



# End of Well Report

Prepared for



## McLin B5

June 9, 2010

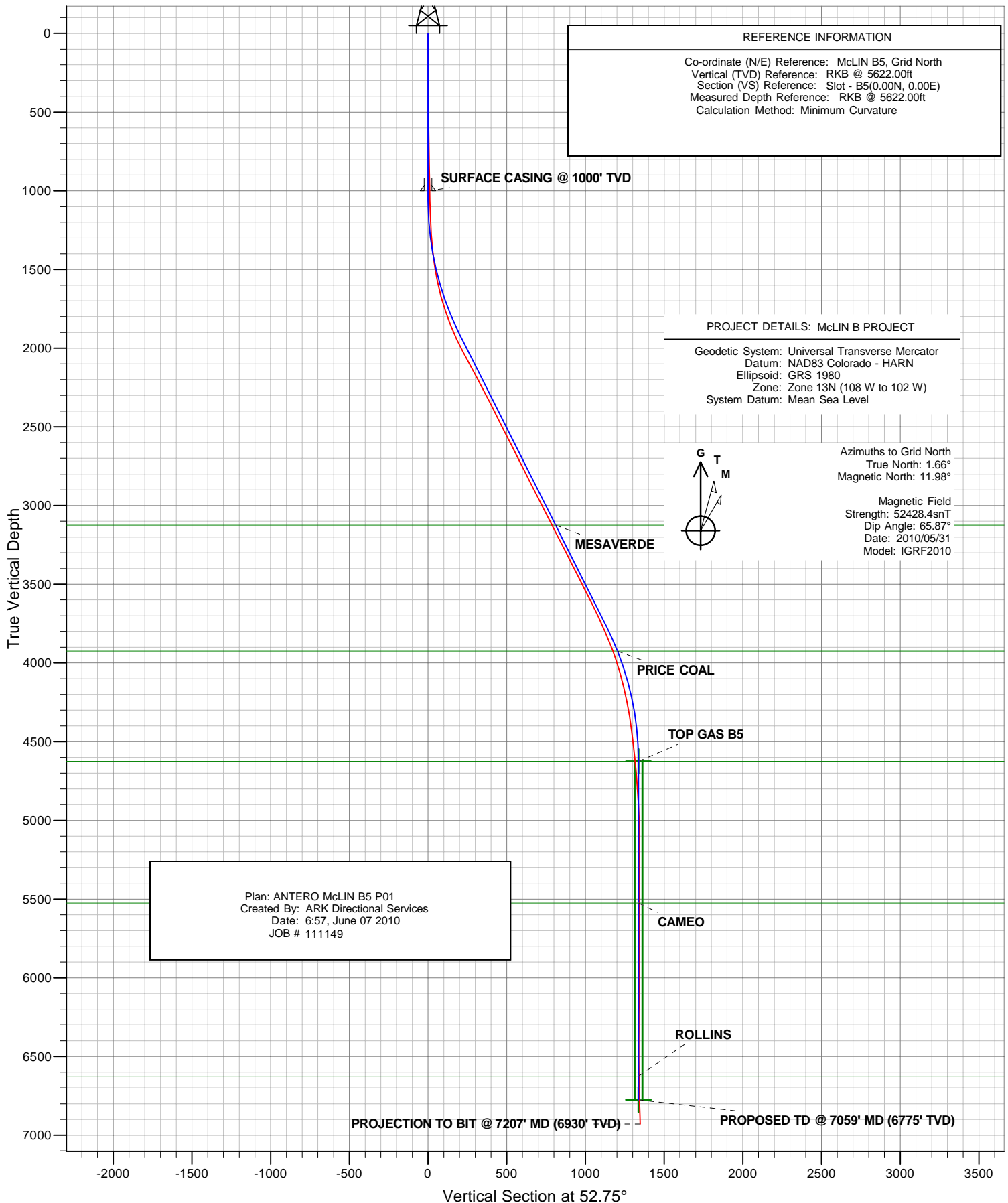
ARK Directional Services Inc  
191 University Blvd, # 601  
Denver, CO 80206



