



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

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

January 10, 2017
PERMIT MODIFICATION APPROVAL
Horizontal 6A / Horizontal 6A Well - 1

ANTERO RESOURCES CORPORATION
1615 WYNKOOP STREET

DENVER, CO 80202

Re: Permit Modification Approval for PIPER UNIT 3H
47-085-10296-00-00

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.


James A. Martin
Chief

Operator's Well Number: PIPER UNIT 3H
Farm Name: DARRELL A. NOLAND ET AL
U.S. WELL NUMBER: 47-085-10296-00-00
Horizontal 6A / Horizontal 6A Well - 1
Date Issued: January 10, 2017

Promoting a healthy environment.

01/13/2017

API# 47-085-10296 PERMIT MODIFICATION

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

1) Well Operator: Antero Resources Corporation 494507062 085 - Ritchie Clay Pennsboro 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: Piper Unit 3H Well Pad Name: Existing Noland Pad

3) Farm Name/Surface Owner: Darrell A. Noland, et al Public Road Access: CR 50/22

4) Elevation, current ground: 1143' Elevation, proposed post-construction: 1143'

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: 6500' TVD, Anticipated Thickness- 75 feet, Associated Pressure- 2800#

8) Proposed Total Vertical Depth: 6500' TVD

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 16000' MD

11) Proposed Horizontal Leg Length: 7805'

12) Approximate Fresh Water Strata Depths: 54', 135', 227'

13) Method to Determine Fresh Water Depths: Fresh Water Depths from Penns Park Unit 1H (API# 47-085-10099) on same pad.

14) Approximate Saltwater Depths: 1658', 1705', 1747'

15) Approximate Coal Seam Depths: 798', 1225'

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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18)

CASING AND TUBING PROGRAM

TYPE	<u>Size (in)</u>	<u>New or Used</u>	<u>Grade</u>	<u>Weight per ft. (lb/ft)</u>	<u>FOOTAGE: For Drilling (ft)</u>	<u>INTERVALS: Left in Well (ft)</u>	<u>CEMENT: Fill-up (Cu. Ft.)/CTS</u>
Conductor	20"	New	H-40	94#	40'	40'	CTS, 38 Cu. Ft.
Fresh Water	13-3/8"	New	J-55/H-40	54.5#/48#	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	20#	16000'	16000'	3992 Cu. Ft
Tubing	2-3/8"	New	N-80	4.7#		7100'	
Liners							

TYPE	<u>Size (in)</u>	<u>Wellbore Diameter (in)</u>	<u>Wall Thickness (in)</u>	<u>Burst Pressure (psi)</u>	<u>Anticipated Max. Internal Pressure (psi)</u>	<u>Cement Type</u>	<u>Cement Yield (cu. ft./k)</u>
Conductor	30"	24"	0.438"	1530	50	Class A	1.18
Fresh Water	13-3/8"	17-1/2"	0.38"/0.33"	2730/1730	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"	0.361"	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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API# 47-085-10296 PERMIT MODIFICATION

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

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 18.62 acres

22) Area to be disturbed for well pad only, less access road (acres): 8.85 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:

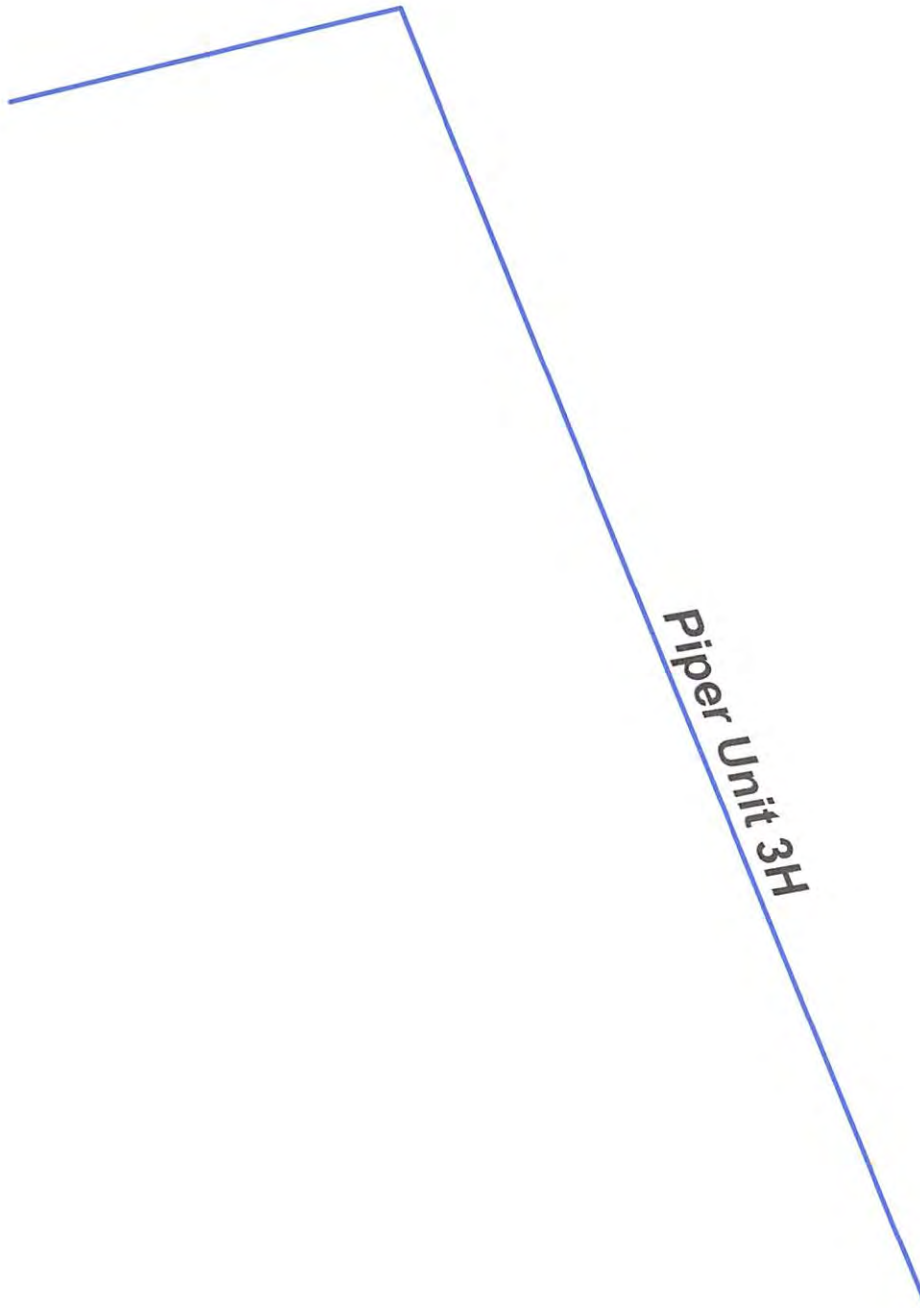
Conductor: blowhole clean with air, run casing, 10 bbls fresh water.
Surface: blowhole clean with air, trip to conductor shoe, trip to bottom, blowhole clean with air, trip out, run casing, circulate pipe capacity + 40 bbls fresh water followed by 25 bbls bentonite mud, 10 bbls fresh water spacer.
Intermediate: 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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AOR Western-Piper Units- no wells



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>The Haught Family Trust Lease</u>			
The Haught Family Trust, Ira M. Haught, Trustee	Antero Resources Corporation	1/8+	0272/0974
<u>Mary V. Wedekamm Lease</u>			
Mary V. Wedekamm	Kepeco, Inc.	1/8	0161/0687
Kepeco, Inc.	Union Drilling, Inc.	Merger	Corporation Record 0004/0322
Union Drilling, Inc.	Equitable Resources Exploration, Inc.	Merger	Corporation Record 0004/0673
Equitable Resources Exploration, Inc.	Equitable Resources Energy Company	Confirmatory Deed & Assignment	0230/0047
Equitable Resources Energy Company	Mike Ross, Inc.	Assignment	0223/0575
Mike Ross, Inc.	Antero Resources Appalachian Corporation	Assignment	0262/0164
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
<u>C.E. Giebell Lease</u>			
C.E. Giebell	Gene Stalnaker	1/8	0161/0644
Gene Stalnaker	Angus Energy, Inc.	Assignment	0212/0137
Angus Energy, Inc.	Stalnaker Energy, Inc.	Merger/Name Change	CR 0006/0225
Stalnaker Energy, Inc.	Antero Resources Appalachian Corporation	Assignment	0263/1065
Antero Resources Appalachian Corporation	Antero Resources Appalachian Corporation	Name Change	Exhibit 1
<u>Byron Taylor, et al Lease</u>			
Byron Taylor, et al	Key Oil Company	1/8	0239/0402
Key Oil Company	Antero Resources Appalachian Corporation	*Partial Assignment	0253/0747
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
<u>Steven Edge Lease</u>			
Steven Edge	Antero Resources Corporation	1/8+	0278/0790
<u>James E. Vogt, et ux Lease</u>			
James Vogt, et ux	Antero Resources Corporation	1/8+	0276/0421
<u>Orma Johnson Trust Lease</u>			
Orma M. Wilson Johnson Declaration of Trust by Orma M. Wilson Johnson, Trustee	Antero Resources Corporation	1/8+	0282/0154
<u>John C. Heuer Lease</u>			
John C. Heuer	Antero Resources Corporation	1/8+	0269/0900

*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.

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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
Cinda Fleming Lease Cinda Fleming	Antero Resources Corporation	1/8+	0290/0708
Robert Whitehair Lease Robert Whitehair	Antero Resources Corporation	1/8+	0277/0478
Larry Horner Lease Larry Horner	Antero Resources Corporation	1/8+	0268/0848
Betty R. Horner Lease Betty R. Horner	Antero Resources Corporation	1/8+	0270/1066
Larry Horner, Jr. Lease Larry Horner, Jr.	Antero Resources Corporation	1/8+	0280/0809
Michael J. Shepherd Lease Michael J. Shepherd	Antero Resources Corporation	1/8+	0275/0018
Jacklyn C. Perkins Lease Jacklyn C. Perkins	Antero Resources Corporation	1/8+	0268/0628
Ruth M. Hufford, et al Lease Ruth M. Hufford, et al	Antero Resources Corporation	1/8+	0268/0631
Kenneth E. Sellers, et ux Lease Kenneth E. Sellers, et ux	Antero Resources Corporation	1/8+	0277/0475
Jon L. Bonnell, et ux Lease Jon L. Bonnell, et ux	Antero Resources Corporation	1/8+	0295/0958
Leta V. Bennett, et al Lease Leta V. Bennett, et al	Antero Resources Corporation	1/8+	0272/0746
Russell I. Gray Lease Russell I. Gray	Antero Resources Corporation	1/8+	0270/0436

*PLEASE NOTE: We are not drilling through "Lisa J. Yanero Lease" (TM 8-2-87). The Piper Unit 3H wellbore is located 13' from this lease.

