



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, March 15, 2021
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION
1615 WYNKOOP STREET

DENVER, CO 80202

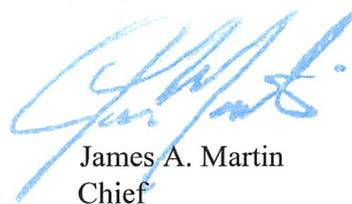
Re: Permit Modification Approval for VISHNU UNIT 2H
47-095-02717-00-00

Lateral Extension

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, written in a cursive style, is positioned above his name and title.

James A. Martin
Chief

Operator's Well Number: VISHNU UNIT 2H
Farm Name: KENNETH TOMBLIN ET AL
U.S. WELL NUMBER: 47-095-02717-00-00
Horizontal 6A New Drill
Date Modification Issued: 3/15/2021

Promoting a healthy environment.

03/19/2021



Antero Resources
1615 Wynkoop Street
Denver, CO 80202
Office 303.357.7310
Fax 303.357.7315

February 25, 2021

West Virginia Department of Environmental Protection
Office of Oil and Gas
601 57th Street
Charleston, WV 25304

Antero Resources Corporation (Antero) would like to submit the following permit modification for one approved wells on the existing Grand Pad. We are requesting to extend the lateral lengths which will change the bottom hold location for the Vishnu Unit 2H (API# 47-095-02717).

Attached you will find the following documents:

- REVISED Form WW-6B, which shows the updated BHL and Measured Depth
- REVISED Form WW-6A1, which shows the new leases we will be drilling into
- REVISED Mylar Plat, which shows the new Lateral Length and Estimated Measured Depth
- ~~As Built Design~~

If you have any questions please feel free to contact me at (303) 357-7182.

Thank you in advance for your consideration.

Sincerely,

A handwritten signature in blue ink that reads "Mallory Stanton".

Mallory Stanton
Permitting Supervisor
Antero Resources Corporation

* BH Coordinator Updated
3/1/21

Enclosures

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Office of Oil and Gas
FEB 26 2021
WV Department of
Environmental Protection

03/19/2021

WW-6B
(04/15)

API NO. 47-095 - 02717

OPERATOR WELL NO. Vishnu Unit 2H

Well Pad Name: Grand Pad

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

1) Well Operator: Antero Resources Corporation 494507062 095-Tyler Ellsworth Porter Falls 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: Vishnu Unit 2H Well Pad Name: Grand Pad

3) Farm Name/Surface Owner: Kenneth Tomblin et al Public Road Access: Gorrells Run Road

4) Elevation, current ground: 1268' Elevation, proposed post-construction: ~1243'

5) Well Type (a) Gas Oil Underground Storage

Other

(b) If Gas Shallow Deep

Horizontal

6) Existing Pad: Yes or No Yes *DMH*

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s): *3-4-21*
Marcellus Shale: 7300' TVD, Anticipated Thickness- 55 feet, Associated Pressure- 2800#

8) Proposed Total Vertical Depth: 7300' TVD

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 25400' MD

11) Proposed Horizontal Leg Length: 16092'

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12) Approximate Fresh Water Strata Depths: 25'

MAR 08 2021

13) Method to Determine Fresh Water Depths: 47-095-02267

14) Approximate Saltwater Depths: 2305'

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Environmental Protection

15) Approximate Coal Seam Depths: 431'

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: _____

WW-6B
(04/15)

API NO. 47- 095 - 02717
OPERATOR WELL NO. Vishnu Unit 2H
Well Pad Name: Grand Pad

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#	80	80	CTS, 218 Cu. Ft.
Fresh Water	13-3/8"	New	J-55	54.5#	300	300	CTS, 417 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#	25400	25400	6576 Cu. Ft
Tubing	2-3/8"	New	N-80	4.7#			
Liners							

PMH
3-4-21

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	~1.18
Fresh Water	13-3/8"	17-1/2"	0.38"	2730	1000	Class A	~1.18
Coal	9-5/8"	12-1/4"	0.352"	3520	1500	Class A	~1.18
Intermediate							
Production	5-1/2"	8-3/4" & 8-1/2"	0.415"	12,630	2500	Lead-HPOZ & Tail - H	H/POZ-1.44 & H-1.8
Tubing	2-3/8"	4.778"	0.19"	11,200			
Liners							

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PACKERS

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

WW-6B
(10/14)

API NO. 47- 095 - 02717
OPERATOR WELL NO. Vishnu Unit 2H
Well Pad Name: Grand Pad

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

Drill, perforate, fracture a new horizontal shallow well and complete Marcellus Shale.

