



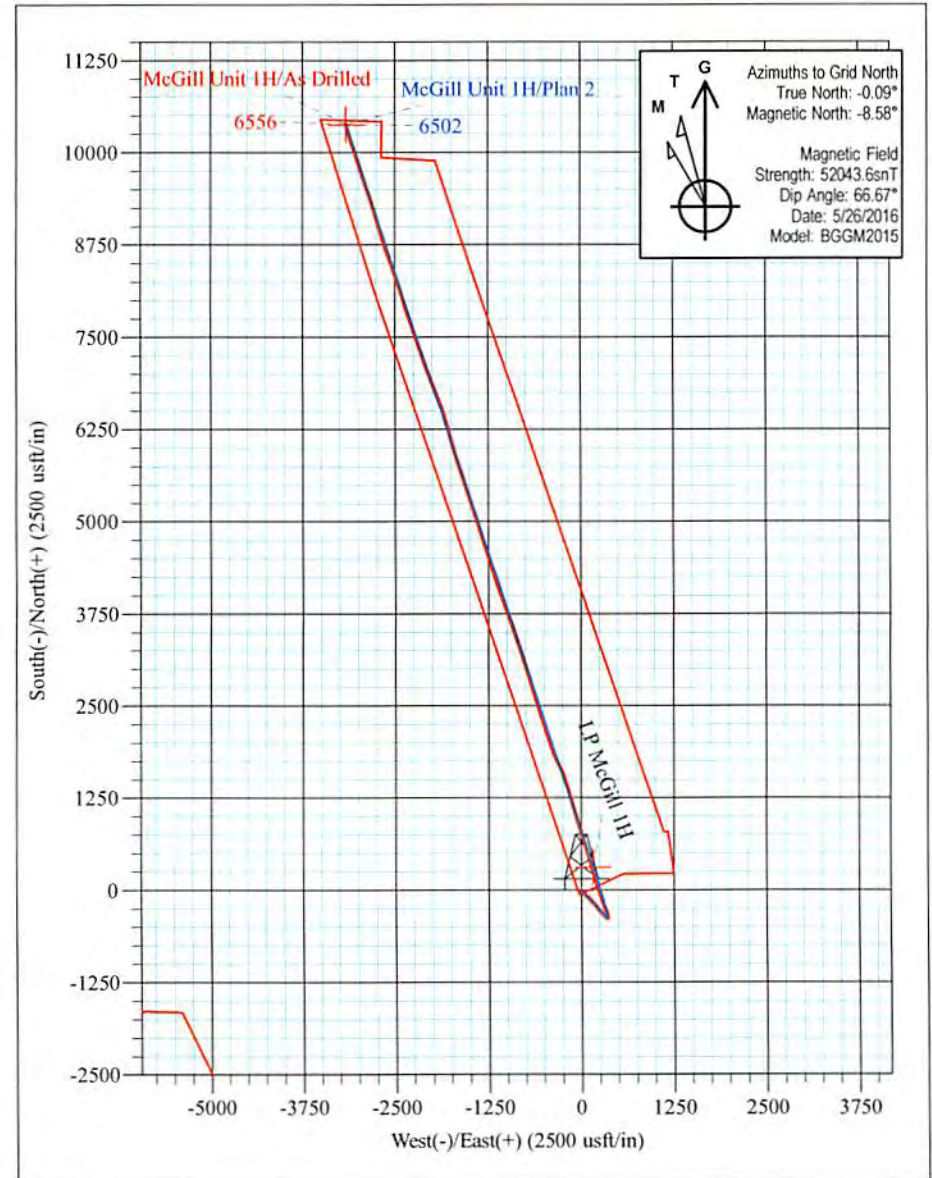
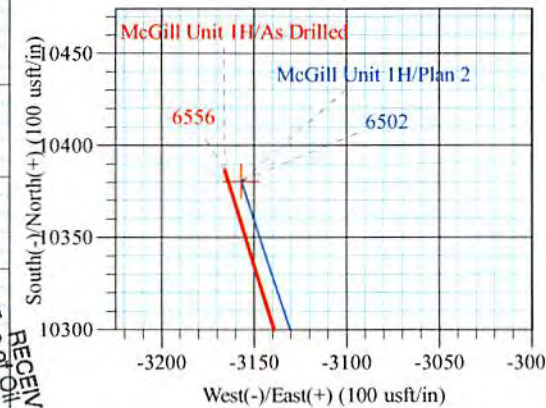
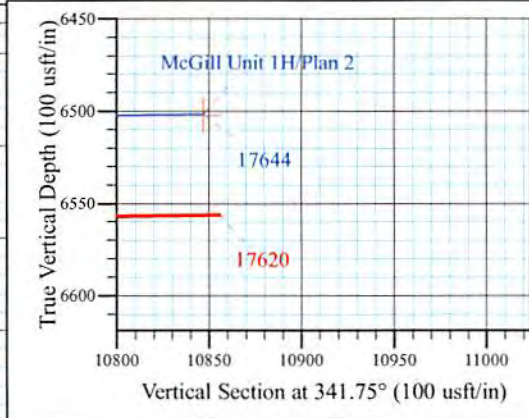
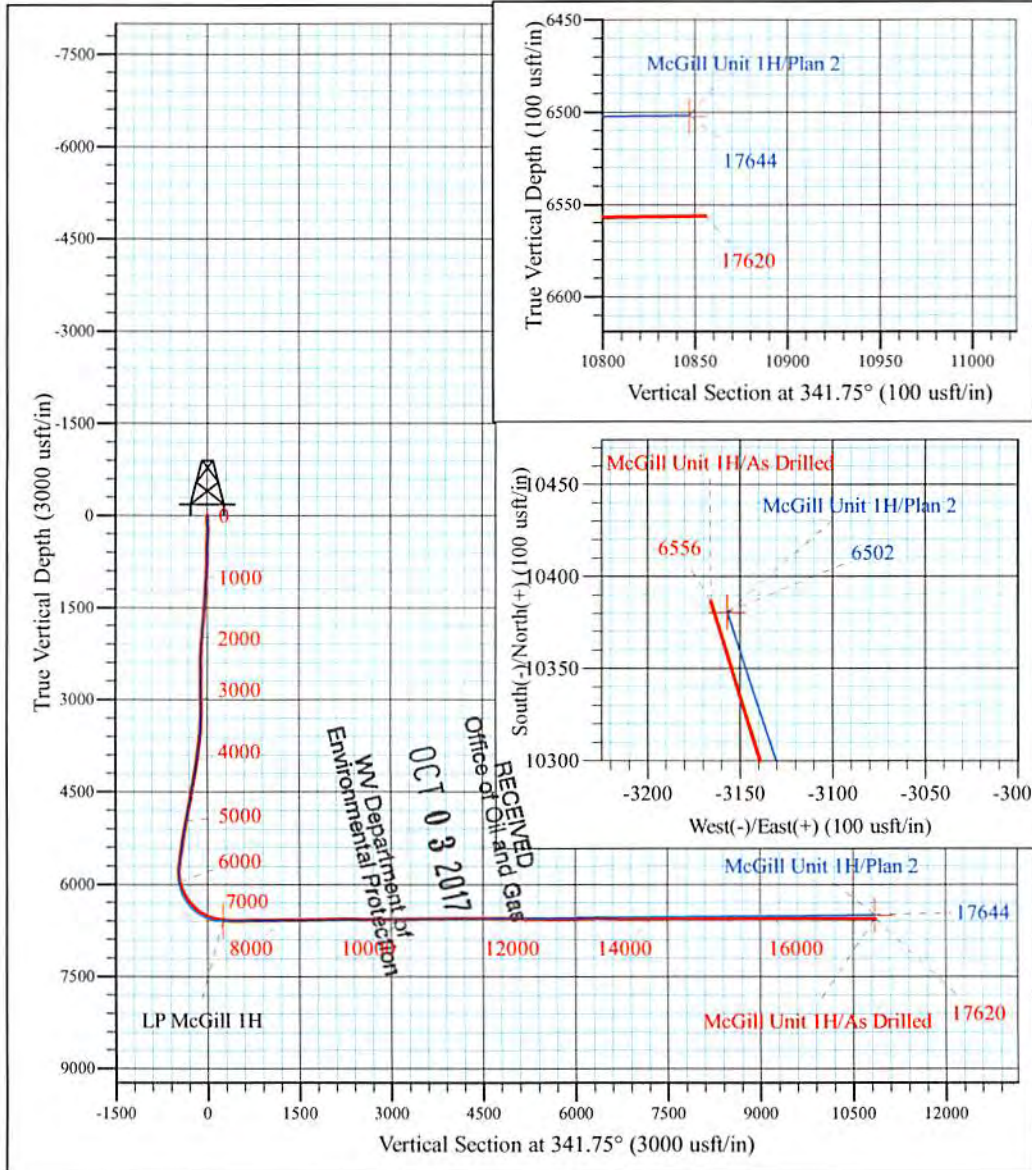
Vogt: Seaborn/Violet/Tulip/Marks
 McGill Unit 1H
 Plan 2
 PD 525: 1112' GL + 19' KB @ 1131.0usft
 Doddridge County WV

PROJECT DETAILS:
 Geodetic System: Universal Transverse Mercator (US Survey Feet)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone: Zone 17N (84 W to 78 W)
 System Datum: Mean Sea Level



WELL DETAILS: McGill Unit 1H

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	14262924.28	1679359.79	39° 16' 38.214 N	80° 51' 44.590 W

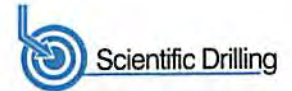


McGill Unit 1H
 Approx. BHL
 39° 18' 20.959 N 80° 52' 24.678W

Shane Rhodes
 9:15, June 08 2016
 Scientific Drilling International
 124 Vista Drive
 Charleroi, PA 15022



Scientific Drilling International
Survey Report - Geographic



Company:	Antero Resources	Local Co-ordinate Reference:	Well McGill Unit 1H
Project:	Doddridge County WV	TVD Reference:	PD 525: 1112' GL + 19' KB @ 1131.0usft
Site:	Vogt: Seaborn/Violet/Tulip/Marks	MD Reference:	PD 525: 1112' GL + 19' KB @ 1131.0usft
Well:	McGill Unit 1H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Antero NE

Project	Doddridge County WV, McClellan District		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 17N (84 W to 78 W)		

