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west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Monday, January 4, 2021  
WELL WORK PERMIT  
Vertical / Re-Work

FQ ENERGY SERVICES, LLC  
PO BOX 634  
JANE LEW, WV 26378

Re: Permit approval for RITCHIE HUNTER 2 (W-1652)  
47-085-10142-00-00

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: RITCHIE HUNTER 2 (W-1652)  
Farm Name: MASON, PEARL EVERETT & I  
U.S. WELL NUMBER: 47-085-10142-00-00  
Vertical Re-Work  
Date Issued: 1/4/2021

## 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.

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### CONDITIONS

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1. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
2. 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.
3. Well work activities shall not constitute a hazard to the safety of persons.

FORM WW-3 (B)  
1/12



1) Date: 11/25/2020  
2) Operator's Well No. Ritchie Hunter 2 (W-1652)  
3) API Well No.: 47 - 085 - 10142  
State County Permit  
4) UIC Permit No. 2D08510142

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: 1,021 feet Watershed: Huskers Run and Bond Creek  
District: Grant County Ritchie Quadrangle Ellenboro  
7) WELL OPERATOR: FQ Energy Services, LLC 8) DESIGNATED AGENT Douglas Gabbert Sr.  
Address P.O. Box 634 Address 2 South Heights  
Jane Lew, WV 26378 Parkersburg, WV 26101  
9) OIL & GAS INSPECTOR TO BE NOTIFIED 10) DRILLING CONTRACTOR  
Name Michael Goff Name N/A  
Address 1723 Auburn Road Address  
Pullman, WV 26421

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 Oriskany Sandstone Depth 6,294 Feet (top) to 6,360 Feet (bottom)

13) Estimated Depth of Completed Well, (or actual depth of existing well): 6,447 Feet

14) Approximate water strata depths: Fresh 175 Feet Salt 1,000 Feet

15) Approximate coal seam depths: N/A - No coal mining in the area

16) Is coal being mined in the area? Yes No

17) Virgin reservoir pressure in target formation 1,400 psig Source Drilling and Completion Work

18) Estimated reservoir fracture pressure 2,940 psig (BHFP)

19) MAXIMUM PROPOSED INJECTION OPERATIONS: Volume per hour 210 barrels Bottom hole pressure 5,035 psig

20) DETAILED IDENTIFICATION OF MATERIALS TO BE INJECTED, INCLUDING ADDITIVES Injection well will be treated with 2,500 gallons of  
28% hydrochloric acid, approximately 200 barrels of brine, and corrosion and scale inhibitors to stimulate the lower perforations in the Oriskany Sandstone that are plugged. See attached proposed stimulation procedure.

21) FILTERS (IF ANY) Bag and cartridge filters are used at the injection pumps

22) SPECIFICATIONS FOR CATHODIC PROTECTION AND OTHER CORROSION CONTROL

Pipelines are supported, wrapped, and coated to reduce corrosion

23) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILL -UP OR SACKS (CU. FT.)	PACKERS
	Size	Grade	Weight per ft.	New	Used	For Drilling	Left In Well		
Conductor	13-3/8"	R-3	48#	X		35'	35'	CTS	Kinds
Fresh Water	9-5/8"	R-3	26#	X		330'	330'	CTS	Baker Hughes A2 Double Lokset
Coal									Sizes
Intermediate	7"	R-3	17#	X		2,130'	2,130'	CTS	2-7/8" x 4-1/2"
Production	4-1/2"	N-80	11.6#	X		6,447'	6,447'	115 sacks	Depths set
Tubing	2-7/8"	J-55	6.5#	X		6,271'	6,271'		6,271 feet
Liners									Perforations 104
									Top Bottom
									6,294' 6,360'

24) APPLICANT'S OPERATING RIGHTS were acquired from Haight Family Trust  
by deed / lease X / other contract / dated 12/01/2010 of record in the  
Ritchie County Clerk's office in Harrisville, West Virginia Book 177 Page 635

RECEIVED  
Office of Oil and Gas

NOV 30 2020

FORM WW-3 (B)  
1/12



1) Date: 11/25/2020  
 2) Operator's Well No. Ritchie Hunter 2 (W-1652)  
 3) API Well No.: 47 - 085 - 10142  
 State County Permit  
 4) UIC Permit No. 2D08510142

**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: 1,021 feet Watershed: Huskers Run and Bond Creek  
 District: Grant County: Ritchie Quadrangle: Ellenboro  
 7) WELL OPERATOR: FQ Energy Services, LLC 8) DESIGNATED AGENT: Douglas Gabbert Sr.  
 Address: P.O. Box 634 Address: 2 South Heights  
Jane Lew, WV 26378 Parkersburg, WV 26101  
 9) OIL & GAS INSPECTOR TO BE NOTIFIED 10) DRILLING CONTRACTOR  
 Name: Michael Goff Name: N/A  
 Address: 1723 Auburn Road Address: \_\_\_\_\_  
Pullman, WV 26421

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 Oriskany Sandstone Depth 6,294 Feet (top) to 6,360 Feet (bottom)  
 13) Estimated Depth of Completed Well, (or actual depth of existing well): 6,447 Feet  
 14) Approximate water strata depths: Fresh 175 Feet Salt 1,000 Feet  
 15) Approximate coal seam depths: N/A - No coal mining in the area  
 16) Is coal being mined in the area? Yes  No   
 17) Virgin reservoir pressure in target formation 1,400 psig Source Drilling and Completion Work  
 18) Estimated reservoir fracture pressure 2,940 psig (BHFP)  
 19) MAXIMUM PROPOSED INJECTION OPERATIONS: Volume per hour 210 barrels Bottom hole pressure 5,035 psig

20) DETAILED IDENTIFICATION OF MATERIALS TO BE INJECTED, INCLUDING ADDITIVES injection well will be treated with 2,306 gallons of 28% hydrochloric acid, approximately 200 barrels of brine, and corrosion and scale inhibitors to stimulate the lower perforations in the Oriskany Sandstone that are plugged. See attached proposed stimulation procedure.

21) FILTERS (IF ANY) Bag and cartridge filters are used at the injection pumps  
 22) SPECIFICATIONS FOR CATHODIC PROTECTION AND OTHER CORROSION CONTROL  
Pipelines are supported, wrapped, and coated to reduce corrosion

23) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILL -UP OR SACKS (CU. FT.)	PACKERS
	Size	Grade	Weight per ft.	New	Used	For Drilling	Left In Well		
Conductor	13-3/8"	R-3	48#	X		35'	35'	CTS	Kinds
Fresh Water	9-5/8"	R-3	26#	X		330'	330'	CTS	Baker Hughes A2 Double Lokset
Coal									Sizes
Intermediate	7"	R-3	17#	X		2,130'	2,130'	CTS	2-7/8" x 4-1/2"
Production	4-1/2"	N-80	11.6#	X		6,447'	6,447'	115 sacks	Depths set
Tubing	2-7/8"	J-55	6.5#	X		6,271'	6,271'		6,271 feet
Liners									Perforations <u>104</u>
									Top Bottom
									6,294' 6,360'

