

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

RECEIVED
Office of Oil and Gas

JAN 24 2023

WV Department of
Environmental Protection

API 47 - 017 - 06912 County Doddridge District West Union
Quad West Union Pad Name Gaspar Field/Pool Name -----
Farm name Antero Midstream, LLC Well Number Calhoun 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 4351726m Easting 520467m
Landing Point of Curve Northing 4351684.51m Easting 520524.02m
Bottom Hole Northing 4349020m Easting 521410m

Elevation (ft) 1189' 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 1/18/2022 Date drilling commenced 3/5/2022 Date drilling ceased 5/14/2022
Date completion activities began 8/13/2022 Date completion activities ceased 10/13/2022
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 140, 200, 171' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 1345' Void(s) encountered (Y/N) depths No
Coal depth(s) ft 814' Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No

Reviewed by:
IMR 02/02/23
03/17/2023

APPROVED

API 47-017 - 06912 Farm name Antero Midstream, LLC Well number Calhoun 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	28"	20"	130'	New	78.67#, X-60	N/A	Y
Surface	17-1/2"	13-3/8"	350'	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"	16278'	New	23#, P-110CYHP	N/A	Y
Tubing		2-3/8"	6847-2/5'		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	254 sx	15.6	1.18	22	0'	8 Hrs.
Surface	Class A	390 sx	15.8	1.16	452	0'	8 Hrs.
Coal							
Intermediate 1	Class A	890 sx	15.8	1.16	1032	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	2515 sx (Tail)	13.5 (Lead), 15.2(Tail)	5.92 (Lead), 1.18(Tail)	2968	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 16278' MD, 6871' TVD (BHL), 6931' (Deepest Point Drilled) Loggers TD (ft) 16278' MD

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

Plug back procedure N/A

Kick off depth (ft) 6311'

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 _____

RECEIVED
Office of Oil and Gas

JAN 24 2023

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

WV Department of
Environmental Protection

WERE TRACERS USED Yes No TYPE OF TRACER(S) USED N/A

API 47-017 - 06912 Farm name Antero Midstream, LLC Well number Calhoun 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.

RECEIVED
Office of Oil and Gas
JAN 24 2023
WV Department of Environmental Protection
03/17/2023

API 47- 017 - 06912 Farm name Antero Midstream, LLC Well number Calhoun Unit 2H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>		
<u>Marcellus</u>	<u>6857' (TOP)</u>	<u>TVD</u>	<u>7021' (TOP) MD</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 2388 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 7039 mcfpd Oil 66 bpd NGL --- bpd Water 912 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 ₂ 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 H & P Drilling
Address 912 N Eagle Valley Rd City Howard State PA Zip 16841

Logging Company GR Energy Services
Address 2150 Town Square Pl #410 City Sugar Land State TX Zip 77479

Cementing Company Halliburton Energy Services
Address 3000 W. Sam Houston Pkwy City Houston State TX Zip 76114

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

Please insert additional pages as applicable.

Completed by Carly Marvel Telephone 303-357-7373
Signature Carly Marvel Title Permitting Agent Date 1/6/2023

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

RECEIVED
Office of Oil and Gas
JAN 24 2023

API 47-017-06912 Farm Name Antero Midstream, LLC Well Number Calhoun Unit 2H

Exhibit 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	08/13/2022	16162	16116.8	60	Marcellus
2	08/14/2022	16079.31185	15913.8711	60	Marcellus
3	08/14/2022	15878.38296	15712.9422	60	Marcellus
4	08/14/2022	15677.45407	15512.0133	60	Marcellus
5	08/15/2022	15476.52519	15311.0844	60	Marcellus
6	08/15/2022	15275.5963	15110.1556	60	Marcellus
7	08/16/2022	15074.66741	14909.2267	60	Marcellus
8	08/16/2022	14873.73852	14708.2978	60	Marcellus
9	08/17/2022	14672.80963	14507.3689	60	Marcellus
10	08/17/2022	14471.88074	14306.44	60	Marcellus
11	08/18/2022	14270.95185	14105.5111	60	Marcellus
12	08/18/2022	14070.02296	13904.5822	60	Marcellus
13	08/18/2022	13869.09407	13703.6533	60	Marcellus
14	08/25/2022	13668.16519	13502.7244	60	Marcellus
15	08/25/2022	13467.2363	13301.7956	60	Marcellus
16	08/25/2022	13266.30741	13100.8667	60	Marcellus
17	08/26/2022	13065.37852	12899.9378	60	Marcellus
18	08/26/2022	12864.44963	12699.0089	60	Marcellus
19	08/27/2022	12663.52074	12498.08	60	Marcellus
20	08/27/2022	12462.59185	12297.1511	60	Marcellus
21	08/27/2022	12261.66296	12096.2222	60	Marcellus
22	08/28/2022	12060.73407	11895.2933	60	Marcellus
23	08/28/2022	11859.80519	11694.3644	60	Marcellus
24	08/29/2022	11658.8763	11493.4356	60	Marcellus
25	08/29/2022	11457.94741	11292.5067	60	Marcellus
26	08/29/2022	11257.01852	11091.5778	60	Marcellus
27	08/30/2022	11056.08963	10890.6489	60	Marcellus
28	08/30/2022	10855.16074	10689.72	60	Marcellus
29	08/31/2022	10654.23185	10488.7911	60	Marcellus
30	08/31/2022	10453.30296	10287.8622	60	Marcellus
31	08/31/2022	10252.37407	10086.9333	60	Marcellus
32	08/31/2022	10051.44519	9886.00444	60	Marcellus
33	09/01/2022	9850.516296	9685.07556	60	Marcellus
34	09/01/2022	9649.587407	9484.14667	60	Marcellus
35	09/01/2022	9448.658519	9283.21778	60	Marcellus
36	09/01/2022	9247.72963	9082.28889	60	Marcellus
37	09/01/2022	9046.800741	8881.36	60	Marcellus
38	09/01/2022	8845.871852	8680.43111	60	Marcellus
39	09/02/2022	8644.942963	8479.50222	60	Marcellus
40	09/02/2022	8444.014074	8278.57333	60	Marcellus
41	09/02/2022	8243.085185	8077.64444	60	Marcellus
42	09/02/2022	8042.156296	7876.71556	60	Marcellus
43	09/02/2022	7841.227407	7675.78667	60	Marcellus
44	09/03/2022	7640.298519	7474.85778	60	Marcellus
45	09/03/2022	7439.36963	7273.92889	60	Marcellus
46	09/03/2022	7238.440741	7073	60	Marcellus

