

AM

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

API 47-017-06561 County Doddridge District Central
Quad Oxford 7.5' Pad Name Primm Pad Field/Pool Name ----
Farm name Primm, Olin E. & Mary Well Number Bierstadt 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 4343573m Easting 512711m
Landing Point of Curve Northing 43431717.74m Easting 512651.91m
Bottom Hole Northing 4340453m Easting 513949m

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

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Date permit issued 9/3/2014 Date drilling commenced 1/24/2015 Date drilling ceased 4/15/2015
Date completion activities began 5/21/2015 Date completion activities ceased 8/25/2015
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:
JC
10/30/2015

API 47-017 - 06561 Farm name Primm, Olin E. & Mary Well number Bierstadt 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# H-40	N/A	Y
Surface	17- 1/2"	13- 3/8"	365'	New	48# H-40	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2537'	New	36# J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4" & 8-1/2"	5-1/2"	17667'	New	23# P-110	N/A	Y
Tubing		2-3/8"	6814'		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	150 sx	15.6	1.18	38	0'	8 Hrs.
Surface	Class A	450 sx	15.6	1.18	254	0'	8 Hrs.
Coal							
Intermediate 1	Class A	936 sx	15.6	1.18	795	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	904 sx (Lead) 1750 sx (Tail)	14.5 Lead 15.2 Tail	1.30 Lead 1.86 Tail	3581	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 17667' MD, 6418' TVD (BHL), 6566' (Deepest Point Drilled) Loggers TD (ft) 17616'
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 5697

Check all wireline logs run caliper density deviated/directional induction temperature
 neutron resistivity gamma ray

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 _____

** This is a subsequent well. Antero only runs wireline logs on one well on a multi-well pad (Callie Unit 2H API # 47-017-06561). Please reference the wireline logs submitted with Form WR-35 for Callie Unit 2H. Form Bond Log has been provided with this submittal.
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API 47- 017 - 06561 Farm name Primm, Olin E. & Mary Well number Bierstadt Unit 1H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Marcellus</u>	<u>6519' (TOP)</u> TVD	<u>6938' (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 7050 mcfpd Oil 27 bpd NGL --- bpd Water 445 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 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 Nabors Completion & Production Services, Co.
 Address 1650 Hackers Creek City Jane Lew State WV Zip 26378

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 *Kara Quackenbush* Title Permit Representative Date 10/14/2015

