

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, April 24, 2023 WELL WORK PERMIT Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION 1615 WYNKOOP STREET

DENVER, CO 80202

Re:

Permit approval for TANGERINE UNIT 1H

47-095-02866-00-00

This well work permit is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to any additional specific conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas Inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0450

Operator's Well Number: TANGERINE UNIT 1H

Farm Name: DAVID E BOWYER

U.S. WELL NUMBER: 47-095-02866-00-00

Horizontal 6A New Drill

Date Issued: 4/24/2023

	ES	w	400	ASS.	ALC: N	407	650EBB	1	V	V	
API	N	un	ıber		-						

PERMIT CONDITIONS

West Virginia Code § 22-6A-8(d) allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

- This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACE).
 Through this permit, you are hereby being advised to consult with USACE regarding this proposed activity.
- 2. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than one hundred (100) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
- 3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
- 4. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
- 5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled Water Well Regulations, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
- 6. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.
- 7. 24 hours prior to the initiation of the completion process the operator shall notify the Chief or his designee.
- 8. During the completion process the operator shall monitor annular pressures and report any anomaly noticed to the chief or his designee immediately.
- 9. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
- 10. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours
- 11. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, completion of any other permitted well work, and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov.

WW-6B (04/15) API NO. 47- 095 OPERATOR WELL NO. Tangerine Unit 1H
Well Pad Name: Dry Run Pad

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

1) Well Operato	or: Antero I	Resources	Corporat	494507062	095 - Tyler	Lincoln	Paden City 7.5'
				Operator ID	County	District	Quadrangle
2) Operator's W	Vell Number:	Tangerine	Unit 1H	Well Pac	Name: Dry F	lun Pad	
3) Farm Name/	Surface Own	er: David E	E. Bowyer	Public Roa	d Access: Dry	Run Road	I
4) Elevation, cu	irrent ground	: 1026'	Ele	evation, proposed	post-constructi	on: 1007'	
5) Well Type	(a) Gas	X	_ Oil	Unde	erground Storag	ge	
	Other						
	(b)If Gas	Shallow	<u>X</u>	Deep			
		Horizontal	X				
6) Existing Pad	: Yes or No	No			-1		
, .	0			pated Thickness a	•		
Marcellus Sh	ale: 6700' TV	D, Anticipate	d Thicknes	ss- 55 feet, Associa	ated Pressure- 2	2850#	
8) Proposed To	tal Vertical I	Depth: <u>670</u>	0' TVD				
9) Formation at	Total Vertic	al Depth:	Marcellus				
10) Proposed To	otal Measure	ed Depth:	19500' MI	D /			
11) Proposed H	orizontal Le	g Length:	9273' *0	Open to modificat	ion at a later o	date	
12) Approximat	te Fresh Wat	er Strata De	pths:	375', 520'	and the second s		
13) Method to I	Determine Fr	esh Water I	Depths: 47	7095002750000 Offset wel	records. Depths have	been adjusted a	according to surface elevations.
14) Approximat	te Saltwater	Depths: 16	53'				
15) Approximat	te Coal Seam	Depths: N	lone Antic	cipated			RECEIVED Office of Oil and Gas
16) Approxima	te Depth to P	ossible Voi	d (coal mi	ne, karst, other):	None Anticipa	ted	APR 10 2023
17) Does Propo directly overlying				ms Yes	No	X	WV Department of Environmental Protection
(a) If Yes, pro	vide Mine Ir	nfo: Name	:				
		Depth			2 PA		
		Seam:					
		Owne	r:				



WW-6B (04/15)

47095 02866 API NO. 47-095

OPERATOR WELL NO. Tangerine Unit 1H
Well Pad Name: Dry Run Pad

18)

CASING AND TUBING PROGRAM

ТҮРЕ	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	79#	100'	100'	CTS, 96 Cu. Ft.
Fresh Water	13-3/8"	New	J/K-55	54.5#	570'	570'	CTS, 594 Cu. Ft.
Coal	9-5/8"	New	J-/K55	36#	2500'	2500'	CTS, 1018 Cu. Ft.
Intermediate							
Production	5-1/2"	New	P-110CY	20#	19500'	19500'	CTS, 3986 Cu. Ft.
Tubing	2-3/8"	New	N-80	4.7#			
Liners							

ТҮРЕ	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"	0.375"	2250	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"	14,360	2500	Class G/H	~1.8
Tubing	2-3/8"	4.778"	0.19"	11,200			
Liners							

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PACKERS

APR 10 2023

Kiı	nd:	N/A		WV Department of Environmental Protection
Siz		N/A		
De	pths Set:	N/A		

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04/28/2023

WW-6B (10/14)

4709502866 API NO. 47- 095

OPERATOR WELL NO. Tangerine Unit 1H

Well Pad Name: Dry Run Pad

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

Drill a new horizontal shallow well into the Marcellus Shale.

*Antero will be air drilling the 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): 22.85 acres

22) Area to be disturbed for well pad only, less access road (acres): 9.70 acres

23) Describe centralizer placement for each casing string:

Conductor: no centralizers

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

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

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

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

Conductor: no additives, Class A/L cement.

Surface: Class A/L cement with 2-3% calcium chloride and 1/4 lb of flake Intermediate: Class A/L cement with 1/4 lb of flake, 5 gallons of clay treat

Production: Lead cement- 50/50 Class H/Poz + 1.5% salt + 1% C-45 + 0.5% C-16a + 0.2% C-12 + 0.45% C-20 + 0.05% C-51 Production: Tail cement- Class G/H + 45 PPS Calcium Carbonate + 1.0% FL-160 + 0.2% ACGB-47 + 0.05% ACSA-51 + 0.2% ACR-20

APR 10 2023

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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.

WW-9 (4/16)

API Number	47 -	095	-	
Ope	rator's	Well No.	Tangerine Unit 1H	

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

FLUIDS/ CUI TINGS DISPOS	AL & RECLAMATION I LAN
Operator Name Antero Resources Corporation	OP Code 494507062
Watershed (HUC 10) Outlet Middle Island Creek	Quadrangle Paden City 7.5'
Do you anticipate using more than 5,000 bbls of water to complete	e the proposed well work? Yes No
Will a pit be used? Yes No V	
If so, please describe anticipated pit waste: No plt will be used	t this site (Drilling and Flowback Fluids will be stored in tanks. Cuttings will be tanked and hauled off site.)
Will a synthetic liner be used in the pit? Yes	No If so, what ml.? N/A
Proposed Disposal Method For Treated Pit Wastes:	
Reuse (at API Number Future permitted w Off Site Disposal (Supply form WW-9 Other (Explain	fumber *UIC Permit # will be provided on Form WR-34) sell locations when applicable. API# will be provided on Form WR-34) for disposal location) (Meadowfill Landfill Permit #SWF-1032-98) Northwestern Landfill Permit #SWF-1025/ WV0109410 Wetzel County Landfill (Permit #SWF-1021)
Will closed loop system be used? If so, describe: Yes, fluids store	ed in tanks, cuttings removed offsite and taken to landfill.
Drilling medium anticipated for this well (vertical and horizontal)	Surrace - Air/resnwater, intermediate -
-If oil based, what type? Synthetic, petroleum, etc. Synthetic	netic
Additives to be used in drilling medium? Please See Attachment	
Drill cuttings disposal method? Leave in pit, landfill, removed of	fsite, etcDrill cuttings stored in tanks, removed offsite and taken to landfill.
-If left in pit and plan to solidify what medium will be us	ed? (cement, lime, sawdust) N/A
	I (Permit #SWF-1032-98), Northwestern Landfill (Permit # SWF-1025/WV0109410) y Landfill (Permit #SWF-1021)
Permittee shall provide written notice to the Office of Oil and Gas West Virginia solid waste facility. The notice shall be provided w where it was properly disposed.	of any load of drill cuttings or associated waste rejected at any
on August 1, 2005, by the Office of Oil and Gas of the West Virg provisions of the permit are enforceable by law. Violations of a law or regulation can lead to enforcement action. I certify under penalty of law that I have personally eapplication form and all attachments thereto and that, based	ditions of the GENERAL WATER POLLUTION PERMIT issued in Department of Environmental Protection. I understand that the my term or condition of the general permit and/or other applicable examined and am familiar with the information submitted on this on my inquiry of those individuals immediately responsible for e, accurate, and complete. I am aware that there are significant by of fine or imprisonment. RECEIVED Office of Oil and Gas
Company Official (Typed Name) Gretchen Kohler	APR 10 2023
Company Official Title Director Environmental & Regulatory Comp	liance
Company Official Title Bilector Elivino michael d Regulatory Comp	WV Department of Environmental Protection
Subscribed and sworn before me this 22 day of	
Stefn Gaspar	Notary Public
Stefin Gaspar My commission expires November 15, 2	STEFAN GASPAR NOTARY PUBLIC STATE OF COLORADO NOTARY ID 20224043669 MY COMMISSION EXPIRES NOVEMBER 15, 2026

