

west virginia department of environmental protection

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

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

Thursday, April 7, 2022 WELL WORK PERMIT Horizontal 6A / New Drill

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

Re: Permit approval for TIMMY MINCH OHI 210H 47-069-00337-00-00

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.

mes A. Martin

Operator's Well Number: Farm Name: U.S. WELL NUMBER: Horizontal 6A Date Issued: 4/7/2022 TIMMY MINCH OHI 210H TIMMY B MINCH & AMY L ₩ 47-069-00337-00-00 New Drill

Promoting a healthy environment.

# **PERMIT CONDITIONS**

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

#### CONDITIONS

- 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 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.

API Number:

4

# **PERMIT CONDITIONS**

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

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API NO. 47- 009 -

OPERATOR WELL NO. Timmy Minch OHI 210H Well Pad Name: Timmy Minch OHI

### WW-6B (04/15)

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

| 1) Well Operator: SWN Product  | ion Co., LLC                          | 494512924   | 069-Ohio   | 6-Triadel 374-Wheeling                    |
|--|---------------------------------------|---|--|---|
| .,   |                                       | Operator ID   | County   | District Quadrangle                       |
| 2) Operator's Well Number: Timn  | ny Minch OHI                          | 210H Well I   | Pad Name: Tim  | my Minch OHI                              |
| 3) Farm Name/Surface Owner:  | nmy B. Minch & Amy                    | L. Minch Public R   | oad Access: Br   | rowns Run Road                            |
| 4) Elevation, current ground: 12   | 208' E                                | levation, propose   | ed post-construc   | ction: 1208'                              |
| 5) Well Type (a) Gas X   | Oil                                   | U   | nderground Stor  | age                                       |
| Other  |                                       |   |  |   |
| (b)If Gas Shallo   | w x                                   | Deep  |  |   |
| Horiz  | ontal x                               |   | MOK  | 2/22/2022                                 |
| 6) Existing Pad: Yes or No Yes   |                                       |   | - Dyr  | op stor                                   |
| <ol> <li>Proposed Target Formation(s), I<br/>Target Formation-Marcellus, Down-Dip well to</li> </ol> | · · · · · · · · · · · · · · · · · · · | the second se | and the second |   |
| 8) Proposed Total Vertical Depth:  | 6316'                                 |   |  |   |
| 9) Formation at Total Vertical Dep   |                                       | S   |  |   |
| 10) Proposed Total Measured Dep  | th: 19858'                            |   |  |   |
| 11) Proposed Horizontal Leg Leng   | th: 11016.93                          | 3'  |  |   |
| 12) Approximate Fresh Water Stra   | ta Depths:                            | 306'  |  |   |
| 13) Method to Determine Fresh W  | ater Depths:                          | 638' Salinity Pro   | ofile  |   |
| 14) Approximate Saltwater Depths   | : 638'- Salini                        | ty Profile  |  |   |
| 15) Approximate Coal Seam Deptl  | ns: 470'                              |   |  |   |
| 16) Approximate Depth to Possible  | e Void (coal m                        | ine, karst, other)  | Possible Voi   | d 470'                                    |
| 17) Does Proposed well location co<br>directly overlying or adjacent to an                           |                                       | ms<br>Yes   | N  | to X RECEIVED<br>Office of Closed Gas     |
| (a) If Yes, provide Mine Info: 1   | Name:                                 |   |  | MAR 4 2022                                |
| 1  | Depth:                                |   |  | WV Department of Environmental Protection |
| S  | Seam:                                 |   |  | Environmental Protection                  |
|  | Owner:                                |   |  |   |

API NO. 47- 009 -

WW-6B (04/15)

18)

# CASING AND TUBING PROGRAM

| ТҮРЕ         | <u>Size</u><br>(in) | <u>New</u><br>or<br>Used | Grade  | <u>Weight per ft.</u><br>(lb/ft) | <u>FOOTAGE: For</u><br><u>Drilling (ft)</u> | INTERVALS:<br>Left in Well<br>(ft) | <u>CEMENT:</u><br><u>Fill-up</u><br>(Cu. Ft.)/CTS |
|--------------|---------------------|--------------------------|--------|----------------------------------|---|------------------------------------|---|
| Conductor    | 20"                 | New                      | J-55   | 94#                              | 100'  | 100' /                             | CTS   |
| Fresh Water  | 13 3/8"             | New                      | J-55   | 54.4#                            | 530'  | 530' /                             | 587 sx/CTS  |
| Coal         | See                 | Surface                  | Casing |                                  |   |                                    | 1.1.1   |
| Intermediate | 9 5/8"              | New                      | J-55   | 36#                              | 1900'                                       | 1900' -                            | 676 sx/CTS  |
| Production   | 5 1/2"              | New                      | 110 HP | 20#                              | 19858'                                      | 19858' /                           | Tai 3707cm 100' Inside Intermediate               |
| Tubing       |                     |                          |        |                                  |   |                                    |   |
| Liners       |                     |                          |        |                                  |   |                                    |   |

# MAK 2/23/2022

| ТҮРЕ         | Size (in) | <u>Wellbore</u><br>Diameter (in) | <u>Wall</u><br><u>Thickness</u><br><u>(in)</u> | Burst Pressure<br>(psi) | Anticipated<br>Max. Internal<br>Pressure (psi) | <u>Cement</u><br><u>Type</u> | <u>Cement</u><br><u>Yield</u><br>(cu. ft./k) |
|--------------|-----------|----------------------------------|--|-------------------------|--|------------------------------|--|
| Conductor    | 20"       | 30"                              | 0.25   | 2120                    | 81   | Class A                      | 1.20/30% Excess                              |
| Fresh Water  | 13 3/8"   | 17.5"                            | 0.380  | 2730                    | 633  | Class A                      | 1.20/30% Excess                              |
| Coal         | See       | Surface                          | Casing   |                         |  |                              |  |
| Intermediate | 9 5/8"    | 12 1/4"                          | 0.395  | 3950                    | 1768   | Class A                      | 1.19/40% Excess                              |
| Production   | 5 1/2"    | 8 3/4"-8 1/2"                    | 0.361  | 14360                   | 10500  | Class A                      | 1.19/5% Excess                               |
| Tubing       |           |                                  |  |                         | 1  |                              |  |
| Liners       |           |                                  |  |                         | · · · · · · · · · · · · · · · · · · ·          |                              |  |

### PACKERS

| Kind:       |      |
|-------------|------|
| Sizes:      |      |
| Depths Set: |      |
|             | <br> |



Page 2 of 3 04/08/2022

WW-6B (10/14) API NO. 47-009 OPERATOR WELL NO. TImmy Minch OHI 210H Well Pad Name: Timmy Minch OHI

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

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

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

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

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 13

22) Area to be disturbed for well pad only, less access road (acres): 4.8

23) Describe centralizer placement for each casing string:

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

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

See Attachment \*\*\*

25) Proposed borehole conditioning procedures:

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

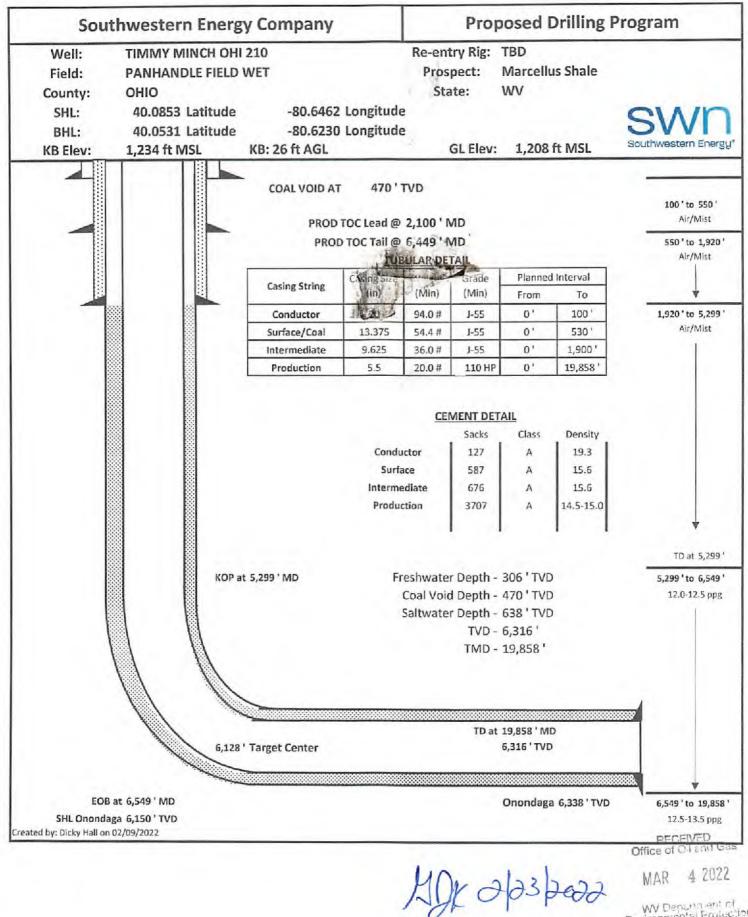


|                         | 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - |                       | CEMENT A                   | ADDITIVES                           |   |             |
|-------------------------|---|-----------------------|----------------------------|-------------------------------------|---|-------------|
| INTERVAL                | SCHLUMBERGER<br>PRODUCT<br>NAME   | BJ<br>PRODUCT<br>NAME | NEXTIER<br>PRODUCT<br>NAME | PRODUCT USE                         | CHEMICAL NAME                           | CAS-Number  |
| SURFACE<br>(FRESHWATER) | $\times$  | INTEGRA<br>SEAL       | CJ600                      | LOST CIRC MATERIAL                  | CELLOPHANE FLAKES                       | 9005-81-6   |
| up to 3%                | \$001   | A-7P                  | CJ110                      | ACCELERATOR                         | CALCIUM CHLORIDE                        | 10043-52-4  |
| COAL<br>PROTECTION      | $\geq$  | INTEGRA<br>SEAL       | CJ600                      | LOST CIRC MATERIAL                  | CELLOPHANE FLAKES                       | 9005-81-6   |
| up to 3%                | S001  | A-7P                  | CJ110                      | ACCELERATOR                         | CALCIUM CHLORIDE                        | 10043-52-4  |
|                         | D020  | BENTONITE             | CJ020                      | EXTENDER                            | BENTONITE                               | 1302-78-9   |
|                         | D047  | FP 28L                | $\ge$                      | LIQUID ANTIFOAM<br>AGENT            | POLYPROPYLENE<br>GLYCOL                 | 25322-69-4  |
| INTERMEDIATE            | $\ge$   | INTEGRA<br>SEAL       | CJ600                      | LOST CIRC MATERIAL                  | CELLOPHANE FLAKES                       | 9005-81-6   |
|                         | CemNet  | $\times$              | $\ge$                      | LOST CIRC MATERIAL                  | COATED FIBERGLASS<br>FIBERS             | PROPRIETARY |
|                         | SUGAR   | SUGAR                 | CJ795                      | CMT RETARDER                        | SUCROSE                                 | 57-50-1     |
|                         | S001  | A-7P                  | CJ110                      | ACCELERATOR                         | CALCIUM CHLORIDE                        | 10043-52-4  |
|                         | $\sim$  | $\sim$                | CJ111                      | ACCELERATOR                         | SODIUM CHLORIDE                         | 7440-23-5   |
|                         | $\geq$  | SS-11W                | CJ880                      | SURFACTANT                          | NONIONIC<br>SURFACTANT                  | 6540-99-4   |
|                         | D047  | FP 28L                | $\ge$                      | LIQUID ANTIFOAM<br>AGENT            | POLYPPYPYLENE<br>GLYCOL                 | 25322-69-4  |
|                         | $\ge$   | $\ge$                 | CJX157011                  | SOLID ANTIFOAM<br>AGENT             | FULLERO                                 | 8031-18-3   |
|                         | $\ge$   | $\ge$                 | CJ540                      | HP FLUID LOSS<br>ADDITIVE           | ALIPHATIC AMIDE                         | PROPRIETARY |
| PRODUCTION              | D255  | $\ge$                 | $\ge$                      | MED TEMP FLUID<br>LOSS ADDITIVE     | POLYACRILIC<br>POLYMER                  | PROPRIETARY |
|                         | $\sim$  | >                     | CJ213                      | RETARDER                            | CHRYSTALLINE SILICA                     | 14808-60-7  |
|                         | $\geq$  | FL-66                 | CJ501                      | LOW TEMP FLUID<br>LOSS ADD          | POWDERED<br>POLYSACCHARIDE              | PROPRIETARY |
|                         | >   | BENTONITE             | CJ020                      | EXTENDER                            | BENTONITE                               | 1302-78-9   |
|                         | D208  | ASA-301               | $\ge$                      | VISCOSIFIER/ANTI-<br>SETTLING AGENT | REFINED POLYMER/<br>CHRYSTALLINE SILICA | PROPRIETARY |
|                         | D198  | R-3                   |                            | CEMENT RETARDER                     | LIGNIN                                  | 8068-51-6   |
|                         | SUGAR   | SUGAR                 | CJ795                      | CEMENT RETARDER                     | SUCROSE                                 | 57-50-1     |

RECEIVED Office of Oil and Gas

MAR 4 2022

WV Dis, article a of Environmental Protection



WV Department of Environmental Protection



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

March 2, 2022

Mr. Charles Brewer Office of Oil & Gas 601 57<sup>th</sup> Street Charleston, WV 25304

RE: Proposed New Well: Timmy Minch OHI 210H

Dear Mr. Brewer:

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

If you have any questions or desire additional information, please me at 304-884-1613.

Thank you.

Sincerely,

Buttany Woody

Brittany Woody Senior Regulatory Analyst Southwestern Energy Production Company, LLC

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The Right Peor 21/08/2020, wisely investing the cash low more our underlying Assets, will create Value+<sup>8</sup> WW-9 API Number 47 - 069 (4/16)Operator's Well No. Timmy Minch OHI 210H 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) Browns Run of Peters Run of Wheeling Creek Quadrangle Wheeling Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No No V Will a pit be used? Yes If so, please describe anticipated pit waste: No V If so, what ml.? Will a synthetic liner be used in the pit? Yes Proposed Disposal Method For Treated Pit Wastes: Land Application Underground Injection (UIC Permit Number Various Approved Facilities Reuse (at API Number At the next anticplated well Off Site Disposal (Supply form WW-9 for disposal location) Other (Explain recovery and solidification on site Will closed loop system be used? If so, describe: Yes- See Attachment 3A

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. Ardin to KOP, null delivery SOBM from KOP to TO

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

Additives to be used in drilling medium? Attachment 3B

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

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

-Landfill or offsite name/permit number? Meadowfill SWF- 1032, Short Creek SWF-1034, Carbon Limestone MSWL018781, Wetzel County 1021 Apex Sanitary Landfill Ub-U8438, Brooke Co SVVF-1013,

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

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

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

| Company Official Signature   |               | RECEIVED<br>Office of O' and Gas  |
|--|---------------|---|
| Company Official (Typed Name) Brittany Woody<br>Company Official Title Senior Regulatory Analyst |               | MAR 4 2022  |
|  |               | WV Depa<br>Environmental Processon  |
| Subscribed and sworn before me this 17th day of February   | , 2022        | REID CROFT  |
| My commission expires 8/21/2024  | Notary Public | Notary Public Official Seal<br>State of West Virginia<br>My Comm. Expires Aug 21, 2024<br>47 Sparrow Lane Morgantown WV 26508 |

## SWN Production Co., LLC

| roposed Revegetation Trea | atment: Acres Disturbe     | ed 13         | Prevegetation pH | r        |
|---------------------------|----------------------------|---------------|------------------|----------|
| Lime_as determined by pH  | test min.2 Tons/acre or to | correct to pH |                  |          |
| Fertilizer type 10        | -20-20                     |               |                  |          |
| Fertilizer amount         | 600/500                    | lbs/acre      |                  |          |
| Mulch Hay/Stra            | w                          | Tons/acre     |                  |          |
|                           |                            | Seed Mixtures |                  |          |
| Т                         | emporary                   |               | Perma            | nent     |
| Seed Type                 | lbs/acre                   |               | Seed Type        | lbs/acre |
| Attachment 3C             |                            |               |                  |          |
|                           |                            |               |                  |          |
|                           |                            |               | -                |          |
|                           |                            |               | 11               |          |

#### 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.

| A ALE           |  |
|-----------------|--|
| Sea. 2          |  |
|                 |  |
|                 | RECEIVED<br>Office of Oil and Gas                        |
| Date: 2 23 2422 | MAR 4 2022<br>WV Dr. Hant of<br>Environmental Protection |
|                 | Date: 2 23 2422  |

#### Attachment 3A

#### **CLOSED LOOP SYSTEM**

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

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

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

#### AIR DRILLING INTERVALS

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

#### LIQUIDS DRILLING (FRESHWATER, BRINE, SOBM)

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

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MAR 4 2022

WV Department of Environmental Protection

# **Attachment 3B**

# **Drilling Mediums**

### Surface/Coal(if present)/Freshwater Intervals:

Air

Freshwater (if needed based on conditions)

Intermediate/Coal (if present):

Air

### **Production Hole:**

Air

Synthetic Oil (Base Fluid for mud system)

