



REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well McLin C17 (111235) - Slot C17, Grid North
Vertical (TVD) Reference: KB @ 5750.00ft (Original Well Elev)
Section (VS) Reference: Slot - C17(0.00N, 0.00E)
Measured Depth Reference: KB @ 5750.00ft (Original Well Elev)
Calculation Method: Minimum Curvature

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

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1150.00	0.00	0.00	1150.00	0.00	0.00	0.00	0.00	0.00	
1799.22	19.48	238.53	1786.79	-57.05	-93.21	3.00	238.53	109.29	
3776.80	19.48	238.53	3651.21	-401.26	-655.61	0.00	0.00	768.66	
4426.02	0.00	0.00	4288.00	-458.31	-748.82	3.00	180.00	877.94	
7276.02	0.00	0.00	7138.00	-458.31	-748.82	0.00	0.00	877.94	C17 BH

Antero Resources

McLin

McLin C

McLin C17 (111235) - Slot C17

McLin C17

Plan: McLin C17 P03

Standard Planning Report - Geographic

26 March, 2012

Planning Report - Geographic

Database:	EDM5000-New	Local Co-ordinate Reference:	Well McLin C17 (111235) - Slot C17
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 C17 (111235)	Survey Calculation Method:	Minimum Curvature
Wellbore:	McLin C17		
Design:	McLin C17 P03		

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:	14,364,522.75 usft
From:	Map	Easting:	905,235.88 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 C17 (111235) - Slot C17		
Well Position	+N/-S	0.00 ft	Northing:
	+E/-W	0.00 ft	Easting:
Position Uncertainty	0.00 ft		Wellhead Elevation:
			Latitude:
			Longitude:
			Ground Level:

Wellbore	McLin C17				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	06/07/12	10.05	65.81	52,219

Design	McLin C17 P03			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	7,138.00	0.00	0.00	238.53

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	
1,150.00	0.00	0.00	1,150.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,799.22	19.48	238.53	1,786.79	-57.05	-93.21	3.00	3.00	0.00	238.53	
3,776.80	19.48	238.53	3,651.21	-401.26	-655.61	0.00	0.00	0.00	0.00	
4,426.02	0.00	0.00	4,288.00	-458.31	-748.82	3.00	-3.00	0.00	180.00	
7,276.02	0.00	0.00	7,138.00	-458.31	-748.82	0.00	0.00	0.00	0.00	C17 BH

Planning Report - Geographic

Database:	EDM5000-New	Local Co-ordinate Reference:	Well McLin C17 (111235) - Slot C17
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 C17 (111235)	Survey Calculation Method:	Minimum Curvature
Wellbore:	McLin C17		
Design:	McLin C17 P03		

