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

June 29, 2015

WELL WORK PERMIT

Vertical Well

This permit, API Well Number: 47-4303499, 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: NATHANIEL MASON 225
Farm Name: BRUMFIELD, JOSHUA D.
API Well Number: 47-4303499
Permit Type: Vertical Well
Date Issued: 06/29/2015

Promoting a healthy environment.

4303499

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 on this well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

4303499

WW - 2B
(Rev. 8/10)

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

1) Well Operator: HG Energy, LLC

494497948	Lincoln	Duval	Griffithsville 7.5'
Operator ID	County	District	Quadrangle

2) Operator's Well Number: Nathaniel Mason 225 3) Elevation: 800'

4) Well Type: (a) Oil X or Gas _____

(b) If Gas: Production ____ / Underground Storage _____

Deep _____ / Shallow X

5) Proposed Target Formation(s): Berea Proposed Target Depth: 2750' TMD
6) Proposed Total Depth: 2750' TMD Feet Formation at Proposed Total Depth: Berea
7) Approximate fresh water strata depths: 190'
8) Approximate salt water depths: 1040'

9) Approximate coal seam depths: 240'

10) Approximate void depths,(coal, Karst, other): NA

11) Does land contain coal seams tributary to active mine? NA

12) Describe proposed well work and fracturing methods in detail (attach additional sheets if needed)
Drill and stimulate production well in the Big Injun. Stimulation will be small hydraulic fracture.

13) **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#	340'	340'	CTS
Coal						
Intermediate						
Production	4 1/2"	J-55	10.5#	2720'	2720'	150 sks
Tubing						
Liners						

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RDT 05/11/15

Packers: Kind: _____
Sizes: _____
Depths Set _____

4303499

WW-2A
(Rev. 6-14)

1). Date: May 6, 2015

2.) Operator's Well Number Nathaniel Mason 225

3.) API Well No.: 47- State County - Permit

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE AND APPLICATION FOR A WELL WORK PERMIT

4) Surface Owner(s) to be served:
(a) Name Joshua Brumfield
Address 31 Vandalia Drive
Yawkey, WV 25573
(b) Name Thurmon Caudill
Address 4946 Straight Fork Road
Yawkey, WV 25573
(c) Name
Address

6) Inspector Ralph Triplett
Address 5539 McClellan Hwy
Branchland, WV 25506
Telephone 304-389-0350

5) (a) Coal Operator
Name N/A
Address
(b) Coal Owner(s) with Declaration
Name N/A
Address
Name
Address
(c) Coal Lessee with Declaration
Name NA
Address

TO THE PERSONS 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 22-6 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through ___ on the above named parties by:

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

I have read and understand Chapter 22-6 and 35 CSR 4, and I agree to the terms and conditions of any permit issued under this application.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator HG Energy, LLC
By: Diane White Diane White
Its: Agent
Address: 5260 Dupont Road
Parkersburg, WV 26101
Telephone: 304-420-1119
Email: dwhite@hgenergyllc.com

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
S. DIANNE DULANEY
5260 Dupont Road
Parkersburg, West Virginia 26101
My Commission Expires Oct. 4, 2016

Subscribed and sworn before me this 5th day of May, 2015

S. Dianne Dulaney Notary Public

My Commission Expires Oct 4, 2016

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WV Department of Environmental Protection

Oil and Gas Privacy Notice

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov

4303499

WW-2A1
(Rev. 1/11)

Operator's Well Number Nathaniel Mason 225

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

** See Attached Sheet **

Acknowledgement of Possible Permitting/Approval
In Addition to the Office of Oil and Gas

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

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

The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the activity is initiated.

Well Operator: HG Energy, LLC
By: Its: Agent

Diane White Diane White

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Environmental Protection

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

Operator's Well No. Nathaniel Mason 225

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
Nathaniel and Rhoda Mason	**South Penn Oil Company**	**1/8**	**39/123**

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 drillingerations 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

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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

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

4303499

WW-2B1
(5-12)

Well No. Nathaniel Mason 225

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 Labs
Sampling Contractor: Sturm Environmental Labs

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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WW-2B1
Page 2 - Continued

Well No. Nathaniel Mason 225

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:

* Joshua Brumfield
31 Vandalia Drive
Yawkey, WV 25573

* Ruth Jones Smith
59 Bear Fork Road
Yawkey, WV 25573

* Linda Owsley
PO Box 246
Griffithsville, WV 25521

* Harvey Kelley
P. O. Box 189
Griffithsville, WV 25521

* Therman Caudill
4946 Straight Fork Road
Yawkey, WV 25573

* Sarah Fletcher
1940 Allens Fork Road
Charleston, WV 25320

* Arthur & Romaline White
7564 Plum Orchard Road
Munith, MI 49259

* David Lawson
1 First American Way
Westlake, TX 76262

* Venita Gail Hager
38 Bear Fork Road
Yawkey, WV 25573

* Fred Adkins
P. O. Box 96
Griffithsville, WV 25521

* Ralph Tudor
204 Jarvis Ridge
Griffithsville, WV 25521

* Franklin Kilburn
4933 Straight Fork Road
Yawkey, WV 25573

* Deanna Miller
4975 Straight Fork Road
Griffithsville, WV 25521

* David Pauley
P. O. Box 198
Griffithsville, WV 25521

* Lorena Dunlap
P. O. Box 227
Griffithsville, WV 25521

* Timothy Antill
4925 Straight Fork Road
Yawkey, WV 25573

* Jackie Stowers
4818 Midway Road

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WW-9
(5/13)

Page _____ of _____
API Number 47 - _____ - _____
Operator's Well No. Nathaniel Mason 225

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name HG Energy, LLC OP Code 494497948

Watershed (HUC 10) Straight & Bear Fork Quadrangle Griffithsville 7.5'

Elevation 800' County Lincoln District Duval

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

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

If so, please describe anticipated pit waste: Fluids encountered while drilling subject well

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

Proposed Disposal Method For Treated Pit Wastes:

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

Will closed loop system be used? No

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

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

Additives to be used in drilling medium? 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.

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 5th day of May, 2015

Notary Public

My commission expires Oct. 4, 2016

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
S. DIANNE DULANEY
Parkersburg, West Virginia 26101
My Commission Expires Oct. 4, 2016

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Form WW-9

Operator's Well No. Nathaniel Mason 223

Proposed Revegetation Treatment: Acres Disturbed 1.00 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 Contol 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.

Plan Approved by: Ralph D. Triplett

Comments:

Title: District Inspector Date: May 11, 2015

Field Reviewed? (✓) Yes ( ) No

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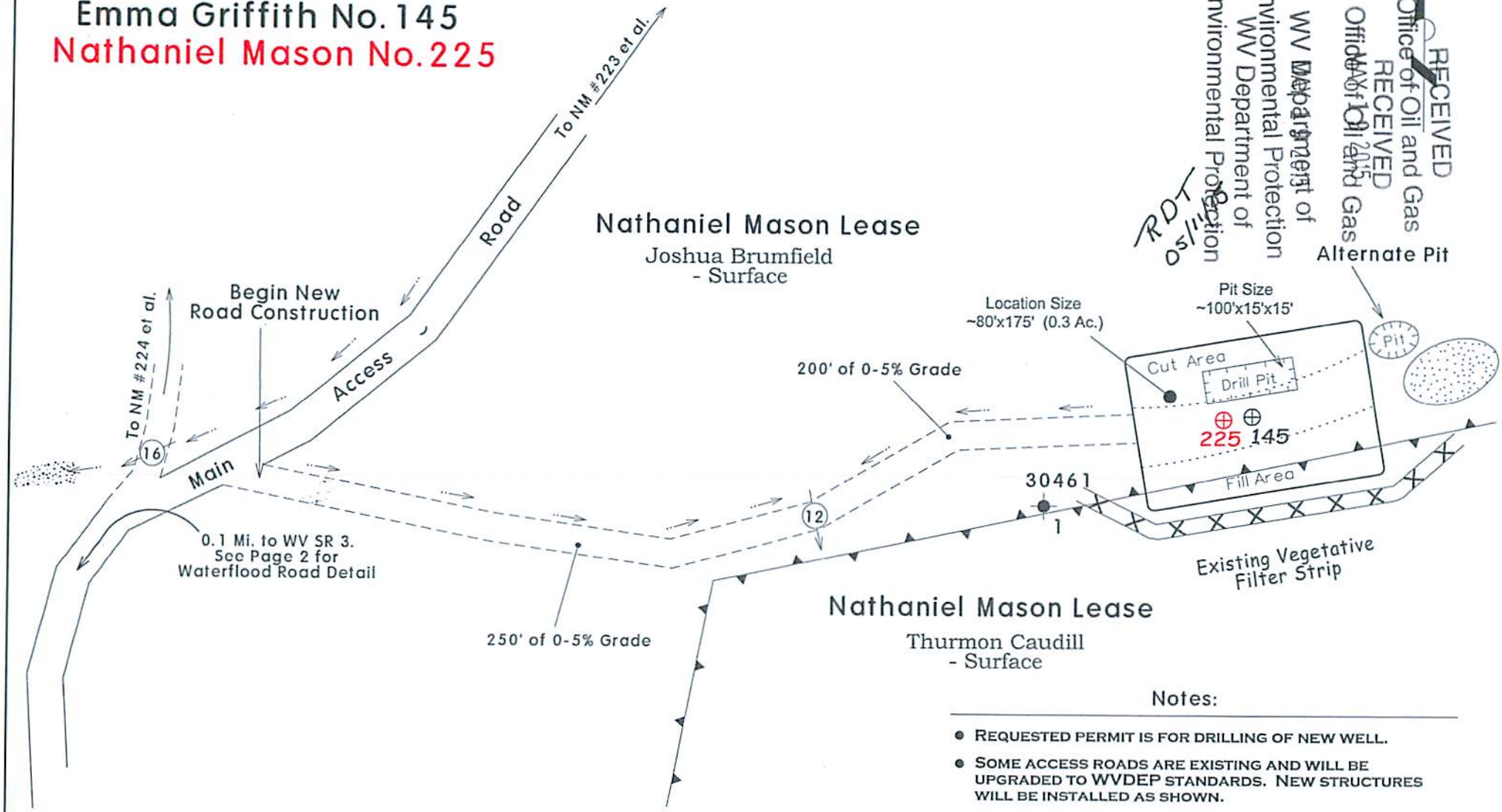
Reclamation Plan For:

Emma Griffith No. 145
Nathaniel Mason No. 225



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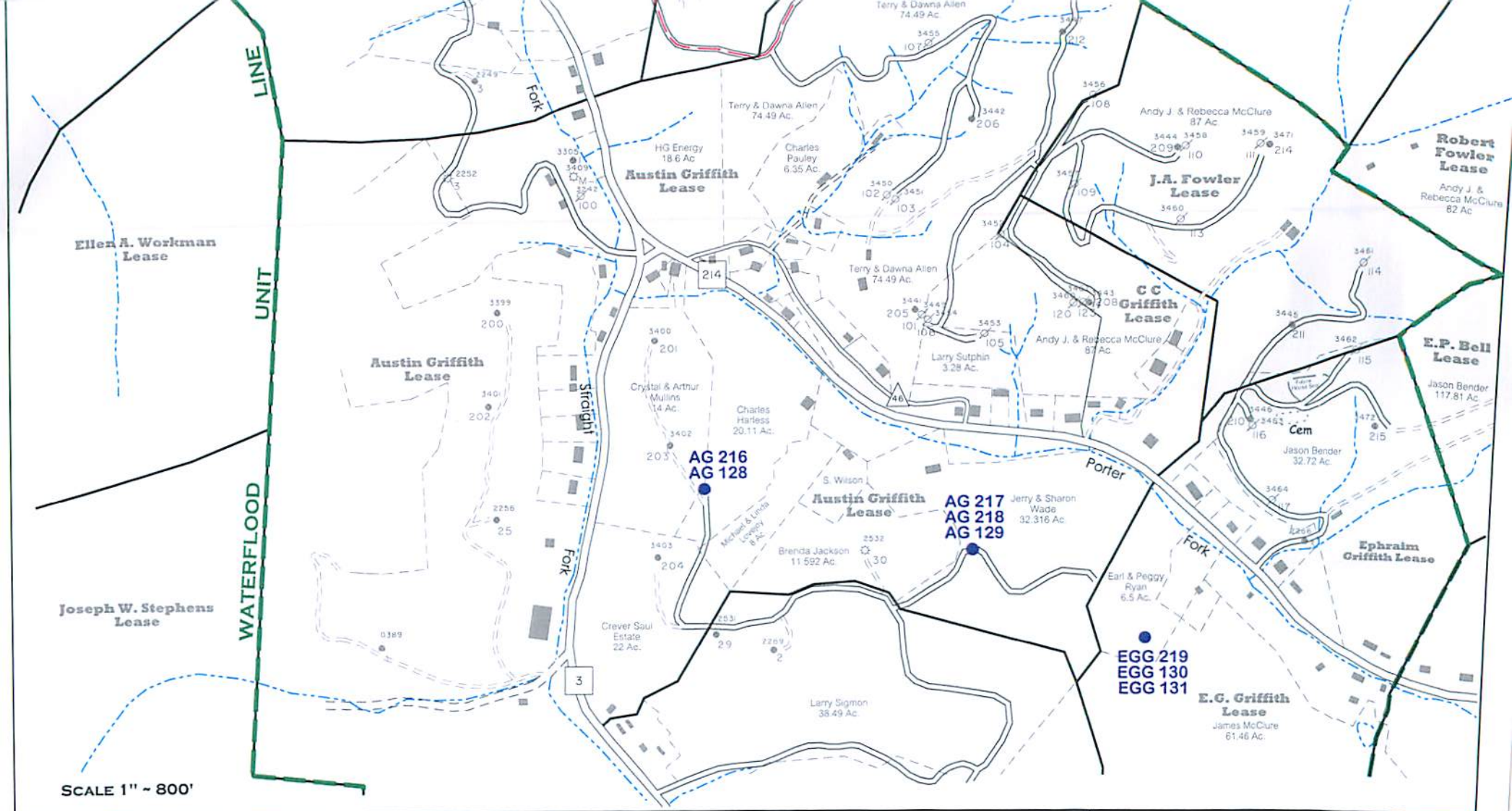
Environmental Protection
WV Department of
Environmental Protection
RDT
05/11/15

