

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

API 47 - 095 - 02724 County Tyler District Ellsworth  
Quad Shirley Pad Name Blizzard Field/Pool Name -----  
Farm name Roger D Blizzard & Ruth E Spencer Well Number Pechora Unit 1H  
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 4372117m Easting 512822m  
Landing Point of Curve Northing 4371574.67m Easting 513631.77m  
Bottom Hole Northing 4367523m Easting 515035m

Elevation (ft) 1004' 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 2/2/21 Date drilling commenced 5/16/2021 Date drilling ceased 6/7/2021  
Date completion activities began 9/4/2021 Date completion activities ceased 10/15/2021  
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 16' Open mine(s) (Y/N) depths No  
Salt water depth(s) ft 1813' Void(s) encountered (Y/N) depths No  
Coal depth(s) ft None Identified Cavern(s) encountered (Y/N) depths No  
Is coal being mined in area (Y/N) No

Reviewed by:  
\_\_\_\_\_

WR-35  
Rev. 8/23/13

API 47-095 - 02724 Farm name Roger D Blizzard & Ruth E Spencer Well number Pechora Unit 1H

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"	80'	New	94#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"	357'	New	54.5#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2647'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	24083'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	7067'		4.7#, P-110		
Packer type and depth set		N/A					

Comment Details \_\_\_\_\_

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	Class A	266 sx	15.6	1.18	56	0'	8 Hrs.
Surface	Class A	402 sx	15.6	1.20	92	0'	8 Hrs.
Coal							
Intermediate 1	Class A	879 sx	15.6	1.19	186	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	792 sx (Lead) 3838 sx (Tail)	13.5 (Lead), 15.2(Tail)	1.4 (Lead), 1.26 (Tail)	861	~500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 24128' MD, 6623' TVD (BHL), 6623' (Deepest Point Drilled) Loggers TD (ft) 24128' MD  
 Deepest formation penetrated Marcellus Plug back to (ft) N/A  
 Plug back procedure N/A

Kick off depth (ft) 5987'

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



API 47- 095 - 02724 Farm name Roger D Blizzard & Ruth E Spencer Well number Pechora Unit 1H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>		
<u>Marcellus</u>	<u>6481' (TOP)</u>	<u>TVD</u>	<u>7134' (TOP) 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 10384 mcfpd Oil 249 bpd NGL --- bpd Water 377 bpd GAS MEASURED BY  Estimated  Orifice  Pilot

LITHOLOGY/ FORMATION	TOP	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H <sub>2</sub> S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	

**\*PLEASE SEE ATTACHED EXHIBIT 3**


Please insert additional pages as applicable.

Drilling Contractor H & P Drilling  
Address 912 N Eagle Valley Rd City Howard State PA Zip 16841

Logging Company Nine Energy Services  
Address 6500 West Fwy City Fort Worth State TX Zip 76116

Cementing Company Shclumberger  
Address 5599 San Felipe St City Houston State TX Zip 77056

Stimulating Company Halliburton  
Address 3000 W. Sam Houston Pkwy City Houston State TX Zip 76114

Please insert additional pages as applicable.

Completed by Brandi Hankins Telephone 303-357-7223  
Signature [Signature] Title Completions Technician Date 3/21/22