24) APPLICANT'S OPERATING RIGHTS were acquired from Haught Family Trust  
 by deed \_\_\_\_\_ / lease X / other contract \_\_\_\_\_ dated 12/01/2010 of record in the  
Ritchie County Clerk's office in Harrisville, West Virginia Book 177 Page 835

12-30-2020  
Douglas Newsham





Mason W-1652  
API # 47-085-10142

Formation	Top	Bottom	Remarks
Red Rock & Shale	0	604	
Sand	604	639	
Red Rock	639	719	
Sand	719	739	
Red Rock	739	794	
Slate	794	874	
Dunkard Sand	874	884	
Slate & Shells	884	1264	
Gas Sand	1264	1374	
Slate	1374	1442	
1st Salt Sand	1442	1502	
Shale	1502	1538	
2nd Salt Sand	1538	1556	
Shale	1556	1584	
3rd Salt Sand	1584	1694	
Slate	1694	1780	
Maxon Sand	1780	1819	
Shale	1819	1889	
Little lime	1889	1914	
Pencil Cave	1914	1918	
Big Lime	1918	2016	
Big Injun Sand	2016	2076	
Slate Break	2076	2080	
Squaw Sand	2080	2094	
Slate & Shells	2094	2358	
Coffee Shale	2358	2392	
Berea Sand	2392	2396	
Slate & Shells	2396	2512	
Sand	2512	2524	
Slate & Shells	2524	2784	
Sand	2784	2796	
Slate & Shells	2796	4428	
Benson Sand	4428	4454	
Slate & Shells	4454	4949	
Alexander Sand	4949	4960	
Slate & Shells	4960	5358	
Sand	5358	5378	
Slate & Shells	5378	6008	
Hamilton Shale	6008	6032	
Tully Lime	6032	6036	
Marcellus Shale	6036	6074	
Onondaga Lime	6074	6300	
Oriskany Sand	6300	6360	
Lime	6360	6480	
TD	6480		

Received  
Office of Oil & Gas  
MAR 31 2019

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

RECEIVED  
Office of Oil and Gas  
JUN 12 2015  
*Correction JIC*

WV Department of  
Environmental Protection

API 47-085-10142 County Ritchie District Grant  
Quad Ellenboro Pad Name Mason Field/Pool Name N/A  
Farm name Nathanael Mason & Pearl Everett Mason Well Number W-1652  
Operator (as registered with the OOG) Haight Energy Corporation  
Address 12864 Staunton TPKE City Smithville State WV Zip 26178

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing 4345259.46 Easting 491589.29  
Landing Point of Curve Northing NA Easting NA  
Bottom Hole Northing NA Easting NA

Elevation (ft) 1021' 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)  
NA

Date permit issued 09/26/2014 Date drilling commenced 01/19/2015 Date drilling ceased 01/26/2015  
Date completion activities began 2/4/2015 Date completion activities ceased 3/24/2015  
Verbal plugging (Y/N) NA Date permission granted NA Granted by NA

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

Freshwater depth(s) ft 175 Open mine(s) (Y/N) depths N  
Salt water depth(s) ft None Void(s) encountered (Y/N) depths N  
Coal depth(s) ft None Cavern(s) encountered (Y/N) depths N  
Is coal being mined in area (Y/N) N

Reviewed by:  
JIC 6/12/15  
W.A.S 06/12/15



WR-35  
Rev. 8/23/13

API 47-085 - 10142 Farm name Nathanael Mason & Pearl Everett Mason Well number W-1652

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor	15"	13 3/8"	35'	New	48#	NA	Yes
Surface	12 -1/4"	9 5/8"	330'	New	26#	NA	Yes
Coal							
Intermediate 1	8 -7/8"	7"	2130	New	17#	1600	Yes
Intermediate 2							
Intermediate 3							
Production	6 -3/8"	4 1/2"	6447.3	New	11.6#	6000, 5000	No
Tubing							
Packer type and depth set							

Comment Details 115 Sacks of cement used on production string (as below) providing approximately 2,000 + feet fill up.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	Type 1/Class A	7	14.8	1.4	8.8	Surface	8
Surface	Type 1/Class A	90	14.8	1.38	124.2	Surface	8
Coal							
Intermediate 1	Type 1/Class A	300	14.8	1.4	420	Surface	8
Intermediate 2							
Intermediate 3							
Production	Strong Lite 150	115	13.1	1.94	223.1	4,450'	24
Tubing							

Drillers TD (ft) 6,480' Loggers TD (ft) 6,480'

Deepest formation penetrated Oriskany Plug back to (ft) NA

Plug back procedure NA

Kick off depth (ft) NA

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 \_\_\_\_\_

Centralizers were used on Fresh water, Intermediate and Production strings as necessary to ensure a centered up casing string for optimal cement circulation and setting.

WAS WELL COMPLETED AS SHOT HOLE  Yes  No DETAILS \_\_\_\_\_

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Office of Oil & Gas  
MAR 31 2015

WAS WELL COMPLETED OPEN HOLE?  Yes  No DETAILS \_\_\_\_\_

WERE TRACERS USED  Yes  No TYPE OF TRACER(S) USED \_\_\_\_\_

**PROPOSED ACID STIMULATION PROCEDURE FOR THE RITCHIE HUNTER #2  
CLASS II INJECTION WELL**

Contact Producers Services Corporation (Producer Services) in Zanesville, Ohio and schedule them to perform the acid stimulation on the Ritchie Hunter #2 injection well. Additionally, FQ Energy Services, LLC (FQ Energy) will have approximately 500 barrels of production brine on location in a frac tank and use vacuum trucks to provide any extra fluid if needed for the acid job and for a step-rate injectivity test after opening up the lower perforations that are plugged off in the Oriskany Sandstone. West Virginia Department of Environmental Protection (WV DEP), Office of Oil and Gas and the Oil and Gas Inspector for Ritchie County, Michael Goff, will be notified well in advance of the pending acid stimulation after the well workover permit has been issued by WV DEP.

**Proposed Acid Stimulation Procedure**

- Producers Services arrives onsite with monitoring van, pump truck, and acid truck. FQ Energy's vacuum trucks will also be onsite for supplying brine for the stimulation and step-rate injectivity testing. A 500-barrel frac tank will be filled with production brine for step-rate testing.
- Hold Job Safety Analysis (JSA) prior to commencement of operations.
- Plumb up Producers Services to wellhead and connect lines to vacuum trucks for brine usage.
- Pressure test lines for leakage. If no issues, proceed with commencement of acid stimulation.
- Initially, start pumping brine at a low rate of one barrel per minute (bpm) and into the perforations from 6,294 to 6,332 feet (76 shots) in the upper section of the Oriskany Sandstone. Pump a total of three barrels of brine and then start acid displacement.
- Start in with 2,500 gallons of 28% hydrochloric acid (HCL) and additives to stabilize and inhibit corrosion from the acid at a rate of two barrels per minute into the lower perforations in the Oriskany Sandstone from 6,346 to 6,360 feet (28 shots), which are plugged off. Displacement for HCL acid to reach the top of the perforations is approximately 47.52 barrels.
- As acid reaches the top of the perforations, increase pumping rate to three bpm or higher if necessary, to open the lower perforations and displace the acid into the formation. Anticipated maximum injection pressure needed for the acid stimulation is approximately 2,100 psig.
- After total displacement of the HCL acid into the perforations, shut down and start recording pressures - instantaneous shut-in pressure (ISIP), and then continue recording shut-in pressures for 5 minutes, 10 minutes, 15 minutes, and then finally after 30 minutes since shut down.

