



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, March 15, 2021
WELL WORK PERMIT
Vertical / Re-Work

HG ENERGY, LLC
5260 DUPONT ROAD
PARKERSBURG, WV 26101

Re: Permit approval for CB FERRELL 110
47-087-04754-00-00

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: CB FERRELL 110
Farm Name: MAY, TIMOTHY D.
U.S. WELL NUMBER: 47-087-04754-00-00
Vertical Re-Work
Date Issued: 3/15/2021

I

4708704754W

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.

03/19/2021

4708704754 W

FORM WW-3 (B)
1/12



1) Date: 01/07/2021
2) Operator's Well No. C. B. Ferrell 110
3) API Well No.: 47 - Roane - 047540
State County Permit
4) UIC Permit No. 2R08700005AP

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: 1110' Watershed: Rush Run
District: Smithfield County Roane Quadrangle Looneyville 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 Joe Taylor Name
Address 1478 Claylick Road Address
Ripley, WV 25271

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 Big Injun Depth 2406' Feet (top) to 2416' Feet (bottom)
13) Estimated Depth of Completed Well, (or actual depth of existing well): 2660' TMD Feet
14) Approximate water strata depths: Fresh NA Feet Salt 1700' Feet
15) Approximate coal seam depths: NA
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

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JAN 21 2021

23) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT OR SACKS (CU. FT.)	PACKERS
	Size	Grade	Weight per ft.	New	Used	For Drilling	Left In Well		
Conductor	11 5/8"	LS	NA		x	30'	30'		Kinds
Fresh Water	7"	LS	17	x		506'	506'	CTS	Tension
Coal									Sizes
Intermediate									2 3/8" x 4"
Production	4 1/2"	J-55	10.5	x		2631'	2631'	200 sks	Depths set
Tubing	2 3/8"	J-55	4.6	x		2400'	2400'		2300'
Liners									Perforations 60
									Top Bottom
									2406' 2416'

24) APPLICANT'S OPERATING RIGHTS were acquired from C B Ferrell et al
by deed / lease x / other contract / dated 11/06/2014 of record in the
Roane County Clerk's office in lease Book 16 Page 440

Joe Taylor
1-14-21 03/19/2021

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

API 47 - 087 - 04754 County ROANE District SMITHFIELD
 Quad LOONEYVILLE 7.5' Pad Name FERRELL, C.B. Field/Pool Name CLOVER
 Farm name MAY, TIMOTHY D. Well Number 110
 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 4,285,443 M Easting 475,638 M
 Landing Point of Curve Northing _____ Easting _____
 Bottom Hole Northing 4,285,234 M Easting 475,776 M

Elevation (ft) 1,110' 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 Injection
 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

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WV Department of
Environmental Protection

Date permit issued 7/10/18 Date drilling commenced NA Date drilling ceased NA
 Date completion activities began 7/23/18 Date completion activities ceased 7/27/18
 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 1700' Void(s) encountered (Y/N) depths None
 Coal depth(s) ft None Cavern(s) encountered (Y/N) depths None
 Is coal being mined in area (Y/N) N

Reviewed by:

JP

03/19/2021

WR-35
Rev. 8/23/13

API 47-087 - 04754 Farm name MAY, TIMOTHY D. Well number 110

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade w/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"	506'	New	LS	64'	Y
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	6 1/4"	4 1/2"	2631.35'	New	J-55		Y
Tubing							
Packer type and depth set							

Comment Details Circulated Est. 25 sks to surface on 7" surface cement job. Circulated Est. 20 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	130	15.6	1.18	153	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	50'	8
Tubing							

Drillers TD (ft) 2660' Loggers TD (ft) 2653'
 Deepest formation penetrated Big Injun Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 600'

Check all wireline logs run caliper density deviated/directional induction neutron resistivity gamma ray temperature sonic **RECEIVED**
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Well cored Yes No Conventional Sidewall Were cuttings collected Yes No **JAN 21 2021**

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING **WV Department of Environmental Protection**
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 _____

