

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

API 47 - 095 - 02337 County Tyler District Centerville
Quad Middlebourne 7.5' Pad Name Estlack Pad Field/Pool Name ---
Farm name Edna Monroe Well Number Melvin Unit 1H
Operator (as registered with the OOG) Antero Resources Corporation
Address 1615 Wynkoop Street City Denver State CO Zip 80202

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4362770m Easting 510501m
Landing Point of Curve Northing 4362604.191m Easting 509842.351m
Bottom Hole Northing 4365566m Easting 508792m

Elevation (ft) 1142' GL Type of Well New Existing Type of Report Interim Final
Permit Type Deviated Horizontal Horizontal 6A Vertical Depth Type Deep Shallow
Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
Well Type Brine Disposal CBM Gas Oil Secondary Recovery Solution Mining Storage Other _____
Type of Completion Single Multiple Fluids Produced Brine Gas NGL Oil Other _____
Drilled with Cable Rotary

Drilling Media Surface hole Air Mud Fresh Water Intermediate hole Air Mud Fresh Water Brine
Production hole Air Mud Fresh Water Brine

Mud Type(s) and Additive(s)

Air - Foam & 4% KCL

Mud - Polymer

Date permit issued 01/29/2016 Date drilling commenced 02/19/2016 Date drilling ceased 04/10/2016
Date completion activities began 09/01/2016 Date completion activities ceased 12/01/2016
Verbal plugging (Y/N) N/A Date permission granted N/A Granted by N/A

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 46', 98' Open mine(s) (Y/N) depths _____
Salt water depth(s) ft 748', 1222' Void(s) encountered (Y/N) depths _____
Coal depth(s) ft 228', 1128', 1628' Cavern(s) encountered (Y/N) depths _____
Is coal being mined in area (Y/N) No

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Reviewed

Reviewed by:

JLB

03/02/2018

API 47-095 - 02337 Farm name Edna Monroe Well number Melvin Unit 1H

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor	24"	20"	72'	New	94#, H-40	N/A	Y
Surface	17- 1/2"	13- 3/8"	411'	New	48#, H-40	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2623'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"	5-1/2"	17695'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	7082'		4.7#, N-80		
Packer type and depth set		N/A					

Comment Details _____

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor	Class A	143 sx	15.6	1.18	169	0	8 Hrs.
Surface	Class A	495 sx	15.6	1.19	589	0	8 Hrs.
Coal							
Intermediate 1	Class A	1029 sx	15.6	1.80	1852	0	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	1012 sx (Lead), 1860 sx (Tail)	14.5 (Lead), 15.2 (Tail)	1.33 (Lead), 1.83 (Tail)	4384	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 17695' MD, 6592' TVD (BHL); & 6597' TVD (Deepest point drilled) Loggers TD (ft) 17667' MD
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 6423'

Check all wireline logs run caliper density deviated/directional induction
 neutron resistivity gamma ray temperature sonic

Well cored Yes No Conventional Sidewall Were cuttings collected Yes No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING _____
 Conductor - 0
 Surface - 1 above guide shoe, 1 above insert float, 1 every 4th joint to surface
 Intermediate - 1 above float joint, 1 above float collar, 1 every 4th joint to surface
 Production - 1 above float joint, 1 below float collar, 1 every 3rd joint to top of cement

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

WERE TRACERS USED Yes No TYPE OF TRACER(S) USED N/A

** This is a subsequent well. Antero only runs wireline logs on one well on a multi-well pad (Lucy Unit 1H API# 47-095-02276). Please reference the wireline logs submitted with Form WR-35 for the Lucy Unit 1H. A Cement Bond Log has been included with this submittal.

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API 47-095-02337 Farm Name Edna Monroe Well Number Melvin Unit 1H

EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	9/1/2016	17424	17593	60	Marcellus
2	9/2/2016	17223	17392	60	Marcellus
3	9/3/2016	17022	17192	60	Marcellus
4	9/3/2016	16822	16991	60	Marcellus
5	9/4/2016	16621	16791	60	Marcellus
6	9/5/2016	16421	16590	60	Marcellus
7	9/5/2016	16220	16389	60	Marcellus
8	9/6/2016	16020	16189	60	Marcellus
9	9/7/2016	15819	15988	60	Marcellus
10	9/8/2016	15619	15788	60	Marcellus
11	9/8/2016	15418	15587	60	Marcellus
12	9/9/2016	15218	15387	60	Marcellus
13	9/9/2016	15017	15186	60	Marcellus
14	9/10/2016	14817	14986	60	Marcellus
15	9/10/2016	14616	14785	60	Marcellus
16	9/11/2016	14416	14585	60	Marcellus
17	9/11/2016	14215	14384	60	Marcellus
18	9/12/2016	14015	14184	60	Marcellus
19	9/12/2016	13814	13983	60	Marcellus
20	9/13/2016	13614	13783	60	Marcellus
21	9/13/2016	13413	13582	60	Marcellus
22	9/14/2016	13213	13382	60	Marcellus
23	9/14/2016	13012	13181	60	Marcellus
24	9/14/2016	12812	12981	60	Marcellus
25	9/15/2016	12611	12780	60	Marcellus
26	9/15/2016	12411	12580	60	Marcellus
27	9/16/2016	12210	12379	60	Marcellus
28	9/16/2016	12009	12179	60	Marcellus
29	9/17/2016	11809	11978	60	Marcellus
30	9/17/2016	11608	11778	60	Marcellus
31	9/18/2016	11408	11577	60	Marcellus
32	9/18/2016	11207	11376	60	Marcellus
33	9/19/2016	11007	11176	60	Marcellus
34	9/20/2016	10806	10975	60	Marcellus
35	9/20/2016	10606	10775	60	Marcellus
36	9/21/2016	10405	10574	60	Marcellus
37	9/21/2016	10205	10374	60	Marcellus
38	9/21/2016	10004	10173	60	Marcellus
39	9/22/2016	9804	9973	60	Marcellus
40	9/23/2016	9603	9772	60	Marcellus
41	9/23/2016	9403	9572	60	Marcellus
42	9/23/2016	9202	9371	60	Marcellus
43	9/24/2016	9002	9171	60	Marcellus
44	9/24/2016	8801	8970	60	Marcellus
45	9/25/2016	8601	8770	60	Marcellus
46	9/25/2016	8400	8569	60	Marcellus
47	9/26/2016	8200	8369	60	Marcellus
48	9/26/2016	7999	8168	60	Marcellus
49	9/26/2016	7799	7968	60	Marcellus
50	9/27/2016	7598	7767	60	Marcellus
51	9/27/2016	7398	7567	60	Marcellus
52	9/28/2016	7197	7366	60	Marcellus

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EXHIBIT 2

Stage No.	Stimulations Date	Avg Pump Rate	Avg Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/ other (units)
1	9/2/2016	70.0	7344	4945	4962	305855	8731.0	N/A
2	9/2/2016	73.5	7483	5703	4268	305855	7848.0	N/A
3	9/3/2016	71.2	7500	6141	4721	302775	9434.0	N/A
4	9/3/2016	68.6	7625	5689	3991	303676	10130.0	N/A
5	9/4/2016	74.2	8126	5653	4568	304251	9904.0	N/A
6	9/5/2016	72.9	7532	5465	5092	303685	7849.0	N/A
7	9/5/2016	75.0	7185	5570	3596	306057	7844.0	N/A
8	9/6/2016	72.3	8012	5646	7153	258830	10311.0	N/A
9	9/7/2016	73.7	7384	5374	4486	306099	7816.0	N/A
10	9/8/2016	70.5	7151	5681	3486	304794	8923.0	N/A
11	9/8/2016	75.4	7382	5771	3620	303829	9037.0	N/A
12	9/9/2016	75.0	7264	5696	3198	303176	7950.0	N/A
13	9/9/2016	76.5	7345	5695	3183	303797	7729.0	N/A
14	9/10/2016	71.4	7161	6176	0	286670	8114.0	N/A
15	9/10/2016	76.3	7484	5806	4503	284635	7683.0	N/A
16	9/11/2016	78.3	7632	6128	3492	304194	7863.0	N/A
17	9/11/2016	73.1	7235	5706	4728	286942	7819.0	N/A
18	9/12/2016	73.7	7289	5985	4307	304554	7876.0	N/A
19	9/12/2016	75.5	7332	5720	3745	304373	8023.0	N/A
20	9/13/2016	76.0	7260	5749	4251	304240	7778.0	N/A
21	9/13/2016	76.6	7465	5634	4405	304942	7641.0	N/A
22	9/14/2016	76.0	7311	5266	3348	305437	8956.0	N/A
23	9/14/2016	77.5	7576	5624	3441	304561	8927.0	N/A
24	9/14/2016	77.7	7304	5926	4415	303775	7841.0	N/A
25	9/15/2016	77.9	7543	5608	4148	306019	7830.0	N/A
26	9/15/2016	76.3	7461	5656	4192	304477	8716.0	N/A
27	9/16/2016	76.8	7702	5660	3758	306598	7703.0	N/A
28	9/16/2016	77.5	7367	5519	4917	303805	7861.0	N/A
29	9/17/2016	77.6	7433	5431	3996	304619	7731.0	N/A
30	9/17/2016	73.9	7081	5794	3895	305676	7815.0	N/A
31	9/18/2016	75.9	7536	5664	3693	304201	8341.0	N/A
32	9/18/2016	75.6	7023	5504	4680	304970	7934.0	N/A
33	9/19/2016	75.6	7129	5484	3607	305033	7761.0	N/A
34	9/20/2016	73.9	7365	5501	3705	303738	7643.0	N/A
35	9/20/2016	55.7	8028	5602	5284	133555	6858.0	N/A
36	9/21/2016	79.8	7513	4696	4182	303988	7690.0	N/A
37	9/21/2016	77.0	6843	5442	4013	305532	7682.0	N/A
38	9/21/2016	75.2	6909	5488	3297	305377	7764.0	N/A
39	9/22/2016	76.6	6905	5767	4589	306439	7623.0	N/A
40	9/23/2016	80.7	6358	5293	5293	304196	7651.0	N/A
41	9/23/2016	75.9	7293	5789	3669	304518	7700.0	N/A
42	9/23/2016	77.4	6680	5387	3334	304641	7601.0	N/A
43	9/24/2016	76.7	6897	5716	3714	304841	7633.0	N/A
44	9/24/2016	77.3	6973	5504	3151	305438	7685.0	N/A
45	9/25/2016	74.0	6873	5629	3177	305017	7674.0	N/A
46	9/25/2016	74.0	6886	5573	3243	303367	7511.0	N/A
47	9/26/2016	75.9	7195	5676	4124	304166	7618.0	N/A
48	9/26/2016	75.8	7195	5584	3398	307331	7575.0	N/A
49	9/26/2016	77.7	6952	5528	3414	304968	7472.0	N/A
50	9/27/2016	77.2	6946	5996	3524	305191	7547.0	N/A
51	9/27/2016	77.3	6901	6000	3555	303791	7592.0	N/A
52	9/28/2016	77.5	6733	6516	3178	300377	7591.0	N/A
AVG=		75.1	7,271	5,649	3,956	15,568,871	417,829	TOTAL

EXHIBIT 3

LITHOLOGY/ FORMATION	TOP DEPTH (TVD)	BOTTOM DEPTH (TVD)	TOP DEPTH (MD)	BOTTOM DEPTH (MD)
	From Surface	From Surface	From Surface	From Surface
Fresh Water	46'	N/A	46'	N/A
Fresh Water	98'	N/A	98'	N/A
Siltstone	0	228	0	228
Coal	est. 228	248	est. 228	248
Sandstone/Siltstone	est. 248	908	est. 248	908
Shale/Siltstone	est. 908	1128	est. 908	1128
Coal	est. 1128	1148	est. 1128	1148
Shale	est. 1148	1348	est. 1148	1348
Coal	est. 1348	1368	est. 1348	1368
Shale	est. 1368	1448	est. 1368	1448
Sandstone/Siltstone	est. 1448	1628	est. 1448	1628
Coal	est. 1628	1648	est. 1628	1648
Sandstone/Siltstone	est. 1648	2045	est. 1648	2123
Big Lime	2045	2158	2123	2246
Big Injun	2158	2662	2246	2787
Gantz Sand	2662	2767	2787	2899
Fifty Foot Sandstone	2767	2873	2899	3013
Gordon	2873	3129	3013	3292
Fifth Sandstone	3129	3199	3292	3368
Bayard	3199	3600	3368	3802
Warren	3600	3946	3802	4175
Speechley	3946	4718	4175	5005
Bradford	4718	5103	5005	5427
Benson	5103	5339	5427	5686
Alexander	5339	5542	5686	5906
Elk	5542	5917	5906	6312
Rhinestreet	5917	6198	6312	6623
Sycamore	6198	6366	6623	6841
Middlesex	6366	6463	6841	7005
Burkett	6463	6491	7005	7067
Tully	6491	6520	7067	7145
Marcellus	6520	NA	7145	NA

*Please note Antero determines formation tops based on mud logs that are only run on one well on a multi-well pad. The measured depth (MD) data on subsequent wells may be slightly different due to the well's unique departure.

