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west virginia department of environmental protection

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

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

Tuesday, June 12, 2018  
WELL WORK PERMIT  
Horizontal 6A / New Drill

SWN PRODUCTION COMPANY, LLC  
POST OFFICE BOX 12359

SPRING, TX 773914954

Re: Permit approval for RINE WTZ 8H  
47-103-03229-00-00

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: RINE WTZ 8H  
Farm Name: LARRY G. RINE & JANA L. RI  
U.S. WELL NUMBER: 47-103-03229-00-00  
Horizontal 6A New Drill  
Date Issued: 6/12/2018

**PERMIT CONDITIONS 4710303229**

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.

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**CONDITIONS**

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

# PERMIT CONDITIONS

**4710303229**

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

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

**47 103 03229**

1) Well Operator: SWN Production Co., LLC

|                  |                   |                 |                      |
|------------------|-------------------|-----------------|----------------------|
| <u>494512924</u> | <u>103-Wetzel</u> | <u>1-Center</u> | <u>438-Littleton</u> |
| Operator ID      | County            | District        | Quadrangle           |

2) Operator's Well Number: Rine WTZ 8H Well Pad Name: Rine WTZ Pad

3) Farm Name/Surface Owner: Larry G. & Jana L. Rine Public Road Access: Route 89

4) Elevation, current ground: 1328' Elevation, proposed post-construction: 1328'

5) Well Type (a) Gas  Oil \_\_\_\_\_ Underground Storage \_\_\_\_\_  
Other \_\_\_\_\_

(b) If Gas Shallow  Deep \_\_\_\_\_  
Horizontal

6) Existing Pad: Yes or No Yes *DMH/ 3/8/18*

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Target Formation- Marcellus, Target Top TVD- 7419', Target Base TVD- 7457', Anticipated Thickness- 38', Associated Pressure- 4834.7

8) Proposed Total Vertical Depth: 7438'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 13,092'

11) Proposed Horizontal Leg Length: 5381.27'

12) Approximate Fresh Water Strata Depths: 314'

13) Method to Determine Fresh Water Depths: Salinity profile at the top of a clean GR signature indicating a probable sandstone.

14) Approximate Saltwater Depths: 783' on the top of sand with calculated high salinity above Raven Cliff Sandstone

15) Approximate Coal Seam Depths: 1177'

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

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

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WW-6B  
(04/15)

API NO. 47- 103 -  
OPERATOR WELL NO. Rino WTZ 6H  
Well Pad Name: Rino WTZ Pad

18) CASING AND TUBING PROGRAM

| TYPE         | Size (in) | New or Used | Grade   | Weight per ft. (lb/ft) | FOOTAGE: For Drilling (ft) | INTERVALS: Left in Well (ft) | CEMENT: Fill-up (Cu. Ft.)/CTS                   |
|--------------|-----------|-------------|---------|------------------------|----------------------------|------------------------------|---|
| Conductor    | 20"       | New         | H-40    | 94#                    | 100'                       | 100'                         | CTS   |
| Fresh Water  | 13 3/8"   | New         | H-40    | 48#                    | 414'                       | 414'                         | 404 sx/CTS                                      |
| Coal         |           |             |         |                        |                            |                              |   |
| Intermediate | 9 5/8"    | New         | J-55    | 36#                    | 2766'                      | 2766'                        | 1076 sx/CTS                                     |
| Production   | 5 1/2"    | New         | HCP-110 | 20#                    | <del>13,403'</del>         | <del>13,403'</del>           | <small>Load 5300 Tst 14700sf 102 Inside</small> |
| Tubing       |           |             |         |                        | 13092' <i>K</i>            | 13092' <i>K</i>              |   |
| Liners       |           |             |         |                        |                            |                              |   |

*DMH 3/8/18*

| TYPE         | Size (in) | Wellbore Diameter (in) | Wall Thickness (in) | Burst Pressure (psi) | Anticipated Max. Internal Pressure (psi) | Cement Type | Cement Yield (cu. ft./k) |
|--------------|-----------|------------------------|---------------------|----------------------|--|-------------|--------------------------|
| Conductor    | 20"       | 30"                    | 0.25                | 2120                 | 81                                       | Class A     | 1.19/50% Excess          |
| Fresh Water  | 13 3/8"   | 17.5"                  | 0.380               | 2740                 | 633                                      | Class A     | 1.19/50% Excess          |
| Coal         | 9 5/8"    | 12 1/4"                | 0.395               | 3950                 | 1768                                     | Class A     | 1.19/50% Excess          |
| Intermediate | 7"        | 8 3/4"                 | 0.317               | 4360                 | 3250                                     | Class A     | 1.20/50% Excess          |
| Production   | 5 1/2"    | 8 3/4"                 | 0.361               | 12360                | 9500                                     | Class A     | 1.20/50% Excess          |
| Tubing       | 2 3/8"    | 4.778"                 | 0.190               |                      |  |             |                          |
| Liners       |           |                        |                     |                      |  |             |                          |

PACKERS

|             |  |  |  |  |
|-------------|--|--|--|--|
| Kind:       |  |  |  |  |
| Sizes:      |  |  |  |  |
| Depths Set: |  |  |  |  |

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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 or run external casing packer/cementing stage tool above void interval and perform 2 stage cementing operation dependent upon depth of void. Run casing not less than 20' below void nor more than 75' below void. (\*If freshwater is encountered deeper than anticipated it must be protected, set casing 50' below and cts.)

DMH  
11-16-17

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 @ 100 barrels a minute.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 7.4

22) Area to be disturbed for well pad only, less access road (acres): 6.6

23) Describe centralizer placement for each casing string:

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

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

See Attachment \*\*\*

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25) Proposed borehole conditioning procedures:

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

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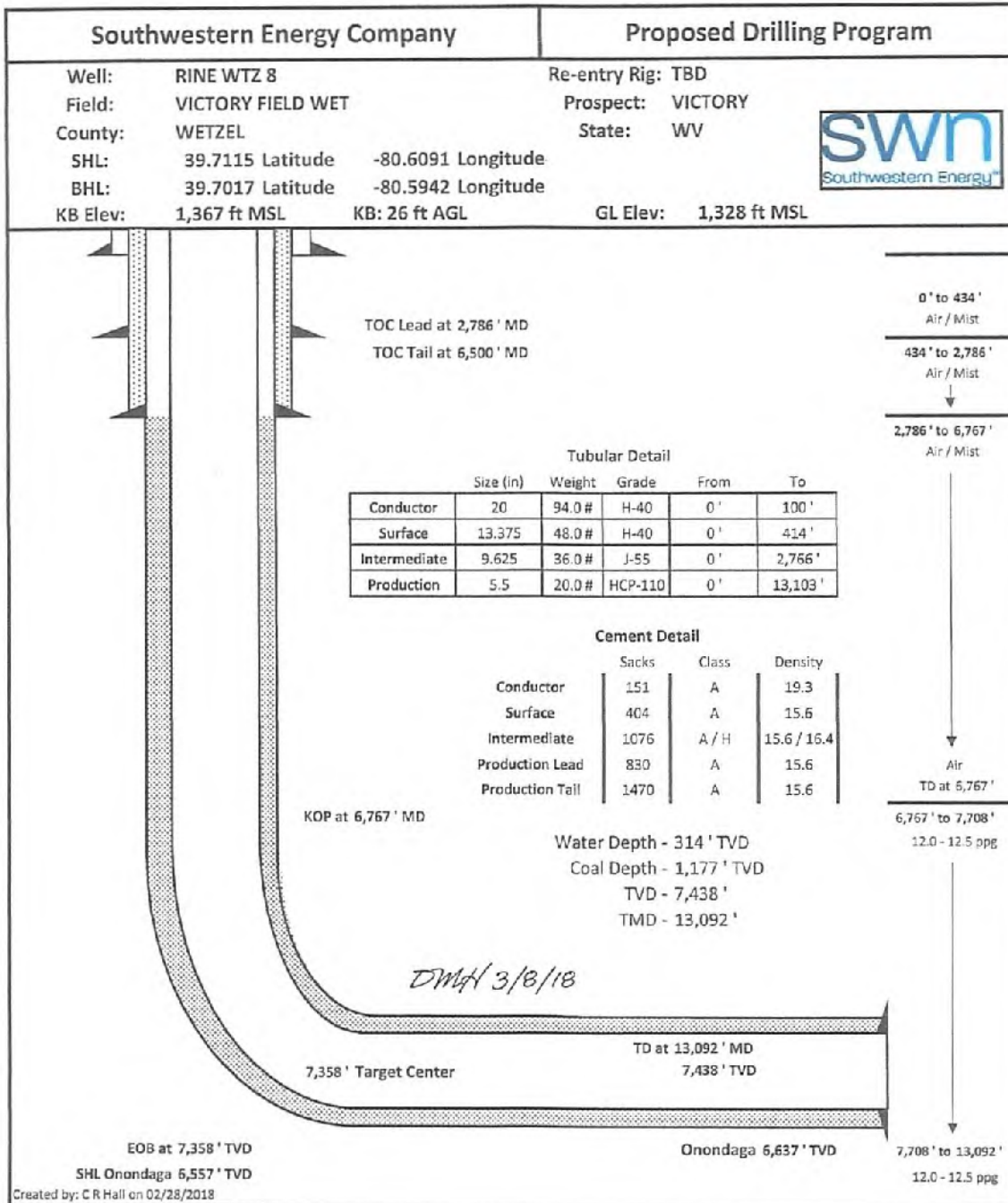
\*Note: Attach additional sheets as needed.



