

#### 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

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

Tuesday, February 5, 2019 WELL WORK PERMIT Vertical / New Drill

KEYROCK ENERGY LLC PO BOX 2223

JOHNSON CITY, TN 37605

Re: Permit approval for DUNKLE I

47-011-01011-00-00

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: DUNKLE 1

Farm Name: DANIEL HAROLD & KATHY

U.S. WELL NUMBER: 47-011-01011-00-00

Vertical New Drill Date Issued: 2/5/2019



#### 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. <u>Failure to adhere to the specified permit conditions may result in enforcement action.</u>

#### **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)

CH# 14875 10/7/18

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

	. Keyro	ck Energ	ly, LLC	494507629	Cabell	Grant	Milton 7.5
	-			Operator ID	County	District	Quadrang
) Operator's W	Vell Numb	er: Dunkle	e No. 1		3) Elevation:	1014	
) Well Type: (a	a) Oil_X	or Ga	is				
(k	) If Gas:	Produ	ction X / Un	derground Sto	rage		
		Deep	/ 8	Shallow X			
) Approximate	tal Depth fresh wa	: 2'900 ter strata	Berea Feet depths: 447', 982	Formation at I	Proposed Tar Proposed Tota	get Depth: 2 al Depth: Dev	2,650' onian Shale
			601-610' 8.75	O' (from ref. well	802)		
Approximate	coai sea	m depths	S: 601-610', & 75	Z (HOIII TOL. WOIL	002)		3
0) Approximat	e void de	pths,(coa	al, Karst, other):	None			
			The second				
1) Does land o	contain co	oal seam	s tributary to ac	tive mine? _	lo		
2) Describe pro	nosed we	ll work an	nd fracturing meth	nods in detail (a	attach additiona	al sheets if ne	eded)
			a new well (estima			i onooio ii no	0404/
in dira stirriarate	doning a roa	III II do Tol	a non non (comine	tou doning oon is	or routh trach.		
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fill not produce fro	om the Mar	cellus For	mation			BECE	IVED:
	om the Mar					RECE	IVED
3)	3 2 7 2 8	<u>C</u> A	ASING AND TU		C/-CIVI	Office of O	il and Ga
3)	om the Mar	<u>C</u> A	ASING AND TU	BING PROGR FOOTAGE	KAM INTERVALS	Office of O	IVED il and Ga
3)	3 2 7 2 8	<u>C</u> A	ASING AND TU		C/-CIVI	Office of O	il and Ga <u>NT</u> 2018 (Ft.)
3) TYPE S	PECIFIC	<u>CA</u> ATIONS	ASING AND TU	FOOTAGE	INTERVALS	Office of O	il and Ga <u>NT</u> 2018 (Ft.)
3) TYPE S Conductor	SPECIFIC Size	<u>CA</u> ATIONS	ASING AND TU	FOOTAGE For Drilling	INTERVALS	Office of O	il and Ga NT2018 I. Ft.) Intrinent o
3)  TYPE S  Conductor  Fresh Water	SPECIFIC Size 9 5/8"	<u>CA</u> ATIONS	ASING AND TU	FOOTAGE For Drilling 30'	INTERVALS  Left in Well  30'	Office of O	il and Ga NT2018 I. Ft.) Intrinent o
3) TYPE S Conductor Fresh Water Coal	SPECIFIC Size 9 5/8"	<u>CA</u> ATIONS	ASING AND TU	FOOTAGE For Drilling 30'	INTERVALS  Left in Well  30'	Office of O	il and Ga NT2018 I. Ft.) artment o tal Protect
3) TYPE S Conductor Fresh Water Coal Intermediate	SPECIFIC Size 9 5/8"	<u>CA</u> ATIONS	ASING AND TU	FOOTAGE For Drilling 30'	INTERVALS  Left in Well  30'	Office of O	NT2018 . Ft.) artment of tal Protect t., CTS
3) TYPE S Conductor Fresh Water Coal Intermediate Production	SPECIFIC Size 9 5/8" 7"	<u>CA</u> ATIONS	ASING AND TU	FOOTAGE For Drilling 30' 1004'	INTERVALS  Left in Well  30' 1004'	Fill -up (Cu WV Debt Sand vironmen 163 Cu. F	I and Ga
3) TYPE S Conductor Fresh Water Coal Intermediate Production Tubing	9 5/8" 7" 4 1/2"	<u>CA</u> ATIONS	ASING AND TU	FOOTAGE  For Drilling 30' 1004' 2,650'	1004' 2,650'	Fill -up (Cu WV Sand vironmen 163 Cu. F	I and Ga
3) TYPE S Conductor Fresh Water Coal Intermediate Production Tubing Liners	9 5/8" 7" 4 1/2" 2 3/8"	<u>CA</u> ATIONS	ASING AND TU	FOOTAGE  For Drilling 30' 1004' 2,650'	1004' 2,650'	Fill -up (Cu WV Sand vironmen 163 Cu. F	I and Ga
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Conductor Fresh Water Coal Intermediate Production Tubing Liners Packers: Kind	9 5/8" 7" 4 1/2" 2 3/8"	<u>CA</u> ATIONS	ASING AND TU	FOOTAGE  For Drilling 30' 1004' 2,650'	1004' 2,650'	Fill -up (Cu WV Sand vironmen 163 Cu. F	I and Ga

