



west virginia department of environmental protection

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

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

May 16, 2016

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-7301339, issued to LOGUE, CATHY, 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 all 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.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. The above named operator will also file, as required in WV Code 22-6-23, an affidavit on form WR-38 by two experienced persons in the operator's employment and the Oil and Gas inspector that the work authorized under this permit was performed and a description given. Failure to abide by all statutory and regulatory provisions governing all duties and operations here under may result in suspensions or revocation of this permit and in addition may result in civil and/or criminal penalties being imposed upon the operator.

This permit will expire in two (2) years from date of issue. If there are any questions, please free to contact me at (304) 926-0499 ext. 1654.


James Martin
Chief

Operator's Well No: H-1292
Farm Name: KEARSE, G. WARREN
API Well Number: 47-7301339
Permit Type: Plugging
Date Issued: 05/16/2016

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. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
2. 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.
3. Well work activities shall not constitute a hazard to the safety of persons.

WW-4B
Rev. 2/01

1) Date March 9, 20 16
2) Operator's
Well No. H-1292
3) API Well No. 47-073 - 01339

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

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

- 4) Well Type: Oil ___ / Gas X / Liquid injection ___ / Waste disposal ___ /
(If "Gas, Production X or Underground storage ___) Deep ___ / Shallow ___
- 5) Location: Elevation 1077' Watershed Left Fork French Creek
District McKim County Pleasants Quadrangle Schultz 7-1/2 quad
- 6) Well Operator Cathy Logue 7) Designated Agent _____
Address 1664 Hardy Hill Road Address _____
St. Marys WV 26170
- 8) Oil and Gas Inspector to be notified 9) Plugging Contractor
Name Derek Haught Name Chisler Brothers Contracting
Address PO Box 85 Address PO Box 101
Smithville WV 26178 Pentress WV 26544

- 10) Work Order: The work order for the manner of plugging this well is as follows:

Ensure all necessary E&S controls are installed

Perform necessary earth work to establish access and work area for rig
Perform Cement Bond Log to confirm 4 1/2" casing is CTS. Remove any free pipe.

RIH with open ended tubing to determine PBTD

Gel hole with 6% bentonite

Pull tubing up to 50 ft below perforations, pump in adequate cement to fill

perforations and ²⁰⁰100 ft above.

If 4 1/2" casing is CTS, place minimum 100 ft plugs at 4000 ft, 3000 ft, 2000 ft and 1000 ft.

Pull tubing to ²⁰⁰100 ft from surface and put in surface cement plug.

Place a standing well monument with API number and reclaim site

PER WV STATE CODE

Tag all plugs to confirm placement as required. Top off as needed.

Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

Work order approved by inspector Derek W. Haught of Oil and Gas Date 4/25/2016

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MAY 02 2016

WV Department of
Environmental Protection

FORM IV-33
(Reverse)

(OS-78)

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL PROPERTIES, ETC.

Nitrogen Fraced by E. J. Haught
500 gallons acid

Perforations: 23 holes (4510 - 4792)

WELL LOG

| FORMATION | Color | Hard or Soft | Top Feet | Bottom Feet | Including intervals of all sands and silt, water, clay, etc. and etc. |
|------------------|-------|--------------|----------|-------------|---|
| Red Rock | | | 0 | 4 | |
| Sand Stone | | | 4 | 8 | |
| Shale & Red Rock | | | 8 | 918 | |
| Sand | | | 918 | 923 | |
| Shale | | | 923 | 930 | |
| Red Rock | | | 930 | 937 | |
| Shale | | | 937 | 946 | |
| Sand | | | 946 | 952 | |
| Shale | | | 952 | 999 | |
| Red Rock | | | 999 | 1019 | |
| Shale | | | 1019 | 1021 | |
| Sand | | | 1021 | 1054 | |
| Red Rock | | | 1054 | 1069 | |
| Shale & Sand | | | 1069 | 1860 | |
| Lime | | | 1860 | 1944 | |
| Sand | | | 1944 | 2125 | |
| Shale | | | 2125 | 2591 | |
| Sand | | | 2591 | 2627 | |
| Shale | | | 2627 | 2748 | |
| Sand | | | 2748 | 2782 | |
| Shale | | | 2782 | 2831 | |
| Sand | | | 2831 | 2856 | |
| Shale | | | 2856 | 3928 | |
| Sand | | | 3928 | 3960 | |
| Shale | | | 3960 | 4085 | |
| Sand | | | 4085 | 4100 | |
| Shale | | | 4100 | 4330 | |
| Sand | | | 4330 | 4340 | |
| Shale | | | 4340 | 5104 | TD |

