



REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well Gentry B18 (112022) - Slot B18, Grid North
Vertical (TVD) Reference: KB @ 5648.00ft (Original Well Elev)
Section (VS) Reference: Slot - B18(0.00N, 0.00E)
Measured Depth Reference: KB @ 5648.00ft (Original Well Elev)
Calculation Method: Minimum Curvature

PROJECT DETAILS: Gentry

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

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1150.00	0.00	0.00	1150.00	0.00	0.00	0.00	0.00	0.00	
2442.32	38.77	332.14	2345.94	372.03	-196.64	3.00	332.14	420.80	
4431.79	38.77	332.14	3897.06	1473.44	-778.78	0.00	0.00	1666.59	
5724.11	0.00	332.14	5093.00	1845.47	-975.41	3.00	180.00	2087.39	
8624.11	0.00	332.14	7993.00	1845.47	-975.41	0.00	332.14	2087.39	BH B18



Antero Resources

Gentry

Gentry B

Gentry B18 (112022) - Slot B18

Gentry B18

Plan: Gentry B18 P01

Standard Planning Report - Geographic

29 May, 2012



Database:	EDM5000-New	Local Co-ordinate Reference:	Well Gentry B18 (112022) - Slot B18
Company:	Antero Resources	TVD Reference:	KB @ 5648.00ft (Original Well Elev)
Project:	Gentry	MD Reference:	KB @ 5648.00ft (Original Well Elev)
Site:	Gentry B	North Reference:	Grid
Well:	Gentry B18 (112022)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Gentry B18		
Design:	Gentry B18 P01		

Project	Gentry		
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		Gentry B			
Site Position:		Northing:	14,366,383.28 usft	Latitude:	39.528393199°N
From:	Map	Easting:	880,664.23 usft	Longitude:	107.694272643°W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.72 °

Well	Gentry B18 (112022) - Slot B18					
Well Position	+N/-S	0.00 ft	Northing:	14,366,399.52 usft	Latitude:	39.528440529°N
	+E/-W	0.00 ft	Easting:	880,698.03 usft	Longitude:	107.694154624°W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,624.00 ft

Wellbore	Gentry B18				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	08/18/12	10.07	65.79	52,191

Design	Gentry B18 P01				
Audit Notes:					
Version:	Phase:	PROTOTYPE		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	332.14	

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	
1,150.00	0.00	0.00	1,150.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,442.32	38.77	332.14	2,345.94	372.03	-196.64	3.00	3.00	0.00	332.14	
4,431.79	38.77	332.14	3,897.06	1,473.44	-778.78	0.00	0.00	0.00	0.00	
5,724.11	0.00	332.14	5,093.00	1,845.47	-975.41	3.00	-3.00	0.00	180.00	
8,624.11	0.00	332.14	7,993.00	1,845.47	-975.41	0.00	0.00	0.00	332.14	BH B18

