



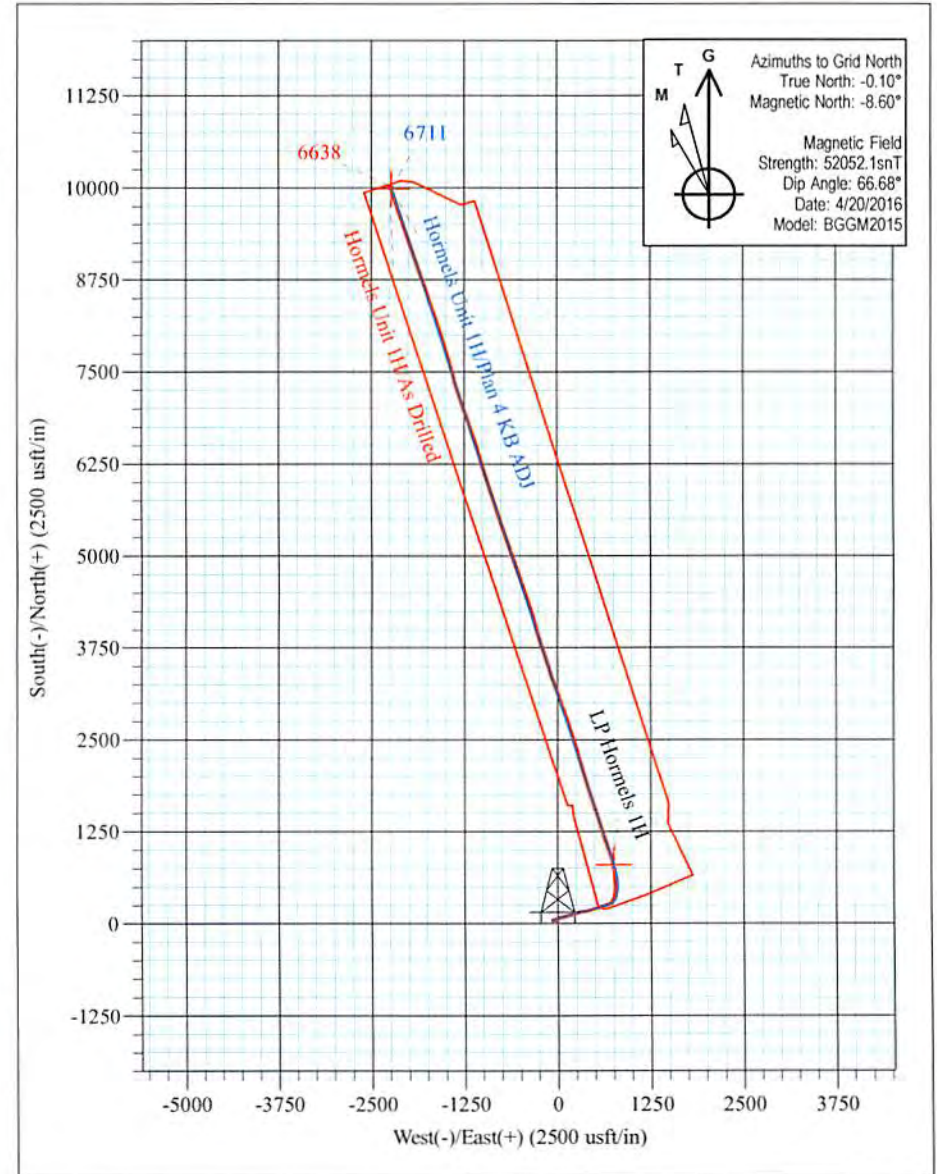
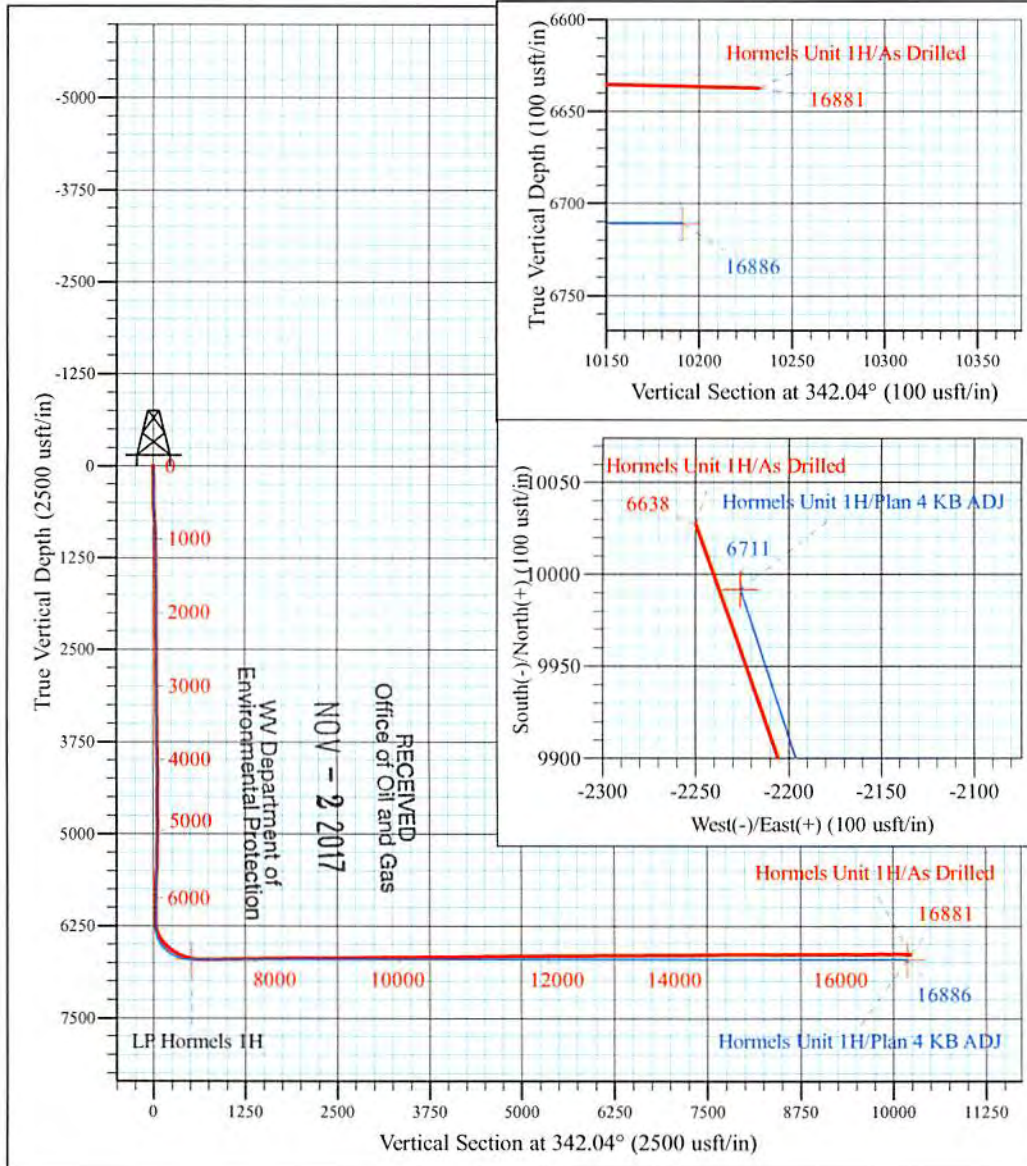
McGill Pad: Hormels/Mash/Nero/Vonda/Wilhelm
 Hormels Unit 1H
 Plan 4 KB ADJ
 Precision 525: 1164' GL + 19' KB @ 1183.0usft
 Doddridge County WV

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: **Hormels Unit 1H SHL**

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	14262009.21	1683178.23	39° 16' 29.106 N	80° 50' 56.034 W



Azimuths to Grid North
 True North: -0.10°
 Magnetic North: -8.60°
 Magnetic Field
 Strength: 52052.1nT
 Dip Angle: 66.68°
 Date: 4/20/2016
 Model: BGGM2015

Hormels Unit 1H
 Approx. BHL
 39° 18' 8.287 N 80° 51' 24.452 W

Slane Rhodes
 10:05, April 29 2016
 Scientific Drilling International
 124 Vista Drive
 Charleroi, PA 15022

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 WV Department of
 Environmental Protection



Scientific Drilling International
Survey Report - Geographic



Company:	Antero Resources	Local Co-ordinate Reference:	Well Hormels Unit 1H
Project:	Doddridge County WV	TVD Reference:	Precision 525: 1164' GL + 19' KB @ 1183.0usft
Site:	McGill Pad: Hormels/Mash/Nero/Vonda/Wilhelm	MD Reference:	Precision 525: 1164' GL + 19' KB @ 1183.0usft
Well:	Hormels Unit 1H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Antero NE

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Office of Oil and Gas

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)		

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Site	McGill Pad: Hormels/Mash/Nero/Vonda/Wilhelm				
Site Position:		Northing:	14,261,930.17 usft	Latitude:	39° 16' 28.324 N
From:	Map	Easting:	1,683,174.55 usft	Longitude:	80° 50' 56.082 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.10 °

Well	Hormels Unit 1H, Marcellus					
Well Position	+N/-S	0.0 usft	Northing:	14,262,009.21 usft	Latitude:	39° 16' 29.106 N
	+E/-W	0.0 usft	Easting:	1,683,178.23 usft	Longitude:	80° 50' 56.034 W
Position Uncertainty		2.0 usft	Wellhead Elevation:	1,183.0 usft	Ground Level:	1,164.0 usft

Wellbore	Original Wellpath				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	11/6/2014	-8.43	66.83	52,209
	BGGM2015	4/20/2016	-8.50	66.68	52,052

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		342.04

Survey Program	Date	4/29/2016			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
32.0	6,217.0	Survey #7 Final Gyro (Original Wellpath)	Standard Keeper 104	Standard Wireline Keeper ver 1.0.4	
6,261.0	16,881.0	Survey #3 - SDI MWD (Original Wellpath)	SDI MWD	Scientific Drilling Intl. MWD - Standard ver 1.0.1	

