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WR-35  
Rev. 8/23/13

WV GEOLOGICAL SURVEY  
MONTICELLO, WV

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

API 47-017-06565 County Doddridge District Grant  
Quad Smithburg 7.5' Pad Name RJ Smith Field/Pool Name ---  
Farm name Smith, Robert J. Well Number Vinola 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 4357405m Easting 523020m  
Landing Point of Curve Northing 4357563.14m Easting 523131.34m  
Bottom Hole Northing 4360034m Easting 522134m

Elevation (ft) 998' 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 10/29/2014 Date drilling commenced 1/19/2015 Date drilling ceased 5/25/2015  
Date completion activities began 11/5/2015 Date completion activities ceased 1/14/2016  
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 181', 237' Open mine(s) (Y/N) depths No  
Salt water depth(s) ft 804', 1267', 1350', 1431' 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 - 06565

Farm name Smith, Robert J.

Well number Vinola 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	94# J-55	N/A	Y
Surface	17- 1/2"	13- 3/8"	362'	New	48# H-40	N/A	Y*
Coal							
Intermediate 1	12-1/4"	9-5/8"	2521'	New	36# J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4" & 8-1/2"	5-1/2"	16063'	New	23# P-110	N/A	Y
Tubing		2-3/8"	7103'		4.7# N-80	N/A	
Packer type and depth set		N/A					

Comment Details First attempt to cement Surface Casing with 490 sacks of Class A Cement was unsuccessful. DEP Inspector, Doug Newlon, was notified on 2/12/2015 and gave instructions to cement the backside. 238 sacks of Class A cement were used down the backside of 13-3/8 casing to bring returns to surface.

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	193 sx	15.6	1.18	38	0'	8 Hrs.
Surface	Class A	728 sx*	15.6	1.18	251	0'	8 Hrs.
Coal							
Intermediate 1	Class A	927 sx	15.6	1.18	790	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	1036 sx (Lead) 1499 sx (Tail)	14.2 Lead 14.8 Tail	1.24 Lead 1.81 Tail	3217	~500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 16063' MD, 8626' TVD (BHL), 6895' (Deepest Point Drilled)

Loggers TD (ft) 15796'

Deepest formation penetrated Marcellus

Plug back to (ft) N/A

Plug back procedure N/A

Kick off depth (ft) 6010'

\*\* This is a subsequent well. Antero only runs wireline logs on one well on a multi-well pad (Duff Unit 2H API #47-017-06247). Please reference the wireline logs submitted with Form WR-35 for Duff Unit 2H. 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 \_\_\_\_\_

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WERE TRACERS USED  Yes  No TYPE OF TRACER(S) USED \_\_\_\_\_

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WV GEOLOGICAL SURVEY  
MORGANTOWN, WV



API 47- 017 - 06565 Farm name Smith, Robert J. Well number Vinola Unit 1H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Marcellus</u>	<u>6834' (TOP)</u> TVD	<u>7067' (TOP)</u> MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 3550 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 14483 mcfpd Oil 18 bpd NGL --- bpd Water 6 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 <sub>2</sub> 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 Precision Drilling Company LP  
Address 2640 Reach Rd. City Williamsport State PA Zip 17701

Logging Company Rush Wellsite Services  
Address 600 Alpha Drive City Canonsburg State PA Zip 15317

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

Stimulating Company Baker Hughes  
Address 837 Philippi Pike City Clarksburg State WV Zip 26301

Please insert additional pages as applicable.

Completed by Kara Quackenbush Telephone 303-357-7233  
Signature [Signature] Title Permit Representative Date 3/17/2016

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API 47-017-06565 Farm Name Smith, Robert J. Well Number Vinola Unit 1H

