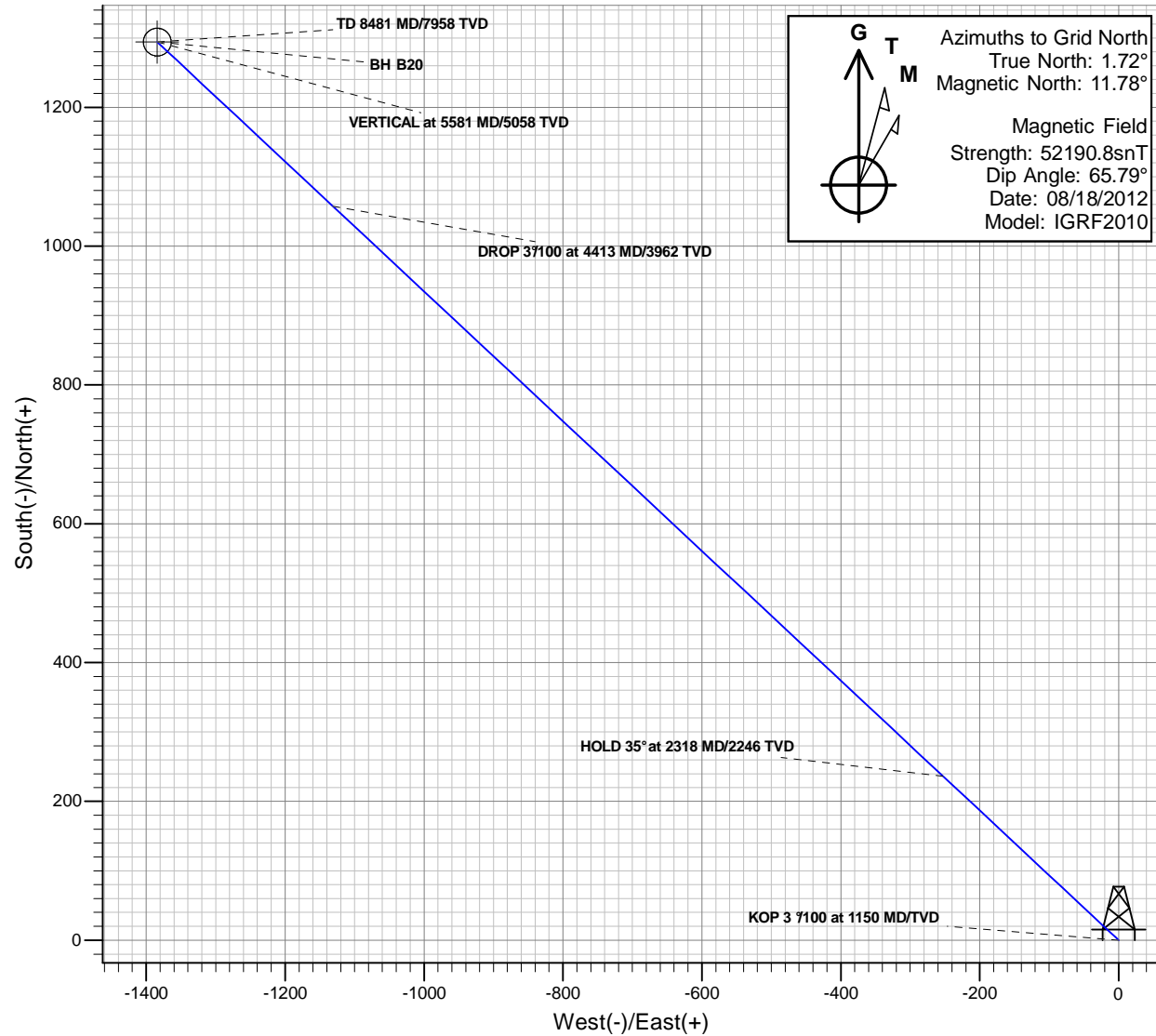
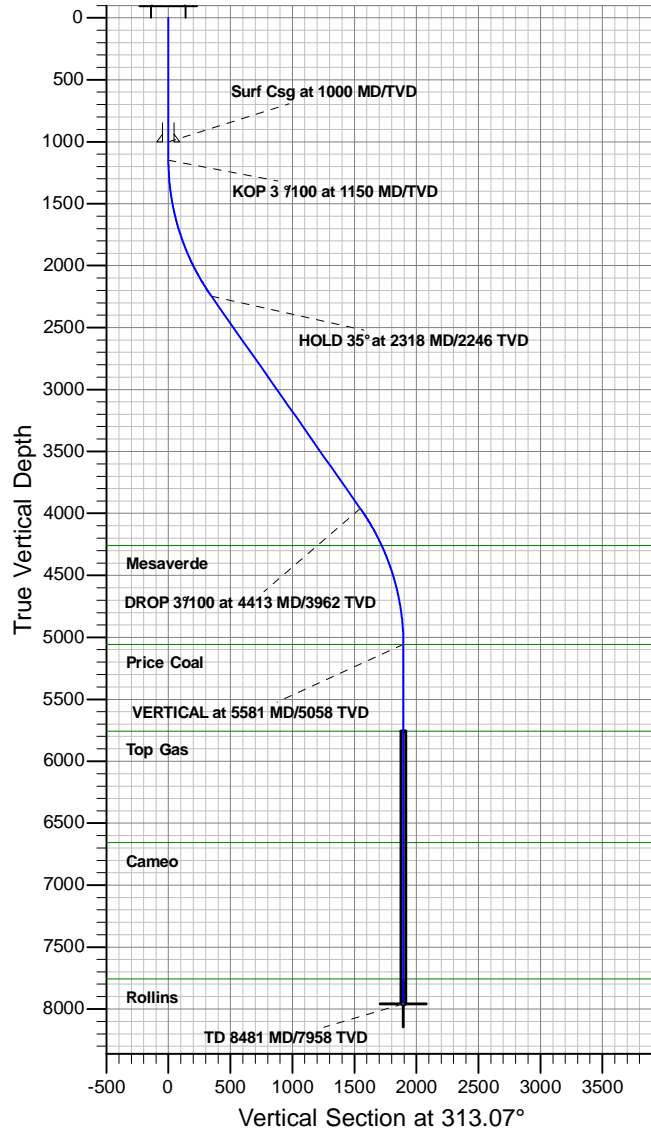




