



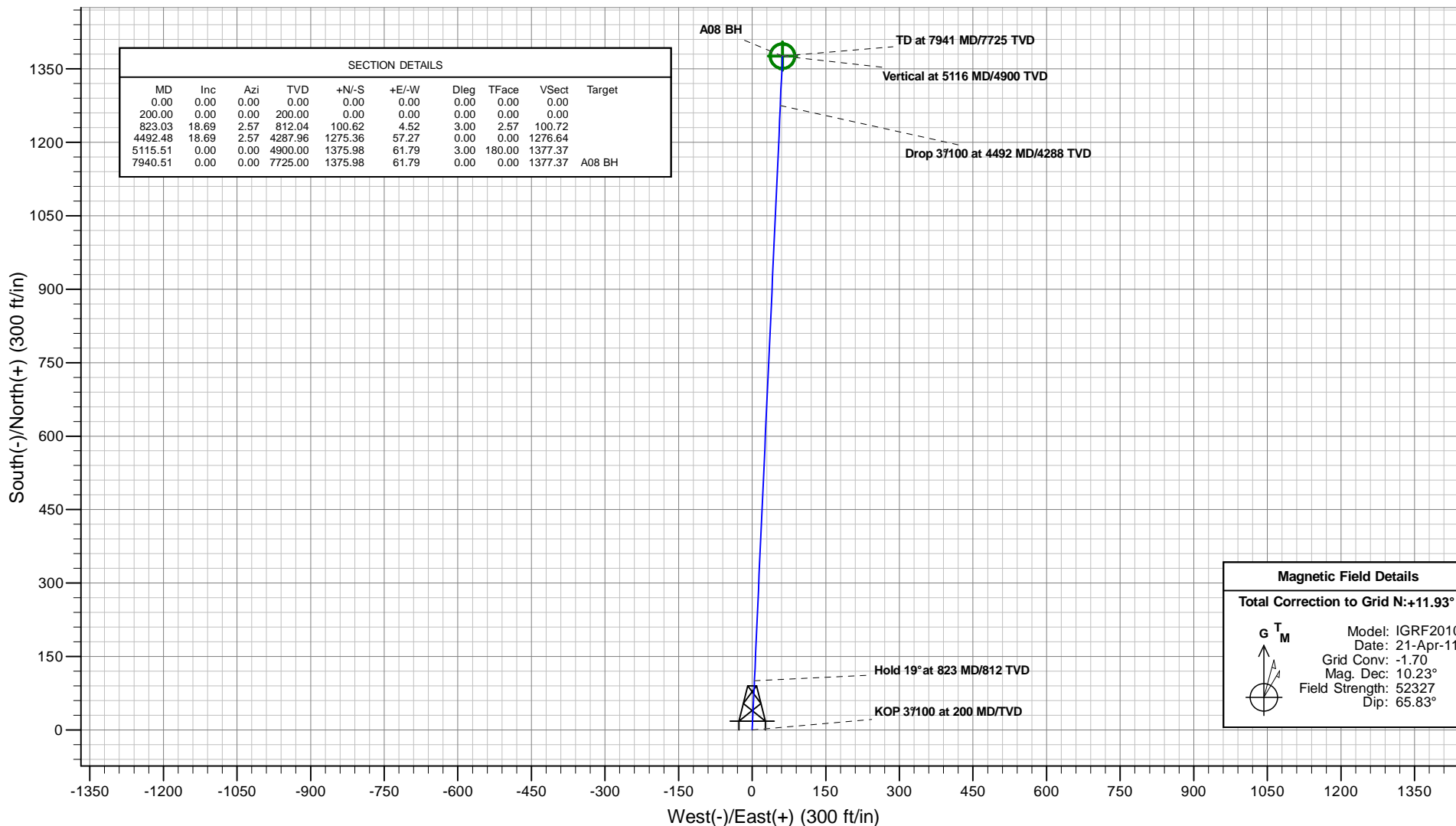
# Antero Resources

Burckle A08 (111331)



