



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

June 3, 2020

West Virginia Department of Environmental Protection  
Office of Oil and Gas  
601 57<sup>th</sup> Street  
Charleston, WV 25304

To Whom It May Concern:

Please find enclosed the Well Operator's Report of Well Work, Form WR-35 (including As-Drilled Survey Plat, Directional Survey and FracFocus report), Discharge Monitoring Report Form WR-34 and corresponding logs for the following wells off of the **Dawson Pad**:

- Dierkes Unit 1H-2H
- Kirk Hadley Unit 1H
- Treasury Unit 1H-2H
- Weese Unit 1H-2H

If you have any questions, please feel free to contact me at (303)-357-7223.

Sincerely,

A handwritten signature in black ink, appearing to read "Megan Griffith", with a long horizontal flourish extending to the right.

Megan Griffith  
Permitting Agent  
Antero Resources Corporation

Enclosures

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

API 47-095-02556 County Tyler District Meade  
Quad Middlebourne 7.5' Pad Name Kirk Hadley Pad Field/Pool Name -----  
Farm name Kirk L. Hadley Well Number Treasury Unit 1H  
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 4368205.093m Easting 505840.471m  
Landing Point of Curve Northing 4368519.68m Easting 506203.65m  
Bottom Hole Northing 4372658.110m Easting 504801.329m

Elevation (ft) 912' 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 1/30/2019 Date drilling commenced 7/26/2019 Date drilling ceased 9/30/2019  
Date completion activities began 2/9/2020 Date completion activities ceased 3/12/2020  
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 142', 242', 349' Open mine(s) (Y/N) depths No  
Salt water depth(s) ft 1225', 1691', 2032' Void(s) encountered (Y/N) depths No  
Coal depth(s) ft 527', 681' Cavern(s) encountered (Y/N) depths No  
Is coal being mined in area (Y/N) No

Reviewed by:  
\_\_\_\_\_

API 47-095 - 02556 Farm name Kirk L. Hadley Well number Treasury Unit 1H

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor	24"	20"	105'	New	94#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"	477'	New	48#, H-40	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2668'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	21564'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	6591'		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	204 sx	15.6	1.18	120	0'	8 Hrs.
Surface	Class A	400 sx	15.6	1.18	826	0'	8 Hrs.
Coal							
Intermediate 1	Class A	800 sx	15.6	1.18	1181	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	450 sx (Lead) 3363 sx (Tail)	13.5 (Lead), 15.2 (Tail)	1.53 (Lead), 1.83 (Tail)		-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 21584' MD, 6180' TVD (BHL), 6182' (Deepest Point Drilled) Loggers TD (ft) 21584' MD

Deepest formation penetrated Marcellus Plug back to (ft) N/A

Plug back procedure N/A

Kick off depth (ft) 5600'

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 - 02556 Farm name Kirk L. Hadley Well number Treasury Unit 1H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Marcellus</u>	<u>6152' (TOP)</u> TVD	<u>6622' (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 5573 mcfpd Oil 193 bpd NGL --- bpd Water 522 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 <sub>2</sub> S, ETC)
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**\*PLEASE SEE ATTACHED EXHIBIT 3**


Please insert additional pages as applicable.

Drilling Contractor Patterson UTI Drilling  
Address 1660 Wynkoop Street, Suite 1100 City Denver State CO Zip 80202

Logging Company KLX Energy Services  
Address 3040 Post Oak Boulevard City Houston State TX Zip 77056

Cementing Company Halliburton Energy Services  
Address 1125 17th Street City Denver State CO Zip 80202

Stimulating Company Baker Hughes  
Address 837 Philippi Pike City Clarksburg State WV Zip 26301

Please insert additional pages as applicable.

Completed by Megan Griffith Telephone 303-357-7223  
Signature  Title Permitting Agent Date 6/3/20

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

API 47-095-02556 Farm Name Kirk L. Hadley Well Number Treasury Unit 1H

**EXHIBIT 1**

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	12/23/2019	21431.9	21387.7	60	Marcellus
2	12/24/2019	21350.55428	21186.8257	60	Marcellus
3	12/24/2019	21151.67995	20987.9514	60	Marcellus
4	12/25/2019	20952.80563	20789.077	60	Marcellus
5	12/25/2019	20753.93131	20590.2027	60	Marcellus
6	12/26/2019	20555.05698	20391.3284	60	Marcellus
7	12/26/2019	20356.18266	20192.4541	60	Marcellus
8	12/27/2019	20157.30833	19993.5797	60	Marcellus
9	12/27/2019	19958.43401	19794.7054	60	Marcellus
10	12/28/2019	19759.55968	19595.8311	60	Marcellus
11	12/28/2019	19560.68536	19396.9568	60	Marcellus
12	12/29/2019	19361.81104	19198.0824	60	Marcellus
13	12/29/2019	19162.93671	18999.2081	60	Marcellus
14	12/30/2019	18964.06239	18800.3338	60	Marcellus
15	12/30/2019	18765.18806	18601.4595	60	Marcellus
16	12/30/2019	18566.31374	18402.5851	60	Marcellus
17	1/1/2020	18367.43941	18203.7108	60	Marcellus
18	1/1/2020	18168.56509	18004.8365	60	Marcellus
19	1/1/2020	17969.69077	17805.9622	60	Marcellus
20	1/2/2020	17770.81644	17607.0878	60	Marcellus
21	1/2/2020	17571.94212	17408.2135	60	Marcellus
22	1/2/2020	17373.06779	17209.3392	60	Marcellus
23	1/3/2020	17174.19347	17010.4649	60	Marcellus
24	1/3/2020	16975.31914	16811.5905	60	Marcellus
25	1/4/2020	16776.44482	16612.7162	60	Marcellus
26	1/4/2020	16577.5705	16413.8419	60	Marcellus
27	1/4/2020	16378.69617	16214.9676	60	Marcellus
28	1/5/2020	16179.82185	16016.0932	60	Marcellus
29	1/5/2020	15980.94752	15817.2189	60	Marcellus
30	1/5/2020	15782.0732	15618.3446	60	Marcellus
31	1/6/2020	15583.19887	15419.4703	60	Marcellus
32	1/6/2020	15384.32455	15220.5959	60	Marcellus
33	1/7/2020	15185.45023	15021.7216	60	Marcellus
34	1/7/2020	14986.5759	14822.8473	60	Marcellus
35	1/7/2020	14787.70158	14623.973	60	Marcellus
36	1/7/2020	14588.82725	14425.0986	60	Marcellus
37	1/8/2020	14389.95293	14226.2243	60	Marcellus
38	1/8/2020	14191.0786	14027.35	60	Marcellus
39	1/9/2020	13992.20428	13828.4757	60	Marcellus
40	1/9/2020	13793.32995	13629.6014	60	Marcellus
41	1/9/2020	13594.45563	13430.727	60	Marcellus