Antero Resources

Gentry B20 (112024)
Gentry B20 P01



REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well Gentry B20 (112024) - Slot B20, Grid North
Vertical (TVD) Reference: WELL @ 5648.00ft (Original Well Elev)
Section (VS) Reference: Slot - B20(0.00N, 0.00E)
Measured Depth Reference: WELL @ 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	
2317.94	35.04	313.07	2246.49	236.38	-252.84	3.00	313.07	346.12	
4412.56	35.04	313.07	3961.51	1057.64	-1131.30	0.00	0.00	1548.69	
5580.50	0.00	313.07	5058.00	1294.02	-1384.14	3.00	180.00	1894.82	
8480.50	0.00	313.07	7958.00	1294.02	-1384.14	0.00	313.07	1894.82	BH B20



Antero Resources

Gentry

Gentry B

Gentry B20 (112024) - Slot B20

Gentry B20

Plan: Gentry B20 P01

Standard Planning Report - Geographic

29 May, 2012



Database:	EDM5000-New	Local Co-ordinate Reference:	Well Gentry B20 (112024) - Slot B20
Company:	Antero Resources	TVD Reference:	WELL @ 5648.00ft (Original Well Elev)
Project:	Gentry	MD Reference:	WELL @ 5648.00ft (Original Well Elev)
Site:	Gentry B	North Reference:	Grid
Well:	Gentry B20 (112024)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Gentry B20		
Design:	Gentry B20 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 B20 (112024) - Slot B20					
Well Position	+N/-S	0.00 ft	Northing:	14,366,403.40 usft	Latitude:	39.528449580°N
	+E/-W	0.00 ft	Easting:	880,678.42 usft	Longitude:	107.694224534°W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,624.00 ft

Wellbore	Gentry B20				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	08/18/12	10.07	65.79	52,191

Design	Gentry B20 P01				
Audit Notes:					
Version:	Phase:	PROTOTYPE		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	7,958.00	0.00	0.00	313.07	

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	
2,317.94	35.04	313.07	2,246.49	236.38	-252.84	3.00	3.00	0.00	313.07	
4,412.56	35.04	313.07	3,961.51	1,057.64	-1,131.30	0.00	0.00	0.00	0.00	
5,580.50	0.00	313.07	5,058.00	1,294.02	-1,384.14	3.00	-3.00	0.00	180.00	
8,480.50	0.00	313.07	7,958.00	1,294.02	-1,384.14	0.00	0.00	0.00	313.07	BH B20

