

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

API 47 - 017 - 06807 County Doddridge District West Union  
Quad West Union 7.5' Pad Name Addie Pad Field/Pool Name -----  
Farm name Antero Resources Corporation Well Number Addie Unit 2H  
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 4353811m Easting 516765m  
Landing Point of Curve Northing 4354059m Easting 517084m  
Bottom Hole Northing 4356132m Easting 516267m

Elevation (ft) 891' 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 5/11/2017 Date drilling commenced 7/6/2017 Date drilling ceased 11/22/2017  
Date completion activities began 2/10/2018 Date completion activities ceased 7/10/2018  
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 370' Open mine(s) (Y/N) depths No  
Salt water depth(s) ft 1495', 1535' Void(s) encountered (Y/N) depths No  
Coal depth(s) ft None Identified Cavern(s) encountered (Y/N) depths No  
Is coal being mined in area (Y/N) No

Reviewed by:  
\_\_\_\_\_

API 47-017 - 06807 Farm name Antero Resources Corporation Well number Addie Unit 2H

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"	95'	New	94#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"	493'	New	54#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2604'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	14749'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	6843'		4.7#, P-110		
Packer type and depth set		N/A					

Comment Details Cement Plug 12/6/2017 with 260 sacks @ 7616'

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	Class A	204 sx	15.6	1.18	241	0'	8 Hrs.
Surface	Class A	440 sx	15.6	1.19	524	0'	8 Hrs.
Coal							
Intermediate 1	Class A	900 sx	15.6	1.18	1062	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	674sx (Lead) 1112sx (Tail)	13.5(Lead), 15.2 (Tail)	1.53 (Lead), 1.83 (Tail)	3066	~500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 14749' MD, 6460' TVD (BHL), 6492' (Deepest Point Drilled) Loggers TD (ft) 14749' MD  
 Deepest formation penetrated Marcellus Plug back to (ft) N/A  
 Plug back procedure N/A

Kick off depth (ft) 6074'

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

API 47- 017 - 06807 Farm name Antero Resources Corporation Well number Addie Unit 2H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
<b>*PLEASE SEE ATTACHED EXHIBIT 1</b>					


Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
<b>*PLEASE SEE ATTACHED EXHIBIT 2</b>								


Please insert additional pages as applicable.

WR-35  
Rev. 8/23/13

API 47- 017 - 06807

Farm name Antero Resources Corporation Well number Addie Unit 2H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
Marcellus	6448' (TOP) TVD	6886' (TOP) MD
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 3600 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 14843 mcfpd Oil 104 bpd NGL --- bpd Water 3105 bpd GAS MEASURED BY  Estimated  Orifice  Pilot

LITHOLOGY/ FORMATION	TOP	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H <sub>2</sub> S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	

**\*PLEASE SEE ATTACHED EXHIBIT 3**


Please insert additional pages as applicable.

Drilling Contractor Frontier Drilling LLC  
Address 562 Spring Run Road City Pennsboro State WV Zip 26415

Logging Company Allied Horizontal  
Address 381 Colonial Manor Rd City North Huntington State PA Zip 15642

Cementing Company C&J Energy Services  
Address 1650 Hackers Creek City Lane Jew State WV Zip 26378

Stimulating Company Keane Group  
Address 5825 North Sam Houston Parkway West, Suite 600 City Houston State TX Zip 77086

Please insert additional pages as applicable.

Completed by Karin Cox Telephone 303-357-6820  
Signature  Title Permitting Agent Date 11/9/2018

API 47-017-06807 Farm Name Antero Resources Corp Well Number Addie Unit 2H

**EXHIBIT 1**

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	2/10/2018	14479	14647	48	Marcellus
2	2/25/2018	14280	14448	48	Marcellus
3	2/26/2018	14081	14249	48	Marcellus
4	2/26/2018	13881	14049	48	Marcellus
5	2/27/2018	13682	13850	48	Marcellus
6	2/28/2018	13483	13651	48	Marcellus
7	2/28/2018	13284	13452	48	Marcellus
8	3/1/2018	13084	13252	48	Marcellus
9	3/1/2018	12885	13053	48	Marcellus
10	3/2/2018	12686	12854	48	Marcellus
11	3/2/2018	12486	12654	48	Marcellus
12	3/3/2018	12287	12455	48	Marcellus
13	3/3/2018	12088	12256	48	Marcellus
14	3/3/2018	11889	12057	48	Marcellus
15	3/4/2018	11689	11857	48	Marcellus
16	3/5/2018	11490	11658	48	Marcellus
17	3/6/2018	11291	11459	48	Marcellus
18	4/16/2018	11091	11259	48	Marcellus
19	4/17/2018	10892	11060	48	Marcellus
20	4/17/2018	10693	10861	48	Marcellus
21	4/18/2018	10494	10662	48	Marcellus
22	4/18/2018	10294	10462	48	Marcellus
23	4/18/2018	10095	10263	48	Marcellus
24	4/19/2018	9896	10064	48	Marcellus
25	4/19/2018	9696	9864	48	Marcellus
26	4/20/2018	9497	9665	48	Marcellus
27	4/20/2018	9298	9466	48	Marcellus
28	4/21/2018	9099	9267	48	Marcellus
29	4/21/2018	8899	9067	48	Marcellus
30	4/21/2018	8700	8868	48	Marcellus
31	4/22/2018	8501	8669	48	Marcellus
32	4/22/2018	8301	8469	48	Marcellus
33	4/22/2018	8102	8270	48	Marcellus
34	4/23/2018	7903	8071	48	Marcellus
35	4/23/2018	7704	7872	48	Marcellus
36	4/24/2018	7504	7672	48	Marcellus
37	4/24/2018	7305	7473	48	Marcellus
38	4/25/2018	7106	7274	48	Marcellus
39	4/25/2018	6906	7075	48	Marcellus

## 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	2/10/2018	73.6	7463	5440	4636	465263	11931	N/A
2	2/25/2018	71.7	7542	5658	3531	464411	10366	N/A
3	2/26/2018	70.6	7220	5597	4263	460660	10339	N/A
4	2/26/2018	71.2	7577	5381	3839	505590	10382	N/A
5	2/27/2018	72.6	7436	5779	4012	504000	10354	N/A
6	2/28/2018	79.6	7667	5224	3711	482452	10122	N/A
7	2/28/2018	78.8	7224	4852	3935	504350	10452	N/A
8	3/1/2018	75.5	7342	5118	3900	504343	10715	N/A
9	3/1/2018	76.5	7885	5449	3632	504600	10328	N/A
10	3/2/2018	76.9	7224	5529	4903	504500	10219	N/A
11	3/2/2018	78	7457	6108	5396	506180	10221	N/A
12	3/3/2018	73.6	6927	5367	5058	505700	10178	N/A
13	3/3/2018	78.9	7620	5588	5173	506580	10137	N/A
14	3/3/2018	73.5	7385	5414	4749	504300	11552	N/A
15	3/4/2018	78.4	7245	5412	5206	505900	10178	N/A
16	3/5/2018	75.7	7037	4069	5174	505000	10176	N/A
17	3/6/2018	79.9	7331	5431	5356	507000	10061	N/A
18	4/16/2018	78.9	7202	5109	5112	504750	10106	N/A
19	4/17/2018	77.1	7020	5879	4667	504350	10151	N/A
20	4/17/2018	76.5	7163	5858	5241	504000	10159	N/A
21	4/18/2018	78.9	7186	7873	5200	494200	10222	N/A
22	4/18/2018	79.3	7021	5691	4911	504725	10121	N/A
23	4/18/2018	77.7	7162	5650	4877	509000	10136	N/A
24	4/19/2018	77.9	6927	5104	4911	511306	10118	N/A
25	4/19/2018	79.5	7023	5356	5089	511420	10961	N/A
26	4/20/2018	79.4	6939	5528	5378	504402	11321	N/A
27	4/20/2018	79.3	6818	5679	5040	506000	10158	N/A
28	4/21/2018	80.8	7177	5505	4798	496000	10120	N/A
29	4/21/2018	80	6846	5907	4889	507694	10034	N/A
30	4/21/2018	79	6806	5594	5120	506000	10105	N/A
31	4/22/2018	80.7	6927	5311	5248	510085	10152	N/A
32	4/22/2018	80	6793	5904	5090	522354	10036	N/A
33	4/22/2018	76.8	6565	5608	5158	505000	12803	N/A
34	4/23/2018	80.4	6501	5724	4144	504350	10014	N/A
35	4/23/2018	80.2	6714	5783	5069	504000	10049	N/A
36	4/24/2018	80.6	6607	5701	4279	504646	9975	N/A
37	4/24/2018	78.5	6663	5626	4116	504000	10062	N/A
38	4/25/2018	78.8	6783	5438	4583	504660	11423	N/A
39	4/25/2018	78.9	6496	6206	4274	505150	10112	N/A
	AVG=	<b>78</b>	<b>7,101</b>	<b>5,576</b>	<b>4,709</b>	<b>19,568,921</b>	<b>406,049</b>	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
Shale	0	197	0	197
Sandy shale	197	357	197	357
Sandstone	357	417	357	417
Sandstone tr coal	417	437	417	437
Sandy shale	437	537	437	537
Shale	537	737	537	737
Silty sandstone	737	817	737	817
Silty shale	817	997	817	997
Sandstone	997	1,017	997	1,017
Silty shale	1,017	1,277	1,017	1,277
Sandstone	1,277	1,417	1,277	1,417
Sandy shale	1,417	1,677	1,417	1,677
Silty shale	1,677	1,733	1,677	1,737
Big Lime	1,733	2,279	1,737	2,283
Fifty Foot Sandstone	2,279	2,492	2,283	2,496
Gordon	2,492	2,712	2,496	2,716
Fifth Sandstone	2,712	2,772	2,716	2,776
Bayard	2,772	3,554	2,776	3,588
Speechley	3,554	3,751	3,588	3,799
Balltown	3,751	4,352	3,799	4,446
Bradford	4,352	4,794	4,446	4,924
Benson	4,794	5,088	4,924	5,240
Alexander	5,088	6,043	5,240	6,263
Sycamore	6,043	6,222	6,263	6,481
Middlesex	6,222	6,353	6,481	6,687
Burkett	6,353	6,380	6,687	6,745
Tully	6,380	6,423	6,745	6,861
Marcellus	6,423	NA	6,861	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.

# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	2/24/2018
Job End Date:	4/25/2018
State:	West Virginia
County:	Doddridge
API Number:	47-017-06807-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Addle 2H
Latitude:	39.33348000
Longitude:	-80.80564000
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,491
Total Base Water Volume (gal):	17,437,560
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
Water	Ascent	Carrier/Base Fluid	Water	7732-18-5	100.00000	87.91993	None
Sand (Proppant)	Keane	Proppant	Water	7732-18-5	100.00000	87.91993	None
KFR-16FW	Keane	Friction Reducer	Crystalline silica: Quartz (SiO2)	14808-60-7	100.00000	11.83792	None
			Water	7732-18-5	60.00000	0.03381	None
			Distillates (petroleum), hydrotreated light	64742-47-8	20.00000	0.01127	None
			oleic acid diethanolamide	93-83-4	1.50000	0.00085	None
			ammonium chloride	12125-02-9	1.50000	0.00085	None
			alcohols, C12-16, ethoxylated	68551-12-2	1.00000	0.00056	None
KWG-111LS	Keane	Gel	Distillates (petroleum), hydrotreated light	64742-47-8	55.00000	0.01573	None
			Guar gum	9000-30-0	55.00000	0.01573	None
Hydrochloric Acid (15%)	Keane	Acidizing	Hydrochloric Acid	7647-01-0	15.00000	0.01993	None
MBC-516W	Keane	Biocide					



			Water	7732-18-5	56.70000	0.00513	None	
			Glutaral	111-30-8	26.70000	0.00241	None	
			didecyl/dimethylammonium chloride	7173-51-5	8.00000	0.00072	None	
			quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	68424-85-1	5.30000	0.00048	None	
			ethonal	64-17-5	2.80000	0.00028	None	
KSI-19	Keane	Scale Inhibitor	Methanol	67-56-1	30.00000	0.00416	None	
KWBO-2	Keane	Breaker	Sodium persulfate	7775-27-1	99.00000	0.00061	None	
KAI-12	Keane	Acid Inhibitor	Ethylene glycol	107-21-1	40.00000	0.00068	None	
			dipropylene glycol, monomethyl ether	34590-94-8	20.00000	0.00044	None	
			Cinnamaldehyde	104-55-2	10.00000	0.00022	None	
			formic acid	64-18-6	10.00000	0.00022	None	
			Ethoxylated alcohol	68131-39-5	10.00000	0.00002	None	
			Tar bases, quinoline derivs., benzyl chloride-quaternized isoproyl alcohol	72480-70-7	10.00000	0.00002	None	
			isoproyl alcohol	67-63-0	5.00000	0.00001	None	
KFEAC-30	Keane	Iron Control	Citric acid	77-92-9	30.00000	0.00017	None	
			Acetic acid	64-19-7	5.00000	0.00003	None	
Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.								
Other Chemical(s)	Listed Above	See Trade Name(s) List						
			Distillates (petroleum), hydrotreated light	64742-47-8	55.00000	0.01573		
			Distillates (petroleum), hydrotreated light	64742-47-8	20.00000	0.01127		
			Glutaral	111-30-8	26.70000	0.00241		
			ammonium chloride	12125-02-9	1.50000	0.00085		
			oleic acid diethanolamide	93-83-4	1.50000	0.00085		
			didecyl/dimethylammonium chloride	7173-51-5	8.00000	0.00072		
			alcohols, C12-16, ethoxylated	68551-12-2	1.00000	0.00056		
			quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	68424-85-1	5.30000	0.00048		
			ethonal	64-17-5	2.80000	0.00025		
			Citric acid	77-92-9	30.00000	0.00017		
			dipropylene glycol, monomethyl ether	34590-94-8	20.00000	0.00004		
			Tar bases, quinoline derivs., benzyl chloride-quaternized	72480-70-7	10.00000	0.00002		
			formic acid	64-18-6	10.00000	0.00002		
			Ethoxylated alcohol	68131-39-5	10.00000	0.00002		
			Cinnamaldehyde	104-55-2	10.00000	0.00002		

			isopropyl alcohol	67-63-0	5.00000	0.00001	
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\* Total Water Volume sources may include fresh water, produced water, and/or recycled water  
 \*\* Information is based on the maximum potential for concentration and thus the total may be over 100%

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)

# ANTERO RESOURCES CORPORATION

Location: Doddridge Co., WV  
 Field: Doddridge  
 Facility: Addie Pad

Slot: Slot #07

Well: Addie Unit 2H

Wellbore: Addie Unit 2H PWB



Projected MD at TD: 14749' : 6461.86ft TVD, 7617.83ft N, 1637.25ft W



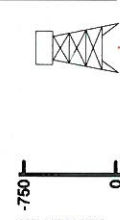
API: 47-017-068807-0000

BHI Job #: 8877723

Rig: Frontier 22

Duration: 11/18/2017-11/20/2017

Plot reference wellbore is Addie Unit 2H PWB Ex-Rev-A-0	Grid System: NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to Frontier 22 (RKB)	North Reference: Grid north
Measured depths are referenced to Frontier 22 (RKB)	Scale: True distance
Frontier 22 (RKB) to Mean Sea Level: 914.5 feet	Depths are in feet
Mean Sea Level to Mud line (At Slot: Slot #07): -890 feet	Created by: delast on 2018-01-11
Coordinates are in feet referenced to Slot	Database: WA, MPL, EasternUS, Dein



Gyrodatta MS Gyro <17-1/2>: (100-475) : 0.15° Inc, 109.50ft TVD, 0.00ft VS

Gyrodatta MS Gyro <12-1/4>: (475)(532-712) : 0.38° Inc, 541.50ft MD, 541.50ft TVD, 0.82ft VS

WFT EM <12-1/4>: (712)(793-2521) : 4.33° Inc, 802.50ft MD, 802.32ft TVD, -6.25ft VS

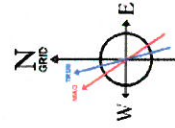
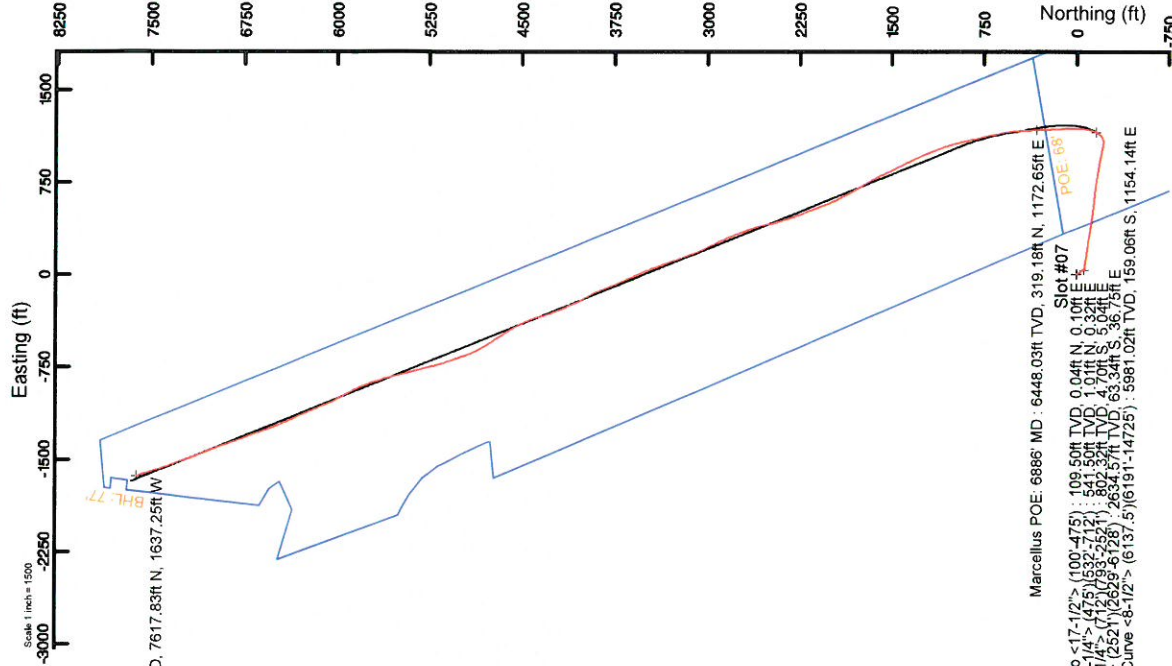
Marcellus POE: 6886' MD : 72.51° Inc, 6886.00ft MD, 6448.03ft TVD, -143.56ft VS

BHI AT Curve <8-1/2>: (6137.5)(6191-14725) : 24.80° Inc, 6191.00ft MD, 5881.02ft TVD, -580.00ft VS

