

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

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WV Department of
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API 47 - 085 - 10361 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 Master 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 4357278m Easting 507725m
Landing Point of Curve Northing 4357422.48m Easting 507937.24m
Bottom Hole Northing 4360472m Easting 506844m

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 12/21/2018
Date completion activities began 3/23/2019 Date completion activities ceased 7/9/2019
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 - 10361 Farm name Daniel M. Haymond IV et al Well number Master 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	24"	20"	95'	New	94#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"	513'	New	48#, H-40	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2588'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	17517'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	6624'		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	425 sx	15.6	1.18	826	0'	8 Hrs.
Coal							
Intermediate 1	Class A	890 sx	15.6	1.18	1181	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	865 sx (Lead) 1645 sx (Tail)	14.0 (Lead), 15.2 (Tail)	1.47 (Lead), 1.83 (Tail)		~500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 17541' MD, 6344' TVD (BHL), 6367' (Deepest Point Drilled) Loggers TD (ft) 17541' MD
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 6070'

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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API 47- 085 - 10361 Farm name Daniel M. Haymond IV et al Well number Master Unit 3H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
*PLEASE SEE ATTACHED EXHIBIT 1					
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Please insert additional pages as applicable.

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STIMULATION INFORMATION PER STAGE

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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)
*PLEASE SEE ATTACHED EXHIBIT 2								

Please insert additional pages as applicable.

API 47- 085 - 10361 Farm name Daniel M. Haymond IV et al Well number Master Unit 3H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>			
<u>Marcellus</u>	<u>6316' (TOP)</u>	<u>TVD</u>	<u>6678' (TOP)</u>	<u>MD</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 2800 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 10923 mcfpd Oil 156 bpd NGL --- bpd Water 1277 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**

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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 KLX Energy Services
Address 3040 Post Oak Boulevard City Houston State TX Zip 77056

Cementing Company C&J Energy Services
Address 1650 Hackers Creek City Jane Lew State WV Zip 26378

Stimulating Company Baker Hughes
Address 837 Philippi Pike City Clarksburg State WV Zip 26301

Please insert additional pages as applicable.

Completed by Megan Griffith Telephone 303-357-7223
Signature  Title Permitting Agent Date 10/21/2019