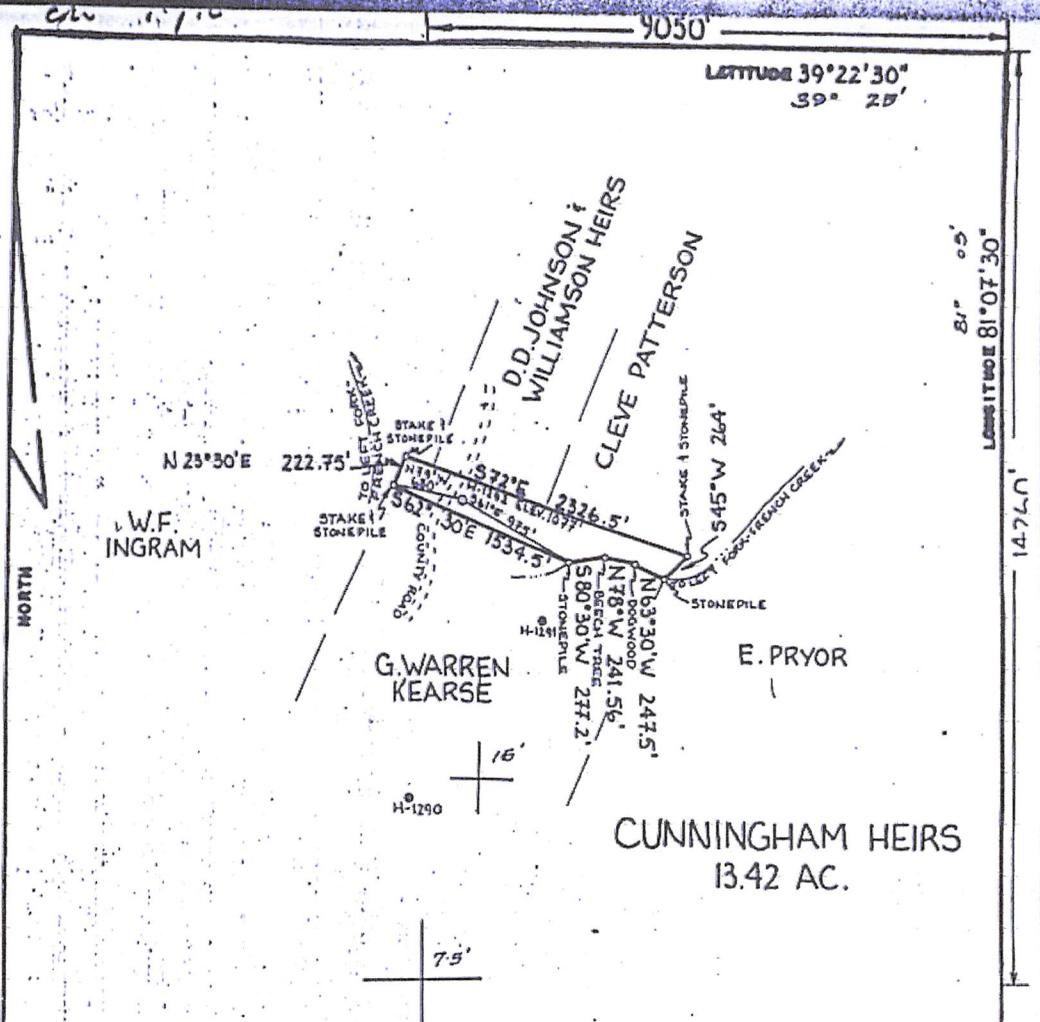
(Attach separate sheets to complete as necessary.)

