



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

Wednesday, April 30, 2025
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION
1615 WYNKOOP STREET

DENVER, CO 80202

Re: Permit Modification Approval for Keel Unit 1H
47-085-10553-00-00

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, written in a cursive style.

James A. Martin
Chief

Operator's Well Number: Keel Unit 1H
Farm Name: Antero Resources Corporation
U.S. WELL NUMBER: 47-085-10553-00-00
Horizontal 6A New Drill
Date Modification Issued: 4/30/2025

Promoting a healthy environment.

05/02/2025

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 Union Pullman 7.5'
Operator ID County District Quadrangle
- 2) Operator's Well Number: Keel Unit 1H MOD Well Pad Name: Minear Pad
- 3) Farm Name/Surface Owner: Louis Daniel Easterday Revocable Living Trust Public Road Access: Pullman Road
- 4) Elevation, current ground: _____ Elevation, proposed post-construction: 1097'
- 5) Well Type (a) Gas X Oil _____ Underground Storage _____
Other _____
(b) If Gas Shallow X Deep _____
Horizontal X
- 6) Existing Pad: Yes or No No
- 7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus Shale: 6800' TVD, Anticipated Thickness- 55 feet, Associated Pressure- 2800#
- 8) Proposed Total Vertical Depth: 6800' TVD
- 9) Formation at Total Vertical Depth: Marcellus
- 10) Proposed Total Measured Depth: 25200' MD
- 11) Proposed Horizontal Leg Length: 15517'
- 12) Approximate Fresh Water Strata Depths: 105', 190', 450', 757'
- 13) Method to Determine Fresh Water Depths: 47-085-08082, 47-085-04932
- 14) Approximate Saltwater Depths: 1085', 1522'
- 15) Approximate Coal Seam Depths: N/A
- 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 X
- (a) If Yes, provide Mine Info: Name: _____
Depth: _____
Seam: _____
Owner: _____

Ch#4040321
7500'

RECEIVED
Office of Oil and Gas
APR 23 2025
WV Department of Environmental Protection

WW-6B
(04/15)

API NO. 47- 085 - 10553
OPERATOR WELL NO. Keel Unit 1H MOD
Well Pad Name: Minear 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#	100	100	CTS, 96 Cu. Ft.
Fresh Water	13-3/8"	New	J-55	54.5#	807	807	CTS, 841 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#	25200	25200	5422 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	LANC-HIPOZ & Tail - H	H/POZ-1.44 & H-1.8
Tubing	2-3/8"	4.778"	0.19"	11,200			
Liners							

PACKERS

Kind:	N/A		RECEIVED Office of Oil and Gas
Sizes:	N/A		APR 23 2025
Depths Set:	N/A		WW Department Environmental Protection

Greg Hill 4-21-25

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

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

22) Area to be disturbed for well pad only, less access road (acres): 17.70 acres

RECEIVED
Office of the Attorney General

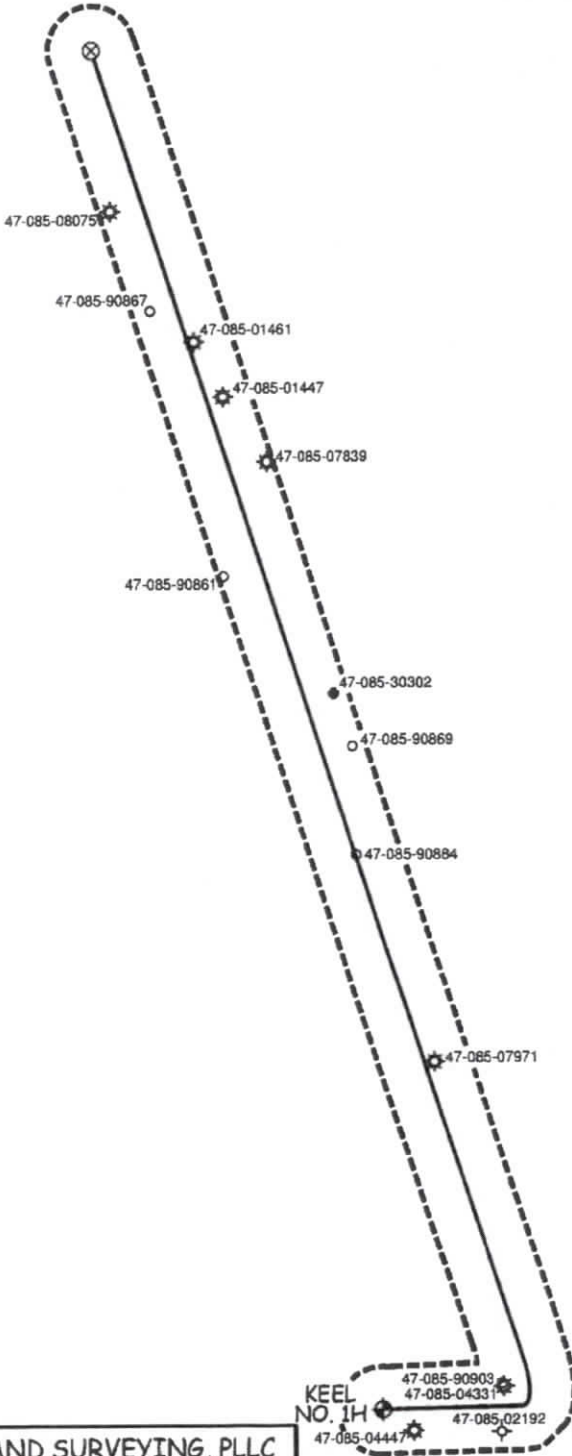
Conductor: no additives, Class A/L cement.
Surface: Class A/L cement with 2-3% calcium chloride and 1/4 lb of flake
Intermediate: Class A/L cement with 1/4 lb of flake, 5 gallons of clay treat
Production: Lead cement- 50/50 Class H/Poz + 1.5% salt + 1% C-45 + 0.5% C-16a + 0.2% C-12 + 0.45% C-20 + 0.05% 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

