



**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

October 16, 2014

**WELL WORK PERMIT**

**Horizontal Well**

This permit, API Well Number: 47-4105695, issued to WACO OIL & GAS CO 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.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days 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.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-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) 926-0499 ext. 1654.



James Martin  
Chief

Operator's Well No: WAUGH #1H 2044  
Farm Name: MORRIS, I.L. & MIKE ROSS, INC.  
**API Well Number: 47-4105695**  
**Permit Type: Horizontal Well**  
Date Issued: 10/16/2014

Promoting a healthy environment.

10/17/2014

## 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.

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### CONDITIONS

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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](mailto:DEPOOGNotify@wv.gov) within 30 days of commencement of drilling.

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: Waco Oil & Gas Co., Inc. 306294 Lewis 041 Freemans Creek Vadis  
Operator ID County District Quadrangle

2) Operator's Well Number: Waugh #1H 2044 3) Elevation: 905'

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

5) Proposed Target Formation(s): Injun Proposed Target Depth: 1,950'

6) Proposed Total Depth: 1,850' 3,580' no Feet Formation at Proposed Total Depth: Injun

7) Approximate fresh water strata depths: 150'

8) Approximate salt water depths: None.

9) Approximate coal seam depths: None.

10) Approximate void depths,(coal, Karst, other): None.

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)  
Construct/modify well site (Including pad and pits). Mobilize drilling rig. Drill a vertical/horizontal well with below casing program.  
Evaluate well. Run production casing. Demobilize drilling rig. Mobilize completion equipment. Complete well:  
fracture stimulate, clean-out, run tubing, unload & test well. Reclaim site. Nitrogen Frac

13) **CASING AND TUBING PROGRAM**

B.S. 9-19-14

TYPE	SPECIFICATIONS			FOOTAGE	INTERVALS	CEMENT
	Size	Grade	Weight per ft	For Drilling	Left in Well	Fill -up (Cu. Ft.)
Conductor	13"	API	54.5#	20'		N/A
Fresh Water	9 5/8"	API	40#	300'	300'	CTS
Coal						
Intermediate	7"	API	17#	1500'	1500'	CTS
Production	4 1/2"	API	11.6#	3540'	3540'	Packers and Sleeves
Tubing						
Liners						

Packers: Kind: \_\_\_\_\_  
Sizes: \_\_\_\_\_  
Depths Set \_\_\_\_\_

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SEP 24 2014  
WV Department of Environmental Protection

Waco

OIL AND GAS COMPANY, INC.

Completion Method

Waugh 1H-2044

The proposed well bore will be drilled on air. Once at TMD, we will blow the hole for 1 hour. With a packer set on the bottom of the 7" for safety and isolation, we will run the production string with packers and sliding sleeves. We will set a packer and sliding sleeve every 200' starting at the toe of the well bore back to the heel. We will only be stimulating the horizontal part of the well bore, using 30,000 pounds of sand, 240,000 cubic feet of nitrogen and 90 barrel of water per stage. We estimate there will be 8 total stages.