*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.

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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
<u>Steven F. Reed, et ux Lease</u> Steven F. Reed, et ux	Antero Resources Corporation	1/8+	0268/0851
<u>Ronald D. Ingram Lease</u> Ronald D. Ingram	Antero Resources Corporation	1/8+	0271/0617
<u>Lesley A. Hinton, et al</u> Lesley A. Hinton & Sherry L. Hinton	Antero Resources Corporation	1/8+	0282/1049
<u>Edwin J. McKinney Lease</u> Edwin J. McKinney	Antero Resources Corporation	1/8+	0269/0157
<u>Charles R. Collins Lease</u> Charles R. Collins	Antero Resources Corporation	1/8+	0274/0392
<u>Donnie Leggett, et ux Lease</u> Donnie Leggett, et ux	Antero Resources Corporation	1/8+	0268/0681
<u>James Shepler, et ux Lease</u> James Shepler, et ux	Antero Resources Corporation	1/8+	0297/0804
<u>Dennis J. Stull, et ux Lease</u> Dennis J. Stull, et ux	Antero Resources Corporation	1/8+	0270/0427
<u>Mole Hill, LLC Lease</u> Mole Hill, LLC	Antero Resources Corporation	1/8+	0282/0799
<u>Lester L. Jewell, et ux Lease</u> Lester L. Jewell, et ux	Antero Resources Corporation	1/8+	0270/1025
<u>Mole Hill, LLC Lease</u> Mole Hill, LLC	Antero Resources Corporation	1/8+	0282/0799
<u>Ronald L. Bell Lease</u> Ronald L. Bell	Antero Resources Corporation	1/8+	0297/0376
<u>Larry Horner, et ux Lease</u> Larry Horner, et ux	Antero Resources Corporation	1/8+	0270/1063

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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
<u>Candice R. Gamache Lease</u> Candice R. Gamache	Antero Resources Corporation	1/8+	0267/0961
<u>Betty Horner Lease</u> Betty Horner	Antero Resources Corporation	1/8+	0270/1066
<u>Ernest R. Doll, et ux Lease</u> Ernest R. Doll, et ux	Antero Resources Corporation	1/8+	0275/0193
<u>Lawrence E. Dotson Lease</u> Lawrence E. Dotson	Antero Resources Corporation	1/8+	0298/0810
<u>Dwight D. Whitehair Lease</u> Dwight D. Whitehair	Antero Resources Corporation	1/8+	0269/0679
<u>Patrick D. Collins Lease</u> Patrick D. Collins	Antero Resources Corporation	1/8+	0300/0551
<u>John T. Kosphina Lease</u> John T. Kosphina	Antero Resources Corporation	1/8+	0275/0021
<u>Janie I. Thomas Lease</u> Janie I. Thomas	Antero Resources Corporation	1/8+	0273/0619
<u>Lloyd Todd, et ux Lease</u> Lloyd Todd, et ux	Antero Resources Corporation	1/8+	0296/0869
<u>Joni T. Fisher Lease</u> Joni T. Fisher	Antero Resources Corporation	1/8+	0269/0269
<u>Kenneth O. Ramsey Lease</u> Kenneth O. Ramsey	Antero Resources Corporation	1/8+	0271/0727
<u>Charlie M. Stull Lease</u> Charlie M. Stull	Antero Resources Corporation	1/8+	0300/0143
<u>Alden N. Smith Lease</u> Alden N. Smith	Antero Resources Corporation	1/8+	0281/1080

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<u>Hummer Properties, LLC Lease</u> Hummer Properties, LLC	Antero Resources Corporation	1/8+	0275/0419
<u>Kenneth O. Ramsey Lease</u> Kenneth O. Ramsey	Antero Resources Corporation	1/8+	0299/0862
<u>Beverly Smith Hornish Lease</u> Beverly Smith Hornish	Antero Resources Corporation	1/8+	0299/0919
<u>James D. Summers Lease</u> James D. Summers	Antero Resources Corporation	1/8+	0272/1075
<u>Kenneth O. Ramsey Lease</u> Kenneth O. Ramsey	Antero Resources Corporation	1/8+	0286/0106
<u>Kenneth O. Ramsey Lease</u> Kenneth O. Ramsey	Antero Resources Corporation	1/8+	0271/0727
<u>Haught Family Trust, et al Lease</u> Haught Family Trust, et al	Antero Resources Corporation	1/8+	0300/0884
<u>Steven L. Hammond Lease</u> Steven L. Hammond	Antero Resources Corporation	1/8+	0286/0792
<u>Mark A. Jackson, et ux Lease</u> Mark A. Jackson, et ux	Antero Resources Corporation	1/8+	0275/0422
<u>Charlene R. Sweeney Lease</u> Charlene R. Sweeney	Antero Resources Corporation	1/8+	0285/0043
<u>Harry Pyles, et al Lease</u> Harry Pyles, et al	Antero Resources Corporation	1/8+	0282/0541
<u>Mary E. Mahaney Lease</u> Mary E. Mahaney	Antero Resources Corporation	1/8+	0300/0095
<u>Gene Shuman, et ux Lease</u> Gene Shuman, et ux	Antero Resources Corporation	1/8+	0267/0956