API 47-095-02724 Farm Name Roger D Blizard & Ruth E Spencer Well Number Pechora Unit 1H					
Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	09/04/2021	24013	23971	36	Marcellus
2	09/05/2021	23931.69643	23767.1786	36	Marcellus
3	09/05/2021	23731.875	23567.3571	36	Marcellus
4	09/05/2021	23532.05357	23367.5357	36	Marcellus
5	09/06/2021	23332.23214	23167.7143	36	Marcellus
6	09/06/2021	23132.41071	22967.8929	36	Marcellus
7	09/07/2021	22932.58929	22768.0714	36	Marcellus
8	09/07/2021	22732.76786	22568.25	36	Marcellus
9	09/08/2021	22532.94643	22368.4286	36	Marcellus
10	09/08/2021	22333.125	22168.6071	36	Marcellus
11	09/09/2021	22133.30357	21968.7857	36	Marcellus
12	09/10/2021	21933.48214	21768.9643	36	Marcellus
13	09/10/2021	21733.66071	21569.1429	36	Marcellus
14	09/10/2021	21533.83929	21369.3214	36	Marcellus
15	09/11/2021	21334.01786	21169.5	36	Marcellus
16	09/11/2021	21134.19643	20969.6786	36	Marcellus
17	09/12/2021	20934.375	20769.8571	36	Marcellus
18	09/12/2021	20734.55357	20570.0357	36	Marcellus
19	09/12/2021	20534.73214	20370.2143	36	Marcellus
20	09/13/2021	20334.91071	20170.3929	36	Marcellus
21	09/13/2021	20135.08929	19970.5714	36	Marcellus
22	09/13/2021	19935.26786	19770.75	36	Marcellus
23	09/14/2021	19735.44643	19570.9286	36	Marcellus
24	09/15/2021	19535.625	19371.1071	36	Marcellus
25	09/16/2021	19335.80357	19171.2857	36	Marcellus
26	09/16/2021	19135.98214	18971.4643	36	Marcellus
27	09/17/2021	18936.16071	18771.6429	36	Marcellus
28	09/17/2021	18736.33929	18571.8214	36	Marcellus
29	09/18/2021	18536.51786	18372	36	Marcellus
30	09/18/2021	18336.69643	18172.1786	36	Marcellus
31	09/19/2021	18136.875	17972.3571	36	Marcellus
32	09/19/2021	17937.05357	17772.5357	36	Marcellus
33	09/20/2021	17737.23214	17572.7143	36	Marcellus
34	09/20/2021	17537.41071	17372.8929	36	Marcellus
35	09/21/2021	17337.58929	17173.0714	36	Marcellus
36	09/21/2021	17137.76786	16973.25	36	Marcellus
37	09/22/2021	16937.94643	16773.4286	36	Marcellus
38	09/22/2021	16738.125	16573.6071	36	Marcellus
39	09/23/2021	16538.30357	16373.7857	36	Marcellus
40	09/23/2021	16338.48214	16173.9643	36	Marcellus
41	09/24/2021	16138.66071	15974.1429	36	Marcellus
42	09/24/2021	15938.83929	15774.3214	36	Marcellus
43	09/24/2021	15739.01786	15574.5	36	Marcellus
44	09/24/2021	15539.19643	15374.6786	36	Marcellus
45	09/24/2021	15339.375	15174.8571	36	Marcellus
46	09/25/2021	15139.55357	14975.0357	36	Marcellus
47	09/25/2021	14939.73214	14775.2143	36	Marcellus
48	09/25/2021	14739.91071	14575.3929	36	Marcellus
49	09/25/2021	14540.08929	14375.5714	36	Marcellus
50	09/26/2021	14340.26786	14175.75	36	Marcellus
51	09/26/2021	14140.44643	13975.9286	36	Marcellus
52	09/26/2021	13940.625	13776.1071	36	Marcellus
53	09/26/2021	13740.80357	13576.2857	36	Marcellus
54	09/26/2021	13540.98214	13376.4643	36	Marcellus
55	09/27/2021	13341.16071	13176.6429	36	Marcellus
56	09/27/2021	13141.33929	12976.8214	36	Marcellus
57	09/27/2021	12941.51786	12777	36	Marcellus
58	09/27/2021	12741.69643	12577.1786	36	Marcellus
59	09/27/2021	12541.875	12377.3571	36	Marcellus
60	09/28/2021	12342.05357	12177.5357	36	Marcellus
61	09/28/2021	12142.23214	11977.7143	36	Marcellus
62	09/28/2021	11942.41071	11777.8929	36	Marcellus
63	09/29/2021	11742.58929	11578.0714	36	Marcellus
64	09/29/2021	11542.76786	11378.25	36	Marcellus
65	09/29/2021	11342.94643	11178.4286	36	Marcellus
66	09/29/2021	11143.125	10978.6071	36	Marcellus
67	09/29/2021	10943.30357	10778.7857	36	Marcellus
68	09/30/2021	10743.48214	10578.9643	36	Marcellus
69	09/30/2021	10543.66071	10379.1429	36	Marcellus
70	09/30/2021	10343.83929	10179.3214	36	Marcellus
71	09/30/2021	10144.01786	9979.5	36	Marcellus
72	09/30/2021	9944.196429	9779.67857	36	Marcellus
73	10/01/2021	9744.375	9579.85714	36	Marcellus
74	10/01/2021	9544.553571	9380.03571	36	Marcellus
75	10/01/2021	9344.732143	9180.21429	36	Marcellus
76	10/01/2021	9144.910714	8980.39286	36	Marcellus
77	10/01/2021	8945.089286	8780.57143	36	Marcellus
78	10/02/2021	8745.267857	8580.75	36	Marcellus
79	10/02/2021	8545.446429	8380.92857	36	Marcellus
80	10/02/2021	8345.625	8181.10714	36	Marcellus
81	10/03/2021	8145.803571	7981.28571	36	Marcellus
82	10/03/2021	7945.982143	7781.46429	36	Marcellus
83	10/03/2021	7746.160714	7581.64286	36	Marcellus
84	10/03/2021	7546.339286	7381.82143	36	Marcellus
85	10/03/2021	7346.517857	7182	36	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 (bbbls)	Amount of Nitrogen/ other (units)
1	09/04/2021	73.85	10066	10651	3991.79	166100	206092	N/A
2	09/05/2021	83.86	10267	6250	4151	402493	308220	N/A
