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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](http://www.dep.wv.gov)

March 31, 2015

**WELL WORK PERMIT**  
**Secondary Recovery Well**

This permit, API Well Number: 47-8704767, 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: J. LONG 106  
Farm Name: KING, WILLIE  
**API Well Number: 47-8704767**  
**Permit Type: Secondary Recovery Well**  
Date Issued: 03/31/2015

**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.

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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 within 30 days of commencement of drilling.

87047675

FORM WW-3 (B)  
1/12



1) Date: 01/13/2015  
2) Operator's Well No. Jackson Long 106  
3) API Well No.: 47 - Roane - s  
State County Permit  
4) UIC Permit No. UIC2R08704AP

STATE OF WEST VIRGINIA  
NOTICE OF LIQUID INJECTION OR WASTE DISPOSAL WELL WORK PERMIT APPLICATION  
FOR THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

5) WELL TYPE: Liquid Injection  / Gas Injection (not storage)  / Waste Disposal   
6) LOCATION: Elevation: 1038'  
District: Smithfield Watershed: Rush Run  
County Roane Quadrangle Looneyville 7.5'  
7) WELL OPERATOR: HG Energy, LLC 8) DESIGNATED AGENT Diane White  
Address 5260 Dupont Road  
Parkersburg, WV 26101 Address Parkersburg, WV 26101  
9) OIL & GAS INSPECTOR TO BE NOTIFIED 10) DRILLING CONTRACTOR  
Name Ed Gainer Name To Be Determined Upon Approval of Permit  
Address P. O. Box 821 Address \_\_\_\_\_  
Spencer, WV 25276

11) PROPOSED WELL WORK Drill  / Drill deeper  / Redrill  / Stimulate   
Plug off old formation  / Perforate new formation  / Convert   
Other physical change in well (specify) \_\_\_\_\_  
12) GEOLOGIC TARGET FORMATION Big Injun Depth 2100 Feet (top) to 2120 Feet (bottom)  
13) Estimated Depth of Completed Well, (or actual depth of existing well): TVD 2200', TMD 2740' Feet  
14) Approximate water strata depths: Fresh 375' Feet Salt 1600' Feet  
15) Approximate coal seam depths: NA  
16) Is coal being mined in the area? Yes \_\_\_\_\_ No \_\_\_\_\_  
17) Virgin reservoir pressure in target formation 1250 psig Source Estimated  
2650 psig (BHFP)  
18) Estimated reservoir fracture pressure \_\_\_\_\_  
19) MAXIMUM PROPOSED INJECTION OPERATIONS: Volume per hour 25 BBL Bottom hole pressure 2400 psi  
20) DETAILED IDENTIFICATION OF MATERIALS TO BE INJECTED, INCLUDING ADDITIVES Fresh water, produced  
water, bactericides and other chemicals as needed to maintain water quality and improve oil recovery.  
21) FILTERS (IF ANY) Cartridge filters and/or coal bed filters  
22) SPECIFICATIONS FOR CATHODIC PROTECTION AND OTHER CORROSION CONTROL \_\_\_\_\_

23) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (CU. FT.)	PACKERS
	Size	Grade	Weight per ft.	New	Used	For Drilling	Left In Well		
Conductor									Kinds
Fresh Water	7"	LS ST&C	17#	x		500'	500'	CTS	Sizes
Coal									2.375"x4.5"
Intermediate									Depths set
Production	4 1/2"	J-55	10.5#	x		2700'	2700'	200 sks	2350'
Tubing	2 3/8"	J-55	4.6#	x		2450'	2450'		Perforations
Liners									Top Bottom

24) APPLICANT'S OPERATING RIGHTS were acquired from Jackson Long et ux  
by deed \_\_\_\_\_ / lease X / other contract \_\_\_\_\_ / dated 02/04/1910 of record in the  
Roane County Clerk's office in \_\_\_\_\_ lease Book 17 Page 562

*[Handwritten signature]*  
1/26/15

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Office of Oil and Gas  
FEB 06 2015  
WV Department of Environmental Protection



