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 west virginia department of environmental protection
 

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

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

Monday, March 4, 2019  
 WELL WORK PERMIT  
 Horizontal 6A / New Drill

EQT PRODUCTION COMPANY  
 625 LIBERTY AVE., SUITE 1700

PITTSBURGH, PA 15222

Re: Permit approval for BIG464H12  
 47-103-03269-00-00

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

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

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

James A. Martin  
 Chief

Operator's Well Number: BIG464H12  
 Farm Name: COASTAL FOREST RESOURC  
 U.S. WELL NUMBER: 47-103-03269-00-00  
 Horizontal 6A New Drill  
 Date Issued: 3/4/2019

# PERMIT CONDITIONS

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

## CONDITIONS

1. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACE). Through this permit, you are hereby being advised to consult with USACE regarding this proposed activity.
2. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than one hundred (100) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
4. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
6. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.
7. 24 hours prior to the initiation of the completion process the operator shall notify the Chief or his designee.
8. During the completion process the operator shall monitor annular pressures and report any anomaly noticed to the chief or his designee immediately.
9. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
10. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.

## PERMIT CONDITIONS

11. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, completion of any other permitted well work, and completion of the well. Such notice shall be provided by sending an email to [DEPOOGNotify@wv.gov](mailto:DEPOOGNotify@wv.gov).

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

1) Well Operator: EQT Production Company

<u>306686</u>	<u>Wetzel</u>	<u>Grant</u>	<u>Big Run</u>
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Operator ID County District Quadrangle

2) Operator's Well Number: BIG464H12 Well Pad Name: BIG464

3) Farm Name/Surface Owner: Coastal Forest Resources Co. d/b/a Coastal Timberlands Co. Public Road Access: Rt. 250

4) Elevation, current ground: 1246.8 Elevation, proposed post-construction: 1246.8

5) Well Type (a) Gas  Oil  Underground Storage

Other \_\_\_\_\_

(b) If Gas Shallow  Deep

Horizontal

*DmH  
11-14-18*

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Target formation is Marcellus at a depth of 7419 with the anticipated thickness to be 51 feet and anticipated target pressure of 2620 PSI

8) Proposed Total Vertical Depth: ~~4719~~ 7419

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 14411

11) Proposed Horizontal Leg Length: ~~6658~~ 6650

12) Approximate Fresh Water Strata Depths: 109,184,432

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

14) Approximate Saltwater Depths: 1724,1848

15) Approximate Coal Seam Depths: 559, 797, 899, 919

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

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

Depth: \_\_\_\_\_

Seam: \_\_\_\_\_

Owner: \_\_\_\_\_

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	26	New	A-500	85.6	40	40	49 ft <sup>3</sup> / CTS
Fresh Water	13 3/8	New	J-55	54.5	1019	1019	952 ft <sup>3</sup> / CTS
Coal							
Intermediate	9 5/8	New	A-500	40	2841	2841	1108 ft <sup>3</sup> / CTS
Production	5 1/2	New	P-110	20	14411	14411	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 50' inclination.	
Liners							

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11-14-18*

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	26	30	.312	1378	18	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							

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Kind:				
Sizes:				
Depths Set:				

WW-6B  
(10/14)

API NO. 47-103 - \_\_\_\_\_  
OPERATOR WELL NO. BIG464H12 \_\_\_\_\_  
Well Pad Name: BIG464 \_\_\_\_\_

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 6485'. Kick off and drill curve. Drill the lateral in the Marcellus. Cement casing.

*DMH  
11-14-18*

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

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

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): no additional

22) Area to be disturbed for well pad only, less access road (acres): no additional

23) Describe centralizer placement for each casing string:

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

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

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

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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.



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Office of Oil and Gas  
601 57<sup>th</sup> 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

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Office of Oil and Gas  
601 57<sup>th</sup> Street, SE  
Charleston, WV 25304  
(304) 926-0450  
(304) 928-0452 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.

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**CONCLUSIONS OF LAW**

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

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

**ORDER**

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

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

IN THE NAME OF THE STATE OF WEST VIRGINIA

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



James Martin, Chief  
Office of Oil and Gas

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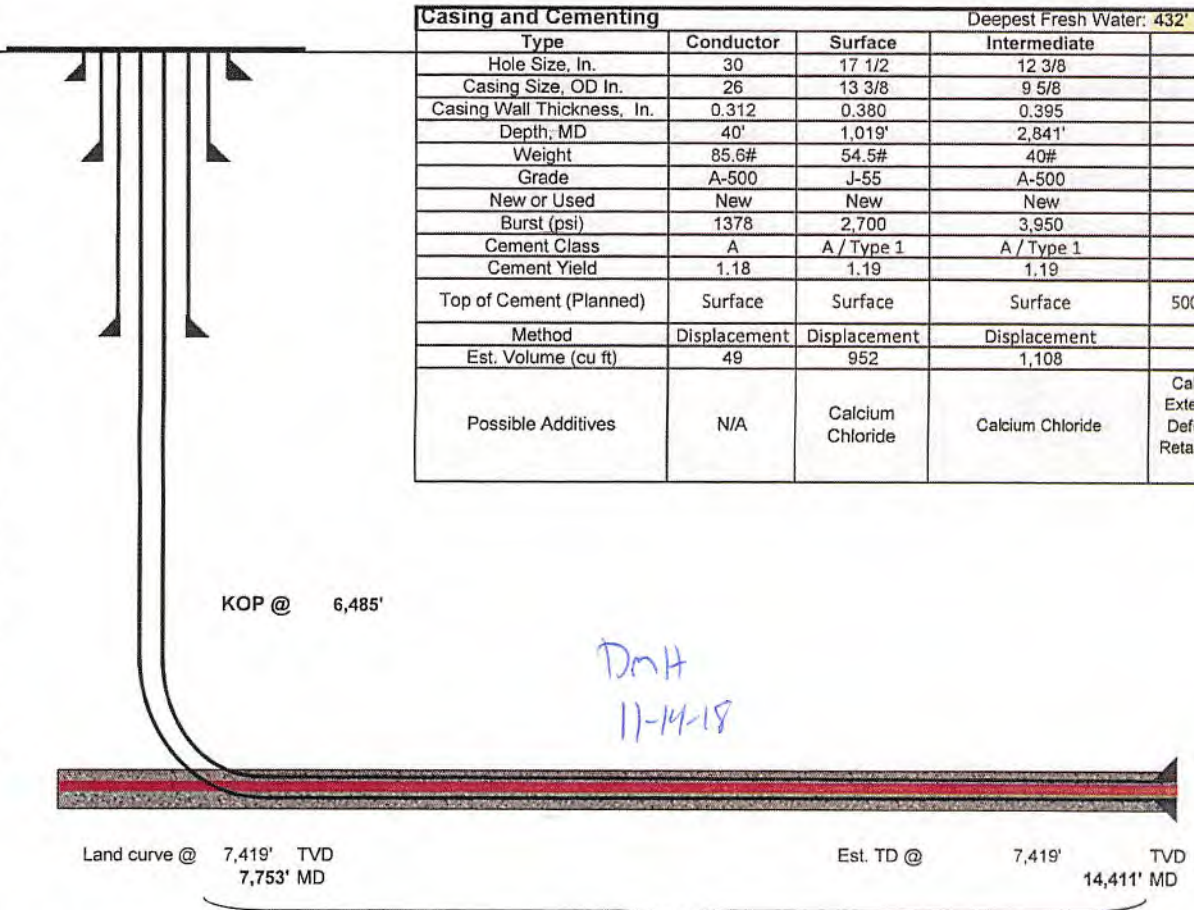
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**Well Big464H12**  
**EQT Production**  
**Big Run Quad**  
**Wetzel County, WV**

Azimuth 337  
 Vertical Section 7172

Note: Diagram is not to scale

Formations	Top TVD	Base TVD
Conductor	40	
Base Red Rock	132	
Base Fresh Water	432	
Surface Casing	1019	
Maxton	1812	1991
Big Lime	2254	2330
Big Injun	2342	2411
Weir	2540	2690
Gantz	2755	2791
Intermediate Casing	2841	
Fifty foot	2896	2952
Thirty foot	2991	3018
Gordon	3047	3092
Forth Sand	3117	3130
Bayard	3242	3260
Warren	3665	3689
Speechley	3785	3833
Balltown A	4143	4158
Riley	4628	4670
Benson	5257	5306
Alexander	5671	5738
Sonyea	6937	7100
Middlesex	7100	7156
Genesee	7156	7243
Geneseo	7243	7275
Tully	7275	7300
Hamilton	7300	7398
Marcellus	7398	7449
Production Casing	14411	MD
Onondaga	7449	



Casing and Cementing		Deepest Fresh Water: 432'		
Type	Conductor	Surface	Intermediate	Production
Hole Size, In.	30	17 1/2	12 3/8	8 1/2
Casing Size, OD In.	26	13 3/8	9 5/8	5 1/2
Casing Wall Thickness, In.	0.312	0.380	0.395	0.361
Depth, MD	40'	1,019'	2,841'	14,411'
Weight	85.6#	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)	49	952	1,108	3,015
Possible Additives	N/A	Calcium Chloride	Calcium Chloride	Calcium Carbonate, Fluid Loss, Extender, Dispersant, Viscosifier, Defoamer, POZ, Bonding Agent, Retarder, Anti-Settling/Suspension Agent

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11-14-18

**Proposed Well Work:**  
 Drill and complete a new horizontal well in the Marcellus formation.  
 Drill the vertical to an approximate depth of 6485'.  
 Kick off and drill curve. Drill lateral in the Marcellus. Cement casing.

6,658' Lateral



4710303269 08/08/2019

November 8, 2018

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 (BIG464)

Dear Mr. Smith,

EQT is requesting the 13-3/8" surface casing be set at 1019' KB, 100' below the workable Pittsburgh Coal seam. We will set the 9-5/8" intermediate string at 2841' KB, 50' below the base of the Gantz formation.

If you have any questions, please do not hesitate to contact me at (304) 848-0035.

Sincerely,

Rebecca Wanstreet  
Landman I

Enc.

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WW-9  
(4/16)

API Number 47 - 103 - \_\_\_\_\_  
Operator's Well No. BIG464H12

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) Wiley Fork 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: n/a

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

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  
11-17-18*

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

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

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

Additives to be used in drilling medium? See Attached

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 *Erin Spine*

Company Official (Typed Name) Erin Spine

Company Official Title Regional Land Supervisor

Subscribed and sworn before me this 8 day of November, 2018

*Rebecca L. Wangstreet* Notary Public

My commission expires 4-7-2020



WW-9 Attachment

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

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

Additives to be used in drilling medium?

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

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EQT Production Company

Proposed Revegetation Treatment: Acres Disturbed no additional Prevegetation pH \_\_\_\_\_

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type Granular 10-20-20

Fertilizer amount 1/3 lbs/acre

Mulch 2 Tons/acre

Seed Mixtures

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

Attach:

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: \_\_\_\_\_

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

Title: Oil + Gas Inspector

Date: 11-14-18

Field Reviewed?  Yes

No



Where energy meets innovation.™

# Site Specific Safety and Environmental Plan

EQT  
BIG464 Pad  
Mannington  
Wetzel County, WV

For Wells:

BIG464H12

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Date Prepared: **February 23, 2018**

