



End of Well Report

Prepared for



Left Hand A09

June 13, 2011

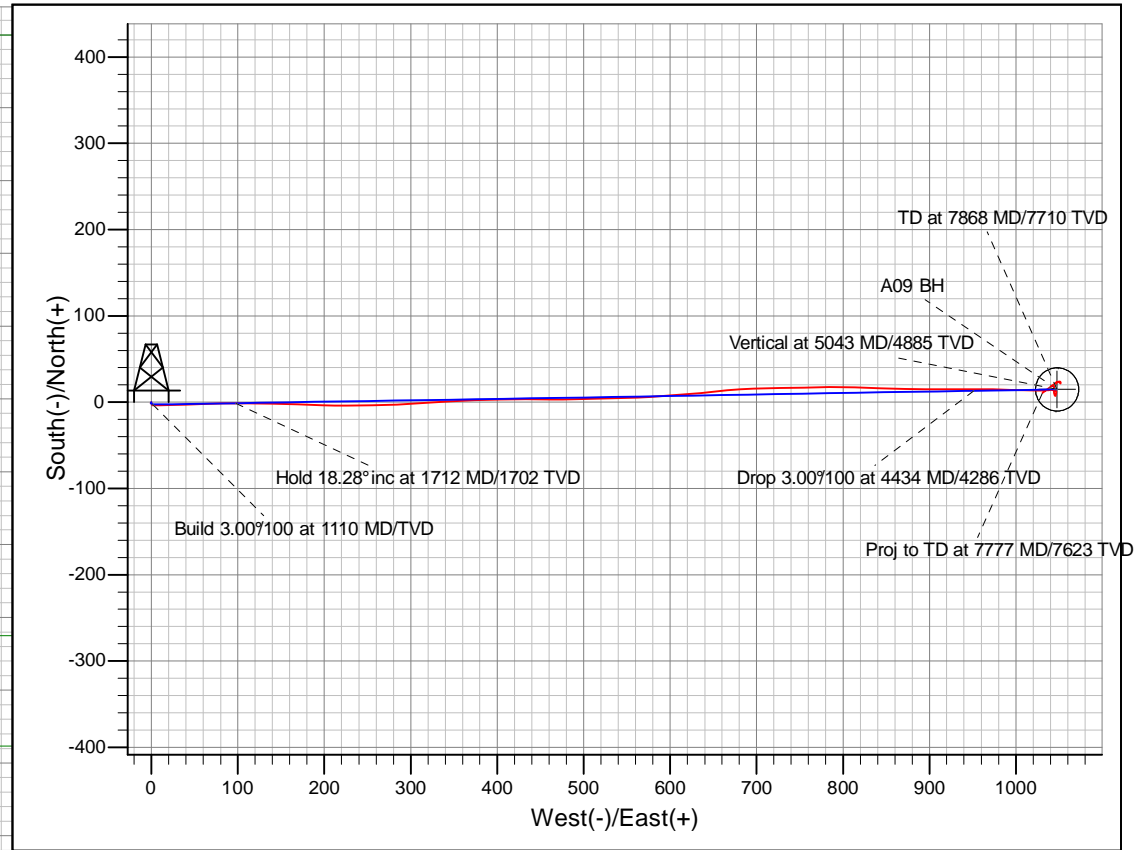
