

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: 47-8510225, 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: 514477

Farm Name: MORTON, JERRY

API Well Number: 47-8510225

Permit Type: Horizontal 6A Well

Date Issued: 08/17/2015

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API N	lumber:	

PERMIT CONDITIONS

4708510225

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. <u>Failure to adhere to the specified permit conditions may result in enforcement action.</u>

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 4708510225

- 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.
- 9. 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 DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

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API NO.	<u>47</u>	٠ _	085		_
OPERATOR WELL NO.					514477
Well Pag	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 306686 085 1 Operator ID County District Quad-	539
Operation 12 County District Quadr	rangle
2) Operator's Well Number:	
3) Farm Name/Surface Owner : Jerry Morton et al Public Road Access: Rt 5	0
4) Elevation, current ground: 1,016.0 Elevation, proposed post-construction: 1,016.0	
5) Well Type: (a) Gas Oil Underground Storage	
Other	
Other	•
Horizontal	022 8
6) Existing Pad? Yes or No:	4 0
7) Proposed Target Formation(s), Depth(s), Anticipated Thicknesses and Associated Pressure(s): Target formation is Marcellus at a depth of 6297 with the anticipated thickness to be 49 feet and anticipated target pressure of	2190 PSI
8) Proposed Total Vertical Depth: 6297	
9) Formation at Total Vertical Depth: Marcellus	
10) Proposed Total Measured Depth: 11,794	
11) Proposed Horizontal Leg Length 4,947	
12) Approximate Fresh Water Strata Depths: 99, 105, 302, 627, 729, 745, 770	
13) Method to Determine Fresh Water Depth: By offset wells	
14) Approximate Saltwater Depths: 1,350	
15) Approximate Coal Seam Depths: 326, 789, 867, 1078, 1182	
16) Approximate Depth to Possible Void (coal mine, karst, other): None reported	
17)Does proposed well location contain coal seams directly overlying or	
adjacent to an active mine? YesNo	
(a) If Yes, provide Mine Info: Name:	
Depth: Seam:	

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APINO. <u>47</u>	<u> </u>	
OPERATOR WELL NO.		514477
Well Pad Name:		PEN54

CASING AND TUBING PROGRAM

TYPE	Size (in)	<u>New</u> <u>or</u> <u>Used</u>	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	-	-	_	_	_	<u>-</u>	_
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	11,794	11,794	See Note 1
Tubing	2 3/8		J-55	4.6			May not be run, if run will be set 100' less than TD
Liners							

TYPE	Size (in)	<u>Wellbore</u> <u>Diameter (in)</u>	Wall Thickness (in)	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		EISE Note 2	1.21
Coal					Office o	Oil and Gas	
Intermediate	9 5/8	12 3/8	0.395	3,950	3160.u.c	See Note 2	1,21
Production	5 1/2	8 1/2	0.361	12,640	3160AUG	1 2015	1.27/1.86
Tubing					WV De	partment of	
Liners					Environme	ntal Protection	

<u>Packers</u>

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)

Page 2 of 3

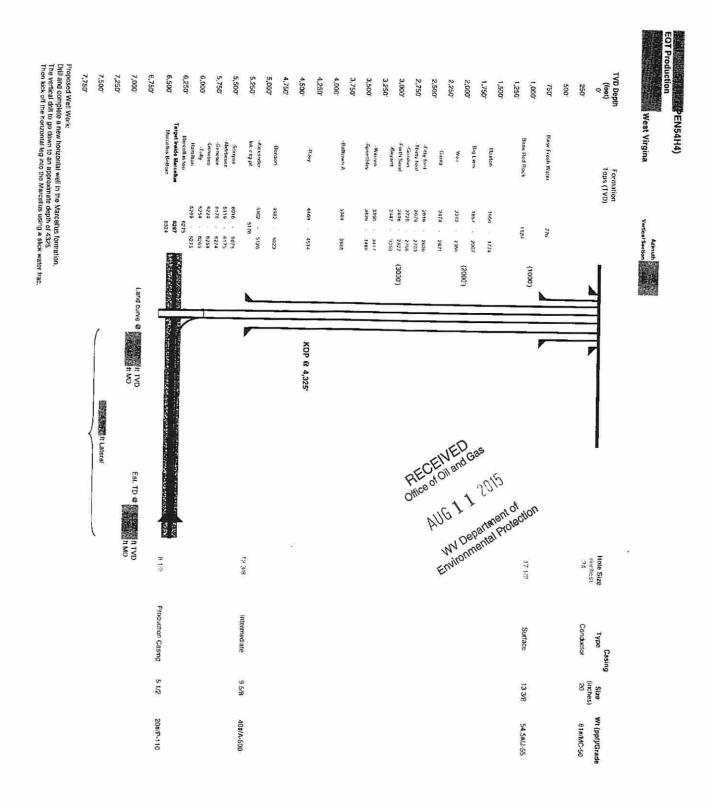
**	AA	-	UL
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API NO. 47	0	
OPERATOR WELL NO.		 51447
Well Pad Name:		PEN54

	Well Pad Name: PE
19) Describe proposed well work, including the drilling and plugging back of any pilot i	hole:
Drill and complete a new horizontal well in the marcellus formation. The vertical drill to go down to an	
off the horizontal leg into the marcellus using a slick water frac.	and the second s
ON Pagasita freedomina (di)	
20) Describe fracturing/stimulating methods in detail, including anticipated max pressu	re and max rate:
Hydraulic fracturing is completed in accordance with state regulations using water recycled from previously freshwater sources. This water is mixed with sand and a small percentage (less than 0.3%) of chemicals (in a control of the	fractured wells and obtained from
gening agent, get breaker, incoon reducer, biccide, and scale inhibitor), referred to in the industry as a "slick	water completion Meximum
anticipated internal casing pressure is expected to average approximately 8500 psi, maximum anticipated tr	pation rates are expected to exercise
approximately 100 bpm. Stage lengths vary from 150 to 300 feet. Average approximately 200,000 barrels vary from 100 mesh to 20/40 mesh. Average approximately 200,000 pounds of sand per stage.	of water per stage. Sand 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):	21.5
23) Describe centralizer placement for each casing string	21.0
Surface: Bow spring centralizers – One at the shoe and one spaced every 500'. Intermediate: Bow spring centralizers – One cent at the shoe and one spaced every 5	
Production: One spaced every 1000' from KOP to Int csg shoe	00'.
24) Describe all coment additions as a second secon	
24) Describe all cement additives associated with each cement type. Surface (Ty) Used to speed the setting of cement slurries.	pe 1 Cement): 0-3% Calcium Chloride
0.4% flake. Loss Circulation Material (LCM) is used to combat the loss of the cement slurry to a	thief zone
Intermediate (Type 1 Cement): 0-3% Calcium Chloride. Salt is used in shallow, low temperature form	nations to speed the setting of cement
to a thief zone.	fluid or cement slurry (not filtrate)
Intermediate (19pe 1 Cement): 0-3% Calcium Chloride. Salt is used in shallow, low temperature form slurries. 0.4% flake. Loss Circulation Material (LCM) is used to combat the loss of whole drilling to a thief zone. Production:	RECEIVED Gas
Lead (Type 1 Cement): 0.2-0.7% Lignosulfonate (Retarder). Lengthens thickening time.	1 1 2015
0.3% CFR (dispersant). Makes cement easier to mix.	AUG 1 1 2015
Tall (Type H Cement): 0.25-0.40% Lignosulfonate (Retarder). Lengthens thickening time.	WV Department of Environmental Protection
0.2-0.3% CFR (dispersant). This is to make the cement easier to mix.	Environmenta
60 % Calcuim Carbonate. Acid solubility.	
0.4-0.6% Halad (fluid loss). Reduces amount of water lost to formation.	
25) Proposed borehole conditioning procedures. <u>Surface: Circulate hole clean (Approximatel</u>	y 30-45 minutes) rotating & reciprocating
one full joint until cuttings diminish at surface. When cuttings returning to surface diminish, contir	
minutes. To ensure that there is no fill, short trip two stands with no circulation. If there is fill, brin	
and circulate hole clean. A constant rate of higher than expected cuttings volume likely indicates	
ntermediate: Circulate hole clean (Approximately 30-45 minutes) rotating & reciprocating one full joint	
urface. When cuttings returning to surface diminish, continue to circulate an additional 5 minute	
ole cleaning use a soap sweep or increase injection rate & foam concentration.	
roduction: Pump marker sweep with nut plug to determine actual hole washout. Calculate a gauge hole	es bottoms up volume.
erform a cleanup cycle by pumping 3-5 bottoms up or until the shakers are clean. Check volume	of cuttings coming across
he shakers every 15 minutes.	

*Note: Attach additional sheets as needed.