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

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.
- STACK BRUSH BELOW DISTURBED AREAS FOR SEDIMENTATION CONTROL.
- DRAWING NOT TO SCALE.

4303499



SCALE 1" ~ 800'

HG ENERGY LLC

GRIIFTHSVILLE WATERFLOOD

Lincoln County, W.Va.

RECLAMATION PLAN SHOWING ROAD SYSTEMS TO BE USED FOR 2015 DRILLING PROGRAM (NORTH)

MARCH 3, 2015

PAGE 2

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 2015 (AS SHOWN). SEE PERMITS ON FILE FOR MORE DETAIL.

LEGEND

EXISTING WATERFLOOD ROADS TO BE USED.

OTHER EXISTING MAIN WATERFLOOD ROADS (POSSIBLE ACCESS).

EXISTING LEASE OR FARM ROADS TO BE UPGRADED.

NEW ROADS TO BE CONSTRUCTED.

AG 216 — LOCATION FOR PROPOSED WELLS

POTENTIAL WATER SUPPLY SOURCE TO BE SAMPLED (LOC. APPROX.)

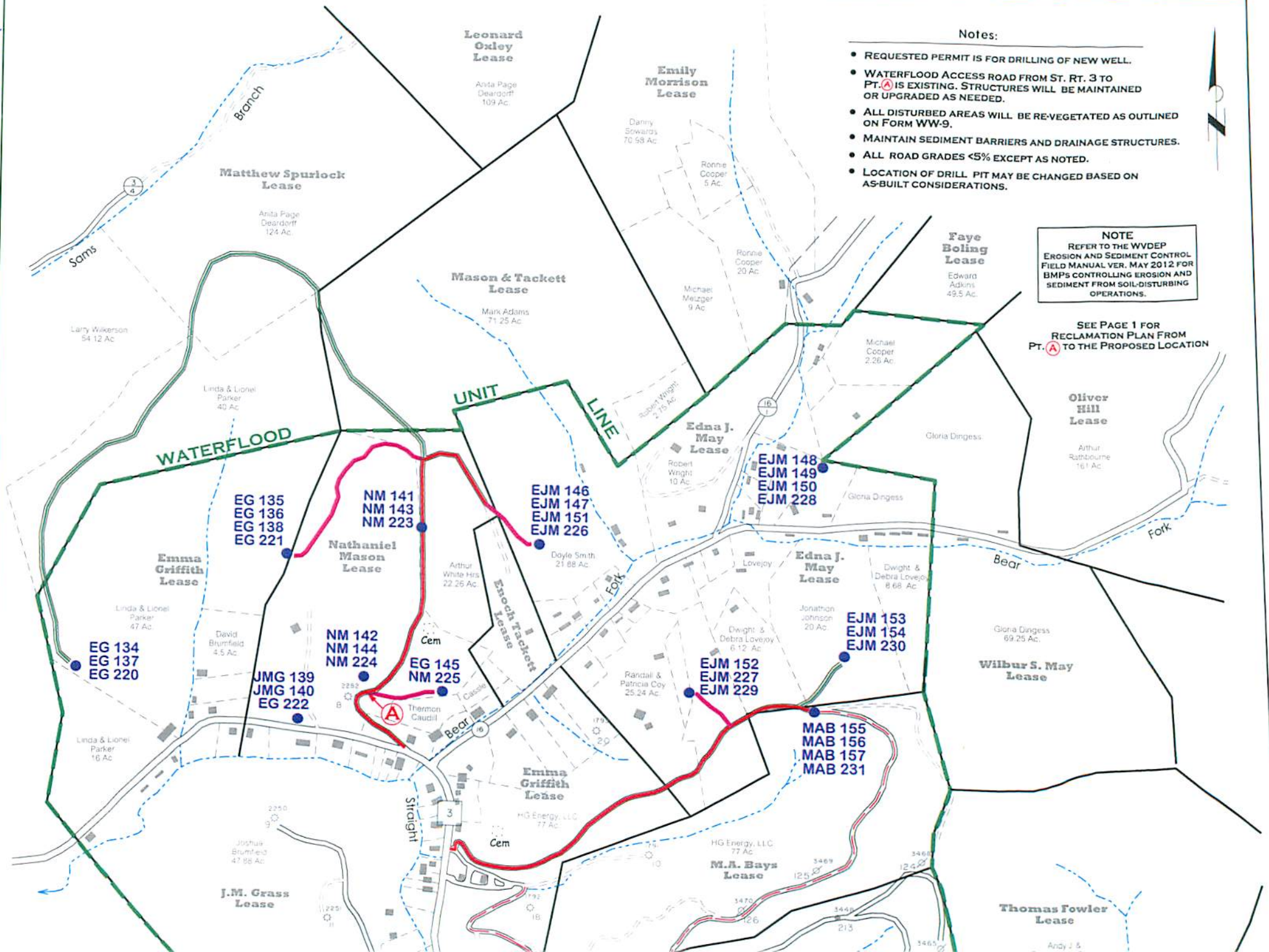
4503499

Notes:

- REQUESTED PERMIT IS FOR DRILLING OF NEW WELL.
- WATERFLOOD ACCESS ROAD FROM ST. RT. 3 TO PT. (A) IS EXISTING. STRUCTURES WILL BE MAINTAINED OR UPGRADED AS NEEDED.
- 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.

