

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, January 27, 2021 WELL WORK PERMIT Horizontal 6A / New Drill

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

Re: Permit approval for MICHAEL KUHN 8H 47-103-03362-00-00

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: MICHAEL KUHN 8H

Farm Name: RACHEL ELIZABETH WYATT

U.S. WELL NUMBER: 47-103-03362-00-00

Horizontal 6A New Drill Date Issued: 1/27/2021

API Number: 103 - 0336 >

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: 103-0334 2-

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, cessation of drilling, sending an email to DEPOOGNotify@wv.gov.

WW-6B (04/15)

API NO. 47	1	
OPERATOR WELL	. NO. 8H	
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 Prod	uction Company	306686	Wetzel	Center	Big Run			
· • • • • • • • • • • • • • • • • • • •		Operator ID	County	District	Quadrangle			
2) Operator's Well Number: 8	2) Operator's Well Number: 8H Well Pad Name: Michael Kuhn							
3) Farm Name/Surface Owner	Rachel Elizabeth Wyatt & Sheldo	Public Road	d Access: CR	19/3				
4) Elevation, current ground:	1509' (built) Ele	evation, proposed p	oost-constructio	on: 1509'	(built)			
5) Well Type (a) Gas X	Oil	Unde	erground Storag	e				
Other								
` ,	nallow X	Deep						
H 6) Existing Pad: Yes or No Y	orizontal X es			DMA	19/16/20			
7) Proposed Target Formation Marcellus, 7,751', 51', 2,620	(s), Depth(s), Antic	ipated Thickness a	nd Expected Pr	essure(s):				
8) Proposed Total Vertical Dep	oth: 7,069'	When late	ral ada	led	Ja			
9) Formation at Total Vertical								
10) Proposed Total Measured	Depth: 7,079'							
11) Proposed Horizontal Leg I	Length: 0'							
12) Approximate Fresh Water	Strata Depths:	75'						
13) Method to Determine Fres		Offset Wells - 47-1	103-01884 & 4	7-103-018	313			
14) Approximate Saltwater De								
15) Approximate Coal Seam I	Depths: 1,163'-1,16	66', 1,260'-1,266'						
16) Approximate Depth to Pos	sible Void (coal mi	ne, karst, other): _	V/A					
17) Does Proposed well location directly overlying or adjacent to		ms Yes	No	X				
(a) If Yes, provide Mine Info	: Name:							
•	Depth:							
	Seam:							
	Owner:							
		REC Office of	CHUED Odlar 1 Gas					

WW-6B (04/15)

API NO. 47	
OPERATOR WELL NO. 8H	
Well Pad Name: Michael Kuhn	

18)

CASING AND TUBING PROGRAM

ТҮРЕ	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	2774	2774	1100 ft^3 / CTS
Production	5 1/2	New	P-110	20	7079	7079	500' above intermediate casing
Tubing							
Liners							

DMH 9/16/20

ТҮРЕ	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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SEP 2 3 2020

WV Department of Environmental Protection

APINO. 47-103. 63362

OPERATOR WELL NO. 8H

Well Pad Name: Michael Kuhn

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

Drill well to the Elk Formation. Drill the vertical, kick off and partially drill curve. This operation will be completed to accommodate future Marcellus well drilling.

DMH 9/16/20

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.

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*Note: Attach additional sheets as needed.



EQT PRODUCTION COMPANY 400 Woodcliff Drive | Canonsburg, PA 15317

September 4, 2020

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 8H

Dear Mr. Brewer.

The 13-3/8" surface casing will be set at 1,316' KB, 50' below the deepest workable coal seam and 1,241' below the deepest fresh water. The 9-5/8" intermediate string will be set at 2,774' 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,

John Zavatchan

Project Specialist - Permitting

Enc.

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WV Department of Environmental Protection

BIG467H8

WEST VIRGINIA GEOLOGICAL PROGNOSIS
Horizontal Well
Pad Name: MICHAEL KUHN 8H
BIG467H8

Pad Name:

Drilling Objectives:
Quad:
County:
Elevation:
Recommended Azimuth

Marcellus Littleton Wetzel 1536 KB Degrees

1523 GL Recommended total wellbore length:

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	75	-	FW from offsets @ 75,		
Sewickley Coal	1163	1166	Coal			
Pittsburgh Coal	1260	1266	Coal	SW @ 2027,2100,2295,2369		
Big Injun	2623	2724	Sandstone	Hydrocarbon prod/show in offset @ 2395,2679,3320,3432,3569		
Int. esg pt	2774			50 ft below Big Injun		
Berca	2891	3151	Sandstone	RED ROCK SHOWS NOT LISTED IN OFFSETS		
Gantz	3256	3324	Silty sand			
Fifty foot	3324		Silty sand	Outside of Storage Boundary		
Thirty foot	3412	3609	Silty sand			
Bayard	3609	3683	Sandstone			
Upper Speechley	4014	4067	Silty sand			
Speechlev	4067	4150	Silty sand			
Balltown	4150	4514	Silty sand			
Bradford	4514	5629	Silty sand			
Benson	5629	6037	Silty sand			
Alexander	6037	6468	Silty sand		1	
Elk	6468	7272	Silty sand			
Sonvea	7272	7441	Gray shale			
Middlesex	7441	7485	Black Shale			
Genesee	7485	7572	Gray shale interbedded			
Geneseo	7572	7599	Black Shale		Top RR	Base RR
Tully	7599	7622	Limestone		1	
Hamilton	7622	7725	Gray shale with some			
Marcellus	7725	7776	Black Shale			
-Purcell	7742	7744	Limestone			
-Cherry Valley	7754	7756	Limestone			
-Lateral Zone	775	1				
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				Planned Depth	
Conductor:	CSG OD	24"	CSG DEPTH:	40	
Freshwater / Coal:	CSG OD	13 3/8"	CSG DEPTH:	1316	50' below Pittsburgh
Intermediate 1:	CSG OD	9 5/8"	CSG DEPTH:	2774	50' below big injun
Production:	CSG OD	5 1/2"	CSG DEPTH:	a TD	

Office of Oil and Gas

Wellbore Diagram **EQT Production** Well: Michael Kuhn 8H County: Wetzel Pad: Michael Kuhn West Virginia State: Elevation: 1523' GL 1536' KB 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 2,774' @ 9-5/8", 36#, J-55, cement to surface w/ Class A/Type I RECEIVED
Office of Oil and Gas SEP 2 3 2020 DMH 9/16/20 WV Department of Environmental Protection **Production** 7,079' MD / 7,069' TVD @ 5-1/2", 20#, P-110, cement to 500' inside 9-5/8" w/ Class A/H Formation: Marcellus **NOT TO SCALE**

Wellbore Diagram 3 0 3 3 6 2 **EQT Production** County: Wetzel Well: Michael Kuhn 8H West Virginia State: Pad: Michael Kuhn Elevation: 1523' GL 1536' KB 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 @ 2,774' 9-5/8", 36#, J-55, cement to surface w/ Class A/Type I RECEIVED
Office of Oil and Gas SEP 2 3 2020 WV Department of Environmental Protection **Production** 7,079' MD / 7,069' TVD 5-1/2", 20#, P-110, cement to 500' inside 9-5/8" w/ Class A/H Formation: Marcellus **NOT TO SCALE**

EQT Production

Hydraulic Fracturing Monitoring Plan

Pad ID: Michael Kuhn (BIG467)

County: Wetzel

July 22, 2020

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WW Department of Environmental Protection

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 (BIG467) pad: 4H, 6H, 8H, 10H, 12H, 14H and 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 prefrac 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