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	14,262,009.21	1,683,178.23	39° 16' 29.106 N	80° 50' 56.034 W	
32.0	0.19	11.64	32.0	0.1	0.0	14,262,009.26	1,683,178.24	39° 16' 29.106 N	80° 50' 56.034 W	
57.0	0.39	11.64	57.0	0.2	0.0	14,262,009.39	1,683,178.26	39° 16' 29.107 N	80° 50' 56.033 W	
82.0	0.58	11.64	82.0	0.4	0.1	14,262,009.60	1,683,178.31	39° 16' 29.109 N	80° 50' 56.033 W	
107.0	0.78	11.66	107.0	0.7	0.1	14,262,009.89	1,683,178.37	39° 16' 29.112 N	80° 50' 56.032 W	
132.0	0.78	15.42	132.0	1.0	0.2	14,262,010.22	1,683,178.45	39° 16' 29.115 N	80° 50' 56.031 W	
157.0	0.72	14.44	157.0	1.3	0.3	14,262,010.53	1,683,178.53	39° 16' 29.119 N	80° 50' 56.030 W	
182.0	0.78	13.58	182.0	1.6	0.4	14,262,010.85	1,683,178.61	39° 16' 29.122 N	80° 50' 56.029 W	
207.0	0.78	4.20	207.0	2.0	0.4	14,262,011.19	1,683,178.66	39° 16' 29.125 N	80° 50' 56.028 W	
232.0	0.78	12.25	232.0	2.3	0.5	14,262,011.52	1,683,178.71	39° 16' 29.128 N	80° 50' 56.028 W	



Scientific Drilling International
Survey Report - Geographic



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Wellbore: Original Wellpath
Design: As Drilled

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Survey Calculation Method: Minimum Curvature
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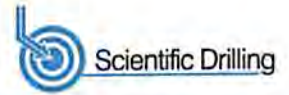
Survey

NOV - 2 2017

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
257.0	0.66	5.18	257.0	2.6	0.5	14,262,011.83	1,683,178.76	39° 16' 29.131 N	80° 50' 56.027 W
282.0	0.66	1.56	282.0	2.9	0.5	14,262,012.12	1,683,178.78	39° 16' 29.134 N	80° 50' 56.027 W
307.0	0.64	351.19	307.0	3.2	0.5	14,262,012.40	1,683,178.76	39° 16' 29.137 N	80° 50' 56.027 W
332.0	0.66	319.91	332.0	3.4	0.4	14,262,012.65	1,683,178.64	39° 16' 29.140 N	80° 50' 56.028 W
357.0	1.32	294.53	357.0	3.7	0.1	14,262,012.88	1,683,178.29	39° 16' 29.142 N	80° 50' 56.033 W
382.0	1.96	279.05	382.0	3.9	-0.6	14,262,013.07	1,683,177.61	39° 16' 29.144 N	80° 50' 56.042 W
407.0	2.42	278.05	406.9	4.0	-1.6	14,262,013.21	1,683,176.66	39° 16' 29.145 N	80° 50' 56.054 W
432.0	2.55	278.00	431.9	4.1	-2.6	14,262,013.36	1,683,175.59	39° 16' 29.147 N	80° 50' 56.067 W
457.0	3.33	278.55	456.9	4.3	-3.9	14,262,013.54	1,683,174.32	39° 16' 29.148 N	80° 50' 56.083 W
482.0	3.46	279.17	481.8	4.6	-5.4	14,262,013.77	1,683,172.86	39° 16' 29.151 N	80° 50' 56.102 W
507.0	3.53	280.69	506.8	4.8	-6.9	14,262,014.03	1,683,171.35	39° 16' 29.153 N	80° 50' 56.121 W
532.0	3.72	286.25	531.7	5.2	-8.4	14,262,014.40	1,683,169.82	39° 16' 29.157 N	80° 50' 56.141 W
557.0	4.09	294.16	556.7	5.8	-10.0	14,262,015.00	1,683,168.23	39° 16' 29.163 N	80° 50' 56.161 W
582.0	4.14	296.87	581.6	6.6	-11.6	14,262,015.77	1,683,166.61	39° 16' 29.171 N	80° 50' 56.181 W
607.0	4.73	299.82	606.6	7.5	-13.3	14,262,016.69	1,683,164.91	39° 16' 29.180 N	80° 50' 56.203 W
632.0	5.20	301.68	631.5	8.6	-15.2	14,262,017.80	1,683,163.05	39° 16' 29.191 N	80° 50' 56.227 W
657.0	5.35	301.95	656.4	9.8	-17.1	14,262,019.01	1,683,161.10	39° 16' 29.203 N	80° 50' 56.251 W
682.0	5.36	302.07	681.2	11.0	-19.1	14,262,020.25	1,683,159.12	39° 16' 29.215 N	80° 50' 56.277 W
707.0	5.40	302.24	706.1	12.3	-21.1	14,262,021.49	1,683,157.14	39° 16' 29.227 N	80° 50' 56.302 W
732.0	5.45	301.67	731.0	13.5	-23.1	14,262,022.74	1,683,155.13	39° 16' 29.240 N	80° 50' 56.327 W
757.0	5.40	301.75	755.9	14.8	-25.1	14,262,023.99	1,683,153.12	39° 16' 29.252 N	80° 50' 56.353 W
782.0	4.74	303.07	780.8	16.0	-27.0	14,262,025.17	1,683,151.25	39° 16' 29.264 N	80° 50' 56.377 W
807.0	3.88	301.73	805.7	17.0	-28.6	14,262,026.18	1,683,149.67	39° 16' 29.274 N	80° 50' 56.397 W
832.0	3.69	300.34	830.7	17.8	-30.0	14,262,027.03	1,683,148.25	39° 16' 29.282 N	80° 50' 56.415 W
857.0	3.59	301.47	855.6	18.6	-31.3	14,262,027.84	1,683,146.89	39° 16' 29.290 N	80° 50' 56.432 W
882.0	3.66	301.32	880.6	19.5	-32.7	14,262,028.67	1,683,145.54	39° 16' 29.298 N	80° 50' 56.449 W
907.0	3.65	300.49	905.5	20.3	-34.1	14,262,029.49	1,683,144.18	39° 16' 29.307 N	80° 50' 56.466 W
932.0	2.93	301.60	930.5	21.0	-35.3	14,262,030.22	1,683,142.95	39° 16' 29.314 N	80° 50' 56.482 W
957.0	2.44	302.17	955.5	21.6	-36.3	14,262,030.84	1,683,141.95	39° 16' 29.320 N	80° 50' 56.495 W
982.0	2.08	301.94	980.4	22.2	-37.1	14,262,031.37	1,683,141.12	39° 16' 29.325 N	80° 50' 56.505 W
1,007.0	1.61	298.75	1,005.4	22.6	-37.8	14,262,031.77	1,683,140.42	39° 16' 29.329 N	80° 50' 56.514 W
1,032.0	1.21	294.16	1,030.4	22.8	-38.4	14,262,032.05	1,683,139.87	39° 16' 29.332 N	80° 50' 56.521 W
1,057.0	1.24	296.01	1,055.4	23.1	-38.8	14,262,032.28	1,683,139.39	39° 16' 29.334 N	80° 50' 56.527 W
1,082.0	1.20	295.58	1,080.4	23.3	-39.3	14,262,032.51	1,683,138.91	39° 16' 29.337 N	80° 50' 56.533 W
1,107.0	1.12	298.00	1,105.4	23.5	-39.8	14,262,032.74	1,683,138.46	39° 16' 29.339 N	80° 50' 56.539 W
1,132.0	1.08	297.59	1,130.4	23.7	-40.2	14,262,032.96	1,683,138.03	39° 16' 29.341 N	80° 50' 56.545 W
1,157.0	1.06	294.50	1,155.4	24.0	-40.6	14,262,033.17	1,683,137.62	39° 16' 29.343 N	80° 50' 56.550 W
1,182.0	1.05	283.41	1,180.4	24.1	-41.0	14,262,033.32	1,683,137.18	39° 16' 29.345 N	80° 50' 56.555 W
1,207.0	0.90	274.73	1,205.4	24.2	-41.5	14,262,033.38	1,683,136.76	39° 16' 29.345 N	80° 50' 56.561 W
1,232.0	0.87	267.06	1,230.4	24.2	-41.8	14,262,033.39	1,683,136.38	39° 16' 29.345 N	80° 50' 56.566 W
1,257.0	0.97	266.32	1,255.4	24.2	-42.2	14,262,033.37	1,683,135.98	39° 16' 29.345 N	80° 50' 56.571 W
1,282.0	0.81	267.41	1,280.4	24.1	-42.6	14,262,033.35	1,683,135.59	39° 16' 29.345 N	80° 50' 56.576 W
1,307.0	0.95	273.64	1,305.4	24.1	-43.0	14,262,033.35	1,683,135.21	39° 16' 29.345 N	80° 50' 56.581 W
1,332.0	0.84	272.22	1,330.4	24.2	-43.4	14,262,033.37	1,683,134.82	39° 16' 29.345 N	80° 50' 56.585 W
1,357.0	0.88	266.94	1,355.4	24.2	-43.8	14,262,033.37	1,683,134.44	39° 16' 29.345 N	80° 50' 56.590 W
1,382.0	0.94	267.19	1,380.4	24.1	-44.2	14,262,033.35	1,683,134.05	39° 16' 29.345 N	80° 50' 56.595 W
1,407.0	0.95	275.96	1,405.4	24.1	-44.6	14,262,033.36	1,683,133.63	39° 16' 29.345 N	80° 50' 56.601 W
1,432.0	0.84	265.77	1,430.4	24.2	-45.0	14,262,033.37	1,683,133.25	39° 16' 29.345 N	80° 50' 56.605 W
1,457.0	0.89	264.71	1,455.4	24.1	-45.4	14,262,033.34	1,683,132.87	39° 16' 29.345 N	80° 50' 56.610 W
1,482.0	0.92	267.71	1,480.4	24.1	-45.8	14,262,033.31	1,683,132.48	39° 16' 29.345 N	80° 50' 56.615 W
1,507.0	0.89	269.33	1,505.4	24.1	-46.1	14,262,033.30	1,683,132.08	39° 16' 29.344 N	80° 50' 56.620 W
1,532.0	0.91	272.51	1,530.4	24.1	-46.5	14,262,033.31	1,683,131.69	39° 16' 29.345 N	80° 50' 56.625 W
1,557.0	0.74	278.00	1,555.4	24.1	-46.9	14,262,033.34	1,683,131.33	39° 16' 29.345 N	80° 50' 56.630 W
1,582.0	0.53	296.37	1,580.3	24.2	-47.2	14,262,033.41	1,683,131.07	39° 16' 29.346 N	80° 50' 56.633 W
1,607.0	0.39	337.81	1,605.3	24.3	-47.3	14,262,033.54	1,683,130.93	39° 16' 29.347 N	80° 50' 56.635 W



