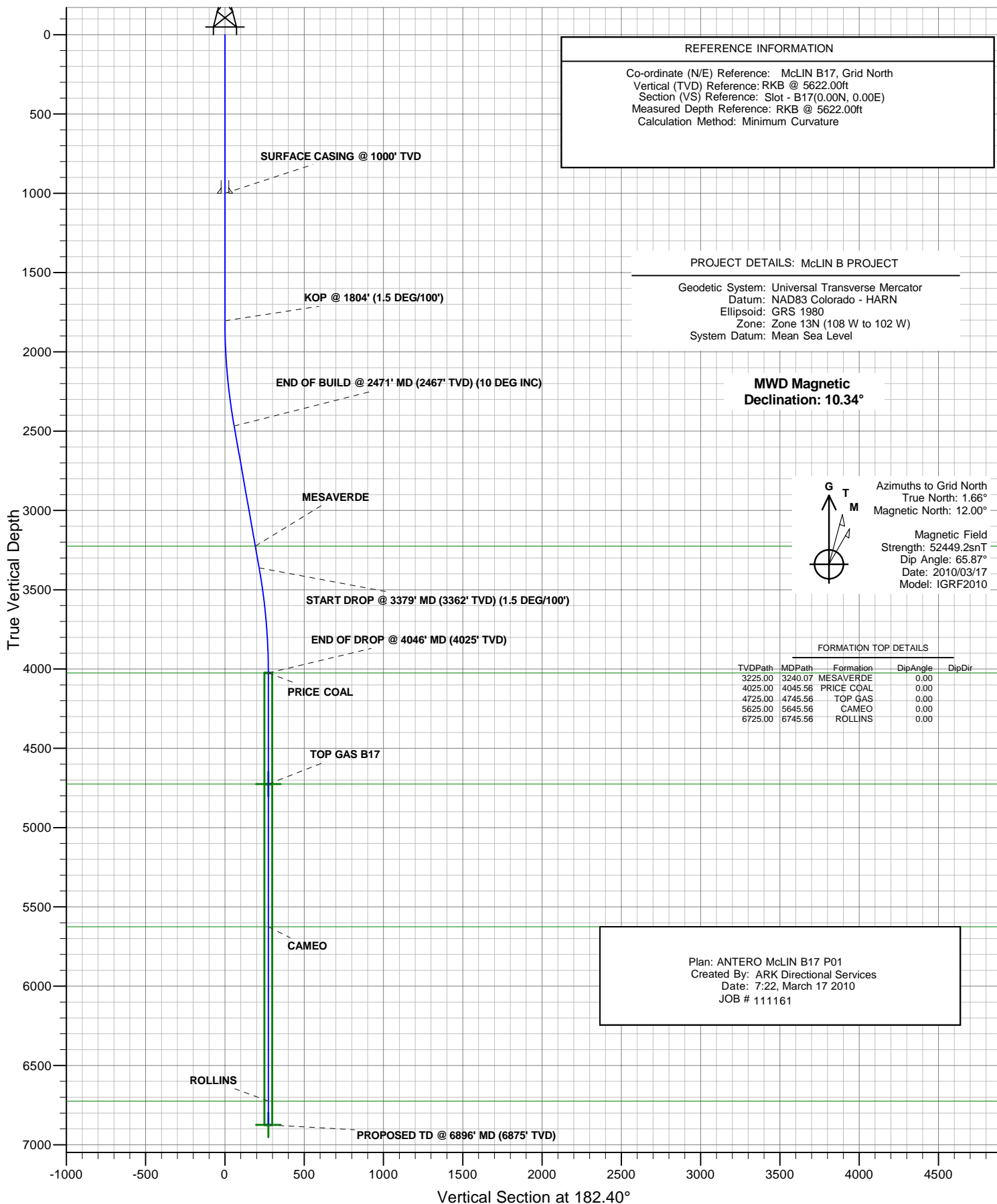




ANTERO RESOURCES

ANTERO McLIN B17

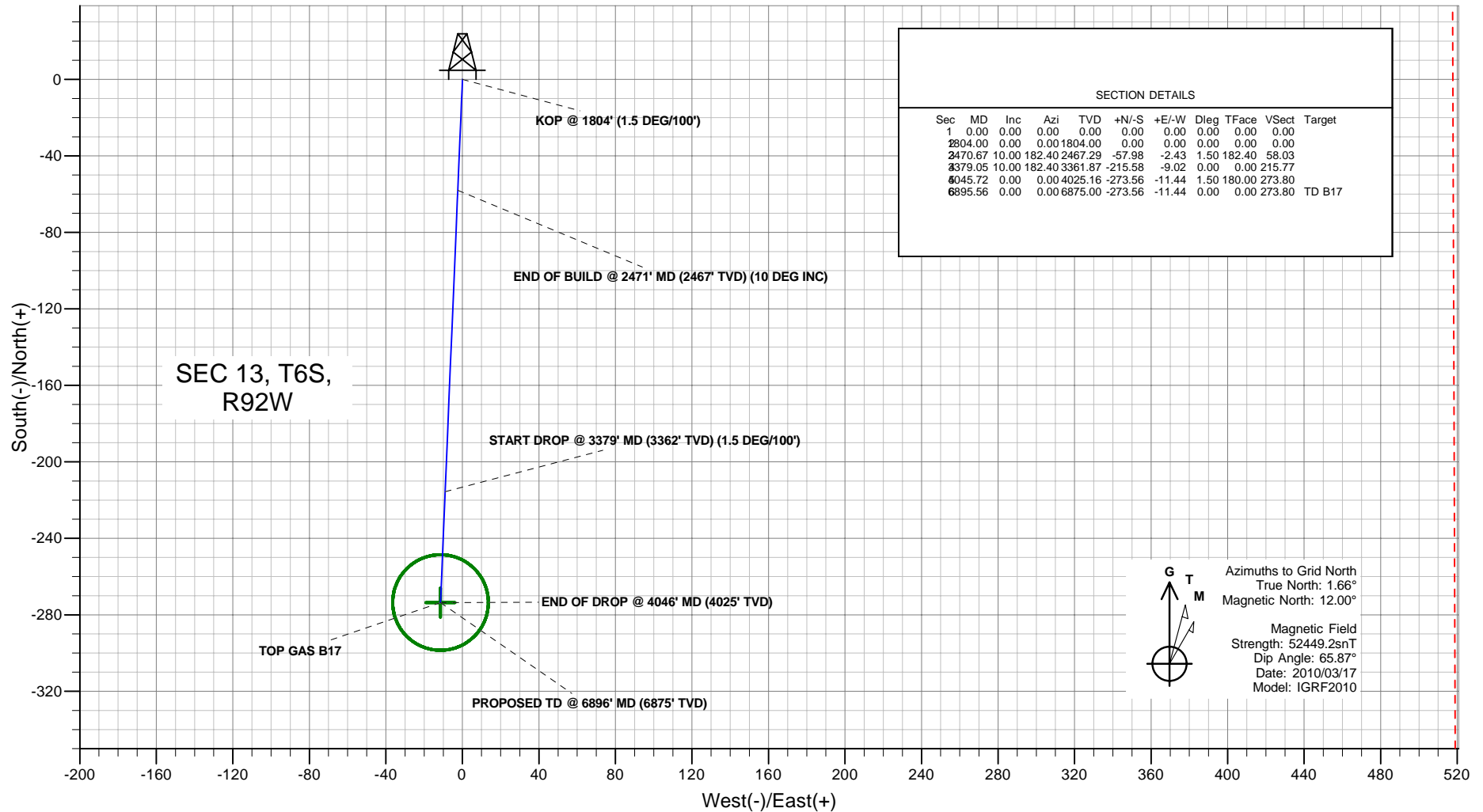




PLAN VIEW

ANTERO RESOURCES

Project: McLIN B PROJECT
Site: FRONTIER 12
Well: McLIN B17 (111161)
Wellbore: ANTERO McLIN B17
Design: ANTERO McLIN B17 P01
JOB # 111161



Plan: ANTERO McLIN B17 P01
Created By: ARK Directional Services
Date: 7:25, March 17 2010

