



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

Friday, February 5, 2021
WELL WORK PERMIT
Vertical / Re-Work

HG ENERGY, LLC
5260 DUPONT ROAD

PARKERSBURG, WV 26101

Re: Permit approval for EDNA MAY 154
47-043-03482-00-00

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.

A handwritten signature in blue ink, appearing to read "James A. Martin".

James A. Martin
Chief

Operator's Well Number:
Farm Name: JOHNSON, J. , LOVEJOY
U.S. WELL NUMBER: 47-043-03482-00-00
Vertical Re-Work
Date Issued: 2/5/2021

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.

4704303482W

FORM WW-3 (B)
1/12



1) Date: 10/30/2020
 2) Operator's Well No. Edna J. May 154
 3) API Well No.: 47 - Lincoln - 03482
 State County Permit
 4) UIC Permit No. UIC2R04302AP

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: 970' Watershed: Bear Fork
 District: Duval County Lincoln Quadrangle Griffithville 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 P. O. 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) _____
 12) GEOLOGIC TARGET FORMATION Berea Depth 2640' Feet (top) to 2650' Feet (bottom)
 13) Estimated Depth of Completed Well, (or actual depth of existing well): 2765' Feet
 14) Approximate water strata depths: Fresh None Feet Salt 1160' Feet
 15) Approximate coal seam depths: 587' - 592'
 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
 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	11 5/8"	LS			x	30.0'	30.0'	Sand in	Kinds
Fresh Water	7"	LS	17#	x		636'	636'	CTS	
Coal									Sizes
Intermediate									2.375"
Production	4 1/2"	J-55	10.5#	x		2765'	2765'	150 sks	Depths set
Tubing	2 3/8"	J-55	4.6#	x		2550'	2550'		2350'
Liners									Perforations <u>4-D</u>
									Top Bottom

24) APPLICANT'S OPERATING RIGHTS were acquired from E J May
 by deed _____ / lease x / other contract _____ / dated 02/07/1973 of record in the
Lincoln County Clerk's office in Lease Book 35

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 Office of Oil and Gas
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 WV Department of
 Environmental Protection

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 47-043-03482 County LINCOLN District DUVAL
Quad GRIFFITHSVILLE 7.5' Pad Name MAY, EDNA Field/Pool Name GRIFFITHSVILLE
Farm name JOHNSON, J. , LOVEJOY Well Number 154
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 4,232,296 M Easting 416,149 M
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing 4,232,522 M Easting 416,232 M

Elevation (ft) 970' 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 6/5/15 Date drilling commenced 10/30/15 Date drilling ceased 11/5/15
Date completion activities began 12/2/15 Date completion activities ceased 12/4/15
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 1160' Void(s) encountered (Y/N) depths None
Coal depth(s) ft 587'- 592' Cavern(s) encountered (Y/N) depths None
Is coal being mined in area (Y/N) N

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API 47-043 - 03482 Farm name JOHNSON, J. , LOVEJOY Well number 154

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	12 1/4"	11 5/8"	30'	Used	LS		Sand In
Surface	8 3/4"	7"	636'	New	LS	64'	Y
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	6 1/4"	4 1/2"	2764.9'	New	J-55		Y
Tubing							
Packer type and depth set							

Comment Details Circulated Est. 75 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	160	15.6	1.18	189	Surface	8
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	50:50 Pozmix	120/125	13.2/14.2	1.64/1.27	197/186	116'	8
Tubing							

Drillers TD (ft) 2811' Loggers TD (ft) 2814'

Deepest formation penetrated Berea Plug back to (ft) N/A

Plug back procedure N/A

Kick off depth (ft) 650'

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 PLACEMENT USED FOR EACH CASING STRING _____

20 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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API 47- 043 - 03482 Farm name JOHNSON, J. , LOVEJOY Well number 154

PRODUCING FORMATION(S)	DEPTHS	
Berea	2460'- 2482'	TVD 2635'- 2658' MD

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 _____ Oil _____ NGL _____ Water _____ GAS MEASURED BY
 _____ mcfpd _____ bpd _____ bpd _____ bpd 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	587	0	587	
Pittsburgh Coal	587	592	587	592	
Sand/Shale	592	1746	592	1852	
Big Lime	1746	1950	1852	2098	
Big Injun	1950	2050	2098	2212	
Shale	2050	2440	2212	2614	
Coffee Shale	2440	2460	2614	2635	
Berea	2460	2482	2635	2658	Drilled directional N 25.5° E a distance of 700'
Shale	2482	2634	2658	2811	
TD	2634		2811		

Please insert additional pages as applicable.

