

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

Wednesday, April 04, 2018 WELL WORK PERMIT Vertical / New Drill

GREYLOCK CONVENTIONAL, LLC 500 CORPORATE LANDING

CHARLESTON, WV 25311

Re:

Permit approval for LYNCH NO. S-1

47-021-09106-00-00

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: LYNCH NO. S-1

Farm Name: HARRY & ERMA HEATER E

U.S. WELL NUMBER: 47-021-09106-00-00

Vertical New Drill

Date Issued: 4/4/2018

Promoting a healthy environment.

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)

Packers: Kind:

Sizes:

Depths Set

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

		<u>V</u>	VELL WORK PE				
1) Well Operat	or: Grayl	ock Conv	ventional, LLC	49452125	Gilmer	Glenville	Glenville 7.5
.,	Gleyi	OCK COIN	rentional, LLC	Operator ID	County	District	Quadrangle
		Lundh	0.1	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~			
2) Operator's V	Vell Numb	per: Lynch	15-1		3) Elevation:	765	C/C34
4) Well Type: (a) Oil	or Ga	as X				5013°
(b) If Gas:	Produ	iction X / Und	derground Sto	rage		\$60
		Deep	o/ S	Shallow X			
6) Proposed To 7) Approximate	otal Depth e fresh wa	: ^{3150'} ter strata		Formation at F			
9) Approximate	e coal sea	m depths	s: 241',389'				
10) Approxima	te void de	pths,(coa	al, Karst, other):	None reported i	n offset wells		
11) Does land	contain co	oal seam	s tributary to act	tive mine? N	0		
12) Describe pro	oposed we	ll work ar	nd fracturing meth	ods in detail (a	ttach additiona	al sheets if nee	eded)
			ter setting and cement	THE STATE OF THE S			- W W W W W W W W.
			run production casir				g well log analysis.
ement will be pla	iced above	the shallov	west known produc	ing horizon and v	will be verified b	y bond log.	
13)		CA	SING AND TU	BING PROGR	AM		
TYPE S	SPECIFIC	ATIONS		FOOTAGE	INTERVALS	CEME!	<u>NT</u>
	<u>Size</u>	<u>Grade</u>	Weight per ft	For Drilling	Left in Well	Fill -up (Cu.	Ft.) (~
Conductor	13 3/8"	LS,R3	43.6#	40'	40'	NA	
Fresh Water							
Coal	7"	LS,R3	16#	475'	475'	CTS	;
Intermediate		1.10		11.5	2.5.75		
Production	4 1/2'	WT65,R3	9.5#	3150'	3150'	320	
Tubing							
	1						

MAR 1 2 2018

WW-2A (Rev. 6-14)

RECEIVED Office of Oil and Gas

MAR 1 2 2018

WV Department of Environmental Protection 1). Date:

3.) API Well No .:

12 FEBRUARY 2018

2.) Operator's Well Number

Lynch S-1

State 47County

021

Permit

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

. (Surface Ow (a) Name Address	mer(s) to be served: 5 Harry Heater 257 Gluck Run Road Glenville, WV 26351) (a) Coal Operator Name Address
	(b) Name	TL Woodyard	(b) Coal Owner(s) with Declaration
	Address	PO Box 1591	Name No OECLARANT
,	Address	Fairmont, WV 26555	Address
		T AITHORE, VVV 20000	
((c) Name		Name
	Address		Address
6) Ir	spector	Danny Mullins	(c) Coal Lessee with Declaration
•	Address	220 Jack Acres Rd	Name
		Buckhannon, WV 26201	Address
Т	elephone	304-932-6844	
	(0.07)	TO THE PERSONS NAME	ED ABOVE TAKE NOTICE THAT:
	Included is th	ne lease or leases or other continuing co	ontract or contracts by which I hold the right to extract oil and gas
<u>OR</u>			
<u>x</u>			Article 6, Section 8(d) of the Code of West Virginia (see page 2)
annli			the <u>West Virginia Code</u> I have served copies of this notice and as pages 1 through on the above named parties by:
арріі	ication, a loc	Personal Service (Affidavit attache	
	X	Certified Mail (Postmarked postal	
		Publication (Notice of Publication	
	I have re		5 CSR 4, and I agree to the terms and conditions of any permit
issue	ed under this		
			ally examined and am familiar with the information submitted on
this	application for	orm and all attachments, and that base ormation, I believe that the information is	ed on my inquiry of those individuals immediately responsible for
obta	ning the inio	ormation, I believe that the information is	or submitting false information, including the possibility of fine and
impr	isonment.	are that there are significant penalties to	in Submitting false information, molading the possibility of fine and
	No.	OTARY PUBLIC OFFICIAL SEATURE Operator	Grevlock Conventional, LLC
ALCO CO	E WEST LINE	Shane A. Lucas [By: [Don C Supcoe III - The Special Control of the Contr
1	1		Director of Land Operations and Permitting
15/	Taken S		500 Corporate Landing
A.C.	The state of the s	3116 WV Highway 5 East	Charleston, WV 25311
-	The state of the s		304-925-6100
Cuba	acribad and a		dcsupcoe@arevlockenerav.com
Subs	scribed and s	sworn before me this 22 day of	FEBRUARY 2018
			Notary Public
My	Commission	Expires Jewasy 30 7	
Oil an	d Gas Privacy	- , ,	

