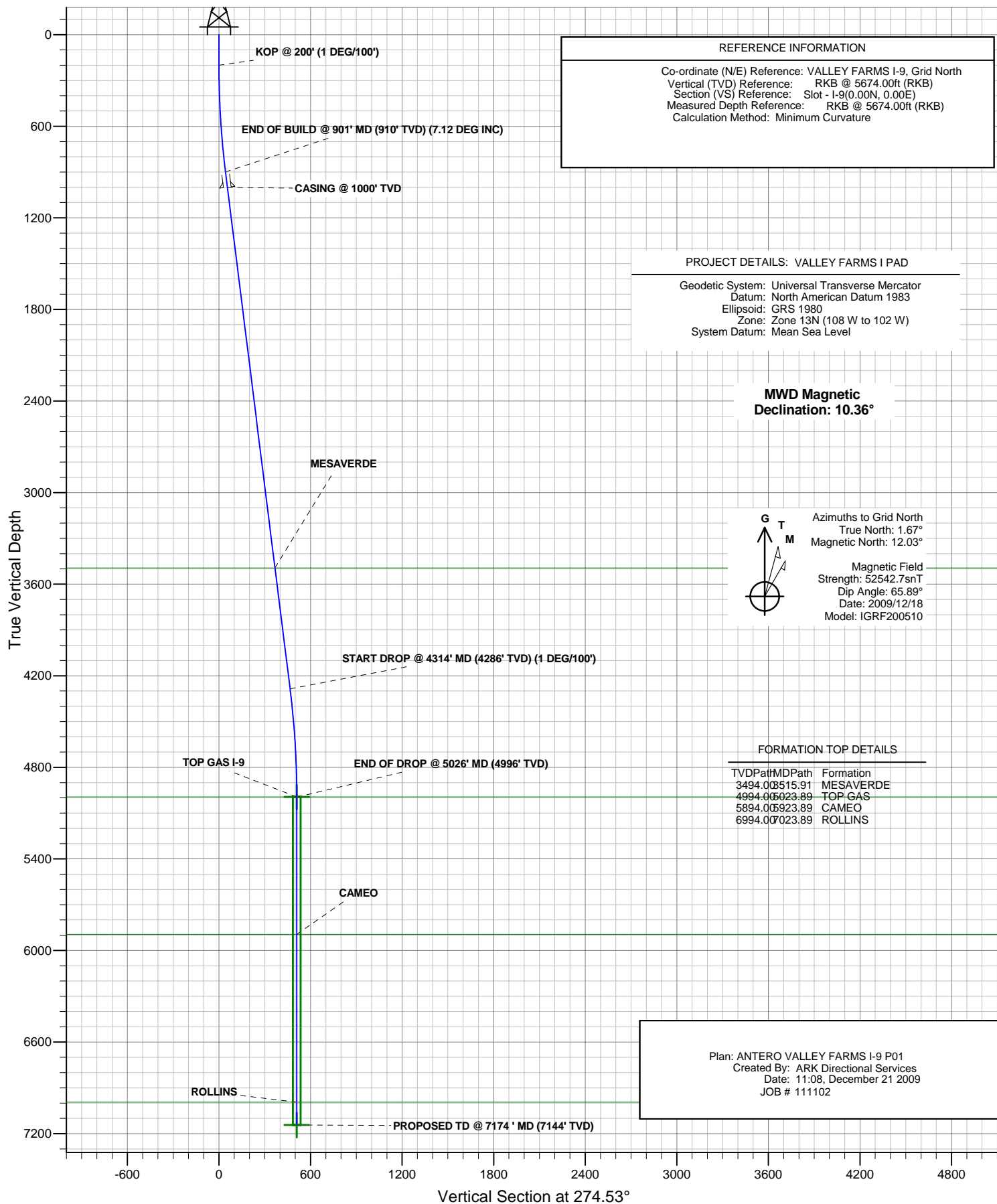




ANTERO RESOURCES

ANTERO VALLEY FARMS I-9

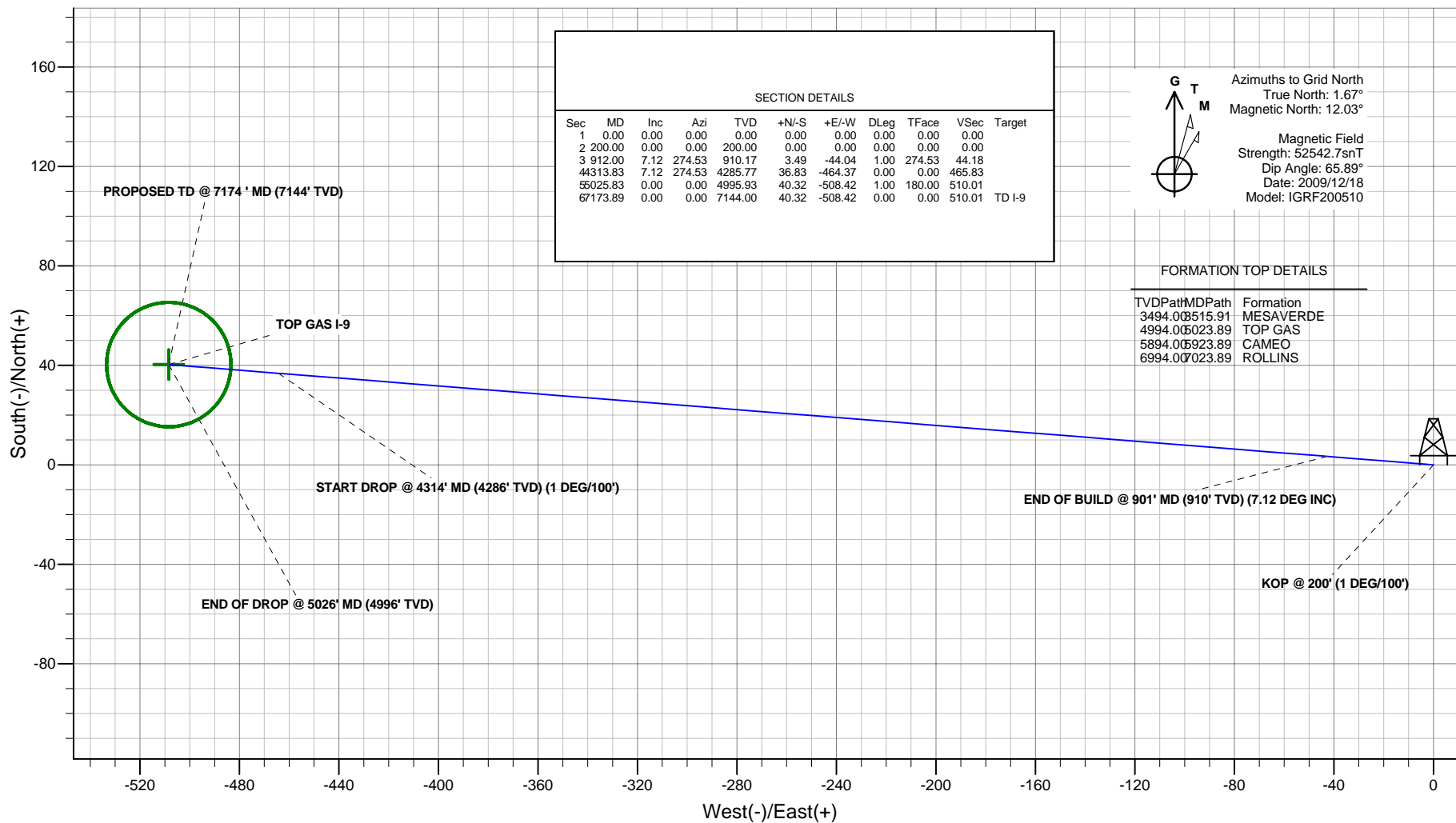




PLAN VIEW

ANTERO RESOURCES

Project: VALLEY FARMS I PAD
Site: FRONTIER 12
Well: VALLEY FARMS I-9 (111102)
Wellbore: ANTERO VALLEY FARMS I-9
Design: ANTERO VALLEY FARMS I-9 P01
JOB # 111102