Location Information			
Facility Name	Grid East (US ft)	Grid North (US ft)	Longitude
Addie Pad	1695325.147	14283415.126	80°48'20.930"W
Slot	Local N (ft)	Local E (ft)	Grid North (US ft)
Slot #07	-0.80	50.29	1695375.418
Comment	Addie Unit 2H		39°20'00.520"N
Frontier 22 (RKB) to Mud line (At Slot: Slot #07)			80°48'20.290"W
Mean Sea Level to Mud line (At Slot: Slot #07)			24.5ft
Frontier 22 (RKB) to Mean Sea Level			-890ft
			914.5ft

Well Profile Data						
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)
The On	6137.50	22.920	37.470	5932.07	-177.25	1142.55
Prof. To Bottom	6210.50	25.410	30.950	5998.68	-152.53	1159.26
End of 3D Arc	6386.42	33.500	15.751	6151.95	-73.19	1191.95
POE	6877.57	70.762	350.500	6451.00	302.71	1190.41
Landing Pt.	7118.08	90.000	350.500	6491.00	535.48	1151.45
On Azimuth	7535.07	90.000	337.990	6491.00	936.01	1038.45
BHL	14785.07	90.000	337.990	6491.00	7657.61	-1678.65
						0.00
						7728.62

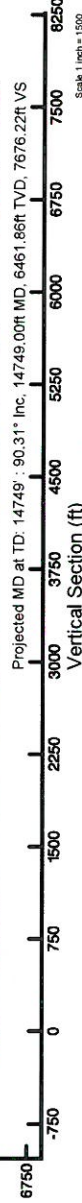
Well Data		
Slot	Well	Wellbore
Slot #07	Addie Unit 2H	Addie Unit 2H AWB
Slot #07	Addie Unit 2H	Addie Unit 2H PWB
		Addie Unit 2H PWB Ex-Rev-A-0



User specified Dip: 66.59° Field: 52073 nT  
 Magnetic: North is 63 degrees West of True North at 16/Nov/2017  
 To correct azimuth from True to Grid subtract 0.12 degrees  
 To correct azimuth from Magnetic to Grid subtract 7.75 degrees

True Vertical Depth (ft)

Scale 1 inch = 1500



Scale 1 inch = 1500

Azimuth 337.99° with reference 0.00 N, 0.00 E



# Actual Wellpath Report

Addie Unit 2H AWP Proj: 14749'

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REFERENCE WELLPATH IDENTIFICATION	
Operator	ANTERO RESOURCES CORPORATION
Area	Doddridge Co., WV
Field	Doddridge
Facility	Addie Pad
Slot	Slot #07
Well	Addie Unit 2H
Wellbore	Addie Unit 2H AWB

REPORT SETUP INFORMATION	
Projection System	NAD27 / UTM Zone 17 North, US feet
North Reference	Grid
Scale	0.999603
Convergence at slot	0.12° East
Software System	WellArchitect® 5.1
User	Delaset
Report Generated	11/Jan/2018 at 11:49
Database/Source file	WA_MPL_EasternUS_Defn/Addie_Unit_2H_AWP_Proj_14749_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-0.90	50.29	1695375.42	14283414.22	39°20'00.520"N	80°48'20.290"W
Facility Reference Pt			1695325.15	14283415.13	39°20'00.530"N	80°48'20.930"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM	
Calculation method	Minimum curvature
Horizontal Reference Pt	Frontier 22 (RKB) to Facility Vertical Datum
Vertical Reference Pt	Slot
MD Reference Pt	Frontier 22 (RKB)
Field Vertical Reference	Frontier 22 (RKB) to Mean Sea Level
	Frontier 22 (RKB) to Mud Line at Slot (Slot #07)
	Section Origin
	Section Azimuth
	24.50ft
	914.50ft
	24.50ft
	N 0.00, E 0.00 ft
	337.99°



# Actual Wellpath Report

Addie Unit 2H AWP Proj: 14749'  
Page 2 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Doddridge Co., WV	Well	Addie Unit 2H
Field	Doddridge	Wellbore	Addie Unit 2H AWB
Facility	Addie Pad		

WELLPATH DATA (181 stations) † = interpolated/extrapolated station																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
0.00H	0.000	67.120	0.00	0.00	0.00	0.00	1695375.42	14283414.22	39°20'00.520"N	80°48'20.290"W	0.00	0.000	0.00	0.00	0.00	
24.50	0.000	67.120	24.50	0.00	0.00	0.00	1695375.42	14283414.22	39°20'00.520"N	80°48'20.290"W	0.00	0.000	0.00	0.00	0.00	
109.50	0.150	67.120	109.50	0.00	0.04	0.10	1695375.52	14283414.27	39°20'00.520"N	80°48'20.289"W	0.11	67.120	0.18	0.18	78.96	Syrodata MS Gyro <17-1/2"> (100'-475')
209.50	0.030	252.870	209.50	0.01	0.09	0.20	1695375.62	14283414.31	39°20'00.521"N	80°48'20.287"W	0.22	66.425	0.18	-0.12	-174.25	
309.50	0.120	329.780	309.50	0.11	0.17	0.12	1695375.54	14283414.39	39°20'00.522"N	80°48'20.288"W	0.21	35.424	0.12	0.09	76.91	
409.50	0.160	354.480	409.50	0.35	0.40	0.05	1695375.47	14283414.62	39°20'00.524"N	80°48'20.289"W	0.40	7.746	0.07	0.04	24.70	
484.50	0.370	15.190	484.50	0.64	0.74	0.11	1695375.53	14283414.96	39°20'00.527"N	80°48'20.289"W	0.74	8.311	0.30	0.28	27.61	
631.50	0.640	105.980	631.49	0.56	1.03	0.32	1695375.73	14283415.26	39°20'00.530"N	80°48'20.286"W	1.06	17.332	0.48	0.02	75.40	Syrodata MS Gyro <12-1/4"> (475')(532'-712')
721.50	2.380	145.130	721.46	-1.57	-0.64	2.60	1695378.02	14283413.58	39°20'00.514"N	80°48'20.257"W	2.68	103.778	2.14	1.93	43.50	
802.50	4.330	151.270	802.32	-6.25	-4.70	5.04	1695380.45	14283409.52	39°20'00.473"N	80°48'20.226"W	6.89	133.023	2.44	2.41	7.58	MFT EM <12-1/4"> (712')(793'-2521')
895.50	6.070	148.250	894.93	-14.58	-11.96	9.31	1695384.73	14283402.27	39°20'00.402"N	80°48'20.172"W	15.16	142.088	1.89	1.87	-3.25	
990.50	6.830	144.460	989.33	-25.02	-20.83	15.24	1695390.65	14283393.40	39°20'00.314"N	80°48'20.097"W	25.81	143.810	0.92	0.80	-3.99	
1085.50	7.300	138.950	1083.61	-36.22	-29.98	22.49	1695397.89	14283384.26	39°20'00.223"N	80°48'20.005"W	37.47	143.126	0.87	0.49	-5.80	
1179.50	6.230	144.370	1176.96	-46.82	-38.63	29.38	1695404.79	14283375.61	39°20'00.138"N	80°48'19.917"W	48.53	142.743	1.32	-1.14	5.77	
1273.50	4.080	154.120	1270.57	-55.12	-45.78	33.81	1695409.22	14283368.46	39°20'00.067"N	80°48'19.861"W	56.91	143.553	2.46	-2.29	10.37	
1368.50	2.580	175.710	1365.41	-60.53	-50.96	35.45	1695410.85	14283363.29	39°20'00.016"N	80°48'19.840"W	62.07	145.176	2.03	-1.58	22.73	
1462.50	2.390	193.780	1459.33	-64.13	-54.97	35.14	1695410.54	14283359.28	39°19'59.976"N	80°48'19.844"W	65.24	147.412	0.85	-0.20	19.22	
1557.50	3.180	171.560	1554.21	-68.30	-59.50	35.05	1695410.46	14283354.75	39°19'59.931"N	80°48'19.846"W	69.06	149.497	1.39	0.83	-23.39	
1652.50	3.100	157.060	1649.07	-73.43	-64.47	36.44	1695411.84	14283349.78	39°19'59.882"N	80°48'19.828"W	74.06	150.524	0.84	-0.08	-15.26	
1746.50	1.480	148.960	1743.00	-77.17	-67.85	38.06	1695413.46	14283346.40	39°19'59.849"N	80°48'19.808"W	77.80	150.713	1.75	-1.72	-8.62	
1841.50	1.340	11.180	1837.98	-77.45	-67.81	38.91	1695414.31	14283346.44	39°19'59.849"N	80°48'19.797"W	78.18	150.157	2.77	-0.15	-145.03	
1936.50	3.370	0.040	1932.90	-73.93	-63.93	39.12	1695414.52	14283350.32	39°19'59.887"N	80°48'19.794"W	74.95	148.536	2.18	2.14	-11.73	
2030.50	2.880	4.180	2026.76	-69.25	-58.81	39.30	1695414.70	14283355.43	39°19'59.938"N	80°48'19.792"W	70.73	146.251	0.57	-0.52	4.40	
2124.50	0.530	333.680	2120.71	-66.70	-56.07	39.28	1695414.68	14283358.18	39°19'59.965"N	80°48'19.792"W	68.46	144.988	2.59	-2.50	-32.45	
2219.50	1.820	200.520	2215.70	-67.37	-57.09	38.55	1695413.95	14283357.16	39°19'59.955"N	80°48'19.801"W	68.89	145.968	2.33	1.36	-140.17	
2313.50	2.430	196.870	2309.63	-70.03	-60.39	37.45	1695412.85	14283353.85	39°19'59.922"N	80°48'19.815"W	71.06	148.196	0.66	0.65	-3.88	
2408.50	1.330	195.650	2404.58	-72.47	-63.38	36.57	1695411.97	14283350.87	39°19'59.893"N	80°48'19.826"W	73.17	150.016	1.16	-1.16	-1.28	
2503.50	0.140	46.910	2499.57	-73.30	-64.36	36.36	1695411.76	14283349.89	39°19'59.883"N	80°48'19.829"W	73.92	150.540	1.53	-1.25	-156.57	
2530.50	0.320	42.600	2526.57	-73.25	-64.29	36.43	1695411.83	14283349.96	39°19'59.884"N	80°48'19.828"W	73.89	150.459	0.67	0.67	-15.96	



