

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

API 47 - 085 - 10538 County Ritchie District Clay  
Quad Ellenboro 7.5' Pad Name Husher Field/Pool Name -----  
Farm name Richard E. Blouir Et Ux Well Number Villers 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 4348623m Easting 498184m  
Landing Point of Curve Northing 4348080m Easting 497661m  
Bottom Hole Northing 4350579m Easting 496837m

Elevation (ft) 1,007' 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 12/16/2024 Date drilling commenced 1/14/2025 Date drilling ceased 3/18/2025  
Date completion activities began 5/1/2025 Date completion activities ceased 7/1/2025  
Verbal plugging (Y/N) N/A Date permission granted N/A Granted by N/A

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

Freshwater depth(s) ft 147', 406' Open mine(s) (Y/N) depths No  
Salt water depth(s) ft 1654' Void(s) encountered (Y/N) depths No  
Coal depth(s) ft N/A Cavern(s) encountered (Y/N) depths No  
Is coal being mined in area (Y/N) No

Reviewed

Reviewed by:  
J.M. 12-8-25  
03/13/2026

API 47- 085 - 10538 Farm name Richard E. Blouir Et Ux Well number Villers 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	28"	20"	130'	New	91.59#, J-55	N/A	Y
Surface	17-1/2"	13-3/8"	508'	New	54.5#, J-55	N/A	Y
Coal							
Intermediate 1	12-3/8"	9-5/8"	6257'	New	34.89#, L-80	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	16622'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	7004'		4.7#, J-55		
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	215 sx	15.6	1.18	254	0'	8 Hrs.
Surface	Class A	470 sx	15.8	1.17	550	0'	8 Hrs.
Coal							
Intermediate 1	Class C	725 sx	15.8	1.15	834	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	2280 sx (Tail)	13.5 (Spacer), 15.2(Tail)	1.31 (Tail)	2987	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 16,622' MD, 6,182' TVD (BHL), 6,199' TVD (Deepest Point Drilled) Loggers TD (ft) 16,592' MD  
 Deepest formation penetrated Marcellus Plug back to (ft) N/A  
 Plug back procedure N/A

Kick off depth (ft) 6,257'

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

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WAS WELL COMPLETED AS SHOT HOLE  Yes  No DETAILS \_\_\_\_\_