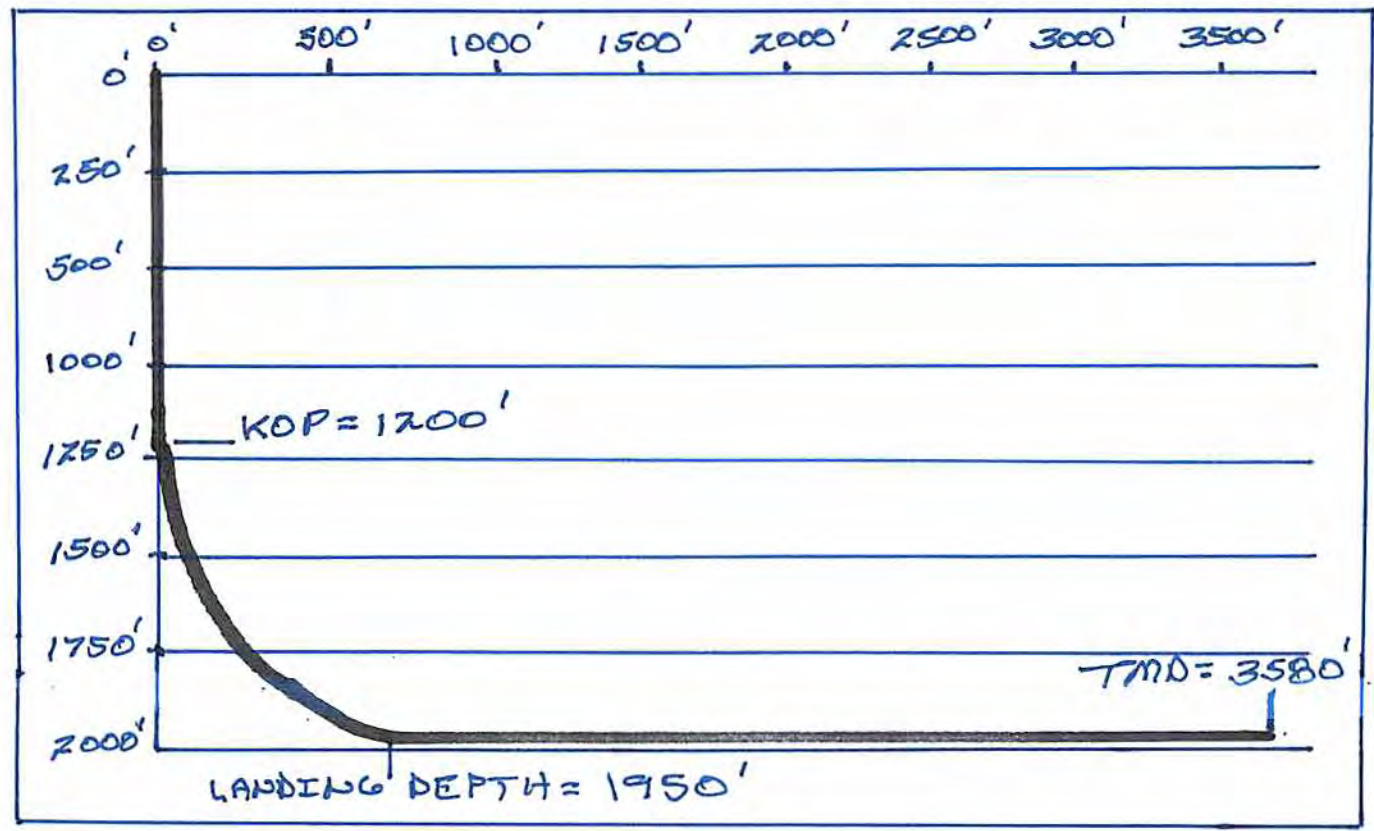
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OCT 16

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Environmental Protection

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Wellbore Graph  
Waco Oil & Gas Co., Inc.  
Waugh 1H-2044



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Waco

Department of Environmental Protection  
Office of Oil & Gas  
601 57<sup>th</sup> St, SE  
Charleston, WV 25304-2345

OIL AND GAS COMPANY, INC.

October 16, 2014

Re: Waugh 1H-2044

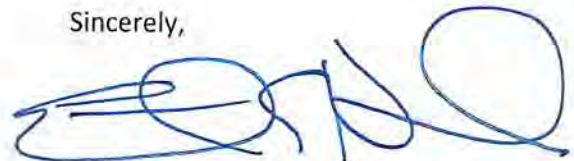
Jeff McLaughlin:

As per your request, following, please find the measures Waco Oil & Gas Co., Inc. will undertake to protect the offset wells to our proposed horizontal well referenced above.

Firstly, please know that all the offset wells, 47-041-02041, 47-041-01143, 47-041-01511, 47-041-02041 and 47-041-00607 are all owned and operated by Waco Oil & Gas Co., Inc. The surface equipment will all be inspected for assurance of proper rating and condition. All wells have earthen containments for any liquid spills. All wells will be continuously monitored during the fracturing process by Waco employees for any changes in pressure, etc., from a safe distance to protect employees from any physical harm. During the completion process, any and all stages that could potentially communicate to offset wells will be adjusted accordingly.

We do not feel that communication to offset wells will occur, but in the unlikely event that it does occur, we are fully prepared to safely handle the situation.

Sincerely,



Stephen E. Holloway

Waco Oil & Gas Co., Inc.

