



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 _____

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>
_____	_____ 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 _____

API 47-085-10341 Farm Nam David L. Weekley Revocable Trust Well Number Cinqmars Unit 1H**EXHIBIT 1**

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	7/21/2019	15645.2	15700.6	60	Marcellus
2	7/22/2019	15446.52093	15614.0868	60	Marcellus
3	7/22/2019	15247.84186	15415.4078	60	Marcellus
4	7/22/2019	15049.16279	15216.7287	60	Marcellus
5	7/22/2019	14850.48372	15018.0496	60	Marcellus
6	7/23/2019	14651.80465	14819.3705	60	Marcellus
7	7/24/2019	14453.12558	14620.6915	60	Marcellus
8	7/25/2019	14254.44651	14422.0124	60	Marcellus
9	7/25/2019	14055.76744	14223.3333	60	Marcellus
10	7/26/2019	13857.08837	14024.6543	60	Marcellus
11	7/26/2019	13658.4093	13825.9752	60	Marcellus
12	7/27/2019	13459.73023	13627.2961	60	Marcellus
13	7/27/2019	13261.05116	13428.6171	60	Marcellus
14	7/28/2019	13062.37209	13229.938	60	Marcellus
15	7/29/2019	12863.69302	13031.2589	60	Marcellus
16	7/30/2019	12665.01395	12832.5798	60	Marcellus
17	7/30/2019	12466.33488	12633.9008	60	Marcellus
18	7/30/2019	12267.65581	12435.2217	60	Marcellus
19	7/31/2019	12068.97674	12236.5426	60	Marcellus
20	8/1/2019	11870.29767	12037.8636	60	Marcellus
21	8/1/2019	11671.6186	11839.1845	60	Marcellus
22	8/1/2019	11472.93953	11640.5054	60	Marcellus
23	8/2/2019	11274.26047	11441.8264	60	Marcellus
24	8/2/2019	11075.5814	11243.1473	60	Marcellus
25	8/3/2019	10876.90233	11044.4682	60	Marcellus
26	8/3/2019	10678.22326	10845.7891	60	Marcellus
27	8/4/2019	10479.54419	10647.1101	60	Marcellus
28	8/5/2019	10280.86512	10448.431	60	Marcellus
29	8/5/2019	10082.18605	10249.7519	60	Marcellus
30	8/6/2019	9883.506977	10051.0729	60	Marcellus
31	8/6/2019	9684.827907	9852.3938	60	Marcellus
32	8/6/2019	9486.148837	9653.71473	60	Marcellus
33	8/7/2019	9287.469767	9455.03566	60	Marcellus
34	8/7/2019	9088.790698	9256.35659	60	Marcellus
35	8/7/2019	8890.111628	9057.67752	60	Marcellus
36	8/7/2019	8691.432558	8858.99845	60	Marcellus
37	8/8/2019	8492.753488	8660.31938	60	Marcellus
38	8/8/2019	8294.074419	8461.64031	60	Marcellus
39	8/8/2019	8095.395349	8262.96124	60	Marcellus
40	8/8/2019	7896.716279	8064.28217	60	Marcellus
41	8/9/2019	7698.037209	7865.6031	60	Marcellus
42	8/9/2019	7499.35814	7666.92403	60	Marcellus
43	8/9/2019	7300.67907	7468.24496	60	Marcellus
44	8/9/2019	7102	7269.56589	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	7/21/2019	72	8088	7180	2760	184260	5182.571	N/A
2	7/22/2019	79.06	7787	5815	3076	409560	8879.048	N/A
3	7/22/2019	79.74	7515	5607	3112	406800	8868.214	N/A
4	7/22/2019	78.37	7758	5491	3035	412090	8981.429	N/A
5	7/22/2019	44.395	7617	5342	4020	407680	9704.238	N/A
6	7/23/2019	78.81	7719	5211	2968	407900	8897.452	N/A
7	7/24/2019	79.72	7802	5895	3286	404440	8993.929	N/A
8	7/25/2019	78.66	7693	5803	3383	403340	8888.952	N/A
9	7/25/2019	78.52	7474	5544	3467	404400	8896	N/A
10	7/26/2019	75.48	7349	5584	3330	408280	8833.286	N/A
11	7/26/2019	14.13	7393	5550	4556	5000	4280.048	N/A
12	7/27/2019	79.28	7176	5368	3293	400280	9015.595	N/A