Barite

Calcium Chloride

Lime

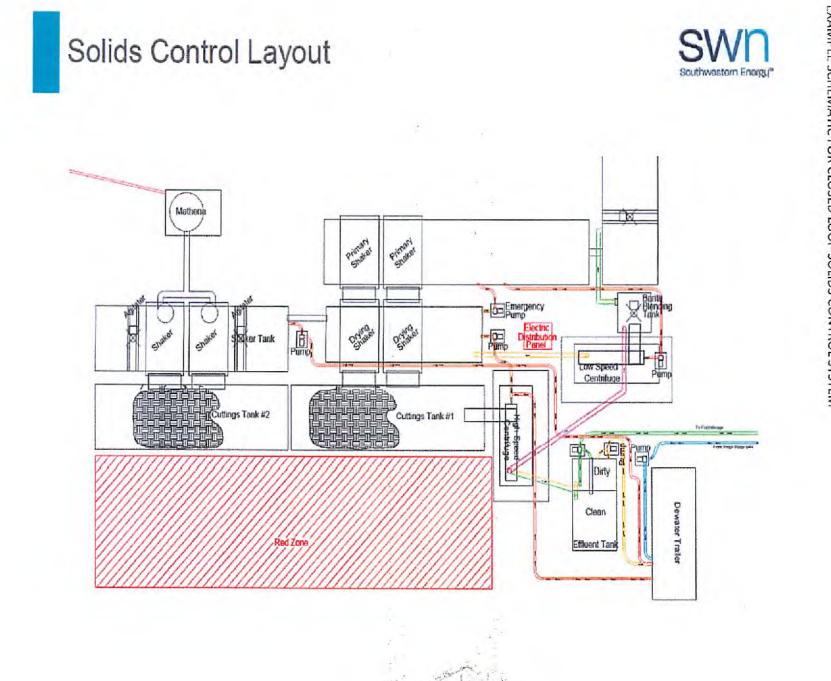
**Organophilic Bentonite** 

**Primary and Secondary Emulsifiers** 

Gilsonite

**Calcium Carbonate** 

**Friction Reducers** 



EXAMPLE SCHEMATIC FOR CLOSED LOOP SOLIDS CONTROL SYSTEM

Attachment 3C

| To Order 5  | eed contact Lyndsi Ed                           | dy Flippo office 570-996-4271 cell 501-26                                      | 9-5451 lyndsi_eddy@swn.com {please allow 7 to 1   | 0 days for delivery)  |
|---|---|--|---|---|
| NON-ORGANIC PROPERTIES  |   |  | ORGANIC PROPERTIES  |   |
| Seed Mixture: ROW Mix   | SWN   | I Supplied   | Seed Mixture: SWN Production Organ  | ic Mix SWN Supplied   |
| Orchardgrass<br>Timothy<br>Annual Ryegrass<br>Brown Top Millet<br>Red Top<br>Medium Red Clover<br>White Clover<br>Birdsfoot Trefoil<br>Rough Bluegrass<br>Apply @ 100lbs per acre | 40%<br>15%<br>15%<br>5%<br>5%<br>5%<br>5%<br>5% | All legumes are<br>innoculated at 5x normal<br>rate<br>Apply @ 2001bs per acre | Organic Timothy<br>Organic Red or White Clover<br>OR<br>Organic Perennial Ryegrass<br>Organic Red or White Clover<br>Apply @ 100lbs per acre<br>April 16th- Oct. 14th<br>Organic Fertilizer @ 200lbs per Acre | 50%<br>50%<br>50%<br>Apply @ 200lbs per acre<br>Oct. 15th- April 15th<br>Pelletized Lime @ 2 Tons per Acr |
| April 16th- Oct. 14th   |   | Oct. 15th- April 15th PLUS<br>os per acre of Winter Wheat                      | WETLANDS (delineated as jurisdie<br>Seed Mixture: Wetland Mix   | ctional wetlands)<br>SWN Supplied   |
| 10-20-20 Fertilizer   | *   | Apply @ 500lbs per Acre  | VA Wild Ryegrass  | 20%   |
| Pelletized Lime   |   | Apply @ 2 Tons per Acre  | Annual Ryegrass   | 20%   |
|   | *unless o                                       | therwise dictated by soil test results   | Fowl Bluegrass  | 20%   |
| Seeding Calculation Information:<br>1452' of 30' ROW/LOD is One Acre<br>871' of 50' ROW/LOD is One Acre<br>622' of 70' ROW/LOD is One Acre  |   |  | Cosmos 'Sensation'<br>Redtop<br>Golden Tickseed<br>Maryland Senna<br>Showy Tickseed   | 10%<br>5%<br>5%<br>5%<br>5%   |
| Synopsis:   |   |  | Fox Sedge   | 2.5%  |
| Every 622 linear feet in a 70' ROW/LOD,<br>bags of fertilizer and (80) 50lb bags of Li<br>Wheat/ac).  |   |  | Soft Rush<br>Woolgrass<br>Swamp Verbena   | 2.5%<br>2.5%<br>2.5%  |
| Special Considerations:   |   |  | Apply @ 25lbs per acre  | Apply @ 50lbs per acre  |
| Landowner Special Considerations including<br>guidance that is not given here. Discuss the<br>beginning of the project to allow time for sp                                       | se requirements wi                              | th SWN supervision at the  | ALA TEL   | Oct. 15th- April 15th   |
|   |   |  | PECEIVED<br>of Oil and Gas  | Rev.1/13/2020   |



# MARCELLUS WELL DRILLING PROCEDURES AND WELL SITE SAFETY PLAN



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

# API NO. 47-XXX-XXXXX WELL NAME: Timmy Minch OHI 210H Wheeling QUAD Triadelphia DISTRICT OHIO COUNTY, WEST VIRGINIA

Submitted by:

Name: Brittany Woody Buttany Woody

Date: 2/8/2022

SWN Production Co., LLC

Approved by:

Name:

Title: Senior Regulatory Analyst

Title: INS DECTO

Approved by:

Name:

Date:

Date:

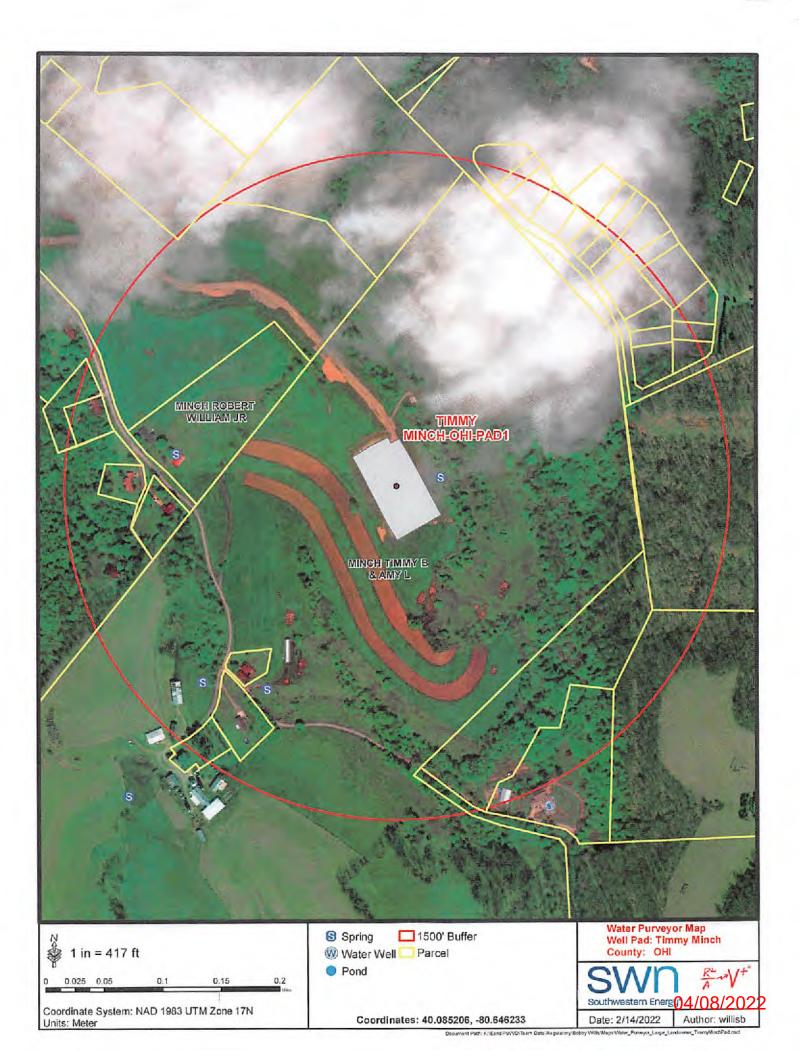
Title:

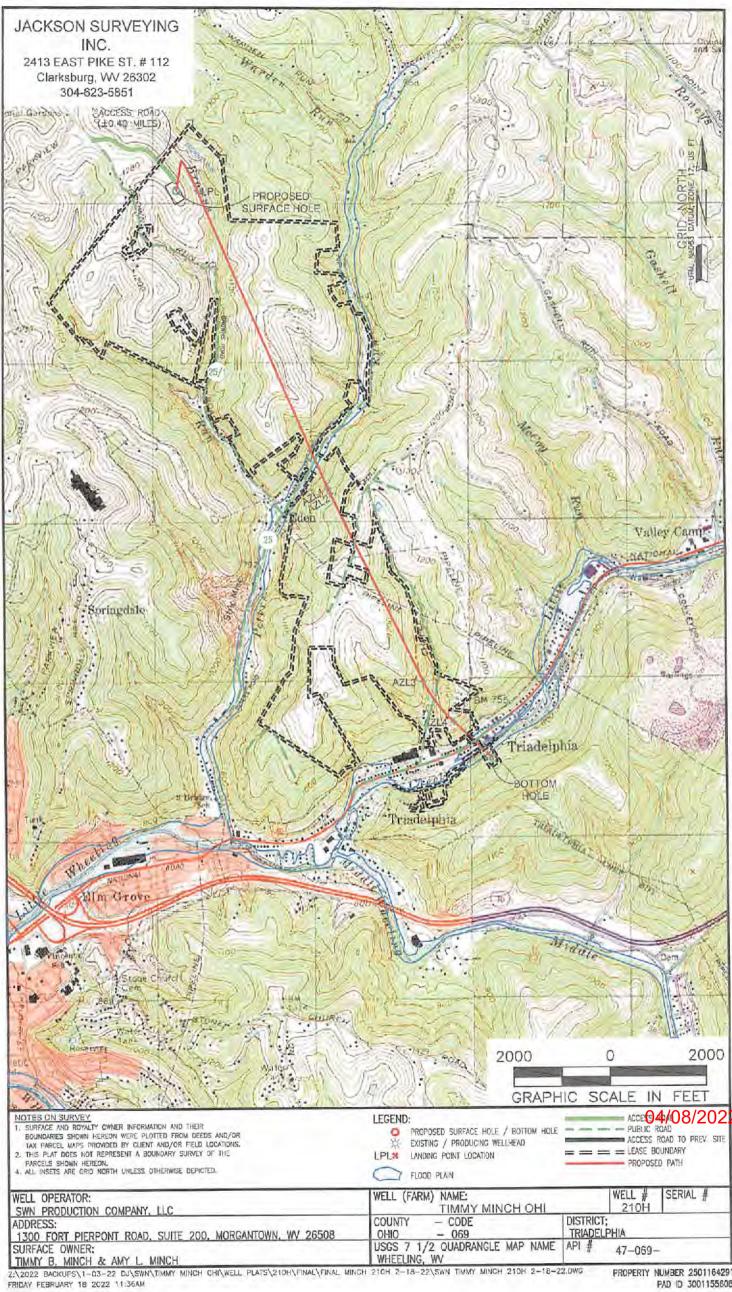
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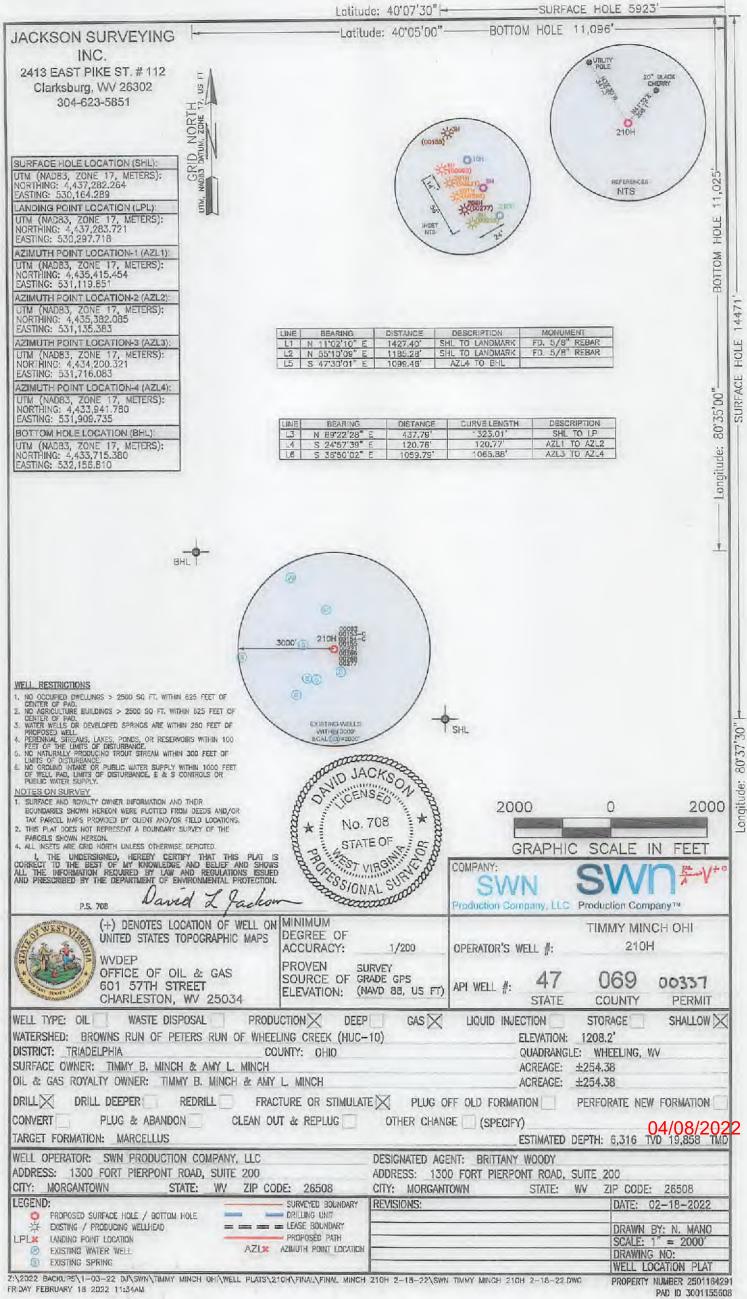
WV Department of Environmental Protection

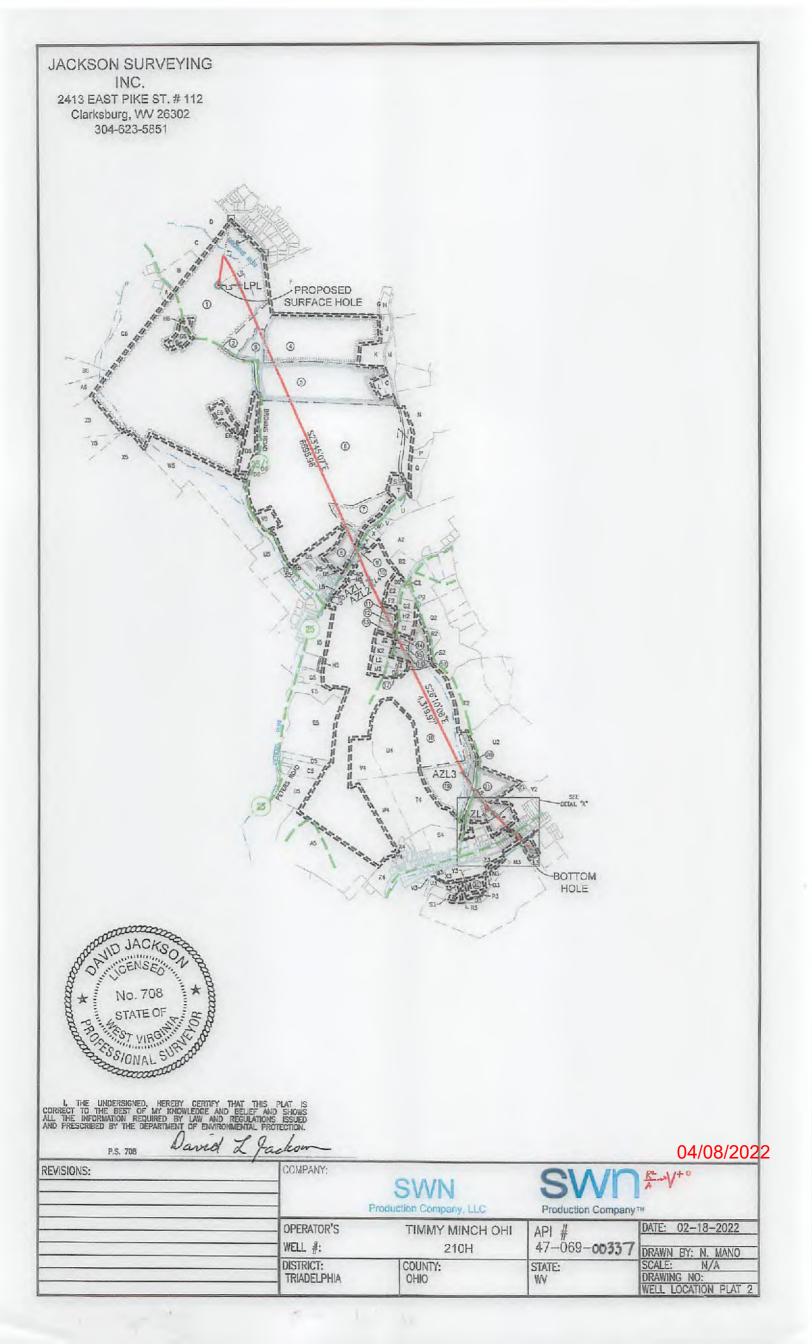
SWN PRODUCTION COMPANY, LLC - CONFIDENTIAL





