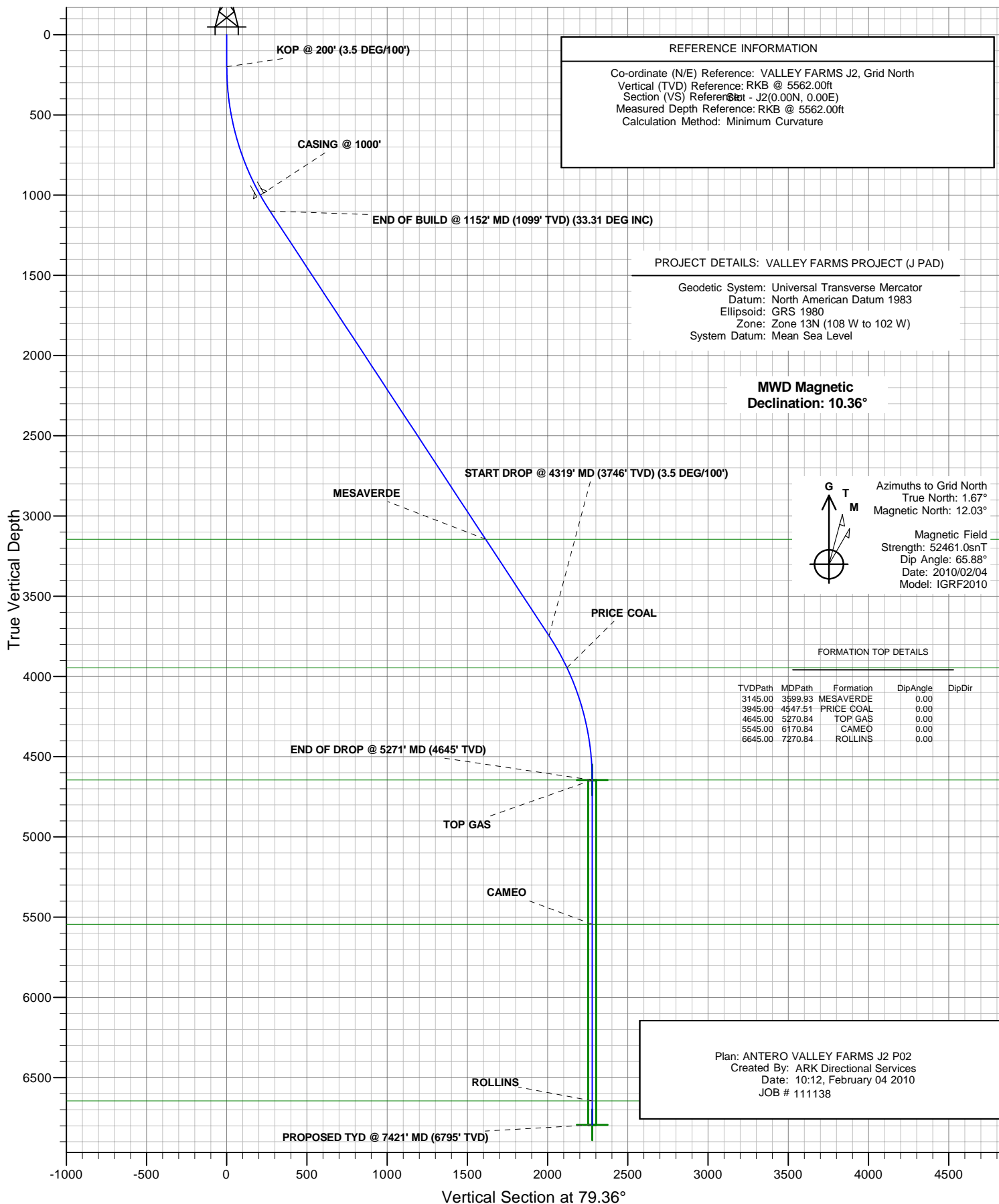




ANTERO RESOURCES

ANTERO VALLEY FARMS J2

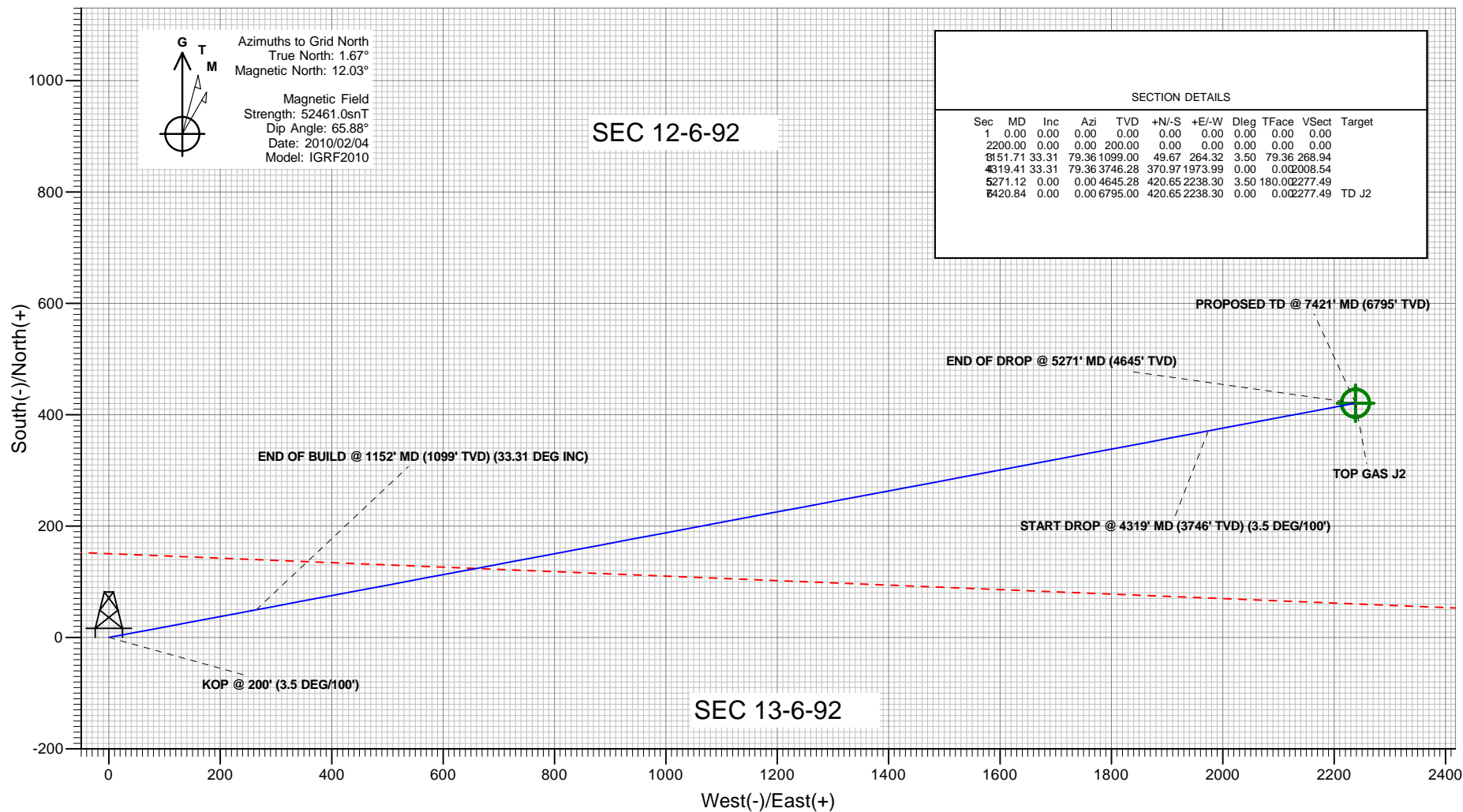




PLAN VIEW

ANTERO RESOURCES

Project: VALLEY FARMS PROJECT (J PAD)
Site: FRONTIER 12
Well: VALLEY FARMS J2 (111138)
Wellbore: ANTERO VALLEY FARMS J2
Design: ANTERO VALLEY FARMS J2 P02
JOB # 111138



