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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

Austin Caperton, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Friday, April 24, 2020  
WELL WORK PERMIT  
Vertical / New Drill

HG ENERGY, LLC  
5260 DUPONT ROAD

PARKERSBURG, WV 26101

Re: Permit approval for MASON & TACKETT 519  
47-043-03601-00-00

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: MASON & TACKETT 519  
Farm Name: RUSSELL & KATHRYN WRIGHT  
U.S. WELL NUMBER: 47-043-03601-00-00  
Vertical New Drill  
Date Issued: 4/24/2020

Promoting a healthy environment.

## PERMIT CONDITIONS

West Virginia Code §22-6-11 allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

### CONDITIONS

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1. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code §22-6-20, which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
2. Pursuant to 35 CSR 4-19.1.a, at the request of the surface owner all water wells or springs within 1000 feet of the proposed well that are actually utilized for human consumption, domestic animals or other general use shall be sampled and analyzed.
3. Pursuant to 35 CSR 4-19.1.c, if the operator is unable to sample and analyze any water well or spring with one thousand (1,000) feet of the permitted well location, the Office of Oil and Gas requires the operator to sample, at a minimum, one water well or spring located between one thousand (1,000) feet and two thousand (2,000) feet of the permitted well location.
4. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
5. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
6. During the surface casing and cementing process, in the event cement does not return to the surface, or any other casing string that is permitted to circulate cement to the surface and does not return to the surface, the oil and gas inspector shall be notified within twenty-four (24) hours.
7. Well work activities shall not constitute a hazard to the safety of persons.
8. Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced on this well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

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ck# 4486  
\$650.00

4704303601S

FORM WW-3 (B)  
1/12



1) Date: 01/07/2020  
2) Operator's Well No. Mason & Tackett 519  
3) API Well No.: 47 - 043 - s  
State County Permit  
4) UIC Permit No. UIC2R04301AP

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: 1006' Watershed: Bear Fork  
District: Duval County Lincoln Quadrangle Griffithsville 7.5'  
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 Jeffery L. Smith Name To Be Determined Upon Approval of the Permit  
Address 5369 Big Tyler Road Address  
Cross Lanes, WV 25313

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 Berea Depth 2640' Feet (top) to 2662' Feet (bottom)

13) Estimated Depth of Completed Well, (or actual depth of existing well): 2800' MD Feet

14) Approximate water strata depths: Fresh 360' Feet Salt 1070' Feet

15) Approximate coal seam depths: 500'

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 charcoal bed filters

22) SPECIFICATIONS FOR CATHODIC PROTECTION AND OTHER CORROSION CONTROL NA

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		560'	560'	CTS	
Coal									Sizes
Intermediate									2.375"
Production	4 1/2"	J-55	10.5#	X		2780'	2780'	150 sks	Depths set
Tubing	2 3/8"	J-55	4.8#	X		2500'	2500'		2400'
Liners									Perforations
									Top Bottom

24) APPLICANT'S OPERATING RIGHTS were acquired from Mason & Tackett  
by deed / lease x / other contract / dated 11/26/2013 of record in the  
Lincoln County Clerk's office in Lease Book 54 Page 257

RECEIVED  
Office of Oil and Gas

JAN 31 2020

WV Department of  
Environmental Protection



FORM WW-3 (A)  
1/12



1) Date: January 7, 2020

2) Operator's Well No. Mason & Tackett 519

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

4) UIC Permit No. UIC2R04301AP

**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,**

<p>5) Surface Owner(S) To Be Served</p> <p>(a) Name <u>Russell &amp; Kathryn Wright</u></p> <p>Address <u>135 Bay Ridge Road</u> <u>Hamstead, NC 28443</u></p> <p>(b) Name <u>Anita Page Deardorf</u></p> <p>Address <u>1417 Robinhood Road</u> <u>Charleston, WV 25314</u></p> <p>(c) Name <u>Linda &amp; Lionel Parker</u></p> <p>Address <u>5008 Straight Fork</u> <u>Yawkey, WV 25573</u></p> <p>6) Inspector <u>Jeffery L. Smith</u></p> <p>Address <u>5369 Big Tyler Road</u> <u>Cross Lanes, WV 25313</u></p> <p>Telephone <u>681-313-6743</u></p>	<p>7) (a) Coal Operator</p> <p>Name <u>NA</u></p> <p>Address _____</p> <p>7) (b) Coal Owner(S) With Declaration Of Record</p> <p>Name <u>NA</u></p> <p>Address _____</p> <p>Name _____</p> <p>Address _____</p> <p>7) (c) Coal Lessee with Declaration Of Record</p> <p>Name <u>NA</u></p> <p>Address _____</p>
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**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 20 .