# ANTERO RESOURCES

## ANTERO McLIN B5

### PLANNED VS ACTUAL

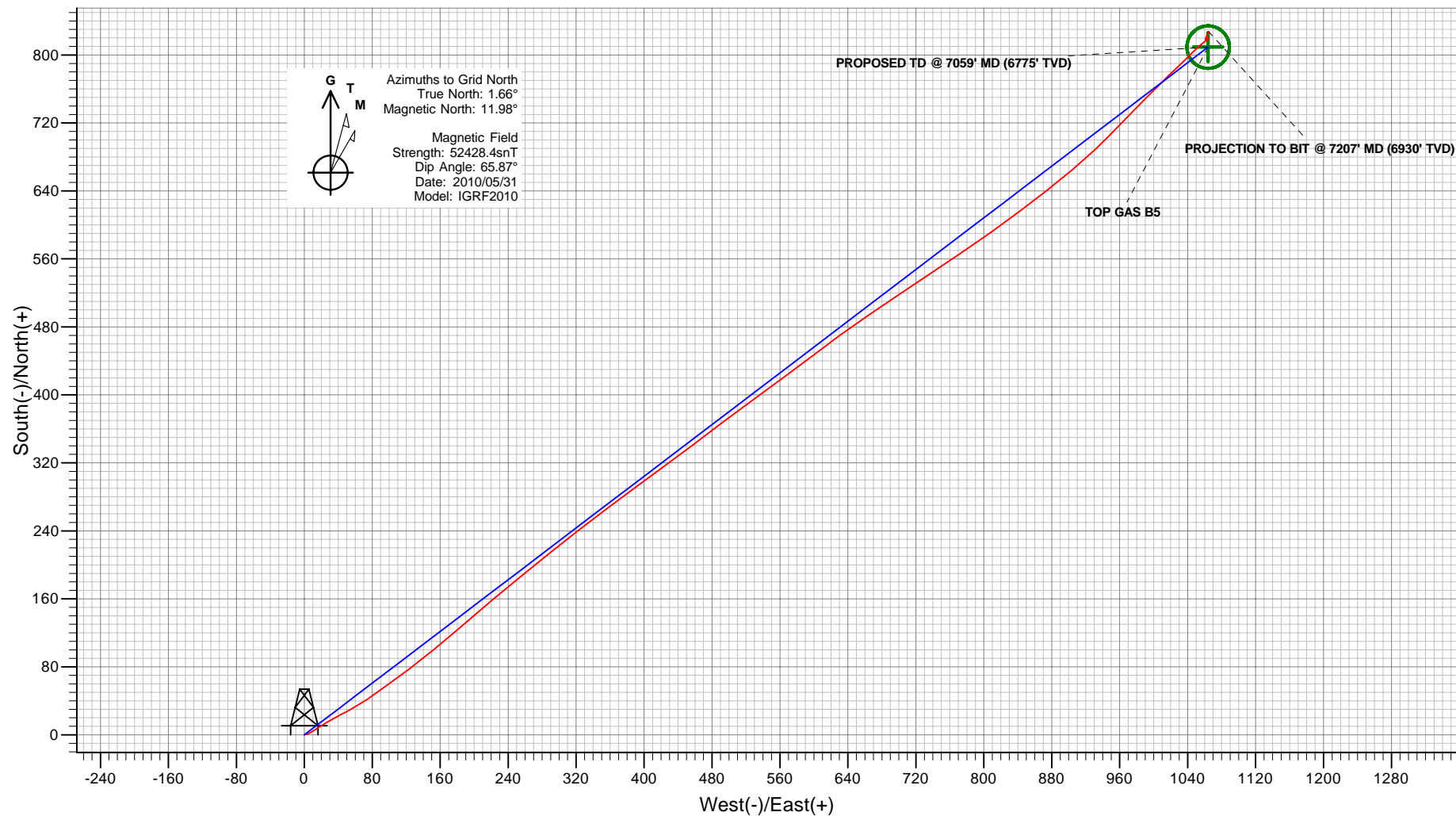




## PLAN VIEW

## ANTERO RESOURCES

Project: McLIN B PROJECT  
Site: FRONTIER 12  
Well: McLIN B5 (111149)  
Wellbore: ANTERO McLIN B5  
Design: ANTERO McLIN B5 P01  
JOB # 111149



Plan: ANTERO McLIN B5 P01  
Created By: ARK Directional Services  
Date: 7:00, June 07 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: McLIN B5, Grid North  
Vertical (TVD) Reference: RKB @ 5622.00ft  
Section (VS) Reference: Slot - B5(0.00N, 0.00E)  
Measured Depth Reference: RKB @ 5622.00ft  
Calculation Method: Minimum Curvature