PROPERTY NUMBER 2501164291 PAD ID 3001155608

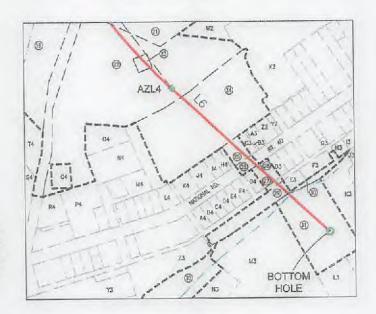




### JACKSON SURVEYING INC. 2413 EAST PIKE ST. # 112 Clarksburg, WV 26302 304-623-5851

|       | WELL BORE TRACTS   |             |
|-------|--|-------------|
| TRACT | SURFACE OWNER (S) / ROYALTY OWNER (R)                          | TAX PARCEL  |
| 1     | MINCH TIMMY B & AMY L (S/R)                                    | 6-T2-18     |
| TRACT | SURFACE OWNER (S)  | TAX PARCEL  |
| 2     | POCKL RONALD J (S)   | 6-T2-20.1   |
| 3     | WOJCHOWSKI MORGAN A (S)  | 6-T2-20     |
| 4     | HATCHER EDWARD A SR (S)  | 6-T2-21.4   |
| 5     | HATCHER EDWARD A (S)   | 6-T2-21     |
| 6     | DICKERSON CYNTHIA ANN ET AL (S)                                | 6-T2-22     |
| 7     | SAPORITO MICHAELA & RAE L (5)                                  | 6-T7-136    |
| 8     | POWELL JAMES E JR & MARY A-LE POWELL J; POWELL M; BRAMAN M (S) | 6-17-137    |
| 9     | PAPADIMITRIOU KATHERINE M (5)                                  | 6-T7-145    |
| 10    | LUCKY FARMS LLC (S)  | 6-T7-163    |
| 11    | KENT ROGER LJR & MELINDA J (S)                                 | 6-17-163.15 |
| 12    | KENT ROGER L JR & MELINDA J (S)                                | 6-T7-163.18 |
| 13    | FULLERTON TODD (S)   | 6-17-163.16 |
| 14    | NEIDHARDT ROBT T O'LEARY KATHLEEN (S)                          | 6-T7-163.3  |
| 15    | NEIDHARDT ROBERT & KATHLEEN (S)                                | 6-T7-163.10 |
| 16    | BRANNARE STEFAN L& BRANNARE EUZABETH L (S)                     | 6-17-163.9  |
| 17    | STOUT CHAD M & LEAH M (S)                                      | 6-17-163.8  |
| 18    | BUSS CHARUE A SR & MARY E (S)                                  | 6-T7-164    |
| 19    | EDGE EDWARD M & CHRISTINE B (S)                                | 6-T7-165    |
| 20    | BRINKMEIER WILLIAM JAY (S)                                     | 6-T7-165.1  |
| 21    | BRINKMEIER LOUIS JR (S)  | 6-17-175.1  |
| 22    | BRINKMEIER WILLIAM J (S)                                       | 6-T7-177    |
| 23    | TOWN OF TRIDELPHIA (S)   | 6-T7-176    |
| 24    | TRENTON ROBERT C & S G (S)                                     | 6-17-177.1  |
| 25    | 470 LAND COMPANY LLC (S)                                       | 7-TW4-35    |
| 26    | WV DEPARTMENT OF TRANSPORTATION (S)                            | US ROUTE 40 |
| 27    | ALLIETTA KERA L (S)  | 7-TW4-62    |
| 28    | DANEHART CHARLES D JR (S)                                      | 7-TW4-61    |
| 29    | KNOLLINGER KATHYRN M (S)                                       | 7-TW8-75    |
| 30    | MIDTOWN MOBILE HOMES INC TEMPLIN TIM T & PATRICIA A (S)        | 6-TW4-126   |
| 31    | PARSONS JAMES (\$)   | 6-T7-182    |







| I. THE UNDERSIGNED.        | HEREBY CERTIFY THAT THIS PLAT IS                                       |
|----------------------------|--|
| CORRECT TO THE BEST OF M   | AT KNOWLEDGE AND BELIEF AND SHOWS<br>RED BY LAW AND REGULATIONS ISSUED |
| AND PRESCRIBED BY THE DEPA | ARTMENT OF ENVIRONMENTAL PROTECTION.                                   |
|                            | David L Jackson  |
| DC 709                     | manul a racium   |

| P.S. 708 PCCCO | Z Jackom<br>COMPANY:     | SWN<br>Production Company, LLC | SWN<br>Production Company | 04/08/202   |
|----------------|--------------------------|--------------------------------|---------------------------|---|
|                | OPERATOR'S<br>WELL #:    | TIMMY MINCH OHI<br>210H        | API #<br>47-069-00337     | DATE: 02-18-2022<br>DRAWN BY: N. MANO             |
|                | DISTRICT:<br>TRIADELPHIA | COUNTY:<br>OHIO                | STATE:<br>WV              | SCALE: N/A<br>DRAWING NO:<br>WELL LOCATION PLAT : |

### JACKSON SURVEYING INC. 2413 EAST PIKE ST. # 112 Clarksburg, WV 26302 304-623-5851

|      | ADJOINING OWNERS TABLE  | 1                      |
|------|---|------------------------|
| RACT | SURFACE OWNER   | TAX PARCEL             |
| A    | MINCH TIMMY B & AMY L   | 4-R17-58.1             |
| В    | MINCH ROBERT WILLIAM JR MINCH BARBARA JEAN                                  | 4-R17-57.2             |
| C    | MINCH ROBERT WILLIAM JR MINCH HERBERT PAUL                                  | 4-R17-57               |
| D    | NUTTING G OGDEN TRUST   | 4-R17-57.1             |
| E    | VEMURI HOME & GARDEN LLC  | 4-R17H-1               |
| F    | HALL EULA BERNICE   | 4-R18-3                |
| G    | POCKLRONALDJ  | 5-T2-20.1              |
| Н    | WOJCHOWSKI MORGAN A   | 6-T2-20                |
| 1    | HATCHER HOWARD W JR & L J   | 5-12-21.6              |
| 1    | COVEY ON RISE, LLC  | 5-T2-21.5              |
| к    | DAILER JAMES M & MARILYN D  | 5-T2-21.7              |
| L    | COURY KRISTIN   | 6-T2-21.3              |
| M    | NEUMAN MICHAEL C & COCHRAN SARAH  | 6-T2-21.1              |
| N    | NEUMAN MICHAEL C & COCHRAN SARAH  | 6-T2-25                |
| 0    | COURY KRISTIN   | 6-T2-21.2              |
| P    | LAUDERMILT GARY E& MA   | 5-T2-26.1              |
| a    | LAUDERMILT MARY A & G E   | 6-T2-26                |
| R    | CROFT SAMUELE & ROSE M TRUST CROFT SAMUELE & ROSE M; TEES                   | 6-T2-24                |
| S    | CROFT SAMUEL & ROSE MITHOST CROFT SAMUEL & ROSE MITHOST CROFT SAMUEL & ROSE | 5-T2-24.2              |
| T    | IONES LAMBERT   | 6-T2-24.2              |
| U    | CROFT REVOCABLE TRUST   | 6-17-139               |
|      |   |                        |
| V    | DANEHART ARTHUR W & P R (LIFE) ENGLAND CYNTHIA A ET AL                      | 6-T7-141               |
| W    | DANEHART ARTHUR W & P R (LIFE) ENGLAND CYNTHIA A ET AL                      | 6-T7-140               |
| X    | LAUDERMILT MARY ANN & GARY E 5R   | 6-17-142               |
| Y    | FIGARETTI KATHERINE M & ANTHONY F   | 6-T7-143               |
| Z    | FIGARETTI KATHERINE M ANTHONY F   | 5-17-143.1             |
| A2   | COREY MICHAEL & TIERRA  | 6-17-158               |
| B2   | HEARN LYLE & KIMBERLIE  | 6-T7-173               |
| C2   | LUCKY FARMS LLC   | 5-17-163               |
| D2   | HANSON AUGUST J & USA M   | 6-17-163.20            |
| E2   | GALBREATH ROBERT W & DEBRA J  | 6-17-163.11            |
| F2   | GRIFFIN DANIEL L& SARA C  | 6-T7-163.5             |
| G2   | MILLER GARY P & J A   | 5-T7-163,4             |
| H2   | BROSKI STEPHEN J  | 6-T7-163.1             |
| 12   | FIORILLI MICHAELA&CL  | 6-17-163.2             |
| 12   | TUCKER ROBERT M & REBECCA E   | 6-17-163.12            |
| K2   | GAUDINO GREGORY A & ANNETTE M   | 6-T7-163,13            |
| 12   | KHALIL BUSAINA  | 6-17-163.7             |
| M2   | KHALIL BUSAINA  | 6-17-163.6             |
| NZ   | SIMMS JAMES   | 6-T7-163.17            |
| 02   | GEORGE GREGORY P JR   | 6-T7-163.21            |
| P2   | BOYD CECELIA  | 6-17-172               |
| 02   | ABUNDANT LIFE BAPTIST CHURCH ET AL  | 6-T7-172.12            |
| R2   | ANDERSON CARLAS E & T D   | 6-T7-172.2             |
| 52   | BUSS CHARUE A SR & MARY E   | 6-T7-164.1             |
| 72   | ABUNDANT LIFE BAPTIST CHURCH ET AL  | 6-T7-172.14            |
|      | BRINKMEIER LOUIS GJR & J A  | 6-T7-175               |
| U2   | CLARK LINDA L   | 7-TW3-1                |
| V2   |   | 6-17-175.2             |
| W2   | BRINKMEIER WILLIAMJ   | 6-17-175.2<br>6-T7-186 |
| X2   | TRENTON ROBERT C & S G  | 7-TW4-39               |
| ¥2   | BONACCI RENTALS LLC   |                        |
| 22   | TRENTON ROBERT C & SYLVIA G   | 7-TW4-38               |
| A3   | TRENTON ROBERT C AND SYLVIA G   | 7-TW4-37               |
| BB   | 470 LAND COMPANY LLC  | 7-TW4-37.1             |
| 63   | 470 LAND COMPANY LLC  | 7-TW4-36               |
| D3   | HALL JAMES E JR & TERRY E   | 7-TW4-60               |
| E3   | MARLIN DOUG & LEXANNE   | 7-TW4-94               |
| F3   | BONACCI RENTALS LLC   | 7-TW4-95               |

| RACT | SURFACE OWNER   | TAX PARCEL  |
|------|---|-------------|
| 63   | EONACCI RENTALS LLC   | 7-TW4-56.1  |
| H3   | COOPER WILLIAM C  | 7-TW4-96    |
| 13   | WCC INC   | 7-TW4-97    |
| 13   | ROBINSON JOYCE  | 6-TB-43.2   |
| K3   | ROBINSON AUGUST FRANKLIN                                    | 6-T8-43     |
| 13   | OHIO COUNTY COMMISSION                                      | 6-T12-53    |
| MB   | MIDTOWN MOBILE HOMES INC (1/2) TEMPLIN TIM & PATRICIA (1/2) | 7-TW4-129   |
| NB   | TEMPLIN TIM T   | 7-TW4-126.1 |
| O3   | MIDTOWN MOBILE HOMES INC                                    | 7-TW4-93    |
| P3   |   | 7-TW4-127   |
|      | MIDTOWN MOBILE HOMES INC(1/2) TEMPLIN TIM & PATRICIA (1/2)  |             |
| 03   | MIDTOWN MOBILE HOMES INC(1/2) TEMPLIN TIM & PATRICIA (1/2)  | 7-TW4-128   |
| RB   | MIDTOWN MOBILE HOMES INC(1/2) TEMPLIN TIM & PATRICIA (1/2)  | 7-TW4-123   |
| 53   | MIDTOWN MOBILE HOMES INC(1/2) TEMPLIN TIM & PATRICIA (1/2)  | 7-TW4-125   |
| TB   | MIDTOWN MOBILE HOMES INC (1/2) TEMPLIN TIM & PATRICIA (1/2) | 7-TW4-122   |
| U3   | MIDTOWN MOBILE HOMES INC (1/2) TEMPLIN TIM & PATRICIA (1/2) | 7-TW4-133   |
| V3   | STARKEY OPHIEE & R S  | 7-TW4-124   |
| EW   | MIDTOWN MOBILE HOMES INC (1/2) TEMPLIN TIM & PATRICIA (1/2) | 7-TW4-121   |
| X3   | BLEIFUS TIRE SERVICE INC                                    | 7-TW4-92    |
| Y3   | ALLIETTA THOMAS J   | 7-TW4-63    |
| Z3   | 470 LAND COMPANY LLC  | 7-TW4-34    |
| A4   | 470 LAND COMPANY LLC  | 7-TW4-33    |
| 84   | 470 LAND COMPANY LLC  | 7-TW4-32    |
| C4   | TRENTON ROBERT C & S G                                      | 7-TW4-31    |
| D4   | TOWN OF TRIADELPHIA   | 7-TW4-30    |
| E4   | TRENTON ROBERT C  | 6-T7-184    |
| F4   | TRENTON ROBT C & SYLVIA                                     | 6-17-184.1  |
| G4   | TRENTON ROBERT C  | 6-T7-184.3  |
| H4   | TOWN OF TRIADELPHIA   | 7-TW4-24    |
| 14   | BRINKMEIER WILLIAM J  | 6-T7-177    |
| 14   | TOWN OF TRIADELPHIA   | 7-TW4-23.1  |
| K4   | OHIO VALLEY IND & BUS DEV CORP                              | 7-TW4-8     |
| 14   | OHIO VALLEY IND & BUS DEV CORP                              | 6-T7-166.1  |
| M4   | LUCKY FARMS KENNELLLC                                       | 5-T7-163.22 |
| N4   | GEORGE GREGORY J & JENNIFER S                               | 6-T7-163.19 |
| 04   | MIDDLE CREEK GARAGE INC                                     | 6-17-166    |
|      | HUTCHINSON AMY JO   | 7-TW1-1.1   |
| P4   |   | 7-TW1-3.2   |
| Q4   | KNOLUNGER WOODROW J JR REV TRUST, ET AL                     | 7-TW1-9     |
| R4   | MIDDLE CREEK GARAGE INC                                     | 6-T12-5     |
| \$4  | LUCKY FARMS LLC   | 6-T7-156    |
| T4   | OCH DANIEL F  |             |
| U4   | FITZPATRICK CINDY L& THOMAS W                               | 6-17-153    |
| V4   | HULS TERESA GELLNER   | 6-17-152    |
| W4   | RICKER WILLIAM R AND KATHY L                                | 6-T7-150    |
| X4   | CRISWELL JOHN T   | 6-17-150.1  |
| ¥4.  | CRISWELL JOHN T   | 6-T7-148.1  |
| Z4   | WALTER GARY R & SUSAN L                                     | 6-T7-148    |
| A5   | MOORE STEVEN A & LISA K                                     | 6-17-148.2  |
| B5   | WENZEL REGIS G & J R  | 6-17G-4     |
| C5   | HEATH JAMES L   | 6-17G-3     |
| D5   | HARRIS DONALD N & J A                                       | 6-T7-147.1  |
| E5   | HARRIS DONALD JEFFERY                                       | 6-T7-147    |
| F5   | SCHMID DAVID J & ET   | 6-T7-145    |
| G5   | DAVIS PROPERTY HOLDINGS LLC                                 | 6-17-137.1  |
| HS   | WARD CHRISTIE L   | 6-T7C-1     |
| 15   | POWELLJAMES E JR & MARY A-LE POWELL J; POWELL M; BRAMAN M   | G-T7-180    |
| 15   | STRADA JEFFREY M & LINDA F                                  | 6-T7C-11    |
| K5   | STRADA JEFFREY M& LINDA F                                   | 6-T7C-11.1  |
| LS   | BAUER HOLLY K & PAUL M                                      | 6-T7-112.1  |
| _    | FRITTER BALPH LEE II FRITTER MELISSA EDITH                  | 6-T7-111    |
| MS - | ORUM M D 6/9 INT, W B ORUM 1/9 K D ORUM 1/9 & J E ORUM 1/9  | 6-17-185.1  |
| NS   |   | 6-T7-178    |
| 05   | ORUM WILLIAM A & CYNTHIA                                    | 6-17-95     |
| P5   | WHEELING PARK COMMISSION                                    | 6-T2-16.2   |
| Q5   | DANEHART LUANN AND ARTHUR W JR                              | 6-12-16.2   |
| R5   | VILLANOVA DONALO GAND BECKY J                               |             |
| \$5  | VILLANOVA DONALD GAND BECKY J                               | 6-T2-15.2   |
| T5   | FRANKE RODD A & LISA R                                      | 6-T2-15.3   |
| U5   | MONFRADI CHARLES AND DOLORES                                | 4-R17-58    |
| V5   | ORUM WILLIAM A & CYNTHIA E                                  | 6-72-19.1   |
| W5   | JUNIPER LODGE INC   | 5-T2-19     |
| X5   | MINCH TIMMY B & AMY L                                       | 4-R17-63    |
| YS   | MINCH DANNY AND GINA  | 4-R17-61    |
| _    | CALVERT GROVE ANDREW  | 4-R17-62    |

|            |                          |                                |                           | 04/08/2022  |
|------------|--------------------------|--------------------------------|---------------------------|---|
| REVISIONS: | COMPANY:                 | SWN<br>Production Company, LLC | SWP<br>Production Company | and the second se |
|            | OPERATOR'S<br>WELL #:    | TIMMY MINCH OHI<br>210H        | API #<br>47-069-00337     | DISTRIBUTE DELL TOT THE RECE  |
|            | DISTRICT:<br>TRIADELPHIA | COUNTY:<br>OHIO                | STATE:<br>WV              | SCALE: N/A<br>DRAWING NO:<br>WELL LOCATION PLAT 4   |

-

WW-6A1 (5/13)

#### 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 -

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

| Lease Name or |                       |                       |         |           |
|---------------|-----------------------|-----------------------|---------|-----------|
| Number        | Grantor, Lessor, etc. | Grantee, Lessee, etc. | Royalty | Book/Page |

#### SEE EXHIBIT "A"

\*Co-tenancy utilization - At least 7 mineral owners in tract and at least 75% of the royalty owners have consented to the lawful use or development of the oil or natural gas mineral property on the tract. The interests of the remaining co-tenants will be secured pursuant to the Co-tenancy Modernization and Majority Protection Act.

