

west virginia department of environmental protection

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

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

Tuesday, April 12, 2022 WELL WORK PERMIT Vertical / Fracture

HG ENERGY, LLC 5260 DUPONT ROAD PARKERSBURG, WV 26101

### Re: Permit approval for CB FERRELL 105 47-087-04755-00-00

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.

ames A. Martin Chief

Operator's Well Number: CB FERRELL 105 Farm Name: MAY, TIMOTHY D U.S. WELL NUMBER: 47-087-04755-00-00 Vertical Fracture Date Issued: 4/12/2022

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. <u>Failure to adhere to the specified permit</u> 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.
- 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.

FORM WW-3 (B) 1/12



1)	Date:	01/05/202	2	-				-
		r's Well N	No.	C.E	8. Ferrell 105			
	API We		47	-	Roane	-	04755	
- /			State	-	County	-	Permit	1
4)	<b>ІЛС</b> Рег	mit No.	2R087	0000	5AP			

## 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

) LOCATION:	Elevation				0	tershed: Rus		Quadrant	gle Looneyville 7.5'
	District:				Cot	8) DESIGNA	TEDAGE		
) WELL OPERA	TOR: HG	Energy, LL	.C			8) DESIGNA	Addres		
Add		0 Dupont R		_			Addres		urg, WV 26101
the second second		kersburg, V				IO POTI D	CONTR		
) OIL & GAS IN	SPECTOR	TOBE	NOTIFIE	ED		10) DRILLIN	GCONTR	ACTOR	
Name Joe Tayl			-1			Name			
	aylick Road	1	av/			Address			
Ripley, V	WV 25271	C		-					/ Stimulate 🗸
11) PROPOSED V 12) GEOLOGIC T	ADGETI	FORMA	Other p	old formation hysical of iniun	change in w	/ Perfo vell (specify) Depth	2288'	Feet (top)	Convert
13) Estimated Dep	th of Com	pleted W	Vell, (or a	ctual de	pth of exist	ing well): 25	10'TMD	Feet	
14) Approximate v	water strat	a depths:	Fre	sh NA	177	Feet	Salt	1700'	Feet
15) Approximate (	coal seam	denths:	NA						
16) Is coal being n	nined in th	e area?	Yes		No				
(7) Virgin reservo	ir pressure	in targe	t formatio	on 1250	psig	s. Source	Estimated		
		a fer see D-							
10) Estimated race	prin fract	hire pres	sure 265	50					psig (BHFP)
18) Estimated rest	ervoir fract	ture pres	SUPE 265	PERATI	IONS: V	· /olume per hou	r 25 BBL		nole pressure 2400 psi
18) Estimated reso 19) MAXIMUM I 20) DETAILED II bactericides, and other bactericides, and bactericides, and and bactericides, and and bacter	PROPOSE DENTIFIC her chemicals	ture press D INJEC CATION as needed	sure 265 CTION 0 OF MAT to maintain v	50 PERATI TERIAL vater qualit	S TO BE I y and Improve	oil recovery.	CLUDING	ADDITIVE	nole pressure 2400 psi
18) Estimated rese 19) MAXIMUM I 20) DETAILED II bactericides, and other 21) FILTERS (IF- 22) SPECIFICAT	ervoir fract PROPOSE DENTIFIC her chemicals ANY) <u>ca</u> IONS FOI	ture press ED INJEC CATION as needed artridge filte R CATH	SUTE 265 CTION O OF MAJ to maintain v rs ODIC PR	50 PERATI TERIAL vater qualit	S TO BE I y and Improve	oil recovery.	CLUDING	ADDITIVE	And Papartment (
<ol> <li>Estimated rese</li> <li>MAXIMUM I</li> <li>DETAILED II bactericides, and oth</li> <li>FILTERS (IF-</li> <li>SPECIFICAT</li> <li>CASING AND</li> </ol>	ervoir fract PROPOSE DENTIFIC her chemicals ANY) <u>ca</u> IONS FOI	ture press D INJEC CATION as needed artridge filte R CATH PROGRAM	Sure 265 CTION O. OF MAJ to maintain v rs ODIC PR	50 PERATI TERIAL vater qualit	S TO BE I y and Improve	OTHER COR	ROSION	ADDITIVE	And Papartment (
18) Estimated reso 19) MAXIMUM I 20) DETAILED II bactericides, and other 21) FILTERS (IF- 22) SPECIFICAT	ervoir fract PROPOSE DENTIFIC her chemicals ANY) <u>ca</u> IONS FOI	ture press D INJEC CATION as needed artridge filte R CATH PROGRAM	SUTE 265 CTION O OF MAJ to maintain v rs ODIC PR	50 PERATI TERIAL vater qualit	S TO BE I y and Improve	oil recovery.	ROSION	ADDITIVE	S Fresh water, Produced water, RECEIVED Office of Oil and Ge
<ol> <li>Estimated resc</li> <li>MAXIMUM I</li> <li>DETAILED II bactericides, and otility</li> <li>FILTERS (IF- 22) SPECIFICAT</li> <li>CASING AND CASING OR TUBING TYPE</li> </ol>	ervoir fract PROPOSE DENTIFIC her chemicals ANY) IONS FOI TUBING P	ture press D INJEC CATION as needed artridge filte R CATH ROGRAN SP Grade	Sure 266 CTION O. OF MAJ to meintain v rs ODIC PR M ECIFICATI Weight per ft.	OPERATI TERIAL Nater qualit	y and improve	OTHER COR	ROSION C	ADDITIVE CONTROL CEMENT FILL-UP OR SACKS	And Papartment (
