



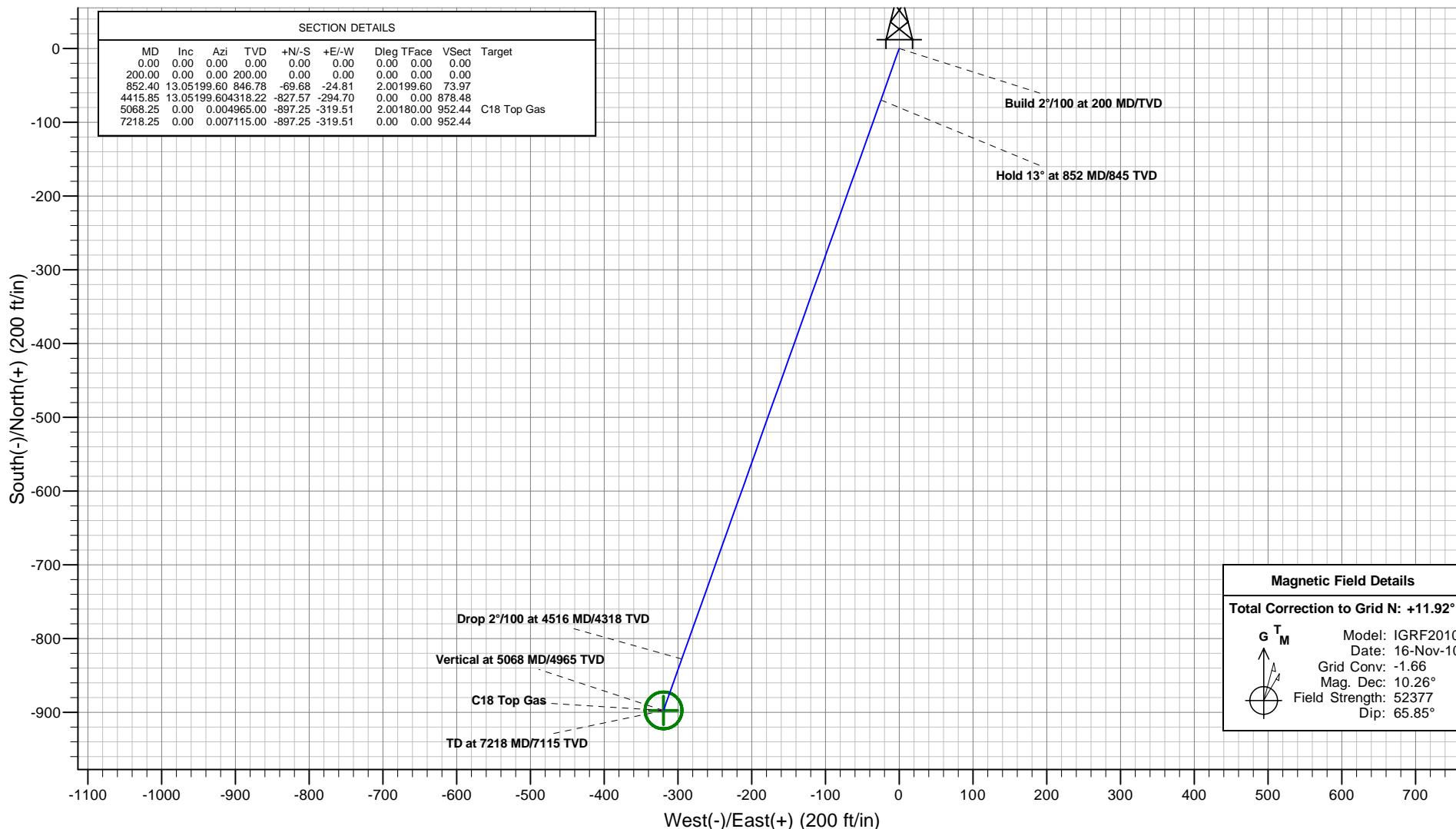
Antero Resources

McLin C18 (111236)



PLAN VIEW

Project: McLin
Site: McLin C
Well: McLin C18 (111236)
Wellbore: McLin C18
Design: McLin C18 P01



Plan: McLin C18 P01
Created By: ARK Directional Services
Date: 15:12, August 17 2010