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

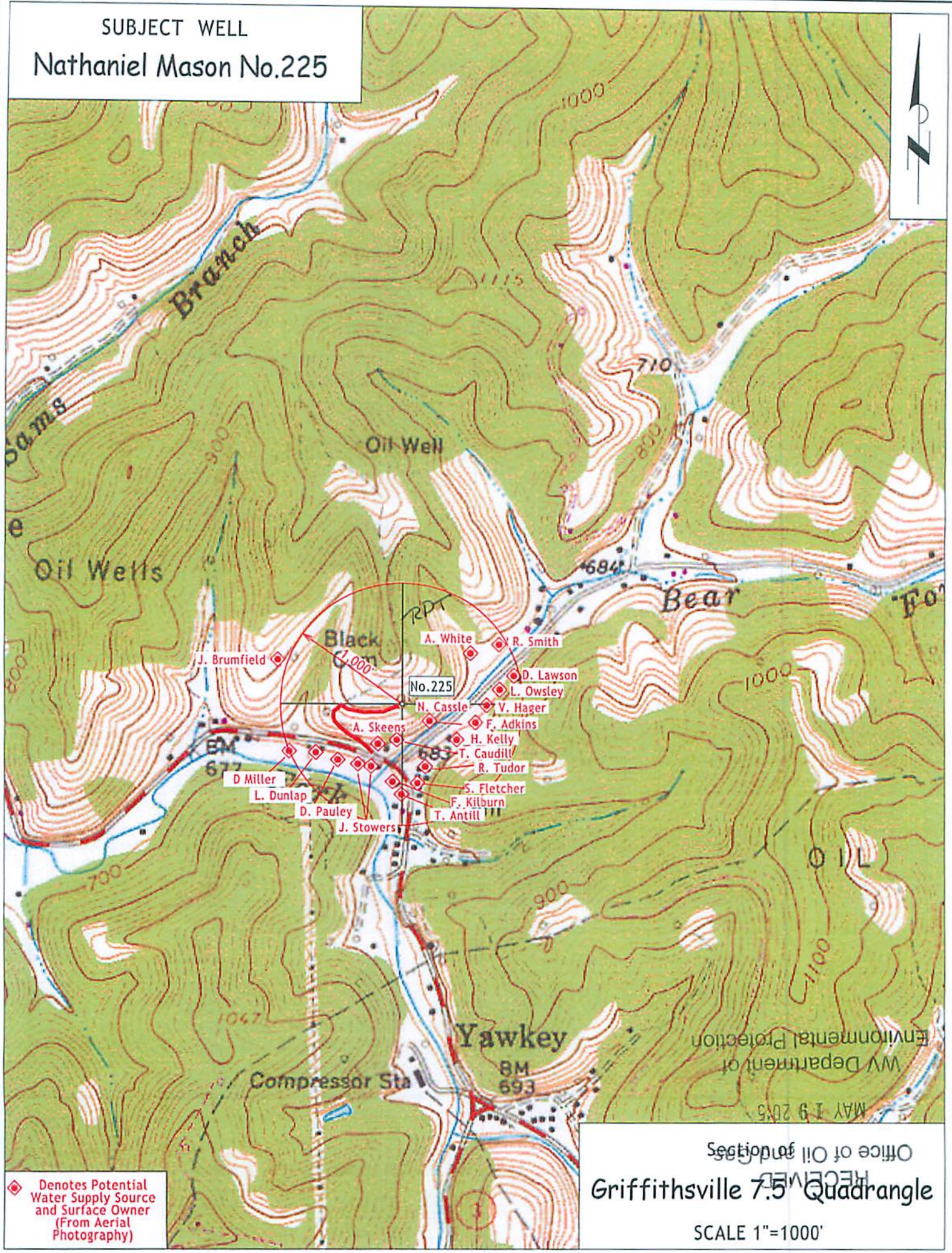
SEE PAGE 1 FOR RECLAMATION PLAN FROM PT. (A) TO THE PROPOSED LOCATION



4303499

SUBJECT WELL

Nathaniel Mason No.225



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

Section of

Griffithsville 7.5' Quadrangle

SCALE 1"=1000'

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(BOT. HL: LON:-81°58'02.2") LON: -81°58'03.6" 2685'

