

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

API 47-085-10205 County Ritchie District Union
Quad Pullman 7.5' Pad Name Lockhart Heirs West Pad Field/Pool Name -----
Farm name O'Neill Family Trust, et al Well Number Left Fork Unit 3H
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 4337820m Easting 506218m
Landing Point of Curve Northing 4337943.25m Easting 506323.56m
Bottom Hole Northing 4340755m Easting 505462m

Elevation (ft) 1039' 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 04/10/2015 Date drilling commenced 2/25/2016 Date drilling ceased 4/26/2016
Date completion activities began 7/27/2016 Date completion activities ceased 9/4/2016
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

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Freshwater depth(s) ft 78' Open mine(s) (Y/N) depths _____
Salt water depth(s) ft None Identified Void(s) encountered (Y/N) depths FEB 01 2017
Coal depth(s) ft None Identified Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

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NAME: Michael Doff
DATE: 5-18-2017

05/26/2017

API 47-085 - 10205 Farm name O'Neill Family Trust, et al Well number Left Fork Unit 3H

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	30"	20"	105'	New	94#/J-55	N/A	Y
Surface	17-1/2"	13-3/8"	413'	New	48#/H-40	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2530'	New	36#/J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	16388'	New	23#/P-110	N/A	Y
Tubing		2-3/8"	6504'		4.7#/N-80		
Packer type and depth set		N/A					

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	Class A	201 sx	15.60	1.18	101 Cu. Ft.	0'	8 Hrs.
Surface	Class A	486 sx	15.67	1.20	287 Cu. Ft.	0'	8 Hrs.
Coal							
Intermediate 1	Class A	930 sx	15.80	1.18	792 Cu. Ft.	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	845 sx (Lead) 1558 sx (Tail)	13.5 (Lead), 15.2 (Tail)	1.24 (Lead), 1.81 (Tail)	3289 Cu. Ft.	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 16388' MD, 6316' TVD (BHL), 6358' TVD (Deepest Point Drilled) Loggers TD (ft) 16341' MD
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 5934'

** This is a subsequent well. Antero only runs wireline logs on one well on a multi-well pad (Left Fork Unit 1H API# 47-085-10204). Please reference the wireline logs submitted with Form WR-35 for Left Fork Unit 1H. A Cement Bond Log has been included with this submittal.

Check all wireline logs run caliper density deviated/directional induction temperature neutron resistivity gamma ray 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 _____

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WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

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WERE TRACERS USED Yes No TYPE OF TRACER(S) USED N/A

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API 47- 085 - 10205 Farm name O'Neill Family Trust, et al Well number Left Fork Unit 3H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
		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)
		SEE ATTACHED EXHIBIT 2						

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Please insert additional pages as applicable.

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<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>		
<u>Marcellus</u>	<u>6394' (TOP)</u>	<u>TVD</u>	<u>6328' (TOP) MD</u>
_____	_____	_____	_____
_____	_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 3000 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 9914 mcfpd Oil 91 bpd NGL --- bpd Water 3 bpd GAS MEASURED BY Estimated Orifice Pilot

<u>LITHOLOGY/ FORMATION</u>	<u>TOP</u>		<u>BOTTOM</u>		<u>DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H₂S, ETC)</u>
	<u>DEPTH IN FT</u> <u>NAME TVD</u>	<u>DEPTH IN FT</u> <u>TVD</u>	<u>DEPTH IN FT</u> <u>MD</u>	<u>DEPTH IN FT</u> <u>MD</u>	
	<u>0</u>		<u>0</u>		
	SEE ATTACHED EXHIBIT 3				

Please insert additional pages as applicable.

Drilling Contractor Patterson - UTI Drilling Company LLC
Address 207 Carlton Drive City Eighty Four State PA Zip 15330

Logging Company Allied Horizontal Wireline Services
Address 381 Colonial Manor Rd City North Huntingdon State PA Zip 15642

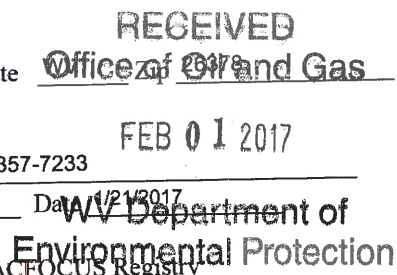
Cementing Company Allied Oil & Gas Services, LLC
Address 1036 East Main Street City Bridgeport State WV Zip 26330

Stimulating Company US Well Services
Address 533 Industrial Park Drive City Jane Lew State Office of Oil and Gas

Please insert additional pages as applicable.

