

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

API 47 - 017 - 06266 County Doddridge District Central
Quad West Union 7.5.' Pad Name Vogt Pad Field/Pool Name ----
Farm name Vogt, Gregory R. & Carolyn S. Well Number Marks Unit 1H
Operator (as registered with the OOG) Antero Resources Corporation
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 4347573m Easting 511876m
Landing Point of Curve Northing 4347493.51m Easting 512367.67m
Bottom Hole Northing 4344549m Easting 513785m

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 6/26/2013 Date drilling commenced 1/30/2014 Date drilling ceased 8/22/2014
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 1637' 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:

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API 47-017 - 06266 Farm name Vogt, Gregory R. & Carolyn S. Well number Marks 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	30"	20"	40'	New	106.5# J-55	N/A	Y
Surface	17- 1/2"	13- 3/8"	385'	New	48# J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2633'	New	36# J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4" & 8-1/2"	5-1/2"	18311'	New	23# P-110	N/A	Y
Tubing		2-3/8"	7675'		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	200 sx	15.6	1.18	38	0'	8 Hrs.
Surface	Class A	437 sx	15.6	1.18	198	0'	8 Hrs.
Coal							
Intermediate 1	Class A	961 sx	15.6	1.18	825	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	1041 sx (Lead) 1257 sx (Tail)	14.5 Lead 15.2 Tail	1.30 Lead 1.86 Tail	3706	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 18311' MD, 6734' TVD (BHL) Loggers TD (ft) 18311'

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

Plug back procedure N/A

Kick off depth (ft) 6540'

** This is a subsequent well. Antero only runs wireline logs on one well on a multi-well pad. Antero plans to run wireline logs on the McGill Unit 1H (API#47-017-06665) once it is drilled. Please reference the McGill Unit 1H logs once they have been submitted. 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 _____

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<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Marcellus</u>	<u>6597' (TOP)</u> TVD	<u>7137' (TOP)</u> MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

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 7939 mcfpd Oil 17 bpd NGL --- bpd Water 385 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 NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	
	<u>0</u>		<u>0</u>		

***PLEASE SEE ATTACHED 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 Rush Wellsite Services
Address 600 Alpha Drive City Canonsburg State PA Zip 15317

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 [Signature] Title Permit Representative Date 5/26/2015

EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	29-Aug-14	18,049	18,219	60	Marcellus
2	6-Sep-14	17,848	18,018	60	Marcellus
3	7-Sep-14	17,647	17,817	60	Marcellus
4	8-Sep-14	17,445	17,615	60	Marcellus
5	8-Sep-14	17,244	17,414	60	Marcellus
6	8-Sep-14	17,043	17,213	60	Marcellus
7	9-Sep-14	16,842	17,011	60	Marcellus
8	9-Sep-14	16,640	16,810	60	Marcellus
9	9-Sep-14	16,439	16,609	60	Marcellus
10	10-Sep-14	16,238	16,407	60	Marcellus
11	10-Sep-14	16,036	16,206	60	Marcellus
12	10-Sep-14	15,835	16,005	60	Marcellus
13	11-Sep-14	15,634	15,804	60	Marcellus
14	11-Sep-14	15,432	15,602	60	Marcellus
15	11-Sep-14	15,231	15,401	60	Marcellus
16	12-Sep-14	15,030	15,200	60	Marcellus
17	12-Sep-14	14,829	14,998	60	Marcellus
18	12-Sep-14	14,627	14,797	60	Marcellus
19	12-Sep-14	14,426	14,596	60	Marcellus
20	13-Sep-14	14,225	14,394	60	Marcellus
21	13-Sep-14	14,023	14,193	60	Marcellus
22	13-Sep-14	13,822	13,992	60	Marcellus
23	13-Sep-14	13,621	13,791	60	Marcellus
24	14-Sep-14	13,419	13,589	60	Marcellus
25	14-Sep-14	13,218	13,388	60	Marcellus
26	14-Sep-14	13,017	13,187	60	Marcellus
27	15-Sep-14	12,816	12,985	60	Marcellus
28	15-Sep-14	12,614	12,784	60	Marcellus
29	15-Sep-14	12,413	12,583	60	Marcellus
30	16-Sep-14	12,212	12,381	60	Marcellus
31	16-Sep-14	12,010	12,180	60	Marcellus
32	17-Sep-14	11,809	11,979	60	Marcellus
33	17-Sep-14	11,608	11,778	60	Marcellus
34	17-Sep-14	11,406	11,576	60	Marcellus
35	18-Sep-14	11,205	11,375	60	Marcellus
36	18-Sep-14	11,004	11,174	60	Marcellus
37	18-Sep-14	10,803	10,972	60	Marcellus
38	18-Sep-14	10,601	10,771	60	Marcellus
39	19-Sep-14	10,400	10,570	60	Marcellus
40	19-Sep-14	10,199	10,368	60	Marcellus
41	19-Sep-14	9,997	10,167	60	Marcellus
42	19-Sep-14	9,796	9,966	60	Marcellus
43	20-Sep-14	9,595	9,765	60	Marcellus
44	20-Sep-14	9,393	9,563	60	Marcellus
45	20-Sep-14	9,192	9,365	60	Marcellus
46	20-Sep-14	8,991	9,161	60	Marcellus
47	21-Sep-14	8,790	8,959	60	Marcellus
48	21-Sep-14	8,588	8,758	60	Marcellus
49	21-Sep-14	8,387	8,557	60	Marcellus
50	21-Sep-14	8,186	8,355	60	Marcellus
51	22-Sep-14	7,984	8,154	60	Marcellus
52	22-Sep-14	7,783	7,953	60	Marcellus
53	22-Sep-14	7,582	7,752	60	Marcellus
54	22-Sep-14	7,380	7,550	60	Marcellus
55	22-Sep-14	7,179	7,349	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	5-Sep-14	66.8	7,658	5,767	3,565	135,600	7,360	N/A
2	6-Sep-14	60.9	7,733	6,087	4,569	62,500	5,178	N/A
3	7-Sep-14	63.5	8,207	6,015	5,827	54,500	6,738	N/A
4	8-Sep-14	65.8	7,609	5,827	3,350	163,700	7,553	N/A
5	8-Sep-14	67.3	7,771	5,390	4,878	99,300	7,069	N/A
6	8-Sep-14	63.5	7,398	6,050	4,949	119,800	7,301	N/A
7	9-Sep-14	64.4	7,302	5,923	4,935	127,600	7,019	N/A
8	9-Sep-14	66.8	7,403	5,757	4,401	162,300	7,125	N/A
9	9-Sep-14	59.3	7,160	5,530	5,088	190,500	7,239	N/A
10	10-Sep-14	59.9	6,945	5,558	3,891	249,200	7,108	N/A
11	10-Sep-14	63.2	7,265	5,544	4,475	205,500	7,172	N/A
12	10-Sep-14	62.4	7,113	5,251	4,569	249,500	7,155	N/A
13	11-Sep-14	61.0	6,881	5,165	4,503	250,000	7,059	N/A
14	11-Sep-14	61.0	7,166	5,300	3,853	157,500	6,999	N/A
15	11-Sep-14	62.0	6,814	5,362	3,748	241,200	6,809	N/A
16	12-Sep-14	61.0	6,998	5,098	3,923	235,100	6,675	N/A
17	12-Sep-14	61.7	6,585	4,733	4,016	240,700	6,546	N/A
18	12-Sep-14	62.5	7,016	5,490	4,813	204,700	6,510	N/A
19	12-Sep-14	61.8	6,801	5,697	4,431	230,200	6,492	N/A
20	13-Sep-14	61.1	6,734	5,667	4,363	238,800	6,567	N/A
21	13-Sep-14	60.9	6,648	5,636	4,848	240,500	6,390	N/A
22	13-Sep-14	62.2	6,703	5,499	4,896	237,500	6,478	N/A
23	13-Sep-14	63.9	6,686	5,232	4,980	235,400	6,390	N/A
24	14-Sep-14	61.2	6,532	5,129	4,357	237,500	6,476	N/A
25	14-Sep-14	62.0	6,585	5,405	4,130	241,100	6,426	N/A
26	14-Sep-14	63.9	6,624	5,370	4,172	237,800	6,356	N/A
27	15-Sep-14	63.3	6,392	5,127	5,088	239,400	6,361	N/A
28	15-Sep-14	61.8	6,288	5,123	4,445	239,400	6,461	N/A
29	15-Sep-14	63.6	6,493	5,266	4,454	239,500	6,102	N/A
30	16-Sep-14	60.7	6,195	5,130	4,907	192,300	6,870	N/A
31	16-Sep-14	63.7	6,545	5,380	4,994	246,700	6,254	N/A
32	17-Sep-14	63.5	6,581	5,471	4,476	230,600	6,179	N/A
33	17-Sep-14	63.5	6,651	5,321	4,723	233,600	6,284	N/A
34	17-Sep-14	63.4	6,335	5,207	4,746	238,200	6,170	N/A
35	18-Sep-14	63.8	6,484	5,442	4,830	239,400	6,131	N/A
36	18-Sep-14	63.5	6,441	5,500	4,246	239,200	6,157	N/A
37	18-Sep-14	63.4	6,668	5,919	3,348	236,500	6,193	N/A
38	18-Sep-14	64.6	6,429	5,280	4,965	247,800	6,165	N/A
39	19-Sep-14	65.2	6,655	5,540	4,965	227,100	6,525	N/A
40	19-Sep-14	65.0	6,969	5,198	4,613	136,800	5,959	N/A
41	19-Sep-14	61.8	6,794	5,241	5,055	183,600	6,361	N/A
42	19-Sep-14	64.8	6,756	5,412	4,855	213,000	6,368	N/A
43	20-Sep-14	64.0	6,579	5,513	4,880	198,300	5,477	N/A
44	20-Sep-14	62.1	5,969	5,048	4,493	238,200	5,963	N/A
45	20-Sep-14	62.1	5,969	5,048	4,493	238,200	5,963	N/A
46	20-Sep-14	61.1	5,937	5,365	4,937	188,200	5,342	N/A
47	21-Sep-14	61.0	5,919	5,537	5,157	239,400	6,035	N/A
48	21-Sep-14	61.6	6,090	5,645	5,047	239,000	5,881	N/A
49	21-Sep-14	60.9	6,084	5,253	5,133	238,100	5,859	N/A
50	21-Sep-14	61.4	6,182	5,587	4,957	237,900	5,886	N/A
51	22-Sep-14	61.9	6,200	5,735	5,127	238,700	6,095	N/A
52	22-Sep-14	62.3	6,088	5,238	5,190	237,100	6,095	N/A
53	22-Sep-14	60.8	6,189	5,226	5,057	240,300	5,892	N/A
54	22-Sep-14	61.7	6,324	5,752	4,685	238,600	5,850	N/A
55	22-Sep-14	55.2	6,390	5,503	4,971	96,600	4,844	N/A
AVG=		62.6	6,708	5,445	4,625	11,499,700	351,912	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	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	2039	est. 1721	2039
Big Lime	2039	2136	2039	2136
Big Injun	2136	2510	2136	2510
Gantz Sand	2510	2616	2510	2616
Fifty Foot Sandstone	2616	2720	2616	2720
Gordon	2720	3077	2720	3077
Fifth Sandstone	3077	3237	3077	3237
Bayard	3237	3470	3237	3470
Warren	3470	3846	3470	3853
Speechley	3846	4093	3853	4113
Baltown	4093	4503	4113	4553
Bradford	4503	4989	4553	5101
Benson	4989	5316	5101	5485
Alexander	5316	5413	5485	5436
Elk	5413	5751	5436	5985
Rhinestreet	5751	6240	5985	6533
Sycamore	6240	6411	6533	6751
Middlesex	6411	6535	6751	6971
Burkett	6535	6564	6971	7038
Tully	6564	6597	7038	7137
Marcellus	6597	NA	7137	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 (Please reference Wireline Logs submitted for the McGill Unit 1H API# 47-017-06665). The measured depth (MD) 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:	9/5/2014
Job End Date:	9/22/2014
State:	West Virginia
County:	Doddridge
API Number:	47-017-06266-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Marks Unit 1H
Longitude:	-80.86247800
Latitude:	39.27735000
Datum:	NAD27
Federal/Tribal Well:	NC
True Vertical Depth:	6,734
Total Base Water Volume (gal):	14,780,304
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	Water					
			Water	7732-18-5	100.00000	91.21578	
Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia					
			Crystalline Silica, quartz	14808-60-7	99.90000	4.70549	
			Aluminum Oxide	1344-28-1	1.10000	0.05181	
			Titanium Oxide	13463-67-7	0.10000	0.00471	
			Iron Oxide	1309-37-1	0.10000	0.00471	
Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia					
			Crystalline Silica, quartz	14808-60-7	99.90000	2.61795	
			Aluminum Oxide	1344-28-1	1.10000	0.02883	
			Titanium Oxide	13463-67-7	0.10000	0.00262	
			Iron Oxide	1309-37-1	0.10000	0.00262	
Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia					
			Crystalline Silica, quartz	14808-60-7	99.90000	0.65822	
			Aluminum Oxide	1344-28-1	1.10000	0.00723	