# **ANTERO RESOURCES**

**McLIN B PROJECT  
FRONTIER 12**

**Survey: ANTERO MCLIN B5 SURVEY**

## **Survey Report - Geographic**

**07 June, 2010**

# ARK Directional Services

## Survey Report - Geographic

<b>Company:</b>	ANTERO RESOURCES	<b>Local Co-ordinate Reference:</b>	Well McLIN B5 (111149) - Slot B5
<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 B5 (111149)	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	ANTERO McLIN B5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	ANTERO McLIN B5	<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)		

Site	FRONTIER 12				
Site Position:		Northing:	14,366,636.75 usft	Latitude:	39° 31' 51.798 N
From:	Lat/Long	Easting:	904,982.97 usft	Longitude:	107° 36' 29.317 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.20 in	Grid Convergence:	-1.66 °

Well	McLIN B5 (111149) - Slot B5					
Well Position	+N/-S	0.00 ft	Northing:	14,366,618.68 usft	Latitude:	39° 31' 51.636 N
	+E/-W	0.00 ft	Easting:	905,040.18 usft	Longitude:	107° 36' 28.580 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,598.00 ft

<b>Wellbore</b>	ANTERO McLIN B5				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	2010/05/31	10.32	65.87	52,428

<b>Design</b>	ANTERO McLIN B5				
<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) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	52.75	

<b>Survey Program</b>	<b>Date</b>	2010/06/07			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
131.00	7,207.00	ANTERO McLIN B5 SURVEY (ANTERO M	MWD	MWD - Standard	

<b>Survey</b>									
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Map Northing (usft)</b>	<b>Map Easting (usft)</b>	<b>Latitude</b>	<b>Longitude</b>
0.00	0.00	0.00	0.00	0.00	0.00	14,366,618.68	905,040.18	39° 31' 51.636 N	107° 36' 28.580 W
131.00	0.70	70.53	131.00	0.27	0.75	14,366,618.95	905,040.93	39° 31' 51.639 N	107° 36' 28.571 W
190.00	0.62	68.49	189.99	0.50	1.39	14,366,619.19	905,041.57	39° 31' 51.641 N	107° 36' 28.563 W
263.00	0.09	53.11	262.99	0.68	1.80	14,366,619.36	905,041.98	39° 31' 51.643 N	107° 36' 28.558 W
315.00	0.26	62.60	314.99	0.76	1.94	14,366,619.44	905,042.12	39° 31' 51.644 N	107° 36' 28.556 W
408.00	0.44	106.29	407.99	0.76	2.47	14,366,619.44	905,042.65	39° 31' 51.644 N	107° 36' 28.549 W
501.00	0.44	115.95	500.99	0.50	3.14	14,366,619.18	905,043.32	39° 31' 51.642 N	107° 36' 28.541 W
593.00	0.79	58.21	592.98	0.68	3.99	14,366,619.36	905,044.17	39° 31' 51.644 N	107° 36' 28.530 W
687.00	0.53	47.75	686.98	1.32	4.87	14,366,620.00	905,045.05	39° 31' 51.650 N	107° 36' 28.519 W
779.00	1.32	61.29	778.96	2.11	6.11	14,366,620.79	905,046.29	39° 31' 51.658 N	107° 36' 28.503 W
827.00	0.97	54.26	826.95	2.61	6.92	14,366,621.29	905,047.10	39° 31' 51.663 N	107° 36' 28.493 W
965.00	1.23	69.81	964.93	3.81	9.26	14,366,622.49	905,049.44	39° 31' 51.676 N	107° 36' 28.464 W

