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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

July 09, 2013

**WELL WORK PERMIT**

**Vertical Well**

This permit, API Well Number: 47-3305776, issued to HG ENERGY, LLC, 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: W.F. WILLIAMS NO. 234

Farm Name: HUFFMAN, BRIAN V.

**API Well Number: 47-3305776**

**Permit Type: Vertical Well**

Date Issued: 07/09/2013

**Promoting a healthy environment.**

**07/12/2013**

# 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. 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 within 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. No land application of pit fluids.
6. A monitor well will be drilled near Mr. Huffman's house and fluid levels will be monitored at least quarterly and sampled at least yearly with the results provided to the WV DEP, Office of Oil and Gas. The well must be a minimum of 300 feet deep or 50 feet below the subsurface elevation of Mr. Huffman's water well, whichever achieves the greatest depth. The monitor well must be drilled and tested before injecting any fluids into any of the new secondary recovery wells within one thousand (1,000) feet of Mr. Huffman's water well.

3305776

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

- 1) Well Operator: HG Energy, LLC
- 2) Operator's Well Number: W. F. Williams No. 234      3) Elevation 1168'
- 4) Well Type: (a) Oil X or Gas \_\_\_\_\_  
 (b) If Gas:      Production \_\_\_\_\_      Underground Storage \_\_\_\_\_
- 5) Proposed Target Formation(s): Fifth Sand
- 6) Proposed Total Depth: 2875' TVD 3100' TMD ft.
- 7) Approximate fresh water strata depths: 80'
- 8) Approximate salt water depths: 1270'
- 9) Approximate coal seam depths: 424'
- 10) Does land contain coal seams tributary to active mine?      Yes \_\_\_\_\_      No X
- 11) Proposed Well Work: Drill and stimulate production well in Fifth Sand, well to be drilled directionally N 42° W 400'

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight Per Ft.	For Drilling	Left in Well	Fill-up (Cu. Ft.)
Conductor						
Fresh Water	7"	LS	17#	499'	499'	Cement to surface
Coal						
Intermediate						
Production	4 1/2"	J-55	10.5#	3100'	3100'	150 Sacks <u>CTS</u>
Tubing						
Liners						

*SDW  
5/23/2013*

Packers: Kind \_\_\_\_\_  
 Sizes \_\_\_\_\_  
 Depths set \_\_\_\_\_

For Office of Oil and Gas Use Only

- Fee(s) Paid
  - Well Work Permit
  - Reclamation Fund
  - Plat
  - WW-9
  - WW-2B
  - Bond
- (Type) \_\_\_\_\_

WPCP  
 Received  
 Office of Oil & Gas  
 Agent

JUN 19 2013

07/12/2013

1) Date: May 22, 2013  
2) Operator's Well Number  
W. F. Williams No. 234  
3) API Well No: 47 - 033 - 05776  
State County Permit

**STATE OF WEST VIRGINIA - BUREAU OF ENVIRONMENT  
DIVISION 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 Orville Myers  
Address RR 4, Box 534  
Salem, WV 26426  
(b) Name Brian V. Huffman  
Address RR 4, Box 530  
Salem, WV 26426  
(c) Name \_\_\_\_\_  
Address \_\_\_\_\_  
6) Inspector Sam Ward  
Address P.O. Box 2327  
Buckhannon, WV 26201  
Telephone (304) - 389-7583

5) (a) Coal Operator:  
Name NA  
Address \_\_\_\_\_  
(b) Coal Owner(s) with Declaration  
Name NA  
Address \_\_\_\_\_  
(c) Coal Lessee with Declaration  
Name Wolf Run Mining  
Address 2708 Cranberry Square  
Morgantown, WV 26505

**TO THE PERSON(S) NAMED ABOVE TAKE NOTICE THAT:**

\_\_\_\_\_ Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas **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 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through 4 on the above-named parties, by:

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

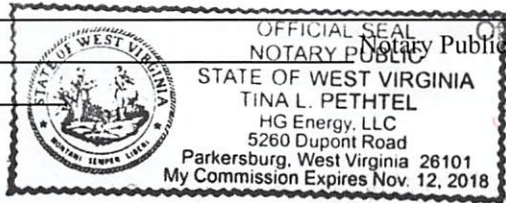
I have read and understand Chapter 22-6 and 38 CSR 11-18, and I agree to the terms and conditions of any permit issued under this application.

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 HG Energy, LLC  
By: Diane C White *Diane C White*  
Its: Accountant  
Address 5260 Dupont Road  
Parkersburg, WV 26101  
Telephone (304) 420-1119

Subscribed and sworn before me this 22 day of May  
*Tina L. Pethel*  
My commission expires Nov. 12, 2013



Received  
Office of Oil & Gas

JUN 19 2013

3309776

Form WW-2A(1)  
(10/10)

Operator's Well No. W. F. Williams No. 234

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
Williams, W F Et Ux	South Penn Oil Company	1/8	92/49

Merger and Conveyance dated July 3, 1963, from South Penn Oil Company to Penzoil Company, Kanawha County, Book 153, Page 35,

Assignment, Conveyance and Bill of Sale dated December 28, 1998, from Pennzoil Company to Pennz Energy Exploration and Production, Wetzel County, Book 12, Page 177.

