

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

API 47-095-02786 County Tyler District Ellsworth, Union, Lincoln
Quad Top Hole: Middleboure -- Btm Hole: Paden City Pad Name Eldon Field/Pool Name ----
Farm name Eldon J. & Ruth A. Helman Well Number Phaeton 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 4371562m Easting 503796m
Landing Point of Curve Northing 4371546.132m Easting 503684.078m
Bottom Hole Northing 4376617m Easting 501947m

Elevation (ft) 880' 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 3/21/2022 Date drilling commenced 6/1/2022 Date drilling ceased 8/6/2022
Date completion activities began 10/2/2022 Date completion activities ceased 12/27/2022
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 156' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 1676' Void(s) encountered (Y/N) depths No
Coal depth(s) ft N/A Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No

APPROVED

Reviewed by:

Handwritten signature and date: 5/24/23

API 47-095 - 02786 Farm name Eldon J. & Ruth A. Helman Well number Phaeton 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	26"	20"	130'	New	78.67#, X-60	N/A	Y
Surface	17-1/2"	13-3/8"	350'	New	54.5#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2784'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	23949'	New	23#, P-110cy	N/A	Y
Tubing		2-3/8"	6171'		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 ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor	Class A	122 sx	15.6	1.18	144	0'	8 Hrs.
Surface	Class A	325 sx	15.8	1.17	380	0'	8 Hrs.
Coal							
Intermediate 1	Class C	985 sx	15.8	1.16	1143	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	4010 sx (Tail)	13.5 (Lead), 15.2(Tail)	1.25 (Tail)	5013	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 23949' MD, 5981' TVD (BHL), 6136' (Deepest Point Drilled) Loggers TD (ft) 23949' MD
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 5286'

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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PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
*PLEASE SEE ATTACHED EXHIBIT 1					

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
*PLEASE SEE ATTACHED EXHIBIT 2								

Please insert additional pages as applicable.

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PRODUCING FORMATION(S)	DEPTHS		
<u>Marcellus</u>	<u>6059' (TOP)</u>	<u>TVD</u>	<u>6318' (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 1405 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 13475 mcfpd Oil 397 bpd NGL --- bpd Water 1615 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 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 Halliburton Energy Services
Address 3000 W. Sam Houston Pkwy City Houston State TX Zip 76114

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

Please insert additional pages as applicable.

Completed by Carly Marvel Telephone 303-357-7373
Signature Carly Marvel Title Permitting Agent Date 2/24/2023