Database:	EDM5000-New	Local Co-ordinate Reference:	Well Gentry B18 (112022) - Slot B18
Company:	Antero Resources	TVD Reference:	KB @ 5648.00ft (Original Well Elev)
Project:	Gentry	MD Reference:	KB @ 5648.00ft (Original Well Elev)
Site:	Gentry B	North Reference:	Grid
Well:	Gentry B18 (112022)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Gentry B18		
Design:	Gentry B18 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	14,366,399.52	880,698.03	39.528440529°N	107.694154624°W
100.00	0.00	0.00	100.00	0.00	0.00	14,366,399.52	880,698.03	39.528440529°N	107.694154624°W
200.00	0.00	0.00	200.00	0.00	0.00	14,366,399.52	880,698.03	39.528440529°N	107.694154624°W
300.00	0.00	0.00	300.00	0.00	0.00	14,366,399.52	880,698.03	39.528440529°N	107.694154624°W
400.00	0.00	0.00	400.00	0.00	0.00	14,366,399.52	880,698.03	39.528440529°N	107.694154624°W
500.00	0.00	0.00	500.00	0.00	0.00	14,366,399.52	880,698.03	39.528440529°N	107.694154624°W
600.00	0.00	0.00	600.00	0.00	0.00	14,366,399.52	880,698.03	39.528440529°N	107.694154624°W
700.00	0.00	0.00	700.00	0.00	0.00	14,366,399.52	880,698.03	39.528440529°N	107.694154624°W
800.00	0.00	0.00	800.00	0.00	0.00	14,366,399.52	880,698.03	39.528440529°N	107.694154624°W
900.00	0.00	0.00	900.00	0.00	0.00	14,366,399.52	880,698.03	39.528440529°N	107.694154624°W
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,366,399.52	880,698.03	39.528440529°N	107.694154624°W
Surf Csg at 1000 MD/TVD									
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,366,399.52	880,698.03	39.528440529°N	107.694154624°W
1,150.00	0.00	0.00	1,150.00	0.00	0.00	14,366,399.52	880,698.03	39.528440529°N	107.694154624°W
KOP 3°/100 at 1150 MD/TVD									
1,200.00	1.50	332.14	1,199.99	0.58	-0.31	14,366,400.09	880,697.73	39.528442091°N	107.694155769°W
1,300.00	4.50	332.14	1,299.85	5.21	-2.75	14,366,404.72	880,695.28	39.528454582°N	107.694164922°W
1,400.00	7.50	332.14	1,399.29	14.45	-7.64	14,366,413.96	880,690.40	39.528479531°N	107.694183204°W
1,500.00	10.50	332.14	1,498.04	28.27	-14.94	14,366,427.79	880,683.09	39.528516868°N	107.694210565°W
1,600.00	13.50	332.14	1,595.85	46.65	-24.66	14,366,446.17	880,673.38	39.528566491°N	107.694246929°W
1,700.00	16.50	332.14	1,692.43	69.53	-36.75	14,366,469.05	880,661.28	39.528628265°N	107.694292197°W
1,800.00	19.50	332.14	1,787.52	96.85	-51.19	14,366,496.37	880,646.84	39.528702020°N	107.694346244°W
1,900.00	22.50	332.14	1,880.87	128.53	-67.93	14,366,528.05	880,630.10	39.528787554°N	107.694408924°W
2,000.00	25.50	332.14	1,972.22	164.49	-86.94	14,366,564.00	880,611.10	39.528884631°N	107.694480063°W
2,100.00	28.50	332.14	2,061.31	204.62	-108.15	14,366,604.13	880,589.88	39.528992988°N	107.694559467°W
2,200.00	31.50	332.14	2,147.90	248.82	-131.51	14,366,648.33	880,566.52	39.529112325°N	107.694646919°W
2,300.00	34.50	332.14	2,231.76	296.97	-156.96	14,366,696.48	880,541.08	39.529242317°N	107.694742179°W
2,400.00	37.50	332.14	2,312.65	348.93	-184.42	14,366,748.44	880,513.61	39.529382606°N	107.694844986°W
2,442.32	38.77	332.14	2,345.94	372.03	-196.64	14,366,771.55	880,501.40	39.529444988°N	107.694890700°W
HOLD 39° at 2442 MD/2346 TVD									
2,500.00	38.77	332.14	2,390.91	403.96	-213.51	14,366,803.48	880,484.52	39.529531201°N	107.694953879°W
2,600.00	38.77	332.14	2,468.87	459.32	-242.77	14,366,858.84	880,455.26	39.529680674°N	107.695063417°W
2,700.00	38.77	332.14	2,546.84	514.69	-272.03	14,366,914.20	880,426.00	39.529830147°N	107.695172955°W
2,800.00	38.77	332.14	2,624.81	570.05	-301.30	14,366,969.56	880,396.74	39.529979619°N	107.695282493°W
2,900.00	38.77	332.14	2,702.77	625.41	-330.56	14,367,024.92	880,367.48	39.530129092°N	107.695392032°W
3,000.00	38.77	332.14	2,780.74	680.77	-359.82	14,367,080.29	880,338.22	39.530278564°N	107.695501571°W
3,100.00	38.77	332.14	2,858.71	736.13	-389.08	14,367,135.65	880,308.96	39.530428036°N	107.695611111°W
3,200.00	38.77	332.14	2,936.68	791.50	-418.34	14,367,191.01	880,279.69	39.530577508°N	107.695720652°W
3,300.00	38.77	332.14	3,014.64	846.86	-447.60	14,367,246.37	880,250.43	39.530726980°N	107.695830192°W
3,400.00	38.77	332.14	3,092.61	902.22	-476.86	14,367,301.73	880,221.17	39.530876451°N	107.695939734°W
3,500.00	38.77	332.14	3,170.58	957.58	-506.12	14,367,357.10	880,191.91	39.531025923°N	107.696049276°W
3,600.00	38.77	332.14	3,248.54	1,012.94	-535.39	14,367,412.46	880,162.65	39.531175395°N	107.696158818°W
3,700.00	38.77	332.14	3,326.51	1,068.30	-564.65	14,367,467.82	880,133.39	39.531324866°N	107.696268361°W
3,800.00	38.77	332.14	3,404.48	1,123.67	-593.91	14,367,523.18	880,104.13	39.531474337°N	107.696377904°W
3,900.00	38.77	332.14	3,482.44	1,179.03	-623.17	14,367,578.54	880,074.87	39.531623808°N	107.696487448°W
4,000.00	38.77	332.14	3,560.41	1,234.39	-652.43	14,367,633.90	880,045.61	39.531773279°N	107.696596992°W
4,100.00	38.77	332.14	3,638.38	1,289.75	-681.69	14,367,689.27	880,016.34	39.531922750°N	107.696706536°W
4,200.00	38.77	332.14	3,716.35	1,345.11	-710.95	14,367,744.63	879,987.08	39.532072221°N	107.696816082°W
4,300.00	38.77	332.14	3,794.31	1,400.48	-740.21	14,367,799.99	879,957.82	39.532221692°N	107.696925627°W
4,400.00	38.77	332.14	3,872.28	1,455.84	-769.48	14,367,855.35	879,928.56	39.532371162°N	107.697035173°W
4,431.79	38.77	332.14	3,897.06	1,473.44	-778.78	14,367,872.95	879,919.26	39.532418676°N	107.697069996°W
DROP 3°/100 at 4432 MD/3897 TVD									
4,500.00	36.72	332.14	3,951.00	1,510.35	-798.29	14,367,909.86	879,899.75	39.532518344°N	107.697143043°W
4,600.00	33.72	332.14	4,032.68	1,561.34	-825.24	14,367,960.85	879,872.80	39.532656001°N	107.697243932°W