Certificate of Merger filed with the WV Secretary of State, December 31, 1999, whereby Pennz Energy Exploration and Production, successor in interest to; to Penzoil Company, merged with Devon Energy Production Company, LP, Wetzel County, Book 12, Page 278.

Deed, Assignment and Bill of Sale dated June 1, 2000, from Devon Energy Production Company, LP to East Resources, Inc., recorded in Wetzel County, Book 370, Page 580.

Assignment, Conveyance and Bill of Sale, dated January 1, 2011, from East Resources, Inc., to HG Energy, LLC, Wetzel County, Book 118A, Page 253.

Upon information and belief, Operator's lease and/or other real property rights permit it to conduct drilling operations for the subject well in the location shown on the plat, including the use of access roads, pipelines and utilities.

**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:

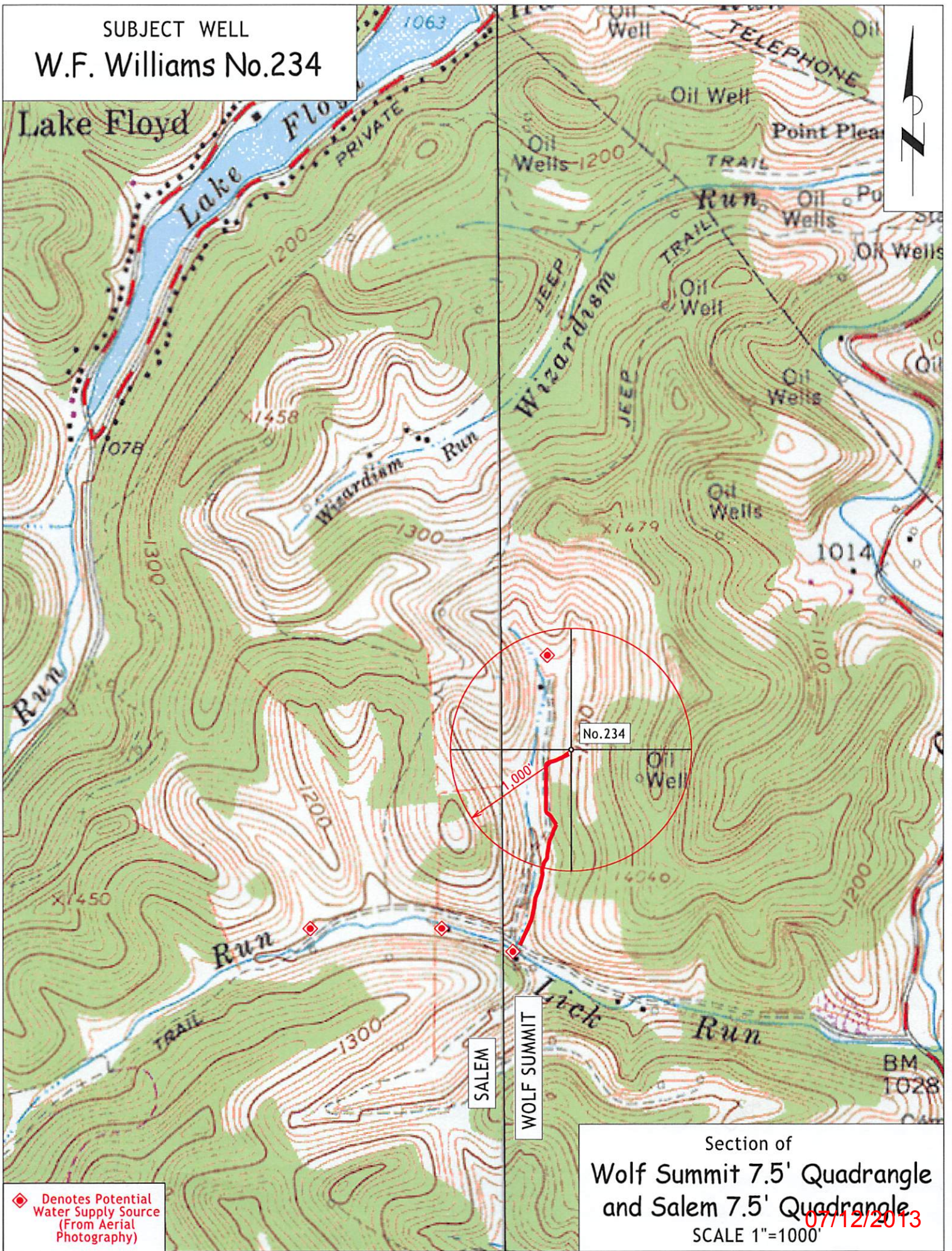
- WV Division of Water and Waste Management
- WV Division of Natural Resources
- WV Division of Highways
- U.S. Army Corps of Engineers
- US Fish and Wildlife Service
- County Floodplain Coordinator

Received  
Office of Oil & Gas  
JUN 19 2013

Well Operator: HG Energy, LLC  
By: Diane C. White  
Its: Accountant

07/12/2013

SUBJECT WELL  
W.F. Williams No.234



Section of  
Wolf Summit 7.5' Quadrangle  
and Salem 7.5' Quadrangle  
SCALE 1"=1000'

07/12/2013

West Virginia Division 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.

