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west virginia department of environmental protection

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Office of Oil and Gas  
601 57<sup>th</sup> Street, S.E.  
Charleston, WV 25304  
(304) 926-0450  
fax: (304) 926-0452

Austin Caperton, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Friday, May 18, 2018  
WELL WORK PERMIT  
Horizontal 6A / Drill Deeper

EQT PRODUCTION COMPANY  
625 LIBERTY AVE., SUITE 1700

PITTSBURGH, PA 15222

Re: Permit approval for BLAKE 4H  
47-103-02913-00-00

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

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

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

James A. Martin  
Chief

Operator's Well Number: BLAKE 4H  
Farm Name: LEMONS, GARY  
U.S. WELL NUMBER: 47-103-02913-00-00  
Horizontal 6A Drill Deeper  
Date Issued: 05/18/2018

## PERMIT CONDITIONS

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

### CONDITIONS

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1. 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.
2. 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.
3. 24 hours prior to the initiation of the completion process the operator shall notify the Chief or his designee.
4. During the completion process the operator shall monitor annular pressures and report any anomaly noticed to the chief or his designee immediately.
5. 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.
6. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, completion of any other permitted well work, and completion of the well. Such notice shall be provided by sending an email to [DEPOOGNotify@wv.gov](mailto:DEPOOGNotify@wv.gov).

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

1) Well Operator: EQT Production Company 306686 Wetzel Magnolia New Martinsville  
Operator ID County District Quadrangle

2) Operator's Well Number: BLAKE 4H Well Pad Name: BLAKE

3) Farm Name/Surface Owner: Lemons, Gary Public Road Access: Rt. 7

4) Elevation, current ground: 1293 Elevation, proposed post-construction: 1293

5) Well Type (a) Gas  Oil  Underground Storage

Other

(b) If Gas Shallow  Deep

Horizontal

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Marcellus at a depth of 6786 with the anticipated thickness to be 55 feet and anticipated target pressure of 2620 PSI

8) Proposed Total Vertical Depth: 6791

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 13581

11) Proposed Horizontal Leg Length: 6354

12) Approximate Fresh Water Strata Depths: 250, 703

13) Method to Determine Fresh Water Depths: By offset wells

14) Approximate Saltwater Depths: 1578, 2283

15) Approximate Coal Seam Depths: 626, 996, 1093

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? Yes  No

(a) If Yes, provide Mine Info: Name: \_\_\_\_\_  
Depth: \_\_\_\_\_  
Seam: \_\_\_\_\_  
Owner: \_\_\_\_\_

*DMH  
via  
phone  
5-18-18  
for*

WW-6B  
(04/15)

API NO. 47- 103 - 02913 **DD**  
 OPERATOR WELL NO. Blake H4  
 Well Pad Name: BLAKE

18) CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	20	New	A-500	78.6	90	90	86 ft <sup>3</sup> / CTS
Fresh Water	13 3/8	New	J-55	54.5	1283	1283	1123 ft <sup>3</sup> / CTS
Coal							
Intermediate	9 5/8	New	A-500	40	2559	2559	988 ft <sup>3</sup> / CTS
Production	5 1/2	New	P-110	20	13581	13581	500' above top producing zone
Tubing	2 3/8		J-55	4.7		May not be run, if run set 40' above top perf or 30° inclination	
Liners							

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20	24	.375	1378	39	Class A	1.18
Fresh Water	13 3/8	17 1/2	.38	2700	2160	See Variance	1.19
Coal							
Intermediate	9 5/8	12 3/8	.395	3950	3160	See Variance	1.19
Production	5 1/2	8 1/2	.361	12640	10112	Class A/H	1.123/2.098
Tubing	2 3/8	NA	.19	7700			
Liners							

*DMH  
via  
Phone  
5-18-18  
for*

PACKERS

Kind:				
Sizes:				
Depths Set:				

WW-6B  
(10/14)

API NO. 47- 103 - 02913 DD  
OPERATOR WELL NO. BLAKE 4H  
Well Pad Name: BLAKE

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

Well has been drilled to 4924' MD. Drill the vertical to an approximate depth of 5687'. Kick off and drill curve. Drill the lateral in the Marcellus. Cement casing.

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

Hydraulic fracturing is completed in accordance with state regulations using water recycled from previously fractured wells and obtained from freshwater sources. This water is mixed with sand and a small percentage (less than 0.1%) of chemicals (including 15% Hydrochloric acid, friction reducer, biocide, and scale inhibitor), referred to in the industry as a "slickwater" completion. Maximum anticipated internal casing pressure is expected to be approximately 10000 psi, maximum anticipated treating rates are expected to average approximately 100 bpm. Stage lengths vary from 150 to 300 feet. Average approximately 350,000 gallons of water per stage. Sand sizes vary from 100 mesh to 20/40 mesh. Average approximately 400,000 pounds of proppant per stage.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 19.58(original), .41(slip repair)

22) Area to be disturbed for well pad only, less access road (acres): 9.39(original), .41(slip repair)

23) Describe centralizer placement for each casing string:

- Surface: Bow spring centralizers – One centralizer at the shoe and one spaced every 500'.
- Intermediate: Bow spring centralizers– One centralizer at the shoe and one spaced every 500'.
- Production: One solid body centralizer spaced every joint from production casing shoe to KOP

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

Conductor: Class A no additives  
Surface (Type 1 Cement): 0-3% Calcium Chloride. Used to speed the setting of cement slurries  
Intermediate (Type 1 Cement): 0-3% Calcium Chloride. Used to speed the setting of cement slurries.  
Production:  
Lead (Class A Cement): 0.2% CD-20 (dispersant makes cement easier to mix). .15% SuperFL-300 (fluid loss/lengthens thickening time) .15% SEC-10 (fluid loss) 50:50 POZ (extender)  
Tail (Class H Cement): 0.2% Super CR-1 (Retarder). Lengthens thickening time. .3% Super FL-200 (fluid loss) .2% SEC-10 (Fluid loss). .2% SuperFL-350 (fluid loss) Reduces amount of water lost to formation. 60 % Calcium Carbonate. Acid solubility.

*DLH  
5-18-18  
v/c phone  
js*

25) Proposed borehole conditioning procedures:

Surface: Circulate hole clean while rotating & reciprocating the drill string until cuttings diminish at surface.  
Intermediate: Circulate hole clean while rotating & reciprocating the drill string until cuttings diminish at surface.  
Production: Pump marker sweep with nut plug to determine actual hole washout. Calculate a gauge holes bottoms up volume. Perform a cleanup cycle by pumping 3-5 bottoms up or until the shakers are clean. Check volume of cuttings coming across the shakers every 15 minutes.

\*Note: Attach additional sheets as needed.

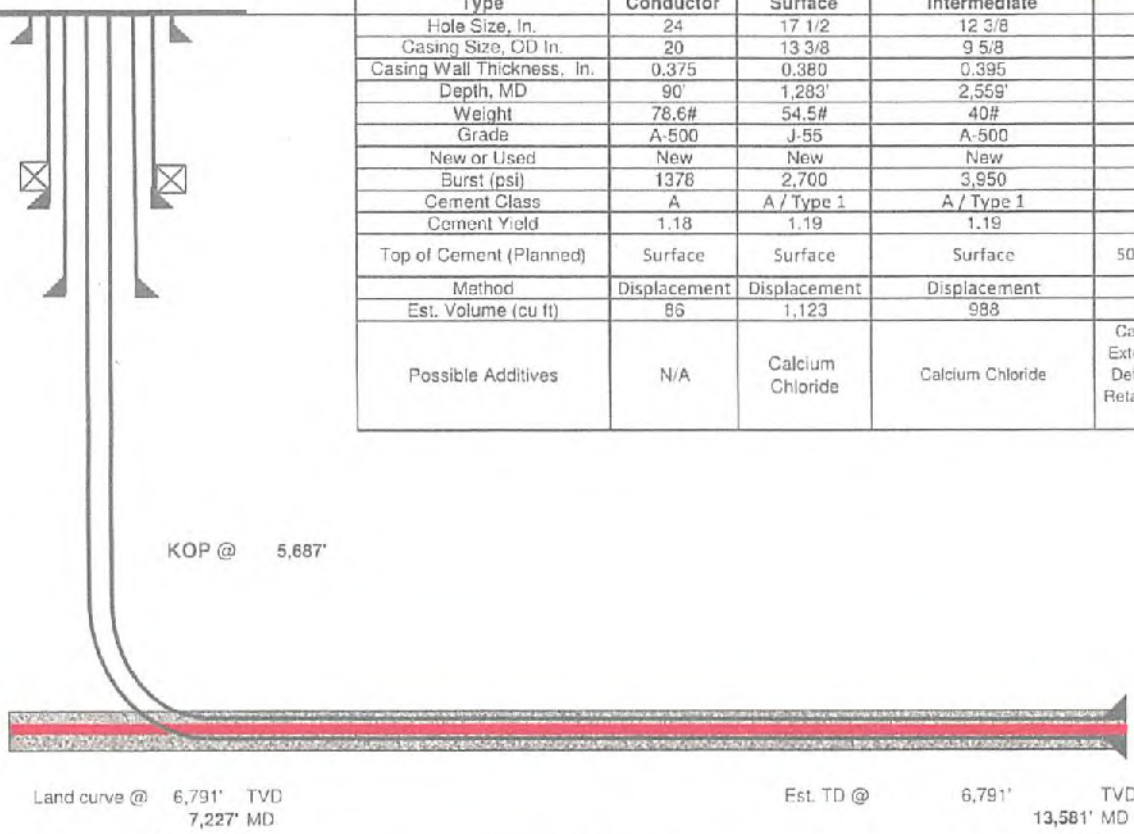
**Well** Blake H4  
**EQT Production**  
 New Martinsville Quad  
 Wetzel County, WV

Azimuth 327  
 Vertical Section 6460

Note: Diagram is not to scale

Formations	Top TVD	Base TVD
Base Fresh Water	90	
Conductor	90	
Sandstone and Shale	0 - 1108	
Coal	1108 - 1115	
Sandstone and Shale	1115 - 2216	
Annular Packer	1177	
Surface Casing	1263	
Big Lime	2216 - 2331	
Big Injun	2331 - 2416	
Sandstone and Shale	2416 - 2786	
Intermediate Casing	2659	
Berea	2786 - 2795	
Shale	2795 - 3036	
Gordon	3036 - 3060	
Undiff Devonian Shale	3060 - 5266	
Benson	5266 - 5317	
Alexander	5532 - 5572	
Sonyea	6590 - 6683	
Middlesex	6683 - 6702	
Genesee	6702 - 6769	
Genesee	6769 - 6788	
Tully	6788 - 6815	
Hamilton	6815 - 6848	
Marcellus	6848 - 6903	
Production Casing	13581 MD	
Onondaga	6903	

Casing and Cementing				Deepest Fresh Water: 90'
Type	Conductor	Surface	Intermediate	Production
Hole Size, In.	24	17 1/2	12 3/8	8 1/2
Casing Size, OD In.	20	13 3/8	9 5/8	5 1/2
Casing Wall Thickness, In.	0.375	0.380	0.395	0.361
Depth, MD	90'	1,283'	2,559'	13,581'
Weight	78.6#	54.5#	40#	20#
Grade	A-500	J-55	A-500	P-110
New or Used	New	New	New	New
Burst (psi)	1378	2,700	3,950	12,640
Cement Class	A	A / Type 1	A / Type 1	A / H
Cement Yield	1.18	1.19	1.19	1.123 / 2.088
Top of Cement (Planned)	Surface	Surface	Surface	500' above top Producing Zone
Method	Displacement	Displacement	Displacement	Displacement
Est. Volume (cu ft)	86	1,123	988	2,876
Possible Additives	N/A	Calcium Chloride	Calcium Chloride	Calcium Carbonate, Fluid Loss, Extender, Dispersant, Viscosifier, Defoamer, POZ, Bonding Agent, Retarder, Anti-Settling/Suspension Agent



**<NOT PILOT HOLE>**

Proposed Well Work:  
 Drill and complete a new horizontal well in the Marcellus formation.  
 Drill the vertical to an approximate depth of 5887'.  
 Kick off and drill curve. Drill lateral in the Marcellus. Cement casing.