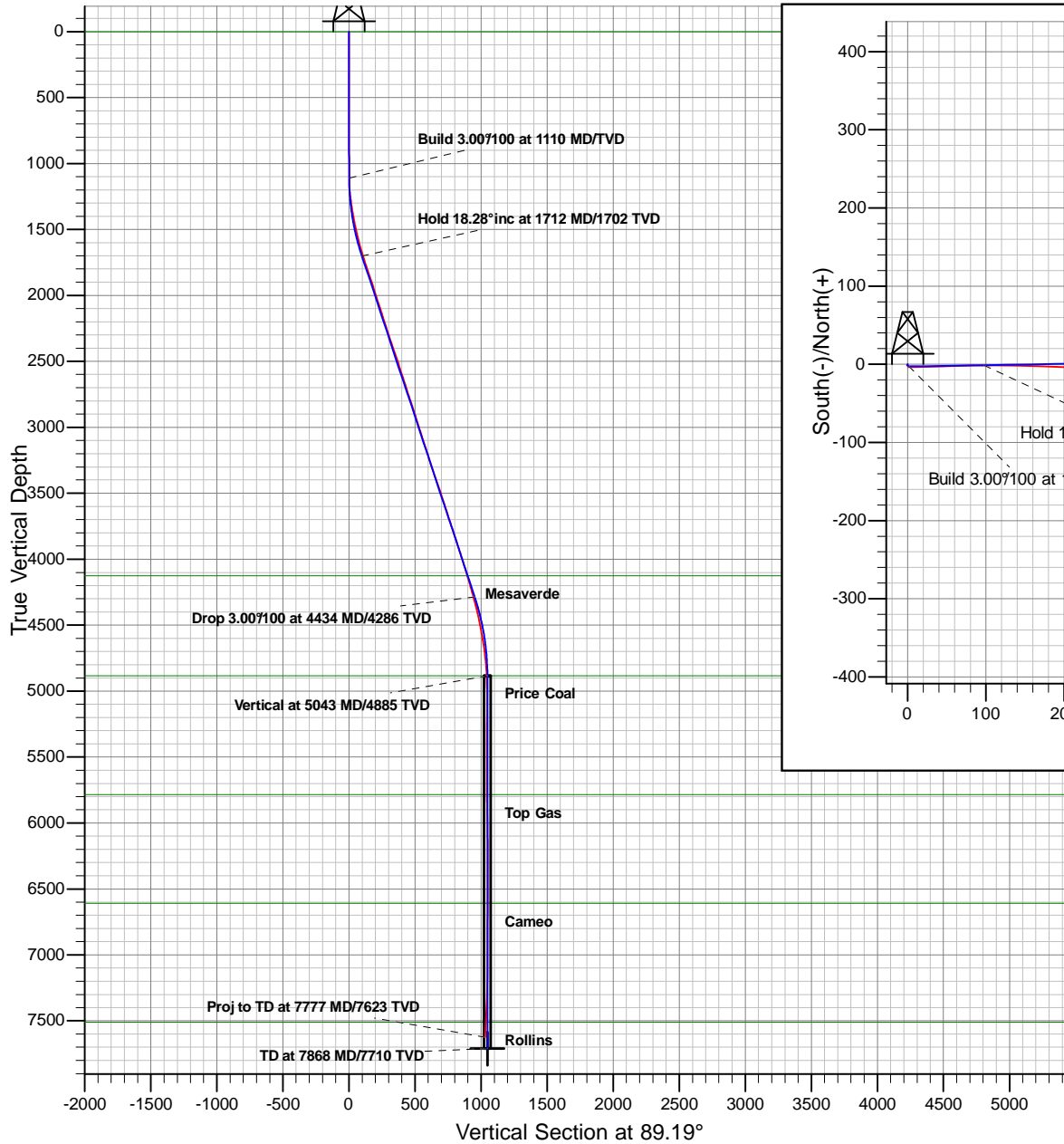
ARK Directional Services Inc
191 University Blvd, # 601
Denver, CO 80206



