



west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary
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 2H
47-103-02911-00-00

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 2H
Farm Name: LEMONS, GARY
U.S. WELL NUMBER: 47-103-02911-00-00
Horizontal 6A Drill Deeper
Date Issued: 5/18/2018

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

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.

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 H2 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):
Target formation is 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: 12829

11) Proposed Horizontal Leg Length: 5453

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
JL*

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 <i>exists</i>	90	86 ft ³ / CTS
Fresh Water	13 3/8	New	J-55	54.5	1300 <i>exists</i>	1300	1137 ft ³ / CTS
Coal							
Intermediate	9 5/8	New	A-500	40	2569 <i>exists</i>	2569	991 ft ³ / CTS
Production	5 1/2	New	P-110	20	12834	12834	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 80° 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	26	.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*

PACKERS

Kind:				
Sizes:				
Depths Set:				

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

Well has been drilled to 5721' MD. Drill the vertical to an approximate depth of 5513'. 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.

*DWH
via phone
5-18-18
JA*

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.

47 10 302 9/10 P

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

1/30/18

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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

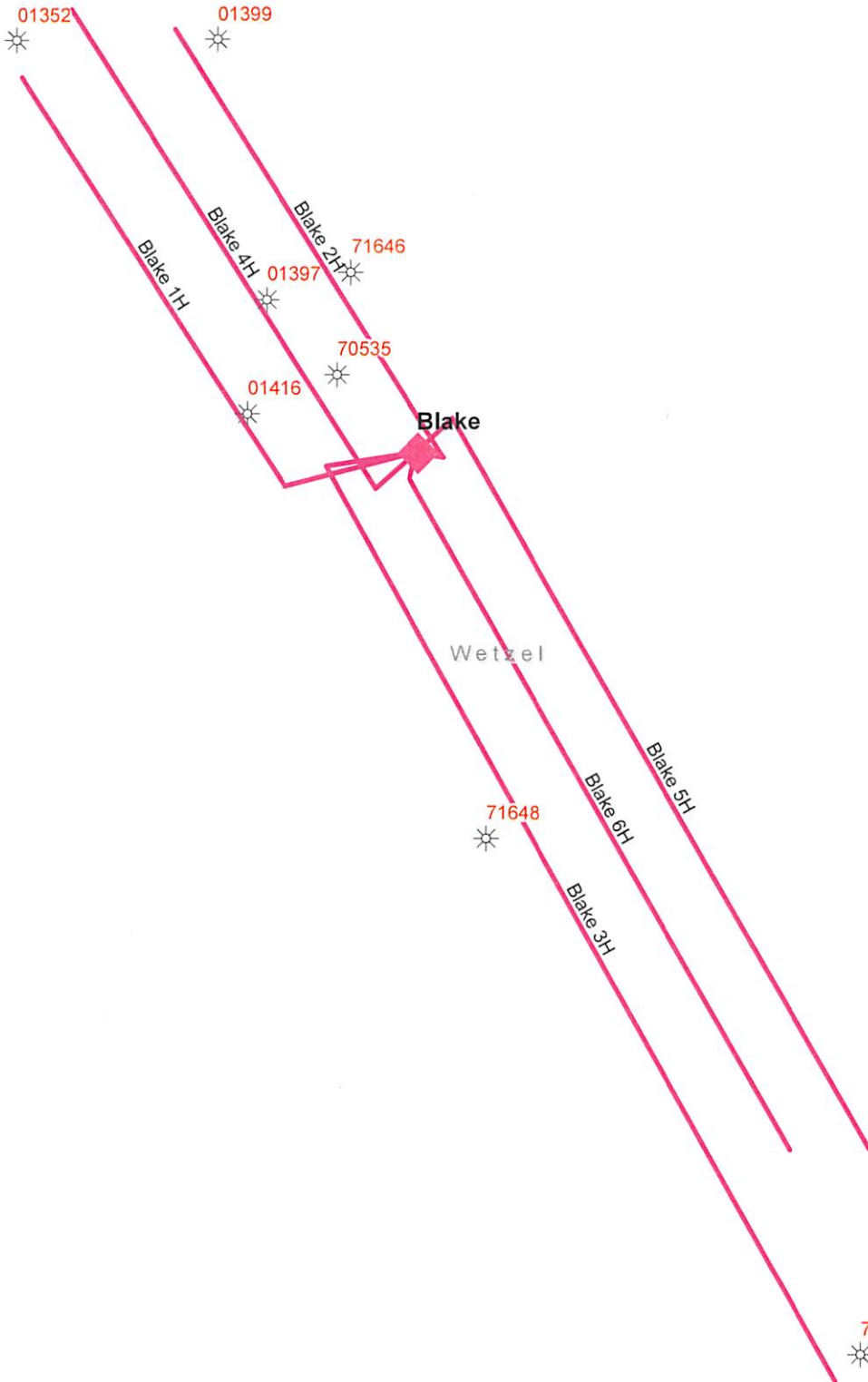
2. Reporting

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.

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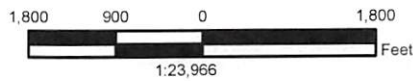


EQT Corporation
625 Liberty Avenue
Pittsburgh, PA 15222



Target Formation

- Marcellus
- Vertical Offsets

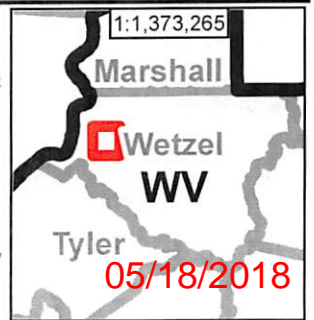


Disclaimer:

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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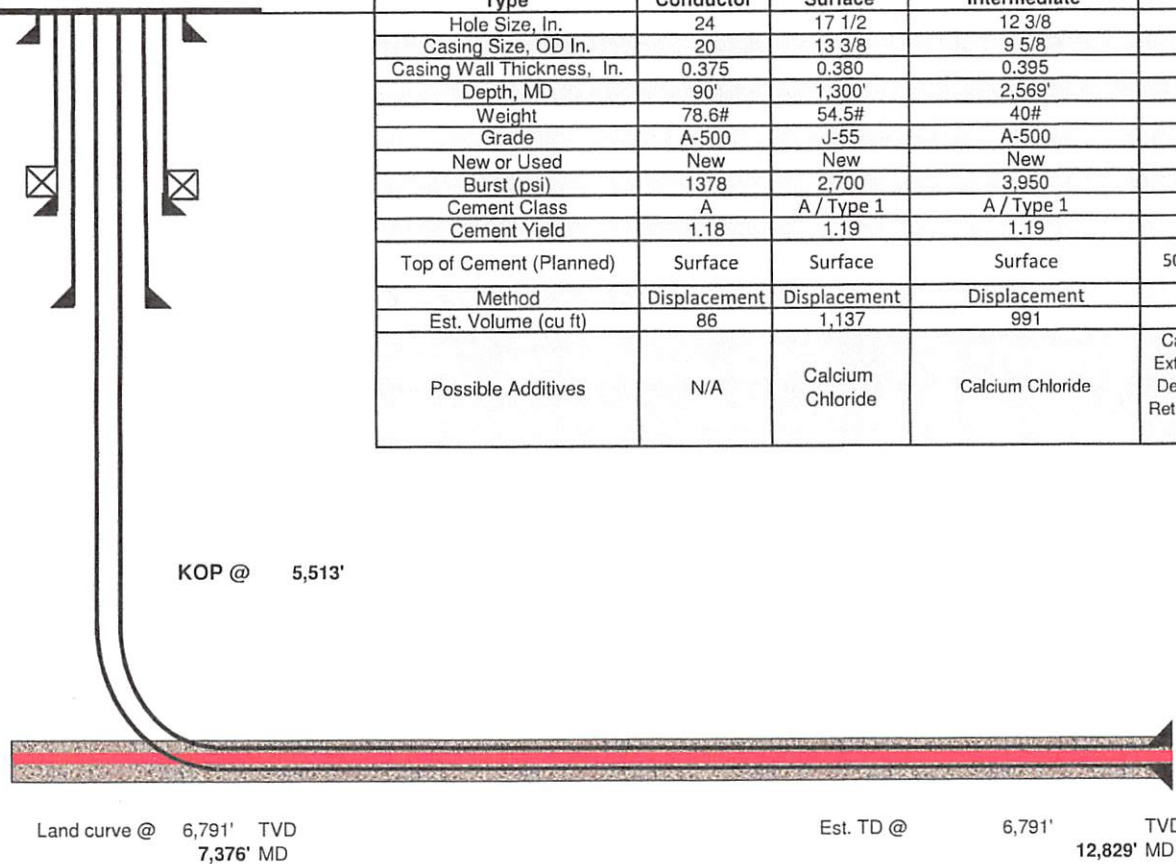
Well Blake 2H
EQT Production
New Martinsville Quad
Wetzel County, WV

Azimuth 328
 Vertical Section 5571

Note: Diagram is not to scale

Formations	Top TVD	Base TVD
Base Fresh Water	90	
Conductor	90	
Sandstone and Shale	0 - 1027	
Coal	1027 - 1034	
Sandstone and Shale	1027 - 2216	
Annular Packer	1186	
Surface Casing	1300	
Big Lime	2216 - 2331	
Big Injun	2331 - 2416	
Sandstone and Shale	2416 - 2786	
Intermediate Casing	2569	
Berea	2786 - 2795	
Shale	2795 - 3036	
Gordon	3036 - 3060	
Undiff Devonian Shale	3060 - 6590	
Sonyea	6590 - 6683	
Middlesex	6683 - 6702	
Genesee	6702 - 6769	
Geneseo	6769 - 6788	
Tully	6788 - 6815	
Hamilton	6815 - 6848	
Marcellus	6848 - 6903	
Production Casing	12829 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'	1,300'	2,569'	12,829'
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	1,137	991	2,686
Possible Additives	N/A	Calcium Chloride	Calcium Chloride	Calcium Carbonate, Fluid Loss, Extender, Dispersent, 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 5513'.

Kick off and drill curve. Drill lateral in the Marcellus. Cement casing.

5,453' Lateral

WEST VIRGINIA GEOLOGICAL PROGNOSIS

Horizontal Well

v 2017.4

Blake 2H

Drilling Objectives: Marcellus
County: Wetzel
Quad: New Martinsville
Elevation: 1303 KB 1293 GL
Surface location Northing: 420231.00 Easting: 1634321.00
Landing Point Northing: 420535.21 Easting: 1634615.63
Toe location Northing: 425173.42 Easting: 1631748.20
Recommended Azimuth 328 Degrees

TVD: 6791
 Recommended LP to TD: 5,453'

ESTIMATED FORMATION TOPS

Formation	Top (TVD)	Base (TVD)	Lithology	Comments	Top RR	Base RR
Fresh Water Zone	0	90				
Sandstone and Shale	0	1027	Sandstone		272	282
Coal	1027	1034	Coal	No past, present, or future mining planned near the well pad.	422	440
Sandstone and Shale	1027	2216	Limestone		472	487
Big Lime	2216	2331	Sandstone	Gas storage zones are NOT of concern.	1057	1077
Big Injun	2331	2416			1092	1232
Int. csg pt	2569				1366	1407
Sandstone and Shale	2416	2786	Silty Sand		1523	1568
Berea	2786	2795	Silty Sand			Base of Red Rock
Shale	2795	3036	Silty Sand			
Gordon	3036	3060	Silty Sand	Base of Offset Well Perforations at 3113' TVD		
Undiff Devonian Shale	3060	6590	Silty Sand			
Sonyea	6590	6683	Gray shale			
Middlesex	6683	6702	Shale			
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			
Purcell	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

Fresh Water/Coal	CSG OD	13 3/8	CSG DEPTH:	1300	as set
Annular Packer	CSG OD	9 5/8	CSG DEPTH:	1186	as set
Intermediate 1:	CSG OD	9 5/8	CSG DEPTH:	2569	as set, Beneath the Big Injun formati
Production:	CSG OD	5 1/2	CSG DEPTH:	@ TD	

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

API 47-103-02911 County Wetzel District Magnolia
Quad New Martinsville Pad Name Blake Field/Pool Name Mary
Farm name Lemons, Gary Well Number #2H
Operator (as registered with the OOG) Stone Energy Corporation
Address 1300 Fort Pierpont Dr. - Suite 201 City Morgantown State WV Zip 26508

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,388,554 Easting 517,291
Landing Point of Curve Northing TBD - Only Top Hole Drilled Easting TBD - Only Top Hole Drilled
Bottom Hole Northing TBD - Only Top Hole Drilled Easting TBD - Only Top Hole Drilled

Elevation (ft) 1293 GL Type of Well New Existing Type of Report Interim Final
Permit Type Deviated Horizontal Horizontal 6A Vertical Depth Type Deep Shallow
Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
Well Type Brine Disposal CBM Gas Oil Secondary Recovery Solution Mining Storage Other
Type of Completion Single Multiple Fluids Produced Brine Gas NGL Oil Other
Drilled with Cable Rotary

Drilling Media Surface hole Air Mud Fresh Water Intermediate hole Air Mud Fresh Water Brine
Production hole Air Mud Fresh Water Brine

Mud Type(s) and Additive(s)
Air Drilling additives: air, fresh water, soda ash, KCl, clay guard, PAC, foamer, corrosion inhibitor

Date permit issued 9/25/2013 Date drilling commenced 2/8/2014 Date drilling ceased 2/13/2014
Date completion activities began Not yet completed Date completion activities ceased
Verbal plugging (Y/N) N Date permission granted Granted by

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 90 Open mine(s) (Y/N) depths N
Salt water depth(s) ft None Reported Void(s) encountered (Y/N) depths N
Coal depth(s) ft 1027 Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

APPROVED

NAME: [Signature]
DATE: 5-25-17

Reviewed by: [Signature]

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05/18/2018

WR-35 Rev. 8/23/13

API 47-103 - 02911 Farm name Lemons, Gary Well number #2H

Table with 8 columns: CASING STRINGS, Hole Size, Casing Size, Depth, New or Used, Grade wt/ft, Basket Depth(s), Did cement circulate (Y/N). Rows include Conductor, Surface, Coal, Intermediate 1, Intermediate 2, Intermediate 3, Production, Tubing, and Packer type and depth set.

