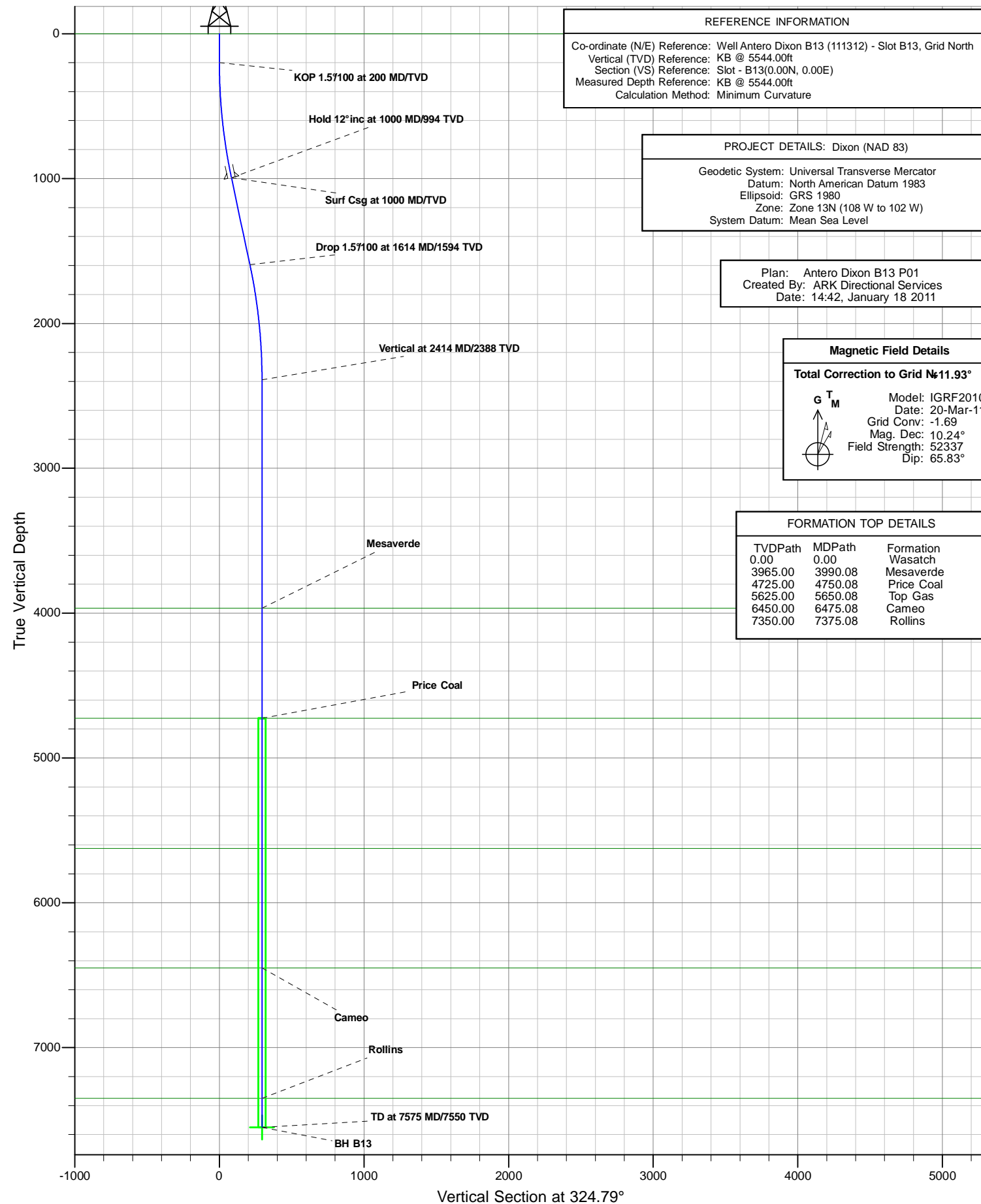


Co-ordinate (N/E) Reference: Well Antero Dixon B13 (111312) - Slot B13, Grid North
Vertical (TVD) Reference: KB @ 5544.00ft
Section (VS) Reference: Slot - B13(0.00N, 0.00E)
Measured Depth Reference: KB @ 5544.00ft
Calculation Method: Minimum Curvature

