



**west virginia** department of environmental protection

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

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

May 11, 2016

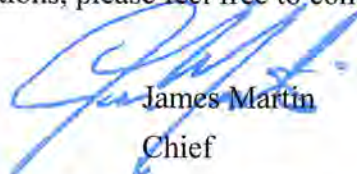
**WELL WORK PERMIT**  
**Secondary Recovery Well**

This permit, API Well Number: 47-8704788, 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: JACKSON LONG 130

Farm Name: WEBB, PATTY C

**API Well Number: 47-8704788**

**Permit Type: Secondary Recovery Well**

Date Issued: 05/11/2016

**Promoting a healthy environment.**

**05/13/2016**

## 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 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, drilling ceased, completion of any other permitted well work and completion of the 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.



FORM WW-3 (B)  
1/12



- 1) Date: 03/03/2016
- 2) Operator's Well No. Jackson Long 130
- 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: 1145' Watershed: Edgell Fork  
District: Smithfield 05 County Roane Quadrangle Looneyville 7.5' 444
- 7) WELL OPERATOR: HG Energy, LLC Address 5260 Dupont Road  
Parkersburg, WV 26101
- 8) DESIGNATED AGENT: Diane White Address 5260 Dupont Road  
Parkersburg, WV 26101
- 9) OIL & GAS INSPECTOR TO BE NOTIFIED: Name Joe Taylor Address 1478 Claylick Road  
Ripley, WV 25271
- 10) DRILLING CONTRACTOR: Name To Be Determined Upon Approval of the Permit Address \_\_\_\_\_
- 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: Depth 2199 Feet (top) to 2223 Feet (bottom)
- 13) Estimated Depth of Completed Well, (or actual depth of existing well): 2364' MD Feet
- 14) Approximate water strata depths: Fresh 495' Feet Salt 1745' 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
- 18) Estimated reservoir fracture pressure 2650 psig (BHFP)
- 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	17#	X		645'	645'	GTS	Sizes
Coal									2.375" x 4.5"
Intermediate									Depths set
Production	4 1/2"	J-55	10.5#	X		2314'	2314'	210 sks	2000'
Tubing	2 3/8"	J-55	4.6#	X		2124"	2124"		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  
Roane County Clerk's office in lease Book 17

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of record in the  
Page 562

APR 18 2016  
WV Department of  
Environmental 05/13/2016

*[Signature]*  
3-23-16

WW-2B1  
(5-12)

Well No. Jackson Long 130

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 contractor 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.

- See Attached Sheet -

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WV Department of  
Environmental Protection 05/13/2016

WW-2B1  
Page 2 - Continued

Well No. Jackson Long 130

West Virginia Department of Environmental Protection  
Office of Oil and Gas

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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 indicate such.

**Surface Owners Identified With Water Sources to be Sampled and Tested:**

- \* Patty Webb  
PO Box 461  
Spencer, WV 25276
  
- \* Willie King  
1090 Clover Road  
Spencer, WV 25276

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Environmental Protection 05/13/2016





87047085

WW-9  
Rev. 5/10

Page \_\_\_\_\_ of \_\_\_\_\_  
API Number 47 - \_\_\_\_\_ - \_\_\_\_\_  
Operator's Well No. Jackson Long 130

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 Edgell Fork Quadrangle Looneyville 7.5'

Elevation 1145' County Roane District Smithfield

Description of anticipated Pit Waste: Fluids encountered while drilling subject 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.? 30 Mil

Proposed Disposal Method For Treated Pit Wastes:  
 ~~Land Application~~ No Land Application  
 Underground Injection ( UIC Permit Number \_\_\_\_\_ )  
 Reuse (at API Number \_\_\_\_\_ )  
 Off Site Disposal (Supply form WW-9 for disposal location)  
 Other (Explain see attached email)

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.

Company Official Signature Diane White

Company Official (Typed Name) Diane White

Company Official Title Agent

Subscribed and sworn before me this 3rd day of March, 2016

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*[Handwritten Signature]*

Notary Public 

My commission expires NOVEMBER 2, 2021

05/13/2016



LEGEND

- Property Boundary
- Road
- Existing Fence
- Planned Fence
- Stream
- Open Ditch
- Rock
- North
- Buildings
- Water wells
- Drill site

- Diversion
- Spring
- Wet Spot
- Drain Pipe with size in inches
- Waterway
- Cross Drain
- Artificial Filter Strip
- Pit: cut walls
- Pit: compacted fill walls
- Area for Land Application of Pit Waste

Proposed Revegetation Treatment: Acres Disturbed 2.4 acres 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
Tall Fescue		40
Ladino Clover		5

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

**\*\* Sediment Control Will 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.

Plan Approved by:

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

Title: ore reports

Date: 3-23-16

Field Reviewed?  (Roane) Yes  No

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Environmental Protection

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**Westbrook, Joshua P**

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**From:** Diane White <dwhite@hgenergyllc.com>  
**Sent:** Friday, May 06, 2016 9:49 AM  
**To:** Westbrook, Joshua P  
**Subject:** Pit Fluids

Josh,  
As per our discussion, HG does not intend to treat pit fluids for the following new well drill sites and plugging sites. HG will contract hauling the pit fluids to an authorized disposal site.

