

March 20, 2020

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

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

#### To Whom It May Concern:

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

Megan Griffith Permitting Agent

**Antero Resources Corporation** 

**Enclosures** 

WR-35 Rev. 8/23/13

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

API _	<u>47</u>	County	D	District				
Quad		Pad Name	Field/Pool Name					
Farm nan	ne			Well Number				
Operator	(as registered with the OC	OG)						
Address _		City		State	Zip			
	ed location NAD 83/UT Top hole Landing Point of Curve Bottom Hole	M Attach an as-drill Northing Northing Northing	Eastin	ng				
Elevation	n (ft) G	Type of Well	□New □ Existing	Type of Report	□Interim □Final			
Permit Ty	ype   Deviated	Horizontal   Horizon	ntal 6A  □ Vertical	Depth Type	□ Deep □ Shallo	w		
Type of C	Operation   Convert	□ Deepen □ Drill □	□ Plug Back □ Redrill	ing □ Rework	□ Stimulate			
Well Typ	pe □ Brine Disposal □ C	BM □ Gas □ Oil □ Se	condary Recovery □ Sol	ution Mining 🗆 St	orage   Other			
• •	Completion	•	uced □ Brine □Gas	□ NGL □ Oil	□ Other			
Production	Media Surface hole □ on hole □ Air □ Mud pe(s) and Additive(s)			ole □ Air □ Mud	l □ Fresh Water □ Br	ine		
Date perr	mit issued	Date drilling com	menced	Date drilling	ceased			
Date com	npletion activities began _		_ Date completion activ	ities ceased				
Verbal pl	lugging (Y/N)	_ Date permission grante	ed	Granted by				
Please no	ote: Operator is required to	o submit a plugging applic	cation within 5 days of ve	rbal permission to p	blug			
Freshwat	er depth(s) ft		Open mine(s) (Y/N) de	pths				
Salt water	er depth(s) ft		Void(s) encountered (Y	//N) depths				
Coal dept	th(s) ft		Cavern(s) encountered	(Y/N) depths				
Is coal be	eing mined in area (Y/N)_				Reviewed by:			

□ Yes □ No

DETAILS \_\_\_\_\_

TYPE OF TRACER(S) USED \_\_\_\_\_

WAS WELL COMPLETED OPEN HOLE?

WERE TRACERS USED □ Yes □ No

API 4	47			_ Farm na	me	Well number						
	PERFORATION RECORD											
Stage No.	Perforation	date		rated from MD ft.		rforated to MD ft.		Number of erforations			Formation(s	)
	+	*PL	EA	SE S	EE	AT	<del> </del> ΓΑ	CHE	DΕ	XHI	BIT 1	
Please	insert addition	onal page	es as app	olicable.			<u> </u>					
				STIN	MULAT	TION INFO	)RMA	TION PER S	STAGE			
Comp	lete a separat	e record	for each	stimulation	ı stage.							
Stage No.	Stimulations Date	Ave P	ump BPM)	Ave Treatn Pressure (F		Max Break Pressure (		ISIP (PSI)		nount of opant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
		*PI	FΔ	SF S	SFF	<del>-</del> = дт	ΤΔ	CHE	D F	XH	BIT 2	<del> </del>
1	1					<b>-</b> / <b>.</b> .				-/	 	<b>-</b> 

Please insert additional pages as applicable.

WR-35 Rev. 8/23/13											Page of
API 47			Farm	name_					Well nu	mber	
PRODUCING	FORMAT	TON(S)				TVD			MD		
Please insert ac	•	•		□ Ope	en Flow		OIL	TEST 🗆	  Flow 🗆 F	'ump	
SHUT-IN PRE	ESSURE	Surface _		psi	Botte	om Hole_		psi	DURATIO	ON OF TEST _	hrs
OPEN FLOW		_ mcfpd								ASURED BY ted $\square$ Orifice	□ Pilot
LITHOLOGY/ FORMATION		N FT DEI	TH IN FT	DEPT	H IN FT		N FT			AND RECORD QU	ANTITYAND DIL, GAS, H <sub>2</sub> S, ETC)
	*P	LEA	SE	SE	E A		AC	HED	EXI	HIBIT 3	
Please insert ac	lditional p	ages as app	licable.	•							
Drilling Contra									State _	Zip	
Logging Comp									State _	Zip	
Cementing Con Address	mpany				City		_		State _	Zip	
Stimulating Co Address Please insert ad					City				State _	Zip	
i iouse misert at	aanaonai p	uges as app	madic.								
Completed by											
Signature					ı ıtıe _				D	ate	<del></del>
Submittal of H	ydraulic F	racturing C	hemical	Disclos	ure Info	rmation	At	tach copy o	of FRACFO	CUS Registry	

