



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

Jim Justice, Governor
Austin Caperton, Cabinet Secretary
www.dep.wv.gov

Monday, February 13, 2017

NOTICE OF RETURNED PERMIT APPLICATION
Horizontal 6A / New Drill

EQT PRODUCTION COMPANY (A)
120 PROFESSIONAL PLACE
BUILDING II
BRIDGEPORT, WV 26330

Re: Returned well work permit application for 515591
47-103-03161-00-00

EQT PRODUCTION COMPANY (A)

Please be advised that the Office of Oil and Gas is returning your Well Work Permit Application for the above referenced well. If you wish to reapply, please complete and submit new forms including a Mylar plat. A new U.S. Well Number will be associated with any subsequent well work applications.

If there are any questions, please feel free to contact me at (304) 926- 0450.

James A. Martin
Chief

Operator's Well Number: 515591
Farm Name: CALVERT, LOIS A.
U.S. WELL NUMBER: 47-103-03161-00-00
Horizontal 6A / New Drill
Date Returned: 02/13/2017

Promoting a healthy environment.

02/17/2017



west virginia department of environmental protection

Shallow Gas Well Review Board
601 57th Street, SE Charleston, WV 25304
(304)926-0499, Ext 1656

Jim Justice, Governor
Barry K Lay, Chairman

**BEFORE THE SHALLOW GAS WELL REVIEW BOARD
OF THE STATE OF WEST VIRGINIA**

**IN THE MATTER OF THE OBJECTIONS FROM WESTERN
POCAHONTAS PROPERTIES, LP REGARDING THE
DRILLING BY EQT PRODUCTION COMPANY FOR THE
PROPOSED WELLS IDENTIFIED AS THE **BIG 209 #515590**
AND #515591 TO BE LOCATED IN GRANT DISTRICT,
WETZEL COUNTY, WEST VIRGINIA.**

**DOCKET NO. 254
ORDER NO. 1**

AND

**IN THE MATTER OF THE OBJECTIONS FROM WESTERN
POCAHONTAS PROPERTIES, LP REGARDING THE
DRILLING BY EQT PRODUCTION COMPANY FOR THE
PROPOSED WELLS IDENTIFIED AS THE **BIG 245 #514366,**
#514367, #514368 AND #514369 TO BE LOCATED IN GRANT
DISTRICT, WETZEL COUNTY, WEST VIRGINIA.**

**DOCKET NO. 255
ORDER NO. 1**

ORDER

These matters came on for hearing on January 5, 2017, on the objection of Western Pocahontas Properties, LP (“WPP”) to oil and gas well permits submitted to the West Virginia Department of Environmental Protection (“WV DEP”) by EQT Production Company (“EQT”). With the agreement of the parties, Dockets 254 and 255 were consolidated for purposes of the statutorily required settlement conference, and failing settlement, for hearing.

Specifically, EQT submitted the following applications:

- a. With respect to wells to be drilled on the Big 209 drilling pad to be located in Grant District, Wetzel County, West Virginia, EQT submitted applications for Well Numbers 515590 (API No. 47-103-03160) and 515591 (API No. 47-103-03161) (the “Big 209 Wells”); and

b. With respect to wells to be drilled on the Big 245 drilling pad to be located in Grant District, Wetzel County, West Virginia, EQT submitted applications for Well Numbers 514366 (API No. 47-103-03173), 514367 (API No. 47-103-03174), 514368 (API No. 47-103-03175), and 514369 (API No. 47-103-03176) to be located in Grant District, Wetzel County, West Virginia (the "Big 245 Wells").

WPP objected to all of the foregoing permit applications. At the pre-hearing conference, the Parties reached an agreement to resolve these matters, as follows:

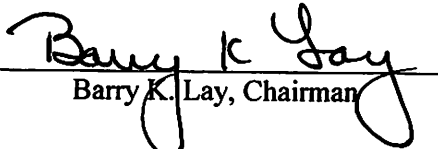
1. EQT cancels and withdraws the pending permit applications for the Big 209 Wells.
2. WPP cancels and withdraws its objections to the pending permit applications for the Big 245 Wells.

The Board having no objection to the agreement of the parties, does hereby ORDER that the permit applications for Big 209 Wells, Well Numbers 515590 (API No. 47-103-03160) and 515591 (API No. 47-103-03161), are withdrawn and cancelled.

The Board further Orders that the permit applications for the Big 245 Wells, being Well Numbers 514366 (API No. 47-103-03173), 514367 (API No. 47-103-03174), 514368 (API No. 47-103-03175), and 514369 (API No. 47-103-03176) are hereby REMANDED to the West Virginia Department of Environmental Protection Office of Oil and Gas for review.

Dated this 3rd day of January, 2017.

SHALLOW GAS WELL REVIEW BOARD

By: 
Barry K. Lay, Chairman

02/17/2017

API: 47-103-03160
47-103-03161

NRP (OPERATING) LLC
5260 Irwin Road
Huntington, WV 25705
(304) 522-5757 • Fax (304) 522-5401

RECEIVED
Office of Oil and Gas

NOV 14 2016

WV Department of
Environmental Protection

November 9, 2016
File: 42-09 / EQT / BIG 209

Richard Johnson, GISP, RL
Landman - Coal
EQT Production - Land Department
Building 1
Schedule 'A'
115 Professional Place
P.O. Box 280
Bridgeport, WV 26330

RE: WPP objection to BIG 209 permit application / gas well pad location
Operator Well Numbers: 515590 and 515591
Grant District, Wetzel County, WV

Dear Rick,

Western Pocahontas Properties (WPP) is in receipt of your letter to the West Virginia Department of Environmental Protection (attached) addressing our objection to EQT's BIG 209 permit location.

Within subject letter, EQT advised that if location is not suitable, then it's requested of WPP to provide coordinates for an alternate location providing reduced amount of lost coal.

As set forth in our objection letter of October 6, 2016, the proposed wells are planned in an area of proven Coal Reserves and will interfere with the future development of our Pittsburgh Seam reserves. Based upon recent meetings between our companies, it's our understanding that EQT would agree to locate future wells within defined barriers (colored by orange on attached map), or at the end of proposed panels. Therefore, WPP requests EQT to revise permitted location to an area within planned barriers or to the end of panel at location and coordinates depicted on attached map.

Thanks for your consideration in this matter.

Sincerely,

NRP (Operating) LLC
On Behalf of WPP LLC
As Its Sole Member



George Angus
Vice President & Regional Manager

GEA/vg
Attachment
CC: WVDEP (SGWRB)

02/17/2017



VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

November 2, 2016

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

Re: WPP's October 6, 2016, Objection to Permit Application for the BIG209 Gas Well Pad
Operator Well Numbers: 515590 and 515591
Grant District, Wetzel County, WV

Dear Mr. Martin:

This letter is in regards to the objection filed by WPP, LLC (hereinafter "WPP") on October 6, 2016 in response to EQT's Notice of Application concerning 515590 and 515591 Well Permits. The objection indicates that the subject wells will interfere with the future development of WPP's Pittsburgh seam reserves.

The proposed BIG209 wells are aligned with the preferred azimuth of the longwall mine projections that WPP provided to EQT and the SGWRB during the BIG177 hearing in 2015. It was EQT's understanding that the preferred azimuth alignment was to reduce the amount of lost coal and to help facilitate future mining plans for WPP. EQT requests that if this location is not suitable, WPP provide coordinates for a suggested alternate location to reduce the anticipated lost coal.

We look forward to cooperating with WPP on this matter and will investigate an alternative location that WPP suggests in order to not impede planned mining.

Sincerely,

Rick Johnson
Landman, Coal

CC: WPP, LLP
Attn: George Angus

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Office of Oil and Gas

NOV 14 2016

WV Department of
Environmental Protection

02/17/2017

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Office of Oil and Gas
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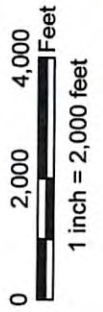
Preference is to relocate to barriers (colored by orange) or as an alternate, locate at the end of the longwall panel 39d 33' 08" N - 80d 35'09"W

HIGHLAND-1122762




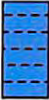






BRANT DISTRICT

816209

597443



Legend

-  Active Gas Well (Drilled/ Producing)
-  Planned, Proposed or Permitted Gas Well (Not Yet Drilled)
-  Notice of Entry Point (Not Yet Drilled)
-  Potential Lost Coal - On WPP Property
-  Potential Lost Coal - Off WPP Property
-  WPP LLC - Wetzel County/ Hibbs Run Lands
-  Murray American Energy Conceptual Mine Plans (As of 5/28/2015)
-  MVP as of 5/12/2015 (George Blake, EQT)
-  Sunrise Pipeline as of 6/3/2014 (Barbara Dunst, EQT)
-  Other EQT Pipelines 6/3/2014 (Barbara Dunst, EQT)

Date: 4/1/2016
 By: DMG
 Location: T:\GIS_Repository\Working_Directory\0042_Wetzel_County\0042_Wetzel_Co_General_Gas_Well-
 Pipeline_Map_With_Tracts-Mine_Projections_Potential_Lost_Coal_4_1_2016.mxd

02/17/2017

47 103 03 161

WW-6B
(04/15)

API NO. 47-103
OPERATOR WELL NO. 515591
Well Pad Name: BIG209

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 Grant Big Run
Operator ID County District Quadrangle

2) Operator's Well Number: 515591 Well Pad Name: BIG209

3) Farm Name/Surface Owner: Lois A Calvert Public Road Access: RT20

4) Elevation, current ground: 1278 Elevation, proposed post-construction: 1242

5) Well Type (a) Gas Oil Underground Storage
Other

(b) If Gas Shallow Deep
Horizontal

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus, 7355', 54', 2620 PSI, Top of Marcellus 7334

8) Proposed Total Vertical Depth: 7355

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 11108

11) Proposed Horizontal Leg Length: 3166

12) Approximate Fresh Water Strata Depths: 277

13) Method to Determine Fresh Water Depths: By Offset Wells

14) Approximate Saltwater Depths: 1802

15) Approximate Coal Seam Depths: 196, 517, 640, 790, 990

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: _____

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Office of Oil & Gas
OCT 04 2016

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	40	40	60 ft ³ / CTS
Fresh Water	13 3/8	New	J-55	54.5	1094	1094	955 ft ³ / CTS
Coal							
Intermediate	9 5/8	New	A-500	40	2540	2540	986 ft ³ / CTS
Production	5 1/2	New	P-110	20	11108	11108	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							

DWH
9-25-16

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	1102	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							

PACKERS

Kind:				
Sizes:				
Depths Set:				

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Office of Oil & Gas
OCT 04 2016

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

Drill and complete a new horizontal well in the Marcellus Formation. Drill the vertical to an approximate depth of 6155'. Kick off and drill curve. Drill the lateral in the Marcellus. Cement casing.

*DmH
6-29-16*

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 0.3%) of chemicals (including 15% Hydrochloric acid, gelling agent, gel breaker, 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 200,000 barrels of water per stage. Sand sizes vary from 100 mesh to 20/40 mesh. Average approximately 200,000 pounds of sand per stage.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 38.08

22) Area to be disturbed for well pad only, less access road (acres): 25.28

23) Describe centralizer placement for each casing string:

- Surface: Bow spring centralizers – One at the shoe and one spaced every 500'.
- Intermediate: Bow spring centralizers– One cent at the shoe and one spaced every 500'.
- Production: One solid body cent 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. 25% Flake Loss Circulation Material (LCM) is used to combat the loss of the cement slurry to a thief zone.
 Intermediate (Type 1 Cement): 0-3% Calcium Chloride. Salt is used in shallow, low temperature formations to speed the setting of cement slurries. 0.25% flake. Loss Circulation Material (LCM) is used to combat the loss of whole drilling fluid or cement slurry (not filtrate) to a thief zone.
 Production:
 Lead (Type H 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 (Type 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 % Calcuim Carbonate. Acid solubility.

