



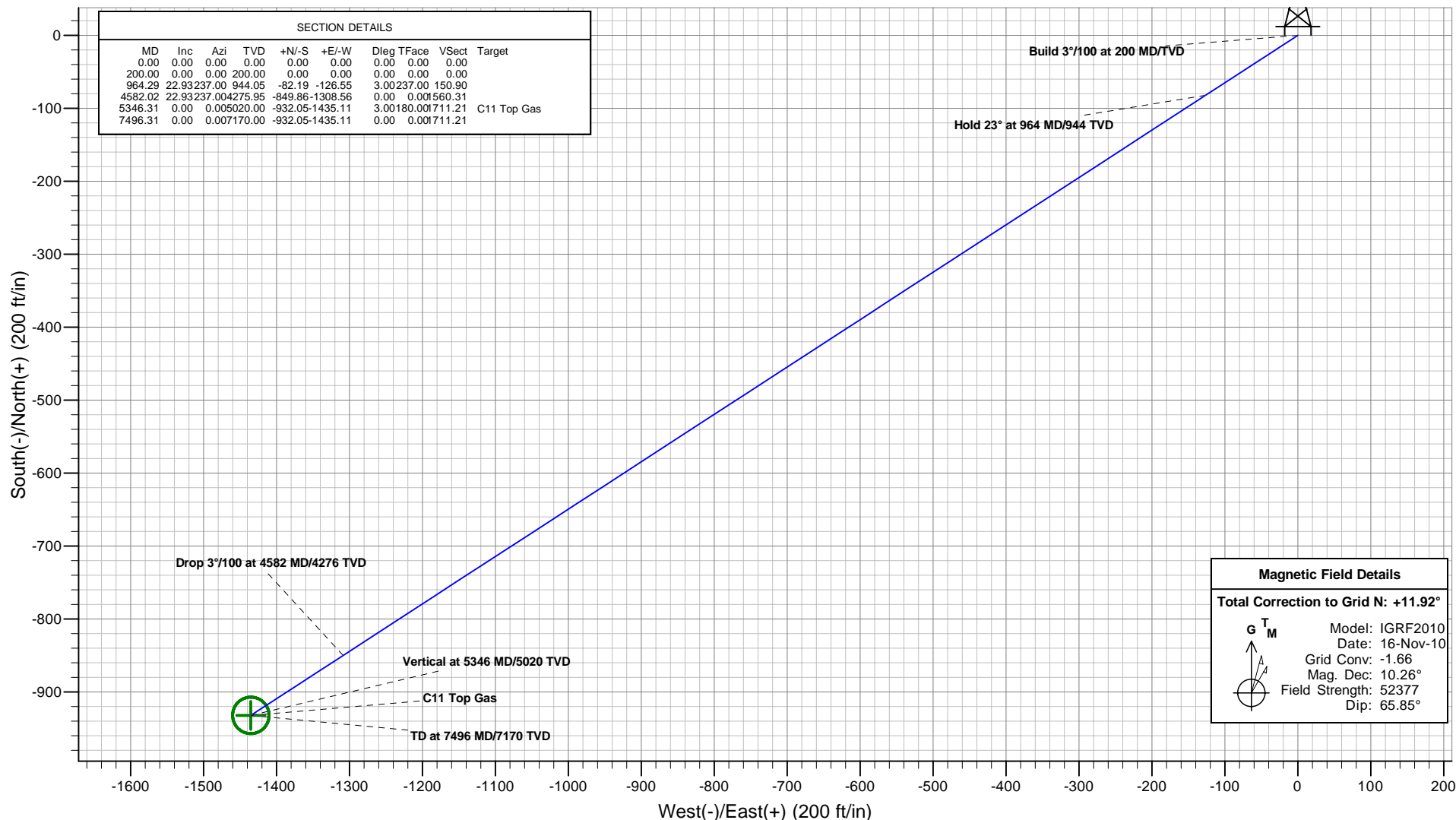
Antero Resources

McLin C11 (111230)



PLAN VIEW

Project: McLin
Site: McLin C
Well: McLin C11 (111230)
Wellbore: McLin C11
Design: McLin C11 P01



