



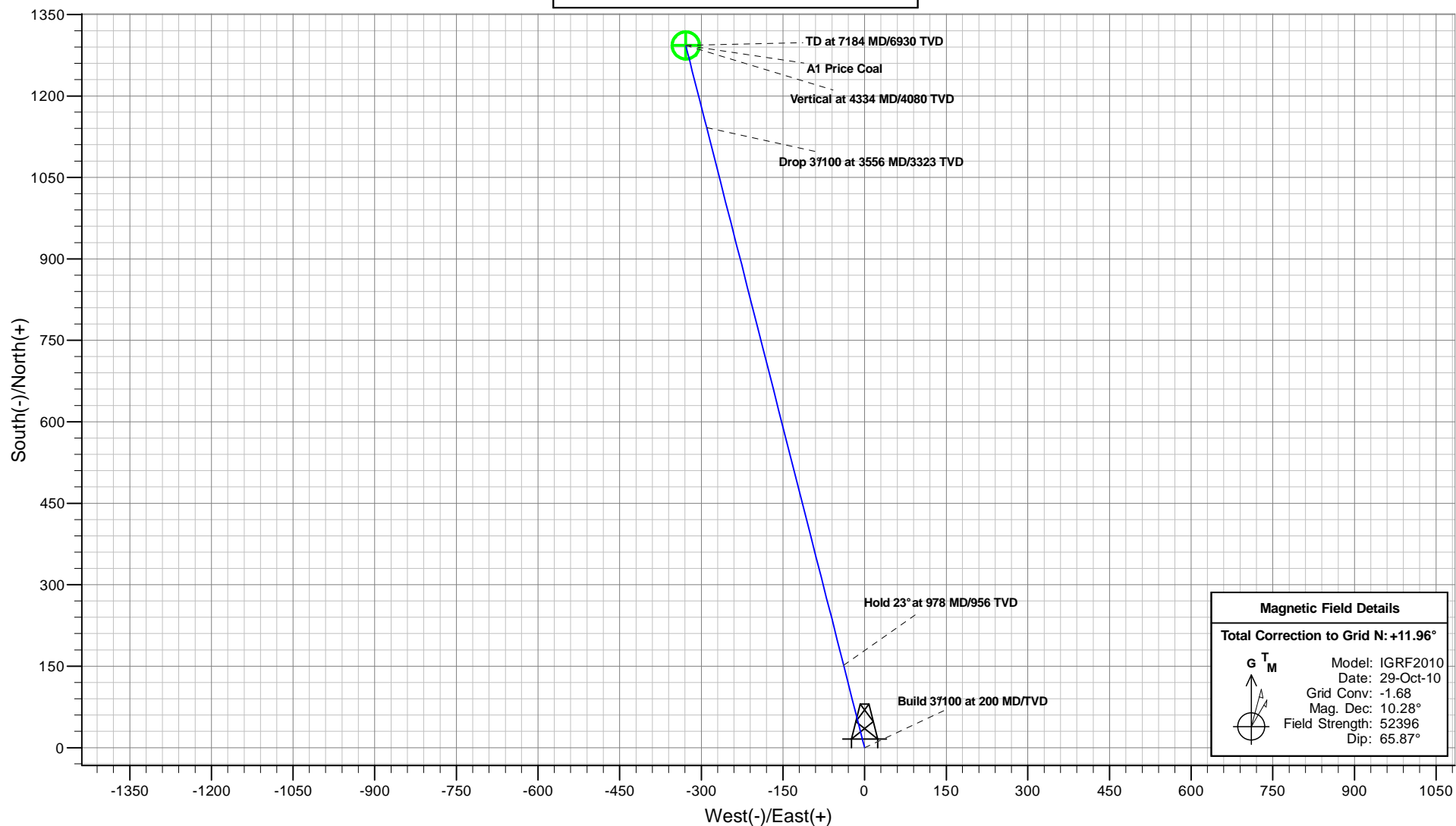
Antero Resources

Three Siblings A1



PLAN VIEW

Project: Three Siblings
Site: Three Siblings A Pad
Well: Three Siblings A1 (111196)
Wellbore: Three Siblings A1
Design: P02



Magnetic Field Details

Total Correction to Grid N: +11.96°



Model: IGRF2010
Date: 29-Oct-10
Grid Conv: -1.68
Mag. Dec: 10.28°
Field Strength: 52396
Dip: 65.87°