Plan: ANTERO VALLEY FARMS I-9 P01
Created By: ARK Directional Services
Date: 11:09, December 21 2009

PROJECT DETAILS: VALLEY FARMS I 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: VALLEY FARMS I-9, Grid North
Vertical (TVD) Reference: RKB @ 5674.00ft (RKB)
Section (VS) Reference: Slot - I-9(0.00N, 0.00E)
Measured Depth Reference: RKB @ 5674.00ft (RKB)
Calculation Method: Minimum Curvature

ANTERO RESOURCES

VALLEY FARMS I PAD

FRONTIER 12

VALLEY FARMS I-9

Plan: ANTERO VALLEY FARMS I-9 P01

Standard Planning Report - Geographic

21 December, 2009

Planning Report - Geographic

Database:	EDMDB	Local Co-ordinate Reference:	Well VALLEY FARMS I-9 (111102) - Slot I-9
Company:	ANTERO RESOURCES	TVD Reference:	RKB @ 5674.00ft (RKB)
Project:	VALLEY FARMS I PAD	MD Reference:	RKB @ 5674.00ft (RKB)
Site:	FRONTIER 12	North Reference:	Grid
Well:	VALLEY FARMS I-9 (111102)	Survey Calculation Method:	Minimum Curvature
Wellbore:	ANTERO VALLEY FARMS I-9		
Design:	ANTERO VALLEY FARMS I-9 P01		

Project	VALLEY FARMS I 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 12			
Site Position:		Northing:	14,365,113.21 ft	Latitude:	39° 31' 35.888 N
From:	Lat/Long	Easting:	901,976.81 ft	Longitude:	107° 37' 7.093 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	-1.67 °

Well	VALLEY FARMS I-9 (111102) - Slot I-9					
Well Position	+N/-S	13.50 ft	Northing:	14,365,126.71 ft	Latitude:	39° 31' 36.007 N
	+E/-W	-47.35 ft	Easting:	901,929.46 ft	Longitude:	107° 37' 7.702 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,650.00 ft

Wellbore	ANTERO VALLEY FARMS I-9				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	2009/12/18	10.36	65.89	52,543

Design	ANTERO VALLEY FARMS I-9 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	274.53	

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	
912.00	7.12	274.53	910.17	3.49	-44.04	1.00	1.00	0.00	274.53	
4,313.83	7.12	274.53	4,285.77	36.83	-464.37	0.00	0.00	0.00	0.00	
5,025.83	0.00	0.00	4,995.93	40.32	-508.42	1.00	-1.00	0.00	180.00	
7,173.89	0.00	0.00	7,144.00	40.32	-508.42	0.00	0.00	0.00	0.00	TD I-9

