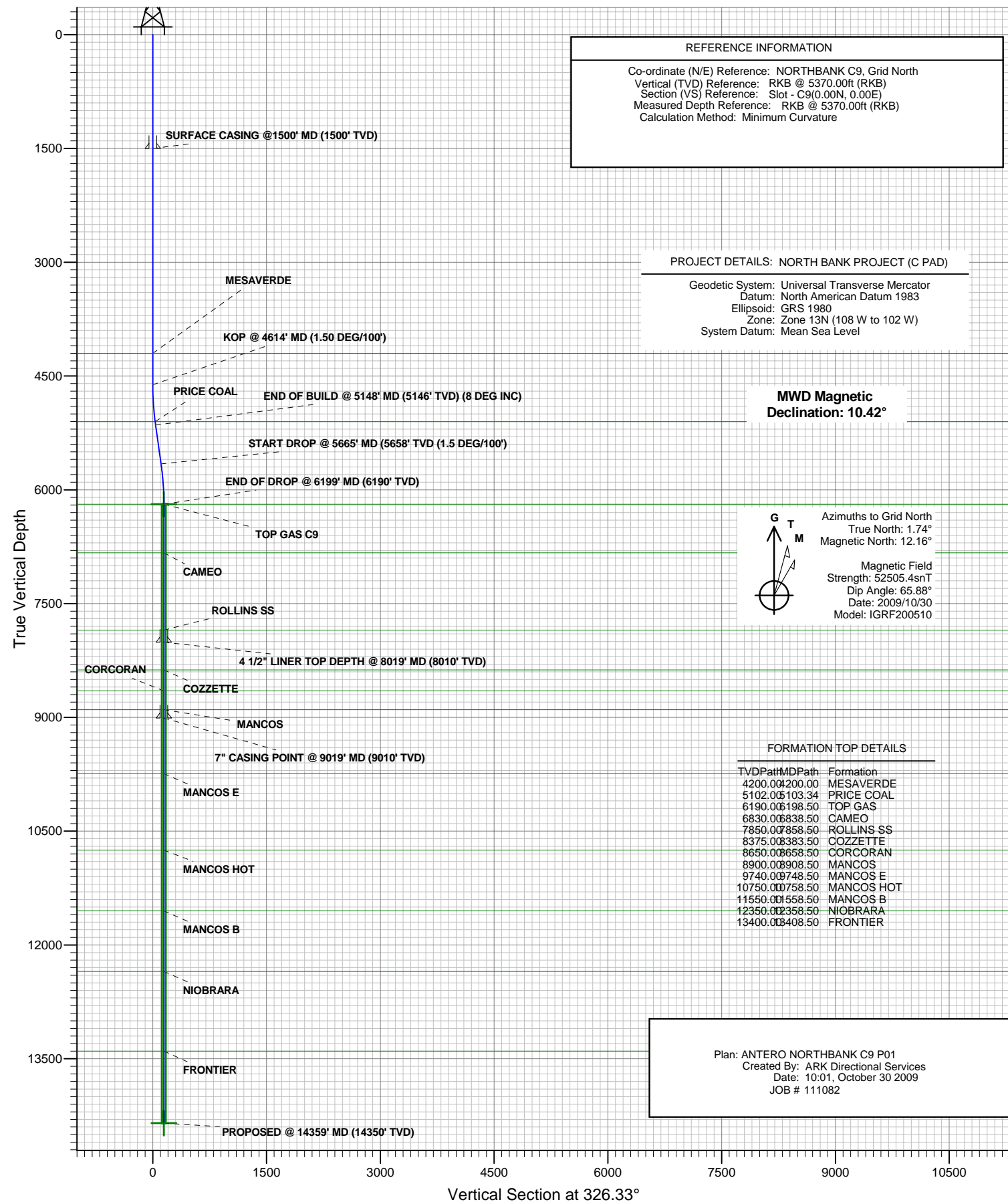




ANTERO RESOURCES

ANTERO NORTHBANK C9



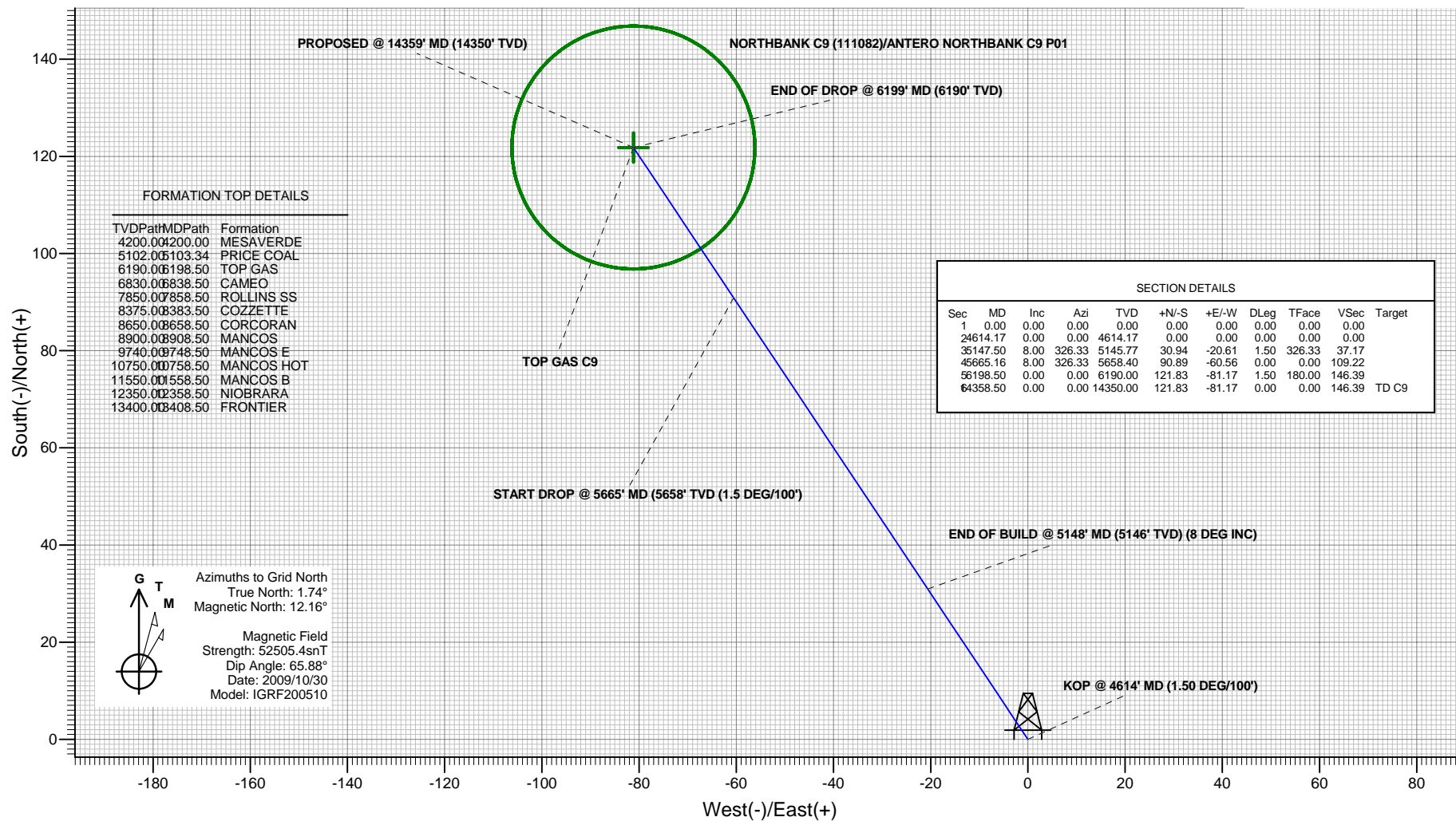


ANTERO RESOURCES

Project: NORTH BANK PROJECT (C PAD)
Site: FRONTIER 14
Well: NORTHBANK C9 (111082)
Wellbore: ANTERO NORTHBANK C9
Design: ANTERO NORTHBANK C9 P01
JOB # 111082