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<u>Richard M. Ridgeway, et ux Lease</u> Richard M. Ridgeway, et ux	Antero Resources Corporation	1/8+	0272/0667
<u>Nancy A. Emery Lease</u> Nancy A. Emery	Antero Resources Corporation	1/8+	0301/0501
<u>Samuel W. Cokeley Lease</u> Samuel W. Cokeley	Antero Resources Corporation	1/8+	0270/0803
<u>Charlene R. Sweeney Lease</u> Charlene R. Sweeney	Antero Resources Corporation	1/8+	0285/0043

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Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
WVSRA Lease	West Virginia State Rail Authority Antero Resources Appalachian Corporation	Antero Resources Appalachian Corporation Antero Resources Corporation	1/8+ Name Change	0253/0409 Exhibit 1


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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: Robert S. Tucker 
 Its: VP of Geology

FORM WW-6A1
EXHIBIT 1

FILED

JUN 10 2013

Natalie E. Tennant
Secretary of State
1900 Kanawha Blvd E
Bldg 1, Suite 157-K
Charleston, WV 25305



Penney Barker, Manager
Corporations Division
Tel: (304)558-8000
Fax: (304)558-8381
Website: www.wvsos.com
E-mail: business@wvsos.com

APPLICATION FOR
AMENDED CERTIFICATE
OF AUTHORITY

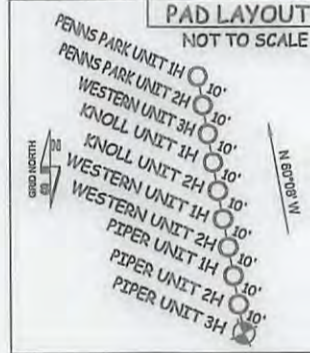
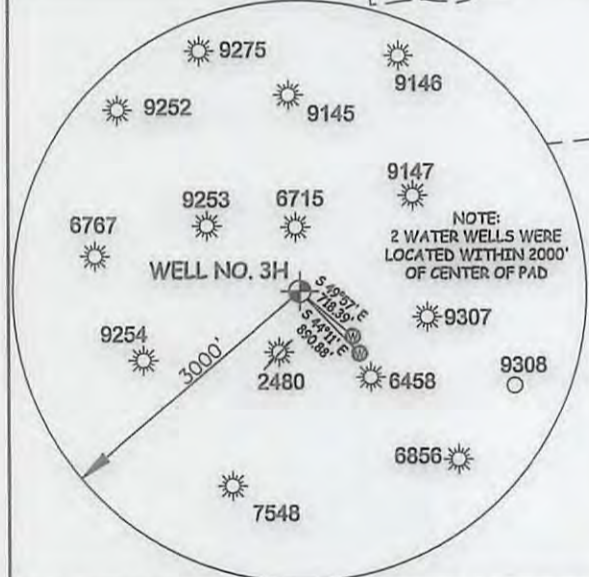
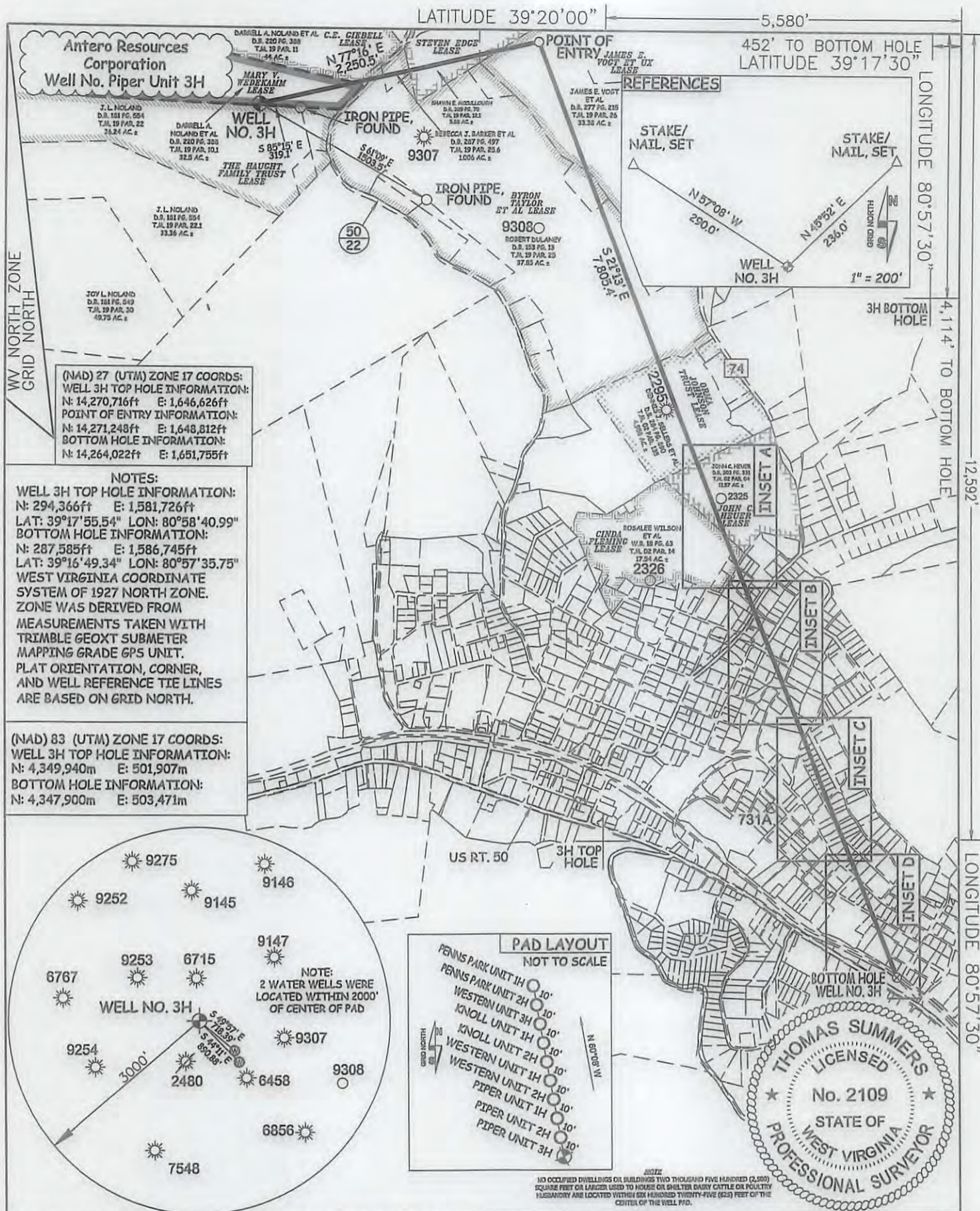
Office Hours: Monday - Friday
8:30 a.m. - 5:00 p.m. ET

