

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

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Office of Oil and Gas

MAY 10 2018

API 47-085-10162 County Ritchie WV Department District Clay  
Quad Pennsboro 7.5' Pad Name Kelly Pad Environmental Protection Field/Pool Name -----  
Farm name Eddy D. Waggoner et al Well Number Duchene Unit 3H  
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 4351665m Easting 503230m  
Landing Point of Curve Northing 4351927.10m Easting 503597.06m  
Bottom Hole Northing 4354367m Easting 502633m

Elevation (ft) 1127' 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 12/05/2014 Date drilling commenced 8/11/2016 Date drilling ceased 11/05/2016  
Date completion activities began 05/16/2017 Date completion activities ceased 9/16/2017  
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 337' Open mine(s) (Y/N) depths No  
Salt water depth(s) ft 1099' 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**  
*Michael Daff*

*9/5/18*

Reviewed by:  
09/07/2018

API 47-085 - 10162 Farm name Eddy D. Waggoner et al Well number Duchene Unit 3H

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"	59'	New	94#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"	541'	New	48#, H-40	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2611'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	15621'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	6667'		4.7#, N-80		
Packer type and depth set		N/A					

Comment Details \_\_\_\_\_

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	Class A	102 sx	15.6	1.18	120	0'	8 Hrs.
Surface	Class A	603 sx	15.6	1.19	718	0'	8 Hrs.
Coal							
Intermediate 1	Class A	990 sx	15.6	1.18	1168	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	695 sx (Lead) 1260 sx (Tail)	13.5 (Lead), 15.2 (Tail)	1.65 (Lead), 1.83 (Tail)	3489	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 15621' MD, 6391' TVD (BHL), 6426' (Depth to Gas) Loggers TD (ft) 15621' MD  
 Deepest formation penetrated Marcellus Plug back to (ft) N/A  
 Plug back procedure N/A

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Kick off depth (ft) 6344'

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- 085 - 10162 Farm name Eddy D. Waggoner et al Well number Duchene Unit 3H

PRODUCING FORMATION(S)	DEPTHS	
Marcellus	6376' (TOP) TVD	6747' (TOP) MD

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 2800 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 9009 mcfpd Oil --- bpd NGL --- bpd Water 1137 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 <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 Precision Drilling Company, LP  
Address 2640 Reach Road City Williamsport State PA Zip 17701

Logging Company Pro Oilfield Services LLC  
Address 3141 Pulaski Rd City New Castle State PA Zip 16105

Cementing Company Nabors Completion & Production Services, Co.  
Address 1650 Hackers Creek City Jane Lew State WV Zip 26378

Stimulating Company FTS International  
Address 1432 Route 519 City Eighty Four State PA Zip 15330

Please insert additional pages as applicable.

Completed by Mallory Stanton Telephone 303-357-7182  
Signature MAM SAJ Title Permitting Supervisor Date 05/09/2018

