



# End of Well Report

Prepared for



## McLin B9

June 27, 2010

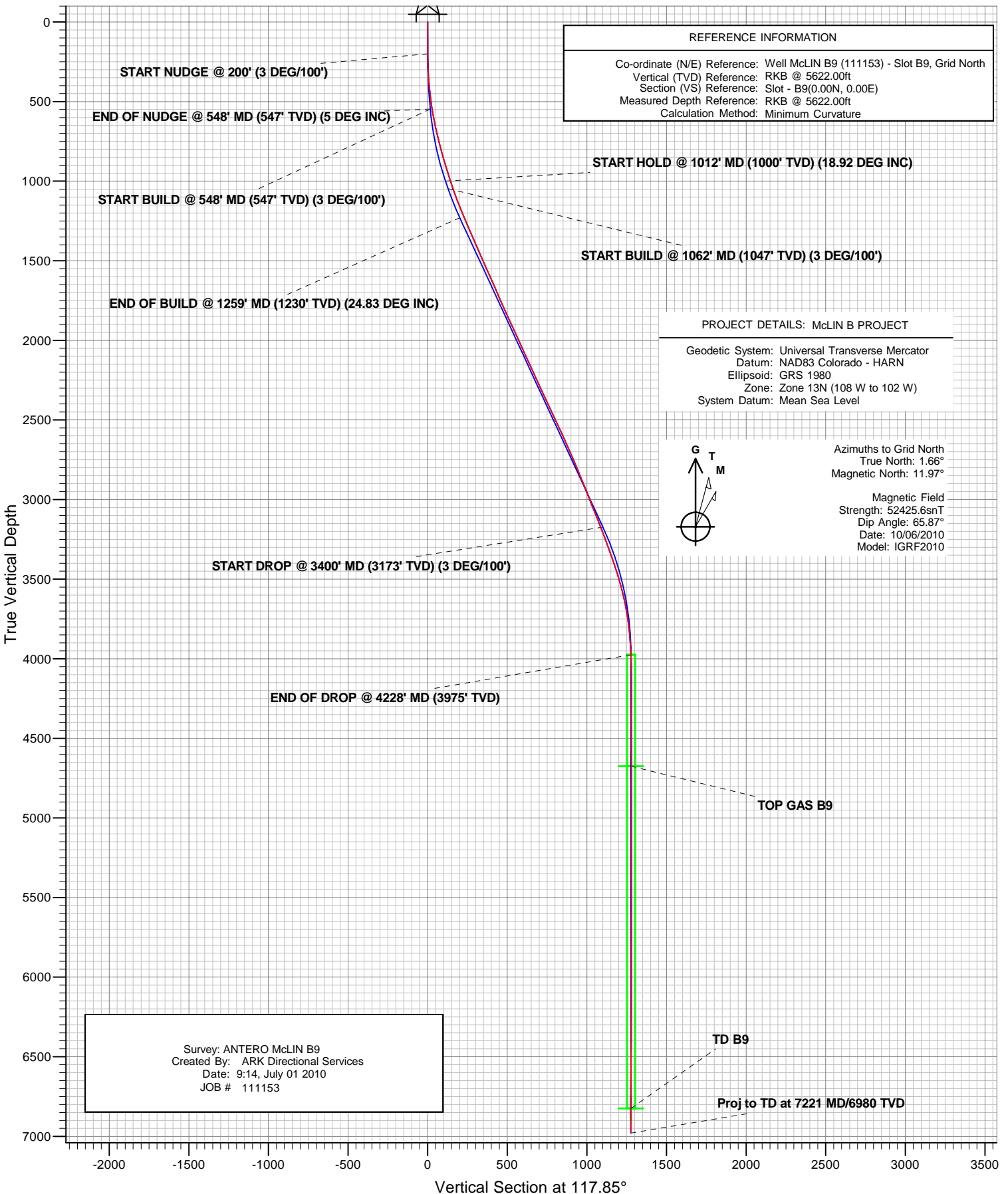
ARK Directional Services Inc  
191 University Blvd, # 601  
Denver, CO 80206