[Signature]  
EQT Production

Regional Land Supervisor  
Title

11/8/2018  
Date

[Signature]  
WV Oil and Gas Inspector

Oil & Gas Inspector  
Title

11-14-18  
Date

Anticipated Frac Additives  
Chemical Names and CAS numbers

03/08/2019

<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		

Dmit  
11-14-18

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

**CWS TRUCKING INC.**

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

**BROAD STREET ENERGY LLC**

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

**LAD LIQUID ASSETS DISPOSAL INC.**

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

**TRIAD ENERGY**

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

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

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

**KING EXCAVATING CO.**

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

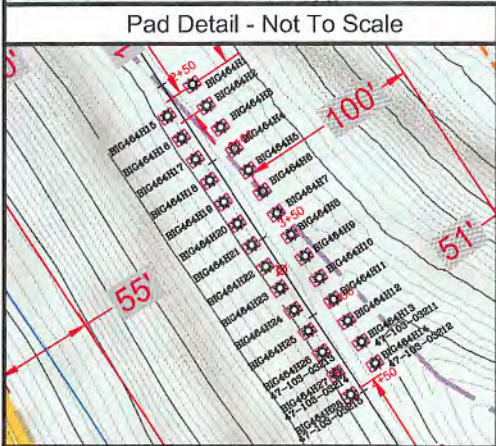
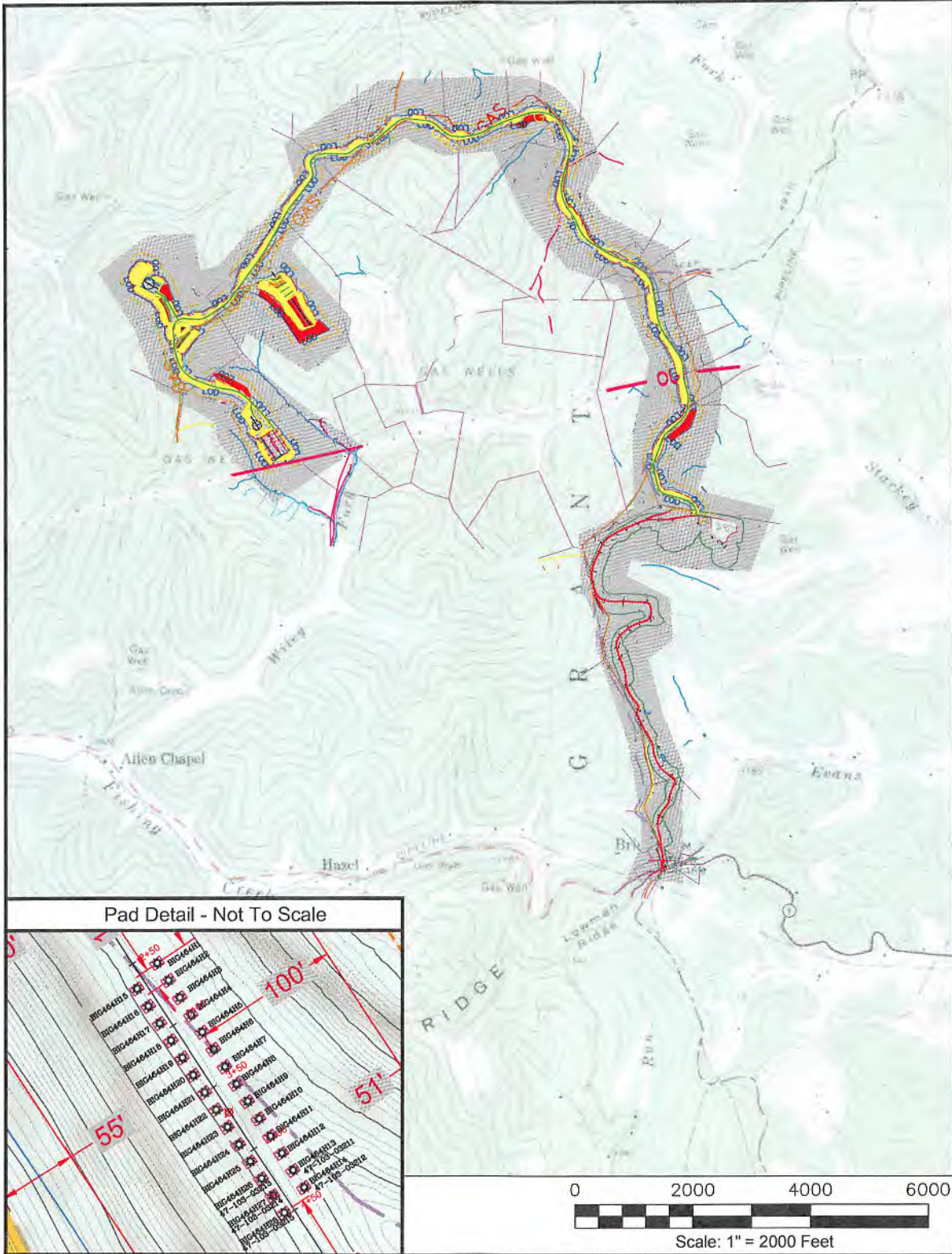
**Waste Management - Meadowfill Landfill**

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

**Waste Management - Northwestern Landfill**

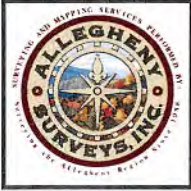
512 E. Dry Road  
Parkersburg, WV 26104  
304-428-0602  
Permit #SWF-1025 WV-0109400  
Approval #100833WV

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Big Run 7.5' USGS QUADRANGLE		Proposed Disturbance Area	
Projected culvert inventory. (for bid purposes only)	Well Site Location	See Site Plan	
15" minimum diameter culverts	See Site Plan	Proposed Access Road	See Site Plan
24" minimum diameter culverts	See Site Plan	Approximate Total Disturbance	See Site Plan
DRAWN BY: Tim Rutledge	DATE: January 31, 2019	FILE NO. 125-16	DRAWING FILE NO. BIG 464 Rec Plan

Note: SEE SITE PLAN OF BIG 464 FOR COMPLETE GRADING & DRAINAGE CONSTRUCTION INCLUDING EROSION & SEDIMENT CONTROL DETAILS, ETC.



SURVEYING AND MAPPING SERVICES PERFORMED BY:  
**ALLEGHENY SURVEYS, INC.**  
 1-800-482-8606  
 Birch River Office  
 Phone: (304) 649-8606  
 Fax: (304) 649-8608  
 237 Birch River Road  
 P.O. Box 438  
 Birch River, WV 26610



Where energy meets innovation.™

# Site Specific Safety and Environmental Plan

EQT

BIG464 Pad

Mannington

Wetzel County, WV

For Wells:

BIG464H12

Date Prepared: **February 23, 2018**

EQT Production

Regional Land Supervisor  
Title

11/8/2018  
Date

WV Oil and Gas Inspector

Title

Date

**EQT Production Water Plan Offsite  
disposals for Marcellus wells**

**CWS TRUCKING INC.**

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

**LAD LIQUID ASSETS DISPOSAL INC.**

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

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

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

**Waste Management - Meadowbrook Landfill**

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

**Waste Management - Meadowbrook Landfill**

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

**BROAD STREET ENERGY LLC.**

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

**TRIAD ENERGY**

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

**KING EXCAVATING CO.**

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

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## EQT Water Management Plan

## Section V. Planned Additives to be used in Fracturing

<b>Material</b>	<b>Approximate Percentage</b>
Water	95.5%
Sand	4.2%
Friction Reducer	0.1%
Biocide	0.05%
Scale Inhibitor	0.03%
15% Hydrochloric Acid	0.06%
Gelling Agent	0.02%
Oxidizing Breaker	0.0009%
Enzyme Breaker	0.0009%

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Topo Quad: Big Run 7.5'

Scale: 1" = 1000'

County: Wetzel

Date: October 26, 2018

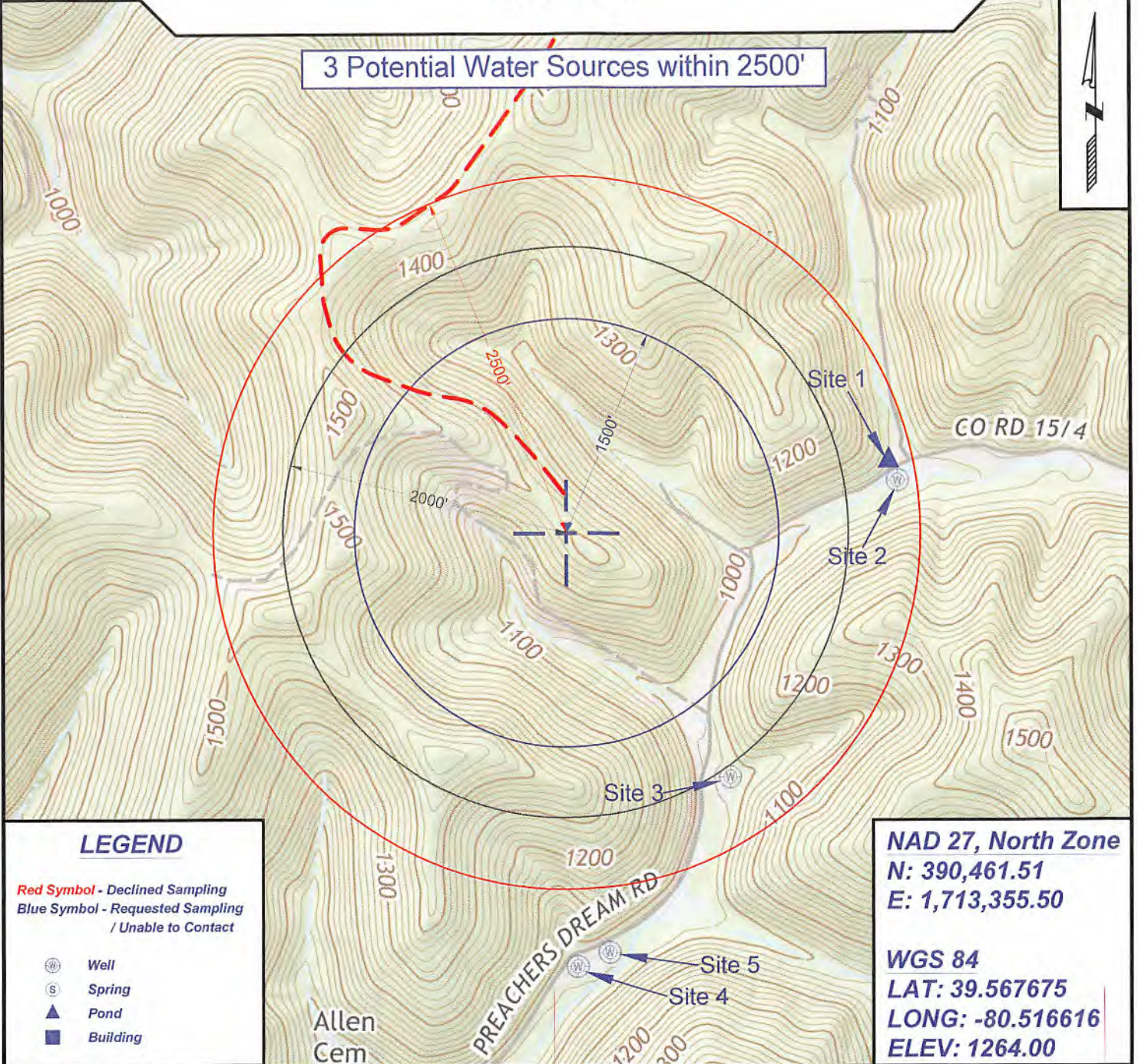
District: Grant

Project No: 125-34-G-16

Water

# BIG 464

3 Potential Water Sources within 2500'



### LEGEND

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

- Well
- Spring
- Pond
- Building

**NAD 27, North Zone**  
**N: 390,461.51**  
**E: 1,713,355.50**

**WGS 84**  
**LAT: 39.567675**  
**LONG: -80.516616**  
**ELEV: 1264.00**



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

Office of Oil and Gas  
 NOV 1 1 2018  
 P.O. Box 280  
 Bridgeport, WV 26330  
 WV Department of Environmental Protection



## Table 1 – Water Source Identification

EQT Well Pad Name: **Big 464**

Submittal Date: **October 26, 2018**

EQT Well Number: \_\_\_\_\_

Survey / Engineering Company: **Allegheny Surveys, Inc.**

Site Number: **1** Distance from Gas Well (feet): **2,335 ±**

Surface Owner / Occupant: **Donald D'Lusky**

Address: **PO Box 495 Farmington, WV 26571** Phone #: **304-777-9220 cell**

Field Located Date: **12/16/2016** Owner home during survey (yes/no):

Coordinates: **39.569123, -80.508546** (decimal degrees – NAD 83)

Contact Attempts (Date): 1<sup>st</sup>: **10/2/2018** 2<sup>nd</sup>: \_\_\_\_\_ Door Hanger Left: \_\_\_\_\_

Comments: **Certified letter sent October 2, 2018. Signed for by Donald D'Lusky. No further contact. Info from previous report in 2016. Pond.**

- |                                     |  |
|-------------------------------------|--|
| <input type="checkbox"/>            | Landowner Requested Sampling   |
| <input type="checkbox"/>            | Landowner Decline Sampling   |
| <input checked="" type="checkbox"/> | Unable to Contact<br>(Further contact attempts to be made by EQT's third party pre-drill sampling lab) |

Site Number: **2** Distance from Gas Well (feet): **2,367 ±**

Surface Owner / Occupant: **Donald D'Lusky**

Address: **PO Box 495 Farmington, WV 26571** Phone #: **304-777-9220 cell**

Field Located Date: **12/16/2016** Owner home during survey (yes/no):

Coordinates: **39.568746, -80.508332** (decimal degrees – NAD 83)

