

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

API 47 - 017 - 06913 County Doddridge District West Union  
Quad West Union Pad Name Gaspar Field/Pool Name -----  
Farm name Antero Midstream, LLC Well Number Calhoun 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 4351724m Easting 520463m  
Landing Point of Curve Northing 4351519.97m Easting 520319.64m  
Bottom Hole Northing 4349178m Easting 521088m

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 5/28/2022  
Date completion activities began 9/4/2022 Date completion activities ceased 10/23/2022  
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:

**APPROVED**

IMR 02/13/2023

**03/17/2023**

API 47-017 - 06913 Farm name Antero Midstream, LLC Well number Calhoun 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	20"	16"	130'	New	62.64#, X-60	N/A	Y
Surface	13-1/2"	10-3/4"	353'	New	40.5#, J-55	N/A	Y
Coal							
Intermediate 1	9-7/8"	7-5/8"	2555'	New	26.4#, L-80	N/A	Y
Intermediate 2							
Intermediate 3							
Production	6-3/4"	5"	15132'	New	18#, P-110CY	N/A	Y
Tubing		2-3/8"	6871'		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 <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	Class A	96 sx	15.6	1.18	22	0'	8 Hrs.
Surface	Class A	681 sx	15.8	1.16	790	0'	8 Hrs.
Coal							
Intermediate 1	Class A	610 sx	15.8	1.16	708	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	925 sx (Lead)	13.8 (Lead), 12.7(Tail)	1.42 (Lead)	1314	-500' into Intermediate casing	8 Hrs.
Tubing							

Drillers TD (ft) 15132' MD, 6852' TVD (BHL), 6922' (Deepest Point Drilled) Loggers TD (ft) 15132' MD  
 Deepest formation penetrated Marcellus Plug back to (ft) N/A  
 Plug back procedure N/A

Kick off depth (ft) 6294'

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- 017 - 06913 Farm name Antero Midstream, LLC Well number Calhoun Unit 1H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>		
<u>Marcellus</u>	<u>6846' (TOP)</u>	<u>TVD</u>	<u>7002' (TOP)</u> <u>MD</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 2506 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 8139 mcfpd Oil 73 bpd NGL --- bpd Water 1041 bpd GAS MEASURED BY  Estimated  Orifice  Pilot

LITHOLOGY/ FORMATION	TOP	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H <sub>2</sub> S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	

**\*PLEASE SEE ATTACHED EXHIBIT 3**


Please insert additional pages as applicable.

Drilling Contractor 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 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

03/17/2023

**API 47-017-06913 Farm Name Antero Midstream, LLC Well Number Calhoun Unit 1H**

**Exhibit 1**

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	09/04/2022	13882.2	13715.9	60	Marcellus
2	09/04/2022	13680.3	13514.1	60	Marcellus
3	09/04/2022	13478.4	13312.2	60	Marcellus
4	09/05/2022	13276.5	13110.3	60	Marcellus
5	09/05/2022	13074.7	12908.4	60	Marcellus
6	09/05/2022	12872.8	12706.6	60	Marcellus
7	09/05/2022	12670.9	12504.7	60	Marcellus
8	09/06/2022	12469.0	12302.8	60	Marcellus
9	09/06/2022	12267.2	12100.9	60	Marcellus
10	09/06/2022	12065.3	11899.1	60	Marcellus
11	09/06/2022	11863.4	11697.2	60	Marcellus
12	09/06/2022	11661.5	11495.3	60	Marcellus
13	09/07/2022	11459.7	11293.4	60	Marcellus
14	09/07/2022	11257.8	11091.5	60	Marcellus
15	09/07/2022	11055.9	10889.7	60	Marcellus
16	09/07/2022	10854.0	10687.8	60	Marcellus
17	09/07/2022	10652.1	10485.9	60	Marcellus
18	09/08/2022	10450.3	10284.0	60	Marcellus
19	09/08/2022	10248.4	10082.2	60	Marcellus
20	09/08/2022	10046.5	9880.3	60	Marcellus
21	09/08/2022	9844.6	9678.4	60	Marcellus
22	09/08/2022	9642.8	9476.5	60	Marcellus
23	09/09/2022	9440.9	9274.6	60	Marcellus
24	09/09/2022	9239.0	9072.8	60	Marcellus
25	09/09/2022	9037.1	8870.9	60	Marcellus
26	09/09/2022	8835.2	8669.0	60	Marcellus
27	09/09/2022	8633.4	8467.1	60	Marcellus
28	09/09/2022	8431.5	8265.3	60	Marcellus
29	09/10/2022	8229.6	8063.4	60	Marcellus
30	09/10/2022	8027.7	7861.5	60	Marcellus
31	09/10/2022	7825.9	7659.6	60	Marcellus
32	09/10/2022	7624.0	7457.8	60	Marcellus
33	09/10/2022	7422.1	7255.9	60	Marcellus
34	09/11/2022	7220.2	7054.0	60	Marcellus

