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west virginia department of environmental protection

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Office of Oil and Gas  
601 57<sup>th</sup> Street, S.E.  
Charleston, WV 25304  
(304) 926-0450  
fax: (304) 926-0452

Jim Justice , Governor  
Austin Caperton , Cabinet Secretary  
www.dep.wv.gov

Wednesday, April 26, 2017  
WELL WORK PERMIT  
Vertical / New Drill

HG ENERGY, LLC (A)  
5260 DUPONT ROAD

PARKERSBURG, WV 26101

Re: Permit approval for THOMAS FOWLER 503  
47-043-03574-00-00

This well work permit 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 any additional specific 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 of 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.

Per 35 CSR 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- 0450.



James A. Martin  
Chief

Operator's Well Number: THOMAS FOWLER 503  
Farm Name: MCCLURE, ANDY & REBECCA  
U.S. WELL NUMBER: 47-043-03574-00-00  
Vertical / New Drill  
Date Issued: 4/26/2017

Promoting a healthy environment.

04/28/2017

## 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.









WW-2B1  
(5-12)

Well No. Thomas Fowler 503

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 Lab  
Sampling Contractor Sturm Environmental Lab

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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Office of Oil and Gas  
APR 03 2017  
WV Department of  
Environmental Protection

04/28/2017

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:

- \* Andy & Becky McClure  
109 Coon Whistle Hollow  
Yawkey, WV 25573



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WV Department of  
Environmental Protection



43035745

WW-9  
(2/15)

API Number 47 - \_\_\_\_\_ - \_\_\_\_\_  
Operator's Well No. Thomas Fowler 503

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) Porter Fork Quadrangle Griffithville 7.5'

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

Will a pit be used? Yes  No

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

Will a synthetic liner be used in the pit? Yes  No  If so, what ml.? 30 Mil 20ml JS

Proposed Disposal Method For Treated Pit Wastes:

NO LAND APPLICATION

- 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? If so, describe: No

Drilling medium anticipated for this well (vertical and horizontal)? 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? \_\_\_\_\_

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

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 27th day of March, 2017

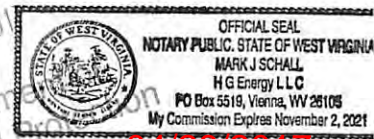
*[Handwritten Signature]*

Notary Public

My commission expires NOVEMBER 2, 2021

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Office of Oil and Gas

WV Department of Environmental Protection



04/28/2017

HG Energy, LLC

Proposed Revegetation Treatment: Acres Disturbed 0.4 acres Prevegetation pH \_\_\_\_\_

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type 10-20-20 or equivalent

Fertilizer amount 500 lbs/acre

Mulch Straw 2 Tons/acre

Seed Mixtures

| Temporary     |           | Permanent     |           |
|---------------|-----------|---------------|-----------|
| Seed Type     | lbs/acre  | Seed Type     | lbs/acre  |
| Tall Fescue   | <u>40</u> | Tall Fescue   | <u>40</u> |
| Ladino Clover | <u>5</u>  | Ladino Clover | <u>5</u>  |

\* Sediment Control Will Be In Place At All Times \*

Attach:

Drawing(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided)

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Jeffrey Smith

Comments: All sediment control to be removed before release

Title: Oil & Gas Inspector

Date: 3-29-17

Field Reviewed?  Yes  No

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Office of Oil and Gas  
APR 03 2017  
WV Department of  
Environmental Protection



Notes:

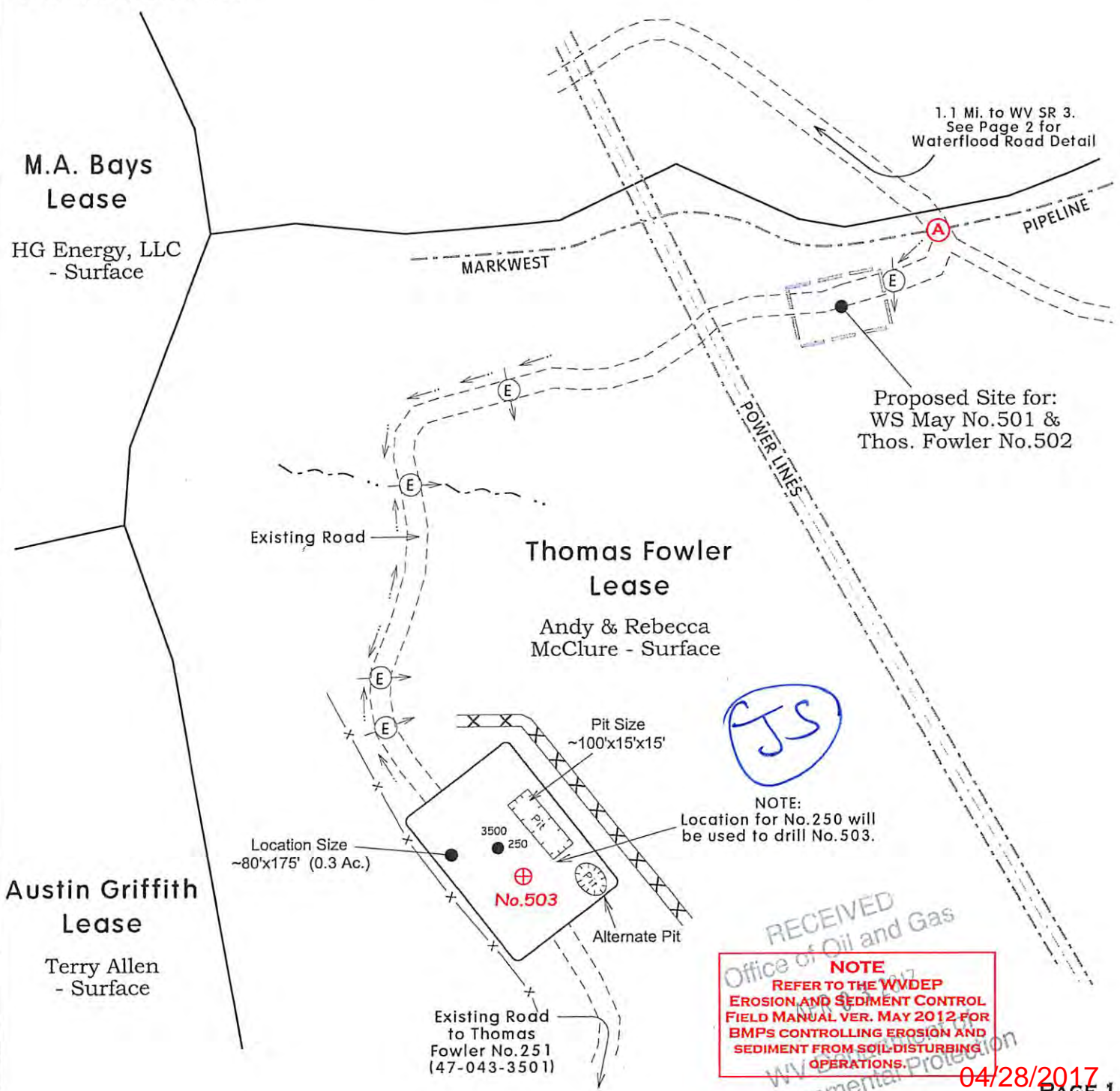
- REQUESTED PERMIT IS FOR DRILLING OF NEW WELL.
- ALL ACCESS ROADS ARE EXISTING AND WILL BE MAINTAINED TO WVDEP STANDARDS.
- STOCKPILE TOPSOIL FOR RE-DRESSING LOCATION DURING RECLAMATION
- ALL DISTURBED AREAS WILL BE RE-VEGETATED AS OUTLINED ON FORM WW-9.
- MAINTAIN SEDIMENT BARRIERS AND DRAINAGE STRUCTURES.
- 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.