Database:	EDM5000-New	Local Co-ordinate Reference:	Well Gentry B18 (112022) - Slot B18
Company:	Antero Resources	TVD Reference:	KB @ 5648.00ft (Original Well Elev)
Project:	Gentry	MD Reference:	KB @ 5648.00ft (Original Well Elev)
Site:	Gentry B	North Reference:	Grid
Well:	Gentry B18 (112022)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Gentry B18		
Design:	Gentry B18 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	
4,700.00	30.72	332.14	4,117.27	1,608.47	-850.15	14,368,007.99	879,847.89	39.532783264°N	107.697337204°W	
4,800.00	27.72	332.14	4,204.53	1,651.63	-872.96	14,368,051.15	879,825.07	39.532899787°N	107.697422604°W	
4,898.65	24.76	332.14	4,293.00	1,690.19	-893.34	14,368,089.71	879,804.69	39.533003898°N	107.697498908°W	
Mesaverde										
4,900.00	24.72	332.14	4,294.23	1,690.69	-893.61	14,368,090.21	879,804.43	39.533005248°N	107.697499898°W	
5,000.00	21.72	332.14	4,386.11	1,725.55	-912.03	14,368,125.06	879,786.00	39.533099359°N	107.697568873°W	
5,100.00	18.72	332.14	4,479.94	1,756.11	-928.18	14,368,155.62	879,769.85	39.533181862°N	107.697629341°W	
5,200.00	15.72	332.14	4,575.44	1,782.29	-942.02	14,368,181.80	879,756.02	39.533252531°N	107.697681136°W	
5,300.00	12.72	332.14	4,672.37	1,804.01	-953.50	14,368,203.52	879,744.54	39.533311173°N	107.697724115°W	
5,400.00	9.72	332.14	4,770.44	1,821.21	-962.59	14,368,220.72	879,735.44	39.533357626°N	107.697758162°W	
5,500.00	6.72	332.14	4,869.40	1,833.86	-969.28	14,368,233.37	879,728.76	39.533391763°N	107.697783182°W	
5,600.00	3.72	332.14	4,968.98	1,841.90	-973.53	14,368,241.42	879,724.51	39.533413491°N	107.697799107°W	
5,700.00	0.72	332.14	5,068.89	1,845.33	-975.34	14,368,244.84	879,722.70	39.533422750°N	107.697805893°W	
5,724.11	0.00	332.14	5,093.00	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
VERTICAL at 5724 MD/5093 TVD - Price Coal										
5,800.00	0.00	332.14	5,168.89	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
5,900.00	0.00	332.14	5,268.89	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
6,000.00	0.00	332.14	5,368.89	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
6,100.00	0.00	332.14	5,468.89	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
6,200.00	0.00	332.14	5,568.89	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
6,300.00	0.00	332.14	5,668.89	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
6,400.00	0.00	332.14	5,768.89	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
6,424.11	0.00	332.14	5,793.00	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
Top Gas										
6,500.00	0.00	332.14	5,868.89	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
6,600.00	0.00	332.14	5,968.89	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
6,700.00	0.00	332.14	6,068.89	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
6,800.00	0.00	332.14	6,168.89	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
6,900.00	0.00	332.14	6,268.89	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
7,000.00	0.00	332.14	6,368.89	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
7,100.00	0.00	332.14	6,468.89	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
7,200.00	0.00	332.14	6,568.89	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
7,300.00	0.00	332.14	6,668.89	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
7,324.11	0.00	332.14	6,693.00	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
Cameo										
7,400.00	0.00	332.14	6,768.89	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
7,500.00	0.00	332.14	6,868.89	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
7,600.00	0.00	332.14	6,968.89	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
7,700.00	0.00	332.14	7,068.89	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
7,800.00	0.00	332.14	7,168.89	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
7,900.00	0.00	332.14	7,268.89	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
8,000.00	0.00	332.14	7,368.89	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
8,100.00	0.00	332.14	7,468.89	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
8,200.00	0.00	332.14	7,568.89	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
8,300.00	0.00	332.14	7,668.89	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
8,400.00	0.00	332.14	7,768.89	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
8,424.11	0.00	332.14	7,793.00	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
Rollins										
8,500.00	0.00	332.14	7,868.89	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
8,600.00	0.00	332.14	7,968.89	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
8,624.11	0.00	332.14	7,993.00	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W	
TD at 8624 MD/7993 TVD										