Site	Vogt: Seaborn/Violet/Tulip/Marks, Site: Seaborn 2H				
Site Position:		Northing:	14,262,941.51 usft	Latitude:	39° 16' 38.384 N
From:	Map	Easting:	1,679,373.00 usft	Longitude:	80° 51' 44.422 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.09 °

Well	McGill Unit 1H, Marcellus					
Well Position	+N/-S	0.0 usft	Northing:	14,262,924.28 usft	Latitude:	39° 16' 38.214 N
	+E/-W	0.0 usft	Easting:	1,679,359.79 usft	Longitude:	80° 51' 44.590 W
Position Uncertainty		2.0 usft	Wellhead Elevation:	1,125.0 usft	Ground Level:	1,112.0 usft

Wellbore	Original Wellpath				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2015	5/26/2016	-8.50	66.67	52,044

Design	As Drilled				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0		341.76

Survey Program	Date	6/8/2016			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
106.0	5,456.0	Survey #6 - Definitive Final Gyros (Original Wellbore)	Standard Keeper 104	Standard Wireline Keeper ver 1.0.4	
5,510.0	17,620.0	Survey #7 - SDI MWD (Original Wellpath)	SDI MWD	Scientific Drilling Intl. MWD - Standard ver 1.0.1	

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Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
0.0	0.00	0.00	0.0	0.0	0.0	14,262,924.28	1,679,359.79	39° 16' 38.214 N	80° 51' 44.590 W	
106.0	0.22	23.48	106.0	0.2	0.1	14,262,924.47	1,679,359.87	39° 16' 38.216 N	80° 51' 44.589 W	
131.0	0.10	15.66	131.0	0.3	0.1	14,262,924.53	1,679,359.89	39° 16' 38.216 N	80° 51' 44.589 W	
156.0	0.01	349.34	156.0	0.3	0.1	14,262,924.56	1,679,359.90	39° 16' 38.216 N	80° 51' 44.589 W	
181.0	0.04	62.64	181.0	0.3	0.1	14,262,924.56	1,679,359.91	39° 16' 38.216 N	80° 51' 44.588 W	
206.0	0.08	44.13	206.0	0.3	0.1	14,262,924.58	1,679,359.93	39° 16' 38.217 N	80° 51' 44.588 W	
231.0	0.09	48.45	231.0	0.3	0.2	14,262,924.61	1,679,359.95	39° 16' 38.217 N	80° 51' 44.588 W	
256.0	0.03	37.72	256.0	0.3	0.2	14,262,924.62	1,679,359.97	39° 16' 38.217 N	80° 51' 44.588 W	
281.0	0.03	62.68	281.0	0.3	0.2	14,262,924.63	1,679,359.98	39° 16' 38.217 N	80° 51' 44.587 W	
306.0	0.06	160.56	306.0	0.3	0.2	14,262,924.62	1,679,359.99	39° 16' 38.217 N	80° 51' 44.587 W	
331.0	0.25	198.23	331.0	0.3	0.2	14,262,924.56	1,679,359.98	39° 16' 38.216 N	80° 51' 44.588 W	

WV Department of Environmental Protection



Scientific Drilling International
Survey Report - Geographic



Company:	Antero Resources	Local Co-ordinate Reference:	Well McGill Unit 1H
Project:	Doddridge County WV	TVD Reference:	PD 525: 1112' GL + 19' KB @ 1131.0usft
Site:	Vogt: Seaborn/Violet/Tulip/Marks	MD Reference:	PD 525: 1112' GL + 19' KB @ 1131.0usft
Well:	McGill Unit 1H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Antero NE

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OCT 03 2017
WV Department of Environmental Protection

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
356.0	0.31	200.57	356.0	0.2	0.2	14,262,924.44	1,679,359.94	39° 16' 38.215 N	80° 51' 44.588 W
381.0	0.33	195.72	381.0	0.0	0.1	14,262,924.31	1,679,359.90	39° 16' 38.214 N	80° 51' 44.589 W
406.0	0.33	191.69	406.0	-0.1	0.1	14,262,924.17	1,679,359.86	39° 16' 38.213 N	80° 51' 44.589 W
431.0	0.45	201.05	431.0	-0.3	0.0	14,262,924.01	1,679,359.81	39° 16' 38.211 N	80° 51' 44.590 W
456.0	0.45	195.54	456.0	-0.5	0.0	14,262,923.82	1,679,359.75	39° 16' 38.209 N	80° 51' 44.590 W
481.0	0.52	198.14	481.0	-0.7	-0.1	14,262,923.62	1,679,359.69	39° 16' 38.207 N	80° 51' 44.591 W
506.0	0.59	198.32	506.0	-0.9	-0.2	14,262,923.39	1,679,359.61	39° 16' 38.205 N	80° 51' 44.592 W
531.0	0.58	202.03	531.0	-1.1	-0.3	14,262,923.15	1,679,359.52	39° 16' 38.203 N	80° 51' 44.593 W
556.0	0.59	196.87	556.0	-1.4	-0.3	14,262,922.91	1,679,359.44	39° 16' 38.200 N	80° 51' 44.594 W
581.0	0.64	196.88	581.0	-1.6	-0.4	14,262,922.65	1,679,359.36	39° 16' 38.198 N	80° 51' 44.595 W
606.0	0.64	195.24	606.0	-1.9	-0.5	14,262,922.39	1,679,359.28	39° 16' 38.195 N	80° 51' 44.596 W
631.0	0.61	194.53	631.0	-2.2	-0.6	14,262,922.12	1,679,359.21	39° 16' 38.192 N	80° 51' 44.597 W
656.0	0.75	188.92	656.0	-2.5	-0.6	14,262,921.83	1,679,359.16	39° 16' 38.189 N	80° 51' 44.598 W
681.0	1.26	167.83	681.0	-2.9	-0.6	14,262,921.40	1,679,359.19	39° 16' 38.185 N	80° 51' 44.598 W
706.0	1.46	160.84	706.0	-3.5	-0.4	14,262,920.83	1,679,359.35	39° 16' 38.180 N	80° 51' 44.596 W
731.0	1.86	151.65	731.0	-4.1	-0.1	14,262,920.17	1,679,359.65	39° 16' 38.173 N	80° 51' 44.592 W
756.0	2.23	149.22	755.9	-4.9	0.3	14,262,919.40	1,679,360.09	39° 16' 38.165 N	80° 51' 44.586 W
781.0	2.40	147.07	780.9	-5.7	0.8	14,262,918.54	1,679,360.62	39° 16' 38.157 N	80° 51' 44.579 W
806.0	3.05	139.57	805.9	-6.7	1.6	14,262,917.60	1,679,361.34	39° 16' 38.148 N	80° 51' 44.570 W
831.0	3.22	138.52	830.9	-7.7	2.4	14,262,916.56	1,679,362.24	39° 16' 38.137 N	80° 51' 44.559 W
856.0	3.43	137.20	855.8	-8.8	3.4	14,262,915.49	1,679,363.21	39° 16' 38.127 N	80° 51' 44.547 W
881.0	3.58	135.20	880.8	-9.9	4.5	14,262,914.39	1,679,364.27	39° 16' 38.116 N	80° 51' 44.533 W
906.0	3.75	131.67	905.7	-11.0	5.6	14,262,913.29	1,679,365.43	39° 16' 38.105 N	80° 51' 44.518 W
931.0	3.76	130.72	930.7	-12.1	6.9	14,262,912.21	1,679,366.66	39° 16' 38.094 N	80° 51' 44.503 W
956.0	3.82	131.24	955.6	-13.2	8.1	14,262,911.13	1,679,367.91	39° 16' 38.083 N	80° 51' 44.487 W
981.0	3.85	130.14	980.6	-14.2	9.4	14,262,910.04	1,679,369.17	39° 16' 38.073 N	80° 51' 44.471 W
1,006.0	3.90	130.72	1,005.5	-15.3	10.7	14,262,908.94	1,679,370.46	39° 16' 38.062 N	80° 51' 44.454 W
1,031.0	3.91	131.92	1,030.4	-16.5	12.0	14,262,907.82	1,679,371.74	39° 16' 38.051 N	80° 51' 44.438 W
1,056.0	3.93	130.63	1,055.4	-17.6	13.2	14,262,906.69	1,679,373.02	39° 16' 38.040 N	80° 51' 44.422 W
1,081.0	3.94	130.82	1,080.3	-18.7	14.5	14,262,905.57	1,679,374.32	39° 16' 38.028 N	80° 51' 44.405 W
1,106.0	4.01	132.07	1,105.3	-19.9	15.8	14,262,904.42	1,679,375.62	39° 16' 38.017 N	80° 51' 44.389 W
1,131.0	4.01	131.46	1,130.2	-21.0	17.1	14,262,903.26	1,679,376.93	39° 16' 38.006 N	80° 51' 44.372 W
1,156.0	3.99	130.95	1,155.1	-22.2	18.5	14,262,902.11	1,679,378.24	39° 16' 37.994 N	80° 51' 44.356 W
1,181.0	4.04	132.03	1,180.1	-23.3	19.8	14,262,900.95	1,679,379.55	39° 16' 37.983 N	80° 51' 44.339 W
1,206.0	4.07	132.16	1,205.0	-24.5	21.1	14,262,899.77	1,679,380.86	39° 16' 37.971 N	80° 51' 44.322 W
1,231.0	4.15	137.96	1,230.0	-25.8	22.3	14,262,898.50	1,679,382.12	39° 16' 37.958 N	80° 51' 44.306 W
1,256.0	4.19	139.18	1,254.9	-27.1	23.5	14,262,897.13	1,679,383.33	39° 16' 37.945 N	80° 51' 44.291 W
1,281.0	4.28	140.96	1,279.8	-28.6	24.7	14,262,895.72	1,679,384.51	39° 16' 37.931 N	80° 51' 44.276 W
1,306.0	4.28	140.64	1,304.8	-30.0	25.9	14,262,894.27	1,679,385.69	39° 16' 37.917 N	80° 51' 44.261 W
1,331.0	4.36	140.53	1,329.7	-31.5	27.1	14,262,892.82	1,679,386.89	39° 16' 37.902 N	80° 51' 44.246 W
1,356.0	4.42	140.74	1,354.6	-32.9	28.3	14,262,891.34	1,679,388.10	39° 16' 37.888 N	80° 51' 44.230 W
1,381.0	4.33	140.58	1,379.5	-34.4	29.5	14,262,889.86	1,679,389.31	39° 16' 37.873 N	80° 51' 44.215 W
1,406.0	4.41	140.10	1,404.5	-35.9	30.7	14,262,888.40	1,679,390.53	39° 16' 37.858 N	80° 51' 44.200 W
1,431.0	4.53	141.21	1,429.4	-37.4	32.0	14,262,886.89	1,679,391.76	39° 16' 37.843 N	80° 51' 44.184 W
1,456.0	4.51	140.97	1,454.3	-38.9	33.2	14,262,885.36	1,679,393.00	39° 16' 37.828 N	80° 51' 44.168 W
1,481.0	4.51	141.06	1,479.2	-40.5	34.4	14,262,883.83	1,679,394.23	39° 16' 37.813 N	80° 51' 44.153 W
1,506.0	4.56	140.53	1,504.2	-42.0	35.7	14,262,882.30	1,679,395.48	39° 16' 37.798 N	80° 51' 44.137 W
1,531.0	4.58	140.65	1,529.1	-43.5	37.0	14,262,880.76	1,679,396.75	39° 16' 37.783 N	80° 51' 44.121 W
1,556.0	4.56	140.27	1,554.0	-45.1	38.2	14,262,879.22	1,679,398.02	39° 16' 37.768 N	80° 51' 44.105 W
1,581.0	4.57	139.75	1,578.9	-46.6	39.5	14,262,877.70	1,679,399.30	39° 16' 37.752 N	80° 51' 44.088 W
1,606.0	4.60	136.90	1,603.8	-48.1	40.8	14,262,876.21	1,679,400.62	39° 16' 37.738 N	80° 51' 44.071 W
1,631.0	4.67	134.81	1,628.8	-49.5	42.2	14,262,874.76	1,679,402.03	39° 16' 37.723 N	80° 51' 44.054 W
1,656.0	4.73	134.18	1,653.7	-51.0	43.7	14,262,873.32	1,679,403.49	39° 16' 37.709 N	80° 51' 44.035 W
1,681.0	4.76	134.00	1,678.6	-52.4	45.2	14,262,871.88	1,679,404.98	39° 16' 37.695 N	80° 51' 44.016 W
1,706.0	4.84	134.25	1,703.5	-53.9	46.7	14,262,870.43	1,679,406.48	39° 16' 37.680 N	80° 51' 43.997 W