FILE ONE ORIGINAL
(Two if you want a filed
stamped copy returned to you)
FEE: \$25.00

**** In accordance with the provisions of the West Virginia Code, the undersigned corporation hereby ****
applies for an Amended Certificate of Authority and submits the following statement:

- Name under which the corporation was authorized to transact business in WV: Antero Resources Appalachian Corporation
- Date Certificate of Authority was issued in West Virginia: 6/25/2008
- Corporate name has been changed to: Antero Resources Corporation
(Attach one Certified Copy of Name Change as filed in home State of incorporation.)
- Name the corporation elects to use in WV: Antero Resources Corporation
(due to home state name not being available)
- Other amendments: _____
(attach additional pages if necessary)
- Name and phone number of contact person. (This is optional, however, if there is a problem with the filing, listing a contact person and phone number may avoid having to return or reject the document.)
Alvyn A. Schopp (303) 367-7310
Contact Name Phone Number
- Signature information (See below *Important Legal Notice Regarding Signature):
Print Name of Signer: Alvyn A. Schopp Title/Capacity: Authorized Person
Signature: [Handwritten Signature] Date: June 10, 2013

***Important Legal Notice Regarding Signature:** Per West Virginia Code §31D-1-129. Penalty for signing false document. Any person who signs a document he or she knows is false in any material respect and knows that the document is to be delivered to the secretary of state for filing is guilty of a misdemeanor and, upon conviction thereof, shall be fined not more than one thousand dollars or confined in the county or regional jail not more than one year, or both.



JOB # 16-005WA DRAWING # PIPER3H SCALE 1" = 1000' 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.		LEGEND --- Surface Owner Boundary Lines +/- - - - Interior Surface Tracts +/- X Existing Fence Rebar, Found	
STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS WELL TYPE: OIL ___ GAS <input checked="" type="checkbox"/> LIQUID INJECTION ___ WASTE DISPOSAL ___ (IF "GAS") PRODUCTION <input checked="" type="checkbox"/> STORAGE ___ DEEP ___ SHALLOW <input checked="" type="checkbox"/> LOCATION: ELEVATION 1,159' ORIGINAL - 1,143' AS DRILLED WATERSHED NORTH FORK HUGHES RIVER QUADRANGLE PENNSBORO 7.5' DISTRICT CLAY COUNTY RITCHIE		STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS WILLOW LAND SURVEYING PLLC 266 HUSHERS RUN RD PENNSBORO WEST VIRGINIA 26415		THOMAS SUMMERS P.S. 2109 DATE 11/07/16 OPERATOR'S WELL# PIPER UNIT 3H API WELL # 47 - 085 - 10296 MOD STATE COUNTY PERMIT	
SURFACE OWNER DARRELL A. NOLAND ET AL ACREAGE 32.5 ACRES +/- OIL & GAS ROYALTY OWNER SEE ATTACHED PAGES FOR LEASE INFORMATION LEASE ACREAGE SEE ATTACHED PAGES		PROPOSED WORK: DRILL ___ CONVERT ___ DRILL DEEPER <input checked="" type="checkbox"/> REDRILL ___ FRACTURE OR STIMULATE <input checked="" type="checkbox"/> PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION <input checked="" type="checkbox"/> OTHER PHYSICAL CHANGE IN WELL (SPECIFY) MOD-BHL TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,500' TVD 16,000 MD		DIANNA STAMPER CT CORPORATION SYSTEM ADDRESS 5400 D BIG TYLER ROAD CHARLESTON, WV 25313	