Land Manager

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Office of Oil and Gas

OCT 16 2014

WV Department of  
Environmental Protection

WW-2A  
(Rev. 6-14)

1.) Date: 9-9-14  
2.) Operator's Well Number Waugh #1H 2044  
State County Permit  
3.) API Well No.: 47- 041 - 05695 H

**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 I.L. Morris ✓  
Address P.O. Box 397  
Glenville, WV 23651  
(b) Name Mike Ross Inc. ✓  
Address P.O. Box 219  
Coalton, WV 26257  
(c) Name \_\_\_\_\_  
Address \_\_\_\_\_  
5) (a) Coal Operator Name N/A  
Address \_\_\_\_\_  
(b) Coal Owner(s) with Declaration Name N/A  
Address \_\_\_\_\_  
(c) Coal Lessee with Declaration Name N/A  
Address \_\_\_\_\_  
6) Inspector Address \_\_\_\_\_  
Telephone \_\_\_\_\_

**TO THE PERSONS NAMED ABOVE TAKE NOTICE THAT:**

OR  
 Included is the information required by Chapter 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)

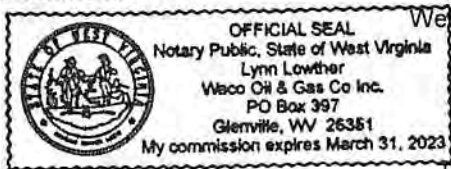
I certify that as required under Chapter 22-6 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through \_\_\_ on the above named parties by:

- 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: Waco Oil & Gas Co., Inc.  
By: Stephen E. Holloway  
Its: Land Manager  
Address: P.O. Box 397  
Glenville, WV 26351  
Telephone: 9304) 462-5347  
Email: steve.holloway@wacowv.com  
Subscribed and sworn before me this 9th day of September, 2014

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Office of Oil and Gas

SEP 24 2014

Notary Public  
WV Department of Environmental Protection

My Commission Expires March 31, 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](mailto:depprivacyofficer@wv.gov)

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CK

WW-2A Surface Waiver

SURFACE OWNER WAIVER

County Lewis

Operator  
Operator well number

Waco Oil & Gas Co., Inc.  
Waugh #1H 2044

**INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW2-A**

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

**NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.**

**WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:**

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

**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

I. L. Morris  
Signature

Date 9/17/14

I. L. Morris  
Print Name

FOR EXECUTION BY A CORPORATION, ETC.

Company Name Mike Ross, Inc.  
By Mike Ross  
Its 9/17/14  
Date

Mike Ross  
Signature  
Date

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SEP 24 2014  
WV Department of Environmental Protection



**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
B	C.O. Dennison	W.H. Mossor		1/8	271/657
B	Pearl Keith	W.H. Mossor		1/8	268/683
B	E.G. Waugh	W.H. Mossor		1/8	264/381
B	Raymond Keith	W.H. Mossor		1/8	269/591
B	Darrie Keith Deweese	W.H. Mossor		1/8	268/686
B	Rex Deweese	W.H. Mossor		1/8	269/161
A	Clayton Waugh, et al	W.H. Mossor		1/8	271/141
A	H.Z. Wiseman	W.H. Mossor		1/8	272/444

**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:

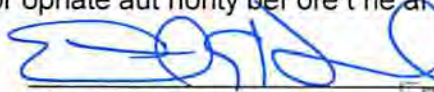
- WV Division of Water and Waste Management
- WV Division of Natural Resources
- WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

*W.H. Mossor to Term Energy 410/308*  
*Term Energy to Triad Energy 607/112*  
*Triad Energy to Waco Oil & Gas 680/340*

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Office of Oil and Gas

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:

  
 Waco Oil & Gas Co., Inc.  
 Stephen E. Holloway/Land manager

WV Department of  
Environmental Protection

4105695H

WW-2B1  
(5-12)

Well No. Waugh #1H 2044

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 Reliance Laboratories- Bridgeport, WV  
Sampling Contractor Hupp Surveying & Mapping

Well Operator Waco Oil & Gas Co., Inc.  
Address P.O. Box 397  
Glenville, WV 26351  
Telephone 304-462-7170

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.

SEE ATTACHMENT.

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SEP 24 2014  
WV Department of  
Environmental Protection

10/17/2014

# HUPP Surveying & Mapping

P.O. BOX 647

GRANTSVILLE, WV 26147

(304) 354-7035 [hupp@frontiernet.net](mailto:hupp@frontiernet.net) FAX: (304) 354-6548

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4105695H

September 9, 2014

RE: Water Samples for Waugh #1H 2044

There appears to be two (2) potable water sources within 1,500' of Waugh #1H 2044, therefore tests should be offered and samples taken as required.