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

Dmk
3-4-21

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): Existing 44.34 acres

22) Area to be disturbed for well pad only, less access road (acres): Existing 13.72 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.

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

MAR 08 2021

Conductor: no additives, Class A cement.

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

Intermediate: Class A 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

WV Department of
Environmental Protection

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.

LATITUDE 39°32'30"

5,360'

LATITUDE 39°35'00"

9,642' TO BOTTOM HOLE

Antero Resources Corporation Well No. Vishnu Unit 2H

NOTES: WELL 2H TOP HOLE INFORMATION: N: 369,514ft E: 1,630,199ft LAT: 39°30'25.65" LON: 80°48'38.39" BOTTOM HOLE INFORMATION: N: 385,237ft E: 1,626,143ft LAT: 39°33'00.45" LON: 80°49'33.09" 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: 4,373,081m E: 516,292m BOTTOM HOLE INFORMATION: N: 4,377,851m E: 514,977m

(NAD) 27 (UTM) ZONE 17 COORDS: WELL 2H TOP HOLE INFORMATION: N: 14,346,636ft E: 1,693,821ft POINT OF ENTRY INFORMATION: N: 14,347,065ft E: 1,694,715ft BOTTOM HOLE INFORMATION: N: 14,362,284ft E: 1,689,505ft

WV NORTH ZONE GRID NORTH

12,096' TO BOTTOM HOLE

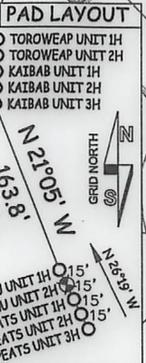
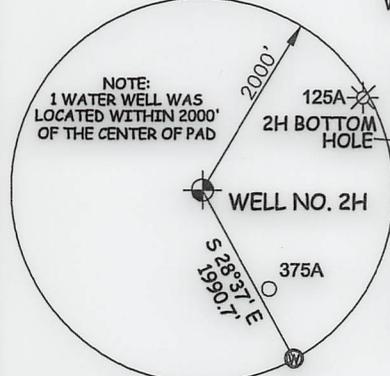
12,581'

LONGITUDE 80°47'30"

LONGITUDE 80°47'30"

NOTE: 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.

Table listing landowners in Ellsworth District - Tyler County, including names like Michael Martin, Darrell Sole, and James Barnhart.



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.

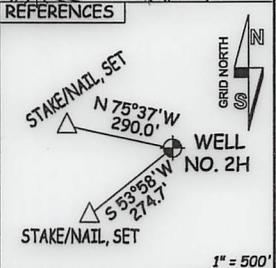
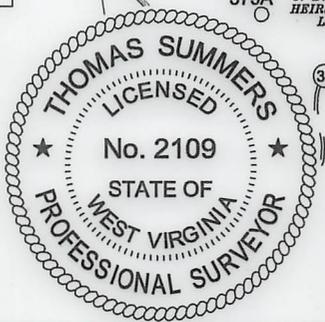


STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS. WILLOW LAND SURVEYING PLLC 220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

NOT TO SCALE. Grid North and True North indicators.

JOB # 20-009WA DRAWING # VISHNU2H SCALE 1" = 2000' 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 +/-, Adjoining Surface Tracts +/-, Found monument, as noted. THOMAS SUMMERS P.S. 2109 DATE 02/16/21 OPERATOR'S WELL# VISHNU UNIT #2H



WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___ 47 - 095 - 02717 MOD (IF "GAS") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X STATE COUNTY PERMIT LOCATION: ELEVATION 1,268'-ORIGINAL 1,243'-PROPOSED WATERSHED OUTLET MIDDLE ISLAND CREEK QUADRANGLE PORTER FALLS 7.5' DISTRICT ELLSWORTH COUNTY TYLER SURFACE OWNER KENNETH TOMBLIN ET AL ACREAGE 290.32 ACRES +/- 03/19/2021 OIL & GAS ROYALTY OWNER S. A. SMITH AND C. B. MORRIS HEIRS TRUST; MICHAEL LEE TOMBLIN; JAMES C. BARNHART LEASE ACREAGE 290.32 AC. +/-; 55 AC. +/-; 46.8 AC. +/- BRC APPALACHIAN MINERALS I LLC; ANTERO MINERALS; PAMELA DOREEN BURLINGAME; BRC APPALACHIAN MINERALS I LLC; ROGER EDDY JR.; GARY A. SOLE; GARY A. SOLE; 51.5 AC. +/-; 57.75 AC. +/-; 44 AC. +/-; 33.38 AC. +/-; 43.75 AC. +/-; 45.34 AC. +/-; 61.82 AC. +/-; MERCER MINERALS I LLC; J. MAURICE CARLISLE JR.; RALPH D. THACKER; BOUNTY MINERAL LLC; J. MAURICE CARLISLE JR.; RICHARD MOORE; AMP FUND III LP 158 AC. +/-; 28.5 AC. +/-; 33 AC. +/-; 33 AC. +/-; 34 AC. +/-; 111.52 AC. +/-; 24.21 AC. +/- PROPOSED WORK: DRILL ___ CONVERT ___ DRILL DEEPER X REDRILL ___ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION X OTHER PHYSICAL CHANGE IN WELL (SPECIFY) MOD-BHL ___ PLUG & ABANDON ___ CLEAN OUT & REPLUG ___ TARGET FORMATION MARCELLUS ESTIMATED DEPTH 7,300' TVD 25,400' MD WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM ADDRESS 1815 WYNKOOP ST. ADDRESS 5400 D BIG TYLER ROAD FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313

