

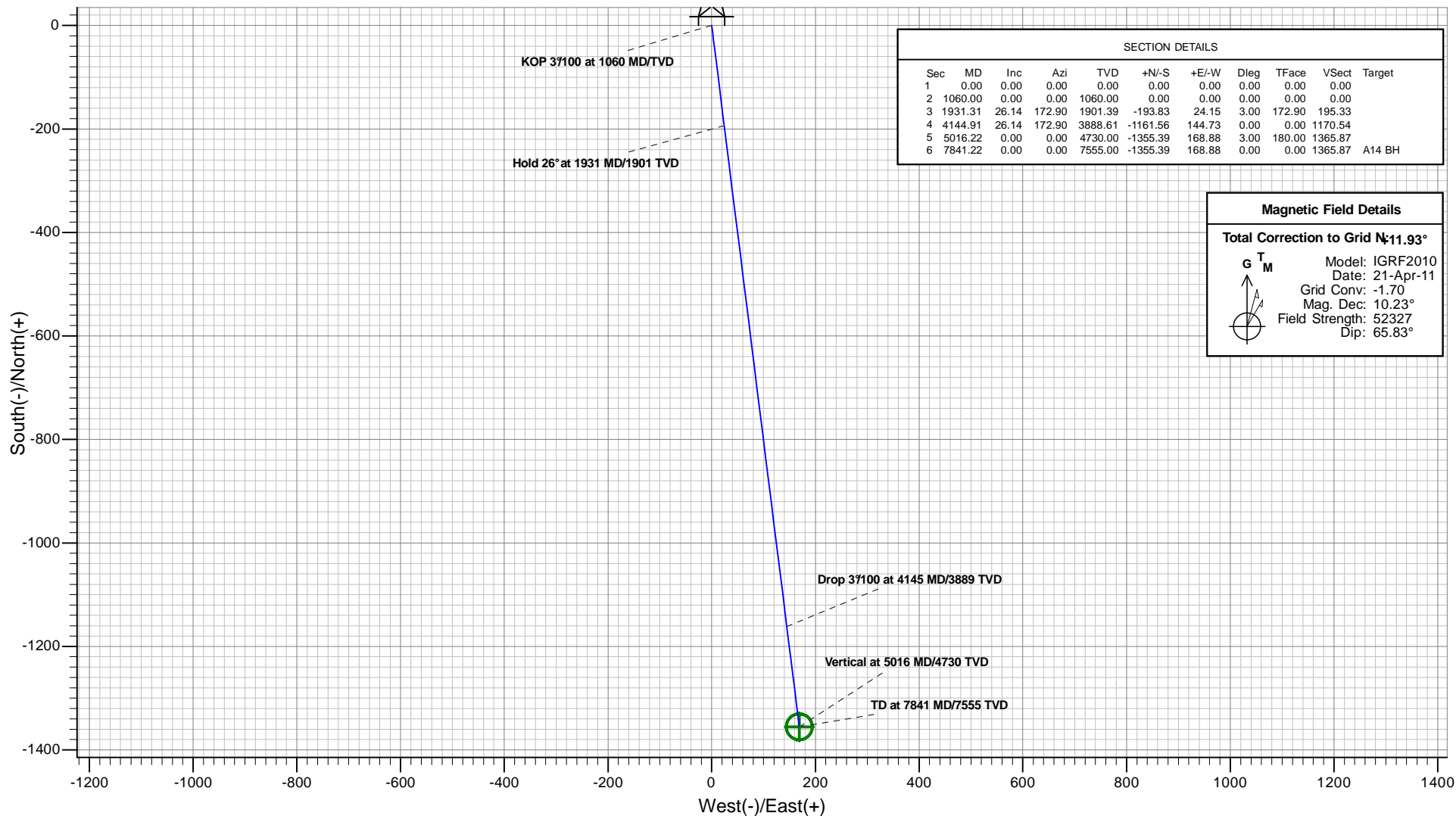


PLAN VIEW

Antero Resources

Burckle A14 (111335)