# Antero Resources

## ANTERO McLIN B9

### PLANNED VS ACTUAL

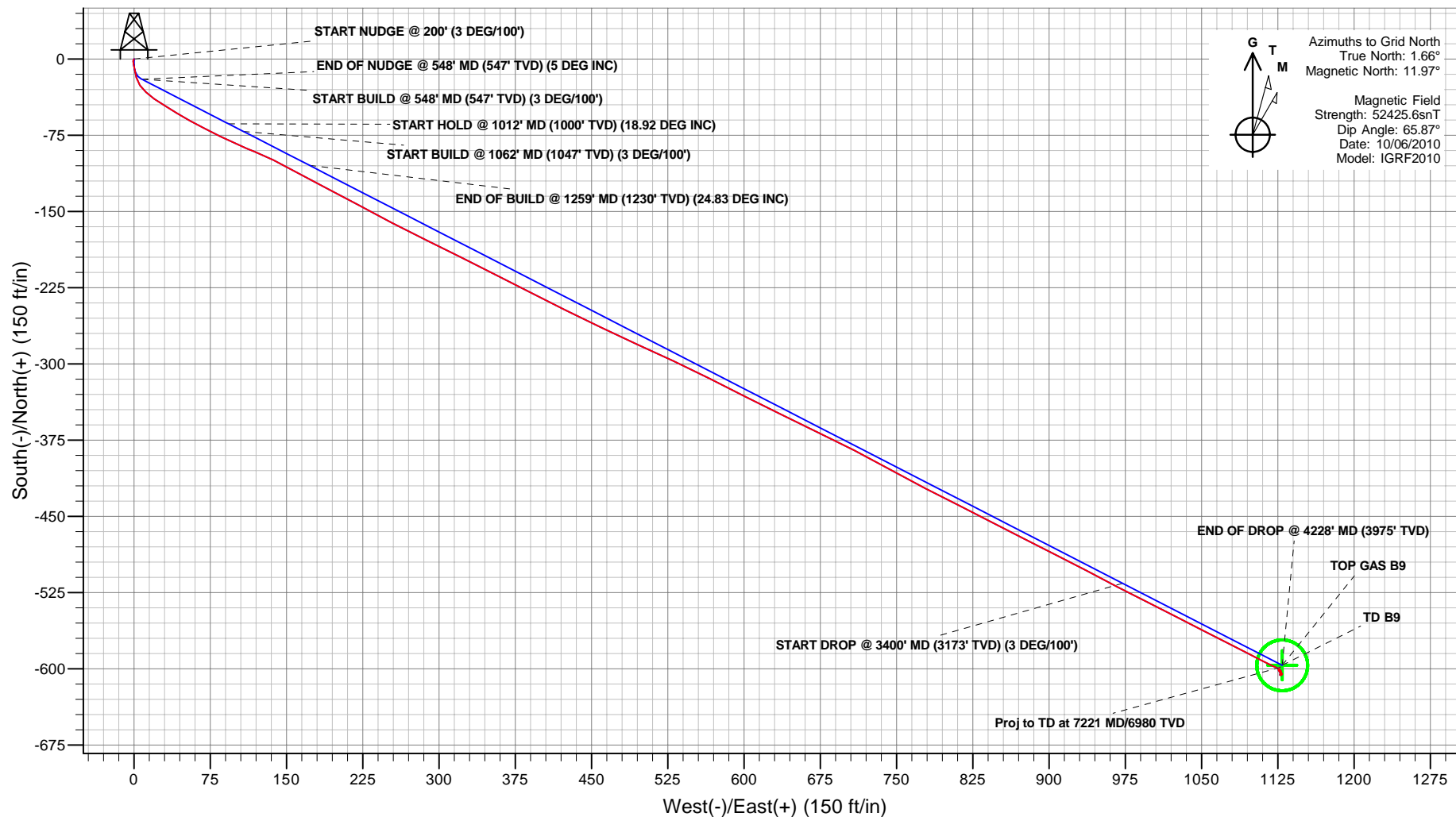




## PLAN VIEW

## Antero Resources

Project: McLIN B PROJECT  
Site: FRONTIER 12  
Well: McLIN B9 (111153)  
Wellbore: ANTERO McLIN B9  
Design: ANTERO McLIN B9  
JOB # 111153



Survey: ANTERO McLIN B9  
Created By: ARK Directional Services  
Date: 9:18, July 01 2010

### PROJECT DETAILS: McLIN B PROJECT

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 McLIN B9 (111153) - Slot B9, Grid North  
Vertical (TVD) Reference: RKB @ 5622.00ft  
Section (VS) Reference: Slot - B9(0.00N, 0.00E)  
Measured Depth Reference: RKB @ 5622.00ft  
Calculation Method: Minimum Curvature