<ol> <li>Estimated reso</li> <li>MAXIMUM I</li> <li>DETAILED II bactericides, and otility</li> <li>FILTERS (IF- 22) SPECIFICAT</li> <li>CASING AND CASING OR TUBING TYPE</li> <li>Conductor</li> </ol>	ervoir fract PROPOSE DENTIFIC her chemicals ANY) IONS FOI TUBING P Size 11 5/8"	ture press D INJEC CATION as needed artridge filte R CATH ROGRAN SP Grade	Sure 266 CTION O. OF MAD to meintain v rs ODIC PR M BCIFICATI Weight per ft. NA	00 PERATI TERIAL vater qualit OTECI	S TO BE I y and improve	OTHER COR FOOTAGE IN For Drilling	ROSION C STERVALS Left In Well	ADDITIVE CONTROL CEMENT FILL-UP OR SACKS	Adde pressure 2400 psi S Presh water, Produced water, RECEIVED Office of Oil and Gr JAN 2.8 2022 WV Department of Enviger States and Protect
<ul> <li>18) Estimated rese</li> <li>19) MAXIMUM I</li> <li>20) DETAILED II</li> <li>bactericides, and otilization</li> <li>21) FILTERS (IF-</li> <li>22) SPECIFICAT</li> <li>23) CASING AND</li> <li>CASING OR</li> <li>TUBING TYPE</li> <li>Conductor</li> <li>Fresh Water</li> </ul>	ervoir fract PROPOSE DENTIFIC her chemicals ANY) IONS FOI TUBING P	ture press D INJEC CATION as needed artridge filte R CATH ROGRAN SP Grade	Sure 266 CTION O. OF MAJ to meintain v rs ODIC PR M ECIFICATI Weight per ft.	OPERATI TERIAL Nater qualit	y and improve	OTHER COR FOOTAGE IN FOOTAGE IN For Drilling	ROSION C CTERVALS Left In Well 30'	ADDITIVE CONTROL CEMENT FILL-UP OR SACKS (CU. FT.)	Nole pressure     2400 psi       S     Fresh water, Produced water, RECEIVED       Office of Oil and Gr       JAN 28 2022       WV Department of Environment of Environment of       Kinds
<ul> <li>18) Estimated rese</li> <li>19) MAXIMUM I</li> <li>20) DETAILED II</li> <li>bactericides, and ott</li> <li>21) FILTERS (IF-</li> <li>22) SPECIFICAT</li> <li>23) CASING AND</li> <li>CASING OR</li> <li>TUBING TYPE</li> </ul> Conductor Fresh Water Coal	ervoir fract PROPOSE DENTIFIC her chemicals ANY) IONS FOI TUBING P Size 11 5/8"	ture press D INJEC CATION as needed artridge filte R CATH ROGRAN SP Grade	Sure 266 CTION O. OF MAD to meintain v rs ODIC PR M BCIFICATI Weight per ft. NA	00 PERATI TERIAL vater qualit OTECI	y and improve	OTHER COR FOOTAGE IN FOOTAGE IN For Drilling	ROSION C CTERVALS Left In Well 30'	ADDITIVE CONTROL CEMENT FILL-UP OR SACKS (CU. FT.)	Note pressure     2400 psi       S     Fresh water, Produced water, RECEIVED       Office of Oil and Gr       JAN 28 2022       WV Department of Environments       Kinds       Tension
<ul> <li>18) Estimated rese</li> <li>19) MAXIMUM I</li> <li>20) DETAILED II</li> <li>bactericides, and oti</li> <li>21) FILTERS (IF-</li> <li>22) SPECIFICAT</li> <li>23) CASING AND</li> <li>CASING OR</li> <li>TUBING TYPE</li> </ul> Conductor Fresh Water Coal Intermediate	ervoir fract PROPOSE DENTIFIC her chemicals ANY) <u>Ca</u> IONS FOI TUBING P Size 11 5/8" 7"	ture press D INJEC CATION as needed artridge filte R CATH ROGRAN Grade LS LS	sure 266 CTION O. OF MAJ to maintain v rs ODIC PR M BCIFICATI Weight per ft. NA 17	50 PERATI TERIAL vater qualit OTECI	y and improve	OTHER COR FOOTAGE IN FOOTAGE IN For Drilling	ROSION C CTERVALS Left In Well 30'	ADDITIVE CONTROL CEMENT FILL-UP OR SACKS (CU. FT.)	Kinds     Kinds
<ul> <li>18) Estimated rese</li> <li>19) MAXIMUM I</li> <li>20) DETAILED II</li> <li>bactericides, and otter</li> <li>21) FILTERS (IF-</li> <li>22) SPECIFICAT</li> <li>23) CASING AND</li> <li>CASING OR</li> <li>TUBING TYPE</li> <li>Conductor</li> <li>Fresh Water</li> <li>Coal</li> <li>Intermediate</li> <li>Production</li> </ul>	ervoir fract PROPOSE DENTIFIC her chemicals ANY) <u>Ca</u> IONS FOI TUBING P Size 11 5/8" 7" 4 1/2"	ture press D INJEC CATION as needed artridge filte R CATH ROGRAN Grade LS LS J-55	sure 260 CTION O. OF MAJ to maintain v rs ODIC PR M BCIFICATI Weight per ft. NA 17 10.5	50 PERATI TERIAL Vater qualit OTECI	y and improve	OTHER COR FOOTAGE IN For Drilling 30' 507'	ROSION O TERVALS Left In Well 30' 507'	ADDITIVE CONTROL CEMENT FILL-UP OR SACKS (CU. FT.) CTS	All of the second states       2400 psi         S       Fresh water, Produced water, Produced water, Produced water, Produced water, Produced water, Produced states         JAN 2 8 2022         WV Department of Environment of Environment of Environment of Environment of Sizes         Sizes         2 3/8" × 4"