Sh

04/28/2023

orm WW-9		Operator's \	Well No. Tangerine Unit 1H
antero Resources Co	rporation	,	
roposed Revegetation Treatme	ent: Acres Disturbed 22.85 a	cres Prevegetation p	Н
Lime 2-4	Tons/acre or to correct to pH		
Fertilizer type Hay or s	straw or Wood Fiber (will be used v	where needed)	,
Fertilizer amount 500	lb	s/acre	•
Mulch 2-3	Tons/a	acre	
Access Road "A	" (9 44 acres) + Well Pad & Water Containm	ent Pad (9 70 acres) + Excess/Topsoil Material St Acres	ckpiles (3.71 acres) = 22.85
	Seed	d Mixtures	
Tem	porary	Perm	anent
Seed Type	lbs/acre	Seed Type	lbs/acre
Annual Ryegrass	40	Crownvetch	10-15
Field Bromegrass	40	Tall Fescue	30
ee attached Table IV-3 for additional	seed type (Dry Run Pad Design)	See attached Table IV-4A for additiona	al seed type (Dry Run Pad Design)
or type of grass seed requ	uested by surface owner	*or type of grass seed requ	ested by surface owner
hotocopied section of involve	d 7.5' topographic sheet.	all disturbed areas	
			RECEIVED Office of Oil and Ga APR 10 2023 WV Department of Environmental Protect



911 Address 207 Dry Run Road Sisterville, WV 26175

Well Site Safety Plan Antero Resources

Well Name: Dry Run Unit 5H, Ringnus Unit 1H-2H, Ripple Unit 1H-2H & Tangerine Unit 1H-2H

Pad Location: DRY RUN PAD

Tyler County/Lincoln District

GPS Coordinates:

Entrance - Lat 39.548653/Long -80.907797 (NAD83)

Pad Center - Lat 39.551681/Long -80.911397 (NAD83)

Driving Directions:

From WV-18: Turn right onto CO 18/5 (Dry Run Road) and travel for 0.6 miles. Continue straight onto CO 18/12 for 0.3 miles. Lease road entrance is on the left.

Alternate Route:

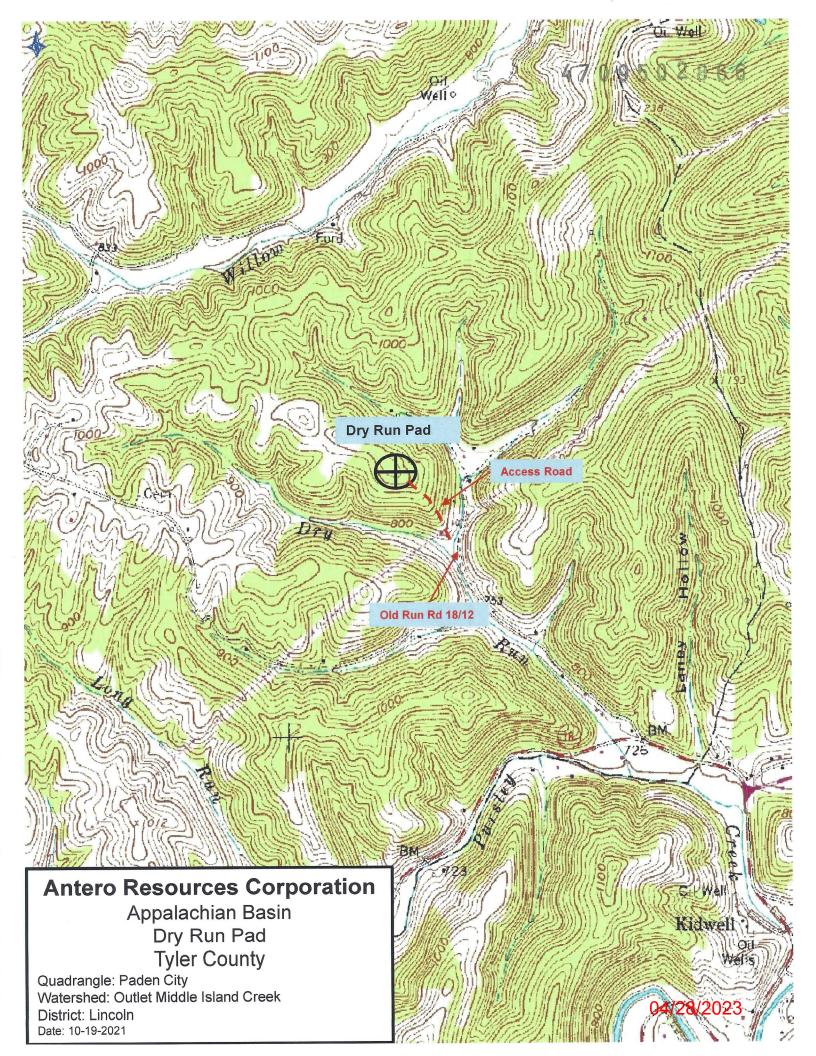
From WV-18, turn right onto CO 18/5 (Dry Run Rd) and travel for 0.6 miles. Continue RECEIVED straight onto CO 18/12 and travel for 0.3 miles. The Dry Run Lease Road will be on the General Gas

