

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 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,

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	API 47 Farm name							We	ell numbe	r		
					P	ERFORAT	'ION F	RECORD				
Stage No.	Perforation	date		rated from MD ft.		rforated to MD ft.		Number of erforations			Formation(s)
	+	*PL	EA	SE S	EE	AT	 ΓΑ:	CHE) E	XHI	BIT 1	
Please	insert addition	onal page	es as app	plicable.				I				
				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 Treatm Pressure (P		Max Break Pressure (ISIP (PSI)		nount of pant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
		*PI	FΔ	SF S	SFF	 = дт	ΤΔ	CHE	h D F	ΧH	BIT 2	
1	1					- / .						-

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 ₂ 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	
Submittal of H	ydraulic F	racturing C	hemical	Disclos	ure Info	rmation	At	tach copy o	of FRACFO	CUS Registry	

API <u>47-085-10347</u> Farm Name <u>David L. Weekley Revocable Trust</u> Well Number <u>Ray Unit 2H</u> EXHIBIT 1										
	Perforation Perforated from MD Perforated to Number of									
Stage No.	Perforation Date	ft.	MD ft.	Number of Perforations	Formations					
1	8/22/2019	14284.1	14338.7	60	Marcellus					
2	8/22/2019	14086.76	14253.21	60	Marcellus					
3	8/22/2019	13889.42	14055.87	60	Marcellus					
4	8/23/2019	13692.08	13858.53	60	Marcellus					
5	8/23/2019	13494.74	13661.19	60	Marcellus					
6	8/23/2019	13297.4	13463.85	60	Marcellus					
7	8/23/2019	13100.06	13266.51	60	Marcellus					
8	8/24/2019	12902.72	13069.17	60	Marcellus					
9	8/24/2019	12705.38	12871.83	60	Marcellus					
10	8/24/2019	12508.04	12674.49	60	Marcellus					
11	8/24/2019	12310.7	12477.15	60	Marcellus					
12	8/25/2019	12113.36	12279.81	60	Marcellus					
13	8/25/2019	11916.02	12082.47	60	Marcellus					
14	8/25/2019	11718.68	11885.13	60	Marcellus					
15	8/25/2019	11521.34	11687.79	60	Marcellus					
16	8/26/2019	11324	11490.45	60	Marcellus					
17	8/26/2019	11126.66	11293.11	60	Marcellus					
18	8/26/2019	10929.32	11095.77	60	Marcellus					
19	8/26/2019	10731.98	10898.43	60	Marcellus					
20	8/27/2019	10534.64	10701.09	60	Marcellus					
21	8/27/2019	10337.3	10503.75	60	Marcellus					
22	8/27/2019	10139.96	10306.41	60	Marcellus					
23	8/27/2019	9942.62	10109.07	60	Marcellus					
24	8/27/2019	9745.28	9911.73	60	Marcellus					
25	8/28/2019	9547.94	9714.39	60	Marcellus					
26	8/28/2019	9350.6	9517.05	60	Marcellus					
27	8/28/2019	9153.26	9319.71	60	Marcellus					
28	8/28/2019	8955.92	9122.37	60	Marcellus					
29	8/29/2019	8758.58	8925.03	60	Marcellus					
30	8/29/2019	8561.24	8727.69	60	Marcellus					
31	8/29/2019	8363.9	8530.35	60	Marcellus					
32	8/29/2019	8166.56	8333.01	60	Marcellus					
33	8/30/2019	7969.22	8135.67	60	Marcellus					
34	8/30/2019	7771.88	7938.33	60	Marcellus					
35	8/30/2019	7574.54	7740.99	60	Marcellus					
36	8/30/2019	7377.2	7543.65	60	Marcellus					
37	8/30/2019	7179.86	7346.31	60	Marcellus					
38	8/31/2019	6982.52	7148.97	60	Marcellus					