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.

Page 3 of 3

05/02/2025

MINEAR PAD
ANTERO RESOURCES
CORPORATION



RECEIVED
Office of Operations

APR 23 2025

WV Department of
Environmental Protection

WILLOW LAND SURVEYING, PLLC
P.O. BOX 17, PENNSBORO, WV 26415
(304) 659-1717

KEEL
NO. 1H
47-085-04447
47-085-02192

JOB #: 24-011WA

FILE: KEEL1HAQR.DWG

SCALE : 1-INCH = 2000-FEET



DATE: 02/18/25

DRAWN BY: D.L.P.

05/02/2025

UWI (API Num)	Well Name	Well Number	Operator	Historical Operator	TD	Perforated Interval (shallowest, deepest)	Perforated Formation(s)	Produced Formation(s) not perf'd
4708504470000	HOWARD JOYCE ETAL	H-884	HOWARD JOYCE ETAL	HAUGHT G L & SONS	2,400	1956-2293	Big Injun, Weir	Benson, Alexander
4708502192000	SARAH & JAMES HOWARD	1	STRICKLIN C.A.	STRICKLIN C.A.	2,318			Benson, Alexander
47085043310000	HADDIX DANIEL ETAL	H-777	DEEM J F OIL & GAS LLC	HAUGHT G L & SONS	2,685	2322-2365	Weir	
47085069030000				EASTERN AMERICAN ENE	5,035	3618 - 4940	Bulltown, Ray, Benson, Alexander	Weir
47085078710000	JOHN D JONES ET AL	2	GREYLOCK OFCO LLC					Weir, Benson, Alexander
4708508840000	G W THOMAS	1	HOPE CONSTR & REFG	HOPE CONSTR & REFG	1,931		Maaton, Big Injun	
470850908610000	MAXWELL/PERKINS	1	GREYLOCK OFCO LLC	EASTERN AMERICAN ENE	4,671	3332 - 4466	Warren, Riley	Weir, Benson, Alexander
47085078390000	A KNIGHT	1	CLAY DISTRICT ASSOC	CLAY DISTRICT ASSOC	1,640		Greenbrier Group	Weir, Benson, Alexander
47085014470000	R TAYLOR	1	CLAY DISTRICT ASSOC	CLAY DISTRICT ASSOC	1,859		Big Injun	Weir, Benson, Alexander
4708508670000	KNIGHT KARL C		GREYLOCK OFCO LLC	EASTERN AMERICAN ENE	5,345	4469 - 5117	Riley, Benson, Alexander	Weir
47085080750000								
4708508690000								