Antero Resources

Left Hand Federal A09 (111346)

Planned Vs. Actual



REFERENCE INFORMATION	
Co-ordinate (N/E) Reference:	Well Left Hand Federal A09 (111346) - Slot A09, Grid North
Vertical (TVD) Reference:	KB @ 5708.00ft (Original Well Elev)
Section (VS) Reference:	Slot - A09(0.00N, 0.00E)
Measured Depth Reference:	KB @ 5708.00ft (Original Well Elev)
Calculation Method:	Minimum Curvature

Magnetic Field Details	
Total Correction to Grid N: +11.93°	
	Model: IGRF2010
	Date: 25-May-11
	Grid Conv: -1.71
	Mag. Dec: 10.22°
	Field Strength: 52314
	Dip: 65.82°

PROJECT DETAILS: Left Hand	
Geodetic System:	Universal Transverse Mercator (US Survey Feet)
Datum:	NAD83 Colorado - HARN
Ellipsoid:	GRS 1980
Zone:	Zone 13N (108 W to 102 W)
System Datum:	Mean Sea Level

Plan:	Left Hand Federal A09 P02
Created By:	ARK Directional Services Inc.
Date:	8:38, June 10 2011

Antero Resources

Left Hand

Left Hand Federal A

Left Hand Federal A09 (111346) - Slot A09

Left Hand Federal A09

Survey: LH A09

Survey Report - Geographic

13 June, 2011

ARK Directional Services

Survey Report - Geographic

Company:	Antero Resources	Local Co-ordinate Reference:	Well Left Hand Federal A09 (111346) - Slot A09
Project:	Left Hand	TVD Reference:	KB @ 5708.00ft (Original Well Elev)
Site:	Left Hand Federal A	MD Reference:	KB @ 5708.00ft (Original Well Elev)
Well:	Left Hand Federal A09 (111346)	North Reference:	Grid
Wellbore:	Left Hand Federal A09	Survey Calculation Method:	Minimum Curvature
Design:	Left Hand Federal A09	Database:	EDM SERVER DB

Project	Left Hand		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	NAD83 Colorado - HARN		
Map Zone:	Zone 13N (108 W to 102 W)		

Site	Left Hand Federal A		
Site Position:		Northing:	14,363,958.16 usft
From:	Map	Easting:	885,193.91 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13.20 in
		Latitude:	39.522111194°N
		Longitude:	107.677970034°W
		Grid Convergence:	-1.71 °

Well	Left Hand Federal A09 (111346) - Slot A09		
Well Position	+N/-S	0.00 ft	Northing:
	+E/-W	0.00 ft	Easting:
Position Uncertainty	0.00 ft	Wellhead Elevation:	ft
		Latitude:	39.522090898°N
		Longitude:	107.677885177°W
		Ground Level:	5,684.00 ft

Wellbore	Left Hand Federal A09		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2010	2011/05/25	10.22
			Dip Angle
			(°)
			65.82
			Field Strength
			(nT)
			52,314

Design	Left Hand Federal A09		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(ft)	(ft)	(ft)
	0.00	0.00	0.00
			Direction
			(°)
			89.19

Survey Program	Date	2011/06/10		
From	To	Survey (Wellbore)	Tool Name	Description
(ft)	(ft)			
100.00	890.00	LH A09 Surf (Left Hand Federal A09)	NS-GYRO-MS	North sensing gyrocompassing m/s
1,061.00	7,777.00	LH A09 (Left Hand Federal A09)	MWD	MWD - Standard

Survey									
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Map	Map	Latitude	Longitude
Depth	(°)	(°)	Depth	(ft)	(ft)	Northing	Easting		
(ft)			(ft)			(usft)	(usft)		
890.00	0.24	111.82	889.99	-2.15	0.52	14,363,947.91	885,218.15	39.522085051°N	107.677883119°W
1,061.00	0.48	178.92	1,060.99	-3.00	0.86	14,363,947.06	885,218.49	39.522082749°N	107.677881803°W
1,093.00	0.79	134.54	1,092.99	-3.28	1.02	14,363,946.77	885,218.65	39.522081970°N	107.677881207°W
1,124.00	1.71	107.95	1,123.98	-3.58	1.62	14,363,946.48	885,219.24	39.522081216°N	107.677879078°W
1,156.00	2.50	94.64	1,155.96	-3.78	2.77	14,363,946.28	885,220.39	39.522080752°N	107.677874983°W
1,250.00	6.59	87.43	1,249.65	-3.70	10.20	14,363,946.35	885,227.83	39.522081567°N	107.677848654°W
1,345.00	9.32	88.13	1,343.72	-3.21	23.34	14,363,946.85	885,240.96	39.522084000°N	107.677802172°W
1,439.00	10.99	89.32	1,436.25	-2.85	39.91	14,363,947.20	885,257.53	39.522086326°N	107.677743521°W
1,534.00	12.79	86.33	1,529.21	-2.07	59.46	14,363,947.98	885,277.08	39.522090063°N	107.677674350°W
1,628.00	15.38	89.63	1,620.37	-1.33	82.31	14,363,948.73	885,299.94	39.522093978°N	107.677593478°W
1,723.00	18.11	90.42	1,711.34	-1.35	109.68	14,363,948.70	885,327.30	39.522096138°N	107.677496531°W

