



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

Wednesday, June 16, 2021
WELL WORK PERMIT
Horizontal 6A / New Drill

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

Re: Permit approval for 12H
47-103-03415-00-00

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

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

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

James A. Martin
Chief

Operator's Well Number: 12H
Farm Name: MICHAEL KUHN
U.S. WELL NUMBER: 47-103-03415-00-00
Horizontal 6A New Drill
Date Issued: 6/17/2021

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.

06/25/2021

4710303415

WW-6B
(04/15)

API NO. 47- 103 - 03415
OPERATOR WELL NO. 12H
Well Pad Name: Michael Kuhn

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 Center Big Run
Operator ID County District Quadrangle

2) Operator's Well Number: 12H Well Pad Name: Michael Kuhn

3) Farm Name/Surface Owner: Rachel Elizabeth Wyatt & Sheldon R Norris Public Road Access: CR 19/3

4) Elevation, current ground: 1509' (built) Elevation, proposed post-construction: 1509' (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, 7,751', 51', 2,620 PSI

8) Proposed Total Vertical Depth: 7751'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 23,432

11) Proposed Horizontal Leg Length: 14,899

12) Approximate Fresh Water Strata Depths: 75', 361'

13) Method to Determine Fresh Water Depths: Offset Wells - 47-103-01884 & 43-103-01813

14) Approximate Saltwater Depths: 2027', 2100', 2295', 2369'

15) Approximate Coal Seam Depths: 1163'-1166', 1260'-1266'

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

(a) If Yes, provide Mine Info: Name: _____

Depth: _____

Seam: _____

Owner: _____

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WW-6B
(04/15)

API NO. 47- 103 - 03415
 OPERATOR WELL NO. 12H
 Well Pad Name: Michael Kuhn

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	1316	1316	1210 ft ³ / CTS
Coal							
Intermediate	9 5/8	New	J-55	36	2823	2823	1100 ft ³ / CTS
Production	5 1/2	New	P-110	20	23432	23432	500' above intermediate casing
Tubing							
Liners							

Bryan Harris 5/13/21

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							

PACKERS

Kind:				
Sizes:				
Depths Set:				

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 Page 2 of 3 Mineral Protection

06/25/2021

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): 12.25 acres (2.87 acres previously disturbed)

22) Area to be disturbed for well pad only, less access road (acres): 5.17 acres (2.72 acres existing)

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

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.

*Note: Attach additional sheets as needed.

4710303415



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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

Promoting a healthy environment

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06/25/2021



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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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WV Department of
Environment & Natural Resources
06/25/2021



May 10, 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 Michael Kuhn 12H

Dear Mr. Brewer,

The 13-3/8" surface casing will be set at 1,316' KB, 50' below the deepest workable coal seam and 955' below the deepest fresh water. The 9-5/8" intermediate string will be set at 2,823' 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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4710303415

WEST VIRGINIA GEOLOGICAL PROGNOSIS

BIG467

Drilling Objectives:
 Quad:
 County:
 Elevation:
 Recommended Azimuth

Marcellus
 Wetzel
 1536 KB
 Degrees

Horizontal Well
 Pad Name: MICHAEL KUHN
 BIG467

Recommended total wellbore length: 1523 GL

Proposed Logging Suite: -No Pilot Hole Needed

Coal requirements: Run a directional survey from the surface through the deepest coal seam

ESTIMATED FORMATION TOPS	Derived from well	4710302775		
Formation	Top (TVD)	Base (TVD)	Lithology	Comments
Fresh Water Zone	1	361		FW from offsets @ 75,361, , , , ,
Sewickley Coal	1163	1166 Coal		
Pittsburgh Coal	1260	1266 Coal		SW @ 2027,2100,2295,2369
Big Injun	2623	2773 Sandstone		Hydrocarbon prod/show in offset @2395,2679,3320,3432,3569, . . . 50 ft below Big Injun
Int csg pt	2823			
Berea	2891	3151 Sandstone		RED ROCK SHOWS NOT LISTED IN OFFSETS
Gantz	3256	3324 Silty sand		
Fifty foot	3324	3412 Silty sand		Outside of Storage Boundary
Thirty foot	3412	3609 Silty sand		
Bayard	3609	3683 Sandstone		
Upper Speecheley	4014	4067 Silty sand		
Speecheley	4067	4150 Silty sand		
Balltown	4150	4514 Silty sand		
Bradford	4514	5629 Silty sand		
Benson	5629	6037 Silty sand		
Alexander	6037	6468 Silty sand		
Elk	6468	7272 Silty sand		
Sonyea	7272	7441 Gray shale		
Middlesex	7441	7485 Black Shale		
Genesee	7485	7572 Gray shale interbedded		
Genesee	7572	7599 Black Shale		
Tully	7599	7622 Limestone		Top RR Base RR
Hamilton	7622	7725 Gray shale with some		
Marcellus	7725	7776 Black Shale		
-Purcell	7742	7744 Limestone		
-Cherry Valley	7754	7756 Limestone		
-Lateral Zone	7751			
Onondaga	7776	Limestone		

Comments:
 Note that this is a TVD prog for a horizontal well (azimuth of degrees, target formation = Marcellus). All measurements taken from estimated KB elevation. Water and coal information estimated from surrounding well data.

RECOMMENDED CASING POINTS

	CSG OD		CSG DEPTH	Planned Depth
Conductor:	24"			40
Freshwater / Coal:	13 3/8"			1316 50' below Pittsburgh
Intermediate 1:	9 5/8"			2823 50' below big injun
Production:	5 1/2"			@ TD

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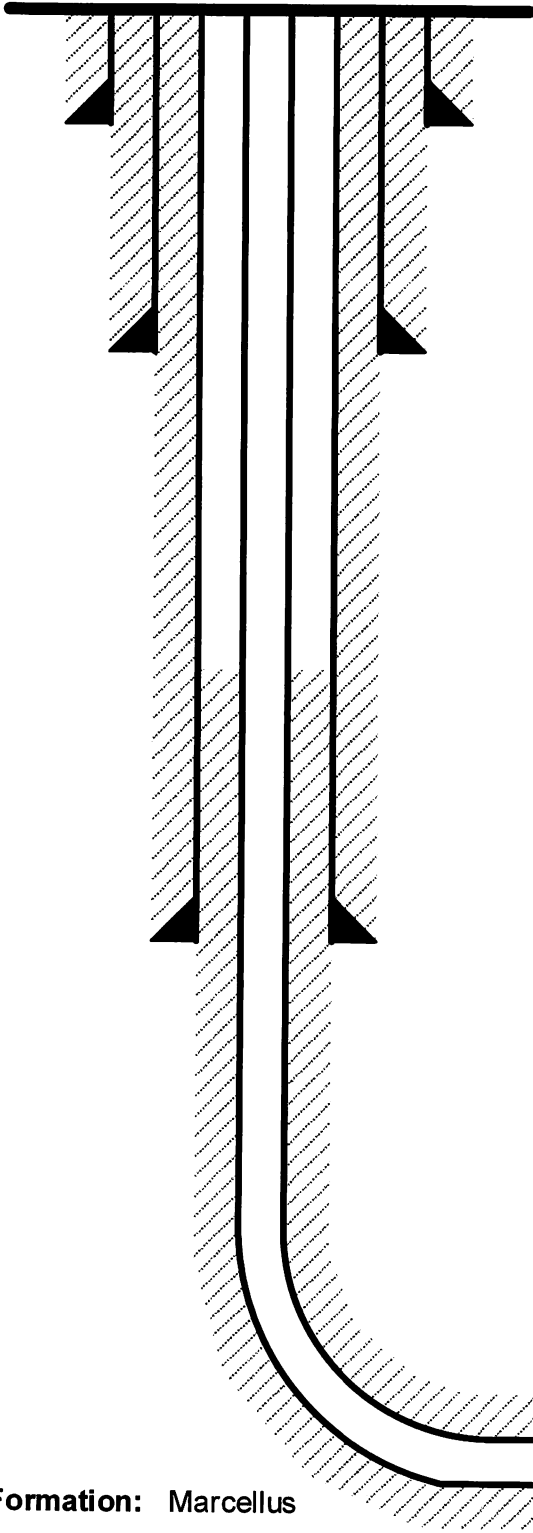
WV Department of
 Environmental Protection
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EQT Production

Wellbore Diagram

Well: Michael Kuhn 12H
Pad: Michael Kuhn
Elevation: 1523' GL 1536' KB

County: Wetzel
State: West Virginia



Conductor @ 40'

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

Surface @ 1,316'

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

Intermediate @ 2,823'

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

Production @ 23,432' MD / 7,751' 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 RECORDED
06/25/2021

WW-9
(4/16)

API Number 47 - 103 - 03415
Operator's Well No. Michael Kuhn 12H

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) Knob Fork of WV Fork of Little Fishing Creek 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 May, 2021

MAY 17 2021

[Signature] Notary Public

WV Department of
Environmental Protection

My commission expires October 25, 2023

Commonwealth of Pennsylvania - Notary Seal
Olivia Pishioneri, Notary Public
Allegheny County
My commission expires October 25, 2023
Commission number: 1859968
06/25/2021
Member, Pennsylvania Association of Notaries

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-clide, carbonates.**
- **Synthetic mud – synthetic base oil, emulsifier, salt, lime, viscosifer, alkalinity control, filtration control, deflocculates, biodegradable oil lubricant, defoaming, carbonates.**

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4710303415

Form WW-9

Operator's Well No. Michael Kuhn 12H

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: Bryan 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.