Database:	EDM5000-New	Local Co-ordinate Reference:	Well Gentry B18 (112022) - Slot B18
Company:	Antero Resources	TVD Reference:	KB @ 5648.00ft (Original Well Elev)
Project:	Gentry	MD Reference:	KB @ 5648.00ft (Original Well Elev)
Site:	Gentry B	North Reference:	Grid
Well:	Gentry B18 (112022)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Gentry B18		
Design:	Gentry B18 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									
BH B18	0.00	360.00	7,993.00	1,845.47	-975.41	14,368,244.98	879,722.62	39.533423113°N	107.697806159°W
- plan hits target center									
- Circle (radius 20.00)									

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		5.500	6.000

Formations					
Measured Depth	Vertical Depth	Name		Dip	Dip Direction
(ft)	(ft)			(°)	(°)
4,898.65	4,293.00	Mesaverde			
5,724.11	5,093.00	Price Coal			
6,424.11	5,793.00	Top Gas			
7,324.11	6,693.00	Cameo			
8,424.11	7,793.00	Rollins			

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
1,150.00	1,150.00	0.00	0.00	KOP 3°/100 at 1150 MD/TVD
2,442.32	2,345.94	372.03	-196.64	HOLD 39° at 2442 MD/2346 TVD
4,431.79	3,897.06	1,473.44	-778.78	DROP 3°/100 at 4432 MD/3897 TVD
5,724.11	5,093.00	1,845.47	-975.41	VERTICAL at 5724 MD/5093 TVD
8,624.11	7,993.00	1,845.47	-975.41	TD at 8624 MD/7993 TVD