



west virginia department of environmental protection

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

Harold D. Ward, Cabinet Secretary
www.dep.wv.gov

Tuesday, August 10, 2021
WELL WORK PERMIT
Horizontal 6A / New Drill

EQT PRODUCTION COMPANY
625 LIBERTY AVE., SUITE 1700
PITTSBURGH, PA 15222

Re: Permit approval for BIG464 5H
47-103-03433-00-00

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.

A blue ink signature of James A. Martin.

James A. Martin
Chief

Operator's Well Number: BIG464 5H
Farm Name: EQT PRODUCTION COMPANY
U.S. WELL NUMBER: 47-103-03433-00-00
Horizontal 6A New Drill
Date Issued: 8/10/2021

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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.

API Number: _____

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.

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

1) Well Operator: EQT Production Company 306686 Wetzel Grant Big Run
Operator ID County District Quadrangle

2) Operator's Well Number: 5H Well Pad Name: BIG464

3) Farm Name/Surface Owner: EQT Production Company Public Road Access: CR1

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

5) Well Type (a) Gas X Oil _____ Underground Storage _____
Other _____
(b) If Gas Shallow X Deep _____
Horizontal X

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus, 7,399', 51', 2,620 PSI

8) Proposed Total Vertical Depth: 7399'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 9390'

11) Proposed Horizontal Leg Length: 1412'

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

13) Method to Determine Fresh Water Depths: Offset Wells - 47-103-30593, 47-103-30910

14) Approximate Saltwater Depths: 1724', 1848'

15) Approximate Coal Seam Depths: 556'-559', 795'-797', 897'-899', 912'-919'

16) Approximate Depth to Possible Void (coal mine, karst, other): N/A

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes _____ No X

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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 ✓	50 ft ³ / CTS
Fresh Water	13 3/8	New	J-55	54.5	1019	1019 ✓	1000 ft ³ / CTS
Coal							
Intermediate	9 5/8	New	J-55	36	2441	2441 ✓	1000 ft ³ / CTS
Production	5 1/2	New	P-110	20	9390	9390 ✓	500' above intermediate casing
Tubing							
Liners							

Big Horn
6-11-21 ✓

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	0.312	1050	18	Class A	1.18
Fresh Water	13 3/8	17 1/2	0.380	2730	2184	Class A / Type 1	1.13 - 1.19
Coal							
Intermediate	9 5/8	12 3/8	0.352	3520	2816	Class A / Type 1	1.13 - 1.19
Production	5 1/2	8 1/2	0.361	14360	11488	Class A/H	1.04 - 2.10
Tubing							
Liners							

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Kind:				
Sizes:				
Depths Set:				

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

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

Hydraulic fracturing is completed in accordance with state regulations using water recycled from previously fractured wells and obtained from freshwater sources. This water is mixed with sand and a small percentage (less than 0.1%) of chemicals (including 15% Hydrochloric acid, friction reducer, biocide, and scale inhibitor), referred to in the industry as a "slickwater" completion. Maximum anticipated internal casing pressure is expected to be approximately 10,000 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 200,000-600,000 pounds of proppant per stage.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): N/A - Site Built

22) Area to be disturbed for well pad only, less access road (acres): N/A - Site Built

23) Describe centralizer placement for each casing string:

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

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

Conductor: Class A no additives ✓
Surface: Calcium Chloride. Used to speed the setting of cement slurries ✓
Intermediate: Calcium Chloride. Used to speed the setting of cement slurries ✓
Production: Calcium Carbonate, Fluid Loss, Extender, Dispersent, Viscosifier, Defoamer, POZ, Bonding Agent, Retarder, Anti-Settling/Suspension Agent

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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: Perform a cleanup cycle by pumping 3-8 bottoms up or until the shakers are clean. Check volume of cuttings coming across the shakers every 15 minutes.

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*Note: Attach additional sheets as needed.



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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 I (2% Calcium Chloride-Accelerator, 0.25% Super Flake-Lost Circulation, 5.2% Water, 94% Type "I" 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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Earl Ray Tomblin, Governor
Randy C. Hoffman, Cabinet Secretary
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**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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WEST VIRGINIA GEOLOGICAL PROGNOSIS

Horizontal Well
BIG464
 S-000124

Drilling Objectives: Marcellus
County: Wetzel
Quad: Big Run
Elevation:

1259 KB 1246 GL

TVD: 7399

Recommended Azimuth: #N/A Degrees

Recommended LP to TD: #N/A

Proposed Logging Suite: Pilot Logging Not needed

ESTIMATED FORMATION TOPS

From pilots on BIG57 and BIG182

Formation	Top (TVD)	Base (TVD)	Lithology	Comments	Top RR	Base RR
Fresh Water Zone	1	432		FW @ 109,184,432 ...	69	73
Waynesburg Coal	556	559 Coal			76	80
Coal	795	797 Coal		No known past/present/and or future mining within the area	96	114
Sewickley Coal	897	899 Coal			125	132 Base of Red
Pittsburgh Coal	912	919 Coal				
Maxton	1792	1971 Sandstone		SW @ 1724,1848 ...		
Big Lime	2234	2310 Limestone				
Big Injun	2322	2391 Sandstone				
Int. csg pt	2441					
Weir	2520	2670 Sandstone				
Top Devonian	2735					
Gantz	2735	2771 Silty Sand				
Fifty foot	2876	2932 Silty Sand		Storage is NOT of concern		
Thirty foot	2971	2998 Silty Sand				
Gordon	3027	3072 Silty Sand				
Forth Sand	3097	3110 Silty Sand		Base of Offset Well Perforations at 3129' TVD		
Fifth Sand	3169	3188 Silty Sand				
Bayard	3222	3240 Silty Sand				
Warren	3645	3669 Silty Sand				
Speechley	3765	3813 Silty Sand				
Balltown A	4123	4138 Silty Sand				
Riley	4608	4650 Silty Sand				
Benson	5237	5286 Silty Sand				
Alexander	5651	5718 Silty Sand				
Elks	5718	6917 Gray Shales and Silts				
Sonyea	6917	7080 Gray shale				
Middlesex	7080	7136 Shale				
Genesee	7136	7223 Gray shale interbedded				
Genesee	7223	7255 Black Shale				
Tully	7255	7280 Limestone				
Hamilton	7280	7378 Gray shale with some				
Marcellus	7378	7429 Black Shale				
Purcell	7393	7396 Limestone				
-Lateral Zone	7399					
Cherry Valley	7409	7413 Limestone				
Onondaga	7429	Limestone				

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Target Thickness	51 feet
Max Anticipated Rock Pressure	2620 PSI

Comments:
 Intermediate casing point is recommended beneath the Big Injun to shut off any water production from the Upper Devonian sands. Intermediate casing should be cemented into the surface string per WV regulations.

LATERAL DRILLING TOLERANCES

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

RECOMMENDED CASING POINTS

Fresh Water/Coal	CSG OD	13 3/8	CSG DEPTH	1019	Beneath Pittsburgh Coal
Intermediate 1:	CSG OD	9 5/8	CSG DEPTH	2441	Beneath the Big Injun formation
Production:	CSG OD	5 1/2	CSG DEPTH	@ TD	9390'

4710303433



EQT PRODUCTION COMPANY
400 Woodcliff Drive | Canonsburg, PA 15317

June 14, 2021

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

Re: Casing on BIG464 5H

Dear Mr. Brewer,

The 13-3/8" surface casing will be set at 1,019' KB, 100' below the deepest workable coal seam and 587' below the deepest fresh water. The 9-5/8" intermediate string will be set at 2,441' KB, 50' below the base of the Big Injun formation.

If you have any questions, please do not hesitate to contact me at 724-746-9073.

Sincerely,

A handwritten signature in blue ink, appearing to read 'J. Zavatchan'.

John Zavatchan
Project Specialist - Permitting

Enc.

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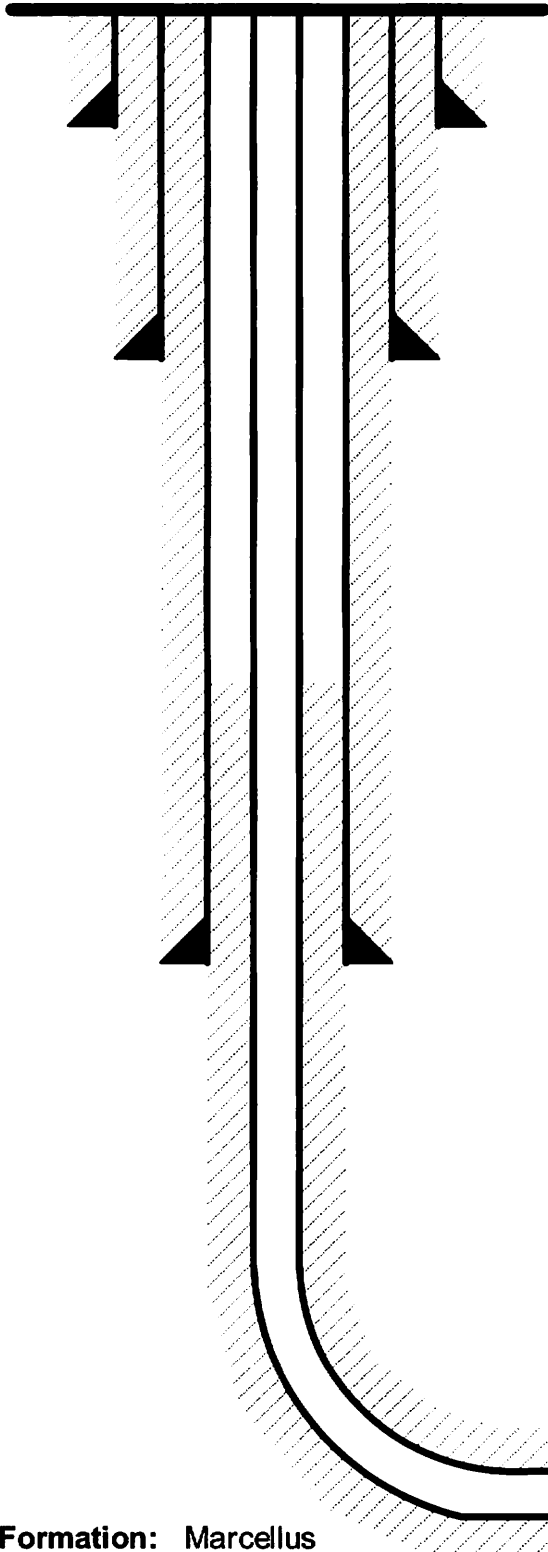
4710303433