01/13/2017

INSET A

ORMA
JOHNSON
TRUST LEASE
8-2-135

Antero Resources
Corporation
Well No. Piper Unit 3H

WV NORTH ZONE
GRID NORTH

JOHN C.
HEUER
LEASE
8-2-4

CINDA FLEMING
LEASE
8-2-14

8-2-15
ROBERT
WHITEHAIR
LEASE

ROBERT
WHITEHAIR
LEASE
8-2-16

8-2-14.1

8-2-48

8-2-49
LARRY HORNER
LEASE

8-2-50

8-2-14.2

BETTY R.
HORNER
LEASE
8-2-45

LARRY
HORNER JR.
LEASE

8-2-51
MICHAEL J.
SHEPHERD
LEASE

KENNETH F. SELLERS
ET UX LEASE

8-2-46

8-2-47

FORDYCE STREET

8-2-44

8-2-86

JACKLYN C.
PERKINS
LEASE

85-10296
01/13/2017
M68



P.O. BOX 17
PENNSBORO, WV 26415
304-659-1717

SCALE: 1-INCH = 100-FEET



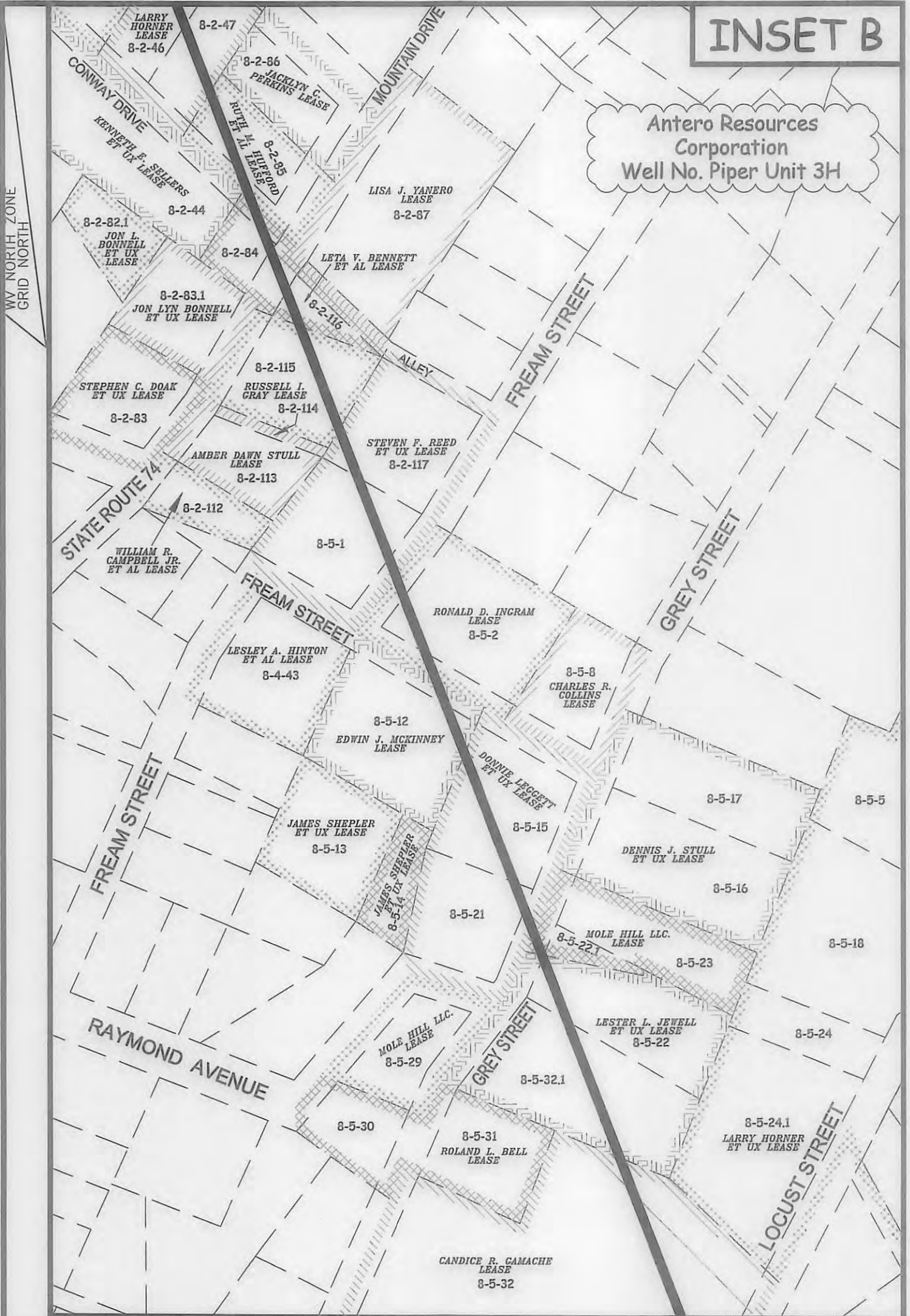
FILE: 16-005WA
JOB: PIPER3H INSETA
DRAFTED BY: T.B.S. 11/07/16