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**API 47-017-06913 Farm Name Antero Midstream, LLC Well Number Calhoun Unit 1H**

**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	09/04/2022	76.4	8185	4795	4437	396,120	308,180	N/A
2	09/04/2022	78.3	8428	3933	4785	397,170	308,231	N/A
3	09/04/2022	83.7	8482	5277	4499	393,360	291,711	N/A
4	09/05/2022	78.8	8432	5790	4406	398,190	303,566	N/A
5	09/05/2022	79.6	8293	4927	4544	397,060	389,421	N/A
6	09/05/2022	82.3	8316	3970	4378	408,580	312,093	N/A
7	09/05/2022	83.0	8360	5220	5032	405,510	302,726	N/A
8	09/06/2022	86.2	8439	4003	4927	414,450	304,653	N/A
9	09/06/2022	83.4	8433	5490	5200	402,030	300,058	N/A
10	09/06/2022	81.7	8406	5620	5161	398,230	281,301	N/A
11	09/06/2022	83.9	8453	4511	4749	408,790	326,316	N/A
12	09/06/2022	88.1	8443	6055	4428	416,360	303,145	N/A
13	09/07/2022	86.3	8468	5841	4414	411,330	298,577	N/A
14	09/07/2022	86.5	8414	4842	4921	410,880	293,193	N/A
15	09/07/2022	91.4	8338	4219	5464	415,180	296,545	N/A
16	09/07/2022	90.8	8413	4095	5718	398,420	283,961	N/A
17	09/07/2022	92.9	8318	4587	4407	394,380	289,078	N/A
18	09/08/2022	92.3	8390	4745	4831	411,360	296,452	N/A
19	09/08/2022	88.5	8094	5353	5071	407,040	302,466	N/A
20	09/08/2022	95.1	8348	5598	4940	399,840	277,835	N/A
21	09/08/2022	92.3	8435	4437	4900	407,940	284,614	N/A
22	09/08/2022	93.4	8437	5887	4457	398,460	283,237	N/A
23	09/09/2022	94.7	8383	5244	4201	397,768	284,679	N/A
24	09/09/2022	97.5	8269	5208	4330	401,200	289,741	N/A
25	09/09/2022	94.4	8094	3969	4772	401,780	285,868	N/A
26	09/09/2022	89.4	7975	3982	6117	400,880	326,998	N/A
27	09/09/2022	95.0	8344	5053	4821	404,820	288,984	N/A
28	09/09/2022	98.3	8272	5332	4523	393,480	290,565	N/A
29	09/10/2022	96.7	8274	5068	4674	413,490	295,355	N/A
30	09/10/2022	95.4	8038	5039	5007	407,660	293,941	N/A
31	09/10/2022	96.0	8148	5300	4610	402,780	293,533	N/A
32	09/10/2022	92.3	8112	5387	4937	415,980	390,115	N/A
33	09/10/2022	98.4	8099	5327	4346	399,880	279,722	N/A
34	09/11/2022	98.2	8229	5388	4288	398,330	281,633	N/A
	<b>AVG=</b>	<b>89</b>	<b>8,311</b>	<b>4,985</b>	<b>4,773</b>	<b>13,728,728</b>	<b>10,238,493</b>	<b>TOTAL</b>