Drilling Contractor Decker Drilling
 Address 11565 State Route 676 City Vincent State OH Zip 45784

Logging Company Weatherford International
 Address 11000 Performance PL City Youngstown State OH Zip 44502

Cementing Company Universal Services
 Address 14 Sewer Plant Rd City Buckhannon State WV Zip 26201

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  Title Operations Manager Date 12/7/15

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

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Return Receipt (hardcopy) \$ _____

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Certified Mail Restricted Delivery \$ _____

Adult Signature Required \$ _____

Adult Signature Restricted Delivery \$ _____

Postage \$ _____

Total Postage and Fees \$ _____

Sent To Dwight & Debra Lovejoy ✓

Street and Apt. No., or PO Box No. 5 Bethel Drive

City, State, ZIP+4® Yawkey WV 25573

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

Postmark: PARKERSBURG WV NOV 05 2020 EJM154 26101

7019 2280 0000 1287 1761

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Adult Signature Required \$ _____

Adult Signature Restricted Delivery \$ _____

Postage \$ _____

Total Postage and Fees \$ _____

Sent To Jonathan Johnson ✓

Street and Apt. No., or PO Box No. 5 Bethel Drive

City, State, ZIP+4® Yawkey WV 25573

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

Postmark: PARKERSBURG WV NOV 05 2020 EJM154

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

4704303482W

October 30, 2020

Dwight & Debra Lovejoy
5 Bethel Drive
Yawkey, WV 25573

RE: Edna J. May No. 154
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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WV Department of
Environmental Protection



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

4704303482^w

October 30, 2020

Jonathan Johnson
5 Bethel Drive
Yawkey, WV 25573

RE: Edna J. May No. 154
Duval District, Lincoln County
West Virginia

Dear Landowner:

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Very truly yours,

Diane White

Diane C. White

Enclosures

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WW-2A / 3A Surface Waiver

SURFACE OWNER WAIVER

County Lincoln Operator HG Energy, LLC
Operator well number Edna J. May 154

INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW2-A / 3A

The well operator named on page WW-2A / 3A is applying for a permit from the State to do oil or gas well work. (Note: If the surface tract is owned by more than three persons, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22 of the West Virginia Code. Well work permits are valid for 24 months. If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator and the Office of Oil and Gas.

NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.

WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0450

Time Limits and methods for filing comments. The law requires these materials to be served on or before the date the operator files his Application. You have FIFTEEN (15) DAYS after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Comments must be in writing. Your comments must include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

The Chief has the power to deny or condition a well work permit based on comments on the following grounds:

- 1) The proposed well work will constitute a hazard to the safety of persons.
2) The soil erosion and sediment control plan is not adequate or effective;
3) Damage would occur to publicly owned lands or resources;
4) The proposed well work fails to protect fresh water sources or supplies;
5) The applicant has committed a substantial violation of a previous permit or a substantial violation of one or more of the rules promulgated under Chapter 22, and has failed to abate or seek review of the violation...

If you want a copy of the permit as it is issued or a copy of the order denying the permit, you should request a copy from the Chief.

List of Water Testing Laboratories. The Office maintains a list of water testing laboratories which you can hire to test your water to establish water quality prior to and after drilling. Contact the Chief to obtain a copy.

VOLUNTARY STATEMENT OF NO OBJECTION

I hereby state that I have read the instructions to surface owners and that I have received copies of a Notice and Application for a Well Work Permit on Form WW2-A / 3A, and attachments consisting of pages 1 through ___ including a work order on Form WW-2B / 3A, a survey plat, and a soil and erosion plan, all for proposed well work on my surface land as described therein.