# Reclamation Plan For:

## Thomas Fowler No.503

W.S. May  
Lease

David Adkins  
- Surface



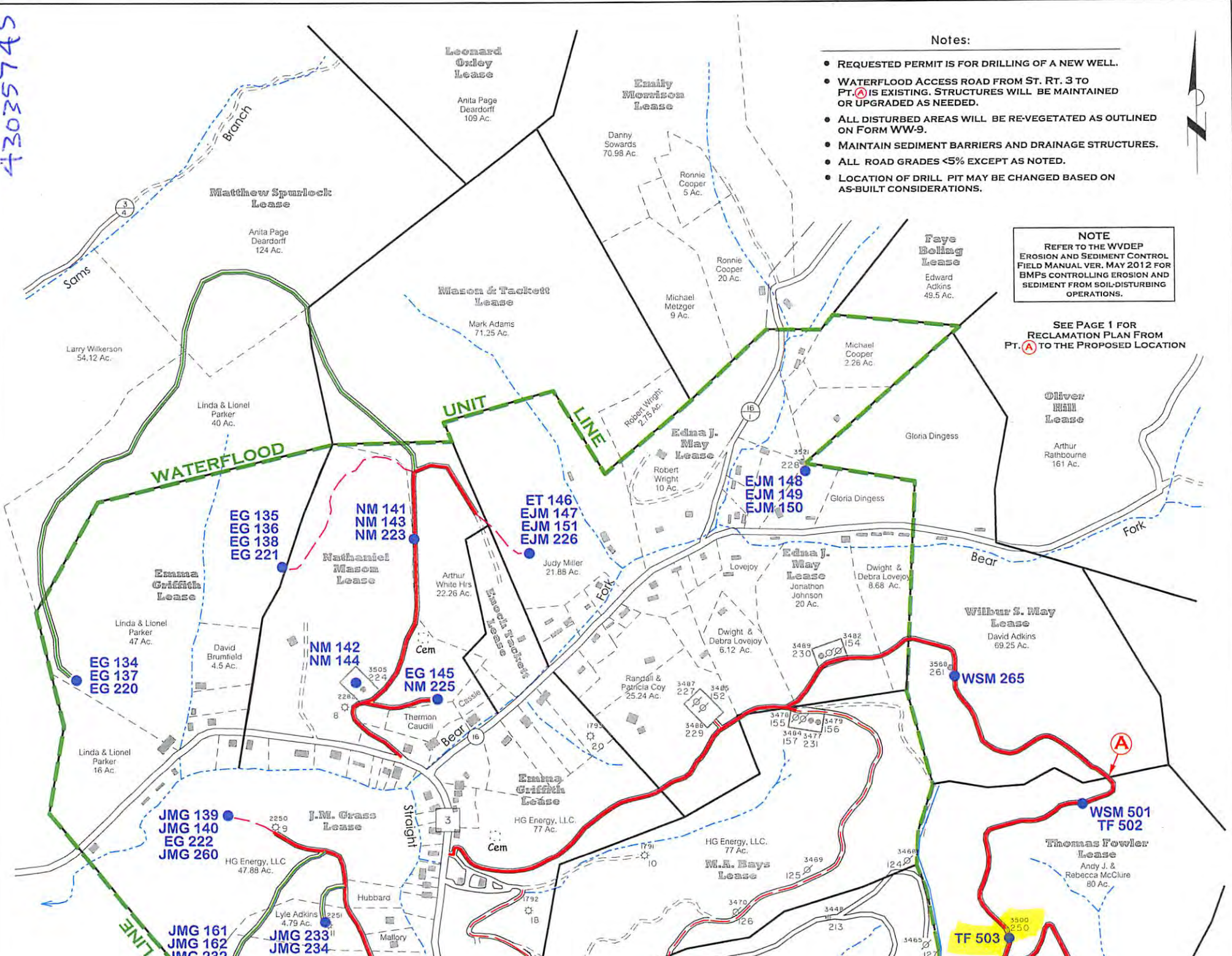
TJS

NOTE:  
Location for No. 250 will  
be used to drill No. 503.

RECEIVED  
Office of Oil and Gas  
NOTE  
REFER TO THE WVDEP  
EROSION AND SEDIMENT CONTROL  
FIELD MANUAL VER. MAY 2012 FOR  
BMPs CONTROLLING EROSION AND  
SEDIMENT FROM SOIL-DISTURBING  
OPERATIONS.