LEGEND

- Piper 3H Lateral
- - - Interior Surface Tracts +/-

INSET B

Antero Resources Corporation
Well No. Piper Unit 3H



WV NORTH ZONE
GRID NORTH

WILLOW
• LAND SURVEYING PLLC •

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304-659-1717

85-10296
01/13/2017
MOB

SCALE: 1-INCH = 100-FEET

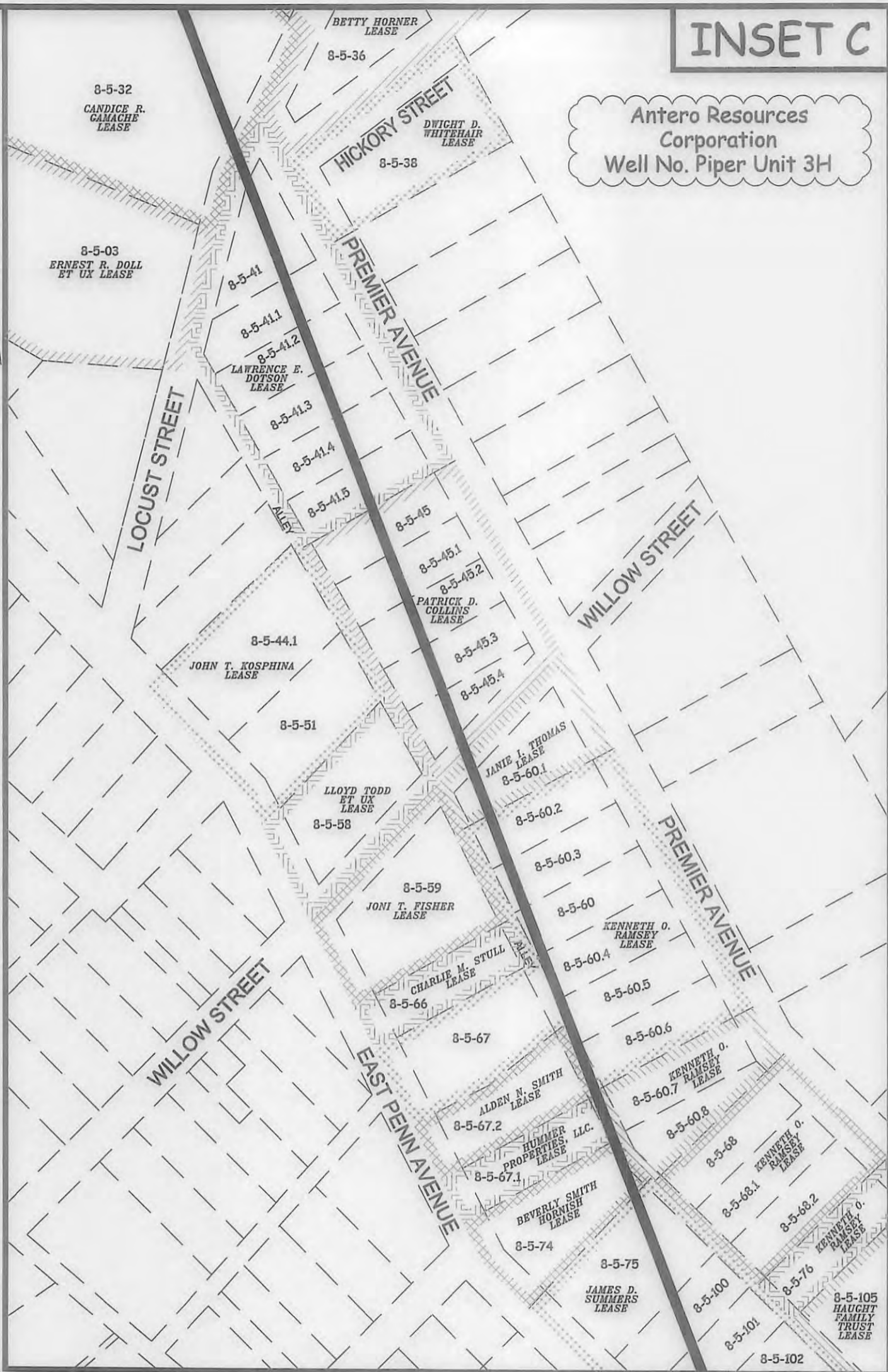


LEGEND	
	Piper 3H Lateral
	Interior Surface Tracts +/-

INSET C

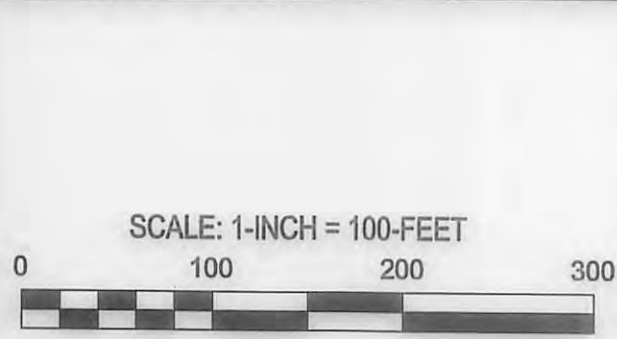
Antero Resources Corporation
Well No. Piper Unit 3H