Contact Attempts (Date): 1<sup>st</sup>: **10/2/2018** 2<sup>nd</sup>: \_\_\_\_\_ Door Hanger Left: \_\_\_\_\_

Comments: **Certified letter sent October 2, 2018. Signed for by Donald D'Lusky. No further contact. Info from previous report in 2016. Water well.**

- |                                     |  |
|-------------------------------------|--|
| <input type="checkbox"/>            | Landowner Requested Sampling   |
| <input type="checkbox"/>            | Landowner Decline Sampling   |
| <input checked="" type="checkbox"/> | Unable to Contact<br>(Further contact attempts to be made by EQT's third party pre-drill sampling lab) |

Site Number: **3** Distance from Gas Well (feet): **2,060 ±**

Surface Owner / Occupant: **William Jack Barr**

Address: **RT 1 Box 29 Smithfield WV 26437** Phone #: **Cell: 681-443-0877**

Field Located Date: **12/16/2016** Owner home during survey (yes/no):

Coordinates: **39.563023, -80.512462** (decimal degrees – NAD 83)

Contact Attempts (Date): 1<sup>st</sup>: **10/2/2018** 2<sup>nd</sup>: \_\_\_\_\_ Door Hanger Left: \_\_\_\_\_

Comments: **Certified letter sent October 2, 2018. Signed for by Marlene Barr on 10/10/2018. No further contact. Info from report in 2016.**

- |                                     |  |
|-------------------------------------|--|
| <input type="checkbox"/>            | Landowner Requested Sampling   |
| <input type="checkbox"/>            | Landowner Decline Sampling   |
| <input checked="" type="checkbox"/> | Unable to Contact<br>(Further contact attempts to be made by EQT's third party pre-drill sampling lab) |

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(Insert additional pages as needed)

Site Number: 4 Distance from Gas Well (feet): 2,367 ±

Surface Owner / Occupant: Mabel Barr

Address: 722 Barr Rd. Smithfield WV 26437 Phone #: 304-386-9650

Field Located Date: 10/15/2018 Owner home during survey (yes/no): Yes

Coordinates: 39.559321, -80.516238 (decimal degrees – NAD 83)

Contact Attempts (Date): 1<sup>st</sup>: 10/2/2018 2<sup>nd</sup>: \_\_\_\_\_ Door Hanger Left: \_\_\_\_\_

<input checked="" type="checkbox"/>	Landowner Requested Sampling
<input type="checkbox"/>	Landowner Decline Sampling
<input type="checkbox"/>	Unable to Contact <small>(Further contact attempts to be made by EQT's third party pre-drill sampling lab)</small>

Comments: Certified letter sent October 2, 2018. Received a call from Mabel's daughter, Sandy Bucher 304-386-9650 on 10/10/2018. Called Sandy Bucher back on 10/11/2018 - she said her brother now has a mobile home on Mabel Barr's property using a water well. Field visit on 10/15. Two wells were located at Ms. Barr's home, and one at her son's mobile home, both of which are outside the 2,500 foot radius.

Site Number: 5 Distance from Gas Well (feet): 2,060 ±

Surface Owner / Occupant: Mabel Barr

Address: 722 Barr Rd. Smithfield WV 26437 Phone #: 304-386-9650

Field Located Date: 10/15/2018 Owner home during survey (yes/no):

Coordinates: 39.559605, -80.515444 (decimal degrees – NAD 83)

Contact Attempts (Date): 1<sup>st</sup>: 10/2/2018 2<sup>nd</sup>: \_\_\_\_\_ Door Hanger Left: \_\_\_\_\_

<input checked="" type="checkbox"/>	Landowner Requested Sampling
<input type="checkbox"/>	Landowner Decline Sampling
<input type="checkbox"/>	Unable to Contact <small>(Further contact attempts to be made by EQT's third party pre-drill sampling lab)</small>

Comments: Certified letter sent October 2, 2018. Received a call from Mabel's daughter, Sandy Bucher 304-386-9650 on 10/10/2018. Called Sandy Bucher back on 10/11/2018 - she said her brother now has a mobile home on Mabel Barr's property using a water well. Field visit on 10/15. Two wells were located at Ms. Barr's home, and one at her son's mobile home, both of which are outside the 2,500 foot radius.

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To Whom It May Concern:

Allegheny Surveys, Inc. has been contracted by EQT Production Company (EQT) to do some preliminary work for a proposed oil and gas well permit application.

In accordance with West Virginia Code 35-8-15, the West Virginia Department of Environmental Protection (WVDEP), Office of Oil and Gas, requires gas well operators to offer pre-drill water testing for existing water wells or developed springs actually used by the surface owner or water purveyor for consumption by humans or domestic animals, which are located within 1,500 feet of the proposed gas well pad. Please note that the WVDEP requires this water testing offer to a radius of 1,500 feet; however it is EQT's standard practice to conduct the water testing to a radius of 2,500 feet from the proposed gas well pad location.

EQT hereby notifies you (the surface owner and/or water purveyor) of the following:

- Your right to request sampling and analysis;
- The rebuttable presumption for contamination or deprivation of a fresh water source or supply;
- That refusal to allow the operator to conduct a pre-drilling water well test constitutes a method to rebut the presumption of liability;
- Your independent right to sample and analyze any water supply at your own expense;
- That EQT will utilize an independent laboratory to analyze any sample;
- That you can obtain from the WVDEP a list of water testing laboratories in the subject area capable of and qualified to test water supplies in accordance with standard acceptable methods.

Therefore, EQT offers, at no charge to you, water testing of your water supply(s). Results of these tests will be sent to you upon our receipt from the independent testing laboratory.

Please notify Allegheny Surveys, Inc. at your earliest convenience if you are interested in having your potable water tested. Please have this letter with you at the time of contact so that the well number may be referenced.

Thank you for your cooperation in this matter.

Allegheny Surveys, Inc.  
 237 Birch River Road  
 Birch River, WV 26610  
 (304) 649-8606  
[JWood@alleghenysurveys.com](mailto:JWood@alleghenysurveys.com)

Date: 10/02/2018 Left/sent by: John Wood

EQT Well Number: BIG 464

Re: Wetzel; Grant; 14-45 & 20-1  
 (County; District; Map; Parcels)

\*If you do not have a water well or other non-public water source, please make note of it and include your name and address when you return this sheet.

If you do not feel the need to have your water well, spring, or other non-public water source sampled, please sign on the line below and return to the above address. This will signify that a sample has been offered to the surface owner and has been declined.

Name (please print): EDWARD G. KRZYWICK Address: P.O. Box 709  
BUCKHANNON, WV 26201  
 Phone Number: 304-460-7000 EXT. 136  
 Signature: Edward G. Krzywick Date: 10/5/18

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NOV 14 2018

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 Environmental Protection



To Whom It May Concern:

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- The rebuttable presumption for contamination or deprivation of a fresh water source or supply;
- That refusal to allow the operator to conduct a pre-drilling water well test constitutes a method to rebut the presumption of liability;
- Your independent right to sample and analyze any water supply at your own expense;
- That EQT will utilize an independent laboratory to analyze any sample;
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Please notify Allegheny Surveys, Inc. at your earliest convenience if you are interested in having your potable water tested. Please have this letter with you at the time of contact so that the well number may be referenced.

Thank you for your cooperation in this matter.

Allegheny Surveys, Inc.  
237 Birch River Road  
Birch River, WV 26610  
(304) 649-8606  
JWood@alleghenysurveys.com

Date: 10/02/2018 Left/sent by: John Wood

EQT Well Number: BIG 464

Re: Wetzel; Grant; 14-33  
 (County; District; Map; Parcels)

\*If you do not have a water well or other non-public water source, please make note of it and include your name and address when you return this sheet.

If you do not feel the need to have your water well, spring, or other non-public water source sampled, please sign on the line below and return to the above address. This will signify that a sample has been offered to the surface owner and has been declined.

Name (please print): Barbara L. Conaway Address: 800 Sootherly Rd. Apt. 904  
Towson MD 21286  
 Phone Number: 443-789-8100  
 Signature: Barbara L. Conaway Date: Oct 23, 2018

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 NOV 14 2018  
 WV Department of  
 Environmental Protection

TH: 4702' LAT: 39-35-00

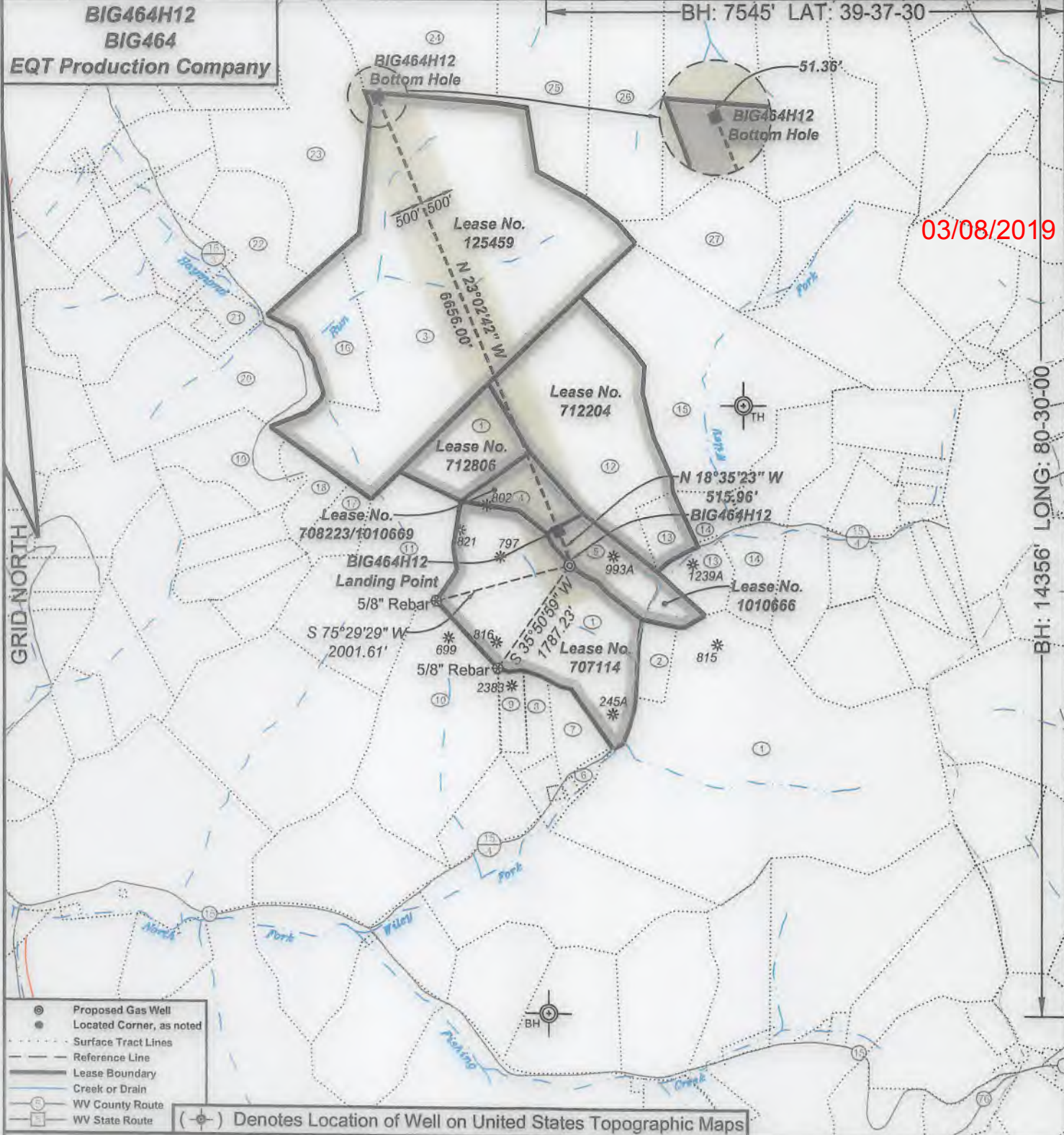
BH: 7545' LAT: 39-37-30

TH: 5762' LONG: 80-30-00

BH: 14356' LONG: 80-30-00

**BIG464H12  
BIG464  
EQT Production Company**

03/08/2019



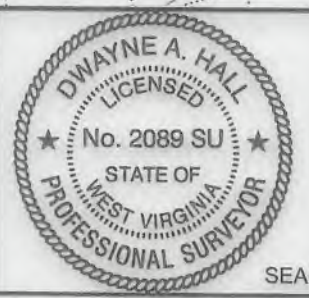
- ⊙ Proposed Gas Well
- Located Corner, as noted
- Surface Tract Lines
- - - Reference Line
- Lease Boundary
- ~ Creek or Drain
- ⊖ WV County Route
- ⊕ WV State Route

