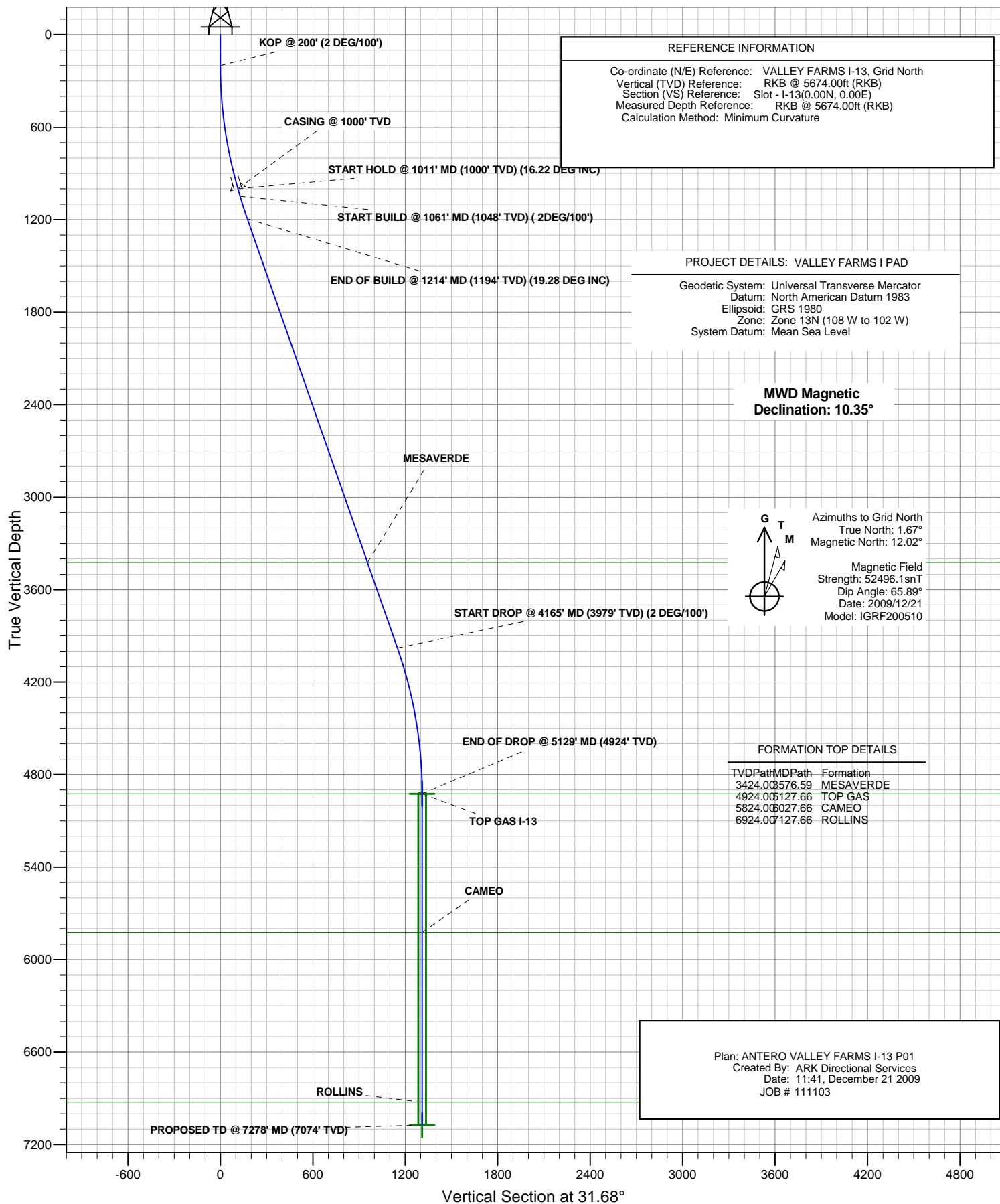




ANTERO RESOURCES

ANTERO VALLEY FARMS I-13



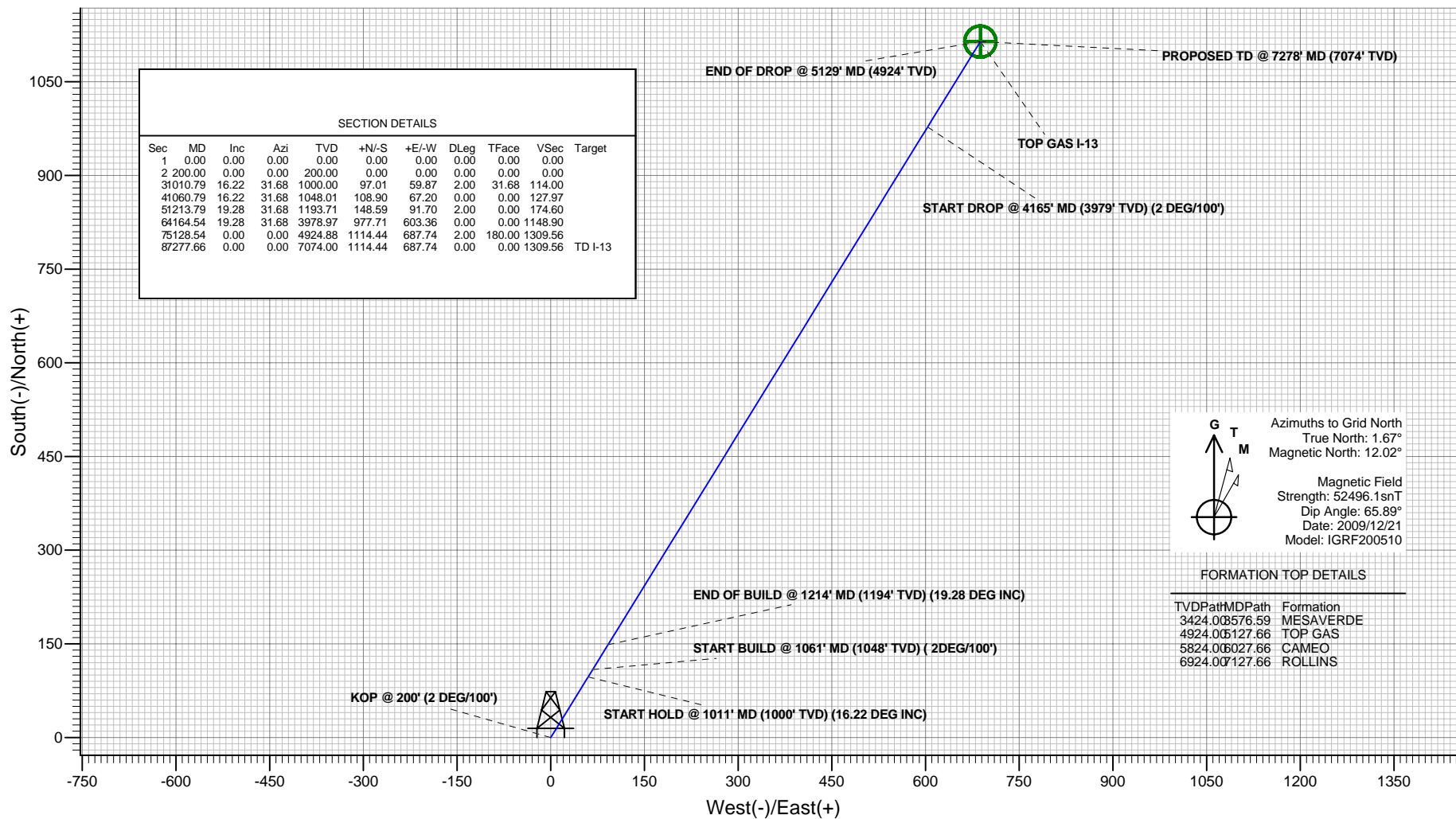


ANTERO RESOURCES

Project: VALLEY FARMS I PAD
Site: FRONTIER 12
Well: VALLEY FARMS I-13 (111103)
Wellbore: ANTERO VALLEY FARMS I-13
Design: ANTERO VALLEY FARMS I-13 P01
JOB # 111103



