

WR-35
Rev. 8/23/13

APPROVED

NAME: [Signature]

DATE: 11/10

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

Page ___ of ___
RECEIVED
Office of Oil and Gas
OCT 30 2017
WV Department of
Environmental Protection

API 47 - 017 - 06283 County Doddridge District New Milton
Quad New Milton 7.5' Pad Name Stewart Pad Field/Pool Name -----
Farm name Randall & Carolyn S. Stewart Well Number Swiger 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 4337765.135m Easting 529240.624m
Landing Point of Curve Northing 4337499.187m Easting 528957.178m
Bottom Hole Northing 4334197.571m Easting 529982.418m

Elevation (ft) 1334' 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 08/13/2013 Date drilling commenced 08/19/2014 Date drilling ceased 12/03/2014
Date completion activities began 12/02/2016 Date completion activities ceased 04/28/2017
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 35', 372', 407' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 964', 1136', 1752' Void(s) encountered (Y/N) depths No
Coal depth(s) ft 1907' Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No

Reviewed by: _____

11/10/2017

API 47-017 - 06283 Farm name Randall & Carolyn S. Stewart Well number Swiger Unit 2H

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade w/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor	24"	20"	40'	New	94#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"	482'	New	48#, H-40	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2541'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	19334'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	7654'		4.7#, N-80		
Packer type and depth set		N/A					

Comment Details _____

RECEIVED
 Office of Oil and Gas
 OCT 9 0 2017

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	171 sx	15.6	1.18	202	0'	8 Hrs.
Surface	Class A	574 sx	15.6	1.18	677	0'	8 Hrs.
Coal							
Intermediate 1	Class A	999 sx	15.6	1.18	1179	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	1108 sx (Lead) 1843 sx (Tail)	13.5 (Lead), 15.2 (Tail)	1.44 (Lead), 1.8 (Tail)	4913	~500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 19334' MD, 7337' TVD (BHL) & 7388' TVD (Deepest Point Drilled) Loggers TD (ft) 19276' MD
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 7221'

** This is a subsequent well. Antero only runs wireline logs on one well on a multi-well pad (Cross Unit 1H API #47-017-06238). Please reference the wireline logs submitted with Form WR-35 for Cross Unit 1H. A Cement Bond Log has been included with this submittal.

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 - 06283 Farm name Randall & Carolyn S. Stewart Well number Swiger 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					
					RECEIVED Office of Oil and Gas
					OCT 30 2017
					WV Department of Environmental Protection

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								

Please insert additional pages as applicable.

API 47- 017 - 06283 Farm name Randall & Carolyn S. Stewart Well number Swiger Unit 2H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>			
<u>Marcellus</u>	<u>7304' (TOP)</u>	<u>TVD</u>	<u>7686' (TOP)</u>	<u>MD</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 3950 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 10399 mcfpd Oil 36 bpd NGL --- bpd Water 721 bpd GAS MEASURED BY Estimated Orifice Pilot

<u>LITHOLOGY/ FORMATION</u>	<u>TOP DEPTH IN FT NAME TVD</u>	<u>BOTTOM DEPTH IN FT TVD</u>	<u>TOP DEPTH IN FT MD</u>	<u>BOTTOM DEPTH IN FT MD</u>	<u>DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H₂S, ETC)</u>
---------------------------------	---	---------------------------------------	-----------------------------------	--------------------------------------	--

***PLEASE SEE ATTACHED EXHIBIT 3**

RECEIVED
Office of Oil and Gas
OCT 30 2017
WV Department of
Environmental Protection

Please insert additional pages as applicable.

Drilling Contractor Patterson - UTI Drilling Company LLC
Address 207 Carlton Drive City Eighty Four State PA Zip 15330

Logging Company Nine Energy Service
Address 125 Museum Road City Washington State PA Zip 15301

Cementing Company Allied Oil & Gas Services, LLC
Address 1036 East Main Street City Bridgeport State WV Zip 26330

Stimulating Company US Well Services
Address 533 Industrial Park Drive City Jane Lew State WV Zip 26378

Please insert additional pages as applicable.

