

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

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Office of Oil and Gas

OCT 23 2019

WV Department of
Environmental Protection

API 47 - 085 - 10363 County Ritchie District Clay
Quad Middlebourne 7.5' Pad Name Lettie Pad Field/Pool Name -----
Farm name Daniel M. Haymond IV et al Well Number Leeroy Unit 2H
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 4357278m Easting 507713m
Landing Point of Curve Northing 4357046.35m Easting 507525.31m
Bottom Hole Northing 4354961m Easting 508304m

Elevation (ft) 970' 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 10/24/2018 Date drilling commenced 7/5/2018 Date drilling ceased 11/24/2018
Date completion activities began 4/1/2019 Date completion activities ceased 6/24/2019
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

Freshwater depth(s) ft 85, 156, 408 Open mine(s) (Y/N) depths No
Salt water depth(s) ft 1158, 1760, 1840 Void(s) encountered (Y/N) depths No
Coal depth(s) ft 320, 348, 390, 500 Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No

Reviewed by:

Reviewed

API 47- 085 - 10363 Farm name Daniel M. Haymond IV et al Well number Leeroy Unit 2H

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	24"	20"	105'	New	94#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"	508'	New	48#, H-40	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2599'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	14456'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	6606'		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	204 sx	15.6	1.18	120	0'	8 Hrs.
Surface	Class A	420 sx	15.6	1.18	826	0'	8 Hrs.
Coal							
Intermediate 1	Class A	895 sx	15.6	1.18	1181	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	665 sx (Lead) 1225 sx (Tail)	14.0 (Lead), 15.2 (Tail)	1.47 (Lead), 1.83 (Tail)		-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 14475' MD, 6354' TVD (BHL), 6355' (Deepest Point Drilled) Loggers TD (ft) 14475' MD
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 6094'

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 _____

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 _____

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

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

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EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	5/27/2019	14346		60	Marcellus
2	5/28/2019	14213.885	14050.81	60	Marcellus
3	5/28/2019	14015.795	13852.72	60	Marcellus
4	5/29/2019	13817.705	13654.63	60	Marcellus
5	5/29/2019	13619.615	13456.54	60	Marcellus
6	6/1/2019	13421.525	13258.45	60	Marcellus
7	6/3/2019	13223.435	13060.36	60	Marcellus
8	6/3/2019	13025.345	12862.27	60	Marcellus
9	6/3/2019	12827.255	12664.18	60	Marcellus
10	6/4/2019	12629.165	12466.09	60	Marcellus
11	6/4/2019	12431.075	12268	60	Marcellus
12	6/4/2019	12232.985	12069.91	60	Marcellus
13	6/5/2019	12034.895	11871.82	60	Marcellus
14	6/5/2019	11836.805	11673.73	60	Marcellus
15	6/5/2019	11638.715	11475.64	60	Marcellus
16	6/5/2019	11440.625	11277.55	60	Marcellus
17	6/6/2019	11242.535	11079.46	60	Marcellus
18	6/6/2019	11044.445	10881.37	60	Marcellus
19	6/6/2019	10846.355	10683.28	60	Marcellus
20	6/6/2019	10648.265	10485.19	60	Marcellus
21	6/7/2019	10450.175	10287.1	60	Marcellus
22	6/7/2019	10252.085	10089.01	60	Marcellus
23	6/7/2019	10053.995	9890.92	60	Marcellus
24	6/8/2019	9855.905	9692.83	60	Marcellus
25	6/8/2019	9657.815	9494.74	60	Marcellus
26	6/8/2019	9459.725	9296.65	60	Marcellus
27	6/8/2019	9261.635	9098.56	60	Marcellus
28	6/9/2019	9063.545	8900.47	60	Marcellus
29	6/9/2019	8865.455	8702.38	60	Marcellus
30	6/9/2019	8667.365	8504.29	60	Marcellus
31	6/10/2019	8469.275	8306.2	60	Marcellus
32	6/10/2019	8271.185	8108.11	60	Marcellus
33	6/10/2019	8073.095	7910.02	60	Marcellus
34	6/10/2019	7875.005	7711.93	60	Marcellus
35	6/11/2019	7676.915	7513.84	60	Marcellus
36	6/11/2019	7478.825	7315.75	60	Marcellus
37	6/11/2019	7280.735	7117.66	60	Marcellus
38	6/11/2019	7082.645	6919.57	60	Marcellus
39	6/12/2019	6884.555	6721.48	60	Marcellus