PROJECT DETAILS: McLIN B PROJECT

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

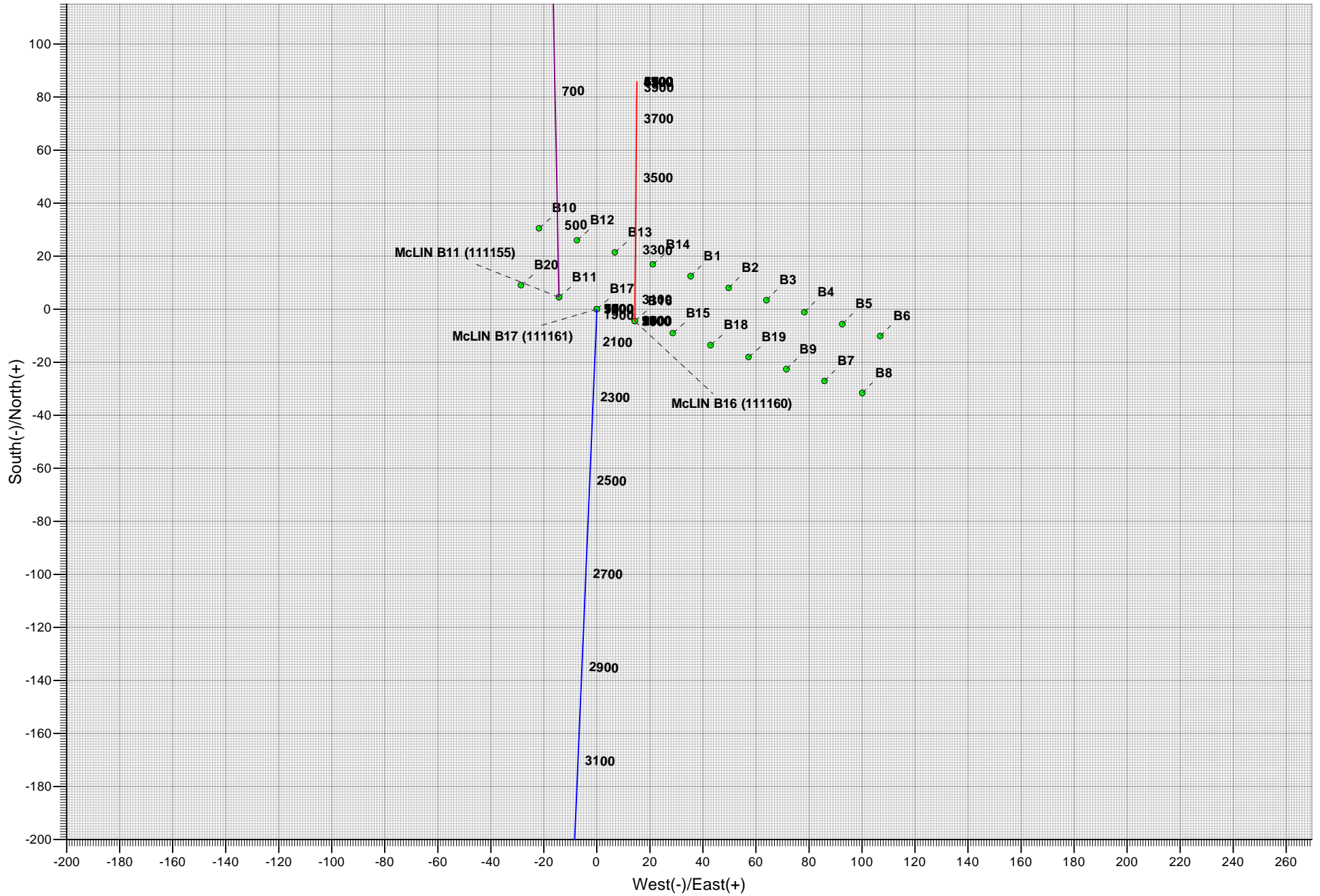
REFERENCE INFORMATION

Co-ordinate (N/E) Reference: McLIN B17, Grid North
Vertical (TVD) Reference: RKB @ 5622.00ft
Section (VS) Reference: Slot - B17(0.00N, 0.00E)
Measured Depth Reference: RKB @ 5622.00ft
Calculation Method: Minimum Curvature



ANTERO McLIN B17

SPIDER PLOT



ANTERO RESOURCES

**McLIN B PROJECT
FRONTIER 12**

Plan: ANTERO McLIN B17 P01

Standard Planning Report - Geographic

17 March, 2010

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well McLIN B17 (111161) - Slot B17
Company:	ANTERO RESOURCES	TVD Reference:	RKB @ 5622.00ft
Project:	McLIN B PROJECT	MD Reference:	RKB @ 5622.00ft
Site:	FRONTIER 12	North Reference:	Grid
Well:	McLIN B17 (111161)	Survey Calculation Method:	Minimum Curvature
Wellbore:	ANTERO McLIN B17		
Design:	ANTERO McLIN B17 P01		

Project	McLIN B PROJECT		
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		FRONTIER 12			
Site Position:		Northing:	14,366,636.75 usft	Latitude:	39° 31' 51.798 N
From:	Lat/Long	Easting:	904,982.97 usft	Longitude:	107° 36' 29.317 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.20 in	Grid Convergence:	-1.66 °

