

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

AUG 26 2017

WV Department of  
Environmental Protection

API 47 - 095 - 02338 County Tyler District Centerville  
Quad Middlebourne 7.5' Pad Name Estlack Pad Field/Pool Name ---  
Farm name Edna Monroe Well Number Melvin 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 4362772m Easting 510499m  
Landing Point of Curve Northing 4362821.314m Easting 509976.231m  
Bottom Hole Northing 4365621m Easting 508982m

Elevation (ft) 1142' 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 01/29/2016 Date drilling commenced 02/19/2016 Date drilling ceased 04/20/2016  
Date completion activities began 10/04/2016 Date completion activities ceased 11/26/2016  
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 46', 98' Open mine(s) (Y/N) depths No  
Salt water depth(s) ft 748', 1222' Void(s) encountered (Y/N) depths No  
Coal depth(s) ft 228', 1128', 1628' Cavern(s) encountered (Y/N) depths No

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

**APPROVED**

NAME: Scm R  
DATE: 9-19-17

Reviewed by: DmH  
10/13/2017  
RBDMS/AX 10/11/17

WR-35  
Rev. 8/23/13

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API 47-095 - 02338 Farm name Edna Monroe Well number Melvin Unit 2H

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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"	72'	New	94#, H-40	N/A	Y
Surface	17- 1/2"	13- 3/8"	417'	New	48#, H-40	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2534'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"	5-1/2"	17387'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	6834'		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 <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	Class A	143 sx	15.6	1.18	169	0	8 Hrs.
Surface	Class A	495 sx	15.6	1.19	589	0	8 Hrs.
Coal							
Intermediate 1	Class A	994 sx	15.6	1.18	1173	0	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	1012 sx (Lead), 1660 sx (Tail)	14.5 (Lead), 15.2 (Tail)	1.33 (Lead), 1.83 (Tail)	4384	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 17387' MD, 6602' TVD (BHL); & 6609' TVD (Deepest point drilled)      Loggers TD (ft) 17374' MD  
 Deepest formation penetrated Marcellus      Plug back to (ft) N/A  
 Plug back procedure N/A

Kick off depth (ft) 6148'

\*\* This is a subsequent well. Antero only runs wireline logs on one well on a multi-well pad (Lucy Unit 1H API# 47-095-02276). Please reference the wireline logs submitted with Form WR-35 for the Lucy 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

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 N/A

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PRODUCING FORMATION(S)

DEPTHS

Marcellus 6532' (Top) TVD 6978' (Top) MD

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 4100 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 13651 mcfpd Oil 263 bpd NGL --- bpd Water 947 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	

**\* PLEASE SEE ATTACHED EXHIBIT 3**

Please insert additional pages as applicable.

Drilling Contractor Frontier Drilling LLC  
Address 562 Spring Run Rd City Pennsboro State WV Zip 26415

Logging Company Allied Horizontal Wireline Services  
Address 381 Colonial Manor Rd City North Huntingdon State PA Zip 15642

Cementing Company C&J Energy Services  
Address 1650 Hackers Creek City Jane Lew State WV Zip 26378

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

Please insert additional pages as applicable.

Completed by Samantha Klaas Telephone 303-357-6759  
Signature *Samantha Klaas* Title Permitting Agent Date 08/25/2017