Completed by Kara Quackenbush Telephone 303-357-7233
Signature Kara Quackenbush Title Permitting Agent Date 1/21/2017

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry



API 47-085-10205 Farm Name O'Neill Family Trust, et al Well Number Left Fork Unit 3H

EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	27-Jul-16	16121	16285	40	Marcellus
2	27-Jul-16	15919	16083	40	Marcellus
3	28-Jul-16	15716	15880	40	Marcellus
4	28-Jul-16	15514	15678	40	Marcellus
5	28-Jul-16	15311	15475	40	Marcellus
6	28-Jul-16	15109	15273	40	Marcellus
7	29-Jul-16	14906	15070	40	Marcellus
8	29-Jul-16	14704	14868	40	Marcellus
9	29-Jul-16	14501	14665	40	Marcellus
10	29-Jul-16	14299	14463	40	Marcellus
11	29-Jul-16	14096	14260	40	Marcellus
12	30-Jul-16	13894	14058	40	Marcellus
13	30-Jul-16	13691	13855	40	Marcellus
14	30-Jul-16	13489	13653	40	Marcellus
15	30-Jul-16	13286	13450	40	Marcellus
16	31-Jul-16	13084	13248	40	Marcellus
17	31-Jul-16	12881	13045	40	Marcellus
18	31-Jul-16	12679	12843	40	Marcellus
19	31-Jul-16	12476	12640	40	Marcellus
20	01-Aug-16	12274	12438	40	Marcellus
21	01-Aug-16	12071	12235	40	Marcellus
22	01-Aug-16	11869	12033	40	Marcellus
23	01-Aug-16	11666	11830	40	Marcellus
24	01-Aug-16	11464	11628	40	Marcellus
25	01-Aug-16	11261	11425	40	Marcellus
26	02-Aug-16	11059	11223	40	Marcellus
27	02-Aug-16	10856	11020	40	Marcellus
28	02-Aug-16	10654	10818	40	Marcellus
29	02-Aug-16	10451	10615	40	Marcellus
30	03-Aug-16	10249	10413	40	Marcellus
31	03-Aug-16	10046	10210	40	Marcellus
32	03-Aug-16	9844	10008	40	Marcellus
33	03-Aug-16	9641	9805	40	Marcellus
34	04-Aug-16	9439	9603	40	Marcellus
35	04-Aug-16	9236	9400	40	Marcellus
36	04-Aug-16	9034	9198	40	Marcellus
37	04-Aug-16	8831	8995	40	Marcellus
38	05-Aug-16	8629	8793	40	Marcellus
39	05-Aug-16	8426	8590	40	Marcellus
40	05-Aug-16	8224	8388	40	Marcellus
41	05-Aug-16	8021	8185	40	Marcellus
42	06-Aug-16	7819	7983	40	Marcellus
43	06-Aug-16	7616	7780	40	Marcellus
44	06-Aug-16	7414	7578	40	Marcellus
45	06-Aug-16	7211	7375	40	Marcellus
46	07-Aug-16	7009	7173	40	Marcellus
47	07-Aug-16	6806	6970	40	Marcellus
48	07-Aug-16	6604	6768	40	Marcellus

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API 47-085-10205 Farm Name O'Neill Family Trust, et al Well Number Left Fork Unit 3H

