



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street, S.E.
Charleston, WV 25304
(304) 926-0450
fax: (304) 926-0452

Harold D. Ward, Cabinet Secretary
www.dep.wv.gov

Monday, July 15, 2024
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION
1615 WYNKOOP STREET

DENVER, CO 80202

Re: Permit Modification Approval for Perna Unit 1H
47-017-06982-00-00

Extended Lateral Length

ANTERO RESOURCES CORPORATION

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before permitted well work is commenced.

If there are any questions, please feel free to contact me at (304) 926- 0450.

A blue ink signature of James A. Martin, Chief, is written over the name and title. The signature is stylized and cursive.

James A. Martin
Chief

Operator's Well Number: Perna Unit 1H
Farm Name: Shawn A Glaspell
U.S. WELL NUMBER: 47-017-06982-00-00
Horizontal 6A New Drill
Date Modification Issued: 7/15/2024

Promoting a healthy environment.

07/19/2024

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WELL WORK PERMIT APPLICATION

1) Well Operator: Antero Resources Corporation 494507062 017-Doddrick McLellan Center Point 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: Perna Unit 1H MOD Well Pad Name: Crimson Pad

3) Farm Name/Surface Owner: Shawn A. Glaspell Public Road Access: Riggins Run

4) Elevation, current ground: 1249' Elevation, proposed post-construction: 1222'

5) Well Type (a) Gas Oil Underground Storage

Other

(b) If Gas Shallow Deep

Horizontal

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus Shale: 7700' TVD, Anticipated Thickness- 55 feet, Associated Pressure- 2800#

8) Proposed Total Vertical Depth: 7700' TVD

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 22400' MD

11) Proposed Horizontal Leg Length: 12383.6'

12) Approximate Fresh Water Strata Depths: 303', 953'

13) Method to Determine Fresh Water Depths: 47-017-00483

14) Approximate Saltwater Depths: 2123'

15) Approximate Coal Seam Depths: None Identified

16) Approximate Depth to Possible Void (coal mine, karst, other): None Anticipated

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes No

(a) If Yes, provide Mine Info: Name: _____

Depth: _____


Seam: _____

Owner: _____

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7-10-24

18)

CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	20"	New	H-40	94#	100	100	CTS, 89 Cu. Ft.
Fresh Water	13-3/8"	New	J-55	54.5#	1003	1003	CTS, 1045 Cu. Ft.
Coal	9-5/8"	New	J-55	36#	2500	2500	CTS, 1018 Cu. Ft.
Intermediate							
Production	5-1/2"	New	P-110	23#	22400	22400	4717 Cu. Ft
Tubing	2-3/8"	New	N-80	4.7#			
Liners							

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20"	24"	0.438"	1530	50	Class A/L	~1.18
Fresh Water	13-3/8"	17-1/2"	0.38"	2730	1000	Class A/L	~1.18
Coal	9-5/8"	12-1/4"	0.352"	3520	1500	Class A/L	~1.18
Intermediate							
Production	5-1/2"	8-3/4" & 8-1/2"	0.415"	12,630	2500	Lead-H/POZ & Tail - H	H/POZ-1.44 & H-1.8
Tubing	2-3/8"	4.778"	0.19"	11,200			
Liners							

PACKERS

Kind:	N/A				
Sizes:	N/A				
Depths Set:	N/A				

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[Signature]
7-10-24

WW-6B
(10/14)

4701706982
API NO. 47-017 - _____
OPERATOR WELL NO. Pema Unit 1H MOD
Well Pad Name: Crimson Pad

19) Describe proposed well work, including the drilling and plugging back of any pilot hole:

Drill a new horizontal shallow well into the Marcellus Shale.

*Antero will be air drilling the freshwater string which makes it difficult to determine when freshwater is encountered. Therefore, we have built in a buffer for the casing setting depth which helps to ensure that all freshwater zones are covered.

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

Antero plans to pump Slickwater into the Marcellus Shale formation in order to ready the well for production. The fluid will be comprised of approximately 99 percent water and sand, with less than 1 percent special-purpose additives as shown in the attached "List of Anticipated Additives Used for Fracturing or Stimulating Well."