Plan: ANTERO VALLEY FARMS J2 P02
Created By: ARK Directional Services
Date: 10:14, February 04 2010

PROJECT DETAILS: VALLEY FARMS PROJECT (J 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 J2, Grid North
Vertical (TVD) Reference: RKB @ 5562.00ft
Section (VS) Reference: Slot - J2(0.00N, 0.00E)
Measured Depth Reference: RKB @ 5562.00ft
Calculation Method: Minimum Curvature

ANTERO RESOURCES

**VALLEY FARMS PROJECT (J PAD)
FRONTIER 12**

Plan: ANTERO VALLEY FARMS J2 P02

Standard Planning Report - Geographic

04 February, 2010

Ark Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well VALLEY FARMS J2 (111138) - Slot J2
Company:	ANTERO RESOURCES	TVD Reference:	RKB @ 5562.00ft
Project:	VALLEY FARMS PROJECT (J PAD)	MD Reference:	RKB @ 5562.00ft
Site:	FRONTIER 12	North Reference:	Grid
Well:	VALLEY FARMS J2 (111138)	Survey Calculation Method:	Minimum Curvature
Wellbore:	ANTERO VALLEY FARMS J2		
Design:	ANTERO VALLEY FARMS J2 P02		

Project	VALLEY FARMS PROJECT (J 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:	14,367,770.23 usft	Latitude:	39° 32' 1.995 N
From:	Lat/Long	Easting:	901,508.18 usft	Longitude:	107° 37' 14.057 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.20 in	Grid Convergence:	-1.67 °

Well							VALLEY FARMS J2 (111138) - Slot J2						
Well Position		+N/-S	0.00 ft	Northing:		14,367,740.24 usft		Latitude:		39° 32' 1.699 N			
		+E/-W	0.00 ft									Easting:	
Position Uncertainty			0.00 ft	Wellhead Elevation:				Ground Level:		5,538.00 ft			

Wellbore	ANTERO VALLEY FARMS J2				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2010/02/04	10.36	65.88	52,461

Design	ANTERO VALLEY FARMS J2 P02				
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	79.36	

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	
1,151.71	33.31	79.36	1,099.00	49.67	264.32	3.50	3.50	0.00	79.36	
4,319.41	33.31	79.36	3,746.28	370.97	1,973.99	0.00	0.00	0.00	0.00	
5,271.12	0.00	0.00	4,645.28	420.65	2,238.30	3.50	-3.50	0.00	180.00	
7,420.84	0.00	0.00	6,795.00	420.65	2,238.30	0.00	0.00	0.00	0.00	TD J2

Ark Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well VALLEY FARMS J2 (111138) - Slot J2
Company:	ANTERO RESOURCES	TVD Reference:	RKB @ 5562.00ft
Project:	VALLEY FARMS PROJECT (J PAD)	MD Reference:	RKB @ 5562.00ft
Site:	FRONTIER 12	North Reference:	Grid
Well:	VALLEY FARMS J2 (111138)	Survey Calculation Method:	Minimum Curvature
Wellbore:	ANTERO VALLEY FARMS J2		
Design:	ANTERO VALLEY FARMS J2 P02		