5704767 S

7014 0510 0000 4074 5583

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 PARKERSBURG, WV

JL 106

Sent To  
 Willie King  
 Street, Apt. No., or PO Box No. 1090 Clover Road ✓  
 City, State, ZIP+4 Spencer, WV 25276

PS Form 3800, August 2006 See Reverse for Instructions

7014 0510 0000 4074 5576

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Total Postage & Fees	\$ 7.61

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 PARKERSBURG, WV

JL 106

Sent To  
 Richard Fisher et al.  
 Street, Apt. No., or PO Box No. 4513 Clay Road ✓  
 City, State, ZIP+4 Spencer, WV 25276

PS Form 3800, August 2006 See Reverse for Instructions

2897 56-250/442 02

DATE 1-14-2015

\$ 650.00 DOLLARS

Security Features Back on

**HG ENERGY, LLC** 03-11  
 304-422-6565  
 5260 DUPONT RD  
 PARKERSBURG, WV 26101

PAY TO THE ORDER OF WV D.E.P.

Six Hundred Fifty Dollars and 00/100

**Peoples BANK**  
 800.374.6123  
 peoplesbankcorp.com  
 Working Together. Building Success.

FOR Permit Jackson Long No. 106

*Barclay*

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 Office of Oil and Gas  
 FEB 06 2015  
 WV Department of  
 Environmental Protection

87047675

WW-2B1  
(5-12)

Well No. Jackson Long 106

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 Sturm Environmental  
Sampling Contractor Sturm Environmental

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 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.

Surface Owners with Water Sources Identified for Sampling/Analysis:

SEE  
TOPO MAP

- \* Willie King  
1090 Clover Road  
Spencer WV 25276
- \* Richard Fisher  
4513 Clay Road  
Spencer WV 25276

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Office of Oil and Gas

FEB 06 2015

WV Department of  
Environmental Protection

87047675

WW-9  
Rev. 5/10

Page 562 of \_\_\_\_\_  
API Number 47 - \_\_\_\_\_ - \_\_\_\_\_  
Operator's Well No. Jackson Long 106

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 Name HG Energy, LLC OP Code 494497948

Watershed Rush Run Quadrangle Looneyville 7.5'

Elevation 1038' County Roane District Smithfield

Description of anticipated Pit Waste: Fluids encountered while drilling shallow well

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

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

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection ( UIC Permit Number 25-561 )
- Reuse (at API Number \_\_\_\_\_)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain \_\_\_\_\_)

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

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

Additives to be used? Water, Soap, KCl

Will closed loop system be used? No

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.

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.

RECEIVED

Office of Oil and Gas

Company Official Signature Diane White

Company Official (Typed Name) Diane White

FEB 06 2015

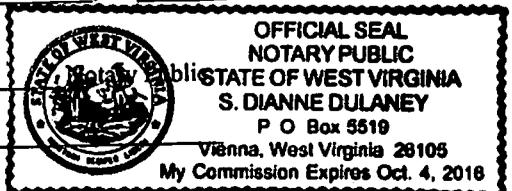
Company Official Title Agent

WV Department of  
Environmental Protection

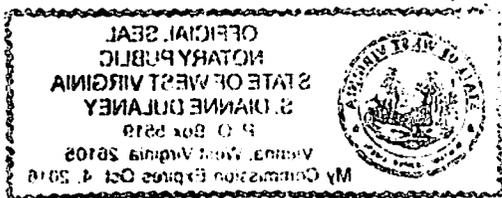
Subscribed and sworn before me this 13th day of January, 20 15

[Signature]

