

#### west virginia department of environmental protection

Office of Oil and Gas 601 57th Street SE Charleston, WV 25304 (304) 926-0450 (304) 926-0452 fax Earl Ray Tomblin, Governor Randy C. Huffman, Cabinet Secretary www.dep.wv.gov

August 17, 2015

#### WELL WORK PERMIT

#### Horizontal 6A Well

This permit, API Well Number: 47-8510231, issued to EQT PRODUCTION COMPANY, 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 all 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 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.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-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) 926-0499 ext. 1654.

James Martin

Chief

Operator's Well No: 516207

Farm Name: MORTON, JERRY

API Well Number: 47-8510231

Permit Type: Horizontal 6A Well

Date Issued: 08/17/2015

Promoting a healthy environment.

API Number:	

# PERMIT CONDITIONS 4708510231

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**

- Operator shall take additional measures with this permitted activity to avoid communication with offset wells.
   Such additional measures are described in the attached addendum. This addendum is part of the terms of the well work permit, and includes a description of depth and completed formations of offset wells. Also included is a description of monitoring activities that will take place during fracturing operations of the permitted well work.
- 1. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACOE). Through this permit, you are hereby being advised to consult with USACOE 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.

API Number:	
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## PERMIT CONDITIONS 4708510231

- 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. 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.
- 8. 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.
- Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced on this well. Such notice shall be provided by sending an email to <u>DEPOOGNotify@wv.gov</u> within 30 days of commencement of drilling.

**WW - 6B** (4/15)

## 4708510231

API NO.	<u>47</u>		085	-	
OPERATO	R WEI	L NO.			516207
Well Pac	l Nan	ne:			PEN54

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

1) Well Operator: EQT	Production Company	<b>y</b>	306686	085	1	539
	-		Operator ID	County	District	Quadrangle
2) Operator's Well Number	er:	516207		_Well Pad Name		PEN54
3) Farm Name/Surface Ov	wner :	Jerry Morton et	al	_Public Road Ac	cess:	Rt 50
4) Elevation, current groun	nd: 1,022.0	Elevat	ion, proposed p	ost-construction:	1,016	0
5) Well Type: (a) Gas _	Oil _	Un	derground Stora	age		
Other _			•	713.		
(b) If Gas	: Shallow _		Deep			
	Horizontal _	•				
6) Existing Pad? Yes or N	o: no.					
7) Proposed Target Forma	etion(s) Denth(s) A	nticipated Thickr	secces and Acc	ooistad Processo	۵)،	
Target formation is Marcell				e 49 feet and antici	-	sure of 2190 PSI
					·	
8) Proposed Total Vertical	•			6297		
9) Formation at Total Vert				Marcellus		
10) Proposed Total Measu				17,390		
11) Proposed Horizontal L	eg Length			10,600		
12) Approximate Fresh W	ater Strata Depths:		99,	105, 302, 627, 72	29, 745, 770	
13) Method to Determine	Fresh Water Depth:			By offset we	ells	
14) Approximate Saltwate	r Depths:			1,350		· · · · · · · · · · · · · · · · · · ·
15) Approximate Coal Sea		_		789, 867, 1078, 1	182	
16) Approximate Depth to	Possible Void (coal	mine, karst, oth			None re	oorted
17)Does proposed well loo			•			
adjacent to an active i	mine?	•	Y	es	No	
(a) If Yes, provide Min	e Info: Name:				-	
• • •	_					
	Seam:				<del></del>	
	Owner:					

Page 1 of 3

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ww	-	6E
(4/15	<b>i</b> )	

API NO.	<u>47</u>		85	
OPERATO	R WE	LL NO.		516208
Well Pad	l Nan	ne: _		PEN54

#### **CASING AND TUBING PROGRAM**

18)	<del>,</del>						
TYPE	Size (in)	<u>New</u> <u>or</u> Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill- up (Cu.Ft.)
Conductor	20	New	MC-50	81	40	40	38 C.T.S.
Fresh Water	13 3/8	New	J-55	54.5	900	900	785 C.T.S.
Coal	_	-			-	_	
Intermediate	9 5/8	New	A-500	40	5,176	5,176	2,037 C.T.S.
Production	5 1/2	New	P-110	20	17,256	17,256	See Note 1
Tubing	2 3/8		J-55	4.6			May not be run, if run will be set
Liners							

TYPE	Size (in)	<u>Wellbore</u> <u>Diameter (in)</u>	<u>Wall</u> <u>Thickness</u> <u>(in)</u>	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20	24	0.375	. •	18	Construction	1.18
Fresh Water	13 3/8	17 1/2	0.38	2,730	2184	* See Note 2	1,21
Coal					2104		
Intermediate	9 5/8	12 3/8	0.395	3,950	3160	* See Note 2	1.21
Production	5 1/2	8 1/2	0.361	12,640	10112	•	1.27/1.86
Tubing			_		10/12	-	
Liners						<del></del> ,	

#### **Packers**

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

**Note 1**: EQT plans to bring the TOC on the production casing cement job 1,000' above kick off point, which is at least 500' above the shallowest production zone, to avoid communication.

Note 2: Reference Variance 2014-17. (Attached)

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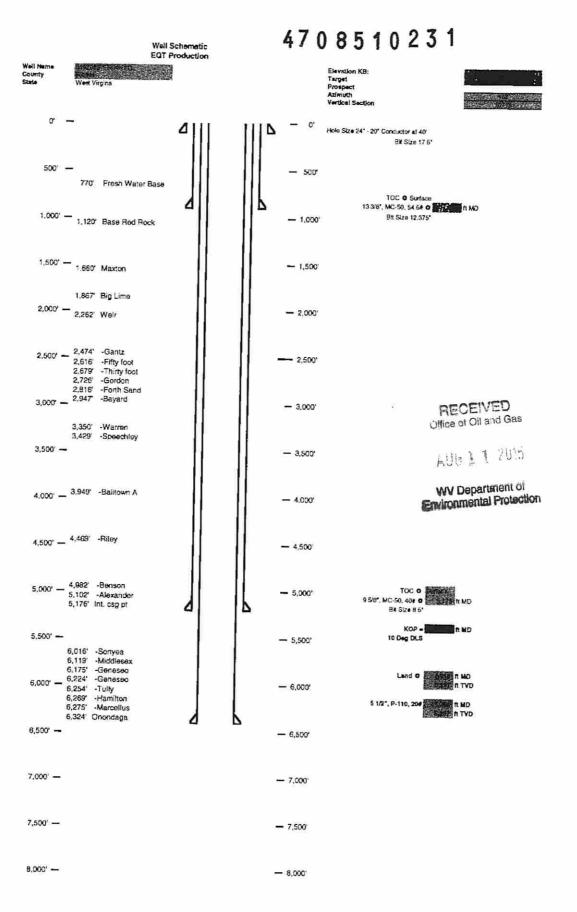
Page 2 of 3

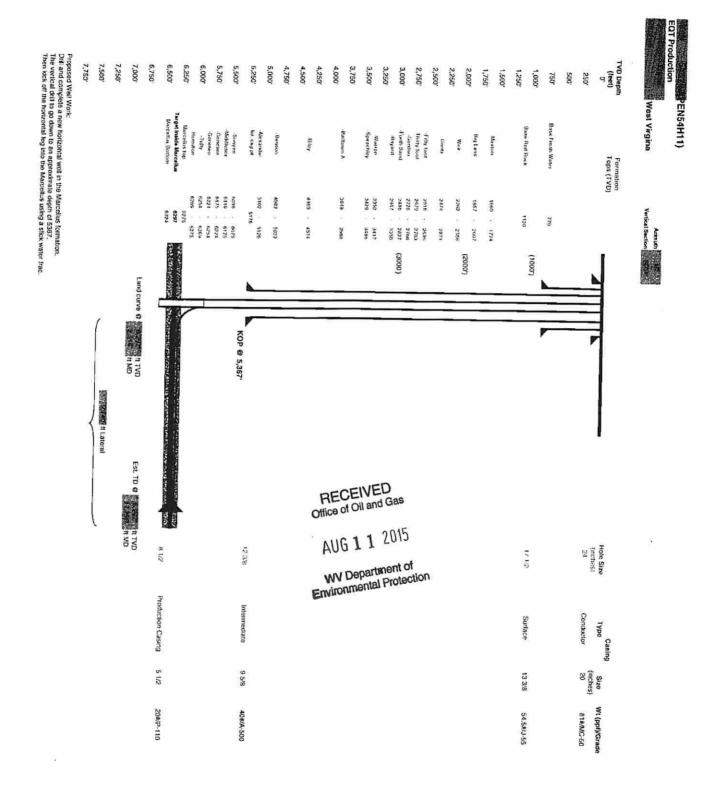
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API NO.	<u>47</u>	٠ _	0	-	
OPERATO	R WE	LL NO.			516208
Well Pag	i Nar	ne:			PEN54

	Well Pad Name: P
<ol><li>Describe proposed well work, including the drilling and plugging back of any p</li></ol>	
Drill and complete a new horizontal well in the marcellus formation. The vertical drill to go down to	o an approximate depth of 5367 then kick off
the horizontal leg into the Marcellus using a slick water frac.	
20) Describe fracturing/stimulating methods in detail, including anticipated max pro-	2001 Wa and was a six
Hydraulic fracturing is completed in accordance with state regulations using water recycled from previous trashwater sources. This water is should be added to the state of th	essure and max rate:
reconstant courses. This water is mixed with sand and a small percentage (less than 0.3%) of chemics	als (Including 15% Hydrochlode soid
geiling agent, get breaker, inction reducer, biocide, and scale inhibitor), referred to in the industry as a	'slickwater' completion Maximum
anticipated internal casing pressure is expected to average approximately 8500 psi, maximum anticipal approximately 100 bpm. Stage lengths vary from 150 to 300 feet. Average approximately 200,000 ba	ted treating rates are expected to average
vary from 100 mesh to 20/40 mesh. Average approximately 200,000 pounds of sand per stage.	Total St. Halor per Stage. Gaily Sizes
21) Total area to be disturbed, including roads, stockpile area, pits, etc, (acres):	52.03
22) Area to be disturbed for well pad only, less access road (acres):	
23) Describe centralizer placement for each casing string	21.5
Surface: Bow spring centralizers – One at the shoe and one spaced every 500'.     Intermediate: Bow spring centralizers – One at the shoe and one spaced every 500'.	
<ul> <li>Intermediate: Bow spring centralizers— One cent at the shoe and one spaced ever</li> <li>Production: One spaced every 1000' from KOP to Int csg shoe</li> </ul>	ry 500'.
24) Describe all cement additives associated with each cement type. <u>Surface</u> <u>Used to speed the setting of cement sluries.</u>	(Type 1 Cement): 0-3% Calcium Chloride
0.4% flake. Loss Circulation Material (LCM) is used to combat the loss of the cement sturn.	to a third zone
intermediate (1796 1 Cement): 0-3% Calcium Chloride. Salt is used in shallow, low temperature	formations to speed the actting of
sturries. 0.4% flake. Loss Circulation Material (LCM) is used to combat the loss of whole dril to a thief zone.	ling fluid or cement slurry (not filtrate)
Production:	
Lead (Tyne 1 Coment): 0.2.0.7% Henry March In	
Lead (Type 1 Cement): 0.2-0.7% Lignosulfonate (Retarder). Lengthens thickening time.	RECEIVED
0.3% CFR (dispersant). Makes cement easier to mix.	RECEIVED Office of Oil and Gas
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<sup>\*</sup>Note: Attach additional sheets as needed.







April 8, 2015

Mr. Gene Smith
West Virginia Department of Environmental Protection
Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304

Re: Casing on Wells (PEN54)

Dear Mr. Smith,

EQT is requesting the 13-3/8" surface casing be set at 870' KB, 100' below the deepest fresh water. This will cover up red rock formations that have given EQT drilling issues in the past. We will set the 9-5/8" intermediate string at 5176' KB, 50' below the porosity zone in the Alexander formation.

If you have any questions, please do not hesitate to contact me at (304) 848-0076.

Sincerely,

Vicki Roark

Permitting Supervisor

Enc.

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JUL 17 2015



west virginia department of environmental protection

Office of Oil and Gas 601 57th Street, SE Charleston, WV 25304 (304) 926-0450 (304) 926-0452 fax Earl Ray Tomblin, Governor Randy C. Huffman, Cabinet Secretary dep.wv.gov

March 18, 2014

Nabors Completion & Production Services Company 1380 Route 286 Hwy E #121 Indiana PA 15701

Re: Cement Variance Request

Dear Sir or Madam,

This agency is approving a variance request for the cement blend listed below to be used on surface and coal protection strings for the drilling of oil and gas wells in the state of West Virginia. The variance cannot be used without requesting its use on a permit application and approval by this agency:

Type 1 (2% Calcium Chloride-Accelerator, 0.25% Super Flake-Lost Circulation, 5.2% Water, 94% Type "1" Cement)

If you have any questions regarding this matter feel free to contact me at 304-926-0499, ext. 1653.

Environmental Resources Specialist / Permitting

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west virginia department of environmental protection

Office of Oil and Gas 601 57th Street, SE Charleston, WV 25304 (304) 926-0450 (304) 926-0452 fax Earl Ray Tomblin, Governor Randy C. Huffman, Cabinet Secretary dep.wv.gov

#### BEFORE THE OFFICE OF OIL AND GAS DEPARTMENT OF ENVIRONMENTAL PROTECTION STATE OF WEST VIRGINIA

IN THE MATTER OF A VARIANCE FROM	)	ORDER NO. 2014	-17
REGULATION 35 CSR § 4-11.4/11.5/14.1	)		
AND 35 CSR § 8-9.2.h. 4/5/6/8 OF THE	)		
THE OPERATIONAL	)		
REGULATIONS OF CEMENTING OIL	)		
AND GAS WELLS	)		

#### REPORT OF THE OFFICE

Nabors Completion & Production Services Co. requests approval of a different cement blend for use in cementing surface and coal protection casing of oil and gas wells.

#### FINDINGS OF FACT

- 1.) Nabors Completion & Production Services Co. proposes the following cement blend:
  - 2% Calcium Chloride (Accelerator)
  - 0.25 % Super Flake (Lost Circulation)
  - 94% Type "1" Cement
  - 5.20 % Water
- Laboratory testing results indicate that the blend listed in Fact No.1 will achieve a 500
  psi compressive strength within 6 hours and a 2,435 psi compressive strength within 24
  hours.

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#### **CONCLUSIONS OF LAW**

Pursuant to Articles 6 and 6A, Chapter 22 of the Code of West Virginia, the Office of Oil and Gas has jurisdiction over the subject matter embraced in said notice, and the persons interested therein, and jurisdiction to promulgate the hereinafter prescribed Order.

