



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

Thursday, October 13, 2022
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION
1615 WYNKOOP STREET
DENVER, CO 80202

Re: Permit Modification Approval for PHEBE 1H
47-017-06937-00-00

Lateral Extension, 0' to 15122.2' Horizontal Leg Length, 0' to 24700' Measured Depth.

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 handwritten signature in blue ink, appearing to read 'James A. Martin', is positioned above the printed name and title.

James A. Martin
Chief

Operator's Well Number: PHEBE 1H
Farm Name: JEFFREY D & CRAIG A HILL ET AL
U.S. WELL NUMBER: 47-017-06937-00-00
Horizontal 6A New Drill
Date Modification Issued: 10/13/2022

Promoting a healthy environment.

10/14/2022

WW-6B
(04/15)

CK#
4012947
\$5000⁰⁰
sign-off

API NO. 47-017 - 06937
OPERATOR WELL NO. Phebe Unit 1H MOD
Well Pad Name: Lemley 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 017-Doddridge Grant Smithburg 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: Phebe Unit 1H MOD Well Pad Name: Lemley Pad

3) Farm Name/Surface Owner: Phillip N. Hill, et al Public Road Access: Hollow Run Rd

4) Elevation, current ground: 1304' AS BUILT Elevation, proposed post-construction: _____

5) Well Type (a) Gas Oil _____ Underground Storage _____

Other _____

(b) If Gas Shallow Deep _____

Horizontal _____

SDW
01/7/2022

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus Shale: 7400' TVD, Anticipated Thickness- 55 feet, Associated Pressure- 2850#

8) Proposed Total Vertical Depth: 7400' TVD

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 24700' MD

11) Proposed Horizontal Leg Length: 15122.2'

12) Approximate Fresh Water Strata Depths: 225', 279', 790'

13) Method to Determine Fresh Water Depths: 47-017-04998, 47-017-04719. Depths have been adjusted according to surface elevations.

14) Approximate Saltwater Depths: 1460', 1673', 1700', 1710'

15) Approximate Coal Seam Depths: 980'

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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Office of Oil and Gas

OCT 11 2022

WV Department of
Environmental Protection

WW-6B
(04/15)

API NO. 47- 017 - 06 97
OPERATOR WELL NO. Phebe Unit 1H MOD
Well Pad Name: Lemley 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	X60	78.67#	100	100	CTS, 96 Cu. Ft.
Fresh Water	13-3/8"	New	J/K-55	54.5#	840'	840'	CTS, 433 Cu. Ft.
Coal	9-5/8"	New	J/K-55	36#	3200'	3200'	CTS, 1303 Cu. Ft.
Intermediate							
Production	5-1/2"	New	PY-110HP	23#	24700'	24700'	5307 Cu. Ft.
Tubing	2-3/8"	New	N-80	4.7#		7100'	
Liners							

SAW
10/7/2022

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-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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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.

*Antero will be air drilling the fresh water string which makes it difficult to determine when fresh water is encountered. Therefore, we have built in a buffer for the casing setting depth which helps to ensure that all fresh water 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): 27.26 acres

22) Area to be disturbed for well pad only, less access road (acres): 4.31 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 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

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.