# ARK Directional Services

## Survey Report - Geographic

<b>Company:</b>	ANTERO RESOURCES	<b>Local Co-ordinate Reference:</b>	Well McLIN B5 (111149) - Slot B5
<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 B5 (111149)	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	ANTERO McLIN B5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	ANTERO McLIN B5	<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
1,058.00	1.23	51.44	1,057.91	4.77	10.98	14,366,623.46	905,051.16	39° 31' 51.686 N	107° 36' 28.442 W
1,152.00	2.11	57.51	1,151.87	6.33	13.23	14,366,625.01	905,053.41	39° 31' 51.702 N	107° 36' 28.414 W
1,215.00	2.72	53.46	1,214.81	7.85	15.41	14,366,626.53	905,055.59	39° 31' 51.718 N	107° 36' 28.387 W
1,246.00	3.16	57.86	1,245.77	8.74	16.72	14,366,627.42	905,056.90	39° 31' 51.727 N	107° 36' 28.370 W
1,278.00	3.69	58.47	1,277.71	9.75	18.35	14,366,628.43	905,058.53	39° 31' 51.737 N	107° 36' 28.350 W
1,306.00	4.48	60.58	1,305.64	10.75	20.07	14,366,629.44	905,060.25	39° 31' 51.748 N	107° 36' 28.328 W
1,338.00	5.01	59.62	1,337.53	12.07	22.36	14,366,630.76	905,062.54	39° 31' 51.761 N	107° 36' 28.300 W
1,369.00	6.06	58.30	1,368.39	13.62	24.92	14,366,632.30	905,065.10	39° 31' 51.777 N	107° 36' 28.268 W
1,400.00	6.94	59.70	1,399.19	15.42	27.93	14,366,634.10	905,068.11	39° 31' 51.796 N	107° 36' 28.230 W
1,432.00	7.74	61.90	1,430.92	17.41	31.50	14,366,636.10	905,071.68	39° 31' 51.817 N	107° 36' 28.185 W
1,463.00	8.47	60.32	1,461.61	19.53	35.33	14,366,638.21	905,075.51	39° 31' 51.839 N	107° 36' 28.137 W
1,495.00	9.14	60.60	1,493.24	21.94	39.59	14,366,640.62	905,079.77	39° 31' 51.864 N	107° 36' 28.084 W
1,526.00	9.93	61.90	1,523.81	24.41	44.09	14,366,643.09	905,084.27	39° 31' 51.889 N	107° 36' 28.027 W
1,557.00	10.63	63.04	1,554.31	26.97	49.00	14,366,645.65	905,089.18	39° 31' 51.916 N	107° 36' 27.965 W
1,590.00	11.60	62.25	1,586.69	29.89	54.65	14,366,648.57	905,094.83	39° 31' 51.947 N	107° 36' 27.895 W
1,683.00	15.47	55.75	1,677.10	41.23	73.18	14,366,659.91	905,113.36	39° 31' 52.064 N	107° 36' 27.662 W
1,779.00	18.90	53.90	1,768.80	57.60	96.33	14,366,676.28	905,136.51	39° 31' 52.232 N	107° 36' 27.373 W
1,873.00	21.71	53.64	1,856.95	76.88	122.64	14,366,695.56	905,162.82	39° 31' 52.430 N	107° 36' 27.045 W
1,968.00	25.40	50.48	1,944.02	100.27	152.52	14,366,718.95	905,192.70	39° 31' 52.670 N	107° 36' 26.672 W
2,062.00	28.30	49.42	2,027.88	127.60	185.00	14,366,746.28	905,225.18	39° 31' 52.949 N	107° 36' 26.268 W
2,157.00	28.13	49.51	2,111.59	156.79	219.14	14,366,775.47	905,259.32	39° 31' 53.247 N	107° 36' 25.843 W
2,251.00	28.13	51.18	2,194.49	185.07	253.25	14,366,803.75	905,293.43	39° 31' 53.536 N	107° 36' 25.419 W
2,346.00	27.77	50.74	2,278.41	213.12	287.84	14,366,831.80	905,328.02	39° 31' 53.823 N	107° 36' 24.988 W
2,440.00	26.63	52.59	2,362.01	239.78	321.53	14,366,858.46	905,361.71	39° 31' 54.096 N	107° 36' 24.568 W
2,535.00	26.63	53.11	2,446.93	265.49	355.47	14,366,884.17	905,395.65	39° 31' 54.360 N	107° 36' 24.145 W
