



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

Harold D. Ward, Cabinet Secretary
www.dep.wv.gov

Monday, December 19, 2022
WELL WORK PERMIT
Vertical / Convert

HG ENERGY, LLC
5260 DUPONT ROAD

PARKERSBURG, WV 26101

Re: Permit approval for EPHRAIM GRIFFITH 133
47-043-03587-00-00

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

A blue ink signature of James A. Martin, written in a cursive style, is positioned above the name and title of the Chief.

Operator's Well Number: EPHRAIM GRIFFITH 133
Farm Name: JASON & ASHLEY BENDER
U.S. WELL NUMBER: 47-043-03587-00-00
Vertical Convert
Date Issued: 12/19/2022

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.

NOV 28 2022

47043035875

FORM WW-3 (B)
1/12



WV Department of
Environmental Protection

1) Date: 10/25/2022
 2) Operator's Well No. Ephraim Griffith No 133 Rev
 3) API Well No.: 47 - 043 - 03587
 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: 888' Watershed: Porter 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 Terry Urban Name To Be Determined Upon Approval of Permit
 Address PO Box 1207 Address _____
Clendenin, WV 25045
 11) PROPOSED WELL WORK Drill / Drill deeper / Redrill / Stimulate
 Plug off old formation / Perforate new formation Convert
 Other physical change in well (specify) Convert producing well to injection well and stimulate
 12) GEOLOGIC TARGET FORMATION Berea Depth 2646' Feet (top) to 2664' Feet (bottom)
 13) Estimated Depth of Completed Well, (or actual depth of existing well): 2822' Feet
 14) Approximate water strata depths: Fresh NA Feet Salt 1070' Feet
 15) Approximate coal seam depths: 440' - 445'
 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's Bottom hole pressure 2400 psi
 20) DETAILED IDENTIFICATION OF MATERIALS TO BE INJECTED, INCLUDING ADDITIVES Fresh water, produced
water, bactericides and other chemicals as needed to maintain water quality and improve oil recovery
 21) FILTERS (IF ANY) Cartridge filters and/or coal bed filters
 22) SPECIFICATIONS FOR CATHODIC PROTECTION AND OTHER CORROSION CONTROL _____

23) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (CU. FT.)	PACKERS
	Size	Grade	Weight per ft.	New	Used	For Drilling	Left In Well		
Conductor	13 3/8"	LS		v		14'	14'		Kinds
Fresh Water	7"	LS	17#	x		549.52'	549.52'		
Coal									Sizes
Intermediate									2.375" x 4.5"
Production	4 1/2"	J-55	10.5#	x		2775.89'	2775.89'		Depths set
Tubing	2 3/8"	J-55	4.6#	x		2550'	2550'		2450'
Liners									Perforations
									Top Bottom
									2646' 2664'

24) APPLICANT'S OPERATING RIGHTS were acquired from E & A Griffith
 by deed _____ / lease x / other contract _____ / dated 12/19/1906 of record in the
Lincoln County Clerk's office in Lease Book 39 Page _____

Handwritten signature

11-7-22
12/23/2022

WR-35
Rev. 8/23/13

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

API 47-043-03587 County LINCOLN District DUVAL
 Quad GRIFFITHSVILLE 7.5' Pad Name GRIFFITH, EPHRAIM Field/Pool Name GRIFFITHSVILLE
 Farm name BENDER, JASON & ASHLEY Well Number 133
 Operator (as registered with the OOG) H.G. ENERGY LLC
 Address 5260 DuPONT ROAD City PARKERSBURG State WV Zip 26101

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
 Top hole Northing 4,230,892 M Easting 416,835 M
 Landing Point of Curve Northing _____ Easting _____
 Bottom Hole Northing 4,230,518 M Easting 416,847 M

Elevation (ft) 888' GL Type of Well New Existing Type of Report Interim Final
 Permit Type Deviated Horizontal Horizontal 6A Vertical Depth Type Deep Shallow
 Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
 Well Type Brine Disposal CBM Gas Oil Secondary Recovery Solution Mining Storage Other _____
 Type of Completion Single Multiple Fluids Produced Brine Gas NGL Oil Other _____
 Drilled with Cable Rotary