Well Schematic **EQT Production** Well Name County State Elevation KB: Target Prospect Azimuth Vertical Section 0' -Δ Hole Size 24" - 20" Conductor at 40" 500' -- 500 770' Fresh Water Base TOC • Surface 13 3/8", MC-50, 54.5# • To 15/15/16 If MD Bh Size 12.375 1,000' - 1,120' Base Red Rock - 1,000 1,500' — 1,660' Maxton - 1.500 RECEIVED Office of Oil and Gas 1,867° Blg Lime 2,000' — 2,262' Weir - 2,000 AUG 11 WY 2,500' — 2,474' -Gantz
2,616' -Fitty lost
2,679' -Thirty foot
2,726' -Gordon
2,816' -Forth Sand
3,000' — 2,947' -Bayard - 2,500 WV Department of Environmental Protection **—** 3,000° 3,350' -Warren 3,429' -Speechley 3,500" --- 3,500 9 5/8", MC-50, 40# @ B# Size 8.5 4,000' - 3,949' -Baltown A - 4,000 KOP - MD 10 Deg DL8 4.500' — 4,469' -Riley - 4,500 5,000' — 4,982' -Benson 5,102' -Alexander 5,176' (nt. csg pt - 5,000 5,500' -- 5,500 6,016' -Sonyea 6,119' -Middlesex 6,175' -Genesos 6,254' -Genesos 6,254' -Tully 6,269' -Hamilton Land e n MD — 6,000° 6 1/2", P-110, 200 11, n MO 6,275' -Marcellus 6,324' Onondaga 6.500' -- 6,500 7,000' -- 7,000 7,500' -- 7,500 8,000 -- 8,000





west virginia department of environmental protection

Office of Oil and Gas 601 57th Street, SIE Charleston, WV 25304 (304) 926-0450 (304) 926-0462 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 4708510225

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 I (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.

ames &

Environmental Resources Specialist / Permitting

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WV Department of Environmental Protection 08/21/2015



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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 lement for use in cementing surface and coal protection casing of oil and gas wells.

FINDINGS OF FACT blend for use in cementing surface and coal protection casing of oil and gas wells.

- 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
- 2.) 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, Chref Office of Oil and Gas

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WV Department of Environmental Protection 08/21/2015

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API No. 47 - 08			10225
Operator's Well No			514477

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

Fluids/Cuttings Disposal & Reclamation Plan

Operator Name	EQT Production	Company	OP 0	cde	306686
Watershed (HUC10)				Per	insboro 7.5
Do you anticipate using n	nore than 5,000 bbls o	f water to com	plete the propose	d well work?	Yes x No
Will a pit be used ? Yes:					
	be anticipated pit waste:		flowback w	rater & residua	ul natida
	er be used in the pit?			If so, wha	
				n so, wna	it ml.?60
r roposed Dispos	sal Method For Treate Land Application	α Pπ wastes:			
	Underground Injec	ction (UIC	Permit Number	0014. 84	462 4037 \
	Reuse (at API Nu	umber	V	arious)
<u></u>	Off Site Disposal Other (Explain	(Supply for	m WW-9 for disp	osal location)	
					
Will closed loop system be	used? Yes, The cl	osed loop syste	m will remove drill	cuttings from the	e drilling
fluid. The drill cuttings are th	en prepared for transpor	tation to an off-	site disposal facility	<u>. </u>	
Drilling medium anticipated	for this well (vertical	and horizontal)? Air, freshwater	. oil based, etc	C.
Air is used to drill the top-hate sections of the	se wellbore (surface, intermediate, a	nd pilot) Water based	mud may be necessary dec	onding on hole condition	ons to stabilize
and drill the informediate section. The pilot	hole, curvo, and lateral sections wil	be drilled with either a	r. water based mud, or oil b	ased mud.	
W - 21					
	nat type? Synthetic, pe	-		Synthetic mu	
Additives to be used in drill		r - biodogradable oil tu	bricant , detergent, defoan	ning, water. Water ba	sed mud - Banta, viscosifer,
Alkalinity control, lime, fitration co	Avol, deflocculates, biodegr	adable oil lubricar	it , deloaming, walnu	t shell, salt, x-cide	, carbonates.
Oil based mud - synthetic base of biodegradable oil lubricant, defoa	mise sectionates	cositer, alkalinity co	ontrol, filtration contro	i, deflocculates,	
g	mily, cziboliates.				
Drill cuttings disposal met	hod? Leave in pit. land	ffill. removed o	ffsite. etc.	lan	ndfill
- If left in pit and pla	n to solidify what medium v	vill be used? (Cerr	ent. Line. sawdust)	Lai	n/a
 Landfill or offsite 	name/permit number?		See At	ached List	
Permittee shall provide written	notice to the Office of O	il and Gas of an	y load of drill cuttin	gs or associated	waste rejected at
any West Virginia solid waste I disclose where it was properly	acility. The notice shall i	be provided with	in 24 hours of rejec	ction and the pe	rmittee shall also
—————	——————————————————————————————————————				
I certify that I understand ar	id agree to the terms and c	onditions of the G	ENERAL WATER PO	LLUTION PERM	IT issued
on August 1, 2005, by the Office of	Oil and Gas of the West V	irginia Departmen	t of Environmental Pr	rotection. I unders	tand that the
provisions of the permit are enforce or regulation can lead to enforcem	Bedie by law. Violations of a Ant action	iny term or conditi	on of the general per	mit and/or other a	pplicable law
I certify under penalty of law application form and all attachment	'inat i have personally exar is thereto and that, based o	nined and am fam	iliar with the informat	ion submitted on	this
he information, I believe that the in	formation is true, accurate	and complete 1 a	mawara that there a	ciately responsible	3 tor obtaining
submitting false information, includi	ing the possibility of fine or i	mprisonmen	m awais maturere a	re significant pen	illes for
		~	9/1		
Company Official Signature Company Official (Typed Na	ma)	m	Vision I D		
Company Official Title		Perm	Victoria J. Roar tting Supervisor	<u> </u>	
_			g Cupervisur		
Notes and the state of the stat			Λ		
Subscribed and sworn before	a me this	day of _	Hugus	<u>t</u>	, 20 15
_Killer a o.	I NOQL	ÐΛ	Ü	Matan	y Public
		117	20	notar	y Public
ly commission expires		4-1-	20		7779

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OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VERGINA
REBECCA L. HEATER
EQT PROBUCTION COMPANY
PO BOX 280
BRIDGEPORT, WY 26330
My conmission aspires April 07, 7020

18/21/2015

Proposed Revegetation T	reatment: Acres Disturbed _	52.03	Prevegetation pH	6.2
	3 Tons/acre or to		6.5	
Fertilize type	Granular 10-20-20			·
Fertilizer Amoun	nt <u>1/3</u> lbs/a	cre (500 lbs minimum)	
Mulch	-			ຄ
		Seed Mixtures	Permane (1)	0
Tem	nporary		Permane (1)	•
Seed Type KY-31	lbs/acre 40	Seed Typ Orchard Gras	e 🖁 📗 lbs/ad	
Alsike Clover	5	Alsike Clover	5	
Annual Rye	15			
Attach: Drawing(s) of road, location	on,pit and proposed area for la	and application.		
Drawing(s) of road, location	on,pit and proposed area for la	• •		
Drawing(s) of road, location of in	volved 7.5' topographic sheet.			
Drawing(s) of road, location Photocopied section of in Plan Approved by:	volved 7.5' topographic sheet.	u_		
Drawing(s) of road, location Photocopied section of in Plan Approved by:	Daufula Leseul V. m.	Ich all	and arm	n o
Drawing(s) of road, location Photocopied section of in Plan Approved by:	Daufula Leseul V. m.	Ich all	and arm	ne Ng
Drawing(s) of road, location Photocopied section of in Plan Approved by:	Daufula Leseul V. m.	Ich all		ne Ny
Drawing(s) of road, location of in	Daufula Leseul V. m.	Ich all		ne Ng
Drawing(s) of road, location Photocopied section of in Plan Approved by:	Daufula	Ich all		ne No
Photocopied section of in Plan Approved by: Comments:	Daufula	under all		ne Ng

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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 02 25
P.O. Box 435
P.O. Box 435
Resol OH 45773
740-516-6021 Well
740-374-2940 Reno Office Jennifer
Nobel County/Jackson Township
Permit # 4037

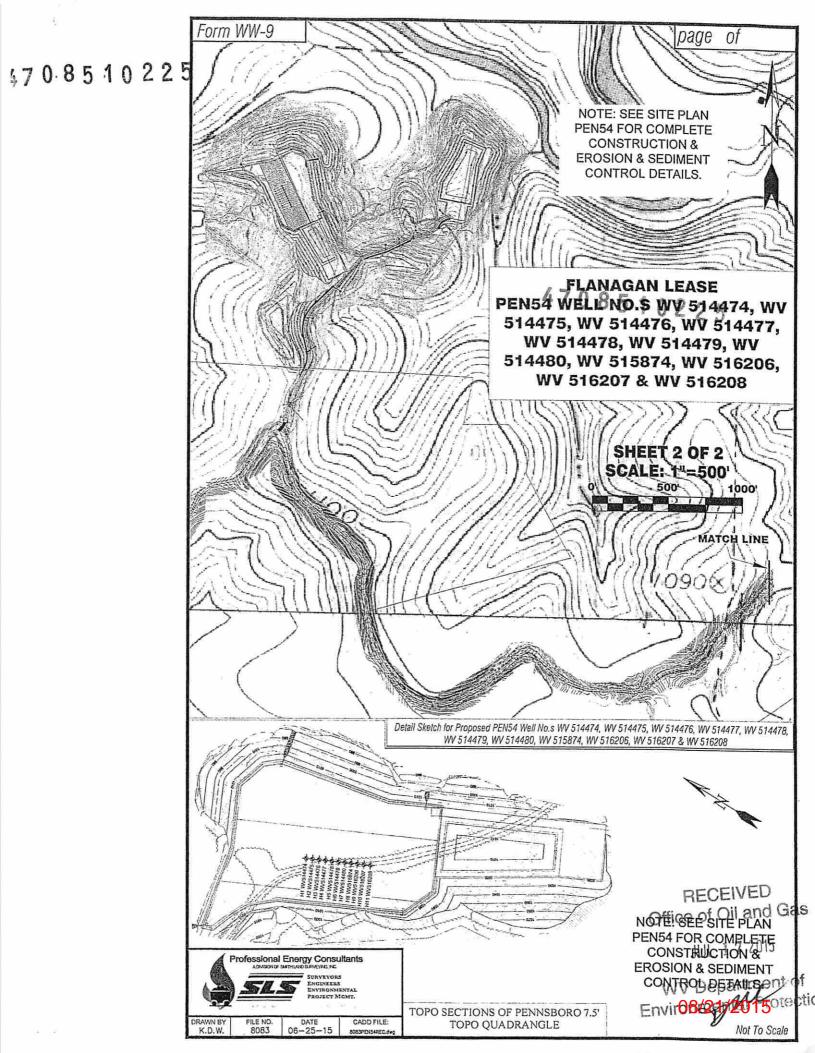
KING EXCAVATING CO.