Plan: McLin C11 P01
Created By: ARK Directional Services
Date: 13:36, August 17 2010

PROJECT DETAILS: McLin

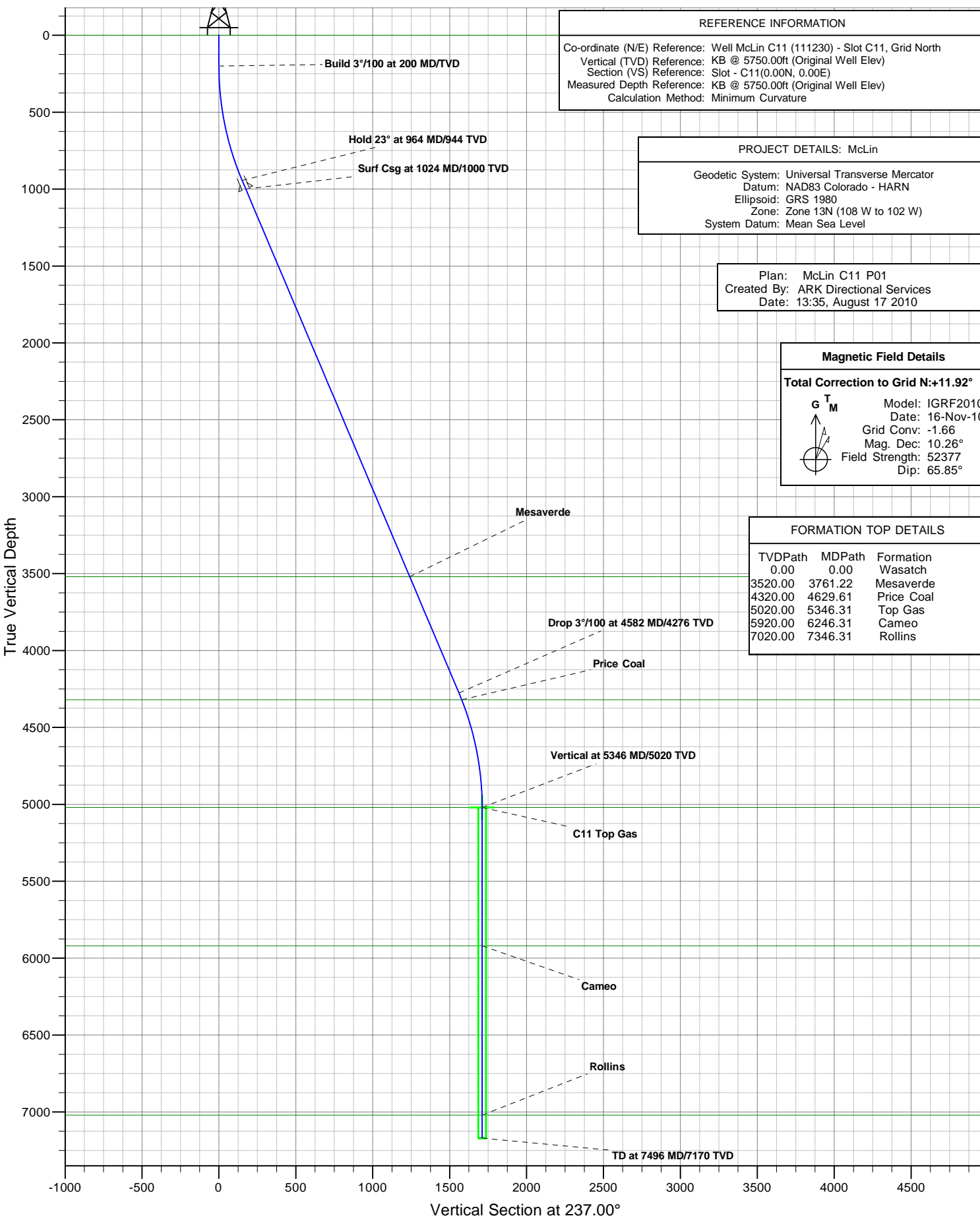
Geodetic System: Universal Transverse Mercator
Datum: NAD83 Colorado - HARN
Ellipsoid: GRS 1980
Zone: Zone 13N (108 W to 102 W)
System Datum: Mean Sea Level

