

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

API 47 - 017 - 06359 County Doddridge District Central  
Quad West Union 7.5' Pad Name Diane Davis Pad Field/Pool Name ----  
Farm name Davis, Jonathan, et al Well Number Shearer Unit 2H  
Operator (as registered with the OOG) Antero Resources Corportion  
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 4350525m Easting 515284m  
Landing Point of Curve Northing 4349839.80m Easting 515700.19m  
Bottom Hole Northing 4348061m Easting 516411m

Elevation (ft) 824' 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 12/18/2013 Date drilling commenced 5/11/2014 Date drilling ceased 7/17/2014  
Date completion activities began 8/8/2014 Date completion activities ceased 10/15/2014  
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 90' Open mine(s) (Y/N) depths No  
Salt water depth(s) ft 1367' 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

RECEIVED  
Office of Oil and Gas  
JUL 08 2015  
WV Department of  
Environmental Protection

Reviewed by:  
JR / 7/24/15  
07/24/2015

API 47-017 - 06359 Farm name Davis, Jonathan, et al Well number Shearer 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"	80'	New	94# J-55	N/A	Y
Surface	17- 1/2"	13- 3/8"	469'	New	48# H-40	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2517'	New	36# J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4" & 8-1/2"	5-1/2"	14900'	New	23# P-110	N/A	Y
Tubing		2-3/8"	6548'		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 <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	Class A	300 sx	15.6	1.18	77	0'	8 Hrs.
Surface	Class A	545 sx	15.6	1.18	326	0'	8 Hrs.
Coal							
Intermediate 1	Class A	923 sx	15.6	1.20	788	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	884 sx (Lead) 1342 sx (Tail)	13.5 Lead 15.2 Tail	1.44 Lead 1.8 Tail	2951	~500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 14900' MD, 6498' TVD (BHL); 6512' TVD (Deepest point drilled) Loggers TD (ft) 14841'  
 Deepest formation penetrated Marcellus Plug back to (ft) N/A  
 Plug back procedure N/A

Kick off depth (ft) <sup>6097'</sup> \_\_\_\_\_

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 \_\_\_\_\_

**RECEIVED**  
**Office of Oil and Gas**  
**JUL 06 2015**  
**WV Department of**  
**Environmental Protection**  
 07/24/2015



API 47- 017 - 06359 Farm name Davis, Jonathan, et al Well number Shearer Unit 2H

PRODUCING FORMATION(S)	DEPTHS		
Marcellus	6336' (TOP)	TVD	6574' (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 11460 mcfpd Oil 11 bpd NGL --- bpd Water 164 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		
<b>*PLEASE SEE ATTACHED EXHIBIT 3</b>					

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

Stimulating Company Halliburton  
Address 121 Champion Way, Suite 200 City Canonsburg State PA Zip 15317

Please insert additional pages as applicable.

Completed by Kara Quackenbush Telephone 303-357-7233  
Signature [Signature] Title Permit Representative Date 7/1/2015 **JUL 06 2015**