ARK Directional Services

Survey Report - Geographic

Company:	Antero Resources	Local Co-ordinate Reference:	Well Left Hand Federal A09 (111346) - Slot A09
Project:	Left Hand	TVD Reference:	KB @ 5708.00ft (Original Well Elev)
Site:	Left Hand Federal A	MD Reference:	KB @ 5708.00ft (Original Well Elev)
Well:	Left Hand Federal A09 (111346)	North Reference:	Grid
Wellbore:	Left Hand Federal A09	Survey Calculation Method:	Minimum Curvature
Design:	Left Hand Federal A09	Database:	EDM SERVER DB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
1,817.00	18.28	91.43	1,800.64	-1.83	139.02	14,363,948.23	885,356.65	39.522097231°N	107.677392526°W
1,912.00	18.19	91.25	1,890.87	-2.52	168.74	14,363,947.53	885,386.37	39.522097750°N	107.677287180°W
2,006.00	17.58	92.55	1,980.32	-3.48	197.59	14,363,946.58	885,415.22	39.522097495°N	107.677184883°W
2,100.00	18.41	89.70	2,069.73	-4.03	226.62	14,363,946.03	885,444.25	39.522098345°N	107.677082006°W
2,195.00	17.49	89.23	2,160.10	-3.76	255.89	14,363,946.30	885,473.52	39.522101476°N	107.676978331°W
2,289.00	17.71	87.34	2,249.70	-2.91	284.30	14,363,947.15	885,501.93	39.522106136°N	107.676877797°W
2,384.00	18.72	85.93	2,339.94	-1.15	313.94	14,363,948.90	885,531.57	39.522113364°N	107.676772984°W
2,478.00	18.50	85.85	2,429.02	1.00	343.86	14,363,951.05	885,561.49	39.522121704°N	107.676667223°W
2,572.00	18.59	88.75	2,518.15	2.40	373.72	14,363,952.46	885,591.34	39.522127998°N	107.676561617°W
2,667.00	18.19	88.92	2,608.29	3.01	403.68	14,363,953.07	885,621.31	39.522132117°N	107.676455538°W
2,761.00	17.89	89.93	2,697.67	3.31	432.79	14,363,953.36	885,650.42	39.522135299°N	107.676352462°W
2,856.00	17.58	91.03	2,788.16	3.07	461.72	14,363,953.12	885,679.35	39.522137002°N	107.676249936°W
2,950.00	18.28	87.52	2,877.60	3.45	490.65	14,363,953.51	885,708.27	39.522140412°N	107.676147522°W
3,045.00	17.80	88.92	2,967.93	4.37	520.05	14,363,954.42	885,737.68	39.522145331°N	107.676043464°W
3,139.00	17.31	89.63	3,057.55	4.73	548.40	14,363,954.79	885,766.03	39.522148635°N	107.675943080°W
3,234.00	18.11	85.32	3,148.05	6.02	577.25	14,363,956.08	885,794.88	39.522154545°N	107.675841020°W
3,329.00	17.40	86.42	3,238.52	8.12	606.14	14,363,958.17	885,823.77	39.522162641°N	107.675738892°W
3,423.00	19.12	84.53	3,327.79	10.46	635.50	14,363,960.52	885,853.12	39.522171470°N	107.675635157°W
3,518.00	18.90	84.04	3,417.61	13.54	666.29	14,363,963.60	885,883.92	39.522182434°N	107.675526411°W
3,612.00	18.81	88.22	3,506.57	15.59	696.58	14,363,965.65	885,914.21	39.522190533°N	107.675419330°W
3,707.00	17.89	89.14	3,596.73	16.29	726.48	14,363,966.35	885,944.10	39.522194878°N	107.675313493°W
3,801.00	17.31	88.75	3,686.33	16.81	754.90	14,363,966.87	885,972.52	39.522198628°N	107.675212884°W
3,896.00	18.28	88.83	3,776.79	17.42	783.92	14,363,967.48	886,001.55	39.522202676°N	107.675110128°W
3,991.00	18.59	92.44	3,866.92	17.08	813.95	14,363,967.14	886,031.57	39.522204191°N	107.675003732°W
4,085.00	17.89	91.51	3,956.19	16.06	843.35	14,363,966.12	886,060.98	39.522203796°N	107.674899470°W
