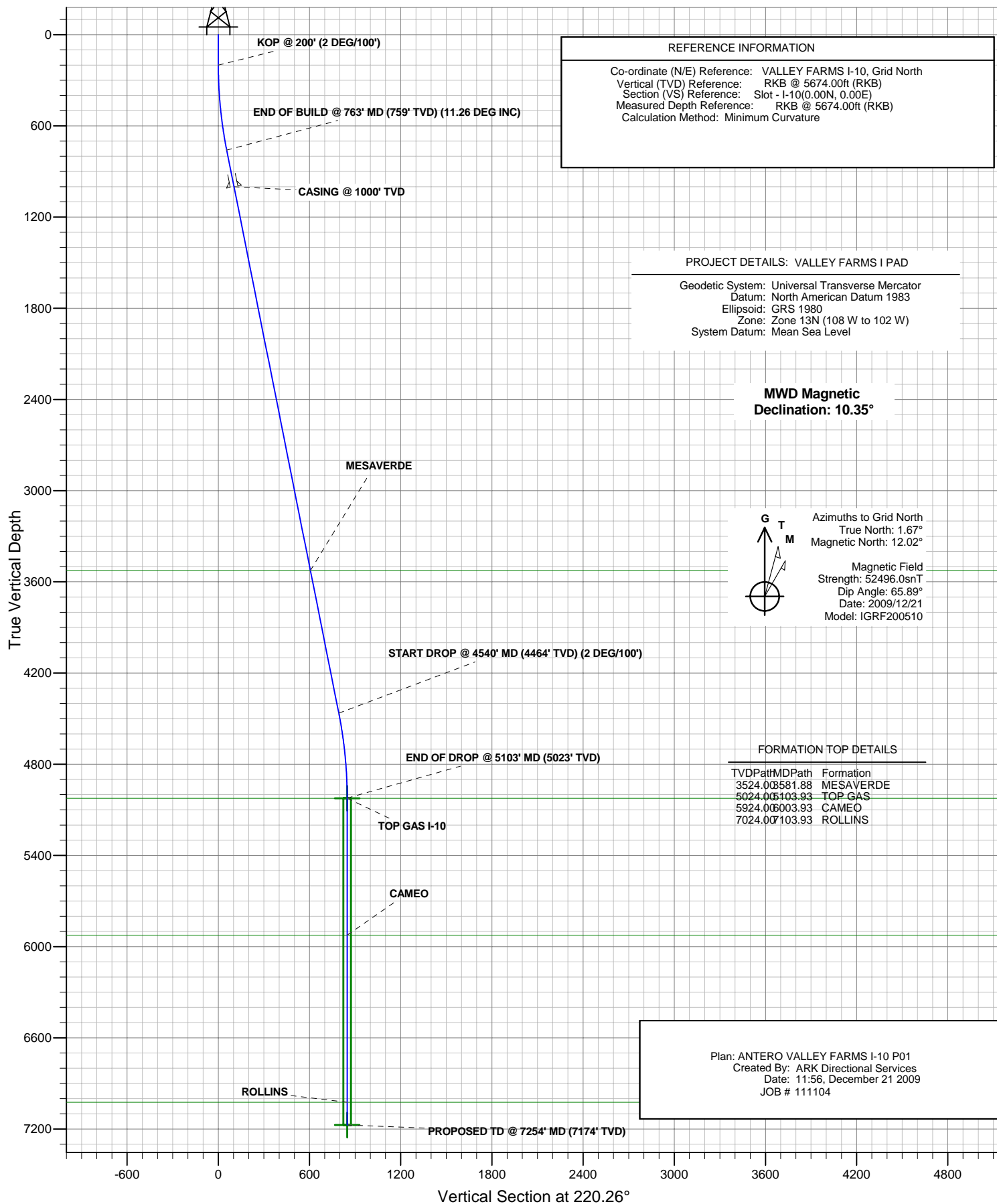




ANTERO RESOURCES

ANTERO VALLEY FARMS I-10



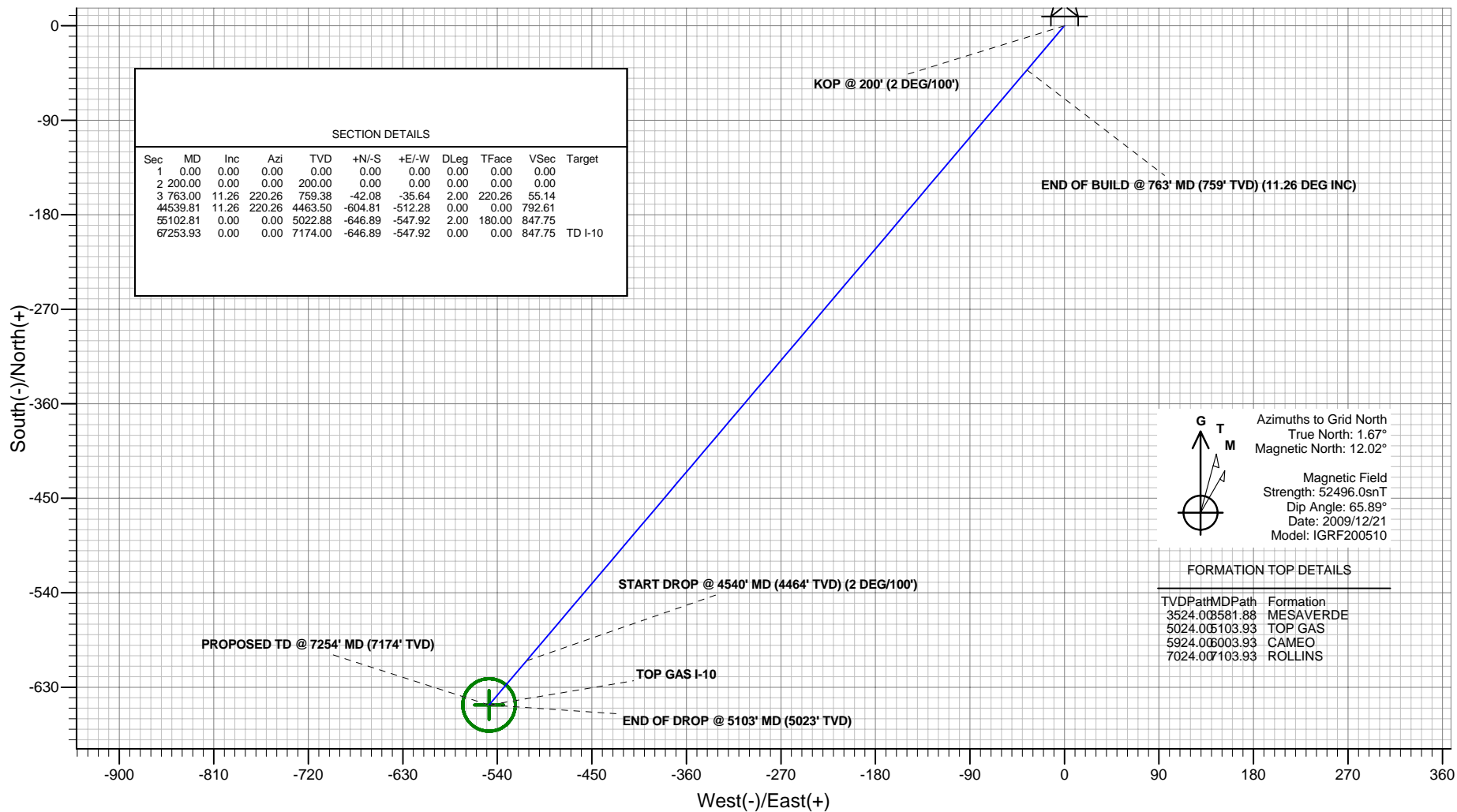


ANTERO RESOURCES

Project: VALLEY FARMS I PAD
Site: FRONTIER 12
Well: VALLEY FARMS I-10 (111104)
Wellbore: ANTERO VALLEY FARMS I-10
Design: ANTERO VALLEY FARMS I-10 P01
JOB # 111104



PLAN VIEW



Plan: ANTERO VALLEY FARMS I-10 P01
Created By: ARK Directional Services
Date: 11:58, 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-10, Grid North
Vertical (TVD) Reference: RKB @ 5674.00ft (RKB)
Section (VS) Reference: Slot - I-10(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-10

Plan: ANTERO VALLEY FARMS I-10 P01

Standard Planning Report - Geographic

21 December, 2009

Planning Report - Geographic

Database:	EDMDB	Local Co-ordinate Reference:	Well VALLEY FARMS I-10 (111104) - Slot I-10
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-10 (111104)	Survey Calculation Method:	Minimum Curvature
Wellbore:	ANTERO VALLEY FARMS I-10		
Design:	ANTERO VALLEY FARMS I-10 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-10 (111104) - Slot I-10					
Well Position	+N/-S	-4.20 ft	Northing:	14,365,109.01 ft	Latitude:	39° 31' 35.838 N
	+E/-W	-29.70 ft	Easting:	901,947.11 ft	Longitude:	107° 37' 7.471 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,650.00 ft