WR-35
Rev. 8/23/13

API 47- 087 - 04754 Farm name MAY, TIMOTHY D. Well number 110

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
Big Injun	2122'- 2150'	TVD 2382'- 2422' 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 _____ 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	1402	0	1432	
Sand	1402	1618	1432	1692	
Shale	1618	1656	1692	1738	
Sand	1656	1824	1738	1738	
Shale	1824	1842	1954	1954	
Sand	1842	1976	1977	2168	
Little Lime	1976	2036	2168	2236	
Pencil Cave	2032	2036	2236	2240	
Big Lime	2036	2104	2240	2356	
Keener	2104	2122	2356	2382	
Big Injun	2122	2150	2382	2422	
Shale	2150	2333	2422	2660	
TD	2333		2660		

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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 777 North River Avenue City Weston State WV Zip 26452

Cementing Company Universal Services
Address Hall 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 [Signature] Title Operations Manager Date 8/1/18

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

FORM WW-3 (A)
1/12



1) Date: January 7, 2021
2) Operator's Well No. C B Ferrell 110
3) API Well No.: 47 - 087 - 04754
State County Permit
4) UIC Permit No. 2R08700005AP

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,

5) Surface Owner(S) To Be Served	7) (a) Coal Operator
(a) Name <u>Timothy May</u>	Name <u>NA</u>
Address <u>242 Edgle Fork Road</u>	Address _____
<u>Spencer, WV 25276</u>	_____
(b) Name _____	7) (b) Coal Owner(S) With Declaration Of Record
Address _____	Name <u>NA</u>
_____	Address _____
(c) Name _____	Name _____
Address _____	Address _____
6) Inspector <u>Joe Taylor</u>	7) (c) Coal Lessee with Declaration Of Record
Address <u>1478 Claylick Road</u>	Name <u>NA</u>
<u>Ripley, WV 25271</u>	Address _____
Telephone <u>304-380-7469</u>	_____

RECEIVED
Office of Oil and Gas
JAN 21 2021
WV Department of Environmental Protection

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 21 .

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: Agent
Signature: Diane White

4708704754w



SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY																	
<ul style="list-style-type: none"> Complete items 1, 2, and 3. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 	<p>A. Signature <input checked="" type="checkbox"/> <i>Timothy D May</i> <input type="checkbox"/> Agent <input checked="" type="checkbox"/> Addressee</p>																	
<p>1. Article Addressed to:</p> <p>Timothy May 242 Edgle Fork Road Spencer WV 25276</p> <p>CBF 110</p>  <p>9590 9402 5282 9154 3530 12</p>	<p>B. Received by (Printed Name) <i>Timothy D May</i></p>	<p>C. Date of Delivery 1-11-21</p>																
<p>2. Article Number (Transfer from service label) 7019 2280 0000 1287 2416</p>	<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type</p> <table border="0"> <tr> <td><input type="checkbox"/> Adult Signature</td> <td><input type="checkbox"/> Priority Mail Express®</td> </tr> <tr> <td><input type="checkbox"/> Adult Signature Restricted Delivery</td> <td><input type="checkbox"/> Registered Mail™</td> </tr> <tr> <td><input checked="" type="checkbox"/> Certified Mail®</td> <td><input type="checkbox"/> Registered Mail Restricted Delivery</td> </tr> <tr> <td><input type="checkbox"/> Certified Mail Restricted Delivery</td> <td><input checked="" type="checkbox"/> Return Receipt for Merchandise</td> </tr> <tr> <td><input type="checkbox"/> Collect on Delivery</td> <td><input type="checkbox"/> Signature Confirmation™</td> </tr> <tr> <td><input type="checkbox"/> Collect on Delivery Restricted Delivery</td> <td><input type="checkbox"/> Signature Confirmation Restricted Delivery</td> </tr> <tr> <td><input type="checkbox"/> Registered Mail Restricted Delivery</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Registered Mail Restricted Delivery (over \$500)</td> <td></td> </tr> </table>		<input type="checkbox"/> Adult Signature	<input type="checkbox"/> Priority Mail Express®	<input type="checkbox"/> Adult Signature Restricted Delivery	<input type="checkbox"/> Registered Mail™	<input checked="" type="checkbox"/> Certified Mail®	<input type="checkbox"/> Registered Mail Restricted Delivery	<input type="checkbox"/> Certified Mail Restricted Delivery	<input checked="" type="checkbox"/> Return Receipt for Merchandise	<input type="checkbox"/> Collect on Delivery	<input type="checkbox"/> Signature Confirmation™	<input type="checkbox"/> Collect on Delivery Restricted Delivery	<input type="checkbox"/> Signature Confirmation Restricted Delivery	<input type="checkbox"/> Registered Mail Restricted Delivery		<input type="checkbox"/> Registered Mail Restricted Delivery (over \$500)	
<input type="checkbox"/> Adult Signature	<input type="checkbox"/> Priority Mail Express®																	
<input type="checkbox"/> Adult Signature Restricted Delivery	<input type="checkbox"/> Registered Mail™																	
<input checked="" type="checkbox"/> Certified Mail®	<input type="checkbox"/> Registered Mail Restricted Delivery																	
<input type="checkbox"/> Certified Mail Restricted Delivery	<input checked="" type="checkbox"/> Return Receipt for Merchandise																	
<input type="checkbox"/> Collect on Delivery	<input type="checkbox"/> Signature Confirmation™																	
<input type="checkbox"/> Collect on Delivery Restricted Delivery	<input type="checkbox"/> Signature Confirmation Restricted Delivery																	
<input type="checkbox"/> Registered Mail Restricted Delivery																		
<input type="checkbox"/> Registered Mail Restricted Delivery (over \$500)																		
<p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>		<p>Domestic Return Receipt</p>																