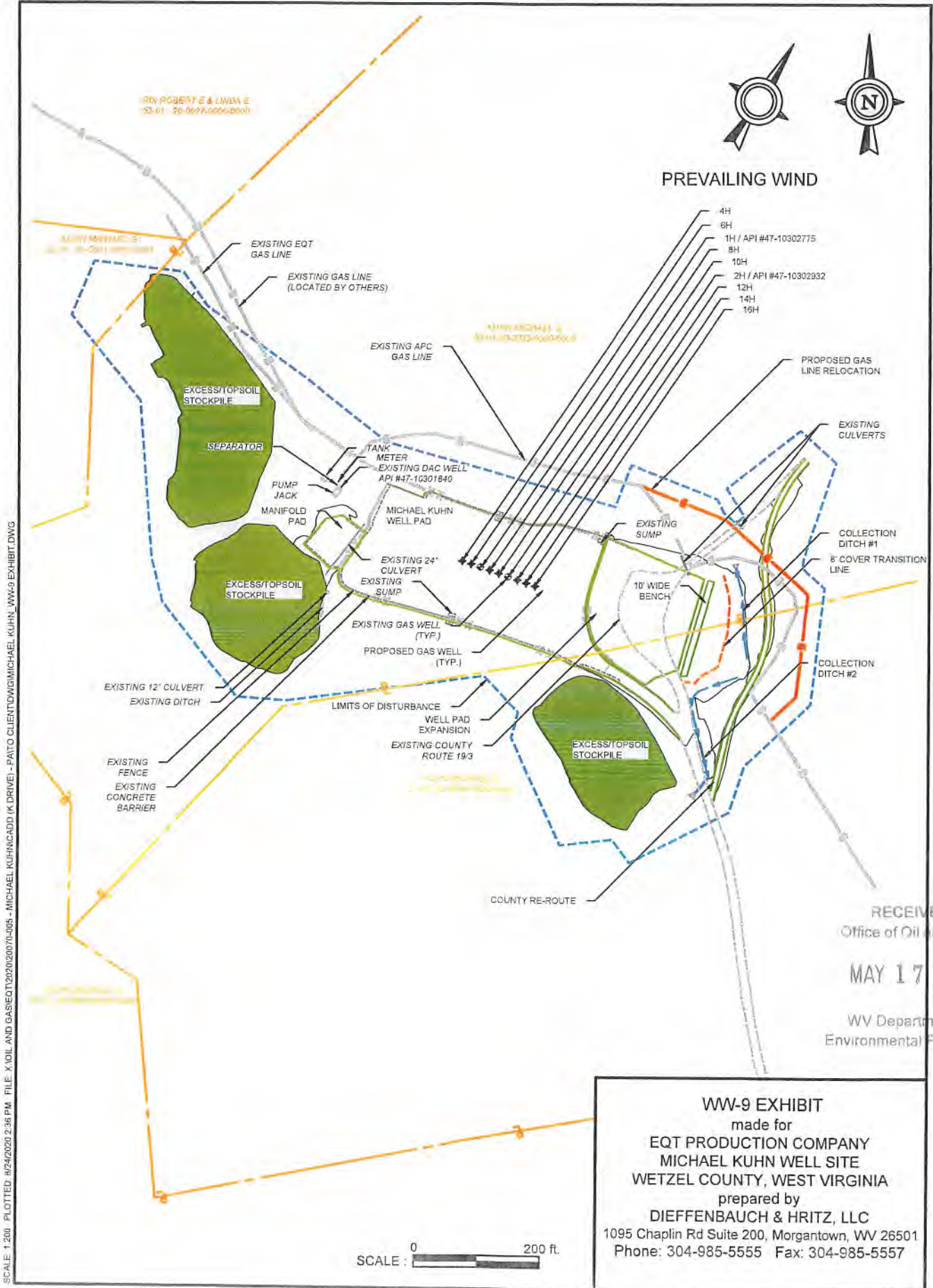
Title: Inspector Date: 5/13/21

Field Reviewed? Yes No

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SCALE: 1:200 PLOTTED: 05/24/2020 2:36 PM FILE: X:\OIL AND GAS\EQT\2020\20070-005 - MICHAEL KUHN\CADD\K DRIVE\ - PATO CLIENT\DWG\MICHAEL KUHN_WW-9 EXHIBIT.DWG

WW-9 EXHIBIT
 made for
EQT PRODUCTION COMPANY
MICHAEL KUHN WELL SITE
WETZEL COUNTY, WEST VIRGINIA
 prepared by
DIEFFENBAUCH & HRITZ, LLC
 1095 Chaplin Rd Suite 200, Morgantown, WV 26501
 Phone: 304-985-5555 Fax: 304-985-5557

06/25/2021

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 Athens 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 - Anderson Rock 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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4710303415

EQT Production
Hydraulic Fracturing Monitoring Plan
Pad ID: Michael Kuhn (BIG467)
County: Wetzel

May 14, 2021

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Purpose

The purpose of this pad-specific Hydraulic Fracturing Monitoring Plan is to identify and notify conventional well operators near EQT hydraulic fracturing in Wetzel County, WV prior to hydraulic fracturing at the following EQT wells on the Michael Kuhn well pad: 4H, 6H, 8H, 10H, 12H, 14H, 16H

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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Planned Lat Lengths

- 1H - 5615'
- 2H - 5502'
- 16H - 14928'
- 14H - 14936'
- 12H - 14894'
- 10H - 17402'
- 8H - 17270'
- 6H - 18515'
- 4H - 21125'

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EQT Corporation
625 Liberty Avenue
Pittsburgh, PA 15222

Michael Kuhn

Vertical Offsets and
Foreign Laterals
within 500'

Legend

Foreign Offset Wells

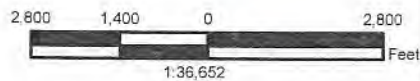
Well Pad Sites

**Well Lateral_FM
Formation**

- Geneseo
- Marcellus
- Utica

Disclaimer:

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



WellID	WellStatus	date	FmatTD	Permit	RemarksPRO	Operator
4710101244	P&A	4/8/1982		01244		HADDAD & BROOK
4710300223	P&A	11/22/1918		00223	4SDBYD	EPC
4710300242	GAS-P	9/20/1940		00242	PTC	CNG
4710300243	DRY	10/21/1940		00243		CNG
4710300246	DRY	12/19/1940		00246		CNG
4710300367	UNK	11/18/1950		00367		W S HINERMAN
4710300368	UNK	11/2/1950		00368		W S HINERMAN
4710300369	UNK	11/2/1950		00369		W S HINERMAN
4710300668	GAS	7/20/1909		00668	4SD5SD	EPC
4710300690	GAS	7/28/1915		00690	SL1	EPC
4710300706	GAS	8/7/1917		00706	4SD	CNG
4710300708	GAS	10/27/1952		00708	GDN4SD	EPC
4710300754	GAS	10/2/1903		00754	BNJ	MANUFACTURERS LIGHT
4710300807	P&A	2/18/1915		00807	NCR	EPC
4710300809	GAS-P			00809		EPC
4710300858	P&A	3/10/1916		00858		EQUITRANS
4710300859	P&A	11/29/1916		00859		EQUITRANS
4710301244	GAS	4/15/1982		01244	GDNBSNONDHBGBSI	HADDAD&BROOKS
4710301473	GAS-P	1/19/1914		01473		CNG TRANSMISSION
4710301504	O&G	5/18/1992		01504	50F	SHELDON & ASSOCIATES
4710301784	GAS	8/2/1999		01784	BNJGDNBYD	D A C
4710301805	GAS	8/12/2000		01805	BNJGDN	D A C
4710301807	GAS	8/23/2000		01807	BNJGDN	D A C
4710301809	GAS	10/20/2000		01809	BNJGDN	D A C
4710301816	GAS			01816		D A C
4710301828	GAS	7/30/2001		01828	BNJGDN	
4710301840	GAS	8/30/2001		01840	BYDBNJ	D A C
4710301841	UNK	8/21/2001		01841	BNJ4SD5SDBYD	D A C
4710301869	GAS	12/18/2001		01869	BNJGDN	D A C
4710301879	GAS	6/17/2002		01879	GDN	D A C
4710301883	GAS	8/7/2002		01883	BNJGDN	D A C
4710301884	GAS	8/14/2002		01884	BNJGDN	D A C
4710301887	GAS	8/22/2002		01887	BNJGDN	D A C
4710301888	GAS	9/14/2002		01888	BNJGDN	
4710301889	GAS-P	9/6/2002		01889	SL	D A C
4710301890	GAS	8/29/2002		01890	GDNBNJ	
4710301966	GAS	8/26/2003		01966	BNJGDN	D A C
4710301975	GAS	9/7/2003		01975	GDN	D A C
4710301980	GAS	12/5/2003		01980	BNJGDN	D A C
4710302013	GAS	12/13/2003		02013	GDN4SD	D A C
4710302018	UNK	4/1/2004		02018	GDN	D A C
4710302115	UNK	9/16/2005		02115	BER	D A C
4710302135	UNK	11/1/2005		02135	BNJ	D A C
4710302196	GAS	9/20/2006		02196	BNJ/GDN	D A C
4710302197	GAS	9/25/2006		02197	BNJ/GDN	D A C
4710302198	GAS	10/1/2006		02198	BNJ/GDN	D A C
4710302394	GAS	9/6/2008		02394	BNJ5SD4SDGDN	D A C
4710302395	GAS	10/12/2008		02395	BNJ/GDS	D A C
4710302594	CBM	2/9/2011		02594		CONSOL GAS
4710330243	GAS	10/27/1905		30243	SLBNJGDN	PGH & WV GAS
4710330350	GAS	9/21/1916		30350	BNJ	HOPE NAT GAS
4710330460	GAS	9/8/1916	LOWER HURON SHALE	30460	MGSBNJ	MANUFACT LIGHT
4710330475	GAS	9/22/1916	LOWER HURON SHALE	30475	BNJ4SD	PGH & WV GAS
4710330509	GAS	6/20/1928		30509	BNJGDN	DUNN-MAR O & G
4710330556	UNK	10/17/1912		30556		DUNN-MAR O & G
4710330651	GAS	8/14/1919		30651	BNJGDN	PGH & WV GAS
4710330765	GAS	5/4/1916		30765	SL1	MANUFACT LIGHT
4710331016	GAS	7/10/1915		31016	MGSBDKSL1	MANUFACT LIGHT
4710331088	GAS	12/22/1908	LOWER HURON SHALE	31088	4SD	OPER IN MIN.OWN
4710331177	UNK			31177		HOPE NAT GAS
47103TEMP16	UNK			EMP16		
651391 TEMP LM	TEMP			MP LM		