18) Estimated rese 19) MAXIMUM I 20) DETAILED II bactericides, and other 21) FILTERS (IF- 22) SPECIFICAT 23) CASING AND CASING OR TUBING TYPE Conductor Fresh Water Coal Intermediate Production Tubing	ervoir fract PROPOSE DENTIFIC her chemicals ANY) <u>Ca</u> IONS FOI TUBING P Size 11 5/8" 7"	ture press D INJEC CATION as needed artridge filte R CATH ROGRAN Grade LS LS	sure 266 CTION O. OF MAJ to maintain v rs ODIC PR M BCIFICATI Weight per ft. NA 17	50 PERATI TERIAL vater qualit OTECI	y and improve	OTHER COR FOOTAGE IN For Drilling 30' 507' 2453.1'	ROSION C TERVALS Left In Well 30' 507' 2453.1'	ADDITIVE CONTROL CEMENT FILL-UP OR SACKS (CU. FT.) CTS	Nole pressure     2400 psi       S     Fresh water, Produced water, RECEIVED       Office of Oil and Ge       JAN 2 8 2022       WV Department of       Environ       Kinds       Tension       Sizes       2 3/8" × 4"       Depths set
18) Estimated rese 19) MAXIMUM I 20) DETAILED II bactericides, and other 21) FILTERS (IF- 22) SPECIFICAT 23) CASING AND CASING OR TUBING TYPE Conductor Fresh Water Coal Intermediate Production Tubing	ervoir fract PROPOSE DENTIFIC her chemicals ANY) <u>Ca</u> IONS FOI TUBING P Size 11 5/8" 7" 4 1/2"	ture press D INJEC CATION as needed artridge filte R CATH ROGRAN Grade LS LS J-55	sure 260 CTION O. OF MAJ to maintain v rs ODIC PR M BCIFICATI Weight per ft. NA 17 10.5	50 PERATI TERIAL Vater qualit OTECI	y and improve	OTHER COR FOOTAGE IN For Drilling 30' 507' 2453.1'	ROSION C TERVALS Left In Well 30' 507' 2453.1'	ADDITIVE CONTROL CEMENT FILL-UP OR SACKS (CU. FT.) CTS	Kinds     23/6" × 4"
18) Estimated rese 19) MAXIMUM I 20) DETAILED II bactericides, and other 21) FILTERS (IF- 22) SPECIFICAT 23) CASING AND CASING OR TUBING TYPE Conductor Fresh Water Coal Intermediate Production Tubing	ervoir fract PROPOSE DENTIFIC her chemicals ANY) <u>Ca</u> IONS FOI TUBING P Size 11 5/8" 7" 4 1/2"	ture press D INJEC CATION as needed artridge filte R CATH ROGRAN Grade LS LS J-55	sure 260 CTION O. OF MAJ to maintain v rs ODIC PR M BCIFICATI Weight per ft. NA 17 10.5	50 PERATI TERIAL Vater qualit OTECI	y and improve	OTHER COR FOOTAGE IN For Drilling 30' 507' 2453.1'	ROSION C TERVALS Left In Well 30' 507' 2453.1'	ADDITIVE CONTROL CEMENT FILL-UP OR SACKS (CU. FT.) CTS	Kinds     23/5" × 4"       Depths set     2075"
18) Estimated rese 19) MAXIMUM I 20) DETAILED II bactericides, and ott 21) FILTERS (IF- 22) SPECIFICAT 23) CASING AND CASING OR TUBING TYPE Conductor Fresh Water Coal	ervoir fract PROPOSE DENTIFIC her chemicals ANY) <u>Ca</u> IONS FOI TUBING P Size 11 5/8" 7" 4 1/2"	ture press D INJEC CATION as needed artridge filte R CATH ROGRAN Grade LS LS J-55	sure 260 CTION O. OF MAJ to maintain v rs ODIC PR M BCIFICATI Weight per ft. NA 17 10.5	50 PERATI TERIAL Vater qualit OTECI	y and improve	OTHER COR FOOTAGE IN For Drilling 30' 507' 2453.1'	ROSION C TERVALS Left In Well 30' 507' 2453.1'	ADDITIVE CONTROL CEMENT FILL-UP OR SACKS (CU. FT.) CTS	Kinds     23/6" × 4"       Depths set     2076'
18) Estimated rese 19) MAXIMUM I 20) DETAILED II bactericides, and other 21) FILTERS (IF- 22) SPECIFICAT 23) CASING AND CASING OR TUBING TYPE Conductor Fresh Water Coal Intermediate Production Tubing	ervoir fract PROPOSE DENTIFIC her chemicals ANY) <u>Ca</u> IONS FOI TUBING P Size 11 5/8" 7" 4 1/2" 2 3/8"	ture press ED INJEC CATION as needed antridge filte R CATH ROGRAN SP Grade LS LS J-55 J-55 J-55	sure 266 CTION O. OF MAJ to maintain v rs ODIC PR M BCIFICATI Weight per ft. NA 17 10.5 4.6	50 PERATI TERIAL Vater qualit OTECI ONS New X X X X X X X X X X X X X X X X X X X	Vised	OTHER COR FOOTAGE IN FOOTAGE IN For Drilling 30' 507' 2453.1' 2176'	ROSION C TERVALS Left In Well 30' 507' 2453.1' 2176'	ADDITIVE CONTROL CEMENT FILL-UP OR SACKS (CU. FT.) CTS	Kinds     23/6" × 4"       Depths set     2076'