Wellbore	ANTERO VALLEY FARMS I-10				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	2009/12/21	10.35	65.89	52,496

Design	ANTERO VALLEY FARMS I-10 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	220.26

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	
763.00	11.26	220.26	759.38	-42.08	-35.64	2.00	2.00	0.00	220.26	
4,539.81	11.26	220.26	4,463.50	-604.81	-512.28	0.00	0.00	0.00	0.00	
5,102.81	0.00	0.00	5,022.88	-646.89	-547.92	2.00	-2.00	0.00	180.00	
7,253.93	0.00	0.00	7,174.00	-646.89	-547.92	0.00	0.00	0.00	0.00	TD I-10

Planning Report - Geographic

Database:	EDMDB	Local Co-ordinate Reference:	Well VALLEY FARMS I-10 (111104) - Slot I-10
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-10 (111104)	Survey Calculation Method:	Minimum Curvature
Wellbore:	ANTERO VALLEY FARMS I-10		
Design:	ANTERO VALLEY FARMS I-10 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	14,365,109.01	901,947.11	39° 31' 35.838 N	107° 37' 7.471 W	
100.00	0.00	0.00	100.00	0.00	0.00	14,365,109.01	901,947.11	39° 31' 35.838 N	107° 37' 7.471 W	
200.00	0.00	0.00	200.00	0.00	0.00	14,365,109.01	901,947.11	39° 31' 35.838 N	107° 37' 7.471 W	
KOP @ 200' (2 DEG/100')										
300.00	2.00	220.26	299.98	-1.33	-1.13	14,365,107.68	901,945.98	39° 31' 35.824 N	107° 37' 7.485 W	
400.00	4.00	220.26	399.84	-5.33	-4.51	14,365,103.68	901,942.60	39° 31' 35.784 N	107° 37' 7.526 W	
500.00	6.00	220.26	499.45	-11.98	-10.14	14,365,097.03	901,936.97	39° 31' 35.716 N	107° 37' 7.596 W	
600.00	8.00	220.26	598.70	-21.27	-18.02	14,365,087.74	901,929.09	39° 31' 35.622 N	107° 37' 7.693 W	
700.00	10.00	220.26	697.47	-33.21	-28.13	14,365,075.80	901,918.98	39° 31' 35.501 N	107° 37' 7.817 W	
763.00	11.26	220.26	759.38	-42.08	-35.64	14,365,066.93	901,911.47	39° 31' 35.412 N	107° 37' 7.910 W	
END OF BUILD @ 763' MD (759' TVD) (11.26 DEG INC)										
800.00	11.26	220.26	795.67	-47.59	-40.31	14,365,061.42	901,906.80	39° 31' 35.356 N	107° 37' 7.967 W	
900.00	11.26	220.26	893.75	-62.49	-52.93	14,365,046.52	901,894.18	39° 31' 35.205 N	107° 37' 8.122 W	
1,000.00	11.26	220.26	991.82	-77.39	-65.55	14,365,031.62	901,881.56	39° 31' 35.054 N	107° 37' 8.278 W	
1,008.34	11.26	220.26	1,000.00	-78.63	-66.60	14,365,030.38	901,880.51	39° 31' 35.042 N	107° 37' 8.291 W	
CASING @ 1000' TVD										
1,100.00	11.26	220.26	1,089.90	-92.29	-78.17	14,365,016.72	901,868.94	39° 31' 34.904 N	107° 37' 8.433 W	
1,200.00	11.26	220.26	1,187.97	-107.19	-90.79	14,365,001.82	901,856.32	39° 31' 34.753 N	107° 37' 8.589 W	
1,300.00	11.26	220.26	1,286.05	-122.09	-103.41	14,364,986.92	901,843.70	39° 31' 34.602 N	107° 37' 8.744 W	
1,400.00	11.26	220.26	1,384.12	-136.99	-116.03	14,364,972.02	901,831.08	39° 31' 34.451 N	107° 37' 8.900 W	
1,500.00	11.26	220.26	1,482.20	-151.89	-128.65	14,364,957.12	901,818.46	39° 31' 34.300 N	107° 37' 9.055 W	
1,600.00	11.26	220.26	1,580.27	-166.79	-141.27	14,364,942.22	901,805.84	39° 31' 34.150 N	107° 37' 9.210 W	
1,700.00	11.26	220.26	1,678.35	-181.69	-153.89	14,364,927.32	901,793.22	39° 31' 33.999 N	107° 37' 9.366 W	
1,800.00	11.26	220.26	1,776.42	-196.59	-166.51	14,364,912.42	901,780.60	39° 31' 33.848 N	107° 37' 9.521 W	