PLAN VIEW



Plan: ANTERO VALLEY FARMS I-13 P01
Created By: ARK Directional Services
Date: 11:44, 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-13, Grid North
Vertical (TVD) Reference: RKB @ 5674.00ft (RKB)
Section (VS) Reference: Slot - I-13(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-13

Plan: ANTERO VALLEY FARMS I-13 P01

Standard Planning Report - Geographic

21 December, 2009

Planning Report - Geographic

Database:	EDMDB	Local Co-ordinate Reference:	Well VALLEY FARMS I-13 (111103) - Slot I-13
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-13 (111103)	Survey Calculation Method:	Minimum Curvature
Wellbore:	ANTERO VALLEY FARMS I-13		
Design:	ANTERO VALLEY FARMS I-13 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-13 (111103) - Slot I-13					
Well Position	+N/-S	21.90 ft	Northing:	14,365,135.12 ft	Latitude:	39° 31' 36.107 N
	+E/-W	12.05 ft	Easting:	901,988.86 ft	Longitude:	107° 37' 6.948 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,650.00 ft

Wellbore	ANTERO VALLEY FARMS I-13				
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-13 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	31.68	

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	
1,010.79	16.22	31.68	1,000.00	97.01	59.87	2.00	2.00	0.00	31.68	
1,060.79	16.22	31.68	1,048.01	108.90	67.20	0.00	0.00	0.00	0.00	
1,213.79	19.28	31.68	1,193.71	148.59	91.70	2.00	2.00	0.00	0.00	
4,164.54	19.28	31.68	3,978.97	977.71	603.36	0.00	0.00	0.00	0.00	
5,128.54	0.00	0.00	4,924.88	1,114.44	687.74	2.00	-2.00	0.00	180.00	
7,277.66	0.00	0.00	7,074.00	1,114.44	687.74	0.00	0.00	0.00	0.00	TD I-13

