

#### west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary www.dep.wv.gov

Monday, October 15, 2018 WELL WORK PERMIT Vertical / New Drill

KEYROCK ENERGY LLC PO BOX 2223

JOHNSON CITY, TN 37605

Re: Permit approval for KENNER 11

47-011-01004-00-00

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: KENNER 11

Farm Name: KENNER Y. MARKINS

U.S. WELL NUMBER: 47-011-01004-00-00

Vertical New Drill Date Issued: 10/15/2018



#### west virginia department of environmental protection

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

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

October 15, 2018

Mr. Kenner Markins 4156 Cavill Creek Road Barboursville, WV 25504

Re: Operator Response to Surface Owner Comments for API permit No. 47-011-01004.

Dear Mr. Markins:

The Office of Oil and Gas (OOG) has completed its review of the above-referenced permit application submitted by Keyrock Energy LLC. Our staff examined the permit to ensure compliance with all applicable requirements. Also, your comments were sent to the applicant to allow them to respond to your concerns. The applicant's response is enclosed for your records.

After considering your comments, the applicant's response, along with the state inspector's input, the OOG has determined that the application meets the requirements set forth in Article 6, Chapter 22 of the West Virginia Code and Legislative Rule Title 35 Series 4. Consequently, the OOG is issuing the permit today. For your information and convenience, I am including with this letter a copy of the permit as issued and the operator's response to your comments.

Please contact Jeff McLaughlin at (304) 926-0499, extension 1614 if you have questions.

Sincerely,

Jeffrey W. McLaughlin

Seffy N M = Laughlin

WV DEP, Office of Oil & Gas

Technical Analyst

B. S. Of Petroleum Engineering

Enclosures: Comment letter, Operator Response, Permit No. 47-011-01004

July 30, 2018

State of West Virginia Dept. of Environmental Protection Office of Oil and Gas 601 57th Street SE Charleston, WV 25304

REF: Well Operator: Keyrock Energy LLC

Operator ID: 494507629

County: Cabell District: Grant

Quadrangle: Milton7.5'

Operator's Well Number: Kenner No. 11

#### To Whom It May Concern:

I am writing to protest the location as determined by Kevrock Energy LLC on the above named well. It is my belief that this location would be inappropriate because it is up against another landowners property and could do damage to his land because of erosion and sediment. This could also do harm to his livestock. The site is to narrow and is obstructed by very large rock which would have to be dump on my property.

My suggestion is that they move the well and pit site to a lower location just below the proposed site. This site is larger, level, and easier to access. It would be a more safe work area, have less soil erosion, and sediment control would be better maintained.

Your consideration into this matter would be greatly appreciated.

Kenner Markins 4156 Cavill Creek Road Barboursville, WV 25504 RECEIVED
Office of Oil and Gas

JUL 3 0 2018



October 1st, 2018

Jeff McLaughlin
Office of Oil and Gas
WV Dept of Environmental Protection

Operators Comments re Kenner Markin Comments, July 30th, 2018.

Mr. McLaughlin,

Keyrock Energy received notice from WV DEP regarding drilling and operating concerns expressed by Mr. Kenner Markins. In address to his concerns, please consider the following:

- 1.) Kenner #11 wellsite is a full 60' from the nearest property line, and is on the downslope side, which presents very minimal opportunity for erosion on offset neighbors. Though our permitted site is large, we do not need a site any larger than 100' x 125' and are drilling with an RD-20 rig. There is no possibility that our operations will cross on to the adjacent land owner's property.
- 2.) Keyrock Energy will take every measure possible to prevent damage to Mr. Markins livestock, as well as any other person's livestock. We will fence the site while drilling, maintain fencing through flowback operations, maintain a sturdy gate at the access entrance onto the property, and fence the pumpjack and all other associated equipment on site.
- 3.) If Mr. Markin does not want any dirt, timber, rock, or other spoils from building the well site we will remove them permanently from the surface location.

We believe if this site were moved any further downslope construction activities would have the potential to initiate slippage and rock falls. We prefer to operate on as level and as hard as ground as possible to minimize erosion and slippage.

