

RECEIVED

JUN 08 2015

WR-35

Page ___ of ___

Rev. 8/23/13

WV GEOLOGICAL SURVEY
MORGANTOWN, WV

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

API 47 - 017 - 06206 County Doddridge District Central
Quad West Union 7.5' Pad Name Vogt Pad Field/Pool Name ---
Farm name Vogt, Gregory R. & Carolyn S. Vogt Well Number Violet Unit 1H
Operator (as registered with the OOG) Antero Resources Corportion
Address 1615 Wynkoop St. 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 4347572m Easting 511882m
Landing Point of Curve Northing 4347410.39m Easting 512187.64m
Bottom Hole Northing 4345495m Easting 513102m

Elevation (ft) 1112' 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 3/27/2013 Date drilling commenced 1/31/2014 Date drilling ceased 8/4/2014
Date completion activities began 8/29/2014 Date completion activities ceased 10/20/2014
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 136' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 1613' 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 by:

RECEIVED

JUN 08 2015

WR-35 WV GEOLOGICAL SURVEY
Rev. 8/23/13 MORGANTOWN, WV

Page ___ of ___

API 47-017 - 06206 Farm name Vogt, Gregory R. & Carolyn S. Vogt Well number Violet 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"	40'	New	94# J-55	N/A	Y
Surface	17- 1/2"	13- 3/8"	362'	New	48# J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2552'	New	36# J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4" & 8-1/2"	5-1/2"	14650'	New	20# P-110	N/A	Y
Tubing		2-3/8"	6600'		4.7# N-80	N/A	
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	100x	15.6	1.18	38	0	8 Hrs.
Surface	Class A	429 sx	15.6	1.18	251	0	8 Hrs.
Coal							
Intermediate 1	Class A	533 sx	15.6	1.18	799	0	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	969 sx (Lead) 1257 sx (Tail)	14.5 Lead 15.2 Tail	1.30 Lead 1.86 Tail	2886	-500' Into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 14650' MD, 6759' TVD (BHL) Loggers TD (ft) 14650'
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 6051'

** This is a subsequent well. Antero only runs wireline logs on one well on a multi-well pad (McGill Unit 1H API #47-017-06665). Please reference the wireline logs submitted with Form WR-35 for McGill 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 _____

RECEIVED

JUN 08 2015

WR-35 WV GEOLOGICAL SURVEY
 Rev. 8/23/13 MORGANTOWN, WV

Page ___ of ___

API 47-017 - 06206

Farm name Vogt, Gregory R. & Carolyn S. Vogt

Well number Violet Unit 1H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
*PLEASE SEE 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 EXHIBIT 2								

Please insert additional pages as applicable.

JUN 08 2015

WR-35
Rev. 8/23/13

WV GEOLOGICAL SURVEY
MORGANTOWN, WV

API 47- 017 - 06206 Farm name Vogt, Gregory R. & Carolyn S. Vogt Well number Violet Unit 1H

PRODUCING FORMATION(S)	DEPTHS			
	6573' (TOP)	TVD	7077' (TOP)	MD
Marcellus				

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 3600 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 9950 mcfpd Oil 54 bpd NGL --- bpd Water 391 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 ₂ S, ETC)
	DEPTH IN FT	DEPTH IN FT	DEPTH IN FT	DEPTH IN FT	
	NAME	TVD	MD	MD	
	0		0		

*PLEASE SEE EXHIBIT 3

Please insert additional pages as applicable.

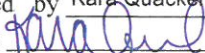
Drilling Contractor Frontier Drilling LLC
Address 562 Spring Run Rd. City Pennsboro State WV Zip 26415

Logging Company STRC Oilfield Technology, LLC
Address 1560 Good Hope Pike City Clarksburg State WV Zip 26301

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

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

Please insert additional pages as applicable.

Completed by Kara Quackenbush Telephone 303-357-7233
Signature  Title Permit Representative Date 5/28/2015

API 47-017-06206 Farm Name Vogt, Gregory R. & Carolyn S. Well Number Violet Unit 1H

EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	29-Aug-14	14,388	14,558	60	Marcellus
2	23-Sep-14	14,186	14,357	60	Marcellus
3	24-Sep-14	13,985	14,155	60	Marcellus
4	24-Sep-14	13,783	13,953	60	Marcellus
5	24-Sep-14	13,581	13,751	60	Marcellus
6	25-Sep-14	13,379	13,550	60	Marcellus
7	25-Sep-14	13,178	13,348	60	Marcellus
8	25-Sep-14	12,976	13,146	60	Marcellus
9	25-Sep-14	12,774	12,944	60	Marcellus
10	26-Sep-14	12,572	12,743	60	Marcellus
11	26-Sep-14	12,371	12,541	60	Marcellus
12	26-Sep-14	12,169	12,339	60	Marcellus
13	26-Sep-14	11,967	12,137	60	Marcellus
14	27-Sep-14	11,766	11,936	60	Marcellus
15	27-Sep-14	11,564	11,934	60	Marcellus
16	27-Sep-14	11,362	11,532	60	Marcellus
17	27-Sep-14	11,160	11,330	60	Marcellus
18	28-Sep-14	10,959	11,129	60	Marcellus
19	28-Sep-14	10,757	10,927	60	Marcellus
20	28-Sep-14	10,555	10,725	60	Marcellus
21	28-Sep-14	10,353	10,523	60	Marcellus
22	29-Sep-14	10,152	10,322	60	Marcellus
23	29-Sep-14	9,950	10,120	60	Marcellus
24	29-Sep-14	9,748	9,918	60	Marcellus
25	30-Sep-14	9,546	9,716	60	Marcellus
26	30-Sep-14	9,345	9,515	60	Marcellus
27	30-Sep-14	9,143	9,313	60	Marcellus
28	1-Oct-14	8,941	9,111	60	Marcellus
29	2-Oct-14	8,739	8,909	60	Marcellus
30	3-Oct-14	8,538	8,708	60	Marcellus
31	3-Oct-14	8,336	8,506	60	Marcellus
32	3-Oct-14	8,134	8,304	60	Marcellus
33	3-Oct-14	7,932	8,102	60	Marcellus
34	3-Oct-14	7,731	7,901	60	Marcellus
35	3-Oct-14	7,529	7,699	60	Marcellus
36	4-Oct-14	7,327	7,497	60	Marcellus
37	4-Oct-14	7,125	7,296	60	Marcellus

RECEIVED
 JUN 08 2015
 WV GEOLOGICAL SURVEY
 MORGANTOWN, WV

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	23-Sep-14	61.0	6,530	5,351	3,532	239,000	6,806	N/A
2	23-Sep-14	65.4	6,755	5,630	4,089	228,300	6,732	N/A
3	24-Sep-14	54.3	6,930	5,831	3,680	168,300	7,140	N/A
4	24-Sep-14	61.8	6,755	6,094	3,693	235,400	6,771	N/A
5	24-Sep-14	62.1	6,554	5,654	4,574	238,600	6,751	N/A
6	25-Sep-14	62.8	6,488	5,512	3,885	213,500	7,315	N/A
7	25-Sep-14	60.9	6,533	5,895	4,270	239,600	6,771	N/A
8	25-Sep-14	62.6	6,718	5,479	4,425	217,900	7,102	N/A
9	25-Sep-14	63.3	6,554	5,547	4,300	238,000	6,709	N/A
10	26-Sep-14	62.3	6,423	5,281	4,717	237,000	6,681	N/A
11	26-Sep-14	61.5	6,219	5,237	4,924	239,600	6,679	N/A
12	26-Sep-14	63.3	6,468	5,581	4,500	236,300	6,704	N/A
13	26-Sep-14	63.4	6,341	5,464	4,172	239,100	6,649	N/A
14	27-Sep-14	60.7	6,047	5,244	4,841	240,000	6,686	N/A
15	27-Sep-14	61.1	6,390	5,237	4,856	237,200	6,572	N/A
16	27-Sep-14	62.9	6,573	5,294	5,150	203,000	7,096	N/A
17	27-Sep-14	63.8	6,482	5,253	4,791	235,300	6,360	N/A
18	28-Sep-14	61.2	6,414	5,338	4,672	237,900	6,397	N/A
19	28-Sep-14	61.2	6,430	5,194	4,481	239,300	6,377	N/A
20	28-Sep-14	62.0	6,577	5,290	4,637	203,500	6,745	N/A
21	28-Sep-14	64.0	6,216	5,259	4,692	239,200	6,328	N/A
22	29-Sep-14	63.2	6,290	5,370	4,968	243,500	6,376	N/A
23	29-Sep-14	64.4	6,220	5,176	5,098	239,100	6,270	N/A
24	29-Sep-14	66.7	6,388	5,259	4,811	239,200	6,298	N/A
25	30-Sep-14	65.1	6,251	5,547	5,195	237,300	6,224	N/A
26	30-Sep-14	60.2	6,252	5,368	5,114	241,200	6,271	N/A
27	30-Sep-14	53.6	6,437	5,505	5,352	105,700	6,131	N/A
28	1-Oct-14	66.5	6,247	5,225	4,953	236,100	5,592	N/A
29	2-Oct-14	57.4	6,334	5,537	5,223	238,500	6,294	N/A
30	3-Oct-14	56.9	6,386	5,805	3,883	208,500	6,044	N/A
31	3-Oct-14	68.2	6,243	5,377	4,494	240,500	6,083	N/A
32	3-Oct-14	68.0	6,474	5,586	4,751	238,100	6,070	N/A
33	3-Oct-14	63.1	6,287	5,861	4,980	237,900	6,103	N/A
34	3-Oct-14	66.8	6,320	6,117	4,834	237,400	6,041	N/A
35	3-Oct-14	66.9	6,277	5,865	4,935	236,200	5,968	N/A
36	4-Oct-14	59.9	6,402	6,059	4,751	239,500	6,009	N/A
37	4-Oct-14	61.2	6,322	6,236	3,548	238,600	6,484	N/A
	AVG=	62.4	6,420	5,529	4,588	8,463,300	239,629	TOTAL