EQT Production

Wellbore Diagram

Well: BIG 464 5H
Pad: BIG 464
Elevation: 1246' GL 1259' KB

County: Wetzel
State: West Virginia



Conductor @ 40'

26", 85.6#, A-500, cement to surface w/ Class A

Surface @ 1,019'

13-3/8", 54.5#, J-55, cement to surface w/ Class A/Type I

Intermediate @ 2,441'

9-5/8", 36#, J-55, cement to surface w/ Class A/Type I

Production @ 9,390' MD / 7,399' TVD

5-1/2", 20#, P-110, cement to 500' inside 9-5/8" w/ Class A/H

Formation: Marcellus

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NOT TO SCALE

WW-9
(4/16)

API Number 47 - 103 - 03433

Operator's Well No. BIG464 5H

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 _____)

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 [Signature]

Company Official (Typed Name) John Zavatchan

Company Official Title Project Specialist - Permitting

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Subscribed and sworn before me this 14th day of June, 2021

[Signature] Notary Public

My commission expires March 9, 2024

Commonwealth of Pennsylvania - Notary Seal
Rebecca Shrum, Notary Public
Beaver County
My commission expires March 9, 2024
Commission number 1267705
Member, Pennsylvania Association of Notaries

EQT Production Water Plan

Offsite Disposals for Unconventional Wells

Facility Name	Address	Address 2	City	State	Zip	Phone	County	State	Permit Number
CWS Trucking Inc.	P.O. Box 391		Williamstown	WV	26187	740-516-3586	Noble	OH	3390
Broad Street Energy LLC	37 West Broad Street	Suite 1100	Columbus	OH	43215	740-516-5381	Washington	OH	8462
LAD Liquid Assets Disposal Inc.	226 Rankin Road		Washington	PA	15301	724-350-2760	Ohio	WV	USEPA WV 0014
Triad Energy	PO Box 430		Reno	OH	45773	740-516-6021 740-374-2940	Noble	OH	4037
Tri County Waste Water Management, Inc.	1487 Toms Run Road		Holbrook	PA	15341	724-627-7178 724-499-5647	Greene	PA	TC-1009
King Excavating Co. Advance Waste Services	101 River Park Drive		New Castle	PA	16101		Lawrence	PA	PAR000029132
Waste Management - Meadowfill Landfill	Rt. 2, Box 68 Dawson Drive		Bridgeport	WV	16330	304-326-6027	Harrison	WV	SWF-1032-98 Approval #100785WV
Waste Management - Northwestern Landfill	512 E. Dry Road		Parkersburg	WV	26104	304-428-0602	Wood	WV	SWF-1025 WV-0109400
APEX Landfill	11 County Road 78	PO Box 57	Amsterdam	OH	43903	740-543-4389	Jefferson	OH	06-08438
Advanced Disposal - Chestnut Valley Landfill	1184 McClellandtown Road		McClellandtown	PA	15458	724-437-7336	Fayette	PA	100419
Westmoreland Sanitary Landfill	901 Tyrol Boulevard		Belle Vernon	PA	15012	724-929-7694	Westmoreland	PA	100277
Austin Master Services	801 North 1st Street		Martins Ferry	OH	43935	740-609-3800	Belmont	OH	2014-541
Belmont Solids Control	77505 Cadiz-New Athers Road		Cadiz	OH	43907	740-942-1739	Harrison	OH	2015-511
Diversified Resources	3111 Braun Rd.		Belpre	OH	45714	740-401-0413	Washington	OH	
Buckeye Brine	23986 Airport Road		Coshocton	OH	43812	740-610-1512 724-591-4393	Coshocton	OH	34-031-27177 34-031-27178 34-031-27241
Central Environmental Services	28333 West Belpre Pike		Coolville	OH	45723	304-488-0701	Athens	OH	
Nuverra - Nichols	10555 Veto Road		Belpre	OH	45714	330-232-5041	Washington	OH	34-119-2-8776
Nuverra - Goff	9350 East Pike Road		Norwich	OH	43767	330-232-5041	Muskingum	OH	34-167-2-3862
Nuverra - Wolf	5480 State Route 5		Newton Falls	OH	44444	330-232-5041	Trumbull	OH	34-155-2-1893
Nuverra - Pander	5310 State Route 5		Newton Falls	OH	44444	330-232-5041	Trumbull	OH	34-155-2-3795
Nuverra - AnnaRock D-1	3549 Warner Road		Fowler	OH	44418	330-232-5041	Trumbull	OH	34-155-2-2403

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FQ Helen	199 Bowersock Road		Reno	OH	45773	740-374-2940 412-443-4397 740-236-2135	Washington	OH	34-167-2-9577
FQ Dexter	38505 Marietta Rd.		Dexter City	OH	45727	740-374-2940 412-443-4397 740-236-2135	Noble	OH	34-121-24037 34-121-24086
FQ Ritchie	122 Lonesome Pine Rd		Ellenboro	WV	26346	740-374-2940 412-443-4397 740-236-2135	Ritchie	WV	47-085-09721
FQ Mills	53610 TS Rd 706		Portland	OH	45770	740-374-2940 412-443-4397 740-236-2135	Meigs	OH	34-105-2-3619 34-105-2-3652 34-105-2-3637 34-105-2-3651
Petta Enterprises - OH	745 North 3rd Street		Cambridge	OH	43725	614-477-1368	Guernsey	OH	Ohio Chiefs Order 25-019
Petta Enterprises - WV	38 Technology Dr.		Tridelpia	WV	26059	740-255-5727	Ohio	WV	
Deep Rock Disposal	2341 OH-821		Marietta	OH	45750	304-629-0176	Washington	OH	34-167-2-9766

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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 synthetic 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.
- Synthetic 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 _____ Prevegetation pH _____

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type Granular 10-20-20

Fertilizer amount 500 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: Diana Harris

Comments: Pre-seed/mulch all disturbed areas as soon as reasonably possible, per regulation. Upgrade E&S as necessary per WV DEP E&S Manual.