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Longitude	Latitude	TargetFm	DatumEleva	TotalDepth-SS	Total Depth
-80.5025	39.5919		973.0000	-7027.0000	8000.00
-80.5152	39.5846		1148.0000	-2082.0000	3230.00
-80.5013	39.5980		1244.0000	336.0000	908.00
-80.5116	39.5776		1272.0000	254.0000	1018.00
-80.5008	39.5939		1177.0000	332.0000	845.00
-80.4979	39.5904		968.0000	327.0000	641.00
-80.4967	39.5897		970.0000	-99999.0000	100969.00
-80.4968	39.5916		986.0000	345.0000	641.00
-80.5107	39.5930		920.0000	-1951.0000	2871.00
-80.5025	39.6018		0.0000	-1820.0000	1820.00
-80.5042	39.5706		979.0000	-2107.0000	3086.00
-80.5048	39.5871		0.0000	-3143.0000	3143.00
-80.5248	39.6172		0.0000	-2448.0000	2448.00
-80.4903	39.5858		0.0000	-2052.0000	2052.00
-80.5119	39.6031		0.0000	-2769.0000	2769.00
-80.5138	39.5952		1221.0000	-1044.0000	2265.00
-80.5137	39.5898		1245.0000	-1047.0000	2292.00
-80.5027	39.5918		983.0000	-7027.0000	8010.00
-80.4931	39.5880		1205.0000	-99999.0000	101204.00
-80.5238	39.6036		960.0000	-99999.0000	100959.00
-80.5194	39.5947		937.0000	-2370.0000	3307.00
-80.5101	39.6070		1450.0000	-2252.0000	3702.00
-80.5369	39.6118		1514.0000	-2159.0000	3673.00
-80.5333	39.6222		1182.0000	-2169.0000	3351.00
-80.5425	39.6290		1434.0000	-99999.0000	101433.00
-80.5289	39.6206		1288.0000	-2396.0000	3684.00
-80.5322	39.6157		1519.0000	-2240.0000	3759.00
-80.5361	39.6261		1400.0000	-2270.0000	3670.00
-80.5211	39.6190		1258.0000	-2295.0000	3553.00
-80.5286	39.6117		1545.0000	-2233.0000	3778.00
-80.5157	39.6178		1175.0000	-2450.0000	3625.00
-80.5279	39.6154		1576.0000	-2265.0000	3841.00
-80.5222	39.6108		1424.0000	-2234.0000	3658.00
-80.5139	39.6156		1381.0000	-2247.0000	3628.00
-80.5182	39.6142		1245.0000	-641.0000	1886.00
-80.5225	39.6176		1402.0000	-2271.0000	3673.00
-80.4954	39.5877		1029.0000	-2260.0000	3289.00
-80.5165	39.6011		1384.0000	-2209.0000	3593.00
-80.4966	39.5918		1027.0000	-2237.0000	3264.00
-80.4979	39.5949		1285.0000	-2221.0000	3506.00
-80.4965	39.5843		1299.0000	-1836.0000	3135.00
-80.5177	39.6138		1242.0000	-1970.0000	3212.00
-80.5142	39.6116		1574.0000	-2176.0000	3750.00
-80.4973	39.5738		0.0000	-3520.0000	3520.00
-80.5014	39.5749		0.0000	-3603.0000	3603.00
-80.5009	39.5784		0.0000	-3706.0000	3706.00
-80.4981	39.5706		1109.0000	-2173.0000	3282.00
-80.5016	39.5683		1064.0000	-2198.0000	3262.00
-80.5244	39.6206		1216.0000	636.0000	580.00
-80.5328	39.6131		1224.0000	-1789.0000	3013.00
-80.5108	39.5825		1427.0000	-1146.0000	2573.00
-80.5097	39.6042		1462.0000	-1995.0000	3457.00
-80.5189	39.5911		1120.0000	-1952.0000	3072.00
-80.5189	39.5875		1182.0000	-1920.0000	3102.00
-80.5017	39.5761		1365.0000	-2108.0000	3473.00
-80.5178	39.5856		1401.0000	-1896.0000	3297.00
-80.5136	39.5986		1165.0000	-446.0000	1611.00
-80.5086	39.6019		1223.0000	-457.0000	1680.00
-80.5011	39.5875		1328.0000	-2095.0000	3423.00
-80.5075	39.5997		1349.0000	-99999.0000	101348.00
-80.5096	39.5931		0.0000	-99999.0000	99999.00
-80.4903	39.5858		0.0000	-99999.0000	99999.00

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Topo Quad: Big Run Scale: 1" = 1000'
 County: Wetzel Date: August 19, 2020
 District: Center Project No: 49-34-C-20

Water

Michael Kuhn Well Pad

4 Potential Water Sources within 2500'



LEGEND

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

- Well
- Spring
- Pond
- Building

NAD 27, North Zone
N:407833.78
E:1709459.12

WGS 84
LAT:39.615245
LONG:-80.531142
ELEV:1509'



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

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Table 1 – Water Source Identification

EQT Well Pad Name: **Michael Kuhn (BIG 467)**

Submission Date: **August 19, 2020**

EQT Well Number: 124

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

Site Number: **1** Distance from Gas Well (feet): **3336 ±**

Surface Owner / Occupant: **Robert & Linda Rix**

Address: **2053 Kodol Rd. Littleton WV 26581** Phone #: **304-775-2425**

Field Located Date: **07/22/2020** Owner home during survey (yes/no): **Yes**

Coordinates: **39.623072, -80.537462** (decimal degrees – NAD 83)

Contact Attempts (Date): 1st: **07/21/2020** 2nd: _____ Door Hanger Left: _____

Comments: **POND - Located about 200 ft. from road. Certified mailed 7/21/2020. Field visit 07/22/2020. Spoke to Mr. Rix who indicated he has two water wells and three ponds.**

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

Site Number: **2** Distance from Gas Well (feet): **2801 ±**

Surface Owner / Occupant: **Robert & Linda Rix**

Address: **2053 Kodol Rd. Littleton WV 26581** Phone #: **304-775-2425**

Field Located Date: **07/22/2020** Owner home during survey (yes/no): **Yes**

Coordinates: **39.621728, -80.536503** (decimal degrees – NAD 83)

Contact Attempts (Date): 1st: **07/21/2020** 2nd: _____ Door Hanger Left: _____

Comments: **WATER WELL - Well casing located by old home site. Certified mailed 7/21/2020. Field visit 07/22/2020.**

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

Site Number: **3** Distance from Gas Well (feet): **2500 ±**

Surface Owner / Occupant: **Robert & Linda Rix**

Address: **2053 Kodol Rd. Littleton WV 26581** Phone #: **304-775-2425**

Field Located Date: **07/22/2020** Owner home during survey (yes/no): **Yes**

Coordinates: **39.621464, -80.534911** (decimal degrees – NAD 83)

Contact Attempts (Date): 1st: **07/21/2020** 2nd: _____ Door Hanger Left: _____

Comments: **WATER WELL - Currently being used in home. Certified mailed 7/21/2020. Field visit 07/22/2020.**

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

(Insert additional pages as needed)

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Site Number: 4 Distance from Gas Well (feet): 1471 ±

Surface Owner / Occupant: Robert & Linda Rix

Address: 2053 Kodol Rd. Littleton WV 26581 Phone #: 304-775-2425

Field Located Date: 07/22/2020 Owner home during survey (yes/no): Yes

Coordinates: 39.618749, -80.533719 (decimal degrees – NAD 83)

Contact Attempts (Date): 1st: 07/21/2020 2nd: _____ Door Hanger Left: _____

Comments: POND - Certified mailed 7/21/2020. Field visit 07/22/2020.