If no water well or spring is located within 1000 feet, the Chief may require the operator to sample and analyze water from a water well or spring within 2000 feet of the proposed well site.

Be advised, you have the right to sample and analyze any water supply at your own expense.

The laboratory used by the operator to analyze the samples will be approved by the Chief. The operator named below has decided to use the following laboratory to analyze the water samples:

Contractor Name Sturm Environmental Services  
 Well operator's private laboratory

Well Operator HG Energy, LLC  
Address 5260 Dupont Road  
Parkersburg, WV 26101  
  
Telephone 304-420-1119

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 underlining which one you have selected to sample and analyze. If there are no water wells or springs within 1000 feet of the proposed site please indicates such.

Wayne & Beatrice England  
RR 5, Box 960  
Salem, WV 26426

Ronald E. & Naomi J. Myers  
RR 4, Box 492  
Salem, WV 26426

Richard L. & Kerry E. Kesling  
RR 1, Box 24-D  
Wolf Summit, WV 26462

Received  
Office of Oil & Gas

Michael E. Hostutler  
RR 4, Box 504  
Salem, WV 26426

Frances J. Hostutler  
RR 4, Box 506  
Salem, WV 26426

July 13 2013

3305776

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

CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM  
GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE

Operator HG Energy, LLC OP Code 494497948  
Watershed Branch of Lick Run Quadrangle Wolf Summit 7.5' 692  
Elevation 1168' County Harrison 33 District Ten Mile 09

Description of anticipated Pit Waste: Fluids encountered in drilling shallow well.

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

Will a synthetic liner be used in pit? Yes          If so, what mil.? ~~10 Mil.~~ 20 mil.

Proposed Disposal Method For Treated Pit Wastes:  
 Land Application HAUL PIT FLUIDS  
 Underground Injection (UIC Permit Number         )  
 Reuse (at API Number         )  
 Off Site Disposal (Supply Form WW-9 for disposal location)  
 Other (Explain         )

Drilling medium anticipated for this well? Air, fresh water, oil based, etc. Air, Fresh Water

- If oilbased, what type? Synthetic, petroleum, etc.         

Additives to be used? Water, soap, KCl

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          Native soil, cement, lime

- Landfill or offsite name/permit number?         

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.

SDW  
5/23/2013

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.

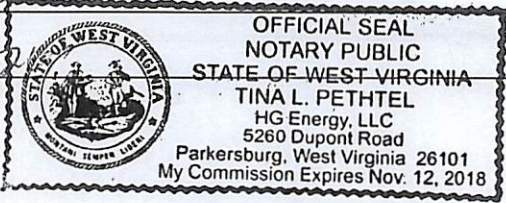
Company Official Signature Diane C White  
Company Official (Typed Name) Diane C. White  
Company Official Title Accountant

Subscribed and sworn before me this 22 day of May 2013

[Signature]

