

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

API 47-095-02517 02516 County Tyler District Centerville
Quad West Union 7.5' Pad Name Meredith Pad Field/Pool Name ----
Farm name Roy A. Meredith Well Number Horst 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 4355475m Easting 511214m
Landing Point of Curve Northing 4354697.83m Easting 510726.11m
Bottom Hole Northing 4352651m Easting 511410m

Elevation (ft) 1111' 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

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Mud - Polymer WV Department of Environmental Protection

Date permit issued 1/22/2019 Date drilling commenced 10/7/2018 Date drilling ceased 2/10/2019
Date completion activities began 9/4/2019 Date completion activities ceased 10/9/2019
Verbal plugging (Y/N) N/A Date permission granted N/A Granted by N/A

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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 463', 683' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 1521', 2109' Void(s) encountered (Y/N) depths No
Coal depth(s) ft 63', 1239' Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No

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Reviewed

Reviewed by:
geb
4/14/2020

API 47- 095 - 02516 Farm name Roy A. Meredith Well number Horst 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"	97'	New	94#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"	814'	New	48#, H-40	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2698'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	16320'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	7142'		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	670 sx	15.6	1.18	826	0'	8 Hrs.
Coal							
Intermediate 1	Class A	915 sx	15.6	1.18	1181	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	735 sx (Lead) 1395 sx (Tail)	14.5 (Lead), 15.2 (Tail)	1.40 (Lead), 1.26 (Tail)		-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 16340' MD, 6546' TVD (BHL), 6546' (Deepest Point Drilled) Loggers TD (ft) 16340' MD
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

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Kick off depth (ft) 6500'

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

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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 shoes, 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

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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

API 47- 095 - 02516 Farm name Roy A. Meredith Well number Horst Unit 2H

PRODUCING FORMATION(S)	DEPTHS		
Marcellus	6466' (TOP)	TVD	7226' (TOP) MD

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 11353 mcfpd Oil 112 bpd NGL --- bpd Water 241 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**

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 3.27.20

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

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API 47-095-02516 Farm Name Roy A. Meredith Well Number Horst Unit 2H

EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	9/4/2019	16630.7	16164.2	60	Marcellus
2	9/4/2019	16429.1	15966.5733	60	Marcellus
3	9/5/2019	16227.5	15768.9467	60	Marcellus
4	9/5/2019	16025.9	15571.32	60	Marcellus
5	9/5/2019	15824.3	15373.6933	60	Marcellus
6	9/5/2019	15622.7	15176.0667	60	Marcellus
7	9/6/2019	15421.1	14978.44	60	Marcellus
8	9/6/2019	15219.5	14780.8133	60	Marcellus
9	9/6/2019	15017.9	14583.1867	60	Marcellus
10	9/7/2019	14816.3	14385.56	60	Marcellus
11	9/7/2019	14614.7	14187.9333	60	Marcellus
12	9/7/2019	14413.1	13990.3067	60	Marcellus
13	9/7/2019	14211.5	13792.68	60	Marcellus
14	9/8/2019	14009.9	13595.0533	60	Marcellus
15	9/8/2019	13808.3	13397.4267	60	Marcellus
16	9/8/2019	13606.7	13199.8	60	Marcellus
17	9/8/2019	13405.1	13002.1733	60	Marcellus
18	9/9/2019	13203.5	12804.5467	60	Marcellus
19	9/9/2019	13001.9	12606.92	60	Marcellus
20	9/9/2019	12800.3	12409.2933	60	Marcellus
21	9/9/2019	12598.7	12211.6667	60	Marcellus
22	9/10/2019	12397.1	12014.04	60	Marcellus
23	9/10/2019	12195.5	11816.4133	60	Marcellus
24	9/11/2019	11993.9	11618.7867	60	Marcellus
25	9/11/2019	11792.3	11421.16	60	Marcellus
26	9/11/2019	11590.7	11223.5333	60	Marcellus
27	9/12/2019	11389.1	11025.9067	60	Marcellus
28	9/13/2019	11187.5	10828.28	60	Marcellus
29	9/13/2019	10985.9	10630.6533	60	Marcellus
30	9/13/2019	10784.3	10433.0267	60	Marcellus
31	9/14/2019	10582.7	10235.4	60	Marcellus
32	9/14/2019	10381.1	10037.7733	60	Marcellus
33	9/14/2019	10179.5	9840.14667	60	Marcellus
34	9/15/2019	9977.9	9642.52	60	Marcellus
35	9/15/2019	9776.3	9444.89333	60	Marcellus
36	9/15/2019	9574.7	9247.26667	60	Marcellus
37	9/15/2019	9373.1	9049.64	60	Marcellus
38	9/16/2019	9171.5	8852.01333	60	Marcellus
39	9/17/2019	8969.9	8654.38667	60	Marcellus
40	9/17/2019	8768.3	8456.76	60	Marcellus
41	9/17/2019	8566.7	8259.13333	60	Marcellus
42	9/17/2019	8365.1	8061.50667	60	Marcellus
43	9/18/2019	8163.5	7863.88	60	Marcellus
44	9/18/2019	7961.9	7666.25333	60	Marcellus
45	9/18/2019	7760.3	7468.62667	60	Marcellus
46	9/18/2019	7558.7	7271	60	Marcellus