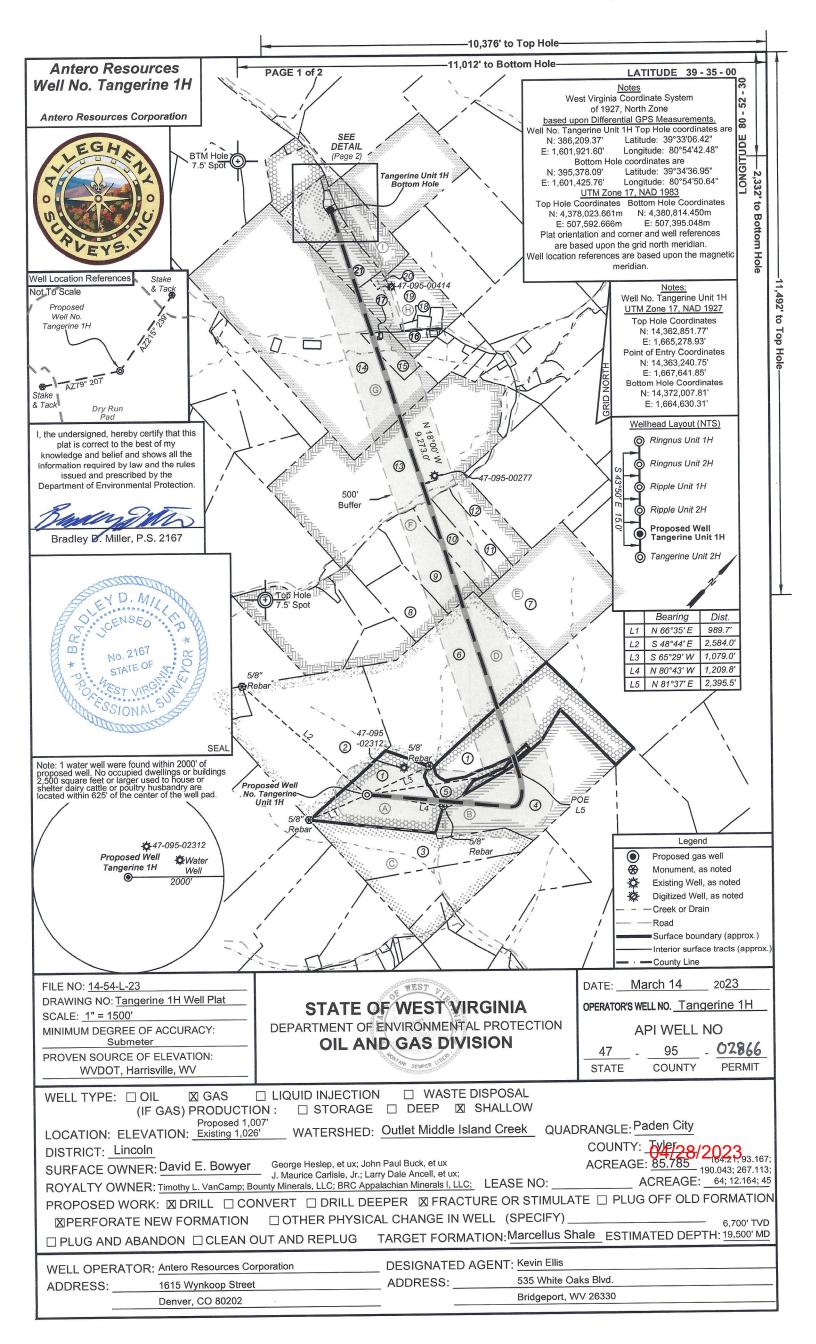
APR 10 2023

WV Department of Environmental Protection

EMERGENCY (24 HOUR) CONTACT 1-800-878-13731

04/28/2023 = 10/23

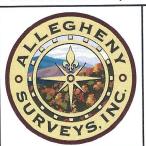


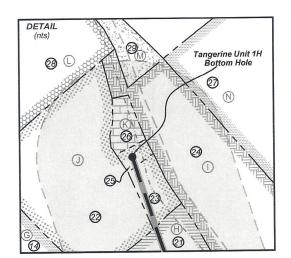


Antero Resources Well No. Tangerine 1H

PAGE 2 of 2

Antero Resources Corporation





			Bk/Pg	A
ID	TM-Par	Owner		Acres
1	9-19	David E. Bowyer	OR16/22	85.78
2	9-17	Ethan A.& Marsha L. Riffle	323/649	90.04
3	9-31.1	David E. Bowyer	OR16/22	38.04
4	9-21	Thomas K. Brotherton	23/310	64.00
5	9-20	Jason & Jessica Greathouse & Laken Curtis	OR59/513	7.38
6	9-18	Michael V. & Debra K. Smith	331/94	100.00
7	9-10	Robert N. & Rita Paulette Christen	337/632	60.00
8	9-7.3	Larry G. & Joyce Ann Kaprich	375/254	17.23
9	9-8	Tammy Williams & Alf Riggs	372/134	25.24
10	9-8.1	Steven Wayne & Cynthia Dennis	317/540	3.41
11	9-7.4	Terry L. Nelson, et al	456/828	10.78
12	9-7.2	Robert N. & Rita Paulette Christen	339/333	13.05
13	9-7.1	Carl L. & Donna M. Yoho	320/456	117.00
14	5-19	John P. & Susan Buck	337/634	159.21
15	5-23	John Paul & Susan Buck	337/634	5.00
16	5-24.6	James G. & Brittany E. Flesher	577/289	3.82
17	5-22	Church of Christ	171/13	
18	5-24.4	Becky L. Anderson	299/173	0.75
19	5-24	Jamie Lee Moore and Cathy Jean Moore	419/556	25.22
20	5-24.2	Todd A. Keller	312/346	1.00
21	5-24.5	Jessica D. & Jonathan L. Moffit	565/511	11.19
22	5-29.2	Larry Dale & Kay Lynn Ancell	273/511	11.00
23	5-29.1	Larry & Kay L. Ancell	229/446	1.38
24	5-28	Reed J. Davis	175/220	14.00
25	5-29	Larry Ancell	WB27/6	
26	5-29.3	Ray T. & Amy S. Fluharty	452/795	0.83
27	5-27	Robert L. Oldham and Cynthia M. Oldham, et al	OR24/300	45.00
28	5-30	Timothy J. & Miranda Haynes	OR151/407	13.25
29	5-31.1	Ronnie Tate & Ellen Jane Eddy	304/292	6.00

	Leases
Α	Timothy L. Vancamp
В	Bounty Minerals, LLC
С	Tamara M. Reynolds
D	BRC Appalachian Minerals I LLC
Е	Robert N. & Rita Paulette Christen
F	J. Maurice Carlisle Jr.
G	John Paul Buck, et alx
Н	George Heslep, et ux
1	Carolyn J. Davis
J	Larry Dale Ancell, et ux
K	J&N Management Enterprises, LLC
	Heritage Resources
L	Marcellus Minerals, LLC
М	Mary Evans
N	Richard A. Slider

FILE NO: <u>14-54-L-23</u>	
DRAWING NO: Tangerine 1H Well Plat	_
SCALE: 1" = 1500'	
MINIMUM DEGREE OF ACCURACY: Submeter	
PROVEN SOURCE OF ELEVATION: WVDOT, Harrisville, WV	

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OIL AND GAS DIVISION

DATE: March 14 2023

OPERATOR'S WELL NO. Tangerine 1H

API WELL NO

47 - 95 - 02866

PROVEN SOURCE OF ELEVATION: WVDOT, Harrisville, WV	OIL AN	THAM SENFER LINE		47 - STATE	95 COUNTY	- <u>02866</u> PERMIT
WELL TYPE: OIL GAS (IF GAS) PRODUCTIO Proposed 1,0 LOCATION: ELEVATION: Existing 1,026 DISTRICT: Lincoln SURFACE OWNER: David E. Bowyer ROYALTY OWNER: Timothy L. VanCamp; Bac PROPOSED WORK: DRILL CO MPERFORATE NEW FORMATION PLUG AND ABANDON CLEAN C	O7' George Heslep, et ux; Joh J. Maurice Carlisle, Jr.; La punty Minerals, LLC; BRC App NVERT □ DRILL DE □ OTHER PHYSIC.	DEEP SHALLOW Outlet Middle Island Creek on Paul Buck, et ux arry Dale Ancell, et ux; calachian Minerals I, LLC; LEASE EPER FRACTURE OR SAL CHANGE IN WELL (SP TARGET FORMATION: Mail	NO: STIMULAT ECIFY) rcellus Sha	COUNTY: ACREAGE	E: 85.785 ACREAGE: B: OFF OLD	164-21-93.167; 90.043; 267.113; 64; 12.164; 45 FORMATION
WELL OPERATOR: Antero Resources Co	rporation	_ DESIGNATED AGENT: Ke			100 50000000000000000000000000000000000	
ADDRESS: 1615 Wynkoop Street		_ ADDITEOU.	35 White Oal			
Denver, CO 80202		Bı	ridgeport, W	V 26330		