## Schlumberger Cement Additives

|                             | Product Name    | Product Use   | Chemical Name                    | CAS Number           |
|-----------------------------|-----------------|---------------|----------------------------------|----------------------|
| Surface                     | S001            | accelerator   | calcium chloride up to 3%        | 10043-52-4           |
| Intermediate                | S001            | accelerator   | calcium chloride                 | 10043-52-4           |
| Kick Off Plug               | D080            | dispersant    | sodium polynaphthalene sulfonate | 9008-63-3            |
|                             | D801            | retarder      | aromatic polymer derivative      | proprietary          |
|                             | D047            | antifoam      | polypropylene glycol             | 25322-69-4           |
| Production-Lead             | D167            | fluid loss    | aliphatic amide polymer          | proprietary          |
|                             | D154            | extender      | non-crystalline silica           | 7631-86-9            |
|                             | D400            | gas migration | boric acid                       | 10043-35-3           |
|                             | D046            | antifoam      | polypropylene glycol             | 25322-69-4           |
|                             |                 |               | fullers earth (attapulgite)      | 8031-18-3            |
|                             | D201            | retarder      | chrystalline silica              | 14808-60-7           |
|                             |                 |               | metal oxide                      | proprietary          |
|                             | D202            | dispersant    | suiphonated synthetic polymer    | proprietary          |
|                             |                 |               | formaldehyde (impurity)          | proprietary          |
|                             | Production-Tail | D046          | antifoam                         | polypropylene glycol |
| fullers earth (attapulgite) |                 |               |                                  | 8031-18-3            |
| D167                        |                 | fluid loss    | aliphatic amide polymer          | proprietary          |
| D065                        |                 | dispersant    | sodium polynaphthalene sulfonate | 9008-63-3            |
|                             |                 |               | sodium sulfate                   | 7757-82-5            |
| D201                        |                 | retarder      | chrystalline silica              | 14808-60-7           |
|                             |                 |               | metal oxide                      | proprietary          |
| D153                        |                 | anti-settling | chrystalline silica              | 14808-60-7           |

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06/15/2018



December 18, 2017

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

**RE:** Proposed New Well Rine WTZ 8H

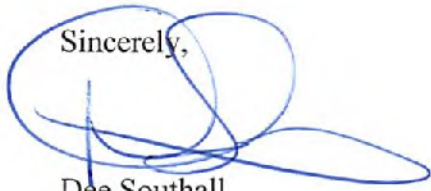
Dear Ms. Adkins

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 Rine's property, in Wetzel County, West Virginia.

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

Thank you.

Sincerely,



Dee Southall  
Senior Regulatory Analyst

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06/15/2018

WW-9  
(4/16)

API Number 47 - 105 **47 10 30 32 29**  
Operator's Well No. Rine WTZ 8H

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name SWN Production Co., LLC OP Code 494512924

Watershed (HUC 10) Little Laural Run of Fish Creek Quadrangle Littleton

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

Will a pit be used? Yes  No

If so, please describe anticipated pit waste: \_\_\_\_\_

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

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection ( UIC Permit Number 34-155-22403, 34-050-24067, 34-119-28776, 34-167-23862, 34-155-23755, 34-121-23655, 34-155-21893 )
- Reuse (at API Number \_\_\_\_\_ at next anticipated well, API# will be included with the WR-34/DDMR &/or permit addendum. )
- 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? If so, describe: Yes

*Dmt  
11-16-17*

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

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

Additives to be used in drilling medium? See Attachment 3A

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

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

-Landfill or offsite name/permit number? Meadowfill SWF- 1032, Short Creek SWF-1034, Carbon Limestone MSWL018781, Wetzel County 1021 Arden Landfill 10072, Apex Sanitary Landfill 06-08438, Brooke Co SWF-1013, Valley 100280

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature [Signature]

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Company Official (Typed Name) Dee Southall

Company Official Title Senior Regulatory Analyst

MAR 21 2018

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Subscribed and sworn before me this 14th day of November, 2017

Brittany R Woody  
11/27/2018

Notary Public

My commission expires \_\_\_\_\_



4710303229

Operator's Well No. Rine WTZ 8H

SWN Production Co., LLC

Proposed Revegetation Treatment: Acres Disturbed 7.4 Prevegetation pH

Lime Tons/acre or to correct to pH 6.6

Fertilizer type

Fertilizer amount lbs/acre

Mulch Tons/acre

Seed Mixtures

Temporary

Permanent

Seed Type lbs/acre

Seed Type lbs/acre

See Attachment 3B

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]

Comments:

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WV Department of Environmental Protection

Title: Oil + Gas Inspector

Date: 11-16-17

Field Reviewed? (X) Yes ( ) No

06/15/2018

**47 10 30 32 29**

**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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## WVD Seeding Specification

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

| NON-ORGANIC PROPERTIES  |              |
|---|--------------|
| Seed Mixture: ROW Mix   | SWN Supplied |
| Orchardgrass  | 40%          |
| Timothy   | 15%          |
| Annual Ryegrass   | 15%          |
| Brown Top Millet  | 5%           |
| Red Top   | 5%           |
| Medium Red Clover   | 5%           |
| White Clover  | 5%           |
| Birdsfoot Trefoil   | 5%           |
| Rough Bluegrass   | 5%           |
| All legumes are<br>inoculated at 5x normal<br>rate  |              |
| <span style="color: red;">Apply @ 100lbs per acre<br/>April 16th- Oct. 14th</span> <span style="color: red; margin-left: 100px;">Apply @ 200lbs per acre<br/>Oct. 15th- April 15th PLUS<br/>50lbs per acre of Winter Wheat</span> |              |

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

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

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

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

| ORGANIC PROPERTIES  |                                   |
|---|-----------------------------------|
| Seed Mixture: SWN Production Organic Mix  | SWN Supplied                      |
| Organic Timothy   | 50%                               |
| Organic Red or White Clover   | 50%                               |
| OR  |                                   |
| Organic Perennial Ryegrass  | 50%                               |
| Organic Red or White Clover   | 50%                               |
| <span style="color: red;">Apply @ 100lbs per acre<br/>April 16th- Oct. 14th</span> <span style="color: red; margin-left: 100px;">Apply @ 200lbs per acre<br/>Oct. 15th- April 15th</span> |                                   |
| Organic Fertilizer @ 200lbs per Acre  | Pelletized Lime @ 2 Tons per Acre |

| WETLANDS (delineated as jurisdictional wetlands)  |              |
|---|--------------|
| Seed Mixture: Wetland Mix   | SWN Supplied |
| VA Wild Ryegrass  | 20%          |
| Annual Ryegrass   | 20%          |
| Fowl Bluegrass  | 20%          |
| Cosmos 'Sensation'  | 10%          |
| Redtop  | 5%           |
| Golden Tickseed   | 5%           |
| Maryland Senna  | 5%           |
| Showy Tickseed  | 5%           |
| Fox Sedge   | 2.5%         |
| Soft Rush   | 2.5%         |
| Woolgrass   | 2.5%         |
| Swamp Verbena   | 2.5%         |
| <span style="color: red;">Apply @ 25lbs per acre<br/>April 16th- Oct. 14th</span> <span style="color: red; margin-left: 100px;">Apply @ 50lbs per acre<br/>Oct. 15th- April 15th</span> |              |
| NO FERTILIZER OR LIME INSIDE WETLAND LIMITS   |              |