# Actual Wellpath Report

Addie Unit 2H AWP Proj: 14749'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #07
ANTERO RESOURCES CORPORATION	Well	Addie Unit 2H
Doddridge Co., WV	Wellbore	Addie Unit 2H AWB
Doddridge		
Addie Pad		

## WELLPATH DATA (181 stations)

MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	VertSect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
2638.50	0.780	9.280	2634.57	-72.50	-63.34	36.75	1695412.16	14283350.91	39°19'59.893"N	80°48'19.824"W	73.23	149.874	0.50	0.43	-30.85	WFT EM -8-3/4" > (2521)(2629-6128)
2733.50	2.940	86.640	2729.52	-72.72	-62.56	39.29	1695414.69	14283351.69	39°19'59.901"N	80°48'19.792"W	73.87	147.868	3.02	2.27	81.43	
2827.50	6.730	100.300	2823.17	-76.44	-63.40	47.12	1695422.52	14283350.85	39°19'59.892"N	80°48'19.692"W	78.99	143.380	4.19	4.03	14.53	
2921.50	10.140	97.090	2916.14	-83.41	-65.41	60.75	1695436.15	14283348.84	39°19'59.872"N	80°48'19.519"W	89.27	137.112	3.66	3.63	-3.41	
3016.50	11.780	97.640	3009.40	-82.27	-67.73	78.67	1695454.05	14283346.52	39°19'59.849"N	80°48'19.291"W	103.80	130.728	1.73	1.73	0.58	
3111.50	13.700	98.630	3102.06	-102.81	-70.71	99.40	1695474.78	14283343.54	39°19'59.819"N	80°48'19.027"W	121.98	125.425	2.03	2.02	1.04	
3207.50	16.110	100.170	3194.83	-115.69	-73.33	123.75	1695499.12	14283339.49	39°19'59.778"N	80°48'18.717"W	144.59	121.138	2.54	2.51	1.60	
3302.50	19.240	98.230	3285.33	-130.60	-79.33	152.23	1695527.58	14283334.92	39°19'59.733"N	80°48'18.355"W	171.06	117.527	3.35	3.29	-2.04	
3396.50	19.280	96.710	3374.07	-145.86	-83.36	182.97	1695556.31	14283330.89	39°19'59.692"N	80°48'17.964"W	201.66	114.495	0.54	0.04	-1.62	
3491.50	21.060	97.480	3463.24	-161.80	-87.42	215.47	1695590.80	14283326.84	39°19'59.651"N	80°48'17.550"W	232.53	112.083	1.89	1.87	0.81	
3586.50	20.990	96.750	3551.92	-178.39	-91.64	249.29	1695624.61	14283322.62	39°19'59.609"N	80°48'17.120"W	265.60	110.184	0.29	-0.07	-0.77	
3680.50	21.050	102.020	3639.67	-195.94	-97.14	282.52	1695657.83	14283317.13	39°19'59.554"N	80°48'16.697"W	298.76	108.974	2.01	0.06	5.61	
3774.50	20.880	100.880	3727.45	-214.48	-103.81	315.49	1695690.78	14283310.45	39°19'59.487"N	80°48'16.278"W	332.13	108.214	0.47	-0.18	-1.21	
3869.50	20.190	98.800	3816.41	-232.07	-109.52	348.31	1695723.59	14283304.75	39°19'59.430"N	80°48'15.860"W	365.12	107.454	1.06	-0.73	-2.19	
3964.50	18.920	96.850	3905.93	-247.90	-113.86	379.81	1695755.07	14283300.41	39°19'59.387"N	80°48'15.460"W	396.51	106.688	1.50	-1.34	-2.05	
4058.50	20.060	97.720	3994.54	-263.25	-117.85	410.91	1695786.17	14283296.42	39°19'59.346"N	80°48'15.064"W	427.48	106.002	1.25	1.21	0.93	
4152.50	22.110	98.370	4082.24	-280.20	-122.59	444.39	1695819.63	14283291.68	39°19'59.299"N	80°48'14.638"W	460.99	105.422	2.19	2.18	0.69	
4246.50	23.830	99.090	4168.79	-298.95	-128.16	480.65	1695855.88	14283286.11	39°19'59.243"N	80°48'14.177"W	497.44	104.930	1.85	1.83	0.77	
4340.50	23.490	97.440	4254.89	-317.97	-133.59	517.98	1695893.19	14283280.69	39°19'59.189"N	80°48'13.702"W	534.93	104.462	0.79	-0.36	-1.76	
4435.50	23.040	95.420	4342.16	-335.85	-137.80	555.26	1695930.45	14283276.48	39°19'59.146"N	80°48'13.227"W	572.10	103.937	0.96	-0.47	-2.13	
4529.50	22.450	94.050	4428.85	-352.21	-140.80	591.47	1695966.66	14283273.48	39°19'59.116"N	80°48'12.767"W	608.00	103.390	0.84	-0.63	-1.46	
4623.50	22.960	96.310	4515.57	-368.79	-144.08	627.60	1696002.77	14283270.20	39°19'59.083"N	80°48'12.307"W	643.93	102.930	1.07	0.54	2.40	
4718.50	22.240	95.250	4603.28	-385.81	-147.77	663.92	1696039.08	14283266.52	39°19'59.045"N	80°48'11.845"W	680.17	102.547	0.87	-0.76	-1.12	
4812.50	21.830	98.230	4690.41	-402.76	-151.90	698.93	1696074.07	14283262.39	39°19'59.004"N	80°48'11.399"W	715.25	102.261	1.27	-0.44	3.17	
4907.50	21.170	99.120	4778.80	-420.53	-157.14	733.35	1696108.48	14283257.14	39°19'58.951"N	80°48'10.961"W	750.00	102.094	0.77	-0.69	0.94	
5002.50	21.180	97.730	4867.39	-437.91	-162.17	767.30	1696142.41	14283252.12	39°19'58.901"N	80°48'10.530"W	784.25	101.934	0.53	0.01	-1.46	
5096.50	21.440	100.230	4954.96	-455.50	-167.51	801.03	1696176.13	14283246.78	39°19'58.847"N	80°48'10.100"W	818.36	101.811	1.01	0.28	2.66	
5191.50	21.650	100.000	5043.32	-474.05	-173.63	835.38	1696210.46	14283240.66	39°19'58.786"N	80°48'09.663"W	853.23	101.742	0.24	0.22	-0.24	
5285.50	21.660	98.740	5130.69	-492.11	-179.28	869.60	1696244.67	14283235.02	39°19'58.729"N	80°48'09.228"W	887.89	101.649	0.49	0.01	-1.34	
5380.50	20.160	99.980	5219.43	-509.75	-184.78	903.05	1696278.11	14283229.52	39°19'58.674"N	80°48'08.803"W	921.76	101.564	1.65	-1.58	1.31	



# Actual Wellpath Report

Addie Unit 2H AWP Proj: 14749'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #07
ANTERO RESOURCES CORPORATION	Well	Addie Unit 2H
Doddridge Co., WV	Wellbore	Addie Unit 2H AWB
Doddridge		
Addie Pad		