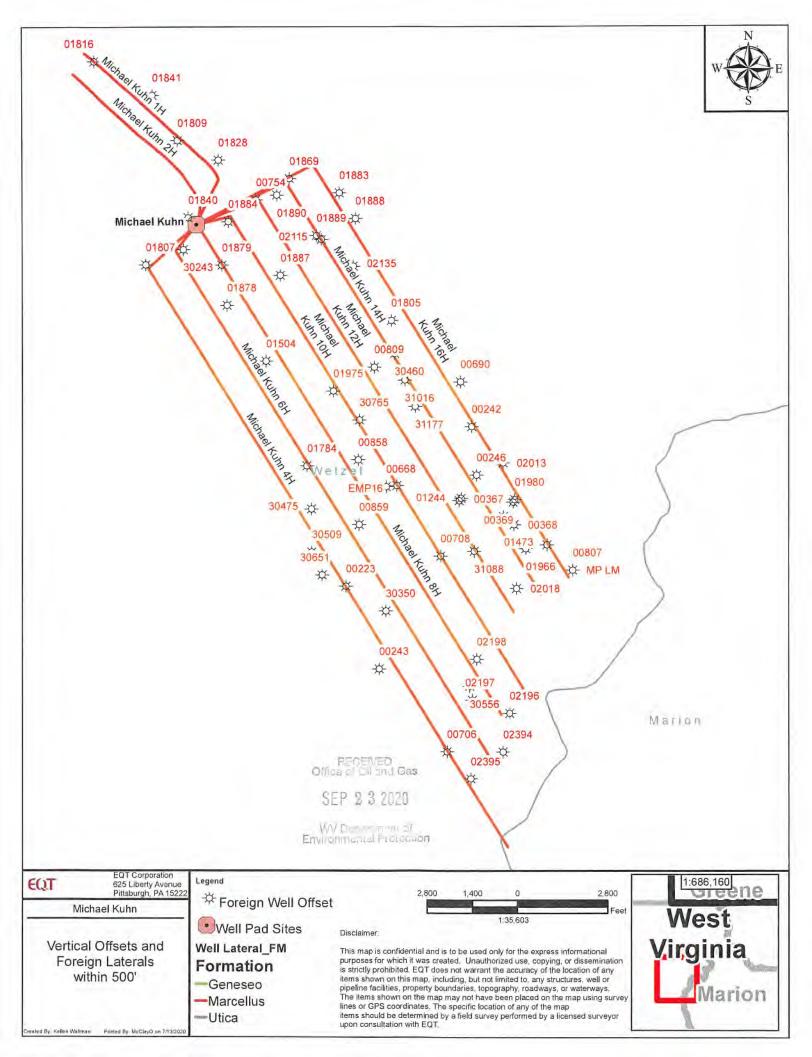
2. Reporting

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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WellID	WellStatus	date	FmatTD	Permit	RemarksPRO	Operator	Longitude Latitude		DatumEleva 973.0000	TotalDepth-SS -7027.0000	Total Depth 8000.0000
4710101244 4710300223	P&A P&A	4/8/1982 11/22/1918		01244 00223	4SDBYD	HADDAD & BROOKS EPC	-80.5025 -80.5152	39.5919 39.5846	9/3.0000 1148.0000	-7027.0000	3230.0000
4710300223 4710300242	GAS-P	9/20/1940		00223	PTC	CNG	-80.5013	39.5980	1244.0000	336,0000	908.0000
4710300242	DRY	10/21/1940		00242	116	CNG	-80.5116	39.5776	1272.0000	254,0000	
4710300246	DRY	12/19/1940		00246		CNG	-80.5008	39.5939	1177.0000	332.0000	845.0000
4710300367	UNK	11/18/1950		00367		W S HINERMAN	-80.4979	39.5904	968.0000	327.0000	641.0000
4710300368	UNK	11/2/1950		00368		W S HINERMAN	-80.4967	39.5897	970.0000	-99999.0000	100969.0000
4710300369	UNK	11/2/1950		00369		W S HINERMAN	-80.4968	39.5916	986.0000	345.0000	641.0000
4710300668	GAS	7/20/1909		00668	4SD5SD	EPC	-80.5107	39.5930	920.0000	-1951.0000	
4710300690	GAS	7/28/1915		00690	SL1	EPC	-80.5025	39.6018	0.0000	-1820.0000	
4710300706	GAS	8/7/1917		00706	4SD	CNG	-80.5042	39.5706	979.0000	-2107.0000	
4710300708	GAS	10/27/1952		00708	GDN4SD	EPC	-80.5048	39.5871	0.0000	-3143.0000	3143.0000
4710300754	GAS	10/2/1903		00754	BNJ	MANUFACTURERS LIGHT EPC	-80.5248	39.6172 39.5858	0.0000	-2448.0000 -2052.0000	
4710300807	P&A	2/18/1915		00807 00809	NCR	EPC EPC	-80.4903 -80.5119	39.5858 39.6031	0.0000	-2052.0000	2769.0000
4710300809 4710300858	GAS-P P&A	3/10/1916		00858		EQUITRANS	-80.5119 -80.5138	39.5952	1221,0000	-1044.0000	
4710300858	P&A P&A	3/10/1916 11/29/1916		00859		EQUITRANS	-80.5137	39.5898	1245.0000	-1047.0000	
4710300033	GAS	4/15/1982		01244	GDNBSNONDHBGBSI	HADDAD&BROOKS	-80.5027	39.5918	983.0000	-7027.0000	
4710301473	GAS-P	1/19/1914		01473		CNG TRANSMISSION	-80.4931	39.5880	1205.0000	-99999.0000	
4710301504	0&G	5/18/1992		01504	50F	SHELDON & ASSOCIATES	-80.5238	39.6036	960.0000	-99999.0000	
4710301784	GAS	8/2/1999		01784	BNJGDNBYD	DAC	-80.5194	39.5947	937.0000	-2370.0000	
4710301805	GAS	8/12/2000		01805	BNJGDN	DAC	-80.5101	39.6070	1450.0000	-2252.0000	
4710301807	GAS	8/23/2000		01807	BNJGDN	DAC	-80.5369	39.6118	1514.0000	-2159.0000	3673.0000
4710301809	GAS	10/20/2000		01809	BNJGDN	DAC	-80.5333	39.6222	1182.0000	-2169.0000	
4710301816	GAS			01816		DAC	-80.5425	39.6290	1434.0000	-99999.0000	
4710301828	GAS	7/30/2001		01828	BNJGDN		-80.5289	39.6206	1288.0000	-2396.0000	
4710301840	GAS	8/30/2001		01840	BYDBNJ	DAC	-80.5322	39.6157	1519.0000	-2240.0000	
4710301841	UNK	8/21/2001		01841	BNJ4SD5SDBYD	DAC	-80,5361	39.6261	1400.0000 1258.0000	-2270.0000 -2295.0000	3670.0000 3553.0000
4710301869 4710301878	GAS GAS	12/18/2001 6/17/2002		01869 01878	BNJGDN 4SDBNJ	DAC DAC	-80.5211 -80.5280	39.6190 39.6083	1409.0000	-2256.0000	3665.0000
4710301878 4710301879	GAS	6/17/2002 6/17/2002		01879	GDN	DAC	-80.5286	39.6117	1545.0000	-2233.0000	3778.0000
4710301879	GAS	8/7/2002		01883	BNJGDN	DAC	-80.5157	39.6178	1175.0000	-2450.0000	
4710301884	GAS			01884	BNJGDN	DAC	-80.5279	39.6154	1576,0000	-2265.0000	
4710301887	GAS	8/14/2002 TT 8/22/2002 S 9/14/2002 S	_	01887	BNJGDN		-80.5222	39.6108	1424.0000	-2234.0000	
4710301888	GAS	9/14/2002	offic SE	01888	BNJGDN		-80.5139	39.6156	1381.0000	-2247.0000	3628.0000
4710301889	GAS-P	9/6/2002	SE SE	01889	SL	DAC	-80.5182	39.6142	1245.0000	-641.0000	1886.0000
4710301890	GAS	8/29/2002 8/26/2003 9/7/2003	(L (1)	01890	GDNBNJ		-80.5225	39.6176	1402.0000	-2271.0000	
4710301966	GAS	8/26/2003		01966	BNJGDN	DAC	-80.4954	39.5877	1029.0000	-2260.0000	3289.0000
4710301975	GAS	9/7/2003	of Oil	01975	GDN	DAC	-80.5165	39.6011	1384.0000	-2209.0000	
4710301980	GAS			01980	BNJGDN	DAC	-80.4966	39.5918	1027.0000	-2237.0000	3264.0000
4710302013	GAS	12/13/2003		02013	GDN4SD	DAC	-80.4979	39.5949	1285.0000	-2221.0000 -1836.0000	3506.0000
4710302018 4710302115	UNK UNK	4/1/2004 - 3		02018 02115	GDN BER	DAC DAC	-80.4965 -80.5177	39.5843 39.6138	1299.0000 1242.0000	-1836.0000	3135.0000 3212.0000
4710302115 4710302135	UNK	3/10/2003		02115	BNJ	DAC	-80.5177 -80.5142	39.6116	1574.0000	-2176.0000	3750.0000
4710302135	GAS	9/20/2006	cas 20	02196	BNJ/GDN	DAC	-80.4973	39.5738	0.0000	-3520.0000	3520.0000
4710302197	GAS	9/20/2006 Emily 9/25/2006 O	Ø	02197	BNJ/GDN	DAC	-80.5014	39.5749	0.0000	-3603.0000	
4710302198	GAS	10/1/2006		02198	BNJ/GDN	DAC	-80,5009	39.5784	0.0000	-3706.0000	
4710302394	GAS	9/6/2008		02394	BNJ5SD4SDGDN	DAC	-80.4981	39.5706	1109.0000	-2173.0000	3282.0000
4710302395	GAS	10/12/2008		02395	BNJ/GDS	DAC	-80.5016	39.5683	1064.0000	-2198.0000	
4710330243	GAS	10/27/1905		30243	SLBNJGDN	PGH & WV GAS	-80.5328	39.6131	1224.0000	-1789.0000	
4710330350	GAS	9/21/1916		30350	BNJ	HOPE NAT GAS	-80.5108	39.5825	1427.0000	-1146.0000	2573.0000
4710330460	GAS	9/8/1916	LOWER HURON SHALE	30460	MGSBNJ	MANUFACT LIGHT	-80.5097	39.6042	1462.0000	-1995.0000	
4710330475	GAS	9/22/1916	LOWER HURON SHALE	30475	BNJ4SD	PGH & WV GAS	-80.5189	39.5911	1120.0000	-1952.0000	
4710330509	GAS	6/20/1928		30509	BNJGDN	DUNN-MAR O & G	-80.5189	39.5875	1182.0000	-1920.0000	3102.0000
4710330556	UNK	10/17/1912		30556	DNICON	DUNN-MAR O & G	-80.5017	39.5761	1365,0000	-2108.0000	
4710330651 4710330765	GAS GAS	8/14/1919		30651 30765	BNJGDN SL1	PGH & WV GAS MANUFACT LIGHT	-80.5178 -80.5136	39.5856 39.5986	1401.0000 1165.0000	-1896.0000 -446.0000	
4710330765 4710331016	GAS GAS	5/4/1916 7/10/1915		30/65 31016	SL1 MGSBDKSL1	MANUFACT LIGHT	-80.5136 -80.5086	39.5986 39.6019	1223.0000	-446.0000 -457.0000	
4710331016 4710331088	GAS GAS	//10/1915 12/22/1908	LOWER HURON SHALE	31016	MGSBDKSLI 4SD	OPER IN MIN.OWN	-80.5011	39.5875	1328.0000	-2095.0000	
4710331088	UNK	14,44,1300	LOWER HORON SHALE	31177	טנד	HOPE NAT GAS	-80.5075	39.5997	1349.0000	-99999.0000	
4710331177 47103TEMP16	UNK			EMP16			-80.5096	39.5931	0.0000	-99999.0000	
651391 TEMP LM	TEMP			MP LM			-80.4903	39.5858	0.0000	-99999.0000	