WAS WELL COMPLETED OPEN HOLE?  Yes  No DETAILS \_\_\_\_\_

WV Department of Environmental Protection

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

Reviewed

*J.M.* 12-8-25  
03/13/2026





**EXHIBIT 1**

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	5/1/2025	16566.4	16551.6	36	Marcellus
2	5/2/2025	16513.25319	16349.5191	36	Marcellus
3	5/22/2025	16314.37234	16150.6383	36	Marcellus
4	5/23/2025	16115.49149	15951.7574	36	Marcellus
5	5/23/2025	15916.61064	15752.8766	36	Marcellus
6	5/24/2025	15717.72979	15553.9957	36	Marcellus
7	5/24/2025	15518.84894	15355.1149	36	Marcellus
8	5/24/2025	15319.96809	15156.234	36	Marcellus
9	5/24/2025	15121.08723	14957.3532	36	Marcellus
10	5/24/2025	14922.20638	14758.4723	36	Marcellus
11	5/24/2025	14723.32553	14559.5915	36	Marcellus
12	5/24/2025	14524.44468	14360.7106	36	Marcellus
13	5/24/2025	14325.56383	14161.8298	36	Marcellus
14	5/25/2025	14126.68298	13962.9489	36	Marcellus
15	5/25/2025	13927.80213	13764.0681	36	Marcellus
16	5/25/2025	13728.92128	13565.1872	36	Marcellus
17	5/25/2025	13530.04043	13366.3064	36	Marcellus
18	5/26/2025	13331.15957	13167.4255	36	Marcellus
19	5/27/2025	13132.27872	12968.5447	36	Marcellus
20	5/27/2025	12933.39787	12769.6638	36	Marcellus
21	5/27/2025	12734.51702	12570.783	36	Marcellus
22	5/27/2025	12535.63617	12371.9021	36	Marcellus
23	5/27/2025	12336.75532	12173.0213	36	Marcellus
24	5/28/2025	12137.87447	11974.1404	36	Marcellus
25	5/28/2025	11938.99362	11775.2596	36	Marcellus
26	5/28/2025	11740.11277	11576.3787	36	Marcellus
27	5/28/2025	11541.23191	11377.4979	36	Marcellus
28	5/28/2025	11342.35106	11178.617	36	Marcellus
29	5/29/2025	11143.47021	10979.7362	36	Marcellus
30	5/29/2025	10944.58936	10780.8553	36	Marcellus
31	5/29/2025	10745.70851	10581.9745	36	Marcellus
32	5/29/2025	10546.82766	10383.0936	36	Marcellus
33	5/30/2025	10347.94681	10184.2128	36	Marcellus
34	5/30/2025	10149.06596	9985.33191	36	Marcellus
35	5/30/2025	9950.185106	9786.45106	36	Marcellus
36	5/30/2025	9751.304255	9587.57021	36	Marcellus
37	5/31/2025	9552.423404	9388.68936	36	Marcellus
38	5/31/2025	9353.542553	9189.80851	36	Marcellus
39	5/31/2025	9154.661702	8990.92766	36	Marcellus
40	5/31/2025	8955.780851	8792.04681	36	Marcellus
41	6/1/2025	8756.9	8593.16596	36	Marcellus
42	6/1/2025	8558.019149	8394.28511	36	Marcellus
43	6/1/2025	8359.138298	8195.40426	36	Marcellus
44	6/1/2025	8160.257447	7996.5234	36	Marcellus
45	6/1/2025	7961.376596	7797.64255	36	Marcellus
46	6/2/2025	7762.495745	7598.7617	36	Marcellus
47	6/2/2025	7563.614894	7399.88085	36	Marcellus
48	6/2/2025	7364.734043	7201	36	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	5/1/2025	84.7	10384	5717	3539	114560	3839	N/A
2	5/2/2025	100.3	10201	5391	5241	411280	6848	N/A
3	5/22/2025	98.1	9815	7531	4851	416140	7160	N/A
4	5/23/2025	94.6	9919	5792	4237	412060	7746	N/A
5	5/23/2025	93.9	10144	5590	4673	408620	6972	N/A
6	5/24/2025	94.5	9695	5514	4920	412340	7001	N/A
7	5/24/2025	94.6	9676	4161	4048	415460	7059	N/A
8	5/24/2025	99	9692	5923	4782	412760	7019	N/A
9	5/24/2025	94.2	9543	5799	4602	407060	6919	N/A
10	5/24/2025	99	9901	5997	4914	412420	6865	N/A
11	5/24/2025	82.9	9820	2649	4884	409780	8738	N/A
12	5/24/2025	97.8	9309	5979	4394	415040	6979	N/A
13	5/24/2025	98.5	9324	6335	5409	417780	6966	N/A
14	5/25/2025	96.3	8878	5256	4723	410710	8737	N/A
15	5/25/2025	93.5	8897	5561	4611	413760	8488	N/A
16	5/25/2025	93	8998	5741	4476	414240	7115	N/A
17	5/25/2025	94.5	9022	5936	3815	411840	6852	N/A
18	5/26/2025	98.5	9130	6334	4798	414300	6949	N/A
19	5/27/2025	98.3	9026	4655	4538	415760	6895	N/A
20	5/27/2025	98.8	8839	5430	3583	417140	7058	N/A
21	5/27/2025	98.2	8809	7102	4598	417140	7163	N/A
22	5/27/2025	99.1	8969	5660	5127	412880	6922	N/A
23	5/27/2025	98.4	8726	5579	4644	411820	6942	N/A
24	5/28/2025	98.4	8955	10097	3858	409540	6888	N/A
25	5/28/2025	99.2	8849	5724	4332	417160	6937	N/A
26	5/28/2025	99.2	8889	6908	4549	411620	6864	N/A
27	5/28/2025	98.7	8669	6410	4357	414820	6765	N/A
28	5/28/2025	98.8	8646	5602	4270	417280	7002	N/A
29	5/29/2025	98.4	8483	4887	4686	397500	6690	N/A
30	5/29/2025	99	8300	6133	4064	410700	6874	N/A
31	5/29/2025	98.3	8436	5736	5650	416100	8372	N/A
32	5/29/2025	98.3	8211	5945	5003	393180	6615	N/A
33	5/30/2025	98.3	8077	6050	4024	410040	6685	N/A
34	5/30/2025	98.6	8141	6211	3897	410400	6724	N/A
35	5/30/2025	98.9	8402	5974	3403	413620	6825	N/A
36	5/30/2025	98.8	8520	6036	4453	397520	6609	N/A
37	5/31/2025	98.6	7986	5603	4939	395060	6702	N/A
38	5/31/2025	98.4	7933	6230	6174	411160	6672	N/A
39	5/31/2025	97.1	7822	5780	4480	402500	6572	N/A
40	5/31/2025	99	8441	6340	3365	412470	6701	N/A
41	6/1/2025	98.4	7832	5131	4363	411280	6673	N/A
42	6/1/2025	97.7	7799	5115	3029	407740	6707	N/A
43	6/1/2025	99	7395	5812	3830	407000	6653	N/A
44	6/1/2025	98.8	7586	5209	4412	411520	7002	N/A
45	6/1/2025	99.1	7324	5015	4453	411720	6685	N/A
46	6/2/2025	98.4	7424	6168	4311	412780	6678	N/A
47	6/2/2025	97	7045	5025	4729	409340	6635	N/A
48	6/2/2025	96.9	7157	5954	4271	409400	7237	N/A
<b>AVERAGE</b>		<b>97.1</b>	<b>8,730</b>	<b>5,807</b>	<b>4,465</b>	<b>19,426,340</b>	<b>333,999</b>	<b>0</b>