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

Site Number: 5 Distance from Gas Well (feet): 2077 ±

Surface Owner / Occupant: Robert & Linda Rix

Address: 2053 Kodol Rd. Littleton WV 26581 Phone #: 304-775-2425

Field Located Date: 07/22/2020 Owner home during survey (yes/no): Yes

Coordinates: 39.620800, -80.529246 (decimal degrees – NAD 83)

Contact Attempts (Date): 1st: 07/21/2020 2nd: _____ Door Hanger Left: _____

Comments: POND - Certified mailed 7/21/2020. Field visit 07/22/2020.

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

Site Number: 6 Distance from Gas Well (feet): 951 ±

Surface Owner / Occupant: Rachel Elizabeth Wyatt & Sheldon R. Norris

Address: 1132 Kodol Rd. Wileyville WV 26581 Phone #: _____

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

Coordinates: 39.613548, -80.534100 (decimal degrees – NAD 83)

Contact Attempts (Date): 1st: 07/21/2020 2nd: _____ Door Hanger Left: _____

Comments: POND – Located with aerial imagery. Certified mailed 7/21/2020. No response or any further contact.

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

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SITE SAFETY AND ENVIRONMENTAL PLAN

Michael Kuhn (BIG467)
Well Site

Center District
Wetzel County, WV

Well Numbers 1H, 2H, 4H, 6H, 8H, 10H, 12H, 14H, 16H

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

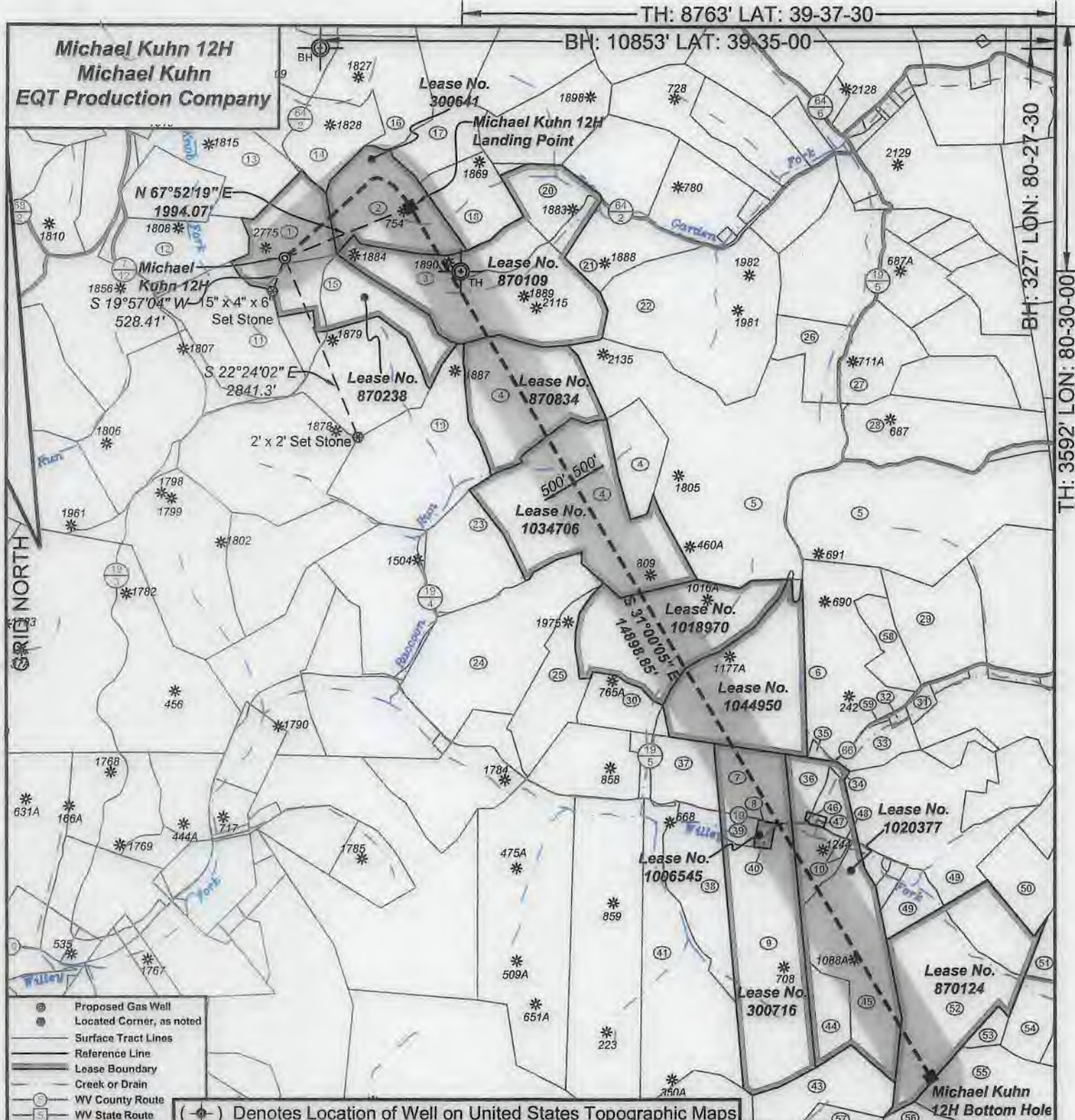
Approved By: Scott M. Held, Senior Safety Coordinator

Created Date: 29-Jan-20

John Zavatchan
Project Specialist
EQT Production Company

Derek Haught
Oil and Gas Specialist
West Virginia DEP

06/25/2021



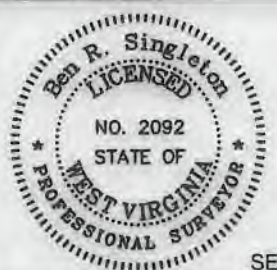
- Proposed Gas Well
- Located Corner, as noted
- Surface Tract Lines
- Reference Line
- Lease Boundary
- Creek or Drain
- WV County Route
- WV State Route

() 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: 49-20
DRAWING NO: Michael Kuhn 12H
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: April 30 20 21
OPERATOR'S WELL NO.: Michael Kuhn 12H
API WELL NO: H6A
47 - 103 - 03415
STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
LOCATION: ELEVATION: 1509' WATERSHED: Knob Fork of West Virginia Fork Fishing Creek QUADRANGLE: Big Run
DISTRICT: Center COUNTY: Wetzel
SURFACE OWNER: Rachel Elizabeth Wyatt & Sheldon R. Norris ACREAGE: 36.40
ROYALTY OWNER: Michael G. Kuhn LEASE NO: 870238 ACREAGE: 202
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: 775'

