

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

API 47 - 095 - 02727 County Tyler District Ellsworth
Quad Shirley Pad Name Blizzard Field/Pool Name -----
Farm name Roger D Blizzard & Ruth E Spencer Well Number Whitmore 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 4372114m Easting 512819m
Landing Point of Curve Northing 4371953.93m Easting 513234.11m
Bottom Hole Northing 4367441m Easting 514796m

Elevation (ft) 1004' 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 2/2/21 Date drilling commenced 5/14/2021 Date drilling ceased 6/17/2021
Date completion activities began 9/4/2021 Date completion activities ceased 10/19/2021
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 16' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 1813' 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

Reviewed by: _____

WR-35
Rev. 8/23/13

API 47-095 - 02727 Farm name Roger D Blizzard & Ruth E Spencer Well number Whitmore 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#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"	359'	New	54.5#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2576'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	23890'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	6844'		4.7#, P-110		
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	266 sx	15.6	1.18	56	0'	8 Hrs.
Surface	Class A	431 sx	15.6	1.20	92	0'	8 Hrs.
Coal							
Intermediate 1	Class A	880sx	15.6	1.19	187	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	792 sx (Lead) 3830 sx (Tail)	13.5 (Lead), 15.2(Tail)	1.4 (Lead), 1.26 (Tail)	860	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 23935' MD, 6624' TVD (BHL), 6626' (Deepest Point Drilled) Loggers TD (ft) 23935' MD
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 5806'

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

API 47- 095 - 02727 Farm name Roger D Blizzard & Ruth E Spencer Well number Whitmore 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								

Please insert additional pages as applicable.

API 47- 095 - 02727 Farm name Roger D Blizzard & Ruth E Spencer Well number Whitmore Unit 2H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Marcellus</u>	<u>6471' (TOP)</u> TVD	<u>6917' (TOP)</u> MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 2800 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 9393 mcfpd Oil 235 bpd NGL --- bpd Water 348 bpd GAS MEASURED BY Estimated Orifice Pilot

<u>LITHOLOGY/ FORMATION</u>	<u>TOP</u>		<u>BOTTOM</u>		<u>DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H₂S, ETC)</u>
	<u>DEPTH IN FT NAME TVD</u>	<u>DEPTH IN FT TVD</u>	<u>DEPTH IN FT MD</u>	<u>DEPTH IN FT MD</u>	

***PLEASE SEE ATTACHED EXHIBIT 3**

Please insert additional pages as applicable.

Drilling Contractor H & P Drilling
Address 912 N Eagle Valley Rd City Howard State PA Zip 16841

Logging Company Nine Energy Services
Address 6500 West Fwy City Fort Worth State TX Zip 76116

Cementing Company Shclumberger
Address 5599 San Felipe St City Houston State TX Zip 77056

Stimulating Company Halliburton
Address 3000 W. Sam Houston Pkwy City Houston State TX Zip 76114

Please insert additional pages as applicable.

Completed by Brandi Hankins Telephone 303-357-7223
Signature [Signature] Title Completions Technician Date 3/31/12