*received
Office of Oil & Gas*

OCT 04 2016

25) Proposed borehole conditioning procedures:

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

*Note: Attach additional sheets as needed.

Well 515591(BIG209H2)
 EQT Production
 Big Run Quad
 Wetzel County, WV

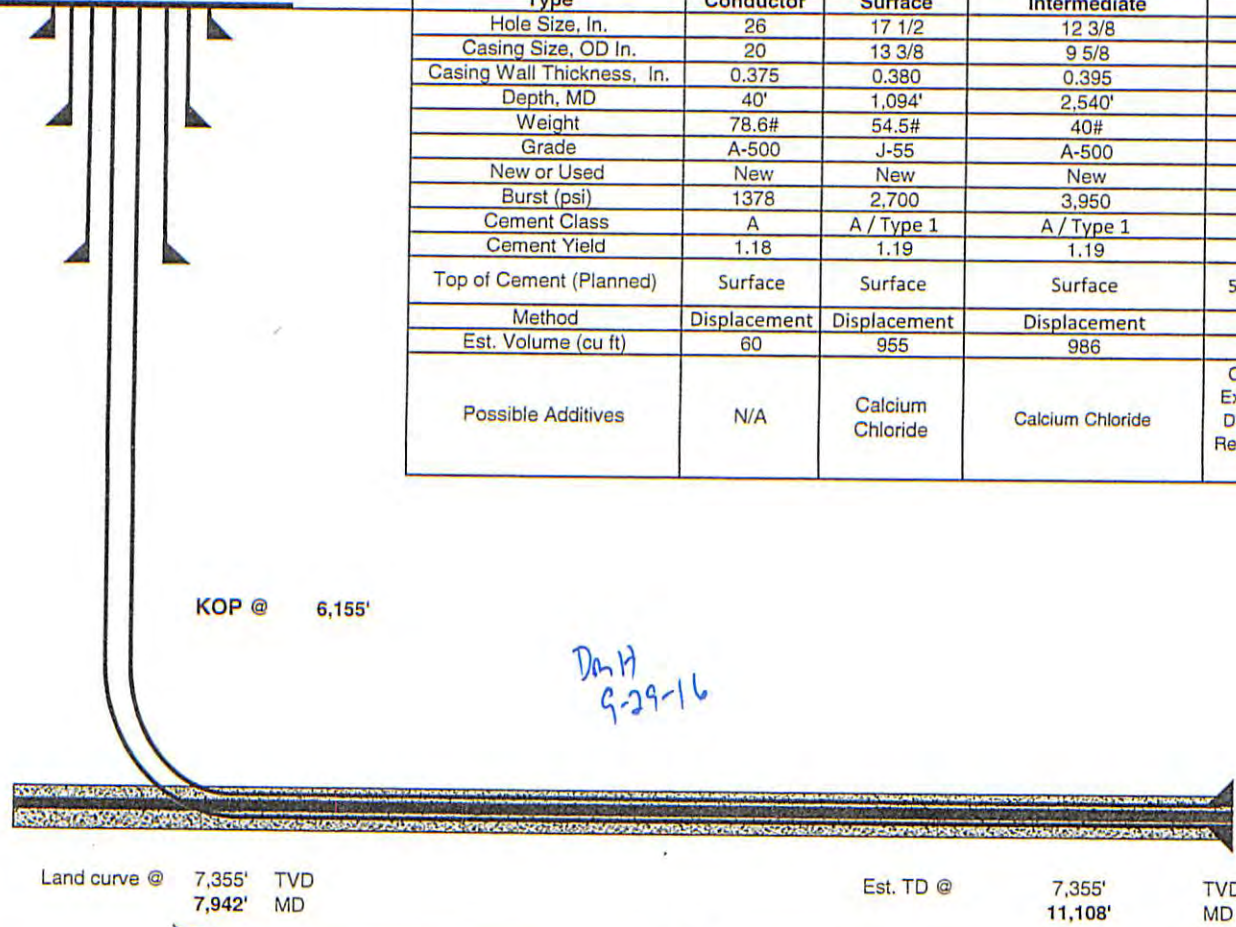
Azimuth 343
 Vertical Section 2540

Note: Diagram is not to scale

4710303161

Formations	Top TVD	Base TVD
Conductor	40	
Base Fresh Water	277	
Surface Casing	1094	
Maxton	2040 - 2167	
Big Lime	2198 - 2296	
Big Injun	2311 - 2490	
Intermediate Casing	2540	
Weir	2597 - 2691	
Gantz	2756 - 2762	
Fifty foot	2798 - 2845	
Base Red Rock	2911	
Gordon	3020 - 3067	
Forth Sand	3105 - 3120	
Bayard	3262 - 3281	
Warren	3638 - 3742	
Speechley	3844 - 3874	
Balltown A	4194 - 4268	
Riley	4611 - 4777	
Benson	5313 - 5384	
Alexander	5698 - 5732	
Sonyea	6918 - 7062	
Middlesex	7062 - 7111	
Genesee	7111 - 7192	
Genesee	7192 - 7220	
Tully	7220 - 7240	
Hamilton	7240 - 7334	
Marcellus	7334 - 7388	
Production Casing	11108 MD	
Onondaga	7388	

Casing and Cementing				Deepest Fresh Water: 277'
Type	Conductor	Surface	Intermediate	Production
Hole Size, In.	26	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	40'	1,094'	2,540'	11,108'
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)	60	955	986	2,175
Possible Additives	N/A	Calcium Chloride	Calcium Chloride	Calcium Carbonate, Fluid Loss, Extender, Dispersent, Viscosifier, Defoamer, POZ, Bonding Agent, Retarder, Anti-Settling/Suspension Agent



Dash
9-29-16

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OCT 04 2016

Proposed Well Work:

- Drill and complete a new horizontal well in the Marcellus formation.
- Drill the vertical to an approximate depth of 6155'.
- Kick off and drill curve. Drill lateral in the Marcellus. Cement casing.



4710303161

August 24, 2016

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

Re: Casing plan on Wells (BIG209)

Dear Mr. Smith,

EQT is requesting the 13-3/8" surface casing be set at 1094' KB, 100' below the workable Pittsburgh Coal seam. We will set the 9-5/8" intermediate string at 2540' KB, 50' below the base of the Big Injun formation.

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

Sincerely,

Vicki Roark
Permitting Supervisor

Enc.

DMH
8-29-16

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Office of Oil & Gas
OCT 04 2016

47 10303161

WW-9
(4/16)

API Number 47 - 103 - _____
Operator's Well No. 515591

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) North Fork Richwood Run Quadrangle Big Run

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

Will a pit be used? Yes No

If so, please describe anticipated pit waste: _____

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

Proposed Disposal Method For Treated Pit Wastes:

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

*DMH
9-29-16*

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

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

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

-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 *Victoria J. Roark*
Company Official (Typed Name) Victoria J. Roark
Company Official Title Permitting Supervisor

*Received
Office of Oil & Gas
OCT 04 2016*

Subscribed and sworn before me this 26 day of Sept
Pamela Sykes

My commission expires 8-24-22



4710303161

Form WW-9

Operator's Well No. 515591

EQT Production Company

Proposed Revegetation Treatment: Acres Disturbed 38.08 Prevegetation pH 6.0

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:

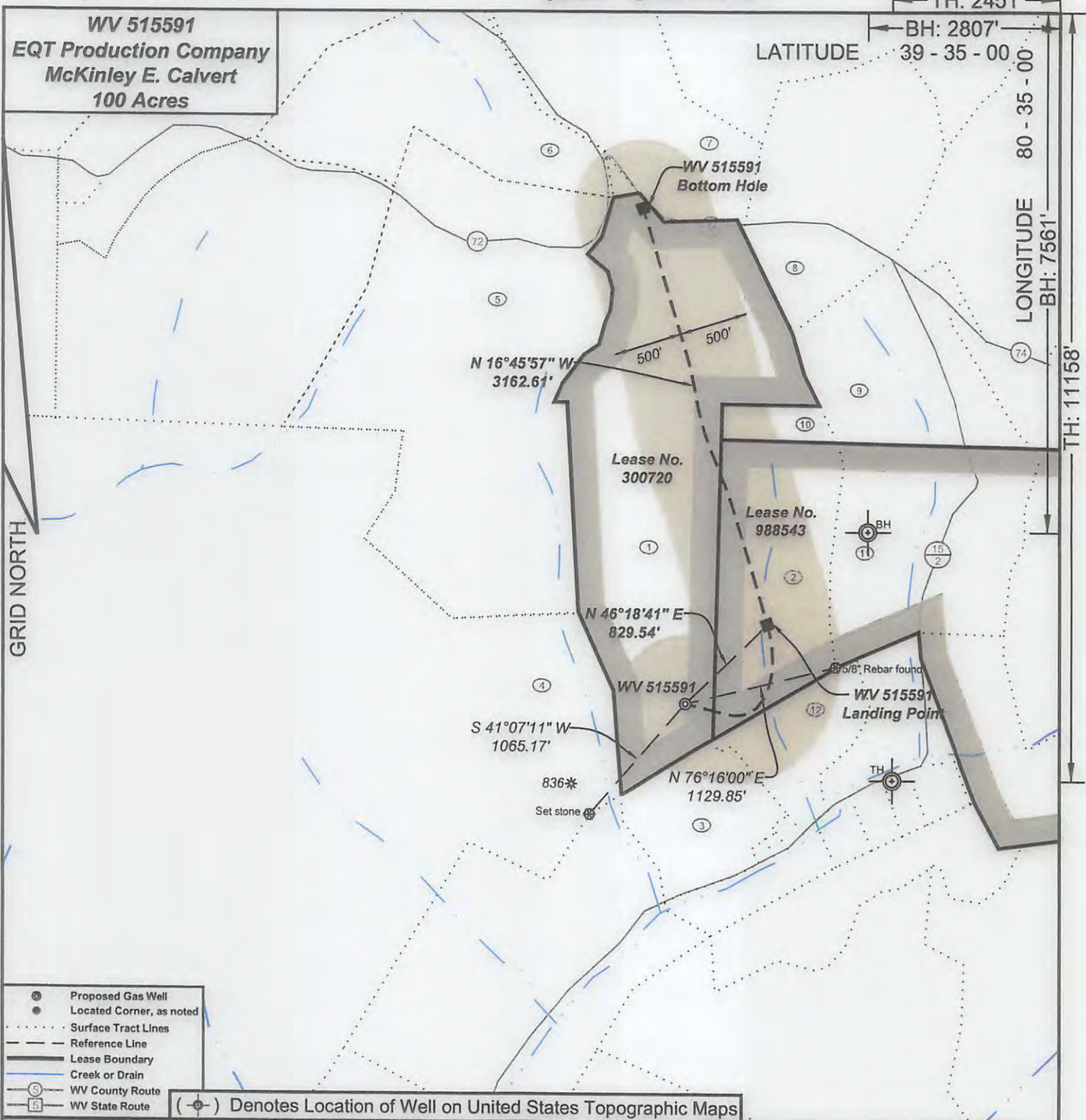
[Blank lines for comments]