Drilling Media Surface hole Air Mud Fresh Water Intermediate hole Air Mud Fresh Water Brine
 Production hole Air Mud Fresh Water Brine
 Mud Type(s) and Additive(s)
N/A

Date permit issued 9/5/18 Date drilling commenced 10/5/18 Date drilling ceased 10/12/18
 Date completion activities began 12/26/18 Date completion activities ceased 11/6/18
 Verbal plugging (Y/N) N Date permission granted _____ Granted by _____

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft None Open mine(s) (Y/N) depths None
 Salt water depth(s) ft 1070' Void(s) encountered (Y/N) depths None
 Coal depth(s) ft 440'-445' Cavern(s) encountered (Y/N) depths None
 Is coal being mined in area (Y/N) N

Reviewed by: **RECEIVED**
Office of Oil and Gas

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8/23/13

API 47-043 - 03587

Farm name BENDER, JASON & ASHLEY Well number 133

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor	15"	13 3/8"	14'	New	LS		Sand In
Surface	8 3/4"	7"	549.52'	New	LS	64'	Y
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	6 1/4"	4 1/2"	2775.89'	New	J-55		Y
Tubing							
Packer type and depth set							

Comment Details Circulated Est. 10 sks to surface on 7" surface cement job. Circulated Est. 15 sks to surface on 4 1/2" cement job.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor							
Surface	Reg Neat	140	15.6	1.18	185	Surface	8
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	50:50 Pozmix	125/125	13.2/14.2	1.84/1.27	205/186	104'	8
Tubing							

Drillers TD (ft) 2822' Loggers TD (ft) 2809'
 Deepest formation penetrated Berea Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 660'

Check all wireline logs run caliper density deviated/directional induction
 neutron resistivity gamma ray temperature sonic

Well cored Yes No Conventional Sidewall Were cuttings collected Yes No

DESCRIBE THE CENTRALIZER PLACBMENT USED FOR EACH CASING STRING _____
12 Centralizers every 88 from bottom on 4 1/2", Centralizer placed mid string on 7"

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

WERE TRACERS USED Yes No TYPE OF TRACER(S) USED _____

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8/23/13

PI 47- 043 - 03587

Farm name BENDER, JASON & ASHLEY Well number 133

PRODUCING FORMATION(S)	DEPTHS	
Berea	2343'- 2464'	TVD 2640'- 2670' MD

No Production

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow

OIL TEST Flow Pump

SHUT-IN PRESSURE Surface _____ psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

OPEN FLOW Gas _____ mcfpd Oil _____ bpd NGL _____ bpd Water _____ bpd GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
Sand/Shale	0	440	0	440	
Pittsburgh Coal	440	445	440	445	
Sand/Shale	445	1637	445	1694	
Blg Lime	1637	1842	1694	1935	
Blg Injun	1842	1924	1935	2042	
Shale	1924	2323	2042	2610	
Coffee Shale	2323	2343	2610	2640	
Berea	2343	2364	2640	2670	Drilled directional S 2.3° E a distance of 933'
Shale	2364	2468	2670	2822	
TD	2468		2822		

Please insert additional pages as applicable.

Drilling Contractor Noah Horn Well Drilling
Address 1070 Sandy Valley Lane City Vansant State VA Zip 24656

Logging Company Weatherford International
Address 13211 Old Hwy 50 City Flora State IL Zip 62839

Cementing Company C & J Energy Services
Address 580 Hawthorn Dr City Norton State VA Zip 24273

Stimulating Company Producers Service Corp.
Address 109 South Graham Street City Zanesville State OH Zip 43701

Please insert additional pages as applicable.

