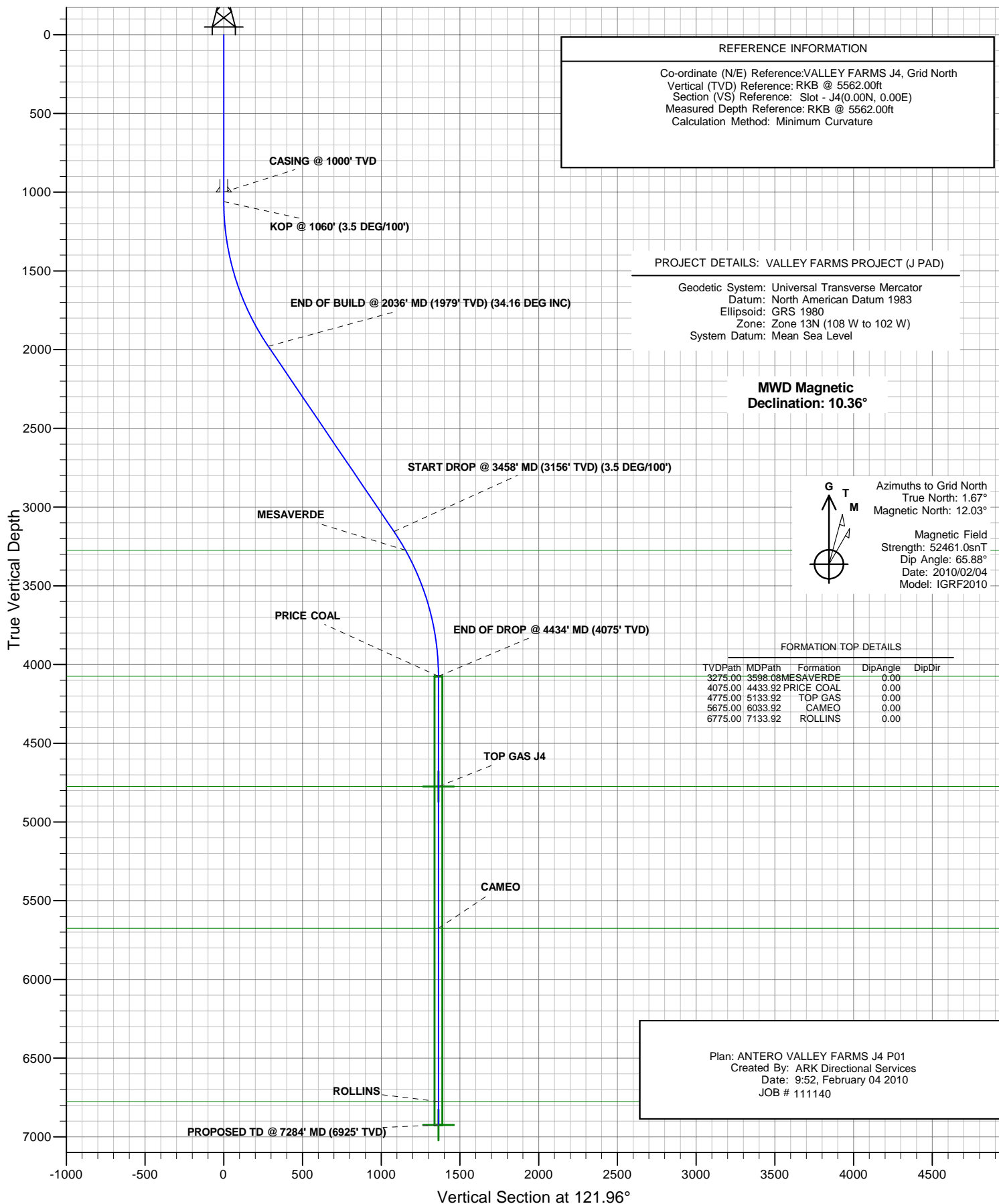




ANTERO RESOURCES

ANTERO VALLEY FARMS J4

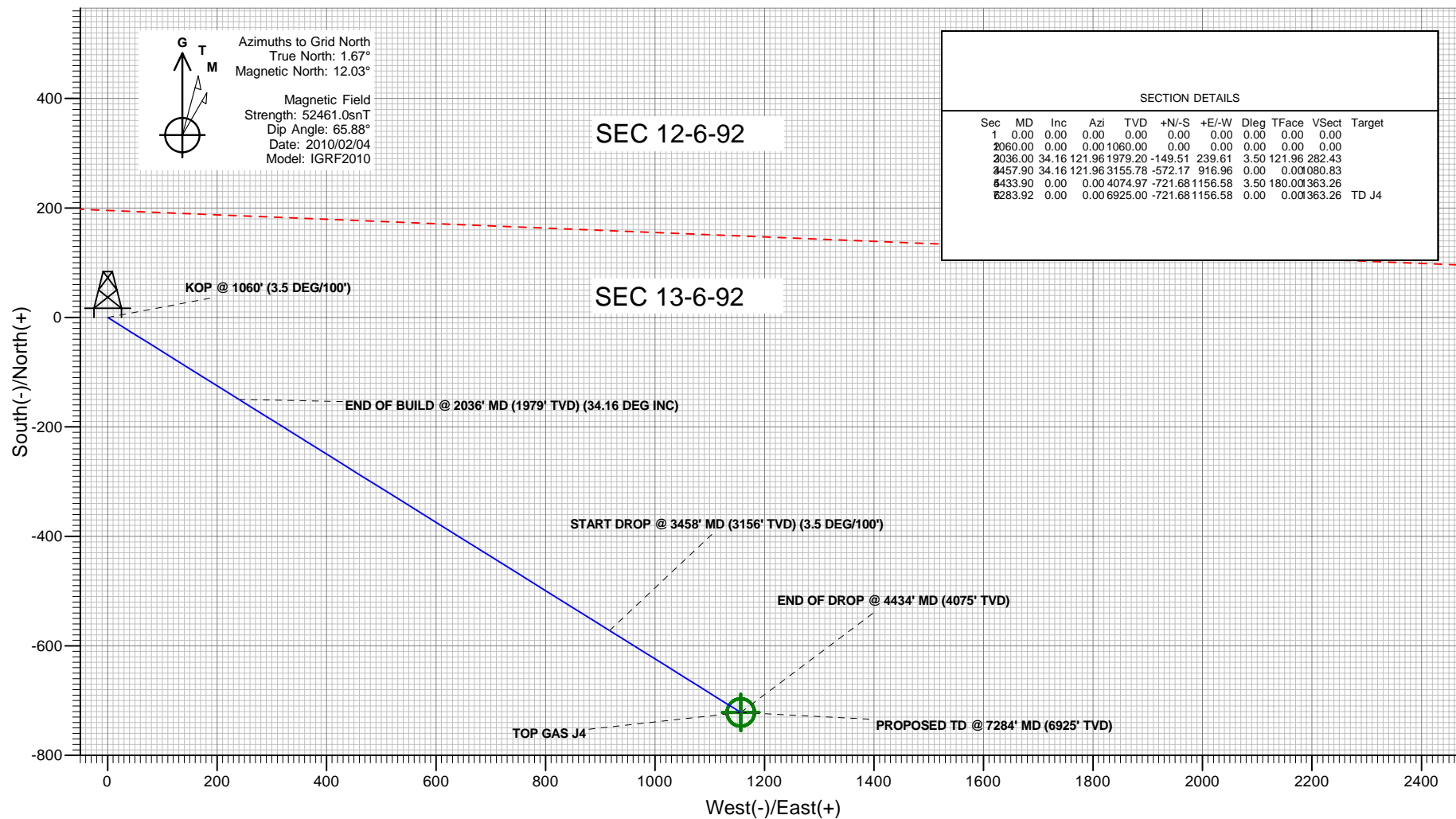




PLAN VIEW

ANTERO RESOURCES

Project: VALLEY FARMS PROJECT (J PAD)
Site: FRONTIER 12
Well: VALLEY FARMS J4 (111140)
Wellbore: ANTERO VALLEY FARMS J4
Design: ANTERO VALLEY FARMS J4 P01
JOB # 111140



Plan: ANTERO VALLEY FARMS J4 P01
Created By: ARK Directional Services
Date: 9:54, 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