Page 1 of 4

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 47-087 04755 County ROANE	District SMITHFIELD	
API     47 - 087     04735     County     ROTAL       Quad     LOONEYVILLE 7.5'     Pad Name     FERRELL, C.B.	Field/Pool Name CLOVER	
Farm name_MAY, TIMOTHY D.	Well Number 105	
U.O. ENEDOVILO		6
Operator (as registered with the OOG)       H.G. ENERGY LLC         Address       5260 DuPONT ROAD       City	G State WV Zip 26	5101
As Drilled location NAD 83/UTM Attach an as-drilled plat, profile Top hole Northing 4,285,444 M	view, and deviation survey Easting 475,643 M	
Landing Point of Curve Northing	Easting	
Bottom Hole Northing 4,285,522 M	Easting 475,789 M	
Elevation (ft) 1,110' GL. Type of Well □New ■Exi	sting Type of Report Interim	Final
Permit Type 🚦 Deviated 🗆 Horizontal 🗆 Horizontal 6A 🗆 V	retical Depth Type 🗆 Deep	Shallow
Type of Operation □ Convert □ Deepen □ Drill □ Plug Back	Redrilling     Rework     Stimulate	
Well Type 🗆 Brine Disposal 🗆 CBM 🗆 Gas 🗆 Oil 🛔 Secondary Recov	ery 🗆 Solution Mining 🗆 Storage 🗆 Oth	er
Type of Completion ■ Single □ Multiple Fluids Produced □ Brine Drilled with □ Cable ■ Rotary Drilling Media Surface hole □ Air □ Mud □Fresh Water Inter Production hole □ Air □ Mud □ Fresh Water □ Brine Mud Type(s) and Additive(s) N/A	□Gas □NGL ■Oil □Other mediate hole □Air □Mud □Fresh Wa	ater 🗆 Brine
9/14/20 Data dilling commenced	N/A Date drilling ceased	N/A
Date permit issued9/14/20Date drilling commenced Date completion activities began9/17/20Date completion	etion activities ceased9/17/20	
S1		
Verbal plugging (Y/N) Date permission granted	Granied by	
Please note: Operator is required to submit a plugging application within 5	days of verbal permission to plug	
Exection depth(c) ft None Open mine(s		
	Nana	RECEIVED Office of Oil and Gas JAN 28 2022
	) (Y/N) depths None	JAN 28 2022
Salt water depth(s) ft 1700' Void(s) enco	) (Y/N) depths None	JAN 28 2022 WV Department of wironmental Protection

SOL

Reviewed by:

04/15/2022

WR-35											Page 2	2_of_4_
Rev. 8/23/13												
API 47- 087	04755	Farm na	m <u>e</u> M	AY, TIM	OTH	IY D.		We	ll number_		<u> </u>	
CASING STRINGS	Hole Size	Casing Size	D	epth	New Use		Grade wt/ft		Basket Depth(s)		cement circula ovide details	
Conductor	12 1/4"	11 5/8"		30'	Us	sed	1	LS			Existin	g
urface	8 3/4"	7"	5	07'	N	ew	1	LS	64'		Existin	g
Coal												
ntermediate 1												
intermediate 2												
ntermediate 3									•			
Production	6 1/4"	4 1/2"	245	53.15'	N	ew	J	-55			Existin	g
Fubing		2 3/8"	21	176'	N	ew	. J	-55				
acker type and de	pth set							•				
Comment Details	Class/Type	ks to surface on 7* su		· Slurry		·	ïeld	Volum	e	Cement	 V	VOC hrs)
DATA	of Cement	of Sacl	<u>(s</u>	wt (ppg	<u>;)</u>	(ft	<sup>3</sup> /sks)	<u>(ft.<sup>3</sup>)</u>	<u> </u>	Cop (MD)		
Conductor Surface		130	<del></del>	15.6			.18	153		Surface	E	xisting
Coal	Reg Neat			10.0			· · · · ·					
ntermediate 1	· · ·											
ntermediate 2							•					
intermediate 3										·		
Production	50:50 Pozmi	x 100/12	25	13.2/14	.2	1.6	4/1.27	164/18	36	66'	E	Existing
Tubing				· · · · · · · · · · · · · · · · · · ·								
Drillers TD (ft Deepest forma Plug back pro	tion penetrated	Big injun		·			D (ft) <u>251</u> to (ft) <u>№</u>					
Kick off depth	(ft) <u>600'</u>											
Check all wire	line logs run	□ caliper □ neutron		ensity esistivity			ed/directi a ray	C	induction temperati	ıre ⊡s	onic	·
Well cored	Yes 🖥 No	Conventi	onal	Sidew	vall		·W	ere cuttin	gs collecte	ed ∎Yes	⊡ No	ï
DESCRIBE T	HE CENTRALI from bottom on 4 1/2", Centra	ZER PLACEM	ENT U	JSED FOR	R EA							
										<u> </u>		
WAS WELL (	COMPLETED A	AS SHOT HOL	E 0	Yes 🖪	No	DI	ETAILS	·				Cil and Ga
WAS WELL (	COMPLETED C	OPEN HOLE?	υYe	es 🛔 No	)	DET	AILS	<u> </u>				282022
WERE TRAC	ERS USED	Yes 🖹 No	TY	PE OF TR	RACI	ER(S)	USED				WV De Environme	partment o ntal Prote

JD/

04/15/2022

WR-35 Rev. 8/23/13

# Page $\frac{3}{\text{of }4}$

API 4	7- 087 _ 04755	Farm nan	MAY, TIMOT	HYD.	Well number 105	
	а н		PERFORATI	ON RECORD		
Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)	_
1	3/23/15	2288'	2296'	32	Big Injun	_
			4			_
						_
						•
			14			_
-						
			40			
						-

Please insert additional pages as applicable.

#### STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISLP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
1	3/26/15	5	551	1751	606	2,500	149	•
1	9/17/20	1.5	1098	119.4	1043		10	2500 gals HCL
		1						
			1	1				
-								
							*	
1						1		1
			1					
			<u>}</u>					
								RECEIVED
			-		*			ffice of Oil and Gas
	14		1.2					JAN 28 2022

Please insert additional pages as applicable.