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

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Form WW-9 708510225 NOTE: SEE SITE PLAN 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 SHEET 2 OF 2 =Š00' 1000 MATCH LINE 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 WV Depays FOR COMPLETE CONSTRUCTION & Environment as to me the stimment Professional Energy Consultants CONTROL DETAILS. TOPO SECTIONS OF PENNSBORO 7.5' 0ATE 06-25-15 CADD FILE: TOPO QUADRANGLE Not To Scale



Site Specific Safety Plan

EQT PEN 54 Pad

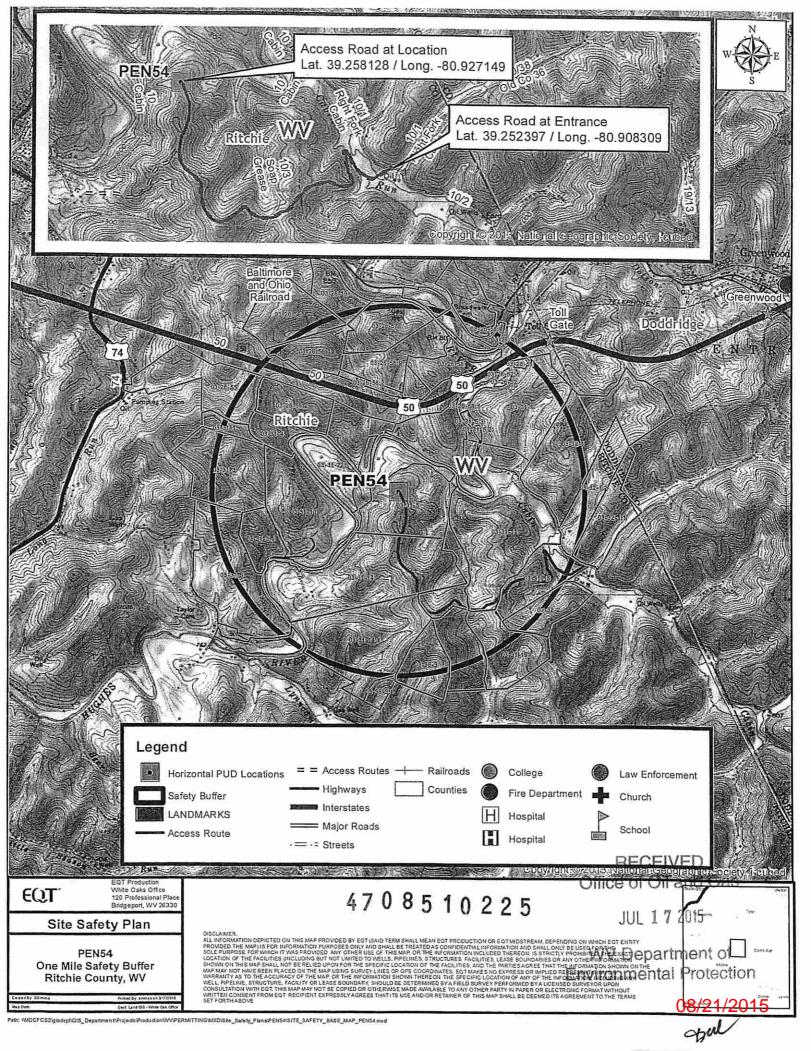
08510225

Toll Gate Ritchie County, WV

Date Prepared: November 17, 2014 Particular Wy Oil and Gas Inspector Wille Title Total Confidence of Oil and Gas Date RECEIVED Office of Oil and Gas	514477		For W	'ells:	
	Dennitting	Superus	_	WV Oil and O	gas inspector 7-15-15

WV Department of Environmental Protestion

JUL 1 7 2015



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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08/21/2015 Attach ment B **EQT Production**

Hydraulic Fracturing Monitoring Plan

Pad ID: PEN54

Ritchie County, WV

6/17/15

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WV Department of Environmental Protection 5

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, relative phigh 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 hydraulic 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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nd Gas	Gas Show/Pay Zone Depths	Producing Formation	Hypotenuse Distance	PENS4 Horizontal TVD minus Offset Vertical TD 7106	Closest Distance from PEN54 Lateral Map View		5	Latitude	Status Abandoned Well	Operator-DEP*	Well ID Prior Operator on Record	Well ID

PGH & WV GAS
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GAS- Active 39.28417 -80.92333 1837 GAS- Active 39.25167 -80.92611 2041 Unknown 39.23972 -80.91611 1087 Unknown 39.23972 -80.91611 1087 Unknown 39.27083 -80.92833 1999

784 107 2 232 310

7147 7189.872391 Maxton 7351 7351.778556 Maxton, Big Injun 7003 7005.000286 Unknown 10618 10650.53426 Unknown 7309 7315.571133 Maxton, Big Injun

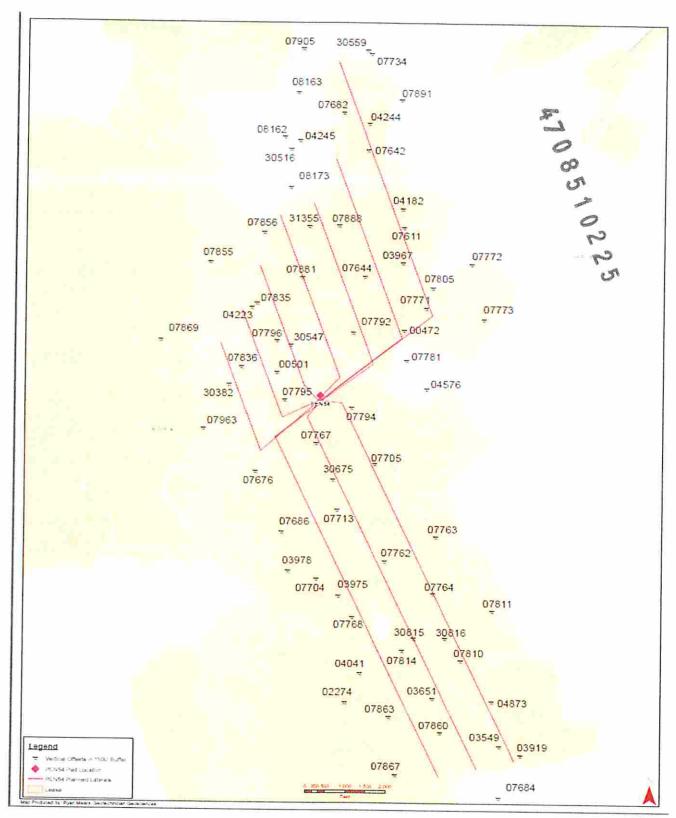
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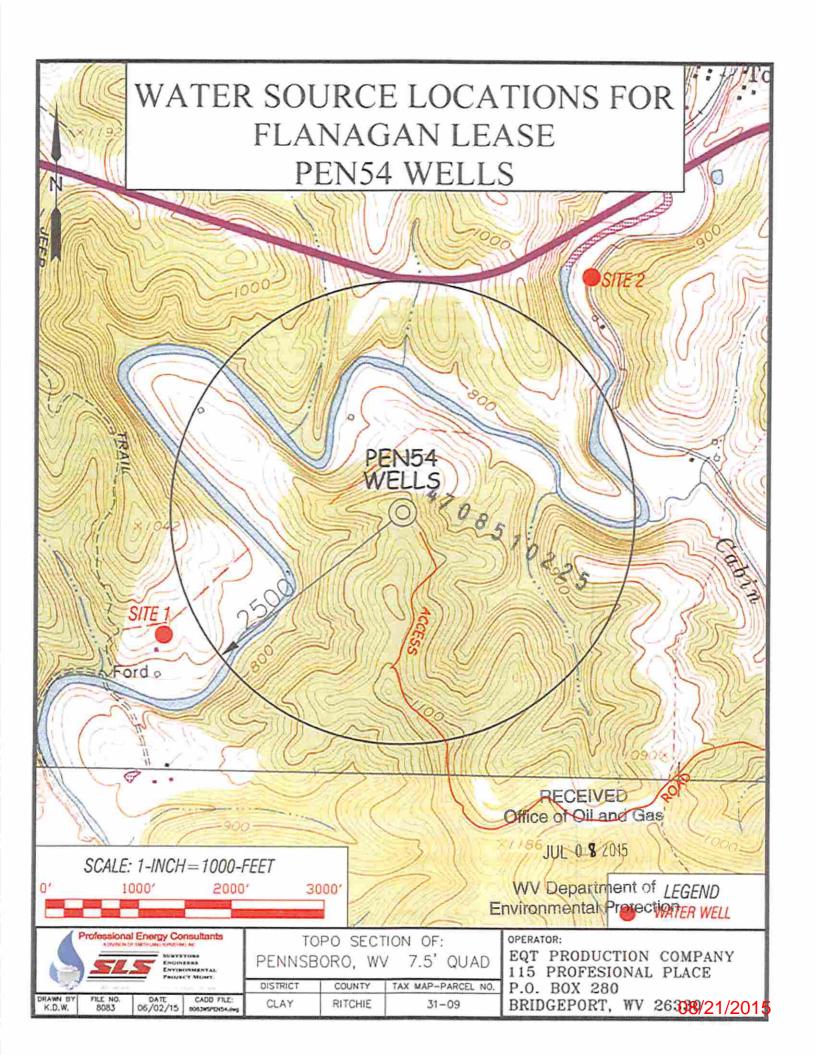