API 47-017-06912 Farm Name Antero Midstream, LLC Well Number Calhoun 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	08/13/2022	76.0	9514	6963	4213	176,490	199,668	N/A
2	08/14/2022	97.9	9858	5749	4891	398,300	363,820	N/A
3	08/14/2022	97.3	9420	5195	4499	404,840	316,601	N/A
4	08/14/2022	96.0	9150	4795	4732	396,480	300,461	N/A
5	08/15/2022	98.0	9404	4988	4845	409,080	305,884	N/A
6	08/15/2022	96.4	8953	4959	4580	408,130	301,632	N/A
7	08/16/2022	96.4	9107	5643	4759	402,580	286,898	N/A
8	08/16/2022	97.6	9188	5494	4386	402,510	294,833	N/A
9	08/17/2022	96.4	9335	4835	4864	399,200	300,147	N/A
10	08/17/2022	96.8	9060	5792	4583	406,090	287,443	N/A
11	08/18/2022	96.5	8952	5364	4336	397,990	282,191	N/A
12	08/18/2022	98.0	9092	5413	4856	410,360	293,823	N/A
13	08/18/2022	98.5	8921	5600	4515	411,130	291,970	N/A
14	08/25/2022	96.5	8556	4188	5621	401,030	295,843	N/A
15	08/25/2022	95.1	8661	5637	4550	404,430	306,704	N/A
16	08/25/2022	96.5	8798	5835	4241	412,610	296,951	N/A
17	08/26/2022	97.7	8554	5641	4823	398,850	289,858	N/A
18	08/26/2022	96.4	8811	5555	4283	399,920	284,999	N/A
19	08/27/2022	96.2	8816	5728	4511	413,020	283,805	N/A
20	08/27/2022	96.0	8522	5652	4952	405,670	289,056	N/A
21	08/27/2022	97.2	8236	5874	4712	411,720	293,364	N/A
22	08/28/2022	95.5	8488	6129	4241	406,840	291,577	N/A
23	08/28/2022	96.2	8528	5639	4521	396,510	281,324	N/A
24	08/29/2022	96.5	8040	4005	5360	396,180	282,991	N/A
25	08/29/2022	97.5	8202	5746	4184	375,660	268,695	N/A
26	08/29/2022	97.8	8223	5829	4219	397,320	269,030	N/A
27	08/30/2022	97.6	8021	5757	4502	399,490	297,970	N/A
28	08/30/2022	97.2	8054	4572	4304	396,550	285,962	N/A
29	08/31/2022	96.5	7741	5887	4868	401,270	291,708	N/A
30	08/31/2022	98.0	7950	3686	4149	402,350	285,010	N/A
31	08/31/2022	96.9	8022	5619	4324	399,810	289,535	N/A
32	08/31/2022	98.4	7882	5698	4904	405,540	291,612	N/A
33	09/01/2022	98.4	7993	5483	4603	412,620	295,939	N/A
34	09/01/2022	98.3	7821	5471	4177	401,260	286,794	N/A
35	09/01/2022	98.1	7605	4668	4196	404,470	291,172	N/A
36	09/01/2022	98.2	7759	5753	4495	405,800	289,058	N/A
37	09/01/2022	96.1	7605	5510	4193	399,950	287,511	N/A
38	09/01/2022	96.8	7450	5534	4237	397,230	286,011	N/A
39	09/02/2022	96.6	7533	5795	4530	396,030	287,597	N/A
40	09/02/2022	98.0	7592	5328	4630	399,090	285,911	N/A
41	09/02/2022	97.8	7386	5644	4922	393,910	284,067	N/A
42	09/02/2022	97.5	7867	5826	4665	392,300	286,774	N/A
43	09/02/2022	97.5	7540	5626	4631	395,020	274,397	N/A
44	09/03/2022	98.6	7562	5460	4502	404,070	282,651	N/A
45	09/03/2022	98.4	7575	5640	4748	414,610	284,981	N/A
46	09/03/2022	97.3	7344	5571	3862	400,780	306,490	N/A
	AVG=	97	8,363	5,452	4,559	18,265,090	13,330,718	TOTAL