(⊙) 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.*

*Dwayne A. Hall*  
P.S. 2089



SEAL

FILE NO: 125-16  
DRAWING NO: 125-16 BIG464H12  
SCALE: 1" = 2000'  
MINIMUM DEGREE OF ACCURACY: 1:2500  
PROVEN SOURCE OF ELEVATION: NGS CORS Station



DATE: October 31 20 18  
OPERATOR'S WELL NO.:  
API WELL NO  
47 - 103 - 03269  
STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
(IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW  
LOCATION: ELEVATION: As Built: 1246.8' WATERSHED Wiley Fork QUADRANGLE: Big Run  
DISTRICT: Grant COUNTY: Wetzel  
SURFACE OWNER: Coastal Forest Resources Company d/b/a Coastal Timberlands Company ACREAGE: 542.5  
ROYALTY OWNER: Ridgetop Royalties LLC, et al LEASE NO: 707114 ACREAGE: 78  
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: 7,419'

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

**BIG464H12**  
**BIG464**  
**EQT Production Company**

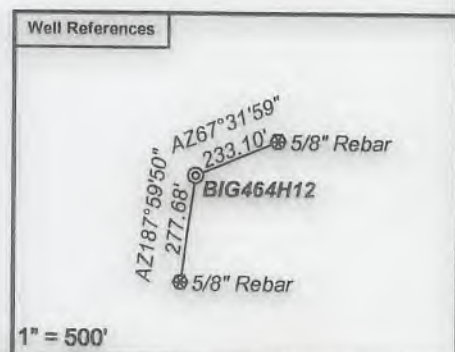
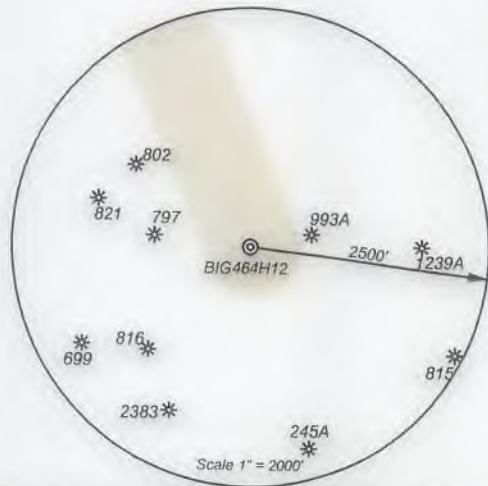
Tract I.D.	Tax Map No.	Parcel No.	County	District	Surface Tract Owner	Acres
1	20	1	Wetzel	Grant	Coastal Forest Resources Co.	542.50
2	15	27	Wetzel	Grant	William J. Barr	10.00
3	14	6	Wetzel	Grant	Coastal Lumber Co.	332.90
4	14	27	Wetzel	Grant	The E. Lorna Howard Trust, LLC, et al.	22.00
5	14	34	Wetzel	Grant	The E. Lorna Howard Trust, LLC, et al.	25.25
6	19	13	Wetzel	Grant	William D. & Mabel F. Barr	2.00
7	14	45	Wetzel	Grant	Coastal Forest Resources Co.	11.06
8	14	44	Wetzel	Grant	Mabel F. Barr	11.00
9	14	43	Wetzel	Grant	Mabel F. Barr	11.01
10	14	42	Wetzel	Grant	Donald J. D'Lusky	111.00
11	14	33	Wetzel	Grant	Atlee & Hilda Conaway	108.00
12	14	20	Wetzel	Grant	Elsie L. Hill Trust	126.50
13	15	16	Wetzel	Grant	Donald J. D'Lusky	25.00
14	15	18	Wetzel	Grant	Donald J. D'Lusky	39.50
15	15	12	Wetzel	Grant	William Bowers, et al.	147.50
16	14	15	Wetzel	Grant	Coastal Forest Resources Co.	26.60
17	14	32	Wetzel	Grant	Mary Jane Byard	13.30
18	14	26	Wetzel	Grant	Mary Jane Byard	14.50
19	14	25	Wetzel	Grant	ET Blue Grass LLC	35.88
20	14	19	Wetzel	Grant	Coastal Forest Resources Co.	138.68
21	14	14	Wetzel	Grant	Mary Yost, et al.	21.40
22	14	5	Wetzel	Grant	Dale K. & Sherry Dulaney	21.50
23	9	61	Wetzel	Grant	Jimbob's Quiet Mountain Retreat	114.10
24	9	38	Wetzel	Grant	Terry L. & Carolyn M. Fry	155.08
25	9	39	Wetzel	Grant	Coastal Forest Resources Co.	128.00
26	10	28	Wetzel	Grant	Coastal Forest Resources Co.	107.00
27	15	5	Wetzel	Grant	William Bowers, et al.	43.20

**Notes:**  
BIG464H12 coordinates are  
NAD 27 N: 390,433.85 E: 1,713,390.85  
NAD 27 Lat: 39.567516 Long: -80.516679  
NAD 83 UTM N: 4,379,878.49 E: 541,531.55  
BIG464H12 Landing Point coordinates are  
NAD 27 N: 390,922.89 E: 1,713,226.37  
NAD 27 Lat: 39.568854 Long: -80.517282  
NAD 83 UTM N: 4,380,026.64 E: 541,478.96  
BIG464H12 Bottom Hole coordinates are  
NAD 27 N: 397,047.73 E: -80.526772  
NAD 27 Lat: 39.585587 Long: -80.526772  
NAD 83 UTM N: 4,381,879.39 E: 540,654.07  
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.

03/08/2019



Lease No.	Acres	Owner
1010666	32	Ridgetop Royalties LLC, et al.
708223/1010669	22.5	W.S. & Mary Furbee
712806	42	W.S. Furbee, et ux.
712204	120	T.J. Glover, et al.
125459	693	Virginia Myers et vir., et al.

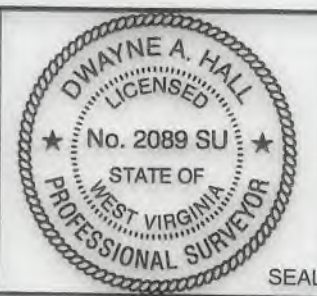


- Proposed Gas Well
- Located Corner, as noted
- Surface Tract Lines
- Reference Line
- Lease Boundary
- Creek or Drain
- WV County Route
- WV State Route



*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.*

*Dwayne A. Hall*  
P.S. 2089



FILE NO: 125-16  
DRAWING NO: 125-16 BIG464H12  
SCALE: 1" = 2000'  
MINIMUM DEGREE OF ACCURACY: 1:2500  
PROVEN SOURCE OF ELEVATION: NGS CORS Station



DATE: October 31 20 18  
OPERATOR'S WELL NO.:  
API WELL NO  
47 - 103 -  
STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
(IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW  
LOCATION: ELEVATION: As Built: 1246.8' WATERSHED Wiley Fork QUADRANGLE: Big Run  
DISTRICT: Grant COUNTY: Wetzel  
SURFACE OWNER: Coastal Forest Resources Company d/b/a Coastal Timberlands Company ACREAGE: 542.5  
ROYALTY OWNER: Ridgetop Royalties LLC, et al LEASE NO: 707114 ACREAGE: 78  
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: 7,419'  
WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Jason Ranson  
ADDRESS: 115 Professional Place PO Box 280 ADDRESS: 115 Professional Place PO Box 280  
Bridgeport, WV 26330 Bridgeport, WV 26330

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

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

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

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

See Attached

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

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

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

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

Well Operator: EQT Production Company  
 By: Erin Spine  
 Its: Regional Land Supervisor

Lease No.	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
<u>707114</u>	<b>Ridgetop Royalties LLC, et al (current royalty owner)</b> W S Furbee, et ux (original lessor) Carnegie Natural Gas Company Carnegie Production Company Equitable Production-Eastern States, Inc. Equitable Production Company	Carnegie Natural Gas Company Carnegie Production Company Equitable Production-Eastern States, Inc. Equitable Production Company EQT Production Company	**	2A/182 78A/513 see attached merger see attached merger 281/346 Doddridge
<u>1010666</u>	Ridgetop Royalties LLC (original lessor)	EQT Production Company	**	166A/638
<u>708223/1010669</u>	<b>Ridgetop Royalties LLC, et al (current royalty owner)</b> W S Furbee, et ux (original lessor) Carnegie Natural Gas Company Carnegie Production Company Equitable Production-Eastern States, Inc. Equitable Production Company	Carnegie Natural Gas Company Carnegie Production Company Equitable Production-Eastern States, Inc. Equitable Production Company EQT Production Company	**	11A/415 78A/513 see attached merger see attached merger 281/346 Doddridge
<u>712806</u>	<b>Ridgetop Royalties LLC, et al (current royalty owner)</b> W S Furbee, et ux (original lessor) Carnegie Natural Gas Company Carnegie Production Company Equitable Production-Eastern States, Inc. Equitable Production Company	Carnegie Natural Gas Company Carnegie Production Company Equitable Production-Eastern States, Inc. Equitable Production Company EQT Production Company	**	21A/84 78A/513 see attached merger see attached merger 281/346 Doddridge
<u>712204</u>	<b>ET Bluegrass, LLC, et al (current royalty owner)</b> T. J. Glover & Daniel Glover (original lessor) Carnegie Natural Gas Company Carnegie Production Company Equitable Production-Eastern States, Inc. Equitable Production Company	Carnegie Natural Gas Company Carnegie Production Company Equitable Production-Eastern States, Inc. Equitable Production Company EQT Production Company	**	19A/380 78A/513 see attached merger see attached merger 281/346 Doddridge
<u>125459</u>	<b>Ronald Hartman, et al (current royalty owner)</b> Virginia Myers, et al Equitable Gas Company Columbia Gas Transmission Corporation Columbia Natural Resources Inc Columbia Natural Resources LLC Chesapeake Appalachia LLC (32.5%) Chesapeake Appalachia LLC (SWN Production Company LLC) Statoil USA Onshore Properties, Inc Antero Exchange Properties LLC	Equitable Gas Company Columbia Gas Transmission Corporation Columbia Natural Resources Inc Columbia Natural Resources LLC Chesapeake Appalachia LLC Statoilhydro USA Onshore Properties Inc Antero Exchange Properties LLC Antero Exchange Properties LLC EQT Production Company	**	47A/16 64A/442 72A/368 12/622 402/446 97A/578 177A/533 177A/738

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

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OSC6:15-1926 (Rev 90)-2

4. (Check, and if appropriate complete, one of the following):

The plan of merger shall be effective upon filing these Articles of Merger in the Department of State.

The plan of merger shall be effective on: December 31, 2000 at 12:15 a.m.  
Date Hour

5. The manner in which the plan of merger was adopted by each domestic corporation is as follows:

Name of Corporation	Manner of Adoption
<u>Carnegie Production Company</u>	<u>Adopted by action of the board of directors of the corporation pursuant to 15 Pa. C. S. Section 1924(b)(2)</u>

6. (Strike out this paragraph if no foreign corporation is a party to the merger). The plan was authorized, adopted or approved, as the case may be, by the foreign business corporation (or each of the foreign business corporations) party to the plan in accordance with the laws of the jurisdiction in which it is incorporated.

7. (Check, and if appropriate complete, one of the following):

The plan of merger is set forth in full in Exhibit A attached hereto and made a part hereof.

Pursuant to 15 Pa.C.S. § 1901 (relating to omission of certain provisions from filed plans) the provisions, if any, of the plan of merger that amend or constitute the operative Articles of Incorporation of the surviving corporation as in effect subsequent to the effective date of the plan are set forth in full in Exhibit A attached hereto and made a part hereof. The full text of the plan of merger is on file at the principal place of business of the surviving corporation, the address of which is:

Number and Street City State Zip County

IN TESTIMONY WHEREOF, the undersigned corporation or each undersigned corporation has caused these Articles of Merger to be signed by a duly authorized officer thereof this 29th day of December, 2000.

Equitable Production - Eastern States, Inc.  
(Name of Corporation)

BY: Johanna S O'Keefe  
(Signature)

TITLE: VP and Corporate Secretary

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Carnegie Production Company  
(Name of Corporation)

BY: [Signature]  
(Signature)

TITLE: VP



**AGREEMENT AND PLAN OF MERGER  
BETWEEN  
EQUITABLE PRODUCTION - EASTERN STATES, INC.  
AND  
CARNEGIE PRODUCTION COMPANY**

AGREEMENT AND PLAN OF MERGER, dated this 29<sup>th</sup> day of December, 2000, pursuant to Section 252 of the General Corporation Law of the State of Delaware and Section 1926 of the Pennsylvania Business Corporation Law of 1938 between Equitable Production - Eastern States, Inc., a Delaware corporation and Carnegie Production Company, a Pennsylvania corporation.