Well	McLIN B17 (111161) - Slot B17					
Well Position	+N/-S	0.00 ft	Northing:	14,366,624.33 usft	Latitude:	39° 31' 51.665 N
	+E/-W	0.00 ft	Easting:	904,947.58 usft	Longitude:	107° 36' 29.764 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,598.00 ft

Wellbore	ANTERO McLIN B17				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2010/03/17	10.34	65.87	52,449

Design	ANTERO McLIN B17 P01			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	182.40

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	
1,804.00	0.00	0.00	1,804.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,470.67	10.00	182.40	2,467.29	-57.98	-2.43	1.50	1.50	0.00	182.40	
3,379.05	10.00	182.40	3,361.87	-215.58	-9.02	0.00	0.00	0.00	0.00	
4,045.72	0.00	0.00	4,025.16	-273.56	-11.44	1.50	-1.50	0.00	180.00	
6,895.56	0.00	0.00	6,875.00	-273.56	-11.44	0.00	0.00	0.00	0.00	TD B17

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well McLIN B17 (111161) - Slot B17
Company:	ANTERO RESOURCES	TVD Reference:	RKB @ 5622.00ft
Project:	McLIN B PROJECT	MD Reference:	RKB @ 5622.00ft
Site:	FRONTIER 12	North Reference:	Grid
Well:	McLIN B17 (111161)	Survey Calculation Method:	Minimum Curvature
Wellbore:	ANTERO McLIN B17		
Design:	ANTERO McLIN B17 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	14,366,624.33	904,947.58	39° 31' 51.665 N	107° 36' 29.764 W
100.00	0.00	0.00	100.00	0.00	0.00	14,366,624.33	904,947.58	39° 31' 51.665 N	107° 36' 29.764 W
200.00	0.00	0.00	200.00	0.00	0.00	14,366,624.33	904,947.58	39° 31' 51.665 N	107° 36' 29.764 W
300.00	0.00	0.00	300.00	0.00	0.00	14,366,624.33	904,947.58	39° 31' 51.665 N	107° 36' 29.764 W
400.00	0.00	0.00	400.00	0.00	0.00	14,366,624.33	904,947.58	39° 31' 51.665 N	107° 36' 29.764 W
500.00	0.00	0.00	500.00	0.00	0.00	14,366,624.33	904,947.58	39° 31' 51.665 N	107° 36' 29.764 W
600.00	0.00	0.00	600.00	0.00	0.00	14,366,624.33	904,947.58	39° 31' 51.665 N	107° 36' 29.764 W
700.00	0.00	0.00	700.00	0.00	0.00	14,366,624.33	904,947.58	39° 31' 51.665 N	107° 36' 29.764 W
800.00	0.00	0.00	800.00	0.00	0.00	14,366,624.33	904,947.58	39° 31' 51.665 N	107° 36' 29.764 W
900.00	0.00	0.00	900.00	0.00	0.00	14,366,624.33	904,947.58	39° 31' 51.665 N	107° 36' 29.764 W
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,366,624.33	904,947.58	39° 31' 51.665 N	107° 36' 29.764 W
SURFACE CASING @ 1000' TVD									
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,366,624.33	904,947.58	39° 31' 51.665 N	107° 36' 29.764 W
1,200.00	0.00	0.00	1,200.00	0.00	0.00	14,366,624.33	904,947.58	39° 31' 51.665 N	107° 36' 29.764 W
1,300.00	0.00	0.00	1,300.00	0.00	0.00	14,366,624.33	904,947.58	39° 31' 51.665 N	107° 36' 29.764 W
1,400.00	0.00	0.00	1,400.00	0.00	0.00	14,366,624.33	904,947.58	39° 31' 51.665 N	107° 36' 29.764 W
1,500.00	0.00	0.00	1,500.00	0.00	0.00	14,366,624.33	904,947.58	39° 31' 51.665 N	107° 36' 29.764 W
1,600.00	0.00	0.00	1,600.00	0.00	0.00	14,366,624.33	904,947.58	39° 31' 51.665 N	107° 36' 29.764 W
1,700.00	0.00	0.00	1,700.00	0.00	0.00	14,366,624.33	904,947.58	39° 31' 51.665 N	107° 36' 29.764 W
1,804.00	0.00	0.00	1,804.00	0.00	0.00	14,366,624.33	904,947.58	39° 31' 51.665 N	107° 36' 29.764 W
KOP @ 1804' (1.5 DEG/100')									
1,900.00	1.44	182.40	1,899.99	-1.21	-0.05	14,366,623.13	904,947.53	39° 31' 51.653 N	107° 36' 29.764 W
2,000.00	2.94	182.40	1,999.91	-5.02	-0.21	14,366,619.31	904,947.37	39° 31' 51.615 N	107° 36' 29.764 W
2,100.00	4.44	182.40	2,099.70	-11.45	-0.48	14,366,612.88	904,947.10	39° 31' 51.552 N	107° 36' 29.766 W
2,200.00	5.94	182.40	2,199.29	-20.49	-0.86	14,366,603.84	904,946.72	39° 31' 51.462 N	107° 36' 29.767 W
2,300.00	7.44	182.40	2,298.61	-32.13	-1.34	14,366,592.20	904,946.24	39° 31' 51.347 N	107° 36' 29.769 W
2,400.00	8.94	182.40	2,397.58	-46.36	-1.94	14,366,577.97	904,945.64	39° 31' 51.207 N	107° 36' 29.771 W
2,470.67	10.00	182.40	2,467.29	-57.98	-2.43	14,366,566.35	904,945.15	39° 31' 51.092 N	107° 36' 29.773 W
END OF BUILD @ 2471' MD (2467' TVD) (10 DEG INC)									
2,500.00	10.00	182.40	2,496.17	-63.07	-2.64	14,366,561.26	904,944.94	39° 31' 51.041 N	107° 36' 29.774 W
2,600.00	10.00	182.40	2,594.66	-80.42	-3.36	14,366,543.91	904,944.22	39° 31' 50.870 N	107° 36' 29.777 W
2,700.00	10.00	182.40	2,693.14	-97.77	-4.09	14,366,526.56	904,943.49	39° 31' 50.698 N	107° 36' 29.780 W
2,800.00	10.00	182.40	2,791.62	-115.12	-4.82	14,366,509.21	904,942.76	39° 31' 50.527 N	107° 36' 29.782 W
2,900.00	10.00	182.40	2,890.10	-132.47	-5.54	14,366,491.86	904,942.04	39° 31' 50.355 N	107° 36' 29.785 W
3,000.00	10.00	182.40	2,988.58	-149.82	-6.27	14,366,474.51	904,941.31	39° 31' 50.183 N	107° 36' 29.788 W
3,100.00	10.00	182.40	3,087.06	-167.17	-6.99	14,366,457.16	904,940.59	39° 31' 50.012 N	107° 36' 29.791 W