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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	5/27/2019	73.4	7686	7358	3546	267450	6781	N/A
2	5/28/2019	80.21	7852	6483	3512	408660	8830	N/A
3	5/28/2019	68.28	7859	5889	3774	411860	8794	N/A
4	5/29/2019	76.13	7905	5910	3659	412900	8896	N/A
5	5/29/2019	79.5	8023	6349	3735	400940	8684	N/A
6	6/1/2019	75.81	8071	5560	3853	408380	8780	N/A
7	6/3/2019	77.86	7860	5869	3884	401940	8592	N/A
8	6/3/2019	76.84	7932	5705	3804	406060	8644	N/A
9	6/3/2019	77.7	7717	5700	3720	404800	8574	N/A
10	6/4/2019	77.6	7670	5842	3790	405860	8481	N/A
11	6/4/2019	76.88	7755	6173	3793	405490	9357	N/A
12	6/4/2019	78.57	7688	5600	3825	404800	8710	N/A
13	6/5/2019	79.5	7925	6749	3854	407400	8491	N/A
14	6/5/2019	78.82	7358	5675	3879	409980	8706	N/A
15	6/5/2019	79	7386	6295	3953	407710	8653	N/A
16	6/5/2019	79.83	7521	5942	3706	402850	8570	N/A
17	6/6/2019	79.49	7417	6412	3792	406680	8547	N/A
18	6/6/2019	80.4	7663	6104	3665	407760	8594	N/A
19	6/6/2019	79.84	7532	5826	3740	403030	8596	N/A
20	6/6/2019	78.71	7578	6789	4068	407560	8476	N/A
21	6/7/2019	80.05	7535	6001	3756	408420	8375	N/A
22	6/7/2019	79.27	7266	5662	3732	409220	8496	N/A
23	6/7/2019	79.95	7397	5603	3770	397800	8344	N/A
24	6/8/2019	78.74	7240	6330	3746	418480	8595	N/A
25	6/8/2019	79.06	7305	6099	3717	410200	8483	N/A
26	6/8/2019	78.07	7181	5799	3597	408560	8509	N/A
27	6/8/2019	78.84	7310	6140	3721	403800	8621	N/A
28	6/9/2019	79.08	7130	5742	3754	410080	8401	N/A
29	6/9/2019	79.36	6975	5876	3916	407380	8435	N/A
30	6/9/2019	79.98	6894	6051	3914	408860	8722	N/A
31	6/10/2019	79.38	7004	6250	3828	409820	8560	N/A
32	6/10/2019	78.02	6824	5574	3674	410160	8616	N/A
33	6/10/2019	78.68	6781	5840	4100	408560	8467	N/A
34	6/10/2019	78.6	6796	7141	4085	409280	8629	N/A
35	6/11/2019	79.2	6953	6592	3912	409660	8445	N/A
36	6/11/2019	79.16	6789	6776	3969	410580	8548	N/A
37	6/11/2019	78.5	6673	6104	4062	407960	8415	N/A
38	6/11/2019	79.6	6824	5982	3861	407900	8377	N/A
39	6/12/2019	78.1	6908	6665	3737	409360	8375	N/A
	AVG	78.4	7,389	6,114	3,805	15,758,190	333,169	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
Silty Sandstone	75	215	75	215
Silty Shale	215	255	215	255
shaly sand	255	395	255	395
Shale	395	455	395	455
Dolomitic Shale	455	735	455	735
Shaly Siltstone	735	855	735	855
Silty Sandstone	855	895	855	895
Shaly Sand	895	1,015	895	1,015
Sandstone	1,015	1,055	1,015	1,055
Silty, Shaly, Sandstone	1,055	1,095	1,055	1,095
Sandstone, Tr Shale, Tr Coal	1,095	1,495	1,095	1,495
Silty Sandstone	1,495	1,675	1,495	1,675
Shaly Siltstone	1,675	1,835	1,675	1,851
Big Lime	1,860	2,615	1,876	2,646
Fifty Foot Sandstone	2,615	2,718	2,646	2,751
Gordon	2,718	3,023	2,751	3,060
Fifth Sandstone	3,023	3,077	3,060	3,115
Bayard	3,077	3,815	3,115	3,865
Speechley	3,815	4,110	3,865	4,165
Balltown	4,110	4,512	4,165	4,574
Bradford	4,512	4,715	4,574	4,860
Benson	4,715	5,136	4,860	5,208
Alexander	5,136	6,160	5,208	6,317
Sycamore	6,028	6,135	6,146	6,292
Middlesex	6,135	6,237	6,292	6,485
Burkett	6,237	6,272	6,485	6,585
Tully	6,272	6,297	6,585	6,674
Marcellus	6,297	NA	6,674	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.