Pursuant to 35 CSR § 4-11.5 and 35 CSR § 8-9.2.h.8 the Chief of the Office of Oil and Gas may approve different cement blends upon the well operator providing satisfactory proof that different cement types are adequate.

#### ORDER

It is ordered that Nabors Completion & Production Services Co. may use the cement blend listed in Findings of Fact No.1 for the cementing of surface and coal protection casing of oil and gas wells in the State as may be requested by oil and gas operators. The waiting time on the cement blend shall be 8 hours. The cement blend shall be mixed in strict accordance with the specifications for each blend and weight measurements made on-site to assure the cement slurries meet the minimum weight specifications. A sample shall be collected and, if after 8 hours the cement is not set up, additional time will be required. Nabors Completion & Production Services Co. shall keep a record of cement blend jobs in which the cement blend approved under this order is to be used and made available to the Office of Oil and Gas upon request.

Dated this, the 18th day of March, 2014.

IN THE NAME OF THE STATE OF WEST VIRGINIA

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

James Martin, Chief Office of Oil and Gas

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WW-9 (2/15)

	Page _	1_	of	2
API No. 47	08			10232
Operator's V	Vell No			516208

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

Fluids/Cuttings Disposal & Reclamation Plan

	a land a dimigo biopodal d	ricolamation Fian		
	EQT Production Company	OP Code_	306686	
Watershed (HUC10)	North Fork Hughes River	Quadrangle	Pennsboro 7.5	_
Do you anticipate using m	ore than 5,000 bbls of water to comp	olete the proposed wel	work? Yes x No	_
Will a pit be used ? Yes:	XNo:			<del></del>
If so please descrit	be anticipated pit waste:	flowback water &	residual solids	
Will a synthetic line	or be used in the pit? Yes X	NoI		<del>-</del>
Proposed Dispos	Reuse (at API Number Off Site Disposal (Supply form	Permit Number	0014, 8462, 4037	<u>)</u> <u>)</u>
Will closed loop system be fluid. The drill cuttings are th	Other (Explain	π will remove drill cutting	<u> </u>	<u>)</u> -
				_
Air is used to drill the troubole sections of the	for this well (vertical and horizontal)	? Air, freshwater, oil b	ased, etc.	
and drill the intermediate section. The retre	e weilbore (surface, intermediate, and pilot). Water based in hole, curve, and lateral sections will be drilled with either als	mud may be necessary depending o	hole conditions to stabilize	_
The plant	HONE, CLEANER, CHEST INSTERNED SOCIOUS WIRE DO CERTIFOR WITH OFFICE ALL	r, water based mud, or oil based mud	<u> </u>	-
				-
- If oil based, wh	at type? Synthetic, petroleum, etc	Synt	hetic mud	
Additives to be used in drill		oricant, detergent, defoaming, water	er. Water based mud - Barite, viscosifer,	•
Of based mid - synthetic base o	itrol, deflocculates, biodegradable oii lubrican	t, defoaming, watnut shell,	salt, x-cide, carbonates.	•
biodegradable oil lubricant, defoa	il, emulsifier, salt, lime, viscosifer, elkalinity co ming, carbonates	ntrol, fitration control, deflor	culates,	•
				•
Drill cuttings disposal meth	nod? Leave in pit, landfill, removed or	ffsite, etc.	Landfill	
<ul> <li>If left in pit and pla</li> </ul>	n to solidify what medium will be used? (Cem	ent, Line, sawdust)	n/a	•
- Landfill or offsite	name/permit number?	See Attached	List	•
Permittee shall provide written any West Virginia solid waste fi disclose where it was properly of	notice to the Office of Oil and Gas of any acility. The notice shall be provided with disposed.	r load of drill cuttings or a in 24 hours of rejection a	ssociated waste rejected at and the permittee shall also	RECEIVED Office of Oil and Gas
I certify that I understand an	d agree to the terms and conditions of the GE	NERAL WATER POLLUTA	ON PERMIT issued	AUG 1 1 2015
on August 1, 2005, by the Office of provisions of the permit are enforce or regulation can lead to enforcems	Oil and Gas of the West Virginia Department table by law. Violations of any term or condition and action.	of Environmental Protection on of the general permit and	n. I understand that the for other applicable law	WV Department of Environmental Protection
application form and all attachments the information, I believe that the inf	that I have personally examined and am fami is thereto and that, based on my inquiry of tho formation is true, accurate, and complete. I ar	se individuals Immediately r	esponsible for obtaining	
submitting false information, includir	ng the possibility of fine or Imprisonment	~/ /	/	,
Company Official Signature Company Official (Typed Na	- fre	211		
Company Official Title		Victoria J. Roark ting Supervisor		
Subscribed and sworn before		August	. 20 /5	
- teneco	2 d Nilleton		_ Notary Public	
My commission expires	4-7-20	3		OFFICIAL SEAL NOTARY PUBLIC STATE OF WEST VIRGINIA REBECCA L. HEATER EQT PRODUCTION COMPANY PO BOX 280 BRIDGEPORT, WV 28330 Ny commission expires April 07, 2020
				08/21/2015

Form WW-9	470851(		r's Well No.	51620
Proposed Revegetation Trea	atment: Acres Disturbed	52.03	Prevegetation pH _	6.2
Lime 3	Tons/acre or to co	orrect to pH	6.5	
Fertilize type	Granular 10-20-20			
Fertilizer Amount	1/3lbs/acre	e (500 lbs minimum)		
Mulch	2	Tons/acre		
	Se	eed Mixtures		
Tempo	rary		Permanent	
Seed Type KY-31	lbs/acre 40	Seed Type Orchard Grass	lbs/ac 15	ere
Alsike Clover	5	Alsike Clover	5	
Annual Rye	15			
Photocopied section of invol	pit and proposed area for lanved 7.5' topographic sheet.	d application.		
Plan Approved by:	David will			
	seed of metal	all con	lasea m	1/2
Than 50		c maint		r.5
during ope	rates			
. (				
Title: ail 49	asinspector	Date:	-15-15	
Field Reviewed? (	) Yes	(	) No	

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# **EQT Production Water plan Offsite disposals for Marcellus wells**

#### CWS TRUCKING INC.

P.O. Box 391 Williamstown, WV 26187 740-516-3586 Noble County/Noble Township Permit # 3390

#### LAD LIQUID ASSETS DISPOSAL INC.

226 Rankin Road Washington, PA 15301 724-350-2760 724-222-6080 724-229-7034 fax Ohio County/Wheeling Permit # USEPA WV 0014

#### TRI COUNTY WASTE WATER MANAGEMENT, INC.

1487 Toms Run Road Holbrook, PA 15341 724-627-7178 Plant 724-499-5647 Office Greene County/Waynesburg Permit # TC-1009

#### **Waste Management - Meadowfill Landfill**

Rt. 2, Box 68 Dawson Drive Bridgeport, WV 26330 304-326-6027 Permit #SWF-1032-98 Approval #100785WV

#### **Waste Management - Northwestern Landfill**

512 E. Dry Road Parkersburg, WV 26104 304-428-0602 Permit #SWF-1025 WV-0109400 Approval #100833WV

#### **BROAD STREET ENERGY LLC**

37 West Broad Street
Suite 1100
Columbus, Ohio 43215
740-516-5381
Washington County/Belpre Twp.
Permit # 8462

#### **TRIAD ENERGY**

P.O. Box 430
Reno, OH 45773
740-516-6021 Well
740-374-2940 Reno Office Jennifer
Nobel County/Jackson Township
Permit # 4037

#### KING EXCAVATING CO.

Advanced Waste Services 101 River Park Drive New Castle, Pa. 16101 Facility Permit# PAR000029132

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Form WW-9 page of NOTE: SEE SITE PLAN 170851023 PEN54 FOR COMPLETE **CONSTRUCTION & EROSION & SEDIMENT** CONTROL DETAILS. FLANAGAN LEASE PEN54 WELL NO.S WV 514474, WV 514475, WV 514476, WV 514477, WV 514478, WV 514479, WV 514480, WV 515874, WV 516206, WV 516207 & WV 516208 CALE: 1"=500" 1000 10900 Detail Sketch for Proposed PEN54 Well No.s WV 514474, WV 514475, WV 514476, WV 514477, WV 514478. WV 514479, WV 514480, WV 515874, WV 516206, WV 516207 & WV 516208 RECEIVED Office of Oil and Gas JUL 1 7 2015 NOTE: SEE SITE PLAN
PEN54 FOR COMPLETEON
Environmentalities & Professional Energy Consultants **EROSION & SEDIMENT** CONTROL DETAILS. 08/21/2015 TOPO SECTIONS OF PENNSBORO 7.5' Not To Scale CADD FILE: DATE 06-25-15 FILE NO. 8083 TOPO QUADRANGLE

Form WW-9 paae of NOTE: SEE SITE PLAN PEN54 FOR COMPLETE 170851023 **CONSTRUCTION & EROSION & SEDIMENT** CONTROL DETAILS. FLANAGAN LEASE PEN54 WELL NO.S WV 514474, WV 514475, WV 514476, WV 514477, WV 514478, WV 514479, WV 514480, WV 515874, WV 516206, WV 516207 & WV 516208 1000 10900 Detail Sketch for Proposed PEN54 Well No.s WV 514474, WV 514475, WV 514476, WV 514477, WV 514478. WV 514479, WV 514480, WV 515874, WV 516206, WV 516207 & WV 516208 RECEIVED
Office of Oil and Gas JUL 17 2015 WV Department of Environmental Protection NOTE: SEE SITE PLAN PEN54 FOR COMPLETE **CONSTRUCTION &** Professional Energy Consultants **EROSION & SEDIMENT** CONTROL DETAILS. TOPO SECTIONS OF PENNSBORO 7.5' CADD FILE: DATE TOPO QUADRANGLE Not To Scale



## Site Specific Safety Plan

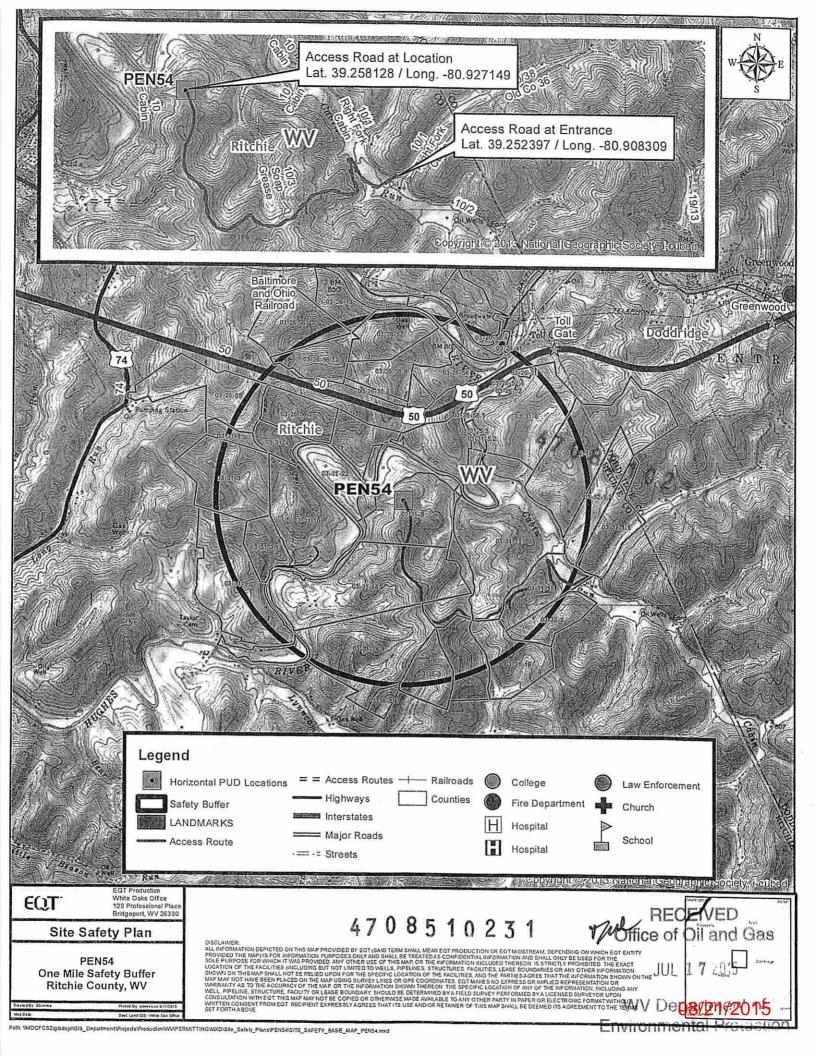
## EQT PEN 54 Pad

# Toll Gate Ritchie County, WV

516207	For We	ells: 
EQT Production  Long Lepen  Title  7-2-15  Date	Date Prepared:	November 17, 2014  Danif when  WV Oil and Gas Inspector  Title  7-15-15  Date

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**EQT Production** 

**Hydraulic Fracturing Monitoring Plan** 

Pad ID: PEN54

Ritchie County, WV

6/17/15

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WV Department of Environmental Projection Page 1 of 2

08/21/2015

#### **Purpose**

The purpose of this pad-specific Hydraulic Fracturing Monitoring Plan is to identify and notify conventional well operators near EQT hydraulic fracturing in Ritchie County, WV prior to hydraulic fracturing at the following EQT wells on the PUL96 pad: 514474, 514475,514476,514477,514478, 514479, 514480, 515874, 516206, 516207, 516208, 516209, and 516210.

Due to the apparent presence of unique geological conditions, the potential for communication between deep geologic zones exists in this area. This potential communication, via natural gas, water, or both, may occur between hydraulically fractured wells in the Marcellus formation (approximately 6,400' TVD) and existing conventional natural gas wells in the partially-depleted, relatively high permeability Alexander formation (approximately 5,200' TVD).

The plan is being implemented as an additional safety measure to be utilized in conjunction with existing best management practices and emergency action plans for the site. These additional measures include pre-notification of conventional well operators of the timing and location of the hydraulio fracturing, establishment of measures conventional well operators should implement, and assurance that the OOG is notified of the timeline, as well as any issues that may arise during fracturing

#### 1. Communications with Conventional Well Operators

EQT, using available data (WV Geological Survey, WVDEP website, and IHS data service), has identified all known conventional wells and well operators within 1,500 feet of this pad and the lateral sections. A map showing these wells along with a list of the wells and operators is included in **Attachment A**.

Upon approval of this plan, EQT will notify these operators, via letter, of the hydraulic fracturing schedule for these wells. A copy of this letter is included in **Attachment B**.

The letter provides recommendations to these conventional operators to 1) increase their monitoring of their wells during that time period, 2) ensure that their well head equipment is sound, and 3) provide immediate notification to EQT and the OOG in the event of any changes in their well conditions.