1. Brad & Cynthia Wilson  
8128 US HWY. 33 W  
Camden, WV 26338  
Tax Map 1F Parcels 3 & 4
2. I.L. Morris, et al  
P.O. Box 219  
Glennville, WV 26351  
Tax Map 1F Parcel 11

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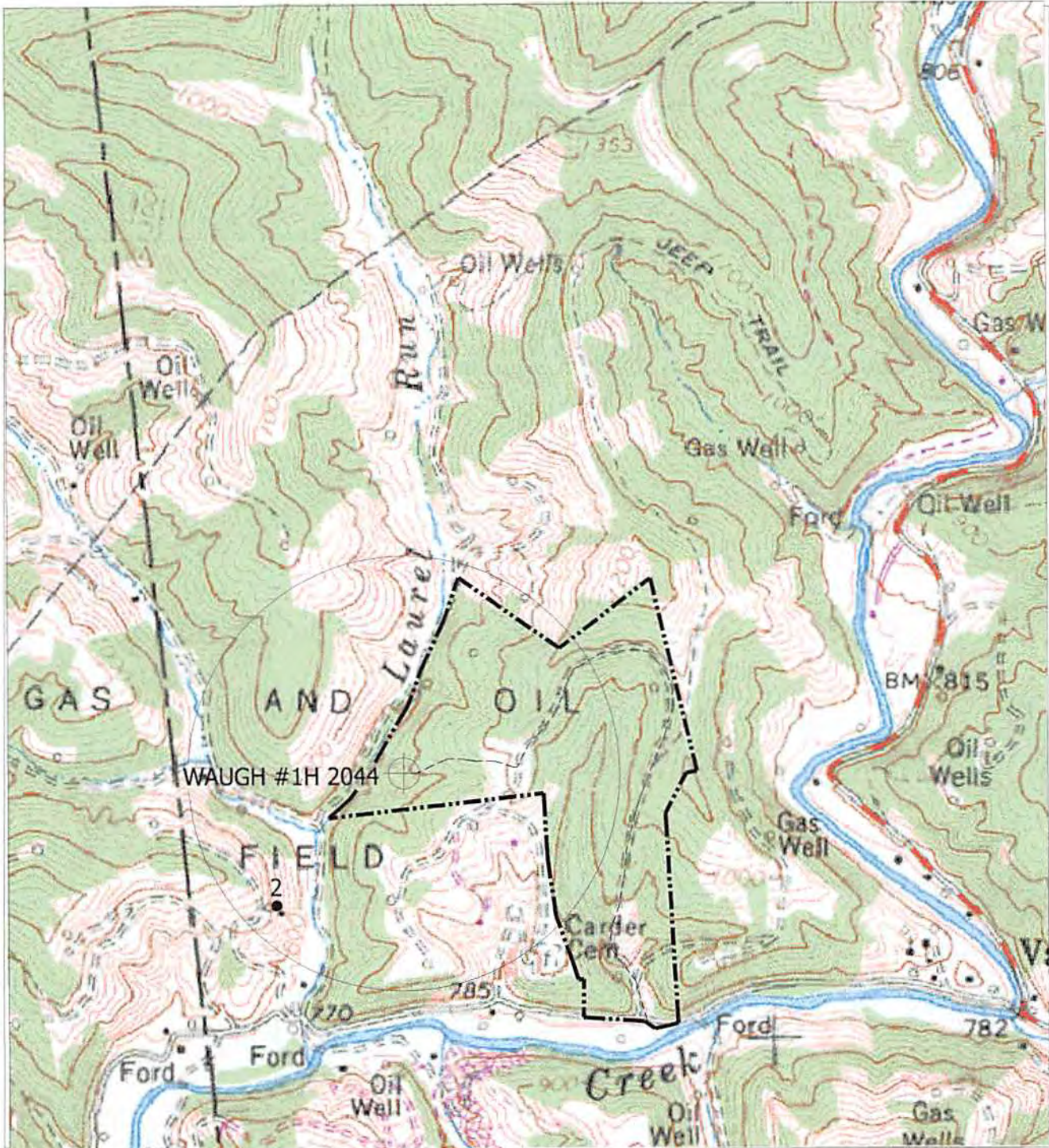
WV Department of  
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10/17/2014

# Waco Oil & Gas Co. Inc. WAUGH #1H 2044 WATER

Form W-9

Page 1 of 1



*BS 9-19-14*

**HUPP Surveying & Mapping**  
 P.O. BOX 647 GRANTSVILLE, WV 26147  
 PH: (304) 354-7035 E-MAIL: hupp@frontiernet.net

1" = 1000'  
 VADIS 7.5'

Waco Oil & Gas Co., Inc.  
 P.O. Box 397  
 Glenville, WV 26351

4105695H

WW-9  
(5/13)

Page \_\_\_\_\_ of \_\_\_\_\_  
API Number 47 - 041 - \_\_\_\_\_  
Operator's Well No. Waugh #1H 2044