Anticipated Max Pressure - 9300 lbs
Anticipated Max Rate - 80 bpm

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 36.89 acres

22) Area to be disturbed for well pad only, less access road (acres): 14.46 acres

23) Describe centralizer placement for each casing string:

Conductor: no centralizers

Surface Casing: one centralizer 10' above the float shoe, one on the insert float collar and one every 4th joint spaced up the hole to surface.

Intermediate Casing: one centralizer above float joint, one centralizer 5' above float collar and one every 4th collar to surface.

Production Casing: one centralizer at shoe joint and one every 3 joints to top of cement in intermediate casing.

24) Describe all cement additives associated with each cement type:

Conductor: no additives, Class A/L cement.

Surface: Class A/L cement with 2-3% calcium chloride and 1/4 lb of flake

Intermediate: Class A/L cement with 1/4 lb of flake, 5 gallons of clay treat

Production: Lead cement- 50/50 Class H/Poz + 1.5% salt + 1% C-45 + 0.5% C-16a + 0.2% C-12 + 0.45% C-20 + 0.05% C-51

Production: Tail cement- Class H + 45 PPS Calcium Carbonate + 1.0% FL-160 + 0.2% ACGB-47 + 0.05% ACSA-51 + 0.2% ACR-20

25) Proposed borehole conditioning procedures:

Conductor: blowhole clean with air, run casing, 10 bbls fresh water.

Surface: blowhole clean with air, trip to conductor shoe, trip to bottom, blowhole clean with air, trip out, run casing, circulate pipe capacity + 40 bbls fresh water followed by 25 bbls bentonite mud, 10 bbls fresh water spacer.

Intermediate: blowhole clean with air, trip to surface casing shoe, trip to bottom, blowhole clean with air, trip out, run casing, circulate 40 bbls brine water followed by 10 bbls fresh water and 25 bbls bentonite mud, pump 10 bbls fresh water.

Production: circulate with 14 lb/gal NaCl mud, trip to middle of lateral, circulate, pump high viscosity sweep, trip to base of curve, pump high viscosity sweep, trip to top of curve, trip to bottom, circulate, pump high viscosity sweep, trip out, run casing, circulate 10 bbls fresh water, pump 48 bbls barite pill, pump 10 bbls fresh water followed by 48 bbls mud flush and 10 bbls water.

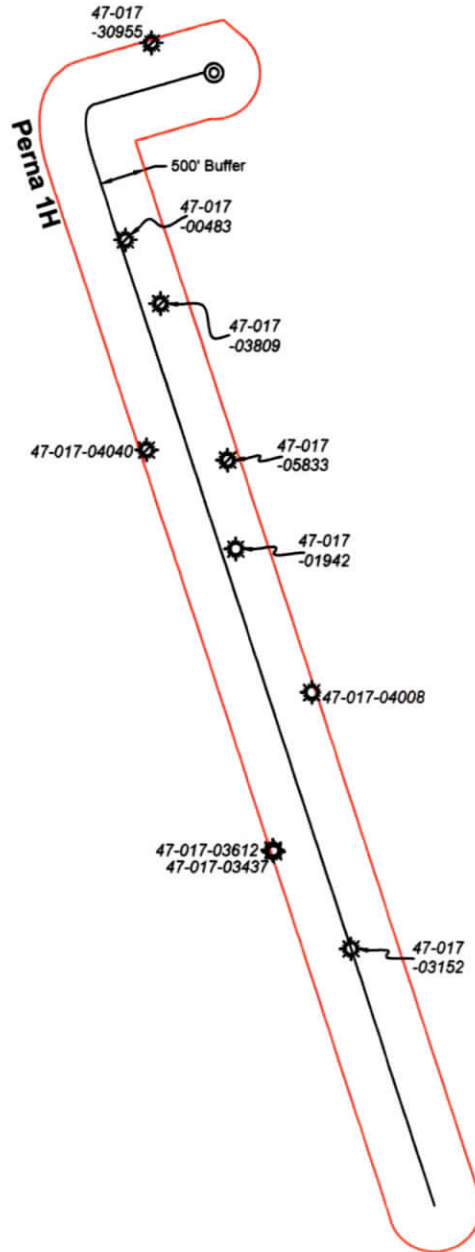
*Note: Attach additional sheets as needed.