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

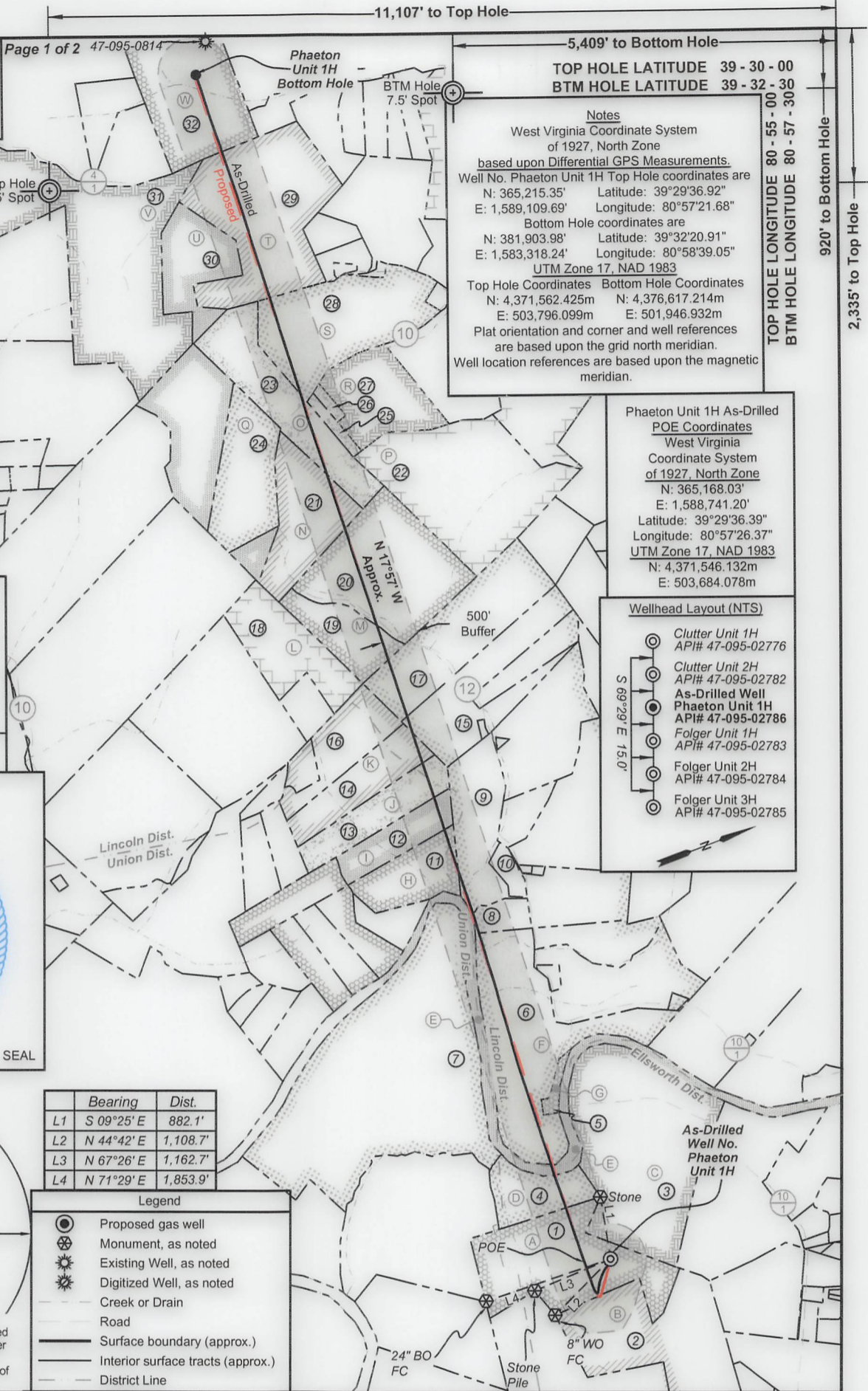
Antero Resources
Well No. Phaeton 1H
As-Drilled
 Antero Resources Corporation



Top Hole Coordinates, As-drilled data, and information was provided by Antero Resources Corporation. Allegany 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.

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.

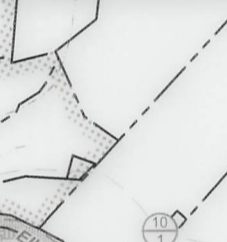
Bradley D. Miller
 Bradley D. Miller, P.S. 2167



Notes
 West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements. Well No. Phaeton Unit 1H Top Hole coordinates are N: 365,215.35' Longitude: 80°29'36.92" E: 1,589,109.69' Longitude: 80°57'21.68" Bottom Hole coordinates are N: 381,903.98' Longitude: 39°32'20.91" E: 1,583,318.24' Longitude: 80°58'39.05" UTM Zone 17, NAD 1983 Top Hole Coordinates Bottom Hole Coordinates N: 4,371,562.425m N: 4,376,617.214m E: 503,796.099m E: 501,946.932m Plat orientation and corner and well references are based upon the grid north meridian. Well location references are based upon the magnetic meridian.