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# 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: Rine WTZ 8H**  
**Littleton QUAD**  
**Center DISTRICT**  
**Wetzel COUNTY, WEST VIRGINIA**

Submitted by:   
Dee Southall \_\_\_\_\_ Date: 11/13/2017  
Senior Regulatory  
Title: Analyst SWN Production Co., LLC

Approved by:   
\_\_\_\_\_ Date: 11-16-17  
Title: Oil + Gas Inspector

Approved by: \_\_\_\_\_  
\_\_\_\_\_ Date: \_\_\_\_\_  
Title: \_\_\_\_\_

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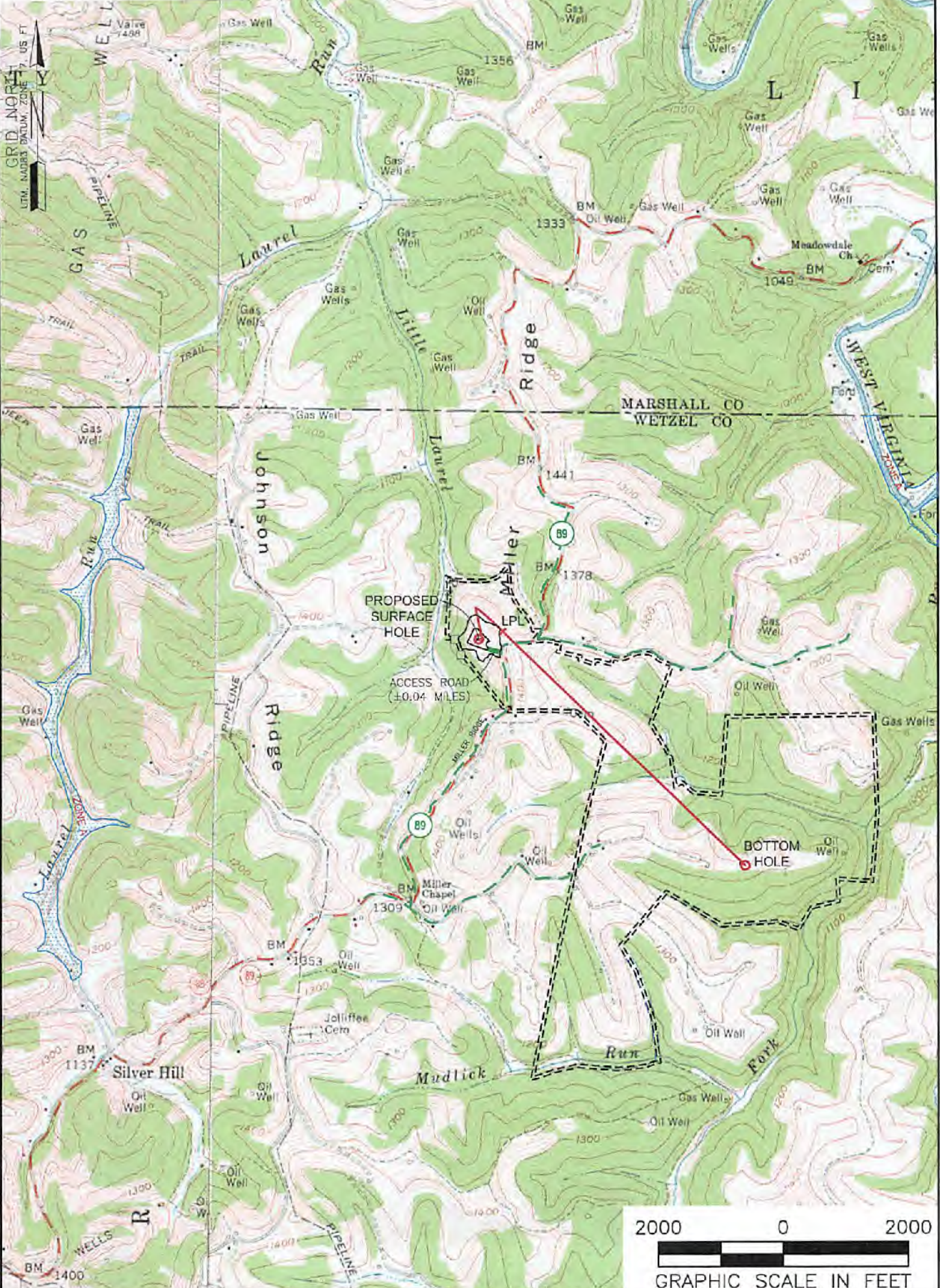
SWN PRODUCTION COMPANY, LLC – CONFIDENTIAL

06/15/2018



JACKSON SURVEYING  
INC.  
P.O. Box 1460  
677 W. Main St.  
Clarksburg, WV 26302  
304-623-5851

4710303229



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

**LEGEND:**  
 ○ PROPOSED SURFACE HOLE / BOTTOM HOLE  
 \* EXISTING / PRODUCING WELLHEAD  
 LPL\* LANDING POINT LOCATION  
 FLOOD PLAIN  
 ACCURATE  
 PUBLIC ROAD  
 ACCESS ROAD TO PREV. SITE  
 LEASE BOUNDARY  
 PROPOSED PATH

06/15/2018

|  |                                       |   |                     |          |
|--|---------------------------------------|---|---------------------|----------|
| WELL OPERATOR:<br>SWN PRODUCTION COMPANY, LLC  | RECEIVED<br>Office of Oil and Gas     | WELL (FARM) NAME:<br>RINE WTZ                   | WELL #<br>8H        | SERIAL # |
| ADDRESS:<br>P.O. BOX 1300 JANE LEW, WV 26378   | MAR 21 2018                           | COUNTY - CODE<br>WETZEL - 103                   | DISTRICT;<br>CENTER |          |
| SURFACE OWNER:<br>LARRY G. RINE & JANA L. RINE | WV Department of<br>Natural Resources | USGS 7 1/2 QUADRANGLE MAP NAME<br>LITTLETON, WV |                     |          |



JACKSON SURVEYING

INC.

P.O. Box 1460  
677 W. Main St.  
Clarksburg, WV 26302  
304-623-5851

SURFACE HOLE LOCATION (SHL):

UTM (NAD83, ZONE 17, METERS):  
NORTHING: 4,395,824.979  
EASTING: 533,491.480

LANDING POINT (LPL):