42	1/10/2020	13395.58131	13231.8527	60	Marcellus
43	1/10/2020	13196.70698	13032.9784	60	Marcellus
44	1/10/2020	12997.83266	12834.1041	60	Marcellus
45	1/10/2020	12798.95833	12635.2297	60	Marcellus
46	1/11/2020	12600.08401	12436.3554	60	Marcellus
47	1/11/2020	12401.20968	12237.4811	60	Marcellus
48	1/11/2020	12202.33536	12038.6068	60	Marcellus
49	1/11/2020	12003.46104	11839.7324	60	Marcellus
50	1/11/2020	11804.58671	11640.8581	60	Marcellus
51	1/12/2020	11605.71239	11441.9838	60	Marcellus
52	1/12/2020	11406.83806	11243.1095	60	Marcellus
53	1/12/2020	11207.96374	11044.2351	60	Marcellus
54	1/12/2020	11009.08941	10845.3608	60	Marcellus
55	1/13/2020	10810.21509	10646.4865	60	Marcellus
56	1/13/2020	10611.34077	10447.6122	60	Marcellus
57	1/13/2020	10412.46644	10248.7378	60	Marcellus
58	1/13/2020	10213.59212	10049.8635	60	Marcellus
59	1/13/2020	10014.71779	9850.98919	60	Marcellus
60	1/13/2020	9815.843468	9652.11486	60	Marcellus
61	1/14/2020	9616.969144	9453.24054	60	Marcellus
62	1/14/2020	9418.09482	9254.36622	60	Marcellus
63	1/14/2020	9219.220495	9055.49189	60	Marcellus
64	1/15/2020	9020.346171	8856.61757	60	Marcellus
65	1/15/2020	8821.471847	8657.74324	60	Marcellus
66	1/15/2020	8622.597523	8458.86892	60	Marcellus
67	1/15/2020	8423.723198	8259.99459	60	Marcellus
68	1/15/2020	8224.848874	8061.12027	60	Marcellus
69	1/16/2020	8025.97455	7862.24595	60	Marcellus
70	1/16/2020	7827.100225	7663.37162	60	Marcellus
71	1/16/2020	7628.225901	7464.4973	60	Marcellus
72	1/16/2020	7429.351577	7265.62297	60	Marcellus
73	1/17/2020	7230.477252	7066.74865	60	Marcellus
74	1/17/2020	7031.602928	6867.87432	60	Marcellus
75	1/17/2020	6832.728604	6669	60	Marcellus

## 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	12/23/2019	85.28	9463	6683	3643	163740	4917.952	N/A
2	12/24/2019	83	9160	5538	3736	401460	7710.238	N/A
3	12/24/2019	84.44	9041	5094	3809	407680	7417.5	N/A
4	12/25/2019	85.75	8796	5448	3622	407720	7485.119	N/A
5	12/25/2019	80.24	9125	5723	3920	407894	7579.738	N/A
6	12/26/2019	84.06	9034	8291	3433	408900	7481.119	N/A
7	12/26/2019	82.11	8971	6532	3716	408420	9604.262	N/A
8	12/27/2019	84.12	9506	5516	3744	406960	7410.024	N/A
9	12/27/2019	83.72	9069	5917	3650	408160	7272.5	N/A
10	12/28/2019	85.51	9007	4866	3882	410040	7315.667	N/A
11	12/28/2019	85.77	9163	5623	3912	403940	7242.405	N/A
12	12/29/2019	85.08	8876	5250	3792	402740	7303.667	N/A
13	12/29/2019	81.38	9404	5825	3484	408200	7207.643	N/A
14	12/30/2019	72.35	8899	6024	4081	405600	10675	N/A
15	12/30/2019	85.55	8796	5530	3925	397680	7124.548	N/A
16	12/30/2019	81.65	8696	4950	3333	397950	7176.476	N/A
17	1/1/2020	79.94	7852	5244	4146	405140	11304.76	N/A
18	1/1/2020	77.98	8186	5017	3254	407910	7362.31	N/A
19	1/1/2020	77.75	8208	5214	3150	409900	7479.429	N/A
20	1/2/2020	77.86	8354	5613	3077	405120	6964.071	N/A
21	1/2/2020	84.6	8775	5712	3451	404340	7375.929	N/A
22	1/2/2020	79.45	8067	5838	3499	407660	6963.5	N/A
23	1/3/2020	79.58	8549	5645	3689	405300	6930.643	N/A
24	1/3/2020	77.86	8908	5812	3325	406540	7273.024	N/A
25	1/4/2020	78.8	8595	5610	3657	407540	6961.19	N/A
26	1/4/2020	80.48	8502	5399	3415	407440	7631.357	N/A
27	1/4/2020	85.48	8827	3935	3369	407820	7259.833	N/A
28	1/5/2020	84.17	8466	5610	3569	405980	6938.595	N/A
29	1/5/2020	85.6	8971	5210	3541	404400	7252.619	N/A
30	1/5/2020	82.34	8313	5493	3565	405320	6934.31	N/A
31	1/6/2020	82.45	8363	5565	3461	403980	6965.31	N/A
32	1/6/2020	84.11	8956	6059	3352	404200	6904.238	N/A
33	1/7/2020	78.63	8149	5715	3289	413060	6872.024	N/A
34	1/7/2020	84.44	8988	6091	3118	405780	6923	N/A
35	1/7/2020	83.31	9047	6617	3162	404980	6914.548	N/A
36	1/7/2020	81.64	8317	6030	3166	404820	6919.738	N/A
37	1/8/2020	84.64	9020	6746	3285	404580	6924.786	N/A
38	1/8/2020	84.74	8759	6539	3135	405860	6937.071	N/A
39	1/9/2020	82.49	8500	5963	3305	410460	6910.119	N/A
40	1/9/2020	85.38	9045	6816	3218	407680	6867.762	N/A
41	1/9/2020	85.92	9004	6314	3224	405300	6881.548	N/A
42	1/10/2020	80.28	8722	6507	4203	406720	8623.405	N/A
43	1/10/2020	85.9	8827	5846	3403	409540	6849.667	N/A
44	1/10/2020	85.76	8998	5765	3241	405040	6950.357	N/A
45	1/10/2020	85.59	8775	5913	3381	407260	6857.571	N/A
46	1/11/2020	84.09	8160	6484	3538	406320	6852.5	N/A
47	1/11/2020	85.66	9032	5868	3478	404840	6713.952	N/A



