



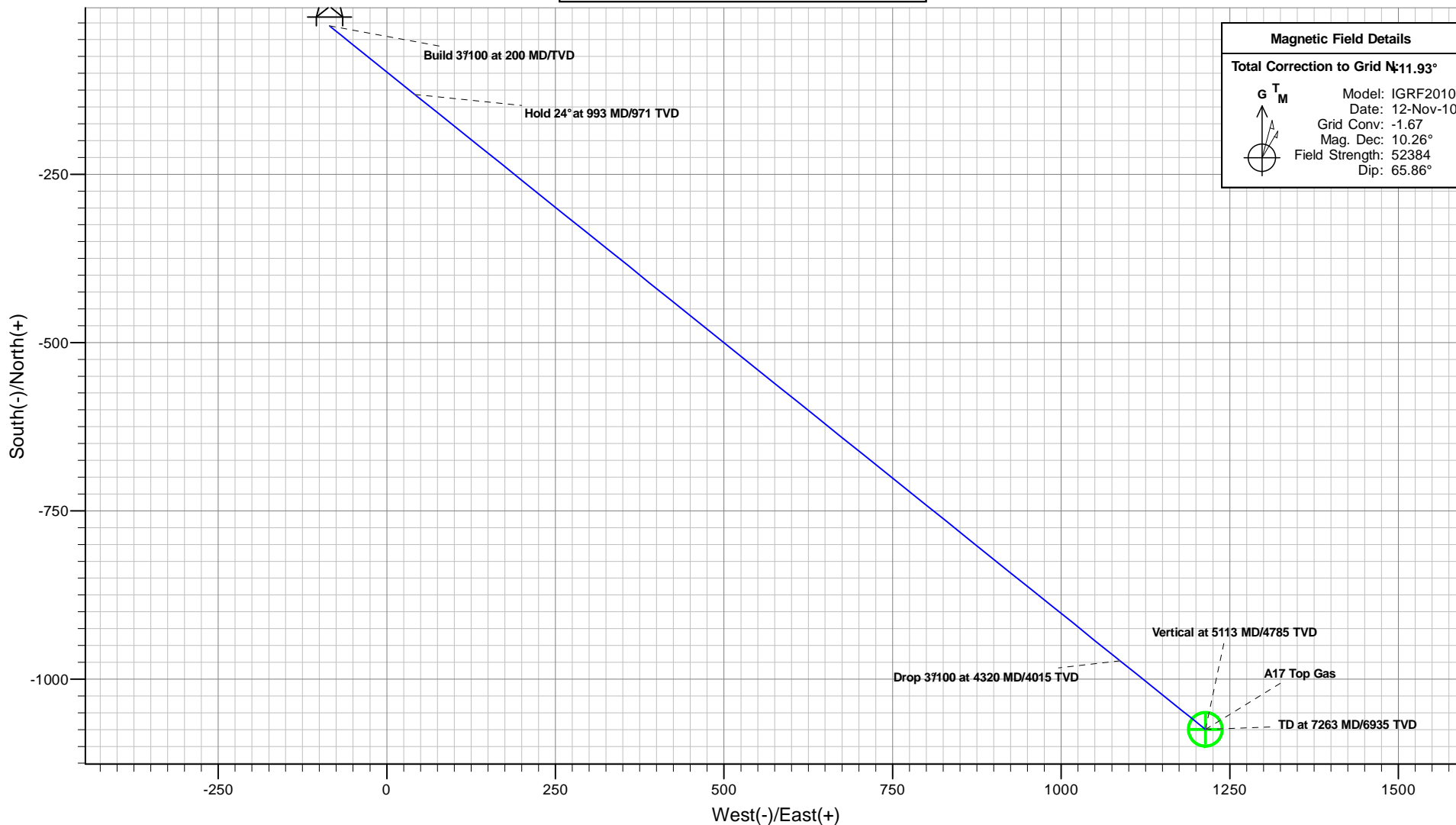
Antero Resources



McLin A17

PLAN VIEW

Project: McLin
Site: McLin A
Well: McLin A17 (111220)
Wellbore: McLin A17
Design: McLin A17 P01



Magnetic Field Details

Total Correction to Grid N: 11.93°



Model: IGRF2010
Date: 12-Nov-10
Grid Conv: -1.67
Mag. Dec: 10.26°
Field Strength: 52384
Dip: 65.86°