4,179.00	16.92	91.43	4,045.89	15.34	871.46	14,363,965.40	886,089.08	39.522204108°N	107.674799826°W
4,261.61	16.55	90.59	4,125.00	14.92	895.24	14,363,964.98	886,112.87	39.522204893°N	107.674715536°W
4,368.00	16.08	89.45	4,227.10	14.91	925.13	14,363,964.96	886,142.75	39.522207290°N	107.674609671°W
4,463.00	15.12	90.24	4,318.60	14.98	950.67	14,363,965.04	886,168.30	39.522209578°N	107.674519186°W
4,557.00	12.61	91.03	4,409.86	14.75	973.20	14,363,964.80	886,190.82	39.522210767°N	107.674439381°W
4,652.00	11.12	91.12	4,502.83	14.38	992.72	14,363,964.44	886,210.35	39.522211357°N	107.674370166°W
4,746.00	10.20	92.35	4,595.20	13.86	1,010.10	14,363,963.92	886,227.73	39.522211352°N	107.674308548°W
4,841.00	7.78	90.64	4,689.03	13.44	1,024.94	14,363,963.50	886,242.57	39.522211418°N	107.674255950°W
4,935.00	5.49	84.84	4,782.39	13.78	1,035.78	14,363,963.83	886,253.41	39.522213217°N	107.674217579°W
5,030.00	2.11	91.34	4,877.17	14.15	1,042.06	14,363,964.20	886,259.68	39.522214738°N	107.674195386°W
5,124.00	2.02	99.64	4,971.11	13.83	1,045.42	14,363,963.88	886,263.05	39.522214141°N	107.674183439°W
5,218.00	1.58	194.52	5,065.08	12.30	1,046.73	14,363,962.35	886,264.36	39.522210044°N	107.674178642°W
5,313.00	2.02	188.94	5,160.03	9.37	1,046.14	14,363,959.43	886,263.77	39.522201980°N	107.674180419°W
5,407.00	0.70	217.64	5,254.01	7.28	1,045.53	14,363,957.34	886,263.16	39.522196193°N	107.674182353°W
5,502.00	1.41	335.24	5,349.00	7.88	1,044.69	14,363,957.94	886,262.31	39.522197775°N	107.674185406°W
5,596.00	1.80	351.93	5,442.96	10.40	1,044.00	14,363,960.45	886,261.62	39.522204610°N	107.674188120°W
5,691.00	2.11	0.24	5,537.90	13.62	1,043.80	14,363,963.68	886,261.42	39.522213444°N	107.674189176°W
5,785.00	1.71	3.84	5,631.85	16.75	1,043.90	14,363,966.81	886,261.52	39.522222039°N	107.674189147°W
5,880.00	0.79	13.95	5,726.83	18.80	1,044.15	14,363,968.86	886,261.77	39.522227683°N	107.674188468°W
5,974.00	1.71	40.01	5,820.81	20.51	1,045.21	14,363,970.56	886,262.83	39.522232442°N	107.674184899°W
6,069.00	1.19	47.61	5,915.78	22.26	1,046.85	14,363,972.31	886,264.47	39.522237379°N	107.674179275°W
6,163.00	1.10	60.05	6,009.76	23.36	1,048.35	14,363,973.42	886,265.98	39.522240542°N	107.674174068°W
6,258.00	0.48	84.75	6,104.75	23.86	1,049.54	14,363,973.91	886,267.16	39.522241988°N	107.674169917°W
6,352.00	0.62	119.24	6,198.74	23.64	1,050.37	14,363,973.70	886,268.00	39.522241473°N	107.674166934°W
6,447.00	0.79	147.15	6,293.74	22.84	1,051.18	14,363,972.90	886,268.80	39.522239341°N	107.674164003°W
6,541.00	0.70	174.04	6,387.73	21.73	1,051.59	14,363,971.78	886,269.21	39.522236314°N	107.674162429°W
6,636.00	1.01	358.13	6,482.72	21.99	1,051.62	14,363,972.04	886,269.25	39.522237029°N	107.674162340°W
6,730.00	0.70	332.42	6,576.71	23.32	1,051.33	14,363,973.38	886,268.95	39.522240673°N	107.674163518°W
6,825.00	0.48	266.02	6,671.71	23.81	1,050.66	14,363,973.87	886,268.29	39.522241954°N	107.674165927°W
6,919.00	1.19	227.04	6,765.70	23.12	1,049.55	14,363,973.17	886,267.18	39.522239964°N	107.674169776°W