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
(Rev.	6 - 14)

1). Date:	12 FEBRU	ARY 2018	_
2.) Operato	r's Well Numbe	er Lynch	S-1
	State	County	Permit
3.) API Well	No: 47-	021	-

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

4) Surface Ov	vner(s) to be served:	5) (a) Coal Operator
(a) Name	Harry Heater	Name
Address	257 Gluck Run Road	Address
	Glenville, WV 26351	71001033
(b) Name	TL Woodyard	(b) Coal Owner(s) with Declaration
Address	PO Box 1591	Name
	Fairmont, WV 26555	Address
	Tail 110(11, WV 20000	
(c) Name		NO DELLATERATI
Address		Name
Address		Address
6) Inspector	Danny Mullins	(c) Coal Lessee with Declaration
Address	220 Jack Acres Rd	Name
	Buckhannon, WV 26201	Address
Telephone	304-932-6844	
	TO THE PERSONS N	AMED ABOVE TAKE NOTICE THAT:
Included is the	ne lease or leases or other continuin	ng contract or contracts by which I hold the right to extract oil and gas
<u> </u>		
x Included is the state of t	e information required by Chapter 2	22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)
i ceruly (nat as required under Chapter 22-	8 of the West Virginia Code I have served series of this
application, a loca	ation plat, and accompanying docum	nents pages 1 through on the above named parties by:
<u> </u>	Personal Service (Affidavit att	ached)
X	Certified Mail (Postmarked po-	stal receipt attached)
	Publication (Notice of Publicat	ion attached)
I have rea	ad and understand Chapter 22-6 ar	nd 35 CSR 4, and I agree to the terms and conditions of any permit
loaded dildel tills	application.	
I certify u	inder penalty of law that I have per	sonally examined and am familiar with the information submitted on
una application ic	and all attachments, and that o	ased on my inquiry of those individuals immediately seementials for
obtaining the into	ilitation, i delieve that the informatio	in is true accurate and complete
imprisonment.	re that there are significant penaltie	es for submitting false information, including the possibility of fine and
imprisoriment.		
NO NO	Shane A. Lucas By	r Grevlock Conventional, LLC
873 3 6	State of West Virginia	Don C Supcoe III - Salas
A COLUMN	My Commission Expires IIIS	Director of Land Operations and Permitting
En		500 Corporate Landing
Tanana da	Glenville, WV 28351 Telephone	Charleston, WV 25311
-	· ordpilolio	304-925-6100
Subscribed and ex	worn before me this 22 day o	dcsupcoe@arevlockenerav.com
Outdoor libed and st	worn before me this 22 day o	Fearuney 2018
		Meteor Dublic
My Commission E	xpires Talliana 30	Notary Public
Oil and Gas Privacy N	- JUNDANA ZO	7023

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

RECEIVED
Office of Oil and Gas

APR 2 2018

Operator's Well Number Lynch S-1

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
George R Lynch	Equitable Gas Co	1/8	90/385
Farmout from Equitable Gas Co	EAE Predecessor to Greylock Conventional, LLC	1/8	231/375

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

RECEIVED Office of Oil and Gas

MAR 1 2 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 appropriate authority before the affected activity is initiated.

Well Operator:

By: Its:

Don C Supcoe III -

Greylock Conventional, LLC

Don C Supcoe

Director of Land Operations and Permitting

WW-2B1
(5-12)

Well	No.	Lynch	#S-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		Fairway Labs SLS Land & Energy Development	
Well Operator	Greylock E	Energy	
Address	500 Corpo	prate Landing	
	Charleston	n, WV 25311	
Telephone	304-925-6	5100	

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.

There appears to be 8 parcels that fall within 1000' of the proposed site. Therefore samples will be offered and taken as required.

RECEIVED Office of Oil and Gas

MAR 1 2 2018

Possible Water Purveyors for Lynch # S-1 Well

10/6 Norman Anderson 2230 Sycamore Run Glenville, WV 26351 10/6.1

Norman L. & Sharon A. Anderson

2230 Sycomore Run Rd.

Glenville, WV 26351

10/7

Waco Oil and Gas Company Inc.