PROJECT DETAILS: McLin

Geodetic System: Universal Transverse Mercator
Datum: NAD83 Colorado - HARN
Ellipsoid: GRS 1980
Zone: Zone 13N (108 W to 102 W)
System Datum: Mean Sea Level

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well McLin C18 (111236) - Slot C18, Grid North
Vertical (TVD) Reference: KB @ 5750.00ft (Original Well Elev)
Section (VS) Reference: Slot - C18(0.00N, 0.00E)
Measured Depth Reference: KB @ 5750.00ft (Original Well Elev)
Calculation Method: Minimum Curvature

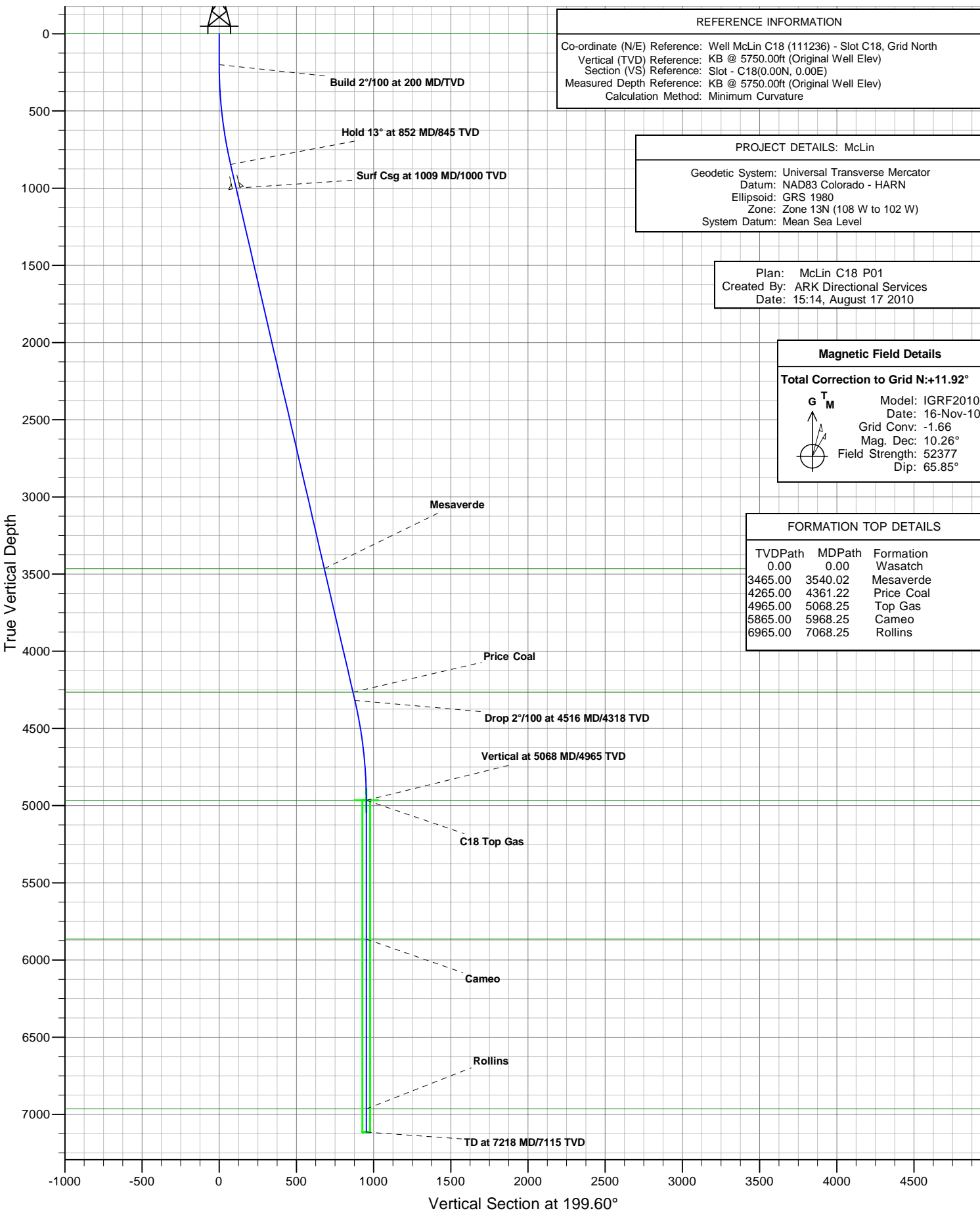


Antero Resources

McLin C18 (111236)