ς.

Access Road PAD NAME **Great Tiger** Well Pad Limit of Disturbance **Great Tiger**

Topo Quad: Big Run Scale: 1" = 1000" Wetzel County: August 19, 2020 Date: Project No: 49-34-C-20 District: Center Water Michael Kuhn Well Pad 4 Potential Water Sources within 2500' ▲Site 1 Site 2 ® Site 3 Site 5 2500 Site 6 NAD 27, North Zone LEGEND N:407833.78 Red Symbol - Declined Sampling E:1709459.12 Blue Symbol - Requested Sampling / Unable to Contact Office of Oil and Gas WGS 84 Well SEP 2 3 2020 LAT:39.615245 (S) Spring Pond LONG:-80.531142 WV B TREMENT OF Building Environmental Protogram 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

Member, Pennsylvania Association of Notaries

WW-9 (4/16)

API Number 47	
---------------	--

Operator's Well No. Michael Kuhn 8H

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

FLUIDS/ CUTTINGS DISE	POSAL & RECLAMATIO	N PLAN	
Operator Name EQT Production Company	OP C	ode 306686	
Watershed (HUC 10) Knob Fork	Quadrangle Big Rur	1	
Do you anticipate using more than 5,000 bbls of water to comp Will a pit be used? Yes No V	olete the proposed well wor	rk? Yes	No No
If so, please describe anticipated pit waste: N/A			
Will a synthetic liner be used in the pit? Yes	No If so, wha	it ml.? N/A	
Proposed Disposal Method For Treated Pit Wastes:			
Land Application Underground Injection (UIC Permi Reuse (at API Number Various Off Site Disposal (Supply form WV Other (Explain		7	
Yes, The close Will closed loop system be used? If so, describe: then prepared	ed loop system will remove drill cutti for transportation to an off-site disp	ings from the drilli	ng fluid. The drill cuttings are
Drilling medium anticipated for this well (vertical and horizon			ee Attached
-If oil based, what type? Synthetic, petroleum, etc. S			
Additives to be used in drilling medium? See Attached			
Drill cuttings disposal method? Leave in pit, landfill, removed	d offsite, etc. Landfill		
-If left in pit and plan to solidify what medium will be		dust) N/A	
-Landfill or offsite name/permit number? See Attache		4444	
Permittee shall provide written notice to the Office of Oil and West Virginia solid waste facility. The notice shall be provided where it was properly disposed.	Gas of any load of drill cut d within 24 hours of rejecti	tings or assoc on and the pe	iated waste rejected at any rmittee shall also disclose
I certify that I understand and agree to the terms and on August 1, 2005, by the Office of Oil and Gas of the West V provisions of the permit are enforceable by law. Violations of law or regulation can lead to enforcement action. I certify under penalty of law that I have personall application form and all attachments thereto and that, base obtaining the information, I believe that the information is penalties for submitting false information, including the possible Company Official Signature	firginia Department of Envor of any term or condition of y examined and am familed on my inquiry of thos true, accurate, and completed	ironmental Pr f the general liar with the se individuals etc. I am av	otection. I understand that the permit and/or other applicable information submitted on this immediately responsible for
Company Official (Typed Name) John Zavatchan			
Company Official Title Project Specialist - Permitting			
Subscribed and sworn before me this 22nd day of	September	, 20 20 Notary Publi	ic
My commission expires Moural 9, 2024	Office of Oil and Gas		Commonwealth of Pennsylvania - Notary Seal Rebecca Shrum, Notary Public Beaver County My commission expires March 9, 2024 Commission number 1267706

WV Department of Environmental Protection

WW-9 Attachment

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

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

Additives to be used in drilling medium?