1,900.00	11.26	220.26	1,874.50	-211.49	-179.13	14,364,897.52	901,767.98	39° 31' 33.697 N	107° 37' 9.677 W	
2,000.00	11.26	220.26	1,972.57	-226.39	-191.75	14,364,882.62	901,755.36	39° 31' 33.546 N	107° 37' 9.832 W	
2,100.00	11.26	220.26	2,070.65	-241.29	-204.37	14,364,867.72	901,742.74	39° 31' 33.396 N	107° 37' 9.988 W	
2,200.00	11.26	220.26	2,168.72	-256.19	-216.99	14,364,852.82	901,730.12	39° 31' 33.245 N	107° 37' 10.143 W	
2,300.00	11.26	220.26	2,266.80	-271.09	-229.61	14,364,837.92	901,717.50	39° 31' 33.094 N	107° 37' 10.298 W	
2,400.00	11.26	220.26	2,364.87	-285.99	-242.23	14,364,823.02	901,704.88	39° 31' 32.943 N	107° 37' 10.454 W	
2,500.00	11.26	220.26	2,462.95	-300.89	-254.85	14,364,808.12	901,692.26	39° 31' 32.792 N	107° 37' 10.609 W	
2,600.00	11.26	220.26	2,561.02	-315.79	-267.47	14,364,793.22	901,679.64	39° 31' 32.642 N	107° 37' 10.765 W	
2,700.00	11.26	220.26	2,659.10	-330.69	-280.09	14,364,778.32	901,667.02	39° 31' 32.491 N	107° 37' 10.920 W	
2,800.00	11.26	220.26	2,757.17	-345.59	-292.71	14,364,763.42	901,654.40	39° 31' 32.340 N	107° 37' 11.075 W	
2,900.00	11.26	220.26	2,855.25	-360.49	-305.33	14,364,748.53	901,641.78	39° 31' 32.189 N	107° 37' 11.231 W	
3,000.00	11.26	220.26	2,953.32	-375.38	-317.95	14,364,733.63	901,629.16	39° 31' 32.039 N	107° 37' 11.386 W	
3,100.00	11.26	220.26	3,051.40	-390.28	-330.57	14,364,718.73	901,616.54	39° 31' 31.888 N	107° 37' 11.542 W	
3,200.00	11.26	220.26	3,149.47	-405.18	-343.19	14,364,703.83	901,603.92	39° 31' 31.737 N	107° 37' 11.697 W	
3,300.00	11.26	220.26	3,247.55	-420.08	-355.81	14,364,688.93	901,591.30	39° 31' 31.586 N	107° 37' 11.853 W	
3,400.00	11.26	220.26	3,345.62	-434.98	-368.43	14,364,674.03	901,578.68	39° 31' 31.435 N	107° 37' 12.008 W	
3,500.00	11.26	220.26	3,443.70	-449.88	-381.05	14,364,659.13	901,566.06	39° 31' 31.285 N	107° 37' 12.163 W	
3,581.88	11.26	220.26	3,524.00	-462.08	-391.39	14,364,646.93	901,555.73	39° 31' 31.161 N	107° 37' 12.291 W	
MESAVERDE										
3,600.00	11.26	220.26	3,541.77	-464.78	-393.67	14,364,644.23	901,553.44	39° 31' 31.134 N	107° 37' 12.319 W	
3,700.00	11.26	220.26	3,639.85	-479.68	-406.30	14,364,629.33	901,540.82	39° 31' 30.983 N	107° 37' 12.474 W	
3,800.00	11.26	220.26	3,737.92	-494.58	-418.92	14,364,614.43	901,528.20	39° 31' 30.832 N	107° 37' 12.630 W	
3,900.00	11.26	220.26	3,836.00	-509.48	-431.54	14,364,599.53	901,515.58	39° 31' 30.681 N	107° 37' 12.785 W	
4,000.00	11.26	220.26	3,934.07	-524.38	-444.16	14,364,584.63	901,502.96	39° 31' 30.531 N	107° 37' 12.940 W	
4,100.00	11.26	220.26	4,032.15	-539.28	-456.78	14,364,569.73	901,490.34	39° 31' 30.380 N	107° 37' 13.096 W	
4,200.00	11.26	220.26	4,130.22	-554.18	-469.40	14,364,554.83	901,477.72	39° 31' 30.229 N	107° 37' 13.251 W	
4,300.00	11.26	220.26	4,228.30	-569.08	-482.02	14,364,539.93	901,465.10	39° 31' 30.078 N	107° 37' 13.407 W	
4,400.00	11.26	220.26	4,326.38	-583.98	-494.64	14,364,525.03	901,452.48	39° 31' 29.927 N	107° 37' 13.562 W	
4,500.00	11.26	220.26	4,424.45	-598.88	-507.26	14,364,510.13	901,439.86	39° 31' 29.777 N	107° 37' 13.718 W	

