

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

API 47 - 095 - 02616 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 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 4373214.230m Easting 510818.457m  
Landing Point of Curve Northing 4372832.86m Easting 511418.81m  
Bottom Hole Northing 4371309.373m Easting 511965.383m

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 8/29/2019 Date drilling ceased 1/22/2020  
Date completion activities began 4/26/2020 Date completion activities ceased 5/14/2020  
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:  
QEB  
11/6/2020

API 47-095 - 02616 Farm name John D. Mendenhall & Jeffery A. Davis Well number Shimano 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"	105'	New	94#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"	390'	New	54.5#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2676'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	15214'	New	23#, HCP-110	N/A	Y
Tubing		2-3/8"	7051'		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 <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	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	930 sx	15.6	1.19	1082	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	792 sx (Lead) 2139 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) 15234' MD, 6550' TVD (BHL), 6551' (Deepest Point Drilled) Loggers TD (ft) 15234' MD

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

Plug back procedure N/A

Kick off depth (ft) 5980'

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

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API 47- 095 - 02616 Farm name John D. Mendenhall & Jeffery A. Davis Well number Shimano Unit 1H

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 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)
<b>*PLEASE SEE ATTACHED EXHIBIT 2</b>								

**\*PLEASE SEE ATTACHED EXHIBIT 2**


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<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
Marcellus	6452' (TOP) TVD	7090' (TOP) MD

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 8895 mcfpd Oil 358 bpd NGL --- bpd Water 1864 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 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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**API 47-095-02616 Farm Name John D. Mendenhall & Jeffrey A. Davis Well Number Shimano Unit 1H**

