



Antero Resources
1615 Wynkoop Street
Denver, CO 80202
Office 303.357.7310
Fax 303.357.7315

July 1, 2016

West Virginia Department of Environmental Protection
Office of Oil and Gas
Attn: John Kearney
601 57th Street
Charleston, WV 25304

Mr. Kearney:

Please find enclosed the Well Operator's Report of Well Work, Form WR-35 (including As-Drilled Survey Plat, Directional Survey and FracFocus report) and corresponding logs for the following well:

- Berry Unit 1H (API# 47-095-02188) – Coastal 1 Pad
- **Berry Unit 2H (API# 47-095-02189) – Coastal 1 Pad**
- Miracle Unit 2H (API# 47-085-00089) – Edwin Pad
- Miracle Unit 3H (API# 47-085-00140) – Edwin Pad
- Hawkeye Unit 1H (API# 47-095-02181) – Weigle East Pad

If you have any questions please feel free to contact me at (303) 357-7233.

Sincerely,

Kara Quackenbush
Permitting Agent
Antero Resources Corporation

Enclosures

Received
Office of Oil & Gas
JUL 05 2016

10/28/2016

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

API 47 - 095 - 02189 County Tyler District McElroy
Quad Centerpoint 7.5' Pad Name Coastal 1 pad Field/Pool Name -----
Farm name Coastal Lumber Company Well Number Berry Unit 2H
Operator (as registered with the OOG) Antero Resources Corporation
Address 1615 Wynkoop Street 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 4363814m Easting 522874m
Landing Point of Curve Northing 4363614.41m Easting 522730.61m
Bottom Hole Northing 4361113m Easting 523547m

Elevation (ft) 1164' 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 08/19/2014 Date drilling commenced 09/18/2014 Date drilling ceased 12/28/2014
Date completion activities began 1/6/2016 Date completion activities ceased 4/11/2016
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

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Freshwater depth(s) ft 97' Open mine(s) (Y/N) depths No JUL 05 2016
Salt water depth(s) ft None Identified Void(s) encountered (Y/N) depths No
Coal depth(s) ft 1327' Cavern(s) encountered (Y/N) depths No

Is coal being mined in area (Y/N) No

APPROVE
NAME: _____
DATE: 9/8/16

Reviewed by: _____
10/28/2016

API 47-095 - 02189 Farm name Coastal Lumber Company Well number Berry 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	30"	20"	40'	New	133# 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"	2523'	New	36# J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	16300'	New	23# P-110	N/A	Y
Tubing		2-3/8"	7237'		4.7# N-80		
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	100 sx	15.6	1.18	38	0'	8 Hrs.
Surface	Class A	430 sx	15.6	1.18	251	0'	8 Hrs.
Coal							
Intermediate 1	Class A	929 sx	15.6	1.18	790	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	992 sx (Lead) 1466 sx (Tail)	13.5 (Lead), 15.2 (Tail)	1.44 (Lead), 1.80 (Tail)	3271	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 16300' MD; 7087' TVD Loggers TD (ft) 16252' MD
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 6636'

** This is a subsequent well. Antero only runs wireline logs on one well on a multi-well pad (Owo Unit 1H API #47-095-02179). Please reference the wireline logs submitted with Form WR-35 for Owo 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

Office of Oil & Gas

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____

JUL 05 2016

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

WERE TRACERS USED Yes No TYPE OF TRACER(S) USED _____

API 47- 095 - 02189 Farm name Coastal Lumber Company Well number Berry Unit 2H

PERFORATION RECORD

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

Recorded
Office of Oil & Gas
JUL 05 2016

Please insert additional pages as applicable.