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

09/07/2018

API 47-085-10162 Farm Name Eddy D. Waggoner et al Well Number Duchene Unit 3H

**EXHIBIT 1**

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	5/16/2017	15350	15518	48	Marcellus
2	6/22/2017	15151	15319	48	Marcellus
3	6/23/2017	14951	15119	48	Marcellus
4	6/24/2017	14752	14920	48	Marcellus
5	6/25/2017	14553	14721	48	Marcellus
6	6/26/2017	14353	14521	48	Marcellus
7	6/27/2017	14154	14322	48	Marcellus
8	6/28/2017	13954	14123	48	Marcellus
9	6/29/2017	13755	13923	48	Marcellus
10	6/30/2017	13556	13724	48	Marcellus
11	7/1/2017	13356	13525	48	Marcellus
12	7/1/2017	13157	13325	48	Marcellus
13	7/2/2017	12958	13126	48	Marcellus
14	7/2/2017	12758	12927	48	Marcellus
15	7/3/2017	12559	12727	48	Marcellus
16	7/4/2017	12360	12528	48	Marcellus
17	7/4/2017	12160	12328	48	Marcellus
18	7/5/2017	11961	12129	48	Marcellus
19	7/5/2017	11762	11930	48	Marcellus
20	7/6/2017	11562	11730	48	Marcellus
21	7/7/2017	11363	11531	48	Marcellus
22	7/8/2017	11164	11332	48	Marcellus
23	7/8/2017	10964	11132	48	Marcellus
24	7/9/2017	10765	10933	48	Marcellus
25	7/10/2017	10566	10734	48	Marcellus
26	7/11/2017	10366	10534	48	Marcellus
27	7/17/2017	10167	10335	48	Marcellus
28	7/18/2017	9968	10136	48	Marcellus
29	7/19/2017	9768	9936	48	Marcellus
30	7/20/2017	9569	9737	48	Marcellus
31	7/20/2017	9370	9538	48	Marcellus
32	7/21/2017	9170	9338	48	Marcellus
33	7/22/2017	8971	9139	48	Marcellus
34	7/23/2017	8772	8940	48	Marcellus
35	7/23/2017	8572	8740	48	Marcellus
36	7/24/2017	8373	8541	48	Marcellus
37	7/25/2017	8173	8342	48	Marcellus
38	7/26/2017	7974	8142	48	Marcellus
39	7/26/2017	7775	7943	48	Marcellus
40	7/26/2017	7575	7744	48	Marcellus
41	7/27/2017	7376	7544	48	Marcellus
42	7/28/2017	7177	7345	48	Marcellus
43	7/29/2017	6977	7146	48	Marcellus
44	7/29/2017	6778	6946	48	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	5/16/2017	72	7233	5349	4150	516958	10485	N/A
2	6/22/2017	75	7480	5155	4766	514754	10469	N/A
3	6/23/2017	80	7422	5855	3835	510155	10096	N/A
4	6/24/2017	80	7537	5744	4197	499655	9781	N/A
5	6/25/2017	80	7453	6136	3390	506900	9994	N/A
6	6/26/2017	80	7417	5715	3665	505933	9865	N/A
7	6/27/2017	80	7458	6017	3416	503288	9878	N/A
8	6/28/2017	80	7335	4944	3142	502941	9751	N/A
9	6/29/2017	79	7462	5855	3190	503098	9897	N/A
10	6/30/2017	79	7604	5540	3410	504316	9864	N/A
11	7/1/2017	75	7521	7436	3413	504264	9856	N/A
12	7/1/2017	80	7582	5212	3612	501083	9894	N/A
13	7/2/2017	76	7598	5963	3556	506353	9831	N/A
14	7/2/2017	80	7450	5609	3438	504369	9917	N/A
15	7/3/2017	79	7425	5682	3806	500799	9818	N/A
16	7/4/2017	75	7756	5438	3514	508034	9659	N/A
17	7/4/2017	73	7913	5336	3922	323255	8707	N/A
18	7/5/2017	78	7711	5477	4581	451029	9327	N/A
19	7/5/2017	77	7136	5451	6395	501218	9850	N/A
20	7/6/2017	78	6981	5289	3726	501492	9816	N/A
21	7/7/2017	78	7516	5927	4841	431451	10889	N/A
22	7/8/2017	77	7025	5381	4624	510670	9836	N/A
23	7/8/2017	78	6097	5565	3403	504620	9987	N/A
24	7/9/2017	64	6926	6051	5208	484829	15988	N/A
25	7/10/2017	76	7539	7030	4098	502292	14698	N/A
26	7/11/2017	77	6957	6848	3640	561899	10849	N/A
27	7/17/2017	64	7455	7327	7953	314677	9961	N/A
28	7/18/2017	79	7013	5501	4933	508391	9858	N/A
29	7/19/2017	80	7171	5870	7016	508737	9929	N/A
30	7/20/2017	80	7177	6011	4424	512873	10103	N/A
31	7/20/2017	76	6946	5389		507046	10423	N/A
32	7/21/2017	79	6993	5364	3871	507386	11962	N/A
33	7/22/2017	75	7150	5966	3947	509819	9800	N/A
34	7/23/2017	75	6767	6191	3948	506007	10082	N/A
35	7/23/2017	77	6466	6166	4840	510377	13240	N/A
36	7/24/2017	80	7069	5736	4860	507016	9816	N/A
37	7/25/2017	82	6947	5621	4685	507770	9671	N/A
38	7/26/2017	80	6890	5965	3884	501923	9433	N/A
39	7/26/2017	79	6781	6785	4597	504412	10001	N/A
40	7/26/2017	79	7315	5956	6897	512269	9433	N/A
41	7/27/2017	73	7281	6054	3588	504212	9835	N/A
42	7/28/2017	80	6890	5965	3884	501923	9433	N/A
43	7/29/2017	79	6767	6445	4361	509295	9745	N/A
44	7/29/2017	77	6547	6083	6200	511425	9957	N/A
	AVG=	77.3	7,208	5,873	4,345	21,811,213	451,684	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
Fresh Water	337'	N/A	337'	N/A
Sandstone	0	221	0	221
siltstone	est. 221	241	est. 221	241
shale	est. 241	381	est. 241	381
Coal	est. 381	401	est. 381	401
Sandstone	est. 401	441	est. 401	441
Limestone	est. 441	561	est. 441	561
Sandstone	est. 561	621	est. 561	621
Sandstone	est. 621	761	est. 621	761
Sandstone	est. 761	941	est. 761	941
Limestone	est. 941	1,983	est. 941	2,010
Big Lime	1,983	2,497	2,010	2,544
Gantz	2,497	2,869	2,544	2,927
Fifty Foot Sandstone	2,869	2,966	2,927	3,029
Gordon	2,966	3,332	3,029	3,413
Fifth Sandstone	3,332	3,404	3,413	3,487
Bayard	3,404	3,944	3,487	4,047
Speechley	3,944	4,199	4,047	4,311
Baltown	4,199	4,594	4,311	4,722
Bradford	4,594	4,980	4,722	5,124
Benson	4,980	5,219	5,124	5,371
Alexander	5,219	5,516	5,371	5,678
Elk	5,516	5,791	5,678	5,964
Rhinestreet	5,791	6,130	5,964	6,326
Sycamore	6,130	6,225	6,326	6,446
Middlesex	6,225	6,332	6,446	6,626
Burkett	6,332	6,357	6,626	6,684
Tully	6,357	6,376	6,684	6,747
Marcellus	6,376	NA	6,747	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 (TVD) data on subsequent wells may be slightly different due to the well's unique departure.

