



west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary
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 518
47-043-03602-00-00

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 518
Farm Name: RUSSELL & KATHRYN WRI
U.S. WELL NUMBER: 47-043-03602-00-00
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

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.

I

47043036025

FORM WW-3 (B)
1/12



1) Date: 01/07/2020
2) Operator's Well No. Mason & Tackett 518
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 2583' Feet (top) to 2604' Feet (bottom)
13) Estimated Depth of Completed Well, (or actual depth of existing well): 2725' 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	Sizes
Coal									2.375"
Intermediate									Depths set
Production	4 1/2"	J-55	10.5#	X		2705'	2705'	150 sks	2400'
Tubing	2 3/8"	J-55	4.8#	X		2500'	2500'		Perforations
Liners									Top Bottom

24) APPLICANT'S OPERATING RIGHTS were acquired from Mason & Tackett, et al
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
Department of Environmental Protection



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. 518
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

RECEIVED
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

Anita Page Deardorf
1417 Robinhood Road
Charleston, WV 25314

RE: Mason & Tackett No. 518
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

RECEIVED
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. 518
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

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

WW-2B1
(5-12)

Well No. Mason & Tackett 518

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>
Address	<u>5260 Dupont Road</u>
	<u>Parkersburg, WV 26101</u>
Telephone	<u>304-420-1119</u>

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 which lists 5 surface owners identified for testing

RECEIVED
Office of Oil and Gas
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

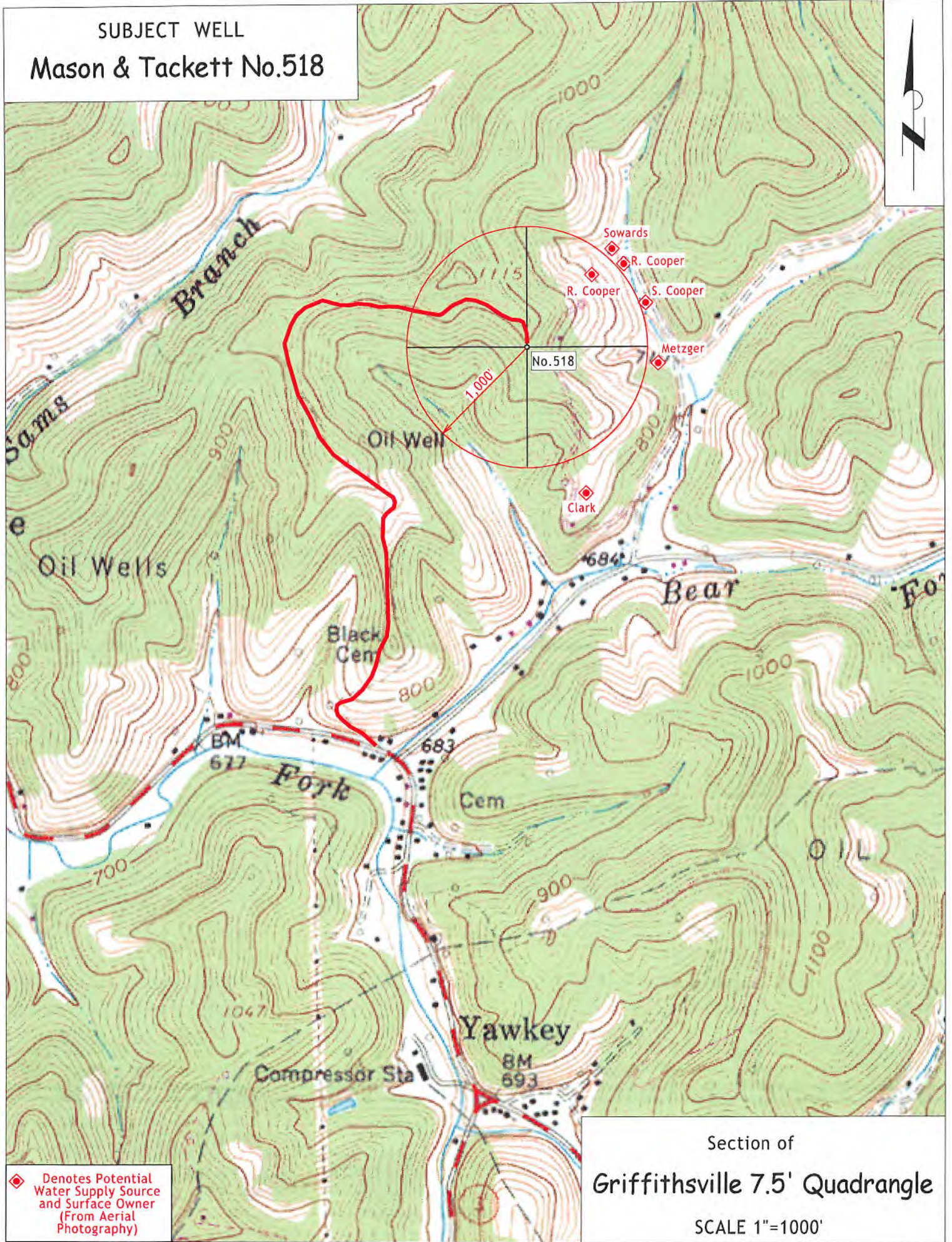
- * David Clark
POB 149
Griffithsville, WV 25521
- * Ronnie & Reba Cooper
POB 307
Griffithsville, WV 25521
- * Sarah Cooper
PO Box 296
Sumerco, WV 25567
- * Danny Sowards
POB 337
Griffithsville, WV 25521
- * Michael & Angelina Metzger
PO Box 8960
Charleston, WV 25303

