

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

API 47-095-02617 County Tyler District Ellsworth
Quad Shirley 7.5' Pad Name State Ridge Pad Field/Pool Name -----
Farm name John D. Mendenhall & Jeffery A. Davis Well Number Shimano 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 4373215.404m Easting 510823.100m
Landing Point of Curve Northing 4372349.32m Easting 511059.41m
Bottom Hole Northing 4371404.992m Easting 512196.933m

Elevation (ft) 1064' 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

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Date permit issued 5/16/2019 Date drilling commenced 9/3/2019 Date drilling ceased 1/18/2020
Date completion activities began 4/14/2020 Date completion activities ceased 5/16/2020
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 44' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 1490' Void(s) encountered (Y/N) depths No
Coal depth(s) ft 100' Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No

Reviewed by:
JEB
11/6/2020

API 47- 095 - 02617 Farm name John D. Mendenhall & Jeffery A. Davis Well number Shimano 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"	105'	New	94#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"	388'	New	54.5#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2763'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	15420'	New	23#, HCP-110	N/A	Y
Tubing		2-3/8"	7307'		4.7#, P-110		
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	242 sx	15.6	1.18	241	0'	8 Hrs.
Surface	Class A	319 sx	15.6	1.20	635	0'	8 Hrs.
Coal							
Intermediate 1	Class A	956 sx	15.6	1.19	1082	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	792 sx (Lead) 2143 sx (Tail)	14.5 (Lead), 15.2(Tail)	1.4 (Lead), 1.6 (Tail)	3003	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 15440' MD, 6545' TVD (BHL), 6546' (Deepest Point Drilled) Loggers TD (ft) 15440' MD

Deepest formation penetrated Marcellus Plug back to (ft) N/A

Plug back procedure N/A

Kick off depth (ft) 6229'

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

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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- 095 - 02617 Farm name John D. Mendenhall & Jeffery A. Davis Well number Shimano Unit 2H

PERFORATION RECORD

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

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)
*PLEASE SEE ATTACHED EXHIBIT 2								

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Please insert additional pages as applicable.

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<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>		
<u>Marcellus</u>	<u>6451' (TOP)</u>	<u>TVD</u>	<u>7348' (TOP) MD</u>
_____	_____	_____	_____
_____	_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 3000 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 8165 mcfpd Oil 330 bpd NGL --- bpd Water 1750 bpd GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP		BOTTOM		DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ 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 KLX Energy Services
Address 6072 W Veterans Memorial Hwy City Bridgeport State WV Zip 26330

Cementing Company Schlumberger Oilfield Services
Address 300 Schlumberger Dr City Sugarland State TX Zip 77478

Stimulating Company CalFrac Well Services
Address 171 17th Street, Suite 1445 City Denver State CO Zip 80202

Please insert additional pages as applicable.

Completed by Megan Griffith Telephone 303-357-7223
Signature  Title Permitting Agent Date 8/14/20

