



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: 47-8704784, 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: A. W. EDGELL 127
Farm Name: WEBB, PATTY C

API Well Number: 47-8704784

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

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 within 30 days of commencement of drilling.

FORM WW-3 (B)
1/12



1) Date: 03/17/2016
 2) Operator's Well No. March 17, 2016
 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: 1042' Watershed: Edgell Fork
 District: Smithfield -5 County Roane Quadrangle Looneyville 7.5' -444
 7) WELL OPERATOR: HG Energy, LLC 8) DESIGNATED AGENT Diane White
 Address 5260 Dupont Road Address 5260 Dupont Road
Parkersburg, WV 26101 Parkersburg, WV 26101
 9) OIL & GAS INSPECTOR TO BE NOTIFIED 10) DRILLING CONTRACTOR
 Name Joe Taylor Name To Be Determined Upon Approval of Permit
 Address 1478 Claylick Road Address _____
Ripley, WV 25271
 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 2230 Feet (top) to 2252 Feet (bottom)
 13) Estimated Depth of Completed Well, (or actual depth of existing well): 2383 Feet
 14) Approximate water strata depths: Fresh 392 Feet Salt 1642 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 | | 542' | 542' | CTS | |
| Coal | | | | | | | | | Sizes |
| Intermediate | | | | | | | | | 2.375" x 4.5" |
| Production | 4 1/2" | J-55 | 10.5# | x | | 2333' | 2333' | 210 sks | Depths set |
| Tubing | 2 3/8" | J-55 | 4.6# | x | | 2155' | 2155' | | 2055' |
| Liners | | | | | | | | | Perforations |
| | | | | | | | | | Top Bottom |

24) APPLICANT'S OPERATING RIGHTS were acquired from A W and Flora O Edgell
 by deed _____ / lease x / other contract _____ / dated 08/31/1900
Roane County Clerk's office in lease Book 4 Office of Oil and Gas Page 202

RECEIVED
 APR 18 2016
 Department of Environmental Protection
 05/13/2016

FORM WW-3 (A)
1/12



1) Date: March 17, 2016
2) Operator's Well No. A W Edgell 127
3) API Well No.: 47 - - -
State County Permit
4) UIC Permit No. UIC2R08704AP

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

| | |
|---------------------------------------|---|
| 5) Surface Owner(S) To Be Served | 7) (a) Coal Operator |
| (a) Name <u>Patty C. Webb</u> | Name <u>NA</u> |
| Address <u>PO Box 461</u> | Address _____ |
| <u>Spencer, WV 25276</u> | |
| (b) Name <u>Willie King</u> | 7) (b) Coal Owner(S) With Declaration Of Record |
| Address <u>1090 Clover Road</u> | Name <u>NA</u> |
| <u>Spencer, WV 25276</u> | Address _____ |
| (c) Name <u>Richard Fisher, et al</u> | Name _____ |
| Address <u>4513 Clay Road</u> | Address _____ |
| <u>Spencer, WV 25276</u> | |
| 6) Inspector <u>Joe Taylor</u> | 7) (c) Coal Lessee with Declaration Of Record |
| Address <u>1478 Claylick Road</u> | Name <u>NA</u> |
| <u>Ripley, WV 25271</u> | Address _____ |
| Telephone <u>304-380-7469</u> | |

TO THE PERSONS NAMED ABOVE: You should have received this form and the following documents

- (1) The Application For A Liquid Injection or Waste Disposal Well Work Permit on Form WW-3(B), which sets out the parties involved in the drilling or other work;
- (2) The plat (surveyor's map) showing the well location on Form WW-6; and
- (3) The Construction and Reclamation Plan on Form WW-9 (unless the well work is only to plug a well), which sets out the plan for erosion and sediment control and for reclamation for the site and access road.

The date proposed for the first injection or waste disposal is _____ 20 16 .

THE REASON YOU HAVE RECEIVED THESE DOCUMENTS IS THAT YOU HAVE RIGHTS REGARDING THE APPLICATION WHICH ARE SUMMARIZED IN THE "INSTRUCTIONS" ON THE REVERSE SIDE OF THE COPY OF THE APPLICATION [(FORM WW-3(B)] DESIGNATED TO YOU. HOWEVER YOU ARE NOT REQUIRED TO TAKE ACTION AT ALL.

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a Well Work Permit with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to a well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, the plat, and the Construction and Reclamation Plan have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of the mailing or delivery to the Chief.

The person signing this document shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document 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
Address 5260 Dupont Road
Parkersburg, WV 26101
By: Diane White
Its: Agent
Signature: Diane White

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

8704784 5

WW-2B1
(5-12)

Well No. A W Edgell 127

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 -

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Office of Oil and Gas

APR 18 2016

WV Department of
Environmental Protection
05/19/2016

WW-2B1
Page 2 - Continued

Well No. A W Edgell 127

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.