Plan: McLin A17 P01
Created By: ARK Directional Services
Date: 11:45, 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

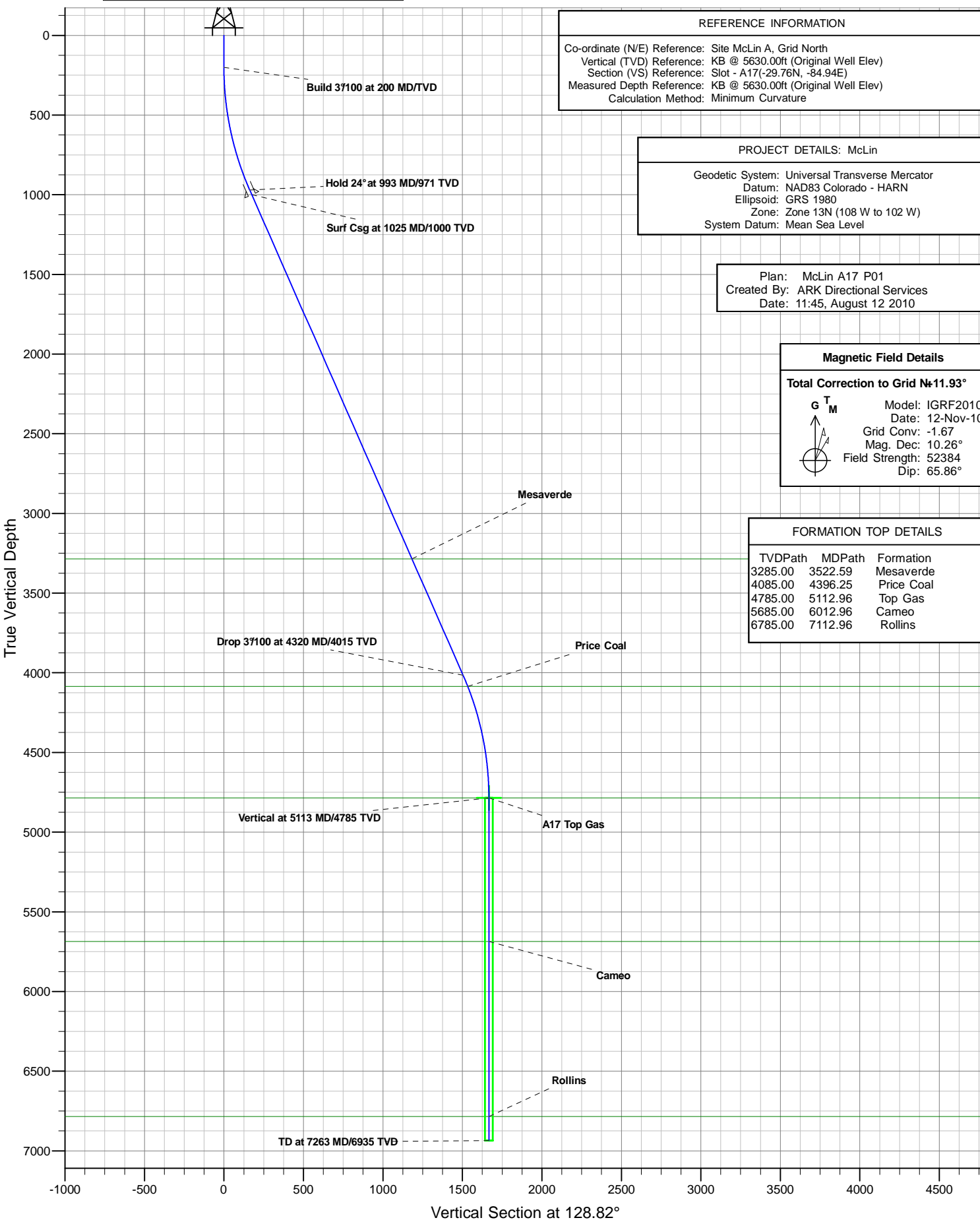
REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Site McLin A, Grid North
Vertical (TVD) Reference: KB @ 5630.00ft (Original Well Elev)
Section (VS) Reference: Slot - A17(-29.76N, -84.94E)
Measured Depth Reference: KB @ 5630.00ft (Original Well Elev)
Calculation Method: Minimum Curvature



