



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 REESE 4
47-021-09105-00-00

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

A handwritten signature in blue ink, appearing to read "James A. Martin", is written over the typed name and title.

Operator's Well Number: REESE 4
Farm Name: LYNCH PROPERTIES, LLC
U.S. WELL NUMBER: 47-021-09105-00-00
Vertical New Drill
Date Issued: 4/4/2018

I

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.

CK #
501393
\$650.⁰⁰

WW - 2B
(Rev. 8/10)

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

1) Well Operator: Greylock Conventional, LLC 494521205 Gilmer Glennville Glennville 7.5
Operator ID County District Quadrangle

2) Operator's Well Number: Reese #4 3) Elevation: 1016'

4) Well Type: (a) Oil _____ or Gas X _____
(b) If Gas: Production X / Underground Storage _____
Deep _____ / Shallow X _____

5) Proposed Target Formation(s): Speechley, Warren, Gordon, Big Injun, Big Line Proposed Target Depth: 3038'
6) Proposed Total Depth: 3190' Feet Formation at Proposed Total Depth: Speechley
7) Approximate fresh water strata depths: 35'
8) Approximate salt water depths: 196'

9) Approximate coal seam depths: 350-355'

10) Approximate void depths, (coal, Karst, other): None reported in offset wells

11) Does land contain coal seams tributary to active mine? No

12) Describe proposed well work and fracturing methods in detail (attach additional sheets if needed)
Drill and complete a vertical well as follows: After setting and cementing the surface casing string using Type 1 and/or an approved light cement, operator will drill to approximately 3190' and run production casing. Multiple formations will be foam fraced depending well log analysis. Cement will be placed above the shallowest known producing horizon and will be verified by bond log.

13) **CASING AND TUBING PROGRAM**

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	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#	500'	500'	CTS
Intermediate						
Production	4 1/2"	WT65,R3	9.5#	3190'	3190'	319
Tubing						
Liners						

DM

Packers: Kind: _____
Sizes: _____
Depths Set _____

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APR 2 2018

WW-2A
(Rev. 8-14)

1.) Date: 12 FEBRUARY 2018
2.) Operator's Well Number Reese #4
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 Owner(s) to be served:
(a) Name Lynch Properties LLC
Address 572 Clydesdale Dr.
Grayson, KY 41143
(b) Name TL Woodward
Address PO Box 1591
Fairmont, WV 26555
(c) Name _____
Address _____
6) Inspector Danny Mullins
Address 220 Jack Acres Rd
Buckhannon, WV 26201
Telephone 304-932-6844

5) (a) Coal Operator
Name _____
Address _____
(b) Coal Owner(s) with Declaration
Name _____
Address NO DECLARANT
(c) Coal Lessee with Declaration
Name _____
Address _____

TO THE PERSONS NAMED ABOVE TAKE NOTICE THAT:

OR Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas

I certify that as required under Chapter 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22-6 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through ___ on the above named parties by:

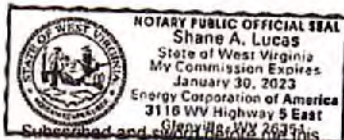
- Personal Service (Affidavit attached)
- Certified Mail (Postmarked postal receipt attached)
- Publication (Notice of Publication attached)

I have read and understand Chapter 22-6 and 35 CSR 4, and I agree to the terms and conditions of any permit issued under this application.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator: Grevlock Conventional, LLC
By: Don C Supcoe III
Its: Director of Land Operations and Permitting
Address: 500 Corporate Landing
Charleston, WV 25311
Telephone: 304-925-6100
Email: dcsupcoe@grevlockenergy.com
22 day of February 2018



My Commission Expires January 30, 2023
Oil and Gas Privacy Notice

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

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APR 2 2018

WV Department of
Environmental Protection

21-09105

WW-2A1
(Rev. 1/11)

Operator's Well Number Reese #4

**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
ML Reese	Equitable Gas Co	1/8	275/453
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 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

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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: _____
By: Its: _____
Greylock Conventional, LLC
Don C Supcoe III 
Director of Land Operations and Permitting

WW-2B1
(5-12)