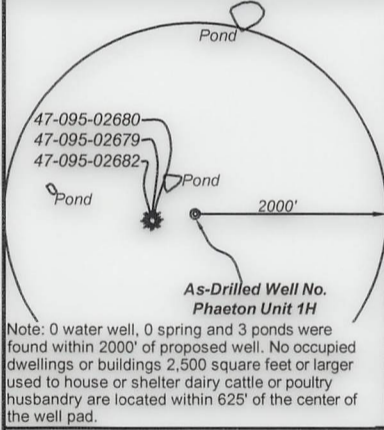
Phaeton Unit 1H As-Drilled POE Coordinates
 West Virginia Coordinate System of 1927, North Zone N: 365,168.03' E: 1,588,741.20' Latitude: 39°29'36.39" Longitude: 80°57'26.37" UTM Zone 17, NAD 1983 N: 4,371,546.132m E: 503,684.078m

Wellhead Layout (NTS)



	Bearing	Dist.
L1	S 09°25' E	882.1'
L2	N 44°42' E	1,108.7'
L3	N 67°26' E	1,162.7'
L4	N 71°29' E	1,853.9'

- Legend**
- Proposed gas well
 - ⊗ Monument, as noted
 - ⊙ Existing Well, as noted
 - ⊙ Digitized Well, as noted
 - Creek or Drain
 - Road
 - Surface boundary (approx.)
 - Interior surface tracts (approx.)
 - District Line



FILE NO: 294-54-E-18
 DRAWING NO: Phaeton Unit 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: February 22 2023
 OPERATOR'S WELL NO. Phaeton Unit 1H
 API WELL NO
47 - 095 - 02786
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built 880' WATERSHED: Middle Island Creek QUADRANGLE: Btm Hole: Paden City
 DISTRICT: Union, Lincoln Outlet Top Hole: Middlebourne
 SURFACE OWNER: Ruth A. Helman William P. Ingram; William J. Goodfellow, et ux (2); Erik D. Grimm; COUNTY: Tyler 61.83; 190; 34.3; 406.69; 78.49;
 ROYALTY OWNER: Eldon J. & Ruth A. Helman; Norma R. Spencer; WVDNR; Richard Keith McCollum; Charles M. Jr. & Crystal R. Young; Myrtle Liva Tucker; ACREAGE: 61.83 18.30; 25.05; 56.06; 100; 38.65; 48.55;
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled LEASE NO: _____ ACREAGE: 62.5; 84.3; 86.607
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 5,981' TVD
23,949' MD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Kevin Ellis
 ADDRESS: 1615 Wynkoop Street ADDRESS: 535 White Oaks Blvd.
Denver, CO 80202 Bridgeport, WV 26330



ID	TM/Par	Owner	Bk/Pg	Acres
1	19-1	Eldon J. & Ruth A. Helman	383/761	61.83
2	19-42	Carol J. Cox	334/298	142.00
3	13-10	Eldon J. & Ruth A. Helman	383/761	96.82
4	6-1.1	Eldon J. & Ruth A. Helman	383/761	21.00
5	15-19	Bennie H. & Karen Kile	263/40	1.00
6	15-18	B.F. Kile	174/412	70.00
7	6-1	Eldon J. & Ruth A. Helman	383/761	169.00
8	15-12	Roger & Claudia Weekly	317/317	7.66
9	15-10	Doris E. Haught	364/544	55.71
10	15-10.2	April A. & Christopher D. Ramsey	364/541	4.67
11	6-6.9	David S. Clough	351/712	24.54
12	6-6.8	Alan B. & Traci L. Clough	354/306	18.30
13	6-6.6	Richard Keith McCollum	362/348	25.05
14	6-6.5	Crystal R. & Charles M. Young, Jr.	345/211	25.65
15	15-4	Ivan W. & Karen L. Makely	337/639	41.29
16	6-6.4	Crystal R. & Charles M. Young, Jr.	368/773	25.35
17	15-2	Stephen E. Surface, et al	365/302	54.00
18	15-1	S.P. & Otto Woodburn Estate	97/423	33.74
19	12-55	John A. & Matthew J. May	432/101	25.00
20	12-55.1	Nathaniel V. & Tamela Frum	428/604	75.00
21	12-49	Estella J. & William J. Goodfellow, Jr.	286/20	38.65
22	12-50	William P. Ingram	605/159	88.00
23	12-43	Estella J. & William J. Goodfellow, Jr.	178/489	43.18
24	12-46	Keith V. & Barbara L. Frum	280/358	40.89
25	12-47	Estella & William J. Goodfellow, Jr.	166/356	3.46
26	12-48.1	Estella & William J. Goodfellow, Jr.	333/223	1.91
27	12-48	William Michael & Mary Ann Wells	314/416	34.62
28	12-44	William P. Ingram	455/477	62.50
29	12-22	William & Joanne Ingram	140/502	84.30
30	12-21	Keith V. & Barbara L. Frum	280/358	77.30
31	11-10	James Arthur & Dorothy J. Shreves	183/420	128.55
32	7-40	Brett Grimm, et al	342/538	86.60

