



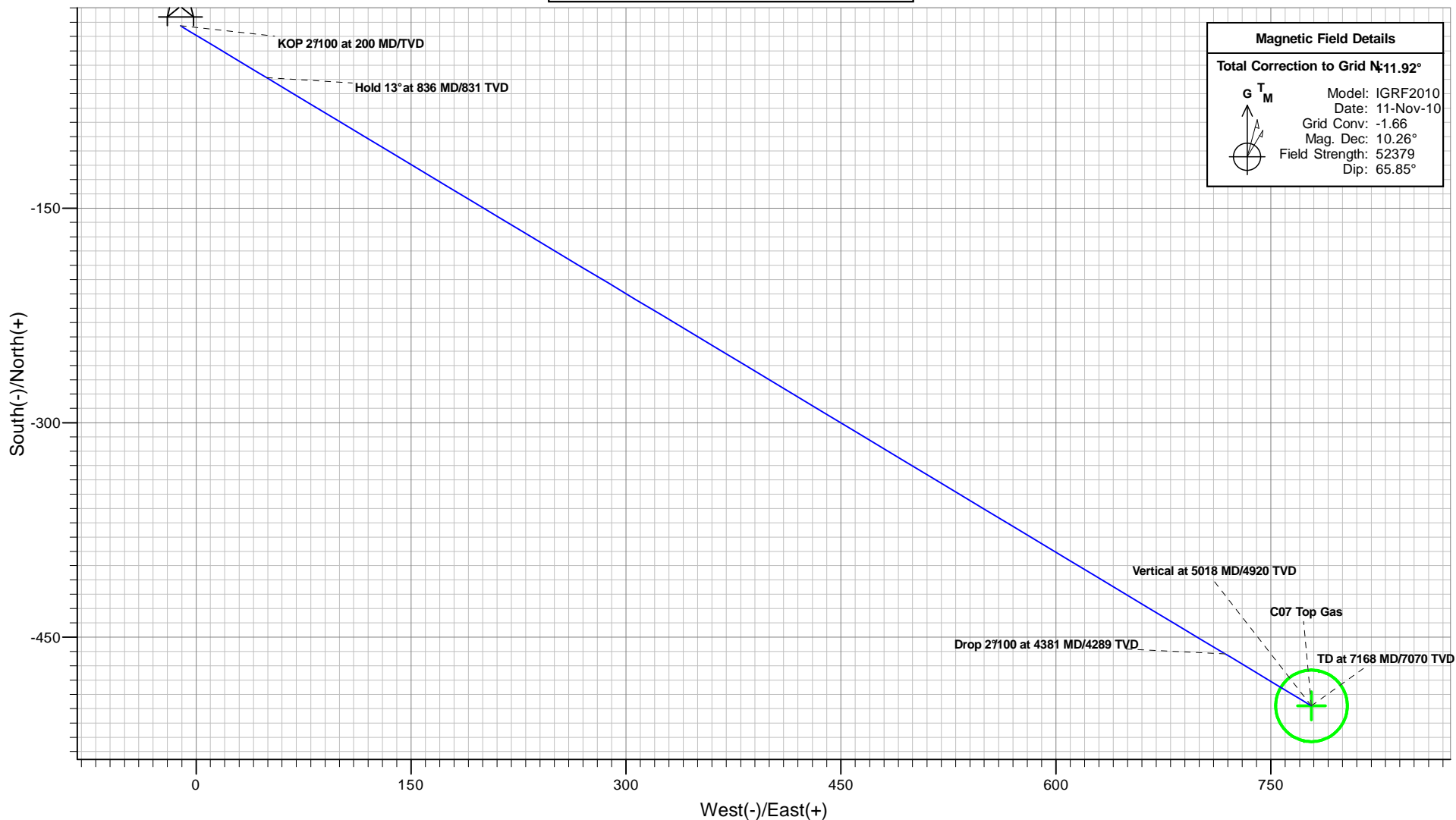
# Antero Resources



## McLin C07

### PLAN VIEW

Project: McLin  
Site: McLin C  
Well: McLin C07 (111203)  
Wellbore: McLin C07  
Design: McLin C07 P01



Plan: McLin C07 P01  
Created By: ARK Directional Services  
Date: 9:59, August 12 2010