API 47-095-02727 Farm Name Roger D Blizzard & Ruth E Spencer Well Number Whitmore Unit 2H					
Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	09/04/2021	23815	23771	36	Marcellus
2	09/05/2021	23732.25904	23565.5542	36	Marcellus
3	09/05/2021	23529.81325	23363.1084	36	Marcellus
4	09/06/2021	23327.36747	23160.6627	36	Marcellus
5	09/06/2021	23124.92169	22958.2169	36	Marcellus
6	09/06/2021	22922.4759	22755.7711	36	Marcellus
7	09/07/2021	22720.03012	22553.3253	36	Marcellus
8	09/07/2021	22517.58434	22350.8795	36	Marcellus
9	09/08/2021	22315.13855	22148.4337	36	Marcellus
10	09/09/2021	22112.69277	21945.988	36	Marcellus
11	09/09/2021	21910.24699	21743.5422	36	Marcellus
12	09/10/2021	21707.8012	21541.0964	36	Marcellus
13	09/10/2021	21505.35542	21338.6506	36	Marcellus
14	09/11/2021	21302.90964	21136.2048	36	Marcellus
15	09/11/2021	21100.46386	20933.759	36	Marcellus
16	09/11/2021	20898.01807	20731.3133	36	Marcellus
17	09/12/2021	20695.57229	20528.8675	36	Marcellus
18	09/12/2021	20493.12651	20326.4217	36	Marcellus
19	09/13/2021	20290.68072	20123.9759	36	Marcellus
20	09/13/2021	20088.23494	19921.5301	36	Marcellus
21	09/13/2021	19885.78916	19719.0843	36	Marcellus
22	09/14/2021	19683.34337	19516.6386	36	Marcellus
23	09/14/2021	19480.89759	19314.1928	36	Marcellus
24	09/15/2021	19278.45181	19111.747	36	Marcellus
25	09/16/2021	19076.00602	18909.3012	36	Marcellus
26	09/16/2021	18873.56024	18706.8554	36	Marcellus
27	09/17/2021	18671.11446	18504.4096	36	Marcellus
28	09/17/2021	18468.66867	18301.9639	36	Marcellus
29	09/18/2021	18266.22289	18099.5181	36	Marcellus
30	09/18/2021	18063.77711	17897.0723	36	Marcellus
31	09/19/2021	17861.33133	17694.6265	36	Marcellus
32	09/19/2021	17658.88554	17492.1807	36	Marcellus
33	09/20/2021	17456.43976	17289.7349	36	Marcellus
34	09/20/2021	17253.99398	17087.2892	36	Marcellus
35	09/21/2021	17051.54819	16884.8434	36	Marcellus
36	09/22/2021	16849.10241	16682.3976	36	Marcellus
37	09/22/2021	16646.65663	16479.9518	36	Marcellus
38	09/23/2021	16444.21084	16277.506	36	Marcellus
39	09/23/2021	16241.76506	16075.0602	36	Marcellus
40	09/23/2021	16039.31928	15872.6145	36	Marcellus
41	09/24/2021	15836.87349	15670.1687	36	Marcellus
42	09/24/2021	15634.42771	15467.7229	36	Marcellus
43	09/24/2021	15431.98193	15265.2771	36	Marcellus
44	09/24/2021	15229.53614	15062.8313	36	Marcellus
45	09/25/2021	15027.09036	14860.3855	36	Marcellus
46	09/25/2021	14824.64458	14657.9398	36	Marcellus
47	09/25/2021	14622.1988	14455.494	36	Marcellus
48	09/25/2021	14419.75301	14253.0482	36	Marcellus
49	09/26/2021	14217.30723	14050.6024	36	Marcellus
50	09/26/2021	14014.86145	13848.1566	36	Marcellus
51	09/26/2021	13812.41566	13645.7108	36	Marcellus
52	09/26/2021	13609.96988	13443.2651	36	Marcellus
53	09/26/2021	13407.5241	13240.8193	36	Marcellus
54	09/27/2021	13205.07831	13038.3735	36	Marcellus
55	09/27/2021	13002.63253	12835.9277	36	Marcellus
56	09/27/2021	12800.18675	12633.4819	36	Marcellus
57	09/27/2021	12597.74096	12431.0361	36	Marcellus
58	09/27/2021	12395.29518	12228.5904	36	Marcellus
59	09/27/2021	12192.8494	12026.1446	36	Marcellus
60	09/28/2021	11990.40361	11823.6988	36	Marcellus
61	09/28/2021	11787.95783	11621.253	36	Marcellus
62	09/29/2021	11585.51205	11418.8072	36	Marcellus
63	09/29/2021	11383.06627	11216.3614	36	Marcellus
64	09/29/2021	11180.62048	11013.9157	36	Marcellus
65	09/29/2021	10978.1747	10811.4699	36	Marcellus
66	09/29/2021	10775.72892	10609.0241	36	Marcellus
67	09/30/2021	10573.28313	10406.5783	36	Marcellus
68	09/30/2021	10370.83735	10204.1325	36	Marcellus
69	09/30/2021	10168.39157	10001.6867	36	Marcellus
70	09/30/2021	9965.945783	9799.24096	36	Marcellus
71	09/30/2021	9763.5	9596.79518	36	Marcellus
72	09/30/2021	9561.054217	9394.3494	36	Marcellus
73	10/01/2021	9358.608434	9191.90361	36	Marcellus
74	10/01/2021	9156.162651	8989.45783	36	Marcellus
75	10/01/2021	8953.716867	8787.01205	36	Marcellus
76	10/01/2021	8751.271084	8584.56627	36	Marcellus
77	10/02/2021	8548.825301	8382.12048	36	Marcellus
78	10/02/2021	8346.379518	8179.6747	36	Marcellus
79	10/02/2021	8143.93735	7977.22892	36	Marcellus
80	10/02/2021	7941.487952	7774.78313	36	Marcellus
81	10/03/2021	7739.042169	7572.33735	36	Marcellus
82	10/03/2021	7536.596386	7369.89157	36	Marcellus
83	10/03/2021	7334.150602	7167.44578	36	Marcellus
84	10/03/2021	7131.704819	6965	36	Marcellus