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	4/13/2020	15116	15072.2	60	Marcellus
2	4/13/2020	15034.09829	14866.5897	60	Marcellus
3	4/13/2020	14830.68803	14663.1795	60	Marcellus
4	4/13/2020	14627.27778	14459.7692	60	Marcellus
5	4/13/2020	14423.86752	14256.359	60	Marcellus
6	4/14/2020	14220.45726	14052.9487	60	Marcellus
7	4/14/2020	14017.04701	13849.5385	60	Marcellus
8	4/14/2020	13813.63675	13646.1282	60	Marcellus
9	4/14/2020	13610.2265	13442.7179	60	Marcellus
10	4/14/2020	13406.81624	13239.3077	60	Marcellus
11	4/15/2020	13203.40598	13035.8974	60	Marcellus
12	4/15/2020	12999.99573	12832.4872	60	Marcellus
13	4/15/2020	12796.58547	12629.0769	60	Marcellus
14	4/15/2020	12593.17521	12425.6667	60	Marcellus
15	4/15/2020	12389.76496	12222.2564	60	Marcellus
16	4/16/2020	12186.3547	12018.8462	60	Marcellus
17	4/16/2020	11982.94444	11815.4359	60	Marcellus
18	4/16/2020	11779.53419	11612.0256	60	Marcellus
19	4/16/2020	11576.12393	11408.6154	60	Marcellus
20	4/17/2020	11372.71368	11205.2051	60	Marcellus
21	4/17/2020	11169.30342	11001.7949	60	Marcellus
22	4/17/2020	10965.89316	10798.3846	60	Marcellus
23	4/17/2020	10762.48291	10594.9744	60	Marcellus
24	4/17/2020	10559.07265	10391.5641	60	Marcellus
25	4/18/2020	10355.66239	10188.1538	60	Marcellus
26	4/18/2020	10152.25214	9984.74359	60	Marcellus
27	4/18/2020	9948.84188	9781.33333	60	Marcellus
28	4/18/2020	9745.431624	9577.92308	60	Marcellus
29	4/18/2020	9542.021368	9374.51282	60	Marcellus
30	4/18/2020	9338.611111	9171.10256	60	Marcellus
31	4/19/2020	9135.200855	8967.69231	60	Marcellus
32	4/19/2020	8931.790598	8764.28205	60	Marcellus
33	4/19/2020	8728.380342	8560.87179	60	Marcellus
34	4/19/2020	8524.970085	8357.46154	60	Marcellus
35	4/19/2020	8321.559829	8154.05128	60	Marcellus
36	4/20/2020	8118.149573	7950.64103	60	Marcellus
37	4/20/2020	7914.739316	7747.23077	60	Marcellus
38	4/20/2020	7711.32906	7543.82051	60	Marcellus
39	4/20/2020	7507.918803	7340.41026	60	Marcellus
40	4/21/2020	7304.508547	7137	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	4/13/2020	85.4	8142	7075	4572	161040	4709.756	N/A
2	4/13/2020	91.9	7957	5437	4724	263220	7491.616	N/A
3	4/13/2020	96.4	8243	5625	4685	262640	7427.53	N/A
4	4/13/2020	92.3	8249	5769	5054	265390	7386.34	N/A
5	4/13/2020	93.9	8303	5477	4520	260600	6952.89	N/A
6	4/14/2020	94.3	7954	5267	4060	263500	7170.78	N/A
7	4/14/2020	92.8	8249	5993	4269	264100	7245.3	N/A
8	4/14/2020	92.8	7858	6497	3747	262940	7138.54	N/A
9	4/14/2020	90.6	8192	6083	4378	271320	7255.2	N/A
10	4/14/2020	92.9	8255	6484	4495	268030	7222.12	N/A
11	4/15/2020	94.8	8285	6403	4588	263560	8198.96	N/A
12	4/15/2020	97.6	8122	6240	4615	262750	7303.14	N/A
13	4/15/2020	92.6	8104	6092	4254	265230	7280.21	N/A
14	4/15/2020	93.9	8347	6186	4572	270230	7137.98	N/A
15	4/15/2020	94.6	8245	6186	4629	268610	7315.98	N/A
16	4/16/2020	89.1	8121	5421	4388	254680	10673.87	N/A
17	4/16/2020	93.9	7903	5169	4819	266260	7106.66	N/A
18	4/16/2020	94.9	7831	5919	4498	270280	7103.37	N/A
19	4/16/2020	95.6	8062	6046	4591	268950	7071.83	N/A
20	4/17/2020	95.4	7940	5810	4152	266590	7043.42	N/A
21	4/17/2020	96.4	7892	5738	4509	266590	7143.52	N/A
22	4/17/2020	96.1	7741	5658	3744	270150	7171.25	N/A
23	4/17/2020	95.4	7744	6263	3731	266640	7048.48	N/A
24	4/17/2020	95.5	7805	6538	4231	266720	7019.93	N/A
25	4/18/2020	95.6	7833	6110	3998	267030	7159.4	N/A
26	4/18/2020	95.6	7676	6200	3777	268760	7146.63	N/A
27	4/18/2020	92.9	7420	6010	4394	263590	7508.19	N/A
28	4/18/2020	96.6	7645	6091	4142	267060	7030.41	N/A
29	4/18/2020	94.5	7515	6077	3872	267450	7132.35	N/A
30	4/18/2020	96.9	7427	5866	3810	267420	6992.34	N/A
31	4/19/2020	96.8	7302	5871	4717	264110	7042.86	N/A
32	4/19/2020	96	7164	5951	3923	265860	7069.14	N/A
33	4/19/2020	96.4	7191	5230	4012	269840	7107.08	N/A
34	4/19/2020	95.1	6933	3922	4513	261400	7127.83	N/A
35	4/19/2020	96	6819	4427	4644	260940	6944.07	N/A
36	4/20/2020	95.5	7035	6101	4314	264700	6892.25	N/A
37	4/20/2020	94.6	6588	5599	4350	267970	8840.39	N/A
38	4/20/2020	92.3	6385	5240	4080	263690	7037.58	N/A
39	4/20/2020	97.6	6803	4972	4500	261450	6993.32	N/A
40	4/21/2020	96.7	6277	4122	4608	265310	6950.02	N/A
	AVG=	94	7,901	5,963	4,317	8,879,140	238,807	TOTAL

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## 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	1,940	1,910	2,015
Big Lime	1,940	2,567	1,990	2,695
Fifty Foot Sandstone	2,567	2,642	2,670	2,775
Gordon	2,642	2,969	2,750	3,124
Fifth Sandstone	2,969	3,050	3,099	3,213
Bayard	3,050	3,940	3,188	4,177
Speechley	3,940	4,207	4,152	4,466
Balltown	4,207	4,591	4,441	4,883
Bradford	4,591	5,022	4,858	5,351
Benson	5,022	5,265	5,326	5,615
Alexander	5,265	6,318	5,590	6,785
Sycamore	6,185	6,293	6,615	6,760
Middlesex	6,293	6,381	6,760	6,906
Burkett	6,381	6,404	6,906	6,953
Tully	6,404	6,452	6,953	7,090
Marcellus	6,452	NA	7,090	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: State Ridge Pad