Specifically, the letter recommends that conventional well operators conduct the following activities during and after fracturing operations:

- 1. Inspect their surface equipment prior to fracturing to establish integrity and establish pre-frac well conditions
- 2. Observe wells closely during and after fracturing and monitor for abnormal increases in water, gas or pressure
- 3. Inspect or install master valves rated to 3,000 psi or other necessary equipment for wellhead integrity
- 4. Notify the OOG and EQT if any changes in water, gas production, pressure, or other anomalies are identified

#### 2. Reporting

EQT will provide information relating to the hydraulic fracturing schedule, communication with conventional operators, and ongoing monitoring of the work upon request of OOG or immediately in the event of any noted abnormalities.

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1700 1714	lie frien	7171 807373 Big Injun		5.	1860	803558	39 25889	GAS - Active	H BEREN	2	4708530382
4239-4891	10325.57722 Riley, Benson, Alexander	0325.57722 R		712	4991	-80.93	39.2738	GAS - Active	KEY OIL COMPANY	3	4708508173
4276-4933	10470.84791 Riley, Benson, Alexander	0470.84791 R		1216	5090	-80.9294	39.281	GAS - Active	KEY OIL COMPANY	ω	4708508163
4326-4994	10544.96297 Riley, Benson, Alexander	0544.96297 R		1412	5140	-80.9306	39.2776	GAS - Active	KEY OIL COMPANY	2	4708508162
4338-4712	lley	10545.55167 Riley	10482 1	1156	5172	-80.9375	39.2555	GAS - Active	ENERGY CORPORATION OF AMERICA	4708507963 Eastern American Energy Corp	70850796
4331-5015	10498.34749 Riley, Alexander	.0498.34749 R		942	5146	-80.929	39.2843	GAS - Active	ENERGY CORPORATION OF AMERICA	4/0850/905 Eastern American Energy Corp	06/0580/
3390-5193	10742.62361 Warren, Riley, Benson, Alexander	0742.62361 V		1149	5371	-80.9203	39.2804	GAS - Active	ENERGY CORPORATION OF AMERICA	4/0850/891 Eastern American Energy Corp	68/0580/
3315-5121	10597.62728 Warren, Riley, Alexander	.0597.62728 V		402	5280	-80.9257	39.2709	GAS - Active	ENERGY CORPORATION OF AMERICA	4708507888 Eastern American Energy Corp	70850788
3315-5112	10582.00118 Warren, Riley, Alexander	0582.00118 V		U.	5272	-80.9289	39.267	GAS - Active	ENERGY CURPURATION OF AMERICA	#/voov/oot castern American Energy Corp	/00/000/
3445-5221	10/91.5536 Warren, Riley, Alexander	A 95CC.T6/OT		1477	5320	CT46:00-	2202.66	מאם יאנויים	ENERGY CORPORATION OF AMERICA	1 Cartery American Engage Corp	70050700
1061-0610	10300 FF20 Water, Mick, Bellson	10301 5536 4		1 1 1 1	5 000	90.040	וכשל מנ	GAS Action	ENERGY CORPORATION OF AMERICA	4708507869 Eastern American Energy Corn	70850786
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2212.4354	Augren Billey	9855 309279 Warren Bilev		477	4534	-80.921	39.2338	O&G - Active	ENERGY CORPORATION OF AMERICA	4708507863 Eastern American Energy Corp	70850786
3133-4274	Warren, Riley	9765.64857 Warren, Riley		434	4446	-80.9165	39.2326	O&G - Active	ENERGY CORPORATION OF AMERICA	4708507860 Eastern American Energy Corp	70850786
3280-5068	.42666 Warren, Riley, Alexander	10636.42666 V		514	5314	-80.9323	39.2704	GAS - Active	ENERGY CORPORATION OF AMERICA	4708507856 Eastern American Energy Corp	70850785
3322-5106	20165 Warren, Riley, Alexander	10746.20165 V		1235	5365	-80.937	39.2681	GAS - Active	ENERGY CORPORATION OF AMERICA	4708507855 Eastern American Energy Corp	70850785
3133-4639	10388.82809 Warren, Riley, Benson	V 60878'88ED1	10385	282	5075	-80.9342	39.2602	GAS - Active	ENERGY CORPORATION OF AMERICA	4/08507836 Eastern American Energy Corp	/0850783
3334-5124	10648.47792 Warren, Riley, Alexander	10648.47792 V		399	5331	-80.9329	39.265	GAS - Active	ENERGY CORPORATION OF AMERICA	4/0850/835 Eastern American Energy Corp	FR/OSBD/
1642-4321	9770.150715 Maxton, Warren, Rijey	4//0.150/15 A		399	7000	6616.09	39.2300	CHO - ACTIVE	ENERGY CONFORMITON OF AIVIENICA	4700007014 Castern American Energy Corp	10,000
2004-4664	10130.73937 Maxton, Reener, Warren, Bailtown, Kiley	10190./395/		720		276:00:	0767.65	CAS Active	ENERGY CORPORATION OF AMERICA	A708507814 Eastern American Engine Com	70950701
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2477 6776	Witten Billion	0766 57197 1		106	5456	.RO 9147	1850 05	GAS - Arrive	ENERGY CORPORATION OF AMERICA	4708507810 Eastern American Energy Corp	70850781
1876	18855 Big Iniun	7589 118855 6		250	2275	-80.9174	39.2662	GAS - Active	PERKINS OIL & GAS INC	<b>σ</b>	4708507805
1590-4862	10340.04691 Keener, Big Injun, Warren, Riley, Benson	10340.04691		251	5027	-80.9299	39.2619	GAS - Active	ENERGY CORPORATION OF AMERICA	4708507796 Eastern American Energy Corp	70850779
1838-5033	10532.99511 Big Injun, Warren, Riley, Benson			205	5221	-80.9304	39.2577	GAS - Active	ENERGY CORPORATION OF AMERICA	4708507795 Eastern American Energy Corp	70850779
1640-4969	22247 Maxton, Keener, Big Injun, Warren, Riley, Benson	10471.22247	10470	160	5160	-80.9245	39.2571	O&G - Active	ENERGY CORPORATION OF AMERICA	4708507794 Eastern American Energy Corp	70850779
3176-4978	10460.00903 Warren, Riley, Alexander	10460.00903 \	10458	205	5148	-80.9244	39.2628	GAS - Active	ENERGY CORPORATION OF AMERICA	4708507792 Eastern American Energy Corp	70850779
3064-4866	10370.4361 Warren, Riley, Alexander	10370.4361 \	10356	547	5046	-80.9197	39.2607	GAS - Active	ENERGY CORPORATION OF AMERICA	4/0850//81 Eastern American Energy Corp	7/0830/
3252-5082	10653.14831 Warren, Speechley, Riley, Benson	10653.14831 \		1288	5265	-80.9129	39.2639	GAS - Active	ENERGY CURPURATION OF AMERICA	4/0850///3 Eastern American Energy Corp	/0850///
1906-5628	73891 Warren, Riley, Benson, Alexander	10867.7891		13/3	2000	#TC:00-	35.200	ONG - MCHAE	ENERGY CORPORATION OF AWIENION	ATOREOTTE Castelli chilentan chengy corp	70000777
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1858-4577	9916 418557 Maxton Big Infirm Warran Speachley Biley	916 418557		219	4604	-80.9243	39.2413	GAS - Active	ENERGY CORPORATION OF AMERICA	4708507768 Eastern American Energy Corp	70850776
3349-4491	Warren Riley	9988.405478 Warren, Rilev		90	4678	-80.9276	39.2544	O&G - Active	ENERGY CORPORATION OF AMERICA	4708507767 Eastern American Energy Corp	70850776
1792-4310	9831.011443 Big Injun, Warren, Bradford	9831.011443 [	9831	15	4521	-80.9172	39.2431	GAS - Active	ENERGY CORPORATION OF AMERICA	4708507764 Eastern American Energy Corp	70850776
1900-4525	10344.71986 Maxton, Keener, Warren, Riley	10344.71986		670	5013	-80.917	39.2474	GAS - Active	ENERGY CORPORATION OF AMERICA	4708507763 Eastern American Energy Corp	70850776
1932-4587	10084.50123 Maxton, Keener, Warren, Riley	10084.50123	10083	174	4773	-80.9215	39.2455	O&G - Active	ENERGY CORPORATION OF AMERICA	4708507762 Eastern American Energy Corp	70850776
4322-5013	10563.37167 Riley, Benson, Alexander	10563.37167 F	10530	839	5220	-80.923	39.2839	O&G - Active	KEY OIL COMPANY	Ā	4708507734
3381-4528	9993.649984 Warren, Speechley, Riley	9993.649984 \	9988	336	4678	-80.9257	39.2494	O&G - Active	ENERGY CORPORATION OF AMERICA	4708507713 Eastern American Energy Corp	70850771
1909-4447	34375 Big Injun, Warren, Speechley, Riley	10263.34375		22	4953	-80.9224	39.2529	O&G - Active	ENERGY CORPORATION OF AMERICA	4708507705 Eastern American Energy Corp	70850770
3335-4475	64694 Warren, Bradford	10316.64694	10298	620	4988	-80.9275	39.2442	O&G - Active	ENERGY CORPORATION OF AMERICA	4/08507704 Eastern American Energy Corp	70850770
330/-4/9/	95511 Warren, Kiley	10291.95511		906	4942	-80.9306	39.24//	Occ - Active	ENERGY CORPORATION OF AMERICA	470007000 Castern American chergy corp	70000
2004/240	orest March Billion	10702.01000		200	200	2000	30,1477	ORG - Action	ENERGY CORPORATION OF AMERICA	Entern American Energy Corp	70950766
3437-4603	Warran Bilay	10742 61095 1		95.7	985	-11008-	39 2277	O&G - Active	ENERGY CORPORATION OF AMERICA	4708507684 Fastern American Energy Corn	70850768
4715-4891	10438-31299 Riley Renson Alexander	10438 317991		333	5123	-80 9754	39.2794	GAS - Active	KEY OIL COMPANY	4708507682 KC Energy. A Partnership	70850768
1688-4346	9850.357354 Maxton, Big Injun, Warren, Riley	9850.357354		822	4506	-80.9329	39.2523	O&G - Active	ENERGY CORPORATION OF AMERICA	4708507676 Eastern American Energy Corp	70850767
4500-5186	76358 Riley, Benson, Alexander	10690.76358	10685	351	5375	-80.9234	39.267	GAS - Active	KEY OIL COMPANY	4708507644 Haddad & Brooks, Inc.	7085076
4429-5094	26508 Riley, Benson, Alexander	10610.26508	10610	75	5300	-80.9232	39.2766	GAS - Active	KEY OIL COMPANY	4708507642 Haddad & Brooks, Inc.	70850764
4300-4984	Riley, Benson, Alexander	10523.44706		97	5213	-80.92	39.2708	GAS - Active	KEY OIL COMPANY	4708507611 Haddad & Brooks, Inc.	7085076
4225-5040	oubsy bradiord, kney, benson, Atexander	11500.608391		3 15	0860	216:00-	39.233	CAG - ACUVE	EPC	4706507613 Carriege Natural Gas Co	000000
75/T-7/0T		11200 80020 Burding		17.	500	6/16:00	300.2.66	ORC ACTIVE	EDC	ATOSCOASTS Company Natural Confe	7000000
1677-1767		7070 517005		1450	75.25	-90 9179	985C 0E	GAS - Active	DEBKINS OIL & GAS INC	76 Parkins Oil and Gas	7085045
	3	7115 487615		1020	1733	-RO 929227	39 2773 28	Phipped	EPC	4708504245 Carnegie Natural Gas Co	70850424
	•	7329.210667		180	2017	-80.92312	39.27859	Abandoned Well	EPC	4708504244 Carnegie Natural Gas Co	70850424
	10638.91428	10638.91428		249	1051	-80.93333	39.26472	Never Drilled	G HAUGHT & SONS	4708504223 Haught, Glen L and Sons	7085042
1876-2141	Big Injun, Weir	7723.575921		235	2410	-80.9201	39.2722	GAS - Active	KEY OIL COMPANY	4708504182 Haught, Glen L and Sons	70850418
2006-2284	7843.648386 Big InjulyWir	7843.648386	7816	658	2506	-80.9236	39.2371	GAS - Active	MOUNTAIN STATE OIL COMPANY LLC	4708504041 Mulvin Oil Corp.	70850404
1653-1790	Big Injun	7251.162252 Big Injun	7155	1177	1845	-80.92999	39.24479	GAS - Active	EPC	78	4708503978
1668-1849	Big Ingle	7240.342879 Big Inpat	7234	303	1924	-80.92554	39.24291	Abandoned Well	EPC	75	4708503975
	1	7078.036239	7074	239	1764	-80.920055	39.268067	Plugged	EPC	67	4708503967
	(	/391./60616	/389	202	20/9	-80.9094	39.23089	Piugged		4708503919 Carnegie Natural Gas Co	7085039
1880	ag injun	7293.658958 Big Injun	7290	231	0861	-80.91/2	39.2352	GAS - Active	MOUNTAIN STATE OIL COMPANY LLC	4/08503651 Willyin Oil Corp.	7085036
2450		/846.15//86	/844	184	2534	FT16.08-	39.2316	GAS - ACTIVE	MOUNTAIN STATE OIL COMPANT LLC	4708303349 Million Oil Corp.	000000
7007-7401	7023.554005 big time, big injun, bered, o. Dev	7023.934005		12.5	2404	6676.00.	20777	CAS ALUVE	MOUNTAIN STATE OIL COMPANIE	ATOSTOTE AS A C. L. C. C. C.	2200007
1047		1012551		1310		90,024	30,000	CAS Anti-	MOUNTAIN STATE ON COMPANY IS	74 Hoden TE	7005077
1705		7091 95 7764 80 190		355	1777	1155 08	39,768	Abandoned Well	OPERATOR LINKNOWN	4708500501	4708500501
		200 200	_		1700	90000	20.00		COEDATOR CHICAGO	73 Market Glorie	100200
Zone Depths	Producing Formation	Distance		from PENS4 Lateral Map View	Ħ	Longitude	Latitude	Status	Operator-DEP*	Prior Operator on Record	Well
Car Chandra					Action					7-1	5

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PGH & WV GAS PGH & WV GAS F S DEEM F S DEEM EPC

GAS - Active GAS - Active Unknown Unknown Unknown

39.28417 39.25167 39.23972 39.23972 39.23972 -80.92333 -80.92611 -80.91889 -80.91611 -80.92833

1837 2041 1693 1087 1999

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784 107 2 232 310

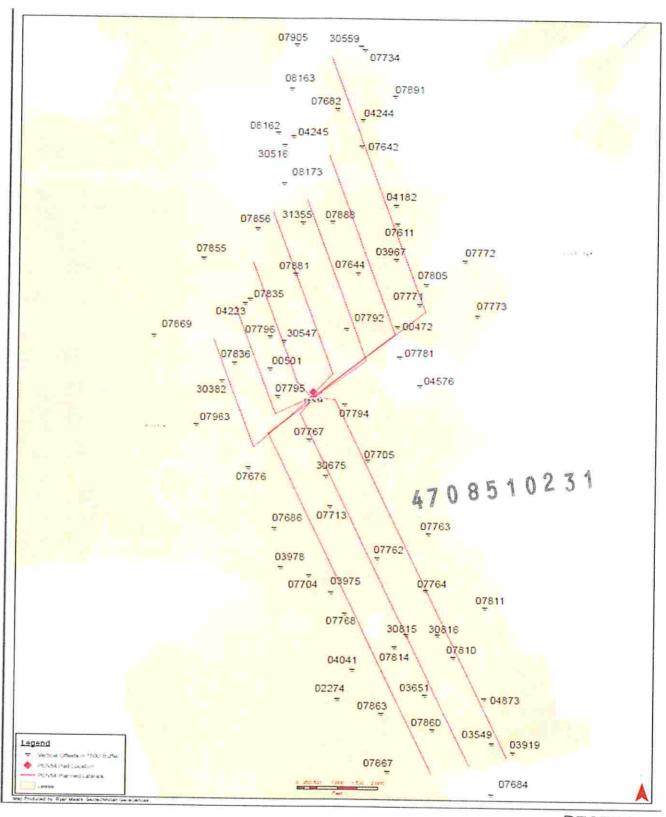
7147 7189.872391 Maxton 7351 7351.778656 Maxton, Big Injun 7003 7003.000286 Unknown 10618 10620.53426 Unknown 7309 7315.571133 Maxton, Big Injun

1577-1595 1750-1994 Unknown Unknown 1767-1994 RECEIVED
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625 Liberty Ave, Suite 1700 Pittsburgh PA 15222 www.eqt.com

TEL: (412) 395-3305 FAX: (412) 395-2156

John Centofanti Corporate Director, Environmental Affairs



(date)

[Conventional Well Operator] [address] [state]

RE: Ritchie County Hydraulic Fracturing Notice

Dear Sir/Madam.