# **Antero Resources**

**McLIN B PROJECT**

**FRONTIER 12**

**McLIN B9 (111153) - Slot B9**

**ANTERO McLIN B9**

**Survey: ANTERO McLIN B9**

## **Survey Report - Geographic**

**01 July, 2010**

# ARK Directional Services

## Survey Report - Geographic

<b>Company:</b>	Antero Resources	<b>Local Co-ordinate Reference:</b>	Well McLIN B9 (111153) - Slot B9
<b>Project:</b>	McLIN B PROJECT	<b>TVD Reference:</b>	RKB @ 5622.00ft
<b>Site:</b>	FRONTIER 12	<b>MD Reference:</b>	RKB @ 5622.00ft
<b>Well:</b>	McLIN B9 (111153)	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	ANTERO McLIN B9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	ANTERO McLIN B9	<b>Database:</b>	EDM SERVER DB

<b>Project</b>	McLIN B PROJECT		
<b>Map System:</b>	Universal Transverse Mercator	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD83 Colorado - HARN		
<b>Map Zone:</b>	Zone 13N (108 W to 102 W)		

<b>Site</b>	FRONTIER 12		
<b>Site Position:</b>		<b>Northing:</b>	14,366,636.75 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	904,982.97 usft
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.20 in
		<b>Latitude:</b>	39.531054942°N
		<b>Longitude:</b>	107.608143570°W
		<b>Grid Convergence:</b>	-1.66 °

<b>Well</b>	McLIN B9 (111153) - Slot B9		
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>
<b>Position Uncertainty</b>	0.00 ft	<b>Wellhead Elevation:</b>	ft
		<b>Latitude:</b>	39.530961761°N
		<b>Longitude:</b>	107.608011963°W
		<b>Ground Level:</b>	5,598.00 ft

<b>Wellbore</b>	ANTERO McLIN B9		
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>
			(°)
	IGRF2010	10/06/2010	10.31
			(°)
			65.87
			52,426

<b>Design</b>	ANTERO McLIN B9		
<b>Audit Notes:</b>			
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL
		<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>
	(ft)	(ft)	(ft)
	0.00	0.00	0.00
			117.85

<b>Survey Program</b>	<b>Date</b>	01/07/2010		
<b>From</b>	<b>To</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
(ft)	(ft)			
163.00	7,221.00	ANTERO McLIN B9 (ANTERO McLIN B9)	MWD	MWD - Standard

<b>Survey</b>									
<b>Measured</b>	<b>Inclination</b>	<b>Azimuth</b>	<b>Vertical</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Map</b>	<b>Map</b>	<b>Latitude</b>	<b>Longitude</b>
<b>Depth</b>	(°)	(°)	<b>Depth</b>	(ft)	(ft)	<b>Northing</b>	<b>Easting</b>		
(ft)			(ft)			(usft)	(usft)		
0.00	0.00	0.00	0.00	0.00	0.00	14,366,601.74	905,019.10	39.530961761°N	107.608011963°W
163.00	0.70	200.58	163.00	-0.93	-0.35	14,366,600.81	905,018.75	39.530959176°N	107.608013107°W
194.00	0.97	211.83	193.99	-1.33	-0.55	14,366,600.41	905,018.55	39.530958062°N	107.608013792°W
225.00	1.76	194.26	224.98	-2.02	-0.81	14,366,599.72	905,018.29	39.530956164°N	107.608014628°W
287.00	3.52	166.39	286.92	-4.79	-0.60	14,366,596.95	905,018.50	39.530948573°N	107.608013587°W
349.00	7.12	168.06	348.64	-10.40	0.65	14,366,591.34	905,019.75	39.530933278°N	107.608008606°W
411.00	7.73	168.50	410.12	-18.25	2.27	14,366,583.50	905,021.37	39.530911883°N	107.608002038°W
473.00	8.26	143.63	471.54	-25.92	5.75	14,366,575.82	905,024.85	39.530891105°N	107.607988944°W
534.00	8.80	134.67	531.86	-32.73	11.66	14,366,569.01	905,030.76	39.530872895°N	107.607967281°W
597.00	10.37	123.85	593.99	-39.28	19.80	14,366,562.46	905,038.90	39.530855579°N	107.607937778°W
660.00	12.13	122.10	655.77	-45.95	30.12	14,366,555.79	905,049.22	39.530838083°N	107.607900540°W
722.00	13.54	120.87	716.22	-53.14	41.87	14,366,548.60	905,060.97	39.530819302°N	107.607858178°W