API 47-095-02727 Farm Name Roger D Blizard & Ruth E Spencer Well Number Whitmore 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 (bbls)	Amount of Nitrogen/ other (units)
1	09/04/2021	80.17	9716	9195	4066	172676	209577	N/A
2	09/05/2021	88.64	10289	5691	3995	409716	338902	N/A
3	09/05/2021	87.6	10317	5512	3633	408622	310033	N/A
4	09/06/2021	85.65	9776	5159	3342	405814	363521	N/A
5	09/06/2021	87.34	10263	5733	3382	414424	347227	N/A
6	09/06/2021	84.51	10265	5830	3599	404897	323386	N/A
7	09/07/2021	87.33	9932	8753	3603	402625	287412	N/A
8	09/07/2021	87.47	10024	6273	3745	409500	313298	N/A
9	09/08/2021	89.48	10414	8715	3562	407417	305864	N/A
10	09/09/2021	85.85	9876	8258	3680	406340	298447	N/A
11	09/09/2021	86.57	9757	5693	3874	405368	302880	N/A
12	09/10/2021	87.11	10076	5495	3555	408890	297753	N/A
13	09/10/2021	84.25	9539	6629	3625	431030	319140	N/A
14	09/11/2021	88	9775	5713	3548	418399	313624	N/A
15	09/11/2021	83.27	9831	6262	3166.11	399435	304119	N/A
16	09/11/2021	90.96	9959	6174	3801	409967	302541	N/A
17	09/12/2021	90.13	9712	7078	3753	407193	304642	N/A
18	09/12/2021	87.75	9826	5384	3617	412562	312520	N/A
19	09/13/2021	90.35	9801	6334	3487	414392	305825	N/A
20	09/13/2021	90.52	9933	6599	3644	412560	296375	N/A
21	09/13/2021	90.04	9963	6177	3522	408968	301556	N/A
22	09/14/2021	90.8	10040	6413	3593	412690	296200	N/A
23	09/14/2021	89.29	9650	6060	3699	409224	298284	N/A
24	09/15/2021	77.74	8509	6360	3452	406937	298726	N/A
25	09/16/2021	88.28	9534	5988	3857	409429	299849	N/A
26	09/16/2021	87.39	9514	7040	3407	409918	297733	N/A
27	09/17/2021	81.84	8793	5189	4693	407791	299098	N/A
28	09/17/2021	91.44	9818	10229	3929	406476	292594	N/A
29	09/18/2021	90.84	9713	5444	3778	406700	294673	N/A
30	09/18/2021	91.06	9998	9954	3571	407253	290580	N/A
31	09/19/2021	88.26	9589	6384	4164	418841	305464	N/A
32	09/19/2021	90.23	9672	10169	3835	407358	293262	N/A
33	09/20/2021	88.27	9111	2789	4726	407252	299454	N/A
34	09/20/2021	89.07	9617	9364	3260	407555	290665	N/A
35	09/21/2021	92.87	9837	6583	3797	407590	289017	N/A
36	09/22/2021	94.71	9803	8119	3629	408139	289375	N/A
37	09/22/2021	91.28	9317	6406	3591	400774	287179	N/A
38	09/23/2021	95.79	10121	9455	3616	412067	291141	N/A
39	09/23/2021	92.59	9468	9483	3726	401362	287897	N/A
40	09/23/2021	95.52	9757	10814	3452	406940	289076	N/A
41	09/24/2021	95.73	9395	10190	3450	408195	287999	N/A
42	09/24/2021	92.44	9574	8858	3251	408048	286990	N/A
43	09/24/2021	94.29	9389	8111	3702	405694	295961	N/A
44	09/24/2021	97.96	9460	9607	3630	407381	289798	N/A
45	09/25/2021	95.37	9236	9334	4217	410291	283597	N/A
46	09/25/2021	94.37	9316	8360	3911	411912	286236	N/A
47	09/25/2021	94.96	9192	8529	4157	384135	285263	N/A
48	09/25/2021	96.92	9708	9427	3348	407126	286823	N/A
49	09/26/2021	93.1	9144	9916	3446	407464	289113	N/A
50	09/26/2021	94.48	9335	9809	3910	414157	288310	N/A
51	09/26/2021	93.44	8858	5892	4234	407541	288671	N/A
52	09/26/2021	93.62	9021	6352	3944	406131	284144	N/A
53	09/26/2021	97.48	9205	8988	3891	406349	294433	N/A
54	09/27/2021	97.18	9129	9256	3543	406974	284843	N/A
55	09/27/2021	97.3	9399	9685	3621	407492	281551	N/A
56	09/27/2021	97.19	9246	9198	3472	413961	287378	N/A
57	09/27/2021	97.34	9131	7141	3755	407278	280983	N/A
58	09/27/2021	97.6	9112	8370	3632	407187	285474	N/A
59	09/27/2021	97.66	8883	8412	3640	414620	284227	N/A
60	09/28/2021	97.15	8849	8065	3681	421360	289439	N/A
61	09/28/2021	96.36	8926	8480	3804	408005	321250	N/A
62	09/29/2021	96.97	8487	7096	3542	398319	296036	N/A
63	09/29/2021	96.04	8616	8859	3412	409894	285066	N/A
64	09/29/2021	97.6	8668	7365	3444	407626	285229	N/A
65	09/29/2021	96.6	8348	8585	3350	407569	283239	N/A
66	09/29/2021	94.82	8402	8188	3703	407555	282342	N/A
67	09/30/2021	98	8467	6710	3956	407340	288068	N/A
68	09/30/2021	97.31	8404	7998	4043	407225	281478	N/A
69	09/30/2021	97.06	8249	7784	3647	406768	282899	N/A
70	09/30/2021	96.39	8255	7495	3928	407441	284418	N/A
71	09/30/2021	97.1	8098	8433	3899	407871	280930	N/A
72	09/30/2021	96.73	8108	8700	3864	393218	273406	N/A
73	10/01/2021	97.59	8445	6990	4250	408150	285488	N/A
74	10/01/2021	97.18	7993	7168	3676	407946	281502	N/A
75	10/01/2021	96.65	8069	7500	3769	401832	271969	N/A
76	10/01/2021	95.95	8422	7881	3716	430932	273572	N/A
77	10/02/2021	78.65	7023	8056	4955	413102	391990	N/A
78	10/02/2021	93.42	7577	5693	3712	407667	280078	N/A
79	10/02/2021	94.56	7501	5721	3850	402215	290989	N/A
80	10/02/2021	95.18	7410	5270	3894	403709	289452	N/A
81	10/03/2021	94.87	7210	5924	3700.57	407992	280837	N/A
82	10/03/2021	94.22	7176	8373	3492	407345	282305	N/A
83	10/03/2021	94.09	7092	5338	3713	412999	281482	N/A
84	10/03/2021	94.94	6980	6368	3952	414307	279606	N/A
	AVG=	92	9,136	7,481	3,734	34,075,414	24,723,773	TOTAL