Morgan Pate

Geologist

423-276-1116

P.O. Box 2223

207 E. Main Street, Suite 2-D

Johnson City, TN 37605

RECEIVED
Office of Oil and Gas

OCT 1 5 2018

## **PERMIT CONDITIONS**

West Virginia Code §22-6-11 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. 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 §22-6-20, 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 fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
- 2. Pursuant to 35 CSR 4-19.1.a, at the request of the surface owner all water wells or springs within 1000 feet of the proposed well that are actually utilized for human consumption, domestic animals or other general use shall be sampled and analyzed.
- 3. Pursuant to 35 CSR 4-19.1.c, if the operator is unable to sample and analyze any water well or spring with one thousand (1,000) feet of the permitted well location, the Office of Oil and Gas requires the operator to sample, at a minimum, one water well or spring located between one thousand (1,000) feet and two thousand (2,000) feet of the permitted well location.
- 4. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
- 5. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
- 6. During the surface casing and cementing process, in the event cement does not return to the surface, or any other casing string that is permitted to circulate cement to the surface and does not return to the surface, the oil and gas inspector shall be notified within twenty-four (24) hours
- 7. Well work activities shall not constitute a hazard to the safety of persons.
- 8. Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced on this well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

WW - 2B (Rev. 8/10)

CK# 14464 7-17-18 \$650.00

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

1) Well Operato	r: Keyro	ck Energ	y LLC	494507629	Cabell	Grant	Milton 7.5	
				Operator ID	County	District	Quadrangle	
2) Operator's W	ell Numb	er: Kenne	er No. 11		3) Elevation:	959'		
4) Well Type: (a	4) Well Type: (a) Oil <u>X</u> or Gas							
(b	(b) If Gas: Production / Underground Storage							
			/ S					
<ul><li>6) Proposed To</li><li>7) Approximate</li></ul>	tal Depth fresh wat	3,500 ter strata	Feet Fadepths: 327', 336', 1477', 1511', 1558' (fr	Formation at F 392', 922', (from ref	Proposed Tota wells 828, 802, 848	al Depth: Lowe	400'	
9) Approximate	coal sear	m depths	3: 702' (from ref. w	/ell 802)				
10) Approximate	e void de	pths,(coa	al, Karst, other):	None				
11) Does land o	ontain co	al seam	s tributary to act	ive mine? N	0	A CONTRACTOR CONTRACTO	Annual	
			nd fracturing meth a new well (estimat				eded)	
Will not produce fro								
13)	DECIFIC	61000000	ASING AND TUE	BING PROGR FOOTAGE	AM INTERVALS	S CEMEI	NT	
TYPE S	PECIFIC	****						
Conductor	<u>Size</u> 13 3/8"	<u>Grade</u>	Weight per ft	For Drilling 30'	Left in Well	Fill -up (Cu Sand		
Conductor	9 5/8"			955'	955'	271 Cu. Ft		
Fresh Water Coal	9 3/0	***************************************		900	900	27 1 Cu. 1 1	, 013	
Intermediate								
Production	4 1/2"			3,400'	3,400'	332 Cu. Ft	., CTS	
Tubing	2 3/8"			3,350'	3,350'	Per WV DE	P Rule	
Liners						REC	EIVED Dil and Gas	
Packers: Kind	:							
Size				100000000000000000000000000000000000000		SEP	0 5 2018	
Dep	ths Set					WV De	partment of ental Protection	

9-5-2018

**WW-2A** (Rev. 6-14)

4) Surface Owner(s) to be served:

RECEIVED
Office of Oil and Gas

JUL 2 0 2018

WV Department of Environmental Protection

1). Date:	7/18/2018	
•		

2.) Operator's Well Number

3.) API Well No.:

Kenner No. 11

State 47County

Cabell

Permit

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

5) (a) Coal Operator

(a) Name	Konner V Markins	Name	nla
` '	Kenner Y. Markins		<u>n/a</u>
Address	4156 Cavill Creek Road	Address	
	Barboursville, WV 25504		
(b) Name	BUDDY & ALEXANDER CHILDERS		wner(s) with Declaration
Address 🥕	824 BIRCH HOLLOW RD.	Name	<u>n/a                                    </u>
ACCESS	BARROURSVILLE, WY CHANCE	Address	
80140			
(c) Name		Name	
Address		Address	
Addicas		_ / (44,000	
G) Inapactor	Aller Flourers	(c) Coal I (	essee with Declaration
6) Inspector	Allen Flowers	(c) coar Le Name	
Address	165 Grassy Creek Ln.		<u>n/a                                    </u>
	Liberty, WV 25124	Address	
Telephone	304-552-8308	_	
	TO THE PERSONS NA	MED ABOVE T	AKE NOTICE THAT:
x Included is t	he lease or leases or other continuing	contract or contra	acts by which I hold the right to extract oil and gas
OR			
Included is t	he information required by Chapter 22	2, Article 6, Sectio	on 8(d) of the Code of West Virginia (see page 2)
I certify	that as required under Chapter 22-6	of the West Virg	inia Code I have served copies of this notice and
application, a loc	cation plat, and accompanying docume	ents pages 1 thro	ugh on the above named parties by:
_	Personal Service (Affidavit attack		
_	X Certified Mail (Postmarked post		ed)
	Publication (Notice of Publication	on attached)	the state of the s
		d 35 CSR 4, and	I agree to the terms and conditions of any permit
issued under this	s application.		the families with the information authorited on
I certify	under penalty of law that I have pers	sonally examined	and am familiar with the information submitted on
this application	form and all attachments, and that be	ased on my inqui	ry of those individuals immediately responsible for
obtaining the int	ormation, I believe that the information	for submitting fa	alse information, including the possibility of fine and
	are that there are significant penalties	s for submitting ra	ase information, including the possibility of the and
imprisonment.	Well Operator	Keyrock Ene	eray LLC
SHIR		Morgan Pate	
A Prince		Geologist	or vary
STATE			23, 207 E. Main St., Suite 2-D
		Johnson City	
TENNESSE TENNESSE	Zelephone:	423-276-111	6
TENNLARY NOTARY	Fmail:		rockenergy.com
Subscribed and	sworn before me this day o		Keyrock Energy
VAL	13	- July	,,
"KIKNOF."	LI DON DOLL		Notary Public
My Commission	Expires 1-9-200		<u> </u>
Oil and Gas Privace			
On and Oas i Hvao	,		

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

# FOR KEYROCK ENERGY, LLC WELL KENNER 11

#### SURFACE OWNERS OF ACCESS ROAD FOR PROPOSED WELL SITE:

Kenner Y. Markins P. O. Box 13 Barboursville, WV 25504

Buddy L. & Alexander D. Childers 824 Birch Hollow Rd. Barboursville, WV 25504

RECEIVED Gas
Office of Oil and Gas
SEP 05 2018
WV Department of Environmental Protection

7/13/2018
TRUE LINE SURVEYING, INC.

3436	CERTIFIED MAIL® REC Domestic Mail Only For delivery information, visit our website	
3010 0000 3483	Postage \$2.05 \$ Total Postage and Fees	0791 21 Postmark JUL 16 2016
7016	Sent To Kenner Markins Street and Apt. No., or PO Box No. City, State, ZIP+18  PS Form 3800, April 2015 PSN 7530-02-000-9047	

RECEIVED Office of Oil and Gas

JUL 20 2018

WW-2A	Surface	Waiver
(4/16)		

SURFACE OWNER WAIVER				
County	Cabeli	Operator	Keyrock Energy	
		Operator well number	Kenner No. 11	

#### INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW2-A

The well operator named on page WW2A is applying for a permit from the State to do oil or gas well work. (Note: If the surface tract is owned by more than three persons, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22 of the West Virginia Code Well work permits are valid for 24 months. If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator and the Office of Oil and Gas

NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.
WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:

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

<u>Time Limits and methods for filing comments.</u> The law requires these materials to be served on or before the date the operator files his Application. You have FIFTEEN (15) 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.

Comments must be in writing. Your comments must 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.

The Chief has the power to deny or condition a well work permit based on comments on the following grounds:

- 1) The proposed well work will constitute a hazard to the safety of persons.
- 2) The soil erosion and sediment control plan is not adequate or effective;
- 3) Damage would occur to publicly owned lands or resources.
- 4) The proposed well work fails to protect fresh water sources or supplies;
- 5) The applicant has committed a substantial violation of a previous permit or a substantial violation of one or more of the rules promulgated under Chapter 22, and has failed to abate or seek review of the violation...

If you want a copy of the permit as it is issued or a copy of the order denying the permit, you should request a copy from the Chief.