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

EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	4/30/2019	17410.8		60	Marcellus
2	5/1/2019	17280.295	17115.77	60	Marcellus
3	5/1/2019	17080.465	16915.94	60	Marcellus
4	5/2/2019	16880.635	16716.11	60	Marcellus
5	5/3/2019	16680.805	16516.28	60	Marcellus
6	5/3/2019	16480.975	16316.45	60	Marcellus
7	5/3/2019	16281.145	16116.62	60	Marcellus
8	5/4/2019	16081.315	15916.79	60	Marcellus
9	5/4/2019	15881.485	15716.96	60	Marcellus
10	5/4/2019	15681.655	15517.13	60	Marcellus
11	5/4/2019	15481.825	15317.3	60	Marcellus
12	5/5/2019	15281.995	15117.47	60	Marcellus
13	5/5/2019	15082.165	14917.64	60	Marcellus
14	5/5/2019	14882.335	14717.81	60	Marcellus
15	5/6/2019	14682.505	14517.98	60	Marcellus
16	5/6/2019	14482.675	14318.15	60	Marcellus
17	5/6/2019	14282.845	14118.32	60	Marcellus
18	5/6/2019	14083.015	13918.49	60	Marcellus
19	5/6/2019	13883.185	13718.66	60	Marcellus
20	5/8/2019	13683.355	13518.83	60	Marcellus
21	5/9/2019	13483.525	13319	60	Marcellus
22	5/9/2019	13283.695	13119.17	60	Marcellus
23	5/10/2019	13083.865	12919.34	60	Marcellus
24	5/10/2019	12884.035	12719.51	60	Marcellus
25	5/10/2019	12684.205	12519.68	60	Marcellus
26	5/11/2019	12484.375	12319.85	60	Marcellus
27	5/11/2019	12284.545	12120.02	60	Marcellus
28	5/12/2019	12084.715	11920.19	60	Marcellus
29	5/12/2019	11884.885	11720.36	60	Marcellus
30	5/14/2019	11685.055	11520.53	60	Marcellus
31	5/15/2019	11485.225	11320.7	60	Marcellus
32	5/15/2019	11285.395	11120.87	60	Marcellus
33	5/16/2019	11085.565	10921.04	60	Marcellus
34	5/16/2019	10885.735	10721.21	60	Marcellus
35	5/16/2019	10685.905	10521.38	60	Marcellus
36	5/17/2019	10486.075	10321.55	60	Marcellus
37	5/17/2019	10286.245	10121.72	60	Marcellus
38	5/18/2019	10086.415	9921.89	60	Marcellus
39	5/18/2019	9886.585	9722.06	60	Marcellus
40	5/18/2019	9686.755	9522.23	60	Marcellus
41	5/19/2019	9486.925	9322.4	60	Marcellus
42	5/19/2019	9287.095	9122.57	60	Marcellus
43	5/20/2019	9087.265	8922.74	60	Marcellus
44	5/20/2019	8887.435	8722.91	60	Marcellus
45	5/21/2019	8687.605	8523.08	60	Marcellus
46	5/21/2019	8487.775	8323.25	60	Marcellus
47	5/21/2019	8287.945	8123.42	60	Marcellus
48	5/22/2019	8088.115	7923.59	60	Marcellus
49	5/22/2019	7888.285	7723.76	60	Marcellus
50	5/22/2019	7688.455	7523.93	60	Marcellus
51	5/23/2019	7488.625	7324.1	60	Marcellus
52	5/24/2019	7288.795	7124.27	60	Marcellus
53	5/24/2019	7088.965	6924.44	60	Marcellus
54	5/24/2019	6889.135	6724.61	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	4/30/2019	76.62	7805		3580	289760	7420	N/A
2	5/1/2019	74.36	7927	5861	3629	415640	9196	N/A
3	5/1/2019	78.86	8272	5618	3735	412960	9082	N/A
4	5/2/2019	76.22	8191	5706	3699	403580	8910	N/A
5	5/3/2019	73.6	8180	5763	3916	402280	8725	N/A
6	5/3/2019	76.68	8275	5310	3950	407800	8807	N/A
7	5/3/2019	78.28	8406	6320	3995	412180	8886	N/A
8	5/4/2019	76.24	8382	5916	3786	402720	8851	N/A
9	5/4/2019	73.36	8152	5962	3799	403020	8801	N/A
10	5/4/2019	75.67	8254	5732	3899	403180	8704	N/A
11	5/4/2019	77.33	8442	5857	4014	402500	8711	N/A
12	5/5/2019	76.54	8437	6126	4036	402500	8791	N/A
13	5/5/2019	77.83	8433	5709	4088	402380	8941	N/A
14	5/5/2019	80.17	8297	5947	4010	402620	8716	N/A
15	5/6/2019	76.75	8288	5977	3875	402280	8977	N/A
16	5/6/2019	77.1	8293	6168	3909	403220	8640	N/A
17	5/6/2019	77.67	8380	6080	4012	403280	8677	N/A
18	5/6/2019	78.88	8375	5908	3862	402880	8649	N/A
19	5/6/2019	79.21	8142	5785	3800	403140	8595	N/A
20	5/8/2019	80.04	8232	6094	3952	402680	8742	N/A
21	5/9/2019	79.48	8186	5861	4044	402920	8803	N/A
22	5/9/2019	78.69	8084	5881	3996	382050	8389	N/A
23	5/10/2019	75.66	8031	6521	4050	403460	8861	N/A
24	5/10/2019	76.24	8203	6102	3993	402340	8828	N/A
25	5/10/2019	78.05	8001	6179	4056	402820	8534	N/A
26	5/11/2019	79.71	8188	5679	4072	401940	8565	N/A
27	5/11/2019	78.24	8064	5724	4084	402960	8611	N/A
28	5/12/2019	78.43	7665	5824	4039	403420	8528	N/A
29	5/12/2019	78.37	7683	5747	4074	398720	8946	N/A
30	5/14/2019	80.6	8056	5803	4017	403320	8656	N/A
31	5/15/2019	64.15	8283	6266	4393	402400	10743	N/A
32	5/15/2019	79.19	8064	5773	3901	403060	8577	N/A
33	5/16/2019	78.4	7601	5736	3971	402300	8423	N/A
34	5/16/2019	79	7633	6046	3841	402320	8516	N/A
35	5/16/2019	78.7	7402	4933	3946	402660	8526	N/A
36	5/17/2019	80.8	7635	5875	4074	402760	8623	N/A
37	5/17/2019	80.65	7635	5771	3864	405240	8530	N/A
38	5/18/2019	80.1	7429	6002	3890	402840	8840	N/A
39	5/18/2019	78.73	7453	6068	3927	402900	8382	N/A
40	5/18/2019	79.7	7447	6033	3852	403400	8220	N/A
41	5/19/2019	80.28	7311	5775	4128	402820	8434	N/A
42	5/19/2019	80	7196	5686	3898	403700	8434	N/A
43	5/20/2019	80.6	7113	5840	4101	403320	8404	N/A
44	5/20/2019	79.33	7354	6506	4150	403020	8480	N/A
45	5/21/2019	79.21	7197	5830	4074	403280	8463	N/A
46	5/21/2019	80.01	7120	6366	3918	403800	8412	N/A
47	5/21/2019	79.41	7074	5805	3949	403420	8542	N/A
48	5/22/2019	81.56	6965	5734	3751	401440	8344	N/A
49	5/22/2019	79.38	7074	5515	3905	403420	8520	N/A
50	5/22/2019	79.53	6980	6165	3793	403180	8391	N/A
51	5/23/2019	79.1	7069	6101	3674	403220	8406	N/A
52	5/24/2019	79.06	6769	5747	3788	402940	8457	N/A
53	5/24/2019	79.9	6907	6361	3773	402900	8444	N/A
54	5/24/2019	80	6888	5746	3925	407040	8559	N/A
AVG		77.5	8,079	5,880	3,943	15,208,130	332,320	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	1,829	1,675	1,847
Big Lime	1,854	2,605	1,872	2,635
Fifty Foot Sandstone	2,605	2,699	2,635	2,738
Gordon	2,699	3,034	2,738	3,051
Fifth Sandstone	3,034	3,081	3,051	3,103
Bayard	3,081	3,790	3,103	3,863
Speechley	3,790	4,091	3,863	4,172
Balltown	4,091	4,502	4,172	4,590
Bradford	4,502	4,776	4,590	4,910
Benson	4,731	5,152	4,910	5,241
Alexander	5,152	6,176	5,241	6,342
Sycamore	6,044	6,151	6,173	6,317
Middlesex	6,151	6,257	6,317	6,503
Burkett	6,257	6,288	6,503	6,584
Tully	6,288	6,316	6,584	6,678
Marcellus	6,316	NA	6,678	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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Job Start Date:	4/30/2019
Job End Date:	5/24/2019
State:	West Virginia
County:	Ritchie
API Number:	47-085-10361-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Master 3H
Latitude:	39.36484200
Longitude:	-80.91049400
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,366
Total Base Water Volume (gal):	20,251,032
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	88.43481	Density = 8.34
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.20808	