48	1/11/2020	85.88	9099	5983	3415	409440	6850.071	N/A
49	1/11/2020	83.59	9030	5948	3361	408140	6764.143	N/A
50	1/11/2020	85.9	8151	5881	3364	403300	6811.167	N/A
51	1/12/2020	79.9	7707	5551	3416	404320	8744.762	N/A
52	1/12/2020	85.9	9032	5747	3337	404800	6749.786	N/A
53	1/12/2020	85.25	8893	5704	3129	398240	6718.095	N/A
54	1/12/2020	85.82	8169	6243	3254	400100	6809.405	N/A
55	1/13/2020	85.9	8052	6503	3556	396780	6767.69	N/A
56	1/13/2020	85.85	8653	6241	3298	399700	6699.167	N/A
57	1/13/2020	85.9	8621	5164	3395	401480	6715.071	N/A
58	1/13/2020	85.94	8604	5734	3394	402620	6676.643	N/A
59	1/13/2020	85.52	8071	6023	3292	400760	6744.524	N/A
60	1/13/2020	89.56	8032	6424	3471	405880	6583.119	N/A
61	1/14/2020	85.9	8836	6216	3350	401620	6625.31	N/A
62	1/14/2020	85.9	8594	5414	3232	399520	6720.976	N/A
63	1/14/2020	83	7408	6257	3478	405360	6787.476	N/A
64	1/15/2020	85.61	7770	6595	3374	400520	6778.262	N/A
65	1/15/2020	84.5	7893	5469	3385	404960	6747.476	N/A
66	1/15/2020	85.9	8080	5525	3282	405540	6731.786	N/A
67	1/15/2020	85.9	7964	5249	3485	406840	6738.262	N/A
68	1/15/2020	85.57	7982	6486	3452	404100	6749.833	N/A
69	1/16/2020	85.75	7741	5921	3425	402500	6786.405	N/A
70	1/16/2020	85.2	7734	5508	3399	399340	6645.5	N/A
71	1/16/2020	85.4	7547	5037	3384	402300	6641.405	N/A
72	1/16/2020	85.62	7532	6155	3209	396320	6738.238	N/A
73	1/17/2020	85.57	7303	5560	3218	402020	6799.119	N/A
74	1/17/2020	85.9	7340	5685	3296	403540	6736.286	N/A
75	1/17/2020	85.9	7158	5309	2920	403300	6581.333	N/A
	<b>AVG.</b>	<b>82.3</b>	<b>8,761</b>	<b>5,730</b>	<b>3,530</b>	<b>15,595,214</b>	<b>287,826</b>	<b>TOTAL</b>

**EXHIBIT 3**

LITHOLOGY/ FORMATION	TOP DEPTH (TVD)	BOTTOM DEPTH (TVD)	TOP DEPTH (MD)	BOTTOM DEPTH (MD)
	From Surface	From Surface	From Surface	From Surface
Siltstone	75	175	75	175
Silty Sandstone	175	295	175	295
Siltstone	295	455	295	455
Shaly Siltstone	455	555	455	555
Siltstone	555	715	555	715
Sandstone	715	755	715	755
Siltstone	755	985	755	985
Silty Sandstone	985	1,095	985	1,095
Sandstone	1,095	1,255	1,095	1,255
Silty Sandstone	1,255	1,485	1,255	1,485
Sandy Siltstone	1,485	1,555	1,485	1,555
Sandstone	1,555	1,625	1,555	1,625
Siltstone	1,625	1,687	1,625	1,737
Big Lime	1,712	2,245	1,712	2,297
Fifty Foot Sandstone	2,245	2,485	2,272	2,553
Gordon	2,485	2,783	2,528	2,865
Fifth Sandstone	2,783	2,879	2,840	2,966
Bayard	2,879	3,727	2,941	3,863
Speechley	3,727	3,884	3,838	4,028
Balltown	3,884	4,474	4,003	4,647
Bradford	4,474	4,678	4,622	4,861
Benson	4,678	5,048	4,836	5,254
Alexander	5,048	6,053	5,229	6,374
Sycamore	5,928	6,028	6,211	6,349
Middlesex	6,028	6,113	6,349	6,512
Burkett	6,113	6,135	6,512	6,569
Tully	6,135	6,152	6,569	6,622
Marcellus	6,152	NA	6,622	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.

# ANTERO RESOURCES CORPORATION

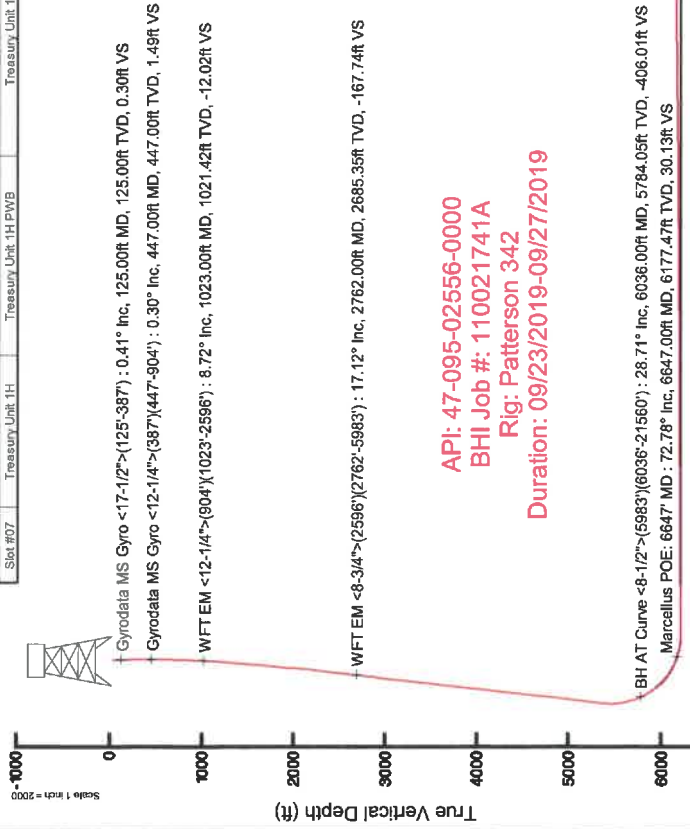
Location: Tyler County, WV  
 Field: Tyler  
 Facility: Kirk Hadley Pad  
 Slot: Slot #07  
 Well: Treasury Unit 1H  
 Wellbore: Treasury Unit 1H PWB

Grid System: NAD27/UTM Zone 17 North, US feet  
 North Reference: Grid North  
 Scale: True distance  
 Measured depths are referenced to Patterson 342 (RKB)  
 Patterson 342 (RKB) to Mean Sea Level: 937 feet  
 Mean Sea Level to Ground level (At Slot Slot #07): -912 feet  
 Coordinates are in feet referenced to Slot

