



west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary
www.dep.wv.gov

Monday, December 21, 2020
WELL WORK PERMIT
Horizontal 6A / New Drill

SWN PRODUCTION COMPANY, LLC
POST OFFICE BOX 12359
SPRING, TX 773914954

Re: Permit approval for CARL ROTTER OHI 206H
47-069-00329-00-00

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: CARL ROTTER OHI 206H
Farm Name: CARL J & GRACE A ROTTER
U.S. WELL NUMBER: 47-069-00329-00-00
Horizontal 6A New Drill
Date Issued: 12/21/2020

Promoting a healthy environment.

10/21/2022

PERMIT CONDITIONS

West Virginia Code § 22-6A-8(d) allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACE). Through this permit, you are hereby being advised to consult with USACE regarding this proposed activity.
2. 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 § 22-6A-5a (12), 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 one hundred (100) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
4. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
6. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.
7. 24 hours prior to the initiation of the completion process the operator shall notify the Chief or his designee.
8. During the completion process the operator shall monitor annular pressures and report any anomaly noticed to the chief or his designee immediately.
9. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
10. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.

PERMIT CONDITIONS

11. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, completion of any other permitted well work, and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov.

WW-6B
(04/15)

4706900329

API NO. 47-009

OPERATOR WELL NO. Carl Rotter OHI 206H

Well Pad Name: Carl Rotter OHI

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WELL WORK PERMIT APPLICATION

1) Well Operator: SWN Production Co., LLC | 494512924 | 069-Ohio | 3-Liberty | 648-Valley Grove
Operator ID County District Quadrangle

2) Operator's Well Number: Carl Rotter OHI 206H Well Pad Name: Carl Rotter OHI

3) Farm Name/Surface Owner: Carl J. & Grace A. Rotter Public Road Access: Rogers Road

4) Elevation, current ground: 1336' Elevation, proposed post-construction: 1336'

5) Well Type (a) Gas x Oil Underground Storage

Other

(b) If Gas Shallow x Deep

Horizontal x

6) Existing Pad: Yes or No Yes

C-NO 11-6-20

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Target Formation- Marcellus, Down-Dip Well to the South, Target Top TVD- 6770', Target Base TVD- 6828', Anticipated Thickness- 58', Associated Pressure- 4438

8) Proposed Total Vertical Depth: 6802'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 25616'

11) Proposed Horizontal Leg Length: 18264.48'

12) Approximate Fresh Water Strata Depths: 586'

13) Method to Determine Fresh Water Depths: Salinity Profile Analysis using deepest nearby water well

14) Approximate Saltwater Depths: 832' Salinity Profile Analysis of Pottsville Sandstone

15) Approximate Coal Seam Depths: 721'

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16) Approximate Depth to Possible Void (coal mine, karst, other): Possible Void 721'

NOV 13 2020

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes No x

WV Department of
Environmental Protection

(a) If Yes, provide Mine Info: Name: Tunnel Ridge
Depth: 721'
Seam: Pittsburgh
Owner: Tunnel Ridge

18) CASING AND TUBING PROGRAM

<u>TYPE</u>	<u>Size (in)</u>	<u>New or Used</u>	<u>Grade</u>	<u>Weight per ft. (lb/ft)</u>	<u>FOOTAGE: For Drilling (ft)</u>	<u>INTERVALS: Left in Well (ft)</u>	<u>CEMENT: Fill-up (Cu. Ft.)/CTS</u>
Conductor	20"	New	J-55	94#	126'	126'	CTS
Fresh Water	13 3/8"	New	H-40	48#	760'	760'	713 sx/CTS
Coal	See	Surface	Casing				
Intermediate	9 5/8"	New	J-55	36#	2168'	2168'	909 sx/CTS
Production	5 1/2"	New	P-110 HP	20#	25616'	25616'	Tai 4916sx/ 100' Inside Intermediate
Tubing							
Liners							

D-7889 11.6.20

<u>TYPE</u>	<u>Size (in)</u>	<u>Wellbore Diameter (in)</u>	<u>Wall Thickness (in)</u>	<u>Burst Pressure (psi)</u>	<u>Anticipated Max. Internal Pressure (psi)</u>	<u>Cement Type</u>	<u>Cement Yield (cu. ft./k)</u>
Conductor	20"	30"	0.25	2120	81	Class A	1.20/30% Excess
Fresh Water	13 3/8"	17.5"	0.380	2730	633	Class A	1.20/30% Excess
Coal							
Intermediate	9 5/8"	12 1/4"	0.352	3520	1768	Class A	1.19/40% Excess
Production	5 1/2"	8 3/4"-8 1/2"	0.361	14360	10500	Class A	1.19/5% Excess
Tubing							
Liners							

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PACKERS

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Kind:				
Sizes:				
Depths Set:				

19) Describe proposed well work, including the drilling and plugging back of any pilot hole:

Drill and stimulate any potential zones between and including the Benson to Marcellus. **If we should encounter a void place basket above and below void area- balance cement to bottom of void and grout from basket to surface or run external casing packer/cementing stage tool above void interval and perform 2 stage cementing operation dependent upon depth of void. Run casing not less than 20' below void nor more than 75' below void. (*If freshwater is encountered deeper than anticipated it must be protected, set casing 50' below and cts.)

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

Well will be perforated within the target formation and stimulated with a slurry of water, sand, and chemical additives at a high rate. This will be performed in stages with the plug and perf method along the wellbore until the entire lateral has been stimulated within the target formation. All stage plugs are then drilled out and the well is flowed back to surface. In some instances, additional toe prep may be performed by pumping additional water in the toe of the well prior to perforating and pumping Stage 1 to ensure that the toe guns/toe sleeves are fully open prior to pumping stage 1. The well is produced through surface facilities consisting of high pressure production unites, horizontal separation units, water and oil storage tanks. Max press and anticipated max rate- 9000 lbs @ 100 barrels a minute.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 14

22) Area to be disturbed for well pad only, less access road (acres): 9

23) Describe centralizer placement for each casing string:

All casing strings will be ran with a centralizer at a minimum of 1 per every 3 joints of casing.

24) Describe all cement additives associated with each cement type:

See Attachment ***

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25) Proposed borehole conditioning procedures:

All boreholes will be conditioned with circulation and rotation for a minimum of one bottoms up and continuing until operator is satisfied with borehole conditions.

*Note: Attach additional sheets as needed.

Southwestern Energy Company

Proposed Drilling Program

Well: CARL ROTTER OHI 206
 Field: PANHANDLE FIELD \\
 County: OHIO
 SHL: 40.1016 Latitude -80.5425 Longitude
 BHL: 40.0523 Latitude -80.5243 Longitude
 KB Elev: 1,362 ft MSL

Re-entry Rig: TBD
 Prospect: Marcellus Shale
 State: WV



KB: 26 ft AGL GL Elev: 1,336 ft MSL

Coal Seam at 721'

PROD TOC Lead @ 2,268' MD
 PROD TOC Tail @ 5,903' MD

D. J. [Signature]
 11.6.20

126' to 780'
 Air/Mist

780' to 2,188'
 Air/Mist

2,188' to 6,880'
 Air/Mist

6,880' to 7,349'
 12.0-12.2 ppg

7,349' to 25,616'
 12.2-12.8 ppg

TUBULAR DETAIL

Casing String	Casing Size (in)	Weight (Min)	Grade (Min)	Planned Interval	
				From	To
Conductor	20	94.0 #	J-55	0'	126'
Surface/Coal	13.375	48.0 #	H-40	0'	760'
Intermediate	9.625	36.0 #	J-55	0'	2,168'
Production	5.5	20.0 #	P-110 HP	0'	25,616'

CEMENT DETAIL

	Sacks	Class	Density
Conductor:	151	A	19.3
Surface:	713	A	15.6
Intermediate:	909	A	15.6
Production:	4916	A	15.6

KOP at 6,135' MD

Freshwater Depth - 586' TVD
 Coal Void Depth - 721' TVD
 Saltwater Depth - 832' TVD
 TVD - 6,802'
 TMD - 25,616'

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6,595' Target Center

TD at 25,616' MD
 6,802' TVD

EOB at 7,349' MD

SHL Onondaga 6,620' TVD

Onondaga 6,827' TVD

WW-9
(4/16)

4706900329

API Number 47 - 069 -
Operator's Well No. Carl Rottler OHI 206H

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name SWN Production Co., LLC OP Code 494512924
Watershed (HUC 10) Upper Ohio South Quadrangle Valley Grove

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

Will a pit be used? Yes No

If so, please describe anticipated pit waste: _____

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

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number Various Approved Facilities)
- Reuse (at API Number at the next anticipated well)
- Off Site Disposal (Supplier form WW-9 for disposal location)
- Other (Explain recovery and solidification on site)

Will closed loop system be used? If so, describe: Yes- See Attachment 3A

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. Air drill to KOP, fluid drill with SOBEM from KOP to TD

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

Additives to be used in drilling medium? Attachment 3B

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

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

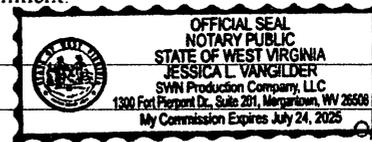
-Landfill or offsite name/permit number? Meadowfill SWF- 1032, Short Creek SWF-1034, Carbon Limestone MSWL018781, Wetzel County 1021

Apex Sanitary Landfill 06-08438, Brooke Co SWF-1013,
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 *Brittany Webby*
Company Official (Typed Name) Brittany Webby
Company Official Title Senior Regulatory Analyst



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Subscribed and sworn before me this 28th day of September, 20 20

Jessica L. Vangilder Notary Public

My commission expires 7-24-25

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SWN Production Co., LLC

Proposed Revegetation Treatment: Acres Disturbed 14 Prevegetation pH _____

Lime as determined by pH test min.2 Tons/acre or to correct to pH 9

Fertilizer type 10-20-20

Fertilizer amount 600/500 lbs/acre

Mulch Hay/Straw Tons/acre

Seed Mixtures

Temporary

Permanent

Seed Type lbs/acre

Seed Type lbs/acre

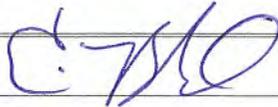
Attachment 3C

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, include dimensions (L x W x D) of the pit, and dimensions (L x W), and area in acreage, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: _____

 11-6-20

Comments: _____

Title: Oil & Gas Inspector

Date: 11-6-20

Field Reviewed? Yes No

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Attachment 3A

CLOSED LOOP SYSTEM

The closed loop system is designed to eliminate the use of reserve pits by providing a higher level of solids control processing and using steel pits for capture of drill cuttings. The cuttings are then processed to achieve landfill requirements before hauling to approved landfills. The liquids are processed to recycle into the active mud system or to transfer to onsite temporary storage as needed.

The closed loop system consists of several sets of a shale gas separator (often called a 'methana'), several banks of solids shakers, high speed centrifuges (1 or 2) used to process the fluid portion of the mud system to remove low gravity solids, low speed centrifuge used for barite recovery in high weight liquid drilling systems, a dewatering system (for air intervals and if freshwater mud systems are in use) used to further clean liquids by flocculation and additional mechanical separation, associated open top tanks for processing liquids and capturing solids for disposal, and transfer pumps to move fluids through the processes. There is an area adjacent to the cuttings tanks (Red Zone) where a track hole is utilized to recover the processed cuttings for loading into containers for hauloff. (See attached schematic of a generic closed loop system layout)

Below are discussions of the processes used when drilling the air interval or liquids interval.

AIR DRILLING INTERVALS

During air drilling operations, flow from the rig will pass down the flowline to the Shale Gas Separator (sometimes called a methane) where gas and liquids/solids are separated. Gas is sent to the flare scrubber tank and is flared at the flare stack. Solids and fluids pass across a shaker system to separate solids from liquids. Solids pass into the cuttings tanks where they are captured for drying and hauloff to an approved landfill site. Liquids fall into a shaker tank and are collected by a centrifugal pump to be processed by the high speed centrifuge to further separate liquids and solids. Solids are then dumped into the cuttings tank for drying and hauloff. Liquids are further processed to remove additional low gravity solids before being reused or transferred to onsite storage.