## WELLPATH DATA (181 stations) † = interpolated/extrapolated station

MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Comments
5475.50	19.150	100.650	5308.90	-526.83	-190.50	934.49	1696309.53	14283223.80	39°19'58.617"N	80°48'08.403"W	953.71	101.522	1.09	-1.06	0.71	
5569.50	18.600	99.870	5397.84	-543.07	-195.92	964.41	1696339.44	14283218.38	39°19'58.563"N	80°48'08.022"W	984.11	101.483	0.64	-0.59	-0.83	
5664.50	19.700	101.140	5487.58	-559.83	-201.61	995.05	1696370.07	14283212.70	39°19'58.506"N	80°48'07.632"W	1015.27	101.454	1.24	1.16	1.34	
5758.50	19.490	100.570	5576.14	-576.93	-207.54	1026.01	1696401.02	14283206.76	39°19'58.447"N	80°48'07.238"W	1046.79	101.436	0.30	-0.22	-0.61	
5853.50	19.320	99.920	5665.74	-593.78	-213.16	1057.07	1696432.06	14283201.45	39°19'58.391"N	80°48'06.843"W	1078.35	101.401	0.29	-0.18	-0.68	
5884.50	19.630	95.910	5694.97	-598.93	-214.58	1067.30	1696442.29	14283199.73	39°19'58.376"N	80°48'06.713"W	1088.66	101.368	4.43	1.00	-12.94	
5916.50	19.860	87.860	5725.10	-603.29	-214.93	1078.06	1696453.05	14283199.38	39°19'58.373"N	80°48'06.576"W	1099.28	101.275	8.49	0.47	-25.16	
5948.50	19.830	79.330	5755.21	-606.20	-213.72	1088.81	1696463.80	14283200.59	39°19'58.384"N	80°48'06.439"W	1109.59	101.105	9.03	0.25	-26.66	
5979.50	19.830	71.910	5784.38	-607.59	-211.11	1098.99	1696473.97	14283203.19	39°19'58.410"N	80°48'06.310"W	1119.08	100.874	8.12	-0.10	-23.94	
6011.50	19.540	63.110	5814.51	-607.51	-207.01	1108.92	1696483.90	14283207.30	39°19'58.450"N	80°48'06.183"W	1128.08	100.574	9.30	-0.91	-27.50	
6042.50	20.240	55.200	5843.67	-605.88	-201.60	1117.95	1696492.92	14283212.70	39°19'58.503"N	80°48'06.068"W	1135.98	100.222	8.96	2.26	-25.52	
6074.50	21.100	48.320	5873.61	-602.72	-194.61	1126.80	1696501.77	14283219.69	39°19'58.572"N	80°48'05.955"W	1143.48	99.799	8.05	2.69	-21.50	
6105.50	21.760	41.840	5902.47	-598.30	-186.62	1134.80	1696509.77	14283227.68	39°19'58.651"N	80°48'05.853"W	1150.04	99.339	7.92	2.13	-20.90	
6137.50	22.920	37.470	5932.07	-592.53	-177.25	1142.55	1696517.51	14283237.04	39°19'58.744"N	80°48'05.754"W	1156.22	98.818	6.33	3.62	-13.66	
6191.00	24.800	27.880	5981.02	-580.00	-169.06	1154.14	1696529.10	14283255.23	39°19'58.923"N	80°48'05.606"W	1165.05	97.847	8.05	3.51	-17.93	BHI AT Curve <8-1/2"> (6137.5)'(6191'-14725')
6238.00	25.910	23.310	6023.49	-566.43	-140.91	1162.81	1696537.77	14283273.37	39°19'59.102"N	80°48'05.496"W	1171.32	96.910	4.79	2.36	-9.72	
6287.00	28.260	17.310	6067.13	-549.92	-120.00	1170.50	1696545.45	14283294.27	39°19'59.309"N	80°48'05.397"W	1176.64	95.853	7.35	4.80	-12.24	
6334.00	31.140	12.100	6107.95	-531.24	-97.48	1176.36	1696551.31	14283316.78	39°19'59.531"N	80°48'05.322"W	1180.40	94.737	8.22	6.13	-11.09	
6382.00	33.520	8.250	6148.51	-509.52	-72.23	1180.88	1696555.82	14283342.02	39°19'59.781"N	80°48'05.264"W	1183.08	93.500	6.53	4.96	-7.94	
6429.00	35.830	4.950	6187.17	-486.05	-45.67	1183.94	1696558.88	14283368.57	39°20'00.043"N	80°48'05.224"W	1184.82	92.209	6.36	4.91	-7.11	
6477.00	39.300	1.290	6225.21	-459.55	-16.47	1185.49	1696560.44	14283397.76	39°20'00.332"N	80°48'05.203"W	1185.61	90.796	8.59	7.23	-7.62	
6500.00†	41.258	0.317	6242.76	-445.85	-1.60	1185.70	1696560.64	14283412.62	39°20'00.479"N	80°48'05.200"W	1185.70	90.077	8.94	8.51	-4.23	Middlesex: 6500' MD
6524.00	43.310	359.380	6260.52	-430.86	14.55	1185.65	1696560.60	14283428.76	39°20'00.638"N	80°48'05.201"W	1185.74	89.297	8.94	8.55	-3.91	
6572.00	47.390	357.740	6294.24	-398.89	48.67	1184.78	1696559.72	14283462.88	39°20'00.976"N	80°48'05.211"W	1185.78	87.648	8.84	8.50	-3.42	
6619.00	51.400	356.790	6324.83	-365.21	84.31	1183.07	1696558.01	14283498.50	39°20'01.328"N	80°48'05.231"W	1186.07	85.924	8.67	8.53	-2.02	
6667.00	55.140	356.630	6353.53	-328.78	122.71	1180.86	1696555.80	14283536.88	39°20'01.707"N	80°48'05.259"W	1187.22	84.068	7.80	7.79	-0.33	
6712.00†	59.391	356.659	6377.86	-292.93	160.49	1178.64	1696553.59	14283574.64	39°20'02.081"N	80°48'05.286"W	1189.52	82.246	9.45	9.45	0.06	Burkett: 6712' MD
6714.00	59.580	356.660	6378.87	-291.30	162.21	1178.54	1696553.49	14283576.36	39°20'02.098"N	80°48'05.287"W	1189.65	82.163	9.45	9.45	0.06	
6762.00	63.630	357.490	6401.69	-251.40	204.37	1176.39	1696551.34	14283618.51	39°20'02.515"N	80°48'05.313"W	1194.01	80.145	8.57	8.44	1.73	
6770.00†	64.166	357.622	6405.21	-244.63	211.54	1176.09	1696551.04	14283625.68	39°20'02.586"N	80°48'05.317"W	1194.96	79.803	6.86	6.70	1.65	July: 6770' MD



# Actual Wellpath Report

Addie Unit 2H AWP Proj: 14749'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	Area	Field	Facility	Slot	Slot #07
ANTERO RESOURCES CORPORATION	Doddridge Co., WV	Doddridge	Addie Pad	Well	Addie Unit 2H
				Wellbore	Addie Unit 2H AWB

## WELLPATH DATA (181 stations) † = interpolated/extrapolated station

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]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
6809.00	66.780	358.250	6421.40	-211.28	247.00	1174.81	1696549.76	14283366.12	39°20'02.936"N	80°48'05.332"W	1200.50	78.127	6.86	6.70	1.61	
6857.00	70.580	358.250	6438.85	-169.34	291.88	1173.43	1696548.38	14283705.79	39°20'03.378"N	80°48'05.348"W	1209.14	76.041	7.92	7.92	-0.06	
6859.00†	70.713	358.242	6439.51	-167.57	293.57	1173.38	1696548.33	14283707.68	39°20'03.396"N	80°48'05.349"W	1209.54	75.953	6.74	6.66	1.08	Hamilton: 6859' MD
6886.00†	72.511	358.531	6448.03	-143.56	319.18	1172.65	1696547.61	14283733.28	39°20'03.649"N	80°48'05.357"W	1215.32	74.774	6.74	6.66	1.07	Marcellus POE: 6886' MD
6904.00	73.710	358.720	6453.26	-127.44	336.40	1172.24	1696547.19	14283750.49	39°20'03.820"N	80°48'05.362"W	1219.56	73.988	6.74	6.66	1.05	
6951.00	76.960	358.640	6465.16	-84.91	381.85	1171.19	1696546.15	14283795.92	39°20'04.269"N	80°48'05.374"W	1231.87	71.942	6.92	6.91	-0.17	
6998.00	80.570	356.430	6474.31	-41.47	427.90	1169.21	1696544.16	14283841.95	39°20'04.724"N	80°48'05.398"W	1245.05	69.899	8.96	7.68	-4.70	
7046.00	83.240	354.990	6481.07	3.79	475.28	1165.65	1696540.60	14283889.31	39°20'05.192"N	80°48'05.442"W	1258.82	67.817	6.31	5.56	-3.00	
7093.00	85.840	352.230	6485.54	48.84	521.77	1160.44	1696535.40	14283935.78	39°20'05.652"N	80°48'05.507"W	1272.35	65.790	8.05	5.53	-5.87	
7141.00	89.940	349.860	6487.31	95.56	569.14	1152.98	1696527.93	14283983.13	39°20'06.120"N	80°48'05.601"W	1285.79	63.728	9.86	8.54	-4.94	
7236.00	89.940	346.340	6487.41	189.07	662.08	1133.39	1696508.36	14284076.04	39°20'07.039"N	80°48'06.120"W	1312.60	59.708	3.71	0.00	-3.71	
7331.00	89.970	347.360	6487.49	282.93	754.59	1111.78	1696486.75	14284168.51	39°20'07.954"N	80°48'06.211"W	1343.67	55.834	1.07	0.03	1.07	
7426.00	90.060	348.620	6487.46	376.49	847.51	1092.01	1696466.99	14284261.39	39°20'08.873"N	80°48'06.369"W	1382.30	52.185	1.33	0.09	1.33	
7521.00	89.940	347.020	6487.46	470.09	940.36	1071.97	1696446.96	14284354.21	39°20'09.791"N	80°48'06.621"W	1425.97	48.742	1.69	-0.13	-1.68	
7615.00	90.030	342.260	6487.49	569.43	1030.98	1047.07	1696422.08	14284444.79	39°20'10.667"N	80°48'06.936"W	1469.45	45.444	5.06	0.10	-5.06	
7710.00	89.910	340.440	6487.53	658.26	1120.99	1016.70	1696391.71	14284534.76	39°20'11.578"N	80°48'07.320"W	1513.37	42.207	1.92	-0.13	-1.92	
7804.00	90.000	337.180	6487.61	752.24	1208.82	982.72	1696357.75	14284622.36	39°20'12.444"N	80°48'07.750"W	1557.73	39.114	3.47	0.10	-3.47	
7900.00	89.970	335.300	6487.63	848.19	1296.48	944.05	1696319.09	14284710.19	39°20'13.314"N	80°48'08.240"W	1603.77	36.061	1.96	-0.03	-1.96	
7995.00	90.090	334.170	6487.58	943.04	1382.39	903.50	1696278.56	14284796.06	39°20'14.164"N	80°48'08.753"W	1651.46	33.168	1.20	0.13	-1.19	
8090.00	89.940	332.490	6487.56	1037.72	1467.28	860.86	1696235.94	14284880.92	39°20'15.004"N	80°48'09.294"W	1701.17	30.400	1.78	-0.16	-1.77	
8184.00	89.750	335.320	6487.81	1131.47	1551.69	819.52	1696194.61	14284965.29	39°20'15.839"N	80°48'09.817"W	1754.81	27.841	3.02	-0.20	3.01	
8279.00	89.630	330.530	6488.33	1226.07	1636.25	776.29	1696151.40	14285049.82	39°20'16.675"N	80°48'10.365"W	1811.06	25.381	5.04	-0.13	-5.04	
8374.00	89.880	329.300	6488.73	1320.13	1718.45	728.67	1696103.80	14285131.99	39°20'17.469"N	80°48'10.969"W	1866.56	22.978	1.32	0.26	-1.29	
8469.00	89.630	332.880	6489.14	1414.42	1801.60	682.75	1696057.90	14285215.10	39°20'18.312"N	80°48'11.551"W	1926.63	20.755	3.78	-0.26	3.77	
8565.00	89.660	330.110	6489.74	1509.79	1885.95	636.94	1696012.11	14285299.42	39°20'19.146"N	80°48'12.132"W	1990.61	18.661	2.89	0.03	-2.89	
8660.00	89.570	336.570	6490.37	1604.43	1970.80	594.34	1695969.52	14285384.24	39°20'19.986"N	80°48'12.672"W	2058.47	16.782	6.80	-0.09	6.80	
8755.00	89.570	339.030	6491.09	1699.42	2058.75	558.45	1695933.65	14285472.16	39°20'20.856"N	80°48'13.126"W	2133.15	15.177	2.59	0.00	2.59	
8850.00	89.880	339.170	6491.54	1794.40	2147.50	524.56	1695899.77	14285560.87	39°20'21.734"N	80°48'13.555"W	2210.64	13.727	0.36	0.33	0.15	
8945.00	90.430	339.740	6491.29	1889.37	2236.46	491.22	1695866.44	14285649.79	39°20'22.614"N	80°48'13.977"W	2289.77	12.388	0.83	0.58	0.60	
9040.00	90.150	340.780	6490.81	1984.29	2325.87	459.14	1695834.37	14285739.17	39°20'23.498"N	80°48'14.383"W	2370.76	11.167	1.13	-0.29	1.09	