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EXHIBIT 2

MAP 2020

Stage No.	Stimulations Date	Avg Pump Rate	Avg Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water/ Environmental Protection (bbls)	Nitrogen/ Department of Environmental Protection (units)
1	9/4/2019	63.01815	7780.437	7091	3938	168250	4676	N/A
2	9/4/2019	72.31678	7571.84	6152	4295	399350	8743	N/A
3	9/5/2019	74.64379	7884.997	6954	4092	399650	8590	N/A
4	9/5/2019	74.80634	7946.651	6030	4078	399100	8546	N/A
5	9/5/2019	73.31121	8009.586	6181	3537	399300	8699	N/A
6	9/5/2019	73.27276	7772.231	5756	3810	399500	8663	N/A
7	9/6/2019	72.08325	7813.479	6072	3770	399250	8704	N/A
8	9/6/2019	58.99076	8055.89	6405	3924	399900	9436	N/A
9	9/6/2019	73.5298	7938.857	6172	3820	399150	8706	N/A
10	9/7/2019	73.2508	7840.566	5263	3805	399550	8587	N/A
11	9/7/2019	76.47853	7971.246	6348	3746	399800	8654	N/A
12	9/7/2019	73.09157	7924.261	6273	3762	399900	8649	N/A
13	9/7/2019	74.39975	7835.101	6330	3839	399450	8690	N/A
14	9/8/2019	78.34769	7855.376	5082	4054	399250	8640	N/A
15	9/8/2019	76.29851	8049.9	6451	3806	399500	8655	N/A
16	9/8/2019	73.08356	7960.685	6645	3518	399600	8607	N/A
17	9/8/2019	76.19214	7951.593	6121	3804	399200	8504	N/A
18	9/9/2019	76.29141	7843.356	6163	3848	399300	8502.7	N/A
19	9/9/2019	79.97383	7978.619	6346	3853	399900	8599.8	N/A
20	9/9/2019	79.55561	7945.402	6172	3954	399500	8559.6	N/A
21	9/9/2019	75.90032	7768.403	6139	3745	399350	9997.1	N/A
22	9/10/2019	77.45126	7846.83	6857	3703	399200	8441.3	N/A
23	9/10/2019	78.67699	7989.502	6246	3574	399700	8559.1	N/A
24	9/11/2019	68.01434	7585.713	7254	3895	399500	10673.4	N/A
25	9/11/2019	72.35691	7847.46	6504	3772	399400	8581.1	N/A
26	9/11/2019	79.60608	7779.784	6808	3573	399500	8519.4	N/A
27	9/12/2019	82.01674	7737.542	6364	3656	399350	8396.8	N/A
28	9/13/2019	78.77721	7962.185	6773	3388	399600	8516.9	N/A
29	9/13/2019	81.96852	8081.547	7054	3526	399500	8558.2	N/A
30	9/13/2019	78.02322	7559.694	6490	3720	400000	8516.4	N/A
31	9/14/2019	79.83564	8190.913	6186	3439	399400	8389	N/A
32	9/14/2019	82.75635	8042.798	6234	3641	400200	8371.8	N/A
33	9/14/2019	84.1168	8245.54	6293	4186	399300	8558.9	N/A
34	9/15/2019	83.79743	8407.364	5850	4139	399650	8449	N/A
35	9/15/2019	82.10323	7996.19	6667	3755	399490	8359.1	N/A
36	9/15/2019	81.05021	7641.407	6324	3673	399240	8417.7	N/A
37	9/15/2019	85.75162	7923.817	5895	4238	399400	8409.3	N/A
38	9/16/2019	83.48393	7443.967	6222	4513	399950	8234.4	N/A
39	9/17/2019	85.40266	7680.198	6382	4060	399350	8310.3	N/A
40	9/17/2019	81.40469	7433.075	6219	3910	399700	8394.6	N/A
41	9/17/2019	81.91809	7320.196	6501	3759	400100	8400.2	N/A
42	9/17/2019	83.89165	7146.996	6366	4238	409250	8383.5	N/A