3,200.00	10.00	182.40	3,185.54	-184.52	-7.72	14,366,439.82	904,939.86	39° 31' 49.840 N	107° 36' 29.794 W
3,240.07	10.00	182.40	3,225.00	-191.47	-8.01	14,366,432.86	904,939.57	39° 31' 49.772 N	107° 36' 29.795 W
MESAVERDE									
3,300.00	10.00	182.40	3,284.02	-201.87	-8.44	14,366,422.47	904,939.14	39° 31' 49.669 N	107° 36' 29.797 W
3,379.05	10.00	182.40	3,361.87	-215.58	-9.02	14,366,408.75	904,938.56	39° 31' 49.533 N	107° 36' 29.799 W
START DROP @ 3379' MD (3362' TVD) (1.5 DEG/100')									
3,400.00	9.69	182.40	3,382.51	-219.16	-9.17	14,366,405.17	904,938.41	39° 31' 49.498 N	107° 36' 29.800 W
3,500.00	8.19	182.40	3,481.30	-234.68	-9.82	14,366,389.65	904,937.76	39° 31' 49.344 N	107° 36' 29.802 W
3,600.00	6.69	182.40	3,580.45	-247.61	-10.36	14,366,376.72	904,937.22	39° 31' 49.216 N	107° 36' 29.804 W
3,700.00	5.19	182.40	3,679.91	-257.94	-10.79	14,366,366.39	904,936.79	39° 31' 49.114 N	107° 36' 29.806 W
3,800.00	3.69	182.40	3,779.61	-265.67	-11.11	14,366,358.67	904,936.47	39° 31' 49.038 N	107° 36' 29.807 W
3,900.00	2.19	182.40	3,879.48	-270.78	-11.33	14,366,353.55	904,936.25	39° 31' 48.987 N	107° 36' 29.808 W
4,000.00	0.69	182.40	3,979.44	-273.29	-11.43	14,366,351.04	904,936.15	39° 31' 48.963 N	107° 36' 29.808 W
4,045.56	0.00	182.40	4,025.00	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
PRICE COAL									
4,045.72	0.00	0.00	4,025.16	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
END OF DROP @ 4046' MD (4025' TVD)									
4,100.00	0.00	0.00	4,079.44	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well McLIN B17 (111161) - Slot B17
Company:	ANTERO RESOURCES	TVD Reference:	RKB @ 5622.00ft
Project:	McLIN B PROJECT	MD Reference:	RKB @ 5622.00ft
Site:	FRONTIER 12	North Reference:	Grid
Well:	McLIN B17 (111161)	Survey Calculation Method:	Minimum Curvature
Wellbore:	ANTERO McLIN B17		
Design:	ANTERO McLIN B17 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
4,200.00	0.00	0.00	4,179.44	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
4,300.00	0.00	0.00	4,279.44	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
4,400.00	0.00	0.00	4,379.44	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
4,500.00	0.00	0.00	4,479.44	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
4,600.00	0.00	0.00	4,579.44	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
4,700.00	0.00	0.00	4,679.44	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
4,745.56	0.00	0.00	4,725.00	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
TOP GAS - TOP GAS B17									
4,800.00	0.00	0.00	4,779.44	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
4,900.00	0.00	0.00	4,879.44	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
5,000.00	0.00	0.00	4,979.44	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
5,100.00	0.00	0.00	5,079.44	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
5,200.00	0.00	0.00	5,179.44	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
5,300.00	0.00	0.00	5,279.44	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
5,400.00	0.00	0.00	5,379.44	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
5,500.00	0.00	0.00	5,479.44	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
5,600.00	0.00	0.00	5,579.44	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
5,645.56	0.00	0.00	5,625.00	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
CAMEO									
5,700.00	0.00	0.00	5,679.44	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
5,800.00	0.00	0.00	5,779.44	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
5,900.00	0.00	0.00	5,879.44	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
6,000.00	0.00	0.00	5,979.44	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
6,100.00	0.00	0.00	6,079.44	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
6,200.00	0.00	0.00	6,179.44	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
6,300.00	0.00	0.00	6,279.44	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
6,400.00	0.00	0.00	6,379.44	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
6,500.00	0.00	0.00	6,479.44	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
6,600.00	0.00	0.00	6,579.44	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
6,700.00	0.00	0.00	6,679.44	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
6,745.56	0.00	0.00	6,725.00	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
ROLLINS									
6,800.00	0.00	0.00	6,779.44	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
6,895.52	0.00	0.00	6,874.96	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
PROPOSED TD @ 6896' MD (6875' TVD)									
6,895.56	0.00	0.00	6,875.00	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
TD B17									