Planning Report - Geographic

Database:	EDMDB	Local Co-ordinate Reference:	Well VALLEY FARMS I-13 (111103) - Slot I-13
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-13 (111103)	Survey Calculation Method:	Minimum Curvature
Wellbore:	ANTERO VALLEY FARMS I-13		
Design:	ANTERO VALLEY FARMS I-13 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	14,365,135.12	901,988.86	39° 31' 36.107 N	107° 37' 6.948 W	
100.00	0.00	0.00	100.00	0.00	0.00	14,365,135.12	901,988.86	39° 31' 36.107 N	107° 37' 6.948 W	
200.00	0.00	0.00	200.00	0.00	0.00	14,365,135.12	901,988.86	39° 31' 36.107 N	107° 37' 6.948 W	
KOP @ 200' (2 DEG/100')										
300.00	2.00	31.68	299.98	1.49	0.92	14,365,136.60	901,989.78	39° 31' 36.122 N	107° 37' 6.937 W	
400.00	4.00	31.68	399.84	5.94	3.67	14,365,141.06	901,992.53	39° 31' 36.167 N	107° 37' 6.903 W	
500.00	6.00	31.68	499.45	13.36	8.24	14,365,148.47	901,997.11	39° 31' 36.242 N	107° 37' 6.848 W	
600.00	8.00	31.68	598.70	23.73	14.65	14,365,158.85	902,003.51	39° 31' 36.346 N	107° 37' 6.770 W	
700.00	10.00	31.68	697.46	37.05	22.86	14,365,172.16	902,011.73	39° 31' 36.480 N	107° 37' 6.670 W	
800.00	12.00	31.68	795.62	53.29	32.89	14,365,188.40	902,021.75	39° 31' 36.643 N	107° 37' 6.548 W	
900.00	14.00	31.68	893.05	72.44	44.70	14,365,207.55	902,033.57	39° 31' 36.836 N	107° 37' 6.405 W	
1,000.00	16.00	31.68	989.64	94.47	58.30	14,365,229.58	902,047.16	39° 31' 37.057 N	107° 37' 6.239 W	
1,010.79	16.22	31.68	1,000.00	97.01	59.87	14,365,232.13	902,048.73	39° 31' 37.083 N	107° 37' 6.220 W	
START HOLD @ 1011' MD (1000' TVD) (16.22 DEG INC) - CASING @ 1000' TVD										
1,060.79	16.22	31.68	1,048.01	108.90	67.20	14,365,244.01	902,056.07	39° 31' 37.202 N	107° 37' 6.131 W	
START BUILD @ 1061' MD (1048' TVD) (2DEG/100')										
1,100.00	17.00	31.68	1,085.59	118.44	73.09	14,365,253.55	902,061.95	39° 31' 37.298 N	107° 37' 6.060 W	
1,200.00	19.00	31.68	1,180.69	144.74	89.32	14,365,279.86	902,078.19	39° 31' 37.563 N	107° 37' 5.862 W	
1,213.79	19.28	31.68	1,193.71	148.59	91.70	14,365,283.70	902,080.56	39° 31' 37.601 N	107° 37' 5.834 W	
END OF BUILD @ 1214' MD (1194' TVD) (19.28 DEG INC)										
1,300.00	19.28	31.68	1,275.09	172.81	106.65	14,365,307.93	902,095.51	39° 31' 37.845 N	107° 37' 5.652 W	
1,400.00	19.28	31.68	1,369.48	200.91	123.99	14,365,336.03	902,112.85	39° 31' 38.127 N	107° 37' 5.441 W	
1,500.00	19.28	31.68	1,463.87	229.01	141.33	14,365,364.13	902,130.19	39° 31' 38.410 N	107° 37' 5.230 W	
1,600.00	19.28	31.68	1,558.26	257.11	158.67	14,365,392.22	902,147.53	39° 31' 38.692 N	107° 37' 5.020 W	
1,700.00	19.28	31.68	1,652.65	285.21	176.01	14,365,420.32	902,164.87	39° 31' 38.975 N	107° 37' 4.809 W	
1,800.00	19.28	31.68	1,747.05	313.31	193.35	14,365,448.42	902,182.21	39° 31' 39.257 N	107° 37' 4.598 W	