PLAN VIEW



Plan: ANTERO NORTHBANK C9 P01
Created By: ARK Directional Services
Date: 10:05, October 30 2009

PROJECT DETAILS: NORTH BANK PROJECT (C PAD)

Geodetic System: Universal Transverse Mercator
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Zone 13N (108 W to 102 W)
System Datum: Mean Sea Level

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: NORTHBANK C9, Grid North
Vertical (TVD) Reference: RKB @ 5370.00ft (RKB)
Section (VS) Reference: Slot - C9(0.00N, 0.00E)
Measured Depth Reference: RKB @ 5370.00ft (RKB)
Calculation Method: Minimum Curvature

ANTERO RESOURCES

**NORTH BANK PROJECT (C PAD)
FRONTIER 14**

Plan: ANTERO NORTHBANK C9 P01

Standard Planning Report - Geographic

30 October, 2009

Planning Report - Geographic

Database:	EDMDB	Local Co-ordinate Reference:	Well NORTHBANK C9 (111082) - Slot C9
Company:	ANTERO RESOURCES	TVD Reference:	RKB @ 5370.00ft (RKB)
Project:	NORTH BANK PROJECT (C PAD)	MD Reference:	RKB @ 5370.00ft (RKB)
Site:	FRONTIER 14	North Reference:	Grid
Well:	NORTHBANK C9 (111082)	Survey Calculation Method:	Minimum Curvature
Wellbore:	ANTERO NORTHBANK C9		
Design:	ANTERO NORTHBANK C9 P01		

Project	NORTH BANK PROJECT (C PAD)		
Map System:	Universal Transverse Mercator	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Zone 13N (108 W to 102 W)		

Site	FRONTIER 14				
Site Position:		Northing:	14,370,670.22 ft	Latitude:	39° 32' 21.840 N
From:	Map	Easting:	871,547.27 ft	Longitude:	107° 43' 37.308 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	-1.74 °

Well	NORTHBANK C9 (111082) - Slot C9					
Well Position	+N/-S	51.86 ft	Northing:	14,370,722.08 ft	Latitude:	39° 32' 22.343 N
	+E/-W	-30.23 ft	Easting:	871,517.04 ft	Longitude:	107° 43' 37.714 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,351.50 ft

Wellbore	ANTERO NORTHBANK C9				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	2009/10/30	10.42	65.88	52,505

Design	ANTERO NORTHBANK C9 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	326.33	

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	
4,614.17	0.00	0.00	4,614.17	0.00	0.00	0.00	0.00	0.00	0.00	
5,147.50	8.00	326.33	5,145.77	30.94	-20.61	1.50	1.50	0.00	326.33	
5,665.16	8.00	326.33	5,658.40	90.89	-60.56	0.00	0.00	0.00	0.00	
6,198.50	0.00	0.00	6,190.00	121.83	-81.17	1.50	-1.50	0.00	180.00	
14,358.50	0.00	0.00	14,350.00	121.83	-81.17	0.00	0.00	0.00	0.00	TD C9