My commission expires Oct. 4, 2016

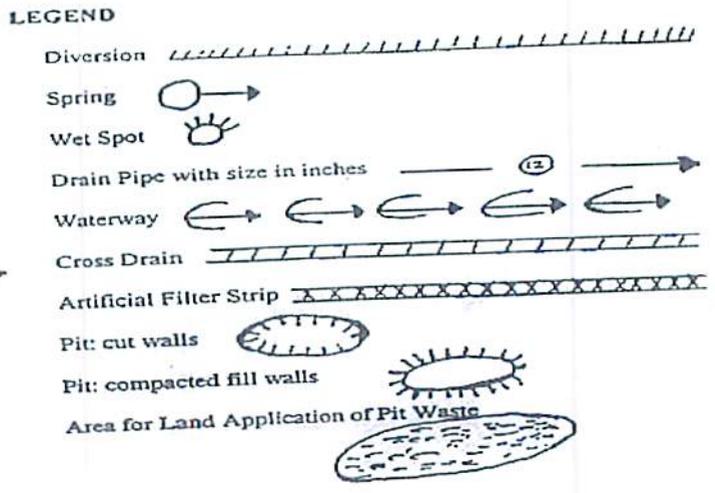
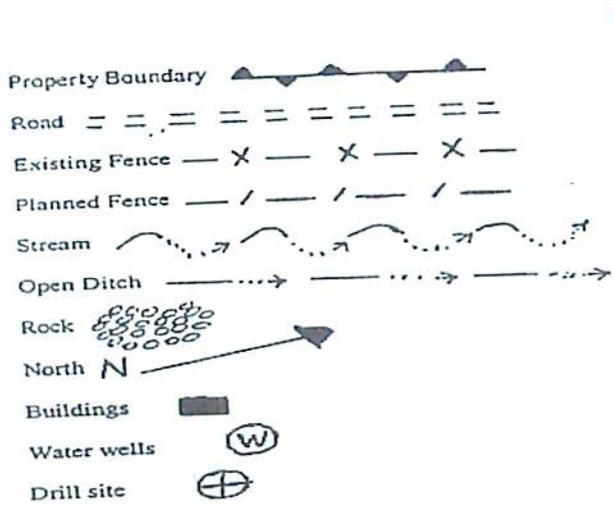


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Proposed Revegetation Treatment: Acres Disturbed 1.2 Prevegetation pH \_\_\_\_\_

Lime 3 Tons/acre or to correct to pH 6.5

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

Mulch Straw 2 Tons/acre  
Seed Mixtures

Seed Type	Area I lbs/acre	Seed Type	Area II lbs/acre
Tall Fescue	40	Tall Fescue	40
Ladino Clover	5	Ladino Clover	5

Proper sediment control should be in place at all times.