Office of Oil and Gas

NOV 30 2020

WV Department of  
Environmental Protection

- After acid treatment, prepare to do step-rate test and perform step-rate test in accordance with other procedure.
- Shut well in, disconnect hoses and lines then demobilize Producers Services and FQ Energy vacuum trucks.
- Hook up well and start injection operations again.
- Copies of the acid stimulation and step-rate test will be given to the WV DEP oil and gas inspector and submitted to WV DEP, Office of Oil and Gas.

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Office of Oil and Gas  
NOV 30 2020  
WV Department of  
Environmental Protection

**PROPOSED STEP-RATE TEST PROCEDURE**  
**RITCHIE HUNTER #2 SWD (085-10142), RITCHIE CO., WV**

The previously proposed acid job will be followed by a step-rate test to assist the West Virginia DEP, Office of Oil and Gas in establishing a maximum allowable surface injection pressure for the Ritchie Hunter #2 saltwater disposal well. The acid stimulation procedure is attached. Below is the proposed procedure for the step-rate test.

**Proposed Step-Rate Testing Procedure**

- After acid job has been completed and shut-in pressures recorded, prepare for performing a step-rate test to assist in establishing a maximum allowable surface injection pressure. As soon as formation fracture (breakdown) is achieved, immediately shut down and record instantaneous shut in pressure and continue recording shut in pressure fall off for 5 minutes, 10 minutes, 15 minutes, and 30 minutes after shut down.
- Start initial pumping rate at **1 barrel per minute (bpm)** for 30 minutes or until pressures have stabilized. Anticipated total brine pumped = **30 barrels**.
- Increase pumping rate to **2 bpm** for 30 minutes or until pressures have stabilized. Anticipated total brine pumped = **60 barrels**.
- Increase pumping rate to **3 bpm** for 30 minutes or until pressures have stabilized. Anticipated total brine pumped = **90 barrels**.
- Increase pumping rate to **4 bpm** for 30 minutes or until pressures have stabilized. Anticipated total brine pumped = **120 barrels**.
- Increase pumping rate to **5 bpm** for 30 minutes or until pressures have stabilized. Anticipated total brine pumped = **150 barrels**.
- It is assumed that formation fracture (breakdown) will be achieved at this pumping rate. If it is not achieved at 5 bpm, then increase rate to **6 bpm** for 30 minutes until formation fracture (breakdown) is achieved or pressures have stabilized.
- After formation fracture (breakdown) has been accomplished, immediately shut down operations and record pressures as discussed above.
- Disconnect all hoses and lines and demobilize Producers Services and vacuum trucks.
- Get copies of all pumping services for inspector, FQ Energy Services, ALL Consulting, and WV DEP, Office of Oil and Gas.
- ALL Consulting will analyze the data and develop a log graph showing all step-rate test data and the formation fracture (breakdown) evaluation.
- WV DEP, Office of Oil and Gas allows the maximum allowable surface injection pressure to be 80% of formation fracture (breakdown) pressure.

RECEIVED  
Office of Oil and Gas  
NOV 30 2020  
WV Department of  
Environmental Protection

FORM WW-3 (A)  
1/12



1) Date: November 25, 2020  
2) Operator's Well No. Ritchie Hunter 2 (W-1652)  
3) API Well No.: 47 - 085 - See Attached Surface Owners  
State County Permit  
4) UIC Permit No. 2D08510142

**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>Nathaniel and Pearl Everett Mason II</u>	Name <u>N/A</u>
Address <u>P.O. Box 235</u>	Address _____
<u>Ellenboro, WV</u>	_____
(b) Name <u>N/A</u>	7) (b) Coal Owner(S) With Declaration Of Record
Address _____	Name <u>N/A</u>
_____	Address _____
(c) Name <u>N/A</u>	Name _____
Address _____	Address _____
_____	_____
6) Inspector <u>Michael Goff</u>	7) (c) Coal Lessee with Declaration Of Record
Address <u>1723 Auburn Road</u>	Name <u>N/A</u>
<u>Pullman, WV 26421</u>	Address _____
Telephone <u>(304) 549-9823</u>	_____

**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 1/1 20 20.

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 FQ Energy Services, LLC  
Address P.O. Box 634  
Jane Lew, WV 26378  
By: David Casto  
Its: Executive Vice President

Signature: \_\_\_\_\_  
Office of Oil and Gas

NOV 30 2020

WW-2A / 3A Surface Waiver

SURFACE OWNER WAIVER

County 085

Operator  
Operator well number

FQ Energy Services, LLC  
Ritchie Hunter 2 (W-1652)

**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.
- 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.

<p>FOR EXECUTION BY A NATURAL PERSON</p> <p><u><i>[Signature]</i></u> Date <u>11/24/20</u></p> <p>Signature _____</p> <p><u>Pearl Everett Mason II</u></p> <p>Print Name _____</p>	<p>FOR EXECUTION BY A CORPORATION, ETC.</p> <p>Company Name _____</p> <p>By _____</p> <p>Its _____</p> <p>_____</p> <p>Signature _____</p> <p>Date _____</p>
--	--

*[Signature]* 11/24/20  
Nathanael Mason

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Office of Oil and Gas  
NOV 30 2020  
WV Department of  
Environmental Protection

ARE 47-085-10142  
175M  
NEM

*6/18/20 Evelyn Nixon*

WW-2A / 3A Coal Waiver

COAL OPERATOR, OWNER, OR LESSEE WAIVER

County Ritchie  
Operator FQ Energy Services, LLC Operator's Well Number Ritchie Hunter 2 (W-1652)

INSTRUCTIONS TO COAL OPERATOR, OWNER, OR LESSEE

To the coal operator, owner, or lessee named on page WW-2A / 3A. You are hereby notified that any objection you wish to make or are required to make by WV Code 22-6-15, 16 or 17, must be filed with the Chief of the Office of Oil and Gas within fifteen (15) days after the receipt of this application by the Office. Mail objections to:

Chief, Office of Oil and Gas  
Department of Environmental Protection  
601 57<sup>th</sup> St. SE  
Charleston, WV 25304  
(304) 926-0499 extension 1654

WAIVER

The undersigned coal operator N/A/ owner N/A/ lessee N/A/ of the coal under this well location has examined this proposed well location. If a mine map exists which covers the area of well location, the well location has been added to the mine map. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

FOR EXECUTION BY A NATURAL PERSON

FOR EXECUTION BY A CORPORATION, ETC.