UTM (NAD83, ZONE 17, METERS):  
NORTHING: 4,395,864.552  
EASTING: 533,508.502

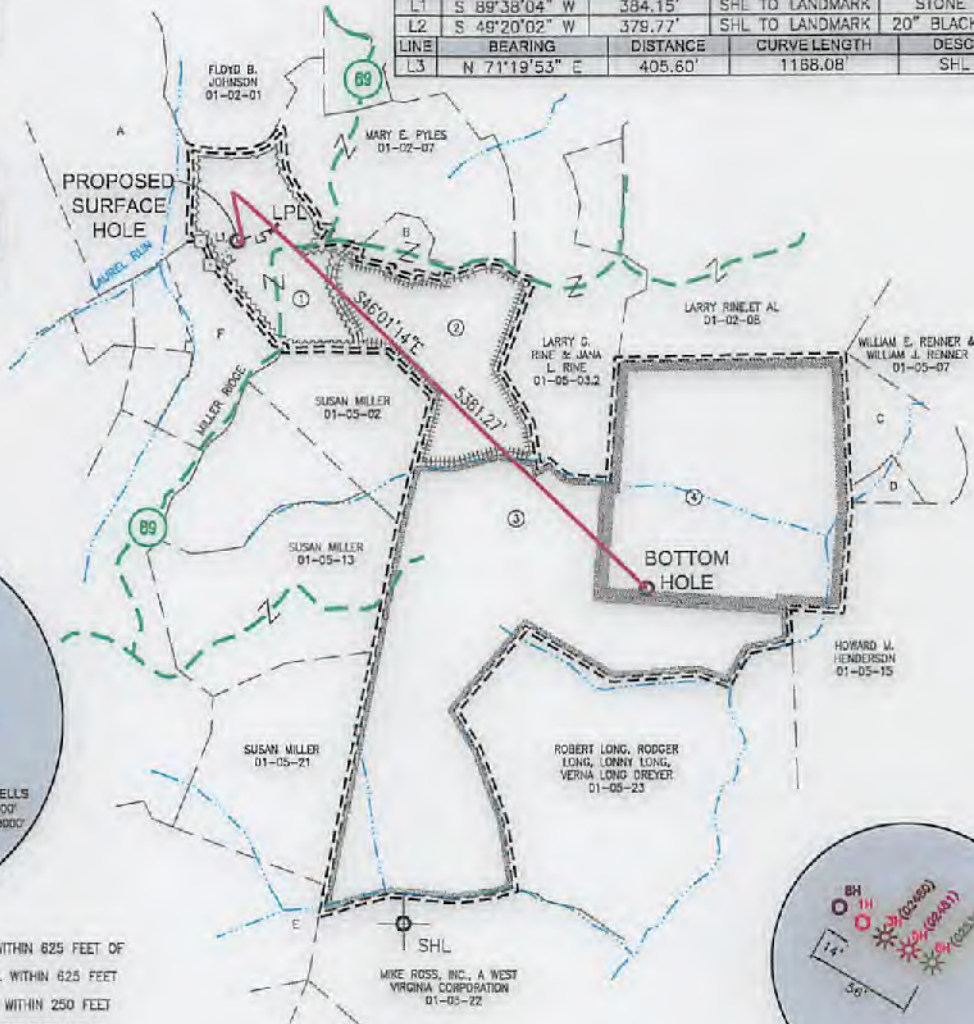
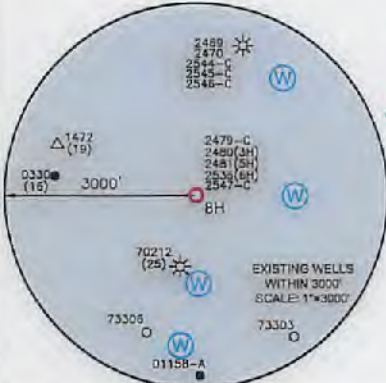
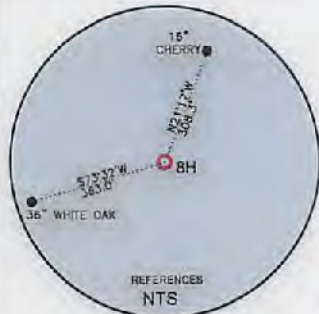
BOTTOM HOLE LOCATION (BHL):

UTM (NAD83, ZONE 17, METERS):  
NORTHING: 4,394,725.588  
EASTING: 534,788.885

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

| WELL BORE TABLE FOR SURFACE / ROYALTY OWNERS |   |            |
|--|---|------------|
| TRACT  | SURFACE OWNER(S) / ROYALTY OWNER (R)  | TAX PARCEL |
| 1  | LARRY G. RINE & JANA L. RINE (S)/VERN STANSBERRY & BESSIE L. STANSBERRY (SHIRLEY A. PARKER; HOWARD G. STANSBERRY) (R) | 01-05-01   |
| SURFACE OWNER                                |   |            |
| 2  | LARRY G. RINE & JANA L. RINE (S)  | 01-05-3.1  |
| 3  | BENJAMIN E. YARBER (S)  | 01-05-14   |
| 4  | WILLIAM E. RENNER (S)   | 01-05-04   |
| ADJOINING OWNERS TABLE                       |   |            |
| TRACT  | SURFACE OWNER   | TAX PARCEL |
| A  | SHAWN D. HARLAN & VINCENT HARLAN  | 01-01-08   |
| B  | MARY E. PYLES   | 01-05-35   |
| C  | WILLIAM E. RENNER & WILLIAM J. RENNER   | 01-05-06   |
| D  | WILLIAM E. RENNER & WILLIAM J. RENNER   | 01-05-05   |
| E  | JAMES LEE MUSGRAVE, DIANA LOUISE WYKERT, CHARLES FRED MUSGRAVE, GREGORY NEIL MUSGRAVE                                 | 01-04-52   |
| F  | VENCIN HARLAN   | 01-04-13   |

| LINE | BEARING       | DISTANCE | DESCRIPTION     | MONUMENT         |
|------|---------------|----------|-----------------|------------------|
| L1   | S 89°38'04" W | 384.15'  | SHL TO LANDMARK | STONE FOUND      |
| L2   | S 49°20'02" W | 379.77'  | SHL TO LANDMARK | 20" BLACK CHERRY |
| LINE | BEARING       | DISTANCE | CURVE LENGTH    | DESCRIPTION      |
| L3   | N 71°19'53" E | 405.60'  | 1188.08'        | SHL TO LP        |



WELL RESTRICTIONS

- NO OCCUPIED DWELLINGS > 2500 SQ FT. WITHIN 625 FEET OF CENTER OF PAD.
- NO AGRICULTURE BUILDINGS > 2500 SQ FT. WITHIN 625 FEET OF CENTER OF PAD.
- WATER WELLS OR DEVELOPED SPRINGS ARE WITHIN 250 FEET OF PROPOSED WELL.
- PERENNIAL STREAMS, LAKES, PONDS, OR RESERVOIRS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
- NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF LIMITS OF DISTURBANCE.
- NO GROUND INTAKE OR PUBLIC WATER SUPPLY WITHIN 1000 FEET OF WELL PAD, LIMITS OF DISTURBANCE, E & S CONTROLS OR PUBLIC WATER SUPPLY.

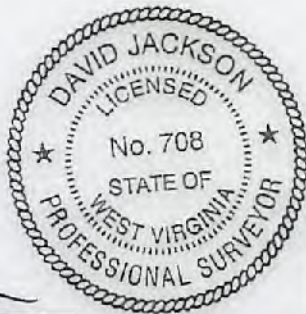
NOTES ON SURVEY

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

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

P.S. 708

David L Jackson



COMPANY: **SWN** Production Company, LLC

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

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

RINE WTZ  
OPERATOR'S WELL #: 8H  
API WELL #: 47 STATE 103 COUNTY 03229 PERMIT

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

WATERSHED: LITTLE LAUREL RUN OF FISH CREEK (HUC-10) ELEVATION: 1327.7'

DISTRICT: CENTER COUNTY: WETZEL QUADRANGLE: LITTLETON, WV

SURFACE OWNER: LARRY G. RINE & JANA L. RINE ACREAGE: ±60.8

OIL & GAS ROYALTY OWNER: VERN STANSBERRY & BESSIE L. STANSBERRY (SHIRLEY A. PARKER; HOWARD G. STANSBERRY) ACREAGE: ±60.8

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

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

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 7,438 **06/15/2018**

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC DESIGNATED AGENT: DEE SOUTHALL  
ADDRESS: P.O. BOX 1300 ADDRESS: P.O. BOX 1300  
CITY: JANE LEW STATE: WV ZIP CODE: 26378 CITY: JANE LEW STATE: WV ZIP CODE: 26378

| LEGEND:                               | REVISIONS:          | DATE:              |
|---------------------------------------|---------------------|--------------------|
| ○ PROPOSED SURFACE HOLE / BOTTOM HOLE | — SURVEYED BOUNDARY | 03-06-2018         |
| ⊙ EXISTING / PRODUCING WELLHEAD       | — DRILLING UNIT     |                    |
| LPL: * LANDING POINT LOCATION         | == LEASE BOUNDARY   | DRAWN BY: N. MANO  |
| ⊕ EXISTING WATER WELL                 | — PROPOSED PATH     | SCALE: 1" = 2000'  |
| ⊕ EXISTING SPRING                     |                     | DRAWING NO:        |
|                                       |                     | WELL LOCATION PLAT |