Planning Report - Geographic

Database:	EDMDB	Local Co-ordinate Reference:	Well VALLEY FARMS I-9 (111102) - Slot I-9
Company:	ANTERO RESOURCES	TVD Reference:	RKB @ 5674.00ft (RKB)
Project:	VALLEY FARMS I PAD	MD Reference:	RKB @ 5674.00ft (RKB)
Site:	FRONTIER 12	North Reference:	Grid
Well:	VALLEY FARMS I-9 (111102)	Survey Calculation Method:	Minimum Curvature
Wellbore:	ANTERO VALLEY FARMS I-9		
Design:	ANTERO VALLEY FARMS I-9 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	14,365,126.71	901,929.46	39° 31' 36.007 N	107° 37' 7.702 W
100.00	0.00	0.00	100.00	0.00	0.00	14,365,126.71	901,929.46	39° 31' 36.007 N	107° 37' 7.702 W
200.00	0.00	0.00	200.00	0.00	0.00	14,365,126.71	901,929.46	39° 31' 36.007 N	107° 37' 7.702 W
KOP @ 200' (1 DEG/100')									
300.00	1.00	274.53	299.99	0.07	-0.87	14,365,126.78	901,928.59	39° 31' 36.008 N	107° 37' 7.713 W
400.00	2.00	274.53	399.96	0.28	-3.48	14,365,126.99	901,925.98	39° 31' 36.009 N	107° 37' 7.747 W
500.00	3.00	274.53	499.86	0.62	-7.83	14,365,127.33	901,921.63	39° 31' 36.011 N	107° 37' 7.802 W
600.00	4.00	274.53	599.68	1.10	-13.91	14,365,127.81	901,915.55	39° 31' 36.014 N	107° 37' 7.880 W
700.00	5.00	274.53	699.37	1.72	-21.73	14,365,128.43	901,907.73	39° 31' 36.018 N	107° 37' 7.980 W
800.00	6.00	274.53	798.90	2.48	-31.29	14,365,129.19	901,898.17	39° 31' 36.023 N	107° 37' 8.102 W
900.00	7.00	274.53	898.26	3.38	-42.57	14,365,130.09	901,886.89	39° 31' 36.028 N	107° 37' 8.247 W
901.00	7.01	274.53	899.25	3.39	-42.70	14,365,130.10	901,886.76	39° 31' 36.028 N	107° 37' 8.248 W
END OF BUILD @ 901' MD (910' TVD) (7.12 DEG INC)									
912.00	7.12	274.53	910.17	3.49	-44.04	14,365,130.20	901,885.42	39° 31' 36.029 N	107° 37' 8.265 W
1,000.00	7.12	274.53	997.49	4.36	-54.92	14,365,131.07	901,874.54	39° 31' 36.034 N	107° 37' 8.404 W
1,002.53	7.12	274.53	1,000.00	4.38	-55.23	14,365,131.09	901,874.23	39° 31' 36.035 N	107° 37' 8.408 W
CASING @ 1000' TVD									
1,100.00	7.12	274.53	1,096.72	5.34	-67.27	14,365,132.05	901,862.19	39° 31' 36.041 N	107° 37' 8.562 W
1,200.00	7.12	274.53	1,195.95	6.32	-79.63	14,365,133.03	901,849.83	39° 31' 36.047 N	107° 37' 8.720 W
1,300.00	7.12	274.53	1,295.18	7.30	-91.99	14,365,134.01	901,837.47	39° 31' 36.053 N	107° 37' 8.878 W
1,400.00	7.12	274.53	1,394.41	8.28	-104.34	14,365,134.99	901,825.12	39° 31' 36.059 N	107° 37' 9.036 W
1,500.00	7.12	274.53	1,493.63	9.26	-116.70	14,365,135.97	901,812.76	39° 31' 36.065 N	107° 37' 9.194 W
1,600.00	7.12	274.53	1,592.86	10.24	-129.05	14,365,136.95	901,800.41	39° 31' 36.071 N	107° 37' 9.352 W
1,700.00	7.12	274.53	1,692.09	11.22	-141.41	14,365,137.92	901,788.05	39° 31' 36.077 N	107° 37' 9.510 W
1,800.00	7.12	274.53	1,791.32	12.19	-153.77	14,365,138.90	901,775.70	39° 31' 36.083 N	107° 37' 9.668 W
1,900.00	7.12	274.53	1,890.55	13.17	-166.12	14,365,139.88	901,763.34	39° 31' 36.090 N	107° 37' 9.826 W