Database:	EDM5000-New	Local Co-ordinate Reference:	Well Gentry B20 (112024) - Slot B20
Company:	Antero Resources	TVD Reference:	WELL @ 5648.00ft (Original Well Elev)
Project:	Gentry	MD Reference:	WELL @ 5648.00ft (Original Well Elev)
Site:	Gentry B	North Reference:	Grid
Well:	Gentry B20 (112024)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Gentry B20		
Design:	Gentry B20 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	14,366,403.40	880,678.42	39.528449580°N	107.694224534°W
100.00	0.00	0.00	100.00	0.00	0.00	14,366,403.40	880,678.42	39.528449580°N	107.694224534°W
200.00	0.00	0.00	200.00	0.00	0.00	14,366,403.40	880,678.42	39.528449580°N	107.694224534°W
300.00	0.00	0.00	300.00	0.00	0.00	14,366,403.40	880,678.42	39.528449580°N	107.694224534°W
400.00	0.00	0.00	400.00	0.00	0.00	14,366,403.40	880,678.42	39.528449580°N	107.694224534°W
500.00	0.00	0.00	500.00	0.00	0.00	14,366,403.40	880,678.42	39.528449580°N	107.694224534°W
600.00	0.00	0.00	600.00	0.00	0.00	14,366,403.40	880,678.42	39.528449580°N	107.694224534°W
700.00	0.00	0.00	700.00	0.00	0.00	14,366,403.40	880,678.42	39.528449580°N	107.694224534°W
800.00	0.00	0.00	800.00	0.00	0.00	14,366,403.40	880,678.42	39.528449580°N	107.694224534°W
900.00	0.00	0.00	900.00	0.00	0.00	14,366,403.40	880,678.42	39.528449580°N	107.694224534°W
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,366,403.40	880,678.42	39.528449580°N	107.694224534°W
Surf Csg at 1000 MD/TVD									
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,366,403.40	880,678.42	39.528449580°N	107.694224534°W
1,150.00	0.00	0.00	1,150.00	0.00	0.00	14,366,403.40	880,678.42	39.528449580°N	107.694224534°W
KOP 3 °/100 at 1150 MD/TVD									
1,200.00	1.50	313.07	1,199.99	0.45	-0.48	14,366,403.85	880,677.94	39.528450767°N	107.694226275°W
1,300.00	4.50	313.07	1,299.85	4.02	-4.30	14,366,407.42	880,674.12	39.528460257°N	107.694240197°W
1,400.00	7.50	313.07	1,399.29	11.16	-11.94	14,366,414.56	880,666.48	39.528479211°N	107.694268001°W
1,500.00	10.50	313.07	1,498.04	21.84	-23.36	14,366,425.24	880,655.06	39.528507577°N	107.694309612°W
1,600.00	13.50	313.07	1,595.85	36.04	-38.55	14,366,439.44	880,639.87	39.528545278°N	107.694364915°W
1,700.00	16.50	313.07	1,692.43	53.71	-57.45	14,366,457.11	880,620.97	39.528592209°N	107.694433760°W
1,800.00	19.50	313.07	1,787.52	74.81	-80.02	14,366,478.22	880,598.39	39.528648243°N	107.694515958°W
1,900.00	22.50	313.07	1,880.87	99.28	-106.20	14,366,502.69	880,572.22	39.528713225°N	107.694611283°W
2,000.00	25.50	313.07	1,972.22	127.06	-135.91	14,366,530.46	880,542.51	39.528786978°N	107.694719474°W
2,100.00	28.50	313.07	2,061.31	158.06	-169.07	14,366,561.46	880,509.35	39.528869299°N	107.694840235°W
2,200.00	31.50	313.07	2,147.90	192.20	-205.59	14,366,595.60	880,472.83	39.528959963°N	107.694973234°W
2,300.00	34.50	313.07	2,231.76	229.39	-245.37	14,366,632.79	880,433.05	39.529058720°N	107.695118108°W
2,317.94	35.04	313.07	2,246.49	236.38	-252.84	14,366,639.78	880,425.58	39.529077272°N	107.695145323°W
HOLD 35° at 2318 MD/2246 TVD									
2,400.00	35.04	313.07	2,313.68	268.55	-287.25	14,366,671.95	880,391.16	39.529162711°N	107.695270658°W
2,500.00	35.04	313.07	2,395.56	307.76	-329.19	14,366,711.16	880,349.22	39.529266826°N	107.695423393°W
2,600.00	35.04	313.07	2,477.44	346.97	-371.13	14,366,750.37	880,307.28	39.529370941°N	107.695576128°W
2,700.00	35.04	313.07	2,559.31	386.18	-413.07	14,366,789.58	880,265.35	39.529475056°N	107.695728864°W
2,800.00	35.04	313.07	2,641.19	425.39	-455.01	14,366,828.79	880,223.41	39.529579171°N	107.695881600°W
2,900.00	35.04	313.07	2,723.07	464.59	-496.95	14,366,868.00	880,181.47	39.529683285°N	107.696034336°W
3,000.00	35.04	313.07	2,804.94	503.80	-538.89	14,366,907.20	880,139.53	39.529787399°N	107.696187073°W
3,100.00	35.04	313.07	2,886.82	543.01	-580.83	14,366,946.41	880,097.59	39.529891513°N	107.696393981°W
3,200.00	35.04	313.07	2,968.70	582.22	-622.77	14,366,985.62	880,055.65	39.529995627°N	107.696492549°W
3,300.00	35.04	313.07	3,050.57	621.43	-664.70	14,367,024.83	880,013.71	39.530099741°N	107.696645287°W
3,400.00	35.04	313.07	3,132.45	660.64	-706.64	14,367,064.04	879,971.77	39.530203854°N	107.696798026°W
3,500.00	35.04	313.07	3,214.33	699.84	-748.58	14,367,103.25	879,929.84	39.530307967°N	107.696950765°W
3,600.00	35.04	313.07	3,296.21	739.05	-790.52	14,367,142.45	879,887.90	39.530412080°N	107.697103505°W
3,700.00	35.04	313.07	3,378.08	778.26	-832.46	14,367,181.66	879,845.96	39.530516193°N	107.697256245°W
3,800.00	35.04	313.07	3,459.96	817.47	-874.40	14,367,220.87	879,804.02	39.530620305°N	107.697408985°W
3,900.00	35.04	313.07	3,541.84	856.68	-916.34	14,367,260.08	879,762.08	39.530724417°N	107.697561726°W
4,000.00	35.04	313.07	3,623.71	895.89	-958.28	14,367,299.29	879,720.14	39.530828530°N	107.697714468°W
4,100.00	35.04	313.07	3,705.59	935.09	-1,000.22	14,367,338.49	879,678.20	39.530932641°N	107.697867210°W
4,200.00	35.04	313.07	3,787.47	974.30	-1,042.15	14,367,377.70	879,636.26	39.531036753°N	107.698019952°W
4,300.00	35.04	313.07	3,869.34	1,013.51	-1,084.09	14,367,416.91	879,594.33	39.531140864°N	107.698172695°W
4,400.00	35.04	313.07	3,951.22	1,052.72	-1,126.03	14,367,456.12	879,552.39	39.531244976°N	107.698325438°W
4,412.56	35.04	313.07	3,961.51	1,057.64	-1,131.30	14,367,461.05	879,547.12	39.531258056°N	107.698346629°W
DROP 3°/100 at 4413 MD/3962 TVD									
4,500.00	32.42	313.07	4,034.22	1,090.80	-1,166.76	14,367,494.20	879,511.66	39.531346083°N	107.698473776°W
4,600.00	29.42	313.07	4,120.01	1,125.88	-1,204.29	14,367,529.28	879,474.13	39.531439239°N	107.698610447°W