43035745



Notes:

- REQUESTED PERMIT IS FOR DRILLING OF A 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.

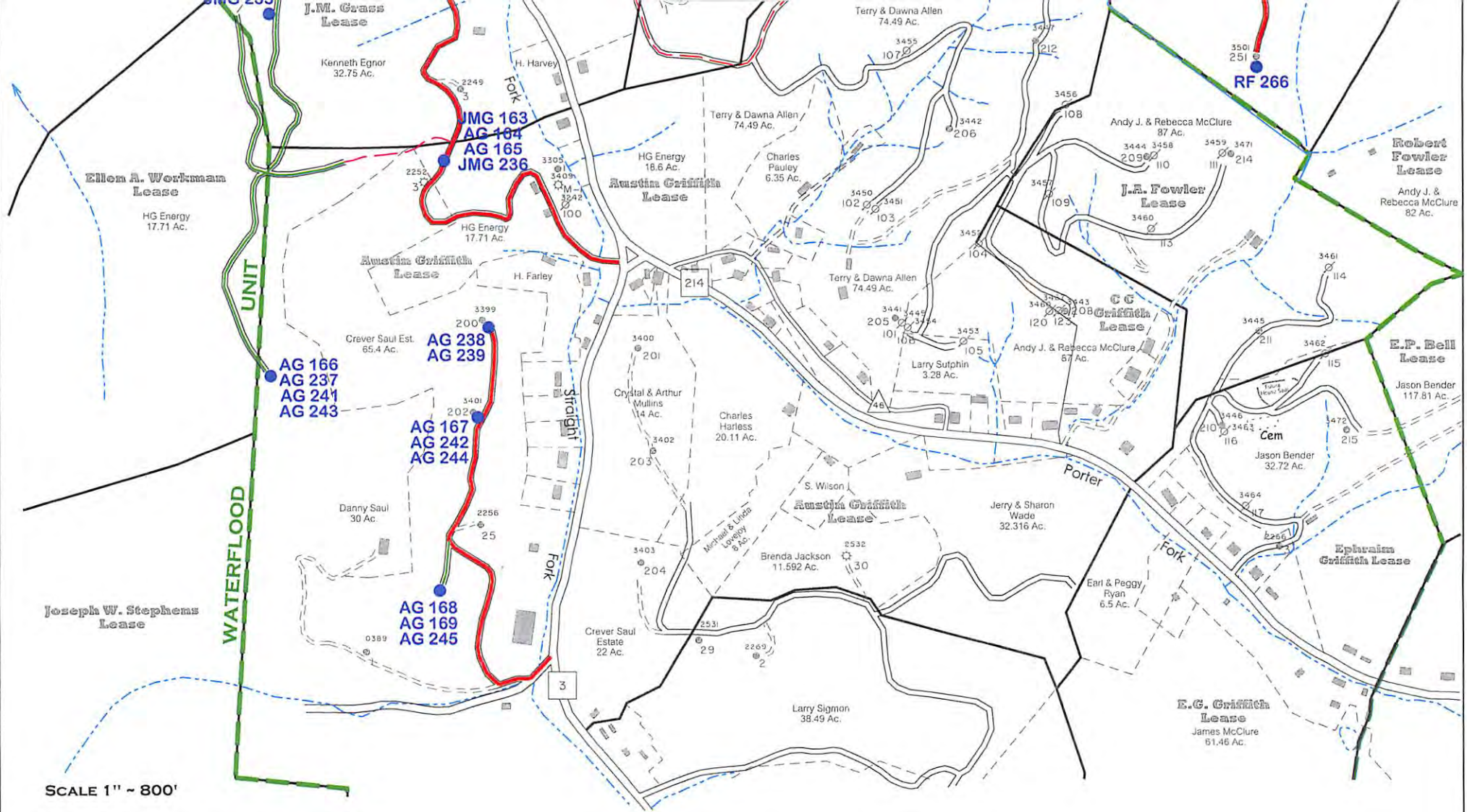
SEE PAGE 1 FOR  
 RECLAMATION PLAN FROM  
 PT. A TO THE PROPOSED LOCATION

Oliver  
 Hill  
 Lease  
 Arthur  
 Rathbourne  
 161 Ac.