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 C. Webb**
PO Box 461
Spencer, WV 25276

* **Willie King**
1090 Clover Road
Spencer, WV 25276

* **Holly Cottrell**
89 Edgle Fork Road
Spencer, WV 25276

* **Judith A. Ziegler, et al**
387 Edgle Fork
Spencer, WV 25276

0704784 S

WW-9
Rev. 5/10

Page 202 of _____
API Number 47 - _____ - _____
Operator's Well No. March 17, 2016

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 1042' 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

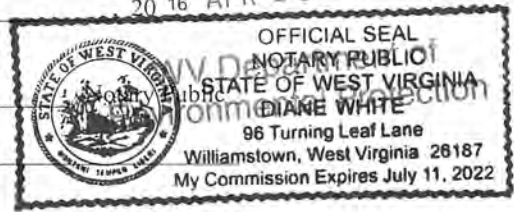
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Office of Oil and Gas

Subscribed and sworn before me this 17th day of March

20 16 APR 18 2016

Diane White

My commission expires July 11, 2022



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 2.6 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

| Area I | | Area II | |
|---------------|----------|---------------|----------|
| Seed Type | lbs/acre | Seed Type | lbs/acre |
| Tall Fescue | 40 | Tall Fescue | 40 |
| Ladino Clover | 5 | 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: 006 Inspectr

Date: 3-23-15

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Field Reviewed? Yes No

APR 18 2015

WV Department of
Environmental Protection
05/13/2016

Westbrook, Joshua P

8704784 S

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

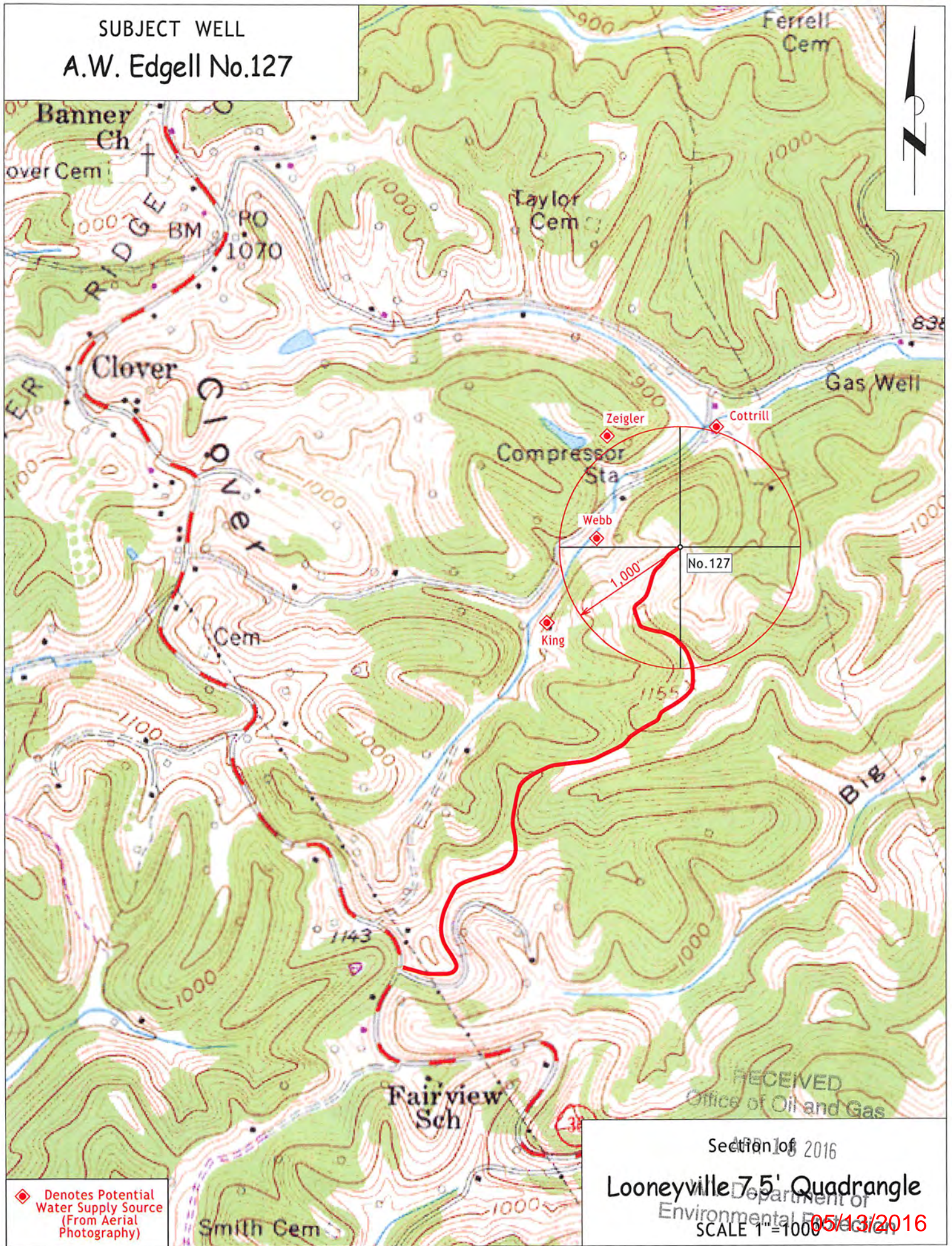
Please let me know if I should provide more information.
Thanks,
Diane