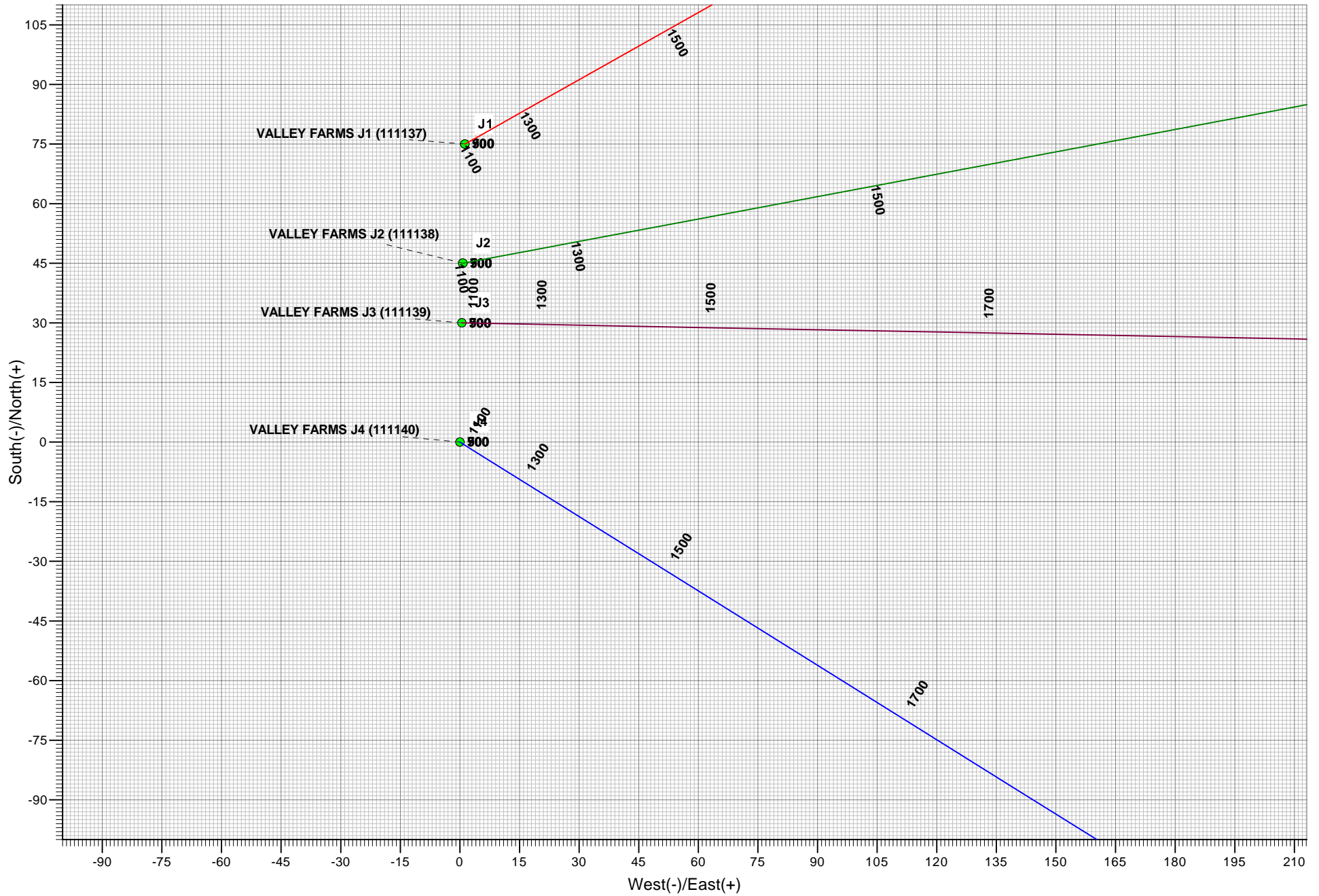
Co-ordinate (N/E) Reference: VALLEY FARMS J4, Grid North
Vertical (TVD) Reference: RKB @ 5562.00ft
Section (VS) Reference: Slot - J4(0.00N, 0.00E)
Measured Depth Reference: RKB @ 5562.00ft
Calculation Method: Minimum Curvature



ANTERO VALLEY FARMS J4



SPIDER PLOT



ANTERO RESOURCES

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

Plan: ANTERO VALLEY FARMS J4 P01

Standard Planning Report - Geographic

04 February, 2010

Ark Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well VALLEY FARMS J4 (111140) - Slot J4
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 J4 (111140)	Survey Calculation Method:	Minimum Curvature
Wellbore:	ANTERO VALLEY FARMS J4		
Design:	ANTERO VALLEY FARMS J4 P01		

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 J4 (111140) - Slot J4					
Well Position	+N/-S	0.00 ft	Northing:	14,367,695.24 usft	Latitude:	39° 32' 1.254 N
	+E/-W	0.00 ft	Easting:	901,506.92 usft	Longitude:	107° 37' 14.046 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,538.00 ft

Wellbore	ANTERO VALLEY FARMS J4				
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 J4 P01				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	121.96	