Completed by Samantha Klaas Telephone 303-357-6759
Signature  Title Permitting Agent Date 10/27/2017

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

11/10/2017

EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	12/2/2016	19052	19220	60	Marcellus
2	2/15/2017	18854	19021	60	Marcellus
3	2/15/2017	18655	18823	60	Marcellus
4	2/16/2017	18456	18624	60	Marcellus
5	2/16/2017	18258	18425	60	Marcellus
6	2/16/2017	18059	18227	60	Marcellus
7	2/17/2017	17861	18028	60	Marcellus
8	2/17/2017	17662	17830	60	Marcellus
9	2/17/2017	17463	17631	60	Marcellus
10	2/18/2017	17265	17432	60	Marcellus
11	2/18/2017	17066	17234	60	Marcellus
12	2/18/2017	16868	17035	60	Marcellus
13	2/18/2017	16669	16837	60	Marcellus
14	2/19/2017	16470	16638	60	Marcellus
15	2/19/2017	16272	16439	60	Marcellus
16	2/20/2017	16073	16241	60	Marcellus
17	2/20/2017	15875	16042	60	Marcellus
18	2/21/2017	15676	15844	60	Marcellus
19	2/21/2017	15477	15645	60	Marcellus
20	2/21/2017	15279	15446	60	Marcellus
21	2/21/2017	15080	15248	60	Marcellus
22	2/22/2017	14882	15049	60	Marcellus
23	2/22/2017	14683	14851	60	Marcellus
24	2/22/2017	14484	14652	60	Marcellus
25	2/23/2017	14286	14453	60	Marcellus
26	2/23/2017	14087	14255	60	Marcellus
27	2/23/2017	13889	14056	60	Marcellus
28	2/24/2017	13690	13858	60	Marcellus
29	2/24/2017	13491	13659	60	Marcellus
30	2/24/2017	13293	13460	60	Marcellus
31	2/24/2017	13094	13262	60	Marcellus
32	2/24/2017	12896	13063	60	Marcellus
33	2/25/2017	12697	12865	60	Marcellus
34	2/26/2017	12498	12666	60	Marcellus
35	2/27/2017	12300	12467	60	Marcellus
36	2/27/2017	12101	12269	60	Marcellus
37	2/27/2017	11903	12070	60	Marcellus
38	2/27/2017	11704	11872	60	Marcellus
39	2/27/2017	11505	11673	60	Marcellus
40	2/28/2017	11307	11474	60	Marcellus
41	2/28/2017	11108	11276	60	Marcellus
42	3/1/2017	10910	11077	60	Marcellus
43	3/1/2017	10711	10879	60	Marcellus
44	3/1/2017	10512	10680	60	Marcellus
45	3/1/2017	10314	10481	60	Marcellus
46	3/2/2017	10115	10283	60	Marcellus
47	3/2/2017	9917	10084	60	Marcellus
48	3/2/2017	9718	9886	60	Marcellus
49	3/2/2017	9519	9687	60	Marcellus
50	3/3/2017	9321	9488	60	Marcellus
51	3/3/2017	9122	9290	60	Marcellus
52	3/3/2017	8924	9091	60	Marcellus
53	3/4/2017	8725	8893	60	Marcellus
54	3/4/2017	8526	8694	60	Marcellus
55	3/4/2017	8328	8495	60	Marcellus
56	3/4/2017	8129	8297	60	Marcellus
57	3/5/2017	7931	8098	60	Marcellus
58	3/5/2017	7732	7900	60	Marcellus

RECEIVED
Office of Oil and Gas
OCT 30 2017
WV Department of
Environmental Protection

11/10/2017

API 47-017-06283 Farm Name Randall & Carolyn S. Stewart Well Number Swiger Unit 2H