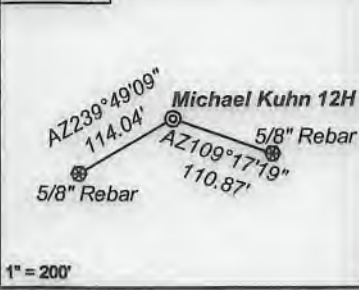
06/25/2021

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

Michael Kuhn 12H
Michael Kuhn
EQT Production Company

Tract I.D.	Tax Map No.	Parcel No.	County	District	Surface Tract Owner	Acres
1	20	32	Wetzel	Center	Rachel Elizabeth Wyatt & Sheldon R. Norris	36.40
2	13	6	Wetzel	Church	William B. Franck Jr.	48.44
3	17	1	Wetzel	Church	Book Buster Hunt Club of WV Inc.	100.00
4	4	12	Wetzel	Grant	Robert E. McCann Jr. & Andrew S. McCann	190.78
5	5	1	Wetzel	Grant	Raccoon Run Properties LLC	370.01
6	10	2.1	Wetzel	Grant	Richard L. Eoright	139.18
7	10	21	Wetzel	Grant	John Gump Jr. & Mary Jo. Gump	25.00
8	10	48	Wetzel	Grant	Brooks & Donna J. Hineman	1.28
9	10	38	Wetzel	Grant	Tammy D. Chambers	69.67
10	10	31.2	Wetzel	Grant	Zachary W. Adams	13.01
11	20	35	Wetzel	Center	Rachel Elizabeth Wyatt & Sheldon R. Norris	54.00
12	20	31	Wetzel	Center	Rachel Elizabeth Wyatt & Sheldon R. Norris	40.00
13	20	27	Wetzel	Center	Robert E. & Linda E. Rix	46.75
14	20	18	Wetzel	Center	Robert E. & Linda E. Rix	60.10
15	20	36	Wetzel	Center	Rachel Elizabeth Wyatt & Sheldon R. Norris	45.00
16	20	5	Wetzel	Center	Robert E. & Linda Rix	107.00
17	13	6	Wetzel	Church	William B. & Pamela S. Franck	26.50
18	13	9	Wetzel	Church	William B. Franck Jr.	28.00
19	4	11	Wetzel	Grant	Liberty Holding Company	69.05
20	13	10	Wetzel	Church	Book Buster Hunt Club of WV Inc	27.50
21	18	1	Wetzel	Church	Andrew Pribus	31.80
22	18	2	Wetzel	Church	David Brockenstein, et al.	68.50
23	9	5	Wetzel	Grant	John E. Sewell	36.50
24	9	12	Wetzel	Grant	Burt Barr	80.28
25	9	64	Wetzel	Grant	Calvin N. Barr, et al.	32.92
26	18	10	Wetzel	Church	Steven W. & Carolyn L. Blair	19.00
27	15	11	Wetzel	Church	Thomas E. Kahl	29.00
28	18	17	Wetzel	Church	Geoff Summers	57.30
29	10	4	Wetzel	Grant	Dary R. Taylor	86.08
30	10	9	Wetzel	Grant	Gregory A. Budine	22.50
31	10	11	Wetzel	Grant	Eamey J. Stoneking	3.52
32	10	2.2	Wetzel	Grant	Eamney J. & Romona L. Stoneking	0.99
33	10	2	Wetzel	Grant	Joseph W. Judge	12.75
34	10	31.1	Wetzel	Grant	Norman & Steacy Adams	0.92
35	10	10	Wetzel	Grant	Leroy & Hazel Kirkpatrick	1.07
36	10	31	Wetzel	Grant	John Gump Jr. & Mary Jo. Gump	16.33
37	10	20	Wetzel	Grant	Billy J. & Frances J. Higgins Irrevocable Trust	21.06
38	10	29.2	Wetzel	Grant	Randy R. Rex	40.00
39	10	35.1	Wetzel	Grant	Brooks Hineman	5.00
40	10	30	Wetzel	Grant	Tammy D. Chambers	1.05
41	10	29	Wetzel	Grant	Billy J. & Frances J. Higgins Irrevocable Trust	99.31
42	15	5	Wetzel	Grant	Donald J. D'Lusky, et al.	43.20
43	15	1	Wetzel	Grant	Timothy E. Tibus	43.20
44	10	39	Wetzel	Grant	Tammy D. Chambers	18.36
45	10	32	Wetzel	Grant	Richard E. & Jay A. Griffith	80.00
46	10	22	Wetzel	Grant	Michael & Katrina Wright	0.25
47	10	22	Wetzel	Grant	Michael & Katrina Wright	0.75
48	10	31.3	Wetzel	Grant	Zachary W. Adams	1.24
49	10	23	Wetzel	Grant	Sheldan L. Gump, et al.	97.70
50	10	35	Wetzel	Grant	EQT Gathering LLC	24.05
51	10	41	Wetzel	Grant	Joshua R. Gump	18.53
52	10	40	Wetzel	Grant	Ronald K. & Deloris P. Gump	94.50
53	10	44	Wetzel	Grant	Ronald K. & Deloris P. Gump	4.10
54	10	45.1	Wetzel	Grant	Emoe W. & Crystal F. Bradley	16.00
55	15	2	Wetzel	Grant	Coastal Forest Resources Co	61.00
56	15	8	Wetzel	Grant	Coastal Forest Resources Co	46.00
57	15	7	Wetzel	Grant	Timothy E. Tibus	115.00
58	10	3	Wetzel	Grant	William & Lisa Stoneking	17.30
59	10	2.4	Wetzel	Grant	Joseph W. Judge	0.31

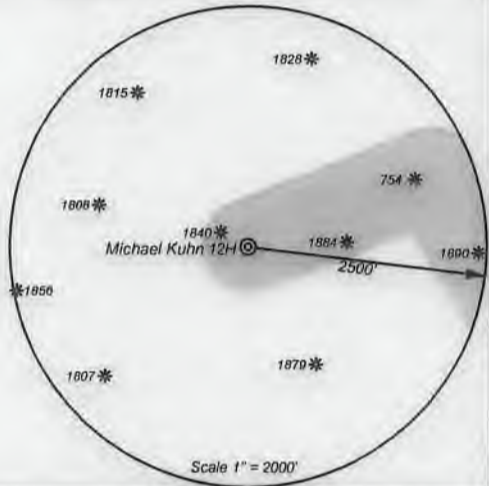
Well References



Notes:
 Michael Kuhn 12H coordinates are
 NAD 27 N: 407,824.59 E: 1,709,523.11
 NAD 27 Lat: 39.615138 Long: -80.531106
 NAD 83 UTM N: 4,385,157.11 E: 540,264.95
 Michael Kuhn 12H Landing Point coordinates are
 NAD 27 N: 408,575.71 E: 1,711,370.30
 NAD 27 Lat: 39.617258 Long: -80.524580
 NAD 83 UTM N: 4,385,395.36 E: 540,823.92
 Michael Kuhn 12H Bottom Hole coordinates are
 NAD 27 N: 395,805.08 E: 1,719,044.06
 NAD 27 Lat: 39.582436 Long: -80.496839
 NAD 83 UTM N: 4,381,543.69 E: 543,226.65
 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.



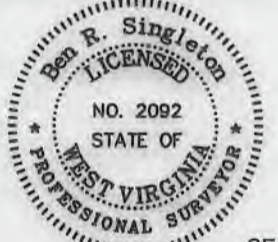
Lease No.	Owner	Acres
300641	Beulah Deloris Ballard	47
870109	Buckbusters Hunting Club of WVA, LLC	127.5
870834	Shiben Estates, Inc., et al.	60.75
1034706	Andrew S. McCann, et al.	107.75
1018970	Three Rivers Royalty, LLC, et al.	75
1044950	Patrick Harold Hasenbuhler, et al.	139.18
300716	Bounty Minerals LLC, et al.	122
1020377	Patrick Harold Hasenbuhler, et al.	110
870124	Ronald Keith Gump, II and Deloris Paula Gump, et al.	94.5
1006545	Ricky A. Plants, et al.	2



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.

[Signature]

P.S. 2092



SEAL

FILE NO: 49-20
 DRAWING NO: Michael Kuhn 12H
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: 1:2500
 PROVEN SOURCE OF ELEVATION: NGS CORS Station



DATE: April 30 20 21
 OPERATOR'S WELL NO.: Michael Kuhn 12H
 API WELL NO: H6A
 47 - 103 - 03415
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
 LOCATION: ELEVATION: 1509' WATERSHED: Knob Fork of West Virginia Fork Fishing Creek QUADRANGLE: Big Run
 DISTRICT: Center COUNTY: Wetzel **06/25/2021**
 SURFACE OWNER: Rachel Elizabeth Wyatt & Sheldon R. Norris ACREAGE: 36.40
 ROYALTY OWNER: Michael G. Kuhn LEASE NO: 870238 ACREAGE: 202
 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: 7751'

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

MAY 17 2021

Lease No.	Grantor, Lessor, etc.	Acres	Grantee, Lessee, etc.	Royalty	Book/Page
870238	Michael G. Kuhn Michael G. Kuhn, a single man Drilling Appalachian Corporation Grenadier Energy Partners, LLC Drilling Appalachian Corporation Statoil USA Onshore Properties Inc.	202 ac	Drilling Appalachian Corporation Grenadier Energy Partners, LLC Statoil USA Onshore Properties Inc. Statoil USA Onshore Properties Inc. EQT Production Company	"at least 1/8th per WV Code 22-6-8"	OG 77A/56 OG 118A/108 & 136A/538 OG 138A/1 OG 138A/54 OG 175A/707
300641	Beulah Deloris Ballard David Ballard and Malinda Ballard, his wife The Carter Oil Company Hope Natural Gas Company Consolidation Gas Supply Corporation Consolidated Gas Transmission Corporation CNG Transmission Corporation Eastern States Oil & Gas, Inc. Blazer Energy Corp. Eastern States Oil & Gas, Inc., Blazer Energy Corp., et al.	47 ac	The Carter Oil Company The Hope Natural Gas Company Consolidation Gas Supply Corporation Consolidated Gas Transmission Corporation CNG Transmission Corporation Eastern States Oil & Gas, Inc. Blazer Energy Corp. Eastern States Oil & Gas, Inc. EQT Production Company	"at least 1/8th per WV Code 22-6-8"	DB 58/165 DB 91/1 DB 233/387 OG 66A/69 Corp. Book 13/151 OG 76A/232 Corp. Book 12/253 Corp. Book 12/259 Corp. Book 13/14
870109	Buckbusters Hunting Club of WVA, LLC Buck Buster Hunting Club of WV Inc. Drilling Appalachian Corporation Grenadier Energy Partners, LLC Drilling Appalachian Corporation Statoil USA Onshore Properties Inc.	127.5 ac	Drilling Appalachian Corporation Grenadier Energy Partners, LLC Statoil USA Onshore Properties Inc. Statoil USA Onshore Properties Inc. EQT Production Company	"at least 1/8th per WV Code 22-6-8"	OG 80A/244 OG 118A/108 & 136A/538 OG 138A/1 OG 138A/54 OG 175A/707
870834	Shiben Estates, Inc., et al. Shiben Estates, Inc. Grenadier Energy Partners, LLC Grenadier Energy Partners, LLC Drilling Appalachian Corporation Statoil USA Onshore Properties Inc.	60.75 ac	Grenadier Energy Partners, LLC Drilling Appalachian Corporation Statoil USA Onshore Properties Inc. Statoil USA Onshore Properties Inc. EQT Production Company	"at least 1/8th per WV Code 22-6-8"	OG 123A/790 OG 125A/319 OG 138A/1 OG 138A/54 OG 175A/707
1034706	Andrew S. McCann, et al. Andrew S. McCann	107.75 ac	EQT Production Company	"at least 1/8th per WV Code 22-6-8"	OG 216A/189
1018976	Three Rivers Royalty, LLC, et al. Three Rivers Royalty, LLC	75 ac	EQT Production Company	"at least 1/8th per WV Code 22-6-8"	OG 179A/57