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	
1,060.00	0.00	0.00	1,060.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,036.00	34.16	121.96	1,979.20	-149.51	239.61	3.50	3.50	0.00	121.96	
3,457.90	34.16	121.96	3,155.78	-572.17	916.96	0.00	0.00	0.00	0.00	
4,433.90	0.00	0.00	4,074.97	-721.68	1,156.58	3.50	-3.50	0.00	180.00	
7,283.92	0.00	0.00	6,925.00	-721.68	1,156.58	0.00	0.00	0.00	0.00	TD J4

Ark Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well VALLEY FARMS J4 (111140) - Slot J4
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 J4 (111140)	Survey Calculation Method:	Minimum Curvature
Wellbore:	ANTERO VALLEY FARMS J4		
Design:	ANTERO VALLEY FARMS J4 P01		

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	14,367,695.24	901,506.92	39° 32' 1.254 N	107° 37' 14.046 W
100.00	0.00	0.00	100.00	0.00	0.00	14,367,695.24	901,506.92	39° 32' 1.254 N	107° 37' 14.046 W
200.00	0.00	0.00	200.00	0.00	0.00	14,367,695.24	901,506.92	39° 32' 1.254 N	107° 37' 14.046 W
300.00	0.00	0.00	300.00	0.00	0.00	14,367,695.24	901,506.92	39° 32' 1.254 N	107° 37' 14.046 W
400.00	0.00	0.00	400.00	0.00	0.00	14,367,695.24	901,506.92	39° 32' 1.254 N	107° 37' 14.046 W
500.00	0.00	0.00	500.00	0.00	0.00	14,367,695.24	901,506.92	39° 32' 1.254 N	107° 37' 14.046 W
600.00	0.00	0.00	600.00	0.00	0.00	14,367,695.24	901,506.92	39° 32' 1.254 N	107° 37' 14.046 W
700.00	0.00	0.00	700.00	0.00	0.00	14,367,695.24	901,506.92	39° 32' 1.254 N	107° 37' 14.046 W
800.00	0.00	0.00	800.00	0.00	0.00	14,367,695.24	901,506.92	39° 32' 1.254 N	107° 37' 14.046 W
900.00	0.00	0.00	900.00	0.00	0.00	14,367,695.24	901,506.92	39° 32' 1.254 N	107° 37' 14.046 W
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,367,695.24	901,506.92	39° 32' 1.254 N	107° 37' 14.046 W
CASING @ 1000' TVD									
1,060.00	0.00	0.00	1,060.00	0.00	0.00	14,367,695.24	901,506.92	39° 32' 1.254 N	107° 37' 14.046 W
KOP @ 1060' (3.5 DEG/100')									
1,100.00	1.40	121.96	1,100.00	-0.26	0.41	14,367,694.98	901,507.33	39° 32' 1.252 N	107° 37' 14.040 W
1,200.00	4.90	121.96	1,199.83	-3.17	5.08	14,367,692.07	901,512.00	39° 32' 1.225 N	107° 37' 13.980 W
1,300.00	8.40	121.96	1,299.14	-9.30	14.90	14,367,685.94	901,521.82	39° 32' 1.167 N	107° 37' 13.852 W
1,400.00	11.90	121.96	1,397.56	-18.62	29.85	14,367,676.62	901,536.77	39° 32' 1.079 N	107° 37' 13.658 W
1,500.00	15.40	121.96	1,494.72	-31.11	49.87	14,367,664.13	901,556.79	39° 32' 0.961 N	107° 37' 13.398 W
1,600.00	18.90	121.96	1,590.26	-46.72	74.88	14,367,648.52	901,581.80	39° 32' 0.815 N	107° 37' 13.073 W
1,700.00	22.40	121.96	1,683.82	-65.39	104.79	14,367,629.85	901,611.71	39° 32' 0.639 N	107° 37' 12.685 W
1,800.00	25.90	121.96	1,775.05	-87.04	139.50	14,367,608.20	901,646.42	39° 32' 0.435 N	107° 37' 12.234 W
1,900.00	29.40	121.96	1,863.62	-111.61	178.86	14,367,583.64	901,685.78	39° 32' 0.204 N	107° 37' 11.723 W
2,000.00	32.90	121.96	1,949.19	-138.99	222.74	14,367,556.26	901,729.66	39° 31' 59.946 N	107° 37' 11.153 W