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

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Office of Oil and Gas

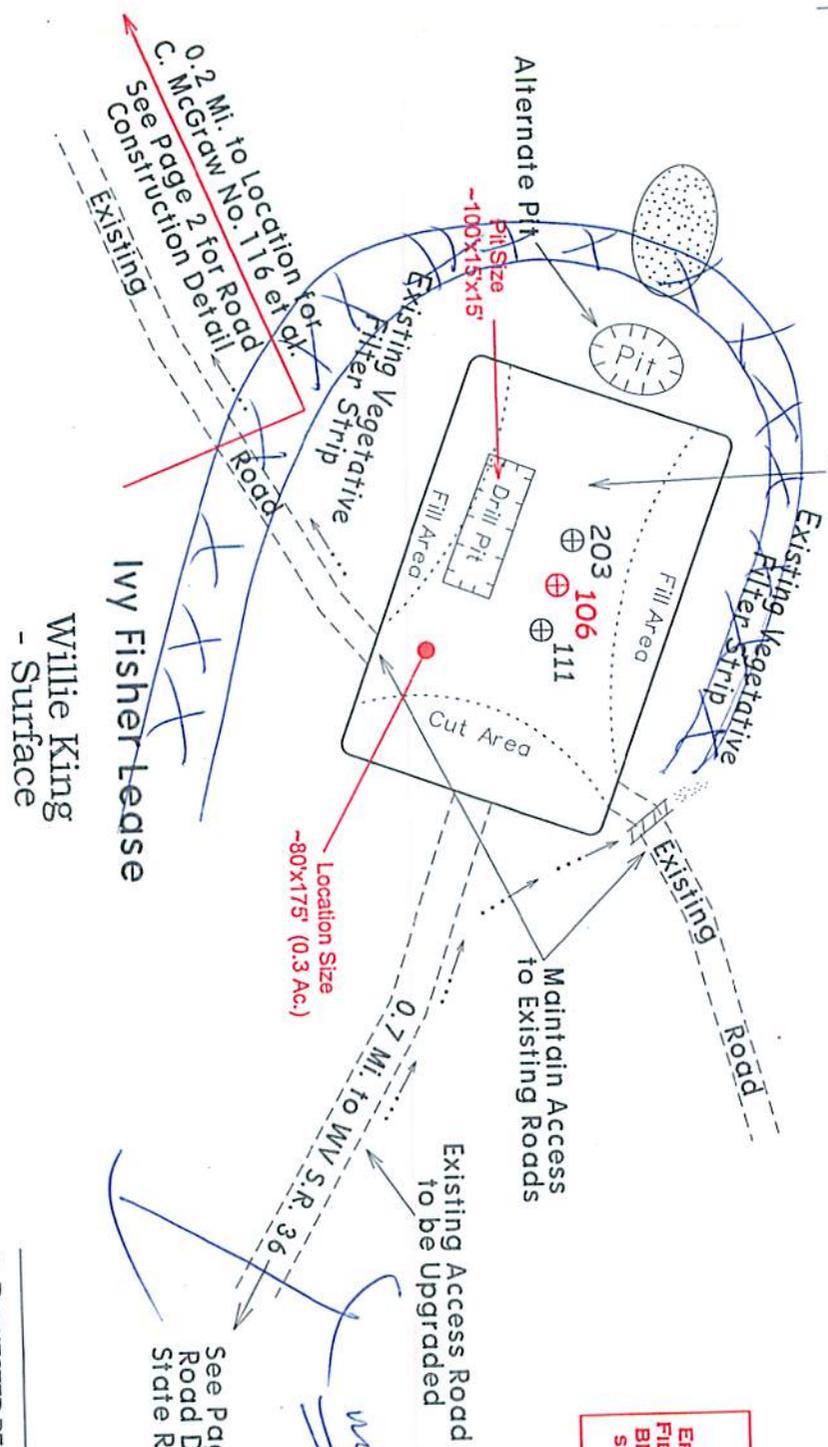
FEB 03 2015

Plan Approved by: 

WV Department of  
Environmental Protection

Title: Inspector Date: 1/26/15  
Field Reviewed?  Yes  No

Location on Ridgetop



*Handwritten signature*  
 1/26/15

**Reclamation Plan For:**  
 Ivy Fisher No. 111  
 Ivy Fisher No. 203 &  
 Jackson Long No. 106

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

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 Environmental Protection

**Notes:**

- REQUESTED PERMIT IS FOR DRILLING OF NEW WELL.
- SOME ACCESS ROADS ARE EXISTING AND WILL BE UPGRADED TO WYDEP STANDARDS. NEW STRUCTURES WILL BE INSTALLED AS SHOWN.
- STOCKPILE TOPSOIL FOR RE-DRESSING LOCATION DURING RECLAMATION
- 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.

See Page 2 for Road Detail to State Route 36

See Page 2 for Road to Additional Wells

SUBJECT WELL  
Jackson Long No.106



◆ Denotes Potential Water Supply Source and Surface Owner (From Aerial Photography)

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Office of Oil and Gas  
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WV Department of Environmental Protection

Section of  
Looneyville 7.5' Quadrangle  
SCALE 1"=1000'

(BOT. HL: LON:-81°16'27.2") | LON: -81°16'28.7" 7030'

LAT: 38°45'00"

# MAP OF H.G. ENERGY, LLC -WATERFLOOD UNIT- J. LONG 106

LON: 81°15'00"

12410'