6,354' Lateral

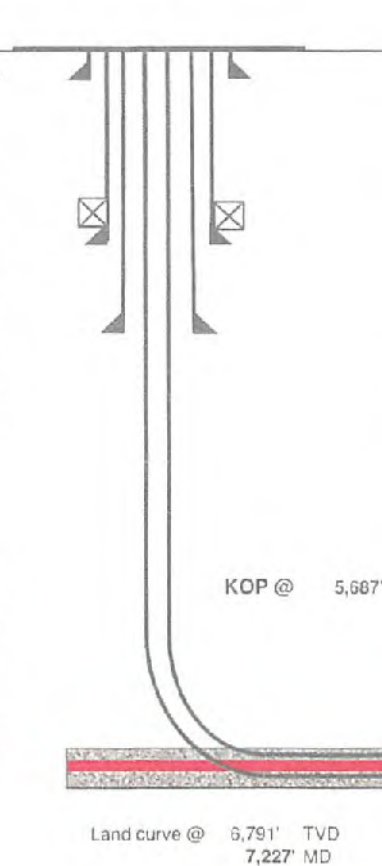
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Well **Blake H4**  
 EQT Production  
 New Martinsville Quad  
 Wetzel County, WV

Azimuth 327  
 Vertical Section 6460

Note: Diagram is not to scale

Formations	Top TVD	Base TVD
Base Fresh Water	90	
Conductor	90	
Sandstone and Shale	0 - 1108	
Coal	1088 - 1115	
Sandstone and Shale	1115 - 2216	
Annular Packer	1177	
Surface Casing	1283	
Big Lime	2216 - 2331	
Big Injun	2331 - 2416	
Sandstone and Shale	2416 - 2766	
Intermediate Casing	2559	
Berea	2786 - 2795	
Shale	2795 - 3036	
Gordon	3036 - 3060	
Undiff Devonian Shale	3060 - 5266	
Benson	5266 - 5317	
Alexander	5532 - 5572	
Sonyea	6590 - 6663	
Middlesex	6683 - 6702	
Genesee	6702 - 6769	
Genesee	6769 - 6788	
Tully	6788 - 6815	
Hamilton	6815 - 6848	
Marcellus	6848 - 6903	
Production Casing	13581' MD	
Onondaga	6903	



Casing and Cementing		Deepest Fresh Water: 90'		
Type	Conductor	Surface	Intermediate	Production
Hole Size, In.	24	17 1/2	12 3/8	8 1/2
Casing Size, OD In.	20	13 3/8	9 5/8	5 1/2
Casing Wall Thickness, In.	0.375	0.380	0.395	0.361
Depth, MD	90'	1,283'	2,559'	13,581'
Weight	78.6#	54.5#	40#	20#
Grade	A-500	J-55	A-500	P-110
New or Used	New	New	New	New
Burst (psi)	1378	2,700	3,950	12,640
Cement Class	A	A / Type 1	A / Type 1	A / H
Cement Yield	1.18	1.19	1.19	1,123 / 2,098
Top of Cement (Planned)	Surface	Surface	Surface	500' above top Producing Zone
Method	Displacement	Displacement	Displacement	Displacement
Est. Volume (cu ft)	86	1,123	988	2,876
Possible Additives	N/A	Calcium Chloride	Calcium Chloride	Calcium Carbonate, Fluid Loss, Extender, Dispersant, Viscosifier, Defoamer, POZ, Bonding Agent, Retarder, Anti-Settling/Suspension Agent

<NOT PILOT HOLE>

Proposed Well Work:

Drill and complete a new horizontal well in the Marcellus formation.  
 Drill the vertical to an approximate depth of 5687'.  
 Kick off and drill curve. Drill lateral in the Marcellus. Cement casing.

163-02913 02

**WEST VIRGINIA GEOLOGICAL PROGNOSIS**

Horizontal Well  
Blake 114

v 2017.4

<b>Drilling Objectives:</b>	Marcellus			
<b>County:</b>	Wetzel			
<b>Quad:</b>	New Martinsville			
<b>Elevation:</b>	1303 KB		1293 GL	
<b>Surface location</b>	Northing: 420269.00	Easting:	1634335.00	
<b>Landing Point</b>	Northing: 420081.01	Easting:	1633884.10	
<b>Toe location</b>	Northing: 425410.83	Easting:	1630425.04	
<b>Recommended Azimuth</b>	327 Degrees			

TVD: 6791  
Recommended L.P. to TD: 6,354'

**ESTIMATED FORMATION TOPS**

Formation	Top (TVD)	Base (TVD)	Lithology	Comments
Fresh Water Zone	0	90		
Sandstone and Shale	0	1108	Sandstone	
Pittsburgh Coal	1108	1115	Coal	
Sandstone and Shale	1115	2216		
Big Lime	2216	2331	Sandstone	Gas storage zones are NOT of concern
Big Injun	2331	2416		
Int. csg pt	2559			
Sandstone and Shale	2416	2786	Silty Sand	
Berea	2786	2795	Silty Sand	
Shale	2795	3036	Silty Sand	
Gordon	3036	3060	Silty Sand	
Undiff Devonian Shale	3060	5266	Silty Sand	Base of Offset Well Perforations at 3113' TVD
Benson	5266	5317	Silty Sand	472 487
Alexander	5332	5572	Silty Sand	1057 1077
Elks	5572	6590	Gray Shales and Sdts	1092 1232
Sonyea	6590	6683	Gray shale	1366 1407
Middlesex	6683	6702	Shale	1523 1568 Base of Red Rock
Genesee	6702	6769	Gray shale interbedded	
Genesee	6769	6788	Black Shale	
Tully	6788	6815	Limestone	
Hamilton	6815	6848	Gray shale with some	
Marcellus	6848	6903	Black Shale	
Purell	6870	6875	Limestone	
-Lateral Zone	6791			Start Lateral at 6791'
Cherry Valley	6892	6894	Limestone	
Onondaga	6903		Limestone	
Pilot Hole TD	N/A			

Target Thickness	55 feet
Max Anticipated Rock Pressure	2620 PSI

**Comments:**  
Note that this is a TVD prog for a  
Intermediate casing point is  
The estimated landing point TVD

**LATERAL DRILLING TOLERANCES**

**Mapview - Lateral:** Deviate as little as possible to the left or right of the planned wellbore  
**Mapview - TD:** DO NOT EXTEND beyond recommended wellbore to avoid lease line

**RECOMMENDED CASING POINTS**

<b>Fresh Water/Coal</b>	CSG OD	13 3/8	CSG DEPTH	1283	as set
<b>Annular Packer</b>	CSG OD	9 5/8	CSG DEPTH	1177	as set
<b>Intermediate 1:</b>	CSG OD	9 5/8	CSG DEPTH	2559	as set, Beneath the Big Injun format
<b>Production:</b>	CSG OD	5 1/2	CSG DEPTH	@ TD	



EQT Production  
Hydraulic Fracturing Monitoring Plan  
Pad ID: BLAKE  
County: Wetzel

1/30/18

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Office of Oil and Gas  
FEB 26 2018  
WV Department of  
Environmental Protection

## Purpose

The purpose of this pad-specific Hydraulic Fracturing Monitoring Plan is to identify and notify conventional well operators near EQT hydraulic fracturing in **Wetzel County, WV** prior to hydraulic fracturing at the following EQT wells on **BLAKE pad: BLAKE 1H, BLAKE 2H, BLAKE 4H.**

Due to the requirements under 35CSR8 5.11, the permittee is required to review the area surrounding the proposed well pad so as to identify and evaluate potential conduits for unintended fracture propagation.

A report is required to be submitted along with a well work permit application.

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 coordination with well operators of the timing and location of the hydraulic fracturing, establishment of measures 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 Well Operators

EQT, using available data (WV Geological Survey, WVDEP website, and IHS data service), has identified all known wells and well operators within 500 feet of this pad and the lateral sections that are known or could reasonably be expected to be within range of the fracture propagation. A map showing these wells along with a list of the wells and operators is included in **Attachment A.**

EQT will notify these operators of the hydraulic fracturing schedule for these wells, and coordinate with them throughout the fracturing process.

EQT will recommend to these operators at a minimum to:

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 or other necessary equipment for wellhead integrity capable of a pressure recommended by EQT
4. Notify the OOG and EQT if any changes in water, gas production, pressure, or other anomalies are identified