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

RECEIVED
Office of Cil and Gas

Form WW-9		Opera	ator's Well No. Michael Kuhn 8H
EQT Production C	ompany		
Proposed Revegetation Trea	atment: Acres Disturbed N	o additional disturbance Prevegeta	tion pH
Lime 3	Tons/acre or to correct	ct to pH 6.5	
Fertilizer type Gr	anular 10-20-20		
Fertilizer amount_	1/3	lbs/acre	
Mulch 2		_Tons/acre	
		Seed Mixtures	
Т	emporary		Permanent
Seed Type KY-31	lbs/acre 40	Seed Type Orchard Grass	lbs/acre 15
Alsike Clover	5	Alsike Clover	5
Annual Rye	15		
•	olved 7.5' topographic sheet.		
Plan Approved by: De	rek M. Haught	ed areas as soon as rea	
per regulation. L	Jpgrade E&S as n	ecessary per WV DEP	E&S Manual.
Title: Oil & Gas Inspe	ctor	_{Date:} 9/16/20	
	V		
Field Reviewed?	(X Yes () No RECEIVED Office of Oil and Ga	38

SEP 2 3 2020

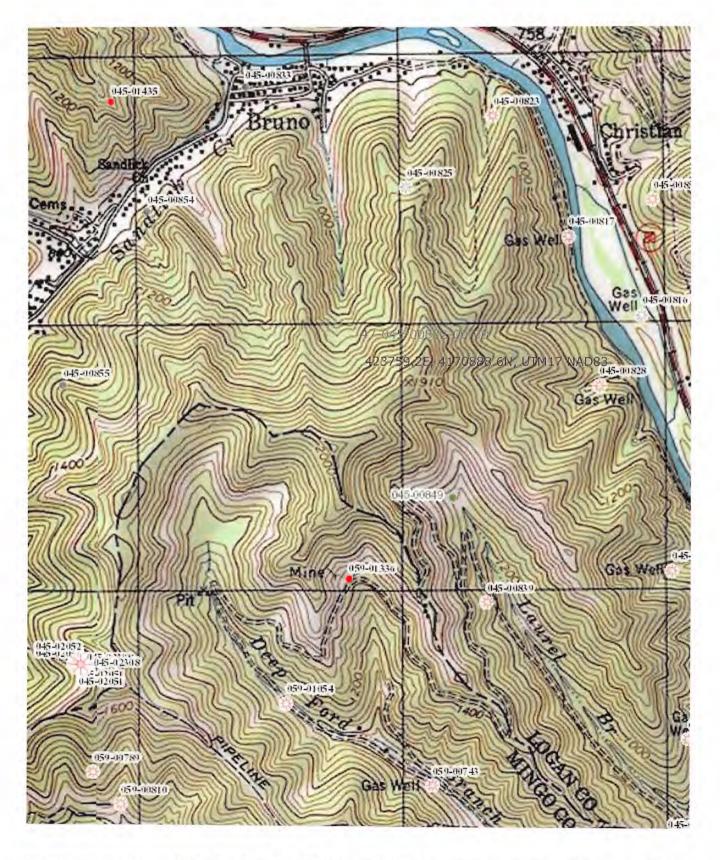
WV Department or Environmental Protection

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NO.

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	ОН	3390
Broad Street Energy LLC	37 West Broad Street	Suite 1100	Columbus	ОН	43215	740-516-5381	Washingotn	ОН	8462
LAD Liquid Assets Disposal Inc.	226 Rankin Road		Washington	PA	15301	724-350-2760	Ohio	wv	USEPA WV 0014
					45770	740 545 5024		011	4027
Triad Energy	PO Box 430		Reno	ОН	45773	740-516-6021	Noble	ОН	4037
				-	<u> </u>	740-374-2940			
Tri County Marke Makes Management Inc	1497 Toma Bun Bond		Holbrook	PA	15341	724-627-7178	Greene	PA	TC-1009
Tri County Waste Water Management, Inc.	1487 Toms Run Road		Holbrook	- FA	13341	724-499-5647	Greene	1.0	16-1003
				+	+	724-455-5047	-	 	
King Excavating Co. Advance Waste Services	101 River Park Drive		New Castle	PA	16101	 	Lawrence	PA	PAR000029132
MINE EXCEPTINE CO. MUVAILLE TVASTE SELVICES	TOT HACE I GIV DIVE	-		1	1	 			
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	ОН	43903	740-543-4389	Jefferson	ОН	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	ОН	43935	740-609-3800	Belmont	ОН	2014-541
0			C. I	-	42007	740 042 1730	Horrison	ОН	2015-511
Belmon Solids Control	77505 Cadiz-New Athers Road		Cadiz	ОН	43907	740-942-1739	narrison	Оп	2013-511
	2444 P P.I		Belpre	ОН	45714	740-401-0413	Washington	ОН	
Diversified Resources	3111 Braun Rd.		beibie	Un	43/14	740-401-0413	wasnington	011	
2 					+	+			34-031-27177
9			Coshocton	ОН	43812	740-610-1512	ŀ	ОН	34-031-27178
Buckeye Brine	23986 Airport Road		Cosnocion		13011	724-591-4393	Coshocton		34-031-27241
S ()	23300 All port Nodu				+				
Central Environmental Services	28333 West Belpre Pike		Coolville	ОН	45723	304-488-0701	Athens	ОН	
central Environmental Services	20000 West Belgie File			_		-			
Nuverra - Nichols	10555 Veto Road		Belpre	ОН	45714	330-232-5041	Washington	ОН	34-119-2-8776
Nuverra - Goff	9350 East Pike Road		Norwich	ОН	43767	330-232-5041	Muskingum	ОН	34-167-2-3862
Nuverra - Wolf	5480 State Route 5		Newton Falls	ОН	44444	330-232-5041	Trumbull	ОН	34-155-2-1893
								ļ	
Nuverra - Pander	5310 State Route 5		Newton Falls	ОН	44444	330-232-5041	Trumbull	ОН	34-155-2-3795
								1	
Nuverra - AnnaRock D-1	3549 Warner Road	1	Fowler	ЮН	44418	330-232-5041	Trumbull	ЮН	34-155-2-2403

					740-374-2940	I		
		Reno	он	45773	412-443-4397		ОН	
FQ Helen	199 Bowersock Road				740-236-2135	Washington		34-167-2-9577
			,		740-374-2940			
		Dexter City	ОН	45727	412-443-4397		ОН	34-121-24037
FQ Dexter	38505 Marietta Rd.		_		740-236-2135	Noble		34-121-24086
					740-374-2940			
	1	Ellenboro	lwv	26346	412-443-4397	Ì	lwv	
FQ Ritchie	122 Lonesome Pine Rd				740-236-2135	Ritchie		47-085-09721
					740-374-2940	l		34-105-2-3619
		Portland	ОН	45770	412-443-4397	1	он	34-105-2-3652
		Portiand	1011	45//0	740 226 2126]	6"	34-105-2-3637
FQ Mills	53610 TS Rd 706				740-230-2133	Meigs		34-105-2-3651
							<u> </u>	
Petta Enterprises - OH	745 North 3rd Street	Cambridge	ОН	43725	614-477-1368	Guernsey	ОН	Ohio Chiefs Order 25-019
Petta Enterprises - WV	38 Technology Dr.	Tridelphia	wv	26059	740-255-5727	Ohio	wv	
Deep Rock Disposal	2341 OH-821	Marietta	ОН	45750	304-629-0176	Washington	ОН	34-167-2-9766

47 103 33362



ORIGIN ID:PITA (412) 278-MARISSA BRINZER KEYSTONE CONSULTANTS LLC 32 E MAIN ST

ROBERT & LINDA RIX

CARNEGIE, PA 15106 UNITED STATES US

(412) 278-2100

SHIP DATE: 02NOV20 ACTWGT: 1.00 LB CAD: 113226966/INET4280

56B.B.51DB/B766

BILL SENDER

After printing this label:
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Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply, Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

65 MGWA

56B.BI51D8/B766

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SHIP DATE: 02NOV20 ACTWGT: 1.00 LB CAD: 113226966/INET4280