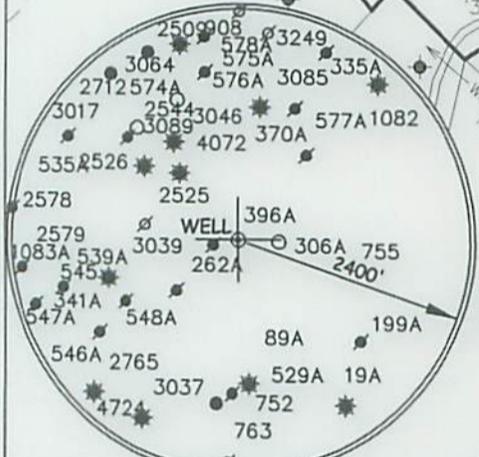
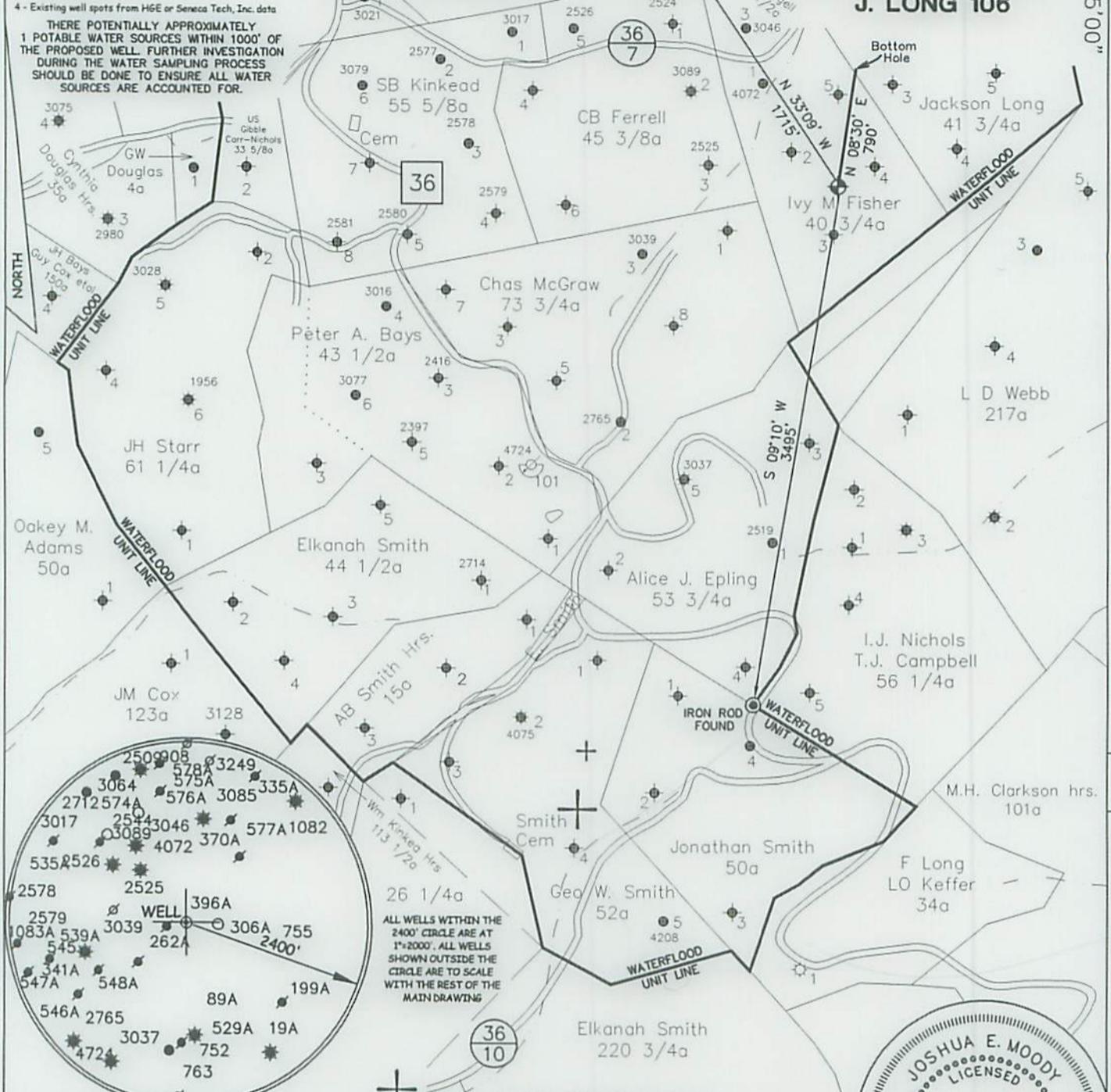
LAT: 38°42'57.3"