					Titanium Oxide	13463-67-7	0.10000	0.00066	
Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia			Iron Oxide	1309-37-1	0.10000	0.00066	
					Crystalline Silica, quartz	14808-60-7	99.90000	0.51599	
					Aluminum Oxide	1344-28-1	1.10000	0.00568	
					Titanium Oxide	13463-67-7	0.10000	0.00052	
					Iron Oxide	1309-37-1	0.10000	0.00052	
LSG-100L	Nabors Completion and Production Services	Gelling Agents							
WFR-6W	Nabors Completion and Production Services	Friction Reducer			Petroleum Distillates	64742-47-8	70.00000	0.09661	
AQUACAR DB 20	Nabors Completion and Production Services	Biocides			Water	7732-18-5	40.00000	0.03150	
					Polyethylene glycol	25322-68-3	54.50000	0.01040	
					2,2-Dibromo-3-nitrilo-propionamide (DBNPA)	10222-01-2	20.00000	0.00382	
					Sodium bromide	7647-15-6	4.00000	0.00076	
					Dibromoacetonitrile	3252-43-5	3.00000	0.00057	
HCl Acid (12.5-18.0%) 22 Baume	Nabors Completion and Production Services	Bulk Acid							
HCl Acid (12.5-18.0%) 22 Baume	Nabors Completion and Production Services	Bulk Acid			Water	7732-18-5	100.00000	0.01346	
Super GREEN SOLV-M	Nabors Completion and Production Services	Paraffin & Scale Additives			22° Baume Hydrochloric Acid	7647-01-0	100.00000	0.01101	
					Aliphatic Hydrocarbons	Proprietary	95.00000	0.00228	
					Dodecane	Proprietary	14.00000	0.00034	
					tetradecane	Proprietary	11.00000	0.00026	
					Tridecane	Proprietary	9.00000	0.00022	
					Undecane	Proprietary	8.00000	0.00019	
Super TSC 2 LT	Nabors Completion and Production Services	Paraffin & Scale Additives							
OB-2 LT	Nabors Completion and Production Services	Gel Breakers			Bis(hexamethylene)triamine Penta (methylene phosphonic acid), Sodium Salt	35657-77-3	15.00000	0.00206	
					Ammonium Persulfate	7727-54-0	85.00000	0.00126	
					Crystalline Silica (in the form of quartz)	14808-60-7	10.00000	0.00015	