43	9/18/2019	85.3888	7617.754	6243	4485	398850	8227.7	N/A
44	9/18/2019	86.90958	7721.267	4659	3708	399600	8176.5	N/A
45	9/18/2019	86.59807	7394.763	6793	3849	399700	8318.5	N/A
46	9/18/2019	86.69954	7278.984	6744	4411	399400	8442.2	N/A
	AVG	77.8	7,829	6,296	3,853	17,756,680	383,571	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	85	145	85	145
Sandstone	145	185	145	185
Silty sandstone tr coal	185	540	185	540
Shaly siltstone tr coal	540	655	540	655
Shaly siltstone	655	705	655	705
Silty Sandstone	705	985	705	985
Silty sandstone	985	1,035	985	1,035
Silty Sandstone	1,035	1,105	1,035	1,105
Siltstone	1,105	1,285	1,105	1,285
Siltstone tr coal	1,285	1,405	1,285	1,405
Sandstone tr coal	1,405	1,635	1,405	1,635
Shaly siltstone tr coal	1,635	1,725	1,635	1,725
Silty sandstone tr coal	1,725	1,981	1,725	2,017
Big Lime	1,996	2,878	1,992	2,995
Fifty Foot Sandstone	2,878	2,960	2,970	3,085
Gordon	2,960	3,112	3,060	3,254
Fifth Sandstone	3,112	3,265	3,229	3,427
Bayard	3,265	3,824	3,402	4,048
Speechley	3,824	4,111	4,023	4,365
Balltown	4,111	4,656	4,340	4,974
Bradford	4,656	5,028	4,949	5,387
Benson	5,028	5,262	5,362	5,644
Alexander	5,262	6,317	5,619	6,854
Sycamore	6,094	6,292	6,669	6,829
Middlesex	6,292	6,402	6,829	7,032
Burkett	6,402	6,524	7,032	7,116
Tully	6,524	6,466	7,116	7,226
Marcellus	6,466	NA	7,226	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

Job Start Date:	9/4/2019
Job End Date:	9/18/2019
State:	West Virginia
County:	Tyler
API Number:	47-095-02517-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Horst Unit 2H
Latitude:	39.34856400
Longitude:	-80.87001900
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,545
Total Base Water Volume (gal):	17,085,806
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
Water	Supplied by Operator	Base Fluid					
		Water		7732-18-5	100.00000	88.44544	
SaniFrac 8844	CWS	Biocide					
				Listed Below			

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Sand (Proppant)	CWS	Propping Agent																		
					Listed Below															
DWP-641	CWS	Friction Reducer																		
					Listed Below															
DAP-902	CWS	Scale Inhibitor																		
					Listed Below															
CalGel 4000	CWS	Gel Slurry																		
					Listed Below															
Calbreak 5501	CWS	Breaker																		
					Listed Below															
CI-9100G	CWS	Corrosion Inhibitor																		
					Listed Below															
DAP-103	CWS	Iron Control																		
					Listed Below															
Hydrochloric Acid	CWS	Clean Perforations																		
					Listed Below															
Other Chemical (s)	Listed Above	See Trade Name (s) List																		