#### PROJECT DETAILS: McLin

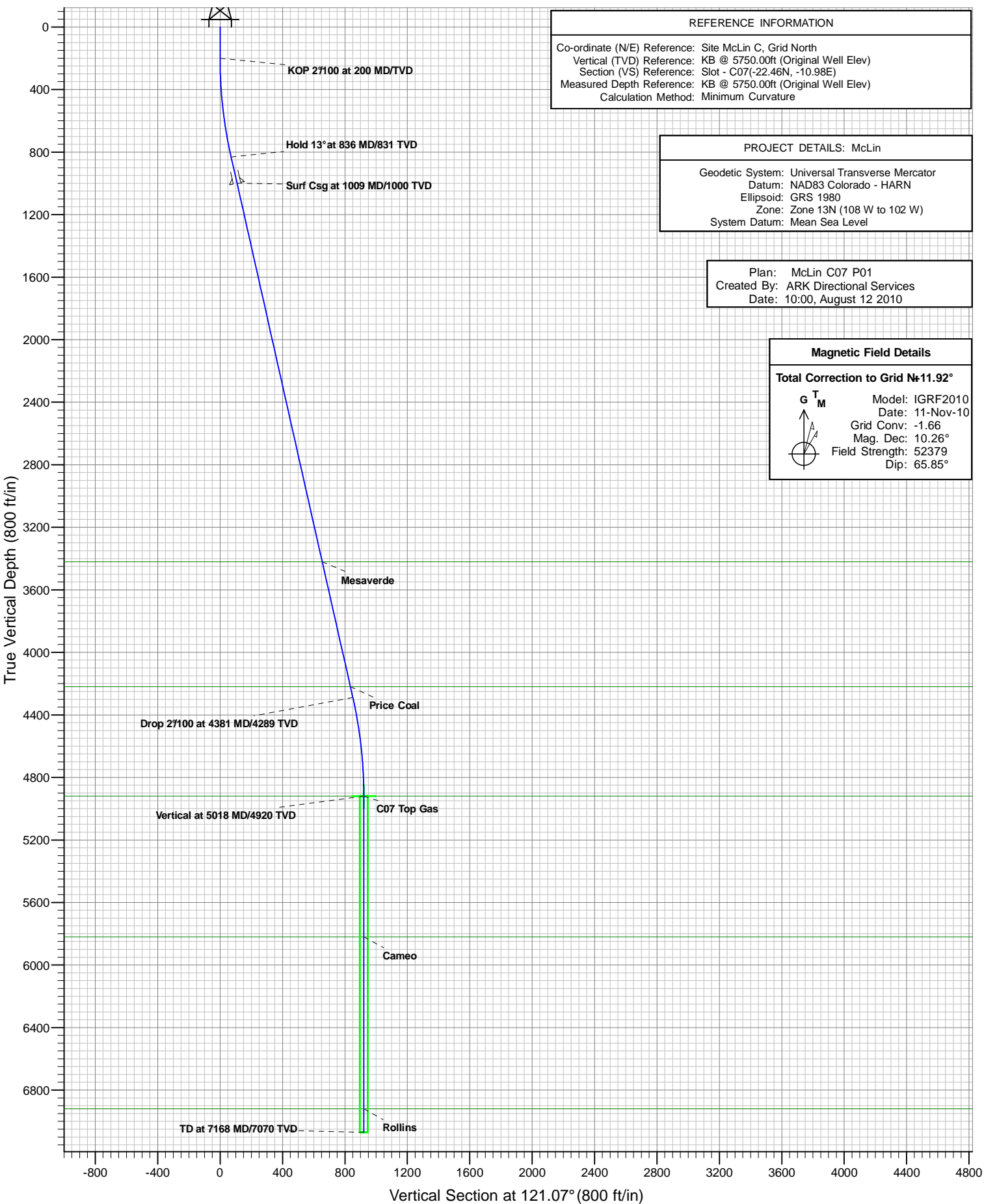
Geodetic System: Universal Transverse Mercator  
Datum: NAD83 Colorado - HARN  
Ellipsoid: GRS 1980  
Zone: Zone 13N (108 W to 102 W)  
System Datum: Mean Sea Level

#### REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Site McLin C, Grid North  
Vertical (TVD) Reference: KB @ 5750.00ft (Original Well Elev)  
Section (VS) Reference: Slot - C07(-22.46N, -10.98E)  
Measured Depth Reference: KB @ 5750.00ft (Original Well Elev)  
Calculation Method: Minimum Curvature