## PLAN VIEW

Project: Burckle  
Site: Burckle A Pad  
Well: Burckle A08 (111331)  
Wellbore: A08  
Design: Burckle A08 P01



Plan: Burckle A08 P01  
Created By: ARK Directional Services  
Date: 12:32, January 25 2011

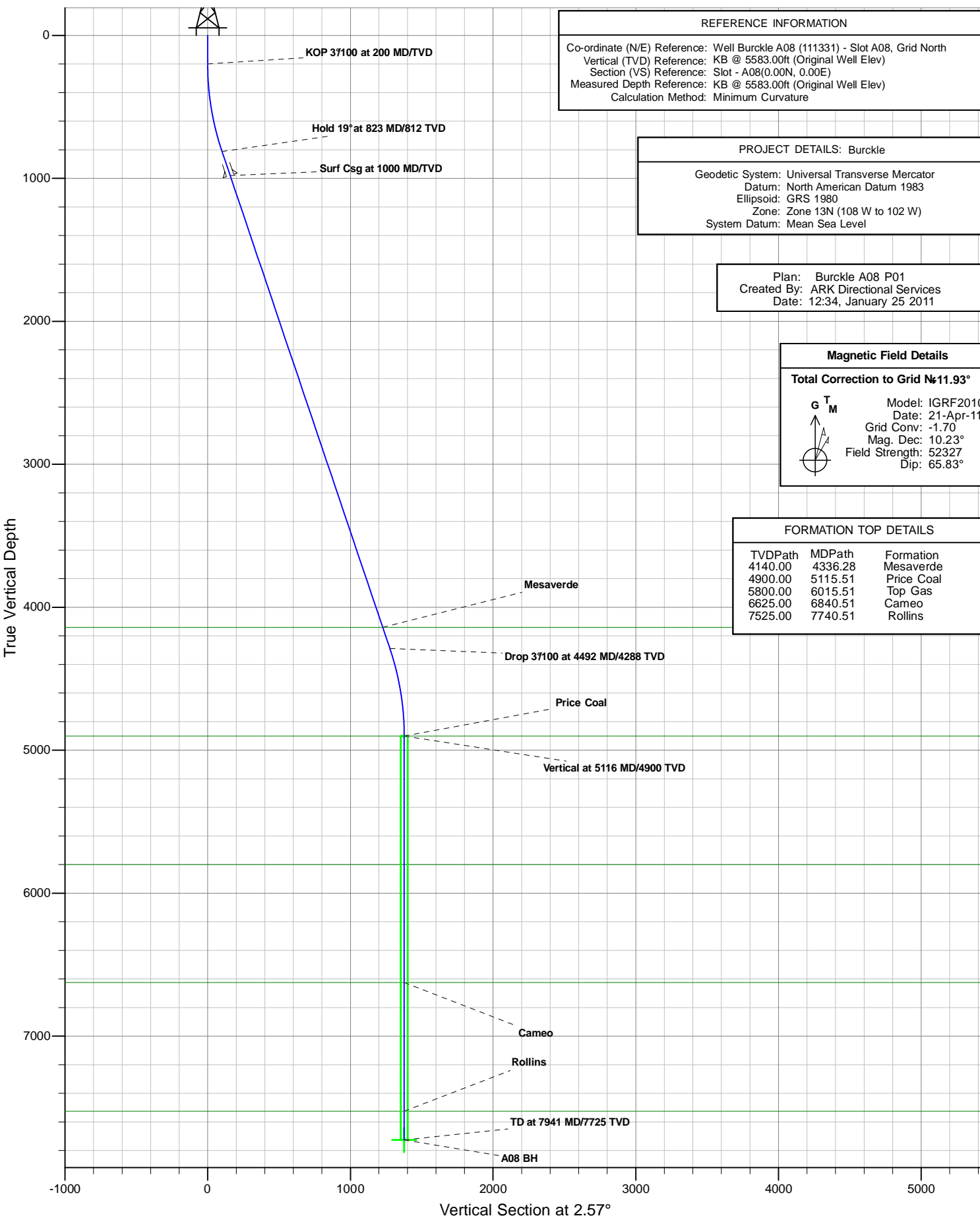
### PROJECT DETAILS: Burckle

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 A08 (111331) - Slot A08, Grid North  
Vertical (TVD) Reference: KB @ 5583.00ft (Original Well Elev)  
Section (VS) Reference: Slot - A08(0.00N, 0.00E)  
Measured Depth Reference: KB @ 5583.00ft (Original Well Elev)  
Calculation Method: Minimum Curvature