03/19/2021



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

4708704754W

January 7, 2021

Timothy May
242 Edgle Fork Road
Spencer, WV 25276

RE: C. B. Ferrell No. 110
Smithfield District, Roane County
West Virginia

Dear Mr. May:

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

03/19/2021

SURFACE OWNER WAIVER

County Roane Operator HG Energy, LLC
Operator well number CB Ferrell 110

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 _____
04754

Company Name
By _____
Its _____ Date _____

Print Name

Signature Date _____

WW-9
(2/15)

API Number 47 - 87 - 04754
Operator's Well No. CB Ferrell 110

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) Rush Run Quadrangle Looneyville 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 *ANY WELL EFFLUENT WILL BE CONTAINED IN TANKS BEFORE DISPOSING OFF SITE. gww*

If so, please describe anticipated pit waste: NA

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

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 anticipated, should there be any fluids they'll be hauled for off site disposal)

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

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JAN 21 2021
WV Department of Environmental Protection

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

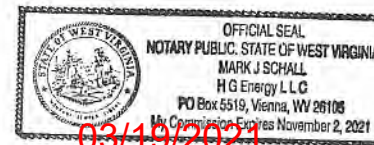
[Signature]
1-14-21

Subscribed and sworn before me this 7th day of January, 2021

[Signature]

Notary Public

My commission expires 11/2/2021



03/19/2021

HG Energy, LLC

Proposed Revegetation Treatment: Acres Disturbed 0.1 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 Control Plan will be in effect 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.

RECEIVED Office of Oil and Gas

Plan Approved by:

JAN 21 2021

Comments:

WV Department of Environmental Protection

Title: OOG Inspector.

Date: 1-14-21

Field Reviewed? (X) Yes () No

4708704754W

Reclamation Plan For: C.B. Ferrell No. 110

47-087-04754

Note
Access roads and Drill Site were constructed
in 2015 for the drilling of the subject well.
All structures are in place and will be maintained

C.B. Ferrell Lease

Timothy D. May
- Surface Owner

Existing
Location on
Ridgetop

Existing Vegetative
Filter Strip

4754
No. 110

202 109 105

Existing Vegetative
Filter Strip

Gate

Ed Asbury
- Surface Owner

Into Vegetation

Into Vegetation

Born

To Existing Wells
No. 200, 101 & 102

Ed Asbury
- Surface Owner

Existing Pad Site
104, 108, 201, 205

SBK
No. 3 2578

Existing
Access
Road

S.B. Kinkead Lease
C.B. Ferrell Lease

EXISTING WATERFLOOD ACCESS TO SR 36

36

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

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.