13	7/27/2019	75.56	7303	5509	3392	403670	8691.5	N/A
14	7/28/2019	75.74	7324	5264	3205	400660	8626.667	N/A
15	7/29/2019	73.89	7056	5919	3494	406910	8685.833	N/A
16	7/30/2019	74.7	7488	6042	3578	404720	8691.214	N/A
17	7/30/2019	73.89	7049	5742	3420	402440	8616.857	N/A
18	7/30/2019	73.87	7252	5809	3366	402700	8599.429	N/A
19	7/31/2019	75.73	7541	5736	3614	406020	8658.167	N/A
20	8/1/2019	77.69	7212	5960	3599	402480	8705.667	N/A
21	8/1/2019	72.1	6795	5641	3581	402540	8636.071	N/A
22	8/1/2019	77.9	7245	5721	3475	402440	8812.452	N/A
23	8/2/2019	76.1	7214	5763	3334	406520	8586.143	N/A
24	8/2/2019	72.4	7049	6344	3569	404340	10059.26	N/A
25	8/3/2019	77.9	7141	5925	3595	411500	8681.905	N/A
26	8/3/2019	77.63	7116	5473	4232	405680	8675.833	N/A
27	8/4/2019	70.78	7329	5563	3574	405940	10207.69	N/A
28	8/5/2019	74.34	6874	5645	3524	395160	8357.095	N/A
29	8/5/2019	77.51	7008	6005	3695	403820	8505.119	N/A
30	8/6/2019	76.49	7048	5771	3728	402840	8548.262	N/A
31	8/6/2019	72.76	6904	5783	3963	405180	8484.143	N/A
32	8/6/2019	70.96	7019	5516	3805	403600	8496.81	N/A
33	8/7/2019	75.1	6923	5819	3810	397920	8319.476	N/A
34	8/7/2019	72.79	6528	5668	3862	403060	8563.024	N/A
35	8/7/2019	77.88	6550	4079	3946	403320	8433.952	N/A
36	8/7/2019	75.33	7294	5795	3656	412370	8603.048	N/A
37	8/8/2019	77.15	6668	5620	3734	404380	8356.929	N/A
38	8/8/2019	73.1	6489	5552	3862	403540	8545.238	N/A
39	8/8/2019	77.83	6903	5389	3861	397860	8487.714	N/A
40	8/8/2019	76.94	6812	5701	3614	409095	8583.881	N/A
41	8/9/2019	77.18	6675	5668	3981	413275	8600.667	N/A
42	8/9/2019	77.56	6816	5592	3937	407640	8444.071	N/A
43	8/9/2019	76.19	6451	5463	3557	405760	8520.5	N/A
44	8/9/2019	77.47	6576	6681	3481	404420	8383.762	N/A
AVG		73.9	7,160	5,694	3,576	17,195,830	376,589	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	-15	225	-15	225
Silty sandstone w/ coal	225	265	225	265
Sandy Siltstone	265	325	265	325
Silty sandstone	325	405	325	405
Sandy sahle	405	425	405	425
Sandy, limy siltstone	425	485	425	485
Sandstone	485	585	485	585
Siltstone	585	685	585	685
Sandstone w lime stingers	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	2,072	2,045	2,131
Big Lime	2,087	2,845	2,107	2,934
Fifty Foot Sandstone	2,845	3,033	2,910	3,132
Gordon	3,033	3,130	3,108	3,233
Fifth Sandstone	3,130	3,524	3,209	3,648
Bayard	3,524	4,118	3,624	4,270
Speechley	4,118	4,354	4,246	4,519
Balltown	4,354	4,975	4,495	5,172
Bradford	4,975	5,367	5,148	5,586
Benson	5,367	5,589	5,562	5,819
Alexander	5,589	6,414	5,795	6,756
Sycamore	6,289	6,390	6,584	6,732
Middlesex	6,390	6,489	6,732	6,930
Burkett	6,489	6,516	6,930	7,002
Tully	6,516	6,535	7,002	7,058
Marcellus	6,535	NA	7,058	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:	7/21/2019
Job End Date:	8/9/2019
State:	West Virginia
County:	Ritchie
API Number:	47-085-10341-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Cinqmars 1H
Latitude:	39.37157780
Longitude:	-80.92392770
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,589
Total Base Water Volume (gal):	16,217,234
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	88.53752	Density = 8.34
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.24350	