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: Accountant  
Signature: Diane White

RECEIVED  
Office of Oil and Gas  
  
JAN 31 2020  
  
WV Department of  
Environmental Protection

47-043-036015



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

January 7, 2020

Russell & Kathryn Wright  
135 Bay Ridge Road  
Hamstead, NC 28443

RE: Mason & Tackett No. 519  
Duval District, Lincoln County  
West Virginia

RECEIVED  
Office of Oil and Gas

JAN 31 2020

WV Department of  
Environmental Protection

Dear Landowner:

Enclosed are copies of various application papers that we have filed with the West Virginia Department of Environmental Protection (WVDEP), Office of Oil and Gas. A well work permit is being requested for the above-referenced well.

Pursuant to WV Code Chapter 22B, Article 6, you are receiving copies of this correspondence because the well or other anticipated disturbance is located on your surface property. Your rights as a landowner are detailed in the enclosed permit application papers.

No action on your part is required. If you have any questions or comments regarding this application, you may call this office at (304) 420-1119.

Very truly yours,

*Diane White*

Diane C. White

Enclosures



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

January 7, 2020

Anita Page Deardorf  
1417 Robinhood Road  
Charleston, WV 25314

RE: Mason & Tackett No. 519  
Duval District, Lincoln County  
West Virginia

Dear Landowner:

Enclosed are copies of various application papers that we have filed with the West Virginia Department of Environmental Protection (WVDEP), Office of Oil and Gas. A well work permit is being requested for the above-referenced well.

Pursuant to WV Code Chapter 22B, Article 6, you are receiving copies of this correspondence because the well or other anticipated disturbance is located on your surface property. Your rights as a landowner are detailed in the enclosed permit application papers.

No action on your part is required. If you have any questions or comments regarding this application, you may call this office at (304) 420-1119.

Very truly yours,

*Diane White*

Diane C. White

Enclosures

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Office of Oil and Gas

JAN 31 2020

WV Department of  
Environmental Protection





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

---

January 7, 2020

Linda & Lionel Parker  
5008 Straight Fork  
Yawkey, WV 25573

RE: Mason & Tackett No. 519  
Duval District, Lincoln County  
West Virginia

RECEIVED  
Office of Oil and Gas

JAN 31 2020

WV Department of  
Environmental Protection

Dear Landowner:

Enclosed are copies of various application papers that we have filed with the West Virginia Department of Environmental Protection (WVDEP), Office of Oil and Gas. A well work permit is being requested for the above-referenced well.

Pursuant to WV Code Chapter 22B, Article 6, you are receiving copies of this correspondence because the well or other anticipated disturbance is located on your surface property. Your rights as a landowner are detailed in the enclosed permit application papers.

No action on your part is required. If you have any questions or comments regarding this application, you may call this office at (304) 420-1119.

Very truly yours,

*Diane White*

Diane C. White

Enclosures

WW-2B1  
(5-12)

Well No. Mason & Tackett 519

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	<u>Sturm Environmental Labs</u>
Sampling Contractor	<u>Sturm Environmental Labs</u>

Well Operator	<u>HG Energy, LLC</u>
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Address	<u>5260 Dupont Road</u>
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	<u>Parkersburg, WV 26101</u>
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Telephone	<u>304-420-1119</u>
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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 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 List of Five Individuals to be Tested

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JAN 31 2020

WV Department of  
Environmental Protection



**Diane White**

---

**From:** Diane White  
**Sent:** Tuesday, January 7, 2020 3:02 PM  
**To:** vhoops@sturmenvironmental.com  
**Subject:** FW: WSW Tests for Mason & Tackett 518 and 519 - Griffithsville Unit, Lincoln  
**Attachments:** 20200107150826452.pdf

Vicki,  
 Good afternoon. Listed below are five surface owners we think have water sources to be tested. The owner names have been taken from the tax records. None of the ones listed below have a street address or phone number we could send you. I've attached a topo map and rec plans which should help with locating the water sources. Please indicate the lat/long references on the testing paperwork. If a surface owner declines to have their water tested please indicate that as well.  
 Let me know if you need further information.  
 Thanks,  
 Diane