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

SUBJECT WELL
A.W. Edgell No.127

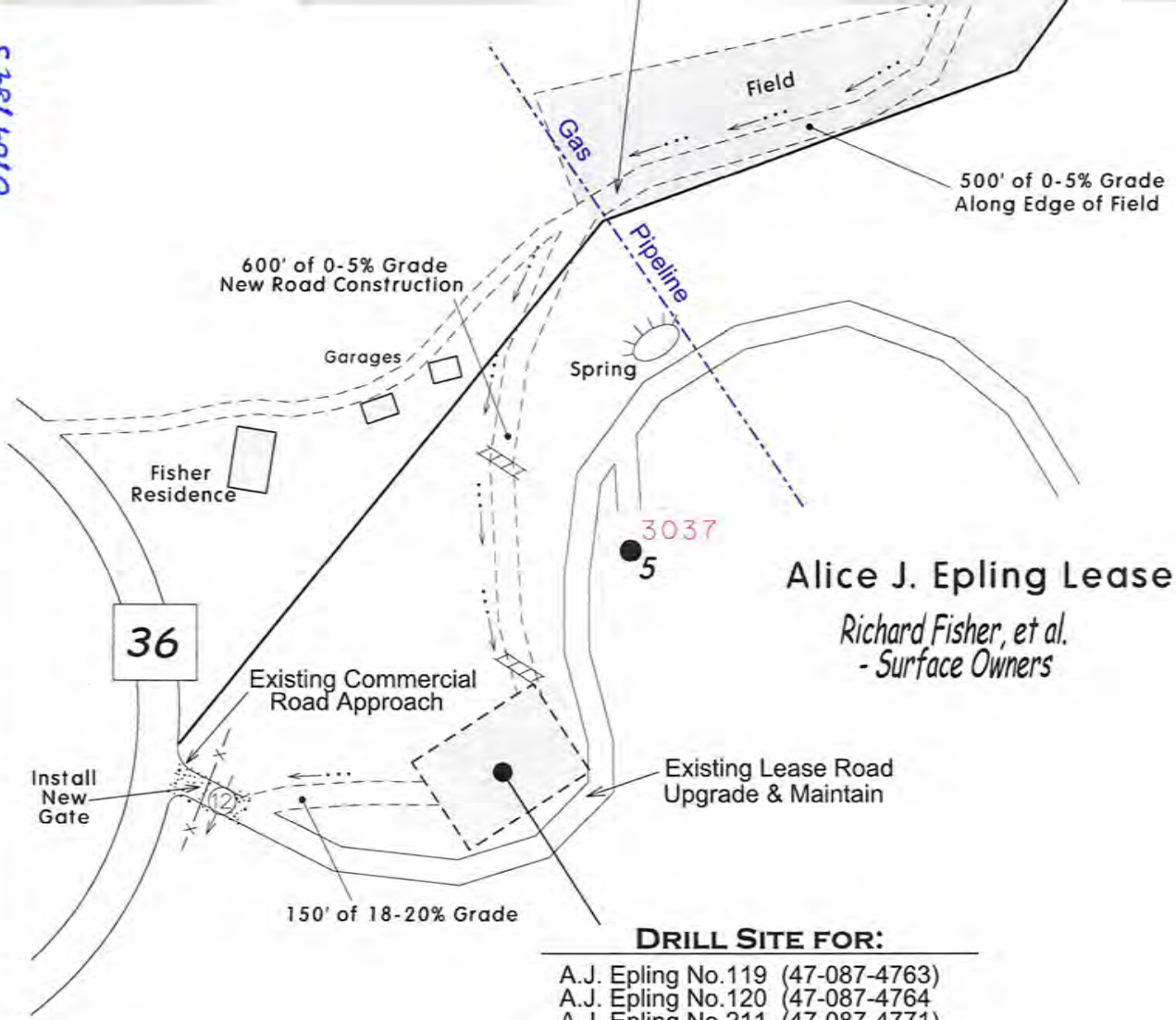


◆ Denotes Potential Water Supply Source (From Aerial Photography)

Section of 2016
Looneyville 7.5' Quadrangle
Department of Environmental Protection
SCALE 1" = 1000' 05/13/2016

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Office of Oil and Gas

0704784 S



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)

WATERFLOOD

CLOVER

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 APR 18 2016
 WV Department of
 Environmental Protection

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)



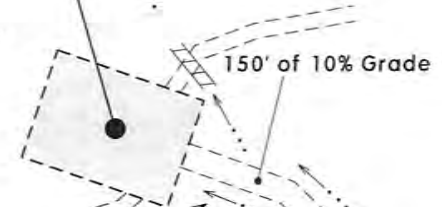
NOTE
 REFER TO THE WVDEP
 EROSION AND SEDIMENT CONTROL
 FIELD MANUAL VER. MAY 2012 FOR
 BMPs CONTROLLING EROSION AND
 SEDIMENT FROM SOIL-DISTURBING
 OPERATIONS.

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 A.W. Edgell No. 127 et al.



DRILL SITE FOR:

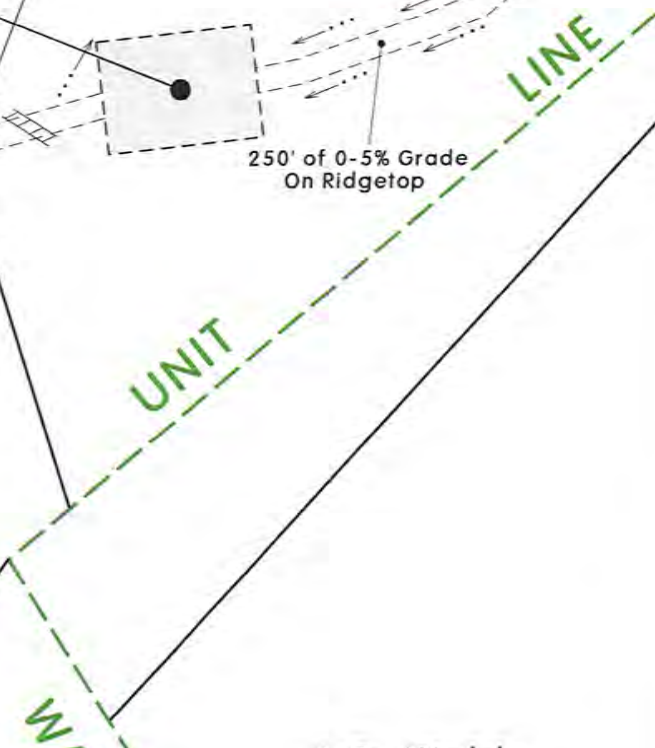
Charles McGraw No.116 (47-087-4766)
 Charles McGraw No.207 (47-087-4777)

300' of 15-18% Grade

200' of 20% Grade

200' of 0-5% Grade On Ridgetop

250' of 0-5% Grade On Ridgetop



Charles McGraw Lease

*Richard Fisher, et al.
 - Surface Owners*

Upgrade and Maintain Existing Access Road



150' of 10-12% Grade

J. D. Webb

Reclamation Plan For:

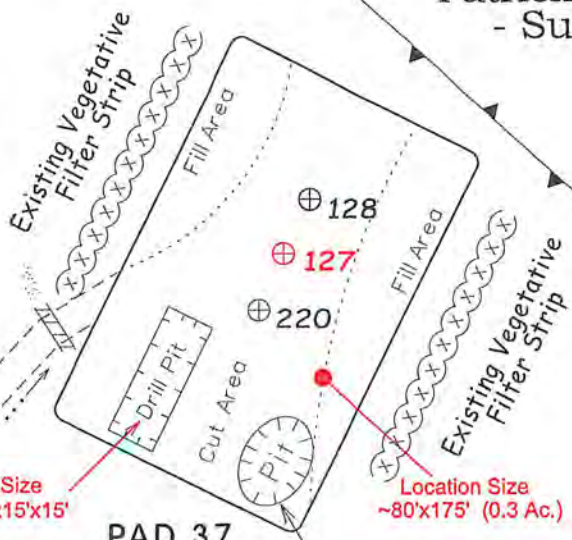
| | |
|-----------------------------|------------------------|
| PAD 37 | PAD 38 |
| A.W. Edgell No. 127 | J. Long No. 129 |
| I.B. Butcher No. 128 | J. Long No. 130 |
| J. Long No. 220 | J. Long No. 221 |

8-23-16

120' of 5-8% Grade

150' of 8-10% Grade

I.B. Butcher Lease
Patrick Cottrill
- Surface

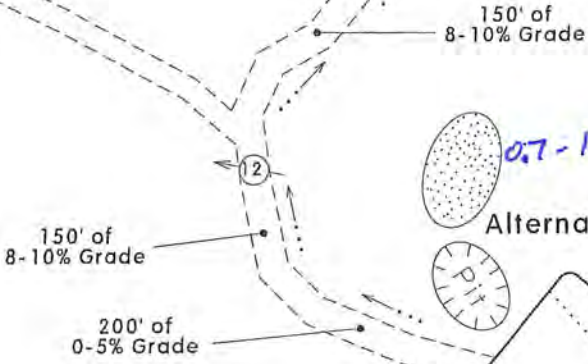


PAD 37
Location on Ridgetop

Alternate Pit

0.7-1.0 Ac

Existing Access Road to be Upgraded

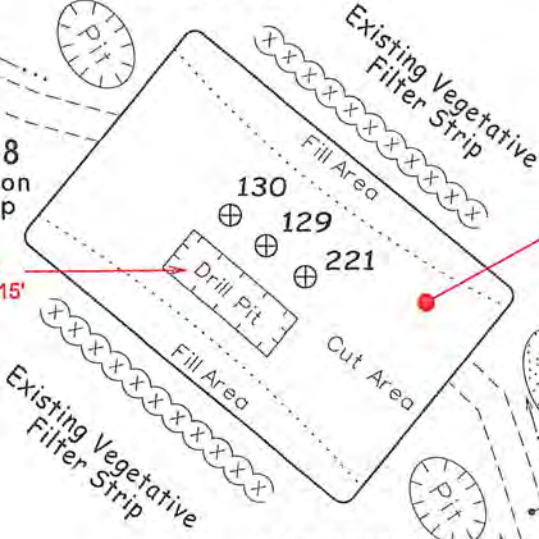


Jackson Long Lease
Patty C. Webb
- Surface

0.7-1.0 Ac

Alternate Pit

PAD 38
Location on Ridgetop



Location Size ~80'x175' (0.3 Ac.)