Comment Details Circulated 25 bbls cement to surface on the 13.375" casing string. Circulated 30 bbls cement to surface on the 9.625" casing string.

Table with 8 columns: CEMENT DATA, Class/Type of Cement, Number of Sacks, Slurry wt (ppg), Yield (ft³/sks), Volume (ft³), Cement Top (MD), WOC (hrs). Rows include Conductor, Surface, Coal, Intermediate 1, Intermediate 2, Intermediate 3, Production, and Tubing.

Drillers TD (ft) 5721 MD / 5699' TVD Loggers TD (ft) N/A
Deepest formation penetrated Devonian Shale Plug back to (ft)

Kick off depth (ft) TBD - only top hole drilled

Check all wireline logs run [] caliper [] density [x] deviated/directional [] induction [] neutron [] resistivity [] gamma ray [] temperature [] sonic

Well cored [] Yes [x] No Conventional Sidewall Were cuttings collected [] Yes [x] No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING Surface casing has bow spring centralizers placed on joints 2, 6, 10, 14, 18, 22, 26 and 30. Intermediate casing has bow spring centralizers placed on joints 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48, 52, 56 and 60.

WAS WELL COMPLETED AS SHOT HOLE [] Yes [x] No DETAILS

WAS WELL COMPLETED OPEN HOLE? [] Yes [x] No DETAILS

WERE TRACERS USED [] Yes [x] No TYPE OF TRACER(S) USED

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103-02911DD

WR-35
Rev. 8/23/13

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API 47- 103 - 02911 Farm name Lemons, Gary Well number #2H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)

Please insert additional pages as applicable.

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WR-35
Rev. 8/23/13

API 47- 103 - 02911 Farm name Lemons, Gary Well number #2H

PRODUCING FORMATION(S)	DEPTHS	TVD	MD
Not yet completed			
Not yet producing			

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface _____ psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

OPEN FLOW Gas _____ mcfpd Oil _____ bpd NGL _____ bpd Water _____ bpd GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
Sandstone & Shale	0	1027	0	1027	Fresh water @ 90'
Coal	1027	1034	1027	1034	No salt water reported
Sandstone & Shale	1027	2216	1027	2216	
Big Lime	2216	2331	2216	2331	
Big Injun	2331	2416	2331	2416	
Sandstone & Shale	2416	2786	2416	2786	
Berea Sandstone	2786	2795	2786	2795	
Shale	2795	3036	2795	3036	
Gordon	3036	3060	3036	3060	
Undiff Devonian Shale	3060	5699	3060	5721	

Please insert additional pages as applicable.

Drilling Contractor Highlands (top hole)
Address 900 Virginia Street - East City Charleston State WV Zip 25301

Logging Company Scientific Drilling (top hole)
Address 124 Vista Drive City Charleroi State PA Zip 15022

Cementing Company Halliburton (top hole)
Address 121 Champion Way City Canonsburg State PA Zip 15317

Stimulating Company _____
Address _____ City _____ State _____ Zip _____

Please insert additional pages as applicable.

Completed by Greg Zofchak Telephone 304-225-1600
Signature *[Signature]* Title Drilling Engineer Date 3/6/2017

Submission of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

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**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 306686

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 _____)

*DAH
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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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
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-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*

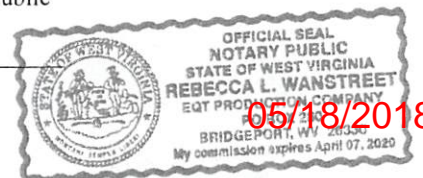
Company Official (Typed Name) Erin Spine

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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103-0291100

