



Antero Resources
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March 20, 2020

West Virginia Department of Environmental Protection
Office of Oil and Gas
601 57th 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 **Weekley Trust Pad**:

- Cinqmars Unit 1H-2H
- Goliad Unit 1H-2H
- Ray Unit 1H-3H
- Swartzmiller 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 "MGriffith", 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- _____ - _____ County _____ District _____
Quad _____ Pad Name _____ Field/Pool Name _____
Farm name _____ Well Number _____
Operator (as registered with the OOG) _____
Address _____ City _____ State _____ Zip _____

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing _____ Easting _____
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing _____ Easting _____

Elevation (ft) _____ 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)

Date permit issued _____ Date drilling commenced _____ Date drilling ceased _____
Date completion activities began _____ Date completion activities ceased _____
Verbal plugging (Y/N) _____ Date permission granted _____ Granted by _____

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft _____ Open mine(s) (Y/N) depths _____
Salt water depth(s) ft _____ Void(s) encountered (Y/N) depths _____
Coal depth(s) ft _____ Cavern(s) encountered (Y/N) depths _____
Is coal being mined in area (Y/N) _____

Reviewed by:

API 47- _____ - _____ Farm name _____ Well number _____

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							
Surface							
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production							
Tubing							
Packer type and depth set							

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							
Surface							
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production							
Tubing							

Drillers TD (ft) _____ Loggers TD (ft) _____
 Deepest formation penetrated _____ Plug back to (ft) _____
 Plug back procedure _____

Kick off depth (ft) _____

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 _____

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 _____

API 47- ____ - ____ Farm name _____ Well number _____

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
*PLEASE SEE ATTACHED EXHIBIT 1					

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
*PLEASE SEE ATTACHED EXHIBIT 2								

Please insert additional pages as applicable.

API 47- _____ - _____ Farm name _____ Well number _____

PRODUCING FORMATION(S)

DEPTHS

_____	_____ TVD	_____ MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

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

OPEN FLOW Gas _____ mcfpd Oil _____ bpd NGL _____ bpd Water _____ 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 ₂ S, ETC)
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***PLEASE SEE ATTACHED EXHIBIT 3**

Please insert additional pages as applicable.

Drilling Contractor _____
Address _____ City _____ State _____ Zip _____

Logging Company _____
Address _____ City _____ State _____ Zip _____

Cementing Company _____
Address _____ City _____ State _____ Zip _____

Stimulating Company _____
Address _____ City _____ State _____ Zip _____

Please insert additional pages as applicable.