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	27-Jul-16	67.8	7986	0	4009	299050	8454	N/A
2	27-Jul-16	70.0	7899	6030	3816	311800	8596	N/A
3	28-Jul-16	71.0	8016	5947	4581	310350	8654	N/A
4	28-Jul-16	70.1	7813	5851	5085	311000	8662	N/A
5	28-Jul-16	72.6	7915	6098	4549	310800	9743	N/A
6	28-Jul-16	75.2	7595	5822	3855	310350	8531	N/A
7	29-Jul-16	73.0	7794	6223	3912	308700	8480	N/A
8	29-Jul-16	73.0	7572	5608	4277	308850	8542	N/A
9	29-Jul-16	77.5	7955	5790	5497	311150	8465	N/A
10	29-Jul-16	76.8	8151	5790	4299	309925	9798	N/A
11	29-Jul-16	67.0	7589	6130	4717	195650	8443	N/A
12	30-Jul-16	72.0	7771	5887	4216	311400	8438	N/A
13	30-Jul-16	77.0	7736	5822	4388	310650	8441	N/A
14	30-Jul-16	78.2	7797	5479	4710	310860	8439	N/A
15	30-Jul-16	79.0	7721	6262	4499	311250	8409	N/A
16	31-Jul-16	72.0	7491	6176	5050	311450	9893	N/A
17	31-Jul-16	79.5	7598	5636	4932	310300	8412	N/A
18	31-Jul-16	81.0	7653	5654	4427	310400	8392	N/A
19	31-Jul-16	80.0	7633	5379	3977	309950	8377	N/A
20	01-Aug-16	72.0	7423	5218	3691	309950	8366	N/A
21	01-Aug-16	75.0	7621	5375	4063	308650	8359	N/A
22	01-Aug-16	80.4	7585	5418	4245	310450	8363	N/A
23	01-Aug-16	80.0	7701	5643	3973	310150	8342	N/A
24	01-Aug-16	79.1	7632	5779	3934	311300	8333	N/A
25	01-Aug-16	68.3	7752	5412	4803	310200	9065	N/A
26	02-Aug-16	70.3	7782	5844	3937	310900	8315	N/A
27	02-Aug-16	77.6	7648	5407	3712	310370	8382	N/A
28	02-Aug-16	76.2	7549	5690	3819	310500	8298	N/A
29	02-Aug-16	75.7	7408	6580	3841	306925	8292	N/A
30	03-Aug-16	74.7	7769	6527	4181	309100	9267	N/A
31	03-Aug-16	77.0	7397	5854	3909	310090	8290	N/A
32	03-Aug-16	76.0	7039	5783	3819	308910	8274	N/A
33	03-Aug-16	77.0	7416	6280	4045	310020	8257	N/A
34	04-Aug-16	76.0	7180	6770	4542	312500	8248	N/A
35	04-Aug-16	77.0	7066	6477	4220	310890	8241	N/A
36	04-Aug-16	77.0	6893	6895	3902	310940	8228	N/A
37	04-Aug-16	74.8	7232	7303	3980	311340	8243	N/A
38	05-Aug-16	79.4	7109	6022	3973	309950	8220	N/A
39	05-Aug-16	78.0	7096	6770	4148	310300	8983	N/A
40	05-Aug-16	62.1	7732	7628	4195	308600	10437	N/A
41	05-Aug-16	75.9	7041	6205	4141	309800	9146	N/A
42	06-Aug-16	76.7	7203	7435	3859	309710	8178	N/A
43	06-Aug-16	76.7	7203	7435	3859	309710	8178	N/A
44	06-Aug-16	76.3	7885	7553	5186	188240	8759	N/A
45	06-Aug-16	70.6	7430	7406	3591	309000	10301	N/A
46	07-Aug-16	74.1	7024	7321	3676	310000	8188	N/A
47	07-Aug-16	74.5	6969	7435	3308	310650	8140	N/A
48	07-Aug-16	77.8	7238	6251	3226	310050	8175	N/A
	AVG=	75.0	7,536	6,069	4,179	14,643,080	413,037	TOTAL

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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
Fresh Water	78'	N/A	78'	N/A
Siltstone/Sandstone	0	95	0	95
Shale	95	255	95	255
Siltstone	255	295	255	295
Shale	295	335	295	335
Siltstone	335	475	335	475
Sandstone	475	675	475	675
Siltstone	675	725	675	725
Siltstone/ sandstone	725	745	725	745
Sandstone	745	915	745	915
Shale/ Siltstone	915	1015	915	1015
Shale	1015	1055	1015	1055
Sandstone	1055	1215	1055	1215
Shale	1215	1255	1215	1255
Sandstone	1255	1395	1255	1395
Siltstone	1395	1715	1395	1715
Shale/ Silstone	1715	1915	1715	1915
Limestone	1915	1957	1915	1927
Big Lime	1957	2874	1927	2412
Fifty Foot Sandstone	2874	2969	2412	2595
Gordon	2969	3335	2595	2897
Fifth Sandstone	3335	3399	2897	2992
Bayard	3399	3516	2992	3770
Speechley	3516	4164	3770	3889
Baltown	4164	4579	3889	4452
Bradford	4579	4982	4452	4823
Benson	4982	5208	4823	5058
Alexander	5208	6150	5058	6019
Sycamore	6150	6244	6019	6177
Middlesex	6244	6351	6177	6281
Burkett	6351	6376	6281	6309
Tully	6376	6394	6309	6328
Marcellus	6394	NA	6,328	NA