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1,632.0	0.30	2.35	1,630.3	24.5	-47.3	14,262,033.69	1,683,130.90	39° 16' 29.348 N	80° 50' 56.635 W
1,657.0	0.44	6.46	1,655.3	24.6	-47.3	14,262,033.85	1,683,130.92	39° 16' 29.350 N	80° 50' 56.635 W
1,682.0	0.52	10.96	1,680.3	24.8	-47.3	14,262,034.05	1,683,130.95	39° 16' 29.352 N	80° 50' 56.635 W
1,707.0	0.44	358.41	1,705.3	25.0	-47.3	14,262,034.26	1,683,130.97	39° 16' 29.354 N	80° 50' 56.634 W
1,732.0	0.51	355.93	1,730.3	25.3	-47.3	14,262,034.47	1,683,130.96	39° 16' 29.356 N	80° 50' 56.635 W
1,757.0	0.46	354.05	1,755.3	25.5	-47.3	14,262,034.68	1,683,130.94	39° 16' 29.358 N	80° 50' 56.635 W
1,782.0	0.37	6.49	1,780.3	25.6	-47.3	14,262,034.86	1,683,130.94	39° 16' 29.360 N	80° 50' 56.635 W
1,807.0	0.42	350.56	1,805.3	25.8	-47.3	14,262,035.03	1,683,130.93	39° 16' 29.362 N	80° 50' 56.635 W
1,832.0	0.40	359.66	1,830.3	26.0	-47.3	14,262,035.21	1,683,130.91	39° 16' 29.363 N	80° 50' 56.635 W
1,857.0	0.45	8.63	1,855.3	26.2	-47.3	14,262,035.39	1,683,130.93	39° 16' 29.365 N	80° 50' 56.635 W
1,882.0	0.50	3.41	1,880.3	26.4	-47.3	14,262,035.60	1,683,130.95	39° 16' 29.367 N	80° 50' 56.635 W
1,907.0	0.53	2.98	1,905.3	26.6	-47.3	14,262,035.82	1,683,130.96	39° 16' 29.369 N	80° 50' 56.634 W
1,932.0	0.56	4.94	1,930.3	26.8	-47.2	14,262,036.06	1,683,130.98	39° 16' 29.372 N	80° 50' 56.634 W
1,957.0	0.56	354.80	1,955.3	27.1	-47.2	14,262,036.30	1,683,130.98	39° 16' 29.374 N	80° 50' 56.634 W
1,982.0	0.55	359.89	1,980.3	27.3	-47.3	14,262,036.54	1,683,130.97	39° 16' 29.377 N	80° 50' 56.634 W
2,007.0	0.46	357.93	2,005.3	27.6	-47.3	14,262,036.76	1,683,130.96	39° 16' 29.379 N	80° 50' 56.634 W
2,032.0	0.47	352.85	2,030.3	27.8	-47.3	14,262,036.97	1,683,130.95	39° 16' 29.381 N	80° 50' 56.635 W
2,057.0	0.47	14.92	2,055.3	28.0	-47.3	14,262,037.17	1,683,130.96	39° 16' 29.383 N	80° 50' 56.634 W
2,082.0	0.41	2.01	2,080.3	28.1	-47.2	14,262,037.35	1,683,130.99	39° 16' 29.385 N	80° 50' 56.634 W
2,107.0	0.46	351.55	2,105.3	28.3	-47.2	14,262,037.54	1,683,130.98	39° 16' 29.386 N	80° 50' 56.634 W
2,132.0	0.44	328.27	2,130.3	28.5	-47.3	14,262,037.72	1,683,130.91	39° 16' 29.388 N	80° 50' 56.635 W
2,157.0	0.42	323.43	2,155.3	28.7	-47.4	14,262,037.88	1,683,130.81	39° 16' 29.390 N	80° 50' 56.636 W
2,182.0	0.31	318.66	2,180.3	28.8	-47.5	14,262,038.00	1,683,130.71	39° 16' 29.391 N	80° 50' 56.638 W
2,207.0	0.42	319.64	2,205.3	28.9	-47.6	14,262,038.12	1,683,130.61	39° 16' 29.392 N	80° 50' 56.639 W
2,232.0	0.35	331.16	2,230.3	29.0	-47.7	14,262,038.26	1,683,130.51	39° 16' 29.394 N	80° 50' 56.640 W
2,257.0	0.48	327.30	2,255.3	29.2	-47.8	14,262,038.42	1,683,130.42	39° 16' 29.395 N	80° 50' 56.641 W
2,282.0	0.44	315.96	2,280.3	29.4	-47.9	14,262,038.57	1,683,130.29	39° 16' 29.397 N	80° 50' 56.643 W
2,307.0	0.69	306.85	2,305.3	29.5	-48.1	14,262,038.73	1,683,130.11	39° 16' 29.398 N	80° 50' 56.645 W
2,332.0	0.42	280.04	2,330.3	29.6	-48.3	14,262,038.84	1,683,129.89	39° 16' 29.399 N	80° 50' 56.648 W
2,357.0	0.38	293.31	2,355.3	29.7	-48.5	14,262,038.89	1,683,129.73	39° 16' 29.400 N	80° 50' 56.650 W
2,382.0	0.49	313.53	2,380.3	29.8	-48.7	14,262,038.99	1,683,129.57	39° 16' 29.401 N	80° 50' 56.652 W
2,407.0	0.23	310.25	2,405.3	29.9	-48.8	14,262,039.10	1,683,129.46	39° 16' 29.402 N	80° 50' 56.654 W
2,432.0	0.31	303.16	2,430.3	30.0	-48.9	14,262,039.17	1,683,129.36	39° 16' 29.403 N	80° 50' 56.655 W
2,457.0	0.58	279.33	2,455.3	30.0	-49.0	14,262,039.23	1,683,129.18	39° 16' 29.403 N	80° 50' 56.657 W
2,482.0	0.63	277.76	2,480.3	30.1	-49.3	14,262,039.27	1,683,128.92	39° 16' 29.404 N	80° 50' 56.660 W
2,507.0	0.66	279.75	2,505.3	30.1	-49.6	14,262,039.31	1,683,128.64	39° 16' 29.404 N	80° 50' 56.664 W
2,532.0	0.64	280.67	2,530.3	30.1	-49.9	14,262,039.36	1,683,128.36	39° 16' 29.404 N	80° 50' 56.667 W
2,557.0	0.59	277.11	2,555.3	30.2	-50.1	14,262,039.40	1,683,128.10	39° 16' 29.405 N	80° 50' 56.671 W
2,582.0	0.62	280.13	2,580.3	30.2	-50.4	14,262,039.44	1,683,127.84	39° 16' 29.405 N	80° 50' 56.674 W
2,607.0	0.65	282.68	2,605.3	30.3	-50.7	14,262,039.50	1,683,127.57	39° 16' 29.406 N	80° 50' 56.678 W
2,632.0	0.61	282.15	2,630.3	30.3	-50.9	14,262,039.56	1,683,127.30	39° 16' 29.406 N	80° 50' 56.681 W
2,657.0	0.66	279.82	2,655.3	30.4	-51.2	14,262,039.61	1,683,127.03	39° 16' 29.407 N	80° 50' 56.684 W
2,682.0	0.64	280.42	2,680.3	30.4	-51.5	14,262,039.66	1,683,126.75	39° 16' 29.407 N	80° 50' 56.688 W
2,707.0	0.61	284.26	2,705.3	30.5	-51.7	14,262,039.72	1,683,126.48	39° 16' 29.408 N	80° 50' 56.691 W
2,732.0	0.57	283.20	2,730.3	30.6	-52.0	14,262,039.78	1,683,126.23	39° 16' 29.409 N	80° 50' 56.695 W
2,757.0	0.59	285.92	2,755.3	30.6	-52.2	14,262,039.84	1,683,125.99	39° 16' 29.409 N	80° 50' 56.698 W
2,782.0	0.60	289.54	2,780.3	30.7	-52.5	14,262,039.92	1,683,125.74	39° 16' 29.410 N	80° 50' 56.701 W
2,807.0	0.58	290.72	2,805.3	30.8	-52.7	14,262,040.01	1,683,125.50	39° 16' 29.411 N	80° 50' 56.704 W
2,832.0	0.60	286.45	2,830.3	30.9	-53.0	14,262,040.09	1,683,125.25	39° 16' 29.412 N	80° 50' 56.707 W
2,857.0	0.65	287.78	2,855.3	31.0	-53.2	14,262,040.17	1,683,124.99	39° 16' 29.413 N	80° 50' 56.710 W
2,882.0	0.63	292.10	2,880.3	31.1	-53.5	14,262,040.27	1,683,124.73	39° 16' 29.413 N	80° 50' 56.714 W
2,907.0	0.65	294.83	2,905.3	31.2	-53.8	14,262,040.38	1,683,124.47	39° 16' 29.415 N	80° 50' 56.717 W
2,932.0	0.64	296.74	2,930.3	31.3	-54.0	14,262,040.50	1,683,124.22	39° 16' 29.416 N	80° 50' 56.720 W
2,957.0	0.60	294.08	2,955.3	31.4	-54.2	14,262,040.62	1,683,123.98	39° 16' 29.417 N	80° 50' 56.723 W
2,982.0	0.56	289.63	2,980.3	31.5	-54.5	14,262,040.71	1,683,123.74	39° 16' 29.418 N	80° 50' 56.726 W