FDP-S1296-17	Halliburton Energy Services	Corrosion Inhibitor											
				Listed Below									
Sand-Common White-100 Mesh, SSA-2	Halliburton	Proppant											
				Listed Below									
MC B-8614	Halliburton	Biocide											
				Listed Below									
SP BREAKER	Halliburton	Breaker											
				Listed Below									
SCALECHEK LP-70	Halliburton	Scale Inhibitor											
				Listed Below									
Excelerate PS-2	Halliburton	Friction Reducer											
				Listed Below									
HYDROCHLORIC ACID	Halliburton	Solvent											
				Listed Below									
WG-36 GELLING AGENT	Halliburton	Gelling Agent											
				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	11.32582

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				Hydrochloric acid	7647-01-0	15.00000	0.02396
				Inorganic salt	Proprietary	30.00000	0.01584
				Acrylamide acrylate polymer	Proprietary	30.00000	0.01584
				Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.01584
				Ethylene glycol	107-21-1	60.00000	0.00781
				Guar gum	9000-30-0	100.00000	0.00471
				Glutaraldehyde	111-30-8	30.00000	0.00266
				Telomer	Proprietary	10.00000	0.00130
				Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl chlorides	68424-85-1	5.00000	0.00044
				Methanol	67-56-1	100.00000	0.00032
				Sodium persulfate	7775-27-1	100.00000	0.00014
				Sodium polyacrylate	9003-04-7	1.00000	0.00013
				Ethanol	64-17-5	1.00000	0.00009
				Modified thiourea polymer	Proprietary	30.00000	0.00007
				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
				Acrylic acid	79-10-7	0.01000	0.00000
				Sodium sulfate	7757-82-6	0.10000	0.00000