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	14,367,740.24	901,507.67	39° 32' 1.699 N	107° 37' 14.053 W
100.00	0.00	0.00	100.00	0.00	0.00	14,367,740.24	901,507.67	39° 32' 1.699 N	107° 37' 14.053 W
200.00	0.00	0.00	200.00	0.00	0.00	14,367,740.24	901,507.67	39° 32' 1.699 N	107° 37' 14.053 W
KOP @ 200' (3.5 DEG/100')									
300.00	3.50	79.36	299.94	0.56	3.00	14,367,740.81	901,510.67	39° 32' 1.706 N	107° 37' 14.015 W
400.00	7.00	79.36	399.50	2.25	11.99	14,367,742.49	901,519.66	39° 32' 1.725 N	107° 37' 13.901 W
500.00	10.50	79.36	498.32	5.06	26.94	14,367,745.30	901,534.61	39° 32' 1.757 N	107° 37' 13.711 W
600.00	14.00	79.36	596.03	8.98	47.79	14,367,749.22	901,555.46	39° 32' 1.802 N	107° 37' 13.447 W
700.00	17.50	79.36	692.26	13.99	74.46	14,367,754.23	901,582.13	39° 32' 1.859 N	107° 37' 13.108 W
800.00	21.00	79.36	786.66	20.08	106.86	14,367,760.32	901,614.53	39° 32' 1.928 N	107° 37' 12.697 W
900.00	24.50	79.36	878.86	27.22	144.86	14,367,767.46	901,652.53	39° 32' 2.010 N	107° 37' 12.215 W
1,000.00	28.00	79.36	968.54	35.39	188.32	14,367,775.63	901,695.99	39° 32' 2.103 N	107° 37' 11.664 W
1,035.85	29.25	79.36	1,000.00	38.56	205.20	14,367,778.80	901,712.87	39° 32' 2.139 N	107° 37' 11.450 W
CASING @ 1000'									
1,100.00	31.50	79.36	1,055.34	44.55	237.08	14,367,784.80	901,744.75	39° 32' 2.207 N	107° 37' 11.045 W
1,151.71	33.31	79.36	1,099.00	49.67	264.31	14,367,789.91	901,771.98	39° 32' 2.266 N	107° 37' 10.700 W
END OF BUILD @ 1152' MD (1099' TVD) (33.31 DEG INC)									
1,200.00	33.31	79.36	1,139.35	54.57	290.38	14,367,794.81	901,798.05	39° 32' 2.322 N	107° 37' 10.369 W
1,300.00	33.31	79.36	1,222.93	64.71	344.35	14,367,804.96	901,852.02	39° 32' 2.437 N	107° 37' 9.685 W
1,400.00	33.31	79.36	1,306.50	74.86	398.32	14,367,815.10	901,905.99	39° 32' 2.553 N	107° 37' 9.000 W
1,500.00	33.31	79.36	1,390.07	85.00	452.29	14,367,825.24	901,959.96	39° 32' 2.669 N	107° 37' 8.315 W
1,600.00	33.31	79.36	1,473.64	95.14	506.27	14,367,835.38	902,013.93	39° 32' 2.784 N	107° 37' 7.631 W
1,700.00	33.31	79.36	1,557.21	105.29	560.24	14,367,845.53	902,067.91	39° 32' 2.900 N	107° 37' 6.946 W
1,800.00	33.31	79.36	1,640.78	115.43	614.21	14,367,855.67	902,121.88	39° 32' 3.016 N	107° 37' 6.261 W
1,900.00	33.31	79.36	1,724.35	125.57	668.18	14,367,865.81	902,175.85	39° 32' 3.132 N	107° 37' 5.577 W
2,000.00	33.31	79.36	1,807.92	135.72	722.15	14,367,875.96	902,229.82	39° 32' 3.247 N	107° 37' 4.892 W
2,100.00	33.31	79.36	1,891.49	145.86	776.13	14,367,886.10	902,283.79	39° 32' 3.363 N	107° 37' 4.207 W
2,200.00	33.31	79.36	1,975.07	156.00	830.10	14,367,896.24	902,337.77	39° 32' 3.479 N	107° 37' 3.523 W