LIQUIDS DRILLING (FRESHWATER, BRINE, SOBM)

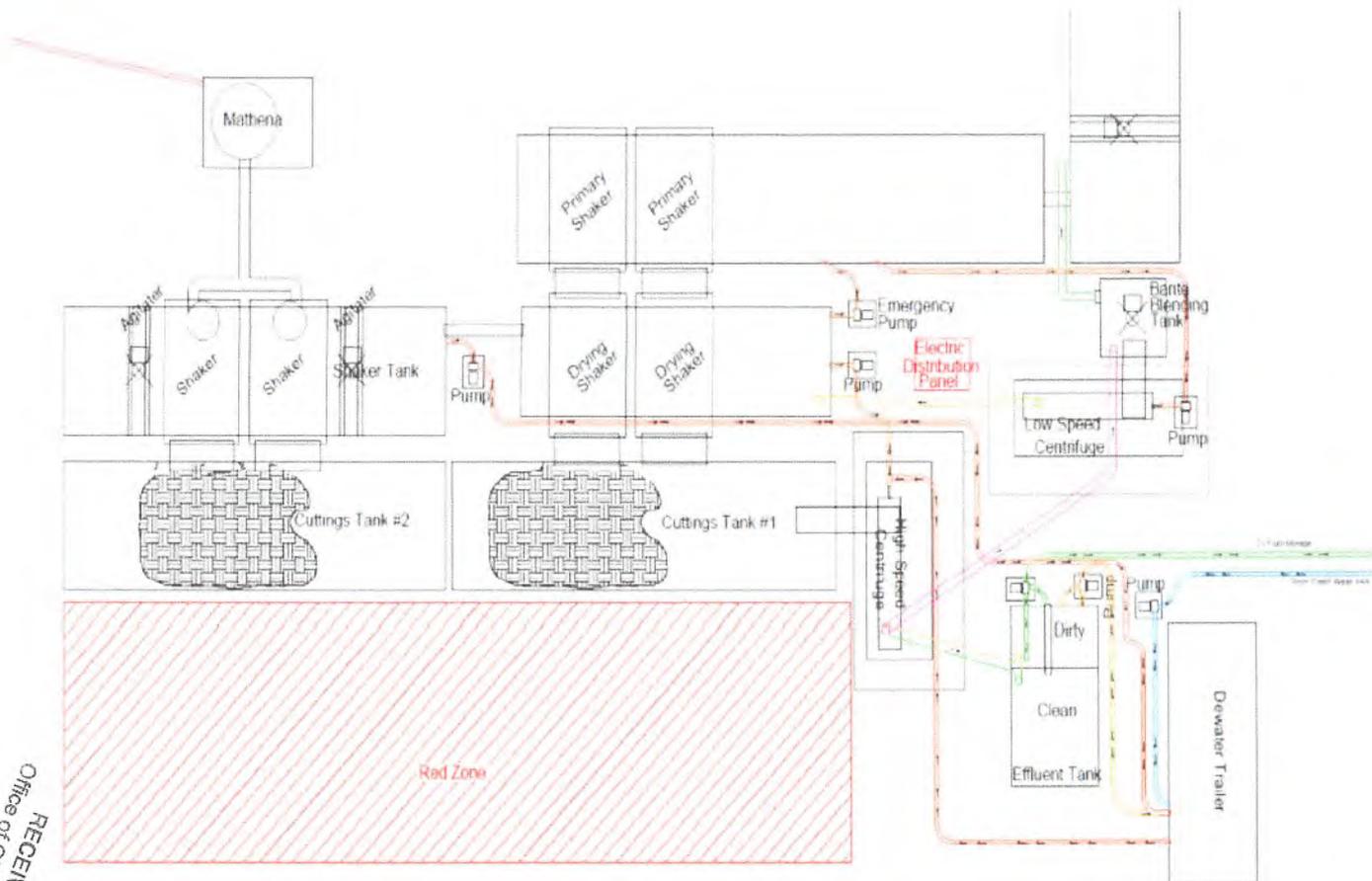
When drilling is converted to liquids drilling, the shale gas separator and associated shaker tank are bypassed, and the liquids system is processed over the primary and drying shaker systems. Cuttings drop into the cuttings tank for additional processing. Any recoverable associated liquids attached to the cutting are recovered out the tank and processed through the low gravity (high speed) and barite recovery centrifuges (low speed) to further remove low gravity solids and to recover barite for reuse in the mud systems.

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Solids Control Layout



EXAMPLE SCHEMATIC FOR CLOSED LOOP SOLIDS CONTROL SYSTEM



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Attachment 3B
Drilling Mediums

Surface/Coal(if present)/Freshwater Intervals:

Air

Freshwater (if needed based on conditions)

Intermediate/Coal (if present):

Air

Production Hole:

Air

Synthetic Oil (Base Fluid for mud system)

Barite

Calcium Chloride

Lime

Organophilic Bentonite

Primary and Secondary Emulsifiers

Gilsonite

Calcium Carbonate

Friction Reducers

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WVD Seeding Specification

R²
A → V⁺

To Order Seed contact Lyndsi Eddy Flippo office 570-996-4271 cell 501-269-5451 lyndsi_eddy@swn.com (please allow 7 to 10 days for delivery)

NON-ORGANIC PROPERTIES	
Seed Mixture: ROW Mix	SWN Supplied
Orchardgrass	40%
Timothy	15%
Annual Ryegrass	15%
Brown Top Millet	5%
Red Top	5%
Medium Red Clover	5%
White Clover	5%
Birdsfoot Trefoil	5%
Rough Bluegrass	5%
All legumes are innoculated at 5x normal rate	
Apply @ 100lbs per acre April 16th- Oct. 14th	
Apply @ 200lbs per acre Oct. 15th- April 15th PLUS 50lbs per acre of Winter Wheat	

SOIL AMENDMENTS	
10-20-20 Fertilizer	*Apply @ 500lbs per Acre
Pelletized Lime	Apply @ 2 Tons per Acre
*unless otherwise dictated by soil test results	

Seeding Calculation Information:	
1452' of 30' ROW/LOD is One Acre	
871' of 50' ROW/LOD is One Acre	
622' of 70' ROW/LOD is One Acre	

Synopsis:
Every 622 linear feet in a 70' ROW/LOD, you should be using (2) 50lb bags of seed, (4) 50lb bags of fertilizer and (80) 50lb bags of Lime (2x seed in winter months + 50lb Winter Wheat/ac).

Special Considerations:
Landowner Special Considerations including CREP program participants require additional guidance that is not given here. Discuss these requirements with SWN supervision at the beginning of the project to allow time for special seed delivery.

ORGANIC PROPERTIES	
Seed Mixture: SWN Production Organic Mix	SWN Supplied
Organic Timothy	50%
Organic Red or White Clover	50%
OR	
Organic Perennial Ryegrass	50%
Organic Red or White Clover	50%
Apply @ 100lbs per acre April 16th- Oct. 14th	
Organic Fertilizer @ 200lbs per Acre	
Apply @ 200lbs per acre Oct. 15th- April 15th	
Pelletized Lime @ 2 Tons per Acre	

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WETLANDS (delineated as jurisdictional wetlands)	
Seed Mixture: Wetland Mix	SWN Supplied
VA Wild Ryegrass	20%
Annual Ryegrass	20%
Fowl Bluegrass	20%
Cosmos 'Sensation'	10%
Redtop	5%
Golden Tickseed	5%
Maryland Senna	5%
Showy Tickseed	5%
Fox Sedge	2.5%
Soft Rush	2.5%
Woolgrass	2.5%
Swamp Verbena	2.5%
Apply @ 25lbs per acre April 16th- Oct. 14th	
Apply @ 50lbs per acre Oct. 15th- April 15th	
NO FERTILIZER OR LIME INSIDE WETLAND LIMITS	

MARCELLUS WELL DRILLING PROCEDURES AND WELL SITE SAFETY PLAN



SWN Production Company, LLC
1300 Fort Pierpont Drive, Suite 201
Morgantown, West Virginia 26508

API NO. 47-XXX-XXXXX
WELL NAME: Carl Rotter OHI 206H
Valley Grove QUAD
Liberty DISTRICT
OHIO COUNTY, WEST VIRGINIA

Submitted by:

Name: Brittany Woody

Date: 9/17/2020

Title: Senior Regulatory Analyst

SWN Production Co., LLC

Approved by:

Name:

Date: 11.6.20

Title: Oil and Gas Inspector

Approved by:

Name: _____

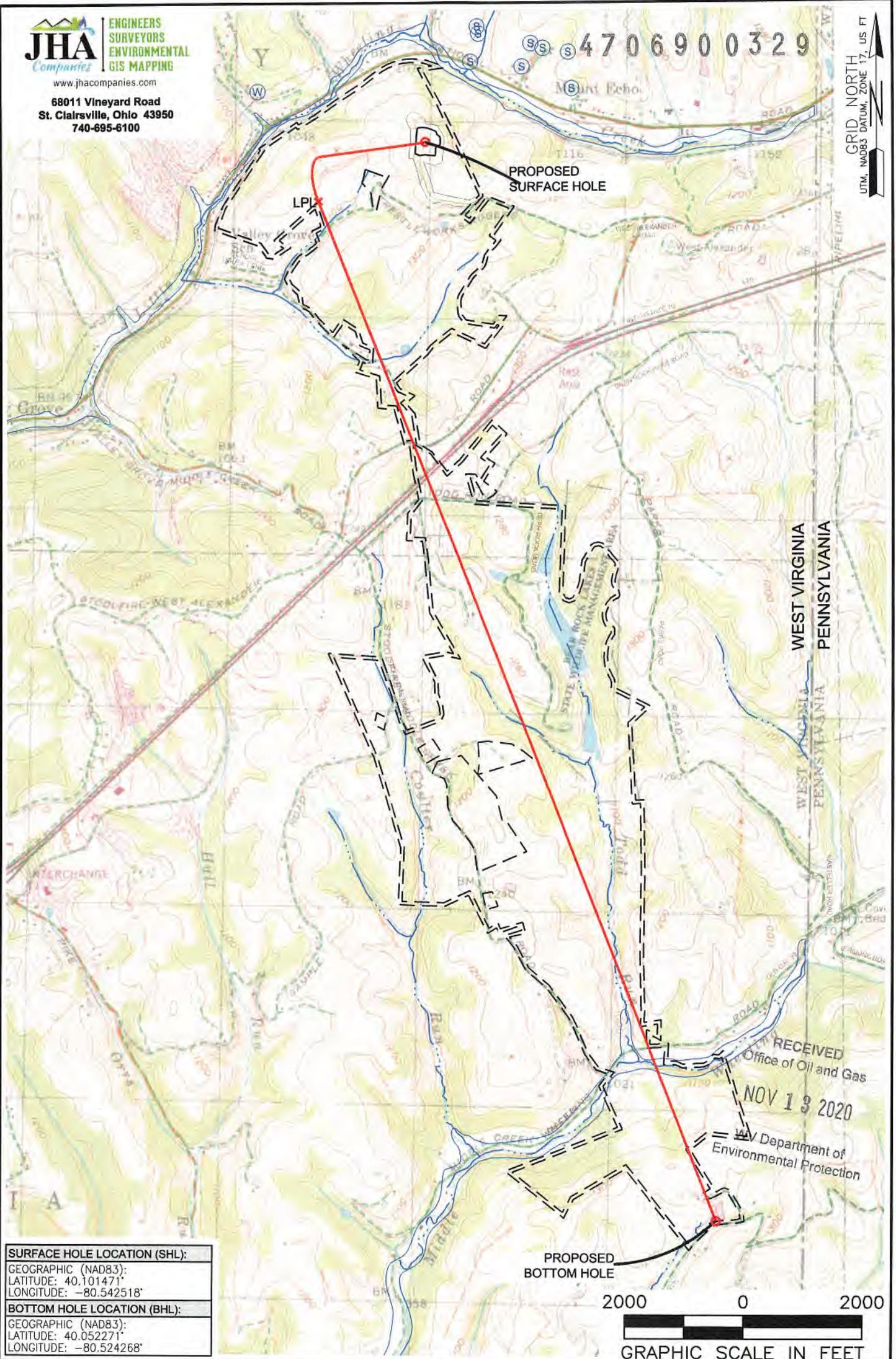
Date: _____

Title: _____

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47 06 90 03 29

GRID NORTH
 UTM, NAD83 DATUM, ZONE 17, US FT



SURFACE HOLE LOCATION (SHL):
GEOGRAPHIC (NAD83):
LATITUDE: 40.101471°
LONGITUDE: -80.542518°
BOTTOM HOLE LOCATION (BHL):
GEOGRAPHIC (NAD83):
LATITUDE: 40.052271°
LONGITUDE: -80.524268°

NOTES ON SURVEY

1. SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND/OR FIELD LOCATIONS.
2. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
3. ALL INSETS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.