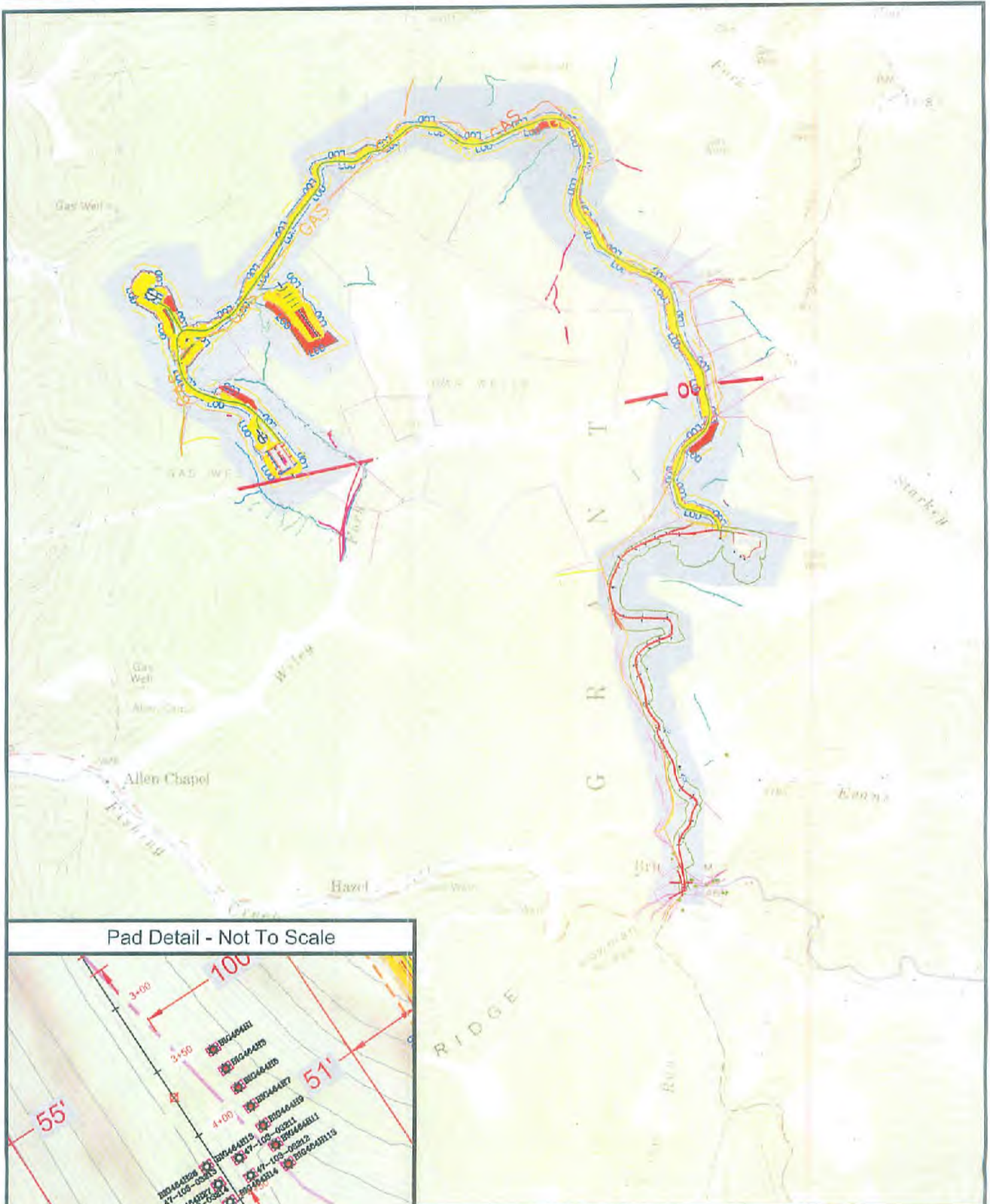
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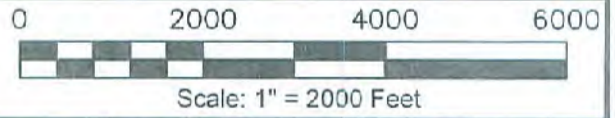
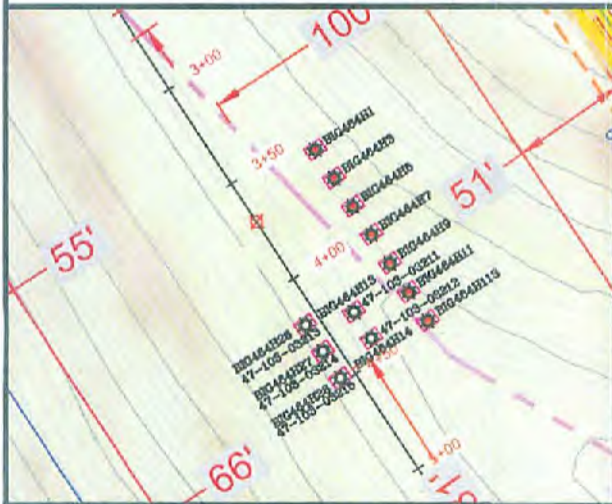
WV Department of
Environmental Protection

Title: Inspector Date: 6-11-21

Field Reviewed? () Yes (X) No



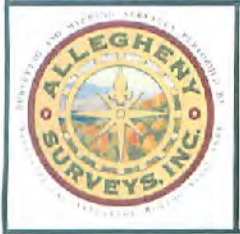
Pad Detail - Not To Scale



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: June 03, 2021	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.

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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

EQT Production
Hydraulic Fracturing Monitoring Plan
Pad ID: BIG464
County: Wetzel

June 14, 2021

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Page 1 of 2

08/13/2021

Purpose

The purpose of this pad-specific Hydraulic Fracturing Monitoring Plan is to identify and notify conventional well operators near EQT hydraulic fracturing in Wetzel County, WV prior to hydraulic fracturing at the following EQT wells on the BIG464 well pad: 1H, 3H, 5H, 7H, 9H, 11H, 113H

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

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

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

1. Communications with Well Operators

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

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

EQT will recommend to these operators at a minimum to:

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

2. Reporting

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

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Page 2 of 2
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08/13/2021

WellID	WellStatus	date	fmatTD	Permit	Operator	Longitude	Latitude	Targetf m	DatumEleva	TotalDepth-55	Total Depth
4710300239	GAS	9/19/1940		00239	EPC	-80.5270	39.5641		1410.0000	-2016.0000	3426.0000
4710300254	GAS	9/27/1941		00254	EPC	-80.5202	39.5744		1464.0000	-1985.0000	3449.0000
4710300279	GAS-P	7/21/1941		00279	EPC	-80.5066	39.5492		1100.0000	-964.0000	2064.0000
4710300286	GAS-P	3/25/1943		00286	EPC	-80.4986	39.5525		1170.0000	-1896.0000	3066.0000
4710300377	D&A			00377	CARNEGIE NAT GAS	-80.5264	39.5818		1035.0000	-2162.0000	3197.0000
4710300456	GAS	9/30/1958		00456	EAGON & ROBINSON	-80.5264	39.5818		1295.0000	-1211.0000	2506.0000
4710300535	STORAGE	1/2/1953		00535	W D BROOKOVER	-80.5366	39.5984		1008.0000	-2040.0000	3057.0000
4710300583	GAS-P	9/21/1979		00583	EPC	-80.5421	39.5878		1015.0000	-1936.0000	2951.0000
4710300699	GAS	8/9/1972		00699	CHG	-80.5091	39.5710		0.0000	-3154.0000	3154.0000
4710300717	GAS	10/2/1919		00717	EPC	-80.5227	39.5647		0.0000	-1926.0000	1926.0000
4710300797	GAS-P			00797	EPC	-80.5200	39.5678		0.0000	-99999.0000	99999.0000
4710800799	GAS	12/19/1910		00799	EPC	-80.5077	39.5699		0.0000	-2987.0000	2987.0000
4710300802	GAS			00802	EPC	-80.5208	39.5697		0.0000	-2343.0000	2343.0000
4710300814	GAS			00814	EPC	-80.5097	39.5553		1340.0000	-1851.0000	3191.0000
4710300815	GAS			00815	EPC	-80.5089	39.5647		0.0000	-3118.0000	3118.0000
4710300817	GAS-P			00817	EPC	-80.5022	39.5544		1520.0000	-2053.0000	3573.0000
4710300821	GAS-P			00821	EPC	-80.5253	39.5664		0.0000	-1883.0000	1883.0000
4710300822	GAS	8/30/1929		00822	EPC	-80.5231	39.5721		0.0000	-1954.0000	1954.0000
4710300875	GAS	12/15/1922		00875	EPC	-80.5294	39.5806		0.0000	-99999.0000	99999.0000
4710301115	OIL	4/29/1899		01115	PENNIZOIL	-80.4945	39.5449		1500.0000	-1132.0000	2632.0000
4710301766	GAS	11/6/1998		01766	D A C	-80.5415	39.5851		871.0000	-1431.0000	2302.0000
4710301767	GAS	10/30/1998		01767	D A C	-80.5382	39.5876		868.0000	-2396.0000	3264.0000
4710301768	GAS	10/25/1998		01768	D A C	-80.5400	39.5951		1785.0000	-2394.0000	3679.0000
4710301769	GAS	10/19/1998		01769	D A C	-80.5396	39.5922		1326.0000	-2366.0000	3692.0000
4710801782	GAS	11/19/1999		01782	D A C	-80.5395	39.6027		1424.0000	-2399.0000	3823.0000
4710301783	GAS	8/26/1999		01783	D A C	-80.5455	39.6011		1376.0000	-2179.0000	3555.0000
4710301785	GAS	8/13/1999		01785	D A C	-80.5269	39.5916		1186.0000	-2368.0000	3554.0000
4710301789	GAS	9/2/1999		01789	D A C	-80.5457	39.5964		1420.0000	-2164.0000	3584.0000
4710301790	GAS	9/17/1999		01790	D A C	-80.5312	39.5969		904.0000	-2222.0000	3126.0000
4710301798	P&A	12/12/1999		01798	D A C	-80.5368	39.6061		1925.0000	-798.0000	2723.0000
4710301799	GAS	12/23/1999		01799	D A C	-80.5372	39.6065		1525.0000	-2052.0000	3617.0000
4710301802	GAS	6/12/2000		01802	D A C	-80.5342	39.6043		1401.0000	-2193.0000	3594.0000
4710301886	GAS	10/9/2002		01886	EXCEL ENERGY	-80.5498	39.6007		981.0000	-2329.0000	3310.0000
4710801961	O&G	9/21/2003		01961	EXCEL ENERGY	-80.5421	39.6050		1380.0000	-2316.0000	3696.0000
4710302017	CBM	4/28/2004		02017	DYNATEC ENERGY	-80.5309	39.5760		948.0000	-287.0000	711.0000
4710330037	GAS	5/22/1920		30037	PGH & WV GAS	-80.5447	39.6000		869.0000	-1007.0000	1866.0000
4710330045	GAS			30045	HOPE NAT GAS	-80.5310	39.5764		1725.0000	-421.0000	2146.0000
471030166	GAS			30166	HOPE NAT GAS	-80.5422	39.5939		1012.0000	-1208.0000	2215.0000
471030176	GAS	8/18/1922		30176	PGH & WV GAS	-80.5489	39.5969		1078.0000	-2057.0000	3135.0000
471030181	GAS	9/29/1923		30181	PGH & WV GAS	-80.5375	39.5808		906.0000	-2030.0000	2936.0000
4710330245	GAS	3/24/1903		30245	CARNEGIE NAT GAS	-80.5142	39.5619		1040.0000	-1868.0000	2908.0000
4710330420	OIL		LOWER HURON SHALE	30420	OPER IN MIN OWN	-80.5364	39.5981		1310.0000	-1916.0000	3226.0000
4710330593	GAS	2/16/1921		30593	CARNEGIE NAT GAS	-80.5055	39.5631		1527.0000	-1860.0000	3387.0000
4710330631	GAS	4/27/1916		30631	HOPE NAT GAS	-80.5444	39.5942		1356.0000	-1938.0000	3294.0000
4710330993	GAS	7/19/1911		30993	CARNEGIE NAT GAS	-80.5142	39.5680		1131.0000	-1873.0000	3004.0000
650531 TEMP LM	TEMP			MP LM		-80.5071	39.5636		0.0000	-99999.0000	99999.0000