1,900.00	19.28	31.68	1,841.44	341.40	210.69	14,365,476.52	902,199.55	39° 31' 39.540 N	107° 37' 4.388 W	
2,000.00	19.28	31.68	1,935.83	369.50	228.03	14,365,504.62	902,216.89	39° 31' 39.822 N	107° 37' 4.177 W	
2,100.00	19.28	31.68	2,030.22	397.60	245.37	14,365,532.72	902,234.23	39° 31' 40.105 N	107° 37' 3.966 W	
2,200.00	19.28	31.68	2,124.61	425.70	262.71	14,365,560.82	902,251.57	39° 31' 40.387 N	107° 37' 3.755 W	
2,300.00	19.28	31.68	2,219.00	453.80	280.05	14,365,588.92	902,268.91	39° 31' 40.670 N	107° 37' 3.545 W	
2,400.00	19.28	31.68	2,313.40	481.90	297.39	14,365,617.01	902,286.25	39° 31' 40.952 N	107° 37' 3.334 W	
2,500.00	19.28	31.68	2,407.79	510.00	314.73	14,365,645.11	902,303.59	39° 31' 41.235 N	107° 37' 3.123 W	
2,600.00	19.28	31.68	2,502.18	538.10	332.07	14,365,673.21	902,320.93	39° 31' 41.517 N	107° 37' 2.912 W	
2,700.00	19.28	31.68	2,596.57	566.20	349.41	14,365,701.31	902,338.27	39° 31' 41.800 N	107° 37' 2.702 W	
2,800.00	19.28	31.68	2,690.96	594.29	366.75	14,365,729.41	902,355.61	39° 31' 42.082 N	107° 37' 2.491 W	
2,900.00	19.28	31.68	2,785.35	622.39	384.09	14,365,757.51	902,372.95	39° 31' 42.365 N	107° 37' 2.280 W	
3,000.00	19.28	31.68	2,879.75	650.49	401.43	14,365,785.61	902,390.29	39° 31' 42.647 N	107° 37' 2.070 W	
3,100.00	19.28	31.68	2,974.14	678.59	418.77	14,365,813.71	902,407.63	39° 31' 42.930 N	107° 37' 1.859 W	
3,200.00	19.28	31.68	3,068.53	706.69	436.11	14,365,841.80	902,424.97	39° 31' 43.212 N	107° 37' 1.648 W	
3,300.00	19.28	31.68	3,162.92	734.79	453.45	14,365,869.90	902,442.31	39° 31' 43.495 N	107° 37' 1.437 W	
3,400.00	19.28	31.68	3,257.31	762.89	470.79	14,365,898.00	902,459.65	39° 31' 43.778 N	107° 37' 1.227 W	
3,500.00	19.28	31.68	3,351.70	790.99	488.13	14,365,926.10	902,476.99	39° 31' 44.060 N	107° 37' 1.016 W	
3,576.59	19.28	31.68	3,424.00	812.51	501.41	14,365,947.62	902,490.27	39° 31' 44.276 N	107° 37' 0.854 W	
MESAVERDE										
3,600.00	19.28	31.68	3,446.10	819.08	505.47	14,365,954.20	902,494.33	39° 31' 44.343 N	107° 37' 0.805 W	
3,700.00	19.28	31.68	3,540.49	847.18	522.81	14,365,982.30	902,511.67	39° 31' 44.625 N	107° 37' 0.594 W	
3,800.00	19.28	31.68	3,634.88	875.28	540.15	14,366,010.40	902,529.01	39° 31' 44.908 N	107° 37' 0.384 W	
3,900.00	19.28	31.68	3,729.27	903.38	557.49	14,366,038.49	902,546.35	39° 31' 45.190 N	107° 37' 0.173 W	
4,000.00	19.28	31.68	3,823.66	931.48	574.83	14,366,066.59	902,563.69	39° 31' 45.473 N	107° 36' 59.962 W	
4,100.00	19.28	31.68	3,918.05	959.58	592.17	14,366,094.69	902,581.03	39° 31' 45.755 N	107° 36' 59.751 W	
4,164.54	19.28	31.68	3,978.97	977.71	603.36	14,366,112.83	902,592.22	39° 31' 45.937 N	107° 36' 59.615 W	
START DROP @ 4165' MD (3979' TVD) (2 DEG/100')										