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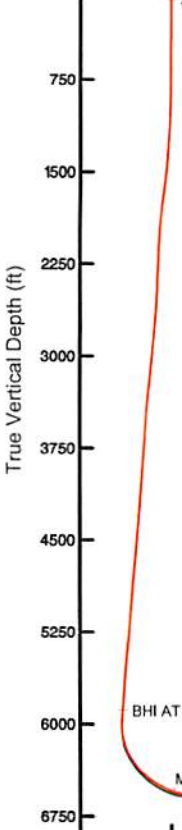
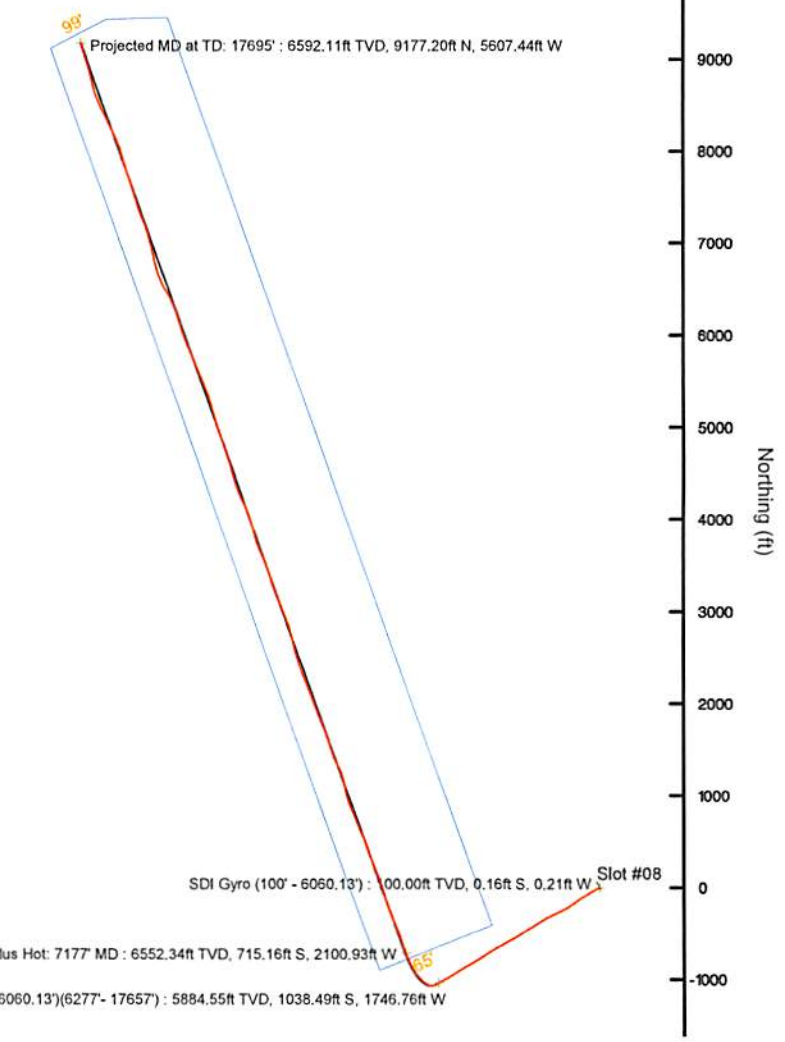
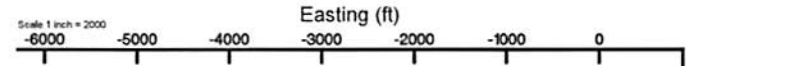
ANTERO RESOURCES CORPORATION

Location: Tyler County, WV
 Field: Tyler
 Facility: Estlack Pad

Slot: Slot #08
 Well: Melvin Unit 1H
 Wellbore: Melvin Unit 1H PWB



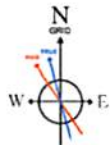
Plot reference wellpath is Melvin Unit 1H PWP Rev-A.0	Grid System: NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to Frontier 32 (KB)	* = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to Frontier 32 (KB)	North Reference: Grid north
Frontier 32 (KB) to Mean Sea Level: 1173 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: Slot #08): -1141 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: hareluk on 2016-04-19
	Database: WA_MPL_EASTERNUS_Deth



SDI Gyro (100' - 6060.13') : 0.44° Inc, 100.00ft MD, 100.00ft TVD, -0.08ft VS

Location Information				
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Estlack Pad	1674804.620	14312832.650	39°24'51.751"N	80°52'41.682"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)
Slot #08	-26.39	15.15	1674819.760	14312806.270
			39°24'51.490"N	80°52'41.490"W
Comment	Melvin Unit 1H			
Frontier 32 (KB) to Mud line (At Slot: Slot #08)	32ft			
Mean Sea Level to Mud line (At Slot: Slot #08)	-1141ft			
Frontier 32 (KB) to Mean Sea Level	1173ft			

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #08	Melvin Unit 1H	Melvin Unit 1H AWB	Melvin Unit 1H AWP Proj: 17695'
Slot #08	Melvin Unit 1H	Melvin Unit 1H PWB	Melvin Unit 1H PWP Rev-A.0



BGGM (1945.0 to 2017.0) Dip: 66.79° Field: 52135.5 nT
 Magnetic North is 8.50 degrees West of True North (at 02/Apr/2016)
 Grid North is 0.08 degrees East of True North
 To correct azimuth from True to Grid subtract 0.08 degrees
 To correct azimuth from Magnetic to Grid subtract 8.58 degrees

API: 47-095-02337-0000
 BHI Job #: 7896034
 Rig: Frontier 32
 Duration: 04.04.2016-04.08.2016

BHI AT Curve [SS+MSA] <8-1/2"> (6060.13')(6277'- 17657') : 22.94° Inc, 6277.00ft MD, 5884.55ft TVD, -396.19ft VS

Marcellus Hot: 7177' MD : 70.47° Inc, 7177.00ft MD, 6552.34ft TVD, 26.78ft VS

Marcellus Hot: 7177' MD : 6552.34ft TVD, 715.16ft S, 2100.93ft W

BHI AT Curve [SS+MSA] <8-1/2"> (6060.13')(6277'- 17657') : 5884.55ft TVD, 1038.49ft S, 1746.76ft W

SDI Gyro (100' - 6060.13') : 100.00ft TVD, 0.16ft S, 0.21ft W Slot #08

Projected MD at TD: 17695' : 89.88° Inc, 17695.00ft MD, 6592.11ft TVD, 10522.23ft VS

Vertical Section (ft)
 Azimuth 340.51° with reference 0.00 N, 0.00 E

Scale 1 inch = 1500



Actual Wellpath Report

Melvin Unit 1H AWP Proj: 17695'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #08
Area	Tyler County, WV	Well	Melvin Unit 1H
Field	Tyler	Wellbore	Melvin Unit 1H AWB
Facility	Estlack Pad		

REPORT SETUP INFORMATION			
Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.0
North Reference	Grid	User	Hareluk
Scale	0.999601	Report Generated	19/Apr/2016 at 10:55
Convergence at slot	0.08° East	Database/Source file	WA_MPL_EASTERNUS_Defn/Melvin_Unit_1H_AWP_Proj_17695_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-26.39	15.15	1674819.76	14312806.27	39°24'51.490"N	80°52'41.490"W
Facility Reference Pt			1674804.62	14312832.65	39°24'51.751"N	80°52'41.682"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Frontier 32 (KB) to Facility Vertical Datum	32.00ft
Horizontal Reference Pt	Slot	Frontier 32 (KB) to Mean Sea Level	1173.00ft
Vertical Reference Pt	Frontier 32 (KB)	Frontier 32 (KB) to Mud Line at Slot (Slot #08)	32.00ft
MD Reference Pt	Frontier 32 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	340.51°

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Actual Wellpath Report

Melvin Unit 1H AWP Proj: 17695
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Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #08
Area	Tyler County, WV	Well	Melvin Unit 1H
Field	Tyler	Wellbore	Melvin Unit 1H AWB
Facility	Estack Pad		

WELLPATH DATA (381 stations) † = Interpolated/extrapolated Station												
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]
0.001	0.000	233.186	32.00	0.00	0.00	0.00	1674819.76	14312806.27	39.2451.490N	80.5241.490W	0.00	0.00
32.00	0.000	233.186	32.00	0.00	0.00	0.00	1674819.76	14312806.27	39.2451.490N	80.5241.490W	0.00	0.00
100.00	0.440	233.186	100.00	-0.08	-0.16	-0.21	1674819.55	14312806.11	39.2451.488N	80.5241.493W	0.26	233.180
125.00	0.310	232.220	125.00	-0.13	-0.26	-0.34	1674819.42	14312806.01	39.2451.488N	80.5241.494W	0.42	233.027
150.00	0.120	197.766	150.00	-0.17	-0.32	-0.40	1674819.36	14312805.95	39.2451.487N	80.5241.495W	0.51	231.236
175.00	0.130	218.190	175.00	-0.21	-0.37	-0.43	1674819.33	14312805.90	39.2451.486N	80.5241.495W	0.56	229.117
200.00	0.070	232.140	200.00	-0.23	-0.40	-0.46	1674819.30	14312805.87	39.2451.486N	80.5241.496W	0.61	228.686
225.00	0.170	231.290	225.00	-0.24	-0.43	-0.50	1674819.26	14312805.84	39.2451.486N	80.5241.496W	0.66	228.912
250.00	0.060	224.320	250.00	-0.26	-0.47	-0.53	1674819.23	14312805.80	39.2451.485N	80.5241.497W	0.71	228.952
275.00	0.080	212.166	275.00	-0.28	-0.49	-0.55	1674819.21	14312805.78	39.2451.485N	80.5241.497W	0.74	228.479
300.00	0.140	189.720	300.00	-0.32	-0.54	-0.56	1674819.20	14312805.73	39.2451.485N	80.5241.497W	0.78	226.487
325.00	0.070	189.720	325.00	-0.36	-0.57	-0.57	1674819.19	14312805.69	39.2451.484N	80.5241.497W	0.81	224.333
350.00	0.100	202.090	350.00	-0.39	-0.62	-0.58	1674819.18	14312805.65	39.2451.484N	80.5241.497W	0.84	223.185
375.00	0.110	255.820	375.00	-0.40	-0.64	-0.61	1674819.15	14312805.63	39.2451.484N	80.5241.498W	0.89	223.514
400.00	0.080	400.00	400.00	-0.42	-0.66	-0.62	1674819.14	14312805.61	39.2451.484N	80.5241.498W	0.91	223.227
425.00	0.230	225.130	425.00	-0.45	-0.71	-0.65	1674819.11	14312805.56	39.2451.483N	80.5241.498W	0.96	222.290
450.00	0.470	235.166	450.00	-0.50	-0.80	-0.77	1674818.99	14312805.47	39.2451.482N	80.5241.500W	1.11	223.597
475.00	0.170	238.450	475.00	-0.56	-0.94	-0.98	1674818.78	14312805.33	39.2451.481N	80.5241.502W	1.36	226.134
500.00	0.990	239.690	499.99	-0.63	-1.13	-1.30	1674818.46	14312805.14	39.2451.479N	80.5241.507W	1.72	228.914
525.00	1.350	239.970	524.99	-0.73	-1.39	-1.74	1674818.02	14312804.88	39.2451.476N	80.5241.512W	2.23	231.406
550.00	1.720	240.840	549.98	-0.85	-1.72	-2.32	1674817.44	14312804.55	39.2451.473N	80.5241.520W	2.89	233.494
575.00	2.160	242.100	574.96	-0.98	-2.12	-3.07	1674816.69	14312804.15	39.2451.469N	80.5241.529W	3.73	235.313
600.00	2.560	243.166	599.94	-1.12	-2.60	-3.98	1674815.78	14312803.68	39.2451.464N	80.5241.541W	4.75	236.903
625.00	2.890	243.980	624.92	-1.26	-3.12	-5.05	1674814.71	14312803.15	39.2451.459N	80.5241.554W	5.94	238.240
650.00	3.390	244.420	649.88	-1.41	-3.72	-6.28	1674813.48	14312802.55	39.2451.453N	80.5241.570W	7.30	239.360
675.00	4.600	245.520	674.82	-1.57	-4.41	-7.75	1674812.01	14312801.87	39.2451.447N	80.5241.589W	8.92	240.389
700.00	4.600	246.900	699.75	-1.71	-5.17	-9.48	1674810.28	14312801.11	39.2451.439N	80.5241.611W	10.80	241.412
725.00	5.230	248.240	724.66	-1.82	-5.98	-11.46	1674808.30	14312800.29	39.2451.431N	80.5241.636W	12.93	242.438
750.00	5.780	248.770	749.55	-1.90	-6.86	-13.69	1674806.07	14312799.41	39.2451.422N	80.5241.665W	15.31	243.388
775.00	6.390	248.310	774.40	-1.99	-7.83	-16.16	1674803.61	14312798.44	39.2451.413N	80.5241.696W	17.96	244.146

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Actual Wellpath Report

Melvin Unit 1H AWP Proj: 17695

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Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Estack Pad
Slot	Slot #08
Melvin Unit 1H	Well
Melvin Unit 1H AWB	Wellbore

WELLPATH DATA (381 stations)														
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Comments
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
800.00	6.990	247.690	799.23	-2.12	-8.92	-18.86	1674800.91	14312797.35	39°24'51.402"N	80°52'41.730"W	20.86	244.682	2.42	
825.00	7.540	247.380	824.03	-2.28	-10.13	-21.78	1674797.99	14312796.14	39°24'51.390"N	80°52'41.768"W	24.02	245.056	2.21	
850.00	8.170	246.880	848.80	-2.48	-11.46	-24.93	1674794.84	14312794.82	39°24'51.377"N	80°52'41.808"W	27.43	245.313	2.53	
875.00	9.130	246.290	873.51	-2.74	-12.95	-28.38	1674791.39	14312793.32	39°24'51.362"N	80°52'41.852"W	31.19	245.464	3.86	
900.00	10.140	245.100	898.16	-3.10	-14.68	-32.19	1674787.58	14312791.60	39°24'51.345"N	80°52'41.900"W	35.38	245.488	4.12	
925.00	10.790	244.360	922.75	-3.56	-16.62	-36.30	1674783.48	14312789.66	39°24'51.326"N	80°52'41.953"W	39.92	245.401	2.65	
950.00	11.500	243.720	947.27	-4.10	-18.73	-40.64	1674779.14	14312787.54	39°24'51.305"N	80°52'42.008"W	44.75	245.253	2.88	
975.00	12.440	242.780	971.73	-4.76	-21.07	-45.27	1674774.51	14312785.21	39°24'51.282"N	80°52'42.067"W	49.93	245.043	3.84	
1000.00	13.400	241.850	996.10	-5.56	-23.67	-50.22	1674769.56	14312782.61	39°24'51.257"N	80°52'42.130"W	55.51	244.767	3.93	
1025.00	14.170	241.310	1020.38	-6.48	-26.50	-55.46	1674764.33	14312779.78	39°24'51.229"N	80°52'42.197"W	61.46	244.457	3.12	
1050.00	14.880	240.890	1044.58	-7.51	-29.53	-60.94	1674758.84	14312776.75	39°24'51.199"N	80°52'42.267"W	67.72	244.146	2.87	
1075.00	15.400	240.540	1068.71	-8.62	-32.73	-66.64	1674753.15	14312773.56	39°24'51.167"N	80°52'42.340"W	74.24	243.844	2.11	
1100.00	15.560	240.340	1092.80	-9.78	-36.02	-72.44	1674747.35	14312770.27	39°24'51.135"N	80°52'42.414"W	80.90	243.564	0.67	
1125.00	15.950	240.040	1116.86	-11.00	-39.39	-78.33	1674741.46	14312766.89	39°24'51.102"N	80°52'42.489"W	87.68	243.302	1.59	
1150.00	16.510	239.690	1140.87	-12.29	-42.90	-84.38	1674735.42	14312763.39	39°24'51.067"N	80°52'42.566"W	94.66	243.049	2.27	
1175.00	16.930	239.440	1164.81	-13.66	-46.55	-90.58	1674729.22	14312759.74	39°24'51.031"N	80°52'42.645"W	101.84	242.803	1.70	
1200.00	17.240	239.180	1188.71	-15.08	-50.29	-96.89	1674722.91	14312756.00	39°24'50.994"N	80°52'42.725"W	109.17	242.568	1.28	
1225.00	17.640	238.950	1212.56	-16.60	-54.17	-103.31	1674716.49	14312752.12	39°24'50.956"N	80°52'42.807"W	116.65	242.330	1.77	
1250.00	18.290	238.710	1236.34	-18.24	-58.23	-109.86	1674709.94	14312748.06	39°24'50.916"N	80°52'42.891"W	124.34	242.075	2.72	
1275.00	18.770	238.680	1260.04	-19.99	-62.46	-116.58	1674703.22	14312743.83	39°24'50.874"N	80°52'42.976"W	132.26	241.818	1.94	
1300.00	19.100	238.690	1283.69	-21.79	-66.80	-123.44	1674696.37	14312739.50	39°24'50.831"N	80°52'43.064"W	140.36	241.580	1.32	
1325.00	19.530	238.820	1307.28	-23.61	-71.21	-130.43	1674689.38	14312735.09	39°24'50.788"N	80°52'43.153"W	148.61	241.367	1.73	
1350.00	20.030	238.770	1330.81	-25.44	-75.69	-137.61	1674682.20	14312730.61	39°24'50.744"N	80°52'43.245"W	157.05	241.188	2.09	
1375.00	20.370	238.440	1354.27	-27.26	-80.22	-144.96	1674674.86	14312726.08	39°24'50.699"N	80°52'43.338"W	165.68	241.041	1.38	
1400.00	20.950	238.460	1377.66	-29.10	-84.83	-152.48	1674667.34	14312721.47	39°24'50.654"N	80°52'43.434"W	174.49	240.910	2.32	
1425.00	21.780	238.750	1400.94	-30.98	-89.58	-160.25	1674659.57	14312716.73	39°24'50.607"N	80°52'43.533"W	183.59	240.796	3.35	
1450.00	22.420	238.890	1424.11	-32.88	-94.45	-168.30	1674651.53	14312711.86	39°24'50.559"N	80°52'43.636"W	192.99	240.700	2.57	
1475.00	22.670	238.690	1447.20	-34.83	-99.41	-176.50	1674643.33	14312706.90	39°24'50.510"N	80°52'43.740"W	202.57	240.609	1.05	
1500.00	22.930	238.210	1470.24	-36.85	-104.48	-184.75	1674635.08	14312701.83	39°24'50.460"N	80°52'43.846"W	212.25	240.511	1.28	
1525.00	23.230	237.860	1493.24	-38.97	-109.67	-193.07	1674626.77	14312696.64	39°24'50.409"N	80°52'43.952"W	222.04	240.401	1.32	