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

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Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	4/13/2020	15314.9	15271.4	60	Marcellus
2	4/13/2020	15233.54957	15067.2974	60	Marcellus
3	4/14/2020	15031.64701	14865.3949	60	Marcellus
4	4/14/2020	14829.74444	14663.4923	60	Marcellus
5	4/14/2020	14627.84188	14461.5897	60	Marcellus
6	4/14/2020	14425.93932	14259.6872	60	Marcellus
7	4/14/2020	14224.03675	14057.7846	60	Marcellus
8	4/15/2020	14022.13419	13855.8821	60	Marcellus
9	4/15/2020	13820.23162	13653.9795	60	Marcellus
10	4/15/2020	13618.32906	13452.0769	60	Marcellus
11	4/15/2020	13416.4265	13250.1744	60	Marcellus
12	4/15/2020	13214.52393	13048.2718	60	Marcellus
13	4/16/2020	13012.62137	12846.3692	60	Marcellus
14	4/16/2020	12810.7188	12644.4667	60	Marcellus
15	4/16/2020	12608.81624	12442.5641	60	Marcellus
16	4/16/2020	12406.91368	12240.6615	60	Marcellus
17	4/16/2020	12205.01111	12038.759	60	Marcellus
18	4/16/2020	12003.10855	11836.8564	60	Marcellus
19	4/17/2020	11801.20598	11634.9538	60	Marcellus
20	4/17/2020	11599.30342	11433.0513	60	Marcellus
21	4/17/2020	11397.40085	11231.1487	60	Marcellus
22	4/17/2020	11195.49829	11029.2462	60	Marcellus
23	4/18/2020	10993.59573	10827.3436	60	Marcellus
24	4/18/2020	10791.69316	10625.441	60	Marcellus
25	4/18/2020	10589.7906	10423.5385	60	Marcellus
26	4/18/2020	10387.88803	10221.6359	60	Marcellus
27	4/18/2020	10185.98547	10019.7333	60	Marcellus
28	4/18/2020	9984.082906	9817.83077	60	Marcellus
29	4/18/2020	9782.180342	9615.92821	60	Marcellus
30	4/19/2020	9580.277778	9414.02564	60	Marcellus
31	4/19/2020	9378.375214	9212.12308	60	Marcellus
32	4/19/2020	9176.47265	9010.22051	60	Marcellus
33	4/19/2020	8974.570085	8808.31795	60	Marcellus
34	4/19/2020	8772.667521	8606.41538	60	Marcellus
35	4/20/2020	8570.764957	8404.51282	60	Marcellus
36	4/20/2020	8368.862393	8202.61026	60	Marcellus
37	4/20/2020	8166.959829	8000.70769	60	Marcellus
38	4/20/2020	7965.057265	7798.80513	60	Marcellus
39	4/21/2020	7763.154701	7596.90256	60	Marcellus
40	4/21/2020	7561.252137	7395	60	Marcellus