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Office of Oil and Gas

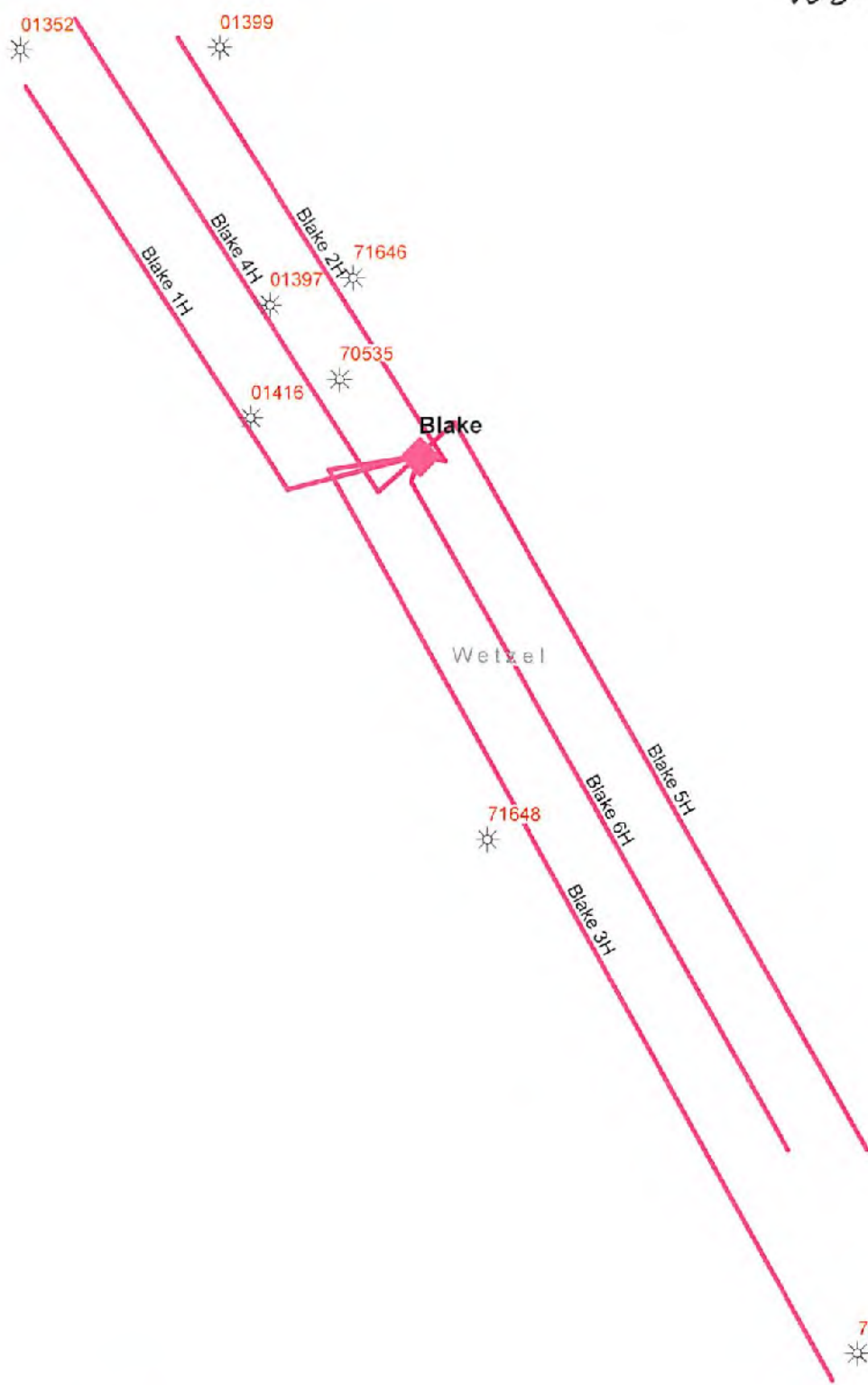
FEB 26 2018

### 2. Reporting

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

WV Department of  
Environmental Protection

103-02913  
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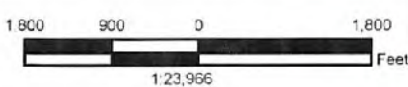
70046 FEB 26 2018

WV Department of  
Environmental Protection

**EQT**  
EQT Corporation  
625 Liberty Avenue  
Pittsburgh, PA 15222



**Target Formation**  
- Marcellus  
\* Vertical Offsets



**Disclaimer:**

This map is confidential and is to be used only for the express informational purposes for which it was created. Unauthorized use, copying, or dissemination is strictly prohibited. EQT does not warrant the accuracy of the location of any items shown on this map, including, but not limited to, any structures, well or pipeline facilities, property boundaries, topography, roadways, or waterways. The items shown on the map may not have been placed on the map using survey lines or GPS coordinates. The specific location of any of the map items should be determined by a field survey performed by a licensed surveyor upon consultation with EQT.



Blake Pad

Vertical Offsets and  
Foreign Laterals  
within 500'

API Number	Completion Date	Current Operator	Elevation	Elevation Reference	Final Status	Lat	Long	Well Name	Permit Date	SPUD Date	TD Formation	Total Depth	Permit
47103013520000	8/28/1985	BLUE GROUP OPERATING INCORPORATED	1397	KB	GAS	39.6595	-80.8148	1 ANDERSON GEORGE A	7/28/1985	8/7/1985	DEVONIAN /SH/	3231	01352
47103013970000	6/3/1986	BLUE GROUP OPERATING INCORPORATED	1317	KB	GAS	39.6514	-80.8046	1 BLAKE RAY	5/9/1986	5/19/1986	DEVONIAN /SH/	3232	01397
47103013990000	11/30/1986	BLUE GROUP OPERATING INCORPORATED	1375	KB	GAS	39.6596	-80.8066	1 SCHUPBACH DAVID	11/8/1986	11/18/1986	GORDON /SD/	3200	01399
47103014160000	4/5/1987	BLUE GROUP OPERATING INCORPORATED	1224	KB	D&A	39.6479	-80.8054	2 BLAKE RAY	3/13/1987	3/23/1987	GORDON /SD/	3080	01416
47103700460000	4/24/1927	UNKNOWN	752	GR	GAS	39.6183	-80.7807	4 L F BURLEY	3/10/1927	3/25/1927	HAMPSHIRE	2612	70046
47103705350000		SOUTH PENN OIL			PSEUDO	39.6491	-80.8018	1 JOHN WITMER					70535
47103716460000		UNKNOWN			UNKWN	39.6523	-80.8012	1 JOHN WIDMER					71646
47103716480000	8/13/1925	UNKNOWN	888	GR	D&A-OG	39.6346	-80.7958	1 MARY HARKER	6/29/1925	7/14/1925	HAMPSHIRE	2842	71648

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FEB 26 2018

WV Department of  
Environmental Protection

WW-9  
(4/16)

API Number 47 - 103 - 02913 DD  
Operator's Well No. BLAKE 4H

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name EQT Production Company OP Code 306688

Watershed (HUC 10) Camp Run Quadrangle New Martinsville

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes  No

Will a pit be used? Yes  No

If so, please describe anticipated pit waste: \_\_\_\_\_

Will a synthetic liner be used in the pit? Yes  No  If so, what ml.? \_\_\_\_\_

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection ( UIC Permit Number 0014, 8462, 4037 )
- Reuse (at API Number Various )
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain \_\_\_\_\_)

*DMH  
3-2-18*

Will closed loop system be used? If so, describe: Yes, The closed loop system will remove drill cuttings from the drilling fluid. The drill cuttings are then prepared for transportation to an off-site disposal facility. \_\_\_\_\_

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. See Attached

-If oil based, what type? Synthetic, petroleum, etc. Synthetic Mud

Additives to be used in drilling medium? See Attached

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Office of Oil and Gas

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Landfill

MAR 13 2018

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) N/A

WV Department of  
Environmental Protection

-Landfill or offsite name/permit number? See Attached List

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

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 thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature *Erin Spine*

Company Official (Typed Name) Erin Spine

Company Official Title Regional Land Supervisor

Subscribed and sworn before me this 23 day of February, 2018

*Rebecca L. Wanstreet*

Notary Public

My commission expires 4-7-2020



**WW-9 Attachment**

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc.

- Air is used to drill the top-hole sections of the wellbore (surface, intermediate, and pilot). Water based mud may be necessary depending on hole conditions to stabilize and drill the intermediate section. The pilot hole, curve, and lateral sections will be drilled with either air, water based mud, or oil based mud.

Additives to be used in drilling medium?

- Air - biodegradable oil lubricant, detergent, defoaming, water. Water based mud – Barite, viscosifer, alkalinity control, lime, filtration control, deflocculates, biodegradable oil lubricant, defoaming, walnut shell, salt, x-cide, carbonates. Oil based mud – synthetic base oil, emulsifier, salt, lime, viscosifer, alkalinity control, filtration control, deflocculates, biodegradable oil lubricant, defoaming, carbonates.

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Office of Oil and Gas  
MAR 13 2018  
WV Department of  
Environmental Protection

EQT Production Company

Proposed Revegetation Treatment: Acres Disturbed 19.99 Prevegetation pH \_\_\_\_\_

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type Granular 10-20-20

Fertilizer amount 1/3 lbs/acre

Mulch 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
KY-31	40	Orchard Grass	15
Alsike Clover	5	Alsike Clover	5
Annual Rye	15		

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, include dimensions (L x W x D) of the pit, and dimensions (L x W), and area in acreage, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: [Signature]

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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Office of Oil and Gas

MAR 13 2018

WV Department of  
Environmental Protection

Title: Oil + Gas Inspector Date: 3-2-18

Field Reviewed? (  ) Yes (  ) No

**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

**BROAD STREET ENERGY LLC**

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

**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

**TRIAD ENERGY**

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

**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

**KING EXCAVATING CO.**

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

**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



**EQT Production Water plan**  
**Offsite disposals for Marcellus wells****CWS TRUCKING INC.**

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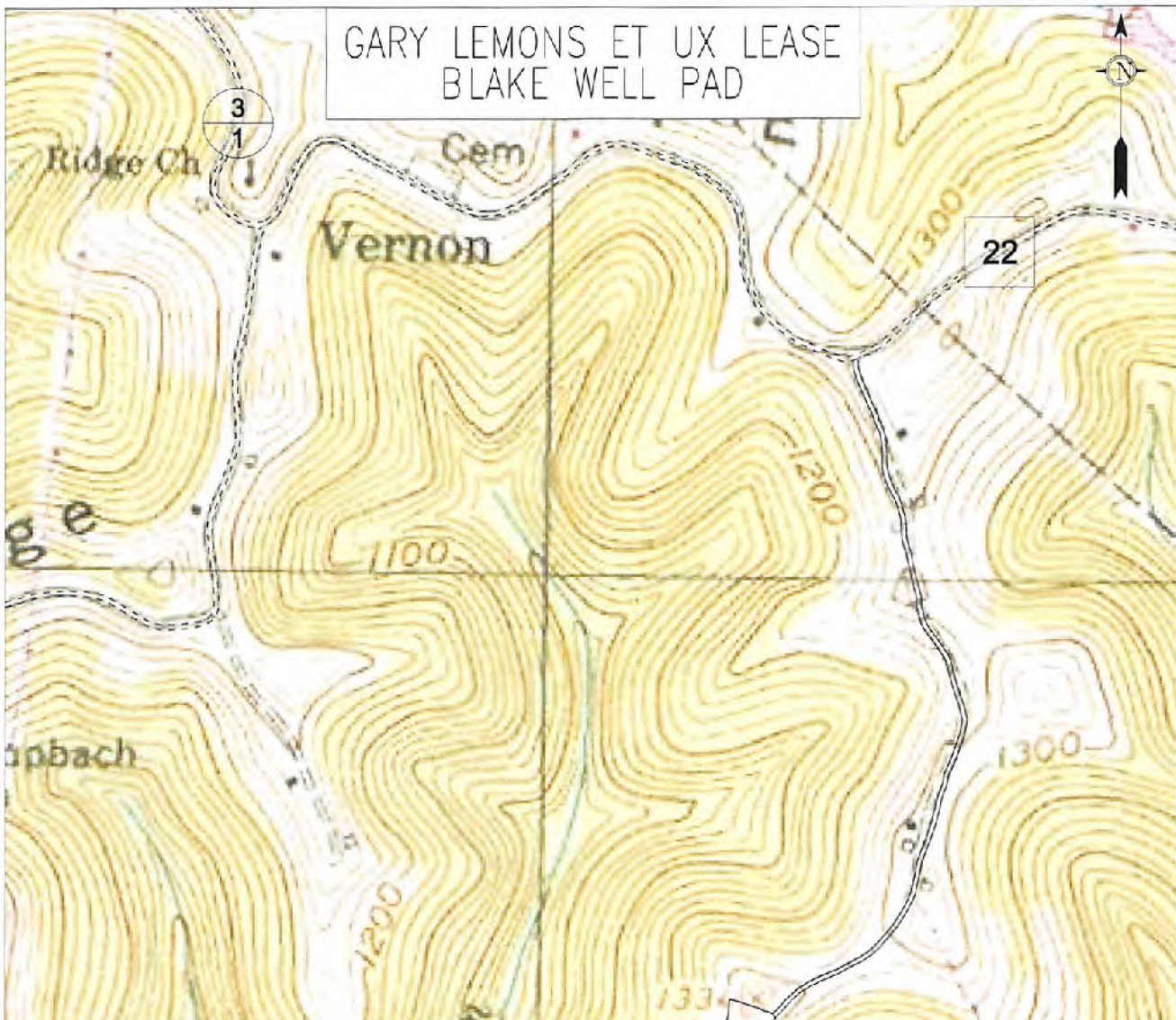
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Permit #SWF-1032-98  
Approval #100785WV