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Waco Oil & Gas Co., Inc. OP Code 306294

Watershed (HUC 10) Laurel Run Quadrangle Vadis

Elevation 905' County \_\_\_\_\_ District Freemans Creek

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

Will a pit be used for drill cuttings? Yes X No \_\_\_\_\_

If so, please describe anticipated pit waste: water encountered & used for drilling

Will a synthetic liner be used in the pit? Yes X No \_\_\_\_\_ If so, what ml.? 20

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? No

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. Air/Freshwater

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

Additives to be used in drilling medium? Brine Water

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

-Landfill or offsite name/permit number? N/A

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) Stephen E. Holloway

Company Official Title Land Manager

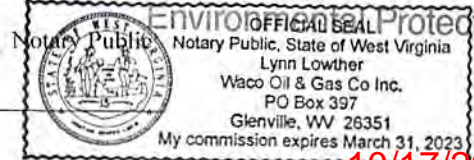
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SEP 24 2014

Subscribed and sworn before me this 9th day of September, 2014

Lynn Lowther

My commission expires March 31, 2023



WV Department of  
Environmental Protection

10/17/2014

Proposed Revegetation Treatment: Acres Disturbed 2.0 Prevegetation pH \_\_\_\_\_

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer (10-20-20 or equivalent) 1/3 Ton lbs/acre (500 lbs minimum)

Mulch Hay 2 Tons/acre

Seed Mixtures

Seed Type	Area I lbs/acre	Seed Type	Area II lbs/acre
KY-31	40	Orchard Grass	15
Alsike Clover	5	Alsike clover	5
Annual Rye	15		

Attach:

Drawing(s) of road, location, pit and proposed area for land application.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: \_\_\_\_\_

*Barry Shrop*

Comments: \_\_\_\_\_

Title: inspector

Date: 9-19-14

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Office of Oil and Gas

Field Reviewed?  Yes  No

SEP 24 2014

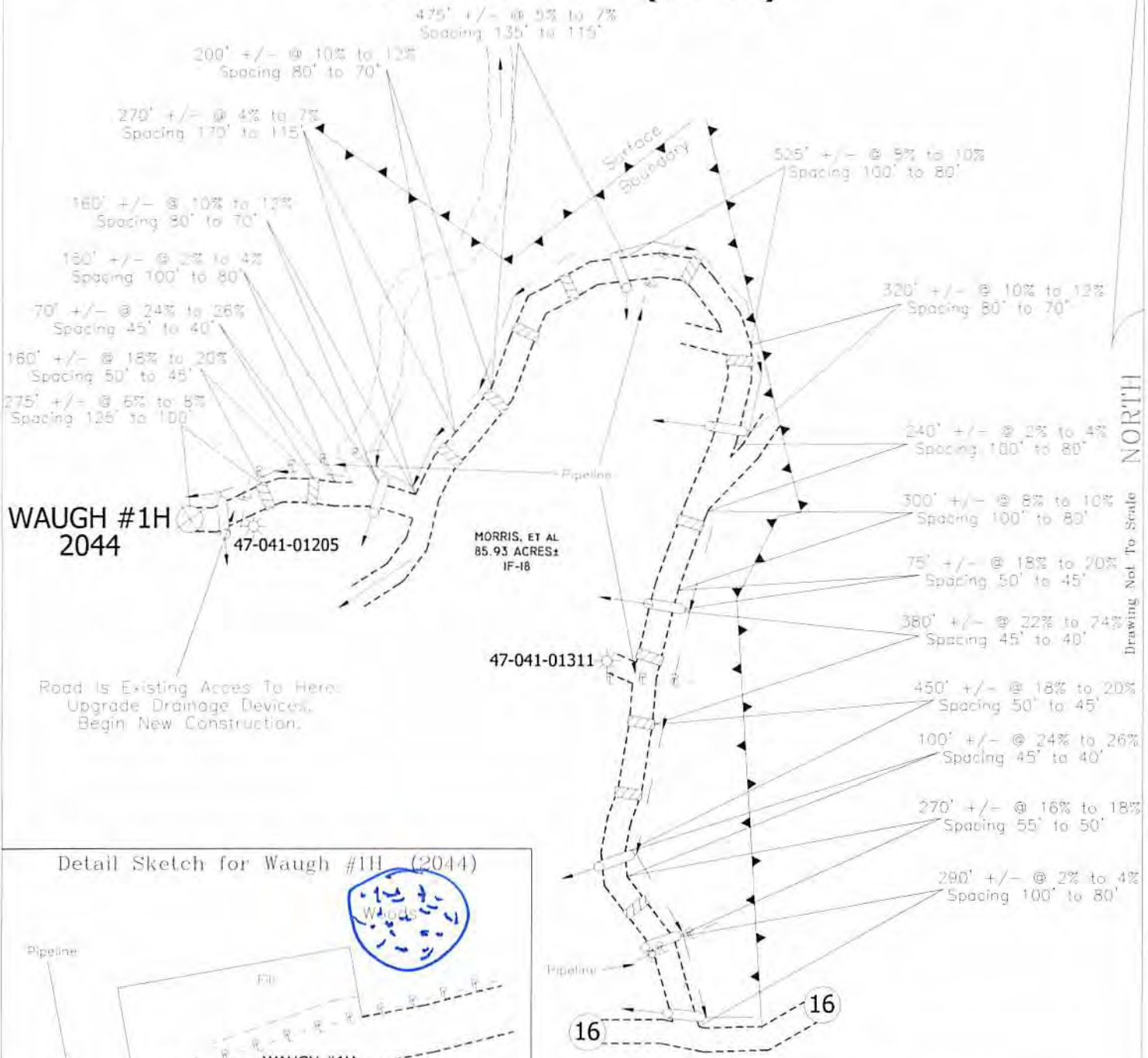
WV Department of  
Environmental Protection