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4710303433

Bryan Harris
6-11-21

SITE SAFETY AND ENVIRONMENTAL PLAN

BIG464 Pad


Mannington
Wetzel County, WV

Wells: 1H, 3H, 5H, 7H, 9H, 11H, 13H (103-03211),
14H (103-03212), 26H (103-03213), 27H (103-03214),
28H (103-03215), 113H

Prepared By: Donny Prater, CSP, Health and Safety Sciences, LLC

Approved By: Scott M. Held, Senior Safety Coordinator

Created Date: 29-Jan-20



John Zavatchan
Project Specialist
EQT Production Company

Bryan Harris
Oil and Gas Inspector
West Virginia DEP

08/13/2021

4710303433

Topo Quad: Big Run 7.5' Scale: 1" = 1000'

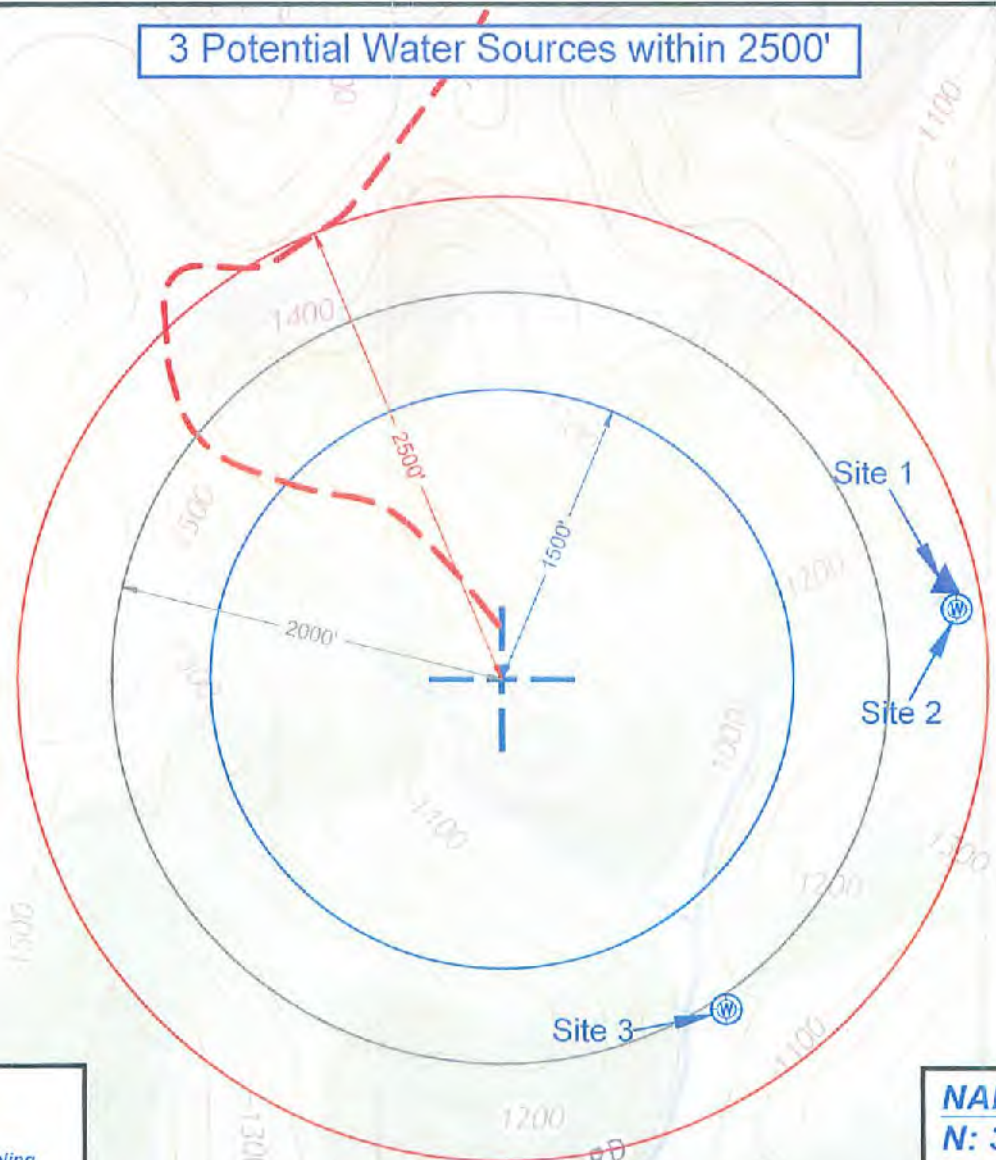
County: Wetzel Date: June 2, 2021

District: Grant Project No: 125-34-G-16

Water

BIG 464

3 Potential Water Sources within 2500'



CO RD 1514

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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

400 Woodcliff Drive
Canonsburg, PA 15317

08/13/2021



Table 1 – Water Source Identification

EQT Well Pad Name: **Big 464**

Submittal Date: **May 2, 2021**

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): 1st: **5/27/2021** 2nd: _____ Door Hanger Left: _____

Comments: **Certified letter sent May 27, 2021. Info from previous report in 2016. Pond.**

<input 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>

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): 1st: **5/27/2021** 2nd: _____ Door Hanger Left: _____

Comments: **Certified letter sent May 27, 2021. Info from previous report in 2016. Water well.**

<input 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>

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

Surface Owner / Occupant: **Marlene Barr – Beverly Lynn Barr L/E**

Address: **2124 Barr Rd Smithfield, WV 26437** Phone #: _____

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

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

Contact Attempts (Date): 1st: **5/27/2021** 2nd: _____ Door Hanger Left: _____

Comments: **Certified letter sent May 27, 2021. Previous Certified signed for by Marlene Barr on 10/10/2018. Info from report in 2016.**

<input 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>

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(Insert additional pages as needed)

08/13/2021

Site Number: 4 Distance from Gas Well (feet): 3044 ±

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): 1st: 5/27/2021 2nd: _____ Door Hanger Left: _____

Comments: Certified letter sent May 27, 2021. Water well by Ms. Barr's home located in 2018.

<input 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>

Site Number: 5 Distance from Gas Well (feet): 2958 ±

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): 1st: 5/27/2021 2nd: _____ Door Hanger Left: _____

Comments: Certified letter sent May 27, 2021. Water well by Ms. Barr's son's mobile home located in 2018.