McLin A17

VERTICAL SECTION VIEW



Antero Resources

McLin

McLin A

McLin A17 (111220) - Slot A17

McLin A17

Plan: McLin A17 P01

Standard Planning Report - Geographic

12 August, 2010

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Site McLin A
Company:	Antero Resources	TVD Reference:	KB @ 5630.00ft (Original Well Elev)
Project:	McLin	MD Reference:	KB @ 5630.00ft (Original Well Elev)
Site:	McLin A	North Reference:	Grid
Well:	McLin A17 (111220)	Survey Calculation Method:	Minimum Curvature
Wellbore:	McLin A17		
Design:	McLin A17 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 A		
Site Position:		Northing:	14,368,868.520 usft
From:	Map	Easting:	902,523.601 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13.20 in
		Latitude:	39.536981937°N
		Longitude:	107.617087010°W
		Grid Convergence:	-1.67 °

Well	McLin A17 (111220) - Slot A17					
Well Position	+N/-S	-29.76 ft	Northing:	14,368,838.763 usft	Latitude:	39.536893517°N
	+E/-W	-84.94 ft	Easting:	902,438.663 usft	Longitude:	107.617384897°W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,606.00 ft

Wellbore	McLin A17				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2010/11/12	10.26	65.86	52,384

Design	McLin A17 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	-29.76	-84.94	128.82	

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	-29.76	-84.94	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	-29.76	-84.94	0.00	0.00	0.00	0.00	
993.12	23.79	128.82	970.52	-131.51	41.54	3.00	3.00	0.00	128.82	
4,319.84	23.79	128.82	4,014.48	-972.82	1,087.27	0.00	0.00	0.00	0.00	
5,112.96	0.00	0.00	4,785.00	-1,074.57	1,213.75	3.00	-3.00	0.00	180.00	A17 Top Gas
7,262.96	0.00	0.00	6,935.00	-1,074.57	1,213.75	0.00	0.00	0.00	0.00	