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

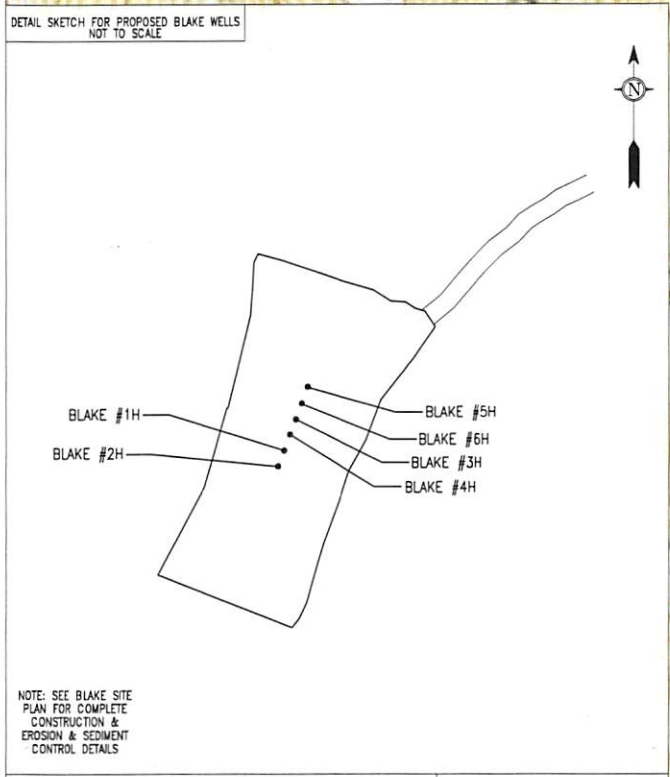
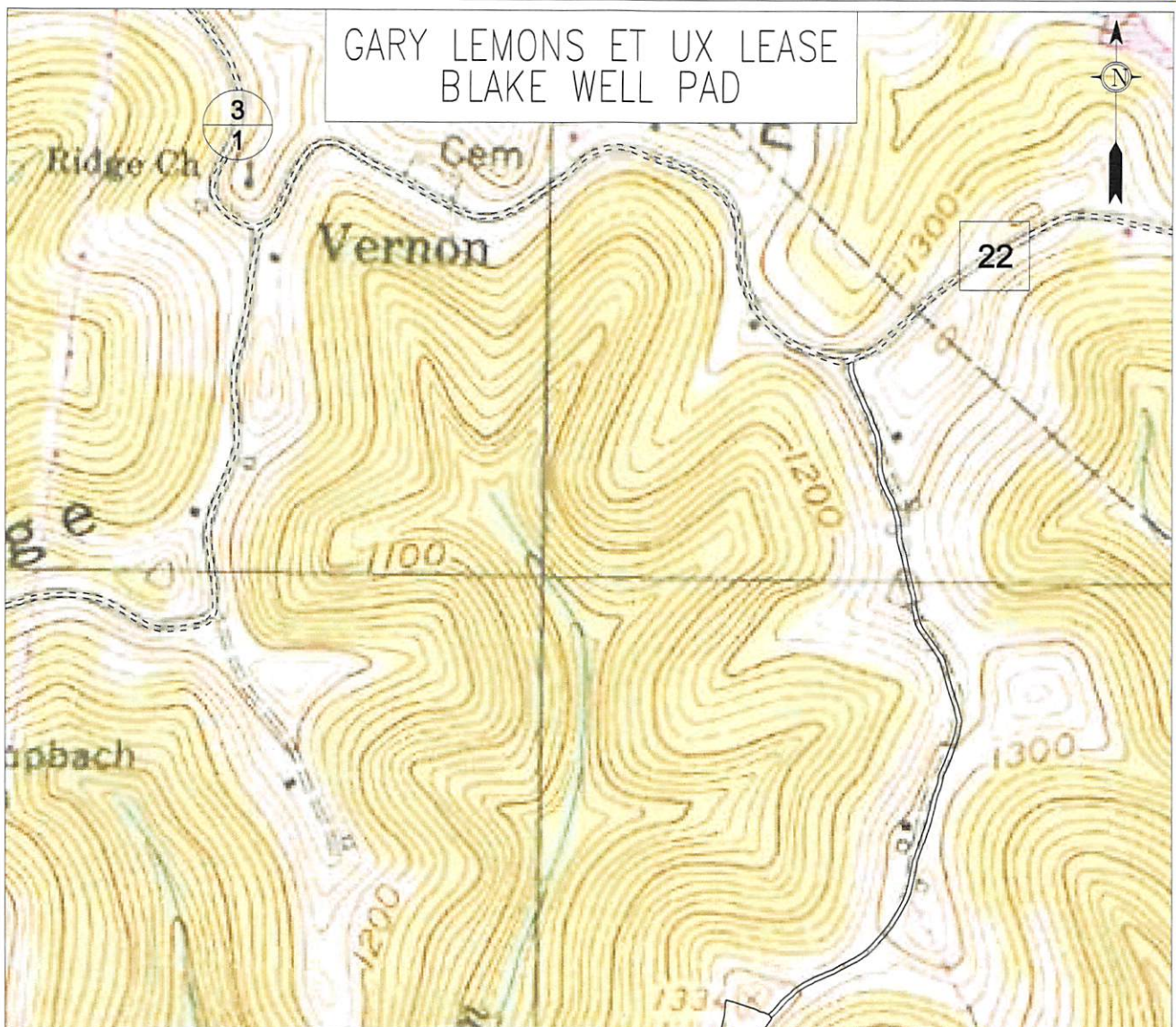
512 E. Dry Road
Parkersburg, WV 26104
304-428-0602
Permit #SWF-1025 WV-0109400
Approval #100833WV

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05/18/2018

103-029100

GARY LEMONS ET UX LEASE BLAKE WELL PAD



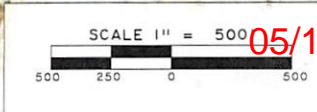
NOTE: SEE BLAKE SITE PLAN FOR COMPLETE CONSTRUCTION & EROSION & SEDIMENT CONTROL DETAILS

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

TOPO 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



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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: _____

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

Field Reviewed? Yes No

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Where energy meets innovation.™