LEGEND

- ⊙ Proposed gas well
- ⊛ Existing Well, as noted
- ⊛ Digitized Well, as noted



The orientation of this survey is Grid North, and its coordinate base is the West Virginia Coordinate System of 1927, North Zone



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Bridgeport Office
Phone: (304) 848-5035
Fax: (304) 848-5037

172 Thompson Drive
Bridgeport, WV 26330

PARTY CHIEF: C. Lynch	DRAWN BY: J. Smith
RESEARCH: J. Miller	PREPARED: October 9, 2023
SURVEYED: Dec. 2016	PROJECT NO: 260-30-M-23
FIELD CREW: C.L., K.M.	DRAWING NO: Perna 1H AOR

Sheet 1 of 1



Scale: 1 Inch = 2000 feet
07/19/2024

UWI (API#)	Well Name	Well Number	Operator	Historical Operator	TD	Perforated Interval (shallowest, deepest)	Perforated Formation(s)	Producible Formation(s) not perf'd
4701709550000	M V UNDERWOOD	2	QUAKER STATE OIL RFG	QUAKER STATE OIL RFG	2,840		Big Injun, Gordon Stray, Gordon	Weir, Benson, Alexander
47017094830000	ARTHUR DOAK ET AL	1	P G OIL & GAS INC	TRAVIS R L	2,794		Big Injun	Weir, Benson, Alexander
47017038090000	DOAK A G	3549	DIVERSIFIED PRODUCTION LLC	CNG DEVELOPMENT CO	5,428	5131 - 5136	Benson	Weir, Alexander
47017058330000	DOAK A G	3	PETROLEUM DEV CORP	PETROLEUM DEV CORP				
47017019420000	P ASH	3279	DIVERSIFIED PRODUCTION LLC	CONSOL GAS SUPPLY CRP	2,318		Maxton, Big Injun, Bradford, Riley, Benson, Alexander	Weir
47017040080000	CUMBERLEDGE LAMBERT ET A	1	DIVERSIFIED PRODUCTION LLC	PETROLEUM DEV CORP	5,441	5319 - 5322	Benson	Weir, Alexander
47017036120000	MOTT JOHN	3	CABOT OIL & GAS CORP	PETROLEUM DEV CORP	2,225	1990 - 2040	Maxton	Weir, Benson, Alexander
47017034370000	MOTT JOHN	5-574	OWS ACQUISITION CO LLC	SCOTT OIL CO	5,457	5308 - 5311	Benson	Weir, Alexander
47017031520000	MOTT JOHN	1	OWS ACQUISITION CO LLC	SCOTT OIL CO	5,213	5065 - 5070	Benson	Weir, Alexander
47017040400000	DOAK DUANNE ETAL	1	DIVERSIFIED PRODUCTION LLC	PETROLEUM DEV CORP	5,339	5187 - 5191	Benson	Weir, Alexander