**From:** Timothy Roush <troush@hgenergyllc.com>  
**Sent:** Thursday, January 2, 2020 8:56 AM  
**To:** Diane White <dwhite@hgenergyllc.com>  
**Cc:** Roger L. Heldman <rheldman@hgenergyllc.com>  
**Subject:** WSW Tests

WSW owners to be tested for M&T #518 & #519

- \* David Clark  
 POB 149  
 Griffithsville, WV 25521
- \* Ronnie & Reba Cooper  
 POB 307  
 Griffithsville, WV 25521
- \* Sarah Cooper  
 PO Box 296  
 Sumerco, WV 25567
- \* Danny Sowards  
 POB 337  
 Griffithsville, WV 25521
- \* Michael & Angelina Metzger  
 PO Box 8960  
 Charleston, WV 25303

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 Office of Oil and Gas

JAN 31 2020

WW-9  
(2/15)

API Number 47 - \_\_\_\_\_ - \_\_\_\_\_  
Operator's Well No. Mason & Tackett 519

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) Bear 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.? 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 \_\_\_\_\_ )

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JAN 31 2020  
WV Department of Environmental Protection

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. Offsite Disposal at a DEP Approved Landfill

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) NA

-Landfill or offsite name/permit number? To Be Determined Upon Approval of Permit

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

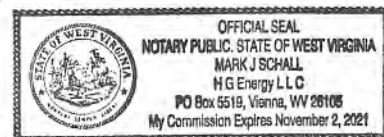
Company Official (Typed Name) Diane White

Company Official Title Accountant

Subscribed and sworn before me this 7th day of January, 2020

[Signature] Notary Public

My commission expires 11/2/2021



HG Energy, LLC

Proposed Revegetation Treatment: Acres Disturbed 1.8 acres Prevegetation pH \_\_\_\_\_

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type 10-20-20

Fertilizer amount 500 lbs/acre

Mulch Straw 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Tall Fescue	40	Tall Fescue	40
Ladino Clover	5	Ladino Clover	5

**\*\*Sediment and Erosion 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 prior to release

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Office of Oil and Gas

JAN 31 2020

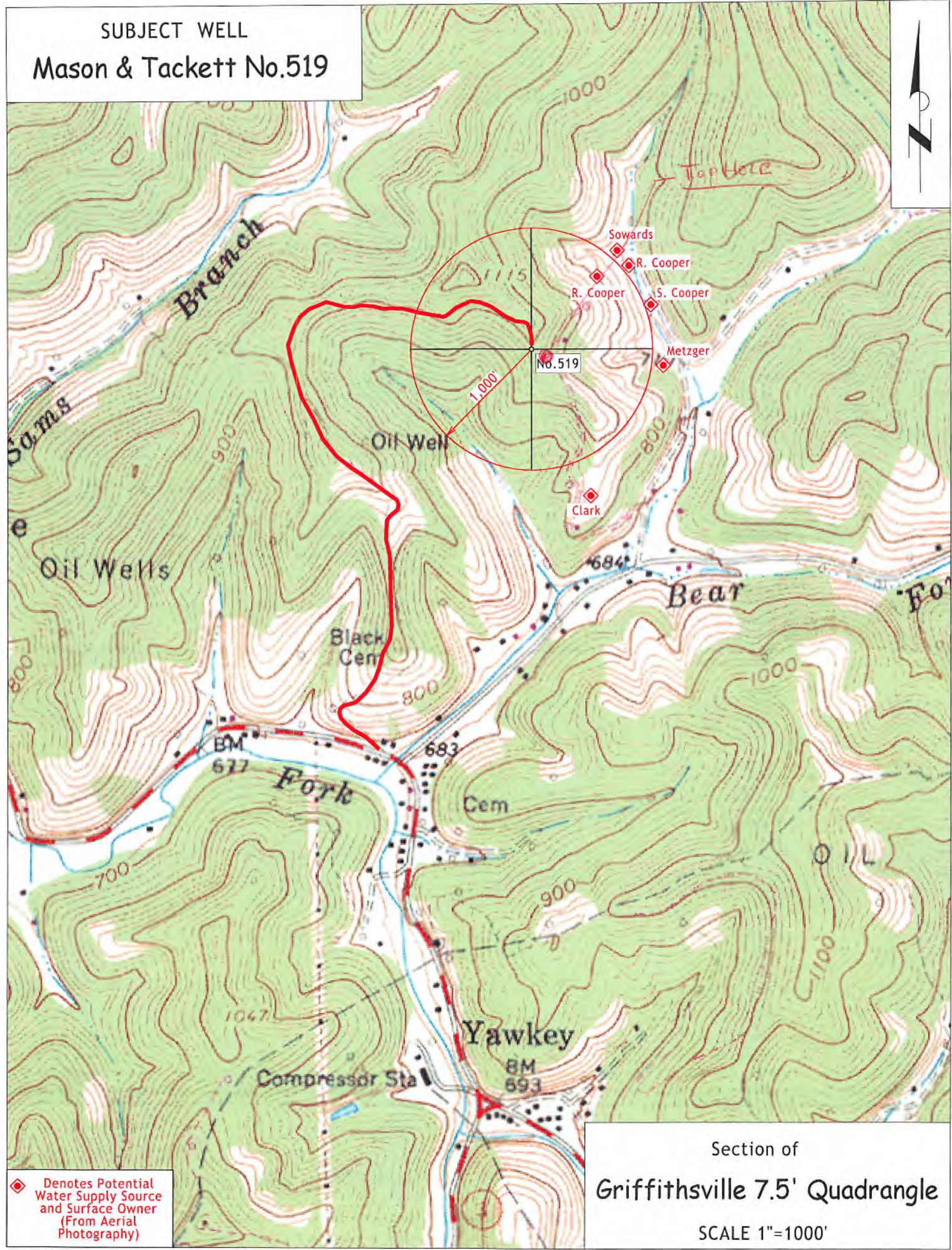
WV Department of  
Environmental Protection