SURVEY NOTES

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 Roane 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.

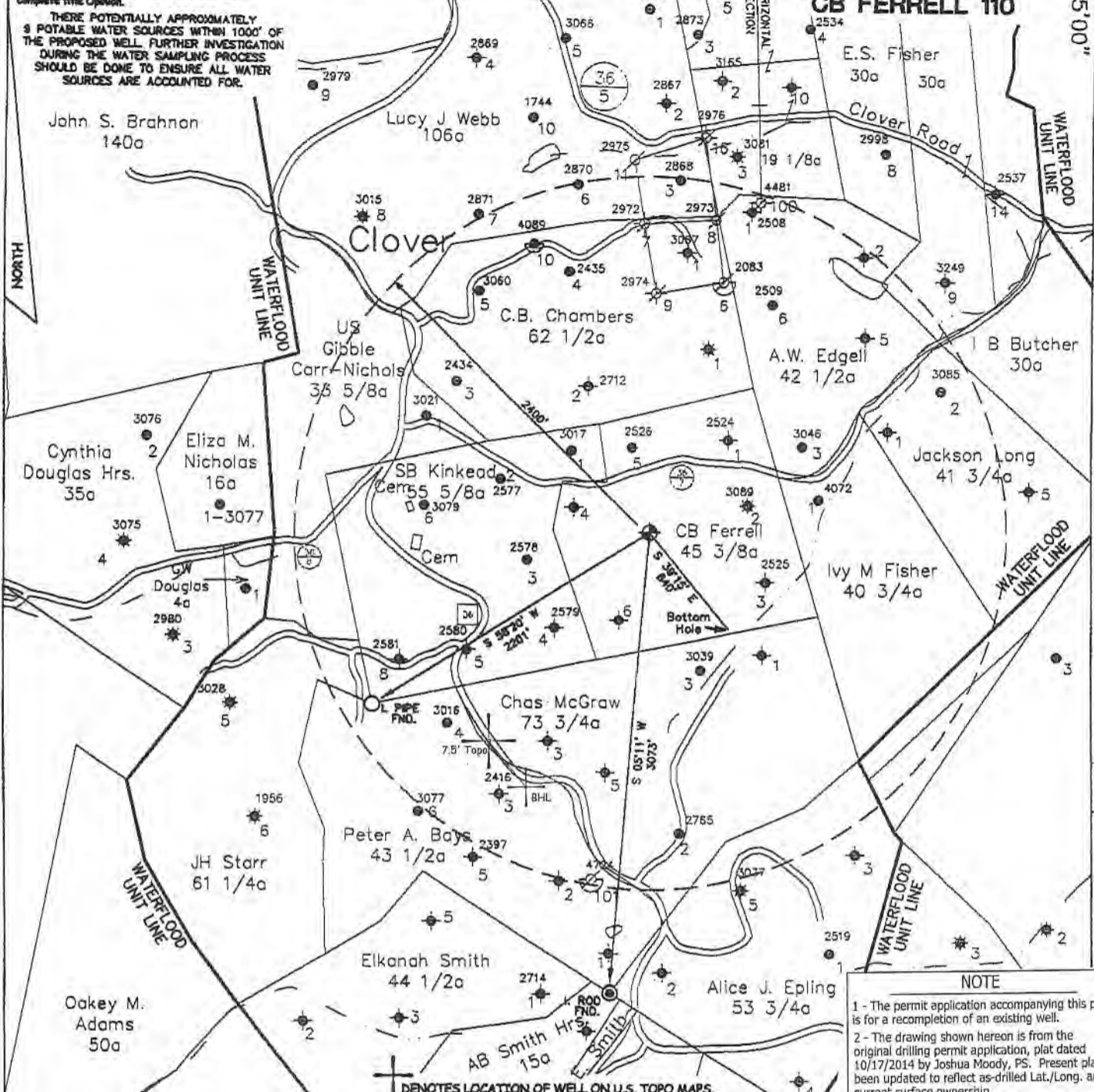
THERE POTENTIALLY APPROXIMATELY 3 POTABLE WATER SOURCES WITHIN 1000' OF THE PROPOSED WELL. FURTHER INVESTIGATION DURING THE WATER SAMPLING PROCESS SHOULD BE DONE TO ENSURE ALL WATER SOURCES ARE ACCOUNTED FOR.