Scientific Drilling International

Survey Report - Geographic



Company:	Antero Resources	Local Co-ordinate Reference:	Well McGill Unit 1H
Project:	Doddridge County WV	TVD Reference:	PD 525: 1112' GL + 19' KB @ 1131.0usft
Site:	Vogt: Seaborn/Violet/Tulip/Marks	MD Reference:	PD 525: 1112' GL + 19' KB @ 1131.0usft
Well:	McGill Unit 1H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Antero NE

OCT 03 2017

Survey										WV Department of Environmental Protection
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
1,731.0	4.89	135.75	1,728.4	-55.4	48.2	14,262,868.93	1,679,407.98	39° 16' 37.666 N	80° 51' 43.978 W	
1,756.0	4.77	137.41	1,753.3	-56.9	49.6	14,262,867.40	1,679,409.43	39° 16' 37.650 N	80° 51' 43.960 W	
1,781.0	4.90	136.79	1,778.2	-58.4	51.1	14,262,865.85	1,679,410.86	39° 16' 37.635 N	80° 51' 43.941 W	
1,806.0	4.94	137.38	1,803.1	-60.0	52.5	14,262,864.28	1,679,412.32	39° 16' 37.620 N	80° 51' 43.923 W	
1,831.0	4.86	137.07	1,828.0	-61.6	54.0	14,262,862.72	1,679,413.77	39° 16' 37.604 N	80° 51' 43.904 W	
1,856.0	4.77	136.48	1,853.0	-63.1	55.4	14,262,861.19	1,679,415.21	39° 16' 37.589 N	80° 51' 43.886 W	
1,881.0	4.64	136.38	1,877.9	-64.6	56.8	14,262,859.70	1,679,416.62	39° 16' 37.574 N	80° 51' 43.868 W	
1,906.0	4.58	135.15	1,902.8	-66.0	58.2	14,262,858.26	1,679,418.02	39° 16' 37.560 N	80° 51' 43.850 W	
1,931.0	4.43	135.66	1,927.7	-67.4	59.6	14,262,856.86	1,679,419.40	39° 16' 37.546 N	80° 51' 43.833 W	
1,956.0	4.34	134.44	1,952.6	-68.8	61.0	14,262,855.51	1,679,420.75	39° 16' 37.533 N	80° 51' 43.816 W	
1,981.0	4.30	135.99	1,977.6	-70.1	62.3	14,262,854.18	1,679,422.08	39° 16' 37.520 N	80° 51' 43.799 W	
2,006.0	4.35	136.40	2,002.5	-71.5	63.6	14,262,852.81	1,679,423.38	39° 16' 37.506 N	80° 51' 43.782 W	
2,031.0	4.36	137.66	2,027.4	-72.9	64.9	14,262,851.43	1,679,424.68	39° 16' 37.492 N	80° 51' 43.766 W	
2,056.0	4.48	136.03	2,052.4	-74.3	66.2	14,262,850.02	1,679,425.99	39° 16' 37.478 N	80° 51' 43.749 W	
2,081.0	4.48	136.42	2,077.3	-75.7	67.6	14,262,848.61	1,679,427.34	39° 16' 37.464 N	80° 51' 43.732 W	
2,106.0	4.32	137.62	2,102.2	-77.1	68.9	14,262,847.21	1,679,428.65	39° 16' 37.451 N	80° 51' 43.715 W	
2,131.0	4.17	138.98	2,127.1	-78.5	70.1	14,262,845.83	1,679,429.88	39° 16' 37.437 N	80° 51' 43.700 W	
2,156.0	4.26	138.68	2,152.1	-79.8	71.3	14,262,844.44	1,679,431.09	39° 16' 37.423 N	80° 51' 43.684 W	
2,181.0	4.31	140.12	2,177.0	-81.3	72.5	14,262,843.03	1,679,432.31	39° 16' 37.409 N	80° 51' 43.669 W	
2,206.0	4.13	141.32	2,201.9	-82.7	73.7	14,262,841.60	1,679,433.47	39° 16' 37.395 N	80° 51' 43.654 W	
2,231.0	3.61	139.51	2,226.9	-84.0	74.8	14,262,840.30	1,679,434.55	39° 16' 37.382 N	80° 51' 43.641 W	
2,256.0	2.81	139.46	2,251.8	-85.0	75.7	14,262,839.24	1,679,435.46	39° 16' 37.372 N	80° 51' 43.629 W	
2,281.0	2.33	138.71	2,276.8	-85.9	76.4	14,262,838.39	1,679,436.19	39° 16' 37.363 N	80° 51' 43.620 W	
2,306.0	1.68	137.23	2,301.8	-86.5	77.0	14,262,837.74	1,679,436.78	39° 16' 37.357 N	80° 51' 43.612 W	
2,331.0	1.18	132.27	2,326.8	-87.0	77.4	14,262,837.30	1,679,437.21	39° 16' 37.352 N	80° 51' 43.607 W	
2,356.0	1.07	132.60	2,351.8	-87.3	77.8	14,262,836.96	1,679,437.58	39° 16' 37.349 N	80° 51' 43.602 W	
2,381.0	0.99	133.08	2,376.8	-87.6	78.1	14,262,836.66	1,679,437.91	39° 16' 37.346 N	80° 51' 43.598 W	
2,406.0	0.84	134.76	2,401.8	-87.9	78.4	14,262,836.38	1,679,438.19	39° 16' 37.343 N	80° 51' 43.594 W	
2,431.0	0.75	132.39	2,426.8	-88.1	78.7	14,262,836.14	1,679,438.45	39° 16' 37.341 N	80° 51' 43.591 W	
2,456.0	0.74	129.49	2,451.8	-88.4	78.9	14,262,835.93	1,679,438.69	39° 16' 37.339 N	80° 51' 43.588 W	
2,481.0	0.64	126.55	2,476.8	-88.5	79.1	14,262,835.74	1,679,438.93	39° 16' 37.337 N	80° 51' 43.585 W	
2,506.0	0.56	130.17	2,501.8	-88.7	79.3	14,262,835.58	1,679,439.13	39° 16' 37.335 N	80° 51' 43.582 W	
2,531.0	0.53	131.73	2,526.8	-88.9	79.5	14,262,835.43	1,679,439.31	39° 16' 37.334 N	80° 51' 43.580 W	
2,556.0	0.41	141.02	2,551.8	-89.0	79.7	14,262,835.28	1,679,439.46	39° 16' 37.332 N	80° 51' 43.578 W	
2,581.0	0.37	140.62	2,576.8	-89.1	79.8	14,262,835.15	1,679,439.56	39° 16' 37.331 N	80° 51' 43.577 W	
2,606.0	0.30	138.97	2,601.8	-89.2	79.9	14,262,835.04	1,679,439.66	39° 16' 37.330 N	80° 51' 43.576 W	
2,631.0	0.32	132.28	2,626.8	-89.3	80.0	14,262,834.94	1,679,439.75	39° 16' 37.329 N	80° 51' 43.574 W	
2,656.0	0.28	126.36	2,651.8	-89.4	80.1	14,262,834.86	1,679,439.85	39° 16' 37.328 N	80° 51' 43.573 W	
2,681.0	0.39	128.69	2,676.8	-89.5	80.2	14,262,834.77	1,679,439.97	39° 16' 37.327 N	80° 51' 43.572 W	
2,706.0	0.25	110.56	2,701.8	-89.6	80.3	14,262,834.69	1,679,440.09	39° 16' 37.327 N	80° 51' 43.570 W	
2,731.0	0.13	48.57	2,726.8	-89.6	80.4	14,262,834.69	1,679,440.16	39° 16' 37.327 N	80° 51' 43.569 W	
2,756.0	0.83	340.04	2,751.8	-89.4	80.3	14,262,834.88	1,679,440.12	39° 16' 37.329 N	80° 51' 43.570 W	
2,781.0	0.97	339.38	2,776.8	-89.0	80.2	14,262,835.25	1,679,439.98	39° 16' 37.332 N	80° 51' 43.572 W	
2,806.0	1.11	338.74	2,801.7	-88.6	80.0	14,262,835.68	1,679,439.82	39° 16' 37.336 N	80° 51' 43.574 W	
2,831.0	1.09	339.80	2,826.7	-88.2	79.9	14,262,836.12	1,679,439.65	39° 16' 37.341 N	80° 51' 43.576 W	
2,856.0	0.99	341.42	2,851.7	-87.7	79.7	14,262,836.55	1,679,439.50	39° 16' 37.345 N	80° 51' 43.578 W	
2,881.0	1.04	340.58	2,876.7	-87.3	79.6	14,262,836.97	1,679,439.35	39° 16' 37.349 N	80° 51' 43.579 W	
2,906.0	1.17	339.03	2,901.7	-86.9	79.4	14,262,837.42	1,679,439.19	39° 16' 37.354 N	80° 51' 43.582 W	
2,931.0	1.04	339.76	2,926.7	-86.4	79.2	14,262,837.87	1,679,439.02	39° 16' 37.358 N	80° 51' 43.584 W	
2,956.0	1.07	340.87	2,951.7	-86.0	79.1	14,262,838.31	1,679,438.86	39° 16' 37.362 N	80° 51' 43.586 W	
2,981.0	0.99	339.21	2,976.7	-85.6	78.9	14,262,838.73	1,679,438.71	39° 16' 37.367 N	80° 51' 43.588 W	
3,006.0	1.03	339.74	3,001.7	-85.1	78.8	14,262,839.14	1,679,438.55	39° 16' 37.371 N	80° 51' 43.590 W	
3,031.0	1.04	341.03	3,026.7	-84.7	78.6	14,262,839.57	1,679,438.40	39° 16' 37.375 N	80° 51' 43.592 W	
3,056.0	0.84	340.78	3,051.7	-84.3	78.5	14,262,839.96	1,679,438.27	39° 16' 37.379 N	80° 51' 43.593 W	
3,081.0	0.22	25.78	3,076.7	-84.1	78.4	14,262,840.17	1,679,438.23	39° 16' 37.381 N	80° 51' 43.594 W	