Title: Oil & Gas Inspector Date: 1-21-20

Field Reviewed?  Yes  No



SUBJECT WELL  
Mason & Tackett No.519



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

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



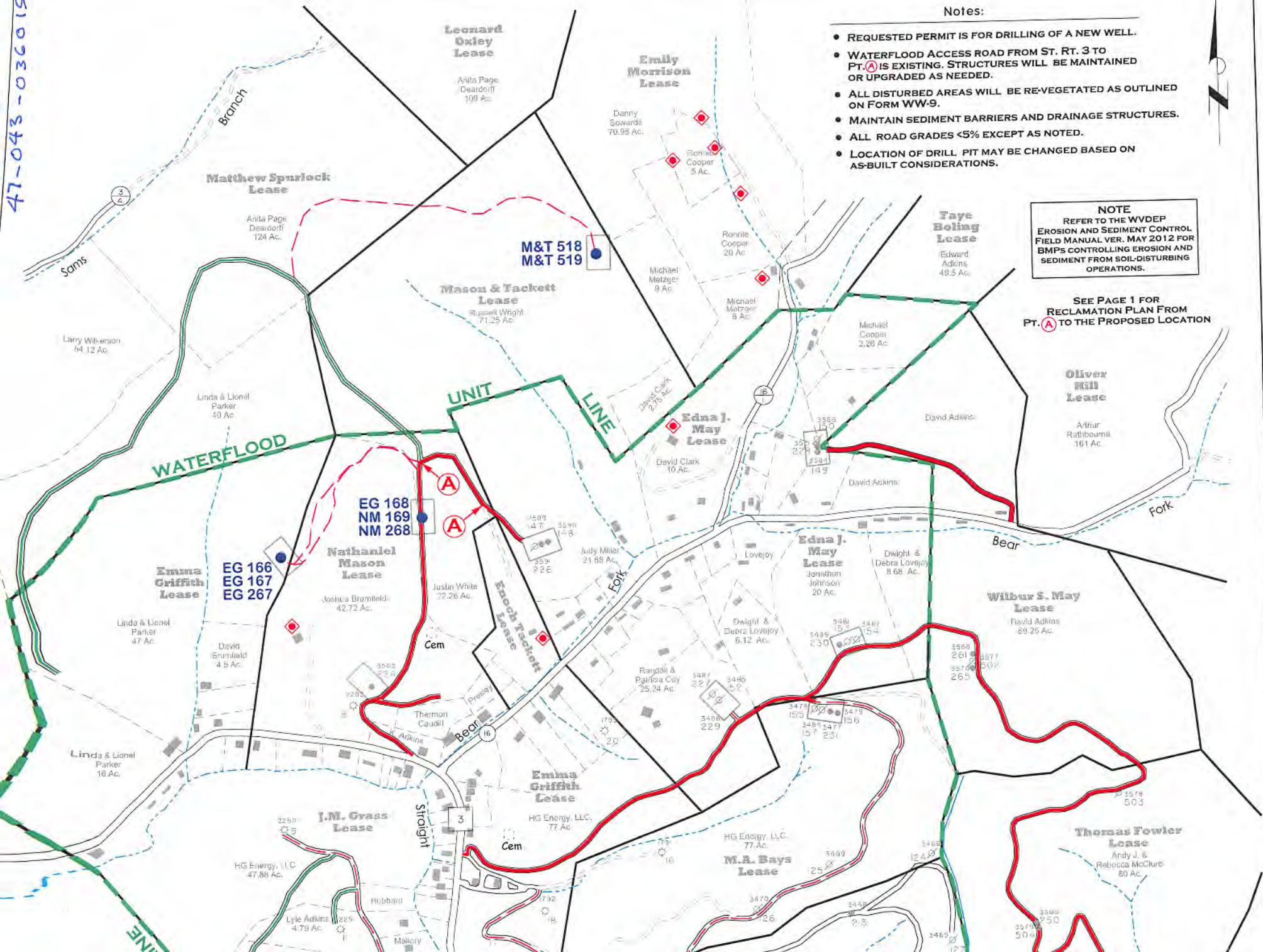
47-043-036015

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



Leonard Oxley Lease

Emily Morrison Lease

Matthew Spurlock Lease

Mason & Tackett Lease

M&T 518  
M&T 519

Faye Boling Lease