3	09/05/2021	82.22	10303	5819	4023	401922	305944	N/A
4	09/05/2021	80.2	10285	5556	3833	407920	310208	N/A
5	09/06/2021	80.71	10301	5823	4008	401132	310547	N/A
6	09/06/2021	79.98	10207	6004	3914	401540	312086	N/A
7	09/07/2021	77.37	10060	5534	3771	409780	371733	N/A
8	09/07/2021	82.84	10315	8182	4297	398900	291869	N/A
9	09/08/2021	83.04	10190	7505	4163	398980	300119	N/A
10	09/08/2021	72.02	10254.98	6166.93	3114.57	400523	297472	N/A
11	09/09/2021	82.67	10152	9678	3613	402283	290682	N/A
12	09/10/2021	77.76	9420	5579	3959	401401	293697	N/A
13	09/10/2021	78.76	9523	6134	3998	399447	309107	N/A
14	09/10/2021	79.92	10117	6981	3255	400700	297366	N/A
15	09/11/2021	77.54	9696.07	6814.01	5370.46	405620	288780	N/A
16	09/11/2021	73.23	8684	7308	3558	403951	332371	N/A
17	09/12/2021	80.44	8672	6480	3635	404860	289156	N/A
18	09/12/2021	83.24	9461	6961	3765	405852	300013	N/A
19	09/12/2021	80.8	9444	6335	4001	396860	288900	N/A
20	09/13/2021	80.67	10079	5594	3736	404440	288056	N/A
21	09/13/2021	81.57	9964	7519	3749	400400	289936	N/A
22	09/13/2021	81.72	9549	6327	3781	406160	290795	N/A
23	09/14/2021	78.09	9306	6326	3780	402011	289574	N/A
24	09/15/2021	50.63	7958	5733	7014.47	328570	416844	N/A
25	09/16/2021	82.17	10088	6704	3888	402720	284366	N/A
26	09/16/2021	79.1	9385	5492	4021	402432	289791	N/A
27	09/17/2021	83.54	9523	7038	4194	402434	286830	N/A
28	09/17/2021	82.42	9499	6571	4129	401960	286758	N/A
29	09/18/2021	84.37	9704	10188	3751	402620	292137	N/A
30	09/18/2021	80.57	9496	6102	4118	402170	290196	N/A
31	09/19/2021	86.17	9669	10310	3978	402099	291599	N/A
32	09/19/2021	80.97	9388	6422	5047	402384	284551	N/A
33	09/20/2021	86.53	9448	9588	3880	403660	286086	N/A
34	09/20/2021	86.74	9706	5956	4428	402219	288465	N/A
35	09/21/2021	88.64	10386	9068	3318	407712	289590	N/A
36	09/21/2021	88.55	10071	8355	3721	402245	288367	N/A
37	09/22/2021	88.34	9617	9027	3813	403386	281187	N/A
38	09/22/2021	93.65	10466	10894	3875	402526	285821	N/A
39	09/23/2021	89.11	9575	9389	3836	408160	289747	N/A
40	09/23/2021	93.86	10375	8356	3514	402535	283424	N/A
41	09/24/2021	94.81	10032	9382	4110	402651	284824	N/A
42	09/24/2021	93.03	10072	8577	3599	406669	279138	N/A
43	09/24/2021	90	9995	9386	3843	404991	280473	N/A
44	09/24/2021	96.1	10019	7991	4235	402176	283967	N/A
45	09/24/2021	94.97	9740	8650	4048	402078	280569	N/A
46	09/25/2021	93.5	9614	10205	4207	410300	281697	N/A
47	09/25/2021	97.48	9958	9161	4099	402605	281027	N/A
48	09/25/2021	97.63	9771	7663	3740	436162	287540	N/A
49	09/25/2021	97.76	9825	9146	4106	402163	286149	N/A
50	09/26/2021	96.2	9759	9159	3931	405140	285353	N/A
51	09/26/2021	97.31	9858	7257	4092	402730	286498	N/A
52	09/26/2021	95.35	9838	8725	4236	401606	282132	N/A
53	09/26/2021	96.86	9780	9742	4328	402098	288000	N/A
54	09/26/2021	97.29	9636	9585	3972	405375	285385	N/A
55	09/27/2021	96.93	9391	9462	4038	402411	276812	N/A
56	09/27/2021	95.48	9637	8469	4272	402162	282373	N/A
57	09/27/2021	96.32	9580	6731	3760	404680	278966	N/A
58	09/27/2021	97.55	9681	7473	3586	402313	282054	N/A
59	09/27/2021	97.44	9523	8645	3769	402882	279779	N/A
60	09/28/2021	97.03	9422	9043	4338	403680	284250	N/A
61	09/28/2021	95.6	9377	8451	3794	404520	282307	N/A
62	09/28/2021	68.73	7466	9132	4960	402373	417938	N/A
63	09/29/2021	91.65	8582	7869	3783	402215	284889	N/A
64	09/29/2021	93.19	8379	5374	3754	402124	281462	N/A
65	09/29/2021	92.41	8757	6277	3542	388455	277331	N/A
66	09/29/2021	93.85	8556	6467	3975	402465	283902	N/A
67	09/29/2021	95.48	8850	9476	4101	402610	280360	N/A
68	09/30/2021	96.04	9165	9017	3945	416101	289234	N/A
69	09/30/2021	93.98	8976	5403	3647	401895	277800	N/A
70	09/30/2021	92.55	8264	5580	3639	410520	280680	N/A
71	09/30/2021	93.58	8844	6627	3800	408220	279201	N/A
72	09/30/2021	95.85	8481	6285	4189	402871	281709	N/A
73	10/01/2021	96.6	8783	5811	4016	402022	279300	N/A
74	10/01/2021	95.85	9020	9334	3936	402804	275899	N/A
75	10/01/2021	92.31	8141	5966	4201	401774	279506	N/A
76	10/01/2021	95.42	8273	6213	3892	407540	284326	N/A
77	10/01/2021	98.01	8218	5972	4128	408500	279711	N/A
78	10/02/2021	96.32	7991	4780	3954	407140	278206	N/A
79	10/02/2021	93.06	7750	5547	3863	402656	284907	N/A
80	10/02/2021	89.87	7569.65	6307.4	3865.93	409640	278220	N/A
81	10/03/2021	94.63	7713	6134	4002.62	402887	276147	N/A
82	10/03/2021	92.5	7534	7403	4285	404020	281076	N/A
83	10/03/2021	94.17	7568	7325	4185	406260	279313	N/A
84	10/3/2021	91.09	7113	6201	4173	405762	310875	N/A
85	10/03/2021	92.97	7326.17	5821.02	4230.18	422781	286253	N/A
	AVG=	88	9,324	7,458	4,002	34,036,134	24,726,020	TOTAL