Leases	
A	Eldon J. & Ruth A. Helman
B	Carol J. Cox
C	Ruth H. Wells
D	Norma R. Spencer
E	WVDNR
F	Mary Ann Devine
G	Benjamin Michael Kile
H	David S. Clough
I	Alan B. Clough, et ux
J	Richard Keith McCollum
K	Charles M. Jr. & Crystal R. Young
L	Flora Patterson Woodburn
M	Karen Moore Hwilka
N	William J. Goodfellow, et ux
O	William J. Goodfellow, et ux
P	William P. Ingram
Q	Keith V. Frum, et ux
R	William Michael Wells, et ux
S	Myrtle Liva Tucker
T	William P. Ingram
U	William P. Ingram
V	James Arthur Shreves, et ux
W	Erik D. Grimm

FILE NO: 294-54-E-18
 DRAWING NO: Phaeton Unit 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: February 22 2023
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 API WELL NO
 47 — 095 — 02786
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built 880' WATERSHED: Middle Island Creek QUADRANGLE: Btm Hole: Paden City
 DISTRICT: Union, Lincoln Outlet Top Hole: Middleboure
 COUNTY: Tyler 61.83; 190; 34.3;
 SURFACE OWNER: Eldon J. & Ruth A. Helman; William P. Ingram; William J. Goodfellow, et ux (2); Erik D. Grimm; 406.69; 78.49;
 Richard Keith McCollum; Charles M. Jr. & Crystal R. Young; Myrtle Liva Tucker; ACREAGE: 61.83 18.30; 25.05; 56.06;
 Mary Ann Devine; David S. Clough; Alan B. Clough, et ux; Karen Moore Hwilka; 100; 38.65; 48.55;
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 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 5,981' TVD
 23,949' MD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Kevin Ellis
 ADDRESS: 1615 Wynkoop Street ADDRESS: 535 White Oaks Blvd.
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Antero Resources
Well No. Phaeton 1H
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 Antero Resources Corporation

Page 1 of 2 47-095-0814



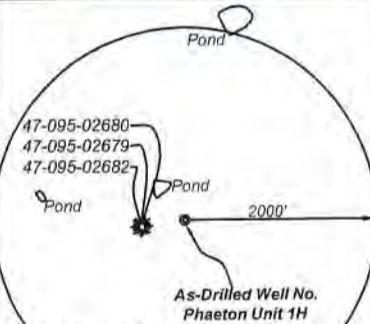
Top Hole Coordinates, As-drilled data, and information was provided by Antero Resources Corporation. Allegheny Surveys Inc. (ASI) is not certifying the data and information provided. ASI is not responsible for any errors or inaccuracies with the data and information that has been provided.

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



SEAL



Note: 0 water well, 0 spring and 3 ponds were found within 2000' of proposed well. No occupied dwellings or buildings 2,500 square feet or larger used to house or shelter dairy cattle or poultry husbandry are located within 625' of the center of the well pad.

	Bearing	Dist.
L1	S 09°25' E	882.1'
L2	N 44°42' E	1,108.7'
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- Legend
- Proposed gas well
 - Monument, as noted
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11,107' to Top Hole