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INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6A, Section 5(a)(5)
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
N: Minda Allen Lease			
Minda Allen	W. B. Allen	1/8	7/357
W. B. Allen	South Penn Oil Company	Assignment	7/359
South Penn Oil Company	Pennzoil Company	Name Change	WVSOS
Pennzoil Company	Pennzoil Products Company	Deed	203/621
Pennzoil Products Company	Pennzoil Exploration and Production Company	Deed	239/355
Pennzoil Exploration and Production Company	Pennz Energy Exploration and Production LLC	Deed	240/702
Pennz Energy Exploration and Production LLC	Devon Energy Production Company L.P	Merger	244/399
Devon Energy Production Company L.P	East Resources Inc	Assignment	247/337
East Resources Inc	East Resources Inc and HG Energy LLC	Assignment	253/31
East Resources Inc and HG Energy LLC	American Energy Marcellus LLC	Assignment	361/1
American Energy Marcellus LLC	Ascent Resources – Marcellus LLC	Name Change	36/455
Ascent Resources – Marcellus LLC	Tribune Resources, LLC	Merger	431/260
Tribune Resources, LLC	Antero Resources Corporation	Assignment	530/325
A: Thomas H. Downs Lease			
Thomas H. Downs	Antero Resources Corporation	1/8+	515/362
B: Robert O. Hopkins Lease			
Robert O. Hopkins	Antero Resources Corporation	1/8+	527/357
C: Arthur G. Doak, et al Lease			
Arthur G. Doak, et al	Robert L. Travis	1/8	66/73
Robert L. Travis	Ollie Travis	Appraisal	8/243
Ollie Travis	Donald Gene Travis	Will Book	10/117
Donald Gene Travis	Tonda Rae Learner	Affidavit	WVSOS
Tonda Rae Learner	Antero Resources Corporation	Assignment	528/320
D: Arthur G. Doak, et ux Lease			
Arthur G. Doak, et ux	Clarence W. Mutschelknaus	1/8	151/113
Clarence W. Mutschelknaus	CNG Development Company	Assignment	151/5713
CNG Development Company	CNG Producing Company	Merger	167/210
CNG Producing Company	Dominion Exploration and Production Inc.	Name Change	
Dominion Exploration and Production Inc.	CONSOL Gas Company	Name Change	286/144
CONSOL Gas Company	CNX Gas Company LLC	Merger	292/469
CNX Gas Company LLC	Antero Resources Appalachian Corporation	Agreement	260/631
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	46/523
E: Kathleen E. Davis, et al Lease			
Kathleen E. Davis, et al	Petroleum Development Corporation	1/8	169/353
Petroleum Development Corporation	PDC Mountaineer LLC	Assignment	240/118
PDC Mountaineer LLC	Antero Resources Appalachian Corporation	Assignment	278/607
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	46/523

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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
G: A. H. Low, et ux Lease			
A.H. Low, et ux	Hope Natural Gas Company	1/8	27/336
Hope Natural Gas Company	Consolidated Gas Supply Corporation	Merger	143/345
Consolidated Gas Supply Corporation	Consolidated Gas Transmission Corporation	Assignment	135/583
Consolidated Gas Transmission Corporation	CNG Transmission Corporation	Name Change	328/398
CNG Transmission Corporation	Dominion Transmission, Inc	Name Change	332/570
Dominion Transmission, Inc	CONSOL Energy Holdings, LLC XVI	Assignment	245/1
CONSOL Energy Holdings, LLC XVI	CONSOL Gas Company	Merger	293/252
CONSOL Gas Company	CNX Gas Company, LLC	Merger	293/252
CNX Gas Company, LLC	Noble Energy, Inc.	Assignment	260/39
Noble Energy, Inc.	HG Energy II Appalachia, LLC	Assignment	388/34
HG Energy II Appalachia, LLC	Antero Resources Corporation	Assignment	508/77
H: CNX Gas Company, LLC Lease			
CNX Gas Company LLC	Antero Resources Corporation	1/8+	523/705
I: Cliff Wilson & Opal Wilson Lease			
Cliff Wilson & Opal Wilson	Claude C. Cottrille	1/8	91/94
Claude C. Cottrille	Collie Cecil Shrader	Assignment	91/101
Collie Cecil Shrader	Violet Vircha Shrader	Will Book	9/168
Violet Vircha Shrader	Bette L. Freedman, Dr Janise Louis	Miscellaneous	14/167
Bette L. Freedman, Dr Janise Louis	Dye McIlhany, Cecil Lynn Shrader	Book	
Dye McIlhany, Cecil Lynn Shrader	Wilco Oil and Gas Company	Civil Order	16/180
Wilco Oil and Gas Company	Antero Resources Corporation	Assignment	311/457
J: Brenda V. Ney Lease			
Brenda V. Ney	Antero Resources Corporation	1/8+	518/503
K: Margaret J. & Martha A. McMillan Lease			
Margaret J. & Martha A. McMillan	Hope Natural Gas Company	1/8	25/354
Hope Natural Gas Company	Consolidated Gas Transmission Corporation	Assignment	143/345
Consolidated Gas Transmission Corporation	CNG Transmission Corporation	Name Change	332/563
CNG Transmission Corporation	UMC Petroleum Corporation	Assignment	167/416
UMC Petroleum Corporation	Ashland Exploration Inc	Assignment	227/252
Ashland Exploration Inc	Ashland Exploration Holdings Inc	Name Change	WVSOS
Ashland Exploration Holdings Inc	Blazer Energy Corp	Assignment	181/421
Blazer Energy Corp	Eastern States Oil & Gas Inc	Name Change	WVSOS
Eastern States Oil & Gas Inc	Equitable Production Eastern States Inc	Name Change	WVSOS
Equitable Production Eastern States Inc	Equitable Production Company	Merger	WVSOS
Equitable Production Company	EQT Production Company	Name Change	WVSOS
EQT Production Company	Antero Resources Corporation	Assignment	531/670
L: Mary A. Murphy Simons Lease			
Mary A. Murphy Simons	Antero Resources Corporation	1/8+	518/170