Slot: Slot #07  
 Well: Shimano Unit 1H  
 Wellbore: Shimano Unit 1H PWB



Grid System: NAD27 (UTM Zone 17 North, US feet)  
 True vertical depths are referenced to H&P 317 (RKB)  
 Reference wellpath measured depths are referenced to H&P 317 (RKB)  
 H&P 317 (RKB) to Mean Sea Level: 1080.5 feet  
 Mean Sea Level to Ground level (At Slot Slot #07) : -1044ft  
 Other wellpath MDs are referenced to each path's default MD datum  
 Created by: dalek on 2020-01-20; Database: WA, WPS, EmbeddedUS\_Datb

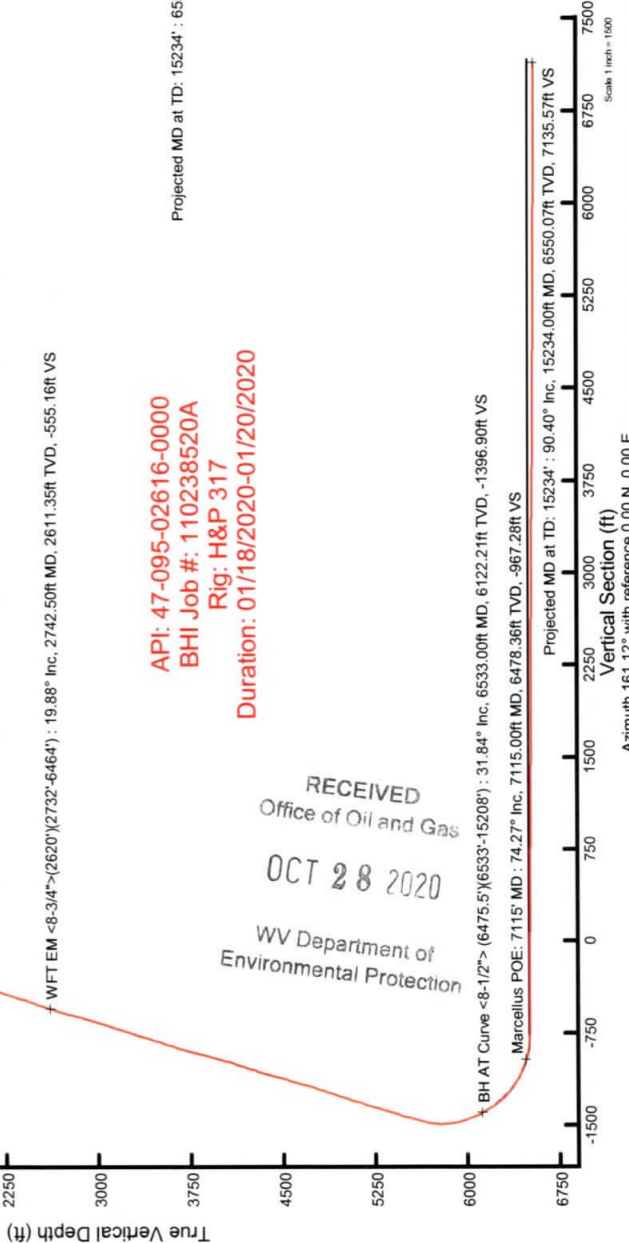
Location Information			
Facility Name	Grid East (US ft)	Grid North (US ft)	Longitude
State Ridge Pad	1075818.050	30°30'30.1807"N	80°52'28.1461"W
Slot #07	9.51	1075882.901	80°52'27.5850"W
Shimano Unit 1H			
Comment: Shimano Unit 1H			
H&P 317 (RKB) to Ground level (At Slot Slot #07)			
Mean Sea Level to Ground level (At Slot Slot #07)			
H&P 317 (RKB) to Mean Sea Level			

Slot	Well	Wellbore	Wellpath
Slot #07	Shimano Unit 1H	Shimano Unit 1H AWB	Shimano Unit 1H AWP Prof. 15234
Slot #07	Shimano Unit 1H	Shimano Unit 1H PWB	Shimano Unit 1H PWP Rev-A-0