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Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #08
Area	Tyler County, WV	Well	Melvin Unit 1H
Field	Tyler	Wellbore	Melvin Unit 1H AWB
Facility	Estack Pad		

WELLPATH DATA (381 stations)														
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Comments
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]
1550.00	23.410	237.460	1516.20	-41.17	-114.97	-201.43	1674618.41	14312691.35	39.2450.356N	80.5244.058W	231.93	240.284	0.96	
1500.00	23.540	236.700	1539.13	-43.49	-120.38	-209.79	1674610.06	14312685.94	39.2450.303N	80.5244.165W	241.87	240.152	1.32	
1600.00	23.620	235.790	1562.04	-45.95	-125.93	-218.10	1674601.75	14312680.39	39.2450.248N	80.5244.271W	251.85	239.997	1.49	
1625.00	23.640	235.420	1584.95	-48.53	-131.60	-226.37	1674593.48	14312674.73	39.2450.192N	80.5244.376W	261.84	239.829	0.60	
1650.00	23.620	235.220	1607.85	-51.15	-137.30	-234.61	1674585.24	14312669.03	39.2450.136N	80.5244.482W	271.83	239.663	0.33	
1675.00	23.600	234.890	1630.76	-53.82	-143.03	-242.82	1674577.04	14312663.30	39.2450.080N	80.5244.586W	281.81	239.500	0.53	
1700.00	23.370	234.390	1653.69	-56.55	-148.80	-250.94	1674568.92	14312657.53	39.2450.023N	80.5244.690W	291.74	239.334	1.22	
1725.00	23.030	233.950	1699.66	-62.11	-160.33	-266.86	1674553.01	14312640.1	39.2449.909N	80.5244.893W	311.32	239.003	0.24	
1750.00	23.000	233.950	1722.66	-64.88	-166.08	-274.79	1674545.08	14312640.26	39.2449.852N	80.5244.994W	321.08	238.852	0.49	
1800.00	22.980	234.480	1745.67	-67.60	-171.78	-282.74	1674537.13	14312634.56	39.2449.796N	80.5244.995W	330.84	238.719	0.69	
1825.00	22.370	234.570	1768.74	-70.26	-177.38	-290.59	1674529.29	14312628.97	39.2449.741N	80.5244.915W	340.45	238.600	2.44	
1850.00	21.800	234.420	1791.90	-72.85	-182.83	-298.24	1674521.64	14312623.51	39.2449.687N	80.5244.923W	349.82	238.490	2.29	
1875.00	21.660	234.760	1815.12	-75.39	-188.20	-305.79	1674514.10	14312618.15	39.2449.634N	80.5244.938W	359.06	238.390	0.75	
1900.00	21.620	235.240	1838.36	-77.86	-193.49	-313.34	1674506.55	14312612.86	39.2449.582N	80.5244.954W	368.26	238.305	0.73	
1925.00	21.620	235.720	1861.60	-80.24	-198.71	-320.93	1674498.66	14312607.64	39.2449.530N	80.5244.968W	377.46	238.236	0.71	
1950.00	21.540	236.250	1884.85	-82.55	-203.85	-328.55	1674491.34	14312602.50	39.2449.480N	80.5244.980W	386.65	238.182	0.84	
1975.00	21.380	237.220	1908.12	-84.73	-208.87	-336.20	1674483.70	14312597.49	39.2449.430N	80.5244.997W	395.79	238.149	1.56	
2000.00	21.430	238.310	1931.39	-86.74	-213.73	-343.91	1674475.98	14312592.62	39.2449.382N	80.5244.987W	404.92	238.140	1.60	
2025.00	21.520	238.940	1954.66	-88.63	-218.50	-351.73	1674468.17	14312587.86	39.2449.335N	80.5244.975W	414.07	238.151	0.99	
2050.00	21.680	239.720	1977.90	-90.41	-223.19	-359.64	1674460.26	14312583.17	39.2449.289N	80.5244.976W	423.27	238.177	1.31	
2100.00	22.000	242.120	2024.22	-93.50	-232.31	-376.13	1674443.78	14312574.06	39.2449.199N	80.5244.986W	442.09	238.300	2.41	
2125.00	22.890	242.780	2047.27	-94.86	-236.78	-384.71	1674435.21	14312569.59	39.2449.155N	80.5244.996W	451.73	238.389	1.49	
2150.00	23.140	243.470	2070.28	-96.11	-241.20	-393.43	1674426.49	14312565.17	39.2449.111N	80.5244.957W	461.47	238.489	1.47	
2175.00	23.460	244.100	2093.24	-97.27	-245.56	-402.30	1674417.62	14312560.81	39.2449.068N	80.5244.920W	471.32	238.600	1.62	
2200.00	23.730	244.720	2116.15	-98.33	-249.89	-411.32	1674408.60	14312556.48	39.2449.026N	80.5244.873W	481.28	238.721	1.47	
2225.00	23.840	244.790	2139.03	-99.34	-254.19	-420.44	1674399.49	14312552.19	39.2448.983N	80.5244.851W	491.31	238.844	0.45	
2250.00	23.790	244.740	2161.90	-100.35	-258.49	-429.57	1674390.36	14312547.88	39.2448.941N	80.5244.868W	501.35	238.963	0.22	
2275.00	23.770	244.830	2184.78	-101.36	-262.78	-438.69	1674381.24	14312543.59	39.2448.899N	80.5247.084W	511.38	239.078	0.17	

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Melvin Unit 1H AWP Proj: 17695

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Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Estack Pad
Slot	Slot #08
Melvin Unit 1H	Well
Melvin Unit 1H AWB	Wellbore

WELLPATH DATA (381 stations)												
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[°/100ft]
2300.00	23.620	244.890	2207.67	-102.35	-267.05	-447.79	1674372.15	14312539.33	39°24'48.85"N	80°52'47.20"W	521.37	239.189
2325.00	23.230	244.580	2230.61	-103.35	-271.29	-456.78	1674363.17	14312535.09	39°24'48.81"N	80°52'47.31"W	531.27	239.293
2350.00	22.710	243.980	2253.63	-104.41	-275.53	-465.57	1674354.38	14312530.85	39°24'48.77"N	80°52'47.42"W	540.99	239.383
2375.00	22.010	243.600	2276.75	-105.52	-279.73	-474.10	1674345.85	14312526.66	39°24'48.72"N	80°52'47.53"W	550.47	239.459
2400.00	21.180	243.300	2299.99	-106.65	-283.84	-482.33	1674337.62	14312522.54	39°24'48.69"N	80°52'47.60"W	559.65	239.524
2425.00	20.590	243.450	2323.35	-107.76	-287.83	-490.30	1674329.66	14312518.55	39°24'48.62"N	80°52'47.74"W	568.54	239.585
2450.00	20.500	243.840	2346.76	-108.81	-291.73	-498.16	1674321.80	14312514.66	39°24'48.61"N	80°52'47.82"W	577.29	239.646
2475.00	20.670	244.070	2370.16	-109.81	-295.59	-506.06	1674313.91	14312510.80	39°24'48.57"N	80°52'47.94"W	586.06	239.711
2500.00	20.510	244.500	2393.57	-110.76	-299.40	-513.98	1674305.99	14312506.99	39°24'48.53"N	80°52'48.04"W	594.82	239.778
2525.00	20.230	244.840	2417.00	-111.65	-303.13	-521.84	1674298.13	14312503.27	39°24'48.50"N	80°52'48.14"W	603.49	239.849
2550.00	20.410	244.690	2440.45	-112.52	-306.83	-529.70	1674290.28	14312499.57	39°24'48.46"N	80°52'48.24"W	612.14	239.918
2575.00	20.700	244.600	2463.86	-113.41	-310.59	-537.63	1674282.35	14312495.81	39°24'48.42"N	80°52'48.34"W	620.89	239.985
2600.00	20.840	244.340	2487.23	-114.35	-314.41	-545.63	1674274.35	14312491.99	39°24'48.39"N	80°52'48.44"W	629.73	240.048
2625.00	20.940	244.110	2510.59	-115.32	-318.28	-553.65	1674266.33	14312488.11	39°24'48.35"N	80°52'48.50"W	638.62	240.106
2650.00	20.740	243.000	2533.95	-116.32	-322.17	-561.65	1674258.33	14312484.23	39°24'48.31"N	80°52'48.61"W	647.49	240.161
2675.00	20.300	243.290	2557.37	-117.37	-326.06	-569.50	1674250.48	14312480.34	39°24'48.27"N	80°52'48.75"W	656.24	240.207
2700.00	20.270	242.090	2580.81	-118.55	-330.04	-577.21	1674242.79	14312476.36	39°24'48.26"N	80°52'48.80"W	664.90	240.240
2725.00	20.510	240.310	2604.25	-119.96	-334.24	-584.84	1674235.16	14312472.17	39°24'48.194"N	80°52'48.947"W	673.61	240.252
2750.00	20.810	238.580	2627.64	-121.65	-338.72	-592.43	1674227.57	14312467.68	39°24'48.150"N	80°52'49.044"W	682.43	240.241
2775.00	21.020	237.850	2650.99	-123.55	-343.42	-600.02	1674219.98	14312462.99	39°24'48.104"N	80°52'49.141"W	691.35	240.215
2800.00	21.100	237.820	2674.32	-125.52	-348.20	-607.62	1674212.38	14312458.21	39°24'48.057"N	80°52'49.238"W	700.32	240.185
2825.00	21.170	237.650	2697.64	-127.52	-353.02	-615.24	1674204.76	14312453.39	39°24'48.009"N	80°52'49.335"W	709.33	240.154
2850.00	20.940	237.240	2720.97	-129.55	-357.85	-622.81	1674197.19	14312448.66	39°24'47.961"W	80°52'49.431"W	718.30	240.120
2875.00	20.610	236.880	2744.35	-131.61	-362.67	-630.26	1674189.76	14312443.74	39°24'47.914"N	80°52'49.526"W	727.15	240.082
2900.00	20.730	236.850	2767.74	-133.69	-367.49	-637.65	1674182.37	14312438.92	39°24'47.866"N	80°52'49.620"W	735.97	240.044
2925.00	21.040	236.750	2791.10	-135.80	-372.37	-645.10	1674174.91	14312434.04	39°24'47.818"N	80°52'49.716"W	744.86	240.005
2950.00	21.350	236.690	2814.40	-137.96	-377.33	-652.66	1674167.36	14312429.09	39°24'47.769"N	80°52'49.812"W	753.89	239.966
2975.00	21.580	236.780	2837.67	-140.14	-382.35	-660.31	1674159.72	14312424.07	39°24'47.720"N	80°52'49.909"W	763.02	239.927
3000.00	21.850	237.140	2860.90	-142.30	-387.40	-668.06	1674151.96	14312419.03	39°24'47.670"N	80°52'50.008"W	772.26	239.891
3025.00	22.250	237.660	2884.07	-144.43	-392.45	-675.97	1674144.06	14312413.98	39°24'47.620"N	80°52'50.109"W	781.64	239.862

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Actual Wellpath Report

Melvin Unit 1H AWP Proj: 17695

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Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Estack Pad
Slot	Slot #08
Melvin Unit 1H	Melvin Unit 1H
Melvin Unit 1H AWB	