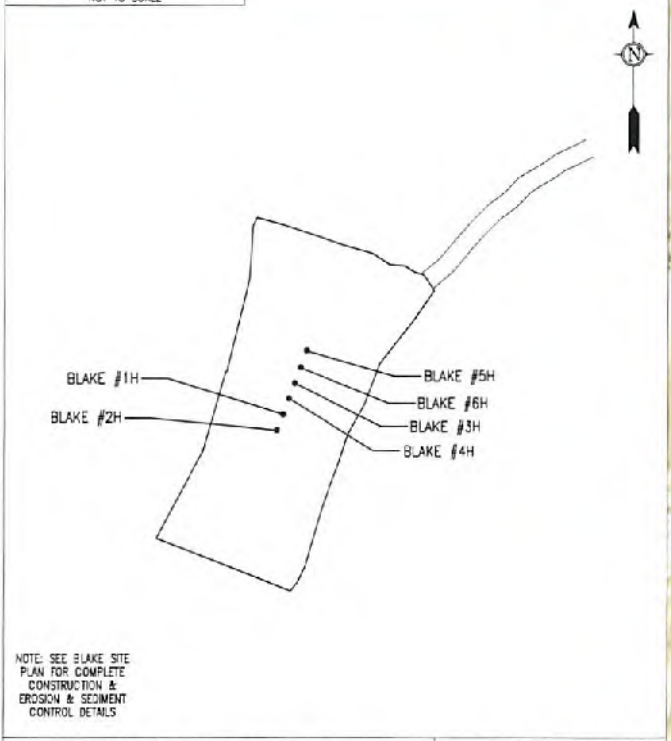
**Waste Management - Northwestern Landfill**

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

# GARY LEMONS ET UX LEASE BLAKE WELL PAD



DETAIL SKETCH FOR PROPOSED BLAKE WELLS  
NOT TO SCALE



NOTE: SEE BLAKE SITE  
PLAN FOR COMPLETE  
CONSTRUCTION &  
EROSION & SEDIMENT  
CONTROL DETAILS

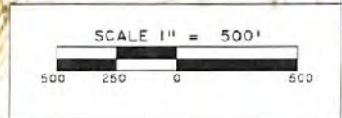
NOTE: SEE BLAKE SITE  
PLAN FOR COMPLETE  
CONSTRUCTION &  
EROSION & SEDIMENT  
CONTROL DETAILS

EQT PRODUCTION COMPANY / BLAKE WELL PAD  
MAGNOLIA TOWNSHIP, WETZEL COUNTY, WEST VIRGINIA

TOP-D SECTION OF NEW MARTINSVILLE 7.5  
USGS TOP QUADRANGLE

EQT PRODUCTION COMPANY

KEYSTONE CONSULTANTS, INC.  
32 EAST MAIN STREET  
CARNEGIE, PA 15106  
412-278-2100





Where energy meets innovation.™

# Site Specific Safety Plan

EQT  
Blake  
  
New Martinsville  
  
Wetzel County, WV

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Office of Oil and Gas

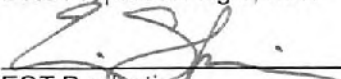
MAR 13 2018

WV Department of  
Environmental Protection

Blake 4H \_\_\_\_\_ For Wells: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Date Prepared: Aug 8, 2017

Revised: Sept 19, 2017

  
 \_\_\_\_\_  
 EQT Production

Regional Land Supervisor  
 \_\_\_\_\_  
 Title

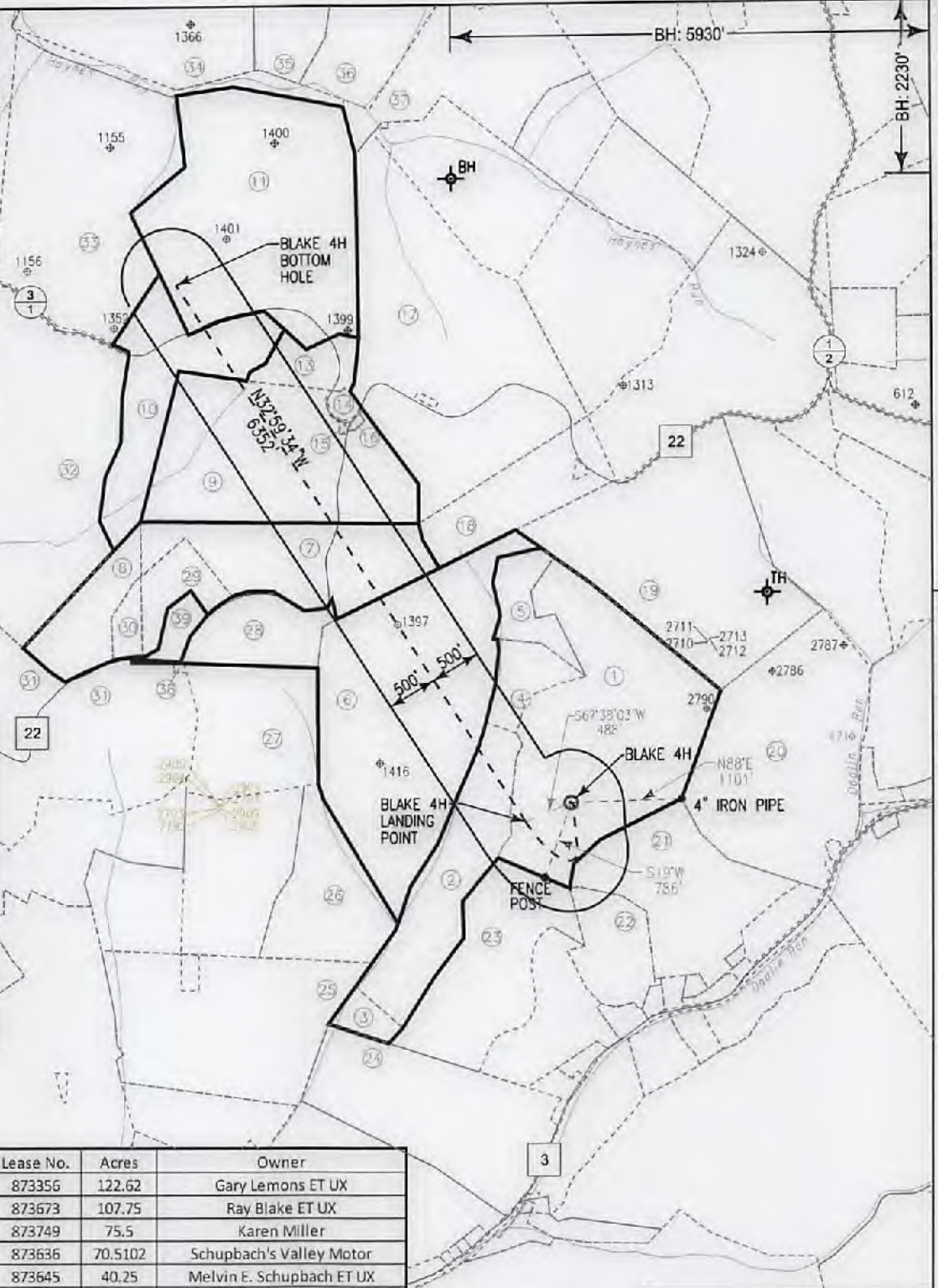
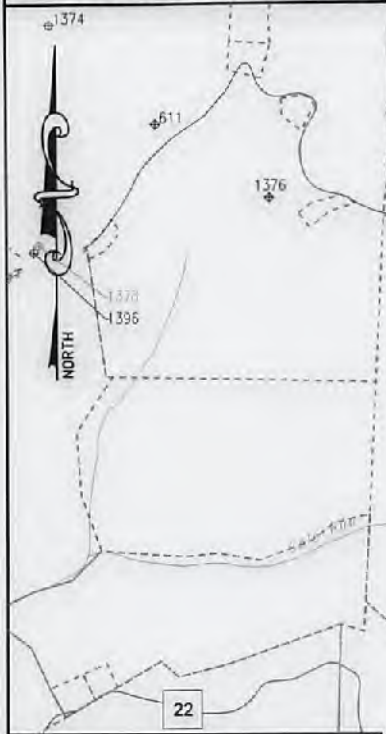
2/23/2018  
 \_\_\_\_\_  
 Date

  
 \_\_\_\_\_  
 WV Oil and Gas Inspector

Oil & Gas Inspector  
 \_\_\_\_\_  
 Title

3-2-18  
 \_\_\_\_\_  
 Date

**BLAKE 4H  
BLAKE  
EQT Production Company**



**NOTES ON SURVEY**

1. COORDINATES SYSTEM IS UTM, NAD 83 DATUM, ZONE 17, U.S. FOOT AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.
2. SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND FIELD LOCATIONS.
3. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
4. NO DWELLINGS AND BUILDINGS WITHIN 625 FEET OF PROPOSED OF CENTER OF PAD.
5. NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.
6. NO PERENNIAL STREAMS, LAKES, PONDS, RESERVOIRS OR WETLANDS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
7. NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF LIMITS OF DISTURBANCE.

**LEGEND**

- ⊕ Active Well Location
- ⊕ Hatched Area
- ⊕ Abandoned Well
- ⊕ Never Drilled
- ⊕ Tract Identification
- ⊕ Proposed Gas Well
- ⊕ Located Corner, as noted
- Surface Tract Lines
- - - Reference Line
- Lease Boundary
- Creek or Drain
- ⊕ WV County Route
- ⊕ WV State Route

Tract ID.	Lease No.	Acres	Owner
1 & 2 & 4	873356	122.62	Gary Lemons ET UX
6	873673	107.75	Ray Blake ET UX
7	873749	75.5	Karen Miller
9	873636	70.5102	Schubach's Valley Motor
10	873645	40.25	Melvin E. Schubach ET UX
11	873674	114	David E. Schubach ET AL

( ⊕ ) Denotes Location of Well on United States Topographic Maps



*I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Department of Environmental Protection.*

*Thomas C. Smalls*  
L. L. S. 687



FILE NO: W2030 (BK 50-21)  
DRAWING NO: \_\_\_\_\_  
SCALE: 1" = 1600'  
MINIMUM DEGREE OF ACCURACY: 1:2500  
PROVEN SOURCE OF ELEVATION: NGS CORS Station

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

DATE: FEBRUARY 16 20 18  
OPERATORS WELL NO: BLAKE 4H  
API WELL NO: DD  
47 - 103 - 02913  
STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
(IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW

LOCATION ELEVATION: 1,298' WATERSHED: CAMP RUN QUADRANGLE: NEW MARTINSVILLE 7.5'  
DISTRICT: Magnolia COUNTY: Wetzel

SURFACE OWNER: Gary Lemons ACREAGE: 69.12 ±  
ROYALTY OWNER: Gary Lemons, ET UX LEASE NO: 873356 ACREAGE: 122.62 ±

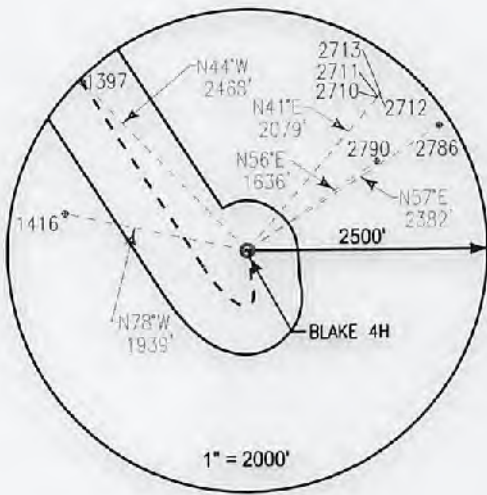
PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_

PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus ESTIMATED DEPTH: 6,786'

WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Jason Ranson  
ADDRESS: 115 Professional Place PO Box 280 ADDRESS: 115 Professional Place PO Box 280  
Bridgeport, WV 26330 Bridgeport, WV 26330

**Blake 4H  
Blake  
EQT Production Company**

Tract ID.	Tax Map No.	Parcel No.	County	District	Surface Tract Owner	Acres
1	5	35	Wetzel	Magnolia	Gary Lemons	79.7
2	8	7	Wetzel	Magnolia	Gary Lemons	30.2
3	8	13	Wetzel	Magnolia	Gary Lemons	5.57
4	5	34	Wetzel	Magnolia	Gary Lemons	11.17
5	5	27	Wetzel	Magnolia	Gary Lemons	11
6	5	33	Wetzel	Magnolia	Franklin Ray Blake	108.47
7	5	26	Wetzel	Magnolia	Stone Energy Corporation	39.95
8	5	25	Wetzel	Magnolia	Stone Energy Corporation	17.64
9	5	19	Wetzel	Magnolia	Ronald L. & Monette Schupbach	68.49
10	5	12	Wetzel	Magnolia	Melvin E. & Willda G. Schupbach	36.87
11	5	2	Wetzel	Magnolia	David E. & Jeanie L. Schupbach	96.43
12	5	N/A	Wetzel	Magnolia	N/A	2.52
13	5	13	Wetzel	Magnolia	Ronald L. & Monette Schupbach	9.48
14	5	14	Wetzel	Magnolia	Ronald Lee & Monette Schupbach	1.51
15	5	20	Wetzel	Magnolia	Ronald L. & Monette Schupbach	0.11
16	5	21	Wetzel	Magnolia	Ronald L. & Monette Schupbach	0.19
17	5	16	Wetzel	Magnolia	Sharon L. Bearce	108.64
18	5	22	Wetzel	Magnolia	Sharon L. Bearce	37.5
19	5	28	Wetzel	Magnolia	Gary & Judy Ann Lemons	102.75
20	6	3	Wetzel	Magnolia	Gary Patrick Fitzsimmons	71.99
21	8	8	Wetzel	Magnolia	Danny L. & Orion F. Neff	42.88
22	8	15.3	Wetzel	Magnolia	David & Orion Neff	11.97
23	8	14	Wetzel	Magnolia	Aaron Lloyd Lemons	43.79
24	8	25	Wetzel	Magnolia	Cathy M. Westfall ET AL	57.68
25	8	12	Wetzel	Magnolia	David L. & Ralph O. & Smith	58.15
26	8	6	Wetzel	Magnolia	Albert Koche HRS	33.01
27	5	32	Wetzel	Magnolia	George S. Schupbach	37.5
28	5	26.2	Wetzel	Magnolia	Franklin Ray Blake	17.73
29	5	26.3	Wetzel	Magnolia	Stone Energy Corporation	10.95
30	5	25.1	Wetzel	Magnolia	Stone Energy Corporation	4.19
31	5	31	Wetzel	Magnolia	John William Burton	66.56
32	5	11	Wetzel	Magnolia	Ronald L. Schupbach	89.45
33	5	1.1	Wetzel	Magnolia	Ronald L. Schupbach	90.33
34	11	13	Proctor	Coastal Forest Resources Co.		105
35	11	14	Proctor	Coastal Forest Resources Co.		22
36	11	16	Wetzel	Proctor	Nancy J. Garner	40
37	11	26	Wetzel	Proctor	Douglas S. & Linda C. Parish	53
38	5	31.1	Wetzel	Magnolia	Schupbach Cemetery	0.27
39	5	26.1	Wetzel	Magnolia	Stone Energy Corporation	3.93

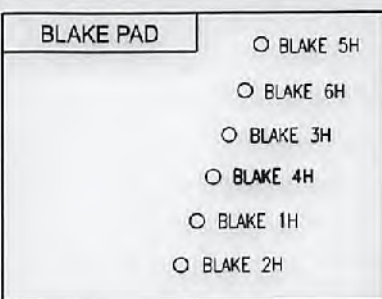


**Notes:**  
**BLAKE 4H As-Built coordinates are**  
 NAD 27 N: 420,269.000 E: 1,634,335.00  
 NAD 27 Lat: 39.646825 Long: -80.798606  
 NAD 83 UTM N: 4,388,585.317 E: 517,294.712  
**BLAKE 4H Landing Point coordinates are**  
 NAD 27 N: 420,083.390 E: 1,633,863.897  
 NAD 27 Lat: 39.646098 Long: -80.800198  
 NAD 83 UTM N: 4,386,506.471 E: 517,158.222  
**BLAKE 4H Bottom Hole coordinates are**  
 NAD 27 N: 425,410.805 E: 1,630,425.056  
 NAD 27 Lat: 39.680584 Long: -80.812757  
 NAD 83 UTM N: 4,390,111.865 E: 516,077.412  
 West Virginia Coordinates system of 1927 (North Zone)  
 based upon Differential GPS Measurements  
 Plat orientation, Corner and well ties are based upon  
 the grid north meridian  
 Well location references are based upon the grid north  
 meridian.  
 UTM coordinates are NAD83, Zone 17, Meters.



**LEGEND**

- ⊕ Active Well Location
- Proposed Gas Well
- Located Corner, as noted
- Surface Tract Lines
- - - - Reference Line
- Lease Boundary
- Creek or Drain
- ⊙ WV County Route
- ⊠ WV State Route



I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Department of Environmental Protection.

*Thomas C. Smalls*  
 L. L. S. 687



FILE NO: W2030 (BK 50-21)  
 DRAWING NO:  
 SCALE: 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY:  
 1:2500  
 PROVEN SOURCE OF ELEVATION:  
 NGS CORS Station

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

DATE: FEBRUARY 16 20 18  
 OPERATORS WELL NO: BLAKE 4H  
 API WELL NO 00  
 47 - 103 - 02913  
 STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
 (IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW  
 LOCATION ELEVATION: 1,298' WATERSHED: CAMP RUN QUADRANGLE: NEW MARTINSVILLE 7.5'  
 DISTRICT: Magnolia COUNTY: Wetzel  
 SURFACE OWNER: Gary Lemons ACREAGE: 69.12 ±  
 ROYALTY OWNER: Gary Lemons, ET UX LEASE NO: 873356 ACREAGE: 122.62 ±  
 PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY)  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus ESTIMATED DEPTH: 6,786'  
 WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Jason Ranson  
 ADDRESS: 115 Professional Place PO Box 280 ADDRESS: 115 Professional Place PO Box 280  
 Bridgeport, WV 26330 Bridgeport, WV 26330

TOP HOLE AS-BUILT

WW-6A1  
(5/13)

Operator's Well No. BLAKE 4H

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

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
See Attached				

RECEIVED  
Office of Oil and Gas

FEB 26 2018


WV Department of  
Environmental Protection

**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: Erin Spine   
 Its: Regional Land Supervisor

Lease No.	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
<b>873356</b>	<b><u>Gary and Judy Lemons, et al (current royalty owner)</u></b>		**	
	Gary Lemons, et ux (original lessor)	Central Michigan Exploration, LLC		94A/281
	Central Michigan Exploration, LLC	Stone Energy Corporation		100A/185
	Central Michigan Exploration, LLC	Stone Energy Corporation		101A/96
	Stone Energy Corporation	EQT Production Company		183A/305
<b>873673</b>	<b><u>Franklin Ray Blake (current royalty owner)</u></b>			
	Ray Blake, et ux (original lessor)	Clay Resources Inc		69A/66
	Clay Resources Inc	Murvin Oil Company		71A/404
	Murvin Oil Company	Applied Mechanics Corp		74A/426
	Applied Mechanics Corp	Cobham Gas Industries, Inc		74A/676
	Cobham Gas Industries, Inc	Tri-County Oil and Gas, Inc		80/639
	Tri-County Oil and Gas, Inc	B&R Construction, Inc		83A/483
	B&R Construction, Inc	B&R Holdings, Inc.		118A/685
	B&R Holdings, Inc.	Stone Energy Corporation		179A/848
	Stone Energy Corporation	EQT Production Company		183A/305
<b>873749</b>	<b><u>Karen Miller, et al (current royalty owner)</u></b>			
	Karen Miller (original lessor)	Stone Energy Corporation		129A/228
	Stone Energy Corporation	EQT Production Company		183A/305
<b>873636</b>	<b><u>Schupbachs Valley Motor Co Inc, et al (current royalty owner)</u></b>			
	Schupbach's Valley Motor Company, Inc (original lessor)	Stone Energy Corporation		165A/552
	Stone Energy Corporation	EQT Production Company		183A/305
<b>873645</b>	<b><u>Melvin E and Wilda G Schupbach (current royalty owner)</u></b>			
	Melvin E Schupbach, et ux (original lessor)	Spartan West Virginia LLC		88A/226
	Spartan West Virginia LLC	Acadian Energy Resources LLC		103A/193
	Acadian Energy Resources LLC	Tenaska Resources, LLC		106A/587
	Acadian Energy Resources LLC	Tsar-WV LLC		108A/478
	Tenaska Resources, LLC/Tsar-WV LLC	B&R Construction Inc		108A/506
	B&R Construction, Inc	B&R Holdings, Inc.		118A/694
	B&R Holdings, Inc.	Stone Energy Corporation		179A/848
	Stone Energy Corporation	EQT Production Company		183A/305
<b>873674</b>	<b><u>David E Schupbach (current royalty owner)</u></b>			
	David E Schupbach, et al (original lessor)	Clay Resources, Inc		69A/495
	Clay Resources, Inc	Murvin Oil Company		71A/404
	Murvin Oil Company	Applied Mechanics Corp		74A/426
	Applied Mechanics Corp	Cobham Gas Industries, Inc		74A/676
	Cobham Gas Industries, Inc	Tri-County Oil and Gas, Inc		80/639
	Tri-County Oil and Gas, Inc	B&R Construction, Inc		110A/41
	B&R Construction, Inc	B&R Holdings, Inc.		118A/685
	B&R Holdings, Inc.	Stone Energy Corporation		179A/848
	Stone Energy Corporation	EQT Production Company		183A/305

\*\* Per West Virginia Code Section 22-6-8.

RECEIVED  
Office of Oil and Gas

FEB 26 2018

WV Department of  
Environmental Protection



January 30, 2018

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

Re: Blake 1H, Blake 2H, Blake 4H  
Magnolia District, Wetzel County

Dear Mr. Martin,

EQT Production Company is submitting an application for a new well work permit for the above well number. 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.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Todd Klaner', is written over a faint, larger signature.