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	7/27/2016
Job End Date:	8/7/2016
State:	West Virginia
County:	Ritchie
API Number:	47-085-10205-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Left Fork 3H
Latitude:	39.18960600
Longitude:	-80.92800000
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,358
Total Base Water Volume (gal):	17,981,894
Total Base Non Water Volume:	0



Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	Antero Resources	Base Fluid	Water	7732-18-5	100.00000	90.77380	
Sand	U.S. Well Services, LLC	Proppant	Crystalline Silica, quartz	14808-60-7	100.00000	8.86285	
HCL Acid (12.6%-18.0%)	U.S. Well Services, LLC	Bulk Acid	Water	7732-18-5	87.50000	0.12355	
			Hydrogen Chloride	7647-01-0	18.00000	0.02951	
LGC-15	U.S. Well Services	Gelling Agents	Guar Gum	9000-30-0	50.00000	0.05082	
			Petroleum Distillates	64742-47-8	60.00000	0.04813	
			Suspending agent (solid)	14808-60-7	3.00000	0.00777	
			Surfactant	68439-51-0	3.00000	0.00305	
	U.S. Well Services	Friction Reducer	Water	7732-18-5	60.00000	0.03893	
			2-Propenoic acid, polymer with 2-propenamide	29003-06-9	30.00000	0.01946	
			Hydrated light distillate (petroleum)	64742-47-8	30.00000	0.01567	

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SI-1100s	J.S. Well Services	Scale Inhibitor	Ethoxylated alcohol blend	68002-97-1	4.00000	0.00260
			Water	7732-18-5	80.00000	0.01039
			Copolymer of Maleic and Acrylic acid	52255-49-9	10.00000	0.00153
			Potassium salt of diethylene triamine penta (methylene phosphonic acid)	15827-60-8	7.50000	0.00132
			Phosphino carboxylic acid polymer	71050-62-9	5.00000	0.00084
			Hexamethylene tramine penta (methylene phosphonic acid)	34690-00-1	5.00000	0.00084
			Hexamethylene diamine penta (methylene phosphonic acid)	23605-74-5	2.00000	0.00034
X-BAC 1020	J.S. Well Services	Anti-Bacterial Agent	2,2-dibromo-3-hitlopropanamide	10222-01-2	20.00000	0.00420
			Deionized Water	7732-18-5	28.00000	0.00240
AP One	J.S. Well Services	Gel Breakers	Ammonium Persulfate	7727-54-0	100.00000	0.00169
AI-302	J.S. Well Services	Acid Corrosion Inhibitors	Water	7732-18-5	95.00000	0.00027
			2-Propyn-1-olcompound with methyloxirane	38172-91-7	15.00000	0.00004

Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.

* Total Water Volume sources may include fresh water, produced water, and/or recycled water

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

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)

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LATITUDE 39°12'30"

3,261'

LATITUDE 39°15'00"

LONGITUDE 80°55'00"

6,852'