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	6474.50	29.060	125.840	6071.78	1806.98	889.61	6.38	-1421.90
PTB	6548.50	31.220	135.430	6135.81	1782.78	917.66	7.12	-1389.92
Build/Turn	6885.87	53.255	152.123	6370.04	1609.12	1036.66	7.74	-1187.09
POE	7088.60	71.471	158.000	6473.00	1430.70	1118.89	8.50	-991.73
LP	7294.48	90.000	158.000	6506.00	1243.13	1194.48	9.00	-789.73
On Azimuth	7398.49	90.000	161.120	6506.00	1145.68	1230.80	3.00	-685.77
BHL	15249.45	90.000	161.120	6506.00	-6282.89	3771.24	0.00	7185.19

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #07	Shimano Unit 1H	Shimano Unit 1H AWB	Shimano Unit 1H AWP Prof. 15234
Slot #07	Shimano Unit 1H	Shimano Unit 1H PWB	Shimano Unit 1H PWP Rev-A-0

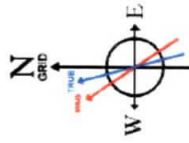
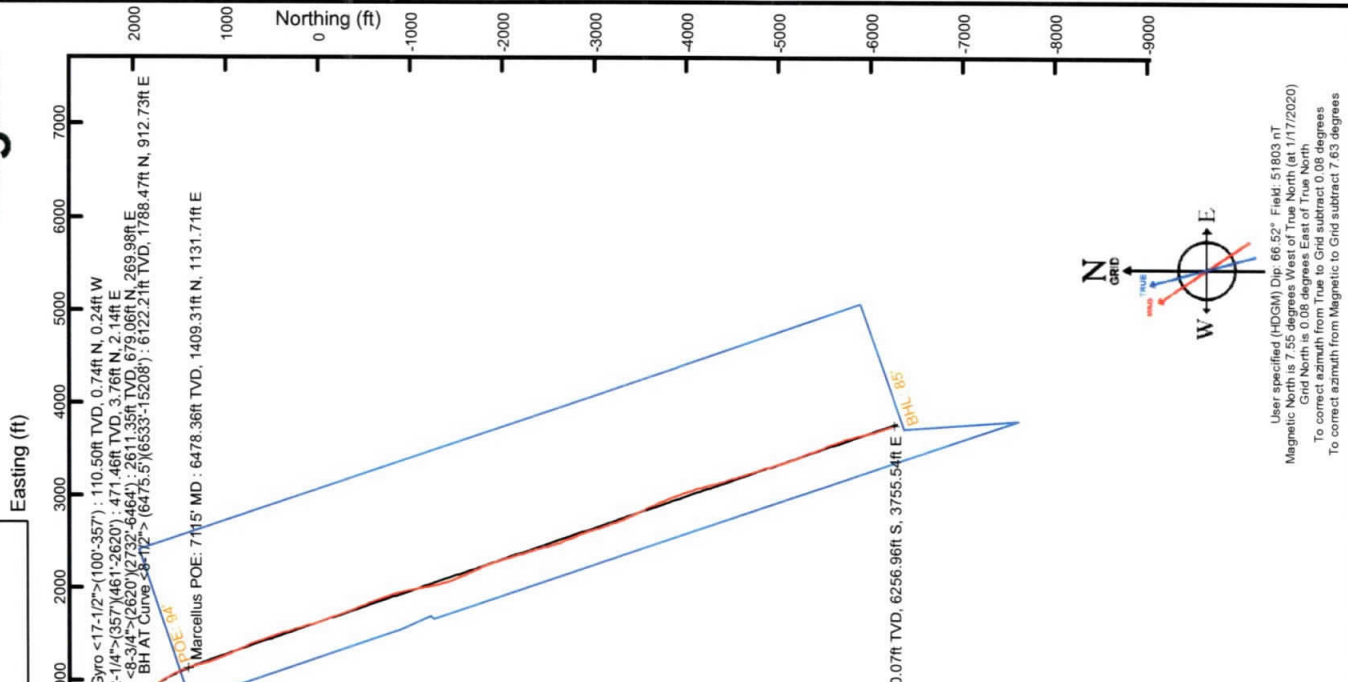
Gyrodia MS Gyro <17-12>(100-357) : 1.05° Inc, 110.50ft MD, 110.50ft TVD, -0.78ft VS  
 WFT EM <12-1/4>(357)(461-2620) : 1.51° Inc, 471.50ft MD, 471.46ft TVD, -2.87ft VS