WELLPATH DATA (381 stations)												
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]
3050.00	22.280	237.480	2907.20	-146.55	-397.53	-683.97	1674136.07	14312408.90	39°24'47.57"N	80°52'50.21"W	791.10	239.834
3075.00	22.540	237.310	2930.32	-148.72	-402.67	-691.99	1674128.04	14312403.76	39°24'47.51"N	80°52'50.31"W	800.62	239.805
3100.00	22.840	237.480	2953.38	-150.90	-407.86	-700.12	1674119.92	14312398.57	39°24'47.46"N	80°52'50.41"W	810.26	239.776
3125.00	23.110	237.560	2976.40	-153.10	-413.10	-708.35	1674111.69	14312393.33	39°24'47.41"N	80°52'50.52"W	820.01	239.750
3150.00	23.240	237.550	2999.38	-155.30	-418.38	-716.65	1674103.39	14312388.06	39°24'47.364"N	80°52'50.62"W	829.84	239.724
3175.00	23.440	237.680	3022.33	-157.51	-423.69	-725.02	1674095.03	14312382.75	39°24'47.312"N	80°52'50.735"W	839.74	239.699
3200.00	23.840	238.060	3045.24	-159.71	-429.02	-733.51	1674086.55	14312377.42	39°24'47.260"N	80°52'50.843"W	849.76	239.677
3225.00	24.030	238.310	3068.09	-161.87	-434.36	-742.12	1674077.93	14312372.08	39°24'47.207"N	80°52'50.953"W	859.90	239.650
3250.00	24.850	238.190	3090.94	-164.03	-439.70	-750.75	1674069.31	14312366.74	39°24'47.154"N	80°52'51.063"W	870.04	239.643
3275.00	23.860	238.170	3113.80	-166.18	-445.03	-759.34	1674060.72	14312361.41	39°24'47.102"N	80°52'51.172"W	880.15	239.626
3300.00	23.950	238.080	3136.66	-168.36	-450.38	-767.95	1674052.12	14312356.07	39°24'47.049"N	80°52'51.282"W	890.27	239.609
3325.00	23.790	237.500	3159.52	-170.58	-455.78	-776.50	1674043.57	14312350.68	39°24'46.996"N	80°52'51.391"W	900.38	239.589
3350.00	23.610	237.110	3182.41	-172.88	-461.20	-784.96	1674035.11	14312345.25	39°24'46.942"N	80°52'51.499"W	910.42	239.564
3375.00	23.640	237.120	3205.31	-175.20	-466.64	-793.37	1674026.70	14312339.81	39°24'46.888"N	80°52'51.606"W	920.43	239.537
3400.00	23.530	236.960	3228.23	-177.53	-472.09	-801.77	1674018.31	14312334.37	39°24'46.835"N	80°52'51.713"W	930.43	239.510
3425.00	23.180	236.770	3251.18	-179.87	-477.50	-810.07	1674010.02	14312328.96	39°24'46.781"N	80°52'51.819"W	940.33	239.482
3450.00	23.130	236.870	3274.16	-182.20	-482.88	-818.29	1674001.79	14312323.58	39°24'46.728"N	80°52'51.924"W	950.15	239.455
3475.00	23.200	236.970	3297.15	-184.51	-488.25	-826.53	1673993.56	14312318.22	39°24'46.675"N	80°52'52.029"W	959.97	239.429
3500.00	22.850	236.720	3320.16	-186.82	-493.60	-834.72	1673985.37	14312312.87	39°24'46.623"N	80°52'52.134"W	969.74	239.403
3525.00	22.260	236.090	3343.24	-189.15	-498.90	-842.71	1673977.39	14312307.57	39°24'46.570"N	80°52'52.235"W	979.32	239.373
3550.00	22.210	235.790	3366.38	-191.53	-504.20	-850.55	1673969.55	14312302.27	39°24'46.518"N	80°52'52.335"W	988.76	239.347
3575.00	22.020	236.510	3412.68	-196.21	-514.71	-866.23	1673953.88	14312297.76	39°24'46.414"N	80°52'52.535"W	1007.61	239.281
3600.00	22.020	236.510	3412.68	-196.21	-514.71	-866.23	1673953.88	14312297.76	39°24'46.414"N	80°52'52.535"W	1007.61	239.281
3625.00	21.500	236.670	3435.90	-198.44	-519.82	-873.97	1673946.14	14312286.66	39°24'46.364"N	80°52'52.634"W	1016.87	239.257
3650.00	21.310	237.990	3459.18	-200.52	-524.74	-881.65	1673938.47	14312281.74	39°24'46.315"N	80°52'52.732"W	1025.99	239.240
3675.00	21.530	239.550	3482.45	-202.38	-529.47	-889.45	1673930.66	14312277.01	39°24'46.269"N	80°52'52.831"W	1035.12	239.235
3700.00	21.690	240.420	3505.69	-204.06	-534.08	-897.43	1673922.69	14312272.40	39°24'46.223"N	80°52'52.933"W	1044.33	239.242
3725.00	21.640	240.630	3528.93	-205.66	-538.62	-905.46	1673914.66	14312267.86	39°24'46.178"N	80°52'53.036"W	1053.55	239.253
3750.00	21.830	240.730	3552.15	-207.24	-543.15	-913.53	1673906.59	14312263.33	39°24'46.134"N	80°52'53.138"W	1062.81	239.266
3775.00	22.250	241.000	3575.32	-208.81	-547.72	-921.73	1673898.40	14312258.77	39°24'46.089"N	80°52'53.243"W	1072.19	239.280

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Melvin Unit 1H AWP Proj: 17695

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #08
Area	Tyler County, WV	Well	Melvin Unit 1H
Field	Tyler	Wellbore	Melvin Unit 1H AWB
Facility	Estack Pad		

WELLPATH DATA (381 stations)														
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Comments
3800.00	22.540	241.120	3598.44	-210.37	-552.33	-930.06	1673890.07	14312254.16	39°24'46.04"N	80°52'53.34"W	1081.71	239.295	1.17	
3825.00	22.570	241.160	3621.52	-211.94	-556.96	-938.46	1673881.67	14312249.53	39°24'45.99"N	80°52'53.45"W	1091.29	239.312	0.13	
3850.00	22.740	241.080	3644.60	-213.51	-561.61	-946.89	1673873.25	14312244.88	39°24'45.95"N	80°52'53.56"W	1100.91	239.327	0.69	
3875.00	22.650	240.720	3667.66	-215.12	-566.30	-955.32	1673864.82	14312240.20	39°24'45.90"N	80°52'53.67"W	1110.56	239.341	0.66	
3900.00	22.180	240.060	3690.77	-216.79	-571.01	-963.61	1673856.54	14312235.49	39°24'45.85"N	80°52'53.77"W	1120.09	239.350	2.13	
3925.00	22.080	239.850	3713.93	-218.52	-575.73	-971.76	1673848.39	14312230.77	39°24'45.81"N	80°52'53.88"W	1129.50	239.355	0.51	
3950.00	22.140	239.800	3737.09	-220.26	-580.46	-979.90	1673840.26	14312226.05	39°24'45.76"N	80°52'53.98"W	1138.91	239.359	0.25	
3975.00	22.010	239.740	3760.26	-222.01	-585.19	-988.01	1673832.14	14312221.32	39°24'45.71"N	80°52'54.08"W	1148.31	239.362	0.53	
4000.00	21.470	239.360	3783.48	-223.77	-589.88	-996.00	1673824.16	14312216.63	39°24'45.67"N	80°52'54.19"W	1157.57	239.364	2.23	
4025.00	21.410	239.020	3806.75	-225.57	-594.56	-1003.85	1673816.32	14312211.95	39°24'45.62"N	80°52'54.29"W	1166.71	239.363	0.55	
4050.00	21.730	239.410	3830.00	-227.37	-599.26	-1011.74	1673808.42	14312207.25	39°24'45.58"N	80°52'54.39"W	1175.90	239.361	1.40	
4075.00	21.700	239.860	3853.23	-229.11	-603.94	-1019.72	1673800.45	14312202.57	39°24'45.53"N	80°52'54.49"W	1185.15	239.364	0.68	
4100.00	21.480	239.710	3876.47	-230.82	-608.57	-1027.67	1673792.50	14312197.95	39°24'45.48"N	80°52'54.59"W	1194.35	239.367	0.91	
4125.00	21.770	239.800	3899.71	-232.54	-613.21	-1035.63	1673784.54	14312193.31	39°24'45.44"N	80°52'54.69"W	1203.56	239.370	1.17	
4150.00	22.280	240.380	3922.89	-234.23	-617.88	-1043.76	1673776.42	14312188.64	39°24'45.39"N	80°52'54.79"W	1212.93	239.376	2.28	
4175.00	22.570	240.960	3946.00	-235.85	-622.54	-1052.08	1673768.10	14312183.98	39°24'45.35"N	80°52'54.90"W	1222.47	239.386	1.37	
4200.00	22.590	241.150	3969.08	-237.43	-627.19	-1060.48	1673759.70	14312179.34	39°24'45.30"N	80°52'55.01"W	1232.06	239.399	0.30	
4225.00	22.850	241.590	3992.14	-238.96	-631.81	-1068.96	1673751.23	14312174.71	39°24'45.26"N	80°52'55.12"W	1241.71	239.415	1.24	
4250.00	23.410	241.880	4015.13	-240.46	-636.46	-1077.60	1673742.59	14312170.06	39°24'45.21"N	80°52'55.23"W	1251.53	239.433	2.29	
4275.00	23.620	241.780	4038.05	-241.96	-641.17	-1086.40	1673733.80	14312165.36	39°24'45.16"N	80°52'55.34"W	1261.49	239.452	0.86	
4300.00	23.800	241.540	4060.94	-243.51	-645.94	-1095.25	1673724.95	14312160.59	39°24'45.12"N	80°52'55.45"W	1271.54	239.469	0.82	
4325.00	24.050	241.610	4083.80	-245.08	-650.77	-1104.16	1673716.04	14312155.76	39°24'45.07"N	80°52'55.56"W	1281.67	239.486	1.01	
4350.00	24.170	241.340	4106.62	-246.69	-655.65	-1113.13	1673707.07	14312150.89	39°24'45.02"N	80°52'55.68"W	1291.87	239.502	0.65	
4375.00	24.040	240.650	4129.44	-248.38	-660.60	-1122.06	1673698.15	14312145.94	39°24'44.97"N	80°52'55.79"W	1302.08	239.513	1.24	
4400.00	23.870	240.380	4152.28	-250.14	-665.59	-1130.90	1673689.31	14312140.94	39°24'44.92"N	80°52'55.91"W	1312.23	239.521	0.81	
4425.00	22.980	240.600	4198.12	-253.61	-675.42	-1148.27	1673671.95	14312131.12	39°24'44.83"N	80°52'56.13"W	1332.19	239.536	2.64	
4450.00	22.640	240.510	4175.16	-251.90	-670.56	-1139.66	1673680.56	14312135.98	39°24'44.87"N	80°52'56.02"W	1322.30	239.528	0.94	
4475.00	22.090	239.800	4221.21	-255.32	-680.18	-1156.59	1673663.63	14312126.36	39°24'44.78"N	80°52'56.23"W	1341.77	239.540	3.77	
4500.00	21.840	239.390	4244.40	-257.09	-684.92	-1164.65	1673655.57	14312121.63	39°24'44.73"N	80°52'56.34"W	1351.12	239.541	1.17	
4525.00	21.850	239.170	4267.60	-258.90	-689.67	-1172.65	1673647.58	14312116.88	39°24'44.68"N	80°52'56.44"W	1360.42	239.539	0.33	

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Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Estack Pad
Slot	Slot #08
Melvin Unit 1H	Melvin Unit 1H
Melvin Unit 1H AWB	

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Comments
4550.00	21.480	4290.84	-260.79	-694.46	-1180.54	-1188.15	1673632.09	14312107.25	39°24'44.594"N	80°52'56.640"W	1378.67	239.521	3.33	
4575.00	20.820	4314.15	-262.81	-699.30	-1188.15	-1195.52	1673624.72	14312102.37	39°24'44.546"N	80°52'56.734"W	1387.49	239.501	1.43	
4600.00	20.570	4337.54	-264.95	-704.18	-1195.52	-1202.77	1673617.47	14312097.46	39°24'44.497"N	80°52'56.826"W	1396.24	239.478	0.76	
4625.00	20.500	4360.95	-267.17	-709.10	-1202.77	-1230.34	1673589.91	14312082.26	39°24'44.308"N	80°52'57.178"W	1429.74	239.376	1.69	
4700.00	19.190	4431.54	-273.98	-723.67	-1223.52	-1237.29	1673596.73	14312082.89	39°24'44.354"N	80°52'57.091"W	1421.51	239.397	1.13	
4750.00	19.510	4478.71	-278.05	-732.86	-1237.29	-1244.32	1673582.96	14312073.70	39°24'44.263"N	80°52'57.267"W	1438.05	239.361	1.23	
4775.00	19.540	4502.28	-279.97	-737.38	-1244.32	-1251.38	1673575.94	14312069.18	39°24'44.218"N	80°52'57.356"W	1446.40	239.349	0.34	
4800.00	19.570	4525.83	-281.86	-741.88	-1251.38	-1258.48	1673568.89	14312064.69	39°24'44.174"N	80°52'57.446"W	1454.76	239.338	0.28	
4825.00	19.750	4549.38	-283.74	-746.39	-1258.48	-1265.59	1673554.68	14312055.64	39°24'44.085"N	80°52'57.627"W	1471.60	239.317	0.45	
4850.00	19.700	4572.91	-285.65	-750.93	-1265.59	-1272.66	1673547.61	14312051.08	39°24'44.040"N	80°52'57.718"W	1480.01	239.305	0.43	
4875.00	19.650	4596.45	-287.59	-755.49	-1272.66	-1279.73	1673540.55	14312046.49	39°24'43.994"N	80°52'57.808"W	1488.43	239.292	0.45	
4925.00	19.960	4643.50	-291.57	-764.73	-1286.83	-1294.04	1673533.44	14312041.84	39°24'43.949"N	80°52'57.898"W	1496.92	239.278	0.85	
4950.00	20.320	4666.97	-293.61	-769.45	-1294.04	-1301.35	1673526.24	14312037.13	39°24'43.902"N	80°52'57.990"W	1505.52	239.264	1.44	
4975.00	20.660	4690.39	-295.70	-774.25	-1301.35	-1308.85	1673518.93	14312032.33	39°24'43.855"N	80°52'58.083"W	1514.26	239.249	1.38	
5000.00	21.380	4713.73	-297.84	-779.17	-1308.85	-1316.64	1673511.44	14312027.41	39°24'43.806"N	80°52'58.179"W	1523.22	239.234	2.90	
5025.00	22.200	4736.94	-299.99	-784.21	-1316.64	-1324.70	1673503.65	14312022.37	39°24'43.757"N	80°52'58.278"W	1532.49	239.221	3.35	
5050.00	22.720	4760.04	-302.13	-789.33	-1324.70	-1332.95	1673495.59	14312017.25	39°24'43.706"N	80°52'58.381"W	1542.04	239.211	2.22	
5075.00	23.060	4783.08	-304.22	-794.47	-1332.95	-1341.42	1673487.34	14312012.11	39°24'43.655"N	80°52'58.486"W	1551.76	239.204	1.56	
5100.00	23.670	4806.03	-306.26	-799.63	-1341.42	-1350.12	1673478.88	14312006.96	39°24'43.604"N	80°52'58.594"W	1561.67	239.200	2.66	
5125.00	24.090	4828.89	-308.24	-804.81	-1350.12	-1358.94	1673470.18	14312001.78	39°24'43.553"N	80°52'58.705"W	1571.79	239.201	1.87	
5150.00	24.240	4851.69	-310.18	-809.99	-1358.94	-1367.87	1673461.36	14311996.60	39°24'43.502"N	80°52'58.818"W	1582.03	239.203	0.68	
5175.00	24.570	4874.46	-312.11	-815.19	-1367.87	-1376.92	1673452.44	14311991.40	39°24'43.451"N	80°52'58.932"W	1592.36	239.207	1.34	
5200.00	24.940	4897.16	-314.04	-820.45	-1376.92	-1386.02	1673443.39	14311986.15	39°24'43.399"N	80°52'59.047"W	1602.82	239.211	1.50	
5225.00	24.810	4919.84	-315.97	-825.71	-1386.02	-1395.04	1673434.29	14311980.89	39°24'43.347"N	80°52'59.163"W	1613.34	239.216	0.52	
5250.00	24.460	4942.57	-317.88	-830.94	-1395.04	-1404.00	1673425.28	14311975.66	39°24'43.296"N	80°52'59.278"W	1623.76	239.220	1.40	
5275.00	24.510	4965.32	-319.79	-836.14	-1404.00	-1413.00	1673416.32	14311970.47	39°24'43.244"N	80°52'59.392"W	1634.12	239.225	0.25	