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WW-6A1

Operator's Well Number Perna Unit 1H MOD

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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page

*Partial Assignments to Antero Resources Corporation include 100% rights to extract, produce and market the oil and gas from the Marcellus and any other formations completed with this well.

***Cotenancy Utilization** - Antero is utilizing the Co-tenancy Modernization and Majority Protection Act to proceed with development of certain royalty owners' interests in this tract.

****Pooling/Unitization** – Antero has filed a horizontal well unitization application with the West Virginia Oil and Gas Conservation Commission that seeks to pool certain owners in this tract

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WW-6A1
(5/13)

Operator's Well No. Perna Unit 1H MOD

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Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
<u>M: Stanley Gain, et al Lease</u>				
	Stanley Gain, et al	Carey Oil Company	1/8	87/45
	Carey Oil Company	M. E. Wilkinson	Assignment	87/79
	M. E. Wilkinson	James F. Scott	Assignment	96/13
	James F. Scott	Emax Oil Company	Assignment	161/1
	Emax Oil Company	Antero Resources Corporation	Assignment	342/346

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**Acknowledgement of Possible Permitting/Approval
In Addition to the Office of Oil and Gas**

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator: Antero Resources Corporation
By: Max Green
Its: Vice President of Land

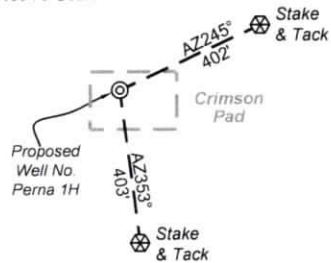
**Antero Resources
Well No. Perna 1H**

Antero Resources Corporation



Well Location References

Not To Scale

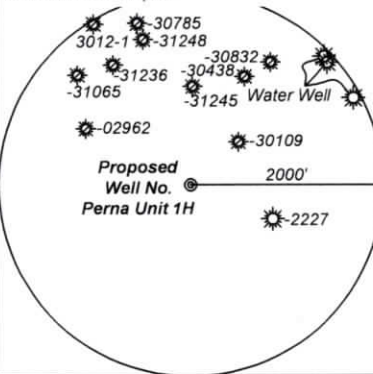


I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the rules issued and prescribed by the Department of Environmental Protection.

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



Note: 3 water wells 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.