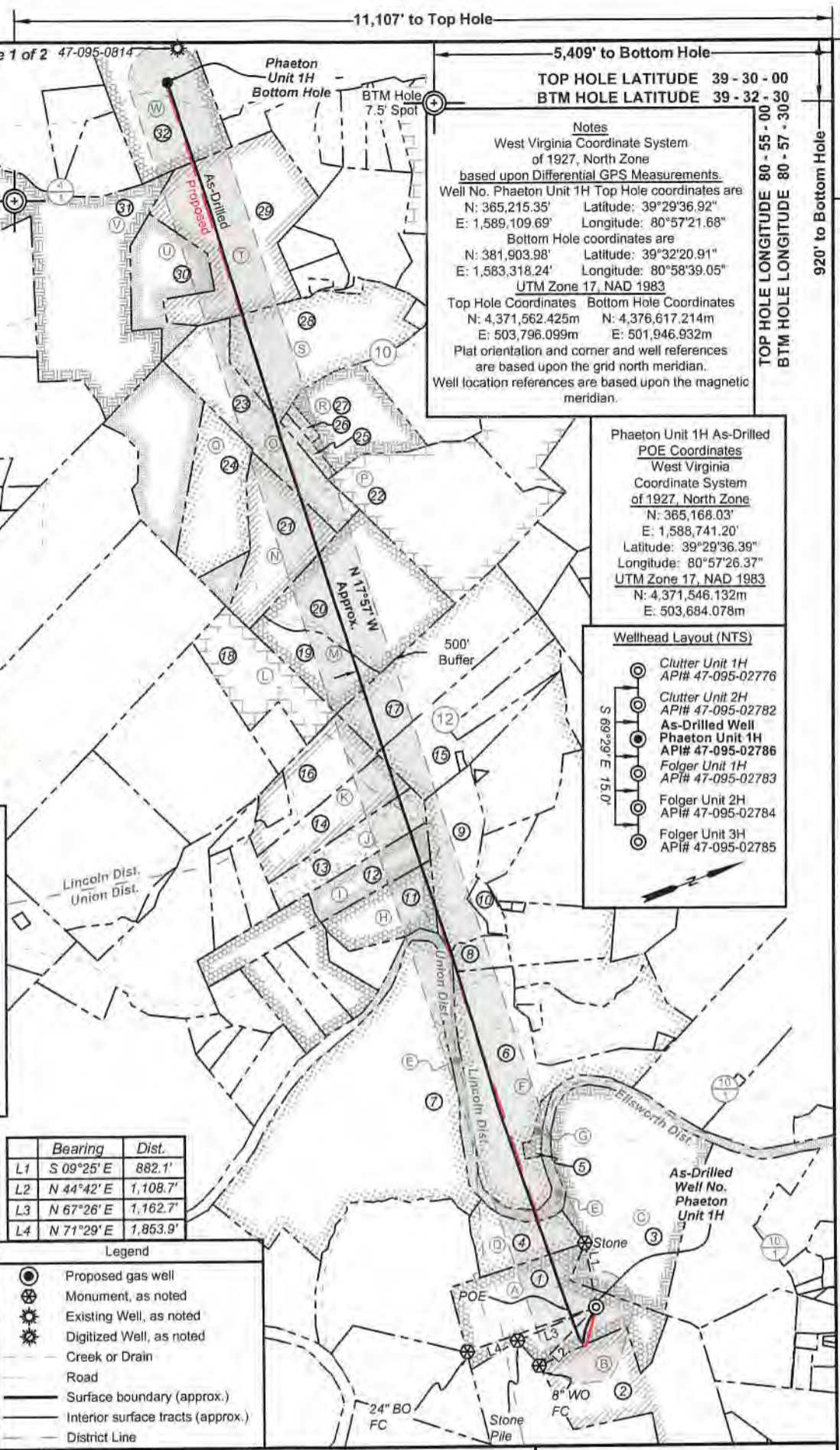
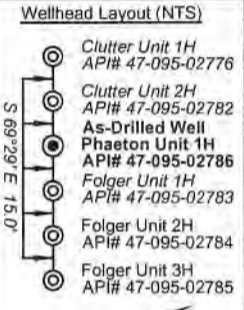
5,409' to Bottom Hole
 TOP HOLE LATITUDE 39 - 30 - 00
 BTM HOLE LATITUDE 39 - 32 - 30

Notes
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TOP HOLE LONGITUDE 80 - 55 - 00
 BTM HOLE LONGITUDE 80 - 57 - 30