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	14,364,465.25	905,182.72	39.525113176°N	107.607212888°W
Wasatch									
100.00	0.00	0.00	100.00	0.00	0.00	14,364,465.25	905,182.72	39.525113176°N	107.607212888°W
200.00	0.00	0.00	200.00	0.00	0.00	14,364,465.25	905,182.72	39.525113176°N	107.607212888°W
300.00	0.00	0.00	300.00	0.00	0.00	14,364,465.25	905,182.72	39.525113176°N	107.607212888°W
400.00	0.00	0.00	400.00	0.00	0.00	14,364,465.25	905,182.72	39.525113176°N	107.607212888°W
500.00	0.00	0.00	500.00	0.00	0.00	14,364,465.25	905,182.72	39.525113176°N	107.607212888°W
600.00	0.00	0.00	600.00	0.00	0.00	14,364,465.25	905,182.72	39.525113176°N	107.607212888°W
700.00	0.00	0.00	700.00	0.00	0.00	14,364,465.25	905,182.72	39.525113176°N	107.607212888°W
800.00	0.00	0.00	800.00	0.00	0.00	14,364,465.25	905,182.72	39.525113176°N	107.607212888°W
900.00	0.00	0.00	900.00	0.00	0.00	14,364,465.25	905,182.72	39.525113176°N	107.607212888°W
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,364,465.25	905,182.72	39.525113176°N	107.607212888°W
Surf Csg at 1000 MD/TVD									
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,364,465.25	905,182.72	39.525113176°N	107.607212888°W
1,150.00	0.00	0.00	1,150.00	0.00	0.00	14,364,465.25	905,182.72	39.525113176°N	107.607212888°W
KOP 3°/100 at 1150 MD/TVD									
1,200.00	1.50	238.53	1,199.99	-0.34	-0.56	14,364,464.91	905,182.16	39.525112194°N	107.607214831°W
1,300.00	4.50	238.53	1,299.85	-3.07	-5.02	14,364,462.18	905,177.70	39.525104345°N	107.607230363°W
1,400.00	7.50	238.53	1,399.29	-8.53	-13.94	14,364,456.72	905,168.78	39.525088667°N	107.607261383°W
1,500.00	10.50	238.53	1,498.04	-16.69	-27.28	14,364,448.56	905,155.44	39.525065204°N	107.607307808°W
1,600.00	13.50	238.53	1,595.85	-27.55	-45.01	14,364,437.71	905,137.71	39.525034020°N	107.607369510°W
1,700.00	16.50	238.53	1,692.43	-41.06	-67.08	14,364,424.20	905,115.64	39.524995201°N	107.607446319°W
1,799.22	19.48	238.53	1,786.79	-57.05	-93.21	14,364,408.20	905,089.51	39.524949243°N	107.607537253°W
Hold 19° at 1799 MD/1787 TVD									
1,800.00	19.48	238.53	1,787.52	-57.19	-93.44	14,364,408.07	905,089.29	39.524948853°N	107.607538025°W
1,900.00	19.48	238.53	1,881.80	-74.59	-121.87	14,364,390.66	905,060.85	39.524898838°N	107.607636985°W
2,000.00	19.48	238.53	1,976.08	-92.00	-150.31	14,364,373.26	905,032.41	39.524848824°N	107.607735945°W
2,100.00	19.48	238.53	2,070.36	-109.40	-178.75	14,364,355.85	905,003.97	39.524798809°N	107.607834905°W
2,200.00	19.48	238.53	2,164.64	-126.81	-207.19	14,364,338.45	904,975.53	39.524748794°N	107.607933865°W
2,300.00	19.48	238.53	2,258.91	-144.21	-235.63	14,364,321.04	904,947.09	39.524698779°N	107.608032825°W
2,400.00	19.48	238.53	2,353.19	-161.62	-264.07	14,364,303.63	904,918.65	39.524648764°N	107.608131784°W
2,500.00	19.48	238.53	2,447.47	-179.02	-292.50	14,364,286.23	904,890.22	39.524598749°N	107.608230743°W
2,600.00	19.48	238.53	2,541.75	-196.43	-320.94	14,364,268.82	904,861.78	39.524548734°N	107.608329702°W
2,700.00	19.48	238.53	2,636.02	-213.84	-349.38	14,364,251.42	904,833.34	39.524498719°N	107.608428661°W
2,800.00	19.48	238.53	2,730.30	-231.24	-377.82	14,364,234.01	904,804.90	39.524448704°N	107.608527620°W
2,900.00	19.48	238.53	2,824.58	-248.65	-406.26	14,364,216.61	904,776.46	39.524398689°N	107.608626579°W
3,000.00	19.48	238.53	2,918.86	-266.05	-434.70	14,364,199.20	904,748.02	39.524348673°N	107.608725537°W
3,100.00	19.48	238.53	3,013.14	-283.46	-463.14	14,364,181.80	904,719.59	39.524298658°N	107.608824496°W
3,200.00	19.48	238.53	3,107.41	-300.86	-491.57	14,364,164.39	904,691.15	39.524248642°N	107.608923454°W
3,300.00	19.48	238.53	3,201.69	-318.27	-520.01	14,364,146.99	904,662.71	39.524198627°N	107.609022412°W
3,400.00	19.48	238.53	3,295.97	-335.67	-548.45	14,364,129.58	904,634.27	39.524148611°N	107.609121370°W
3,500.00	19.48	238.53	3,390.25	-353.08	-576.89	14,364,112.17	904,605.83	39.524098595°N	107.609220328°W
3,600.00	19.48	238.53	3,484.52	-370.49	-605.33	14,364,094.77	904,577.39	39.524048579°N	107.609319285°W
3,603.69	19.48	238.53	3,488.00	-371.13	-606.38	14,364,094.13	904,576.34	39.524046735°N	107.609322934°W
Mesaverde									
3,700.00	19.48	238.53	3,578.80	-387.89	-633.77	14,364,077.36	904,548.95	39.523998563°N	107.609418243°W
3,776.80	19.48	238.53	3,651.21	-401.26	-655.61	14,364,064.00	904,527.11	39.523960149°N	107.609494247°W
Drop 3°/100 at 3777 MD/3651 TVD									
3,800.00	18.78	238.53	3,673.13	-405.23	-662.09	14,364,060.03	904,520.63	39.523948747°N	107.609516806°W
3,900.00	15.78	238.53	3,768.60	-420.73	-687.43	14,364,044.52	904,495.30	39.523904191°N	107.609604959°W
4,000.00	12.78	238.53	3,865.50	-433.61	-708.46	14,364,031.65	904,474.26	39.523867193°N	107.609678161°W
4,100.00	9.78	238.53	3,963.56	-443.82	-725.15	14,364,021.44	904,457.58	39.523837852°N	107.609736212°W
4,200.00	6.78	238.53	4,062.50	-451.34	-737.43	14,364,013.92	904,445.29	39.523816249°N	107.609778952°W
4,300.00	3.78	238.53	4,162.07	-456.14	-745.28	14,364,009.11	904,437.44	39.523802445°N	107.609806265°W