RECEIVED
Office of Oil & Gas

APR 23 2025

WV Department of
Environmental Protection

05/02/2025

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>Z: Joseph A. Howard Lease</u> Joseph A. Howard	Antero Resources Corporation	1/8+	323/561
<u>Y: Joyce Ann Howard Lease</u> Joyce Ann Howard Warren R. Haught ANJO Investments 710 Corporation Whittle Corporation	Warren R. Haught ANJO Investments 710 Corporation Whittle Corporation Antero Resources Corporation	1/8 Assignment Assignment Assignment Assignment	123/638 171/739 194/342 234/182 261/105
<u>W: Daniel Haddox and Clareth Haddox Lease</u> Daniel Haddox and Clareth Haddox Warren R. Haught Courtney Co Inc. Petro Southern Inc Shanley Oil Company Black Petroleum Corporation Apple Corporation Eastern American Energy Corporation Antero Resources Appalachian Corporation	Warren R. Haught Courtney Co. Inc Petro Southern Inc Shanley Oil Company Black Petroleum Corporation Apple Corporation Eastern American Energy Corporation Antero Resources Appalachian Corporation Antero Resources Corporation	1/8 Assignment Assignment Assignment Assignment Assignment Assignment Assignment Assignment Name Change	127/219 171/733 171/729 186/22 191/133 203/778 211/282 257/377 15/705
<u>U: Norma C. Dawson Lease</u> Norma C. Dawson	Antero Resources Corporation	1/8	348/95
<u>T: Wanema Riggs Lease</u> Wanema Riggs Eastern American Energy Corporation Energy Corporation of America Antero Resources Appalachian Corporation	Eastern American Energy Corporation Energy Corporation of America Antero Resources Appalachian Corporation Antero Resources Corporation	1/8 Merger Assignment Name Change	206/511 6/450 257/377 15/705
<u>S: John D. Jones, et ux Lease</u> John D. Jones, et ux Eastern American Energy Corporation Energy Corporation of America Antero Resources Appalachian Corporation	Easter American Energy Corporation Energy Corporation of America Antero Resources Appalachian Corporation Antero Resources Corporation	1/8 Assignment Assignment Name Change	206/691 250/393 257/377 15/705
<u>R: Lloyd Minear Lease</u> Lloyd Minear Kanawha Drilling Company Industrial Gas Associates Eastern American Energy Corporation Energy Corporation of America Antero Resources Appalachian Corporation	Kanawha Drilling Company Industrial Gas Associates Eastern American Energy Corporation Energy Corporation of America Antero Resources Appalachian Corporation Antero Resources Corporation	1/8 Assignment Assignment Merger Assignment Name Change	123/51 124/541 211/287 6/450 257/377 15/705
<u>S: John D. Jones, et ux Lease</u> John D. Jones, et ux Eastern American Energy Corporation Energy Corporation of America Antero Resources Appalachian Corporation	Eastern American Energy Corporation Energy Corporation of America Antero Resources Appalachian Corporation Antero Resources Corporation	1/8 Assignment Assignment Name Change	206/691 250/393 257/377 15/705

RECEIVED
Office of Oil and Gas

APR 23 2025

WV Department of
Environmental Protection

05/02/2025

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>O: Wanema Riggs Lease</u>			
Wanema Riggs	Eastern American Energy Corporation	1/8	204/131
Easter American Energy Corporation	Energy Corporation of America	Merger	6/450
Energy Corporation of America	Antero Resources Appalachian Corporation	Assignment	257/377
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	15/705
<u>L: Gregory Byrl Dodd Lease</u>			
Gregory Byrl Dodd	Antero Resources Corporation	1/8+	303/657
<u>O: Wanema Riggs Lease</u>			
Wanema Riggs	Eastern American Energy Corporation	1/8	204/131
Easter American Energy Corporation	Energy Corporation of America	Merger	6/450
Energy Corporation of America	Antero Resources Appalachian Corporation	Assignment	257/377
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	15/705
<u>N: Donald R. Lea and Matthew B. Lea Lease</u>			
Donald R. Lea and Matthew B. Lea	Antero Resources Corporation	1/8+	318/612
<u>L: Gregory Byrl Dodd Lease</u>			
Gregory Byrl Dodd	Antero Resources Corporation	1/8+	303/657
<u>K: Mary Holland, et vir Lease</u>			
Mary Holland, et vir	Eastern American Energy Corporation	1/8+	204/61
Eastern American Energy Corporation	Energy Corporation of America	Merger	6/450
Energy Corporation of America	Antero Resources Appalachian Corporation	Assignment	257/377
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	15/705
<u>J: Lyle M. Freeland and Donnie D. Freeland Lease</u>			
Lyle M. Freeland and Donnie D. Freeland	Antero Resources Corporation	1/8+	343/726
<u>I: Lyle M. Freeland and Donnie D. Freeland Lease</u>			
Lyle M. Freeland and Donnie D. Freeland	Antero Resources Corporation	1/8+	343/726
<u>F: Norma Jean Goff and Carl Goff Lease</u>			
Norma Jean Goff and Carl Goff	Eastern American Energy Corporation	1/8	196/472
Eastern American Energy Corporation	Energy Corporation of America	Merger	6/450
Energy Corporation of America	Antero Resources Appalachian Corporation	Assignment	257/377
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	15/705
<u>E: Donna L. Hiley Lease</u>			
Donna L. Hiley	Antero Resources Corporation	1/8+	355/480
<u>D: Ray Cottrill, et al Lease</u>			
Ray Cottrill, et al	Eastern American Energy Corporation	1/8	204/495
Eastern American Energy Corporation	Energy Corporation of America	Merger	6/450
Energy Corporation of America	Antero Resources Appalachian Corporation	Assignment	257/377
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	15/705