API 47-095-02724 Farm Name Roger D Blizzard & Ruth E Spencer Well Number Pechora Unit 1H

**EXHIBIT 3**

<b>LITHOLOGY/ FORMATION</b>	<b>TOP DEPTH (TVD) From Surface</b>	<b>BOTTOM DEPTH (TVD) From Surface</b>	<b>TOP DEPTH (MD) From Surface</b>	<b>BOTTOM DEPTH (MD) From Surface</b>
Shaley Sandstone	74	214	74	214
Sandy Shale	214	364	214	364
Shaley Sandstone	364	514	364	514
Limestone, Tr Shale	514	544	514	544
Sandstone	544	664	544	664
Limestone, Tr Coal	664	694	664	694
Shaley Sandstone, Tr Coal	694	784	694	784
Shale, Tr Sandstone	784	1,204	784	1,204
Sandy Shale, Limestone, Tr Coal	1,204	1,354	1,204	1,354
Sandy Shale	1,354	1,504	1,354	1,504
Sandstone, Tr Shale, Tr Coal	1,504	1,624	1,504	1,624
Sandy Shale	1,624	1,834	1,624	1,834
Shaly Sandstone, Tr coal	1,834	1,863	1,834	1,901
Big Lime	1,889	2,629	1,901	2,723
Fifty Foot Sandstone	2,629	2,710	2,697	2,809
Gordon	2,710	3,004	2,783	3,126
Fifth Sandstone	3,004	3,063	3,100	3,189
Bayard	3,063	3,872	3,163	4,064
Speechley	3,872	4,176	4,038	4,392
Balltown	4,176	4,533	4,366	4,776
Bradford	4,533	4,959	4,750	5,242
Benson	4,959	5,176	5,216	5,478
Alexander	5,176	6,336	5,452	6,776
Sycamore	6,197	6,310	6,595	6,750
Middlesex	6,310	6,402	6,750	6,910
Burkett	6,402	6,427	6,910	6,966
Tully	6,427	6,481	6,966	7,134
Marcellus	6,481	NA	7,134	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

Job Start Date:	9/4/2021
Job End Date:	10/3/2021
State:	West Virginia
County:	Tyler
API Number:	47-095-02724-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	PECHORA UNIT 1H
Latitude:	39.49850000
Longitude:	-80.85104000
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,623
Total Base Water Volume (gal):	26,470,845
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
Produced Water Mixture	Halliburton	Base Fluid					
			Water	7732-18-5	100.00000	86.69848	Density = 8.50
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.12516	