03/17/2023

EXHIBIT 3

LITHOLOGY/ FORMATION	TOP DEPTH (TVD)	BOTTOM DEPTH (TVD)	TOP DEPTH (MD)	BOTTOM DEPTH (MD)
	From Surface	From Surface	From Surface	From Surface
Shaley Siltstone	120	210	120	210
Shale	210	390	210	390
Silty Shale	390	480	390	480
Shale	480	810	480	810
Silty Shale	810	840	810	840
Shaley Sandstone	840	960	840	960
Shaley Sandstone	960	1,050	960	1,050
Shale	1,050	1,110	1,050	1,110
Sandy Shale	1,110	1,230	1,110	1,230
Shaley Sandstone	1,230	1,290	1,230	1,290
Sandstone, Tr Shale, Tr Silt	1,290	1,710	1,290	1,710
Shaley Sandstone, Occ Coal	1,710	1,890	1,710	1,890
Sandy Shale, Tr Coal, Tr Limestone	1,890	2,135	1,890	2,135
Big Lime	2,165	2,787	2,135	2,787
Fifty Foot Sandstone	2,787	2,862	2,757	2,862
Gordon	2,862	3,145	2,832	3,145
Fifth Sandstone	3,145	3,339	3,115	3,339
Bayard	3,339	4,027	3,309	4,027
Speechley	4,027	4,288	3,997	4,288
Balltown	4,288	4,709	4,258	4,711
Bradford	4,709	5,155	4,681	5,159
Benson	5,155	5,433	5,129	5,441
Alexander	5,433	6,671	5,411	6,706
Sycamore	6,435	6,641	6,452	6,676
Middlesex	6,641	6,775	6,676	6,858
Burkett	6,775	6,804	6,858	6,906
Tully	6,804	6,857	6,906	7,021
Marcellus	6,857	NA	7,021	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:	8/13/2022
Job End Date:	9/3/2022
State:	West Virginia
County:	Doddridge
API Number:	47-017-06912-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	CALHOUN UNIT 2H
Latitude:	39.31461000
Longitude:	-80.76276000
Datum:	WGS84
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,931
Total Base Water Volume (gal):	13,689,823
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	Halliburton	Base Fluid					
			Water	7732-18-5	100.00000	86.25367	Density = 8.50
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.17221	

Excelerate LX-15	Halliburton	Friction Reducer					
				Listed Below			
OPTIFLO-II DELAYED RELEASE BREAKER	Halliburton	Breaker					
				Listed Below			
MC B-8614A	MultiChem	Biocide					
				Listed Below			
HYDROCHLORI C ACID, 22 BAUME	Halliburton	Solvent					
				Listed Below			
Sand-Premium White-30/70	Halliburton	Proppant					
				Listed Below			
Sand-Common White-100 Mesh, SSA-2	Halliburton	Proppant					
				Listed Below			
HAI-501	Halliburton	Acid Corrosion Inhibitor					
				Listed Below			
FDP-S1443-21	Halliburton	Corrosion Inhibitor					
				Listed Below			

WG-36 GELLING AGENT	Halliburton	Gelling Agent					
				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	13.53892	
			Hydrochloric acid	7647-01-0	30.00000	0.04129	
			Complex Amine Compound	Proprietary	60.00000	0.02603	
			Guar gum	9000-30-0	100.00000	0.01720	
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.01301	
			Glutaraldehyde	111-30-8	30.00000	0.00257	
			Sobitan, mono-9-octadecenoate, (Z)	1338-43-8	5.00000	0.00217	
			Surfactant	Proprietary	5.00000	0.00217	
			Ethoxylated alcohols	Proprietary	30.00000	0.00048	
			Alkoxyated polyhydric alcohol	Proprietary	1.00000	0.00043	
			Organic chloride compound	Proprietary	1.00000	0.00043	
			Alkyl (C12-16) dimethylbenzyl ammonium chloride	68424-85-1	5.00000	0.00043	
			Ammonium persulfate	7727-54-0	100.00000	0.00041	
			Methanol	67-56-1	100.00000	0.00029	
			Oxylated phenolic resin	Proprietary	30.00000	0.00012	
			Ethanol	64-17-5	1.00000	0.00009	
			Modified thiourea polymer	Proprietary	30.00000	0.00006	
			Mixture of dimer and trimer fatty acids of indefinite composition derived from tall oil	61790-12-3	30.00000	0.00005	
			Hexadecene	629-73-2	5.00000	0.00001	
			Propargyl alcohol	107-19-7	5.00000	0.00001	
			Aldehyde	Proprietary	5.00000	0.00001	