Scientific Drilling International
Survey Report - Geographic



Company: Antero Resources
Project: Doddridge County WV
Site: McGill Pad: Hormels/Mash/Nero/Vonda/Wilhelm
Well: Hormels Unit 1H
Wellbore: Original Wellpath
Design: As Drilled

Local Co-ordinate Reference: Well Hormels Unit 1H
TVD Reference: Precision 525: 1164' GL + 19' KB @ 1183.0usft
MD Reference: Precision 525: 1164' GL + 19' KB @ 1183.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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
3,007.0	0.52	292.23	3,005.3	31.6	-54.7	14,262,040.79	1,683,123.52	39° 16' 29.419 N	80° 50' 56.729 W
3,032.0	0.56	296.02	3,030.3	31.7	-54.9	14,262,040.89	1,683,123.31	39° 16' 29.420 N	80° 50' 56.732 W
3,057.0	0.59	299.30	3,055.3	31.8	-55.1	14,262,041.01	1,683,123.09	39° 16' 29.421 N	80° 50' 56.735 W
3,082.0	0.58	296.60	3,080.3	31.9	-55.4	14,262,041.13	1,683,122.86	39° 16' 29.422 N	80° 50' 56.737 W
3,107.0	0.61	296.09	3,105.3	32.0	-55.6	14,262,041.24	1,683,122.63	39° 16' 29.423 N	80° 50' 56.740 W
3,132.0	0.60	298.89	3,130.3	32.2	-55.8	14,262,041.36	1,683,122.39	39° 16' 29.424 N	80° 50' 56.743 W
3,157.0	0.64	300.87	3,155.3	32.3	-56.1	14,262,041.50	1,683,122.16	39° 16' 29.426 N	80° 50' 56.746 W
3,182.0	0.66	301.35	3,180.3	32.4	-56.3	14,262,041.64	1,683,121.92	39° 16' 29.427 N	80° 50' 56.749 W
3,207.0	0.64	305.04	3,205.3	32.6	-56.5	14,262,041.80	1,683,121.68	39° 16' 29.429 N	80° 50' 56.752 W
3,232.0	0.58	303.08	3,230.3	32.7	-56.8	14,262,041.95	1,683,121.46	39° 16' 29.430 N	80° 50' 56.755 W
3,257.0	0.59	305.25	3,255.3	32.9	-57.0	14,262,042.09	1,683,121.25	39° 16' 29.432 N	80° 50' 56.758 W
3,282.0	0.62	308.43	3,280.3	33.0	-57.2	14,262,042.25	1,683,121.04	39° 16' 29.433 N	80° 50' 56.761 W
3,307.0	0.62	309.03	3,305.3	33.2	-57.4	14,262,042.42	1,683,120.82	39° 16' 29.435 N	80° 50' 56.763 W
3,332.0	0.65	312.65	3,330.3	33.4	-57.6	14,262,042.60	1,683,120.62	39° 16' 29.437 N	80° 50' 56.766 W
3,357.0	0.59	315.01	3,355.3	33.6	-57.8	14,262,042.79	1,683,120.42	39° 16' 29.438 N	80° 50' 56.768 W
3,382.0	0.50	310.00	3,380.3	33.7	-58.0	14,262,042.95	1,683,120.25	39° 16' 29.440 N	80° 50' 56.771 W
3,407.0	0.57	309.38	3,405.3	33.9	-58.2	14,262,043.10	1,683,120.07	39° 16' 29.442 N	80° 50' 56.773 W
3,432.0	0.66	313.17	3,430.3	34.1	-58.4	14,262,043.28	1,683,119.86	39° 16' 29.443 N	80° 50' 56.775 W
3,457.0	0.66	320.18	3,455.3	34.3	-58.6	14,262,043.48	1,683,119.67	39° 16' 29.445 N	80° 50' 56.778 W
3,482.0	0.63	326.29	3,480.3	34.5	-58.7	14,262,043.71	1,683,119.50	39° 16' 29.448 N	80° 50' 56.780 W
3,507.0	0.68	320.91	3,505.3	34.7	-58.9	14,262,043.94	1,683,119.33	39° 16' 29.450 N	80° 50' 56.782 W
3,532.0	0.62	319.22	3,530.3	34.9	-59.1	14,262,044.16	1,683,119.15	39° 16' 29.452 N	80° 50' 56.785 W
3,557.0	0.63	317.34	3,555.3	35.1	-59.3	14,262,044.36	1,683,118.97	39° 16' 29.454 N	80° 50' 56.787 W
3,582.0	0.64	314.01	3,580.3	35.3	-59.5	14,262,044.56	1,683,118.77	39° 16' 29.456 N	80° 50' 56.789 W
3,607.0	0.67	317.37	3,605.3	35.6	-59.7	14,262,044.76	1,683,118.57	39° 16' 29.458 N	80° 50' 56.792 W
3,632.0	0.72	321.11	3,630.3	35.8	-59.9	14,262,044.99	1,683,118.38	39° 16' 29.460 N	80° 50' 56.794 W
3,657.0	0.72	317.06	3,655.3	36.0	-60.1	14,262,045.23	1,683,118.17	39° 16' 29.463 N	80° 50' 56.797 W
3,682.0	0.62	316.15	3,680.2	36.2	-60.3	14,262,045.44	1,683,117.97	39° 16' 29.465 N	80° 50' 56.800 W
3,707.0	0.66	318.82	3,705.2	36.4	-60.4	14,262,045.65	1,683,117.78	39° 16' 29.467 N	80° 50' 56.802 W
3,732.0	0.71	319.94	3,730.2	36.7	-60.6	14,262,045.88	1,683,117.59	39° 16' 29.469 N	80° 50' 56.804 W
3,757.0	0.67	318.50	3,755.2	36.9	-60.8	14,262,046.10	1,683,117.39	39° 16' 29.471 N	80° 50' 56.807 W
3,782.0	0.66	321.86	3,780.2	37.1	-61.0	14,262,046.33	1,683,117.20	39° 16' 29.474 N	80° 50' 56.809 W
3,807.0	0.59	327.52	3,805.2	37.3	-61.2	14,262,046.55	1,683,117.05	39° 16' 29.476 N	80° 50' 56.811 W
3,832.0	0.64	328.54	3,830.2	37.6	-61.3	14,262,046.78	1,683,116.90	39° 16' 29.478 N	80° 50' 56.813 W
3,857.0	0.64	324.11	3,855.2	37.8	-61.5	14,262,047.01	1,683,116.75	39° 16' 29.480 N	80° 50' 56.815 W
3,882.0	0.61	323.69	3,880.2	38.0	-61.6	14,262,047.23	1,683,116.59	39° 16' 29.482 N	80° 50' 56.817 W
3,907.0	0.64	323.34	3,905.2	38.2	-61.8	14,262,047.45	1,683,116.43	39° 16' 29.485 N	80° 50' 56.819 W
3,932.0	0.67	321.45	3,930.2	38.5	-62.0	14,262,047.67	1,683,116.25	39° 16' 29.487 N	80° 50' 56.821 W
3,957.0	0.67	319.26	3,955.2	38.7	-62.2	14,262,047.90	1,683,116.07	39° 16' 29.489 N	80° 50' 56.824 W
3,982.0	0.61	325.78	3,980.2	38.9	-62.3	14,262,048.12	1,683,115.89	39° 16' 29.491 N	80° 50' 56.826 W
4,007.0	0.58	330.05	4,005.2	39.1	-62.5	14,262,048.34	1,683,115.76	39° 16' 29.493 N	80° 50' 56.828 W
4,032.0	0.62	330.63	4,030.2	39.4	-62.6	14,262,048.57	1,683,115.63	39° 16' 29.496 N	80° 50' 56.829 W
4,057.0	0.64	323.73	4,055.2	39.6	-62.7	14,262,048.80	1,683,115.48	39° 16' 29.498 N	80° 50' 56.831 W
4,082.0	0.56	306.86	4,080.2	39.8	-62.9	14,262,048.98	1,683,115.30	39° 16' 29.500 N	80° 50' 56.833 W
4,107.0	0.53	306.01	4,105.2	39.9	-63.1	14,262,049.12	1,683,115.11	39° 16' 29.501 N	80° 50' 56.836 W
4,132.0	0.49	312.68	4,130.2	40.1	-63.3	14,262,049.26	1,683,114.93	39° 16' 29.503 N	80° 50' 56.838 W
4,157.0	0.41	333.03	4,155.2	40.2	-63.4	14,262,049.42	1,683,114.82	39° 16' 29.504 N	80° 50' 56.840 W
4,182.0	0.35	355.90	4,180.2	40.4	-63.5	14,262,049.57	1,683,114.77	39° 16' 29.506 N	80° 50' 56.840 W
4,207.0	0.64	47.90	4,205.2	40.5	-63.4	14,262,049.74	1,683,114.87	39° 16' 29.507 N	80° 50' 56.839 W
4,232.0	1.22	70.33	4,230.2	40.7	-63.0	14,262,049.93	1,683,115.22	39° 16' 29.509 N	80° 50' 56.834 W
4,257.0	1.94	79.20	4,255.2	40.9	-62.3	14,262,050.09	1,683,115.89	39° 16' 29.511 N	80° 50' 56.826 W
4,282.0	2.68	79.50	4,280.2	41.1	-61.3	14,262,050.28	1,683,116.88	39° 16' 29.513 N	80° 50' 56.813 W
4,307.0	3.52	79.74	4,305.2	41.3	-60.0	14,262,050.52	1,683,118.21	39° 16' 29.515 N	80° 50' 56.796 W
4,332.0	4.48	80.68	4,330.1	41.6	-58.3	14,262,050.82	1,683,119.93	39° 16' 29.518 N	80° 50' 56.775 W
4,357.0	5.36	81.04	4,355.0	41.9	-56.2	14,262,051.16	1,683,122.04	39° 16' 29.521 N	80° 50' 56.748 W