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	2/14/2017	62.1	8085	0	4806	503272	17797	N/A
2	2/15/2017	67.6	8033	6582	5597	502700	10783	N/A
3	2/15/2017	70.5	7954	6203	5193	502380	10729	N/A
4	2/16/2017	68.1	8032	6526	4973	503330	10742	N/A
5	2/16/2017	69.3	7884	5966	5227	501890	10740	N/A
6	2/16/2017	68.8	7787	6227	5333	502330	10741	N/A
7	2/17/2017	68.4	7613	5824	5556	502360	11797	N/A
8	2/17/2017	69.0	7736	6531	5333	501730	10704	N/A
9	2/17/2017	69.6	7644	6139	5320	504110	10712	N/A
10	2/18/2017	68.9	7580	5920	5349	502650	10676	N/A
11	2/18/2017	69.0	7674	5635	5625	501940	10675	N/A
12	2/18/2017	70.0	7717	5807	5522	502530	10647	N/A
13	2/18/2017	67.2	7250	5853	5351	503030	10686	N/A
14	2/19/2017	71.0	7454	5711	5358	502020	10649	N/A
15	2/19/2017	68.0	7551	5617	5358	503090	11578	N/A
16	2/20/2017	70.8	7817	5998	5170	498630	11615	N/A
17	2/20/2017	77.1	7780	5627	5351	502300	10631	N/A
18	2/21/2017	76.9	7630	5358	5488	501910	10622	N/A
19	2/21/2017	78.2	7860	5747	5229	499650	10491	N/A
20	2/21/2017	79.4	7770	5611	5267	502050	10493	N/A
21	2/21/2017	79.0	7850	5765	5543	503150	10496	N/A
22	2/22/2017	78.2	7517	5445	5367	500950	10461	N/A
23	2/22/2017	79.5	7589	5865	4986	501200	10454	N/A
24	2/22/2017	79.4	7652	6435	5239	501050	10381	N/A
25	2/23/2017	79.4	7570	6203	5128	502630	10317	N/A
26	2/23/2017	80.9	7677	5771	5105	501200	10284	N/A
27	2/23/2017	79.3	7479	6326	5485	504020	10413	N/A
28	2/24/2017	77.2	7401	5649	5396	502050	10291	N/A
29	2/24/2017	80.5	7735	7620	5111	504410	11776	N/A
30	2/24/2017	81.1	7426	7216	5360	500950	10148	N/A
31	2/24/2017	79.5	7504	5690	5335	503000	10259	N/A
32	2/24/2017	79.6	7337	5755	5389	502620	10252	N/A
33	2/25/2017	80.1	7417	5668	5411	503610	10256	N/A
34	2/26/2017	79.4	7289	5690	5533	502370	11683	N/A
35	2/27/2017	78.6	7220	5645	5341	503340	10269	N/A
36	2/27/2017	79.2	7313	5647	5498	502110	11105	N/A
37	2/27/2017	80.1	7263	5885	5607	501490	10222	N/A
38	2/27/2017	80.0	7210	6170	5319	503270	10199	N/A
39	2/27/2017	80.0	7265	4528	5485	503380	10176	N/A
40	2/28/2017	78.8	7397	4669	5356	504200	10878	N/A
41	2/28/2017	79.0	7133	5934	5401	502710	10194	N/A
42	3/1/2017	78.0	7207	5690	5412	503410	10166	N/A
43	3/1/2017	79.8	7239	5687	5216	504078	10169	N/A
44	3/1/2017	79.3	7489	5723	4870	499900	10124	N/A
45	3/1/2017	79.0	7721	5740	5088	501650	10027	N/A
46	3/2/2017	79.0	7450	5802	5374	502740	10235	N/A
47	3/2/2017	79.6	7552	5884	5356	500200	10400	N/A
48	3/2/2017	78.1	7429	5675	5379	502200	10079	N/A
49	3/2/2017	79.0	7420	4323	5360	501090	10140	N/A
50	3/3/2017	78.5	6915	3490	5647	498800	10096	N/A
51	3/3/2017	79.0	6913	5620	5581	499300	10023	N/A
52	3/3/2017	79.0	7021	5552	5685	501780	10036	N/A
53	3/4/2017	79.3	6956	4675	5742	501900	10045	N/A
54	3/4/2017	79.9	6867	5685	5483	504500	9988	N/A
55	3/4/2017	79.0	6734	4860	5147	502570	9977	N/A
56	3/4/2017	78.0	6544	4191	5497	503090	10092	N/A
57	3/5/2017	79.7	6898	5677	5525	504700	10038	N/A
58	3/5/2017	78.3	6804	4782	5102	504750	9958	N/A
AVG=		76.2	7453	5,612	5,349	29,134,270	615,615	TOTAL

