Tuesday, January 09, 2018
WELL WORK PERMIT
Horizontal 6A / New Drill

SWN PRODUCTION COMPANY, LLC
POST OFFICE BOX 12359

SPRING, TX 773914954

Re: Permit approval for MIKE RYNIA WEC BRK 3H
47-009-00237-00-00

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: MIKE RYNIA WEC BRK 3H
Farm Name: MIKE RYNIA WEC
U.S. WELL NUMBER: 47-009-00237-00-00
Horizontal 6A / New Drill
Date Issued:

Promoting a healthy environment.
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 specified 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 DEPOOOGNotify@wv.gov.
**STATE OF WEST VIRGINIA**
**DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS**
**WELL WORK PERMIT APPLICATION**

1) **Well Operator:** SWN Production Co., LLC
   Operator ID: 49447757
   County: 009-Brooke
   District: 3-Buffalo
   Quadrangle: 247-Bethany

2) **Operator's Well Number:** Mike Ryniawec BRK 3H
   Well Pad Name: Mike Ryniawec PAD

3) **Farm Name/Surface Owner:** Mike Ryniawec
   Public Road Access: Lazeear Run Road

4) **Elevation, current ground:** 1147'
   Elevation, proposed post-construction: 1147'

5) **Well Type**
   (a) Gas
   (b) If Gas
      Shallow
      Deep
   Oil
   Under Ground Storage
   Horizontal

6) **Existing Pad:** Yes
   **Date:** 1/29/17

7) **Proposed Target Formation(s), Depth(s), Anticipated Thickness and Associated Pressure(s):**
   Target Formation- Marcellus, Target Top TVD- 5910', Target Base TVD- 5995', Anticipated Thickness- 41', Associated Pressure- 3886

8) **Proposed Total Vertical Depth:** 5940'

9) **Formation at Total Vertical Depth:** Marcellus

10) **Proposed Total Measured Depth:** 17040'

11) **Proposed Horizontal Leg Length:** 10755.2'

12) **Approximate Fresh Water Strata Depths:** 346'

13) **Method to Determine Fresh Water Depths:** Salinity Profile

14) **Approximate Saltwater Depths:** 645'

15) **Approximate Coal Seam Depths:** 342'

16) **Approximate Depth to Possible Void (coal mine, karst, other):** None that we are aware of.

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

   (a) **If Yes, provide Mine Info:**
      Name:
      Depth:
      Seam:
      Owner:

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Office of Oil and Gas

**NOV 29 2017**

**WV Department of Environmental Protection**
### CASING AND TUBING PROGRAM

<table>
<thead>
<tr>
<th>TYPE</th>
<th>Size (in)</th>
<th>New or Used</th>
<th>Grade</th>
<th>Weight per ft (lb/ft)</th>
<th>FOOTAGE: For Drilling (ft)</th>
<th>INTERVALS: Left in Well (ft)</th>
<th>CEMENT: Fill-up (Cu. Ft.)/CTS</th>
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<td>If Needed</td>
<td>If Needed</td>
<td>If Needed/As Needed</td>
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<td>HCP-110</td>
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<td>Liners</td>
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### TYPE

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<th>Wellbore Diameter (in)</th>
<th>Wall Thickness (in)</th>
<th>Burst Pressure (psi)</th>
<th>Max. Associated Surface Pressure (psi)</th>
<th>Cement Type</th>
<th>Cement Yield (cu. ft./ac)</th>
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<td>Depths Set:</td>
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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. Run casing not less than 20' below void nor more than 50' 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. The well is produced through surface facilities consisting of high pressure production unites, vertical separation units, water and oil storage tanks. Max press and anticipated max rate- 9000 lbs @ 80 barrels a minute.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 14.99

22) Area to be disturbed for well pad only, less access road (acres): 9.69

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 ***

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.
<table>
<thead>
<tr>
<th>Product Name</th>
<th>Product Use</th>
<th>Chemical Name</th>
<th>CAS Number</th>
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April 5, 2017

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

**RE: Proposed New Well Mike Ryniawec BRK 3H**

Dear Ms. Adkins,

SWN has reviewed the area of the above mentioned well and discovered no shallow wells within 500' of the lateral. This well is situated on the Ryniawec’s property, in Buffalo District, Brooke County, West Virginia.

If you have any questions or desire additional information, please me at 304-884-1614

Thank you.

Sincerely,

[Signature]

Dee Southall
Regulatory Supervisor
Southwestern Energy Production Company, LLC
PO Box 1300
Jane Lew, WV 26378

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WV Department of
Environmental Protection

The right people doing the right things, wisely investing the cash flow from our underlying assets, will create value.
Southwestern Energy Company  Proposed Drilling Program

Well: MIKE RYNIKIEWICZ BRK 3  Re-entry Rig: TBD
Field: PANHANDLE FIELD 1  Prospect: PANHANDLE
County: BROOKE  State: WV
SHL: 40.1907 Latitude  -80.6092 Longitude
BHL: 40.2204 Latitude  -80.6237 Longitude
KB Elev: 1,173 ft MSL  KB: 25 ft AGL  GL Elev: 1,147 ft MSL

TOC Lead at 1,711 ' MD
TOC Tail at 5,100 ' MD

Tubular Detail

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<tr>
<th>Size (in)</th>
<th>Weight</th>
<th>Grade</th>
<th>From</th>
<th>To</th>
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<tr>
<td>Conductor</td>
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Cement Detail

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<td>Production Tail</td>
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KOP at 5,413 ' MD

Water Depth - 346 ' TVD
Coal Depth - 342 ' TVD
TVD - 5,940 ' TMD - 17,040 '

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SEP - 6 2017

5,940 ' Target Center

TD at 17,040 ' MD 5,784 ' TVD

KOR at 5,940 ' TVD
SHL Onondaga 5,951 ' TVD

6,283 ' to 37,040 '
12.0 - 12.5 ppg

6,283 ' to 37,040 '
12.0 - 12.5 ppg

0 to 446'
Air / Mist

446' to 1,711'
Air / Mist

1,711' to 5,413'
Air / Mist

Creator: C R Hall or 09/22/2017
STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name: SWN Production Company, LLC
Watershed (HUC 10): Buffalo Creek
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: closed loop system in place at this time - cuttings will be taken to a permitted landfill
Will a synthetic liner be used in the pit? Yes [ ] No [ ]
If so, what ml? ___________
Proposed Disposal Method For Treated Pit Wastes:
- Land Application
- Underground Injection ( UIC Permit Number )
- Reuse ( at API Number, at next anticipated well, API 2 will be included with the WR-3400MR & permit addition )
- Off Site Disposal ( Supply form WW-9 for disposal location )
- Other ( Explain flow back fluids will be put in steel tanks and reused or taken to a permitted disposal facility

Will closed loop system be used? Yes [ ]
Drilling medium anticipated for this well ( vertical and horizontal)? Air, freshwater, oil based, etc.
- Oil based, what type? Synthetic, petroleum, etc. - synthetic oil base
Additives to be used in drilling medium? see attached sheets
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
Arden Landfill 10072, American U2-12954, Country Wide 33590/9413390, Pine Grove 13588
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 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 __________________________
Company Official ( Typed Name ) Dee Southall
Company Official Title Regulatory Supervisor

Subscribed and sworn before me this 4th day of April, 2017
Notary Public
My commission expires November 27, 2022

OFFICIAL SEAL
Notary Public, State of West Virginia
BRITANNY R. WOODY
3300 Old Elkms Road
Elkwood WV 26311
My commission expires November 27, 2022
SWN Production Company, LLC

Proposed Revegetation Treatment: Acres Disturbed 14.99 Prevegetation pH 

Lime as determined by pH test min 2 Tons/acre or to correct to pH 9.69

Fertilizer type 10-20-20

Fertilizer amount 600 lbs/acre

Mulch Hay/Straw 2.5 Tons/acre

Seed Mixtures

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<th>Permanent</th>
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<tr>
<td>Seed Type</td>
<td>lbs/acre</td>
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**See Attachment**

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: [Signature] 9.20.17

Comments:

---

Title: oil and gas inspector Date: 9.20.17

Field Reviewed? (✓) Yes ( ) No
Attachment 3A

Drilling Mediums

Synthetic Oil
Brine
Barite
Calcium Chloride
Lime
Organophilic Bentonite
Primary and Secondary Emulsifiers
Gilsonite
Calcium Carbonate
Friction Reducers

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NOV 29 2017

WV Department of
Environmental Protection
# WVD Seeding Specification

**NON-ORGANIC PROPERTIES**

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<tr>
<td>Timothy</td>
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<tr>
<td>Annual Ryegrass</td>
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<tr>
<td>Brown Top Millet</td>
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<td>Red Top</td>
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<tr>
<td>Medium Red Clover</td>
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<tr>
<td>White Clover</td>
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<tr>
<td>Birdsfoot Trefoil</td>
<td>5%</td>
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<tr>
<td>Rough Bluegrass</td>
<td>5%</td>
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*All legumes are inoculated 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
- Pelletized Lime

*Apply @ 500lbs per Acre*  
*Apply @ 5 Tons per Acre*

**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.

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**ORGANIC PROPERTIES**

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<th>Seed Mixture: SWN Production Organic Mix</th>
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<td>Organic Red or White Clover OR</td>
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<td>Organic Perennial Ryegrass</td>
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<td>Organic Red or White Clover</td>
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- **Apply @ 100lbs per acre**
  - **April 16th - Oct. 14th**
- **Apply @ 200lbs per acre**
  - **Oct. 15th - April 15th**

  **Organic Fertilizer @ 200lbs per Acre**
  - Pelletized Lime @ 2 Tons per Acre

**WETLANDS (delineated as jurisdictional wetlands)**

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- **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
179 Innovation Drive
Jane Lew, West Virginia 26378

API NO. 47-XXX-XXXXX
WELL NAME: Mike Ryniawec BRK 3H
Bethany QUAD
Buffalo DISTRICT
Brooke COUNTY, WEST VIRGINIA

Submitted by: Dee Southall Date: 4/4/2017
Title: Regulatory Supervisor SWN Production Co., LLC

Approved by: Date: 4/28/17
Title: Oil & Gas Engineer

Approved by:

Date: 

Title: 

SWN PRODUCTION COMPANY, LLC
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REVISIONS: N/A

COMPANY: SWN Production Company, LLC

OPERATORS: MIKE RYNIKIEWC

WELL #: BRK 3H

WELL LOCATION: N/A

DISTRICT: BUFFALO

COUNTY: BROOME

STATE: NY

DATE: 12-20-2017

DRAWN BY: C. WEHR

SCALE: N/A

DRAWING NO.: 2017-220
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 date (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:  

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<th>Grantee, Lessee, etc.</th>
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See Exhibit A  

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 Co., LLC  
By: Nancy Wallace  
Its: Staff Landman  