RECEIVED
Office of Oil and Gas

JAN 31 2020

WV Department of
Environmental Protection

SUBJECT WELL
Mason & Tackett No.518



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

Section of
Griffithsville 7.5' Quadrangle

SCALE 1"=1000'

WW-9
(2/15)

API Number 47 - _____ - _____
Operator's Well No. Mason & Tackett 518

**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 Griffithsville 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 _____)

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

RECEIVED
Office of Oil and Gas

JAN 31 2020

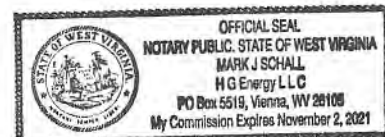
WV Department of
Environmental Protection

Subscribed and sworn before me this 7th day of January, 20 20

[Signature]

Notary Public

My commission expires 11/2/2021



Form WW-9

Operator's Well No. Mason & Tackett 518

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
Tall Fescue	40
Ladino Clover	5

Seed Type	lbs/acre
Tall Fescue	40
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

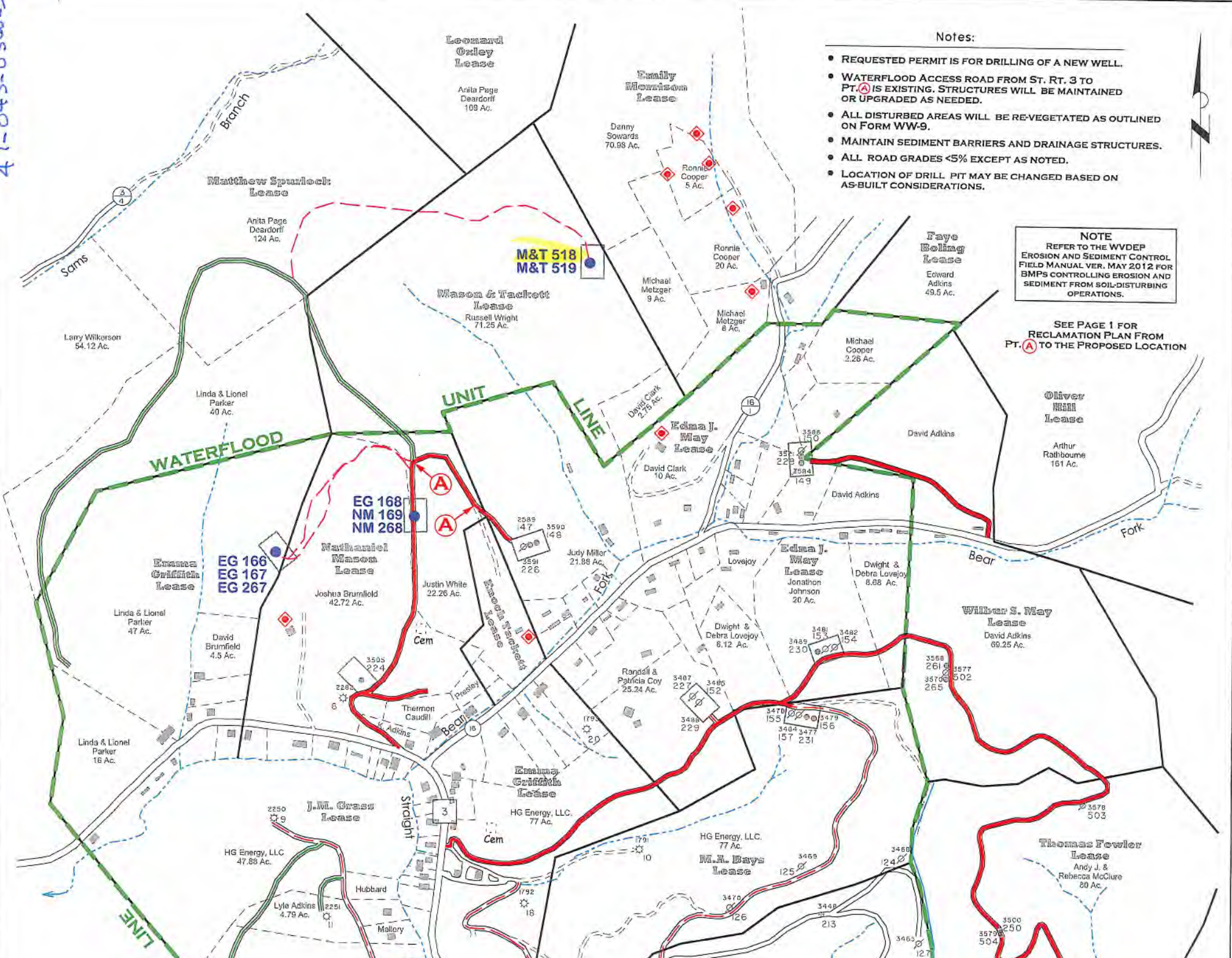
Comments: All sediment control to be removed prior to release.