VERTICAL SECTION VIEW



Antero Resources

Dixon (NAD 83)

Dixon B

Antero Dixon B13 (111312) - Slot B13

Antero Dixon B13

Plan: Antero Dixon B13 P01

Standard Planning Report - Geographic

18 January, 2011

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well Antero Dixon B13 (111312) - Slot B13
Company:	Antero Resources	TVD Reference:	KB @ 5544.00ft
Project:	Dixon (NAD 83)	MD Reference:	KB @ 5544.00ft
Site:	Dixon B	North Reference:	Grid
Well:	Antero Dixon B13 (111312)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Antero Dixon B13		
Design:	Antero Dixon B13 P01		

Project	Dixon (NAD 83)		
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	Dixon B				
Site Position:		Northing:	14,364,517.556 usft	Latitude:	39.524071000°N
From:	Lat/Long	Easting:	890,418.038 usft	Longitude:	107.659523000°W
Position Uncertainty:	0.00 ft	Slot Radius:	13.20 in	Grid Convergence:	-1.69 °

Well	Antero Dixon B13 (111312) - Slot B13					
Well Position	+N/-S	0.00 ft	Northing:	14,364,533.911 usft	Latitude:	39.524111176°N
	+E/-W	0.00 ft	Easting:	890,360.167 usft	Longitude:	107.659729718°W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,520.00 ft

Wellbore	Antero Dixon B13				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2011/03/20	10.24	65.83	52,337

Design	Antero Dixon B13 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	324.79	

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	
1,000.00	12.00	324.79	994.16	68.20	-48.12	1.50	1.50	0.00	324.79	
1,613.51	12.00	324.79	1,594.26	172.43	-121.66	0.00	0.00	0.00	0.00	
2,413.51	0.00	0.00	2,388.43	240.63	-169.78	1.50	-1.50	0.00	180.00	
7,575.08	0.00	0.00	7,550.00	240.63	-169.78	0.00	0.00	0.00	0.00	BH B13