LEGEND:

- PROPOSED SURFACE HOLE / BOTTOM HOLE
- EXISTING / PRODUCING WELLHEAD
- LPL* LANDING POINT LOCATION
- FLOOD PLAIN
- NATURAL WATERWAY
- ACCESS ROAD
- PUBLIC ROAD
- ACCESS ROAD TO PREV. SITE
- LEASE BOUNDARY
- PROPOSED PATH

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	WELL (FARM) NAME: CARL ROTTER OHI	WELL # 206H	SERIAL # XXXX
ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201, MORGANTOWN, WV 26508	COUNTY: OHIO	CODE: 9	DISTRICT: LIBERTY
SURFACE OWNER: CARL J. & GRACE A. ROTTER	USGS 7 1/2 QUADRANGLE MAP NAME: VALLEY GROVE, WV		
		API # 47-69-XXXX	

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LATITUDE: 40°07'30" SURFACE HOLE (2000' SCALE) 307'

6830'
LATITUDE: 40°05'00" BOTTOM HOLE (2000' SCALE)



www.jhacompanies.com

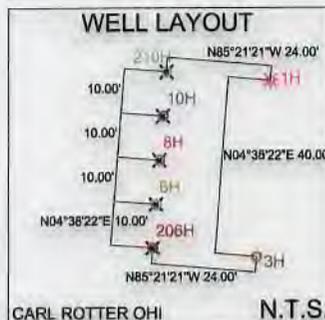
68011 Vineyard Road
St. Clairsville, Ohio 43950
740-695-6100

GRID NORTH
UTM, NAD83 DATUM, ZONE 17, US FT

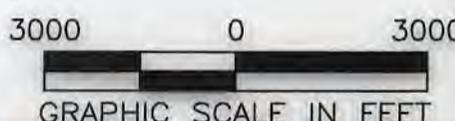
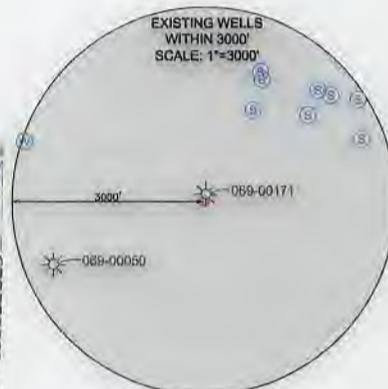
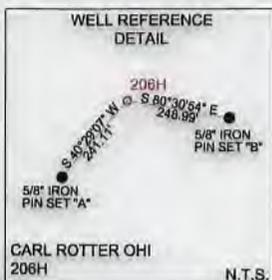


NOTES ON SURVEY

1. COORDINATE SYSTEM IS UTM NAD 83 DATUM, ZONE 17, U.S. FOOT AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.
2. SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND/OR FIELD LOCATIONS.
3. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
4. NO DWELLINGS OR BUILDINGS WITHIN 625 FEET OF PROPOSED CENTER OF PAD.
5. NO PERENNIAL STREAMS, LAKES, PONDS, RESERVOIRS OR WETLANDS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
6. NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF THE LIMITS OF DISTURBANCE.
7. NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.



LINE	BEARING	DISTANCE
L1	S37°18'04"W	1436.11'
L2	S31°35'47"W	1611.21'



SURFACE HOLE LOCATION (SHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4439119.88 EASTING: 538992.70
LANDING POINT LOCATION (LPL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4438809.43 EASTING: 538449.48
BOTTOM HOLE LOCATION (BHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4433667.26 EASTING: 540577.41

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 REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

P.S. 2041

COMPANY: **SWN** Production Company, LLC

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
WVDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25034

MINIMUM DEGREE OF ACCURACY: 1/200
PROVEN SURVEY SOURCE OF ELEVATION: SURVEY GRADE GPS (NAVD 88, US FT)

CARL ROTTER OHI
OPERATOR'S WELL #: 206H
API WELL #: 47 069 00329
STATE COUNTY PERMIT

WELL TYPE: OIL WASTE DISPOSAL PRODUCTION DEEP GAS LIQUID INJECTION STORAGE SHALLOW

WATERSHED: UPPER OHIO SOUTH
DISTRICT: LIBERTY COUNTY: OHIO
SURFACE OWNER: CARL J. & GRACE A. ROTTER
OIL & GAS ROYALTY OWNER: CARL J. & GRACE A. ROTTER

DRILL DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION

CONVERT PLUG & ABANDON CLEAN OUT & REPLUG OTHER CHANGE | (SPECIFY)

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 6,802' TVD 25,616' TMD

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201 CITY: MORGANTOWN STATE: WV ZIP CODE: 26508
DESIGNATED AGENT: BRITTANY WOODY ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201 CITY: MORGANTOWN STATE: WV ZIP CODE: 26508

LEGEND:	REVISIONS:	DATE: 10-08-2020
○ PROPOSED SURFACE HOLE / BOTTOM HOLE		API NO: 47-069-XXXXX
⊙ EXISTING / PRODUCING WELLHEAD		DRAWN BY: R. GRIMES
LPL LANDING POINT LOCATION		SCALE: 1" = 3000'
⊙ EXISTING WATER WELL		DRAWING NO: 2018-0153
⊙ EXISTING SPRING		WELL LOCATION PLAT
— NATURAL WATERWAY		
— SURVEYED BOUNDARY		
— LEASE BOUNDARY		
— PROPOSED PATH		
— PUBLIC ROAD		

LONGITUDE: 80°30'00" BOTTOM HOLE (2000' SCALE) 11365'

8567'
LONGITUDE: 80°32'30" SURFACE HOLE (2000' SCALE)

WELL BORE TABLE FOR SURFACE/ROYALTY OWNERS		
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL
1	ROTTER CARL J & GRACE A (S/R)	3-111-50
TRACT	SURFACE OWNER	TAX PARCEL
2	NOLAN JOHN A JR	3-111-61
3	ROTTER CARL J & GRACE A	3-111-65
4	ROTTER CARL J & GRACE A	3-111-64
5	DAVIS DONNA E, WEASE RHONDA	3-111-49
6	STATE OF WEST VIRGINIA DEPARTMENT OF HIGHWAYS	FRESTLEWORK ROGERS RD
7	TUNNEL RIDGE LLC	3-111-55
8	WEASE DUANE L & RHONDA L	3-111-58
9	WEASE DUANE L & RHONDA L	3-111-55.2
10	TUNNEL RIDGE LLC	3-111-55.1
11	KLAGES LLOYD A JR	3-111-46.18
12	DEAN LAWRENCE J II & JANET S	3-114-49
13	SPEAKER BERNARD P & AMY L	3-114-24.2
14	DEAN LAWRENCE J II & MICHELLE R	3-114-24.4
15	TUNNEL RIDGE LLC	3-114-24.1
16	BAKER BRUCE A & TAMMY A	3-114-52.4
17	STATE OF WEST VIRGINIA DEPARTMENT OF HIGHWAYS	STOOLFIRE/WEST ALEXANDER ROAD
18	TUNNEL RIDGE LLC	3-114-32
19	STATE OF WEST VIRGINIA DEPARTMENT OF HIGHWAYS	INTERSTATE 70
20	BLAZIER ROBERT BRENT	3-114-31
21	WEST VIRGINIA DEPARTMENT OF NATURAL RESOURCES	3-114-29
22	CONSERVATION COMM OF W VA	6-115-1
23	ADAMS CAROLE JOYCE	6-114-6
24	ADAMS THOMAS E & AMANDA BAKER	6-114-8.1
25	DAGUE FREDERICK W	6-119-48
26	RIGGLE PAUL, RIGGLE KIMBERLY	6-119-48.5
27	KOZIK JOHN A & JAMES E	6-119-49
28	KOZIK JOHN A & CHERYL A	6-119-12
29	WILD LIFE LEAGUE OF OHIO CO	6-110-2
30	NICK GREGORY W & ELIZABETH I	6-110-5.1
31	HAUGHT RANDY T & BRITTANY L	6-110-5.7
32	KRUPINSKI MARK D & PATTISHALL JAN M	6-110-5.6
33	STRAWN REX M & BETH ANN	6-110-11.2
34	ALDERMAN CHRISTINA M, C/O GARRETT CHRISTINA	6-110-11.5
35	GARRETT CHRISTINA M & AMBER C MOORE	6-110-11
36	GARRETT CHRISTINA M & ALDERMAN BRANDI N	6-110-11.1
ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	GRIFFITH SHARON & WARREN	3-111-60.1
B	SCHMIDT TODD R	3-111-46.22
C	POWERS JEFFREY B	3-111-46.20
D	KLAGES PROPERTIES LLC	3-111-46.9
E	WOLEN JOHN J & MICHELLE L	3-111-46.11
F	HOMESTEAD FARMS LLC	3-111-46
G	MOORE SCOTT E & LEAH	3-111-46.10
H	OHIO RIVER COLLIERIES COMPANY	3-111-46.3
I	KING PATRICK R	3-111-46.7
J	HENDERSON DENNIS C & MURPHY PATRICIA A	3-114-51
K	TUNNEL RIDGE LLC	3-114-51
L	TUNNEL RIDGE LLC	3-114-52.1
M	CAROLLA FRANK A JR	3-114-52.2
N	TUNNEL RIDGE LLC	3-114-52.3
O	TUNNEL RIDGE LLC	3-114-52.24
P	TUNNEL RIDGE LLC	3-114-52.26
Q	TUNNEL RIDGE LLC	3-114-52.33
R	TUNNEL RIDGE LLC	3-114-52.32
S	TUNNEL RIDGE LLC	3-114-52.34
T	SMITH WESLEY DALE, BETTY ANN	3-114-52.39
U	HUNTLEY CHAD D & SUSAN L	3-114-52.7
V	WINTERS ROBERT E	3-114-52.19
W	KNICELY GERALD L & JO ANN, TR 2009 KNICELY FAMILY IRR TRUST	3-114-52.20

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
X	HEWITT PATRICIA E	3-114-52.6
Y	TUNNEL RIDGE LLC	3-114-33
Z	TULLY JAMES M & VERONICA	3-114-31.2
AA	TULLY JAMES M & VERONICA	3-114-31.1
AB	GARRETT JOHN W & CHRISTINA M	3-114-31.6
AC	ERNEST DEBORAH J	3-114-31.5
AD	HOCKENBERRY JAMES MICHAEL	3-114-31.3
AE	HOCKENBERRY JAMES MICHAEL	3-114-31.7
AF	BROWN MARCINDA LEE & GARY	3-114-31.8
AG	GARRETT JOHN W & CHRISTINA	3-114-37
AH	NIETZELT EDWARD L	3-114-38
AI	PAGENDARM PATRICIA M	3-115-2.2
AJ	WEST VIRGINIA DIVISION OF NATURAL RESOURCES	6-115-2
AK	JONES DOROTHY S & GIVENS HERSCHELL	6-115-2.2
AL	DAVIS JOHN R & ADA I	6-115-2.1
AM	DAVIS JOHN RICHARD & ADA I	6-115-2.3
AN	DAVIS JOHN RICHARD JR & ADA I	6-115-6
AO	DAVIS JOHN RICHARD ET AL	6-110-1
AP	WINESBURG MICHAEL I	6-110-5.4
AQ	PHILLIPS VANCE A & BRIANNE L	6-110-5.5
AR	NICK CLINTON W & JENNIFER M	6-110-5.2
AS	HOCKING GEORGE M & JOAN ANN - TOD	6-110-5.10
AT	NICK CLINTON W NICK JENNIFER M	6-110-5.3
AU	KRUPINSKI MARK D & PATTISHALL JAN M	6-110-5
AV	KRUPINSKI MARK D & PATTISHALL JAN M	6-110-9
AW	LEMMON WADE LEE, LEMMON JOSHUA, LEMMON MORGAN	6-110-10
AX	ALDERMAN ROY M	6-110-11.6
AY	ALDERMAN ROY M	6-110-11.3
AZ	ALDERMAN ROY M	6-110-11.7
BA	WHITEMAN FLORENCE J	6-115-11
BB	MACRI GARY A	6-115-11.2
BC	SMITH WAYNE P & GRACE A	6-115-2
BD	ALDERMAN ROY & BRANDI	6-115-3
BE	MCCONN MICHELE M TRUSTEE	6-115-4
BF	STRAWN REX M & BETH ANN	6-114-36.1
BG	STRAWN HAROLD REX	6-110-33
BH	SLIGAR DAVID B & EASTER A	6-110-7
BI	MCDONALD MICHAEL W & VALERIE R	6-119-51
BJ	MCDONALD ZACHARY MICHAEL	6-119-51.2
BK	KOZIK KALEIGH A. & MCKENZIE CHAD A	6-119-49.3
BL	HENDERSON JOHN M & HENDERSON ELIZABETH STARR	6-119-51.1
BM	HENDERSON JOHN M & HENDERSON ELIZABETH STARR	6-119-50
BN	HENDERSON JOHN M & DAVID L	6-119-34
BO	DAGUE FREDERICK W	6-119-45
BP	DAGUE FREDERICK W	6-119-45.1
BQ	BLACK SCOTT A	6-114-7
BR	LEWTON TIMOTHY M ET AL LEWTON FREDERICK M - LE	6-114-7.3
BS	HRUTKAY LISA	6-114-11
BT	HASENAUER RICHARD W & MARGARET K	6-114-11.2
BU	HASENAUER RICHARD W & MARGARET K	6-114-11.1
BV	HASENAUER RICHARD W & MARGARET K	6-114-11.3
BW	LEWTON TIMOTHY M ET AL LEWTON FREDERICK M - LE	6-114-10
BX	LEWTON SUE ANN	6-114-10.1
BY	BLAZIER BETH ANN	3-114-27.31
BZ	TUNNEL RIDGE LLC	3-114-27.37
CA	HICKS PAUL F JR & HICKS TANYA R	3-114-27
CB	TUNNEL RIDGE LLC	3-114-52.18
CC	TUNNEL RIDGE LLC	3-114-52.21
CD	YOURKOVICH JEFFREY	3-114-52.22
CE	JONES CHARLES & MARGARET	3-114-52.23
CF	SALOMON GREG F & CARNAHAN JAN M	3-114-24.3
CG	KLEEH CHAD D, KLEEH TAMI L & WATSON GARY	3-114-28
CH	KLEEH TAMI L	3-114-23
CI	KLEEH CHAD D, KLEEH TAMI L & WATSON GARY	3-114-23.1
CJ	WATSON GARY L	3-114-21
CK	HEINRICH EARNEST J III & ANGELA R	3-114-22
CL	WILDAMSON TERRY L	3-114-30
CM	NEIDHARDT CHRISTOPHER E & MARY BETH	3-111-38
CN	MULL CLYDE E JR AND HEIDI L	3-111-42.3
CO	MULL CLYDE E JR; HEIDI L MULL	3-111-55.3
CP	RAWLEY ELIZABETH (DCC) RAWLEY ROGER LEE	3-111-40
CQ	WV DOT	3-111-34.3
CR	TUNNEL RIDGE LLC	3-111-34.2
CS	TUNNEL RIDGE LLC	3-111-49.1
CT	DAVIS DANIEL R & DAVIS DONNA EVANS	3-111-49.3
CU	TUNNEL RIDGE LLC	3-111-56
CV	TUNNEL RIDGE LLC	3-111-34.1
CW	TUNNEL RIDGE LLC	3-111-71
CX	TUNNEL RIDGE LLC	3-111-72
CY	NOLAN JOHN A JR	3-111-66
CZ	TUNNEL RIDGE LLC	3-112-32
DA	DAVIS DONNA E & DANIEL R	3-111-50
DB	DAVIS DONNA EVANS & DANIEL R	3-111-49.2
DC	ROTTER C J & GRACE A	3-111-52
DD	ROTTER C J & GRACE A	3-111-53
DE	HACKATHORN TINA RAE & DAVID T JR	6-114-12
DF	STENGER WILLIAM J JR & SHIRLEY A	6-119-48.2
DG	GARRETT HAROLD R	6-119-48.1
DH	RIGGLE PAUL & KIMBERLY M	6-119-48.6
DI	RIGGLE PAUL, RIGGLE KIMBERLY	6-119-48.4
DJ	KOZIK JOHN A & CHERYL A	6-119-49.2
DK	KOZIK JAMES E & HEATHER L	6-119-49.1