Notary Public

My commission expires Nov 12 2018  
Form WW-9



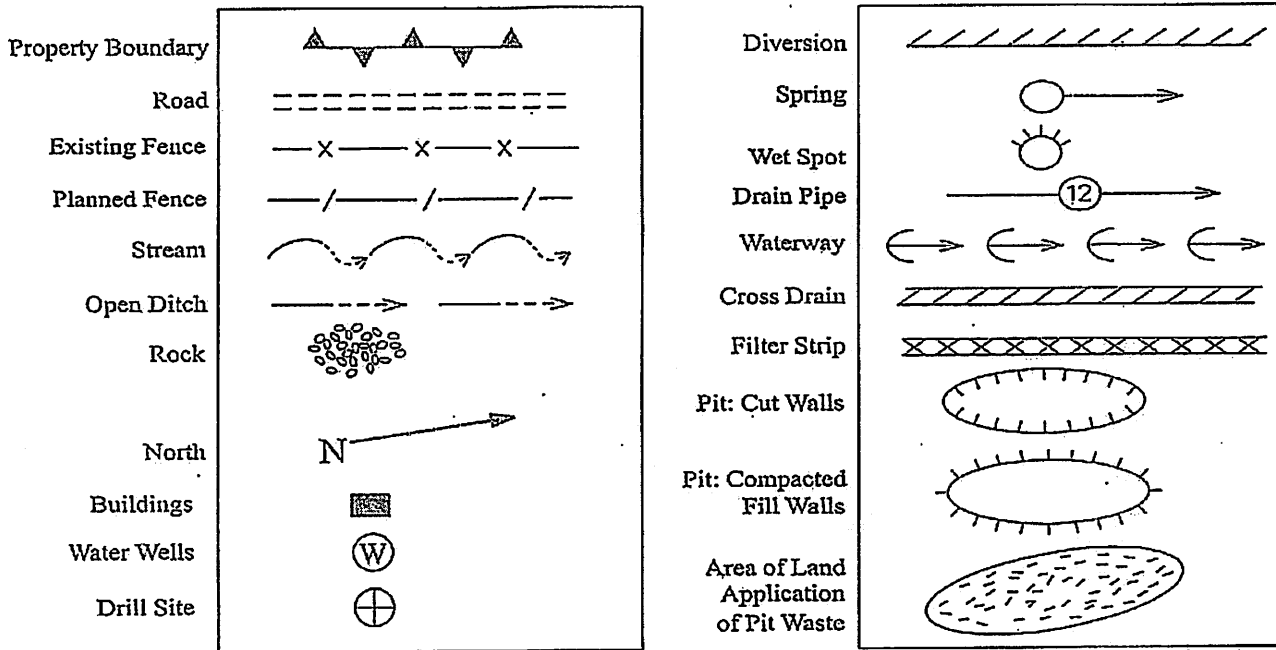
Received  
Office of Oil & Gas

JUN 19 2013

07/12/2013



Legend



Proposed Revegetation Treatment: Acres Disturbed Area I  
 Approx. 1.0 Ac. Prevegetation pH \_\_\_\_\_

Area II  
 Approx. 0.1 Ac.

Lime 2 Tons/Acre or Correct to pH 6.5  
 Fertilizer (10-20-20 or Equivalent) 500 Lbs./Acre (500 lbs. Minimum)  
 Mulch Straw 2 Tons/Acre

SEED MIXTURES.

<u>Area I (Location)</u>		<u>Area II (Road)</u>	
Seed Type	Lbs./Ac.	Seed Type	Lbs./Ac.
Tall Fescue	<u>40</u>	Tall Fescue	<u>40</u>
Ladino Clover	<u>5</u>	Ladino Clover	<u>5</u>

Attach:  
 Drawing(s) of road, location, pit and proposed area for land application  
 Photocopied section of involved 7.5' topographic sheet.

Plan approved by: S. J. W. W. W. Pre-seeds & mulch. Upgrade E&S as necessary per WV DEP E&S manual

Title: Oil & Gas Inspector Date: 5/23/2017

Field Reviewed? X Yes \_\_\_\_\_ No

Reclamation Plan For:  
W.F. Williams No. 234

325063



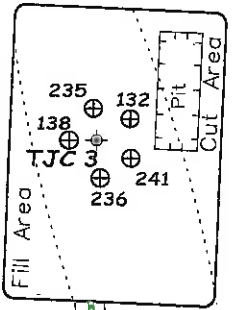
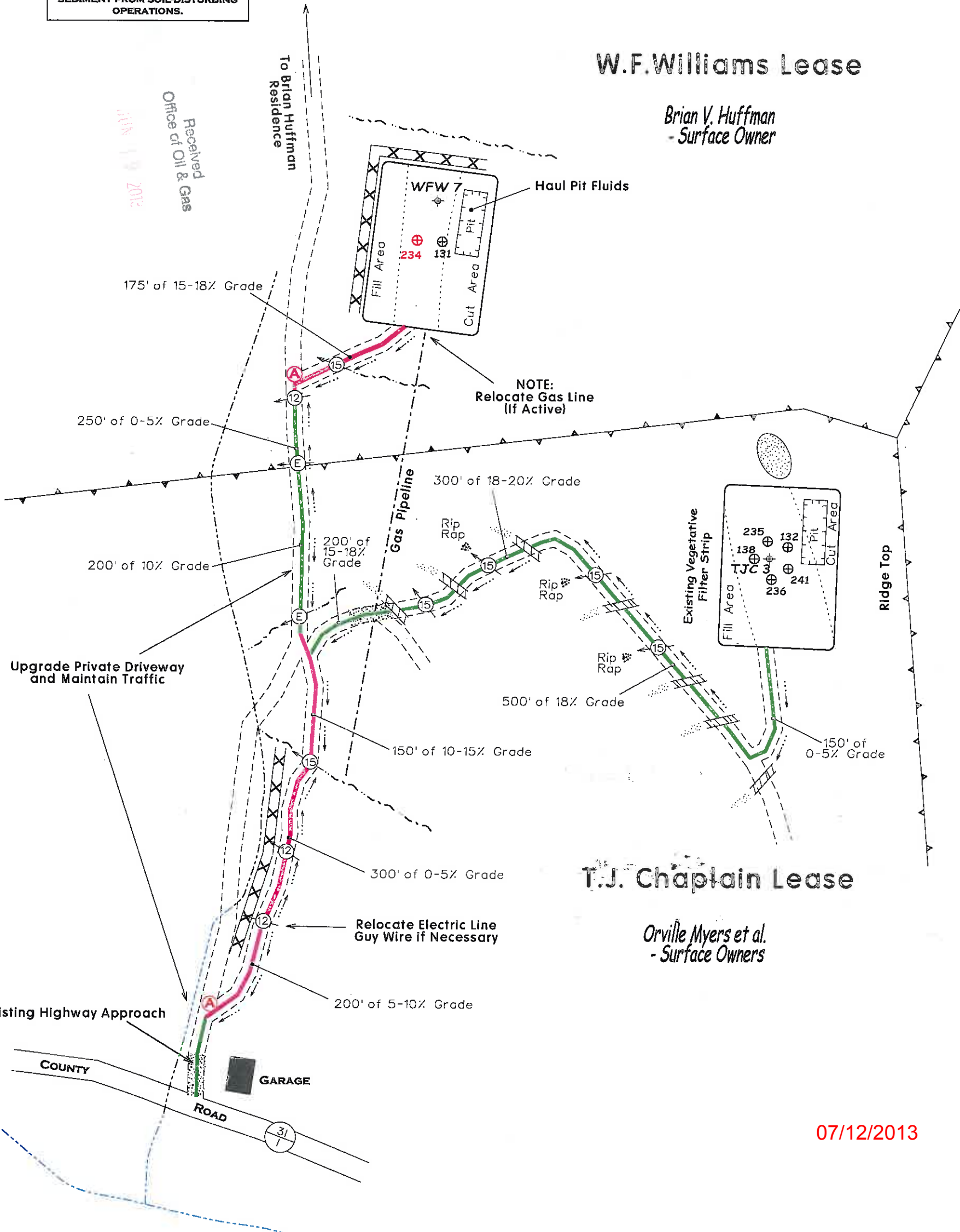
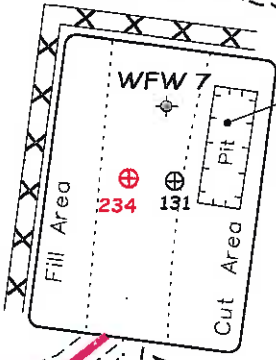
**NOTE**  
REFER TO THE WVDEP  
EROSION AND SEDIMENT CONTROL  
FIELD MANUAL VER. MAY 2012 FOR  
BMPs CONTROLLING EROSION AND  
SEDIMENT FROM SOIL-DISTURBING  
OPERATIONS.