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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	4/13/2020	85.2	8242	7453	4402	158260	4877.996	N/A
2	4/13/2020	92.2	8267	5690	4221	261570	7284.916	N/A
3	4/14/2020	94	8307	5796	4216	261260	7310.11	N/A
4	4/14/2020	92.5	8312	5625	4426	261120	7289.6	N/A
5	4/14/2020	93.3	8287	5649	4265	263940	7548.91	N/A
6	4/14/2020	93.3	8259	5594	5028	263160	7242.29	N/A
7	4/14/2020	92.2	8314	5913	4203	266600	7284.71	N/A
8	4/15/2020	92.3	8457	6155	4071	263490	7086.91	N/A
9	4/15/2020	96.1	8213	5783	4140	263340	7213.43	N/A
10	4/15/2020	87.6	8223	6094	3912	263310	9769.02	N/A
11	4/15/2020	96.7	8001	5862	4071	269070	7376.46	N/A
12	4/15/2020	88	8444	5983	4232	269290	7118.18	N/A
13	4/16/2020	91.9	8334	7508	3949	265670	7153.9	N/A
14	4/16/2020	87.1	8227	6382	4223	273360	7573.82	N/A
15	4/16/2020	92.6	8099	5670	4646	265000	7007.16	N/A
16	4/16/2020	95	7966	5819	4628	271660	7143.56	N/A
17	4/16/2020	94	8086	6680	4413	267770	7161.21	N/A
18	4/16/2020	94.4	8110	6003	4591	266010	7122.89	N/A
19	4/17/2020	95.9	8083	5808	4724	265390	7100.08	N/A
20	4/17/2020	95.1	7688	5792	3904	269030	7148.13	N/A
21	4/17/2020	95.3	7894	5846	4073	270980	7146.5	N/A
22	4/17/2020	94.3	7976	6055	3861	269960	7180.85	N/A
23	4/18/2020	95.7	7767	5983	4015	268550	7095.42	N/A
24	4/18/2020	96.2	7800	6003	4179	266200	7127.28	N/A
25	4/18/2020	94.9	7599	6158	4340	266450	7092.52	N/A
26	4/18/2020	95.8	7595	5951	4156	267040	7139.83	N/A
27	4/18/2020	95.5	7734	5969	4304	268050	7143.72	N/A
28	4/18/2020	96.2	7485	5870	3868	265580	7192.68	N/A
29	4/18/2020	95.9	7558	5869	4461	268430	7005.22	N/A
30	4/19/2020	85.2	7790	6289	4297	265460	9135.04	N/A
31	4/19/2020	96.7	7490	5785	3841	271340	7035.24	N/A
32	4/19/2020	95.6	7591	5723	4040	268580	7117.89	N/A
33	4/19/2020	95.7	7402	5634	3846	266960	6907.86	N/A
34	4/19/2020	96	7308	6100	3541	263360	6860.31	N/A
35	4/20/2020	96.9	7237	6148	3924	265350	6931.68	N/A
36	4/20/2020	95.8	7105	5961	3730	267930	7093.55	N/A
37	4/20/2020	95.8	7127	6332	4115	264910	7005.52	N/A
38	4/20/2020	96.7	7136	6111	4693	264770	6987.88	N/A
39	4/21/2020	96.2	6982	6426	4165	265830	6909.21	N/A
40	4/21/2020	93.4	7589	5632	3809	268630	7173.58	N/A
	AVG=	93	7,988	6,012	4,229	8,691,880	239,133	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
Sandstone	100	300	100	300
Siltstone	300	450	300	450
Siltstone w/ trace coal	450	510	450	510
Shaly Siltstone	510	630	510	630
Sandstone	630	700	630	700
Siltstone w/ trace coal	700	850	700	850
Silty Shale	850	970	850	970
Shale	970	1,010	970	1,010
Limestone w/ trace coal	1,010	1,130	1,010	1,130
Shaly Siltstone	1,130	1,510	1,130	1,510
Shaly Sandstone	1,510	1,830	1,510	1,830
Sandstone w/ interbedded coals	1,830	1,870	1,830	1,870
Shale	1,870	1,910	1,870	1,910
Sandy Siltstone	1,910	1,934	1,910	2,043
Big Lime	1,934	2,565	2,018	2,753
Fifty Foot Sandstone	2,565	2,637	2,728	2,832
Gordon	2,637	2,973	2,807	3,218
Fifth Sandstone	2,973	3,057	3,193	3,314
Bayard	3,057	3,936	3,289	4,313
Speechley	3,936	4,215	4,288	4,632
Balltown	4,215	4,599	4,607	5,066
Bradford	4,599	4,995	5,041	5,513
Benson	4,995	5,256	5,488	5,808
Alexander	5,256	6,319	5,783	7,031
Sycamore	6,184	6,294	6,853	7,006
Middlesex	6,294	6,380	7,006	7,157
Burkett	6,380	6,402	7,157	7,203
Tully	6,402	6,451	7,203	7,348
Marcellus	6,451	NA	7,348	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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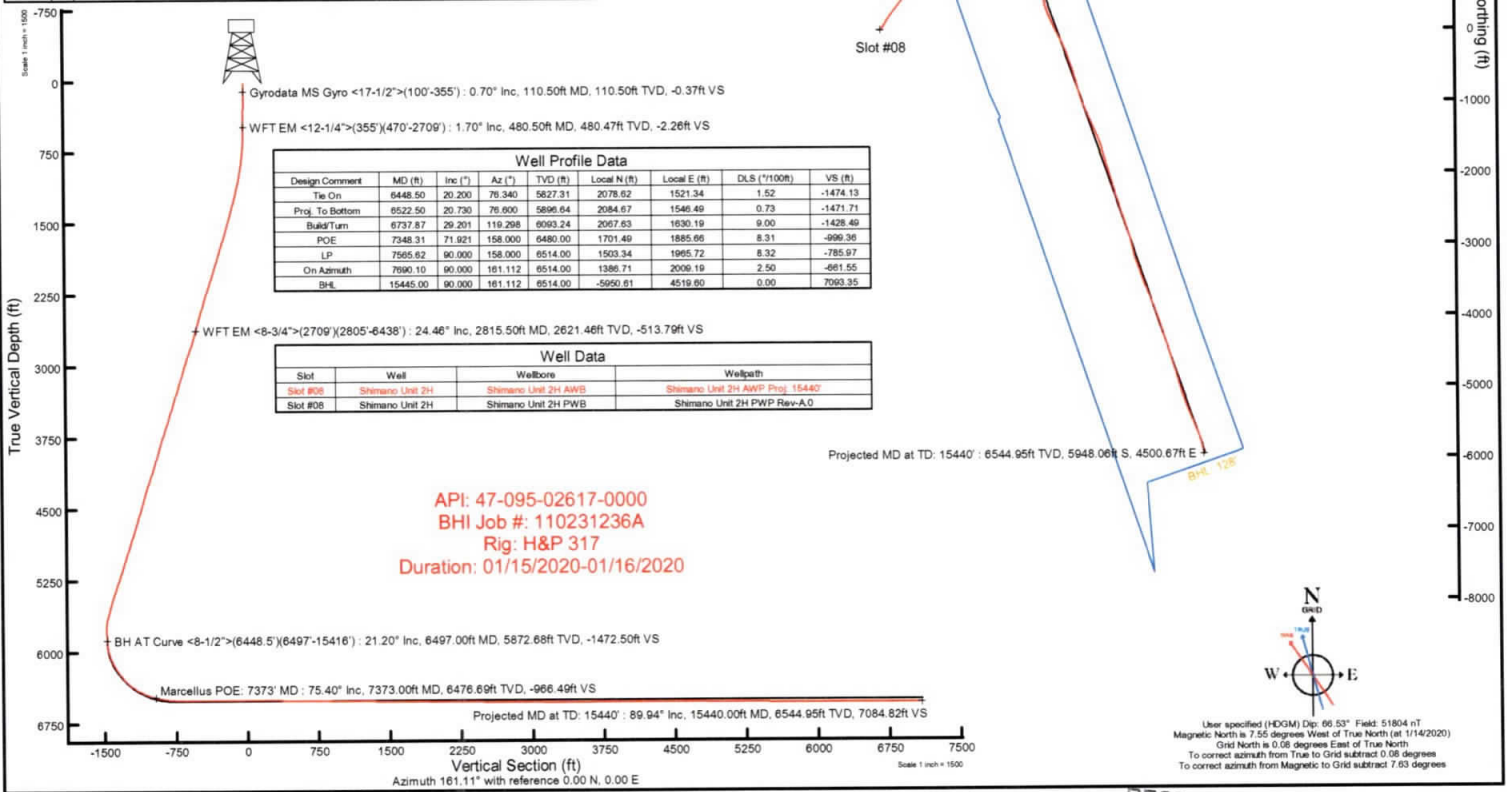