10/21/2022

REVISIONS:	COMPANY: SWN Production Company, LLC		DATE: 10-08-2020	
	OPERATOR'S: CARL ROTTER OHI		API NO: 47-069-XXXX	
	WELL #: 47-069-00329 - H4A 206H		DRAWN BY: R. GRIMES	
	DISTRICT: LIBERTY	COUNTY: OHIO	STATE: WV	SCALE: N/A
				DRAWING NO: 2018-0153
				WELL LOCATION PLAT

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6A, Section 5(a)(5)
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:

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
See Exhibit				

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Office of Oil and Gas
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WV Department of
Environmental Protection

**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.

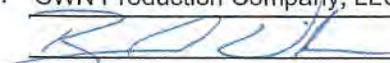
Well Operator: SWN Production Company, LLC.
 By: 
 Its: Senior Landman

EXHIBIT "A"

Attached to and made a part of the State of West Virginia Oil and Gas Permit Form, WW-6A1, by SWN Production Company, LLC Operator
 Carl Rotter OHI 206H
 Ohio County, West Virginia

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#	TMP	LESSOR	LESSEE	ROYALTY	BK/PG
✓ 1)	3-L11-54	Carl J. and Grace A. Rotter, husband and wife	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50%	791/16 885/248
✓ 2)	3-L11-61	John A. Nolan, Jr., a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	837/743 885/728
✓ 3)	3-L11-65	Carl J. and Grace A. Rotter, husband and wife	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50%	791/16 885/248
✓ 4)	3-L11-64	Carl J. and Grace A. Rotter, husband and wife	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50%	791/16 885/248
✓ 5)	3-L11-49	Rhonda Evans Wease, a married woman dealing in her sole and separate property Donna Evans Davis, a married woman dealing in her sole and separate property	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50% 12.50%	792/557 885/260 792/562 885/260
✓ 6)	Trestlework Rogers Road	West Virginia Department of Transportation, Division of Highways	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	15.00%	860/5 883/766
✓ 7)	3-L11-55	Mary Talbott, a married woman dealing in her sole and separate property Gilbert Wilson, a single man Virginia Fetty, widow	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50% 12.50% 12.50%	792/334 885/260 792/350 885/260 792/338 885/260
✓ 8)	3-L11-58	Mary Talbott, a married woman dealing in her sole and separate property Gilbert Wilson, a single man	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50% 12.50%	792/334 885/260 792/350 885/260

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 Carl Rotter OHI 206H
 Ohio County, West Virginia

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		Virginia Fetty, widow	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50%	792/338 885/260
9)	3-L11-55.2	Mary Talbott, a married woman dealing in her sole and separate property Gilbert Wilson, a single man	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50% 12.50%	792/334 885/260 792/350 885/260
		Virginia Fetty, widow	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50%	792/338 885/260
10)	3-L11-55.1	Mary Talbott, a married woman dealing in her sole and separate property Gilbert Wilson, a single man	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50% 12.50%	792/334 885/260 792/350 885/260
		Virginia Fetty, widow	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50%	792/338 885/260
11)	3-L11-46.18	Lloyd A. Klages and Bertha L. Klages, his wife	Great Lakes Energy Partners, L.L.C. Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50%	778/278 808/521 883/515
12)	3-L14-49	Alliance Resource GP, LLC	SWN Production Company, LLC	18.00%	946/111
13)	3-L14-24.2	Bernard P. Speaker and Amy L. Speaker, husband and wife	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	818/559 885/560
14)	3-L14-24.4	Lawrence J. Dean, II & Janet S. Dean, husband and wife	SWN Production Company, L.L.C.	18.00%	938/408
		Donna Lu Hicks, a single woman	SWN Production Company, LLC	16.00%	980/693
15)	3-L14-24.1	Robert J. Kalany Jr. and Patricia D. Kalany, husband and wife	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	859/572 883/754

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Carl Rotter OHI 206H
Ohio County, West Virginia

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16)	3-L14-52.4	Bruce A. Baker & Tammy A. Baker, husband and wife	SWN Production Company, LLC	18.00%	946/53
17)	Stoolfire/West Alexander Rd	West Virginia Department of Transportation, Division of Highways	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	15.00%	873/389 885/536
18)	3-L14-32	Master Minerals Holdings II, L.P., a Texas Limited Partnership, by and through its general partner, PBEX Resources, LLC, a Texas limited liability company	SWN Production Company, LLC	17.00%	990/32
19)	I-70	Master Minerals Holdings II, L.P., a Texas Limited Partnership, by and through its general partner, PBEX Resources, LLC, a Texas limited liability company Robert Brent Blazier, a single man	SWN Production Company, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	17.00% 18.00%	990/32 863/151 883/766
20)	3-L14-31	Robert Brent Blazier, a single man	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	863/151 883/766
21)	3-L14-29	State of West Virginia, Department of Commerce, Division of Natural Resources	SWN Production Company, LLC	15.00%	974/420
22)	6-T5-1	State of West Virginia, Department of Commerce, Division of Natural Resources	SWN Production Company, LLC	15.00%	974/434
23)	6-T4-8	Carole Joyce Adams, a single woman	NPAR, LLC Chevron U.S.A. Inc. Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	814/333 827/284 867/713 885/320
24)	6-T4-8.1	Thomas E. Adams and Amanda Baker Adams, his wife	NPAR, LLC Chevron U.S.A. Inc. Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	819/74 827/284 867/713 885/320

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 Carl Rotter OHI 206H
 Ohio County, West Virginia

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 WV Department of
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25)	6-T9-48	Frederick W. Dague, a single man	NPAR, LLC Chevron U.S.A. Inc. Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	815/448 827/284 867/713 884/277
26)	6-T9-48.5	Ridgetop Capital II, LP	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	875/103 884/361
27)	6-T9-49	John A. Kozik and James E. Kozik	TriEnergy, Inc TriEnergy Holdings, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50%	791/101 791/171 798/653 885/524
28)	6-T10-12	John A. Kozik and Cheryl A. Kozik, husband and wife	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	854/104 885/428
29)	6-T10-2	Wild Life League of Ohio County, West Virginia, Inc. Jeanie Lee Skipwith, a married woman dealing in her sole and separate property William Russell Pethtel, a married man dealing in his sole and separate property Ruth Ann Myers, a married woman dealing in her sole and separate property Robert Leroy Pethtel, a married man dealing in his sole and separate property Harold Rex Strawn, a married man dealing in his sole and separate property	Great Lakes Energy Partners, L.L.C. Chesapeake Appalachia, L.L.C. SWN Production Company, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50% 18.00% 18.00% 18.00% 18.00% 18.00%	777/96 853/553 808/556 883/192 853/751 885/428 853/756 885/428 853/761 885/428 853/766 885/428 854/276 885/428

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 Carl Rotter OHI 206H
 Ohio County, West Virginia

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Bonnie Jean Evans f/k/a Bonnie Jean Hand, a widow	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	854/281 885/428
Easter Ann Sligar, a married woman dealing in her sole and separate property	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	854/286 885/428
Jennifer Lynn Spielvogel f/k/a Jennifer Lynn Blazier, a married woman dealing in her sole and separate property	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	854/291 885/428
H. Naomi Miller, a widow	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	854/296 885/428
James A. Strawn, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	854/301 885/440
Mary Lee Jorgenson, a married woman dealing in her sole and separate property	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	854/306 885/440
Myrna Jo Strawn f/k/a Myrna Jo Henderson, a single woman	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	854/311 885/428
Jane Lou Lewton, a married woman dealing in her sole and separate property	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	854/688 885/428
Kent D. Blazier a/k/a Kent W. Blazier, a single man	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	854/693 885/428
Harry W. Blazier, a single man	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	854/698 885/428
Sharon E. Kepke, a single woman	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	854/707 885/440
George William Strawn, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	854/712 885/440
Richard Lewis Strawn, a single man	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	855/615 885/440

EXHIBIT "A"

Attached to and made a part of the State of West Virginia Oil and Gas Permit Form, WW-6A1, by SWN Production Company, LLC, Operator
 Carl Rotter OHI 206H
 Ohio County, West Virginia

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		Martha Hoffmann a/k/a Martha Mae Hoffman, a married woman dealing in her sole and separate property	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	855/642 885/440
		D. Colleen Martsolf a/k/a Colleen Martsolf, a married woman dealing in her sole and separate property	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	855/647 885/440
		Joan Strawn, a widow	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	855/673 885/440
		John E. Strawn a/k/a J. Edward Strawn, a married man dealing in his sole and separate property, by and through his Attorney-in-Fact, Jennifer R. Strawn	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	855/679 884/277
		Susan E. Nannarone, a married woman dealing in her sole and separate property	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	855/684 885/440
		Linda M. Jenkins a/k/a Linda L. Jenkins and Harold Jenkins, wife and husband	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	856/633 884/277
		Paul C. Hoy Jr., a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	856/670 884/277
		Anne M. Frayne, a widow	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	857/472 884/277
		Mary Alice Amos, a married woman dealing in her sole & separate property	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	853/775 885/428
		John W. Stephenson & Janet R. Stephenson, husband and wife	SWN Production Company, LLC	18.00%	984/743
		Sharon Rothwell, by Charles Rothwell, as Attorney-in-Fact	SWN Production Company, LLC	18.00%	984/737
30)	6-T10-5.1	Jeanie Lee Skipwith, a married woman dealing in her sole and separate property	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	853/751 885/428
		William Russell Pethtel, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	853/756 885/428

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		Ruth Ann Myers, a married woman dealing in her sole and separate property	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	853/761 885/428
		Robert Leroy Pethtel, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	853/766 885/428
		Mary Alice Amos, a married woman dealing in her sole & separate property	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	853/775 885/428
		Gregory W. Nick & Elizabeth I. Nick, husband and wife	SWN Production Company, LLC	17.00%	989/733
31)	6-T10-5.7	SWN Production Company, LLC (Company Owned Minerals)		12.50%	963/558 (Mineral Deed)
32)	6-T10-5.6	SWN Production Company, LLC (Company Owned Minerals)		12.50%	963/558 (Mineral Deed)
33)	6-T10-11.2	Rex M. & Beth Ann Strawn, Husband & Wife	Great Lakes Energy Partners, L.L.C. Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	15.50%	771/296 853/558 808/343 883/192
34)	6-T10-11.5	Roy M. Alderman, a married man acting in his sole and separate property	NPAR, LLC Chevron U.S.A. Inc. Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	815/436 827/269 867/713 885/296
		Christina M. Alderman, a married woman acting in her sole and separate property	NPAR, LLC Chevron U.S.A. Inc. Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	815/436 827/269 867/713 885/296
35)	6-T10-11	Betty J. Midcap	American Petroleum Partners Operating, LLC SWN Production Company, LLC	16.00%	928/734 980/572

EXHIBIT "A"

Attached to and made a part of the State of West Virginia Oil and Gas Permit Form, WW-6A1, by SWN Production Company, LLC, Operator
Carl Rotter OHI 206H
Ohio County, West Virginia

36)	6-T10-11.1	Betty J. Midcap	American Petroleum Partners Operating, LLC	16.00%	928/734
			SWN Production Company, LLC		980/572

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SWN Production Company, LLC
1300 Fort Pierpont Dr, Ste 201
Morgantown, WV 26508
Tel: 304 884 1610
Fax: 304 471 2497
www.swn.com

October 27, 2020

Ms. Laura Adkins
WV DEP Office of Oil & Gas
601 57th St., SE
Charleston, WV 25304

RE: SWN's proposed New Well: Carl Rotter OHI 206H in Ohio County, West Virginia, Drilling under Trestleworks Rogers Road, Interstate 70, Stoolfire-West Alexander Road, Todd Run Road, and C.R. 39.