	Date		Company Name	<u>N/A</u>
Signature			By	
			Its	Date
				Date

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NOV 30 2020  
WV Department of  
Environmental Protection

WW-2A1  
(Rev. 1/11)

Operator's Well Number Ritchie Hunter 2 (W-1652)

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE  
Chapter 22, Article 6, Section 8(d)  
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
Haight Family Trust	Whittle Corporation	12.5%	177/635
SEE ATTACHMENTS (1) & (2) ↓ AGREEMENT DOCUMENT			

**Acknowledgement of Possible Permitting/Approval  
In Addition to the Office of Oil and Gas**

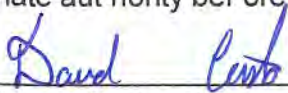
The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources
- WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

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Office of Oil and Gas  
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WV Department of  
Environmental Protection

The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator:  
By: Its:

  
\_\_\_\_\_  
FQ Energy Services, LLC  
\_\_\_\_\_  
Executive Vice President



WW-2A1  
(Rev 1/11)

Operator's Well Number W-1652

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE  
Chapter 22, Article 6, Section 8(d)  
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that -

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
Haught Family Trust	Whittle Corporation	12.5%	177/635

✓ Whittle Corporation is a wholly owned subsidiary of Haught Energy Corporation and as owner of Whittle Corporation, Haught Energy Corporation has full right to drill and complete an oil and gas well on the above property with leases taken and agreements put into place by Whittle Corporation. (Agreement Attached)

**Acknowledgement of Possible Permitting/Approval  
In Addition to the Office of Oil and Gas**

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources
- WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator: \_\_\_\_\_  
By: Its \_\_\_\_\_  
Haught Energy Corporation  
Agent \_\_\_\_\_  
WV Department of Environmental Protection

RECEIVED  
Office of Oil and Gas  
JUL 10 2014

ATTACHMENT 2

AGREEMENT

THIS AGREEMENT, Made this 1st day of December, 2010, by and between Whittle Corporation, HC 68 Box 14, Smithville, WV 26178 as party of the First part and Haught Energy Corporation, HC 68 Box 14, Smithville, WV 26178 as Party of the second part.

WHEREAS:

Haught Energy Corporation is the parent company of Whittle Corporation.

WITNESSETH:

Whittle Corporation gives Haught Energy Corporation the right to operate and develop any leases that are owned by Whittle Corporation within the State of West Virginia.

IN WITNESS WHEREOF, the Parties have caused this Assignment to be properly executed the day and year first above written.

Whittle Corporation

*Warren R. Haught*

Name: Warren R. Haught

Title: President

Haught Energy Corporation

*B. Douglas Haught*

Name: B. Douglas Haught

Title: President

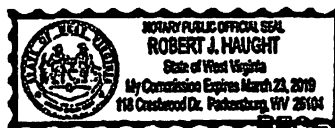
STATE OF WEST VIRGINIA

COUNTY OF RITCHIE

BE IT KNOWN, that on this 1st day of December, 2010, before me, the undersigned authority, personally came and appeared WARREN R. HAUGHT appearing herein in his capacity as the PRESIDENT of WHITTLE CORPORATION, to me personally know to be the identical person whose name is subscribed to the foregoing instrument as the said officer of said corporation, and declared and acknowledged to me, Notary, that he executed the same on behalf of said corporation, and that the said instrument is the free act and deed of the said corporation and was executed for the uses, purposes and benefits therein expressed.

*[Signature]*

NOTARY PUBLIC



RECEIVED  
Office of Oil and Gas

JUL 1 0 2014

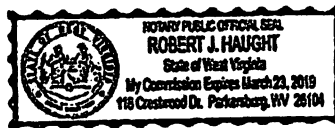
STATE OF WEST VIRGINIA

COUNTY OF RITCHIE

BE IT KNOWN, that on this 1st day of December, 2010, before me, the undersigned authority, personally came and appeared B. DOUGLAS HAUGHT appearing herein in his capacity as President of HAUGHT ENERGY CORPORATION, to me personally know to be the identical person whose name is subscribed to the foregoing instrument as the said officer of said corporation, and declared and acknowledged to me, Notary, that he executed the same on behalf of said corporation, and that the said instrument is the free act and deed of the said corporation and was executed for the uses, purposes and benefits therein expressed.

*[Signature]*

NOTARY PUBLIC



RECEIVED  
Department of Environmental Protection

This Document Prepared by:

Whittle Corporation  
HC 68 Box 14  
Smithville, WV 26178

## AGREEMENT

This Agreement ("Agreement") is made and entered into this 15<sup>th</sup> day of January, 2015, by and between GreenHunter Water, LLC ("GreenHunter Water") and Haught Energy Corporation ("Haught Energy").

**WHEREAS**, GreenHunter Water has obtained, or will obtain, any and all necessary agreements, rights, easements, etc. to allow for the drilling and completion of a salt water disposal well on the property location shown on Exhibit A attached hereto (the "Well") allowing for underground injection activity pursuant to the terms of a valid UIC Permit;

**WHEREAS**, Haught Energy is willing at its sole cost and expense, on behalf of GreenHunter Water, to obtain any and all necessary permits for the Well, and to drill and complete the Well, allowing for underground injection activity pursuant to the terms of a UIC Permit; and

**WHEREAS**, in consideration of Haught Energy using its reasonable commercial efforts to drill and complete the Well, GreenHunter Water is willing to pay Haught Energy (i) a royalty of \$1.50 per barrel of fluids injected into the Well until Haught Energy's total cost to drill and complete the Well is recovered in full without interest, and (ii) subsequently upon payout, a royalty of \$0.35 per barrel of fluids injected into the Well thereafter, assuming a minimum of \$3.00 per barrel disposal rate received from GreenHunter Water's customers. For every \$0.05 reduction in rate experienced by GreenHunter Water from its customers on price per barrel for injection below \$3.00, the royalty due to Haught Energy will decrease \$0.01 per barrel; provided that the royalty paid hereunder shall never be decreased below \$0.25 per barrel.

**NOW, THEREFORE**, for and in consideration of the mutual promises and covenants contained herein, and for other good and valuable consideration, the parties hereto agree as follows:

1. **Drilling and Completion of the Well.** As soon as practicable after GreenHunter Water has obtained the necessary agreements, rights, permits, easements, etc. to allow for the drilling and completion of the Well, Haught Energy shall submit a budget to GreenHunter Water for the costs to drill and complete the Well, specifying the work to be performed, proposed depth, time schedule and the estimated cost of the operation. GreenHunter Water shall have seven (7) days after receipt of the budget to consent to the amounts contained in the budget or to make objections. If GreenHunter Water timely objects to any amounts proposed in the budget, GreenHunter Water and Haught Energy shall promptly meet in order to reach an agreement on the disputed items. In the event GreenHunter Water and Haught Energy cannot reach an agreement on all terms and costs of the budget, this Agreement will be null and void.

Once the budget has been agreed upon, Haught Energy will utilize its reasonable commercial efforts to drill and complete the Well to commercial operation in accordance with the budget. Any cost overruns to the budget must be pre-approved by GreenHunter Water before such overruns are included in the costs incurred by Haught Energy to be repaid at the royalty amount of \$1.50 per barrel described below. Haught Energy shall not undertake any single project reasonably estimated to require an expenditure in excess of Ten Thousand and 00/100 Dollars (\$10,000.00) in connection with the drilling and completion of the Well that has not been previously authorized by or pursuant

to this Agreement; provided, however, that, in case of explosion, fire, flood or other sudden emergency, whether of the same or different nature, Haught Energy may take such steps and incur such expenses as in its opinion are required to deal with the emergency to safeguard life and property but Haught Energy, as promptly as possible, shall report the emergency to GreenHunter Water. Haught Energy shall submit to GreenHunter Water weekly statements reflecting the costs actually incurred to-date for the drilling and completion of the Well. Haught Energy will submit such weekly statements until the Well is completed and ready for commercial operations.