VERTICAL SECTION VIEW



# **Antero Resources**

**McLin**

**McLin C**

**McLin C07 (111203) - Slot C07**

**McLin C07**

**Plan: McLin C07 P01**

## **Standard Planning Report - Geographic**

**12 August, 2010**

# ARK Directional Services

## Planning Report - Geographic

<b>Database:</b>	EDM SERVER DB	<b>Local Co-ordinate Reference:</b>	Site McLin C
<b>Company:</b>	Antero Resources	<b>TVD Reference:</b>	KB @ 5750.00ft (Original Well Elev)
<b>Project:</b>	McLin	<b>MD Reference:</b>	KB @ 5750.00ft (Original Well Elev)
<b>Site:</b>	McLin C	<b>North Reference:</b>	Grid
<b>Well:</b>	McLin C07 (111203)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	McLin C07		
<b>Design:</b>	McLin C07 P01		

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

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

<b>Well</b>	McLin C07 (111203) - Slot C07		
<b>Well Position</b>	<b>+N/-S</b>	-22.46 ft	<b>Northing:</b>
	<b>+E/-W</b>	-10.98 ft	<b>Easting:</b>
<b>Position Uncertainty</b>	0.00 ft		<b>Wellhead Elevation:</b>
			<b>Latitude:</b>
			<b>Longitude:</b>
			<b>Ground Level:</b>

<b>Wellbore</b>	McLin C07				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	2010/11/11	10.26	65.85	52,379

<b>Design</b>	McLin C07 P01				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.00	
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.00	-22.46	-10.98	121.07	

<b>Plan Sections</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>	<b>TFO (°)</b>	<b>Target</b>
0.00	0.00	0.00	0.00	-22.46	-10.98	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	-22.46	-10.98	0.00	0.00	0.00	0.00	
836.19	12.72	121.07	830.98	-58.77	49.28	2.00	2.00	0.00	121.07	
4,381.30	12.72	121.07	4,289.02	-461.73	718.08	0.00	0.00	0.00	0.00	
5,017.49	0.00	0.00	4,920.00	-498.03	778.34	2.00	-2.00	0.00	180.00	C07 Top Gas
7,167.49	0.00	0.00	7,070.00	-498.03	778.34	0.00	0.00	0.00	0.00	