New Drill Sites:  
CB Ferrell 218  
Jackson Long 220  
Jackson Long 129  
Jackson Long 130  
AW Edgell 127  
IB Butcher 128

Wells to be plugged:  
Stowers Heirs 6  
Samuel Bowman 2  
AA Woodrum 5  
Woodrum Daniels 2  
SW Nunn 1  
SW Nunn 2

Please let me know if I should provide more information.  
Thanks,  
Diane

*Diane C. White*

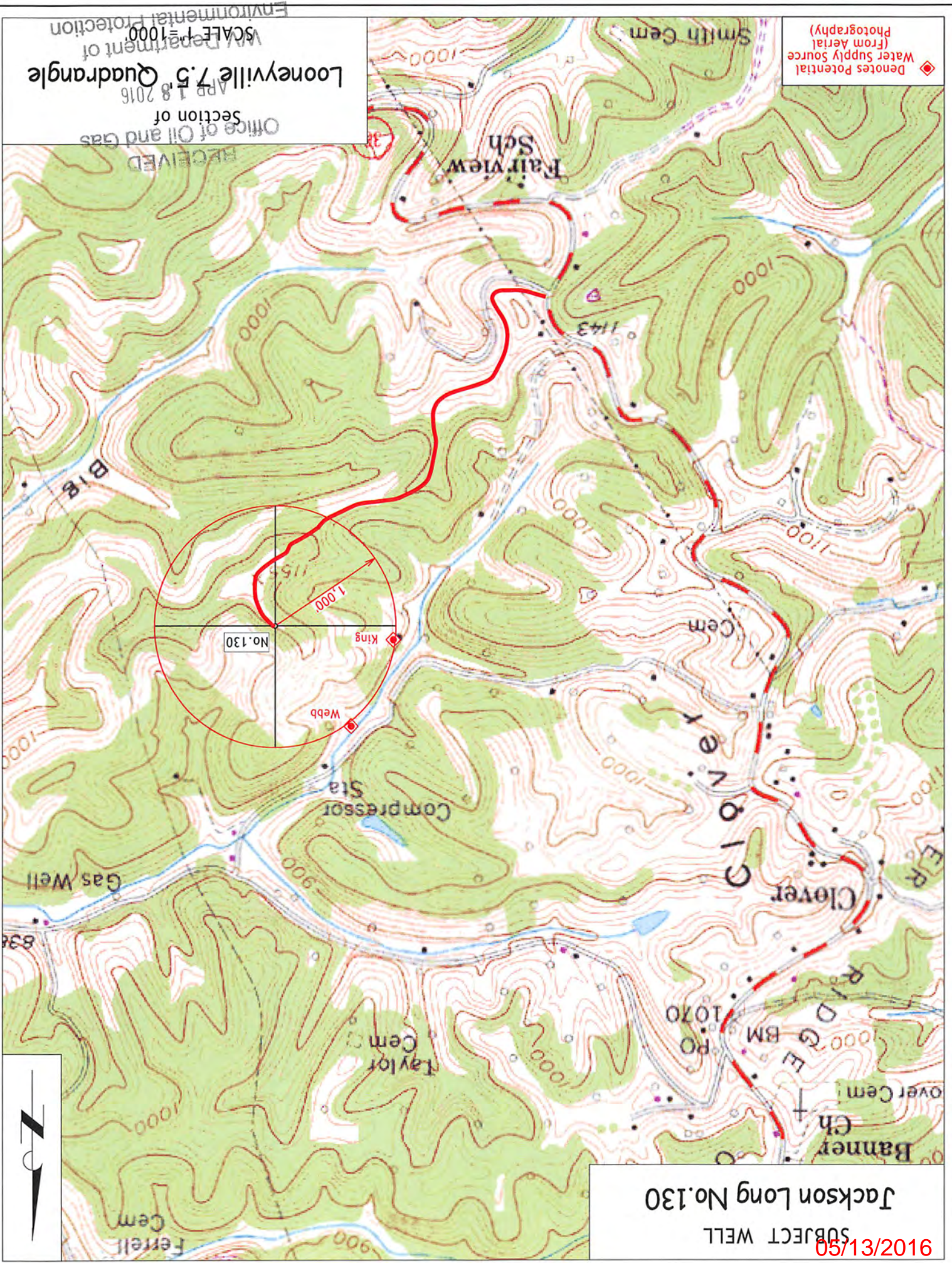


**HG Energy, LLC**  
5260 Dupont Road  
Parkersburg, WV 26101  
304-420-1119 (O)  
304-482-0108 (C)  
304-863-3172 (F)  
[dwhite@hgenergyllc.com](mailto:dwhite@hgenergyllc.com)