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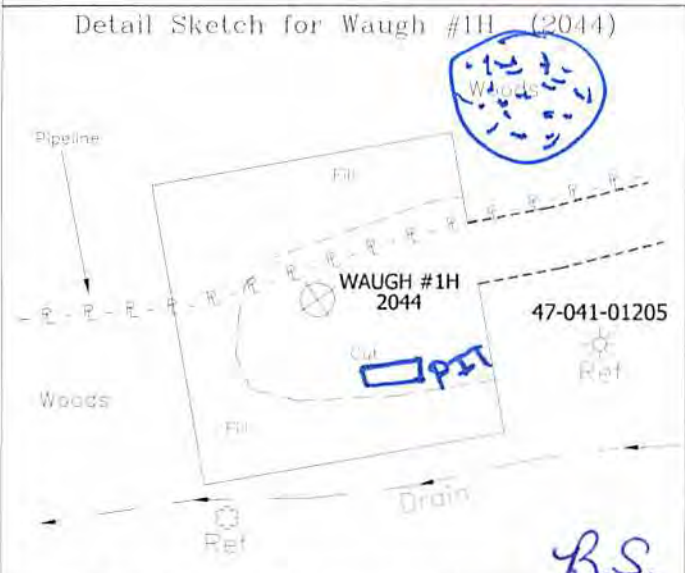
# WACO OIL & GAS CO. INC. WAUGH #1H (2044)

Form W-9

Page 1 of 1



NORTH  
Drawing Not To Scale



Install Minimum 12" Culvert

ALL ROADS SHOWN HEREON ARE EXISTING UNLESS OTHERWISE NOTED AND SHALL BE MAINTAINED IN ACCORDANCE WITH DEP, OIL AND GAS BMP MANUAL ENTRIES AT COUNTY-STATE ROADS SHALL BE MAINTAINED IN ACCORDANCE WITH WV DEP REGULATIONS. SEPARATE PERMITS MAY BE REQUIRED BY THE SDT.

SEDIMENT BASINS, TRAPS AND APPROPRIATE EROSION CONTROL BARRIERS ARE TO BE CONSTRUCTED AT ALL DELIVERY AND CROSS DRAIN PLETS AND OUTLETS AS REQUIRED IN THE WV DEP, OIL AND GAS BMP MANUAL. FIELD CONDITIONS PROVE INADEQUATE AND SEDIMENT TRAP PROBLEMS BEING INSTALLED. WHEN THESE CONDITIONS EXIST ADDITIONAL EROSION CONTROL MEASURES SHALL BE EVALUATED AND UTILIZED.

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

CONTRACTORS/COMPANY ARE RESPONSIBLE FOR LOCATING UTILITIES WHETHER SHOWN ON THIS PLAN OR NOT.

PERMANENTLY SEEK PERMITS PRIOR TO ANY ALTERATION OF LOCATION.

DO NOT STRIKE ALL TREES ABOVE 6" DBH. CHAIN AND THINER.

GRASS BRUSH BELOW LOCATION FOR SEDIMENT CONTROL.

