



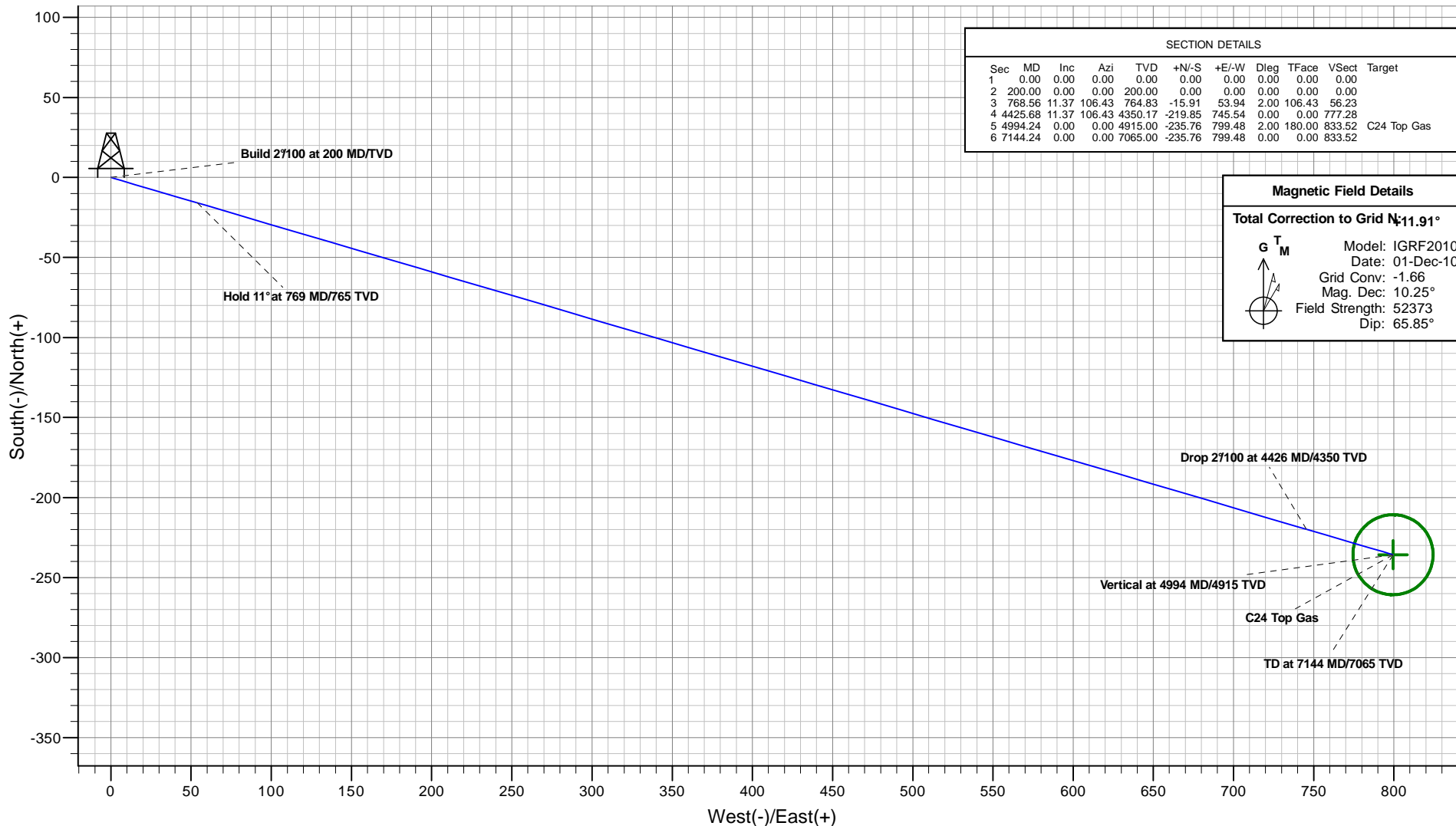
Antero Resources

McLin C24 (111245)



PLAN VIEW

Project: McLin
Site: McLin C
Well: McLin C24 (111245)
Wellbore: McLin C24
Design: McLin C24 P01