WHEREAS, the constituent corporations desire to merge into a single corporation:

NOW, THEREFORE, the corporations, parties to this Agreement, in consideration of the mutual covenants, agreements and provisions hereinafter contained and intending to be legally bound, do hereby prescribe the terms and conditions of said merger and mode of carrying the same into effect as follows:

FIRST: Effective December 31, 2000, Carnegie Production Company hereby merges into Equitable Production - Eastern States, Inc. and Equitable Production - Eastern States, Inc. shall be the surviving corporation.

SECOND: The Certificate of Incorporation of Equitable Production - Eastern States, Inc. as heretofore amended and is in effect on the date of the merger provided in this Agreement, shall continue in full force and effect as the Certificate of Incorporation of the corporation surviving this merger.

THIRD: The manner of converting the outstanding shares of the common stock of each of the constituent corporations into shares or other securities of the surviving corporation shall be as follows: Each share of common stock of the surviving corporation, Equitable Production - Eastern States, Inc., which is issued and outstanding on the effective date of this Agreement, shall remain issued and outstanding. Each share of common stock of the merged corporation, Carnegie Production Company, shall be cancelled.

FOURTH: The terms and conditions of the merger are as follows:

- (a) The by-laws of the surviving corporation as they shall exist on the effective date of this Agreement shall be and remain the by-laws of the surviving corporation until the same shall be altered, amended and repealed as therein provided.

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- (b) The directors and officers of the surviving corporation shall continue in office until the next annual meeting of stockholders and until their successors shall have been elected and qualified.
- (c) Upon the merger becoming effective, all the property, rights, privileges, franchises, patents, trademarks, licenses, registrations and other assets of every kind and description of the merged corporation shall be transferred to, vested in and devolved upon the surviving corporation without further act or deed and all property, rights, and every other interest of the surviving corporation and the merged corporation shall be effectively the property of the surviving corporations as they were of the surviving corporation and the merged corporation respectively. The merged corporation hereby agrees from time to time, as and when requested by the surviving corporation or by its successors or assigns, to execute and deliver or cause to be executed and delivered all such deeds and instruments and to take or cause to be taken such further or other action as the surviving corporation and may deem to be necessary or desirable in order to vest in and confirm to the surviving corporation title to and possession of any property of the merged corporation acquired or to be acquired by reason of or as a result of the merger herein provided for and otherwise to carry out the intent and purposes hereof and the proper officers and directors of the merged corporation and the proper officers and directors of the surviving corporation are fully authorized in the name of the merged corporation or otherwise to take any and all such action.

IN WITNESS WHEREOF, the parties to this agreement, pursuant to the approval and authority duly given by resolutions adopted by their respective Board of Directors and stockholders have caused these presents to be executed by the officers of each party hereto as the respective act, deed and agreement of said corporations on this 29<sup>th</sup> day of December 2000.

EQUITABLE PRODUCTION -  
EASTERN STATES, INC.

By: *Johanna B O'Keefe*  
VP and Corporate Secretary

CARNEGIE PRODUCTION COMPANY

By: *Henry C. Paul*  
VP

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03/08/2019

PENNSYLVANIA DEPARTMENT OF STATE  
CORPORATION BUREAU  
ROOM 308 NORTH OFFICE BUILDING  
P.O. BOX 8722  
HARRISBURG, PA 17105-8722

315

EQUITABLE PRODUCTION COMPANY

*PA*

THE CORPORATION BUREAU IS HAPPY TO SEND YOU YOUR FILED DOCUMENT.  
PLEASE NOTE THE FILE DATE AND THE SIGNATURE OF THE SECRETARY OF THE  
COMMONWEALTH. THE CORPORATION BUREAU IS HERE TO SERVE YOU AND WANTS  
TO THANK YOU FOR DOING BUSINESS IN PENNSYLVANIA. IF YOU HAVE ANY  
QUESTIONS PERTAINING TO THE CORPORATION BUREAU, CALL (717) 787-1057.

ENTITY NUMBER: 2980374

MICROFILM NUMBER: 2001032

1297-1300

C T CORP SYSTEM  
COUNTER

200132-1297

03/08/2019

APR 30 2001

Microfilm Number \_\_\_\_\_

Filed with the Department of State on \_\_\_\_\_

Entity Number 2980374

*Kim Duggan-John*  
Secretary of the Commonwealth

**ARTICLES OF MERGER-DOMESTIC BUSINESS CORPORATION**

CSCB:15-1926 (Rev 90)

*JD*

In compliance with the requirements of 15 Pa.C.S. § 1926 (relating to articles of merger or consolidation), the undersigned business corporations, desiring to effect a merger, hereby state that:

1. The name of the corporation surviving the merger is: Equitable Production Company

2. (Check and complete one of the following):

The surviving corporation is a domestic business corporation and the (a) address of its current registered office in this Commonwealth or (b) name of its commercial registered office provider and the county of venue is (the Department is hereby authorized to correct the following information to conform to the records of the Department):

(a) \_\_\_\_\_  
Number and Street City State Zip County

(b) c/o: CT Corporation System Allegheny  
Name of Commercial Registered Office Provider County

For a corporation represented by a commercial registered office provider, the county in (b) shall be deemed the county in which the corporation is located for venue and official publication purposes.

\_\_\_\_\_ The surviving corporation is a qualified foreign business corporation incorporated under the laws of \_\_\_\_\_ and the (a) address of its current registered office in this Commonwealth or (b) name of its commercial registered office provider and the county of venue is (the Department is hereby authorized to correct the following information to conform to the records of the Department):

(a) \_\_\_\_\_  
Number and Street City State Zip County

(b) c/o: \_\_\_\_\_  
Name of Commercial Registered Office Provider County

For a corporation represented by a commercial registered office provider, the county in (b) shall be deemed the county in which the corporation is located for venue and official publication purposes.

\_\_\_\_\_ The surviving corporation is a nonqualified foreign business corporation incorporated under the laws of \_\_\_\_\_ and the address of its principal office under the laws of such domiciliary jurisdiction is:

\_\_\_\_\_ Number and Street City State Zip

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Environmental Protection

3. The name and the address of the registered office in this Commonwealth or name of its commercial registered office provider and the county of venue of each other domestic business corporation and qualified foreign business corporation which is a party to the plan of merger are as follows:

Name of Corporation	Address of Registered Office or Name of Commercial Registered Office Provider	County
<u>Equitable Production Company</u>	<u>CT Corporation System</u>	<u>Allegheny</u>
<u>Equitable Production-Eastern States, Inc.</u>	<u>CT Corporation System</u>	<u>Allegheny</u>

DSCB:15-1926 (Rev 90)-2

4. (Check, and if appropriate complete, one of the following):

\_\_\_ The plan of merger shall be effective upon filing these Articles of Merger in the Department of State.

X The plan of merger shall be effective on: April 30, 2001 at \_\_\_\_\_ at \_\_\_\_\_  
Date Hour

5. The manner in which the plan of merger was adopted by each domestic corporation is as follows:

Name of Corporation	Manner of Adoption
<u>Equitable Production Company</u>	<u>Adopted by Board of Directors pursuant to Sec. 1924 of the PA BCL</u>
_____	_____
_____	_____

6. (Strike out this paragraph if no foreign corporation is a party to the merger). The plan was authorized, adopted or approved, as the case may be, by the foreign business corporation (or each of the foreign business corporations) party to the plan in accordance with the laws of the jurisdiction in which it is incorporated.

7. (Check, and if appropriate complete, one of the following):

X The plan of merger is set forth in full in Exhibit A attached hereto and made a part hereof.

\_\_\_ Pursuant to 15 Pa.C.S. § 1901 (relating to omission of certain provisions from filed plans) the provisions, if any, of the plan of merger that amend or constitute the operative Articles of Incorporation of the surviving corporation as in effect subsequent to the effective date of the plan are set forth in full in Exhibit A attached hereto and made a part hereof. The full text of the plan of merger is on file at the principal place of business of the surviving corporation, the address of which is:

Number and Street	City	State	Zip	County
_____	_____	_____	_____	_____

IN TESTIMONY WHEREOF, the undersigned corporation or each undersigned corporation has caused these Articles of Merger to be signed by a duly authorized officer thereof this 26th day of April, 2001.

Equitable Production Company  
(Name of Corporation)

BY: Henry E. Reich  
Henry E. Reich, J (Signature)

TITLE: Vice President

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Equitable Production - Eastern States Energy  
(Name of Corporation) WV Department of Environmental Protection

BY: Johanna G. O'Loughlin  
Johanna G. O'Loughlin (Signature)

TITLE: Corporate Secretary

**AGREEMENT AND PLAN OF MERGER**  
**BETWEEN**  
**EQUITABLE PRODUCTION – EASTERN STATES, INC.**  
**AND**  
**EQUITABLE PRODUCTION COMPANY**

AGREEMENT AND PLAN OF MERGER, dated this 30<sup>th</sup> day of April 2001, pursuant to Section 251 of the General Corporation Law of the State of Delaware between Equitable Production – Eastern States, Inc., a Delaware corporation, and Equitable Production Company, a Pennsylvania corporation.

WHEREAS, the constituent corporations desire to merge into a single corporation.

NOW, THEREFORE, the corporations, parties to this Agreement, in consideration of the mutual covenants, agreements and provisions hereinafter contained, do hereby prescribe the terms and conditions of said merger and mode of carrying the same into effect as follows:

FIRST: Effective on April 30, 2001, Equitable Production Company hereby merges into itself Equitable Production – Eastern States, Inc., and Equitable Production Company shall be the surviving corporation.

SECOND: The Articles of Incorporation of Equitable Production Company as heretofore amended and as in effect on the date of the merger provided in this Agreement, shall continue in full force and effect as the Articles of Incorporation of the corporation surviving this merger.

THIRD: The outstanding shares of the capital stock of Equitable Production – Eastern States, Inc. shall be cancelled as of the effective date of the merger pursuant to this Agreement and no new shares issued therefor.

FOURTH: The terms and conditions of the merger are as follows:

- (a) The by-laws of the surviving corporation as they shall exist on the effective date of this Agreement shall be and remain the by-laws of the surviving corporation until the same shall be altered, amended and repealed as therein provided.
- (b) The directors and officers of the surviving corporation shall continue in office until the next annual meeting of the shareholders

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WV Department of  
Environmental Protection

and until their successors shall have been elected and qualified.

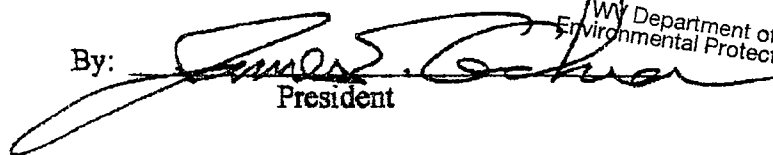
- (c) Upon the merger becoming effective, all the property, rights, privileges, franchises, patents, trademarks, licenses, registrations and other assets of every kind and description of the merged corporation shall be transferred to, vested in and devolved upon the surviving corporation without further act or deed and all property, rights, and every other interest of the surviving corporation and the merged corporation shall be effectively the property of the surviving corporation as they were of the surviving and the merged corporations, respectively. The merged corporation hereby agrees from time to time, as and when requested by the surviving corporation or by its successors or assigns, to execute and deliver or cause to be executed and delivered all such deeds and instruments and to take or cause to be taken such further or other action as the surviving corporation may deem to be necessary or desirable in order to vest in and confirm to the surviving corporation title to and possession of any property of the merged corporation acquired or to be acquired by reason of or as a result of the merger herein provided for and otherwise to carry out the intent and purposes hereof and the proper officers and directors of the merged corporation and the proper officers and directors of the surviving corporation are fully authorized in the name of the merged corporation or otherwise to take any and all such action.

IN WITNESS WHEREOF, the parties to this agreement, pursuant to the approval and authority duly given by resolutions adopted by their Board of Directors have caused these presents to be executed by the President of each party hereto as the respective act, deed and agreement of said corporations on this 30<sup>th</sup> day of April 2001.

ATTEST:

EQUITABLE PRODUCTION -  
EASTERN STATES, INC.