RECEIVED
Office of Oil and Gas

OCT 30 2017

WV Department of
Environmental Protection

11/10/2017

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	35'	N/A	35'	N/A
Fresh Water	372'	N/A	372'	N/A
Fresh Water	407'	N/A	407'	N/A
Shale/Siltstone	est. 0	447	est. 0	447
Sandstone	est. 447	467	est. 447	467
Shale/Siltstone	est. 467	687	est. 467	687
Sandstone	est. 687	727	est. 687	727
Shale	est. 727	827	est. 727	827
Sandstone	est. 827	887	est. 827	887
Shale	est. 887	1127	est. 887	1127
Sandstone	est. 1127	1207	est. 1127	1207
Shale	est. 1207	1787	est. 1207	1787
Sandstone/Siltstone	est. 1787	1907	est. 1787	1907
Sandstone/Siltstone with trace coal	est. 1907	1967	est. 1907	1967
Shale	est. 1967	2395	est. 1967	2399
Big Lime	2393	2479	2397	2482
Big Injun	2479	2691	2482	2695
Gantz Sand	2691	2839	2695	2842
Fifty Foot Sandstone	2839	3051	2842	3055
Gordon	3051	3405	3055	3408
Fifth Sandstone	3405	3469	3408	3472
Bayard	3469	3745	3472	3748
Warren	3745	4016	3748	4020
Speechley	4016	4218	4020	4221
Baltown	4218	4847	4221	4851
Bradford	4847	5307	4851	5310
Benson	5307	5558	5310	5561
Alexander	5558	5785	5561	5788
Elk	5785	6327	5788	6331
Rhinstreet	6327	6864	6331	7064
Sycamore	6864	7029	7064	7249
Middlesex	7029	7173	7249	7434
Burkett	7173	7204	7434	7480
Tully	7204	7304	7480	7686
Marcellus	7304	NA	7686	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.

RECEIVED
Office of Oil and Gas

OCT 30 2017

WV Department of
Environmental Protection

11/10/2017

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	2/14/2017
Job End Date:	3/5/2017
State:	West Virginia
County:	Doddridge
API Number:	47-017-06283-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Swiger 2H
Latitude:	39.1885000
Longitude:	-80.66159722
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	7,387
Total Base Water Volume (gal):	26,654,048
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	Antero Resources	Carrier/Base Fluid	Water	7732-18-5	100.00000	88.24072	
Sand	U.S. Well Services, LLC	Proppant	Crystalline Silica, quartz	14808-60-7	100.00000	11.56496	
HCL Acid (12.6%-17.5%)	U.S. Well Services, LLC	Bulk Acid	Water	7732-18-5	87.40000	0.09394	
			Hydrogen Chloride	7647-01-0	17.50000	0.02184	
LGC-15	U.S. Well Services, LLC	Gelling Agents	Guar Gum	9000-30-0	50.00000	0.01444	
			Petroleum Distillates	64742-47-8	60.00000	0.01368	
			Suspending agent (solid)	14808-60-7	3.00000	0.00221	
			Surfactant	68439-51-0	3.00000	0.00087	
WFRA-500	U.S. Well Services, LLC	Friction Reducer	2-Propenoic acid, polymer with 2 propenamide	9003-06-9	30.00000	0.01668	
			Hydrated light distillate (petroleum)	64742-47-8	30.00000	0.01343	

RECEIVED
 Office of Oil and Gas
 WV Department of
 Environmental Protection
 OCT 30 2017