WW-6A1  
(5/13)

Operator's Well No. Rine WTZ 8H

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE  
Chapter 22, Article 6A, Section 5(a)(5)  
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

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

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

| Lease Name or<br>Number | Grantor, Lessor, etc. | Grantee, Lessee, etc. | Royalty | Book/Page |
|-------------------------|-----------------------|-----------------------|---------|-----------|
| See Attachment          |                       |                       |         |           |

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

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

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

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

Well Operator: SWN Production Company, LLC.  
 By: Gary Nuckolls  
 Its: Staff Landman

Page 1 of \_\_\_\_

06/15/2018

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**EXHIBIT "A"**

Attached to and made a part of the State of West Virginia Oil and Gas Permit Form, WW-6A1, by SWN Production Company, LLC, Operator  
Rine WTZ 8H

| # | TMP     | LESSOR  | LESSEE                                    | ROYALTY | BK/PG    |
|---|---------|---|---|---------|----------|
| 1 | 1-5-1   | Vern Stansberry and Bessie L. Stansberry, his wife<br>(Shirley A. Parker; Howard G. Stansberry) | The Manufacturers Light and Heat Company  | 12.50%  | 45A/173  |
|   |         | Manufacturers Light and Heat Company  | Columbia Gas Transmission Corporation     |         | 263/164  |
|   |         | Columbia Gas Transmission Corporation   | Columbia Natural Resources, LLC           |         | 84A/129  |
|   |         | Columbia Natural Resources, LLC   | Chesapeake Appalachia, L.L.C.             |         | 402/446  |
|   |         | Chesapeake Appalachia, L.L.C.   | SWN Production Company, LLC               |         | 157A/540 |
| 2 | 1-5-3.1 | Charles R. Walker, a single man   | Statoil USA Onshore Properties Inc.       | 18.00%  | 155A/879 |
|   |         | Statoil USA Onshore Properties Inc. et al   | EQT Production Company                    |         | 175A/707 |
|   |         | EQT Production Company  | SWN Production Company, LLC               |         | 203A/146 |
| 3 | 1-5-14  | Benjamin E. Yarber and Maria Yarber, husband and<br>wife  | Drilling Appalachian Corporation          | 12.50%  | 92A/544  |
|   |         | Drilling Appalachian Corporation  | Chesapeake Appalachia, L.L.C.             |         | 103A/187 |
|   |         | Chesapeake Appalachia, L.L.C.   | SWN Production Company, LLC               |         | 157A/540 |
| 4 | 1-5-4   | Helen V. Rutan, a married woman dealing in her sole<br>and separate property                    | Columbia Natural Resources, LLC           | 12.50%  | 84A/553  |
|   |         | Columbia Natural Resources, LLC   | Chesapeake Appalachia, L.L.C.             |         | 402/446  |
|   |         | Chesapeake Appalachia, L.L.C.   | Statoil USA Onshore Properties Inc. et al |         | 97A/578  |
|   |         | Chesapeake Appalachia, L.L.C.   | SWN Production Company, LLC               |         | 182A/533 |
|   |         | Statoil USA Onshore Properties Inc. et al   | EQT Production Company                    |         | 193A/657 |
|   |         | EQT Production Company  | SWN Production Company, LLC               |         | 203A/146 |
| 4 | 1-5-4   | Julia A. Cain, a widow  | Chesapeake Appalachia, L.L.C.             | 12.50%  | 94A/916  |
|   |         | Chesapeake Appalachia, L.L.C.   | Statoil USA Onshore Properties Inc. et al |         | 97A/578  |
|   |         | Chesapeake Appalachia, L.L.C.   | SWN Production Company, LLC               |         | 182A/533 |
|   |         | Statoil USA Onshore Properties Inc. et al   | EQT Production Company                    |         | 193A/657 |
|   |         | EQT Production Company  | SWN Production Company, LLC               |         | 203A/146 |

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**EXHIBIT "A"**

Attached to and made a part of the State of West Virginia Oil and Gas Permit Form, WW-6A1, by SWN Production Company, LLC, Operator  
Rine WTZ 8H

|   |       |   |   |         |          |
|---|-------|---|---|---------|----------|
| 4 | 1-5-4 | Ann Marie Hovik, single<br>(DWG Oil and Gas Acquisitions, LLC)  | Statoil USA Onshore Properties Inc. and Drilling<br>Appalachian Corporation | 12.50%  | 109A/628 |
|   |       | Drilling Appalachian Corporation  | Grenadier Energy Partners   |         | 110A/821 |
|   |       | Grenadier Energy Partners   | Statoil USA Onshore Properties Inc.   |         | 138A/1   |
|   |       | Drilling Appalachian Corporation  | Statoil USA Onshore Properties Inc.   |         | 138A/54  |
|   |       | Grenadier Energy Partners   | Statoil USA Onshore Properties Inc.   |         | 153A/695 |
|   |       | Drilling Appalachian Corporation  | Statoil USA Onshore Properties Inc.   |         | 153A/640 |
|   |       | Statoil USA Onshore Properties Inc. et al   | EQT Production Company  |         | 175A/707 |
|   |       | EQT Production Company  | SWN Production Company, LLC   |         | 203A/146 |
| 4 | 1-5-4 | BRC Minerals LP and BRC Appalachian Minerals I LLC<br>(BP Minerals Holdings II, LLC; OXY USA Inc.; Somerset<br>Minerals, LLC) | BRC Working Interest Company LLC  | 12.875% | 103A/320 |
|   |       | BRC Working Interest Company, LLC   | Chesapeake Appalachia, LLC  |         | 103A/470 |
|   |       | Chesapeake Appalachia, L.L.C.   | Statoil USA Onshore Properties Inc.   |         | 120A/109 |
|   |       | Chesapeake Appalachia, L.L.C.   | SWN Production Company, LLC   |         | 157A/540 |
|   |       | Statoil USA Onshore Properties Inc. et al   | EQT Production Company  |         | 193A/657 |
|   |       | EQT Production Company  | SWN Production Company, LLC   |         | 203A/146 |

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Environmental Protection

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SWN Production Company, LLC  
179 Innovation Drive  
Jane Lew, WV 26378  
Tel: 304 884 1610  
Fax: 304 471 2497  
www.swn.com

November 14, 2017

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

**RE:** SWN's Proposed New Well: Rinc WTZ 8H in Wetzel County, West Virginia, Drilling under Miller Ridge 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 Camp Run Road and Field 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,

A handwritten signature in blue ink, appearing to read "Gary Nuckolls", written over a blue horizontal line.

Gary Nuckolls  
Staff Landman  
SWN Production Company, LLC

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WV Department of  
Environmental Protection  
*RL*  
*A* → *V*

The Right People doing the Right Things,  
wisely investing the cash flow from our  
underlying Assets. **06/15/2018**

47 10 30 32 29

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

Date of Notice Certification: 3/19/18

API No. 47- 103 -  
Operator's Well No. Rine WTZ BH  
Well Pad Name: Rine WTZ Pad

**Notice has been given:**

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

|   |                                       |                              |
|---|---------------------------------------|------------------------------|
| State: <u>West Virginia</u>                       | UTM NAD 83                            | Easting: <u>533503.239</u>   |
| County: <u>103-Wetzel</u>                         |                                       | Northing: <u>4395811.193</u> |
| District: <u>Center</u>                           | Public Road Access: <u>Route 89</u>   |                              |
| Quadrangle: <u>Littleton</u>                      | Generally used farm name: <u>Rine</u> |                              |
| Watershed: <u>Little Laurel Run of Fish Creek</u> |                                       |                              |

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

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

**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.

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WV Department of  
Environmental Protection  
06/15/2018