Dear Ms. Adkins:

SWN Production Company, LLC ("SWN") is applying for a drilling permit for the above referenced well. The State of West Virginia has raised some concern as to SWN's right to drill under Trestleworks Rogers Road, Interstate 70, Stoolfire-West Alexander Road, Todd Run Road, and C.R. 39. Please be advised that SWN has leased all mineral owners under said route as it relates to the above-referenced well and unit.

Thank you.

Sincerely,

Bradley Wilson
Senior Landman
SWN Production Company, LLC

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The Right People doing the Right Things,
wisely investing the cash flow from our
underlying Assets, will create value. 10/21/2022

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE CERTIFICATION

Date of Notice Certification: 11/12

API No. 47- 069 -
Operator's Well No. Carl Rotter OHI 206H
Well Pad Name: Carl Rotter OHI Pad

Notice has been given:

Pursuant to the provisions in West Virginia Code § 22-6A, the Operator has provided the required parties with the Notice Forms listed below for the tract of land as follows:

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>538,992.70</u>
County:	<u>069-Ohio</u>		Northing:	<u>4,439,119.88</u>
District:	<u>Liberty</u>	Public Road Access:	<u>Rodgers Road</u>	
Quadrangle:	<u>Valley Grove</u>	Generally used farm name:	<u>Carl Rotter OHI</u>	
Watershed:	<u>Upper Ohio South</u>			

Pursuant to West Virginia Code § 22-6A-7(b), every permit application filed under this section shall be on a form as may be prescribed by the secretary, shall be verified and shall contain the following information: (14) A certification from the operator that (i) it has provided the owners of the surface described in subdivisions (1), (2) and (4), subsection (b), section ten of this article, the information required by subsections (b) and (c), section sixteen of this article; (ii) that the requirement was deemed satisfied as a result of giving the surface owner notice of entry to survey pursuant to subsection (a), section ten of this article six-a; or (iii) the notice requirements of subsection (b), section sixteen of this article were waived in writing by the surface owner; and Pursuant to West Virginia Code § 22-6A-11(b), the applicant shall tender proof of and certify to the secretary that the notice requirements of section ten of this article have been completed by the applicant.

Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following: *PLEASE CHECK ALL THAT APPLY <input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED <input checked="" type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED <input checked="" type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or <input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH) <input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION <input checked="" type="checkbox"/> 5. PUBLIC NOTICE <input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION		OOG OFFICE USE ONLY <input type="checkbox"/> RECEIVED/ NOT REQUIRED <input checked="" type="checkbox"/> RECEIVED <input checked="" type="checkbox"/> RECEIVED/ NOT REQUIRED <input checked="" type="checkbox"/> RECEIVED <input checked="" type="checkbox"/> RECEIVED <input checked="" type="checkbox"/> RECEIVED
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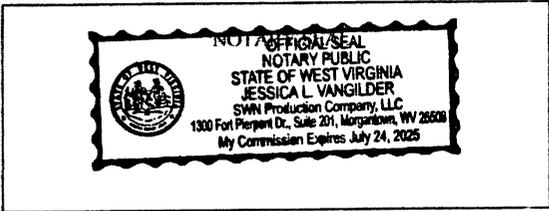
Required Attachments:

The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication date verification or the associated Affidavit of Publication. The attached Notice Forms and Certifications of Notice shall serve as proof that the required parties have been noticed as required under West Virginia Code § 22-6A. Pursuant to West Virginia Code § 22-6A-11(b), the Certification of Notice to the person may be made by affidavit of personal service, the return receipt card or other postal receipt for certified mailing.

Certification of Notice is hereby given:

THEREFORE, I Brittany Woody, have read and understand the notice requirements within West Virginia Code § 22-6A. I certify that as required under West Virginia Code § 22-6A, I have served the attached copies of the Notice Forms, identified above, to the required parties through personal service, by registered mail or by any method of delivery that requires a receipt or signature confirmation. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Notice Certification 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:	<u>SWN Production Co., LLC</u>	Address:	<u>1300 Fort Pierpont Dr., Suite 201</u>
By:	<u>Brittany Woody</u>		<u>Morgantown, WV 26508</u>
Its:	<u>Senior Regulatory Analyst</u>	Facsimile:	<u>304-884-1690</u>
Telephone:	<u>304-884-1610</u>	Email:	<u>Brittany_Woody@swn.com</u>



Subscribed and sworn before me this 28th day of September, 2020
Jessica L. Vangilder Notary Public
 My Commission Expires 7-24-25

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacy@dep.wv.gov.

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**STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF APPLICATION**

Notice Time Requirement: notice shall be provided no later than the **filing date of permit application.**

Date of Notice: 11/12 **Date Permit Application Filed:** 11/12
Notice of:

- PERMIT FOR ANY WELL WORK CERTIFICATE OF APPROVAL FOR THE CONSTRUCTION OF AN IMPOUNDMENT OR PIT

Delivery method pursuant to West Virginia Code § 22-6A-10(b)

- PERSONAL SERVICE REGISTERED MAIL METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

Pursuant to W. Va. Code § 22-6A-10(b) no later than the filing date of the application, the applicant for a permit for any well work or for a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site Safety Plan ("WSSP") to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Application Notice WSSP Notice E&S Plan Notice Well Plat Notice is hereby provided to:

SURFACE OWNER(s)
Name: Carl J. & Grace A. Rotter
Address: 2 Melrose Dr
Chillicothe, OH 45601

Name: _____
Address: _____

SURFACE OWNER(s) (Road and/or Other Disturbance)
Name: _____
Address: _____

Name: _____
Address: _____

SURFACE OWNER(s) (Impoundments or Pits)
Name: _____
Address: _____

COAL OWNER OR LESSEE
Name: Tunnel Ridge- Alliance Resources GP LLC
Address: 2596 Battle Run Road
Triadelphia, WV 26059

COAL OPERATOR
Name: _____
Address: _____

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Name: None
Address: _____

OPERATOR OF ANY NATURAL GAS STORAGE FIELD
Name: _____
Address: _____

*Please attach additional forms if necessary

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STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF APPLICATION

Notice Time Requirement: notice shall be provided no later than the **filing date of permit application.**

Date of Notice: 11/12 Date Permit Application Filed: 11/12
Notice of:

- PERMIT FOR ANY WELL WORK CERTIFICATE OF APPROVAL FOR THE CONSTRUCTION OF AN IMPOUNDMENT OR PIT

Delivery method pursuant to West Virginia Code § 22-6A-10(b)

- PERSONAL SERVICE REGISTERED MAIL METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

Pursuant to W. Va. Code § 22-6A-10(b) no later than the filing date of the application, the applicant for a permit for any well work or for a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site Safety Plan ("WSSP") to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Application Notice WSSP Notice E&S Plan Notice Well Plat Notice is hereby provided to:

SURFACE OWNER(s)

Name: _____
Address: _____

Name: _____
Address: _____

SURFACE OWNER(s) (Road and/or Other Disturbance)

Name: _____
Address: _____

Name: _____
Address: _____

SURFACE OWNER(s) (Impoundments or Pits)

Name: _____
Address: _____

COAL OWNER OR LESSEE

Name: The Kathleen S. Craft Foundation & The Joseph W. Craft III Foundation
Address: 2502 E. 45th St.
Tulsa, OK 74105-5147

COAL OPERATOR

Name: _____
Address: _____

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)

Name: _____
Address: _____

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: _____
Address: _____

*Please attach additional forms if necessary

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Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-10(b), notice is hereby given that the undersigned well operator has applied for a permit for well work or for a certificate of approval for the construction of an impoundment or pit.

This Notice Shall Include:

Pursuant to W. Va. Code § 22-6A-10(b), this notice shall include: (1) copies of the application; (2) the erosion and sediment control plan required by section seven of this article; and (3) the well plat.

Pursuant to W. Va. Code § 22-6A-10(f), this notice shall include: (1) a statement of the time limits for filing written comments; (2) who may file written comments; (3) the name and address of the secretary for the purpose of filing the comments and obtaining additional information; and (4) a statement that the persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

Pursuant to W. Va. Code R. § 35-8-5.7.a, the operator shall provide the Well Site Safety Plan to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Pursuant to W. Va. Code R. § 35-8-15.2.c, this notice shall: (1) contain a statement of the surface owner's and water purveyor's right to request sampling and analysis; (2) advise the surface owner and water purveyor of the rebuttable presumption for contamination or deprivation of a fresh water source or supply; advise the surface owner and water purveyor that refusal to allow the operator to conduct a pre-drilling water well test constitutes a method to rebut the presumption of liability; (3) advise the surface owner and water purveyor of his or her independent right to sample and analyze any water supply at his or her own expense; advise the surface owner and water purveyor whether or not the operator will utilize an independent laboratory to analyze any sample; and (4) advise the surface owner and or water purveyor that he or she can obtain from the Chief a list of water testing laboratories in the subject area capable of and qualified to test water supplies in accordance with standard acceptable methods.

Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/and-gas/pages/default.aspx.

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Well Location Restrictions

Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No well pad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, nothing contained in this section prevents an operator from conducting the activities permitted or authorized by a Clean Water Act Section 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state or within the restricted areas referenced in this section. (d) The well location restrictions set forth in this section shall not apply to any well on a multiple well pad if at least one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 31, 2012, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items

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examined in the study required by this subsection, the secretary shall have the authority to propose for promulgation legislative rules establishing guidelines and procedures regarding reasonable levels of noise, light, dust and volatile organic compounds relating to drilling horizontal wells, including reasonable means of mitigating such factors, if necessary.

Water Well Testing:

Pursuant to West Virginia Code § 22-6A-10(d), notification shall be made, with respect to surface landowners identified in subsection (b) or water purveyors identified in subdivision (5), subsection (b) of this section, of the opportunity for testing their water well. The operator shall provide an analysis to such surface landowner or water purveyor at their request.

Water Testing Laboratories:

Pursuant to West Virginia Code § 22-6A-10(i), persons entitled to notice pursuant to subsection (b) of this section may contact the department to ascertain the names and locations of water testing laboratories in the subject area capable and qualified to test water supplies in accordance with standard accepted methods. In compiling that list of names the department shall consult with the state Bureau for Public Health and local health departments. A surface owner and water purveyor has an independent right to sample and analyze any water supply at his or her own expense. The laboratory utilized by the operator shall be approved by the agency as being certified and capable of performing sample analyses in accordance with this section.