Site Specific Safety Plan

EQT

Blake

New Martinsville

Wetzel County, WV

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MAR 13 2018


WV Department of
Environmental Protection

Blake 2H

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

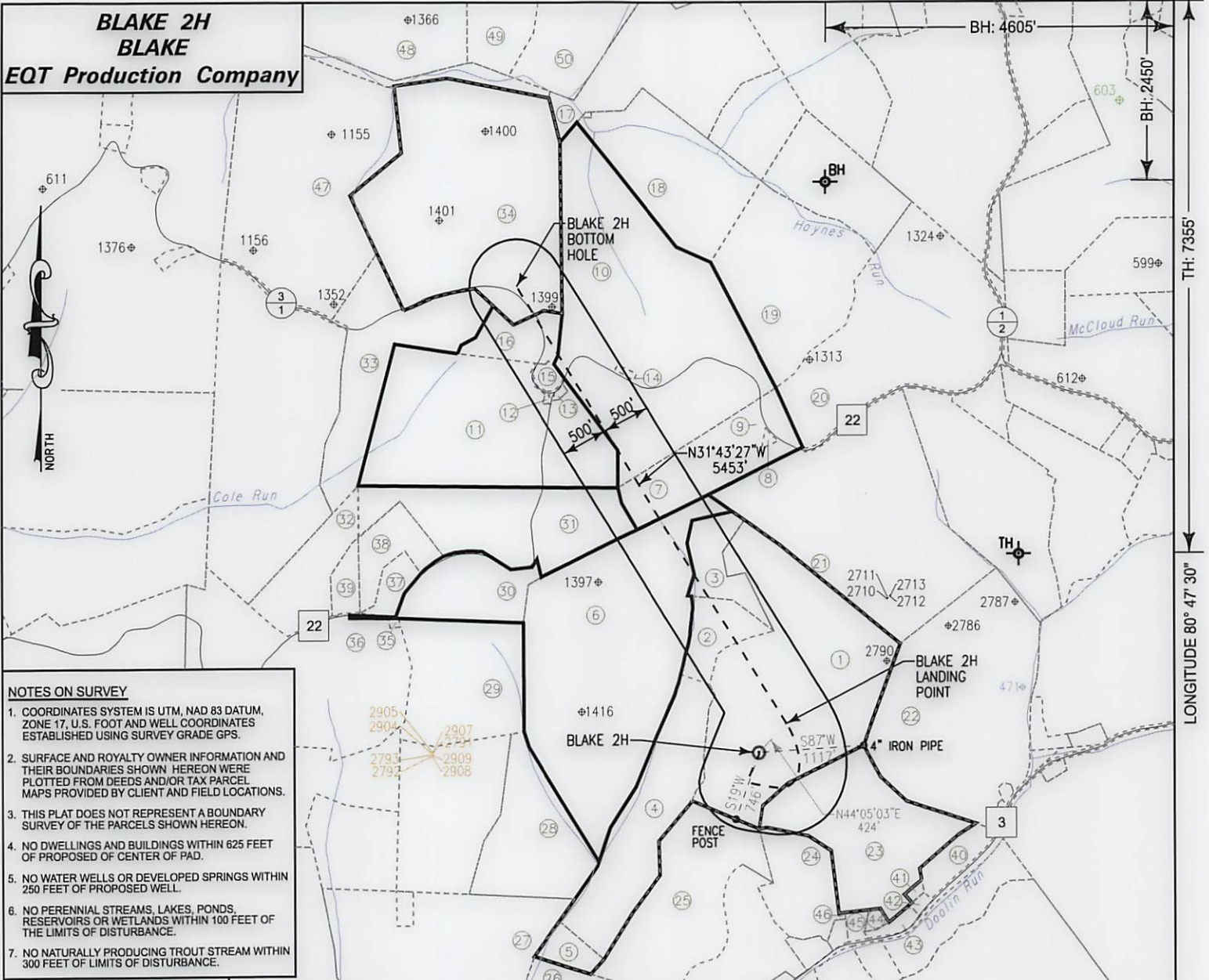
Oil & Gas Inspector

 Title

3-2-18

 Date

**BLAKE 2H
BLAKE
EQT Production Company**



- NOTES ON SURVEY**
- COORDINATES SYSTEM IS UTM, NAD 83 DATUM, ZONE 17, U.S. FOOT AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.
 - 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.
 - THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
 - NO DWELLINGS AND BUILDINGS WITHIN 625 FEET OF PROPOSED OF CENTER OF PAD.
 - NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.
 - NO PERENNIAL STREAMS, LAKES, PONDS, RESERVOIRS OR WETLANDS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
 - NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF LIMITS OF DISTURBANCE.

LEGEND

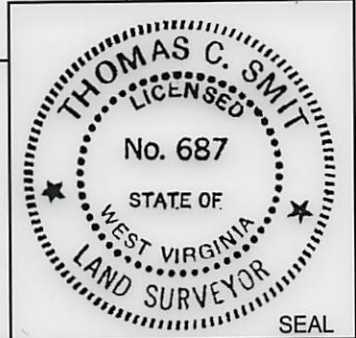
- ⊕ Active Well Location
- ⊕ Permit Issued
- ⊕ Abandoned Well
- ⊕ Plugged Well Location
- ① Tract Identification
- Proposed Gas Well
- Located Corner, as noted
- Surface Tract Lines
- Reference Line
- Lease Boundary
- Creek or Drain
- Ⓜ WV County Route
- Ⓜ WV State Route

Tract ID.	Lease No.	Acres	Owner
1&2&3	873356	122.65	Gary Lemons ET UX
6	873673	140	Ray Blake ET UX
7	873699	37.5	Sharon L. Bearce
10	873697	119.5	Sharon L. Bearce
11	873636	81	Schubbach's Valley Motor ET AL
23	873717	43	Danny L. Neff ET UX
34	873674	114	David E. Schubbach ET AL



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 2H
API WELL NO: 47 - 103 - 02911
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: 05/18/2018
ROYALTY OWNER: Gary Lemons, ET UX LEASE NO: 873356 ACREAGE: 122.65 ±

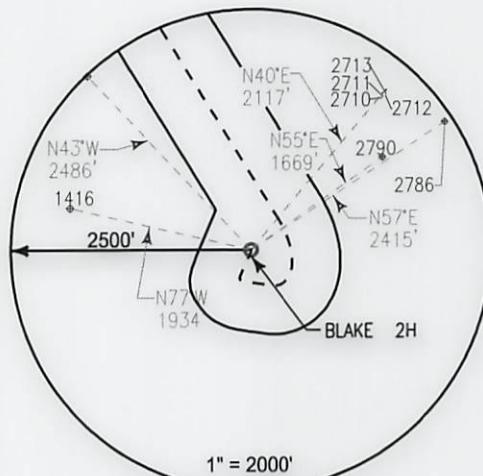
PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY)

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 2H
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	5	34	Wetzel	Magnolia	Gary Lemons	11.17
3	5	27	Wetzel	Magnolia	Gary Lemons	11
4	8	7	Wetzel	Magnolia	Gary Lemons	30.2
5	8	13	Wetzel	Magnolia	Gary Lemons	5.57
6	5	33	Wetzel	Magnolia	Franklin Ray Blake	108.47
7	5	22	Wetzel	Magnolia	Sharon L. Bearce	37.5
8	5	23	Wetzel	Magnolia	N/A	0.4
9	5	22.1	Wetzel	Magnolia	Sharon L. Bearce	0.1
10	5	16	Wetzel	Magnolia	Sharon L. Bearce	108.64
11	5	19	Wetzel	Magnolia	Ronald L. & Monette Schupbach	68.49
12	5	20	Wetzel	Magnolia	Ronald L. & Monette Schupbach	0.11
13	5	21	Wetzel	Magnolia	Ronald L. & Monette Schupbach	0.19
14	5	15	Wetzel	Magnolia	Bokulman Cemetery	0.39
15	5	14	Wetzel	Magnolia	Ronald Lee & Monette Schupbach	1.51
16	5	13	Wetzel	Magnolia	Ronald L. & Monette Schupbach	9.48
17	11	26	Wetzel	Proctor	Douglas S. & Linda C. Parish	46.98
18	5	3	Wetzel	Magnolia	Sharon Bearce	39.32
19	5	17	Wetzel	Magnolia	Sharon L. Bearce	48.32
20	5	18	Wetzel	Magnolia	Wetzel Co Fur, Fin, & Feather	72.26
21	5	28	Wetzel	Magnolia	Gary & Judy Ann Lemons	102.75
22	6	3	Wetzel	Magnolia	Gary Patrick Fitzsimmons	71.99
23	8	8	Wetzel	Magnolia	Danny L. & Orion F. Neff	42.88
24	8	15.3	Wetzel	Magnolia	David & Orion Neff	11.97
25	8	14	Wetzel	Magnolia	Aaron Lloyd Lemons	43.79
26	8	25	Wetzel	Magnolia	Cathy M. Westfall ET AL	57.68
27	8	12	Wetzel	Magnolia	David L. & Ralph O. Smith	58.15
28	8	6	Wetzel	Magnolia	Albert Kocher HRS	33.01
29	5	32	Wetzel	Magnolia	George S. Schupbach	37.5
30	5	26.2	Wetzel	Magnolia	Franklin Ray Blake	17.73
31	5	26	Wetzel	Magnolia	Stone Energy Corporation	39.95
32	5	25	Wetzel	Magnolia	Stone Energy Corporation	17.64
33	5	12	Wetzel	Magnolia	Melvin E. & Wilda G. Schupbach	36.87
34	5	2	Wetzel	Magnolia	David E. & Jeanie L. Schupbach	96.43
35	5	31.1	Wetzel	Magnolia	Schupbach Cemetery	0.27
36	5	31	Wetzel	Magnolia	John William Burton	66.56
37	5	26.1	Wetzel	Magnolia	Stone Energy Corporation	3.93
38	5	26.3	Wetzel	Magnolia	Stone Energy Corporation	10.95
39	5	25.1	Wetzel	Magnolia	Stone Energy Corporation	4.19
40	9	48	Wetzel	Magnolia	Heather Leigh Wetzel	6.32
41	8	8.1	Wetzel	Magnolia	E. D. & Marshie A. Sidenstricker	0.57
42	8	8.2	Wetzel	Magnolia	Earnest Dean Sidenstricker	0.58
43	8	17	Wetzel	Magnolia	Tamara L. & Michael Stansberry	1.23
44	8	16.2	Wetzel	Magnolia	Loma A. Neff	0.92
45	8	16	Wetzel	Magnolia	Keith Sr. & Sena Wojtaskiak	1.14
46	8	16.1	Wetzel	Magnolia	David & Orion Neff	0.10
47	5	1.1	Wetzel	Magnolia	Ronald L. Schupbach	90.33
48	11	13	Wetzel	Proctor	Coastal Forest Resources Co.	105.00
49	11	14	Wetzel	Proctor	Coastal Forest Resources Co.	22.00
50	11	16	Wetzel	Proctor	Nancy J. Garner	40.00