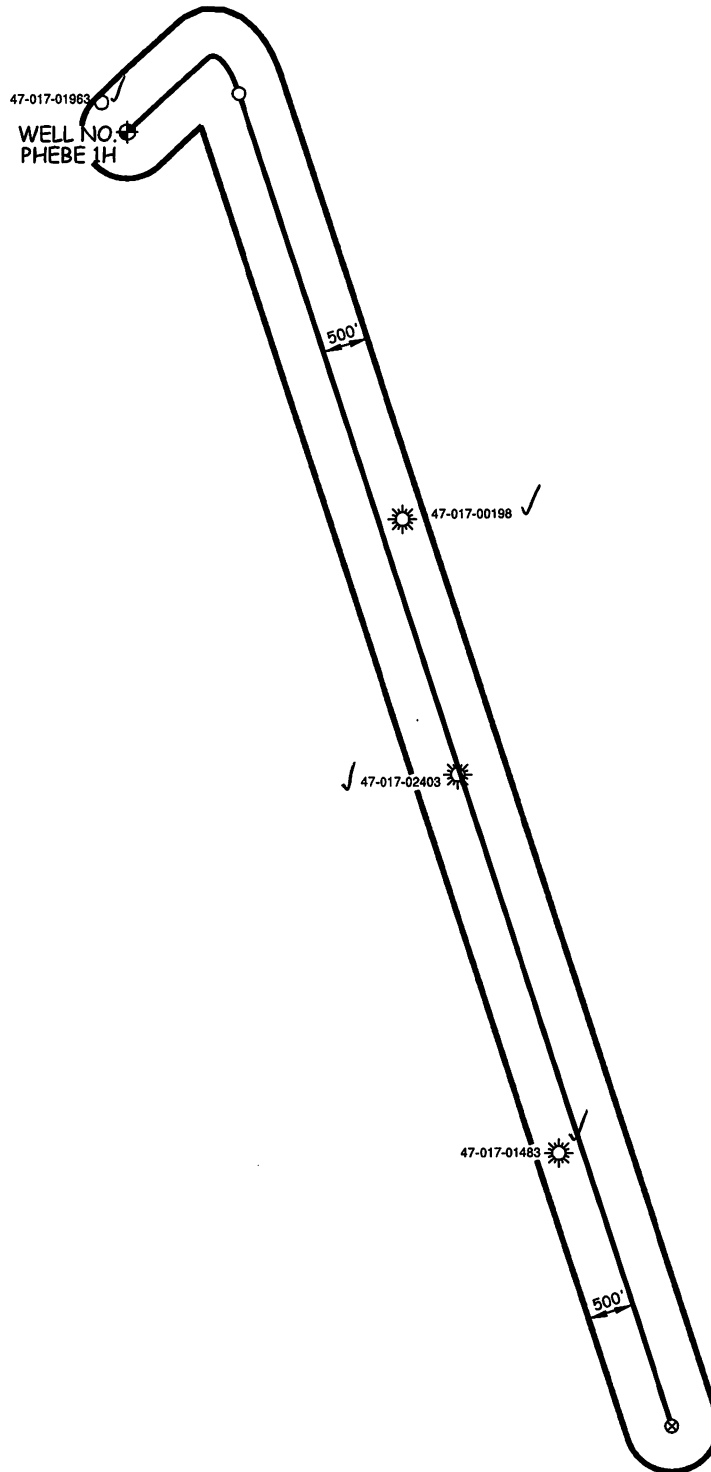
*Note: Attach additional sheets as needed.

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Office of Oil and Gas

OCT 11 2022

10/14/2022

LEMLEY PAD ANTERO RESOURCES CORPORATION



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Office of Oil and Gas
OCT 03 2022
WV Department of
Environmental Protection

WILLOW LAND SURVEYING, PLLC P.O. BOX 17, PENNSBORO, WV 26415 (304) 659-1717	JOB #: 22-005WA	SCALE : 1-INCH = 2000-FEET 0' 2000' 4000' 6000'
DATE: 09/19/22	DRAWN BY: D.L.P.	FILE: PHEBE1HAOR.DWG

10/14/2022

UWI (APINum)	Well Name	Well Number	Operator	Historical Operator	TD	Perforated Interval (shallowest, deepest)	Perforated Formation(s)	Producible Formation(s) not perf'd
47017019630000	W BOYCE	5124	DOMINION TRANSMISSION	HOPE NATURAL GAS	2,294		Big Injun, Squaw	Alexander, Berea
47017001980000	P M BALL	4523	HOPE NATURAL GAS	HOPE NATURAL GAS	2,067		Big Injun	Alexander, Berea
47017024030000	Z T BALL	766	ROSS & WHARTON GAS	HOPE NATURAL GAS	2,316		Salt Sands, Maxton, Big Injun	Alexander, Berea
47017014830000	R B ROSS	1	R & R OIL & GAS LLC	SCOTT JAMES F	2,236		Big Injun	Alexander, Berea

LATITUDE 39°20'00"

3882'

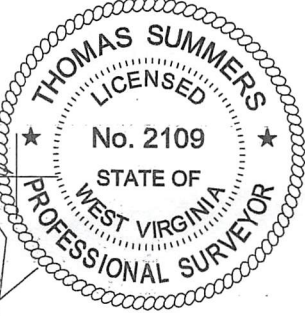
LATITUDE 39°17'30"

Antero Resources Corporation Well No. Phebe Unit 1H

NOTES:

WELL 1H TOP HOLE INFORMATION: N: 303,156ft E: 1,666,088ft LAT: 39°19'34.75" LON: 80°40'49.40" BOTTOM HOLE INFORMATION: N: 289,176ft E: 1,671,944ft LAT: 39°17'17.33" LON: 80°39'32.58" 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 1H TOP HOLE INFORMATION: N: 4,353,048m E: 527,563m BOTTOM HOLE INFORMATION: N: 4,348,818m E: 529,419m



MINERAL OWNERSHIP

Table listing mineral owners including B CREED JONES ET AL, C DELORIS MADINE DAVIS, D MARIETTE LEMLEY ET AL, E SIDNEY AUSTIN SMITH TRUST LLC, F DELORIS MADINE DAVIS, G CHAD W. JOHNSON, H JOYCE A. BATES, I SIDNEY THOMPSON, J PAULA KAY REYNOLDS, K U.C. AMETT ET UX, L Z.T. BALL ET UX, M DELBERT E. LEATHERMAN, N WILLIAM C. HUNTER, O ANTERO MINERALS LLC, P GARY C. WILCOX, Q WILLIAM C. HUNTER, R GARY C. WILCOX, S LARRY C. CALICOAT, T EMAX GAS CO. ET AL, U EMAX GAS CO. ET AL, V PERRY TATE, W F. C. ORR ET AL, X LINDA R. NEPPS, Y RANDALL E. SHEARER.

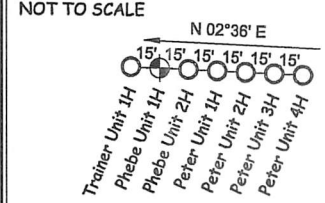
GRANT DISTRICT - DODDRIDGE COUNTY

Table listing land grant owners including 9-34 HFP LLC, 10-25 DENNIS POWELL, 13-05 HFP LLC, 13-11 JEFFERY HILL, 13-11.1 JEFFERY HILL, 13-11.2 JEFFERY HILL, 13-20 DANNY MARSHALL, 13-20.2 SKYLINE COMMUNICATIONS, 13-20.4 DANNY MARSHALL, 13-25 ALDEN MOORE, 13-26 JOHN ARCHER, 13-35 JEFFERY HILL, 14-03 ANDREW LETT, 14-12 ANDREW LETT, 14-12.1 ANDREW LETT, 14-13 ETHEL CHILDERS, 14-27 JOHN ARCHER, 14-28 JOHN ARCHER, 14-29 SARAH BUTLER, 14-31.1 MARVIN SWENTZEL, 14-32 JOHN ARCHER, 14-33 NEIL SWENTZEL, 14-33.1 NEIL SWENTZEL, 14-33.2 ALVIN SWENTZEL, 14-39 PAUL BAKER, 14-43 DANNY MARSHALL, 14-44 CHARLES POWELL, 16-03 CAROL BOYD, 17-02 MARVIN SWENTZEL, 17-03 ALVIN SWENTZEL, 17-09 DWAYNE BUNTING, 17-9.1 SHERLEY BUNTING, 17-9.2 SHERLEY BUNTING, 17-11 DOUGLAS LUTZ, 17-18 TOBEY NUTT, 17-19 GARY HYATT, 17-31 KIMBERLY TUSTIN, 17-31.1 SAMMY GAIN, 17-31.2 TOBY GAIN, 17-32.1 DAVID KIMBALL, 17-33 SHARON POWELL, 17-51 RICHARD NICHOLSON, 17-52 PATRICIA WOLFORD, 17-53 MARK MATHENY, 17-54 CHERLOTTE SAMPLES, 17-55 LARRY FERGUSON, 17-56 RICHARD BARNETT, 17-57 DAVID KIMBALL, 17-58 JOSHUA HARRIS, 17-59 TOD INGRAM, 17-60 ALFRED GETSLER, 17-61 MARK MATHENY, 17-62 DAVY WETZEL, 17-63 RICHARD DAVIS, 17-64 COLE DOTSON, 17-66 JULIE MATHENY.