SI-1100	U.S. Well Services, LLC	Scale Inhibitor					
			Ethylene Glycol	107-21-1	40.00000	0.00736	
			Copolymer of Maleic and Acrylic acid	52255-49-9	10.00000	0.00152	
			Potassium salt of diethylene triamine penta (methylene phosphonic acid)	15827-60-8	3.00000	0.00052	
			Hexamethylene tramine penta (methylene phosphonic acid)	34690-00-1	3.00000	0.00050	
			Phosphino carboxylic acid polymer	71050-62-9	3.00000	0.00050	
Bioclear 2000	U.S. Well Services, LLC	Anti-Bacterial Agent					
			2,2-dibromo-3-nitrilopropionamide	10222-01-2	20.00000	0.00411	
			Deionized Water	7732-18-5	28.00000	0.00235	
AP One	U.S. Well Services, LLC	Gel Breakers					
			Ammonium Persulfate	7727-54-0	100.00000	0.00030	
AI-303	U.S. Well Services, LLC	Acid Corrosion Inhibitors					
			Ethylene glycol	107-21-1	40.00000	0.00004	
			Cinnamaldehyde	104-55-2	20.00000	0.00001	
			Formic acid	64-18-6	20.00000	0.00001	
			Butyl cellosolve	111-76-2	20.00000	0.00001	
			Polyether	60828-78-6	10.00000	0.00001	
			Acetophenone, thiourea, formaldehyde polymer	68527-49-1	5.00000	0.00000	

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.

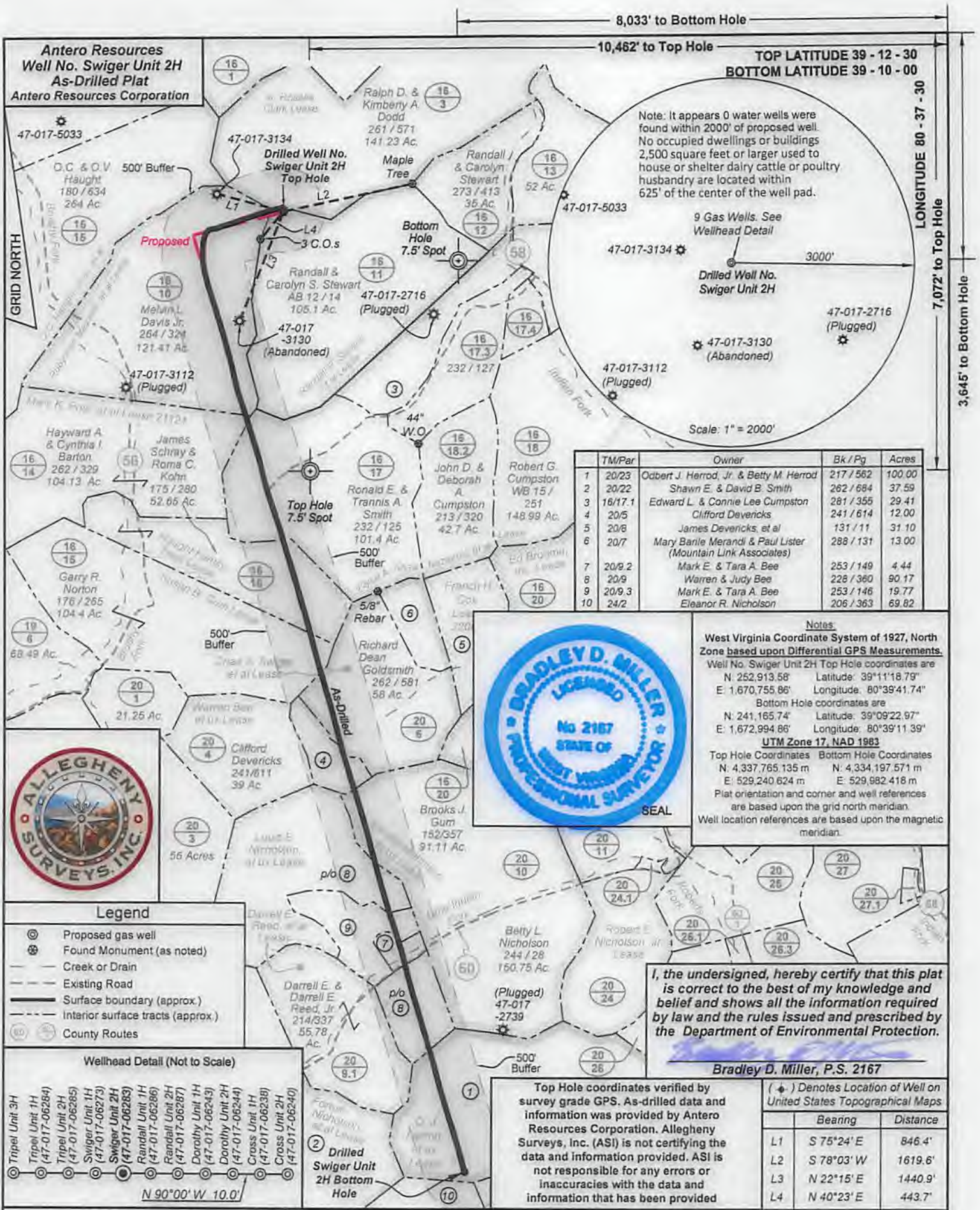
* Total Water Volume sources may include fresh water, produced water, and/or recycled water