Completed by _____ Telephone _____
Signature _____ Title _____ Date _____

EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	6/30/2019	16735.9	16791.1	60	Marcellus
2	6/30/2019	16535.056	16704.426	60	Marcellus
3	6/30/2019	16334.212	16503.582	60	Marcellus
4	7/1/2019	16133.368	16302.738	60	Marcellus
5	7/1/2019	15932.524	16101.894	60	Marcellus
6	7/1/2019	15731.68	15901.05	60	Marcellus
7	7/2/2019	15530.836	15700.206	60	Marcellus
8	7/2/2019	15329.992	15499.362	60	Marcellus
9	7/6/2019	15129.148	15298.518	60	Marcellus
10	7/6/2019	14928.304	15097.674	60	Marcellus
11	7/7/2019	14727.46	14896.83	60	Marcellus
12	7/7/2019	14526.616	14695.986	60	Marcellus
13	7/18/2019	14325.772	14495.142	60	Marcellus
14	7/18/2019	14124.928	14294.298	60	Marcellus
15	7/19/2019	13924.084	14093.454	60	Marcellus
16	7/19/2019	13723.24	13892.61	60	Marcellus
17	7/19/2019	13522.396	13691.766	60	Marcellus
18	7/19/2019	13321.552	13490.922	60	Marcellus
19	7/20/2019	13120.708	13290.078	60	Marcellus
20	7/23/2019	12919.864	13089.234	60	Marcellus
21	7/23/2019	12719.02	12888.39	60	Marcellus
22	7/24/2019	12518.176	12687.546	60	Marcellus
23	7/24/2019	12317.332	12486.702	60	Marcellus
24	7/25/2019	12116.488	12285.858	60	Marcellus
25	7/25/2019	11915.644	12085.014	60	Marcellus
26	7/25/2019	11714.8	11884.17	60	Marcellus
27	7/25/2019	11513.956	11683.326	60	Marcellus
28	7/26/2019	11313.112	11482.482	60	Marcellus
29	7/26/2019	11112.268	11281.638	60	Marcellus
30	7/26/2019	10911.424	11080.794	60	Marcellus
31	7/27/2019	10710.58	10879.95	60	Marcellus
32	7/27/2019	10509.736	10679.106	60	Marcellus
33	7/27/2019	10308.892	10478.262	60	Marcellus
34	7/28/2019	10108.048	10277.418	60	Marcellus
35	7/28/2019	9907.204	10076.574	60	Marcellus
36	7/28/2019	9706.36	9875.73	60	Marcellus
37	8/1/2019	9505.516	9674.886	60	Marcellus
38	8/1/2019	9304.672	9474.042	60	Marcellus
39	8/1/2019	9103.828	9273.198	60	Marcellus
40	8/2/2019	8902.984	9072.354	60	Marcellus
41	8/2/2019	8702.14	8871.51	60	Marcellus
42	8/3/2019	8501.296	8670.666	60	Marcellus
43	8/3/2019	8300.452	8469.822	60	Marcellus
44	8/4/2019	8099.608	8268.978	60	Marcellus
45	8/4/2019	7898.764	8068.134	60	Marcellus
46	8/4/2019	7697.92	7867.29	60	Marcellus
47	8/5/2019	7497.076	7666.446	60	Marcellus
48	8/6/2019	7296.232	7465.602	60	Marcellus
49	8/6/2019	7095.388	7264.758	60	Marcellus
50	8/6/2019	6894.544	7063.914	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	6/30/2019	68.35	7801	7453	2422	159120	5394	N/A
2	6/30/2019	68.16	8396	5328	2957	404120	8637	N/A
3	6/30/2019	72.57	8286	5366	2875	405400	8905	N/A
4	7/1/2019	77.63	7814	5048	2929	407640	8861	N/A
5	7/1/2019	77.25	7203	5287	3076	412360	8844	N/A
6	7/1/2019	76.15	7249	5258	3064	413640	8924	N/A
7	7/2/2019	79.96	7837	5519	3030	400140	8895	N/A
8	7/2/2019	74.22	7572	5580	3494	410640	12037	N/A
9	7/6/2019	78.3	7659	5705	2685	403300	8889	N/A
10	7/6/2019	77.54	7271	5769	3091	401220	8678	N/A
11	7/7/2019	79.43	7436	4495	3211	405220	9421	N/A
12	7/7/2019	79.42	7387	5152	3027	404680	8765	N/A
13	7/18/2019	79.18	7509	5504	3212	404860	8781.3	N/A
14	7/18/2019	80.57	7371	5670	3061	404480	8698.7	N/A
15	7/19/2019	79.95	7470	5867	3015	398640	8688.9	N/A
16	7/19/2019	79.54	7628	5817	3007	401600	8639	N/A
17	7/19/2019	78.79	7473	5691	3076	408340	8692.8	N/A
18	7/19/2019	80.08	7226	5329	3100	406780	8680.1	N/A
19	7/20/2019	37.94	8660	5925	4872	13250	7585.4	N/A
20	7/23/2019	79.95	7441	5755	3152	408320	8898.9	N/A
21	7/23/2019	54.825	8110	6200	3111	384250	9868	N/A
22	7/24/2019	74.77	7367	5335	3105	401500	8891.1	N/A
23	7/24/2019	79.54	7337	8331	3332	398660	9214.4	N/A
24	7/25/2019	77.76	7122	5902	3428	399780	8588.9	N/A
25	7/25/2019	77.1	7148	6094	3373	411920	8701	N/A
26	7/25/2019	77.72	6979	5368	3122	413920	8795.5	N/A
27	7/25/2019	77.8	7226	5403	3394	400770	8834.6	N/A
28	7/26/2019	78.36	7328	5584	3431	398630	8782.1	N/A
29	7/26/2019	77.05	7096	5490	3280	406650	8764.5	N/A
30	7/26/2019	75.94	7000	5663	3213	412430	8742.9	N/A
31	7/27/2019	77.4	6891	5799	3068	410180	8748.1	N/A
32	7/27/2019	77.99	6864	3643	3161	407160	8632.5	N/A
33	7/27/2019	77.13	6643	5600	3202	398160	8425	N/A
34	7/28/2019	76.07	6869	6028	3412	405020	8593	N/A
35	7/28/2019	78.56	7026	5910	3471	396210	8476.9	N/A
36	7/28/2019	79.3	7201	5635	3388	406720	8577	N/A
37	8/1/2019	36.5	8941	6312	5365	33610	3279	N/A
38	8/1/2019	73.2	6513	5717	3346	399680	8457	N/A
39	8/1/2019	74.43	6662	5691	3320	399480	8495	N/A
40	8/2/2019	78.3	6710	5795	3450	410300	8631	N/A
41	8/2/2019	76.4	6940	5663	3644	411940	8622	N/A
42	8/3/2019	77.52	6852	6027	3374	409980	8600	N/A
43	8/3/2019	80.3	6621	6003	3421	404480	8454	N/A
44	8/4/2019	77.65	6649	6211	3887	405300	8415	N/A
45	8/4/2019	72.74	6466	5491	3339	414340	8648	N/A
46	8/4/2019	76.91	6567	5413	3373	404760	8444	N/A
47	8/5/2019	79.2	6463	5584	3588	400140	8320	N/A
48	8/6/2019	77.65	6979	6219	3610	406200	8550	N/A
49	8/6/2019	72.24	6445	5858	3452	405560	8372	N/A
50	8/6/2019	74.89	6234	6114	3348	405400	8437	N/A
	AVG	74.9	7,317	5,698	3,289	17,214,820	387,152	TOTAL