A

TF 503





SCALE 1" ~ 800'



## GRIFFITHSVILLE WATERFLOOD

Lincoln County, W.Va.

### RECLAMATION PLAN SHOWING ROAD SYSTEMS TO BE USED FOR 2017 DRILLING PROGRAM

### NOTES

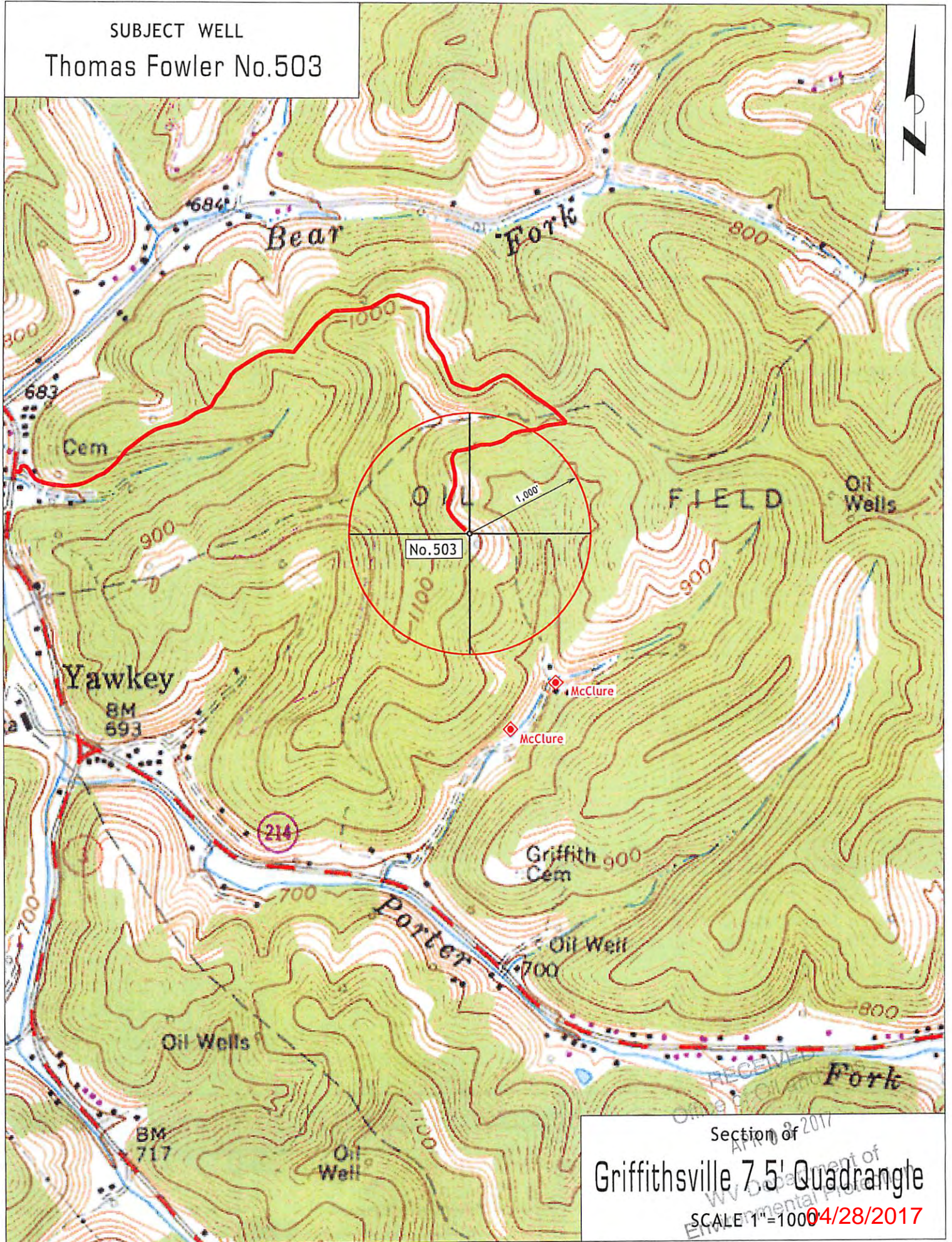
1. REFER TO THE WVDEP EROSION AND SEDIMENTATION CONTROL MANUAL (VER. MAY 20, 2013) FOR BMP'S CONTROLLING EROSION AND SEDIMENTATION FROM ALL SOIL-DISTURBING OPERATIONS.
2. SEE PAGE ONE OF RECLAMATION PLAN FOR DETAILS OF NEW ROAD CONSTRUCTION AND ROAD UPGRADES FROM POINT **A** TO DRILL SITE LOCATION.
3. 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.
- TF 503
- LOCATION FOR PROPOSED WELLS
- POTENTIAL WATER SUPPLY SOURCE TO BE SAMPLED (LOC. APPROX.)