920' to Bottom Hole
 2,335' to Top Hole

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

LOCATION: ELEVATION: As-Built 880' WATERSHED: Middle Island Creek QUADRANGLE: Btm Hole: Paden City
 DISTRICT: Union, Lincoln COUNTY: Tyler 61.83; 190; 34.3;
 SURFACE OWNER: Eldon J. & Ruth A. Helman; William P. Ingram; William J. Goodfellow, et ux (2); Erik D. Grimm; 406.69; 78.49;
 ROYALTY OWNER: Eldon J. & Ruth A. Helman; Norma R. Spencer; WVDNR; Richard Keith McCollum; Charles M. Jr. & Crystal R. Young; Myrtle Liva Tucker; ACREAGE: 61.83 18.30; 25.05; 56.06;
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled 100; 38.65; 48.55;
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 23,949' MD 62.5; 84.3; 86.607

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Kevin Ellis
 ADDRESS: 1615 Wynkoop Street ADDRESS: 535 White Oaks Blvd.
 Denver, CO 80202 Bridgeport, WV 26330

API 47-095-02786 Farm Name Eldon J. & Ruth A. Helman Well Number Phaseton Unit 1H

Exhibit 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	10/02/2022	23823.0	23781.0	60	Marcellus
2	10/03/2022	23742.7	23577.9	60	Marcellus
3	10/03/2022	23542.6	23377.8	60	Marcellus
4	10/04/2022	23342.5	23177.7	60	Marcellus
5	10/04/2022	23142.4	22977.6	60	Marcellus
6	10/05/2022	22942.3	22777.5	60	Marcellus
7	10/05/2022	22742.2	22577.4	60	Marcellus
8	10/06/2022	22542.1	22377.4	60	Marcellus
9	10/07/2022	22342.0	22177.3	60	Marcellus
10	10/07/2022	22141.9	21977.2	60	Marcellus
11	10/08/2022	21941.8	21777.1	60	Marcellus
12	10/09/2022	21741.7	21577.0	60	Marcellus
13	10/09/2022	21541.6	21376.9	60	Marcellus
14	10/10/2022	21341.5	21176.8	60	Marcellus
15	10/10/2022	21141.5	20976.7	60	Marcellus
16	10/11/2022	20941.4	20776.6	60	Marcellus
17	10/11/2022	20741.3	20576.5	60	Marcellus
18	10/12/2022	20541.2	20376.4	60	Marcellus
19	10/12/2022	20341.1	20176.3	60	Marcellus
20	10/13/2022	20141.0	19976.3	60	Marcellus
21	10/13/2022	19940.9	19776.2	60	Marcellus
22	10/14/2022	19740.8	19576.1	60	Marcellus
23	10/14/2022	19540.7	19376.0	60	Marcellus
24	10/15/2022	19340.6	19175.9	60	Marcellus
25	10/15/2022	19140.5	18975.8	60	Marcellus
26	10/15/2022	18940.4	18775.7	60	Marcellus
27	10/16/2022	18740.4	18575.6	60	Marcellus
28	10/16/2022	18540.3	18375.5	60	Marcellus
29	10/16/2022	18340.2	18175.4	60	Marcellus
30	10/17/2022	18140.1	17975.3	60	Marcellus
31	10/17/2022	17940.0	17775.2	60	Marcellus
32	10/18/2022	17739.9	17575.1	60	Marcellus