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Site McLin A
Company:	Antero Resources	TVD Reference:	KB @ 5630.00ft (Original Well Elev)
Project:	McLin	MD Reference:	KB @ 5630.00ft (Original Well Elev)
Site:	McLin A	North Reference:	Grid
Well:	McLin A17 (111220)	Survey Calculation Method:	Minimum Curvature
Wellbore:	McLin A17		
Design:	McLin A17 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	-29.76	-84.94	14,368,838.763	902,438.663	39.536893517°N	107.617384897°W
100.00	0.00	0.00	100.00	-29.76	-84.94	14,368,838.763	902,438.663	39.536893517°N	107.617384897°W
200.00	0.00	0.00	200.00	-29.76	-84.94	14,368,838.763	902,438.663	39.536893517°N	107.617384897°W
Build 3°/100 at 200 MD/TVD									
300.00	3.00	128.82	299.95	-31.40	-82.90	14,368,837.122	902,440.702	39.536889178°N	107.617377502°W
400.00	6.00	128.82	399.63	-36.32	-76.79	14,368,832.204	902,446.815	39.536876175°N	107.617355337°W
500.00	9.00	128.82	498.77	-44.50	-66.62	14,368,824.023	902,456.984	39.536854542°N	107.617318464°W
600.00	12.00	128.82	597.08	-55.92	-52.42	14,368,812.601	902,471.181	39.536824339°N	107.617266982°W
700.00	15.00	128.82	694.31	-70.55	-34.23	14,368,797.970	902,489.368	39.536785648°N	107.617201034°W
800.00	18.00	128.82	790.18	-88.35	-12.11	14,368,780.169	902,511.494	39.536738576°N	107.617120800°W
900.00	21.00	128.82	884.43	-109.27	13.90	14,368,759.247	902,537.499	39.536683252°N	107.617026500°W
993.12	23.79	128.82	970.52	-131.51	41.54	14,368,737.008	902,565.142	39.536624446°N	107.616926266°W
Hold 24° at 993 MD/971 TVD									
1,000.00	23.79	128.82	976.81	-133.25	43.70	14,368,735.269	902,567.304	39.536619846°N	107.616918425°W
1,025.34	23.79	128.82	1,000.00	-139.66	51.67	14,368,728.860	902,575.269	39.536602901°N	107.616889542°W
Surf Csg at 1025 MD/1000 TVD									
1,100.00	23.79	128.82	1,068.32	-158.54	75.14	14,368,709.979	902,598.738	39.536552973°N	107.616804440°W
1,200.00	23.79	128.82	1,159.82	-183.83	106.57	14,368,684.690	902,630.172	39.536486099°N	107.616690455°W
1,300.00	23.79	128.82	1,251.32	-209.12	138.01	14,368,659.400	902,661.606	39.536419225°N	107.616576471°W
1,400.00	23.79	128.82	1,342.82	-234.41	169.44	14,368,634.111	902,693.041	39.536352352°N	107.616462486°W
1,500.00	23.79	128.82	1,434.32	-259.70	200.87	14,368,608.822	902,724.475	39.536285478°N	107.616348502°W
1,600.00	23.79	128.82	1,525.82	-284.99	232.31	14,368,583.532	902,755.909	39.536218604°N	107.616234518°W
1,700.00	23.79	128.82	1,617.32	-310.28	263.74	14,368,558.243	902,787.343	39.536151730°N	107.616120535°W
1,800.00	23.79	128.82	1,708.82	-335.57	295.18	14,368,532.953	902,818.777	39.536084855°N	107.616006551°W
1,900.00	23.79	128.82	1,800.32	-360.86	326.61	14,368,507.664	902,850.211	39.536017981°N	107.615892568°W