CalBreak 5501	Calfrac Well Services Corp.	Breaker					
				Listed Below			
Excelerate EC-8	Halliburton	Friction Reducer					
				Listed Below			
WG-36 GELLING AGENT	Halliburton	Gelling Agent					
				Listed Below			
HYDROCHLORIC ACID, 22 BAUME	Halliburton	Solvent					
				Listed Below			
MC B-8614	Halliburton	Biocide					
				Listed Below			
FDP-S1296-17	Halliburton	Acid Corrosion Inhibitor					
				Listed Below			
SCALECHECK LP-70	Halliburton	Scale Inhibitor					
				Listed Below			
Sand-Premium White-30/50	Halliburton	Proppant					
				Listed Below			
Sand-Premium White-40/70	Halliburton	Proppant					

				Listed Below			
Sand-Common White-100 Mesh, SSA-2	Halliburton	Proppant					
				Listed Below			
OPTIFLO-II DELAYED RELEASE BREAKER	Halliburton	Breaker					
				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	11.17608	
			Hydrochloric acid	7647-01-0	15.00000	0.02874	
			Acrylamide acrylate polymer	Proprietary	30.00000	0.01650	
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.01650	
			Inorganic salt	Proprietary	30.00000	0.01650	
			Guar gum	9000-30-0	100.00000	0.01617	
			Ethylene glycol	107-21-1	60.00000	0.00614	
			Glutaraldehyde	111-30-8	30.00000	0.00382	
			Telomer	Proprietary	10.00000	0.00102	
			Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl chlorides	68424-85-1	5.00000	0.00064	
			Peroxydisulfuric acid	7727-54-0	100.00000	0.00038	
			Methanol	67-56-1	100.00000	0.00027	
			Ammonium persulfate	7727-54-0	100.00000	0.00013	
			Ethanol	64-17-5	1.00000	0.00013	
			Sodium polyacrylate	9003-04-7	1.00000	0.00010	
			2-Propenoic acid, methyl ester, polymer with 1,1-dichloroethene	25038-72-6	20.00000	0.00008	

			Modified thiourea polymer	Proprietary	30.00000	0.00004	
			Mixture of dimer and trimer fatty acids of indefinite composition derived from tall oil	61790-12-3	30.00000	0.00004	
			Oxylated phenolic resin	Proprietary	30.00000	0.00004	
			Phosphoric acid	7664-38-2	0.10000	0.00001	
			Hexadecene	629-73-2	5.00000	0.00001	
			Propargyl alcohol	107-19-7	5.00000	0.00001	
			Ethoxylated alcohols	Proprietary	5.00000	0.00001	
			C.I. pigment Orange 5	3468-63-1	1.00000	0.00000	
			Acrylic acid	79-10-7	0.01000	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: 47-085-10341 County: Ritchie
District: Clay Well No: Cinqmars Unit 1H
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: 3/20/20 - 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" ← 2,053'