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well McLin C11 (111230) - Slot C11, Grid North
Vertical (TVD) Reference: KB @ 5750.00ft (Original Well Elev)
Section (VS) Reference: Slot - C11(0.00N, 0.00E)
Measured Depth Reference: KB @ 5750.00ft (Original Well Elev)
Calculation Method: Minimum Curvature



VERTICAL SECTION VIEW



Antero Resources

McLin

McLin C

McLin C11 (111230) - Slot C11

McLin C11

Plan: McLin C11 P01

Standard Planning Report - Geographic

17 August, 2010

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well McLin C11 (111230) - Slot C11
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 C11 (111230)	Survey Calculation Method:	Minimum Curvature
Wellbore:	McLin C11		
Design:	McLin C11 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 C11 (111230) - Slot C11		
Well Position	+N/-S	0.00 ft	Northing:
	+E/-W	0.00 ft	Easting:
Position Uncertainty	0.00 ft	Wellhead Elevation:	
		Latitude:	39.525081940°N
		Longitude:	107.607231168°W
		Ground Level:	5,726.00 ft

Wellbore	McLin C11				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2010/11/16	10.26	65.85	52,377

Design	McLin C11 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	0.00	0.00	237.00

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	
964.29	22.93	237.00	944.05	-82.19	-126.55	3.00	3.00	0.00	237.00	
4,582.02	22.93	237.00	4,275.95	-849.86	-1,308.56	0.00	0.00	0.00	0.00	
5,346.31	0.00	0.00	5,020.00	-932.05	-1,435.11	3.00	-3.00	0.00	180.00	C11 Top Gas
7,496.31	0.00	0.00	7,170.00	-932.05	-1,435.11	0.00	0.00	0.00	0.00	