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

FOR EXECUTION BY A NATURAL PERSON

FOR EXECUTION BY A CORPORATION, ETC.

Signature Date

Company Name By Its RECEIVED Office of Oil and Gas DEC - 3 2020 Date

03520 Print Name

Signature Date WV Department of Environmental Protection

47-043-03482W

WW-9
(2/15)

API Number 47 - 043 - 03482
Operator's Well No. Edna J. May No. 154

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 UIC2R04302AP
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: No fluids are anticipated, if there are any, they'll be disposed of off site
Will a synthetic liner be used in the pit? Yes No If so, what ml.? _____

Proposed Disposal Method For Treated Pit Wastes: 11-23-20
 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 anticipated, should there be any fluids they'll be hauled to an approved disposal site)

Will closed loop system be used? If so, describe: No

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. NA

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

Additives to be used in drilling medium? 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 at this time

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.

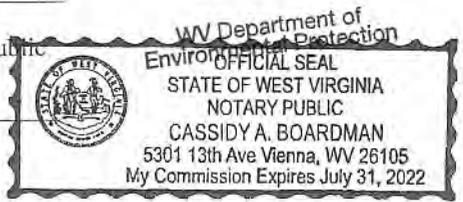
Company Official Signature Diane White
Company Official (Typed Name) Diane White
Company Official Title Agent

Subscribed and sworn before me this 30th day of October, 2020

Cassidy Boardman Notary Public
My commission expires 7/31/2022

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HG Energy, LLC

Proposed Revegetation Treatment: Acres Disturbed .20 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

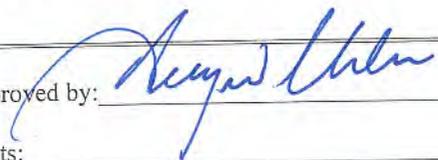
Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Tall Fescue	40	Tall Fescue	40
Ladino Clover	5	Ladino Clover	5

Sediment Control Will Be Maintained 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: 

