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WR-35

Rev. 8/23/13

WV GEOLOGICAL SURVEY  
MORGANTOWN, WV

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

API 47-017-06191 County Doddridge District Central  
Quad Oxford 7.5' Pad Name Primm Pad Field/Pool Name ----  
Farm name Primm, Olin E. & Mary Well Number Ahouse Unit 2H  
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 4343584m Easting 512721m  
Landing Point of Curve Northing 4343819.02m Easting 51300.33m  
Bottom Hole Northing 4345530m Easting 512181m

Elevation (ft) 1008' 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 3/27/2014 Date drilling commenced 7/31/2013 Date drilling ceased 4/28/2014  
Date completion activities began 6/4/2014 Date completion activities ceased 8/20/2014  
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 225' Open mine(s) (Y/N) depths No  
Salt water depth(s) ft 743', 2147' Void(s) encountered (Y/N) depths No  
Coal depth(s) ft 437' 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 - 06191 Farm name Primm, Olin E. & Mary Well number Ahouse Unit 2H

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"	40'	New	94# J-55	N/A	Y
Surface	17- 1/2"	13- 3/8"	355'	New	48# H-40	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2516'	New	36# J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4" & 8-1/2"	5-1/2"	13550'	New	20# P-110	N/A	Y
Tubing		2-3/8"	6864'		5.95# 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 <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	Class A	200 sx	15.6	1.18	38	0'	8 Hrs.
Surface	Class A	420 sx	15.6	1.18	247	0'	8 Hrs.
Coal							
Intermediate 1	Class A	928 sx	15.6	1.18	788	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	918 sx (Lead) 1091 sx (Tail)	13.5 Lead 15.2 Tail	1.44 Lead 1.8 Tail	2642	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 13550' MD, 6572' TVD (BHL); 6582' TVD (Deepest point drilled) Loggers TD (ft) 13497'  
 Deepest formation penetrated Marcellus Plug back to (ft) N/A  
 Plug back procedure N/A

Kick off depth (ft) 6190'

\*\* This is a subsequent well. Antero only runs wireline logs on one well on a multi-well pad (Callie Unit 2H API #47-017-06193). Please reference the wireline logs submitted with Form WR-35 for Callie 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 \_\_\_\_\_

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

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API 47-017-06191 Farm name Primm, Olin E. & Mary Well number Ahouse Unit 2H

**PERFORATION RECORD**

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
<b>*PLEASE SEE ATTACHED EXHIBIT 1</b>					

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 (bbbls)	Amount of Nitrogen/other (units)
<b>*PLEASE SEE ATTACHED EXHIBIT 2</b>								

Please insert additional pages as applicable.

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API 47- 017 - 06191 Farm name Primm, Olin E. & Mary Well number Ahouse Unit 2H

PRODUCING FORMATION(S)	DEPTHS	
Marcellus	6541' (TOP) TVD	6986' (TOP) 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 10209 mcfpd Oil --- bpd NGL --- bpd Water 403 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	
	0		0		

**\*PLEASE SEE ATTACHED EXHIBIT 3**

Please insert additional pages as applicable.

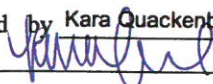
Drilling Contractor Precision Drilling Company, LP  
Address 2640 Reach Rd. City Williamsport State PA Zip 17701

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

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

Stimulating Company US Well Services  
Address 533 Industrial Park Dr. 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 7/27/2015

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API 47-017-06191 Farm Name Primm, Olin E. & Mary Well Number Ahouse Unit 2H