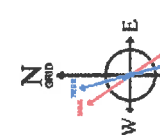
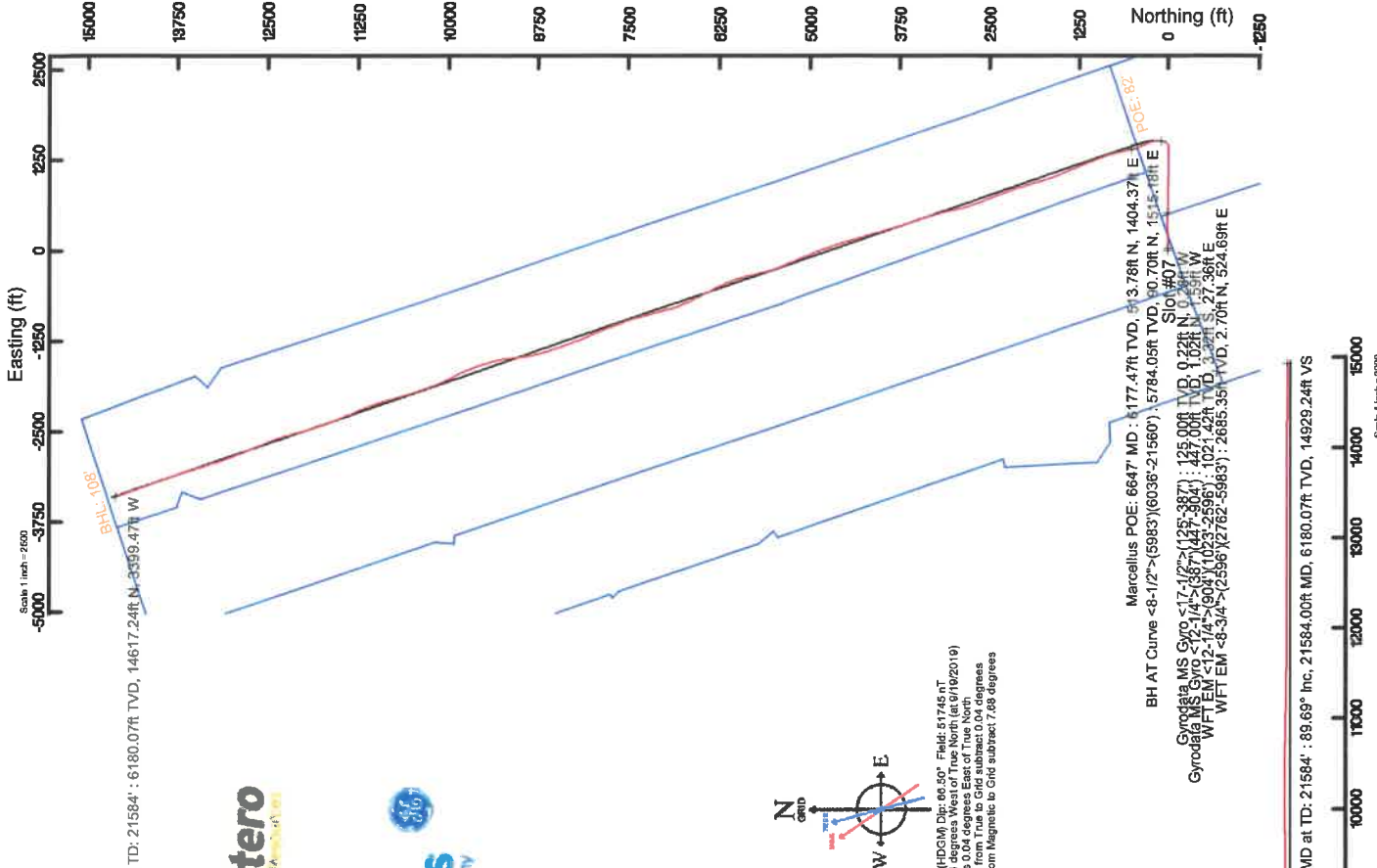
Location Information			
Facility Name	Grid East (US ft)	Grid North (US ft)	Longitude
Kirk Hadley Pad	1659520.850	14530579.820	80°56'56.328"W
Slot	Local E (ft)	Grid North (US ft)	Longitude
Slot #07	69.13	1659630.788	80°56'56.198"W
Patterson 342 (RKB) to Ground level (At Slot Slot #07)	26ft		
Mean Sea Level to Ground level (At Slot Slot #07)	-912ft		
Patterson 342 (RKB) to Mean Sea Level	937ft		

Well Profile Data						
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local E (ft)	Local N (ft)
Tile On	5983.00	28.340	16.930	5797.04	86.97	1509.20
Proj. To Bottom	6063.00	30.080	13.730	5798.72	69.88	1517.89
End of 3D Arc	6194.04	36.843	356.878	5916.57	175.69	1524.00
POE	6647.46	71.593	341.056	6179.00	526.92	1444.03
Landing PL	6878.67	90.000	341.056	6216.00	741.84	1370.26
BHL	21696.99	90.000	341.058	6216.00	-3404.80	0.00

Well Data		
Well	Wellbore	Wellpath
Slot #07	Treasury Unit 1H	Treasury Unit 1H AWP Proj: 21584
Slot #07	Treasury Unit 1H	Treasury Unit 1H PWB Rev-A-0



API: 47-095-025556-0000  
 BHI Job #: 110021741A  
 Rig: Patterson 342  
 Duration: 09/23/2019-09/27/2019



Scale 1 inch = 200'

Vertical Section (ft)

Asimuth 341.08° with reference 0.00 N, 0.00 E

# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	12/23/2019
Job End Date:	1/17/2020
State:	West Virginia
County:	Tyler
API Number:	47-095-02556-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Treasury 1H
Latitude:	39.46332500
Longitude:	-80.93327000
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,212
Total Base Water Volume (gal):	23,533,096
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 Mixture	Halliburton	Base Fluid					
			Water	7732-18-5	100.00000	86.75018	Density = 8.50
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.16393	



Legend LD-2990	MultiChem	Friction Reducer								
					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		13.06309		
			Hydrochloric acid	7647-01-0		30.00000		0.04075		
			Complex Amine Compound	Proprietary		60.00000		0.01062		
			Hydrotreated light petroleum distillate	64742-47-8		30.00000		0.00985		
			Complex Amine Compound	Proprietary		60.00000		0.00908		
			Guar gum	9000-30-0		100.00000		0.00544		
			Glutaraldehyde	111-30-8		30.00000		0.00252		
			Polyethoxylated fatty amine salt	61791-26-2		30.00000		0.00116		
			Surfactant	Proprietary		5.00000		0.00089		
			Sorbitan, mono-9-octadecenoate, (Z)	1338-43-8		5.00000		0.00089		
			Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl chlorides	68424-85-1		5.00000		0.00042		
			Methanol	67-56-1		100.00000		0.00033		
			Organic chloride compound	Proprietary		1.00000		0.00018		
			Ethoxylated alcohols	Proprietary		1.00000		0.00018		
			Alkoxyated polyhydric alcohol	Proprietary		1.00000		0.00018		
			Adipic acid	124-04-9		1.00000		0.00015		
			Ethoxylated alcohols	Proprietary		1.00000		0.00015		
			Poly(oxy-1,2-ethanediyl), alpha-tridecyl-omega-hydroxy-, branched	69011-36-5		1.00000		0.00015		
			Ammonium persulfate	7727-54-0		100.00000		0.00011		
			Ethanol	64-17-5		1.00000		0.00008		