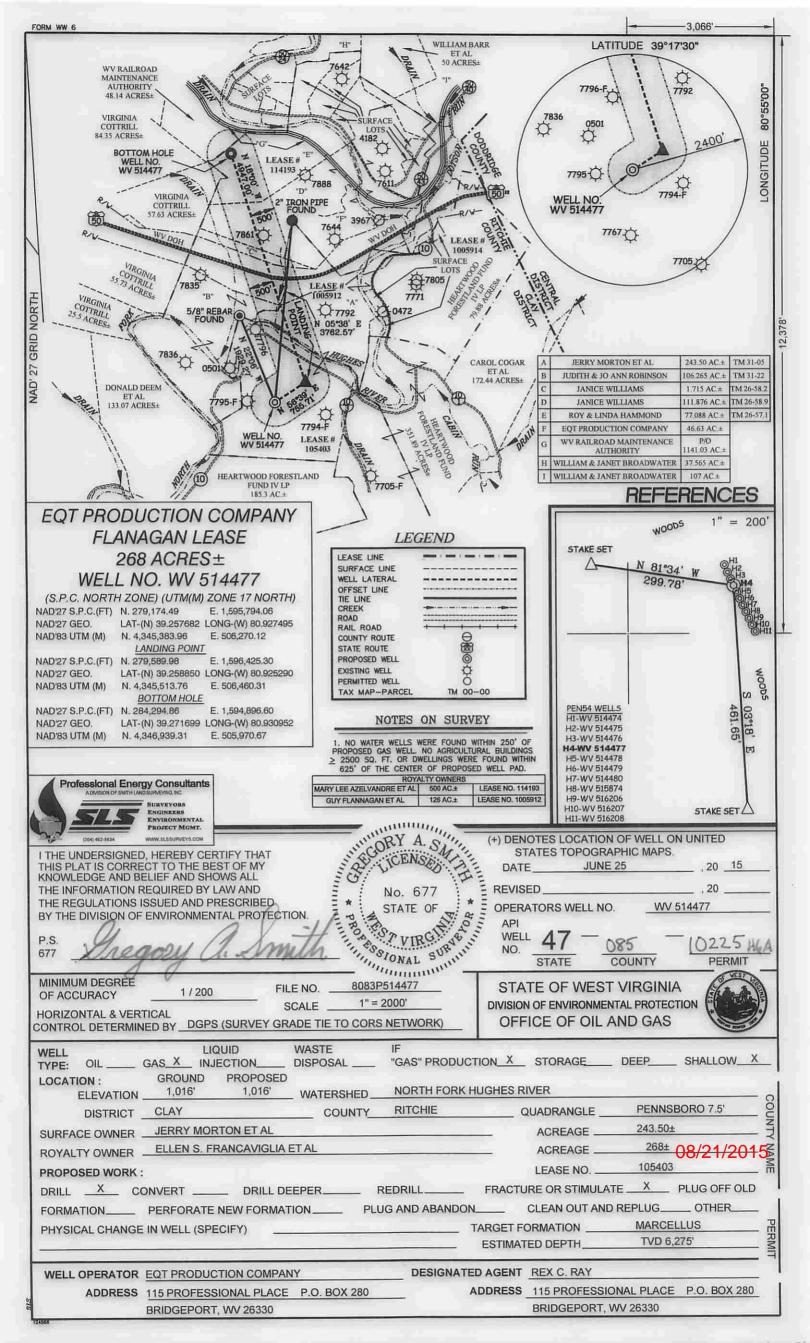
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INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE Chapter 22, Article 6A, Section 5(a)(5) IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)

Under the oath required to make the verification on page 1 of this Notice and Application, 1 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;

the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Lease Name or			Royally 1		
Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalky /	Book/Page	_
<u>105403</u>	W.A. Flanagan, et al The Philadelphia Company of West	The Philadelphia Company of West Virginia	Min 1/8 pd	LB63/295	
	Virginia	Pittsburgh and West Virginia Gas Co	ompany	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	s, Inc.	DB234/830	
	Equitable Production/Eastern States, Inc.	Equitable Production Company		CB557/56	
	Equitable Production Company	EQT Production Co.		DB 281/346	Doddridge
114 <u>193</u>			Min 1/8 pd		
	Harry L. Broadwater and Sadie E. Broadwater, etal	W.J. Rowland		LB33/533	
	W.J. Rowland	The Philadelphia Company of West Virginia		DB126/418	
	The Philadelphia Company of West Virginia	Pittsburgh and West Virginia Gas Co	ompany	LB55/362	
	Pittsburgh and West Virginia Gas Company	Equitable Gas Company		DB126/473	
	Equitable Gas Company	Equitrans, Inc.		LB201/253	
	Equitrans,Inc.	Equitrans,LP.		AB269/182	
	Equitrans,LP	Equitable Production/Eastern States	s, Inc.	DB234/830	
	Equitable Production/Eastern States, Inc.	Equitable Production Company		CB557/56	
	Equitable Production Company	EQT Production Company		DB281/346	Doddridge
1005912			Min 1/8 pd		
	Antero Resources Corporation	EQT Production Company		DB277/1037	

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.

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WV Department of Environmental Propertion/2015

Acknowledgement of Possible Permitting/Approval In Addition to the Office of Oil and Gas

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator: EQT Production Company

By:

Its: Permitting Supervisor

Page 1 of 1

4708510225



JUL 0 8 2015



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

Date of Notice Certification: 7-6-15		API No. 470 8 08 Operator's Well No. Well Pad Name:	0 10225 PEN54
Notice has been given: Pursuant to the provisions in West Virginia Code § below for the tract of land as follows:	22-6A, the Operator has provided t	he required parties wit	h the Notice Forms listed
State: WV	UTM NAD 83 Easting:		506,270.12
County: Ritchie	UTM NAD 83 Northing:		4,345,383.96
District: Clay	Public Road Access:		Rt 50
Quadrangle: Pennsboro 7.5 Watershed: North Fork Hughes River	Generally used farm name:		Jerry Morton et al
it has provided the owners of the surface described information required by subsections (b) and (c), see of giving the surface owner notice of entry to survey requirements of subsection (b), section sixteen of the Virginia Code § 22-6A-11(b), the applicant shall ten of this article have been completed by the applicant Pursuant to West Virginia Code § 22-6A, the Opera	tion sixteen of this article; (ii) that to pursuant to subsection (a), section his article were waived in writing by der proof of and certify to the secret.	he requirement was den ten of this article six- the surface owner; an etary that the notice rec	eemed satisfied as a result a; or (iii) the notice d Pursuant to West
that the Operator has properly served the required p			OOG OFFICE USE ONLY
*PLEASE CHECK ALL THAT APPLY			ONL
	OTICE NOT REQUIRED BECAU		RECEIVED/NOT REQUIRED
NOTICE OF ENTRY FOR PLAT SURVEY	or NO PLAT SURVEY W	AS CONDUCTED	RECEIVED
NOTICE OF INTENT TO DRILL or 🔽 NO	OTICE NOT REQUIRED BECA OTICE OF ENTRY FOR PLAT AS CONDUCTED OR		RECEIVED/NOT REQUIRED
	RITTEN WAIVER BY SURFAC LEASE ATTACH)	CE OWNER	
NOTICE OF PLANNED OPERATION			☐ RECEIVED
PUBLIC NOTICE			☐ RECEIVED
NOTICE OF APPLICATION			BECEIVED BECEIVED

Required Attachments:

JUL 0 \$ 2015

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

WW-6AC (1/12)

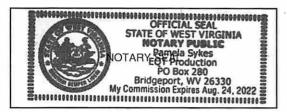
	_		. 1	Lorenza	121
Certification	of	Notice	İŞ	hereby	given:

 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	2	dayof	,2015
Le born	1 1 1	9. (Notary Public

My Commission Expires 8-24-22

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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Office of Oil and Gas

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WV Department of Environmental Protection

WW-6A	
(9-13)	