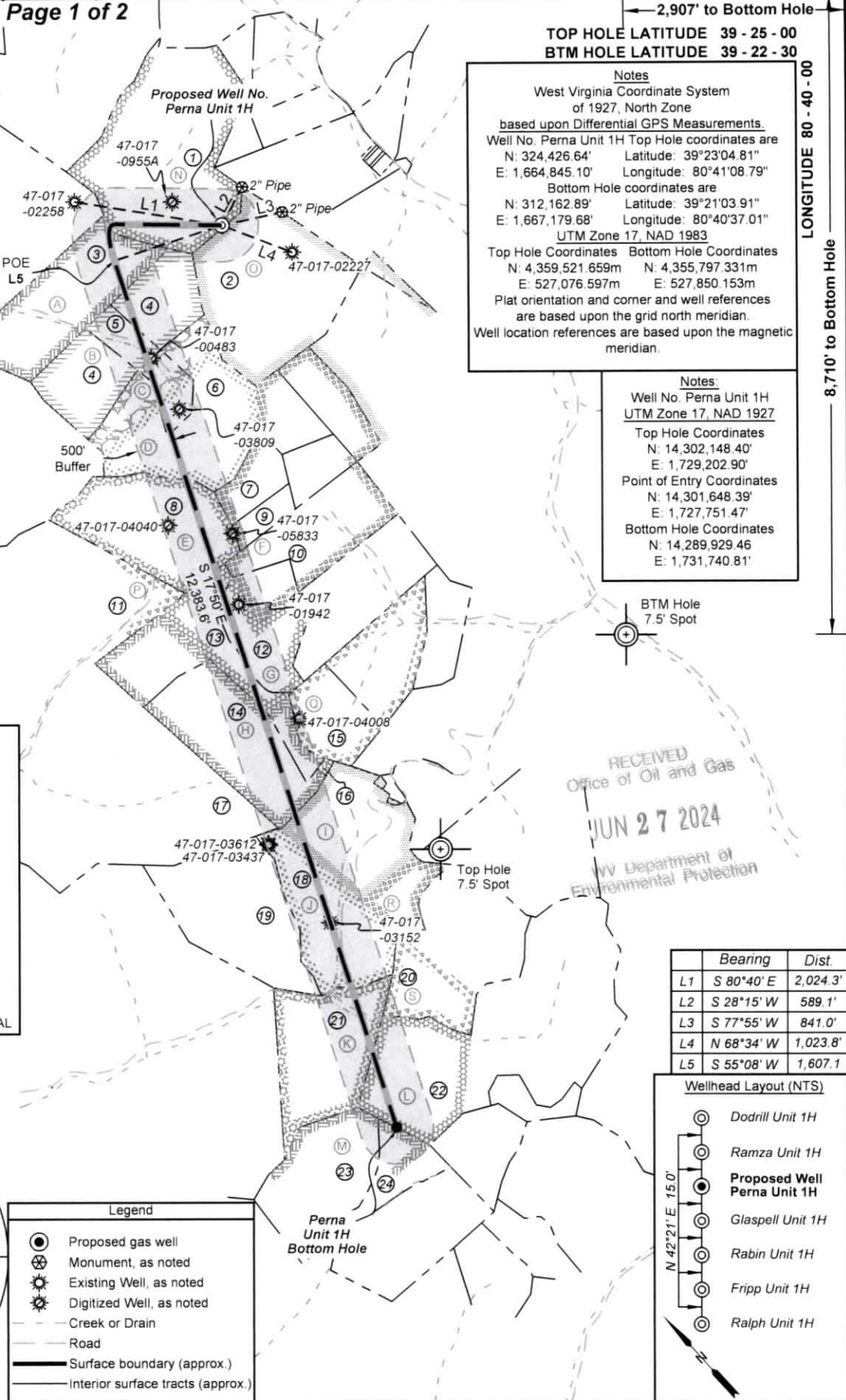
Legend

- 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.)

5,401' to Top Hole
2,907' to Bottom Hole
TOP HOLE LATITUDE 39 - 25 - 00
BTM HOLE LATITUDE 39 - 22 - 30

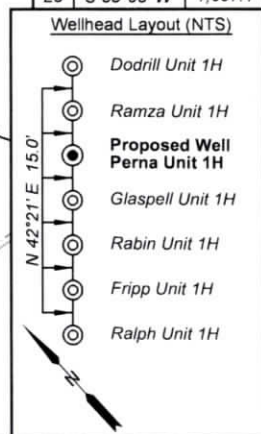
Notes
West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.
Well No. Perna Unit 1H Top Hole coordinates are
N: 324,426.64' Latitude: 39°23'04.81"
E: 1,664,845.10' Longitude: 80°41'08.79"
Bottom Hole coordinates are
N: 312,162.89' Latitude: 39°21'03.91"
E: 1,667,179.68' Longitude: 80°40'37.01"
UTM Zone 17, NAD 1983
Top Hole Coordinates Bottom Hole Coordinates
N: 4,359,521.659m N: 4,355,797.331m
E: 527,076.597m E: 527,850.153m
Plat orientation and corner and well references are based upon the grid north meridian.
Well location references are based upon the magnetic meridian.