Received Office of Oil & Gas OCT 04 2016

Title: Oil & Gas Inspector Date: 9-29-16

Field Reviewed? (X) Yes () No

NOT ISSUED



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

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



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

Ben R. Singleton
P.S. 2092



FILE NO: 122-14
DRAWING NO: 122-14 Big 209 H2
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: September 14 20 16
OPERATOR'S WELL NO.: 515591
API WELL NO
47 - 103 - 03161
STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
LOCATION: ELEVATION: Ground 1,278' Proposed 1,242' WATERSHED North Fork of Richwood Run QUADRANGLE: Big Run
DISTRICT: Grant COUNTY: Wetzel
SURFACE OWNER: McKinley E. Calvert Heirs ACREAGE: 100
ROYALTY OWNER: Lois A. Dennis, et. al. LEASE NO: 300720 ACREAGE: 100
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: 7,355'

WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Rex C. Ray
ADDRESS: 115 Professional Place PO Box 280 ADDRESS: 115 Professional Place PO Box 280
Bridgeport, WV 26330 Bridgeport, WV 26330

NOT ISSUED

02/17/2017

NOT ISSUED

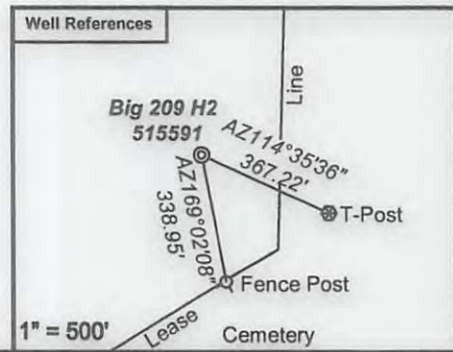
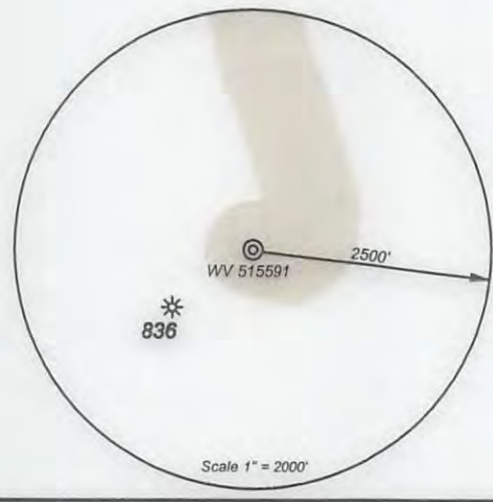
WV 515591
EQT Production Company
McKinley E. Calvert
100 Acres

Tract I.D.	Tax Map No.	Parcel No.	County	District	Surface Tract Owner	Acres
1	18	1	Wetzel	Grant	McKinley E. Calvert Heirs	100.00
2	18	6	Wetzel	Grant	Dwight Beckett	37.00
3	18	14	Wetzel	Grant	Frank M. & Frankie L. Dulaney	9.55
4	17	14	Wetzel	Grant	Coastal Forest Resources Co.	1627.60
5	13	46	Wetzel	Grant	Burl Henthorn Est, et al.	99.00
6	13	35	Wetzel	Grant	Jennie B. Goddard, et al.	50.00
7	13	36	Wetzel	Grant	Sara Miller, et al.	49.00
8	13	37	Wetzel	Grant	Lydle Martin	16.00
9	18	3	Wetzel	Grant	Lydle Martin	32.25
10	18	2	Wetzel	Grant	Frederick Jewell, et al.	4.66
11	18	7	Wetzel	Grant	William R. & Joey J. Work	46.47
12	18	17	Wetzel	Grant	Alan D. & Dianna L. Barr	13.00

Notes:
 WV 515591 coordinates are
 NAD 27 N: 385,287.18 E: 1,692,085.52
 NAD 27 Lat: 39.552700 Long: -80.592026
 NAD 83 UTM N: 4,378,201.98 E: 535,066.65
 WV 515591 Landing Point coordinates are
 NAD 27 N: 385,860.17 E: 1,692,685.36
 NAD 27 Lat: 39.554293 Long: -80.589923
 NAD 83 UTM N: 4,378,379.61 E: 535,246.49
 WV 515591 Bottom Hole coordinates are
 NAD 27 N: 388,888.35 E: 1,691,773.07
 NAD 27 Lat: 39.562576 Long: -80.593289
 NAD 83 UTM N: 4,379,297.53 E: 534,953.19
 West Virginia Coordinate 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.

Big 209
 H4, 515593
 H3, 515592
 H2, 515591
 H1, 515590

Lease No.	Acres	Owner
988543	297.5	Shiben Estate, Inc.



- 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.

Ben R. Singleton
 P.S. 2092



FILE NO: 122-14
 DRAWING NO: 122-14 Big 209 H2
 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: September 14 20 16
 OPERATOR'S WELL NO.: 515591
 API WELL NO
 47 - 103 - 03161
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
 LOCATION: ELEVATION: Ground 1,278' Proposed 1,242' WATERSHED North Fork of Richwood Run QUADRANGLE: Big Run
 DISTRICT: Grant COUNTY: Wetzel
 SURFACE OWNER: McKinley E. Calvert Heirs ACREAGE: 100
 ROYALTY OWNER: Lois A. Dennis, et al. LEASE NO: 300720 ACREAGE: 100
 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: 7,355'

WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Rex C. Ray
 ADDRESS: 115 Professional Place PO Box 280 ADDRESS: 115 Professional Place PO Box 280
Bridgeport, WV 26330 Bridgeport, WV 26330

NOT ISSUED

02/17/2017

**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

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: Victoria J Roark
 Its: Permitting Supervisor

Lease No.	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
300720	<u>Lois A. Dennis, et al. (current royalty owner)</u>		***	
	A.C. Calvert (1/3)	C.L. Johnston		DB 3A/133
	W.L. Calvert (1/3)	C.L. Johnston		DB 3A/134
	C.L. Johnston	P.D. Morris		DB 3A/427
	P.D. Morris	Hope Natural Gas Company		DB 3A/428
	Willis L. Calvert (1/3)	Hope Natural Gas Company		DB 3A/136
	Hope Natural Gas Company	Consolidated Gas Supply Corporation		DB 233/387
	Consolidated Gas Supply Corporation	Consolidated Gas Transmission Corporation		LB 66A/69
	Consolidated Gas Transmission Corporation	CNG Transmission Corporation		CB 13/151
	CNG Transmission Corporation	Eastern States Oil & Gas, Inc.		LB 76A/232
	Eastern States Oil & Gas, Inc.	Blazer Energy Corp.		CB 12/253
	Blazer Energy Corp.	Eastern States Oil & Gas, Inc.		CB 12/259
	Eastern States Oil & Gas, Inc.	Equitable Production - Eastern States Oil & Gas, Inc.		CB 13/14
	Equitable Production - Eastern States Oil & Gas, Inc.	Equitable Production Company		CB 13/14
	Equitable Production Company	EQT Production Company		CB 13/14
988543	<u>Shiben Estates Inc. (current royalty owner)</u>		***	
	Esther Peters, et al (Estates of Joseph Shiben & Minnie Shiben)	Consolidated Gas Supply Corp.		OG 54A/503
	Consolidated Gas Supply Corp.	Consolidated Gas Transmission Corp.		LB 66A/69
	Consolidated Gas Transmission Corp.	CNG Transmission Corp.		CB13/151
	CNG Transmission Corp.	Dominion Transmission Inc.		CB 13/158
	Dominion Transmission, Inc.	CONSOL Energy Holdings, LLC, XVI		OG 110A/55
	CONSOL Energy Holdings, LLC, XVI	CONSOL Gas Company		CB 13/114
	CONSOL Gas Company	CNX Gas Company, LLC		Misc BK 96/307
	CNX Gas Company, LLC	Antero Resources Appalachian Corp.		OG 126A/846
	Antero Resources Appalachian Corp.	EQT Production Company		OG 127A/195

*** We will pay one-eighth of the total amount paid to or received by or allowed to the owner of the working interest at the wellhead for the oil or gas so extracted, produced, or marketed before deducting the amount to be paid to or set aside for the owner of the oil or gas in place, on all such oil or gas to be extracted, produced or marketed from the well.

Consolidated
Gas Supply Corporation

SEP 26 2016

Antero Resources
Appalachian Corp.

02/17/2017

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: 9-27-16 Date Permit Application Filed: 9-27-16

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

Surface Owners:

Lois A Calvert aka Lois A Dennis
385 N 20th St
Weirton WV 26062-2638

Dwight W Beckett
9421 Reed Road
North Ridgeville OH 44039

RECORDED
Office of Oil and Gas

SEP 29 2016

WV Department of
Environmental Protection

02/17/2017



4710303161

Where energy meets innovation.™

Site Specific Safety Plan

EQT BIG 209

Big Run Quadrant
Wetzel County, WV

For Wells:

515591 _____

Date Prepared:

July 27, 2016

[Signature]
EQT Production

[Signature]
WV Oil and Gas Inspector

Permitting Supervisor
Title

Oil + Gas Inspector
Title

Date

9-26-16

9-25-16
Date

Received
Office of Oil & Gas
OCT 04 2016

Anticipated Frac Additives 47 10303161
Chemical Names and CAS numbers

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

DAT
9-25-16

Received
Office of Oil & Gas
OCT 04 2016

02/17/2017

4710303160

Received
Office of Oil & Gas
OCT 04 2016

811

Know what's below.
Call before you dig.

MISS Utility of West Virginia
1-800-245-4848
West Virginia State Law
(Section XIV, Chapter 24-C)
Requires that you call two business days before you dig in the state of West Virginia.
IT'S THE LAW!!!

The drawings, construction notes, and reference diagrams attached hereto have been prepared in accordance with the West Virginia Code of State Rules. The information reflects one A-17 pad with one (1) 40,000 gallon with secondary containment barrier.

Design Certification
Contractors or makers associated with the Above Ground Storage Tank
Contractors or makers associated with the design.

FLOODPLAIN CONDITIONS

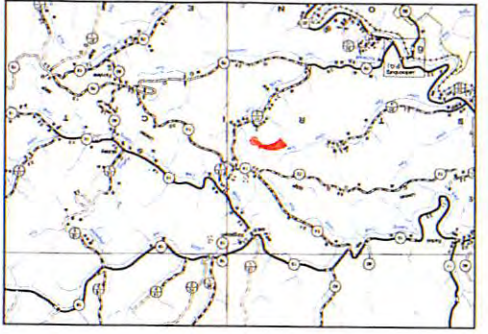
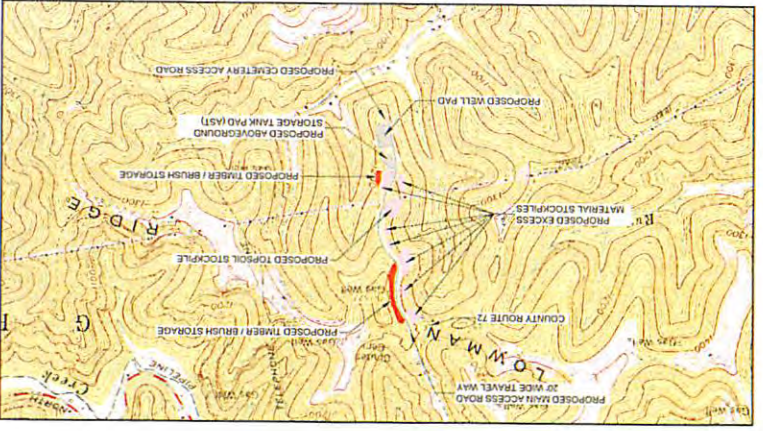
DO SITE CONSTRUCTION ACTIVITIES TAKE PLACE IN FLOODPLAIN	NO
PERMIT NEEDED FROM COUNTY FLOODPLAIN COORDINATOR	NO
REGS STUDY COMPLETED	N/A
FLOODPLAIN SHOWN ON DRAWINGS	N/A
FIRM MAP NUMBER(S) FOR SITE	541020215C
ACREAGE OF CONSTRUCTION IN FLOODPLAIN	N/A