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Actual Wellpath Report

Melvin Unit 1H AWP Proj.: 17695

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Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #08
Area	Tyler County, WV	Well	Melvin Unit 1H
Field	Tyler	Wellbore	Melvin Unit 1H AWB
Facility	Estack Pad		

WELLPATH DATA (381 stations)														
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Comments
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]
5300.00	24.850	240.160	4988.04	-321.69	-1413.05	-1413.05	16733407.28	14311965.26	39°24'43.193"N	80°52'59.508"W	1644.56	239.230	1.40	
5325.00	24.720	240.030	5010.73	-323.58	-1422.13	-1422.13	16733398.20	14311960.04	39°24'43.142"N	80°52'59.623"W	1655.04	239.235	0.56	
5350.00	24.550	240.040	5033.46	-325.47	-1431.78	-1431.78	16733389.17	14311954.83	39°24'43.090"N	80°52'59.739"W	1665.46	239.240	0.68	
5375.00	24.950	240.130	5056.16	-327.37	-1440.23	-1440.23	16733380.10	14311949.62	39°24'43.039"N	80°52'59.854"W	1675.92	239.246	1.61	
5400.00	25.470	240.260	5078.78	-329.28	-1449.47	-1449.47	16733370.87	14311944.33	39°24'42.987"N	80°52'59.972"W	1686.57	239.252	2.09	
5425.00	25.650	240.330	5101.33	-331.19	-1458.84	-1458.84	16733361.50	14311938.98	39°24'42.934"N	80°53'00.092"W	1697.35	239.258	0.73	
5450.00	25.760	240.500	5123.86	-333.09	-1468.27	-1468.27	16733352.08	14311933.63	39°24'42.881"N	80°53'00.212"W	1708.20	239.266	0.53	
5475.00	26.270	240.710	5146.33	-334.97	-1477.83	-1477.83	16733342.53	14311928.25	39°24'42.828"N	80°53'00.334"W	1719.16	239.274	2.07	
5500.00	26.310	240.770	5168.74	-336.85	-1487.49	-1487.49	16733332.87	14311922.84	39°24'42.775"N	80°53'00.457"W	1730.23	239.284	0.19	
5525.00	25.670	240.410	5191.21	-338.74	-1497.03	-1497.03	16733323.33	14311917.46	39°24'42.722"N	80°53'00.578"W	1741.18	239.292	2.64	
5550.00	24.660	239.690	5213.84	-340.67	-1506.24	-1506.24	16733314.12	14311912.16	39°24'42.669"N	80°53'00.696"W	1751.81	239.296	4.22	
5575.00	23.580	238.480	5236.66	-342.69	-1515.01	-1515.01	16733305.36	14311906.92	39°24'42.617"N	80°53'00.808"W	1762.02	239.295	4.75	
5600.00	22.540	237.260	5259.66	-344.83	-1523.30	-1523.30	16733297.07	14311901.71	39°24'42.566"N	80°53'00.913"W	1771.81	239.287	4.58	
5625.00	21.930	236.270	5282.80	-347.08	-1531.21	-1531.21	1673289.16	14311896.53	39°24'42.515"N	80°53'01.014"W	1781.26	239.274	2.86	
5650.00	22.040	236.040	5305.98	-349.40	-1539.32	-1539.32	1673281.39	14311891.32	39°24'42.464"N	80°53'01.113"W	1790.61	239.258	0.56	
5675.00	22.570	236.260	5329.11	-351.75	-1546.87	-1546.87	1673273.51	14311886.04	39°24'42.411"N	80°53'01.214"W	1800.08	239.241	2.15	
5700.00	22.890	236.240	5352.17	-354.13	-1554.90	-1554.90	1673265.49	14311880.67	39°24'42.359"N	80°53'01.316"W	1809.73	239.225	1.28	
5725.00	22.910	236.520	5375.20	-356.51	-1563.00	-1563.00	1673257.39	14311875.29	39°24'42.305"N	80°53'01.420"W	1819.45	239.210	0.44	
5750.00	22.990	237.990	5398.22	-358.74	-1571.20	-1571.20	1673249.19	14311870.02	39°24'42.253"N	80°53'01.524"W	1829.19	239.200	2.31	
5775.00	23.170	238.870	5421.22	-360.79	-1579.55	-1579.55	1673240.85	14311864.89	39°24'42.203"N	80°53'01.631"W	1838.99	239.196	1.56	
5800.00	22.930	238.970	5444.22	-362.76	-1587.93	-1587.93	1673232.47	14311859.84	39°24'42.153"N	80°53'01.737"W	1848.78	239.194	0.97	
5825.00	22.620	239.010	5467.27	-364.69	-1596.22	-1596.22	1673224.18	14311854.85	39°24'42.104"N	80°53'01.843"W	1858.45	239.193	1.24	
5850.00	23.040	239.260	5490.32	-366.60	-1604.55	-1604.55	1673215.85	14311849.88	39°24'42.055"N	80°53'01.949"W	1868.15	239.193	1.72	
5875.00	23.110	239.510	5513.32	-368.49	-1612.98	-1612.98	1673207.42	14311844.89	39°24'42.005"N	80°53'02.057"W	1877.95	239.194	0.48	
5900.00	22.680	239.380	5536.35	-370.36	-1621.36	-1621.36	1673199.05	14311839.95	39°24'41.957"N	80°53'02.164"W	1887.68	239.195	1.73	
5925.00	22.440	239.530	5559.43	-372.20	-1629.62	-1629.62	1673190.79	14311835.08	39°24'41.909"N	80°53'02.269"W	1897.27	239.197	0.99	
5950.00	22.580	240.100	5582.53	-373.98	-1637.89	-1637.89	1673182.52	14311830.27	39°24'41.861"N	80°53'02.375"W	1906.84	239.200	1.04	
5975.00	22.540	240.370	5605.62	-375.69	-1646.22	-1646.22	1673174.20	14311825.51	39°24'41.814"N	80°53'02.481"W	1916.43	239.205	0.44	
6000.00	21.990	240.140	5628.75	-377.37	-1654.44	-1654.44	1673165.98	14311820.81	39°24'41.768"N	80°53'02.586"W	1925.90	239.210	2.23	
6025.00	21.740	240.530	5651.95	-379.02	-1662.53	-1662.53	1673157.89	14311816.20	39°24'41.722"N	80°53'02.689"W	1935.21	239.215	1.16	

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #08
Area	Tyler County, WV	Well	Melvin Unit 1H
Field	Tyler	Wellbore	Melvin Unit 1H AWB
Facility	Estlack Pad		

WELLPATH DATA (381 stations) † = interpolated/extrapolated station															
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Comments	
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(US ft)	(US ft)			(ft)	(°)	("/100ft)		
6050.00	22.190	240.630	5675.14	-380.63	-995.06	-1670.68	1673149.75	14311811.61	39°24'41.677"N	80°53'02.793"W	1944.56	239.222	1.81		
6060.13	22.500	240.560	5684.51	-381.29	-996.95	-1674.03	1673146.40	14311809.72	39°24'41.659"N	80°53'02.835"W	1948.41	239.225	3.07		
6277.00	22.940	239.970	5884.55	-396.19	-1038.49	-1746.76	1673073.70	14311768.19	39°24'41.249"N	80°53'03.763"W	2032.15	239.267	0.23	BHI AT Curve [SS+MSA] <8-1/2"> (6060.13)(6277- 17657)	
6328.00	21.770	239.130	5931.71	-399.88	-1048.32	-1763.49	1673056.98	14311758.37	39°24'41.152"N	80°53'03.976"W	2051.55	239.270	2.38		
6374.00	22.230	242.740	5974.37	-402.74	-1056.68	-1778.54	1673041.93	14311750.01	39°24'41.069"N	80°53'04.168"W	2068.77	239.284	3.10		
6423.00	22.300	254.300	6019.74	-403.38	-1063.45	-1795.74	1673024.74	14311743.25	39°24'41.003"N	80°53'04.387"W	2087.01	239.366	8.93		
6468.00	22.300	263.850	6061.38	-400.84	-1066.67	-1812.45	1673008.03	14311740.02	39°24'40.971"N	80°53'04.600"W	2103.04	239.522	8.04		
6517.00	22.760	276.570	6106.67	-394.53	-1066.59	-1831.12	1672989.37	14311740.11	39°24'40.972"N	80°53'04.838"W	2119.11	239.780	9.97		
6563.00	24.600	288.670	6148.82	-384.70	-1062.50	-1849.05	1672971.45	14311744.20	39°24'41.013"N	80°53'05.066"W	2132.58	240.117	11.27		
6614.00	27.710	298.160	6194.61	-369.37	-1053.50	-1869.57	1672950.94	14311753.19	39°24'41.102"N	80°53'05.328"W	2145.96	240.599	10.20		
6655.00†	30.593	304.164	6230.43	-353.91	-1043.14	-1886.62	1672933.90	14311763.55	39°24'41.205"N	80°53'05.544"W	2155.80	241.061	10.01	Sycamore: 6655' MD	
6657.00	30.740	304.430	6232.15	-353.09	-1042.56	-1887.46	1672933.06	14311764.12	39°24'41.210"N	80°53'05.555"W	2156.26	241.085	10.01		
6706.00	35.060	310.510	6273.29	-330.76	-1026.33	-1908.50	1672912.02	14311780.35	39°24'41.371"N	80°53'05.823"W	2166.96	241.730	11.09		
6752.00	38.590	314.340	6310.11	-306.43	-1007.71	-1928.82	1672891.71	14311798.96	39°24'41.555"N	80°53'06.082"W	2176.19	242.415	9.15		
6802.00	42.340	317.420	6348.15	-276.94	-984.40	-1951.37	1672869.17	14311822.26	39°24'41.786"N	80°53'06.369"W	2185.61	243.231	8.50		
6848.00	45.830	320.410	6381.19	-247.18	-960.27	-1972.38	1672848.17	14311846.38	39°24'42.025"N	80°53'06.636"W	2193.72	244.040	8.83		
6873.00†	47.700	322.685	6398.31	-229.96	-946.01	-1983.70	1672836.86	14311860.64	39°24'42.166"N	80°53'06.780"W	2197.72	244.504	9.99	Middlesex: 6873' MD	
6899.00	49.690	324.910	6415.47	-211.25	-930.25	-1995.23	1672825.33	14311876.40	39°24'42.322"N	80°53'06.926"W	2201.43	245.003	9.99		
6942.00	52.850	328.770	6442.38	-178.67	-902.16	-2013.55	1672807.02	14311904.47	39°24'42.600"N	80°53'07.159"W	2206.42	245.865	10.15		
6990.00	56.520	332.210	6470.13	-140.11	-868.08	-2032.81	1672787.77	14311938.54	39°24'42.937"N	80°53'07.404"W	2210.40	246.876	9.62		
7037.00†	61.053	334.827	6494.48	-100.22	-832.11	-2050.71	1672769.88	14311974.50	39°24'43.292"N	80°53'07.632"W	2213.10	247.914	10.76	Burkett: 7037' MD	
7038.00	61.150	334.880	6494.96	-99.35	-831.31	-2051.08	1672769.50	14311975.29	39°24'43.300"N	80°53'07.636"W	2213.14	247.937	10.76		
7086.00	63.690	336.180	6517.19	-56.97	-792.59	-2068.69	1672751.90	14312014.00	39°24'43.683"N	80°53'07.860"W	2215.33	249.036	5.81		
7099.00†	64.757	336.539	6522.84	-45.30	-781.87	-2073.39	1672747.20	14312024.72	39°24'43.789"N	80°53'07.920"W	2215.91	249.339	8.57	Tully: 7099' MD	
7133.00	67.550	337.450	6536.59	-14.26	-753.25	-2085.54	1672735.06	14312053.33	39°24'44.072"N	80°53'08.074"W	2217.40	250.142	8.57		
7177.00†	70.474	338.523	6552.34	26.78	-715.16	-2100.93	1672719.67	14312091.39	39°24'44.449"N	80°53'08.270"W	2219.32	251.201	7.02	Marcellus Hot: 7177' MD	
7184.00	70.940	338.690	6554.66	33.38	-709.01	-2103.34	1672717.26	14312097.54	39°24'44.510"N	80°53'08.300"W	2219.62	251.372	7.02		
7227.00	76.430	340.620	6566.73	74.62	-670.33	-2117.67	1672702.94	14312136.21	39°24'44.892"N	80°53'08.482"W	2221.23	252.435	13.47		
7276.00	82.260	341.720	6575.79	122.75	-624.77	-2133.20	1672687.41	14312181.75	39°24'45.343"N	80°53'08.679"W	2222.81	253.676	12.10		
7323.00	87.300	341.740	6580.06	169.53	-580.34	-2147.87	1672672.75	14312226.16	39°24'45.782"N	80°53'08.866"W	2224.89	254.880	10.72		