Planning Report - Geographic

Database:	EDMDB	Local Co-ordinate Reference:	Well NORTHBANK C9 (111082) - Slot C9
Company:	ANTERO RESOURCES	TVD Reference:	RKB @ 5370.00ft (RKB)
Project:	NORTH BANK PROJECT (C PAD)	MD Reference:	RKB @ 5370.00ft (RKB)
Site:	FRONTIER 14	North Reference:	Grid
Well:	NORTHBANK C9 (111082)	Survey Calculation Method:	Minimum Curvature
Wellbore:	ANTERO NORTHBANK C9		
Design:	ANTERO NORTHBANK C9 P01		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
100.00	0.00	0.00	100.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
200.00	0.00	0.00	200.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
300.00	0.00	0.00	300.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
400.00	0.00	0.00	400.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
500.00	0.00	0.00	500.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
600.00	0.00	0.00	600.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
700.00	0.00	0.00	700.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
800.00	0.00	0.00	800.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
900.00	0.00	0.00	900.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
1,200.00	0.00	0.00	1,200.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
1,300.00	0.00	0.00	1,300.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
1,400.00	0.00	0.00	1,400.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
1,500.00	0.00	0.00	1,500.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
SURFACE CASING @1500' MD (1500' TVD)									
1,600.00	0.00	0.00	1,600.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
1,700.00	0.00	0.00	1,700.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
1,800.00	0.00	0.00	1,800.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
1,900.00	0.00	0.00	1,900.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
2,000.00	0.00	0.00	2,000.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
2,100.00	0.00	0.00	2,100.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
2,200.00	0.00	0.00	2,200.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
2,300.00	0.00	0.00	2,300.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
2,400.00	0.00	0.00	2,400.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
2,500.00	0.00	0.00	2,500.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
2,600.00	0.00	0.00	2,600.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
2,700.00	0.00	0.00	2,700.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
2,800.00	0.00	0.00	2,800.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
2,900.00	0.00	0.00	2,900.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
3,000.00	0.00	0.00	3,000.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
3,100.00	0.00	0.00	3,100.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
3,200.00	0.00	0.00	3,200.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
3,300.00	0.00	0.00	3,300.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
3,400.00	0.00	0.00	3,400.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
3,500.00	0.00	0.00	3,500.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
3,600.00	0.00	0.00	3,600.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
3,700.00	0.00	0.00	3,700.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
3,800.00	0.00	0.00	3,800.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
3,900.00	0.00	0.00	3,900.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
4,000.00	0.00	0.00	4,000.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
4,100.00	0.00	0.00	4,100.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
4,200.00	0.00	0.00	4,200.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
MESAVERDE									
4,300.00	0.00	0.00	4,300.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
4,400.00	0.00	0.00	4,400.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
4,500.00	0.00	0.00	4,500.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
4,600.00	0.00	0.00	4,600.00	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
4,614.17	0.00	0.00	4,614.17	0.00	0.00	14,370,722.08	871,517.04	39° 32' 22.343 N	107° 43' 37.714 W
KOP @ 4614' MD (1.50 DEG/100')									
4,700.00	1.29	326.33	4,699.99	0.80	-0.53	14,370,722.88	871,516.50	39° 32' 22.351 N	107° 43' 37.721 W
4,800.00	2.79	326.33	4,799.93	3.76	-2.51	14,370,725.84	871,514.53	39° 32' 22.379 N	107° 43' 37.747 W
4,900.00	4.29	326.33	4,899.73	8.90	-5.93	14,370,730.97	871,511.11	39° 32' 22.429 N	107° 43' 37.793 W