Planning Report - Geographic

Database:	EDMDB	Local Co-ordinate Reference:	Well VALLEY FARMS I-13 (111103) - Slot I-13
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-13 (111103)	Survey Calculation Method:	Minimum Curvature
Wellbore:	ANTERO VALLEY FARMS I-13		
Design:	ANTERO VALLEY FARMS I-13 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
4,200.00	18.57	31.68	4,012.52	987.50	609.40	14,366,122.61	902,598.26	39° 31' 46.036 N	107° 36' 59.542 W
4,300.00	16.57	31.68	4,107.85	1,013.19	625.25	14,366,148.30	902,614.12	39° 31' 46.294 N	107° 36' 59.349 W
4,400.00	14.57	31.68	4,204.17	1,036.03	639.35	14,366,171.15	902,628.21	39° 31' 46.524 N	107° 36' 59.178 W
4,500.00	12.57	31.68	4,301.37	1,056.00	651.67	14,366,191.11	902,640.53	39° 31' 46.724 N	107° 36' 59.028 W
4,600.00	10.57	31.68	4,399.34	1,073.07	662.20	14,366,208.18	902,651.07	39° 31' 46.896 N	107° 36' 58.900 W
4,700.00	8.57	31.68	4,497.94	1,087.22	670.94	14,366,222.33	902,659.80	39° 31' 47.038 N	107° 36' 58.794 W
4,800.00	6.57	31.68	4,597.06	1,098.43	677.85	14,366,233.54	902,666.72	39° 31' 47.151 N	107° 36' 58.710 W
4,900.00	4.57	31.68	4,696.59	1,106.69	682.95	14,366,241.80	902,671.81	39° 31' 47.234 N	107° 36' 58.648 W
5,000.00	2.57	31.68	4,796.39	1,111.99	686.22	14,366,247.10	902,675.08	39° 31' 47.287 N	107° 36' 58.608 W
5,100.00	0.57	31.68	4,896.34	1,114.32	687.66	14,366,249.43	902,676.52	39° 31' 47.311 N	107° 36' 58.591 W
5,127.66	0.02	31.68	4,924.00	1,114.44	687.74	14,366,249.55	902,676.60	39° 31' 47.312 N	107° 36' 58.590 W
TOP GAS									
5,128.54	0.00	0.00	4,924.88	1,114.44	687.74	14,366,249.55	902,676.60	39° 31' 47.312 N	107° 36' 58.590 W
END OF DROP @ 5129' MD (4924' TVD)									
5,200.00	0.00	0.00	4,996.34	1,114.44	687.74	14,366,249.55	902,676.60	39° 31' 47.312 N	107° 36' 58.590 W
5,300.00	0.00	0.00	5,096.34	1,114.44	687.74	14,366,249.55	902,676.60	39° 31' 47.312 N	107° 36' 58.590 W
5,400.00	0.00	0.00	5,196.34	1,114.44	687.74	14,366,249.55	902,676.60	39° 31' 47.312 N	107° 36' 58.590 W
5,500.00	0.00	0.00	5,296.34	1,114.44	687.74	14,366,249.55	902,676.60	39° 31' 47.312 N	107° 36' 58.590 W
5,600.00	0.00	0.00	5,396.34	1,114.44	687.74	14,366,249.55	902,676.60	39° 31' 47.312 N	107° 36' 58.590 W
5,700.00	0.00	0.00	5,496.34	1,114.44	687.74	14,366,249.55	902,676.60	39° 31' 47.312 N	107° 36' 58.590 W
5,800.00	0.00	0.00	5,596.34	1,114.44	687.74	14,366,249.55	902,676.60	39° 31' 47.312 N	107° 36' 58.590 W
5,900.00	0.00	0.00	5,696.34	1,114.44	687.74	14,366,249.55	902,676.60	39° 31' 47.312 N	107° 36' 58.590 W
6,000.00	0.00	0.00	5,796.34	1,114.44	687.74	14,366,249.55	902,676.60	39° 31' 47.312 N	107° 36' 58.590 W
6,027.66	0.00	0.00	5,824.00	1,114.44	687.74	14,366,249.55	902,676.60	39° 31' 47.312 N	107° 36' 58.590 W
CAMEO									
6,100.00	0.00	0.00	5,896.34	1,114.44	687.74	14,366,249.55	902,676.60	39° 31' 47.312 N	107° 36' 58.590 W
6,200.00	0.00	0.00	5,996.34	1,114.44	687.74	14,366,249.55	902,676.60	39° 31' 47.312 N	107° 36' 58.590 W
6,300.00	0.00	0.00	6,096.34	1,114.44	687.74	14,366,249.55	902,676.60	39° 31' 47.312 N	107° 36' 58.590 W
6,400.00	0.00	0.00	6,196.34	1,114.44	687.74	14,366,249.55	902,676.60	39° 31' 47.312 N	107° 36' 58.590 W
6,500.00	0.00	0.00	6,296.34	1,114.44	687.74	14,366,249.55	902,676.60	39° 31' 47.312 N	107° 36' 58.590 W
6,600.00	0.00	0.00	6,396.34	1,114.44	687.74	14,366,249.55	902,676.60	39° 31' 47.312 N	107° 36' 58.590 W
6,700.00	0.00	0.00	6,496.34	1,114.44	687.74	14,366,249.55	902,676.60	39° 31' 47.312 N	107° 36' 58.590 W
6,800.00	0.00	0.00	6,596.34	1,114.44	687.74	14,366,249.55	902,676.60	39° 31' 47.312 N	107° 36' 58.590 W
6,900.00	0.00	0.00	6,696.34	1,114.44	687.74	14,366,249.55	902,676.60	39° 31' 47.312 N	107° 36' 58.590 W
7,000.00	0.00	0.00	6,796.34	1,114.44	687.74	14,366,249.55	902,676.60	39° 31' 47.312 N	107° 36' 58.590 W
7,100.00	0.00	0.00	6,896.34	1,114.44	687.74	14,366,249.55	902,676.60	39° 31' 47.312 N	107° 36' 58.590 W
7,127.66	0.00	0.00	6,924.00	1,114.44	687.74	14,366,249.55	902,676.60	39° 31' 47.312 N	107° 36' 58.590 W
ROLLINS									
7,200.00	0.00	0.00	6,996.34	1,114.44	687.74	14,366,249.55	902,676.60	39° 31' 47.312 N	107° 36' 58.590 W
7,277.64	0.00	0.00	7,073.98	1,114.44	687.74	14,366,249.55	902,676.60	39° 31' 47.312 N	107° 36' 58.590 W
PROPOSED TD @ 7278' MD (7074' TVD)									
7,277.66	0.00	0.00	7,074.00	1,114.44	687.74	14,366,249.55	902,676.60	39° 31' 47.312 N	107° 36' 58.590 W