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

1). Date: 11/15/2018
2.) Operator's Well Number State County Permit
3.) API Well No.: 47- Cabell

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

	NOTICE AND APPLICAT	ION FOR A V	VELL WORK PERMI	
4) Surface C	Owner(s) to be served:	5) (a) Coal Op	erator	
(a) Name		Name	n/a	
Address	6314 Booten Creek Rd	Address		
	Barboursville, WV 25504	-		
(b) Name		(b) Coal C	wner(s) with Declaration	n
Address	614 Left Fork Fudges Creek R	Name	n/a	
	Milton, WV 25541	Address		
(c) Name		Name	_	
Address		Address		
6) Inspector	Allen Flowers		essee with Declaration	
Address	165 Grassy Lick Ln.	Name	n/a	-
	Liberty, WV 25124	Address		
Telephone				
	TO THE PERSONS NAME the lease or leases or other continuing of	MED ABOVE T	AKE NOTICE THAT:	
I have issued under to I certife this application	ocation plat, and accompanying docume Personal Service (Affidavit attack X Certified Mail (Postmarked postar Publication (Notice of Publication read and understand Chapter 22-6 and his application.  Ty under penalty of law that I have person form and all attachments, and that basen formation, I believe that the information aware that there are significant penalties	hed) al receipt attache n attached) 35 CSR 4, and onally examined sed on my inqui	ed)  I agree to the terms and am familiar with the ry of those individuals im-	d conditions of any permit information submitted on mediately responsible for
	Well Operator	Kevrock Ene	ray LLC	NOV 10 200
		Morgan Pate	Might	1 9 2018
	Its:	Geologist	20 007 E Maia Ct 05	) Environmental Protection
	Address:		23, 207 E. Main St. 20	2. It in onmental Protection
	Tolophono	Johnson City (423)726-20	7, TN 37005	100000000000000000000000000000000000000
			ockenergy.com	WAY SULL
Subscribed an	nd sworn before me this day of			30110
\ \	1 to Share	TARACE! Y		STATE VI
Llora	4 aprille		Notary Public	- / OF 1 1
My Commission	on Expires 17-9-200			TENNESSEE
Oil and Gas Priva	acy Notice			PUBLIC S
			rese and phone number 20 2	nart of out regulatory duties

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 depprivacyofficer@wv.gov

### WW-2A Surface Waiver (4/16)

NOV 27 2018

W Department of

#### SURFACE OWNER WAIVER

County	Cabell	Operator	Environmental Protection
		Operator well number	Dunkle 1

#### **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 57<sup>th</sup> 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.

<u>Comments must be in writing.</u> 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 EXE	CUTION BY A CORPORATION, ETC.	
That & Timble Date	11-72-18 Company Name		
Danie/Signature Dunkle Kathy L. Dunkle	By Its	Date	
Print Name	 Sig	nature Date	

WW-2A Surface Waiver (4/16)

#### SURFACE OWNER WAIVER

WV Department of Environmental Protection

County	Cabell	Operator	
		Operator well number	Dunkle 1

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List of Water Testing Laboratories. 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** 

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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.		
Doris FAVE Wilson 1 Signature Davis Laye Wilson	Date	Company Name By Its		Date
Print Name		-	Signature	Date

WW.	-2A	1	
(Rev.	1/1	1	

Operator's	Well	Number	Dunkle 1
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# 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
Daniel Harold Dunkle and Kathy Lynn Dunkle	Keyrock Energy LLC	1/8	396/221
Tommy Edward Wilson and Doris Faye Wilson	Keyrock Energy LLC	1/8	396/532

## 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 he reby 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

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	Mue	
Keyrock Energ	y LLC	
Geologist		

WV	V-	.2	В	1
(5-	1	2)	)	

Well No.	Dunkle 1

### 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	y LLC	
Address	P.O. Box 2223, 207 E. Main St., 2D		
Johnson City, TN 37605			
	Johnson City, T	'N 37605	

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.