# ARK Directional Services

## Planning Report - Geographic

<b>Database:</b>	EDM SERVER DB	<b>Local Co-ordinate Reference:</b>	Site McLin C
<b>Company:</b>	Antero Resources	<b>TVD Reference:</b>	KB @ 5750.00ft (Original Well Elev)
<b>Project:</b>	McLin	<b>MD Reference:</b>	KB @ 5750.00ft (Original Well Elev)
<b>Site:</b>	McLin C	<b>North Reference:</b>	Grid
<b>Well:</b>	McLin C07 (111203)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	McLin C07		
<b>Design:</b>	McLin C07 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	-22.46	-10.98	14,364,500.292	905,224.899	39.525212664°N	107.607067060°W
100.00	0.00	0.00	100.00	-22.46	-10.98	14,364,500.292	905,224.899	39.525212664°N	107.607067060°W
200.00	0.00	0.00	200.00	-22.46	-10.98	14,364,500.292	905,224.899	39.525212664°N	107.607067060°W
<b>KOP 2°/100 at 200 MD/TVD</b>									
300.00	2.00	121.07	299.98	-23.36	-9.49	14,364,499.391	905,226.394	39.525210312°N	107.607061672°W
400.00	4.00	121.07	399.84	-26.06	-5.00	14,364,496.690	905,230.876	39.525203258°N	107.607045515°W
500.00	6.00	121.07	499.45	-30.56	2.46	14,364,492.193	905,238.341	39.525191512°N	107.607018608°W
600.00	8.00	121.07	598.70	-36.85	12.90	14,364,485.904	905,248.779	39.525175088°N	107.606980983°W
700.00	10.00	121.07	697.47	-44.92	26.30	14,364,477.831	905,262.178	39.525154005°N	107.606932688°W
800.00	12.00	121.07	795.62	-54.77	42.64	14,364,467.984	905,278.521	39.525128289°N	107.606873780°W
836.19	12.72	121.07	830.97	-58.77	49.28	14,364,463.986	905,285.157	39.525117846°N	107.606849860°W
<b>Hold 13° at 836 MD/831 TVD</b>									
900.00	12.72	121.07	893.22	-66.02	61.32	14,364,456.733	905,297.195	39.525098904°N	107.606806469°W
1,000.00	12.72	121.07	990.76	-77.39	80.18	14,364,445.366	905,316.061	39.525069218°N	107.606738468°W
1,009.00	12.72	121.07	999.54	-78.41	81.88	14,364,444.343	905,317.759	39.525066547°N	107.606732348°W
<b>Surf Csg at 1009 MD/1000 TVD</b>									
1,100.00	12.72	121.07	1,088.31	-88.75	99.05	14,364,433.999	905,334.926	39.525039533°N	107.606670467°W
1,200.00	12.72	121.07	1,185.85	-100.12	117.91	14,364,422.633	905,353.792	39.525009847°N	107.606602466°W
1,300.00	12.72	121.07	1,283.39	-111.49	136.78	14,364,411.266	905,372.657	39.524980161°N	107.606534465°W
1,400.00	12.72	121.07	1,380.94	-122.85	155.64	14,364,399.899	905,391.523	39.524950476°N	107.606466464°W
1,500.00	12.72	121.07	1,478.48	-134.22	174.51	14,364,388.533	905,410.389	39.524920790°N	107.606398463°W
1,600.00	12.72	121.07	1,576.03	-145.59	193.37	14,364,377.166	905,429.254	39.524891104°N	107.606330463°W
1,700.00	12.72	121.07	1,673.57	-156.95	212.24	14,364,365.799	905,448.120	39.524861418°N	107.606262462°W
1,800.00	12.72	121.07	1,771.12	-168.32	231.11	14,364,354.432	905,466.985	39.524831732°N	107.606194461°W
1,900.00	12.72	121.07	1,868.66	-179.69	249.97	14,364,343.066	905,485.851	39.524802046°N	107.606126461°W