			Formaldehyde	50-00-0	0.01000	0.00000	
			Organic salt #1	Proprietary	0.01000	0.00000	
			Sodium hydroxide	1310-73-2	0.01000	0.00000	
			Sodium glycolate	2836-32-0	0.01000	0.00000	
			Nitrated acetate salt	Proprietary	0.01000	0.00000	
			Acrylamide	79-06-1	0.01000	0.00000	
			Organic salt #2	Proprietary	0.01000	0.00000	
			C.I. pigment Orange 5	3468-63-1	1.00000	0.00000	
			1-Octadecene	112-88-9	1.00000	0.00000	
			1-Hexadecene	629-73-2	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. Calhoun 2H
As-Drilled
 Antero Resources Corporation



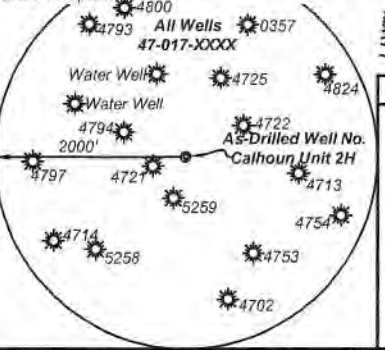
Top Hole Coordinates, As-drilled data, and information was provided by Antero Resources Corporation. Allegheny Surveys Inc. (ASI) is not certifying the data and information provided. ASI is not responsible for any errors or inaccuracies with the data and information that has been provided.

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: 2 water well was 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
- Monument, as noted
- Existing Well, as noted
- Digitized Well, as noted
- Creek or Drain
- Road
- Surface boundary (approx.)
- Interior surface tracts (approx.)

Sheet 1 of 2

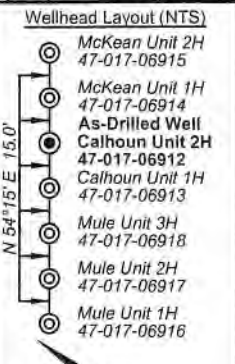
3,611' to Top Hole
 538' to Bottom Hole
 TOP HOLE LATITUDE 39 - 20 - 00
 BTM HOLE LATITUDE 39 - 17 - 30
 Notes
 West Virginia Coordinate System of 1927, North Zone
 based upon Differential GPS Measurements
 Well No. Calhoun Unit 2H Top Hole coordinates are
 N: 299,208.84' Latitude: 39°18'52.60"
 E: 1,642,727.81' Longitude: 80°45'45.94"
 Bottom Hole coordinates are
 N: 290,275.34' Latitude: 39°17'24.72"
 E: 1,645,676.42' Longitude: 80°45'06.84"
 UTM Zone 17, NAD 1983
 Top Hole Coordinates Bottom Hole Coordinates
 N: 4,351,726.402m N: 4,349,019.802m
 E: 520,466.563m E: 521,410.250m
 Plat orientation and corner and well references are based upon the grid north meridian.
 Well location references are based upon the magnetic meridian.

Calhoun Unit 2H As-Drilled POE Coordinates
 West Virginia Coordinate System of 1927, North Zone
 N: 299,068.21'
 E: 1,642,914.08'
 Latitude: 39°18'51.24"
 Longitude: 80°45'43.55"
 UTM Zone 17, NAD 1983
 N: 4,351,684.507m
 E: 520,524.024m

Leases

A	William A. Farr
B	James Lincoln Smith
C	William Ashburn Heirs
D	Betty Lou Calhoun
E	Jennie Mae Sponaugle, et al
F	Robert Powell, et ux
G	William Franklin Willis
H	Carolyn E. Farr Trust
I	Franklin L. Butler & Key Oil Co.
J	WVDNR
K	WV State Rail Authority
L	Wanda Longacre, et al
M	C.M. Tate, et ux
N	Thomas L. Barnes, et ux
O	Sara Lynn Bailey

Bearing	Dist.
L1 N 88°30' E	1,568.1'
L2 S 66°48' E	665.7'
L3 S 62°34' W	714.0'
L4 N 17°52' W	1,546.8'



FILE NO: 54-30-WU-14
 DRAWING NO: Calhoun Unit 2H As-Drilled
 SCALE: 1" = 1500'
 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: December 20 20 22
 OPERATOR'S WELL NO. Calhoun Unit 2H
 API WELL NO
 47 - 017 - 06912
 STATE COUNTY PERMIT