### VERTICAL SECTION VIEW



# **Antero Resources**

**Burckle**

**Burckle A Pad**

**Burckle A08 (111331) - Slot A08**

**A08**

**Plan: Burckle A08 P01**

## **Standard Planning Report - Geographic**

**25 January, 2011**

# ARK Directional Services

## Planning Report - Geographic

<b>Database:</b>	EDM 5000 SERVER DB	<b>Local Co-ordinate Reference:</b>	Well Burckle A08 (111331) - Slot A08
<b>Company:</b>	Antero Resources	<b>TVD Reference:</b>	KB @ 5583.00ft (Original Well Elev)
<b>Project:</b>	Burckle	<b>MD Reference:</b>	KB @ 5583.00ft (Original Well Elev)
<b>Site:</b>	Burckle A Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	Burckle A08 (111331)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	A08		
<b>Design:</b>	Burckle A08 P01		

<b>Project</b>	Burckle		
<b>Map System:</b>	Universal Transverse Mercator	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	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 A08 (111331) - Slot A08					
Well Position	+N/-S	0.00 ft	Northing:	14,365,057.683 usft	Latitude:	39.525309112°N
	+E/-W	0.00 ft	Easting:	887,419.249 usft	Longitude:	107.670202795°W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,559.00 ft

<b>Wellbore</b>	A08				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	21/04/2011	10.23	65.83	52,327

<b>Design</b>	Burckle A08 P01			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	2.57

<b>Plan Sections</b>										
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	
823.03	18.69	2.57	812.04	100.62	4.52	3.00	3.00	0.00	2.57	
4,492.48	18.69	2.57	4,287.96	1,275.36	57.27	0.00	0.00	0.00	0.00	
5,115.51	0.00	0.00	4,900.00	1,375.98	61.79	3.00	-3.00	0.00	180.00	
7,940.51	0.00	0.00	7,725.00	1,375.98	61.79	0.00	0.00	0.00	0.00	A08 BH