2,000.00	7.12	274.53	1,989.78	14.15	-178.48	14,365,140.86	901,750.98	39° 31' 36.096 N	107° 37' 9.984 W
2,100.00	7.12	274.53	2,089.01	15.13	-190.83	14,365,141.84	901,738.63	39° 31' 36.102 N	107° 37' 10.142 W
2,200.00	7.12	274.53	2,188.24	16.11	-203.19	14,365,142.82	901,726.27	39° 31' 36.108 N	107° 37' 10.300 W
2,300.00	7.12	274.53	2,287.47	17.09	-215.55	14,365,143.80	901,713.92	39° 31' 36.114 N	107° 37' 10.458 W
2,400.00	7.12	274.53	2,386.69	18.07	-227.90	14,365,144.78	901,701.56	39° 31' 36.120 N	107° 37' 10.616 W
2,500.00	7.12	274.53	2,485.92	19.05	-240.26	14,365,145.76	901,689.20	39° 31' 36.126 N	107° 37' 10.774 W
2,600.00	7.12	274.53	2,585.15	20.03	-252.61	14,365,146.74	901,676.85	39° 31' 36.132 N	107° 37' 10.932 W
2,700.00	7.12	274.53	2,684.38	21.01	-264.97	14,365,147.72	901,664.49	39° 31' 36.139 N	107° 37' 11.089 W
2,800.00	7.12	274.53	2,783.61	21.99	-277.33	14,365,148.70	901,652.14	39° 31' 36.145 N	107° 37' 11.247 W
2,900.00	7.12	274.53	2,882.84	22.97	-289.68	14,365,149.68	901,639.78	39° 31' 36.151 N	107° 37' 11.405 W
3,000.00	7.12	274.53	2,982.07	23.95	-302.04	14,365,150.66	901,627.42	39° 31' 36.157 N	107° 37' 11.563 W
3,100.00	7.12	274.53	3,081.30	24.93	-314.39	14,365,151.64	901,615.07	39° 31' 36.163 N	107° 37' 11.721 W
3,200.00	7.12	274.53	3,180.53	25.91	-326.75	14,365,152.62	901,602.71	39° 31' 36.169 N	107° 37' 11.879 W
3,300.00	7.12	274.53	3,279.75	26.89	-339.10	14,365,153.60	901,590.36	39° 31' 36.175 N	107° 37' 12.037 W
3,400.00	7.12	274.53	3,378.98	27.87	-351.46	14,365,154.58	901,578.00	39° 31' 36.181 N	107° 37' 12.195 W
3,500.00	7.12	274.53	3,478.21	28.85	-363.82	14,365,155.56	901,565.64	39° 31' 36.188 N	107° 37' 12.353 W
3,515.91	7.12	274.53	3,494.00	29.01	-365.78	14,365,155.72	901,563.68	39° 31' 36.189 N	107° 37' 12.378 W
MESAVERDE									
3,600.00	7.12	274.53	3,577.44	29.83	-376.17	14,365,156.54	901,553.29	39° 31' 36.194 N	107° 37' 12.511 W
3,700.00	7.12	274.53	3,676.67	30.81	-388.53	14,365,157.52	901,540.93	39° 31' 36.200 N	107° 37' 12.669 W
3,800.00	7.12	274.53	3,775.90	31.79	-400.88	14,365,158.50	901,528.58	39° 31' 36.206 N	107° 37' 12.827 W
3,900.00	7.12	274.53	3,875.13	32.77	-413.24	14,365,159.48	901,516.22	39° 31' 36.212 N	107° 37' 12.985 W
4,000.00	7.12	274.53	3,974.36	33.75	-425.60	14,365,160.46	901,503.86	39° 31' 36.218 N	107° 37' 13.143 W
4,100.00	7.12	274.53	4,073.59	34.73	-437.95	14,365,161.44	901,491.51	39° 31' 36.224 N	107° 37' 13.301 W
4,200.00	7.12	274.53	4,172.81	35.71	-450.31	14,365,162.42	901,479.15	39° 31' 36.230 N	107° 37' 13.459 W
4,300.00	7.12	274.53	4,272.04	36.69	-462.66	14,365,163.40	901,466.80	39° 31' 36.237 N	107° 37' 13.617 W
4,313.83	7.12	274.53	4,285.77	36.83	-464.37	14,365,163.54	901,465.09	39° 31' 36.237 N	107° 37' 13.638 W
START DROP @ 4314' MD (4286' TVD) (1 DEG/100')									