Todd Klaner  
Regional Land Manager

RECEIVED  
Office of Oil and Gas

FEB 26 2018

WV Department of  
Environmental Protection



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

Date of Notice Certification: 02/23/2018

API No. 47- 103 - 02913  
Operator's Well No. BLAKE 4H  
Well Pad Name: BLAKE

**Notice has been given:**

Pursuant to the provisions in West Virginia Code § 22-6A, the Operator has provided the required parties with the Notice Forms listed below for the tract of land as follows:

State: <u>WV</u>	UTM NAD 83	Easting: <u>517295.0</u>
County: <u>Wetzel</u>		Northing: <u>4388565.0</u>
District: <u>Magnolia</u>	Public Road Access: <u>Rt. 7</u>	
Quadrangle: <u>New Martinsville</u>	Generally used farm name: <u>Lemons, Gary</u>	
Watershed: <u>Camp Run</u>		

Pursuant to West Virginia Code § 22-6A-7(b), every permit application filed under this section shall be on a form as may be prescribed by the secretary, shall be verified and shall contain the following information: (14) A certification from the operator that (i) it has provided the owners of the surface described in subdivisions (1), (2) and (4), subsection (b), section ten of this article, the information required by subsections (b) and (c), section sixteen of this article; (ii) that the requirement was deemed satisfied as a result of giving the surface owner notice of entry to survey pursuant to subsection (a), section ten of this article six-a; or (iii) the notice requirements of subsection (b), section sixteen of this article were waived in writing by the surface owner; and Pursuant to West Virginia Code § 22-6A-11(b), the applicant shall tender proof of and certify to the secretary that the notice requirements of section ten of this article have been completed by the applicant.

<p>Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:</p> <p>*PLEASE CHECK ALL THAT APPLY</p> <p><input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED</p> <p><input type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input checked="" type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or</p> <p style="padding-left: 40px;"><input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)</p> <p><input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION</p> <p><input checked="" type="checkbox"/> 5. PUBLIC NOTICE</p> <p><input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION</p>	<p><b>OOG OFFICE USE ONLY</b></p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p>
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**Required Attachments:**

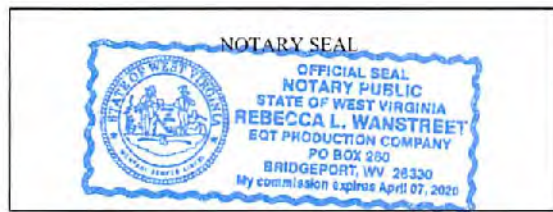
The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication date verification or the associated Affidavit of Publication. The attached Notice Forms and Certifications of Notice shall serve as proof that the required parties have been notified 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)

**Certification of Notice is hereby given:**

THEREFORE, I Erin Spine, have read and understand the notice requirements within West Virginia Code § 22-6A. I certify that as required under West Virginia Code § 22-6A, I have served the attached copies of the Notice Forms, identified above, to the required parties through personal service, by registered mail or by any method of delivery that requires a receipt or signature confirmation. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Notice Certification and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator:	<u>EQT Production Company</u>	Address:	<u>2200 Energy Dr.</u>
By:	<u>Erin Spine</u>		<u>Canonsburg PA 15317</u>
Its:	<u>Regional Land Supervisor</u>	Facsimile:	<u>304-848-0041</u>
Telephone:	<u>304-848-0035</u>	Email:	<u>espine@eqt.com</u>



Subscribed and sworn before me this 23 day of February, 2018.  
Rebecca L. Wanstreet Notary Public  
 My Commission Expires 4-7-2020

**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](mailto:depprivacyofficer@wv.gov).

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**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:** 2/23/2018 **Date Permit Application Filed:** 2/23/2018

**Notice of:**

- PERMIT FOR ANY WELL WORK
- CERTIFICATE OF APPROVAL FOR THE CONSTRUCTION OF AN IMPOUNDMENT OR PIT

**Delivery method pursuant to West Virginia Code § 22-6A-10(b)**

- PERSONAL SERVICE
- REGISTERED MAIL
- METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

Pursuant to W. Va. Code § 22-6A-10(b) no later than the filing date of the application, the applicant for a permit for any well work or for a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site Safety Plan ("WSSP") to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Application Notice  WSSP Notice  E&S Plan Notice  Well Plat Notice is hereby provided to:

SURFACE OWNER(s)  
Name: See Attached  
Address: \_\_\_\_\_  
\_\_\_\_\_  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

COAL OWNER OR LESSEE  
Name: See Attached  
Address: \_\_\_\_\_  
\_\_\_\_\_

COAL OPERATOR  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

SURFACE OWNER(s) (Road and/or Other Disturbance)  
Name: See Attached  
Address: \_\_\_\_\_  
\_\_\_\_\_  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)  
Name: See Attached  
Address: \_\_\_\_\_

SURFACE OWNER(s) (Impoundments or Pits)  
Name: See Attached  
Address: \_\_\_\_\_  
\_\_\_\_\_

OPERATOR OF ANY NATURAL GAS STORAGE FIELD  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

\*Please attach additional forms if necessary

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**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 environmental protection 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 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

**Well Location Restrictions**

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

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 57<sup>th</sup> 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. **NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.**

**Time Limits and Methods for Filing Comments.**

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

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

**Comment Requirements**

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

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

**Permit Denial or Condition**

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

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

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

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

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WW-6A  
(8-13)

API NO. 47- 103 - 02913 DD  
OPERATOR WELL NO. BLAKE 4H  
Well Pad Name: BLAKE

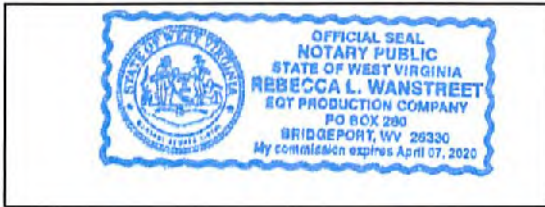
**Notice is hereby given by:**

Well Operator: EQT Production Company   
Telephone: 304-848-0035  
Email: espine@eqt.com

Address: 2200 Energy Dr.  
Canonsburg PA 15317  
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 of your personal information, please contact DEP's Chief Privacy Officer at [depprivacyofficer@wv.gov](mailto:depprivacyofficer@wv.gov).



Subscribed and sworn before me this 23 day of February, 2018.

Rebecca L. Wanstreet Notary Public

My Commission Expires 4-7-2020

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163-0291300

Topo Quad: NEW MARTINSVILLE, WV - OHIO 7.5

Scale: 1" = 1000'

County: WETZEL

Date: 01 FEBRUARY 2018

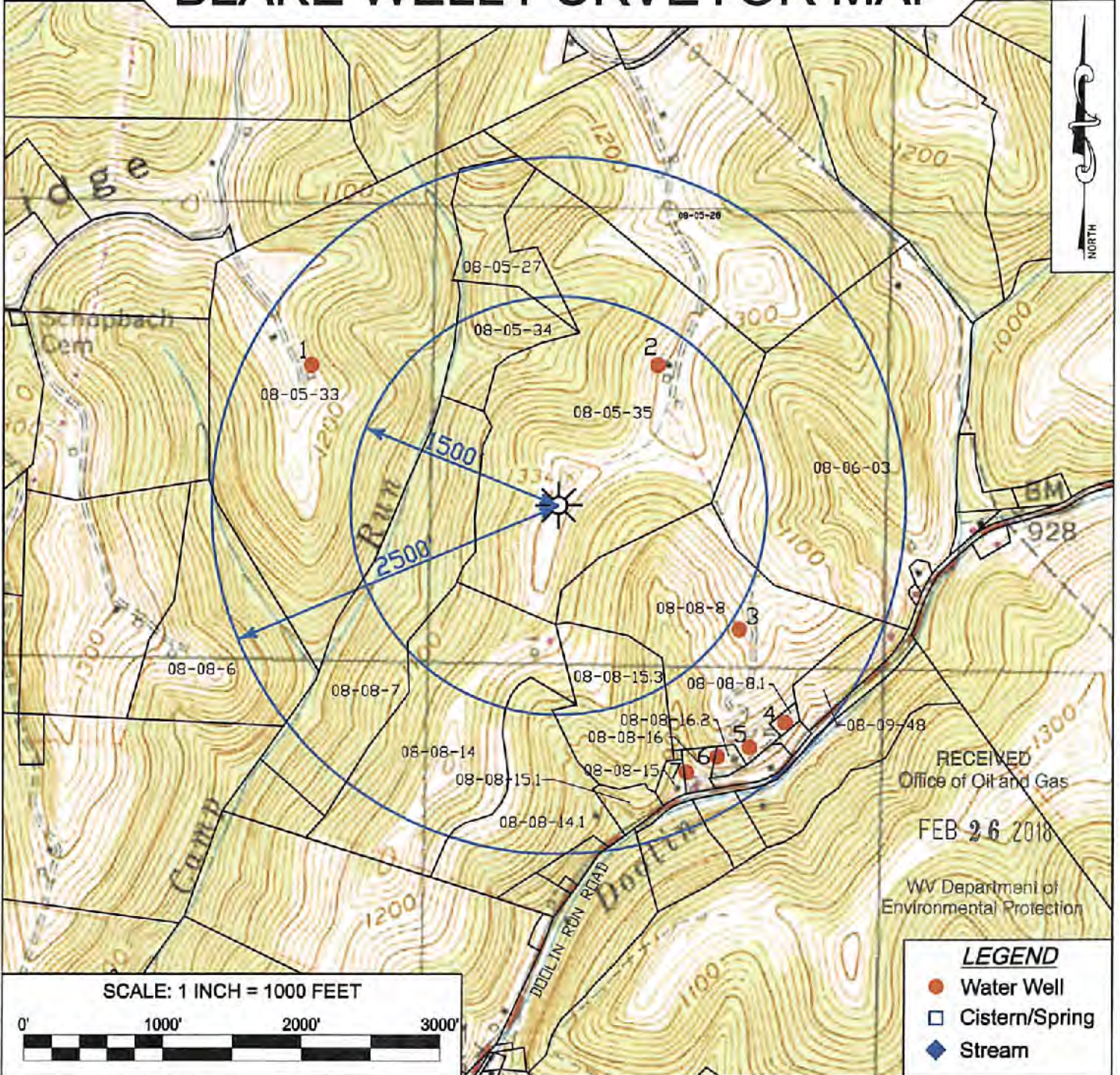
District: MAGNOLIA

Project No: NMA12

Water

# BLAKE WELL PURVEYOR MAP

Topo



SCALE: 1 INCH = 1000 FEET



### LEGEND

- Water Well
- Cistern/Spring
- ◆ Stream

SURVEYING AND MAPPING SERVICES PERFORMED BY:

PREPARED FOR:



**EQT Production Co. Inc.**  
 115 Professional Place, P.O. Box 280  
 Bridgeport, WV 26330



Topo Quad: NEW MARTINSVILLE, WV - OHIO 7.5

Scale: 1" = 1000'