Scientific Drilling International

Survey Report - Geographic



Company:	Antero Resources	Local Co-ordinate Reference:	Well McGill Unit 1H
Project:	Doddridge County WV	TVD Reference:	PD 525: 1112' GL + 19' KB @ 1131.0usft
Site:	Vogt: Seaborn/Violet/Tulip/Marks	MD Reference:	PD 525: 1112' GL + 19' KB @ 1131.0usft
Well:	McGill Unit 1H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Antero NE

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Survey										WV Department of Environmental Protection
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
3,106.0	0.16	79.29	3,101.7	-84.1	78.5	14,262,840.22	1,679,438.28	39° 16' 37.381 N	80° 51' 43.593 W	
3,131.0	0.14	75.76	3,126.7	-84.0	78.6	14,262,840.24	1,679,438.35	39° 16' 37.381 N	80° 51' 43.592 W	
3,156.0	0.17	77.28	3,151.7	-84.0	78.6	14,262,840.25	1,679,438.41	39° 16' 37.382 N	80° 51' 43.591 W	
3,181.0	0.20	94.53	3,176.7	-84.0	78.7	14,262,840.26	1,679,438.49	39° 16' 37.382 N	80° 51' 43.590 W	
3,206.0	0.22	84.96	3,201.7	-84.0	78.8	14,262,840.26	1,679,438.59	39° 16' 37.382 N	80° 51' 43.589 W	
3,231.0	0.30	104.08	3,226.7	-84.0	78.9	14,262,840.25	1,679,438.70	39° 16' 37.382 N	80° 51' 43.588 W	
3,256.0	0.68	128.27	3,251.7	-84.1	79.1	14,262,840.14	1,679,438.88	39° 16' 37.380 N	80° 51' 43.585 W	
3,281.0	1.30	133.40	3,276.7	-84.4	79.4	14,262,839.85	1,679,439.20	39° 16' 37.378 N	80° 51' 43.581 W	
3,306.0	1.58	132.79	3,301.7	-84.9	79.9	14,262,839.42	1,679,439.66	39° 16' 37.373 N	80° 51' 43.576 W	
3,331.0	2.17	131.44	3,326.7	-85.4	80.5	14,262,838.87	1,679,440.27	39° 16' 37.368 N	80° 51' 43.568 W	
3,356.0	2.35	129.98	3,351.7	-86.1	81.2	14,262,838.23	1,679,441.01	39° 16' 37.362 N	80° 51' 43.558 W	
3,381.0	2.75	129.15	3,376.6	-86.8	82.1	14,262,837.52	1,679,441.87	39° 16' 37.355 N	80° 51' 43.547 W	
3,406.0	3.11	127.71	3,401.6	-87.6	83.1	14,262,836.73	1,679,442.87	39° 16' 37.347 N	80° 51' 43.535 W	
3,431.0	3.42	128.68	3,426.6	-88.4	84.2	14,262,835.85	1,679,443.99	39° 16' 37.338 N	80° 51' 43.520 W	
3,456.0	3.99	131.70	3,451.5	-89.5	85.4	14,262,834.80	1,679,445.22	39° 16' 37.328 N	80° 51' 43.505 W	
3,481.0	4.30	132.24	3,476.4	-90.7	86.8	14,262,833.60	1,679,446.57	39° 16' 37.316 N	80° 51' 43.488 W	
3,506.0	4.74	133.79	3,501.4	-92.0	88.2	14,262,832.25	1,679,448.01	39° 16' 37.302 N	80° 51' 43.470 W	
3,531.0	5.39	133.10	3,526.3	-93.5	89.8	14,262,830.73	1,679,449.61	39° 16' 37.287 N	80° 51' 43.449 W	
3,556.0	5.57	133.93	3,551.2	-95.2	91.6	14,262,829.09	1,679,451.34	39° 16' 37.271 N	80° 51' 43.427 W	
3,581.0	6.10	135.73	3,576.0	-97.0	93.4	14,262,827.30	1,679,453.14	39° 16' 37.253 N	80° 51' 43.404 W	
3,606.0	6.38	136.08	3,600.9	-98.9	95.2	14,262,825.35	1,679,455.03	39° 16' 37.234 N	80° 51' 43.380 W	
3,631.0	6.61	136.30	3,625.7	-101.0	97.2	14,262,823.30	1,679,456.99	39° 16' 37.214 N	80° 51' 43.355 W	
3,656.0	7.24	137.74	3,650.5	-103.2	99.3	14,262,821.10	1,679,459.04	39° 16' 37.192 N	80° 51' 43.329 W	
3,681.0	7.37	138.21	3,675.3	-105.5	101.4	14,262,818.74	1,679,461.17	39° 16' 37.169 N	80° 51' 43.302 W	
3,706.0	7.82	137.54	3,700.1	-108.0	103.6	14,262,816.29	1,679,463.39	39° 16' 37.144 N	80° 51' 43.274 W	
3,731.0	8.13	137.60	3,724.9	-110.6	105.9	14,262,813.73	1,679,465.73	39° 16' 37.119 N	80° 51' 43.244 W	
3,756.0	8.27	136.82	3,749.6	-113.2	108.4	14,262,811.11	1,679,468.15	39° 16' 37.093 N	80° 51' 43.214 W	
3,781.0	8.57	136.30	3,774.3	-115.8	110.9	14,262,808.45	1,679,470.67	39° 16' 37.067 N	80° 51' 43.182 W	
3,806.0	8.67	135.86	3,799.1	-118.5	113.5	14,262,805.75	1,679,473.27	39° 16' 37.040 N	80° 51' 43.149 W	
3,831.0	8.74	135.80	3,823.8	-121.2	116.1	14,262,803.04	1,679,475.90	39° 16' 37.013 N	80° 51' 43.115 W	
3,856.0	8.80	136.07	3,848.5	-124.0	118.8	14,262,800.30	1,679,478.55	39° 16' 36.986 N	80° 51' 43.082 W	
3,881.0	8.89	135.54	3,873.2	-126.7	121.4	14,262,797.54	1,679,481.23	39° 16' 36.959 N	80° 51' 43.047 W	
3,906.0	8.91	135.43	3,897.9	-129.5	124.2	14,262,794.79	1,679,483.94	39° 16' 36.931 N	80° 51' 43.013 W	
3,931.0	8.93	135.58	3,922.6	-132.3	126.9	14,262,792.02	1,679,486.66	39° 16' 36.904 N	80° 51' 42.979 W	
3,956.0	9.05	135.42	3,947.3	-135.0	129.6	14,262,789.24	1,679,489.40	39° 16' 36.876 N	80° 51' 42.944 W	
3,981.0	9.12	135.40	3,972.0	-137.9	132.4	14,262,786.42	1,679,492.17	39° 16' 36.849 N	80° 51' 42.909 W	
4,006.0	9.18	135.31	3,996.6	-140.7	135.2	14,262,783.60	1,679,494.96	39° 16' 36.821 N	80° 51' 42.873 W	
4,031.0	9.30	135.25	4,021.3	-143.5	138.0	14,262,780.74	1,679,497.79	39° 16' 36.792 N	80° 51' 42.837 W	
4,056.0	9.28	135.44	4,046.0	-146.4	140.8	14,262,777.87	1,679,500.63	39° 16' 36.764 N	80° 51' 42.801 W	
4,081.0	9.39	137.70	4,070.7	-149.4	143.6	14,262,774.93	1,679,503.41	39° 16' 36.735 N	80° 51' 42.766 W	
4,106.0	9.63	139.66	4,095.3	-152.5	146.4	14,262,771.83	1,679,506.14	39° 16' 36.704 N	80° 51' 42.731 W	
4,131.0	9.71	139.64	4,120.0	-155.7	149.1	14,262,768.63	1,679,508.86	39° 16' 36.672 N	80° 51' 42.697 W	
4,156.0	10.04	140.47	4,144.6	-158.9	151.8	14,262,765.34	1,679,511.61	39° 16' 36.640 N	80° 51' 42.662 W	
4,181.0	10.15	140.47	4,169.2	-162.3	154.6	14,262,761.96	1,679,514.40	39° 16' 36.606 N	80° 51' 42.626 W	
4,206.0	10.50	139.03	4,193.8	-165.7	157.5	14,262,758.54	1,679,517.29	39° 16' 36.572 N	80° 51' 42.589 W	
4,231.0	10.88	135.68	4,218.4	-169.2	160.6	14,262,755.13	1,679,520.44	39° 16' 36.539 N	80° 51' 42.550 W	
4,256.0	11.03	136.12	4,242.9	-172.6	164.0	14,262,751.72	1,679,523.74	39° 16' 36.505 N	80° 51' 42.508 W	
4,281.0	11.18	134.80	4,267.4	-176.0	167.3	14,262,748.29	1,679,527.12	39° 16' 36.471 N	80° 51' 42.465 W	
4,306.0	11.23	135.09	4,292.0	-179.4	170.8	14,262,744.86	1,679,530.56	39° 16' 36.437 N	80° 51' 42.421 W	
4,331.0	11.32	135.80	4,316.5	-182.9	174.2	14,262,741.37	1,679,533.99	39° 16' 36.403 N	80° 51' 42.377 W	
4,356.0	11.17	138.15	4,341.0	-186.5	177.5	14,262,737.81	1,679,537.31	39° 16' 36.367 N	80° 51' 42.335 W	
4,381.0	11.09	138.91	4,365.5	-190.1	180.7	14,262,734.19	1,679,540.51	39° 16' 36.331 N	80° 51' 42.295 W	
4,406.0	10.97	141.56	4,390.1	-193.8	183.8	14,262,730.52	1,679,543.57	39° 16' 36.295 N	80° 51' 42.256 W	
4,431.0	10.94	141.80	4,414.6	-197.5	186.7	14,262,726.79	1,679,546.51	39° 16' 36.258 N	80° 51' 42.218 W	
4,456.0	11.00	141.25	4,439.2	-201.2	189.7	14,262,723.07	1,679,549.47	39° 16' 36.221 N	80° 51' 42.181 W	