WV Department of Environmental Protection

04/15/2022

## WR-35

Page 4 of 4

PRODUCING	FORMATION(	5)	DEPTHS								
Verse Street			2133'- 2166'	TVD 2	270'- 2308'	MD					
Big Injun	0		2100 2100								
											Ξ.
										•	
						_					
Please insert ad	ditional pages a	s applicable.									
GAS TEST	Build up	Drawdown	Open Flow	0	IL TEST D	Flow D	Pump				
	SSURE Surf							F TEST	_	hrs	
					Vater						
OPEN FLOW	Gas	On	NGL bpd	hnd	hpd	GASIN	nated	D Orifi	ce 🗆	Pilot	
	IIICI	pu		_ opu	opd	Li Liuti	introd				
TTUOLOGY	TOP	BOTTOM	TOP	BOTTOM							
LITHOLOGY/ FORMATION	DEPTH IN FT		DEPTH IN FT		DESCRIBE	ROCK TY	PEAND	RECORD	QUANT	ITYAND	
OXMATION	NAME TVD	TVD	MD	MD						AS, H2S, ET	C)
Sand/Shale	0	1294	0	1314							
Sand	1294	1494	1314	1533					_		
Shale	1494	1538	1533	1568		4					
Sand	1538	1566	1568	1612				_			
Shale	1566	1682	1612	1744							
Sand	1682	1992	1744	2104				-			_
Little Lime	1992	2032	2104	2150			-				
Pencil Cave	2032	2034	2150	2154	_						
Big Lime	2034	2118	2154	2250							_
Keener	2118	2133	2250	2270		1.5721.5P	or a state		A Callon"		
Big Injun	2133	2166	2270	2308		Drilled dired	ctional N	59°Ead	istance	of 615'	-
Shale	2166	2348	2308	2510							
TD	2348		2510			P.					-
Places incert ad	ditional pages a	sannlicable									
					m					4	
Drilling Contra	ctor Decker Dril	ling		10-21					5794		
Address 11565	State Route 676		City	Vincent		State	OH	_Zip_4	0104		-
Logging Com-	any Weatherford	International			4		-				
Address 777 No	rth River Avenue		City	Weston		State	wv	_Zip_2	6452		
							-				
Cementing Con	npany Universa	Services					1007		0004	4	
Address Hall Rd			City	Buckhannon		State	WV	_Zip_2	0201		-
Stimulating Co	mnany Produc	ers Service Co	rp.								
Address 109 So	uth Graham Street		City	Zanesville		State	OH	Zip 4	3701	RECEIV	ED.
	ditional pages a		Ony			Duto			Of	fice of Oll a	and (
										JAN 28	202
Completed by	Roger Heldman			.*	Telephone	304-420	-1107				
Signature	Ka M.	lana	Title O	perations Mana	iger		Date 1	1/3/20	Envi	MV Departr ronmental	Prot
1	0 NO								Envi	ronnenta	caron

FORM WW-3 (A) 1/12



<ol> <li>Date: January 5,</li> <li>Operator's Well</li> </ol>		CBFe	rrell 105	1	
3) API Well No.:	47	4	087	•	04755 Permit
4) UIC Permit No.	State 2R08	700005/	County		rennn

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

## 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 22

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 <u>West Virginia Code</u>, 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 <u>deliver</u> by publication in certain circumstances) on or before the day of the mailing or delivery to the Chief. Office of Oil and Gas

The person signing this document shall make the following certification: JAN 28 2022

"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 Op Address By: Its: Signatur

Well Operator	HG Energy, LLC	WV Department of Environmental Protection
Address	5260 Dupont Road	Environmental Protectio
	Parkersburg, WV 26101	
By:	Diane White	
Its:	Agent	
Signature:	Diane White	



RECEIVED Office of Oil and Gas

JAN 2 8 2022

WV Department of Environmental Protection



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

January 5, 2022

Timothy D. May 242 Edgell Fork Spencer, FL 25276

RE: C. B. Ferrell No. 105 Smithfield District, Roane County West Virginia

Dear Landowner:

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

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

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

Very truly yours,

Diane White

Diane C. White

Enclosures

RECEIVED Office of Oil and Gas

JAN 2 8 2022

WV Department of Environmental Protection

WW-2A / 3A Surface Waiver

#### SURFACE OWNER WAIVER

County

Roane

Operator Operator well number HG Energy, LLC **CB** Ferrell 105

## 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 57<sup>th</sup> 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.
- The soil erosion and sediment control plan is not adequate or effective; 2)
- 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. RECEIVED			
		Company .	Office of Oil and	Gas	
•	Date	Name	JAN 28 20	22	
Signature		Ву		<u> </u>	
04755		its	WV Department Environmental Pro	nt of Date	
_ :		· .		·	
Print Name		Si	ignature	Date	
. · ·			JOZ	04/15/2022	

ww-9			
2/15)		API Number 47 - 087 - 0475 Operator's Well No. CB Fem	
	STATE OF N	VEST VIRGINIA	-
	DEPARTMENT OF ENVI	CONMENTAL PROTECTION	
		OIL AND GAS	
	FLUIDS/ CUTTINGS DISPO	SAL & RECLAMATION PLAN	
Operator Name HG Energ	W 11C	OP Code 494497948	
		Quadrangle Looneyville 7.5'	
Watershed (HUC 10) Rush Ru	1. 5 000 bble of swater to comple	te the proposed well work? Yes	No 🗸
Will a pit be used? Yes		·	
and the second	anticipated pit waste: NA	No 🖌 If so, what ml.?	
		No If so, what ml.?	
Proposed Disposal M	lethod For Treated Pit Wastes:	*	1997 - E.
Lar	nd Application		2 1
	derground Injection (UIC Permit	Number	
00	use (at API Number Site Disposal (Supply form WW-	-9 for disposal location)	
Oth	er (Explain No waste anticipated,	should there be any fluids they'll be hauled for o	iff site disposal
			1. Second Second
Will closed loop system be us	ed? If so, describe: No		
		1)? Air, freshwater, oil based, etc. <u>NA</u>	
	pe? Synthetic, petroleum, etc. NA		
Additives to be used in drillin		a second and a second sec	
Drill cuttings disposal method	? Leave in pit, landfill, removed o	offsite, etc. NA	
-If left in pit and plan	to solidify what medium will be	used? (cement, lime, sawdust) NA	
and the second	ame/permit number? <u>NA</u>		
			With the
Permittee shall provide writte	n notice to the Office of Oil and G	as of any load of drill cuttings or associated within 24 hours of rejection and the permitt	tee shall also disclose
West Virginia solid waste fac where it was properly dispose	d.	within 24 hours of rejeation and and promo-	مالېند، دند د
I certify that I under	stand and agree to the terms and c	onditions of the GENERAL WATER POL	LUTION PERMIT issued
torest 1 2005 by the Of	Fice of Oil and Gas of the West Vir	ginia Department of Environmental Protec	non. I understand mat the
provisions of the permit are of	inforceable by law. Violations of	any term or condition of the general perm	nt and/or other applicable
1 an enlation ann load to a	enforcement action		
I certify under pena	lty of law that I have personally	examined and am familiar with the infor	mation submitted on tins
application form and all att	achments thereto and that, based	on my inquiry of those individuals im	that there are significant
obtaining the information, I	believe that the information is fr	rue, accurate, and complete. I am aware	
penalties for submitting false	information, including the possibil	ity of fine or imprisonment.	Office of Oil and Gas
Company Official Signature_	giane White		Office of Oil and Gas
Company Official (Typed Na			AN 28 2022
	ent		WV-Department of
Company Official Title Ag			Environmental Protecti
Subscribed and sworn before	me this 5th day of Ja	nuary , 20 22	OFFICIAL SEAL