BILL SENDER

ROBERT & LINDA RIX

ORIGIN ID:PITA (412) 278-2 MARISSA BRINZER KEYSTONE CONSULTANTS LLC 32 E MAIN ST

2053 KODOL RD

CARNEGIE, PA 15106 UNITED STATES US

TO

LITTLETON WV 26581 REF: MICHAEL KUHN NOTIFICATIONS

(412) 278-2100

Fedex:

TUE - 03 NOV 4:30P PRIORITY OVERNIGHT

> 26581 PIT

11/2/2020



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 M. Haught

Derek Haught

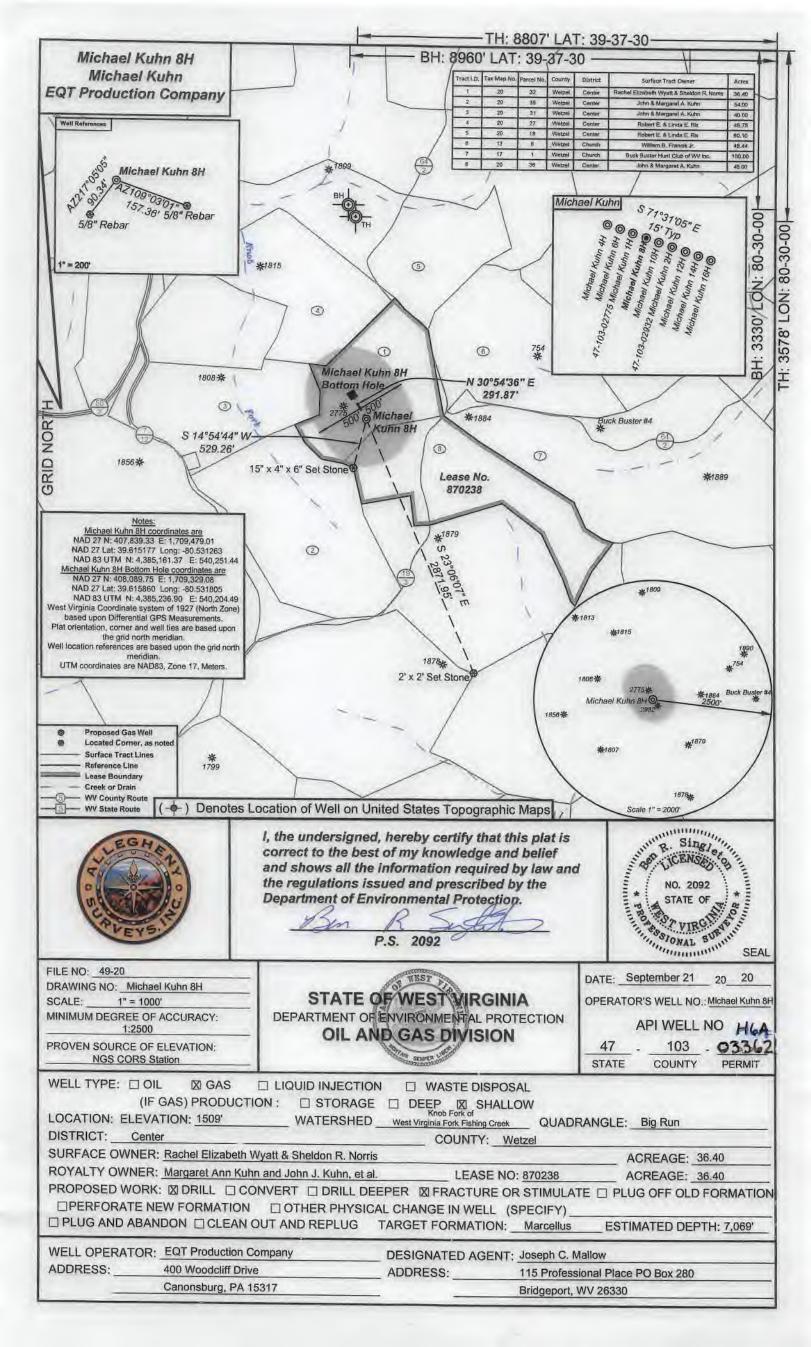
Oil and Gas Specialist

West Virginia DEP

Office of Cil and Gas

SEP 2 3 2020

WV Departme. Environmental Protect



WW-6A1 (5/13)

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
870238	Michael G Kuhn, single man	Drilling Appalachian Corporation	at least 1/8th per WV Code 22-6-8	OG77A/56
	Drilling Appalachian Corporation	Grenadier Energy Partners, LLC	at least 1/8th per WV Code 22-6-8	OG 118A/108 & 136A/538
	Grenadier Energy Partners, LLC	Statoil USA Onshore Properties Inc.	at least 1/8th per WV Code 22-6-8	OG 138A/1
	Drilling Appalachian Corporation	Statoil USA Onshore Properties Inc.	at least 1/8th per WV Code 22-6-8	OG 138A/54
	Statoil USA Onshore Properties Inc.	EQT Production Company	at least 1/8th per WV Code 22-6-8	OG 175A/707

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

John Zavatchan RECEIVED Office of Or and Gas Its:

Project Specialist - Permitting



EQT PRODUCTION COMPANY
400 Woodcliff Drive | Canonsburg, PA 15317

September 21, 2020

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

Re:

Michael Kuhn 8H Gas Well

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,

John Zavatchan

Project Specialist - Permitting

Office of Gas

Environmental . ,

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

Date of Notic	ce Certification: 09/22/2020		API No. 4	7-103 - 1	53362
				Well No. 8H	
			Well Pad !	Name: Michael	Kuhn
Notice has l					AND SECTION AS A SECTION AS
	ne provisions in West Virginia Code	§ 22-6A, the Operator has pro	vided the red	quired parties v	vith the Notice Forms listed
	tract of land as follows:				
State:	West Virginia	UTM NAD 83	Easting:	540251.437	
County:	Wetzel		Northing:	4385161.373	
District:	Center	Public Road Acc	ess:	CR 19/3	
Quadrangle:	Big Run	Generally used f	arm name:	Rachel Elizabeth	Wyall & Sheldon R Norris
Watershed:	Knob Fork of West Virginia Fork Fish Creek				
it has provided information representation of giving the requirements Virginia Code of this article	the secretary, shall be verified and ed the owners of the surface descrequired by subsections (b) and (c), so surface owner notice of entry to so of subsection (b), section sixteen to be \$22-6A-11(b), the applicant shall have been completed by the application. West Virginia Code § 22-6A, the O	ibed in subdivisions (1), (2) a section sixteen of this article; (i urvey pursuant to subsection of this article were waived in tender proof of and certify to t int.	and (4), sub- ii) that the re (a), section writing by the secretary	section (b), sec quirement was ten of this arti the surface ov that the notice	ction ten of this article, the deemed satisfied as a result cle six-a; or (iii) the notice wher; and Pursuant to West
	rator has properly served the requir			1,000-01-01	OOG OFFICE USE
*PLEASE CHI	ECK ALL THAT APPLY			- 1	ONLY
☐ 1. NO	FICE OF SEISMIC ACTIVITY OF	NOTICE NOT REQUIRED SEISMIC ACTIVITY WAS			RECEIVED/ NOT REQUIRED
☐ 2. NO	TICE OF ENTRY FOR PLAT SUR	VEY or <a> NO PLAT SURV	EY WAS C	ONDUCTED	☐ RECEIVED
■ 3. NO	TICE OF INTENT TO DRILL or	NOTICE NOT REQUINOTICE OF ENTRY FOR WAS CONDUCTED or			RECEIVED/ NOT REQUIRED
		☐ WRITTEN WAIVER (PLEASE ATTACH)		CE OWNER	
■ 4. NO	TICE OF PLANNED OPERATION			1	☐ RECEIVED
■ 5. PUE	BLIC NOTICE				☐ RECEIVED
■ 6. NO	TICE OF APPLICATION				☐ RECEIVED

Required Attachments:

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

Certification of Notice is hereby given:

THEREFORE,			the notice requirements within West Virginia Code § 22-
			erved the attached copies of the Notice Forms, identified
above, to the re	equired parties through personal ser-	vice, by registered mail	or by any method of delivery that requires a receipt or
signature confir	mation. I certify under penalty of la	w that I have personally	examined and am familiar with the information submitted
in this Notice (Certification and all attachments, a	and that based on my i	nquiry of those individuals immediately responsible for
obtaining the in	formation, I believe that the informa	tion is true, accurate and	d complete. I am aware that there are significant penalties
	alse information, including the possil		
ioi buoilitting i		2/1/	1001000
Well Operator:	EQT Production Company	Address:	400 Woodcliff Drive
By:	John Zavatchan		Canonsburg, PA 15317
Its:	Project Specialist - Permitting	Facsimile:	412-395-2974
Telephone:	724-746-9073	Email:	jzavatchan@eqt.com
			02.00
Commonw	ealth of Panksylvania - Notary Seal	Subscribed and swo	orn before me this 32 nd day of September, 2030
	ecca Shrum, Notary Public		A The state of the
	Beaver County	resece	Notary Public
	mission expires March 9, 2024		0
Andreas	nmission number 1267706	My Commission Ex	xpires March 9 2024
Mamber, P	ennsylvania Association of Notaries	103/12/21/21/21/21/21/21/21	1 2 2 2 2

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.

Office of Call and Cas
SEP 2 3 2020
W/ Engran and A/
Environmental Protection

WW-6A (9-13)

API NO. 47	
OPERATOR WELI	NO. 8H
Well Pad Name: Mie	chael Kuhn

NOU	ce i inie Requireme	ent: nouce shall be provi	ded no later than the thing date of permit application.
	-	Date Permit Applicat	tion Filed: 9/22/2020
Noti	ce of:		
V	PERMIT FOR AN	Y CERTIFI	CATE OF APPROVAL FOR THE
	WELL WORK	CONSTR	RUCTION OF AN IMPOUNDMENT OR PIT
Deli	very method pursu	ant to West Virginia Co	ode § 22-6A-10(b)
	PERSONAL	REGISTERED	✓ METHOD OF DELIVERY THAT REQUIRES A
	SERVICE	MAIL	RECEIPT OR SIGNATURE CONFIRMATION
sedin the soil and description operation operation well important well important provides a substitution of the substitution o	ment control plan requestrace of the tract on and gas leasehold being ribed in the erosion at ator or lessee, in the expectation of the surface to coal seams; (4) The work, if the surface to condition of this section (b) of this section (b) of this section of this article to the R. § 35-8-5.7.a requestract of the traction of the section (b) of this article to the R. § 35-8-5.7.a requestration of the section	aired by section seven of the which the well is or is proposed by the proposed sediment control plants are the tract of land on which we was a few or section of the surfact is to be used for the proposed in section nine of the proposed in section nine of the proposed in section of the propo	quires a receipt or signature confirmation, copies of the application, the erosion and this article, and the well plat to each of the following persons: (1) The owners of record of posed to be located; (2) The owners of record of the surface tract or tracts overlying the sed well work, if the surface tract is to be used for roads or other land disturbance as submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, which the well proposed to be drilled is located [sic] is known to be underlain by one or urface tract or tracts overlying the oil and gas leasehold being developed by the proposed lacement, construction, enlargement, alteration, repair, removal or abandonment of any this article; (5) Any surface owner or water purveyor who is known to the applicant to eated within one thousand five hundred feet of the center of the well pad which is used to estic animals; and (6) The operator of any natural gas storage field within which the firmore than three tenants in common or other co-owners of interests described in ands, the applicant may serve the documents required upon the person described in the suant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any ien holder is not notice to a landowner, unless the lien holder is the landowner. W. Va. rator shall also provide the Well Site Safety Plan ("WSSP") to the surface owner and any not water testing as provided in section 15 of this rule.
Ø A	application Notice	☑ WSSP Notice ☑ E&	S Plan Notice Well Plat Notice is hereby provided to:
☑ SU	JRFACE OWNER(s)	☑ COAL OWNER OR LESSEE
Nam	ne: See Attached List		Name: See Attached List
Auu	1688.		Address:
Nam			
Add	ress:		Name:
			Address:
☑ St	JRFACE OWNER(s) (Road and/or Other Dis	
	ne: See Attached List		■ SURFACE OWNER OF WATER WELL
Add	ress:		_ AND/OR WATER PURVEYOR(s)
			Name: See Attached List
Nam	ne:		_ Address:
Add	ress:		
			OPERATOR OF ANY NATURAL GAS STORAGE FIELD
) (Impoundments or Pits	
Nam	ne:		_ Address:
Add	ress:		
			*Please attach additional forms if necessary
			REGEIVED Office of Oil and Gas

SEP 2 3 2020

WV Department of Environmental Protection

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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W/ Departure Environmental Process

WW-6A (8-13) 4710303362

API NO. 47OPERATOR WELL NO. 8H
Well Pad Name: Michael Kuhn

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 crosion 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) API NO. 47-____OPERATOR WELL NO. 8H
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

Office of Oil and Gas

WV Department of Environmental Protection

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.**

WW-6A (8-13) API NO. 47OPERATOR WELL NO. 8H
Well Pad Name; Michael Kuhn

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-I0(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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SEP 2 3 2020

Environmental Proposition

WW-6A (8-13) API NO. 47-4710303362

OPERATOR WELL NO. 8H

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 depprivacyofficer awy.gov.

Commonwealth of Pennsylvania - Notary Seal Rebecca Shrum, Notary Public Beaver County

My commission expires March 9, 2024 Commission number 1267706

Member, Pennsylvania Association of Notaries

Subscribed and sworn before me this 22nd day of September 2000 Notary Public

My Commission Expires March 9, 7670

Office of Oll and Gas

SEP 2 3 2020

WV Department of Environmental Protection

4710303362 1" = 1000" Big Run Scale: Topo Quad: Date: August 19, 2020 Wetzel County: Project No: 49-34-C-20 District: Center Water Michael Kuhn Well Pad 4 Potential Water Sources within 2500' ▲Site 1 Site 2 ® Site 3 Site 5 Site 4 2000' 2500 Site 6 NAD 27, North Zone LEGEND

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



Well



Spring Pond



Building



SEP 2 3 2020

WV Depairment of Environmental Protection

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



Table 1 - Water Source Identification

EQT Well Pad Name: Michael Kuhn (BIG 467) EQT Well Number:	Submittal Date: A	ugust 19, 2020
Survey / Engineering Company: Allegheny Surve	eys, Inc.	
Site Number: 1 Distance from Gas Well (feet): 33	36 ±	
Surface Owner / Occupant: Robert & Linda Rix Address: 2053 Kodol Rd. Littleton WV 26581 Ph	2000 #: 304 775 2425	
		☐ Landowner Decline Sampling
Field Located Date: 07/22/2020 Owner home dur		☐ Unable to Contact (Further contact attempts to be
Coordinates: 39.623072, -80.537462 (decimal deg		made by EQT's third party pre-drill sampling lab)
Contact Attempts (Date): 1st; 07/21/2020 2nd:	Door Hanger Left:	
Comments: POND - Located about 200 ft. from to 07/22/2020. Spoke to Mr. Rix who indicated he		
Site Number: 2 Distance from Gas Well (feet): 28	01 ±	
Surface Owner / Occupant: Robert & Linda Rix		□ Landowner Requested
Address: 2053 Kodol Rd. Littleton WV 26581 Ph	none #: 304-775-2425	Sampling Landowner Decline
Field Located Date: 07/22/2020 Owner home dur	ring survey (yes/no): Yes	Sampling Unable to Contact
Coordinates: 39.621728, -80.536503 (decimal deg	grees – NAD 83)	(Further contact attempts to be made by EQT's third party pre-drill sampling lab)
Contact Attempts (Date): 1st: 07/21/2020 2nd:	Door Hanger Left:	pre-unii samping iau)
Comments: WATER WELL - Well casing located visit 07/22/2020.	d by old home site. Certifieds n	nailed 7/21/2020. Field
Site Number: 3 Distance from Gas Well (feet): 25	00 ±	
Surface Owner / Occupant: Robert & Linda Rix		□ Landowner Requested
Address: 2053 Kodol Rd. Littleton WV 26581 Pt	none #: 304-775-2425	Sampling Landowner Decline
Field Located Date: 07/22/2020 Owner home dur	ring survey (yes/no): Yes	Sampling Unable to Contact
Coordinates: 39.621464, -80.534911 (decimal deg	grees – NAD 83)	(Further contact attempts to be made by EQT's third party pre-drill sampling lab)
Contact Attempts (Date): 1st: 07/21/2020 2nd:	Door Hanger Left:	pre-drift sampling laby
Comments: WATER WELL - Currently being use 07/22/2020.	ed in home. Certifieds mailed 7	7/21/2020. Field visit
(Insert additional pages as needed)	Office of Office) Sas	
	SEP 2 3 2020	