WELL LEGEND

515590 - LAT: 39.552756 / LONG: -80.591833
515591 - LAT: 39.552783 / LONG: -80.591841
515592 - LAT: 39.552810 / LONG: -80.591848
515593 - LAT: 39.552837 / LONG: -80.591856
515594 - LAT: 39.552863 / LONG: -80.591864
515595 - LAT: 39.552944 / LONG: -80.591888
A - LAT: 39.553024 / LONG: -80.591912



**BIG-209 WELL PAD
FINAL SITE DESIGN**



WELL LOCATION

WELL NUMBER	WELL DEPTH	WELL TYPE
515590	100 FT	WATER
515591	100 FT	WATER
515592	100 FT	WATER
515593	100 FT	WATER
515594	100 FT	WATER
515595	100 FT	WATER



5-25-16
DWH

- Project Contacts**
- 304-848-0055 Orlan
 - 304-848-0055 Orlan
 - 304-848-0055 Orlan
 - 304-848-0055 Orlan
 - 304-848-0055 Orlan
 - 304-848-0055 Orlan
 - 304-848-0055 Orlan
 - 304-848-0055 Orlan
 - 304-848-0055 Orlan
 - 304-848-0055 Orlan

- WELL LOCATION RESTRICTIONS**
- 100' from edge of structure to nearest proposed stream
 - 100' from edge of structure to nearest proposed road
 - 100' from edge of structure to nearest proposed pad
 - 100' from edge of structure to nearest proposed well
 - 100' from edge of structure to nearest proposed tank
 - 100' from edge of structure to nearest proposed storage
 - 100' from edge of structure to nearest proposed access
 - 100' from edge of structure to nearest proposed road
 - 100' from edge of structure to nearest proposed well
 - 100' from edge of structure to nearest proposed tank
 - 100' from edge of structure to nearest proposed storage
 - 100' from edge of structure to nearest proposed access

REVISIONS

DATE	REVISIONS
7/12/2016	Scale As Shown
	Approved For
	Drawn
	Checked
	Reviewed

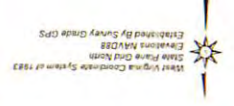
SHEET INDEX

DATE	REVISIONS
7/12/2016	Scale As Shown
	Approved For
	Drawn
	Checked
	Reviewed

- COVER SHEET**
- 1 COVER SHEET LOCATION MAP
 - 2 SCHEDULE AND QUANTITIES PLAN
 - 3 CONSTRUCTION GENERAL AND EAS NOTES
 - 4 WELL PAD DESIGN PLANS
 - 5 MAIN ACCESS ROAD AND SECTIONS
 - 6 ACCESS SPILL STOCKPILES AND SECTIONS
 - 7 APT PAD PROFILE AND SECTIONS
 - 8 TOPSOIL, STORAGE AND SECTIONS
 - 9 MAIN ACCESS ROAD PROFILE AND SECTIONS
 - 10 CONCRETE ROAD PROFILE AND SECTIONS
 - 11 RECLAMATION PLANS

- WELL LOCATION RESTRICTIONS**
- 100' from edge of structure to nearest proposed stream
 - 100' from edge of structure to nearest proposed road
 - 100' from edge of structure to nearest proposed pad
 - 100' from edge of structure to nearest proposed well
 - 100' from edge of structure to nearest proposed tank
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 - 100' from edge of structure to nearest proposed access
 - 100' from edge of structure to nearest proposed road
 - 100' from edge of structure to nearest proposed well
 - 100' from edge of structure to nearest proposed tank
 - 100' from edge of structure to nearest proposed storage
 - 100' from edge of structure to nearest proposed access

- WELL LOCATION RESTRICTIONS**
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 - 100' from edge of structure to nearest proposed tank
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 - 100' from edge of structure to nearest proposed access
 - 100' from edge of structure to nearest proposed road
 - 100' from edge of structure to nearest proposed well
 - 100' from edge of structure to nearest proposed tank
 - 100' from edge of structure to nearest proposed storage
 - 100' from edge of structure to nearest proposed access



COVER SHEET

BIG-209 WELL PAD SITE

BOONE COUNTY, WV

ECOT

Hornor Bros. Engineers

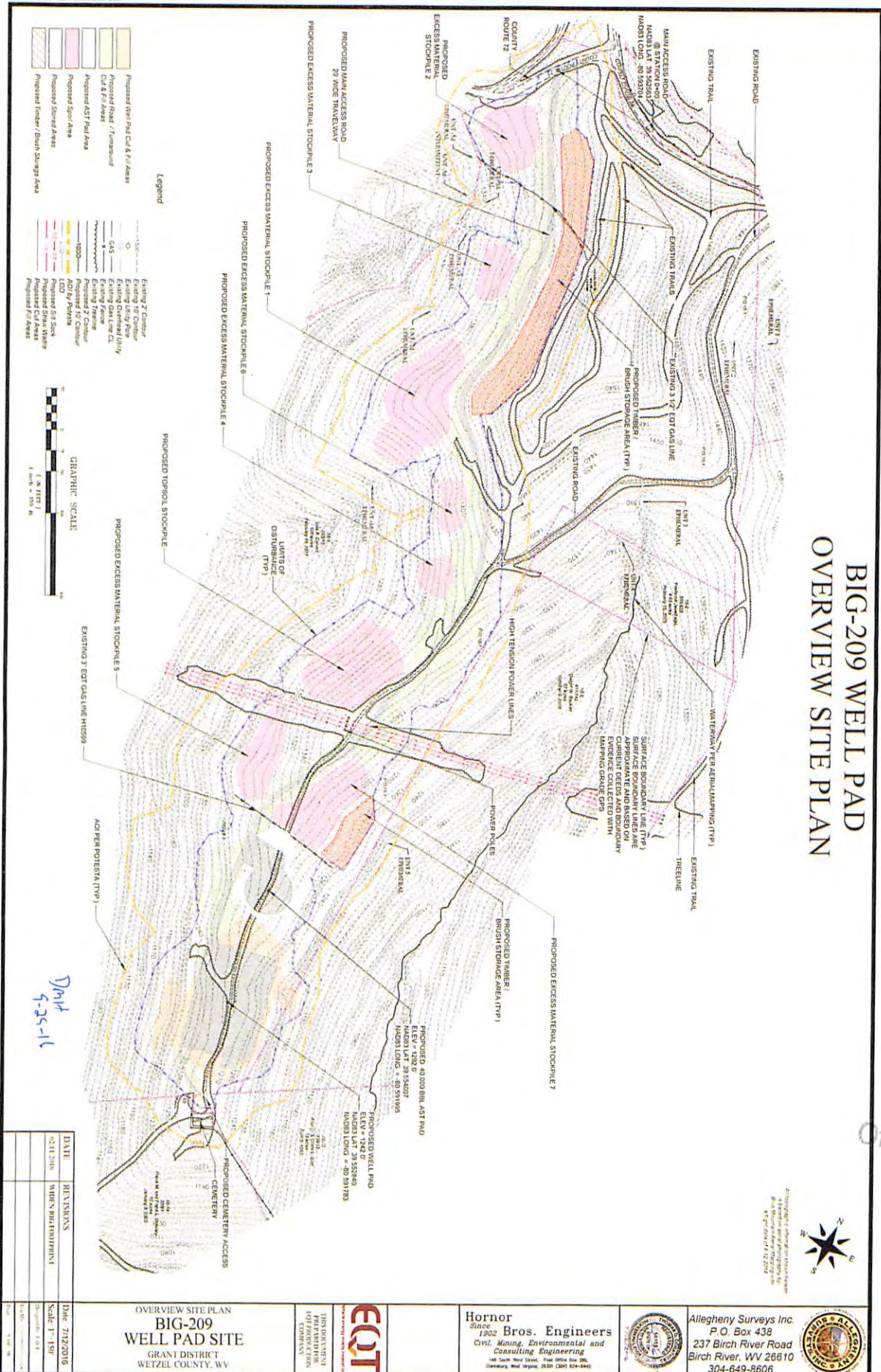
237 Birch River Road
Birch River, WV 25610
304-649-8608

Allegany Surveys Inc.

P.O. Box 438
237 Birch River Road
Birch River, WV 25610
304-649-8608

BIG-209 WELL PAD OVERVIEW SITE PLAN

Received
Office of Oil & G
OCT 04 2016



DML
5-25-16

DATE	REVISIONS	DATE
02/11/2016	WHEN BIDDING	

OVERVIEW SITE PLAN
**BIG-209
WELL PAD SITE**
GRANT DISTRICT
WETZEL COUNTY, WV



Honor
Since 1902 Bros. Engineers
Civil, Mining, Environmental and
Consulting Engineering
100 South Third Street, First Floor, Suite 100
Martinsburg, West Virginia, 25401 (304) 827-5545

Allegheny Surveys Inc.
P.O. Box 438
237 Birch River Road
Birch River, WV 26610
304-649-8606



4710303161

4710303161

Horizontal 6A Well Permit App. Checklist

Operator Well No. 515591

OPERATOR: EQT Production Company

PAD NAME: BIG209 WELL: 515591

PAD BUILT: YES NO DATE REVIEWED: _____ INT. _____

REVIEWED BY (APPLICANT): Vicki Roark

CONTACT PHONE: 304-848-0076 EMAIL: vroark@eqt.com

APPLICANT SIGNATURE: *Vicki Roark*

*CK20835
15300.00
\$5150.00*

CHECKLIST FOR FILING A PERMIT HORIZONTAL 6A WELL

Please include these required elements in the Horizontal Well 6A applications, in order listed below.
Do not use staples.

First Well	Subsequent Well
\$10,150.00 <input type="checkbox"/>	\$5,150.00 <input checked="" type="checkbox"/>

Fees

Checklist / Cover letter

WW-6B Notice of Application _____ Field Approved

Cement Additives

Well Bore Schematic

WW-9 Fluids/Cuttings Disposal and Reclamation Plan _____ Field Approved

Site Safety Plan _____ Field Approved

Water Management Plan _____ DWWM Approval

Topographic Map w/water purveyors, showing access road

Mylar Plat (Signed and sealed) (Surface Owner matches WW-6A)

WW-6A1 Lease Information

Road Crossing Letter

WW-PN Application Notice by Publication

Public Notice (dated copy of advertisement or affidavit of publication)

Horizontal 6A Well Permit App. Checklist

- WW-6AC Notice Certifications, notarized
- WW-6A Notice of Application notarized w/ any attachments
- Topographic Map with labeled surrounding water wells
- Certified Mail receipts for WW-6A
- NA WW-6A3 Notice of Entry for Plat Survey
- NA Certified Mail receipts for WW-6A3
- WW-6A4 Notice of Intent to Drill
- Certified Mail receipts for WW-6A4
- WW-6A5 Notice of Planned Operation
- Certified Mail receipts for WW-6A5
- NA WW-6RW Well Location Restriction Waiver
- NA WW-6AW Voluntary Statement of No Objection
- _____ Waiver for Surface Owner at Wellhead
- _____ Waiver for Surface Owner for Roads or other Disturbances
- _____ Waiver for Coal Owner, Operator or Lessee
- _____ Waiver for surface owner for Impoundment or Pit
- _____ Waiver for Surface Owner or Water Purveyor within 1500 feet of Center of Pad
- _____ Waiver for Natural gas Storage Field Operator
- Road Bonding Agreement / DOH Certification
- Frac Additives List of Chemical Names & CAS #s
- Site Construction, Reclamation, Erosion & Sediment Control Plans _____ Field Approved
- Copy of To Scale Plans
- Inspector packet mailed to inspector (Plat, Topographic Map, WW-6B, WW-9, All Plans)
- Bond (\$250,000)
- Operator is registered with the SOS