Denotes Potential  
Water Supply Source  
(From Aerial  
Photography)

Section of  
Office of Oil and Gas  
Apr 18 2016  
Looneyville 7.5 Quadrangle  
SCALE 1:1000  
Environmental Protection  
Department of



Jackson Long No. 130

SUBJECT WELL

9/13/2016

8704788 S





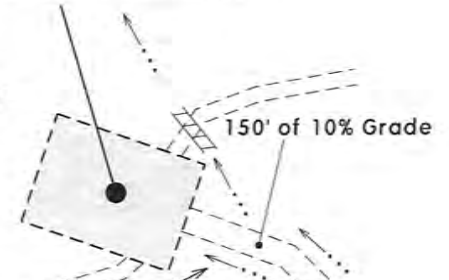
**NOTE**  
REFER TO THE WYDEP  
EROSION AND SEDIMENT CONTROL  
FIELD MANUAL VER. MAY 2012 FOR  
BMPs CONTROLLING EROSION AND  
SEDIMENT FROM SOIL-DISTURBING  
OPERATIONS.

**DRILL SITE FOR:**

Ivy Fisher No.111 (47-087-4765)  
Ivy Fisher No.203 (47-087-4779)  
Jackson Long No.106 (47-087-4767)

**Ivy Fisher Lease**

*Willie King  
- Surface Owner*



400' of 0-5% Grade

Upgrade and Maintain  
Existing Access Road

**Begin New  
Construction**  
See Reclamation  
Page 1 for Jackson  
Long No.130 et al.



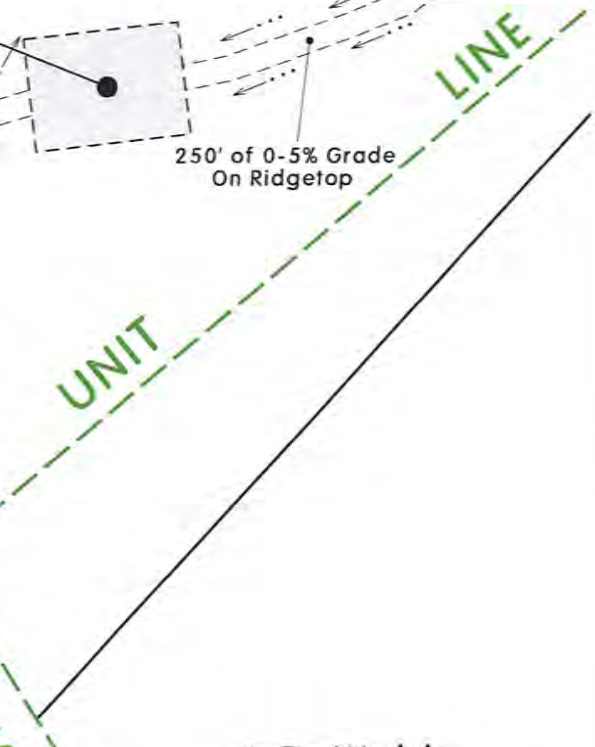
**DRILL SITE FOR:**

Charles McGraw No.116 (47-087-4766)  
Charles McGraw No.207 (47-087-4777)

300' of 15-18% Grade

200' of 20% Grade

200' of 0-5% Grade  
On Ridgetop



250' of 0-5% Grade  
On Ridgetop

Upgrade and Maintain  
Existing Access Road

Shooting  
House

150' of 10-12% Grade

**Charles McGraw Lease**

*Richard Fisher, et al.  
- Surface Owners*

J.D. Webb





**Alice J. Epling Lease**  
*Richard Fisher, et al.*  
 - Surface Owners

- DRILL SITE FOR:**
- A.J. Epling No.119 (47-087-4763)
  - A.J. Epling No.120 (47-087-4764)
  - A.J. Epling No.211 (47-087-4771)
  - A.J. Epling No.215 (47-087-4772)

**NOTES**

1. REFER TO THE WVDEP EROSION AND SEDIMENTATION CONTROL MANUAL (VER. MAY 20, 2013) FOR BMP'S CONTROLLING EROSION AND SEDIMENTATION FROM ALL SOIL-DISTURBING OPERATIONS.
2. SEE PAGE ONE OF RECLAMATION PLAN FOR DETAILS OF NEW ROAD CONSTRUCTION AND ROAD UPGRADES FROM POINT (A) TO DRILL SITE LOCATION.
3. EXISTING WATERFLOOD ACCESS ROADS WILL BE MAINTAINED IN PRESENT CONDITION. THESE ROADS WERE CONSTRUCTED UNDER CONDITIONS SET FORTH IN VARIOUS DRILLING PERMITS ISSUED BY WVDEP-OOG PRIOR TO 2016 (AS SHOWN). SEE PERMITS ON FILE FOR MORE DETAIL.