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

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API 47-095-02338 Farm Name <u>Edna Monroe</u> Well Number <u>Melvin Unit 2H</u>					
EXHIBIT 1					
Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	10/4/2016	17118.0	17285.0	60	Marcellus
2	10/5/2016	16920.0	17087.0	60	Marcellus
3	10/5/2016	16723.0	16889.0	60	Marcellus
4	10/6/2016	16525.0	16692.0	60	Marcellus
5	10/6/2016	16327.0	16494.0	60	Marcellus
6	10/6/2016	16129.0	16296.0	60	Marcellus
7	10/7/2016	15931.0	16098.0	60	Marcellus
8	10/7/2016	15733.0	15900.0	60	Marcellus
9	10/7/2016	15536.0	15702.0	60	Marcellus
10	10/7/2016	15338.0	15505.0	60	Marcellus
11	10/8/2016	15140.0	15307.0	60	Marcellus
12	10/8/2016	14942.0	15109.0	60	Marcellus
13	10/8/2016	14744.0	14911.0	60	Marcellus
14	10/9/2016	14547.0	14713.0	60	Marcellus
15	10/9/2016	14349.0	14516.0	60	Marcellus
16	10/10/2016	14151.0	14318.0	60	Marcellus
17	10/10/2016	13953.0	14120.0	60	Marcellus
18	10/10/2016	13755.0	13922.0	60	Marcellus
19	10/10/2016	13558.0	13724.0	60	Marcellus
20	10/11/2016	13360.0	13527.0	60	Marcellus
21	10/11/2016	13162.0	13329.0	60	Marcellus
22	10/11/2016	12964.0	13131.0	60	Marcellus
23	10/12/2016	12766.0	12933.0	60	Marcellus
24	10/12/2016	12568.0	12735.0	60	Marcellus
25	10/12/2016	12371.0	12537.0	60	Marcellus
26	10/13/2016	12173.0	12340.0	60	Marcellus
27	10/13/2016	11975.0	12142.0	60	Marcellus
28	10/13/2016	11777.0	11944.0	60	Marcellus
29	10/13/2016	11579.0	11746.0	60	Marcellus
30	10/14/2016	11382.0	11548.0	60	Marcellus
31	10/14/2016	11184.0	11351.0	60	Marcellus
32	10/15/2016	10986.0	11153.0	60	Marcellus
33	10/15/2016	10788.0	10955.0	60	Marcellus
34	10/15/2016	10590.0	10757.0	60	Marcellus
35	10/16/2016	10392.0	10559.0	60	Marcellus
36	10/16/2016	10195.0	10362.0	60	Marcellus
37	10/16/2016	9997.0	10164.0	60	Marcellus
38	10/17/2016	9799.0	9966.0	60	Marcellus
39	10/24/2016	9601.0	9768.0	60	Marcellus
40	10/24/2016	9403.0	9570.0	60	Marcellus
41	10/24/2016	9206.0	9372.0	60	Marcellus
42	10/25/2016	9008.0	9175.0	60	Marcellus
43	10/25/2016	8810.0	8977.0	60	Marcellus
44	10/25/2016	8612.0	8779.0	60	Marcellus
45	10/25/2016	8414.0	8581.0	60	Marcellus
46	10/25/2016	8217.0	8383.0	60	Marcellus
47	10/26/2016	8019.0	8186.0	60	Marcellus
48	10/26/2016	7821.0	7988.0	60	Marcellus
49	10/26/2016	7623.0	7790.0	60	Marcellus
50	10/26/2016	7425.0	7592.0	60	Marcellus
51	10/26/2016	7227.0	7394.0	60	Marcellus
52	10/26/2016	7030.0	7196.0	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	10/4/2016	74.9	7873	5327	4974	301238	8205.0	N/A
2	10/5/2016	73.4	7703	5396	5015	301790	7713.0	N/A
3	10/5/2016	76.3	7772	5293	4324	299600	7584.0	N/A
4	10/6/2016	76.9	7753	5266	4258	300726	7604.0	N/A
5	10/6/2016	79.1	7637	5488	4363	302083	7609.0	N/A
6	10/6/2016	74.9	7109	5331	4608	304242	7671.0	N/A
7	10/7/2016	79.4	7526	5281	4245	302771	7653.0	N/A
8	10/7/2016	74.5	7284	5519	4167	301184	8516.0	N/A
9	10/7/2016	73.5	7527	5669	4117	301559	7739.0	N/A
10	10/7/2016	76.9	7303	5642	4751	304468	7625.0	N/A
11	10/8/2016	78.6	7492	5692	3992	306481	7704.0	N/A
12	10/8/2016	78.9	7660	5251	3871	302129	7543.0	N/A
13	10/8/2016	73.3	7118	4724	3943	305620	7642.0	N/A
14	10/9/2016	72.4	7102	5063	4353	301673	7696.0	N/A