<input 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>

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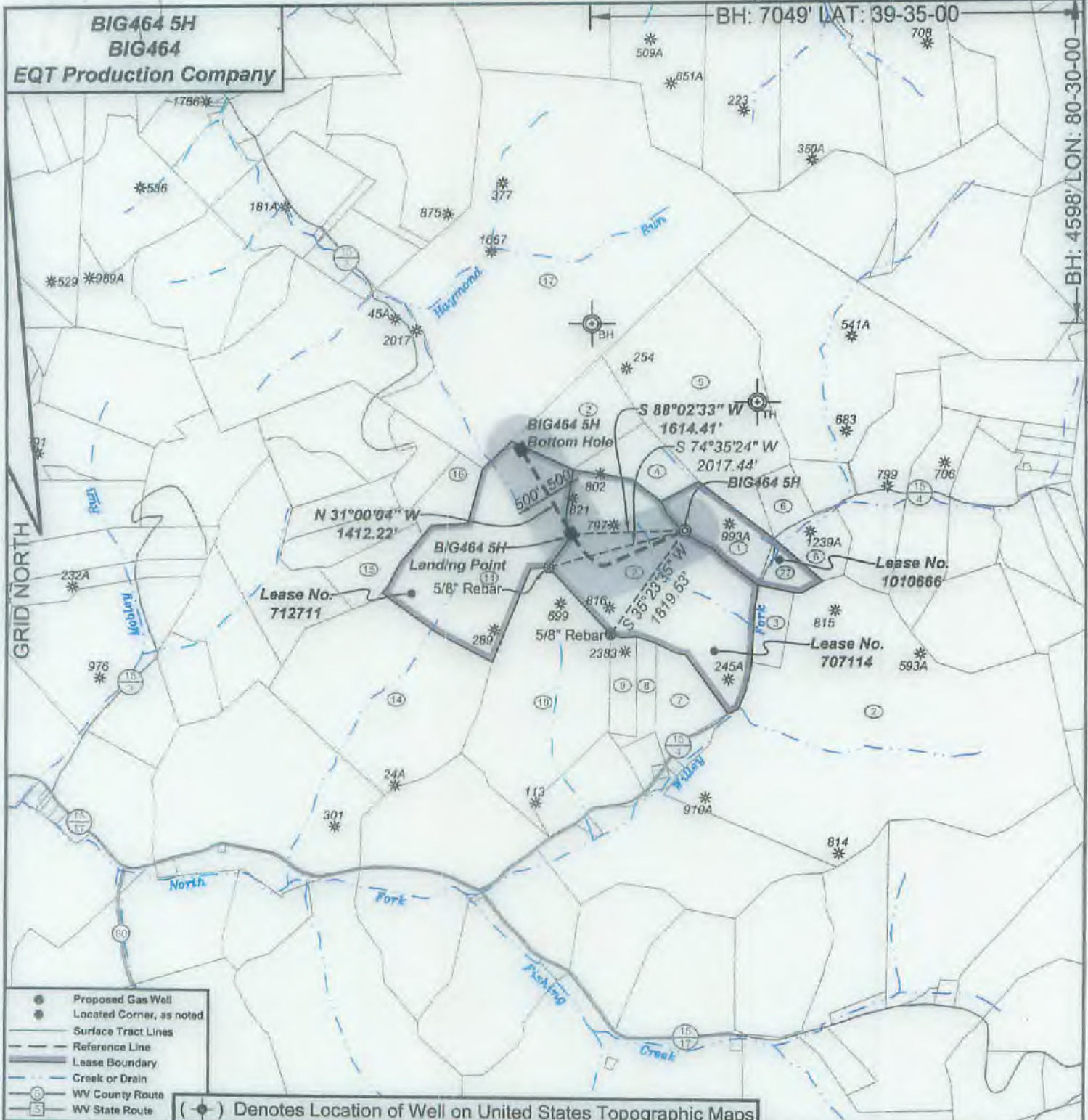
08/13/2021

TH: 4695' LAT: 39-35-00

BH: 7049' LAT: 39-35-00

BH: 4598' LON: 80-30-00
TH: 5727' LON: 80-30-00

BIG464 5H
BIG464
EQT Production Company



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

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



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

Ben R. Singleton
P.S. 2092



SEAL

FILE NO: 125-16
DRAWING NO: BIG464 5H
SCALE: 1" = 2000'
MINIMUM DEGREE OF ACCURACY: 1:2500
PROVEN SOURCE OF ELEVATION: NGS CORS Station

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

DATE: May 18 20 21
OPERATOR'S WELL NO.: BIG464 5H
API WELL NO
47 - 103 - 03433
STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
LOCATION: ELEVATION: 1246.8' WATERSHED: Wiley Fork QUADRANGLE: Big Run
DISTRICT: Grant COUNTY: Wetzel
SURFACE OWNER: EQT Production Company ACREAGE: 25.25
ROYALTY OWNER: Ridgetop Royalties, LLC, et al. LEASE NO: 1010666 ACREAGE: 32
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: 7,399'

08/13/2021

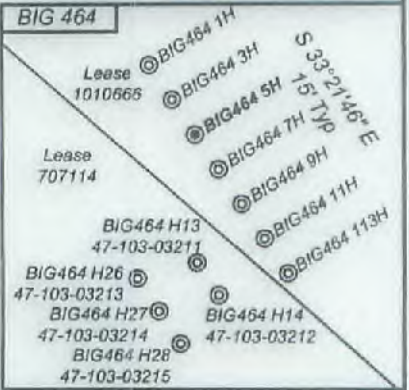
WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Joseph C. Mallow
ADDRESS: 400 Woodcliff Drive ADDRESS: 115 Professional Place PO Box 280
Canonsburg, PA 15317 Bridgeport, WV 26330

BIG464 5H
BIG464
EQT Production Company

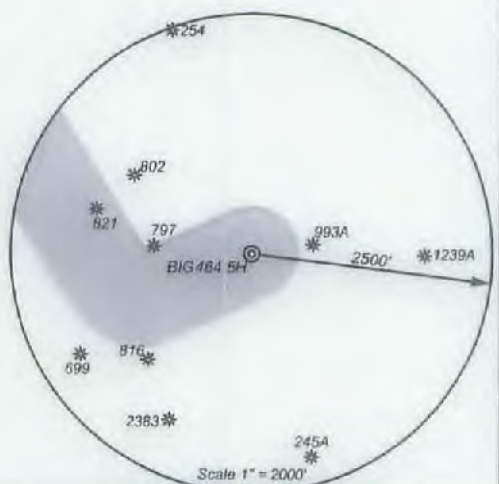
Tract I.D.	Tax Map No.	Parcel No.	County	District	Surface Tract Owner	Acres
1	14	34	Wetzel	Grant	EQT Production Company	25.25
2	20	7	Wetzel	Grant	Coastal Forest Resources Company	520.00
3	15	27	Wetzel	Grant	Beverly Lynn Barr Life Estate	60.00
4	14	37	Wetzel	Grant	EQT Production Company	22.00
5	14	20	Wetzel	Grant	EQT Production Company	126.50
6	15	10	Wetzel	Grant	Donald J. D'Lusky	25.00
7	14	45	Wetzel	Grant	Coastal Forest Resources Company	11.00
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	Alice H. & Hills B. Conaway	108.00
14	14	40	Wetzel	Grant	Donald J. D'Lusky, Jr.	131.00
15	14	31	Wetzel	Grant	Donald J. D'Lusky, Jr.	59.00
16	14	32	Wetzel	Grant	Mary Jane Byard	13.30
17	14	8	Wetzel	Grant	Coastal Forest Resources Company	332.50
27			Wetzel	Grant	No Tax Map & Parcel Information	



Notes:
BIG464 5H coordinates are
NAD 27 N: 390,468.48 E: 1,713,397.98
NAD 27 Lat: 39.567612 Long: -80.516655
NAD 83 UTM N: 4,379,889.08 E: 541,533.55
BIG464 5H Landing Point coordinates are
NAD 27 N: 390,413.34 E: 1,711,784.51
NAD 27 Lat: 39.567410 Long: -80.522376
NAD 83 UTM N: 4,379,864.06 E: 541,042.26
BIG464 5H Bottom Hole coordinates are
NAD 27 N: 391,623.83 E: 1,711,057.14
NAD 27 Lat: 39.570710 Long: -80.525005
NAD 83 UTM N: 4,380,229.15 E: 540,814.51
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.



Lease No.	Owner	Acres
707114	Ridgetop Royalties, LLC, et al.	78
712711	Barbara Lynne Mothery, et al.	108



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

Ben R. Singleton
P.S. 2092



FILE NO: 125-16
DRAWING NO: BIG464 5H
SCALE: 1" = 2000'
MINIMUM DEGREE OF ACCURACY: 1:2500
PROVEN SOURCE OF ELEVATION: NGS CORS Station



DATE: May 18 20 21
OPERATOR'S WELL NO.: BIG464 5H
API WELL NO
47 - 103 - 03433
STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
LOCATION: ELEVATION: 1246.8' WATERSHED Wiley Fork QUADRANGLE: Big Run
DISTRICT: Grant COUNTY: Wetzel
SURFACE OWNER: EQT Production Company ACREAGE: 25.25
ROYALTY OWNER: Ridgetop Royalties, LLC, et al. LEASE NO: 1010666 ACREAGE: 32
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: 7,399'
WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Joseph C. Mallow
ADDRESS: 400 Woodcliff Drive ADDRESS: 115 Professional Place PO Box 280
Canonsburg, PA 15317 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
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See Attachment

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

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

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

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

Well Operator: EQT Production Company
 By: John Zavatchan
 Its: Project Specialist - Permitting

[Handwritten Signature]
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WW-5A1 attachment

Operator's Well No.

Big464 5H

<u>Lease No.</u>	<u>Grantor, Lessor, etc.</u>	<u>Acres</u>	<u>Grantee, Lessee, etc.</u>	<u>Royalty</u>	<u>Book/Page</u>
<u>1010866</u>	<u>Ridgetop Royalties, LLC, et al.</u> Ridgetop Royalties, LLC	32 ac	EQT Production Company	"at least 1/8th per WV Code 22-6-8"	OG 166A/638
<u>707114</u>	<u>Ridgetop Royalties, LLC, et al.</u> W. S. Furbee and Mary Furbee, his wife Carnegie Natural Gas Company Carnegie Production Company	78 ac	Carnegie Natural Gas Company Carnegie Production Company EQT Production Company	"at least 1/8th per WV Code 22-6-8"	OG 2A/182 OG 78A/513 WV SOS
<u>712711</u>	<u>Barbara Lynne Metheny, et al.</u> Lee Glover and Bertha Glover, his wife Carnegie Natural Gas Company Carnegie Production Company	108 ac	Carnegie Natural Gas Company Carnegie Production Company EQT Production Company	"at least 1/8th per WV Code 22-6-8"	OG 20A/493 OG 78A/513 WV SOS

08/13/2021

4710303433



EQT PRODUCTION COMPANY
400 Woodcliff Drive | Canonsburg, PA 15317

June 14, 2021

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

Re: BIG464 5H
Grant District, Wetzel County, WV

Dear Mr. Brewer,

EQT Production Company is applying for a new well work permit for the well referenced above. Upon information and belief, the 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 'J. Zavatchan'.