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
3	768.56	11.37	106.43	764.83	-15.91	53.94	2.00	106.43	56.23	
4	4425.68	11.37	106.43	4350.17	-219.85	745.54	0.00	0.00	777.28	
5	4994.24	0.00	0.00	4915.00	-235.76	799.48	2.00	180.00	833.52	C24 Top Gas
6	7144.24	0.00	0.00	7065.00	-235.76	799.48	0.00	0.00	833.52	

Magnetic Field Details

Total Correction to Grid N: 11.91°

G T M

Model: IGRF2010
Date: 01-Dec-10
Grid Conv: -1.66
Mag. Dec: 10.25°
Field Strength: 52373
Dip: 65.85°

Plan: McLin C24 P01
Created By: ARK Directional Services
Date: 12:09, September 01 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 C24 (111245) - Slot C24, Grid North
Vertical (TVD) Reference: KB @ 5750.00ft (Original Well Elev)
Section (VS) Reference: Slot - C24(0.00N, 0.00E)
Measured Depth Reference: KB @ 5750.00ft (Original Well Elev)
Calculation Method: Minimum Curvature

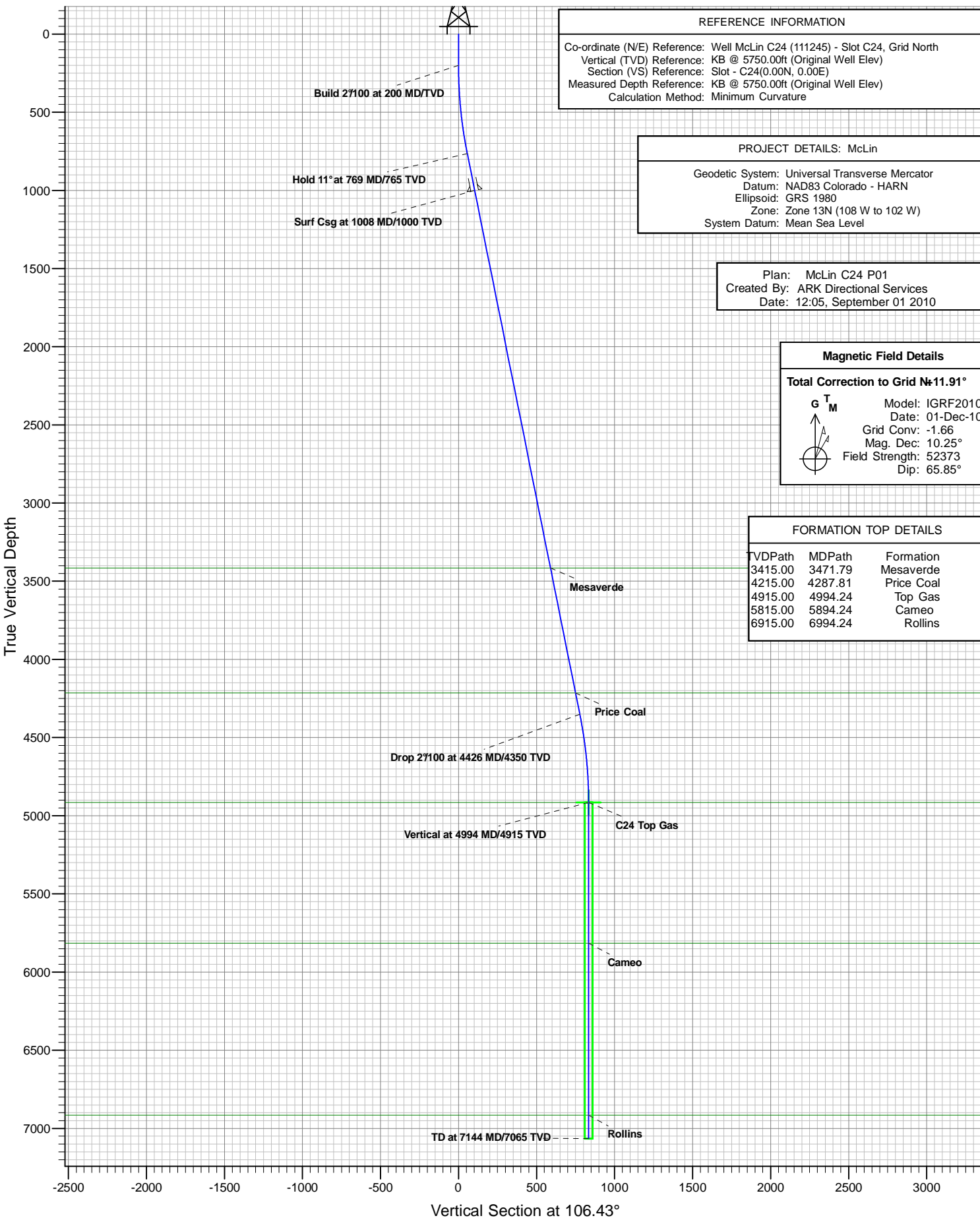


Antero Resources



McLin C24 (111245)

VERTICAL SECTION VIEW



Antero Resources

McLin

McLin C

McLin C24 (111245) - Slot C24

McLin C24

Plan: McLin C24 P01

Standard Planning Report - Geographic

01 September, 2010

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well McLin C24 (111245) - Slot C24
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 C24 (111245)	Survey Calculation Method:	Minimum Curvature
Wellbore:	McLin C24		
Design:	McLin C24 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 C24 (111245) - Slot C24		
Well Position	+N/-S	0.00 ft	Northing:
	+E/-W	0.00 ft	Easting:
Position Uncertainty	0.00 ft	Wellhead Elevation:	
		Latitude:	39.525243911°N
		Longitude:	107.607048764°W
		Ground Level:	5,726.00 ft

Wellbore	McLin C24				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2010/12/01	10.25	65.85	52,373

Design	McLin C24 P01				
Audit Notes:					
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	4,915.00	0.00	0.00	106.43	

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	0.00	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	
768.56	11.37	106.43	764.83	-15.91	53.94	2.00	2.00	0.00	106.43	
4,425.68	11.37	106.43	4,350.17	-219.85	745.54	0.00	0.00	0.00	0.00	
4,994.24	0.00	0.00	4,915.00	-235.76	799.48	2.00	-2.00	0.00	180.00	C24 Top Gas
7,144.24	0.00	0.00	7,065.00	-235.76	799.48	0.00	0.00	0.00	0.00	