**Certification of Notice is hereby given:**

THEREFORE, I \_\_\_\_\_, have read and understand the notice requirements within West Virginia Code § 22-6A. I certify that as required under West Virginia Code § 22-6A, I have served the attached copies of the Notice Forms, identified above, to the required parties through personal service, by registered mail or by any method of delivery that requires a receipt or signature confirmation. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Notice Certification and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

|                |                                  |            |                             |
|----------------|----------------------------------|------------|-----------------------------|
| Well Operator: | <u>SWN Production Co., LLC</u>   | Address:   | <u>P.O. Box 1300</u>        |
| By:            | <u>Dee Southall</u>              |            | <u>Jane Lew, WV 26378</u>   |
| Its:           | <u>Senior Regulatory Analyst</u> | Facsimile: | <u>304-884-1690</u>         |
| Telephone:     | <u>304-884-1610</u>              | Email:     | <u>Dee_Southall@swn.com</u> |



Subscribed and sworn before me this 13<sup>th</sup> day of November 2017  
Brittany R Woody Notary Public  
 My Commission Expires 11/27/21

**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](mailto:depprivacyofficer@wv.gov).

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

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

Date of Notice: 3/19/18 Date Permit Application Filed: 3/19/18

Notice of:

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

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

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

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

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

SURFACE OWNER(s)  
Name: Larry C. Rine & Jana L. Rine  
Address: 118 Virginia Oaks  
Moundsville, WV 26041

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: Consolidation Coal Company  
Address: 1000 Consol Energy Drive  
Canonsburg, PA 15317-6506

COAL OPERATOR  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

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

Name: None  
Address: \_\_\_\_\_

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

\*Please attach additional forms if necessary

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06/15/2018  
WV Department of Environmental Protection



**Notice is hereby given:**

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

**This Notice Shall Include:**

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

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

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

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

Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://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. (d) Any operator electing to preserve its defenses under subdivision (1), subsection (c) of this section shall retain the services of an independent certified laboratory to conduct the predrilling or prealteration water well test. A copy of the results of the test shall be submitted to the department and the surface owner or water purveyor in a manner prescribed by the secretary. (e) Any operator shall replace the water supply of an owner of interest in real property who obtains all or part of that owner's supply of water for domestic, agricultural, industrial or other legitimate use from an underground or surface source with a comparable water supply where the secretary determines that the water supply has been affected by contamination, diminution or interruption proximately caused by the oil or gas operation, unless waived in writing by that owner. (f) The secretary may order the operator conducting the oil or gas operation to: (1) Provide an emergency drinking water supply within twenty-four hours; (2) Provide temporary water supply within seventy-two hours; (3) Within thirty days begin activities to establish a permanent water supply or submit a proposal to the secretary outlining the measures and timetables to be used in establishing a permanent supply. The total time in providing a permanent water supply may not exceed two years. If the operator demonstrates that providing a permanent replacement water supply cannot be completed within two years, the secretary may extend the time frame on case-by-case basis; and (4) Pay all reasonable costs incurred by the real property owner in securing a water supply. (g) A person as described in subsection (b) of this section aggrieved under the provisions of subsections (b), (e) or (f) of this section may seek relief in court... (i) Notwithstanding the denial of the operator of responsibility for the damage to the real property owner's water supply or the status of any appeal on determination of liability for the damage to the real property owner's water supply, the operator may not discontinue providing the required water service until authorized to do so by the secretary or a court of competent jurisdiction.

**Written Comment:**

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

Chief, Office of Oil and Gas  
Department of Environmental Protection  
601 57<sup>th</sup> 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 used in the test water. **NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.**

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WV Department of  
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**Time Limits and Methods for Filing Comments.**

The law requires these materials to be served on or before the date the operator files its Application. You have **THIRTY (30) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

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

**Comment Requirements**

Your comments must be in writing and include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

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

**Permit Denial or Condition**

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

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

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

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

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Department of  
Environmental Protection



47 10 30 32 29

WW-6A  
(8-13)

API NO. 47- 103 -  
OPERATOR WELL NO. Rine Wtz 8H  
Well Pad Name: Rine Wtz Pad

**Notice is hereby given by:**

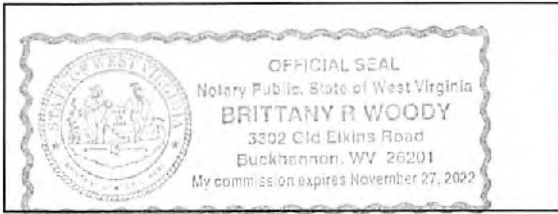
Well Operator: SWN Production Co., LLC  
Telephone: 304-884-1610  
Email: Dae\_Southall@swn.com



Address: P.O. Box 1300  
Jane Lew. WV 26378  
Facsimile: 304-884-1690

**Oil and Gas Privacy Notice:**

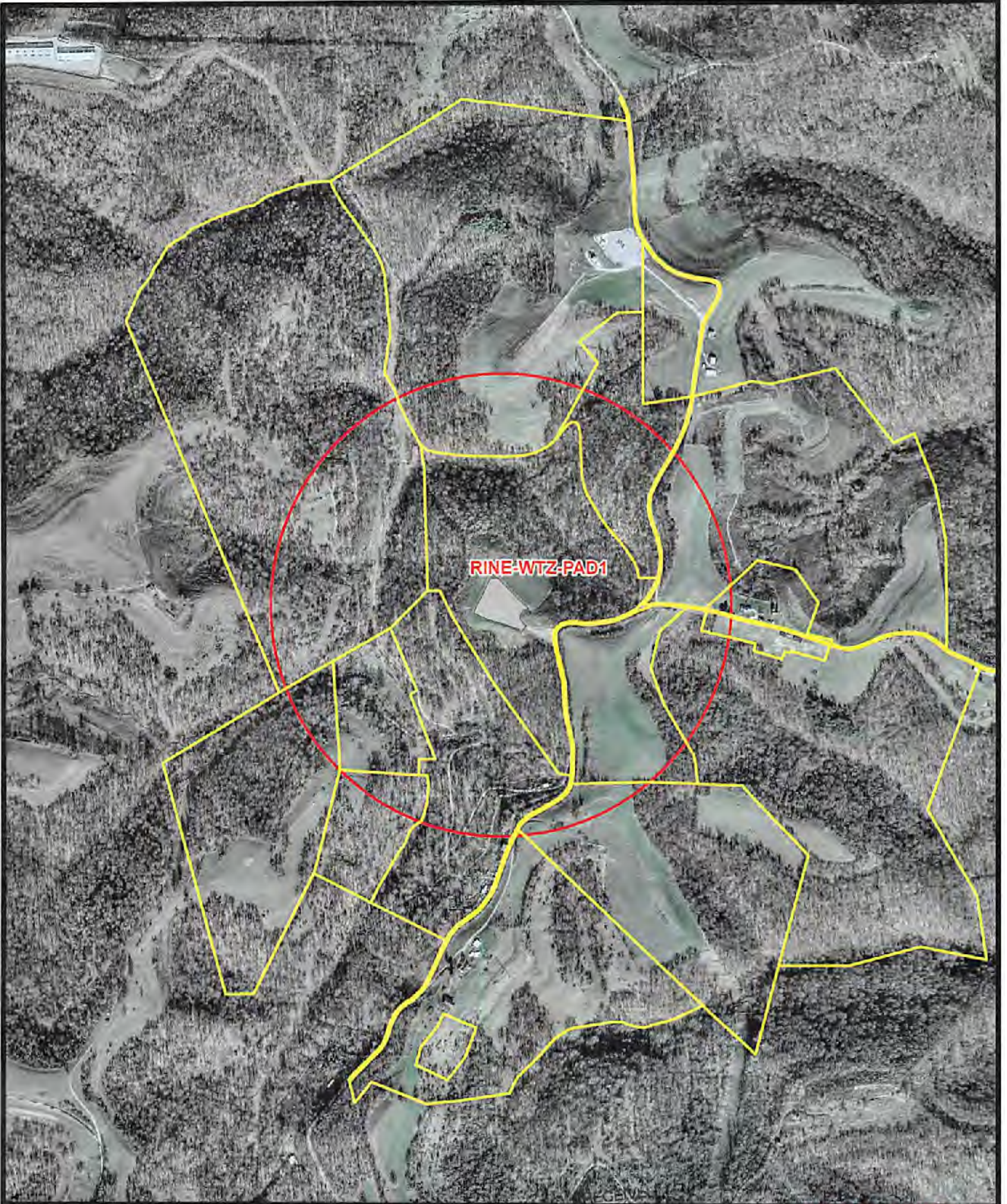
The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory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