API 47-095-02727 Farm Name Roger D Blizzard & Ruth E Spencer Well Number Whitmore Unit 2H

EXHIBIT 3

LITHOLOGY/ FORMATION	TOP DEPTH (TVD) From Surface	BOTTOM DEPTH (TVD) From Surface	TOP DEPTH (MD) From Surface	BOTTOM DEPTH (MD) From Surface
Shaley Sandstone	74	214	74	214
Sandy Shale	214	364	214	364
Shaley Sandstone	364	514	364	514
Limestone, Tr Shale	514	544	514	544
Sandstone	544	664	544	664
Limestone, Tr Coal	664	694	664	694
Shaley Sandstone, Tr Coal	694	784	694	784
Shale, Tr Sandstone	784	1,204	784	1,204
Sandy Shale, Limestone, Tr Coal	1,204	1,354	1,204	1,354
Sandy Shale	1,354	1,504	1,354	1,504
Sandstone, Tr Shale, Tr Coal	1,504	1,624	1,504	1,624
Sandy Shale	1,624	1,834	1,624	1,834
Shaly Sandstone, Tr coal	1,834	1,866	1,834	1,870
Big Lime	1,892	2,625	1,870	2,631
Fifty Foot Sandstone	2,625	2,701	2,605	2,707
Gordon	2,701	2,997	2,681	3,006
Fifth Sandstone	2,997	3,054	2,980	3,065
Bayard	3,054	3,870	3,039	3,926
Speechley	3,870	4,174	3,900	4,251
Balltown	4,174	4,531	4,225	4,633
Bradford	4,531	4,952	4,607	5,085
Benson	4,952	5,159	5,059	5,305
Alexander	5,159	6,327	5,279	6,597
Sycamore	6,185	6,301	6,415	6,571
Middlesex	6,301	6,391	6,571	6,717
Burkett	6,391	6,416	6,717	6,769
Tully	6,416	6,471	6,769	6,917
Marcellus	6,471	NA	6,917	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:	9/4/2021
Job End Date:	10/3/2021
State:	West Virginia
County:	Tyler
API Number:	47-095-02727-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	WHITMORE UNIT 2H
Latitude:	39.49847000
Longitude:	-80.85107000
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,626
Total Base Water Volume (gal):	26,372,473
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
Produced Water Mixture	Halliburton	Base Fluid					
			Water	7732-18-5	100.00000	86.65670	Density = 8.50
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.10239	