Scientific Drilling International

Survey Report - Geographic



Company: Antero Resources
Project: Doddridge County WV
Site: McGill Pad: Hormels/Mash/Nero/Vonda/Wilhelm
Well: Hormels Unit 1H
Wellbore: Original Wellpath
Design: As Drilled

Local Co-ordinate Reference: Well Hormels Unit 1H
TVD Reference: Precision 525: 1164' GL + 19' KB @ 1183.0usft
MD Reference: Precision 525: 1164' GL + 19' KB @ 1183.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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
4,382.0	6.46	79.13	4,379.9	42.4	-53.6	14,262,051.61	1,683,124.58	39° 16' 29.526 N	80° 50' 56.715 W
4,407.0	7.13	77.46	4,404.7	43.0	-50.8	14,262,052.21	1,683,127.47	39° 16' 29.532 N	80° 50' 56.678 W
4,432.0	7.95	75.56	4,429.5	43.8	-47.6	14,262,052.98	1,683,130.66	39° 16' 29.539 N	80° 50' 56.638 W
4,457.0	8.88	72.57	4,454.2	44.8	-44.0	14,262,053.98	1,683,134.18	39° 16' 29.549 N	80° 50' 56.593 W
4,482.0	9.61	71.81	4,478.9	46.0	-40.2	14,262,055.21	1,683,138.00	39° 16' 29.561 N	80° 50' 56.544 W
4,507.0	10.14	71.61	4,503.5	47.3	-36.2	14,262,056.56	1,683,142.07	39° 16' 29.574 N	80° 50' 56.493 W
4,532.0	10.46	70.25	4,528.1	48.8	-31.9	14,262,058.02	1,683,146.30	39° 16' 29.589 N	80° 50' 56.439 W
4,557.0	10.44	70.80	4,552.7	50.3	-27.7	14,262,059.53	1,683,150.57	39° 16' 29.604 N	80° 50' 56.384 W
4,582.0	10.81	70.49	4,577.3	51.8	-23.3	14,262,061.06	1,683,154.92	39° 16' 29.619 N	80° 50' 56.329 W
4,607.0	11.64	69.03	4,601.8	53.5	-18.7	14,262,062.75	1,683,159.49	39° 16' 29.635 N	80° 50' 56.271 W
4,632.0	12.19	68.36	4,626.2	55.4	-13.9	14,262,064.62	1,683,164.29	39° 16' 29.654 N	80° 50' 56.210 W
4,657.0	12.59	67.80	4,650.7	57.4	-9.0	14,262,066.63	1,683,169.27	39° 16' 29.673 N	80° 50' 56.146 W
4,682.0	13.13	67.26	4,675.0	59.5	-3.8	14,262,068.75	1,683,174.41	39° 16' 29.694 N	80° 50' 56.081 W
4,707.0	13.95	66.65	4,699.3	61.8	1.6	14,262,071.04	1,683,179.80	39° 16' 29.717 N	80° 50' 56.012 W
4,732.0	15.02	66.69	4,723.5	64.3	7.3	14,262,073.52	1,683,185.54	39° 16' 29.741 N	80° 50' 55.939 W
4,757.0	15.72	66.35	4,747.6	66.9	13.4	14,262,076.16	1,683,191.62	39° 16' 29.767 N	80° 50' 55.862 W
4,782.0	16.28	66.60	4,771.7	69.7	19.7	14,262,078.91	1,683,197.93	39° 16' 29.794 N	80° 50' 55.782 W
4,807.0	16.70	67.58	4,795.7	72.5	26.2	14,262,081.67	1,683,204.47	39° 16' 29.822 N	80° 50' 55.698 W
4,832.0	17.15	70.09	4,819.6	75.1	33.0	14,262,084.30	1,683,211.26	39° 16' 29.847 N	80° 50' 55.612 W
4,857.0	17.21	73.28	4,843.5	77.4	40.0	14,262,086.62	1,683,218.27	39° 16' 29.870 N	80° 50' 55.523 W
4,882.0	17.40	75.88	4,867.3	79.4	47.2	14,262,088.59	1,683,225.43	39° 16' 29.890 N	80° 50' 55.432 W
4,907.0	17.56	77.37	4,891.2	81.1	54.5	14,262,090.33	1,683,232.74	39° 16' 29.907 N	80° 50' 55.339 W
4,932.0	17.84	77.52	4,915.0	82.8	61.9	14,262,091.98	1,683,240.16	39° 16' 29.923 N	80° 50' 55.244 W
4,957.0	17.95	77.25	4,938.8	84.4	69.4	14,262,093.66	1,683,247.65	39° 16' 29.939 N	80° 50' 55.149 W
4,982.0	18.42	76.31	4,962.5	86.2	77.0	14,262,095.44	1,683,255.25	39° 16' 29.957 N	80° 50' 55.052 W
5,007.0	18.65	75.86	4,986.2	88.1	84.7	14,262,097.36	1,683,262.96	39° 16' 29.976 N	80° 50' 54.954 W
5,032.0	19.55	75.90	5,009.9	90.1	92.7	14,262,099.35	1,683,270.90	39° 16' 29.995 N	80° 50' 54.853 W
5,057.0	20.59	75.90	5,033.3	92.2	101.0	14,262,101.44	1,683,279.22	39° 16' 30.016 N	80° 50' 54.747 W
5,082.0	21.21	75.61	5,056.7	94.4	109.6	14,262,103.64	1,683,287.86	39° 16' 30.037 N	80° 50' 54.637 W
5,107.0	21.87	75.29	5,079.9	96.7	118.5	14,262,105.94	1,683,296.74	39° 16' 30.060 N	80° 50' 54.524 W
5,132.0	22.55	75.20	5,103.1	99.1	127.7	14,262,108.35	1,683,305.88	39° 16' 30.084 N	80° 50' 54.408 W
5,157.0	23.59	75.00	5,126.1	101.7	137.1	14,262,110.87	1,683,315.35	39° 16' 30.108 N	80° 50' 54.287 W
5,182.0	24.17	74.95	5,149.0	104.3	146.9	14,262,113.49	1,683,325.12	39° 16' 30.134 N	80° 50' 54.163 W
5,207.0	24.90	75.03	5,171.7	107.0	156.9	14,262,116.18	1,683,335.15	39° 16' 30.161 N	80° 50' 54.035 W
5,232.0	25.46	74.82	5,194.3	109.7	167.2	14,262,118.95	1,683,345.42	39° 16' 30.188 N	80° 50' 53.905 W
5,257.0	25.99	74.45	5,216.8	112.6	177.7	14,262,121.82	1,683,355.88	39° 16' 30.216 N	80° 50' 53.771 W
5,282.0	26.49	73.74	5,239.3	115.6	188.3	14,262,124.85	1,683,366.51	39° 16' 30.246 N	80° 50' 53.636 W
5,307.0	26.67	73.25	5,261.6	118.8	199.0	14,262,128.03	1,683,377.24	39° 16' 30.277 N	80° 50' 53.500 W
5,332.0	26.12	72.11	5,284.0	122.1	209.6	14,262,131.34	1,683,387.85	39° 16' 30.310 N	80° 50' 53.365 W
5,357.0	25.73	71.17	5,306.5	125.6	220.0	14,262,134.78	1,683,398.22	39° 16' 30.343 N	80° 50' 53.233 W
5,382.0	25.58	70.87	5,329.0	129.1	230.2	14,262,138.30	1,683,408.46	39° 16' 30.378 N	80° 50' 53.102 W
5,407.0	25.50	70.82	5,351.6	132.6	240.4	14,262,141.84	1,683,418.64	39° 16' 30.413 N	80° 50' 52.973 W
5,432.0	25.64	71.60	5,374.1	136.1	250.6	14,262,145.31	1,683,428.85	39° 16' 30.447 N	80° 50' 52.843 W
5,457.0	25.86	73.13	5,396.7	139.4	261.0	14,262,148.60	1,683,439.20	39° 16' 30.479 N	80° 50' 52.711 W
5,482.0	26.41	74.59	5,419.1	142.4	271.6	14,262,151.66	1,683,449.78	39° 16' 30.510 N	80° 50' 52.576 W
5,507.0	26.53	75.71	5,441.5	145.3	282.3	14,262,154.52	1,683,460.55	39° 16' 30.538 N	80° 50' 52.439 W
5,532.0	26.63	76.73	5,463.8	148.0	293.2	14,262,157.18	1,683,471.42	39° 16' 30.564 N	80° 50' 52.301 W
5,557.0	26.59	77.95	5,486.2	150.4	304.1	14,262,159.64	1,683,482.34	39° 16' 30.588 N	80° 50' 52.162 W
5,582.0	26.61	78.60	5,508.5	152.7	315.1	14,262,161.91	1,683,493.30	39° 16' 30.610 N	80° 50' 52.022 W
5,607.0	27.09	78.72	5,530.9	154.9	326.1	14,262,164.13	1,683,504.37	39° 16' 30.632 N	80° 50' 51.882 W
5,632.0	27.58	78.85	5,553.1	157.2	337.4	14,262,166.36	1,683,515.63	39° 16' 30.654 N	80° 50' 51.738 W
5,657.0	27.73	78.97	5,575.2	159.4	348.8	14,262,168.60	1,683,527.02	39° 16' 30.676 N	80° 50' 51.593 W
5,682.0	27.62	78.75	5,597.3	161.6	360.2	14,262,170.84	1,683,538.41	39° 16' 30.698 N	80° 50' 51.448 W
5,707.0	28.00	78.61	5,619.5	163.9	371.6	14,262,173.13	1,683,549.85	39° 16' 30.720 N	80° 50' 51.303 W
5,732.0	28.49	78.11	5,641.5	166.3	383.2	14,262,175.52	1,683,561.44	39° 16' 30.744 N	80° 50' 51.155 W



Scientific Drilling International

Survey Report - Geographic



Company: Antero Resources
Project: Doddridge County WV
Site: McGill Pad: Hormels/Mash/Nero/Vonda/Wilhelm
Well: Hormels Unit 1H
Wellbore: Original Wellpath
Design: As Drilled