			Modified thiourea polymer	Proprietary	30.00000	0.00007	
			Mixture of dimer and trimer fatty acids of indefinite composition derived from tall oil	61790-12-3	30.00000	0.00007	
			Oxylated phenolic resin	Proprietary	30.00000	0.00003	
			Acrylamide	79-06-1	0.10000	0.00002	
			Organic salt #1	Proprietary	0.10000	0.00002	
			Propargyl alcohol	107-19-7	5.00000	0.00001	
			Ethoxylated alcohols	Proprietary	5.00000	0.00001	
			Hexadecene	629-73-2	5.00000	0.00001	
			Phosphoric acid	7664-38-2	0.10000	0.00001	
			Sodium hydroxide	1310-73-2	0.01000	0.00000	
			Organic salt #2	Proprietary	0.01000	0.00000	
			Sodium glycolate	2836-32-0	0.01000	0.00000	
			Nitrated acetate salt	Proprietary	0.01000	0.00000	
			Formaldehyde	50-00-0	0.01000	0.00000	
			Organic salt #3	Proprietary	0.01000	0.00000	
			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)

State of West Virginia  
Department of Environmental Protection - Office of Oil and Gas  
Discharge Monitoring Report  
Oil and Gas General Permit

Company Name: Antero Resources Corporation  
API No: 47-095-02556 County: Tyler  
District: Meade Well No: Treasury Unit 1H  
Farm Name: Kirk L. Hadley  
Discharge Date/s From:(MMDDYY) 04/13/20 To: (MMDDYY) 05/13/20  
Discharge Times. From: 0:00 To: 24:00  
Total Volume to be Disposed from this facility (gallons): 765,688  
Disposal Option(s) Utilized (write volumes in gallons):

(1) Land Application: 0 (Include a topographical map of the Area.)  
(2) UIC: 43,505 Permit No. 3400923821; 3416729543; 3412123995; 3410523619  
(3) Offsite Disposal: 205 Site Location: Mud Masters  
(4) Reuse: 721,978 Alternate Permit Number: \_\_\_\_\_  
(5) Centralized Facility: 0 Permit No. \_\_\_\_\_  
(6) Other method: 0 (Include an explanation)

Follow Instructions below to determine your treatment category:

Optional Pretreatment test: N/A Cl- mg/l N/A DO mg/l

1. Do you have permission to use expedited treatment from the Director or his representative?  
(Y/N) N/A If yes, who? \_\_\_\_\_ and place a four (4) on line 7.  
If not go to line 2
2. Was Frac Fluid or flowback put into the pit? (Y/N) N/A If yes, go to line 5. If not, go to line 3.
3. Do you have a chloride value pretreatment (see above)? (Y/N) N/A If yes, go to line 4  
If not, go to line 5.
4. Is the Chloride level less than 5000 mg/l? (Y/N) N/A If yes, then enter a one (1) on line 7.
5. Do you have a pretreatment value for DO? (See above) (Y/N) N/A If yes, go to line 6  
If not, enter a three (3) in line 7.
6. Is the DO level greater than 2.5 mg/l?(Y/N) N/A If yes, enter a two (2) on line 7. If not, enter a three (3) on line 7.
7. N/A is the category of your pit. Use the Appropriate section.
8. Comments on Pit condition: \_\_\_\_\_  
N/A No Pit on-site.

Name of Principal Exec. Officer: Gretchen Kohler

Title of Officer: Sr. Environmental & Regulatory Manager

Date Completed: 05/28/2020

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Gretchen Kohler

Digitally signed by Gretchen Kohler  
Date: 2020.05.28 17:17:28 -06'00'

Signature of a Principal Exec. Officer or Authorized agent.



Category 1  
Sampling Results

API No : \_\_\_\_\_

Parameter	Predischarge		Discharge		Units
	Limits	Reported	Limits	Reported	
pH	6-10	_____	6-10	_____	S.U
Settling Time	5	_____	N/A	N/A	Days
Fe	6	_____	6	_____	mg/l
D.O.	2.5	_____	2.5	_____	mg/l
Settleable Sol.	0.5	_____	0.5	_____	mg/l
Cl	5,000	_____	5,000	_____	mg/l
Oil	Trace	_____	Trace	_____	Obs.
TOC**		_____	Monitor	_____	mg/l
Oil and Grease		_____	Monitor	_____	mg/l
Total Al***		_____	Monitor	_____	mg/l
TSS		_____	Monitor	_____	mg/l
Total Mn	Monitor	_____	Monitor	_____	mg/l
Volume		_____	Monitor	_____	Gal
Flow		_____	Monitor	_____	Gal/min
Disposal Area		_____	Monitor	_____	Acres

\*\*\* Al is only reported if the pH is above 9.0

Category 2  
Sampling Results

API No : \_\_\_\_\_

Parameter	Predischarge		Discharge		Units
	Limits	Reported	Limits	Reported	
pH	6-10	_____	6-10	_____	S.U
Settling Time	10	_____	N/A	N/A	Days
Fe	6	_____	6	_____	mg/l
D.O.	2.5	_____	2.5	_____	mg/l
Settleable Sol.	0.5	_____	0.5	_____	mg/l
Cl*	12,500	_____	12,500	_____	mg/l
Oil	Trace	_____	Trace	_____	Obs.
TOC**		_____	Monitor	_____	mg/l
Oil and Grease		_____	Monitor	_____	mg/l
Total Al***		_____	Monitor	_____	mg/l
TSS		_____	Monitor	_____	mg/l
Total Mn	Monitor	_____	Monitor	_____	mg/l
Volume		_____	Monitor	_____	Gal
Flow		_____	Monitor	_____	Gal/min
Disposal Area		_____	Monitor	_____	Acres

\* Can be 25,000 with inspector's approval,

(Inspector's signature): \_\_\_\_\_

Date: \_\_\_\_\_

\*\* Include a description of your aeration technique.