**EXHIBIT 1**

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	5-Nov-15	15,804	15,971	60	Marcellus
2	21-Nov-15	15,606	15,773	60	Marcellus
3	21-Nov-15	15,409	15,575	60	Marcellus
4	21-Nov-15	15,211	15,378	60	Marcellus
5	21-Nov-15	15,013	15,180	60	Marcellus
6	22-Nov-15	14,816	14,982	60	Marcellus
7	22-Nov-15	14,618	14,785	60	Marcellus
8	22-Nov-15	14,420	14,587	60	Marcellus
9	22-Nov-15	14,222	14,389	60	Marcellus
10	23-Nov-15	14,025	14,192	60	Marcellus
11	23-Nov-15	13,827	13,994	60	Marcellus
12	23-Nov-15	13,629	13,796	60	Marcellus
13	23-Nov-15	13,432	13,598	60	Marcellus
14	24-Nov-15	13,234	13,401	60	Marcellus
15	24-Nov-15	13,036	13,203	60	Marcellus
16	24-Nov-15	12,839	13,005	60	Marcellus
17	25-Nov-15	12,641	12,808	60	Marcellus
18	25-Nov-15	12,443	12,610	60	Marcellus
19	27-Nov-15	12,245	12,412	60	Marcellus
20	27-Nov-15	12,048	12,214	60	Marcellus
21	27-Nov-15	11,850	12,017	60	Marcellus
22	28-Nov-15	11,652	11,819	60	Marcellus
23	28-Nov-15	11,455	11,621	60	Marcellus
24	28-Nov-15	11,257	11,424	60	Marcellus
25	28-Nov-15	11,059	11,226	60	Marcellus
26	28-Nov-15	10,862	11,028	60	Marcellus
27	29-Nov-15	10,664	10,831	60	Marcellus
28	29-Nov-15	10,466	10,633	60	Marcellus
29	29-Nov-15	10,268	10,435	60	Marcellus
30	29-Nov-15	10,071	10,237	60	Marcellus
31	29-Nov-15	9,873	10,040	60	Marcellus
32	29-Nov-15	9,675	9,842	60	Marcellus
33	30-Nov-15	9,478	9,644	60	Marcellus
34	30-Nov-15	9,280	9,447	60	Marcellus
35	30-Nov-15	9,082	9,249	60	Marcellus
36	30-Nov-15	8,885	9,051	60	Marcellus
37	30-Nov-15	8,687	8,854	60	Marcellus
38	1-Dec-15	8,489	8,656	60	Marcellus
39	1-Dec-15	8,291	8,458	60	Marcellus
40	1-Dec-15	8,094	8,260	60	Marcellus
41	1-Dec-15	7,896	8,063	60	Marcellus
42	1-Dec-15	7,698	7,865	60	Marcellus
43	2-Dec-15	7,501	7,667	60	Marcellus
44	2-Dec-15	7,303	7,470	60	Marcellus
45	2-Dec-15	7,105	7,272	60	Marcellus

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API 47-017-06565 Farm Name Smith, Robert J. Well Number Vinola Unit 1H