0.7-1.0 Ac

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

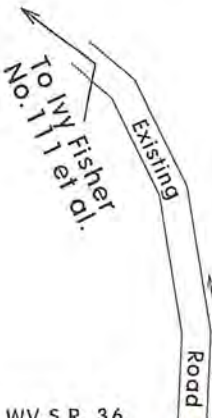
Pit Size ~100'x15'x15'

250' of 8-10% Grade

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Office of Oil and Gas
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WV Department of
Environmental Protection

Ivy Fisher Lease
Willie King
- Surface

400' of 0-5% Grade on Ridgetop

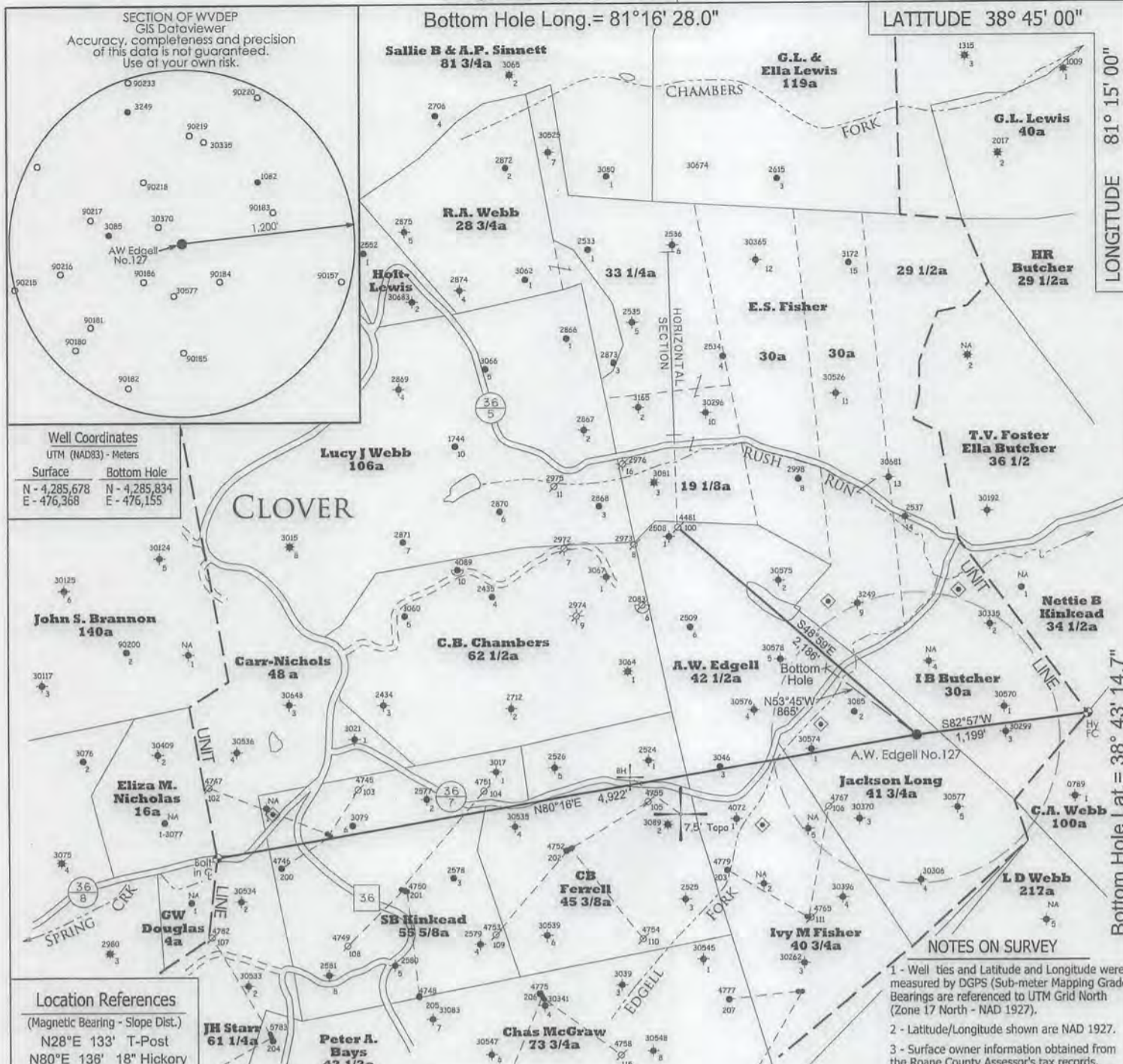


0.6 Mi. to WV S.R. 36
See Page 2 for Road
Construction Detail

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



LONGITUDE 81° 15' 00"

11,165'

Bottom Hole Lat. = 38° 43' 14.7"

Latitude = 38° 43' 09.65"

Location References
(Magnetic Bearing - Slope Dist.)
N28°E 133' T-Post
N80°E 136' 18" Hickory

- 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.

- 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. 1501

SCALE 1" = 1000'

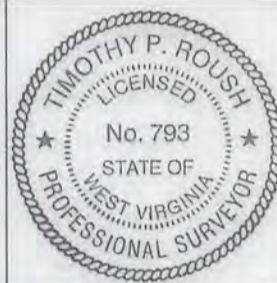
MINIMUM DEGREE OF ACCURACY Sub-Meter

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



DATE March 1, 2016

FARM A.W. Edgell No.127

API WELL NO. 47 - 087 - 04784 5

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

LOCATION: ELEVATION 1042' 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 43 Ac. LEASE NO. 61724-50 05/13/2016