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Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients.		Listed Below			
	Crystalline silica (Quartz)	14808-60-7	100.00000	11.26320	
	Illite	12173-60-3	1.00000	0.11263	
	Hydrochloric acid	7647-01-0	37.00000	0.05866	
	Polymer	26100-47-0	45.00000	0.02190	
	Distillates (petroleum), hydrotreated light	64742-47-8	30.00000	0.01460	
	Ilmenite	98072-94-7	0.10000	0.01126	
	Biotite	1302-27-8	0.10000	0.01126	
	Goethite	1310-14-1	0.10000	0.01126	
	Apatite	64476-38-6	0.10000	0.01126	
	Guar gum	9000-30-0	60.00000	0.00806	
	Distillates (petroleum), hydrotreated middle	64742-46-7	60.00000	0.00806	
	Polyethylene glycol mixture	25322-68-3	54.50000	0.00677	
	Ammonium chloride	12125-02-9	11.00000	0.00535	
	2,2-Dibromo-3-Nitripropionamide	10222-01-2	20.00000	0.00248	
	Sorbitan monooleate	1338-43-8	4.00000	0.00195	
	Polyethylene glycol monooleate	9004-96-0	3.00000	0.00146	
	Sorbitol tetraoleate	61723-83-9	2.00000	0.00097	
	Quaternary ammonium compounds, bis (hydrogenated tallow alkyl)dimethyl, salts with bentonite	68953-58-2	5.00000	0.00067	
	Citric acid	77-92-9	60.00000	0.00051	
	Sodium bromide	7647-15-6	4.00000	0.00050	
	Amines, tallow alkyl, ethoxylated	61791-26-2	1.00000	0.00049	
	Dibromoacetonitrile	3252-43-5	3.00000	0.00037	
	Ammonium Persulfate	7727-54-0	100.00000	0.00026	

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				Alkyloxypolyethyleneoxy ethanol	84133-50-6	0.50000	0.00024	
				Oxirane, 2-methyl-, polymer with oxirane, monodecyl ether	37251-67-5	1.50000	0.00020	
				Vinylidene chloride-methyl acrylate copolymer	25038-72-6	20.00000	0.00005	
				Acrylamide	79-06-1	0.10000	0.00005	
				Ethylene Glycol	107-21-1	40.00000	0.00003	
				Diethylene glycol, monomethyl ether	34590-94-8	20.00000	0.00002	
				Cinnamaldehyde	104-55-2	10.00000	0.00001	
				Isopropyl alcohol	67-63-0	5.00000	0.00001	
				Ethoxylated Alcohols	68131-39-5	10.00000	0.00001	
				Tar bases, quinolone derivs, benzyl chloride-quatzenized	72480-70-7	10.00000	0.00001	
				Formic acid	64-18-6	10.00000	0.00001	
				Glycol	57-55-6			Proprietary Additive Concentration
				Organic Acid Salts	9003-04-7			Proprietary Additive Concentration

* 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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LATITUDE 39°22'30"

10,375'

LATITUDE 39°20'00"

9,752' TO BOTTOM HOLE

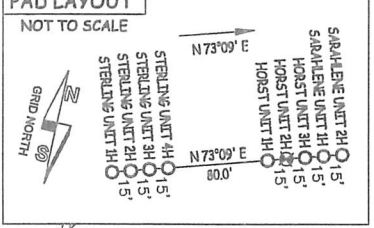
3,722' TO BOTTOM HOLE

LONGITUDE 80°50'00"

LONGITUDE 80°50'00"

AS DRILLED DATA:
WELL 2H TOP HOLE INFORMATION:
 N: 312,018ft E: 1,612,572ft
 LAT: 39°20'54.83" LON: 80°52'12.08"
BOTTOM HOLE INFORMATION:
 N: 302,741ft E: 1,613,057ft
 LAT: 39°19'23.21" LON: 80°52'04.10"
 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 2H TOP HOLE INFORMATION:
 N: 4,355,475m E: 511,214m
BOTTOM HOLE INFORMATION:
 N: 4,352,651m E: 511,410m