Plan: P02
Created By: ARK Directional Services
Date: 16:25, July 29 2010

PROJECT DETAILS: Three Siblings

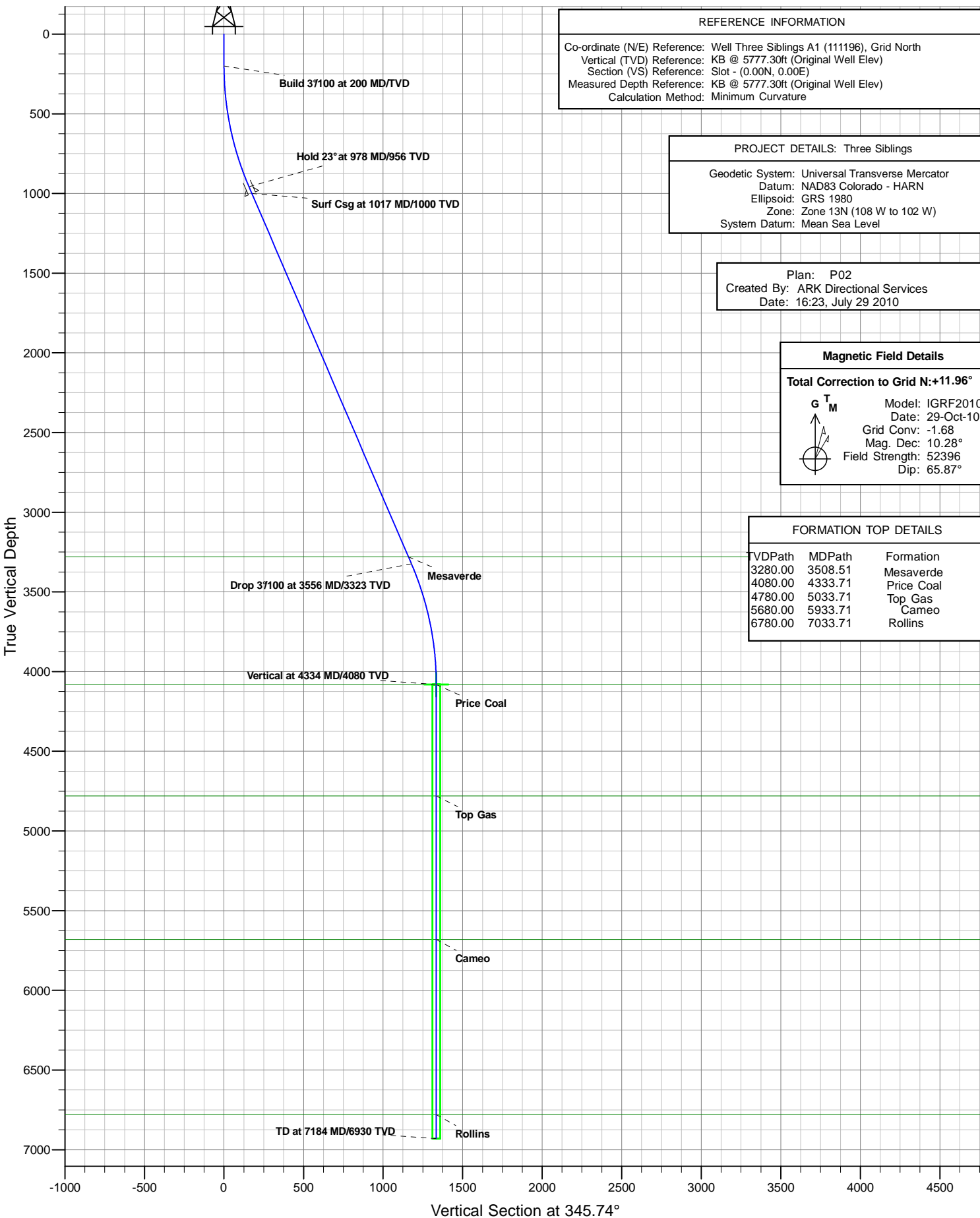
Geodetic System: Universal Transverse Mercator
Datum: NAD83 Colorado - HARN
Ellipsoid: GRS 1980
Zone: Zone 13N (108 W to 102 W)
System Datum: Mean Sea Level

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well Three Siblings A1 (111196), Grid North
Vertical (TVD) Reference: KB @ 5777.30ft (Original Well Elev)
Section (VS) Reference: Slot - (0.00N, 0.00E)
Measured Depth Reference: KB @ 5777.30ft (Original Well Elev)
Calculation Method: Minimum Curvature

Three Siblings A1 (111196)

VERTICAL SECTION VIEW



Antero Resources

Three Siblings

Three Siblings A Pad

Three Siblings A1 (111196)

Three Siblings A1

Plan: P02

Standard Planning Report - Geographic

29 July, 2010

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well Three Siblings A1 (111196)
Company:	Antero Resources	TVD Reference:	KB @ 5777.30ft (Original Well Elev)
Project:	Three Siblings	MD Reference:	KB @ 5777.30ft (Original Well Elev)
Site:	Three Siblings A Pad	North Reference:	Grid
Well:	Three Siblings A1 (111196)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Three Siblings A1		
Design:	P02		

Project	Three Siblings		
Map System:	Universal Transverse Mercator	System Datum:	Mean Sea Level
Geo Datum:	NAD83 Colorado - HARN		
Map Zone:	Zone 13N (108 W to 102 W)		

Site	Three Siblings A Pad		
Site Position:		Northing:	14,376,392.458 usft
From:	Lat/Long	Easting:	897,415.836 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13.20 in
		Latitude:	39.557214677°N
		Longitude:	107.635966268°W
		Grid Convergence:	-1.68 °