<u>List of Water Testing Laboratories</u>. The Office maintains a list of water testing laboratories which you can hire to test your water to establish water quality prior to and after drilling. Contact the Chief to obtain a copy

VOLUNTARY STATEMENT OF NO OBJECTION

I hereby state that I have read the instructions to surface owners and that I have received copies of a Notice and Application for a Well Work Permit on Form WW2-A, and attachments consisting of pages 1 through \_\_\_\_ including a work order on Form WW2-B, a survey plat, WW-9, and a soil and erosion plan, all for proposed well work on my surface land as described therein

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

FOR EXECUTION BY A NATURAL PERSON

FOR EXECUTION BY A CORPORATION, ETC.

Bueleljan	Date	16/17/18	Company Name	n/a	
Baddy Chillure		1	By Its		Date
Print Name		EIVED			
Off	ice of C	il and Gas		Signature	Date

OCT 1 5 2018

WW-2A1 (Rev. 1/11)

Operator's Well Number Kenner No. 11

#### INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE Chapter 22, Article 6, Section 8(d) 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:

Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
Kenner Y, Markins	Keyrock Energy LLC	1/16	391/267
Buddy L. and Alexander D. Childers	Keyrock Energy LLC	1/16	391/324
Reference Declaration and Notice of Pooled Unit:	Keyrock Energy LLC	50/50 split of 1/8th royalty	113/24

#### 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 a cknowledges 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

RECEIVED Office of Oil and Gas

OCT 1 5 2018

WV Department of **Environmental Protection** 

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 ac quired from the appr opriate aut hority before the affected activity is initiated.

Well Operator:

By: Its:

Morgan Pate Keyrock Energy LLC

Geologist

WW-2B1	
(5-12)	

Well	No.	Kenner No. 11	
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## West Virginia Department of Environmental Protection Office of Oil and Gas

#### NOTICE TO SURFACE OWNERS

The well operator named below is preparing to file for a permit from the state to drill a new well. Before a well work permit can be filed with the Chief of the Office of Oil and Gas, the well operator is required to have given notice of the right to request water well or spring analytical testing. This notice shall be given to the owners or occupants of land which have a water well or spring being utilized for human consumption, domestic animals, or other general use and which is located within 1000 feet of the proposed well site.

With this form, the operator is giving you notice of your right to request analytical testing. The operator is required to sample and analyze the water wells or springs of all owners or occupants who request it. Therefore, if you wish to have your water well or spring tested, contact the operator named below.

All sampling shall be completed prior to drilling. Within thirty (30) days of the receipt of such sample analyses the operator shall submit the results to the Chief of the Office of Oil and Gas and to the owners or occupants who may have requested them.

Be advised, you have the right to sample and analyze any water supply at your own expense.

Listed below is the laboratory chosen by operator to perform analysis, and contactor chosen to collect sample.

Certified Laboratory Name Sampling Contractor

Pace Analytical
True Line Surveying

Well Operator Keyrock Energy
Address PO BOX 2223

Johnson City, TN 37605

Telephone 423-726-2070

FOR OPERATOR'S USE ONLY: Below, or on an attached page, list those persons which were given this notice. Place an asterisk beside the one(s) that contacted you and requested sampling and analyses. If there were no requests made, indicate by underling which one you have selected to sample and analyze. If there are no water wells or springs within 1000 feet of the proposed site, the Chief may require the operator to test wells up to 2000 feet from the proposed site.

SEE ATTACHED

RECEIVED Office of Oil and Gas

JUL 2 0 2018

#### WATER NOTICE FOR KEYROCK ENERGY, LLC WELL KENNER 11

WATER SOURCES IDENTIFIED WITHIN 1,000' OF PROPOSED WELL SITE:

Kenner Y. Markins
P. O. Box 13
Barboursville, WV 25504

RECEIVED Gas
Office of Oil and Gas

SEP 05 2018

WV Department of Environmental Protection

7/13/2018 TRUE LINE SURVEYING, INC. W W -9 (5/16)