RECEIVED
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

47-043-036023



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

EG 168
 NM 169
 NM 268

EG 166
 EG 167
 EG 267

M&T 518
 M&T 519

UNIT
 LINE

WATERFLOOD

LINE

Leonard Oxley Lease
 Anita Page Deardorff 108 Ac.

Emily Morrison Lease
 Danny Sowards 70.98 Ac.

Matthew Spurlock Lease
 Anita Page Deardorff 124 Ac.

Mason & Tackett Lease
 Russell Wright 71.25 Ac.

Larry Wilkerson 54.12 Ac.

Linda & Lionel Parker 40 Ac.

Ronnie Cooper 5 Ac.

Ronnie Cooper 20 Ac.

Faye Boling Lease
 Edward Adkins 49.5 Ac.

Michael Metzger 9 Ac.

Michael Metzger 8 Ac.

Michael Cooper 3.26 Ac.

Oliver Hill Lease
 Arthur Rathbourne 161 Ac.

Edna J. May Lease
 David Clark 10 Ac.

David Adkins

Emma Griffith Lease

Nathaniel Mason Lease
 Joshua Brumfield 42.72 Ac.

Justin White 22.26 Ac.

Judy Miller 21.88 Ac.

Edna J. May Lease
 Jonathon Johnson 20 Ac.

Dwight & Debra Lovejoy 8.88 Ac.

Wilbur S. May Lease
 David Adkins 69.25 Ac.

Linda & Lionel Parker 47 Ac.

David Brumfield 4.5 Ac.

Thermon Caudill

Randall & Patricia Coy 25.34 Ac.