Revised 12/30/13

RECEIVED
Office of Oil and Gas

SEP 28 2016

WV Department of
Environmental Protection

02/17/2017

- Workers Compensation / Unemployment Insurance account is OK
- Professional Engineer/Company has COA
- Check for Mine Data at proposed coordinates
- Check for Floodplain Data at proposed coordinates
- IMP-1A Associated Pit or Impoundment
- WW-6A7 Well Restrictions Form w/ Signature
 - At Least 100 Feet from Pad and LOD (including any E&S Control Feature) to any Perennial Stream, Lake, Pond, Reservoir or Wetland
 - DEP Waiver and Permit Conditions
 - At Least 300 Feet from Pad and LOD (including any E&S Control Feature) to any Naturally Producing Trout Stream
 - DEP Waiver and Permit Conditions
 - At Least 1000 Feet from Pad and LOD (including any E&S Control Feature) to any Groundwater Intake or Public Water Supply
 - DEP Waiver and Permit Conditions
 - At Least 250 Feet from an Existing Water Well or Developed Spring to Well Being Drilled
 - Surface Owner Waiver and Recorded with County Clerk, OR
 - DEP Variance and Permit Conditions
 - At Least 625 Feet from an Occupied Dwelling Structure to the Center of the Pad
 - Surface Owner Waiver and Recorded with County Clerk, OR
 - DEP Variance and Permit Conditions
 - At Least 625 Feet from Agricultural Buildings Larger than 2500 Square Feet to the Center of the Pad
 - Surface Owner Waiver and Recorded with County Clerk, OR
 - DEP Variance and Permit Conditions

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

1) Well Operator: EQT Production Company

<u>306686</u>	<u>Wetzel</u>	<u>Grant</u>	<u>Big Run</u>
---------------	---------------	--------------	----------------

Operator ID County District Quadrangle

2) Operator's Well Number: 515591 Well Pad Name: BIG209

3) Farm Name/Surface Owner: Lois A Calvert Public Road Access: RT20

4) Elevation, current ground: 1278 Elevation, proposed post-construction: 1242

5) Well Type (a) Gas Oil _____ Underground Storage _____

Other _____

(b) If Gas Shallow Deep _____

Horizontal _____

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus, 7355', 54', 2620 PSI, Top of Marcellus 7334

8) Proposed Total Vertical Depth: 7355

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 11108

11) Proposed Horizontal Leg Length: 3166

12) Approximate Fresh Water Strata Depths: 277

13) Method to Determine Fresh Water Depths: By Offset Wells

14) Approximate Saltwater Depths: 1802

15) Approximate Coal Seam Depths: 196, 517, 640, 790, 990

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: _____

18)

CASING AND TUBING PROGRAM

<u>TYPE</u>	<u>Size (in)</u>	<u>New or Used</u>	<u>Grade</u>	<u>Weight per ft. (lb/ft)</u>	<u>FOOTAGE: For Drilling (ft)</u>	<u>INTERVALS: Left in Well (ft)</u>	<u>CEMENT: Fill-up (Cu. Ft.)/CTS</u>
Conductor	20	New	A-500	78.6	40	40	60 ft^3 / CTS
Fresh Water	13 3/8	New	J-55	54.5	1094	1094	955 ft^3 / CTS
Coal							
Intermediate	9 5/8	New	A-500	40	2540	2540	986 ft^3 / CTS
Production	5 1/2	New	P-110	20	11108	11108	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							

<u>TYPE</u>	<u>Size (in)</u>	<u>Wellbore Diameter (in)</u>	<u>Wall Thickness (in)</u>	<u>Burst Pressure (psi)</u>	<u>Anticipated Max. Internal Pressure (psi)</u>	<u>Cement Type</u>	<u>Cement Yield (cu. ft./k)</u>
Conductor	20	26	.375	1378	1102	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							

PACKERS

Kind:				
Sizes:				
Depths Set:				

SEP 20 2015

SEP 20 2015

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

Drill and complete a new horizontal well in the Marcellus Formation. Drill the vertical to an approximate depth of 6155'. 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 0.3%) of chemicals (including 15% Hydrochloric acid, gelling agent, gel breaker, 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 200,000 barrels of water per stage. Sand sizes vary from 100 mesh to 20/40 mesh. Average approximately 200,000 pounds of sand per stage.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 38.08

22) Area to be disturbed for well pad only, less access road (acres): 25.28

23) Describe centralizer placement for each casing string:

- Surface: Bow spring centralizers – One at the shoe and one spaced every 500'.
- Intermediate: Bow spring centralizers– One cent at the shoe and one spaced every 500'.
- Production: One solid body cent 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. .25% Flake Loss Circulation Material (LCM) is used to combat the loss of the cement slurry to a thief zone.
Intermediate (Type 1 Cement): 0-3% Calcium Chloride. Salt is used in shallow, low temperature formations to speed the setting of cement slurries. 0.25% flake. Loss Circulation Material (LCM) is used to combat the loss of whole drilling fluid or cement slurry (not filtrate) to a thief zone.
Production:
Lead (Type H 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 (Type 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.

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. SEP 20 2016

*Note: Attach additional sheets as needed.

4710303161

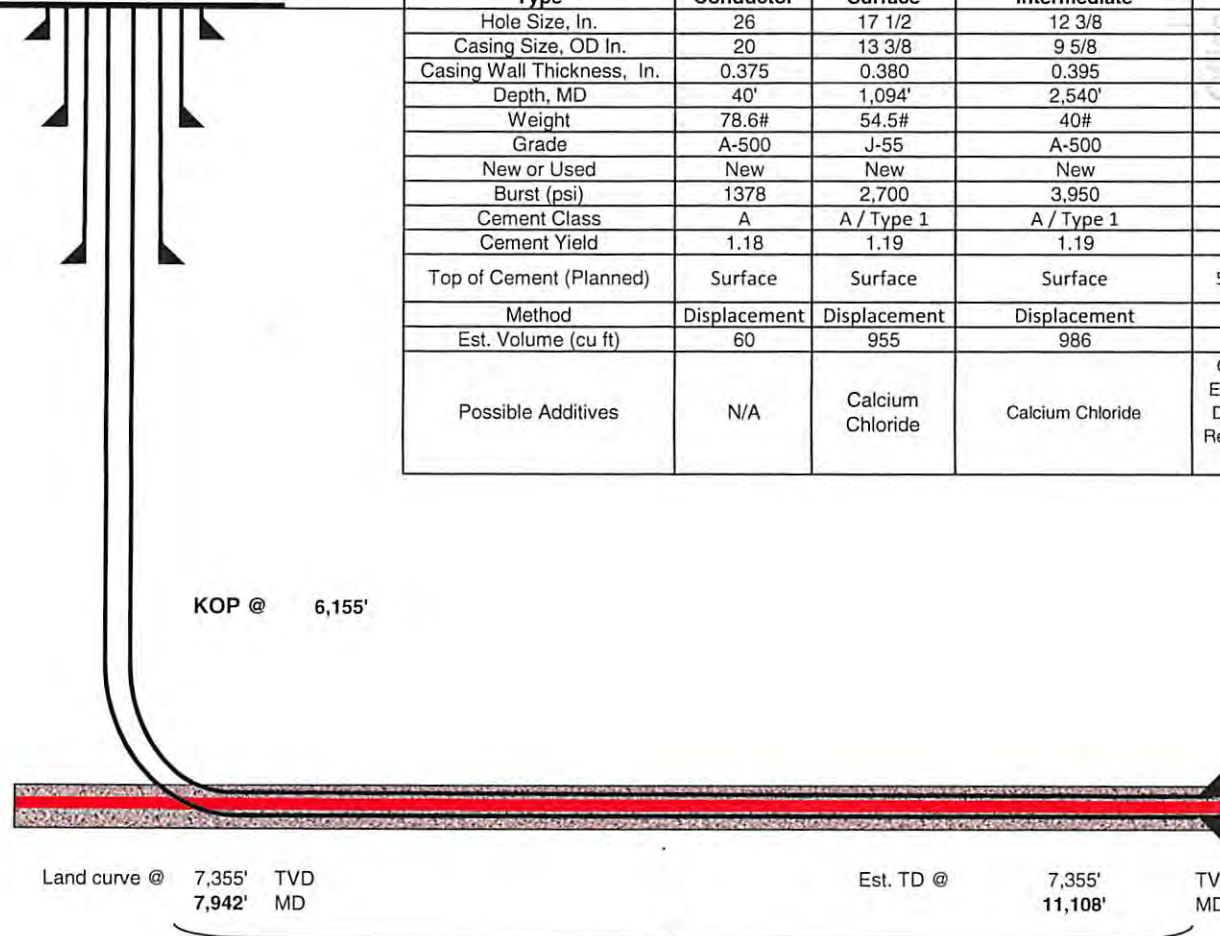
Well 515591(BIG209H2)
 EQT Production
 Big Run Quad
 Wetzel County, WV

Azimuth 343
 Vertical Section 2540

Note: Diagram is not to scale

Formations	Top TVD	Base TVD
Conductor	40	
Base Fresh Water	277	
Surface Casing	1094	
Intermediate Casing	2540	
Maxton	2040 - 2167	
Big Lime	2198 - 2296	
Big Injun	2311 - 2490	
Weir	2597 - 2691	
Gantz	2756 - 2762	
Fifty foot	2798 - 2845	
Base Red Rock	2911	
Gordon	3020 - 3067	
Forth Sand	3105 - 3120	
Bayard	3262 - 3281	
Warren	3638 - 3742	
Speechley	3844 - 3874	
Balltown A	4194 - 4268	
Riley	4611 - 4777	
Benson	5313 - 5384	
Alexander	5698 - 5732	
Sonyea	6918 - 7062	
Middlesex	7062 - 7111	
Genesee	7111 - 7192	
Geneseo	7192 - 7220	
Tully	7220 - 7240	
Hamilton	7240 - 7334	
Marcellus	7334 - 7388	
Production Casing	11108 MD	
Onondaga	7388	

Casing and Cementing				Deepest Fresh Water: 277'
Type	Conductor	Surface	Intermediate	Production
Hole Size, In.	26	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	40'	1,094'	2,540'	11,108'
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)	60	955	986	2,175
Possible Additives	N/A	Calcium Chloride	Calcium Chloride	Calcium Carbonate, Fluid Loss, Extender, Dispersant, Viscosifier, Defoamer, POZ, Bonding Agent, Retarder, Anti-Settling/Suspension Agent



Proposed Well Work:

Drill and complete a new horizontal well in the Marcellus formation.
 Drill the vertical to an approximate depth of 6155'.
 Kick off and drill curve. Drill lateral in the Marcellus. Cement casing.

3,166' Lateral



4710303161

August 24, 2016

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

Re: Casing plan on Wells (BIG209)

Dear Mr. Smith,

EQT is requesting the 13-3/8" surface casing be set at 1094' KB, 100' below the workable Pittsburgh Coal seam. We will set the 9-5/8" intermediate string at 2540' KB, 50' below the base of the Big Injun formation.

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

Sincerely,

A handwritten signature in blue ink, appearing to read 'Vicki Roark'.

Vicki Roark
Permitting Supervisor

Enc.

RECEIVED
Office of Oil and Gas

SEP 28 2016

West Virginia Department of
Environmental Protection



west virginia department of environmental protection

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

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
dep.wv.gov

March 18, 2014

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

Re: Cement Variance Request

Dear Sir or Madam,

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

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

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

Sincerely,

James Peterson
Environmental Resources Specialist / Permitting

Promoting a healthy environment.