EQT has developed a Marcellus pad (Pennsboro 54 pad) located in Ritchie County, WV. As an owner or operator of conventional natural gas wells in this area, we are requesting your assistance in this matter.

Due to the apparent presence of unique geological conditions, the potential for communication between deep geologic zones exists in this area. This potential communication, via natural gas, water, or both, may occur between hydraulically fractured wells in the Marcellus formation (approximately 6,400' TVD) and existing conventional natural gas wells in the partially-depleted, relatively high permeability, Alexander formation (approximately 5,200' TVD).

EQT anticipates conducting hydraulic fracturing at the Pennsboro 54 pad during the second quarter of 2015. We have identified conventional natural gas wells operated by your company within 1,500' (lateral distance) of our new/planned laterals. Plats for each well on this pad are attached.

We recommend that conventional well operators conduct the following activities before, during, and after fracturing operations:

- Inspect surface equipment, prior to fracturing, to establish integrity and establish well conditions.
- 2. Observe wells closely during and after fracturing and monitor for abnormal increases in water, gas, or pressure.
- Inspect or install master valves rated to 3,000 psi or other necessary equipment for wellhead integrity.
- 4. Notify the OOG and EQT if any changes in water, gas production, pressure, or other anomalies are identified.

Please feel free to contact me at 412-395-3305 with any questions or comments. You may also contact the West Virginia Office of Oil and Gas at 304-926-0440.

Sincerely, EQT Production

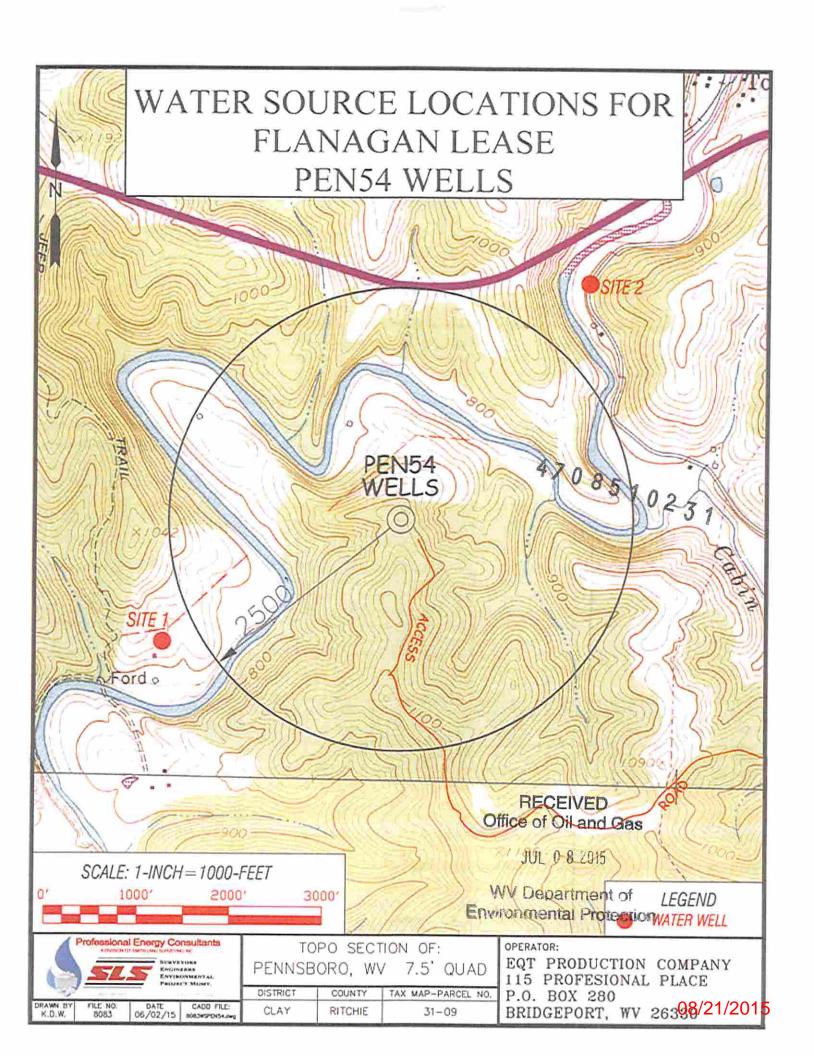
John Centofanti Corporate Director, Environmental Affairs

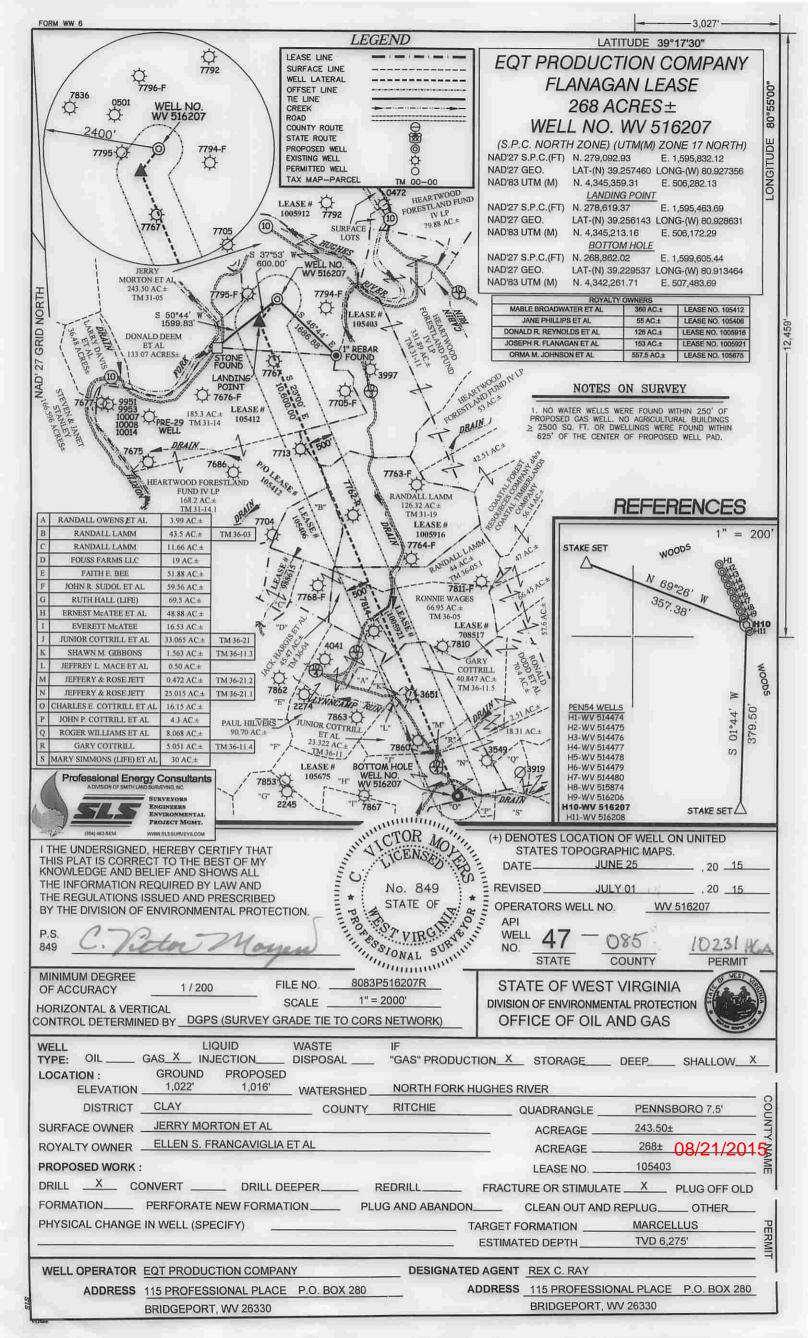
cc: James Martin, WV Office of Oil and Gas

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#### 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:

Number	Grantor, Lessor, etc.	Grantee, Lessee, etc. Roy		Book/Page	_
<u>105403</u>		Min 1	/8 pd		
	W.A. Flanagan, et al	The Philadelphia Company of West Virginia		LB63/295	
	The Philadelphia Company of West Virginia	Pittsburgh and West Virginia Gas Company		DB55/362	
	Pittsburgh and West Virginia Gas Company	Equitable Gas Company		DB 126/473	
	Equitable Gas Company	Equitrans, Inc.		LB 201/253	
	Equitrans,Inc.	Equitrans,LP.		AB269/182	
	Equitrans,LP	Equitable Production/Eastern States, Inc.		DB234/830	
	Equitable Production/Eastern States, Inc.	Equitable Production Company		CB557/56	
	Equitable Production Company	EQT Production Co.		DB 281/346	Doddridge
105412		Min 1	/8 pd		
	Creed Collins and Susan Collins	W.A. Flanagan		LB24/317	
	W.A. Flanagan	J.L. Newman 7		LB53/362	
	J.L. Newman	The Philadelphia Company of West Virginia		LB53/363	
	The Philadelphia Company of West Virginia	Pittsburgh and West Virginia Gas Company		LB55/362	
	Pittsburgh and West Virginia Gas Company	Equitable Gas Company	7	DB126/473	
	Equitable Gas Company	Equitrans, Inc.		LB201/697	
	Equitrans,Inc.	Equitrans,LP.		AB269/182	
	Equitrans,LP	Equitable Production/Eastern States, Inc.		DB234/830	
	Equitable Production/Eastern States, Inc.	Equitable Production Company		CB557/56	
	Equitable Production Company	EQT Production Company		DB281/346	Doddridge
105406		Min 1	/8 pd		
	Nathanial Dodd and Jennie Dodd	W.A. Flanagan		LB29/337	
	W.A. Flanagan	J.L. Newman		LB58/362	
	J.L. Newman	The Philadelphia Company of West Virginia		LB58/363	<b>&gt;</b>
	The Philadelphia Company of West Virginia	Pittsburgh and West Virginia Gas Company		LB55/359E(	EIVED
	Pittsburgh and West Virginia Gas Company	Equitable Gas Company		DB281/253	Oll and G
	Equitable Gas Company Equitrans, Inc	Equitrans, Inc Equitrans, LP		AB269/182 (	1.0 20
	Equitans, IIC Equitrans, LP	Equitable Production-Eastern States, Inc.		DB234/830	0 2015
	Equitable Production/Eastern States, Inc.	Equitable Production Company	_	DB234/830 CB554/8 <b>e</b> pa VI5829/98901ta	rtma
	Equitable Production Company	EQT Production Company	En	VIFORMIDADA	- Beddridge

1005916		Min 1/8 pd	
	Mary E. Sorrells	Eastern American Energy Corporation	LB197/229
	Eastern American Energy Corporation	Energy Corporation of American (Merger)	CB6/450
	Energy Corporation of American	Antero Resources Corporation	LB257/377
	Antero Resources Corporation	EQT Production Company	LB277/1037
1005921		Min 1/8 pd	
	Robert F. Johnson, et al	Eastern American Energy Corporation	LB197/229
	Eastern American Energy Corporation	Energy Corporation of American (Merger)	CB6/450
	Energy Corporation of American	Antero Resources Corporation	LB257/377
	Antero Resources Corporation	EQT Production Company	LB277/1037
105675		Min 1/8 pd	
	E.J. Taylor and Laura Taylor, his wife	J.L. Newman	LB30/149
	J.L. Newman	The Philadelphia Company of West Virginia	LB91/265
	E.J.Taylor etux	The Philadelphia Company of West Virginia	LB30/151
	The Philadelphia Company of West Virginia	Pittsburgh and West Virginia Gas Company	LB55/362
	Pittsburgh and West Virginia Gas Company	Equitable Gas Company	DB126/515
	Equitable Gas Company	Equitrans, Inc.	LB201/253
	Equitrans,Inc.	Equitrans,LP.	AB269/182
	Equitrans,LP	Equitable Production/Eastern States, Inc.	DB234/830
	Equitable Production/Eastern States, Inc.	Equitable Production Company	CB557/56
	Equitable Production Company	EQT Production Company	DB281/346

Upon information and belief, Operator's lease and/or other real property rights permit it to conduct drilling operations for the subject well in the location shown on the plat, including under any public roads that the well lateral crosses.

#### 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

470851023 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.

> EOT Production Company Well Operator: By: Permitting Supervisor Its:

> > Page 1 of 1 RECEIVED Office of Oil and Gas

> > > JUL 0 8 2015

Date of Notice Certification: 7-6-15

Notice has been given:

**Required Attachments:** 

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

API No. 47 -

Well Pad Name:

Operator's Well No.