P.O. Box 397

Glenville, WV 26351

10/8

County Poor Farm

Sycamore Rd.

10/58

Harry Heater

257 Gluck Run Rd.

Glenville, WV 26351

10/59.1

Moore Lulah Belle (Life)/Jessica Lynn Hixson Drake 688 Gluck Run Rd.

RECEIVED Office of Oil and Gas

MAR 1 2 2018

Glenville, WV 26351

10/59.2 & 59.3

Robert E. Jones

573 Gluck Run. Rd.

Glenville, WV 26351

RECEIVED Office of Oil and Gas

MAR 1 2 2018



Possible Water Purveyors for Lynch # S-1 Well

10/6

Norman Anderson

2230 Sycamore Run

Glenville, WV 26351

10/6.1

Norman L. & Sharon A. Anderson

2230 Sycomore Run Rd.

Glenville, WV 26351

10/7

Waco Oil and Gas Company Inc.

P.O. Box 397

Glenville, WV 26351

10/8

County Poor Farm

Sycamore Rd.

10/58

Harry Heater

257 Gluck Run Rd.

Glenville, WV 26351

SELECTED TO SMAPLE ANALYZE

10/59.1

Moore Lulah Belle (Life)/Jessica Lynn Hixson Drake

688 Gluck Run Rd.

RECEIVED
Office of Oil and Gas

APR 2 2018

WW-9 (5/16)

API Number	47 - 0	021	-
Operator's W	ell No.	Lynch S-1	

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Greylock Conventional, LLC OP	Code 494521205
Watershed (HUC 10) Little Kanawha River Quadrangle Glenvi	
Do you anticipate using more than 5,000 bbls of water to complete the proposed well we	
Will a pit be used? Yes V No	
If so, please describe anticipated pit waste: Drill Cuttings	
Will a synthetic liner be used in the pit? Yes No If so, wh	at ml.?_30
Proposed Disposal Method For Treated Pit Wastes:	
Land Application (if selected provide a completed form WW Underground Injection (UIC Permit Number Reuse (at API Number Off Site Disposal (Supply form WW-9 for disposal location))
Other (Explain	
Will closed loop systembe used? If so, describe: No	
Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil	based, etc. Air/Fresh water
-If oil based, what type? Synthetic, petroleum, etc	
Additives to be used in drilling medium? Soap, Klastay	
Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Leave in pit	
-If left in pit and plan to solidify what medium will be used? (cement, lime, sa	wdust) Cement/Lime
-Landfill or offsite name/permit number?	
Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cu West Virginia solid waste facility. The notice shall be provided within 24 hours of reject where it was properly disposed.	ittings or associated waste rejected at any ion and the permittee shall also disclose
I certify that I understand and agree to the terms and conditions of the GENER on April 1, 2016, by the Office of Oil and Cas of the West Virginia Department of Env provisions of the permit are enforceable by law. Violations of any term or condition of tor regulation can lead to enforcement action. I certify under penalty of law that I have personally examined and am fam application form and all attachments thereto and that, based on my inquiry of those individe information, I believe that the information is true, accurate, and complete. I am a submitting false information, including the possibility of fine or imprisonment. Company Official Signature Company Official Title Director of Land Operations and Permitting	rironmental Protection. I understand that the he general permit and/or other applicable law liar with the information submitted on this riduals immediately responsible for o btaining
Subscribed and sworn before me this 22 day of February	, 20 /% RECEIVED Office of Oil and Gas
Valland 20 2102	Notary Public MAR 1 2 2018
My commission expires SAHDARY 30, 7623	WV Department of Environmental Protection

Form WW-9			Operator's W	Vell No. Lynch S-1	
Proposed Revegetation Trea	atment: Acres Disturbe	ad 1.2 +/-	Preveg etation p	ьн	_
	Tons/acre or to c				
Fertilizer type 10-					
Fertilizer amount_1	I/3 TON	lbs/	acre		
_{Mulch} Hay	2	Tons/aci	re		
		Seed N	<u>Mixtures</u>		2~
Te	emporary		Perma	inent	("
Seed Type	lbs/acre		Seed Type	lbs/acre	
KY-31	40		Orchard Grass	15	
Alsike Clover	5		Alsike Clover	5	
Annual Rye	15				
Attach: Maps(s) of road, location, p provided). If water from the (L, W), and area in acres, of Photocopied section of invo	pit will be land applied the land application ar	d, provide waterea.	on (unless engineered plans inclu er volume, include dimensions (L,	ding this info have been W, D) of the pit, and din	nensions
Plan Approved by:					

Title: Day Milling OUG Inspector Date: 2-22-18

Field Reviewed?