				68953-58-2	Organophylic Clay			
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* 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)

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LATITUDE 39°17'30"

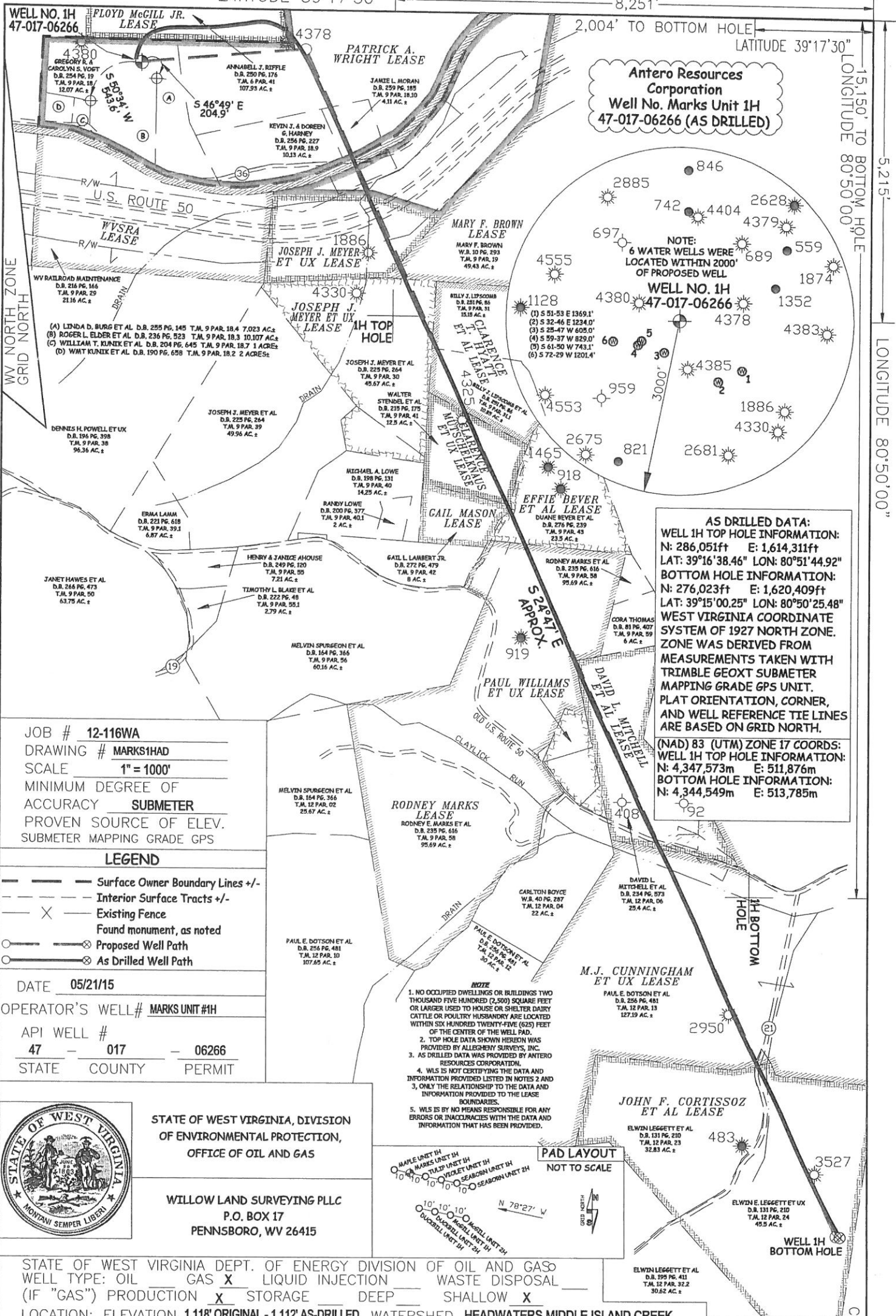
8,251'