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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
Silty Sandstone	100	170	100	100
Silty Sandstone, Occ LS	170	370	170	170
Silty Sandstone	370	570	370	370
Sandstone. Scat SLTST, Scat LS	570	770	570	570
Silty Sandstone, tr LS	770	970	770	770
Sandy Siltstone	970	1,170	970	970
Sandy Siltstone	1,170	1,370	1,170	1,170
Silty Sandstone, tr MICA	1,370	1,770	1,370	1,370
Silty Sandstone, tr LS, tr PYR	1,770	1,870	1,770	1,770
Sandy Limestone, rr Shale	1,870	1,811	1,870	1,870
Big Lime	1,841	2,472	1,898	1,898
Fifty Foot Sandstone	2,472	2,548	2,644	2,644
Gordon	2,548	2,848	2,734	2,734
Fifth Sandstone	2,848	3,112	3,090	3,090
Bayard	3,112	3,970	3,407	3,407
Speechley	3,970	4,196	4,442	4,442
Balltown	4,196	4,536	4,715	4,715
Bradford	4,536	4,684	5,133	5,133
Benson	4,684	5,084	5,312	5,312
Alexander	5,084	5,942	5,791	5,791
Sycamore	5,912	6,000	6,795	6,795
Middlesex	6,000	6,096	6,913	6,913
Burkett	6,096	6,118	7,087	7,087
Tully	6,118	6,120	7,143	7,143
Marcellus	6,120	NA	7,149	7,149

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03/13/2026

LATITUDE 39°17'30"

6,007'

LATITUDE 39°20'00"

10,428' TO BOTTOM HOLE

LONGITUDE 81°00'00"

10,498' TO BOTTOM HOLE

LONGITUDE 81°00'00"

COUNTY NAME PERMIT

Antero Resources Corporation  
Well No. Villers Unit 1H

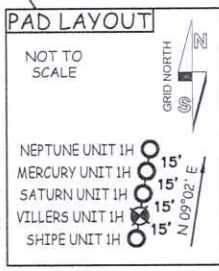
AS DRILLED DATA:  
WELL 1H TOP HOLE INFORMATION:  
N: 290,249ft E: 1,569,438ft  
LAT: 39°17'12.83" LON: 81°01'16.39"  
BOTTOM HOLE INFORMATION:  
1H TOP HOLE  
N: 296,739ft E: 1,565,124ft  
LAT: 39°18'16.24" LON: 81°02'12.67"  
WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE.  
ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE GEOXT SUBMETER MAPPING GRADE GPS UNIT. PLAT ORIENTATION, CORNER, AND WELL REFERENCE TIE LINES ARE BASED ON GRID NORTH.