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

10/30/2015

Department of Environmental Protection

EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	21-May-15	17,406	17,575	60	Marcellus
2	31-May-15	17,205	17,374	60	Marcellus
3	31-May-15	17,005	17,174	60	Marcellus
4	31-May-15	16,804	16,973	60	Marcellus
5	1-Jun-15	16,604	16,773	60	Marcellus
6	1-Jun-15	16,403	16,572	60	Marcellus
7	2-Jun-15	16,203	16,372	60	Marcellus
8	2-Jun-15	16,002	16,171	60	Marcellus
9	2-Jun-15	15,801	15,971	60	Marcellus
10	29-Jul-15	15,601	15,770	60	Marcellus
11	29-Jul-15	15,400	15,570	60	Marcellus
12	29-Jul-15	15,200	15,369	60	Marcellus
13	29-Jul-15	14,999	15,168	60	Marcellus
14	29-Jul-15	14,799	14,968	60	Marcellus
15	30-Jul-15	14,598	14,767	60	Marcellus
16	30-Jul-15	14,398	14,567	60	Marcellus
17	30-Jul-15	14,197	14,366	60	Marcellus
18	31-Jul-15	13,997	14,166	60	Marcellus
19	1-Aug-15	13,796	13,965	60	Marcellus
20	1-Aug-15	13,595	13,765	60	Marcellus
21	1-Aug-15	13,395	13,564	60	Marcellus
22	1-Aug-15	13,194	13,363	60	Marcellus
23	1-Aug-15	12,994	13,163	60	Marcellus
24	2-Aug-15	12,793	12,962	60	Marcellus
25	2-Aug-15	12,593	12,762	60	Marcellus
26	2-Aug-15	12,392	12,561	60	Marcellus
27	2-Aug-15	12,192	12,361	60	Marcellus
28	3-Aug-15	11,991	12,160	60	Marcellus
29	3-Aug-15	11,790	11,960	60	Marcellus
30	3-Aug-15	11,590	11,759	60	Marcellus
31	4-Aug-15	11,389	11,559	60	Marcellus
32	7-Aug-15	11,189	11,358	60	Marcellus
33	7-Aug-15	10,988	11,157	60	Marcellus
34	7-Aug-15	10,788	10,957	60	Marcellus
35	7-Aug-15	10,587	10,756	60	Marcellus
36	8-Aug-15	10,387	10,556	60	Marcellus
37	8-Aug-15	10,186	10,355	60	Marcellus
38	8-Aug-15	9,986	10,155	60	Marcellus
39	9-Aug-15	9,785	9,954	60	Marcellus
40	9-Aug-15	9,584	9,754	60	Marcellus
41	9-Aug-15	9,384	9,553	60	Marcellus
42	9-Aug-15	9,183	9,352	60	Marcellus
43	9-Aug-15	8,983	9,152	60	Marcellus
44	10-Aug-15	8,782	8,951	60	Marcellus
45	11-Aug-15	8,582	8,751	60	Marcellus
46	11-Aug-15	8,381	8,550	60	Marcellus
47	11-Aug-15	8,181	8,350	60	Marcellus
48	11-Aug-15	7,980	8,149	60	Marcellus
49	12-Aug-15	7,779	7,949	60	Marcellus
50	12-Aug-15	7,579	7,748	60	Marcellus
51	12-Aug-15	7,378	7,548	60	Marcellus
52	13-Aug-15	7,178	7,347	60	Marcellus
53	13-Aug-15	6,977	7,146	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	31-May-15	43.8	8,424	N/A	5,743	10,670	6,622	N/A
2	31-May-15	59.8	7,323	6,189	4,223	160,500	6,761	N/A
3	31-May-15	59.5	7,371	6,122	4,828	145,220	7,230	N/A
4	31-May-15	59.1	7,125	5,856	4,491	105,220	6,342	N/A
5	1-Jun-15	64.4	6,735	6,138	3,506	234,400	6,670	N/A
6	1-Jun-15	61.4	7,225	6,372	7,432	122,500	5,790	N/A
7	2-Jun-15	56.6	7,193	5,782	5,043	129,260	7,183	N/A
8	2-Jun-15	62.9	6,864	6,008	5,103	206,200	7,133	N/A
9	2-Jun-15	63.2	6,867	6,066	7,814	181,980	6,399	N/A
10	29-Jul-15	61.7	6,962	5,127	5,194	209,830	6,643	N/A
11	29-Jul-15	61.7	7,047	6,164	4,186	225,760	6,895	N/A
12	29-Jul-15	61.3	6,938	6,157	4,427	174,480	7,000	N/A
13	29-Jul-15	54.7	7,566	6,602	4,115	103,300	6,508	N/A
14	29-Jul-15	34.4	8,143	6,670	4,874	2,420	6,369	N/A
15	30-Jul-15	63.5	7,084	6,938	4,750	214,540	6,470	N/A
16	30-Jul-15	64.2	7,002	6,027	5,430	196,600	6,093	N/A
17	30-Jul-15	61.7	6,549	6,097	4,616	162,800	6,798	N/A
18	31-Jul-15	66.1	6,769	5,725	4,280	224,650	6,887	N/A
19	1-Aug-15	64.2	6,906	5,573	4,911	212,600	6,158	N/A
20	1-Aug-15	66.0	6,922	5,662	4,065	235,900	6,620	N/A
21	1-Aug-15	67.1	6,876	6,215	3,703	241,800	6,587	N/A
22	1-Aug-15	68.4	6,958	5,812	4,515	211,200	6,791	N/A
23	1-Aug-15	67.3	6,916	5,867	3,808	208,900	6,101	N/A
24	2-Aug-15	65.1	6,593	6,245	4,583	237,900	6,462	N/A
25	2-Aug-15	65.8	6,540	6,606	3,796	235,710	6,434	N/A
26	2-Aug-15	65.3	6,800	6,554	3,958	192,960	6,189	N/A
27	2-Aug-15	67.3	6,692	6,142	4,664	236,950	6,282	N/A
28	3-Aug-15	67.8	6,773	5,667	4,721	223,720	6,077	N/A
29	3-Aug-15	64.5	6,599	6,290	4,445	233,780	6,319	N/A
30	3-Aug-15	63.3	6,838	6,690	4,465	223,000	6,301	N/A
31	4-Aug-15	62.3	6,876	6,628	4,797	159,080	6,837	N/A
32	7-Aug-15	62.7	6,756	5,150	4,826	168,040	6,513	N/A
33	7-Aug-15	65.7	6,569	5,956	3,802	216,350	6,149	N/A
34	7-Aug-15	67.0	6,650	6,078	4,115	209,500	6,663	N/A
35	7-Aug-15	65.8	6,725	5,813	4,400	217,660	6,024	N/A
36	8-Aug-15	65.9	6,616	5,918	3,672	237,940	6,192	N/A
37	8-Aug-15	67.1	6,740	6,038	3,526	239,450	6,236	N/A
38	8-Aug-15	66.3	6,982	5,880	4,376	200,220	6,304	N/A
39	9-Aug-15	66.1	6,497	5,989	4,809	224,980	6,170	N/A
40	9-Aug-15	66.9	6,328	5,526	3,573	236,100	6,110	N/A
41	9-Aug-15	65.9	6,516	6,745	4,259	188,320	6,090	N/A
42	9-Aug-15	66.8	6,720	6,208	4,247	181,880	6,157	N/A
43	9-Aug-15	59.3	7,093	6,161	4,076	87,910	5,617	N/A
44	10-Aug-15	65.5	6,583	6,389	4,089	159,670	6,063	N/A
45	11-Aug-15	50.2	6,459	6,216	4,453	139,600	6,633	N/A
46	11-Aug-15	68.2	6,445	5,829	4,257	236,920	6,065	N/A
47	11-Aug-15	67.9	6,348	6,133	4,097	236,180	6,044	N/A
48	11-Aug-15	67.0	6,601	6,169	4,198	209,250	5,704	N/A
49	12-Aug-15	67.5	6,642	7,047	4,365	237,200	6,289	N/A
50	12-Aug-15	68.5	6,594	5,807	4,134	236,790	5,999	N/A
51	12-Aug-15	68.5	6,664	6,254	4,167	213,570	6,389	N/A
52	13-Aug-15	67.6	6,331	6,148	4,309	206,080	5,945	N/A
53	13-Aug-15	68.4	6,215	6,060	3,789	235,370	6,022	N/A
AVG=		63.4	6,841	6,106	4,491	10,182,810	338,329	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	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	1961	est. 1683	1963
Big Lime	1961	2006	1963	2008
Big Injun	2006	2297	2008	2300
Weir	2297	2607	2300	2609
Fifty Foot Sandstone	2607	2791	2609	2793
Gordon	2791	3044	2793	3046
Fifth Sandstone	3044	3066	3046	3068
Bayard	3066	3383	3068	3386
Speechley	3383	4076	3386	4079
Baltown	4076	4532	4079	4535
Bradford	4532	4940	4535	4943
Benson	4940	5202	4943	5205
Alexander	5202	6177	5205	6288
Sycamore	6177	6343	6288	6700
Middlesex	6343	6463	6547	6836
Burkett	6463	6491	6767	6938
Tully	6491	6519	6836	6938
Marcellus	6519	NA	6938	NA