Well Coordinates
 UTM NAD 83 (mtr)
 Surface N - 4,285,441 m.
 E - 475,636 m.
 Bottom N - 4,285,253 m.
 E - 475,789 m.

LOCATION REFERENCES
 Existing Well

MAP OF H.G. ENERGY, LLC - WATERFLOOD UNIT - CB FERRELL 110

LON: 81°15'00"
 LONGITUDE 81° 15' 00"



11,950'

As Drilled Latitude = 38° 43' 01.9"

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 10/17/2014 by Joshua Moody, PS. Present plat has been updated to reflect as-drilled Lat./Long. and current surface ownership.

⊕ DENOTES LOCATION OF WELL ON U.S. TOPO MAPS.

FILE NO. _____

SCALE 1" = 1000'

MINIMUM DEGREE OF ACCURACY _____

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 November 20, 2020
 FARM C.B. Ferrell No.110
 API WELL NO. 47 - 087 - 04754W

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

LOCATION: ELEVATION 1,110' WATERSHED Rush Run
 DISTRICT Smithfield COUNTY Roane
 QUADRANGLE Looneyville 7.5'

SURFACE OWNER Timothy D. May ACREAGE 25.51 Ac.
 OIL & GAS ROYALTY OWNER Beverly Eberfeld et al. LEASE ACREAGE 45 Ac.
 LEASE NO. _____

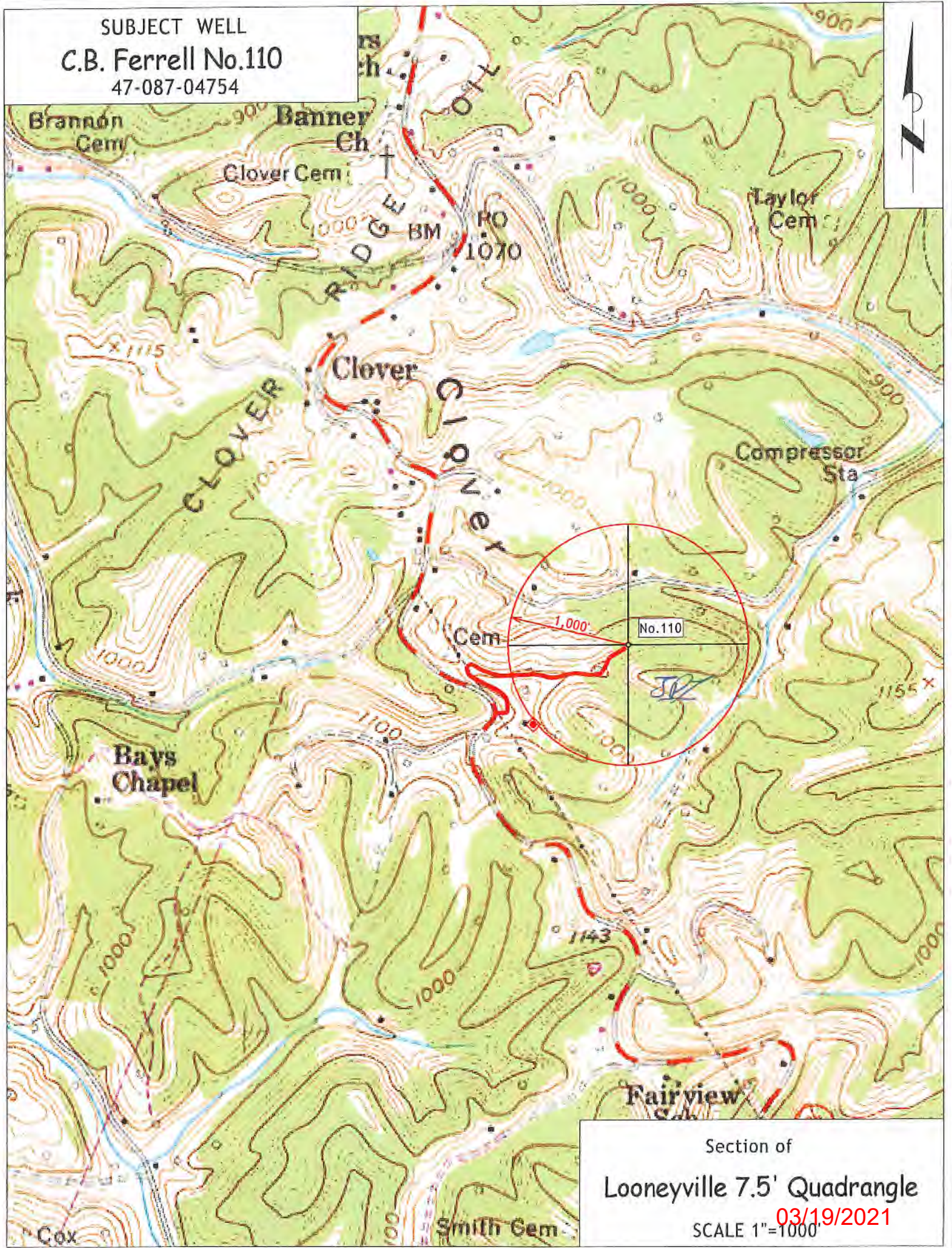
PROPOSED WORK: DRILL ___ CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
 TARGET FORMATION Big Injun ESTIMATED DEPTH 2,660' MD