API NO. 47 -	085	
OPERATOR WELL NO	Ų	514477
Well Pad Name:	PEN54	

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

Notice Time Requirement: notice shall be provided no later than the filing date of permit application. Date of Notice: 7-6-15 Date Permit Application Filed: 7-6-15	
Notice of: 470851022!	5
 ✓ PERMIT FOR ANY ✓ CERTIFICATE OF APPROVAL FOR THE WELL WORK ✓ CONSTRUCTION OF AN IMPOUNDMENT OR PIT 	
Delivery method pursuant to West Virginia Code § 22-6A-10(b)	
☐ PERSONAL ☐ REGISTERED ☐ METHOD OF DELIVERY THAT REQUIRES A SERVICE MAIL RECEIPT OR SIGNATURE CONFIRMATION	
Pursuant to W. Va. Code § 22-6A-10(b) no later than the filing date of the application, the applicant for a permit for any well work of for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section sever plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be lot the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is nunless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well S the surface o	any en of ccated; used (3) The e coal et is to d) of
SURFACE OWNER(s) Name: Address: RR 1 Box 581 Pennsboro WV 26415 SURFACE OWNER OR LESSEE Name: Name: Phyllis A Rymer Address: Ad	
Name: Randy Collins, Natalie Collins, Kate Collins Address: See attached for additional coal owners. COAL OPERATOR Name: Address:	
SURFACE OWNERS(s) (Road and/or Other Disturbance) Name: Address: RR 1 Box 581 Pennsboro WV 26415 Pennsboro WV 26415 Name: SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s) Name:	
Name: Randy Collins, Natalie Collins, Kate Collins Address: 5368 Muscovy Road Middleburg FL 32068 See Attached	WED
SURFACE OWNER(s) (Impoundments/Pits) Name: RR 1 Box 581 Reprochers WV 26415 OPERATOR OF ANY NATURAL GAS STORAGE FIELD CEI Name: Address: OPERATOR OF ANY NATURAL GAS STORAGE FIELD CEI Name: Address:	i and Gas
Pennsboro WV 26415 See Attached JUL 0	3 2015

*Please attach additional forms if necessary

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 Oro Valley AZ 85737

Rebecca Pearson 1812 W Mountain Ft Collins CO 80521

Gene C Singleton 2504 22nd Ave Parkersburg WV 26101 4708510225

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WV D**คระ่น**ทุ**วก**ำซ์ Environmental Protection

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

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

4708510225

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WV Department of Environmental Pratection

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 Nound 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 4708510225

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WV Department of Environment of Protection

API NO. <u>47</u> - 085		(
OPERATOR WELL NO.	5144	77
Wall Dad Mama	DENISA	

Notice is hereby given:

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

This Notice Shall Include:

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

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

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

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

Additional information related to horizontal drilling may be obtained from the Secretary, at the 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 syngr transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in thickness in 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 her ariance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and properly. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No well pad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, nothing contained in this section prevents an operator from conducting the activities permitted or authorized by a Clean Water Act Section 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state or within the restricted areas referenced in this section. (d) The well location restrictions set forth in this section shall not apply to any well on a multiple well pad if at least one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 31, 2012, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate to the well location restrictions regarding occupied a compound of the compound structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding of the book and Gas structures are inadequate or otherwise require alteration to address the items

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API NO. <u>47</u> -	085	-	0
OPERATOR WELL NO.		-	514477
Well Pad Name:			DEN54

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

Water Well Testing:

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

Water Testing Laboratories:

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

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

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

Written Comment:

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

WDEPARTMENT OF THE ANY COMMENT.

WDEPARTMENT OF Environmental Protection 08/21/2015

API NO. <u>47</u> -	085 -	0
OPERATOR WELL NO.		514477
Wall Dad Name:		DENISA

Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

A permit may also be denied under West Virginia Code § 22-6A-7(k), the secretary shall deny the issuance of a permit if the secretary determines that the applicant has committed a substantial violation of a previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit, or a substantial violation of one or more of the rules promulgated under this article, and in each instance has failed to abate or seek review of the violation within the time prescribed by the secretary pursuant to the provisions of subdivisions (1) and (2), subsection (a), section five of this article and the previously 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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WV Department of Environmental Protection

Notice is nereby giv	en by:		
Well Operator:	EQT Production Company	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.

Bridgeport, WV 26330

OFFICIAL SEAL

By: Victoria Roark

Its: Permitting Supervisor

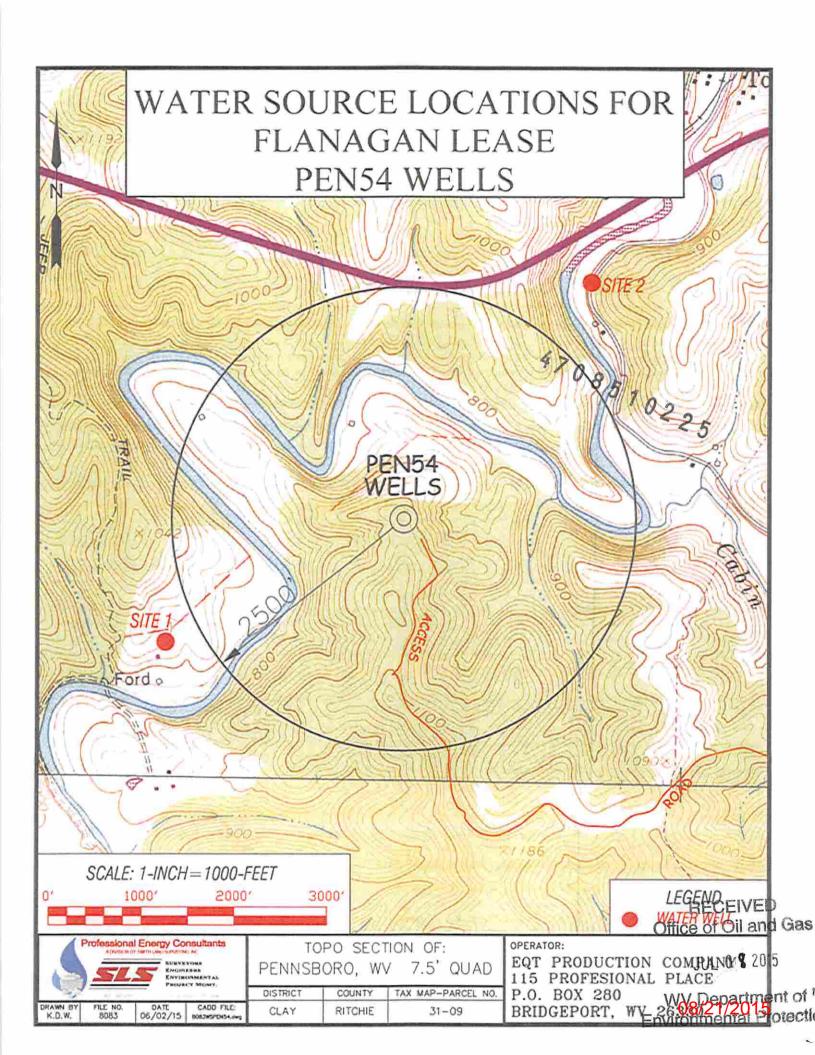
, 2015

My Commission Expir

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

12 g 207-	Trouce shall be provided at least S	EVEN (7) days hul no more than comme	-11 A 4 A
Date of No	ne Requirement: Notice shall be provided at least S otice: _April 9, 2014		FIVE (45) days prior to entry.
	nethod pursuant to West Virginia Code § 22-6A-1	Date of Planned Entry:	April 16, 2014
PERS		(40.8)	
		METHOD OF DELIVERY THAT REQUIRES	A RECEIPT OR SIGNATURE CONFIRMATION
pursuant to records. The and gas exp	West Virginia Code § 22-6A-10(a), prior to filing a plat surveys required pursuant to this article the entry to: (1) The surface owner of such tract; (2) section thirty-six, article six, chapter twenty-two of e notice shall include a statement that copies of the ploration and production may be obtained from the Son the Secretary's web site, to enable the surface of the provided to:	e. Such notice shall be provided at least so to any owner or lessee of coal seams ben if this code; and (3) any owner of minera state Erosion and Sediment Control Manu	de notice of planned entry on to the surface even days but no more than forty-five days eath such tract that has filed a declaration
Notice is he	ereby provided to:	wher to obtain copies from the secretary.	modeling the address for
	SURFACE OWNER(S)		
		X COAL OWN	ER OR LESSEE
Name: _	Randy Collins, Natalie Collins & Kate Collins	Coal Declara	alion nursuant to 822 GA 40 - 1 can a
	5368 Muscovy Rd	Name: Not of Recor	d 322 0 00
Audiess	Middlebourg, FL 32068-3531 ½ Interest	Address: 4 > 0	= = = = = = = = = = = = = = = = = = = =
		MINERAL	Winer(s) 225
Name:		. Name:	WINER(S)
Address:		Name.	- 625
-		. Address:	3
Name:			
Address:		· ··········	
		Address:	
Notice is here	eby given:	*Please allach additional	forms if necessary
he tract of lan	/est Virginia Code § 22-6A-10(a), notice is hereby girld as follows:	en that the undersigned well operator is n	anning entry to conduct a set of
/ w		o and a product to pr	critis to conduct a plat survey on
State:	West Virginia	Managan Lauri of Laur	
State:	West Virginia Ritchie	Approx. Latitude & Longitude: 39.2555	5 / -80.92743
State: County:	West Virginia Ritchie	Approx. Latitude & Longitude: 39.2555 Public Road Access: Cabin Ro	5 / -80.92743 pad
County: District:	West Virginia Ritchie Clay Map 31 Parcel 5 243.50 acres Pennsboro	Approx. Latitude & Longitude: 39.2555 Public Road Access: Cabin Row Watershed: North Fo	5 / -80.92743 oad ork Hughes River
State: County: District: Quadrangle: Copies of the	Ritchie Clay Map 31 Parcel 5 243.50 acres Pennsboro state Erosion and Sediment Control Manual and the Secretary at the MV Penademan.	Approx. Latitude & Longitude: 39.2555. Public Road Access: Cabin Rown Watershed: North Formation Community Used Farm Name: The statues and rules related to oil and one of the statues and rules related to oil and one of the statues and rules related to oil and one of the statues and rules related to oil and one of the statues and rules related to oil and one of the statues and rules related to oil and one of the statues and rules related to oil and one of the statues are statues and rules related to oil and one of the statues are statues and rules related to oil and one of the statues are statues and rules related to oil and one of the statues are statues are statues and rules related to oil and one of the statues are statues are statues and rules related to oil and one of the statues are statues ar	57-80.92743 oad ork Hughes River
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State: County: District: Quadrangle: Copies of the blained from t 804-926-0450; ww.dep.wv.gc otice is herel fell Operator: Telephone: Facsimile: Email:	Ritchie Clay Map 31 Parcel 5 243.50 acres Pennsboro state Erosion and Sediment Control Manual and the Secretary, at the WV Department of Environment). Copies of such documents or additional informational-and-qas/pages/default.aspx. by given by: EQT Production Company 304-848-0094	Approx. Latitude & Longitude: Public Road Access: Watershed: North Formation Generally Used Farm Name: the statues and rules related to oil and goal Protection headquarters, located at 601 ion related to horizontal drilling may be of Address: Address: 115 Profes	oad ork Hughes River as exploration and production may be 57th Street, SE, Charleston, WV 25304 obtained from the Secretary by visiting ssional Place, Bridgeport, WV 26330