Planning Report - Geographic

Database:	EDMDB	Local Co-ordinate Reference:	Well NORTHBANK C9 (111082) - Slot C9
Company:	ANTERO RESOURCES	TVD Reference:	RKB @ 5370.00ft (RKB)
Project:	NORTH BANK PROJECT (C PAD)	MD Reference:	RKB @ 5370.00ft (RKB)
Site:	FRONTIER 14	North Reference:	Grid
Well:	NORTHBANK C9 (111082)	Survey Calculation Method:	Minimum Curvature
Wellbore:	ANTERO NORTHBANK C9		
Design:	ANTERO NORTHBANK C9 P01		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
5,000.00	5.79	326.33	4,999.34	16.20	-10.80	14,370,738.28	871,506.24	39° 32' 22.500 N	107° 43' 37.858 W
5,100.00	7.29	326.33	5,098.69	25.68	-17.11	14,370,747.76	871,499.93	39° 32' 22.591 N	107° 43' 37.942 W
5,103.34	7.34	326.33	5,102.00	26.03	-17.34	14,370,748.11	871,499.69	39° 32' 22.595 N	107° 43' 37.945 W
PRICE COAL									
5,147.50	8.00	326.33	5,145.77	30.94	-20.61	14,370,753.01	871,496.43	39° 32' 22.642 N	107° 43' 37.988 W
END OF BUILD @ 5148' MD (5146' TVD) (8 DEG INC)									
5,200.00	8.00	326.33	5,197.76	37.02	-24.66	14,370,759.09	871,492.37	39° 32' 22.701 N	107° 43' 38.042 W
5,300.00	8.00	326.33	5,296.78	48.60	-32.38	14,370,770.68	871,484.66	39° 32' 22.813 N	107° 43' 38.145 W
5,400.00	8.00	326.33	5,395.81	60.18	-40.10	14,370,782.26	871,476.94	39° 32' 22.925 N	107° 43' 38.248 W
5,500.00	8.00	326.33	5,494.84	71.76	-47.81	14,370,793.84	871,469.22	39° 32' 23.037 N	107° 43' 38.351 W
5,600.00	8.00	326.33	5,593.87	83.34	-55.53	14,370,805.42	871,461.51	39° 32' 23.149 N	107° 43' 38.454 W
5,665.16	8.00	326.33	5,658.39	90.89	-60.56	14,370,812.97	871,456.48	39° 32' 23.222 N	107° 43' 38.521 W
START DROP @ 5665' MD (5658' TVD (1.5 DEG/100'))									
5,700.00	7.48	326.33	5,692.91	94.79	-63.16	14,370,816.87	871,453.88	39° 32' 23.260 N	107° 43' 38.556 W
5,800.00	5.98	326.33	5,792.22	104.54	-69.65	14,370,826.62	871,447.38	39° 32' 23.355 N	107° 43' 38.642 W
5,900.00	4.48	326.33	5,891.80	112.13	-74.71	14,370,834.20	871,442.33	39° 32' 23.428 N	107° 43' 38.710 W
6,000.00	2.98	326.33	5,991.59	117.54	-78.31	14,370,839.61	871,438.73	39° 32' 23.480 N	107° 43' 38.758 W
6,100.00	1.48	326.33	6,091.51	120.77	-80.47	14,370,842.85	871,436.57	39° 32' 23.512 N	107° 43' 38.787 W
6,198.50	0.00	0.00	6,190.00	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
END OF DROP @ 6199' MD (6190' TVD) - TOP GAS - TOP GAS C9									
6,200.00	0.00	0.00	6,191.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
6,300.00	0.00	0.00	6,291.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
6,400.00	0.00	0.00	6,391.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
6,500.00	0.00	0.00	6,491.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
6,600.00	0.00	0.00	6,591.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
6,700.00	0.00	0.00	6,691.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
6,800.00	0.00	0.00	6,791.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
6,838.50	0.00	0.00	6,830.00	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
CAMEO									
6,900.00	0.00	0.00	6,891.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
7,000.00	0.00	0.00	6,991.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
7,100.00	0.00	0.00	7,091.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
7,200.00	0.00	0.00	7,191.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
7,300.00	0.00	0.00	7,291.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
7,400.00	0.00	0.00	7,391.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
7,500.00	0.00	0.00	7,491.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
7,600.00	0.00	0.00	7,591.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
7,700.00	0.00	0.00	7,691.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
7,800.00	0.00	0.00	7,791.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
7,858.50	0.00	0.00	7,850.00	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
ROLLINS SS									
7,900.00	0.00	0.00	7,891.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
8,000.00	0.00	0.00	7,991.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
8,018.50	0.00	0.00	8,010.00	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
4 1/2" LINER TOP DEPTH @ 8019' MD (8010' TVD)									
8,100.00	0.00	0.00	8,091.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
8,200.00	0.00	0.00	8,191.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
8,300.00	0.00	0.00	8,291.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
8,383.50	0.00	0.00	8,375.00	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
COZZETTE									
8,400.00	0.00	0.00	8,391.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
8,500.00	0.00	0.00	8,491.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
8,600.00	0.00	0.00	8,591.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W