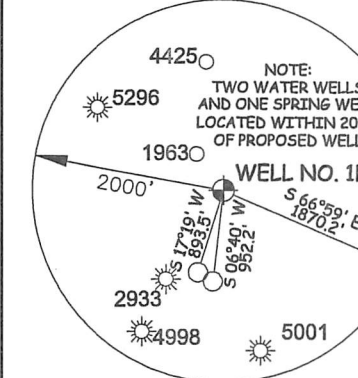
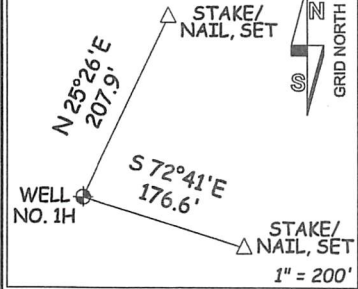
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GRID NORTH

PAD LAYOUT



REFERENCES



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.

JOB # 17-030WA DRAWING # PHEBE1HR1 SCALE 1" = 2000' MINIMUM DEGREE OF ACCURACY SUBMETER PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

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

LEGEND Surface Owner Boundary Lines +/- Interior Surface Tracts +/- Existing Fence Found monument, as noted

THOMAS SUMMERS P.S. 2109

DATE 09/09/22 OPERATOR'S WELL# PHEBE UNIT #1H API WELL # 47 - 017 - 06937 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL (IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW X LOCATION: ELEVATION 1,304' AS BUILT WATERSHED MCELROY CREEK QUADRANGLE SMITHBURG 7.5' DISTRICT GRANT COUNTY DODDRIDGE SURFACE OWNER BRIAN D. LEMLEY & CHRISTY M. LEMASTER ET AL ACREAGE 59.08 ACRES +/- OIL & GAS ROYALTY OWNER MARIETTE LEMLEY ET AL; SIDNEY AUSTIN SMITH TRUST LLC; CHAD W. JOHNSON; JOYCE A. BATES; SIDNEY THOMPSON; PAULA KAY REYNOLDS; Z.T. BALL ET UX; WILLIAM C. HUNTER; ANTERO MINERALS LLC; WILLIAM C. HUNTER; GARY C. WILCOX; EMAX GAS CO. ET AL; EMAX GAS CO. ET AL; PERRY TATE; F. G. ORR ET AL; LINDA R. NEPPS; RANDALL E. SHEARER LEASE ACREAGE 66.87 AC±; 50 AC±; 31.96 AC±; 47.88 AC±; 98 AC±; 79.08 AC±; 138 AC±; 11.85 AC±; 6.29 AC±; 21.75 AC±; 6.9 AC±; 49.5 AC±; 81 AC±; 70 AC±; 172 AC±; 189.88 AC±; 212.5 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 7,400' TVD 24,700' MD WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER-CT CORPORATION SYSTEM ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD DENVER, CO 80202 CHARLESTON, WV 25313

10/14/2022

LATITUDE 39°20'00"

3882'

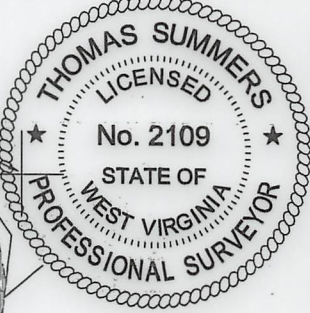
LATITUDE 39°17'30"

Antero Resources Corporation Well No. Phebe Unit 1H

NOTES: WELL 1H TOP HOLE INFORMATION: N: 303,156ft E: 1,666,088ft LAT: 39°19'34.75" LON: 80°40'49.40" BOTTOM HOLE INFORMATION: N: 289,176ft E: 1,671,944ft LAT: 39°17'17.33" LON: 80°39'32.58" 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.

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WV NORTH ZONE GRID NORTH

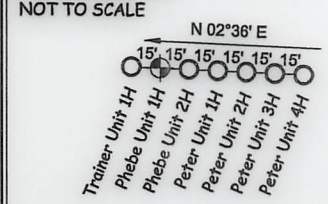


LONGITUDE 80°37'30"

1,282' TO BOTTOM HOLE

LONGITUDE 80°40'00"

PAD LAYOUT



REFERENCES

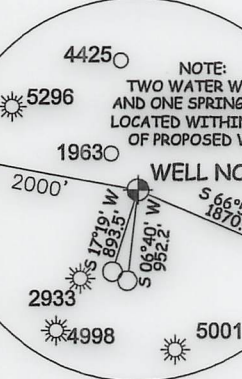
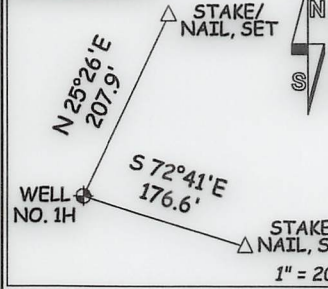


Table listing landowners in Grant District - Doddridge County, including names like HFP LLC, Dennis Powell, Jeffery Hill, and others.