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. If you have any questions about our use or your personal information. If you have any questions about our use or your personal information.

WV Destate Protection

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

Notice 1 Im	e Requirement: Notice shall be provided at lea	east SEVEN (7) days but no more than FORTY-FIVE (45) days prior to entry.
Date of Not	ice: April 9, 2014	Date of Planned Estate 1 to 2 to 2 prior to entry.
Delivery me	ethod pursuant to West Virginia Code § 22-6	Date of Planned Entry: April 16, 2014
PERSO	ONAL SERVICE X CERTIFIED MAIL	METHOD OF DELIVERY THAT REQUIRES A DECEMBER OF COMMUNICATION
pursuant to records. The and gas expl a web page of	entry to: (1) The surface owner of such tract; section thirty-six, article six, chapter twenty-had notice shall include a statement that copies of loration and production may be obtained from the surface on the Secretary's web site, to enable the surface.	ing a permit application, the operator shall provide notice of planned entry on to the surfact article. Such notice shall be provided at least seven days but no more than forty-five days to the surfact that has filed a declaration of this code; and (3) any owner of minerals underlying such tract in the county to the state Erosion and Sediment Control Manual and the statutes and rules related to of the Secretary, which statement shall include contact information, including the address for face owner to obtain copies from the secretary.
Notice is he	reby provided to:	obligation and according.
X	SURFACE OWNER(S)	X COAL OWNER OR LESSEE
Name: _	Jerry Morton ½ Inter	Coal Declaration pursuant to §22-6A-10 and §22-6-30 Not of Record
Address:	RR1 Box 581 Pennsboro, WV 26415-9611	Address:
Name:		MINERAL OWNER(S)
,,unio		Name:
Address:		Address:
Name:		Name:
Address: _		- 49 -
Notice is her	eby given:	"Please attach additional forms If necessary
Pursuant to W the tract of lar	/est Virginia Code § 22-6A-10(a), notice is here as follows:	reby given that the undersigned well operator is planning entry to conduct a plat survey on
State:	West Virginia	**
County:	Ritchie	
District	Clay Map 31 Parcel 5 243.50 acres	
	Pennsboro	Generally Used Farm Name:
(304-926-0450	state Erosion and Sediment Control Manual the Secretary, at the WV Department of Environ). Copies of such documents or additional in ov/oil-and-gas/pages/default.aspx.	al and the statues and rules related to oil and gas exploration and production may be commental 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 here	eby given by:	
Well Operator:	EQT Production Company	Address: 115 Professional Place Bridgeport 180/ 20220
Telephone:		The state of the s
Facsimile:	304-848-0040	
Email:	EQTLandEntryNotice@eqt.com	Signature: Mencey
The Office of Oil may be disclose Freedom of Info	rivacy Notice: and Gas processes your personal information, such to other State agencies or third parties in the norm armation Act requests. Our office will appropriately use contact DEP's Chief Privacy Officer at depprivace	ch a name, address and telephone number, as part of regulator titules. Your personal information that secure your personal information the secure your personal information.

WV Department of Environmental Page 1/2015

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(1/12)

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514477

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

Notice Time Re Date of Notice:	equirement: notice shall be provided no later the	han the filing o e Permit Appli		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Delivery metho	od pursuant to West Virginia Code § 22-6A-16	(c)		
	FIED MAIL HAND RN RECEIPT REQUESTED DELIVE	ΞRY		
return receipt rec the planned oper required to be pr drilling of a horize damages to the s	a. Code § 22-6A-16(c), no later than the date for filinguested or hand delivery, give the surface owner whation. The notice required by this subsection shall involved by subsection (b), section ten of this article contal well; and (3) A proposed surface use and compurface affected by oil and gas operations to the extended by this section shall be given to the surface of	hose land will be nclude: (1) A co to a surface owr pensation agree ent the damage:	e used for the drilling py of this code section ner whose land will be ment containing an s are compensable u	g of a horizontal well notice of on; (2) The information be used in conjunction with the offer of compensation for nder 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 notic	ce):		
Name:	Jerry Mort	ton √ Name:	R	andy Collins, Natalie Collins, Kate Collins
Address:	RR 1 Box 5	Addres Addres	· 470	5368 Muscovy Road
	Pennsboro WV 264	115	7/0	Middleburg FL 32068
	given: t Virginia Code § 22-6A-16(c), notice is hereby given surface owner's land for the purpose of drilling a he		signed well operator	has developed a planned
State:	wv	UTM NAD 83	Easting:	506,270.120000
County:	Ritchie		Northing:	4,345,383.960000
District:	Clay F	Public Road Acce	ess:	Rt 50
Quadrangle:	Pennsboro 7.5	Generally used f	arm name:	Jerry Morton et al
Watershed:	North Fork Hughes River			
This Notice Shall Include: Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1)A copy of this code section; (2) The information required to be provided by W. Va. Code § 22-6A-10(b) to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx .				
Well Operator:	EQT Production Company	Address:	115 Professional Pl	ace, P.O. Box 280
Telephone:	304-848-0082	Bridgeport,	A compression of the compression	pp. 10 € pp. 10 17 17 17 17 17 17 17 17 17 17 17 17 17
Email:	vroark@egt.com	Facsimile:	304-848-0040	

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 Office of Oil and Gas DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

JUL 0 \$ 2015

WW-6A	5
(1/12)	

Operator Well No.