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 WV Department of
 Environmental Protection
 MAY 17 2021

1044950	<u>Patrick Harold Hasenbuhler, et al.</u> Patrick Harold Hasenbuhler, a married man dealing in his sole and separate property	139.18 ac	EQT Production Company	"at least 1/8th per WV Code 22-6-8"	OG 246A/888
300716	<u>Bounty Minerals LLC, et al.</u> Ara Long Hope Natural Gas Company Consolidation Gas Supply Corporation Consolidated Gas Transmission Corporation CNG Transmission Corporation Eastern States Oil & Gas, Inc. Blazer Energy Corp. Eastern States Oil & Gas, Inc., Blazer Energy Corp., et al.	122 ac	Hope Natural Gas Company Consolidation Gas Supply Corporation Consolidated Gas Transmission Corporation CNG Transmission Corporation Eastern States Oil & Gas, Inc. Blazer Energy Corp. Eastern States Oil & Gas, Inc. EQT Production Company	"at least 1/8th per WV Code 22-6-8"	OG 2A/42 DB 233/387 OG 66A/69 Corp. Book 13/151 OG 76A/232 Corp. Book 12/253 Corp. Book 12/259 Corp. Book 13/14
1020377	<u>Patrick Harold Hasenbuhler, et al.</u> Lester L. Ice and Gertrude C. Ice, his wife Hope Natural Gas Company Consolidation Gas Supply Corporation Consolidated Gas Transmission Corporation CNG Transmission Corporation Invitation Energy, Inc. Joe O'Ferrell Standard Oil Company, Inc.	110 ac	Hope Natural Gas Company Consolidation Gas Supply Corporation Consolidated Gas Transmission Corporation CNG Transmission Corporation Invitation Energy, Inc. Joe O'Ferrell Standard Oil Company, Inc. EQT Production Company	"at least 1/8th per WV Code 22-6-8"	OG 48A/299 DB 233/387 OG 66A/69 Corp. Book 13/151 OG 74A/538 OG 125A/982 & 136A/861 OG 125A/984 & 136A/863 OG 186A/286 & 188A/31
870124	<u>Ronald Keith Gump, II and Deloris Paula Gump, et al.</u> Ronald Keith Gump and Paula Gump, sign as Ronald K. Gump, II and Deloris P. Gump Drilling Appalachian Corporation Grenadier Energy Partners, LLC Drilling Appalachian Corporation Statoil USA Onshore Properties Inc.	94.5 ac	Drilling Appalachian Corporation Grenadier Energy Partners, LLC Statoil USA Onshore Properties Inc. Statoil USA Onshore Properties Inc. EQT Production Company	"at least 1/8th per WV Code 22-6-8"	OG 81A/383 OG 118A/108 & 136A/538 OG 138A/1 OG 138A/54 OG 175A/707
1006545	<u>Ricky A. Plants, et al.</u> Ricky A. Plants, a married man dealing in his sole and separate property	2 ac	EQT Production Company		OG 162A/599



May 6, 2021

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

Re: Michael Kuhn 12H
Center 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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Office of Oil and Gas

MAY 17 2021

WV Department of
Environmental Protection
06/25/2021

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

Date of Notice Certification: 5/14/21

API No. 47- 103 - 03415
Operator's Well No. 12H
Well Pad Name: Michael Kuhn

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>540264.95</u>
County:	<u>Wetzel</u>		Northing:	<u>4385157.11</u>
District:	<u>Center</u>	Public Road Access:		<u>CR 19/3</u>
Quadrangle:	<u>Big Run</u>	Generally used farm name:		<u>Rachel Elizabeth Wyatt & Sheldon R Norris</u>
Watershed:	<u>Knob Fork of West Virginia Fork Fishing Creek</u>			

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

<p>Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:</p> <p>*PLEASE CHECK ALL THAT APPLY</p> <p><input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED</p> <p><input type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input checked="" type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or</p> <p style="padding-left: 100px;"><input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)</p> <p><input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION</p> <p><input checked="" type="checkbox"/> 5. PUBLIC NOTICE</p> <p><input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION</p>	<p>OOG OFFICE USE ONLY</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p>
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Required Attachments:

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

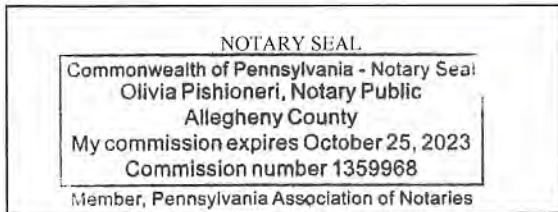
MAY 17 2021

06/25/2021
Environmental Protection

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 14th day of May 2021
[Signature] Notary Public
 My Commission Expires October 25, 2023

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
Environment & Natural Resources
06/25/2021

WW-6A
(9-13)

4710308415

API NO. 47- 103 - 03415
OPERATOR WELL NO. 12H
Well Pad Name: Michael Kuhn

**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: 5/14/2021 **Date Permit Application Filed:** 5/14/2021

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: _____

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

Name: See Attached List
Address: _____

Name: _____
Address: _____

SURFACE OWNER(s) (Impoundments or Pits)

Name: _____
Address: _____

COAL OWNER OR LESSEE

Name: See Attached List
Address: _____

COAL OPERATOR

Name: _____
Address: _____

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

Name: See Attached List
Address: _____

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: _____
Address: _____

*Please attach additional forms if necessary

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WV Department of
Environmental Protection
06/25/2021

Michael Kuhn Well Site**Surface Owners (All Disturbance):**

Rachel Elizabeth Wyatt and Sheldon R Norris
1132 Kodol Rd
Wileyville, WV 26581

Coal Owners

New Gauley Coal Corp ✓
5260 Irwin Road
Huntington, WV 25705

Margaret Kuhn ✓
1045 N Sabal Palm Way
Inverness, FL 34453

John Kuhn ✓
1045 N Sabal Palm Way
Inverness, FL 34453

Water Supply Owners Within 1,500'

Robert & Linda Rix ✓
2053 Kodol Rd
Littleton, WV 26581

Rachel Elizabeth Wyatt & Sheldon R Norris
1132 Kodol Rd
Wileyville, WV 26581

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Office of Oil and Gas

MAY 17 2021

WV Department of
Environmental Protection
06/25/2021

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/oil-and-gas/pages/default.aspx.

Well Location Restrictions

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

WW-6A
(8-13)

4710308415
API NO. 47- 103 - 03415
OPERATOR WELL NO. 12H
Well Pad Name: Michael Kuhn

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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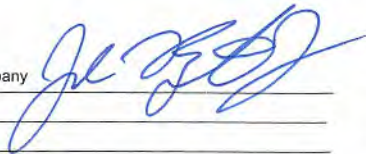
06/25/2021

WW-6A
(8-13)

4710303415
API NO. 47- 103-03415
OPERATOR WELL NO. 12H
Well Pad Name: Michael Kuhn

Notice is hereby given by:

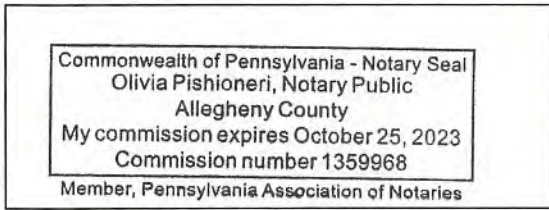
Well Operator: EQT Production Company
Telephone: 724-746-9073
Email: jzavatchan@eqt.com



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 deprivacyofficer@wv.gov.



Subscribed and sworn before me this 14th day of May 2021.
[Signature] Notary Public
My Commission Expires October 25, 2023