2. **Royalty.** In consideration of Haught Energy funding the drilling and completion of the Well on behalf of GreenHunter Water in accordance with the terms of this Agreement, GreenHunter Water shall make the following payments to Haught Energy once the well is completed and capable of commercial operation: (i) a royalty of \$1.50 per barrel of fluids injected into the Well until Haught Energy's total cost to drill and complete the Well is recovered in full without interest, and (ii) subsequently upon payout, a royalty of \$0.35 per barrel of fluids injected into the Well thereafter, assuming a minimum of \$3.00 per barrel disposal rate received from GreenHunter Water's customers. For every \$0.05 reduction in rate experienced by GreenHunter Water from its customers on price per barrel for injection below \$3.00, the royalty due to Haught Energy will decrease \$0.01 per barrel; provided that the royalty paid hereunder shall never be decreased below \$0.25 per barrel.

GreenHunter Water shall pay Haught Energy the royalty for any given month under this Agreement thirty (30) days after the end of said month. In the event GreenHunter Water does not timely pay the royalty payment within thirty (30) days after the end of the month, GreenHunter Water shall pay Haught Energy a penalty of 2% per month until such delinquent payment is paid in full.

3. **Representations and Warranties of Haught Energy.** Unless specifically stated otherwise, Haught Energy hereby represents and warrants that the following are true and correct as of the date hereof:

A. **Organization and Good Standing.** Haught Energy is a corporation duly organized, validly existing and in good standing under the laws of the state of its incorporation, with all requisite corporate power and authority to carry on the business in which it is engaged, to own the properties it owns, to execute and deliver this Agreement and to consummate the transactions contemplated hereby.

B. **Authorization and Validity.** The execution, delivery and performance by Haught Energy of this Agreement and the other agreements contemplated hereby, and the consummation of the transactions contemplated hereby and thereby, have been duly authorized by Haught Energy. This Agreement and each other agreement contemplated hereby have been duly executed and delivered by Haught Energy and constitute or will constitute legal, valid and binding obligations of Haught Energy, enforceable against Haught Energy in accordance with their respective terms, except as may be limited by applicable bankruptcy, insolvency or similar laws affecting creditors rights generally or the availability of equitable remedies.

C. **No Violation.** Neither the execution, delivery or performance of this Agreement or the other agreements contemplated hereby nor the consummation of the transactions contemplated hereby or thereby will (i) conflict with, or result in a violation or breach of the terms, conditions and

provisions of, or constitute a default under, the Certificate of Incorporation or Bylaws of Haught Energy or any agreement, indenture or other instrument under which Haught Energy is bound or (ii) violate or conflict with any judgment, decree, order, statute, rule or regulation of any court or any public, governmental or regulatory agency or body having jurisdiction over Haught Energy or the properties or assets of Haught Energy.

4. **Representations and Warranties of GreenHunter Water.** Unless specifically stated otherwise, GreenHunter Water hereby represents and warrants that the following are true and correct as of the date hereof:

A. **Organization and Good Standing.** GreenHunter Water is a corporation duly organized, validly existing and in good standing under the laws of the state of its incorporation, with all requisite corporate power and authority to carry on the business in which it is engaged, to own the properties it owns, to execute and deliver this Agreement and to consummate the transactions contemplated hereby.

B. **Authorization and Validity.** The execution, delivery and performance by GreenHunter Water of this Agreement and the other agreements contemplated hereby, and the consummation of the transactions contemplated hereby and thereby, have been duly authorized by GreenHunter Water. This Agreement and each other agreement contemplated hereby have been duly executed and delivered by GreenHunter Water and constitute or will constitute legal, valid and binding obligations of GreenHunter Water, enforceable against GreenHunter Water in accordance with their respective terms, except as may be limited by applicable bankruptcy, insolvency or similar laws affecting creditors rights generally or the availability of equitable remedies.

C. **No Violation.** Neither the execution, delivery or performance of this Agreement or the other agreements contemplated hereby nor the consummation of the transactions contemplated hereby or thereby will (i) conflict with, or result in a violation or breach of the terms, conditions and provisions of, or constitute a default under, the Certificate of Incorporation or Bylaws of GreenHunter Water or any agreement, indenture or other instrument under which GreenHunter Water is bound or (ii) violate or conflict with any judgment, decree, order, statute, rule or regulation of any court or any public, governmental or regulatory agency or body having jurisdiction over GreenHunter Water or the properties or assets of GreenHunter Water.

D. **Capacity.** GreenHunter Water represents that Haught Energy's disposal capacity of 500 barrels per week in the well currently located in Ritchie County, West Virginia will transfer to the Well once it becomes commercially operational.

5. **Remedies.** The parties hereto shall indemnify and hold harmless each other as follows:

A. **Indemnification by Haught Energy.** Subject to the terms and conditions of this Section, Haught Energy agrees to indemnify, defend and hold GreenHunter Water and its directors, officers, agents, attorneys and affiliates harmless from and against all losses, claims, obligations, demands, assessments, penalties, liabilities, costs, damages, attorneys' fees and expenses (collectively, "Damages"), asserted against or incurred by such indemnitees by reason of or resulting

from a breach of any representation, warranty or covenant of Haught Energy contained herein, the activities associated with the drilling and completion of the Well as described herein, or in any agreement executed in connection with the transactions contemplated hereby.

**B. Indemnification by Purchaser.** Subject to the terms and conditions of this Section, GreenHunter Water hereby agrees to indemnify, defend and hold Haught Energy and their respective directors, officers, trustees, agents, attorneys and affiliates harmless from and against all Damages asserted against or incurred by any of such indemnitees by reason of or resulting from a breach of any representation, warranty or covenant of GreenHunter Water contained herein, or in any agreement executed in connection with the transactions contemplated hereby.

**C. Waiver.** No waiver by any party of any default or breach by another party of any representation, warranty, covenant or condition contained in this Agreement, any exhibit or any document, instrument or certificate contemplated hereby shall be deemed to be a waiver of any subsequent default or breach by such party of the same or any other representation, warranty, covenant or condition. No act, delay, omission or course of dealing on the part of any party in exercising any right, power or remedy under this Agreement or at law or in equity shall operate as a waiver thereof or otherwise prejudice any of such party's rights, powers and remedies. All remedies, whether at law or in equity, shall be cumulative and the election of any one or more shall not constitute a waiver of the right to pursue other available remedies.

**D. Remedies Not Exclusive.** The remedies provided in this Section shall not be exclusive of any other rights or remedies available to one party against the other, either at law or in equity.

**E. Costs, Expenses and Legal Fees.** Whether or not the transactions contemplated hereby are consummated, each party hereto shall bear its own costs and expenses (including attorneys' fees and expenses), except that each party hereto agrees to pay the costs and expenses (including reasonable attorneys' fees and expenses) incurred by the other parties in successfully (i) enforcing any of the terms of this Agreement or (ii) proving that another party breached any of the terms of this Agreement.