LEASES	
A	ROSE ALKIRE, ET AL
B1	M.B. LEASBURGE, ET UX
B2	M.B. LEASBURGE, ET UX
B3	M.B. LEASBURGE, ET UX
C	C.B. MORRIS AND S.A. SMITH IRREVOCABLE LIVING TRUST
D1	BLACK GOLD GROUP, LTD
D2	BLACK GOLD GROUP, LTD
E	FREDERICK R. HAYHURST, ET AL
F	ALFRED A. LAMBERT
G1	TOM G. STRICKLER, JR., ET UX
G2	TOM G. STRICKLER, JR., ET UX
G3	TOM G. STRICKLER, JR., ET UX
G4	TOM G. STRICKLER, JR., ET UX
G5	TOM G. STRICKLER, JR., ET UX
H1	F. ROBERT HAYHURST FAMILY TRUST
H2	F. ROBERT HAYHURST FAMILY TRUST
H3	F. ROBERT HAYHURST FAMILY TRUST
I	MICHAEL P. SHEARER & NELLIE H. SHEARER
J	WEST VIRGINIA DIVISION OF MULTIMODEL TRANSPORTATION FACILITIES
K	FRANKLIN OWENS AND ANNIE I. OWENS
L	VIRGINIA L. CONNORS
M	AGNES L. ROGERS
N	AGNES L. ROGERS
P	CLARENCE J. MCCULLOUGH, ET UX
Q	F. ROBERT HAYHURST FAMILY TRUST
O	CLARENCE J. MCCULLOUGH, ET UX
R	TOM G. STRICKLER, JR., ET UX
S	RICHARD BLOUIR, ET AL
T	KIMBERLY BARNES
U	NANCY LOUISE VAUGHN

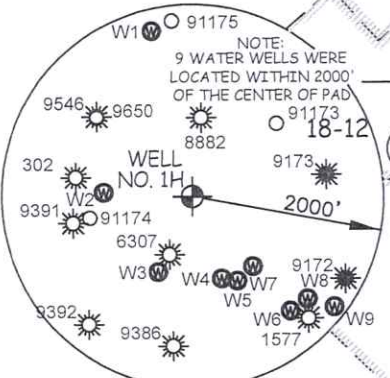
(NAD) 83 (UTM) ZONE 17 COORDS:  
WELL 1H TOP HOLE INFORMATION:  
N: 4,348,623m E: 498,184m  
BOTTOM HOLE INFORMATION:  
N: 4,350,579m E: 496,837m

(NAD) 27 (UTM) ZONE 17 COORDS:  
WELL 1H TOP HOLE INFORMATION:  
N: 14,266,396ft E: 1,634,412ft  
POINT OF ENTRY INFORMATION:  
N: 14,263,913ft E: 1,633,102ft  
BOTTOM HOLE INFORMATION:  
N: 14,272,810ft E: 1,629,992ft

CLAY DISTRICT - RITCHIE COUNTY	
11-42.1	JUDITH PACKMAN
18-04	DAVID VILLERS
18-4.1	DAVID VILLERS
18-4.2	ALFRED LAMBERT
18-4.3	DAVID VILLERS
18-4.4	WESLEY EZELL
18-4.5	LEANDRA PARSONS
18-4.6	LEANDRA PARSONS
18-06	DANIEL MARTIN
18-12	ALFRED LAMBERT
18-12.1	ALFRED LAMBERT
18-12.2	NAOMI FREDERKEIL
18-14	RONALD HAYHURST
18-17	DELNO HAYHURST
18-17.1	CAROL SPANGLER
18-18	THOMAS SUMMERS
18-20.2	MICHAEL REED
18-20.3	REGINA WAAS
24-02	KEVIN MINOR
24-03	M P CHURCH HUSHERS RUN
24-3.1	HUSHERS RUN U.M. CHURCH
24-04	DAVID LAWRENCE
24-4.1	ROGER HART
24-05	RICHARD BLOUIR
24-5.2	FREDERICK WANSTREET
24-21	FRANKLIN OWENS
24-22	CHARLES THOMAS
24-22.1	TRIPLE B TRUCKING INC
24-23	CLARENCE MCCULLOUGH
24-23.1	CLARENCE MCCULLOUGH
24-24.1	MATTHEW BLOUIR



WATER WELLS		
W1	S 13°36' E	1772.1'
W2	N 87°26' W	929.2'
W3	S 24°40' W	864.4'
W4	S 19°28' E	906.8'
W5	S 27°55' E	993.1'
W6	S 40°30' E	1566.5'
W7	N 40°45' W	960.8'
W8	S 48°22' E	1604.4'
W9	S 52°09' E	1872.9'



JOB # 23-010WA  
DRAWING # VILLERS1HAD  
SCALE 1" = 1000'  
MINIMUM DEGREE OF ACCURACY SUBMETER  
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENERGY  
DIVISION OF OIL AND GAS