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*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.

17-06561

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	5/31/2016
Job End Date:	8/13/2016
State:	West Virginia
County:	Doddridge
API Number:	47-017-06561-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Bierstadt Unit 1H
Longitude:	-80.85270600
Latitude:	39.24137500
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	6,566
Total Base Water Volume (gal):	14,474,718
Total Base Non Water Volume:	549,975



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	91.75180	
Sand	U.S. Well Services, LLC	Proppant	Crystalline Silica, quartz	14808-60-7	100.00000	7.73938	
HCL Acid (12.6%-18.0%)	U.S. Well Services, LLC	Bulk Acid	Water	7732-18-5	87.50000	0.17869	
LGC-15	U.S. Well Services	Gelling Agents	Hydrogen Chloride	7647-01-0	18.00000	0.04268	
			Guar Gum	9000-30-0	50.00000	0.07270	
			Petroleum Distillates	84742-47-8	60.00000	0.06886	
			Suspending agent (solid)	14808-60-7	3.00000	0.01112	
			Surfactant	38439-51-0	3.00000	0.00436	
WFRA-405	U.S. Well Services	Friction Reducer	Anionic Polyacrylamide	Proprietary	40.00000	0.03348	
			Water	7732-18-5	40.00000	0.03348	
			Sodium Chloride	7647-14-5	20.00000	0.01674	
			Petroleum Distillates	84742-47-8	20.00000	0.01348	
			Ethoxylated alcohol blend	Proprietary	5.00000	0.00419	