API 47- 095 - 02189 Farm name Coastal Lumber Company Well number Berry Unit 2H

PRODUCING FORMATION(S)	DEPTHS	
Marcellus	6988' (TOP) TVD	7249' (TOP) 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 13083 mcfpd Oil 43 bpd NGL -- bpd Water 314 bpd GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
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***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 *Kara Quackenbush* Title Permitting Agent Date 7/1/2016

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

10/28/2016

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Office of Oil & Gas
JUL 05 2016

EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	6-Jan-16	16,065	16,233	60	Marcellus
2	11-Feb-16	15,866	16,034	60	Marcellus
3	11-Feb-16	15,666	15,834	60	Marcellus
4	12-Feb-16	15,467	15,635	60	Marcellus
5	12-Feb-16	15,267	15,435	60	Marcellus
6	12-Feb-16	15,068	15,236	60	Marcellus
7	13-Feb-16	14,868	15,036	60	Marcellus
8	13-Feb-16	14,669	14,837	60	Marcellus
9	13-Feb-16	14,469	14,637	60	Marcellus
10	13-Feb-16	14,270	14,438	60	Marcellus
11	14-Feb-16	14,070	14,238	60	Marcellus
12	14-Feb-16	13,871	14,039	60	Marcellus
13	14-Feb-16	13,671	13,839	60	Marcellus
14	14-Feb-16	13,472	13,640	60	Marcellus
15	15-Feb-16	13,272	13,440	60	Marcellus
16	15-Feb-16	13,073	13,241	60	Marcellus
17	15-Feb-16	12,873	13,041	60	Marcellus
18	15-Feb-16	12,674	12,842	60	Marcellus
19	15-Feb-16	12,474	12,642	60	Marcellus
20	16-Feb-16	12,275	12,443	60	Marcellus
21	16-Feb-16	12,075	12,243	60	Marcellus
22	16-Feb-16	11,876	12,044	60	Marcellus
23	16-Feb-16	11,676	11,844	60	Marcellus
24	17-Feb-16	11,477	11,645	60	Marcellus
25	17-Feb-16	11,277	11,445	60	Marcellus
26	17-Feb-16	11,078	11,246	60	Marcellus
27	17-Feb-16	10,878	11,046	60	Marcellus
28	18-Feb-16	10,679	10,847	60	Marcellus
29	18-Feb-16	10,479	10,647	60	Marcellus
30	18-Feb-16	10,280	10,448	60	Marcellus
31	18-Feb-16	10,080	10,248	60	Marcellus
32	18-Feb-16	9,881	10,049	60	Marcellus
33	19-Feb-16	9,681	9,849	60	Marcellus
34	19-Feb-16	9,482	9,650	60	Marcellus
35	19-Feb-16	9,282	9,450	60	Marcellus
36	19-Feb-16	9,083	9,251	60	Marcellus
37	20-Feb-16	8,883	9,051	60	Marcellus
38	20-Feb-16	8,684	8,852	60	Marcellus
39	20-Feb-16	8,484	8,652	60	Marcellus
40	20-Feb-16	8,285	8,453	60	Marcellus
41	20-Feb-16	8,085	8,253	60	Marcellus
42	21-Feb-16	7,886	8,054	60	Marcellus
43	21-Feb-16	7,686	7,854	60	Marcellus
44	21-Feb-16	7,487	7,655	60	Marcellus
45	21-Feb-16	7,287	7,455	60	Marcellus