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

WATERFLOOD

UNIT LINE

EG 168  
NM 169  
NM 268

A

A

Emma Griffith Lease

EG 166  
EG 167  
EG 267

Nathaniel Mason Lease

Cem

Enoch Tackett Lease

Edna J. May Lease

Wilbur S. May Lease

Emma Griffith Lease

M.A. Bays Lease

Thomas Fowler Lease

I.M. Grass Lease

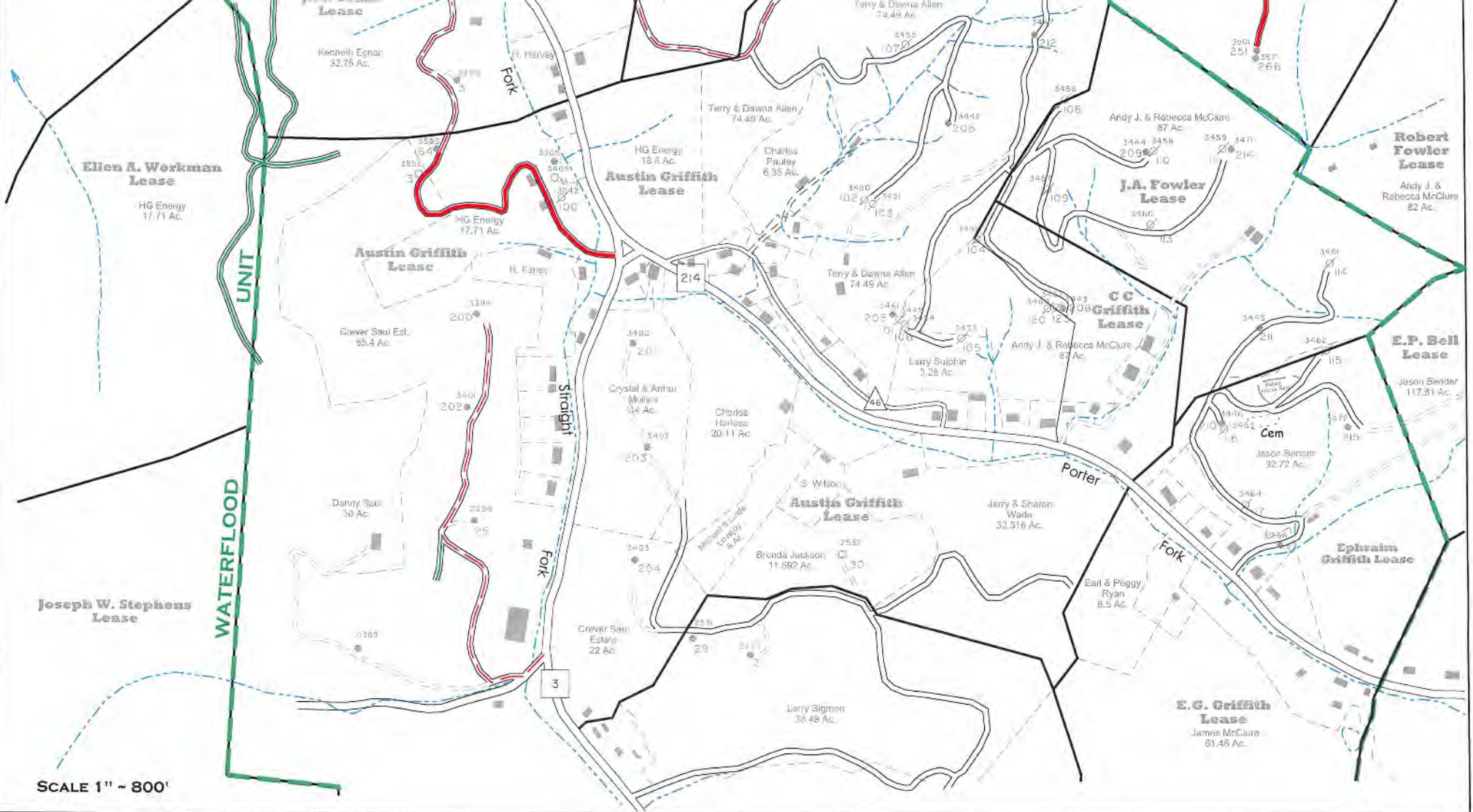
Cem

HG Energy, LLC 77 Ac.

Andy J. & Rebecca McClure 80 Ac.







# GRIFFITHSVILLE WATERFLOOD








Lincoln County, W.Va.