Page 1 of
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Pending

Rocco A. Basil, Jr. | SWN Production Company | 18.00% | 34/53 |
Kimberly Lynn Kerr, A/K/A Kimberly Lynn Basil | SWN Production Company | 18.00% | 33/701 |
Craig Lee Bowers | Chesapeake Appalachia, LLC | 18.00% | 30/100 |
Shirley Buchanan | Chesapeake Appalachia, LLC | 18.00% | 17/302 |
Debra A. Conley | Chesapeake Appalachia, LLC | 18.00% | 16/462 |
E. Jean Cross | Chesapeake Appalachia, LLC | 18.00% | 16/480, 28/37 |
Daniel Gorby | Chesapeake Appalachia, LLC | 18.00% | 16/486 |
Jenny Miller | Chesapeake Appalachia, LLC | 18.00% | 16/702 |
Deborah Moreira | Chesapeake Appalachia, LLC | 18.00% | 17/339 |
Gary Morris | Chesapeake Appalachia, LLC | 18.00% | 17/186 |
Lori Morris | Chesapeake Appalachia, LLC | 18.00% | 17/351 |
Sherry Morris-Clay | Chesapeake Appalachia, LLC | 18.00% | 17/673 |
Alice Faye Newton | Chesapeake Appalachia, LLC | 18.00% | 16/474 |
Robyn Nicholson | Chesapeake Appalachia, LLC | 18.00% | 17/679 |
Sharon M. Smith | Chesapeake Appalachia, LLC | 18.00% | 16/708 |
Nancy Lee Vargo | Chesapeake Appalachia, LLC | 18.00% | 16/468 |
James Keith Wilkin | Chesapeake Appalachia, LLC | 18.00% | 17/345 |
Mark Thomas Wilkin | Chesapeake Appalachia, LLC | 18.00% | 17/688 |
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6) 03-0837-0087-0000-0000 | Linda Reeves Greathouse and Vicki Lynn Hamilton | 317.230 | 751332-001 | Linda Reeves Greathouse, a married woman dealing in her sole and separate property and Lynn Greathouse Hamilton, a married woman dealing in her sole and separate property | Chesapeake Appalachia, LLC | 18.00% | 11/162 |
<p>| 7) 03-0842-0001-0000-0000 | Evelyn Blake, Junnie Blakely, Verna Brady, Betty Buffington, James Carducci, Joseph Mark Carducci, Michael Carducci, Nathan Todd Carducci, Randy Carducci, Rick Carducci, Samuel Carducci, Wendy Cresap, Christina Fitz, Birdie Finney, Kim Gooding, James Greathouse, Carol Harris, Valerie Lounder, Paula Mahan, Robin Polen, John Polen, Tammi Carducci McNamee, Ellen Stanley, Pearl Temple, Mary Weakley | 18.120 | pending | Joan Amlay | SWN Production Company | 14.00% | 34/458 |
| 8) 03-0837-0130-0000-0000 | Victor Charles Smith | 27.350 | pending | William Michael Blakely, Sr. | SWN Production Company | 14.00% | attached |
| 9) 03-0837-0111-0000-0000 | Victor Charles Smith | 1.000 | pending | Verna Brady | SWN Production Company | 14.00% | 34/567 |
| 10) 03-0837-0129-0000-0000 | Rhonda S. Bailey, Reva L. Guglielmotti, Leonard Samuel McGrew, II, Timothy Allen McGrew | 22.520 | pending | Betty Buffington | SWN Production Company | 14.00% | 35/247 |
|  | Jo Anne Carducci | SWN Production Company | 17.00% | attached |
|  | Joseph Mark Carducci | SWN Production Company | 14.00% | 35/438 |
|  | Michael Carducci | SWN Production Company | 17.00% | 35/786 |
|  | Nathan Todd Carducci | SWN Production Company | 14.00% | 35/213 |
|  | Randy Carducci | SWN Production Company | 17.00% | 35/751 |
|  | Brent Carducci | SWN Production Company | 17.00% | 35/741 |
|  | Brianna Carducci | SWN Production Company | 17.00% | 35/746 |
|  | Samuel Carducci | SWN Production Company | 14.00% | 35/252 |
|  | Wendy Cresap | SWN Production Company | 14.00% | 35/770 |
|  | Christina Fitz | SWN Production Company | 17.00% | 35/664 |
|  | Greg Finney | SWN Production Company | 17.00% | 35/766 |
|  | Lisa Hartsthorn | SWN Production Company | 17.00% | attached |
|  | Lori Fuller | SWN Production Company | 17.00% | 35/763 |
|  | Kim Gooding | SWN Production Company | 14.00% | 35/433 |
|  | James Greathouse | SWN Production Company | 14.00% | 35/786 |
|  | Carol Harris | SWN Production Company | 14.00% | 35/648 |
|  | Valerie Lounder | SWN Production Company | 14.00% | 35/771 |
|  | Paula Mahan | SWN Production Company | 14.00% | 35/453 |
|  | Tammi Carducci McNamee | SWN Production Company | 17.00% | 35/751 |
|  | John Polen | SWN Production Company | 14.00% | 35/218 |
|  | Robin Polen | SWN Production Company | 14.00% | 35/443 |
|  | Ellen Stanley | SWN Production Company | 14.00% | 35/638 |
|  | Pearl Temple | SWN Production Company | 14.00% | 35/601 |
|  | Mary Weakley | SWN Production Company | 14.00% | 35/596 |
|  | William A. Pilchard | SWN Production Company | 14.00% | 34/462 |
| 8) 03-0837-0130-0000-0000 | Victor Charles Smith | 27.350 | pending | Victor Charles Smith | Chesapeake Appalachia, LLC | 18.00% | 18/667 |
| 9) 03-0837-0111-0000-0000 | Victor Charles Smith | 1.000 | pending | Victor Charles Smith | Chesapeake Appalachia, LLC | 18.00% | 30/480 |
| 10) 03-0837-0129-0000-0000 | Rhonda S. Bailey, Reva L. Guglielmotti, Leonard Samuel McGrew, II, Timothy Allen McGrew | 22.520 | pending | Leonard Samuel McGrew, II | Chesapeake Appalachia, LLC | 18.00% | 21/635 |
|  | Dean M. Guglielmotti and Reva L. Guglielmotti, husband and wife | Chesapeake Appalachia, LLC | 18.00% | 15/554 |
|  | SWN Production Company | 30/480 | 732593-201 | 18.00% | 30/480 | 732593-201 | 18.00% | 30/480 |</p>
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PAID-UP OIL & GAS LEASE

Lease No.

This Lease, made this 25th day of July, 2017, by and between James Carducci, a married man, doing business herein with separate property, 140 Rachel Lin I.I., Saint Cloud, FL 34771 hereinafter collectively called “Lessor,” and SVN Production Company, L.L.C., a Texas limited liability company, 10000 Energy Drive, Spring, Texas 77389 hereinafter called “Lessee.”

WITNESSETH, that for and in consideration of Ten Dollars ($10.00) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and of the mutual covenants and agreements hereinafter set forth, the Lessor and Lessee agree as follows:

LEASING CLAUSE. Lessor hereby leases exclusively to Lessee all the oil and gas (including, but not limited to coal seam gas, coalbed methane gas, coalbed methane gas, methane gas, gas, gaseous methane/natural gas and all associated natural gas and other hydrocarbons and non-hydrocarbons contained in, associated with, emitting from, or produced/originating within any formation, field area, mixed-out area, coal seam, and all communication zones, and their liquid gaseous constituents, whether hydrocarbon or non-hydrocarbon, underly the land herein leased, together with such exclusive rights as may be necessary or convenient for Lessee, at its election, to explore for, develop, produce, measure, and market production from the Leasehold, or from other lands, using methods and techniques which are not restricted to current technology, including, without limitation, the right to conduct geophysical and other exploratory tests; to drill, maintain, operate, cease to operate, plug, abandon, and remove wells; to use or install roads over and across the Leasehold for use in development of the Leasehold or other lands, electric power and telephone facilities, water impoundments, and to construct pipelines with appurtenant facilities, including data acquisition, compression and collection facilities for use in the production and transportation of products from the Leasehold or from other lands across the Leasehold, to use oil, gas, and non-domestic water sources, free of cost, to store gas of any kind underground, regardless of the source thereof, including the injecting of gas therein and removing the same therefrom; to procure and transport equipment, material and equipment; and to use and occupy the subsurface of the Leasehold for the drilling of a wellbore(s) for use in development of the Leasehold or other lands.

DESCRIPTION. The Leasehold is located in the District of Buffalo, in the County of Brooke, in the State of West Virginia, and described as follows:

Property Tax Parcel Identification Number: TaxParcel ID. 03-B42-0001-0000
and is bounded by the following:
On the North by lands of 03-B37-0128-0000;
On the East by lands of 03-B37-0130-0000;
On the South by lands of 03-B37-0087-0000;
On the West by lands of 03-B37-0125-0000, 03-B42-0002-0000;

including lands acquired from Samuel Merle Hall by virtue of Fiduciary Records dated September 17, 2007 and recorded in Appraiser Book 22, at Page 180, and described for the purposes of this agreement as containing a total of 17.25 Leasehold acres, whether actually more or less, and including contiguous lands owned by Lessor. This Lease also covers and includes, in addition to that above described, all land, if any, contiguous or adjacent to or adjoining the land above described and (a) owned or claimed by Lessee, by limitation, prescription, possession, reversion or unencumbered instrument or (b) as to which Lessor has a preference right of acquisition. Lessor agrees to execute any supplemental instrument requested by Lessee for a more complete or accurate description of said land.

LEASE TERM. This Lease shall remain in force for a primary term of Five (5) years from 12:00 A.M. July 25, 2017 (effective date) to 11:59 P.M. July 25, 2022 (last day of primary term) and shall continue beyond the primary term as to the entirety of the Leasehold if any of the following is satisfied: (i) operations are conducted on the Leasehold or lands pooled/united therewith in search of oil, gas, or their constituents, or (ii) a well is drilled by Lessee to be capable of production is located on the Leasehold or lands pooled/united therewith, or (iii) if oil or gas, or their constituents, are produced from the Leasehold or lands pooled/united therewith, or (iv) if the Lessor or lands pooled/united therewith was used for the underground storage of gas, or for the protection of stored gas, or (v) if prescribed payments are made, or (vi) if Lessee's operations are delayed, postponed or interrupted as a result of any coal, stone or other mining or mining related operation under any existing and effective lease, permit or authorization covering such operations on the leased premises or on other lands affecting the leased premises, such delay will automatically extend the primary or secondary term of this oil and gas lease without additional compensation or performance by Lessee for a period of time equal to any such delay, postponement or interruption.

If there is any dispute concerning the extension of this Lease beyond the primary term by reason of any of the alternative mechanisms specified herein, the payment to the Lessee of the prescribed payments provided below shall be conclusive evidence that the Lease has been extended beyond the primary term.

EXTENSION OF PRIMARY TERM. Lessor has the option to extend the primary term of this Lease as to all or any part of the acreage then covered hereby, for one additional term of Five (5) years from the expiration of the primary term of this Lease; said extension to be under the same terms and conditions as contained in this Lease. Lessee may exercize this option to extend this Lease if on or before the expiration date of the primary term of this Lease, Lessee pays to Lessee or to the Lessor’s credit an amount equal to the sum of the initial consideration given for the execution hereof, which shall be paid in proportion to the number of net acres actually extended. Exercise of this option is at Lessee’s sole discretion and may be invoked by Lessee where no other alternative of the Lease Term clause extends this Lease beyond the primary term. If this option is exercized by Lessee the lease as extended will thereafter be treated as if the original primary term was Ten (10) years.

NO AUTOMATIC TERMINATION OR FORECLOSURE.

(A) CONSTRUCTION OF LEASE: The language of this Lease (including, but not limited to, the Lease Term and Extension of Term contained hereon) shall be read and construed as language of special limitation. This Lease shall be construed against termination, forfeiture, cancellation or expiration and in favor of giving effect to the continuance of this Lease where the circumstances exist to maintain this Lease in effect under any of the alternative mechanisms set forth above. In connection therewith, (i) a well shall be deemed to be capable of production if it has the capacity to produce a profit over operating costs, without regard to any capital costs to drill or equip the well, or to deliver the oil or gas to market, and (ii) the Lessee shall be deemed to be conducting operations in search of oil or gas, or their constituents, if the Lessee is engaged in geophysical and other exploratory work including, but not limited to, activities to drill an initial well, to drill a new well, or to rework, stimulate, deepen, sidetrack, false plug back in the same or different formation or repair a well or equipment on the Leasehold or any lands pooled/united therewith (such activities shall include, but not be limited to, performing any preliminary or preparatory work necessary for drilling, conducting internal technical analysis to initiate and/or further develop a well, obtaining permits and approvals associated therewith and may include reasonable gaps in activities provided that there is a continuum of activities showing a good faith effort to develop a well or that the cessation or interruption of activities was beyond the control of Lessee, including interruptions caused by the acts of third parties over whom Lessee has no control or regulatory delays associated with any approval process required for conducting such activities).
(B) LIMITATION OF FORFEITURE: This Lease shall never be subject to a civil action or proceeding to enforce a claim of termination, cancellation, expiration or forfeiture due to any action or inaction by the Lessee, including, but not limited to making any prescribed payments authorized under the terms of this Lease, unless the Lessee has received written notice of Lessor's demand and thereafter fails or refuses to satisfy or provide justification respecting to Lessor's demand within 60 days from the receipt of such notice. If Lessor timely responds to Lessor's demand, but in good faith disagrees with Lessor's position and sets forth the reasons, therefore, such a response shall be deemed to satisfy this provision, this Lease shall continue in full force and effect and no further damages (or other claims for relief) will accrue in Lessor's favor during the pendency of the dispute, other than claims for payments that may be due under the terms of this Lease.

PAYMENTS TO LESSOR. In addition to the bonus paid by Lessee for the execution hereof, Lessee covenants to pay Lessor, proportionate to Lessor's percentage of ownership, as follows:

(A) DELAY RENTAL: To pay Lessor as Delay Rental, after the first year, at the rate of five dollars ($5.00) per net acre per year payable in advance. The parties hereto agree that this is a paid-Up Lease with no further Delay Rental and/or Delay in Marketing payments due to Lessor during the primary term or, if so exercised, the extended primary term hereof.

(B) ROYALTY: To pay Lessor as Royalty, less all taxes, assessments, and adjustments on production from the Leasold, as follows:

1. OIL: To deliver to the credit of Lessor a Royalty equal to one-eighth (1/8) of the net revenue realized by Lessee for all oil and any constituents thereof produced and marketed from the Leasold, less the cost to transport, bundle, separate, meter, treat, process and market the oil.