API Number	47 - (	Cabell _	
Operator's W	ell No.	Kenner No.	11

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Keyrock Energy LLC OP Code 494507629	
Watershed (HUC 10) Quadrangle Milton WV 7.5'	
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: Drill water and cement cuttings	
Will a synthetic liner be used in the pit? Yes No If so, what ml.? 20 mil	
Proposed Disposal Method For Treated Pit Wastes:	
Land Application (if selected provide a completed form WW-9-GPP)  Underground Injection (UIC Permit Number)  Reuse (at API Number)	
Off Site Disposal (Supply form WW-9 for disposal location) Other (Explain	
Will closed loop system be used? If so, describe: No	
Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. Vertical, Air and Mud	
-If oil based, what type? Synthetic, petroleum, etc. n/a  RECEIVI  Office of Oil a	
Additives to be used in drilling medium? Soap if needed.	
Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. leave in pit SEP 0 5	2018
-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) lime and sawdust  WV Departm	ent of
-Landfill or offsite name/permit number? Environmental F	rotection
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 is such a pril 1, 2016, 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 the 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 is submitting false information, including the possibility of fine or imprisonment.	he w his ng
Company Official Signature	
Company Official (Typed Name) Morgan Pate	
Company Official Title Geologist	
NA Y. SHIR	11
Subscribed and sworn before me this day of July 30 Notary Public NOTARY PUBLIC	7
OF WASHING!	35

		Operator's W	ell No. Kenner No. 1	1
Proposed Revegetation Trea	utment: Acres Disturbed <1.	.5 acres Prevegetation p	H 6.2	2 12 12 12 12 12 12 12 12 12 12 12 12 12
	Tons/acre or to correct			
Fertilizer type 10-	20-20 or equivalent	<b>E</b>		
Fertilizer amount_1	1/3 ton	lbs/acre		
Mulch_Hay	2	Tons/acre		
		Seed Mixtures		
Te	emporary	Perma	nent	
Seed Type	lbs/acre	Seed Type	lbs/acre	
KY-31	40	Orchard Grass	5	
Alsike Clover	5	Alsike Clover	5	
Annual Rye	15			
Land is used for grazing	g. If surface owner prefe	rs different seed mixture we will sub	mit an updated WW	V-9.
(L, W), and area in acres, of		vide water volume, include dimensions (L,	C	RECEIVED Office of Oil and Gas SEP 05 2018  WV Department of
Comments:			ENV	ironmental Protection
		eles attel 50	cos-	
		Butoct El		
44		& GN STUDIN		
				And the state of t
Title: State	INSpectal	Date: 0-21	-2018	
Field Reviewed? (	) Yes (	) No		

WW-9- GPP Rev. 5/16

	Page	1	of	2
API Number 47	- Cabell		Keyrock	Energy
Operator's Well N	No. Kenne	r No.	11	