**EXHIBIT 1**

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	8-Aug-14	14,640	14,809	60	Marcellus
2	10-Sep-14	14,439	14,608	60	Marcellus
3	10-Sep-14	14,239	14,408	60	Marcellus
4	11-Sep-14	14,038	14,207	60	Marcellus
5	11-Sep-14	13,838	14,007	60	Marcellus
6	12-Sep-14	13,637	13,807	60	Marcellus
7	12-Sep-14	13,437	13,606	60	Marcellus
8	12-Sep-14	13,237	13,406	60	Marcellus
9	12-Sep-14	13,036	13,205	60	Marcellus
10	12-Sep-14	12,836	13,005	60	Marcellus
11	13-Sep-14	12,635	12,804	60	Marcellus
12	13-Sep-14	12,435	12,604	60	Marcellus
13	13-Sep-14	12,234	12,403	60	Marcellus
14	14-Sep-14	12,034	12,203	60	Marcellus
15	14-Sep-14	11,833	12,002	60	Marcellus
16	14-Sep-14	11,633	11,802	60	Marcellus
17	15-Sep-14	11,432	11,601	60	Marcellus
18	15-Sep-14	11,232	11,401	60	Marcellus
19	15-Sep-14	11,031	11,201	60	Marcellus
20	15-Sep-14	10,831	11,000	60	Marcellus
21	16-Sep-14	10,631	10,800	60	Marcellus
22	16-Sep-14	10,430	10,599	60	Marcellus
23	16-Sep-14	10,230	10,399	60	Marcellus
24	17-Sep-14	10,029	10,198	60	Marcellus
25	17-Sep-14	9,829	9,998	60	Marcellus
26	17-Sep-14	9,628	9,797	60	Marcellus
27	18-Sep-14	9,428	9,597	60	Marcellus
28	18-Sep-14	9,227	9,396	60	Marcellus
29	18-Sep-14	9,027	9,196	60	Marcellus
30	18-Sep-14	8,826	8,995	60	Marcellus
31	19-Sep-14	8,626	8,795	60	Marcellus
32	19-Sep-14	8,425	8,595	60	Marcellus
33	19-Sep-14	8,225	8,394	60	Marcellus
34	19-Sep-14	8,025	8,194	60	Marcellus
35	20-Sep-14	7,824	7,993	60	Marcellus
36	20-Sep-14	7,624	7,793	60	Marcellus
37	20-Sep-14	7,423	7,592	60	Marcellus
38	20-Sep-14	7,223	7,392	60	Marcellus
39	20-Sep-14	7,022	7,191	60	Marcellus
40	21-Sep-14	6,822	6,991	60	Marcellus
41	21-Sep-14	6,621	6,790	60	Marcellus

RECEIVED  
Office of Oil and Gas

JUL 06 2015

WV Department of Environmental Protection  
07/24/2015

**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	9-Sep-14	67.5	7,651	5,297	9,383	132,556	6,789	N/A
2	10-Sep-14	69.7	7,215	5,571	5,368	173,608	7,097	N/A
3	10-Sep-14	62.7	7,250	5,493	5,571	93,965	6,973	N/A
4	11-Sep-14	65.1	7,037	5,492	5,201	101,405	6,784	N/A
5	11-Sep-14	58.8	6,431	5,510	4,949	208,792	7,012	N/A
6	11-Sep-14	64.5	6,960	5,705	5,357	243,644	6,673	N/A
7	12-Sep-14	56.4	6,520	5,355	5,132	81,425	6,591	N/A
8	12-Sep-14	63.2	6,518	5,387	5,141	242,322	6,512	N/A
9	12-Sep-14	63.1	6,420	5,337	5,130	238,648	6,498	N/A
10	13-Sep-14	64.7	6,387	5,168	5,165	244,605	6,499	N/A
11	13-Sep-14	58.3	6,263	5,175	5,299	179,948	6,572	N/A
12	13-Sep-14	62.9	6,266	5,398	5,078	243,360	6,527	N/A
13	13-Sep-14	64.7	6,294	5,260	5,220	241,530	6,524	N/A
14	14-Sep-14	62.9	6,316	5,060	5,292	236,215	6,388	N/A
15	14-Sep-14	64.5	6,238	5,087	5,271	245,438	6,465	N/A
16	14-Sep-14	64.8	6,329	5,271	5,100	243,689	6,541	N/A
17	15-Sep-14	61.4	6,439	5,590	4,742	237,908	6,326	N/A
18	15-Sep-14	62.6	6,267	5,131	5,484	240,553	6,452	N/A
19	15-Sep-14	62.2	6,532	5,401	5,219	244,611	6,497	N/A
20	16-Sep-14	63.7	6,683	5,302	5,300	222,282	6,158	N/A
21	16-Sep-14	62.8	6,403	5,361	5,213	239,835	6,365	N/A
22	16-Sep-14	64.7	6,478	5,670	5,133	243,266	6,330	N/A
23	17-Sep-14	65.4	6,442	5,507	5,162	242,683	6,280	N/A
24	17-Sep-14	63.2	6,268	5,475	5,306	241,800	6,249	N/A
25	17-Sep-14	64.8	6,843	5,819	5,304	243,264	6,366	N/A
26	17-Sep-14	62.6	6,850	5,475	5,741	189,167	6,353	N/A
27	18-Sep-14	63.7	6,271	5,473	4,794	239,238	6,249	N/A
28	18-Sep-14	64.9	6,539	5,210	5,141	240,301	6,250	N/A
29	18-Sep-14	64.1	6,085	5,182	5,104	242,464	6,204	N/A
30	19-Sep-14	64.6	6,221	5,410	5,145	243,110	6,222	N/A
31	19-Sep-14	63.9	6,136	5,433	5,425	241,455	6,209	N/A
32	19-Sep-14	63.9	6,038	5,367	5,199	241,326	6,385	N/A
33	19-Sep-14	66.1	6,178	5,592	5,193	242,594	5,977	N/A
34	20-Sep-14	64.0	6,109	5,368	5,243	245,565	6,124	N/A
35	20-Sep-14	64.5	6,048	5,220	5,338	243,286	6,114	N/A
36	20-Sep-14	63.2	5,974	5,403	5,158	242,677	6,064	N/A
37	20-Sep-14	62.9	6,049	5,596	5,257	237,910	5,951	N/A
38	20-Sep-14	64.6	6,113	5,595	5,196	242,593	5,999	N/A
39	21-Sep-14	63.8	5,932	5,413	5,202	242,191	6,122	N/A
40	21-Sep-14	62.8	6,070	5,315	5,345	243,460	5,998	N/A
41	21-Sep-14	63.6	5,907	5,219	5,165	242,519	5,960	N/A
AVG=		63.6	6,414	5,393	5,321	9,127,208	261,647	TOTAL