Scientific Drilling International

Survey Report - Geographic



Company:	Antero Resources	Local Co-ordinate Reference:	Well McGill Unit 1H
Project:	Doddridge County WV	TVD Reference:	PD 525: 1112' GL + 19' KB @ 1131.0usft
Site:	Vogt: Seaborn/Violet/Tulip/Marks	MD Reference:	PD 525: 1112' GL + 19' KB @ 1131.0usft
Well:	McGill Unit 1H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Antero NE

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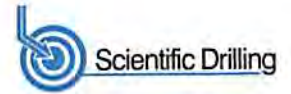
OCT 03 2017

WV Department of
Environmental Protection

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
4,481.0	10.86	142.75	4,463.7	-205.0	192.6	14,262,719.33	1,679,552.39	39° 16' 36.184 N	80° 51' 42.144 W
4,506.0	10.52	140.92	4,488.3	-208.6	195.5	14,262,715.69	1,679,555.26	39° 16' 36.148 N	80° 51' 42.107 W
4,531.0	10.19	139.02	4,512.9	-212.0	198.4	14,262,712.24	1,679,558.15	39° 16' 36.114 N	80° 51' 42.071 W
4,556.0	10.07	138.10	4,537.5	-215.3	201.3	14,262,708.95	1,679,561.06	39° 16' 36.081 N	80° 51' 42.034 W
4,581.0	10.02	139.00	4,562.1	-218.6	204.2	14,262,705.68	1,679,563.94	39° 16' 36.049 N	80° 51' 41.997 W
4,606.0	10.09	138.90	4,586.7	-221.9	207.0	14,262,702.39	1,679,566.81	39° 16' 36.017 N	80° 51' 41.961 W
4,631.0	10.23	137.45	4,611.3	-225.2	210.0	14,262,699.10	1,679,569.75	39° 16' 35.984 N	80° 51' 41.923 W
4,656.0	10.66	142.33	4,635.9	-228.6	212.9	14,262,695.64	1,679,572.66	39° 16' 35.950 N	80° 51' 41.886 W
4,681.0	11.03	142.59	4,660.5	-232.4	215.7	14,262,691.91	1,679,575.53	39° 16' 35.913 N	80° 51' 41.850 W
4,706.0	11.34	141.32	4,685.0	-236.2	218.7	14,262,688.09	1,679,578.52	39° 16' 35.875 N	80° 51' 41.812 W
4,731.0	11.74	143.52	4,709.5	-240.2	221.8	14,262,684.12	1,679,581.57	39° 16' 35.836 N	80° 51' 41.773 W
4,756.0	12.09	142.76	4,733.9	-244.3	224.9	14,262,680.00	1,679,584.66	39° 16' 35.795 N	80° 51' 41.734 W
4,781.0	12.14	142.20	4,758.4	-248.4	228.1	14,262,675.83	1,679,587.66	39° 16' 35.754 N	80° 51' 41.693 W
4,806.0	12.14	141.29	4,782.8	-252.6	231.3	14,262,671.71	1,679,591.12	39° 16' 35.713 N	80° 51' 41.652 W
4,831.0	12.14	140.89	4,807.3	-256.7	234.6	14,262,667.81	1,679,594.42	39° 16' 35.672 N	80° 51' 41.610 W
4,856.0	12.16	140.11	4,831.7	-260.7	238.0	14,262,663.55	1,679,597.76	39° 16' 35.632 N	80° 51' 41.568 W
4,881.0	12.02	139.89	4,856.1	-264.7	241.3	14,262,659.54	1,679,601.13	39° 16' 35.592 N	80° 51' 41.525 W
4,906.0	11.79	138.10	4,880.6	-268.6	244.7	14,262,655.65	1,679,604.51	39° 16' 35.554 N	80° 51' 41.482 W
4,931.0	11.72	137.26	4,905.1	-272.4	248.2	14,262,651.89	1,679,607.94	39° 16' 35.517 N	80° 51' 41.438 W
4,956.0	11.49	138.92	4,929.6	-276.1	251.5	14,262,648.14	1,679,611.30	39° 16' 35.480 N	80° 51' 41.396 W
4,981.0	11.29	139.24	4,954.1	-279.9	254.7	14,262,644.41	1,679,614.54	39° 16' 35.443 N	80° 51' 41.355 W
5,006.0	11.20	138.19	4,978.6	-283.5	258.0	14,262,640.75	1,679,617.75	39° 16' 35.406 N	80° 51' 41.314 W
5,031.0	11.28	138.26	5,003.1	-287.2	261.2	14,262,637.12	1,679,621.00	39° 16' 35.370 N	80° 51' 41.273 W
5,056.0	11.56	136.67	5,027.6	-290.8	264.6	14,262,633.47	1,679,624.34	39° 16' 35.334 N	80° 51' 41.230 W
5,081.0	11.48	137.18	5,052.1	-294.5	268.0	14,262,629.82	1,679,627.75	39° 16' 35.298 N	80° 51' 41.187 W
5,106.0	11.26	135.30	5,076.6	-298.0	271.4	14,262,626.26	1,679,631.16	39° 16' 35.263 N	80° 51' 41.144 W
5,131.0	11.11	134.25	5,101.2	-301.4	274.8	14,262,622.85	1,679,634.60	39° 16' 35.229 N	80° 51' 41.100 W
5,156.0	10.71	135.21	5,125.7	-304.8	278.2	14,262,619.52	1,679,637.97	39° 16' 35.196 N	80° 51' 41.057 W
5,181.0	10.48	136.80	5,150.3	-308.1	281.4	14,262,616.21	1,679,641.16	39° 16' 35.163 N	80° 51' 41.017 W
5,206.0	10.40	139.09	5,174.9	-311.4	284.4	14,262,612.85	1,679,644.19	39° 16' 35.130 N	80° 51' 40.978 W
5,231.0	10.28	142.16	5,199.5	-314.9	287.3	14,262,609.38	1,679,647.04	39° 16' 35.096 N	80° 51' 40.942 W
5,256.0	10.48	143.01	5,224.0	-318.5	290.0	14,262,605.80	1,679,649.78	39° 16' 35.060 N	80° 51' 40.907 W
5,281.0	10.60	144.14	5,248.6	-322.2	292.7	14,262,602.12	1,679,652.49	39° 16' 35.024 N	80° 51' 40.873 W
5,306.0	10.27	143.42	5,273.2	-325.8	295.4	14,262,598.47	1,679,655.17	39° 16' 34.988 N	80° 51' 40.839 W
5,331.0	9.88	141.48	5,297.8	-329.3	298.0	14,262,595.00	1,679,657.83	39° 16' 34.953 N	80° 51' 40.805 W
5,356.0	9.07	138.43	5,322.5	-332.4	300.7	14,262,591.85	1,679,660.47	39° 16' 34.922 N	80° 51' 40.771 W
5,381.0	8.64	136.40	5,347.2	-335.3	303.3	14,262,589.02	1,679,663.08	39° 16' 34.894 N	80° 51' 40.738 W
5,406.0	8.32	135.36	5,371.9	-337.9	305.9	14,262,586.37	1,679,665.64	39° 16' 34.868 N	80° 51' 40.706 W
5,431.0	8.16	133.65	5,396.7	-340.4	308.4	14,262,583.86	1,679,668.20	39° 16' 34.843 N	80° 51' 40.673 W
5,456.0	8.12	132.68	5,421.4	-342.8	311.0	14,262,581.44	1,679,670.78	39° 16' 34.819 N	80° 51' 40.640 W
5,510.0	8.78	133.66	5,474.8	-348.3	316.8	14,262,576.01	1,679,676.56	39° 16' 34.765 N	80° 51' 40.567 W
First SDI MWD @ 5510									
5,554.0	9.86	133.99	5,518.2	-353.2	321.9	14,262,571.07	1,679,681.70	39° 16' 34.716 N	80° 51' 40.502 W
5,599.0	9.71	132.57	5,562.6	-358.5	327.5	14,262,565.83	1,679,687.27	39° 16' 34.664 N	80° 51' 40.431 W
5,644.0	9.70	130.36	5,606.9	-363.5	333.2	14,262,560.81	1,679,692.95	39° 16' 34.615 N	80° 51' 40.359 W
5,689.0	9.57	129.41	5,651.3	-368.3	338.9	14,262,555.98	1,679,698.73	39° 16' 34.567 N	80° 51' 40.285 W
5,734.0	8.85	131.78	5,695.7	-373.0	344.4	14,262,551.29	1,679,704.20	39° 16' 34.521 N	80° 51' 40.216 W
5,779.0	6.22	137.87	5,740.3	-377.1	348.6	14,262,547.18	1,679,708.42	39° 16' 34.480 N	80° 51' 40.162 W
5,823.0	3.17	99.48	5,784.2	-379.1	351.4	14,262,545.21	1,679,711.22	39° 16' 34.460 N	80° 51' 40.127 W
5,868.0	2.96	47.06	5,829.1	-378.5	353.5	14,262,545.80	1,679,713.30	39° 16' 34.466 N	80° 51' 40.100 W
5,913.0	6.16	24.98	5,874.0	-375.5	355.4	14,262,548.78	1,679,715.17	39° 16' 34.495 N	80° 51' 40.076 W
5,958.0	9.55	16.18	5,918.6	-369.7	357.4	14,262,554.55	1,679,717.23	39° 16' 34.553 N	80° 51' 40.050 W
6,003.0	13.57	2.23	5,962.6	-360.9	358.7	14,262,563.42	1,679,718.48	39° 16' 34.640 N	80° 51' 40.034 W
6,048.0	17.14	354.48	6,006.0	-349.0	358.3	14,262,575.30	1,679,718.05	39° 16' 34.758 N	80° 51' 40.039 W
6,092.0	20.01	345.88	6,047.8	-335.2	355.8	14,262,589.06	1,679,715.58	39° 16' 34.894 N	80° 51' 40.070 W