WG-36 GELLING AGENT	Halliburton	Gelling Agent					
				Listed Below			
OPTIFLO-II DELAYED RELEASE BREAKER	Halliburton	Breaker					
				Listed Below			
Sand-Common White-100 Mesh, SSA-2	Halliburton	Proppant					
				Listed Below			
HAI-501	Halliburton	Acid Corrosion Inhibitor					
				Listed Below			
MC B-8614A	MultiChem	Biocide					
				Listed Below			
HYDROCHLORIC ACID, 22 BAUME	Halliburton	Solvent					
				Listed Below			
Excelerate LX-15	Halliburton	Friction Reducer					
				Listed Below			
Sand-Premium White-30/70	Halliburton	Proppant					
				Listed Below			

FLUID Enviro-Syn HCR-7000-WL	Fluid Energy Group	Acid Replacement					
				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	13.17267	
			Complex Amine Compound	Proprietary	60.00000	0.03123	
			Hydrochloric acid	7647-01-0	30.00000	0.01886	
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.01562	
			Proprietary	Proprietary	20.00000	0.00815	
			Guar gum	9000-30-0	100.00000	0.00640	
			Proprietary	Proprietary	10.00000	0.00408	
			Surfactant	Proprietary	5.00000	0.00260	
			Sobitan, mono-9-octadecenoate, (Z)	1338-43-8	5.00000	0.00260	
			Glutaraldehyde	111-30-8	30.00000	0.00249	
			Ethoxylated alcohols	Proprietary	5.00000	0.00053	
			Organic chloride compound	Proprietary	1.00000	0.00052	
			Alkoxyated polyhydric alcohol	Proprietary	1.00000	0.00052	
			Alkyl (C12-16) dimethylbenzyl ammonium chloride	68424-85-1	5.00000	0.00041	
			Ammonium persulfate	7727-54-0	100.00000	0.00014	
			Methanol	67-56-1	100.00000	0.00012	
			Ethanol	64-17-5	1.00000	0.00008	
			Oxylated phenolic resin	Proprietary	30.00000	0.00004	
			Modified thiourea polymer	Proprietary	30.00000	0.00004	
			Mixture of dimer and trimer fatty acids of indefinite composition derived from tall oil	61790-12-3	30.00000	0.00004	

			Hexadecene	629-73-2	5.00000	0.00001	
			Propargyl alcohol	107-19-7	5.00000	0.00001	
			Sodium glycolate	2836-32-0	0.01000	0.00001	
			Sodium hydroxide	1310-73-2	0.01000	0.00001	
			Organic salt #2	Proprietary	0.01000	0.00001	
			Nitrated acetate salt	Proprietary	0.01000	0.00001	
			Organic salt #1	Proprietary	0.01000	0.00001	
			Acrylamide	79-06-1	0.01000	0.00001	
			Formaldehyde	50-00-0	0.01000	0.00001	
			C.I. pigment Orange 5	3468-63-1	1.00000	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)

Antero Resources
Well No. Whitmore 2H
As-Drilled
Antero Resources Corporation



Wellhead Layout

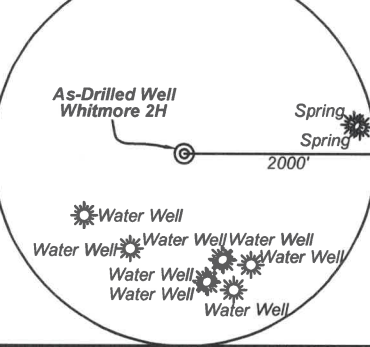
- Pechora Unit 2H
47-095-02725
- Pechora Unit 1H
47-095-02724
- As-Drilled
Whitmore Unit 2H
47-095-02727
- Whitmore Unit 1H
47-095-02726
- Wade Unit 2H
47-095-02728
- Wade Unit 1H
47-095-02729



I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the rules issued and prescribed by the Department of Environmental Protection.