Notes
Well No. Perna Unit 1H UTM Zone 17, NAD 1927
Top Hole Coordinates
N: 14,302,148.40'
E: 1,729,202.90'
Point of Entry Coordinates
N: 14,301,648.39'
E: 1,727,751.47'
Bottom Hole Coordinates
N: 14,289,929.46'
E: 1,731,740.81'



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	Bearing	Dist.
L1	S 80°40' E	2,024.3'
L2	S 28°15' W	589.1'
L3	S 77°55' W	841.0'
L4	N 68°34' W	1,023.8'
L5	S 55°08' W	1,607.1'



FILE NO: 260-30-M-23
DRAWING NO: Perna 1H Well Plat
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: April 25 2024
OPERATOR'S WELL NO. Perna 1H
API WELL NO
47 - 017 - 06982
STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
LOCATION: ELEVATION: Proposed: 1,222' Existing: 1,249' WATERSHED: McElroy Creek QUADRANGLE: Center Point
DISTRICT: McClellan Shawn A. COUNTY: Doddridge
SURFACE OWNER: Glaspell ACREAGE: 100
ROYALTY OWNER: Minda Allen LEASE NO: ACREAGE: 100
PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY)
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 7,700' TVD 22,400' 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

LONGITUDE 80 - 40 - 00

8,710' to Bottom Hole

11,655' to Top Hole

07/19/2024

Antero Resources Corporation



Leases	
A	Thomas H. Downs
B	Robert O. Hopkins
C	Arthur G. Doak, et al
D	Arthur G. Doak, et ux
E	Kathleen E. Davis, et al
F	Shawn Giaspell
G	A.H. Low, et ux
H	CNX Gas Company, LLC
I	Cliff Wilson & Opal Wilson
J	Brenda V. Ney
K	Margaret J. & Martha A. McMillan
L	Mary A. Murphy Simons
M	Stanley Gain, et al
N	Minda Allen
O	Morris Mountaineer Oil & Gas LLC
P	Herbert Doak, et al
Q	CNX Gas Company, LLC
R	Brian A. Moreno & Diane P. Blanchette
S	Romona L. Clauson

ID	TM-Par	Owner	Bk/Pg	Acres
1	17-3.3	Shawn A. Giaspell	283/601	100.00
2	17-3.2	Shawn A. Giaspell	283/601	135.00
3	17-13	Shawn A. Giaspell	468/444	65.00
4	17-16	Faith L. Fry	238/167	36.84
5	17-18.1	Faith L. & Michael Fry	342/340	19.50
6	17-18	Faith L. Fry	238/167	80.14
7	17-19	Shawn A. Giaspell	372/215	13.82
8	6-6	Duaine Doak, et al	WB31/416	50.00
9	17-25	Shawn A. Giaspell	372/215	7.89
10	17-21	Patrick M. MacMillan	379/615	30.69
11	3-2	Ryan Thomas Nissel	372/405	54.63
12	22-1	Donald V. Sandstrom	266/650	34.63
13	6-11.1	Danny R. & Joyce A. Groover	301/149	44.94
14	6-11	Danny R. & Joyce A. Groover	301/149	47.30
15	22-3.1	George D. Payton & Donald V. Sandstrom	236/354	24.11
16	6-11.2	Danny R. & Joyce A. Groover	301/149	0.64
17	6-10	Margot Beth Crowder	305/722	218.61
18	6-16	Brian A. Moreno & Diane P. Blanchette	389/382	104.80
19	6-23.1	Coastal Forest Resources Co.	260/135	52.00
20	6-17	Clyde M. Ford III	234/474	65.6
21	6-23	Werner F. Blei	272/340	52.50
22	7-1	Steven M. & Mary Ellen Perna	286/506	132.54
23	9-5.1	Josephine J. Donnahoe	WB31/4	48.75
24	9-6	Josephine J. Donnahoe	WB31/4	17.00

RECEIVED
Office of Oil and Gas
JUN 27 2024
WV Department of
Environmental Protection

FILE NO: 260-30-M-23
DRAWING NO: Perna 1H Well Plat
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: April 25 2024
OPERATOR'S WELL NO. Perna 1H
API WELL NO
47 - 017 - 06982
STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
LOCATION: ELEVATION: Proposed: 1,222' Existing: 1,249' WATERSHED: McElroy Creek QUADRANGLE: Center Point
DISTRICT: McClellan Shawn A. COUNTY: Doddridge
SURFACE OWNER: Giaspell ACREAGE: 100
ROYALTY OWNER: Minda Allen LEASE NO: ACREAGE: 100
PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY)
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 7,700' TVD 22,400' 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