2,000.00	23.79	128.82	1,891.82	-386.15	358.05	14,368,482.375	902,881.646	39.535951107°N	107.615778585°W
2,100.00	23.79	128.82	1,983.32	-411.44	389.48	14,368,457.085	902,913.080	39.535884232°N	107.615664603°W
2,200.00	23.79	128.82	2,074.82	-436.72	420.91	14,368,431.796	902,944.514	39.535817357°N	107.615550620°W
2,300.00	23.79	128.82	2,166.32	-462.01	452.35	14,368,406.506	902,975.948	39.535750482°N	107.615436638°W
2,400.00	23.79	128.82	2,257.82	-487.30	483.78	14,368,381.217	903,007.382	39.535683607°N	107.615322656°W
2,500.00	23.79	128.82	2,349.32	-512.59	515.22	14,368,355.928	903,038.816	39.535616732°N	107.615208674°W
2,600.00	23.79	128.82	2,440.82	-537.88	546.65	14,368,330.638	903,070.251	39.535549857°N	107.615094692°W
2,700.00	23.79	128.82	2,532.32	-563.17	578.08	14,368,305.349	903,101.685	39.535482982°N	107.614980711°W
2,800.00	23.79	128.82	2,623.82	-588.46	609.52	14,368,280.059	903,133.119	39.535416106°N	107.614866729°W
2,900.00	23.79	128.82	2,715.32	-613.75	640.95	14,368,254.770	903,164.553	39.535349231°N	107.614752748°W
3,000.00	23.79	128.82	2,806.82	-639.04	672.39	14,368,229.481	903,195.987	39.535282355°N	107.614638768°W
3,100.00	23.79	128.82	2,898.32	-664.33	703.82	14,368,204.191	903,227.421	39.535215479°N	107.614524787°W
3,200.00	23.79	128.82	2,989.82	-689.62	735.26	14,368,178.902	903,258.856	39.535148603°N	107.614410807°W
3,300.00	23.79	128.82	3,081.33	-714.91	766.69	14,368,153.612	903,290.290	39.535081727°N	107.614296826°W
3,400.00	23.79	128.82	3,172.83	-740.20	798.12	14,368,128.323	903,321.724	39.535014851°N	107.614182847°W
3,500.00	23.79	128.82	3,264.33	-765.49	829.56	14,368,103.034	903,353.158	39.534947975°N	107.614068867°W
3,522.59	23.79	128.82	3,285.00	-771.20	836.66	14,368,097.320	903,360.260	39.534932864°N	107.614043114°W
Mesaverde									
3,600.00	23.79	128.82	3,355.83	-790.78	860.99	14,368,077.744	903,384.592	39.534881098°N	107.613954887°W
3,700.00	23.79	128.82	3,447.33	-816.07	892.43	14,368,052.455	903,416.026	39.534814222°N	107.613840908°W
3,800.00	23.79	128.82	3,538.83	-841.36	923.86	14,368,027.165	903,447.461	39.534747345°N	107.613726929°W
3,900.00	23.79	128.82	3,630.33	-866.65	955.30	14,368,001.876	903,478.895	39.534680468°N	107.613612950°W
4,000.00	23.79	128.82	3,721.83	-891.93	986.73	14,367,976.587	903,510.329	39.534613591°N	107.613498971°W
4,100.00	23.79	128.82	3,813.33	-917.22	1,018.16	14,367,951.297	903,541.763	39.534546714°N	107.613384993°W
4,200.00	23.79	128.82	3,904.83	-942.51	1,049.60	14,367,926.008	903,573.197	39.534479837°N	107.613271015°W
4,300.00	23.79	128.82	3,996.33	-967.80	1,081.03	14,367,900.718	903,604.631	39.534412960°N	107.613157037°W
4,319.84	23.79	128.82	4,014.48	-972.82	1,087.27	14,367,895.702	903,610.867	39.534399694°N	107.613134428°W
Drop 3°/100 at 4320 MD/4015 TVD									