**CLOVER WATERFLOOD**

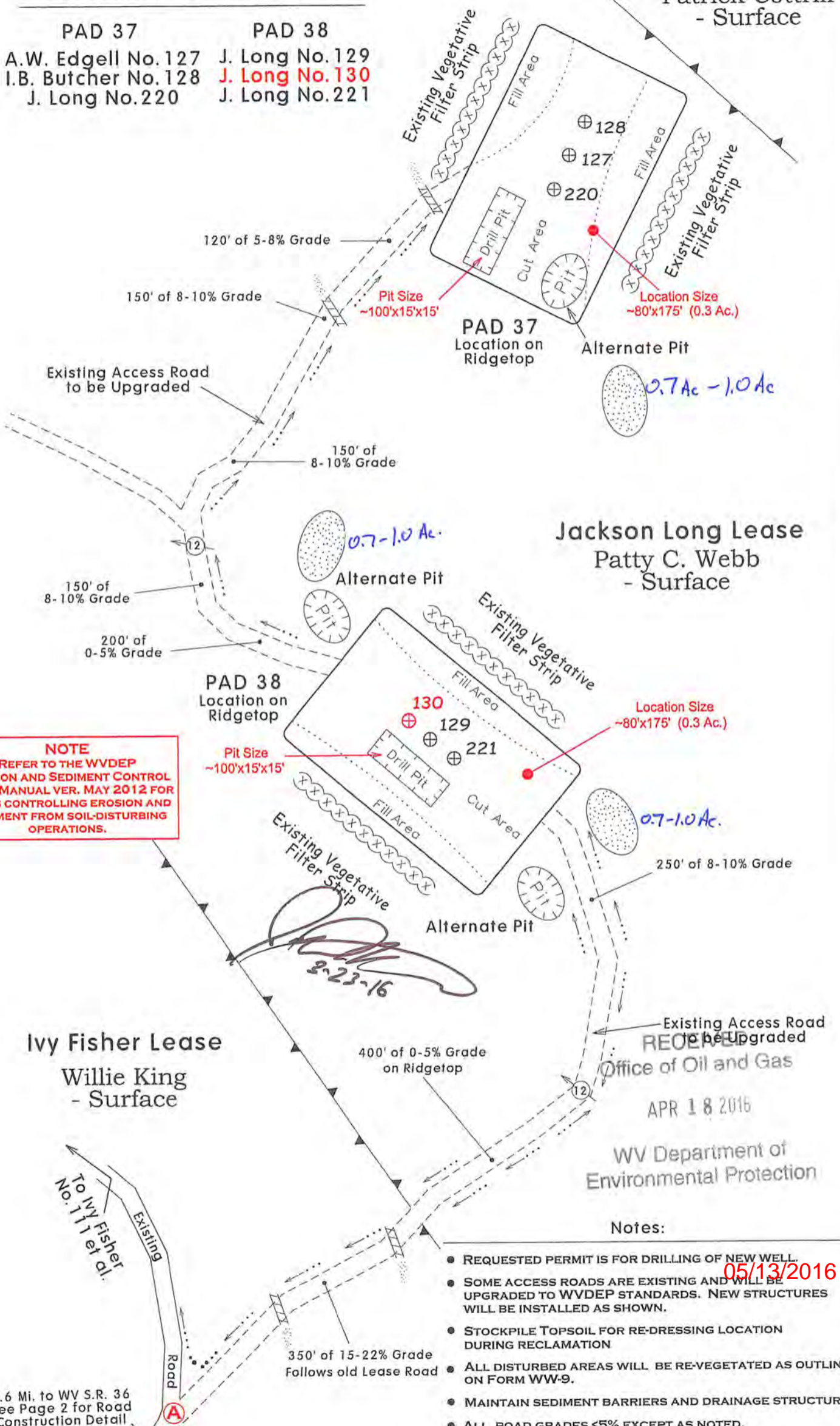
**RECLAMATION PLAN  
 SHOWING ROAD CONSTRUCTED  
 IN 2015 TO SERVE CLOVER  
 WATERFLOOD FIELD**

(See Page 1 for New Road Construction Detail)

# Reclamation Plan For:

<b>PAD 37</b>	<b>PAD 38</b>
A.W. Edgell No. 127	J. Long No. 129
I.B. Butcher No. 128	<b>J. Long No. 130</b>
J. Long No. 220	J. Long No. 221

I.B. Butcher Lease  
Patrick Cottrill  
- Surface



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

Jackson Long Lease  
Patty C. Webb  
- Surface

Ivy Fisher Lease  
Willie King  
- Surface

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Notes:

- REQUESTED PERMIT IS FOR DRILLING OF NEW WELL.
- SOME ACCESS ROADS ARE EXISTING AND WILL BE UPGRADED TO WVDEP 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.