2,626.00	27.07	53.38	2,528.12	290.08	388.40	14,366,908.76	905,428.58	39° 31' 54.612 N	107° 36' 23.734 W
2,724.00	27.16	54.08	2,615.35	316.51	424.41	14,366,935.19	905,464.59	39° 31' 54.883 N	107° 36' 23.284 W
2,818.00	26.63	52.67	2,699.19	341.87	458.54	14,366,960.55	905,498.72	39° 31' 55.144 N	107° 36' 22.858 W
2,912.00	26.98	53.20	2,783.09	367.42	492.36	14,366,986.10	905,532.54	39° 31' 55.406 N	107° 36' 22.436 W
3,007.00	26.28	53.20	2,868.01	392.92	526.46	14,367,011.60	905,566.64	39° 31' 55.667 N	107° 36' 22.011 W
3,101.00	27.51	54.61	2,951.84	417.96	560.82	14,367,036.64	905,601.00	39° 31' 55.924 N	107° 36' 21.582 W
3,196.00	26.72	51.97	3,036.40	443.83	595.53	14,367,062.51	905,635.71	39° 31' 56.190 N	107° 36' 21.149 W
3,290.00	26.81	54.17	3,120.33	469.26	629.37	14,367,087.94	905,669.55	39° 31' 56.451 N	107° 36' 20.727 W
3,295.23	26.87	54.26	3,125.00	470.64	631.28	14,367,089.32	905,671.46	39° 31' 56.465 N	107° 36' 20.703 W
3,385.00	27.86	55.75	3,204.72	494.29	665.09	14,367,112.98	905,705.27	39° 31' 56.708 N	107° 36' 20.280 W
3,479.00	26.98	56.10	3,288.16	518.55	700.94	14,367,137.23	905,741.12	39° 31' 56.958 N	107° 36' 19.832 W
3,574.00	26.54	56.19	3,372.99	542.38	736.46	14,367,161.06	905,776.64	39° 31' 57.203 N	107° 36' 19.388 W
3,668.00	26.63	56.19	3,457.05	565.79	771.42	14,367,184.47	905,811.59	39° 31' 57.445 N	107° 36' 18.950 W
3,762.00	27.42	54.52	3,540.78	590.07	806.55	14,367,208.75	905,846.72	39° 31' 57.695 N	107° 36' 18.511 W
3,857.00	26.37	53.38	3,625.51	615.35	841.29	14,367,234.03	905,881.47	39° 31' 57.954 N	107° 36' 18.077 W
3,951.00	25.58	51.88	3,710.01	640.33	874.01	14,367,259.01	905,914.19	39° 31' 58.210 N	107° 36' 17.669 W
4,046.00	23.47	49.77	3,796.44	665.22	904.60	14,367,283.90	905,944.77	39° 31' 58.465 N	107° 36' 17.288 W
4,140.00	21.80	46.52	3,883.20	689.32	931.56	14,367,308.00	905,971.73	39° 31' 58.711 N	107° 36' 16.953 W
4,184.79	20.30	45.37	3,925.00	700.50	943.12	14,367,319.18	905,983.30	39° 31' 58.824 N	107° 36' 16.810 W
4,235.00	18.63	43.88	3,972.34	712.40	954.88	14,367,331.08	905,995.06	39° 31' 58.945 N	107° 36' 16.664 W
4,329.00	15.73	44.68	4,062.13	732.29	974.25	14,367,350.97	906,014.43	39° 31' 59.147 N	107° 36' 16.425 W
4,424.00	13.62	44.50	4,154.03	749.42	991.15	14,367,368.10	906,031.32	39° 31' 59.321 N	107° 36' 16.216 W
4,518.00	11.87	44.76	4,245.71	764.18	1,005.71	14,367,382.86	906,045.89	39° 31' 59.471 N	107° 36' 16.035 W
4,613.00	8.88	46.61	4,339.15	776.16	1,017.92	14,367,394.84	906,058.10	39° 31' 59.593 N	107° 36' 15.884 W
4,707.00	7.73	47.31	4,432.16	785.43	1,027.84	14,367,404.11	906,068.02	39° 31' 59.687 N	107° 36' 15.761 W
4,802.00	6.33	44.85	4,526.44	793.48	1,036.23	14,367,412.16	906,076.41	39° 31' 59.769 N	107° 36' 15.657 W
4,896.00	5.89	44.94	4,619.91	800.57	1,043.29	14,367,419.25	906,083.47	39° 31' 59.841 N	107° 36' 15.569 W
4,903.08	5.83	45.04	4,626.96	801.08	1,043.80	14,367,419.76	906,083.98	39° 31' 59.846 N	107° 36' 15.563 W
TOP GAS B5									
4,981.00	5.19	46.35	4,704.51	806.31	1,049.16	14,367,424.99	906,089.33	39° 31' 59.900 N	107° 36' 15.497 W