ARK Directional Services

Survey Report - Geographic

Company:	Antero Resources	Local Co-ordinate Reference:	Well Left Hand Federal A09 (111346) - Slot A09
Project:	Left Hand	TVD Reference:	KB @ 5708.00ft (Original Well Elev)
Site:	Left Hand Federal A	MD Reference:	KB @ 5708.00ft (Original Well Elev)
Well:	Left Hand Federal A09 (111346)	North Reference:	Grid
Wellbore:	Left Hand Federal A09	Survey Calculation Method:	Minimum Curvature
Design:	Left Hand Federal A09	Database:	EDM SERVER DB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
7,014.00	0.62	30.65	6,860.69	22.89	1,049.09	14,363,972.94	886,266.72	39.522239295°N	107.674171381°W
7,108.00	0.22	199.05	6,954.69	23.15	1,049.29	14,363,973.21	886,266.92	39.522240044°N	107.674170699°W
7,203.00	0.70	315.94	7,049.69	23.40	1,048.83	14,363,973.46	886,266.46	39.522240677°N	107.674172365°W
7,297.00	0.70	262.02	7,143.69	23.73	1,047.86	14,363,973.79	886,265.49	39.522241512°N	107.674175829°W
7,392.00	1.49	227.22	7,238.67	22.81	1,046.38	14,363,972.87	886,264.01	39.522238868°N	107.674180980°W
7,486.00	2.42	231.22	7,332.61	20.74	1,043.94	14,363,970.80	886,261.56	39.522232982°N	107.674189419°W
7,631.00	3.52	232.84	7,477.42	16.13	1,038.00	14,363,966.19	886,255.63	39.522219861°N	107.674209954°W
7,727.00	3.60	233.81	7,573.23	12.57	1,033.22	14,363,962.63	886,250.85	39.522209705°N	107.674226516°W
7,777.00	3.60	233.81	7,623.13	10.72	1,030.69	14,363,960.78	886,248.31	39.522204413°N	107.674235296°W
Proj to TD at 7777 MD/7623 TVD - A09 BH									

Survey Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
7,777.00	7,623.13	10.72	1,030.69	Proj to TD at 7777 MD/7623 TVD

Checked By: _____ Approved By: _____ Date: _____