2. GAS: To pay Lessor on actual volumes of gas and any constituents thereof sold from said land, one-eighth of the net amount realized by Lessee, as computed at the wellhead. As used in this lease, the term "net amount realized by Lessee, computed at the wellhead" shall mean the gross proceeds received by Lessee from the sale of oil and gas minus post-production costs incurred by Lessor between the wellhead and the point of sale. As used in this Lease, the term "post-production costs" shall mean all costs and expenses of (a) treating and processing oil and/or gas, and (b) separating liquid hydrocarbons from gas, other than condensate separated at the well, and (c) transporting oil and/or gas, including but not limited to transportation between the wellhead and any other transportation facilities, and transportation to the point of sale, and (d) compressing gas for transportation and delivery purposes, and (e) metering oil and/or gas to determine the amount sold and/or the amount used by Lessee, and (f) sales charges, commissions and fees paid to third parties (whether or not affiliated) in connection with the sale of the gas, and (g) any and all other costs and expenses of any kind or nature incurred in regard to the gas, or exchange therebetween, between the wellhead and the point of sale, Lessee may use its own pipelines and equipment to provide such treating, processing, separating, transportation, compression and metering services, or it may engage others to provide such services; and if Lessee uses its own pipelines and/or equipment, post-production costs shall include without limitation reasonable depreciation and amortization expenses relating to such facilities, together with Lessor's cost of capital and a reasonable return on its investment in such facilities. Lessor may be required to execute a Division Order certifying Lessor's interest in production. Lessee may pay all taxes and fees levied upon the oil and gas as produced, including, without limitation, severance taxes and privilege and surveillance fees, and deduct a proportionate share of the amount so paid from any monies payable to Lessor hereunder. Lessee may withhold Royalty payment until such time as the total withheld exceeds one hundred dollars ($100.00).

(C) DELAY IN MARKETING: In the event that Lessee drills a well on the Leasold or lands pooled/united therewith that is awaiting completion (including, without limitation, hydraulic fracture stimulation), or that Lessee deems to be capable of production, but does not market producible gas, oil, or their constituents, therewith, and there is no other basis for extending this Lease, Lessee shall pay the primary term and until such time as marketing is established (or Lessee surrenders the Lease) a Delay in Marketing payment equal in amount and frequency to the annual Delay Rental payment, and this Lease shall remain in full force and effect to the same extent as payment of Royalty.

(D) SHUT-IN: In the event that production of oil, gas, or their constituents, is interrupted and not marketed for a period of twelve (12) months, and there is no producing well on the Leasold or lands pooled/united therewith, Lessee shall, after the primary term, as Royalty for constructive production, pay a Shut-In Royalty equal in amount and frequency to the annual Delay Rental payment until such time as production is re-established (or Lessee surrenders the Lease) and this Lease shall remain in full force and effect. During Shut-in, Lessee shall have the right to rework, stimulate, or deepen any well on the Leasold or to drill a new well on the Leasold in an effort to re-establish production, whether from an original producing formation or from a different formation. In the event that the production from the only producing well on the Leasold is interrupted for a period of less than twelve (12) months, this Lease shall remain in full force and effect without payment of Royalty or Shut-In Royalty.

(E) DAMAGES: Lessee will remove unnecessary equipment and materials and reclaim all disturbed land at the completion of all activities on the Leasold, and Lessee agrees to repair any damaged improvements to the land and pay for the loss of growing crops or marketable timber.

(F) MANNER OF PAYMENT: Lessee shall make or tender all payments due hereunder by check, payable to Lessor, at Lessor's last known address, and Lessee may withhold any payment pending notification by Lessor of a change in address. Payment may be tendered by mail or any comparable method (e.g., Federal Express), and payment is deemed complete upon mailing or dispatch. Where the date for any payment specified herein falls on a Sunday, Saturday, Monday or Sunday, payment tendered (mailed or dispatched) on the next business day is timely.

(G) CHANGE IN LAND OWNERSHIP: Lessee shall not be bound by any change in the ownership of the Leasold until furnished by Lessee with such documentation as Lessee may reasonably require. Pending the receipt of documentation, Lessee may elect either to continue to make or withhold payments as if such a change had not occurred.

(H) TITLE: If Lessee receives evidence that Lessor does not have title to all or any part of the rights herein leased, Lessee may immediately withhold payments that would be otherwise due and payable hereunder to Lessor until the adverse claim is fully resolved. Lessor represents and warrants that there is no existing oil and gas lease which is presently in effect covering the Leasold.

(I) LIENS: Lessee may, at its option, pay and discharge any past due taxes, mortgages, judgments, or other liens and encumbrances on or against any land or interest included in the Leasold; and Lessee shall be entitled to recover from the debtor, with legal interest and costs, by deduction from any future payments to Lessor or by any other lawful means. In the event the liens and encumbrances are encumbered by a purchase agreement, then, notwithstanding anything contained herein to the contrary, Lessee shall have the right to suspend the payment of any royalties due hereunder, without liability for interest, until such time as Lessee obtains at its own expense a subordination of the mortgage in a form acceptable to Lessee.

(J) CHARACTERIZATION OF PAYMENTS: Payments set forth herein are covenants, not special limitations, regardless of the manner in which these payments may be invoked. Any failure on the part of the Lessee to timely or otherwise properly tender payment cannot result in an automatic termination, expiration, cancellation, or forfeiture of this Lease. Lessor recognizes and acknowledges that oil and gas leases payments, in the form of rental, bonus and royalty, can vary depending on multiple factors and that this Lease is the product of good faith negotiations. Lessor hereby agrees that the payment terms, as set forth herein, and any bonus payments paid to Lessor constitute full consideration for the Leasold. Lessor further agrees that such payment terms and bonus payments are final and that Lessor
will not seek to amend or modify the lease payments, or seek additional consideration based upon any differing terms which Lessee has or will negotiate with any other lessor/oil and gas owner.

(K) PAYMENT REDUCTIONS. If Lessor owns a lesser interest in the oil or gas than the entire undivided fee simple estate, then the rentals (except for Delay Rental payments as set forth above), royalties and shut-in royalties hereunder shall be paid to Lessor only in the proportion which Lessor’s interest bears to the whole and undivided fee.

UNITIZATION AND POOLING. Lessor grants Lessee the right to pool, unitize, or combine all or parts of the Leasedhold with other lands, whether contiguous or not contiguous, leased or unleased, whether owned by Lessor or by others, at a time before or after drilling to create drilling or production units either by contract right or pursuant to governmental authorization. Pooling or unitizing in one or more instances shall not exhaust Lessee’s pooling and unitizing rights hereunder, and Lessee is granted the right to change the size, shape, and conditions of operation or payment of any unit created. Lessor agrees to accept and receive out of the production or the revenue realized from the production of such unit, such proportional share of the Royalty from each unit well as the number of Leasedhold acres included in the unit bears to the total number of acres in the unit. Otherwise, as to any part of the unit, drilling, operations in preparation for drilling, production, or shut-in production from the unit, or payment of Royalty, Shut-in Royalty, Delay in Marketing payment or Delay Rental attributable to any part of the unit (including non-Leasedhold land) shall have the same effect upon the terms of this Lease as if a well were located on, or the subject activity attributable to, the Leasedhold. In the event of conflict or inconsistency between the Leasedhold areas ascribed to the Lease, and the local property tax assessment calculation of the lands covered by the Lease, or the deeded acreage amount, Lessee may, at its option, rely on the latter as being determinative for the purposes of this paragraph.

FACILITIES. Lessee shall not drill a well a within 200 feet of any structure located on the Leasedhold without Lessee’s written consent. Lessee shall not erect any building or structure, or plant any trees within 200 feet of a well or within 25 feet of a pipeline without Lessee’s written consent. Lessee shall not improve, modify, degrade, or restrict roads and facilities built by Lessee without Lessee’s written consent.

CONVERSION TO STORAGE. Lessee is hereby granted the right to convert the Leasedhold or lands pooled/unitized therewith to gas storage. At the time of conversion, Lessee shall pay Lessor’s proportionate part for the estimated recoverable gas remaining in any well drilled pursuant to this Lease using methods of calculating gas reserves as are generally accepted by the natural gas industry and, in the event that all wells on the Leasedhold and/or lands pooled/unitized therewith have permanently ceased production, Lessee shall be paid a Conversion to Storage payment in an amount equal to Delay Rental for as long thereafter as the Leasedhold or lands pooled/unitized therewith is/are used for gas storage or for protection of gas storage; such Conversion to Storage payment shall first become due upon the next ensuing Delay Rental anniversary date. The use of any part of the Leasedhold or lands pooled or unitized therewith for the underground storage of gas, or for the protection of stored gas will extend this Lease beyond the primary term as to all rights granted by this Lease, including but not limited to production rights, regardless of whether the production and storage rights are owned together or separately.

DISPOSAL AND INJECTION WELLS. Lessor hereby grants to Lessee the right to drill wells and/or re-enter existing wells, including necessary location, roadway and pipeline easements and rights of way, on any part of the Leasedhold or lands pooled or unitized therewith for the disposal and/or injection into any subsurface strata, other than a potable water strata, of air, gas, brine, completion and production fluids, waste water and any hydrocarbon related substances from any source, including, but not limited to wells on the Leasedhold or lands pooled or unitized therewith from properties and lands outside the Leasedhold or lands pooled or unitized therewith, and to conduct all operations as may be required, for so long as necessary and required by Lessee for purposes as herein provided. If, at the expiration of the primary term, Lessee is disposing and/or injecting into any subsurface strata underlying the Leasedhold or lands pooled or unitized therewith or conducting operations for such disposal and/or injection and this lease is not being maintained by any other provision contained herein and no other payments are being made to Lessor as prescribed hereunder, Lessee shall pay to Lessor the sum of one thousand dollars ($1,000.00) per year, proportionately reduced to Lessor’s ownership in the Leasedhold and surface as it bears to the full and undivided estate, beginning on the next anniversary date of this Lease and said payment and term of this Lease, insofar as to terms and provisions contained herein applicable to disposal and injection wells, shall continue annually thereafter for so long as necessary and required by Lessee for purposes as herein provided and until all disposal and/or injection wells located on the Leasedhold or on lands pooled or unitized therewith are plugged and abandoned. Lessee agrees that if required by Lessor, regulatory agency or governmental authority having jurisdiction, Lessee shall enter a separate Disposal and Injection Agreement with Lessee for the purposes as herein provided.

TITLE AND INTERESTS. Lessor hereby warrants generally and agrees to defend title to the Leasedhold and covenants that Lessor shall have quiet enjoyment hereunder and shall have beneficial title to the Leasedhold and shall not fail to execute this Lease, the Lessee shall nevertheless be binding upon all persons who do execute it as Lessor.

LEASE DEVELOPMENT. There is no implied covenant to drill, prevent drainage, further develop or market production within the primary term or any extension of term of this Lease. There shall be no Leasehold forfeiture, termination, expiration or cancellation for failure to comply with said implied covenants. Provisions herein, including, but not limited to the prescribed payments, constitute full compensation for the privileges herein granted.

COVENANTS. This Lease and its expressed or implied covenants shall not be subject to termination, forfeiture of rights, or damages due to failure to comply with obligations if compliance is effectively prevented by federal, state, or local law, regulation, or decree, or the acts of God and/or third parties over whom Lessee has no control.

RIGHT OF FIRST REFUSAL. If at any time within the primary term of this lease or any continuation or extension thereof, Lessor receives any bona fide offer, acceptable to Lessor, to grant an additional lease which will take effect upon expiration of this Lease ("Top Lease") covering all or part of the Leasedhold, Lessee shall have the continuing option by meeting any such offer to acquire a Top Lease on equivalent terms and conditions. Any offer must be in writing and must set forth the proposed Lessor’s name, bonus consideration and royalty consideration to be paid for such Top Lease, and include a copy of the lease form to be utilized reflecting all pertinent and relevant terms and conditions of the Top Lease. Lessee shall have fifteen (15) days after receipt from Lessor of a complete copy of any such offer to advise Lessor in writing of its election to enter into an oil and gas lease with Lessor on equivalent terms and conditions that Lessor fails to notify Lessee within the aforesaid fifteen (15) day period of its election to meet any such bona fide offer, Lessee shall have the right to accept said offer. Any Top Lease granted by Lessor in violation of this provision shall be null and void.

ARBITRATION. In the event of a disagreement between Lessor and Lessee concerning this Lease or the associated Order of Payment, performance thereunder, or damages caused by Lessee’s operations, the resolution of all such disputes shall be determined by arbitration in accordance with the rules of the American Arbitration Association. Arbitration shall be the exclusive remedy and cover all disputes, including but not limited to, the formation, execution, validity and performance of the Lease and Order of Payment. All fees and costs associated with the arbitration shall be borne equally by Lessor and Lessee.