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well McLin C11 (111230) - Slot C11
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 C11 (111230)	Survey Calculation Method:	Minimum Curvature
Wellbore:	McLin C11		
Design:	McLin C11 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	14,364,454.026	905,177.235	39.525081940°N	107.607231168°W
Wasatch									
100.00	0.00	0.00	100.00	0.00	0.00	14,364,454.026	905,177.235	39.525081940°N	107.607231168°W
200.00	0.00	0.00	200.00	0.00	0.00	14,364,454.026	905,177.235	39.525081940°N	107.607231168°W
Build 3°/100 at 200 MD/TVD									
300.00	3.00	237.00	299.95	-1.43	-2.20	14,364,452.600	905,175.040	39.525077854°N	107.607238798°W
400.00	6.00	237.00	399.63	-5.70	-8.77	14,364,448.327	905,168.461	39.525065608°N	107.607261667°W
500.00	9.00	237.00	498.77	-12.81	-19.72	14,364,441.219	905,157.515	39.525045235°N	107.607299712°W
600.00	12.00	237.00	597.08	-22.73	-35.00	14,364,431.294	905,142.234	39.525016791°N	107.607352830°W
700.00	15.00	237.00	694.31	-35.45	-54.58	14,364,418.580	905,122.658	39.524980354°N	107.607420874°W
800.00	18.00	237.00	790.18	-50.91	-78.39	14,364,403.113	905,098.842	39.524936023°N	107.607503658°W
900.00	21.00	237.00	884.43	-69.09	-106.38	14,364,384.933	905,070.851	39.524883921°N	107.607600956°W
964.29	22.93	237.00	944.05	-82.19	-126.55	14,364,371.836	905,050.685	39.524846385°N	107.607671052°W
Hold 23° at 964 MD/944 TVD									
1,000.00	22.93	237.00	976.94	-89.77	-138.22	14,364,364.259	905,039.018	39.524824669°N	107.607711605°W
1,024.00	22.93	237.00	999.05	-94.86	-146.06	14,364,359.166	905,031.177	39.524810073°N	107.607738861°W
Surf Csg at 1024 MD/1000 TVD									
1,100.00	22.93	237.00	1,069.04	-110.99	-170.89	14,364,343.039	905,006.345	39.524763853°N	107.607825173°W
1,200.00	22.93	237.00	1,161.14	-132.21	-203.56	14,364,321.820	904,973.673	39.524703037°N	107.607938741°W
1,300.00	22.93	237.00	1,253.24	-153.43	-236.24	14,364,300.600	904,941.000	39.524642221°N	107.608052309°W
1,400.00	22.93	237.00	1,345.34	-174.65	-268.91	14,364,279.381	904,908.328	39.524581405°N	107.608165876°W
1,500.00	22.93	237.00	1,437.44	-195.87	-301.58	14,364,258.161	904,875.655	39.524520589°N	107.608279443°W
1,600.00	22.93	237.00	1,529.54	-217.08	-334.25	14,364,236.941	904,842.983	39.524459773°N	107.608393011°W
1,700.00	22.93	237.00	1,621.63	-238.30	-366.93	14,364,215.722	904,810.310	39.524398957°N	107.608506577°W
1,800.00	22.93	237.00	1,713.73	-259.52	-399.60	14,364,194.502	904,777.637	39.524338140°N	107.608620144°W
1,900.00	22.93	237.00	1,805.83	-280.74	-432.27	14,364,173.283	904,744.965	39.524277324°N	107.608733711°W
2,000.00	22.93	237.00	1,897.93	-301.96	-464.94	14,364,152.063	904,712.292	39.524216507°N	107.608847277°W
2,100.00	22.93	237.00	1,990.03	-323.18	-497.62	14,364,130.844	904,679.620	39.524155690°N	107.608960843°W
2,200.00	22.93	237.00	2,082.13	-344.40	-530.29	14,364,109.624	904,646.947	39.524094874°N	107.609074409°W
2,300.00	22.93	237.00	2,174.23	-365.62	-562.96	14,364,088.404	904,614.275	39.524034057°N	107.609187975°W
2,400.00	22.93	237.00	2,266.33	-386.84	-595.63	14,364,067.185	904,581.602	39.523973240°N	107.609301540°W
2,500.00	22.93	237.00	2,358.43	-408.06	-628.31	14,364,045.965	904,548.929	39.523912423°N	107.609415105°W
2,600.00	22.93	237.00	2,450.53	-429.28	-660.98	14,364,024.746	904,516.257	39.523851605°N	107.609528670°W
2,700.00	22.93	237.00	2,542.62	-450.50	-693.65	14,364,003.526	904,483.584	39.523790788°N	107.609642235°W
2,800.00	22.93	237.00	2,634.72	-471.72	-726.32	14,363,982.306	904,450.912	39.523729971°N	107.609755800°W
2,900.00	22.93	237.00	2,726.82	-492.94	-759.00	14,363,961.087	904,418.239	39.523669153°N	107.609869364°W
3,000.00	22.93	237.00	2,818.92	-514.16	-791.67	14,363,939.867	904,385.567	39.523608335°N	107.609982929°W
3,100.00	22.93	237.00	2,911.02	-535.38	-824.34	14,363,918.648	904,352.894	39.523547518°N	107.610096493°W
3,200.00	22.93	237.00	3,003.12	-556.60	-857.02	14,363,897.428	904,320.221	39.523486700°N	107.610210056°W
3,300.00	22.93	237.00	3,095.22	-577.82	-889.69	14,363,876.209	904,287.549	39.523425882°N	107.610323620°W
3,400.00	22.93	237.00	3,187.32	-599.04	-922.36	14,363,854.989	904,254.876	39.523365064°N	107.610437184°W
3,500.00	22.93	237.00	3,279.42	-620.26	-955.03	14,363,833.769	904,222.204	39.523304245°N	107.610550747°W
3,600.00	22.93	237.00	3,371.52	-641.48	-987.71	14,363,812.550	904,189.531	39.523243427°N	107.610664310°W
3,700.00	22.93	237.00	3,463.61	-662.70	-1,020.38	14,363,791.330	904,156.859	39.523182609°N	107.610777873°W
3,761.22	22.93	237.00	3,520.00	-675.69	-1,040.38	14,363,778.339	904,136.856	39.523145374°N	107.610847399°W
Mesaverde									
3,800.00	22.93	237.00	3,555.71	-683.92	-1,053.05	14,363,770.111	904,124.186	39.523121790°N	107.610891435°W
3,900.00	22.93	237.00	3,647.81	-705.14	-1,085.72	14,363,748.891	904,091.514	39.523060972°N	107.611004998°W
4,000.00	22.93	237.00	3,739.91	-726.36	-1,118.40	14,363,727.671	904,058.841	39.523000153°N	107.611118560°W
4,100.00	22.93	237.00	3,832.01	-747.58	-1,151.07	14,363,706.452	904,026.168	39.522939334°N	107.611232122°W
4,200.00	22.93	237.00	3,924.11	-768.80	-1,183.74	14,363,685.232	903,993.496	39.522878515°N	107.611345684°W
4,300.00	22.93	237.00	4,016.21	-790.01	-1,216.41	14,363,664.013	903,960.823	39.522817696°N	107.611459246°W
4,400.00	22.93	237.00	4,108.31	-811.23	-1,249.09	14,363,642.793	903,928.151	39.522756877°N	107.611572807°W
4,500.00	22.93	237.00	4,200.41	-832.45	-1,281.76	14,363,621.573	903,895.478	39.522696058°N	107.611686368°W