		Code § 22-6A, the Operator has provided the require	ed parties with the Notice Forms listed
	tract of land as follows:	Property and the Value of the	pure avera virav
State:	WV	UTM NAD 83 Easting:	506,282.13
County:	Ritchie	UTM NAD 83 Northing:	4,345,359.31
District:	Clay Pennsboro 7.5	Public Road Access:	Rt 50
Quadrangle: Watershed:	North Fork Hughes River	Generally used farm name:	Jerry Morton et al
prescribed b it has provid- information r of giving the requirements Virginia Cod	y the secretary, shall be verified ed the owners of the surface de required by subsections (b) and surface owner notice of entry to s of subsection (b), section sixte e § 22-6A-11(b), the applicant s	o), every permit application filed under this section solution and shall contain the following information: (14) A scribed in subdivisions (1), (2) and (4), subsection (c), section sixteen of this article; (ii) that the require survey pursuant to subsection (a), section ten of the sen of this article were waived in writing by the surfathall tender proof of and certify to the secretary that	certification from the operator that (i) (b), section ten of this article, the ement was deemed satisfied as a result his article six-a; or (iii) the notice acce owner; and Pursuant to West
Pursuant to		e Operator has attached proof to this Notice Certification quired parties with the following:	ation OOG OFFICE USE ONLY
*PLEASE C	CHECK ALL THAT APPLY		RECEIVED/NOT
☐ NOTICE	OF SEISMIC ACTIVITY or	NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED	
<b>▼</b> NOTICE	OF ENTRY FOR PLAT SU	IRVEY or NO PLAT SURVEY WAS CON	IDUCTED RECEIVED
□ NOTICE	OF INTENT TO DRILL or	NOTICE NOT REQUIRED BECAUSE  NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED OR	RECEIVED/NOT REQUIRED
		WRITTEN WAIVER BY SURFACE OWN (PLEASE ATTACH)	ER
<b>▼</b> NOTICE	OF PLANNED OPERATIO	N	☐ RECEIVED
<b>▼</b> PUBLIC	NOTICE		☐ RECEIVED
▼ NOTICE	OF APPLICATION		☐ RECEIVED
D			RECEIVED

The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided and Gas

Pursuant to West Virginia Code § 22-6A-11(b), the Certification of Notice to the person may be made by affidavit of personal savidation of the return receipt card or other postal receipt for certified mailing.

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 U 8 2015 Certifications of Notice shall serve as proof that the required parties have been noticed as required under West Virginia Code § 22-6A.

WW-6AC (1/12)

Cortification	٥f	Mationia	horoby	aireah.
Certification	OI	NOTICE IS	nereby	given:

 Well Operator:
 EQT Production Company
 Address:
 P.O. Box 280

 By:
 Victoria J. Roark
 Bridgeport, WV 26330

 Its:
 Permitting Supervisor
 Facsimile:
 304-848-0040

 Telephone:
 304-848-0076
 Email:
 vroark@eqt.com



Subscribed and sworn before me this day of fully 2015

Notary Public

My Commission Expires 8-24-23

#### 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.

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API NO.	47	Ē.,_	085	 C
OPERATOR	516207			
Wall Dad	NT		-	DENISA

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

	e shall be provided no later than the filing of	
Date of Notice:	Date Permit Application File	led:
Notice of:		OVAL FOR THE IMPOUNDMENT OR PIT  ETHOD OF DELIVERY THAT REQUIRES A ECCIPT OR SIGNATURE CONFIRMATION
	, <u> </u>	*>a
PERMIT FOR ANY	☐ CERTIFICATE OF APPRO	OVAL FOR THE
WELL WORK	CONSTRUCTION OF AN	IMPOUNDMENT OR PIT
Delivery method pursuant to V	West Virginia Code § 22-6A-10(b)	0 2
		~ ~ ×
☐ PERSONAL	☐ REGISTERED ☑ MI	ETHOD OF DELIVERY THAT REQUIRES A
SERVICE	MAIL RE	ECEIPT OR SIGNATURE CONFIRMATION
for the construction of an i requires a receipt or signature plat to each of the following the surface tract or tracts of disturbance as described in lessee, in the event the tract record of the surface tract of construction, enlargement, water purveyor who is knowhich is used to provide where work activity is to take place in the lands, the applicant particle one, chapter eleventualess the lien holder is the the surface owner and any	impoundment or pit as required by ure confirmation, copies of the apping persons: (1) The owners of reconverlying the oil and gas leasehold be the the erosion and sediment control pet of land on which the well propose or tracts overlying the oil and gas leaderation, repair, removal or abandown to the applicant to have a water vater for consumption by humans of ce. (c)(1) If more than three tenants may serve the documents required the of this code. (2) Notwithstanding the landowner. W. Va. Code R. § 35-	and date of the application, the applicant for a permit for any well work or for a this article shall deliver, by personal service or by registered mail or by any olication, the erosion and sediment control plan required by section seven of any of the surface of the tract on which the well is or is proposed to be located; being developed by the proposed well work, if the surface tract is to be used plan submitted pursuant to subsection (c), section seven of this article; (3) The ed to be drilled is located [sic] is known to be underlain by one or more coal easehold being developed by the proposed well work, if the surface tract is to donment of any impoundment or pit as described in section nine of this rewell, spring or water supply source located within one thousand five or domestic animals; and (6) The operator of any natural gas storage field is in common or other co-owners of interests described in subsection (b) of upon the person described in the records of the sheriff required to be go any provision of this article to the contrary, notice to a lien holder is not ease. S.7.a requires, in part, that the operator shall also provide the Well Site subject to notice and water testing as provided in section 15 of this rule.  Well Plat Notice is hereby provided to:
☑ SURFACE OWNER(s)	·)	✓ COAL OWNER OR LESSEE
Name:	Jerry Morton	Name: Phyllis A Rymer
Address:	RR 1 Box 581	Address: 21166 State Rt 676
	Pennsboro WV 26415	Marietta OH 45750
Name: Randy Collin	ns, Natalie Collins, Kate Collins 5368 Muscovy Road Middleburg FL 32068	See attached for additional coal owners.  COAL OPERATOR  Name: Address:
☑ SURFACE OWNERS	(s) (Road and/or Other Disturbance	2)
Name:	Jerry Morton	
Address:	RR 1 Box 581 Pennsboro WV 26415	SURFACE OWNER OF WATER WELL
	Pennsboro W V 20415	AND/OR WATER PURVEYOR(s) Name:
Name: Randy Collin	is, Natalie Collins, Kate Collins	Address:
Address:	5368 Muscovy Road	
·	Middleburg FL 32068	RECEIVED
	See Attached	OPERATOR OF ANY NATURAL GAS STORAGE FIELD OIL and Gas
✓ SURFACE OWNER(s Name:	Inmi Moston	(事業のような)
Name: Address:	Jerry Morton RR 1 Box 581	Name: Address: JUL 0 8 2015
radicos.	Pennsboro WV 26415	JUL 0 2 2010
	See Attached	WV Department of
		*Please attach additional forms if pagessary

Environmental Protection 08/21/2015

WW6-A

#### Additional Surface Owners: Access Road

Heartwood Forestland Fund IV, LP 1212 East Franklin St Suite 104 Chapel Hill NC 27514

Coastal Forest Resources

dba Coastal Timberlands Company
PO Box 709
Buckhannon WV 26201

#### Additional Surface Owners: Pits/Impoundments

Randy Collins, Natalie Collins, Kate Collins 5368 Muscovy Rd Middleburg FL 32068

#### **Additional Coal Owners**

Braden M Nida 150 Seneca Dr Marietta OH 45750

Anita W Gass 2033 Butterfly Lane Apt 222 Naperville IL 60563

Byron Whealen 678 N 38th Ave Deerfield Beach FL 33442

Robert Singleton 1561 Connell Rd Charleston WV 25314

Mollie Harrington
Charles Morrison
Claire Leugers
Trustees of Joan N Morrison Residuary Trust
102 NE Cypress Trail
Jensen Beach FL 34957

Carolyn W Wilson 3731 Buffalo Lane Montrose CO 81401

Marsha Spenst 11133 N Eagle Crest Dr V Oro Valley AZ 85737

Rebecca Pearson 1812 W Mountain Ft Collins CO 80521

Gene C Singleton 2504 22nd Ave Parkersburg WV 26101 4708510231

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WV Department of Environmental Projection 08/21/2015

#### **Additional Coal Owners**

Deborah K Latham
Trustee of the Deborah K Latham Living Trust
1810 10th Pike
Vero Beach FL 32960

Patricia A Zinn 315 South 4th St Douglas WY 82633

Virginia R Terry 8868 State Rt 555 Cutler OH 45724

Joyce L Wilson FKA Joyce L Fowler 150 County Rd 4603 Bogata TX 75417

Linda J Chambers 47 Weber St Richwood WV 26261

First National Bank of Oregon Trustee for Lathan Flanagan 31033 Foxridge Ln Eugene OR 97405

Linda Sue Hill 626 Thorn Grove Pike Rd Starwberry Plains TN 37871

Nelva Jean Ford 8805 Mid Haven Circle Granbury TX 76048

Holmes & Vada J Lemon 1295 South Spring St Harrisville WV 26362

Dewey W Jones PO Box 172 Griffithville WV 25521

James P Rogers Jr 4000 Pinal Catalina AZ 85739

Samuel C Rogers 204 Elanor St Pennsboro WV 26415

Wilma J Coffield 1842 Tonawanda Ave Akron OH 44305 4708510231

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WV Department of Environment 98/20/15

#### **Additional Coal Owners**

Stephen Ward 2610 New York Ave Parkersburg WV 26101

Appalachian Royalty Co / 3049 Robert C Byrd Dr Beckley WV 25801

Warren R & Lena G Haught 12864 Staunton Turnpike Smithville WV 26178

Barry D Haught
Ira Haught
Robin J Cook
Trustees for the Haught Family Trust
210 E Main St
Harrisville WV 26362

Karen Louise Plants PO box 7304 Glen Rose TX 76043

Betty Lou Fankhauser 753 Cedarcrest Dr Bound Brook NJ 08805

Philip Latham Sherror 203 SW Bridge St #124 Grants Pass OR 97526

Ellen Sherror Francaviglia 3117 Lakeview Dr Salem OR 97304

Gregory Flanagan 202 Willow St Pennsboro WV 26415

Antero Resources Appalachian Corp 1625 17th St Denver CO 80202

Ann S Batta FKS Ann Sherror Killen PO Box 27570 San Deigo CA 92198

Patricia L Moore 170 Birdhouse Lane Bridgeport WV 26330

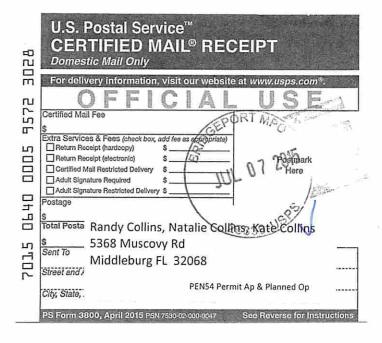
Joseph Flanagan PO Box 2 Smithville WV 26178 4708510231

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Office of Oil and Gas

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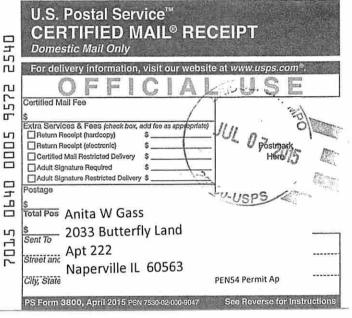


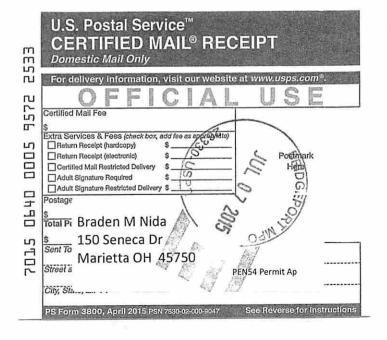


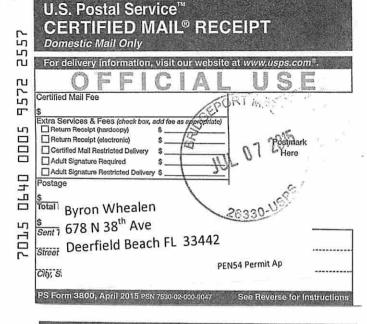
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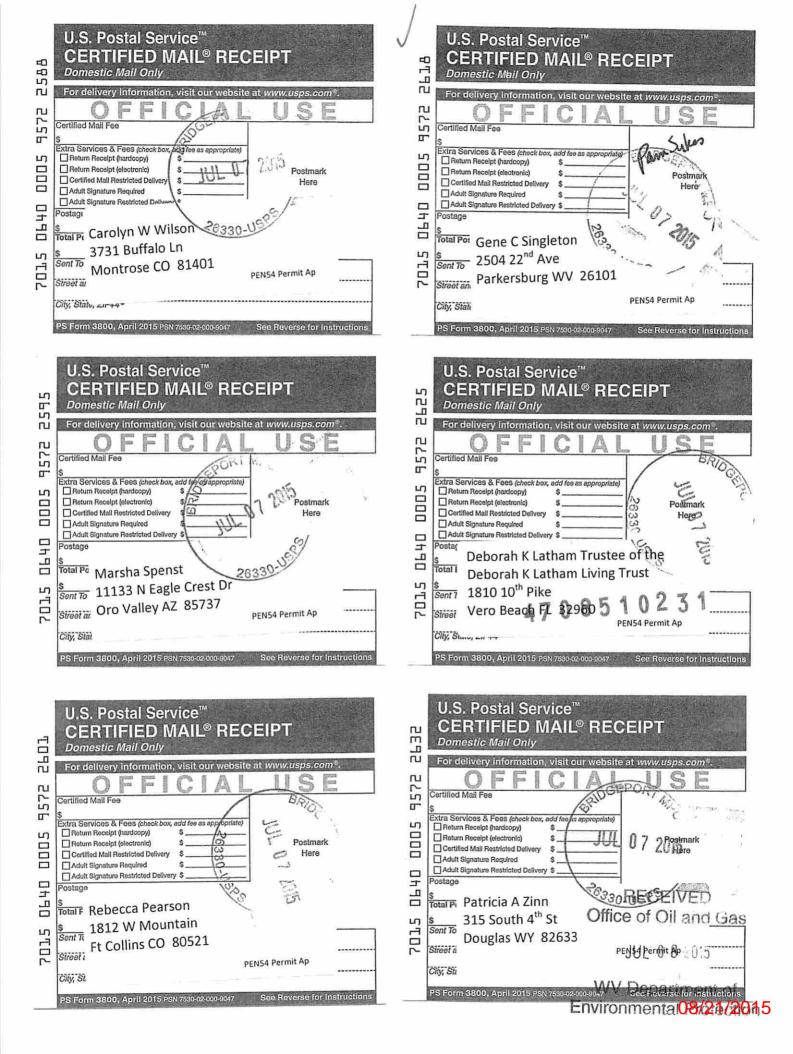