RECEIVED  
Office of Oil and Gas

JUL 06 2015

07/24/2015

WV Department of  
Environmental Protection

**EXHIBIT 3**

<b>LITHOLOGY/ FORMATION</b>	<b>TOP DEPTH (TVD) From Surface</b>	<b>BOTTOM DEPTH (TVD) From Surface</b>	<b>TOP DEPTH (MD) From Surface</b>	<b>BOTTOM DEPTH (MD) From Surface</b>
Fresh Water	90'	N/A	90'	N/A
Sandstone/ Shale	0	407	0	407
Sand Shale/ Trace Coal	407	457	407	457
Sandstone/ Limestone	457	567	457	567
Sandstone	567	667	567	667
Sandstone/ Limestone	667	707	667	707
Sandstone/ Siltstone	707	807	707	807
Sandstone/ Limestone	807	927	807	927
Shale	927	947	927	947
Sandstone/ Shale	947	1147	947	1147
Sandstone/ Trace Coal	1147	1507	1147	1507
Sandstone/ Siltstone	1507	1567	1507	1567
Sandstone/ Trace Coal	1567	1587	1567	1587
Sandstone/ Siltstone	1587	1713	1587	1713
Big Lime	1713	1816	1713	1816
Big Injun	1816	2247	1816	2247
Gantz Sand	2247	2374	2247	2374
Fifty Foot Sandstone	2374	2461	2374	2461
Gordon	2461	2783	2461	2783
Fifth Sandstone	2783	2807	2783	2807
Bayard	2807	3196	2807	3196
Warren	3196	3569	3196	3569
Speechley	3569	3835	3569	3835
Baltown	3835	4298	3835	4298
Bradford	4298	4727	4298	4727
Benson	4727	4989	4727	4991
Alexander	4989	5177	4991	5186
Elk	5177	5672	5186	5719
Rhinestreet	5672	5971	5719	6042
Sycamore	5971	6140	6042	6235
Middlesex	6140	6269	6235	6425
Burkett	6269	6299	6425	6480
Tully	6299	6336	6480	6574
Marcellus	6336	NA	6574	NA

RECEIVED  
Office of Oil and Gas

JUL 06 2015

WV Department of  
Environmental Protection  
07/24/2015

# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	9/9/2014
Job End Date:	9/21/2014
State:	West Virginia
County:	Doddridge
API Number:	47-017-06359-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Shearer Unit 2H
Longitude:	-80.82273300
Latitude:	39.30397500
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	6,512
Total Base Water Volume (gal):	11,688,427
Total Base Non Water Volume:	0