15	10/9/2016	76.3	7496	5599	4015	301297	7504.0	N/A
16	10/10/2016	74.4	7147	5561	3976	303862	7549.0	N/A
17	10/10/2016	79.2	7351	5504	3919	292454	7531.0	N/A
18	10/10/2016	78.2	7327	5560	3967	298173	8018.0	N/A
19	10/10/2016	72.6	6937	5788	3936	304518	7635.0	N/A
20	10/11/2016	74.5	7199	6202	3910	304686	7603.0	N/A
21	10/11/2016	78.3	7332	5576	3894	299655	7685.0	N/A
22	10/11/2016	78.5	7135	5723	3922	305069	7570.0	N/A
23	10/12/2016	73.1	7440	5841	3825	301253	7522.0	N/A
24	10/12/2016	78.0	7245	5299	3810	307285	7579.0	N/A
25	10/12/2016	75.7	7164	5532	3939	301494	7512.0	N/A
26	10/13/2016	76.3	7409	5659	3900	302795	7456.0	N/A
27	10/13/2016	78.1	7224	5652	3989	300837	7465.0	N/A
28	10/13/2016	73.0	6959.5	5521	4363	270518	10279.0	N/A
29	10/13/2016	77.0	7518	5506	3888	297830	8890.0	N/A
30	10/14/2016	75.8	7519	5295	3650	301149	7336.0	N/A
31	10/14/2016	75.5	7277	5134	3907	299880	7317.0	N/A
32	10/15/2016	76.9	7609	5685	3734	303130	7376.0	N/A
33	10/15/2016	77.6	7516	5445	4022	302253	7321.0	N/A
34	10/15/2016	74.0	7427	5814	3745	301400	7311.0	N/A
35	10/16/2016	73.1	7160	5449	3852	300772	7276.0	N/A
36	10/16/2016	77.9	7460	5656	3807	300348	7292.0	N/A
37	10/16/2016	76.8	6876	5558	3933	301720	7280.0	N/A
38	10/17/2016	77.5	7404	6233	3789	301310	7907.0	N/A
39	10/24/2016	79.2	7389	5918	3748	302390	7330.0	N/A
40	10/24/2016	80.2	6865	5395	3851	301244	7298.0	N/A
41	10/24/2016	80.0	7038	5694	4050	303479	7361.0	N/A
42	10/25/2016	79.7	6938	5449	3876	301463	7288.0	N/A
43	10/25/2016	52.2	7941	5925	8905	299872	11689.0	N/A
44	10/25/2016	77.4	7249	5237	3994	300954	7146.0	N/A
45	10/25/2016	80.2	7139	5482	4034	300398	7198.0	N/A
46	10/25/2016	77.6	7315	5626	4519	298209	8455.0	N/A
47	10/26/2016	76.7	6702	5558	4055	302348	7219.0	N/A
48	10/26/2016	79.0	7254	5902	4634	302216	7229.0	N/A
49	10/26/2016	78.7	7082	5872	4577	304327	7152.0	N/A
50	10/26/2016	79.4	6901	5415	4934	302953	7131.0	N/A
51	10/26/2016	81.5	7299	5611	3725	304685	7176.0	N/A
52	10/26/2016	80.8	6493	5540	3551	304141	7469.0	N/A
	AVG=	76.4	7,300	5,545	4,176	15,667,931	399,859	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	46'	N/A	46'	N/A
Fresh Water	98'	N/A	98'	N/A
Siltstone	0	228	0	228
Coal	est. 228	248	est. 228	248
Sandstone/Siltstone	est. 248	908	est. 248	908
Shale/Siltstone	est. 908	1128	est. 908	1128
Coal	est. 1128	1148	est. 1128	1148
Shale	est. 1148	1348	est. 1148	1348
Coal	est. 1348	1368	est. 1348	1368
Shale	est. 1368	1448	est. 1368	1448
Sandstone/Siltstone	est. 1448	1628	est. 1448	1628
Coal	est. 1628	1648	est. 1628	1648
Sandstone/Siltstone	est. 1648	2043	est. 1648	2079
Big Lime	2043	2154	2079	2196
Big Injun	2154	2676	2196	2737
Gantz Sand	2676	2770	2737	2836
Fifty Foot Sandstone	2770	2883	2836	2954
Gordon	2883	3170	2954	3254
Fifth Sandstone	3170	3231	3254	3318
Bayard	3231	3603	3318	3703
Warren	3603	3967	3703	4085
Speechley	3967	4708	4085	4860
Bradford	4708	5093	4860	5262
Benson	5093	5344	5262	5525
Alexander	5344	5538	5525	5729
Elk	5538	5910	5729	6117
Rhinestreet	5910	6207	6117	6436
Sycamore	6207	6375	6436	6651
Middlesex	6375	6476	6651	6824
Burkett	6476	6502	6824	6889
Tully	6502	6532	6889	6978
Marcellus	6532	NA	6978	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.

## Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	10/26/2016
Job End Date:	10/26/2016
State:	West Virginia
County:	Tyler
API Number:	47-095-02338-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Estlack Melvin 2H
Latitude:	39.41432778
Longitude:	-80.87821111
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,609
Total Base Water Volume (gal):	17,468,087
Total Base Non Water Volume:	29,500



### 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					
			Water	7732-18-5	100.00000	89.88599	Density = 8.340
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.39117	

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WG-36 GELLING AGENT	Halliburton	Gelling Agent					
				Listed Below			
FDP-M1075-12	Halliburton	Scale Inhibitor					
				Listed Below			
FR-78	Halliburton	Friction Reducer					
				Listed Below			
HYDROCHLORIC ACID	Halliburton	Solvent					
				Listed Below			
SAND-PREMIUM WHITE-40/70, BULK	Halliburton	Proppant					
				Listed Below			
SAND-COMMON WHITE - 100 MESH, 3307 LB BAG	Halliburton	Proppant					
				Listed Below			
SP BREAKER	Halliburton	Breaker					
				Listed Below			
HYDROCHLORIC ACID	Halliburton	Solvent					
				Listed Below			

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HAI-OS ACID INHIBITOR	Halliburton	Corrosion Inhibitor					
				Listed Below			
MC B-8614	Halliburton	Biocide					
				Listed Below			
Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients.							
			Crystalline silica, quartz	14808-60-7	100.00000	9.67525	
			Hydrochloric acid	7647-01-0	60.00000	0.20496	
			Guar gum	9000-30-0	100.00000	0.01746	
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.01699	
			Polyacrylate	Proprietary	30.00000	0.01699	
			Ethylene Glycol	107-21-1	60.00000	0.00840	
			Amide	Proprietary	5.00000	0.00283	Denise Tuck, Halliburton, 3000 N. Sam Houston Pkwy E., Houston, TX 77032, 281-871-6226
			Inorganic salt	Proprietary	5.00000	0.00283	
			Alcohols, C12-16, ethoxylated	68551-12-2	5.00000	0.00283	
			Glutaraldehyde	111-30-8	30.00000	0.00259	
			Telomer	Proprietary	10.00000	0.00140	
			Fatty acid ester	Proprietary	1.00000	0.00057	
			Ammonium chloride	12125-02-9	1.00000	0.00057	
			Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl chlorides	68424-85-1	5.00000	0.00043	
			Sodium persulfate	7775-27-1	100.00000	0.00027	
			Sodium polyacrylate	9003-04-7	1.00000	0.00014	
			Methanol	67-56-1	60.00000	0.00009	
			Ethanol	64-17-5	1.00000	0.00009	

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			Reaction product of acetophenone, formaldehyde, thiourea and oleic acid in dimethyl formamide	68527-49-1	30.00000	0.00004	
			Ethoxylated alcohols	Proprietary	30.00000	0.00004	
			Fatty acids, tall oil	Proprietary	30.00000	0.00004	
			Olefins	Proprietary	5.00000	0.00002	
			Propargyl alcohol	107-19-7	10.00000	0.00001	
			Phosphoric acid	7664-38-2	0.10000	0.00001	
			Acrylic acid	79-10-7	0.01000	0.00000	
			Sodium sulfate	7757-82-6	0.10000	0.00000	

\* Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water

\*\* Information is based on the maximum potential for concentration and thus the total may be over 100%

\*\*\* If you are calculating a percentage of total ingredients do not add the water volume below the green line to the water volume above the green line

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°25'00" -906'

5,872' TO BOTTOM HOLE

LATITUDE 39°27'30"

2H TOP HOLE

LONGITUDE 80°52'30" -906'

LONGITUDE 80°52'30"

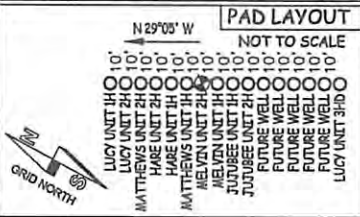
Office of Oil & Gas

6,675' TO BOTTOM HOLE

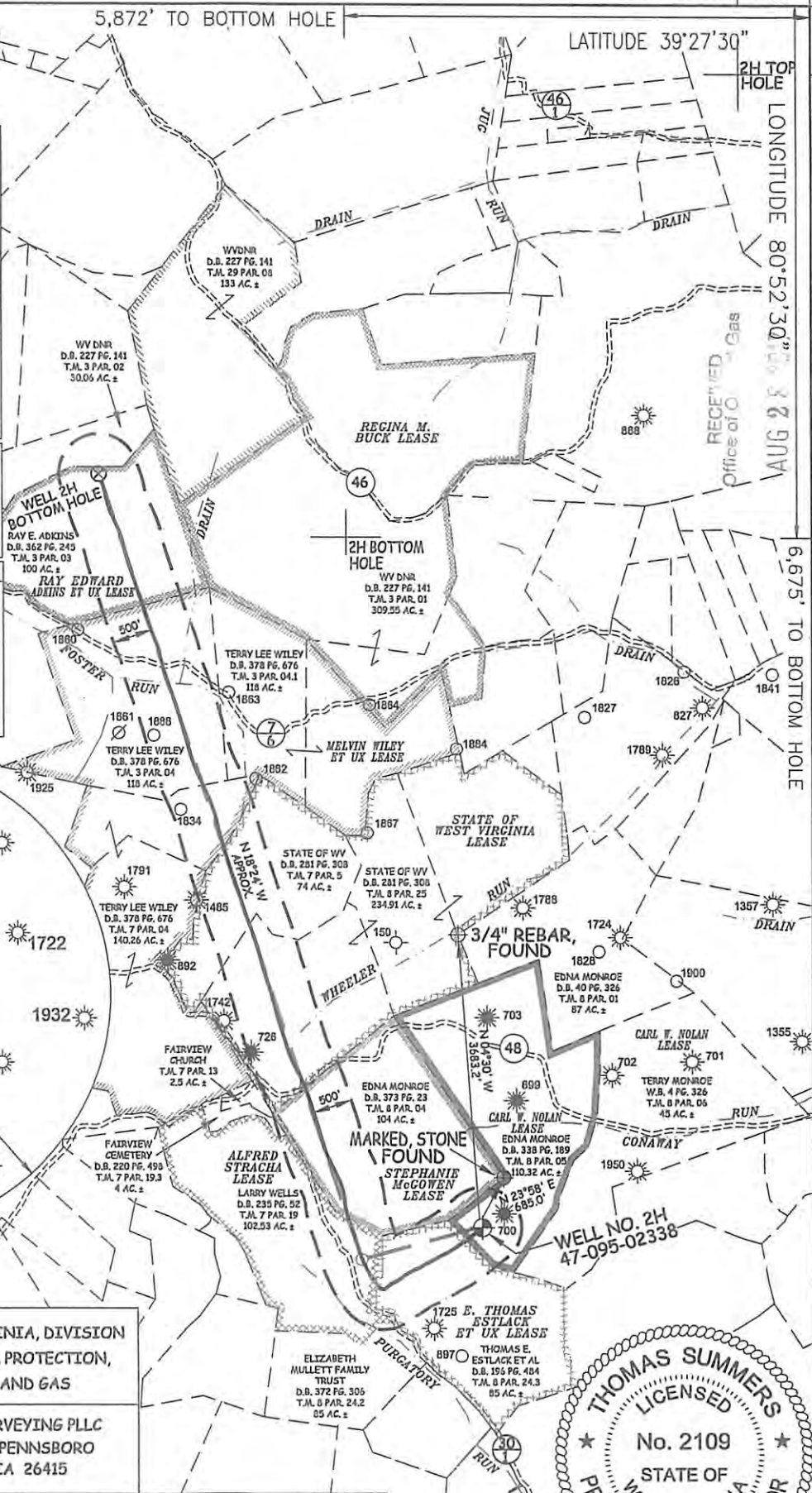
Antero Resources Corporation  
Well No. Melvin Unit 2H  
47-095-02338 (AS DRILLED)