** 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)

RECEIVED
Office of Oil and Gas
OCT 30 2017
WV Department of
Environmental Protection



Note: It appears 0 water wells 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.

9 Gas Wells. See Wellhead Detail
 Drilled Well No. Swiger Unit 2H
 3000'
 47-017-5033
 47-017-3134
 47-017-2716 (Plugged)
 47-017-3130 (Abandoned)
 47-017-3112 (Plugged)
 47-017-2716 (Plugged)
 Scale: 1" = 2000'

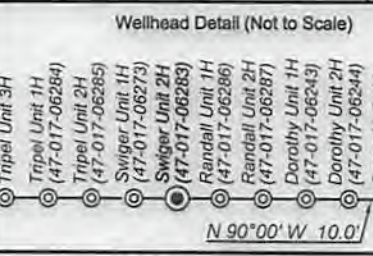
TM/Par	Owner	Bk / Pg	Acres
1 20/23	Odbert J. Herrod, Jr. & Betty M. Herrod	217 / 562	100.00
2 20/22	Shawn E. & David B. Smith	262 / 684	37.59
3 18/17.1	Edward L. & Connie Lee Cumpston	281 / 355	29.41
4 20/5	Clifford Devericks	241 / 614	12.00
5 20/8	James Devericks, et al	131 / 11	31.10
6 20/7	Mary Banle Merandi & Paul Lister (Mountain Link Associates)	288 / 131	13.00
7 20/9.2	Mark E. & Tara A. Bee	253 / 149	4.44
8 20/9	Warren & Judy Bee	228 / 360	90.17
9 20/9.3	Mark E. & Tara A. Bee	253 / 146	19.77
10 24/2	Eleanor R. Nicholson	206 / 363	69.82



Notes:
 West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.
 Well No. Swiger Unit 2H Top Hole coordinates are
 N 252,913.58' Latitude: 39°11'18.79"
 E 1,670,755.86' Longitude: 80°39'41.74"
 Bottom Hole coordinates are
 N 241,165.74' Latitude: 39°09'22.97"
 E 1,672,994.86' Longitude: 80°39'11.39"
UTM Zone 17, NAD 1983
 Top Hole Coordinates Bottom Hole Coordinates
 N: 4,337,765.135 m N: 4,334,197.571 m
 E: 529,240.624 m E: 529,982.418 m
 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
 - Found Monument (as noted)
 - Creek or Drain
 - Existing Road
 - Surface boundary (approx.)
 - Interior surface tracts (approx.)
 - County Routes



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, P.S. 2167

Top Hole coordinates verified by survey grade GPS. As-drilled data and information was provided by Antero Resources Corporation. Allegheeny 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

	Bearing	Distance
L1	S 75°24' E	846.4'
L2	S 78°03' W	1619.6'
L3	N 22°15' E	1440.9'
L4	N 40°23' E	443.7'