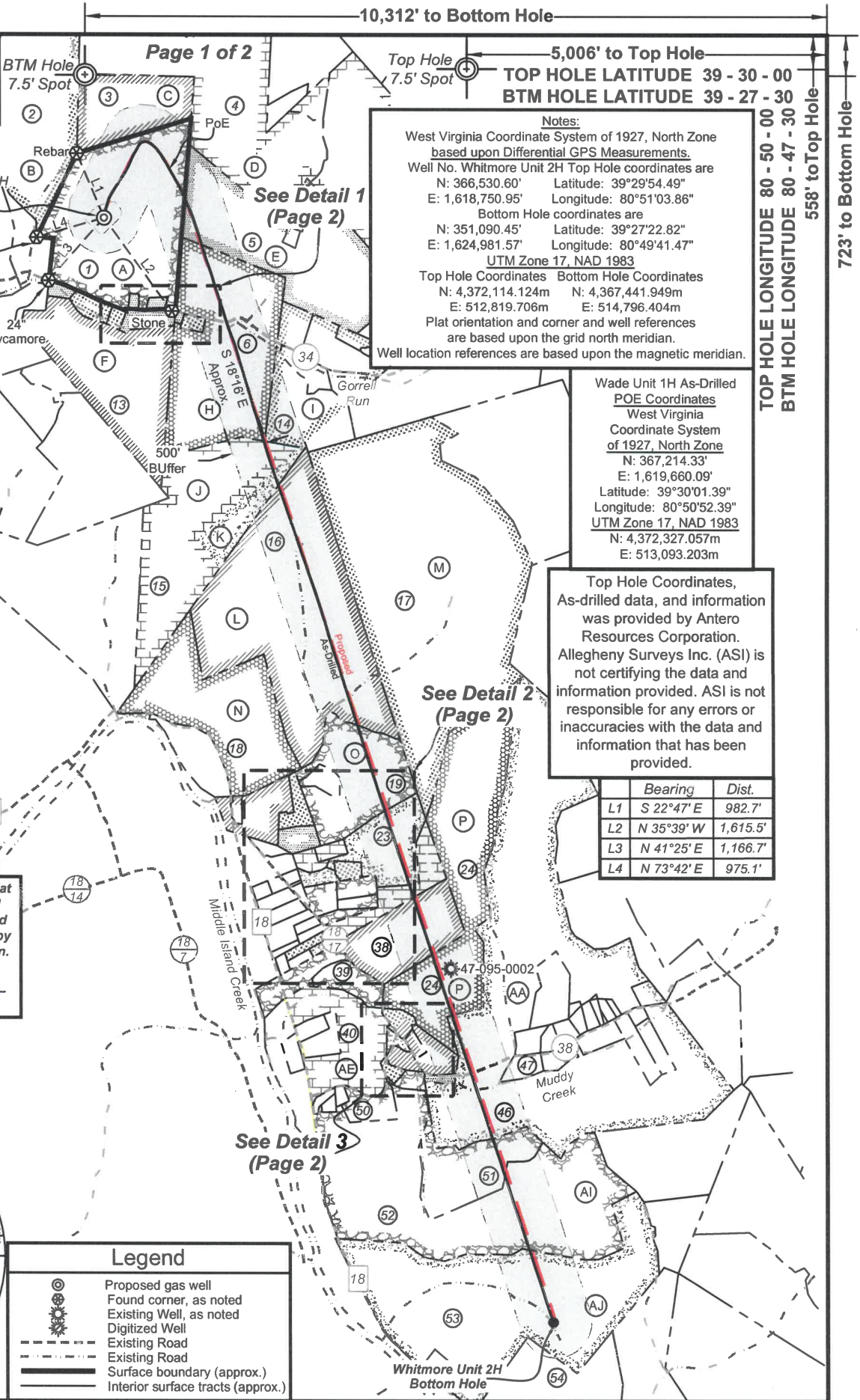
Bradley D. Miller
Bradley D. Miller, P.S. 2167

Note: 8 water wells and 2 springs were found within 2000' of proposed well. No occupied dwellings or buildings 2,500 square feet or larger used to house or shelter dairy cattle or poultry husbandry are located within 625' of the center of the well pad.



Legend

- Proposed gas well
- Found corner, as noted
- Existing Well, as noted
- Digitized Well
- - - Existing Road
- - - Existing Road
- Surface boundary (approx.)
- Interior surface tracts (approx.)



Notes:
 West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.
 Well No. Whitmore Unit 2H Top Hole coordinates are
 N: 366,530.60' Latitude: 39°29'54.49"
 E: 1,618,750.95' Longitude: 80°51'03.86"
 Bottom Hole coordinates are
 N: 351,090.45' Latitude: 39°27'22.82"
 E: 1,624,981.57' Longitude: 80°49'41.47"
 UTM Zone 17, NAD 1983
 Top Hole Coordinates Bottom Hole Coordinates
 N: 4,372,114.124m N: 4,367,441.949m
 E: 512,819.706m E: 514,796.404m
 Plat orientation and corner and well references are based upon the grid north meridian.
 Well location references are based upon the magnetic meridian.