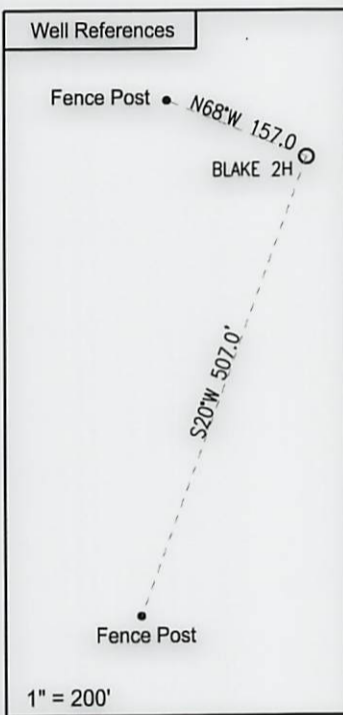


Notes:
BLAKE 2H As-Built coordinates are
 NAD 27 N: 420,231.000 E: 1,634,321.000
 NAD 27 Lat: 39.646520 Long: -80.798654
 NAD 83 UTM N: 4,388,553.669 E: 517,290.640

BLAKE 2H Landing Point coordinates are
 NAD 27 N: 420,535.212 E: 1,634,615.633
 NAD 27 Lat: 39.647367 Long: -80.797623
 NAD 83 UTM N: 4,388,647.850 E: 517,378.858

BLAKE 2H Bottom Hole coordinates are
 NAD 27 N: 425,173.415 E: 1,631,748.203
 NAD 27 Lat: 39.659985 Long: -80.808045
 NAD 83 UTM N: 4,390,046.304 E: 516,481.725

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.



- BLAKE PAD**
- BLAKE 5H
 - BLAKE 6H
 - BLAKE 3H
 - BLAKE 4H
 - BLAKE 1H
 - BLAKE 2H

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 2H
 API WELL NO: 47 - 103 - 02911
 STATE COUNTY PERMIT

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

SURFACE OWNER: Gary Lemons ACREAGE: 122.65 ±
 ROYALTY OWNER: Gary Lemons, ET UX LEASE NO: 873356 ACREAGE: 122.65 ±

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 2H

**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				

**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

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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
<u>873356</u>	<u>Gary and Judy Lemons, et al (current royalty owner)</u> Gary Lemons, et ux (original lessor) Central Michigan Exploration, LLC Central Michigan Exploration, LLC Stone Energy Corporation	Central Michigan Exploration, LLC Stone Energy Corporation Stone Energy Corporation EQT Production Company	**	94A/281 100A/185 101A/96 183A/305
<u>873673</u>	<u>Franklin Ray Blake (current royalty owner)</u> Ray Blake, et ux (original lessor) Clay Resources Inc Murvin Oil Company Applied Mechanics Corp Cobham Gas Industries, Inc Tri-County Oil and Gas, Inc B&R Construction, Inc B&R Holdings, Inc. Stone Energy Corporation	Clay Resources Inc Murvin Oil Company Applied Mechanics Corp Cobham Gas Industries, Inc Tri-County Oil and Gas, Inc B&R Construction, Inc B&R Holdings, Inc. Stone Energy Corporation EQT Production Company		69A/66 71A/404 74A/426 74A/676 80/639 83A/483 118A/685 179A/848 183A/305
<u>873699</u>	<u>Sharon L. Bearce (current royalty owner)</u> Sharon L. Bearce (original lessor) Stone Energy Corporation	Stone Energy Corporation EQT Production Company		116A/936 183A/305
<u>873697</u>	<u>Sharon L. Bearce (current royalty owner)</u> Sharon L. Bearce (original lessor) Stone Energy Corporation	Stone Energy Corporation EQT Production Company		118A/769 183A/305
<u>873636</u>	<u>Schubbachs Valley Motor Co Inc, et al (current royalty owner)</u> Schubbach's Valley Motor Company, Inc (original lessor) Stone Energy Corporation	Stone Energy Corporation EQT Production Company		165A/552 183A/305
<u>873717</u>	<u>Danny L. Neff (current royalty owner)</u> Danny L. Neff (original lessor) Stone Energy Corporation	Stone Energy Corporation EQT Production Company		122A/830 183A/305
<u>873674</u>	<u>David E Schubbach (current royalty owner)</u> David E Schubbach, et al (original lessor) Clay Resources, Inc Murvin Oil Company Applied Mechanics Corp Cobham Gas Industries, Inc Tri-County Oil and Gas, Inc B&R Construction, Inc B&R Holdings, Inc. Stone Energy Corporation	Clay Resources, Inc Murvin Oil Company Applied Mechanics Corp Cobham Gas Industries, Inc Tri-County Oil and Gas, Inc B&R Construction, Inc B&R Holdings, Inc. Stone Energy Corporation EQT Production Company		69A/495 71A/404 74A/426 74A/676 80/639 110A/41 118A/685 179A/848 183A/305

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

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WV Department of
Environmental Protection

05/18/2018



47 10 30 29 11 ^{DD}

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'.

Todd Klaner
Regional Land Manager

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Office of Oil and Gas

FEB 26 2018

WV Department of
Environmental Protection

05/18/2018

Topo Quad: NEW MARTINSVILLE, WV - OHIO 7.5

Scale: 1" = 1000'