Well No. Reese #4

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 Fairway Labs
Sampling Contractor SLS Land & Energy Development

Well Operator Greylock Energy
Address 500 Corporate Landing
Charleston, WV 25311
Telephone 304-925-6100

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

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21-09105

Possible Water Purveyors for Reese #4 Well

11/30

Lynch Properties LLC

572 Clydesdale Dr.

Grayson, KY 41143

11/31

David & Alice Meyer

1711 Mud Lick Rd.

Glennville, WV 26351

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Possible Water Purveyors for Reese #4 Well

11/30

Lynch Properties LLC

572 Clydesdale Dr.

Grayson, KY 41143

Selected for sampling

11/31

David & Alice Meyer

1711 Mud Lick Rd.

Glennville, WV 26351

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WW-9
(5/16)

API Number 47 - 021 - _____
Operator's Well No. Reese #4 _____

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) Jakes Run Quadrangle Glennville 7.5

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No

DM

Will a pit be used? Yes No

If so, please describe anticipated pit waste: Drill Cuttings

Will a synthetic liner be used in the pit? Yes No If so, what ml.? 30

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. 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, sawdust) Cement/Lime

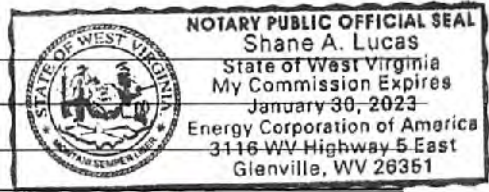
-Landfill or offsite name/permit number? _____

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on April 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 this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature [Signature]
Company Official (Typed Name) Don C Supcoe III
Company Official Title Director of Land Operations and Permitting



Subscribed and sworn before me this 22 day of FEBRUARY, 20 18
[Signature] Notary Public

My commission expires JANUARY 30, 2023

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Proposed Revegetation Treatment: Acres Disturbed 1.4 +/- Prevegetation pH _____

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type 10-20-20

Fertilizer amount 1/3 TON lbs/acre

Mulch Hay 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
KY-31	40	Orchard Grass	15
Alsike Clover	5	Alsike Clover	5
Annual Rye	15		

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, provide water volume, include dimensions (L, W, D) of the pit, and dimensions (L, W), and area in acres, of the land application area.

Photocopied section of involved 7.5' topographic sheet.


Plan Approved by: _____

Comments: _____

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Title:  Date: 2-22-18

Field Reviewed? () Yes () No

No known groundwater quality data for the area. Samples have been offered for non-public sources within a 1,000' radius of the proposed well.

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 deicing purposes, or fill material on the property.

7. Describe the groundwater protection instruction and training to be provided to the employees. Job procedures shall provide direction on how to prevent groundwater contamination.

All employees will be familiar with the contents of the GPP and how to implement it. During routine JSA meetings, the GPP will be discussed. Safe work practices shall protect the groundwater from contamination per company policy.

8. Provide provisions and frequency for inspections of all GPP elements and equipment.

ALL GPP elements and ^{re}quirements will be inspected upon every shift. Work shall cease and not commence until any problem is remediated and documented.

Signature: 