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SEP 28 2016

WV Department of
Environmental Protection

02/17/2017



west virginia department of environmental protection

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

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
dep.wv.gov

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

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

REPORT OF THE OFFICE

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

FINDINGS OF FACT

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

Promoting a healthy environment.

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Environmental Protection

02/17/2017

CONCLUSIONS OF LAW

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

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

ORDER

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

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

IN THE NAME OF THE STATE OF WEST VIRGINIA

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



James Martin, Chief
Office of Oil and Gas

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Office of Oil and Gas
SEP 28 2016
Department of
Environmental Protection

02/17/2017

WW-9
(4/16)

API Number 47 - 103 - _____
Operator's Well No. 515591

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) North Fork Richwood Run Quadrangle Big Run

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 _____)

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

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

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

-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.

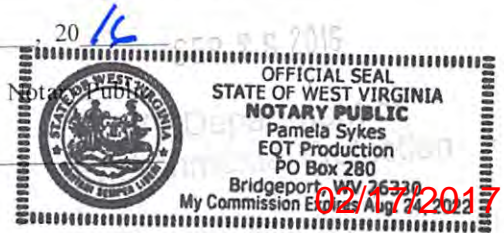
Company Official Signature *Victoria J. Roark*

Company Official (Typed Name) Victoria J. Roark

Company Official Title Permitting Supervisor

Subscribed and sworn before me this 26 day of Sept

My commission expires 8-24-22



OFFICIAL SEAL
STATE OF WEST VIRGINIA
NOTARY PUBLIC
Patricia S. Lee
EQT Production
PO Box 280
Martinsburg, WV 26130
My Commission Expires Aug 24 2025



02/17/2017

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.

SEP 20 2016

SEP 20 2016

SEP 20 2016

02/17/2017

EQT Production Company

Proposed Revegetation Treatment: Acres Disturbed 38.08 Prevegetation pH 6.0

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: _____

Comments: _____

Title: _____

Date: SEP 26 2016

Field Reviewed? () Yes () No

SEP 26 2016

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



Where energy meets innovation.™

Site Specific Safety Plan

EQT BIG 209

Big Run Quardrant Wetzel County, WV

For Wells:

515591

Date Prepared:

July 27, 2016

EQT Production

WV Oil and Gas Inspector

Title

Title

Date

Date

RECEIVED
Office of Oil and Gas

SEP 28 2016

WV Department of
Environmental Protection

02/17/2017



September 20, 2016

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

Re: BIG209 well pad, well number 515591
Grant 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 'Vicki Roark'.

Vicki Roark
Permitting Supervisor-WV

RECEIVED
Office of Oil and Gas
SEP 28 2016
WV Department of
Environmental Protection

Horizontal Natural Gas Well Work Permit Application Notice By Publication

Notice is hereby given:

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

Paper: The Wetzel Chronicle

Public Notice Date: 7/20/2016 and 7/27/2016

The following applicant intends to apply for a horizontal natural well work permit which disturbs three acres or more of surface excluding pipelines, gathering lines and roads or utilizes more than two hundred ten thousand gallons of water in any thirty day period.

Applicant: EQT Production Company **Well Number:** 515591

Address: 115 Professional Place PO Box 280 Bridgeport WV 26330

Business Conducted: Natural gas production.

Location –

State: WV County: Wetzel
District: Grant Quadrangle: Big Run
UTM Coordinate NAD83 Northing: 4378202
UTM coordinate NAD83 Easting: 535066.6
Watershed: North Fork Richwood Run

Coordinate Conversion:

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

Electronic notification:

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

Reviewing Applications:

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

Submitting Comments:

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

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

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

WETZEL CHRONICLE

Legal Notices

Legal Advertisement for the Wetzel Chronicle Newspaper

PUBLIC NOTICE OF APPLICATION FOR NATURAL GAS HORIZONTAL WELL DRILLING PERMIT, pursuant to West Virginia Code Section 22-6A-10(e).

EQT Production Company 115 Professional Place PO Box 280 Bridgeport WV 26330, is applying for permits for natural gas horizontal wells:

WELL #515590, located at approximately UTM NAD 83 Easting 535067.3 UTM NAD 83 Northing 4378199;

WELL #515591, located at approximately UTM NAD 83 Easting 535066.6 UTM NAD 83 Northing 4378202;

All wells in NORTH FORK RICHWOOD RUN WATER-SHED, BIG RUN QUADRANGLE, GRANT DISTRICT, WETZEL COUNTY, WV which disturbs three acres or more of surface excluding pipelines, gathering lines and roads or utilizes more than two hundred ten thousand gallons of water in any thirty day period.

Any interested person may submit online comments to https://apps.dep.wv.gov/oog/comments/comments.cfm or, you may email DEP.comments@wv.gov. To submit a written letter or request a copy, send to: Permit Review, Office of Oil and Gas, 601 57th Street, SE, Charleston, WV 25304, or call 304-926-0450. Emailed or written comments must reference the county, well number and operator and must be received within 30 days of the date of the last publication (expected to be 7-27-16). Copies of the proposed permit application may be reviewed at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304, (304-926-0450). Full copies or scans of the proposed permit application will cost \$15.00, whether mailed or obtained at DEP headquarters. For information relating to horizontal drilling, and all horizontal well applications filed in this state, visit: www.dep.wv.gov/oil-and-gas/pages/default.aspx

EQT Production WC-7-20,27 13016

Martinsville, WV July 27, 2016

West Virginia, County of Wetzel:

personally appeared before the undersigned, a Notary Public,

Brian Clutter who, being duly sworn,

that he is the manager of the Wetzel Chronicle, a weekly

paper of general circulation, published at New Martinsville,

County of Wetzel, State of West Virginia, and that a copy of the

document attached hereto was published for 2 successive

issues in the Wetzel Chronicle, beginning on the 20 day

of July, 2016 and ending on the 27 day

of July, 2016.

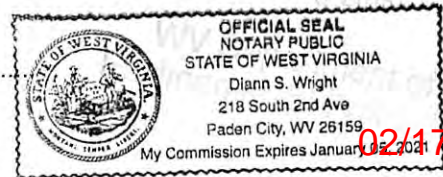
Manager, Wetzel Chronicle

Subscribed and sworn to before me, a Notary Public of said County, on this 27 day of July, 2016.

Notary Public

My commission expires on the 5th day of January, 2021.

Printers Fee.....



02/17/2017

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

Date of Notice Certification: 9-27-16

API No. 47- 103 -
 Operator's Well No. 515591
 Well Pad Name: BIG209

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>535066.6</u>
County: <u>Wetzel</u>		Northing: <u>4378202</u>
District: <u>Grant</u>	Public Road Access: <u>RT20</u>	
Quadrangle: <u>Big Run</u>	Generally used farm name: <u>Lois A Calvert</u>	
Watershed: <u>North Fork Richwood 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>
--	---

Required Attachments:

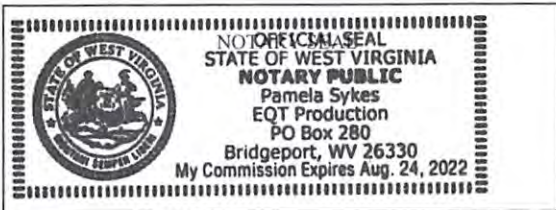
The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication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

Certification of Notice is hereby given:

THEREFORE, I *Victoria J Roark*, 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: EQT Production Company
By: Victoria J Roark
Its: Permitting Supervisor
Telephone: 304-848-0076

Address: 115 Professional Place PO Box 280
Bridgeport WV 26330
Facsimile: 304-848-0041
Email: vroark@eqt.com



Subscribed and sworn before me this 26 day of Sept 2016.
Pamela Sykes Notary Public
My Commission Expires 8-24-22

Oil and Gas Privacy Notice:

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

Faint, illegible text or stamp in the bottom right corner.

7016 0750 0000 9581 5754

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
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For delivery information, visit our website at www.usps.com®

OFFICIAL USE

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Return Receipt (hardcopy) \$ _____

Return Receipt (electronic) \$ _____

Certified Mail Restricted Delivery \$ _____

Adult Signature Required \$ _____

Adult Signature Restricted Delivery \$ _____

Postage \$ _____

Total \$ _____

Sent to **Lois A Calvert**
Aka Lois A Dennis
385 N 20th St
Weirton WV 26062
 City, State ZIP+4® **WV 26062** **BIG209 Permit Ap & Planned Op**

BRIDGEPORT MPO
 VR
 SEP 27 2016
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Sent To **Dwight Beckett**
9421 Reed Road
North Ridgeville OH 44039
 Street and City, State ZIP+4® **OH 44039** **BIG209 Permit Ap & Planned Op**

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North Ridgeville
Ohio Natural Gas

SEP 28 2016

Department of

02/17/2017

Surface Owners (road or other disturbance):

Lois A Calvert aka Lois A Dennis ✓
385 N 20th St
Weirton WV 26062-2638

Alan D & Diana L Barr ✓
3659 Richwood Run Rd
Jacksonburg WV 26377

Frank M & Frankie L Dulaney ✓
3447 Richwood Run Road
Jacksonburg WV 26377

THE STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENT & NATURAL RESOURCES

SEP 9 2016

02/17/2017

02/17/2017

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Street 385 N 20th St

City, State Weirton WV 26062

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Street 3659 Richwood Run Rd

City, State Jacksonburg WV 26377

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Street and Ap 3447 Richwood Run Road

City, State, Zip Jacksonburg WV 26377

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Surface Owners (AST, Pits or impoundments):

Lois A Calvert aka Lois A Dennis ✓

385 N 20th St

Weirton WV 26062-2638

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Office of Oil and Gas

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WV Department of
Environmental Protection

02/17/2017

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- Adult Signature Restricted Delivery \$



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Total

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Sent to

Street

City, &

Lois A Calvert
Aka Lois A Dennis
385 N 20th St
Weirton WV 26062

BIG209 Permit Ap & Planned Op

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Oil and Gas

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02/17/2017

Coal Owner

Western Pocahontas Properties, LP ✓
5260 Irwin Road
Huntington, WV 25705

CNX Land LLC
Engineering Operations Support Dept. Coal ✓
CNX Center 1000 Consol Energy Drive
Canonsburg, PA 15317-6506

Frank M. & Frankie L Dulaney ✓
3447 Richwood Run Road
Jacksonburg, WV 26377

WEST VIRGINIA DEPARTMENT OF ENVIRONMENT & NATURAL RESOURCES

SEP 20 10 45 AM '16

WV DEPARTMENT OF ENVIRONMENT & NATURAL RESOURCES

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Adult Signature Required \$ _____

Adult Signature Restricted Delivery \$ _____

Postage \$ _____

Total P&C \$ _____

Sent To Western Pocahontas Properties LP
 5260 Irwin Road
 Huntington WV 25705

Street and Ap
 City, State, Zi

Postmark Here
 SEP 27 2016
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BIG209 Permit Ap

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Adult Signature Restricted Delivery \$ _____

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Sent To CNX Land LLC
 Engineering Operations Support Dept Coal
 CNX Center 1000 Consol Energy Dr
 Canonsburg PA 15317

Street and Ap
 City, State, Zi

Postmark Here
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Adult Signature Restricted Delivery \$ _____

Postage \$ _____

Total Postag \$ _____

Sent To Frank M & Frankie L Dulaney
 3447 Richwood Run Road
 Jacksonburg WV 26377

Street and Ap
 City, State, Zi

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PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