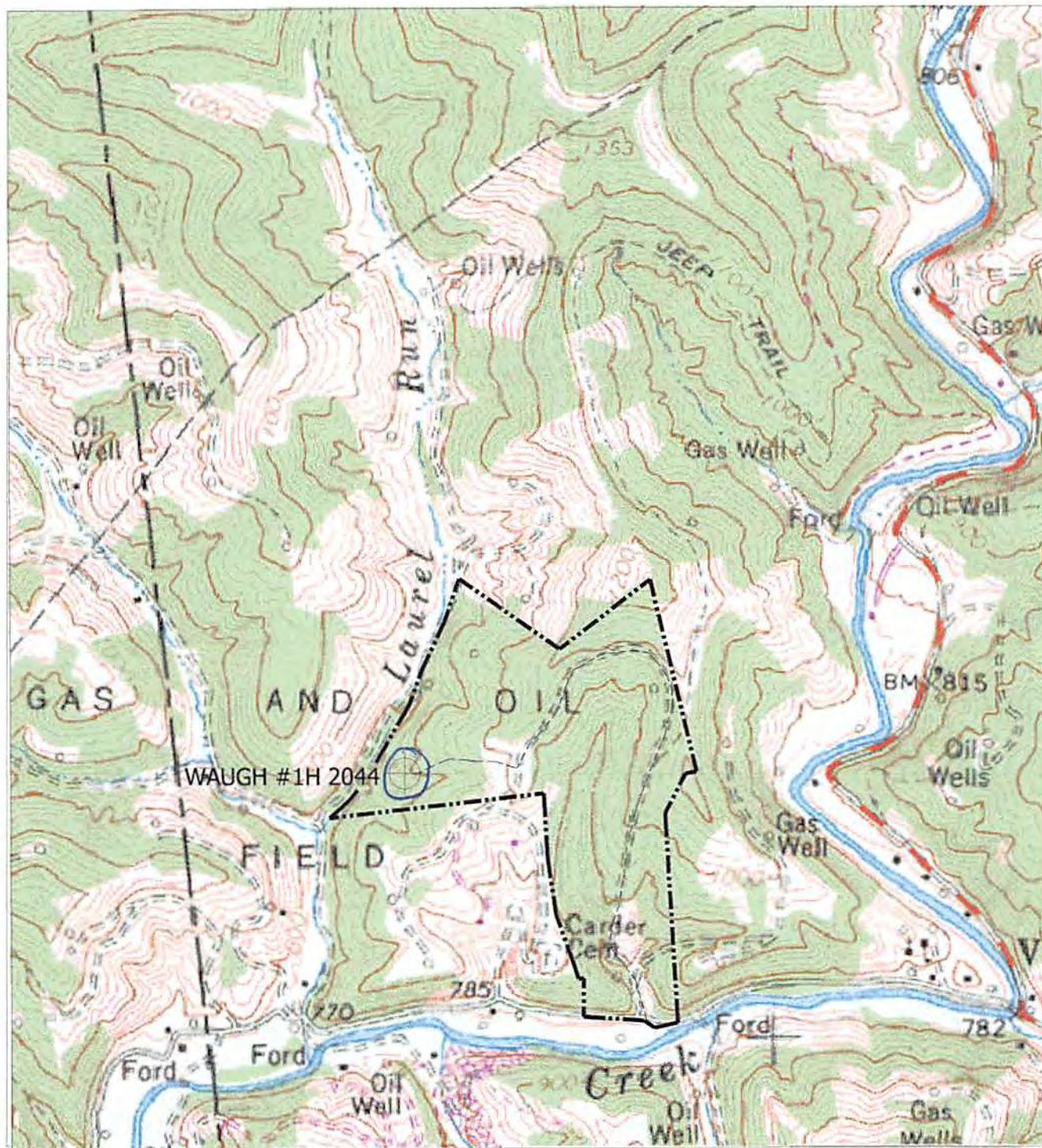
B.S. 9-19-14

<b>HUPP Surveying &amp; Mapping</b> P.O. BOX 647 GRANTSVILLE, WV 26147 PH: (304)354-7035 E-MAIL: hupp@frontier.net	Drafted BY: DB	Date Drafted: SEP 24 2014 Job Number: W20142357
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RECEIVED  
Office of Oil and Gas

WV Department of Environmental Protection  
10/17/2014

# Waco Oil & Gas Co. Inc. WAUGH #1H 2044



NORTH

### HUPP Surveying & Mapping

P.O. BOX 647 GRANTSVILLE, WV 26147  
PH: (304)354-7035 E-MAIL: hupp@frontiernet.net

1" = 1000'  
VADIS 7.5'