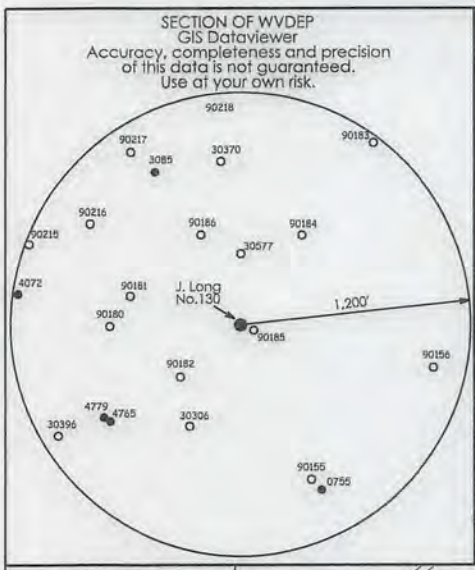
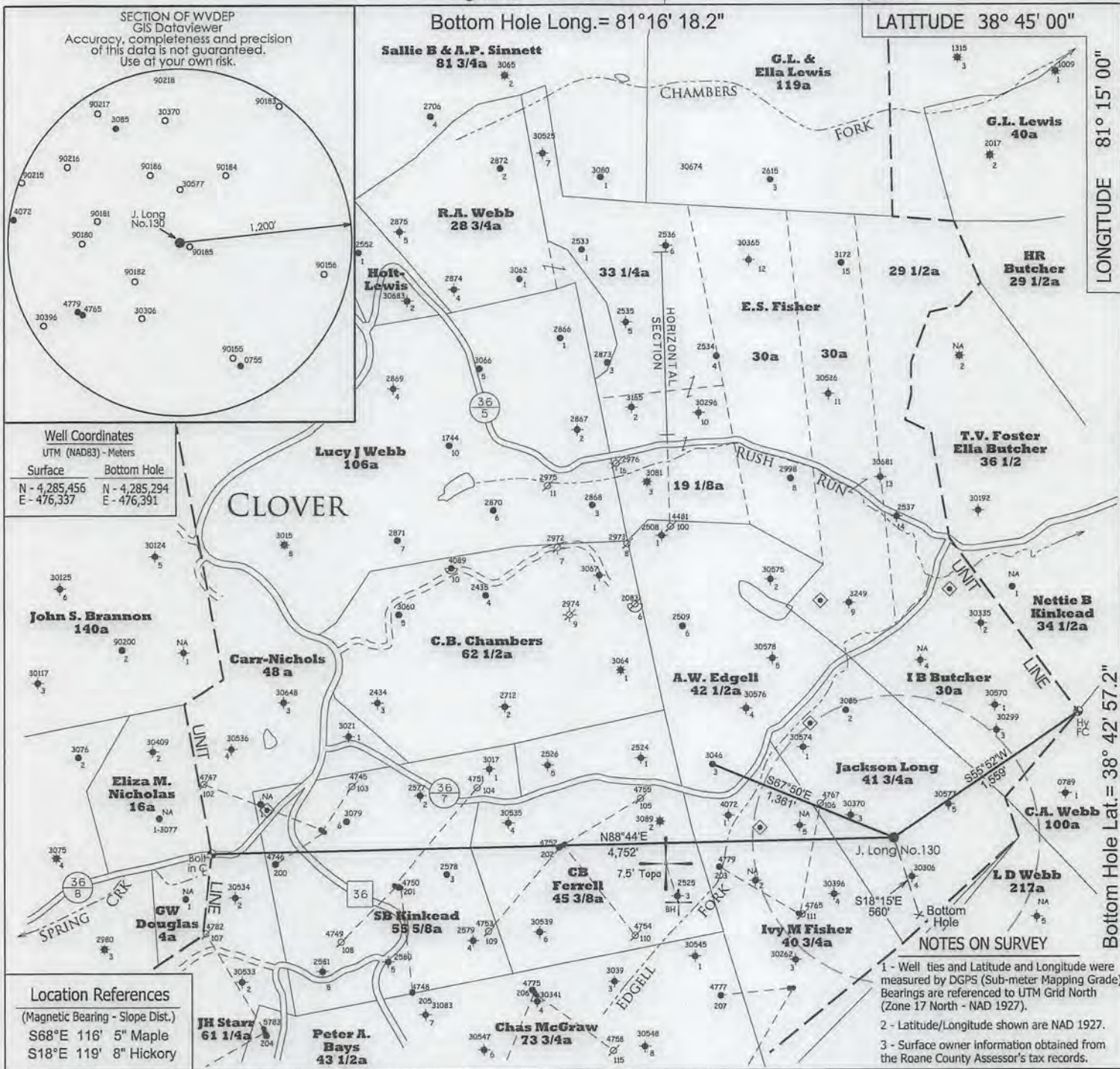
05/13/2016

0.6 Mi. to WV S.R. 36  
See Page 2 for Road  
Construction Detail



Longitude = 81°16' 20.44"