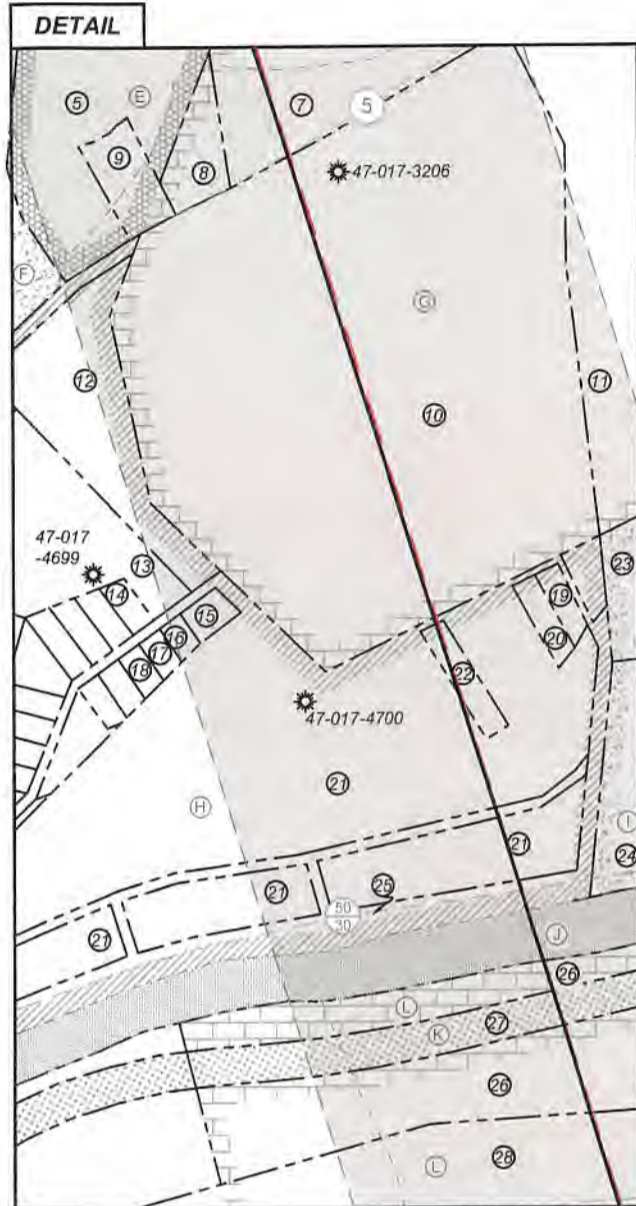
WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
 LOCATION: ELEVATION: As-Built: 1,189' WATERSHED: Middle Island Creek QUADRANGLE: West Union
 DISTRICT: West Union Antero COUNTY: Doddridge
 SURFACE OWNER: Midstream, LLC Thomas L. Barnes, et ux; WV State Rail Authority; WVDNR
 ROYALTY OWNER: William A. Farr; James Lincoln Smith; William Franklin Willis; LEASE NO: ACREAGE: 45.8
 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: 6,871' TVD
 16,278' MD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Kevin Ellis
 ADDRESS: 1615 Wynkoop Street ADDRESS: 535 White Oaks Blvd.
 Denver, CO 80202 Bridgeport, WV 26330

03/17/2023



ID	TM/Par	Owner	Bk/Pg	Acres
1	7-18	Antero Midstream, LLC	387/708	116.54
2	7-18.1	Antero Midstream, LLC	346/612	45.80
3	7-29	Sharon A. Gaspar	W113/242	182.67
4	8-31	Jacqueline D. & Gayford A. Cox	469/369	53.75
5	7-25	Robert W. Sponaugle, et al	369/496	49.50
6	11-8	Granville Jr. & Rose Mae Criss	317/43	44.15
7	12-2	Frank Jr & Doris E. Holtz	235/23	13.54
8	11-11.1	Robert W. Sponaugle, et al	369/496	0.25
9	7-25.1	Elden C. & Teresa A. Sponaugle	349/701	0.50
10	12-1	Antero Midstream, LLC	378/34	18.90
11	12-4	Sharon E. Walker & Ronald J. Burns	259/365	18.70
12	34-3	Spencer Enterprises, LLC	261/512	2.13
13	34-62	Terri Lynn Whitehill	AP44/659	2.90
14	34-82	Terri Lynn Whitehill	AP44/659	0.13
15	34-90	Terri Lynn Whitehill	AP44/659	0.14
16	34-89	Terri Lynn Whitehill	AP44/659	0.10
17	34-88	Terri Lynn Whitehill	AP44/659	0.10
18	34-87	Terri Lynn Whitehill	AP44/659	0.11
19	34-98	Roy F. Rupert	122/141	0.32
20	34-116	W.W. Gaskins, Heirs	76/305	0.20
21	34-98	Rossie & Eva Lowery	272/321	15.62
22	34-18	Ina Jessa Underwood, Heirs	W6/397	0.28
23	12-6	Rossie & Eva Lowery, et al	258/336	15.30
24	12-23	Rossie & Eva Lowery	258/336	14.63
25	34-13	W. Va. D.O.H.	---	0.36
26	12-103	Barnes Siblings Property, LLC	471/545	43.11
27	12-101	WV Railroad Maintenance Authority	216/166	11.30
28	12-50	Key Oil Co., et al	252/558	76.98
29	12-64	Frank L. Butler, et al	259/275	34.13
30	12-71.1	Franklin L. Butler & Key Oil Co.	256/324	81.91
31	12-64.1	Frank L. Butler, et al	259/275	15.50