# ARK Directional Services

## Survey Report - Geographic

<b>Company:</b>	Antero Resources	<b>Local Co-ordinate Reference:</b>	Well McLIN B9 (111153) - Slot B9
<b>Project:</b>	McLIN B PROJECT	<b>TVD Reference:</b>	RKB @ 5622.00ft
<b>Site:</b>	FRONTIER 12	<b>MD Reference:</b>	RKB @ 5622.00ft
<b>Well:</b>	McLIN B9 (111153)	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	ANTERO McLIN B9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	ANTERO McLIN B9	<b>Database:</b>	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
783.00	14.68	119.37	775.38	-60.59	54.73	14,366,541.15	905,073.83	39.530799873°N	107.607811830°W
845.00	15.82	117.09	835.20	-68.30	69.10	14,366,533.45	905,088.20	39.530779885°N	107.607760124°W
907.00	17.10	116.56	894.66	-76.22	84.78	14,366,525.52	905,103.88	39.530759390°N	107.607703765°W
1,003.00	17.95	112.50	986.20	-88.19	111.07	14,366,513.55	905,130.17	39.530728634°N	107.607609381°W
1,029.00	18.19	111.46	1,010.92	-91.21	118.55	14,366,510.53	905,137.65	39.530720949°N	107.607582576°W
1,092.00	19.16	116.38	1,070.61	-99.40	136.97	14,366,502.34	905,156.07	39.530699939°N	107.607516491°W
1,155.00	20.57	118.93	1,129.86	-109.35	155.92	14,366,492.39	905,175.02	39.530674152°N	107.607448332°W
1,249.00	23.30	117.44	1,217.05	-125.91	186.87	14,366,475.83	905,205.97	39.530631185°N	107.607336949°W
1,344.00	23.80	118.14	1,304.13	-143.61	220.45	14,366,458.13	905,239.55	39.530585298°N	107.607216169°W
1,438.00	23.20	117.79	1,390.34	-161.19	253.56	14,366,440.56	905,272.66	39.530539705°N	107.607097076°W
1,533.00	23.73	115.94	1,477.48	-178.27	287.30	14,366,423.47	905,306.40	39.530495511°N	107.606975769°W
1,627.00	24.30	116.74	1,563.34	-195.25	321.58	14,366,406.49	905,340.68	39.530451661°N	107.606852569°W
1,721.00	23.99	116.65	1,649.12	-212.52	355.93	14,366,389.22	905,375.03	39.530407001°N	107.606729089°W
1,816.00	23.10	117.18	1,736.21	-229.70	389.77	14,366,372.04	905,408.87	39.530362569°N	107.606607435°W
1,910.00	24.52	116.38	1,822.21	-246.79	423.65	14,366,354.95	905,442.75	39.530318373°N	107.606485647°W
2,005.00	24.79	115.68	1,908.55	-264.18	459.26	14,366,337.56	905,478.36	39.530273494°N	107.606357700°W
2,099.00	24.43	114.63	1,994.01	-280.82	494.69	14,366,320.92	905,513.79	39.530230655°N	107.606230465°W
2,194.00	24.87	114.63	2,080.35	-297.33	530.71	14,366,304.41	905,549.81	39.530188214°N	107.606101165°W
2,288.00	24.43	117.09	2,165.79	-314.42	565.99	14,366,287.32	905,585.08	39.530144129°N	107.605974435°W
2,383.00	24.70	116.74	2,252.19	-332.30	601.20	14,366,269.44	905,620.30	39.530097881°N	107.605847834°W
2,477.00	24.87	116.30	2,337.53	-349.89	636.46	14,366,251.85	905,655.56	39.530052411°N	107.605721106°W
2,572.00	25.40	115.59	2,423.54	-367.54	672.75	14,366,234.20	905,691.85	39.530006867°N	107.605590740°W
2,666.00	24.87	117.18	2,508.64	-385.28	708.51	14,366,216.46	905,727.61	39.529961046°N	107.605462202°W
2,760.00	24.96	119.37	2,593.89	-404.04	743.38	14,366,197.70	905,762.48	39.529912357°N	107.605336742°W
2,855.00	23.64	116.70	2,680.47	-422.43	777.87	14,366,179.31	905,796.97	39.529864642°N	107.605212672°W