#### 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

Office of Oil and Gas

- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

WV Department of

4 2022

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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:            | This Now                    | - |  |  |  |
| Its:           | GAVIN NADEAU, RPL           |   |  |  |  |
|                | LANDMAN                     |   |  |  |  |

Page 1 of \_\_\_\_

|          |                          | Tinney Minch OHI 210H<br>Otdo County, West Virginia  |  |                  |                       |  |
|----------|--------------------------|--|--|------------------|-----------------------|--|
|          |                          | Otho County, west Virginia<br>Attached to und made a part of the State of West Virginia Oil and Gan Pereit Form, W   | W-6AL by SWN Production Contempt                                 | LLC., Operator   | -                     | - 1  |
|          |                          | LESSOR   | LESSEE   | BOYALTY          | RKPG                  | ** INTEREST NOT LEASED BY SWN<br>PRODUCTION COMPANY, LLC |
| 1)       | TMP<br>06-0072-0018-0000 | LESSON<br>Howard L. Minch, and Bevery G. Minch, hostanid and wafe  | Great Lokes Energy Partners, L.L.C.                              | 12.50%           | 776/391               |  |
|          |                          |  | Chespealar Appalachia, L.L.C.                                    |                  | SDS/418               |  |
| Mirch    | a hostand and wife and a | ent Mineral Owners) obtained mineral interest by deeri dated June 19, 2018, from Howard L. Minch, Sr. and Beverly<br>econded on June 19, 2108 in Deed Book 785, Page 728 in the Office of the County Clark of Ohio County, West        |  |                  |                       | 0.00%  |
| remia.   | Howard and Beverly Mind  | executed the subject leave in 2006 with Great Lakes Energy Partners, L.L.C. before the above mentioned convergence,<br>sure subject to the original leave shown above recorded at Hook 776 and Page 391, which SWN Production Company, |  |                  | dias.                 |  |
|          |                          | v assignment recorded at Block \$83 and Page 192   | 5WN Production Company, LLC<br>SWN Production Company, LLC       | 18.60%           | 38(3/192<br>947/8/95  |  |
| +1       | 03-0011-0010-0001        | Devid Turppa   | SWN Production Company, LLC                                      | 13.00%           | 948/46<br>958/314     |  |
|          |                          | David A. Brutt<br>Alfred W. Wagner   | SWN Production Company, LLC<br>SWN Production Company, LLC       | 18.00%           | 959/310               |  |
|          |                          | Burbura Prohisika<br>Gregory M. Braz   | SWN Production Company, LLC<br>SWN Production Company, LLC       | 18.00%           | 959/317<br>959/356    |  |
|          |                          | David B. Kadar   | SWN Production Company, LLC                                      | 18.09%           | 959/3/(3<br>959/625   | 0.0046   |
|          |                          | John W. Bratt<br>Paul Scott Wagner   | SWN Production Company, LLC<br>SWN Production Company, LLC       | 13.00%           | 959/648               |  |
|          |                          | Chestne Ray Zanoch<br>Babara Gilmatin  | SWN Production Company, LLC<br>SWN Production Company, LLC       | 18.00%           | 959/655<br>960/2/13   |  |
|          |                          | Rockine D. Eble and Nan cy J. Kadar, hustward and wife<br>Alfred J. Kadar and Rose Marie Kadar, hustward and wife  | SWN Production Company, LLC<br>SWN Production Company, LLC       | 18.00%s          | 961/336               |  |
| 3)       | 06-0012-0020-0000        |  | SWN Production Company, LLC                                      | 18,00%           | 541.695               |  |
|          |                          | David Tappa<br>David A. Braz   | SWN Production Company, LLC<br>SWN Production Company, LLC       | 18.00%           | 948/45 958/314        |  |
|          |                          | Afred W. Wagner  | SWN Production Company, LLC                                      | 18.00%           | 959/310               |  |
|          |                          | Burbara Prohaska<br>Gregory M. Bratt   | SWN Production Company, LLC<br>SWN Production Company, LLC       | 18,00%<br>18,00% | 959/317<br>959/356    |  |
|          |                          | David B. Kuthr<br>John W. Bratt  | SWN Production Company, LLC<br>SWN Production Company, LLC       | 18.06%           | 959/363<br>959/625    | 0.00%  |
|          |                          | Paul Scott Wagner  | SWN Production Company, LLC                                      | 18.00%           | 959/648               |  |
|          |                          | Christine Drey Zanoch<br>Harbera Cilitartia  | SWN Production Company LLC<br>SWN Production Company LLC         | 18.00%<br>18.20% | 939/65.5<br>960/203   |  |
|          |                          | Roderie D. Effic and Nancy J. Kadar, histoard and wife<br>Alfred J. Kadar and Ross Marje Kadar, hasband and wife   | SWN Production Company, LLC<br>SWN Production Company, LLC       | 18.00%           | 960/191<br>961/336    |  |
| 4)       | 06-0072-0021-0004        | Howard W. Hatcher Jr., and Linda J. Elatcher, hushand and wife   | NPAR LLC   | 18.00%           | B17/516               |  |
|          |                          |  | Chevron USA, Inc.<br>Chesapeake Appalichia, L.L.C.               |                  | 827/284<br>858/339    | 0.00%  |
| 51       | 05-09T2-0021-0000        | Edward A. Hatchier, single   | SWN Production Company, LLC<br>NPAR, LLC                         | 18.00%           | \$85/296<br>\$15/411  |  |
| 58       | 00400124002140000        | Landary S Tenning 2015s  | Chesren USA, Inc.  | 19.000           | 827/284               | 0.00%  |
|          |                          |  | Chesapeake Appalachia, L.L.C.<br>SWN Production Company, LLC     |                  | 832/359<br>885/284    |  |
| 63       | 96-0072-0072-0000        | Ruth Hall, widow   | NPAR. LLC<br>Chevron U.S.A. Inc.                                 | 13.00%           | \$14/339<br>\$27/284  |  |
|          |                          |  | Cheppenke Appalachia LLC   |                  | 848.149               | 0.00%  |
| 7)       | 06-0017-0136-0000        | Midnel A. Saparito, a sinale man   | SWN Production Company, LLC.<br>Orienspeake Appellaching L.L.C.  | 18.00%           | \$85/296<br>\$37/163  | 0.00%  |
|          | 06-00T7-0137-0000        | Bounty Minimals, LLC   | SWN Production Company, LLC<br>SWN Production Company, LLC       | 18.00%           | \$85.368<br>93£.777   | 0.00%  |
| 8)<br>91 | 06-0017-0145-0000        | Katherine Maria Papadintarion, adža Katherine Figuretti  | Chesspeake Appalachia L.I.C.                                     | 18.00%           | 821/782               | 0.00%  |
| 10)      | 06-0017-0163-0000        | John J. Catien   | SWN Production Company, LLC<br>NPAR, LLC                         | 17.00%           | 802/181               |  |
| 1.07     |                          |  | Chevron U.S.A. Inc.  |                  | 827/254<br>858/359    | 0.00%  |
|          |                          |  | Ottempeake Appaluchia L.L.C.<br>SWN Preduction Company, LLC      |                  | 885/296               |  |
| \$12     | 06-0017-0163-0015        | Roger L. Kunt, Jr. and Melinda J. Kent, husband and wife   | Chesapeake Appalachia, L.L.C.<br>SWN Production Company, LLC     | 14.00%           | \$69.714<br>\$\$4/349 | 0.50%  |
| 12)      | 86-0017-0163-0018        | Roger L. Kms, Jr. and Melinda J. Kms, husband and wife   | Chesipeake Appalachia L.I.C.                                     | 14.00%           | 869/714<br>884/349    | 0.0054   |
| 13)      | 06-0017-0163-0016        | Todd Felletton   | SWN Production Computy, LLC<br>Chempeake Appalachie, L1/C        | 16.00%           | 831/616               | 0.00%  |
| 149      | 96-0017-0163-0003        | Robert T. Neidhardt und Eathloen H. Neidhardt Ok a Kabilson O'Leary, husband and wife  | SWN Production Company, LLC<br>Chempedie Appalachea, L.I.C.      | 19.00%           | 872/175               | 0.09%  |
|          | OF OWNER DIA & DOUG      | Robert T. Neichardt und Kahleen H. Neidhardt f/c/a Kahleen O'Leary, husband and wife   | SWN Preduction Company, LLC                                      |                  | \$84,409              |  |
| 15)      | 06-0017-0163-0010        |  | Chosapeake Appalachia, L.I. C.<br>SWN Paschatian Company, LLC    | 13.00%           | \$72/175<br>\$884/409 | 0.00%  |
| 16)      | 06-0017-0163-0909        | Stefan L. Brannare and Elizabeth L. Brannare. Intsited and we'r  | Chesapeake Appalachia, U.I. C.<br>SWN Production Company, U.C.   | 16.00%           | 833/14<br>895/462     | 0.00%  |
| 12)      | 06-0017-0163-0008        | Chief M. Stort and Leab M. Strut, husbaryd and wife  | Chesapeake Appalachia 1.1.C.                                     | 16.00%           | 833/22                | 0.00%  |
| 13)      | 05-0017-0164-0000        | Chartie A. Hiss, Sr. and Mmy Elley Blass, hastand and wife   | SWN Production Company, LLC<br>NPAR, LLC                         | 18.00%           | \$95.462<br>\$11.428  |  |
|          |                          |  | Chryron U.S.A. Ioc.  |                  | 827/369<br>858/359    | 0.00%  |
| _        |                          |  | Christopeake: Appulacitis, L.U.C.<br>SWN Production Company, LLC |                  | 885/296               |  |
| 19)      | 05-0017-0165-0003        | Royalty Owner<br>Adam Rogerson, a single man   | N/A<br>SWN Production Company, LLC                               | N/A<br>15.00%    | N/A<br>993-132        | 23 80%   |
|          |                          | Ann Muldrew Tumbin, a smole woman<br>Barlara A, Duran, a single woman  | SWN Production Company LLC<br>SWN Production Company, LLC        | 14.00%<br>14.00% | 984-770<br>978-379    |  |
|          |                          | Bathen A. Patten, a widow  | SWN Production Company, LLC                                      | 14.00%           | 980-148               |  |
|          |                          | Batara May Scott, a widow<br>Becky Allen, a single woman   | SWN Production Company, LLC<br>SWN Production Company, LLC       | 14.00%<br>14.00% | 983-49<br>981-490     |  |
|          |                          | Receipt R. Kien, a window<br>Betty Jo Contrems Vann & Robert M. Vann, with and historicit  | SWN Production Company, LLC                                      | 14.00%           | 983-12<br>995-187     |  |
|          |                          | Betty Marie Surger Woods, a single woman   | SWM Production Company, LLC<br>SWM Production Company, LLC       | 14.00%           | 179-702               |  |
|          |                          | Bille Jo Russinvaum, a married wornan dealing in her sole and separate property<br>Brackey A. Box & Roberta J. Box, Insburd and wife   | SWN Productor: Computy, LLC<br>SWN Productor: Computy, LLC       | 14.00%           | 986-138<br>979-15     | RECEIVED   |
|          |                          | Brandy Thispers, a wikine<br>Breada Lee Perca a Ma Bronda Lee Navarto-Perez, a magnici wernap  | SWN Production Company, LLC<br>SWN Production Company, LLC       | 14.00%<br>14.00% | 983-14<br>998-582     | Office of Oil and  |
|          |                          | Hruce Neur A Lisa Loie Stout, husband and wife   | SWN Production Company, LLC                                      | 14.00%           | 1006-759              | alling at an end   |
|          |                          | Carl B. Fied & Kun Fiest, husband and wife<br>Carol L. Wentz, a married woman dealing to her sole and scientic property  | SWN Production Company, LLC<br>SWN Production Company, LLC       | 14.00%           | 983-56<br>984-777     | MAR 4 20   |
|          |                          | Carol L. Witer, a single woman<br>Cecclin M. Flocchmi, a single woman  | SWN Production Company, LLC<br>SWN Production Company, LLC       | 14.00%<br>14.00% | 979-8<br>1009-55      | MAR 4 21   |
|          |                          | Charlene L. Wise, a widow  | SWN Production Company, LLC.                                     | 14.00%           | 983-64                |  |
|          |                          | Chales Henry Alman, a single man<br>Charles N. Waster J. Nan B. Waster, husband and wife   | 5WN Production Campany, LLC<br>5WN Production Campany, LLC       | 14.00%<br>14.00% | 979.775<br>981-374    | WV Departme  |
|          |                          | Cheryl Ann Lyon, a single woman<br>Constance M. Knollinger, a widow  | SWN Production Company, LLC<br>SWN Production Company, LLC       | 14.09%           | 978-344               | Environmental Pro  |
|          |                          | Dana A. Suthers, a single man  | SWN Production Company, LLC                                      | 14.00%           | 988-203               |  |
|          |                          | David Herb & Annetta M Harb, husband and wife<br>David L. Best, a single man   | SWN Production Company, LLC<br>SWH Production Company, LLC       | 14,00%           | 985-475<br>981-485    |  |
|          |                          | David L. Singer, St., a matriced man dealing in his sole and separate property<br>David R. Mukhaw & Karen Mukhew, hisband and wife   | SWN Production Company, LLC<br>SWN Production Company, LLC       | 14.00%<br>14.00% | 977-323<br>979-315    |  |
|          |                          | Debita Lytra Caldwell, a single woman  | SWN Production Company, LLC                                      | 14.00%           | 981-476               |  |
|          |                          | Debra M. Singer Salkwords, a single woman<br>Dame H. White, a married woman dealing as her sole and separate property  | SWN Production Company, LLC<br>SWN Production Company, LLC       | 14.00%           | 979-674<br>979-1      |  |
|          |                          | Dolerce Willinger, a widow<br>Docu M P. Meille, a married man dealing in his sole and separate property  | SWN Production Company, LLC<br>SWN Production Company, LLC       | 14.00%           | 979-64                |  |
|          |                          | Douglas W. Kaolinger, a marined man dealing in this sole auch epotety<br>Edward J Best A. Bath Best, hadowal and wife  | SWN Production Company, LLC                                      | 14.00%           | 979-78<br>977-357     |  |
|          |                          |  | SWN Production Company, LLC                                      | 14.00%           | 979-43                |  |