EXHIBIT 3

LITHOLOGY/ FORMATION	TOP DEPTH (TVD)	BOTTOM DEPTH (TVD)	TOP DEPTH (MD)	BOTTOM DEPTH (MD)
	From Surface	From Surface	From Surface	From Surface
Silty sandstone	0	225	0	225
Silty sandstone w/ coal	225	265	225	265
Sandy Siltstone	265	325	265	325
Silty sandstone	325	405	325	405
Sandy shale	405	425	405	425
Sandy, limy siltstone	425	485	425	485
Sandstone	485	585	485	585
Siltstone	585	685	585	685
Sandstone w lime stringers	685	1,275	685	1,275
Silty sandstone	1,275	1,685	1,275	1,685
Limy shale	1,685	1,905	1,685	1,905
Sandstone	1,905	2,045	1,905	2,045
Siltstone	2,045	2,052	2,045	2,068
Big Lime	2,067	2,837	2,044	2,839
Fifty Foot Sandstone	2,837	3,049	2,815	3,052
Gordon	3,049	3,123	3,028	3,127
Fifth Sandstone	3,123	3,533	3,103	3,545
Bayard	3,533	4,122	3,521	4,149
Speechley	4,122	4,350	4,125	4,382
Balltown	4,350	4,973	4,358	5,022
Bradford	4,973	5,397	4,998	5,456
Benson	5,397	5,628	5,432	5,693
Alexander	5,628	6,414	5,669	6,574
Sycamore	6,290	6,390	6,405	6,550
Middlesex	6,390	6,490	6,550	6,732
Burkett	6,490	6,516	6,732	6,794
Tully	6,516	6,536	6,794	6,851
Marcellus	6,536	NA	6,851	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:	6/30/2019
Job End Date:	8/6/2019
State:	West Virginia
County:	Ritchie
API Number:	47-085-10342-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Cinqmars 2H
Latitude:	39.37158330
Longitude:	-80.92389160
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,609
Total Base Water Volume (gal):	18,841,197
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
Fresh Water	Halliburton	Base Fluid					
			Water	7732-18-5	100.00000	88.68492	Density = 8.34
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.41261	