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 2,383' MD

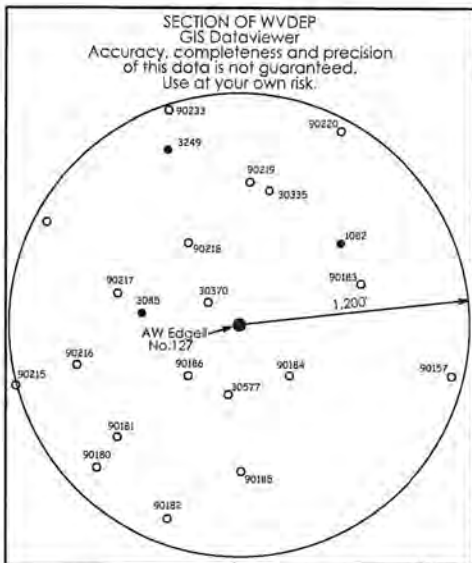
WELL OPERATOR HG Energy LLC. DESIGNATED AGENT Diane White
ADDRESS 5260 DuPont Road ADDRESS 5260 DuPont Road
Parkersburg, WV 26101 Parkersburg, WV 26101

Longitude = 81°16' 19.21"

6275'

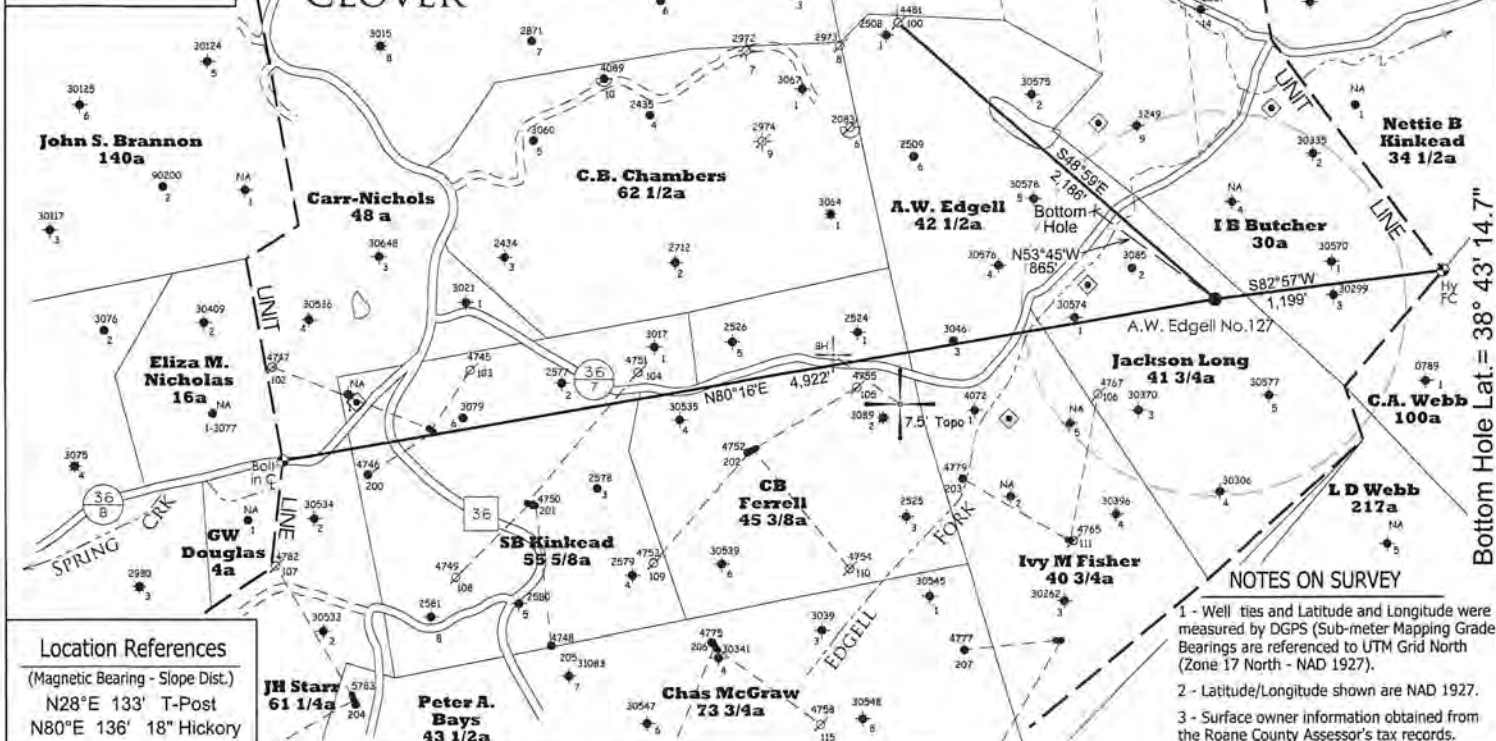
Bottom Hole Long. = 81°16' 28.0"

LATITUDE 38° 45' 00"



Well Coordinates
UTM (NAD83) - Meters

| Surface | Bottom Hole |
|------------------------------|------------------------------|
| N - 4,285,678 E - 476,368 | N - 4,285,834 E - 476,155 |



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.