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well McLin C11 (111230) - Slot C11
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 C11 (111230)	Survey Calculation Method:	Minimum Curvature
Wellbore:	McLin C11		
Design:	McLin C11 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	
4,582.02	22.93	237.00	4,275.95	-849.86	-1,308.56	14,363,604.169	903,868.680	39.522646175°N	107.611779510°W	
Drop 3°/100 at 4582 MD/4276 TVD										
4,600.00	22.39	237.00	4,292.54	-853.63	-1,314.37	14,363,600.396	903,862.871	39.522635360°N	107.611799702°W	
4,629.61	21.50	237.00	4,320.00	-859.66	-1,323.65	14,363,594.370	903,853.592	39.522618087°N	107.611831954°W	
Price Coal										
4,700.00	19.39	237.00	4,385.96	-873.05	-1,344.27	14,363,580.978	903,832.971	39.522579702°N	107.611903625°W	
4,800.00	16.39	237.00	4,481.11	-889.78	-1,370.03	14,363,564.248	903,807.213	39.522531753°N	107.611993155°W	
4,900.00	13.39	237.00	4,577.74	-903.77	-1,391.57	14,363,550.255	903,785.666	39.522491644°N	107.612068045°W	
5,000.00	10.39	237.00	4,675.58	-914.99	-1,408.85	14,363,539.035	903,768.390	39.522459485°N	107.612128092°W	
5,100.00	7.39	237.00	4,774.37	-923.41	-1,421.81	14,363,530.619	903,755.432	39.522435364°N	107.612173129°W	
5,200.00	4.39	237.00	4,873.83	-929.00	-1,430.41	14,363,525.031	903,746.828	39.522419348°N	107.612203035°W	
5,300.00	1.39	237.00	4,973.69	-931.74	-1,434.64	14,363,522.286	903,742.601	39.522411479°N	107.612217726°W	
5,346.31	0.00	0.00	5,020.00	-932.05	-1,435.11	14,363,521.980	903,742.130	39.522410603°N	107.612219362°W	
Vertical at 5346 MD/5020 TVD - Top Gas										
5,400.00	0.00	0.00	5,073.69	-932.05	-1,435.11	14,363,521.980	903,742.130	39.522410603°N	107.612219362°W	
5,500.00	0.00	0.00	5,173.69	-932.05	-1,435.11	14,363,521.980	903,742.130	39.522410603°N	107.612219362°W	
5,600.00	0.00	0.00	5,273.69	-932.05	-1,435.11	14,363,521.980	903,742.130	39.522410603°N	107.612219362°W	
5,700.00	0.00	0.00	5,373.69	-932.05	-1,435.11	14,363,521.980	903,742.130	39.522410603°N	107.612219362°W	
5,800.00	0.00	0.00	5,473.69	-932.05	-1,435.11	14,363,521.980	903,742.130	39.522410603°N	107.612219362°W	
5,900.00	0.00	0.00	5,573.69	-932.05	-1,435.11	14,363,521.980	903,742.130	39.522410603°N	107.612219362°W	
6,000.00	0.00	0.00	5,673.69	-932.05	-1,435.11	14,363,521.980	903,742.130	39.522410603°N	107.612219362°W	
6,100.00	0.00	0.00	5,773.69	-932.05	-1,435.11	14,363,521.980	903,742.130	39.522410603°N	107.612219362°W	
6,200.00	0.00	0.00	5,873.69	-932.05	-1,435.11	14,363,521.980	903,742.130	39.522410603°N	107.612219362°W	
6,246.31	0.00	0.00	5,920.00	-932.05	-1,435.11	14,363,521.980	903,742.130	39.522410603°N	107.612219362°W	
Cameo										
6,300.00	0.00	0.00	5,973.69	-932.05	-1,435.11	14,363,521.980	903,742.130	39.522410603°N	107.612219362°W	
6,400.00	0.00	0.00	6,073.69	-932.05	-1,435.11	14,363,521.980	903,742.130	39.522410603°N	107.612219362°W	
6,500.00	0.00	0.00	6,173.69	-932.05	-1,435.11	14,363,521.980	903,742.130	39.522410603°N	107.612219362°W	
6,600.00	0.00	0.00	6,273.69	-932.05	-1,435.11	14,363,521.980	903,742.130	39.522410603°N	107.612219362°W	
6,700.00	0.00	0.00	6,373.69	-932.05	-1,435.11	14,363,521.980	903,742.130	39.522410603°N	107.612219362°W	
6,800.00	0.00	0.00	6,473.69	-932.05	-1,435.11	14,363,521.980	903,742.130	39.522410603°N	107.612219362°W	
6,900.00	0.00	0.00	6,573.69	-932.05	-1,435.11	14,363,521.980	903,742.130	39.522410603°N	107.612219362°W	
7,000.00	0.00	0.00	6,673.69	-932.05	-1,435.11	14,363,521.980	903,742.130	39.522410603°N	107.612219362°W	
7,100.00	0.00	0.00	6,773.69	-932.05	-1,435.11	14,363,521.980	903,742.130	39.522410603°N	107.612219362°W	
7,200.00	0.00	0.00	6,873.69	-932.05	-1,435.11	14,363,521.980	903,742.130	39.522410603°N	107.612219362°W	
7,300.00	0.00	0.00	6,973.69	-932.05	-1,435.11	14,363,521.980	903,742.130	39.522410603°N	107.612219362°W	
7,346.31	0.00	0.00	7,020.00	-932.05	-1,435.11	14,363,521.980	903,742.130	39.522410603°N	107.612219362°W	
Rollins										
7,400.00	0.00	0.00	7,073.69	-932.05	-1,435.11	14,363,521.980	903,742.130	39.522410603°N	107.612219362°W	
7,496.31	0.00	0.00	7,170.00	-932.05	-1,435.11	14,363,521.980	903,742.130	39.522410603°N	107.612219362°W	
TD at 7496 MD/7170 TVD										