  
Corporate Secretary

By:   
President

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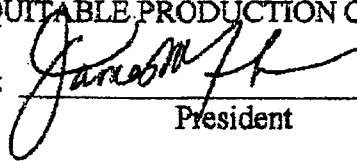
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Environmental Protection

ATTEST:

EQUITABLE PRODUCTION COMPANY

  
Corporate Secretary

By:   
President

03/08/2019

COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF STATE

APRIL 30, 2001

TO ALL WHOM THESE PRESENTS SHALL COME, GREETING:

EQUITABLE PRODUCTION COMPANY

I, Kim Pizzingrilli, Secretary of the Commonwealth of Pennsylvania do hereby certify that the foregoing and annexed is a true and correct photocopy of Articles of Merger

which appear of record in this department



IN TESTIMONY WHEREOF, I have hereunto set my hand and caused the Seal of the Secretary's Office to be affixed, the day and year above written.

*Kim Pizzingrilli*

Secretary of the Commonwealth

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47 1 0 3 0 3 2 0 19

October 17, 2018

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

Re: BIG464 well pad, well numbers BIG464H12, BIG464H25,  
Grant District, Wetzel County

Dear Mr. Brewer,

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 'Erin Spine'.

Erin Spine  
Regional Land Supervisor

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

Date of Notice Certification: 11/8/18

API No. 47- 103 - \_\_\_\_\_  
Operator's Well No. BIG464H12  
Well Pad Name: BIG464

**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>541,531.55</u>
County: <u>Wetzel</u>		Northing: <u>4,379,878.49</u>
District: <u>Grant</u>	Public Road Access: <u>Rt. 250</u>	
Quadrangle: <u>Big Run</u>	Generally used farm name: <u>Coastal Forest Resources Co. d/b/a Coastal Timberlands Co.</u>	
Watershed: <u>Wiley Fork</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><b>OOG OFFICE USE ONLY</b></p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p>
<p>RECEIVED Office of Oil and Gas NOV 14 2018</p>	

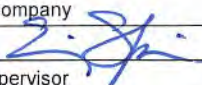
WV Department of  
Environmental Protection

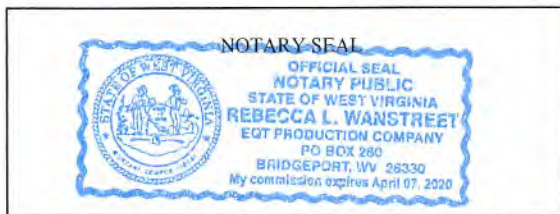
**Required Attachments:**

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

Well Operator:	<u>EQT Production Company</u>	Address:	<u>2400 Ansys Drive- Suite 200</u>
By:	<u>Erin Spine</u> 		<u>Canonsburg PA 15317</u>
Its:	<u>Regional Land Supervisor</u>	Facsimile:	<u>304-848-0041</u>
Telephone:	<u>304-848-0035</u>	Email:	<u>espine@eqt.com</u>



Subscribed and sworn before me this 8 day of November 2018.  
Rebecca L. Wanstreet Notary Public  
 My Commission Expires 4-7-2020

**Oil and Gas Privacy Notice:**

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

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

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

**Date of Notice:** 11/14/18 **Date Permit Application Filed:** 11/14/18

**Notice of:**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

\*Please attach additional forms if necessary

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03/08/2019

**Surface Owners:**

Coastal Forest Resources Co  
DBA Coastal Timberlands Co  
PO Box 709  
Buckhannon WV 26201

ET Bluegrass  
625 Liberty Ave Suite 1700  
Pittsburgh PA 15222

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Environmental Protection

**Surface Owners: Access Road**

Coastal Forest Resources Co  
DBA Coastal Timberlands Co  
PO Box 709  
Buckhannon WV 26201

ET Bluegrass  
625 Liberty Ave Suite 1700  
Pittsburgh PA 15222

Robert E Tonkery  
33 Tonkery Dr  
Fairmont WV 26554

Beverly Hickman  
132 Joes Run Rd  
Morgantown WV 26508

Paul Glover  
15861 Rt. 301  
LaGrange OH 44050

Raymond Teagarden  
718 Evans Run Rd  
Mannington WV 26582

David A Floyd & Diane E Floyd  
12 Emily Ct  
Fairmont WV 26554

Keith & Rita Powell  
3898 Buffalo Brink Rd  
Mannington WV 26582

Paul Able Trustee et al  
PO Box 54  
New Martinsville WV 26155

William J & Beverly L Barr  
1044 Barr Road  
Smithfield WV 26437

Donald & Diana White  
5017 Husky Hwy  
Mannington WV 26582

Rich Rager  
4620 Simpson Road  
Grafton WV 26354

Timothy E Titus  
7335 Willey Fork Rd  
Burton WV 26562

Higgins Family Trust  
Billy James Higgins  
531 Franklin Terrace  
Washington PA 15301

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**Surface Owners: AST**

Coastal Forest Resources Co  
DBA Coastal Timberlands Co  
PO Box 709  
Buckhannon WV 26201

ET Bluegrass  
625 Liberty Ave Suite 1700  
Pittsburgh PA 15222

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**Coal Owners:**

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

Patrick Beatty  
7755 Grant Creek Road  
Missoula MT 59808

Consol Mining Company  
Engineering Operations Support Dept Coal  
1000 Consol Energy Dr  
Canonsburg PA 15317

CNX Gas Company LLC  
1000 Consol Energy Dr  
Canonsburg PA 15317

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DBA Coastal Timberlands Co  
PO Box 709  
Buckhannon WV 26201

Jackson T Beatty  
1408 Roblar Street  
Paraground AK 72450

James F Beatty Trust  
314 Washington Street  
East Charleston WV 25301

SBK or SKB Mineral Interest LLC  
3606 Pruetts Chapel Road  
Paraground AK 72450

Scott T Beatty  
1003 St Johns Drive  
Charlevoix MI 49720

Ann Beatty Reynolds  
PO Box 5  
Elkview WV 25071

Joe P Beatty Jr.  
818 Cabin John Parkway  
Rockville MD 20852

William F Beatty  
83 Cozy Mountain Lane  
Weaverville NC 28787



**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 water purveyor that he or she can obtain from the Chief a list of water testing laboratories in the subject area capable of and qualified to test water supplies in accordance with standard acceptable methods.

Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

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**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

WV Department of  
Environmental Protection

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 supply unless authorized to do so by the secretary or a court of competent jurisdiction.

**Written Comment:**

Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written comments with the secretary as to the location or construction of the applicant's proposed well work within thirty days after the application is filed with the secretary. All persons described in West Virginia Code § 22-6A-10(b) may file written comments as to the location or construction of the applicant's proposed well work to the Secretary at:

Chief, Office of Oil and Gas  
Department of Environmental Protection  
601 57<sup>th</sup> St. SE  
Charleston, WV 25304  
(304) 926-0450

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.**

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

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

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

**Comment Requirements**

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

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

**Permit Denial or Condition**

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

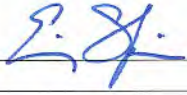
- (1) The proposed well work will constitute a hazard to the safety of persons;
- (2) The plan for soil erosion and sediment control is not adequate or effective;
- (3) Damage would occur to publicly owned lands or resources; or
- (4) The proposed well work fails to protect fresh water sources or supplies.

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

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

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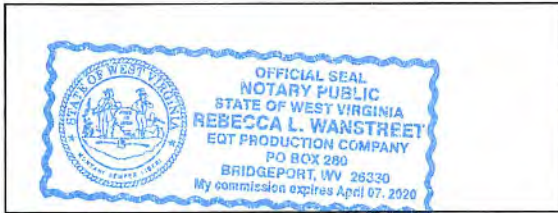
**Notice is hereby given by:**

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

Address: 2400 Ansys Drive - Suite 200  
Canonsburg PA 15317  
Facsimile: 304-848-0041

**Oil and Gas Privacy Notice:**

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



Subscribed and sworn before me this 8 day of November 2018.  
Rebecca L. Wanstreet Notary Public  
My Commission Expires 4-7-2020

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WV Department of  
Environmental Protection

Topo Quad: Big Run 7.5'

Scale: 1" = 1000'

03/08/2019

County: Wetzel

Date: October 26, 2018

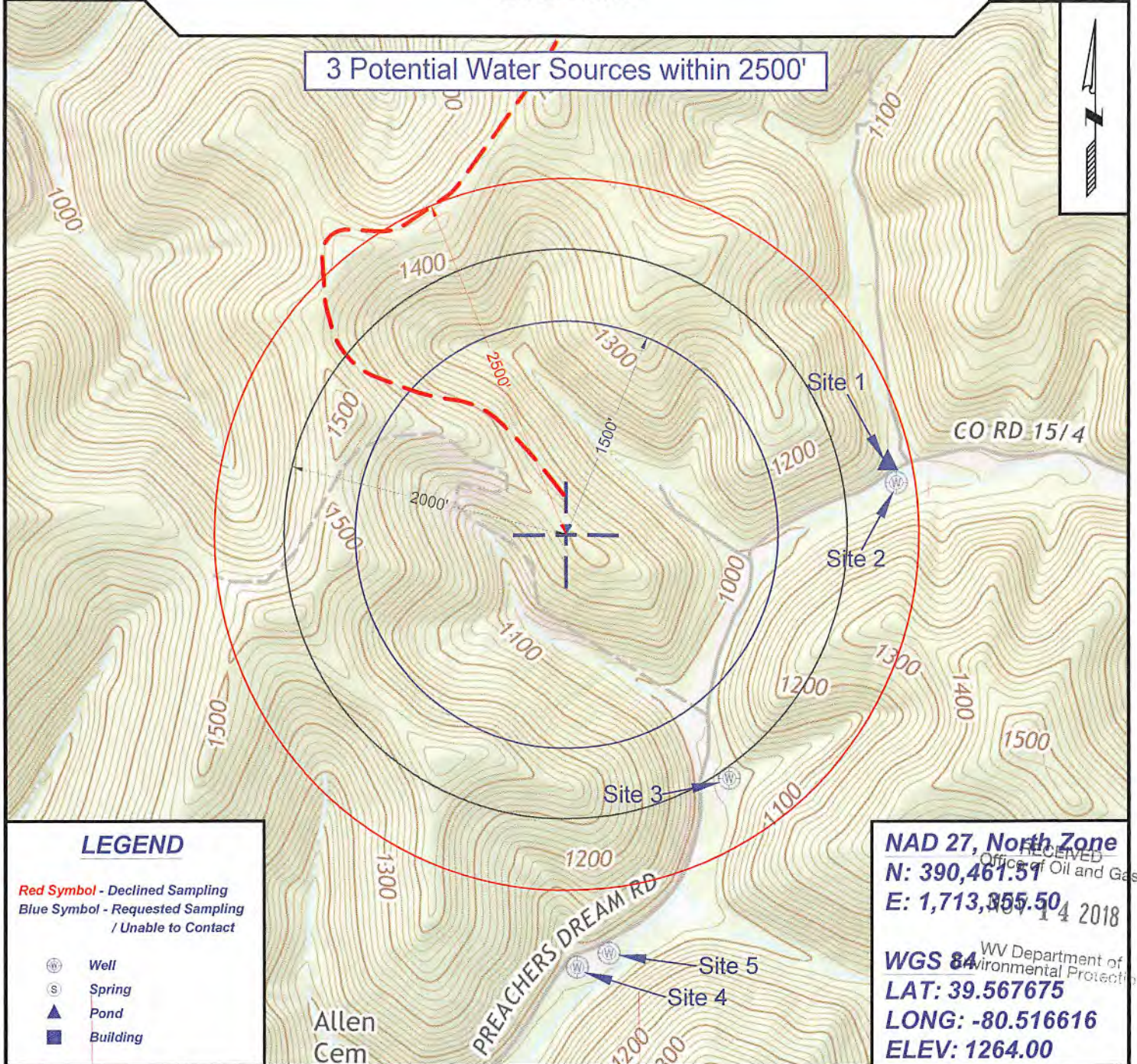
District: Grant

Project No: 125-34-G-16

Water

# BIG 464

3 Potential Water Sources within 2500'



### LEGEND

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

- Well
- Spring
- Pond
- Building

NAD 27, North Zone  
 N: 390,461.51  
 E: 1,713,355.50  
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WGS 84  
 LAT: 39.567675  
 LONG: -80.516616  
 ELEV: 1264.00  
 WV Department of Environmental Protection



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

03/08/2019

**Surface Owners:**

Coastal Forest Resources Co  
DBA Coastal Timberlands Co  
PO Box 709  
Buckhannon WV 26201

ET Bluegrass  
625 Liberty Ave Suite 1700  
Pittsburgh PA 15222

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**Surface Owners: Access Road**

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Fairmont WV 26554

Beverly Hickman  
132 Joes Run Rd  
Morgantown WV 26508

Paul Glover  
15861 Rt. 301  
LaGrange OH 44050

Raymond Teagarden  
718 Evans Run Rd  
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David A Floyd & Diane E Floyd  
12 Emily Ct  
Fairmont WV 26554

Keith & Rita Powell  
3898 Buffalo Brink Rd  
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PO Box 54  
New Martinsville WV 26155

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Smithfield WV 26437

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Mannington WV 26582

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4620 Simpson Road  
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Billy James Higgins  
531 Franklin Terrace  
Washington PA 15301

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**Surface Owners: AST**

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East Charleston WV 25301

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Rockville MD 20852

William F Beatty  
83 Cozy Mountain Lane  
Weaverville NC 28787

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STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
**VOLUNTARY STATEMENT OF NO OBJECTION**

**Instructions to Persons Named on Page WW-6A**

The well operator named on page WW-6A is applying for a permit from the State of West Virginia to conduct oil or gas well work. Well work permits are valid for twenty-four (24) months. Please contact the listed well operator and the Office of Oil and Gas if you do not own any interest in the listed surface tract.