Completed by Roger Heldman Telephone 304-420-1107
Signature [Signature] Title Operations Manager Date 12/5/18

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Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

WV Department of
Environmental Protection

12/23/2022

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

CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM
GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE

Operator Name HG Energy, LLC OP Code 494497948

Watershed Porter Fork Quadrangle Griffithville 7.5'

Elevation 888' County Lincoln District Duval

Description of anticipated Pit Waste: No waste anticipated, not using a pit

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

Will a synthetic liner be used in the pit? No. If so, what 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 No waste water or drill cuttings anticipated for the conversion)

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

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

Additives to be used? NA

Will closed loop system be used? NA

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. NA

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

-Landfill or offsite name/permit number? NA

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature Diane White

Company Official (Typed Name) Diane White

Company Official Title Agent

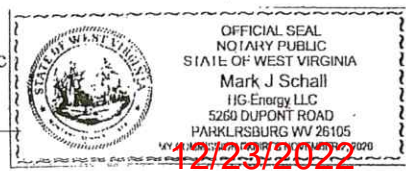
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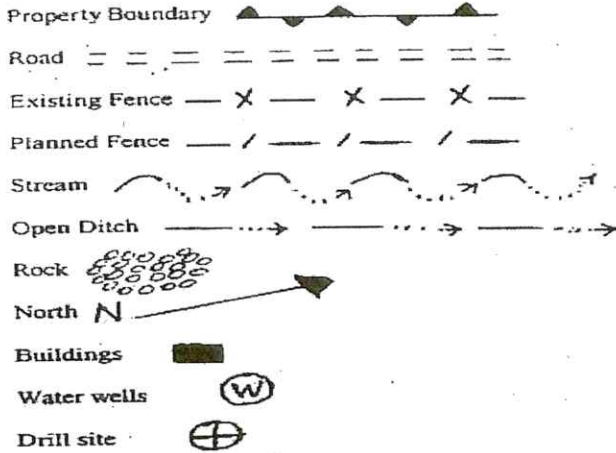
WV Department of
Environmental Protection

Subscribed and sworn before me this 25th day of October, 2022

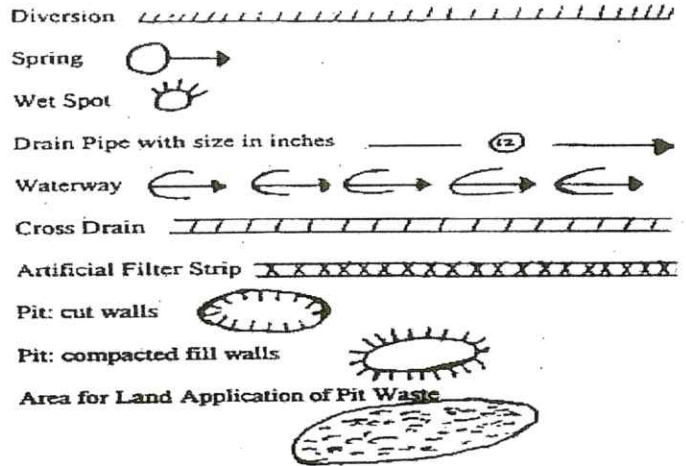
[Signature] Notary Public

My commission expires 11/2/2026





LEGEND



Proposed Revegetation Treatment: Acres Disturbed 0.25 Prevegetation pH _____

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer (10-20-20 or equivalent) 10-20-20 lbs/acre (500 lbs minimum)

Mulch Straw 2 Tons/acre

Seed Mixtures

Seed Type	Area I lbs/acre	Seed Type	Area II lbs/acre
Tall Fescue	40	Tall Fescue	40
Ladino Clover	5	Ladino Clover	5

****Sediment Control Plan Will Be In Effect 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: *Murray W. Miller*
Comments: _____