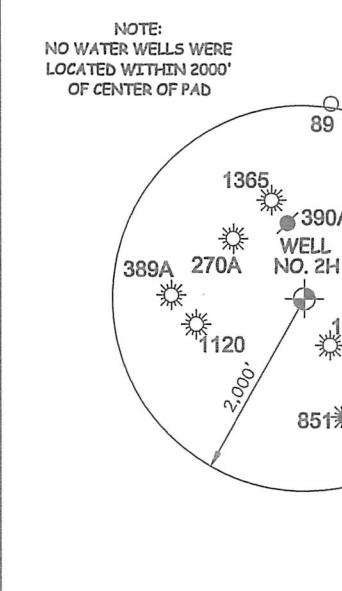
Antero Resources Corporation
 Well No. Horst Unit 2H

WV NORTH ZONE GRID NORTH
 RITCHIE COUNTY TYLER
 GENE BOND LEASE
 JANICE L. HURST LEASE
 ROY A. MEREDITH ET UX LEASE
 LARRY F. HADLEY ET AL
 COLLEEN GRIFFIN ASH LEASE
 MAE BOND LEASE
 O.W. GRIFFIN ET UX LEASE
 DAVID W. GLASURE SR.
 LELLA WASHBURN ET AL LEASE
 ELEANOR E. FOWLER ET AL
 CAMMIE GATRELL ET AL LEASE
 EDWARD GATRELL
 THE HEIRS OF S.T. DARNELL AND JOHN C. WILSON LEASE
 RICHARD C. FOLEY ET AL
 NETTIE LEAH LICOT ET AL LEASE
 PHYLLIS SHEPARD TRUST LEASE
 JEAN COLE ET VIR LEASE
 EUGENE R. WALTON ET AL LEASE
 RICHARD K. MCCULLOUGH
 RICHARD F. MCCULLOUGH LEASE

JOB # 17-011WA
 DRAWING # HORST2HAD
 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

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

DOUGLAS R. ROWE P.S. 2202
 DATE 02/18/20

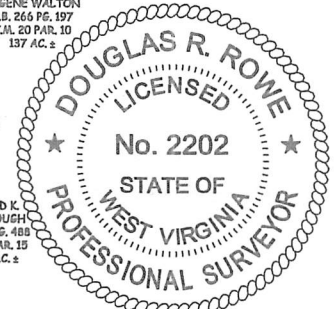


I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE RULES ISSUED AND PERSCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



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

- 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
 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.



WELL TYPE: OIL ___ GAS LIQUID INJECTION ___ WASTE DISPOSAL ___ OPERATOR'S WELL# HORST UNIT #2H
 (IF "GAS") PRODUCTION STORAGE ___ DEEP ___ SHALLOW 47 - 095 - 02516
 LOCATION: ELEVATION 1,111'-AS DRILLED WATERSHED HEADWATERS MIDDLE ISLAND CREEK STATE COUNTY PERMIT
 QUADRANGLE WEST UNION 7.5' DISTRICT CENTERVILLE COUNTY TYLER
 SURFACE OWNER ROY A. MEREDITH ACREAGE 59.39 ACRES +/-
 OIL & GAS ROYALTY OWNER ROY A. MEREDITH ET UX; JANICE L. HURST; GENE BOND; COLEEN GRIFFIN ASH; MAE BOND; LEASE ACREAGE 80 AC±; 97.63 AC±; 14.44 AC±; 44.187 AC±; 67 AC±;
 LELLA WASHBURN ET AL; CAMMIE GATRELL ET AL; NETTIE LEAH LICOT ET AL; NATHAN CAIN ET AL; JEAN COLE ET VIR; EUGENE R. WALTON ET AL 150 AC±; 139.5 AC±; 43 AC±; 278 AC±; 77.5 AC±; 137 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 6,546' TVD 16,340' 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