County: WETZEL

Date: 01 FEBRUARY 2018

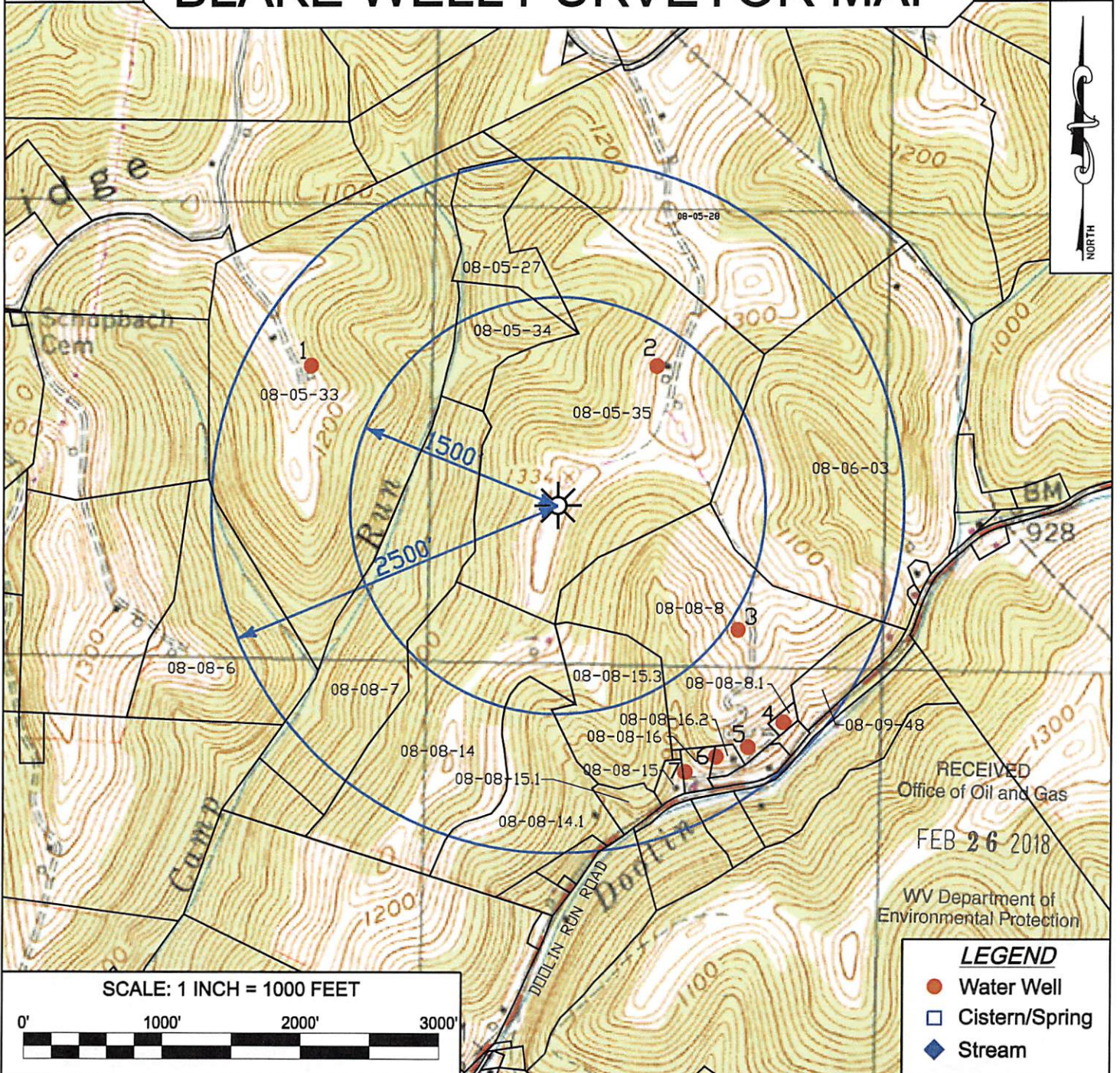
District: MAGNOLIA

Project No: NMA12

Water

BLAKE WELL PURVEYOR MAP

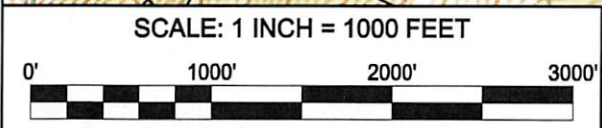
Topo



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LEGEND

- Water Well
- Cistern/Spring
- ◆ Stream



SURVEYING AND MAPPING SERVICES PERFORMED BY:

KEYSTONE
CONSULTANTS, INC.

PREPARED FOR:

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

05/18/2018



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): 1st: _____ 2nd: _____ 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): 1st: _____ 2nd: _____ 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: 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): 1st: _____ 2nd: _____ Door Hanger Left: _____

Comments: _____

WV Department of
Environmental Protection

- 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): 1st: _____ 2nd: _____ Door Hanger Left: _____

Comments: _____

WV Department of Environmental Protection

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): 1st: _____ 2nd: _____ 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): 1st: _____ 2nd: _____ 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): 1st: _____ 2nd: _____ 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)

05/18/2018

**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 - 02911
Operator's Well No. BLAKE 2H
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>517291.0</u>
County: <u>Wetzel</u>	Northing: <u>4388554.0</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: 100px;"><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>OOG OFFICE USE ONLY</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.


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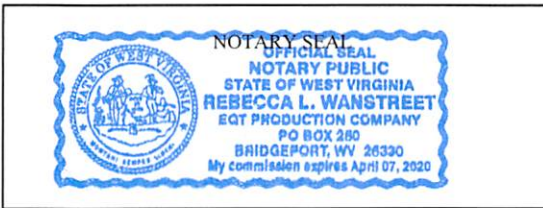
FEB 26 2018

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.

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WV Department of
Environmental Protection

05/18/2018

WW-6A
(9-13)

API NO. 47- 103 - 02911
OPERATOR WELL NO. BLAKE 2H
Well Pad Name: BLAKE

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: _____

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

Name: See Attached
Address: _____

Name: _____
Address: _____

SURFACE OWNER(s) (Impoundments or Pits)

Name: See Attached
Address: _____

COAL OWNER OR LESSEE

Name: See Attached
Address: _____

COAL OPERATOR

Name: _____
Address: _____

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)

Name: See Attached
Address: _____

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: _____
Address: _____

*Please attach additional forms if necessary

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Environmental Protection
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(8-13)

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Office of Oil and Gas

API NO. 47- 103 - 02911 DD
OPERATOR WELL NO. BLAKE 2H
Well Pad Name: BLAKE

FEB 26 2018

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 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

05/18/2018

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FEB 26 2018 API NO. 47- 103 - 02911 DD
OPERATOR WELL NO. BLAKE 2H
Well Pad Name: BLAKE

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

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.**

05/18/2018

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(8-13)

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API NO. 47- 103 - 02911 DD
OPERATOR WELL NO. BLAKE 2H
Well Pad Name: BLAKE

Time Limits and Methods for Filing Comments.

WV Department of
Environmental Protection

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.

05/18/2018

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API NO. 47- 103 - 02911 00
OPERATOR WELL NO. BLAKE 2H
Well Pad Name: BLAKE

Notice is hereby given by:

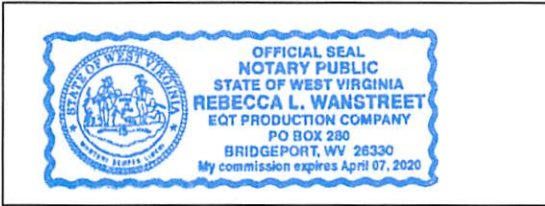
Well Operator: EQT Production Company
Telephone: 304-848-0035
Email: espine@eqt.com



WV Department of
Environmental Protection
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.



