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**west virginia** department of environmental protection

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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

March 04, 2016

**WELL WORK PLUGGING PERMIT**

**Plugging**

This permit, API Well Number: 47-3906377, issued to RESERVE OIL & GAS, INC., 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: HARMON #2  
Farm Name: THE COURTLAND COMPANY  
**API Well Number: 47-3906377**  
**Permit Type: Plugging**  
Date Issued: 03/04/2016

**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

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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 \_\_\_\_\_, 20\_\_\_\_  
2) Operator's  
Well No. \_\_\_\_\_  
3) API Well No. 47-\_\_\_\_-\_\_\_\_\_

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 600 Watershed Davis Creek  
District South Charleston County Kanawha Quadrangle Charleston West

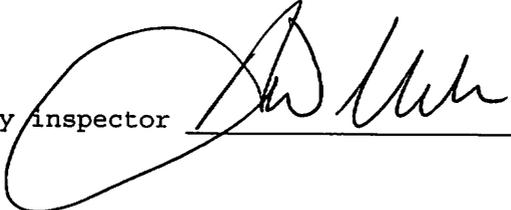
6) Well Operator Reserve Oil & Gas, Inc. 7) Designated Agent Doug Douglass  
Address 929 Charleston Road Address 929 Charleston Road  
Spencer, WV 25276 Spencer, WV 25276

8) Oil and Gas Inspector to be notified 9) Plugging Contractor  
Name Terry Urban Name Contractor Services Inc. of WV  
Address P.O. Box 1207 Address 929 Charleston Road  
Clendenin, WV 25045 Spencer, WV 25276

10) Work Order: The work order for the manner of plugging this well is as follows:  
Move in, rig up.  
Estimate 50' of 13 3/8" conductor pipe cemented in place.  
Cement plug 50' of conductor pipe to surface.  
Place monument per WV code.

*Well plugged  
GAE Verbal*

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

Work order approved by inspector  Date 1-15-16

Received

JAN 15 2016

Office of Oil and Gas  
WV Dept. of Environmental Protection

WW-4A  
Revised 6-07

1) Date: \_\_\_\_\_  
2) Operator's Well Number  
Harmon #2 \_\_\_\_\_  
3) API Well No.: 47 - 39 - 06377

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

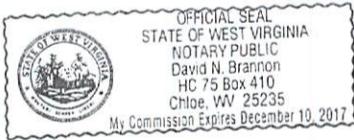
|                                       |                                    |
|---------------------------------------|------------------------------------|
| 4) Surface Owner(s) to be served:     | 5) (a) Coal Operator               |
| (a) Name <u>The Courlland Company</u> | Name _____                         |
| Address <u>114 Monongalia Street</u>  | Address _____                      |
| <u>Charleston, WV 25302</u>           |                                    |
| (b) Name _____                        | (b) Coal Owner(s) with Declaration |
| Address _____                         | Name _____                         |
|                                       | Address _____                      |
| (c) Name _____                        | Name _____                         |
| Address _____                         | Address _____                      |
| 6) Inspector <u>Terry Urban</u>       | (c) Coal Lessee with Declaration   |
| Address <u>P.O. Box 1207</u>          | Name _____                         |
| <u>Clendenin, WV 25045</u>            | Address _____                      |
| Telephone <u>304-549-5915</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 Reserve Oil & Gas, Inc.  
 By: [Signature]  
 Its: Vice President  
 Address 929 Charleston Road  
Spencer, WV 25276  
 Telephone 304-927-5228

Subscribed and sworn before me this 14<sup>th</sup> day of January 2016  
David N. Brannon Notary Public  
 My Commission Expires December 10, 2017

**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 [depprivacyoffier@wv.gov](mailto:depprivacyoffier@wv.gov).

Received  
 JAN 15 2016  
 Office of Oil and Gas  
 WV Dept. of Environmental Protection

WW-2A Surface Waiver

SURFACE OWNER WAIVER

County Kanawha Operator Reserve Oil & Gas, Inc Operator well number Harmon #2 A

INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW2-A

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

NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.

WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:

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

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 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 a 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.

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

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, and a soil and erosion plan, all for proposed well work on my surface land as described therein.

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

FOR EXECUTION BY A NATURAL PERSON

FOR EXECUTION BY A CORPORATION, ETC.

Signature: John A. Truesdell Date: 1-16-2016 Print Name: JOHN A. TRUESDELL

Company Name: The Courland Company By: JOHN A. TRUESDELL Date: VICE PRES. Signature: John A. Truesdell Date: 1-16-2016

WW-4B

API No. 47-13-06377  
Farm Name Courtland Company  
Well No. Harmon #2

**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 \_\_\_\_\_

*Received*  
JAN 15 2016  
Office of Oil and Gas  
WV Dept. of Environmental Protection

*No known operator, owner  
or lessee of workable  
coalbed/seam on this tract.*

WW-9  
(2/15)

API Number 47 - 39 - 06377  
Operator's Well No. Harmon #2

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Reserve Oil & Gas, Inc. OP Code 310-324

Watershed (HUC 10) Davis Creek Quadrangle Charleston West

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

Will a pit be used? Yes  No

If so, please describe anticipated pit waste: \_\_\_\_\_

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 N/A)

*Handwritten:* TU - 1-15-16

Will closed loop system be used? If so, describe: N/A

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. \_\_\_\_\_

-If oil based, what type? Synthetic, petroleum, etc. \_\_\_\_\_

Additives to be used in drilling medium? \_\_\_\_\_

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. N/A

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

-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 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 [Signature]  
Company Official (Typed Name) J. Scott Freshwater  
Company Official Title Vice President

Received

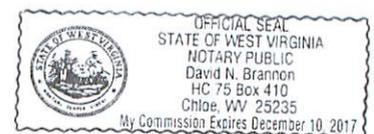
JAN 15 2016

Office of Oil and Gas  
WV Dept. of Environmental Protection

Subscribed and sworn before me this 14<sup>th</sup> day of January, 20 16

David N. Brannon Notary Public

My commission expires December 10, 2017



Form WW-9

Operator's Well No. Harmon #2

Reserve Oil & Gas, Inc.

Proposed Revegetation Treatment: Acres Disturbed 1.5 Prevegetation pH 5.5

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type \_\_\_\_\_

Fertilizer amount 0.25 lbs/acre

Mulch Hay 2 Tons/acre

**Seed Mixtures**

| Temporary      |          | Permanent     |          |
|----------------|----------|---------------|----------|
| Seed Type      | lbs/acre | Seed Type     | lbs/acre |
| Orchard Grass  | 25       | Ladino Clover | 5        |
| Red Top Clover | 15       | KY 31         | 40       |
|                |          |               |          |

**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 Insp O&G

Date: 1-15-16

Field Reviewed?

Yes

No

Received

JAN 15 2016

NOTE:

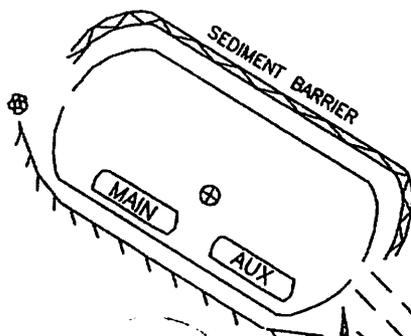
Any Trees 6" or larger in Diameter will be cut and piled. Brush will be used as Sediment Barriers. Temporary seed and mulch all slopes upon construction. Stone over all Culverts and entrance off existing roadway.