Received  
Office of Oil & Gas  
JUN 19 2012

To Brian Huffman  
Residence

W.F. Williams Lease

Brian V. Huffman  
- Surface Owner



T.A. Rumble Lease

Ronald Myers  
- Surface

T.J. Chaplain Lease

Orville Myers et al.  
- Surface Owners

07/12/2013

SDW  
5/23/2013

Notes:

- REQUESTED PERMIT IS FOR DRILLING OF NEW WELLS.
- ACCESS ROAD FROM Co. Rd. 31/1 TO PT. A IS EXISTING. ROAD WILL BE UPGRADED TO WVDEP STANDARDS AND STRUCTURES INSTALLED AS SHOWN.
- ALL DISTURBED AREAS WILL BE RE-VEGETATED AS OUTLINED ON FORM WW-9.
- MAINTAIN SEDIMENT BARRIERS AND DRAINAGE STRUCTURES.
- ALL ROAD GRADES <5% EXCEPT AS NOTED.
- LOCATION OF DRILL PIT MAY BE CHANGED BASED ON AS-BUILT CONSIDERATIONS.
- DRAWING NOT TO SCALE.

LEGEND

- EXISTING WATERFLOOD ROADS
- EXISTING LEASE OR FARM ROADS TO BE UPGRADED.
- NEW ROADS TO BE CONSTRUCTED

(BOT. HL: LON:-80°29'56.0")

LON:-80°29'52.7"

11220

1 - Well ties and Latitude and Longitude were measured by Topcon Hiper GA survey grade GPS. Bearings are referenced to UTM Grid North (Zone 17 North - NAD 1927).

2 - Surface owners, adjoining information, Lease names, & line mapping obtained from HGE GIS system. No survey was performed to determine lines within the Waterflood Unit-reference: HGE GIS system.

3 - No Title Opinion was provided to the Surveyor during this survey. This survey is subject to a complete title Opinion.

SURVEY NOTES

UTM Coordinates (Zone 17N-NAD 1983)

Surface N-4,347,052m.  
E-543,322m.

Bottom Hole N-4,347,142m.  
E-543,240m.

LOCATION REFERENCES

UTM 27  
N 15°45' E 48.2' EX: WELL  
N 70°41' W 103.8' 11" MAPLE  
Brg. Direction is prop. well to the ref.

LAT: 39°17'30"  
**MAP OF  
H.G. ENERGY, LLC  
-WATERFLOOD UNIT-  
W.F. WILLIAMS 234**

LON: 80°27'30"

7295

LAT: 39°16'17.9"

(BOTTOM HOLE: LAT: 39°16'20.9")



✕ DENOTES LOCATION OF WELL ON U.S. TOPO MAPS.

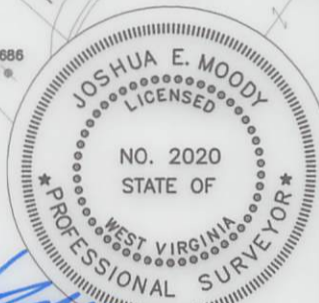
JOB # 13-014  
DRAWING # 13LAKEFLOYD FOLDER  
SCALE 1" = 1500'  
MINIMUM DEGREE OF ACCURACY 1/2500  
PROVEN SOURCE OF ELEV. BENCH MARK H-80

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 PERSCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



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

MOODY LAND SURVEYING, LLC  
ST. MARYS, WV 26170



JOSHUA E. MOODY, P.S. 2020

WEST VIRGINIA DEPARTMENT  
OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS

DATE 4/19/13  
OPERATOR'S WELL  
W.F. WILLIAMS #234

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  HORIZONTAL   
(IF "GAS") PRODUCTION  STORAGE  DEEP  SHALLOW   
LOCATION: ELEVATION 1168' WATERSHED BRANCH OF LICK RUN API WELL # 47-033-05776  
DISTRICT TEN MILE COUNTY HARRISON STATE WV COUNTY PERMIT  
QUADRANGLE WOLF SUMMIT 7.5'

SURFACE OWNER BRIAN V. HUFFMAN ACREAGE 102.35 ACRES +/-

OIL & GAS ROYALTY OWNER CLYDE WILLIAMS ET AL LEASE ACREAGE 102 ACRES +/-

PROPOSED WORK: DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR

STIMULATE  PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION

OTHER PHYSICAL CHANGE IN WELL (SPECIFY) WILL BE DRILLED DIRECTIONALLY (N 42° W 400')

PLUG & ABANDON  CLEAN OUT & REPLUG

TARGET FORMATION 5TH SAND

WELL OPERATOR H.G. ENERGY, LLC

ADDRESS 5260 DuPONT ROAD

PARKERSBURG, WV 26101

ESTIMATED DEPTH MD= 3,100'

DESIGNATED AGENT MIKE KIRSCH

ADDRESS 5260 DuPONT ROAD

PARKERSBURG, WV 26101

07/12/2013

(BOT. HL: LON:-80°29'56.0")

LON:-80°29'52.7"

11220

**SURVEY NOTES**

1 - Well ties and Latitude and Longitude were measured by Topcon Hiper GA survey grade GPS. Bearings are referenced to UTM Grid North (Zone 17 North - NAD 1927).

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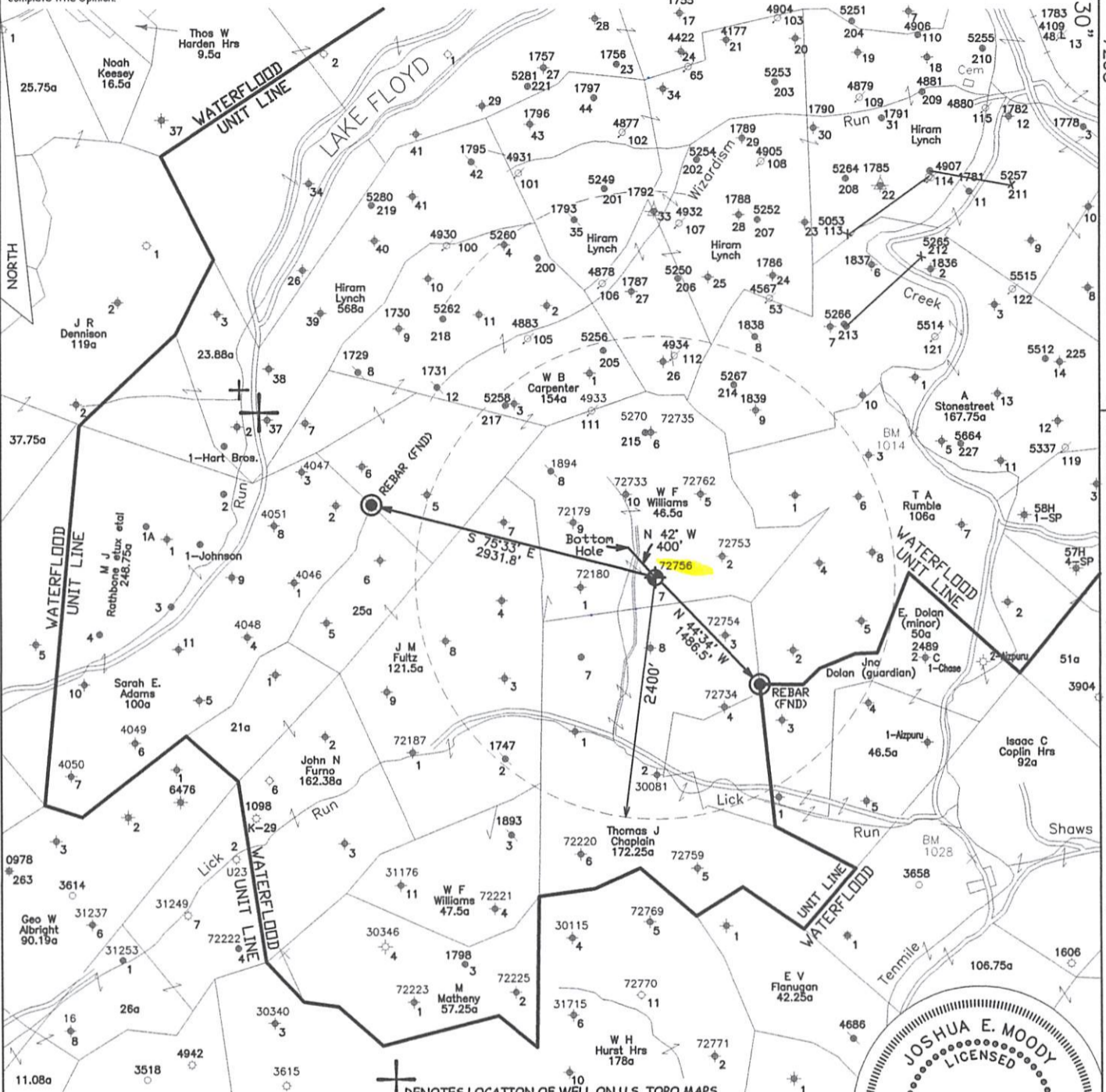
UTM Coordinates (Zone 17N-NAD 1983)	
Surface	N-4,347,052m. E-543,322m.
Bottom Hole	N-4,347,142m. E-543,240m.