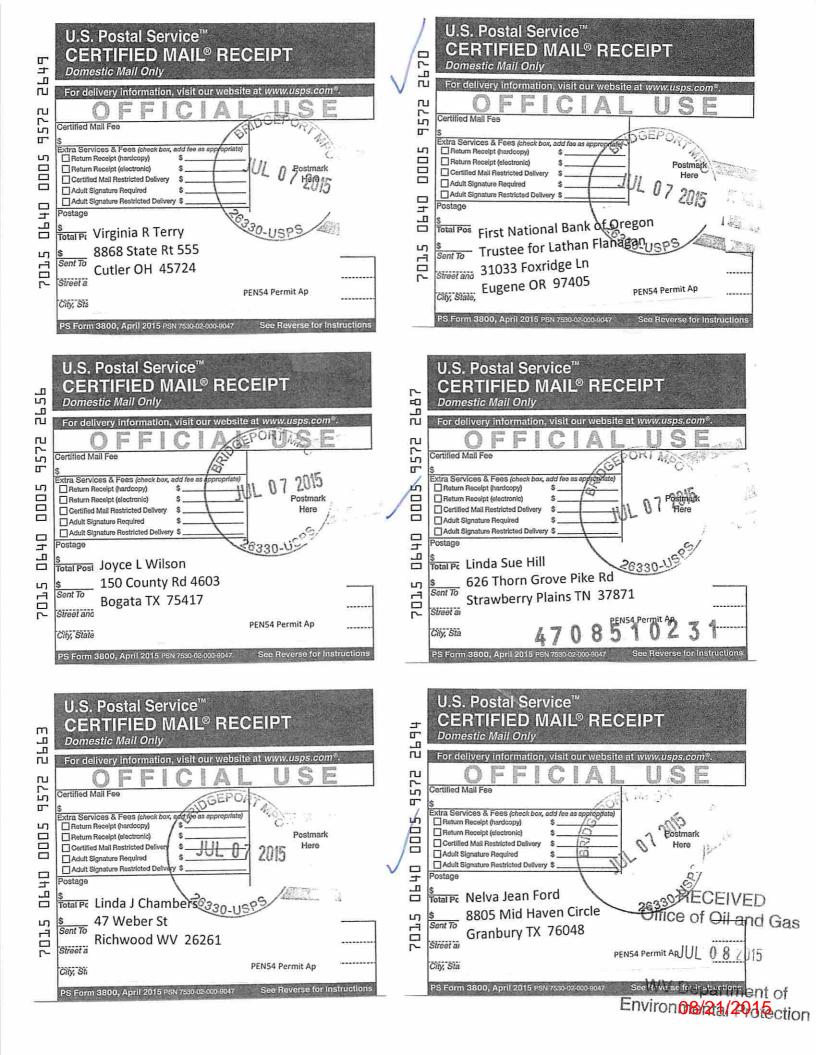


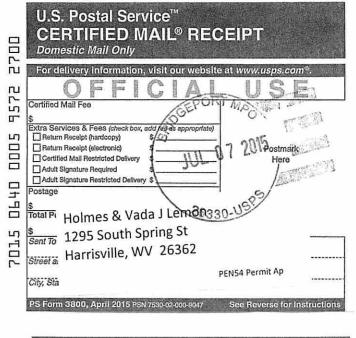


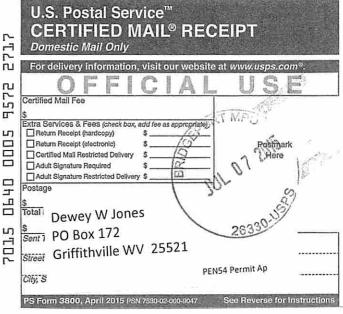


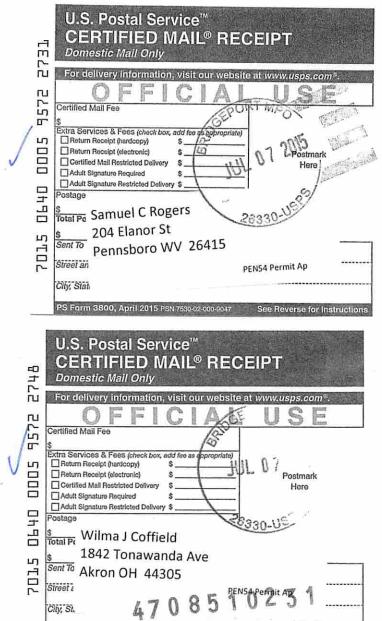








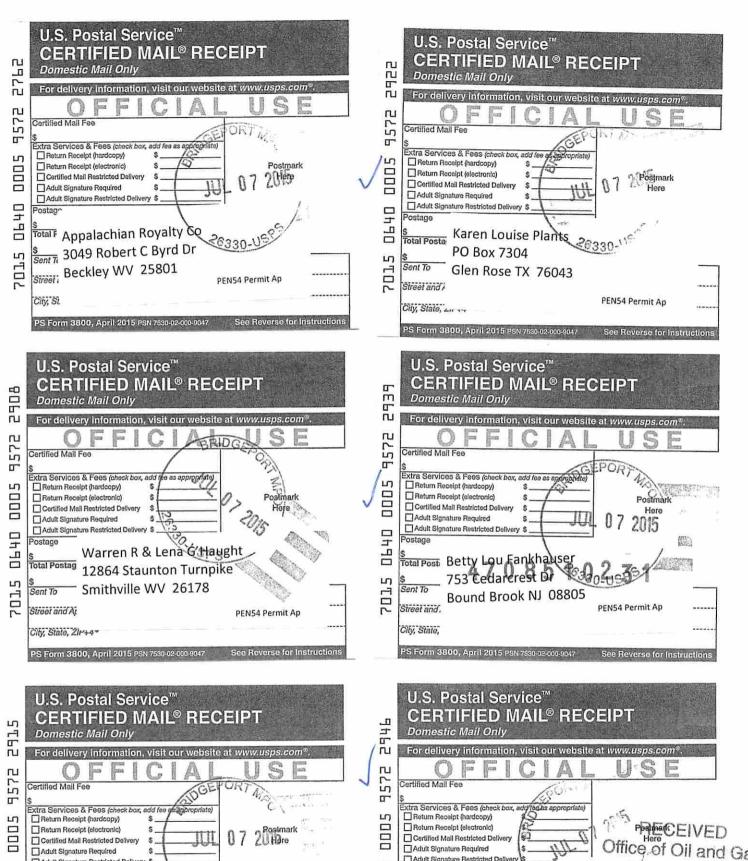




PS Form 3800, April 2015 PSN 7530-02-000-9047



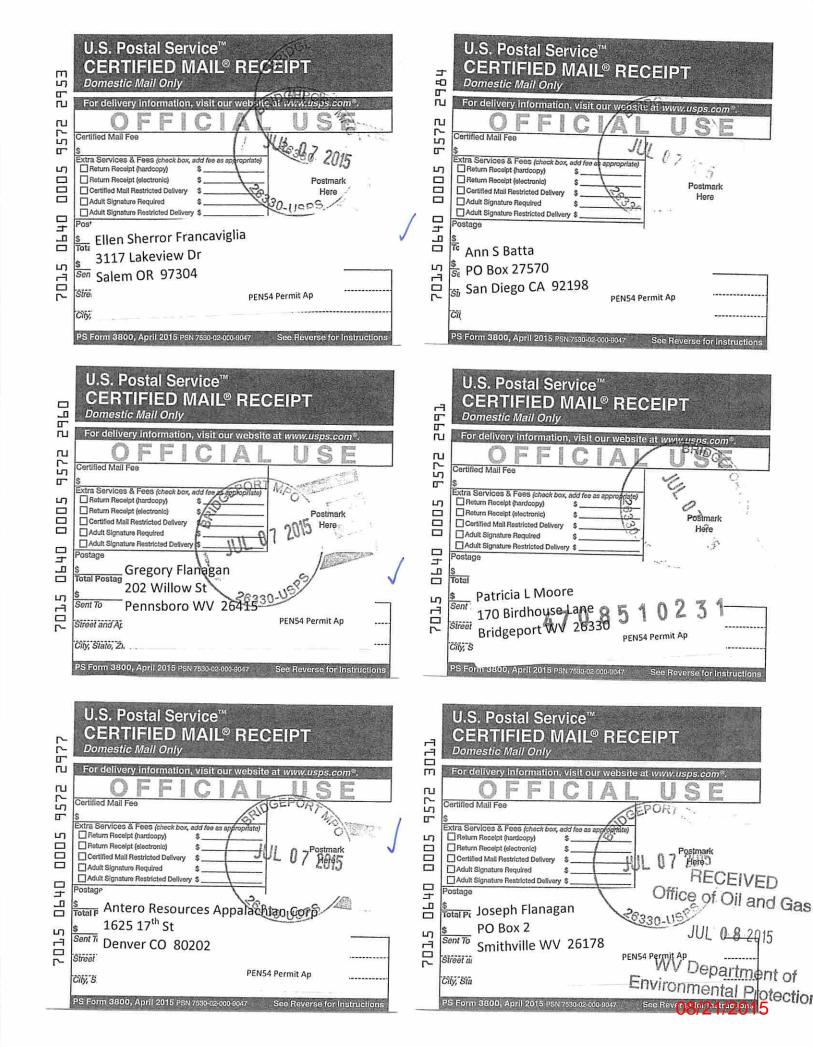


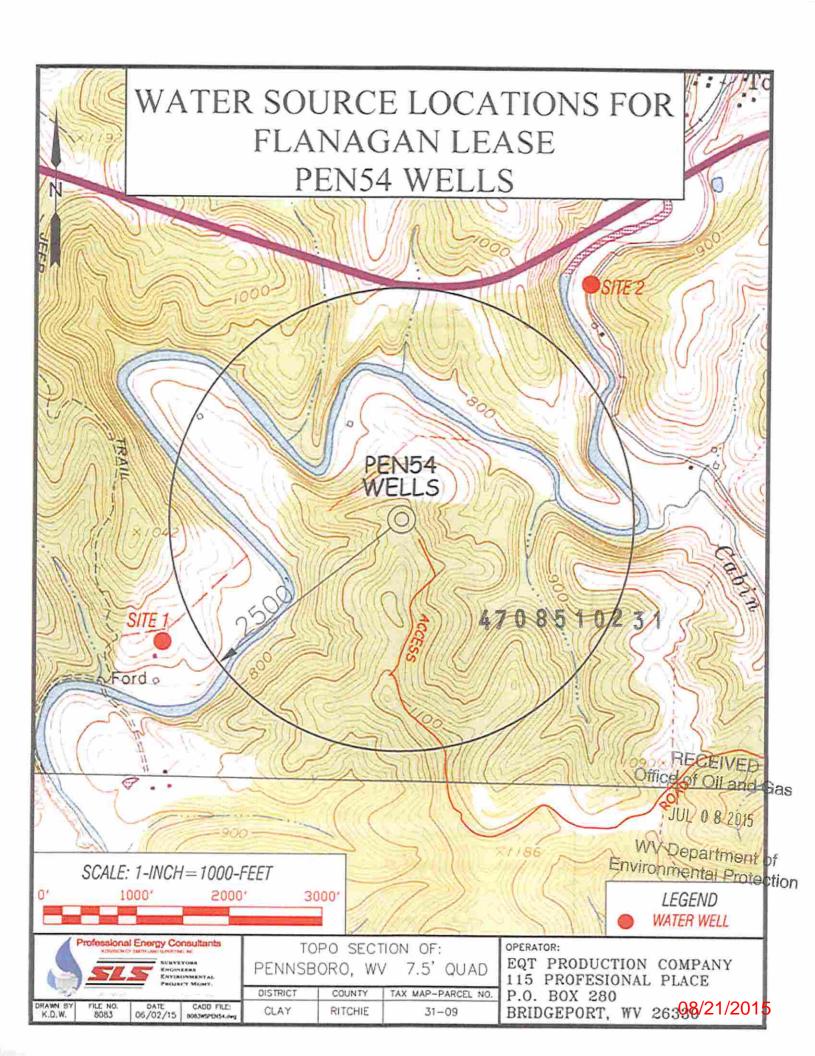


Adult Signature Restricted Delivery \$ \_ Total Pc Barry D Haught, Ira Haught & Robin & Cook Sent To Trustees for the Haught Family Trust ы 210 E Main St Harrisville WV 26362 PENS4 Permit Ap City, Stat. PS Form 3800, April 2015 PSN 7530-02-000-9047

Office of Oil and Gas Adult Signature Restricted Deliv 마 Total Pos Phillip Latham Sherror JUL 0 8 2015 190 \_ 203 SW Bridge St #1246330 Grants Pass OR 97526 PENSUPERIDE partment of Environmental Protection Street and City, State,

PS Form 3800, April 2015 PSN 7530-02-000-9047





WW-6A	
(8-13)	

API NO. <u>47</u> - 085	-	(
OPERATOR WELL NO.		516207
Well Pad Name	PI	N54

#### 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.

4708510231

#### 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 WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

#### **Well Location Restrictions**

Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not 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 before the ED effective date of this article. (e) The secretary shall, by December 31, 2012, report to the Legislature on the noise, lighting of the and Gas 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 welling 2015 structures are inadequate or otherwise require alteration to address the items



WW-6A (8-13) API NO. 47 - 085 - 0 (8-13) OPERATOR WELL NO. Well Pad Name: PEN54

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 0 8 5 1 0 2 3 4

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 work within thirty days after the application is filed with the secretary. All persons described in West Virginia Code § 22-6A-10(b) may file written comments as to the location 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

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Office of Oil and Gas

Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to the submitting written comments, notice of the permit decision and a list of persons qualified to the submitting written comments.



#### 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.

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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.

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Office of Oil and Gas

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WV Department of Environmental Protection 08/21/2013

Nouce is nereby give	en by:		
Well Operator:	<b>EQT Production Company</b>	Address:	115 Professional Place P.O. Box 280
Telephone:	304-848-0082		Bridgeport, WV 26330
Email:	Vroark@eqt.com	Facsimile:	304-848-0041

#### 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.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form 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.