Local Co-ordinate Reference: Well Hormels Unit 1H
TVD Reference: Precision 525: 1164' GL + 19' KB @ 1183.0usft
MD Reference: Precision 525: 1164' GL + 19' KB @ 1183.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Antero NE

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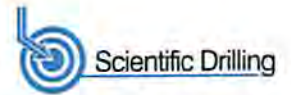
Survey

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
5,757.0	28.78	77.06	5,663.4	168.9	394.9	14,262,178.09	1,683,573.14	39° 16' 30.769 N	80° 50' 51.007 W
5,782.0	29.12	76.32	5,685.3	171.7	406.7	14,262,180.88	1,683,584.91	39° 16' 30.796 N	80° 50' 50.857 W
5,807.0	29.65	75.62	5,707.1	174.6	418.6	14,262,183.85	1,683,596.81	39° 16' 30.825 N	80° 50' 50.705 W
5,832.0	29.57	74.93	5,728.8	177.8	430.5	14,262,186.99	1,683,608.76	39° 16' 30.856 N	80° 50' 50.553 W
5,857.0	29.12	74.52	5,750.6	181.0	442.4	14,262,190.22	1,683,620.58	39° 16' 30.888 N	80° 50' 50.403 W
5,882.0	28.75	73.96	5,772.5	184.3	454.0	14,262,193.50	1,683,632.22	39° 16' 30.920 N	80° 50' 50.255 W
5,907.0	29.02	73.45	5,794.4	187.7	465.6	14,262,196.89	1,683,643.81	39° 16' 30.954 N	80° 50' 50.107 W
5,932.0	28.83	72.38	5,816.3	191.2	477.1	14,262,200.45	1,683,655.37	39° 16' 30.988 N	80° 50' 49.960 W
5,957.0	29.07	71.53	5,838.1	195.0	488.6	14,262,204.19	1,683,666.87	39° 16' 31.025 N	80° 50' 49.814 W
5,982.0	29.01	71.16	5,860.0	198.9	500.1	14,262,208.08	1,683,678.37	39° 16' 31.064 N	80° 50' 49.667 W
6,007.0	28.92	70.93	5,881.9	202.8	511.6	14,262,212.01	1,683,689.82	39° 16' 31.102 N	80° 50' 49.521 W
6,032.0	28.61	70.62	5,903.8	206.8	523.0	14,262,215.97	1,683,701.18	39° 16' 31.141 N	80° 50' 49.377 W
6,057.0	28.51	70.29	5,925.7	210.8	534.2	14,262,219.97	1,683,712.45	39° 16' 31.181 N	80° 50' 49.234 W
6,082.0	28.31	70.30	5,947.7	214.8	545.4	14,262,223.98	1,683,723.64	39° 16' 31.220 N	80° 50' 49.091 W
6,107.0	28.09	70.21	5,969.8	218.8	556.5	14,262,227.97	1,683,734.76	39° 16' 31.259 N	80° 50' 48.949 W
6,132.0	27.53	71.05	5,991.9	222.6	567.5	14,262,231.84	1,683,745.77	39° 16' 31.297 N	80° 50' 48.809 W
6,157.0	27.62	71.88	6,014.0	226.3	578.5	14,262,235.52	1,683,756.74	39° 16' 31.334 N	80° 50' 48.670 W
6,182.0	27.51	72.67	6,036.2	229.8	589.5	14,262,239.04	1,683,767.76	39° 16' 31.368 N	80° 50' 48.529 W
6,207.0	27.56	73.36	6,058.4	233.2	600.6	14,262,242.42	1,683,778.81	39° 16' 31.401 N	80° 50' 48.389 W
6,217.0	27.20	73.38	6,067.2	234.5	605.0	14,262,243.73	1,683,783.22	39° 16' 31.414 N	80° 50' 48.333 W
6,261.0	27.55	73.05	6,106.3	240.4	624.4	14,262,249.57	1,683,802.59	39° 16' 31.472 N	80° 50' 48.086 W
First SDI MWD @ 6261									
6,305.0	26.90	71.32	6,145.4	246.5	643.5	14,262,255.73	1,683,821.75	39° 16' 31.532 N	80° 50' 47.842 W
6,350.0	26.21	70.61	6,185.7	253.1	662.5	14,262,262.29	1,683,840.77	39° 16' 31.597 N	80° 50' 47.600 W
6,395.0	25.92	69.76	6,226.1	259.8	681.1	14,262,268.99	1,683,859.37	39° 16' 31.663 N	80° 50' 47.363 W
6,440.0	27.13	65.79	6,266.4	267.4	699.7	14,262,276.60	1,683,877.96	39° 16' 31.738 N	80° 50' 47.127 W
6,485.0	29.21	50.23	6,306.1	278.6	717.6	14,262,287.85	1,683,895.78	39° 16' 31.849 N	80° 50' 46.900 W
6,530.0	31.55	36.85	6,345.0	295.1	733.1	14,262,304.32	1,683,911.30	39° 16' 32.011 N	80° 50' 46.702 W
6,575.0	35.15	26.33	6,382.6	316.2	745.9	14,262,325.37	1,683,924.12	39° 16' 32.219 N	80° 50' 46.539 W
6,619.0	38.24	20.97	6,417.9	340.2	756.4	14,262,349.45	1,683,934.62	39° 16' 32.457 N	80° 50' 46.404 W
6,664.0	41.34	15.46	6,452.5	367.6	765.3	14,262,376.79	1,683,943.57	39° 16' 32.727 N	80° 50' 46.290 W
6,709.0	44.77	10.43	6,485.3	397.5	772.2	14,262,406.72	1,683,950.40	39° 16' 33.023 N	80° 50' 46.202 W
6,744.0	47.21	6.98	6,509.7	422.4	776.0	14,262,431.59	1,683,954.20	39° 16' 33.269 N	80° 50' 46.154 W
Middlesex @ 6744									
6,754.0	47.92	6.05	6,516.4	429.7	776.8	14,262,438.93	1,683,955.03	39° 16' 33.341 N	80° 50' 46.143 W
6,799.0	50.94	4.48	6,545.7	463.7	779.9	14,262,472.96	1,683,958.16	39° 16' 33.678 N	80° 50' 46.102 W
6,844.0	54.32	1.29	6,573.0	499.5	781.7	14,262,508.67	1,683,959.94	39° 16' 34.031 N	80° 50' 46.079 W
6,889.0	57.47	358.99	6,598.2	536.7	781.8	14,262,545.92	1,683,960.01	39° 16' 34.399 N	80° 50' 46.077 W
6,933.0	61.11	356.48	6,620.7	574.5	780.3	14,262,583.71	1,683,958.50	39° 16' 34.773 N	80° 50' 46.096 W
6,950.0	62.59	355.60	6,628.7	589.4	779.2	14,262,598.66	1,683,957.47	39° 16' 34.921 N	80° 50' 46.108 W
Burket @ 6950									
6,978.0	65.05	354.19	6,641.1	614.5	777.0	14,262,623.68	1,683,955.23	39° 16' 35.168 N	80° 50' 46.136 W
7,018.0	68.46	352.67	6,656.8	651.0	772.8	14,262,660.19	1,683,951.02	39° 16' 35.529 N	80° 50' 46.189 W
Tully @ 7018									
7,023.0	68.89	352.49	6,658.7	655.6	772.2	14,262,664.81	1,683,950.42	39° 16' 35.575 N	80° 50' 46.197 W
7,068.0	72.02	351.02	6,673.7	697.6	766.1	14,262,706.77	1,683,944.33	39° 16' 35.990 N	80° 50' 46.273 W
7,113.0	75.41	349.23	6,686.3	740.1	758.7	14,262,749.31	1,683,936.92	39° 16' 36.411 N	80° 50' 46.367 W
7,122.0	75.93	348.94	6,688.6	748.7	757.0	14,262,757.88	1,683,935.27	39° 16' 36.495 N	80° 50' 46.387 W
Marcellus @ 7122									
7,158.0	77.99	347.81	6,696.7	783.0	750.0	14,262,792.23	1,683,928.20	39° 16' 36.835 N	80° 50' 46.477 W
7,203.0	81.43	346.12	6,704.7	826.1	740.0	14,262,835.35	1,683,918.21	39° 16' 37.262 N	80° 50' 46.603 W
7,246.0	86.57	343.62	6,709.2	867.4	728.8	14,262,876.62	1,683,907.05	39° 16' 37.670 N	80° 50' 46.744 W
7,272.0	89.66	341.43	6,710.1	892.2	721.0	14,262,901.40	1,683,899.25	39° 16' 37.915 N	80° 50' 46.842 W
7,361.0	90.87	340.14	6,709.7	976.2	691.7	14,262,985.44	1,683,869.96	39° 16' 38.747 N	80° 50' 47.213 W



Scientific Drilling International
Survey Report - Geographic



Company: Antero Resources
Project: Doddridge County WV
Site: McGill Pad: Hormels/Mash/Nero/Vonda/Wilhelm
Well: Hormels Unit 1H
Wellbore: Original Wellpath
Design: As Drilled

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well Hormels Unit 1H
Precision 525: 1164' GL + 19' KB @ 1183.0usft
Precision 525: 1164' GL + 19' KB @ 1183.0usft
Grid
Minimum Curvature
Antero NE