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JUL 05 2016

10/28/2016

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	11-Feb-16	62.5	7,673	N/A	4,628	253,900	7,027	N/A
2	11-Feb-16	68.9	7,606	5,672	5,075	251,500	6,586	N/A
3	11-Feb-16	68.0	7,453	5,883	5,826	251,400	6,549	N/A
4	12-Feb-16	69.9	7,422	5,633	5,279	250,060	6,502	N/A
5	12-Feb-16	71.2	7,462	5,350	5,264	251,200	6,522	N/A
6	12-Feb-16	71.0	7,395	5,515	5,693	251,050	6,482	N/A
7	13-Feb-16	70.0	7,583	5,765	5,836	250,500	6,510	N/A
8	13-Feb-16	69.2	7,276	5,307	5,268	251,895	6,436	N/A
9	13-Feb-16	68.9	7,167	5,740	5,225	251,575	6,424	N/A
10	13-Feb-16	71.0	7,471	5,465	5,983	251,950	6,420	N/A
11	14-Feb-16	70.0	7,403	5,693	6,044	252,650	6,471	N/A
12	14-Feb-16	69.7	7,381	5,590	5,196	252,590	6,397	N/A
13	14-Feb-16	70.2	7,409	5,668	5,350	250,340	6,405	N/A
14	14-Feb-16	70.0	7,525	5,432	5,769	253,450	6,602	N/A
15	15-Feb-16	70.0	7,379	5,604	5,618	251,050	6,346	N/A
16	15-Feb-16	69.9	7,195	5,486	5,472	251,020	6,334	N/A
17	15-Feb-16	70.7	7,242	5,457	5,143	250,600	6,323	N/A
18	15-Feb-16	69.9	7,350	5,447	5,182	250,870	6,408	N/A
19	15-Feb-16	69.6	7,227	5,636	5,776	249,600	6,275	N/A
20	16-Feb-16	69.7	7,000	5,425	5,164	240,700	7,069	N/A
21	16-Feb-16	70.7	7,127	5,826	5,475	250,460	6,271	N/A
22	16-Feb-16	68.7	7,069	5,543	5,339	249,750	6,258	N/A
23	16-Feb-16	69.1	6,833	5,565	5,457	248,950	6,247	N/A
24	17-Feb-16	71.4	6,827	5,454	5,525	252,000	6,233	N/A
25	17-Feb-16	73.1	7,149	5,769	5,432	252,060	6,221	N/A
26	17-Feb-16	72.1	6,873	5,769	5,647	249,950	6,198	N/A
27	17-Feb-16	70.3	6,928	5,615	5,718	250,100	6,195	N/A
28	18-Feb-16	70.4	6,837	5,518	5,322	250,950	6,180	N/A
29	18-Feb-16	72.3	7,105	5,511	5,758	251,400	6,238	N/A
30	18-Feb-16	72.6	7,189	5,282	5,418	251,060	7,111	N/A
31	18-Feb-16	70.1	6,830	5,636	5,883	251,800	7,054	N/A
32	18-Feb-16	71.3	6,883	5,933	5,372	249,200	6,232	N/A
33	19-Feb-16	72.1	6,768	5,629	5,511	249,850	6,118	N/A
34	19-Feb-16	71.4	7,012	5,529	5,168	252,000	6,205	N/A
35	19-Feb-16	70.6	6,732	5,322	5,482	252,250	6,873	N/A
36	19-Feb-16	70.2	7,226	5,722	5,504	218,750	6,991	N/A
37	20-Feb-16	71.0	6,877	5,550	5,504	251,100	6,067	N/A
38	20-Feb-16	70.8	6,813	5,440	5,336	251,760	6,062	N/A
39	20-Feb-16	72.7	6,901	5,665	5,575	252,260	6,095	N/A
40	20-Feb-16	72.2	7,140	5,969	5,432	251,520	6,546	N/A
41	20-Feb-16	71.1	6,765	5,947	5,829	250,700	6,016	N/A
42	21-Feb-16	70.8	6,880	5,693	5,250	248,800	6,043	N/A
43	21-Feb-16	70.5	6,599	5,744	5,243	251,400	5,993	N/A
44	21-Feb-16	73.2	6,684	6,151	5,597	251,520	5,980	N/A
45	21-Feb-16	72.8	6,868	6,881	4,156	251,100	5,972	N/A
AVG=		70.5	7,123	5,646	5,438	11,258,590	6,389	TOTAL

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	97'	N/A	97'	N/A
Sandstone	0	267	0	267
Shale and Sandstone	est. 267	727	est. 267	727
Shale	est. 727	767	est. 727	767
Shale and Siltstone	est. 767	1,107	est. 767	1,107
Shale	est. 1107	1,187	est. 1107	1,187
Sandstone	est. 1187	1,327	est. 1187	1,327
Coal	est. 1327	1347	est. 1327	1347
Sandstone	est. 1347	1627	est. 1347	1627
Shale/Sandstone/Siltstone	est. 1627	2158	est. 1627	2159
Big Lime	2158	2278	2159	2279
Big Injun	2278	2710	2279	2711
Gantz Sand	2710	2848	2711	2849
Fifty Foot Sandstone	2848	2922	2849	2923
Gordon	2922	3211	2923	3212
Fifth Sandstone	3211	3211	3212	3247
Bayard	3211	3656	3247	3657
Warren	3656	4027	3657	4028
Speechley	4027	4326	4028	4327
Baltown	4326	4803	4327	4804
Bradford	4803	5275	4804	5277
Benson	5275	5535	5277	5542
Alexander	5535	5725	5542	5744
Elk	5725	6229	5744	6293
Rhinestreet	6229	6606	6293	6707
Sycamore	6606	6767	6707	6893
Middlesex	6767	6901	6893	7076
Burkett	6901	6929	7076	7123
Tully	6929	6988	7123	7249
Marcellus	6988	NA	7249	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.