ENTIRE CONTRACT. The entire agreement between Lessee and Lessor is embodied herein and in the associated Order of Payment (if any). No oral warranties, representations, or promises have been made or relied upon by either party as an inducement to or modification of this Lease.

TITLE CURATIVE. Lessor agrees to execute, acknowledge, assign, record, and file any conveyances, assignments, and other instruments as Lessee may request to carry into effect the purpose of this lease, including without limitation, applications necessary to obtain driveway entrance permits, and approvals of drilling or production units which Lessee may seek to form pursuant to governmental authorization.
SURRENDER. Lessee, at any time, and from time to time, may surrender and cancel this Lease as to all or any part of the Leasehold by recording a Surrender of Lease and thereupon this Lease, and the rights and obligations of the parties hereunder, shall terminate as to the part so surrendered; provided, however, that upon such surrender as to any part of the Leasehold, Lessee shall have reasonable and convenient easements for the existing wells, pipelines, poles, lines, roadways and other facilities on the lands surrendered.

SUCCESSORS. All rights, duties, and liabilities herein benefit and bind Lessor and Lessee and their heirs, successors, and assigns.

FORCE MAJEURE. All terms, provisions and express or implied covenants of this Lease shall be subject to all applicable laws, rules, regulations and orders. If Lessee shall be unable, in its sole discretion, to effectively accomplish the purposes and objectives of this Lease or to exercise its rights hereunder because of such laws, rules, regulations or orders, or if drilling, reworking, production or other operations hereunder, or Lessee's fulfillment of its obligations hereunder are prevented or delayed by such laws, rules, regulations or orders, or by inability to obtain necessary permits, equipment, services, material, water, electricity, fuel, access or easements, or by fire, flood, adverse weather conditions, war, sabotage, rebellion, insurrection, riot, strike or labor disputes, or by inability to obtain a satisfactory market for production or failure of purchasers or carriers to take or transport such production, or by any other cause not reasonably within Lessee's control, then this Lease shall not terminate, in whole or in part, because of such inability, prevention or delay, and, at Lessee's option, the period of such inability, prevention or delay shall be added to the term hereof. Lessee shall not be liable in damages for breach of any express or implied covenants of this Lease for failure to comply therewith, if compliance is prevented by, or failure is the result of any applicable laws, rules, regulations or orders or operation of force majeure. If this Lease is the subject matter of any lawsuit, arbitration proceeding, or other action, then this Lease shall not expire during the pendency of such lawsuit, arbitration proceeding, or other action, or any appeal thereof, and the period of the lawsuit, arbitration proceeding, or other action, and any appeal thereof, shall be added to the term of this Lease.

SEVERABILITY. This Lease is intended to comply with all applicable laws, rules, regulations, ordinances and governmental orders. If any provision of this Lease is held by a court of competent jurisdiction to be invalid, void, or unenforceable, the remaining provisions shall survive and continue in full force and effect to the maximum extent allowed by law. If a court of competent jurisdiction holds any provision of this Lease invalid, void, or unenforceable under applicable law, the court shall give the provision the greatest effect possible under the law and modify the provision so as to conform to applicable law if that can be done in a manner which does not frustrate the purpose of this Lease.

COUNTERPARTS. This Lease may be executed in one or more counterparts, each of which shall be deemed to be an original copy of this Lease and all of which, when taken together, will be deemed to constitute one and the same agreement.

**See Exhibit "A" attached hereto and by reference made a part hereof**

IN WITNESS WHEREOF, Lessee hereunto sets hand and seal.

Witness. (Seal)

Witness. (Seal)

Witness. (Seal)

Witness. (Seal)

LESSOR:

James Carducci

IN WITNESS WHEREOF, Lessor hereunto sets hand and seal.

Witness. (Seal)

Witness. (Seal)

Witness. (Seal)

Witness. (Seal)

Document prepared by: SWN Production Company, L.L.C., 1000 Energy Drive, Spring, Texas 77389.

ACKNOWLEDGMENT

STATE OF )
COUNTY OF ) SS:

On this the 22 day of June, 2017, before me, the undersigned officer, personally appeared James Carducci, a married man, dealing herein with his separate property known to me (or satisfactorily proven) to be the person(s) whose name(s) is/are subscribed to the within instrument, and acknowledged that he/she/they executed the same for the purposes therein contained.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission Expires: June 5, 2019
Signature/Notary Public: [Signature]
Name/Notary Public (print): Tamm L. Johnson
Exhibit “A”

Addendum to Oil and Gas Lease dated July 25, 2017, from James Carducci, a married man, dealing herein with his separate property, of 140 Rachel Lin Dr., Saint Cloud, FL 34771, Lessor to SWN Production Company, LLC, as Lessee, covering 17.25 acres, more or less, situated in Buffalo District, Brooke County, West Virginia:

In the event of a conflict or inconsistency between the printed terms of this lease and these added terms of this lease, the added terms shall control and be deemed to supersede the printed terms of the lease.

ROYALTY—All references made in Paragraph (B)1 and 2 of the section entitled “PAYMENT TO LESSOR” as to one-eighth (1/8) royalty shall be amended to seventeen percent (17%)

Signed for Ratification:

[Signature]

James Carducci

RECEIVED
Office of Oil and Gas
SEP - 6 2017
WV Department of Environmental Protection
PAID-UP
OIL & GAS LEASE

Lease No. _ _ _

1/15 - WV

This Lease, made this 26th day of April, 2017, by and between Evelyn Blake, a widow, of 654 Swimmill Lane, Glen Easton, WV 26039 hereinafter collectively called “Lessee,” and SWN Production Company, L.L.C., a Texas limited liability company, 10000 Energy Drive, Spring, Texas 77388, hereinafter called “Lessee.”

WITNESSETH, that for and in consideration of Ten Dollars ($10.00) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and of the mutual covenants and agreements hereinafter set forth, the Lessee and Lessee agree as follows:

1. LEASING CLAUSE. Lessee hereby leases exclusively to Lessee all the oil and gas (including, but not limited to) coal seam gas, coiled gas, coalbed methane gas, coalbed gas, methane gas, gas, gas, coiled gas, methane, natural gas and all associated natural gas and other hydrocarbons and non-hydrocarbons contained in, associated with, emitting from, or produced (originating within any formation, on area, mine-out area, coal seam, and all communicating zone), and their liquid gaseous constituents, whether hydrocarbon or non-hydrocarbon, underlying the lands herein leased, together with such exclusive rights as may be necessary or convenient for Lessee, at its election, to explore for, develop, produce, measure, and market production from the Leasehold, or from other lands, using methods and techniques which are not restricted to current technology, including, without limitation, the right to conduct geophysical and other exploratory tests; to drill, maintain, operate, cease to operate, plug, abandon, and remove wells; to use or install roads over and across the Leasehold for use in development of the Leasehold or other lands, electric power and telephone facilities, water impoundments, and to construct pipelines and appurtenant facilities, including data acquisition, compression and collection facilities for use in the production and transportation of products from the Leasehold or from other lands across the Leasehold, to use oil, gas, and non-domestic water sources, free of cost, to store gas of any kind, underground, regardless of the source thereof, including the injecting of gas therein and removing the same therefrom; to protect stored gas; to operate, maintain, repair, and remove material and equipment; to use and occupy the subsurface of the Leasehold for the drilling of a well(s) for use in development of the Leasehold or other lands.

2. DESCRIPTION. The Leasehold is located in the District of Buffalo, in the County of Brooke, in the State of West Virginia, and described as follows:

Property Tax Parcel Identification Number: Tax Parcel I.D. 03-842-0001-0000
and is bounded formerly or currently as follows:

On the North by lands of 03-837-0124-0000;
On the East by lands of 03-837-0122-0000;
On the South by lands of 03-837-0127-0000;
On the West by lands of 03-837-0128-0000, 03-842-0002-0000.

including lands acquired from Alma Rose Grishouse by virtue of Last Will and Testament dated October 22, 2003 and recorded in Will Book 51, at Page 556, and described for the purposes of this agreement as containing a total of 17.25 Leasehold acres, whether actually more or less, and including contiguous lands owned by Lessee. This Lease also covers and includes, in addition to that above described, all land, if any, contiguous or adjacent to or adjoining the land above described and (x) owned or claimed by Lessee, by limitation, prescription, possession, reversion or unrecorded instrument or (y) as to which Lessee has a preference right of acquisition. Lessee agrees to execute any supplemental instrument requested by Lessee for a more complete or accurate description of said land.

3. LEASE TERM. This Lease shall remain in force for a primary term of Five (5) years from 12:00 A.M., April 24, 2017 (effective date) to 11:59 P.M., April 23, 2022 (last day of primary term) and shall continue beyond the primary term as to the entirety of the Leasehold if any of the following is satisfied: (i) operations are conducted on the Leasehold or lands pooled/united therewith in search of oil, gas, or their constituents; or (ii) if a well is drilled by Lessee to be capable of production located on the Leasehold or lands pooled/united therewith, or (iii) if the Lessee is engaged in geophysical and other exploratory work including, but not limited to, activities to drill an initial well, to drill a new well, or to rework, stimulate, deepen, sidetrack, frac, plug back in the same or different formation or repair a well on the Leasehold or on any lands pooled/united therewith such activities shall include, but not be limited to, performing any preliminary or preparatory work necessary for drilling, conducting internal technical analysis to initiate and/or further develop a well, obtaining permits and approvals associated therewith and may include reasonable gaps in activities provided that there is a continuum of activities showing a good faith effort to develop a well or that the cessation or interruption of activities was beyond the control of Lessee, including interruptions caused by the acts of third parties over whom Lessee has no control or regulatory delays associated with any approval process required for conducting such activities.

RECEIVED
Office of Oil and Gas
SEP - 6 2017
WV Department of Environmental Protection
(B) LIMITATION OF FORFEITURE: This Lease shall never be subject to a civil action or proceeding to enforce a claim of termination, cancellation, expiration or forfeiture due to any act of the Lessee, including, but not limited to making any prescribed payments authorized under the terms of this Lease, unless the Lessee has received written notice of Lessor's demand and failure to pay said sum or sums due to the Lessor's demand within 60 days of such failure. If the Lessee timely responds to Lessor's demand, but in good faith disagrees with Lessor's position and sets forth the reasons therefore, such a response shall be deemed to satisfy this provision, this Lease shall continue in full force and effect and no further damages (or other claims for relief) will accrue to Lessor's favor during the pendency of the dispute, other than claims for payments that may be due under the terms of this Lease.

PAYMENTS TO LESSOR: In addition to the bonus paid by Lessee for the execution hereof, Lessee covenants to pay Lessor, proportionate to Lessor's percentage of ownership, as follows:

(A) DELAY RENTAL: To pay Lessor as Delay Rental, after the first year, at the rate of five dollars ($5.00) per acre per year payable in advance. The parties hereto agree that this is a Paid-Up Lease with no further Delay Rental and/or Delay in Marketing payments due to Lessor during the primary term or, if so exercised, the extended primary term hereof.

(B) ROYALTY: To pay Lessor as Royalty, less all taxes, assessments, and adjustments on production from the Leasehold, as follows:

1. OIL: To deliver to the credit of Lessor a Royalty equal to one-eighth (1/8) of the net revenue realized by Lessee for all oil and any constituents thereof produced and marketed from the Leasehold, less the cost to transport, handle, separate, meter, treat, process and market the oil.

2. GAS: To pay Lessee an actual volume of gas and any constituents thereof sold from said land, one-eighth of the net amount realized by Lessee, computed at the wellhead. As used in this lease, the term "net amount realized by Lessee" means the gross proceeds received by Lessor from the sale of oil and gas minus post-production costs incurred by Lessor between the wellhead and the point of sale. As used in this lease, the term "post-production costs" means all costs and expenses of (a) treating and processing oil and any liquid or gaseous hydrocarbons from gas, and (b) separating liquid hydrocarbons from gas, other than the cost of transporting oil and/or gas, including but not limited to transportation between the wellhead and any production or treating facilities, and transportation to the point of sale, and (c) compressing gas for transportation and delivery purposes, and (d) metering oil and/or gas to determine the amount sold and/or the amount used by Lessee, and (e) sales charges, commissions and fees paid to third parties (whether or not affiliated) in connection with the sale of the gas, and (g) any and all other costs and expenses of any kind or nature incurred in regard to the gas, or the handling thereof, between the wellhead and the point of sale. Lessor may use its own pipelines and equipment to provide such treating, processing, separating, transportation, compression and metering services, or it may engage others to provide such services; and if Lesser uses its own pipelines and/or equipment, post-production costs shall include without limitation reasonable depreciation and amortization expenses relating to such facilities, together with Lesser's cost of capital and a reasonable return on its investment in such facilities. Prior to payment of royalty, Lessor may be required to execute a Division Order certifying Lesser's interest in production. Lessee may pay all taxes and fees levied upon the oil and gas as produced, including, without limitation, severance taxes and privilege and surveillance fees, and deduct a proportionate share of the amount so paid from any moneys payable to Lessee hereunder. Lessor may withhold royalty payment until such time as the total withheld exceeds one hundred dollars ($100.00).