**LOCATION REFERENCES**

UTM 27  
N 15°45' E 48.2' EX: WELL  
N 70°41' W 103.8' 11' MAPLE  
Brg. Direction is prop. well to the ref.

LAT: 39°17'30"  
**MAP OF  
H.G. ENERGY, LLC  
-WATERFLOOD UNIT-  
W.F. WILLIAMS 234**

LON: 80°27'30"  
7295  
LAT: 39°16'17.9"  
(BOTTOM HOLE: LAT:39°16'20.9")



⊕ DENOTES LOCATION OF WELL ON U.S. TOPO MAPS.

JOB # 13-014  
DRAWING # 13LAKEFLOYD FOLDER  
SCALE 1" = 1500'  
MINIMUM DEGREE OF ACCURACY 1/2500  
PROVEN SOURCE OF ELEV. BENCH MARK H-80

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 PERSCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



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

**MOODY LAND SURVEYING, LLC  
ST. MARYS, WV 26170**



WEST VIRGINIA DEPARTMENT  
OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  HORIZONTAL   
(IF "GAS") PRODUCTION  STORAGE  DEEP  SHALLOW   
LOCATION: ELEVATION 1168' WATERSHED BRANCH OF LICK RUN API WELL # 47 - 033 - 05776V  
DISTRICT TEN MILE COUNTY HARRISON STATE WV COUNTY PERMIT  
QUADRANGLE WOLF SUMMIT 7.5'

SURFACE OWNER BRIAN V. HUFFMAN ACREAGE 102.35 ACRES +/-  
OIL & GAS ROYALTY OWNER CLYDE WILLIAMS ET AL LEASE ACREAGE 102 ACRES +/-  
PROPOSED WORK: DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR  
STIMULATE  PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION   
OTHER PHYSICAL CHANGE IN WELL (SPECIFY) WILL BE DRILLED DIRECTIONALLY (N 42° W 400')  
PLUG & ABANDON  CLEAN OUT & REPLUG   
TARGET FORMATION 5TH SAND ESTIMATED DEPTH MD= 3,100'  
WELL OPERATOR H.G. ENERGY, LLC DESIGNATED AGENT MIKE KIRSCH  
ADDRESS 5260 DuPONT ROAD ADDRESS 5260 DuPONT ROAD  
PARKERSBURG, WV 26101 PARKERSBURG, WV 26101

07/12/2013

(BOT. HL: LON:-80°29'56.0")

LON:-80°29'52.7"

11220

3305776V

**SURVEY NOTES**

1 - Well ties and Latitude and Longitude were measured by Topcon Hiper GA survey grade GPS. Bearings are referenced to UTM Grid North (Zone 17 North - NAD 1927).