Rebuttable Presumption for Contamination or Deprivation of a Fresh Water Source or Supply:

W. Va. Code § 22-6A-18 requires that (b) unless rebutted by one of the defenses established in subsection (c) of this section, in any action for contamination or deprivation of a fresh water source or supply within one thousand five hundred feet of the center of the well pad for horizontal well, there is a rebuttable presumption that the drilling and the oil or gas well or either was the proximate cause of the contamination or deprivation of the fresh water source or supply. (c) In order to rebut the presumption of liability established in subsection (b) of this section, the operator must prove by a preponderance of the evidence one of the following defenses: (1) The pollution existed prior to the drilling or alteration activity as determined by a predrilling or prealteration water well test. (2) The landowner or water purveyor refused to allow the operator access to the property to conduct a predrilling or prealteration water well test. (3) The water supply is not within one thousand five hundred feet of the well. (4) The pollution occurred more than six months after completion of drilling or alteration activities. (5) The pollution occurred as the result of some cause other than the drilling or alteration activity. (d) Any operator electing to preserve its defenses under subdivision (1), subsection (c) of this section shall retain the services of an independent certified laboratory to conduct the predrilling or prealteration water well test. A copy of the results of the test shall be submitted to the department and the surface owner or water purveyor in a manner prescribed by the secretary. (e) Any operator shall replace the water supply of an owner of interest in real property who obtains all or part of that owner's supply of water for domestic, agricultural, industrial or other legitimate use from an underground or surface source with a comparable water supply where the secretary determines that the water supply has been affected by contamination, diminution or interruption proximately caused by the oil or gas operation, unless waived in writing by that owner. (f) The secretary may order the operator conducting the oil or gas operation to: (1) Provide an emergency drinking water supply within twenty-four hours; (2) Provide temporary water supply within seventy-two hours; (3) Within thirty days begin activities to establish a permanent water supply or submit a proposal to the secretary outlining the measures and timetables to be used in establishing a permanent supply. The total time in providing a permanent water supply may not exceed two years. If the operator demonstrates that providing a permanent replacement water supply cannot be completed within two years, the secretary may extend the time frame on case-by-case basis; and (4) Pay all reasonable costs incurred by the real property owner in securing a water supply. (g) A person as described in subsection (b) of this section aggrieved under the provisions of subsections (b), (e) or (f) of this section may seek relief in court... (i) Notwithstanding the denial of the operator of responsibility for the damage to the real property owner's water supply or the status of any appeal on determination of liability for the damage to the real property owner's water supply, the operator may not discontinue providing the required water service until authorized to do so by the secretary or a court of competent jurisdiction.

Written Comment:

Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written comments with the secretary as to the location or construction of the applicant's proposed well work within thirty days after the application is filed with the secretary. All persons described in West Virginia Code § 22-6A-10(b) may file written comments as to the location or construction of the applicant's proposed well work to the Secretary at:

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

Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water. **NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.**

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Time Limits and Methods for Filing Comments.

The law requires these materials to be served on or before the date the operator files its Application. You have **THIRTY (30) 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.

Pursuant to West Virginia Code § 22-6A-11(c)(2), Any objections of the affected coal operators and coal seam owners and lessees shall be addressed through the processes and procedures that exist under sections fifteen, seventeen and forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article. The written comments filed by the parties entitled to notice under subdivisions (1), (2), (4), (5) and (6), subsection (b), section ten of this article shall be considered by the secretary in the permit issuance process, but the parties are not entitled to participate in the processes and proceedings that exist under sections fifteen, seventeen or forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article.

Comment Requirements

Your comments must be in writing and 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.

Disclaimer: All comments received will be placed on our web site <http://www.dep.wv.gov/oil-and-gas/Horizontal-Permits/Pages/default.aspx> and the applicant will automatically be forwarded an email notice that such comments have been submitted. The applicant will be expected to provide a response to comments submitted by any surface owner, water purveyor or natural gas storage operator noticed within the application.

Permit Denial or Condition

The Chief has the power to deny or condition a well work permit. Pursuant to West Virginia Code § 22-6A-8(d), the permit may not be issued or be conditioned, including conditions with respect to the location of the well and access roads prior to issuance if the director determines that:

- (1) The proposed well work will constitute a hazard to the safety of persons;
- (2) The plan for soil erosion and sediment control is not adequate or effective;
- (3) Damage would occur to publicly owned lands or resources; or
- (4) The proposed well work fails to protect fresh water sources or supplies.

A permit may also be denied under West Virginia Code § 22-6A-7(k), the secretary shall deny the issuance of a permit if the secretary determines that the applicant has committed a substantial violation of a previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit, or a substantial violation of one or more of the rules promulgated under this article, and in each instance has failed to abate or seek review of the violation within the time prescribed by the secretary pursuant to the provisions of subdivisions (1) and (2), subsection (a), section five of this article and the rules promulgated hereunder, which time may not be unreasonable.

Pursuant to West Virginia Code § 22-6A-10(g), any person entitled to submit written comments to the secretary pursuant to subsection (a), section eleven of this article, shall also be entitled to receive from the secretary a copy of the permit as issued or a copy of the order modifying or denying the permit if the person requests receipt of them as a part of the written comments submitted concerning the permit application. Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

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WW-6A
(8-13)

API NO. 47- 009 -
OPERATOR WELL NO. Carl Rotter OHI 206H
Well Pad Name: Carl Rotter OHI

Notice is hereby given by:

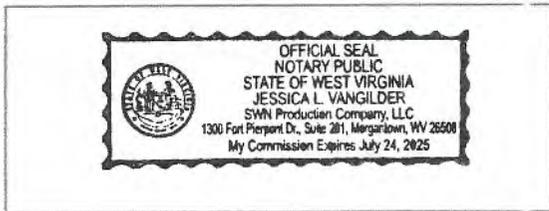
Well Operator: SWN Production Co., LLC
Telephone: 304-884-1610
Email: Brittany_Woody@swn.com

Brittany Woody

Address: 1300 Fort Pierpont Dr., Suite 201
Morgantown, WV 26508
Facsimile: 304-884-1690

Oil and Gas Privacy Notice:

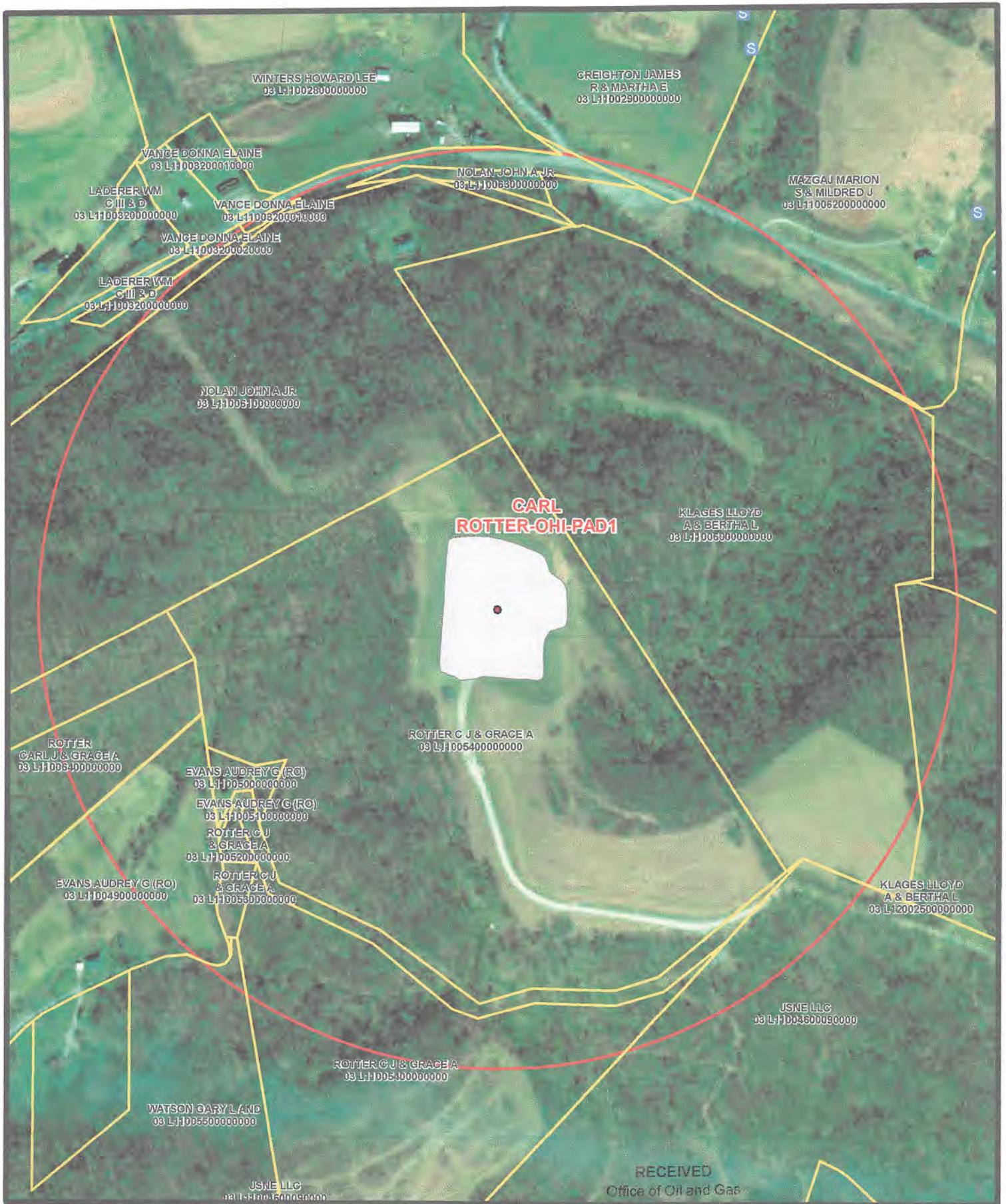
The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.



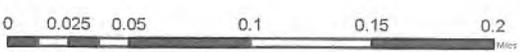
Subscribed and sworn before me this 28th day of Sept. 2020
Jessica L. VanMilder Notary Public
My Commission Expires 7-24-25

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10/21/2022



N
1 in = 417 ft



Coordinate System: NAD 1983 UTM Zone 17N
Units: Meter

- S Spring
- W Water Well
- P Pond
- 1500' Buffer
- Parcel

NOV 13 2020

WV Department of Environmental Protection

Coordinates: 40.101498, -80.542329

Water Purveyor Map
Well Pad: Carl Rotter
County: OH

SWN ^{Rt-V+}
Southwestern Energy
10/21/2022

Date: 9/10/2020 | Author: willisb

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF ENTRY FOR PLAT SURVEY

Notice Time Requirement: Notice shall be provided at least **SEVEN (7)** days but no more than **FORTY-FIVE (45)** days prior to entry

Date of Notice: 9/9/2020 **Date of Planned Entry:** 9/16/2020

Delivery method pursuant to West Virginia Code § 22-6A-10a

- PERSONAL SERVICE
 REGISTERED MAIL
 METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

Pursuant to West Virginia Code § 22-6A-10(a), Prior to filing a permit application, the operator shall provide notice of planned entry on to the surface tract to conduct any plat surveys required pursuant to this article. Such notice shall be provided at least seven days but no more than forty-five days prior to such entry to: (1) The surface owner of such tract; (2) to any owner or lessee of coal seams beneath such tract that has filed a declaration pursuant to section thirty-six, article six, chapter twenty-two of this code; and (3) any owner of minerals underlying such tract in the county tax records. The notice shall include a statement that copies of the state Erosion and Sediment Control Manual and the statutes and rules related to oil and gas exploration and production may be obtained from the Secretary, which statement shall include contact information, including the address for a web page on the Secretary's web site, to enable the surface owner to obtain copies from the secretary.

Notice is hereby provided to:

SURFACE OWNER(s)

Name: Carl J. and Grace A. Rotter

Address: 2 Melrose Dr.
Chillicothe, OH 45601

Name: _____

Address: _____

Name: _____

Address: _____

COAL OWNER OR LESSEE

Name: Alliance Resources GP LLC Attn: Evan Midler

Address: 2596 Battle Run Rd.
Triadelphia, WV 26059

MINERAL OWNER(s)

Name: Carl J. and Grace A. Rotter

Address: 2 Melrose Dr.
Chillicothe, OH 45601

*please attach additional forms if necessary

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-10(a), notice is hereby given that the undersigned well operator is planning entry to conduct a plat survey on the tract of land as follows:

State: <u>WV</u>	Approx. Latitude & Longitude: <u>40.101501, -80.542417</u>
County: <u>Ohio</u>	Public Road Access: <u>Trestlework Rogers Road</u>
District: <u>Liberty</u>	Watershed: <u>Little Wheeling Creek</u>
Quadrangle: <u>Valley Grove</u>	Generally used farm name: <u>Carl Rotter OHI</u>

Copies of the state Erosion and Sediment Control Manual and the statutes and rules related to oil and gas exploration and production may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450). Copies of such documents or additional information related to horizontal drilling may be obtained from the Secretary by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

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Notice is hereby given by:

Well Operator: SWN PRODUCTION COMPANY, LLC

Telephone: 304-884-1610

Email: dee_southall@swn.com or brittany_woody@swn.com

Address: PO BOX 1300
JANE LEW, WV 26376

Facsimile: 304-884-1690

WV Department of
Environmental Protection

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF ENTRY FOR PLAT SURVEY

Notice Time Requirement: Notice shall be provided at least **SEVEN (7)** days but no more than **FORTY-FIVE (45)** days prior to entry

Date of Notice: 9/9/2020 **Date of Planned Entry:** 9/16/2020

Delivery method pursuant to West Virginia Code § 22-6A-10a

- PERSONAL SERVICE
- REGISTERED MAIL
- METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

Pursuant to West Virginia Code § 22-6A-10(a), Prior to filing a permit application, the operator shall provide notice of planned entry on to the surface tract to conduct any plat surveys required pursuant to this article. Such notice shall be provided at least seven days but no more than forty-five days prior to such entry to: (1) The surface owner of such tract; (2) to any owner or lessee of coal seams beneath such tract that has filed a declaration pursuant to section thirty-six, article six, chapter twenty-two of this code; and (3) any owner of minerals underlying such tract in the county tax records. The notice shall include a statement that copies of the state Erosion and Sediment Control Manual and the statutes and rules related to oil and gas exploration and production may be obtained from the Secretary, which statement shall include contact information, including the address for a web page on the Secretary's web site, to enable the surface owner to obtain copies from the secretary.