# Actual Wellpath Report

Addie Unit 2H AWP Proj: 14749'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #07
ANTERO RESOURCES CORPORATION	Well	Addie Unit 2H
Doddridge Co., WV	Wellbore	Addie Unit 2H AWB
Doddridge		
Addie Pad		

## WELLPATH DATA (181 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]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
9135.00	90.460	343.710	6490.30	2079.02	2416.34	430.17	1695805.42	14285829.60	39°20'24.393"N	80°48'14.749"W	2454.33	10.094	3.10	0.33	3.08	
9230.00	90.180	347.750	6489.77	2173.13	2508.38	406.76	1695782.01	14285921.61	39°20'25.303"N	80°48'15.044"W	2541.15	9.211	4.26	-0.29	4.25	
9325.00	90.280	344.360	6489.39	2267.18	2600.57	383.87	1695759.13	14286013.76	39°20'26.215"N	80°48'15.333"W	2628.75	8.397	3.57	0.11	-3.57	
9420.00	90.150	338.830	6489.03	2361.95	2690.68	353.88	1695729.16	14286103.83	39°20'27.106"N	80°48'15.712"W	2713.85	7.493	5.82	-0.14	-5.82	
9514.00	90.030	338.570	6488.88	2455.94	2778.25	319.74	1695695.03	14286191.37	39°20'27.972"N	80°48'16.144"W	2796.59	6.565	0.30	-0.13	-0.28	
9610.00	90.180	335.940	6488.71	2551.93	2866.78	282.63	1695657.93	14286279.86	39°20'28.848"N	80°48'16.614"W	2880.68	5.630	2.74	0.16	-2.74	
9704.00	90.310	332.830	6488.31	2645.73	2951.53	241.99	1695617.31	14286364.58	39°20'29.687"N	80°48'17.129"W	2961.44	4.687	3.31	0.14	-3.31	
9799.00	90.180	335.920	6487.90	2740.53	3037.18	200.91	1695576.25	14286450.19	39°20'30.534"N	80°48'17.650"W	3043.81	3.785	3.26	-0.14	3.25	
9893.00	90.340	337.880	6487.47	2834.50	3123.63	164.04	1695539.39	14286536.61	39°20'31.389"N	80°48'18.117"W	3127.94	3.006	2.09	0.17	2.09	
9989.00	90.280	340.000	6486.95	2930.48	3213.22	129.54	1695504.91	14286626.16	39°20'32.275"N	80°48'18.553"W	3215.83	2.309	2.21	-0.06	2.21	
10083.00	90.340	341.340	6486.44	3024.38	3301.91	98.43	1695473.81	14286714.82	39°20'33.153"N	80°48'18.947"W	3303.38	1.707	1.43	0.06	1.43	
10178.00	90.090	339.700	6486.09	3119.28	3391.47	66.75	1695442.14	14286804.34	39°20'34.039"N	80°48'19.348"W	3392.13	1.128	1.75	-0.26	-1.73	
10273.00	90.030	338.280	6485.99	3214.26	3480.15	32.59	1695408.09	14286892.99	39°20'34.916"N	80°48'19.779"W	3480.31	0.538	1.50	-0.06	-1.49	
10368.00	90.180	336.310	6485.81	3309.25	3567.79	-3.98	1695371.44	14286980.59	39°20'35.783"N	80°48'20.243"W	3567.79	359.936	2.08	0.16	-2.07	
10463.00	90.340	334.390	6485.38	3404.15	3654.12	-43.60	1695331.84	14287066.89	39°20'36.637"N	80°48'20.745"W	3654.38	359.316	2.03	0.17	-2.02	
10557.00	89.970	337.120	6485.13	3498.06	3739.83	-82.19	1695293.26	14287152.56	39°20'37.485"N	80°48'21.234"W	3740.73	358.741	2.93	-0.39	2.90	
10652.00	90.090	338.520	6485.08	3593.06	3827.79	-118.06	1695257.41	14287240.49	39°20'38.355"N	80°48'21.688"W	3829.61	358.233	1.48	0.13	1.47	
10747.00	90.180	333.750	6484.85	3687.98	3914.65	-156.48	1695219.00	14287327.31	39°20'39.214"N	80°48'22.175"W	3917.77	357.711	5.02	0.09	-5.02	
10842.00	90.090	332.870	6484.63	3782.65	3999.45	-199.30	1695176.20	14287412.08	39°20'40.053"N	80°48'22.717"W	4004.41	357.147	1.14	-0.09	-1.14	
10937.00	90.180	336.470	6484.41	3877.47	4085.23	-240.09	1695135.43	14287497.82	39°20'40.902"N	80°48'23.234"W	4092.28	356.637	4.00	0.09	4.00	
11032.00	90.340	337.160	6483.98	3972.44	4172.55	-277.49	1695098.04	14287585.11	39°20'41.766"N	80°48'23.708"W	4181.77	356.195	0.75	0.17	0.73	
11127.00	90.220	339.530	6483.51	4067.43	4260.84	-312.54	1695063.00	14287673.37	39°20'42.639"N	80°48'24.152"W	4272.29	355.805	2.50	-0.13	2.49	
11222.00	90.340	343.200	6483.05	4162.25	4350.84	-342.89	1695032.66	14287763.33	39°20'43.529"N	80°48'24.535"W	4364.33	355.494	3.87	0.13	3.86	
11317.00	90.520	338.540	6482.33	4257.10	4440.57	-374.01	1695000.55	14287853.02	39°20'44.417"N	80°48'24.929"W	4456.29	355.186	4.91	0.19	4.91	
11412.00	90.340	330.720	6481.62	4351.86	4526.34	-414.69	1694960.90	14287938.76	39°20'45.265"N	80°48'25.444"W	4545.30	354.765	8.23	-0.19	-8.23	
11507.00	90.370	329.760	6481.03	4445.99	4608.81	-461.84	1694913.76	14288021.19	39°20'46.081"N	80°48'26.042"W	4631.89	354.278	1.01	0.03	-1.01	
11602.00	90.310	326.800	6480.47	4539.62	4699.61	-511.78	1694863.84	14288101.96	39°20'46.981"N	80°48'26.676"W	4717.45	353.772	3.12	-0.06	-3.12	
11697.00	90.090	325.810	6480.14	4632.65	4788.65	-564.48	1694811.16	14288180.97	39°20'47.663"N	80°48'27.345"W	4801.94	353.249	1.07	-0.23	-1.04	
11792.00	90.150	332.870	6479.94	4726.51	4850.31	-612.90	1694762.77	14288262.60	39°20'48.472"N	80°48'27.959"W	4888.88	352.798	7.43	0.06	7.43	
11886.00	90.370	340.490	6479.51	4820.41	4936.57	-650.08	1694725.60	14288348.83	39°20'49.325"N	80°48'28.430"W	4979.19	352.498	8.11	0.23	8.11	



# Actual Wellpath Report

Addie Unit 2H AWP Proj: 14749'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #07
ANTERO RESOURCES CORPORATION	Well	Addie Unit 2H
Doddridge Co., WV	Wellbore	Addie Unit 2H AWB
Doddridge		
Addie Pad		