HARMON #2



NOTE:

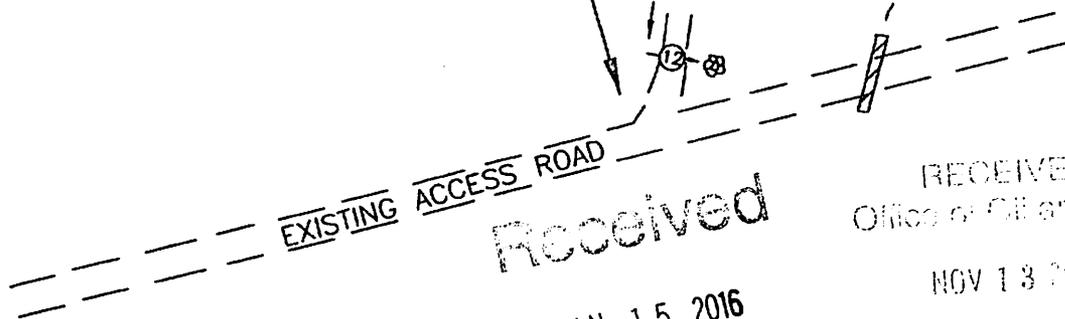
PIT SIZE: 25'X80' +/-  
LOCATION SIZE: 100'X200' +/-



TU  
11.9.13

2%  
100'

2%  
200'