WG-36 GELLING AGENT	Halliburton	Gelling Agent					
				Listed Below			
OPTIFLO-II DELAYED RELEASE BREAKER	Halliburton	Breaker					
				Listed Below			
HYDROCHLORIC ACID, 22 BAUME	Halliburton	Solvent					
				Listed Below			
FLUID Enviro-Syn HCR-7000-WL	Fluid Energy Group	Acid Replacement					
				Listed Below			
MC B-8614A	MultiChem	Biocide					
				Listed Below			
Excelerate LX-15	Halliburton	Friction Reducer					
				Listed Below			
HAI-501	Halliburton	Acid Corrosion Inhibitor					
				Listed Below			
Sand-Common White-100 Mesh, SSA-2	Halliburton	Proppant					
				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	13.11492
			Complex Amine Compound	Proprietary	60.00000	0.03284
			Hydrochloric acid	7647-01-0	30.00000	0.02522
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.01642
			Guar gum	9000-30-0	100.00000	0.00918
			Proprietary	Proprietary	20.00000	0.00601
			Proprietary	Proprietary	10.00000	0.00300
			Surfactant	Proprietary	5.00000	0.00274
			Sobitan, mono-9-octadecenoate, (Z)	1338-43-8	5.00000	0.00274
			Glutaraldehyde	111-30-8	30.00000	0.00248
			Ethoxylated alcohols	Proprietary	5.00000	0.00056
			Alkoxylated polyhydric alcohol	Proprietary	1.00000	0.00055
			Organic chloride compound	Proprietary	1.00000	0.00055
			Alkyl (C12-16) dimethylbenzyl ammonium chloride	68424-85-1	5.00000	0.00041
			Ammonium persulfate	7727-54-0	100.00000	0.00020
			Methanol	67-56-1	100.00000	0.00016
			Ethanol	64-17-5	1.00000	0.00008
			Oxylated phenolic resin	Proprietary	30.00000	0.00006
			Mixture of dimer and trimer fatty acids of indefinite composition derived from tall oil	61790-12-3	30.00000	0.00005
			Modified thiourea polymer	Proprietary	30.00000	0.00005
			Propargyl alcohol	107-19-7	5.00000	0.00001
			Hexadecene	629-73-2	5.00000	0.00001
			Sodium glycolate	2836-32-0	0.01000	0.00001
			Sodium hydroxide	1310-73-2	0.01000	0.00001

			Nitrated acetate salt	Proprietary	0.01000	0.00001	
			Acrylamide	79-06-1	0.01000	0.00001	
			Organic salt #1	Proprietary	0.01000	0.00001	
			Organic salt #2	Proprietary	0.01000	0.00001	
			Formaldehyde	50-00-0	0.01000	0.00001	
			C.I. pigment Orange 5	3468-63-1	1.00000	0.00000	

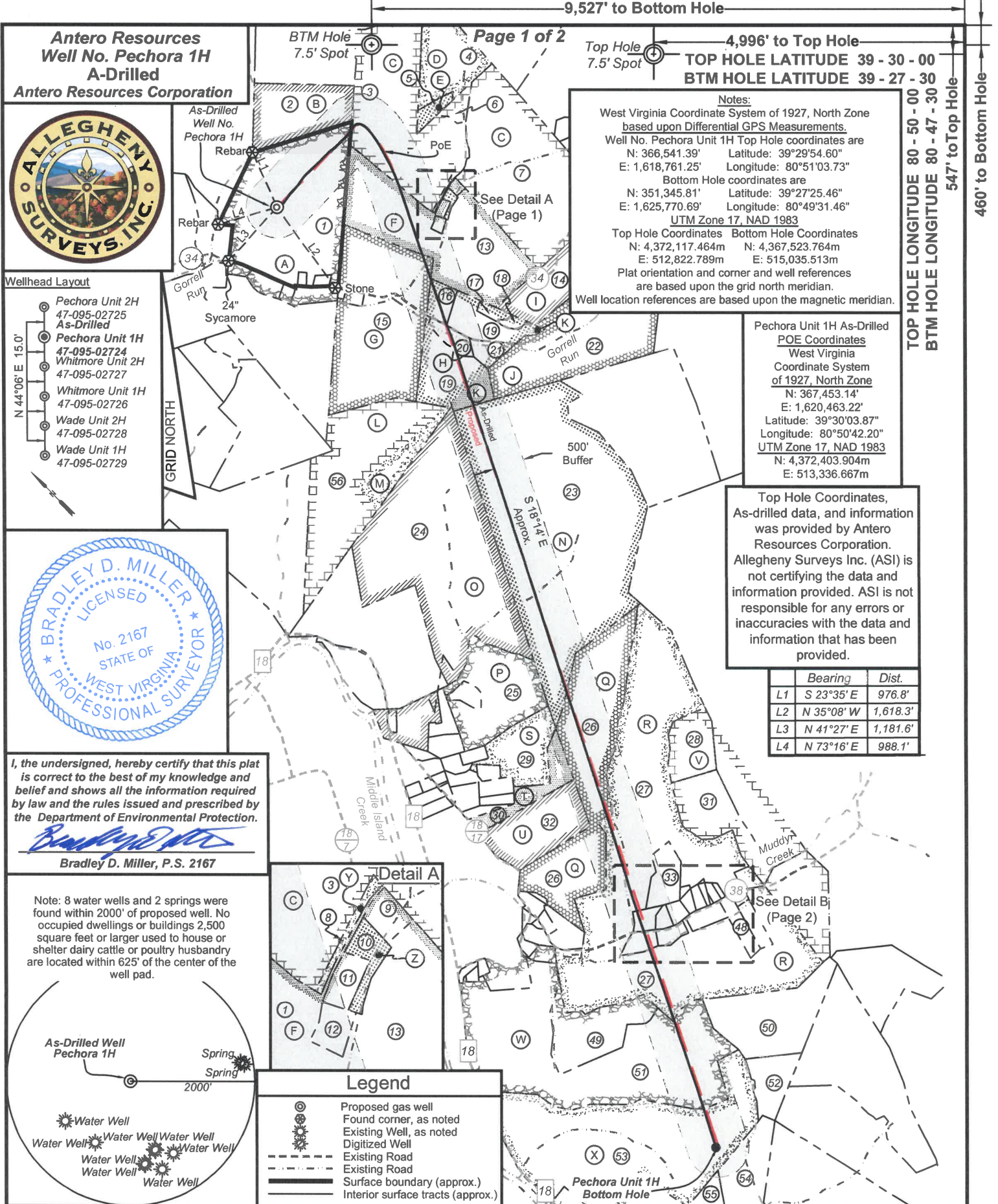
\* Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water