Haught, Inc.

Well Operator
By W. R. Haught
Inc.

NOTE: Population (OS-78) provides as follows:

"The term 'log' or 'well log' shall mean a systematic, detailed geologic record of all formations, including well, encountered in the well."



FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1:200
 PROVEN SOURCE OF ELEVATION HIGH PT. 1165'

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF MINES.
 (SIGNED) *William R. Moscoe*
 R.P.E. _____ L.L.S. 551

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 FORM IV-6
 (8-78)



DATE 29 SEPTEMBER, 19 81
 OPERATOR'S WELL NO H-1292
 API WELL NO. 47-073-1339-Frac
 STATE COUNTY PERMIT
 FRAC CANCELLED

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION

WELL TYPE: OIL GAS LIQUID INJECTION _____ WASTE DISPOSAL _____
 (IF "GAS", PRODUCTION STORAGE _____ DEEP _____ SHALLOW
 LOCATION: ELEVATION 1077' WATER SHED LEFT FORK - FRENCH CREEK
 DISTRICT M/KIM COUNTY PLEASANTS
 QUADRANGLE SCHULTZ 7 1/2' QUAD.
 SURFACE OWNER G. WARREN KEARSE ACRES 13.42
 OIL & GAS ROYALTY OWNER T.E. CUNNINGHAM HEIRS LEASE ACRES 13.42
 LEASE NO. _____
 PROPOSED WORK: DRILL CONVERT _____ DRILL DEEPER _____ REDRILL _____
 STIMULATE _____ PLUG OFF OLD FORMATION _____ PERFORATE NEW FORMATION _____ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____
 PLUG AND ABANDON _____ CLEAN OUT AND REPLUG _____
 TARGET FORMATION SHALE ESTIMATED DEPTH 5400'
 WELL OPERATOR HAUGHT INC. DESIGNATED AGENT WARREN HAUGHT
 ADDRESS SMITHVILLE, W.VA. 26178 ADDRESS SMITHVILLE, W.VA. 26178

WW-4A
Revised 6-07

1) Date: March 9, 2016
2) Operator's Well Number
H-1292

3) API Well No.: 47 - 073 - 01339

**STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL**

| | |
|-------------------------------------|------------------------------------|
| 4) Surface Owner(s) to be served: | 5) (a) Coal Operator |
| (a) Name <u>Cathy Logue</u> | Name _____ |
| Address <u>1664 Hardy Hill Road</u> | Address _____ |
| <u>St. Marys WV 26170</u> | |
| (b) Name _____ | (b) Coal Owner(s) with Declaration |
| Address _____ | Name _____ |
| | Address _____ |
| (c) Name _____ | Name _____ |
| Address _____ | Address _____ |
| | |
| 6) Inspector <u>Derek Haught</u> | (c) Coal Lessee with Declaration |
| Address <u>PO Box 85</u> | Name _____ |
| <u>Smithville WV 26178</u> | Address _____ |
| Telephone <u>304-206-7613</u> | |

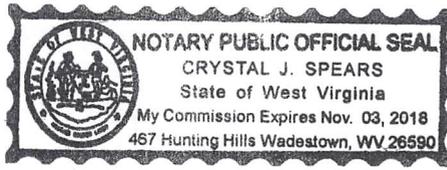
TO THE PERSONS NAMED ABOVE: You should have received this Form and the following documents:

- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
- (2) The plat (surveyor's map) showing the well location on Form WW-6.

The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side. However, you are not required to take any action at all.

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to the well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, and the plat have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Chief.