Dwight & Debra Lovejoy 6.12 Ac.

Linda & Lionel Parker 16 Ac.

J.M. Grass Lease
 HG Energy, LLC 47.88 Ac.

Hubbard

EMMA GRIFITH LEASE
 HG Energy, LLC 77 Ac.

EMMA GRIFITH LEASE
 HG Energy, LLC 77 Ac.

M.A. Bays Lease
 HG Energy, LLC 77 Ac.

Thomas Fowler Lease
 Andy J. & Rebecca McClure 80 Ac.

Lyla Adkins 4.79 Ac.

Mallory

Hubbard

Mallory

Hubbard

Mallory

Hubbard

Mallory

Hubbard

Mallory

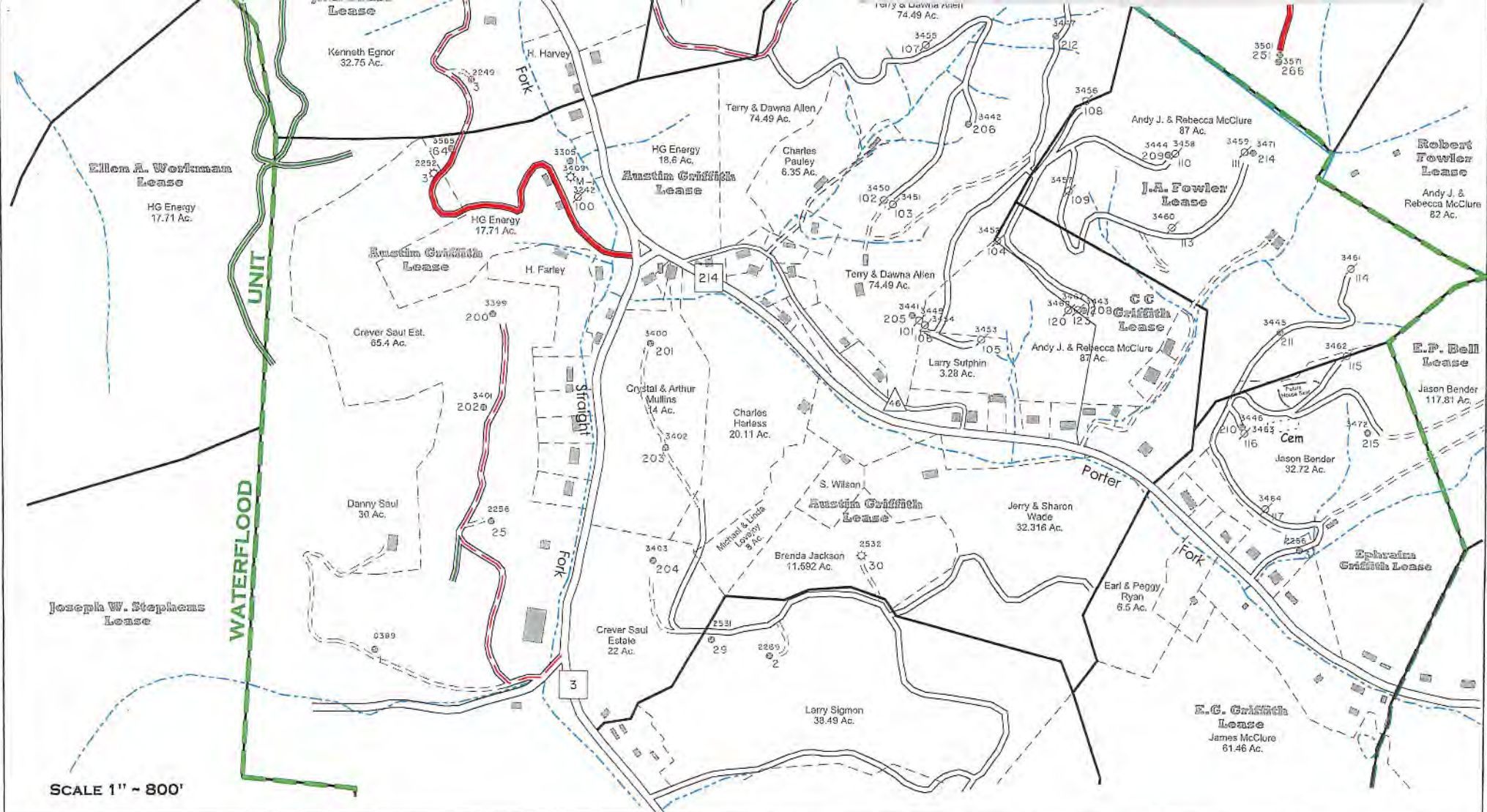
Hubbard

Mallory

Hubbard

Mallory

Hubbard



SCALE 1" = 800'



GRIFFTHSVILLE WATERFLOOD

Lincoln County, W.Va.

RECLAMATION PLAN SHOWING ROAD SYSTEMS TO BE USED FOR 2020 DRILLING PROGRAM







DECEMBER 30, 2019

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.
-  M&T 516
LOCATION FOR PROPOSED WELLS
-  POTENTIAL WATER SUPPLY SOURCE TO BE SAMPLED (SEE TOPO SHEET)



Matthew Spurlock Lease
Anita Page Deardorf - Surface

150' of 0-5% Grade

200' of 8-10% Grade

300' of 5-8% Grade

400' of 0-5% Grade

Upgrade Existing Timber Road (~0.5 Mi.)

New Road Construction (~225' of 12-15%)

500' of 5-10% Grade

300' of 8-10% Grade

Mason & Tackett Lease
Russell & Kathryn Wright - Surface

Upgrade Existing Lease Road (~0.3 Mi.)

Existing Vegetative Filter Strip

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

Pit Size ~100'x15'x15'

Emily Morrison Lease
Danny Sowards et al. - Surface

Emma Griffith Lease
Linda & Lionel Parker - Surface

500' of 8-10% Grade

225' of 8-10% Grade

150' of 5-8% Grade

500' of 15-18% Grade

Old Road Bed

New Road Construction (~175' of 15-20%)

Existing Waterflood Access Road to WV SR 3 (~0.4 Mi.)

Nathaniel Mason Lease
Justin White - Surface

UNIT NO. 2
UNIT NO. 1

Reclamation Plan For:
Mason & Tackett No. 518
Mason & Tackett No. 519

Notes:

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

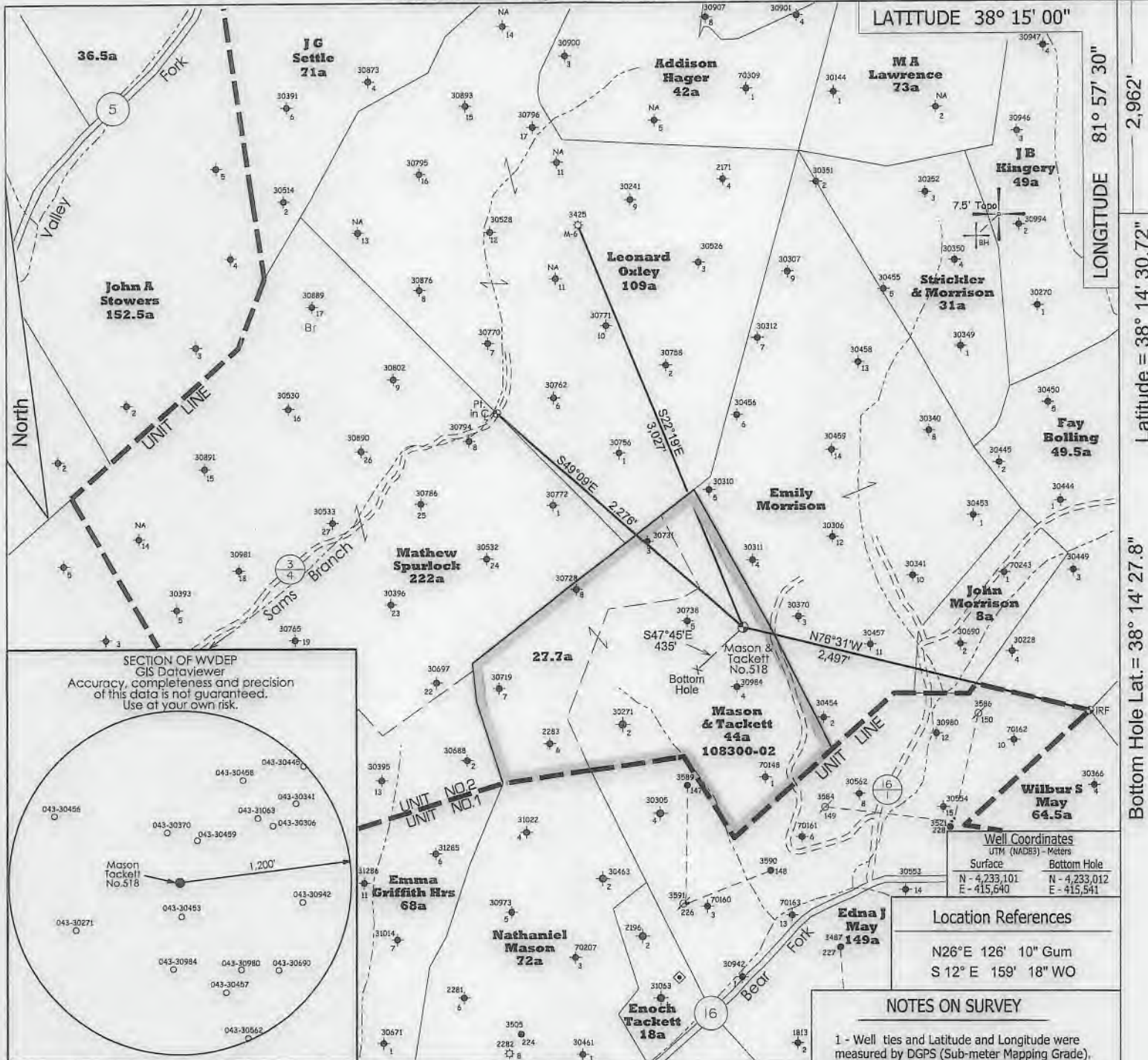
NOTE
REFER TO THE WVDROP EROSION AND SEDIMENT CONTROL FIELD MANUAL, VER. MAY 2012 FOR BMPs CONTROLLING EROSION AND SEDIMENT FROM SOIL-DISTURBING OPERATIONS.

Bottom Hole Long. = 81°57' 55.0"

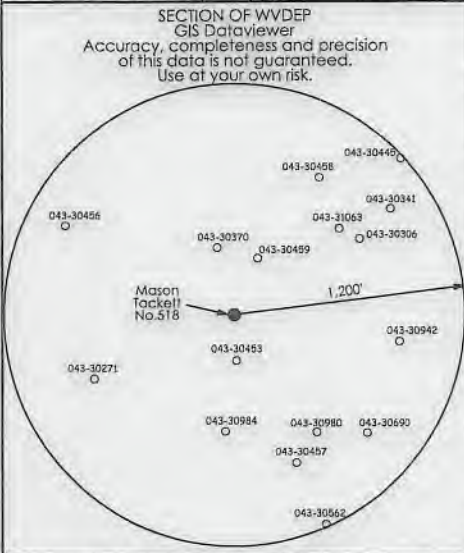
Longitude = 81°57' 51.00"

1,675'

LATITUDE 38° 15' 00"



LONGITUDE 81° 57' 30"
Latitude = 38° 14' 30.72"
Bottom Hole Lat. = 38° 14' 27.8"



Well Coordinates	
UTM (NAD83) - Meters	
Surface	Bottom Hole
N - 4,233,101	N - 4,233,012
E - 415,640	E - 415,541

Location References

N26° E 126' 10" Gum
S 12° E 159' 18" WO

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 - 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*
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 30, 2019

FARM Mason & Tackett No.518

API WELL NO. 47 - 043 - 03602 S

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 2,725' 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-B