RECEIVED
Office of Oil and Gas

APR 23 2025

WV Department of
Environmental Protection

05/02/2025

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:

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
A: Mark Taylor, et al Lease				
	Mark Taylor, et al	J. Forrest Maxwell, et al	1/8	75/509
	J. Forrest Maxwell, et al	C. O. Travis	Assignment	80/56
	C. O. Travis	Boyd Wright	Assignment	80/58
	Boyd Wright	David A. Harrison and Charles E. Young	Assignment	90/350
	David A. Harrison and Charles E. Young	David A. Harrison	Assignment	98/264
	David A. Harrison	Charles E. Young and Helen F. Young	Assignment	98/264
	The Union National Bank of Pittsburgh, Executor of the Estate of Helen F. Young	Elizabeth K. Harrison	Assignment	122/29
	Pittsburgh National Bank as executor of Elizabeth K. Harrison Estate	Ray Rex Taylor and Willard H. McCloy	Assignment	126/260
	Ray Rex Taylor and Willard H. McCloy	Warren R. Haught	Assignment	127/402
	Warren R. Haught	Mid Oil Inc	Assignment	190/753
	Mid Oil Inc	Antero Resources Appalachian Corporation	Assignment	262/192
	Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	15/705

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

RECEIVED
Office of Oil and Gas

APR 23 2025

WV Department of
Environmental Protection

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

-11,799'

UNION DISTRICT - RITCHIE COUNTY	
7-13	Dawn McLaughlin
7-14	Wayne & Delphine Haddox
7-15	Louis Daniel Easterday Revocable Living Trust
7-16	Louis D Easterday
7-18	Louis D Easterday
7-19	Max & Laura Dodd
8-1	Danny Haddox Et Al
8-1.1	Danny Haddox Et Al
8-1.2	Danny Haddox Et Al
8-1.3	Wayne & Delphine Haddox
8-1.4	David Haddox
8-1.6	David Haddox
12-6	Robert & Dorothy Layton
12-6.1	Robert & Dorothy Layton
12-7	Louis Daniel Easterday Revocable Living Trust
12-7.1	Louis Daniel Easterday Revocable Living Trust
13-1	David & Rose Cox
13-1.1	David & Rose Cox
CLAY DISTRICT - RITCHIE COUNTY	
35-3	Debra Davis, Et Al
35-4	Gerald & Teresa Hall
35-8	Debra Clements
35-19	Eddy & Kelly Waggoner
35-19.2	Virginia Gottroll
35-19.3	Virginia Gottroll
35-20	Virginia Gottroll
35-20.1	Virginia Gottroll
35-21	Kevin Baker, Et Al
35-22	Kevin Baker, Et Al
35-23	Kevin Baker, Et Al
35-24	Eddy & Kelly Waggoner
35-33.1	Timothy Whitehair
35-33.2	Lyly & Donnie Freeland
35-33.2.1	Lyly & Donnie Freeland
35-33.3	Tabitha Richards & Steven Goff
35-33.4	Lyly & Donnie Freeland
35-33.5	Lyly & Donnie Freeland
35-33.6	Lyly & Janet Dodd
35-34	Lyly & Donnie Freeland
35-44.1	Herbert & Kelly Moyer
35-44.2	Gerald Lamm & Doris Locke
35-46	Gregory Dodd
35-46.1	Duane & Regina Riggs
35-7	Bonnie McCullough
39-8	Duane & Regina Riggs
39-8.1	Duane Riggs
39-9	Gamegetter LTD
39-14	William Catalina & Margaret Russell
39-15.1	Evero Van
39-15.2	Evero Van
39-15.3	John Jones Jr.
39-15.5	John Jones Jr., Et Al
39-15.7	Evero Van
39-16	John Jones Jr.
40-15	Wayne & Delphine Haddox
40-15.1	Earl H Riggs Sr.
40-15.2	Henry Riggs
40-15.3	Earl H Riggs Sr.
40-17	Dunne Riggs