LAT:38°15'00"

LON:81°57'30"

5885'

LAT:38°14'01.8"

(BOTTOM HOLE: LAT:38°14'03.1")

MAP OF H.G. ENERGY, LLC -WATERFLOOD UNIT- NATHANIEL MASON 225

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).

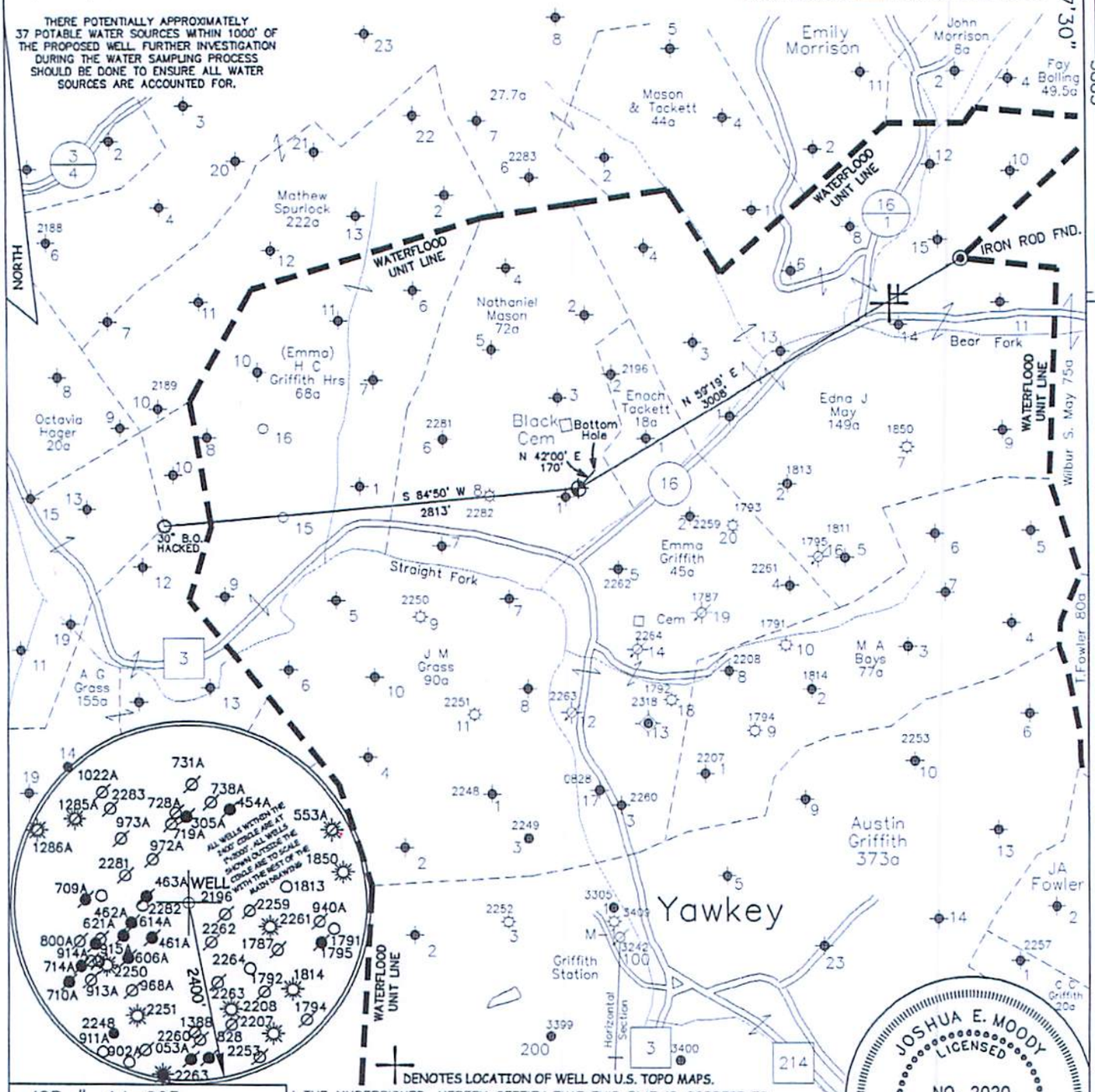
2 - Surface owners and adjoiners information obtained from the Lincoln County Assessor's tax records.