RECEIVED  
Office of Oil and Gas  
PROTECTION COUNCIL  
JUL 06 2015

WV Department of  
Environmental Protection

## 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
Fresh Water	Operator	Base Fluid	Fresh Water	7732-18-5	100.00000	91.06213	Density = 8.340
SAND - PREMIUM WHITE	Halliburton	Proppant	Crystalline silica, quartz	14808-60-7	100.00000	7.79233	
SSA-2	Halliburton	Proppant	Crystalline silica, quartz	14808-60-7	100.00000	0.77143	
WG-36 GELLING AGENT	Halliburton	Gelling Agent	Guar gum	9000-30-0	100.00000	0.08946	
HYDROCHLORIC ACID 10-30%	Halliburton	Solvent	Hydrochloric acid	7647-01-0	30.00000	0.06082	
FR-66	Halliburton	Friction Reducer	Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.01677	
SP BREAKER	Halliburton	Breaker	Sodium persulfate	7775-27-1	100.00000	0.00215	
Scalechek® LP-65 Scale Inhibitor	Halliburton	Scale Inhibitor	Ammonium chloride	12125-02-9	10.00000	0.00149	
BE-9	Halliburton	Biocide					

07/24/2015



LCA-1	Halliburton	Solvent	Tributyl tetradecyl phosphonium chloride	81741-28-8	10.00000	0.00081		
			Paraffinic solvent	Confidential	100.00000	0.00069	Denise Tuck, Halliburton E., Houston, TX 77032 281-871-6226	
HAI-OS ACID INHIBITOR	Halliburton	Corrosion Inhibitor						
			Methanol	67-56-1	60.00000	0.00010		
			Propargyl alcohol	107-19-7	10.00000	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.								
		Other Ingredient(s)	Water	7732-18-5		0.25334		
		Other Ingredient(s)	Polyacrylamide copolymer	Confidential		0.01677		
		Other Ingredient(s)	Organic phosphonate	Confidential		0.00891		
		Other Ingredient(s)	Bentonite, benzy(hydrogenated tallow alkyl) dimethylammonium stearate complex	121888-68-4		0.00447		
		Other Ingredient(s)	Ammonium chloride	12125-02-9		0.00280		
		Other Ingredient(s)	Fatty acid tall oil amide	Confidential		0.00280		
		Other Ingredient(s)	Sodium chloride	7647-14-5		0.00280		
		Other Ingredient(s)	Alcohols, C12-16, ethoxylated	68551-12-2		0.00280		
		Other Ingredient(s)	Silica gel	112926-00-8		0.00089		
		Other Ingredient(s)	Surfactant mixture	Confidential		0.00089		
		Other Ingredient(s)	Surfactant mixture	Confidential		0.00089		
		Other Ingredient(s)	Sorbitan, mono-9-octadecenoate, (Z)	1338-43-8		0.00056		
		Other Ingredient(s)	Sorbitan monooleate polyoxyethylene derivative	9005-65-6		0.00056		
		Other Ingredient(s)	Formaldehyde	50-00-0		0.00015		
		Other Ingredient(s)	Crystalline Silica, Quartz	14808-60-7		0.00009		

**RECEIVED**  
 Office of Oil and Gas  
 JUL 08 2015  
 Energy Department  
 Environmental Protection

			Alcohols, C14-C15, ethoxylated	68951-67-7		0.00005
	Other Ingredient(s)					
			Reaction product of acetophenone, formaldehyde, thiourea and oleic acid in dimethyl formamide	68527-49-1		0.00005
	Other Ingredient(s)					
			Fatty acids, tall oil	Confidential		0.00005
	Other Ingredient(s)					
			Olefins	Confidential		0.00001
	Other Ingredient(s)					
			Olefins	Confidential		0.00001
	Other Ingredient(s)					
			Sodium sulfate	7757-82-6		0.00000
	Other Ingredient(s)					
			Olefins	Confidential		0.00000
	Other Ingredient(s)					
			Olefins	Confidential		0.00000