33	10/18/2022	17539.8	17375.1	60	Marcellus
34	10/18/2022	17339.7	17175.0	60	Marcellus
35	10/19/2022	17139.6	16974.9	60	Marcellus
36	10/19/2022	16939.5	16774.8	60	Marcellus
37	10/20/2022	16739.4	16574.7	60	Marcellus
38	10/20/2022	16539.3	16374.6	60	Marcellus
39	10/20/2022	16339.2	16174.5	60	Marcellus
40	10/21/2022	16139.2	15974.4	60	Marcellus
41	10/21/2022	15939.1	15774.3	60	Marcellus
42	10/21/2022	15739.0	15574.2	60	Marcellus
43	10/22/2022	15538.9	15374.1	60	Marcellus
44	10/22/2022	15338.8	15174.0	60	Marcellus
45	10/22/2022	15138.7	14974.0	60	Marcellus
46	10/23/2022	14938.6	14773.9	60	Marcellus
47	10/23/2022	14738.5	14573.8	60	Marcellus
48	10/23/2022	14538.4	14373.7	60	Marcellus
49	10/23/2022	14338.3	14173.6	60	Marcellus
50	10/24/2022	14138.2	13973.5	60	Marcellus
51	10/24/2022	13938.1	13773.4	60	Marcellus
52	10/24/2022	13738.1	13573.3	60	Marcellus
53	10/24/2022	13538.0	13373.2	60	Marcellus
54	10/24/2022	13337.9	13173.1	60	Marcellus
55	10/24/2022	13137.8	12973.0	60	Marcellus
56	10/25/2022	12937.7	12772.9	60	Marcellus
57	10/25/2022	12737.6	12572.9	60	Marcellus
58	10/25/2022	12537.5	12372.8	60	Marcellus
59	10/25/2022	12337.4	12172.7	60	Marcellus
60	10/25/2022	12137.3	11972.6	60	Marcellus
61	10/25/2022	11937.2	11772.5	60	Marcellus
62	10/26/2022	11737.1	11572.4	60	Marcellus
63	10/26/2022	11537.0	11372.3	60	Marcellus
64	10/26/2022	11337.0	11172.2	60	Marcellus
65	10/26/2022	11136.9	10972.1	60	Marcellus
66	10/26/2022	10936.8	10772.0	60	Marcellus
67	10/27/2022	10736.7	10571.9	60	Marcellus
68	10/27/2022	10536.6	10371.8	60	Marcellus
69	10/27/2022	10336.5	10171.7	60	Marcellus
70	10/27/2022	10136.4	9971.7	60	Marcellus
71	10/27/2022	9936.3	9771.6	60	Marcellus
72	10/27/2022	9736.2	9571.5	60	Marcellus
73	10/27/2022	9536.1	9371.4	60	Marcellus
74	10/28/2022	9336.0	9171.3	60	Marcellus
75	10/28/2022	9135.9	8971.2	60	Marcellus
76	10/28/2022	8935.8	8771.1	60	Marcellus
77	10/28/2022	8735.8	8571.0	60	Marcellus
78	10/28/2022	8535.7	8370.9	60	Marcellus
79	10/28/2022	8335.6	8170.8	60	Marcellus
80	10/29/2022	8135.5	7970.7	60	Marcellus
81	10/29/2022	7935.4	7770.6	60	Marcellus
82	10/29/2022	7735.3	7570.6	60	Marcellus
83	10/29/2022	7535.2	7370.5	60	Marcellus
84	10/29/2022	7335.1	7170.4	60	Marcellus
85	10/29/2022	7135.0	6970.3	60	Marcellus
86	10/30/2022	6934.9	6770.2	60	Marcellus
87	10/30/2022	6734.8	6570.1	60	Marcellus
88	10/30/2022	6534.7	6370.0	60	Marcellus