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

UTM Coordinates (Zone 17N-NAD 1983)	
Surface	N-4,232,213m. E-415,323m.
Bottom Hole	N-4,232,252m. E-415,358m.

LOCATION REFERENCES	
MAGNETIC BEARING	
S 75° E 114.9'	38° W.O.
S 10° W 74.7'	7° R.O.

THERE POTENTIALLY APPROXIMATELY 37 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.



JOB # 14-023
DRAWING # 15HG LC 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 DEPTARTMENT OF ENVIRONMENTAL PROTECTION.

JOSHUA E. MOODY LICENSED NO. 2020 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

JOSHUA E. MOODY, P.S. 2020

STATE OF WEST VIRGINIA MONTANI SEMPER LIBERI

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

DATE 3/10/15
OPERATOR'S WELL NATHANIEL MASON # 225

WELL TYPE: OIL X GAS ___ LIQUID INJECTION ___ WASTE DISPOSAL ___ HORIZONTAL ___
(IF "GAS") PRODUCTION ___ STORAGE ___ DEEP ___ SHALLOW X
LOCATION: ELEVATION 800' WATERSHED STRAIGHT & BEAR FORK
DISTRICT DUVAL COUNTY LINCOLN
QUADRANGLE GRIFFITHSVILLE 7.5'

API WELL # 47 - 043 - 03499
STATE COUNTY PERMIT

SURFACE OWNER JOSHUA D. BRUMFIELD ACREAGE 42.72 ACRES +/-
OIL & GAS ROYALTY OWNER HG ENERGY, LLC ET AL LEASE ACREAGE 80 ACRES +/-
PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___
OTHER PHYSICAL CHANGE IN WELL (SPECIFY) WELL WILL BE DRILLED DIRECTIONALLY (N 42°00' E 170')
PLUG & ABANDON ___ CLEAN OUT & REPLUG ___
TARGET FORMATION BEREA ESTIMATED DEPTH TVD-2,280' TMD-2,370'
WELL OPERATOR H.G. ENERGY, LLC DESIGNATED AGENT D. WHITE
ADDRESS 5260 DuPONT ROAD ADDRESS 5260 DuPONT ROAD
PARKERSBURG, WV 26101 PARKERSBURG, WV 26101

COUNTY NAME PERMIT

FORM WW-6 LEASE # 71124-50

RECEIVED
Office of Oil and Gas
MAY 1 9 2015
WV Department of Environmental Protection

(BOT. HL: LON:-81°58'02.2") LON: -81°58'03.6" 2685'

LAT:38°15'00"

LON:81°57'30"

5885'

LAT:38°14'01.8"

(BOTTOM HOLE: LAT:38°14'03.1")

MAP OF H.G. ENERGY, LLC -WATERFLOOD UNIT- NATHANIEL MASON 225

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).