FILE NO: 78-30-NM-13
 DRAWING NO: 78-13 Swiger 2H As-Drilled
 SCALE: 1" = 1500'
 MINIMUM DEGREE OF ACCURACY: Submeter
 PROVEN SOURCE OF ELEVATION: WVDOT, Bridgeport, WV

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

DATE: July 13 2017
 OPERATOR'S WELL NO. Swiger Unit 2H
 API WELL NO
 47 - 017 - 06283
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW

LOCATION: ELEVATION: Existing Grade - 1334' Original Grade - 1361' WATERSHED: Headwaters Middle Island Creek QUADRANGLE: New Milton
 DISTRICT: New Milton Joyce A. Shaw Nazelrod, et al; Chad A. Swiger, et al
 SURFACE OWNER: Randall & Carolyn S. Stewart Haught Family Trust, Ruby Farr Maxwell, et al
 ROYALTY OWNER: Randall P. Stewart, et al; O.J. Herrod, et ux; Everett Nicholson, et ux Louis E. Nicholson, et ux; Susan B. Gum; Warren Bee, et ux; Mary K. Post, et al; LEASE NO: 21121 ACREAGE: 52.50; 102.19; 69.54

PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled 7.337' TVD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 19,334' 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

ADDRESS: Denver, CO 80505
 ADDRESS: Charleston, WV 25313
 WELL OPERATOR: Antero Resources Corporation
 DESIGNATED AGENT: Daines Shaffer - CT Corporation System

RENEW AND ABANDON CLEAN OUT AND REGRIND TARGET FORMATION: Marcellus shale ESTIMATED DEPTH: 18'334. MD
 REFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Divided
 PROPOSED WORK: DRILL COMPLET DRIFT DEEPER FRACTURE OR STIMULATE RIG OFF OLD FORMATION
 ROYALTY OWNER: Randall P. Stewart, et al; O. L. Herrod, et ux; Everett Nicholson, et ux
 SURFACE OWNER: Havel & Carolyn S. Stewart
 DISTRICT: New Milton
 LOCATION: ELEVATION: Original Grade - 1331, Existing Grade - 1334
 WATERSHED: Headwaters Middle Branch Creek
 QUADRANGLE: New Milton
 WELL TYPE: OIL GAS LIQUID INJECTION DEEP SHALLOW

MWDOT Budget: WV
 PROVEN SOURCE OF ELEVATION:
 Minimum Degree of Accuracy:
 SCALE: 1" = 1200'
 DRAWING NO: AS-2199-25
 SHEET NO: 18-30-IM-13

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

STATE: WV COUNTY: Mingo PERMIT: 08583
 WELL NO: 2199-25
 OPERATOR: Antero Resources
 DATE: 11/10/2017