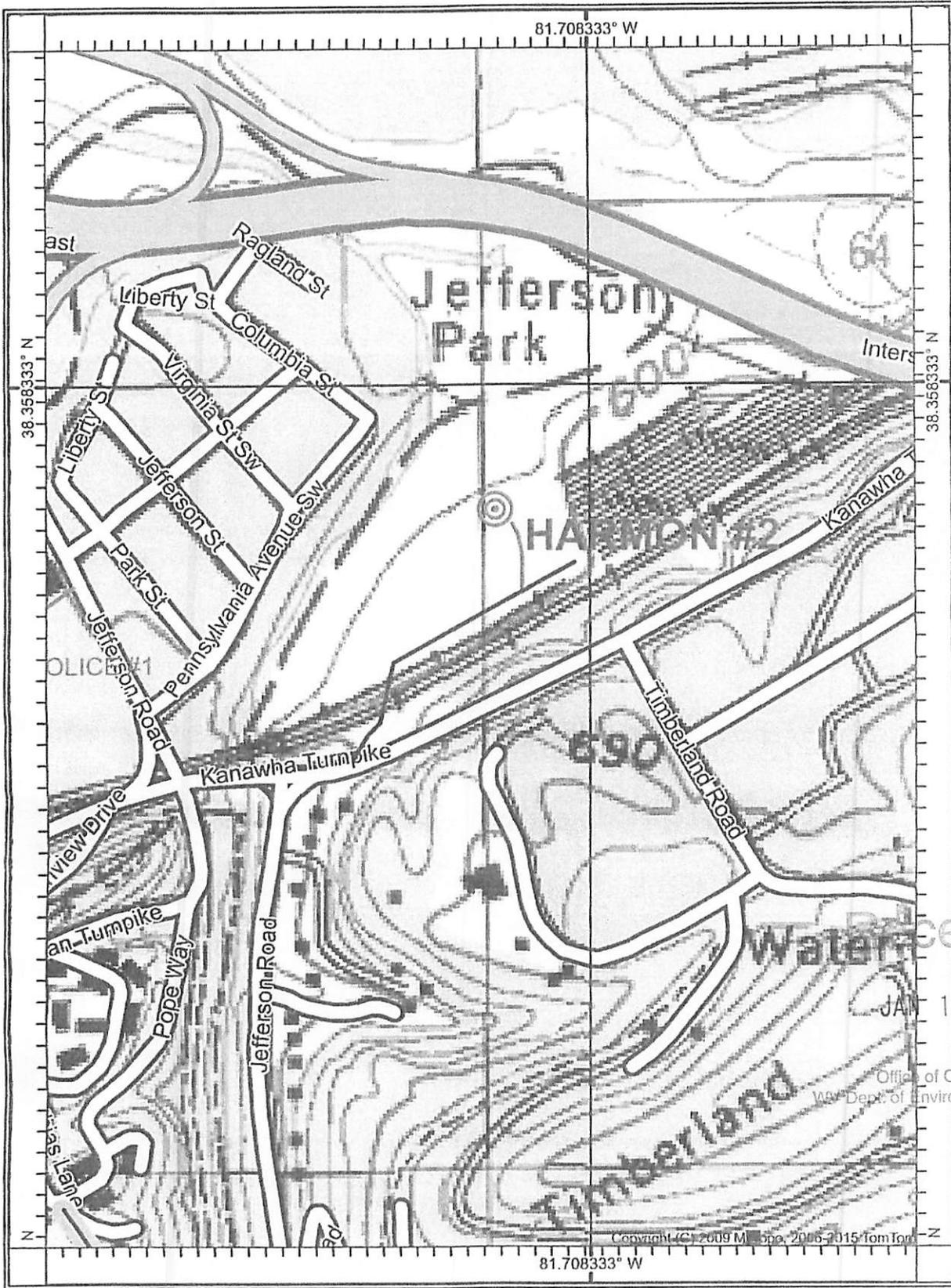
Received

JAN 15 2016

RECEIVED  
Office of Oil and Gas

NOV 18 2015

Office of Oil and Gas  
U.S. Dept. of Environmental Protection

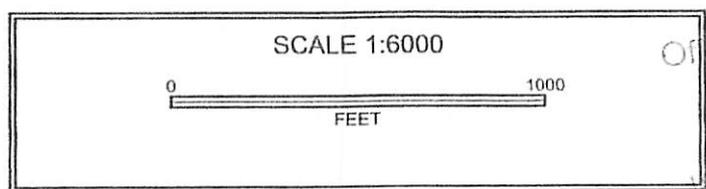


Water Received

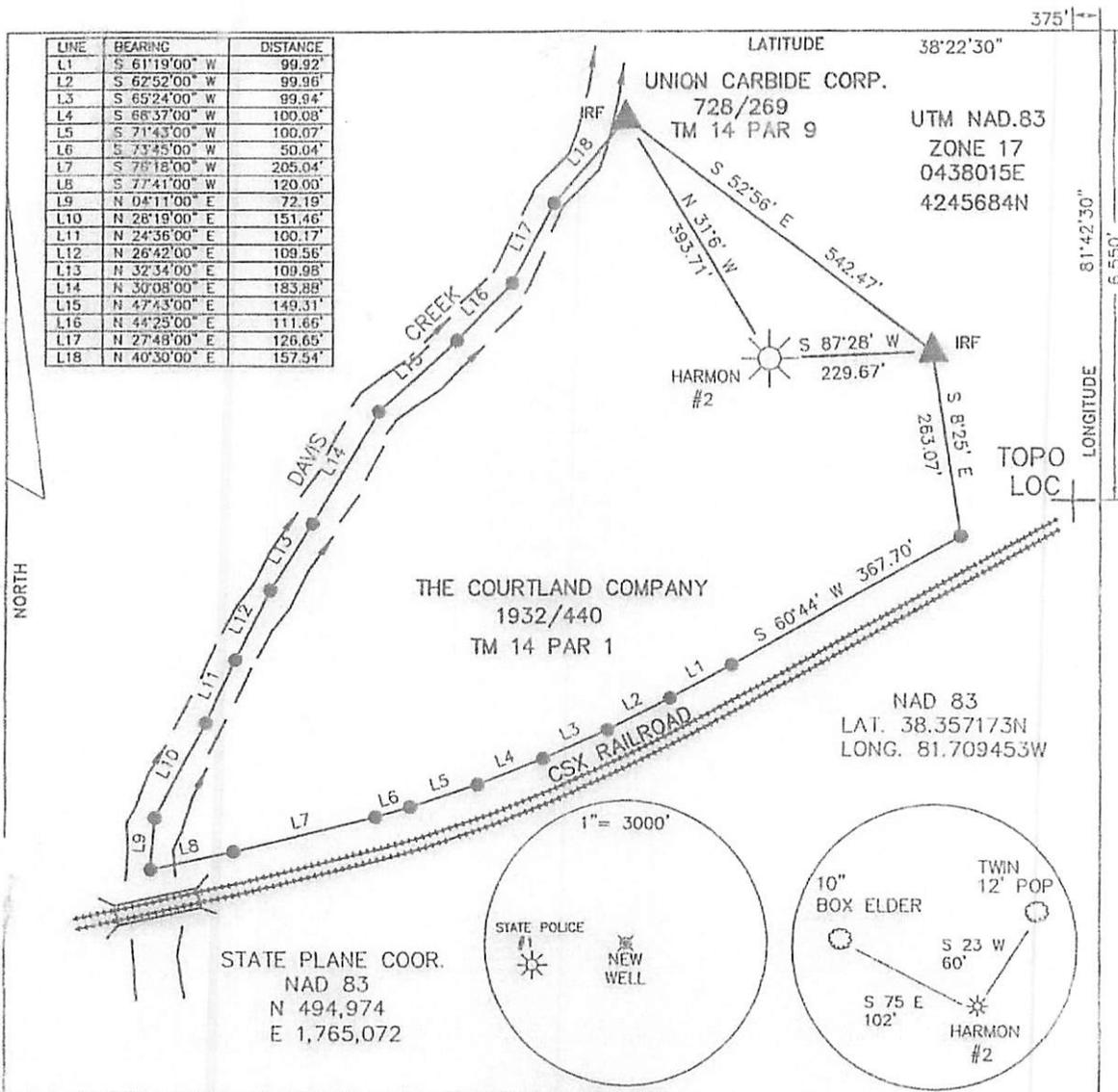
JAN 15 2016

Office of Oil and Gas  
WV Dept. of Environmental Protection

Copyright (C) 2009 MapInfo, 2006-2015 TomTom



RECEIVED  
Office of Oil and Gas  
NOV 13 2015  
WV Department of  
Environmental Protection



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. \_\_\_\_\_  
DRAWING NO. 15-08  
SCALE 1"=200'  
MINIMUM DEGREE OF ACCURACY 1 IN 200  
PROVEN SOURCE OF ELEVATION GPS

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 ENERGY.  
(SIGNED) *[Signature]*  
R.P.E. \_\_\_\_\_ P.S. 851



STATE OF WEST VIRGINIA  
Department of Environmental Protection  
OFFICE OF OIL AND GAS

DATE 10/23 20 15  
OPERATOR'S WELL NO. HARMON #2  
API WELL NO. 47-039-06377  
STATE WV COUNTY KANAWHA PERMIT 06377

WELL TYPE: OIL  GAS  LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_  