Well Operator Cathy Logue
 By: Cathy Logue
 Its: owner
 Address 1664 Hardy Hill Road
St. Marys WV 26170
 Telephone _____



Subscribed and sworn before me this 11th day of March 2016
Crystal J Spears Notary Public
My Commission Expires Nov 3 2018

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Office of Oil and Gas

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

MAY 09 2016
WV Department of
Environmental Protection

SURFACE OWNER WAIVER

Operator's Well
Number

H-1292

INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW4-A

The well operator named on page WW-4A is applying for a permit from the State to plug and abandon a well. (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

Time Limits and methods for filing comments. The law requires these materials to be served on or before the date the operator files his Application. You have **FIVE (5) 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.

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 Permit To Plug And Abandon on Forms WW-4A and WW-4B, and a survey plat.

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
ETC.

FOR EXECUTION BY A CORPORATION,

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Office of Oil and Gas
MAY 02 2016

Cathy Lopez
Signature

Date 3-11-16 Name _____
By _____
Its _____

WV Department of
Environmental Protection
Signature _____ Date _____

WW-4B

| | |
|-----------|-------------------------|
| API No. | <u>47-073-01339</u> |
| Farm Name | <u>Kearse G. Warren</u> |
| Well No. | <u>H-1292</u> |

**INSTRUCTIONS TO COAL OPERATORS
OWNERS AND LESSEE**

The well operator named on the obverse side of WW-4 (B) is about to abandon the well described in the enclosed materials and will commence the work of plugging and abandoning said well on the date the inspector is notified. Which date shall not be less than five days after the day on which this notice and application so mailed is received, or in due course should be received by the Department of Environmental Protection Office of Oil & Gas.

This notice and application is given to you in order that your respective representatives may be present at the plugging and filling of said well. You are further notified that whether you are represented or not the operator will proceed to plug and fill said well in the manner required by Section 24, Article 6, Chapter 22 of the Code and given in detail on obverse side of this application.

NOTE: If you wish this well to be plugged according to 22-6-24(d) then as per Regulation 35CSR4-13.9 you must complete and return to this office on form OB-16 "Request by Coal Operator, Owner, or Lessee for plugging" prior to the issuance of this plugging permit.

WAIVER

The undersigned coal operator ____/ owner ____/ lessee ____/ of the coal under this well location has examined this proposed plugging work order. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

Date: _____

By: _____
Its _____

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Office of Oil and Gas
MAY 02 2016
WV Department of
Environmental Protection

WW-9
(2/15)

API Number 47 - 073 - 01339
Operator's Well No. H-1292

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Cathy Logue OP Code _____

Watershed (HUC 10) Left Fork French Creek Quadrangle Schultz 7-1/2

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 gwm per ATTACHMENT A

If so, please describe anticipated pit waste: water

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

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- 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: yes - see attachment

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

-If oil based, what type? Synthetic, petroleum, etc. N/A

Additives to be used in drilling medium? Bentonite

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. remove offsite

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) _____

-Landfill or offsite name/permit number? see attachment

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.

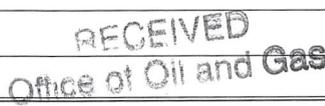
I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations 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 Bruce A. Chisler

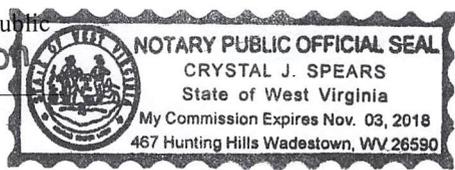
Company Official (Typed Name) Bruce A Chisler

Company Official Title Operating Manager



Subscribed and sworn before me this 11th day of March, 2016

Crystal J Spears Notary Public
My commission expires Nov 3 2018



Attachment A to WW-9

Cathy Logue plans to utilize a closed loop process for the drilling of the H-1290 well. Return flow from the well will be separated into its liquid and solid form. Liquids will be held in steel tanks and reused in the drilling and completions process or disposed of at an approved facility listed below. Solids removed from the stream will be diverted to steel half-round tanks where they will be solidified on site and taken to disposal as they are accumulated.

H-1290 drill cuttings will be taken to disposal at one or more of the following disposal/approved waste facilities, unless listed facilities are no longer approved to accept waste at time of disposal.