AS DRILLED DATA:  
WELL 2H TOP HOLE INFORMATION:  
N: 336,003ft E: 1,610,624ft  
LAT: 39°24'51.58" LON: 80°52'41.55"  
BOTTOM HOLE INFORMATION:  
N: 345,433ft E: 1,605,802ft  
LAT: 39°26'24.03" LON: 80°53'44.85"  
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.

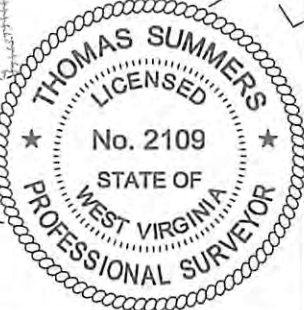
(NAD) 83 (UTM) ZONE 17 COORDS:  
WELL 2H TOP HOLE INFORMATION:  
N: 4,362,772m E: 510,499m  
BOTTOM HOLE INFORMATION:  
N: 4,365,621m E: 508,982m



WV NORTH ZONE  
GRID NORTH



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 # 14-063WA  
DRAWING # MELVIN2HADR  
SCALE 1" = 2000'  
MINIMUM DEGREE OF ACCURACY SUBMETER  
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS  
STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS

LEGEND  
--- Surface Owner Boundary Lines +/-  
--- Interior Surface Tracts +/-  
⊕ Found monument, as noted  
⊙ Proposed Well Path  
⊙ As Drilled Well Path  
THOMAS SUMMERS P.S. 2109  
DATE 06/28/17  
OPERATOR'S WELL# MELVIN UNIT #2H

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.

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_ 47 - 095 - 02338  
(IF "GAS") PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW \_\_\_ STATE COUNTY PERMIT  
LOCATION: ELEVATION 1,142' - AS-DRILLED WATERSHED HEADWATERS MIDDLE ISLAND CREEK 10/13/2017  
QUADRANGLE MIDDLEBOURNE 7.5' DISTRICT CENTERVILLE COUNTY TYLER  
SURFACE OWNER EDNA MONROE ACREAGE 110.32 ACRES +/-  
OIL & GAS ROYALTY OWNER CARL W. NOLAN; E. THOMAS ESTLACK ET UX; ALFRED STRACHA; LEASE ACREAGE 116 AC.±; 85.5 AC.±; 101.2 AC.±  
STEPHANIE MCGOWEN; MELVIN WILEY ET UX; WVDNR; RAY EDWARD ADKINS ET UX 170 AC.±; 378 AC.±; 553.16 AC.±; 100 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 6,602' TVD 17,387' MD  
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM  
ADDRESS 1615 WYNKOOP ST. ADDRESS 5400 D BIG TYLER ROAD  
DENVER, CO 80202 CHARLESTON, WV 25313



LATITUDE 39°25'00" -906'

LONGITUDE 80°52'30"