02/17/2017

Owners of Water Wells

Ken Dotson
3772 Richwood Run Road
Jacksonburg WV 26377

Connie Lou Wright
3685 Richwood Run Road
Jacksonburg WV 26377

Alan D Barr
3659 Richwood Run Road
Jacksonburg WV 26377

Everett Lemley
3631 Richwood Run Road
Jacksonburg WV 26377

Nora Price
3591 Richwood Run Road
Jacksonburg WV 26377

Frankie Dulaney
3447 Richwood Run Road
Jacksonburg WV 26377

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Adult Signature Required \$

Adult Signature Restricted Delivery \$

Postage
 \$

Total Post \$

Sent To **Ken Dotson**

Street and Apt. **3772 Richwood Run Rd**

City, State, Zip **Jacksonburg WV 26377**

Postmark Here **SEP 27 2016**

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Total Post \$

Sent To **Connie Lou Wright**

Street and Apt. **3685 Richwood Run Road**

City, State, Zip **Jacksonburg, WV 26377**

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BIG209 permit app

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Adult Signature Required \$

Adult Signature Restricted Delivery \$

Postage
 \$

Total Post \$

Sent To **Alan D & Diana L Barr**

Street and Apt. **3659 Richwood Run Rd**

City, State, Zip **Jacksonburg WV 26377**

Postmark Here **SEP 27 2016**

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Certified Mail Restricted Delivery \$

Adult Signature Required \$

Adult Signature Restricted Delivery \$

Postage
 \$

Total Postage \$

Sent To **Everett Lemley**

Street and Apt. **3631 Richwood Run Rd**

City, State, Zip **Jacksonburg WV 26377**

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Return Receipt (electronic) \$

Certified Mail Restricted Delivery \$

Adult Signature Required \$

Adult Signature Restricted Delivery \$

Postage
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Total Post \$

Sent To **Nora Price**

Street and Apt. **3591 Richwood Run Rd**

City, State, Zip **Jacksonburg WV 26377**

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Certified Mail Restricted Delivery \$

Adult Signature Required \$

Adult Signature Restricted Delivery \$

Postage
 \$

Total Postage \$

Sent To **Frank M & Frankie L Dulaney**

Street and Apt. **3447 Richwood Run Road**

City, State, Zip **Jacksonburg WV 26377**

Postmark Here **SEP 27 2016**

BRIDGEPORT MPO 26330-USPS

BIG209 Ap + Planned Op

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

02/17/2017

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

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.**

Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

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

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

WW-6A
(8-13)

API NO. 47- 103 - _____
OPERATOR WELL NO. 515591 _____
Well Pad Name: BIG209 _____

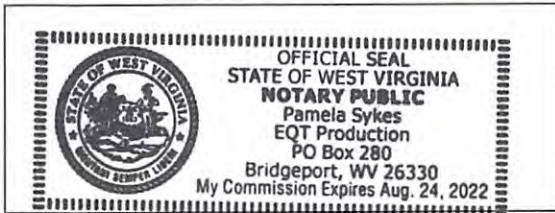
Notice is hereby given by:

Well Operator: EQT Production Company
Telephone: 304-848-0076
Email: vroark@eqt.com

Address: 115 Professional Place PO Box 280
Bridgeport WV 26330
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 26 day of Sept., 2016.

Pamela Sykes Notary Public

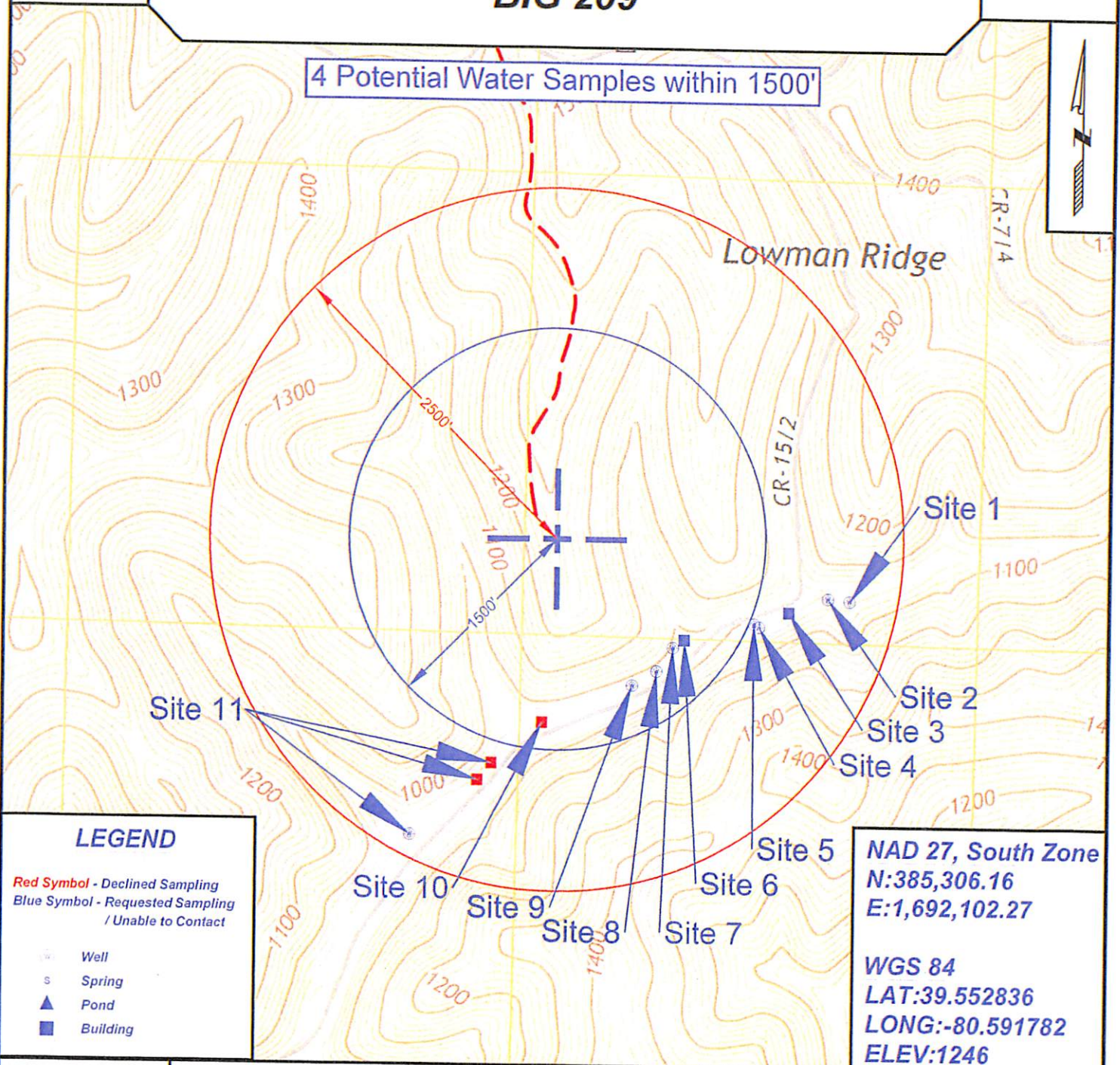
My Commission Expires 8-24-22

Topo Quad:	Big Run	Scale:	1" = 1000'
County:	Wetzel	Date:	July 25, 2016
District:	Grant	Project No:	122-34-G-14

Water

BIG 209

4 Potential Water Samples within 1500'



LEGEND

Red Symbol - Declined Sampling
 Blue Symbol - Requested Sampling / Unable to Contact

- Well
- Spring
- Pond
- Building

NAD 27, South Zone
 N:385,306.16
 E:1,692,102.27

WGS 84
 LAT:39.552836
 LONG:-80.591782
 ELEV:1246



SURVEYING AND MAPPING SERVICES PERFORMED BY:

ALLEGHENY SURVEYS, INC.

1-800-482-8606
 237 Birch River Road
 Birch River, WV 26610
 PH: (304) 649-8606
 FAX: (304) 649-8608

PREPARED FOR:

EQT Production Company

P.O. Box 280
 Bridgeport, WV 26330

02/17/2017

**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: 09/01/2016 **Date Permit Application Filed:** 09/10/2016

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

- HAND DELIVERY
- CERTIFIED MAIL RETURN RECEIPT REQUESTED

Pursuant to W. Va. Code § 22-6A-16(b), at least ten days prior to filing a permit application, an operator shall, by certified mail return 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:	WV	UTM NAD 83 Easting:	535066.6
County:	Wetzel	UTM NAD 83 Northing:	4378202
District:	Grant	Public Road Access:	RT20
Quadrangle:	Big Run	Generally used farm name:	Lois A Calvert
Watershed:	North Fork Richwood Run		

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: 115 Professional Place PO Box 280
Bridgeport WV 26330
Telephone: 304-848-0076
Email: vroark@eqt.com
Facsimile: 304-848-0041

Authorized Representative: Victoria Roark
Address: 115 Professional Place PO Box 280
Bridgeport WV 26330
Telephone: 304-848-0076
Email: vroark@eqt.com
Facsimile: 304-848-0041

Oil and Gas Privacy Notice:

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

SEP 30 2016

02/17/2017

Surface Owners:

Lois A. Calvert Aka Lois A. Dennis ✓
385 N 20th St
Weirton, WV 26062-2638

Dwight W. Beckett ✓
9421 Reed Road
North Ridgeville, OH 44039

Frank M and Frankie L Dulaney ✓
3447 Richwood Run Road
Jacksonburg, WV 26377

Alan D. & Diana L. Barr ✓
3659 Richwood Run Rd
Jacksonburg, WV 26377

FILED
Office of the Clerk

SEP 26 2016

02/17/2017

7016 0340 0000 8668 3574

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Return Receipt (electronic) \$

Certified Mail Restricted Delivery \$

Adult Signature Required \$

Adult Signature Restricted Delivery \$

Postage
\$

Total
\$

Sent
\$

Street
Lois A Calvert aka Lois A Dennis
385 N 20th St
Weirton WV 26062-2638

City
BIG209 Notice of Intent

PS Form 3800, April 2012

BRIDGEPORT WPO
AUG 31 2016
26330-USPS
Postmark Here

RW

Instructions

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Certified Mail Restricted Delivery \$

Adult Signature Required \$

Adult Signature Restricted Delivery \$

Postage
\$

Total Postage and Fees
\$

Sent To
\$

Street
Frank M. & Frankie L Dulaney
3447 Richwood Run Road
Jacksonburg, WV 26377

City, State
BIG209 Notice of Intent

PS Form 3800, April 2012

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26330-USPS
Postmark Here

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Return Receipt (electronic) \$

Certified Mail Restricted Delivery \$

Adult Signature Required \$

Adult Signature Restricted Delivery \$

Postage
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Total
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Sent
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Street
Dwight W. Beckett
9421 Reed Road
North Ridgeville, OH 44039

City
BIG209 Notice of Intent

PS Form 3800, April 2012

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Return Receipt (electronic) \$

Certified Mail Restricted Delivery \$

Adult Signature Required \$

Adult Signature Restricted Delivery \$

Postage
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Total
\$

Sent To
\$

Street
Alan D. & Diana L. Barr
3659 Richwood Run Rd
Jacksonburg, WV 26377

City
BIG209 Notice of Intent

PS Form 3800, April 2012

BRIDGEPORT WPO
AUG 31 2016
26330-USPS
Postmark Here

RW

Instructions

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: 9-27-16 **Date Permit Application Filed:** 9-27-16

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: <u>See Attached</u>	Name: _____
Address: _____	Address: _____
_____	_____

Notice is hereby given:

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

State: <u>WV</u>	UTM NAD 83	Easting: <u>535066.6</u>
County: <u>Wetzel</u>		Northing: <u>4378202</u>
District: <u>Grant</u>	Public Road Access: <u>RT20</u>	
Quadrangle: <u>Big Run</u>	Generally used farm name: <u>Lois A Calvert</u>	
Watershed: <u>North Fork Richwood Run</u>		

This Notice Shall Include:

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

Well Operator: <u>EQT Production Company</u>	Address: <u>115 Professional Place PO Box 280</u>
Telephone: <u>304-848-0076</u>	<u>Bridgeport WV 26330</u>
Email: <u>vroark@eqt.com</u>	Facsimile: <u>304-848-0041</u>

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.