(____) Yes

)No

RECEIVED Office of Oil and Gas

MAR 1 2 2018

WW-9- GPP Rev. 5/16

Pa	gel of 2
API Number 47 -	-
Operator's Well No.	WACH S-1

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

GROUNDWATER PROTECTION PLAN

Operator Na	me: Greylock Conventional, LLC	
Watershed (HUC 10): Gluck Run	Quad: Glenville 7.5
Farm Name:	LYNCH	
1. List the ground		scharge of fluids. Include a list of all operations that could contaminate the
achieve diluted v to drop o No fertil	a PH level to 7.0+. Should excession of a property of a state of the s	P standards. Pit will be tested, and Lime will be applied to ssive chlorides be present, the fluids will be evaluated a WV DEP approved facility. Solids will be allowed time sing fluids such as fuel, oil, and lubricants will be stored on
2. Describ	e procedures and equipment used to prote	ct groundwater quality from the list of potential contaminant sources above.
leaks an Earther and fail	nd failures. pit and secondary containment	be monitored and inspected every shift for possible will be monitored and inspected every shift for leaks
3. List the dischar		water body, and distance from closest Well Head Protection Area to the
	Run is the closest water body at ne area.	approximately 250ft. No known public water intakes
4. Summa	rize all activities at your facility that are a	lready regulated for groundwater protection.
N/A		
		RECEIVED Office of Oil and Ga
		MAR 1 2 2018

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

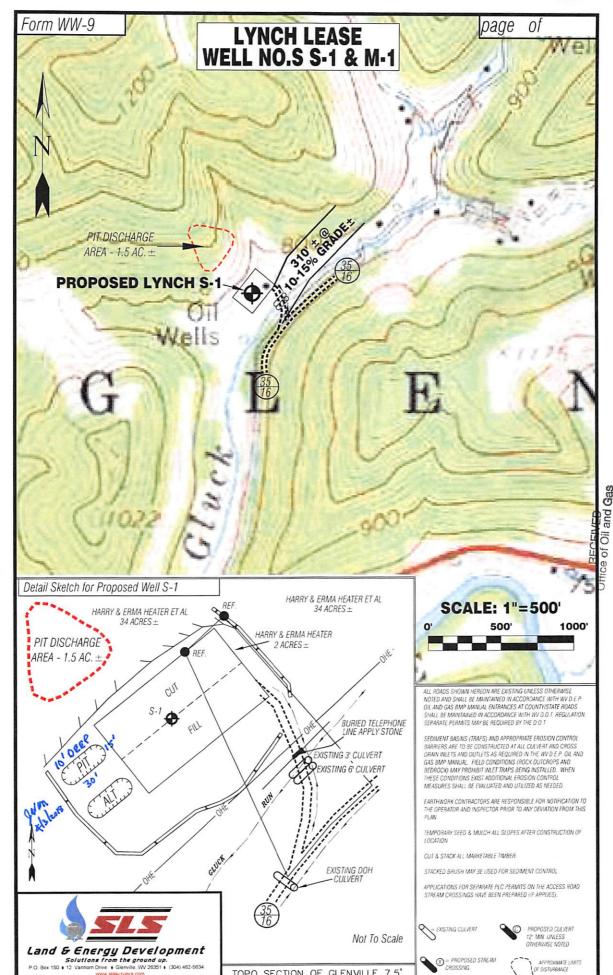
WW-9- GPP Rev. 5/16

	Page _		of	
API Number 47	-1	-		
Operator's Well N	No. L-	NCH	5-1	

No known groundwater quality data for the area. Samples have been of sources within a 1,000' radius of the proposed well.	offered for non-public
Provide a statement that no waste material will be used for deicing or fill material on the pr	roperty.
No waste material will be used for deicing purposes, or fill material on t	he property.
Describe the groundwater protection instruction and training to be provided to the employerovide direction on how to prevent groundwater contamination.	oyees. Job procedures shall
All employees will be familiar with the contents of the GPP and how to involve JSA meetings, the GPP will be discussed. Safe work practices groundwater from contamination per company policy.	implement it. During shall protect the
Provide provisions and frequency for inspections of all GPP elements and equipment.	
ALL GPP elements and sequirements will be inspected upon every shing not commence until any problem is remediated and documented.	ft. Work shall cease and
Signature:	RECEIVED
Date: 2/22/18	Office of Oil and

MAR 1 2 2018

RECEIVED Office of Oil and Gas



TOPO SECTION OF GLENVILLE 7.5

USGS TOPO QUADRANGLE

DATE 02-28-18

CADD FILE:

PIT NEEDS

TO BE IN

CUT.