2,000.00	12.72	121.07	1,966.20	-191.05	268.84	14,364,331.699	905,504.716	39.524772360°N	107.606058460°W
2,100.00	12.72	121.07	2,063.75	-202.42	287.70	14,364,320.332	905,523.582	39.524742674°N	107.605990460°W
2,200.00	12.72	121.07	2,161.29	-213.79	306.57	14,364,308.966	905,542.448	39.524712988°N	107.605922460°W
2,300.00	12.72	121.07	2,258.84	-225.15	325.43	14,364,297.599	905,561.313	39.524683302°N	107.605854459°W
2,400.00	12.72	121.07	2,356.38	-236.52	344.30	14,364,286.232	905,580.179	39.524653616°N	107.605786459°W
2,500.00	12.72	121.07	2,453.93	-247.89	363.17	14,364,274.866	905,599.044	39.524623929°N	107.605718459°W
2,600.00	12.72	121.07	2,551.47	-259.25	382.03	14,364,263.499	905,617.910	39.524594243°N	107.605650459°W
2,700.00	12.72	121.07	2,649.01	-270.62	400.90	14,364,252.132	905,636.776	39.524564557°N	107.605582459°W
2,800.00	12.72	121.07	2,746.56	-281.99	419.76	14,364,240.766	905,655.641	39.524534870°N	107.605514459°W
2,900.00	12.72	121.07	2,844.10	-293.35	438.63	14,364,229.399	905,674.507	39.524505184°N	107.605446459°W
3,000.00	12.72	121.07	2,941.65	-304.72	457.49	14,364,218.032	905,693.372	39.524475498°N	107.605378459°W
3,100.00	12.72	121.07	3,039.19	-316.09	476.36	14,364,206.665	905,712.238	39.524445811°N	107.605310459°W
3,200.00	12.72	121.07	3,136.74	-327.45	495.22	14,364,195.299	905,731.104	39.524416125°N	107.605242459°W
3,300.00	12.72	121.07	3,234.28	-338.82	514.09	14,364,183.932	905,749.969	39.524386438°N	107.605174459°W
3,400.00	12.72	121.07	3,331.82	-350.19	532.96	14,364,172.565	905,768.835	39.524356751°N	107.605106460°W
3,490.40	12.72	121.07	3,420.00	-360.46	550.01	14,364,162.290	905,785.888	39.524329916°N	107.605044991°W
<b>Mesaverde</b>									
3,500.00	12.72	121.07	3,429.37	-361.55	551.82	14,364,161.199	905,787.700	39.524327065°N	107.605038460°W
3,600.00	12.72	121.07	3,526.91	-372.92	570.69	14,364,149.832	905,806.566	39.524297378°N	107.604970460°W
3,700.00	12.72	121.07	3,624.46	-384.29	589.55	14,364,138.465	905,825.431	39.524267691°N	107.604902461°W
3,800.00	12.72	121.07	3,722.00	-395.65	608.42	14,364,127.099	905,844.297	39.524238005°N	107.604834461°W
3,900.00	12.72	121.07	3,819.55	-407.02	627.28	14,364,115.732	905,863.163	39.524208318°N	107.604766462°W
4,000.00	12.72	121.07	3,917.09	-418.39	646.15	14,364,104.365	905,882.028	39.524178631°N	107.604698463°W
4,100.00	12.72	121.07	4,014.63	-429.75	665.02	14,364,092.998	905,900.894	39.524148944°N	107.604630463°W
4,200.00	12.72	121.07	4,112.18	-441.12	683.88	14,364,081.632	905,919.759	39.524119257°N	107.604562464°W
4,300.00	12.72	121.07	4,209.72	-452.49	702.75	14,364,070.265	905,938.625	39.524089570°N	107.604494465°W
4,310.54	12.72	121.07	4,220.00	-453.69	704.73	14,364,069.067	905,940.613	39.524086442°N	107.604487300°W
<b>Price Coal</b>									