\* 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)

RECEIVED  
 Office of Oil and Gas

JUL 06 2015

WV Department of  
 Environmental Protection

07/24/2015

LATITUDE 39°20'00"

8,838'

LATITUDE 39°17'30"

LONGITUDE 80°47'30"

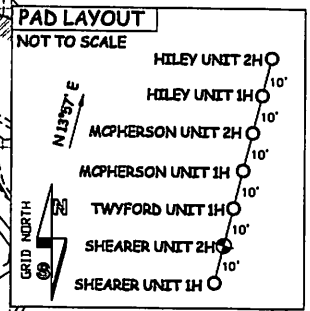
10,724'

LONGITUDE 80°47'30"

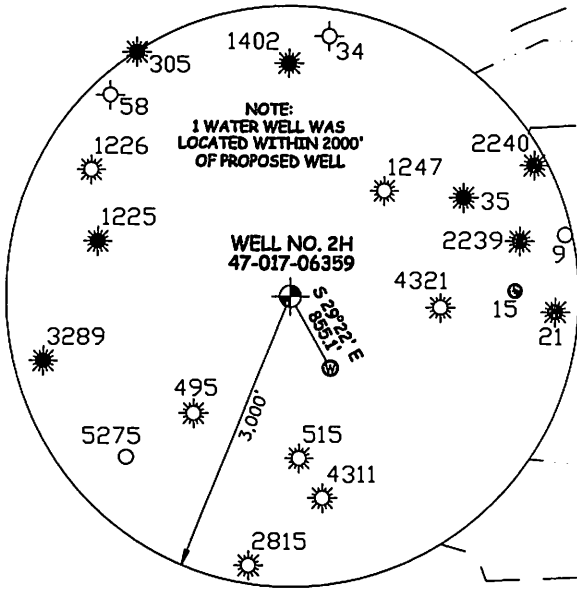
Antero Resources Corporation  
Well No. Shearer Unit 2H  
47-017-06359 (AS DRILLED)

AS DRILLED DATA:  
WELL 2H TOP HOLE INFORMATION:  
N: 295,549ft E: 1,625,657ft  
LAT: 39°18'14.00" LON: 80°49'22.44"  
BOTTOM HOLE INFORMATION:  
N: 287,404ft E: 1,629,219ft  
LAT: 39°16'54.02" LON: 80°48'35.62"  
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.

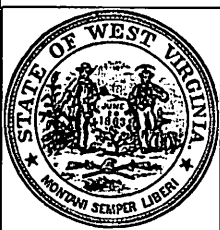
(NAD) 83 (UTM) ZONE 17 COORDS:  
WELL 2H TOP HOLE INFORMATION:  
N: 4,350,525m E: 515,284m  
BOTTOM HOLE INFORMATION:  
N: 4,348,061m E: 516,411m



- 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.



JOB # 13-068WA  
DRAWING # SHEARER2HAD  
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  
P.O. BOX 17  
PENNBSORO, WV 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 X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
(IF "GAS") PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW X  
LOCATION: ELEVATION 829' ORIGINAL - 824' AS-DRILLED WATERSHED HEADWATERS MIDDLE ISLAND CREEK  
QUADRANGLE WEST UNION 7.5' DISTRICT CENTRAL COUNTY DODDRIDGE  
SURFACE OWNER JONATHAN DAVIS ET AL ACREAGE 35.21 ACRES +/-  
OIL & GAS ROYALTY OWNER V. KARIN OSBOURN HOLLIS; WILLIAM JOHN WILSON; CORLIS P. HUDSON ET AL; WVSRA; RUBY FARR MAXWELL ET AL; RUTH D. ROGERS 488.7 ACRES+; 301.19 ACRES+; 45 ACRES+; 20 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 6,497' TVD 14,900' MD  
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM  
ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD  
DENVER, CO 80202 CHARLESTON, WV 25313

DATE 05/18/15  
OPERATOR'S WELL# SHEARER UNIT #2H  
API WELL # 47 - 017 - 06359  
STATE COUNTY PERMIT  
07/24/2015  
COUNTY NAME PERMIT