# ARK Directional Services

## Survey Report - Geographic

<b>Company:</b>	ANTERO RESOURCES	<b>Local Co-ordinate Reference:</b>	Well McLIN B5 (111149) - Slot B5
<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 B5 (111149)	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	ANTERO McLIN B5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	ANTERO McLIN B5	<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
5,085.00	3.78	50.48	4,808.19	811.74	1,055.20	14,367,430.41	906,095.38	39° 31' 59.955 N	107° 36' 15.421 W
5,180.00	3.16	51.09	4,903.02	815.37	1,059.66	14,367,434.05	906,099.84	39° 31' 59.992 N	107° 36' 15.366 W
5,275.00	1.76	47.84	4,997.93	818.00	1,062.78	14,367,436.68	906,102.95	39° 32' 0.019 N	107° 36' 15.327 W
5,369.00	1.14	347.37	5,091.90	819.88	1,063.64	14,367,438.56	906,103.82	39° 32' 0.038 N	107° 36' 15.317 W
5,465.00	0.26	16.64	5,187.89	821.02	1,063.50	14,367,439.70	906,103.67	39° 32' 0.049 N	107° 36' 15.319 W
5,565.00	0.62	158.05	5,287.89	820.73	1,063.76	14,367,439.41	906,103.94	39° 32' 0.046 N	107° 36' 15.316 W
5,654.00	0.62	125.45	5,376.89	820.01	1,064.34	14,367,438.69	906,104.51	39° 32' 0.039 N	107° 36' 15.308 W
5,749.00	0.62	214.57	5,471.88	819.29	1,064.46	14,367,437.97	906,104.64	39° 32' 0.032 N	107° 36' 15.306 W
5,802.12	0.40	202.92	5,525.00	818.88	1,064.23	14,367,437.56	906,104.40	39° 32' 0.028 N	107° 36' 15.309 W
5,843.00	0.26	181.17	5,565.88	818.66	1,064.17	14,367,437.33	906,104.35	39° 32' 0.026 N	107° 36' 15.310 W
5,938.00	0.26	185.21	5,660.88	818.22	1,064.15	14,367,436.90	906,104.32	39° 32' 0.022 N	107° 36' 15.310 W
6,033.00	0.18	23.67	5,755.88	818.15	1,064.19	14,367,436.83	906,104.36	39° 32' 0.021 N	107° 36' 15.309 W
6,127.00	0.88	254.12	5,849.88	818.08	1,063.55	14,367,436.76	906,103.73	39° 32' 0.020 N	107° 36' 15.317 W
6,221.00	0.70	277.67	5,943.87	817.96	1,062.29	14,367,436.64	906,102.47	39° 32' 0.019 N	107° 36' 15.333 W
6,316.00	0.70	350.18	6,038.86	818.61	1,061.61	14,367,437.29	906,101.79	39° 32' 0.025 N	107° 36' 15.342 W
6,411.00	0.79	187.59	6,133.86	818.54	1,061.43	14,367,437.22	906,101.61	39° 32' 0.024 N	107° 36' 15.345 W
6,504.00	0.44	179.85	6,226.85	817.54	1,061.34	14,367,436.22	906,101.52	39° 32' 0.014 N	107° 36' 15.345 W
6,599.00	0.26	118.59	6,321.85	817.08	1,061.53	14,367,435.75	906,101.71	39° 32' 0.010 N	107° 36' 15.343 W
6,693.00	0.44	231.09	6,415.85	816.75	1,061.44	14,367,435.43	906,101.62	39° 32' 0.006 N	107° 36' 15.344 W
6,788.00	0.62	350.10	6,510.85	817.02	1,061.07	14,367,435.70	906,101.25	39° 32' 0.009 N	107° 36' 15.349 W
6,882.00	1.23	8.29	6,604.84	818.52	1,061.13	14,367,437.20	906,101.30	39° 32' 0.024 N	107° 36' 15.348 W
6,902.17	1.26	10.84	6,625.00	818.96	1,061.20	14,367,437.63	906,101.38	39° 32' 0.028 N	107° 36' 15.348 W
6,976.00	1.41	19.01	6,698.81	820.61	1,061.65	14,367,439.29	906,101.83	39° 32' 0.045 N	107° 36' 15.343 W
7,051.87	1.83	21.38	6,774.65	822.62	1,062.39	14,367,441.30	906,102.57	39° 32' 0.065 N	107° 36' 15.334 W
TD B5									
7,071.00	1.93	21.82	6,793.77	823.20	1,062.62	14,367,441.88	906,102.80	39° 32' 0.070 N	107° 36' 15.331 W
7,154.00	2.11	24.46	6,876.72	825.89	1,063.78	14,367,444.57	906,103.95	39° 32' 0.097 N	107° 36' 15.317 W
7,207.00	2.11	24.46	6,929.68	827.67	1,064.58	14,367,446.35	906,104.76	39° 32' 0.115 N	107° 36' 15.308 W
PROJECTION TO BIT @ 7207' MD (6930' TVD)									

Survey Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
7,207.00	6,929.68	827.67	1,064.58	PROJECTION TO BIT @ 7207' MD (6930' TVD)

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