Aeration Code: \_\_\_\_\_

\*\*\* Al is only reported if the pH is above 9.0

Category 3  
Sampling Results

API No : \_\_\_\_\_

Parameter	Predischarge		Discharge		Units
	Limits	Reported	Limits	Reported	
pH	6-10	_____	6-10	_____	S.U
Settling Time	20	_____	N/A	N/A	Days
Fe	6	_____	6	_____	mg/l
D.O.	2.5	_____	2.5	_____	mg/l
Settleable Sol.	0.5	_____	0.5	_____	mg/l
Cl*	12,500	_____	12,500	_____	mg/l
Oil	Trace	_____	Trace	_____	Obs.
TOC**		_____	Monitor	_____	mg/l
Oil and Grease		_____	Monitor	_____	mg/l
Total Al***		_____	Monitor	_____	mg/l
TSS		_____	Monitor	_____	mg/l
Total Mn	Monitor	_____	Monitor	_____	mg/l
Volume		_____	Monitor	_____	Gal
Flow		_____	Monitor	_____	Gal/min
Disposal Area		_____	Monitor	_____	Acres

\* Can be 25,000 with inspector's approval,

(Inspector's signature): \_\_\_\_\_

Date: \_\_\_\_\_

\*\* Include a description of your aeration technique.

Aeration Code: \_\_\_\_\_

\*\*\* Al is only reported if the pH is above 9.0.

Category 4  
Sampling Results

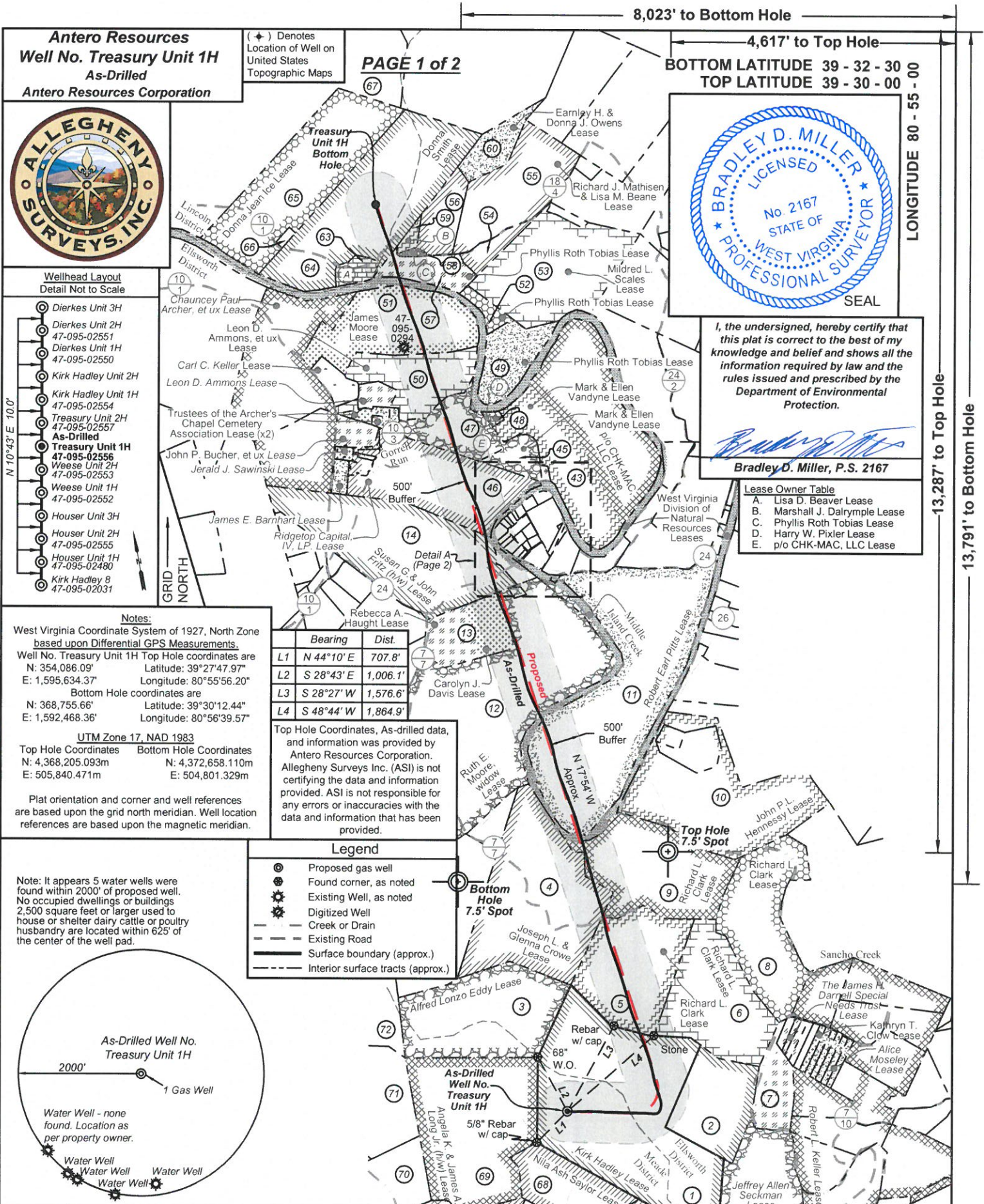
API No: \_\_\_\_\_

Parameter	Predischarge		Discharge		Units
	Limits	Reported	Limits	Reported	
pH	6-10	_____	6-10	_____	S.U
Settling Time	1	_____	N/A	N/A	Days
Fe	Monitor	_____	Monitor	_____	mg/l
D.O.	Monitor	_____	Monitor	_____	mg/l
Settleable Sol.	Monitor	_____	Monitor	_____	mg/l
Cl*	12,500	_____	12,500	_____	mg/l
Oil	Trace	_____	Trace	_____	Obs.
TOC**		_____	Monitor	_____	mg/l
Oil and Grease		_____	Monitor	_____	mg/l
TSS		_____	Monitor	_____	mg/l
Total Mn	Monitor	_____	Monitor	_____	mg/l
Volume		_____	Monitor	_____	Gal
Flow		_____	Monitor	_____	Gal/min
Activated Carbon (0.175)		_____	N/A	N/A	lb/Bt
Date Site Reclaimed	N/A	N/A			10 days from dis.
Disposal Area		_____	Monitor	_____	Acres

\* Can be 25,000 with inspector's approval,

(Inspector's signature): \_\_\_\_\_

Date: \_\_\_\_\_



**Antero Resources**  
**Well No. Treasury Unit 1H**  
**As-Drilled**  
**Antero Resources Corporation**

(+) Denotes Location of Well on United States Topographic Maps

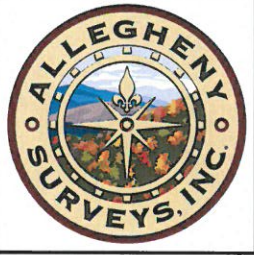
PAGE 1 of 2

8,023' to Bottom Hole

4,617' to Top Hole

BOTTOM LATITUDE 39 - 32 - 30  
 TOP LATITUDE 39 - 30 - 00

LONGITUDE 80 - 55 - 00



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**

**Lease Owner Table**

A.	Lisa D. Beaver Lease
B.	Marshall J. Dalrymple Lease
C.	Phyllis Roth Tobias Lease
D.	Harry W. Pixler Lease
E.	p/o CHK-MAC, LLC Lease