HYDROCHLORIC ACID, 22 BAUME	Halliburton	Solvent					
				Listed Below			
Sand-Common White-100 Mesh, SSA-2	Halliburton	Proppant					
				Listed Below			
MC B-8614	Halliburton	Biocide					
				Listed Below			
Sand-Premium White-40/70	Halliburton	Proppant					
				Listed Below			
WG-36 GELLING AGENT	Halliburton	Gelling Agent					
				Listed Below			
CalFrac CalBreak 5501	Calfrac Well Services Corp.	Oxidizer					
				Listed Below			
SP BREAKER	Halliburton	Breaker					
				Listed Below			
SCALECHEK LP-70	Halliburton	Scale Inhibitor					
				Listed Below			

OPTIFLO-II DELAYED RELEASE BREAKER	Halliburton	Breaker					
				Listed Below			
Excelerate EC-8	Halliburton	Friction Reducer					
				Listed Below			
Sand-Premium White-30/50	Halliburton	Proppant					
				Listed Below			
FDP-S1296-17	Halliburton	Acid Corrosion Inhibitor					
				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	10.85698	
			Hydrochloric acid	7647-01-0	15.00000	0.21719	
			Guar gum	9000-30-0	100.00000	0.01721	
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.01654	
			Inorganic salt	Proprietary	30.00000	0.01654	
			Acrylamide acrylate polymer	Proprietary	30.00000	0.01654	
			Ethylene glycol	107-21-1	60.00000	0.00830	
			Glutaraldehyde	111-30-8	30.00000	0.00278	
			Telomer	Proprietary	10.00000	0.00138	
			Quaternary ammonium compounds, benzyl-C12- 16-alkyldimethyl chlorides	68424-85-1	5.00000	0.00046	
			Peroxydisulfuric acid ([(HO)S(O)2]2O2), ammonium salt (1:2)	7727-54-0	100.00000	0.00037	

			Methanol	67-56-1	100.00000	0.00029	
			Sodium polyacrylate	9003-04-7	1.00000	0.00014	
			Ethanol	64-17-5	1.00000	0.00009	
			Ammonium persulfate	7727-54-0	100.00000	0.00007	
			2-Propenoic acid, methyl ester, polymer with 1,1-dichloroethene	Trade Secret	20.00000	0.00007	
			Sodium persulfate	7775-27-1	100.00000	0.00006	
			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	0.00006	
			Oxylated phenolic resin	Proprietary	30.00000	0.00002	
			Ethoxylated alcohols	Proprietary	5.00000	0.00001	
			Hexadecene	629-73-2	5.00000	0.00001	
			Propargyl alcohol	107-19-7	5.00000	0.00001	
			Phosphoric acid	7664-38-2	0.10000	0.00001	
			Acrylic acid	79-10-7	0.01000	0.00000	
			C.I. pigment Orange 5	3468-63-1	1.00000	0.00000	
			Sodium sulfate	7757-82-6	0.10000	0.00000	

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

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

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

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

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: 47-085-10342 County: Ritchie
District: Clay Well No: Cinqmars Unit 2H
Farm Name: David Weekley L. Revocable Trust
Discharge Date/s From:(MMDDYY) 09/26/19 To: (MMDDYY) 10/26/19
Discharge Times. From: 0:00 To: 24:00
Total Volume to be Disposed from this facility (gallons): 906,634

Disposal Option(s) Utilized (write volumes in gallons):

- (1) Land Application: _____ (Include a topographical map of the Area.)
(2) UIC: 104,033 Permit No. 3400923821, 3400923823, 3400923824, 3416729731, 3416729543, 3416729464, 3416729445, 3410523619, 3410523652
(3) Offsite Disposal: _____ Site Location: _____
(4) Reuse: 802,601 Alternate Permit Number: _____
(5) Centralized Facility: _____ Permit No. _____
(6) Other method: _____ (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: Senior Environmental and Regulatory Manager

Date Completed: 3/16/20

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.