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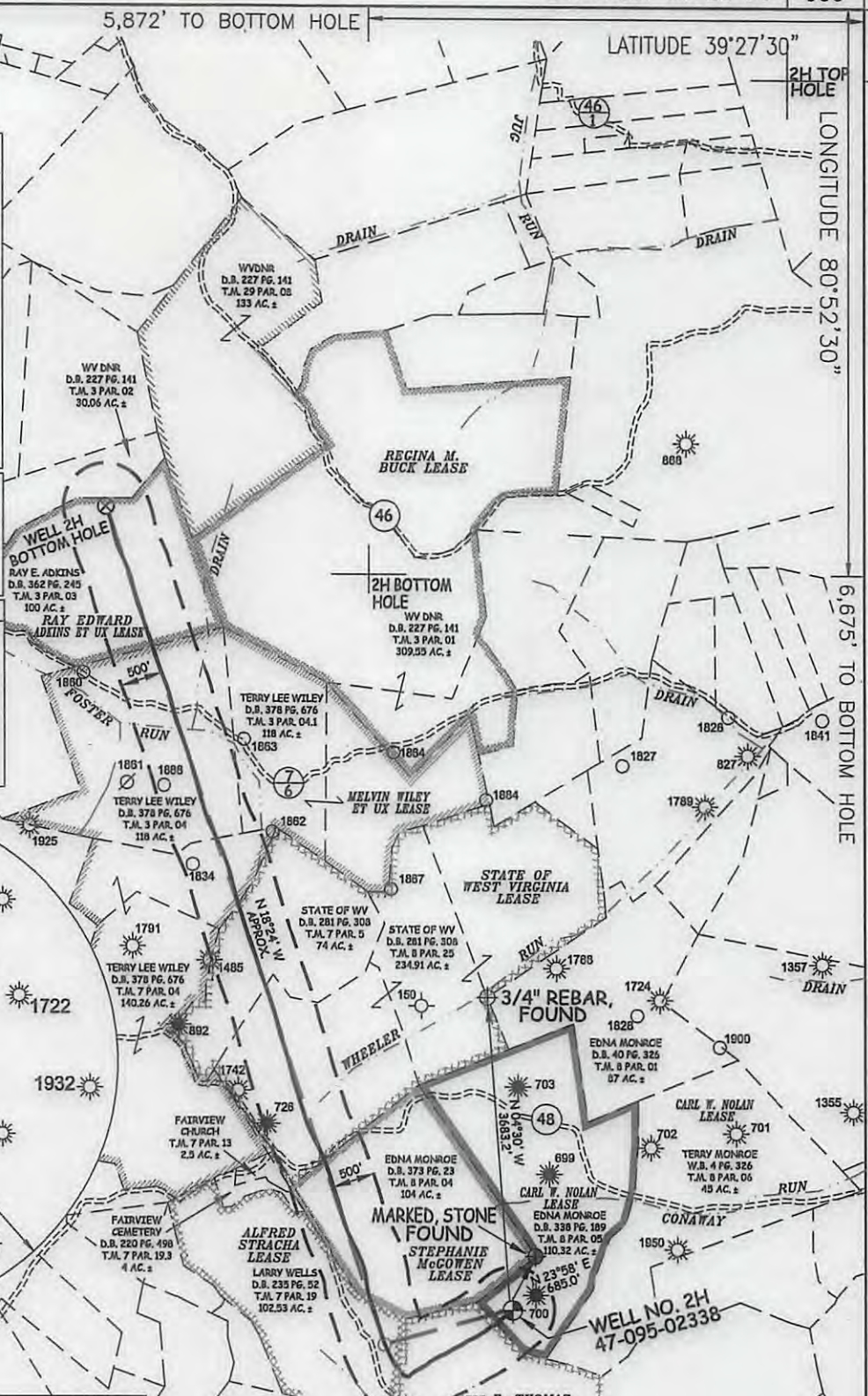
WV NORTH ZONE  
GRID NORTH

5,872' TO BOTTOM HOLE

LATITUDE 39°27'30"

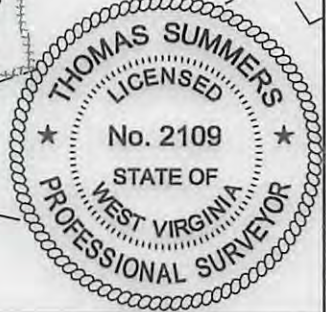
2H TOP HOLE  
LONGITUDE 80°52'30"

6,675' TO BOTTOM HOLE



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STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS

THOMAS SUMMERS P.S. 2109  
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