6,375'



Well Coordinates	
UTM (NAD83) - Meters	
Surface	Bottom Hole
N - 4,285,456	N - 4,285,294
E - 476,337	E - 476,391

Location References	
(Magnetic Bearing - Slope Dist.)	
S68°E 116' 5" Maple	
S18°E 119' 8" Hickory	

- ◆ - DENOTES A POSSIBLE WATER SUPPLY SOURCE LOCATED FROM CIRCA 2003 AERIAL PHOTOGRAPHY - NOT BY SURVEY. OTHER SOURCES MAY BE PRESENT.
- ⊕ - DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

**NOTES ON SURVEY**

- 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 - Latitude/Longitude shown are NAD 1927.
- 3 - Surface owner information obtained from the Roane County Assessor's tax records.

FILE NO. 427

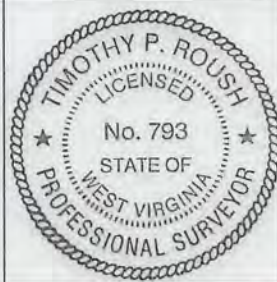
SCALE 1" = 1000'

MINIMUM DEGREE OF ACCURACY Sub-Meter

PROVEN SOURCE OF ELEVATION DGPS Survey  
(Sub-Meter Mapping Grade)

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 ENVIRONMENTAL PROTECTION.

(SIGNED) *[Signature]*  
TIMOTHY P. ROUSH PS 793



WEST VIRGINIA  
Division of Environmental Protection  
Office of Oil and Gas  
601 57th Street  
Charleston, West Virginia 25301



DATE March 1, 2016

FARM Jackson Long No.130

API WELL NO. 47 - 087 - 04788 S

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

LOCATION: ELEVATION 1,145' WATERSHED Edgell Fork  
DISTRICT Smithfield COUNTY Roane  
QUADRANGLE Looneyville 7.5'

SURFACE OWNER Patty C. Webb ACREAGE 41.75 Ac.

OIL & GAS ROYALTY OWNER HG Energy, LLC., et al LEASE ACREAGE 42 Ac.  
LEASE NO. 61118-50

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 directionally drilled as shown.

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

TARGET FORMATION Big Injun ESTIMATED DEPTH 2,364' MD

WELL OPERATOR HG Energy LLC. DESIGNATED AGENT Diane White  
ADDRESS 5260 DuPont Road ADDRESS 5260 DuPont Road  
Parkersburg, WV 26101 Parkersburg, WV 26101

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Oil and Gas

FORM IV-6

LONGITUDE 81° 15' 00"

11,890'

Bottom Hole Lat. = 38° 42' 57.2"

Latitude = 38° 43' 02.45"

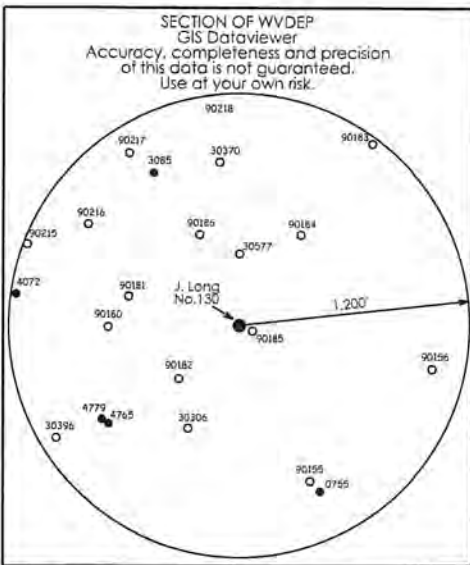


Longitude = 81°16' 20.44"

6,375'