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SI-1100	J.S. Well Services	Scale Inhibitor						
			Water	7732-18-5		80.00000		0.01081
			Ethylene Glycol	107-21-1		25.00000		0.00382
			Copolymer of Maleic and Acrylic acid	62255-49-9		10.00000		0.00159
			Potassium salt of diethylene triamine penta (methylene phosphonic acid)	15827-60-8		7.50000		0.00137
			Hexamethylene tramine penta (methylene phosphonic acid)	34690-00-1		5.00000		0.00088
			Phosphino carboxylic acid polymer	71050-02-0		5.00000		0.00088
			Hexamethylene diamine penta (methylene phosphonic acid)	23605-74-5		2.00000		0.00035
K-BAC 1020	J.S. Well Services	Anti-Bacterial Agent						
			2,2-dibromo-3-nitropropionamide	10222-01-2		20.00000		0.00425
			Deionized Water	7732-18-5		28.00000		0.00243
AP One	J.S. Well Services	Gel Breakers						
			Ammonium Persulfate	7727-54-0		100.00000		0.00230
AI-301	J.S. Well Services	Acid Corrosion Inhibitors						
			Diethylene Glycol	111-46-6		30.00000		0.00014
			Methanamine	100-97-0		20.00000		0.00011
			Hydrogen Chloride	7647-01-0		10.00000		0.00005
			Polyethylene polyamine	38603-67-8		10.00000		0.00004
			Coco amine	61791-14-8		5.00000		0.00002

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"

5,535'

1,492' TO BOTTOM HOLE

LATITUDE 39°15'00"

LONGITUDE 80°50'00"

LONGITUDE 80°50'00"

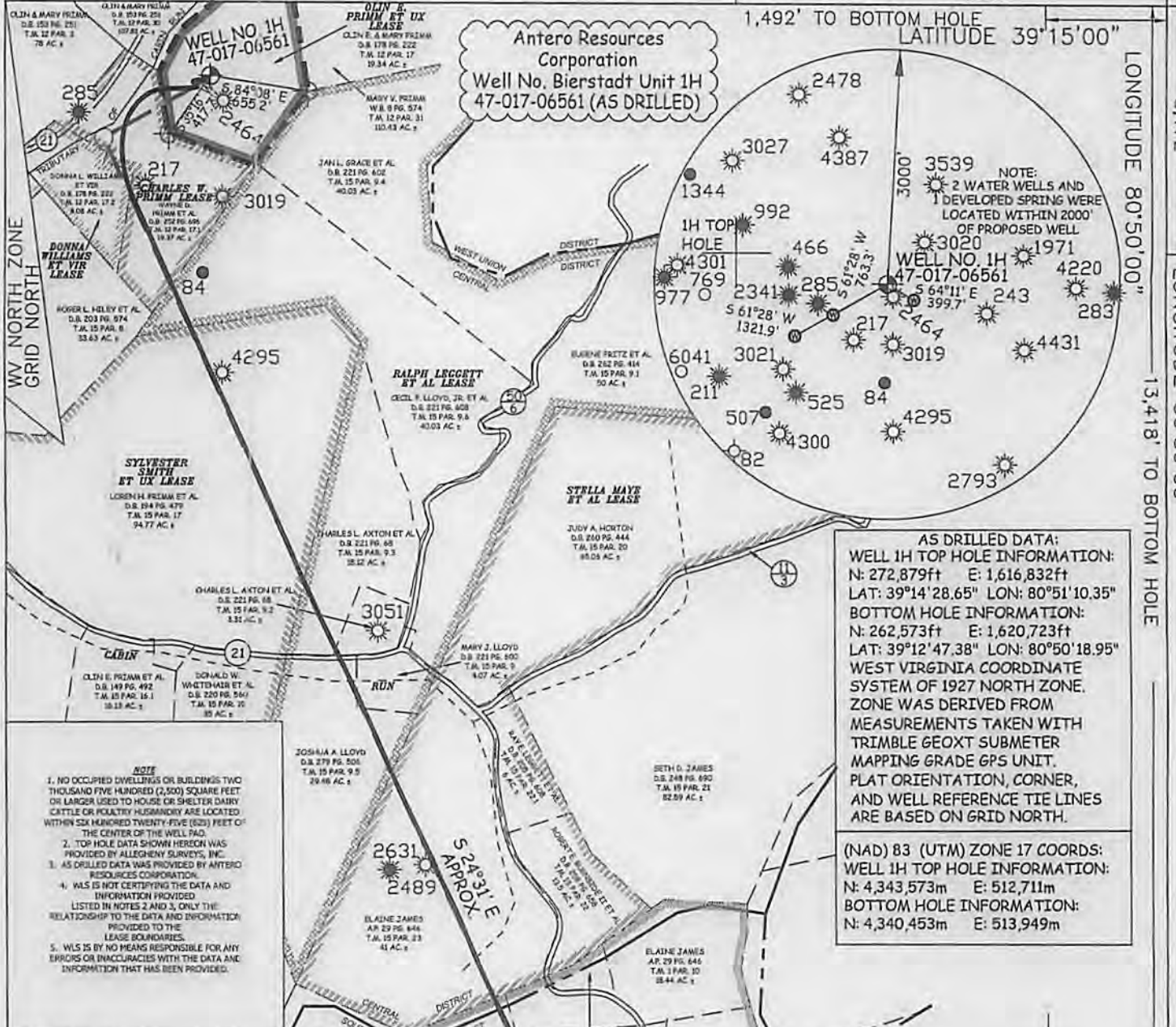
LONGITUDE 80°50'00"