(BOTTOM HOLE: LAT:38°43'05.0")

- SURVEY NOTES**
- 1 - Well ties and Latitude and Longitude were measured by DGPS (Sub-meter Mapping Grade). Bearings are referenced to UTM Grid North (Zone 17 North - NAD 1927).
  - 2 - Surface owners and adjoining information obtained from the Roane County Assessor's tax records.
  - 3 - No Title Opinion was provided to the Surveyor during this survey. This survey is subject to a complete title Opinion.
  - 4 - Existing well spots from HGE or Seneca Tech, Inc. data
- THERE POTENTIALLY APPROXIMATELY 1 POTABLE WATER SOURCES WITHIN 1000' OF THE PROPOSED WELL. FURTHER INVESTIGATION DURING THE WATER SAMPLING PROCESS SHOULD BE DONE TO ENSURE ALL WATER SOURCES ARE ACCOUNTED FOR.

UTM Coordinates (Zone 17N-NAD 1983)	
Surface	N-4,285,299m. E-476,138m.
Bottom Hole	N-4,285,537m. E-476,174m.

LOCATION REFERENCES	
MAGNETIC BEARING	
S 04° E 104.0'	6' HICKORY
S 85° E 125.8'	10' HICKORY



ALL WELLS WITHIN THE 2400' CIRCLE ARE AT 1"=2000'. ALL WELLS SHOWN OUTSIDE THE CIRCLE ARE TO SCALE WITH THE REST OF THE MAIN DRAWING

JOB # 14-033  
DRAWING # 14CLOVER FOLDER  
SCALE 1" = 1000'  
MINIMUM DEGREE OF ACCURACY 1/200  
PROVEN SOURCE OF ELEV. MAPPING GRADE 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 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  
DATE 12/15/14  
OPERATOR'S WELL  
J. LONG # 106

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 1038' WATERSHED RUSH CREEK OF HENRYS FORK API WELL # 47-087-047675  
DISTRICT SMITHFIELD COUNTY ROANE STATE 47 COUNTY 087 PERMIT 047675  
QUADRANGLE LOONEYVILLE 7.5'

SURFACE OWNER WILLIE KING ACREAGE 40.16 ACRES +/-  
OIL & GAS ROYALTY OWNER MYRTLE LONG BROOKS ET AL LEASE ACREAGE 42.00 ACRES +/-  
PROPOSED WORK: DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR  
STIMULATE  PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION   
OTHER PHYSICAL CHANGE IN WELL (SPECIFY) WELL WILL BE DRILLED DIRECTIONALLY (N 08°30' E 790')  
PLUG & ABANDON  CLEAN OUT & REPLUG   
TARGET FORMATION BIG INJUN ESTIMATED DEPTH TVD=2,200' MD=2,740'  
WELL OPERATOR H.G. ENERGY, LLC INITIALED AGENT DIANE WHITE  
ADDRESS 5260 DuPONT ROAD ADDRESS 5260 DuPONT ROAD  
PARKERSBURG, WV 26101 PARKERSBURG, WV 26101  
FEB 06 2015

FORM WW-6

LEASE # 61118-40

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Office of Oil and Gas  
FEB 06 2015

COUNTY NAME PERMIT

PARKERSBURG, WV 26101  
ADDRESS  
H.G. ENERGY, LLC  
WELL OPERATOR  
BIG INJUN  
TARGET FORMATION  
CLEAN OUT & REJUG  
OTHER PHYSICAL CHANGE IN WELL (SPECIFY) WELL WILL BE DRILLED DIRECTIONALLY (N 08°30' E 790')

STIMULATE  PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION  
PROPOSED WORK: DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR  
OIL & GAS ROYALTY OWNER MYRTLE LONG BROOKS ET AL  
LEASE ACREAGE 43.00 ACRES +/-  
SURFACE OWNER WILLIE KING