Tangerine Unit 1H

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
1	A: Timothy L. VanCamp Lease			
,	Timothy L. VanCamp Lease	Chesapeake Appalachia LLC	1/8	354/704
	Chesapeake Appalachia LLC	Statoil USA Onshore Properties Inc.	Assignment	423/152
	Statoil USA Onshore Properties Inc.	EQT Production Company	Assignment	539/239
	EQT Production Company	Antero Resources Corporation	Assignment	134/172
	, , ,			,
/	B: Bounty Minerals, LLC Lease			
	Bounty Minerals, LLC	Antero Resources Corporation	1/8+	623/575
	A Maria and A A A A A A A A A A A A A A A A A A A			
/	A: Timothy L. VanCamp Lease	Character Association 12 11 C	4.40	0.7.4/7.0.4
	Timothy L. VanCamp	Chesapeake Appalachia LLC	1/8	354/704
	Chesapeake Appalachia LLC	Statoil USA Onshore Properties Inc.	Assignment	423/152
	Statoil USA Onshore Properties Inc.	EQT Production Company	Assignment	539/239
	EQT Production Company	Antero Resources Corporation	Assignment	134/172
/	D: BRC Appalachian Minerals I LLC Lease			
	BRC Appalachian Minerals I LLC	BRC Working Interest Company LLC	1/8	369/300
	BRC Working Interest Company LLC	Chesapeake Appalachia LLC	Assignment	369/784
	Chesapeake Appalachia LLC	Statoil USA Onshore Properties Inc.	Assignment	378/764
	Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC	Assignment	470/668
	SWN Exchange Titleholder LLC	SWN Production Company LLC	Assignment Office of Oil and Gas	9/404
	SWN Production Company LLC	Antero Exchange Properties	Assignment Of Oil and Gas	544/242
	Antero Exchange Properties	Antero Resources Corporation	Merger MAD 0	525/315
	Time of Exemange 11 openies	Antero Resources corporation	Merger MAR 2 3 2023	323/313
1	F: J. Maurice Carlisle, Jr. Lease		WV 12	
	J. Maurice Carlisle, Jr.	Antero Resources Corporation	WV Department of 1/8+Environmental Protection	229/723
,			Protection	
/	G: John Paul Buck, et ux Lease			
	John Paul Buck, et ux	Antero Resources Corporation	1/8+	233/447
	H: George Heslep, et ux Lease			
1	George Heslep, et ux	Joseph S. Gruss	1/8	176/240
	Joseph S. Gruss	Mareve Oil Corp, Evmar Oil Corp, Jogruss Oil Corp,	Assignment	176/502
	303Cpii 31 G1033	Jomacare Inc.	Assignment	170/302
	Mareve Oil Corp, Evmar Oil Corp, Jogruss Oil	Quaker State Oil Refining Corporation	Assignment	200/152
	Corp, Jomacare Inc.	Quaker State Oil Remning Corporation	Assignment	200/132
	Quaker State Oil Refining Corporation	Quaker State Corporation	Name Change	WVSOS
	Quaker State Corporation	Belden and Blake Corporation	Assignment	311/584
	Belden and Blake Corporation	Peake Energy Inc.	Assignment	321/340
	Peake Energy Inc.	North Coast Energy Eastern Inc.	Name Change	8/702
	North Coast Energy Eastern Inc.	EXCO-North Coast Energy Eastern Inc.	Name Change	9/80
	EXCO-North Coast Energy Eastern Inc.	EXCO Resources	Name Change	WVSOS
	EXCO Resources	EXCO Production Company	Name Change	WVSOS
	EXCO Production Company	Antero Resources Appalachian Corporation	Assignment	417/307
	Antero Resources Appalachian Corporation	Antero Resources Corporation	Merger	557/430
		F		

Operator's Well No. Tangerine Unit 1H

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
(): Larry Dale Ancell, et ux Lease	Lower Dela Arred Later			Bookiruge
	Larry Dale Ancell, et ux	Antero Resources Corporation	1/8+	0587/0623
				CEIVED Oil and Gas
			MAR	2 3 2023
			WV De	partment of

*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.

- 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 Ledy	-
Its:	Senior Vice President of Land	

Page Lof 1

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

March 20, 2023

West Virginia Department of Environmental Protection Chief, Office of Oil and Gas Attn: Mr. James Martin 601 57th Street SE Charleston, WV 25304

RE:

Tangerine Unit 1H

Quadrangle: Paden City 7.5'

Tyler County/Lincoln District, West Virginia

Mr. Martin:

Antero Resources Corporation (Antero) is submitting the following application for a new well work permit for the Tangerine Unit 1H horizontal shallow well. As an authorized representative, I certify that Antero has the right to extract, produce or market the oil or gas for all leases through which the Tangerine Unit 1H horizontal lateral will drill through including any and all roads crossed under as identified on the attached survey plat.

Sincerely,

Tyler Adams Landman

Office of Oil and Gas
MAR 2 3 2023

Wy Department of Environmental Protection

WW-PN (11-18-2015)

Horizontal Natural Gas Well Work Permit **Application Notice By Publication**

Notice is hereby given:

Pursuant to West Virginia Code 22-6A-10(e) prior to filing an application for a permit for a horizontal well the applicant shall publish in the county in which the well is located or is proposed to be located a Class II legal advertisement.

Paper: Tyler Star News		
Public Notice Date: 02/01/2023 & 02/08/2023	3	
The following applicant intends to apply for a surface excluding pipelines, gathering lines an any thirty day period.	horizontal nated roads or utili	ural well work permit which disturbs three acres or more of zes more than two hundred ten thousand gallons of water in
Applicant: Antero Resources Corporation		Well Number: Tangerine Unit 1H
Address: 1615 Wynkoop St. Denver, CO 802	02	
Business Conducted: Natural gas production	1.	
Location –		
State: West Virginia		County: Tyler
District: Lincoln		Quadrangle: Paden City 7.5'
UTM Coordinate NAD83 Northing:	4378023.661m	
UTM coordinate NAD83 Easting:	507592.666m	The state of the s
Watershed: Outlet Middle Island Creek		

Coordinate Conversion:

To convert the coordinates above into longitude and latitude, visit: http://tagis.dep.wv.gov/convert/llutm conus.php

Electronic notification:

To receive an email when applications have been received or issued by the Office of Oil and Gas, visit http://www.dep.wv.gov/insidedep/Pages/DEPMailingLists.aspx to sign up.