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
TOP GAS B17 - plan hits target center - Circle (radius 25.00)	0.00	360.00	4,725.00	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W
TD B17 - plan hits target center - Circle (radius 25.00)	0.00	360.00	6,875.00	-273.56	-11.44	14,366,350.77	904,936.14	39° 31' 48.960 N	107° 36' 29.808 W

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well McLIN B17 (111161) - Slot B17
Company:	ANTERO RESOURCES	TVD Reference:	RKB @ 5622.00ft
Project:	McLIN B PROJECT	MD Reference:	RKB @ 5622.00ft
Site:	FRONTIER 12	North Reference:	Grid
Well:	McLIN B17 (111161)	Survey Calculation Method:	Minimum Curvature
Wellbore:	ANTERO McLIN B17		
Design:	ANTERO McLIN B17 P01		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,000.00	1,000.00	SURFACE CASING @ 1000' TVD	9.62	12.25	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,240.07	3,225.00	MESAVERDE		0.00	
4,045.56	4,025.00	PRICE COAL		0.00	
4,745.56	4,725.00	TOP GAS		0.00	
5,645.56	5,625.00	CAMEO		0.00	
6,745.56	6,725.00	ROLLINS		0.00	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,804.00	1,804.00	0.00	0.00	KOP @ 1804' (1.5 DEG/100')	
2,470.67	2,467.29	-57.98	-2.43	END OF BUILD @ 2471' MD (2467' TVD) (10 DEG INC)	
3,379.05	3,361.87	-215.58	-9.02	START DROP @ 3379' MD (3362' TVD) (1.5 DEG/100')	
4,045.72	4,025.16	-273.56	-11.44	END OF DROP @ 4046' MD (4025' TVD)	
6,895.52	6,874.96	-273.56	-11.44	PROPOSED TD @ 6896' MD (6875' TVD)	