Site Number: 4 Distance from Gas Well (feet): 1471 ±	
Surface Owner / Occupant: Robert & Linda Rix	☐ Landowner Requested
Address: 2053 Kodol Rd. Littleton WV 26581 Phone #: 304-775-2425	Sampling Landowner Decline
Field Located Date: 07/22/2020 Owner home during survey (yes/no): Yes	Sampling Unable to Contact
Coordinates: 39.618749, -80.533719 (decimal degrees – NAD 83)	(Further contact attempts to be made by EQT's third party pre-drill sampling lab)
Contact Attempts (Date): 1st: 07/21/2020 2nd: Door Hanger Left:	
Comments: POND - Certifieds mailed 7/21/2020. Field visit 07/22/2020.	
Site Number: 5 Distance from Gas Well (feet): 2077 ±	
Surface Owner / Occupant: Robert & Linda Rix	□ Landowner Requested
Address: 2053 Kodol Rd. Littleton WV 26581 Phone #: 304-775-2425	Sampling Landowner Decline
Field Located Date: 07/22/2020 Owner home during survey (yes/no): Yes	Sampling Unable to Contact
Coordinates: 39.620800, -80.529246 (decimal degrees – NAD 83)	(Further contact attempts to be made by EQT's third party pre-drill sampling lab)
Contact Attempts (Date): 1st: 07/21/2020 2nd: Door Hanger Left:	
Comments: POND - Certifieds mailed 7/21/2020. Field visit 07/22/2020.	
Site Number: 6 Distance from Gas Well (feet): 951 ±	
Surface Owner / Occupant: Rachel Elizabeth Wyatt & Sheldon R. Norris	☐ Landowner Requested
Address: 1132 Kodol Rd. Wileyville WV 26581 Phone #:	Sampling Landowner Decline
Field Located Date: Owner home during survey (yes/no): No	Sampling ☑ Unable to Contact
Coordinates: 39.613548, -80.534100 (decimal degrees – NAD 83)	(Further contact attempts to be made by EQT's third party pre-drill sampling lab)
Contact Attempts (Date): 1st: 07/21/2020 2nd: Door Hanger Left:	
Comments: POND – Located with aerial imagery. Certifieds mailed 7/21/2020. No further contact.	response or any

Office of Cili and Gas

SEP 2 3 2020

WV Department of Environmental Protection WW-6A4 (1/12) Operator Well No. Michael Kuhn 8H

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 Date of Notice		rovided at least TEN (10) days prior to filing a Date Permit Application Filed: 09/22/2020	permit application.
Delivery met	hod pursuant to West Virginia	Code § 22-6A-16(b)	
☐ HAND	■ CERTIFIED M	AIL	
DELIVE		EIPT REQUESTED	
receipt request drilling a hor of this subsect subsection mand if availab	sted or hand delivery, give the sizontal well: <i>Provided</i> . That no ction as of the date the notice way be waived in writing by the side, facsimile number and electrons.	ast ten days prior to filing a permit application, arface owner notice of its intent to enter upon the tice given pursuant to subsection (a), section to subsection to the surface owner: <i>Provided, howerface</i> owner. The notice, if required, shall include mail address of the operator and the operator	ne surface owner's land for the purpose of en of this article satisfies the requirements of the name, address, telephone number,
	reby provided to the SURF.		
Address: 1132		Name:	
Carlo P. Daniel P. A. Maria	ville, WV 26581	Address.	
State:	West Virginia	illing a horizontal well on the tract of land as for UTM NAD 83 Easting:	540251.437
County:	Wetzel	Northing:	4385161.373
District:	Center	Public Road Access:	CR 19/3
Quadrangle:	Big Run	Generally used farm name:	Michael Kuhn (Rachel Elizabeth Wyatt & Sheldon R Norris)
Watershed:	Knob Fork of West Virginia Fork Fish Cr	eek	
Pursuant to facsimile nur	nber and electronic mail addre	6(b), this notice shall include the name, address of the operator and the operator's authorized from the Secretary, at the WV Department of 25304 (304-926-0450) or by visiting www.de	ed representative. Additional information f Environmental Protection headquarters,
	reby given by:		
Well Operato	FC EQT Production Company	Authorized Representative:	John Zavatchan
Address:	400 Woodcliff Drive	Address:	400 Woodcliff Drive
	Canonsburg, PA 15317		Canonsburg, PA 15317
Telephone:	724-746-9073	Telephone:	724-746-9073
Email:	jzavatchan@eqt.com	Email:	jzavatchan@eqt.com
Facsimile:	412-395-2974	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.