- ◆ - 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. 1501

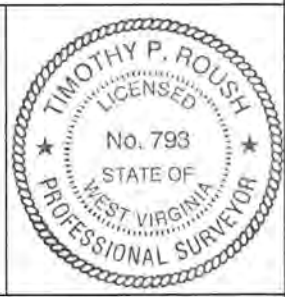
SCALE 1" = 1000'

MINIMUM DEGREE OF ACCURACY Sub-Meter

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

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 (IF "GAS") PRODUCTION ___ STORAGE ___ DEEP ___ SHALLOW ___

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DISTRICT Smithfield COUNTY Roane

QUADRANGLE Looneyville 7.5'

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OIL & GAS ROYALTY OWNER HG Energy, LLC., et al LEASE ACREAGE 43 Ac. **05/13/2016**

LEASE NO. 61724-50

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PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___

TARGET FORMATION Big Injun ESTIMATED DEPTH 2,383' MD

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

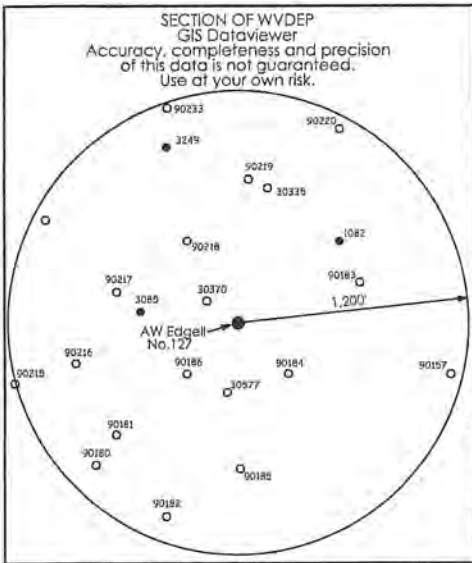
FORM IV-6

LONGITUDE 81° 15' 00"

11,165'

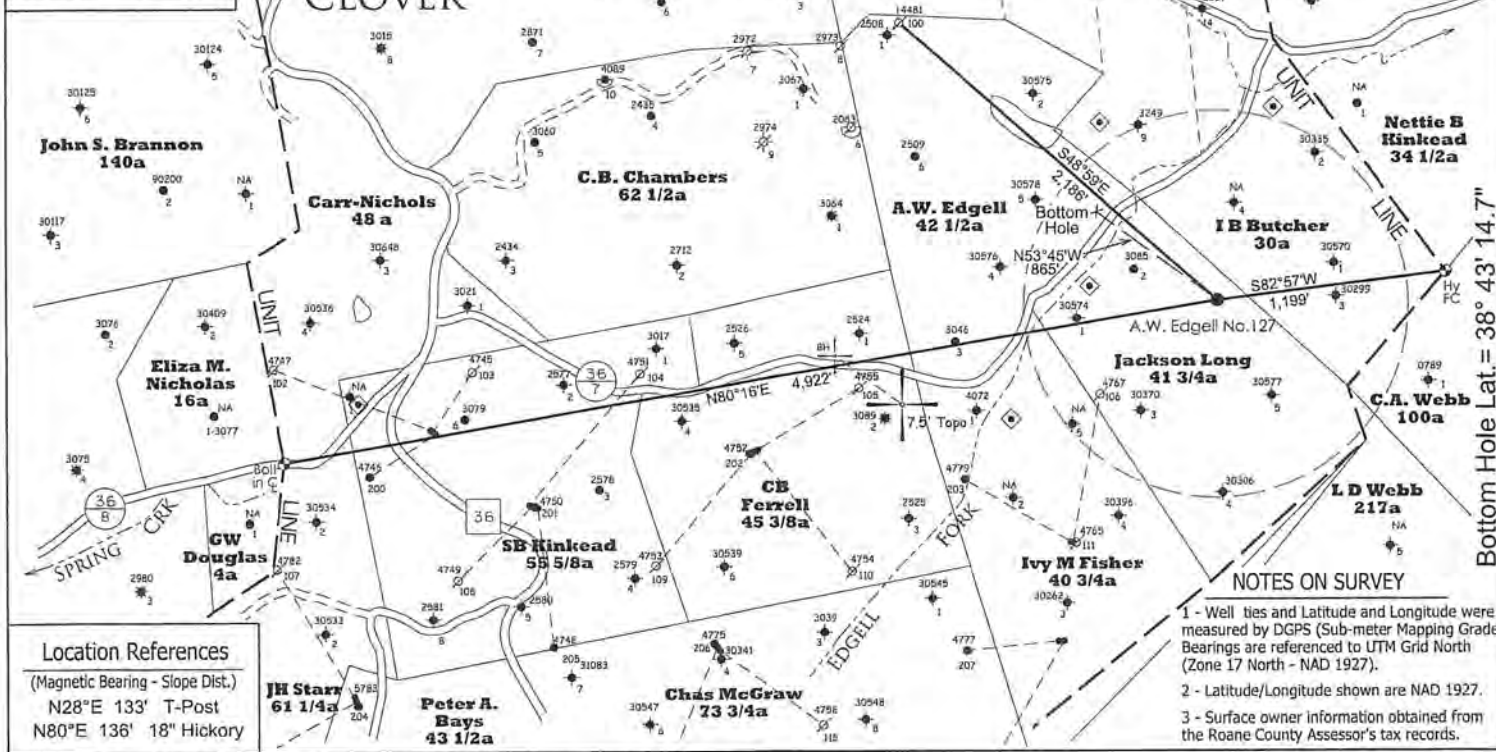
Bottom Hole Lat. = 38° 43' 14.7"

Latitude = 38° 43' 09.65"



Well Coordinates
UTM (NAD83) - Meters

| Surface | Bottom Hole |
|------------------------------|------------------------------|
| N - 4,285,678 E - 476,368 | N - 4,285,834 E - 476,155 |



Location References
(Magnetic Bearing - Slope Dist.)
N28°E 133' T-Post
N80°E 136' 18" Hickory