(IF "GAS") PRODUCTION  STORAGE \_\_\_\_\_ DEEP \_\_\_\_\_ SHALLOW

LOCATION: ELEVATION 600 WATER SHED DAVIS CREEK  
DISTRICT SOUTH CHARLESTON COUNTY KANAWHA  
QUADRANGLE CHARLESTON WEST

SURFACE OWNER THE COURTLAND COMPANY ACREAGE 13.767  
OIL & GAS ROYALTY OWNER THE COURTLAND COMPANY LEASE ACREAGE 13.767  
LEASE NO. \_\_\_\_\_

PROPOSED WORK: DRILL  CONVERT \_\_\_\_\_ DRILL DEEPER \_\_\_\_\_ REDRILL \_\_\_\_\_ FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION \_\_\_\_\_ PERFORATE NEW FORMATION \_\_\_\_\_ OTHER PHYSICAL CHANGE IN WELL (SPECIFY): \_\_\_\_\_

PLUG AND ABANDON \_\_\_\_\_ CLEAN OUT AND REPLUG \_\_\_\_\_

TARGET FORMATION BASE OF LOWER HURON/RHINESTREET ESTIMATED DEPTH 5500  
WELL OPERATOR RESERVE OIL & GAS INC. DESIGNATED AGENT J. SCOTT FRESHWATER  
ADDRESS 929 CHARLESTON ROAD ADDRESS 929 CHARLESTON ROAD  
SPENCER, WV 25276 SPENCER, WV 25276

Received

JAN 15 2016

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Office of Oil and Gas  
5500  
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WV Dept. of Environmental Protection