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well McLin C24 (111245) - Slot C24
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 C24 (111245)	Survey Calculation Method:	Minimum Curvature
Wellbore:	McLin C24		
Design:	McLin C24 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	14,364,511.522	905,230.389	39.525243911°N	107.607048764°W
100.00	0.00	0.00	100.00	0.00	0.00	14,364,511.522	905,230.389	39.525243911°N	107.607048764°W
200.00	0.00	0.00	200.00	0.00	0.00	14,364,511.522	905,230.389	39.525243911°N	107.607048764°W
Build 2°/100 at 200 MD/TVD									
300.00	2.00	106.43	299.98	-0.49	1.67	14,364,511.028	905,232.063	39.525242689°N	107.607042783°W
400.00	4.00	106.43	399.84	-1.97	6.69	14,364,509.548	905,237.083	39.525239027°N	107.607024849°W
500.00	6.00	106.43	499.45	-4.44	15.05	14,364,507.083	905,245.442	39.525232929°N	107.606994982°W
600.00	8.00	106.43	598.70	-7.89	26.74	14,364,503.636	905,257.130	39.525224401°N	107.606953219°W
700.00	10.00	106.43	697.47	-12.31	41.75	14,364,499.211	905,272.134	39.525213455°N	107.606899611°W
768.56	11.37	106.43	764.83	-15.91	53.94	14,364,495.616	905,284.326	39.525204560°N	107.606856049°W
Hold 11° at 769 MD/765 TVD									
800.00	11.37	106.43	795.66	-17.66	59.88	14,364,493.862	905,290.273	39.525200222°N	107.606834803°W
900.00	11.37	106.43	893.69	-23.24	78.80	14,364,488.286	905,309.184	39.525186425°N	107.606767235°W
1,000.00	11.37	106.43	991.73	-28.81	97.71	14,364,482.709	905,328.095	39.525172628°N	107.606699666°W
1,008.00	11.37	106.43	999.57	-29.26	99.22	14,364,482.263	905,329.608	39.525171524°N	107.606694261°W
Surf Csg at 1008 MD/1000 TVD									
1,100.00	11.37	106.43	1,089.77	-34.39	116.62	14,364,477.132	905,347.006	39.525158831°N	107.606632098°W
1,200.00	11.37	106.43	1,187.81	-39.97	135.53	14,364,471.555	905,365.917	39.525145034°N	107.606564530°W
1,300.00	11.37	106.43	1,285.84	-45.54	154.44	14,364,465.979	905,384.829	39.525131237°N	107.606496962°W
1,400.00	11.37	106.43	1,383.88	-51.12	173.35	14,364,460.402	905,403.740	39.525117440°N	107.606429394°W
1,500.00	11.37	106.43	1,481.92	-56.70	192.26	14,364,454.825	905,422.651	39.525103643°N	107.606361825°W
1,600.00	11.37	106.43	1,579.95	-62.27	211.17	14,364,449.248	905,441.562	39.525089846°N	107.606294257°W
1,700.00	11.37	106.43	1,677.99	-67.85	230.08	14,364,443.672	905,460.473	39.525076049°N	107.606226689°W
1,800.00	11.37	106.43	1,776.03	-73.43	249.00	14,364,438.095	905,479.384	39.525062252°N	107.606159121°W
1,900.00	11.37	106.43	1,874.07	-79.00	267.91	14,364,432.518	905,498.296	39.525048454°N	107.606091553°W
2,000.00	11.37	106.43	1,972.10	-84.58	286.82	14,364,426.941	905,517.207	39.525034657°N	107.606023985°W