(C) DELAY IN MARKETING: In the event that Lessee drills a well on the Leasehold or lands pooled/united therewith that is in an unsuccessful completion (including, without limitation, hydraulic fracture stimulation), or that Lessee deems to be capable of production, but does not market producible gas, oil, or their constituents, thereafter, and there is no other basis for extending this Lease, Lessee shall pay after the primary term and until such time as marketing is established (or Lesser surrenders the Lease) a Delay in Marketing payment equal in amount and frequency to the annual Delay Rental payment, and this Lease shall remain in full force and effect to the same extent as payment of Royalty.

(D) SHUT-IN: In the event that production of oil, gas, or their constituents, is interrupted and not marketed for a period of twelve (12) months, and there is no producing well on the Leasehold or lands pooled/united therewith, Lessee shall, after the primary term, as Royalty for constructive production, pay a Shut-In Royalty equal in amount and frequency to the annual Delay Rental payment until such time as production is re-established (or Lessee surrenders the Lease) and this Lease shall remain in full force and effect. During Shut-In, Lessee shall have the right to rework, stimulate, or deepen any well on the Leasehold or to drill a new well on the Leasehold in an effort to re-establish production, whether from an original producing formation or from a different formation. In the event that the production from the only producing well on the Leasehold is interrupted for a period of less than twelve (12) months, this Lease shall remain in full force and effect without payment of Royalty or Shut-In Royalty.

(E) DAMAGES: Lessee will remove unnecessary equipment and materials and reclaim all disturbed lands at the completion of all activities on the Leasehold, and Lessee agrees to repair any damaged improvements to the land and pay for the loss of growing crops or marketable timber.

(F) MANNER OF PAYMENT: Lessee shall make or tender all payments due hereunder by check, payable to Lessor, at Lessee's last known address, and Lessee may withhold any payment pending payment by Lessor of a change in address. Payment may be tendered by mail or any comparable method (e.g., Federal Express), and payment is deemed complete upon mailing or dispatch. Where the due date for any payment specified herein falls on a holiday, Saturday or Sunday, payment must be tendered (mailed or dispatched) on the next business day.

(G) CHANGE IN LAND OWNERSHIP: Lessee shall not be bound by any change in the ownership of the Leasehold until furnished by Lessee with such documentation as Lessee reasonably requires. Pending the receipt of documentation, Lessee may elect either to continue to make or withhold payments as if such a change had not occurred.

(H) TITLE: If Lessee receives evidence that Lessor does not have title to all or any part of the rights herein leased, Lessee may immediately withhold payments that would be otherwise due and payable hereunder to Lessee until the adverse claim is fully resolved. Lessee represents and warrants that there is no existing oil and gas lease which is presently in effect covering the Leasehold.

(I) LIENS: Lessee may, at its option, pay and discharge any past due taxes, mortgages, judgments, or other liens and encumbrances that are due and payable on any land or interests included in the Leasehold at and a time following the execution of this lease by either Lessee or the Lessee shall be entitled to receive after the expiration, or termination, of this lease, if any, by any act or omission of the lessor that amounts to a violation of the terms of this lease, a violation of which constitutes a breach of any of the terms of the lease.

(J) CHARACTERIZATION OF PAYMENTS: Payments set forth herein are covenants, not special limitations, regardless of the manner in which these payments may be invoked. Any failure on the part of the Lessee to timely or otherwise properly tender payment cannot result in an automatic termination, expiration, cancellation, or forfeiture of this lease. Lessee recognizes and acknowledges that any act or omission of the lessor that amounts to a violation of the terms of this lease, a violation of which constitutes a breach of any of the terms of the lease, may vary depending on multiple factors, including, without limitation, the good faith negotiations. Lessee hereby agrees that the payment terms, as set forth herein, and any bonus payments paid to Lessee constitute full consideration for the Leasehold. Lessee further agrees that such payment terms and bonus payments are final and that Lessee
will not seek to amend or modify the lease payments, or seek additional consideration based upon any differing terms which Lessee has or will negotiate with any other lessor and gas owner.

(k) PAYMENT REDUCTIONS. If Lessor owns a lesser interest in the oil or gas than the entire undivided fee simple estate, then the rentals (except for Delay Rental payments as set forth above), royalties and shut-in royalties hereunder shall be paid to Lessor only in the proportion which Lessor’s interest bears to the whole and undivided fee.

INITIATION AND POOLING. Lessor grants Lessee the right to pool, unitize, or combine all or parts of the Leasehold with other lands, whether contiguous or not contiguous, leased or unleased, whether owned by Lessor or by others, at a time before or after drilling to create drilling or production units either by contract right or pursuant to governmental authorization. Pooling or unitizing in one or more instances shall not exhaust Lessee’s pooling and unitizing rights hereunder, and Lessee is granted the right to change the size, shape, and conditions of operation or payment of any unit created. Lessor agrees to accept and receive out of the production or the revenue realized from the production of such unit, such proportional share of the Royalty from each unit well as the number of Leasehold acres included in the unit bears to the total number of acres in the unit. Otherwise, as to any part of the unit, drilling, operations in preparation for drilling, production, or shut-in production from the unit, or payment of Royalty. Shut-in Royalty, Delay in Marketing Payment or Delay Rental attributable to a part of the unit (including non-Leasehold land) shall have the same effect upon the terms of this Lease as if a well were located on, or the subject activity attributable to, the Leasehold. In the event of conflict or inconsistency between the Leasehold acreage ascribed to the Lease, and the local property tax assessment calculation of the lands covered by the Lease, or the deeded acreage amount, Lessee may, at its option, rely on the latter as being determinative for the purposes of this paragraph.

FACILITIES. Lessee shall not drill a well on the Leasehold within 200 feet of any structure located on the Leasehold without Lessor’s written consent. Lessor shall not erect any building or structure, or plant any trees within 200 feet of a well or within 25 feet of a pipeline without Lessor’s written consent. Lessor shall not improve, modify, degrade, or restrict roads and facilities built by Lessor without Lessor’s written consent.

CONVERSION TO STORAGE. Lessee is hereby granted the right to convert the Leasehold or lands pooled/unitized therewith to gas storage. At the time of conversion, Lessee shall pay Lessor’s proportionate part for the estimated recoverable gas remaining in any well drilled pursuant to this Lease using methods of calculating gas reserves as are generally accepted by the natural gas industry and, in the event that all wells on the Leasehold and/or lands pooled/united therewith have been converted to gas storage, the Lessee shall be paid a Conversion to Storage payment in an amount equal to Delay Rental for as long thereafter as the Leasehold or lands pooled/unitized therewith is/are used for gas storage or for protection of gas storage; such Conversion to Storage payment shall first become due upon the next ensuing Delay Rental anniversary date. The use of any part of the Leasehold or lands pooled or unitized therefor for the underground storage of gas, or for the protection of stored gas, will extend this Lease beyond the primary term as to all rights granted by this Lease, including but not limited to production rights, regardless of whether the production and storage rights are owned together or separately.

DISPOSAL AND INJECTION WELLS. Lessor hereby grants to Lessee the right to drill wells and/or re-enter existing wells, including necessary location, roadway and pipeline easements and rights of way, on any part of the Leasehold or lands pooled or unitized therefor for the disposal and/or injection into any subsurface strata, other than a possible water strata, of air, gas, brine, completion and production fluids, waste water and any hydrocarbon related substances from any source, including, but not limited to wells on the Leasehold or lands pooled or unitized therefrom from the Leasehold or lands pooled or unitized therewith, and to conduct all operations as may be required, for so long as necessary and required by Lessor for purposes as herein provided. If, at the expiration of the primary term, Lessee is disposing and/or injecting into any subsurface strata underlying the Leasehold or lands pooled or unitized therefor or conducting operations for such disposal and/or injection and this lease is not being maintained by any other provision contained herein, and there are no other payments being made to Lessor as prescribed hereunder, Lessee shall pay to Lessor the sum of one thousand dollars ($1,000.00) per year, proportionately reduced to Lessor’s ownership in the Leasehold and as it bears to the full and undivided estate, beginning on the next anniversary date of this Lease and said payment and term of this Lease, insofar as in terms and provisions contained herein applicable to disposal and injection wells shall continue annually thereafter for so long as necessary and required by Lessee to dispose and/or inject wells for the purposes herein provided and until all disposal and/or injection wells for the purpose of disposing and/or injecting wells are plugged and abandoned. Lessee agrees that if required by Lessor, regulatory agency or governmental authority having jurisdiction, Lessee shall enter a separate Disposal and Injection Agreement with Lessor for the purposes as hereinprovided.

TITLE AND INTERESTS. Lessor hereby warrants generally and agrees to defend title to the Leasehold and covenants that Lessee shall have quiet enjoyment hereunder and shall have benefit of the doctrine of after acquired title. Should any person having title to the Leasehold fail to execute this Lease, the Lessee shall nevertheless be binding upon all persons who do execute it as Lessor.

LEASE DEVELOPMENT. There is no implied covenant to drill, prevent drainage, further develop or market production within the primary term or any extension of term of this Lease. There shall be no Lessee forfeiture, termination, expiration or cancellation for failure to comply with said implied covenants. Provisions herein, including, but not limited to the prescribed payments, constitute full compensation for the privileges herein granted.

COVENANTS. This Lease and its expressed or implied covenants shall not be subject to termination, forfeiture of rights, or damages due to failure to comply with obligations if compliance is effectively prevented by federal, state, or local law, regulation, or decree, or the acts of God or third parties over whom Lessor has no control.

RIGHT OF FIRST REFUSAL. If at any time within the primary term of this lease or any continuation or extension thereof, Lessor receives any bona fide offer, acceptable to Lessor, to grant an additional lease which will take effect upon expiration of this Lease ("Top Lease") covering all or part of the Leasehold, Lessor shall have the continuing option by meeting any such offer to acquire a Top Lease on equivalent terms and conditions. Any offer must be in writing and must set forth the proposed Lessor’s name, lease consideration and royalty consideration to be paid for such Top Lease, and include a copy of the lease form to be utilized reflecting all pertinent and relevant terms and conditions of the Top Lease. Lessor shall have fifteen (15) days after receipt from Lessee of a complete copy of any such offer to advise Lessee in writing of its election to enter into an oil and gas lease with Lessor on equivalent terms and conditions. If Lessee fails to notify Lessor within the aforesaid fifteen (15) day period of its election to meet any such bona fide offer, Lessor shall have the right to accept said offer. Any Top Lease granted by Lessor in violation of this provision shall be null and void.

ARBITRATION. In the event of a disagreement between Lessor and Lessee concerning this Lease or the associated Order of Payment, performance thereunder, or damages caused by Lessee’s operations, the resolution of all such disputes shall be determined by arbitration in accordance with the rules of the American Arbitration Association. Arbitration shall be the exclusive remedy and cover all disputes, including but not limited to, the formation, execution, validity and performance of the Lease and Order of Payment. All fees and costs associated with the arbitration shall be borne equally by Lessor and Lessee.

ENTIRE CONTRACT. The entire agreement between Lessor and Lessee is embodied herein and in the associated Order of Payment (if any). No oral warranties, representations, or promises have been made or relied upon by either party as an inducement to or modification of this Lease.

TITLE CURATIVE. Lessor agrees to execute covenants, affidavits, Modifications, amendments, permits and other instruments as Lessee may request to carry out the purpose of this lease, including without limitation, applications necessary to obtain driveway entrance permits, and approvals of drilling or production units which Lessee may seek to form pursuant to governmental authorization.
SURRENDER. Lessee, at any time, and from time to time, may surrender and cancel this Lease as to all or any part of the Leasehold by reciting a Surrender of Lease and thereupon this Lease, and the right and obligations of the parties hereunder, shall terminate as to the part so surrendered; provided, however, that upon such surrender as to any part of the Leasehold, Lessee shall have reasonable and convenient covenants for the existing wells, pipelines, pole lines, roads, and other facilities on the land surrendered.

SUCCESSORS. All rights, duties, and liabilities herein benefit and bind Lessor and Lessee, and their heirs, successors, and assigns.