VERTICAL SECTION VIEW



Antero Resources

McLin

McLin C

McLin C18 (111236) - Slot C18

McLin C18

Plan: McLin C18 P01

Standard Planning Report - Geographic

17 August, 2010

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well McLin C18 (111236) - Slot C18
Company:	Antero Resources	TVD Reference:	KB @ 5750.00ft (Original Well Elev)
Project:	McLin	MD Reference:	KB @ 5750.00ft (Original Well Elev)
Site:	McLin C	North Reference:	Grid
Well:	McLin C18 (111236)	Survey Calculation Method:	Minimum Curvature
Wellbore:	McLin C18		
Design:	McLin C18 P01		

Project	McLin		
Map System:	Universal Transverse Mercator	System Datum:	Mean Sea Level
Geo Datum:	NAD83 Colorado - HARN		
Map Zone:	Zone 13N (108 W to 102 W)		

Site	McLin C		
Site Position:		Northing:	14,364,522.752 usft
From:	Map	Easting:	905,235.880 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13.20 in
		Latitude:	39.525275157°N
		Longitude:	107.607030464°W
		Grid Convergence:	-1.66 °

Well	McLin C18 (111236) - Slot C18		
Well Position	+N/-S	0.00 ft	Northing:
	+E/-W	0.00 ft	Easting:
Position Uncertainty	0.00 ft		Wellhead Elevation:
			Ground Level:
			5,726.00 ft

Wellbore	McLin C18				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	2010/11/16	10.26	65.85	52,377

Design	McLin C18 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	199.60

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(ft)	(ft)	Rate	Rate	Rate	(°)	
(ft)			(ft)			(°/100ft)	(°/100ft)	(°/100ft)		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
852.40	13.05	199.60	846.78	-69.68	-24.81	2.00	2.00	0.00	199.60	
4,415.85	13.05	199.60	4,318.22	-827.57	-294.70	0.00	0.00	0.00	0.00	
5,068.25	0.00	0.00	4,965.00	-897.25	-319.51	2.00	-2.00	0.00	180.00	C18 Top Gas
7,218.25	0.00	0.00	7,115.00	-897.25	-319.51	0.00	0.00	0.00	0.00	