API <u>47-085-10346</u> Farm Name <u>David L. Weekley Revocable Trust</u> Well Number <u>Ray Unit 1H</u> EXHIBIT 1									
Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations				
1	8/22/2019	14563.1	14617.2	60	Marcellus				
2	8/23/2019	14364.68	14532.03	60	Marcellus				
3	8/23/2019	14166.26	14333.61	60	Marcellus				
4	8/23/2019	13967.84	14135.19	60	Marcellus				
5	8/23/2019	13769.42	13936.77	60	Marcellus				
6	8/24/2019	13571	13738.35	60	Marcellus				
7	8/24/2019	13372.58	13539.93	60	Marcellus				
8	8/24/2019	13174.16	13341.51	60	Marcellus				
9	8/24/2019	12975.74	13143.09	60	Marcellus				
10	8/25/2019	12777.32	12944.67	60	Marcellus				
11	8/25/2019	12578.9	12746.25	60	Marcellus				
12	8/25/2019	12380.48	12547.83	60	Marcellus				
13	8/25/2019	12182.06	12349.41	60	Marcellus				
14	8/26/2019	11983.64	12150.99	60	Marcellus				
15	8/26/2019	11785.22	11952.57	60	Marcellus				
16	8/26/2019	11586.8	11754.15	60	Marcellus				
17	8/26/2019	11388.38	11555.73	60	Marcellus				
18	8/26/2019	11189.96	11357.31	60	Marcellus				
19	8/27/2019	10991.54	11158.89	60	Marcellus				
20	8/27/2019	10793.12	10960.47	60	Marcellus				
21	8/27/2019	10594.7	10762.05	60	Marcellus				
22	8/27/2019	10396.28	10563.63	60	Marcellus				
23	8/28/2019	10197.86	10365.21	60	Marcellus				
24	8/28/2019	9999.44	10166.79	60	Marcellus				
25	8/28/2019	9801.02	9968.37	60	Marcellus				
26	8/28/2019	9602.6	9769.95	60	Marcellus				
27	8/29/2019	9404.18	9571.53	60	Marcellus				
28	8/29/2019	9205.76	9373.11	60	Marcellus				
29	8/29/2019	9007.34	9174.69	60	Marcellus				
30	8/29/2019	8808.92	8976.27	60	Marcellus				
31	8/29/2019	8610.5	8777.85	60	Marcellus				
32	8/30/2019	8412.08	8579.43	60	Marcellus				
33	8/30/2019	8213.66	8381.01	60	Marcellus				
34	8/30/2019	8015.24	8182.59	60	Marcellus				
35	8/30/2019	7816.82	7984.17	60	Marcellus				
36	8/31/2019	7618.4	7785.75	60	Marcellus				
37	8/31/2019	7419.98	7587.33	60	Marcellus				
38	8/31/2019	7221.56	7388.91	60	Marcellus				