FORCE MAJEURE. All terms, provisions, and express or implied covenants of this Lease shall be subject to all applicable laws, rules, regulations, and orders. If Lessor is unable, in its sole discretion, to effectively accomplish the purposes and objectives of this Lease or to exercise its rights hereunder because of such laws, rules, regulations, or orders, or if drilling, reworking, production or other operations hereunder, or Lessor's fulfillment of its obligations hereunder are prevented or delayed by such laws, rules, regulations or orders, or by inability to obtain necessary permits, equipment, services, materials, water, electricity, fuel, access or easements, or by fire, flood, adverse weather conditions, war, sabotage, rebellion, insurrection, riot, strike, or labor disputes, or by inability to obtain a satisfactory market for production or failure of purchasers or carriers to take or transport such production, or by any other cause not reasonably within Lessor's control, then this Lease shall not terminate, in whole or in part, because of such inability, prevention or delay, and, at Lessor's option, the period of such inability, prevention or delay shall be added to the term hereof. Lessor shall not be liable in damages for breach of any express or implied covenants of this Lease for failure to comply therewith, if compliance is prevented by, or is a result of any applicable laws, rules, regulations, or orders, or operation of force majeure. If this Lease is the subject matter of any lawsuit, arbitration proceeding, or other action, then this Lease shall not expire during the pendency of such lawsuit, arbitration proceeding, or other action, and any appeal thereof, and the period of the lawsuit, arbitration proceeding, or other action, and any appeal thereof, shall be added to the term of this Lease.

SEVERABILITY. This Lease is intended to comply with all applicable laws, rules, regulations, ordinances and governmental orders. If any provision of this Lease is held by a court of competent jurisdiction to be invalid, void, or unenforceable, the remaining provisions shall survive and continue in full force and effect to the maximum extent allowed by law. If a court of competent jurisdiction holds any provision of this Lease invalid, void, or unenforceable under applicable law, the court shall give the provision the greatest effect possible under the law and modify the provision so as to conform to applicable law that can be done in a manner which does not frustrate the purpose of this Lease.

COUNTERPARTS. This Lease may be executed in one or more counterparts, each of which will be deemed to be an original copy of this Lease and all of which, when taken together, will be deemed to constitute one and the same agreement.

IN WITNESS WHEREOF, Lessor hereto sets hand and seal.

[Signature]

Witness

Witness

Witness

Witness

Document prepared by: SWN Production Company, L.L.C., 1093 Energy Drive, Spring, Texas 77380

ACKNOWLEDGMENT

STATE OF

COUNTY OF

On this the day of , 2017, before me, the undersigned officer, personally appeared , a witness, known to me (or sufficiently proven to be the person whose name is here subscribed to the within instrument), and acknowledged that he/she/they executed the same for the purposes therein contained.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission Expires: August 13, 2017

Signature/Notary Public:

Name/Notary Public (print):
Exhibit “A”

Addendum to Oil and Gas Lease dated April 24, 2017, from Evelyn Blake, a widow of 651 Surrill Lane, Glen Easton, WV 26039, Lessor to SWN Production Company, LLC, as Lessee, covering 17.25 acres, more or less, situated in Buffalo District, Brooke County, West Virginia.

In the event of a conflict or inconsistency between the printed terms of this Lease and these added terms of this Lease, the added terms shall control and be deemed to supersede the printed terms of the lease.

ROYALTY—All references made in Paragraph (B)1 and 2 of the section entitled “PAYMENT TO LESSOR” as to one-eighth (1/8) royalty shall be amended to fourteen percent (14%).

Signed for Identification:

Evelyn Blake

RECEIVED
Office of Oil and Gas
SEP - 6 2017
WV Department of Environmental Protection
PAID-UP

OIL & GAS LEASE

Lease No._____

1/15 - WV

This Lease, made this 23rd day of May, 2017, by and between Lisa Finney Hartshorn, a married woman, in her separate property, of 2597 Crestview Woods, Nescott, Ohio 43555 hereinafter collectively called "Lessor," and SWN Production Company, L.L.C., a Texas limited liability company, 10000 Energy Drive, Spring, Texas 77389, hereinafter called "Lessee."

WITNESSETH, that for and in consideration of Ten Dollars ($10.00) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and of the mutual covenants and agreements hereinafter set forth, the Lessor and Lessee agree as follows:

LEASING CLAUSE. Lessee hereby leases exclusively to Lessor all the oil and gas (including, but not limited to coal seam gas, coaled methane gas, coaled gas, methane gas, coal gas, coaled methanofurfural gas and all associated natural gas and other hydrocarbons and non-hydrocarbons contained in, associated with, emitted from, or produced/originating within any formation, gob area, mined-out area, coal seam, and all communicating zones), and their liquid gaseous constituents, whether hydrocarbon or non-hydrocarbon, underlying the land herein leased, together with such exclusive rights as may be necessary or convenient for Lessee, at its election, to explore for, develop, produce, measure, and market production from the Leasehold, or from other lands, using methods and techniques which are not restricted to current technology, including, without limitation, the right to conduct geophysical and other exploratory tests, to drill, maintain, operate, cease to operate, plug, abandon, and remove wells; to use or install roads over and across the Leasehold for use in development of the Leasehold or other lands, electric power and telephone facilities, water impoundments, and to construct pipelines with appurtenant facilities, including data acquisition, compression and collection facilities for use in the production and transportation of products from the Leasehold or from other lands across the Leasehold, to use oil, gas, and non-domestic water sources, free of cost, to store gas of any kind underground, regardless of the source thereof, including the injection of gas therein and removing the same therefrom; to protect stored gas; to operate, maintain, repair, and remove material and equipment; to use and occupy the subsurface of the Leasehold for the drilling of a well(bore(s) for use in development of the Leasehold or other lands. DESCRIPTION. The Leasehold is located in the District of Buffalo, in the County of Brooke, in the State of West Virginia, and described as follows:

Property Tax Parcel Identification Number: Tax Parcel I.D. 03-B42-0001-0000
and is bounded formerly or currently as follows:
On the North by lands of 03-B37-0128-0000;
On the East by lands of 03-B37-0130-0000;
On the South by lands of 03-B37-0087-0000;
On the West by lands of 03-B37-0125-0000, 03-B42-0002-0000;
including lands acquired from Birdie Finney by virtue of Death Affidavit dated March 16, 2009 and recorded in Monroe County Ohio Book 179, at Page 679, and including lands acquired from the Estate of Carl A. Finney bearing case number 2013 ESI 09837, Monroe County Ohio Probate Records, and described for the purposes of this agreement as containing a total of 17.25 Leasehold acres, whether actually more or less, and including contiguous lands owned by Lessor. This Lease also covers and includes, in addition to that described above, all land, if any, contiguous to or adjoining the land above described and (a) owned or claimed by Lessor, by limitation, prescription, possession, reversion or unreclaimed instrument or (b) to which Lessor has a preference right of acquisition. Lessor agrees to execute any supplemental instrument requested by Lessee for a more complete or accurate description of said land.

LEASE TERM. This Lease shall remain in force for a primary term of Five (5) years from 12:00 A.M. May 23, 2017 (effective date) to 11:59 P.M. May 22, 2022 (last day of primary term) and shall continue beyond the primary term to as the entirety of the Leasehold if any of the following is satisfied: (i) operations are conducted on the Leasehold or lands pooled/united therewith in search of oil, gas, or their constituents, (ii) the Lessee is a well deemed by Lessor to be capable of production is located on the Leasehold or lands pooled/united therewith, or (iii) oil or gas, or their constituents, are produced from the Leasehold or lands pooled/united therewith, or (iv) if the Leasehold or lands pooled/united therewith is used for the underground storage of gas, or for the protection of stored gas, or (v) if Lessee makes payments and, (vi) if Lessee's operations are delayed, postponed or interrupted as a result of any coal, stone or other mining or mining related operations under any existing or future lease, permit or authorization covering such operations. If the lease is extended beyond the primary term, if this option is exercised by Lessee the lease as extended will thereafter be treated as if the original primary term was Ten (10) years.

EXTENSION OF PRIMARY TERM. Lessee has the option to extend the primary term of this Lease at any time for any part of the acreage as covered hereby, for one additional term of Five (5) years from the expiration of the primary term of this Lease; said extension to be valid only if there is no well, lease, or production on the Leasehold. The Lessee may exercise this option to extend this Lease if on or before the expiration date of the primary term of this Lease, Lessee pays or tenders to the Lessor or to the Lessor's credit an amount equal to the sum of the initial consideration given for the execution hereof, which shall be paid in proportion to the number of acres actually extended. Exercise of this option is at Lessee's sole discretion and may be exercised by Lessee where no other alternative of the Lessee Term clause extends this Lease beyond the primary term. If this option is exercised by Lessee the lease as extended will thereafter be treated as if the original primary term was Ten (10) years.

NO AUTOMATIC TERMINATION OR FOREFEITURE. (A) CONSTRUCTION OF LEASE. The language of this Lease (including, but not limited to, the Lease Term and Extension of Term clauses) is never to be read as language of special limitation. This Lease shall be construed against termination, forfeiture, cancellation or expiration and in favor of giving effect to the continuation of this Lease where the circumstances exist to maintain this Lease in effect under any of the alternative mechanisms set forth above. In connection therewith, (i) a well shall be deemed to be capable of production if it has the capacity to produce a profit over operating costs, without regard to any capital costs to drill or equip the well, or to deliver the oil or gas to market, and (ii) the Lessee shall be deemed to be conducting operations in search of oil or gas, or their constituents, if the Lessee is engaged in geophysical and other exploratory work including, but not limited to, activities to drill an initial well, to drill a new well, or to rework, stimulate, deepen, sidetrack, plug back in the same or different formation or repair a well or equipment on the Leasehold or any lands pooled/united therewith (such activities shall include, but not be limited to, performance of any preliminary or preparatory work necessary for drilling, conducting internal technical analysis to initiate and/or further develop a well, obtaining permits and approvals associated therewith and may include reasonable gaps in activities provided that there is a continuance of activities showing a good faith effort to develop a well or that the cessation or interruption of activities was beyond the control of Lessee, including interruptions caused by the acts of third parties over whom Lessee has no control or regulatory delays associated with any approval process required for conducting such activities).
(B) LIMITATION OF FORFEITURE: This Lease shall never be subject to a civil action or proceeding to enforce a claim of termination, cancellation, expiration or forfeiture due to any action or inaction by the Lessee, including, but not limited to making any prescribed payments authorized under the terms of this Lease, unless the Lessee has received written notice of Lessee’s demand and thereafter fails or refuses to act within thirty days after receipt of such notice. If Lessee timely responds to Lessee’s demand, but in good faith disagrees with Lessee’s position and sets forth the reasons therefor, such a response shall be deemed to satisfy this provision, this Lease shall continue in full force and effect and no further damages (or other claims for relief) will accrue to Lessee’s favor during the pendency of the dispute, other than claims for payments that may be due under the terms of this Lease.

PAYMENTS TO LESSOR: In addition to the bonus paid by Lessee for the execution hereof, the Lessee covenants to pay Lessee, proportionate to Lessee’s percentage of ownership, as follows:

(A) DELAY RENTAL: To pay Lessee as Delay Rental, after the first year, at the rate of five dollars ($5.00) per net acre per year payable in advance. The parties hereby agree that this is a Paid-Up Lease with no further Delay Rental and/or Delay in Marketing payments due to Lessee during the primary term or, if so exercised, the extended primary term hereof.

(B) ROYALTY: To pay Lessee as Royalty, less all taxes, assessments, and adjustments on production from the Leasehold, as follows:

1. OIL: To deliver to the credit of Lessee a Royalty equal to one-eighth (1/8) of the net revenue realized by Lessee for all oil and any constituents thereof produced and marketed from the Leasehold, less the cost to transport, handle, separate, meter, treat, process and market the oil.

2. GAS: To pay Lessee on actual volumes of gas and any constituents thereof sold from said land, one-eighth (1/8) of the net amount realized by Lessee, computed at the wellhead. As used in this lease, the term "net amount realized by Lessee, computed at the wellhead" shall mean the gross proceeds received by Lessee from the sale of oil and gas minus post-production costs incurred by Lessee between the wellhead and the point of sale. As used in this Lease, the term "post-production costs" shall mean all costs and expenses of (a) treating and processing oil and/or gas, and (b) separating liquid hydrocarbons from gas, other than condensate separated at the well, and (c) transporting oil and/or gas, including but not limited to transportation between the wellhead and any production or treating facilities, and transportation to the point of sale, and (d) compressing gas for transportation and delivery purposes, and (e) metering oil and/or gas to determine the amount sold and/or the amount used by Lessee, and (f) sales charges, commissions and fees paid to third parties (whether or not affiliated) in connection with the sale of the gas, and (g) any and all costs and expenses of any kind or nature incurred in regard to the gas, or the handling thereof, between the wellhead and the point of sale. Lessee may use its own pipelines and equipment to provide such treating, processing, compressing and metering services, or it may engage or employ others to provide such services; and if Lessee uses its own pipelines and equipment, post-production costs shall include without limitation reasonable depreciation and amortization expenses relating to such facilities, together with Lessee’s cost of capital and a reasonable return on its investment in such facilities. Prior to payment of royalty, Lessee may be required to execute a Division Order certifying Lessee’s interest in production. Lessee may pay all taxes and fees levied upon the oil and gas as produced, including, without limitation, severance taxes and privilege and surveillance fees, and deduct a proportionate share of the amount so paid from any monies payable to Lessee hereunder. Lessee may withhold Royalty payment until such time as the total withheld exceeds one hundred dollars ($100.00).