Waco Oil & Gas Co., Inc.  
P.O. Box 397  
Glenville, WV 26351

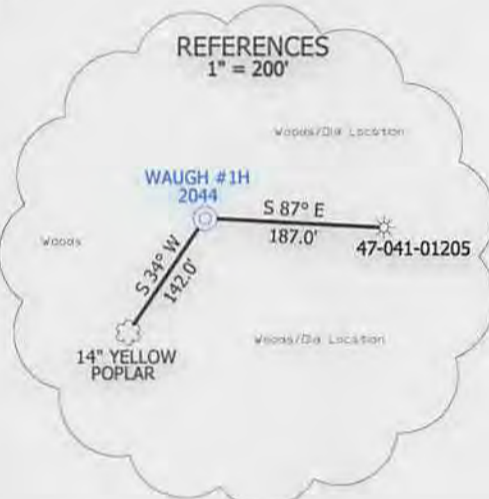


# WAUGH #1H 2044

WAUGH #1H 2044 SURFACE HOLE		
STATE PLANE COORDINATES	L & L DECIMAL	UTM (NAD 83) ZONE 17 METERS
NORTH ZONE-NAD 27	NAD 27	
(N) 201422	39.04659	4321994
(E) 1654226	80.71744	524466

WAUGH #1H 2044 LANDING POINT		
STATE PLANE COORDINATES	L & L DECIMAL	UTM (NAD 83) ZONE 17 METERS
NORTH ZONE-NAD 27	NAD 27	
(N) 201230	39.04606	4321936
(E) 1654282	80.71724	524485

WAUGH #1H 2044 BOTTOM HOLE		
STATE PLANE COORDINATES	L & L DECIMAL	UTM (NAD 83) ZONE 17 METERS
NORTH ZONE-NAD 27	NAD 27	
(N) 199897	39.04242	4321532
(E) 1654671	80.71580	524610



### NOTES ON SURVEY

1. NO DWELLINGS WITHIN 625' WERE FOUND.
2. NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250' WERE FOUND. TIES TO WELLS AND CORNERS ARE BASED ON STATE PLANE GRID NORTH WV NORTH ZONE NAD '27.
3. WELL LAT./LONG. ESTABLISHED BY DGPS(SUB-METER).
4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF LEWIS COUNTY IN AUGUST, 2014 AND INFORMATION PROVIDED BY WACO OIL & GAS CO.
5. WELLS SHOWN ARE TAKEN FROM RECORDS OF WVDEP.

### LINE LEGEND

LEASE BOUNDARY	---
SURFACE BOUNDARY	---
CREEK/STREAM	---
ROADS	---
WELL TIES	---
HYPOTHETICAL	---
500' LATERAL OFFSET	---

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 RULES ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



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

DATE SEPTEMBER 8, 20 14

OPERATORS WELL NO. WAUGH #1H 2044

API NO. 47-041-05695H

WELL NO. 47-041-05695H STATE WV COUNTY LEWIS PERMIT 10/17/2014

P.S. 834  
  
 HUPP Surveying & Mapping  
 P.O. Box 647 Grantsville, WV 26147  
 (304) 354-7035 EMAIL: hupp@frontiernet.net

MINIMUM DEGREE OF ACCURACY 1/200 FILE NO. W2357 (BK71-64)  
 PROVEN SOURCE OF ELEVATION DGPS (SUBMETER) SCALE 1" = 500'

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



WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  IF "GAS" PRODUCTION  STORAGE  DEEP  SHALLOW

LOCATION: ELEVATION 905' WATERSHED LAUREL RUN  
 DISTRICT FREEMANS CREEK COUNTY LEWIS QUADRANGLE VADIS 7.5'

SURFACE OWNER I.L. MORRIS & MIKE ROSS INC. ACREAGE 85.93±

ROYALTY OWNER WILLIAM WISEMAN, et al LEASE ACREAGE 145.43±

PROPOSED WORK: LEASE NO. \_\_\_\_\_

DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION  PLUG AND ABANDON  CLEAN OUT AND REPLUG  OTHER \_\_\_\_\_

PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_ TARGET FORMATION INJUN

ESTIMATED DEPTH TVD-1,950' MD-3,540'

WELL OPERATOR WACO OIL & GAS CO., INC. DESIGNATED AGENT STEPHEN E. HOLLOWAY

ADDRESS P.O. BOX 397 GLENVILLE, WV 26351 ADDRESS P.O. BOX 397 GLENVILLE, WV 26351

COUNTY NAME PERMIT