THOMAS SUMMERS P.S. 2109  
DATE 11/12/25  
OPERATOR'S WELL# VILLERS UNIT #1H  
API WELL # 47 - 085 - 10538  
STATE COUNTY PERMIT

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 PERSCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



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

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL   
 (IF "GAS") PRODUCTION  STORAGE  DEEP  SHALLOW   
 LOCATION: ELEVATION AS BUILT - 1,007' WATERSHED NORTH FORK HUGHES RIVER  
 QUADRANGLE ELLENBORO 7.5' DISTRICT CLAY COUNTY RITCHIE  
 SURFACE OWNER RICHARD E. BLOUIR ET UX ACREAGE 53.682 ACRES +/-  
 OIL & GAS ROYALTY OWNER AGNES L. ROGERS LEASE ACREAGE 57 ACRES +/-  
 PROPOSED WORK: DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE   
 PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) AS DRILLED  PLUG & ABANDON  CLEAN OUT & REPLUG   
 TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,182' TVD 16,622' MD  
 WELL OPERATOR ANTERO RESOURCES CORPORATION DESIGNATED AGENT CONRAD BASTON  
 ADDRESS 1615 WYNKOOP STREET ADDRESS 535 WHITE OAKS BLVD  
 FORM WW-6 DENVER, CO 80202 BRIDGEPORT, WV 26330

LEGEND  
 --- Surface Owner Boundary Lines +/-  
 - - - Interior Surface Tracts +/-  
 ○ Proposed Well Path  
 ⊙ As Drilled Information

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

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# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	05/01/2025
Job End Date:	06/02/2025
State:	West Virginia
County:	Ritchie
API Number:	47-085-10538-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Villers Unit 1H
Latitude:	39.286978
Longitude:	-81.021061
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6186
Total Base Water Volume (gal)*:	14514612
Total Base Non Water Volume:	0



Water Source	Percent
Groundwater, < 1000TDS	100.00%

## 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
100 mesh sand	NexTier Completions Solutions	Propping Agent					
15% HCl	Tarquin	Acid					
CIA-12	NexTier Completions Solutions	Acid corrosion inhibitor					
Fincide GQ 12A	NexTier Completions Solutions	Biocide					
NGA-14	NexTier Completions Solutions	Gelling Agent					
Other Chemical(s)	Listed Above	See Trade Name(s)					
StimBreak Encap APB LT	NexTier Completions Solutions	Breaker					
ViscStim 300CE-113	NexTier Completions	Friction Reducer					

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	Solutions						
Water	Operator	Carrier Fluid					
Items above are Trade Names. Items below are the individual ingredients.							
			Water	7732-18-5	100.00000	85.80070	
			Crystalline Silica	14808-60-7	99.90000	13.79648	
			Water	7732-18-5	85.00000	0.28214	
			Hydrochloric Acid	7647-01-0	15.00000	0.04979	
			Chemplex-Polymer-00019	Proprietary	40.00000	0.01903	
			Isoalkanes	6742-47-8	30.00000	0.01427	
			Aluminum Oxide	1344-28-1	0.10000	0.01381	
			Chemplex-surfactant-00015	Proprietary	5.00000	0.00238	
			Glutaraldehyde	111-30-8	30.00000	0.00229	
			Chemplex-surfactant-00021	Proprietary	3.00000	0.00143	
			Distillates (Petroleum), Hydrotreated Light	64742-47-8	50.00000	0.00070	
			Alkyl (C12-16) dimethylbenzylammonium chloride	68424-85-1	5.00000	0.00038	
			1-Decanaminium, N-decyl-N,N-dimethyl-,chloride	7173-51-5	5.00000	0.00038	
			Ammonium Persulfate	7727-54-0	90.00000	0.00014	
			Ethylene glycol	107-21-1	45.00000	0.00014	
			Glycol Ether EB	111-76-2	45.00000	0.00014	
			Bentonite	1302-78-9	5.00000	0.00007	
			Alkoxylated Isodecyl Alcohol	154518-36-2	5.00000	0.00007	
			N,N-Dimethylformamide	68-12-2	20.00000	0.00006	
			Tar bases,quinoline derivs.,benzyl chloride-quaternized	72480-70-7	20.00000	0.00006	
			Water	7732-18-5	15.00000	0.00005	
			Cinnamaldehyde	104-55-2	10.00000	0.00003	
			Nonylphenol ethoxylated	127087-87-0	10.00000	0.00003	
			Alcohols, C6-12	68603-15-6	10.00000	0.00003	

\* 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%

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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