Notice is hereby provided to:

SURFACE OWNER(S)

Name: Carl J. and Grace A. Rotter
Address: 2 Melrose Dr.
Chillicothe, OH 45601

Name: _____
Address: _____

Name: _____
Address: _____

COAL OWNER OR LESSEE

Name: The Kathleen S. Craft Foundation & The Joseph W. Craft III Foundation
Address: 2502 E 45th ST
Tulsa, OK 74105-5147

MINERAL OWNER(S)

Name: Carl J. and Grace A. Rotter
Address: 2 Melrose Dr.
Chillicothe, OH 45601

*please attach additional forms if necessary

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-10(a), notice is hereby given that the undersigned well operator is planning entry to conduct a plat survey on the tract of land as follows:

State: <u>WV</u>	Approx. Latitude & Longitude: <u>40.101501, -80.542417</u>
County: <u>Ohio</u>	Public Road Access: <u>Trestlework Rogers Road</u>
District: <u>Liberty</u>	Watershed: <u>Little Wheeling Creek</u>
Quadrangle: <u>Valley Grove</u>	Generally used farm name: <u>Carl Rotter OHI</u>

Copies of the state Erosion and Sediment Control Manual and the statutes and rules related to oil and gas exploration and production may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450). Copies of such documents or additional information related to horizontal drilling may be obtained from the Secretary by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Notice is hereby given by:

Well Operator: SWN PRODUCTION COMPANY, LLC
Telephone: 304-884-1610
Email: dee_southall@swn.com or brittany_woody@swn.com

Address: PO BOX 1300
JANE LEW, WV 26378
Facsimile: 304-884-1690

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Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF INTENT TO DRILL

Pursuant to W. Va. Code § 22-6A-16(b), the Notice of Intent to Drill is only required if the notice requirements of W. Va. Code § 22-6A-10(a) have NOT been met or if the Notice of Intent to Drill requirement has NOT been waived in writing by the surface owner.

Notice Time Requirement: Notice shall be provided at least **TEN (10)** days prior to filing a permit application.

Date of Notice: 10/13/2020 **Date Permit Application Filed:** 11/13

Delivery method pursuant to West Virginia Code § 22-6A-16(b)

HAND DELIVERY CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Pursuant to W. Va. Code § 22-6A-16(b), at least ten days prior to filing a permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner notice of its intent to enter upon the surface owner's land for the purpose of drilling a horizontal well: *Provided*, That notice given pursuant to subsection (a), section ten of this article satisfies the requirements of this subsection as of the date the notice was provided to the surface owner: *Provided, however*, That the notice requirements of this subsection may be waived in writing by the surface owner. The notice, if required, shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative.

Notice is hereby provided to the SURFACE OWNER(s):

Name: Carl & Grace Rotter
Address: 2 Melrose Dr.
Chillicothe, OH 45601

Name: _____
Address: _____

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-16(b), notice is hereby given that the undersigned well operator has an intent to enter upon the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State: West Virginia UTM NAD 83 Easting: 538,992.70
County: Ohio Northing: 4,439,119.88
District: Liberty Public Road Access: Rogers Road
Quadrangle: Valley Grove, WV Generally used farm name: Carl Rotter OH1
Watershed: Upper Ohio South

This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(b), this notice shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Notice is hereby given by:

Well Operator: SWN Production Company, LLC
Address: 1300 Fort Pierpont Dr., Suite 201
Morgantown, WV 26508
Telephone: 304-517-6603
Email: Michael_Yates@SWN.com
Facsimile: 304-884-1691

Authorized Representative: Michael Yates
Address: 1300 Fort Pierpont Dr., Suite 201
Morgantown, WV 26508
Telephone: 304-517-6603
Email: Michael_Yates@SWN.com
Facsimile: 304-884-1691

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Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF PLANNED OPERATION

Notice Time Requirement: notice shall be provided no later than the **filing date of permit application.**

Date of Notice: 10/13/2020 **Date Permit Application Filed:** 11/18

Delivery method pursuant to West Virginia Code § 22-6A-16(c)

- CERTIFIED MAIL
RETURN RECEIPT REQUESTED
- HAND
DELIVERY

Pursuant to W. Va. Code § 22-6A-16(c), no later than the date for filing the permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner whose land will be used for the drilling of a horizontal well notice of the planned operation. The notice required by this subsection shall include: (1) A copy of this code section; (2) The information required to be provided by subsection (b), section ten of this article to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. (d) The notices required by this section shall be given to the surface owner at the address listed in the records of the sheriff at the time of notice.

Notice is hereby provided to the SURFACE OWNER(s)

(at the address listed in the records of the sheriff at the time of notice):

Name: <u>Carl & Grace Rotter</u>	Name: _____
Address: <u>2 Melrose Dr.</u> Chillicothe, OH 45601	Address: _____

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-16(c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State: <u>West Virginia</u>	UTM NAD 83 Easting: <u>538,992.70</u>
County: <u>Ohio</u>	Northing: <u>4,439,119.88</u>
District: <u>Liberty</u>	Public Road Access: <u>Rogers Road</u>
Quadrangle: <u>Valley Grove, WV</u>	Generally used farm name: <u>Carl Rotter OHI</u>
Watershed: <u>Upper Ohio South</u>	

This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1) A copy of this code section; (2) The information required to be provided by **W. Va. Code § 22-6A-10(b)** to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Well Operator: <u>SWN Production Company, LLC</u>	Address: <u>1300 Fort Pierpont Dr., Suite 201</u>
Telephone: <u>304-517-6603</u>	<u>Morgantown, WV 26508</u>
Email: <u>Michael_Yates@SWN.com</u>	Facsimile: <u>304-884-1691</u>

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

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10/21/2022

Attachment VI Frac Additives

4706900329

Product Name	Product Use	Chemical Name	CAS Number
AI-303 (U.S. Well Services)	Mixture	Ethylene glycol	107-21-1
		Cinnamaldehyde	104-55-2
		Butyl cellosolve	111-76-2
		Formic acid	64-18-6
		Polyether	Proprietary
		Acetophenone, thiourea, formaldehyde polymer	68527-49-1
AP ONE (U.S. Well Services)	Breaker	Ammonium persulfate	7727-54-0
Bactron K-139 (Champion Technologies)	Biocide	Glutaraldehyde	111-30-8
		Quaternary Ammonium Compounds, Benzyl-C12-16-Alkyldimethyl, Chlorides	68424-85-1
		Ethanol	64-17-5
Bactron K-219 (Champion Technologies)	Biocide	Methanol	67-56-1
		Quaternary Ammonium Compounds, Benzyl-C12-16-Alkyldimethyl, Chlorides	68424-85-1
CarboNRT	Tracer	Ceramic Proppant	66402-68-4
EC6486A (Naico Champion)	Scale Inhibitor	Amine Triphosphate	Proprietary
		Ethylene Glycol	107-21-1
EC6734A (Champion Technologies)	Biocide	Hydrogen Peroxide	7722-84-1
		Acetic Acid	64-19-7
		Peroxyacetic Acid	79-21-0
Econo-C1200 (SWN Well Services)	Corrosion Inhibitor	Methanol	67-56-1
		Oxyalkylated fatty acid	68951-67-7
		Fatty acids	61790-12-3
		Modified thiourea polymer	68527-49-1
		Water	7732-18-5
		Hydrochloric acid	7647-01-0
		Potassium acetate	127-08-2
		Formaldehyde	50-00-0
Ecopol-FEAC (SWN Well Services)	Iron Control	Acetic Acid	64-19-7
		Citric Acid	77-92-9
		Water	7732-18-5
FDP-S1176-15 (Halliburton)	Friction Reducer	Polyacrylate	Proprietary
		Hydrotreated light petroleum distillate	64742-47-8
FLOJET DR900 LPP (SWN Well Services)	Friction Reducer	Distillates (petroleum) hydrotreated light	64674-47-8
		Ethylene Glycol	107-21-1
		Alcohols, C12-16, Exoxygenated propoxylated	68213-24-1
		Fatty Alcohols ethoxylated	Proprietary
		Water	7732-18-5
FLOJET DRP 1130X (SWN Well Services)	Friction Reducer	Proprietary	Proprietary
FR-76 (Halliburton)	Friction Reducer	Hydrotreated light petroleum distillate	64742-47-8
		Inorganic Salt	Proprietary
GYPTRON T-390 (Champion Technologies)	Scale Inhibitor	Methanol	67-56-1
		Nonylphenol Ethoxylate	Proprietary
HAI-150E (Halliburton)	Corrosion Inhibitor	No hazardous substance	N/A
HCL (SWN Well Services)	Hydrochloric Acid	Hydrochloric Acid	7647-01-0
		Water	7732-18-5
LP-65 MC (Halliburton)	Scale Inhibitor	Organic phosphonate	Proprietary
		Ammonium Chloride	12125-02-9
OPTI-FLEX (U.S. Well Services)	Viscosifying Agent	Distillates, petroleum, hydrotreated light	64742-47-8
Plexslick 930	Friction Reducer	Copolymer of 2-propenamide	Proprietary
		Hydrotreated Distillate	64742-47-8
		Sodium Chloride	7647-14-5
		Alcohols, C12-16, Exoxygenated	68551-12-2
		Oleic Acid Diethanolamide	93-83-4
		Ammonium Chloride	12125-02-9
Plexslick 953	Friction Reducer	Petroleum Distillate	64742-47-8
		Sodium Chloride	7647-14-5
		Ammonium Chloride	12125-02-9
		N,N-bis (2-hydroxyethyl) oleamide	93-83-4
		Petroleum Distillate	64742-47-8
Plexslick 957	Friction Reducer	Ammonium Chloride	12125-02-9
		Oleic Acid Diethanolamide	93-83-4
		Alcohols, C12-16, Exoxygenated	68551-12-2
		Water	7732-15-5
		Hydrotreated light distillate (petroleum)	64742-47-8
		Propenoic acid, polymer with propenamide	9003-06-9
Plexaid 655 NM	Scale Inhibitor	Diethylenetriamine penta (methylene phosphonic acid)	15827-30-8
Plexslick 922	no data available	Copolymer of 2-propenamide	69418-26-4
		Distillates (petroleum), hydrotreated light	64742-47-8
		Ammonium chloride ((NH4)Cl)	12125-02-9
		Oleic Acid Diethanolamide	93-83-4
		Tetrakis (hydroxymethyl) phosphonium sulphate	55566-30-8
Tolcide PS50A	Biocidal product	Acrylic acid terpolymer containing carboxylate phosphonate and sulfonate groups	397256-50-7
		Hydrotreated light petroleum distillate	64742-47-8
LD-2950	Friction Reducer	Ethoxylated alcohol	Proprietary
		Poly (oxy-1,2-ethanediyl) alpha.-tridecyl.-omega.-hydroxy-, branched	69011-36-5
Legend LD-7750W	Scale Control	Methanol	67-56-1
		Phosphonic Acid Salt	Proprietary
		Sodium Nitrate	7631-99-4
MC MX 8-4743	Specialty Product	Sodium Nitrate	7631-99-4

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Office of Oil and Gas
NOV 13 2020
WV Department of
Environmental Protection



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

1900 Kanawha Boulevard East • Building Five • Room 110
Charleston, West Virginia 25305-0430 • (304) 558-3505

Byrd E. White, III
Secretary of Transportation/
Commissioner of Highways

September 22, 2020

Jimmy Wriston, P. E.
Deputy Secretary/
Deputy Commissioner

James A. Martin, Chief
Office of Oil and Gas
Department of Environmental Protection
601 57th Street, SE
Charleston, WV 25304

Subject: DOH Permit for the Carl Rotter Pad, Ohio County
Carl Rotter OHI 206H Well Site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #06-2013-0307 which has been issued to Southwestern Energy for access to the State Road for a well site located off Ohio County Route 40/6 SLS MP 1.2.