SUBJECT WELL  
Thomas Fowler No.503



Section of  
Griffithsville 7.5' Quadrangle  
SCALE 1"=1000'  
APR 9 2017  
WV Department of  
Environmental Protection  
04/28/2017

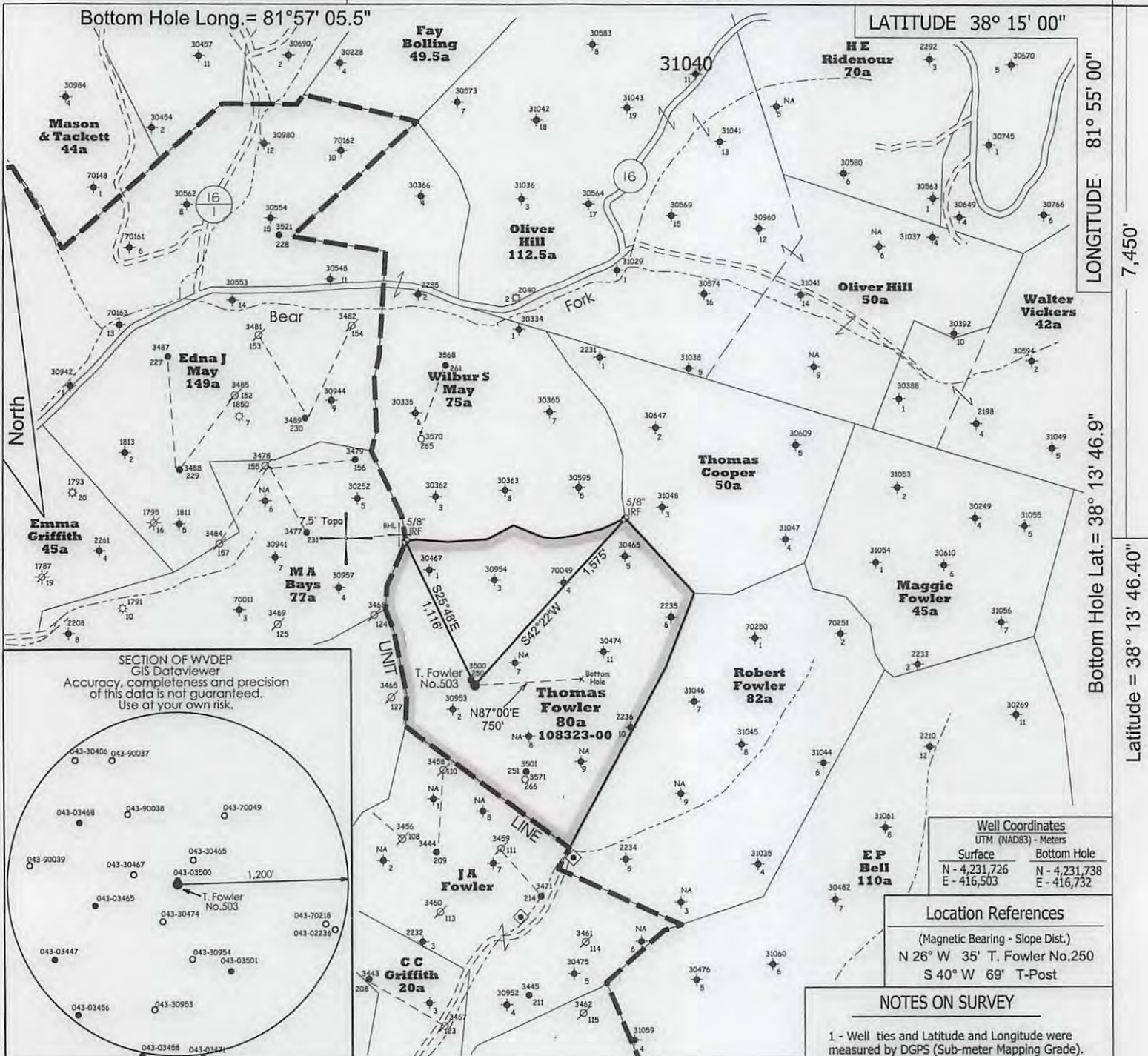


Longitude = 81°57' 14.88"

10,760'

LATITUDE 38° 15' 00"

Bottom Hole Long = 81°57' 05.5"

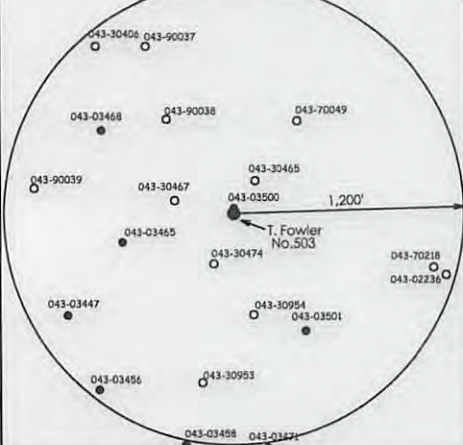


LONGITUDE 81° 55' 00"

Bottom Hole Lat. = 38° 13' 46.9"

7,450'  
Latitude = 38° 13' 46.40"

SECTION OF WVDEP  
GIS Dataviewer  
Accuracy, completeness and precision  
of this data is not guaranteed.  
Use at your own risk.



| Well Coordinates     |               |
|----------------------|---------------|
| UTM (NAD83) - Meters |               |
| Surface              | Bottom Hole   |
| N - 4,231,726        | N - 4,231,738 |
| E - 416,503          | E - 416,732   |

**Location References**  
(Magnetic Bearing - Slope Dist.)  
N 26° W 35' T. Fowler No.250  
S 40° W 69' T-Post

**NOTES ON SURVEY**

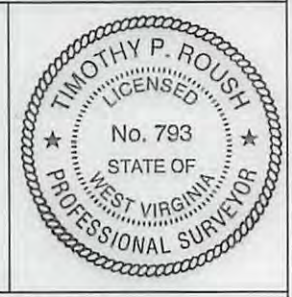