Planning Report - Geographic

Database:	EDMDB	Local Co-ordinate Reference:	Well NORTHBANK C9 (111082) - Slot C9
Company:	ANTERO RESOURCES	TVD Reference:	RKB @ 5370.00ft (RKB)
Project:	NORTH BANK PROJECT (C PAD)	MD Reference:	RKB @ 5370.00ft (RKB)
Site:	FRONTIER 14	North Reference:	Grid
Well:	NORTHBANK C9 (111082)	Survey Calculation Method:	Minimum Curvature
Wellbore:	ANTERO NORTHBANK C9		
Design:	ANTERO NORTHBANK C9 P01		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude	
8,658.50	0.00	0.00	8,650.00	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
CORCORAN										
8,700.00	0.00	0.00	8,691.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
8,800.00	0.00	0.00	8,791.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
8,900.00	0.00	0.00	8,891.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
8,908.50	0.00	0.00	8,900.00	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
MANCOS										
9,000.00	0.00	0.00	8,991.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
9,018.50	0.00	0.00	9,010.00	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
7" CASING POINT @ 9019' MD (9010' TVD)										
9,100.00	0.00	0.00	9,091.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
9,200.00	0.00	0.00	9,191.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
9,300.00	0.00	0.00	9,291.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
9,400.00	0.00	0.00	9,391.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
9,500.00	0.00	0.00	9,491.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
9,600.00	0.00	0.00	9,591.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
9,700.00	0.00	0.00	9,691.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
9,748.50	0.00	0.00	9,740.00	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
MANCOS E										
9,800.00	0.00	0.00	9,791.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
9,900.00	0.00	0.00	9,891.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
10,000.00	0.00	0.00	9,991.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
10,100.00	0.00	0.00	10,091.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
10,200.00	0.00	0.00	10,191.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
10,300.00	0.00	0.00	10,291.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
10,400.00	0.00	0.00	10,391.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
10,500.00	0.00	0.00	10,491.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
10,600.00	0.00	0.00	10,591.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
10,700.00	0.00	0.00	10,691.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
10,758.50	0.00	0.00	10,750.00	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
MANCOS HOT										
10,800.00	0.00	0.00	10,791.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
10,900.00	0.00	0.00	10,891.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
11,000.00	0.00	0.00	10,991.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
11,100.00	0.00	0.00	11,091.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
11,200.00	0.00	0.00	11,191.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
11,300.00	0.00	0.00	11,291.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
11,400.00	0.00	0.00	11,391.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
11,500.00	0.00	0.00	11,491.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
11,558.50	0.00	0.00	11,550.00	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
MANCOS B										
11,600.00	0.00	0.00	11,591.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
11,700.00	0.00	0.00	11,691.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
11,800.00	0.00	0.00	11,791.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
11,900.00	0.00	0.00	11,891.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
12,000.00	0.00	0.00	11,991.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
12,100.00	0.00	0.00	12,091.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
12,200.00	0.00	0.00	12,191.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
12,300.00	0.00	0.00	12,291.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
12,358.50	0.00	0.00	12,350.00	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
NIOBRARA										
12,400.00	0.00	0.00	12,391.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
12,500.00	0.00	0.00	12,491.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	
12,600.00	0.00	0.00	12,591.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W	