Location: Tyler County, WV
 Field: Tyler
 Facility: State Ridge Pad

Slot: Slot #08
 Well: Shimano Unit 2H
 Wellbore: Shimano Unit 2H PWB

Plot reference wellpath is Shimano Unit 2H PWB Rev-A-0	Grid System: NAD83 / UTM Zone 17 North, US feet
True vertical depths are referenced to H&P 317 (RKB)	North Reference: Grid north
Reference wellpath measured depths are referenced to H&P 317 (RKB)	Scale: True distance
H&P 317 (RKB) to Mean Sea Level: 1089.5 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: Slot #08): -1054 feet	Deaths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: detroit on 2020-01-28, Database: W.A.MS_EasternUS_Cut

Location Information					
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
State Ridge Pad	1675818.950	14347063.000	39°30'30.1867"N	80°52'28.1461"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude
Slot #08	12.66	58.62	1675877.548	14347075.748	39°30'30.3110"N
Comment	Shimano Unit 2H				
H&P 317 (RKB) to Ground level (At Slot: Slot #08)	25.5ft				
Mean Sea Level to Ground level (At Slot: Slot #08)	-1054ft				
H&P 317 (RKB) to Mean Sea Level	1089.5ft				



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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	4/21/2020
Job End Date:	4/21/2020
State:	West Virginia
County:	Tyler
API Number:	47-095-02617-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Shimano Unit 2H
Latitude:	39.50842000
Longitude:	-80.87428000
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,530
Total Base Water Volume (gal):	303,634
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	Supplied by Operator	Base Fluid	Water	7732-18-5	100.00000	85.76765	
Sand (Proppant)		Propping Agent					
				Listed Below			