Scientific Drilling International
Survey Report - Geographic



Company:	Antero Resources	Local Co-ordinate Reference:	Well McGill Unit 1H
Project:	Doddridge County WV	TVD Reference:	PD 525: 1112' GL + 19' KB @ 1131.0usft
Site:	Vogt: Seaborn/Violet/Tulip/Marks	MD Reference:	PD 525: 1112' GL + 19' KB @ 1131.0usft
Well:	McGill Unit 1H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Antero NE

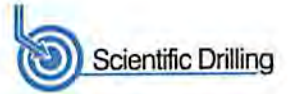
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Survey										WV Department of Environmental Protection
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
6,137.0	22.92	342.08	6,089.6	-319.4	351.2	14,262,604.87	1,679,711.01	39° 16' 35.050 N	80° 51' 40.128 W	
6,182.0	25.33	339.32	6,130.7	-302.1	345.1	14,262,622.21	1,679,704.91	39° 16' 35.222 N	80° 51' 40.205 W	
6,227.0	27.92	338.77	6,170.9	-283.2	337.9	14,262,641.04	1,679,697.70	39° 16' 35.408 N	80° 51' 40.297 W	
6,272.0	31.58	338.12	6,210.0	-262.5	329.7	14,262,661.81	1,679,689.49	39° 16' 35.613 N	80° 51' 40.401 W	
6,317.0	34.23	339.74	6,247.8	-239.7	320.9	14,262,684.62	1,679,680.71	39° 16' 35.839 N	80° 51' 40.512 W	
6,334.0	35.62	339.81	6,261.7	-230.5	317.6	14,262,693.75	1,679,677.35	39° 16' 35.929 N	80° 51' 40.555 W	
6,379.0	39.06	340.22	6,297.5	-204.9	308.2	14,262,719.40	1,679,668.02	39° 16' 36.183 N	80° 51' 40.673 W	
6,424.0	41.50	341.17	6,331.8	-177.4	298.6	14,262,746.86	1,679,658.41	39° 16' 36.455 N	80° 51' 40.795 W	
6,469.0	43.41	340.98	6,365.0	-148.7	288.8	14,262,775.59	1,679,648.56	39° 16' 36.739 N	80° 51' 40.919 W	
6,514.0	46.35	340.31	6,396.9	-118.7	278.2	14,262,805.54	1,679,638.03	39° 16' 37.035 N	80° 51' 41.053 W	
6,518.0	46.72	340.33	6,399.6	-116.0	277.3	14,262,808.27	1,679,637.06	39° 16' 37.062 N	80° 51' 41.065 W	
Middlesex @ 6518										
6,559.0	50.48	340.52	6,426.7	-87.0	267.0	14,262,837.25	1,679,626.75	39° 16' 37.349 N	80° 51' 41.195 W	
6,604.0	55.26	341.36	6,453.9	-53.1	255.3	14,262,871.15	1,679,615.05	39° 16' 37.684 N	80° 51' 41.344 W	
6,648.0	59.51	342.29	6,477.6	-17.9	243.7	14,262,906.35	1,679,603.50	39° 16' 38.033 N	80° 51' 41.490 W	
6,693.0	63.78	342.94	6,499.0	19.9	231.9	14,262,944.14	1,679,591.67	39° 16' 38.407 N	80° 51' 41.640 W	
6,734.0	67.71	343.96	6,515.8	55.7	221.2	14,262,979.96	1,679,581.03	39° 16' 38.761 N	80° 51' 41.774 W	
Burket @ 6734										
6,738.0	68.09	344.06	6,517.3	59.2	220.2	14,262,983.53	1,679,580.01	39° 16' 38.796 N	80° 51' 41.787 W	
6,783.0	71.74	344.59	6,532.8	99.9	208.8	14,263,024.21	1,679,568.60	39° 16' 39.199 N	80° 51' 41.932 W	
6,811.0	73.66	344.01	6,541.1	125.7	201.6	14,263,049.95	1,679,561.36	39° 16' 39.453 N	80° 51' 42.023 W	
Tully @ 6811										
6,828.0	74.82	343.66	6,545.7	141.4	197.0	14,263,065.66	1,679,556.81	39° 16' 39.609 N	80° 51' 42.081 W	
6,873.0	77.44	343.33	6,556.5	183.3	184.6	14,263,107.54	1,679,544.40	39° 16' 40.023 N	80° 51' 42.238 W	
6,917.0	79.72	343.75	6,565.2	224.6	172.4	14,263,148.90	1,679,532.18	39° 16' 40.432 N	80° 51' 42.393 W	
6,945.0	80.52	343.47	6,570.0	251.1	164.6	14,263,175.37	1,679,524.40	39° 16' 40.694 N	80° 51' 42.491 W	
Marcellus @ 6945										
6,962.0	81.01	343.30	6,572.7	267.2	159.8	14,263,191.44	1,679,519.60	39° 16' 40.853 N	80° 51' 42.552 W	
7,007.0	82.36	343.95	6,579.3	309.9	147.3	14,263,234.16	1,679,507.04	39° 16' 41.275 N	80° 51' 42.711 W	
7,052.0	84.31	343.68	6,584.5	352.8	134.8	14,263,277.09	1,679,494.59	39° 16' 41.700 N	80° 51' 42.868 W	
7,097.0	86.03	343.67	6,588.3	395.8	122.2	14,263,320.12	1,679,481.98	39° 16' 42.126 N	80° 51' 43.028 W	
7,142.0	86.54	342.98	6,591.2	438.9	109.3	14,263,363.13	1,679,469.10	39° 16' 42.551 N	80° 51' 43.191 W	
7,187.0	88.53	342.62	6,593.1	481.8	96.0	14,263,406.08	1,679,455.80	39° 16' 42.976 N	80° 51' 43.359 W	
7,260.0	92.18	341.07	6,592.7	551.1	73.3	14,263,475.43	1,679,433.06	39° 16' 43.662 N	80° 51' 43.647 W	
7,336.0	91.54	342.23	6,590.2	623.2	49.4	14,263,547.53	1,679,409.15	39° 16' 44.375 N	80° 51' 43.950 W	
7,425.0	91.64	342.20	6,587.7	708.0	22.2	14,263,632.24	1,679,381.98	39° 16' 45.213 N	80° 51' 44.294 W	
7,515.0	90.83	343.10	6,585.8	793.8	-4.6	14,263,718.12	1,679,355.14	39° 16' 46.063 N	80° 51' 44.634 W	
7,605.0	90.73	344.08	6,584.6	880.2	-30.1	14,263,804.45	1,679,329.72	39° 16' 46.917 N	80° 51' 44.955 W	
7,694.0	89.85	343.01	6,584.1	965.5	-55.3	14,263,889.80	1,679,304.51	39° 16' 47.761 N	80° 51' 45.275 W	
7,784.0	90.09	342.37	6,584.2	1,051.4	-82.1	14,263,975.72	1,679,277.73	39° 16' 48.611 N	80° 51' 45.614 W	
7,873.0	90.33	342.20	6,583.8	1,136.2	-109.1	14,264,060.50	1,679,250.65	39° 16' 49.450 N	80° 51' 45.956 W	
7,963.0	90.49	343.63	6,583.2	1,222.2	-135.6	14,264,146.53	1,679,224.21	39° 16' 50.301 N	80° 51' 46.291 W	
8,053.0	90.36	343.02	6,582.5	1,308.5	-161.4	14,264,232.74	1,679,198.39	39° 16' 51.154 N	80° 51' 46.618 W	
8,142.0	90.32	344.88	6,582.0	1,394.0	-186.0	14,264,318.26	1,679,173.78	39° 16' 52.000 N	80° 51' 46.929 W	
8,232.0	90.02	343.78	6,581.7	1,480.6	-210.3	14,264,404.92	1,679,149.48	39° 16' 52.857 N	80° 51' 47.237 W	
8,322.0	90.66	340.58	6,581.2	1,566.3	-237.9	14,264,490.59	1,679,121.94	39° 16' 53.704 N	80° 51' 47.586 W	
8,411.0	90.36	335.60	6,580.4	1,648.8	-271.0	14,264,573.13	1,679,088.74	39° 16' 54.521 N	80° 51' 48.006 W	
8,501.0	91.33	334.67	6,579.1	1,730.5	-308.9	14,264,654.78	1,679,050.90	39° 16' 55.329 N	80° 51' 48.486 W	
8,591.0	91.17	336.10	6,577.1	1,812.3	-346.4	14,264,736.58	1,679,013.42	39° 16' 56.138 N	80° 51' 48.961 W	
8,681.0	92.17	338.12	6,574.5	1,895.2	-381.4	14,264,819.45	1,678,978.43	39° 16' 56.958 N	80° 51' 49.405 W	
8,770.0	91.87	340.36	6,571.3	1,978.3	-412.9	14,264,902.61	1,678,946.91	39° 16' 57.781 N	80° 51' 49.804 W	
8,860.0	91.70	342.26	6,568.5	2,063.5	-441.7	14,264,987.82	1,678,918.08	39° 16' 58.624 N	80° 51' 50.170 W	
8,950.0	89.28	343.28	6,567.8	2,149.5	-468.4	14,265,073.77	1,678,891.43	39° 16' 59.474 N	80° 51' 50.507 W	
9,039.0	90.19	343.16	6,568.2	2,234.7	-494.1	14,265,158.98	1,678,865.74	39° 17' 0.317 N	80° 51' 50.832 W	