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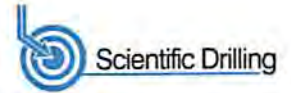
Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
7,451.0	91.11	342.25	6,708.1	1,061.4	662.7	14,263,070.61	1,683,840.95	39° 16' 39.589 N	80° 50' 47.580 W
7,541.0	91.08	342.45	6,706.4	1,147.1	635.4	14,263,156.36	1,683,813.67	39° 16' 40.438 N	80° 50' 47.926 W
7,630.0	89.58	341.77	6,705.9	1,231.8	608.1	14,263,241.05	1,683,786.33	39° 16' 41.275 N	80° 50' 48.272 W
7,720.0	90.25	343.23	6,706.0	1,317.7	581.0	14,263,326.89	1,683,759.27	39° 16' 42.125 N	80° 50' 48.614 W
7,810.0	90.02	340.67	6,705.8	1,403.2	553.2	14,263,412.45	1,683,731.39	39° 16' 42.971 N	80° 50' 48.967 W
7,899.0	90.22	342.00	6,705.6	1,487.6	524.7	14,263,496.77	1,683,702.90	39° 16' 43.805 N	80° 50' 49.327 W
7,989.0	90.18	341.20	6,705.3	1,573.0	496.3	14,263,582.16	1,683,674.50	39° 16' 44.650 N	80° 50' 49.687 W
8,079.0	91.01	341.86	6,704.4	1,658.3	467.8	14,263,667.52	1,683,645.98	39° 16' 45.495 N	80° 50' 50.048 W
8,169.0	91.51	342.74	6,702.4	1,744.0	440.4	14,263,753.24	1,683,618.63	39° 16' 46.343 N	80° 50' 50.394 W
8,258.0	91.60	342.09	6,700.0	1,828.8	413.5	14,263,838.05	1,683,591.75	39° 16' 47.182 N	80° 50' 50.734 W
8,348.0	90.33	343.01	6,698.4	1,914.7	386.5	14,263,923.89	1,683,564.77	39° 16' 48.031 N	80° 50' 51.076 W
8,437.0	90.80	345.37	6,697.6	2,000.3	362.3	14,264,009.51	1,683,540.52	39° 16' 48.878 N	80° 50' 51.382 W
8,527.0	89.76	343.90	6,697.1	2,087.1	338.4	14,264,096.29	1,683,516.68	39° 16' 49.736 N	80° 50' 51.684 W
8,617.0	90.06	343.02	6,697.3	2,173.4	312.8	14,264,182.57	1,683,491.05	39° 16' 50.590 N	80° 50' 52.008 W
8,706.0	90.83	343.32	6,696.6	2,258.5	287.1	14,264,267.75	1,683,465.29	39° 16' 51.433 N	80° 50' 52.334 W
8,796.0	91.10	344.18	6,695.1	2,344.9	261.9	14,264,354.14	1,683,440.11	39° 16' 52.287 N	80° 50' 52.652 W
8,886.0	89.79	342.43	6,694.4	2,431.1	236.0	14,264,440.34	1,683,414.25	39° 16' 53.140 N	80° 50' 52.979 W
8,976.0	90.70	343.53	6,694.0	2,517.2	209.7	14,264,526.40	1,683,387.91	39° 16' 53.991 N	80° 50' 53.313 W
9,065.0	89.66	341.31	6,693.7	2,602.0	182.8	14,264,611.23	1,683,361.03	39° 16' 54.830 N	80° 50' 53.653 W
9,155.0	89.79	341.94	6,694.1	2,687.4	154.4	14,264,696.64	1,683,332.66	39° 16' 55.675 N	80° 50' 54.012 W
9,245.0	92.12	340.25	6,692.6	2,772.6	125.3	14,264,781.77	1,683,303.51	39° 16' 56.518 N	80° 50' 54.381 W
9,334.0	91.78	339.98	6,689.6	2,856.2	95.0	14,264,866.41	1,683,273.25	39° 16' 57.345 N	80° 50' 54.764 W
9,424.0	91.18	341.92	6,687.3	2,941.2	65.7	14,264,950.45	1,683,243.89	39° 16' 58.186 N	80° 50' 55.136 W
9,514.0	91.78	341.59	6,685.0	3,026.7	37.5	14,265,035.90	1,683,215.72	39° 16' 59.032 N	80° 50' 55.492 W
9,604.0	90.37	340.99	6,683.3	3,111.9	8.6	14,265,121.12	1,683,186.86	39° 16' 59.875 N	80° 50' 55.858 W
9,693.0	90.64	338.63	6,682.5	3,195.4	-22.1	14,265,204.65	1,683,156.14	39° 17' 0.701 N	80° 50' 56.247 W
9,783.0	90.67	339.65	6,681.5	3,279.5	-54.1	14,265,288.74	1,683,124.10	39° 17' 1.533 N	80° 50' 56.653 W
9,873.0	90.77	341.74	6,680.3	3,364.5	-83.9	14,265,373.67	1,683,094.35	39° 17' 2.374 N	80° 50' 57.029 W
9,963.0	91.45	344.75	6,678.6	3,450.6	-109.8	14,265,459.82	1,683,068.41	39° 17' 3.226 N	80° 50' 57.358 W
10,052.0	89.86	343.05	6,677.6	3,536.1	-134.5	14,265,545.32	1,683,043.73	39° 17' 4.072 N	80° 50' 57.670 W
10,142.0	90.17	341.61	6,677.5	3,621.9	-161.8	14,265,631.07	1,683,016.42	39° 17' 4.920 N	80° 50' 58.015 W
10,232.0	91.18	341.63	6,676.5	3,707.3	-190.2	14,265,716.47	1,682,988.04	39° 17' 5.765 N	80° 50' 58.375 W
10,322.0	90.57	341.49	6,675.1	3,792.6	-218.7	14,265,801.84	1,682,959.58	39° 17' 6.609 N	80° 50' 58.735 W
10,411.0	90.17	342.52	6,674.5	3,877.3	-246.1	14,265,886.48	1,682,932.08	39° 17' 7.447 N	80° 50' 59.083 W
10,501.0	90.87	343.77	6,673.7	3,963.4	-272.2	14,265,972.61	1,682,905.99	39° 17' 8.299 N	80° 50' 59.413 W
10,591.0	89.33	344.14	6,673.6	4,049.9	-297.1	14,266,059.10	1,682,881.11	39° 17' 9.154 N	80° 50' 59.728 W
10,680.0	89.97	343.81	6,674.1	4,135.4	-321.7	14,266,144.64	1,682,856.55	39° 17' 10.001 N	80° 51' 0.039 W
10,770.0	90.40	341.99	6,673.8	4,221.4	-348.1	14,266,230.66	1,682,830.08	39° 17' 10.852 N	80° 51' 0.374 W
10,860.0	91.71	343.16	6,672.2	4,307.3	-375.1	14,266,316.51	1,682,803.14	39° 17' 11.701 N	80° 51' 0.715 W
10,950.0	90.27	342.18	6,670.6	4,393.2	-401.9	14,266,402.41	1,682,776.33	39° 17' 12.551 N	80° 51' 1.054 W
11,039.0	90.20	341.50	6,670.2	4,477.8	-429.6	14,266,486.98	1,682,748.59	39° 17' 13.387 N	80° 51' 1.405 W
11,129.0	91.04	340.99	6,669.3	4,563.0	-458.6	14,266,572.19	1,682,719.66	39° 17' 14.230 N	80° 51' 1.771 W
11,219.0	90.67	341.35	6,667.9	4,648.2	-487.6	14,266,657.36	1,682,690.61	39° 17' 15.073 N	80° 51' 2.139 W
11,309.0	90.27	340.70	6,667.2	4,733.3	-516.9	14,266,742.47	1,682,661.35	39° 17' 15.915 N	80° 51' 2.510 W
11,398.0	90.07	340.24	6,666.9	4,817.1	-546.6	14,266,826.35	1,682,631.60	39° 17' 16.745 N	80° 51' 2.886 W
11,488.0	90.47	340.80	6,666.5	4,902.0	-576.6	14,266,911.20	1,682,601.59	39° 17' 17.584 N	80° 51' 3.266 W
11,578.0	91.78	341.29	6,664.7	4,987.1	-605.9	14,266,996.30	1,682,572.36	39° 17' 18.426 N	80° 51' 3.636 W
11,668.0	90.57	342.01	6,662.9	5,072.5	-634.2	14,267,081.70	1,682,544.03	39° 17' 19.271 N	80° 51' 3.995 W
11,757.0	89.93	341.47	6,662.5	5,157.0	-662.1	14,267,166.22	1,682,516.15	39° 17' 20.107 N	80° 51' 4.348 W
11,847.0	90.84	341.82	6,661.9	5,242.4	-690.4	14,267,251.64	1,682,487.81	39° 17' 20.952 N	80° 51' 4.707 W
11,937.0	90.74	341.15	6,660.6	5,327.8	-719.0	14,267,336.97	1,682,459.23	39° 17' 21.796 N	80° 51' 5.069 W
12,026.0	90.27	341.94	6,659.9	5,412.2	-747.2	14,267,421.39	1,682,431.06	39° 17' 22.632 N	80° 51' 5.425 W
12,116.0	90.47	342.03	6,659.3	5,497.8	-775.0	14,267,506.97	1,682,403.22	39° 17' 23.478 N	80° 51' 5.778 W
12,206.0	91.14	342.01	6,658.0	5,583.4	-802.8	14,267,592.57	1,682,375.44	39° 17' 24.325 N	80° 51' 6.129 W
12,295.0	91.11	342.84	6,656.3	5,668.2	-829.7	14,267,677.40	1,682,348.58	39° 17' 25.164 N	80° 51' 6.470 W



Scientific Drilling International

Survey Report - Geographic



Company: Antero Resources
Project: Doddridge County WV
Site: McGill Pad: Hormels/Mash/Nero/Vonda/Wilhelm
Well: Hormels Unit 1H
Wellbore: Original Wellpath
Design: As Drilled

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well Hormels Unit 1H
 Precision 525: 1164' GL + 19' KB @ 1183.0usft
 Precision 525: 1164' GL + 19' KB @ 1183.0usft
 Grid
 Minimum Curvature
 Antero NE