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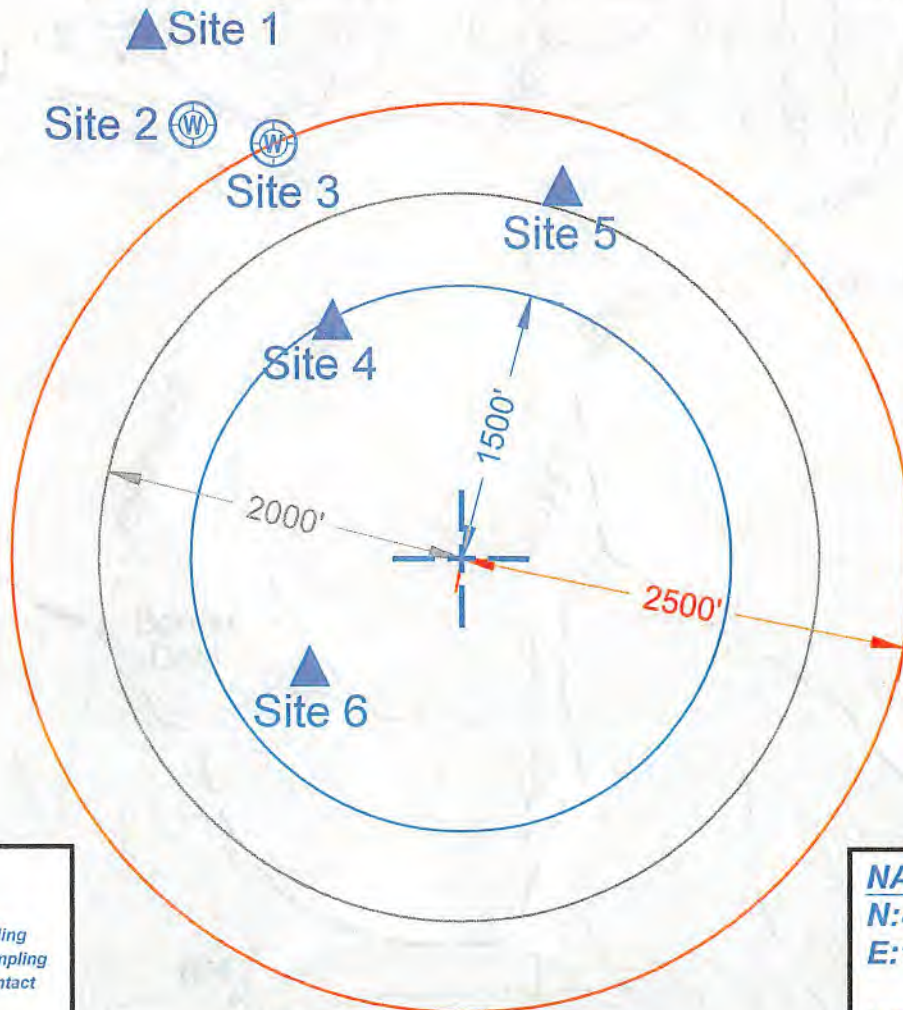
06/25/2021

Topo Quad: Big Run Scale: 1" = 1000'
 County: Wetzel Date: August 19, 2020
 District: Center Project No: 49-34-C-20

Water

Michael Kuhn Well Pad

4 Potential Water Sources within 2500'



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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:407833.78
E:1709459.12

WGS 84
LAT:39.615245
LONG:-80.531142
ELEV:1509'



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

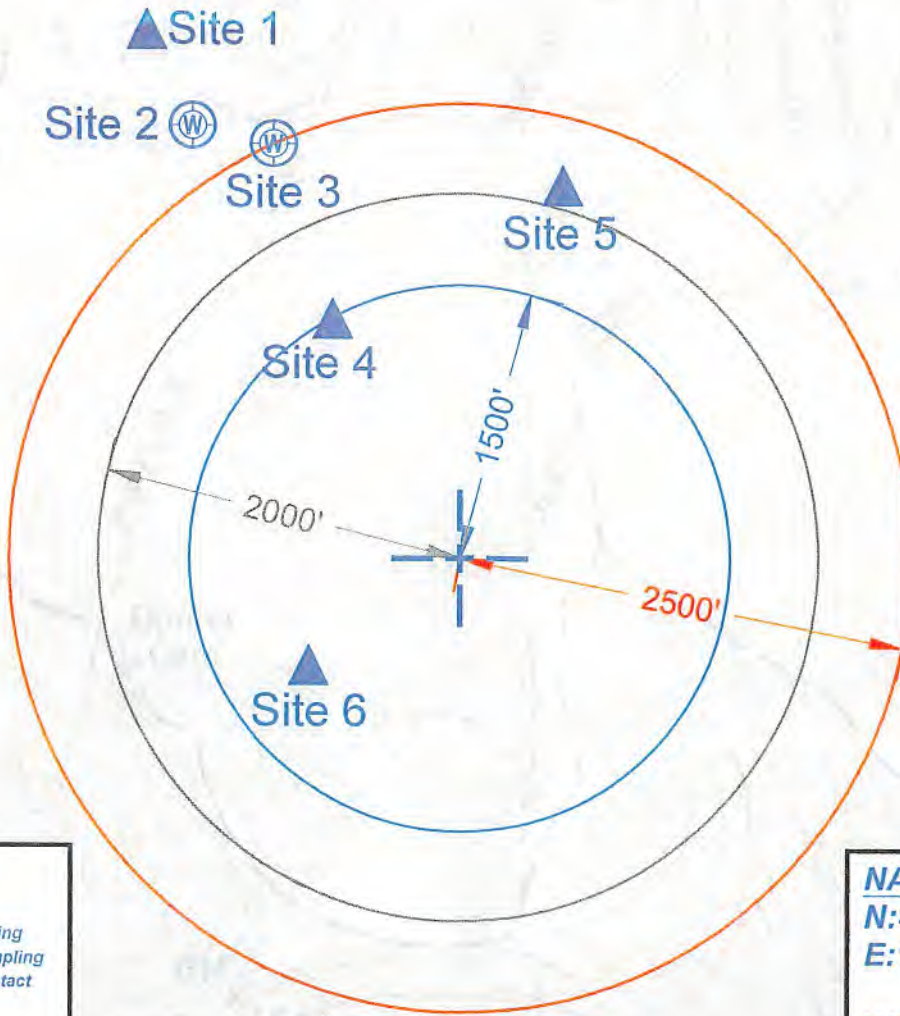
400 Woodcliff Drive
 Canonsburg, PA 15317

Topo Quad: Big Run Scale: 1" = 1000'
 County: Wetzel Date: August 19, 2020
 District: Center Project No: 49-34-C-20

Water

Michael Kuhn Well Pad

4 Potential Water Sources within 2500'



LEGEND

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 PH: (304) 649-8606
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PREPARED FOR:

EQT Production Company

400 Woodcliff Drive
 Canonsburg, PA 15317

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

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

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

Date of Notice: 04/30/2021 **Date Permit Application Filed:** 5/14/21

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: Rachel Elizabeth Wyatt and Sheldon R. Norris
Address: 1132 Koddol Rd.
Wileyville, WV 26581

Name: _____
Address: _____

Notice is hereby given:

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

State:	<u>West Virginia</u>	UTM NAD 83 Easting:	<u>540,264.95</u>
County:	<u>Wetzel</u>	Northing:	<u>4,385,157.11</u>
District:	<u>Center</u>	Public Road Access:	<u>CR 19/3</u>
Quadrangle:	<u>Big Run</u>	Generally used farm name:	<u>Michael Kuhn</u>
Watershed:	<u>Knob Fork of West Virginia Fork Fishing Creek</u>		

This Notice Shall Include:

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

Notice is hereby given by:

Well Operator: EQT Production Company
Address: 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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**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: 05/14/2021 **Date Permit Application Filed:** 05/14/2021

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: Rachel Elizabeth Wyatt and Sheldon R. Norris

Name: _____

Address: 1132 Kodol Rd.

Address: _____

Wileyville, WV 26581

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>540264.95</u>
County: <u>Wetzel</u>	Northing: <u>4385157.11</u>
District: <u>Center</u>	Public Road Access: <u>CR 19/3</u>
Quadrangle: <u>Big Run</u>	Generally used farm name: <u>Michael Kuhn</u>
Watershed: <u>Knob Fork of WV Fork Fishing Creek</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: EQT Production Company

Telephone: 724-746-9073

Email: jzavatchan@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.

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WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
Division of Highways

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

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

March 18, 2021

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

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 Michael Kuhn Pad, Wetzel County
Michael Kuhn WTZ 12H Well Site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #06-2012-0113 which has been issued to EQT Production Company for access to the State Road for a well site located off Wetzel County Route 19/3 SLS MP 2.34.

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: John Zavatchan
EQT Production Company
CH, OM, D-6
File

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

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

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06/25/2021

ASSIGNMENT WELL ID	API #	LATITUDE (NAD83)	LONGITUDE (NAD83)	NORTHING (NAD83)	EASTING (NAD83)	SOUTHING (NAD83)	WESTING (NAD83)	NORTHING (NAD83) ± 10 METERS	EASTING (NAD83) ± 10 METERS
01	47-0002276	39° 30' 54.986537"	80° 31' 51.060437"	402811.9220	172021.784	407844.848	1709451.082	402821.820	1709461.082
20		39° 30' 54.986537"	80° 31' 51.060437"	407802.3620	167822.626	402821.848	1709461.082	407812.362	167812.626
40	47-0002282	39° 30' 54.986537"	80° 31' 51.060437"	402811.9217	167207.384	407844.848	1709451.082	402821.817	167197.384
03		39° 30' 54.986537"	80° 31' 51.060437"	402805.2048	162031.621	407844.848	1709451.082	402815.205	161931.621
04		39° 30' 54.986537"	80° 31' 51.060437"	402805.2048	167031.621	407844.848	1709451.082	402815.205	167031.621
10		39° 30' 54.986537"	80° 31' 51.060437"	402822.1159	167812.626	407844.848	1709451.082	402832.116	167822.626
12		39° 30' 54.986537"	80° 31' 51.060437"	402822.1159	167812.626	407844.848	1709451.082	402832.116	167822.626
14		39° 30' 54.986537"	80° 31' 51.060437"	402822.1159	167812.626	407844.848	1709451.082	402832.116	167822.626
16		39° 30' 54.986537"	80° 31' 51.060437"	402822.1159	167812.626	407844.848	1709451.082	402832.116	167822.626