Wade Unit 1H As-Drilled
 POE Coordinates
 West Virginia
 Coordinate System
 of 1927, North Zone
 N: 367,214.33'
 E: 1,619,660.09'
 Latitude: 39°30'01.39"
 Longitude: 80°50'52.39"
 UTM Zone 17, NAD 1983
 N: 4,372,327.057m
 E: 513,093.203m

Top Hole Coordinates, As-drilled data, and information was provided by Antero Resources Corporation. Allegheny Surveys Inc. (ASI) is not certifying the data and information provided. ASI is not responsible for any errors or inaccuracies with the data and information that has been provided.

	Bearing	Dist.
L1	S 22°47' E	982.7'
L2	N 35°39' W	1,615.5'
L3	N 41°25' E	1,166.7'
L4	N 73°42' E	975.1'

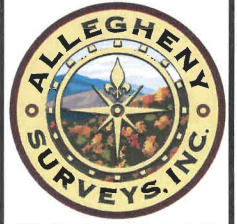
FILE NO: 120-54-E-19
 DRAWING NO: Whitmore 2H As-Drilled
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY:
 Submeter
 PROVEN SOURCE OF ELEVATION:
 WVDOT, Harrisville, WV

STATE OF WEST VIRGINIA
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
OIL AND GAS DIVISION

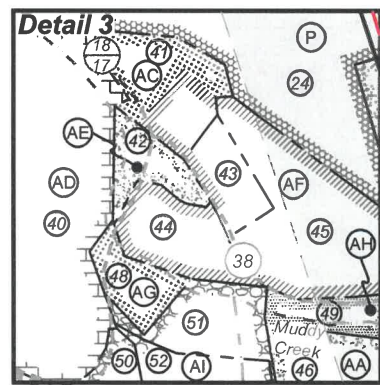
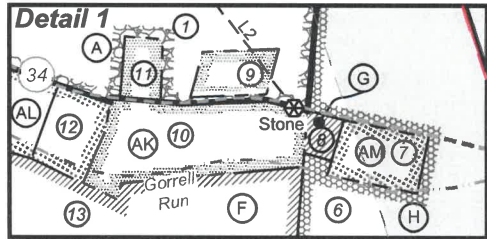
DATE: March 7 2022
 OPERATOR'S WELL NO. Whitmore 2H
 API WELL NO
 47 - 095 - 02727
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
 LOCATION: ELEVATION: As-Built 1,004' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Shirley
 DISTRICT: Ellsworth COUNTY: Tyler
 SURFACE OWNER: Roger D. Blizzard Carolee J. Daniel; Kendra K. Wyke; Keith C. & Phyllis J. Smith; Ronald L. Hoover, et ux; Rebecca Lynn Gebhardt; E. Lorna Howard Testamentary Trust; Randall L. Wise, et ux; ACREAGE: 102.62
 ROYALTY OWNER: Heritage Resources - Marcellus Minerals, LLC (2); William S. Nash, et al; Alfred Lonzo Eddy; LEASE NO: _____ ACREAGE: 168.175; 136.22
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 6,624' TVD 23,935' MD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System
 ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road
Denver, CO 80202 Charleston, WV 25313