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

03/19/2021

SUBJECT WELL
C.B. Ferrell No.110
47-087-04754



Section of
Looneyville 7.5' Quadrangle
SCALE 1"=1000
03/19/2021

SURVEY NOTES
 1 - Well Nos 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 adjoiners information obtained from the Roane 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.
 THERE POTENTIALLY APPROXIMATELY 3 POTABLE WATER SOURCES WITHIN 1000' OF THE PROPOSED WELL. FURTHER INVESTIGATION DURING THE WATER SAMPLING PROCESS SHOULD BE DONE TO ENSURE ALL WATER SOURCES ARE ACCOUNTED FOR.

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LOCATION REFERENCES

Existing Well

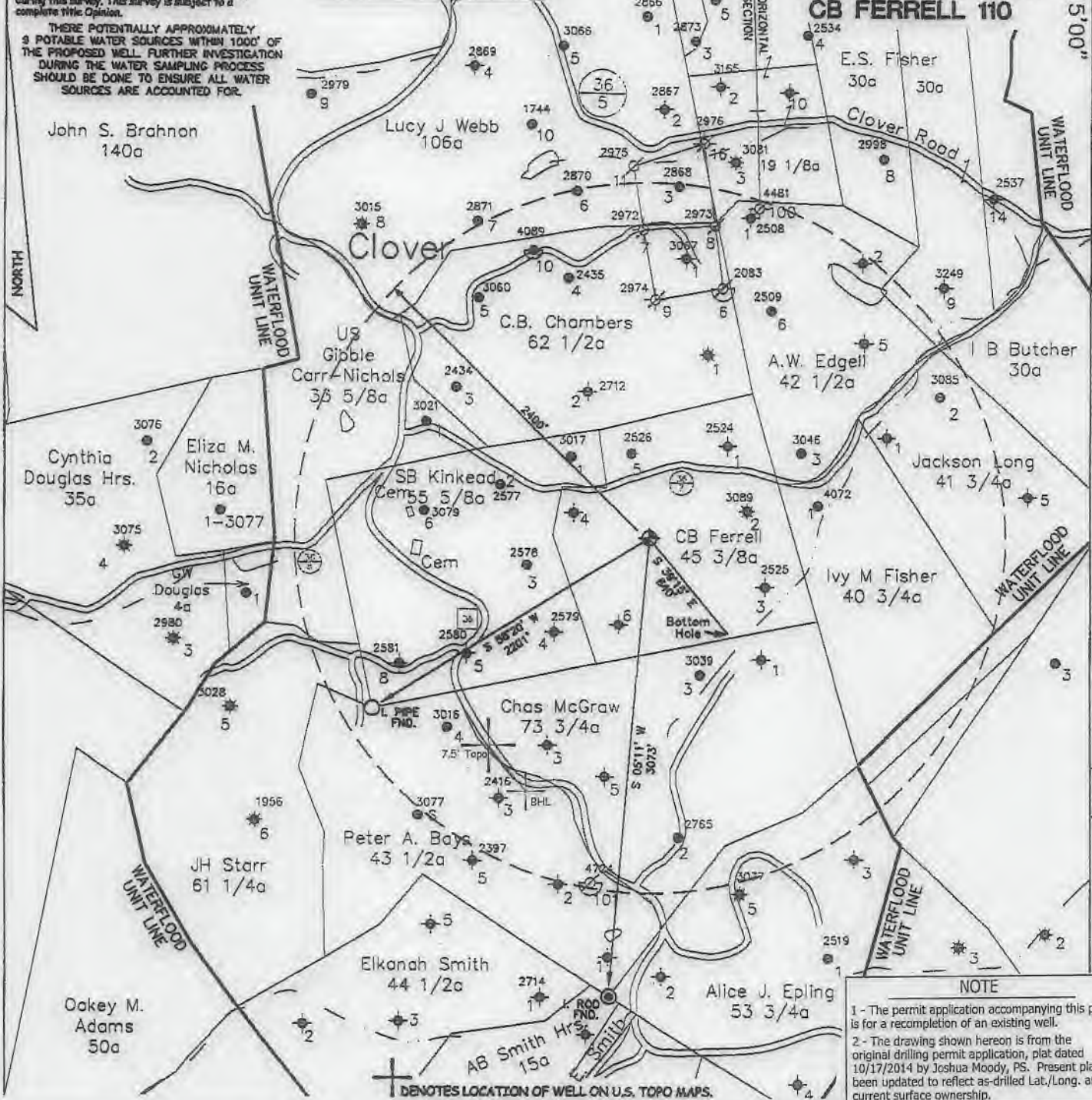
MAP OF H.G. ENERGY, LLC - WATERFLOOD UNIT - CB FERRELL 110

LAT: 38°45'00"

LONGITUDE 81°15'00"

11,950'

As Drilled Latitude = 38° 43' 01.9"



⊕ DENOTES LOCATION OF WELL ON U.S. TOPO MAPS.

NOTE
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 (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 November 20, 2020
 FARM C.B. Ferrell No.110
 API WELL NO. 47 - 087 - 04754 W

03/19/2021

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 (IF "GAS") PRODUCTION ___ STORAGE ___ DEEP ___ SHALLOW ___
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 DISTRICT Smithfield COUNTY Roane
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 WELL OPERATOR HG Energy LLC. DESIGNATED AGENT Diane White
 ADDRESS 5260 DuPont Road ADDRESS 5260 DuPont Road
 Parkersburg, WV 26101 Parkersburg, WV 26101



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

87-04754 R
4708704754 V

January 7, 2021

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

RECEIVED
Office of Oil and Gas
JAN 21 2021
WV Department of
Environmental Protection

RE: C B Ferrell No. 110 (47-087-04754)
Smithfield District, Roane 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 the above captioned injection well. Also enclosed is our check in the amount of \$550.00 to cover the associated permit fees.

Very truly yours,

Diane White

Diane C. White

Enclosures

cc: Timothy May – Certified
Joe Taylor – DEP Inspector

CHK# 4891
Amt \$550
Date 1/8/21

03/19/2021