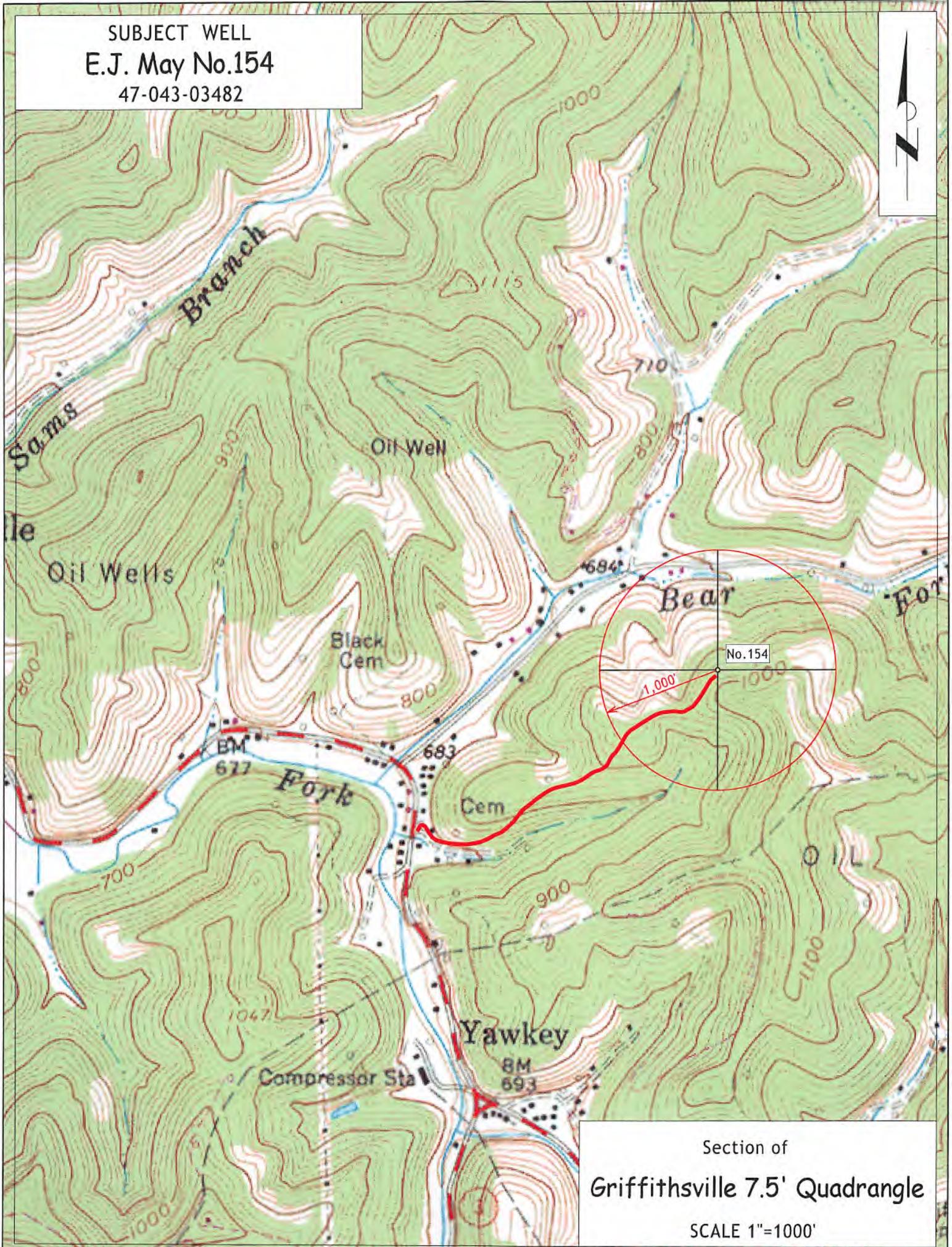
Comments: _____

Title: Inspector Oil & Gas Date: 11-23-20

Field Reviewed? Yes No

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SUBJECT WELL
E.J. May No.154
47-043-03482



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

Reclamation Plan For:

E.J. May No. 154
47-043-03482

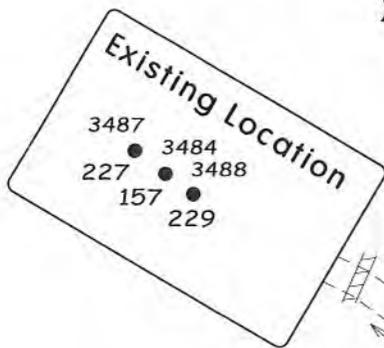
Jonathon Johnson
- Surface of Record
Dwight Lovejoy - Claim

E.J. May Lease



E.J. May Lease

Randall &
Patricia Coy
- Surface



Access to follow
existing lease road

E.J. May Lease

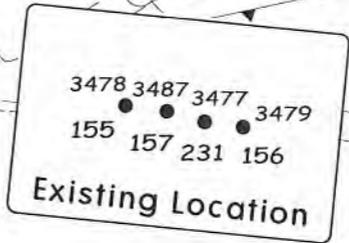
Dwight Lovejoy
- Surface

200' of 5-8% Grade

200' of 5-8% Grade

150' of 5-8% Grade

400' of 0-5% Grade



Gate

0.4 Mi. to WV SR 3.
See Page 2 for
Waterflood Road Detail

M.A. Bays Lease

HG Energy
- Surface

Existing Road
To MA Bays
No. 125

Notes:

- REQUESTED PERMIT IS FOR RECOMPLETION OF AN EXISTING WELL.
- ACCESS ROADS ARE EXISTING AND WILL BE MAINTAINED TO WVDEP STANDARDS.
- NO EARTHWORK IS ANTICIPATED FOR REQUESTED WELL WORK
- NO PIT WILL BE REQUIRED FOR REQUESTED WELL WORK.
- ANY DISTURBED AREAS WILL BE RE-VEGETATED AS OUTLINED ON FORM WW-9.
- MAINTAIN SEDIMENT BARRIERS AND DRAINAGE STRUCTURES.
- DRAWING NOT TO SCALE.