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Hydraulic Fracturing Fluid Product Component Information Disclosure

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Frac Focus
Chemical Disclosure Registry



Job Start Date:	5/27/2019
Job End Date:	6/12/2019
State:	West Virginia
County:	Ritchie
API Number:	47-085-10363-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	LEEROY UNIT 2H
Latitude:	39.36485000
Longitude:	-80.91063600
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,355
Total Base Water Volume (gal):	14,300,460
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	88.10910	Density = 8.34
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.21255	

Sand-Premium White-40/70	Halliburton	Proppant								
					Listed Below					
Exceletrate PS-2	Halliburton	Friction Reducer								
					Listed Below					
Sand-Premium White-30/50	Halliburton	Proppant								
					Listed Below					
SP BREAKER	Halliburton	Breaker								
					Listed Below					
SCALECHEK LP-70	Halliburton	Scale Inhibitor								
					Listed Below					
WG-36 GELLING AGENT	Halliburton	Gelling Agent								
MC B-8614	Halliburton	Biocide								
					Listed Below					
					Listed Below					
Sand-Common White-100 Mesh, SSA-2	Halliburton	Proppant								
					Listed Below					
HYDROCHLORI C ACID	Halliburton	Solvent								

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FDP-S1296-17	Halliburton	Acid Corrosion Inhibitor		Listed Below				
				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	11.64150		
			Hydrochloric acid	7647-01-0	15.00000	0.02508		
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.01412		
			Acrylamide acrylate polymer	Proprietary	30.00000	0.01412		
			Inorganic salt	Proprietary	30.00000	0.01412		
			Guar gum	9000-30-0	100.00000	0.01196		
			Ethylene glycol	107-21-1	60.00000	0.00840		
			Glutaraldehyde	111-30-8	30.00000	0.00261		
			Telomer	Proprietary	10.00000	0.00140		
			Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl chlorides	68424-85-1	5.00000	0.00044		
			Sodium persulfate	7775-27-1	100.00000	0.00034		
			Methanol	67-56-1	100.00000	0.00021		
			Sodium polyacrylate	9003-04-7	1.00000	0.00014		
			Ethanol	64-17-5	1.00000	0.00009		
			Mixture of dimer and trimer fatty acids of indefinite composition derived from tall oil	61790-12-3	30.00000	0.00004		
			Modified thiourea polymer	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		

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			79-10-7	0.01000	0.00000
		Acrylic acid			
		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)

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10,076' TO TOP HOLE

LATITUDE 39°22'30"

8,146'

LATITUDE 39°22'30"

LONGITUDE 80°52'30"

3,697'