Reviewing Applications:

Copies of the proposed permit application may be reviewed at the WV Department of Environmental Protections of the proposed permit application may be reviewed at the WV Department of Environmental Protections of the proposed permit application may be reviewed at the WV Department of Environmental Protections of the proposed permit application may be reviewed at the WV Department of Environmental Protections of the proposed permit application may be reviewed at the WV Department of Environmental Protections of the proposed permit application may be reviewed at the WV Department of Environmental Protections of the proposed permit application may be reviewed at the WV Department of Environmental Protections of the proposed permit application may be reviewed at the WV Department of Environmental Protections of the proposed permit application may be reviewed at the WV Department of Environmental Protections of the proposed permit application may be reviewed at the WV Department of Environmental Protections of the protection of the protect headquarters, located at 601 57th Street, SE Charleston, WV 25304 (304-926-0450). Full copies or scans of the crion proposed permit application will cost \$15, whether mailed or obtained at DEP headquarters. Copies may be requested by calling the office or by sending an email to DEP.comments@wv.gov.

Submitting Comments:

Comments may be submitted online at https://apps.dep.wv.gov/oog/comments/comments.cfm, or by letter to Permit Review, Office of Oil and Gas, 601 57th Street, SE Charleston, WV 25304. Please reference the county, well number, and operator when using this option.

Regardless of format for comment submissions, they must be received no later than thirty days after the permit application is received by the Office of Oil and Gas.

For information related to horizontal drilling visit: www.dep.wv.gov/oil-and-gas/pages/default.aspx

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE CERTIFICATION

Date of Notice Certification: 03/21/2023	API No. 4	7_ 095 _	
		Well No. Tan	gerine Unit 1H
NT of Table 1		Vame: Dry Ru	
Notice has been given:			
Pursuant to the provisions in West Virginia Code § 22-6 below for the tract of land as follows:	6A, the Operator has provided the red	quired parties	with the Notice Forms listed
Tolle 115.		1 1	The same is to the end of this history
State: West Virginia County: Tyler	UTM NAD 83 Easting:	507592.666m	
District: Lincoln	Northing:	4378023.661m	
Quadrangle: Paden City 7.5'	Public Road Access:	Dry Run Road	
Watershed: Outlet Middle Island Creek	Generally used farm name:	David E. Bowyer	
- Contraction of the contraction	_		
Pursuant to West Virginia Code § 22-6A-7(b), every permit application filed under this section shall be on a form as may be prescribed by the secretary, shall be verified and shall contain the following information: (14) A certification from the operator that (i) it has provided the owners of the surface described in subdivisions (1), (2) and (4), subsection (b), section ten of this article, the information required by subsections (b) and (c), section sixteen of this article; (ii) that the requirement was deemed satisfied as a result of giving the surface owner notice of entry to survey pursuant to subsection (a), section ten of this article six-a; or (iii) the notice requirements of subsection (b), section sixteen of this article were waived in writing by the surface owner; and Pursuant to West Virginia Code § 22-6A-11(b), the applicant shall tender proof of and certify to the secretary that the notice requirements of section ten of this article have been completed by the applicant.			
Pursuant to West Virginia Code § 22-6A, the Operator that the Operator has properly served the required part.	has attached proof to this Notice Coies with the following:	ertification	
*PLEASE CHECK ALL THAT APPLY			OOG OFFICE USE ONLY
	SMIC ACTIVITY WAS CONDUCT	ED	RECEIVED/ NOT REQUIRED
2. NOTICE OF ENTRY FOR PLAT SURVEY of	NO PLAT SURVEY WAS CO	NDUCTED	□ RECEIVED
NOT	NOTICE NOT REQUIRED BECAU ICE OF ENTRY FOR PLAT SURV S CONDUCTED or	SE EY	RECEIVED/ NOT REQUIRED
	WRITTEN WAIVER BY SURFAC (PLEASE ATTACH)		
4. NOTICE OF PLANNED OPERATION	Office RECEIV.	ED	☐ RECEIVED
5. PUBLIC NOTICE	MAR 2 2 2		□ RECEIVED
■ 6. NOTICE OF APPLICATION	Environmental Prot	Of Patient	☐ RECEIVED

Required Attachments:

The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication date verification or the associated Affidavit of Publication. The attached Notice Forms and Certifications of Notice shall serve as proof that the required parties have been noticed as required under West Virginia Code § 22-6A. Pursuant to West Virginia Code § 22-6A-11(b), the Certification of Notice to the person may be made by affidavit of personal service, the return receipt card or other postal receipt for certified mailing.

Certification of Notice is hereby given:

THEREFORE, I Jon McEvers, have read and understand the notice requirements within West Virginia Code § 22-6A. I certify that as required under West Virginia Code § 22-6A, I have served the attached copies of the Notice Forms, identified above, to the required parties through personal service, by registered mail or by any method of delivery that requires a receipt or signature confirmation. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Notice Certification and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.				
	, vertiling the possion	10) 01 1111	c and impriso	
Well Operator	Antero Resources Corporation		Address:	1615 Wynkoop Street
By:	Jon McEvers	ver	1	Denver, CO 80202
Its:	Senior VP of Operations		Facsimile:	303-357-7315
Telephone:	303-357-6799		Email:	mturco@anteroresources.com
MY CO	STEFAN GASPAR NOTARY PUBLIC STATE OF COLORADO NOTARY ID 20224043669 IMISSION EXPIRES NOVEMBER 15, 2026		Stef	rn before me this <u>22</u> day of <u>March</u> , <u>2023</u> . Notary Public pires <u>November</u> 15, 2026

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at deepprivacyofficer@wv.gov.

Office of Oil and Gas

MAR 2 3 2023

WV Departmental Protection

WW-6A (9-13) API NO. 47-095 0 2 8 6 6

OPERATOR WELL NO. Tangerine Unit 1H

Well Pad Name: Dry Run Pad

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS $\frac{\text{NOTICE OF APPLICATION}}{\text{NOTICE OF APPLICATION}}$

Notice Time Requirement: notice shall be provided no later than the filing date of permit application. Date of Notice: 03/22/2023 Date Permit Application Filed: 03/22/2023 Notice of: PERMIT FOR ANY ☐ CERTIFICATE OF APPROVAL FOR THE WELL WORK CONSTRUCTION OF AN IMPOUNDMENT OR PIT Delivery method pursuant to West Virginia Code § 22-6A-10(b) ☐ PERSONAL REGISTERED ☑ METHOD OF DELIVERY THAT REQUIRES A **SERVICE** MAIL RECEIPT OR SIGNATURE CONFIRMATION Pursuant to W. Va. Code § 22-6A-10(b) no later than the filing date of the application, the applicant for a permit for any well work or for a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site Safety Plan ("WSSP") to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule. ☑ Application Notice ☑ WSSP Notice ☑ E&S Plan Notice ☑ Well Plat Notice is hereby provided to: ☑ SURFACE OWNER(s) COAL OWNER OR LESSEE Name: NO DECLARATIONS ON RECORD WITH COUNTY Name: David E. Bowyer Address: 12088 Middle Island Road RECENTRESS: Office of Oil and Gas

COAL OPERATOR Alma, WV 26320 Name: MAR 2 Name: NO DECLARATIONS ON RECORD WITH COUNTY Address: SURFACE OWNER(s) (Road and/or Other Disturbance)

SURFACE OWNER(s) (Road and/or Other Disturbance)

SURFACE OWNER OF WATER WELL

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s) Address: Name: PLEASE SEE ATTACHMENT Name: Address: Address: OPERATOR OF ANY NATURAL GAS STORAGE FIELD ☐ SURFACE OWNER(s) (Impoundments or Pits) Name: Name: Address: Address: *Please attach additional forms if necessary

WW-6A (8-13)

API NO. 47- 095

OPERATOR WELL NO. Tangerine Unit 1H

Well Pad Name: Dry Run Pad

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-10(b), notice is hereby given that the undersigned well operator has applied for a permit for well work or for a certificate of approval for the construction of an impoundment or pit.