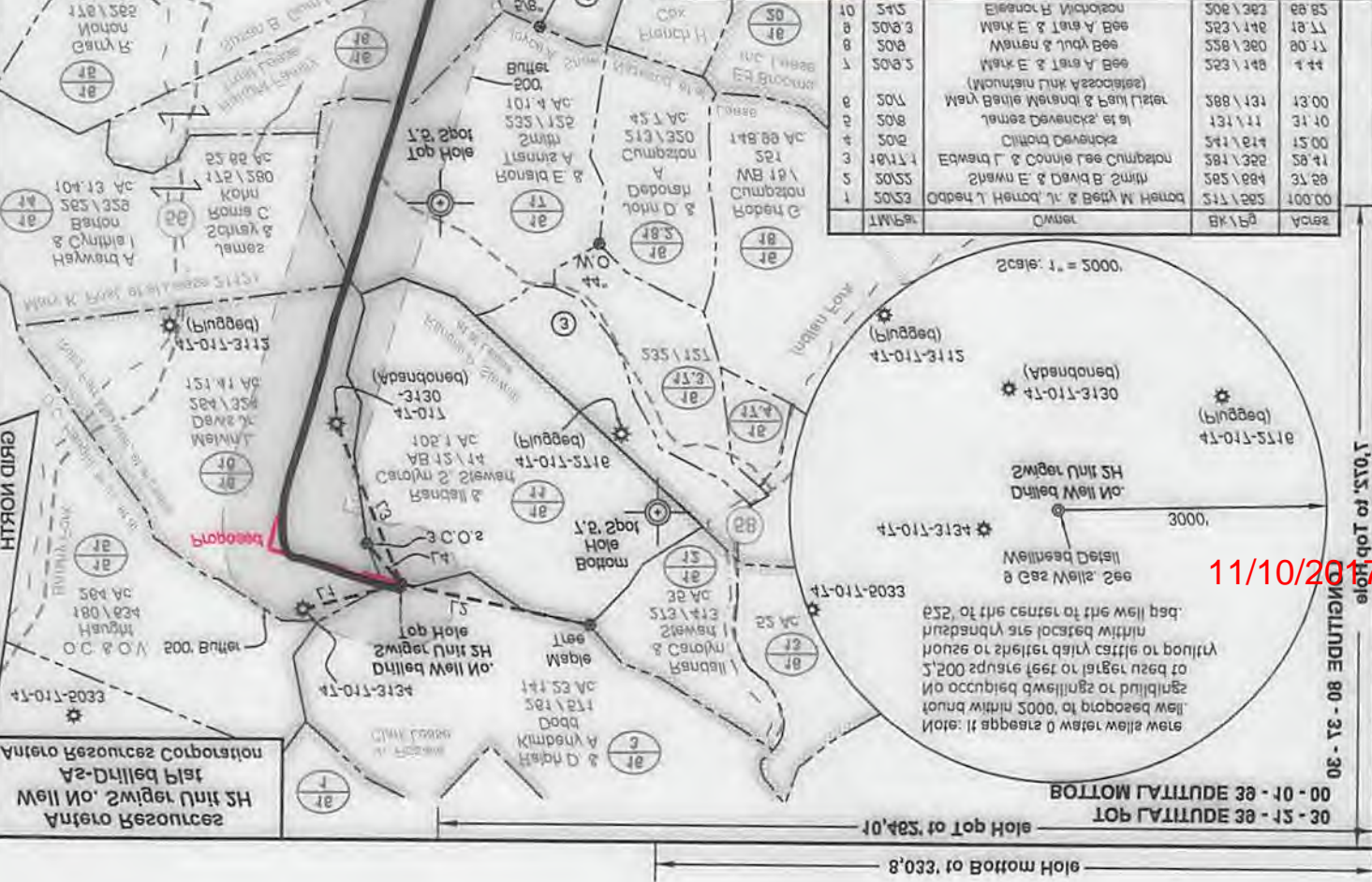


Information that has been provided in accordance with the data and not responsible for any errors or data and information provided. AS is not certifying the resources corporation. All other information was provided by Antero and is the responsibility of the resources corporation.

The Department of Environmental Protection hereby certifies that this plan 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.

Well location references are based upon the magnetic declination and true north meridian. All other references are based upon the magnetic declination and true north meridian.

Well No.	Top Hole Coordinates	Bottom Hole Coordinates
1	E: 252,913.28, N: 432,122.14	E: 252,913.28, N: 432,122.14
2	E: 252,913.28, N: 432,122.14	E: 252,913.28, N: 432,122.14
3	E: 252,913.28, N: 432,122.14	E: 252,913.28, N: 432,122.14
4	E: 252,913.28, N: 432,122.14	E: 252,913.28, N: 432,122.14
5	E: 252,913.28, N: 432,122.14	E: 252,913.28, N: 432,122.14
6	E: 252,913.28, N: 432,122.14	E: 252,913.28, N: 432,122.14
7	E: 252,913.28, N: 432,122.14	E: 252,913.28, N: 432,122.14
8	E: 252,913.28, N: 432,122.14	E: 252,913.28, N: 432,122.14
9	E: 252,913.28, N: 432,122.14	E: 252,913.28, N: 432,122.14
10	E: 252,913.28, N: 432,122.14	E: 252,913.28, N: 432,122.14



11/10/2017