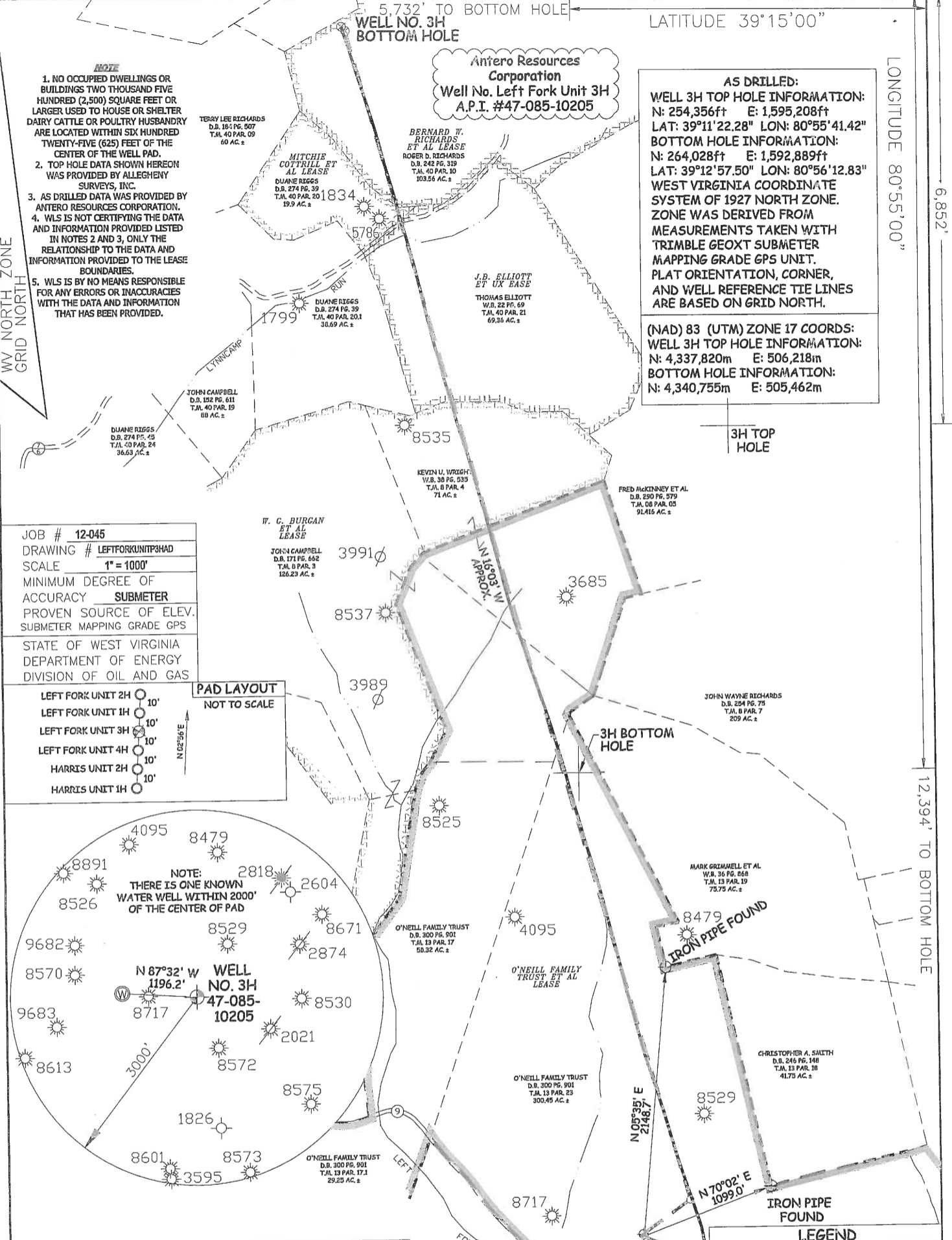
12,394' TO BOTTOM HOLE

- NOTE**
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 ALLEGHENY SURVEYS, INC.
 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.

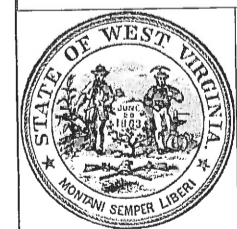
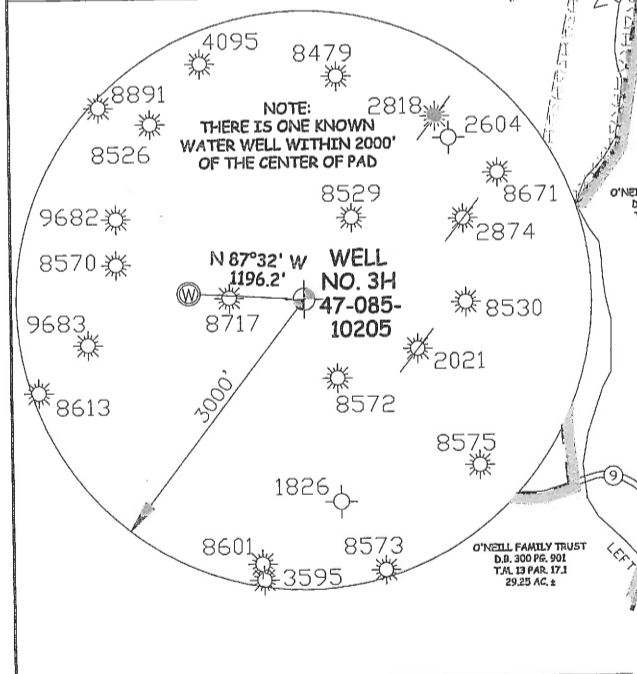
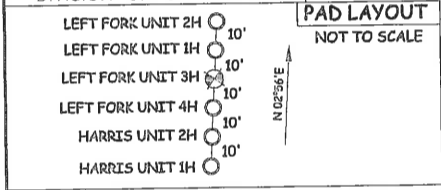
Antero Resources Corporation
Well No. Left Fork Unit 3H
A.P.I. #47-085-10205