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well McLin C18 (111236) - Slot C18
Company:	Antero Resources	TVD Reference:	KB @ 5750.00ft (Original Well Elev)
Project:	McLin	MD Reference:	KB @ 5750.00ft (Original Well Elev)
Site:	McLin C	North Reference:	Grid
Well:	McLin C18 (111236)	Survey Calculation Method:	Minimum Curvature
Wellbore:	McLin C18		
Design:	McLin C18 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	14,364,455.373	905,202.939	39.525087679°N	107.607140246°W
Wasatch									
100.00	0.00	0.00	100.00	0.00	0.00	14,364,455.373	905,202.939	39.525087679°N	107.607140246°W
200.00	0.00	0.00	200.00	0.00	0.00	14,364,455.373	905,202.939	39.525087679°N	107.607140246°W
Build 2°/100 at 200 MD/TVD									
300.00	2.00	199.60	299.98	-1.64	-0.59	14,364,453.729	905,202.354	39.525083122°N	107.607142151°W
400.00	4.00	199.60	399.84	-6.57	-2.34	14,364,448.799	905,200.598	39.525069457°N	107.607147864°W
500.00	6.00	199.60	499.45	-14.78	-5.26	14,364,440.589	905,197.674	39.525046699°N	107.607157379°W
600.00	8.00	199.60	598.70	-26.26	-9.35	14,364,429.108	905,193.586	39.525014878°N	107.607170683°W
700.00	10.00	199.60	697.47	-41.00	-14.60	14,364,414.372	905,188.339	39.524974031°N	107.607187760°W
800.00	12.00	199.60	795.62	-58.97	-21.00	14,364,396.398	905,181.938	39.524924208°N	107.607208590°W
852.40	13.05	199.60	846.78	-69.68	-24.81	14,364,385.693	905,178.126	39.524894537°N	107.607220995°W
Hold 13° at 852 MD/845 TVD									
900.00	13.05	199.60	893.15	-79.80	-28.42	14,364,375.570	905,174.521	39.524866476°N	107.607232727°W
1,000.00	13.05	199.60	990.56	-101.07	-35.99	14,364,354.302	905,166.947	39.524807522°N	107.607257375°W
1,009.00	13.05	199.60	999.33	-102.99	-36.67	14,364,352.387	905,166.266	39.524802216°N	107.607259593°W
Surf Csg at 1009 MD/1000 TVD									
1,100.00	13.05	199.60	1,087.98	-122.34	-43.57	14,364,333.033	905,159.374	39.524748568°N	107.607282022°W
1,200.00	13.05	199.60	1,185.40	-143.61	-51.14	14,364,311.765	905,151.800	39.524689615°N	107.607306669°W
1,300.00	13.05	199.60	1,282.82	-164.88	-58.71	14,364,290.496	905,144.226	39.524630661°N	107.607331317°W
1,400.00	13.05	199.60	1,380.24	-186.15	-66.29	14,364,269.228	905,136.652	39.524571707°N	107.607355964°W
1,500.00	13.05	199.60	1,477.66	-207.41	-73.86	14,364,247.959	905,129.079	39.524512754°N	107.607380611°W
1,600.00	13.05	199.60	1,575.07	-228.68	-81.43	14,364,226.691	905,121.505	39.524453800°N	107.607405259°W
1,700.00	13.05	199.60	1,672.49	-249.95	-89.01	14,364,205.422	905,113.931	39.524394846°N	107.607429906°W
1,800.00	13.05	199.60	1,769.91	-271.22	-96.58	14,364,184.154	905,106.358	39.524335893°N	107.607454553°W
1,900.00	13.05	199.60	1,867.33	-292.49	-104.16	14,364,162.885	905,098.784	39.524276939°N	107.607479200°W
2,000.00	13.05	199.60	1,964.75	-313.76	-111.73	14,364,141.617	905,091.210	39.524217985°N	107.607503847°W
2,100.00	13.05	199.60	2,062.16	-335.02	-119.30	14,364,120.349	905,083.636	39.524159032°N	107.607528494°W
2,200.00	13.05	199.60	2,159.58	-356.29	-126.88	14,364,099.080	905,076.063	39.524100078°N	107.607553141°W
2,300.00	13.05	199.60	2,257.00	-377.56	-134.45	14,364,077.812	905,068.489	39.524041124°N	107.607577788°W
2,400.00	13.05	199.60	2,354.42	-398.83	-142.02	14,364,056.543	905,060.915	39.523982170°N	107.607602435°W
2,500.00	13.05	199.60	2,451.84	-420.10	-149.60	14,364,035.275	905,053.341	39.523923217°N	107.607627082°W
2,600.00	13.05	199.60	2,549.25	-441.37	-157.17	14,364,014.006	905,045.768	39.523864263°N	107.607651729°W
2,700.00	13.05	199.60	2,646.67	-462.64	-164.75	14,363,992.738	905,038.194	39.523805309°N	107.607676375°W
2,800.00	13.05	199.60	2,744.09	-483.90	-172.32	14,363,971.469	905,030.620	39.523746355°N	107.607701022°W
2,900.00	13.05	199.60	2,841.51	-505.17	-179.89	14,363,950.201	905,023.047	39.523687402°N	107.607725669°W
3,000.00	13.05	199.60	2,938.93	-526.44	-187.47	14,363,928.932	905,015.473	39.523628448°N	107.607750316°W
3,100.00	13.05	199.60	3,036.35	-547.71	-195.04	14,363,907.664	905,007.899	39.523569494°N	107.607774962°W
3,200.00	13.05	199.60	3,133.76	-568.98	-202.61	14,363,886.396	905,000.325	39.523510541°N	107.607799609°W
3,300.00	13.05	199.60	3,231.18	-590.25	-210.19	14,363,865.127	904,992.752	39.523451587°N	107.607824255°W
3,400.00	13.05	199.60	3,328.60	-611.52	-217.76	14,363,843.859	904,985.178	39.523392633°N	107.607848902°W
3,500.00	13.05	199.60	3,426.02	-632.78	-225.34	14,363,822.590	904,977.604	39.523333679°N	107.607873548°W
3,540.02	13.05	199.60	3,465.00	-641.29	-228.37	14,363,814.080	904,974.574	39.523310089°N	107.607883411°W
Mesaverde									
3,600.00	13.05	199.60	3,523.44	-654.05	-232.91	14,363,801.322	904,970.030	39.523274725°N	107.607898195°W
3,700.00	13.05	199.60	3,620.85	-675.32	-240.48	14,363,780.053	904,962.457	39.523215772°N	107.607922841°W
3,800.00	13.05	199.60	3,718.27	-696.59	-248.06	14,363,758.785	904,954.883	39.523156818°N	107.607947487°W
3,900.00	13.05	199.60	3,815.69	-717.86	-255.63	14,363,737.516	904,947.309	39.523097864°N	107.607972134°W
4,000.00	13.05	199.60	3,913.11	-739.13	-263.20	14,363,716.248	904,939.736	39.523038910°N	107.607996780°W
4,100.00	13.05	199.60	4,010.53	-760.39	-270.78	14,363,694.980	904,932.162	39.522979957°N	107.608021426°W
4,200.00	13.05	199.60	4,107.94	-781.66	-278.35	14,363,673.711	904,924.588	39.522921003°N	107.608046072°W
4,300.00	13.05	199.60	4,205.36	-802.93	-285.93	14,363,652.443	904,917.014	39.522862049°N	107.608070719°W
4,361.22	13.05	199.60	4,265.00	-815.95	-290.56	14,363,639.422	904,912.378	39.522825959°N	107.608085807°W
Price Coal									