2,100.00	11.37	106.43	2,070.14	-90.16	305.73	14,364,421.365	905,536.118	39.525020860°N	107.605956417°W
2,200.00	11.37	106.43	2,168.18	-95.73	324.64	14,364,415.788	905,555.029	39.525007062°N	107.605888849°W
2,300.00	11.37	106.43	2,266.21	-101.31	343.55	14,364,410.211	905,573.940	39.524993265°N	107.605821281°W
2,400.00	11.37	106.43	2,364.25	-106.89	362.46	14,364,404.634	905,592.851	39.524979468°N	107.605753713°W
2,500.00	11.37	106.43	2,462.29	-112.46	381.37	14,364,399.058	905,611.763	39.524965670°N	107.605686145°W
2,600.00	11.37	106.43	2,560.32	-118.04	400.29	14,364,393.481	905,630.674	39.524951873°N	107.605618578°W
2,700.00	11.37	106.43	2,658.36	-123.62	419.20	14,364,387.904	905,649.585	39.524938075°N	107.605551010°W
2,800.00	11.37	106.43	2,756.40	-129.19	438.11	14,364,382.327	905,668.496	39.524924277°N	107.605483442°W
2,900.00	11.37	106.43	2,854.44	-134.77	457.02	14,364,376.751	905,687.407	39.524910480°N	107.605415874°W
3,000.00	11.37	106.43	2,952.47	-140.35	475.93	14,364,371.174	905,706.318	39.524896682°N	107.605348306°W
3,100.00	11.37	106.43	3,050.51	-145.92	494.84	14,364,365.597	905,725.230	39.524882884°N	107.60528039°W
3,200.00	11.37	106.43	3,148.55	-151.50	513.75	14,364,360.020	905,744.141	39.524869087°N	107.605213171°W
3,300.00	11.37	106.43	3,246.58	-157.08	532.66	14,364,354.444	905,763.052	39.524855289°N	107.605145603°W
3,400.00	11.37	106.43	3,344.62	-162.66	551.58	14,364,348.867	905,781.963	39.524841491°N	107.605078036°W
3,471.79	11.37	106.43	3,415.00	-166.66	565.15	14,364,344.864	905,795.539	39.524831586°N	107.605029530°W
Mesaverde									
3,500.00	11.37	106.43	3,442.66	-168.23	570.49	14,364,343.290	905,800.874	39.524827693°N	107.605010468°W
3,600.00	11.37	106.43	3,540.70	-173.81	589.40	14,364,337.713	905,819.785	39.524813895°N	107.604942900°W
3,700.00	11.37	106.43	3,638.73	-179.39	608.31	14,364,332.137	905,838.697	39.524800097°N	107.604875333°W
3,800.00	11.37	106.43	3,736.77	-184.96	627.22	14,364,326.560	905,857.608	39.524786299°N	107.604807765°W
3,900.00	11.37	106.43	3,834.81	-190.54	646.13	14,364,320.983	905,876.519	39.524772501°N	107.604740198°W
4,000.00	11.37	106.43	3,932.84	-196.12	665.04	14,364,315.406	905,895.430	39.524758703°N	107.604672630°W
4,100.00	11.37	106.43	4,030.88	-201.69	683.95	14,364,309.830	905,914.341	39.524744905°N	107.604605063°W
4,200.00	11.37	106.43	4,128.92	-207.27	702.86	14,364,304.253	905,933.252	39.524731107°N	107.604537495°W
4,287.81	11.37	106.43	4,215.00	-212.17	719.47	14,364,299.356	905,949.857	39.524718991°N	107.604478167°W
Price Coal									
4,300.00	11.37	106.43	4,226.96	-212.85	721.78	14,364,298.676	905,952.164	39.524717308°N	107.604469928°W
4,400.00	11.37	106.43	4,324.99	-218.42	740.69	14,364,293.099	905,971.075	39.524703510°N	107.604402360°W