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



- 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 1983).
- 2 - Surface owners and adjacent information obtained from the Lincoln County Assessor's tax records.
- 3 - No Title Opinion was provided to the Surveyor during this survey. This survey is subject to a complete Title Opinion.

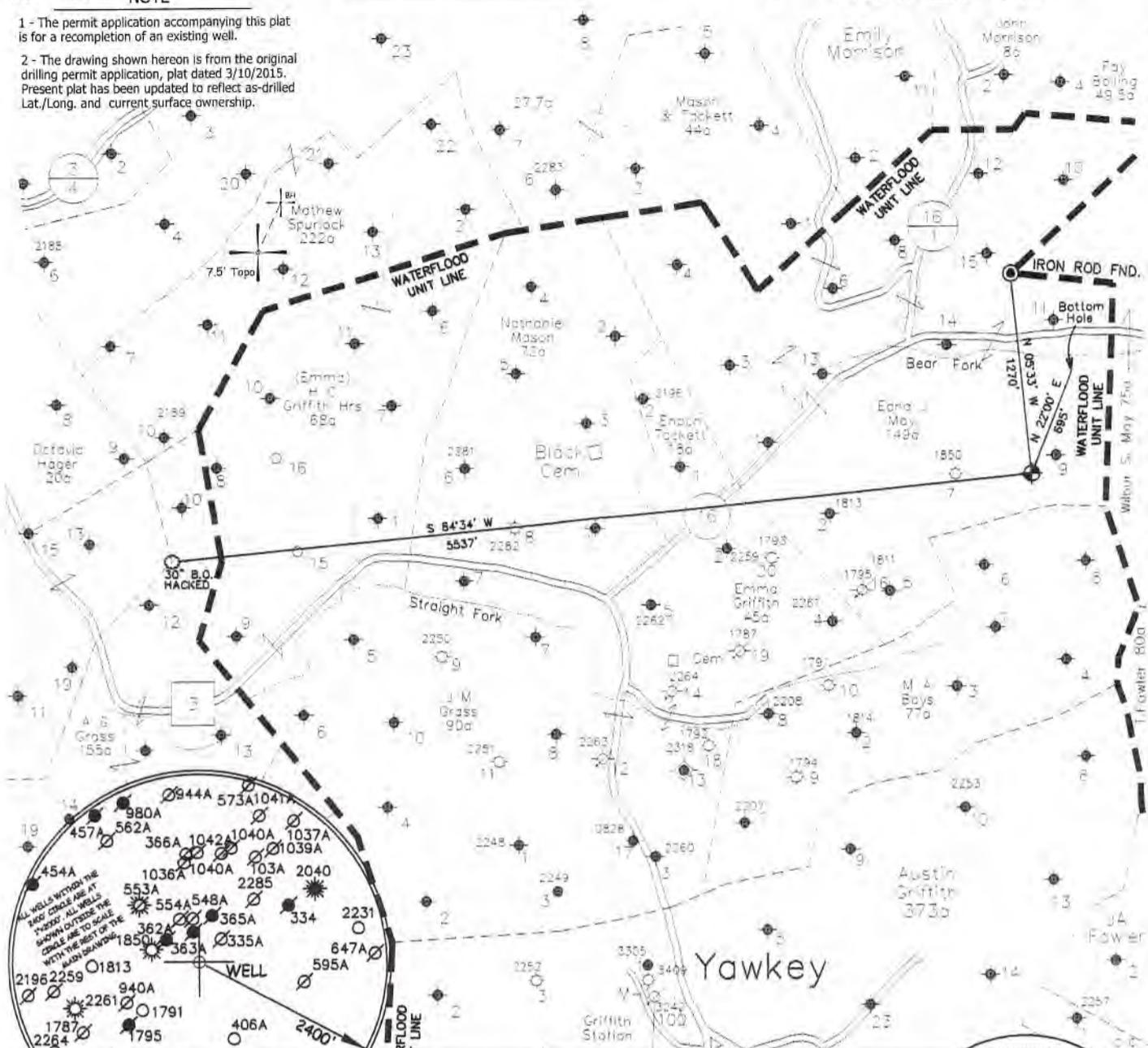
NOTE

- 1 - The permit application accompanying this plat is for a recompletion of an existing well.
- 2 - The drawing shown hereon is from the original drilling permit application, plat dated 3/10/2015. Present plat has been updated to reflect as-drilled Lat./Long. and current surface ownership.