## RECLAMATION PLAN SHOWING ROAD SYSTEMS TO BE USED FOR 2020 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.
-  M&T 519
-  LOCATION FOR PROPOSED WELLS
-  POTENTIAL WATER SUPPLY SOURCE TO BE SAMPLED (SEE TOPO SHEET)





**Matthew Spurlock Lease**  
Anita Page Deardorf - Surface

**Emma Griffith Lease**  
Linda & Lionel Parker - Surface

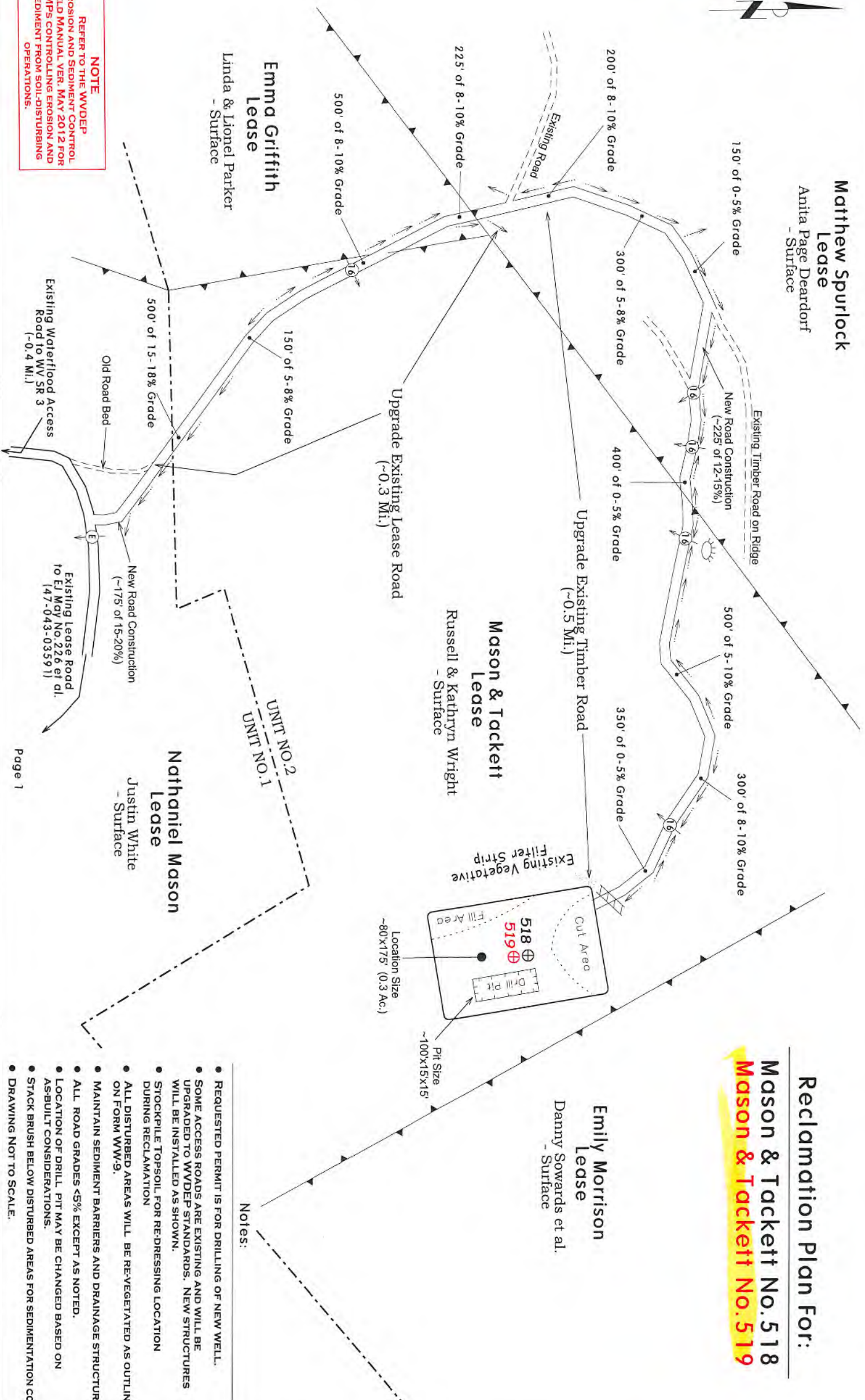
**Mason & Tackett Lease**  
Russell & Kathryn Wright - Surface