## WELLPATH DATA (181 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]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
11981.00	90.400	339.530	6478.87	4915.35	5025.84	-682.56	1694663.13	14288438.06	39°20'50.208"N	80°48'28.841"W	5071.98	352.266	1.01	0.03	-1.01	
12076.00	90.280	341.600	6478.31	5010.25	5115.42	-714.16	1694661.54	14288527.61	39°20'51.094"N	80°48'29.241"W	5165.04	352.052	2.18	-0.13	2.18	
12171.00	90.370	344.750	6477.77	5104.85	5206.34	-741.66	1694634.06	14288618.49	39°20'51.993"N	80°48'29.588"W	5258.90	351.893	3.32	0.09	3.32	
12266.00	90.250	346.100	6477.25	5199.05	5298.28	-765.56	1694610.16	14288710.39	39°20'52.902"N	80°48'29.890"W	5353.31	351.778	1.43	-0.13	1.42	
12361.00	90.430	348.110	6476.69	5293.09	5390.50	-788.38	1694587.36	14288802.58	39°20'53.814"N	80°48'30.178"W	5447.85	351.679	0.19	0.19	0.01	
12456.00	90.430	347.390	6475.98	5386.98	5482.97	-810.15	1694565.59	14288895.01	39°20'54.729"N	80°48'30.452"W	5542.50	351.595	1.35	0.00	1.35	
12551.00	90.460	343.140	6475.24	5481.19	5574.82	-834.31	1694541.44	14288986.82	39°20'55.637"N	80°48'30.757"W	5636.90	351.489	4.47	0.03	-4.47	
12646.00	90.400	342.790	6474.53	5575.83	5665.65	-862.14	1694513.63	14289077.61	39°20'56.535"N	80°48'31.109"W	5730.87	351.348	0.37	-0.06	-0.37	
12741.00	90.830	338.670	6473.51	5670.69	5755.30	-893.48	1694482.30	14289167.23	39°20'57.422"N	80°48'31.506"W	5824.24	351.176	4.36	0.45	-4.34	
12836.00	90.370	334.260	6472.51	5765.63	5842.37	-931.40	1694444.39	14289254.27	39°20'58.283"N	80°48'31.986"W	5916.15	350.942	4.67	-0.48	-4.64	
12931.00	90.280	331.210	6471.97	5860.22	5926.81	-974.92	1694400.89	14289338.67	39°20'59.119"N	80°48'32.538"W	6006.46	350.659	3.21	-0.09	-3.21	
13026.00	90.220	333.530	6471.56	5954.76	6010.97	-1018.97	1694356.85	14289422.79	39°20'59.952"N	80°48'33.096"W	6096.72	350.379	2.44	-0.06	2.44	
13121.00	90.280	337.130	6471.14	6049.64	6097.28	-1058.62	1694317.22	14289509.07	39°21'00.805"N	80°48'33.599"W	6188.50	350.150	3.79	0.06	3.79	
13216.00	90.280	337.950	6470.68	6144.63	6185.07	-1094.91	1694280.95	14289596.83	39°21'01.674"N	80°48'34.058"W	6281.24	349.961	0.86	0.00	0.86	
13310.00	90.280	338.560	6470.22	6238.62	6271.76	-1131.25	1694244.62	14289683.48	39°21'02.531"N	80°48'34.519"W	6372.97	349.775	1.48	0.00	-1.48	
13405.00	90.310	334.710	6469.73	6333.54	6358.29	-1170.44	1694205.44	14289769.98	39°21'03.388"N	80°48'35.015"W	6465.12	349.570	1.95	0.03	-1.95	
13500.00	90.310	335.910	6469.22	6428.43	6444.61	-1210.12	1694165.78	14289856.26	39°21'04.241"N	80°48'35.518"W	6557.24	349.365	1.26	0.00	1.26	
13594.00	90.310	341.650	6468.71	6522.38	6532.19	-1244.13	1694131.78	14289943.81	39°21'05.108"N	80°48'35.949"W	6649.62	349.217	6.11	0.00	6.11	
13690.00	90.280	339.790	6468.21	6618.26	6622.81	-1275.83	1694100.10	14290034.39	39°21'06.004"N	80°48'36.350"W	6744.57	349.096	1.94	-0.03	-1.94	
13784.00	90.310	338.300	6467.73	6712.24	6710.59	-1309.44	1694066.50	14290122.13	39°21'06.872"N	80°48'36.775"W	6837.15	348.959	1.59	0.03	-1.59	
13879.00	90.310	340.150	6467.21	6807.22	6799.40	-1343.14	1694032.82	14290210.92	39°21'07.751"N	80°48'37.202"W	6930.79	348.826	1.95	0.00	1.95	
13974.00	90.370	341.170	6466.65	6902.11	6889.04	-1374.60	1694001.37	14290300.52	39°21'08.637"N	80°48'37.600"W	7024.84	348.716	1.08	0.06	1.07	
14069.00	90.400	339.630	6466.01	6997.02	6978.53	-1406.46	1693969.52	14290389.97	39°21'09.523"N	80°48'38.003"W	7118.85	348.605	1.62	0.03	-1.62	
14164.00	90.490	337.860	6465.27	7092.01	7067.06	-1440.90	1693935.09	14290478.47	39°21'10.388"N	80°48'38.439"W	7212.46	348.476	1.87	0.09	-1.86	
14259.00	90.370	338.410	6464.56	7187.00	7155.22	-1476.28	1693899.73	14290566.60	39°21'11.270"N	80°48'38.887"W	7305.93	348.342	0.59	-0.13	0.58	
14353.00	90.280	340.670	6464.03	7280.96	7243.29	-1509.13	1693866.89	14290654.62	39°21'12.141"N	80°48'39.303"W	7398.83	348.231	2.41	-0.10	2.40	
14448.00	90.310	338.220	6463.54	7375.92	7332.23	-1542.49	1693833.55	14290743.53	39°21'13.021"N	80°48'39.725"W	7492.72	348.120	2.58	0.03	-2.58	
14543.00	90.340	341.420	6463.00	7470.86	7421.39	-1575.25	1693800.79	14290832.65	39°21'13.903"N	80°48'40.140"W	7586.73	348.016	3.37	0.03	3.37	
14638.00	90.310	343.000	6462.46	7565.60	7511.84	-1604.28	1693771.78	14290923.07	39°21'14.798"N	80°48'40.507"W	7681.24	347.945	1.66	-0.03	1.66	
14725.00	90.310	342.540	6461.99	7652.29	7594.93	-1630.05	1693746.02	14291006.13	39°21'15.619"N	80°48'40.833"W	7767.89	347.887	0.53	0.00	-0.53	

### REFERENCE WELLPATH IDENTIFICATION

Operator	Slot #07
ANTERO RESOURCES CORPORATION	Addie Unit 2H
Area	Well
Field	Addie Unit 2H AWB
Facility	Wellbore

### WELLPATH DATA (181 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]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
14749.00	90.310	342.540	6461.86	7676.22	7617.83	-1637.25	1693738.82	14291029.02	39°21'15.846"N	80°48'40.924"W	7791.78	347.870	0.00	0.00	0.00	Projected MD at TD: 14749'

### HOLE & CASING SECTIONS - Ref Wellbore: Addie Unit 2H AWB Ref Wellpath: Addie Unit 2H AWP Proj: 14749'

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	24.50	104.50	80.00	24.50	104.50	0.00	0.00	0.00	0.00
17.5in Open Hole	104.50	502.50	398.00	104.50	502.50	0.04	0.09	0.84	0.15
13.375in Casing Surface	24.50	502.50	478.00	24.50	502.50	0.00	0.00	0.84	0.15
12.25in Open Hole	502.50	2613.60	2111.10	502.50	2609.67	0.84	0.15	-63.65	36.69
9.625in Casing Intermediate	24.50	2613.60	2589.10	24.50	2609.67	0.00	0.00	-63.65	36.69
8.75in Open Hole	2613.60	6210.50	3596.90	2609.67	5998.69	-63.65	36.69	-151.70	1157.87
8.5in Open Hole	6210.50	14749.00	8538.50	5998.69	6461.86	-151.70	1157.87	7617.83	-1637.25
5.5in Casing Production	24.50	14749.00	14724.50	24.50	6461.86	0.00	0.00	7617.83	-1637.25

### TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Addie Unit 2H POE - Rev-2	6451.00	302.71	1190.41	1696565.35	14283716.81	39°20'03.486"N	80°48'05.132"W	point
Addie Unit 2H BHL - Rev-2	6491.00	7657.61	-1678.65	1693697.44	14291068.78	39°21'16.240"N	80°48'41.450"W	point
Addie Unit 2H LP - Rev-1	6491.00	535.48	1151.45	1696526.41	14283949.49	39°20'05.788"N	80°48'05.621"W	point



# Actual Wellpath Report

Addie Unit 2H AWP Proj: 14749'  
Page 9 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Doddridge Co., WV	Well	Addie Unit 2H
Field	Doddridge	Wellbore	Addie Unit 2H AWB
Facility	Addie Pad		

WELLPATH COMPOSITION - Ref Wellbore: Addie Unit 2H AWB Ref Wellpath: Addie Unit 2H AWP Proj: 14749'			
Start MID (ft)	End MID (ft)	Positional Uncertainty Model	Log Name/Comment
24.50	484.50	Gyrodata standard - Drop gyro or Multi-shot	01. Gyrodata MS Gyro <17-1/2">(100'-475')
484.50	721.50	Gyrodata standard - Drop gyro or Multi-shot	02. Gyrodata MS Gyro <12-1/4">(475')(532'-712')
721.50	2530.50	ISCVSA MWD, Rev. 4 (Standard)	03. WFT EM <12-1/4">(712')(793'-2521')
2530.50	6137.50	ISCVSA MWD, Rev. 4 (Standard)	04. WFT EM <8-3/4">(2521')(2629'-6128')
6137.50	14725.00	BHI AutoTrak Curve (Short)	05. BH ATCurve <8-1/2">(6137.50')(6191'-14725')
14725.00	14749.00	Blind Drilling (std)	Projection to bit
			Addie Unit 2H AWB
			Addie Unit 2H AWB
			Addie Unit 2H AWB
			Addie Unit 2H AWB
			Addie Unit 2H AWB