514477

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

NOTICE OF PLANNED OPERATION

	e remit Appi	ication Filed:	7-6-15
Delivery method pursuant to West Virginia Code § 22-6A-16	(c)		
CERTIFIED MAIL HAND DELIVE	ERY		
Pursuant to W. Va. Code § 22-6A-16(c), no later than the date for filing return receipt requested or hand delivery, give the surface owner with the planned operation. The notice required by this subsection shall is required to be provided by subsection (b), section ten of this article drilling of a horizontal well; and (3) A proposed surface use and compared to the surface affected by oil and gas operations to the extension of the notices required by this section shall be given to the surface of notice.	hose land will b include: (1) A co to a surface ow pensation agree ent the damage	e used for the drilling of ppy of this code section ner whose land will be ement containing an of is are compensable und	of a horizontal well notice of ; (2) The information used in conjunction with the ifer of compensation for der article six-b of this chapter.
Notice is hereby provided to the SURFACE OWNER(s)			
(at the address listed in the records of the sheriff at the time of notic	1		0.0015
Name: Heartwood Forestland Fund IV Address: 1512 East Franklin	1507		Coastal Forest Resources dba Coastal Timberlands Co
Suite 1			PO Box 709
Chapel Hill NC 275			Buckhannon WV 26201
Pursuant to West Virginia Code § 22-6A-16(c), notice is hereby given	that the under	signed well operator h	• 50 0 0
County: Ritchie District: Clay	orizontal well o UTM NAD 83 Public Road Acc Generally used i	n the tract of land as for Easting: Northing:	
State: WV County: Ritchie District: Clay	UTM NAD 83 Public Road Acc	n the tract of land as for Easting: Northing:	506,270.120000 4,345,383.960000 Rt 50
State: WV County: County: Ritchie District: Clay F Quadrangle: Pennsboro 7.5 C	Public Road Acc Generally used to de: (1)A copy of ose land will be greement conta s are compensa Secretary, at the	n the tract of land as for Easting: Northing: ess: farm name: this code section; (2) To used in conjunction we wining an offer of complete under article six-b or entire to the entire	Sobjections: 506,270.120000 4,345,383.960000 Rt 50 Jerry Morton et al The information required ith the drilling of all ensation for damages to the of this chapter. Additional environmental Protection
State: WV County: Ritchie District: Clay Pennsboro 7.5 Watershed: Pennsboro 7.5 Watershed: North Fork Hughes River This Notice Shall Include: Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include to be provided by W. Va. Code § 22-6A-10(b) to a surface owner whe horizontal well; and (3) A proposed surface use and compensation as surface affected by oil and gas operations to the extent the damages information related to horizontal drilling may be obtained from the Sheadquarters, located at 601 57th Street, SE, Charleston, WV 25304 pages/default.aspx. Well Operator: EQT Production Company	Public Road Acc Generally used to de: (1)A copy of ose land will be greement conta s are compensa Secretary, at the (304-926-0450	n the tract of land as for Easting: Northing: ess: farm name: this code section; (2) To used in conjunction was ining an offer of compose with the compose WV Department of East or by visiting www.dest or by visiting www.dest or by visiting www.dest or by VD partment of East or by visiting www.dest or by visiting www.dest or by VD partment of East or by visiting www.dest or by visiting www.dest or by VD partment of East or by VD p	Solitows: 506,270.120000 4,345,383.960000 Rt 50 Jerry Morton et al The information required ith the drilling of a ensation for damages to the of this chapter. Additional nvironmental Protection ep.wv.gov/oil-and-gas/
State: WV County: Ritchie District: Clay Pennsboro 7.5 Watershed: North Fork Hughes River This Notice Shall Include: Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include to be provided by W. Va. Code § 22-6A-10(b) to a surface owner whorizontal well; and (3) A proposed surface use and compensation as surface affected by oil and gas operations to the extent the damages information related to horizontal drilling may be obtained from the sheadquarters, located at 601 57th Street, SE, Charleston, WV 25304 pages/default.aspx. Well Operator: EQT Production Company Telephone: EQT Production Company	Public Road Acc Generally used of de: (1)A copy of ose land will be greement conta s are compensa Secretary, at the (304-926-0450 Address: Bridgeport,	n the tract of land as for Easting: Northing: ess: farm name: this code section; (2) To used in conjunction was ining an offer of composite under article six-body www.dece WV Department of Eight (2) or by visiting www.december 115 Professional Place WV 26330	Solitows: 506,270.120000 4,345,383.960000 Rt 50 Jerry Morton et al The information required ith the drilling of a ensation for damages to the of this chapter. Additional nvironmental Protection ep.wv.gov/oil-and-gas/
State: WV County: Ritchie District: Clay Pennsboro 7.5 Watershed: Pennsboro 7.5 Watershed: North Fork Hughes River This Notice Shall Include: Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include to be provided by W. Va. Code § 22-6A-10(b) to a surface owner whe horizontal well; and (3) A proposed surface use and compensation as surface affected by oil and gas operations to the extent the damages information related to horizontal drilling may be obtained from the Sheadquarters, located at 601 57th Street, SE, Charleston, WV 25304 pages/default.aspx. Well Operator: EQT Production Company	Public Road Acc Generally used to de: (1)A copy of ose land will be greement conta s are compensa Secretary, at the (304-926-0450	n the tract of land as for Easting: Northing: ess: farm name: this code section; (2) To used in conjunction was ining an offer of compose with the compose WV Department of East or by visiting www.dest or by visiting www.dest or by visiting www.dest or by VD partment of East or by visiting www.dest or by visiting www.dest or by VD partment of East or by visiting www.dest or by visiting www.dest or by VD partment of East or by VD p	Solitows: 506,270.120000 4,345,383.960000 Rt 50 Jerry Morton et al The information required ith the drilling of a ensation for damages to the of this chapter. Additional nvironmental Protection ep.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 ECEIVED duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business 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 \$ 2015 DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.



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 57th Street, SE Charleston, WV 25304

4708510225

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.

Dary K. Clayton

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 \$ 2015

WV Departmentof
Environmental Protection

Anticipated Frac Additives Chemical Names and CAS numbers

<u>Material</u>	<u>Ingredient</u>	CAS Number
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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RECEIVED
Office of Oil and Gas

JUL 0 \$ 2015

WV Department of Environmental Protection

08/21/2015

TRIPLE BACK INTERNATIONS AND THE PROPERTY OF T Stantec

PROMET AND STREET AND 1.50

RITCHIE COUNTY, WV TOIRTZIG YAJO EQT PEN 54

CALL AS INDIM

SMITH LAND SURVEYING, INC. 12 VANHORN DRIVE PD 6027, 199 GLEWILLE WY 25331 PHONE (304) 462-5634

STAMTEC CCHBULTING/INC 111 ELKINS STREET FAIRMONT, WV 28551 PHONE (201) 367 9401

EGT PRODUCTION COMPANY OPERATOR to 100668 P.O. BOX 280 BRIGGEDORT WA 28510 PROME (304) 348-3470

SURVEYOR

TITLE SHEET





90 Pecelved R Office

> 13.73 5:15

WELL PAD

THE WELLPAD FLOWBACK PIT ACCESS HOAD AND COMPLETION PIT AME BEING CONSTRUCTED TO AD IN THE DEVELOPMENT OF INDIVIDUANCELLIS SHALE DAS WELLS.

SITE DISTURBANCE COMPUTATIONS

COMPLETION PLY ANNA 1 84 1. ACRES
TOTAL SITE DISTURBANCE ARCA - \$2.03 -1. ACRES

ENTRANCE PERMIT

EGT PER 64 WELL PAG CENTÉRE LATITUDE 28 257410 , LANGUINDE 80 927222 (MAD 83) EGT PER 54 ELONGACK, PHT CENTÉRE LATITUDE 30 256871 , LOMOITUDE 80 426404 (MAD 83)

LOCATION COORDINATES

BUTE LOCATION
THE EOFT PENS WELL PAD IS LOCATED 19
MIES 4- SOUTHEAST OF THE JUNCTION O
US ROUTE SO AND WY 74

DI, AND GAS ROYALTY OWNER.
W. FLANGAN HISS, ET AL (300 ++ ACHES)
CLAY DESTRICT
RECHE COUNTY, WV

CONSTAL FOREST RESOURCES DRA COATA
CLAY DISTRICT, RITCHIS COUNTY, VV
TA MAY BYZO
TOTA PROPERTY AREA 42 51 1- ACRES
TOTAL DISTURBANCE AREA 0 73 1- ACRES

EGT PES 54 COMPLETION POT CENTER
LATITUDE 19 258129 LONGITUDE 65 903164 (MAD 83)

GENERAL DESCRIPTION

PROPOSED ENTRANCE

WOOP BUT HAT PROTECTION PHOP COMPOST FATERSDCK PROP FILLING
PROP LIMITS OF DISTURBANCE KOP PLAT BOTTOM DITCH THENECK DAMS TOP, CONTAINMENT BERE RISP. ROAD CENTERLINE ARACH DELINEATION TOP VOITER NOW WELL HEAD ROP TREELINE EX WATER WELL EX GAS WELL EX TREELINE

EX BUILDING

EX DELINEATED WETLAND EX DELINEATED STREA

EX REFERENCE TRE

SUCTION EXISTING DRABE.

SECTION PROPOSED GRADE

GECTION GRID INTERMEDIATE

OPERATOR

MASS DARRY of West Veryman 1-800, 255-548.4 West Veryma State Law West Veryma State Law Section M. Complex 24-07 Requires their year and two basiness days before you dig in the state of their Veryman TTS THE LAWRY

PERSEONO DUADRANOLE WEST VEGNIA 7.5 MANUTE SERIES

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GEOTECHNICAL NOTES

A METLAND GELNEL ADDRIVES REFORMED BY PETERS ASSOCIATED BOT WORTH.

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AGO WITHOUT BILDDIT SECTION AND SECTION AND SECTION AS OF BENEVE WE GITE CHEWATERS

AND CORPUS OF ENGINEETED AND SECTION WITHOUT REFORMED TO PETER U.S.

AND CORPUS OF ENGINEETED AND SECTION AND SECTION AND SECTION AS OF THE GITE OF THE CHEWATERS AND SECTION AND S

MISS UTILITY OF WEST VIRGINIA WAS NOTED FOR THE LOCATING OF UTILITIES PRIGHT TO THE PROJECT DEGINE, TROFET SACREDAD. IN ADDITION MASS UTILITY WILL BE: CONTACTED PRIGHT TO STAKE OF THE PROJECT.