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## EXHIBIT 3

LITHOLOGY/ FORMATION	TOP DEPTH (TVD)	BOTTOM DEPTH (TVD)	TOP DEPTH (MD)	BOTTOM DEPTH (MD)
	From Surface	From Surface	From Surface	From Surface
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	2,139
Big Lime	2,165	2,787	2,139	2,791
Fifty Foot Sandstone	2,787	2,863	2,761	2,868
Gordon	2,863	3,143	2,838	3,151
Fifth Sandstone	3,143	3,341	3,121	3,352
Bayard	3,341	4,013	3,322	4,034
Speechley	4,013	4,288	4,004	4,312
Balltown	4,288	4,693	4,282	4,722
Bradford	4,693	5,162	4,692	5,198
Benson	5,162	5,424	5,168	5,463
Alexander	5,424	6,661	5,433	6,736
Sycamore	6,428	6,631	6,485	6,706
Middlesex	6,631	6,763	6,706	6,869
Burkett	6,763	6,792	6,869	6,910
Tully	6,792	6,846	6,910	7,002
Marcellus	6,846	NA	7,002	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:	9/4/2022
Job End Date:	9/11/2022
State:	West Virginia
County:	Doddridge
API Number:	47-017-06913-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	CALHOUN UNIT 1H
Latitude:	39.31459000
Longitude:	-80.76281000
Datum:	WGS84
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,920
Total Base Water Volume (gal):	10,441,700
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	86.41855	Density = 8.50
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.17378	



OPTIFLO-II DELAYED RELEASE BREAKER	Halliburton	Breaker					
				Listed Below			
Excelerate LX-15	Halliburton	Friction Reducer					
				Listed Below			
HAI-501	Halliburton	Acid Corrosion Inhibitor					
				Listed Below			
Sand-Common White-100 Mesh, SSA-2	Halliburton	Proppant					
				Listed Below			
MC B-8614A	MultiChem	Biocide					
				Listed Below			
Sand-Premium White-30/70	Halliburton	Proppant					
				Listed Below			
WG-36 GELLING AGENT	Halliburton	Gelling Agent					
				Listed Below			
HYDROCHLORI C ACID, 22 BAUME	Halliburton	Solvent					
				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	13.36745
			Hydrochloric acid	7647-01-0	30.00000	0.03914
			Complex Amine Compound	Proprietary	60.00000	0.03491
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.01745
			Guar gum	9000-30-0	100.00000	0.01634
			Sobitan, mono-9-octadecenoate, (Z)	1338-43-8	5.00000	0.00291
			Surfactant	Proprietary	5.00000	0.00291
			Glutaraldehyde	111-30-8	30.00000	0.00253
			Ethoxylated alcohols	Proprietary	5.00000	0.00059
			Organic chloride compound	Proprietary	1.00000	0.00058
			Alkoxyated polyhydric alcohol	Proprietary	1.00000	0.00058
			Alkyl (C12-16) dimethylbenzyl ammonium chloride	68424-85-1	5.00000	0.00042
			Ammonium persulfate	7727-54-0	100.00000	0.00041
			Methanol	67-56-1	100.00000	0.00024
			Oxylated phenolic resin	Proprietary	30.00000	0.00012
			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
			Hexadecene	629-73-2	5.00000	0.00001
			Propargyl alcohol	107-19-7	5.00000	0.00001
			Formaldehyde	50-00-0	0.01000	0.00001
			Sodium hydroxide	1310-73-2	0.01000	0.00001
			Organic salt #2	Proprietary	0.01000	0.00001
			Sodium glycolate	2836-32-0	0.01000	0.00001
			Organic salt #1	Proprietary	0.01000	0.00001

			Nitrated acetate salt	Proprietary	0.01000	0.00001	
			Acrylamide	79-06-1	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. Calhoun 1H**  
**As-Drilled**  
 Antero Resources Corporation



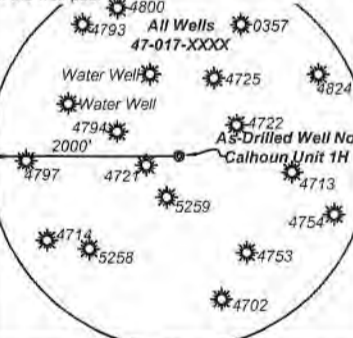
Top Hole Coordinates, As-drilled data, and information was provided by Antero Resources Corporation. Allegany Surveys Inc. (ASI) is not certifying the data and information provided. ASI is not responsible for any errors or inaccuracies with the data and information that has been provided.

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.)