2,300.00	33.31	79.36	2,058.64	166.14	884.07	14,367,906.39	902,391.74	39° 32' 3.594 N	107° 37' 2.838 W
2,400.00	33.31	79.36	2,142.21	176.29	938.04	14,367,916.53	902,445.71	39° 32' 3.710 N	107° 37' 2.153 W
2,500.00	33.31	79.36	2,225.78	186.43	992.01	14,367,926.67	902,499.68	39° 32' 3.826 N	107° 37' 1.469 W
2,600.00	33.31	79.36	2,309.35	196.57	1,045.99	14,367,936.81	902,553.65	39° 32' 3.941 N	107° 37' 0.784 W
2,700.00	33.31	79.36	2,392.92	206.72	1,099.96	14,367,946.96	902,607.63	39° 32' 4.057 N	107° 37' 0.099 W
2,800.00	33.31	79.36	2,476.49	216.86	1,153.93	14,367,957.10	902,661.60	39° 32' 4.173 N	107° 36' 59.415 W
2,900.00	33.31	79.36	2,560.06	227.00	1,207.90	14,367,967.24	902,715.57	39° 32' 4.288 N	107° 36' 58.730 W
3,000.00	33.31	79.36	2,643.64	237.15	1,261.87	14,367,977.39	902,769.54	39° 32' 4.404 N	107° 36' 58.045 W
3,100.00	33.31	79.36	2,727.21	247.29	1,315.85	14,367,987.53	902,823.51	39° 32' 4.520 N	107° 36' 57.361 W
3,200.00	33.31	79.36	2,810.78	257.43	1,369.82	14,367,997.67	902,877.49	39° 32' 4.635 N	107° 36' 56.676 W
3,300.00	33.31	79.36	2,894.35	267.57	1,423.79	14,368,007.82	902,931.46	39° 32' 4.751 N	107° 36' 55.992 W
3,400.00	33.31	79.36	2,977.92	277.72	1,477.76	14,368,017.96	902,985.43	39° 32' 4.867 N	107° 36' 55.307 W
3,500.00	33.31	79.36	3,061.49	287.86	1,531.73	14,368,028.10	903,039.40	39° 32' 4.983 N	107° 36' 54.622 W
3,599.93	33.31	79.36	3,145.00	298.00	1,585.67	14,368,038.24	903,093.33	39° 32' 5.098 N	107° 36' 53.938 W
MESAVERDE									
3,600.00	33.31	79.36	3,145.06	298.00	1,585.71	14,368,038.24	903,093.37	39° 32' 5.098 N	107° 36' 53.938 W
3,700.00	33.31	79.36	3,228.63	308.15	1,639.68	14,368,048.39	903,147.35	39° 32' 5.214 N	107° 36' 53.253 W
3,800.00	33.31	79.36	3,312.20	318.29	1,693.65	14,368,058.53	903,201.32	39° 32' 5.330 N	107° 36' 52.568 W
3,900.00	33.31	79.36	3,395.78	328.43	1,747.62	14,368,068.67	903,255.29	39° 32' 5.445 N	107° 36' 51.884 W
4,000.00	33.31	79.36	3,479.35	338.58	1,801.59	14,368,078.82	903,309.26	39° 32' 5.561 N	107° 36' 51.199 W
4,100.00	33.31	79.36	3,562.92	348.72	1,855.57	14,368,088.96	903,363.23	39° 32' 5.677 N	107° 36' 50.514 W
4,200.00	33.31	79.36	3,646.49	358.86	1,909.54	14,368,099.10	903,417.21	39° 32' 5.792 N	107° 36' 49.830 W
4,300.00	33.31	79.36	3,730.06	369.00	1,963.51	14,368,109.25	903,471.18	39° 32' 5.908 N	107° 36' 49.145 W
4,319.41	33.31	79.36	3,746.28	370.97	1,973.99	14,368,111.21	903,481.65	39° 32' 5.930 N	107° 36' 49.012 W
START DROP @ 4319' MD (3746' TVD) (3.5 DEG/100')									
4,400.00	30.49	79.36	3,814.69	378.84	2,015.84	14,368,119.08	903,523.50	39° 32' 6.020 N	107° 36' 48.481 W