### WATER NOTICE FOR KEYROCK ENERGY, LLC WELL DUNKLE 1

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

Tommy and Doris Wilson / RR 2, Box 594 Milton, WV 25541

John & Lovie Chapman RR 2, Box 596 Milton, WV 25541

#### Additional water sources to test:

Larry Stratton RR 2, Box 592 Milton, WV 25541

Norma Stratton RR 2, Box 584 Milton, WV 25541

James Harper RR 2, Box 592A // Milton, WV 25541 PO Box 204 Ona, WV 25545

James Hathaway / 2126 Brooke St. Culloden, WV 25510

Keith Ramsey
314 Right Fork Wilson Creek Rd
Wayne, WV 25570

RECEIVED
Office of Oil and Gas

NOV 1 9 2018

WV Department of Environmental Protection

11/8/2018 TRUE LINE SURVEYING, INC. WW-9 (5/16)

API Number 47 -		
Operator's Well No.	Dunkle 1	

### 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) Saunders Creek of Mud River	Quadrangle Milton, WV 7.5
Do you anticipate using more than 5,000 bbls of water to comple	
Will a pit be used? Yes   ✓ No	
If so, please describe anticipated pit waste: Drill water	r and cement cuttings.
Will a synthetic liner be used in the pit? Yes	
Proposed Disposal Method For Treated Pit Wastes:	
Land Application (if selected provide	a completed form WW-9-GPP)
	Number)
Reuse (at API NumberOff Site Disposal (Supply form WW	(0 for disposal location)
the state of the s	-9 for disposariocation)
/ill closed loop systembe used? If so, describe: No	
rilling medium anticipated for this well (vertical and horizonta	d)? Air, freshwater, oil based, etc. Vertical, Air & Mud
-If oil based, what type? Synthetic, petroleum, etc. N/A	
dditives to be used in drilling medium? N/A	
rill cuttings disposal method? Leave in pit, landfill, removed of	offsite, etc. Leave in pit.
-If left in pit and plan to solidify what medium will be	used? (cement, lime, sawdust) Lime & sawdust.
-Landfill or offsite name/permit number?	
	as of any load of drill cuttings or associated waste rejected at any within 24 hours of rejection and the permittee shall also disclose
on April 1, 2016, by the Office of Oil and Gas of the West Virg provisions of the permit are enforceable by law. Violations of an or regulation can lead to enforcement action.  I certify under penalty of law that I have personally application form and all attachments thereto and that, based on n	conditions of the GENERAL WATER POLLUTION PERMIT issued in a Department of Environmental Protection. I understand that the ny term or condition of the general permit and/or other applicable law examined and am familiar with the information submitted on the inquiry of those individuals immediately responsible for obtaining, and complete. I am aware that there are significant penalties for imprisonment.
Company Official Signature	
ompany Official (Typed Name) Morgan Pate	
Company Official Title Geologist	Y. SHIP
Tak.	STATE
Subscribed and sworn before me this 15th day of day of	Notary Public S PUBLIC
7-9-300	394
My commission expires	OF WASHING