Scientific Drilling International

Survey Report - Geographic



Company:	Antero Resources	Local Co-ordinate Reference:	Well McGill Unit 1H
Project:	Doddridge County WV	TVD Reference:	PD 525: 1112' GL + 19' KB @ 1131.0usft
Site:	Vogt: Seaborn/Violet/Tulip/Marks	MD Reference:	PD 525: 1112' GL + 19' KB @ 1131.0usft
Well:	McGill Unit 1H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Antero NE

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Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
9,129.0	90.36	342.45	6,567.8	2,320.7	-520.7	14,265,244.96	1,678,839.13	39° 17' 1.168 N	80° 51' 51.169 W	
9,218.0	90.46	341.33	6,567.1	2,405.3	-548.3	14,265,329.54	1,678,811.47	39° 17' 2.004 N	80° 51' 51.519 W	
9,308.0	88.78	342.26	6,567.7	2,490.7	-576.4	14,265,415.03	1,678,783.35	39° 17' 2.850 N	80° 51' 51.876 W	
9,398.0	88.92	342.08	6,569.5	2,576.4	-604.0	14,265,500.69	1,678,755.80	39° 17' 3.697 N	80° 51' 52.224 W	
9,488.0	89.35	343.16	6,570.9	2,662.3	-630.9	14,265,586.57	1,678,728.92	39° 17' 4.547 N	80° 51' 52.565 W	
9,578.0	90.53	344.14	6,571.0	2,748.6	-656.2	14,265,672.93	1,678,703.58	39° 17' 5.401 N	80° 51' 52.885 W	
9,667.0	90.03	342.07	6,570.5	2,833.8	-682.1	14,265,758.08	1,678,677.72	39° 17' 6.244 N	80° 51' 53.213 W	
9,757.0	92.21	342.43	6,568.8	2,919.5	-709.5	14,265,843.78	1,678,650.29	39° 17' 7.091 N	80° 51' 53.560 W	
9,847.0	90.94	342.59	6,566.3	3,005.3	-736.5	14,265,929.58	1,678,623.25	39° 17' 7.940 N	80° 51' 53.903 W	
9,936.0	90.87	342.05	6,564.9	3,090.1	-763.6	14,266,014.37	1,678,596.23	39° 17' 8.779 N	80° 51' 54.245 W	
10,026.0	90.94	341.73	6,563.5	3,175.6	-791.5	14,266,099.90	1,678,568.25	39° 17' 9.625 N	80° 51' 54.599 W	
10,116.0	90.84	342.13	6,562.1	3,261.2	-819.4	14,266,185.45	1,678,540.34	39° 17' 10.471 N	80° 51' 54.953 W	
10,206.0	90.90	342.34	6,560.7	3,346.9	-846.9	14,266,271.15	1,678,512.86	39° 17' 11.319 N	80° 51' 55.300 W	
10,296.0	91.04	342.82	6,559.2	3,432.7	-873.8	14,266,357.01	1,678,485.94	39° 17' 12.168 N	80° 51' 55.642 W	
10,385.0	90.67	341.13	6,557.9	3,517.3	-901.4	14,266,441.63	1,678,458.41	39° 17' 13.005 N	80° 51' 55.990 W	
10,475.0	91.17	339.47	6,556.4	3,602.1	-931.7	14,266,526.34	1,678,428.07	39° 17' 13.844 N	80° 51' 56.375 W	
10,565.0	89.89	340.93	6,555.6	3,686.7	-962.2	14,266,611.02	1,678,397.59	39° 17' 14.681 N	80° 51' 56.761 W	
10,654.0	89.46	340.75	6,556.1	3,770.8	-991.4	14,266,695.08	1,678,368.38	39° 17' 15.513 N	80° 51' 57.131 W	
10,744.0	89.29	338.83	6,557.1	3,855.3	-1,022.5	14,266,779.53	1,678,337.29	39° 17' 16.348 N	80° 51' 57.525 W	
10,834.0	89.69	339.89	6,557.9	3,939.5	-1,054.2	14,266,863.75	1,678,305.57	39° 17' 17.182 N	80° 51' 57.927 W	
10,924.0	90.27	340.95	6,557.9	4,024.3	-1,084.4	14,266,948.55	1,678,275.41	39° 17' 18.020 N	80° 51' 58.309 W	
11,014.0	91.07	340.41	6,556.9	4,109.2	-1,114.2	14,267,033.47	1,678,245.64	39° 17' 18.861 N	80° 51' 58.686 W	
11,103.0	90.10	342.15	6,555.9	4,193.5	-1,142.7	14,267,117.75	1,678,217.08	39° 17' 19.694 N	80° 51' 59.048 W	
11,193.0	90.03	342.33	6,555.8	4,279.2	-1,170.2	14,267,203.46	1,678,189.62	39° 17' 20.542 N	80° 51' 59.396 W	
11,283.0	90.46	342.97	6,555.5	4,365.1	-1,197.0	14,267,289.37	1,678,162.78	39° 17' 21.392 N	80° 51' 59.736 W	
11,372.0	90.67	341.73	6,554.6	4,449.9	-1,224.0	14,267,374.17	1,678,135.80	39° 17' 22.231 N	80° 52' 0.077 W	
11,462.0	89.90	342.29	6,554.1	4,535.5	-1,251.8	14,267,459.77	1,678,108.01	39° 17' 23.078 N	80° 52' 0.429 W	
11,552.0	89.86	343.05	6,554.3	4,621.4	-1,278.6	14,267,545.68	1,678,081.20	39° 17' 23.928 N	80° 52' 0.769 W	
11,642.0	89.56	342.50	6,554.8	4,707.4	-1,305.2	14,267,631.65	1,678,054.55	39° 17' 24.778 N	80° 52' 1.106 W	
11,731.0	89.53	342.53	6,555.5	4,792.2	-1,332.0	14,267,716.53	1,678,027.81	39° 17' 25.618 N	80° 52' 1.445 W	
11,821.0	89.70	342.66	6,556.1	4,878.1	-1,358.9	14,267,802.41	1,678,000.89	39° 17' 26.467 N	80° 52' 1.786 W	
11,911.0	89.86	342.95	6,556.4	4,964.1	-1,385.5	14,267,888.39	1,677,974.28	39° 17' 27.318 N	80° 52' 2.123 W	
12,000.0	90.03	342.83	6,556.5	5,049.2	-1,411.7	14,267,973.45	1,677,948.10	39° 17' 28.159 N	80° 52' 2.454 W	
12,090.0	88.96	342.99	6,557.3	5,135.2	-1,438.1	14,268,059.47	1,677,921.65	39° 17' 29.010 N	80° 52' 2.789 W	
12,180.0	88.52	342.36	6,559.3	5,221.1	-1,464.9	14,268,145.36	1,677,894.85	39° 17' 29.860 N	80° 52' 3.129 W	
12,270.0	88.66	341.37	6,561.5	5,306.6	-1,492.9	14,268,230.87	1,677,866.85	39° 17' 30.706 N	80° 52' 3.483 W	
12,359.0	89.73	341.08	6,562.8	5,390.8	-1,521.6	14,268,315.12	1,677,838.21	39° 17' 31.539 N	80° 52' 3.846 W	
12,449.0	89.80	340.14	6,563.1	5,475.7	-1,551.5	14,268,400.01	1,677,808.33	39° 17' 32.379 N	80° 52' 4.225 W	
12,539.0	91.41	341.85	6,562.2	5,560.8	-1,580.8	14,268,485.10	1,677,779.02	39° 17' 33.221 N	80° 52' 4.596 W	
12,629.0	92.12	342.31	6,559.4	5,646.4	-1,608.4	14,268,570.69	1,677,751.35	39° 17' 34.067 N	80° 52' 4.947 W	
12,719.0	91.08	343.52	6,556.9	5,732.4	-1,634.9	14,268,656.68	1,677,724.92	39° 17' 34.918 N	80° 52' 5.281 W	
12,808.0	90.91	342.39	6,555.3	5,817.5	-1,661.0	14,268,741.76	1,677,698.83	39° 17' 35.759 N	80° 52' 5.612 W	
12,898.0	91.28	342.74	6,553.6	5,903.3	-1,687.9	14,268,827.61	1,677,671.87	39° 17' 36.609 N	80° 52' 5.953 W	
12,988.0	90.30	344.11	6,552.4	5,989.6	-1,713.6	14,268,913.86	1,677,646.20	39° 17' 37.462 N	80° 52' 6.278 W	
13,078.0	90.61	345.07	6,551.7	6,076.3	-1,737.5	14,269,000.62	1,677,622.29	39° 17' 38.320 N	80° 52' 6.581 W	
13,167.0	88.92	343.48	6,552.0	6,162.0	-1,761.6	14,269,086.28	1,677,598.17	39° 17' 39.167 N	80° 52' 6.886 W	
13,257.0	88.86	343.48	6,553.8	6,248.3	-1,787.2	14,269,172.55	1,677,572.58	39° 17' 40.021 N	80° 52' 7.210 W	
13,347.0	88.69	343.38	6,555.7	6,334.5	-1,812.9	14,269,258.79	1,677,546.92	39° 17' 40.874 N	80° 52' 7.535 W	
13,436.0	88.62	342.06	6,557.8	6,419.5	-1,839.3	14,269,343.75	1,677,520.49	39° 17' 41.714 N	80° 52' 7.870 W	
13,526.0	89.56	341.42	6,559.2	6,504.9	-1,867.5	14,269,429.20	1,677,492.29	39° 17' 42.560 N	80° 52' 8.227 W	
13,616.0	89.80	340.15	6,559.7	6,589.9	-1,897.1	14,269,514.19	1,677,462.68	39° 17' 43.400 N	80° 52' 8.602 W	
13,706.0	89.87	340.38	6,560.0	6,674.6	-1,927.5	14,269,598.90	1,677,432.29	39° 17' 44.238 N	80° 52' 8.988 W	
13,795.0	89.77	339.19	6,560.3	6,758.1	-1,958.3	14,269,682.42	1,677,401.53	39° 17' 45.065 N	80° 52' 9.377 W	
13,885.0	89.87	338.90	6,560.5	6,842.2	-1,990.4	14,269,766.46	1,677,369.35	39° 17' 45.896 N	80° 52' 9.785 W	
13,974.0	90.34	340.06	6,560.4	6,925.5	-2,021.6	14,269,849.81	1,677,338.15	39° 17' 46.721 N	80° 52' 10.181 W	