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/B1
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: _____

LATITUDE 39°22'30" 2,043'

LATITUDE 39°22'30"

LONGITUDE 80°52'30"

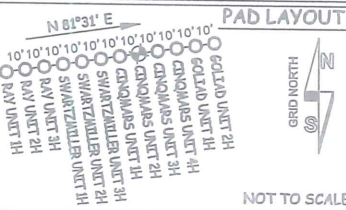
1,245' LONGITUDE 80°55'00"

10,924' TO BOTTOM HOLE

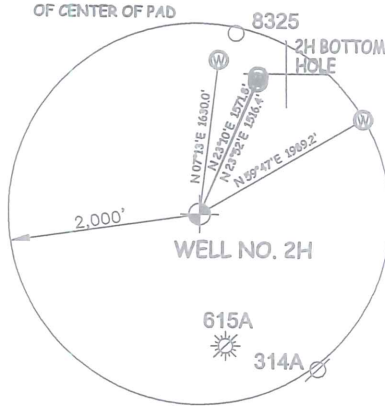
Antero Resources Corporation
Well No. Cinqmars Unit 2H
47-085-10342

NOTES:
WELL 2H TOP HOLE INFORMATION:
N: 320,638ft E: 1,597,472ft
LAT: 39°22'17.70" LON: 80°55'26.01"
BOTTOM HOLE INFORMATION:
N: 310,915ft E: 1,600,184ft
LAT: 39°20'42.03" LON: 80°54'49.53"
WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE.
ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE G60XT SUBMETER MAPPING GRADE GPS UNIT.
PLAT ORIENTATION, CORNER, AND WELL REFERENCE TIE LINES ARE BASED ON GRID NORTH.

(NAD) 83 (UTM) ZONE 17 COORDS:
WELL 2H TOP HOLE INFORMATION:
N: 4,358,024m E: 506,570m
BOTTOM HOLE INFORMATION:
N: 4,355,076m E: 507,446m



NOTE:
4 WATER WELLS WERE LOCATED WITHIN 2000' OF CENTER OF PAD



TM-Par	Surface Owner	ACREAGE	2H TOP
03-03	Brian Jones	298/298	14 AC
03-04	Brian Jones	298/298	30 AC
03-05	Benny Cowger	270/228	15.75 AC
03-09	Steven Haga	222/163	87 AC
03-9.1	Steven Haga	222/163	73 AC
03-10	David Weekley Revocable Trust	265/204	203.38 AC
03-11	Steven Haga	303/566	24.12 AC
03-11.1	Walter Hill	340/679	45.83 AC
03-11.2	Steven Haga	318/195	0.58 AC
03-11.3	David Weekley Revocable Trust	308/476	40 AC
03-11.4	Ovando Thelwell	311/749	76.56 AC
03-12	David Weekley Revocable Trust	265/204	25 AC
03-16	John Milligan	305/256	45.75 AC
03-16.1	John Milligan	305/256	25 AC
03-17	John Milligan	305/256	25 AC
03-18	Perkins Oil & Gas Inc.	308/653	24.7 AC
03-23	Charles Bobbins	297/766	60 AC
03-24	Charles Bobbins	297/766	40 AC
04-31.1	Burt Neswald Sr.	316/1040	90.656 AC
08-06	Walter Fleming	280/373	39.09 AC
08-6.2	Walter Fleming	280/373	53.7 AC
08-07	Troy Kirk	238/418	41.566 AC
08-7.1	W.V.D.O.H.	271/851	22.932 AC
08-08	Donna Ayers	269/588	LOT
08-8.1	Donna Ayers	269/588	LOT
08-8.2	Tom Richmond	322/759	LOT
08-18	David Locco	287/389	40.67 AC
08-18.2	Troy Kirk	261/894	74.01 AC
08-19	Edwin Forman III	283/949	21.252 AC
08-19.1	Barbara Cornell	296/23	7.5 AC
08-19.4	Stephen Deak	340/270	2.156 AC
08-19.5	Troy Kirk	238/418	31.338 AC
08-26	Landrum Revocable Trust	240/458	39.936 AC
09-22	Randall Ridgeway	279/207	22.932 AC
09-22.1	Randall Ridgeway	279/207	27 AC