Project: Burckle
Site: Burckle A Pad
Well: Burckle A14 (111335)
Wellbore: A14
Design: Burckle A14_P01



Plan: Burckle A14_P01
Created By: ARK Directional Services
Date: 9:33, January 25 2011

PROJECT DETAILS: Burckle
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: Well Burckle A14 (111335) - Slot A14, Grid North
Vertical (TVD) Reference: KB @ 5583.00ft (Original Well Elev)
Section (VS) Reference: Slot - A14(0.00N, 0.00E)
Measured Depth Reference: KB @ 5583.00ft (Original Well Elev)
Calculation Method: Minimum Curvature

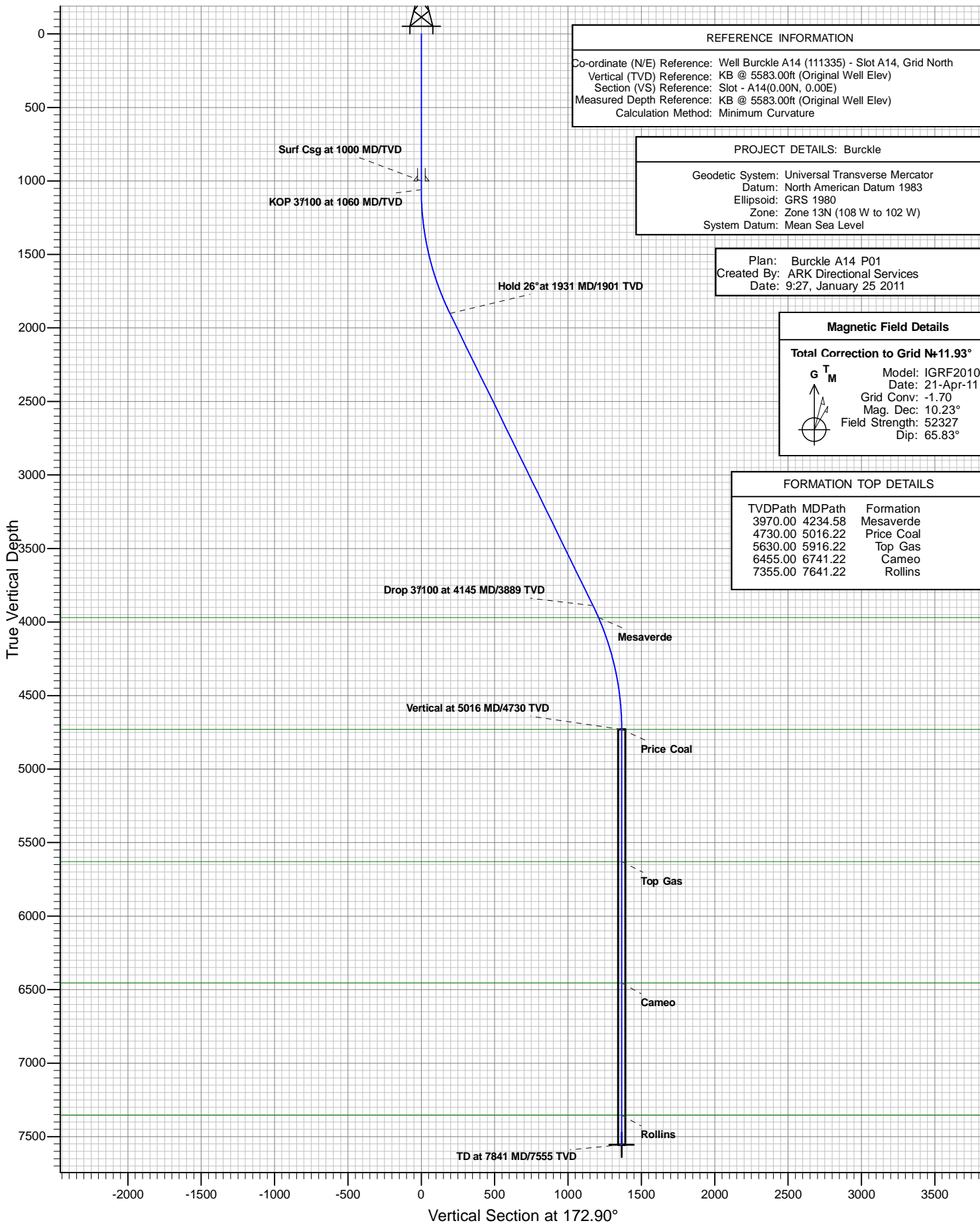


Antero Resources



VERTICAL SECTION VIEW

Burckle A14 (111335)



Antero Resources

Burckle

Burckle A Pad

Burckle A14 (111335) - Slot A14

A14

Plan: Burckle A14 P01

Standard Planning Report - Geographic

25 January, 2011

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well Burckle A14 (111335) - Slot A14
Company:	Antero Resources	TVD Reference:	KB @ 5583.00ft (Original Well Elev)
Project:	Burckle	MD Reference:	KB @ 5583.00ft (Original Well Elev)
Site:	Burckle A Pad	North Reference:	Grid
Well:	Burckle A14 (111335)	Survey Calculation Method:	Minimum Curvature
Wellbore:	A14		
Design:	Burckle A14 P01		

Project	Burckle		
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		Burckle A Pad			
Site Position:		Northing:	14,365,035.774 usft	Latitude:	39.525250278°N
From:	Map	Easting:	887,434.870 usft	Longitude:	107.670145154°W
Position Uncertainty:	0.00 ft	Slot Radius:	13.20 in	Grid Convergence:	-1.70 °

Well	Burckle A14 (111335) - Slot A14					
Well Position	+N/-S	0.00 ft	Northing:	14,365,044.449 usft	Latitude:	39.525270898°N
	+E/-W	0.00 ft	Easting:	887,395.822 usft	Longitude:	107.670284393°W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,559.00 ft

Wellbore	A14				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2011/04/21	10.23	65.83	52,327

Design	Burckle A14 P01				
Audit Notes:					
Version:	Phase:	PROTOTYPE		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	7,555.00	0.00	0.00	172.90	

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	
1,931.31	26.14	172.90	1,901.40	-193.83	24.15	3.00	3.00	0.00	172.90	
4,144.91	26.14	172.90	3,888.61	-1,161.56	144.73	0.00	0.00	0.00	0.00	
5,016.22	0.00	0.00	4,730.00	-1,355.39	168.88	3.00	-3.00	0.00	180.00	
7,841.22	0.00	0.00	7,555.00	-1,355.39	168.88	0.00	0.00	0.00	0.00	A14 BH