Subscribed and sworn before me this 5th day of January , 20 22 Mot APY Public State OF WEST VIGINIA Mark J Schall Mark J S

Form WW-9	Fo	rm	W	W	-9	)
-----------	----	----	---	---	----	---

## Operator's Well No. CB Ferrell 105

110	E	110
HG	Energy,	LLU

osed Revegetation Treatment: A	pres Disturbed 0.1	Prevegetation pH	
Lime <u>3</u> Tor	s/acre or to correct to pH6.5		
Fertilizer type 10-20-20			
Fertilizer amount	500 Ibs/acre		
Mulch Straw	2 Tons/acre		

### Seed Mixtures

Te	emporary		Per	manent
Seed Type Tall Fescue	lbs/acre 40		Seed Type Tall Fescue	lbs/acre 40
Ladino Clover	5	•	Ladino Clover	5

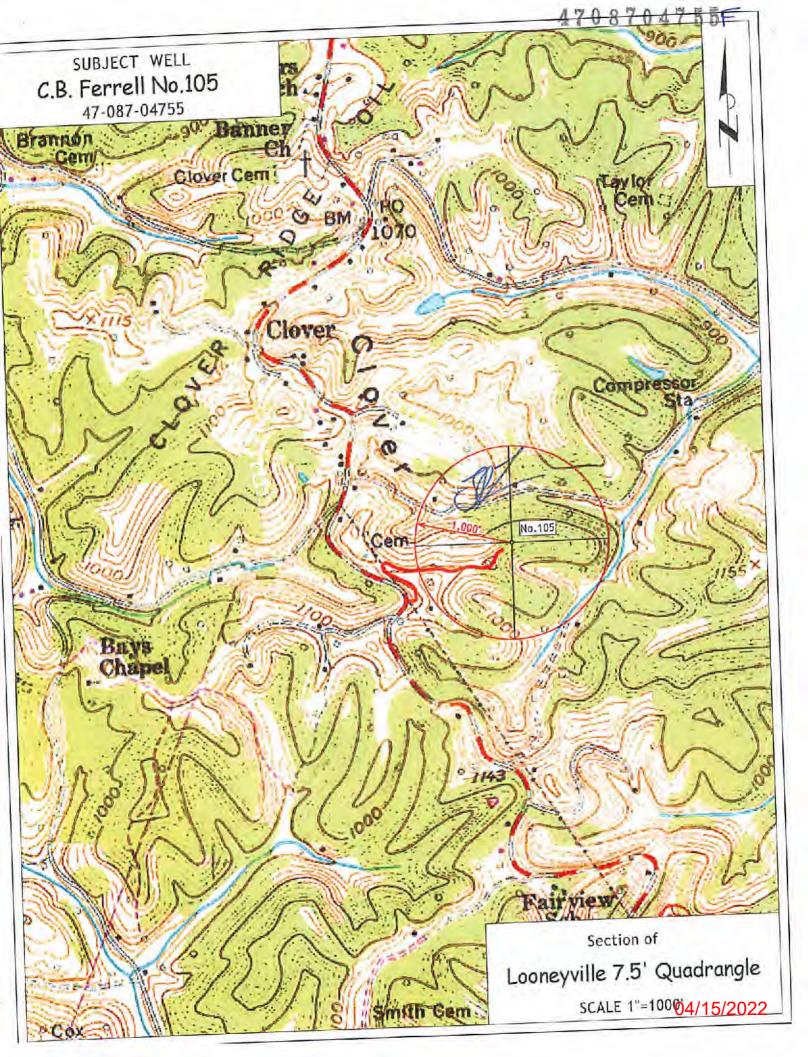
\*\* Sediment Control Plan will be in effect at all times \*\*