LATITUDE 39°17'30"

LONGITUDE 80°50'00"

5,215'

LONGITUDE 80°50'00"



Antero Resources Corporation
Well No. Marks Unit 1H
47-017-06266 (AS DRILLED)

NOTE:
 6 WATER WELLS WERE LOCATED WITHIN 200' OF PROPOSED WELL
WELL NO. 1H
47-017-06266

AS DRILLED DATA:
WELL 1H TOP HOLE INFORMATION:
 N: 286,051ft E: 1,614,311ft
 LAT: 39°16'38.46" LON: 80°51'44.92"
BOTTOM HOLE INFORMATION:
 N: 276,023ft E: 1,620,409ft
 LAT: 39°15'00.25" LON: 80°50'25.48"
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.
(NAD) 83 (UTM) ZONE 17 COORDS:
WELL 1H TOP HOLE INFORMATION:
 N: 4,347,573m E: 511,876m
BOTTOM HOLE INFORMATION:
 N: 4,344,549m E: 513,785m

JOB # 12-116WA
 DRAWING # MARKS1HAD
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY SUBMETER
 PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

LEGEND
 — Surface Owner Boundary Lines +/-
 - - - Interior Surface Tracts +/-
 X Existing Fence
 ⊗ Found monument, as noted
 ○ Proposed Well Path
 ⊗ As Drilled Well Path

DATE 05/21/15
 OPERATOR'S WELL # MARKS UNIT #1H
 API WELL # 47 - 017 - 06266
 STATE COUNTY PERMIT



STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

WILLOW LAND SURVEYING PLLC
 P.O. BOX 17
 PENNSBORO, WV 26415

- 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 ALLEGHENY 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.

PAD LAYOUT
 NOT TO SCALE

STATE OF WEST VIRGINIA DEPT. OF ENERGY DIVISION OF OIL AND GAS
 WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 1,118' ORIGINAL - 1,112' AS-DRILLED WATERSHED HEADWATERS MIDDLE ISLAND CREEK
 QUADRANGLE WEST UNION 7.5' DISTRICT CENTRAL COUNTY DODDRIDGE
 SURFACE OWNER GREGORY R. & CAROLYN S. VOGT ACREAGE 12.07 ACRES +/-
 OIL & GAS ROYALTY OWNER PATRICK A. WRIGHT; FLOYD MCGILL JR.; WVSRA; JOSEPH J. MEYER ET UX; MARY F. BROWN; JOSEPH J. MEYER ET UX; CLARENCE T. HYATT ET AL; CLARENCE MUTSCHELKNAUS ET UX; GAIL MASON; EFFIE BEVER ET AL; RODNEY MARKS; DAVID L MITCHELL ET AL; M.J. CUNNINGHAM ET UX; JOHN F. CORTISSOZ ET AL LEASE ACREAGE 222 AC±; 107 AC±; 301.19 AC±; 8.63 AC±; 55.65 AC±; 37.25 AC±; 31.5 AC±; 12.5 AC±; 7.086 AC±; 23.5 AC±; 100 AC±; 26.017 AC±; 228 AC±; 79.5 AC±
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) (X) AS DRILLED PLUG & ABANDON CLEAN OUT & REPLUG
 TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,734' TVD 18,311' MD
 WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER
 ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD
 DENVER, CO 80202 CHARLESTON, WV 25313