WV Department of Environmental Protection



Scientific Drilling International

Survey Report - Geographic



Company:	Antero Resources	Local Co-ordinate Reference:	Well McGill Unit 1H
Project:	Doddridge County WV	TVD Reference:	PD 525: 1112' GL + 19' KB @ 1131.0usft
Site:	Vogt: Seaborn/Violet/Tulip/Marks	MD Reference:	PD 525: 1112' GL + 19' KB @ 1131.0usft
Well:	McGill Unit 1H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Antero NE

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Survey										WV Department of Environmental Protection
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
14,064.0	90.77	339.00	6,559.5	7,009.8	-2,053.1	14,269,934.13	1,677,306.68	39° 17' 47.555 N	80° 52' 10.580 W	
14,154.0	90.47	341.23	6,558.5	7,094.5	-2,083.7	14,270,018.75	1,677,276.07	39° 17' 48.392 N	80° 52' 10.968 W	
14,243.0	90.40	341.51	6,557.9	7,178.8	-2,112.1	14,270,103.08	1,677,247.64	39° 17' 49.226 N	80° 52' 11.328 W	
14,333.0	90.27	341.34	6,557.3	7,264.1	-2,140.8	14,270,188.39	1,677,218.97	39° 17' 50.070 N	80° 52' 11.691 W	
14,423.0	89.90	341.22	6,557.2	7,349.3	-2,169.7	14,270,273.63	1,677,190.08	39° 17' 50.913 N	80° 52' 12.057 W	
14,513.0	89.56	341.31	6,557.6	7,434.6	-2,198.6	14,270,358.86	1,677,161.18	39° 17' 51.757 N	80° 52' 12.423 W	
14,602.0	89.06	341.24	6,558.7	7,518.9	-2,227.2	14,270,443.15	1,677,132.61	39° 17' 52.590 N	80° 52' 12.785 W	
14,692.0	88.72	341.04	6,560.4	7,604.0	-2,256.3	14,270,528.30	1,677,103.52	39° 17' 53.433 N	80° 52' 13.154 W	
14,782.0	89.36	340.99	6,561.9	7,689.1	-2,285.5	14,270,613.39	1,677,074.25	39° 17' 54.274 N	80° 52' 13.525 W	
14,871.0	89.53	341.11	6,562.8	7,773.3	-2,314.4	14,270,697.56	1,677,045.35	39° 17' 55.107 N	80° 52' 13.891 W	
14,961.0	90.07	342.51	6,563.1	7,858.8	-2,342.5	14,270,783.06	1,677,017.25	39° 17' 55.953 N	80° 52' 14.247 W	
15,051.0	90.51	343.74	6,562.7	7,944.9	-2,368.7	14,270,869.18	1,676,991.13	39° 17' 56.805 N	80° 52' 14.578 W	
15,141.0	90.41	343.00	6,561.9	8,031.1	-2,394.4	14,270,955.42	1,676,965.37	39° 17' 57.658 N	80° 52' 14.904 W	
15,230.0	89.90	341.20	6,561.7	8,115.8	-2,421.8	14,271,040.10	1,676,938.02	39° 17' 58.496 N	80° 52' 15.251 W	
15,320.0	89.50	340.37	6,562.2	8,200.8	-2,451.4	14,271,125.09	1,676,908.40	39° 17' 59.336 N	80° 52' 15.626 W	
15,410.0	90.47	341.44	6,562.2	8,285.8	-2,480.8	14,271,210.13	1,676,878.96	39° 18' 0.178 N	80° 52' 15.999 W	
15,499.0	90.98	341.21	6,561.1	8,370.2	-2,509.3	14,271,294.44	1,676,850.46	39° 18' 1.012 N	80° 52' 16.360 W	
15,589.0	90.84	340.03	6,559.6	8,455.0	-2,539.2	14,271,379.33	1,676,820.60	39° 18' 1.851 N	80° 52' 16.739 W	
15,678.0	90.84	339.88	6,558.3	8,538.6	-2,569.7	14,271,462.93	1,676,790.10	39° 18' 2.678 N	80° 52' 17.126 W	
15,768.0	90.94	341.49	6,556.9	8,623.6	-2,599.5	14,271,547.85	1,676,760.33	39° 18' 3.518 N	80° 52' 17.503 W	
15,858.0	91.14	341.38	6,555.3	8,708.9	-2,628.1	14,271,633.15	1,676,731.68	39° 18' 4.362 N	80° 52' 17.866 W	
15,947.0	89.80	342.85	6,554.6	8,793.6	-2,655.4	14,271,717.84	1,676,704.35	39° 18' 5.200 N	80° 52' 18.212 W	
16,037.0	89.80	343.69	6,554.9	8,879.7	-2,681.3	14,271,804.03	1,676,678.45	39° 18' 6.053 N	80° 52' 18.540 W	
16,127.0	89.77	343.17	6,555.2	8,966.0	-2,707.0	14,271,890.29	1,676,652.78	39° 18' 6.906 N	80° 52' 18.865 W	
16,217.0	90.10	343.39	6,555.3	9,052.2	-2,732.9	14,271,976.49	1,676,626.89	39° 18' 7.759 N	80° 52' 19.193 W	
16,306.0	89.90	342.68	6,555.3	9,137.3	-2,758.9	14,272,061.62	1,676,600.92	39° 18' 8.601 N	80° 52' 19.522 W	
16,396.0	89.09	342.47	6,556.1	9,223.2	-2,785.8	14,272,147.48	1,676,573.97	39° 18' 9.450 N	80° 52' 19.864 W	
16,486.0	89.16	342.36	6,557.5	9,309.0	-2,813.0	14,272,233.27	1,676,546.78	39° 18' 10.299 N	80° 52' 20.208 W	
16,575.0	89.73	342.18	6,558.4	9,393.8	-2,840.1	14,272,318.03	1,676,519.68	39° 18' 11.137 N	80° 52' 20.551 W	
16,665.0	89.93	341.80	6,558.6	9,479.3	-2,867.9	14,272,403.62	1,676,491.85	39° 18' 11.984 N	80° 52' 20.904 W	
16,755.0	90.67	341.58	6,558.2	9,564.8	-2,896.2	14,272,489.07	1,676,463.58	39° 18' 12.829 N	80° 52' 21.262 W	
16,844.0	90.64	341.23	6,557.1	9,649.1	-2,924.6	14,272,573.41	1,676,435.20	39° 18' 13.663 N	80° 52' 21.622 W	
16,934.0	89.83	342.49	6,556.8	9,734.7	-2,952.6	14,272,658.94	1,676,407.18	39° 18' 14.509 N	80° 52' 21.977 W	
17,024.0	89.46	341.97	6,557.3	9,820.4	-2,980.1	14,272,744.64	1,676,379.71	39° 18' 15.357 N	80° 52' 22.325 W	
17,113.0	89.36	340.74	6,558.2	9,904.7	-3,008.5	14,272,828.96	1,676,351.26	39° 18' 16.191 N	80° 52' 22.686 W	
17,203.0	90.34	341.23	6,558.5	9,989.8	-3,037.8	14,272,914.05	1,676,321.94	39° 18' 17.033 N	80° 52' 23.057 W	
17,293.0	89.53	341.03	6,558.6	10,074.9	-3,067.0	14,272,999.21	1,676,292.83	39° 18' 17.876 N	80° 52' 23.426 W	
17,383.0	90.03	342.21	6,558.9	10,160.3	-3,095.3	14,273,084.62	1,676,264.45	39° 18' 18.720 N	80° 52' 23.786 W	
17,472.0	90.87	342.58	6,558.2	10,245.2	-3,122.2	14,273,169.45	1,676,237.54	39° 18' 19.560 N	80° 52' 24.127 W	
17,555.0	90.71	343.03	6,557.1	10,324.4	-3,146.8	14,273,248.73	1,676,213.00	39° 18' 20.344 N	80° 52' 24.438 W	
Last SDI MWD @ 17555										
17,620.0	90.71	343.03	6,556.3	10,386.6	-3,165.8	14,273,310.90	1,676,194.03	39° 18' 20.959 N	80° 52' 24.678 W	
Projection To Bit @ 17620 MD / 6556 TVD										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
PBHL McGill 1H	90.00	341.75	6,502.0	10,380.6	-3,156.9	14,273,304.88	1,676,202.89	39° 18' 20.899 N	80° 52' 24.565 W	
- actual wellpath misses target center by 54.8usft at 17612.3usft MD (6556.4 TVD, 10379.3 N, -3163.5 E)										
- Rectangle (sides W50.0 H0.0 D17,000.0)										



Company:	Antero Resources	Local Co-ordinate Reference:	Well McGill Unit 1H
Project:	Doddridge County WV	TVD Reference:	PD 525: 1112' GL + 19' KB @ 1131.0usft
Site:	Vogt: Seaborn/Violet/Tulip/Marks	MD Reference:	PD 525: 1112' GL + 19' KB @ 1131.0usft
Well:	McGill Unit 1H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Antero NE

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
6,518.0	6,399.6	Middlesex @ 6518		0.00		
6,734.0	6,515.8	Burket @ 6734		0.00		
6,811.0	6,541.1	Tully @ 6811		0.00		
6,945.0	6,570.0	Marcellus @ 6945		0.00		

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
5,510.0	5,474.8	-348.3	316.8	First SDI MWD @ 5510	
17,555.0	6,557.1	10,324.4	-3,146.8	Last SDI MWD @ 17555	
17,620.0	6,556.3	10,386.6	-3,165.8	Projection To Bit @ 17620 MD / 6556 TVD	

Checked By: _____ Approved By: _____ Date: _____

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