FILE NO: 54-30-WU-14
 DRAWING NO: Calhoun Unit 2H As-Drilled
 SCALE: 1" = 1500'
 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: December 20 2022
 OPERATOR'S WELL NO. Calhoun Unit 2H
 API WELL NO
 47 - 017 - 06912
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built: 1,189' WATERSHED: Middle Island Creek QUADRANGLE: West Union
 DISTRICT: West Union Antero COUNTY: Doddridge 03/17/2023

SURFACE OWNER: Midstream, LLC Thomas L. Barnes, et ux; WV State Rail Authority; WVDNR ACREAGE: 45.8
 ROYALTY OWNER: William A. Farr; James Lincoln Smith; William Franklin Willis; LEASE NO: ACREAGE: 301.19; 115; 34

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: 16,278' MD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Kevin Ellis
 ADDRESS: 1615 Wynkoop Street ADDRESS: 535 White Oaks Blvd.
 Denver, CO 80202 Bridgeport, WV 26330

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



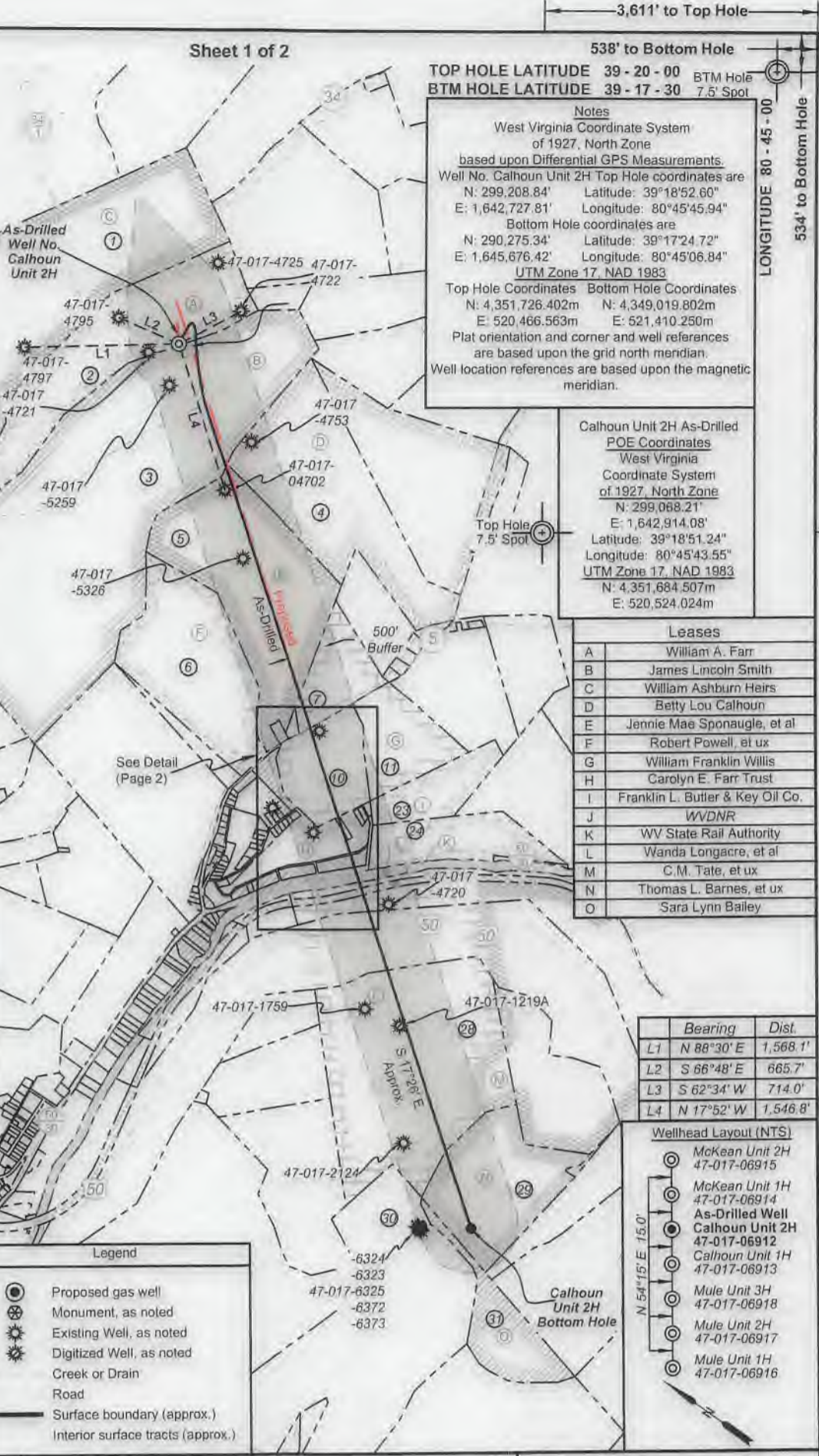
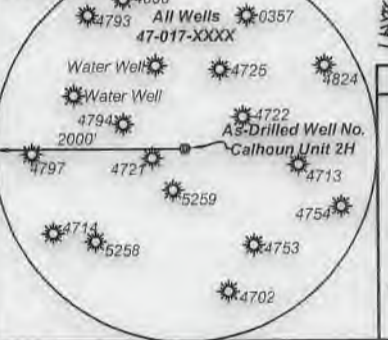
Top Hole Coordinates, As-drilled data, and information was provided by Antero Resources Corporation. Allegheny Surveys Inc. (ASI) is not certifying the data and information provided. ASI is not responsible for any errors or inaccuracies with the data and information that has been provided.