API 47-085-10346 Farm Name David L. Weekley Revocable Trust Well Number Ray 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	8/22/2019	60.96	8246	6543	4060	159920	6171	N/A			
2	8/23/2019	78.69	8297	6423	3758	403940	8666	N/A			
3	8/23/2019	80.83	8283	5852	3725	405300	8557	N/A			
4	8/23/2019	77.78	8355	5699	3588	407400	8735	N/A			
5	8/23/2019	86.18	8238	5596	3544	408120	8606	N/A			
6	8/24/2019	84.02	8282	5818	3719	410660	8655	N/A			
7	8/24/2019	53.99	8231	5411	4435	408840	11236	N/A			
8	8/24/2019	84.78	8287	5496	3556	413420	8835	N/A			
9	8/24/2019	85.36	8288	5625	3696	415300	8922	N/A			
10	8/25/2019	84.79	8271	5880	3634	411240	8741	N/A			
11	8/25/2019	85.36	8339	5705	3575	410380	8724	N/A			
12	8/25/2019	82.42	8161	5690	3561	411420	8709	N/A			
13	8/25/2019	72.78	8137	5642	4284	410700	10512	N/A			
14	8/26/2019	85.35	8305	5758	3902	410980	8600	N/A			
15	8/26/2019	84.03	8170	5463	3565	406680	8435	N/A			
16	8/26/2019	84.25	7864	5496	3607	407340	8746	N/A			
17	8/26/2019	82.81	8129	5770	3628	407560	8638	N/A			
18	8/26/2019	82.35	8365	5574	3805	410020	8547	N/A			
19	8/27/2019	84.16	8462	5713	3924	405200	8512	N/A			
20	8/27/2019	85.41	8081	5785	3741	408220	8524	N/A			
21	8/27/2019	85.32	8209	5732	3628	403060	8457	N/A			
22	8/27/2019	86.54	8059	5796	3792	393680	8169	N/A			
23	8/28/2019	85.5	7895	5703	4047	404460	8283	N/A			
24	8/28/2019	85.49	7886	5784	4064	405340	8424	N/A			
25	8/28/2019	82.49	8068	5787	3914	405060	8545	N/A			
26	8/28/2019	85.03	7844	5344	4089	408440	8324	N/A			
27	8/29/2019	83.89	7787	5727	3922	412360	8407	N/A			
28	8/29/2019	84.87	7808	5902	3942	405040	8455	N/A			
29	8/29/2019	84.85	7787	6027	4069	403780	8403	N/A			
30	8/29/2019	84.51	7892	6014	3935	405560	8414	N/A			
31	8/29/2019	85.43	7619	6026	3878	399880	8252	N/A			
32	8/30/2019	85.3	7663	5627	3992	403380	8263	N/A			
33	8/30/2019	83.58	7388	6158	3913	406520	8392	N/A			
34	8/30/2019	84.05	7513	5843	3766	406180	8343	N/A			
35	8/30/2019	85.57	7614	5627	3962	403860	8144	N/A			
36	8/31/2019	86.02	7194	5972	3778	403980	8073	N/A			
37	8/31/2019	85.99	7126	5729	3847	405140	8319	N/A			
38	8/31/2019	84.23	7046	5619	3907	406640	9253	N/A			
	AVG	82.5	7,979	5,773	3,836	15,215,000	325,991	TOTAL			

<b>API</b> <u>47-08</u>	35-10346 <b>Farm Name</b> Da	avid L. Weekley Revocable Tru	st_ <b>Well Number</b> Ray Ur	<u>iit 1H</u>					
EXHIBIT 3									
LITHOLOGY/ FORMATION	TOP DEPTH (TVD) From Surface	BOTTOM DEPTH (TVD) From Surface	TOP DEPTH (MD) From Surface	BOTTOM DEPTH (MD) From Surface					
Silty sandstone	0	225	0	225					
Silty sandstone w/ coal	225	265	225	265					
•	265	325	265	325					
Sandy Siltstone	325	405	325	405					
Silty sandstone									
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	2,022	2,045	2,100					
Big Lime	2,037	2,796	2,076	2,911					
Fifty Foot Sandstone	2,796	2,963	2,887	3,091					
Gordon	2,963	3,083	3,067	3,221					
Fifth Sandstone	3,083	3,471	3,197	3,638					
Bayard	3,471	4,076	3,614	4,280					
Speechley	4,076	4,320	4,256	4,539					
Balltown	4,320	4,928	4,515	5,188					
Bradford	4,928	5,337	5,164	5,624					
Benson	5,337	5,546	5,600	5,846					
Alexander	5,546	6,414	5,822	6,838					
Sycamore	6,288	6,390	6,667	6,814					
Middlesex	6,390	6,488	6,814	7,011					
Burkett	6,488	6,515	7,011	7,093					
Tully	6,515	6,536	7,093	7,178					
Marcellus	6,536	NA	7,178	NA					

<sup>\*</sup>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.