- Wellhead Layout**  
 Detail Not to Scale
- Dierkes Unit 3H
  - Dierkes Unit 2H 47-095-02551
  - Dierkes Unit 1H 47-095-02550
  - Kirk Hadley Unit 2H
  - Kirk Hadley Unit 1H 47-095-02554
  - Treasury Unit 2H 47-095-02557
  - As-Drilled Treasury Unit 1H 47-095-02556
  - Weese Unit 2H 47-095-02553
  - Weese Unit 1H 47-095-02552
  - Houser Unit 3H
  - Houser Unit 2H 47-095-02555
  - Houser Unit 1H 47-095-02480
  - Kirk Hadley 8 47-095-02031

**Notes:**  
 West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.  
 Well No. Treasury Unit 1H Top Hole coordinates are N: 354,086.09' Latitude: 39°27'47.97"  
 E: 1,595,634.37' Longitude: 80°55'56.20"  
 Bottom Hole coordinates are N: 368,755.66' Latitude: 39°30'12.44"  
 E: 1,592,468.36' Longitude: 80°56'39.57"

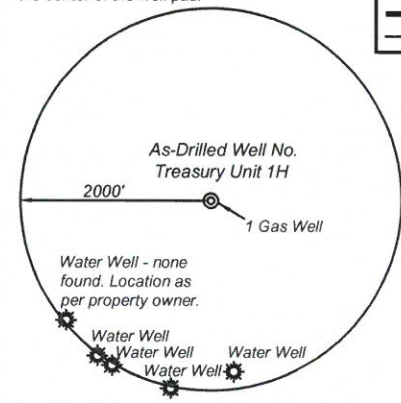
Bearing	Dist.
L1 N 44°10' E	707.8'
L2 S 28°43' E	1,006.1'
L3 S 28°27' W	1,576.6'
L4 S 48°44' W	1,864.9'

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.

**UTM Zone 17, NAD 1983**  
 Top Hole Coordinates N: 4,368,205.093m E: 505,840.471m  
 Bottom Hole Coordinates N: 4,372,658.110m E: 504,801.329m

Plat orientation and corner and well references are based upon the grid north meridian. Well location references are based upon the magnetic meridian.

- Legend**
- Proposed gas well
  - Found corner, as noted
  - ⊙ Existing Well, as noted
  - ⊙ Digitized Well
  - Creek or Drain
  - Existing Road
  - Surface boundary (approx.)
  - Interior surface tracts (approx.)



FILE NO: 101-54-E-18  
 DRAWING NO: Treasury 1H 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: April 23 20 20  
 OPERATOR'S WELL NO. Treasury Unit 1H  
 API WELL NO  
 47 - 095 - 02556  
 STATE COUNTY PERMIT

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

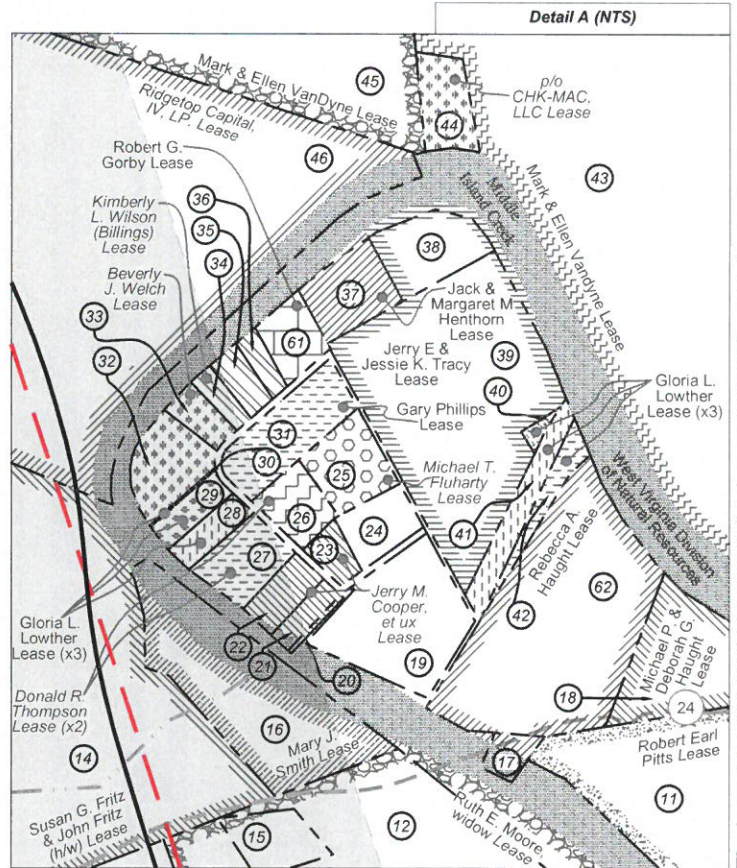
LOCATION: ELEVATION: As-Built 912' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Middlebourne  
 DISTRICT: Meade, Ellsworth, Lincoln COUNTY: Tyler 34.3; 21.48; 127.39; 95.6; 189.3625; 14;  
 SURFACE OWNER: Kirk L. Hadley Mark & Ellen VanDyne; Leon D. Ammons, et ux; Phyllis Roth Tobias; West Virginia Division of Natural Resources (2); Susan G. & John Fritz; Ridgetop Capital, IV, LP.; Carolyn J. Davis; 33.11; 35.11; 64.48;  
 ROYALTY OWNER: Kirk Hadley; Richard L. Clark (2); Joseph L. & Glenna Crowe; James Moore; LEASE NO: ACREAGE: 162 56.98; 140; 100; 202; 8.62; 61.25; 66.84;

PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled 6,180' TVD  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 21,584' 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