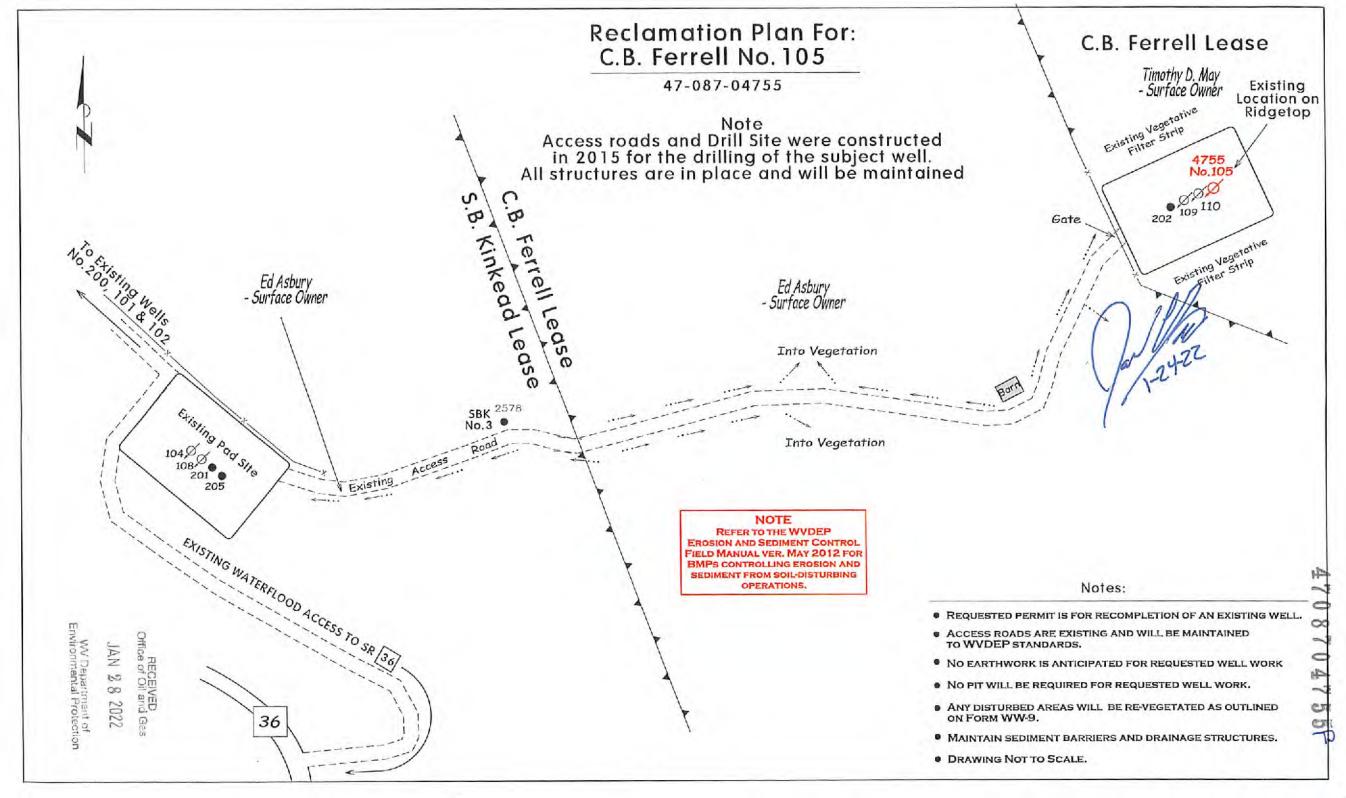
Attach:

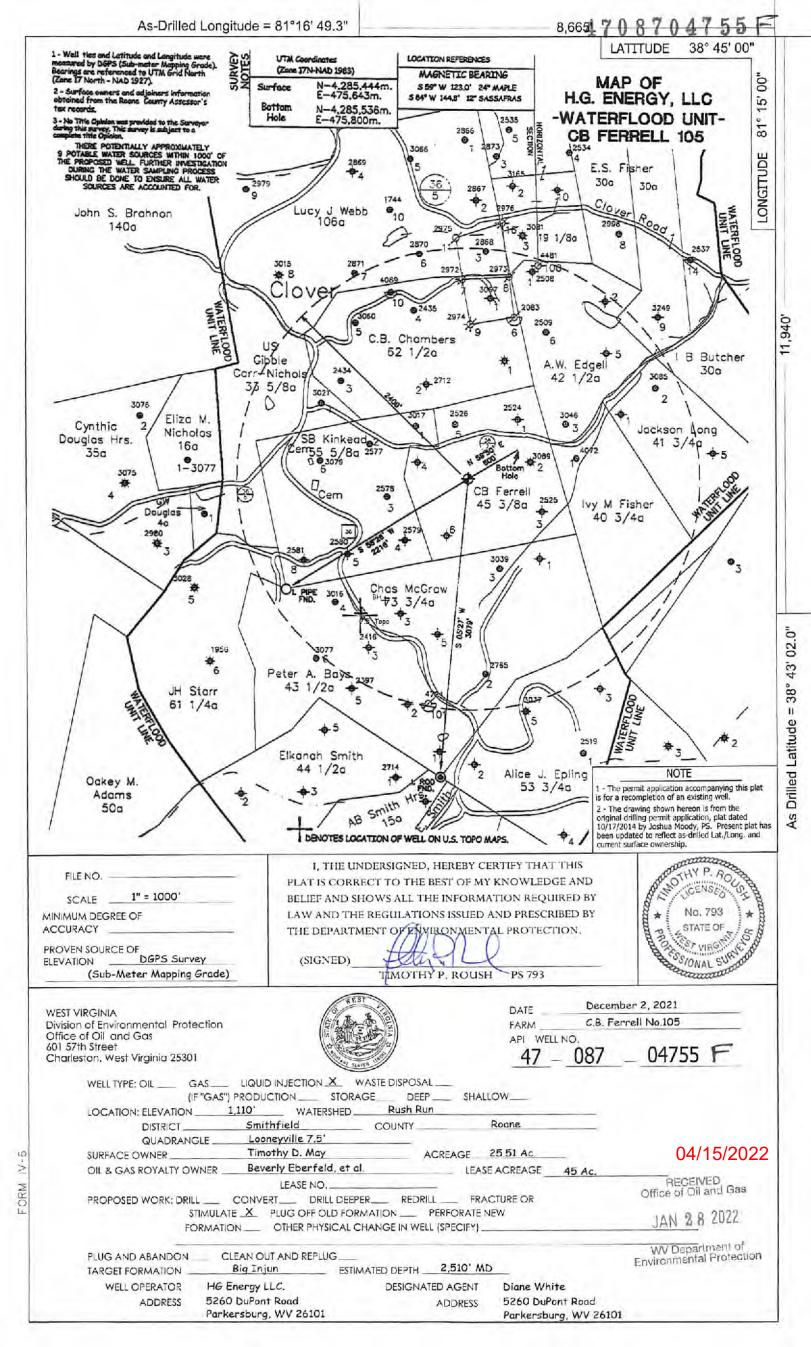
Drawing(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided)