**Comment and Waiver Provisions**

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.

Pursuant to West Virginia Code § 22-6A-8(b) No permit may be issued less than thirty days after the filing date of the application for any well work except plugging or replugging; and no permit for plugging or replugging may be issued less than five days after the filing date of the application except a permit for plugging or replugging a dry hole: *Provided*, That if the applicant certifies that all persons entitled to notice of the application under the provisions of subsection (b), section ten of this article have been served in person or by certified mail, return receipt requested, with a copy of the well work application, including the erosion and sediment control plan, if required, and the well plat, and further files written statements of no objection by all such persons, the secretary may issue the well work permit at any time.

**VOLUNTARY STATEMENT OF NO OBJECTION**

I, Jason Ranson, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through \_\_\_\_\_, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

State: <u>WV</u>	UTM NAD 83	Easting: <u>541,531.55</u>
County: <u>Wetzel</u>		Northing: <u>4,379,878.49</u>
District: <u>Grant</u>	Public Road Access: <u>Rt. 250</u>	
Quadrangle: <u>Big Run</u>	Generally used farm name: <u>Coastal Forest Resources Co. d/b/a Coastal Timberlands Co.</u>	
Watershed: <u>Wiley Fork</u>		

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

\*Please check the box that applies

- SURFACE OWNER
- SURFACE OWNER (Road and/or Other Disturbance)
- SURFACE OWNER (Impoundments/Pits)
- COAL OWNER OR LESSEE
- COAL OPERATOR
- WATER PURVEYOR
- OPERATOR OF ANY NATURAL GAS STORAGE FIELD

**FOR EXECUTION BY A NATURAL PERSON**

Signature: \_\_\_\_\_  
Print Name: \_\_\_\_\_  
Date: \_\_\_\_\_

**FOR EXECUTION BY A CORPORATION, ETC.**

Company: ET Bluegrass LLC  
By: Jason Ranson  
Its: Director Drilling-Land

Signature: [Signature]  
Date: 10-21-18

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Environmental Protection

**Oil and Gas Privacy Notice:**

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

**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:** 10/12/2018      **Date Permit Application Filed:** 10/22/2018

**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: <u>WV</u>	UTM NAD 83 Easting: <u>541,531.55</u>
County: <u>Wetzel</u>	Northing: <u>4,379,878.49</u>
District: <u>Grant</u>	Public Road Access: <u>Rt. 250</u>
Quadrangle: <u>Big Run</u>	Generally used farm name: <u>Coastal Forest Resources Co. d/b/a Coastal Timberlands Co.</u>
Watershed: <u>Wiley Fork</u>	

**This Notice Shall Include:**

Pursuant to West Virginia Code § 22-6A-16(b), this notice shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

**Notice is hereby given by:**

Well Operator: EQT Production Company  
Address: 2400 Ansys Drive- Suite 200  
Canonsburg PA 15317  
Telephone: 304-848-0035  
Email: espine@eqt.com  
Facsimile: 304-848-0041

Authorized Representative: Erin Spine  
Address: 2400 Ansys Drive - Suite 200  
Canonsburg PA 15317  
Telephone: 304-848-0035  
Email: espine@eqt.com  
Facsimile: 304-848-0041

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WV Department of  
Environmental Protection

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03/08/2019

**Surface Owners:**

Coastal Forest Resources Co  
DBA Coastal Timberlands Co  
PO Box 709  
Buckhannon WV 26201

ET Bluegrass  
625 Liberty Ave Suite 1700  
Pittsburgh PA 15222

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Environmental Protection

**Surface Owners: Access Road**

Coastal Forest Resources Co  
DBA Coastal Timberlands Co  
PO Box 709  
Buckhannon WV 26201

ET Bluegrass  
625 Liberty Ave Suite 1700  
Pittsburgh PA 15222

Robert E Tonkery  
33 Tonkery Dr  
Fairmont WV 26554

Beverly Hickman  
132 Joes Run Rd  
Morgantown WV 26508

Paul Glover  
15861 Rt. 301  
LaGrange OH 44050

Raymond Teagarden  
718 Evans Run Rd  
Mannington WV 26582

David A Floyd & Diane E Floyd  
12 Emily Ct  
Fairmont WV 26554

Keith & Rita Powell  
3898 Buffalo Brink Rd  
Mannington WV 26582

Paul Able Trustee et al  
PO Box 54  
New Martinsville WV 26155

William J & Beverly L Barr  
1044 Barr Road  
Smithfield WV 26437

Donald & Diana White  
5017 Husky Hwy  
Mannington WV 26582

Rich Rager  
4620 Simpson Road  
Grafton WV 26354

Timothy E Titus  
7335 Willey Fork Rd  
Burton WV 26562

Higgins Family Trust  
Billy James Higgins  
531 Franklin Terrace  
Washington PA 15301

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WV Department of  
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03/08/2019

**Surface Owners: AST**

Coastal Forest Resources Co  
DBA Coastal Timberlands Co  
PO Box 709  
Buckhannon WV 26201

ET Bluegrass  
625 Liberty Ave Suite 1700  
Pittsburgh PA 15222

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Environmental Protection

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

**WAIVER**

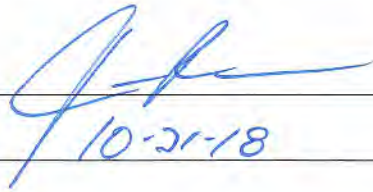
Pursuant to W. Va. Code § 22-6A-16(b), at least ten days prior to filing a permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner notice of its intent to enter upon the surface owner's land for the purpose of drilling a horizontal well: *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.

**Surface Owner Waiver:**

I, Jason Ranson, Director Drilling-Land, hereby state that I have read the notice provisions listed above and hereby waive the notice requirements under West Virginia Code § 22-6A-16(b) for the tract of land as follows:

State:	<u>WV</u>	UTM NAD 83	Easting:	<u>541,531.55</u>
County:	<u>Wetzel</u>		Northing:	<u>4,379,878.49</u>
District:	<u>Grant</u>	Public Road Access:		<u>Rt. 250</u>
Quadrangle:	<u>Big Run</u>	Generally used farm name:		<u>Coastal Forest Resources Co. d/b/a Coastal Timberlands Co.</u>
Watershed:	<u>Wiley Fork</u>			

Name: ET Bluegrass LLC  
Address: 625 Liberty Ave Suite 1700  
Pittsburgh PA 15222

Signature:   
Date: 10-21-18

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Environmental Protection





03/08/2019

**Surface Owners:**

Coastal Forest Resources Co  
DBA Coastal Timberlands Co  
PO Box 709  
Buckhannon WV 26201

ET Bluegrass  
625 Liberty Ave Suite 1700  
Pittsburgh PA 15222

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**Surface Owners: Access Road**

Coastal Forest Resources Co  
DBA Coastal Timberlands Co  
PO Box 709  
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33 Tonkery Dr  
Fairmont WV 26554

Beverly Hickman  
132 Joes Run Rd  
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718 Evans Run Rd  
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03/08/2019

**Surface Owners: AST**

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DBA Coastal Timberlands Co  
PO Box 709  
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Pittsburgh PA 15222

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WV Department of  
Environmental Protection

**STATE OF WEST VIRGINIA**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS**  
**VOLUNTARY STATEMENT OF NO OBJECTION**

**Instructions to Persons Named on Page WW-6A**

The well operator named on page WW-6A is applying for a permit from the State of West Virginia to conduct oil or gas well work. Well work permits are valid for twenty-four (24) months. Please contact the listed well operator and the Office of Oil and Gas if you do not own any interest in the listed surface tract.

**Comment and Waiver Provisions**

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.

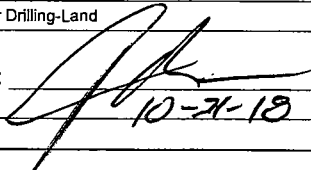
Pursuant to West Virginia Code § 22-6A-8(b) No permit may be issued less than thirty days after the filing date of the application for any well work except plugging or replugging; and no permit for plugging or replugging may be issued less than five days after the filing date of the application except a permit for plugging or replugging a dry hole: *Provided*, That if the applicant certifies that all persons entitled to notice of the application under the provisions of subsection (b), section ten of this article have been served in person or by certified mail, return receipt requested, with a copy of the well work application, including the erosion and sediment control plan, if required, and the well plat, and further files written statements of no objection by all such persons, the secretary may issue the well work permit at any time.

**VOLUNTARY STATEMENT OF NO OBJECTION**

I, Jason Ranson, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through \_\_\_\_\_, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

State: <u>WV</u>	UTM NAD 83 Easting: <u>541,531.55</u>
County: <u>Wetzel</u>	UTM NAD 83 Northing: <u>4,379,878.49</u>
District: <u>Grant</u>	Public Road Access: <u>Rt. 250</u>
Quadrangle: <u>Big Run</u>	Generally used farm name: <u>Coastal Forest Resources Co. d/b/a Coastal Timberlands Co.</u>
Watershed: <u>Wiley Fork</u>	

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

<p>*Please check the box that applies</p> <p><input checked="" type="checkbox"/> SURFACE OWNER</p> <p><input checked="" type="checkbox"/> SURFACE OWNER (Road and/or Other Disturbance)</p> <p><input checked="" type="checkbox"/> SURFACE OWNER (Impoundments/Pits)</p> <p><input type="checkbox"/> COAL OWNER OR LESSEE</p> <p><input type="checkbox"/> COAL OPERATOR</p> <p><input type="checkbox"/> WATER PURVEYOR</p> <p><input type="checkbox"/> OPERATOR OF ANY NATURAL GAS STORAGE FIELD</p>	<p style="text-align: right;"><b>RECEIVED</b> Office of Oil and Gas <b>NOV 14 2018</b></p> <p><b>FOR EXECUTION BY A NATURAL PERSON</b></p> <p>Signature: _____</p> <p>Print Name: _____</p> <p>Date: _____</p> <p style="text-align: right;"><b>WV Department of Environmental Protection</b></p> <p><b>FOR EXECUTION BY A CORPORATION, ETC.</b></p> <p>Company: <u>ET Bluegrass LLC</u></p> <p>By: <u>Jason Ranson</u></p> <p>Its: <u>Director Drilling-Land</u></p> <p>Signature: </p> <p>Date: <u>10-27-18</u></p>
--	---

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WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
**Division of Highways**

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

Jim Justice  
Governor

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

Revised November 7, 2018

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

Subject: DOH Permit for the BIG 464 Pad Site, Marion County

BIG464H12  
BIG464H25

Dear Mr. Martin,

This well site will be accessed from Permit # 04-2014-0722 transferred to EQT Production Company and the haul route revised for access to the State Road. The well site is located off of Marion County Route 1 SLS.

The operator has signed a STATEWIDE OIL AND GAS ROAD MAINTENANCE BONDING AGREEMENT and provided the required Bond. This operator is currently in compliance with the DOH OIL AND GAS POLICY dated January 3, 2012.