AS DRILLED:
WELL 3H TOP HOLE INFORMATION:
 N: 254,356ft E: 1,595,208ft
 LAT: 39°11'22.28" LON: 80°55'41.42"
BOTTOM HOLE INFORMATION:
 N: 264,028ft E: 1,592,889ft
 LAT: 39°12'57.50" LON: 80°56'12.83"
 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 3H TOP HOLE INFORMATION:
 N: 4,337,820m E: 506,218m
BOTTOM HOLE INFORMATION:
 N: 4,340,755m E: 505,462m



JOB # 12-045
 DRAWING # LEFTFORKUNIT3HAD
 SCALE 1" = 1000'
 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



STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
 WILLOW LAND SURVEYING PLLC
 220 MASONIC AVE PENNSBORO WEST VIRGINIA 26415

DATE 11/08/16
 OPERATOR'S WELL# LEFT FORK UNIT #3H

LEGEND

- Surface Owner Boundary Lines +/-
- Interior Surface Tracts +/-
- Found monument, as noted
- Proposed Well Path
- As Drilled Well Path

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL API WELL # 47 - 085 - 10205
 (IF "GAS") PRODUCTION STORAGE DEEP SHALLOW STATE COUNTY PERMIT COUNTY NAME
 LOCATION: ORIGINAL GROUND ELEV. 1,039' AS DRILLED ELEV. 1,019' WATERSHED SOUTH FORK HUGHES RIVER COUNTY RITCHIE
 QUADRANGLE PULLMAN 7.5' DISTRICT UNION COUNTY RITCHIE
 SURFACE OWNER O'NEILL FAMILY TRUST ET AL ACREAGE 300.45 ACRES +/- LEASE ACREAGE 817.83 ACRES +/- 154 ACRES +/- 70 ACRES +/- 19.9 ACRES +/- 114 ACRES +/-
 OIL & GAS ROYALTY OWNER O'NEILL FAMILY TRUST ET AL; W. G. BURGAN ET AL; J.B. ELLIOTT ET UX; MITCHIE COTTRILL ET AL; BERNARD W. RICHARDS ET AL
 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 6,316' TVD 16,388' MD
 WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM
 ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD
 DENVER, CO 80202 CHARLESTON, WV 25313

05/26/2017

LATITUDE 39°12'30" 3,261'

LATITUDE 39°15'00"

LONGITUDE 80°55'00"

6,852'

12,394' TO BOTTOM HOLE

5,732' TO BOTTOM HOLE
WELL NO. 3H
BOTTOM HOLE

Antero Resources
Corporation
Well No. Left Fork Unit 3H
A.P.I. #47-085-10205

AS DRILLED:
WELL 3H TOP HOLE INFORMATION:
N: 254,356ft E: 1,595,208ft
LAT: 39°11'22.28" LON: 80°55'41.42"
BOTTOM HOLE INFORMATION:
N: 264,028ft E: 1,592,889ft
LAT: 39°12'57.50" LON: 80°56'12.83"
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 3H TOP HOLE INFORMATION:
N: 4,337,820m E: 506,218m
BOTTOM HOLE INFORMATION:
N: 4,340,755m E: 505,462m

3H TOP
HOLE

3H BOTTOM
HOLE

IRON PIPE FOUND

IRON PIPE
FOUND

- NOTE**
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 ALLEGHENY SURVEYS, INC.
 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.