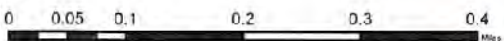


Subscribed and sworn before me this 13 day of November 2017  
Brittany R. Woody Notary Public  
My Commission Expires 11/27/22

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06/15/2018  
WV Department of Environmental Protection










 1 in = 833 ft  


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

Office of Conservation  
 Environmental Protection

-  Spring
-  Water Well
-  Pond
-  1500' Buffer

Water Purveyor Map  
 Well Pad: Rine  
 County: WTZ

 *Rine*  
 Southwestern Energy

Date: 11/7/2017 | Author: willisb

06/15/2018



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

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

**Date of Notice:** 10/24/2017      **Date of Planned Entry:** 10/31/2017

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

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

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

**Notice is hereby provided to:**

SURFACE OWNER(s)

Name: Larry G. Rina & Jana L. Rina  
Address: 118 Virginia Oaks  
Moundsville, WV 26041

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

COAL OWNER OR LESSEE

Name: Consolidation Coal Company  
Address: 1000 Consol Energy Drive  
Canonsburg, PA 15317-6506

MINERAL OWNER(s)

Name: Shirley A. Parker  
Address: 97 Peach Lane  
New Martinsville, WV 26155

\*please attach additional forms if necessary

**Notice is hereby given:**

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

|                              |  |
|------------------------------|--|
| State: <u>West Virginia</u>  | Approx. Latitude & Longitude: <u>39.711619, -80.609204</u> |
| County: <u>Wetzel</u>        | Public Road Access: <u>Route 89</u>                        |
| District: <u>Wileyville</u>  | Watershed: <u>Fish Creek</u>                               |
| Quadrangle: <u>Littleton</u> | Generally used farm name: <u>Rine</u>                      |

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

**Notice is hereby given by:**

Well Operator: SWN PRODUCTION COMPANY, LLC  
Telephone: 304-884-1610  
Email: dee\_southall@swn.com or brittany\_woody@swn.com

Address: PO BOX 1300  
JANE LEW, WV 26378  
Facsimile: \_\_\_\_\_

**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](mailto:depprivacyofficer@wv.gov).

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MAY 21 2018  
WV Department of  
Environmental Protection  
06/15/2018



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

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

Date of Notice: 10/24/2017 Date of Planned Entry: 10/31/2017

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

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

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

Notice is hereby provided to:

SURFACE OWNER(s)

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

COAL OWNER OR LESSEE

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

MINERAL OWNER(s)

Name: Howard G. Stansberry  
Address: 97 Peach Lane  
New Martinsville, WV 26155

\*please attach additional forms if necessary

Notice is hereby given:

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

|                              |  |
|------------------------------|--|
| State: <u>West Virginia</u>  | Approx. Latitude & Longitude: <u>39.711619, -80.609204</u> |
| County: <u>Wetzel</u>        | Public Road Access: <u>Route 89</u>                        |
| District: <u>Wileyville</u>  | Watershed: <u>Fish Creek</u>                               |
| Quadrangle: <u>Littleton</u> | Generally used farm name: <u>Rine</u>                      |

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

Notice is hereby given by:

Well Operator: SWN PRODUCTION COMPANY, LLC  
Telephone: 304-864-1610  
Email: cae\_southall@swn.com or brittany\_woody@swn.com

Address: PO BOX 1300  
JANE LEW, WV 26378  
Facsimile: \_\_\_\_\_

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MAR 21 2018  
WV Department of Environmental Protection

Oil and Gas Privacy Notice:

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



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

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

**Notice Time Requirement:** Notice shall be provided at least TEN (10) days prior to filing a permit application.  
**Date of Notice:** 02/26/2018      **Date Permit Application Filed:** \_\_\_\_\_

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

HAND DELIVERY       CERTIFIED MAIL RETURN RECEIPT REQUESTED

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

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

Name: Larry G & Jana L Rine  
Address: 48 Virginia Oaks  
Moundsville, WV 26041

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

**Notice is hereby given:**

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

State: West Virginia      UTM NAD 83      Easting: 533,491.480  
County: Wetzel      Northing: 4,395,824.979  
District: Center      Public Road Access: Miller Ridge  
Quadrangle: Littleton, WV      Generally used farm name: Rine WTZ  
Watershed: Little Laurel Run of Fish Creek (HUC-10)

**This Notice Shall Include:**

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

**Notice is hereby given by:**

Well Operator: SWN Production Company, LLC  
Address: PO Box 1300, 179 Innovation Drive  
Jane Lew, WV 26378  
Telephone: 832-540-1136  
Email: Steve\_Teel@swn.com  
Facsimile: 304-884-1691

Authorized Representative: Steve Teel  
Address: PO Box 1300, 179 Innovation Drive  
Jane Lew, WV 26378  
Telephone: 832-540-1136  
Email: Steve\_Teel@swn.com  
Facsimile: 304-884-1691

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MAR 21 2018  
WV Department of  
Environmental Protection

**Oil and Gas Privacy Notice:**

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



WW-6A5  
(1/12)

**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:** 02/26/2018      **Date Permit Application Filed:** 3/19/18

**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: Larry G & Jana L Rine

Address: 49 Virginia Oaks

Moundsville, WV 26041

Name: \_\_\_\_\_

Address: \_\_\_\_\_

**Notice is hereby given:**

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

|             |   |                           |                     |                      |
|-------------|---|---------------------------|---------------------|----------------------|
| State:      | <u>West Virginia</u>                            | UTM NAD 83                | Easting:            | <u>533,491.480</u>   |
| County:     | <u>Weitzel</u>                                  |                           | Northing:           | <u>4,395,824.979</u> |
| District:   | <u>Center</u>                                   | Public Road Access:       | <u>Miller Ridge</u> |                      |
| Quadrangle: | <u>Littleton, WV</u>                            | Generally used farm name: | <u>Rine Wtz</u>     |                      |
| Watershed:  | <u>Little Laurel Run of Fish Creek (HUC-10)</u> |                           |                     |                      |

**This Notice Shall Include:**

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

Well Operator: SWN Production Company, LLC  
Telephone: 832-540-1135  
Email: Steve\_Teel@SWN.com

Address: PO Box 1300, 179 Innovation Drive  
Jane Lew, WV 26378  
Facsimile: 304-884-1691

**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](mailto:depprivacyofficer@wv.gov).

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MAR 21 2018  
WV Department of  
Environmental Protection  
06/15/2018





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WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
**Division of Highways**

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

Jim Justice  
Governor

Thomas J. Smith, P. E.  
Secretary of Transportation/  
Commissioner of Highways

November 14, 2017

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

Subject: DOH Permit for the Larry Rine Well Pad, Wetzel County  
Rine WTZ 8H Well Site

Dear Mr. Martin,

The West Virginia Division of Highways has transferred Permit #06-2009-0244 to Southwestern Energy for the existing well pad. Access to the well site is off of WV 89 in Wetzel County.