This Notice Shall Include:

Pursuant to W. Va. Code § 22-6A-10(b), this notice shall include: (1) copies of the application; (2) the erosion and sediment control plan required by section seven of this article; and (3) the well plat.

Pursuant to W. Va. Code § 22-6A-10(f), this notice shall include: (1) a statement of the time limits for filing written comments; (2) who may file written comments; (3) the name and address of the secretary for the purpose of filing the comments and obtaining additional information; and (4) a statement that the persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

Pursuant to W. Va. Code R. § 35-8-5.7.a, the operator shall provide the Well Site Safety Plan to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Pursuant to W. Va. Code R. § 35-8-15.2.c, this notice shall: (1) contain a statement of the surface owner's and water purveyor's right to request sampling and analysis; (2) advise the surface owner and water purveyor of the rebuttable presumption for contamination or deprivation of a fresh water source or supply; advise the surface owner and water purveyor that refusal to allow the operator to conduct a pre-drilling water well test constitutes a method to rebut the presumption of liability; (3) advise the surface owner and water purveyor of his or her independent right to sample and analyze any water supply at his or her own expense; advise the surface owner and water purveyor whether or not the operator will utilize an independent laboratory to analyze any sample; and (4) advise the surface owner and or water purveyor that he or she can obtain from the Chief a list of water testing laboratories in the subject area capable of and qualified to test water supplies in accordance with standard acceptable methods.

Additional information related to horizontal drilling may be obtained from the Secretary, at the WWoDefarment of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-MAR 2 3 2023 and-gas/pages/default.aspx.

Well Location Restrictions

Environment to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured softzentally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may how be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No well pad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, nothing contained in this section prevents an operator from conducting the activities permitted or authorized by a Clean Water Act Section 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state or within the restricted areas referenced in this section. (d) The well location restrictions set forth in this section shall not apply to any well on a multiple well pad if at least one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 31, 2012, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items

WW-6A (8-13)

API NO. 47-095

OPERATOR WELL NO. Tangerine Unit 1H

Well Pad Name: Dry Run Pad

examined in the study required by this subsection, the secretary shall have the authority to propose for promulgation legislative rules establishing guidelines and procedures regarding reasonable levels of noise, light, dust and volatile organic compounds relating to drilling horizontal wells, including reasonable means of mitigating such factors, if necessary.

Water Well Testing:

Pursuant to West Virginia Code § 22-6A-10(d), notification shall be made, with respect to surface landowners identified in subsection (b) or water purveyors identified in subdivision (5), subsection (b) of this section, of the opportunity for testing their water well. The operator shall provide an analysis to such surface landowner or water purveyor at their request.

Water Testing Laboratories:

Pursuant to West Virginia Code § 22-6A-10(i), persons entitled to notice pursuant to subsection (b) of this section may contact the department to ascertain the names and locations of water testing laboratories in the subject area capable and qualified to test water supplies in accordance with standard accepted methods. In compiling that list of names the department shall consult with the state Bureau for Public Health and local health departments. A surface owner and water purveyor has an independent right to sample and analyze any water supply at his or her own expense. The laboratory utilized by the operator shall be approved by the agency as being certified and capable of performing sample analyses in accordance with this section.

Rebuttable Presumption for Contamination or Deprivation of a Fresh Water Source or Supply:

W. Va. Code § 22-6A-18 requires that (b) unless rebutted by one of the defenses established in subsection (c) of this section, in any action for contamination or deprivation of a fresh water source or supply within one thousand five hundred feet of the center of the well pad for horizontal well, there is a rebuttable presumption that the drilling and the oil or gas well or either was the proximate cause of the contamination or deprivation of the fresh water source or supply. (c) In order to rebut the presumption of liability established in subsection (b) of this section, the operator must prove by a preponderance of the evidence one of the following defenses: (1) The pollution existed prior to the drilling or alteration activity as determined by a predrilling or prealteration water well test. (2) The landowner or water purveyor refused to allow the operator access to the property to conduct a predrilling or prealteration water well test. (3) The water supply is not within one thousand five hundred feet of the well. (4) The pollution occurred more than six months after completion of drilling or alteration activities. (5) The pollution occurred as the result of some cause other than the drilling or alteration activity. (d) Any operator electing to preserve its defenses under subdivision (1), subsection (c) of this section shall retain the services of an independent certified laboratory to conduct the predrilling or prealteration water well test. A copy of the results of the test shall be submitted to the department and the surface owner or water purveyor in a manner prescribed by the secretary. (e) Any operator shall replace the water supply of an owner of interest in real property who obtains all or part of that owner's supply of water for domestic, agricultural, industrial or other legitimate use from an underground or surface source with a comparable water supply where the secretary determines that the water supply has been affected by contamination, diminution or interruption proximately caused by the oil or gas operation, unless waived in writing by that owner. (f) The secretary may order the operator conducting the oil or gas operation to: (1) Provide an emergency drinking water supply within twenty-four hours; (2) Provide temporary water supply within seventy-two hours; (3) Within thirty days begin activities to establish a permanent water supply or submit a proposal to the secretary outlining the measures and timetables to be used in establishing a permanent supply. The total time in providing a permanent water supply may not exceed two years. If the operator demonstrates that providing a permanent replacement water supply cannot be completed within two years, the secretary may extend the time frame on case-by-case basis; and (4) Pay all reasonable costs incurred by the real property owner in securing a water supply. (g) A person as described in subsection (b) of this section aggrieved under the provisions of subsections (b), (e) or (f) of this section may seek relief in court... (i) Notwithstanding the denial of the operator of responsibility for the damage to the real property owner's water supply or the status of any appeal on determination of liability for the damage to the real property owner's water supply, the operator may not discontinue providing the required water service until authorized to do so by the secretary or a court of competent jurisdiction.

Written Comment:

Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written comments with the secretary as to the location or construction of the applicant's proposed well with the secretary. All persons described in West Virginia Code § 22-6A-10(b) may file written application or construction of the applicant's proposed well work to the Secretary at:

Chief, Office of Oil and Gas Department of Environmental Protection 601 57th St. SE Charleston, WV 25304 (304) 926-0450

WV Department of Environmental Protection

Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water. **NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.**

WW-6A (8-13) 4709502866

OPERATOR WELL NO. Tangerine Unit 1H

Well Pad Name: Dry Run Pad

Time Limits and Methods for Filing Comments.

The law requires these materials to be served on or before the date the operator files its Application. You have THIRTY (30) DAYS after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Pursuant to West Virginia Code § 22-6A-11(c)(2), Any objections of the affected coal operators and coal seam owners and lessees shall be addressed through the processes and procedures that exist under sections fifteen, seventeen and forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article. The written comments filed by the parties entitled to notice under subdivisions (1), (2), (4), (5) and (6), subsection (b), section ten of this article shall be considered by the secretary in the permit issuance process, but the parties are not entitled to participate in the processes and proceedings that exist under sections fifteen, seventeen or forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article.

Comment Requirements

Your comments must be in writing and include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

Disclaimer: All comments received will be placed on our web site http://www.dep.wv.gov/oil-and-gas/Horizontal-Permits/Pages/default.aspx and the applicant will automatically be forwarded an email notice that such comments have been submitted. The applicant will be expected to provide a response to comments submitted by any surface owner, water purveyor or natural gas storage operator noticed within the application.