John Zavatchan
Project Specialist - Permitting

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

Date of Notice Certification: 6/15/2021

API No. 47- 103 - 03433
Operator's Well No. 5H
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>West Virginia</u>	UTM NAD 83	Easting: <u>541533.546</u>
County: <u>Wetzel</u>		Northing: <u>4379889.076</u>
District: <u>Grant</u>	Public Road Access: <u>CR1</u>	
Quadrangle: <u>Big Run</u>	Generally used farm name: <u>EOC Production Company</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: 40px;"><input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)</p> <p><input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION</p> <p><input checked="" type="checkbox"/> 5. PUBLIC NOTICE</p> <p><input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION</p>	<p>OOG OFFICE USE ONLY</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p>
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Required Attachments:

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

Office of Oil and Gas

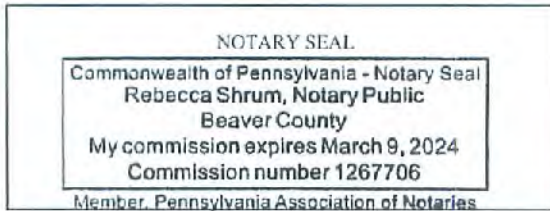
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Environmental Protection
08/13/2021

Certification of Notice is hereby given:

THEREFORE, I John Zavatchan, 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>400 Woodcliff Drive</u>
By:	<u>John Zavatchan</u> 		<u>Canonsburg, PA 15317</u>
Its:	<u>Project Specialist - Permitting</u>	Facsimile:	<u>412-395-2974</u>
Telephone:	<u>724-746-9073</u>	Email:	<u>jzavatchan@eqt.com</u>



Subscribed and sworn before me this 15th day of June 2021.
Rebecca Shrum Notary Public
 My Commission Expires March 9, 2024

Oil and Gas Privacy Notice:

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

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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: 6/15/2021 Date Permit Application Filed: 7/16/2021

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 List
Address: _____
Name: _____
Address: _____

COAL OWNER OR LESSEE
Name: See Attached List
Address: _____
 COAL OPERATOR
Name: _____
Address: _____

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

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Name: _____
Address: _____

SURFACE OWNER(s) (Impoundments or Pits)
Name: _____
Address: _____

OPERATOR OF ANY NATURAL GAS STORAGE FIELD
Name: _____
Address: _____

*Please attach additional forms if necessary

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Environmental Protection

08/13/2021

Notice is hereby given:

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

This Notice Shall Include:

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

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

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

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

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

Well Location Restrictions

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

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

Water Well Testing:

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

Water Testing Laboratories:

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

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

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

Written Comment:

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

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

Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water. **NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.**

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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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WW-6A
(8-13)

API NO. 47- 103 - 03433

OPERATOR WELL NO. 5H

Well Pad Name: BIG464

Notice is hereby given by:

Well Operator: EQT Production Company

Telephone: 724-746-9073

Email: jzavalchan@eqt.com



Address: 400 Woodcliff Drive

Canonsburg, PA 15317

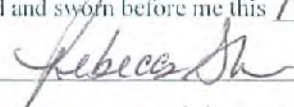
Facsimile: 412-395-2974

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.

Commonwealth of Pennsylvania - Notary Seal
Rebecca Shrum, Notary Public
Beaver County
My commission expires March 9, 2024
Commission number 1267706
Member, Pennsylvania Association of Notaries

Subscribed and sworn before me this 14th day of June, 2021.



Notary Public

My Commission Expires March 9, 2024

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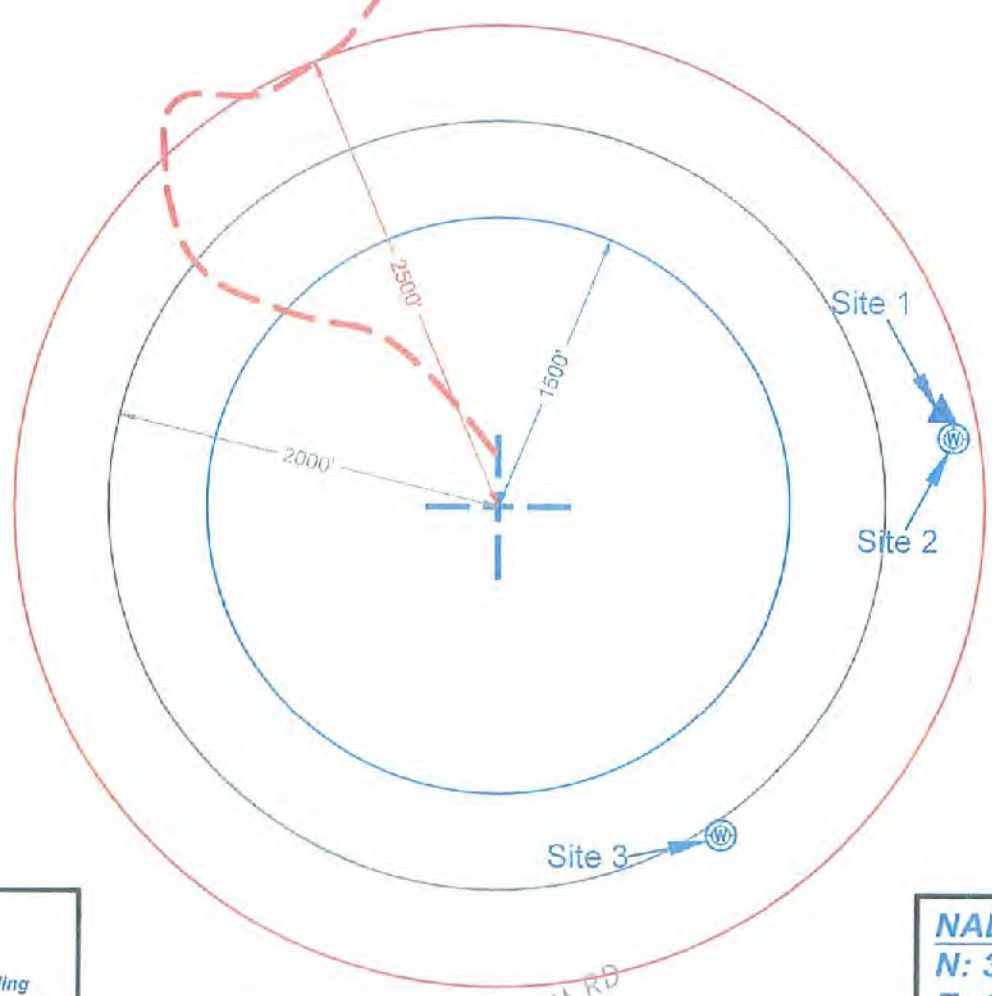
4710303433

Topo Quad: Big Run 7.5' Scale: 1" = 1000'
 County: Wetzel Date: June 2, 2021
 District: Grant Project No: 125-34-G-16

Water

BIG 464

3 Potential Water Sources within 2500'



CO RD 15

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NAD 27, North Zone
 Env. & Nat. Resources
 Environmental Protection

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

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

LEGEND

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

- Well
- Spring
- Pond
- Building

PREACHERS DREAM RD

Site 5
 Site 4

Allen Cem



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
 400 Woodcliff Drive
 Canonsburg, PA 15317
08/13/2021

Well Pad / AST Pad / Access Road / Stockpile

- EQT Production Company
400 Woodcliff Drive, CANONSBURG, PA 15317
- Coastal Forest Resources Co.
PO BOX 709, BUCKHANNON, WV 26201

Access Road

- Robert and Maxine Tonkery
33 TONKERY DR., FAIRMONT, WV 26554
- Paul Able Trustee ETAL
400 DELTA RD. APT 1, AMHERST, NY 14226
- William Jack & Beverly Barr (Marlene Barr LE)
2124 BARR RD., SMITHFIELD, WV 26437
- Donald W. & Diana L. White
5017 HUSKY HWY., MANNINGTON, WV 26582
- Coastal Forest Resources Co.
PO BOX 709, BUCKHANNON, WV 26201
- Rich Rager
4620 SIMPSON RD., GRAFTON, WV 26354
- Timothy E. Titus
7335 WILLEY FORK RD., BURTON, WV 26562
- Timothy E. Titus ETAL
7335 WILLEY FORK RD., BURTON, WV 26562
- Billy J. & Frances J. Higgins Irrevocable Intervenor's Trust
531 FRANKLIN TERRANCE, WASHINGTON, PA 15301

Coal Owners

- Consol RCPC LLC
1000 Consol Energy Drive, Canonsburg, PA 15370
- SKB Mineral Interests, LLC
3606 Pruetts Chapel Road, Paragould, AK 72450
- Newton S Beaty Families Trust
107 High Street, PO Box 108, Mannington, WV 26582