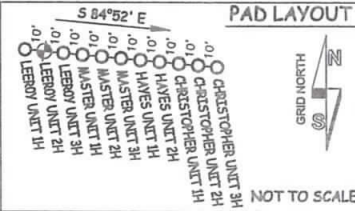
LONGITUDE 80°52'30"

11,304' TO BOTTOM HOLE

Antero Resources Corporation Well No. Leeroy Unit 2H

AS DRILLED DATA:
WELL 2H TOP HOLE INFORMATION:
 N: 318,127ft E: 1,601,180ft
 LAT: 39°21'53.46" LON: 80°54'38.29"
BOTTOM HOLE INFORMATION:
 N: 310,491ft E: 1,602,993ft
 LAT: 39°20'38.28" LON: 80°54'13.69"
WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE.
 ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE GEOXT SUBMETER 2H TOP MAPPING GRADE GPS UNIT. HOLE 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: 4,357,278m E: 507,713m
BOTTOM HOLE INFORMATION:
 N: 4,354,961m E: 508,304m

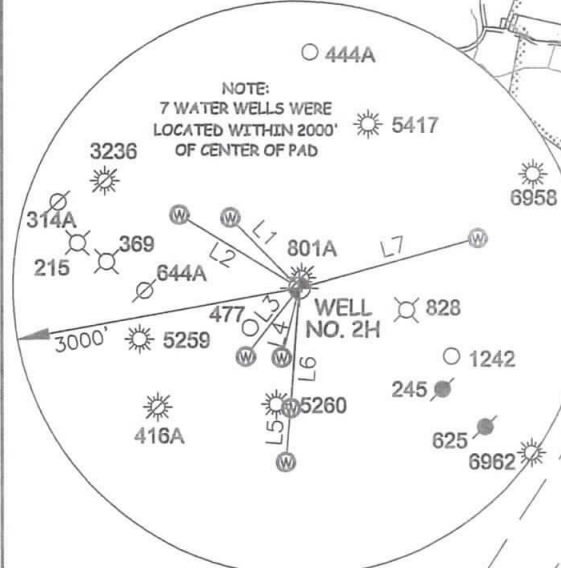


TM-Par	Surface Owner	Book/Pg	Acreage
04-09	Christin Haymond	346/484	111.48 AC
04-10	Perkins Oil & Gas Inc.	318/683	73.168 AC
04-10.1	Perkins Oil & Gas Inc.	316/760	0.996 AC
04-10.2	Perkins Oil & Gas Inc.	316/760	19.772 AC
04-11.1	Nancy Richards	297/286	1.595 AC
04-11.2	Tommy Richmond	305/287	1.86 AC
04-13	Antero Resources Corp.	341/928	1.25 AC
04-13.1	Trustees Mountain Comm. Bldg.	124/569	1 AC
04-14	Jacob Cox	340/525	5.747 AC
04-14.3	Rocly McCain	286/361	1 AC
04-15	Christopher Haymond	214/99	1.33 AC
04-16	Charles Stull	193/778	1 AC
04-22	Donald Freas	262/167	42.22 AC
04-22.1	Jacob Cox	340/525	5.91 AC
04-23	Mary Lou Dawson	283/263	0.781 AC
04-25	Dina Noland	297/27	1.12 AC
04-26	Gregory Der	302/532	0.709 AC
04-27	Perkins Oil & Gas Inc.	308/653	29.589 AC
04-27.1	Perkins Oil & Gas Inc.	308/653	0.79 AC
04-31	Myron Perkins	186/521	1.39 AC
04-31.1	Burt Neswald Sr.	316/1040	90.656 AC
04-32	Gary Bishop	339/45	4.7 AC
04-35	Gary Bishop	339/43	24.256 AC
04-35.1	Lewis Jones	309/603	23.424 AC
04-36	William Shriver	185/415	21.4 AC
04-39	Scott Leggett	346/291	0.75 AC
04-43	Walter Fleming	280/373	4.66 AC
04-43.1	Scott Leggett	346/291	0.529 AC
04-44	Donald Morrison	154/251	1.25 AC
04-47	Sheila Taylor	316/853	6.07 AC
04-47.1	William Shriver	185/415	8.5 AC
04-50	James Mahoney	287/216	5 AC
04-51	Jacob Cox	340/525	2.2 AC
09-01	James Mahoney	277/668	147.83 AC
09-03	Matthew Washington	306/138	39.66 AC
09-17	Rassiter Holmes	295/451	
09-19	Regar Scott	280/625	66 AC
09-20	Walter Smertycha	317/89	70.5 AC
09-21	Roy Robinson	175/817	36 AC
09-24	Roy Robinson Jr.	227/662	67.25 AC
09-27	Jeremy Lamp	295/929	0.789 AC