STATE OF WEST VIRGINIA

WOTARY PUBLIC

Pamela Sykes

EQT Production

PO Box 280

Bridgeport, WV 26330

STATE OF WEST VIRGINIA

NOTARY PUBLIC

Pamela Sykes
EQT Production
PO Box 280

Bridgeport, WV 26330

My Commission Expires Aug. 24, 2022

By: Victoria Roark

Its: Permitting Supervisor

Subscribed and sworn before n

Notary Public

My Commission Expir

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RECEIVED Office of Oil and Gas

JUL 0 8 2015

## STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF ENTRY FOR PLAT SURVEY

Notice Time Requirement: Notice about	STATE TORFLAT SURVEY
Date of Notice: April 2 2011	ast SEVEN (7) days but no more than FORTY-FIVE (45) days prior to entry.
Delivery method pursuant to West Virginia Code § 22-6	A-10(a):
PERSONAL SERVICE X CERTIFIED MAIL	METHOD OF DELIVERY THAT REQUIRES A DECEMBER A
Pursuant to West Virginia Code § 22-6A-10(a), prior to filing	METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION
pursuant to section thirty-six, article six, chapter twenty-ty	g a permit application, the operator shall provide notice of planned entry on to the surface article. Such notice shall be provided at least seven days but no more than forty-five days (2) to any owner or lessee of coal seams beneath such tract that has filed a declaration of this code; and (3) any owner of minerals underlying such tract in the county tax five state Erosion and Sediment Control Manual and the statutes and rules related to oil the Secretary, which statement shall include contact information, including the address for control obtain copies from the secretary.
Notice is hereby provided to:	ob owner to obtain copies from the secretary.
X SURFACE OWNER(S)	
1 to 180	X COAL OWNER OR LESSEE
Name: Randy Collins, Natalie Collins & Kate Collins	Coal Declaration pursuant to §22-6A-10 and §22-6-36
5368 Muscovy Rd.	Name: Not of Record
Address: Middlebourg, FL 32068-3531 ½ Interest	Address:
	MINERAL OWNER(S)
Name:	
	*
Address:	Address:
Name:	Name 7 0 8 5 1 0 2 7 4
Address:	
Address:	
lotice is hereby given:	*Please attach additional forms if necessary
ursuant to West Virginia Code § 22-6A-10(a), notice is herel ne tract of land as follows:	by given that the undersigned well operator is planning entry to conduct a plat survey on
State: West Virginia	Approx. Latitude & Longitude: 39.25555 / -80.92743
County: Ritchie	Public Road Access: Cabin Road
District: Clay Map 31 Parcel 5 243.50 acres	
uadrangle: Pennsboro	Watershed: North Fork Hughes River Generally Used Farm Name:
opies of the state Erosion and Sediment Control Manual obtained from the Secretary, at the WV Department of Enviror 04-926-0450). Copies of such documents or additional inforww.dep.wv.gov/oil-and-gas/pages/default.aspx.	and the statues and rules related to oil and gas exploration and production may be immental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 ormation related to horizontal drilling may be obtained from the Secretary by visiting
otice is hereby given by:	
ell Operator: _EQT Production Company	RECEIVED
Telephone: 304-848-0094	Address: 115 Professional Place, Bridgeon, WV26330nd
Facsimile: 304-848-0040	EQT Representative: Jim Mencer
Email: EQTLandEntryNotice@eqt.com	Signature: JUL 0 8 2015
and Gas Privacy Notice:	WV Department
	a name, address and telephone number, as part of regulatory duties. Your personal information

The Office of Oil and Gas processes your personal information, such a name, address and telephone number, as part of 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 information. Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at <a href="mailto:depprivacyofficer@WV.qov">depprivacyofficer@WV.qov</a>.

08/21/2015

### STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF ENTRY FOR PLAT SURVEY

Notice Tin	ne Requirement: Notice shall be provided at l	east SEVEN (7) days but no more than FORTY-FIVE (45) days prior to entry.
Date of No	tice: _April 9, 2014	But of the more than FORTY-FIVE (45) days prior to entry.
Delivery m	ethod pursuant to West Virginia Code § 22	Date of Planned Entry: April 16, 2014
	OZ. THE IZE WALL	METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION
pursuant to records. Th and gas exp	section thirty-six, article six, chapter twenty e notice shall include a statement that copies ploration and production may be obtained from	ling a permit application, the operator shall provide notice of planned entry on to the surface is article. Such notice shall be provided at least seven days but no more than forty-five days of this code; and (3) any owner of minerals underlying such tract in the county tax of the state Erosion and Sediment Control Manual and the statutes and rules related to oil in the Secretary, which statement shall include contact information, including the address for face owner to obtain copies from the secretary.
Notice is h	ereby provided to:	or non the secretary.
X	SURFACE OWNER(S)	X COAL OWNER OR LESSEE
Name:	Jerry Morton 1/2 Int	erest Name: Not of Record Page 14 Not of Rec
	RR1 Box 581	erest Name: Not of Record
Address: _	Pennsboro, WV 26415-9611	Address:
		MINERAL OWNER(S)
Name: _		Name:
Address:		0 = 40231
) <del></del>		
Name:		Name:
Address:		
Notice is he	· · · · · · · · · · · · · · · · · · ·	*Please attach additional forms if necessary
Pursuant to \		ereby given that the undersigned well operator is planning entry to conduct a plat survey on
State:	West Virginia	Approx. Latitude & Longitude: 39.25555 / -80.92743
County:	Ritchie	Public Road Access: Cabin Road
District:	Clay Map 31 Parcel 5 243.50 acre	
Quadrangle:	Pennsboro	Generally Used Farm Name:
(304-926-045		al and the statues and rules related to oil and gas exploration and production may be ironmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 information related to horizontal drilling may be obtained from the Secretary by visiting
Notice is he	reby given by:	RECEIVED
Well Operato	r: EQT Production Company	Address: 115 Professional Place, Bridgepor, WV 26330 3 as
Telephone	e: 304-848-0094	EQT Representative: Jim-Mencer
Facsimile	e: 304-848-0040	JUL 0 8 2015
Emai	l: EQTLandEntryNotice@eqt.com	Signature: Mence
The Office of C may be disclos Freedom of In	Privacy Notice:  iii and Gas processes your personal information, so ed to other State agencies or third parties in the noformation Act requests. Our office will appropriate ease contact DEP's Chief Privacy Officer at deports.	Environmental Protection Environmental Protection Environmental Protection Environmental Protection Information In

information, please contact DEP's Chief Privacy Officer at depprivacyofficer@WV.gov.

WW-6A5
(1/12)

Operator Well No.

516207

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

#### NOTICE OF PLANNED OPERATION

Date of I	Fime Requirement: notice shall be provided no later th Notice: 7-6-15 Date	an the filing date Permit Application	THE RESIDENCE OF THE PROPERTY	on. 7-6-15
Delivery	method pursuant to West Virginia Code § 22-6A-16(	:)		
2.2	CERTIFIED MAIL HAND RETURN RECEIPT REQUESTED DELIVE	RY		
return rec the plann required t drilling of damages	to W. Va. Code § 22-6A-16(c), no later than the date for filing to W. Va. Code § 22-6A-16(c), no later than the date for filing the ceipt requested or hand delivery, give the surface owner when doperation. The notice required by this subsection shall into be provided by subsection (b), section ten of this article to fa horizontal well; and (3) A proposed surface use and composed to the surface affected by oil and gas operations to the extendictions required by this section shall be given to the surface of the s	ose land will be use clude: (1) A copy of o a surface owner w ensation agreemen nt the damages are	d for the drilling of a this code section; (2 those land will be use t containing an offer compensable under	horizontal well notice of ) The information ed in conjunction with the of compensation for article six-b of this chapter.
	hereby provided to the SURFACE OWNER(s)			
	ddress listed in the records of the sheriff at the time of notice	F. 100 CT		
Name: _	Jerry Morto	50 S M	Randy	Collins, Natalie Collins, Kate Collins
Address:		<del></del>		5368 Muscovy Road
	Pennsboro WV 2641	5		Middleburg FL 32068
Pursuant	hereby given: to West Virginia Code § 22-6A-16(c), notice is hereby given to n on the surface owner's land for the purpose of drilling a ho			
State: County: District: Quadrang Watershe	Ritchie Clay Pugle: Pennsboro 7.5 Gr	rizontal well on the FM NAD 83 ublic Road Access: enerally used farm	Easting: 470 Northing:	WS: 8 5 1 0 306;282,130000 4,345,359:310000 Rt 50 Jerry Morton et al
State: County: District: Quadrang Watershe  This Notic Pursuant to be pro- horizonta surface ad informati headquar	WV U   Ritchie   Clay Pu   gle: Pennsboro 7.5 Go	thic Road Access: enerally used farm e: (1)A copy of this of se land will be used reement containing are compensable underetary, at the WV	Easting: 470 Northing: name:  Code section; (2) The lin conjunction with an offer of compens of the compens of	8 5 1 306,282,130000 4,345,359,310000 Rt 50 Jerry Morton et al information required the drilling of a sation for damages to the his chapter. Additional ronmental Protection
State: County: District: Quadrang Watershe  This Notic Pursuant to be pro- horizonta surface ad informati headquar	gle: Pennsboro 7.5  gle: Pennsboro 7.5  dice Shall Include:  to West Virginia Code § 22-6A-16(c), this notice shall include ovided by W. Va. Code § 22-6A-10(b) to a surface owner who all well; and (3) A proposed surface use and compensation againfected by oil and gas operations to the extent the damages of ion related to horizontal drilling may be obtained from the Surters, located at 601 57th Street, SE, Charleston, WV 25304 (efault.aspx.	oblic Road Access: enerally used farm (c) (1) A copy of this of se land will be used reement containing are compensable un ecretary, at the WV (304-926-0450) or b	Easting: 470 Northing: name:  Code section; (2) The lin conjunction with an offer of compens of the compens of	A,345,359.310000  Rt 50  Jerry Morton et al  information required the drilling of a sation for damages to the his chapter. Additional ronmental Protection wv.gov/oil-and-gas/
State: County: District: Quadrang Watershe  This Notic Pursuant to be prophorizonta surface af informati headquar pages/de	gle: Pennsboro 7.5  gle: Pennsboro 7.5  gle: Pennsboro 7.5  de: North Fork Hughes River  ice Shall Include:  t to West Virginia Code § 22-6A-16(c), this notice shall include ovided by W. Va. Code § 22-6A-10(b) to a surface owner who all well; and (3) A proposed surface use and compensation againfected by oil and gas operations to the extent the damages of ion related to horizontal drilling may be obtained from the Sourcers, located at 601 57th Street, SE, Charleston, WV 25304 (pefault.aspx.	oblic Road Access: enerally used farm (c) (1) A copy of this of se land will be used reement containing are compensable un ecretary, at the WV (304-926-0450) or b	Easting: 4 7 0  Northing:  name:  code section; (2) The lin conjunction with gan offer of compens ander article six-b of to Department of Enviry visiting www.dep.v	A,345,359.310000  Rt 50  Jerry Morton et al  information required the drilling of a sation for damages to the his chapter. Additional ronmental Protection wv.gov/oil-and-gas/
State: County: District: Quadrang Watershe  This Notic Pursuant to be prophorizonta surface af informati headquar pages/de  Well Ope	gle: Pennsboro 7.5  gle: Pennsboro 7.5  gle: Pennsboro 7.5  de: North Fork Hughes River  ice Shall Include:  t to West Virginia Code § 22-6A-16(c), this notice shall include ovided by W. Va. Code § 22-6A-10(b) to a surface owner who all well; and (3) A proposed surface use and compensation againfected by oil and gas operations to the extent the damages of ion related to horizontal drilling may be obtained from the Sourcers, located at 601 57th Street, SE, Charleston, WV 25304 (pefault.aspx.	thic Road Access: enerally used farm  (1) A copy of this of the containing are compensable understanding are compensable understanding are compensable understanding are compensable understanding are compensable under and the WV 304-926-0450) or but address:  Address: 115 Bridgeport, WV 2	Easting: 4 7 0  Northing:  name:  code section; (2) The lin conjunction with gan offer of compens ander article six-b of to Department of Enviry visiting www.dep.v	A,345,359.310000  Rt 50  Jerry Morton et al  information required the drilling of a sation for damages to the his chapter. Additional ronmental Protection wv.gov/oil-and-gas/

#### 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 RECEIVED The Office of Oil and Gas processes your personal information, such as name, against and to personal course of business or as detective duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as detective duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as detective duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as detective duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as detective duties. appropriately secure your personal information. If you have any questions about our use or your personal information, please contact JUL 0 8 015 DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

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516207

#### STATE OF WEST VIRGINIA

cice Time Requirement: notice shall be provided no later than the filing date of permit application.

#### DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF PLANNED OPERATION

Date of Notice:	7-6-13 Da	ate Permit Appli	cation Filed:	1-6-13
Delivery metho	d pursuant to West Virginia Code § 22-6A-	16(c)		
	FIED MAIL HANI IN RECEIPT REQUESTED DELI	D VERY	1-	
return receipt rec the planned oper required to be pro drilling of a horizo damages to the so	a. Code § 22-6A-16(c), no later than the date for quested or hand delivery, give the surface owner ation. The notice required by this subsection sha ovided by subsection (b), section ten of this articontal well; and (3) A proposed surface use and courface affected by oil and gas operations to the equired by this section shall be given to the surface.	whose land will be all include: (1) A could be to a surface own ompensation agreement the damage	e used for the drilling py of this code sectioner whose land will be ement containing and s are compensable u	of a horizontal well notice of on; (2) The information e used in conjunction with the offer of compensation for onder article six-b of this chapter.
Notice is hereby	provided to the SURFACE OWNER(s)			
(at the address lis	sted in the records of the sheriff at the time of no	otice):		
Name:	Heartwood Forestland Fund	Name:		Coastal Forest Resources
Address:	1512 East Fran	klin St Addres	s:	dba Coastal Timberlands Co
	Suit	te 104		PO Box 709
	Chapel Hill NC	27514		Buckhannon WV 26201
Notice is hereby		27		
Pursuant to West operation on the State:	Virginia Code § 22-6A-16(c), notice is hereby gives surface owner's land for the purpose of drilling www.		n the tract of land as Easting:	follows: 506,282.130000
Pursuant to West operation on the State: County:	Virginia Code § 22-6A-16(c), notice is hereby gives surface owner's land for the purpose of drilling a WV Ritchie	a horizontal well o	n the tract of land as Easting: Northing:	follows:
Pursuant to West operation on the State: County: District:	Virginia Code § 22-6A-16(c), notice is hereby gives surface owner's land for the purpose of drilling a WV Ritchie Clay	a horizontal well o UTM NAD 83 Public Road Acc	n the tract of land as  Easting:  Northing:  ess:	follows: 506,282.130000 4,345,359.310000 Rt 50
Pursuant to West operation on the State: County:	Virginia Code § 22-6A-16(c), notice is hereby gives surface owner's land for the purpose of drilling a WV Ritchie	a horizontal well o UTM NAD 83	n the tract of land as  Easting:  Northing:  ess:	follows: 506,282.130000 4,345,359.310000
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Oil and Gas Privacy Notice:

RECEIVED 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 Tillice of Oil and Gas 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 JUL 0 8 2015 DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

WV Department of



#### WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

### **Division of Highways**

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

Paul A. Mattox, Jr., P. E. Secretary of Transportation/Commissioner of Highways

May 15, 2015

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

4708510231

Subject: DOH Permit for the PEN 54 Pad Site, Ritchie County

514474 PEN54H1	514475 PEN54H2	514476 PEN54H3
514477 PEN54H4	514478 PEN54H5	514479 PEN54H6
514480 PEN54H7	515874 PEN54H8	516206 PEN54H9
516207 PEN54H10	516208 PEN54H11	516209 PEN54H12
516210 PEN54H13		

Dear Mr. Martin,

**Earl Ray Tomblin** 

Governor

This well site will be accessed from Permit #03-2015-0161 issued to EQT Production Company for access to the State Road. The well site is located off of Ritchie County Route 10/1 SLS. Approved permit must be received before the start of construction.