# ARK Directional Services

## Planning Report - Geographic

<b>Database:</b>	EDM 5000 SERVER DB	<b>Local Co-ordinate Reference:</b>	Well Burckle A08 (111331) - Slot A08
<b>Company:</b>	Antero Resources	<b>TVD Reference:</b>	KB @ 5583.00ft (Original Well Elev)
<b>Project:</b>	Burckle	<b>MD Reference:</b>	KB @ 5583.00ft (Original Well Elev)
<b>Site:</b>	Burckle A Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	Burckle A08 (111331)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	A08		
<b>Design:</b>	Burckle A08 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	14,365,057.683	887,419.249	39.525309112°N	107.670202795°W
100.00	0.00	0.00	100.00	0.00	0.00	14,365,057.683	887,419.249	39.525309112°N	107.670202795°W
200.00	0.00	0.00	200.00	0.00	0.00	14,365,057.683	887,419.249	39.525309112°N	107.670202795°W
<b>KOP 3°/100 at 200 MD/TVD</b>									
300.00	3.00	2.57	299.95	2.61	0.12	14,365,060.297	887,419.366	39.525316295°N	107.670202654°W
400.00	6.00	2.57	399.63	10.45	0.47	14,365,068.135	887,419.718	39.525337824°N	107.670202231°W
500.00	9.00	2.57	498.77	23.49	1.05	14,365,081.173	887,420.304	39.525373641°N	107.670201528°W
600.00	12.00	2.57	597.08	41.69	1.87	14,365,099.376	887,421.121	39.525423646°N	107.670200546°W
700.00	15.00	2.57	694.31	65.01	2.92	14,365,122.694	887,422.168	39.525487704°N	107.670199288°W
800.00	18.00	2.57	790.18	93.38	4.19	14,365,151.064	887,423.442	39.525565637°N	107.670197758°W
823.03	18.69	2.57	812.04	100.62	4.52	14,365,158.305	887,423.767	39.525585530°N	107.670197368°W
<b>Hold 19° at 823 MD/812 TVD</b>									
900.00	18.69	2.57	884.95	125.26	5.63	14,365,182.946	887,424.874	39.525653221°N	107.670196039°W
1,000.00	18.69	2.57	979.68	157.28	7.06	14,365,214.960	887,426.312	39.525741166°N	107.670194312°W
<b>Surf Csg at 1000 MD/TVD</b>									
1,100.00	18.69	2.57	1,074.40	189.29	8.50	14,365,246.974	887,427.749	39.525829111°N	107.670192585°W
1,200.00	18.69	2.57	1,169.13	221.31	9.94	14,365,278.988	887,429.187	39.525917056°N	107.670190858°W
1,300.00	18.69	2.57	1,263.85	253.32	11.38	14,365,311.002	887,430.625	39.526005001°N	107.670189132°W
1,400.00	18.69	2.57	1,358.58	285.33	12.81	14,365,343.016	887,432.062	39.526092947°N	107.670187405°W
1,500.00	18.69	2.57	1,453.31	317.35	14.25	14,365,375.030	887,433.500	39.526180892°N	107.670185678°W
1,600.00	18.69	2.57	1,548.03	349.36	15.69	14,365,407.044	887,434.938	39.526268837°N	107.670183951°W
1,700.00	18.69	2.57	1,642.76	381.38	17.13	14,365,439.058	887,436.375	39.526356782°N	107.670182225°W
1,800.00	18.69	2.57	1,737.48	413.39	18.56	14,365,471.072	887,437.813	39.526444727°N	107.670180498°W
1,900.00	18.69	2.57	1,832.21	445.40	20.00	14,365,503.086	887,439.251	39.526532672°N	107.670178771°W
2,000.00	18.69	2.57	1,926.94	477.42	21.44	14,365,535.100	887,440.688	39.526620617°N	107.670177045°W