\*\* 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.

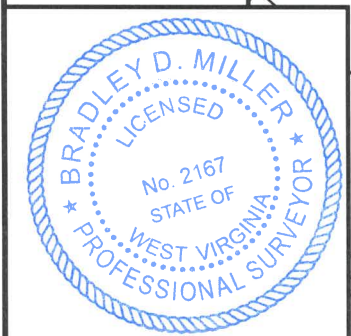
Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)



**Antero Resources**  
**Well No. Pechora 1H**  
**A-Drilled**  
**Antero Resources Corporation**

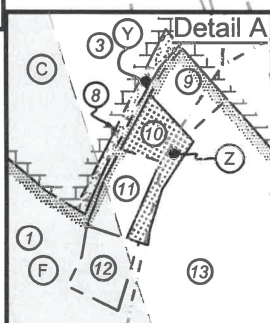
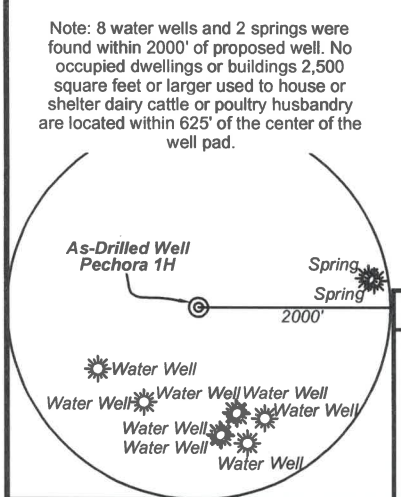


- Wellhead Layout**
- Pechora Unit 2H  
47-095-02725  
As-Drilled
  - Pechora Unit 1H  
47-095-02724  
As-Drilled
  - Whitmore Unit 2H  
47-095-02727
  - Whitmore Unit 1H  
47-095-02726
  - Wade Unit 2H  
47-095-02728
  - Wade Unit 1H  
47-095-02729



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 prescribed by the Department of Environmental Protection.

*Bradley D. Miller*  
**Bradley D. Miller, P.S. 2167**



**Legend**

- ⊙ Proposed gas well
- ⊙ Found corner, as noted
- ⊙ Existing Well, as noted
- ⊙ Digitized Well
- - - Existing Road
- - - Existing Road
- Surface boundary (approx.)
- - - Interior surface tracts (approx.)

9,527' to Bottom Hole

4,996' to Top Hole

TOP HOLE LATITUDE 39 - 30 - 00  
 BTM HOLE LATITUDE 39 - 27 - 30

**Notes:**  
 West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.  
 Well No. Pechora Unit 1H Top Hole coordinates are  
 N: 366,541.39' Latitude: 39°29'54.60"  
 E: 1,618,761.25' Longitude: 80°51'03.73"  
 Bottom Hole coordinates are  
 N: 351,345.81' Latitude: 39°27'25.46"  
 E: 1,625,770.69' Longitude: 80°49'31.46"  
 UTM Zone 17, NAD 1983  
 Top Hole Coordinates Bottom Hole Coordinates  
 N: 4,372,117.464m N: 4,367,523.764m  
 E: 512,822.789m E: 515,035.513m  
 Plat orientation and corner and well references are based upon the grid north meridian.  
 Well location references are based upon the magnetic meridian.

Pechora Unit 1H As-Drilled POE Coordinates  
 West Virginia Coordinate System of 1927, North Zone  
 N: 367,453.14'  
 E: 1,620,463.22'  
 Latitude: 39°30'03.87"  
 Longitude: 80°50'42.20"  
 UTM Zone 17, NAD 1983  
 N: 4,372,403.904m  
 E: 513,336.667m

Top Hole Coordinates, As-drilled data, and information was provided by Antero Resources Corporation. Allegheny Surveys Inc. (ASI) is not certifying the data and information provided. ASI is not responsible for any errors or inaccuracies with the data and information that has been provided.