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well Burckle A14 (111335) - Slot A14
Company:	Antero Resources	TVD Reference:	KB @ 5583.00ft (Original Well Elev)
Project:	Burckle	MD Reference:	KB @ 5583.00ft (Original Well Elev)
Site:	Burckle A Pad	North Reference:	Grid
Well:	Burckle A14 (111335)	Survey Calculation Method:	Minimum Curvature
Wellbore:	A14		
Design:	Burckle A14 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	14,365,044.449	887,395.822	39.525270898°N	107.670284393°W
100.00	0.00	0.00	100.00	0.00	0.00	14,365,044.449	887,395.822	39.525270898°N	107.670284393°W
200.00	0.00	0.00	200.00	0.00	0.00	14,365,044.449	887,395.822	39.525270898°N	107.670284393°W
300.00	0.00	0.00	300.00	0.00	0.00	14,365,044.449	887,395.822	39.525270898°N	107.670284393°W
400.00	0.00	0.00	400.00	0.00	0.00	14,365,044.449	887,395.822	39.525270898°N	107.670284393°W
500.00	0.00	0.00	500.00	0.00	0.00	14,365,044.449	887,395.822	39.525270898°N	107.670284393°W
600.00	0.00	0.00	600.00	0.00	0.00	14,365,044.449	887,395.822	39.525270898°N	107.670284393°W
700.00	0.00	0.00	700.00	0.00	0.00	14,365,044.449	887,395.822	39.525270898°N	107.670284393°W
800.00	0.00	0.00	800.00	0.00	0.00	14,365,044.449	887,395.822	39.525270898°N	107.670284393°W
900.00	0.00	0.00	900.00	0.00	0.00	14,365,044.449	887,395.822	39.525270898°N	107.670284393°W
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,365,044.449	887,395.822	39.525270898°N	107.670284393°W
Surf Csg at 1000 MD/TVD									
1,060.00	0.00	0.00	1,060.00	0.00	0.00	14,365,044.449	887,395.822	39.525270898°N	107.670284393°W
KOP 3°/100 at 1060 MD/TVD									
1,100.00	1.20	172.90	1,100.00	-0.42	0.05	14,365,044.033	887,395.874	39.525269762°N	107.670284166°W
1,200.00	4.20	172.90	1,199.87	-5.09	0.63	14,365,039.359	887,396.456	39.525256987°N	107.670281611°W
1,300.00	7.20	172.90	1,299.37	-14.94	1.86	14,365,029.504	887,397.684	39.525230051°N	107.670276225°W
1,400.00	10.20	172.90	1,398.21	-29.95	3.73	14,365,014.496	887,399.554	39.525189029°N	107.670268023°W
1,500.00	13.20	172.90	1,496.12	-50.07	6.24	14,364,994.375	887,402.061	39.525134033°N	107.670257026°W
1,600.00	16.20	172.90	1,592.83	-75.25	9.38	14,364,969.197	887,405.198	39.525065214°N	107.670243265°W
1,700.00	19.20	172.90	1,688.09	-105.42	13.14	14,364,939.031	887,408.957	39.524982761°N	107.670226778°W
1,800.00	22.20	172.90	1,781.62	-140.49	17.51	14,364,903.959	887,413.327	39.524886899°N	107.670207609°W
1,900.00	25.20	172.90	1,873.18	-180.37	22.47	14,364,864.077	887,418.296	39.524777891°N	107.670185812°W
1,931.31	26.14	172.90	1,901.40	-193.83	24.15	14,364,850.620	887,419.973	39.524741108°N	107.670178457°W
Hold 26° at 1931 MD/1901 TVD									
2,000.00	26.14	172.90	1,963.06	-223.86	27.89	14,364,820.589	887,423.715	39.524659026°N	107.670162044°W