Permit Denial or Condition

The Chief has the power to deny or condition a well work permit. Pursuant to West Virginia Code § 22-6A-8(d), the permit may not be issued or be conditioned, including conditions with respect to the location of the well and access roads prior to issuance if the director determines that:

- (1) The proposed well work will constitute a hazard to the safety of persons;
- (2) The plan for soil erosion and sediment control is not adequate or effective;
- (3) Damage would occur to publicly owned lands or resources; or
- (4) The proposed well work fails to protect fresh water sources or supplies.

A permit may also be denied under West Virginia Code § 22-6A-7(k), the secretary shall deny the issuance of a permit if the secretary determines that the applicant has committed a substantial violation of a previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit, or a substantial violation of one or more of the rules promulgated under this article, and in each instance has failed to abate or seek review of the violation within the time prescribed by the secretary pursuant to the provisions of subdivisions (1) and (2), subsection (a), section five of this article and the rules promulgated hereunder, which time may not be unreasonable.

Pursuant to West Virginia Code § 22-6A-10(g), any person entitled to submit written comments to the secretary pursuant to subsection (a), section eleven of this article, shall also be entitled to receive from the secretary a copy of the permit as issued or a copy of the order modifying or denying the permit if the person requests receipt of them as a part of the written comments submitted concerning the permit application. Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

Office RECEIVED of Oil and Gas
MAR 2 3 2023

WV Department of Environmental Protection

WW-6A (8-13)

Telephone:

Email:

API NO. 47-095 OPERATOR WELL NO. Tangerine Unit 2H Well Pad Name: Dry Run Pad

Notice is hereby given by: Well Operator: Antero Resources Corporation

(303) 357-7310

mturco@anteroresources.com/

MELELANGRESS:

1615 Wynkoop Street

Denver, CO 80202

Facsimile: 303-357-7315

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

STEFAN GASPAR NOTARY PUBLIC STATE OF COLORADO NOTARY ID 20224043669 MY COMMISSION EXPIRES NOVEMBER 15, 2026

Subscribed and sworn before me this 22 day of March. 2023

Steran Gaspar Notary Public

My Commission Expires November 15 2026

Office of Oil and Gas WV Department of Environmental Protection

WW-6A4 (1/12) Operator Well No. Tangerine Unit 1H

Multiple Wells on Dry Run Pad

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF INTENT TO DRILL

Pursuant to W. Va. Code § 22-6A-16(b), the Notice of Intent to Drill is only required if the notice requirements of W. Va. Code § 22-6A-10(a) have NOT been met or if the Notice of Intent to Drill requirement has NOT been waived in writing by the surface owner.

Notice Time R Date of Notice:	equirement: Notice shall be provided at least 101/25/2023 Date Permit	ast TEN (10) days prior to filing a t Application Filed: 03/22/2023	permit application.
Delivery metho	od pursuant to West Virginia Code § 22-6	6A-16(b)	
☐ HAND	CERTIFIED MAIL		
DELIVER		ESTED	
receipt requested rilling a horized of this subsection may and if available,	Va. Code § 22-6A-16(b), at least ten days point of the surface owner ontal well: <i>Provided</i> , That notice given pure on as of the date the notice was provided to be waived in writing by the surface owner, facsimile number and electronic mail address.	notice of its intent to enter upon the result to subsection (a), section to the surface owner: <i>Provided, how</i> . The notice, if required, shall includes of the operator and the operator.	he surface owner's land for the purpose of en of this article satisfies the requirements wever, That the notice requirements of this lude the name, address, telephone number,
	by provided to the SURFACE OWN: Bowyer		
Address: 12088 N		Name:	
	VV 26320-7211	Address:	
the surface own State: County:	st Virginia Code § 22-6A-16(b), notice is her's land for the purpose of drilling a horizonest Virginia Tyler Lincoln	ontal well on the tract of land as for UTM NAD 83 UTM NAD 83 Easting: Northing: Public Road Access:	bllows: 507592.666m 4378023.661m Dry Run Rd
	Paden City 7.5'	Generally used farm name:	David E. Bowyer
	Outlet Middle Island Creek	Generally used farm hame.	David L. Dowyel
facsimile numb related to horize	hall Include: est Virginia Code § 22-6A-16(b), this not er and electronic mail address of the ope ontal drilling may be obtained from the Se 7 th Street, SE, Charleston, WV 25304 (304)	rator and the operator's authorized cretary, at the WV Department of	ed representative. Additional information of Environmental Protection headquarters,
Notice is here			
Well Operator:	Antero Resources Corporation	Authorized Representative:	Mallory Turco
Address:	1615 Wynkoop St.	Address:	1615 Wynkoop St.
	Denver, CO 80202		Denver, CO 80202
Telephone:	303-357-7323	Telephone:	303-357-7223
Email:	mturco@anteroresources.com	Email:	mturco@anteroresources.com
Facsimile:	303-357-7315	Facsimile:	303-357-7315

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

WW-6A5 (1/12)

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF PLANNED OPERATION 4709502866

Notice Time Ro Date of Notice:	equirement: notice shall be provided no later the 03/22/2023 Date Permit Application			application.
Delivery metho	od pursuant to West Virginia Code § 22-6A-1	6(c)		
CERTIFIE RETURN	ED MAIL			
Pursuant to W. Va. Code § 22-6A-16(c), no later than the date for filing the permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner whose land will be used for the drilling of a horizontal well notice of the planned operation. The notice required by this subsection shall include: (1) A copy of this code section; (2) The information required to be provided by subsection (b), section ten of this article to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. (d) The notices required by this section shall be given to the surface owner at the address listed in the records of the sheriff at the time of notice. Notice is hereby provided to the SURFACE OWNER(s) (at the address listed in the records of the sheriff at the time of notice): Name: David E. Bowyer Address: 12088 Middle Island Road Alma, WV 26320 Name: Address: 12088 Middle Island Road Alma, WV 26320				
Address: 12088 N		Address	3:	"Mental Pont
operation on the State: County: District:	st Virginia Code § 22-6A-16(c), notice is hereby e surface owner's land for the purpose of drillin Vest Virginia Tyler Lincoln	ig a horizonta UTM NAD 8 Public Road A	l well on the trace Easting: Northing:	vell operator has developed a planned
	Outlet Middle Island Creek	Generally use	a farm name.	David E. Dowyor
This Notice Shall Include: Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1)A copy of this code section; (2) The information required to be provided by W. Va. Code § 22-6A-10(b) to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57 th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx .				
Well Operator:	Antero Resources Corporation	Address:	1615 Wynkoop Stree	et
Telephone:	(303) 357-7310		Denver, CO 80202	
Email:	mturco@anteroresources.com	Facsimile:	303-357-7315	

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at deprivacyofficer@wv.gov.

WW-6AW (1-12)

4709502866

API NO. 47- 095 OPERATOR WELL NO. Tangerine Unit 1H
Well Pad Name: Dry Run Pad

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS VOLUNTARY STATEMENT OF NO OBJECTION

Instructions to Persons Named on Page WW-6A

The well operator named on page WW-6A is applying for a permit from the State of West Virginia to conduct oil or gas well work. Well work permits are valid for twenty-four (24) months. Please contact the listed well operator and the Office of Oil and Gas if you do not own any interest in the listed surface tract.

Comment and Waiver Provisions

Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written comments with the secretary as to the location or construction of the applicant's proposed well work within thirty days after the application is filed with the secretary.

Pursuant to West Virginia Code § 22-6A-8(b) No permit may be issued less than thirty days after the filing date of the application for any well work except plugging or replugging; and no permit for plugging or replugging may be issued less than five days after the filing date of the application except a permit for plugging or replugging a dry hole: *Provided*, That if the applicant certifies that all persons entitled to notice of the application under the provisions of subsection (b), section ten of this article have been served in person or by certified mail, return receipt requested, with a copy of the well work application, including the erosion and sediment control plan, if required, and the well plat, and further files written statements of no objection by all such persons, the secretary may issue the well work permit at any time.