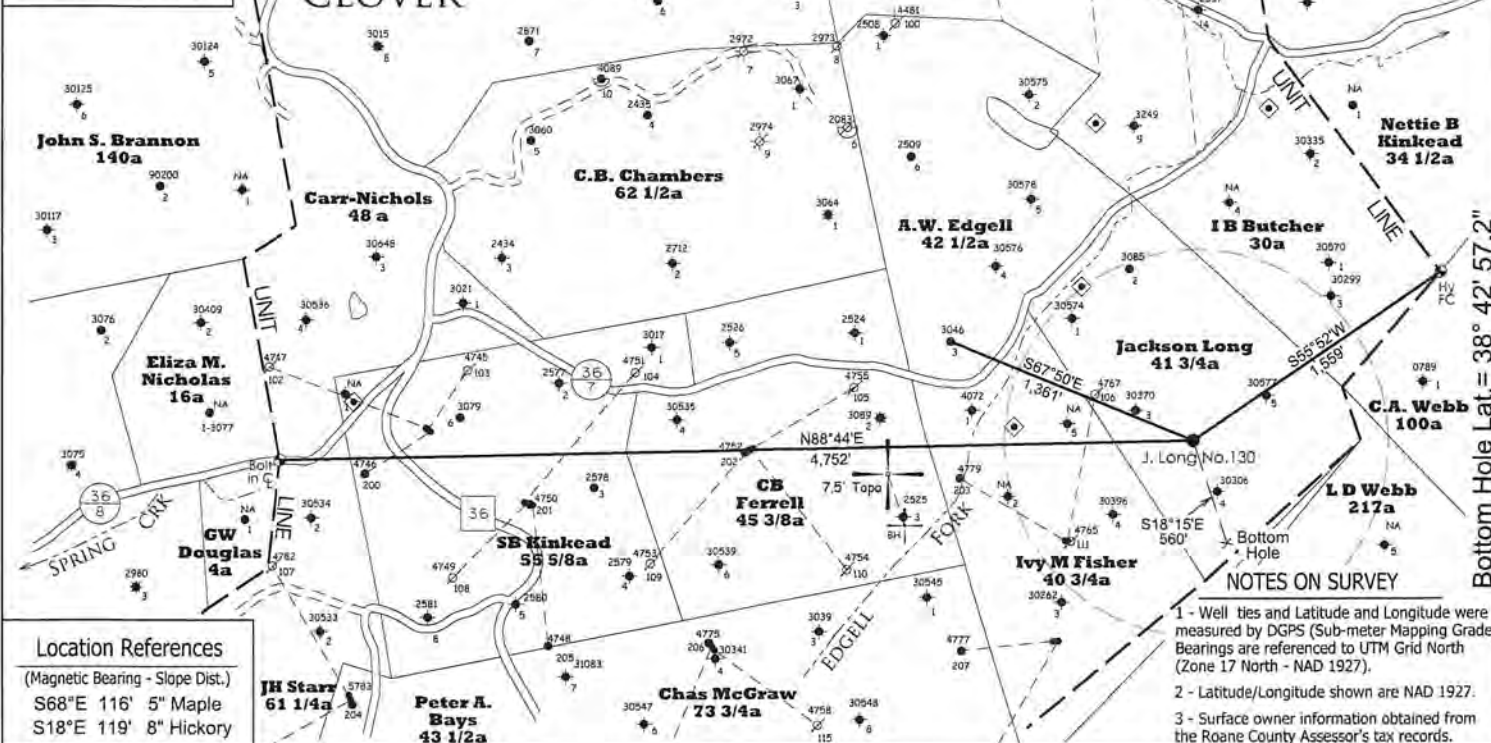
Bottom Hole Long. = 81°16' 18.2"

LATITUDE 38° 45' 00"



Well Coordinates  
UTM (NAD83) - Meters

Surface	Bottom Hole
N - 4,285,456 E - 476,337	N - 4,285,294 E - 476,391



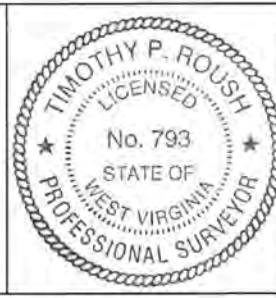
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FILE NO. 427  
 SCALE 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY Sub-Meter  
 PROVEN SOURCE OF ELEVATION DGPS Survey (Sub-Meter Mapping Grade)

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 ENVIRONMENTAL PROTECTION.

(SIGNED) *Timothy P. Roush*  
 TIMOTHY P. ROUSH PS 793



WEST VIRGINIA  
 Division of Environmental Protection  
 Office of Oil and Gas  
 601 57th Street  
 Charleston, West Virginia 25301

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

LOCATION: ELEVATION 1,145' WATERSHED Edgell Fork  
 DISTRICT Smithfield COUNTY Roane  
 QUADRANGLE Looneyville 7.5'  
 SURFACE OWNER Patty C. Webb ACREAGE 41.75 Ac.  
 OIL & GAS ROYALTY OWNER HG Energy, LLC., et al LEASE ACREAGE 42 Ac. LEASE NO. 61118-50

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 directionally drilled as shown.

PLUG AND ABANDON \_\_\_ CLEAN OUT AND REPLUG \_\_\_  
 TARGET FORMATION Big Injun ESTIMATED DEPTH 2,364' MD

WELL OPERATOR HG Energy LLC. DESIGNATED AGENT Diane White  
 ADDRESS 5260 DuPont Road Parkersburg, WV 26101 ADDRESS 5260 DuPont Road Parkersburg, WV 26101