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* 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)

LATITUDE 39°22'30"

10,036'

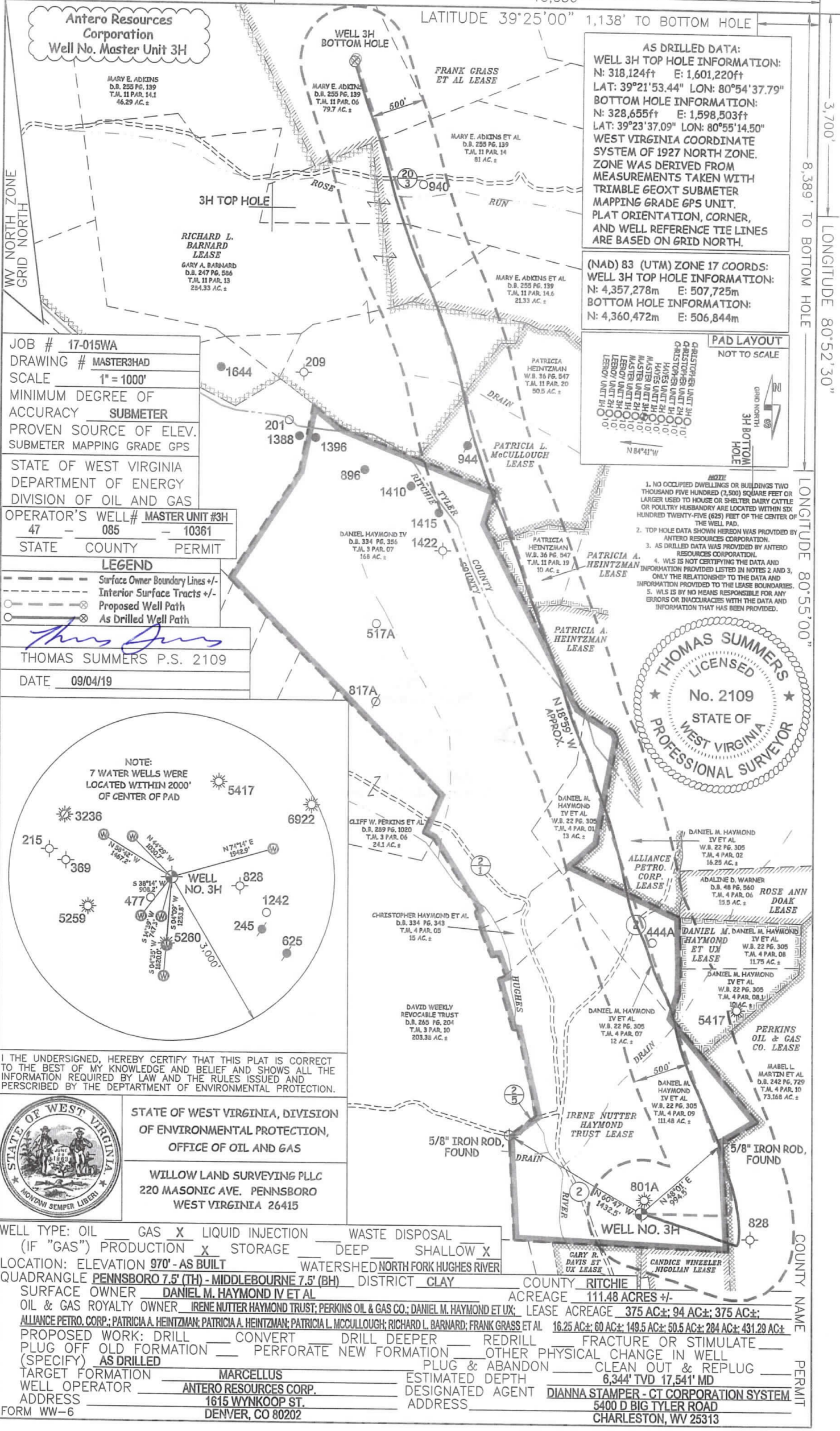
LATITUDE 39°25'00" 1,138' TO BOTTOM HOLE

3,700'