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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
Sandstone	145	220	145	220
Silty Sandstone	220	270	220	270
Silty Shale	270	420	270	420
Shale	370	470	370	470
Silty Sandstone	420	470	420	470
Silty Shale	470	670	470	670
Silty Sandstone	670	770	670	770
Shaly Siltstone	770	870	770	870
Shaly Sandstone w/ tr coal	870	1,070	870	1,070
Sandstone	1,070	1,220	1,070	1,220
Shaly Siltstone w/ tr coal	1,220	1,270	1,220	1,270
Shaly Sandstone and siltstone	1,270	1,320	1,270	1,320
Shaly Sandstone w/ tr coal	1,320	1,420	1,320	1,420
Silty Sandstone w/ coal	1,420	1,470	1,420	1,470
Sandy Shale	1,470	1,760	1,470	1,761
Big Lime	1,790	2,182	1,761	2,183
Fifty Foot Sandstone	2,182	2,585	2,153	2,586
Gordon	2,585	2,726	2,556	2,727
Fifth Sandstone	2,726	2,909	2,697	2,910
Bayard	2,909	3,726	2,880	3,741
Speechley	3,726	3,968	3,711	3,988
Balltown	3,968	4,416	3,958	4,448
Bradford	4,416	4,779	4,418	4,818
Benson	4,779	4,975	4,788	5,018
Alexander	4,975	5,977	4,988	6,113
Sycamore	5,853	5,947	5,945	6,083
Middlesex	5,947	6,032	6,083	6,245
Burkett	6,032	6,059	6,245	6,318
Marcellus	6,059	NA	6,318	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:	10/2/2022
Job End Date:	10/30/2022
State:	West Virginia
County:	Tyler
API Number:	47-095-02786-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	PHAETON UNIT 1H
Latitude:	39.49359000
Longitude:	-80.95602000
Datum:	WGS84
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,136
Total Base Water Volume (gal):	27,290,460
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
Produced Water	Halliburton	Base Fluid					
			Water	7732-18-5	100.00000	86.78267	Density = 8.50
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.19606	

DA

Sand-Premium White-30/70	Halliburton	Proppant					
				Listed Below			
Excelerate LX-15	Halliburton	Friction Reducer					
				Listed Below			
HAI-501	Halliburton	Acid Corrosion Inhibitor					
				Listed Below			
Chemstream StimSTREAM FR 9800	Chemstream, Inc.	Friction Reducer					
				Listed Below			
OPTIFLO-II DELAYED RELEASE BREAKER	Halliburton	Breaker					
				Listed Below			
WG-36 GELLING AGENT	Halliburton	Gelling Agent					
				Listed Below			
MC B-8614A	MultiChem	Biocide					
				Listed Below			
HYDROCHLORIC ACID, 22 BAUME	Halliburton	Solvent					
				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	12.96604	
			Hydrochloric acid	7647-01-0	30.00000	0.04987	
			Guar gum	9000-30-0	100.00000	0.03004	
			Complex Amine Compound	Proprietary	60.00000	0.02183	
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.01092	
			Alkanes, C16-20-iso-	Proprietary	25.00000	0.00244	
			Butene, homopolymer	9003-29-6	25.00000	0.00244	
			Glutaraldehyde	111-30-8	30.00000	0.00240	
			Surfactant	Proprietary	5.00000	0.00182	
			Sorbitan, mono-9- octadecenoate, (Z)	1338-43-8	5.00000	0.00182	
			Ammonium persulfate	7727-54-0	100.00000	0.00065	
			Alkyl (C12-16) dimethylbenzyl ammonium chloride	68424-85-1	5.00000	0.00040	
			Ethoxylated alcohols	Proprietary	5.00000	0.00038	
			Organic chloride compound	Proprietary	1.00000	0.00036	
			Alkoxyated polyhydric alcohol	Proprietary	1.00000	0.00036	
			Methanol	67-56-1	100.00000	0.00031	
			Ethoxylated alcohols (C12-16)	68213-23-0	3.00000	0.00029	
			Oxylated phenolic resin	Proprietary	30.00000	0.00019	
			Mixture of dimer and trimer fatty acids of indefinite composition derived from tall oil	61790-12-3	30.00000	0.00009	
			Modified thiourea polymer	Proprietary	30.00000	0.00009	

			Ethanol	64-17-5	1.00000	0.00008	
			Hexadecene	629-73-2	5.00000	0.00002	
			Propargyl alcohol	107-19-7	5.00000	0.00002	
			C.I. pigment Orange 5	3468-63-1	1.00000	0.00001	
			Nitrated acetate salt	Proprietary	0.01000	0.00000	
			Sodium glycolate	2836-32-0	0.01000	0.00000	
			Sodium hydroxide	1310-73-2	0.01000	0.00000	
			Formaldehyde	50-00-0	0.01000	0.00000	
			Organic salt #2	Proprietary	0.01000	0.00000	
			Organic salt #1	Proprietary	0.01000	0.00000	
			Acrylamide	79-06-1	0.01000	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)