2,100.00	18.69	2.57	2,021.66	509.43	22.88	14,365,567.113	887,442.126	39.526708562°N	107.670175318°W
2,200.00	18.69	2.57	2,116.39	541.45	24.31	14,365,599.127	887,443.564	39.526796507°N	107.670173591°W
2,300.00	18.69	2.57	2,211.11	573.46	25.75	14,365,631.141	887,445.001	39.526884453°N	107.670171864°W
2,400.00	18.69	2.57	2,305.84	605.47	27.19	14,365,663.155	887,446.439	39.526972398°N	107.670170138°W
2,500.00	18.69	2.57	2,400.57	637.49	28.63	14,365,695.169	887,447.876	39.527060343°N	107.670168411°W
2,600.00	18.69	2.57	2,495.29	669.50	30.07	14,365,727.183	887,449.314	39.527148288°N	107.670166684°W
2,700.00	18.69	2.57	2,590.02	701.52	31.50	14,365,759.197	887,450.752	39.527236233°N	107.670164958°W
2,800.00	18.69	2.57	2,684.75	733.53	32.94	14,365,791.211	887,452.189	39.527324178°N	107.670163231°W
2,900.00	18.69	2.57	2,779.47	765.54	34.38	14,365,823.225	887,453.627	39.527412123°N	107.670161504°W
3,000.00	18.69	2.57	2,874.20	797.56	35.82	14,365,855.239	887,455.065	39.527500068°N	107.670159777°W
3,100.00	18.69	2.57	2,968.92	829.57	37.25	14,365,887.253	887,456.502	39.527588013°N	107.670158051°W
3,200.00	18.69	2.57	3,063.65	861.59	38.69	14,365,919.267	887,457.940	39.527675958°N	107.670156324°W
3,300.00	18.69	2.57	3,158.38	893.60	40.13	14,365,951.281	887,459.378	39.527763904°N	107.670154597°W
3,400.00	18.69	2.57	3,253.10	925.61	41.57	14,365,983.295	887,460.815	39.527851849°N	107.670152871°W
3,500.00	18.69	2.57	3,347.83	957.63	43.00	14,366,015.309	887,462.253	39.527939794°N	107.670151144°W
3,600.00	18.69	2.57	3,442.55	989.64	44.44	14,366,047.323	887,463.691	39.528027739°N	107.670149417°W
3,700.00	18.69	2.57	3,537.28	1,021.66	45.88	14,366,079.337	887,465.128	39.528115684°N	107.670147691°W
3,800.00	18.69	2.57	3,632.01	1,053.67	47.32	14,366,111.351	887,466.566	39.528203629°N	107.670145964°W
3,900.00	18.69	2.57	3,726.73	1,085.68	48.75	14,366,143.365	887,468.004	39.528291574°N	107.670144237°W
4,000.00	18.69	2.57	3,821.46	1,117.70	50.19	14,366,175.379	887,469.441	39.528379519°N	107.670142511°W
4,100.00	18.69	2.57	3,916.18	1,149.71	51.63	14,366,207.393	887,470.879	39.528467464°N	107.670140784°W
4,200.00	18.69	2.57	4,010.91	1,181.73	53.07	14,366,239.407	887,472.317	39.528555409°N	107.670139057°W
4,300.00	18.69	2.57	4,105.64	1,213.74	54.51	14,366,271.421	887,473.754	39.528643354°N	107.670137331°W
4,336.28	18.69	2.57	4,140.00	1,225.35	55.03	14,366,283.034	887,474.276	39.528675258°N	107.670136704°W
<b>Mesaverde</b>									
4,400.00	18.69	2.57	4,200.36	1,245.75	55.94	14,366,303.435	887,475.192	39.528731299°N	107.670135604°W
4,492.48	18.69	2.57	4,287.96	1,275.36	57.27	14,366,333.040	887,476.521	39.528812627°N	107.670134007°W
<b>Drop 3°/100 at 4492 MD/4288 TVD</b>									
4,500.00	18.47	2.57	4,295.09	1,277.75	57.38	14,366,335.434	887,476.629	39.528819206°N	107.670133878°W