Well	Three Siblings A1 (111196)		
Well Position	+N/-S	0.00 ft	Northing:
	+E/-W	0.00 ft	Easting:
Position Uncertainty	0.00 ft	Wellhead Elevation:	
		Latitude:	39.557214677°N
		Longitude:	107.635966268°W
		Ground Level:	5,753.30 ft

Wellbore	Three Siblings A1				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	2010/10/29	10.28	65.87	52,396

Design	P02				
Audit Notes:					
Version:	Phase:	PROTOTYPE		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.00	0.00	0.00	345.74	

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(ft)	(ft)	Rate	Rate	Rate	(°)	
(ft)			(ft)			(°/100ft)	(°/100ft)	(°/100ft)		
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	
978.18	23.35	345.74	956.83	151.54	-38.50	3.00	3.00	0.00	345.74	
3,555.53	23.35	345.74	3,323.17	1,141.43	-290.00	0.00	0.00	0.00	0.00	
4,333.71	0.00	0.00	4,080.00	1,292.97	-328.51	3.00	-3.00	0.00	180.00	A1 Price Coal
7,183.71	0.00	0.00	6,930.00	1,292.97	-328.51	0.00	0.00	0.00	0.00	

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well Three Siblings A1 (111196)
Company:	Antero Resources	TVD Reference:	KB @ 5777.30ft (Original Well Elev)
Project:	Three Siblings	MD Reference:	KB @ 5777.30ft (Original Well Elev)
Site:	Three Siblings A Pad	North Reference:	Grid
Well:	Three Siblings A1 (111196)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Three Siblings A1		
Design:	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	14,376,392.458	897,415.836	39.557214677°N	107.635966268°W	
200.00	0.00	0.00	200.00	0.00	0.00	14,376,392.458	897,415.836	39.557214677°N	107.635966268°W	
Build 3°/100 at 200 MD/TVD										
978.18	23.35	345.74	956.83	151.54	-38.50	14,376,543.998	897,377.334	39.557627330°N	107.636118476°W	
Hold 23° at 978 MD/956 TVD										
1,025.20	23.35	345.74	1,000.00	169.60	-43.09	14,376,562.058	897,372.746	39.557676508°N	107.636136615°W	
Surf Csg at 1017 MD/1000 TVD										
3,508.51	23.35	345.74	3,280.00	1,123.37	-285.41	14,377,515.822	897,130.422	39.560273649°N	107.637094622°W	
Mesaverde										
3,555.53	23.35	345.74	3,323.17	1,141.43	-290.00	14,377,533.881	897,125.834	39.560322827°N	107.637112763°W	
Drop 3°/100 at 3556 MD/3323 TVD										
4,333.71	0.00	0.00	4,080.00	1,292.97	-328.51	14,377,685.422	897,087.332	39.560735478°N	107.637264985°W	
Vertical at 4334 MD/4080 TVD - Price Coal - A1 Price Coal										
5,033.71	0.00	0.00	4,780.00	1,292.97	-328.51	14,377,685.422	897,087.332	39.560735478°N	107.637264985°W	
Top Gas										
5,933.71	0.00	0.00	5,680.00	1,292.97	-328.51	14,377,685.422	897,087.332	39.560735478°N	107.637264985°W	
Cameo										
7,033.71	0.00	0.00	6,780.00	1,292.97	-328.51	14,377,685.422	897,087.332	39.560735478°N	107.637264985°W	
Rollins										
7,183.71	0.00	0.00	6,930.00	1,292.97	-328.51	14,377,685.422	897,087.332	39.560735478°N	107.637264985°W	
TD at 7184 MD/6930 TVD										

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	
A1 Price Coal - plan hits target center - Circle (radius 25.00)	0.00	0.01	4,080.00	1,292.97	-328.51	14,377,685.422	897,087.332	39.560735478°N	107.637264985°W	

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,025.20	1,000.00	Surf Csg at 1017 MD/1000 TVD	5.50	6.00	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,508.51	3,280.00	Mesaverde				
4,333.71	4,080.00	Price Coal				
5,033.71	4,780.00	Top Gas				
5,933.71	5,680.00	Cameo				
7,033.71	6,780.00	Rollins				

ARK Directional Services

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Site:	Three Siblings A Pad	North Reference:	Grid
Well:	Three Siblings A1 (111196)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Three Siblings A1		
Design:	P02		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
200.00	200.00	0.00	0.00	Build 3°/100 at 200 MD/TVD
978.18	956.83	151.54	-38.50	Hold 23° at 978 MD/956 TVD
3,555.53	3,323.17	1,141.43	-290.00	Drop 3°/100 at 3556 MD/3323 TVD
4,333.71	4,080.00	1,292.97	-328.51	Vertical at 4334 MD/4080 TVD
7,183.71	6,930.00	1,292.97	-328.51	TD at 7184 MD/6930 TVD