Planning Report - Geographic

Database:	EDMDB	Local Co-ordinate Reference:	Well VALLEY FARMS I-9 (111102) - Slot I-9
Company:	ANTERO RESOURCES	TVD Reference:	RKB @ 5674.00ft (RKB)
Project:	VALLEY FARMS I PAD	MD Reference:	RKB @ 5674.00ft (RKB)
Site:	FRONTIER 12	North Reference:	Grid
Well:	VALLEY FARMS I-9 (111102)	Survey Calculation Method:	Minimum Curvature
Wellbore:	ANTERO VALLEY FARMS I-9		
Design:	ANTERO VALLEY FARMS I-9 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
4,400.00	6.26	274.53	4,371.35	37.62	-474.38	14,365,164.33	901,455.08	39° 31' 36.242 N	107° 37' 13.766 W
4,500.00	5.26	274.53	4,470.84	38.42	-484.38	14,365,165.13	901,445.08	39° 31' 36.247 N	107° 37' 13.894 W
4,600.00	4.26	274.53	4,570.50	39.07	-492.65	14,365,165.78	901,436.81	39° 31' 36.251 N	107° 37' 14.000 W
4,700.00	3.26	274.53	4,670.28	39.59	-499.18	14,365,166.30	901,430.28	39° 31' 36.255 N	107° 37' 14.083 W
4,800.00	2.26	274.53	4,770.16	39.97	-503.98	14,365,166.68	901,425.48	39° 31' 36.257 N	107° 37' 14.145 W
4,900.00	1.26	274.53	4,870.12	40.21	-507.04	14,365,166.92	901,422.42	39° 31' 36.259 N	107° 37' 14.184 W
5,000.00	0.26	274.53	4,970.11	40.32	-508.36	14,365,167.03	901,421.10	39° 31' 36.259 N	107° 37' 14.201 W
5,023.89	0.02	274.53	4,994.00	40.32	-508.42	14,365,167.03	901,421.04	39° 31' 36.259 N	107° 37' 14.202 W
TOP GAS									
5,025.83	0.00	0.00	4,995.94	40.32	-508.42	14,365,167.03	901,421.04	39° 31' 36.259 N	107° 37' 14.202 W
END OF DROP @ 5026' MD (4996' TVD)									
5,100.00	0.00	0.00	5,070.11	40.32	-508.42	14,365,167.03	901,421.04	39° 31' 36.259 N	107° 37' 14.202 W
5,200.00	0.00	0.00	5,170.11	40.32	-508.42	14,365,167.03	901,421.04	39° 31' 36.259 N	107° 37' 14.202 W
5,300.00	0.00	0.00	5,270.11	40.32	-508.42	14,365,167.03	901,421.04	39° 31' 36.259 N	107° 37' 14.202 W
5,400.00	0.00	0.00	5,370.11	40.32	-508.42	14,365,167.03	901,421.04	39° 31' 36.259 N	107° 37' 14.202 W
5,500.00	0.00	0.00	5,470.11	40.32	-508.42	14,365,167.03	901,421.04	39° 31' 36.259 N	107° 37' 14.202 W
5,600.00	0.00	0.00	5,570.11	40.32	-508.42	14,365,167.03	901,421.04	39° 31' 36.259 N	107° 37' 14.202 W
5,700.00	0.00	0.00	5,670.11	40.32	-508.42	14,365,167.03	901,421.04	39° 31' 36.259 N	107° 37' 14.202 W
5,800.00	0.00	0.00	5,770.11	40.32	-508.42	14,365,167.03	901,421.04	39° 31' 36.259 N	107° 37' 14.202 W
5,900.00	0.00	0.00	5,870.11	40.32	-508.42	14,365,167.03	901,421.04	39° 31' 36.259 N	107° 37' 14.202 W
5,923.89	0.00	0.00	5,894.00	40.32	-508.42	14,365,167.03	901,421.04	39° 31' 36.259 N	107° 37' 14.202 W
CAMEO									
6,000.00	0.00	0.00	5,970.11	40.32	-508.42	14,365,167.03	901,421.04	39° 31' 36.259 N	107° 37' 14.202 W
6,100.00	0.00	0.00	6,070.11	40.32	-508.42	14,365,167.03	901,421.04	39° 31' 36.259 N	107° 37' 14.202 W
6,200.00	0.00	0.00	6,170.11	40.32	-508.42	14,365,167.03	901,421.04	39° 31' 36.259 N	107° 37' 14.202 W
6,300.00	0.00	0.00	6,270.11	40.32	-508.42	14,365,167.03	901,421.04	39° 31' 36.259 N	107° 37' 14.202 W
6,400.00	0.00	0.00	6,370.11	40.32	-508.42	14,365,167.03	901,421.04	39° 31' 36.259 N	107° 37' 14.202 W
6,500.00	0.00	0.00	6,470.11	40.32	-508.42	14,365,167.03	901,421.04	39° 31' 36.259 N	107° 37' 14.202 W
6,600.00	0.00	0.00	6,570.11	40.32	-508.42	14,365,167.03	901,421.04	39° 31' 36.259 N	107° 37' 14.202 W
6,700.00	0.00	0.00	6,670.11	40.32	-508.42	14,365,167.03	901,421.04	39° 31' 36.259 N	107° 37' 14.202 W
6,800.00	0.00	0.00	6,770.11	40.32	-508.42	14,365,167.03	901,421.04	39° 31' 36.259 N	107° 37' 14.202 W
6,900.00	0.00	0.00	6,870.11	40.32	-508.42	14,365,167.03	901,421.04	39° 31' 36.259 N	107° 37' 14.202 W
7,000.00	0.00	0.00	6,970.11	40.32	-508.42	14,365,167.03	901,421.04	39° 31' 36.259 N	107° 37' 14.202 W
7,023.89	0.00	0.00	6,994.00	40.32	-508.42	14,365,167.03	901,421.04	39° 31' 36.259 N	107° 37' 14.202 W
ROLLINS									
7,100.00	0.00	0.00	7,070.11	40.32	-508.42	14,365,167.03	901,421.04	39° 31' 36.259 N	107° 37' 14.202 W
7,173.87	0.00	0.00	7,143.98	40.32	-508.42	14,365,167.03	901,421.04	39° 31' 36.259 N	107° 37' 14.202 W
PROPOSED TD @ 7174' MD (7144' TVD)									
7,173.89	0.00	0.00	7,144.00	40.32	-508.42	14,365,167.03	901,421.04	39° 31' 36.259 N	107° 37' 14.202 W