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Site McLin A
Company:	Antero Resources	TVD Reference:	KB @ 5630.00ft (Original Well Elev)
Project:	McLin	MD Reference:	KB @ 5630.00ft (Original Well Elev)
Site:	McLin A	North Reference:	Grid
Well:	McLin A17 (111220)	Survey Calculation Method:	Minimum Curvature
Wellbore:	McLin A17		
Design:	McLin A17 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	
4,396.25	21.50	128.82	4,085.00	-991.26	1,110.19	14,367,877.258	903,633.792	39.534350921°N	107.613051304°W	
Price Coal										
4,400.00	21.39	128.82	4,088.49	-992.12	1,111.26	14,367,876.400	903,634.859	39.534348650°N	107.613047434°W	
4,500.00	18.39	128.82	4,182.51	-1,013.44	1,137.76	14,367,855.078	903,661.362	39.534292263°N	107.612951336°W	
4,600.00	15.39	128.82	4,278.19	-1,031.65	1,160.40	14,367,836.869	903,683.995	39.534244111°N	107.612869273°W	
4,700.00	12.39	128.82	4,375.25	-1,046.70	1,179.10	14,367,821.824	903,702.695	39.534204326°N	107.612801468°W	
4,800.00	9.39	128.82	4,473.44	-1,058.54	1,193.81	14,367,809.985	903,717.411	39.534173016°N	107.612748107°W	
4,900.00	6.39	128.82	4,572.48	-1,067.14	1,204.51	14,367,801.382	903,728.104	39.534150267°N	107.612709338°W	
5,000.00	3.39	128.82	4,672.11	-1,072.48	1,211.14	14,367,796.041	903,734.743	39.534136142°N	107.612685265°W	
5,100.00	0.39	128.82	4,772.04	-1,074.55	1,213.71	14,367,793.975	903,737.311	39.534130679°N	107.612675955°W	
5,112.96	0.00	0.00	4,785.00	-1,074.57	1,213.75	14,367,793.948	903,737.345	39.534130606°N	107.612675830°W	
Vertical at 5113 MD/4785 TVD - Top Gas - A17 Top Gas										
5,200.00	0.00	0.00	4,872.04	-1,074.57	1,213.75	14,367,793.948	903,737.345	39.534130606°N	107.612675830°W	
5,300.00	0.00	0.00	4,972.04	-1,074.57	1,213.75	14,367,793.948	903,737.345	39.534130606°N	107.612675830°W	
5,400.00	0.00	0.00	5,072.04	-1,074.57	1,213.75	14,367,793.948	903,737.345	39.534130606°N	107.612675830°W	
5,500.00	0.00	0.00	5,172.04	-1,074.57	1,213.75	14,367,793.948	903,737.345	39.534130606°N	107.612675830°W	
5,600.00	0.00	0.00	5,272.04	-1,074.57	1,213.75	14,367,793.948	903,737.345	39.534130606°N	107.612675830°W	
5,700.00	0.00	0.00	5,372.04	-1,074.57	1,213.75	14,367,793.948	903,737.345	39.534130606°N	107.612675830°W	
5,800.00	0.00	0.00	5,472.04	-1,074.57	1,213.75	14,367,793.948	903,737.345	39.534130606°N	107.612675830°W	
5,900.00	0.00	0.00	5,572.04	-1,074.57	1,213.75	14,367,793.948	903,737.345	39.534130606°N	107.612675830°W	
6,000.00	0.00	0.00	5,672.04	-1,074.57	1,213.75	14,367,793.948	903,737.345	39.534130606°N	107.612675830°W	
6,012.96	0.00	0.00	5,685.00	-1,074.57	1,213.75	14,367,793.948	903,737.345	39.534130606°N	107.612675830°W	
Cameo										
6,100.00	0.00	0.00	5,772.04	-1,074.57	1,213.75	14,367,793.948	903,737.345	39.534130606°N	107.612675830°W	
6,200.00	0.00	0.00	5,872.04	-1,074.57	1,213.75	14,367,793.948	903,737.345	39.534130606°N	107.612675830°W	
6,300.00	0.00	0.00	5,972.04	-1,074.57	1,213.75	14,367,793.948	903,737.345	39.534130606°N	107.612675830°W	
6,400.00	0.00	0.00	6,072.04	-1,074.57	1,213.75	14,367,793.948	903,737.345	39.534130606°N	107.612675830°W	
6,500.00	0.00	0.00	6,172.04	-1,074.57	1,213.75	14,367,793.948	903,737.345	39.534130606°N	107.612675830°W	
6,600.00	0.00	0.00	6,272.04	-1,074.57	1,213.75	14,367,793.948	903,737.345	39.534130606°N	107.612675830°W	
6,700.00	0.00	0.00	6,372.04	-1,074.57	1,213.75	14,367,793.948	903,737.345	39.534130606°N	107.612675830°W	
6,800.00	0.00	0.00	6,472.04	-1,074.57	1,213.75	14,367,793.948	903,737.345	39.534130606°N	107.612675830°W	
6,900.00	0.00	0.00	6,572.04	-1,074.57	1,213.75	14,367,793.948	903,737.345	39.534130606°N	107.612675830°W	
7,000.00	0.00	0.00	6,672.04	-1,074.57	1,213.75	14,367,793.948	903,737.345	39.534130606°N	107.612675830°W	
7,100.00	0.00	0.00	6,772.04	-1,074.57	1,213.75	14,367,793.948	903,737.345	39.534130606°N	107.612675830°W	
7,112.96	0.00	0.00	6,785.00	-1,074.57	1,213.75	14,367,793.948	903,737.345	39.534130606°N	107.612675830°W	
Rollins										
7,200.00	0.00	0.00	6,872.04	-1,074.57	1,213.75	14,367,793.948	903,737.345	39.534130606°N	107.612675830°W	
7,262.96	0.00	0.00	6,935.00	-1,074.57	1,213.75	14,367,793.948	903,737.345	39.534130606°N	107.612675830°W	
TD at 7263 MD/6935 TVD										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
A17 Top Gas	0.00	0.00	4,785.00	-1,074.57	1,213.75	14,367,793.948	903,737.345	39.534130606°N	107.612675830°W	
- hit/miss target										
- Shape										
- plan hits target center										
- Circle (radius 25.00)										

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Site McLin A
Company:	Antero Resources	TVD Reference:	KB @ 5630.00ft (Original Well Elev)
Project:	McLin	MD Reference:	KB @ 5630.00ft (Original Well Elev)
Site:	McLin A	North Reference:	Grid
Well:	McLin A17 (111220)	Survey Calculation Method:	Minimum Curvature
Wellbore:	McLin A17		
Design:	McLin A17 P01		

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
1,025.34	1,000.00	Surf Csg at 1025 MD/1000 TVD	5.50	6.00

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,522.59	3,285.00	Mesaverde			
4,396.25	4,085.00	Price Coal			
5,112.96	4,785.00	Top Gas			
6,012.96	5,685.00	Cameo			
7,112.96	6,785.00	Rollins			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
200.00	200.00	-29.76	-84.94	Build 3°/100 at 200 MD/TVD
993.12	970.52	-131.51	41.54	Hold 24° at 993 MD/971 TVD
4,319.84	4,014.48	-972.82	1,087.27	Drop 3°/100 at 4320 MD/4015 TVD
5,112.96	4,785.00	-1,074.57	1,213.75	Vertical at 5113 MD/4785 TVD
7,262.96	6,935.00	-1,074.57	1,213.75	TD at 7263 MD/6935 TVD