Coal Lessee

- ACNR Resources
46226 National Road, St. Clairsville, OH 43950

RECEIVED
Office of Oil and Gas

JUL 08 2021

WV Department of
Environmental Protection

08/13/2021

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: 05/25/2021 Date Permit Application Filed: 7/10/2021

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:	West Virginia	UTM NAD 83 Easting:	541533.546
County:	Wetzel	Northing:	4379889.076
District:	Grant	Public Road Access:	CR1
Quadrangle:	Big Run	Generally used farm name:	EQT Production Company
Watershed:	Wiley Fork		

This Notice Shall Include:

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

Notice is hereby given by:

Well Operator: EQT Production Company
Address: 400 Woodcliff Drive
Canonsburg, PA 15317
Telephone: 724-746-9073
Email: jzavatchan@eqt.com
Facsimile: 412-395-2974

Authorized Representative: John Zavatchan
Address: 400 Woodcliff Drive
Canonsburg, PA 15317
Telephone: 724-746-9073
Email: jzavatchan@eqt.com
Facsimile: 412-395-2974

Oil and Gas Privacy Notice:

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

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WV Department of Environmental Protection

08/13/2021

Well Pad / AST Pad / Access Road / Stockpile

- EQT Production Company
400 Woodcliff Drive, CANONSBURG, PA 15317
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PO BOX 709, BUCKHANNON, WV 26201

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5017 HUSKY HWY., MANNINGTON, WV 26582
- Coastal Forest Resources Co.
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- Rich Rager
4620 SIMPSON RD., GRAFTON, WV 26354
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7335 WILLEY FORK RD., BURTON, WV 26562
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531 FRANKLIN TERRANCE, WASHINGTON, PA 15301

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Office of Oil and Gas

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WV Department of
Environmental Protection

08/13/2021

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

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

Date of Notice: 01/15/2021 Date Permit Application Filed: 7/16/2021

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

- CERTIFIED MAIL RETURN RECEIPT REQUESTED
- HAND DELIVERY

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

Notice is hereby provided to the SURFACE OWNER(s)
(at the address listed in the records of the sheriff at the time of notice):

Name: <u>EQT Production Company</u>	Name: _____
Address: <u>400 Woodcliff Drive</u>	Address: _____
<u>Canonsburg, PA 15317</u>	_____

Notice is hereby given:

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

State: <u>West Virginia</u>	UTM NAD 83	Easting: <u>541533.545</u>
County: <u>Wetzel</u>		Northing: <u>4379889.076</u>
District: <u>Grant</u>	Public Road Access: <u>CR1</u>	
Quadrangle: <u>Big Run</u>	Generally used farm name: <u>EQT Production Company</u>	
Watershed: <u>Wiley Fork</u>		

This Notice Shall Include:

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

Well Operator: <u>EQT Production Company</u>	Address: <u>400 Woodcliff Drive</u>
Telephone: <u>724-746-9073</u>	<u>Canonsburg, PA 15317</u>
Email: <u>jzavalchan@eqt.com</u>	Facsimile: <u>412-395-2974</u>

Oil and Gas Privacy Notice:

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

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Environmental Protection

08/13/2021

4710303433



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

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

Byrd E. White, III
Secretary of Transportation/
Commissioner of Highways

Jimmy Wriston, P. E.
Deputy Secretary/
Deputy Commissioner

June 2, 2021

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

Subject: DOH Permit for the BIG 464 Pad, Wetzel County
BIG 464 5H Well Site ✓

Dear Mr. Martin,

This well site will be accessed from a DOH permit #06-2018-0403 which has been issued to EQT Production Company for access to the State Road for a well site located off Wetzel County Route 15/4 SLS at MP 1.13.

This operator is in compliance with §22-6A-20 of the WV Code. 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 October 1, 2018. This letter is valid for permitting purposes for one year from the date of this letter.

Very Truly Yours,

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

Cc: Becky Shrum
EQT Production Company
CH, OM, D-6
File

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08/13/2021

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

<u>Material</u>	<u>Ingredient</u>	<u>CAS Number</u>
Sand (Proppant)	Silica Substrate	14808-60-7
Water	Water	7732-18-5
Hydrochloric Acid (HCl)	Hydrogen Chloride	7647-01-0
Friction Reducer	Copolymer of 2-propenamide	Proprietary
	Petroleum Distillate	64742-47-8
	Oleic Acid Diethanolamide	93-83-4
	Alcohols, C12-16, ethoxylated	68551-12-2
	Ammonium chloride ((NH ₄)Cl)	12125-02-9
Biocide	Glutaraldehyde	111-30-8
	Alkyl dimethyl benzyl ammonium chloride	68391-01-5
	Didecyl dimethyl ammonium chloride	7173-51-5
	Non-hazardous substances	Proprietary
Scale Control	Bis(HexaMethylene Triamine Penta(Methylene Phosphonic Acid)(BHMT)	34690-00-1
	Non-hazardous substances	Proprietary
Acid Chelating Agent	Citric Acid	77-92-9
Corrosion Inhibitor	Methanol	67-56-1
	pyridinium, 1-(phenylmethyl)-, ethyl methyl derivs., chlorides	68909-18-2
	Nonoxynol-9	127087-87-0
	2-ethyl-1-hexanol	104-76-7
	4-nonylphenyl, ethoxylated	26027-38-3

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WV Department of
Environmental Protection

08/13/2021

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

West Virginia Coordinate System of 1983
State Plane Grid North
Elevations NAVD88
Established By Survey Grade GPS



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



Hornor
Gregory R. Hornor, P.E.
Civil, Mining, Environmental and
Consulting Engineering
Company, Inc. 2005-2006-2007-2008-2009-2010-2011-2012-2013-2014-2015-2016-2017-2018-2019-2020-2021

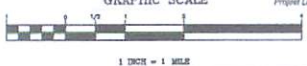
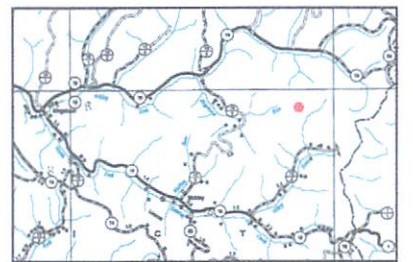
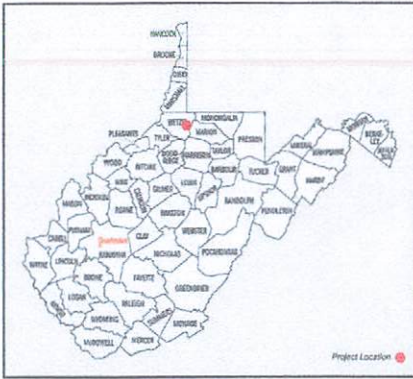


EQT
Energy Energy Services

THIS DOCUMENT
PREPARED FOR
EQT PELLERIN
COMPANY

AS-BUILT COVER SHEET / LOCATION MAP
**BIG 464
WELL PAD SITE**
GRANT DISTRICT WETZEL COUNTY, WV
MANNING DISTRICT MARION COUNTY, WV

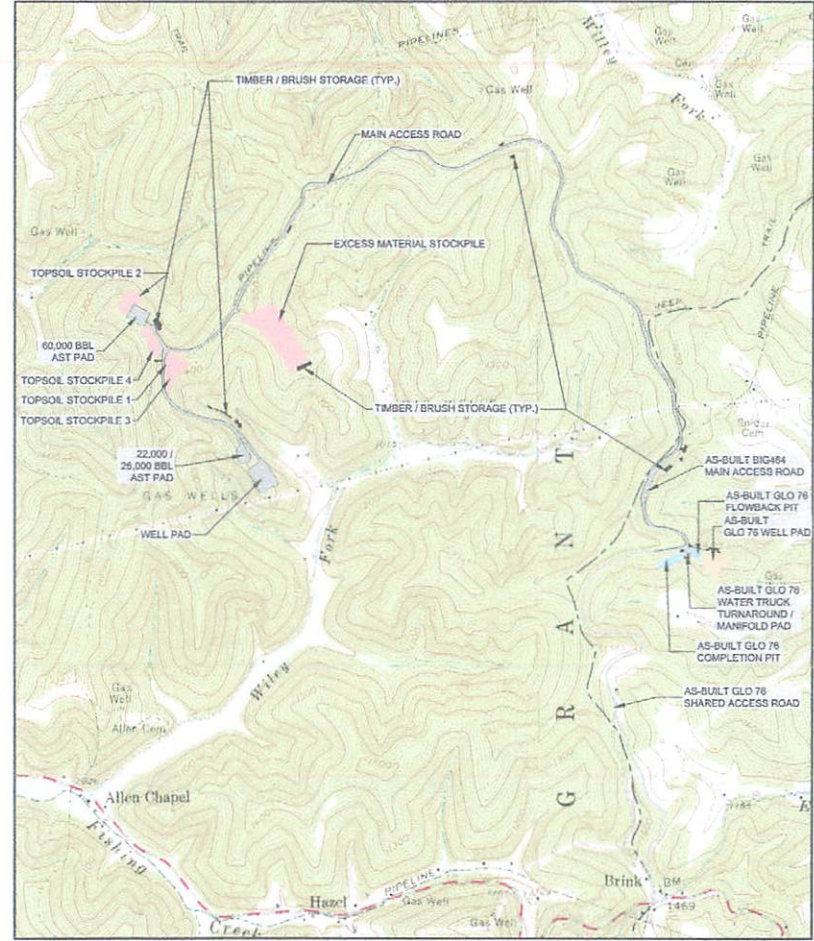
DATE: 06/14/2018
REVISIONS:
10/2/2018 ADDIT AS-BUILT WELL PAD NUMBERS
5/11/2021 CHANGED AS-BUILT AST SIZE
5/20/2021 UPDATED TOP HOLES
Scale: N.A.
Designed By: TRC
File No.: 1714-0001-01
Page: 1 of 21



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
FIRM MAP NUMBER(S) FOR SITE:	54049C0069D - 54103C0250C - 54103C0225C
ACREAGES OF CONSTRUCTION IN FLOODPLAIN:	N.A.