VOLUNTARY STATEMENT OF NO OBJECTION

I,	, hereby state that I have re				
provisions list	provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form				
WW-6A and	attachments consisting of pages one (1) the	rough	, including t	the erosion and s	sediment control plan, if
	the well plat, all for proposed well work on the				
State:	West Virginia	UTM NAD	Easting:	507592.666m	
County:	Tyler	D 11' D	Northing:		
District:	Lincoln	Public Roa		Dry Run Road	
Quadrangle:	Paden City 7.5'	Generally i	used farm name:	David E. Bowyer	Office of Oil and Gas
Watershed:	Outlet Middle Island Creek				and Gas
I further state	that I have no objection to the planned work	described in the	ese materials, and	I have no objectio	n to a permit bing 23
			-		WV Department of Environmental Protection
*Please check	the box that applies		FOR EXECUT	ION BY A NATU	JRAL PERSON
■ SURFAC	CE OWNER		Signature:		
□ SURFAC	E OWNER (Road and/or Other Disturba	ance)	Print Name:		
□ SURFAC	E OWNER (Impoundments/Pits)				PORATION, ETC.
□ COAL O	WNER OR LESSEE		Company:		Washington and the same of the
□ COAL O	PERATOR		By: Its:		
■ WATER	PURVEYOR		Signature:		
□ OPERAT	OR OF ANY NATURAL GAS STORA	GE FIELD	Date:		

Oil and Gas Privacy Notice:

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WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

1900 Kanawha Boulevard East • Building Five • Room 110 Charleston, West Virginia 25305-0430 • (304) 558-3505

Jimmy Wriston, P. E. Secretary of Transportation Commissioner of Highways

March 16, 2023

James A. Martin, Chief Office of Oil and Gas Department of Environmental Protection 601 57th Street, SE Charleston, WV 25304

Subject: DOH Permit for the Dry Run Pad, Tyler County

Tangerine Unit 1H Well Site

Office RECEIVED Oil and Gas
MAR 2 3 2023

Environmental Protection

Dear Mr. Martin,

Gregory L. Bailey, P.E.

Interim

State Highway Engineer

This well site will be accessed from a DOH permit #06-2021-0458 which has been issued to Antero Resources for access to the State Road for a well site located off Tyler County Route 18/12 SLS MP 1.68.

This operator is in compliance with §22-6A-20 of the WV Code. Operator has signed a STATEWIDE OIL AND GAS ROAD MAINTENANCE BONDING AGREEMENT and provided the required Bond. This operator is currently in compliance with the DOH OIL AND GAS POLICY dated October 1, 2018. This letter is valid for permitting purposes for one year from the date of this letter.

Very Truly Yours,

Gary K. Clayton, P.E.

Regional Operations Engineer Central Office O&G Coordinator

Hary K. Clayton

Cc:

Stefan Gaspar Antero Resources CH, OM, D-6

File

Subdivision 3.3.e A listing of the anticipated additives that may be used in the water used for fracturing or stimulating the well. (A listing of the additives that were actually used in the fracturing or stimulating of the well shall be submitted as part of the completion report required by W. Va. Code 22-6-22.)

FRACTURING/STIMULATING INTERVAL

Additive	Chemical Abstract Service Number (CAS #)
1. Fresh Water	7732-18-5
2. 2 Phosphobutane 1,2,4 tricarboxylic acid	37971-36-1
3. Ammonium Persulfate	7727-54-0
4. Anionic copolymer	Proprietary
5. Anionic polymer	Proprietary
6. BTEX Free Hydrotreated Heavy Naphtha	64742-48-9
7. Cellulase enzyme	(Proprietary)
8. Demulsifier Base	(Proprietary)
9. Ethoxylated alcohol blend	Mixture
10. Ethoxylated Nonylphenol	68412-54-4
11. Ethoxylated oleylamine	26635-93-8
12. Ethylene Glycol	107-21-1
13. Glycol Ethers	111-76-2
14. Guar gum	9000-30-0
15. Hydrogen Chloride	7647-01-0
16. Hydrotreated light distillates, non-aromatic, BTEX free	64742-47-8
17. Isopropyl alcohol	67-63-0
18. Liquid, 2,2-dibromo-3- nitrilopropionamide	10222-01-2
19. Microparticle	Proprietary
20. Petroleum Distillates (BTEX Below Detect)	64742-47-8
21. Polyacrylamide	57-55-6
22. Propargyl Alcohol	107-19-7
23. Propylene Glycol	57-55-6
24. Quartz	14808-60-7
25. Sillica crystalline quartz	7631-86-9
26. Sodium Chloride	7647-14-5
27. Sodium Hydroxide	1310-73-2
28. Sugar	57-50-1
29. Surfactant	68439-51-0
30. Suspending agent (solid)	14808-60-7
31. Tar bases, quinolone derivs, benzyl chloride-quarternized	
32. Solvent Naptha, petroleum, heavy aliph	64742-96-7
33. Soybean Oil, Me ester	67784-80-9
34. Copolymer of Maleic and Acrylic Acid	52255-49-9
35. DETA Phosphonate	15827-60-8
36. Hexamythylene Triamine Penta	34690-00-1
37. Phosphino Carboxylic acid polymer	71050-62-9
38. Hexamethylene diamine penta	23605-74-5
39. 2-Propenoic acid, polymer with 2 propenamide	9003-06-9
40. Hexamethylene diamine penta (methylene phosphonic a	•
41. Diethylene Glycol 42. Methenamine	111-46-6
	100-97-0
43. Polyethylene polyamine 44. Coco amine	68603-67-8
	61791-14-8
45. 2-Propyn-1-olcompound with methyloxirane	38172-91-7

WW-6A7 (6-12)

OPERATOR: Antero Resources Corp.	WELL NO: Tangerine Unit 1H
PAD NAME: Dry Run Pad	
REVIEWED BY: Mallory Turco	SIGNATURE: My

WELL RESTRICTIONS CHECKLIST

HORIZONTAL 6A WELL

Well Res	trictions
\checkmark	At Least 100 Feet from Pad and LOD (including any E&S Control Feature) to any Perennial Stream, Lake, Pond, Reservoir or Wetland; OR
	DEP Waiver and Permit Conditions
\checkmark	At Least 300 Feet from Pad and LOD (including any E&S Control Feature) to any Naturally Producing Trout Stream; OR
	DEP Waiver and Permit Conditions
\checkmark	At Least 1000 Feet from Pad and LOD (including any E&S Control Feature) to any Groundwater Intake or Public Water Supply; OR
	DEP Waiver and Permit Conditions
\checkmark	DEP Waiver and Permit Conditions At Least 250 Feet from an Existing Water Well or Developed Spring to Well Being Drilled; OR
	Surface Owner Waiver and Recorded with County Clerk, OR Surface Owner Waiver and Recorded with County Clerk, OR
	DEP Variance and Permit Conditions
\checkmark	At Least 625 Feet from an Occupied Dwelling Structure to Center of the Pad; OR
	Surface Owner Waiver and Recorded with County Clerk, OR
	DEP Variance and Permit Conditions
\checkmark	At Least 625 Feet from Agricultural Buildings Larger than 2500 Square Feet to the Center of the Pad; OR
	Surface Owner Waiver and Recorded with County Clerk, OR
	DEP Variance and Permit Conditions