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 I-9 - plan hits target - Circle (radius 25.00)		360.00	4,994.00	40.32	-508.42	14,365,167.03	901,421.04	39° 31' 36.259 N	107° 37' 14.202 W
TD I-9 - plan hits target - Circle (radius 25.00)	0.00	0.00	7,144.00	40.32	-508.42	14,365,167.03	901,421.04	39° 31' 36.259 N	107° 37' 14.202 W

Planning Report - Geographic

Database:	EDMDB	Local Co-ordinate Reference:	Well VALLEY FARMS I-9 (111102) - Slot I-9
Company:	ANTERO RESOURCES	TVD Reference:	RKB @ 5674.00ft (RKB)
Project:	VALLEY FARMS I PAD	MD Reference:	RKB @ 5674.00ft (RKB)
Site:	FRONTIER 12	North Reference:	Grid
Well:	VALLEY FARMS I-9 (111102)	Survey Calculation Method:	Minimum Curvature
Wellbore:	ANTERO VALLEY FARMS I-9		
Design:	ANTERO VALLEY FARMS I-9 P01		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,002.53	1,000.00	CASING @ 1000' TVD	8.62	12.25	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,515.91	3,494.00	MESAVERDE		0.00	
5,023.89	4,994.00	TOP GAS		0.00	
5,923.89	5,894.00	CAMEO		0.00	
7,023.89	6,994.00	ROLLINS		0.00	

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	KOP @ 200' (1 DEG/100')	
901.00	899.25	3.39	-42.70	END OF BUILD @ 901' MD (910' TVD) (7.12 DEG INC)	
4,313.83	4,285.77	36.83	-464.37	START DROP @ 4314' MD (4286' TVD) (1 DEG/100')	
5,025.83	4,995.94	40.32	-508.42	END OF DROP @ 5026' MD (4996' TVD)	
7,173.87	7,143.98	40.32	-508.42	PROPOSED TD @ 7174 ' MD (7144' TVD)	