Database:	EDM5000-New	Local Co-ordinate Reference:	Well Gentry B20 (112024) - Slot B20
Company:	Antero Resources	TVD Reference:	WELL @ 5648.00ft (Original Well Elev)
Project:	Gentry	MD Reference:	WELL @ 5648.00ft (Original Well Elev)
Site:	Gentry B	North Reference:	Grid
Well:	Gentry B20 (112024)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Gentry B20		
Design:	Gentry B20 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	26.42	313.07	4,208.36	1,157.85	-1,238.48	14,367,561.25	879,439.94	39.531524125°N	107.698734987°W	
4,755.04	24.76	313.07	4,258.00	1,174.08	-1,255.85	14,367,577.48	879,422.57	39.531567234°N	107.698798234°W	
Mesaverde										
4,800.00	23.42	313.07	4,299.04	1,186.61	-1,269.25	14,367,590.01	879,409.17	39.531600510°N	107.698847055°W	
4,900.00	20.42	313.07	4,391.81	1,212.10	-1,296.51	14,367,615.50	879,381.91	39.531668183°N	107.698946342°W	
5,000.00	17.42	313.07	4,486.39	1,234.24	-1,320.19	14,367,637.64	879,358.23	39.531726960°N	107.699032576°W	
5,100.00	14.42	313.07	4,582.55	1,252.96	-1,340.22	14,367,656.36	879,338.20	39.531776680°N	107.699105523°W	
5,200.00	11.42	313.07	4,680.01	1,268.22	-1,356.54	14,367,671.62	879,321.88	39.531817205°N	107.699164980°W	
5,300.00	8.42	313.07	4,778.50	1,279.98	-1,369.12	14,367,683.38	879,309.30	39.531848426°N	107.699210786°W	
5,400.00	5.42	313.07	4,877.77	1,288.20	-1,377.91	14,367,691.60	879,300.51	39.531870256°N	107.699242814°W	
5,500.00	2.42	313.07	4,977.52	1,292.86	-1,382.90	14,367,696.26	879,295.52	39.531882636°N	107.699260978°W	
5,580.50	0.00	313.07	5,058.00	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
VERTICAL at 5581 MD/5058 TVD - Price Coal										
5,600.00	0.00	313.07	5,077.50	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
5,700.00	0.00	313.07	5,177.50	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
5,800.00	0.00	313.07	5,277.50	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
5,900.00	0.00	313.07	5,377.50	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
6,000.00	0.00	313.07	5,477.50	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
6,100.00	0.00	313.07	5,577.50	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
6,200.00	0.00	313.07	5,677.50	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
6,280.50	0.00	313.07	5,758.00	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
Top Gas										
6,300.00	0.00	313.07	5,777.50	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
6,400.00	0.00	313.07	5,877.50	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
6,500.00	0.00	313.07	5,977.50	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
6,600.00	0.00	313.07	6,077.50	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
6,700.00	0.00	313.07	6,177.50	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
6,800.00	0.00	313.07	6,277.50	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
6,900.00	0.00	313.07	6,377.50	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
7,000.00	0.00	313.07	6,477.50	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
7,100.00	0.00	313.07	6,577.50	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
7,180.50	0.00	313.07	6,658.00	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
Cameo										
7,200.00	0.00	313.07	6,677.50	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
7,300.00	0.00	313.07	6,777.50	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
7,400.00	0.00	313.07	6,877.50	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
7,500.00	0.00	313.07	6,977.50	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
7,600.00	0.00	313.07	7,077.50	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
7,700.00	0.00	313.07	7,177.50	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
7,800.00	0.00	313.07	7,277.50	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
7,900.00	0.00	313.07	7,377.50	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
8,000.00	0.00	313.07	7,477.50	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
8,100.00	0.00	313.07	7,577.50	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
8,200.00	0.00	313.07	7,677.50	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
8,280.50	0.00	313.07	7,758.00	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
Rollins										
8,300.00	0.00	313.07	7,777.50	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
8,400.00	0.00	313.07	7,877.50	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
8,480.50	0.00	313.07	7,958.00	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W	
TD 8481 MD/7958 TVD										