SEP 2 3 2020

Emilioning ital Protection

WW-6A5 (1/12) Operator Well No. Michael Kuhn 8H

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

Date of Notic	Requirement: notice shall be procee: 09/22/2020 Date P	ermit Application Filed: 09/22/2020	
Delivery met	hod pursuant to West Virginia	Code § 22-6A-16(c)	
CERTI	FIED MAIL	☐ HAND	
	RN RECEIPT REQUESTED	DELIVERY	
return receipt the planned of required to be drilling of a damages to th (d) The notic of notice. Notice is her	requested or hand delivery, give operation. The notice required by provided by subsection (b), sect horizontal well; and (3) A propose surface affected by oil and gas are required by this section shall be by provided to the SURFACE	the surface owner whose land will be up this subsection shall include: (1) A fion ten of this article to a surface owner osed surface use and compensation agroperations to the extent the damages are given to the surface owner at the add	t application, an operator shall, by certified mail used for the drilling of a horizontal well notice of copy of this code section; (2) The information r whose land will be used in conjunction with the reement containing an offer of compensation for the compensable under article six-b of this chapter, ress listed in the records of the sheriff at the time
Name: Rachel I Address: 1132 Wiley	Elizabeth Wyatt & Sheldon R Norris \ Kodol Rd rille, WV 26581	Name:Address:	
Name: Rachel I Address: 1132 Wiley Notice is her Pursuant to V operation on	Elizabeth Wyatt & Sheldon R Norris Kodol Rd rille, WV 26581 eby given: Vest Virginia Code § 22-6A-16(c	Address:), notice is hereby given that the unders purpose of drilling a horizontal well on	
Name: Rachell Address: 1132 Wiley Notice is her Pursuant to V operation on State:	Elizabeth Wyatt & Sheldon R Norris Kodol Rd Fille, WV 26581 Coby given: Vest Virginia Code § 22-6A-16(c) the surface owner's land for the	Address: Address: notice is hereby given that the unders purpose of drilling a horizontal well on East	the tract of land as follows:
Name: Rachel II Address: 1132 Wiley Notice is her Pursuant to V operation on State: County: District:	Elizabeth Wyatt & Sheldon R Norris Kodol Rd fille, WV 26581 eby given: Vest Virginia Code § 22-6A-16(c the surface owner's land for the West Virginia	Address:), notice is hereby given that the unders purpose of drilling a horizontal well on East UTM NAD 83 Nort Public Road Access:	the tract of land as follows: ing: 540251.437 thing: 4385161.373 CR 19/3
Name: Rachel II Address: 1132 Wiley Notice is her Pursuant to V operation on State: County:	eby given: Vest Virginia Code § 22-6A-16(c the surface owner's land for the West Virginia West Virginia	Address: Address: Notice is hereby given that the unders purpose of drilling a horizontal well on East UTM NAD 83 Nort	the tract of land as follows: ing: 540251.437 thing: 4385161.373 CR 19/3
Name: Rachel II Address: 1132 Wiley Notice is her Pursuant to V operation on State: County; District: Quadrangle: Watershed:	eby given: Vest Virginia Code § 22-6A-16(c the surface owner's land for the West Virginia Wetzel Center Big Run Knob Fork of West Virginia Fork Fish Creek	Address: Address: Address: Discreption of the inders of the unders of drilling a horizontal well on the inders of the inders of the indersor of the inderso	the tract of land as follows: ing: 540251.437 thing: 4385161.373 CR 19/3
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Name: Rachell Address: 1132 Wiley Notice is her Pursuant to V operation on State: County: District: Quadrangle: Watershed: This Notice States affect information of headquarters,	eby given: Vest Virginia Code § 22-6A-16(c the surface owner's land for the West Virginia Wetzel Center Big Run Knob Fork of West Virginia Fork Fish Creek Shall Include: Vest Virginia Code § 22-6A-16(c ed by W. Va. Code § 22-6A-16(c ed by Old and gas operations to related to horizontal drilling may located at 601 57th Street, SE.	Address: Address:	the tract of land as follows: ing: 540251.437 thing: 4385161.373 CR 19/3 ame: Michael Kuhn (Rachel Elizabeth Wyatt & Sheldon R Norris) of this code section; (2) The information required all be used in conjunction with the drilling of a ming an offer of compensation for damages to the ole under article six-b of this chapter. Additional ne WV Department of Environmental Protection -0450) or by visiting www.dep.wv.gov/oil-and-
Name: Rachell Address: 1132 Wiley Notice is her Pursuant to V operation on State: County: District: Quadrangle: Watershed: This Notice State Pursuant to V to be provide horizontal we surface affect information of headquarters, gas/pages/de	eby given: Vest Virginia Code § 22-6A-16(c the surface owner's land for the West Virginia Wetzel Center Big Run Knob Fork of West Virginia Fork Fish Creek Shall Include: Vest Virginia Code § 22-6A-16(c ed by W. Va. Code § 22-6A-16(c ed by Old and gas operations to related to horizontal drilling may located at 601 57th Street, SE.	Address: Addres	the tract of land as follows: ing: 540251.437 thing: 4385161.373 CR 19/3 ame: Michael Kuhn (Rachel Elizabeth Wyatt & Sheldon R Norris) of this code section; (2) The information required all be used in conjunction with the drilling of a ming an offer of compensation for damages to the ole under article six-b of this chapter. Additional ne WV Department of Environmental Protection -0450) or by visiting www.dep.wv.gov/oil-and-

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.





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

July 27, 2020 /

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 8H Well Site

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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 MP 2.34 SLS.

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.

Very Truly Yours,

Gary K. Clayton, P.E.

Regional Maintenance Engineer Central Office O&G Coordinator

Office of Chand Gas

SEP 2 3 2020

Environmental Protection

Cc: John Zavatchan

EQT Production Company

CH, OM, D-6

File

Anticipated Frac Additives Chemical Names and CAS numbers

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

Office of Oil and Gas

SEP 2 3 2020

WV Department of Environmental Protection

				MIC	HAEL KUHN WEL	L LOCATIONS	Na.		
ASSIGNED WELL ID	APLE	LATINADETI	JERKLANJING/J	NORTHINGINAD831	EASTING(NAD83)	NORTHING NADEZ	EAS BNG(NAD27)	NORTHING, NAD 83 UTM METERS	EASTINGINAD 83 UTIVIMETER
181	47 10302775	39" 36 54 98656	80" 31 52 04943	407881 9520	1678025 847	407844 348	1709463 982	4385162 826	540246 834
211	47 10302932	39' 36 54 84561	80' 31 51 48261	407867.1830	1678070 036	407829.578	1709508.171	4385158 551	540260 372
4H		39° 36 55 07731	80° 31 52 41440	407891 4617	1677997 394	407853.858	1709435 530	4385165.578	540238.118
6H		39" 36 55 03193	80" 31 52 23192	407886 7068	1678011 621	407849 103	1709449 756	4385164 202	540242 476
H8		39" 36 54 93863	80" 31 51 85621	407876 9303	1678040 872	407839 326	1709479 007	4385161 373	540251 437
10H		39° 36 54 89325	80° 31 51 67427	407872 1755	1678055 098	407834 571	1709493 233	4385159 096	540255 796
1211		39" 36 54 79796	80" 31 51 29100	407862 1904	1678084 974	407824 585	1709523 109	4385157 106	540264 949
14H		39" 36 54 75258	80° 31 51 10852	407857 4356	1678099.200	407819 830	1709537 335	4385155.730	540269 307
16H		39° 36 54 70720	80" 31 50 92604"	407852 6807	1678113.427	407815 075	1709551 561	4385154 354	540273 665

EROSION & SEDIME MICHAEL KUF WETZEL CO

EQT PRODUCT

	0	ISTURBANCE BREAKDOWN		
STOCKPALES	COUNTY ROLLTE	WELL PAD ACCESS	WELL PAD EXPANSION	TOTAL DISTURBANCE
5 30 AC	1 33 AC	0.48 AC	5 14 AC	12 25 AC

		LANDOWNER DISTU	RBANCE BREAKDOWN		
LANDOWNER	DISTURBANCE FROM STOCKPILES	DISTURBANCE FROM COUNTY ROUTE	DISTURBANCE FROM ACCESS ROAD	DISTURBANCE FROM WELL PAD EXPANSION	TOTAL DISTURBANCE
KUHN MICHAEL G 52 01-20 0031 0000 0000	0 21 AC	N/A	N/A	N/A	G 21 AC
KUHN MICHAEL G 52-01-20 0032-0000-0000	3 92 AC	0 67 AC	0 01 AC	4 61 AC	9 21 AC
KUHN MICHAEL G 52 01 20 0036-0000-0000	131 AC	0.65 AC	D 47 AC	0.57.AC	3 00 AC





PROJECT NO **AUGUS**

DIEFFENBAUCI

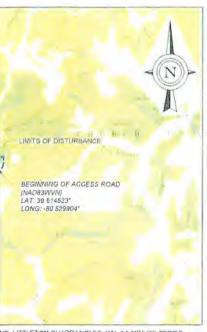




NT CONTROL PLAN IN WELL SITE

DUNTY, WV

ION COMPANY



NO LITTLETON QUADRANGLES, WV, 7.5 MINUTE SERIES

	TOWN SIONAL ENGINEERS
	INDEX
DRAWING NO	INDEX
DRAWING NO	
DRAWING NO	TITLE
1	TITLE TITLE SHEET

DMH 9/16/20

6-7

9-11

COUNTY ROUTE AND ACCESS ROAD PROFILES

COUNTY ROUTE CROSS SECTIONS

ACCESS ROAD CROSS SECTIONS

E&S TYPICAL SECTIONS E&S DETAILS

SEP 2 3 2020

WV Dopartment of Environmental Protection

. 20070-005

1 & HRITZ, LLC

MICHAEL KUHN WELL SITE

EQT PRODUCTION COMPANY

TMR

CHECKED

RCL

20070-005

DIEFFENBAUCH & HRITZ, I 1095 Chiptin Road Sute 209 Motgettown, WV 26501

TITLE SHEET