API: 47-095-02616-0000  
 BHI Job #: 110238520A  
 Rig: H&P 317  
 Duration: 01/18/2020-01/20/2020

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Projected MD at TD: 15234' : 90.40° Inc, 15234.00ft MD, 6550.07ft TVD, 7135.57ft VS  
 Vertical Section (ft)  
 Azimuth 161.12° with reference 0.00 N, 0.00 E  
 Scale 1 inch = 1500



User specified (HDGM) Dip: 66.52° Field: 51803 nT  
 Magnetic North is 7.55 degrees West of True North (at 1/17/2020)  
 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 7.63 degrees



# 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:	47-095-02616-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Shimano Unit 1H
Latitude:	39.50841000
Longitude:	-80.87433000
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,532
Total Base Water Volume (gal):	294,119
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	85.55846	
Sand (Proppant)	RECEIVED Office of Oil and Gas WVS	Propping Agent		Listed Below			

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Hydrochloric Acid	CWS	Clean Perforations															
								Listed Below									
SaniFrac™ 8123	CWS	Microbiocide						Listed Below									
								Listed Below									
CalGel™ 4000	CWS	Gel Slurry						Listed Below									
								Listed Below									
CalBreak™ 5501	CWS	Breaker						Listed Below									
								Listed Below									
CI-9100G	CWS	Corrosion Inhibitor						Listed Below									
								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	14.11228						
								Hydrochloric acid	7647-01-0	37.00000	0.11567						
								Illite	12173-60-3	1.00000	0.09248						
								Calcite	471-34-1	1.00000	0.04863						
								Biotite	1302-27-8	0.10000	0.01411						
								Goethite	1310-14-1	0.10000	0.01411						
								Apatite	64476-38-6	0.10000	0.01411						
								Ilmenite	98072-94-7	0.10000	0.00925						
								Guar gum	9000-30-0	60.00000	0.00840						