			'ell No. Dunkle 1
Proposed Revegetation Trea	atment: Acres Disturbed 1.	5 +/- Preveg etation n	Н
_	Tons/acre or to correc		
	-20-20 or equivalent		
Fertilizer amount 1		lbs/acre	
Mulch Hay	_	Tons/acre	
Withon		_101b/acte	
		Seed Mixtures	
Te	emporary	Perma	nent
Seed Type	lbs/acre	Seed Type	lbs/acre
KY-31	40	Orchard Grass	15
Alsike Clover	5	Alsike Clover	5
Annual Rye	15		
Maps(s) of road, location, p provided). If water from the	pit will be land applied, pro	application (unless engineered plans include vide water volume, include dimensions (L,	
Maps(s) of road, location, p provided). If water from the (L, W), and area in acres, of	pit will be land applied, pro		
Maps(s) of road, location, p provided). If water from the (L, W), and area in acres, of Photocopied section of invo	pit will be land applied, pro the land application area.		
Maps(s) of road, location, p provided). If water from the (L, W), and area in acres, of Photocopied section of invo  Plan Approved by:	pit will be land applied, pro the land application area.		
provided). If water from the (L, W), and area in acres, of Photocopied section of invo  Plan Approved by:  Comments:	pit will be land applied, profithe land application area.  lved 7.5' topographic sheet.		W, D) of the pit, and dime
Maps(s) of road, location, p provided). If water from the (L, W), and area in acres, of Photocopied section of invo	pit will be land applied, profithe land application area.  lved 7.5' topographic sheet.	vide water volume, include dimensions (L,	W, D) of the pit, and dime
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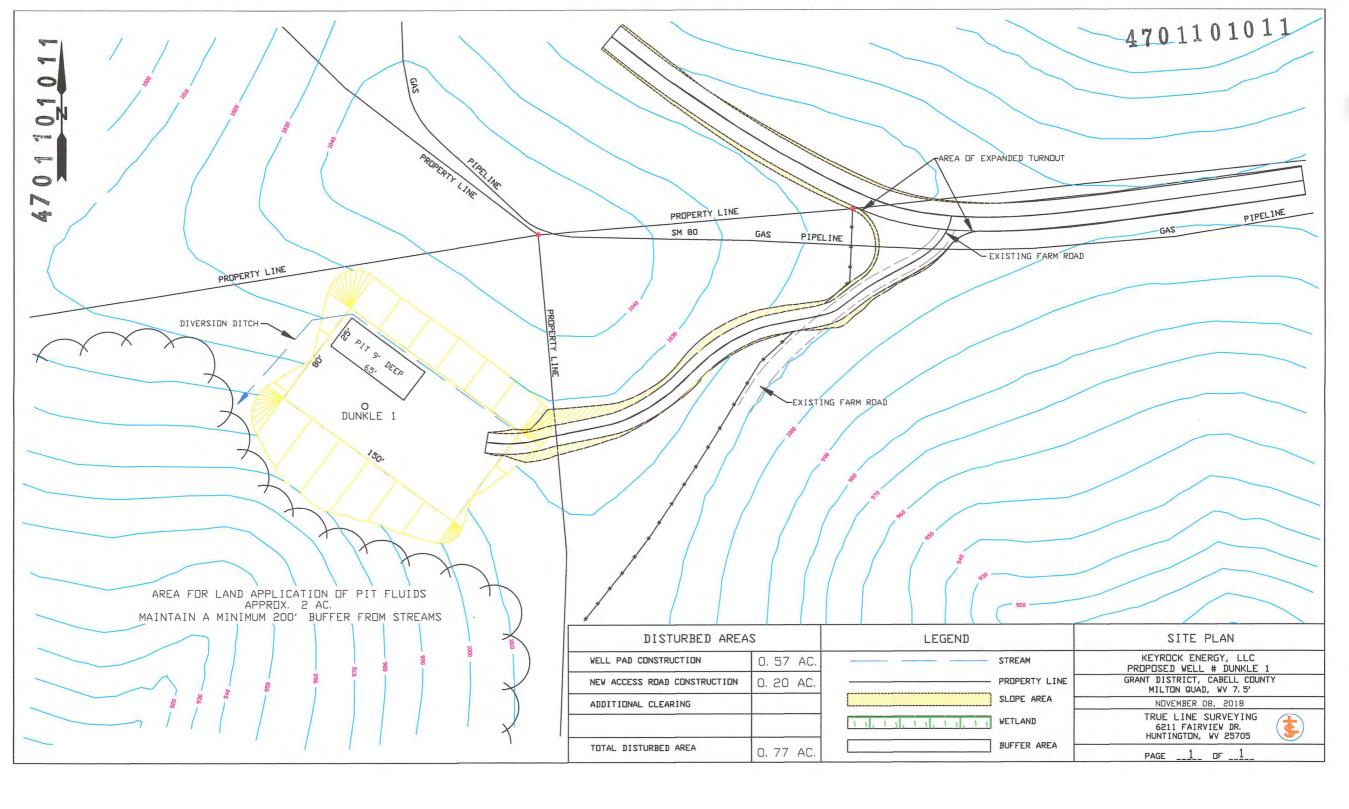
	Page	_of	
API Number 47	- Cabell		
Operator's Well	No. Dunkle1		