QUADRANGLE LOONEYVILLE 7.5,  
DISTRICT SMITHFIELD  
COUNTY ROANE  
STATE COUNTY PERMIT

LOCATION: ELEVATION 1038' WATERSHED RUSH CREEK OF HENRY'S FORK  
WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  HORIZONTAL   
PRODUCTION  STORAGE  DEEP  SHALLOW

APR WELL # 087  
DATE 12/15/14  
OPERATOR'S WELL  
J. LONG # 106

ST. MARYS, WV 26170  
WOODY LAND SURVEYING, LLC  
JOSHUA E. MOODY, P.S. 2020

OFFICE OF ENVIRONMENTAL PROTECTION  
WEST VIRGINIA DEPARTMENT  
OF OIL AND GAS

MINIMUM DEGREE OF  
ACCURACY 1/200  
PROVEN SOURCE OF ELEV.  
MAPPING GRADE GPS

SCALE 1" = 1000'  
DRAWING # 14CLOVER FOLDER  
JOB # 14-033

THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.  
REQUIRED BY LAW AND THE REGULATIONS ISSUED AND DESCRIBED BY  
THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOW ALL THE INFORMATION  
I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAN IS CORRECT TO  
DENOTES LOCATION OF WELL ON U.S. TOPO MAPS.

WITH THE REST OF THE  
CIRCLE ARE TO SCALE  
SHOWN OUTSIDE THE  
1,500'. ALL WELLS  
5,000' CIRCLE ARE AT  
ALL WELLS WITHIN THE

MAIN DRAWING  
WELLS WITHIN THE  
CIRCLE ARE TO SCALE  
SHOWN OUTSIDE THE  
1,500'. ALL WELLS  
5,000' CIRCLE ARE AT  
ALL WELLS WITHIN THE

WATERFLOOD UNIT LINE  
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1 - Well head failure and leakage were  
measured by DWS (Dip-ster Meter Probe)  
Bearings are referenced to UTM Grid North  
(Zone 17 North - NAD 1983)  
2 - Surface owners and adjacent mineral  
owners from the Boone County Assessor's  
tax records  
3 - No Title Opinion was provided to the Surveyor  
during this survey. This survey is subject to a  
complete title Opinion.  
4 - Existing well spot from HBE or Geacis Tech, Inc. data  
THERE POTENTIALLY APPROXIMATELY  
1 POTABLE WATER SOURCES WITHIN 1000' OF  
THE PROPOSED WELL. FURTHER INVESTIGATION  
DURING THE WATER SAMPLING PROCESS  
SHOULD BE DONE TO ENSURE ALL WATER  
SOURCES ARE ACCOUNTED FOR.