1596' to Bottom Hole  
 TOP HOLE LATITUDE 39 - 20 - 00  
 BTM HOLE LATITUDE 39 - 17 - 30

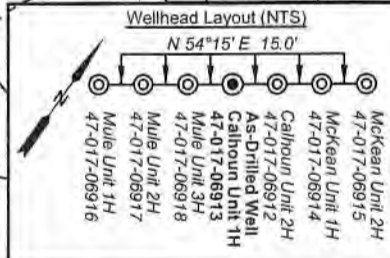
**Notes**  
 West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.  
 Well No. Calhoun Unit 1H Top Hole coordinates are  
 N: 299,199.53' Latitude: 39°18'52.51"  
 E: 1,642,716.18' Longitude: 80°45'46.09"  
 Bottom Hole coordinates are  
 N: 290,810.80' Latitude: 39°17'29.86"  
 E: 1,644,626.68' Longitude: 80°45'20.29"  
 UTM Zone 17, NAD 1983  
 Top Hole Coordinates Bottom Hole Coordinates  
 N: 4,351,723.506m N: 4,349,177.589m  
 E: 520,463.067m E: 521,087.726m  
 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 1H As-Drilled POE Coordinates  
 West Virginia Coordinate System of 1927, North Zone  
 N: 298,539.49'  
 E: 1,642,234.38'  
 Latitude: 39°18'45.92"  
 Longitude: 80°45'52.10"  
 UTM Zone 17, NAD 1983  
 N: 4,351,519.971m  
 E: 520,319.640m

**Leases**

A	William Ashburn Heirs
B	William A. Farr
C	James Lincoln Smith
D	Jennie Mae Sponaugle, et al
E	Robert Powell, et ux
F	John G. Azar
G	William Franklin Willis
H	Richard Lowther, et ux
I	Carolyn E. Farr Trust
J	WVDNR
K	WV State Rail Authority
L	Mary Agnes Phillips, et al
M	WV DOT, Division of Highways
N	Wanda Longacre, et al

Bearing	Dist.
L1 N 88°50' E	1,556.2'
L2 S 65°40' E	658.8'
L3 S 62°20' W	728.6'
L4 N 18°23' W	1,541.6'



FILE NO: 54-30-WU-14  
 DRAWING NO: Calhoun Unit 1H 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 1H  
 API WELL NO  
 47 - 017 - 06913  
 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 WV State Rail Authority; WVDNR ACREAGE: 45.8  
 ROYALTY OWNER: William A. Farr; James Lincoln Smith; Jennie Mae Sponaugle, et al; Robert Powell, et ux; Carolyn E. Farr Trust; Mary Agnes Phillips, et al; LEASE NO: ACREAGE: 10.9; 115

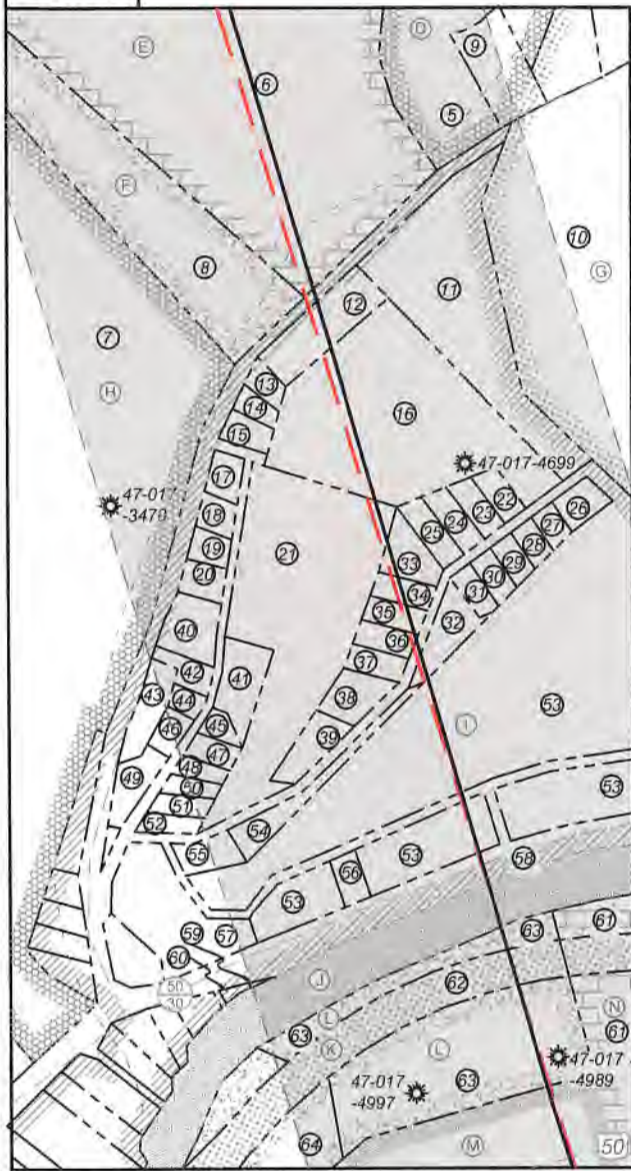
PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 15,132' MD