(C) DELAY IN MARKETING: In the event that Lessee drills a well on the Leasehold or lands pooled/unitized therewith that is awaiting completion (including, without limitation, hydraulic fracture stimulation), or that Lessee does not make a decision to produce, but does not market producible gas, oil, or their constituents, therefor, and there is no other basis for extending this Lease, Lessee shall pay to Lessee after the primary term and until such time as marketing is established (or Lessee surrenders the Lease) a Delay in Marketing payment equal in amount and frequency to the annual Delay Rental payment, and this Lease shall remain in full force and effect to the same extent as payment of Royalty.

(D) SHUT-IN: In the event that production of oil, gas, or their constituents, is interrupted and not marketed for a period of twelve (12) months, and there is no producing well on the Leasehold or lands pooled/unitized therewith, Lessee shall, after the primary term, as Royalty for constructive production, pay a Shut-In Royalty equal in amount and frequency to the annual Delay Rental payment until such time as production is re-established (or Lessee surrenders the Lease) and this Lease shall remain in full force and effect. During Shut-In, Lessee shall have the right to rework, stimulate, or deepen any well on the Leasehold or to drill a new well on the Leasehold in an effort to re-establish production, whether from an original producing formation or from a different formation. In the event that the production from the only producing well on the Leasehold is interrupted for a period of less than twelve (12) months, this Lease shall remain in full force and effect without payment of Royalty or Shut-In Royalty.

(E) DAMAGES: Lessee will remove unnecessary equipment and materials and reclaim all disturbed land at the completion of all activities on the Leasehold, and Lessee agrees to repair any damaged improvements to the land and pay for the cost of growing crops or marketable timber.

(F) MANNER OF PAYMENT: Lessee shall make or tender all payments due hereunder by check, payable to Lessee, at Lessee’s last known address, and Lessee may withhold any payment pending notification by Lessee of a change in address. Payment may be tendered by mail or any comparable method (e.g., Federal Express), and payment is deemed complete upon mailing or dispatch. Where the due date for any payment specified herein falls on a holiday, Saturday or Sunday, payment tendered (mailed or dispatched) on the next business day is timely.

(G) CHANGE IN LAND OWNERSHIP: Lessee shall not be bound by any change in the ownership of the Leasehold until the Lessee, with such documentation as Lessee may reasonably require. Pending the receipt of documentation, Lessee may elect either to continue to make or withhold payments as if such a change had not occurred.

(H) TITLE: If Lessee receives evidence that Lessee does not have title to all or any of the rights hereinafter leased, Lessee may immediately withhold payments that would be otherwise due and payable hereunder to Lessee until the adverse claim is fully resolved. Lessee represents and warrants that there is no existing oil and gas lease which is presently in effect covering the Leasehold.

(I) LIENS: Lessee may, at its option, pay and discharge any past due taxes, mortgages, judgments, or other liens and encumbrances on or against any land or interest included in the Leasehold, and Lessee shall be entitled to recover from the debtor, with legal interest and costs, by deduction from any future payments to Lessee or by any other lawful means. In the event the leased lands are encumbered by a prior mortgage, then, notwithstanding any requirements hereof, the Lessor shall have the right to suspend the payment of any royalties due hereunder, without liability for interest, until such time as Lessee obtains at its own expense a subordination of the mortgage in a form acceptable to Lessee.

(J) CHARACTERIZATION OF PAYMENTS: Payments set forth herein are covenants, not special limitations, regardless of the manner in which these payments may be invoked. Any failure on the part of the Lessee to timely or otherwise properly tender payment can result in an action for damages, expiration, cancellation, or forfeiture of this Lease. If it is determined that oil and gas lease payments, in the form of rental, bonus and royalty, can vary depending on multiple factors and that this is the product of good faith negotiations. Lessor hereby agrees that the payment terms, as set forth herein, and any bonus payments paid to Lessee constitute full consideration for the Leasehold. Lessor further agrees that such payment terms and bonus payments are final and that Lessor
will not seek to amend or modify the lease payments, or seek additional consideration based upon any differing terms which Lessee has or will negotiate with any other lessor(s) and gas owner.

(K) PAYMENT REDUCTIONS. If Lessee owns a lesser interest in the oil or gas than the entire undivided fee simple estate, then the rentals (except for Delay Rental payments as set forth above), royalties and shut-in royalties hereunder shall be paid to Lessee only in the proportion which Lesser’s interest bears to the whole and undivided fee.

UNIFICATION AND POOLING. Lessee grants Lessee the right to pool, utilize, or combine all or parts of the Leasehold with other lands, whether contiguous or not contiguous, leased or unleased, whether owned by Lessee or by others, at a time before or after drilling to create drilling or production units either by contract right or pursuant to governmental authorization. Pooling or unitizing in one or more instances shall not exhaust Lessee’s pooling and unitizing rights hereunder, and Lessee is granted the right to change the size, shape, and conditions of operation or payment of any unit created. Lessee agrees to accept and receive out of the production or the revenue realized from the production of such unit, such proportional share of the Royalty from each unit well as the number of Leasehold acres included in the unit bears to the total number of acres in the unit. Otherwise, as to any part of the unit, drilling, operations in preparation for drilling, production, or shut-in production from the unit, or payment of Royalty, Shut-in Royalty, Delay in Marketing payment or Delay Rental attributable to any part of the unit (including non-Lessee owned land) shall have the same effect upon the terms of this Lease as if a well were located on, or the subject activity attributable to, the Leasehold. In the event of conflict or inconsistency between the Leasehold acres ascribed to the Lease, and the land property tax assessment calculation of the lands covered by the Lease, or the deduced acreage amount, Lessee may, at its option, rely on the latter as being determinative for the purposes of this paragraph.

FACILITIES. Lessee shall not drill a well on the Leasehold within 200 feet of any structure located on the Leasehold without Lessee’s written consent. Lessee shall not erect any building or structure, or plant any trees within 200 feet of a well or within 25 feet of a pipeline without Lessee’s written consent. Lessee shall not improve, modify, degrade, or restrict roads and facilities built by Lessee without Lessee’s written consent.

CONVERSION TO STORAGE. Lessee is hereby granted the right to convert the Leasehold or lands pooled/unitized therewith to gas storage. At the time of conversion, Lessee shall pay Lessee’s proportionate part for the estimated recoverable gas remaining in any well drilled pursuant to this Lease using methods of calculating gas reserves as are generally accepted by the natural gas industry and, in the event that all wells on the Leasehold and/or lands pooled/unitized therewith have permanently ceased production, Lessee shall be paid a Conversion to Storage payment in an amount equal to Delay Rental for as long thereafter as the Leasehold and/or lands pooled/unitized therewith is used for gas storage or for protection of gas storage; such Conversion to Storage payment shall first become due upon the ensuing Delay Rental anniversary date of the Leasehold and/or lands pooled/unitized therewith. For any part of the Leasehold or lands pooled or unitized therewith for the protection of stored gas will extend this Lease beyond the primary term as to all rights granted by this Lease, including but not limited to production rights, regardless of whether the production and storage rights are owned together or separately.

DISPOSAL AND INJECTION WELLS. Lessee hereby grants to Lessee the right to drill wells and/or re-enter existing wells, including recovery wells or any other wells, for the purpose of disposing and/or injecting into any subsurface strata, other than a potable water strata, of air, gas, brine, completion and production fluids, water, and any hydrocarbon related substances from anywhere, including, but not limited to wells on the Leasehold and/or lands pooled or unitized therewith from properties and lands outside the Leasehold, or lands and/or lands pooled or unitized therewith, and to conduct all operations as may be required, for so long as necessary and required by Lessee for purposes as herein provided. If, at the expiration of the primary term, Lessee is disposing and/or injecting into any subsurface strata underlying the Leasehold or lands pooled or unitized therewith or conducting operations for such disposal and/or injection and this lease is not being maintained by any other provision contained herein and no other payments are being made to Lessee as prescribed hereunder, Lessee shall pay to Lessee the sum of one thousand dollars ($1,000.00) per year, proportionately reduced to Lessee’s ownership in the Leasehold and surface as it bears to the full and undivided estate, beginning on the next anniversary date of this Lease and said payment and term of this Lease, insofar as to terms and provisions contained herein applicable to disposal and injection wells, shall continue annually thereafter for so long as necessary and required by Lessee for purposes as herein provided and until all disposal and/or injection wells located on the Leasehold or on lands pooled or unitized therewith are plugged and abandoned. Lessee shall have the option to require by Lessee, regulatory agency or governmental authority having jurisdiction, Lessee shall enter a separate Disposal and Injection Agreement with Lessee for the purposes as herein provided.

TITLE AND INTERESTS. Lessee hereby warrants generally and agrees to defend title to the Leasehold and covenants that Lessee shall have quiet enjoyment hereunder and shall have benefit of the doctrine of after acquired title. Should any person having title to the Leasehold fail to execute hereunder, the Leasehold shall nevertheless be binding upon all persons who do execute it as Lessee.

LEASE DEVELOPMENT. There is no implied covenant to drill, prevent drainage, further develop or market production within the primary term or any extension term of this Lease. There shall be no Lessee forbearance, termination, expiration or cancellation for failure to comply with said implied covenants. Provisions herein, including, but not limited to the prescribed payments, constitute full compensation for the privileges herein granted.

COVENANTS. This Lease and its expressed or implied covenants shall not be subject to termination, forfeiture of rights, or damages due to failure to comply with obligations if compliance is effectively prevented by federal, state, or local law, regulation, or decree, or the acts of God and/or third parties over whom Lessee has no control.

RIGHT OF FIRST REFUSAL. If at any time within the primary term of this lease or any continuation or extension thereof, Lessee receives any bona fide offer, acceptable to Lessee, to grant an additional lease which will take effect upon expiration of this Lease ("Top Lease") covering all or part of the Leasehold, Lessee shall have the continuing option by meeting any such offer to acquire a Top Lease on equivalent terms and conditions. Any offer must be in writing and must set forth the proposed Lessee's name, bonus consideration and royalty consideration to be paid for such Top Lease, and include a copy of the lease form to be utilized reflecting all pertinent and relevant terms and conditions of the Top Lease. Lessee shall have fifteen (15) days after receipt from Lessee of a complete copy of any such offer to advise Lessee in writing of its election to enter into an oil and gas lease with Lessee on equivalent terms and conditions. If Lessee fails to notify Lessee within the aforesaid fifteen (15) day period of its election to meet any such bona fide offer, Lessee shall have the right to accept said offer. Any Top Lease granted by Lessee in violation of this provision shall be null and void.

ARBITRATION. In the event of a disagreement between Lessee and Lessee concerning this Lease or the associated Order of Payment, performance thereunder, or damages caused by Lessee's operations, the resolution of all such disputes shall be determined by arbitration in accordance with the rules of the American Arbitration Association. Arbitration shall be the exclusive remedy and cover all disputes, including but not limited to, the formation, execution, validity and performance of the Lease and Order of Payment. All fees and costs associated with the arbitration shall be borne equally by Lessee and Lessee.

ENTIRE CONTRACT. The entire agreement between Lessee and Lessee is embodied herein and in the associated Order of Payment (if any). No oral warranties, representations, or promises have been made or relied upon by either party as an inducement to or modification of this Lease.

TITLE CURATIVE. Lessee agrees to execute consents, affidavits, notifications, amendments, permits and other instruments as Lessee may request to carry out the purpose of this lease, including without limitation, applications necessary to obtain roadway entrance permits, and approvals of drilling or production units which Lessee may seek to form pursuant to governmental authorization.
SURRENDER. Lessee, at any time, and from time to time, may surrender and cancel this Lease as to all or any part of the Leasable by executing a Surrender of Lease and thereupon this Lease, and the rights and obligations of the parties hereunder, shall terminate as to the part so surrendered, provided, however, that upon such surrender as to any part of the Leasable, Lessee shall have reasonable and convenient easements for their existing wells, pipelines, roads, and other facilities on the lands surrendered.