**6. Termination.** This Agreement may be terminated:

(a) At any time by GreenHunter Water if any representation, warranty or covenant of Haught Energy contained in this Agreement or in other document executed and delivered by Haught Energy pursuant to this Agreement is or becomes untrue or breached in any material respect or if the Company fails to comply in any material respect with any covenant contained herein, and any such misrepresentation, noncompliance or breach is not cured, waived or eliminated within ten (10) business days.

(b) Other than for the situation described in Section (c) below, at any time by Haught Energy if any representation, warranty or covenant of GreenHunter Water contained in this Agreement or in any other document executed and delivered by GreenHunter Water pursuant to this Agreement is or becomes untrue or breached in any material respect or if GreenHunter Water fails to comply in any material respect with any covenant contained herein, and any such misrepresentation,

noncompliance or breach is not cured, waived or eliminated within ten (10) business days.

(c) Notwithstanding the above, in the event GreenHunter Water fails to timely pay the required royalty payment in accordance with Section 2(i) to Haught Energy, Haught Energy may terminate the Agreement and take ownership of the Well provided Haught Energy delivers written notice to GreenHunter Water of its failure to pay royalty payment in accordance with Section 2(i) and GreenHunter Water does not cure such failure to pay within ninety (90) days of receipt of the notice letter.

In addition, Haught Energy may take any and all necessary steps to secure and protect its interest in the Well prior to the payout described in Section 2(i), including the filing of any recordable instrument in the appropriate jurisdiction, and GreenHunter Water will cooperate with Haught Energy in executing and delivering any documentation in connection herewith.

## 7. Miscellaneous.

A. **Amendment**. This Agreement may be amended, modified, or supplemented only by an instrument in writing executed by all the parties hereto.

B. **Assignment**. Neither this Agreement nor any right created hereby or in any agreement entered into in connection with the transactions contemplated hereby shall be assignable by any party hereto without the written consent of the party not seeking assignment.

C. **Parties In Interest: No Third Party Beneficiaries**. Except as otherwise provided herein, the terms and conditions of this Agreement shall inure to the benefit of and be binding upon the respective heirs, legal representatives, successors and assigns of the parties hereto. Neither this Agreement nor any other Agreement contemplated hereby shall be deemed to confer upon any person not a party hereto or thereto any rights or remedies hereunder or thereunder.

D. **Entire Agreement**. This Agreement and the agreements contemplated hereby constitute the entire agreement of the parties regarding the subject matter hereof, and supersede all prior agreements and understandings, both written and oral, among the parties, or any of them, with respect to the subject matter hereof.

E. **Severability**. If any provision of this Agreement is held to be illegal, invalid or unenforceable under present or future laws effective during the term hereof, such provision shall be fully severable and this Agreement shall be construed and enforced as if such illegal, invalid or unenforceable provision never comprised a part hereof; and the remaining provisions hereof shall remain in full force and effect and shall not be affected by the illegal, invalid or unenforceable provision or by its severance here from. Furthermore, in lieu of such illegal, invalid or unenforceable provision, there shall be added automatically as part of this Agreement a provision as similar in its terms to such illegal, invalid, or unenforceable provision as may be possible and be legal, valid and enforceable.

F. **Governing Law.** THIS AGREEMENT AND THE RIGHTS AND OBLIGATIONS OF THE PARTIES HERETO SHALL BE GOVERNED BY, CONSTRUED AND ENFORCED IN ACCORDANCE WITH THE SUBSTANTIVE LAWS OF THE STATE OF WEST VIRGINIA.

G. **Captions.** The captions in this agreement are for convenience of reference only and shall not limit or otherwise affect any of the terms or provisions hereof.

H. **Gender and Number.** When the context requires, the gender of all words used herein shall include the masculine, feminine and neuter and the number of all words shall include the singular and plural.

I. **Reference to Agreement.** Use of the words "herein", "hereof", "hereto" and the like in this Agreement shall be construed as references to this Agreement as a whole and not to any particular Section or provision in this Agreement, unless otherwise noted.

J. **Confidentiality.** With the exception of the fact that the parties have entered into a strategic alliance with each other, each party shall keep this Agreement and its terms confidential, and shall make no press release or public disclosure, either written or oral, regarding the transactions contemplated by this Agreement without the prior knowledge and consent of the other parties hereto; provided that the foregoing shall not prohibit any disclosure (i) by press release, filing or otherwise that is required by federal securities laws, and (ii) to attorneys, accountants, investment bankers or other agents of the parties assisting the parties in connection with the transactions contemplated by this Agreement. In the event that the transactions contemplated hereby are not consummated for any reason whatsoever, the parties hereto agree not to disclose or use any confidential information they may have concerning the affairs of the other parties, except for information that is required by law to be disclosed.

K. **Notice.** Any notice or communication hereunder or in any agreement entered into in connection with the transactions contemplated hereby must be in writing and given by depositing the same in the United States mail, addressed to the party to be notified, postage prepaid and registered or certified with return receipt requested, or by delivering the same in person. Such notice shall be deemed received on the date on which it is hand delivered or on the third business day following the date on which it is to be mailed. For purposes of notice, the addresses of the parties shall be:

**If to GreenHunter Water:**  
1048 Texan Trail  
Grapevine, Texas 76051  
Attn: Morgan F. Johnston  
Senior Vice President, General Counsel and Secretary




**If to Haught Energy:**  
107 Lancaster Street, Ste 301  
Marietta, OH 45750  
Attn: B. Douglas Haught  
President

L. **Expenses.** Each party shall pay its own fees and expenses incurred in connection with the proposed transaction contemplated herein.

M. **Counterparts.** This Agreement may be executed in multiple counterparts, each of which shall be deemed an original, and all of which together shall constitute one and the same instrument. Execution and delivery of this Agreement by exchange of facsimile copies bearing facsimile signature of a party shall constitute a valid and binding execution and delivery of this Agreement by such party. Such fully executed facsimile copies shall constitute enforceable original documents.


**Haught Energy**

Haught Energy Corporation

By:   
B. Douglas Haught  
President

**GreenHunter Water**

GreenHunter Water LLC

By: 

**Kirk J. Trosclair**  
**Executive VP and**  
**Chief Operating Officer**

WW-2B1  
(5-12)

N/A

Well No. Ritchie Hunter 2 (W-1652)

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 Microbac Laboratories 158 Starlite Drive Marietta, Ohio 45750  
Sampling Contractor To be determined

Well Operator FQ Energy Services, LLC  
Address P.O. Box 634  
Jane Lew, WV 26378  
Telephone (740) 236-2135

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.

RECEIVED  
Office of Oil and Gas  
NOV 30 2011  
WV Department of  
Environmental Protection

WW-9  
(2/15)

API Number 47-085 - 10142  
Operator's Well No. Ritchie Hunter 2 (W-1652)

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name FQ Energy Services, LLC OP Code 494517164

Watershed (HUC 10) Huskers Run and Bond Creek Quadrangle Ellenboro

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 AND DISPOSED OFF SITE. g/m/m*

If so, please describe anticipated pit waste: N/A - No cuttings or waste will be generated.