Title: *Inspector O&G*

Date: *11-7-22*

Field Reviewed? (*Lincoln*) Yes () No

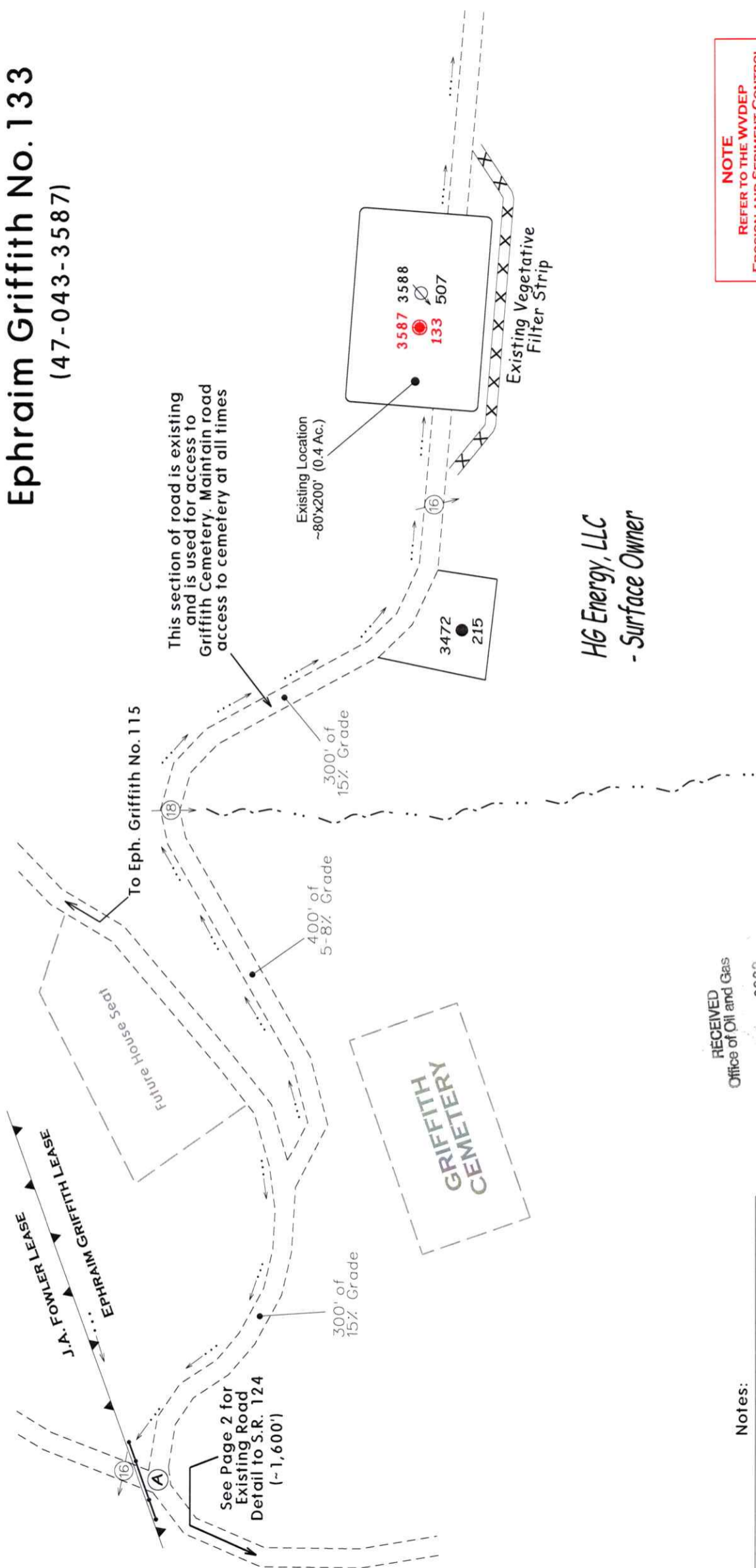
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12/23/2022

Reclamation Plan For:

Ephraim Griffith No. 133

(47-043-3587)



HG Energy, LLC
- Surface Owner

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

- Notes:
- REQUESTED PERMIT IS FOR CONVERSION OF EXISTING WELL.
 - ACCESS ROADS ARE EXISTING AND WILL BE MAINTAINED TO WVDEP STANDARDS
 - NO PIT WILL BE REQUIRED FOR WELL CONVERSION.
 - ALL DISTURBED AREAS WILL BE RE-VEGETATED AS OUTLINED ON FORM WW-9.
 - DRAWING NOT TO SCALE

Longitude = 81°57' 00.8"

9,637'

47043035875

Bottom Hole Long. = 81°57' 00.2"