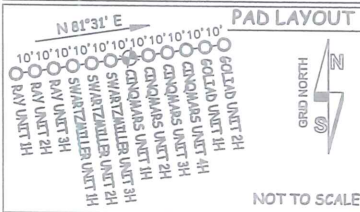
613' TO BOTTOM HOLE
LATITUDE 39°22'30"

LONGITUDE 80°55'00" → 1,247'
LONGITUDE 80°55'00"

Antero Resources Corporation
Well No. Cinqmars Unit 1H
47-085-10341

NOTES:
WELL 1H TOP HOLE INFORMATION:
N: 320,637ft E: 1,597,462ft
LAT: 39°22'17.68" LON: 80°55'26.14"
BOTTOM HOLE INFORMATION:
N: 311,785ft E: 1,598,762ft
LAT: 39°20'50.41" LON: 80°55'07.80"
WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE. ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE GEOXT 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 1H TOP HOLE INFORMATION:
N: 4,358,024m E: 506,567m
BOTTOM HOLE INFORMATION:
N: 4,355,334m E: 507,008m



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

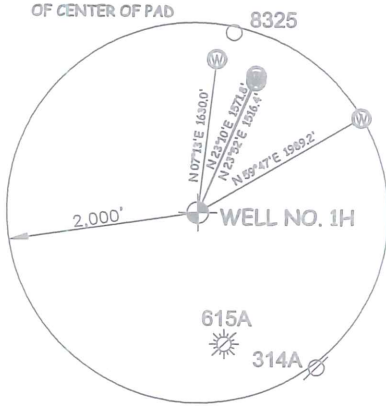


Table with 4 columns: TM-Par, Surface Owner, Book/Pg, Acreage. Lists various land parcels and owners.

Table with 2 columns: Royalty Owner, Name. Lists royalty owners for different sections of the well pad.

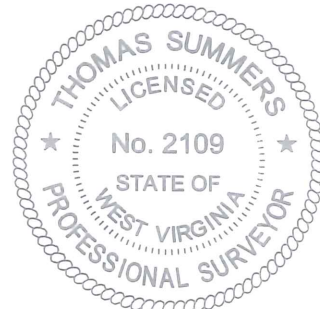
I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE RULES ISSUED AND PERSCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



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

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

- 1. 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.
2. TOP HOLE DATA SHOWN HEREON WAS PROVIDED BY
3. AS DRILLED DATA WAS PROVIDED BY ANTERO RESOURCES CORPORATION.
4. 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.
5. WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.



LEGEND section with symbols for Surface Owner Boundary Lines, Interior Surface Tracts, Proposed Well Path, and As Drilled Well Path. Includes signature of Thomas Summers and his title.

WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL 47 - 085 - 10341
(IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW X STATE COUNTY PERMIT
LOCATION: ELEVATION 1,235' AS BUILT WATERSHED NORTH FORK HUGHES RIVER
QUADRANGLE PENNSBORO 7.5 DISTRICT CLAY COUNTY RITCHIE
SURFACE OWNER DAVID L. WEEKLEY REVOCABLE TRUST ACREAGE 203.38 ACRES +/-
OIL & GAS ROYALTY OWNER DAVID L. WEEKLEY REVOCABLE TRUST; NORMAN FLEMING ET UX; HAUGHT FAMILY TRUST; JOHN A. MILLIGAN ET AL; JOHN A. MILLIGAN ET AL; JOHN A. MILLIGAN ET AL; CHARLES ALLMAN; CHARLENE COTTRILL; EMERSON MCCULLOUGH ET AL; ROBERT MCCULLOUGH ET UX LEASE ACREAGE 229 AC±; 130 AC±; 323 AC±; 44.5 AC±; 25 AC±; 25 AC±; 60 AC±; 40 AC±; 154 AC±; 148 AC±
PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) AS DRILLED PLUG & ABANDON CLEAN OUT & REPLUG
TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,599' TVD 15,816' MD
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM
ADDRESS 1615 WYNKOOP ST. ADDRESS 5400 D BIG TYLER ROAD
FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313