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Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #08
Area	Tyler County, WV	Well	Melvin Unit 1H
Field	Tyler	Wellbore	Melvin Unit 1H AWB
Facility	Estlack Pad		

WELLPATH DATA (381 stations)														
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS ["/100ft]	Comments
7362.00	90.090	341.150	6580.95	208.51	-543.38	-2160.28	1672660.35	14312263.11	39°24'46.147"N	80°53'09.023"W	2227.57	255.881	7.31	
7417.00	89.970	338.700	6580.92	263.51	-491.73	-2179.15	1672641.48	14312314.74	39°24'46.658"N	80°53'09.263"W	2233.95	257.284	4.46	
7511.00	89.570	338.510	6581.30	357.45	-404.21	-2213.45	1672607.20	14312402.23	39°24'47.524"N	80°53'09.698"W	2250.05	259.651	0.47	
7606.00	89.330	339.040	6582.21	452.41	-315.65	-2247.84	1672572.82	14312490.74	39°24'48.399"N	80°53'10.135"W	2269.89	262.006	0.61	
7701.00	89.360	338.550	6583.30	547.36	-227.09	-2282.20	1672538.48	14312579.27	39°24'49.275"N	80°53'10.571"W	2293.47	264.317	0.52	
7796.00	89.640	343.250	6584.13	642.32	-137.35	-2313.27	1672507.41	14312668.97	39°24'50.162"N	80°53'10.966"W	2317.35	266.602	4.96	
7891.00	90.260	344.340	6584.21	737.17	-46.13	-2339.78	1672480.91	14312760.16	39°24'51.064"N	80°53'11.302"W	2340.24	268.871	1.32	
7986.00	90.010	341.020	6583.99	832.09	44.55	-2368.06	1672452.65	14312850.80	39°24'51.961"N	80°53'11.661"W	2368.48	271.078	3.50	
8081.00	89.180	338.690	6584.66	927.07	133.73	-2400.78	1672419.95	14312939.95	39°24'52.843"N	80°53'12.076"W	2404.50	273.188	2.60	
8175.00	89.300	337.340	6585.90	1020.97	220.89	-2435.96	1672384.77	14313027.07	39°24'53.705"N	80°53'12.523"W	2445.96	275.181	1.44	
8269.00	89.400	339.630	6586.97	1114.90	308.33	-2470.43	1672350.32	14313114.47	39°24'54.569"N	80°53'12.961"W	2489.60	277.114	2.44	
8363.00	89.150	341.730	6588.16	1208.89	397.02	-2501.53	1672319.24	14313203.13	39°24'55.446"N	80°53'13.356"W	2532.84	279.018	2.25	
8459.00	89.180	340.100	6589.56	1304.87	487.73	-2532.91	1672287.86	14313293.80	39°24'56.343"N	80°53'13.754"W	2579.44	280.899	1.70	
8554.00	89.300	337.520	6590.82	1399.81	576.29	-2567.24	1672253.54	14313382.33	39°24'57.219"N	80°53'14.190"W	2631.13	282.652	2.72	
8650.00	89.210	336.390	6592.07	1495.62	664.62	-2604.82	1672215.98	14313470.63	39°24'58.092"N	80°53'14.668"W	2688.27	284.314	1.18	
8745.00	89.430	339.330	6593.20	1590.50	752.60	-2640.62	1672180.20	14313558.57	39°24'58.962"N	80°53'15.122"W	2745.77	285.908	3.10	
8840.00	89.270	338.140	6594.27	1685.44	841.13	-2675.07	1672145.76	14313647.06	39°24'59.838"N	80°53'15.560"W	2804.19	287.455	1.26	
8935.00	89.490	338.890	6595.30	1780.38	929.52	-2709.86	1672110.98	14313735.42	39°25'00.712"N	80°53'16.002"W	2864.85	288.933	0.82	
9030.00	90.900	347.720	6594.98	1875.17	1020.42	-2737.12	1672083.73	14313826.28	39°25'01.610"N	80°53'16.348"W	2921.15	290.446	9.41	
9126.00	90.620	348.640	6593.70	1970.30	1114.38	-2756.79	1672064.08	14313920.20	39°25'02.539"N	80°53'16.597"W	2973.50	292.010	1.00	
9220.00	90.560	345.340	6592.74	2063.68	1205.95	-2777.94	1672042.93	14314011.73	39°25'03.445"N	80°53'16.865"W	3028.41	293.466	3.51	
9315.00	90.440	334.560	6591.90	2158.54	1295.05	-2810.47	1672010.42	14314100.80	39°25'04.326"N	80°53'17.278"W	3094.49	294.740	11.35	
9410.00	90.220	333.980	6591.36	2252.97	1380.63	-2851.71	1671969.20	14314186.35	39°25'05.172"N	80°53'17.802"W	3168.34	295.834	0.65	
9506.00	90.280	341.720	6590.94	2348.79	1469.48	-2887.87	1671933.04	14314275.16	39°25'06.051"N	80°53'18.262"W	3240.24	296.969	8.06	
9601.00	90.840	343.240	6590.01	2443.73	1560.06	-2916.47	1671904.46	14314365.71	39°25'06.946"N	80°53'18.624"W	3307.51	298.143	1.71	
9695.00	90.560	340.920	6588.86	2537.68	1649.49	-2945.39	1671875.55	14314455.10	39°25'07.830"N	80°53'18.992"W	3375.82	299.250	2.49	
9791.00	89.910	336.880	6588.47	2633.62	1739.03	-2979.94	1671841.01	14314544.61	39°25'08.716"N	80°53'19.430"W	3450.26	300.267	4.26	
9885.00	90.440	337.900	6588.18	2727.48	1825.81	-3016.08	1671804.89	14314631.35	39°25'09.574"N	80°53'19.889"W	3525.66	301.189	1.22	
9980.00	89.950	340.220	6587.86	2822.44	1914.53	-3050.03	1671770.95	14314720.03	39°25'10.451"N	80°53'20.321"W	3601.12	302.117	2.50	
10074.00	89.910	340.350	6587.97	2916.44	2003.02	-3081.74	1671739.26	14314808.48	39°25'11.326"N	80°53'20.723"W	3675.49	303.022	0.14	

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Actual Wellpath Report

Melvin Unit 1H AWP Proj: 17695

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Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #08
Area	Tyler County, WV	Well	Melvin Unit 1H
Field	Tyler	Wellbore	Melvin Unit 1H AWB
Facility	Estack Pad		

WELLPATH DATA (381 stations)														
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Comments
10169.00	39.050	3011.43	6587.96	3011.43	-3114.70	-2092.11	1671706.31	14314897.55	39°25'12.20"N	80°53'21.14"W	3752.10	303.889	1.90	1.38
10265.00	89.700	337.270	6588.13	3107.35	-2181.22	-3150.41	1671670.61	14314986.62	39°25'13.08"N	80°53'21.59"W	3831.81	304.697	1.90	1.38
10360.00	89.980	338.830	6588.40	3202.25	-2269.33	-3185.92	1671635.12	14315074.69	39°25'13.96"N	80°53'22.04"W	3911.51	305.462	1.67	1.38
10455.00	89.910	340.280	6588.49	3297.24	-2358.34	-3219.10	1671601.95	14315163.67	39°25'14.84"N	80°53'22.46"W	3990.54	306.227	1.53	1.38
10550.00	89.790	342.270	6588.74	3392.23	-2448.31	-3249.60	1671571.46	14315253.60	39°25'15.12"N	80°53'22.85"W	4068.67	306.995	2.10	1.38
10645.00	89.760	344.740	6589.11	3487.09	-2539.39	-3276.57	1671544.50	14315344.65	39°25'16.63"N	80°53'23.19"W	4145.41	307.776	2.60	1.38
10739.00	90.100	346.810	6589.22	3580.69	-2630.51	-3299.67	1671521.42	14315435.72	39°25'17.53"N	80°53'23.49"W	4219.88	308.562	2.23	1.38
10834.00	90.680	345.460	6588.58	3675.22	-2722.73	-3322.43	1671498.66	14315527.91	39°25'18.44"N	80°53'23.77"W	4295.56	309.335	1.55	1.38
10930.00	90.870	347.170	6587.28	3771.06	-2814.80	-3349.55	1671471.55	14315619.94	39°25'19.35"N	80°53'24.12"W	4375.22	310.042	3.91	1.38
11024.00	90.380	339.480	6586.25	3865.05	-2903.44	-3380.78	1671440.34	14315708.55	39°25'20.22"N	80°53'24.52"W	4456.42	310.656	2.43	1.38
11118.00	90.380	338.710	6585.63	3959.02	-2991.25	-3414.32	1671406.81	14315796.33	39°25'21.09"N	80°53'24.94"W	4539.29	311.221	0.82	1.38
11213.00	89.820	337.120	6585.46	4053.91	-3079.28	-3450.04	1671371.11	14315884.32	39°25'21.96"N	80°53'25.40"W	4624.36	311.750	1.77	1.38
11306.00	89.760	337.560	6585.80	4146.77	-3165.10	-3485.86	1671335.29	14315970.10	39°25'22.81"N	80°53'25.85"W	4708.41	312.239	0.48	1.38
11402.00	89.510	341.550	6586.42	4242.74	-3255.03	-3519.39	1671301.78	14316060.00	39°25'23.70"N	80°53'26.28"W	4793.89	312.765	4.16	1.38
11496.00	89.820	344.380	6586.97	4336.64	-3344.90	-3546.93	1671274.26	14316149.83	39°25'24.59"N	80°53'26.63"W	4875.35	313.321	3.03	1.38
11592.00	89.880	342.040	6587.22	4432.53	-3436.80	-3574.65	1671246.54	14316241.69	39°25'25.50"N	80°53'26.98"W	4958.80	313.874	2.44	1.38
11687.00	89.700	336.920	6587.57	4527.48	-3525.74	-3607.94	1671213.26	14316330.60	39°25'26.38"N	80°53'27.40"W	5044.61	314.340	5.39	1.38
11782.00	89.670	335.770	6588.09	4622.22	-3612.76	-3646.06	1671175.16	14316417.58	39°25'27.24"N	80°53'27.88"W	5132.81	314.737	1.21	1.38
11877.00	89.820	339.250	6588.51	4717.08	-3700.52	-3682.39	1671138.84	14316505.30	39°25'28.11"N	80°53'28.35"W	5220.52	315.141	3.67	1.38
11971.00	90.000	344.750	6588.66	4811.01	-3711.43	-3711.43	1671109.82	14316594.63	39°25'28.994"N	80°53'28.72"W	5304.52	315.599	5.85	1.38
12066.00	90.130	343.720	6588.55	4905.81	-3737.24	-3737.24	1671084.02	14316686.02	39°25'29.898"N	80°53'29.047"W	5388.09	316.083	1.09	1.38
12161.00	89.790	342.540	6588.62	5000.71	-3764.81	-3764.81	1671056.46	14316776.90	39°25'30.797"N	80°53'29.397"W	5472.87	316.536	1.29	1.38
12256.00	90.100	340.020	6588.71	5095.69	-3795.30	-3795.30	1671025.99	14316866.83	39°25'31.686"N	80°53'29.784"W	5559.28	316.945	2.67	1.38
12351.00	89.790	334.450	6588.80	5190.50	-3832.04	-3832.04	1670989.25	14316954.36	39°25'32.552"N	80°53'30.251"W	5648.45	317.279	5.87	1.38
12447.00	90.030	334.390	6588.95	5285.96	-3873.49	-3873.49	1670947.82	14317040.91	39°25'33.409"N	80°53'30.778"W	5740.25	317.562	0.26	1.38
12541.00	89.880	338.080	6589.02	5379.68	-3911.37	-3911.37	1670909.96	14317126.89	39°25'34.259"N	80°53'31.259"W	5829.37	317.858	3.93	1.38
12636.00	90.130	343.750	6589.02	5474.64	-3942.41	-3942.41	1670878.92	14317216.60	39°25'35.147"N	80°53'31.653"W	5916.86	318.218	5.97	1.38
12730.00	90.000	345.180	6588.91	5568.41	-3967.59	-3967.59	1670853.76	14317307.12	39°25'36.042"N	80°53'31.973"W	6001.31	318.615	1.53	1.38
12825.00	89.880	343.140	6589.01	5663.21	-3993.52	-3993.52	1670827.84	14317398.48	39°25'36.945"N	80°53'32.302"W	6087.16	319.000	2.15	1.38
12920.00	90.000	341.740	6589.11	5758.16	-4022.18	-4022.18	1670799.19	14317489.01	39°25'37.841"N	80°53'32.666"W	6174.43	319.351	1.48	1.38

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Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #08
Area	Tyler County, WV	Well	Melvin Unit 1H
Field	Tyler	Wellbore	Melvin Unit 1H AWB
Facility	Estack Pad		