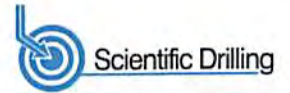
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Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
12,385.0	89.83	342.59	6,655.5	5,754.1	-856.4	14,267,763.33	1,682,321.84	39° 17' 26.014 N	80° 51' 6.808 W
12,475.0	89.86	342.27	6,655.8	5,839.9	-883.6	14,267,849.13	1,682,294.67	39° 17' 26.863 N	80° 51' 7.152 W
12,565.0	90.81	342.62	6,655.2	5,925.7	-910.7	14,267,934.94	1,682,267.52	39° 17' 27.712 N	80° 51' 7.496 W
12,654.0	90.20	342.81	6,654.5	6,010.7	-937.1	14,268,019.91	1,682,241.08	39° 17' 28.553 N	80° 51' 7.830 W
12,744.0	91.28	342.43	6,653.3	6,096.6	-964.0	14,268,105.79	1,682,214.20	39° 17' 29.402 N	80° 51' 8.170 W
12,834.0	89.66	342.49	6,652.6	6,182.4	-991.1	14,268,191.60	1,682,187.08	39° 17' 30.251 N	80° 51' 8.514 W
12,924.0	89.93	342.94	6,652.9	6,268.3	-1,017.9	14,268,277.54	1,682,160.34	39° 17' 31.101 N	80° 51' 8.852 W
13,014.0	90.60	343.04	6,652.5	6,354.4	-1,044.2	14,268,363.60	1,682,134.01	39° 17' 31.953 N	80° 51' 9.185 W
13,103.0	89.87	343.17	6,652.1	6,439.5	-1,070.1	14,268,448.76	1,682,108.14	39° 17' 32.795 N	80° 51' 9.513 W
13,193.0	90.44	343.39	6,651.9	6,525.7	-1,096.0	14,268,534.95	1,682,082.25	39° 17' 33.648 N	80° 51' 9.840 W
13,283.0	89.93	343.33	6,651.8	6,612.0	-1,121.7	14,268,621.18	1,682,056.48	39° 17' 34.501 N	80° 51' 10.167 W
13,372.0	89.80	340.65	6,651.8	6,696.6	-1,149.3	14,268,705.81	1,682,028.96	39° 17' 35.338 N	80° 51' 10.515 W
13,462.0	90.40	339.54	6,651.6	6,781.2	-1,179.9	14,268,790.43	1,681,998.32	39° 17' 36.175 N	80° 51' 10.903 W
13,552.0	91.45	339.74	6,650.2	6,865.6	-1,211.2	14,268,874.80	1,681,967.02	39° 17' 37.010 N	80° 51' 11.300 W
13,641.0	89.63	338.35	6,649.3	6,948.7	-1,243.0	14,268,957.90	1,681,935.19	39° 17' 37.832 N	80° 51' 11.703 W
13,731.0	90.81	341.40	6,649.0	7,032.2	-1,274.0	14,269,042.40	1,681,904.23	39° 17' 38.668 N	80° 51' 12.095 W
13,821.0	90.10	341.72	6,648.3	7,118.6	-1,302.5	14,269,127.77	1,681,875.76	39° 17' 39.513 N	80° 51' 12.456 W
13,910.0	90.81	341.60	6,647.6	7,203.0	-1,330.5	14,269,212.25	1,681,847.76	39° 17' 40.348 N	80° 51' 12.810 W
14,000.0	89.70	340.89	6,647.2	7,288.3	-1,359.4	14,269,297.47	1,681,818.82	39° 17' 41.192 N	80° 51' 13.177 W
14,090.0	90.94	345.03	6,646.7	7,374.3	-1,385.8	14,269,383.49	1,681,792.45	39° 17' 42.043 N	80° 51' 13.510 W
14,180.0	90.27	344.53	6,645.7	7,461.1	-1,409.4	14,269,470.33	1,681,768.83	39° 17' 42.902 N	80° 51' 13.809 W
14,269.0	90.87	345.74	6,644.8	7,547.1	-1,432.2	14,269,556.35	1,681,746.00	39° 17' 43.752 N	80° 51' 14.098 W
14,359.0	89.77	344.29	6,644.3	7,634.1	-1,455.5	14,269,643.28	1,681,722.73	39° 17' 44.612 N	80° 51' 14.392 W
14,449.0	90.03	344.61	6,644.5	7,720.8	-1,479.6	14,269,729.99	1,681,698.60	39° 17' 45.470 N	80° 51' 14.698 W
14,539.0	89.53	343.47	6,644.8	7,807.3	-1,504.4	14,269,816.52	1,681,673.85	39° 17' 46.326 N	80° 51' 15.011 W
14,628.0	90.44	342.01	6,644.8	7,892.3	-1,530.8	14,269,901.50	1,681,647.45	39° 17' 47.167 N	80° 51' 15.345 W
14,718.0	91.45	341.51	6,643.4	7,977.8	-1,558.9	14,269,986.97	1,681,619.28	39° 17' 48.012 N	80° 51' 15.702 W
14,808.0	91.51	341.31	6,641.0	8,063.0	-1,587.6	14,270,072.25	1,681,590.60	39° 17' 48.856 N	80° 51' 16.065 W
14,898.0	89.46	342.35	6,640.3	8,148.5	-1,615.7	14,270,157.75	1,681,562.54	39° 17' 49.702 N	80° 51' 16.420 W
14,987.0	88.56	340.50	6,641.8	8,232.9	-1,644.0	14,270,242.10	1,681,534.19	39° 17' 50.536 N	80° 51' 16.779 W
15,077.0	90.20	340.99	6,642.8	8,317.8	-1,673.7	14,270,327.05	1,681,504.52	39° 17' 51.377 N	80° 51' 17.155 W
15,167.0	91.45	341.79	6,641.5	8,403.1	-1,702.4	14,270,412.34	1,681,475.80	39° 17' 52.220 N	80° 51' 17.519 W
15,256.0	90.17	342.43	6,640.2	8,487.8	-1,729.8	14,270,497.02	1,681,448.46	39° 17' 53.058 N	80° 51' 17.865 W
15,346.0	89.56	341.58	6,640.4	8,573.4	-1,757.6	14,270,582.62	1,681,420.66	39° 17' 53.905 N	80° 51' 18.217 W
15,436.0	89.90	340.24	6,640.9	8,658.5	-1,787.0	14,270,667.67	1,681,391.23	39° 17' 54.746 N	80° 51' 18.590 W
15,525.0	91.21	340.31	6,640.0	8,742.2	-1,817.0	14,270,751.44	1,681,361.19	39° 17' 55.575 N	80° 51' 18.970 W
15,615.0	90.74	340.44	6,638.5	8,827.0	-1,847.3	14,270,836.20	1,681,330.97	39° 17' 56.414 N	80° 51' 19.353 W
15,705.0	90.20	341.00	6,637.7	8,911.9	-1,877.0	14,270,921.15	1,681,301.25	39° 17' 57.254 N	80° 51' 19.729 W
15,794.0	89.90	340.08	6,637.7	8,995.8	-1,906.6	14,271,005.06	1,681,271.60	39° 17' 58.084 N	80° 51' 20.105 W
15,884.0	90.10	342.01	6,637.7	9,081.0	-1,935.9	14,271,090.18	1,681,242.37	39° 17' 58.926 N	80° 51' 20.475 W
15,974.0	90.47	342.36	6,637.2	9,166.6	-1,963.4	14,271,175.86	1,681,214.83	39° 17' 59.774 N	80° 51' 20.824 W
16,063.0	89.53	341.42	6,637.2	9,251.2	-1,991.1	14,271,260.45	1,681,187.17	39° 18' 0.611 N	80° 51' 21.174 W
16,153.0	89.53	342.15	6,637.9	9,336.7	-2,019.2	14,271,345.94	1,681,159.04	39° 18' 1.457 N	80° 51' 21.531 W
16,243.0	90.10	341.22	6,638.2	9,422.2	-2,047.5	14,271,431.37	1,681,130.76	39° 18' 2.302 N	80° 51' 21.899 W
16,333.0	90.44	340.60	6,637.8	9,507.2	-2,076.9	14,271,516.42	1,681,101.32	39° 18' 3.143 N	80° 51' 22.262 W
16,423.0	90.14	342.09	6,637.4	9,592.5	-2,105.7	14,271,601.69	1,681,072.54	39° 18' 3.987 N	80° 51' 22.626 W
16,512.0	90.41	341.66	6,636.9	9,677.1	-2,133.4	14,271,686.27	1,681,044.85	39° 18' 4.823 N	80° 51' 22.977 W
16,602.0	90.61	342.69	6,636.1	9,762.7	-2,160.9	14,271,771.95	1,681,017.30	39° 18' 5.671 N	80° 51' 23.326 W
16,692.0	90.88	341.84	6,635.0	9,848.5	-2,188.3	14,271,857.66	1,680,989.89	39° 18' 6.519 N	80° 51' 23.673 W
16,782.0	88.82	340.87	6,635.2	9,933.7	-2,217.1	14,271,942.93	1,680,961.12	39° 18' 7.363 N	80° 51' 24.037 W
16,817.0	88.59	340.66	6,636.0	9,966.8	-2,228.6	14,271,975.97	1,680,949.59	39° 18' 7.689 N	80° 51' 24.183 W
Last SDI MWD @ 16817									
16,881.0	88.59	340.66	6,637.6	10,027.1	-2,249.8	14,272,036.34	1,680,928.40	39° 18' 8.287 N	80° 51' 24.452 W
Projection To Bit @ 16881 MD / 6637 TVD									



Company:	Antero Resources	Local Co-ordinate Reference:	Well Hormels Unit 1H
Project:	Doddridge County WV	TVD Reference:	Precision 525: 1164' GL + 19' KB @ 1183.0usft
Site:	McGill Pad: Hormels/Mash/Nero/Vonda/Wilhelm	MD Reference:	Precision 525: 1164' GL + 19' KB @ 1183.0usft
Well:	Hormels 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 (°)	
6,744.0	6,509.7	Middlesex @ 6744		0.00		
6,950.0	6,628.7	Burket @ 6950		0.00		
7,018.0	6,656.8	Tully @ 7018		0.00		
7,122.0	6,688.6	Marcellus @ 7122		0.00		

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
6,261.0	6,106.3	240.4	624.4	First SDI MWD @ 6261	
16,817.0	6,636.0	9,966.8	-2,228.6	Last SDI MWD @ 16817	
16,881.0	6,637.6	10,027.1	-2,249.8	Projection To Bit @ 16881 MD / 6637 TVD	

Checked By: _____ Approved By: _____ Date: _____

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