COUNTY NAME PERMIT

LATITUDE 39°32'30"

5,360'

LATITUDE 39°35'00"

9,642' TO BOTTOM HOLE

Antero Resources Corporation Well No. Vishnu Unit 2H

NOTES: WELL 2H TOP HOLE INFORMATION: N: 369,514ft E: 1,630,199ft... BOTTOM HOLE INFORMATION: N: 385,237ft E: 1,626,143ft... WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE.

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Table with 2 columns: Lease Number and Leaseholder Name. Includes entries like 07-05 Josh Amos, 07-19 Albert Rice Est., 07-20 Wash Beatty Et Al, etc.

WV NORTH ZONE GRID NORTH

12,096' TO BOTTOM HOLE

12,581'

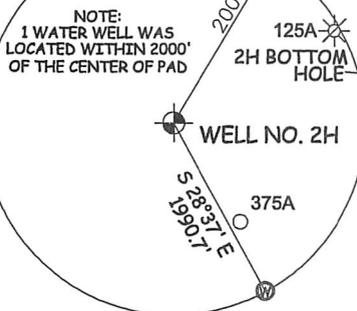
LONGITUDE 80°47'30"

LONGITUDE 80°47'30"

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FEB 26 2021

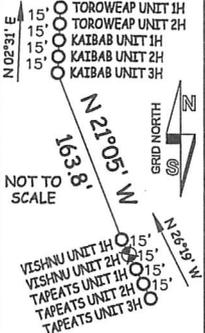
WV Department of Environmental Protection



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Table listing lease numbers and names for Ellsworth District - Tyler County, including 11-60 Michael Martin, 16-01 Darrell Sole, etc.

PAD LAYOUT



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.



STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

WILLOW LAND SURVEYING PLLC 220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

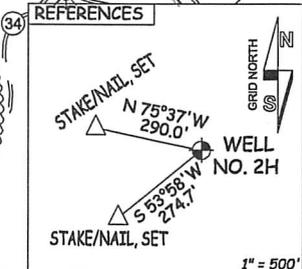
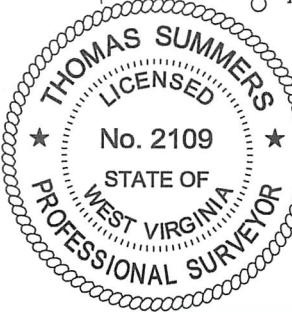
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JOB # 20-009WA DRAWING # VISHNU2H SCALE 1" = 2000' MINIMUM DEGREE OF ACCURACY SUBMETER PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

LEGEND Surface Owner Boundary Lines +/- Adjoining Surface Tracts +/- Found monument, as noted THOMAS SUMMERS P.S. 2109

STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS

DATE 02/16/21 OPERATOR'S WELL# VISHNU UNIT #2H



WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___ 47 - 095 - 02717 Mod (IF "GAS") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X STATE COUNTY PERMIT

LOCATION: ELEVATION 1,268' - ORIGINAL 1,243' - PROPOSED WATERSHED OUTLET MIDDLE ISLAND CREEK QUADRANGLE PORTER FALLS 7.5' DISTRICT ELLSWORTH COUNTY TYLER

SURFACE OWNER KENNETH TOMBLIN ET AL ACREAGE 290.32 ACRES +/- 03/19/2021

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PROPOSED WORK: DRILL ___ CONVERT ___ DRILL DEEPER X REMDRILL ___ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION X OTHER PHYSICAL CHANGE IN WELL (SPECIFY) MOD-BHL PLUG & ABANDON CLEAN OUT & REPLUG