8,389' TO BOTTOM HOLE

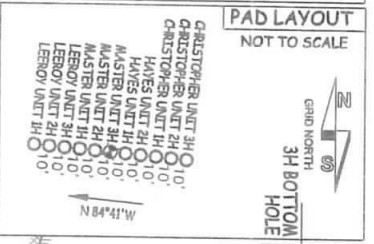
LONGITUDE 80°52'30"

LONGITUDE 80°55'00"

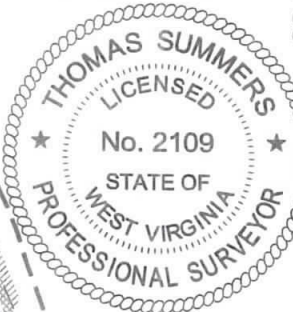


AS DRILLED DATA:
WELL 3H TOP HOLE INFORMATION:
 N: 318,124ft E: 1,601,220ft
 LAT: 39°21'53.44" LON: 80°54'37.79"
BOTTOM HOLE INFORMATION:
 N: 328,655ft E: 1,598,503ft
 LAT: 39°23'37.09" LON: 80°55'14.50"
WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE.
 ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH 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: 4,357,278m E: 507,725m
BOTTOM HOLE INFORMATION:
 N: 4,360,472m E: 506,844m



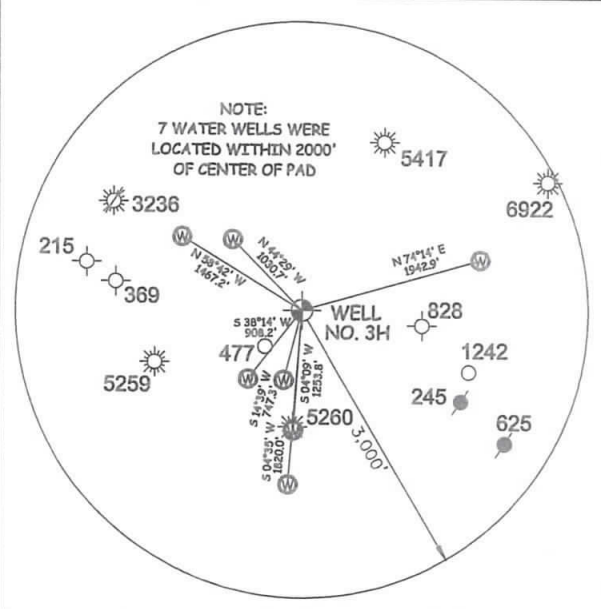
- NOTE**
1. NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER DAIRY CATTLE OR POULTRY HUSBANDRY ARE LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL PAD.
 2. TOP HOLE DATA SHOWN HEREON WAS PROVIDED BY ANTERO RESOURCES CORPORATION.
 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.



JOB # 17-015WA
DRAWING # MASTER3HAD
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
OPERATOR'S WELL# MASTER UNIT #3H
 47 - 085 - 10361
STATE COUNTY PERMIT

LEGEND
 - - - - - Surface Owner Boundary Lines +/-
 - - - - - Interior Surface Tracts +/-
 - - - - - Proposed Well Path
 - - - - - As Drilled Well Path

Thomas Summers
 THOMAS SUMMERS P.S. 2109
 DATE 09/04/19



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

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
LOCATION: ELEVATION 970' - AS BUILT WATERSHED NORTH FORK HUGHES RIVER
QUADRANGLE PENNSBORO 7.5' (TH) - MIDDLEBOURNE 7.5' (BH) DISTRICT CLAY COUNTY RITCHIE
SURFACE OWNER DANIEL M. HAYMOND IV ET AL ACREAGE 111.48 ACRES +/-
OIL & GAS ROYALTY OWNER IRENE NUTTER HAYMOND TRUST; PERKINS OIL & GAS CO.; DANIEL M. HAYMOND ET UX; LEASE ACREAGE 375 AC±: 94 AC±; 375 AC±;
ALLIANCE PETRO. CORP.; PATRICIA A. HEINTZMAN; PATRICIA A. HEINTZMAN; PATRICIA L. MCCULLOUGH; RICHARD L. BARNARD; FRANK GRASS ET AL 16.25 AC±; 60 AC±; 149.5 AC±; 50.5 AC±; 284 AC±; 431.29 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 6,344' TVD 17,541' 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