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# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	6/2/2017
Job End Date:	7/29/2017
State:	West Virginia
County:	Ritchie
API Number:	47-085-10162-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Duchene 3H
Latitude:	39.31437800
Longitude:	-80.96253300
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,400
Total Base Water Volume (gal):	18,998,196
Total Base Non Water Volume:	66,880



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## 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	87.58132	
Other Chemical (s)	Listed Above	See Trade Name (s) List					
			Water	7732-18-5	60.00000	0.04352	



			Water	7732-18-5	85.00000	0.13253	
			Water	7732-18-5	97.00000	0.01368	
			Water	7732-18-5	30.00000	0.00349	
			Water	7732-18-5	30.00000	0.00009	
K-BAC-1020	FTSI	Biocide					
				Listed Below			
CI-150	FTSI	Acid Corrosion Inhibitor					
				Listed Below			
30/50 White	FTSI	Proppant					
				Listed Below			
FRW-900	FTSI	Friction Reducer					
				Listed Below			
CS-750 SI	FTSI	Scale Inhibitor					
				Listed Below			
LTB-1	FTSI	Breaker					
				Listed Below			
40/70 White	FTSI	Proppant					

				Listed Below			
HVG-1 4.0	FTSI	Water gelling agent					
				Listed Below			
100 Mesh Sand	FTSI	Proppant					
				Listed Below			
10.1%-15.0% HCL	FTSI	Acid					
				Listed Below			

Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients.

			Silica, Quartz	14808-60-7	100.00000	5.59246	
			Silica, Quartz	14808-60-7	100.00000	3.36285	
			Silica, Quartz	14808-60-7	100.00000	3.12424	
			Guar gum	9000-30-0	55.00000	0.03681	
			Raffinates, Sorption Process	64741-85-1	55.00000	0.03681	
			Petroleum Distillate	64742-47-8	55.00000	0.03681	
			Anionic polymer	Proprietary	40.00000	0.02901	
			Hydrotreated Light Distillate	64742-47-8	40.00000	0.02901	
			Hydrogen Chloride	7647-01-0	15.00000	0.02339	
			2-Propenoic acid, polymer with 2 propenamide	9003-06-9	30.00000	0.02176	
			Ammonium Persulfate	7727-54-0	84.00000	0.01487	
			Glycerol	56-81-5	10.00000	0.00725	
			Polyethylene glycol	25322-68-3	50.00000	0.00582	
			Cured acrylic resin	25085-19-2	22.00000	0.00390	
			Sorbitan, mono-(9Z)-9-octadecenoate	1338-43-8	5.00000	0.00363	