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, P.S. 2167



Note: 2 water well was 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.

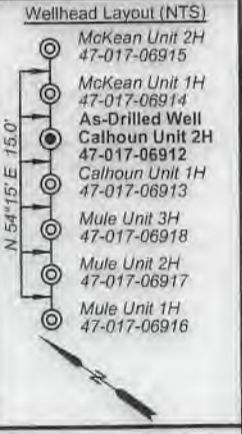


TOP HOLE LATITUDE 39 - 20 - 00
 BTM HOLE LATITUDE 39 - 17 - 30
 Notes
 West Virginia Coordinate System of 1927, North Zone
 based upon Differential GPS Measurements.
 Well No. Calhoun Unit 2H Top Hole coordinates are
 N: 299,208.84' Latitude: 39°18'52.60"
 E: 1,642,727.81' Longitude: 80°45'45.94"
 Bottom Hole coordinates are
 N: 290,275.34' Latitude: 39°17'24.72"
 E: 1,645,676.42' Longitude: 80°45'06.84"
 UTM Zone 17, NAD 1983
 Top Hole Coordinates Bottom Hole Coordinates
 N: 4,351,726.402m N: 4,349,019.802m
 E: 520,466.563m E: 521,410.250m
 Plat orientation and corner and well references are based upon the grid north meridian.
 Well location references are based upon the magnetic meridian.

Calhoun Unit 2H As-Drilled
 POE Coordinates
 West Virginia
 Coordinate System of 1927, North Zone
 N: 299,088.21'
 E: 1,642,914.08'
 Latitude: 39°18'51.24"
 Longitude: 80°45'43.55"
 UTM Zone 17, NAD 1983
 N: 4,351,684.507m
 E: 520,524.024m

Leases	
A	William A. Farr
B	James Lincoln Smith
C	William Ashburn Heirs
D	Betty Lou Calhoun
E	Jennie Mae Sponaugle, et al
F	Robert Powell, et ux
G	William Franklin Willis
H	Carolyn E. Farr Trust
I	Franklin L. Butler & Key Oil Co.
J	WVDNR
K	WV State Rail Authority
L	Wanda Longacre, et al
M	C.M. Tate, et ux
N	Thomas L. Barnes, et ux
O	Sara Lynn Bailey

Bearing	Dist.
L1	N 88°30' E 1,568.1'
L2	S 66°48' E 665.7'
L3	S 62°34' W 714.0'
L4	N 17°52' W 1,546.8'



FILE NO: 54-30-WU-14
 DRAWING NO: Calhoun Unit 2H As-Drilled
 SCALE: 1" = 1500'
 MINIMUM DEGREE OF ACCURACY: Submeter
 PROVEN SOURCE OF ELEVATION: WVDOT, Harrisville, WV

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

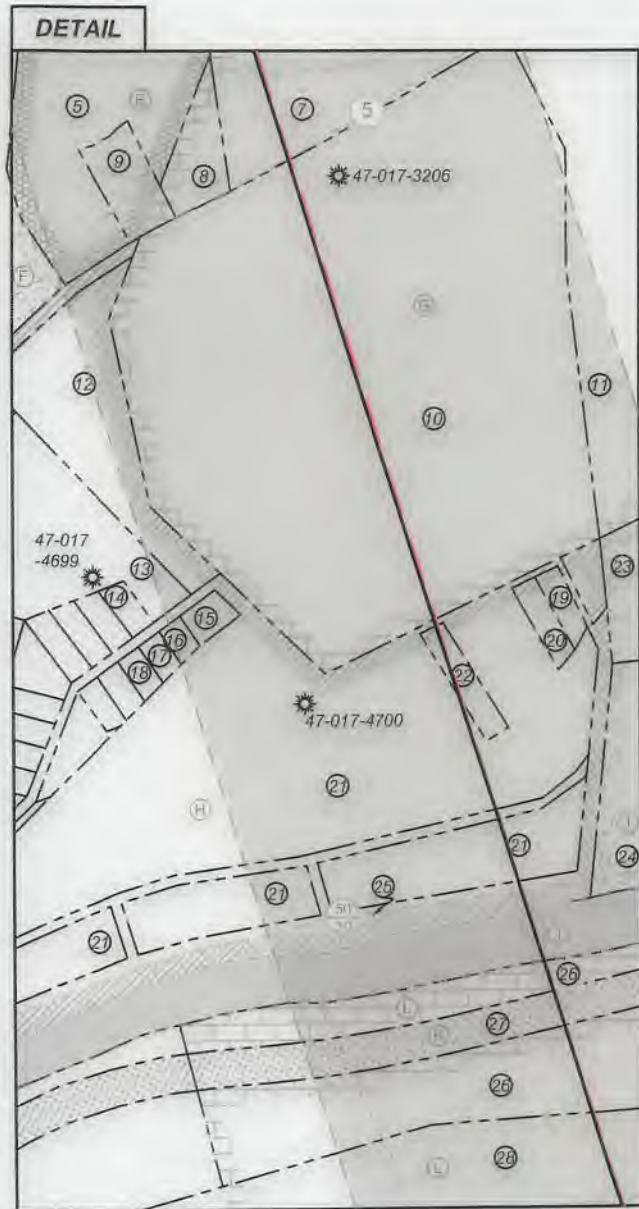
DATE: December 20 2022
 OPERATOR'S WELL NO. Calhoun Unit 2H
 API WELL NO
 47 - 017 - 06912
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
 LOCATION: ELEVATION: As-Built: 1,189' WATERSHED: Middle Island Creek QUADRANGLE: West Union
 DISTRICT: West Union Antero COUNTY: Doddridge
 SURFACE OWNER: Midstream, LLC Thomas L. Barnes, et ux; WV State Rail Authority; WVDNR ACREAGE: 45.8
 ROYALTY OWNER: William A. Farr; James Lincoln Smith; William Franklin Willis. LEASE NO: ACREAGE: 301.19; 115; 34
 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: 6,871' TVD 16,278' MD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Kevin Ellis
 ADDRESS: 1615 Wynkoop Street ADDRESS: 535 White Oaks Blvd.
 Denver, CO 80202 Bridgeport, WV 26330