Well Coordinates - As Drilled	
UTM (NAD83) - Meters	
Surface	Bottom Hole
N - 4,232,298	N - 4,232,491
E - 416,148	E - 416,240

LOCATION REFERENCES	
MAGNETIC BEARING	
Existing Well	
3	5

**MAP OF
H.G. ENERGY, LLC
-WATERFLOOD UNIT-
EDNA MAY 154**



LONGITUDE 81° 55' 00"
 As Drilled Bottom Hole Lat. = 38° 14' 11.1"
 As Drilled Latitude = 38° 14' 04.84"
 5,580'

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) *[Signature]*
 TIMOTHY P. ROUSH PS 793



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



DATE October 9, 2020
 FARM E.J. May No.154
 API WELL NO. 47 - 043 - 03482 W

WELL TYPE: OIL ___ GAS ___ LIQUID INJECTION WASTE DISPOSAL ___
 (IF "GAS") PRODUCTION ___ STORAGE ___ DEEP ___ SHALLOW ___

LOCATION: ELEVATION 804' WATERSHED Bear Fork
 DISTRICT Duval COUNTY Lincoln
 QUADRANGLE Griffithville 7.5'

SURFACE OWNER Dwight David Lovejoy ACREAGE 20 Ac.
 OIL & GAS ROYALTY OWNER HG Energy, LLC et al. LEASE ACREAGE 149 Ac.
 LEASE NO. 80221-50

PROPOSED WORK: DRILL ___ CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR
 STIMULATE PLUG OFF OLD FORMATION ___ PERFORATE NEW
 FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
 TARGET FORMATION Berea ESTIMATED DEPTH TMD - 2,811'

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

RECEIVED
 Office of Oil and Gas
 DEC - 3 2020
 WV Department of Environmental Protection

1 - Well ties and Latitude and Longitude were measured by DGPS (Sub-meter Mapping Grade). Bearings are referenced to UTM Grid North (Zone 17 North - NAD 1927).