- Well ties and Latitude and Longitude were measured by DGPS (Sub-meter Mapping Grade). Bearings are referenced to UTM Grid North (Zone 17 North - NAD 1927).
- Surface owner information obtained from the Lincoln County Assessor's tax records.

- ◆ - 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. \_\_\_\_\_  
 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 X WASTE DISPOSAL \_\_\_  
 (IF "GAS") PRODUCTION \_\_\_ STORAGE \_\_\_ DEEP \_\_\_ SHALLOW \_\_\_

LOCATION: ELEVATION 1,003' WATERSHED Porter Fork  
 DISTRICT Duval COUNTY Lincoln  
 QUADRANGLE Griffithsville 7.5'


SURFACE OWNER Andy & Rebecca McClure ACREAGE 80 Ac.  
 OIL & GAS ROYALTY OWNER Edith Armstrong et al. LEASE ACREAGE 80 Ac. 04/28/2017  
 LEASE NO. 108323-00

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) NOTE: This well will be drilled directionally as shown on the plat above.

PLUG AND ABANDON \_\_\_ CLEAN OUT AND REPLUG \_\_\_  
 TARGET FORMATION Berea ESTIMATED DEPTH 2,865' MD

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

DATE March 20, 2017  
 FARM Thomas Fowler No.503  
 API WELL NO. 47 - 043 - 03574 S



FORM IV-6