Very Truly Yours,

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

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NOV 14 2018

WV Department of  
Environmental Protection

Cc: Nick Bumgardner  
EQT Production Company  
CH, OM, D-4, File

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

03/08/2019

<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		

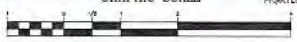
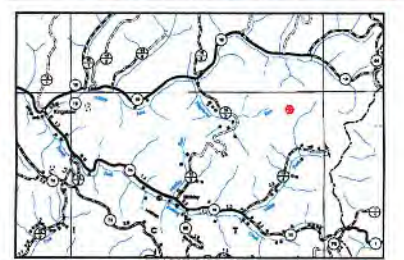
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WV Department of  
Environmental Protection

# BIG 464 WELL PAD FINAL SITE DESIGN AS-BUILT COVER SHEET/LOCATION MAPS

West Virginia Coordinate System of 1983  
State Plane Grid North  
Elevations NAVD83  
Established By Survey Grade GPS



FLOODPLAIN CONDITIONS	
DO SITE CONSTRUCTION ACTIVITIES TAKE PLACE IN FLOODPLAIN:	NO
PERMIT NEEDED FROM COUNTY FLOODPLAIN COORDINATOR:	NO
HEC-RAS STUDY COMPLETED:	NO
FLOODPLAIN SHOWN ON DRAWINGS:	NO
FRM MAP NUMBER(S) FOR SITE:	54049C006S0 - 54103C002S0 - 54103C022S0
ACREAGES OF CONSTRUCTION IN FLOODPLAIN:	N.A.



**AS-DESIGNED WELL LEGEND**

BIG464H1-	LAT: 39.567951 / LONG: -80.516795
BIG464H2-	LAT: 39.567919 / LONG: -80.516767
BIG464H3-	LAT: 39.567887 / LONG: -80.516740
BIG464H4-	LAT: 39.567855 / LONG: -80.516712
BIG464H5-	LAT: 39.567823 / LONG: -80.516684
BIG464H6-	LAT: 39.567791 / LONG: -80.516656
BIG464H7-	LAT: 39.567759 / LONG: -80.516628
BIG464H8-	LAT: 39.567727 / LONG: -80.516601
BIG464H9-	LAT: 39.567695 / LONG: -80.516573
BIG464H10-	LAT: 39.567664 / LONG: -80.516545
BIG464H11-	LAT: 39.567632 / LONG: -80.516517
BIG464H12-	LAT: 39.567600 / LONG: -80.516490
47-103-03211-	LAT: 39.567568 / LONG: -80.516462
47-103-03212-	LAT: 39.567536 / LONG: -80.516434
BIG464H15-	LAT: 39.567502 / LONG: -80.516406
BIG464H16-	LAT: 39.567471 / LONG: -80.516378
BIG464H17-	LAT: 39.567439 / LONG: -80.516350
BIG464H18-	LAT: 39.567407 / LONG: -80.516322
BIG464H19-	LAT: 39.567375 / LONG: -80.516294
BIG464H20-	LAT: 39.567343 / LONG: -80.516266
BIG464H21-	LAT: 39.567311 / LONG: -80.516238
BIG464H22-	LAT: 39.567279 / LONG: -80.516210
BIG464H23-	LAT: 39.567247 / LONG: -80.516182
BIG464H24-	LAT: 39.567215 / LONG: -80.516154
BIG464H25-	LAT: 39.567183 / LONG: -80.516126
47-103-03213-	LAT: 39.567151 / LONG: -80.516098
47-103-03214-	LAT: 39.567119 / LONG: -80.516070
47-103-03215-	LAT: 39.567087 / LONG: -80.516042

**SHEET INDEX**

COVER SHEET / LOCATION MAP	1
AS-BUILT SITE PLAN	2-23
ACCESS ROAD PROFILES	24-27

**AS-BUILT MATERIAL QUANTITIES**

ITEM DESCRIPTION	DESIGN QTY	UNIT	AS-BUILT QTY
Clearing and Grubbing	925.43	AC	123.78
12" Silt Sock	0	LF	3,384
24" Silt Sock	29,823	LF	25,470
12" Dia. HDPE Culvert Pipe	0	LF	75
15" Dia. HDPE Culvert Pipe	643	LF	1,075
18" Dia. HDPE Culvert Pipe	342	LF	560
24" Dia. HDPE Culvert Pipe	312	LF	1,126
30" Dia. HDPE Culvert Pipe	315	LF	334
36" Dia. HDPE Culvert Pipe	0	LF	175
Erosion Control Matting	139,442	SY	0
Straw Wattle	21,816	LF	19,177
Silt Fence	0	LF	790
Super Silt Fence	358	LF	922
Toe Key Drain Pipe	24,749	LF	25,792
Toe Key Outlet Pipe	7,320	LF	15,175

**GRADING VOLUMES COMPARISON TABLE**

DESCRIPTION	DESIGN GRADING VOLUMES			AS-BUILT GRADING VOLUMES		
	CUT (CY)	FILL (CY)	NET (CY)	CUT (CY)	FILL (CY)	NET (CY)
MAIN ACCESS ROAD	56,384	213,381	-156,997	240,339	249,482	-109,123
WELL PAD	258,756	12,463	246,293	236,590	10,906	225,684
60,000 BBL ABOVEGROUND STORAGE TANK (AST) PAD	14,230	21,301	-7,071	13,460	21,332	-7,872
40,000 BBL ABOVEGROUND STORAGE TANK (AST) PAD	56,516	2,133	54,383	54,755	2,602	52,153
40,000 BBL AST ACCESS ROAD	11,788	133	11,655	9,490	19	9,471
60,000 BBL AST ACCESS ROAD	0	2,594	-2,594	0	2,976	-2,976
EXCESS MATERIAL STOCKPILE	0	143,669	-143,669	0	201,335	-201,335
TOPSOIL STOCKPILES	62,915	0	62,915	62,939	0	62,939
TOTAL	458,589	395,674	62,915	517,593	488,652	78,941

**As-Built Certification**  
These drawings have been prepared high density 3D scan data provided by Allegheny Surveys, Inc. on 10/2/2018 and reflect the location and as-built conditions known to exist following construction of this site, to the best of my knowledge.

DATE	REVISIONS	DATE
10/2/2018	ADDED AS-BUILT WELL PAD NUMBERS	06/14/2018

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!!**

**Know what's below. Call before you dig.**

**BIG 464 SITE LOCATIONS**

NO	EASTING	NORTHING
Center of Well Pad	39 567951	-80 516795
Center of 60,000 BBL AST Pad	39 567919	-80 516767
Center of 40,000 BBL AST Pad	39 567887	-80 516740
Site 40,000 BBL Access	39 567855	-80 516712
Site 60,000 BBL Access	39 567823	-80 516684
Site 40,000 BBL Access	39 567791	-80 516656
Site 40,000 BBL Access	39 567759	-80 516628
Site 40,000 BBL Access	39 567727	-80 516601



Allegheny Surveys, Inc.  
P.O. Box 438  
237 Birch River Road  
Birch River, WV 26610  
304-669-8606



**Hornor**  
Since 1902  
Bros. Engineers  
Mining, Environmental and  
Civil  
100 South New Street, 10th Floor, Box 800  
Martinsburg, West Virginia 26001 (304) 263-4444



THIS DOCUMENT  
PREPARED FOR  
EQT PRODUCTION  
COMPANY

AS-BUILT COVER SHEET / LOCATION MAP  
**BIG 464**  
**WELL PAD SITE**  
GRANT DISTRICT WELZEL COUNTY, WV  
MANNINGTON DISTRICT MARIOTT COUNTY, WV

DATE: 06/14/2018  
Scale: N.A.  
Designed by: TBC  
File No.: 101046427  
Page: 1 of 27

# BIG 464 WELL PAD AS BUILT SITE PLAN



All geographic information shown herein is based on high density 3D scan data provided by Allegheny Surveys, Inc. on 5/5/18



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



Hornor  
James R. Broderick, P.E.  
Civil, Mining, Environmental and  
Consulting Engineering  
105 Lake Park Road, Suite 200  
Martinsburg, WV 26151



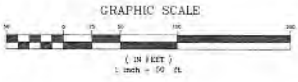
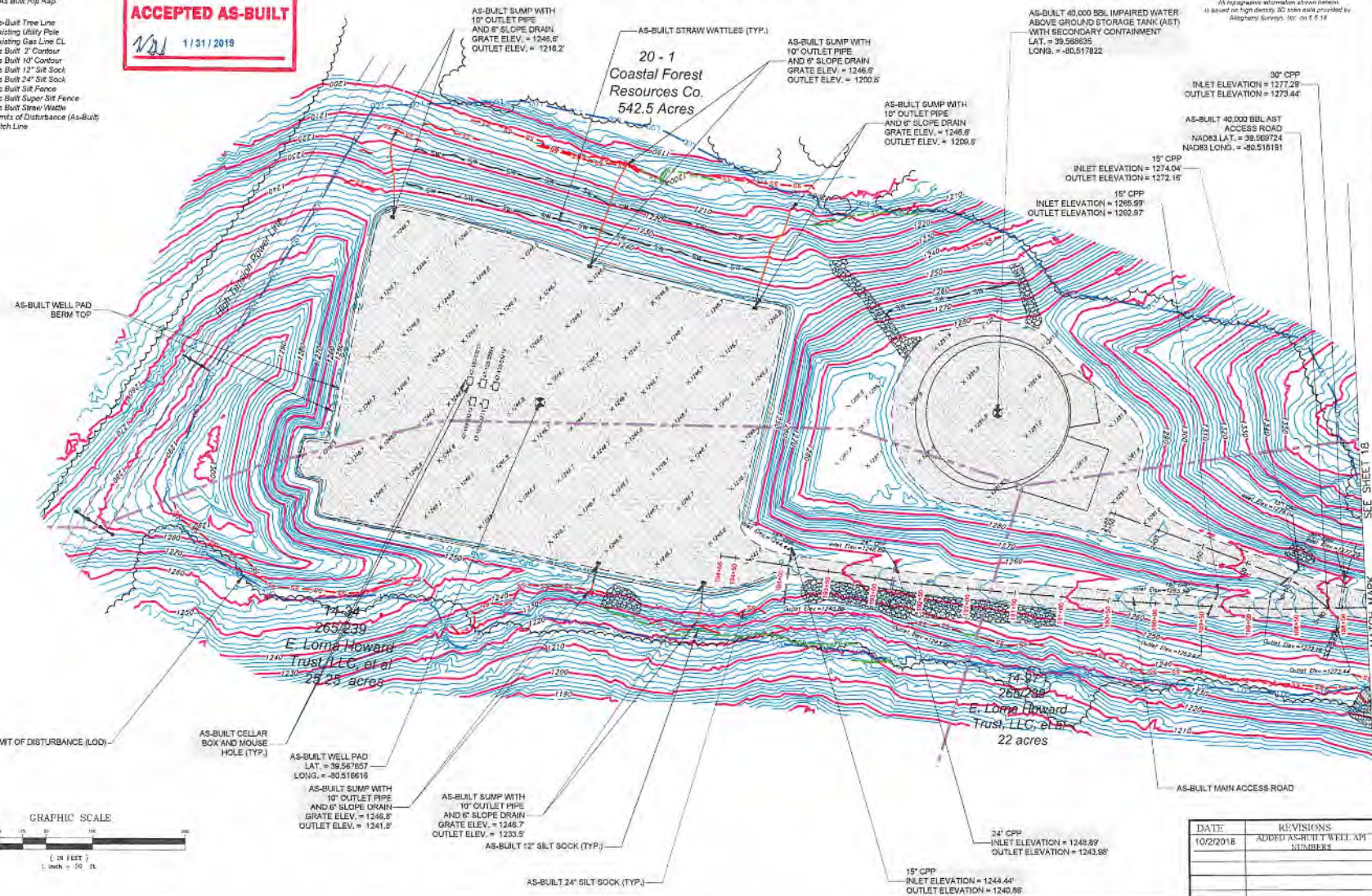
THIS DOCUMENT  
PREPARED FOR  
EQT PROJECTS  
COMPANY

AS BUILT SITE PLAN  
**BIG 464  
WELL PAD SITE**  
GRANT DISTRICT, WV  
WEITZEL COUNTY, WV

**Legend**

- As Built Spoil Area
- As Built Gravel
- As Built Rip Rap
- As-Built Tree Line
- Existing Utility Pole
- Existing Gas Line CL
- As Built 10" Contour
- As Built 12" Sit Sock
- As Built 24" Sit Sock
- As Built Sit Fence
- As Built Super Sit Fence
- As Built Stream/Wedge
- Limits of Disturbance (As-Built)
- Ditch Line

**WVDEP OOG  
ACCEPTED AS-BUILT**  
1/31/2019



DATE	REVISIONS	DATE
10/2/2018	ADDED AS-BUILT WELL PAD NUMBERS	08/14/2018
		Scale: 1"=50'
		Drawn By: TPC
		Proj No: 1804000000
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