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CalBreak™ 5501	CWS	Breaker							
					Listed Below				
CI-9100G	CWS	Corrosion Inhibitor							
					Listed Below				
SaniFrac™ 8123	CWS	Microbiocide							
					Listed Below				
CalGel™ 4000	CWS	Gel Slurry							
					Listed Below				
Hydrochloric Acid	CWS	Clean Perforations							
					Listed Below				
Other Chemical (s)	Listed Above	See Trade Name (s) List							
					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		13.90698	
			Hydrochloric acid	7647-01-0		37.00000		0.11232	
			Illite	12173-60-3		1.00000		0.09093	
			Calcite	471-34-1		1.00000		0.04813	
			Biotite	1302-27-8		0.10000		0.01391	
			Apatite	64476-38-6		0.10000		0.01391	
			Goethite	1310-14-1		0.10000		0.01391	
			Distillates (petroleum), hydrotreated middle	64742-46-7		60.00000		0.00943	

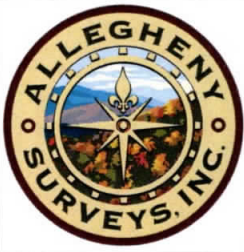
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				Guar gum	9000-30-0	60.00000	0.00943
				Imenite	98072-94-7	0.10000	0.00909
				Glutaraldehyde	111-30-8	14.00000	0.00168
				Quaternary ammonium compounds, bis (hydrogenated tallow alkyl)dimethyl, salts with bentonite	68953-58-2	5.00000	0.00079
				Didecyl dimethyl ammonium chloride	7173-51-5	3.00000	0.00036
				Ethanol	64-17-5	3.00000	0.00036
				Alkyl dimethyl benzyl ammonium chloride	68424-85-1	3.00000	0.00036
				Ammonium Persulfate	7727-54-0	100.00000	0.00030
				Oxirane, 2-methyl-, polymer with oxirane, monodecyl ether	37251-67-5	1.50000	0.00024
				Ethylene Glycol	107-21-1	40.00000	0.00006
				Vinylidene chloride-methyl acrylate copolymer	25038-72-6	20.00000	0.00006
				Diethylene glycol, monomethyl ether	34590-94-8	20.00000	0.00003
				Formic acid	64-18-6	10.00000	0.00002
				Ethoxylated Alcohols	68131-39-5	10.00000	0.00002
				Cinnamaldehyde	104-55-2	10.00000	0.00002
				Tar bases, quinolone derivs, benzyl chloride-quatzenized	72480-70-7	10.00000	0.00002
				Isopropyl alcohol	67-63-0	5.00000	0.00001

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* 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)

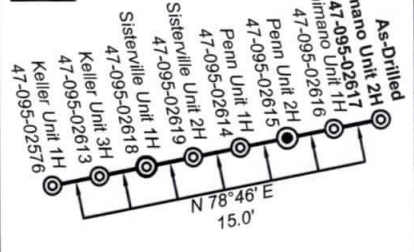
Antero Resources
Well No. Shimano Unit 2H
As-Drilled
Antero Resources Corporation



Legend

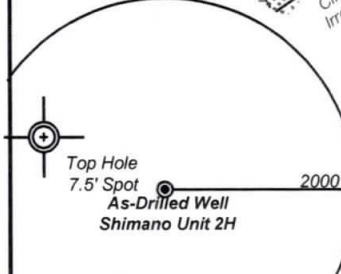
- Proposed gas well
- ⊙ Found corner, as noted
- ⊛ Existing Well, as noted
- ⊙ Digitized Well
- Creek or Drain
- Existing Road
- Surface boundary (approx.)
- Interior surface tracts (approx.)

Wellhead Layout



Detail Not to Scale

Top Hole Coordinates, As-drilled data, and information was provided by Antero Resources Corporation. Allegheny Surveys Inc. (ASI) is not certifying the data and information provided. ASI is not responsible for any errors or inaccuracies with the data and information that has been provided.