|      |                    | EST(HBT 'A''<br>Thinny Minds Offi 216:<br>Obio County, West Virgin<br>Amschrid to und made a part of the State of West Virginis Off and Gas Permit Form,                                 | la la   | ULC. Openilar      |                     |   |
|------|--------------------|--|---|--------------------|---------------------|---|
| T    | 150*               | LESSOR   | LESSEE  | ROYALTY            | BK/PG               | % INTEREST NOT LEASED BY S<br>PRODUCTION COMPANY, LLO |
| 1    | 15UP               | Forck E. Altman. a manualman dealing in his sole and separate property   | SWN Production Company, LLC                                 | 14,00%             | 380-739             | 1   |
|      |                    | Gary Hellingshead & Linda Hollingshead, hastand and wife   | SWN Production Company, LLC                                 | 14,00%             | 984-756<br>977-344  |   |
|      |                    | Cary R. Knellinger A. Beverly K. Knollinger, husband and wife<br>Cary Singer, a maried man dealing in his sole and separateproperty  | SWN Production Company, LLC<br>SWN Production, Company, LLC | 14.00%             | 578-158             |   |
|      |                    | Gerald H. Martin, a wildswer   | SWN Production Company LLC                                  | 14.00%             | 581-469             |   |
|      |                    | Greg Hollingshead & Lorin Hollingshead hudsond and wife  | SWN Production Company LLC                                  | 14.00%<br>14.00%   | 985-52<br>979-295   |   |
|      |                    | Gregory W. Ganizer & Mary Rebecca Ganizer, host and andwife<br>Helen Pacheta Schnetz, by Joseph Schueiz, her Attorney-in-Fact  | SWN Production Company LLC<br>SWN Production Company LLC    | 14.00%             | 919 293             |   |
|      |                    | Isalel A Schuetz Chargerben, widow, by Zella T Whitman, her Attomey-in-Fast  | SWN Production Company, LLC                                 | 14.00%             | 982-494             |   |
|      |                    | James Altinus, a single man  | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14,00%             | 581-428<br>1006-731 |   |
|      |                    | Jurnes B. Hoover, B., a single man<br>Jurnes Blanksriehip, a married may dealing in hits sole and separate property  | SWN Production Company, LLC<br>SWN Production Company, LLC  | 18.00%             | 581-456             |   |
|      |                    | Jamot I. Gentrer, a merried man dealing in his sole and separate property  | SWN Production Company, LLC                                 | 14.00%             | 1000-581            |   |
|      |                    | Jancete Filteen Fahey, a wildow<br>Janice Kren & Dr. Rietard Kran, DDS, wife and hastrand  | SWN Production Company, LLC<br>SWN Production Company, LLC  | 12.50%             | 983-72              |   |
|      |                    | Jamee Arm at Dr. Rahar o Arm, Labo, wile and annound   | SWN Production Company, LLC                                 | 14.00%             | 995-105             |   |
|      |                    | Jeffrey Scout, a single man  | SWN Preduction Company, LLC                                 | 14.00%             | 979-667             |   |
|      |                    | Jerume Carl Schuetz, a unarried mun dealing in his sole and separate property<br>Jody Ann Schufer, a widow   | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14 D0%             | 997-131<br>995-93   |   |
|      |                    | Jonathan P. Lyon, a manifed man dealing in his sole and separate property  | SWN Production Company LLC                                  | 14.00%             | 1001-151            |   |
|      |                    | Jonatium Stewart Eggletten, a single man   | SWN Production Company, LLC                                 | 14.00%<br>14.00%   | 1005-207            |   |
|      |                    | Joseph Thomas Willinger, III, a single man<br>Jadeh A. McGrad, a widow   | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%             | 977-316             |   |
|      |                    | Judith Moore, a married woman dealing in her sole and septente property  | SWN Production Company, LLC                                 | 14.00%             | 595-84              |   |
|      |                    | Judy Askew, a single woman   | SWN Production Company, LLC                                 | 14.00%             | 1002-748            |   |
|      |                    | Julian Schuetz & Serah Schuetz, hu stand and wife<br>Kan Edward Little, a single man   | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%             | 986-119             |   |
|      |                    | Rirsten Pagerstrom, a single worran  | SWN Production Company, LLC                                 | 14.00%ii           | 983-21              |   |
|      |                    | Kristine M. Shiseropi Uwa Christy Marie Bennett, a single woman<br>Larry Phelps & Florence Phelps, husband and wife  | SWN Production Company, LLC<br>SWN Production Company, LLC  | 1.4.00%<br>1.4.00% | 993-792<br>979-50   |   |
|      |                    | Larry Phelps & Florence Phelps, hubband and wife<br>Laurie Schuetz, oka Lannie Ann Morgan, mantied woaran dealing in her sole and separate property                                      | SWN Production Company, LLC                                 | 14.00%             | (003-646            |   |
|      |                    | Linds M. Kranmer, a married woman dealing in her sole and separate property  | SWN Production Company, LLC                                 | 18.00%             | 981 791             |   |
|      |                    | Linda Marie Jones, a married woman dealing in her sole and separate property<br>Landa Singer Feature, a married woman dealing in her sole and separate property                          | SWN Prediction Company, LLC<br>SWN Prediction Company, LLC  | 14.00%             | 981-381<br>980-135  |   |
|      |                    | Les M. Singer, a single woman  | SWN Production Company, LLC                                 | 1 8 0 0%           | 978-372             |   |
|      |                    | Leis McDerman, a single woman, by Mary B. McGinty as Anorney-in Fast.  | SWN Production Company, LLC                                 | 14.00%s<br>14.00%s | 998-234<br>998-499  |   |
|      |                    | Leuisie Elminer Winter, a widow<br>Mari Arme Newallo filoa Mari Anne Schuretz, a sicuple woman   | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%             | 998-499             |   |
|      |                    | Mark Singer, a single man  | SWN Production Company, LLC                                 | 14.00%             | 980-712             |   |
|      |                    | Marta Jo Smith, a single womm  | SWN Production Company, LLC                                 | 14.00%             | 981-442<br>979-709  |   |
|      |                    | Mary Amelia Martin, a single woman<br>Mary Bridget McGinty a martied woman dealing in her sole and separate property   | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%             | 988-260             |   |
|      |                    | Mary Jo Jaskela, a sergie wurner   | SWN Preclaction Company, LLC                                | 14.00%             | 1000-147            |   |
|      |                    | Mary Los Merris alon Mary Los Andrale, a married woman dealing in her sole and separate property<br>Mary Lynn Singer Hadrina, a married woman dealing as her sole and separate property. | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%s            | 989-763<br>979-723  |   |
|      |                    | Melissa Nuzam n.k/a Melissa Forte, a married woman   | SWN Production Company, LLC                                 | 14.00%             | 997-110             |   |
|      |                    | Michael Johnson, a married man dealarg in his sole and separate property   | SWN Production Company, LLC                                 | 14.00%             | 979-302             |   |
|      |                    | Michele B. Kell, a married woman, dealing in her sole and separate property<br>Michelle D. Yarazo, a married woman dealing in her sole and separate property                             | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%s            | 907-736<br>980-128  |   |
|      |                    | Millisse L. Masscotte, n/o/a, Milista Wise, a married woman dealing in her sole and separate property  | SWN Production Company, LLC                                 | 14.00%             | 987-28              |   |
|      |                    | Nancy J. Walding, a single woman   | SWN Freduction Company, LLC                                 | 14.00%             | 990-704<br>991-683  |   |
|      |                    | Nancy L. Kollogg, a wadow<br>Nancy Lauphren filola Nancy Williamson, a angle Worran  | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%             | 979-29              |   |
|      |                    | Nancy Schlieper & George Schlieper, wife and kushand   | SWN Production Company, LLC                                 | 14.00%             | 1006-752            |   |
|      |                    | Nany Ridgeway, a single woman<br>Neale Schuetz, a sin gle man  | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%             | 996-349<br>980-163  |   |
|      |                    | Pamela Rae Nelson, a single woman  | SWN Production Company, LLC                                 | 14.07%             | 978.393             |   |
|      |                    | Paincia Lee Rodgers Fly's Pairson Lee Scott, a married woman dealing in her sole and separate property   | SWN Froduction Company, LLC                                 | 14.00%             | 979-695             |   |
|      |                    | Patitie A. Williams, a widow<br>Paul Edward Singer, a matrixed man dealing su his sole and separate property   | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%<br>14.00%   | 979-688<br>982-790  |   |
|      |                    | Paul T. Alman & Joy L. Altman, haistand and wife   | SWN Production Company, LLC                                 | 14.00%             | 979-36              |   |
|      |                    | Paulh Schufer, a sangle woman<br>Phylis Ann Jordan, a marned woman deallog in her sole and separate property   | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%+            | 993-125<br>980-121  |   |
|      |                    | Rehears Ruthers Sorrell, a married woman dealing in her sole and separate property   | SWN Production Company, LLC                                 | 14.00%             | 930-726             |   |
|      |                    | Richard Gordon Willinger & Pameia Jean Willinger, busband and wife   | SWN Production Company, LLC                                 | 14.00%             | 979-718             |   |
|      |                    | Richard T. Almann & Sata Ann Alman, husband and wife<br>Robert Brent Nelson & Kimberty S. Nelson, husband and wife   | SWN Production Company, LLC<br>SWN Production Company, LLC  | 12.50%             | 983-79<br>977-733   |   |
|      |                    | Robert Moline, a shigh man   | SWN Production Company, LLC                                 | 1100%              | 993-757             |   |
|      |                    | Robert Singer & Sundy Singer, Instand and wife   | SWN Production Company, LLC                                 | 14.00%             | 980-719             |   |
|      |                    | Rodney & Pitchys & Vicki L. Phelps, husband and wife<br>Ronald Caldwell, a single start  | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%             | 975-568<br>981-849  |   |
|      |                    | Rosentury DeSantis & Frank DeSantis, wife and Janshund   | SWN Production Company, LL/C                                | 14.00%             | 978-351             |   |
|      |                    | Russell F. Gentzra, a sangle mut   | SWN Production Computy, LLC                                 | 14,00%             | 977-309             |   |
|      |                    | Right M. Bennett, a single woman<br>Saffie L. Zammerman, a widow   | SWN Frederica Company, LLC<br>SWN Production Company, LLC   | 14.00%a<br>14.00%a | 989+182<br>984-749  |   |
|      |                    | Samutha Cifeli, a single woman   | SWN Production Company, LLC                                 | 14.00%             | 925-001             |   |
|      |                    | Samuei J. Lapp, II & Heathr A. Lapp, hestoard and wife<br>Sara L. Saudio, a single woman   | SWN Preduction Company, LLC<br>SWN Preduction Company, LLC  | 14.00%<br>14.00%   | 978-385<br>981-505  |   |
|      |                    | Sergio V. Ouera, a widowe  | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%             | 981-903             |   |
|      |                    | Shari Singar, a single worran  | SWN Preduction Company, LLC                                 | 14.00%             | 278-365             |   |
|      |                    | Station M. Korthas, a manifed woman dealing in her sole and separate property<br>Stephen D. Phelos & Pacnela C. Phelos, husband and wafe   | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14,00%             | 979-335<br>979-57   |   |
|      |                    | Stephen Ward Tumer, a married nur, dealing in his sole and separate property.  | SWN Production Company, LLC                                 | 14.00%             | 997-690             |   |
|      |                    | Skryen E. Lyon, a single man   | SWN Production Company, LLC                                 | 14.00%             | 1001-409            |   |
|      |                    | The Singer Family Trust, dated January 9, 2003, Herty Marie Woods, Trustee and Berry Marie Woods, a married<br>woman dealing in hirr sole and reparate property                          | SWN Production Company, LLC                                 | 14.00%             | 979-702             |   |
|      |                    | Tim only J. Hors: & Jaskie L. Horst, husband and wife  | SWN Production Company, LLC                                 | 14,00%             | 979-282             |   |
|      |                    | Tira Marie Islay, a single woman<br>Vo units Altanas Taby & James M. Tally, wife and hashand   | SWN Production Company, LLC<br>SWN Oraclection Company, LLC | 14.00%             | 993-139             |   |
|      |                    | Virginin A, hady, a married women dealing in her sole and separate property  | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%             | 5%1-388<br>979-328  |   |
|      |                    | Wityne A. Singer, a single man   | SWN Production Company, LLC                                 | 14.00%             | 979-681             |   |
|      |                    | Wayne Mosecolle, a wingle man<br>William C. Stratel, a widower   | 5WN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%<br>14.00%   | 983-35<br>995-77    |   |
|      |                    | William George Alstact, a saugle man   | SWN Production Company, LLC                                 | 14,00%             | 581-395             |   |
|      |                    | William Scentewald Jr. it. Hazed N. Sonnersweld, hushend and wife<br>William T. Caldwell, a single man   | SWN Production Company LLC                                  | 34.00%             | 983-7               |   |
|      |                    | Weltiers T. Caldwell, a single must<br>William Willinger, a mustigd must dealing in his sole and separate property   | SWN Production Company LLC<br>SWN Production Company LLC    | 14.00%             | 981-421<br>998-575  |   |
|      |                    | Woodnow J. Knollinger, a married man dealing in his safe and separate property   | SWN Production Company: LLC                                 | 14.00%             | 977-330             |   |
| 20   | 640017-0185-00     | Zzila T Whitnur, Ova Zzila Theresa Pralat, a single woman<br>11 Rogalty Canaer   | 5WN Production Company, LLC                                 | 14.09%             | 985-15              |   |
| - Cl | and a real matched | Adm Hageren, a single min  | N/A<br>SWN Production Company, LLC                          | N/A<br>16.00%      | N/A.<br>993-132     | 22.50%  |
|      |                    | Ann Maldrew Turnhim, a single woman  | SWN Production Company, LLC                                 | 14,00%             | 924-770             |   |
|      |                    | Burban, A. Duini, a single woman<br>Barban, A. Parlon, a wallow  | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00% 14.00%      | 978-379<br>980-148  |   |
|      |                    | Barlana May Scort, a widow   | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%             | 950-148<br>953-19   |   |
|      |                    | Bedey Alfea, a single wommi  | SWN Production Company, LLA?                                | 14.00%             | 931-150             |   |
|      |                    | Betty Jo Cartreras Vinne & Rescard States, wife and husband  | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%             | 983-12<br>995-487   |   |
|      |                    | Betty Jo Contrems Vinni & Rescard Sheen, wile and hirdsend<br>Betty Marie Singer Woods, a high-solution  | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%             | 979-467             |   |
|      |                    | Billie Jo Ruonavaara, a married wonian dealing in her sole and separate property   | 5WN Production Company, LLC                                 | 14.00%             | 936-138             |   |