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well McLin C24 (111245) - Slot C24
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 C24 (111245)	Survey Calculation Method:	Minimum Curvature
Wellbore:	McLin C24		
Design:	McLin C24 P01		

Planned Survey										
Measured			Vertical			Map	Map			
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)			
4,425.68	11.37	106.43	4,350.17	-219.85	745.54	14,364,291.667	905,975.931	39.524699967°N	107.604385009°W	
Drop 2°/100 at 4426 MD/4350 TVD										
4,500.00	9.88	106.43	4,423.21	-223.73	758.69	14,364,287.790	905,989.078	39.524690374°N	107.604338037°W	
4,600.00	7.88	106.43	4,522.01	-228.10	773.50	14,364,283.422	906,003.891	39.524679566°N	107.604285111°W	
4,700.00	5.88	106.43	4,621.28	-231.49	785.00	14,364,280.032	906,015.388	39.524671177°N	107.604244033°W	
4,800.00	3.88	106.43	4,720.91	-233.90	793.17	14,364,277.623	906,023.555	39.524665218°N	107.604214853°W	
4,900.00	1.88	106.43	4,820.78	-235.32	797.99	14,364,276.200	906,028.382	39.524661696°N	107.604197607°W	
4,994.24	0.00	0.00	4,915.00	-235.76	799.48	14,364,275.762	906,029.869	39.524660612°N	107.604192296°W	
Vertical at 4994 MD/4915 TVD - Top Gas - C24 Top Gas										
5,000.00	0.00	0.00	4,920.76	-235.76	799.48	14,364,275.762	906,029.869	39.524660612°N	107.604192296°W	
5,100.00	0.00	0.00	5,020.76	-235.76	799.48	14,364,275.762	906,029.869	39.524660612°N	107.604192296°W	
5,200.00	0.00	0.00	5,120.76	-235.76	799.48	14,364,275.762	906,029.869	39.524660612°N	107.604192296°W	
5,300.00	0.00	0.00	5,220.76	-235.76	799.48	14,364,275.762	906,029.869	39.524660612°N	107.604192296°W	
5,400.00	0.00	0.00	5,320.76	-235.76	799.48	14,364,275.762	906,029.869	39.524660612°N	107.604192296°W	
5,500.00	0.00	0.00	5,420.76	-235.76	799.48	14,364,275.762	906,029.869	39.524660612°N	107.604192296°W	
5,600.00	0.00	0.00	5,520.76	-235.76	799.48	14,364,275.762	906,029.869	39.524660612°N	107.604192296°W	
5,700.00	0.00	0.00	5,620.76	-235.76	799.48	14,364,275.762	906,029.869	39.524660612°N	107.604192296°W	
5,800.00	0.00	0.00	5,720.76	-235.76	799.48	14,364,275.762	906,029.869	39.524660612°N	107.604192296°W	
5,894.24	0.00	0.00	5,815.00	-235.76	799.48	14,364,275.762	906,029.869	39.524660612°N	107.604192296°W	
Cameo										
5,900.00	0.00	0.00	5,820.76	-235.76	799.48	14,364,275.762	906,029.869	39.524660612°N	107.604192296°W	
6,000.00	0.00	0.00	5,920.76	-235.76	799.48	14,364,275.762	906,029.869	39.524660612°N	107.604192296°W	
6,100.00	0.00	0.00	6,020.76	-235.76	799.48	14,364,275.762	906,029.869	39.524660612°N	107.604192296°W	
6,200.00	0.00	0.00	6,120.76	-235.76	799.48	14,364,275.762	906,029.869	39.524660612°N	107.604192296°W	
6,300.00	0.00	0.00	6,220.76	-235.76	799.48	14,364,275.762	906,029.869	39.524660612°N	107.604192296°W	
6,400.00	0.00	0.00	6,320.76	-235.76	799.48	14,364,275.762	906,029.869	39.524660612°N	107.604192296°W	
6,500.00	0.00	0.00	6,420.76	-235.76	799.48	14,364,275.762	906,029.869	39.524660612°N	107.604192296°W	
6,600.00	0.00	0.00	6,520.76	-235.76	799.48	14,364,275.762	906,029.869	39.524660612°N	107.604192296°W	
6,700.00	0.00	0.00	6,620.76	-235.76	799.48	14,364,275.762	906,029.869	39.524660612°N	107.604192296°W	
6,800.00	0.00	0.00	6,720.76	-235.76	799.48	14,364,275.762	906,029.869	39.524660612°N	107.604192296°W	
6,900.00	0.00	0.00	6,820.76	-235.76	799.48	14,364,275.762	906,029.869	39.524660612°N	107.604192296°W	
6,994.24	0.00	0.00	6,915.00	-235.76	799.48	14,364,275.762	906,029.869	39.524660612°N	107.604192296°W	
Rollins										
7,000.00	0.00	0.00	6,920.76	-235.76	799.48	14,364,275.762	906,029.869	39.524660612°N	107.604192296°W	
7,100.00	0.00	0.00	7,020.76	-235.76	799.48	14,364,275.762	906,029.869	39.524660612°N	107.604192296°W	
7,144.24	0.00	0.00	7,065.00	-235.76	799.48	14,364,275.762	906,029.869	39.524660612°N	107.604192296°W	
TD at 7144 MD/7065 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										
C24 Top Gas	0.00	0.00	4,915.00	-235.76	799.48	14,364,275.762	906,029.869	39.524660612°N	107.604192296°W	
- plan hits target center										
- Circle (radius 25.00)										

ARK Directional Services

Planning Report - Geographic

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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 C24 (111245)	Survey Calculation Method:	Minimum Curvature
Wellbore:	McLin C24		
Design:	McLin C24 P01		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,008.00	999.57	Surf Csg at 1008 MD/1000 TVD	5.50	6.00	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,471.79	3,415.00	Mesaverde			
4,287.81	4,215.00	Price Coal			
4,994.24	4,915.00	Top Gas			
5,894.24	5,815.00	Cameo			
6,994.24	6,915.00	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	
768.56	764.83	-15.91	53.94	Hold 11° at 769 MD/765 TVD	
4,425.68	4,350.17	-219.85	745.54	Drop 2°/100 at 4426 MD/4350 TVD	
4,994.24	4,915.00	-235.76	799.48	Vertical at 4994 MD/4915 TVD	
7,144.24	7,065.00	-235.76	799.48	TD at 7144 MD/7065 TVD	