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well McLin C18 (111236) - Slot C18
Company:	Antero Resources	TVD Reference:	KB @ 5750.00ft (Original Well Elev)
Project:	McLin	MD Reference:	KB @ 5750.00ft (Original Well Elev)
Site:	McLin C	North Reference:	Grid
Well:	McLin C18 (111236)	Survey Calculation Method:	Minimum Curvature
Wellbore:	McLin C18		
Design:	McLin C18 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	13.05	199.60	4,302.78	-824.20	-293.50	14,363,631.174	904,909.441	39.522803095°N	107.608095365°W
4,415.85	13.05	199.60	4,318.22	-827.57	-294.70	14,363,627.803	904,908.240	39.522793750°N	107.608099272°W
Drop 2°/100 at 4516 MD/4318 TVD									
4,500.00	11.37	199.60	4,400.47	-844.33	-300.67	14,363,611.042	904,902.272	39.522747292°N	107.608118694°W
4,600.00	9.37	199.60	4,498.83	-861.28	-306.70	14,363,594.094	904,896.236	39.522700313°N	107.608138334°W
4,700.00	7.37	199.60	4,597.76	-874.98	-311.58	14,363,580.390	904,891.356	39.522662326°N	107.608154214°W
4,800.00	5.37	199.60	4,697.14	-885.43	-315.30	14,363,569.946	904,887.637	39.522633379°N	107.608166316°W
4,900.00	3.37	199.60	4,796.84	-892.60	-317.86	14,363,562.777	904,885.084	39.522613505°N	107.608174624°W
5,000.00	1.37	199.60	4,896.75	-896.49	-319.24	14,363,558.889	904,883.700	39.522602730°N	107.608179129°W
5,068.25	0.00	0.00	4,965.00	-897.25	-319.51	14,363,558.123	904,883.427	39.522600607°N	107.608180016°W
Vertical at 5068 MD/4965 TVD - Top Gas									
5,100.00	0.00	0.00	4,996.75	-897.25	-319.51	14,363,558.123	904,883.427	39.522600607°N	107.608180016°W
5,200.00	0.00	0.00	5,096.75	-897.25	-319.51	14,363,558.123	904,883.427	39.522600607°N	107.608180016°W
5,300.00	0.00	0.00	5,196.75	-897.25	-319.51	14,363,558.123	904,883.427	39.522600607°N	107.608180016°W
5,400.00	0.00	0.00	5,296.75	-897.25	-319.51	14,363,558.123	904,883.427	39.522600607°N	107.608180016°W
5,500.00	0.00	0.00	5,396.75	-897.25	-319.51	14,363,558.123	904,883.427	39.522600607°N	107.608180016°W
5,600.00	0.00	0.00	5,496.75	-897.25	-319.51	14,363,558.123	904,883.427	39.522600607°N	107.608180016°W
5,700.00	0.00	0.00	5,596.75	-897.25	-319.51	14,363,558.123	904,883.427	39.522600607°N	107.608180016°W
5,800.00	0.00	0.00	5,696.75	-897.25	-319.51	14,363,558.123	904,883.427	39.522600607°N	107.608180016°W
5,900.00	0.00	0.00	5,796.75	-897.25	-319.51	14,363,558.123	904,883.427	39.522600607°N	107.608180016°W
5,968.25	0.00	0.00	5,865.00	-897.25	-319.51	14,363,558.123	904,883.427	39.522600607°N	107.608180016°W
Cameo									
6,000.00	0.00	0.00	5,896.75	-897.25	-319.51	14,363,558.123	904,883.427	39.522600607°N	107.608180016°W
6,100.00	0.00	0.00	5,996.75	-897.25	-319.51	14,363,558.123	904,883.427	39.522600607°N	107.608180016°W
6,200.00	0.00	0.00	6,096.75	-897.25	-319.51	14,363,558.123	904,883.427	39.522600607°N	107.608180016°W
6,300.00	0.00	0.00	6,196.75	-897.25	-319.51	14,363,558.123	904,883.427	39.522600607°N	107.608180016°W
6,400.00	0.00	0.00	6,296.75	-897.25	-319.51	14,363,558.123	904,883.427	39.522600607°N	107.608180016°W
6,500.00	0.00	0.00	6,396.75	-897.25	-319.51	14,363,558.123	904,883.427	39.522600607°N	107.608180016°W
6,600.00	0.00	0.00	6,496.75	-897.25	-319.51	14,363,558.123	904,883.427	39.522600607°N	107.608180016°W
6,700.00	0.00	0.00	6,596.75	-897.25	-319.51	14,363,558.123	904,883.427	39.522600607°N	107.608180016°W
6,800.00	0.00	0.00	6,696.75	-897.25	-319.51	14,363,558.123	904,883.427	39.522600607°N	107.608180016°W
6,900.00	0.00	0.00	6,796.75	-897.25	-319.51	14,363,558.123	904,883.427	39.522600607°N	107.608180016°W
7,000.00	0.00	0.00	6,896.75	-897.25	-319.51	14,363,558.123	904,883.427	39.522600607°N	107.608180016°W
7,068.25	0.00	0.00	6,965.00	-897.25	-319.51	14,363,558.123	904,883.427	39.522600607°N	107.608180016°W
Rollins									
7,100.00	0.00	0.00	6,996.75	-897.25	-319.51	14,363,558.123	904,883.427	39.522600607°N	107.608180016°W
7,200.00	0.00	0.00	7,096.75	-897.25	-319.51	14,363,558.123	904,883.427	39.522600607°N	107.608180016°W
7,218.25	0.00	0.00	7,115.00	-897.25	-319.51	14,363,558.123	904,883.427	39.522600607°N	107.608180016°W
TD at 7218 MD/7115 TVD									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
C18 Top Gas	0.00	0.00	4,965.00	-897.25	-319.51	14,363,558.123	904,883.427	39.522600607°N	107.608180016°W
- plan hits target center									
- Circle (radius 25.00)									