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,

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

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

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Environmental Protection  
06/15/2018

## FRAC ADDITIVES

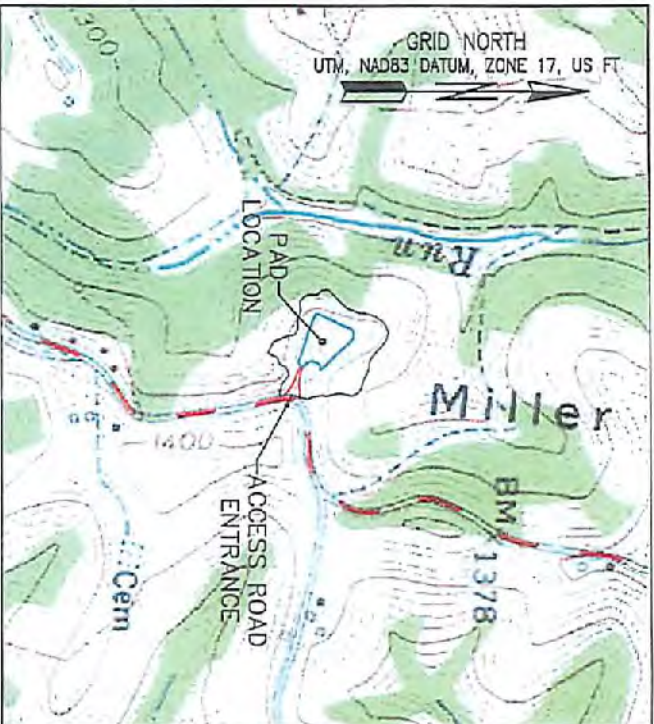
| Product Name                          | Product Use              | Chemical Name   | CAS Number  |
|---------------------------------------|--------------------------|---|-------------|
| EC6734A (Champion Technologies)       | Biocide                  | Hydrogen Peroxide   | 7722-84-1   |
|                                       |                          | Acetic Acid   | 64-19-7     |
|                                       |                          | Peroxyacetic Acid   | 79-21-0     |
| GYPTRON T-390 (Champion Technologies) | Scale Inhibitor          | Methanol  | 67-56-1     |
|                                       |                          | Nonylphenol Ethoxylate  | Proprietary |
| Bactron K-139 (Champion Technologies) | Biocide                  | Glutaraldehyde  | 111-30-8    |
|                                       |                          | Quaternary Ammonium Compounds, Benzyl-C12-16-Alkyldimethyl, Chlorides | 68424-85-1  |
|                                       |                          | Ethanol   | 64-17-5     |
| Bactron K-219 (Champion Technologies) | Biocide                  | Methanol  | 67-56-1     |
|                                       |                          | Quaternary Ammonium Compounds, Benzyl-C12-16-Alkyldimethyl, Chlorides | 68424-85-1  |
| EC6486A (Nalco Champion)              | Scale Inhibitor          | Amine Triphosphate  | Proprietary |
|                                       |                          | Ethylene Glycol   | 107-21-1    |
| WFRA-2000 (U.S. Well Services)        | Anionic Friction Reducer | Hydrotreated light distillate (petroleum)                             | 64742-47-8  |
|                                       |                          | Propenoic acid, polymer with propenamide                              | 9003-06 9   |
| AI-303 (U.S. Well Services)           | Mixture                  | Ethylene glycol   | 107-21 1    |
|                                       |                          | Cinnamaldehyde  | 104-55 2    |
|                                       |                          | Butyl cellosolve  | 111-76 2    |
|                                       |                          | Formic acid   | 64-18 6     |
|                                       |                          | Polyether   | Proprietary |
|                                       |                          | Acetophenone, thiourea, formaldehyde polymer                          | 68527-49 1  |
| AP ONE (U.S. Well Services)           | Breaker                  | Ammonium persulfate   | 7727-54-0   |
| OPTI-FLEX (U.S. Well Services)        | Viscosifying Agent       | Distillates, petroleum, hydrotreated light                            | 64742-47-8  |
| Econo-CI200 (SWN Well Services)       | Corrosion Inhibitor      | Methanol  | 67-56-1     |
|                                       |                          | Oxyalkylated fatty acid   | 68951-67-7  |
|                                       |                          | Fatty acids   | 61790-12-3  |
|                                       |                          | Modified thiourea polymer   | 68527-49-1  |
|                                       |                          | Water   | 7732-18-5   |
|                                       |                          | Hydrochloric acid   | 7647-01-0   |
|                                       |                          | Potassium acetate   | 127-08-2    |
|                                       |                          | Formaldehyde  | 50-00-0     |
| Ecopol-FEAC (SWN Well Services)       | Iron Control             | Acetic Acid   | 64-19-7     |
|                                       |                          | Citric Acid   | 77-92-9     |
|                                       |                          | Water   | 7732-18-5   |
| HCL (SWN Well Services)               | Hydrocholic Acid         | Hydrochloric Acid   | 7647-01-0   |
|                                       |                          | Water   | 7732-18-5   |
| FLOJET DRP 1130X (SWN Well Services)  | Friction Reducer         | Proprietary   | Proprietary |
| FLOJET DR900 LPP (SWN Well Services)  | Friction Reducer         | Distillates (petroleum) hydrotreated light                            | 64674-47-8  |
|                                       |                          | Ethylene Glycol   | 107-21-1    |
|                                       |                          | Alcohols, C12-16, Exoxylated propoxylated                             | 68213-24-1  |
|                                       |                          | Fatty Alcohols ethoxylated  | Proprietary |
|                                       |                          | Water   | 7732-18-5   |
| FR-76 (Halliburton)                   | Friction Reducer         | Hydrotreated light petroleum distillate                               | 64742-47-8  |
|                                       |                          | Inorganic Salt  | Proprietary |
| HAI-150E (Halliburton)                | Corrosion Inhibitor      | No hazardous substance  | N/A         |
| FDP-S1176-15 (Halliburton)            | Friction Reducer         | Polyacrylate  | Proprietary |
|                                       |                          | Hydrotreated light petroleum distillate                               | 64742-47-8  |
| LP-65 MC (Halliburton)                | Scale Inhibitor          | Organic phosphonate   | Proprietary |
|                                       |                          | Ammonium Chloride   | 12125-02-9  |
| Zero Wash Tracer                      | Tracer                   | Ceramic Proppant  | Proprietary |

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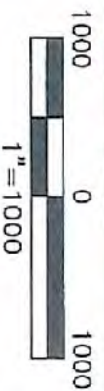


**RINE WTZ PAD  
CONSTRUCTION AND RECLAMA  
AS-B-BUILT  
CENTER DISTRICT, WETZEL C  
NOVEMBER 2016**



TOTAL DISTURBED AREA: 7.4 ACRES  
ROAD DISTURBED AREA: 0.8 ACRES  
PAD DISTURBED AREA: 6.6 ACRES

LOD



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



**WV DEP 00G  
ACCEPTED AS-B-BUILT**

*WJL* 1/26/2018

COORDINATE  
SITE ENTRANCE  
(NAD83)  
LAT: 39.7111  
LONG: 80.6000  
AT RINE P  
(NAD83)  
LAT: 39.7111  
LONG: 80.6000  
CENTER OF  
(NAD83)  
LAT: 39.7111  
LONG: 80.6000  
GATHERING A  
(NAD83)  
LAT: 39.7111  
LONG: 80.6000



Dennis L. Fisher RPE 8684

ATION PLAN  
 COUNTY, WV

**SHEET INDEX**

TS1. TITLE SHEET

EP2.1 EVACUATION ROUTE/ PREWALLING WIND

EP2.2 EVACUATION ROUTE/ PREWALLING WIND

AS3.1 ASSULT OVERVIEW

AS3.2 ASSULT

ASR4.1 CONSTRUCTION AND RECLAMATION ACCESS ROAD PROFILE

MRD5.1 RECLAMATION PLAN OVERVIEW

MRD5.2 RECLAMATION PLAN

MRD6.3 DETAILS

MRD6.4 DETAILS

| REVISION | DATE |
|----------|------|
|          |      |

**EXISTING WELLS:**

RINE WTZ 3H  
 API:47-103-02480H  
 (NAD83)  
 LAT: 39.711592  
 LONG: 80.609197

RINE WTZ 5H  
 API:47-103-02481H  
 (NAD83)  
 LAT: 39.711574  
 LONG: 80.609154

RINE WTZ 6H  
 API:47-103-02536H  
 (NAD83)  
 LAT: 39.711555  
 LONG: 80.609110

**WEST VIRGINIA 811**

CALL BEFORE YOU DIG!

Dial 811 or 800.245.4848

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*DmH*  
*11-16-16*

**SWM** *R<sup>2</sup> A V<sup>+</sup>* ©

Production Company™



*Jackson Surveying Inc.*

TITLE SHEET  
 TS.1

SOUTHWESTERN PRODUCTION COMPANY LLC.  
 RINE WTZ PAD  
 CENTER DISTRICT, WETZEL COUNTY, WV  
 NOVEMBER 28, 2016