**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	21-Nov-15	69.0	7,319	0	5,164	249,575	6,424	N/A
2	21-Nov-15	68.4	7,079	5,763	5,345	250,150	6,635	N/A
3	21-Nov-15	68.0	6,843	5,985	5,177	248,085	6,566	N/A
4	21-Nov-15	68.0	7,040	5,714	5,509	249,173	6,568	N/A
5	21-Nov-15	69.0	6,910	5,587	5,100	249,112	6,753	N/A
6	22-Nov-15	71.0	7,194	5,773	5,251	246,886	6,550	N/A
7	22-Nov-15	67.0	7,076	5,741	4,951	251,345	6,444	N/A
8	22-Nov-15	70.0	6,895	5,784	5,349	250,828	6,390	N/A
9	22-Nov-15	68.0	6,941	6,355	5,043	248,642	6,311	N/A
10	23-Nov-15	74.0	7,395	6,273	5,020	253,851	6,349	N/A
11	23-Nov-15	74.0	7,266	5,631	5,184	252,295	6,364	N/A
12	23-Nov-15	70.4	6,921	6,024	5,349	249,930	6,367	N/A
13	23-Nov-15	69.1	6,833	5,584	5,182	250,039	6,401	N/A
14	24-Nov-15	77.0	7,342	6,203	5,258	247,875	6,285	N/A
15	24-Nov-15	77.0	7,348	5,678	5,271	249,936	6,445	N/A
16	24-Nov-15	76.5	6,982	5,477	5,058	249,293	6,218	N/A
17	25-Nov-15	78.0	7,212	5,586	5,151	252,948	6,269	N/A
18	25-Nov-15	78.0	7,060	5,324	5,244	248,927	6,284	N/A
19	27-Nov-15	77.0	7,183	5,398	5,141	249,855	6,243	N/A
20	27-Nov-15	77.0	7,273	5,516	5,756	249,733	6,194	N/A
21	27-Nov-15	77.0	6,848	5,353	4,480	249,680	6,208	N/A
22	28-Nov-15	78.0	6,869	5,387	4,564	249,769	6,216	N/A
23	28-Nov-15	76.0	7,275	5,489	5,024	249,589	6,207	N/A
24	28-Nov-15	77.0	7,035	5,528	4,961	249,663	6,297	N/A
25	28-Nov-15	77.0	6,955	5,859	5,230	249,827	6,116	N/A
26	28-Nov-15	78.0	6,726	5,648	5,095	222,596	6,767	N/A
27	29-Nov-15	77.0	7,235	5,903	5,014	250,483	6,141	N/A
28	29-Nov-15	78.0	7,164	5,576	5,072	249,541	6,262	N/A
29	29-Nov-15	78.0	7,058	5,751	5,067	252,226	6,127	N/A
30	29-Nov-15	78.0	7,112	5,746	4,964	251,187	6,115	N/A
31	29-Nov-15	78.6	6,793	5,851	4,870	249,842	6,044	N/A
32	29-Nov-15	76.1	6,652	5,622	5,702	250,210	6,141	N/A
33	30-Nov-15	72.2	6,700	5,511	4,668	249,048	6,289	N/A
34	30-Nov-15	80.0	6,929	5,391	5,023	251,107	6,017	N/A
35	30-Nov-15	78.0	6,901	5,032	5,168	249,652	5,969	N/A
36	30-Nov-15	80.0	6,886	5,819	5,423	249,101	6,001	N/A
37	30-Nov-15	75.8	6,518	5,376	5,022	250,203	6,025	N/A
38	1-Dec-15	77.6	6,509	5,807	5,733	249,146	6,037	N/A
39	1-Dec-15	79.0	7,065	5,532	5,488	250,008	6,035	N/A
40	1-Dec-15	79.0	6,933	6,827	5,282	248,838	6,014	N/A
41	1-Dec-15	79.0	6,790	6,013	4,884	249,304	5,957	N/A
42	1-Dec-15	78.0	6,843	5,250	5,216	219,059	6,516	N/A
43	2-Dec-15	76.4	6,767	5,607	4,865	142,567	6,534	N/A
44	2-Dec-15	77.3	6,723	5,620	4,481	249,009	5,926	N/A
45	2-Dec-15	79.0	6,658	5,467	4,775	249,717	5,903	N/A
<b>AVG=</b>		<b>75.3</b>	<b>6,979</b>	<b>5,564</b>	<b>5,124</b>	<b>11,079,850</b>	<b>281,924</b>	<b>TOTAL</b>

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API 47-017-06565 Farm Name Smith, Robert J. Well Number Vinola Unit 1H

**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	181'	N/A	181'	N/A
Fresh Water	237'	N/A	237'	N/A
Siltstone	0	427	0	427
Sandstone	est. 427	597	est. 427	597
Dolostone/Sandstone/Siltstone	est. 597	637	est. 597	637
Sandstone and Siltstone w/trace coal	est. 637	697	est. 637	697
Siltstone	est. 697	877	est. 697	877
Shale	est. 877	1027	est. 877	1027
Sandstone	est. 1027	1107	est. 1027	1107
Sandstone w/trace coal	est. 1107	1197	est. 1107	1197
Sandstone	est. 1197	1527	est. 1197	1527
Siltstone	est. 1527	1587	est. 1527	1587
Sandstone	est. 1587	1647	est. 1587	1647
Shale	est. 1647	1707	est. 1647	1707
Sandstone	est. 1707	1737	est. 1707	1737
Shale	est. 1737	1867	est. 1737	1867
Siltstone	est. 1867	2008	est. 1867	2010
Big Lime	2008	2115	2010	2117
Big Injun	2115	2562	2117	2564
Gantz Sand	2562	2698	2564	2700
Fifty Foot Sandstone	2698	2784	2700	2786
Gordon	2784	3141	2786	3143
Fifth Sandstone	3141	3156	3143	3158
Bayard	3156	3502	3158	3504
Warren	3502	3892	3504	3894
Speechley	3892	4602	3894	4604
Bradford	4602	5079	4604	5081
Benson	5079	5356	5081	5358
Alexander	5356	5553	5358	5555
Elk	5553	6044	5555	6047
Rhinestreet	6044	6422	6047	6479
Sycamore	6422	6608	6479	6723
Middlesex	6608	6750	6723	6923
Burkett	6750	6779	6923	6969
Tully	6779	6834	6969	7067
Marcellus	6834	NA	7067	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.