Ark Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well VALLEY FARMS J2 (111138) - Slot J2
Company:	ANTERO RESOURCES	TVD Reference:	RKB @ 5562.00ft
Project:	VALLEY FARMS PROJECT (J PAD)	MD Reference:	RKB @ 5562.00ft
Site:	FRONTIER 12	North Reference:	Grid
Well:	VALLEY FARMS J2 (111138)	Survey Calculation Method:	Minimum Curvature
Wellbore:	ANTERO VALLEY FARMS J2		
Design:	ANTERO VALLEY FARMS J2 P02		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
4,500.00	26.99	79.36	3,902.36	387.72	2,063.08	14,368,127.96	903,570.75	39° 32' 6.121 N	107° 36' 47.882 W
4,547.51	25.33	79.36	3,945.00	391.59	2,083.67	14,368,131.83	903,591.33	39° 32' 6.165 N	107° 36' 47.621 W
PRICE COAL									
4,600.00	23.49	79.36	3,992.80	395.59	2,104.98	14,368,135.83	903,612.65	39° 32' 6.211 N	107° 36' 47.350 W
4,700.00	19.99	79.36	4,085.67	402.43	2,141.38	14,368,142.67	903,649.05	39° 32' 6.289 N	107° 36' 46.888 W
4,800.00	16.49	79.36	4,180.64	408.21	2,172.13	14,368,148.45	903,679.80	39° 32' 6.355 N	107° 36' 46.498 W
4,900.00	12.99	79.36	4,277.33	412.91	2,197.14	14,368,153.15	903,704.80	39° 32' 6.409 N	107° 36' 46.181 W
5,000.00	9.49	79.36	4,375.40	416.51	2,216.29	14,368,156.75	903,723.95	39° 32' 6.450 N	107° 36' 45.938 W
5,100.00	5.99	79.36	4,474.47	419.00	2,229.52	14,368,159.24	903,737.19	39° 32' 6.478 N	107° 36' 45.770 W
5,200.00	2.49	79.36	4,574.18	420.36	2,236.78	14,368,160.60	903,744.45	39° 32' 6.494 N	107° 36' 45.678 W
5,270.84	0.01	79.36	4,645.00	420.65	2,238.30	14,368,160.89	903,745.97	39° 32' 6.497 N	107° 36' 45.659 W
TOP GAS - TOP GAS J2									
5,271.12	0.00	0.00	4,645.28	420.65	2,238.30	14,368,160.89	903,745.97	39° 32' 6.497 N	107° 36' 45.659 W
END OF DROP @ 5271' MD (4645' TVD)									
5,300.00	0.00	0.00	4,674.16	420.65	2,238.30	14,368,160.89	903,745.97	39° 32' 6.497 N	107° 36' 45.659 W
5,400.00	0.00	0.00	4,774.16	420.65	2,238.30	14,368,160.89	903,745.97	39° 32' 6.497 N	107° 36' 45.659 W
5,500.00	0.00	0.00	4,874.16	420.65	2,238.30	14,368,160.89	903,745.97	39° 32' 6.497 N	107° 36' 45.659 W
5,600.00	0.00	0.00	4,974.16	420.65	2,238.30	14,368,160.89	903,745.97	39° 32' 6.497 N	107° 36' 45.659 W
5,700.00	0.00	0.00	5,074.16	420.65	2,238.30	14,368,160.89	903,745.97	39° 32' 6.497 N	107° 36' 45.659 W
5,800.00	0.00	0.00	5,174.16	420.65	2,238.30	14,368,160.89	903,745.97	39° 32' 6.497 N	107° 36' 45.659 W
5,900.00	0.00	0.00	5,274.16	420.65	2,238.30	14,368,160.89	903,745.97	39° 32' 6.497 N	107° 36' 45.659 W
6,000.00	0.00	0.00	5,374.16	420.65	2,238.30	14,368,160.89	903,745.97	39° 32' 6.497 N	107° 36' 45.659 W
6,100.00	0.00	0.00	5,474.16	420.65	2,238.30	14,368,160.89	903,745.97	39° 32' 6.497 N	107° 36' 45.659 W
6,170.84	0.00	0.00	5,545.00	420.65	2,238.30	14,368,160.89	903,745.97	39° 32' 6.497 N	107° 36' 45.659 W
CAMEO									
6,200.00	0.00	0.00	5,574.16	420.65	2,238.30	14,368,160.89	903,745.97	39° 32' 6.497 N	107° 36' 45.659 W
6,300.00	0.00	0.00	5,674.16	420.65	2,238.30	14,368,160.89	903,745.97	39° 32' 6.497 N	107° 36' 45.659 W
6,400.00	0.00	0.00	5,774.16	420.65	2,238.30	14,368,160.89	903,745.97	39° 32' 6.497 N	107° 36' 45.659 W
6,500.00	0.00	0.00	5,874.16	420.65	2,238.30	14,368,160.89	903,745.97	39° 32' 6.497 N	107° 36' 45.659 W
6,600.00	0.00	0.00	5,974.16	420.65	2,238.30	14,368,160.89	903,745.97	39° 32' 6.497 N	107° 36' 45.659 W
6,700.00	0.00	0.00	6,074.16	420.65	2,238.30	14,368,160.89	903,745.97	39° 32' 6.497 N	107° 36' 45.659 W
6,800.00	0.00	0.00	6,174.16	420.65	2,238.30	14,368,160.89	903,745.97	39° 32' 6.497 N	107° 36' 45.659 W
6,900.00	0.00	0.00	6,274.16	420.65	2,238.30	14,368,160.89	903,745.97	39° 32' 6.497 N	107° 36' 45.659 W
7,000.00	0.00	0.00	6,374.16	420.65	2,238.30	14,368,160.89	903,745.97	39° 32' 6.497 N	107° 36' 45.659 W
7,100.00	0.00	0.00	6,474.16	420.65	2,238.30	14,368,160.89	903,745.97	39° 32' 6.497 N	107° 36' 45.659 W
7,200.00	0.00	0.00	6,574.16	420.65	2,238.30	14,368,160.89	903,745.97	39° 32' 6.497 N	107° 36' 45.659 W
7,270.84	0.00	0.00	6,645.00	420.65	2,238.30	14,368,160.89	903,745.97	39° 32' 6.497 N	107° 36' 45.659 W
ROLLINS									
7,300.00	0.00	0.00	6,674.16	420.65	2,238.30	14,368,160.89	903,745.97	39° 32' 6.497 N	107° 36' 45.659 W
7,400.00	0.00	0.00	6,774.16	420.65	2,238.30	14,368,160.89	903,745.97	39° 32' 6.497 N	107° 36' 45.659 W
7,420.81	0.00	0.00	6,794.97	420.65	2,238.30	14,368,160.89	903,745.97	39° 32' 6.497 N	107° 36' 45.659 W
PROPOSED TD @ 7421' MD (6795' TVD)									
7,420.84	0.00	0.00	6,795.00	420.65	2,238.30	14,368,160.89	903,745.97	39° 32' 6.497 N	107° 36' 45.659 W
TD J2									