WV NORTH ZONE
GRID NORTH



WILLOW
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304-659-1717



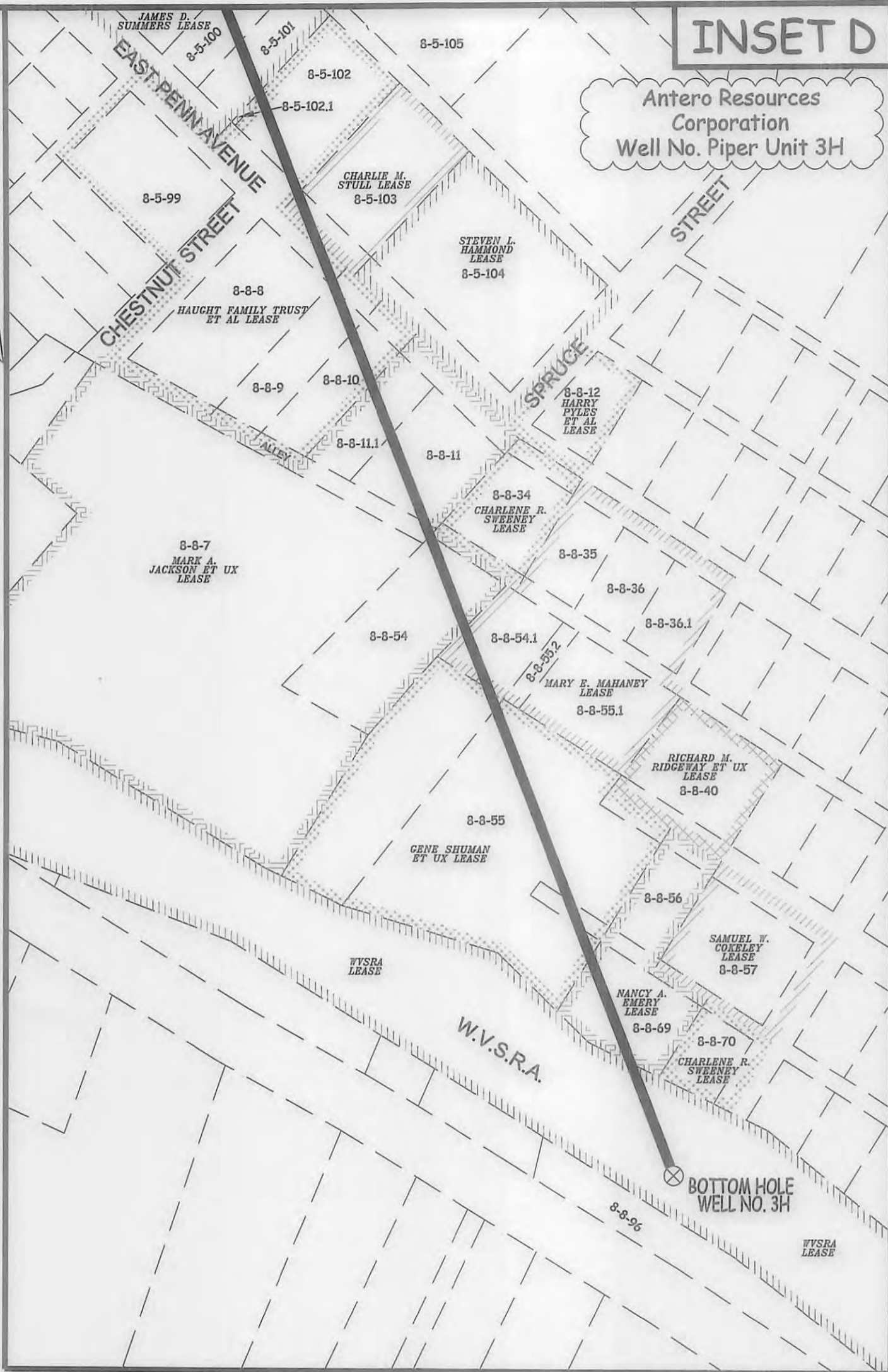
FILE: 16-005WA
JOB: PIPER3H INSETC
DRAFTED BY: T.B.S. 11/07/16

LEGEND	
	Piper 3H Lateral
	Interior Surface Tracts +/-

INSET D

Antero Resources Corporation
Well No. Piper Unit 3H

WV NORTH ZONE
GRID NORTH



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SCALE: 1-INCH = 100-FEET



85-10296
MOD 01/13/2017

FILE: 16-005WA
JOB: PIPER3H INSETD
DRAFTED BY: T.B.S. 11/07/16

LEGEND	
	Piper 3H Lateral
	Interior Surface Tracts +/-