Planning Report - Geographic

Database:	EDMDB	Local Co-ordinate Reference:	Well NORTHBANK C9 (111082) - Slot C9
Company:	ANTERO RESOURCES	TVD Reference:	RKB @ 5370.00ft (RKB)
Project:	NORTH BANK PROJECT (C PAD)	MD Reference:	RKB @ 5370.00ft (RKB)
Site:	FRONTIER 14	North Reference:	Grid
Well:	NORTHBANK C9 (111082)	Survey Calculation Method:	Minimum Curvature
Wellbore:	ANTERO NORTHBANK C9		
Design:	ANTERO NORTHBANK C9 P01		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
12,700.00	0.00	0.00	12,691.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
12,800.00	0.00	0.00	12,791.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
12,900.00	0.00	0.00	12,891.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
13,000.00	0.00	0.00	12,991.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
13,100.00	0.00	0.00	13,091.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
13,200.00	0.00	0.00	13,191.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
13,300.00	0.00	0.00	13,291.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
13,400.00	0.00	0.00	13,391.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
13,408.50	0.00	0.00	13,400.00	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
FRONTIER									
13,500.00	0.00	0.00	13,491.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
13,600.00	0.00	0.00	13,591.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
13,700.00	0.00	0.00	13,691.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
13,800.00	0.00	0.00	13,791.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
13,900.00	0.00	0.00	13,891.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
14,000.00	0.00	0.00	13,991.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
14,100.00	0.00	0.00	14,091.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
14,200.00	0.00	0.00	14,191.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
14,300.00	0.00	0.00	14,291.50	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
14,358.48	0.00	0.00	14,349.98	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
PROPOSED @ 14359' MD (14350' TVD)									
14,358.50	0.00	0.00	14,350.00	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
TD C9									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
TOP GAS C9 - plan hits target - Circle (radius 25.00)		0.00	6,190.00	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W
TD C9 - plan hits target - Circle (radius 25.00)	0.00	360.00	14,350.00	121.83	-81.17	14,370,843.90	871,435.87	39° 32' 23.522 N	107° 43' 38.796 W

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
8,018.50	8,010.00	4 1/2" LINER TOP DEPTH @ 8019' MD (8010' TVD)	7.00	7.50	
9,018.50	9,010.00	7" CASING POINT @ 9019' MD (9010' TVD)	7.00	7.50	
1,500.00	1,500.00	SURFACE CASING @1500' MD (1500' TVD)	9.62	12.25	

Planning Report - Geographic

Database:	EDMDB	Local Co-ordinate Reference:	Well NORTHBANK C9 (111082) - Slot C9
Company:	ANTERO RESOURCES	TVD Reference:	RKB @ 5370.00ft (RKB)
Project:	NORTH BANK PROJECT (C PAD)	MD Reference:	RKB @ 5370.00ft (RKB)
Site:	FRONTIER 14	North Reference:	Grid
Well:	NORTHBANK C9 (111082)	Survey Calculation Method:	Minimum Curvature
Wellbore:	ANTERO NORTHBANK C9		
Design:	ANTERO NORTHBANK C9 P01		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,200.00	4,200.00	MESAVERDE		0.00	
5,103.34	5,102.00	PRICE COAL		0.00	
6,198.50	6,190.00	TOP GAS		0.00	
6,838.50	6,830.00	CAMEO		0.00	
7,858.50	7,850.00	ROLLINS SS		0.00	
8,383.50	8,375.00	COZZETTE		0.00	
8,658.50	8,650.00	CORCORAN		0.00	
8,908.50	8,900.00	MANCOS		0.00	
9,748.50	9,740.00	MANCOS E		0.00	
10,758.50	10,750.00	MANCOS HOT		0.00	
11,558.50	11,550.00	MANCOS B		0.00	
12,358.50	12,350.00	NIOBRARA		0.00	
13,408.50	13,400.00	FRONTIER		0.00	

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
4,614.17	4,614.17	0.00	0.00	KOP @ 4614' MD (1.50 DEG/100')
5,147.50	5,145.77	30.94	-20.61	END OF BUILD @ 5148' MD (5146' TVD) (8 DEG INC)
5,665.16	5,658.39	90.89	-60.56	START DROP @ 5665' MD (5658' TVD (1.5 DEG/100')
6,198.50	6,190.00	121.83	-81.17	END OF DROP @ 6199' MD (6190' TVD)
14,358.48	14,349.98	121.83	-81.17	PROPOSED @ 14359' MD (14350' TVD)