**EXHIBIT 1**

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	4-Jun-14	13,295	13,466	60	Marcellus
2	27-Jun-14	13,146	13,273	60	Marcellus
3	28-Jun-14	12,997	13,123	60	Marcellus
4	28-Jun-14	12,847	12,974	60	Marcellus
5	28-Jun-14	12,698	12,825	60	Marcellus
6	29-Jun-14	12,549	12,675	60	Marcellus
7	29-Jun-14	12,400	12,526	60	Marcellus
8	1-Jul-14	12,250	12,377	60	Marcellus
9	2-Jul-14	12,101	12,227	60	Marcellus
10	3-Jul-14	11,952	12,078	60	Marcellus
11	3-Jul-14	11,802	11,929	60	Marcellus
12	3-Jul-14	11,653	11,779	60	Marcellus
13	4-Jul-14	11,504	11,630	60	Marcellus
14	4-Jul-14	11,354	11,481	60	Marcellus
15	4-Jul-14	11,205	11,332	60	Marcellus
16	4-Jul-14	11,056	11,182	60	Marcellus
17	5-Jul-14	10,906	11,033	60	Marcellus
18	5-Jul-14	10,757	10,884	60	Marcellus
19	5-Jul-14	10,608	10,734	60	Marcellus
20	6-Jul-14	10,459	10,585	60	Marcellus
21	6-Jul-14	10,309	10,436	60	Marcellus
22	6-Jul-14	10,160	10,286	60	Marcellus
23	6-Jul-14	10,011	10,137	60	Marcellus
24	7-Jul-14	9,861	9,988	60	Marcellus
25	7-Jul-14	9,712	9,838	60	Marcellus
26	7-Jul-14	9,563	9,689	60	Marcellus
27	8-Jul-14	9,413	9,540	60	Marcellus
28	8-Jul-14	9,264	9,390	60	Marcellus
29	8-Jul-14	9,115	9,241	60	Marcellus
30	8-Jul-14	8,965	9,092	60	Marcellus
31	9-Jul-14	8,816	8,943	60	Marcellus
32	9-Jul-14	8,667	8,793	60	Marcellus
33	9-Jul-14	8,518	8,644	60	Marcellus
34	9-Jul-14	8,368	8,495	60	Marcellus
35	9-Jul-14	8,219	8,345	60	Marcellus
36	10-Jul-14	8,070	8,196	60	Marcellus
37	10-Jul-14	7,920	8,047	60	Marcellus
38	10-Jul-14	7,771	7,897	60	Marcellus
39	10-Jul-14	7,622	7,748	60	Marcellus
40	10-Jul-14	7,472	7,599	60	Marcellus
41	11-Jul-14	7,323	7,449	60	Marcellus
42	11-Jul-14	7,174	7,300	60	Marcellus
43	11-Jul-14	7,024	7,151	60	Marcellus

