	29.59	92.89	3,701.98	-62.82	1,347.16	14,367,155.798	887,183.236	39.531045916°N	107.671259573°W
4,100.00	29.59	92.89	3,788.94	-65.31	1,396.47	14,367,153.310	887,232.549	39.531043106°N	107.671084608°W
4,195.51	29.59	92.89	3,872.00	-67.69	1,443.57	14,367,150.933	887,279.649	39.531040422°N	107.670917492°W
Drop 3°/100 at 4196 MD/3872 TVD									
4,200.00	29.45	92.89	3,875.91	-67.80	1,445.78	14,367,150.821	887,281.856	39.531040296°N	107.670909661°W
4,300.00	26.45	92.89	3,964.23	-70.16	1,492.59	14,367,148.459	887,328.666	39.531037629°N	107.670743576°W
4,400.00	23.45	92.89	4,054.89	-72.29	1,534.71	14,367,146.333	887,370.795	39.531035227°N	107.670594100°W
4,400.12	23.45	92.89	4,055.00	-72.29	1,534.76	14,367,146.330	887,370.844	39.531035225°N	107.670593924°W
Mesaverde									

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 A11 (111363)	Survey Calculation Method:	Minimum Curvature
Wellbore:	A11		
Design:	A11 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	20.45	92.89	4,147.62	-74.17	1,572.05	14,367,144.449	887,408.127	39.531033099°N	107.670461641°W
4,600.00	17.45	92.89	4,242.19	-75.81	1,604.48	14,367,142.812	887,440.561	39.531031250°N	107.670346562°W
4,700.00	14.45	92.89	4,338.33	-77.20	1,631.93	14,367,141.427	887,468.008	39.531029686°N	107.670249180°W
4,800.00	11.45	92.89	4,435.77	-78.33	1,654.31	14,367,140.297	887,490.392	39.531028409°N	107.670169760°W
4,900.00	8.45	92.89	4,534.26	-79.20	1,671.57	14,367,139.426	887,507.652	39.531027425°N	107.670108520°W
5,000.00	5.45	92.89	4,633.51	-79.81	1,683.66	14,367,138.816	887,519.740	39.531026736°N	107.670065629°W
5,100.00	2.45	92.89	4,733.26	-80.15	1,690.54	14,367,138.469	887,526.624	39.531026344°N	107.670041204°W
5,181.76	0.00	0.00	4,815.00	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
Vertical at 5182 MD/4815 TVD - Price Coal									
5,200.00	0.00	0.00	4,833.24	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
5,300.00	0.00	0.00	4,933.24	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
5,400.00	0.00	0.00	5,033.24	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
5,500.00	0.00	0.00	5,133.24	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
5,600.00	0.00	0.00	5,233.24	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
5,700.00	0.00	0.00	5,333.24	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
5,800.00	0.00	0.00	5,433.24	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
5,900.00	0.00	0.00	5,533.24	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
6,000.00	0.00	0.00	5,633.24	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
6,081.76	0.00	0.00	5,715.00	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
Top Gas									
6,100.00	0.00	0.00	5,733.24	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
6,200.00	0.00	0.00	5,833.24	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
6,300.00	0.00	0.00	5,933.24	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
6,400.00	0.00	0.00	6,033.24	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
6,500.00	0.00	0.00	6,133.24	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
6,600.00	0.00	0.00	6,233.24	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
6,700.00	0.00	0.00	6,333.24	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
6,800.00	0.00	0.00	6,433.24	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
6,900.00	0.00	0.00	6,533.24	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
6,906.76	0.00	0.00	6,540.00	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
Cameo									
7,000.00	0.00	0.00	6,633.24	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
7,100.00	0.00	0.00	6,733.24	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
7,200.00	0.00	0.00	6,833.24	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
7,300.00	0.00	0.00	6,933.24	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
7,400.00	0.00	0.00	7,033.24	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
7,500.00	0.00	0.00	7,133.24	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
7,600.00	0.00	0.00	7,233.24	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
7,700.00	0.00	0.00	7,333.24	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
7,800.00	0.00	0.00	7,433.24	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
7,806.76	0.00	0.00	7,440.00	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
Rollins									
7,900.00	0.00	0.00	7,533.24	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
7,956.76	0.00	0.00	7,590.00	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
TD at 7957 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 A11 (111363)	Survey Calculation Method:	Minimum Curvature
Wellbore:	A11		
Design:	A11 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									
A11 BH	0.00	360.00	7,590.00	-80.24	1,692.29	14,367,138.380	887,528.372	39.531026244°N	107.670035003°W
- plan hits target center									
- Circle (radius 25.00)									

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		5.50	6.00

Formations					
Measured Depth	Vertical Depth	Name		Lithology	Dip Direction
(ft)	(ft)				(°)
4,400.12	4,055.00	Mesaverde			
5,181.76	4,815.00	Price Coal			
6,081.76	5,715.00	Top Gas			
6,906.76	6,540.00	Cameo			
7,806.76	7,440.00	Rollins			

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)		
1,060.00	1,060.00	-1.65	134.99	KOP 3°/100 at 1060 MD/TVD	
2,046.25	2,003.00	-14.20	383.71	Hold 30° at 2046 MD/2003 TVD	
4,195.51	3,872.00	-67.69	1,443.57	Drop 3°/100 at 4196 MD/3872 TVD	
5,181.76	4,815.00	-80.24	1,692.29	Vertical at 5182 MD/4815 TVD	
7,956.76	7,590.00	-80.24	1,692.29	TD at 7957 MD/7590 TVD	