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

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 N/A)

Will closed loop system be used? If so, describe: N/A

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

-If oil based, what type? Synthetic, petroleum, etc. N/A

Additives to be used in drilling medium? N/A

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. N/A

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) N/A

-Landfill or offsite name/permit number? N/A

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 David Casto

Company Official (Typed Name) David Casto

Company Official Title Executive Vice President

RECEIVED  
Office of Oil and Gas  
NOV 30 2020

Subscribed and sworn before me this 25<sup>th</sup> day of November

Joel U. Howdyshell  
My commission expires 10/16/2023



WV Department of Environmental Protection  
Joel U. Howdyshell, Notary Public  
In and For The State of Ohio  
Washington County  
My Commission Expires  
October 16, 2023

**FQ Energy Services, LLC**

Proposed Revegetation Treatment: Acres Disturbed N/A - no disturbance Prevegetation pH N/A

Lime N/A Tons/acre or to correct to pH N/A

Fertilizer type N/A

Fertilizer amount N/A lbs/acre

Mulch N/A Tons/acre

**Seed Mixtures**

**Temporary**

**Permanent**

Seed Type lbs/acre

Seed Type lbs/acre

N/A

N/A

**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.

N/A

Plan Approved by: \_\_\_\_\_

Comments: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Field Reviewed? ( ) Yes ( ) No

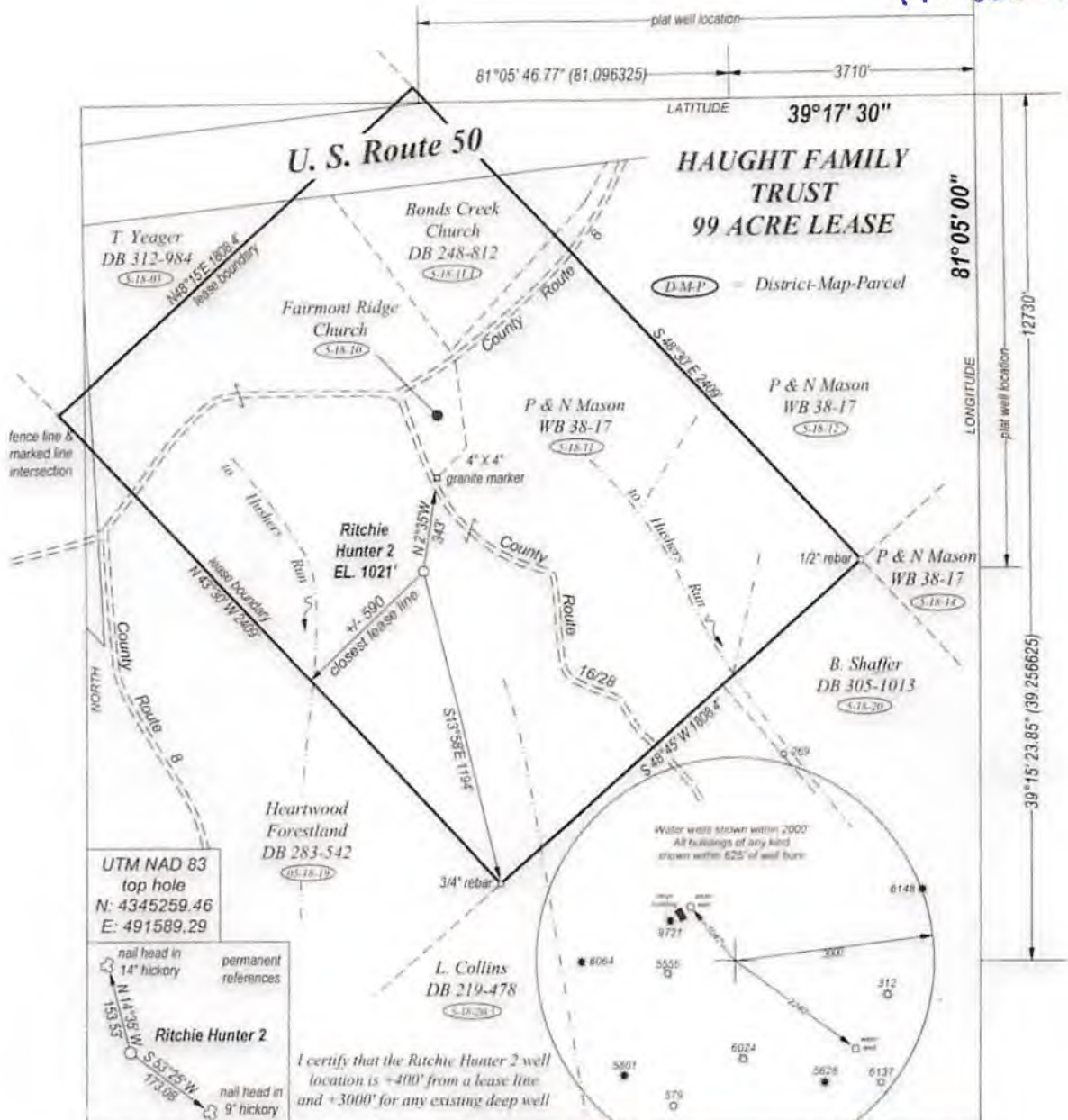
RECEIVED  
Office of Oil and Gas

NOV 30 2020

WV Department of  
Environmental Protection



47-085-10142W



FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 500'  
 MINIMUM DEGREE OF ACCURACY 1/200  
 PROVEN SOURCE OF ELEVATION GPS OBSERVATION

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 ENERGY.  
 (SIGNED) \_\_\_\_\_  
 PROFESSIONAL SURVEYOR: 551



**STATE OF WEST VIRGINIA**  
 DEPARTMENT OF ENERGY  
 DIVISION OF OIL AND GAS

DATE JUNE 23RD, 2014  
 OPERATORS WELL NO RITCHIE HUNTER 2

**API 47 - 085 - 10142W**  
 STATE COUNTY PERMIT

WELL TYPE OIL  GAS  LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_  
 (IF GAS) PRODUCTION  STORAGE \_\_\_\_\_ DEEP  SHALLOW \_\_\_\_\_

LOCATION: ELEVATION 1021' WATER SHED HUSHERS RUN  
 DISTRICT GRANT COUNTY RITCHIE QUADRANGLE ELLENBORO

SURFACE OWNER PEARL EVERETT MASON & NATHANAEL LYLE MASON ACREAGE 84.27  
 OIL & GAS ROYALTY HAUGHT FAMILY TRUST LEASE AC 99

PROPOSED WORK: DRILL  CONVERT \_\_\_\_\_ DRILL DEEPER \_\_\_\_\_ REDRILL \_\_\_\_\_  
 FRACTURE OR STIMULATE \_\_\_\_\_ PLUG OFF OLD FORMATION \_\_\_\_\_  
 PERFORATE NEW FORMATION \_\_\_\_\_  
 OTHER PHYSICAL CHANGE IN WELL \_\_\_\_\_  
 PLUG AND ABANDON \_\_\_\_\_ CLEAN OUT AND REPLUG \_\_\_\_\_

TARGET FORMATION ORISKANY ESTIMATED DEPTH 6270'

WELL OPERATOR HAUGHT ENERGY CORP. DESIGNATED AGENT WARREN HAUGHT  
 ADDRESS 12864 STAUNTON TURNPIKE ADDRESS 12864 STAUNTON TURNPIKE  
SMITHVILLE, WV 26178 SMITHVILLE, WV 26178

FORM WV-6

COUNTY NAME  
 PERMIT

OP-77 (05-01)

Record No. \_\_\_\_\_

State of West Virginia  
Department of Environmental Protection  
Charleston, WV 25301

This is to acknowledge that the well: API no. 47-085-10142

District Grant

Well No Ritchie Hunter #2 (W-1652) Farm name Mason, Pearl Everett & Nathaniel

Is hereby transferred from:

The transferor Company: Haught Energy Corporation

Code # 494494463 Address 12864 Staunton Turnpike, Smithville, WV 26178

To:

The transferee Company: GreenHunter Water, LLC

Code # 494506251 Address 1048 Texan Trail Grapevine, TX 76051

Transfer approval and responsibility for any noncompliance matter not resolved in this document will be addressed in the thirty day circular that will be issued after review of your application for transfer, or as otherwise set forth by agreement with the Chief.