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well Antero Dixon B13 (111312) - Slot B13
Company:	Antero Resources	TVD Reference:	KB @ 5544.00ft
Project:	Dixon (NAD 83)	MD Reference:	KB @ 5544.00ft
Site:	Dixon B	North Reference:	Grid
Well:	Antero Dixon B13 (111312)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Antero Dixon B13		
Design:	Antero Dixon B13 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	14,364,533.911	890,360.167	39.524111176°N	107.659729718°W
Wasatch									
100.00	0.00	0.00	100.00	0.00	0.00	14,364,533.911	890,360.167	39.524111176°N	107.659729718°W
200.00	0.00	0.00	200.00	0.00	0.00	14,364,533.911	890,360.167	39.524111176°N	107.659729718°W
KOP 1.5°/100 at 200 MD/TVD									
300.00	1.50	324.79	299.99	1.07	-0.75	14,364,534.980	890,359.412	39.524114049°N	107.659732504°W
400.00	3.00	324.79	399.91	4.28	-3.02	14,364,538.188	890,357.149	39.524122666°N	107.659740857°W
500.00	4.50	324.79	499.69	9.62	-6.79	14,364,543.532	890,353.378	39.524137020°N	107.659754774°W
600.00	6.00	324.79	599.27	17.10	-12.06	14,364,551.008	890,348.103	39.524157103°N	107.659774243°W
700.00	7.50	324.79	698.57	26.70	-18.84	14,364,560.612	890,341.327	39.524182901°N	107.659799252°W
800.00	9.00	324.79	797.54	38.43	-27.11	14,364,572.336	890,333.055	39.524214395°N	107.659829784°W
900.00	10.50	324.79	896.09	52.26	-36.87	14,364,586.173	890,323.292	39.524251564°N	107.659865818°W
1,000.00	12.00	324.79	994.16	68.20	-48.12	14,364,602.113	890,312.045	39.524294382°N	107.659907329°W
Hold 12° inc at 1000 MD/994 TVD - Surf Csg at 1000 MD/TVD									
1,100.00	12.00	324.79	1,091.98	85.19	-60.11	14,364,619.101	890,300.059	39.524340016°N	107.659951570°W
1,200.00	12.00	324.79	1,189.79	102.18	-72.09	14,364,636.089	890,288.073	39.524385651°N	107.659995810°W
1,300.00	12.00	324.79	1,287.61	119.17	-84.08	14,364,653.078	890,276.086	39.524431285°N	107.660040051°W
1,400.00	12.00	324.79	1,385.42	136.16	-96.07	14,364,670.066	890,264.100	39.524476919°N	107.660084292°W
1,500.00	12.00	324.79	1,483.24	153.14	-108.05	14,364,687.054	890,252.114	39.524522553°N	107.660128532°W
1,600.00	12.00	324.79	1,581.05	170.13	-120.04	14,364,704.042	890,240.127	39.524568186°N	107.660172773°W
1,613.51	12.00	324.79	1,594.27	172.43	-121.66	14,364,706.337	890,238.508	39.524574352°N	107.660178750°W
Drop 1.5°/100 at 1614 MD/1594 TVD									
1,700.00	10.70	324.79	1,679.06	186.34	-131.47	14,364,720.246	890,228.694	39.524611715°N	107.660214972°W
1,800.00	9.20	324.79	1,777.56	200.46	-141.44	14,364,734.368	890,218.730	39.524649648°N	107.660251748°W
1,900.00	7.70	324.79	1,876.47	212.47	-149.91	14,364,746.378	890,210.256	39.524681910°N	107.660283025°W
2,000.00	6.20	324.79	1,975.73	222.36	-156.89	14,364,756.269	890,203.278	39.524708478°N	107.660308782°W
2,100.00	4.70	324.79	2,075.27	230.12	-162.37	14,364,764.032	890,197.800	39.524729333°N	107.660329001°W
2,200.00	3.20	324.79	2,175.03	235.75	-166.34	14,364,769.665	890,193.826	39.524744462°N	107.660343668°W
2,300.00	1.70	324.79	2,274.94	239.25	-168.81	14,364,773.161	890,191.359	39.524753855°N	107.660352774°W
2,400.00	0.20	324.79	2,374.92	240.61	-169.77	14,364,774.519	890,190.401	39.524757503°N	107.660356311°W
2,413.51	0.00	0.00	2,388.43	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
Vertical at 2414 MD/2388 TVD									
2,500.00	0.00	0.00	2,474.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
2,600.00	0.00	0.00	2,574.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
2,700.00	0.00	0.00	2,674.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
2,800.00	0.00	0.00	2,774.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
2,900.00	0.00	0.00	2,874.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
3,000.00	0.00	0.00	2,974.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
3,100.00	0.00	0.00	3,074.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
3,200.00	0.00	0.00	3,174.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
3,300.00	0.00	0.00	3,274.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
3,400.00	0.00	0.00	3,374.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
3,500.00	0.00	0.00	3,474.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
3,600.00	0.00	0.00	3,574.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
3,700.00	0.00	0.00	3,674.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
3,800.00	0.00	0.00	3,774.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
3,900.00	0.00	0.00	3,874.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
3,990.08	0.00	0.00	3,965.00	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
Mesaverde									
4,000.00	0.00	0.00	3,974.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
4,100.00	0.00	0.00	4,074.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
4,200.00	0.00	0.00	4,174.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