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



**DETAIL**



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	11-9	Shelia Jane Lynch Buck, et al	W8/35	56.25
8	11-9.1	Leonard & Sheila Cash	387/31	6.14
9	7-25.1	Elden C. & Teresa A. Sponaugle	349/701	0.50
10	12-1	Antero Midstream, LLC	378/34	18.90
11	34-3	Spencer Enterprises, LLC	261/512	2.13
12	34-2	Destiny Cheyenne Lambert	436/310	0.39
13	34-61	Destiny Cheyenne Lambert	436/310	0.10
14	34-60	Destiny Cheyenne Lambert	436/310	0.10
15	34-59	Destiny Cheyenne Lambert	436/310	0.10
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17	34-58	Terri Lynn Whitehill	AP44/659	0.10
18	34-57	Terri Lynn Whitehill	AP44/659	0.10
19	34-56	Terri Lynn Whitehill	AP44/659	0.10
20	34-55	Terri Lynn Whitehill	AP44/659	0.10
21	34-7	Terri Lynn Whitehill	AP44/659	3.00
22	34-82	Terri Lynn Whitehill	AP44/659	0.13
23	34-81	Terri Lynn Whitehill	AP44/659	0.15
24	34-80	Terri Lynn Whitehill	AP44/659	0.15
25	34-79	Terri Lynn Whitehill	AP44/659	0.16
26	34-90	Terri Lynn Whitehill	AP44/659	0.14
27	34-89	Terri Lynn Whitehill	AP44/659	0.10
28	34-88	Terri Lynn Whitehill	AP44/659	0.10
29	34-87	Terri Lynn Whitehill	AP44/659	0.11
30	34-86	Terri Lynn Whitehill	AP44/659	0.11
31	34-85	Terri Lynn Whitehill	AP44/659	0.11
32	34-84	Terri Lynn Whitehill	AP44/659	0.27
33	34-78	Terri Lynn Whitehill	AP44/659	0.19
34	34-77	Terri Lynn Whitehill	AP44/659	0.11
35	34-76	Terri Lynn Whitehill	AP44/659	0.11
36	34-75	Terri Lynn Whitehill	AP44/659	0.11
37	34-74	Terri Lynn Whitehill	AP44/659	0.11
38	34-73	Terri Lynn Whitehill	AP44/659	0.22
39	34-72	Terri Lynn Whitehill	AP44/659	0.23
40	34-6	Webb & Son, LLC	423/335	0.25
41	34-63	Terri Lynn Whitehill	AP44/659	0.30
42	34-54	Terri Lynn Whitehill	AP44/659	0.12
43	34-53.1	Cheryl L. Brunner	AP38/201	0.24
44	34-5	Terri Lynn Whitehill	AP44/659	0.07
45	34-64	Terri Lynn Whitehill	AP44/659	0.08
46	34-53	Terri Lynn Whitehill	AP44/659	0.10
47	34-65	Terri Lynn Whitehill	AP44/659	0.10
48	34-66	Terri Lynn Whitehill	AP44/659	0.10
49	34-52	Terri Lynn Whitehill	AP44/659	0.20
50	34-67	Terri Lynn Whitehill	AP44/659	0.10
51	34-68	Terri Lynn Whitehill	AP44/659	0.10
52	34-69	Terri Lynn Whitehill	AP44/659	0.10
53	34-98	Rossie & Eva Lowery	272/321	15.82
54	34-83	Terri Lynn Whitehill	AP44/659	0.20
55	34-70	Terri Lynn Whitehill	AP44/659	0.16
56	34-39	Roy F. Ruppert	122/141	0.17
57	34-8	Terri Lynn Whitehill	AP44/659	1.40
58	34-13	W. Va. D.O.H.	---	0.36
59	34-14	Terri Lynn Whitehill	AP44/659	0.03
60	34-24	Terri Lynn Whitehill	AP44/659	0.07
61	12-103	Barnes Siblings Property LLC	471/545	43.11
62	12-101	WV Railroad Maintenance Authority	216/166	11.30
63	11-26	Karen M. Ireland Family L.P.	235/3	11.80
64	11-25	J. Charles & George J. Buff III, et al	377/517	6.02
65	11-25.1	J. Charles & George J. Buff III, et al	377/517	16.72
66	12-50	Key Oil Co, et al	252/558	76.98
67	12-63	Karen M. Ireland Family L.P.	235/3	31.50
68	12-71.1	Franklin L. Buller & Key Oil Co.	256/324	81.91