Received
Office of Oil & Gas
JUL 05 2016

10/28/2016

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date	2/11/2016
Job End Date	2/21/2016
State	West Virginia
County	Tyler
API Number	47-095-02189-00-00
Operator Name	Antero Resources Corporation
Well Name and Number	Berry 2H
Latitude	39.42356100
Longitude	-80.73428300
Datum	NAD83
Federal Well	NO
Indian Well	NO
True Vertical Depth	7,087
Total Base Water Volume (gal)	12,485,422
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	Base Fluid					
			Water	7732-18-5	100.00000	89.86292	
Sand	U.S. Well Services, LLC	Proppant					
			Crystalline Silica, quartz	14808-60-7	100.00000	9.71617	
HCL Acid (12.6%-18.0%)	U.S. Well Services, LLC	Bulk Acid					
			Water	7732-18-5	87.50000	0.16358	
			Hydrogen Chloride	7647-01-0	18.00000	0.03907	
LGC-15	U.S. Well Services	Gelling Agents					
			Guar Gum	9000-30-0	50.00000	0.05819	
			Petroleum Distillates	64742-47-8	60.00000	0.05511	
			Suspending agent (solid)	14808-60-7	3.00000	0.00890	
			Surfactant	68439-51-0	3.00000	0.00349	
WFRA-405	U.S. Well Services	Fricition Reducer					
			Water	7732-18-5	60.00000	0.03324	
			2-Propenoic acid, polymer with 2-propanamide	29003-06-9	30.00000	0.01662	
			Hydrated light distillate (petroleum)	64742-47-8	30.00000	0.01338	

SI-1100	J.S. Well Services	Scale Inhibitor	Ethoxylated alcohol blend	68002-97-1	4.00000	0.00222
			Water	7732-18-5	80.00000	0.01001
			Ethylene Glycol	107-21-1	25.00000	0.00353
			Copolymer of Maleic and Acrylic acid	62255-49-9	10.00000	0.00148
			Potassium salt of diethylene triamine penta (methylene phosphonic acid)	15827-60-8	7.50000	0.00127
			Phosphino carboxylic acid polymer	71050-62-9	5.00000	0.00081
			Hexamethylene tramine penta (methylene phosphonic acid)	34690-00-1	5.00000	0.00081
			Hexamethylene diamine penta (methylene phosphonic acid)	23605-74-5	2.00000	0.00033
K-BAC 1020	J.S. Well Services	Anti-Bacterial Agent	2,2-dibromo-3-nitropropionamide	10222-01-2	20.00000	0.00422
			Deionized Water	7732-18-5	28.00000	0.00241
AP One	J.S. Well Services	Gel Breakers	Ammonium Persulfate	7727-54-0	100.00000	0.00181
AI-302	J.S. Well Services	Acid Corrosion Inhibitors	Water	7732-18-5	95.00000	0.00036
			2-Propyn-1-ol compound with methylxirane	38172-91-7	15.00000	0.00006

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)

LATITUDE 39°27'30"

7,370'

5,191' TO BOTTOM HOLE

LATITUDE 39°25'00"

LONGITUDE 80°42'30"

12,699'

LONGITUDE 80°42'30"

Antero Resources Corporation
Well No. Berry Unit 2H
47-095-02189 (AS DRILLED)