RECEIVED

JUN 08 2015

WV GEOLOGICAL SURVEY
MORGANTOWN, WV

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	136'	N/A	136'	N/A
Shale	0	211	0	211
Sandstone	est. 211	761	est. 211	761
Limestone	est. 761	821	est. 761	821
Limestone/ Sandstone	est. 821	921	est. 821	921
Sandstone	est. 921	1151	est. 921	1151
Limestone/ Siltstone	est. 1151	1181	est. 1151	1181
Siltstone/ Sandstone	est. 1181	1271	est. 1181	1271
Sandstone/ Limestone	est. 1271	1361	est. 1271	1361
Siltstone. Limestone	est. 1361	1721	est. 1361	1721
Sandstone/ Siltstone	est. 1721	2032	est. 1721	2032
Big Lime	2032	2133	2032	2133
Big Injun	2133	2514	2133	2514
Gantz Sand	2514	2635	2514	2635
Fifty Foot Sandstone	2635	2719	2635	2719
Gordon	2719	3068	2719	3068
Fifth Sandstone	3068	3189	3068	3189
Bayard	3189	3518	3189	3518
Warren	3518	3858	3518	3858
Speechley	3858	4082	3858	4082
Baltown	4082	4493	4082	4493
Bradford	4493	4994	4493	4994
Benson	4994	5324	4994	5324
Alexander	5324	5425	5324	5425
Elk	5425	5748	5425	5748
Rhinestreet	5748	6210	5748	6218
Sycamore	6210	6382	6218	6433
Middlesex	6382	6505	6433	6728
Burkett	6505	6536	6728	6870
Tully	6536	6573	6870	7077
Marcellus	6573	NA	7077	NA

*Please note Antero determines shallow formation tops based on mud and/or wireline 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

JUN 08 2015

WV GEOLOGICAL SURVEY
MORGANTOWN, WV

RECEIVED
JUN 08 2015

WV GEOLOGICAL SURVEY
MORGANTOWN, WV

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	9/23/2014
Job End Date:	10/5/2014
State:	West Virginia
County:	Doddridge
API Number:	47-017-06206-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Violet Unit 1H
Longitude:	-80.86240800
Latitude:	39.27734200
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	6,759
Total Base Water Volume (gal):	10,064,418
Total Base Non Water Volume:	0



Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Service Abstract Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	ANTERO RESOURCES	Water				90.60652	
WV Specific 40/70 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia					
			Crystalline Silica, quartz	14808-60-7	99.90000	4.90542	
			Aluminum Oxide	1344-28-1	1.10000	0.05401	
			Titanium Oxide	13463-67-7	0.10000	0.00491	
			Iron Oxide	1309-37-1	0.10000	0.00491	
WV Specific 30/50 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia					
			Crystalline Silica, quartz	14808-60-7	99.90000	3.41845	
			Aluminum Oxide	1344-28-1	1.10000	0.03764	
			Iron Oxide	1309-37-1	0.10000	0.00342	
			Titanium Oxide	13463-67-7	0.10000	0.00342	
WV Specific 100 mesh Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia					
			Crystalline Silica, quartz	14808-60-7	99.90000	0.80274	
			Aluminum Oxide	1344-28-1	1.10000	0.00884	