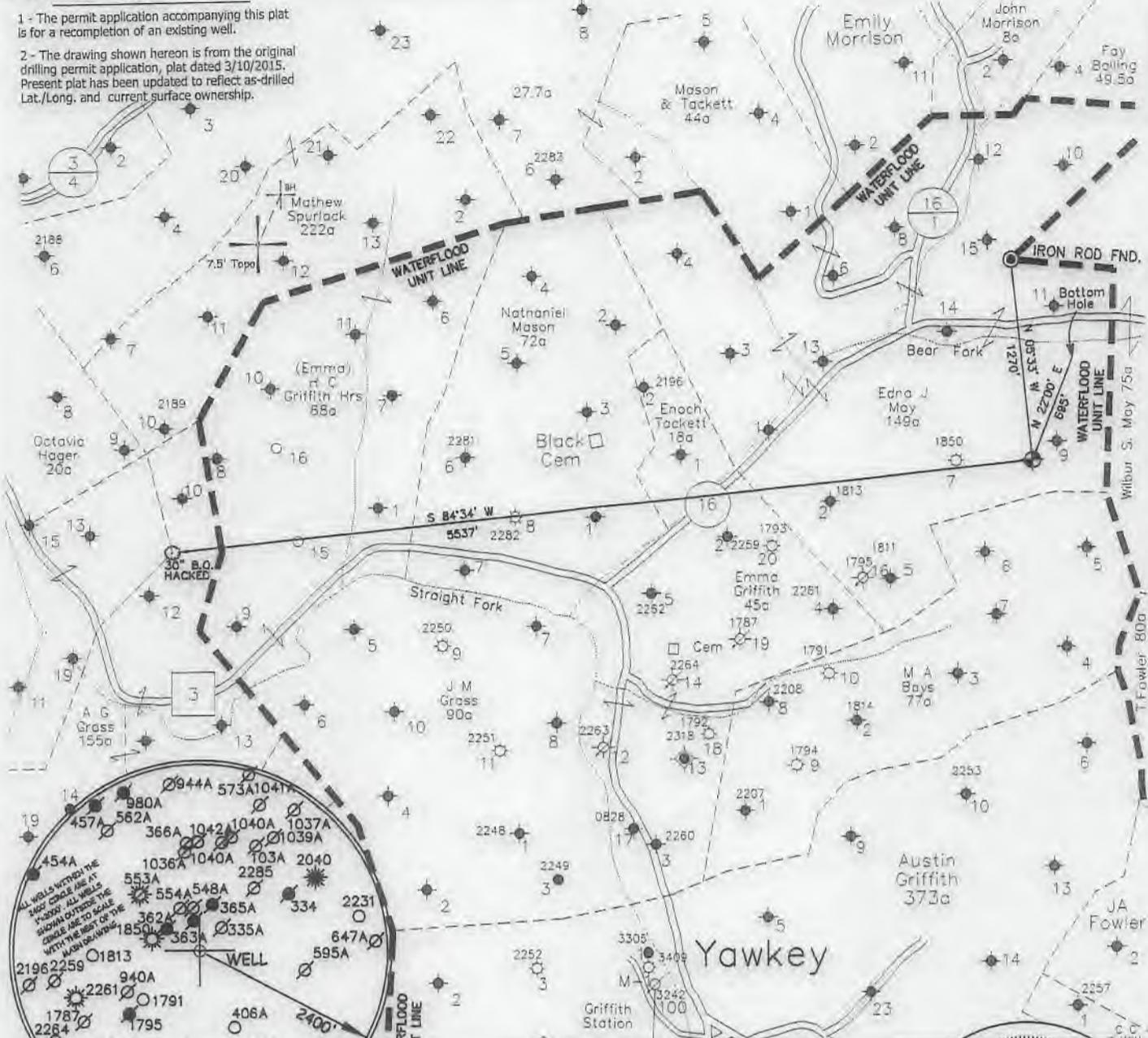
2 - Surface owners and adjoining information obtained from the Lincoln County Assessor's tax records.

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

Well Coordinates - As Drilled	
UTM (NAD83) - Meters	
Surface	Bottom Hole
N - 4,232,298	N - 4,232,491
E - 416,148	E - 416,240

LOCATION REFERENCES	
MAGNETIC BEARING	
Existing Well	
3	3

MAP OF H.G. ENERGY, LLC -WATERFLOOD UNIT- EDNA MAY 154



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.

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



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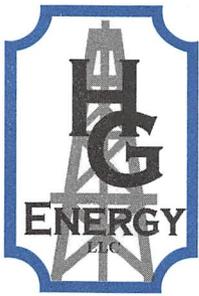
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FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
TARGET FORMATION Berea ESTIMATED DEPTH TMD - 2,811'

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

4704303482W



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

October 30, 2020

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

RE: Edna J. May No. 154
Duval District, Lincoln County
West Virginia

Dear Mr. McLaughlin:

Enclosed are Forms WW-3A, WW-3B, WW-9, mylar of plat, reclamation plan, topo map and copies of the certified mailing receipts for a permit to stimulate an injection well. Also enclosed is our check in the amount of \$500.00 to cover the associated permit fees.

Very truly yours,

Diane White

Diane C. White

Enclosures

cc: HG Energy, LLC - ~~Certified~~ Not noticed
Dwight & Debra Lovejoy - Certified
Jonathan Johnson - Certified
Terry Urban - Inspector

CHK# 4818
Amt \$ 500
Date 11/5/20

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Office of Oil and Gas
DEC - 3 2020
WV Department of
Environmental Protection

WW-2B1
(5-12)

Well No. Edna J. May No. 154

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

Well Operator	<u>HG Energy, LLC</u>
Address	<u>5260 Dupont Road</u>
	<u>Parkersburg, WV</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.

* Not Applicable *

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WV Department of
Environmental Protection