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

Rebecca L. Wanstreet Notary Public

My Commission Expires 4-7-2020

Topo Quad: NEW MARTINSVILLE, WV - OHIO 7.5

Scale: 1" = 1000'

County: WETZEL

Date: 01 FEBRUARY 2018

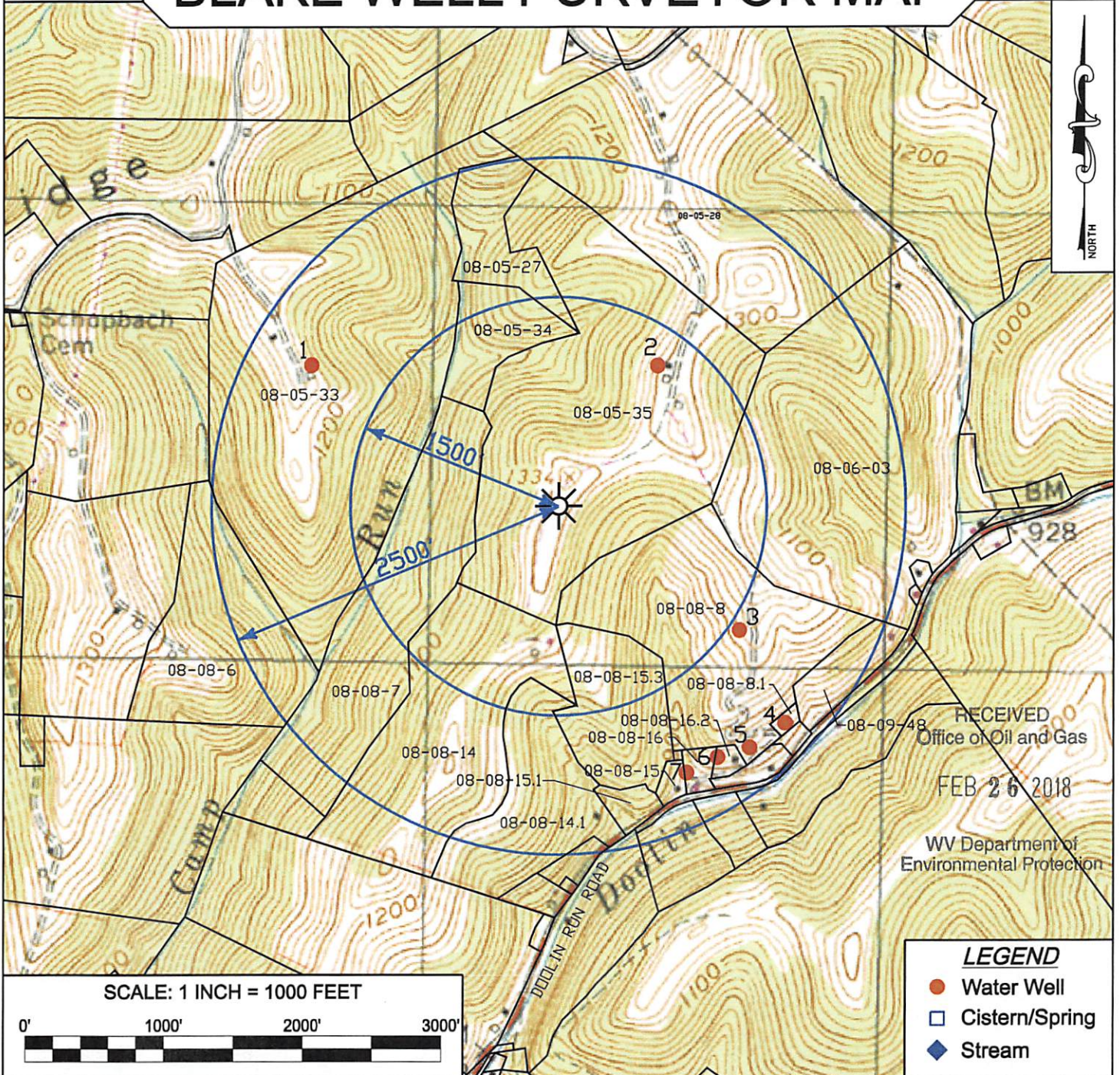
District: MAGNOLIA

Project No: NMA12

Water

BLAKE WELL PURVEYOR MAP

Topo



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WV Department of
Environmental Protection

LEGEND

- Water Well
- Cistern/Spring
- ◆ Stream

SCALE: 1 INCH = 1000 FEET

SURVEYING AND MAPPING SERVICES PERFORMED BY:

KEYSTONE
CONSULTANTS, INC.

PREPARED FOR:

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

EQT
05/18/2018

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

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

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

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

Notice Time Requirement: Notice shall be provided at least TEN (10) days prior to filing a permit application.

Date of Notice: 08/11/2017 **Date Permit Application Filed:** 08/21/2017

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

- HAND DELIVERY
- CERTIFIED MAIL RETURN RECEIPT REQUESTED

WV Department of
Environmental Protection

Pursuant to W. Va. Code § 22-6A-16(b), at least ten days prior to filing a permit application, an operator shall, by receipt requested or hand delivery, give the surface owner notice of its intent to enter upon the surface owner's land for the purpose of drilling a horizontal well: *Provided*, That notice given pursuant to subsection (a), section ten of this article satisfies the requirements of this subsection as of the date the notice was provided to the surface owner: *Provided, however*, That the notice requirements of this subsection may be waived in writing by the surface owner. The notice, if required, shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative.

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

Name: See Attached
Address: _____

Name: See Attached
Address: _____

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-16(b), notice is hereby given that the undersigned well operator has an intent to enter upon 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>517291.0</u>
County: <u>Wetzel</u>		Northing: <u>4388554.0</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(b), this notice shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative. 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.

Notice is hereby given by:

Well Operator: EQT Production Company
Address: 2200 Energy Dr.
Canonsburg PA 15317
Telephone: 304-848-0035
Email: espine@eqt.com
Facsimile: 304-848-0041

Authorized Representative: Erin Spine
Address: 2200 Energy Dr
Canonsburg PA
Telephone: 304-848-0035
Email: espine@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.

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: WV UTM NAD 83 Easting: 517291.0
County: Wetzel Northing: 4388554.0
District: Magnolia Public Road Access: Rt. 7
Quadrangle: New Martinsville Generally used farm name: Lemons, Gary
Watershed: Camp Run

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: 2200 Energy Dr.
Telephone: 304-848-0035 Canonsburg PA 15317
Email: espine@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.



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 57th Street, SE
 Charleston, WV 25304

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WV Department of
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Subject: DOH Permit for the Blake Pad, Wetzel County

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

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

05/18/2018

Anticipated Frac Additives
Chemical Names and CAS numbers

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<u>Material</u>	<u>Ingredient</u>	<u>CAS Number</u>	WV Department of Environmental Protection
Water			
Sand	Hydrotreated light petroleum distillate	14808-60-7	
	Tributyl tetradecyl phosphonium		
Friction Reducer	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	