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.**



**WVDEP OOG
ACCEPTED AS-BUILT**
8/11/2021

AS-BUILT WELL LEGEND

BIG464 11H-	LAT: 39.587764 / LONG: -80.516525
BIG464 3H-	LAT: 39.587730 / LONG: -80.516495
BIG464 6H-	LAT: 39.587695 / LONG: -80.516466
BIG464 7H-	LAT: 39.587661 / LONG: -80.516436
BIG464 9H-	LAT: 39.587627 / LONG: -80.516406
BIG464 11H-	LAT: 39.587593 / LONG: -80.516376
BIG464 113H-	LAT: 39.587559 / LONG: -80.516347
47-103-03211-	LAT: 39.587568 / LONG: -80.516462
47-103-03212-	LAT: 39.587538 / LONG: -80.516434
47-103-03213-	LAT: 39.587502 / LONG: -80.516337
47-103-03214-	LAT: 39.587520 / LONG: -80.516510
47-103-03215-	LAT: 39.587488 / LONG: -80.516482

SHEET INDEX

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

ASBUILT MATERIAL QUANTITIES

ITEM DESCRIPTION	DESIGN QTY	UNIT	ASBUILT QTY
Clearing and Grubbing	125.43	AC	125.79
12" Silt Sox	0	LF	2,584
24" Silt Sox	19,821	LF	25,470
12" Dia. HDPE Culvert/ Pipe	0	LF	73
15" Dia. HDPE Culvert/ Pipe	643	LF	1,075
18" Dia. HDPE Culvert/ Pipe	342	LF	560
24" Dia. HDPE Culvert/ Pipe	912	LF	1,216
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	522
Toe Key Drain Pipe	24,479	LF	25,782
Toe Key Outlet Pipe	7,320	LF	13,275

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	50,384	213,381	-156,997	140,359	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	14,240	21,301	-7,071	13,460	21,332	-7,872
22,000/26,000 BBL ABOVEGROUND STORAGE TANK (AST) PAD	54,516	7,133	57,389	54,755	7,607	52,155
22,000/26,000 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	28,541

BIG 464 SITE LOCATIONS

NAME	LATITUDE	LONGITUDE
Center of Well Pad	39.587730	-80.516495
Center of 60,000 BBL AST Pad	39.571701	-80.524345
Center of 22,000/26,000 BBL AST Pad	39.586669	-80.517732
Site Owner Main Access	39.584632	-80.497130
Site Owner 60,000 AST Access	39.573440	-80.522528
Site Owner 22,000/26,000 AST Access	39.580724	-80.518191

As-Built Certification
These drawings have been prepared high density 3D scan data provided by Allegany Surveys, Inc. on 6/6/18 and reflect the locations and as-built conditions known to exist following construction of this site. To the best of my knowledge.

BIG 464 WELL PAD AS BUILT SITE PLAN



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 2" Contour
- As Built 10' Contour
- As Built 12' Silt Sock
- As Built 24' Silt Sock
- As Built Silt Fence
- As Built Super Silt Fence
- As Built Straw Wattle
- Limits of Disturbance (As-Built)
- Ditch Line

**WVDEP OOG
ACCEPTED AS-BUILT**
8/11/2021

20 - 1
Coastal Forest
Resources Co.
542.5 Acres

PROPOSED 22,000 BBL IMPAIRED WATER
ABOVE GROUND STORAGE TANK (AST)
WITH 26,000 BBL SECONDARY
CONTAINMENT
LAT. = 39.569835
LONG. = -80.517822

All topographic information shown herein
is based on high density 30 meter data provided by
Allegheny Surveys, Inc. on 6/6/18



Allegheny Surveys, Inc.
P.O. Box 438
237 Birch River Road
Birch River, WV 26670
304-649-8606



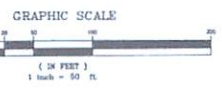
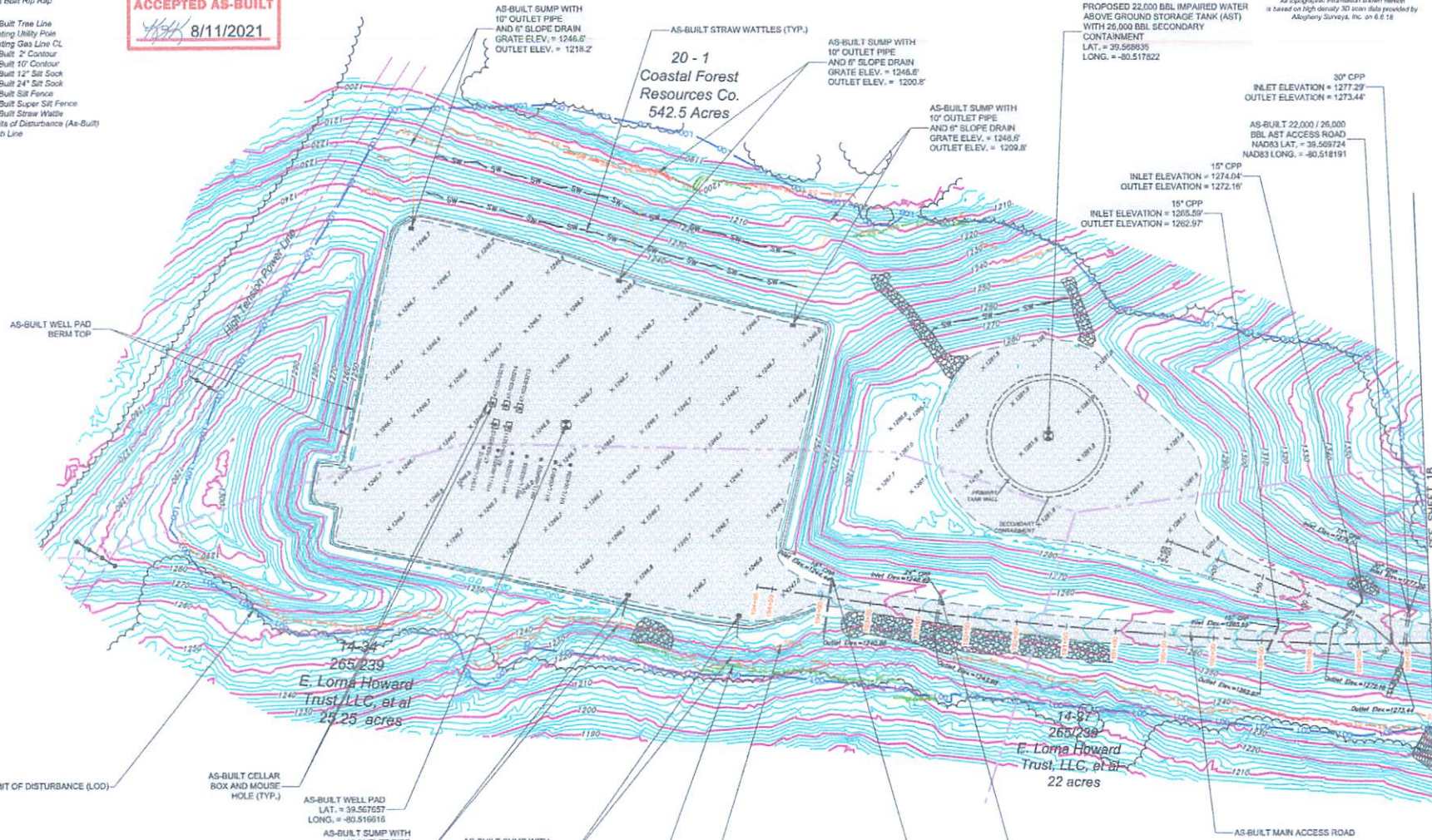
Hornor
James J. Hornor
1988 Bros. Engineers
Civil, Mining, Environmental and
Surveying
100 South 34th Street, Suite 200
Charleston, West Virginia, 25304 (304) 334-1144



THIS DOCUMENT
PREPARED FOR
EQT PRODUCTION
COMPANY

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

DATE: 06/14/2018
Scale: 1"=50'
Designed by: TRC
File No.:
Page 22 of 22



DATE	REVISIONS	DATE: 06/14/2018
10/2/2018	ADDED AS-BUILT WELL APT NUMBERS	Scale: 1"=50'
5/11/2021	CHANGED AS-BUILT AST SIZE	Designed by: TRC
5/20/2021	UPDATED TOP HOLES	File No.:
		Page 22 of 22