ENVIRONMENTAL NOTES

COT PRODUCTON COMPANY WILL OBTAIN AN ENCROADING MALEUS FROM THE WEST VINGINIA DEPARTMENT OF TRANS DIVISION OF HIGHWAYS, PRICH TO COMMENCEMENT OF CO

MISS UTILITY STATEMENT

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

BUILD CONNESS RATE COLUNS
1. RANDY, MATALE & MATE COLUNS
AV DISTRICT, RUDHE COLUNY WY
AVER BEST

LERNY MORTON
CAN DISTRICT, RETCHE COUNTY WY
TAX MARS 14 GET REPRESS
TOTAL PROPERTY ASS 60 +1 ACRES
TOTAL DISTURBANCE ABEA 23 67 +1 ACRES

CLAY DISTRICT, RITCHIN COMMITTEEN TAX MAP 31-46 (12 INTEREST)
TOTAL PROPERTY AREA 243 SO 11 ACRES
TOTAL DISTURDANCE AREA 32.67 -1. ACRES

HEATWOOD FORESTLAND FUND IVILG CLAY DISTRICT, RITCHIS COLINTY, WY TAX AMP 21-1, 31-14, 31-16, TOTAL BHYSERY AREA, 380 19 + ACRESS TOTAL BISTLIGANCE AREA, 18 83 +1, ACRESS TOTAL BISTLIGANCE AREA, 18 83 +1, ACRESS

PROJECT INFORMATION

08/21/2015

PACKAGE PACKAGE PACKAGE	91	
SURFACE OWNER: 1. RANDY, NATALIE & HATE COL CLAY DISTRICT, RITCHIE COL	PROJECT NAME: EQT PEN 54	PROJECT INFORMATION

API# 8510222 API# 8510225 API# 8510226

API# 8510228 API# 8510229

API# 8510227

ROJECT NAME: EQT PEN 54 RANDY, NATALE & NATE COLLINS CLAY DISTRICT, RITCHE COUNTY, WA TAX MAP 31-05 (1/2 INTEREST) TOTAL PROPERTY AREA: 28.50 -:- ACRES TOTAL DISTURBANCE AREA: 22.87 -- ACRES

HEARTWOOD FORESTLAND FUND IN LIC CLAY DISTRICT, RITCHIE COUNTY, WY TAX MAD 31-11, 31-12, 31-12 TOTAL PROPERTY AREA: 58,0,19-4: ACRES TOTAL DISTURBANCE AREA: 18,53-4: ACRES LERRY MORTON
CLAY DISTRICT, RITCHE COLUMY, WV
TAX MAP 31-05 (102 WITEKEST)
TOTAL PROPERTY AREA: 243-59 **- ACRES
TOTAL DISTURBANCE AREA: 32-57 **- ACRES

> API# 8510232 API# 8510231 API# 8510230

COASTAL FOREST RESOURCES DEA COASTAL
CLAY DISTRICT, HITCHE COUNTY, WY
TAX MAP 13-02
TOTAL PROPERTY AREA 42-51 +- ACRES
TOTAL DISTURBANCE AREA-0.73 +- ACRES

W. FLANAGAN 1995, ET AL (500 1/2 ACRES) DLAY DISTRICT RITCHIE COUNTY, WV LOCATION:
E EOT PEN S4 WELL PAD IS LOCATED 1.9
ES +5 SOUTHEAST OF THE JUNCTION OF
ROUTE 50 AND WY 74.

OT PEN SA COMPLETION PIT CENTER ATTUDE: 39 218129 LONGITUDE: 80 923194 (PAD 83) THEN 54 FLOWBACK PIT CENTER
FUDE: 39.256871 LONGITUDE: 80.925494 (NAD 83) OCATION COORDINATES

PEN 64 WELL PAD CENTER

PEN 64 WELL PAD CENTER

GENERAL DESCRIPTION WELL PAD, FLOWBACK PIT, ACCESS ROAD, AND COMPLETION PIT BESIG CONSTRUCTED TO AID IN THE DEVELOPMENT OF INDIVIDUAL CREUS SHALE CAS WELLS.

SITE DISTURBANCE COMPUTATIONS

ENTRANCE PERMIT ITELL PADIFLOWBACK PIT (AREA = 14.00 ++ ACRES WCEES ROAD AVEA - 30.53 ++ ACRES COMMILETON PIT AREA = 8.84 ++ ACRES OTAL SITE DISTURBANCE AREA = 52.03 +/+ ACRES

RECOUCTION COMPARY WILL ORTAIN AN EXCROACHMENT SERVIT (FORM 99) FROM THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION ION OF HIGHWAYS, PRIDE TO COMMENCEMENT ON CONSTRUCTION ACTIVITIES.

AISS UTILITY STATEMENT

UTILITY OF WEST VIRIONA WAS HOTED FOR THE LOCATING OF UTILITIES PRIOR HIS PROJECT DESIGN TOKET #1402025122. IN ADDITION, MISS UTILITY WILL BE JACTED PRIOR TO START OF THE PROJECT.

NVIRONMENTAL NOTES

ANETIAND GELINENTININIAS PERGONED BY POTESTA ANSOCIATES ON INSCRIP NATURE IN STUDIA, DA LICHOL TO STORTA, AND INFORTA DE REPORT IN STITE OF WATERS AND NETIANDS THAT ARE DUST INCELL YOUTH BY THE SIGGIAL TORY PURPAINED OF THE SIG AND NETIANDS THAT ARE DUST INCELL YOUTH BY THE SIGGIAL TORY PURPAINED OF THE SIG BUYMBOANETIAL PROTECTION (WAGER). THE TOZOTI AND SIGGIAL FOR THE BUT OF SEMBROANETIAL PROTECTION (WAGER). THE TOZOTI AND SIGGIAL FOR THE RED SEMBROANETIAL DESTA A ASSOCIATES BAY, SUAMAZIES THE REQUIT SOF THE RED SEMBROANETIAL DE REPORT DOCES NOT; N. AAY WAY, REPRESENT A JUSTISOCIATIONAL DELINEATION, THE SINCE ON THE WAGER. IT IS STRONGE RECOMMENDED THAT THE AGRICANTIONAL DEALERS BE CONSULTED BAY SETTED TO CAMINATION WHITH AN BILL CONTINUATION OF THE BUILDINGS NEEDSBEED BY THAT SETTED TO HAVE WORTH ON THE CONTINUATION OF THE BUILDINGS NEEDSBEED BY THAT SETTED TO THE SETTED AND THE SINCE AND SETTED ON THE SITE ON THE

SEOTECHNICAL NOTES

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RESTRICTIONS NOTES

2000' 0' 2000' PENNSBORO QUADRANGLE WEST VEIGHUA 7,5 MINUTE SERIES

MISS Utility of West Virginia
1,805-245-454.6
West Virginia State Lea
25ction XIV, Chapter 24-C)
Requires that you call two
business days before you sign
the state of West Virginia.
IT'S THE LAW!

EGT PRODUCTION COMP OPERATOR ID: 308586 P.O. BOX 289 BRIDGEPORT, WV 26530 PHONE: (304) 345-3870 OPERATOR

STANTEC CONSULTINGING. 111 ELKINE STREET FARMONT, WV 26554 PHONE; (304) 387-5401

SMITH LAND SURVEYING. 12 VANHORN DRIVE
PO BOX 150
GLENVILLE, WV 26351
PHONE: (E04) 467-5634 SURVEYOR

CALE AS SHOWN

ENGINEER

HIGH JABE HEIBMITEN TSHENNE, LAKE, POME, ORIELEGOIDE HIMM NO RETE OF HE PROJECT JOD. HEIE ARE HEITLAND, MINH NO FEET OF THE LOO, AND A WARLES FOOM THE WOOD THAT. ILE APPLIED TOOL THOODIN HE MAY CARRY OF EMBREESS BY BED FROD CHIN COUNTAIN.

MAY CARRY OF EMBREESS BY BED FROD CHIN COUNTAIN.

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THAN 2500 DOLLARE FILET WITHIN 625 FILET OF THE CONTER OF THE

EQ Ш PRO **PEN 54** \overline{C} o N S COMPANY ק Ž

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

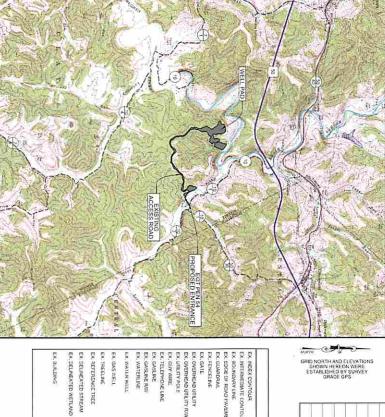
SHEET NO.

LIST OF DRAWINGS

WVDEP OOG

8/14/2015

APPROVED





30-33 24-29 13-23

ACCESS ROAD CROSS SECTIONS

ACCESS ROAD PROFILE

5-12 2

ACCESS ROAD AND WELL SITE LAYOUT WELL PADELOWBACK PIT/ COMPLETION PIT GROSS SECTIONS

OVERALL PLAN SHEET INDEX

GENERAL NOTES DESCRIPTION TITLE SHEET

	LEG	LEGEND	
X CONTOUR	1550	PROP, INDEX CONTOUR	1550
RMEDIATE CONTOUR	***************************************	PROP, INTERMEDIATE CONTOUR	
NDARY LINE		PROP, CUI LINE	
E OF ROAD PAVEMENT	l l	PROP, FILL LINE	7
ADRAIL	0	PROP, LIMITS OF DISTURBANCE	
CELINE		AREA OF DELINEATION	1
BUEARITHITY		DHOD, WELL HEAD	4
RHEAD UTILITY RIW	ļ	PROP, CONTAINMENT BERM	
ITY POLE	φ,	PROP, ROAD CENTERLINE	
EPHOXELBIE	4	PROP. FLAT BOTTOMBITCH	
UNE	9	PROP VARION	
LINE RAW	1	WITH CHECK DAWS	
ERLINE		PROP CULVERY	
TEMMET	Ö	PROP, RIP-RAP OUTLET PROTECTION	DN AND
TEW	Ç	PROF. COMPOST FILTERSOCK	
ELINE	2	PROP. THEFTIME	~
PAGE TOTAL	3		-

TITLE	S

EQT PEN 54









HEET

CLAY DISTRICT RITCHIE COUNTY, WV

- A . K . A . X

K-SECTION GRUD INTERMEDIATE SECTION EXISTING GRADE -SECTION PROPOSED GRADE

ENTHUMCE X-SECTION GRID INDEX