Design Targets										
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
C11 Top Gas - plan hits target center - Circle (radius 25.00)	0.00	0.00	5,020.00	-932.05	-1,435.11	14,363,521.980	903,742.130	39.522410603°N	107.612219362°W	

ARK Directional Services

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Project:	McLin	MD Reference:	KB @ 5750.00ft (Original Well Elev)
Site:	McLin C	North Reference:	Grid
Well:	McLin C11 (111230)	Survey Calculation Method:	Minimum Curvature
Wellbore:	McLin C11		
Design:	McLin C11 P01		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,024.00	999.05	Surf Csg at 1024 MD/1000 TVD	5.50	6.00	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
0.00	0.00	Wasatch			
3,761.22	3,520.00	Mesaverde			
4,629.61	4,320.00	Price Coal			
5,346.31	5,020.00	Top Gas			
6,246.31	5,920.00	Cameo			
7,346.31	7,020.00	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 3°/100 at 200 MD/TVD	
964.29	944.05	-82.19	-126.55	Hold 23° at 964 MD/944 TVD	
4,582.02	4,275.95	-849.86	-1,308.56	Drop 3°/100 at 4582 MD/4276 TVD	
5,346.31	5,020.00	-932.05	-1,435.11	Vertical at 5346 MD/5020 TVD	
7,496.31	7,170.00	-932.05	-1,435.11	TD at 7496 MD/7170 TVD	