# ARK Directional Services

## Planning Report - Geographic

<b>Database:</b>	EDM 5000 SERVER DB	<b>Local Co-ordinate Reference:</b>	Well Burckle A08 (111331) - Slot A08
<b>Company:</b>	Antero Resources	<b>TVD Reference:</b>	KB @ 5583.00ft (Original Well Elev)
<b>Project:</b>	Burckle	<b>MD Reference:</b>	KB @ 5583.00ft (Original Well Elev)
<b>Site:</b>	Burckle A Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	Burckle A08 (111331)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	A08		
<b>Design:</b>	Burckle A08 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
4,600.00	15.47	2.57	4,390.73	1,306.90	58.69	14,366,364.581	887,477.938	39.528899273°N	107.670132306°W
4,700.00	12.47	2.57	4,487.76	1,331.01	59.77	14,366,388.687	887,479.020	39.528965495°N	107.670131006°W
4,800.00	9.47	2.57	4,585.93	1,350.01	60.62	14,366,407.687	887,479.874	39.529017689°N	107.670129981°W
4,900.00	6.47	2.57	4,684.95	1,363.85	61.25	14,366,421.528	887,480.495	39.529055713°N	107.670129235°W
5,000.00	3.47	2.57	4,784.56	1,372.49	61.63	14,366,430.174	887,480.883	39.529079462°N	107.670128768°W
5,100.00	0.47	2.57	4,884.49	1,375.92	61.79	14,366,433.599	887,481.037	39.529088872°N	107.670128584°W
5,115.51	0.00	0.00	4,900.00	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°W
Vertical at 5116 MD/4900 TVD - Price Coal									
5,200.00	0.00	0.00	4,984.49	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°W
5,300.00	0.00	0.00	5,084.49	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°W
5,400.00	0.00	0.00	5,184.49	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°W
5,500.00	0.00	0.00	5,284.49	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°W
5,600.00	0.00	0.00	5,384.49	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°W
5,700.00	0.00	0.00	5,484.49	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°W
5,800.00	0.00	0.00	5,584.49	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°W
5,900.00	0.00	0.00	5,684.49	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°W
6,000.00	0.00	0.00	5,784.49	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°W
6,015.51	0.00	0.00	5,800.00	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°W
Top Gas									
6,100.00	0.00	0.00	5,884.49	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°W
6,200.00	0.00	0.00	5,984.49	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°W
6,300.00	0.00	0.00	6,084.49	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°W
6,400.00	0.00	0.00	6,184.49	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°W
6,500.00	0.00	0.00	6,284.49	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°W
6,600.00	0.00	0.00	6,384.49	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°W
6,700.00	0.00	0.00	6,484.49	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°W
6,800.00	0.00	0.00	6,584.49	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°W
6,840.51	0.00	0.00	6,625.00	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°W
Cameo									
6,900.00	0.00	0.00	6,684.49	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°W
7,000.00	0.00	0.00	6,784.49	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°W
7,100.00	0.00	0.00	6,884.49	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°W
7,200.00	0.00	0.00	6,984.49	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°W
7,300.00	0.00	0.00	7,084.49	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°W
7,400.00	0.00	0.00	7,184.49	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°W
7,500.00	0.00	0.00	7,284.49	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°W
7,600.00	0.00	0.00	7,384.49	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°W
7,700.00	0.00	0.00	7,484.49	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°W
7,740.51	0.00	0.00	7,525.00	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°W
Rollins									
7,800.00	0.00	0.00	7,584.49	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°W
7,900.00	0.00	0.00	7,684.49	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°W
7,940.51	0.00	0.00	7,725.00	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°W
TD at 7941 MD/7725 TVD - A08 BH									

# ARK Directional Services

## Planning Report - Geographic

<b>Database:</b>	EDM 5000 SERVER DB	<b>Local Co-ordinate Reference:</b>	Well Burckle A08 (111331) - Slot A08
<b>Company:</b>	Antero Resources	<b>TVD Reference:</b>	KB @ 5583.00ft (Original Well Elev)
<b>Project:</b>	Burckle	<b>MD Reference:</b>	KB @ 5583.00ft (Original Well Elev)
<b>Site:</b>	Burckle A Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	Burckle A08 (111331)	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	A08		
<b>Design:</b>	Burckle A08 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									
A08 BH	0.00	360.00	7,725.00	1,375.98	61.79	14,366,433.662	887,481.040	39.529089045°N	107.670128580°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	979.68	Surf Csg at 1000 MD/TVD		5.50	6.00

Formations					
Measured Depth	Vertical Depth	Name		Dip	Dip Direction
(ft)	(ft)			(°)	(°)
4,336.28	4,140.00	Mesaverde			
5,115.51	4,900.00	Price Coal			
6,015.51	5,800.00	Top Gas			
6,840.51	6,625.00	Cameo			
7,740.51	7,525.00	Rollins			

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
(ft)	(ft)	+N/-S	+E/-W		
(ft)	(ft)	(ft)	(ft)		
200.00	200.00	0.00	0.00	KOP 3°/100 at 200 MD/TVD	
823.03	812.04	100.62	4.52	Hold 19° at 823 MD/812 TVD	
4,492.48	4,287.96	1,275.36	57.27	Drop 3°/100 at 4492 MD/4288 TVD	
5,115.51	4,900.00	1,375.98	61.79	Vertical at 5116 MD/4900 TVD	
7,940.51	7,725.00	1,375.98	61.79	TD at 7941 MD/7725 TVD	