2,036.00	34.16	121.96	1,979.20	-149.51	239.61	14,367,545.73	901,746.53	39° 31' 59.847 N	107° 37' 10.934 W
END OF BUILD @ 2036' MD (1979' TVD) (34.16 DEG INC)									
2,100.00	34.16	121.96	2,032.16	-168.54	270.10	14,367,526.71	901,777.02	39° 31' 59.668 N	107° 37' 10.538 W
2,200.00	34.16	121.96	2,114.90	-198.26	317.74	14,367,496.98	901,824.66	39° 31' 59.388 N	107° 37' 9.919 W
2,300.00	34.16	121.96	2,197.65	-227.99	365.37	14,367,467.26	901,872.29	39° 31' 59.108 N	107° 37' 9.301 W
2,400.00	34.16	121.96	2,280.40	-257.71	413.01	14,367,437.53	901,919.93	39° 31' 58.828 N	107° 37' 8.682 W
2,500.00	34.16	121.96	2,363.14	-287.44	460.65	14,367,407.81	901,967.57	39° 31' 58.548 N	107° 37' 8.063 W
2,600.00	34.16	121.96	2,445.89	-317.16	508.29	14,367,378.08	902,015.20	39° 31' 58.268 N	107° 37' 7.445 W
2,700.00	34.16	121.96	2,528.64	-346.89	555.92	14,367,348.36	902,062.84	39° 31' 57.988 N	107° 37' 6.826 W
2,800.00	34.16	121.96	2,611.39	-376.61	603.56	14,367,318.63	902,110.48	39° 31' 57.708 N	107° 37' 6.207 W
2,900.00	34.16	121.96	2,694.13	-406.33	651.20	14,367,288.91	902,158.12	39° 31' 57.428 N	107° 37' 5.589 W
3,000.00	34.16	121.96	2,776.88	-436.06	698.84	14,367,259.18	902,205.75	39° 31' 57.149 N	107° 37' 4.970 W
3,100.00	34.16	121.96	2,859.63	-465.78	746.47	14,367,229.46	902,253.39	39° 31' 56.869 N	107° 37' 4.351 W
3,200.00	34.16	121.96	2,942.38	-495.51	794.11	14,367,199.73	902,301.03	39° 31' 56.589 N	107° 37' 3.733 W
3,300.00	34.16	121.96	3,025.12	-525.23	841.75	14,367,170.01	902,348.67	39° 31' 56.309 N	107° 37' 3.114 W
3,400.00	34.16	121.96	3,107.87	-554.96	889.39	14,367,140.28	902,396.30	39° 31' 56.029 N	107° 37' 2.496 W
3,457.90	34.16	121.96	3,155.78	-572.17	916.97	14,367,123.07	902,423.89	39° 31' 55.867 N	107° 37' 2.137 W
START DROP @ 3458' MD (3156' TVD) (3.5 DEG/100')									
3,500.00	32.69	121.96	3,190.92	-584.44	936.64	14,367,110.80	902,443.56	39° 31' 55.751 N	107° 37' 1.882 W
3,598.08	29.25	121.96	3,275.00	-611.16	979.45	14,367,084.08	902,486.37	39° 31' 55.500 N	107° 37' 1.326 W
MESAVERDE									
3,600.00	29.19	121.96	3,276.68	-611.66	980.25	14,367,083.59	902,487.17	39° 31' 55.495 N	107° 37' 1.316 W
3,700.00	25.69	121.96	3,365.42	-636.04	1,019.33	14,367,059.20	902,526.25	39° 31' 55.266 N	107° 37' 0.808 W
3,800.00	22.19	121.96	3,456.80	-657.52	1,053.75	14,367,037.72	902,560.67	39° 31' 55.063 N	107° 37' 0.361 W
3,900.00	18.69	121.96	3,550.49	-676.00	1,083.37	14,367,019.24	902,590.28	39° 31' 54.889 N	107° 36' 59.976 W
4,000.00	15.19	121.96	3,646.14	-691.42	1,108.08	14,367,003.82	902,614.99	39° 31' 54.744 N	107° 36' 59.656 W
4,100.00	11.69	121.96	3,743.39	-703.72	1,127.79	14,366,991.53	902,634.70	39° 31' 54.628 N	107° 36' 59.400 W
4,200.00	8.19	121.96	3,841.87	-712.85	1,142.42	14,366,982.39	902,649.34	39° 31' 54.542 N	107° 36' 59.210 W
4,300.00	4.69	121.96	3,941.23	-718.78	1,151.93	14,366,976.46	902,658.85	39° 31' 54.486 N	107° 36' 59.086 W
4,400.00	1.19	121.96	4,041.08	-721.49	1,156.28	14,366,973.75	902,663.20	39° 31' 54.461 N	107° 36' 59.030 W