2,100.00	26.14	172.90	2,052.84	-267.58	33.34	14,364,776.872	887,429.162	39.524539534°N	107.670138151°W
2,200.00	26.14	172.90	2,142.61	-311.29	38.79	14,364,733.155	887,434.610	39.524420042°N	107.670114259°W
2,300.00	26.14	172.90	2,232.38	-355.01	44.24	14,364,689.437	887,440.057	39.524300551°N	107.670090366°W
2,400.00	26.14	172.90	2,322.15	-398.73	49.68	14,364,645.720	887,445.504	39.524181059°N	107.670066473°W
2,500.00	26.14	172.90	2,411.93	-442.45	55.13	14,364,602.003	887,450.951	39.524061568°N	107.670042580°W
2,600.00	26.14	172.90	2,501.70	-486.16	60.58	14,364,558.286	887,456.399	39.523942076°N	107.670018688°W
2,700.00	26.14	172.90	2,591.47	-529.88	66.02	14,364,514.569	887,461.846	39.523822585°N	107.669994795°W
2,800.00	26.14	172.90	2,681.24	-573.60	71.47	14,364,470.851	887,467.293	39.523703093°N	107.669970903°W
2,900.00	26.14	172.90	2,771.02	-617.32	76.92	14,364,427.134	887,472.740	39.523583602°N	107.669947011°W
3,000.00	26.14	172.90	2,860.79	-661.03	82.37	14,364,383.417	887,478.187	39.523464110°N	107.669923119°W
3,100.00	26.14	172.90	2,950.56	-704.75	87.81	14,364,339.700	887,483.635	39.523344618°N	107.669899227°W
3,200.00	26.14	172.90	3,040.33	-748.47	93.26	14,364,295.983	887,489.082	39.523225127°N	107.669875335°W
3,300.00	26.14	172.90	3,130.11	-792.18	98.71	14,364,252.265	887,494.529	39.523105635°N	107.669851443°W
3,400.00	26.14	172.90	3,219.88	-835.90	104.15	14,364,208.548	887,499.976	39.522986143°N	107.669827551°W
3,500.00	26.14	172.90	3,309.65	-879.62	109.60	14,364,164.831	887,505.424	39.522866652°N	107.669803659°W
3,600.00	26.14	172.90	3,399.43	-923.34	115.05	14,364,121.114	887,510.871	39.522747160°N	107.669779768°W
3,700.00	26.14	172.90	3,489.20	-967.05	120.50	14,364,077.397	887,516.318	39.522627668°N	107.669755876°W
3,800.00	26.14	172.90	3,578.97	-1,010.77	125.94	14,364,033.680	887,521.765	39.522508177°N	107.669731985°W
3,900.00	26.14	172.90	3,668.74	-1,054.49	131.39	14,363,989.962	887,527.213	39.522388685°N	107.669708094°W
4,000.00	26.14	172.90	3,758.52	-1,098.21	136.84	14,363,946.245	887,532.660	39.522269193°N	107.669684202°W
4,100.00	26.14	172.90	3,848.29	-1,141.92	142.29	14,363,902.528	887,538.107	39.522149702°N	107.669660311°W
4,144.91	26.14	172.90	3,888.61	-1,161.56	144.73	14,363,882.895	887,540.553	39.522096038°N	107.669649582°W
Drop 3°/100 at 4145 MD/3889 TVD									
4,200.00	24.49	172.90	3,938.40	-1,184.93	147.64	14,363,859.522	887,543.466	39.522032154°N	107.669636809°W
4,234.58	23.45	172.90	3,970.00	-1,198.87	149.38	14,363,845.584	887,545.202	39.521994056°N	107.669629192°W
Mesaverde									
4,300.00	21.49	172.90	4,030.45	-1,223.68	152.47	14,363,820.775	887,548.294	39.521926246°N	107.669615634°W
4,400.00	18.49	172.90	4,124.42	-1,257.59	156.70	14,363,786.861	887,552.519	39.521833550°N	107.669597101°W