WELLPATH DATA (381 stations)														
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Comments
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]
13013.00	89.820	341.330	6589.25	5851.14	4772.83	-4051.64	1670769.75	1431757.19	39°25'38.713"N	80°53'33.040"W	6260.64	319.672	0.48	
13108.00	89.790	340.590	6589.58	5946.14	4862.63	-4082.63	1670738.77	1431766.95	39°25'33.433"N	80°53'33.433"W	6349.25	319.983	0.78	
13203.00	89.910	341.440	6589.83	6041.13	4952.46	-4113.53	1670707.88	1431775.75	39°25'40.489"N	80°53'33.826"W	6438.01	320.287	0.90	
13297.00	90.340	343.250	6589.62	6135.08	5042.03	-4142.04	1670679.38	1431784.28	39°25'41.375"N	80°53'34.188"W	6525.22	320.597	1.98	
13392.00	90.310	345.490	6589.08	6229.86	5133.51	-4167.63	1670653.80	1431793.72	39°25'42.279"N	80°53'34.513"W	6612.27	320.929	2.36	
13487.00	90.160	343.120	6588.69	6324.64	5224.96	-4193.33	1670628.11	1431802.99	39°25'43.183"N	80°53'34.839"W	6699.57	321.251	2.50	
13582.00	90.000	341.810	6588.56	6419.58	5315.54	-4221.95	1670599.50	1431819.68	39°25'44.079"N	80°53'35.202"W	6788.22	321.541	1.39	
13677.00	90.860	339.540	6587.85	6514.57	5405.18	-4253.39	1670568.08	14318209.29	39°25'44.965"N	80°53'35.601"W	6878.03	321.800	2.56	
13772.00	89.910	337.320	6587.21	6609.50	5493.52	-4288.31	1670533.17	14318297.59	39°25'45.839"N	80°53'36.045"W	6969.10	322.024	2.54	
13867.00	89.880	338.170	6587.38	6704.39	5581.44	-4324.29	1670497.21	14318385.48	39°25'46.708"N	80°53'36.502"W	7060.59	322.233	0.90	
14057.00	90.160	337.020	6587.86	6894.11	5756.86	-4397.26	1670424.26	14318560.83	39°25'48.443"N	80°53'37.430"W	7244.13	322.626	0.54	
14152.00	89.970	337.520	6587.76	6988.96	5844.49	-4433.97	1670387.57	14318648.41	39°25'49.309"N	80°53'37.896"W	7336.08	322.814	0.56	
14246.00	89.790	338.660	6587.95	7082.87	5931.70	-4469.05	1670352.51	14318735.59	39°25'50.172"N	80°53'38.342"W	7426.80	323.005	1.23	
14341.00	89.760	340.500	6588.33	7177.85	6020.72	-4502.19	1670319.37	14318824.58	39°25'51.052"N	80°53'38.763"W	7517.90	323.212	1.94	
14435.00	90.060	342.810	6588.47	7271.83	6109.94	-4531.77	1670289.80	14318913.76	39°25'51.934"N	80°53'39.138"W	7607.12	323.435	2.48	
14529.00	89.820	342.660	6588.57	7365.76	6199.70	-4559.67	1670261.92	14319003.49	39°25'52.822"N	80°53'39.493"W	7695.90	323.667	0.30	
14625.00	89.970	339.570	6588.75	7461.74	6290.52	-4590.74	1670230.86	14319094.27	39°25'53.720"N	80°53'39.887"W	7787.53	323.879	3.22	
14719.00	90.060	332.950	6588.72	7555.43	6376.52	-4628.56	1670193.05	14319180.24	39°25'54.570"N	80°53'40.368"W	7879.31	324.025	7.04	
14813.00	89.790	329.200	6588.85	7648.14	6458.78	-4674.02	1670147.61	14319262.46	39°25'55.383"N	80°53'40.946"W	7972.60	324.108	4.00	
14908.00	89.760	333.530	6589.22	7741.91	6542.14	-4719.53	1670102.12	14319345.79	39°25'56.208"N	80°53'41.525"W	8066.82	324.193	4.56	
15004.00	89.630	338.690	6589.73	7837.59	6629.88	-4758.40	1670063.27	14319433.50	39°25'57.076"N	80°53'42.019"W	8160.74	324.332	5.38	
15099.00	89.730	344.280	6590.26	7932.54	6719.93	-4788.55	1670033.13	14319523.51	39°25'57.966"N	80°53'42.402"W	8251.53	324.527	5.89	
15194.00	89.850	347.400	6590.61	8027.12	6812.03	-4811.79	1670009.90	14319615.57	39°25'58.876"N	80°53'42.697"W	8340.09	324.764	3.29	
15289.00	89.510	347.310	6591.14	8121.44	6904.73	-4832.59	1669989.11	14319708.23	39°25'59.793"N	80°53'42.960"W	8427.88	325.012	0.37	
15384.00	89.390	345.830	6592.05	8215.90	6997.12	-4854.65	1669967.06	14319800.59	39°26'00.706"N	80°53'43.240"W	8516.30	325.247	1.56	
15479.00	89.660	345.330	6592.84	8310.53	7089.12	-4878.31	1669943.41	14319892.55	39°26'01.616"N	80°53'43.540"W	8605.44	325.467	0.60	
15573.00	89.570	339.260	6593.47	8404.43	7178.63	-4906.88	1669914.85	14319982.02	39°26'02.501"N	80°53'43.903"W	8695.41	325.646	6.46	
15669.00	89.540	337.420	6594.22	8500.36	7267.84	-4942.31	1669879.43	14320071.20	39°26'03.383"N	80°53'44.353"W	8789.08	325.783	1.92	
15763.00	89.690	340.610	6594.85	8594.31	7355.60	-4975.97	1669845.79	14320158.92	39°26'04.251"N	80°53'44.781"W	8880.60	325.922	3.40	

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Meivin Unit 1H AWP Proj: 17695

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #08
Area	Tyler County, WV	Well	Meivin Unit 1H
Field	Tyler	Wellbore	Meivin Unit 1H AWB
Facility	Estack Pad		

WELLPATH DATA (381 stations)														
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Comments
17695.00	89.730	342.650	6595.33	8689.29	7445.75	-5005.90	1669815.86	14320249.04	39.2605.142°N	80.5345.161°W	8972.08	326.086	2.15	
15858.00	89.730	342.650	6595.33	8689.29	7445.75	-5005.90	1669815.86	14320249.04	39.2605.142°N	80.5345.161°W	8972.08	326.086	2.15	
15953.00	89.880	343.020	6595.65	8784.21	7536.52	-5033.94	1669787.84	14320339.77	39.2606.039°N	80.5345.517°W	9063.09	326.259	0.42	
16048.00	89.540	342.380	6596.14	8879.14	7627.22	-5062.19	1669759.60	14320430.43	39.2606.936°N	80.5345.876°W	9154.25	326.428	0.76	
16143.00	89.660	340.380	6596.80	8974.12	7717.24	-5092.52	1669729.28	14320520.42	39.2607.826°N	80.5346.261°W	9246.05	326.580	2.11	
16238.00	90.370	341.510	6596.77	9069.11	7807.03	-5123.54	1669698.28	14320610.17	39.2608.174°N	80.5346.655°W	9338.11	326.724	1.40	
16333.00	90.740	344.790	6595.85	9164.00	7897.93	-5151.07	1669670.75	14320701.04	39.2609.613°N	80.5347.005°W	9429.26	326.887	3.47	
16429.00	90.090	343.730	6595.16	9259.79	7990.33	-5177.11	1669644.72	14320793.40	39.2610.526°N	80.5347.335°W	9520.92	327.060	1.30	
16523.00	90.340	335.740	6594.80	9353.74	8079.08	-5207.96	1669613.89	14320882.12	39.2611.404°N	80.5347.727°W	9612.20	327.193	6.17	
16616.00	90.250	335.190	6594.33	9446.51	8164.40	-5244.94	1669576.92	14320967.40	39.2612.247°N	80.5348.197°W	9703.96	327.283	2.96	
16710.00	90.430	335.920	6593.77	9540.16	8249.97	-5283.84	1669538.04	14321052.94	39.2613.094°N	80.5348.692°W	9796.99	327.362	0.80	
16805.00	90.340	334.620	6593.13	9634.76	8336.26	-5323.58	1669498.32	14321139.19	39.2613.947°N	80.5349.197°W	9891.09	327.437	1.37	
16899.00	89.730	333.840	6593.07	9728.19	8420.91	-5364.44	1669457.47	14321223.80	39.2614.784°N	80.5349.717°W	9984.43	327.501	1.05	
16993.00	89.170	336.370	6593.97	9821.76	8506.16	-5404.01	1669417.92	14321309.02	39.2615.627°N	80.5350.220°W	10077.60	327.572	2.76	
17088.00	89.820	338.950	6594.81	9916.63	8594.02	-5440.11	1669381.83	14321396.85	39.2616.496°N	80.5350.679°W	10171.14	327.666	2.80	
17183.00	90.000	346.050	6594.21	10011.51	8684.56	-5468.66	1669353.29	14321487.35	39.2617.391°N	80.5351.041°W	10262.94	327.801	7.56	
17278.00	91.020	346.520	6592.62	10106.02	8776.84	-5491.18	1669330.78	14321579.59	39.2618.303°N	80.5351.327°W	10353.07	327.968	0.51	
17372.00	90.000	344.880	6591.79	10199.62	8867.92	-5514.40	1669307.57	14321670.64	39.2619.204°N	80.5351.621°W	10442.63	328.125	2.05	
17468.00	90.030	342.130	6591.76	10295.48	8959.96	-5541.65	1669280.33	14321762.64	39.2620.114°N	80.5351.967°W	10535.22	328.264	2.86	
17562.00	89.880	342.860	6591.83	10389.42	9049.61	-5569.93	1669252.06	14321852.25	39.2621.000°N	80.5352.326°W	10626.36	328.388	0.79	
17657.00	89.880	344.040	6592.03	10484.30	9140.67	-5596.99	1669225.01	14321943.28	39.2622.262°N	80.5352.670°W	10718.12	328.520	1.24	
17695.00	89.880	344.040	6592.11	10522.23	9177.20	-5607.44	1669214.57	14321979.80	39.2622.262°N	80.5352.803°W	10754.74	328.574	0.00	Projected MD at TD: 17695'

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Actual Wellpath Report

Melvin Unit 1H AWP Proj: 17695'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #08
Area	Tyler County, WV	Well	Melvin Unit 1H
Field	Tyler	Wellbore	Melvin Unit 1H AWB
Facility	Estlack Pad		

HOLE & CASING SECTIONS - Ref Wellbore: Melvin Unit 1H AWB Ref Wellpath: Melvin Unit 1H AWP Proj: 17695'									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
20in Conductor	32.00	72.00	40.00	32.00	72.00	0.00	0.00	-0.05	-0.07
13.375in Casing Surface	32.00	411.00	379.00	32.00	411.00	0.00	0.00	-0.68	-0.62
9.625in Casing Intermediate	32.00	2623.00	2591.00	32.00	2508.72	0.00	0.00	-317.97	-553.01

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Melvin Unit 1H POE - Plat	6573.00	-721.13	-2104.87	1672715.73	14312085.43	39°24'44.390"N	80°53'08.320"W	point
Melvin Unit 1H BHL - Plat	6599.00	9176.04	-5607.22	1669214.79	14321978.63	39°26'22.250"N	80°53'52.800"W	point
Melvin Unit 1H LP Rev-1	6599.00	-560.27	-2161.80	1672658.83	14312246.23	39°24'45.981"N	80°53'09.043"W	point
Melvin Unit 1H DC	6650.00	0.00	0.00	1674819.76	14312806.27	39°24'51.490"N	80°52'41.490"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: Melvin Unit 1H AWB Ref Wellpath: Melvin Unit 1H AWP Proj: 17695'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	
32.00	6060.13	BHI Generic gyro - northseeking (Standard)	01_SDI Gyro (100' - 6060.13')	Melvin Unit 1H AWB	
6060.13	17657.00	Navitrak w/ Surcon: (MagCAD, Short spacing)	02_BHI AT Curve [SS+MSA] <8-1/2"> (6060.13')(6277'- 17657')	Melvin Unit 1H AWB	
17657.00	17695.00	Blind Drilling (std)	Projection to bit	Melvin Unit 1H AWB	

RECEIVED
 Environmental Protection
 8/2018

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	9/30/2016
Job End Date:	9/30/2016
State:	West Virginia
County:	Tyler
API Number:	47-095-02337-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Melvin 1H
Latitude:	39.41430278
Longitude:	-80.87819167
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,592
Total Base Water Volume (gal):	18,475,237
Total Base Non Water Volume:	0



Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Fresh Water	Operator	Base Fluid					
			Water	7732-18-5	100.00000	90.65049	Density = 8.330
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.15552	

HCL >10%	Halliburton	Solvent					
				Listed Below			
FR-76	Halliburton	Friction Reducer					
				Listed Below			
SAND-COMMON WHITE - 100 MESH, 3307 LB BAG	Halliburton	Proppant					
				Listed Below			
MC B-8614	Halliburton	Biocide					
				Listed Below			
SP Breaker	Halliburton	Breaker					
				Listed Below			
SAND- PREMIUM WHITE-40/70, BULK	Halliburton	Proppant					
				Listed Below			
FDP-M1075-12	Halliburton	Scale Inhibitor					
				Listed Below			
HALOS ACID INHIBITOR	Halliburton	Corrosion Inhibitor					
				Listed Below			

WG-36 GELLING AGENT	Halliburton	Gelling Agent					
				Listed Below			
Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients.							
			Crystalline silica, quartz	14808-60-7	100.00000	9.16900	
			Hydrochloric acid	7647-01-0	30.00000	0.04666	
			Guar gum	9000-30-0	100.00000	0.02455	
			Telomer	Proprietary	10.00000		
			Ethylene Glycol	107-21-1	60.00000		
			Olefins	Proprietary	5.00000		
			Hydrotreated light petroleum distillate	64742-47-8	30.00000		
			Acrylic acid	79-10-7	0.01000		
			Ethoxylated alcohols	Proprietary	30.00000		
			Propargyl alcohol	107-19-7	10.00000		
			Sodium polyacrylate	9003-04-7	1.00000		
			Reaction product of acetophenone, formaldehyde, thiourea and oleic acid in dimethyl formamide	68527-49-1	30.00000		
			Methanol	67-56-1	60.00000		
			Fatty acids, tall oil	Proprietary	30.00000		
			Acrylamide acrylate copolymer	Proprietary	30.00000		Denise Tuck, Halliburton, 3000 N. Sam Houston Pkwy E., Houston, TX 77032, 281-871-6226
			Inorganic salt	Proprietary	30.00000		

• Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water
 • Information is based on the maximum potential for concentration and thus the total may be over 100%
 • If you are calculating a percentage of total ingredients do not add the water volume below the green line to the water volume above the green line
 Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.
 Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