API 47-085-10347 Farm Name David L. Weekley Revocable Trust Well Number Ray Unit 2H									
	EXHIBIT 2								
Stage No.	Stimulations Date	Avg Pump Rate	Avg Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/ other (units)	
1	8/22/2019	73.72	8168	7138	3898	159960	4963	N/A	
2	8/22/2019	77.58	8256	5928	3390	404760	7390	N/A	
3	8/22/2019	79.43	8286	6282	3507	404360	7256	N/A	
4	8/23/2019	82.16	8204	5920	3551	408460	7202	N/A	
5	8/23/2019	78.82	8275	5669	3586	409400	7315	N/A	
6	8/23/2019	85.13	8252	5581	3561	408220	7293	N/A	
7	8/23/2019	82.65	8196	5560	3457	409500	7150	N/A	
8	8/24/2019	81.87	8213	5615	3587	409060	7183	N/A	
9	8/24/2019	85.74	8258	5711	3553	412260	7329	N/A	
10	8/24/2019	84.82	8338	5555	3451	415220	7302	N/A	
11	8/24/2019	81.47	8040	5347	3688	410440	7269	N/A	
12	8/25/2019	82.97	8149	5656	3799	411920	7157	N/A	
13	8/25/2019	85.79	8196	5318	3648	412000	7202	N/A	
14	8/25/2019	85.64	8174	5232	3572	412740	7200	N/A	
15	8/25/2019	83.16	8210	5560	3775	413180	7101	N/A	
16	8/26/2019	84.1	8209	5757	4126	408240	7016	N/A	
17	8/26/2019	84.3	8018	5697	3523	406260	7126	N/A	
18	8/26/2019	84.21	7866	5823	3585	409820	7188	N/A	
19	8/26/2019	84.95	8091	4023	3536	409000	7002	N/A	
20	8/27/2019	84.61	8160	5765	3669	404500	6849	N/A	
21	8/27/2019	84.44	8131	6212	3732	408160	6986	N/A	
22	8/27/2019	86.27	8040	6249	3664	406500	7171	N/A	
23	8/27/2019	84.24	8213	6046	3667	403180	7026	N/A	
24	8/27/2019	83.87	7942	5757	3709	399680	6692	N/A	
25	8/28/2019	83.96	8068	6227	3585	405720	6693	N/A	
26	8/28/2019	81.42	7670	5961	3776	401380	6990	N/A	
27	8/28/2019	81.26	7686	5766	3638	406880	6867	N/A	
28	8/28/2019	83.59	7742	5465	3827	410520	6790	N/A	
29	8/29/2019	84.77	7834	5900	3797	405460	6827	N/A	
30	8/29/2019	84.66	7551	5842	3701	409260	6900	N/A	
31	8/29/2019	85.35	7636	6147	3815	403620	6833	N/A	
32	8/29/2019	83.93	7589	6111	3875	403380	6727	N/A	
33	8/30/2019	84.4	7579	5743	3671	402200	6576	N/A	
34	8/30/2019	85.33	7329	5759	3665	406640	6703	N/A	
35	8/30/2019	86.12	7408	6159	3682	404660	6797	N/A	
36	8/30/2019	83.4	7261	5742	3763	405740	6758	N/A	
37	8/30/2019	85.4	7451	5664	3693	402880	6669	N/A	
38	8/31/2019	83.85	7141	6074	3847	405240	6637	N/A	
	AVG	83.4	7,943	5,788	3,673	15,230,400	264,135	TOTAL	

API 47-08	35-10347 Farm Name Da	avid L. Weekley Revocable Tru	st_ Well Number Ray Ur	nit 2H				
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				
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	2,043	2,045	2,086				
Big Lime	2,058	2,814	2,062	2,867				
Fifty Foot Sandstone	2,814	2,998	2,843	3,058				
Gordon	2,998	3,096	3,034	3,159				
Fifth Sandstone	3,096	3,497	3,135	3,575				
Bayard	3,497	4,099	3,551	4,197				
Speechley	4,099	4,333	4,173	4,438				
Balltown	4,333	4,948	4,414	5,075				
Bradford	4,948	5,333	5,051	5,473				
Benson	5,333	5,540	5,449	5,686				
Alexander	5,540	6,403	5,662	6,643				
Sycamore	6,278	6,379	6,479	6,619				
Middlesex	6,379	6,485	6,619	6,810				
Burkett	6,485	6,511	6,810	6,874				
Tully	6,511	6,534	6,874	6,939				
Marcellus	6,534	NA	6,939	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

8/22/2019	Job Start Date:
8/31/2019	Job End Date:
West Virginia	State:
Ritchie	County:
47-085-10347-00-00	API Number:
Antero Resources Corporation	Operator Name:
Ray 2H	Well Name and Number:
39.37155560	Latitude:
-80.92410270	Longitude:
NAD83	Datum:
NO	Federal Well:
NO	Indian Well:
6,593	True Vertical Depth:
11,369,058	Total Base Water Volume (gal):
0	Total Base Non Water Volume:







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	85.94669	Density = 8.34
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.20659	

Sand-Common White-100 Mesh, SSA-2	Halliburton	Proppant					
				Listed Below			
MC B-8614	Halliburton	Biocide					
				Listed Below			
LD-2950	MultiChem	Friction Reducer					
				Listed Below			
HYDROCHLORI C ACID, 10-30%	Halliburton	Solvent					
				Listed Below			
FDP-S1296-17	Halliburton Energy Services	Corrosion Inhibitor					
				Listed Below			
CalBreak 5501	Calfrac Well Services Corp.	Breaker					
				Listed Below			
WG-36 GELLING AGENT	Halliburton	Gelling Agent					
				Listed Below			
Items above are Tra	ade Names with the	exception of Base Wa	ater . Items below are the indi	vidual ingredients.			
			Crystalline silica, quartz	14808-60-7	100.00000	13.80543	
			Hydrochloric acid	7647-01-0	15.00000		
			Hydrotreated light petroleum distillate	64742-47-8	30.00000		
			Guar gum	9000-30-0	100.00000	0.00350	