County: WETZEL

Date: 01 FEBRUARY 2018

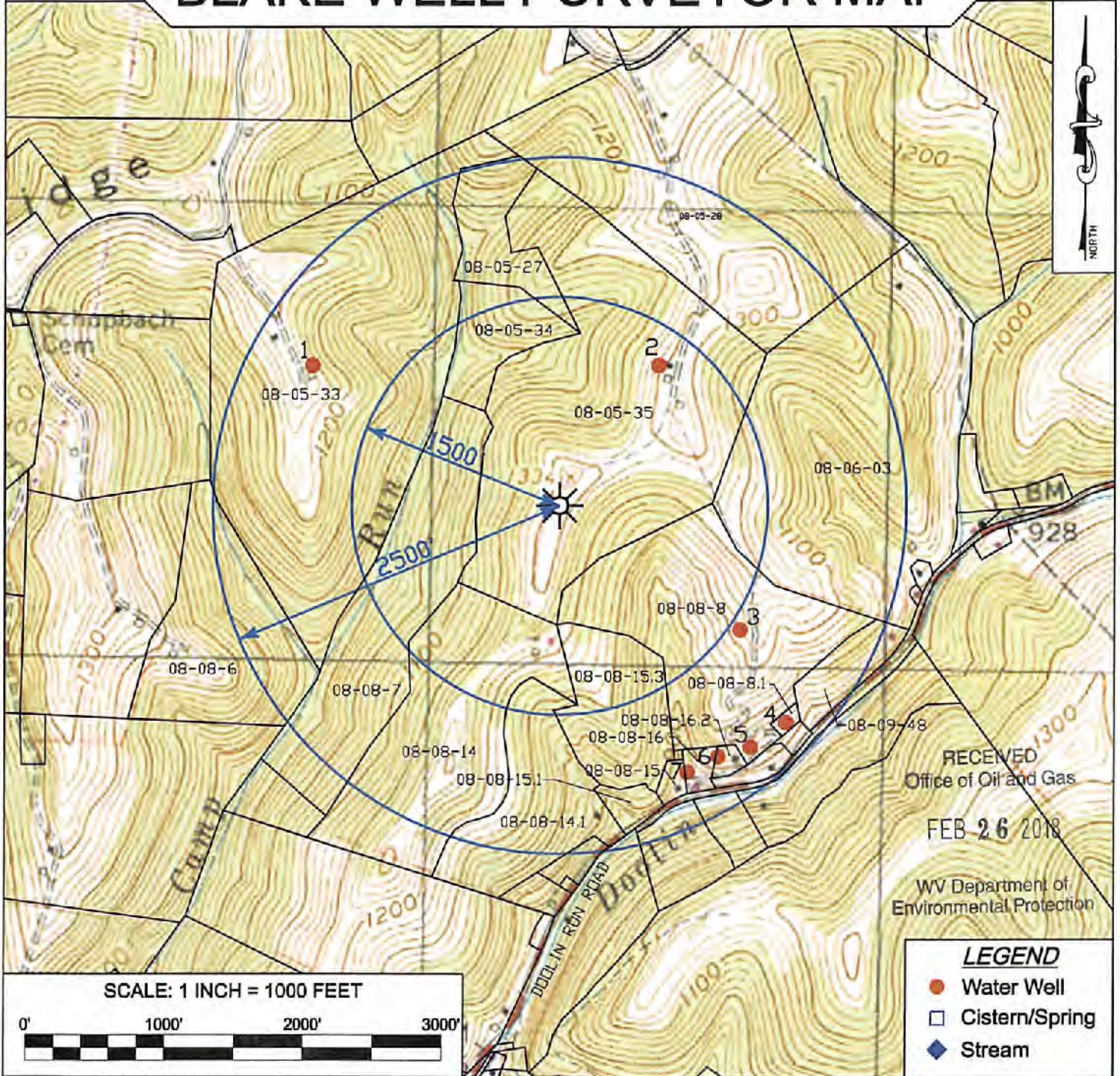
District: MAGNOLIA

Project No: NMA12

Water

# BLAKE WELL PURVEYOR MAP

Topo



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SCALE: 1 INCH = 1000 FEET



### LEGEND

- Water Well
- Cistern/Spring
- ◆ Stream

SURVEYING AND MAPPING SERVICES PERFORMED BY:

PREPARED FOR:



**EQT Production Co. Inc.**  
115 Professional Place, P.O. Box 280  
Bridgeport, WV 26330





**Table 1 – Water Source Identification**

EQT Well Pad Name: BLAKE Submittal Date: \_\_\_\_\_

EQT Well Number: 1H, 2H, 3H, 4H, 5H, 6H

Survey / Engineering Company: Keystone Consultants, Inc.

Site Number: 1 Distance from Gas Well (feet): 2,050' +/-

Surface Owner / Occupant: Franklin Ray Blake

Address: 416 Cessna Ave Charleston, SC 29407 Phone #: \_\_\_\_\_

Field Located Date: N/A Owner home during survey (yes/no): \_\_\_\_\_

Coordinates: 39.649438°, -80.804795° +/- (decimal degrees – NAD 83)

Contact Attempts (Date): 1<sup>st</sup>: \_\_\_\_\_ 2<sup>nd</sup>: \_\_\_\_\_ Date Door Hanger Left: \_\_\_\_\_

Comments: \_\_\_\_\_

- Landowner Requested Sampling
- Landowner Decline Sampling
- Unable to Contact  
(Further contact attempts to be made by EQT's third party pre-drill sampling lab)

Site Number: 2 Distance from Gas Well (feet): 1,238'+/-

Surface Owner / Occupant: Gary Lemons

Address: 1102 James St. New Martinsville, WV 26155 Phone #: N/A

Field Located Date: N/A Owner home during survey (yes/no): \_\_\_\_\_

Coordinates: 39.649537°, -80.795933° +/- (decimal degrees – NAD 83)

Contact Attempts (Date): 1<sup>st</sup>: \_\_\_\_\_ 2<sup>nd</sup>: \_\_\_\_\_ Door Hanger Left: \_\_\_\_\_

Comments: \_\_\_\_\_

- Landowner Requested Sampling
- Landowner Decline Sampling
- Unable to Contact  
(Further contact attempts to be made by EQT's third party pre-drill sampling lab)

Site Number: 3 Distance from Gas Well (feet): 1,576'+/-

Surface Owner / Occupant: Danny L. & Orion F. Neff

Address: 3137 Doolin Run Rd New Martinsville, WV 26155 Phone #: N/A

Field Located Date: N/A Owner home during survey (yes/no): No

Coordinates: 39.644345°, -80.793740° +/- (decimal degrees – NAD 83)

Contact Attempts (Date): 1<sup>st</sup>: \_\_\_\_\_ 2<sup>nd</sup>: \_\_\_\_\_ Door Hanger Left: \_\_\_\_\_

Comments: \_\_\_\_\_

- Landowner Requested Sampling
- Landowner Decline Sampling
- Unable to Contact  
(Further contact attempts to be made by EQT's third party pre-drill sampling lab)

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Site Number: 4 Distance from Gas Well (feet): 2,252'+/-

Surface Owner / Occupant: E. D. & Marshie A. Sidenstricker

Address: 164 Wool Rd New Martinsville, WV 26155 Phone #: N/A

Field Located Date: N/A Owner home during survey (yes/no): No

Coordinates: 39.642534°, -80.792538°+/- (decimal degrees – NAD 83)

Contact Attempts (Date): 1<sup>st</sup>: \_\_\_\_\_ 2<sup>nd</sup>: \_\_\_\_\_ Door Hanger Left: \_\_\_\_\_

Comments: \_\_\_\_\_

Landowner Requested Sampling  
 Landowner Decline Sampling  
 Unable to Contact  
(Further contact attempts to be made by EQT's third party pre-drill sampling lab)

Site Number: 5 Distance from Gas Well (feet): 2,209'+/-

Surface Owner / Occupant: Danny L. & Orion F. Neff

Address: 3137 Doolin Run Rd New Martinsville, WV 26155 Phone #: N/A

Field Located Date: N/A Owner home during survey (yes/no): No

Coordinates: 39.642041°, -80.793433°+/- (decimal degrees – NAD 83)

Contact Attempts (Date): 1<sup>st</sup>: \_\_\_\_\_ 2<sup>nd</sup>: \_\_\_\_\_ Door Hanger Left: \_\_\_\_\_

Comments: \_\_\_\_\_

Landowner Requested Sampling  
 Landowner Decline Sampling  
 Unable to Contact  
(Further contact attempts to be made by EQT's third party pre-drill sampling lab)

Site Number: 6 Distance from Gas Well (feet): 2,131'+/-

Surface Owner / Occupant: Marshie Sidenstricker Et Al

Address: 115 Wool Rd New Martinsville, WV 26155 Phone #: N/A

Field Located Date: N/A Owner home during survey (yes/no): No

Coordinates: 39.641843°, -80.794252°+/- (decimal degrees – NAD 83)

Contact Attempts (Date): 1<sup>st</sup>: \_\_\_\_\_ 2<sup>nd</sup>: \_\_\_\_\_ Door Hanger Left: \_\_\_\_\_

Comments: \_\_\_\_\_

Landowner Requested Sampling  
 Landowner Decline Sampling  
 Unable to Contact  
(Further contact attempts to be made by EQT's third party pre-drill sampling lab)

Site Number: 7 Distance from Gas Well (feet): 2,119'+/-

Surface Owner / Occupant: Lou Ann Beaty-Anderson

Address: 2071 Doolin Run Rd New Martinsville, WV 26155 Phone #: N/A

Field Located Date: N/A Owner home during survey (yes/no): No

Coordinates: 39.641531°, -80.795037°+/- (decimal degrees – NAD 83)

Contact Attempts (Date): 1<sup>st</sup>: \_\_\_\_\_ 2<sup>nd</sup>: \_\_\_\_\_ Door Hanger Left: \_\_\_\_\_

Comments: \_\_\_\_\_

Landowner Requested Sampling  
 Landowner Decline Sampling  
 Unable to Contact  
(Further contact attempts to be made by EQT's third party pre-drill sampling lab)

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FEB 26 2018

Surface Owners: Surface Owners (road or other disturbance): 47 10 302913 DD

Gary and Judy Lemons  
1102 James Street  
New Martinsville, WV 26155

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FEB 26 2013

WV Department of  
Environmental Protection

**Coal Owner**

Gary Lemons  
1102 James Street  
New Martinsville, WV 26155

CNX RCPC, LLC  
1000 Consol Energy Dr.  
Canonsburg PA 15317  
Attn: Casey Saunders

CNX Gas Company LLC  
1000 Consol Energy Dr.  
Canonsburg PA 15317  
Attn: Casey Saunders

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47 10 30 29 13

DD

Surface Owners:    Surface Owners (road or other disturbance):

Gary and Judy Lemons  
1102 James Street  
New Martinsville, WV 26155

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WV Department of  
Environmental Protection



WW-6A5  
(1/12)

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

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

**Date of Notice:** 02/23/2018      **Date Permit Application Filed:** 02/23/2018

**Delivery method pursuant to West Virginia Code § 22-6A-16(c)**

CERTIFIED MAIL                       HAND  
RETURN RECEIPT REQUESTED              DELIVERY

Pursuant to W. Va. Code § 22-6A-16(c), no later than the date for filing the permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner whose land will be used for the drilling of a horizontal well notice of the planned operation. The notice required by this subsection shall include: (1) A copy of this code section; (2) The information required to be provided by subsection (b), section ten of this article to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. (d) The notices required by this section shall be given to the surface owner at the address listed in the records of the sheriff at the time of notice.

**Notice is hereby provided to the SURFACE OWNER(s)**

(at the address listed in the records of the sheriff at the time of notice):

Name: See Attached

Name: See Attached

Address: \_\_\_\_\_

Address: \_\_\_\_\_

**Notice is hereby given:**

Pursuant to West Virginia Code § 22-6A-16(c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State:	<u>WV</u>	UTM NAD 83	Easting:	<u>517295.0</u>
County:	<u>Wetzel</u>		Northing:	<u>4388565.0</u>
District:	<u>Magnolia</u>	Public Road Access:		<u>Rt. 7</u>
Quadrangle:	<u>New Martinsville</u>	Generally used farm name:		<u>Lemons, Gary</u>
Watershed:	<u>Camp Run</u>			

**This Notice Shall Include:**

Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1) A copy of this code section; (2) The information required to be provided by **W. Va. Code § 22-6A-10(b)** to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

Well Operator: EQT Production Company  
Telephone: 304-848-0035  
Email: espine@eqt.com

Address: 2200 Energy Dr.  
Canonsburg PA 15317  
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 of your personal information, please contact DEP's Chief Privacy Officer at [depprivacyofficer@wv.gov](mailto:depprivacyofficer@wv.gov).