			Sodium chloride (NaCl)	7647-14-5	5.00000	0.00363	
			Alcohols, C10-C16, ethoxylated	68002-97-1	5.00000	0.00363	
			Ethoxylated Alcohols	Proprietary	5.00000	0.00363	
			Suspending Agent	1302-78-9	5.00000	0.00335	
			Quartz	14808-60-7	4.00000	0.00268	
			2,2-Dibromo-3-nitrilopropionamide	10222-01-2	21.00000	0.00245	
			Proprietary Scale Inhibitor	Proprietary	10.00000	0.00141	
			Isotridecanol, ethoxylated	9043-30-5	2.00000	0.00134	
			Isopropanol	67-63-0	60.00000	0.00017	
			Talc	14807-96-6	0.60000	0.00011	
			Fatty amino compound salt	Proprietary	30.00000	0.00009	
			Ethoxylated fatty alcohol	Proprietary	30.00000	0.00009	
			Ethoxylated Alcohol	Proprietary	10.00000	0.00003	
			Aromatic aldehyde	Proprietary	8.00000	0.00002	
			Alkoxyated fatty amine	Proprietary	5.00000	0.00001	
			Methanol	67-56-1	0.10000	0.00000	

\* Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water

\*\* Information is based on the maximum potential for concentration and thus the total may be over 100%

\*\*\* If you are calculating a percentage of total ingredients do not add the water volume below the green line to the water volume above the green line

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

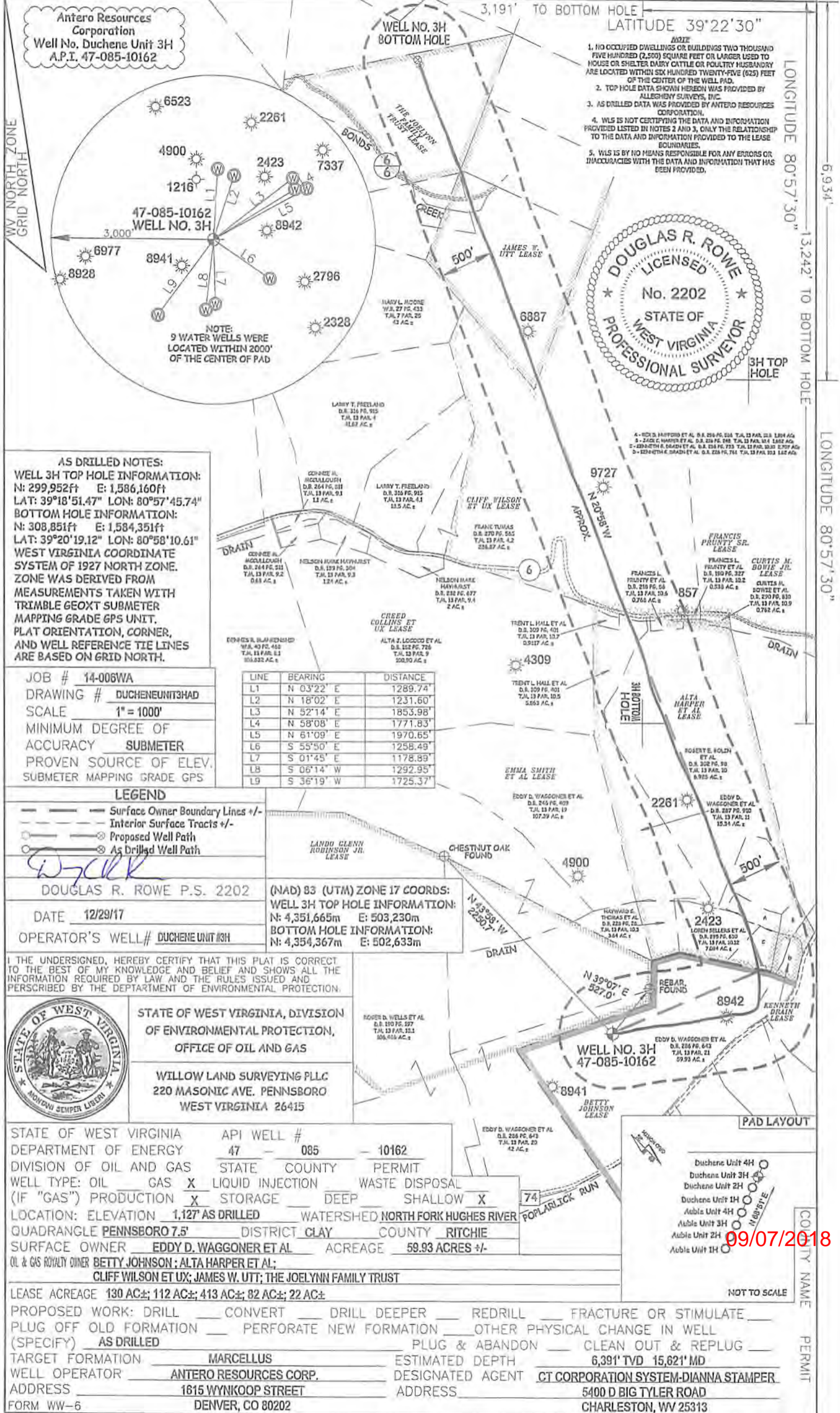
Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