2,949.00	22.94	117.09	2,766.81	-439.24	811.01	14,366,162.50	905,830.11	39.529821155°N	107.605093512°W
3,044.00	22.50	116.91	2,854.44	-455.90	843.71	14,366,145.84	905,862.81	39.529778050°N	107.604975978°W
3,138.00	21.80	117.53	2,941.50	-472.11	875.22	14,366,129.64	905,894.32	39.529736086°N	107.604862655°W
3,233.00	21.53	116.03	3,029.79	-487.91	906.53	14,366,113.83	905,925.63	39.529695215°N	107.604750118°W
3,327.00	21.62	118.58	3,117.21	-503.76	937.24	14,366,097.98	905,956.34	39.529654158°N	107.604639701°W
3,422.00	21.27	117.00	3,205.63	-519.96	967.96	14,366,081.78	905,987.06	39.529612165°N	107.604529194°W
3,516.00	19.78	116.30	3,293.66	-534.75	997.41	14,366,067.00	906,016.51	39.529573931°N	107.604423332°W
3,611.00	19.51	117.79	3,383.13	-549.26	1,025.86	14,366,052.48	906,044.95	39.529536358°N	107.604321067°W
3,705.00	17.14	116.56	3,472.36	-562.78	1,052.14	14,366,038.96	906,071.23	39.529501370°N	107.604226575°W
3,800.00	14.94	117.09	3,563.66	-574.62	1,075.56	14,366,027.13	906,094.66	39.529470754°N	107.604142364°W
3,894.00	11.78	117.18	3,655.10	-584.52	1,094.89	14,366,017.22	906,113.99	39.529445118°N	107.604072871°W
3,989.00	7.73	117.88	3,748.71	-591.94	1,109.17	14,366,009.80	906,128.27	39.529425894°N	107.604021518°W
4,083.00	5.19	115.86	3,842.10	-596.75	1,118.59	14,366,004.99	906,137.68	39.529413442°N	107.603987667°W
4,178.00	3.08	110.41	3,936.85	-599.52	1,124.84	14,366,002.23	906,143.94	39.529406354°N	107.603965208°W
4,272.00	1.93	158.13	4,030.77	-601.87	1,127.80	14,365,999.88	906,146.90	39.529400142°N	107.603954491°W
4,367.00	1.23	187.75	4,125.74	-604.36	1,128.26	14,365,997.38	906,147.36	39.529393333°N	107.603952611°W
4,461.00	0.62	241.28	4,219.72	-605.60	1,127.68	14,365,996.14	906,146.78	39.529389873°N	107.603954546°W
4,556.00	0.26	278.28	4,314.72	-605.82	1,127.01	14,365,995.92	906,146.11	39.529389228°N	107.603956876°W
4,650.00	0.18	147.59	4,408.72	-605.91	1,126.88	14,365,995.83	906,145.98	39.529388960°N	107.603957334°W
4,745.00	0.18	125.00	4,503.72	-606.13	1,127.08	14,365,995.62	906,146.18	39.529388396°N	107.603956596°W
4,840.00	0.26	100.83	4,598.72	-606.25	1,127.42	14,365,995.49	906,146.52	39.529388076°N	107.603955400°W
4,916.27	0.55	104.08	4,674.99	-606.37	1,127.94	14,365,995.37	906,147.04	39.529387784°N	107.603953522°W
TOP GAS B9									
4,934.00	0.62	104.40	4,692.72	-606.42	1,128.12	14,365,995.32	906,147.22	39.529387675°N	107.603952895°W
5,029.00	0.26	351.76	4,787.71	-606.33	1,128.59	14,365,995.41	906,147.69	39.529387947°N	107.603951250°W
5,123.00	0.62	12.85	4,881.71	-605.63	1,128.67	14,365,996.12	906,147.77	39.529389893°N	107.603951030°W
5,218.00	0.26	226.16	4,976.71	-605.27	1,128.63	14,365,996.47	906,147.73	39.529390855°N	107.603951212°W
5,312.00	0.09	257.45	5,070.71	-605.44	1,128.40	14,365,996.30	906,147.50	39.529390387°N	107.603951995°W
5,407.00	0.18	350.96	5,165.71	-605.31	1,128.31	14,365,996.44	906,147.40	39.529390740°N	107.603952350°W
5,501.00	0.70	7.84	5,259.71	-604.59	1,128.36	14,365,997.15	906,147.46	39.529392705°N	107.603952228°W