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well Burckle A14 (111335) - Slot A14
Company:	Antero Resources	TVD Reference:	KB @ 5583.00ft (Original Well Elev)
Project:	Burckle	MD Reference:	KB @ 5583.00ft (Original Well Elev)
Site:	Burckle A Pad	North Reference:	Grid
Well:	Burckle A14 (111335)	Survey Calculation Method:	Minimum Curvature
Wellbore:	A14		
Design:	Burckle A14 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	15.49	172.90	4,220.05	-1,286.58	160.31	14,363,757.874	887,556.131	39.521754320°N	107.669581260°W
4,600.00	12.49	172.90	4,317.07	-1,310.56	163.30	14,363,733.893	887,559.119	39.521688773°N	107.669568154°W
4,700.00	9.49	172.90	4,415.23	-1,329.47	165.65	14,363,714.984	887,561.475	39.521637089°N	107.669557821°W
4,800.00	6.49	172.90	4,514.25	-1,343.25	167.37	14,363,701.198	887,563.193	39.521599408°N	107.669550287°W
4,900.00	3.49	172.90	4,613.86	-1,351.88	168.45	14,363,692.574	887,564.268	39.521575835°N	107.669545574°W
5,000.00	0.49	172.90	4,713.78	-1,355.32	168.87	14,363,689.134	887,564.696	39.521566434°N	107.669543694°W
5,016.22	0.00	0.00	4,730.00	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
Vertical at 5016 MD/4730 TVD - Price Coal									
5,100.00	0.00	0.00	4,813.78	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
5,200.00	0.00	0.00	4,913.78	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
5,300.00	0.00	0.00	5,013.78	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
5,400.00	0.00	0.00	5,113.78	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
5,500.00	0.00	0.00	5,213.78	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
5,600.00	0.00	0.00	5,313.78	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
5,700.00	0.00	0.00	5,413.78	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
5,800.00	0.00	0.00	5,513.78	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
5,900.00	0.00	0.00	5,613.78	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
5,916.22	0.00	0.00	5,630.00	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
Top Gas									
6,000.00	0.00	0.00	5,713.78	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
6,100.00	0.00	0.00	5,813.78	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
6,200.00	0.00	0.00	5,913.78	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
6,300.00	0.00	0.00	6,013.78	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
6,400.00	0.00	0.00	6,113.78	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
6,500.00	0.00	0.00	6,213.78	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
6,600.00	0.00	0.00	6,313.78	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
6,700.00	0.00	0.00	6,413.78	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
6,741.22	0.00	0.00	6,455.00	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
Cameo									
6,800.00	0.00	0.00	6,513.78	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
6,900.00	0.00	0.00	6,613.78	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
7,000.00	0.00	0.00	6,713.78	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
7,100.00	0.00	0.00	6,813.78	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
7,200.00	0.00	0.00	6,913.78	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
7,300.00	0.00	0.00	7,013.78	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
7,400.00	0.00	0.00	7,113.78	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
7,500.00	0.00	0.00	7,213.78	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
7,600.00	0.00	0.00	7,313.78	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
7,641.22	0.00	0.00	7,355.00	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
Rollins									
7,700.00	0.00	0.00	7,413.78	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
7,800.00	0.00	0.00	7,513.78	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
7,841.22	0.00	0.00	7,555.00	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
TD at 7841 MD/7555 TVD - A14 BH									