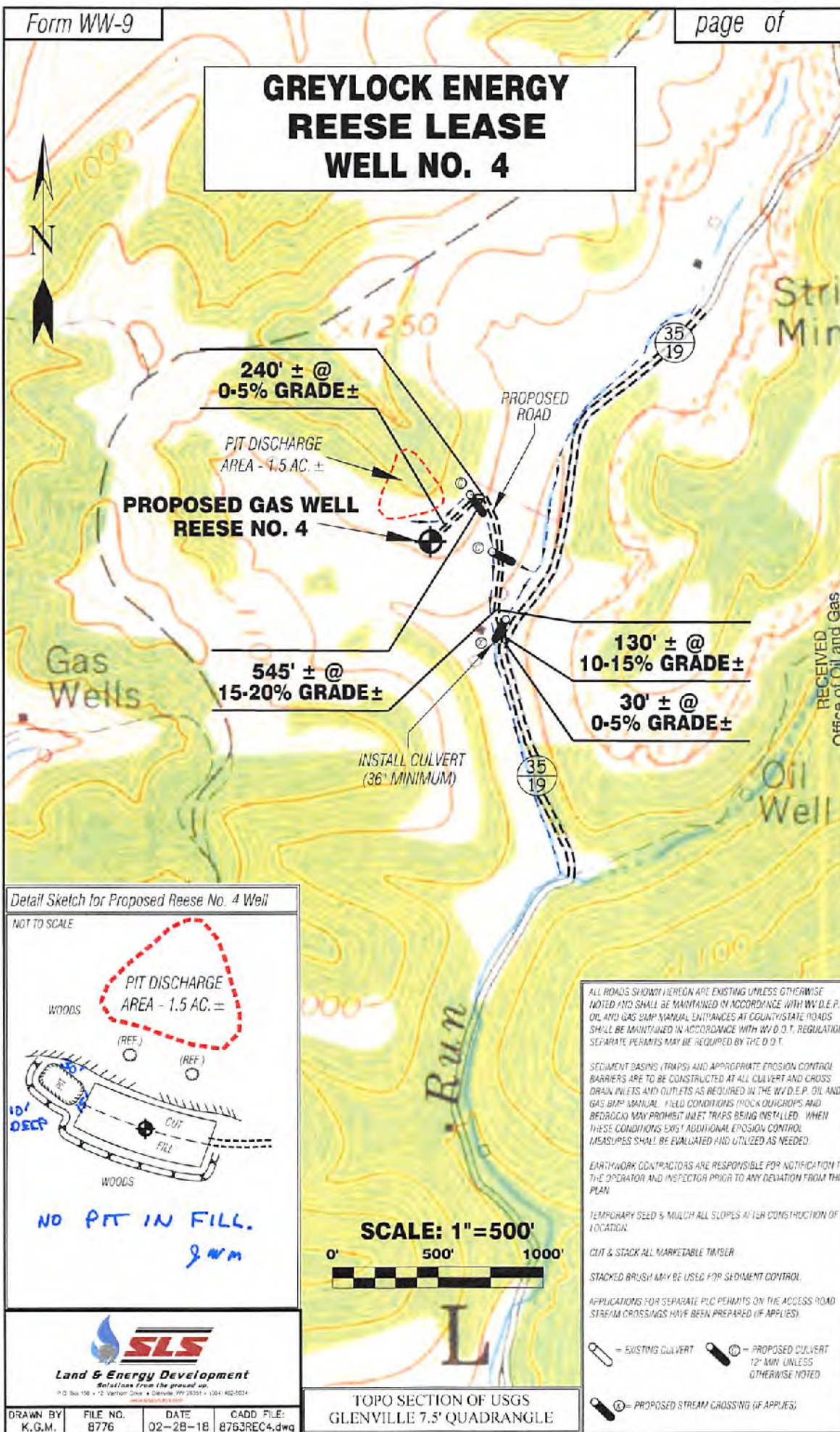
Date: 2/22/18

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GREYLOCK ENERGY REESE LEASE WELL NO. 4



**240' ± @
0-5% GRADE ±**

PIT DISCHARGE
AREA - 1.5 AC. ±

**PROPOSED GAS WELL
REESE NO. 4**

**545' ± @
15-20% GRADE ±**

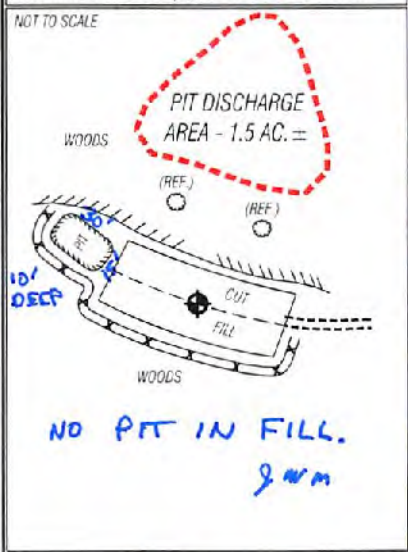
**130' ± @
10-15% GRADE ±**

**30' ± @
0-5% GRADE ±**

INSTALL CULVERT
(36" MINIMUM)