EROSION & SEDIMENT CONTROL PLAN

MICHAEL KUHN WELL SITE

WETZEL COUNTY, WV

FOR

EQT PRODUCTION COMPANY

APPROVED
WVDEP OOG

 1/27/2021

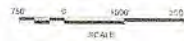


DISTURBANCE BREAKDOWN				
STOCKPILES	COUNTY ROUTE	WELL PAD ACCESS	WELL PAD EXTENSION	TOTAL DISTURBANCE
5.90 AC	1.31 AC	0.46 AC	0.53 AC	8.20 AC

LANDOWNER	LANDOWNER DISTURBANCE BREAKDOWN				TOTAL DISTURBANCE
	DISTURBANCE FROM STOCKPILES	DISTURBANCE FROM COUNTY ROUTE	DISTURBANCE FROM WELL PAD ACCESS	DISTURBANCE FROM WELL PAD EXTENSION	
KLUM MICHAEL G. 53-09-20-00-25-0000-0000	0.21 AC	N/A	N/A	N/A	0.21 AC
KLUM MICHAEL G. 53-09-20-0020-0000-0000	3.92 AC	0.67 AC	0.01 AC	4.60 AC	8.21 AC
KUHN MICHAEL G. 53-09-20-00-0000-0000	1.31 AC	0.68 AC	0.44 AC	0.57 AC	3.00 AC



REFERENCES: UNITED STATES GEOLOGICAL SURVEY - BIG RUN AND LITTLETON QUADRANGLES W 7.5 MINUTE SERIES



PROJECT NO. 20070-005
JANUARY 2021

DIEFFENBAUCH & HRITZ, LLC

INDEX	
DRAWING NO.	TITLE
1	TITLE SHEET
2	AS-BUILT SITE PLAN
3	PROPOSED SITE PLAN
4	PROPOSED RESTORATION PLAN
5	COUNTY ROUTE AND ACCESS ROAD PROFILES
6	COUNTY ROUTE CROSS SECTIONS
7	ACCESS ROAD CROSS SECTIONS
8-10	EBS TYPICAL SECTIONS
11-13	EBS DETAILS



WV Department of Environmental Protection

MAY 17 2021

Office of Oil and Gas

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PROJECT: MICHAEL KUHN WELL SITE WETZEL COUNTY, WV
 TITLE SHEET
 1

APPROVED
WV DEP OOG
1/27/2021

BAR WORK QUANTITIES (CY)

CU	181
WELL PAD EXPANSION & METER PAD	20.140
RELOCATED ROAD	309
RELOCATED DRIVE	20.622
GRAVE	1.000

1. EXISTING MATERIAL STOCKPILES (AS SHOWN) ASSUMED AT LEAST A 1.5X SAFETY FACTOR IN ACCORDANCE TO THE QUANTITIES LISTED ABOVE.
2. EXISTING MATERIAL STOCKPILES (AS SHOWN) ASSUMED AT LEAST A 1.5X SAFETY FACTOR IN ACCORDANCE TO THE QUANTITIES LISTED ABOVE.
3. EXISTING MATERIAL STOCKPILES (AS SHOWN) ASSUMED AT LEAST A 1.5X SAFETY FACTOR IN ACCORDANCE TO THE QUANTITIES LISTED ABOVE.

1. SURVEY AND STAKE-OUT ARE ASSUMED TO BE COMPLETE.
 2. AREAS THAT ARE NOT TO BE OBTAINED SHOULD BE CLEARLY MARKED BEFORE BEGINNING WORK ON SITE.
 3. MAKE ONE CALL TO MARK UTILITIES. CONTRACTORS SHALL BE RESPONSIBLE FOR ANY FURTHER STAKE-OUTS ON SITE THAT HAVE NOT BEEN MARKED BY THE UTILITY COMPANIES.
 4. FILL MATERIAL SHALL BE PLACED IN LIFTS NOT EXCEEDING 2 FEET AND SHALL BE COMPACTED TO A MINIMUM OF 95% RELATIVE COMPACTION. EXCESS FILL MATERIAL SHALL BE PLACED IN LIFTS NOT EXCEEDING 2 FEET AND SHALL BE COMPACTED TO A MINIMUM OF 95% RELATIVE COMPACTION. EXCESS FILL MATERIAL SHALL BE PLACED IN LIFTS NOT EXCEEDING 2 FEET AND SHALL BE COMPACTED TO A MINIMUM OF 95% RELATIVE COMPACTION.
 5. THERE WILL BE NO CHARGE FROM THE SUBMITTERS OPERATIONS.
 6. FILL OF BERM OR AREAS OF CONFINEMENT EXISTING SHALL BE USED TO ENSURE IMPERMEABLE SURFACE.
- CONSTRUCTION SEQUENCE**
1. ALL FENCES ARE TO BE INSTALLED PER THE ATTACHED PLANS.
 2. WELL PAD EXPANSION.
 3. BEGIN CUT AND FILL PROCESS ON PAD EXPANSION AREA.
 4. STONE WALL TO BE USED TO ACHIEVE PAD GRADE.
 5. INSTALL COLLECTION DEITCH #1 AND #2 BY RAP APPROX.
 6. INSTALL COLLECTION DEITCH #3 AND #4 BY RAP APPROX.
1. COUNTY REQUIRE CONSTRUCTION WILL COMPLY WITH BROWN OUT AND FILL PROVISIONS ON THE ROAD.
2. PLACE FABRIC AND STONE ON THE ROAD.

LEGEND

EXISTING TREE LINE	EXISTING INDEX CONTOUR LINE (10')
EXISTING ROAD	EXISTING INTERMEDIATE CONTOUR LINE
EXISTING RIGHT-OF-WAY	PROPOSED INDEX CONTOUR LINE (10')
PROPOSED RIGHT-OF-WAY	PROPOSED INTERMEDIATE CONTOUR LINE
MUNICIPAL BOUNDARY	CHANNEL FLOW DIRECTION
PROPOSED FENCE	STREAM
EXISTING FENCE	DELINEATED STREAM
EXISTING UTILITY CHASE LINE	DELINEATED WETLAND BOUNDARY
EXISTING GAS LINE	FOODWAY BOUNDARY
PROPOSED GAS LINE	WETLAND BUFFER
PROPOSED WATER LINE	SALT FENCE (5')
FILL LIMITS	THREE (3) STACK CFS SEDIMENT TRAP
CUT LIMITS	EXISTING SPOT ELEVATION
TOE BENCH WITH DRAIN	PROPOSED SPOT ELEVATION
ROADWAY CENTERLINE	EXISTING STRUCTURE
LIMITS OF DISTURBANCE	PERMANENT FENCE
EXISTING UTILITY POLE	TEMPORARY GRABBLE
	PERMANENT GRABBLE

MICHAEL KUHN WELL LOCATIONS

ASSIGNED WELL ID	API #	(LAT/NAD83)	(LON/WAD83)	(NORTHING/NAD83)	(EASTING/NAD83)	(NORTHING/NAD27)	(EASTING/NAD27)	NEIGHBORING UTILITY METERS	EASTING/UTL METERS
2H	47-2100775	39° 30' 54.98502"	80° 31' 52.00047"	40781.9520	157805.847	40784.148	170443.982	485552.826	140256.838
2H	47-2040782	39° 30' 54.84502"	80° 31' 51.46017"	40782.1820	157807.036	40784.578	170458.171	485158.153	140260.477
4H		39° 30' 54.07142"	80° 31' 52.41847"	40791.4017	157797.194	40793.808	170465.540	486055.579	140268.118
6H		39° 30' 54.01914"	80° 31' 51.24192"	40786.2000	157801.521	40788.101	170449.736	485834.202	140262.476
8H		39° 30' 54.01814"	80° 31' 51.85673"	40787.9013	157800.872	40789.146	170449.107	485161.373	140251.437
10H		39° 30' 54.89312"	80° 31' 51.72047"	40782.1755	1578055.098	40784.571	170461.238	485159.966	140255.796
12H		39° 30' 54.29384"	80° 31' 51.72047"	40782.1944	1578054.574	40784.585	170454.130	485157.106	140254.389
14H		39° 30' 54.72584"	80° 31' 51.18692"	40787.4416	1578099.200	40788.841	170457.495	485155.790	140253.807
16H		39° 30' 54.70702"	80° 31' 50.82847"	40783.0867	157811.417	40785.625	170455.051	485154.814	140251.005





PROJECT: MICHAEL KUHN WELL SITE
 CLIENT: EQT PRODUCTION COMPANY
 DATE: 1/27/2021
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 APPROVED BY: [Name]
 SCALE: AS SHOWN
 SHEET NO: 3 OF 3
 PROJECT NO: [Number]


ArcGIS Web Map




2/28/2020, 3:50:05 PM

 Groundwater Intake (public water supply)

 Surface Water Intake (public water supply)

 Surface Water Intake (non-public water supply)

 Groundwater Intake (non-public water supply)

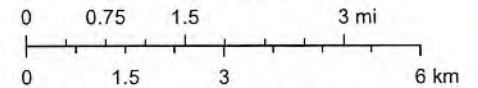
 Documented Springs

WV Department of
Environmental Protection

MAY 17 2021

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Office of Oil and Gas

1:144,448



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

Web AppBuilder for ArcGIS
see layers | USDA FSA, Earthstar Geographics |