The 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 January 3, 2012.

Very Truly Yours,

Garý K. Clayton, P.E.

Regional Maintenance Engineer

Central Office O&G Coordinator

Cc: Nick Bumgardner

EQT Production Company

CH, OM, D-3, File

RECEIVED
Office of Oil and Gas

JUL 0 8 2015

WV Department of Environmental Projection

## Anticipated Frac Additives Chemical Names and CAS numbers

<u>Material</u>	<u>Ingredient</u>	<b>CAS Number</b>
Water		
Sand	Hydrotreated light petroleum distillate	14808-60-7
Friction Reducer	Tributyl tetradecyl phosphonium chloride	64742-47-8
Biocide	Ammonium chloride	81741-28-8
Scale Inhibitor	Hydrochloric Acid	12125-02-9
15% Hydrochloric Acid	Propargyl Alcohol	7647-01-0
Corrosion Inhibitor	Methanol	107-19-7
Corrosion Inhibitor	Guar Gum	67-56-1
Gelling Agent	Sodium Persulfate	9000-30-0
Oxidizing Breaker	Potassium Carbonate	7775-27-1
Buffering Agent		584-08-7

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Office of Oil and Gas

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WV Department of Environmental Property Property

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LISTOR PRANNINGS

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PROPOSED WELL NO. H1 WV514474, H2 WV514475, H3 WV 514476, H4 WV514477, H5 WV514478. H6 WV514479, H7 WV514480, H8 WV515874, H9 WV516206, H10 WV516207, H11 WV516208 SITUATE ON THE WATERS OF NORTH FORK HUGHES RIVER IN CLAY DISTRICT, RITCHIE COUNTY, WV

EQT PEN 54 SITE PLAN EQT PRODUCTION COMPANY



ROP FLAT BOTTOM DITCH ATH CHECK DAMS ROP. CONTAINMENT BETSA HOP ROAD CRATERLINE

ANTH CHECK DAMS

PROP CULVERT

EX WATER WELL EX GAS WELL EX TREELING



RITCHIE COUNTY, WV CLAY DISTRICT

AS BED

RAET 104 41

SMITH LAND SURVEYING, IN 12 VAHACRN DRIVE PO BOX 150 GLENVILLE, WY 20351 PHOME: (354) 442-654

STANTEC CONSULTNO, NC 111 ELXING STREET FARMONT, WY 26554 PHONE (304) 367 5401

SURVEYOR

EQT PEN 54

X-SECTION EXISTING GRADE

TITLE SHEET

PROP CULLING PROP CULLING PROP FALLING PROP LIMITS OF DISTURBANCE

WELL PAD

THE WELL PAD FLOWBACK PIT, ACCESS ROAD, AND COMMETION PIT. AME DERKI COMSTRUCTED TO AID IN THE DEVEL OPMENT OF IMPIVIDA. MARCELLUS SHALE GAS WELLS.

SITE DISTURBANCE COMPUTATIONS

COMPLETION PIT AREA = 6 St + ACHES TOTAL SITE DISTURBANCE AREA - 52 03 + ACHES

ENTRANCE PERMIT

MISS UTILITY STATEMENT

ENVIRONMENTAL NOTES

EGT PERM MILL FAD CENTER
ATTUDE: 1922/10 - CONGINDE: 80 927222 (MO 8.1)
607 PEN A F. COMBANE RT ESPTER
LATTUDE: 99 256871 - CONGINDE: 60 92694 (MA 8.1)

LOCATION COORDINATES

BOTE LOCATION
THE GOLD PLANEL PAD IS LOCATED 19
MILES 1- BOUTFEAKED OF THE JUNCTION IS
URI ROUTE SO AND WY 76

OIL AND GAS ROYALTY OWNER W. RLANGAN HES. ET AI. (50) 11-ACHES) CLAY DETRICT HITCHE COUNTY, WAY

RIDT PEN SK COMPLETION PIT CENTER LATITUDE, 1925AP24, LONGITUDE, 19322194 (MAD A3)

GENERAL DESCRIPTION

CONSTAL FOREST RESIGNECE DRA COASTAL CLAY DOTRICT, RITCHE COLMYY, WV TAN AND YOUR TOTAL PROPERTY AREA 42 51 10 ACRES TOTAL DISTURBANCE AREA 0 73 10 ACRES

HEATWOOD FORESTLAND FUND IV LIC CLAY DISTRICT, NITCHEE COUNTY, WY TAX MAY 311 314 314 314 TOTAL PROPERTY AREA 801 19 14 ACRES TOTAL OISTURBANCE AREA 18 83 19 ACRES

PROPOSED ENTRANCE

ENVIRONMENTAL ASSE

OVER TEMPO

PROP RIPRAP INLET PROTECTION PROP COMPOST FILTERSOCK PROP RIPLAND CUTLET PROTECT

K. SECTION GRID INTERMEDIATE PROP. ROCK CONSTRUCTION ENTRONCE PROP TRUCKING

K. SECTION PROPOSED DRADE

EX DELINEATED STRE IX DELIMENTED WITH REFERENCE THE

AMSIGOTATES ON SACROTA

AND THE PROPERTY OF THE US

THE USE OF THE USE

THE USE OF

ENGINEER

OPERATOR

EQT PRODUCTION COMPANY OPERATOR ID 306886 P.O. BOX 280 BRIDGEFORT, WY 28530 PHONE, (264) 345-3870

MASS Utally of West Virginia 1-000/Schiedeli West Virginia State Law (Seaton MX, Chaples 24-D) Grapans that you call for business days before you dig in the state of West Virginia The state of West Virginia

PENNSBORD GUADRANGLE WEST VIRGINIA 7 5 MINUTE SERIES

WITHIN JUD FEET OF THE PAD AND LOD
WITHIN JUD FEET OF THE PAD AND LOD
GONED SPRINGS WITHIN 230 FEET OF THE WELL(I) BEING
PRESHOUGHELE FOR ANY EXISTING WATER WELL OF

AMB, LAKES, POHOS, OR RESERVOIRS WITHIN 100 FEET OF THE PRIDJECT LOD. THERE OF THE LOD, AND A WAVER FROM THE VADICE WILL BE APPLIED FOR THROUGH THE CAST PRODUCTION COMPANY.

GEOTECHNICAL NOTES

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PROJECT INFORMATION

LERRY MORTON
CLAY DISTRICT, RECORDER, WV
CLAY DISTRICT, RECORDER, WV
TOTAL MAY NO FOR THE TOTAL PROPERTY ACRES
TOTAL DISTURBANCE AREA, 33 SP 11, ACRES

76	

PROJECT INFORMATION INFACE CONFRE ANDY, MATALE & MATE COLUNS CLAY DISTRICT, SITCHE COUNTY, MY TAX MAD 3456 (TO MITERST) TOTAL PROPERTY AREA 22.57 \*\* ACRES TOTAL OISTURBANCE AREA 22.57 \*\* ACRES ROJECT NAME: EQT PEN 54

> API# 8510226 API# 8510227 API# 8510222 API# 8510225

JERRY MORTON
CLAY DISTRICT, RITCHEL COUNTY, WV
LIX MAP 31-66 (1/2 INTEREST)
TOTAL PROPERTY AREA: 20.50 \*\* AGRES
TOTAL DISTURBANCE AREA: 32.67 \*\* AGRES

API# 8510232 API# 8510231 API# 8510230 API# 8510229 API# 8510228

- HEARTWOOD FORESTLAND FUND IV LLC CLAY DISTRICT, RITCHIE COUNTY, WV TAX MAP 3+11, 31+3, 31+5 TOTAL PROPERTY AREA: 500, 19 +4: ACRES TOTAL DISTURBANCE AREA: 10.03 +4: ACRES
- COASTAL FOREST RESOURCES DBA COASTAL CLAY DISTRICT, RITCHIE COUNTY, MV
  TAX MAP 12-02
  TOTAL PROPERTY AREA: 42-51 1-1-ACRES
  TOTAL DISTURBANCE AREA: 0.71 1-1-ACRES

## W. FLANAGAN HRS. EX P. CLAY DISTRICT RITCHEE COUNTY, WV AND DAS ROYALTY DWNER: FLANAGAN HRS. ET AL (500 % ACRES)

# LOCATION: E EGT PEN 54 WELL PAD IS LOCATED 1.9 LES +4 SOUTHEAST OF THE JUNCTION OF ROUTE 50 AND WAY 14,

## ISOTEM SA WELL PAD CENTER LATITUDE: 90.27670 LONGITUDE: 90.27672 (NAD III) EQT PER SI FLOWBACK PIT CENTER LATITUDE: 90.256871 LONGITUDE: 90.591454 (NAD 83) OCATION COORDINATES

SENERAL DESCRIPTION OT PEN 64 COMPLETION PIT CENTER ATTUDE: 39 258129 LONGITUDE: 30 923194 (NAD 87) WELL PAD, FLOWBACK PIT, ACCESS ROAD, AND COMPLETION PIT BEING CONSTRUCTED TO AID IN THE DEVELOPMENT OF INDIVIDUAL ICELLUS SHALE GAS WELLS:

## WELL PADIFLOWBACK PIT AREA = 14.08 + 1-ACRES VICLESS ROAD AREA = 20.53 + 1-ACRES COMPLETION PIT JAKEA = 6.64 + 1-ACRES COMPLETION PIT JAKEA = 6.64 + 1-ACRES COTAL SITE DISTURBANCE AREA = 52.03 + 1-ACRES SITE DISTURBANCE COMPUTATIONS

ENTRANCE PERMIT

ECT PRODUCTION COMPANY UIL ORDAN AN ENCROACHMENT PERMIT (FORM MANN) PROM THE WEST VIRBUM DEPARTMENT OF TRANSPORTATION ORDINO OF HIGHWAYS, PRIOR TO COMMINCEMENT OF CONSTRUCTION ACTIVITIES.

# AISS UTILITY STATEMENT

VAS NOTED FOR THE LOCATING OF UTILITIES PRIOR TWILES PRIOR

# NVIRONMENTAL NOTES

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# SEOTECHNICAL NOTES

RESTRICTIONS NOTES

WEST VIRGINA
7.5 MINUTE SERIES

EGT PRODUCTION COMPANY OPERATOR ID: 30666 P.C. BOX 250 BRIDGEPORT, WAY 26630 PHONE: (354) 340-3970 OPERATOR

STANTEC CONSULTINGING. 111 ELKINS STREET FARMONT, WV 26554 PHONE: (304) 367-9401

SMITH LAND SURVEYING, II 12 VANHORN DRIVE PO BOX 150 GLENVILLE WV 26151 PHONE: COM 1462-5634 SURVEYOR

INC.

NAME OF THOSE

ENGINEER

HAGE, AGE RETEMPLEND STEEMEN, LANGE POWER, OF DESCROORS CHIMAN LOSTET OF THE PROCESSION OF THEE AGEN CONTRACT OF THE CONTRACT OF THE PROCESSION OF THE CONTRACT OF THE CONTRACT OF THE PROCESSION OF THE CONTRACT OF THE PROCESSION OF THE PROCESSION

## EQT П PRO **PEN 54** 2 COMPANY ט A

PROPOSED WELL NO. H1 WV514474, H2 WV514475, H3 WV 514476, H4 WV514477, H5 WV514478, H6 WV514479, H7 WV514480, H8 WV515874, H9 WV516206, H10 WV516207, H11 WV516208 SITUATE ON THE WATERS OF NORTH FORK HUGHES RIVER IN CLAY DISTRICT, RITCHIE COUNTY, WV







24-29 13.23 Y 12 ĭ

ACCESS ROAD AND WELL SITE LAYOUT
WELL PADPLOWBACK PHY
COMPLETION PHI GROSS SECTIONS

OVERALL PLAN SHEET INDEX

CENERAL NOTES DESCRIPTION TITLE SHEET

EXCESS MATERIAL STOCKPILE CROSS SECTIONS

TOPSOIL STOCKPILE PROFILES

TOPSOIL STOCKPILE CROSS SECTIONS

RECLAMATION PLAN

CONSTRUCTION DETAILS

EXCESS MATERIAL STOCKPILE PROFILES

ACCESS ROAD CROSS SECTIONS

ACCESS ROAD PROFILE

	LEG	LEGEND	
IDEX CONTOUR	1550	PROP, INDEX CONTOUR	1550
DUNDARY LINE		PROP. CUT LINE	
DOE OF ROAD PAVENEY	1	PROP. FILL LINE	1
UARDRAIL	0	PROP, LIMITS OF DISTURBANCE	
ENCELINE	-C	AREA OF DELINEATION	
WERHEAD UTILITY	- 1	PROP, WELL HEAD	\$
WERHEAD UTILITY RW	l i	PROP, CONTAINMENT BERM	
ULLITA POTE	¢	PROP, ROAD CENTERLINE	
JUY WIRE	Ţ	HOLD TO THE BOOK OF BOOK OF	
ELEPHONE LINE	1	WITH CHECK DAMS	
ASLINE R/W		PROP, V-DITCH	
VATERLINE		PROP. CULVERT	
WIER MEIT	0	PROP, RIP.RAP DUTLET PROTECTION	OI MI
WENT WET	Ö	PROP, RIP FRAP BULET PROTECTION PROP, COMPOST FUTERSOCK	3 0
REELINE	3	PROP, TREELINE	mon
ELINEATED STREAM	: <	PROP. ROCK CONSTRUCTION ENTRANCE	
ELINEATED WETLAND	X	X-SECTION GRID INDEX	
UILDING		X-SECTION GRID INTERMEDIATE X-SECTION PROPOSED GRADE	
		X-SECTION EXISTING GRADE	-

EX 73

Ex, G EX. W

EX.U EX D EX.D



EQT PEN 54 CLAY DISTRICT RITCHIE COUNTY WA







SHEET NO.

LIST OF DRAWINGS

WVDEP OOG

岁 8/14/2015

APPROVED