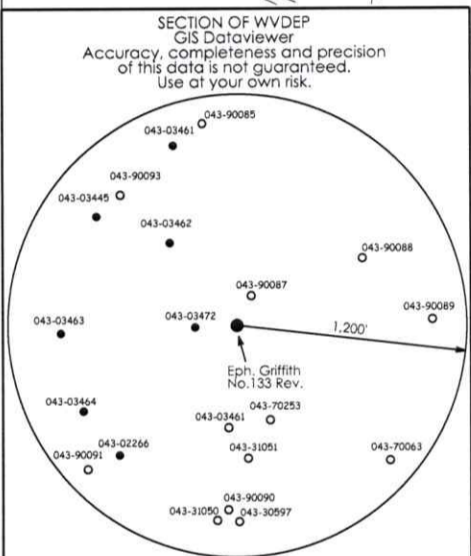
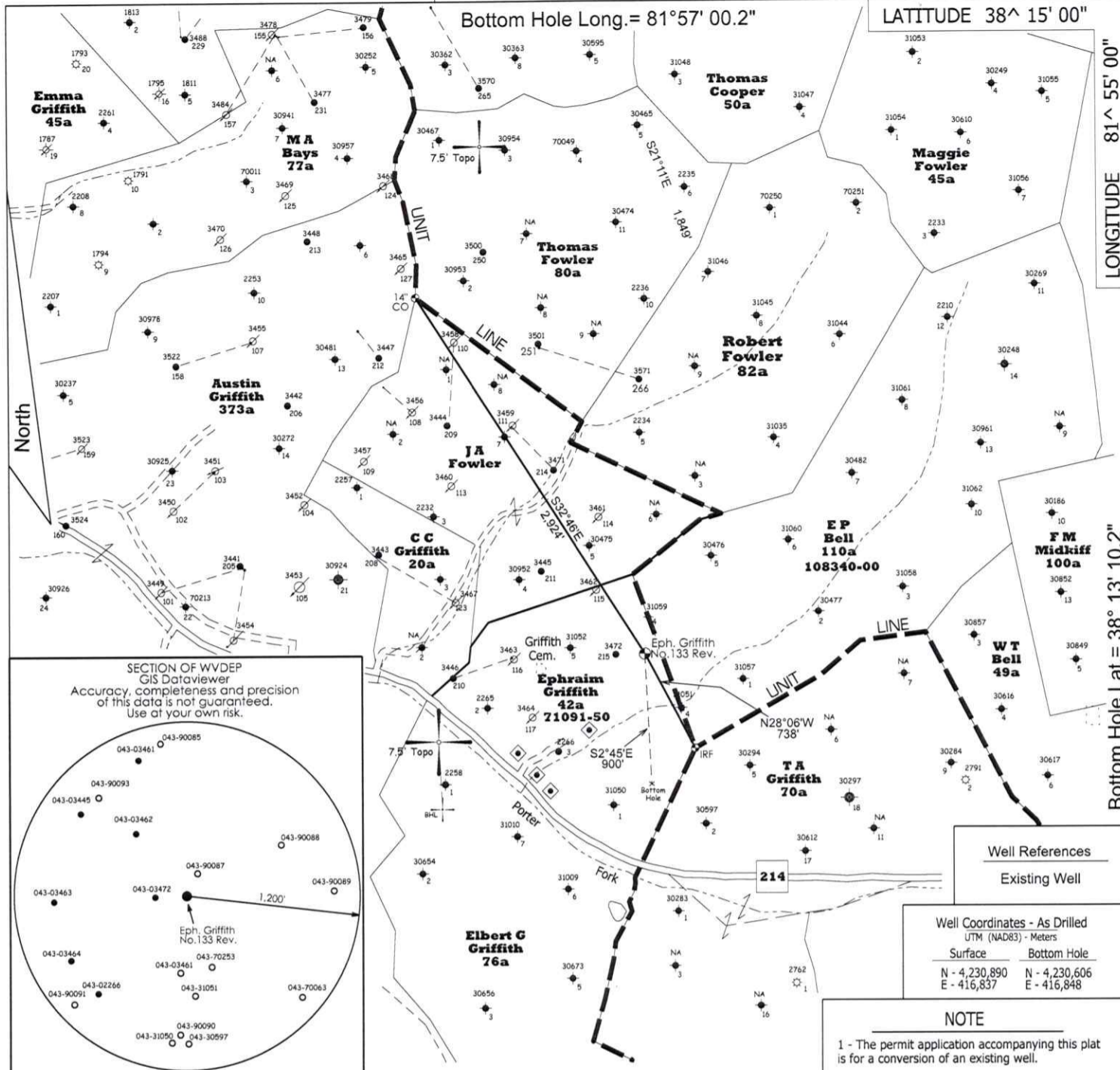
LATITUDE 38° 15' 00"