Planning Report - Geographic

Database:	EDM5000-New	Local Co-ordinate Reference:	Well McLin C17 (111235) - Slot C17
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 C17 (111235)	Survey Calculation Method:	Minimum Curvature
Wellbore:	McLin C17		
Design:	McLin C17 P03		

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	0.78	238.53	4,261.98	-458.22	-748.67	14,364,007.04	904,434.05	39.523796476°N	107.609818074°W
4,426.02	0.00	0.00	4,288.00	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
Vertical at 4426 MD/4288 TVD - Price Coal									
4,500.00	0.00	0.00	4,361.98	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
4,600.00	0.00	0.00	4,461.98	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
4,700.00	0.00	0.00	4,561.98	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
4,800.00	0.00	0.00	4,661.98	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
4,900.00	0.00	0.00	4,761.98	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
5,000.00	0.00	0.00	4,861.98	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
5,100.00	0.00	0.00	4,961.98	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
5,126.02	0.00	0.00	4,988.00	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
Top Gas									
5,200.00	0.00	0.00	5,061.98	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
5,300.00	0.00	0.00	5,161.98	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
5,400.00	0.00	0.00	5,261.98	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
5,500.00	0.00	0.00	5,361.98	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
5,600.00	0.00	0.00	5,461.98	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
5,700.00	0.00	0.00	5,561.98	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
5,800.00	0.00	0.00	5,661.98	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
5,900.00	0.00	0.00	5,761.98	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
6,000.00	0.00	0.00	5,861.98	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
6,026.02	0.00	0.00	5,888.00	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
Cameo									
6,100.00	0.00	0.00	5,961.98	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
6,200.00	0.00	0.00	6,061.98	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
6,300.00	0.00	0.00	6,161.98	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
6,400.00	0.00	0.00	6,261.98	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
6,500.00	0.00	0.00	6,361.98	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
6,600.00	0.00	0.00	6,461.98	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
6,700.00	0.00	0.00	6,561.98	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
6,800.00	0.00	0.00	6,661.98	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
6,900.00	0.00	0.00	6,761.98	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
7,000.00	0.00	0.00	6,861.98	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
7,100.00	0.00	0.00	6,961.98	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
7,126.02	0.00	0.00	6,988.00	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
Rollins									
7,200.00	0.00	0.00	7,061.98	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
7,276.02	0.00	0.00	7,138.00	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
TD at 7276 MD/7138 TVD									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
C17 BH	0.00	0.00	7,138.00	-458.31	-748.82	14,364,006.94	904,433.90	39.523796210°N	107.609818600°W
- hit/miss target									
- Shape									
- plan hits target center									
- Circle (radius 20.00)									

Planning Report - Geographic

Database:	EDM5000-New	Local Co-ordinate Reference:	Well McLin C17 (111235) - Slot C17
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 C17 (111235)	Survey Calculation Method:	Minimum Curvature
Wellbore:	McLin C17		
Design:	McLin C17 P03		

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

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
0.00	0.00	Wasatch			
3,603.69	3,488.00	Mesaverde			
4,426.02	4,288.00	Price Coal			
5,126.02	4,988.00	Top Gas			
6,026.02	5,888.00	Cameo			
7,126.02	6,988.00	Rollins			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,150.00	1,150.00	0.00	0.00	KOP 3°/100 at 1150 MD/TVD	
1,799.22	1,786.79	-57.05	-93.21	Hold 19° at 1799 MD/1787 TVD	
3,776.80	3,651.21	-401.26	-655.61	Drop 3°/100 at 3777 MD/3651 TVD	
4,426.02	4,288.00	-458.31	-748.82	Vertical at 4426 MD/4288 TVD	
7,276.02	7,138.00	-458.31	-748.82	TD at 7276 MD/7138 TVD	