- Westmoreland Landfill (Tervita) – Belle Vernon, PA (Permit #100277)
- Meadowfill Landfill (Waste Management) – Bridgeport WV (Permit #SWF103298)
- Max Environmental – Yukon, PA (PAD004835146 and 301071)
- Max Environmental – Bulger, PA (PAD059087072 and 301359)
- Chestnut Valley Landfill (Advanced Disposal) – Export, PA (Permit #101421)

Cathy Logue plans to reuse and recycle all flow back fluid and/or reach out to other operators in the area who may be able to reuse and recycle such fluid. However, in the event that reuse is not obtainable the fluid will be disposed of at one, or multiple, of the following disposal/approved waste facilities unless listed facilities are no longer approved or accept waste at time of disposal:

- Fairmont Brine Processing (WV NPDES #0116408)
- Green Hunter M.E> Elder 1 Disposal Well (Permit #47-085-05151)
- Green Hunter Mason 1 Disposal Well (Permit #47-085-09721)
- Green Hunter Warren Disposal Well (Permit #34-121-2-3995)
- Green Hunter Travis Unit Disposal Well (Permit #34-121-2-4086)
- Viking Energy Corporation 20320 Disposal Well (Permit #47-039-02210)
- Ohio Oil Gathering Killbuck Disposal Well (Permit #34-075-24527)
- Ohio Oil Gathering Moran Disposal Well (Permit #34-089-24792)
- Ohio Oil Gathering Bells Run Disposal Well (Permit #34-167-29395)
- Ohio Oil Gathering Long Run Disposal Well (Permit #34-167-29658)
- Ohio Oil Gathering Newell Run Disposal Well (Permit #34-167-29658)
- Appalachian Oil Purchaser Greens Run Disposal Well (Permit #2D0732540)
- Appalachian Oil Purchaser BW#4 Disposal Well (Permit #2D0732523)

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Office of Oil and Gas
MAY 09 2015
WV Department of
Environmental Protection

Cathy Logue

Proposed Revegetation Treatment: Acres Disturbed 2.2 Prevegetation pH TBD

Lime 2 Tons/acre or to correct to pH 7

Fertilizer type 19-19-19

Fertilizer amount 500 lbs/acre

Mulch 2 Tons/acre

Seed Mixtures

| Temporary | | Permanent | |
|--------------------------|----------|--------------------------|----------|
| Seed Type | lbs/acre | Seed Type | lbs/acre |
| orchard grass | 46 | orchard grass | 46 |
| red clover | 8 | red clover | 8 |
| tertapolid perennial rye | 16 | tertapolid perennial rye | 16 |
| timothy 15 annual rye | 15 | timothy 15 annual rye | 15 |

Attach:

Drawing(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided)