If this well has been out of production for the period in excess of 12 months, the transferee agrees to bring the well into compliance by producing or plugging within 120 days of approval of the application.  Yes  No

The transferee has registered and designated an agent on form OP-1, which is on file with the Office of Oil and Gas. The agent is:

Designated agent (name) Michael Umstot

Address: 15556 Emerson Ave., Waverly, WV 26184

The transferee has bonded the said well by ( check one ):

- Securities
- Cash
- Surety bond
- Letter of credit

Identified by:

Amount:	<u>50,000.00</u>	Effective date :	<u>September 23, 2014</u>
Issuing authority:	<u>U.S. Specialty Insurance Company</u>	Id. No:	<u>B009046</u>

Transferor: Haught Energy Corporation

By: [Signature]

Its: CEO

Taken, subscribed and sworn before me this 3<sup>rd</sup> day of JUNE 2015

Notary Public [Signature]

My Commission Expires MAY 12, 2024

Transferee: GreenHunter Water, LLC.

By: [Signature]

Its: Sr VP., General Counsel, and Secretary

Taken, subscribed and sworn before me this 1 day of June 2015

Notary Public [Signature]

My Commission Expires 3-26-17





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west virginia department of environmental protection

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

Earl Ray Tomblin, Governor  
Randy C. Huffman, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

June 15, 2016

Ritchie Hunter Water Disposal, LLC  
P.O. Box 100  
Reno, OH 45773  
AND  
FQ Energy Services, LLC  
P.O. Box 100  
Reno, OH 45773

Re: Transfer – UIC 2D Brine Disposal  
UIC Permit ID: 2D08510142  
Operator Well Number: RITCHIE HUNTER 2 (W-1652)

Dear Permittee:

Pursuant to Legislative Rule §47-13 Section 13.17, this letter serves as notice of approval of transfer of UIC permit number 2D08510142 from Ritchie Hunter Water Disposal, LLC to FQ Energy Services, LLC. The permit being transferred, effective today, was issued to Ritchie Hunter Water Disposal, LLC on 12/23/2015, with the above permit number.

Please be advised that you are required to adhere to any and all conditions, criteria, and design standards outlined in the permit as issued to the previous owner. If deviation from the issued permit is needed, a request must be submitted and an approved modification must be issued prior to the work being initiated.

Should you have any questions or need further assistance, you may contact Justin Nottingham at 304.926.0499 ext. 1650.

Sincerely,

A handwritten signature in blue ink, appearing to read 'James Martin', is written over a printed name and title.

James Martin  
Chief

JM/msh

Cc: Michael Goff, OOG Inspector



OP-77U (07/15)



Office of Oil & Gas
Underground Injection Control Class 2 & 3
Permit Transfer Agreement

This Agreement is entered into this 9th day of June, 2016 by
Ritchie Hunter Water Disposal, LLC and FQ Energy Services, LLC, in
order to affect a transfer of West Virginia Department of Environmental Protection/Office of Oil & Gas UIC permit(s), set
forth on Exhibit "A" attached hereto, and the responsibility, coverage, and liability thereunder from
Ritchie Hunter Water Disposal, LLC to FQ Energy Services, LLC

FQ Energy Services, LLC certifies that there will be no operational changes that warrant a
permit modification.

On the date such transfer becomes effective, FQ Energy Services, LLC agrees to assume
the responsibility, coverage, and liability of the permit(s), and
Ritchie Hunter Water Disposal, LLC agrees to relinquish all rights which it may have under
said permits.

Transferor (Company Name): Ritchie Hunter Water Disposal, LLC
MAILING ADDRESS: P.O. Box 100
Reno, Ohio 45773
PHONE: 740-373-4599

By: [Signature]
Signature of Responsible Official
Title: C.O.O
Printed Name: Kirk Trosclair

Transferee (Company Name): FQ Energy Services, LLC
MAILING ADDRESS: P.O. Box 100
Reno, Ohio 45773
PHONE: 740-373-4599

By: [Signature]
Signature of Responsible Official
Title: C.O.O.
Printed Name: Robert Sloan

Received
Office of Oil & Gas
JUN 13 2016



OP-77U (07/15)



Office of Oil & Gas  
Underground Injection Control Class 2 & 3  
Permit Transfer Agreement

On this 9th day of June, Kirk Truesdell personally appeared before me Phyllis Wark a notary, and stated that (s)he is the C.O.O. of Ritchie Hunter Water Disposal, LLC, a corporation, and that the instrument was signed in behalf of the said corporation by authority of its board of directors and acknowledged said instrument to be its voluntary act and deed.



Before me: Phyllis M. Wark  
Notary Public State of Ohio  
My Commission Expires August 8, 2020

On this 9th day of June, Robert Eckel personally appeared before me Phyllis Wark a notary, and stated that (s)he is the C.O.O. of FQ Energy Services, LLC, a corporation, and that the instrument was signed in behalf of the said corporation by authority of its board of directors and acknowledged said instrument to be its voluntary act and deed.



Before me: Phyllis M. Wark  
Notary Public for state of OHIO  
My Commission Expires: August 8, 2020

Transfer Agreement Exhibit "A" Attached.

This Agreement applies to 1 wells, which are all listed on the following page, Exhibit "A".

Received  
JUNE 18 2018



November 25, 2020

PN 1618

Mr. Taylor Brewer, Assistant Chief  
West Virginia Department of Environmental Protection  
Office of Oil and Gas  
601 57<sup>th</sup> Street, SE  
Charleston, WV 25304

**RE: Proposed Well Workover for the Ritchie Hunter #2 Class IID Commercial Disposal Well, UIC2D08510142**

Dear Mr. Taylor:

Please find attached the required documents for the proposed well workover stimulation acid job and proposed step-rate testing for the Ritchie Hunter #2 saltwater disposal well.

If you have any questions regarding this matter, please feel free to contact me at (614) 940-3521 or e-mail me at [ttomastik@all-llc.com](mailto:ttomastik@all-llc.com).

Sincerely,

Tom Tomastik, Chief Geologist and Regulatory Specialist  
ALL Consulting, LLC  
10811 Keller Pines Court  
Galena, Ohio 43021

Cc: Dave Casto, FQ Energy, LLC

RECEIVED  
Office of Oil and Gas

NOV 30 2020

WV Department of  
Environmental Protection