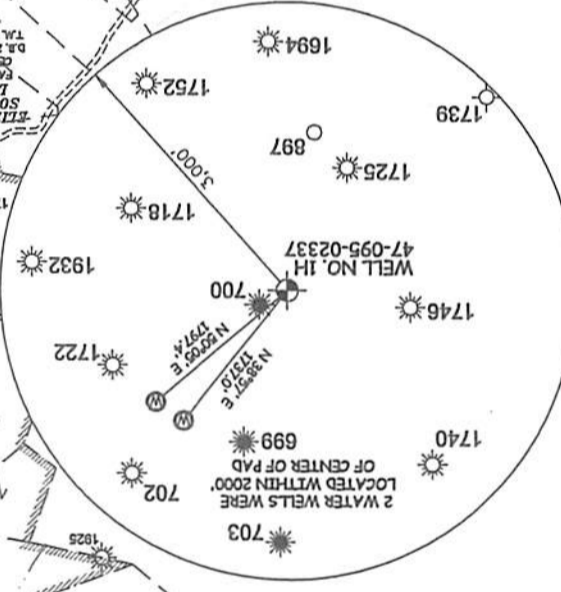
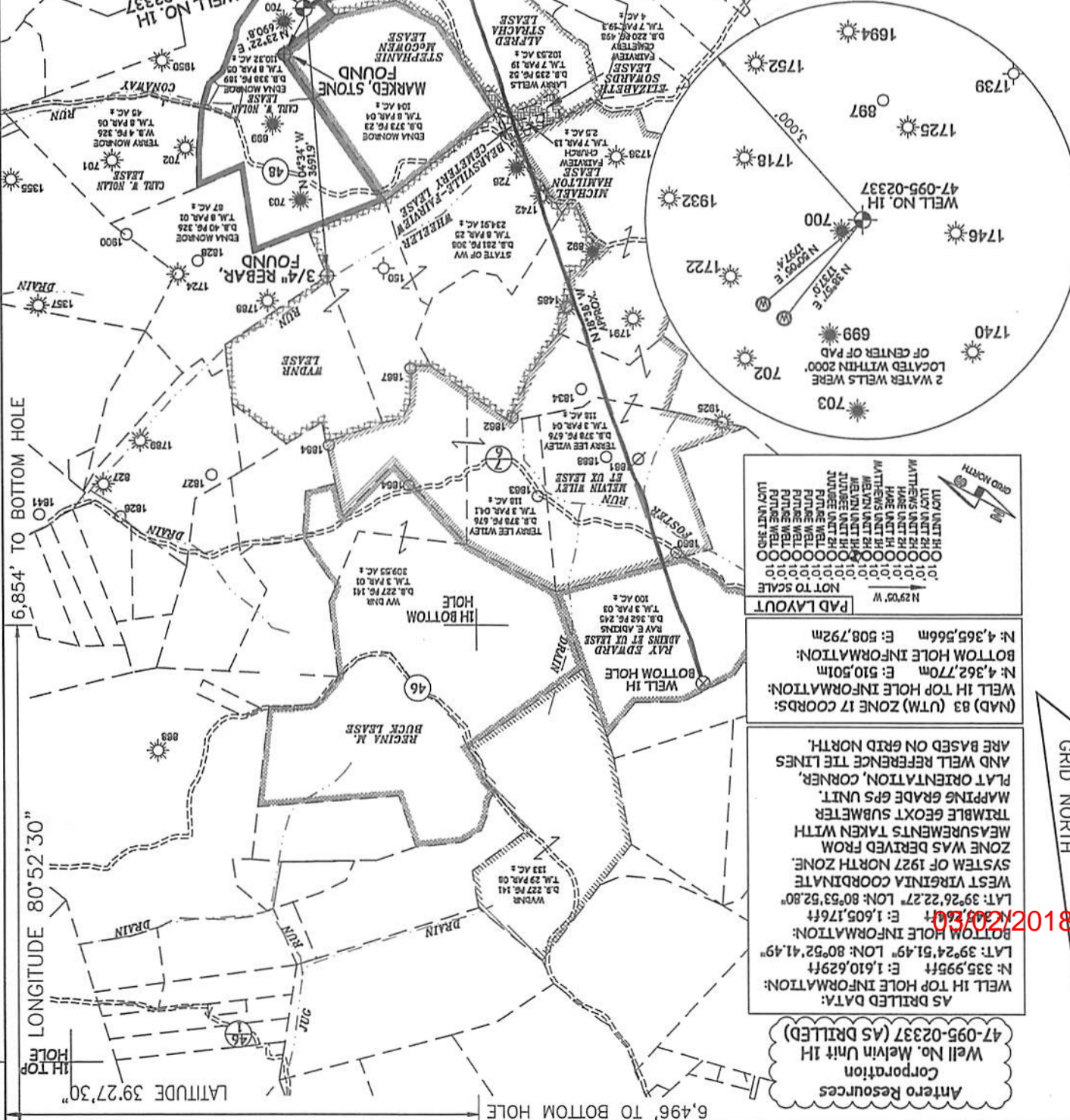
RECEIVED
 Office of Oil and Gas
 JAN 8 2018

WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW X
 LOCATION: ELEVATION 1,160' - ORIGINAL 1,142' - EXISTING WATERSHED HEADWATERS MIDDLE ISLAND CREEK
 QUADRANGLE MIDDLEBOURNE 7.5 DISTRICT CENTERVILLE COUNTY TYLER
 SURFACE OWNER EDNA MONROE ACREAGE 110.32 ACRES +/-
 OIL & GAS ROYALTY OWNER CARL W. NOLAN, E. THOMAS ESTLACK ET UX, ALFRED STRACHA, LEASE ACREAGE 116 AC.±; 85.5 AC.±; 101.2 AC.±
 ELIZABETH SOMARDS, MICHAEL HAMILTON, BEARSVILLE-FARMVIEW CEMETERY, MELVIN WILEY ET UX, WYDNR, RAY EDWARD ADKINS ET UX
 PROPOSED WORK: DRILL CONVERT REDRILL
 PLUG OFF OLD FORMATION PERFORMATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL
 (SPECIFY) (X) AS DRILLED
 TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,592' TVD 17,695' MD
 DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM
 ADDRESS 1615 WYNKOOP ST. DENVER, CO 80202
 ADDRESS 5400 D BIG TYLER ROAD CHARLESTON, WV 25313

PERMIT COUNTY NAME STATE COUNTY PERMIT
 02337 095 47 095 02337

JOB # 14-063WA
 DRAWING # MELVINHAD
 SCALE 1" = 2000'
 MINIMUM DEGREE OF ACCURACY SUBMETER
 PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS
 STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS
 OPERATOR'S WELL # MELVIN UNIT 1H1H
 DATE 03/08/17

OFFICE OF ENVIRONMENTAL PROTECTION, DIVISION OF ENVIRONMENTAL PROTECTION, WEST VIRGINIA 26415
 WILLOW LAND SURVEYING PLLC 220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415



AS DRILLED DATA:
 WELL 1H TOP HOLE INFORMATION:
 N: 335,995ft E: 1,610,629ft
 LAT: 39°24'51.49" LON: 80°52'41.49"
 BOTTOM HOLE INFORMATION:
 N: 330,256ft E: 1,605,176ft
 LAT: 39°26'22.27" LON: 80°53'52.80"
 WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE.
 ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE GEOXT SUBMETER MAPPING GRADE GPS UNIT. PLATFORM ORIENTATION, CORNER AND WELL REFERENCE TIE LINES ARE BASED ON GRID NORTH.

WELL 1H TOP HOLE INFORMATION:
 N: 4,362,770m E: 510,501m
 BOTTOM HOLE INFORMATION:
 N: 4,365,566m E: 508,792m

WV NORTH ZONE GRID NORTH
 ANTERO RESOURCES CORPORATION
 WELL NO. MELVIN UNIT 1H
 47-095-02337 (AS DRILLED)

LONGITUDE 80°52'30" LONGITUDE 80°52'30" LONGITUDE 80°52'30"
 LATITUDE 39°27'30" LATITUDE 39°25'00" LATITUDE 39°25'00"

NOTE:
 1. NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR SHEDDLE DAILY CATTLE OR POULTRY HUSBANDRY ARE LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL PAD.
 2. TOP HOLE DATA SHOWN HEREON WAS PROVIDED BY ALLEGANY SURVEYORS, INC. CENTER OF THE WELL PAD.
 3. AS DRILLED DATA WAS PROVIDED BY ANTERO RESOURCES CORPORATION. NOTES 2 AND 3, ONLY THE RELATIONSHIP TO THE DATA AND INFORMATION PROVIDED TO THE LEASE BOUNDARIES.
 4. THIS IS NOT CERTIFYING THE DATA AND INFORMATION LISTED IN THIS REPORT. THE DATA AND INFORMATION LISTED IN THIS REPORT IS PROVIDED BY ANTERO RESOURCES CORPORATION.
 5. THIS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.

RECEIVED
 JAN 8 2018
 WV Department of Environmental Protection

Antero Resources Corporation
Well No. Melvin Unit 1H
47-095-02337 (AS DRILLED)

AS DRILLED DATA:
WELL 1H TOP HOLE INFORMATION:
N: 335,995ft E: 1,610,629ft
LAT: 39°24'51.49" LON: 80°52'41.49"
BOTTOM HOLE INFORMATION:
N: 345,264ft E: 1,605,176ft
LAT: 39°26'22.27" LON: 80°53'52.80"
WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE. ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE GEOXT SUBMETER MAPPING GRADE GPS UNIT. PLAT ORIENTATION, CORNER, AND WELL REFERENCE TIE LINES ARE BASED ON GRID NORTH.

(NAD) 83 (UTM) ZONE 17 COORDS:
WELL 1H TOP HOLE INFORMATION:
N: 4,362,770m E: 510,501m
BOTTOM HOLE INFORMATION:
N: 4,365,566m E: 508,792m



WV NORTH ZONE
GRID NORTH

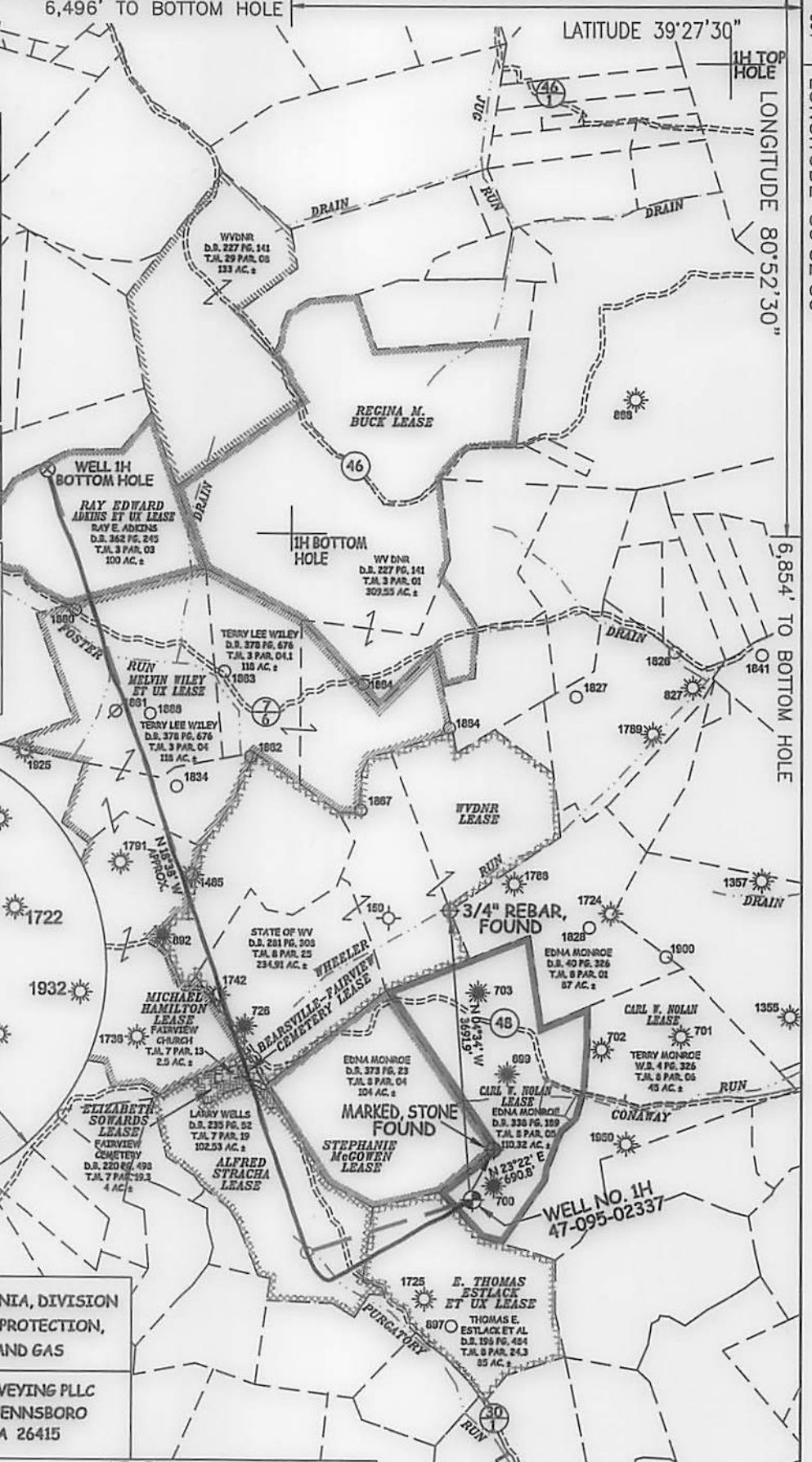
6,496' TO BOTTOM HOLE

LATITUDE 39°27'30"

LONGITUDE 80°52'30"

LONGITUDE 80°52'30"

6,854' TO BOTTOM HOLE



STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WILLOW LAND SURVEYING PLLC
220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

JOB # 14-063WA
DRAWING # MELVIN1HAD
SCALE 1" = 2000'
MINIMUM DEGREE OF ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS
STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS

LEGEND
--- Surface Owner Boundary Lines +/-
- - - Interior Surface Tracts +/-
⊕ Found monument, as noted
○ Proposed Well Path
○ As Drilled Well Path
DATE 03/08/17
OPERATOR'S WELL# MELVIN UNIT 1H

- NOTE
1. NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER DAIRY CATTLE OR POULTRY HUSBANDRY ARE LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL PAD.
2. TOP HOLE DATA SHOWN HEREON WAS PROVIDED BY ALLEGHENY SURVEYS, INC.
3. AS DRILLED DATA WAS PROVIDED BY ANTERO RESOURCES CORPORATION.
4. WLS IS NOT CERTIFYING THE DATA AND INFORMATION PROVIDED LISTED IN NOTES 2 AND 3, ONLY THE RELATIONSHIP TO THE DATA AND INFORMATION PROVIDED TO THE LEASE BOUNDARIES.
5. WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
LOCATION: ELEVATION 1,160' - ORIGINAL 1,142' - EXISTING ___ WATERSHED HEADWATERS MIDDLE ISLAND CREEK
QUADRANGLE MIDDLEBOURNE 7.5' DISTRICT CENTERVILLE COUNTY TYLER
SURFACE OWNER EDNA MONROE ACREAGE 110.32 ACRES +/-
OIL & GAS ROYALTY OWNER CARL W. NOLAN; E. THOMAS ESTLACK ET UX; ALFRED STRACHA; LEASE ACREAGE 116 AC.±; 85.5 AC.±; 101.2 AC.±
ELIZABETH SOWARDS; MICHAEL HAMILTON; BEARSVILLE-FAIRVIEW CEMETERY; MELVIN WILEY ET UX; WVDNR; RAY EDWARD ADKINS ET UX
PROPOSED WORK: DRILL ___ CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___
PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL
(SPECIFY) (X) AS DRILLED PLUG & ABANDON CLEAN OUT & REPLUG
TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,592' TVD 17,695' MD
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM
ADDRESS 1615 WYNKOOP ST. ADDRESS 5400 D BIG TYLER ROAD
FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313

03/02/2018

COUNTY NAME PERMIT