Ark Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well VALLEY FARMS J2 (111138) - Slot J2
Company:	ANTERO RESOURCES	TVD Reference:	RKB @ 5562.00ft
Project:	VALLEY FARMS PROJECT (J PAD)	MD Reference:	RKB @ 5562.00ft
Site:	FRONTIER 12	North Reference:	Grid
Well:	VALLEY FARMS J2 (111138)	Survey Calculation Method:	Minimum Curvature
Wellbore:	ANTERO VALLEY FARMS J2		
Design:	ANTERO VALLEY FARMS J2 P02		

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 J2 - plan hits target center - Circle (radius 25.00)	0.00	360.00	4,645.00	420.65	2,238.30	14,368,160.89	903,745.97	39° 32' 6.497 N	107° 36' 45.659 W
TD J2 - plan hits target center - Circle (radius 25.00)	0.00	360.00	6,795.00	420.65	2,238.30	14,368,160.89	903,745.97	39° 32' 6.497 N	107° 36' 45.659 W

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,035.85	1,000.00	CASING @ 1000'	9.62	12.25	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,599.93	3,145.00	MESAVERDE		0.00	
4,547.51	3,945.00	PRICE COAL		0.00	
5,270.84	4,645.00	TOP GAS		0.00	
6,170.84	5,545.00	CAMEO		0.00	
7,270.84	6,645.00	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' (3.5 DEG/100')	
1,151.71	1,099.00	49.67	264.31	END OF BUILD @ 1152' MD (1099' TVD) (33.31 DEG INC)	
4,319.41	3,746.28	370.97	1,973.99	START DROP @ 4319' MD (3746' TVD) (3.5 DEG/100')	
5,271.12	4,645.28	420.65	2,238.30	END OF DROP @ 5271' MD (4645' TVD)	
7,420.81	6,794.97	420.65	2,238.30	PROPOSED TD @ 7421' MD (6795' TVD)	