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Office of Oil and Gas

FEB 26 2018

WV Department of  
Environmental Protection

47 10 302913

DD

Surface Owners:    Surface Owners (road or other disturbance):

Gary and Judy Lemons  
1102 James Street  
New Martinsville, WV 26155

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WV Department of  
Environmental Protection



## WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

**Division of Highways**

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

Jim Justice  
 Governor

Thomas J. Smith, P. E.  
 Secretary of Transportation/  
 Commissioner of Highways

August 25, 2017

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

Subject: DOH Permit for the Blake Pad, Wetzel County

Blake 1H	Blake 2H
Blake 3H	Blake 4H
Blake 5H	Blake 6H

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 Office of Oil and Gas

FEB 26 2018

WV Department of  
 Environmental Protection

Dear Mr. Martin,

This well site will be accessed from a permit 06-2015-0141 which has been transferred to EQT Production Company for access to the State Road for a well site located off of Wetzel County Route 22 SLS.

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,

Gary K. Clayton, P.E.  
 Regional Maintenance Engineer  
 Central Office O&G Coordinator

Cc: Nick Bumgarder  
 EQT Production Company  
 CH, OM, D-6  
 File

**Anticipated Frac Additives**  
**Chemical Names and CAS numbers**

47 10 3029 1300

<u>Material</u>	<u>Ingredient</u>	<u>CAS Number</u>
Water		
Sand	Hydrotreated light petroleum distillate	14808-60-7
	Tributyl tetradecyl phosphonium chloride	64742-47-8
Friction Reducer		
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

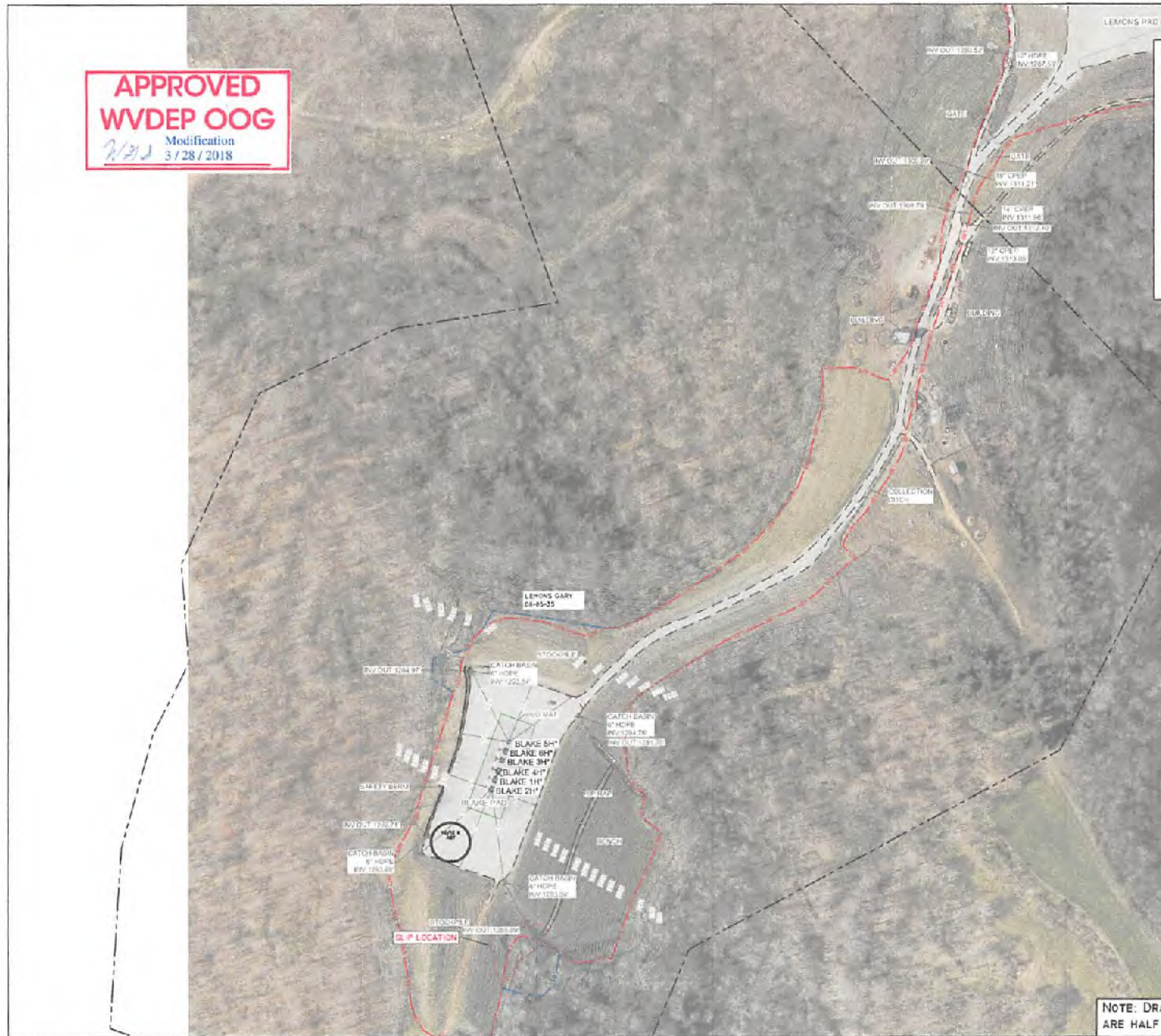
RECEIVED  
Office of Oil and Gas

FEB 26 2018

WV Department of  
Environmental Protection



**APPROVED WVDEP OOG**  
 Modification  
 3/28/2018



PROPOSED LIMITS OF DISTURBANCE BY NAME	SHAPE	AREA	UNITS
LEMONS GARY	88-36-55	0.41	ACRES

DESCRIPTION	COORDINATES			
	NAD 83	NAD 27	UTM (NAD83)	
BLAKE 91*	35-32916	LAT = 39 044387° LONG = 80 284615°	LAT = 39 044387° LONG = 80 284615°	N = 4385209.233 E = 517245.035
BLAKE 20*	35-32916	LAT = 39 044387° LONG = 80 284615°	LAT = 39 044387° LONG = 80 284615°	N = 4385209.233 E = 517245.035
BLAKE 20*	35-32916	LAT = 39 044387° LONG = 80 284615°	LAT = 39 044387° LONG = 80 284615°	N = 4385209.233 E = 517245.035
BLAKE 41*	35-32916	LAT = 39 044387° LONG = 80 284615°	LAT = 39 044387° LONG = 80 284615°	N = 4385209.233 E = 517245.035
BLAKE 50*	35-32916	LAT = 39 044387° LONG = 80 284615°	LAT = 39 044387° LONG = 80 284615°	N = 4385209.233 E = 517245.035
BLAKE 60*	35-32916	LAT = 39 044387° LONG = 80 284615°	LAT = 39 044387° LONG = 80 284615°	N = 4385209.233 E = 517245.035
LEMONS 91*	35-32718	LAT = 39 040197° LONG = 80 283809°	LAT = 39 040197° LONG = 80 283809°	N = 4384909.448 E = 517209.000
LEMONS 50*	35-32718	LAT = 39 040197° LONG = 80 283809°	LAT = 39 040197° LONG = 80 283809°	N = 4384909.448 E = 517209.000
LEMONS 40*	35-32718	LAT = 39 040197° LONG = 80 283809°	LAT = 39 040197° LONG = 80 283809°	N = 4384909.448 E = 517209.000
LEMONS 30*	35-32718	LAT = 39 040197° LONG = 80 283809°	LAT = 39 040197° LONG = 80 283809°	N = 4384909.448 E = 517209.000
LEMONS 20*	35-32718	LAT = 39 040197° LONG = 80 283809°	LAT = 39 040197° LONG = 80 283809°	N = 4384909.448 E = 517209.000
LEMONS 10*	35-32718	LAT = 39 040197° LONG = 80 283809°	LAT = 39 040197° LONG = 80 283809°	N = 4384909.448 E = 517209.000

DESCRIPTION	COORDINATES			
	NAD 83	NAD 27	UTM (NAD83)	
ENTRANCE	LAT = 39 045378° LONG = 80 284581°	LAT = 39 045378° LONG = 80 284581°	N = 4385262.210 E = 517245.129	
CENTER OF BLAKE PAD	LAT = 39 044600° LONG = 80 284615°	LAT = 39 044600° LONG = 80 284615°	N = 4385050.438 E = 517245.278	
CENTER OF "S" TANK W. 4#E	LAT = 39 044600° LONG = 80 284615°	LAT = 39 044600° LONG = 80 284615°	N = 4385050.438 E = 517245.278	



- LEGEND**
- - - - - PROPOSED FENCE
  - - - - - PROPERTY BOUNDARY
  - - - - - FENCE LINE
  - - - - - EXISTING CONTOURS
  - - - - - PROPOSED CONTOURS
  - - - - - COMPOSITE FILTER SAND
  - - - - - LIMIT OF DISTURBANCE
  - - - - - LIMIT OF DISTURBANCE PERMITTED
  - - - - - LIMIT OF DISTURBANCE UNPERMITTED
  - - - - - 5' (2x) L&D
  - - - - - EXISTING TREE LINE
  - - - - - FOR DRAW
  - - - - - CUT
  - - - - - FILL
  - - - - - BERM
  - - - - - MOUNTABLE BERM
  - - - - - 100' L&D
  - - - - - 500' L&D
  - - - - - STREAM
  - - - - - WETLANDS
  - - - - - BUFFER ZONE
  - - - - - DRAINAGE
  - - - - - WELL HEAD
  - - - - - EXISTING ELEVATION
  - - - - - PROPOSED ELEVATION

AREA		
DESCRIPTION	QUANTITY	UNITS
LIMITS OF DISTURBANCE	0.58	ACRES
PERMITTED AREA	0.41	ACRES
PROPOSED AREA	0.41	ACRES

NOTE: ALL WELLS MARKED WITH AN ASTERISK (\*) ARE APPROXIMATE; THEY WERE COVERED WITH PROTECTIVE STEEL PLATES AT THE TIME OF SURVEY.

DATUM: 83 WY NORTH

NOTE: DRAWING WAS CREATED ON 22x34 PAPER. 11x17 DRAWINGS ARE HALF SCALE. REFER TO SCALE BAR FOR PROPER SCALING.

**Blue Mountain Inc.**  
 Engineer and Land Conservator  
 10000 Mountain Road, Blue Mountain, WV 25814  
 Phone: 803-432-4614  
 Fax: 803-432-4606

**EQT**

120 PROFESSIONAL PLACE  
 PROFESSIONAL BUILDING FOUR  
 BRIDGEPORT, WV 26330

EXISTING CONDITIONS (1 OF 2)  
 BLAKE PAD

PROJECT NO:  
 DATE:  
 SCALE:  
 JOB NO:  
 DRAWING NAME: BLAKE PAD

SHEET NO. 4