ARK Directional Services

Planning Report - Geographic

Database:	EDM SERVER DB	Local Co-ordinate Reference:	Well Burckle A14 (111335) - Slot A14
Company:	Antero Resources	TVD Reference:	KB @ 5583.00ft (Original Well Elev)
Project:	Burckle	MD Reference:	KB @ 5583.00ft (Original Well Elev)
Site:	Burckle A Pad	North Reference:	Grid
Well:	Burckle A14 (111335)	Survey Calculation Method:	Minimum Curvature
Wellbore:	A14		
Design:	Burckle A14 P01		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
- Shape									
A14 BH	0.00	360.00	7,555.00	-1,355.39	168.88	14,363,689.066	887,564.705	39.521566248°N	107.669543657°W
- plan hits target center									
- Circle (radius 25.00)									

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

Formations					
Measured Depth	Vertical Depth	Name		Dip	Dip Direction
(ft)	(ft)			(°)	(°)
4,234.58	3,970.00	Mesaverde			
5,016.22	4,730.00	Price Coal			
5,916.22	5,630.00	Top Gas			
6,741.22	6,455.00	Cameo			
7,641.22	7,355.00	Rollins			

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
(ft)	(ft)	+N/-S	+E/-W		
(ft)	(ft)	(ft)	(ft)		
1,060.00	1,060.00	0.00	0.00	KOP 3°/100 at 1060 MD/TVD	
1,931.31	1,901.40	-193.83	24.15	Hold 26° at 1931 MD/1901 TVD	
4,144.91	3,888.61	-1,161.56	144.73	Drop 3°/100 at 4145 MD/3889 TVD	
5,016.22	4,730.00	-1,355.39	168.88	Vertical at 5016 MD/4730 TVD	
7,841.22	7,555.00	-1,355.39	168.88	TD at 7841 MD/7555 TVD	