TERRY LEE RICHARDS
D.B. 184 PG. 507
T.M. 40 PAR. 09
50 AC. ±

BERNARD W. RICHARDS
ET AL LEASE
ROGER D. RICHARDS
D.B. 242 PG. 319
T.M. 40 PAR. 10
103.56 AC. ±

MITCHIE
COTTRILL ET
AL LEASE
DUANE RIGGGS
D.B. 274 PG. 39
T.M. 40 PAR. 20
19.9 AC. ±

J.B. ELLIOTT
ET AL LEASE
THOMAS ELLIOTT
W.B. 22 PG. 69
T.M. 40 PAR. 21
69.36 AC. ±

DUANE RIGGGS
D.B. 274 PG. 39
T.M. 40 PAR. 20
38.69 AC. ±

JOHN CAMPBELL
D.B. 152 PG. 611
T.M. 40 PAR. 19
88 AC. ±

DUANE RIGGGS
D.B. 274 PG. 45
T.M. 40 PAR. 24
36.63 AC. ±

KEVIN U. WRIGHT
W.B. 38 PG. 035
T.M. 8 PAR. 4
71 AC. ±

FRED MCKINNEY ET AL
D.B. 290 PG. 579
T.M. 08 PAR. 05
91.15 AC. ±

W. G. BURGAN
ET AL
LEASE
JOHN CAMPBELL
D.B. 171 PG. 662
T.M. 8 PAR. 3
126.23 AC. ±

JOHN WAYNE RICHARDS
D.B. 254 PG. 72
T.M. 8 PAR. 7
209 AC. ±

MARK GRIMMEL ET AL
W.B. 36 PG. 868
T.M. 13 PAR. 19
73.75 AC. ±

CHRISTOPHER A. SMITH
D.B. 246 PG. 148
T.M. 13 PAR. 18
41.75 AC. ±

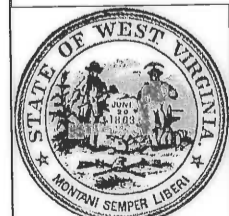
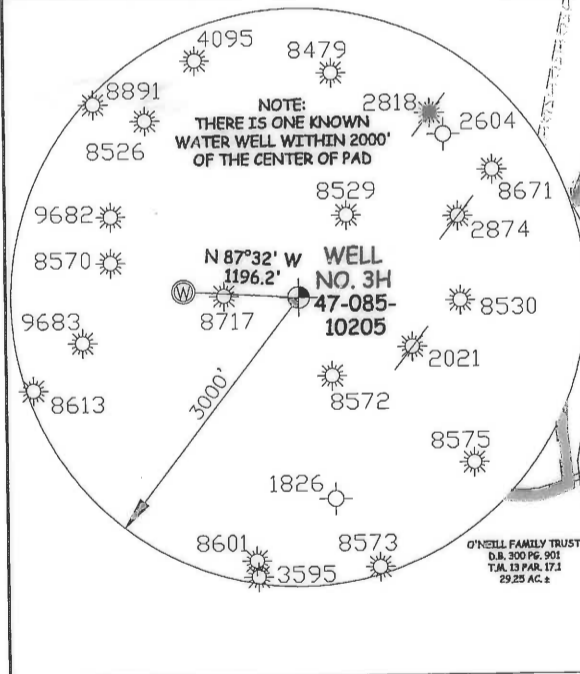
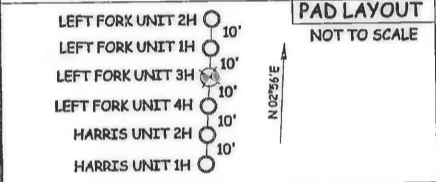
O'NEILL FAMILY TRUST
D.B. 300 PG. 901
T.M. 13 PAR. 17
58.32 AC. ±

O'NEILL FAMILY TRUST ET AL
LEASE

O'NEILL FAMILY TRUST
D.B. 300 PG. 901
T.M. 13 PAR. 23
300.45 AC. ±

O'NEILL FAMILY TRUST
D.B. 300 PG. 901
T.M. 13 PAR. 17.1
29.25 AC. ±

JOB # 12-045
DRAWING # LEFTFORUNIT3HAD
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY SUBMETER
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