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API 47-017-06191 Farm Name Primm, Olin E. & Mary Well Number Ahouse 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 (bbbls)	Amount of Nitrogen/ other (units)
1	26-Jun-14	72.2	7,481	5,972	4,847	202,734	6,586	N/A
2	27-Jun-14	76.0	7,496	6,176	4,245	172,900	6,333	N/A
3	28-Jun-14	74.0	7,710	6,348	5,214	142,700	6,413	N/A
4	28-Jun-14	73.0	7,665	5,801	4,599	219,063	5,843	N/A
5	28-Jun-14	73.0	7,510	5,729	3,578	221,600	5,919	N/A
6	29-Jun-14	75.0	7,326	5,820	3,991	220,700	5,811	N/A
7	29-Jun-14	76.8	7,564	6,109	3,572	225,520	5,802	N/A
8	1-Jul-14	80.0	7,908	5,992	4,249	218,680	5,791	N/A
9	2-Jul-14	69.0	7,561	6,244	5,200	142,100	5,931	N/A
10	3-Jul-14	77.3	7,266	5,503	4,493	221,400	5,903	N/A
11	3-Jul-14	78.9	7,623	5,372	4,322	218,680	5,857	N/A
12	3-Jul-14	71.0	8,386	6,361	5,227	119,900	6,281	N/A
13	4-Jul-14	81.0	7,539	5,510	5,299	222,300	5,836	N/A
14	4-Jul-14	83.0	7,394	5,593	4,974	222,780	5,834	N/A
15	4-Jul-14	66.0	7,755	5,826	5,239	140,180	6,056	N/A
16	4-Jul-14	81.0	8,258	5,846	5,278	173,800	6,263	N/A
17	5-Jul-14	77.1	7,486	5,467	5,525	171,976	6,154	N/A
18	5-Jul-14	78.8	7,504	5,754	3,849	222,154	5,783	N/A
19	5-Jul-14	81.0	7,783	5,480	4,124	223,000	5,824	N/A
20	6-Jul-14	81.0	7,741	5,519	5,282	222,200	5,769	N/A
21	6-Jul-14	79.0	7,514	5,475	4,511	208,099	5,572	N/A
22	6-Jul-14	79.4	7,318	5,736	4,541	221,924	5,749	N/A
23	6-Jul-14	82.0	7,577	5,529	3,431	222,400	5,742	N/A
24	7-Jul-14	81.0	7,599	6,219	3,895	221,100	5,710	N/A
25	7-Jul-14	75.0	7,883	5,679	6,212	160,600	8,891	N/A
26	7-Jul-14	81.0	7,532	5,447	5,311	221,800	5,710	N/A
27	8-Jul-14	78.0	7,496	5,686	5,060	170,400	6,012	N/A
28	8-Jul-14	78.0	7,281	5,328	4,187	145,600	5,631	N/A
29	8-Jul-14	73.0	7,266	5,347	3,362	222,050	5,725	N/A
30	8-Jul-14	81.0	7,675	5,529	4,063	187,800	6,040	N/A
31	9-Jul-14	81.0	7,198	5,690	3,916	222,700	5,655	N/A
32	9-Jul-14	80.0	7,021	5,711	3,383	221,300	5,652	N/A
33	9-Jul-14	78.0	7,213	5,808	3,555	222,350	5,643	N/A
34	9-Jul-14	81.0	7,538	5,332	3,870	222,500	5,863	N/A
35	9-Jul-14	79.0	7,513	5,769	4,903	157,800	5,517	N/A
36	10-Jul-14	80.0	7,125	5,440	5,304	222,600	5,616	N/A
37	10-Jul-14	79.0	7,167	5,583	4,939	219,900	5,987	N/A
38	10-Jul-14	78.0	6,978	5,772	4,156	223,300	5,580	N/A
39	10-Jul-14	78.0	6,755	5,751	3,591	209,700	5,446	N/A
40	10-Jul-14	82.0	7,080	5,243	6,223	222,200	5,602	N/A
41	11-Jul-14	82.0	6,792	5,815	4,070	222,400	5,563	N/A
42	11-Jul-14	79.0	7,375	6,073	4,299	219,150	5,946	N/A
43	11-Jul-14	78.0	6,671	5,937	3,448	219,900	5,522	N/A
<b>AVG=</b>		<b>77.8</b>	<b>7,454</b>	<b>5,728</b>	<b>4,496</b>	<b>8,711,940</b>	<b>254,363</b>	<b>TOTAL</b>