NOTE:
NO WATER WELLS WERE
LOCATED WITHIN 2000'
OF CENTER OF PAD

AS DRILLED DATA:
WELL 2H TOP HOLE INFORMATION:
N: 338,742ft E: 1,651,290ft
LAT: 39°25'24.49" LON: 80°44'03.92"
BOTTOM HOLE INFORMATION:
N: 329,843ft E: 1,653,350ft
LAT: 39°23'56.82" LON: 80°43'36.13"
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: 4,363,814m E: 522,874m
BOTTOM HOLE INFORMATION:
N: 4,361,113m E: 523,547m

NOTE
1. NO 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
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 VERIFYING 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
6. THIS WELL BORE IS SUBJECT TO THAT 60 FOOT STRIP OF GROUND KNOWN AS THE SISTERSVILLE AND SALEM TURNPIKE WHICH MAY OR MAY NOT COINCIDE WITH STATE ROUTE 23 IN THIS AREA.

WV NORTH ZONE
GRID NORTH

EAST RESOURCES
INC. LEASE
PATRICIA C. GURNEY ET AL.
W.A. 24 PG. 023
T.A. 17 PAR. 07
54.8 AC.±

WELL NO. 2H
47-095-02189

O.W.O. HARDMAN
ET AL LEASE
COASTAL LUMBER COMPANY
D.R. 399 PG. 257
T.A. 17 PAR. 03
766 AC.±

ALTA NICHOLS ET AL.
D.R. 316 PG. 432
T.A. 17 PAR. 10
12.6 AC.±

COASTAL LUMBER COMPANY
D.R. 337 PG. 224
T.A. 17 PAR. 12.1
12.8 AC.±

RONALD R. JONES SR.
D.R. 396 PG. 401
T.A. 17 PAR. 12
90 AC.±

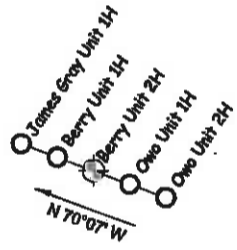
M. FOSTER LIVING
TRUST LEASE
RONALD R. JONES SR.
D.R. 396 PG. 401
T.A. 17 PAR. 12
90.29 AC.±

FRED GLOVER
ET AL LEASE
COASTAL LUMBER COMPANY
D.R. 340 PG. 272
T.A. 17 PAR. 14
79.2 AC.±

S.A. SMITH
ET AL LEASE
GARY LEE REYNOLDS ET AL
D.R. 243 PG. 700
T.A. 10 PAR. 04
192.76 AC.±

FORREST C. ACCREY ET UX
D.R. 340 PG. 440
T.A. 10 PAR. 05
67.75 AC.±

PAD LAYOUT



NOT TO SCALE

JOB # 14-021WA
DRAWING # BERRYUNIT2HAD
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 06/23/15

OPERATOR'S WELL # BERRY UNIT #2H

STATE OF WEST VIRGINIA API WELL #
DEPARTMENT OF ENERGY 47 - 095 - 02189
DIVISION OF OIL AND GAS STATE COUNTY PERMIT

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

LOCATION: ELEVATION 1,171' ORIGINAL - 1,184' AS DRILLED WATERSHED MCELROY CREEK

QUADRANGLE CENTERPOINT 7.5 DISTRICT MCELROY COUNTY TYLER

SURFACE OWNER COASTAL LUMBER COMPANY ACREAGE 766 ACRES +/-

OIL & GAS ROYALTY OWNER O.W.O. HARDMAN ET AL; EAST RESOURCES INC.; M. FOSTER LIVING TRUST;

FRED GLOVER ET UX; S.A. SMITH ET AL

LEASE ACREAGE 952.3 AC±; 100 AC±; 101.549 AC±; 263.67 AC±; 443.68 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 7,087' TVD 16,300' MD

WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT CT CORPORATION SYSTEM-DIANNA STAMPER

ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD

FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313



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

10/28/2015

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

COUNTY NAME PERMIT

LATITUDE 39°27'30"

7,370'