LINE	BEARING	DIST.
L1	N 44°29' W	1030.7'
L2	N 58°42' W	1467.2'
L3	S 38°14' W	908.2'
L4	S 14°39' W	747.3'
L5	S 04°35' W	1820.0'
L6	S 04°09' W	1253.8'
L7	N 74°14' E	1942.9'

Royalty Owner	
A	The Irene Nutter Haymond Trust
B	Elan Ellis
C	Gary R. Davis Et Ux
D	Gary R. Davis Et Ux
E	Kysor Haymond Jr. Et Al
F	Mary Lou Dawson
G	Charles E. Stull Et Ux
H	Candice Winzeler Nigolian
I	Candice Winzeler Nigolian
J	Myron Perkins Et Ux
K	Helen N. McCullough
L	Norman Fleming
M	Ricky McCullough
N	Emerson McCullough Et Al
O	L. S. Taggart Et Al
P	Union Bank of Harrisville
Q	Gene P. Bond
R	H. K. Haymond Et Al

WV NORTH ZONE
GRID NORTH



LINE	BEARING	DIST.
L1	N 44°29' W	1030.7'
L2	N 58°42' W	1467.2'
L3	S 38°14' W	908.2'
L4	S 14°39' W	747.3'
L5	S 04°35' W	1820.0'
L6	S 04°09' W	1253.8'
L7	N 74°14' E	1942.9'

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



JOB # 17-014WA	LEGEND - - - Surface Owner Boundary Lines +/- - - - Interior Surface Tracts +/- ○ Proposed Well Path ⊗ As Drilled Well Path
DRAWING # LEEROY2HAD	
SCALE 1" = 2000'	
MINIMUM DEGREE OF ACCURACY SUBMETER	
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS	THOMAS SUMMERS P.S. 2109
STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS	DATE 09/04/19
	OPERATOR'S WELL# LEEROY UNIT #2H

- NOTE**
- 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 ANTERO RESOURCES CORPORATION.
 - 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 LEASE 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.

WELL TYPE: OIL ___ GAS LIQUID INJECTION ___ WASTE DISPOSAL ___ 47 - 085 - 10363
 (IF "GAS") PRODUCTION STORAGE ___ DEEP ___ SHALLOW STATE COUNTY PERMIT
 LOCATION: ELEVATION 970' - AS BUILT WATERSHED NORTH FORK HUGHES RIVER
 QUADRANGLE PENNSBORO 7.5 DISTRICT CLAY COUNTY RITCHIE
 SURFACE OWNER DANIEL M. HAYMOND IV ET AL ACREAGE 111.48 ACRES +/-
 OIL & GAS ROYALTY OWNER THE IRENE NUTTER HAYMOND TRUST; GARY R. DAVIS ET UX; LEASE ACREAGE 375 AC±; 10.25 AC±;
 KYSOR HAYMOND JR. ET AL; MYRON PERKINS ET UX; HELEN N. MCCULLOUGH; NORMAN FLEMING; 8.5 AC±; 1.42 AC±; 103 AC±; 49.5 AC±;
 RICKY McCULLOUGH; EMERSON McCULLOUGH ET AL; L. S. TAGGART ET AL; GENE P. BOND 9.92 AC±; 154 AC±; 151 AC±; 70.5 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 6,354' TVD 14,475' 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