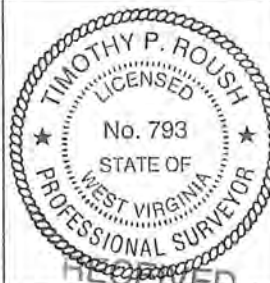
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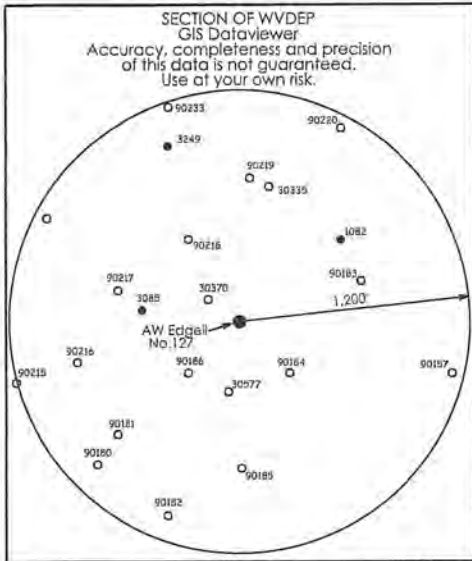
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FARM A.W. Edgell No.127
API WELL NO. 47 - 087
APR 18 2016
04784 5

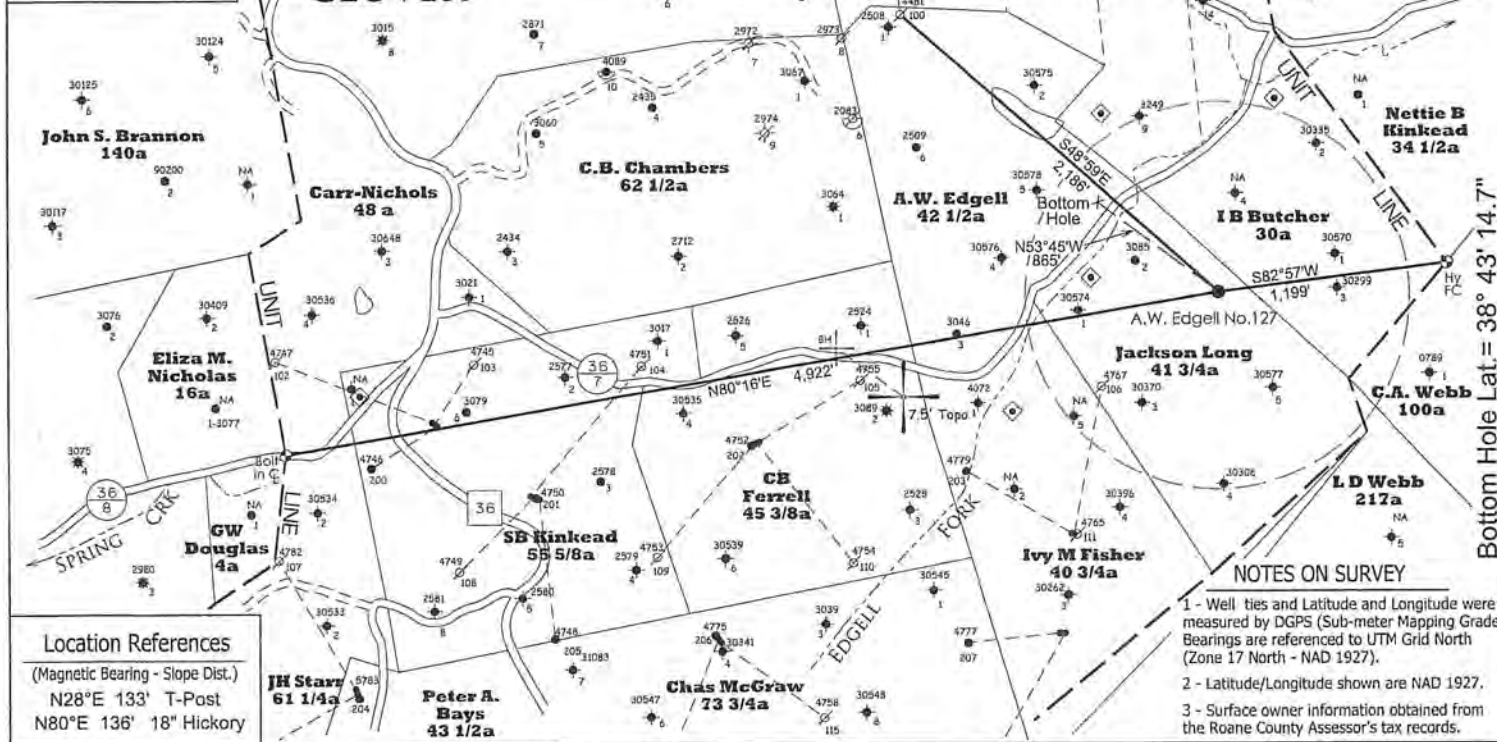
Office of Oil and Gas
RECEIVED
WV Department of Environmental Protection

05/13/2016



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| Surface | Bottom Hole |
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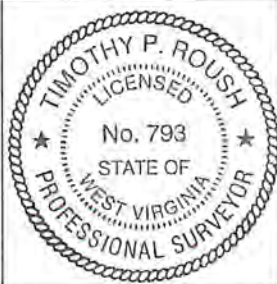
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