SUCCESSORS. All rights, duties, and liabilities hereunder shall bind Lessor and Lessee and their heirs, successors, and assigns.

FORCE MAJEURE. All terms, provisions and covenants or implied covenants of this Lease shall be subject to all applicable laws, rules, regulations and orders. If Lessee is unable, in its sole discretion, to effectively accomplish the purposes and objectives of this Lease or to exercise its rights hereunder because of such laws, rules, regulations or orders, or if drilling, production, or other operations hereunder, or Lessee's fulfillment of its obligations hereunder are prevented or delay by such laws, rules, regulations or orders or by incapacity to obtain necessary permits, equipment or services, material, water, electricity, fuel, access or easement, or by fire, flood, adverse weather conditions, war, sabotage, accident, insurrection, riot, strike or labor disputes, or by inability to obtain a satisfactory market for production or failure of purchasers or owners to take or transport such production, or by any other cause not reasonably within Lessor's control, then this Lease shall not terminate, in whole or in part, because of such incapacity, prevention or delay, and, in Lessee's opinion, the period of such inability, prevention or delay shall be added to the term hereof. Lessee shall not be liable in damages for breach of any express or implied covenants of this Lease for failure to comply therewith, if compliance is prevented by, or failure is the result of any applicable laws, rules, regulations or orders or operation of Force Majeure. If this Lease is the subject matter of any lawsuit, arbitration proceeding, or other action, then this Lease shall not expire during the pendency of such lawsuit, arbitration proceeding, or other action, nor any appeal thereof, and the period of the lawsuit, arbitration proceeding, or other action, and any appeal thereof, shall be added to the term of this Lease.

SEVERABILITY. This Lease is intended to comply, with all applicable laws, rules, regulations, ordinances and governmental orders. If any provision of this Lease is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remaining provisions shall survive and continue in effect. In the event this Lease is invalid, void, or unenforceable under applicable law, the court shall give the provision the greatest effect possible under the law and modify the provision so to conform to applicable law that is valid and enforceable.

COUNTERPARTS. This Lease may be executed in one or more counterparts, each of which shall be deemed to be an original copy of this Lease and all of which, when taken together, shall be deemed to constitute one and the same agreement.

**See Exhibit "A" attached hereto and by reference made a part hereof**

IN WITNESS WHEREOF, Lessors and Lessee set their hand and seal.

Witness

Witness

Witness

Witness

LESSEE:

[Signature]

(Sail)

LEASE:

[Signature]

(Sail)

Document prepared by: SW Production Company, L.L.C., 1080 Energy Drive, Spring, Texas 77380.

ACKNOWLEDGMENT

STATE OF

COUNTY OF

On this the 14th day of April, 2017, before me, the undersigned officer, personally appeared LIST FIRST NAME. LAST NAME, known to me (or satisfactory evidence of whose identity was produced to me) and acknowledged that he/she executed the same for the purpose for which executed.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission Expires: March 25, 2018

Signature/Notary Public: [Signature]

Name/Notary Public: [Signature]
Exhibit “A”

Addendum to Oil and Gas Lease dated May 23, 2017, from Lisa Finney Hartshorn, a married woman dealing in her separate property, of 2597 Crestview Woods, Newark, Ohio 43055, Lessor to SWN Production Company, LLC, as Lessee, covering 17.25 acres, more or less, situated in Buffalo District, Brooke County, West Virginia:

In the event of a conflict or inconsistency between the printed terms of this Lease and these added terms of this Lease, the added terms shall control and be deemed to supersede the printed terms of the lease.

ROYALTY—All references made in Paragraph (B)1 and 2 of the section entitled “PAYMENT TO LESSOR” as to one-eighth (1/8) royalty shall be amended to seventeen percent (17%).

Signed for Identification:

Lisa Finney Hartshorn

RECEIVED
Office of Oil and Gas
Sep - 6 2017
WV Department of Environmental Protection
April 5, 2017

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

RE: SWN’s proposed New Well: Mike Ryniawec BRK 3H, Mike Ryniawec BRK 1H in Brooke County, West Virginia, Drilling under Hukill Run Road.

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 Hukill Run Road. 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,

[Signature]

Macey Wallace
Staff Landman
SWN Production Company, LLC
PO Box 1300
Jane Lew, WV 26378
STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
NOTICE CERTIFICATION  

Date of Notice Certification: __9/11/17__  

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 | WV  | County | 908-Brooke  | District | Buffalo  | Quadrangle | Bethany  | Watershed | Buffalo Creek  | UTM NAD 83 | Easting | 831325.63  | Northing | 4446997.68  | Public Road Access | Lazeer Run Road  | Generally used farm name | Mike Ryniaiec  | API No. 47-909  | Operator's Well No. | Mike Ryniaiec BRK 341  | Well Pad Name | Mike Ryniaiec PAD  |

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-at 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*  

- [ ] 1. NOTICE OF SEISMIC ACTIVITY or [ ] NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED  
- [ ] 2. NOTICE OF ENTRY FOR PLAT SURVEY or [ ] NO PLAT SURVEY WAS CONDUCTED  
- [ ] 3. NOTICE OF INTENT TO DRILL or [ ] NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or  
  - [ ] WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)  
- [ ] 4. NOTICE OF PLANNED OPERATION  
- [ ] 5. PUBLIC NOTICE  
- [ ] 6. NOTICE OF APPLICATION  

**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, [Signature], 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: SWN Production En., LLC
By: Dee Southall
Its: Regulatory Supervisor
Telephone: 832-796-1610
Address: P.O. Box 1300
Jane Low, WV 26378
Facsimile: 304-471-2407
Email: Dee_Southall@swn.com

Subscribed and sworn before me this 4th day of April 2017.

Notary Public

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.

RECEIVED
Office of Oil and Gas
SEP - 6 2017
WV Department of Environmental Protection
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: [ ] Date Permit Application Filed: [ ]

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 ☐ REGISTERED ☐ METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

MAIL

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 plan to each of the following persons: (1) The owner 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 landlord, unless the lien holder is the landlord. 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

☐ SURFACE OWNER(s)
Name: Mike Rymaee
Address: 6 Leazer Wilkins Road
Wesling, WV 25633
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: Windsor Coal Company
Address: 1000 Central Energy Drive
Canonsburg, PA 15317

☐ COAL OPERATOR
Name: 
Address: 

☐ SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Name: See Attachment 71
Address: 

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

*Please attach additional forms if necessary
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 plan.

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/oil-and-gas/pages/default.aspx.

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.
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. (6) 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 with the Secretary of the Office of Oil and Gas regarding 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 5th 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.
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 in a list of persons qualified to test water.
Notice is hereby given by:

Well Operator: E PO Production Co., LLC
Telephone: 802-785-1819
Email: Doe_Sacheli@epon.com

Address: P.O. Box 1369
Jane Low, WV 26378
Facsimile: 304-471-2497

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.

Subscribed and sworn before me this 4th day of April 2017.

[Signature]
Notary Public

My Commission Expires 11/21/2022
<table>
<thead>
<tr>
<th>Landowner</th>
<th>Address</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mike Ryniawec</td>
<td>azear Run, Wheeling WV 26003</td>
<td>1 spring</td>
</tr>
</tbody>
</table>
The intent of this map is for general reference only. Information on this map was created using the best available data at the time but is not guaranteed accurate.

**Water Purveyor Map**

Map by: speart  
Date: 03/3/2017  
NAD 1983 BLM Zone 17N HGS

**Well Pad:**  
Mike Ryniawec BRK Pad

**Coordinates:**  
40.190615, -80.608565  

**County:**  
BROOKE
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: 04/04/2017 Date Permit Application Filed:____________

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

☐ HAND ☐ 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: Mike Rynarowc
Address: 5 Lazear Wilhelm Rd
Wheeling, WV 26003

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
County: Brooke/Oho
District: Buffalo
Quadrangle: Bethany WV
Watershed: Buffalo Creek

This Notice Shall Include:

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: PO Box 1303, 170 Innovation Drive
Jane Lew, WV 26378
Telephone: 304-517-7603
Email: michael.ynarowc@swn.com
Fax/SC: 304-864-1891

Authorized Representative: Mike Yates
Address: PO Box 1303, 170 Innovation Drive
Jane Lew, WV 26378
Telephone: 304-517-6003
Email: Michael.Yates@swn.com
Fax/SC: 304-864-1891

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, contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

Revised: SEP - 6 2017

WV Department of Environmental Protection
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: 04/26/2017  Date Permit Application Filed: 04/26/2017

Delivery method pursuant to West Virginia Code § 22-6A-16(c)
☐ CERTIFIED MAIL  ☐ HAND
RETURN RECEIPT REQUESTED  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: Mike Rynar
Address: 8 Lazear Wilhelm Rd.
          Wheeling, WV 26003

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: West Virginia
County: Barbour
District: Buffalo
Quadrangle: Bethany, WV
Watershed: Buffalo Creek

UTM NAD 83

Easting: 633,285.03
Northing: 4,443,037.85
Public Road Access: Lazear Run Road
Generally used farm name: Mike Rynar

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: SWN Production Company, LLC
Address: PO Box 1300, 170 Innovation Drive
         Janes Island, WV 26378
Telephone: 304-697-6630
Fax/Email: Michael.Yates@swn.com

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.

RECEIVED
Office of Oil and Gas
SEP - 6 2017
WV Department of Environmental Protection
April 4, 2017

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 Mike Ryniawec Pad, Brooke County

Mike Ryniawec BRK 3H

Dear Mr. Martin,

The West Virginia Division of Highways has transferred Permit #06-2011-0475 for the subject site to Southwestern Energy for access to the State Road for the well site located off of Brooke County Route 28/4 S.L.S.

The operator has signed an 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 January 3, 2012.

Very Truly Yours,

[Signature]

Gary K. Clayton, P.E.
Regional Maintenance Engineer
Central Office Oil & Gas Coordinator

Cc: Brittany Woody
Southwestern Energy
CH, OM, D-6
File
<table>
<thead>
<tr>
<th>Product Name</th>
<th>Product Use</th>
<th>Chemical Name</th>
<th>CAS Number</th>
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<td>Biocide</td>
<td>Hydrogen Peroxide</td>
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<td>Acetic Acid</td>
<td>64-19-7</td>
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<td>Peroxyacetic Acid</td>
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<td>Scale Inhibitor</td>
<td>Methanol</td>
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<td>Nonylphenol Ethoxylate</td>
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<td>Glutaraldehyde</td>
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<td>Quaternary Ammonium Compounds, Benzyl-C12-16-Alkyldimethyl, Chlorides</td>
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<td>Ethanol</td>
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<td>Amine Triphosphate</td>
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<td>Ethylene Glycol</td>
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<td>WFRA-2000 (U.S. Well Services)</td>
<td>Anionic Friction Reducer</td>
<td>Hydro treated light distillate (petroleum)</td>
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<td>Propenoic acid, polymer with propenamide</td>
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<td>AI-303 (U.S. Well Services)</td>
<td>Mixture</td>
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<td>Cinnamaldehyde</td>
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<td>Butyl cellosolve</td>
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<td>Formic acid</td>
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<td>Polyether</td>
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<td>Ammonium persulfate</td>
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<td>OPTI-FLEX (U.S. Well Services)</td>
<td>Viscosifying Agent</td>
<td>Distillates, petroleum, hydrotreated light</td>
<td>64742-47-8</td>
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</table>
AS-BUILT SITE
FOR
MIKE RYNIAWEC BRK PAD "A"
BUFFALO DISTRICT, BROGUE

PROJECT
LOCATION

COUNTY MAP
N.T.S.

WVDEP OOG
ACCEPTED AS-BUILT

SWN
Southwestern Energy

OPERATOR

LIST OF DRAWINGS
TS1.1 . COVER SHEET
EP1.1 . EVACUATION PLAN
EP2.2 . EVACUATION PLAN
AS3.1 . AS-BUILT
AS3.2 . AS-BUILT
AS3.3 . AS-BUILT
CRA4.1 . ACCESS ROAD
CRA4.2 . PAD CROSS-SECTION
MRP5.1 . RECLAMATION PLAN
MRP5.2 . RECLAMATION PLAN
MRP5.3 . RECLAMATION PLAN
MRD5.1 . DETAILS
MRD5.2 . DETAILS
MRD6.3 . DETAILS

THIS ENGINEER'S CERTIFICATION COVERS UPDATING THE MIKE RYNIAWEC BRK PAD "A" TO CURRENT WEST VIRGINIA STANDARDS AND COVERS ONLY THE ADDITION OF THE CONTAINMENT BERM, CONTACT MISS SHADE BERM AT THE PAD ENTRANCE AND THE RECLAMATION PLAN.

PRINTED NAME: PATRICK C. DE'NARDO, PE
SIGN NAME: [Signature]