**Nathaniel Mason Lease**  
Justin White - Surface

**Emily Morrison Lease**  
Danny Sowards et al. - Surface

**Reclamation Plan For:**

**Mason & Tackett No. 518**  
**Mason & Tackett No. 519**



**NOTE**  
REFER TO THE WVDOP 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 WVDOP 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.



Bottom Hole Long. = 81°57' 47.3"

Longitude = 81°57' 50.96"

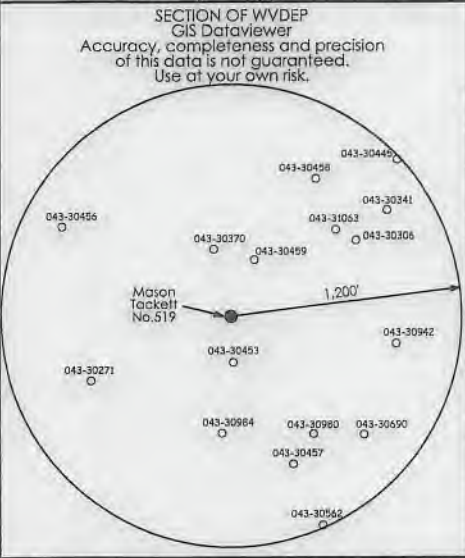
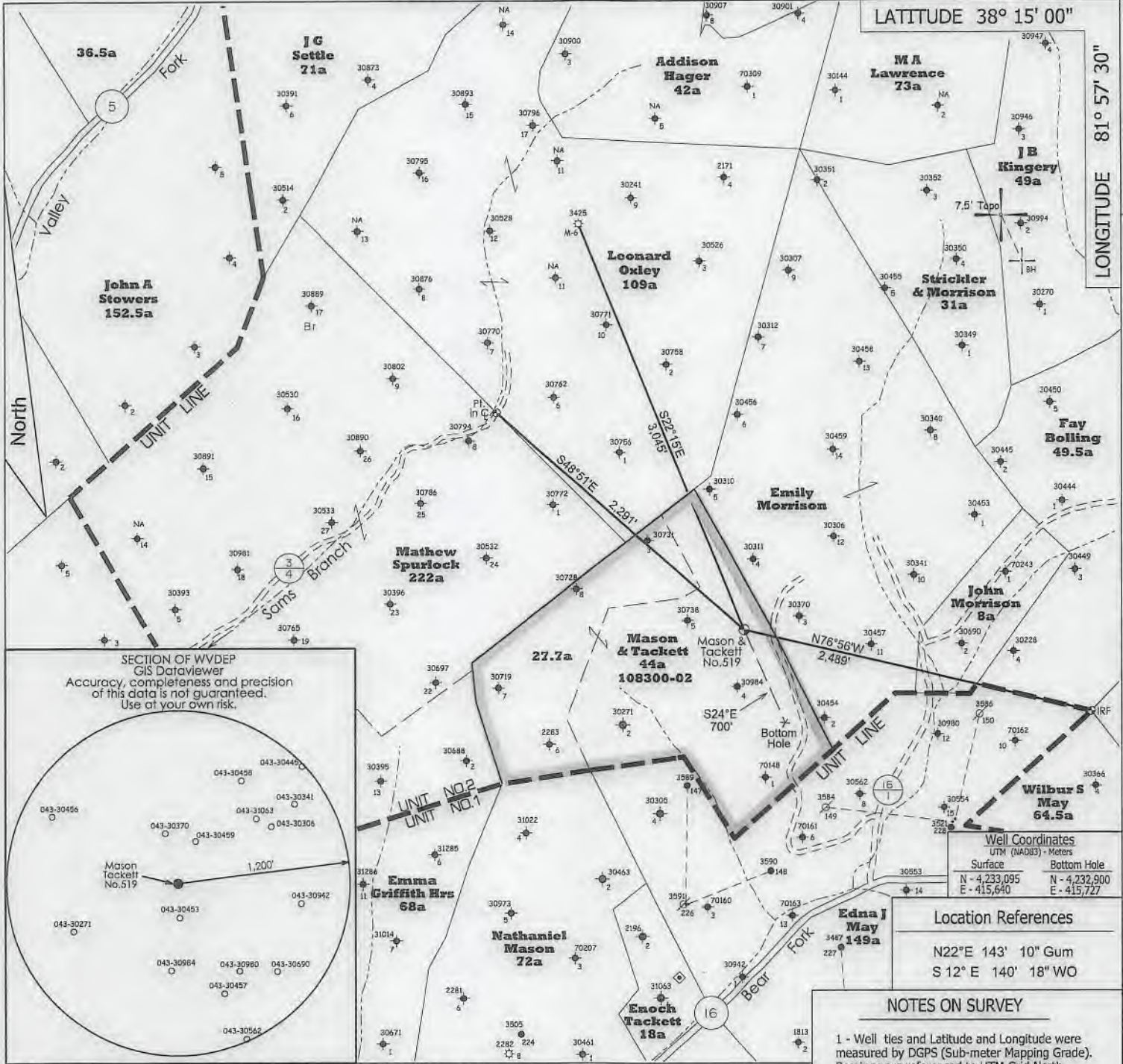
1,672'

LATITUDE 38° 15' 00"

LONGITUDE 81° 57' 30"

Latitude = 38° 14' 30.53"

Bottom Hole Lat. = 38° 14' 24.2"



Well Coordinates	
UTM (NAD83) - Meters	
Surface	Bottom Hole
N - 4,233,095	N - 4,232,900
E - 415,640	E - 415,727

Location References	
N22°E 143' 10" Gum	
S 12° E 140' 18" WO	


**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 2016 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 PS 793**



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