	LEASES
A	MARK TAYLOR, ET AL
B	GLADYS JACKSON
C	WILSON DAVIS AND MARJORIE E. DAVIS
D	RAY COTTRILL ET AL
E	DONNA L. HILEY
F	NORMA JEAN GOFF AND CARL GOFF
G	JOHN D. DODD AND JANET M. DODD
H	MORGAN WINCE
I	LYLE M. FREELAND AND DONNIE D. FREELAND
J	LYLE M. FREELAND AND DONNIE D. FREELAND
K	MARY HOLLAND ET VIR
L	GREGORY BYRL DODD
M	JACQUELINE D. HAYNES
N	DONALD R. LEA AND MATTHEW B. LEA
O	WANEMA RIGGS
Q	COLUMBUS FOUNDATION
R	LLOYD MINEAR
S	JOHN D. JONES ET UX
T	WANEMA RIGGS
U	NORMA C. DAWSON
V	DUANE RIGGS
W	DANIEL HADDOX AND CLARETH HADDOX
Y	JOYCE ANN HOWARD
Z	JOSEPH A. HOWARD
AA	KENNETH B. PERINE AND PATRICIA PERINE

1H BOTTOM HOLE	
AND WELL REFERENCE TIE LINES ARE BASED ON GRID NORTH.	
(NAD) 83 (UTM) ZONE 17 COORDS	
WELL 1H TOP HOLE INFORMATION:	
N: 4,338,913m	E: 503,615m
BOTTOM HOLE INFORMATION:	
N: 4,343,571m	E: 502,545m
(NAD) 27 (UTM) ZONE 17 COORDS	
WELL 1H TOP HOLE INFORMATION:	
N: 14,234,536ft	E: 1,652,230ft
POINT OF ENTRY INFORMATION:	
N: 14,235,162ft	E: 1,653,790ft
BOTTOM HOLE INFORMATION:	
N: 14,249,820ft	E: 1,648,718ft

[illegible]

WATER WELLS		
W1	S 86°08' E	1093.5'
W2	S 81°22' W	1624.9'
W3	S 75°32' W	1309.4'
W4	S 71°11' W	1368.5'
W5	S 66°20' W	914.7'
W6	S 65°21' W	1193.6'
W7	N 74°39' E	1936.7'

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 PLL
220 MASONIC AVE. PENNSBORO
WEST VIRGINIA 26415

JOB # 24-011WA
DRAWING # KEEL1HR
SCALE 1" = 2000'
MINIMUM DEGREE OF
ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER
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 03/11/25

OPERATOR'S WELL# KEEL UNIT #1H

47 - 085 - 10553

STATE	COUNTY	PERMIT
-------	--------	--------

PAD LAYOUT

NOT TO

SCALE
VERT. UNIT 11X

JIB UNIT 1H 15'

SAIL UNIT 1H  15'

AFT UNIT 1H 15' 2°14'

ELLIOTT UNIT 1H 15' Z

DISPOSAL

WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL
(IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW
LOCATION: ELEVATION PROPOSED - 1,097' WATERSHED SOUTH FORK HUGHES RIVER
QUADRANGLE PULLMAN 7.5' DISTRICT UNION COUNTY RITCHIE
SURFACE OWNER LOUIS DANIEL EASTERDAY REVOCABLE LIVING TRUST ACREAGE 5.25 ACRES +/-
OIL & GAS ROYALTY OWNER JOSEPH A. HOWARD LEASE ACREAGE 5.25 ACRES±
PROPOSED WORK: DRILL CONVERT DRILL DEEPER X REDRILL
FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION PERFORATE NEW
FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) MOD-BHL
PLUG & ABANDON CLEAN OUT & REPLUG
TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,800' TVD 25,200' MD
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT CONRAD BASTON
ADDRESS 1615 WYNKOOP ST. ADDRESS 535 WHITE OAKS BLVD
DENVER, CO 80202 BRIDGEPORT, WV 26330

NOTE
NO OCCUPIED DWELLINGS OR
BUILDINGS TWO THOUSAND FIVE
HUNDRED (2,500) SQUARE FEET OR
LARGER USED TO HOUSE OR SHELTER
ANY CATTLE OR POULTRY HUSBANDRY
ARE LOCATED WITHIN SIX HUNDRED

REFERENCES

W4 NAIL, SET

23.5°46'

$$\frac{19}{22}$$


WELL NO. 1H 30-79

7
A7

STA

1" = 400' X NAIL