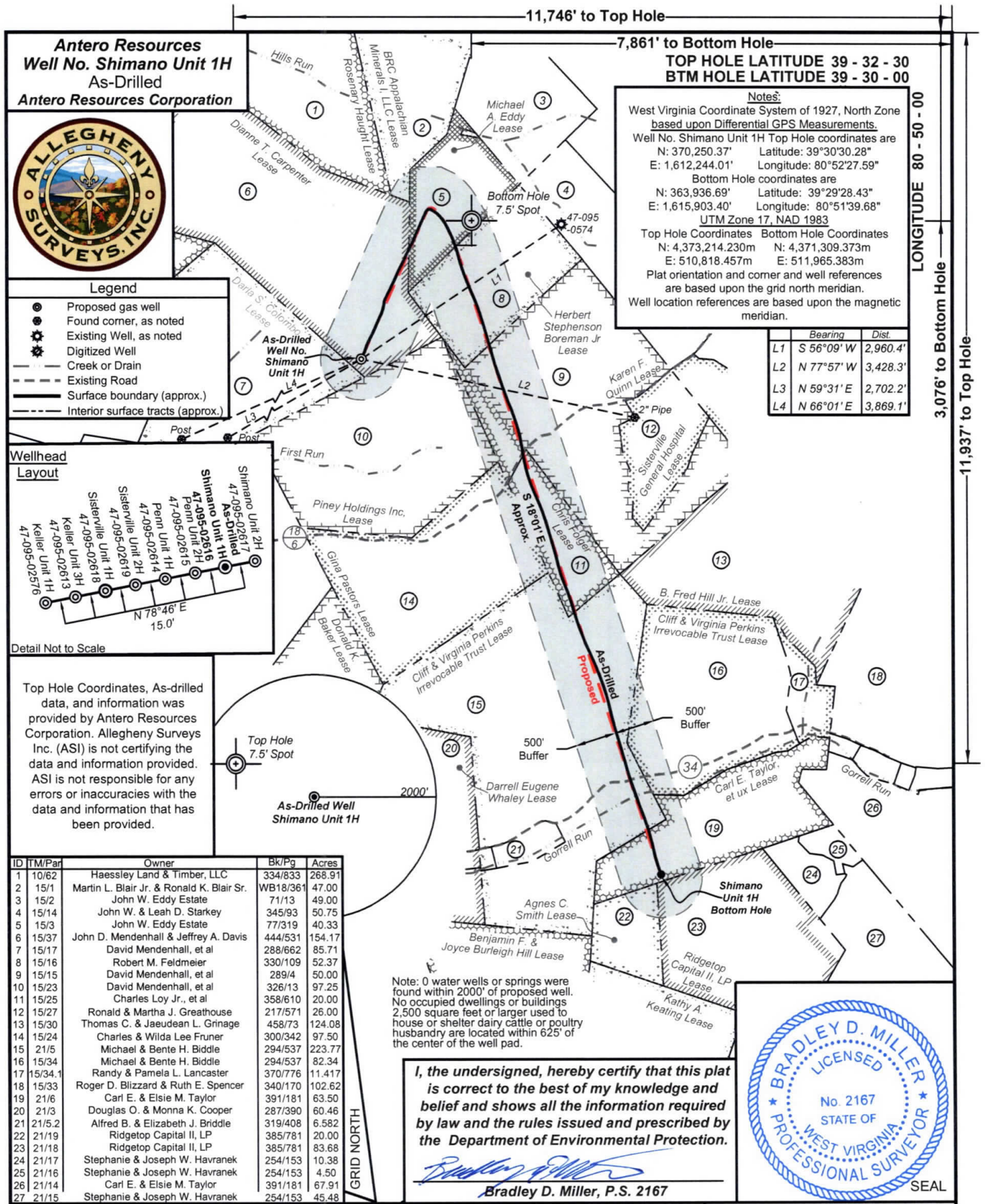
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				Distillates (petroleum), hydrotreated middle	64742-46-7	60.00000	0.00840	
				Glutaraldehyde	111-30-8	14.00000	0.00160	
				Quaternary ammonium compounds, bis (hydrogenated tallow alkyl)dimethyl, salts with bentonite	68953-58-2	5.00000	0.00070	
				Alkyl dimethyl benzyl ammonium chloride	68424-85-1	3.00000	0.00034	
				Ethanol	64-17-5	3.00000	0.00034	
				Didecyl dimethyl ammonium chloride	7173-51-5	3.00000	0.00034	
				Ammonium Persulfate	7727-54-0	100.00000	0.00031	
				Oxirane, 2-methyl-, polymer with oxirane, monodecyl ether	37251-67-5	1.50000	0.00021	
				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	
				Ethoxylated Alcohols	68131-39-5	10.00000	0.00002	
				Tar bases, quinolone derivs, benzyl chloride- quaternized	72480-70-7	10.00000	0.00002	
				Cinnamaldehyde	104-55-2	10.00000	0.00002	
				Formic acid	64-18-6	10.00000	0.00002	
				Isopropyl alcohol	67-63-0	5.00000	0.00001	

\* 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)

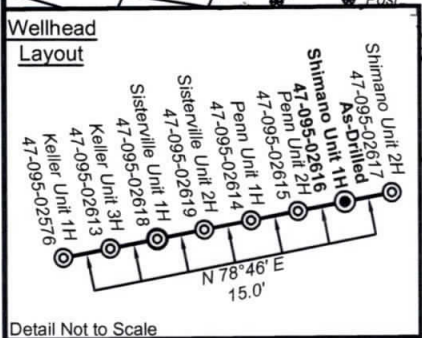
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Office of Oil and Gas  
OCT 28 2020  
U.S. Department of  
Environmental Protection



**Antero Resources**  
Well No. Shimano Unit 1H  
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.)



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. Blizzard & 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. Briddle	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 1H As-Drilled 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 1H  
API WELL NO  
47 - 095 - 02616  
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; Karen F. Quinn; Michael A. Eddy; Carl E. Taylor, et ux; ACREAGE: 154.17 154.17; 40.33; 52; 130; 36;  
ROYALTY OWNER: Dianne T. Carpenter; Herbert Stephenson Boreman Jr.; Chris Folger; 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 6,550' TVD  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 15,234' 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