RECEIVED
 JUN 08 2015
 WYOMING GEOLOGICAL SURVEY
 MORGANTOWN, WY

			Iron Oxide	1309-37-1	0.10000	0.00080
LSG-100L	Nabors Completion and Production Services	Gelling Agents	Titanium Oxide	13463-67-7	0.10000	0.00080
WFR-6W	Nabors Completion and Production Services	Friction Reducer	Petroleum Distillates	64742-47-8	70.00000	0.08778
HCl Acid (12.5-18.0%) 22 Baume	Nabors Completion and Production Services	Bulk Acid	Water	7732-18-5	40.00000	0.03057
HCl Acid (12.5-18.0%) 22 Baume	Nabors Completion and Production Services	Bulk Acid	Water	7732-18-5	100.00000	0.01371
AQUICAR DB 20	Nabors Completion and Production Services	Biocides	22° Baume Hydrochloric Acid	7647-01-0	100.00000	0.01122
			Polyethylene glycol	25322-68-3	54.50000	0.00746
			2,2-Dibromo-3-nitrilopropionamide (DBNPA)	10222-01-2	20.00000	0.00274
			Sodium bromide	7647-15-6	4.00000	0.00055
			Dibromoacetone	3252-43-5	3.00000	0.00041
Super GREEN SOLV-M	Nabors Completion and Production Services	Paraffin & Scale Additives	Aliphatic Hydrocarbons	Proprietary	95.00000	0.00186
			Dodecane	Proprietary	14.00000	0.00027
			Tetradecane	Proprietary	11.00000	0.00022
			Tridecane	Proprietary	9.00000	0.00018
			Undecane	Proprietary	8.00000	0.00016
OB-2 LT	Nabors Completion and Production Services	Gel Breakers	Ammonium Persulfate	7727-54-0	85.00000	0.00125
			Crystalline Silica (in the form of quartz)	14808-60-7	10.00000	0.00015
Super TSC 2 LT	Nabors Completion and Production Services	Paraffin & Scale Additives	Bis(hexamethylene triaminepenta(methylene phosphonic acid))	Proprietary	10.00000	0.00131
Acid Inhibitor 2 (AI-2)	Nabors Completion and Production Services	Acid Corrosion Inhibitors	Glycol Ethers	111-46-6	40.00000	0.00016
			Isopropyl Alcohol	67-63-0	40.00000	0.00016
			Propargyl Alcohol	107-19-7	40.00000	0.00016
			Ethoxylated Nonylphenol	68412-54-4	13.00000	0.00005

EB-4L	Nabors Completion and Production Services	Gel Breakers	Tar bases, quinoline derivs, benzyl chloride-quaternized	72480-70-7	10.00000	0.00004
			Ethylene Glycol	107-21-1	40.00000	0.00016
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.						
Other Ingredients	Nabors Completion and Production Services	Other Ingredients				
			Copolymer	Proprietary	100.00000	0.07644
			guar gum	9000-30-0	50.00000	0.06270
			Isoparaffinic Solvent	64742-47-8	26.00000	0.01987
			Water	7732-18-5	90.00000	0.01176
			Water	7732-18-5	32.00000	0.00438
			Ethylene Glycol	107-21-1	4.00000	0.00306
			Ethoxylated alcohols	Proprietary	4.00000	0.00306
			Crystalline Silica (in the form of quartz)	14808-60-7	2.00000	0.00251
			Surfactant	68439-51-0	2.00000	0.00251
			Surfactant Blend	Proprietary	3.00000	0.00229
			Sugar	57-50-1	100.00000	0.00041
			Proprietary	Proprietary	100.00000	0.00041
			Alkali Chloride salt	Proprietary	15.00000	0.00022
			Water	7732-18-5	100.00000	0.00020
			Water	7732-18-5	48.00000	0.00019
			2,2-Dibromomalonamide	73003-80-2	1.00000	0.00014
			Monobromo-3-nitropropionamide	1113-55-9	1.00000	0.00014
			Sodium Hydroxide	1310-73-2	1.00000	0.00013
			2-Propenamide as residual	79-06-1	0.10000	0.00008
			2-Butoxyethanol	111-76-2	13.00000	0.00005
			Proprietary	Proprietary	1.00000	0.00000
			Proprietary	Proprietary	1.00000	0.00000
			Proprietary	Proprietary	1.00000	0.00000
			Proprietary	Proprietary	1.00000	0.00000
			Dioxane	123-91-1	1.00000	0.00000
			Organophylic Clay	68953-58-2	1.00000	0.00000

* 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

JUN 08 2015

WV GEOLOGICAL SURVEY
MORGANTOWN, WV