Ark Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well VALLEY FARMS J4 (111140) - Slot J4
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 J4 (111140)	Survey Calculation Method:	Minimum Curvature
Wellbore:	ANTERO VALLEY FARMS J4		
Design:	ANTERO VALLEY FARMS J4 P01		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
4,433.90	0.00	0.00	4,074.98	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
END OF DROP @ 4434' MD (4075' TVD)									
4,433.92	0.00	0.00	4,075.00	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
PRICE COAL									
4,500.00	0.00	0.00	4,141.08	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
4,600.00	0.00	0.00	4,241.08	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
4,700.00	0.00	0.00	4,341.08	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
4,800.00	0.00	0.00	4,441.08	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
4,900.00	0.00	0.00	4,541.08	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
5,000.00	0.00	0.00	4,641.08	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
5,100.00	0.00	0.00	4,741.08	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
5,133.92	0.00	0.00	4,775.00	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
TOP GAS - TOP GAS J4									
5,200.00	0.00	0.00	4,841.08	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
5,300.00	0.00	0.00	4,941.08	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
5,400.00	0.00	0.00	5,041.08	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
5,500.00	0.00	0.00	5,141.08	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
5,600.00	0.00	0.00	5,241.08	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
5,700.00	0.00	0.00	5,341.08	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
5,800.00	0.00	0.00	5,441.08	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
5,900.00	0.00	0.00	5,541.08	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
6,000.00	0.00	0.00	5,641.08	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
6,033.92	0.00	0.00	5,675.00	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
CAMEO									
6,100.00	0.00	0.00	5,741.08	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
6,200.00	0.00	0.00	5,841.08	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
6,300.00	0.00	0.00	5,941.08	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
6,400.00	0.00	0.00	6,041.08	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
6,500.00	0.00	0.00	6,141.08	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
6,600.00	0.00	0.00	6,241.08	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
6,700.00	0.00	0.00	6,341.08	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
6,800.00	0.00	0.00	6,441.08	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
6,900.00	0.00	0.00	6,541.08	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
7,000.00	0.00	0.00	6,641.08	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
7,100.00	0.00	0.00	6,741.08	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
7,133.92	0.00	0.00	6,775.00	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
ROLLINS									
7,200.00	0.00	0.00	6,841.08	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
7,283.89	0.00	0.00	6,924.97	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
PROPOSED TD @ 7284' MD (6925' TVD)									
7,283.92	0.00	0.00	6,925.00	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
TD J4									

Ark Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well VALLEY FARMS J4 (111140) - Slot J4
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 J4 (111140)	Survey Calculation Method:	Minimum Curvature
Wellbore:	ANTERO VALLEY FARMS J4		
Design:	ANTERO VALLEY FARMS J4 P01		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
TOP GAS J4	0.00	0.00	4,775.00	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
- plan hits target center									
- Circle (radius 25.00)									
TD J4	0.00	0.00	6,925.00	-721.68	1,156.58	14,366,973.56	902,663.49	39° 31' 54.459 N	107° 36' 59.026 W
- plan hits target center									
- Circle (radius 25.00)									

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

Formations					
Measured Depth	Vertical Depth			Dip	Dip Direction
(ft)	(ft)	Name	Lithology	(°)	(°)
3,598.08	3,275.00	MESAVERDE		0.00	
4,433.92	4,075.00	PRICE COAL		0.00	
5,133.92	4,775.00	TOP GAS		0.00	
6,033.92	5,675.00	CAMEO		0.00	
7,133.92	6,775.00	ROLLINS		0.00	

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(ft)	(ft)	+N/-S	+E/-W	Comment	
(ft)	(ft)	(ft)	(ft)		
1,060.00	1,060.00	0.00	0.00	KOP @ 1060' (3.5 DEG/100')	
2,036.00	1,979.20	-149.51	239.61	END OF BUILD @ 2036' MD (1979' TVD) (34.16 DEG INC)	
3,457.90	3,155.78	-572.17	916.97	START DROP @ 3458' MD (3156' TVD) (3.5 DEG/100')	
4,433.90	4,074.98	-721.68	1,156.58	END OF DROP @ 4434' MD (4075' TVD)	
7,283.89	6,924.97	-721.68	1,156.58	PROPOSED TD @ 7284' MD (6925' TVD)	