## 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	225'	N/A	225'	N/A
Shale	0	227	0	227
Sandstone	est. 227	437	est. 227	437
Coal	est. 437	457	est. 437	457
Sandy shale	est. 457	477	est. 457	477
Shale	est. 477	595	est. 477	595
Sandstone	est. 595	605	est. 595	605
Shale	est. 605	625	est. 605	625
Sandstone	est. 625	638	est. 625	638
Shale	est. 638	659	est. 638	659
Sandstone	est. 659	808	est. 659	808
Shale	est. 808	1175	est. 808	1175
Sandy shale	est. 1175	1235	est. 1175	1235
Trace coal	est. 1235	1257	est. 1235	1257
Shale	est. 1257	1421	est. 1257	1421
Sandstone	est. 1421	1445	est. 1421	1445
Sandy shale	est. 1445	1477	est. 1445	1477
Trace Coal/shale	est. 1477	1542	est. 1477	1542
Sandstone	est. 1542	1683	est. 1542	1683
Sandy shale	est. 1683	2021	est. 1683	2021
Big Lime	2021	2017	2021	2017
Big Injun	2017	2311	2017	2311
Weir	2311	2619	2311	2619
Fifty Foot Sandstone	2619	2777	2619	2777
Gordon	2777	3061	2777	3063
Fifth Sandstone	3061	3084	3063	3086
Bayard	3084	3386	3086	3390
Speechley	3386	4101	3390	4111
Baltown	4101	4544	4111	4577
Bradford	4544	4954	4577	5028
Benson	4954	5219	5028	5322
Alexander	5219	6189	5322	6403
Sycamore	6189	6361	6403	6612
Middlesex	6361	6484	6612	6816
Burkett	6484	6511	6816	6883
Tully	6511	6541	6883	6986
Marcellus	6541	NA	6986	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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**Hydraulic Fracturing Fluid Product Component Information Disclosure**



**Frac Focus**  
Chemical Disclosure Registry



Job Start Date:	6/26/2014
Job End Date:	7/11/2014
State:	West Virginia
County:	Doddridge
API Number:	47-017-06191-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Ahouse Unit 2H
Longitude:	-80.85258900
Latitude:	39.24148300
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	6,582
Total Base Water Volume (gal):	10,683,246
Total Base Non Water Volume:	437,992

**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	Base Fluid	Water	7732-18-5	100.00000	90.81629	
Sand	U.S. Well Services, LLC	Proppant					
HCL Acid (12.6%-18.0%)	U.S. Well Services, LLC	Bulk Acid	Crystalline Silica, quartz	14808-60-7	100.00000	8.87993	
LGC-15	U.S. Well Services, LLC	Gelling Agents	Water	7732-18-5	87.50000	0.09288	
			Hydrogen Chloride	7641-01-1	18.00000	0.02219	
			Guar Gum	9000-30-0	50.00000	0.04016	
			Petroleum Distillates	64742-47-8	60.00000	0.03803	
			Suspending agent (solid)	14808-60-7	3.00000	0.00614	
			Surfactant	68439-51-0	3.00000	0.00241	
WFRA-405	U.S. Well Services, LLC	Friction Reducer	Water	7732-18-5	40.00000	0.02677	
			Anionic Polyacrylamide	Proprietary		0.02677	
			Petroleum Distillates	64742-47-8	22.00000	0.02155	
			Crystalline Salt	12125-02-9	5.00000	0.00335	



SI-1000	U.S. Well Services, LLC	Scale Inhibitor	Ethoxylated alcohol blend	Proprietary	5.00000	0.00335
			Anionic Copolymer	Proprietary		0.00414
			Ethylene Glycol	107-21-1	20.00000	0.00375
			Water	7732-18-5	30.00000	0.00312
X-BAC 1020	U.S. Well Services, LLC	Anti-Bacterial Agent				
			2,2-dibromo-3-nitropropionamide	10222-01-2	20.00000	0.00450
			Deionized Water	7732-18-5	28.00000	0.00257
AP One	U.S. Well Services, LLC	Gel Breakers				
			Ammonium Persulfate	7727-54-0	100.00000	0.00153
AI-300	U.S. Well Services, LLC	Acid Corrosion Inhibitors				
			Ethylene Glycol	107-21-1	31.00000	0.00025
			N,N-Dimethylformamide	38-12-2	15.00000	0.00008
			Cinnamaldehyde	104-55-2	5.00000	0.00007
			Tar bases, quinoline derivs, benzyl chloride-quaternized	72480-70-7	13.00000	0.00007
			2-Butoxyethanol	111-76-2	7.00000	0.00006
			Water	7732-18-5	20.00000	0.00002
			Ethoxylated Nonylphenol	58412-54-4	5.00000	0.00002
			Isopropyl Alcohol	67-63-0	3.00000	0.00001
			Triethyl Phosphate	78-40-0	3.00000	0.00001