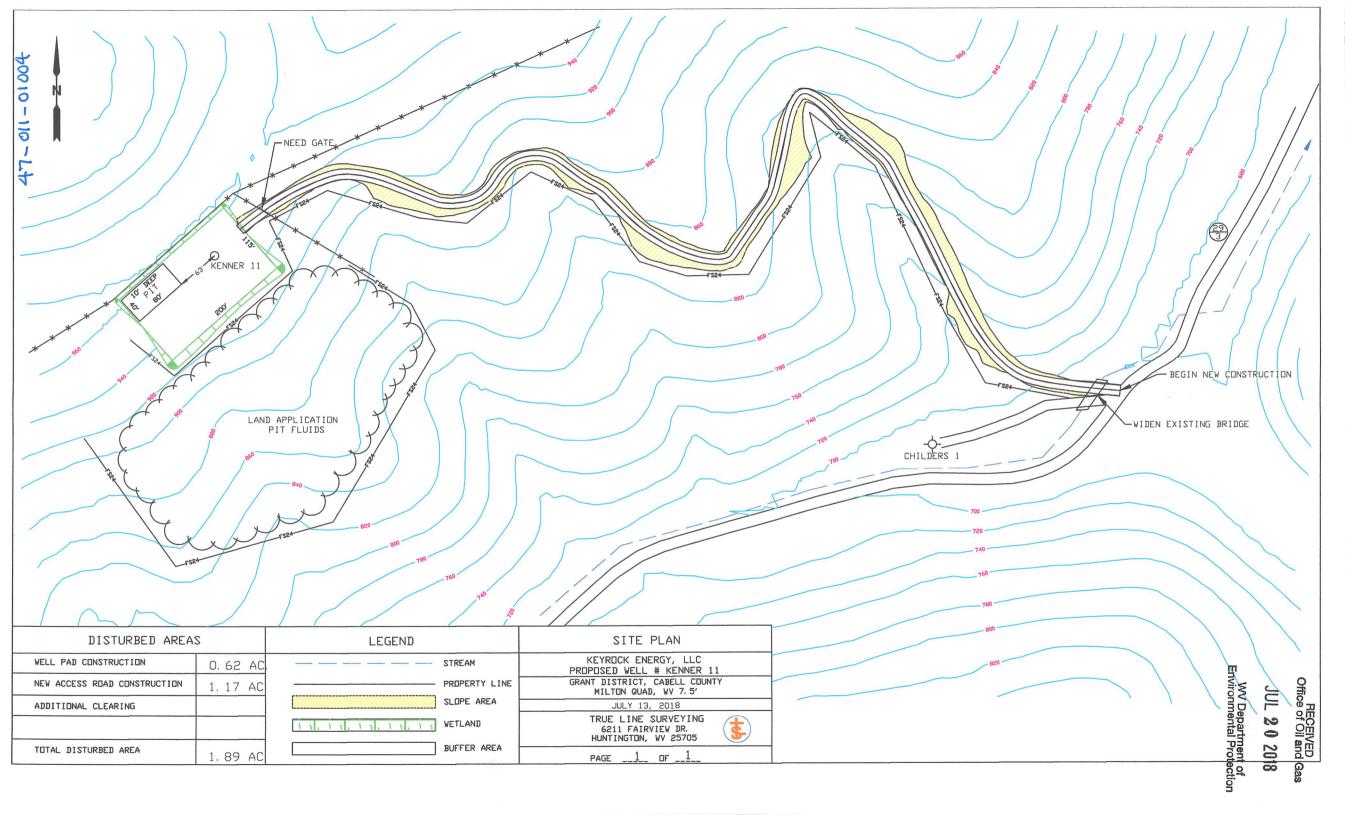
# STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS GROUNDWATER PROTECTION PLAN

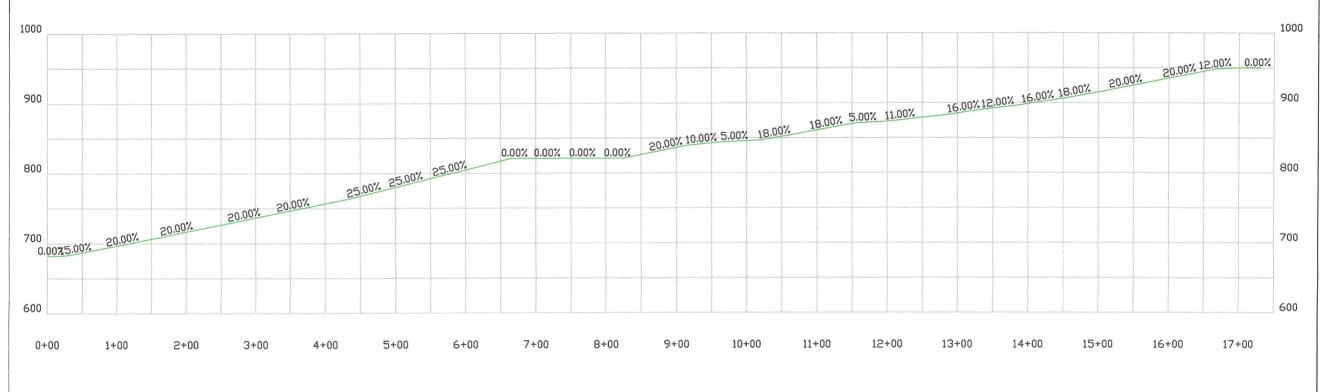
Operator Name: Keyrock Energy LLC	
Watershed (HUC 10): Quad: Milton 7.5'	
Farm Name: Kenner Y. Markins	
List the procedures used for the treatment and discharge of fluids. Include a list of all operations the groundwater.	hat could contaminate the
Pit water will be tested, then aerated with lime being added to bring the ph to event of excessive chlorides, pit fluids will be diluted with either fresh water or possible, pit fluids will be hauled to an approved disposal facility. Pit water witten days to let solids drop out.	r, where that is not
Describe procedures and equipment used to protect groundwater quality from the list of potential co	ontaminant sources above.
Once the drilling pit fluids are at acceptable levels for discharge, then the purbe floated approximately 12" below the water level and the discharge line will	
<ol> <li>List the closest water body, distance to closest water body, and distance from closest Well Headischarge area.</li> </ol>	nd Protection Area to the
See letter from surveyors.	
	RECEIVED Office of Oil and Gas
	SEP <b>05</b> 2018
4. Summarize all activities at your facility that are already regulated for groundwater protection.	WV Department of Environmental Protection
n/a	