TARGET FORMATION MARCELLUS ESTIMATED DEPTH 7,300' TVD 25,400' MD

WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM

ADDRESS 1615 WYNNKOOP ST. ADDRESS 5400 D BIG TYLER ROAD DENVER, CO 80202 CHARLESTON, WV 25313

WW-6A1

Operator's Well Number Vishnu Unit 2H

**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
<u>S.A. Smith & C. B. Morris Heirs Trust Lease</u>			
S.A. Smith & C. B. Morris Trust Heirs	Antero Resources Corporation	1/8+	0022/0268
<u>Michael Lee Tomblin Lease</u>			
Michael Lee Tomblin	Antero Resources Corporation	1/8	0420/0497
<u>James C. Barnhart Lease</u>			
James C. Barnhart	Petroedge Energy LLC	1/8+	0400/0184
Statoil USA Onshore Properties	EQT Production Company	Assignment	0539/0239
EQT Production Company	Antero Resources Corporation	Assignment	0663/0001
<u>BRC Appalachian Minerals I LLC Lease (TM 16 PCL 14)</u>			
BRC Appalachian Minerals I LLC	Statoil USA Onshore Properties	Assignment	0378/0764
Statoil USA Onshore Properties	EQT Production Company	Assignment	0539/0239
EQT Production Company	Antero Resources Corporation	Assignment	0663/0001
<u>Antero Minerals Lease</u>			
<u>John E. Valentour et ux Lease</u>			
John E. Valentour et ux	EQT Production Company	1/8	0624/0600
EQT Production Company	Antero Resources Corporation	Assignment	0663/0001
<u>Pamela Doreen Burlincame Lease</u>			
Pamela Doreen Burlincame	Petroedge Energy LLC	1/8	0408/0817
Petroedge Energy LLC	EQT Production Company	Assignment	0539/0239
EQT Production Company	Antero Resources Corporation	Assignment	0663/0001
<u>BRC Appalachian Minerals I LLC Lease (TM 11 PCL 55)</u>			
BRC Appalachian Minerals I LLC	Statoil USA Onshore Properties	Assignment	0378/0764
Statoil USA Onshore Properties	EQT Production Company	Assignment	0539/0239
EQT Production Company	Antero Resources Corporation	Assignment	0663/0001
<u>Roger Eddy Jr. Lease</u>			
Roger Eddy Jr.	Stone Energy Corporation	1/8+	0400/0257
Stone Energy Corporation	EQT Production Company	Assignment	0556/0132
EQT Production Company	Antero Resources Corporation	Assignment	0663/0001

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Office of Oil and Gas
MAR 08 2021
WV Department of
Environmental Protection

*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.

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)

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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
<u>Gary A. Sole Lease (TM 11 PCL 26)</u> Gary A. Sole	Antero Resources Corporation	1/8+	0066/0150
<u>Gary A. Sole Lease (TM 11 PCL 27)</u> Gary A. Sole	Antero Resources Corporation	1/8+	0066/0150
<u>Mercer Minerals LLC Lease</u> Mercer Minerals LLC	Antero Resources Corporation	1/8+	0628/0396
<u>J. Maurice Carlisle Jr. Lease (TM 11 PCL 9)</u> J. Maurice Carlisle Jr.	Antero Resources Corporation	1/8+	0505/0192
<u>Ralph D. Thacker Lease</u> Ralph D. Thacker	Antero Resources Corporation	1/8+	0032/0432
<u>Bounty Minerals LLC Lease</u> Bounty Minerals LLC	Antero Resources Corporation	1/8+	0508/0274
<u>J. Maurice Carlisle Jr. Lease (TM 11 PCL 11)</u> J. Maurice Carlisle Jr.	Antero Resources Corporation	1/8+	0505/0192
<u>Richard Moore Lease</u> Richard Moore	Antero Resources Corporation	1/8+	0617/0114

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Office of Oil and Gas

MAR 08 2021

WV Department of
Environmental Protection

03/19/2021

WW-6A1
(5/13)

Operator's Well No. Vishnu Unit 2H

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
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- (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:

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
<u>AMP Fund III LP Lease</u>	AMP Fund III LP	Antero Resources Corporation	1/8+	0087/0284

*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.

**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

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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.

*Co-tenancy utilization – At least 7 mineral owners in tract. At least 75% of the royalty owners have executed a lease on the tract. The interests of the remaining co-tenants were acquired pursuant to the Co-tenancy Modernization and Majority Protection Act

Well Operator: Antero Resources Corporation
 By: Tim Rady
 Its: VP of Land