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)

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LATITUDE 39°15'00"

5,502'

7,264' TO BOTTOM HOLE  
LATITUDE 39°17'30"

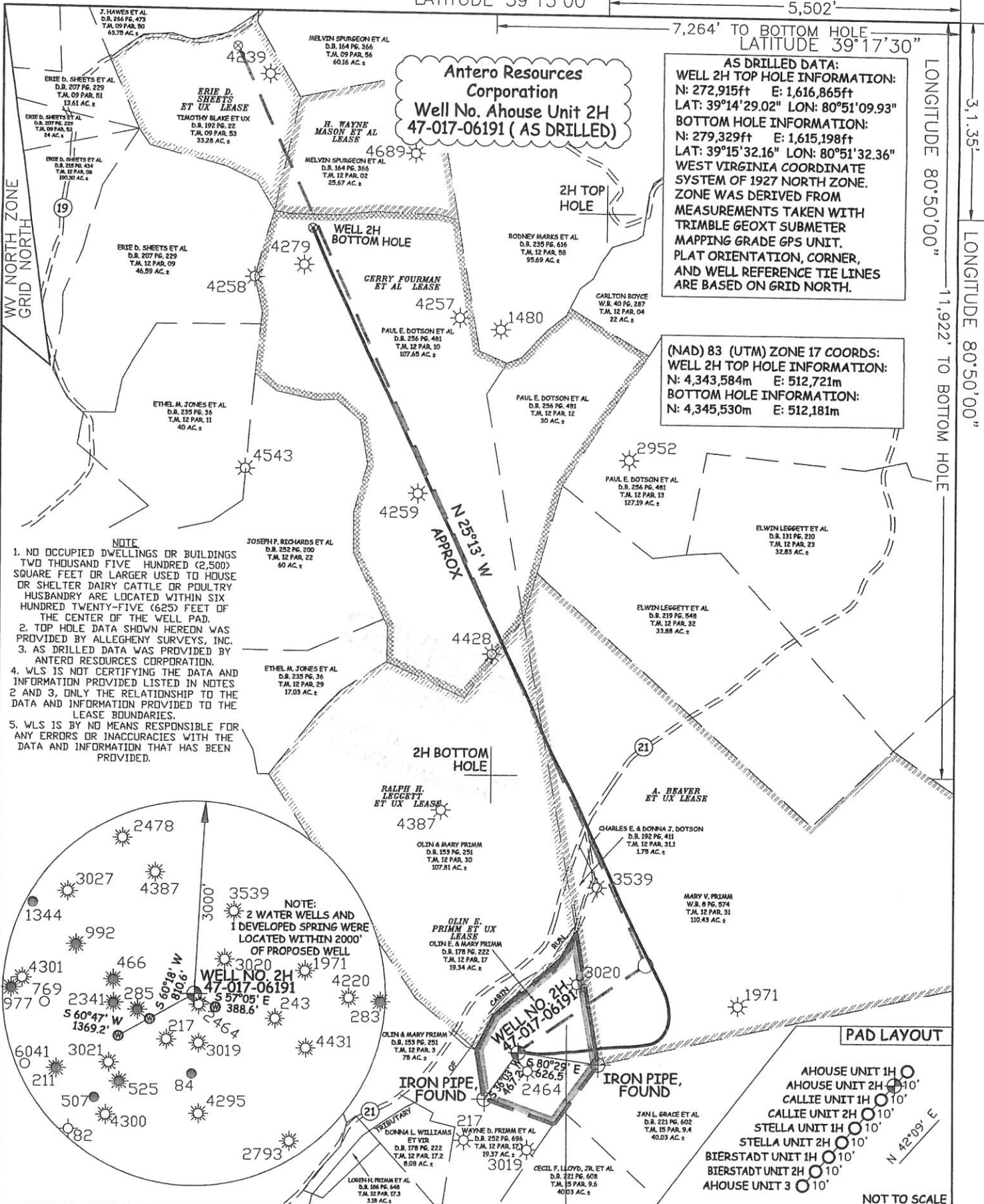
LONGITUDE 80°50'00"