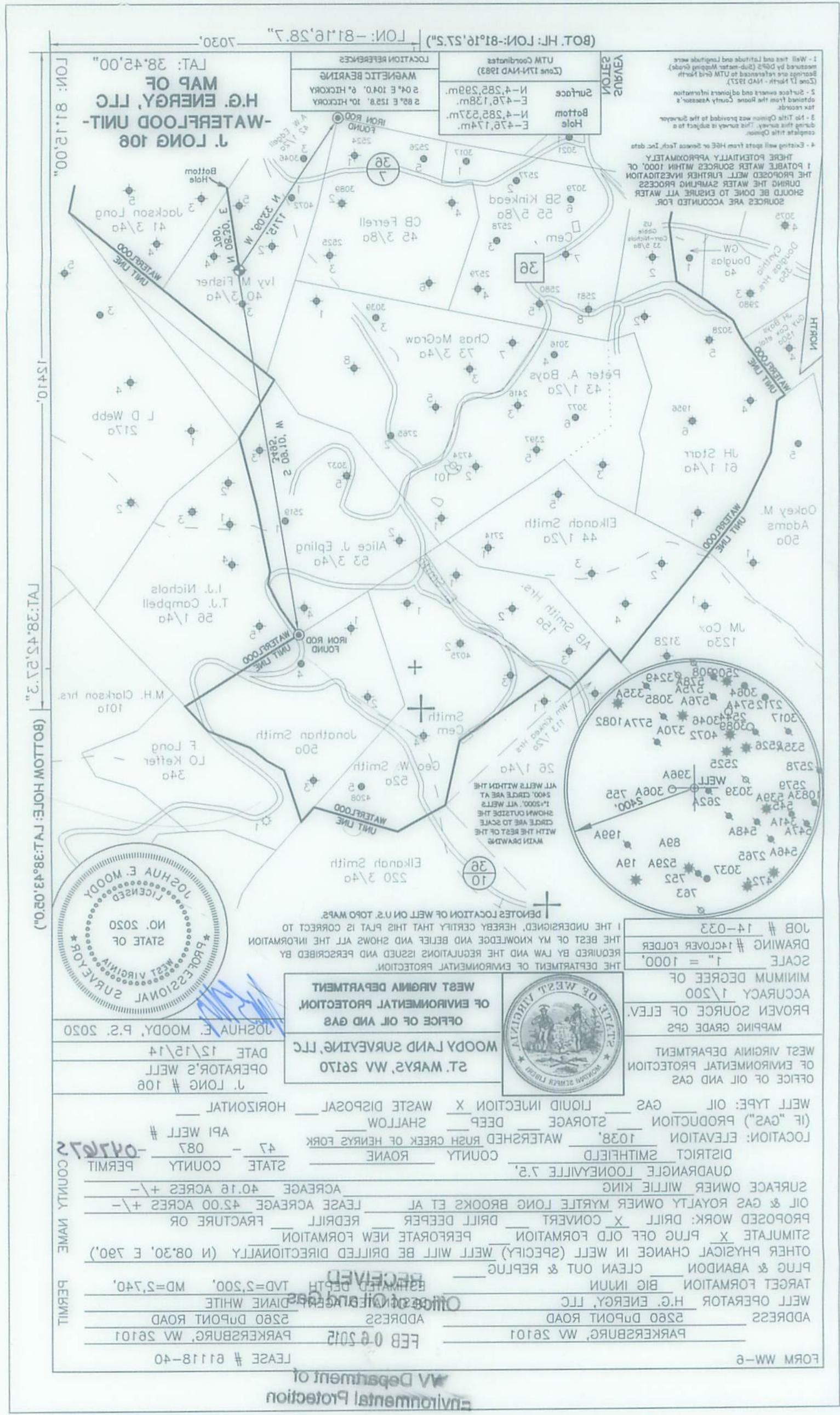
UTM Coordinates  
(Zone 17N-MAD 1983)  
Surface N-4,285,299m  
E-476,138m  
Bottom Hole N-4,285,237m  
E-476,174m

LOCATION REFERENCES  
MAGNETIC BEARING  
S 04° E 104.0' 6' HICKORY  
S 85° E 158.8' 10' HICKORY

MAP OF  
H.G. ENERGY, LLC  
-WATERFLOOD UNIT-  
J. LONG 106  
LAT: 38°45'00"  
LON: 81°12'00"



15410.0' (BOLLOW HOLE: T.V.L:38,43,020.0')





**HG Energy, LLC**  
5260 Dupont Road  
Parkersburg, WV 26101  
(304) 420-1100 - Office  
(304) 863-3172 - Fax

CK# 2894 87047675  
650.00

January 13, 2015

Mr. Jeff McLaughlin  
WVDEP  
Division of Oil & Gas  
601 57<sup>th</sup> Street  
Charleston, West Virginia 25304

RE: Jackson Long No. 106  
Smithfield District, Roane County  
West Virginia

Dear Mr. McLaughlin:

Enclosed are Forms WW-3A, WW-3B, WW-9, WW-3(B1), mylar of plat, reclamation plan, topo map and copies of the certified mailing receipts for a permit to drill an injection well. Also enclosed is our check in the amount of \$650.00 to cover the associated permit fees.

Very truly yours,

*Diane White*

Diane C. White

Enclosures

cc: Richard Fisher – Certified  
Willie King - Certified  
Ed Gainer – Inspector

RECEIVED  
Office of Oil and Gas  
FEB 06 2015  
WV Department of  
Environmental Protection