Surface Owners:

Lois A. Calvert Aka Lois A. Dennis
385 N 20th St
Weirton, WV 26062-2638

Dwight W. Beckett
9421 Reed Road
North Ridgeville, OH 44039

Frank M and Frankie L Dulaney
3447 Richwood Run Road
Jacksonburg, WV 26377

Alan D. & Diana L. Barr
3659 Richwood Run Rd
Jacksonburg, WV 26377

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Ohio Natural Gas
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Ohio SEP 23 2016
SEP 28 2016
Ohio Department of
Environmental Protection
02/17/2017

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- Return Receipt (electronic) \$
- Certified Mail Restricted Delivery \$
- Adult Signature Required \$
- Adult Signature Restricted Delivery \$



Postage

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Total

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Sent To

Street

City, State, Zi

Lois A Calvert
 Aka Lois A Dennis
 385 N 20th St
 Weirton WV 26062
 BIG209 Permit Ap & Planned Op

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

See Reverse for Instructions

7016 0750 0000 9581 5754

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- Certified Mail Restricted Delivery \$
- Adult Signature Required \$
- Adult Signature Restricted Delivery \$



Postage

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Total Po

\$

Sent To

Street a

City, Sta

Dwight Beckett
 9421 Reed Road
 North Ridgeville OH 44039
 BIG209 Permit Ap & Planned Op

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

See Reverse for Instructions

7016 0750 0000 9581 3651

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Extra Services & Fees (check box, add fee as appropriate)

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- Return Receipt (electronic) \$
- Certified Mail Restricted Delivery \$
- Adult Signature Required \$
- Adult Signature Restricted Delivery \$



Postage

\$

Total Postage

\$

Sent To

Street and Ap

City, State, Zi

Frank M & Frankie L Dulaney
 3447 Richwood Run Road
 Jacksonburg WV 26377
 BIG209 Ap + Planned Op

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

See Reverse for Instructions

7016 0750 0000 9581 5778

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- Return Receipt (hardcopy) \$
- Return Receipt (electronic) \$
- Certified Mail Restricted Delivery \$
- Adult Signature Required \$
- Adult Signature Restricted Delivery \$



Postage

\$

Total Po

\$

Sent To

Street a

City, Sta

Alan D & Diana L Barr
 3659 Richwood Run Rd
 Jacksonburg WV 26377
 BIG209 Permit Ap & Planned Op

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

See Reverse for Instructions

7016 0750 0000 9581 5761

SEP 27 2016

02/17/2017



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

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

Earl Ray Tomblin
Governor

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

September 20, 2016

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

Subject: DOH Permit for the BIG209 Pad Site, Wetzel County

515590 BIG209H1	515591 BIG209H2	515592 BIG209H3
515593 BIG209H4	515594 BIG209H5	515595 BIG209H6

Dear Mr. Martin,

This well site will be accessed from existing Permit # 06-2016-0332 issued to EQT Production Company for access to the State Road for a well site located off of Wetzel County Route 72 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
Gary K. Clayton, P.E.
Regional Maintenance Engineer
Central Office O&G Coordinator

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

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SEP 28 2016

02/17/2017

Anticipated Frac Additives

Chemical Names and CAS numbers

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

SEP 20 2016

02/17/2017

OPERATOR: EQT Production WELL NO: 515590, 515591

PAD NAME: BIG209

REVIEWED BY: Keely Cunningham SIGNATURE: Keely Cunningham

WELL RESTRICTIONS CHECKLIST

HORIZONTAL 6A WELL

Well Restrictions

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

EQT Production
Hydraulic Fracturing Monitoring Plan
Pad ID: BIG209
Wetzel County, WV

8/30/16

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Emergency Response
Division
SEP 29 2016
Page 1 of 2
02/17/2017

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 BIG209 pad: 515591.

Due to the apparent presence of unique geological conditions, the potential for communication between deep geologic zones exists in this area. This potential communication, via natural gas, water, or both, may occur between hydraulically fractured wells in the Marcellus formation (7,300 TVD) and existing conventional natural gas wells in the partially-depleted, relatively high permeability Alexander formation (approximately 5,700' TVD).

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

1. Communications with Conventional Well Operators

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

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

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

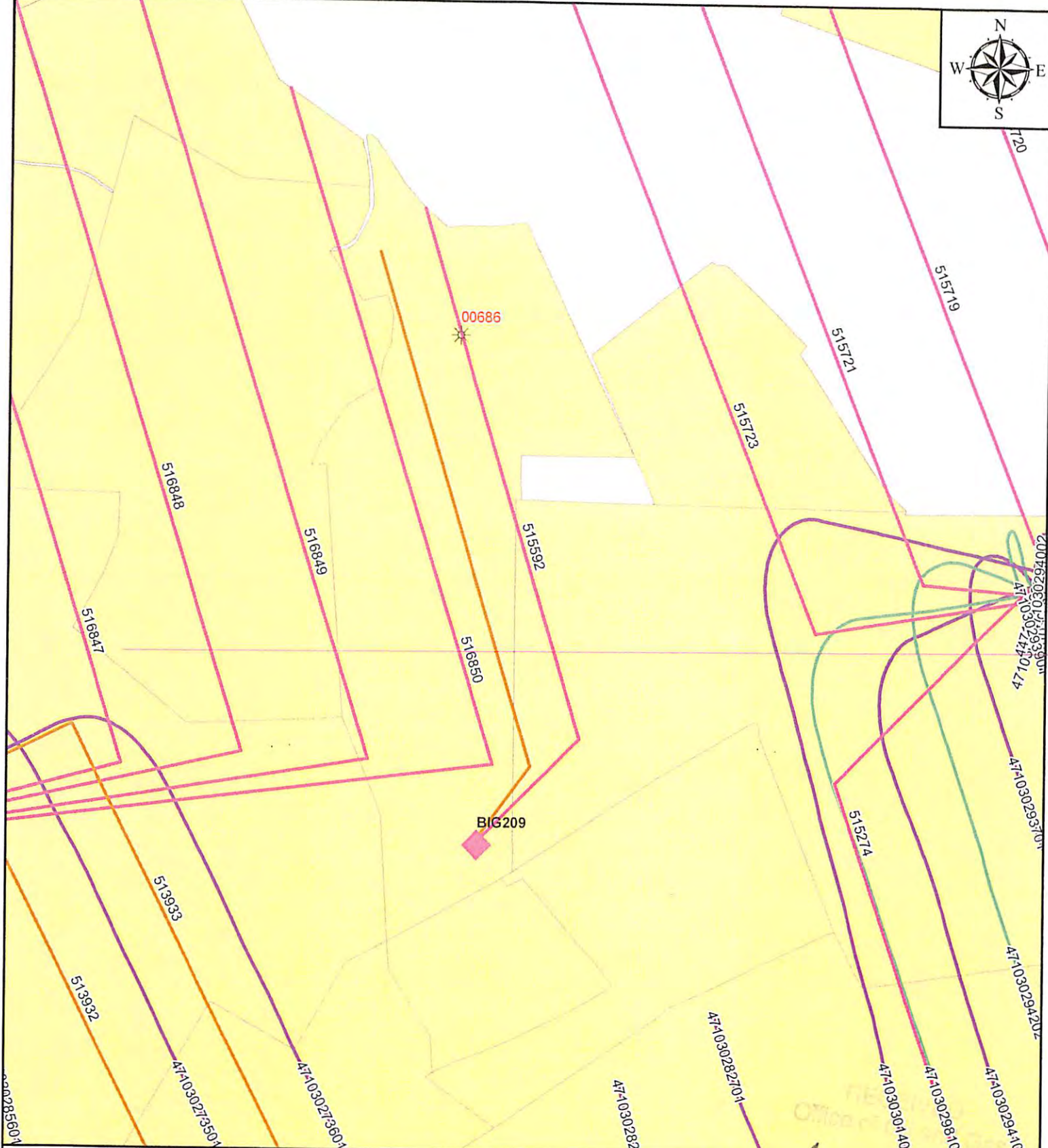
Specifically, the letter recommends that conventional well operators conduct the following activities during and after fracturing operations:

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

2. Reporting

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

SEP 20 2016



EQT
 EQT Corporation
 625 Liberty Avenue
 Pittsburgh, PA 15222

BIG209

Vertical Offsets and Foreign Laterals within 500'

Created By: _____ Printed By: mearsR on 8/30/2016

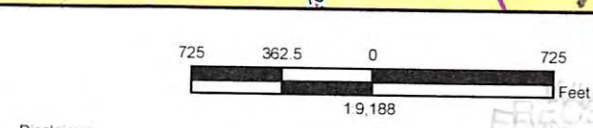
Legend

- BIG209_Vertical_Offsets
- Target Formation**

 - Utica
 - Genesee
 - Marcellus
 - Middlesex
 - Genesee Spud
 - Marcellus Spud
 - Middlesex Spud
 - Utica Spud

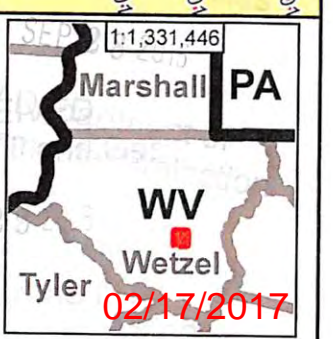
- Active Status (Enertrial)**

 - Active



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.



WELL ID 4710300686
WELL STATUS GAS/PSEUDO
COMP DATE
FM AT TD 00686
PERMIT 00686
ORGANAL OPERATOR CONSOL GAS SUPPLY CRP
CURRENT OPERATOR EPC
LONGITUDE -80.5922
LATITUDE 39.5605
TARGE FM
DATUM ELEVATION TD 0.0000 -99999.0000

No Perforated Data.



625 Liberty Ave, Suite 1700
Pittsburgh PA 15222
www.eqt.com

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

John Centofanti
Corporate Director,
Environmental Affairs

(date)

[Conventional Well Operator]
[address]
[state]

RE: Wetzel County Hydraulic Fracturing Notice

Dear Sir/Madam,

EQT has developed an Upper Devonian and Marcellus pad (Big 209 pad) located in Wetzel County, WV. As an owner or operator of conventional natural gas wells in this area, we are requesting your assistance in this matter.

Due to the apparent presence of unique geological conditions, the potential for communication between deep geologic zones exists in this area. This potential communication, via natural gas, water, or both, may occur between hydraulically fractured wells in the Marcellus formation (approximately 7,300' TVD) and existing conventional natural gas wells in the partially-depleted, relatively high permeability, Alexander formation (approximately 5,200' TVD).

EQT anticipates conducting hydraulic fracturing at the BIG 209 pad during the [first,second, third,fourth] quarter of [year]. We have identified conventional natural gas wells operated by your company within 500' (lateral distance) of our new/planned laterals. Plats for each well on this pad are attached.

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

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

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

Sincerely,
EQT Production

John Centofanti
Corporate Director, Environmental Affairs

cc: James Martin, WV Office of Oil and Gas

02/17/2017