PROPOSED
ROAD

Detail Sketch for Proposed Reese No. 4 Well



DM



DRAWN BY: K.G.M. FILE NO.: 8776 DATE: 02-28-18 CADD FILE: 8763REC4.dwg

TOPO SECTION OF USGS
GLENVILLE 7.5' QUADRANGLE

ALL ROADS SHOWN HEREON ARE EXISTING UNLESS OTHERWISE NOTED AND SHALL BE MAINTAINED IN ACCORDANCE WITH WV D.E.P. OIL AND GAS BMP MANUAL. ENTRANCES AT COUNTY/STATE ROADS SHALL BE MAINTAINED IN ACCORDANCE WITH WV D.O.T. REGULATION. SEPARATE PERMITS MAY BE REQUIRED BY THE D.O.T.

SEDIMENT BASINS (TRAPS) AND APPROPRIATE EROSION CONTROL BARRIERS ARE TO BE CONSTRUCTED AT ALL CULVERT AND CROSS-DRAIN INLETS AND OUTLETS AS REQUIRED IN THE WV D.E.P. OIL AND GAS BMP MANUAL. FIELD CONDITIONS (ROCK OULCROPS AND BEDROCK) MAY PROHIBIT INLET TRAPS BEING INSTALLED. WHEN THESE CONDITIONS EXIST ADDITIONAL EROSION CONTROL MEASURES SHALL BE EVALUATED AND UTILIZED AS NEEDED.

EARTHWORK CONTRACTORS ARE RESPONSIBLE FOR NOTIFICATION TO THE OPERATOR AND INSPECTOR PRIOR TO ANY DEVIATION FROM THIS PLAN.

TEMPORARY SEED & MULCH ALL SLOPES AFTER CONSTRUCTION OF LOCATION.

CUT & STACK ALL MARKETABLE TIMBER

STACKED BRUSH MAY BE USED FOR SEDIMENT CONTROL.

APPLICATIONS FOR SEPARATE PLC PERMITS ON THE ACCESS ROAD/STREAM CROSSINGS HAVE BEEN PREPARED (IF APPLIES).

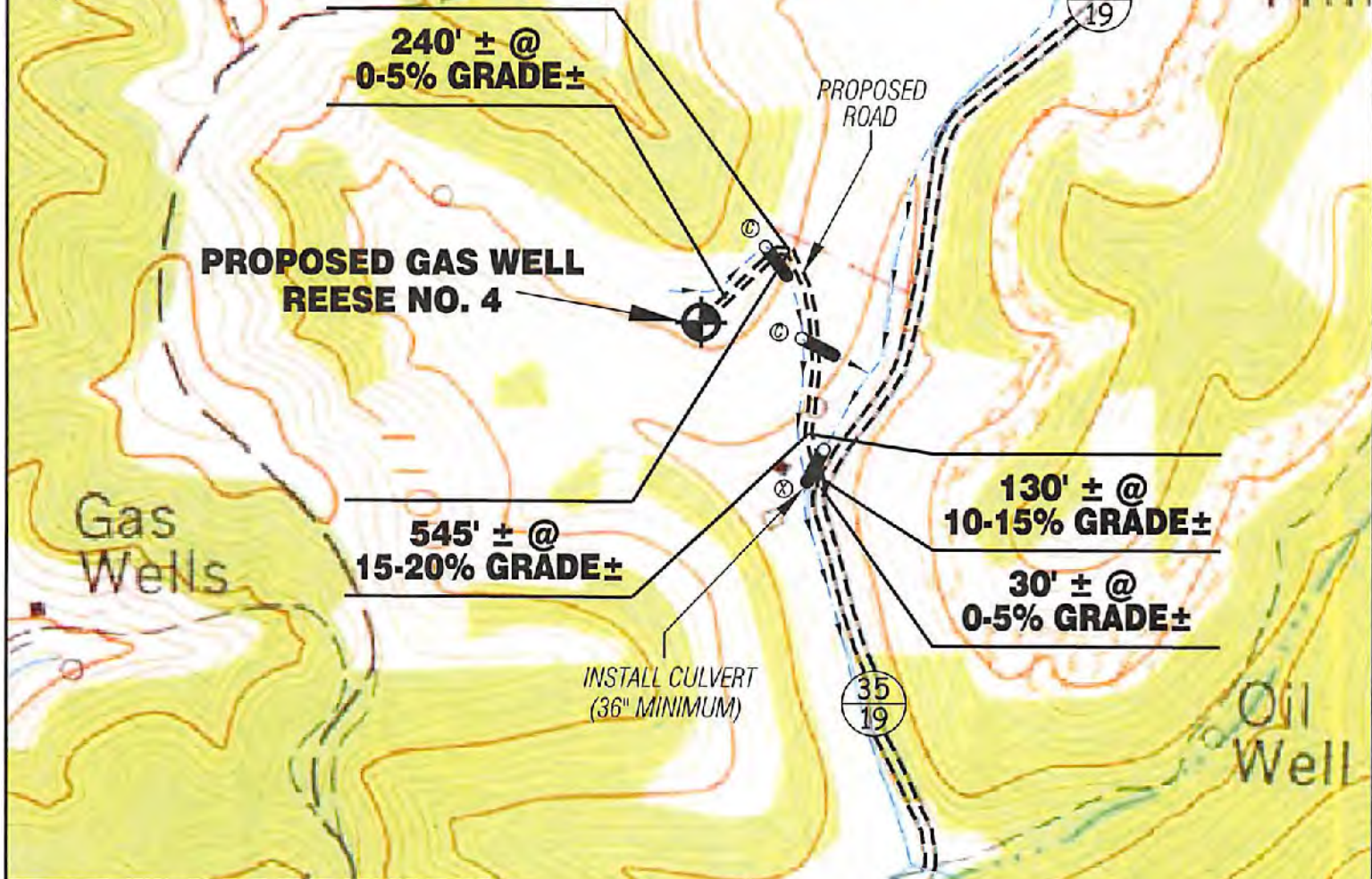
- EXISTING CULVERT
- PROPOSED CULVERT 12" MIN UNLESS OTHERWISE NOTED
- PROPOSED STREAM CROSSING (IF APPLIES)