DATE **December 31, 2019**  
 FARM **Mason & Tackett No.519**  
 API WELL NO. **47 - 043 - 036015**

WELL TYPE: OIL \_\_\_ GAS \_\_\_ LIQUID INJECTION  WASTE DISPOSAL \_\_\_  
 (IF "GAS") PRODUCTION \_\_\_ STORAGE \_\_\_ DEEP \_\_\_ SHALLOW \_\_\_  
 LOCATION: ELEVATION **1,006'** WATERSHED **Bear Fork**  
 DISTRICT **Duval** COUNTY **Lincoln**  
 QUADRANGLE **Griffithsville 7.5'**  
 SURFACE OWNER **Russell & Kathryn Wright** ACREAGE **71.25 Ac.**  
 OIL & GAS ROYALTY OWNER **HG Energy, LLC et al.** LEASE ACREAGE **44 Ac.**  
 LEASE NO. **108300-02**  
 PROPOSED WORK: DRILL  CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE OR  
 STIMULATE  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 **2,800' MD**  
 WELL OPERATOR **HG Energy LLC.** DESIGNATED AGENT **Diane White**  
 ADDRESS **5260 DuPont Road** ADDRESS **5260 DuPont Road**  
**Parkersburg, WV 26101** **Parkersburg, WV 26101**

FORM IV-6