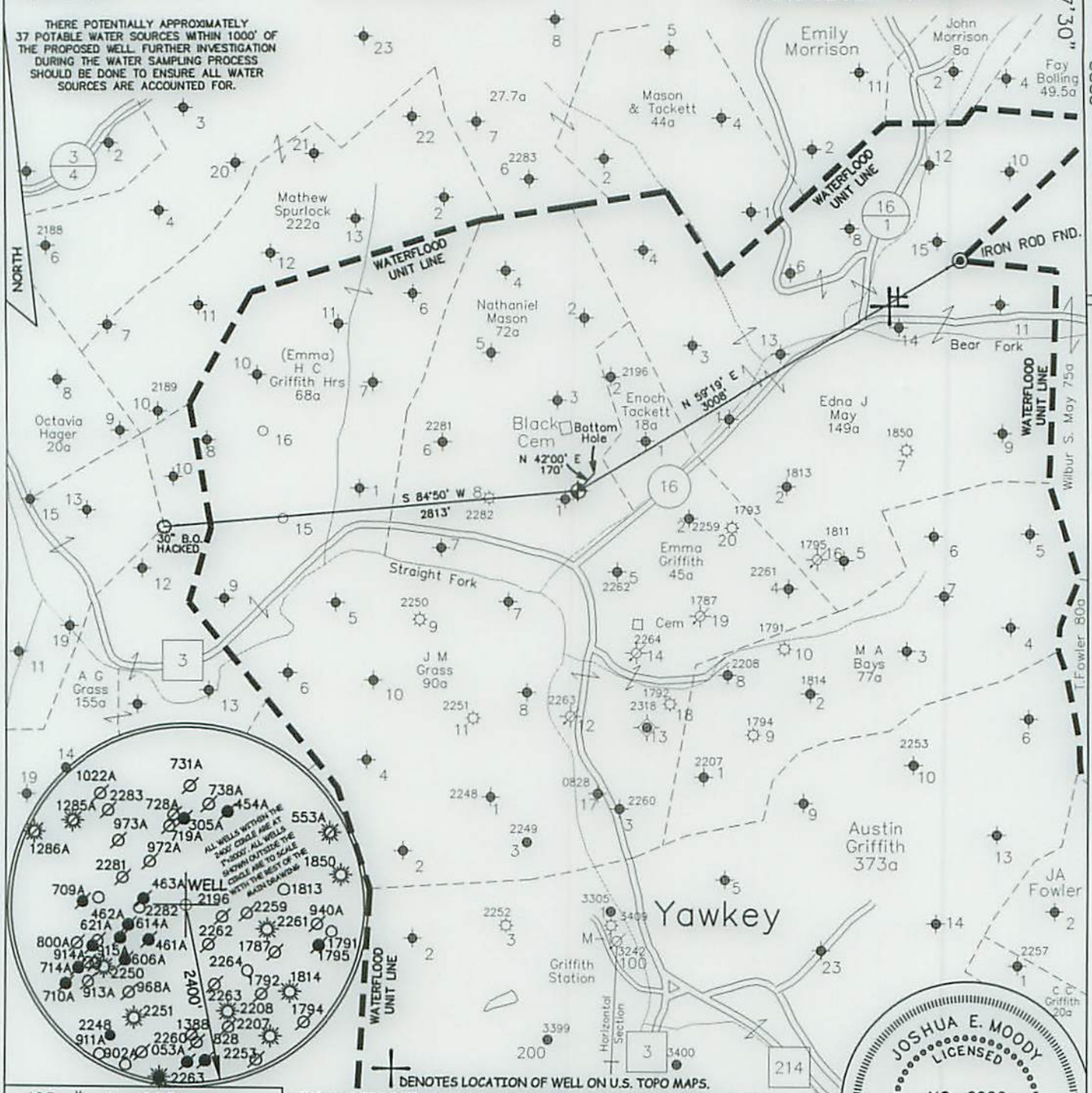
2 - Surface owners and adjoiners information obtained from the Lincoln County Assessor's tax records.

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

UTM Coordinates (Zone 17N-NAD 1983)	
Surface	N-4,232,213m. E-415,323m.
Bottom Hole	N-4,232,252m. E-415,358m.

LOCATION REFERENCES	
MAGNETIC BEARING	
S 75° E 114.9'	38° W.O.
S 10° W 74.7'	7° R.O.

THERE POTENTIALLY APPROXIMATELY 37 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.



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

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MOODY LAND SURVEYING, LLC
ST. MARYS, WV 26170

JOSHUA E. MOODY, P.S. 2020

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