	Glutaraldehyde	111-30-8	30.00000	0.00281	
	Methanol	67-56-1	100.00000	0.00236	
	Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl chlorides	68424-85-1	5.00000	0.00047	
	Ethoxylated alcohols	Proprietary	1.00000	0.00038	
	Poly(oxy-1,2-ethanediyl), alpha-tridecyl-omega- hydroxy-, branched	69011-36-5	1.00000	0.00038	
	Ammonium Persulfate	7727-54-0	100.00000	0.00010	
	Ethanol	64-17-5	1.00000	0.00009	
	Modified thiourea polymer	Proprietary	30.00000	0.00009	
	2 Propenoic acid, methylester, polymer with 1,1-dichloroethene	25038-72-6	20.00000	0.00002	
	Propargyl alcohol	107-19-7	5.00000	0.00001	
	Ethoxylated alcohols	Proprietary	5.00000	0.00001	_
	Phosphoric acid	7664-38-2	0.10000	0.00001	

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)

^{*} 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

WR-34 Page 1 of 3 Rev. 10-10

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:	47-085-10347	County:	Ritchie
District:	Clay	Well No:	Ray Unit 2H
Farm Name:	David Weekley L. Revocable Trust		
Discharge Date/s I	From:(MMDDYY) 09/26/19	To: (MM)	DDYY) 10/26/19
Discharge Times.	From: 0:00	To: 24:0	0
Total Volume to b	e Disposed from this facility (ga	llons): 906,634	
Disposal Option(s)) Utilized (write volumes in gallo	ons):	
(1) Land Applica	tion:	(Include a topograph	nical map of the Area.) 3400923823, 3400923824, 3416729731, 3416729543,
(2) UIC:	104,033	Permit No.3416729464,	3416729445, 3410523619, 3410523652
(3) Offsite Dispos	sal:	Site Location:	
(4) Reuse:	802,601	Alternate Permit Nu	ımber:
(5) Centralized Fa	acility:	Permit No.	
(6) Other method	:	(Include an explana	tion)
Follow Instruction	s below to determine your treatm	ent category:	
Optional Pretreat		n/a DO mg/	
-	permission to use expedited treat		
(Y/N) n/a		and	d place a four (4) on line 7.
If not go to li	ne 2 aid or flowback put into the pit? ((V/N) n/a If ve	s, go to line 5. If not, go to
line 3.	nd of howback put into the pit: (171N) 111d 11 ye	s, go to fine 3. If not, go to
	a chloride value pretreatment (se	ee above)? (Y/N) n/a	If yes, go to line 4
If not, go to 1	-	/ (/	
4. Is the Chloric	le level less than 5000 mg/l? (Y/	N) <u>n/a</u> If yes, t	hen enter a one (1) on line 7.
•	a pretreatment value for DO? (Se	ee above) (Y/N) _n/a_	If yes, go to line 6
•	three (3) in line 7.		
	rel greater than 2.5 mg/l?(Y/N)	n/a If yes, o	enter a two (2) on line 7. If
· ·	aree (3) on line 7. The category of your pit. Use the A	Annuantiata aastian	
	on Pit condition: n/a No pit on		
o. Comments	on the condition.		
Name of Princip	oal Exec. Officer: Gretchen Kohle	er	
Title of Officer:			
Date Completed	1: 3/16/20)	
•	ler penalty of law that I have p	•	
	mitted on this document and all		
	luals immediately responsible for	_	
	rue, accurate, and complete. I ar		-
submitting false	information, including the possi	ibility of fine and impri	sonment.

Signature of a Principal Exec. Officer or Authorized agent.

Category 1 Sampling Results API No:	
Sampling Results	
Category 1	
WR-34 Page 2 of 3	
WD 04	
WR-34	

	Predischarge		Disc		
Parameter	Limits	Reported	Limits	Reported	Units
pН	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 rep	orted if the pH	is above 9.0			

Category 2	
Sampling Results	
API No:	

	Predi	Predischarge Disch		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	y 	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 ae	ration technique. Aeration Code:

^{***} Al is only reported if the pH is above 9.0

WR-34				
Page	3	of	3	

Category 3	
Sampling Results	
API No:	

	Predi	scharge	Disc	harge			
Parameter	Limits	Reported	Limits	Reported	Units		
pН	6-10		6-10	CIT.	S.U		
Settling Time	20		N/A	N/A	Days		
Fe	6		6		mg/l		
D.O.	2.5	0	2.5		mg/l		
Settleable Sol.	0.5		0.5		mg/l		
Cl*	12,500	>	12,500	4	mg/l		
Oil	Trace		Trace		Obs.		
TOC**			Monitor		mg/l		
Oil and Grease		5	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 signar	ture):		Da	ate:			
** Include a descr	iption of your	aeration techniq	ue.	Aeration Cod	e:		
*** Al is only reported if the pH is above 9.0.							
Category 4	Category 4						

Parameter	Limits	Reported	Limits	Report
	Predi	scharge	Disc	harge
API No:		_		
Sampling Results				
0 ,				

	Predis	charge	Disc	harge	
Parameter	Limits	Reported	Limits	Reported	Units
pН	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 (0.1	175)		N/A	N/A	lb/Bl
Date Site Reclaimed	N/A	N/A			10 days from dis.
Disposal Area			Monitor		Acres
* Can be 25,000 wit	th inspector's	approval,			

(Inspector's signature): _____ Date: ____