ID	TM/Par	Owner	Bk/Pg	Acres
1	10/62	Haessley Land & Timber, LLC	334/833	268.91
2	15/1	Martin L. Blair Jr. & Ronald K. Blair Sr.	WB18/361	47.00
3	15/2	John W. Eddy Estate	71/13	49.00
4	15/14	John W. & Leah D. Starkey	345/93	50.75
5	15/3	John W. Eddy Estate	77/319	40.33
6	15/37	John D. Mendenhall & Jeffrey A. Davis	444/531	154.17
7	15/17	David Mendenhall, et al	288/662	85.71
8	15/16	Robert M. Feldmeier	330/109	52.37
9	15/15	David Mendenhall, et al	289/4	50.00
10	15/23	David Mendenhall, et al	326/13	97.25
11	15/25	Charles Loy Jr., et al	358/610	20.00
12	15/27	Ronald & Martha J. Greathouse	217/571	26.00
13	15/30	Thomas C. & Jauudean L. Grinage	458/73	124.08
14	15/24	Charles & Wilda Lee Fruner	300/342	97.50
15	21/5	Michael & Bente H. Biddle	294/537	223.77
16	15/34	Michael & Bente H. Biddle	294/537	82.34
17	15/34.1	Randy & Pamela L. Lancaster	370/776	11.417
18	15/33	Roger D. Blizard & Ruth E. Spencer	340/170	102.62
19	21/6	Carl E. & Elsie M. Taylor	391/181	63.50
20	21/3	Douglas O. & Monna K. Cooper	287/390	60.46
21	21/5.2	Alfred B. & Elizabeth J. Bridle	319/408	6.582
22	21/19	Ridgetop Capital II, LP	385/781	20.00
23	21/18	Ridgetop Capital II, LP	385/781	83.68
24	21/17	Stephanie & Joseph W. Havranek	254/153	10.38
25	21/16	Stephanie & Joseph W. Havranek	254/153	4.50
26	21/14	Carl E. & Elsie M. Taylor	391/181	67.91
27	21/15	Stephanie & Joseph W. Havranek	254/153	45.48

Note: 0 water wells or springs 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.

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: 38-54-E-16
DRAWING NO: Shimano 2H Well Plat
SCALE: 1" = 1500'
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: July 28 2020
OPERATOR'S WELL NO. Shimano Unit 2H
API WELL NO
47 - 095 - 02617
STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
LOCATION: ELEVATION: As-Built 1,064' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Shirley/Porter Falls
DISTRICT: Ellsworth COUNTY: Tyler
SURFACE OWNER: John D. Mendenhall & Jeffrey A. Davis Cliff & Virginia Perkins Irrevocable Trust (2); Karen F. Quinn; B. Fred Hill, Jr.; Carl E. Taylor, et ux; ACREAGE: 154.17 154.17; 40.33; 93.757; 52; 130;
ROYALTY OWNER: Dianne T. Carpenter; Herbert Stephenson Boreman Jr.; Michael A. Eddy LEASE NO: ACREAGE: 231.42344; 63.5
PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled 6,545' TVD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 15,440' MD

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

7,096' to Bottom Hole
TOP HOLE LATITUDE 39 - 32 - 30
BTM HOLE LATITUDE 39 - 30 - 00

Notes:
West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.
Well No. Shimano Unit 2H Top Hole coordinates are
N: 370,253.97' Latitude: 39°30'30.32"
E: 1,612,259.31' Longitude: 80°52'27.39"
Bottom Hole coordinates are
N: 364,237.76' Latitude: 39°29'31.52"
E: 1,616,668.47' Longitude: 80°51'29.98"
UTM Zone 17, NAD 1983
Top Hole Coordinates Bottom Hole Coordinates
N: 4,373,215.404m N: 4,371,404.992m
E: 510,823.100m E: 512,196.933m
Plat orientation and corner and well references are based upon the grid north meridian.
Well location references are based upon the magnetic meridian.

	Bearing	Dist.
L1	S 56°03' W	2,945.7'
L2	N 77°50' W	3,414.1'
L3	N 59°36' E	2,717.0'
L4	N 66°04' E	3,884.4'

11,730' to Top Hole

LONGITUDE 80 - 50 - 00

2,775' to Bottom Hole

11,933' to Top Hole