LONGITUDE 80°50'00"

LONGITUDE 80°50'00"

LONGITUDE 80°50'00"

LONGITUDE 80°50'00"

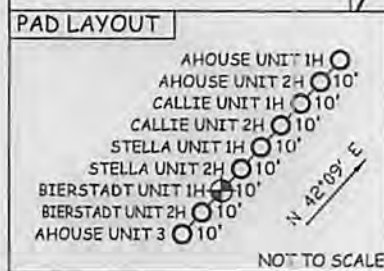


Antero Resources Corporation
Well No. Bierstadt Unit 1H
47-017-06561 (AS DRILLED)

AS DRILLED DATA:
WELL 1H TOP HOLE INFORMATION:
 N: 272,879ft E: 1,616,832ft
 LAT: 39°14'28.65" LON: 80°51'10.35"
BOTTOM HOLE INFORMATION:
 N: 262,573ft E: 1,620,723ft
 LAT: 39°12'47.38" LON: 80°50'18.95"
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: 4,343,573m E: 512,711m
BOTTOM HOLE INFORMATION:
 N: 4,340,453m E: 513,949m

- 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.



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

WILLOW LAND SURVEYING PLLC
 220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

JOB # 14-060WA
 DRAWING # BIERSTADT:HAD
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY SUBMETER
 PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

LEGEND

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

DATE 07/10/15
 OPERATOR'S WELL# BIERSTADT UNIT #1H

STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS
 WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW X
 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; CHARLES W. PRIMM, DONNA WILLIAMS ET VIR; RALPH L. LEGGETT ET AL; SYLVESTER SMITH ET UX; STELLA MAYE ET AL; BILLY JOE GARNER ET AL; DONALD BRUENING; OKY LEGGETT
 LEASE ACREAGE 19.34 ACRES +/-; 19.37 ACRES +/-; 11.25 ACRES +/-; 187 ACRES +/-; 210 ACRES +/-; 125.5 ACRES +/-; 83.79 ACRES +/-; 33.33 ACRES +/-; 141 ACRES +/-
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER DRILL FRACTURE OR STIMULATE
 PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) (X) AS DRILLED
 TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,417' TVD 17,667' MD
 WELL OPERATOR ANTERO RESOURCES CORP DESIGNATED AGENT DIANNA STAMPER
 ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD
 FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313

10/30/2015

RECEIVED

10/30/2015