LATITUDE 39°20'00" 1,237'

LATITUDE 39°22'30"

LONGITUDE 80°57'30"

LONGITUDE 80°57'30"



Antero Resources Corporation  
Well No. Duchene Unit 3H  
A.P.I. 47-085-10162



- 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 ALLECHEY SURVEYS, INC.
  3. AS DRILLED DATA WAS PROVIDED BY ANTERO RESOURCES CORPORATION.
  4. WLS IS NOT CERTIFYING THE DATA AND INFORMATION PROVIDED LISTED IN NOTES 2 AND 3, ONLY THE RELATIONSHIP TO THE DATA AND INFORMATION PROVIDED TO THE LEASE BOUNDARIES.
  5. WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.



AS DRILLED NOTES:  
WELL 3H TOP HOLE INFORMATION:  
N: 299,952ft E: 1,586,160ft  
LAT: 39°18'51.47" LON: 80°57'45.74"  
BOTTOM HOLE INFORMATION:  
N: 308,851ft E: 1,584,351ft  
LAT: 39°20'19.12" LON: 80°58'10.61"  
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.

JOB # 14-006WA  
DRAWING # DUCHENEUNIT3HAD  
SCALE 1" = 1000'  
MINIMUM DEGREE OF ACCURACY SUBMETER  
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

LINE	BEARING	DISTANCE
L1	N 03°22' E	1289.74'
L2	N 18°02' E	1231.60'
L3	N 52°14' E	1853.98'
L4	N 58°08' E	1771.83'
L5	N 61°09' E	1970.65'
L6	S 55°50' E	1258.49'
L7	S 01°45' E	1178.89'
L8	S 06°14' W	1292.95'
L9	S 36°19' W	1725.37'

LEGEND

- Surface Owner Boundary Lines +/-
- Interior Surface Tracts +/-
- Proposed Well Path
- As Drilled Well Path

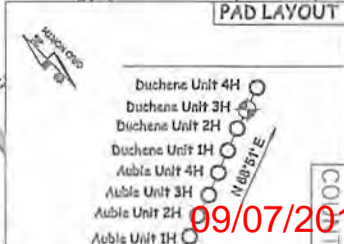
DOUGLAS R. ROWE P.S. 2202  
DATE 12/29/17  
OPERATOR'S WELL # DUCHENE UNIT #3H  
(NAD) 83 (UTM) ZONE 17 COORDS:  
WELL 3H TOP HOLE INFORMATION:  
N: 4,351,665m E: 503,230m  
BOTTOM HOLE INFORMATION:  
N: 4,354,367m E: 502,633m

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 AVE. PENNSBORO WEST VIRGINIA 26415

STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS  
WELL TYPE: OIL GAS  LIQUID INJECTION WASTE DISPOSAL  
(IF "GAS") PRODUCTION  STORAGE DEEP SHALLOW   
LOCATION: ELEVATION 1,127' AS DRILLED WATERSHED NORTH FORK HUGHES RIVER  
QUADRANGLE PENNSBORO 7.5' DISTRICT CLAY COUNTY RITCHIE  
SURFACE OWNER EDDY D. WAGGONER ET AL ACREAGE 59.93 ACRES +/-  
OIL & GAS ROYALTY OWNER BETTY JOHNSON; ALTA HARPER ET AL;  
CLIFF WILSON ET UX; JAMES W. UTT; THE JOELYNN FAMILY TRUST



LEASE ACREAGE 130 AC±; 112 AC±; 413 AC±; 82 AC±; 22 AC±  
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  
TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,391' TVD 15,621' MD  
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT CT CORPORATION SYSTEM-DIANNA STAMPER  
ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD  
FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313

09/07/2018

COUNTY NAME PERMIT