ID	TM/Par	Owner	Bk/Pg	Acres
1	7-18	Antero Midstream, LLC	387/708	116.54
2	7-18.1	Antero Midstream, LLC	346/612	45.80
3	7-29	Sharon A. Gaspar	W113/242	182.67
4	8-31	Jacqueline D. & Gayford A. Cox	469/369	53.75
5	7-25	Robert W. Sponaugle, et al	369/496	49.50
6	11-8	Granville Jr. & Rose Mae Criss	317/43	44.15
7	12-2	Frank Jr & Doris E. Holtz	235/23	13.54
8	11-11.1	Robert W. Sponaugle, et al	369/496	0.25
9	7-25.1	Elden C. & Teresa A. Sponaugle	349/701	0.50
10	12-1	Antero Midstream, LLC	378/34	18.90
11	12-4	Sharon E. Walker & Ronald J. Burns	259/365	18.70
12	34-3	Spencer Enterprises, LLC	261/512	2.13
13	34-62	Terri Lynn Whitehill	AP44/659	2.90
14	34-82	Terri Lynn Whitehill	AP44/659	0.13
15	34-90	Terri Lynn Whitehill	AP44/659	0.14
16	34-89	Terri Lynn Whitehill	AP44/659	0.10
17	34-88	Terri Lynn Whitehill	AP44/659	0.10
18	34-87	Terri Lynn Whitehill	AP44/659	0.11
19	34-98	Roy F. Rupert	122/141	0.32
20	34-116	W.W. Gaskins, Heirs	76/305	0.20
21	34-98	Rossie & Eva Lowery	272/321	15.62
22	34-18	Ina Jessa Underwood, Heirs	W6/397	0.28
23	12-6	Rossie & Eva Lowery, et al	258/336	15.30
24	12-23	Rossie & Eva Lowery	258/336	14.63
25	34-13	W. Va. D.O.H.	---/---	0.36
26	12-103	Barnes Siblings Property, LLC	471/545	43.11
27	12-101	WV Railroad Maintenance Authority	216/166	11.30
28	12-50	Key Oil Co., et al	252/558	76.98
29	12-64	Frank L. Butler, et al	259/275	34.13
30	12-71.1	Franklin L. Butler & Key Oil Co.	256/324	81.91
31	12-64.1	Frank L Butler, et al	259/275	15.50



FILE NO: 54-30-WU-14
 DRAWING NO: Calhoun Unit 2H As-Drilled
 SCALE: 1" = 1500'
 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: December 20 2022
 OPERATOR'S WELL NO. Calhoun Unit 2H
 API WELL NO
 47 - 017 - 06912
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built: 1,189' WATERSHED: Middle Island Creek QUADRANGLE: West Union

DISTRICT: West Union Antero COUNTY: Doddridge
 SURFACE OWNER: Midstream, LLC Thomas L. Barnes, et ux; WV State Rail Authority; WVDNR
 ROYALTY OWNER: William A. Farr; James Lincoln Smith; William Franklin Willis; LEASE NO: ACREAGE: 301.19; 115: 34
 ACREAGE: 45.8
 54.48;
 45.8; 180;
 50; 51; 38;

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: 16,278' MD
 6,871' TVD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Kevin Ellis
 ADDRESS: 1615 Wynkoop Street ADDRESS: 535 White Oaks Blvd.
 Denver, CO 80202 Bridgeport, WV 26330