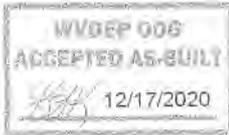
This operator is in compliance with §22-6A-20 of the WV Code. Operator has signed a STATEWIDE OIL AND GAS ROAD MAINTENANCE BONDING AGREEMENT and provided the required Bond. This operator is currently in compliance with the DOH OIL AND GAS POLICY dated October 1, 2018.

Very Truly Yours,

Gary K. Clayton, P.E.
Regional Maintenance Engineer
Central Office O&G Coordinator

Cc: Brittany Woody
Southwestern Energy
CH, OM, D-6
File

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NOV 13 2020
WV Department of
Environmental Protection
10/21/2020



CARL ROTTER OHI WELL PAD CONSTRUCTION AS-BUILT & RECLAMATION PLAN

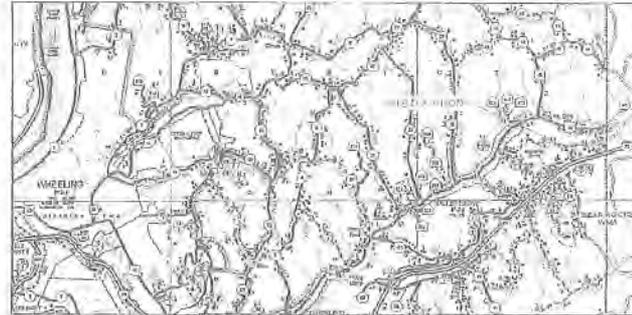
LIBERTY DISTRICT, OHIO COUNTY, WV
SEPTEMBER 2017

LOCAL MAP COORDINATES
ACCESS ROAD ENTRANCE
LATITUDE: 39.56161° LONGITUDE: 80.55511° UTM ZONE: 17N UTM EPOCH: 2011
Easting: 498422.7 Northing: 4209923.4

WELL PAD CENTER
LATITUDE: 39.56221° LONGITUDE: 80.54221° UTM ZONE: 17N UTM EPOCH: 2011
Easting: 497992.3 Northing: 4209923.4

- NOTES:**
- THE AS-BUILT INFORMATION PROVIDED HEREON IS BASED ON FIELD DATA COLLECTED RELATIVE TO THE PERM. GRANTING OF THE DISTURBED AREA AS OF AUGUST 2, 2017. LANDOWNERS ARE RESPONSIBLE FOR ANY CHANGES MADE TO THIS SITE AFTER THE AS-BUILT INFORMATION DATE.
 - PROPERTY INFORMATION SHOWN HEREON WAS PROVIDED BY SURVEYORS AND SHOULD NOT BE TAKEN AS A GUARANTEE OF CURRENT BOUNDARY LOCATION.

TOTAL DISTURBED AREA: 14.0 ACRES
ROAD DISTURBED AREA: 5.0 ACRES
PAD DISTURBED AREA: 0.0 ACRES



WELL PAD NO.	NO. HOURS PAD IS IN	NO. HOURS PAD IS OUT	OPER. COST PER HOUR	PERMITS AS-BUILT	RECLAMATION COST
1	100	100	100	100	100

SHEET INDEX

- COVER SHEET
- EVACUATION ROUTE/PREVAILING WINDS
- AS-BUILT OVERALL PLAN SHEET INDEX
- ACCESS ROAD AS-BUILT PLAN
- WELL PAD AS-BUILT PLAN
- WELL PAD AS-BUILT PROFILE
- ACCESS ROAD AS-BUILT PROFILE
- WELL PAD AS-BUILT PROFILE
- AS-BUILT RECLAMATION PLAN OVERALL PLAN SHEET INDEX
- AS-BUILT ACCESS ROAD RECLAMATION PLAN
- AS-BUILT WELL PAD RECLAMATION PLAN
- GENERAL NOTES AND DETAILS
- DETAILS

ENGINEERING ESTIMATE OF QUANTITIES

WELL SITE PAD DATA (DRILLING)		
INSTALL MOUNTABLE BERM	41	CY
SPREAD MULTIPLE DISTURBED AREAS	235	SF
TOP COVER SOIL	252	LF
BT ONE FOR PAD SURFACE REPAIR AND MOUNTABLE BERM STONE CURBING	143	CY
WELL SITE PAD DATA (RECLAMATION)		
REMOVE SLUMP	2	EA
BREACH BERM	2	EA
10' WIDE R/R RAP DISCHARGE CHANNELS	80	DY

RECLAMATION SPEC: MAX OIL THICKNESS 2" AND COMPACTED TO 90% OF STANDARD PROCTOR

DESIGN CONFORMANCE
THE DRAWINGS, CONSTRUCTION NOTES, AND REFERENCE DIAGRAMS ATTACHED HERETO HAVE BEEN PREPARED IN ACCORDANCE WITH THE WEST VIRGINIA CODE OF STATE RULES, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS CSR 35-B.



MISS Utility of West Virginia
1-800-245-4363
West Virginia State Law
Section 20A, Chapter 24C
Anytime that you call the
business days before you dig in
the State of West Virginia
IT'S THE LAW

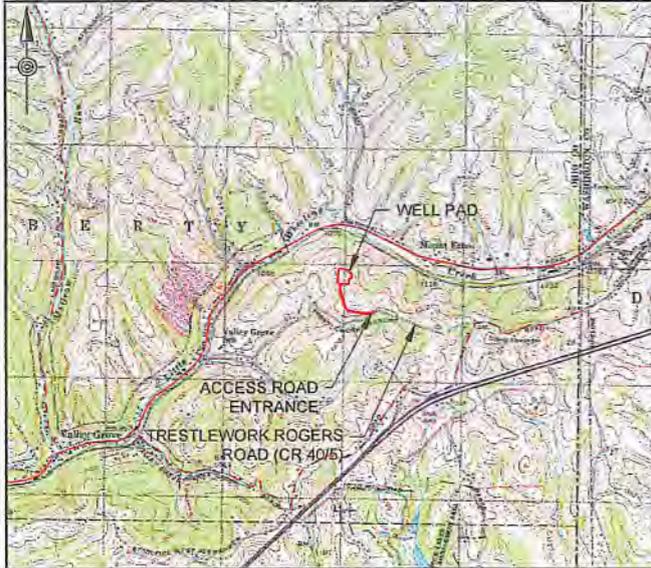


Sheet No. 1 of 14
ANSI FULL BLEED D
(22.00 X 34.00 INCHES)
Product No. 4589-015-1028



NO.	DATE	DESCRIPTION	BY	CHKD
1	11/07/17	ISSUE / REVISIONS		
2	11/07/17	ISSUE / REVISIONS		
3	11/07/17	ISSUE / REVISIONS		
4	11/07/17	ISSUE / REVISIONS		
5	11/07/17	ISSUE / REVISIONS		
6	11/07/17	ISSUE / REVISIONS		
7	11/07/17	ISSUE / REVISIONS		
8	11/07/17	ISSUE / REVISIONS		
9	11/07/17	ISSUE / REVISIONS		
10	11/07/17	ISSUE / REVISIONS		
11	11/07/17	ISSUE / REVISIONS		
12	11/07/17	ISSUE / REVISIONS		
13	11/07/17	ISSUE / REVISIONS		
14	11/07/17	ISSUE / REVISIONS		
15	11/07/17	ISSUE / REVISIONS		
16	11/07/17	ISSUE / REVISIONS		
17	11/07/17	ISSUE / REVISIONS		
18	11/07/17	ISSUE / REVISIONS		
19	11/07/17	ISSUE / REVISIONS		
20	11/07/17	ISSUE / REVISIONS		

CARL ROTTER OHI WELL PAD
Linn Landgr Group
1700 1st Street, Suite 100
Martinsburg, WV 26158
PHONE: 304.777.2840 FAX: 304.777.2842
WWW.LINNLANDGR.COM



USGS 7.5 VALLEY GROVE QUAD MAP
SCALE
2000 0 2000 4000 FEET

CARL ROTTER OHI WELL PAD CONSTRUCTION AS-BUILT & RECLAMATION PLAN

LIBERTY DISTRICT, OHIO COUNTY, WV
SEPTEMBER 2017

LOCATION COORDINATES:
ACCESS ROAD ENTRANCE
LATITUDE: 40.098790 LONGITUDE: -80.539450 (NAD-83)
N 4438623.7 E 539255.8 (UTM ZONE 17 METERS)

WELL PAD CENTER
LATITUDE: 40.101501 LONGITUDE: -80.542441 (NAD-83)
N 4439123.2 E 538999.3 (UTM ZONE 17 METERS)

- NOTES:**
1. THE AS-BUILT INFORMATION SHOWN HEREON REFLECTS FIELD DATA COLLECTED RELATING TO THE FINAL GRADING OF THE DISTURBED AREA AS OF AUGUST 2, 2017. LARSON DESIGN GROUP IS NOT RESPONSIBLE FOR ANY CHANGES MADE TO THE SITE AFTER THE ABOVE MENTIONED DATE.
 2. PROPERTY INFORMATION SHOWN HEREON WAS PROVIDED BY SOUTHWESTERN ENERGY AND MAY NOT REFLECT CURRENT BOUNDARY LOCATION.

TOTAL DISTURBED AREA: 14.0 ACRES
ROAD DISTURBED AREA: 5.0 ACRES
PAD DISTURBED AREA: 9.0 ACRES



WEST VIRGINIA DIVISION OF HIGHWAYS COUNTY ROAD MAP
SCALE
5000 0 5000 10000 FEET

WELL NAMES	WV NORTH NAD 27	WV NORTH NAD 83	UTM (METERS) ZONE 17	NAD 83 LAT & LONG	ELEVATION (FEET)
	AS-DRILLED COORDINATES				
CARL ROTTER OH (DRILLED) #P# 41-009-03171	N 585009.91 E 1708332.88	N 585046.96 E 1676698.62	N 4439131.58 E 539000.77	LAT 40.101576° LONG -80.542423°	1336.08'

ENGINEERING ESTIMATE OF QUANTITIES WELL SITE PAD DATA (DRILLING)		
INSTALL MOUNTABLE BERM	44	CY
SEED & MULCH DISTURBED AREAS	205	SY
18" COMPOST SOCK	252	LF
STONE FOR PAD SURFACE REPAIR AND MOUNTABLE BERM STONE SURFACING	143	CY
WELL SITE PAD DATA (RECLAMATION)		
REMOVE SUMP	2	EA
BREACH BERM	2	EA
10" WIDE RIP-RAP DISCHARGE CHANNELS	30	CY

C. J. Hill
11-6-20



WEST VIRGINIA COUNTY MAP

SHEET INDEX

- 1 COVER SHEET
- 2-3 EVACUATION ROUTE/PREVAILING WINDS
- 4 AS-BUILT OVERALL PLAN SHEET INDEX
- 5 ACCESS ROAD AS-BUILT PLAN
- 6 WELL PAD AS-BUILT PLAN
- 7 ACCESS ROAD AS-BUILT PROFILE
- 8 WELL PAD AS-BUILT PROFILE
- 9 AS-BUILT RECLAMATION PLAN OVERALL PLAN SHEET INDEX
- 10 AS-BUILT ACCESS ROAD RECLAMATION PLAN
- 11 AS-BUILT WELL PAD RECLAMATION PLAN
- 12 GENERAL NOTES AND DETAILS
- 13-14 DETAILS

DESIGN CERTIFICATION

THE DRAWINGS, CONSTRUCTION NOTES, AND REFERENCE DIAGRAMS ATTACHED HERETO HAVE BEEN PREPARED IN ACCORDANCE WITH THE WEST VIRGINIA CODE OF STATE RULES, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS CSR 35-8.



MISS Utility of West Virginia
1-800-245-4848
West Virginia State Law
(Section XIV: Chapter 24-C)
Requires that you call two
business days before you dig in
the state of West Virginia.
IT'S THE LAW!!



ORIGINAL SHEET SIZE:
ANSI FULL BLEED D
(22.00 X 34.00 INCHES)
SHEET NO.:
1 OF 14
PROJECT NO.:
7688-016-008



NO.	DATE	COMMENTS	BY	CHK
1	10/9/2017	FINAL AS-BUILT PLAN	BLG	RMR
	9/14/2017	DRAFT AS-BUILT PLAN	BLG	RMR

CARL ROTTER OHI WELL PAD
LIBERTY DISTRICT, OHIO COUNTY, WEST VIRGINIA

Larson Design Group • Architects Engineers Surveyors
2502 Cranberry Square
Martinsburg, WV 26150
PHONE 304.777.2940 TOLL FREE 877.323.6603
FAX 570.323.9902 • www.larsondesigngroup.com

SWN Production Company, LLC
178 Innovation Drive
Jane Lew, WV 26378
PHONE 304-884-1622

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