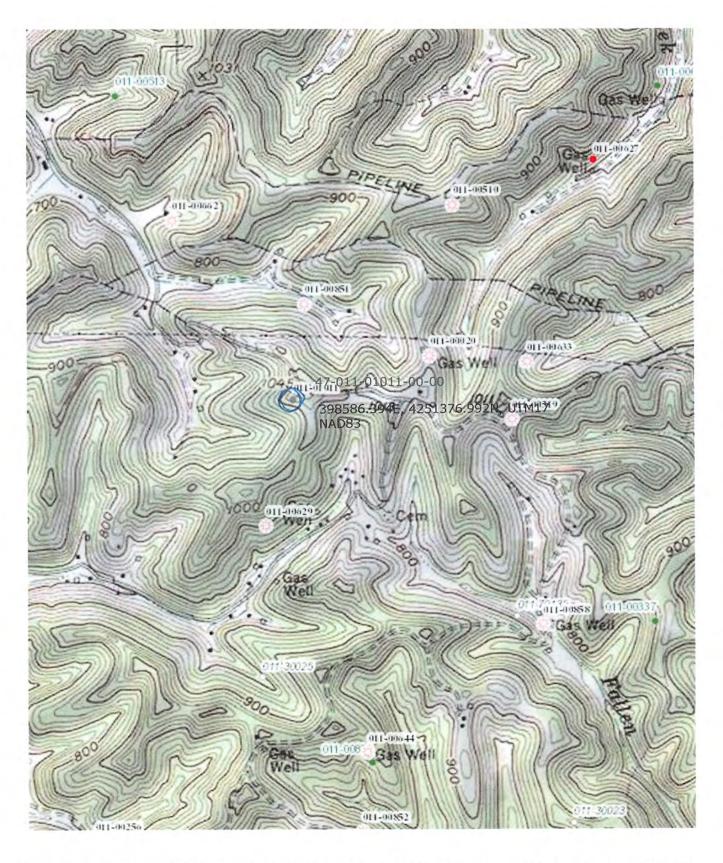
## STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS

GROUNDWATER PR	OTECTION PLAN
Operator Name: Keyrock Energy LLC	
Watershed (HUC 10): Saunders Creek of Mud River	Quad: Milton, WV 7.5
Farm Name: Daniel H. & Kathy L. Dunkle	
List the procedures used for the treatment and discharge of flugroundwater.	uids. Include a list of all operations that could contaminate the
Pit water will be tested, then aerated with the limit the event of excessive chlorides, the pit fluids will or hauled to an approved disposal facility. Pit was solids precipitate out.	Il be evaluated to either dilute with fresh water
Describe procedures and equipment used to protect groundwa	ter quality from the list of potential contaminant sources above.
Once the drilling pit fluids are at an acceptable le floated approximately 12" below the water level at the water over the designated discharge area. The pattern, so as not to oversaturate any given area.	and the discharge line will be set up to disperse he water will be sprayed in a back and forth
<ol> <li>List the closest water body, distance to closest water body, discharge area.</li> </ol>	and distance from closest Well Head Protection Area to the
Tributary of Saunders Creek, 1,145' N-NE of pro No known well head protection areas in the vicin	•
Summarize all activities at your facility that are already regular.	ated for groundwater protection.
N/A	Office of Oil and Gas
	NOV 1 9 20 8
	WV Department of Environmental Protection

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

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	Operator's Well No. Dunkle1
	oublic water sources known within 1,000' of well head. al address bordering all sides of well location.
6. Provide a statement that no waste material will be	used for deicing or fill material on the property.
No waste material will be used for deici	ng or fill material on the property.
<ol> <li>Describe the groundwater protection instruction provide direction on how to prevent groundwater</li> </ol>	and training to be provided to the employees. Job procedures shall contamination.
	ontents of the groundwater protection plan and how to the protection of groundwater from contamination per
8. Provide provisions and frequency for inspections	of all GPP elements and equipment.
• • •	ent will be inspected daily prior to use and in the event of til any problems are remediated and documented.
	Office of Oil and Gas
	NOV 1 9 2018
Signature:	WV Department of Environmental Protection
Date:	





http://deparcgis1/ooggis/index.html?x=398586.394&y=4251376.992&datum=NAD83&pntl... 2/1/2019