Planning Report - Geographic

Database:	EDMDB	Local Co-ordinate Reference:	Well VALLEY FARMS I-10 (111104) - Slot I-10
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-10 (111104)	Survey Calculation Method:	Minimum Curvature
Wellbore:	ANTERO VALLEY FARMS I-10		
Design:	ANTERO VALLEY FARMS I-10 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	
4,539.81	11.26	220.26	4,463.49	-604.81	-512.28	14,364,504.20	901,434.83	39° 31' 29.717 N	107° 37' 13.779 W	
START DROP @ 4540' MD (4464' TVD) (2 DEG/100')										
4,600.00	10.06	220.26	4,522.64	-613.31	-519.48	14,364,495.70	901,427.64	39° 31' 29.631 N	107° 37' 13.868 W	
4,700.00	8.06	220.26	4,621.39	-625.32	-529.65	14,364,483.69	901,417.46	39° 31' 29.509 N	107° 37' 13.993 W	
4,800.00	6.06	220.26	4,720.63	-634.69	-537.59	14,364,474.32	901,409.53	39° 31' 29.414 N	107° 37' 14.091 W	
4,900.00	4.06	220.26	4,820.24	-641.42	-543.28	14,364,467.60	901,403.83	39° 31' 29.346 N	107° 37' 14.161 W	
5,000.00	2.06	220.26	4,920.09	-645.48	-546.73	14,364,463.53	901,400.38	39° 31' 29.305 N	107° 37' 14.204 W	
5,102.81	0.00	0.00	5,022.88	-646.89	-547.92	14,364,462.12	901,399.19	39° 31' 29.291 N	107° 37' 14.218 W	
END OF DROP @ 5103' MD (5023' TVD)										
5,103.93	0.00	0.00	5,024.00	-646.89	-547.92	14,364,462.12	901,399.19	39° 31' 29.291 N	107° 37' 14.218 W	
TOP GAS										
5,200.00	0.00	0.00	5,120.07	-646.89	-547.92	14,364,462.12	901,399.19	39° 31' 29.291 N	107° 37' 14.218 W	
5,300.00	0.00	0.00	5,220.07	-646.89	-547.92	14,364,462.12	901,399.19	39° 31' 29.291 N	107° 37' 14.218 W	
5,400.00	0.00	0.00	5,320.07	-646.89	-547.92	14,364,462.12	901,399.19	39° 31' 29.291 N	107° 37' 14.218 W	
5,500.00	0.00	0.00	5,420.07	-646.89	-547.92	14,364,462.12	901,399.19	39° 31' 29.291 N	107° 37' 14.218 W	
5,600.00	0.00	0.00	5,520.07	-646.89	-547.92	14,364,462.12	901,399.19	39° 31' 29.291 N	107° 37' 14.218 W	
5,700.00	0.00	0.00	5,620.07	-646.89	-547.92	14,364,462.12	901,399.19	39° 31' 29.291 N	107° 37' 14.218 W	
5,800.00	0.00	0.00	5,720.07	-646.89	-547.92	14,364,462.12	901,399.19	39° 31' 29.291 N	107° 37' 14.218 W	
5,900.00	0.00	0.00	5,820.07	-646.89	-547.92	14,364,462.12	901,399.19	39° 31' 29.291 N	107° 37' 14.218 W	
6,000.00	0.00	0.00	5,920.07	-646.89	-547.92	14,364,462.12	901,399.19	39° 31' 29.291 N	107° 37' 14.218 W	
6,003.93	0.00	0.00	5,924.00	-646.89	-547.92	14,364,462.12	901,399.19	39° 31' 29.291 N	107° 37' 14.218 W	
CAMEO										
6,100.00	0.00	0.00	6,020.07	-646.89	-547.92	14,364,462.12	901,399.19	39° 31' 29.291 N	107° 37' 14.218 W	
6,200.00	0.00	0.00	6,120.07	-646.89	-547.92	14,364,462.12	901,399.19	39° 31' 29.291 N	107° 37' 14.218 W	
6,300.00	0.00	0.00	6,220.07	-646.89	-547.92	14,364,462.12	901,399.19	39° 31' 29.291 N	107° 37' 14.218 W	