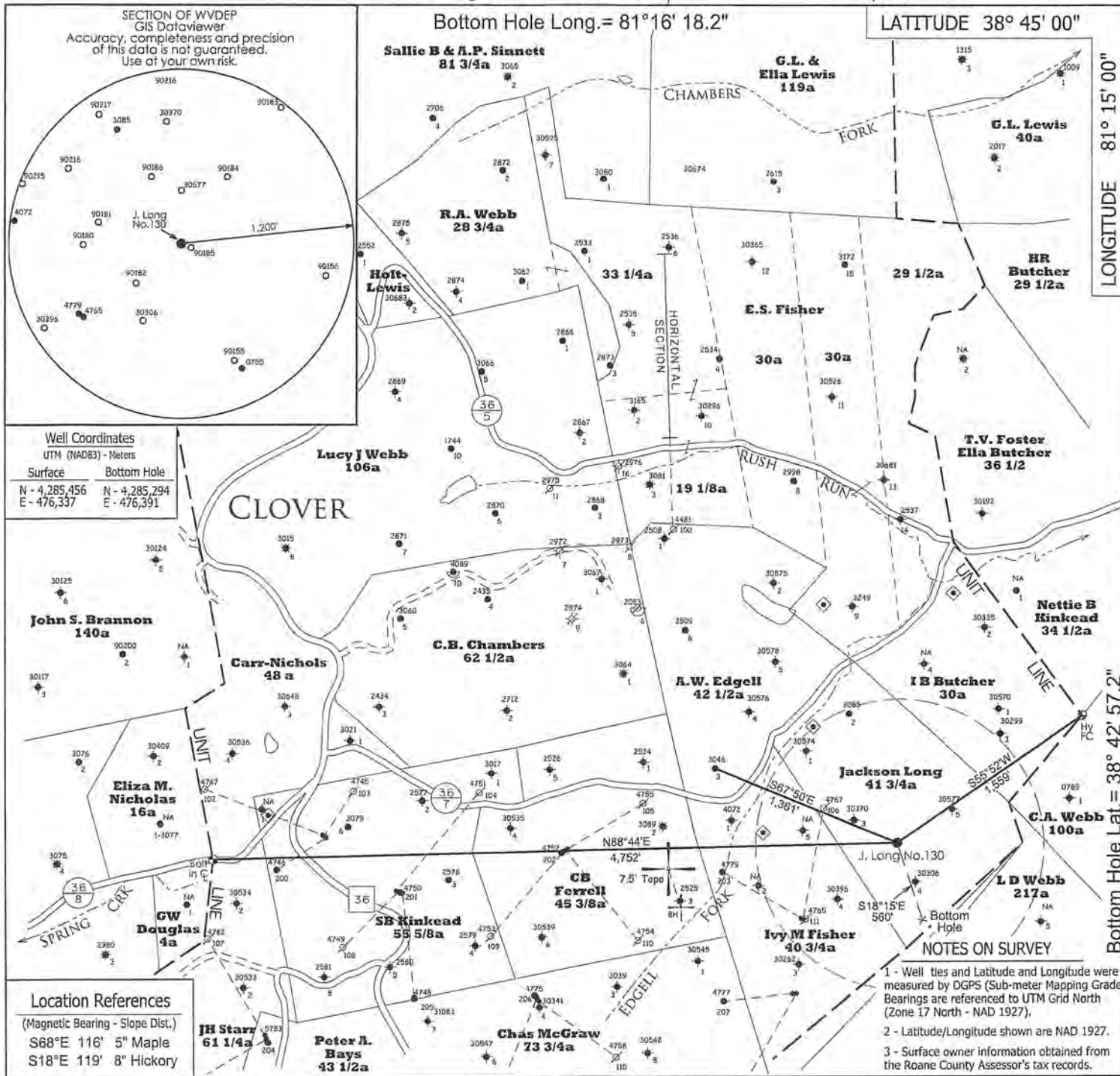
DATE March 1, 2016  
 FARM Jackson Long No.130  
 API WELL NO. 47 - 087 - 04788 S

RECEIVED  
 Office of Oil and Gas  
 APR 18 2016  
 WV Department of Environmental Protection

LONGITUDE 81° 15' 00"  
 11,890'  
 Bottom Hole Lat. = 38° 42' 57.2"  
 Latitude = 38° 43' 02.45"

FORM IV-5





- DENOTES A POSSIBLE WATER SUPPLY SOURCE LOCATED FROM CIRCA 2003 AERIAL PHOTOGRAPHY - NOT BY SURVEY. OTHER SOURCES MAY BE PRESENT.
- DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

FILE NO. 427

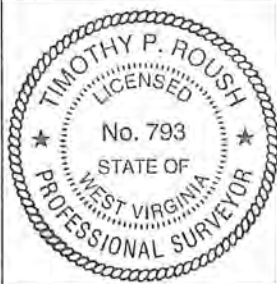
SCALE 1" = 1000'

MINIMUM DEGREE OF ACCURACY Sub-Meter

PROVEN SOURCE OF ELEVATION DGPS Survey  
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(SIGNED) *[Signature]*  
TIMOTHY P. ROUSH PS 793



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601 57th Street  
Charleston, West Virginia 25301



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ADDRESS 5260 DuPont Road ADDRESS 5260 DuPont Road  
Parkersburg, WV 26101 Parkersburg, WV 26101