3,135'  
LONGITUDE 80°50'00"  
11,922' TO BOTTOM HOLE

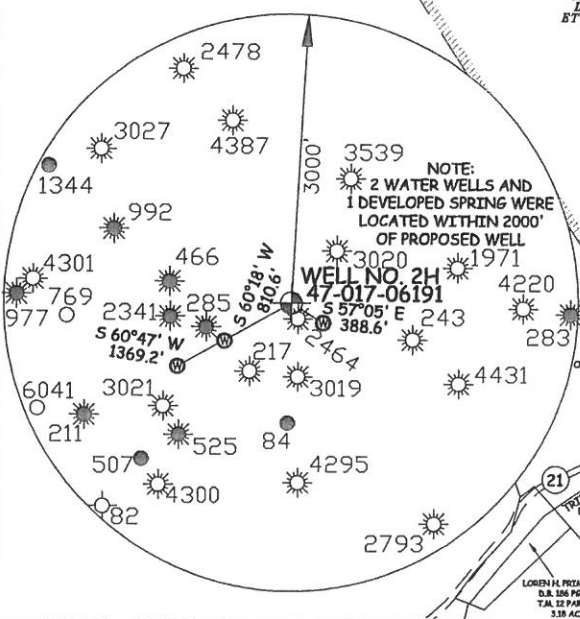
Antero Resources Corporation  
Well No. Ahouse Unit 2H  
47-017-06191 (AS DRILLED)

AS DRILLED DATA:  
WELL 2H TOP HOLE INFORMATION:  
N: 272,915ft E: 1,616,865ft  
LAT: 39°14'29.02" LON: 80°51'09.93"  
BOTTOM HOLE INFORMATION:  
N: 279,329ft E: 1,615,198ft  
LAT: 39°15'32.16" LON: 80°51'32.36"  
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.

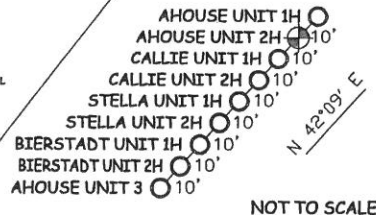
(NAD) 83 (UTM) ZONE 17 COORDS:  
WELL 2H TOP HOLE INFORMATION:  
N: 4,343,584m E: 512,721m  
BOTTOM HOLE INFORMATION:  
N: 4,345,530m E: 512,181m



- 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



JOB # 12-061WA  
DRAWING # AHOUSE2HAD  
SCALE 1" = 1000'  
MINIMUM DEGREE OF ACCURACY SUBMETER  
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS



STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
WILLOW LAND SURVEYING PLLC  
220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

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

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 1,030' ORIGINAL - 1,008' AS DRILLED WATERSHED NORTH FORK HUGHES RIVER  
QUADRANGLE OXFORD 7.5 DISTRICT CENTRAL COUNTY DODDRIDGE  
SURFACE OWNER OLIN E. & MARY PRIMM ACREAGE 19.34 ACRES +/-  
OIL & GAS ROYALTY OWNER OLIN E. PRIMM ET UX; A. BEAVER ET UX; LEASE ACREAGE 19.34 ACRES±; 113 ACRES±;  
RALPH H. LEGGETT ET UX; GERRY FOURMAN ET AL 108 ACRES±; 137.65 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 6,572' TVD 13,550' MD

WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER  
ADDRESS 1615 WYNKOOP STREET ADDRESS CT CORPORATION SYSTEM  
DENVER, CO 80202 CHARLESTON, WV 25313

COUNTY NAME PERMIT