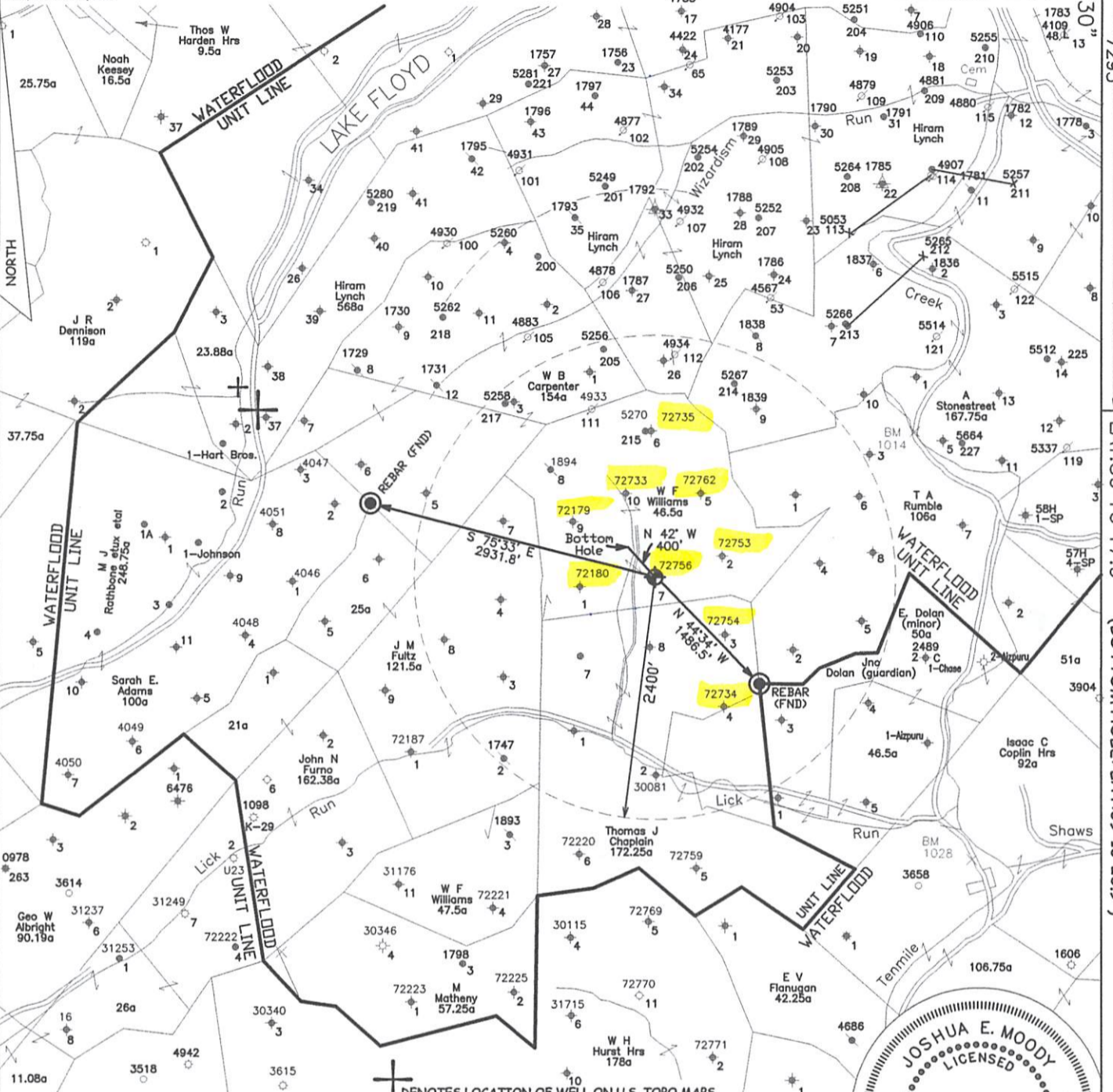
2 - Surface owners, adjoining information, Lease names, & line mapping obtained from HGE GIS system. No survey was performed to determine lines within the Waterflood Unit-reference: HGE GIS system.

3 - No Title Opinion was provided to the Surveyor during this survey. This survey is subject to a complete title Opinion.

UTM Coordinates (Zone 17N-NAD 1983)	
Surface	N-4,347,052m. E-543,322m.
Bottom Hole	N-4,347,142m. E-543,240m.

LOCATION REFERENCES	
UTM 27	
N 15°45' E 48.2' EX: WELL	
N 70°41' W 103.8' 11' MAPLE	
Brg. Direction is prop. well to the ref.	

LAT: 39°17'30"  
**MAP OF**  
**H.G. ENERGY, LLC**  
**-WATERFLOOD UNIT-**  
**W.F. WILLIAMS 234**



7295  
 LAT: 39°16'17.9"  
 (BOTTOM HOLE: LAT: 39°16'20.9")

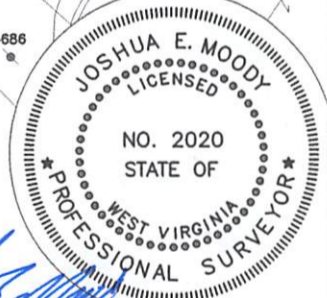
JOB # 13-014  
 DRAWING # 13LAKEFLOYD FOLDER  
 SCALE 1" = 1500'  
 MINIMUM DEGREE OF ACCURACY 1/2500  
 PROVEN SOURCE OF ELEV. BENCH MARK H-80

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 PERSCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



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

MOODY LAND SURVEYING, LLC  
 ST. MARYS, WV 26170



JOSHUA E. MOODY, P.S. 2020

WEST VIRGINIA DEPARTMENT  
 OF ENVIRONMENTAL PROTECTION  
 OFFICE OF OIL AND GAS

DATE 4/19/13  
 OPERATOR'S WELL  
 W.F. WILLIAMS #234

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  HORIZONTAL   
 (IF "GAS") PRODUCTION  STORAGE  DEEP  SHALLOW   
 LOCATION: ELEVATION 1168' WATERSHED BRANCH OF LICK RUN API WELL # 47 - 033 - 05776V  
 DISTRICT TEN MILE COUNTY HARRISON STATE WV COUNTY PERMIT  
 QUADRANGLE WOLF SUMMIT 7.5'

SURFACE OWNER BRIAN V. HUFFMAN ACREAGE 102.35 ACRES +/-  
 OIL & GAS ROYALTY OWNER CLYDE WILLIAMS ET AL LEASE ACREAGE 102 ACRES +/-  
 PROPOSED WORK: DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR  
 STIMULATE  PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION   
 OTHER PHYSICAL CHANGE IN WELL (SPECIFY) WILL BE DRILLED DIRECTIONALLY (N 42' W 400')  
 PLUG & ABANDON  CLEAN OUT & REPLUG   
 TARGET FORMATION 5TH SAND ESTIMATED DEPTH MD= 3,100'  
 WELL OPERATOR H.G. ENERGY, LLC DESIGNATED AGENT MIKE KIRSCH  
 ADDRESS 5260 DuPONT ROAD ADDRESS 5260 DuPONT ROAD  
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