|          | Othio Cucuty, West Virginia<br>Altached to and made a part of the State of West Virginia Oil and Osa Parmit Perm, WV-6A1; by SWN Production Company, LLC., Operator |   |                  |                     |  |  |  |  |
|----------|---|---|------------------|---------------------|--|--|--|--|
| TMP      | LESSOR  | LESSEE  | ROYALTY          | BK/PC               | % INTEREST NOT LEASED BY<br>PRODUCTION COMPANY, LI |  |  |  |
|          | Brandy Thiggon, a widow<br>Branda Lee Perez a/r/a Branda Lee Navarto-Perez, a married woman   | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%<br>14.00% | 983-14<br>998-582   |  |  |  |  |
|          | Bruce Staut & Liss Loie Stast, husband and wife   | SWN Production Company, LLC                                 | 14.00%           | 1006-759            |  |  |  |  |
|          | Carl B. Best & Kim Best, husband and wife   | SWN Production Company, LLC                                 | 14.00%<br>14.00% | 983-56<br>984-777   |  |  |  |  |
|          | Carol L. Wentz, a married woman doaling in her sole and separate property<br>Carol L. Wiker, a single woman   | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%           | 979-8               |  |  |  |  |
|          | Cocelia M. Flocchini, a single woman  | SWN Production Company, LLC                                 | 14.00%           | 1009-55             |  |  |  |  |
|          | Charlene L. Wine, a widow   | SWN Production Company, LLC                                 | 14.00%           | 983-64              |  |  |  |  |
|          | Charles Henry Ahman, a single man<br>Charles M. Winter & Mar B. Winter bushered and wife  | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%<br>14.00% | 979-275<br>981-374  |  |  |  |  |
|          | Charles N. Water & Nan B. Wester, husband and wife<br>Cheryl Ann Lyon, a single woman   | SWN Production Company, LLC                                 | 14.00%           | 1000/140            |  |  |  |  |
|          | Constance M. Knolinger, a widow   | SWN Production Company, LLC                                 | 14.00%           | 978-344             |  |  |  |  |
|          | Daza A. Rathers, a stagle man   | SWN Production Company, LLC                                 | 14.00%           | 988-203<br>985-475  |  |  |  |  |
|          | David Harb & Anacta M Harb, busband and wife<br>David L. Bost, a single man   | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%           | 981-435             |  |  |  |  |
|          | David L. Singer, Sr., a martied man dealing in his sole and separate property   | SWN Production Company, LLC                                 | 14.00%           | 977-323             |  |  |  |  |
|          | David R. Mukirow & Karan Mukirow, husband and wife  | SWN Produition-Company, LLC                                 | 14.00%           | 979-315<br>981-476  |  |  |  |  |
|          | Debra Lyen Caldweil, a single woman<br>Debra M. Singer Salkvoick, a single woman  | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%           | 979-674             |  |  |  |  |
|          | Dime H. White, a married woman dealing in her sole and separate property  | SWN Production Company, LLC                                 | 14.00%           | 979-L               |  |  |  |  |
|          | Dolores Willinger, a widow  | SWN Production Company, LLC                                 | 14.00%           | 979-64              |  |  |  |  |
|          | Donaid P. Maille, a matried man dealing in his sole and separate property   | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%           | 979-78<br>977-337   |  |  |  |  |
|          | Douglas W. Knolinger, a married man dealing in his sole and separate property<br>Edward J. Best & Ruth Best, husband and wife                                       | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%           | 979-43              |  |  |  |  |
|          | Emily J. Wells, a manied woman dealing in her sole and separate property  | SWN Production Company, LLC                                 | 14.00%           | 985-468             |  |  |  |  |
|          | Frank E. Altman, a married man dealing in his sole and separate property  | SWN Production Company, LLC                                 | 14.00%           | 980-739             |  |  |  |  |
|          | Gary Holingshead & Linda Holingshead, husband and wife  | SWN Production Company, LLC                                 | 14.00%           | 984-756             |  |  |  |  |
|          | Gary R. Knollinger & Bevorly K. Knollinger, hunband and wife<br>Gary Singer, a married man dening in his sole and separate property                                 | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%           | 977-344<br>978-358  |  |  |  |  |
|          | Gersid H. Martin, a widower   | SWN Production Company, LLC                                 | 14.00%           | 981-469             |  |  |  |  |
|          | Greg Holingshead & Lorin Holingshead, husband and wife  | SWN Production Company, LLC                                 | 14.00%           | 985-52              |  |  |  |  |
|          | Gregory R. Gantzer & Mary Rebecca Gantzer, husband and wife   | SWN Production Company, LLC                                 | 14.00%           | 979-295             |  |  |  |  |
|          | Helen Pachuta Schuetz, by Joseph Schuetz, her Attorney-in-Pact<br>Joshel & Schuetz Cheserbon, widen, by Zella T. Whitmen, her Attorney-in-Pact                      | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%           | 985-79<br>985-494   |  |  |  |  |
|          | Isabel A Schuetz Chagerben, widow, by Zeila T Whitman, her Attorney-in-Fact<br>James Altman, a single man   | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%           | 981-428             |  |  |  |  |
|          | James B. Hoover, II, a single man   | SWN Production Company, LLC                                 | 14.00%           | 1006-731            |  |  |  |  |
|          | James Blankenship, a married man dealing in his sole and separate property  | SWN Production Company, LLC                                 | 18.00%           | 981-456             |  |  |  |  |
|          | James L. Gantzer, a married man dealing in his sole and separate property   | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%<br>12.50% | 1000-581<br>983-72  |  |  |  |  |
|          | Janette Eileen Fahey, a widow<br>Janice Kren & Dr. Richard Kren, DDS, wife and husband  | SWN Production Company, LLC                                 | 14.00%           | 1003-728            |  |  |  |  |
|          | Jarrett T. Schafer, a single man  | SWN Production Company, LLC                                 | 14.00%           | 995-105             |  |  |  |  |
|          | Juffrey Stout, a single man   | SWN Production Company, LLC                                 | 14.00%           | 979-667             |  |  |  |  |
|          | Jerome Carl Schuetz, a married man dealing in his sole and separate property  | SWN Production Company, LLC                                 | 14.00%           | 997-131<br>995-91   |  |  |  |  |
|          | Jody Ann Schufer, a widow<br>Jonathan P. Lyon, a married man dealing in his sole and separate property  | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%<br>14.00% | 1001-451            |  |  |  |  |
|          | Jonathan Stewart Eggiston, a single man   | SWN Production Company, LLC                                 | 14.00%           | 1005-207            |  |  |  |  |
|          | Joseph Thomas Willinger, III, a single man  | SWN Production Company, LLC                                 | 14.00%           | 1006-675            |  |  |  |  |
|          | Judith A. McGruil, a widow  | SWN Production Company, LLC                                 | 14.00%           | 977-316             |  |  |  |  |
|          | Judith Moore, a matried woman dealing in her sole and separate property   | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%<br>14.00% | 995-84<br>1003-748  |  |  |  |  |
|          | Judy Askew, a single wanzu<br>Julian Schuetz & Sarah Schuetz, husband and wife  | SWN Production Company, LLC                                 | 14.00%           | 1002-368            |  |  |  |  |
|          | Kim Edward Little, a single man   | SWN Production Company, LLC                                 | 14,00%           | 9\$6-119            |  |  |  |  |
|          | Kirsten Fagerstrom, a single woman  | SWN Production Company, LLC                                 | 14.00%           | 983-21              |  |  |  |  |
|          | Kristine M. Sinicropi Dk/s Christy Marie Bennett, a single woman  | SWN Production Company, LLC                                 | 14.00%           | 993-792             |  |  |  |  |
|          | Larry Phelps & Florence Phelps, heaband and wife<br>Larrie Schuetz, aka Laurie Ann Morgan, married woman dealing in her sole and separate property                  | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%           | 1003-646            |  |  |  |  |
|          | Linda M. Kranauer, a married woman dataing in her sole and separate property  | SWN Production Company, LLC                                 | 14.00%           | 984-791             |  |  |  |  |
|          | Linda Marie Jones, a married woman dealing in her sole and separate property  | SWN Production Company, LLC                                 | 14.00%           | 981-381             |  |  |  |  |
|          | Linda Singer Fontana, a married worman dealing in her sole and separate property  | SWN Production Company, LLC                                 | 14.00%           | 950-135             |  |  |  |  |
|          | Lisa M. Singer, a single woman<br>Lois McDermott, a single woman, by Mary B. McOinty as Attorney-in-Fact  | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%<br>14.00% | 978-372<br>988-234  |  |  |  |  |
|          | Louise Eleanor Winter, a widow  | SWN Production Company, LLC                                 | 14.00%           | 998-499             |  |  |  |  |
|          | Mari Anne Newallo Dk/a Mari Anne Schuetz, a single wormen   | SWN Production Company, LLC                                 | 14.00%           | 1003-665            |  |  |  |  |
|          | Mark Singer, a single man   | SWN Production Company, LLC                                 | 14.00%           | 980-712             |  |  |  |  |
|          | Marta Jo Smith, a single woman<br>Mary Ametia Martin, a single woman  | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%<br>14.00% | 981-442<br>979-709  |  |  |  |  |
|          | Mary Bridget McCinty, a married woman dealing in her sole and separate property   | SWN Production Company, LLC                                 | 14.00%           | 988-260             |  |  |  |  |
|          | Mary Jo Jaskela, a single woman   | SWN Production Company, LLC                                 | 14.00%           | 1000-147            |  |  |  |  |
|          | Mary Los Morris while Mary Los Andrade, a married woman desing in her sole and separate property  | SWN Production Company, LLC                                 | 14.00%           | 989-763             |  |  |  |  |
|          | Mary Lynn Singer Hadzina, a married woman dealing in her sole and separate property<br>Melissa Nazam nAza Melissa Forte, a married woman                            | SWN Production Company, LLC<br>SWN Production Company LLC   | 14.00%           | 979-723<br>997-110  |  |  |  |  |
|          | Michael Johnson, a married man dealing in his sole and separate property  | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%           | 979-302             |  |  |  |  |
|          | Michele B. Keil, a married woman, dealing in her sole and separate property   | SWN Production Company, LLC                                 | 14.00%           | 997-736             |  |  |  |  |
|          | Michelle D. Yaraca, a married woman dealing in her sole and separate property   | SWN Production Company, LLC                                 | 14.00%           | 980-128             |  |  |  |  |
|          | Milliana L. Massecutie, nik/a, Miliana Wise, a married woman dealing in her sole and acparate property<br>Nancy J. Wadding, a single woman                          | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%           | 983-28<br>980-705   |  |  |  |  |
|          | Nancy I. Wanning, a union within Nancy I. Kellogg, a widow  | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%           | 981-483             |  |  |  |  |
|          | Nancy Laughran Dit/a Nancy Williamson, a single woman   | SWN Production Company, LLC                                 | 14.00%           | 979-29              |  |  |  |  |
|          | Nancy Schlieper & George Schlieper, wife and husband  | SWN Production Company, LLC                                 | 14.00%           | 1006-752            |  |  |  |  |
|          | Nany Ridgeway, a single woman<br>Nenie Schuctz, a single man  | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%           | 996-349<br>980-163  |  |  |  |  |
|          | Penie Seniecz, a single man<br>Pamela Raz Nelson, a single woman  | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%           | 978-163<br>978-393  |  |  |  |  |
|          | Patricia Lee Rodgers Dk/a Patricia Lee Scott, a married woman dealing in her sole and separate property   | SWN Production Company, LLC                                 | 14.00%           | 979-695             |  |  |  |  |
|          | Pattic A. Williams, a widow   | SWN Production Company, LLC                                 | 14.00%           | 979-688             |  |  |  |  |
|          | Paul Edward Singer, a married man dealing in his sole and separate property<br>Bent T. Altman, & Inc. 7. Altman, husband and wife                                   | SWN Production Company, LLC                                 | 14.00%           | 982-790             |  |  |  |  |
|          | Peul T. Alman & Joy L. Alman, husband and wife<br>Paula Schafer, a single woman   | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%<br>14.00% | 979-36<br>993-125   |  |  |  |  |
|          | Phylis Ann Jordan, a married woman dealing in her sole and separate property  | SWN Production Company, LLC                                 | 14.00%           | 980-121             |  |  |  |  |
|          | Rebecca Ruthers Sorrell, a married woman dealing in her sole and separate property  | SWN Production Company, LLC                                 | 14.00%           | 980-726             |  |  |  |  |
|          | Richard Gordon Willinger & Parnela Jean Willinger, husband and wife<br>Richard T. Alman & Sara Ann Altman, husband and wife   | SWN Production Company, LLC                                 | 14.00%           | 979-716             |  |  |  |  |
|          | Richard T. Alman & San Am Annan, tusband and wife<br>Robert Brent Neisen & Kimburly S. Neison, husband and wife   | SWN Production Company, LLC<br>SWN Production Company, LLC  | 12.50%           | 983-79<br>977-733   |  |  |  |  |
|          | Robert Moline, a single man   | SWN Production Company, LLC                                 | 14.00%           | 993-757             |  |  |  |  |
|          | Robert Singer & Sandy Singer, hunband and wife  | SWN Production Company, LLC                                 | 14.00%           | 980-719             |  |  |  |  |
|          | Rochey A. Pholos & Vicki L. Pholos, husband and wife<br>Remain Conductil a sincle sum   | SWN Production Company, LLC                                 | 14.00%           | 998-568             |  |  |  |  |
|          | Ronald Chidweil, a single man<br>Rosemany DeSantis & Frank DeSantis, wife and hushand   | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%           | 981-449<br>978-351  |  |  |  |  |
|          | Russell F. Gantzer, a single man  | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%           | 978-351<br>977-309  |  |  |  |  |
|          | Ruth M. Bennett, a single woman   | SWN Production Company, LLC                                 | 14.00%           | 929-182             |  |  |  |  |
|          | Salis 1. Zimmarman, a widow   | SWN Production Company, LLC                                 | 14.00%           | 984-749             |  |  |  |  |
|          | Semantha Cifelli, a single woman<br>Semant I, I are, 11 & Heather & J are, husband and wife   | SWN Production Company, LLC                                 | 14.00%           | 985-001             |  |  |  |  |
|          | Samuci J. Lapp. II & Heathr A. Lapp, husband and wife<br>Sam L. Saudio, a single woman  | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%           | 978-386<br>981-503  |  |  |  |  |
|          | Sargio V. Guara, a widower  | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%           | 981-503<br>981-402  |  |  |  |  |
| Sec. 198 | Shari Singar, a single woman  | SWN Production Company, LLC                                 | 14.00%           | 978-365             |  |  |  |  |
|          | Sharon M. Korthaa, a martied woman dealing in her sole and separate property<br>Starbar D. Electre & Bernah C. Bhaba husband and with                               | SWN Production Company, LLC                                 | 14.00%           | 979-335             |  |  |  |  |
| Wite.    | Stephen D. Phelps & Panela C. Phelps, husband and wife<br>Stephen Ward Turner, a married man dealing in his sole and separate property                              | SWN Production Company, LLC<br>SWNI Production Company, LLC | 14.00%           | 979-57              |  |  |  |  |
| 1990     | Steven E. Lyon, a single man  | SWN Production Company, LLC<br>SWN Production Company, LLC  | 14.00%<br>14.00% | 997-690<br>1001-409 |  |  |  |  |
|          | The Singer Femily Trust, dated January 9, 2003, Betty Marie Woods, Trustee and Betty Marie Woods, a married   |   |                  |                     |  |  |  |  |

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|     |                   | ECOHER<br>Througy Match<br>Attached to and made a part of the State of West Vergenia Oil and Gits Peo | OHI 210H<br>West Virginia      | LLC., Operator |          |   |
|-----|-------------------|---|--------------------------------|----------------|----------|---|
|     | TMP               | LESSOR  | LESSEE                         | ROYALTY        | BKPG     | STEREST NOT LEASED BY SW<br>PRODUCTION COMPANY, LLC |
| -   |                   | Timothy J. Horst & Jackie L. Horst, husband and wife  | SWN Production Company, LLC    | 14.00%         | 979-282  |   |
|     |                   | Tina Marie Islay, a single woman  | SWN Production Company, LLC    | 14.00%         | 993-139  |   |
|     |                   | Veronica Alterna Tully & James M. Tully, wife and hashand   | SWN Production Company, LLC    | 14,00%         | 981-388  |   |
|     |                   | Virginia A. Isaly, a married woman dealing in her sole and separate property                          | SWN Production Company, LLC    | 14.00%         | 979-328  |   |
|     |                   | Wayne A. Singer, a single man   | SWN Production Company, LLC    | 14.00%         | 979-681  |   |
|     |                   | Wiryne Mississoffie, a single mari  | SWN Production Company, LLC    | 14.00%         | 983-35   |   |
|     |                   | William C. Stroud a widower   | SWN Production Company, LLC    | 14.00%         | 995.77   |   |
|     |                   | William George Alstadt, a single man  | SWN Production Company, LLC    | 14.00%         | 981-325  |   |
|     |                   | William Sonnewald Jr. & Hagel N. Sonnenwald, husband and wife   | SWN Production Company, LLC    | 14.00%         | 983-7    |   |
|     |                   | William T. Caldwell, a stagle mun   | SWN Production Company, LLC    | 14.00%         | 981-421  |   |
|     |                   | William Willinger, a married man dealing as his sole and separate property                            | SWN Production Company, LLC    | 14.00%         | 998-575  |   |
|     |                   | Woodrow J. Knollinger, a married num dealing in his sole and separate property                        | SWN Production Company LLC     | 14.00%         | 977-330  |   |
|     |                   | Zeila T Whitman, ffora Zella Theresa Pralat, a single woman   | SWN Production Company, LLC    | 14.00%         | 985-45   |   |
| 21) | 06-00T7-0175-0001 | Louis Srinkmeier, Jr. and Jelanda A. Brenkmeier, husband and wife                                     | Chesapeake Appalachia, L.L.C.  | 18,00%         | 818/431  | 0.00%   |
|     |                   |   | SWN Production Company, LLC    |                | 854/313  |   |
| 22) | 05-0017-0177-0000 | William J. Brinkmeier, single   | SWN Production Company, LLC    | 18.00%         | 1000/660 | 0.00%   |
| 23) | 05-0017-0176-0000 | The Town of Triadelphia, a West Virginia municipal corporation  | SWN Produced Company, LLC      | 16.00%         | 993/785  | 0.00%   |
| 24) | 06-0017-0177-0001 | Robert C. Trenton wie/a Robert Charles Trenton and Sylvin G. Treaton, husband and wife                | Chesapealar Appalachia, L.L.C. | 14.00%         | 868/534  | 0.00%   |
|     |                   |   | SWN Production Company, LLC    |                | \$84/409 |   |
| 25) | 07-0TW4-0035-0000 | Robert C. Trenton wide Robert Churles Trenton and Sylvin G. Trenton, husband and wife                 | Chesapeake Appalachia, L.L.C.  | 14,00%         | 868/534  | 0.00%   |
|     |                   |   | SWN Production Company, LLC    |                | 884/409  |   |
| 26) | US ROUTH 40       | West Virginia Department of Transportation, Division of Highways                                      | Chempeake Appalachia, L.L.C.   | 15.00%         | \$30/11  | 0.00%   |
|     |                   |   | SWN Production Company, LLC    |                | 883/620  |   |
| 27) | 07+0TW4+0052+0000 | Kera L. Albetta, married  | Chesapeake Appalachia, L.L.C.  | 14.00%         | 863/159  | 0.00%   |
|     |                   |   | SWN Production Company, LLC    |                | 824/385  |   |
| 25) | 07-01W4-0051-0000 | Charles D. Danehart, Jr., a single man  | SWN Production Company, LLC    | 16.00%         | 1006/619 | 0.00%   |
| 29) | 07-0TW8-0075-0000 | Kadarya M. Knellinger and Woodrow J. Knollinger, her husband  | Chesapeake Appalachiz, L.J. C. | 18.06%         | 805/60   | 0.00%   |
|     |                   |   | SWN Production Company, LLC    |                | 883/267  |   |
| 30) | 06-0TW4-0126-0000 | Tim T. Templin and Patricia A. Templin, hashand and wife  | SWN Production Gorgany, LLC    | 14.00%         | 923/80   | 0.00%   |
|     |                   | Michown Mobile Homes, Inc.  | SWN Production Company, LLC    | 14.06%         | 923/85   | 1.1.1.1   |
| 31) | 06-00T7-0182-0000 | Carol L. Parsons  | SWN Production Company, LLC    | 18.00%         | 1015/702 | 0.00%   |

END OF EXHIBIT "A"

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Cyre.



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

February 17, 2022

Mr. Charles Brewer WV DEP Office of Oil & Gas 601 57<sup>th</sup> St., SE Charleston, WV 25304

**RE:** SWN's proposed New Well: Timmy Minch OHI 210H in Ohio County, West Virginia, Drilling under Browns Run Road, Peters Road, Chapel Hill Road, Kingsley Drive, and National Road.

Dear Mr. Brewer:

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 Browns Run Road, Peters Road, Chapel Hill Road, Kingsley Drive, and National Road. Please be advised that SWN has leased all mineral owners under said route as it relates to the above-referenced well and unit.

Respectfully Submitted:

Gavin Nadeau, RPL Landman SWN Production Company, LLC

RECEIVED Office of Oil and Gas

MAR 4 2022

WV Department of Environmental Protection

The Right People doing the Right Things, wisely investing the cash flow from our underlying Assa 4/08/2022

#### STATE OF WEST VIRGINIA

#### DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE CERTIFICATION

Date of Notice Certification:

| API No. 47- 009           | 1.00                   |
|---------------------------|------------------------|
| <b>Operator's Well No</b> | . Timmy Minch OHI 210H |
| Well Pad Name:            | Timmy Minch OHI        |

#### 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:      | West Virginia                              | - UTM NAD 83     | Easting:   | 531119.851      |   |
|-------------|--|------------------|------------|-----------------|---|
| County:     | 069-Ohio                                   | - UTMINAD 83     | Northing:  | 4435415.454     |   |
| District:   | Triadelphia                                | Public Road Ace  | cess:      | Browns Run Road |   |
| Quadrangle: | Wheeling                                   | Generally used f | farm name: | Timmy Minch OHI |   |
| Watershed:  | Browns Run of Peters Run of Wheeling Creek | 3                |            |                 | 2 |

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>*PLEASE CHECK ALL THAT APPLY | OOG OFFICE USE<br>ONLY    |
|---|---------------------------|
| □ 1. NOTICE OF SEISMIC ACTIVITY or ■ NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED  | RECEIVED/<br>NOT REQUIRED |
| ■ 2. NOTICE OF ENTRY FOR PLAT SURVEY or □ NO PLAT SURVEY WAS CONDUCTED  | RECEIVED                  |
| <ul> <li>3. NOTICE OF INTENT TO DRILL or NOTICE NOT REQUIRED BECAUSE<br/>NOTICE OF ENTRY FOR PLAT SURVEY<br/>WAS CONDUCTED or</li> <li>WRITTEN WAIVER BY SURFACE OWNER</li> </ul>                                   | RECEIVED/<br>NOT REQUIRED |
| (PLEASE ATTACH)   |                           |
| 4. NOTICE OF PLANNED OPERATION  | RECEIVED                  |
| 5. PUBLIC NOTICE     BECEIVED     Office of Oll and Gas   | RECEIVED                  |
| 6. NOTICE OF APPLICATION     MAR 4 2022     WD Becaution of     Environmental Protection  |                           |

#### **Required Attachments:**

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

#### Certification of Notice is hereby given:

#### THEREFORE, I Brittany Woody

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

| By:        | SWN Production Co., LLC Brittany Woody Ratta | <u>1</u> ~         | Morgantown, WV 26508                          |
|------------|--|--------------------|---|
| Its:       | Senior Regulatory Analyst                    | Facsimile:         | 304-884-1690                                  |
| Telephone: | 304-884-1610                                 | Email:             | Brittany_Woody@swn.com                        |
|            |  | Subscribed and swo | orn before me this $17^{th}$ day of Feb, 2022 |