Database:	EDM5000-New	Local Co-ordinate Reference:	Well Gentry B20 (112024) - Slot B20
Company:	Antero Resources	TVD Reference:	WELL @ 5648.00ft (Original Well Elev)
Project:	Gentry	MD Reference:	WELL @ 5648.00ft (Original Well Elev)
Site:	Gentry B	North Reference:	Grid
Well:	Gentry B20 (112024)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Gentry B20		
Design:	Gentry B20 P01		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
BH B20	0.00	0.00	7,958.00	1,294.02	-1,384.14	14,367,697.42	879,294.28	39.531885712°N	107.699265491°W
- plan hits target center									
- Circle (radius 20.00)									

Casing Points					
Measured Depth	Vertical Depth			Casing Diameter	Hole Diameter
(ft)	(ft)	Name		(in)	(in)
1,000.00	1,000.00	Surf Csg at 1000 MD/TVD		5.500	6.000

Formations						
Measured Depth	Vertical Depth				Dip	Dip Direction
(ft)	(ft)	Name		Lithology	(°)	(°)
4,755.04	4,258.00	Mesaverde				
5,580.50	5,058.00	Price Coal				
6,280.50	5,758.00	Top Gas				
7,180.50	6,658.00	Cameo				
8,280.50	7,758.00	Rollins				

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(ft)	(ft)	+N/-S	+E/-W	Comment	
(ft)	(ft)	(ft)	(ft)		
1,150.00	1,150.00	0.00	0.00	KOP 3 °/100 at 1150 MD/TVD	
2,317.94	2,246.49	236.38	-252.84	HOLD 35° at 2318 MD/2246 TVD	
4,412.56	3,961.51	1,057.64	-1,131.30	DROP 3°/100 at 4413 MD/3962 TVD	
5,580.50	5,058.00	1,294.02	-1,384.14	VERTICAL at 5581 MD/5058 TVD	
8,480.50	7,958.00	1,294.02	-1,384.14	TD 8481 MD/7958 TVD	