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 Mineral Ownership, including names like B. Creed Jones et al., C. Deloris Madine Davis, and others.

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

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

LEGEND: Surface Owner Boundary Lines +/-, Interior Surface Tracts +/-, Existing Fence, Found monument, as noted. Signature of Thomas Summers.

THOMAS SUMMERS P.S. 2109 DATE 09/09/22 OPERATOR'S WELL# PHEBE UNIT 1H API WELL # 47 - 017 - 06937 STATE COUNTY PERMIT

Form containing well details: LOCATION: ELEVATION 1,304' AS BUILT QUADRANGLE SMITHBURG 7.5' DISTRICT GRANT COUNTY DODDRIDGE SURFACE OWNER BRIAN D. LEMLEY & CHRISTY M. LEMASTER ET AL ACREAGE 59.08 ACRES +/- OIL & GAS ROYALTY OWNER MARIETTE LEMLEY ET AL; SIDNEY AUSTIN SMITH TRUST LLC; CHAD W. JOHNSON; LEASE ACREAGE 66.87 AC±; 50 AC±; 31.96 AC±; JOYCE A. BATES; SIDNEY THOMPSON; PAULA KAY REYNOLDS; Z.T. BALL ET UX; WILLIAM C. HUNTER; ANTERO MINERALS LLC; WILLIAM C. HUNTER; 47.88 AC±; 98 AC±; 79.06 AC±; 138 AC±; 11.85 AC±; 6.29 AC±; 21.75AC±; GARY G. WILCOX; EMAX GAS CO. ET AL; EMAX GAS CO. ET AL; PERRY TATE; F. G. ORR ET AL; LINDA R. NEPPS; RANDALL E. SHEARER 6.9 AC±; 49.5 AC±; 81 AC±; 70 AC±; 172 AC±; 189.88 AC±; 212.5 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 WELL OPERATOR ANTERO RESOURCES CORP. ESTIMATED DEPTH 7,400' TVD 24,700' MD ADDRESS 1615 WYNKOOP STREET DENVER, CO 80202 ADDRESS 5400 D BIG TYLER ROAD CHARLESTON, WV 25313

10/14/2022

COUNTY NAME PERMIT

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>D: Mariette Lemley, et al Lease</u>			
Mariette Lemley, et al	S&K Land Company	1/8	0114/0075
S&K Land Company	Mert Development, Inc.	Assignment	0115/0110
Mert Development, Inc.	Continental Reserves 1980-E	Assignment	0123/0022
Continental Reserves 1980-E	Appalachian Energy Development Corporation	Assignment	0150/0251
Appalachian Energy Development Corporation	Appalachian Energy Reserves, Inc	Affidavit of Identity	0019/0210
Appalachian Energy Reserves, Inc.	Jay Shearer	Assignment	0179/0146
Jay Shearer	Clowser Production Company	Assignment	0285/0420
Clowser Production Company	Antero Resources Appalachian Corporation	Assignment	0285/0417
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	0046/0523
<u>E: Sidney Austin Smith Trust, LLC Lease</u>			
Sidney Austin Smith Trust, LLC	Antero Resources Corporation	1/8+	0503/0358
<u>G: Chad W. Johnson Lease</u>			
Chad W. Johnson	Antero Resources Corporation	1/8+	0459/0054
<u>H: Joyce A. Bates Lease</u>			
Joyce A. Bates	Antero Resources Corporation	1/8+	0500/0463
<u>I: Sidney Thompson Lease</u>			
Sidney Thompson	Antero Resources Corporation	1/8+	0445/0542
<u>J: Paula Kay Reynolds Lease</u>			
Paula Kay Reynolds	Antero Resources Corporation	1/8+	0501/0198
<u>L: Z.T. Ball, et al Lease</u>			
Z.T. Ball, et al	Hope Natural Gas Company	1/8	0023/0021
Hope Natural Gas Company	Consolidated Gas Supply Corporation	Merger	0143/0345
Consolidated Gas Supply Corporation	Consolidated Gas Transmission Corporation	Assignment	0135/0583
Consolidated Gas Transmission Corporation	CNG Development Company	Merger	0139/0041
CNG Development Company	CNG Producing Company	Merger	0168/0588
CNG Producing Company	Dominion Exploration & Production Company	Merger	0058/0366
Dominion Exploration & Production Company	Antero Resources Appalachian Corporation	Assignment	0230/0113
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	0046/0523
<u>O: Antero Minerals, LLC Lease</u>			
Antero Minerals, LLC	Antero Resources Corporation	1/8+	0494/0296
<u>N: William C. Hunter Lease</u>			
William C. Hunter	Antero Resources Corporation	1/8+	0461/0521
<u>R: Gary G. Wilcox Lease</u>			
Gary G. Wilcox	Antero Resources Corporation	1/8+	0442/0457
<u>Q: William C. Hunter Lease</u>			
William C. Hunter	Antero Resources Corporation	1/8+	0461/0521
<u>T: Emax Gas Co., et al Lease</u>			
Emax Gas Company, et al	Emax Oil Company	1/8	0374/0192
Emax Oil Company	Antero Resources Corporation	Assignment	0394/0182