#### **Oil and Gas Privacy Notice:**

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



RECEIVED Office of Oil and Gas

4 2022 MAR

WV Department of Environmental Protection

| WW-6A  |  |
|--------|--|
| (9-13) |  |

OPERATOR WELL NO. Timmy Minch OHI 210H Well Pad Name: Timmy Minch OHI

#### 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.

|                        | e of Notice:<br>ice of:  | _ D                | ate Permit Applica   | ition Filed:   |
|------------------------|--|--------------------|--|--|
|                        | PERMIT FOR AN<br>WELL WORK   | Y                  |  | ICATE OF APPROVAL FOR THE<br>RUCTION OF AN IMPOUNDMENT OR PIT  |
| Deli                   | very method pursu  | ant                | to West Virginia C   | ode § 22-6A-10(b)  |
|                        | PERSONAL<br>SERVICE  | V                  | REGISTERED<br>MAIL   | METHOD OF DELIVERY THAT REQUIRES A<br>RECEIPT OR SIGNATURE CONFIRMATION  |
| certi<br>regis<br>sedi | ficate of approval for<br>stered mail or by any<br>ment control plan req | the ometh<br>uired | construction of an im<br>od of delivery that re<br>l by section seven of | an the filing date of the application, the applicant for a permit for any well work or for a poundment or pit as required by this article shall deliver, by personal service or by equires a receipt or signature confirmation, copies of the application, the erosion and this article, and the well plat to each of the following persons: (1) The owners of record on the surface tract or tracts overlying the |

vners of record of ted; (2) The owners of record of the surface tract or tracts overlying the d to be loo 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)                                 | COAL OWNER OR LESSEE                               |
|--|--|
| Name: Timmy B. & Amy L. Minch                      | Name: Alliance Resources GP, LLC                   |
| Address: 260 Browns Run Road                       | Address: 2596 Battle Run Road                      |
| Wheeling, WV 26003                                 | Triadelphia, WV 26059                              |
| Name:  | COAL OPERATOR                                      |
| Address:   | Name:  |
|  | Address: RECEIVED Office of Oil and Gas            |
| □ SURFACE OWNER(s) (Road and/or Other Disturbance) |  |
| Name:  | SURFACE OWNER OF WATER WELL MAR 4 2022             |
| Address:   | AND/OR WATER PURVEYOR(s)                           |
|  | Name: See Attachment 13A WV Department of          |
| Name:  | Address: WV Department of Environmental Protection |
| Address:   |  |
|  | OPERATOR OF ANY NATURAL GAS STORAGE FIELD          |
| □ SURFACE OWNER(s) (Impoundments or Pits)          | Name:  |
| Name:  | Address:   |
| Address:   |  |
|  | *Please attach additional forms if necessary       |

WW-6A (9-13)

OPERATOR WELL NO. Timmy Minch OHI 210H Well Pad Name: Timmy Minch OHI

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

| Notice | Time Rec | uirement: notice shall | be provided no | later than the fili | ing date of | permit application. |
|--------|----------|------------------------|----------------|---------------------|-------------|---------------------|
|--------|----------|------------------------|----------------|---------------------|-------------|---------------------|

|       | e of Notice:                | Date Permit Applica       | ntion Filed: 33  |
|-------|-----------------------------|---------------------------|--|
| Ø     | PERMIT FOR ANY<br>WELL WORK |                           | ICATE OF APPROVAL FOR THE<br>RUCTION OF AN IMPOUNDMENT OR PIT  |
| Deli  | very method pursu           | unt to West Virginia C    | ode § 22-6A-10(b)  |
|       | PERSONAL<br>SERVICE         | REGISTERED<br>MAIL        | METHOD OF DELIVERY THAT REQUIRES A<br>RECEIPT OR SIGNATURE CONFIRMATION  |
| certi | ficate of approval for      | the construction of an im | an the filing date of the application, the applicant for a permit for any well work or for a appoundment or pit as required by this article shall deliver, by personal service or by aquires a receipt or signature confirmation, copies of the application, the erosion and |

ice 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 [sie] is known to be underlain by one or more coal seams; (4) The owners of record of the surface 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)                                 | COAL OWNER OR LESSEE   |  |
|--|--|--|
| Name:  | Name: H3, LLC  |  |
| Address:   | Address: Rt 1 Box 605  | RECEIVED                                     |
|  | Milton, WV 25541   | Office of Oil and Gas                        |
| Name:  | COAL OPERATOR  |  |
| Address:   | Name:  | MAR 4 2022                                   |
| and all of the different states and the set of     | Address:   |  |
| □ SURFACE OWNER(s) (Road and/or Other Disturbance) |  | WV Department of<br>Environmental Protection |
| Name:  | □ SURFACE OWNER OF WATER WELL  | Environmental Protection                     |
| Address:   | AND/OR WATER PURVEYOR(s)   |  |
|  | Name:  |  |
| Name:  | Address:   |  |
| Address:   |  |  |
|  | OPERATOR OF ANY NATURAL GAS S  | TORAGE FIELD                                 |
| □ SURFACE OWNER(s) (Impoundments or Pits)          | Name:  |  |
| Name:  | Address:   |  |
| Address:   | and the set of the set |  |
|  | *Please attach additional forms if necessary   |  |

WW-6A (8-13) API NO. 47- 009 -OPERATOR WELL NO. Timmy March OHI 210H Well Pad Name: Timmy Minch OHI

#### 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 <u>www.dep.wv.gov/oil-und-gas/pages/default.aspx</u>.

#### 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. (c) 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

WW-6A (8-13)

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

MAR 4 2022

W Department of Environmental Protection

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

WW-6A (8-13) API NO. 47-009 -OPERATOR WELL NO. TEmmy Minch OHI 210H Well Pad Name: Timmy Minch OHI

#### 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-

<u>Permits/Pages/default.aspx</u> 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.

| WW-6A                                |   |
|--------------------------------------|---|
| (8-13)                               |   |
|                                      |   |
| Notice is hereby given by:           |   |
| THE HOLE SHALL Braduction Co. LLC    | 1 |
| Telephone: 304-884-1610              |   |
| Telephone. Westweiter of the officer | T |
| Email: Brittany_Woody@swn.com        |   |

API NO. 47-009 -OPERATOR WELL NO. Timmy Minch OHI 210H Well Pad Name: Timmy Minch OHI

day of Feb , 2022

Notary Public

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

#### **Oil and Gas Privacy Notice:**

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

| REID CROFT<br>Notary Public Official Seal<br>State of West Virginia<br>My Comm. Expires Aug 21, 2024 | Subscribed and sworn befo | re me this $17^{+h}_{da}$ |
|--|---------------------------|---------------------------|
| 47 Sparrow Lane Morgantown WV 26508  | My Commission Expires     | 8/21/2024                 |

RECEIVED Office of Oil and Gas

MAR 4 2022

WV Department of Environmental Protection

| OWNER                   | MAILING ADDRESS   | CITY     | STATE | ZIP   | WATER SOURCES |
|-------------------------|-------------------|----------|-------|-------|---------------|
| MINCH TIMMY B & AMY L   | 160 BROWNS RUN Rd | WHEELING | WV    | 26003 | 3             |
| MINCH ROBERT WILLIAM JR | 265 BROWNS RUN Rd | WHEELING | WV    | 26003 | 1             |

RECEIVED Office of Oil and Gas

MAR 4 2022

WV Department of Environmental Protection

WW 643 (1/12) Operator Well No. Timmy Minch OHI

### 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: 1/10/2022
Date of Planned Entry: 1/17/2022

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

| PERSONAL | REGI | STERED |   | METHOD OF DELIVERY THAT REQUIRES A |
|----------|------|--------|---|------------------------------------|
| SERVICE  | MAII | -      | E | 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 (5) 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)              | COAL OWNER OR LESSEE                         |                          |
|-------------------------------|--|--------------------------|
| Name: Timmy B. & Amy L. Minch | Name: Alliance Resources GP, LLC             |                          |
| Address: 260 Browns Run Road  | Address. 2596 Battle Run Road                |                          |
| Wheeling, WV 26003            | Triadelphis, WV 26059                        |                          |
| Name:                         | -  | Or RECONT                |
| Address.                      | MINERAL OWNER(s)                             | Office of Oil and Gas    |
|                               | Name: Timmy B. & Amy L. Minch                | MAD Gas                  |
| Name:                         | Address: 260 Browns Run Road                 | MAR 4 2022               |
| Address:                      | Wheeling, WV 26003                           | Len                      |
|                               | *please attach additional forms if necessary | Environment -            |
|                               |  | Environmental Protection |

#### 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:      | West Virginia | Approx. Latitude & Longitude: | 40.085254, -80.646239                             |
|-------------|---------------|-------------------------------|---|
| County:     | Ohio          | Public Road Access.           | Brown Run Road                                    |
| District:   | Triadelphia   | Watershed:                    | Browns Run of Peters Run of Little Wheeling Creek |
| Quadrangle. | Wheeling      | Generally used farm name.     | Timmy Minch                                       |

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

#### Notice is hereby given by

| Well Operator: | SWN PRODUCTION COMPANY, LLC | Address:   | 1300 Fort Pierpont Dr., Suite 201 |   |
|----------------|-----------------------------|------------|-----------------------------------|---|
| Telephone:     | 304-884-1610                |            | Morgantown, WV 26508              | 1 |
| Email:         | Brittany_Woody@swn.com      | 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 depute recommendent.

WW-6A3 (1/12)

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: 1/10/2022 Date of Planned Entry: 1/17/2022 Delivery method pursuant to West Virginia Code § 22-6A-16a

Operator Well No. Timmy Mine

 PERSONAL
 REGISTERED
 METHOD OF DELIVERY THAT REQUIRES A

 SERVICE
 MAIL
 RECEIPT OR SIGNATURE CONFIRMATION

Pursuant to West Virginia Code § 22-6A-10(a). Prior to filing a permit application, the operator shall provide hotice 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) | COAL OWNER OR LESSEE                         |
|------------------|--|
| Name             | Name: H3.LLC                                 |
| Address:         | Address: Rt. 1 Box 605                       |
|                  | Milton, WV 255441                            |
| Name             |  |
| Address.         | MINERAL OWNER(s)                             |
|                  | Name:  |
| Name:            | Address:                                     |
| Address:         |  |
|                  | *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:      | West Virginia | Approx. Latitude & Longitude: | 40.085254, -80.646239                             |
|-------------|---------------|-------------------------------|---|
| County:     | Ohio .        | Public Road Access:           | Brown Run Road                                    |
| District:   | Triadelphia   | Watershed:                    | Browns Run of Peters Run of Little Wheeling Creek |
| Quadrangle: | Wheeling      | Generally used farm name      | Timmy Minch                                       |
|             |               |                               |   |

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

| Notice is here | by given by  |           |  | Office of Oil and Gas |
|----------------|--|-----------|--|-----------------------|
| Well Operator: |  | Address:  | 1300 Fort Pierpont Dr., Suite 201  | MAR 4 2022            |
| Telephone:     | 304-884-1610   |           | Morgantown, WV 26508   | - LULL                |
| Email:         | Brittany_Woody@swn.com   | Facsimile | 304-884-1690 E   | nvironment            |
|                | Internet and the second s |           | and the second s | Foten la              |

#### 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 2 and 2 and

### 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 fing a permit application.
Date of Notice: 02/07/2022 Date Permit Application Filed:

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

| HAND     | 11 | CERTIFIED MAIL           |
|----------|----|--------------------------|
| DELIVERY |    | 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: Timmy B. & Amy L. Minch | · · · · · · | Name:    |
|-------------------------------|-------------|----------|
| Address: 260 Browns Run Rd.   | /           | Address: |
| Wheeling, WV 26003            |             |          |
|                               |             |          |

#### Notice is hereby given:

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

| State:      | West Virginia                                       | UTM NAD 83       | Easting:  | 530,164.289     |                       |  |
|-------------|---|------------------|-----------|-----------------|-----------------------|--|
| County:     | Ohio  | UTMINAD 85       | Northing: | 4,437,282.264   |                       |  |
| District:   | Tridelphia  | Public Road Acc  | css:      | Browns Run Road | BECEIVED              |  |
| Quadrangle: | Wheeling, WV  | Generally used f | arm name: | Timmy Minch OHI | Office of Oil and Gas |  |
| Watershed:  | Browns Run of Peters Run of Wheeling Creek (HUC-10) |                  |           |                 | MAR 4 2022            |  |
|             |   |                  |           |                 | WIAM                  |  |

#### This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(b), this notice shall include the name, address, telephone number and differentiable, 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.

#### Notice is hereby given by:

| Well Operator: | SWN Production Company, LLC         | Authorized Representative: | Mike Yates                          |  |
|----------------|-------------------------------------|----------------------------|-------------------------------------|--|
| Address:       | 1300 Fort Pierpont Drive, Suite 201 | Address:                   | 1300 Fort Pierpont Drive, Suite 201 |  |
|                | Morgantown, WV 26508                |                            | Morgantown, WV 26508                |  |
| Telephone:     | 304-884-1714                        | Telephone:                 | 304-884-1714                        |  |
| Email:         | Michael_Yates@swn.com               | Email:                     | Michael_Yates@swn.com               |  |
| Facsimile:     |                                     | 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.

Operator Well No. Tim Try Mines OH: 210H

### 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: 02/07/2022 **Date Permit Application Filed:** 

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

| Π | 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: Timmy B. & Amy L. Minch |                    | /        | Name:  |  |
|-------------------------------|--------------------|----------|--|--|
| Address:                      | 260 Browns Run Rd. | Address: |  |  |
|                               | Wheeling, WV 26003 |          |  |  |
|                               |                    |          | and the second sec |  |

#### Notice is hereby given:

WW-6A5 (1/12)

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

| State:      | West Virginia                                       | UTM    |
|-------------|---|--------|
| County:     | Ohio  | UTM    |
| District:   | Tridelphia  | Public |
| Quadrangle: | Wheeling, WV  | Gener  |
| Watershed:  | Browns Run of Peters Run of Wheeling Creek (HUC-10) |        |

| NAD 83               | Easting:  | 530,164.289     |   |
|----------------------|-----------|-----------------|---|
| NAD 85               | Northing: | 4,437,282.264   |   |
| Road Ac              | cess:     | Browns Run Road |   |
| ally used farm name: |           | Timmy Minch OHI | _ |

#### This Notice Shall Include:

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

| Well Operator: | SWN Production Company, LLC | Address:   | 1300 Fort Pierpont Drive, Suite Sence of Oil and Gas |  |  |
|----------------|-----------------------------|------------|--|--|--|
| Telephone:     | 304-884-1714                |            | Morgantown, WV 26508 1 7022                          |  |  |
| Email:         | Michael_Yates@swn.com       | Facsimile: | MAR  |  |  |
|                |                             |            | not Department of                                    |  |  |

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.



# WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

# **Division of Highways**

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

D. Alan Reed, P.E. State Highway Engineer Jimmy Wriston, P. E. Secretary of Transportation Commissioner of Highways

February 9, 2022

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 Timmy Minch Pad, Ohio County Timmy Minch OHI 210H Well Site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #06-2011-0441 which has been issued to Southwestern Energy for access to the State Road for a well site located off Open County Route 25/1 SLS MP 0.12.