Planning Report - Geographic

Database:	EDMDB	Local Co-ordinate Reference:	Well VALLEY FARMS I-13 (111103) - Slot I-13
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-13 (111103)	Survey Calculation Method:	Minimum Curvature
Wellbore:	ANTERO VALLEY FARMS I-13		
Design:	ANTERO VALLEY FARMS I-13 P01		

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-13 - plan hits target - Circle (radius 25.00)		360.00	4,924.00	1,114.44	687.74	14,366,249.55	902,676.60	39° 31' 47.312 N	107° 36' 58.590 W
TD I-13 - plan hits target - Circle (radius 25.00)	0.00	0.00	7,074.00	1,114.44	687.74	14,366,249.55	902,676.60	39° 31' 47.312 N	107° 36' 58.590 W

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,010.79	1,000.00	CASING @ 1000' TVD	8.62	12.25	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,576.59	3,424.00	MESAVERDE		0.00	
5,127.66	4,924.00	TOP GAS		0.00	
6,027.66	5,824.00	CAMEO		0.00	
7,127.66	6,924.00	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')	
1,010.79	1,000.00	97.01	59.87	START HOLD @ 1011' MD (1000' TVD) (16.22 DEG INC)	
1,060.79	1,048.01	108.90	67.20	START BUILD @ 1061' MD (1048' TVD) (2DEG/100')	
1,213.79	1,193.71	148.59	91.70	END OF BUILD @ 1214' MD (1194' TVD) (19.28 DEG INC)	
4,164.54	3,978.97	977.71	603.36	START DROP @ 4165' MD (3979' TVD) (2 DEG/100')	
5,128.54	4,924.88	1,114.44	687.74	END OF DROP @ 5129' MD (4924' TVD)	
7,277.64	7,073.98	1,114.44	687.74	PROPOSED TD @ 7278' MD (7074' TVD)	