LONGITUDE 81° 55' 00"

10,177'

Bottom Hole Lat. = 38° 13' 10.2"

Latitude = 38° 13' 19.4"



Well References	
Existing Well	
Well Coordinates - As Drilled UTM (NAD83) - Meters	
Surface	Bottom Hole
N - 4,230,890	N - 4,230,606
E - 416,837	E - 416,848

NOTE

1 - The permit application accompanying this plat is for a conversion of an existing well.

2 - The drawing shown hereon is from the original drilling permit application, plat dated 7/26/2018. Present plat has been updated to reflect as-drilled Lat./Long. and current surface ownership.

◆ - 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. _____

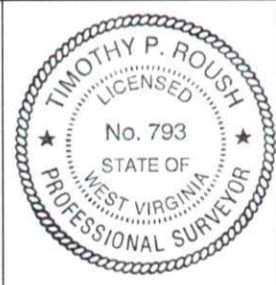
SCALE **1" = 1000'**

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

LOCATION: ELEVATION **888'** WATERSHED **Porter Fork**
DISTRICT **Duval** COUNTY **Lincoln**
QUADRANGLE **Griffithville 7.5'**

SURFACE OWNER **HG Energy, LLC** ACREAGE **152.13 Ac.**
OIL & GAS ROYALTY OWNER **H.G. Energy, LLC** LEASE ACREAGE **42 Ac.**
LEASE NO. **71091-50**

PROPOSED WORK: DRILL ___ CONVERT DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___ PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) **Well will be converted to water injection well**

PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
TARGET FORMATION **Berea** ESTIMATED DEPTH **TMD - 2,822'**