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MORGANTOWN, WV

# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	11/21/2015
Job End Date:	12/2/2015
State:	West Virginia
County:	Doddridge
API Number:	47-017-06565-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Vinola Unit 1H
Longitude:	-80.74331000
Latitude:	39.38974000
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	6,895
Total Base Water Volume (gal):	12,346,950
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	Operator	Carrier	Water	7732-18-5	100.00000	89.88825	
Sand, White	Baker Hughes	Proppant	Listed with Other Chemicals	NA		9.67447	
HCl, 20.1 - 28%	Baker Hughes	Acidizing	Listed with Other Chemicals	NA		0.21620	
GW-3LDF	Baker Hughes	Gelling Agent	Listed with Other Chemicals	NA		0.12460	
Calcium Chloride	Baker Hughes	Salts	Listed with Other Chemicals	NA		0.04800	
FRW-18	Baker Hughes	Friction Reducer	Listed with Other Chemicals	NA		0.01791	
Alpha 1427	Baker Hughes	Biocide	Listed with Other Chemicals	NA		0.00445	
Enzyme G-NE	Baker Hughes	Breaker	Listed with Other Chemicals	NA		0.00071	
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 Chemicals	Crystalline Silica (Quartz)	14808-60-7		9.67909	

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MORGANTOWN WV





LATITUDE 39°22'30"

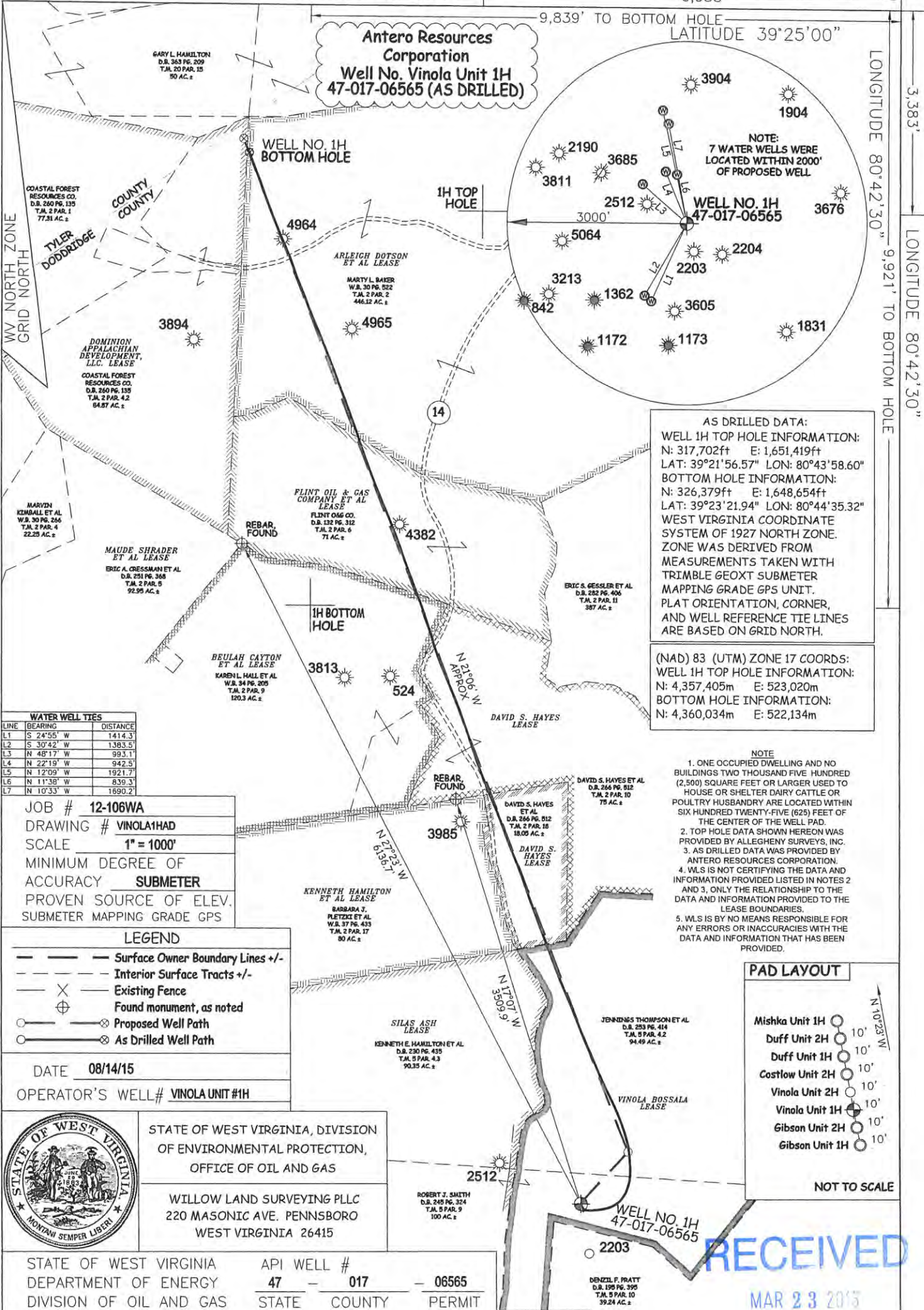
6,958'