# ARK Directional Services

## Survey Report - Geographic

<b>Company:</b>	Antero Resources	<b>Local Co-ordinate Reference:</b>	Well McLIN B9 (111153) - Slot B9
<b>Project:</b>	McLIN B PROJECT	<b>TVD Reference:</b>	RKB @ 5622.00ft
<b>Site:</b>	FRONTIER 12	<b>MD Reference:</b>	RKB @ 5622.00ft
<b>Well:</b>	McLIN B9 (111153)	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	ANTERO McLIN B9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	ANTERO McLIN B9	<b>Database:</b>	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
5,575.00	0.09	117.90	5,333.70	-604.17	1,128.47	14,365,997.57	906,147.57	39.529393868°N	107.603951871°W
5,596.00	0.26	163.76	5,354.70	-604.23	1,128.50	14,365,997.52	906,147.60	39.529393723°N	107.603951766°W
5,690.00	0.62	137.74	5,448.70	-604.81	1,128.90	14,365,996.94	906,148.00	39.529392161°N	107.603950284°W
5,785.00	0.44	262.81	5,543.70	-605.23	1,128.89	14,365,996.51	906,147.99	39.529390990°N	107.603950297°W
5,879.00	0.44	294.01	5,637.70	-605.13	1,128.20	14,365,996.61	906,147.30	39.529391215°N	107.603952745°W
5,973.00	0.18	248.84	5,731.70	-605.04	1,127.73	14,365,996.71	906,146.83	39.529391434°N	107.603954410°W
6,068.00	0.18	303.50	5,826.70	-605.01	1,127.47	14,365,996.73	906,146.57	39.529391492°N	107.603955347°W
6,162.00	0.09	312.38	5,920.70	-604.88	1,127.29	14,365,996.86	906,146.39	39.529391838°N	107.603955990°W
6,257.00	0.26	319.76	6,015.69	-604.66	1,127.10	14,365,997.08	906,146.20	39.529392412°N	107.603956700°W
6,352.00	0.70	41.50	6,110.69	-604.06	1,127.34	14,365,997.68	906,146.44	39.529394075°N	107.603955893°W
6,446.00	0.26	270.63	6,204.69	-603.63	1,127.51	14,365,998.11	906,146.61	39.529395275°N	107.603955345°W
6,540.00	0.18	289.79	6,298.69	-603.58	1,127.16	14,365,998.16	906,146.26	39.529395390°N	107.603956598°W
6,635.00	0.26	17.07	6,393.69	-603.32	1,127.08	14,365,998.42	906,146.18	39.529396088°N	107.603956898°W
6,729.00	0.53	297.88	6,487.69	-602.91	1,126.76	14,365,998.83	906,145.86	39.529397180°N	107.603958079°W
6,824.00	0.53	311.41	6,582.68	-602.42	1,126.04	14,365,999.32	906,145.14	39.529398484°N	107.603960673°W
6,918.00	1.32	345.69	6,676.67	-601.08	1,125.45	14,366,000.66	906,144.54	39.529402104°N	107.603962914°W
7,013.00	0.26	40.18	6,771.66	-599.86	1,125.32	14,366,001.89	906,144.41	39.529405454°N	107.603963505°W
7,066.37	0.41	53.65	6,825.03	-599.65	1,125.55	14,366,002.09	906,144.65	39.529406036°N	107.603962706°W
TD B9									
7,107.00	0.53	58.64	6,865.66	-599.47	1,125.82	14,366,002.27	906,144.92	39.529406562°N	107.603961742°W
7,171.00	0.88	57.06	6,929.65	-599.05	1,126.49	14,366,002.70	906,145.59	39.529407771°N	107.603959429°W
7,221.00	0.88	57.06	6,979.65	-598.63	1,127.13	14,366,003.11	906,146.23	39.529408968°N	107.603957188°W
Proj to TD at 7221 MD/6980 TVD									

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									
TOP GAS B9	0.00	0.00	4,675.00	-596.63	1,129.24	14,366,005.11	906,148.33	39.529414614°N	107.603949947°W
- survey misses target center by 9.83ft at 4916.27ft MD (4674.99 TVD, -606.37 N, 1127.94 E)									
- Circle (radius 25.00)									
TD B9	0.00	0.00	6,825.00	-596.63	1,129.24	14,366,005.11	906,148.33	39.529414614°N	107.603949947°W
- survey misses target center by 4.77ft at 7066.38ft MD (6825.04 TVD, -599.65 N, 1125.55 E)									
- Circle (radius 25.00)									

Survey Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
7,221.00	6,979.65	-598.63	1,127.13	Proj to TD at 7221 MD/6980 TVD

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_