5,191' TO BOTTOM HOLE

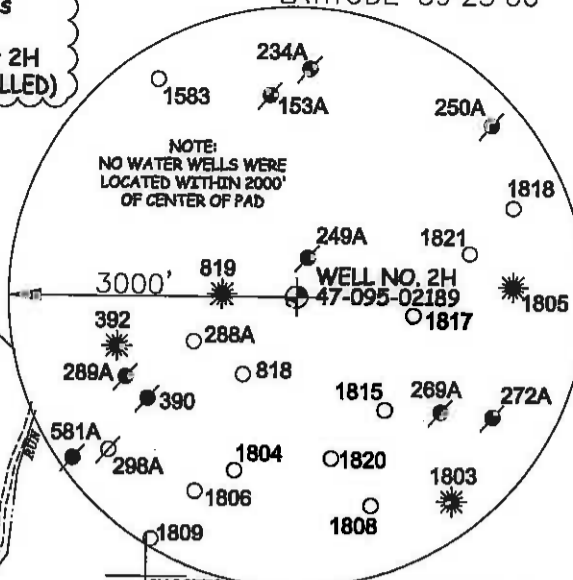
LATITUDE 39°25'00"

LONGITUDE 80°42'30"

12,699'

LONGITUDE 80°42'30"

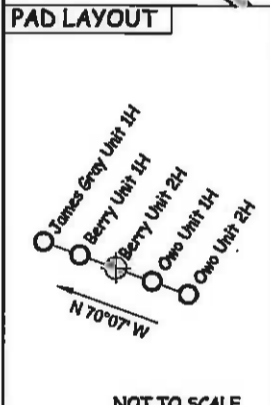
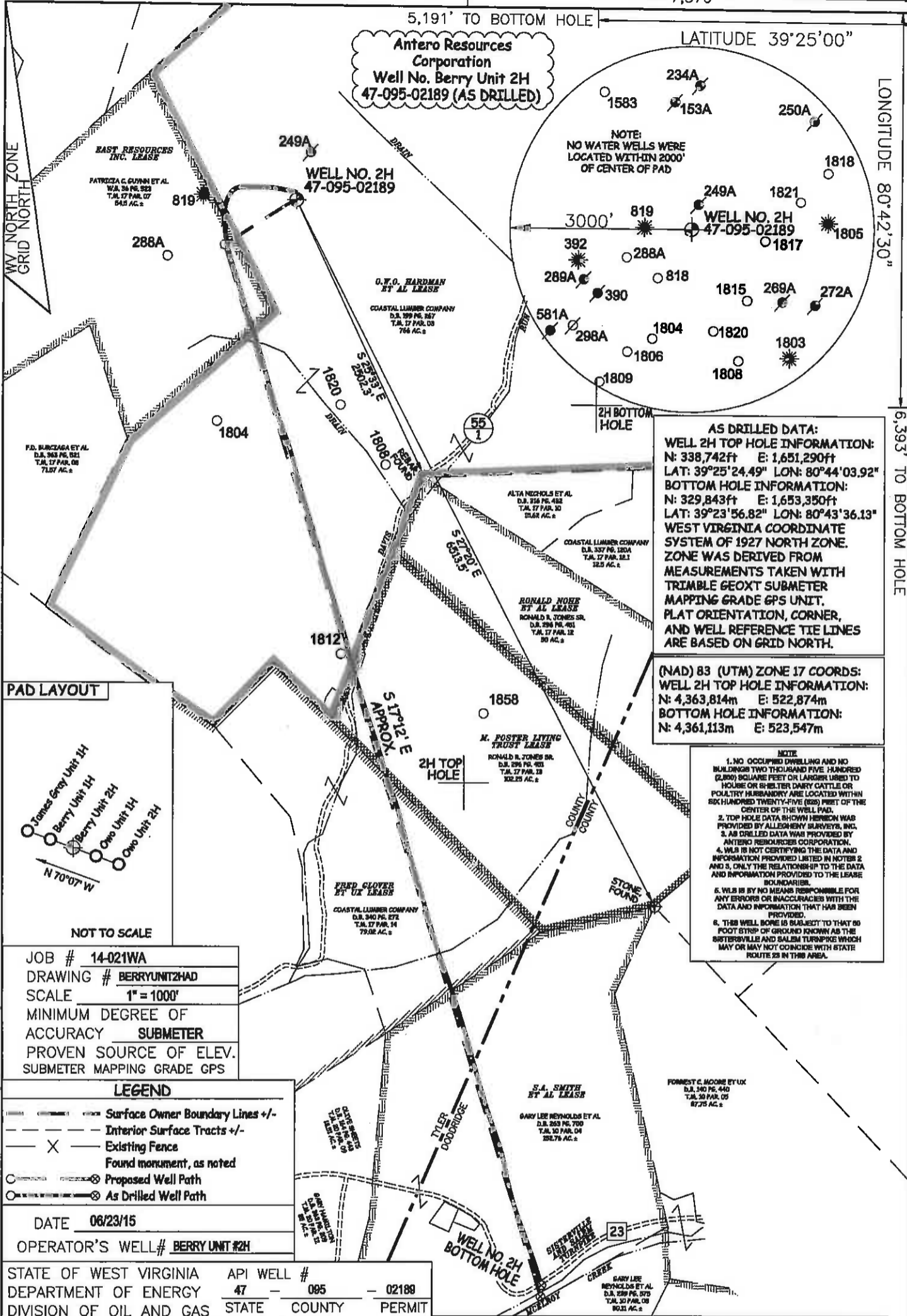
Antero Resources Corporation
Well No. Berry Unit 2H
47-095-02189 (AS DRILLED)