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GREYLOCK ENERGY REESE LEASE WELL NO. 4



Detail Sketch for Proposed Reese No. 4 Well

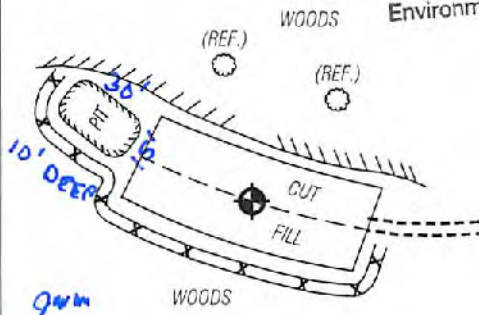
NOT TO SCALE

Per 15' x 30' x 10' DEEP

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SCALE: 1" = 500'



ALL ROADS SHOWN HEREON ARE EXISTING UNLESS OTHERWISE NOTED AND SHALL BE MAINTAINED IN ACCORDANCE WITH WV D.E.P. OIL AND GAS BMP MANUAL ENTRANCES AT COUNTY/STATE ROADS SHALL BE MAINTAINED IN ACCORDANCE WITH WV D.O.T. REGULATION. SEPARATE PERMITS MAY BE REQUIRED BY THE D.O.T.

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TEMPORARY SEED & MULCH ALL SLOPES AFTER CONSTRUCTION OF LOCATION

CUT & STACK ALL MARKETABLE TIMBER.

STACKED BRUSH MAY BE USED FOR SEDIMENT CONTROL.

APPLICATIONS FOR SEPARATE PLC PERMITS ON THE ACCESS ROAD STREAM CROSSINGS HAVE BEEN PREPARED (IF APPLIES)

= EXISTING CULVERT = PROPOSED CULVERT 12" MIN. UNLESS OTHERWISE NOTED

= PROPOSED STREAM CROSSING (IF APPLIES)



DRAWN BY K.G.M.	FILE NO. 8776	DATE 01/30/18	CADD FILE: 8763REC4.dwg
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TOPO SECTION OF USGS
GLENVILLE 7.5' QUADRANGLE