# ARK Directional Services

## Planning Report - Geographic

<b>Database:</b>	EDM SERVER DB	<b>Local Co-ordinate Reference:</b>	Site McLin C
<b>Company:</b>	Antero Resources	<b>TVD Reference:</b>	KB @ 5750.00ft (Original Well Elev)
<b>Project:</b>	McLin	<b>MD Reference:</b>	KB @ 5750.00ft (Original Well Elev)
<b>Site:</b>	McLin C	<b>North Reference:</b>	Grid
<b>Well:</b>	McLin C07 (111203)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	McLin C07		
<b>Design:</b>	McLin C07 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
4,381.30	12.72	121.07	4,289.03	-461.73	718.08	14,364,061.024	905,953.963	39.524065434°N	107.604439182°W
Drop 2°/100 at 4381 MD/4289 TVD									
4,400.00	12.35	121.07	4,307.28	-463.82	721.56	14,364,058.929	905,957.439	39.524059963°N	107.604426650°W
4,500.00	10.35	121.07	4,405.32	-473.98	738.42	14,364,048.773	905,974.295	39.524033439°N	107.604365895°W
4,600.00	8.35	121.07	4,503.99	-482.36	752.33	14,364,040.390	905,988.210	39.524011542°N	107.604315741°W
4,700.00	6.35	121.07	4,603.16	-488.96	763.29	14,364,033.788	905,999.167	39.523994300°N	107.604276248°W
4,800.00	4.35	121.07	4,702.72	-493.78	771.27	14,364,028.977	906,007.153	39.523981734°N	107.604247464°W
4,900.00	2.35	121.07	4,802.54	-496.79	776.28	14,364,025.961	906,012.157	39.523973859°N	107.604229425°W
5,000.00	0.35	121.07	4,902.51	-498.01	778.30	14,364,024.746	906,014.175	39.523970684°N	107.604222153°W
5,017.49	0.00	0.00	4,920.00	-498.03	778.34	14,364,024.718	906,014.221	39.523970612°N	107.604221988°W
Vertical at 5018 MD/4920 TVD - Top Gas - C07 Top Gas									
5,100.00	0.00	0.00	5,002.51	-498.03	778.34	14,364,024.718	906,014.221	39.523970612°N	107.604221988°W
5,200.00	0.00	0.00	5,102.51	-498.03	778.34	14,364,024.718	906,014.221	39.523970612°N	107.604221988°W
5,300.00	0.00	0.00	5,202.51	-498.03	778.34	14,364,024.718	906,014.221	39.523970612°N	107.604221988°W
5,400.00	0.00	0.00	5,302.51	-498.03	778.34	14,364,024.718	906,014.221	39.523970612°N	107.604221988°W
5,500.00	0.00	0.00	5,402.51	-498.03	778.34	14,364,024.718	906,014.221	39.523970612°N	107.604221988°W
5,600.00	0.00	0.00	5,502.51	-498.03	778.34	14,364,024.718	906,014.221	39.523970612°N	107.604221988°W
5,700.00	0.00	0.00	5,602.51	-498.03	778.34	14,364,024.718	906,014.221	39.523970612°N	107.604221988°W
5,800.00	0.00	0.00	5,702.51	-498.03	778.34	14,364,024.718	906,014.221	39.523970612°N	107.604221988°W
5,900.00	0.00	0.00	5,802.51	-498.03	778.34	14,364,024.718	906,014.221	39.523970612°N	107.604221988°W
5,917.49	0.00	0.00	5,820.00	-498.03	778.34	14,364,024.718	906,014.221	39.523970612°N	107.604221988°W
Cameo									
6,000.00	0.00	0.00	5,902.51	-498.03	778.34	14,364,024.718	906,014.221	39.523970612°N	107.604221988°W
6,100.00	0.00	0.00	6,002.51	-498.03	778.34	14,364,024.718	906,014.221	39.523970612°N	107.604221988°W
6,200.00	0.00	0.00	6,102.51	-498.03	778.34	14,364,024.718	906,014.221	39.523970612°N	107.604221988°W
6,300.00	0.00	0.00	6,202.51	-498.03	778.34	14,364,024.718	906,014.221	39.523970612°N	107.604221988°W
6,400.00	0.00	0.00	6,302.51	-498.03	778.34	14,364,024.718	906,014.221	39.523970612°N	107.604221988°W
6,500.00	0.00	0.00	6,402.51	-498.03	778.34	14,364,024.718	906,014.221	39.523970612°N	107.604221988°W
6,600.00	0.00	0.00	6,502.51	-498.03	778.34	14,364,024.718	906,014.221	39.523970612°N	107.604221988°W
6,700.00	0.00	0.00	6,602.51	-498.03	778.34	14,364,024.718	906,014.221	39.523970612°N	107.604221988°W
6,800.00	0.00	0.00	6,702.51	-498.03	778.34	14,364,024.718	906,014.221	39.523970612°N	107.604221988°W
6,900.00	0.00	0.00	6,802.51	-498.03	778.34	14,364,024.718	906,014.221	39.523970612°N	107.604221988°W
7,000.00	0.00	0.00	6,902.51	-498.03	778.34	14,364,024.718	906,014.221	39.523970612°N	107.604221988°W
7,017.49	0.00	0.00	6,920.00	-498.03	778.34	14,364,024.718	906,014.221	39.523970612°N	107.604221988°W
Rollins									
7,100.00	0.00	0.00	7,002.51	-498.03	778.34	14,364,024.718	906,014.221	39.523970612°N	107.604221988°W
7,167.49	0.00	0.00	7,070.00	-498.03	778.34	14,364,024.718	906,014.221	39.523970612°N	107.604221988°W
TD at 7168 MD/7070 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									
C07 Top Gas	0.00	360.00	4,920.00	-498.03	778.34	14,364,024.718	906,014.221	39.523970612°N	107.604221988°W
- plan hits target center									
- Circle (radius 25.00)									

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<b>Project:</b>	McLin	<b>MD Reference:</b>	KB @ 5750.00ft (Original Well Elev)
<b>Site:</b>	McLin C	<b>North Reference:</b>	Grid
<b>Well:</b>	McLin C07 (111203)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	McLin C07		
<b>Design:</b>	McLin C07 P01		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,009.00	999.54	Surf Csg at 1009 MD/1000 TVD	5.50	6.00	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,490.40	3,420.00	Mesaverde			
4,310.54	4,220.00	Price Coal			
5,017.49	4,920.00	Top Gas			
5,917.49	5,820.00	Cameo			
7,017.49	6,920.00	Rollins			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
200.00	200.00	-22.46	-10.98	KOP 2°/100 at 200 MD/TVD	
836.19	830.97	-58.77	49.28	Hold 13° at 836 MD/831 TVD	
4,381.30	4,289.03	-461.73	718.08	Drop 2°/100 at 4381 MD/4289 TVD	
5,017.49	4,920.00	-498.03	778.34	Vertical at 5018 MD/4920 TVD	
7,167.49	7,070.00	-498.03	778.34	TD at 7168 MD/7070 TVD	