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

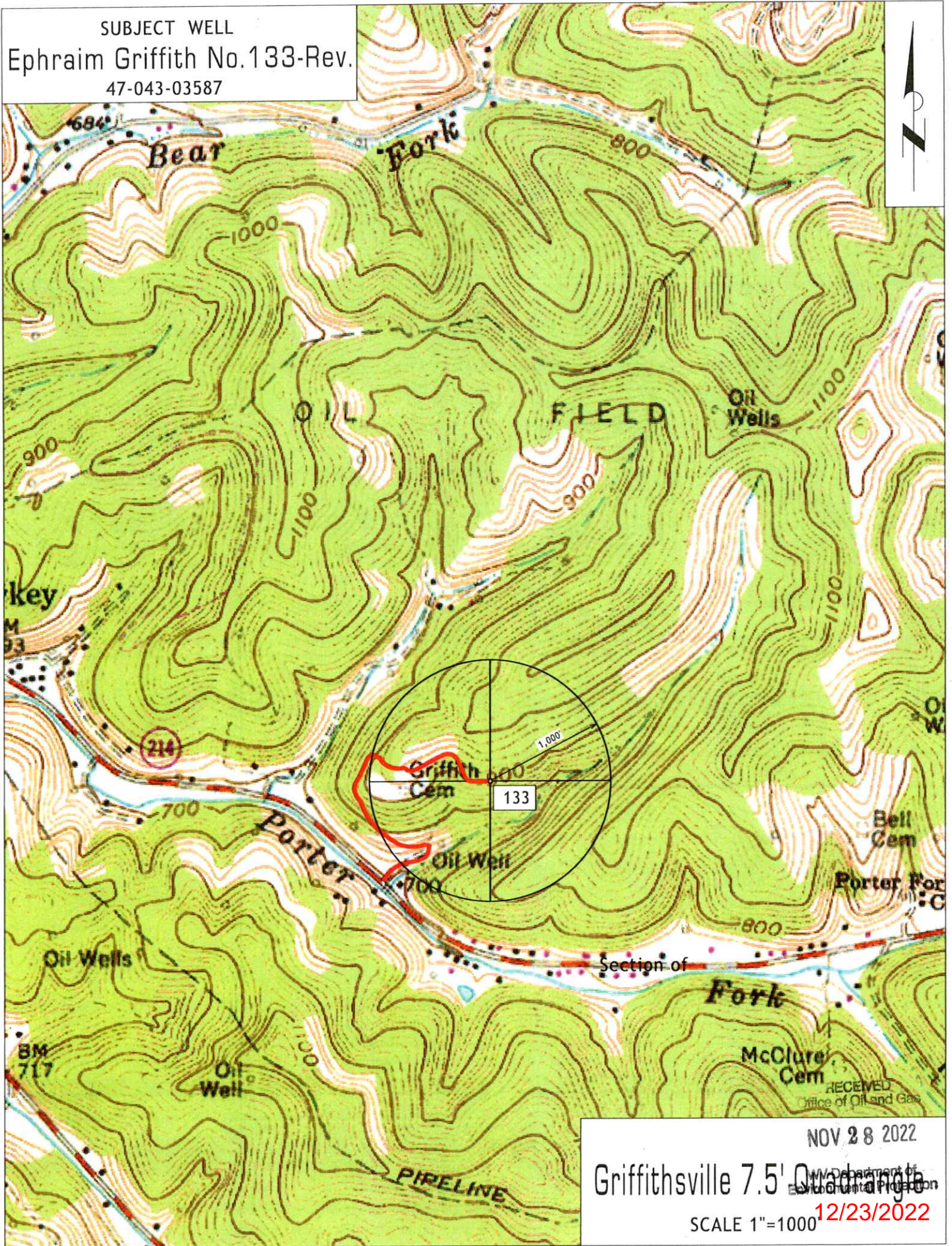
DATE **October 19, 2022**
FARM **Ephraim Griffith No.133-Rev.**
API WELL NO. **47 - 043 - 035875**

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NOV 28 2022
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FORM IV-6

SUBJECT WELL
Ephraim Griffith No.133-Rev.
47-043-03587



NOV 28 2022

Griffithsville 7.5' Quadrangle

SCALE 1"=1000

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12/23/2022



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

47043035875

October 25, 2022

Mr. Jeff McLaughlin
WVDEP
Division of Oil & Gas
601 57th Street
Charleston, West Virginia 25304

RE: Ephraim Griffith No. 133 (API 47-043-03587)
Duval District, Lincoln County
West Virginia

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Dear Mr. McLaughlin:

Enclosed are the Forms WW-3A, WW-3B, WW-9, WR-35, mylar of plat, reclamation plan and topo map for a permit to convert the above captioned shallow producing well to an injection well. The surface location is owned by HG Energy therefore a Notice to the Surface Owner wasn't needed. Our check in the amount of \$550 is attached.

If you have any questions regarding this application, please call me at 304-420-1119 or email at dwhite@hgenergyllc.com.

Very truly yours,

Diane White

Diane C. White

Enclosures

cc:

Terry Urban – WV DEP Inspector

CK# 652382
Amt \$550
Date 10/28/22

12/23/2022



Kennedy, James P <james.p.kennedy@wv.gov>

Well work permit issued 4704303587

1 message

Kennedy, James P <james.p.kennedy@wv.gov>


Mon, Dec 19, 2022 at 8:46 AM

To: Diane White <dwhite@hgenergyllc.com>, Brian Warden <brian.warden@wv.gov>, guybrowning@lincolncountywv.org, Andrew L Lockwood <andrew.l.lockwood@wv.gov>

To whom it may concern, a well work permit has been issued for 4704303587.

James Kennedy

WVDEP OOG

 **4704303587.pdf**
2767K

12/23/2022