	Bearing	Dist.
L1	S 23°35' E	976.8'
L2	N 35°08' W	1,618.3'
L3	N 41°27' E	1,181.6'
L4	N 73°16' E	988.1'

FILE NO: 121-54-E-19  
 DRAWING NO: Pechora 1H As-Drilled  
 SCALE: 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY: Submeter  
 PROVEN SOURCE OF ELEVATION: WVDOT, Harrisville, WV

**STATE OF WEST VIRGINIA**  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
**OIL AND GAS DIVISION**

DATE: March 7 2022  
 OPERATOR'S WELL NO. Pechora 1H  
 API WELL NO  
47 - 095 - 02724  
 STATE COUNTY PERMIT

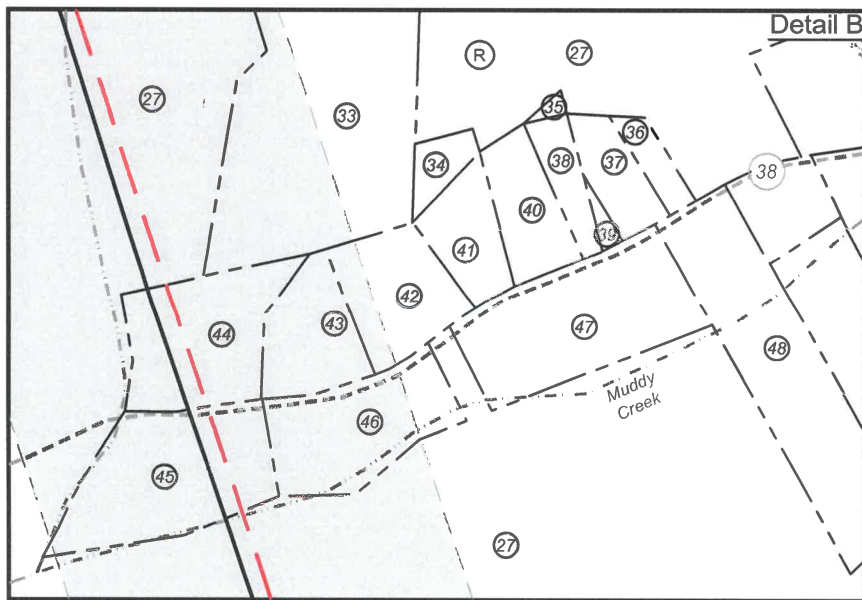
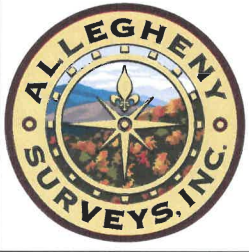
WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
 (IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW

LOCATION: ELEVATION: As-Built 1,004' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Shirley  
 DISTRICT: Ellsworth COUNTY: Tyler 87.53; 148.72; 90.168; 177;  
 SURFACE OWNER: Roger D. Blizzard & Ruth E. Spencer Ronald L. Hoover, et ux; Anthony B. Parr; Kendra K. Wyke; Keith C. & Phyllis J. Smith; Alfred Lonzo Eddy; Roberta L. Schickler; Marjorie R. Asher Longston, et vir; 79.919; 99.998;  
 ROYALTY OWNER: Heritage Resources-Marcellus Minerals (2), LLC; Helen E. Boggs; William S. Nash, et al; LEASE NO: \_\_\_\_\_ ACREAGE: 102.62 51.50; 6.338; 222;  
 PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 24,128' MD 6,623' TVD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System  
 ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road  
Denver, CO 80202 Charleston, WV 25313

547' to Top Hole  
 460' to Bottom Hole

See Detail A (Page 1)  
 See Detail B (Page 2)