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well McLin C18 (111236) - Slot C18
Company:	Antero Resources	TVD Reference:	KB @ 5750.00ft (Original Well Elev)
Project:	McLin	MD Reference:	KB @ 5750.00ft (Original Well Elev)
Site:	McLin C	North Reference:	Grid
Well:	McLin C18 (111236)	Survey Calculation Method:	Minimum Curvature
Wellbore:	McLin C18		
Design:	McLin C18 P01		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,009.00	999.33	Surf Csg at 1009 MD/1000 TVD	5.50	6.00	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
0.00	0.00	Wasatch			
3,540.02	3,465.00	Mesaverde			
4,361.22	4,265.00	Price Coal			
5,068.25	4,965.00	Top Gas			
5,968.25	5,865.00	Cameo			
7,068.25	6,965.00	Rollins			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
200.00	200.00	0.00	0.00	Build 2°/100 at 200 MD/TVD	
852.40	846.78	-69.68	-24.81	Hold 13° at 852 MD/845 TVD	
4,415.85	4,318.22	-827.57	-294.70	Drop 2°/100 at 4516 MD/4318 TVD	
5,068.25	4,965.00	-897.25	-319.51	Vertical at 5068 MD/4965 TVD	
7,218.25	7,115.00	-897.25	-319.51	TD at 7218 MD/7115 TVD	