5. Discuss any existing groundwater quality data for your facility or an adjacent property.

W	W	-9-	GPP
Re	v.	5/1	6

W W-9- GPP Rev. 5/16	API Number 47 Operator's Well No. Kenner No. 11
No known groundwater quality data. Samples have within 1,000' of the proposed well.	
6. Provide a statement that no waste material will be used for deic	ing or fill material on the property.
No waste material will be used for deicing of fill ma	aterial on the property.
7. Describe the groundwater protection instruction and training provide direction on how to prevent groundwater contamination.  Output  Describe the groundwater protection instruction and training provide direction on how to prevent groundwater contamination.	
All employees will be familiar with the contents of implement it. Work practices will support the protection of the company HSE Policy.	
8. Provide provisions and frequency for inspections of all GPP ele	ments and equipment.
All GPP elements and equipment present will be in any problem. Work will not commence until any p	roblems are remediated and documented.
Signature: Way 12018  Date: 7/18/2018	RECEIVAND Gas Office of Oil and





ROAD PROFILE

HARD ROCK EXPLORATION
PROPOSED WELL # KENNER 11
GRANT DISTRICT, CABELL COUNTY

MILTON QUAD, WV 7.5'

JULY 10, 2018

TRUE LINE SURVEYING 6211 FAIRVIEW DR. HUNTINGTON, WV 25705

OF \_\_1

PAGE

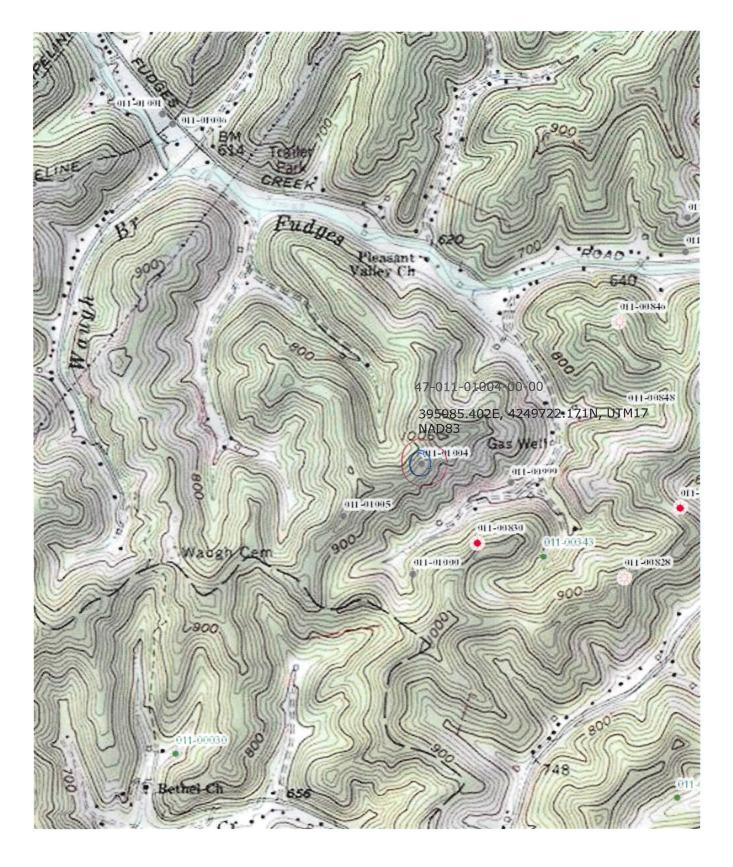
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WV Department of Environmental Protection

Office of Oil and Gas

JUL 2 0 2018

47-011-01004



 $http://deparcgis1/ooggis/index.html?x = 395985.402 \& y = 4249722.171 \& datum = NAD83 \& p... \\ 10/15/2018 = 10/15/2018 +$ 