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>U: Emax Gas Co., et al Lease</u>			
Emax Gas Company, et al	Emax Oil Company	1/8	0374/0188
Emax Oil Company	Antero Resources Corporation	Assignment	0394/0182
<u>V: Perry Tate Lease</u>			
Perry Tate	Jesse F. Randolph & G.W.F. Randolph	1/8	0017/0207
Jesse F. Randolph & G.W.F. Randolph	South Penn Oil Company	Assignment	0018/0087
South Penn Oil Company	Hope Natural Gas Company	Assignment	0026/0133
Hope Natural Gas Company	Consolidated Gas Supply Corporation	Merger	0143/0345
Consolidated Gas Supply Corporation	Consolidated Gas Transmission Corporation	Assignment	0135/0583
Consolidated Gas Transmission Corporation	CNG Transmission Corporation	Name Change	0332/0563
CNG Transmission Corporation	Dominion Transmission Inc	Name Change	0332/0570
Dominion Transmission Inc	CONSOL Energy Holdings LLC	Assignment	0245/0001
CONSOL Energy Holdings LLC	CONSOL Gas Company	Merger	0292/0477
CONSOL Gas Company	CNX Gas Company LLC	Merger	0293/0252
CNX Gas Company LLC	Antero Resources Corporation	Partial Assignment	0400/0565
<u>W: F.G. Orr, et al Lease</u>			
F.G. Orr, et al	J.W. Wilson and Company	1/8	0024/0049
J.W. Wilson and Company	The Wheeling Natural Gas Company	Assignment	0064/0196
The Wheeling Natural Gas Company	Manufacturers Light and Heat Company & Union Gasoline & Oil Corporation	Assignment	0129/0121
Manufacturers Light and Heat Company & Union Gasoline & Oil Corporation	J.R. Thomey	Assignment	0054/0462
J.R. Thomey	Cruz Marie Thomey, widow	Will Book	0046/0286
Cruz Marie Thomey, widow	Eddison E. Ritter & Jesse P. Scott	Assignment	0078/0204
Eddison E. Ritter & Jess P. Scott	EMAX Oil Company	Assignment	0161/0001
EMAX Oil Company	Antero Resources Corporation	Assignment	0394/0182
<u>X: Linda R. Nepps Lease</u>			
Linda R. Nepps	Clarence W. Mutschelknaus	1/8+	0457/0448
Clarence W. Mutschelknaus	Bluestone Energy Partners	Assignment	0250/0659
Bluestone Energy Partners	BEP Merger Sub LP	Merger	0288/0001
BEP Merger Sub LP	Antero Resources Bluestone LLC	Merger	0288/0001
Antero Resources Bluestone LLC	Antero Resources Corporation	Merger	WV SOS

*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.

10/14/2022

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6A, Section 5(a)(5)
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(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>Y: Randall E. Shearer Lease</u>	Randall E. Shearer	Antero Resources Corporation	1/8+	0500/0082

***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

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: Tim Rady
 Its: Senior Vice President - Land