ID	TM/Par	Owner	DB/PG	Acres
1	15-33	Roger D. Blizzard & Ruth E. Spencer	340/170	102.62
2	15-30	Thomas C. & Judeann L. Grinage	458/73	124.08
3	15-31	Roger D. Blizzard & Ruth E. Spencer	342/782	25.00
4	15-38	Rodney A. & Candis L. Nash	351/701	85.48
5	15-32	William S. & Opal Marie Nash	335/188	78.58
6	21-13	Alfred Lonzo Eddy	337/650	98.58
7	21-13.1	Matthew Scott & Christy Lynn Kile	348/191	1.42
8	21-12	Church of Christ	50/6	0.71
9	21-11	Roger D. & Darlene F. Blizzard	186/466	1.00
10	21-10	Roger D. Blizzard & Ruth E. Spencer	340/170	5.00
11	21-9	Clayton M. & Ruth E. Spencer	201/541	0.71
12	21-8.1	Charles M. & Amanda C. Spencer	397/36	1.32
13	21-14	Carl E. & Elsie M. Taylor	391/181	67.91
14	22-1	Robert I. Reed & Floyd W. Reed	321/763	42.32
15	21-53	Haessly Land & Timber LLC	337/101A	89.88
16	22-42	Sharon Christenson, et al	635/420	144.26
17	22-41	Anthony B. Parr	342/763	222.00
18	21-54	Sybill Gorby	WB 34/343	70.00
19	22-43	Loretta Louise Baker	253/131	38.97
20	22-43.2	Forest & Leeann Moore	421/356	3.36
21	22-43.1	Jeffery & Ricki L. Smith	317/507	4.17
22	22-49	Enoch Family Irrevocable Trust	440/433	4.14
23	22-47	Tom J. & Jean A. Gump	628/629	22.30
24	28-9	David & Cheryl L. Barrick	263/606	87.53
25	28-7	Randall L. & Kathryn M. Wise	442/85	9.00
26	22-47.1	Lee Roy & Tracy Ferguson	341/271	2.05
27	22-47.3	Lee Roy & Tracey Ferguson	355/656	2.39
28	22-47.4	Samantha Anderson	591/348	2.36
29	22-47.2	Tara Wright & Michael Thomas	574/143	2.03
30	28-4.5	Shaun R. & Christie L. Curran	344/371	3.36
31	28-4	David A. Mays & Connie S. Gilbert	289/306	3.82
32	28-4.4	Shaun R. & Christie L. Curran	344/371	2.02
33	28-4.3	Jerry T. & Lavonne L. Williams	311/89	1.91
34	28-4.2	Joshua D. Botkins	451/569	1.18
35	28-12	April Watkinson & Thomas Weekley	611/755	1.88
36	28-11	Rodney J. & Kennetta K. Davis	281/348	1.00
37	28-10	Carol Knapp Rev. Trust	435/461	9.20
38	28-8	Carolee J. Daniell	WB 43/267	30.00
39	28-10.1	Jean A. & Tom Gump	556/92	8.20
40	28-17	Kathy Ann Seago, et al	WB41/119	12.11
41	28-18	Justin & Sarah Cumberledge	503/168	2.70
42	28-19	James & Ada Johnson	264/418	1.42
43	28-20.1	Michael & Joyce Mercer	237/131	1.42
44	28-21	Lorraine Weekley	AR49-717	2.30
45	28-20	Michael & Joyce Mercer	237/131	5.98
46	28-31	Victor A. & Lorraine B. Weekley	AR49/717	226.25
47	28-31.4	Victor & Lorraine Weekley	AR 49/717	3.64
48	28-22	Lorraine Weekley	AR49/717	1.35
49	28-29.1	Donald A. Quinif	WB17/139	0.88
50	28-23	Troy & Kelly Smith	OR20/722	3.60
51	28-30	Keith C. Smith	WB35/228	30.13
52	28-29	Keith C. Smith	WB35/228	116.72
53	28-28	Ronald & Linda Hoover	184/383	136.22
54	5-4	Kenneth & Jennifer L. Mason	OR 75/585	52.78



Leases			
A	Heritage Resources - Marcellus Minerals, LLC	T	Rebecca Lynn Gebhardt
		U	Melissa D. Maston
B	B. Fred Hill	V	Enoch Family Irrevocable Trust
C	Jerry R. Brown	W	Randall L. Wise, et ux
D	Helen E. Boggs	X	April R. Weekley, et vir
E	William S. Nash, et al	Y	Rodney J. Davis
F	The Swan Living Trust	Z	Carolee J. Daniel
G	Alfred Lonzo Eddy	AA	Kendra K. Wyke
H	Alfred Lonzo Eddy	AB	AMP Fund LP
I	Roberta L. Schickler		Heritage Resources - Marcellus Minerals, LLC
J	Hasley Land & Timber, LLC	AC	
K	City of Sistersville	AD	Brian M. Weigle
L	E. Lorna Howard Testamentary Trust	AE	James T. & Ada L. Johnson
		AF	Brian M. Weigle
M	Anthony B. Parr	AG	Lorraine B. Weekley
N	Bradley J. Carpenter	AH	Keith C. Smith, et ux
O	Loretta L. Baker	AI	Keith C. & Phyllis J. Smith
P	Heritage Resources - Marcellus Minerals, LLC	AJ	Ronald L. Hoover, et ux
Q	Jeffrey D. Smith, et ux	AK	Heritage Resources - Marcellus Minerals, LLC
R	Enoch Family Irrevocable Trust	AL	Virginia Dianne Thompson
S	Lee Roy Ferguson, et ux	AM	Matthew Scot Kile, et ux

FILE NO: 120-54-E-19
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 Submeter
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 WVDOT, Harrisville, WV



DATE: March 7 2022
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ACREAGE: 102.62
 13.125;
 102.62; 79.919;
 87.53; 99.998; 75.25;
 143.7325; 45.692;
 24.663; 9; 30; 271;
 168.175; 136.22

ROYALTY OWNER: Heritage Resources - Marcellus Minerals, LLC (2); William S. Nash, et al; Alfred Lonzo Eddy; LEASE NO:

PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled

PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 6,624' TVD 23,935' MD

WELL OPERATOR: Antero Resources Corporation

DESIGNATED AGENT: Dianna Stamper - CT Corporation System

ADDRESS: 1615 Wynkoop Street
 Denver, CO 80202

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 Charleston, WV 25313