LATITUDE 39°25'00"

LONGITUDE 80°42'30" 9,921' TO BOTTOM HOLE

LONGITUDE 80°42'30" 5,383'

### Antero Resources Corporation Well No. Vinola Unit 1H 47-017-06565 (AS DRILLED)



**AS DRILLED DATA:**  
**WELL 1H TOP HOLE INFORMATION:**  
 N: 317,702ft E: 1,651,419ft  
 LAT: 39°21'56.57" LON: 80°43'58.60"  
**BOTTOM HOLE INFORMATION:**  
 N: 326,379ft E: 1,648,654ft  
 LAT: 39°23'21.94" LON: 80°44'35.32"  
 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: 4,357,405m E: 523,020m  
**BOTTOM HOLE INFORMATION:**  
 N: 4,360,034m E: 522,134m

- NOTE**
- ONE OCCUPIED DWELLING AND NO 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.
  - TOP HOLE DATA SHOWN HEREON WAS PROVIDED BY ALLEGHENY SURVEYS, INC.
  - AS DRILLED DATA WAS PROVIDED BY ANTERO RESOURCES CORPORATION.
  - 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.
  - WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.

LINE	BEARING	DISTANCE
L1	S 24°55' W	1414.3'
L2	S 30°42' W	1383.5'
L3	N 48°17' W	993.1'
L4	N 22°19' W	942.5'
L5	N 12°09' W	1921.7'
L6	N 11°38' W	839.3'
L7	N 10°33' W	1690.2'

JOB # **12-106WA**  
 DRAWING # **VINOLA1HAD**  
 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 **08/14/15**  
 OPERATOR'S WELL # **VINOLA UNIT #1H**



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

API WELL # **47 - 017 - 06565**

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

LOCATION: ELEVATION **1,004' ORIGINAL - 998' AS DRILLED** WATERSHED **MCELROY CREEK**  
 QUADRANGLE **SMITHBURG (TH) CENTERPOINT (BH)** DISTRICT **GRANT** COUNTY **DODDRIDGE**

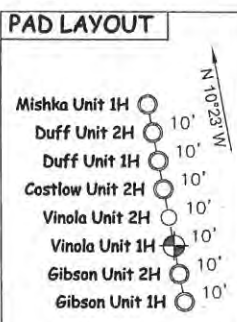
SURFACE OWNER **ROBERT J. SMITH** ACREAGE **100 ACRES +/-**

OIL & GAS ROYALTY OWNER **VINOLA BOSSALA; DAVID S. HAYES; DAVID S. HAYES; BEULAH CAYTON ET AL; FLINT OIL & GAS COMPANY ET AL; ARLEIGH DOTSON ET AL; DOMINION APPALACHIAN DEV. LLC.**

LEASE ACREAGE **120 ACRES±; 18 ACRES±; 75 ACRES±; 123.5 ACRES±; 70 ACRES±; 446.5 ACRES±; 167.29 ACRES±**

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 **6,833' TVD 16,063' MD**

WELL OPERATOR **ANTERO RESOURCES CORP.** DESIGNATED AGENT **CT CORPORATION SYSTEM**  
 ADDRESS **1615 WYNKOOP STREET** ADDRESS **5400 D BIG TYLER ROAD**  
**DENVER, CO 80202** **CHARLESTON, WV 25313**



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