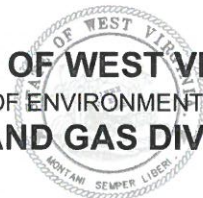
No.	TM - Par.	Bk / Pg	Acres	Owner(s)	District
54	13 - 3.4	415 / 733	7.505	Justin L. & Jessica Carpenter	Ellsworth District
53	13 - 5	393 / 473	78.00	Mildred Scales	
52	13 - 7	387 / 671	6.04	Robert D. & Sherry A. Ball	
51	13 - 8	WB43 / 425	56.98	Larry Moore & James Moore	
50	13 - 8.1	371 / 36	35.11	Leon B. & Deanna N. Ammons	Ellsworth District
49	13 - 6	387 / 671	21.42	Robert D. & Sherry A. Ball	
48	19 - 4	388 / 250	1.20	Harry Wayne Pixler	
47	19 - 56	390 / 553	23.56	Mark L. & Ellen W. VanDyne	
46	19 - 33	308 / 18	60.12	Mark L. & Ellen W. VanDyne	Ellsworth District
45	19 - 55	333 / 208	9.55	Mark & Ellen VanDyne	
44	19 - 5	471 / 812	0.89	Ruth A. McDonald	
43	20 - 1	210 / 37	126.90	Mark L. & Ellen W. VanDyne	
42	19 - 29	39 / 506	0.39	Gloria L. Lowther	Ellsworth District
41	19 - 28	39 / 506	0.083	Gloria L. Lowther	
40	19 - 27	39 / 506	0.08	Gloria L. Lowther	
39	19 - 6	245 / 651	8.05	Jerry E. & Jessie K. Tracy	
38	19 - 7	337 / 653	0.77	Jerry E. & Jessie K. Tracy	Ellsworth District
37	19 - 26	326 / 86	0.60	Jack & Margaret M. Henthorn	
36	19 - 9	355 / 675	0.23	Kimberly L. Billings	
35	19 - 10	355 / 675	0.35	Kimberly L. Billings	
34	19 - 11	355 / 675	0.23	Kimberly L. Billings	Ellsworth District
33	19 - 12	255 / 334	0.35	Beverly J. Welch	
32	19 - 13	255 / 334	0.80	Beverly J. Welch	
31	19 - 25.1	303 / 105	1.288	Bill & Patricia Lemasters	
30	19 - 13.1	355 / 782	0.03	Gloria L. Lowther	Ellsworth District
29	19 - 14	355 / 782	0.39	Gloria L. Lowther	
28	19 - 15	355 / 782	0.39	Gloria L. Lowther	
27	19 - 16	329 / 47	0.79	Donald R. Thompson	
26	19 - 25	329 / 47	1.241	Donald R. Thompson	Ellsworth District
25	19 - 25.3	334 / 117	0.631	Keith & Barbara Frum	
24	19 - 25.2	334 / 117	0.631	Keith & Barbara Frum	
23	19 - 21	312 / 141	0.30	Jerry Michael & Anna Arlene Cooper	
22	19 - 17	312 / 141	0.51	Jerry Michael & Anna Arlene Cooper	Ellsworth District
21	19 - 20	312 / 141	0.22	Jerry Michael & Anna Arlene Cooper	
20	19 - 18	312 / 141	0.06	Jerry Michael & Anna Arlene Cooper	
19	19 - 19	226 / 266	2.308	Keith V. & Barbara Frum	
18	20 - 34	344 / 268	7.75	Michael P. & Deborah G. Haught	Ellsworth District
17	19 - 31	334 / 603	0.25	WV Department of Highways	
16	19 - 32	147 / 426	4.41	Mary J. Smith	
15	19 - 52.1	369 / 434	1.00	Hope Fellowship in Christ's Church	
14	19 - 34	318 / 636	95.60	Chauncy P. & Ruth Archer	Ellsworth District
13	19 - 35	WB30 / 315	29.00	Rebecca Haught	
12	19 - 52	WB43 / 425	188.36	Larry Moore, et al	
11	20 - 35	181 / 376	140.00	Robert C. Sellers, et al	
10	20 - 98	247 / 7	74.231	John P. L. Hennessy	Ellsworth District
9	20 - 97	314 / 699	66.84	Dennis J. & Connie S. Moore	
8	26 - 3	448 / 216	63.02	Dennis James Moore, et al	
7	26 - 9	404 / 352	28.021	JB Exploration I, LLC	
6	26 - 2	314 / 701	63.40	Larry G. & Besty E. Moore	Ellsworth District
5	26 - 1	448 / 216	61.78	Dennis James Moore, et al	
4	19 - 54	WB36 / 738	100.00	Deborah Susan Reed	
3	25 - 2	333 / 188	75.00	Angela K. & James A. Long Jr.	
2	26 - 11	321 / 842	40.00	Kirk L. Hadley	Ellsworth District
1	26 - 12	213 / 74	162.00	Kirk L. Hadley	
No.	TM - Par.	Bk / Pg	Acres	Owner(s)	

72	2 - 15.1	333 / 188	23.70	Angela K. & James A. Long Jr.
71	2 - 5	392 / 712	69.50	Robert L. & Nancy C. Donaghy, et al
70	2 - 5.1	204 / 309	54.24	Donald R. & Shirley D. Fletcher
69	2 - 15	333 / 188	100.00	Angela K. & James A. Long Jr.
68	3 - 1.2	309 / 598	41.25	William Kent & Deborah Lee Snyder
67	15 - 13	174 / 412	140.00	B.F., Ben H., & Ida M. Kile
66	15 - 16.1	339 / 706	1.00	Richard G. Thomas
65	15 - 16	WB30 / 1	81.67	Everett Glen Thomas
64	15 - 17	191 / 12	127.39	Earl & Donna Smith
63	15 - 17.1	327 / 758	6.35	Lisa D. Beaver
62	19 - 30	WB30 / 315	5.40	Rebecca A. Haught
61	19 - 8	357 / 127	0.60	Robert G. & Pamela R. Gorby
60	13 - 3.1	350 / 388	13.919	Earnley H. & Donna J. Owens
59	13 - 3.2	342 / 509	2.433	Marshal J. & Peggy S. Dalrymple
58	13 - 4	267 / 209	1.03	Marshal J. Dalrymple
57	13 - 3	387 / 671	8.62	Robert D. & Sherry A. Ball
56	13 - 3.5	406 / 668	17.648	Lisa M. Beane
55	13 - 3.3	349 / 563	70.509	Richard J. Mathisen
No.	TM - Par.	Bk / Pg	Acres	Owner(s)



FILE NO: 101-54-E-18  
 DRAWING NO: Treasury 1H 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: April 23 20 20  
 OPERATOR'S WELL NO. Treasury Unit 1H  
 API WELL NO  
 47 - 095 - 02556  
 STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
 (IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW  
 LOCATION: ELEVATION: As-Built 912' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Middlebourne  
 DISTRICT: Meade, Ellsworth, Lincoln COUNTY: Tyler 34.3; 21.48; 127.39;  
 SURFACE OWNER: Kirk L. Hadley Mark & Ellen VanDyne; Leon D. Ammons, et ux; Ruth E. Moore, widow; Robert Earl Pitts; Donna Smith; Phyllis Roth Tobias; West Virginia Division of Natural Resources (2); Susan G. & John Fritz; Ridgetop Capital, IV, LP.; Carolyn J. Davis; 95.6; 189.3625; 14;  
 ROYALTY OWNER: Kirk Hadley; Richard L. Clark (2); Joseph L. & Glenna Crowe; James Moore; LEASE NO: ACREAGE: 162 33.11; 35.11; 64.48;  
 PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION 56.98; 140; 100; 202;  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled 8.62; 61.25; 66.84;  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 21,584' MD 6,180' TVD

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