ID	TM/Par	Owner	DB/PG	Acres
1	15-33	Roger D. Blizzard & Ruth E. Spencer	340/170	102.62
2	15-31	Roger D. Blizzard & Ruth E. Spencer	342/782	25.00
3	15-38	Rodney A. & Candis L. Nash	351/701	85.48
4	16-23	Joseph L. Sitko	314/462	29.70
5	16-23.1	Bruce Winkelmann	334/195	3.30
6	16-44.1	Carl Straight	543/598	3.70
7	16-44	Robert A. Pyles, et al	335/482	87.82
8	16-60	Rodney & Candis Nash	378/815	0.56
9	16-54	David M. & Amanda B. Trimble	447/110	1.00
10	16-59	Rodney & Candis Nash	378/818	1.10
11	16-56	Rodney & Candis Nash	247/773	1.00
12	16-57	Rodney & Candis Nash	252/446	1.00
13	15-32	William S. & Opal Marie Nash	335/188	78.58
14	22-3	Harold L. & Deborah C. Hollaway	287/669	22.95
15	21-13	Alfred Lonzo Eddy	337/650	98.58
16	22-1.2	Earl David & Joyce Ann Giles	336/447	5.39
17	22-1.3	Ronald Hartline & Jamie Barnhart	591/741	2.02
18	22-2	Ronald Hartline & Jamie Barnhart	591/741	1.50
19	22-1	Robert I. Reed & Floyd W. Reed	321/763	42.32
20	22-1.4	David E. & Joyce A. Giles	546/764	4.76
21	22-1.1	Robert I. Reed & Floyd W. Reed	278/661	4.49
22	22-4	Stephen H. & Barbara J. Dunthorn	216/40	59.71
23	22-41	Anthony B. Parr	342/763	222.00
24	22-42	Sharon Christenson, et al	635/420	144.26
25	22-43	Loretta Louise Baker	253/131	38.97
26	28-9	David & Cheryl L. Barrick	263/606	87.53
27	28-31	Victor A. & Lorraine B. Weekley	AR49/717	226.25
28	22-37	B.W. Weekley	107/562	15.78
29	22-47	Tom J. & Jean A. Gump	628/629	24.66
30	28-7	Randall L. & Kathryn M. Wise	442/85	9.00
31	28-32	B.W. Weekley	107/562	33.31
32	28-8	Robert L. & Carolee J. Daniell	WB 43/267	30.00
33	28-31.7	Kordell Stewart & Katelyn Gogan	640/473	9.62
34	28-31.14	Ray Howe	363/416	0.51
35	28-31.18	Lorraine Weekley	AR49-717	0.08
36	28-31.16	William Morgan	374/472	0.50
37	28-31.12	William Morgan	374/472	1.00
38	28-31.15	James & Peggy Morgan	525/214	0.81
39	28-31.19	James & Peggy Morgan	377/10	0.14
40	28-31.9	James & Peggy Morgan	525/214	1.38
41	28-31.11	Ray Howe	356/678	1.27
42	28-31.13	Ray Howe	361/436	2.06
43	28-31.5	Kordell Stewart & Katelyn Gogan	640/473	1.75
44	28-31.6	Kordell Stewart & Katelyn Gogan	640/473	3.00
45	28-31.4	Victor & Lorraine Weekley	AR 49/717	3.64
46	28-31.8	Victor & Lorraine Weekley	AR 49/717	2.78
47	28-31.10	Danny Swiger & Peggy Smith	356/675	4.00
48	28-31.3	David Lantz & Rita Parr	618/689	5.00
49	28-30	Keith C. Smith	WB 35/228	30.13
50	5-9	Keith A. Riegelsberger	376/828	43.23
51	28-29	Keith C. Smith	WB 35/228	167.03
52	5-8	James L. & James C. Fitzpatrick	199/171	13.11
53	28-28	Ronald & Linda Hoover	184/383	136.22
54	5-5	Earnley Owens et al	WB 33/418	75.00
55	5-4	William D. Jr. & Saturina M. Morrison	341/35	52.78
56	21-53	Haessly Land & Timber, LLC	337/101A	89.88

Leases	
A	Heritage Resources, Marcellus Minerals, LLC
B	Jerry R. Brown
C	Helen E. Boggs
D	Joseph L. Sitko, et ux
E	Bruce Winkelmann
F	William S. Nash, et al
G	Alfred Lonzo Eddy
H	Roberta L. Schickler
I	Ridgetop Capital II, LP
J	Ridgetop Capital II, LP
K	Marjorie R. Asher Longston, et vir
L	Haessly Land & Timber Co., LLC
M	OPEN
N	Anthony B. Parr
O	E. Lorna Howard Testamentary Trust
P	Loretta L. Baker
Q	Heritage Resources - Marcellus Minerals, LLC
R	Kendra K. Wyke
S	Rebecca Lynn Gebhardt
T	Randall L. Wise, et ux
U	Carolee J. Daniell
V	Richard L. White II
W	Keith C. & Phyllis J. Smith
X	Ronald L. Hoover, et ux
Y	Rodney A. Nash, et ux
Z	Randy Nash, et ux

FILE NO: 121-54-E-19  
DRAWING NO: Pechora 1H As-Drilled  
SCALE: 1" = 2000'  
MINIMUM DEGREE OF ACCURACY: Submeter  
PROVEN SOURCE OF ELEVATION: WVDOT, Harrisville, WV

**STATE OF WEST VIRGINIA**  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
**OIL AND GAS DIVISION**

DATE: March 7 2022  
OPERATOR'S WELL NO. Pechora 1H  
API WELL NO  
47 - 095 - 02724  
STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
(IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW  
LOCATION: ELEVATION: As-Built 1,004' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Shirley  
DISTRICT: Ellsworth COUNTY: Tyler 87.53; 148.72; 90.168; 177;  
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 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled 271; 168.175  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 24,128' MD 6,623' TVD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System  
ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road  
Denver, CO 80202 Charleston, WV 25313