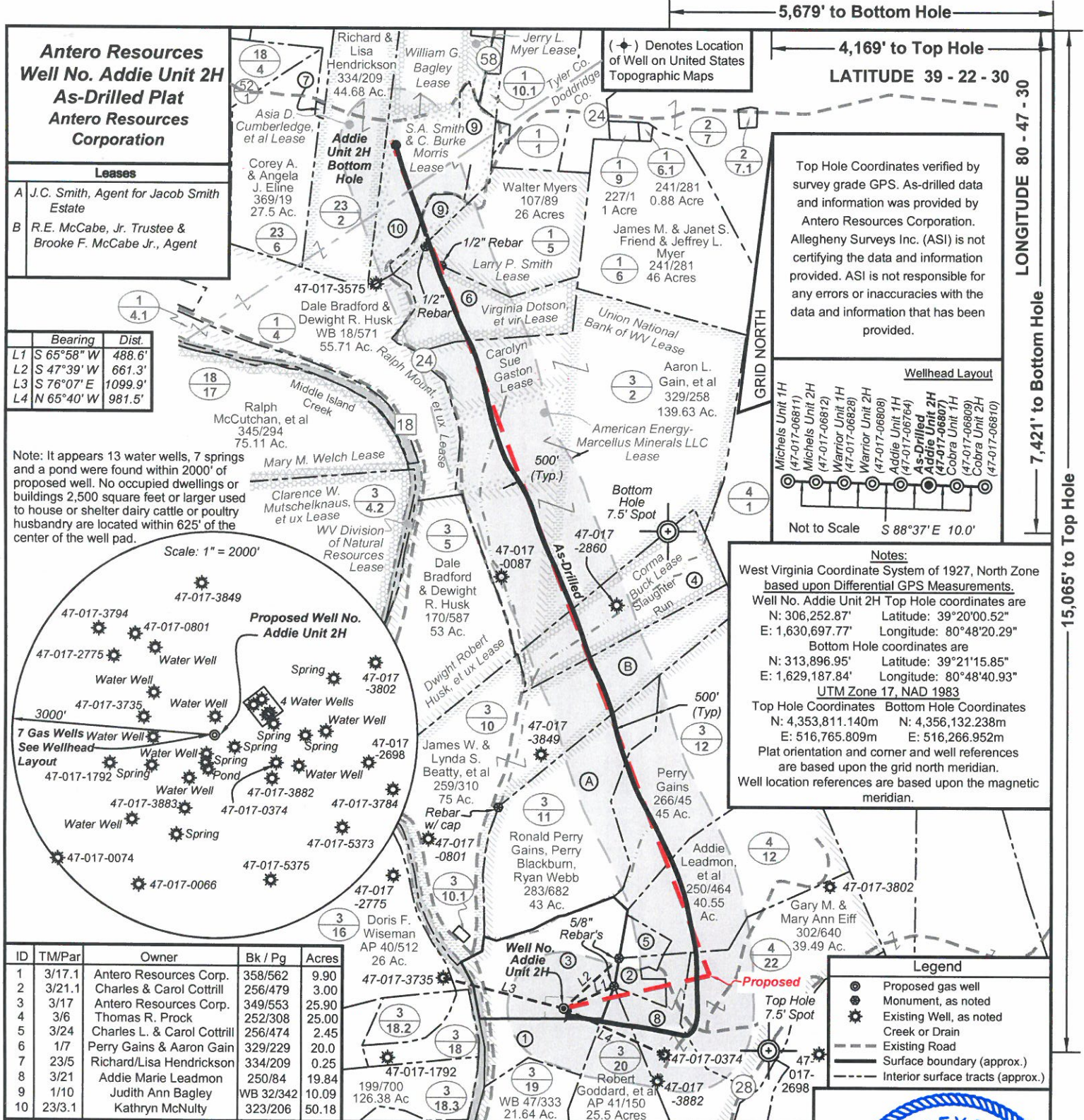
# Actual Wellpath Report

Addie Unit 2H AWP Proj: 14749'  
Page 10 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Doddridge Co., WV	Well	Addie Unit 2H
Field	Doddridge	Wellbore	Addie Unit 2H AWB
Facility	Addie Pad		

COMMENTS
<p><b>Wellpath general comments</b>            API: 47-017-06807-0000            BHI Job #: 8877723            Rig: Frontier 22            Duration: 11/18/2017-11/20/2017            Gyrodatta MS Gyro &lt;17-1/2"&gt; (100'-475)            Gyrodatta MS Gyro &lt;12-1/4"&gt; (475')(532'-712')            WFT EM &lt;12-1/4"&gt; (712')(793'-2521')            WFT EM &lt;8-3/4"&gt; (2521')(2629'-6128')            BHI AT Curve &lt;8-1/2"&gt; (6137.5')(6191'-14725')            Middlesex: 6500' MD            Burkett: 6712' MD            Tully: 6770' MD            Hamilton: 6859' MD            Marcellus POE: 6886' MD            Projected MD at TD: 14749'</p>



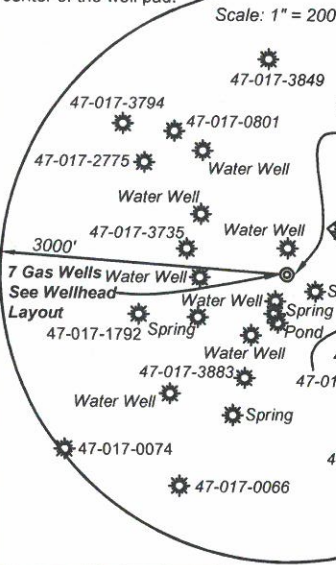
**Antero Resources**  
**Well No. Addie Unit 2H**  
**As-Drilled Plat**  
**Antero Resources**  
**Corporation**

**Leases**

A	J.C. Smith, Agent for Jacob Smith Estate
B	R.E. McCabe, Jr. Trustee & Brooke F. McCabe Jr., Agent

Bearing	Dist.
L1 S 65°58' W	488.6'
L2 S 47°39' W	661.3'
L3 S 76°07' E	1099.9'
L4 N 65°40' W	981.5'

Note: It appears 13 water wells, 7 springs and a pond were found within 2000' of proposed well. No occupied dwellings or buildings 2,500 square feet or larger used to house or shelter dairy cattle or poultry husbandry are located within 625' of the center of the well pad.

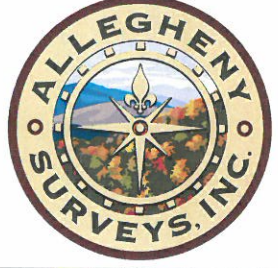


ID	TMPar	Owner	Bk / Pg	Acres
1	3/17.1	Antero Resources Corp.	358/562	9.90
2	3/21.1	Charles & Carol Cottrill	256/479	3.00
3	3/17	Antero Resources Corp.	349/553	25.90
4	3/6	Thomas R. Prock	252/308	25.00
5	3/24	Charles L. & Carol Cottrill	256/474	2.45
6	1/7	Perry Gains & Aaron Gain	329/229	20.0
7	23/5	Richard/Lisa Hendrickson	334/209	0.25
8	3/21	Addie Marie Leadmon	250/84	19.84
9	1/10	Judith Ann Bagley	WB 32/342	10.09
10	23/3.1	Kathryn McNulty	323/206	50.18

**Notes:**  
 West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.  
 Well No. Addie Unit 2H Top Hole coordinates are  
 N: 306,252.87'    Latitude: 39°20'00.52"  
 E: 1,630,697.77'    Longitude: 80°48'20.29"  
 Bottom Hole coordinates are  
 N: 313,896.95'    Latitude: 39°21'15.85"  
 E: 1,629,187.84'    Longitude: 80°48'40.93"  
 UTM Zone 17, NAD 1983  
 Top Hole Coordinates    Bottom Hole Coordinates  
 N: 4,353,811.140m    N: 4,356,132.238m  
 E: 516,765.809m    E: 516,266.952m  
 Plat orientation and corner and well references are based upon the grid north meridian.  
 Well location references are based upon the magnetic meridian.

**Legend**

- Proposed gas well
- Monument, as noted
- Existing Well, as noted
- Creek or Drain
- Existing Road
- Surface boundary (approx.)
- Interior surface tracts (approx.)



**I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the rules issued and prescribed by the Department of Environmental Protection.**

*Bradley D. Miller*  
**Bradley D. Miller, P.S. 2167**



FILE NO: 55-30-WU-15  
 DRAWING NO: Addie 2H Well Plat As-Drilled  
 SCALE: 1" = 1200'  
 MINIMUM DEGREE OF ACCURACY: Submeter  
 PROVEN SOURCE OF ELEVATION: WVDOT, Harrisville, WV

**STATE OF WEST VIRGINIA**  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
**OIL AND GAS DIVISION**

DATE: June 7 20 18  
 OPERATOR'S WELL NO. Addie Unit 2H  
 API WELL NO  
 47 - 017 - 06807  
 STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
 (IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW  
 LOCATION: ELEVATION: 891' As-Drilled WATERSHED: Headwaters Middle Island Creek QUADRANGLE: West Union  
 DISTRICT: West Union LARRY P. SMITH; S.A. SMITH & C. BURKE MORRIS  
 SURFACE OWNER: Antero Resources Corp. J. C. SMITH, AGENT FOR JACOB SMITH ESTATE; UNION NATIONAL BANK OF WV  
 ROYALTY OWNER: R. E. MCCABE, JR. TRUSTEE & BROOKE F. MCCABE, JR., AGENT; CORMA BUCK LEASE NO: ACREAGE: 29.57; 79  
 PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled ACREAGE: 25.9 20; 25; 20; 53  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 14,749' MD ACREAGE: 290; 75; 20; 28.1  
 6,460' TVD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System  
 ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road  
 Denver, CO 80202 Charleston, WV 25313