Royalty Owner
A Brian Keith Jones
B Brian Keith Jones
C Benny Cowger Et Ux
D Norman Fleming Et Ux
E David L. Weekley Revocable Trust
F Haught Family Trust
G John A. Milligan Et Al
H John A. Milligan Et Al
I John A. Milligan Et Al
J Lori Pierpont-Case
K Charles Allman
L Helen McCullough
M Charlene Cottrell
N Emerson McCullough Et Al
O Robert McCullough Et Ux
P Robert McCullough Et Ux
Q P&J Asset Management, LLC
R Eddie F. Landrum
S Ronald Lee Ridgeway
T Tom L. Richmond
U Carl Ridgeway Et Ux
V Edward T. Clissold

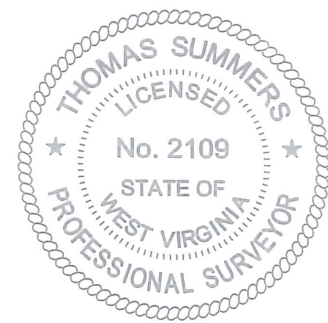
I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE RULES ISSUED AND PERSCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

WILLOW LAND SURVEYING PLLC
220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

- NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER DAIRY CATTLE OR POULTRY HUSBANDRY ARE LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL PAD.
- TOP HOLE DATA SHOWN HEREON WAS PROVIDED BY
- AS DRILLED DATA WAS PROVIDED BY ANTERO RESOURCES CORPORATION.
- WLS IS NOT CERTIFYING THE DATA AND INFORMATION PROVIDED LISTED IN NOTES 2 AND 3, ONLY THE RELATIONSHIP TO THE DATA AND INFORMATION PROVIDED TO THE LEASE BOUNDARIES.
- WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.



JOB # 17-045WA
DRAWING # CINQMARS 2HAD
SCALE 1" = 2000'
MINIMUM DEGREE OF ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS
STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS

LEGEND
 --- Surface Owner Boundary Lines +/-
 --- Interior Surface Tracts +/-
 --- Proposed Well Path
 --- As Drilled Well Path
 THOMAS SUMMERS P.S. 2109
 DATE 02/10/20
 OPERATOR'S WELL# CINQMARS UNIT #2H

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___ 47 ___ 085 ___ 10342
 (IF "GAS") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X STATE COUNTY PERMIT
 LOCATION: ELEVATION 1,235' AS BUILT WATERSHED NORTH FORK HUGHES RIVER DISTRICT CLAY COUNTY RITCHIE
 QUADRANGLE PENNSBORO 7.5' ACREAGE 203.38 ACRES +/-
 SURFACE OWNER DAVID L. WEEKLEY REVOCABLE TRUST
 OIL & GAS ROYALTY OWNER DAVID L. WEEKLEY REVOCABLE TRUST; NORMAN FLEMING ET UX; HAUGHT FAMILY TRUST; LORI PIERPONT-CASE; CHARLES ALLMAN; HELEN N. McCULLOUGH; EMERSON McCULLOUGH ET AL; ROBERT McCULLOUGH ET UX; CARL RIDGWAY ET UX; TOM L. RICHMOND; RONALD LEE RIDGWAY; ROBERT McCULLOUGH ET UX
 LEASE ACREAGE 229 AC±; 130 AC±; 323 AC±; 24.25 AC±; 60 AC±; 103 AC±; 154 AC±; 148 AC±; 22.5 AC±; 0.3 AC±; 0.1 AC±; 148.5 AC±
 PROPOSED WORK: DRILL ___ CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___
 (SPECIFY) AS DRILLED PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL
 TARGET FORMATION MARCELLUS PLUG & ABANDON CLEAN OUT & REPLUG
 WELL OPERATOR ANTERO RESOURCES CORP. ESTIMATED DEPTH 6,609' TVD 16,904' MD
 ADDRESS 1615 WYNKOOP ST. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM
 FORM WW-6 DENVER, CO 80202 ADDRESS 5400 D BIG TYLER ROAD CHARLESTON, WV 25313