6,400.00	0.00	0.00	6,320.07	-646.89	-547.92	14,364,462.12	901,399.19	39° 31' 29.291 N	107° 37' 14.218 W	
6,500.00	0.00	0.00	6,420.07	-646.89	-547.92	14,364,462.12	901,399.19	39° 31' 29.291 N	107° 37' 14.218 W	
6,600.00	0.00	0.00	6,520.07	-646.89	-547.92	14,364,462.12	901,399.19	39° 31' 29.291 N	107° 37' 14.218 W	
6,700.00	0.00	0.00	6,620.07	-646.89	-547.92	14,364,462.12	901,399.19	39° 31' 29.291 N	107° 37' 14.218 W	
6,800.00	0.00	0.00	6,720.07	-646.89	-547.92	14,364,462.12	901,399.19	39° 31' 29.291 N	107° 37' 14.218 W	
6,900.00	0.00	0.00	6,820.07	-646.89	-547.92	14,364,462.12	901,399.19	39° 31' 29.291 N	107° 37' 14.218 W	
7,000.00	0.00	0.00	6,920.07	-646.89	-547.92	14,364,462.12	901,399.19	39° 31' 29.291 N	107° 37' 14.218 W	
7,100.00	0.00	0.00	7,020.07	-646.89	-547.92	14,364,462.12	901,399.19	39° 31' 29.291 N	107° 37' 14.218 W	
7,103.93	0.00	0.00	7,024.00	-646.89	-547.92	14,364,462.12	901,399.19	39° 31' 29.291 N	107° 37' 14.218 W	
ROLLINS										
7,200.00	0.00	0.00	7,120.07	-646.89	-547.92	14,364,462.12	901,399.19	39° 31' 29.291 N	107° 37' 14.218 W	
7,253.91	0.00	0.00	7,173.98	-646.89	-547.92	14,364,462.12	901,399.19	39° 31' 29.291 N	107° 37' 14.218 W	
PROPOSED TD @ 7254' MD (7174' TVD)										
7,253.93	0.00	0.00	7,174.00	-646.89	-547.92	14,364,462.12	901,399.19	39° 31' 29.291 N	107° 37' 14.218 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-10 - plan hits target - Circle (radius 25.00)		360.00	5,024.00	-646.89	-547.92	14,364,462.12	901,399.19	39° 31' 29.291 N	107° 37' 14.218 W	
TD I-10 - plan hits target - Circle (radius 25.00)	0.00	360.00	7,174.00	-646.89	-547.92	14,364,462.12	901,399.19	39° 31' 29.291 N	107° 37' 14.218 W	

Planning Report - Geographic

Database:	EDMDB	Local Co-ordinate Reference:	Well VALLEY FARMS I-10 (111104) - Slot I-10
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-10 (111104)	Survey Calculation Method:	Minimum Curvature
Wellbore:	ANTERO VALLEY FARMS I-10		
Design:	ANTERO VALLEY FARMS I-10 P01		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,008.34	1,000.00	CASING @ 1000' TVD	8.62	12.25	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,581.88	3,524.00	MESAVERDE		0.00	
5,103.93	5,024.00	TOP GAS		0.00	
6,003.93	5,924.00	CAMEO		0.00	
7,103.93	7,024.00	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' (2 DEG/100')	
763.00	759.38	-42.08	-35.64	END OF BUILD @ 763' MD (759' TVD) (11.26 DEG INC)	
4,539.81	4,463.49	-604.81	-512.28	START DROP @ 4540' MD (4464' TVD) (2 DEG/100')	
5,102.81	5,022.88	-646.89	-547.92	END OF DROP @ 5103' MD (5023' TVD)	
7,253.91	7,173.98	-646.89	-547.92	PROPOSED TD @ 7254' MD (7174' TVD)	