FILE NO: 54-30-WU-14  
 DRAWING NO: Calhoun Unit 1H 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 1H  
 API WELL NO  
 47 - 017 - 06913  
 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 Wanda Longacre, et al; WV DOT, Division of Highway; ACREAGE: 45.8 45.8; 180; 50; 44; 38; 301.19; 92;

ROYALTY OWNER: William A. Farr; James Lincoln Smith; Jennie Mae Sponaugle, et al; LEASE NO: ACREAGE: 10.9; 115

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: 6,852' TVD 15,132' 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 1H**  
**As-Drilled**  
 Antero Resources Corporation



Top Hole Coordinates, As-drilled data, and information was provided by Antero Resources Corporation. Allegheeny 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.



**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.)

3,622' to Top Hole  
 1596' to Bottom Hole  
 TOP HOLE LATITUDE 39 - 20 - 00  
 BTM HOLE LATITUDE 39 - 17 - 30

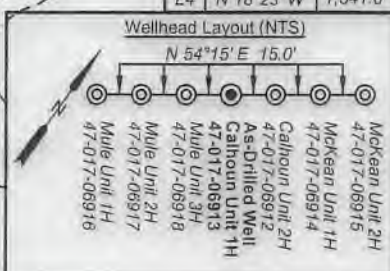
**Notes**  
 West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.  
 Well No. Calhoun Unit 1H Top Hole coordinates are  
 N: 299,199.53' Latitude: 39°18'52.51"  
 E: 1,642,716.18' Longitude: 80°45'46.09"  
 Bottom Hole coordinates are  
 N: 290,810.80' Latitude: 39°17'29.86"  
 E: 1,644,826.68' Longitude: 80°45'20.29"  
 UTM Zone 17, NAD 1983  
 Top Hole Coordinates: Bottom Hole Coordinates  
 N: 4,351,723.506m N: 4,349,177.589m  
 E: 520,483.067m E: 521,087.726m  
 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 1H As-Drilled POE Coordinates  
 West Virginia Coordinate System of 1927, North Zone  
 N: 298,539.49'  
 E: 1,642,234.38'  
 Latitude: 39°18'45.92"  
 Longitude: 80°45'52.10"  
 UTM Zone 17, NAD 1983  
 N: 4,351,519.971m  
 E: 520,319.640m

**Leases**

A	William Ashburn Heirs
B	William A. Farr
C	James Lincoln Smith
D	Jennie Mae Sponaugle, et al
E	Robert Powell, et ux
F	John G. Azar
G	William Franklin Willis
H	Richard Lowther, et ux
I	Carolyn E. Farr Trust
J	WVDNR
K	WV State Rail Authority
L	Mary Agnes Phillips, et al
M	WV DOT, Division of Highways
N	Wanda Longacre, et al

Bearing	Dist.
L1 N 88°50' E	1,556.2'
L2 S 65°40' E	658.8'
L3 S 62°20' W	728.6'
L4 N 18°23' W	1,541.6'



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 DISTRICT: West Union Antero COUNTY: Doddridge  
 SURFACE OWNER: Midstream, LLC WV State Rail Authority: WVDNR  
 Robert Powell, et ux; Carolyn E. Farr Trust; Mary Agnes Phillips, et al; ACREAGE: 45.8  
 ROYALTY OWNER: William A. Farr; James Lincoln Smith; Jennie Mae Sponaugle, et al; LEASE NO: ACREAGE: 10.9; 115  
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