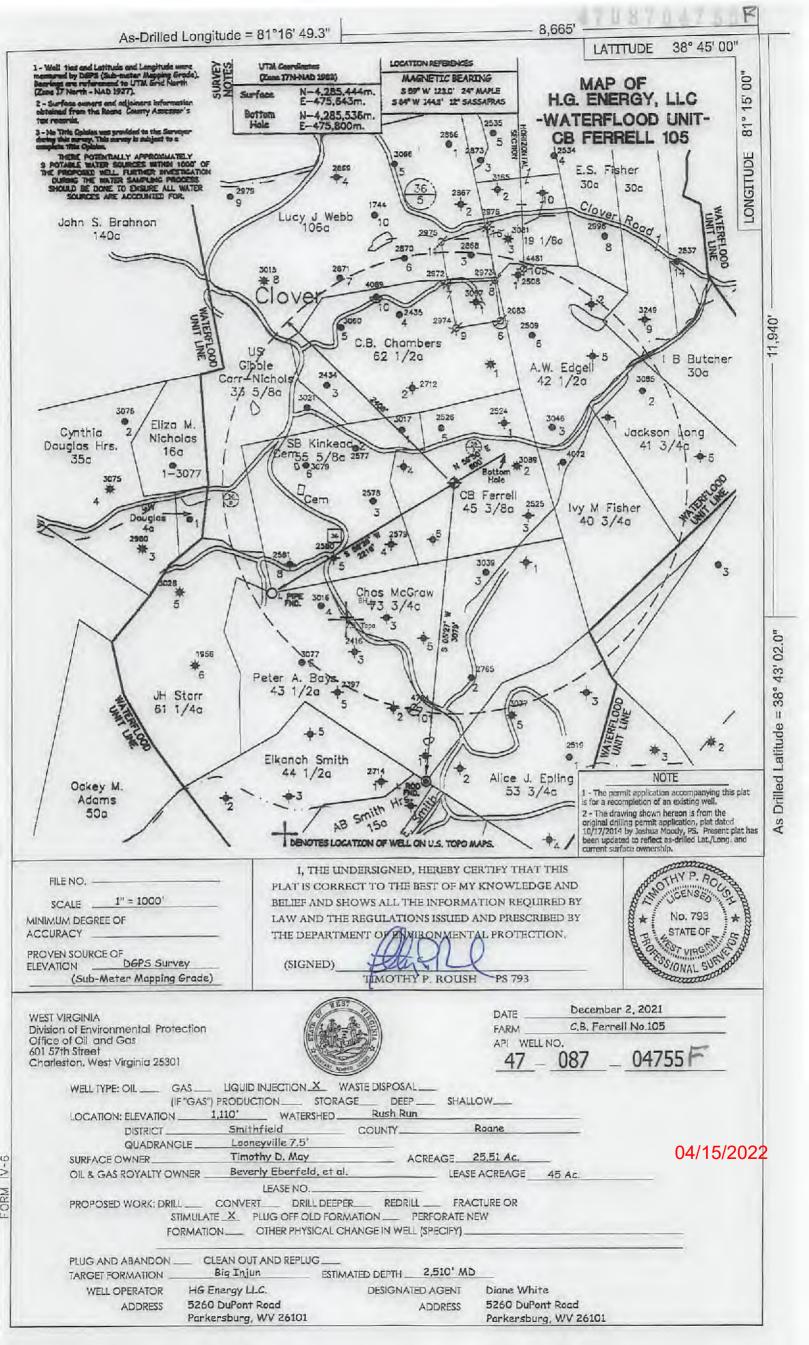
Photocopied section of involved 7.5' topographic sheet.

• •	
Plan Approved by: Se Taylor Addis	)
Comments:	
And the second sec	
	RECEIVED Office of Oil and Gas
	Office of Oil and Gas
Title: COC Tropade Date: 1-24-2	JAN 28 2022
Title: Ces propert	
Field Reviewed? () No	WV Department of Environmental Protection











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

January 5, 2022

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

RECEIVED Office of Oil and Gas

JAN 28 2022

WV Department of Environmental Protection

RE: C. B. Ferrell No. 105 (API 47-087-04755) 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 an 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 D. May – Certified Joe Taylor – Inspector CK 5192 Amts 550 Date 1/19/22



Stansberry, Wade A <wade.a.stansberry@wv.gov>

### Re-Work/Fracture Vertical Well Work Permit (API: 47-087-04747 & 04755)

1 message

 Stansberry, Wade A <wade.a.stansberry@wv.gov>
 Tue, Apr 12, 2022 at 7:51 AM

 To: Diane White <dwhite@hgenergyllc.com>, "Taylor, Joseph D" <joseph.d.taylor@wv.gov>, Emily Westfall <ewestfall@wvassessor.com>

I have attached a copy of the newly issued well permit number. This will serve as your copy.

#### 47-087-04747 - CARR-NICHOLS 102 47-087-04755 - C B FERRELL 105

If you have any questions, then please contact us here at the Office of Oil and Gas.

Thank you,

Wade A. Stansberry

**Environmental Resource Specialist 3** 

West Virginia Department of Environmental Protection

Office of Oil & Gas

601 57th St. SE

Charleston, WV 25304

(304) 926-0499 ext. 41115

(304) 926-0452 fax

Wade.A.Stansberry@wv.gov

4 attachments

- ₩ 47-087-04755 Copy.pdf 1882K
- ₱ 47-087-04747 Copy.pdf 1976K
- Page 18:26 Blank.pdf 169K
- IR-26 Blank.pdf 169K