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: _____

Comments: _____

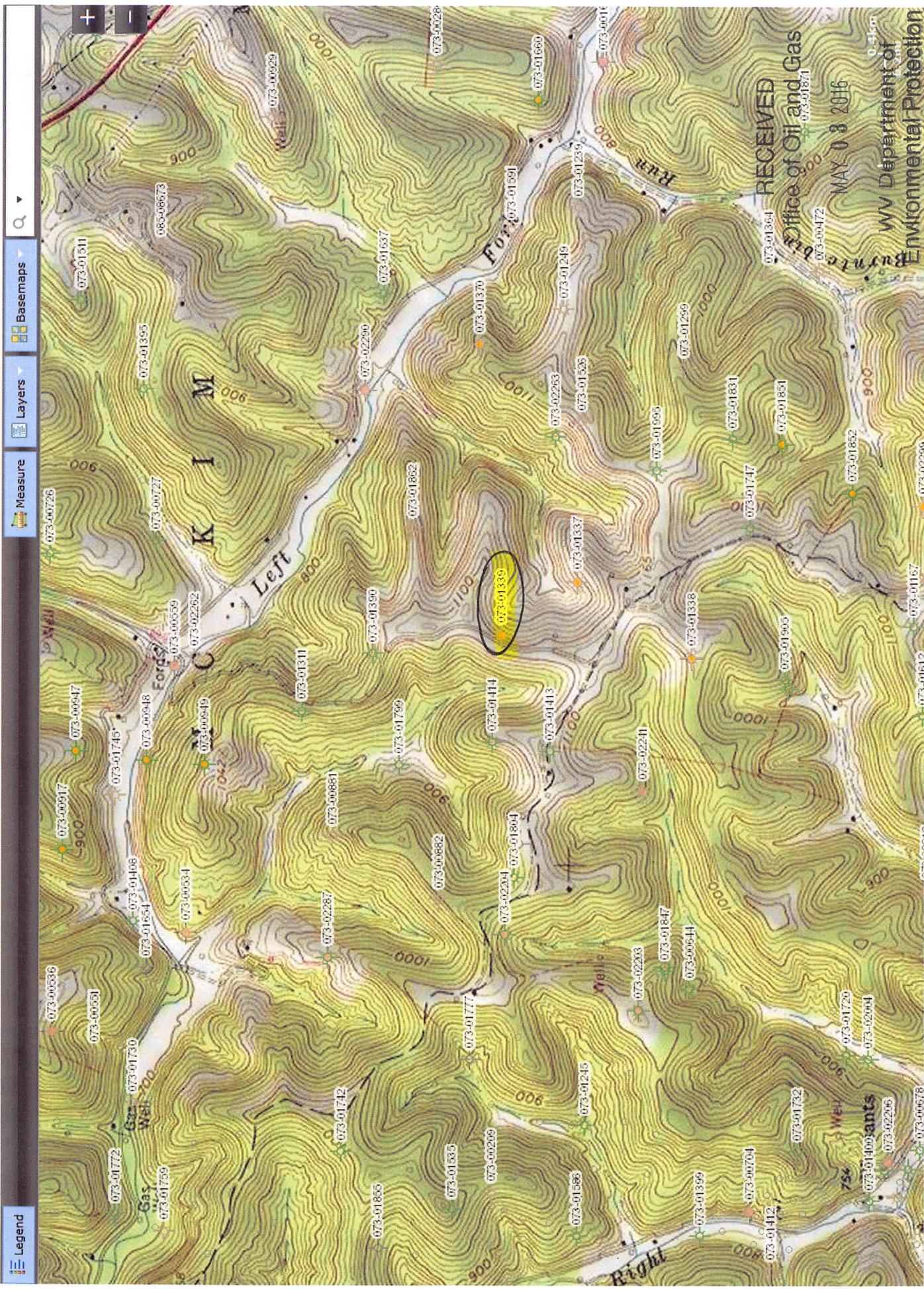
Title: _____

Field Reviewed? () Yes () No

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MAY 02 2016

WV Department of
Environmental Protection



7301339P

WW-7
8-30-06



West Virginia Department of Environmental Protection
Office of Oil and Gas
WELL LOCATION FORM: GPS

API: 47-073-01339 WELL NO.: H-1292

FARM NAME: Kearse G. Warren

RESPONSIBLE PARTY NAME: Cathy Logue

COUNTY: Pleasants DISTRICT: McKim

QUADRANGLE: Schultz 7-1/2

SURFACE OWNER: Cathy Logue

ROYALTY OWNER: Cathy Logue

UTM GPS NORTHING: 4354031.1

UTM GPS EASTING: 486490.6 GPS ELEVATION: 1077'

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit or assigned API number on the above well. The Office of Oil and Gas will not accept GPS coordinates that do not meet the following requirements:

1. Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
2. Accuracy to Datum – 3.05 meters
3. Data Collection Method:

Survey grade GPS : Post Processed Differential

Real-Time Differential

Mapping Grade GPS : Post Processed Differential

Real-Time Differential

4. Letter size copy of the topography map showing the well location.

I the undersigned, hereby certify this data is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Office of Oil and Gas.

Cathy Logue
Signature

Owner
Title

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Office of Oil and Gas
MAY 02 2016
WV Department of Environmental Protection
Date 5-11-16