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# State of West Virginia

## Department of Environmental Protection - Office of Oil and Gas Discharge Monitoring Report

## Oil and Gas General Permit

Company Name:	Antero R	Resources Corporation			
API No:	47-085-1	0346		County:	Ritchie
District:	Clay			Well No:	Ray Unit 1H
Farm Name:	David W	eekley L. Revocable Trust	_		
Discharge Date/s I	From:(M	MDDYY) 09/26/19		To: (MMI	ODYY) 10/26/19
Discharge Times.	From:	0:00		To: 24:00	)
Total Volume to b	e Dispos	ed from this facility (gall	lons):	906,634	
Disposal Option(s)	) Utilized	d (write volumes in gallor	ıs):		
(1) Land Applica	tion:		(Include	a topograph	nical map of the Area.) 8400923823, 3400923824, 3416729731, 3416729543,
(2) UIC:		104,033	Permit N	O.341672 <u>9464,</u> 3	3416729445, 3410523619, 3410523652
(3) Offsite Dispos	sal:		Site Loc	ation:	
(4) Reuse:		802,601	Alternate	e Permit Nu	mber:
(5) Centralized Fa	acility:		Permit N	To	
(6) Other method	:		(Include	an explanat	ion)
Follow Instruction	s below	to determine your treatme	ent categor	y:	
Optional Pretreat			n/a	DO mg/l	
•	_	on to use expedited treatr			-
(Y/N) <u>n/a</u>		If yes, who?		and	l place a four (4) on line 7.
If not go to li			T 75 T	7.0	4
	iid or flo	wback put into the pit? (Y	(/N) <u>n/a</u>	If yes	s, go to line 5. If not, go to
line 3.	a chlorid	le value pretreatment (see	ahove)? (	V/N) n/a	If yes, go to line 4
If not, go to 1		ie value pretreatment (see	above): (	1/11) 11/4	m yes, go to fine 4
. •		ess than 5000 mg/l? (Y/N	∬ n/a	If ves, th	hen enter a one (1) on line 7.
		ntment value for DO? (See			If yes, go to line 6
If not, enter a	_	•			
6. Is the DO lev	el greate	er than 2.5 mg/l?(Y/N) _n/	/a	If yes, e	enter a two (2) on line 7. If
not, enter a tl					
	_	ory of your pit. Use the A		e section.	
8. Comments	on Pit c	ondition: n/a No pit on s	site		<del></del>
Nama of Dringin	nol Evon	Officery Crotobon Kobley			
Title of Officer:	-	. Officer: Gretchen Kohler ior Environmental and Regulator		<del></del>	
Date Completed		ZIII/GIO	ory Manager		
		lty of law that I have pe	rsonally e	 xamined an	d am familiar with the
•	-	n this document and all the	-		
		mediately responsible for			· · · · · · · · · · · · · · · · · · ·
		rate, and complete. I am	_		
	•	tion, including the possib			<u> </u>

Signature of a Principal Exec. Officer or Authorized agent.

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Page 2 of 3				
Category 1 Sampling Results API No:		_		
	Predi	scharge	Disc	harge
Parameter	Limits	Reported	Limits	Reported
pН	6-10	- -	6-10	
Settling Time	5		N/A	N/A
Fe	6		6	
D.O.	2.5		2.5	
Settleable Sol.	0.5		0.5	
C1	5,000		5,000	
Oil	Trace		Trace	
TOC**			Monitor	142
Oil and Grease			Monitor	
Total Al***			Monitor	
TSS			Monitor	
Total Mn	Monitor		Monitor	
Volume			Monitor	
Flow			Monitor	
Disposal Area			Monitor	
*** Al is only rep	orted if the pH	is above 9.0		
Category 2				
Sampling Results				
API No:		_		
	Predis	scharge	Disc	harge
Parameter	Limits	Reported	Limits	Reported
pН	6-10		6-10	
Settling Time	10	-	N/A	N/A

Units S.U

Days
mg/l
mg/l
mg/l
Obs.
mg/l
mg/l
mg/l
mg/l
Gal
Gal/min
Acres

	Predi	scharge	Disc	harge	
Parameter	Limits	Reported	Limits	Reported	Units
pН	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/1
Volume			Monitor		Gal
Flow			Monitor		Gal/min
Disposal Area			Monitor		Acres
* Can be 25,000 w	ith inspector's	approval,			

Date: \_\_\_\_

Aeration Code:

(Inspector's signature):

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

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

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Category 3	
Sampling Results	
API No:	

	Predischarge		Discharge					
<b>Parameter</b>	Limits	Reported	Limits	Reported	Units			
pН	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			
C1*	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):			Da	ate:				
** Include a descri	Aeration Cod	e:						
*** Al is only repo	rted if the pH	is above 9.0.						
Category 4								
Sampling Results								
API No:								
+		-						

	Predischarge		Discharge				
Parameter	Limits	Reported	Limits	Reported	Units		
pН	6-10	19	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	<del>2</del> .	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 (0.1	75)		N/A	N/A	1b/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: \_\_\_\_