AS DRILLED DATA:
WELL 2H TOP HOLE INFORMATION:
N: 338,742ft E: 1,651,290ft
LAT: 39°25'24.49" LON: 80°44'03.92"
BOTTOM HOLE INFORMATION:
N: 329,843ft E: 1,653,350ft
LAT: 39°23'56.82" LON: 80°43'36.13"
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: 4,363,814m E: 522,874m
BOTTOM HOLE INFORMATION:
N: 4,361,113m E: 523,547m

NOTE
1. NO OCCUPIED DWELLING AND NO BUILDINGS TWO THOUSAND FIVE HUNDRED (2,000) SQUARE FEET OR LARGER LINED TO HOUSE OR SHELTER DAIRY CATTLE OR POULTRY HUSBANDRY ARE LOCATED WITHIN 800 HUNDRED TWENTY-FIVE (825) 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.
6. THIS WELL BORE IS SUBJECT TO THAT 60 FOOT STRIP OF GROUND KNOWN AS THE SISTERSVILLE AND SALEM TURNPIKE WHICH MAY OR MAY NOT COINCIDE WITH STATE ROUTE 23 IN THIS AREA.



JOB # 14-021WA
DRAWING # BERRYUNIT2HAD
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

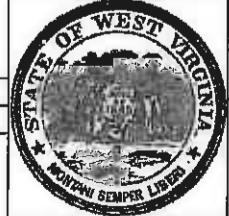
DATE 06/23/15
OPERATOR'S WELL# BERRY UNIT #2H

STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS
API WELL # 47 - 095 - 02189
STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
LOCATION: ELEVATION 1,171' ORIGINAL - 1,164' AS DRILLED WATERSHED MCELROY CREEK
QUADRANGLE CENTERPOINT 7.5' DISTRICT MCELROY COUNTY TYLER
SURFACE OWNER COASTAL LUMBER COMPANY ACREAGE 768 ACRES +/-
OIL & GAS ROYALTY OWNER O.W.O. HARDMAN ET AL; EAST RESOURCES INC.; M. FOSTER LIVING TRUST; FRED GLOVER ET UX; S.A. SMITH ET AL

LEASE ACREAGE 952.3 AC±; 100 AC±; 101.549 AC±; 283.67 AC±; 443.68 AC±

PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) AS DRILLED PLUG & ABANDON CLEAN OUT & REPLUG
TARGET FORMATION MARCELLUS ESTIMATED DEPTH 7,087' TVD 16,300' MD
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT CT CORPORATION SYSTEM-DIANNA STAMPER
ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD
FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313



STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
10/28/2016
WILLOW LAND SURVEYING PLLC
P.O. BOX 17
PENNSBORO, WV 26415

COUNTY NAME

PERMIT