4,300.00	0.00	0.00	4,274.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
4,400.00	0.00	0.00	4,374.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well Antero Dixon B13 (111312) - Slot B13
Company:	Antero Resources	TVD Reference:	KB @ 5544.00ft
Project:	Dixon (NAD 83)	MD Reference:	KB @ 5544.00ft
Site:	Dixon B	North Reference:	Grid
Well:	Antero Dixon B13 (111312)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Antero Dixon B13		
Design:	Antero Dixon B13 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
4,500.00	0.00	0.00	4,474.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
4,600.00	0.00	0.00	4,574.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
4,700.00	0.00	0.00	4,674.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
4,750.08	0.00	0.00	4,725.00	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
Price Coal									
4,800.00	0.00	0.00	4,774.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
4,900.00	0.00	0.00	4,874.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
5,000.00	0.00	0.00	4,974.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
5,100.00	0.00	0.00	5,074.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
5,200.00	0.00	0.00	5,174.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
5,300.00	0.00	0.00	5,274.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
5,400.00	0.00	0.00	5,374.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
5,500.00	0.00	0.00	5,474.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
5,600.00	0.00	0.00	5,574.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
5,650.08	0.00	0.00	5,625.00	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
Top Gas									
5,700.00	0.00	0.00	5,674.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
5,800.00	0.00	0.00	5,774.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
5,900.00	0.00	0.00	5,874.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
6,000.00	0.00	0.00	5,974.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
6,100.00	0.00	0.00	6,074.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
6,200.00	0.00	0.00	6,174.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
6,300.00	0.00	0.00	6,274.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
6,400.00	0.00	0.00	6,374.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
6,475.08	0.00	0.00	6,450.00	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
Cameo									
6,500.00	0.00	0.00	6,474.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
6,600.00	0.00	0.00	6,574.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
6,700.00	0.00	0.00	6,674.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
6,800.00	0.00	0.00	6,774.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
6,900.00	0.00	0.00	6,874.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
7,000.00	0.00	0.00	6,974.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
7,100.00	0.00	0.00	7,074.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
7,200.00	0.00	0.00	7,174.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
7,300.00	0.00	0.00	7,274.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
7,375.08	0.00	0.00	7,350.00	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
Rollins									
7,400.00	0.00	0.00	7,374.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
7,500.00	0.00	0.00	7,474.92	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
7,575.07	0.00	0.00	7,549.99	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
TD at 7575 MD/7550 TVD									
7,575.08	0.00	0.00	7,550.00	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
BH B13									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
BH B13	0.00	360.00	7,550.00	240.63	-169.78	14,364,774.539	890,190.387	39.524757556°N	107.660356362°W
- plan hits target center									
- Circle (radius 25.00)									

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well Antero Dixon B13 (111312) - Slot B13
Company:	Antero Resources	TVD Reference:	KB @ 5544.00ft
Project:	Dixon (NAD 83)	MD Reference:	KB @ 5544.00ft
Site:	Dixon B	North Reference:	Grid
Well:	Antero Dixon B13 (111312)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Antero Dixon B13		
Design:	Antero Dixon B13 P01		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,000.00	994.16	Surf Csg at 1000 MD/TVD	5.50	6.00	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
0.00	0.00	Wasatch			
3,990.08	3,965.00	Mesaverde			
4,750.08	4,725.00	Price Coal			
5,650.08	5,625.00	Top Gas			
6,475.08	6,450.00	Cameo			
7,375.08	7,350.00	Rollins			

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 1.5°/100 at 200 MD/TVD	
1,000.00	994.16	68.20	-48.12	Hold 12° inc at 1000 MD/994 TVD	
1,613.51	1,594.27	172.43	-121.66	Drop 1.5°/100 at 1614 MD/1594 TVD	
2,413.51	2,388.43	240.63	-169.78	Vertical at 2414 MD/2388 TVD	
7,575.07	7,549.99	240.63	-169.78	TD at 7575 MD/7550 TVD	