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

Very Truly Yours,

Dary K. Clayton

RECEIVED Office of Oil and Gas

MAR 4 2022

WV Department of Environmental Protection

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

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

| Product Name   | Product Use   | Chemical Name   | CAS Number  |         |
|--|---|---|---|---------|
| Al-303 (U.S. Well Services)  | Mixture   | Ethylene glycol   | 107-21-1  |         |
| 1  |   | Cinnamaldehyde  | 104-55 2  |         |
|  |   | Butyl cellosolve  | 111-76 2  |         |
|  |   | Formic acid   | 64-18.5   |         |
|  |   | Polyether   | Proprietary   |         |
|  |   | Acetophenone, thiourea, formaldehyde polymer  | 68527-49 1  |         |
| AP ONE (U.S. Well Services)  | Breaker   | Ammonium persulfate   | 7727-54-0   |         |
| Bactron K-139 (Champion Technologies)  | Biocide   | Glutaraldehyde  | 111-30-8  |         |
| obertein in 155 fertampion reenhologiest   | biocide   | Glutarendenyde  | 111-50-6  |         |
|  |   | 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   |         |
| beccon a sus terrampen recommendes)  | biocide   | INCLIDIO  | 07-00-1   |         |
|  |   | Quaternary Ammonium Compounds, Benzyl-C12-16-Alkyldimethyl, Chlorides   | 68424-85-1  |         |
| CarboNRT   | Tracer  | Ceramic Proppant  | 66402-58-4  |         |
| EC6486A (Nalco Champion)   | Scale Inhibitor   | Amine Triphosphate  | Proprietary   |         |
|  | Scale initiation  | Ethylene Glycol   | 107-21-1  |         |
| C6734A (Champion Technologies)   | Biocide   |   |   |         |
| ecoroada (champion recinciogies)   | biocide   | Hydrogen Peroxide<br>Acetic Acid  | 7722-84-1<br>64-19-7  |         |
|  |   | Peroxyacetic Acid   | 79-21-0   |         |
| cipes temping it could all   | Constant and a fail for   |   |   |         |
| Econo-CI200 (SWN Well Services)  | Corrosion Inhibitor   | Methanol  | 67-56-1   |         |
|  |   | Oxyalkylated fatty acid   | 68951-67-7 BEC  |         |
|  |   | Fatty acids   | 61790-12-3 Office of  | EVED    |
|  |   | Modified thiourea polymer   | 68527-49-1 07 (<br>7732-19-5 /  | and r   |
|  |   | Water Hudropharia acid  | 7732-18-5 MAR   |         |
|  |   | Hydrochloric acid   | 127-08-2  | 1 2000  |
|  |   | Potassium acetate<br>Formaldehyde   | 127-08-2<br>50-00+9 W1/5  | 022     |
|  | 1   |   | 50-00-0 WV Departr<br>64-19-7 Vironmental p<br>77-92-9  |         |
| Ecopol-FEAC (SWN Well Services)  | Iron Control  | Acetic Acid   | ad-14-1 Undientel   | nentor  |
|  |   | Citric Acid   | 50-0010 WV Departr<br>54-19-7 Vironmental 1<br>77-92-9<br>7732-18-5   | Toleon- |
|  |   | Water   |   | 01/0    |
| DP-S1176-15 (Halliburton)  | Friction Reducer  | Polyacylate   | Proprietary   |         |
|  |   | Hydrotreated light petroleum of late  | 54742-47-8  |         |
| LOJET DR900 LPP (SWN Well Services)  | Friction Reducer  | Distillates (petroleum) bydrotre light  | 64674-47-8  |         |
|  |   | Ethylene Glycal   | 107-21-1  |         |
|  |   | Alcohols, C12-16, Explylated per call ated  | 68213-24-1  |         |
| 1  |   | Fatty Alcohols ethoxylated  | Proprietary   |         |
|  |   | Water   | 7732-18-5   |         |
| LOJET DRP 1130X (SWN Well Services)  | Friction Reducer  | Proprietary   | Proprietary   |         |
| R-76 (Halliburton)   | Friction Reducer  | Hydrotreated light petroleuri distiliate  | 64742-47-8  |         |
|  |   | Inorganic Salt  | Proprietary   |         |
| GYPTRON T-390 (Champion Technologies)  | Scale Inhibitor   | Methanol  | 67-56-1   |         |
|  |   | Nonylphenol Ethoxylate  | Proprietary   |         |
| HAI-150E (Halliburton)   | Corresion Inhibitor   | No hazardous substance  | N/A   |         |
| HCL (SWN Well Services)  | Hydrocholic Acid  | Hydrachlaric Acid   | 7547-01-0   |         |
|  |   | Water   | 7732-18-5   |         |
| P-65 MC (Halliburton)  | Scale Inhibitor   | Organic phosphonate   | Proprietary   |         |
|  | - And the second second   | Ammonium Chloride   | 12125-02-9  |         |
| OPTI-FLEX (U.S. Well Services)   | Viscosifying Agent  | Distillates, petroleum, hydrotreated light  | 64742-47-8  |         |
| Plexslick 930  | Friction Reducer  | Copolymer of 2-propenamide  | Proprietary   |         |
| NAMES AND A STREET AN STREET AND A STREET AN |   | Hydrotreated Distillate   | 64742-47-8  |         |
|  |   | Sodium Chloride   | 7647-14-5   |         |
|  |   | Alcohols, C12-16, Exoxylated  |   |         |
|  |   |   | 68551-12-2  |         |
|  |   |   | 68551-12-2<br>93-83-4   |         |
|  |   | Alconois, C12-10, Exoxylated<br>Oleic Acid Diethanolamide<br>Ammonium Chloride  | 93-83-4   |         |
| Diaveliek 953  | Friction Beducer  | Oleic Acid Diethanolamide Ammonium Chloride   | 93-83-4<br>12125-02-9   |         |
| Plexslick 953  | Friction Reducer  | Oleic Acid Diethanolamide<br>Ammonium Chloride<br>Petroleum Distillate  | 93-83-4<br>12125-02-9<br>64742-47-8   |         |
| Plexslick 953  | Friction Reducer  | Oleic Acid Diethanolamide<br>Ammonium Chloride<br>Petroleum Distillate<br>Sodium Chloride   | 93-83-4<br>12125-02-9<br>64742-47-8<br>7647-14-5  |         |
| Plexslick 953  | Friction Reducer  | Oleic Acid Diethanolamide<br>Ammonium Chloride<br>Petroleum Distillate<br>Sodium Chloride<br>Ammonium Chloride  | 93-83-4<br>12125-02-9<br>64742-47-8<br>7647-14-5<br>12125-02-9  |         |
|  |   | Oleic Acid Diethanolamide<br>Ammonium Chloride<br>Petroleum Distillate<br>Sodium Chloride<br>Ammonium Chloride<br>N,N-bis (2-hvdroxyethyl) pleamide   | 93-83-4<br>12125-02-9<br>64742-47-8<br>7647-14-5<br>12125-02-9<br>93-83-4   |         |
|  | Friction Reducer  | Oleic Acid Diethanolamide<br>Ammonium Chloride<br>Petroleum Distillate<br>Sodium Chloride<br>Ammonium Chloride<br>N,N-bis (2-hvdroxyethyl) oleamide<br>Petroleum Distillate   | 93-83-4<br>12125-02-9<br>64742-47-8<br>7647-14-5<br>12125-02-9<br>93-83-4<br>64742-47-8   |         |
|  |   | Oleic Acid Diethanolamide<br>Ammonium Chloride<br>Petroleum Distillate<br>Sodium Chloride<br>Ammonium Chloride<br>NN-bis (2-hydroxyethyl) oleamide<br>Petroleum Distillate<br>Ammonium Chloride   | 93-83-4<br>12125-02-9<br>64742-47-8<br>7647-14-5<br>12125-02-9<br>93-83-4<br>64742-47-8<br>12125-02-9   |         |
|  |   | Oleic Acid Diethanolamide<br>Ammonium Chloride<br>Petroleum Distillate<br>Sodium Chloride<br>N,N-bis (2-hvdroxyethyl) oleamide<br>Petroleum Distillate<br>Ammonium Chloride<br>Oleic Acid Diethanolamide  | 93-83-4<br>12125-02-9<br>64742-47-8<br>7647-14-5<br>12125-02-9<br>93-83-4<br>64742-47-8<br>12125-02-9<br>93-83-4  |         |
|  |   | Oleic Acid Diethanolamide<br>Ammonium Chloride<br>Petroleum Distillate<br>Sodium Chloride<br>Ammonium Chloride<br>NN-bis (2-hydroxyethyl) oleamide<br>Petroleum Distillate<br>Ammonium Chloride   | 93-83-4<br>12125-02-9<br>64742-47-8<br>7647-14-5<br>12125-02-9<br>93-83-4<br>64742-47-8<br>12125-02-9<br>93-83-4<br>68551-12-2  |         |
| Plexslick 957  | Friction Reducer  | Oleic Acid Diethanolamide<br>Ammonium Chloride<br>Petroleum Distillate<br>Sodium Chloride<br>N,N-bis (2-hvdroxyethyl) oleamide<br>Petroleum Distillate<br>Ammonium Chloride<br>Oleic Acid Diethanolamide<br>Alcohols, C12-16, Exoxylated<br>Water   | 93-83-4<br>12125-02-9<br>64742-47-8<br>7647-14-5<br>12125-02-9<br>93-83-4<br>64742-47-8<br>12125-02-9<br>93-83-4<br>68551-12-2<br>7732-15-5   |         |
| lexslick 957   | Friction Reducer  | Oleic Acid Diethanolamide<br>Ammonium Chloride<br>Petroleum Distillate<br>Sodium Chloride<br>Ammonium Chloride<br>N,N-bis (2-hvdroxyethyl) oleamide<br>Petroleum Distillate<br>Ammonium Chloride<br>Oleic Acid Diethanolamide<br>Alcohols, C12-16, Exoxylated<br>Water<br>Hydrotreated light distillate (petroleum)   | 93-83-4<br>12125-02-9<br>64742-47-8<br>7647-14-5<br>12125-02-9<br>93-83-4<br>64742-47-8<br>12125-02-9<br>93-83-4<br>68551-12-2<br>7732-15-5<br>64742-47-8   |         |
| Plexslick 957<br>VFRA-2000 (U.S. Well Services)  | Friction Reducer<br>Anionic Friction Reducer  | Oleic Acid Diethanolamide<br>Ammonium Chloride<br>Petroleum Distillate<br>Sodium Chloride<br>Ammonium Chloride<br>N,N-bis (2-hvdroxyethyl) oleamide<br>Petroleum Distillate<br>Ammonium Chloride<br>Oleic Acid Diethanolamide<br>Alcohols, C12-16, Exoxylated<br>Water<br>Hydrotreated light distillate (petroleum)<br>Propenoic acid, polymer with propenamide   | 93-83-4<br>12125-02-9<br>64742-47-8<br>7647-14-5<br>12125-02-9<br>93-83-4<br>64742-47-8<br>12125-02-9<br>93-83-4<br>68551-12-2<br>7732-15-5<br>64742-47-8<br>9003-06 9  |         |
| Plexslick 957<br>VFRA-2000 (U.S. Well Services)<br>Plexaid 655 NM  | Friction Reducer<br>Anionic Friction Reducer<br>Scale Inhibitor   | Oleic Acid Diethanolamide<br>Ammonium Chloride<br>Petroleum Distillate<br>Sodium Chloride<br>Ammonium Chloride<br>NN-bis (2-hydroxyethyl) oleamide<br>Petroleum Distillate<br>Ammonium Chloride<br>Oleic Acid Diethanolamide<br>Alcohols, C12-16, Exoxylated<br>Water<br>Hydrotreated light distillate (petroleum)<br>Propenoic acid, polymer with propenamide<br>Diethylenetriamine penta (methylene phosphonic acid)  | 93-83-4<br>12125-02-9<br>64742-47-8<br>7647-14-5<br>12125-02-9<br>93-83-4<br>64742-47-8<br>12125-02-9<br>93-83-4<br>68551-12-2<br>7732-15-5<br>64742-47-8<br>9003-06 9<br>15827-30-8  |         |
| Plexslick 957<br>VFRA-2000 (U.S. Well Services)<br>Plexaid 655 NM  | Friction Reducer<br>Anionic Friction Reducer  | Oleic Acid Diethanolamide<br>Ammonium Chloride<br>Petroleum Distillate<br>Sodium Chloride<br>Ammonium Chloride<br>NN-bis (2-hydroxyethyl) oleamide<br>Petroleum Distillate<br>Ammonium Chloride<br>Oleic Acid Diethanolamide<br>Alcohols, C12-16, Exoxylated<br>Water<br>Hydrotreated light distillate (petroleum)<br>Propenoic acid, polymer with propenamide<br>Diethylenetriamine penta (methylene phosphonic acid)<br>Copolymer of 2-propenaminde   | 93-83-4<br>12125-02-9<br>64742-47-8<br>7647-14-5<br>12125-02-9<br>93-83-4<br>64742-47-8<br>12125-02-9<br>93-83-4<br>68551-12-2<br>7732-15-5<br>64742-47-8<br>9003-06 9<br>15827-30-8<br>69418-26-4  |         |
| Plexslick 957<br>VFRA-2000 (U.S. Well Services)<br>Plexaid 655 NM  | Friction Reducer<br>Anionic Friction Reducer<br>Scale Inhibitor   | Oleic Acid Diethanolamide<br>Ammonium Chloride<br>Petroleum Distillate<br>Sodium Chloride<br>Ammonium Chloride<br>N,N-bis (2-hvdroxyethyl) oleamide<br>Petroleum Distillate<br>Ammonium Chloride<br>Oleic Acid Diethanolamide<br>Alcohols, C12-16, Exoxylated<br>Water<br>Hydrotreated light distillate (petroleum)<br>Propenoic acid, polymer with propenamide<br>Diethylenetriamine penta (methylene phosphonic acid)<br>Copolymer of 2-propenaminde<br>Distillates (petroleum), hydotreated light  | 93-83-4<br>12125-02-9<br>64742-47-8<br>7647-14-5<br>12125-02-9<br>93-83-4<br>64742-47-8<br>12125-02-9<br>93-83-4<br>68551-12-2<br>7732-15-5<br>64742-47-8<br>9003-06 9<br>15827-30-8<br>69418-26-4<br>64742-47-8  |         |
| Plexslick 957<br>NFRA-2000 (U.S. Well Services)<br>Plexaid 655 NM  | Friction Reducer<br>Anionic Friction Reducer<br>Scale Inhibitor   | Oleic Acid Diethanolamide<br>Ammonium Chloride<br>Petroleum Distillate<br>Sodium Chloride<br>Ammonium Chloride<br>N,N-bis (2-hvdroxyethyl) oleamide<br>Petroleum Distillate<br>Ammonium Chloride<br>Oleic Acid Diethanolamide<br>Alcohols, C12-16, Exoxylated<br>Water<br>Hydrotreated light distillate (petroleum)<br>Propenoic acid, polymer with propenamide<br>Diethylenetriamine penta (methylene phosphonic acid)<br>Copolymer of 2-propenaminde<br>Distillates (petroleum), hydotreated light<br>Ammonium chloride ((NH4)CI)   | 93-83-4<br>12125-02-9<br>64742-47-8<br>7647-14-5<br>12125-02-9<br>93-83-4<br>64742-47-8<br>12125-02-9<br>93-83-4<br>68551-12-2<br>7732-15-5<br>64742-47-8<br>9003-06 9<br>15827-30-8<br>69418-26-4<br>64742-47-8<br>12125-02-9  |         |
| Plexslick 957<br>NFRA-2000 (U.S. Well Services)<br>Plexald 655 NM<br>Plexslick 922   | Friction Reducer<br>Anionic Friction Reducer<br>Scale Inhibitor<br>no data available                          | Oleic Acid Diethanolamide<br>Ammonium Chloride<br>Petroleum Distillate<br>Sodium Chloride<br>Ammonium Chloride<br>N,N-bis (2-hvdroxyethyl) oleamide<br>Petroleum Distillate<br>Ammonium Chloride<br>Oleic Acid Diethanolamide<br>Alcohols, C12-16, Exoxylated<br>Water<br>Hydrotreated light distillate (petroleum)<br>Propenoic acid, polymer with propenamide<br>Diethylenetriamine penta (methylene phosphonic acid)<br>Copolymer of 2-propenaminde<br>Distillates (petroleum), hydotreated light<br>Ammonium chloride ((NH4)CI)<br>Oleic Acid Diethnolamide   | 93-83-4<br>12125-02-9<br>64742-47-8<br>7647-14-5<br>12125-02-9<br>93-83-4<br>64742-47-8<br>12125-02-9<br>93-83-4<br>68551-12-2<br>7732-15-5<br>64742-47-8<br>9003-06 9<br>15827-30-8<br>69418-26-4<br>64742-47-8<br>12125-02-9<br>93-83-4   |         |
| Plexslick 957<br>NFRA-2000 (U.S. Well Services)<br>Plexald 655 NM<br>Plexslick 922   | Friction Reducer<br>Anionic Friction Reducer<br>Scale Inhibitor   | Oleic Acid Diethanolamide<br>Ammonium Chloride<br>Petroleum Distillate<br>Sodium Chloride<br>Ammonium Chloride<br>N,N-bis (2-hydroxyethyl) oleamide<br>Petroleum Distillate<br>Ammonium Chloride<br>Oleic Acid Diethanolamide<br>Alcohols, C12-16, Exoxylated<br>Water<br>Hydrotreated light distillate (petroleum)<br>Propenoic acid, polymer with propenamide<br>Diethylenetriamine penta (methylene phosphonic acid)<br>Copolymer of 2-propenaminde<br>Distillates (petroleum), hydotreated light<br>Ammonium chloride ((NH4)CI)<br>Oleic Acid Diethnolamide<br>Tetrakis (hydroxymethyl) phosphonium sulphate  | 93-83-4<br>12125-02-9<br>64742-47-8<br>7647-14-5<br>12125-02-9<br>93-83-4<br>64742-47-8<br>12125-02-9<br>93-83-4<br>68551-12-2<br>7732-15-5<br>64742-47-8<br>9003-06 9<br>15827-30-8<br>69418-26-4<br>64742-47-8<br>12125-02-9  |         |
| Plexslick 957<br>NFRA-2000 (U.S. Well Services)<br>Plexalid 655 NM<br>Plexslick 922  | Friction Reducer<br>Anionic Friction Reducer<br>Scale Inhibitor<br>no data available                          | Oleic Acid Diethanolamide<br>Ammonium Chloride<br>Petroleum Distillate<br>Sodium Chloride<br>Ammonium Chloride<br>Ammonium Chloride<br>Petroleum Distillate<br>Ammonium Chloride<br>Oleic Acid Diethanolamide<br>Alcohols, C12-16, Exoxylated<br>Water<br>Hydrotreated light distillate (petroleum)<br>Propenoic acid, polymer with propenamide<br>Diethylenetriamine penta (methylene phosphonic acid)<br>Copolymer of 2-propenaminde<br>Distillates (petroleum), hydotreated light<br>Ammonium chloride (INH4)CI)<br>Oleic Acid Diethnolamide<br>Tetrakis (hydroxymethyl) phosphonium sulphate<br>Acrylic acid terpolymer containing carboxylate phosphonate and sulfonate  | 93-83-4<br>12125-02-9<br>64742-47-8<br>7647-14-5<br>12125-02-9<br>93-83-4<br>64742-47-8<br>12125-02-9<br>93-83-4<br>64742-47-8<br>12125-02-9<br>93-83-4<br>68551-12-2<br>7732-15-5<br>64742-47-8<br>9003-06 9<br>15827-30-8<br>69418-26-4<br>64742-47-8<br>12125-02-9<br>93-83-4<br>55566-30-8                    |         |
| Plexslick 957<br>NFRA-2000 (U.S. Well Services)<br>Plexald 655 NM<br>Plexslick 922<br>folcide PSSOA  | Friction Reducer Anionic Friction Reducer Scale Inhibitor no data available Biocidal product                  | Oleic Acid Diethanolamide<br>Ammonium Chloride<br>Petroleum Distillate<br>Sodium Chloride<br>Ammonium Chloride<br>Ammonium Chloride<br>N,N-bis (2-hvdroxyethyl) oleamide<br>Petroleum Distillate<br>Ammonium Chloride<br>Oleic Acid Diethanolamide<br>Alcohols, C12-16, Exoxylated<br>Water<br>Hydrotreated light distillate (petroleum)<br>Propenoic acid, polymer with propenamide<br>Diethylenetriamine penta (methylene phosphonic acid)<br>Copolymer of 2-propenaminde<br>Distillates (petroleum, hydotreated light<br>Ammonium chloride ((NH4)CI)<br>Oleic Acid Diethnolamide<br>Tetrakis (hydroxymethyl) phosphonium sulphate<br>Acrylic acid terpolymer containing carboxylate phosphonate and sulfonate<br>groups  | 93-83-4<br>12125-02-9<br>64742-47-8<br>7647-14-5<br>12125-02-9<br>93-83-4<br>64742-47-8<br>12125-02-9<br>93-83-4<br>68551-12-2<br>7732-15-5<br>64742-47-8<br>9003-06 9<br>15827:30-8<br>69418-26-4<br>64742-47-8<br>12125-02-9<br>93-83-4<br>55566-30-8<br>397256-50-7  |         |
| Plexslick 957<br>NFRA-2000 (U.S. Well Services)<br>Plexald 655 NM<br>Plexslick 922<br>folcide PSSOA  | Friction Reducer<br>Anionic Friction Reducer<br>Scale Inhibitor<br>no data available                          | Oleic Acid Diethanolamide<br>Ammonium Chloride<br>Petroleum Distillate<br>Sodium Chloride<br>Ammonium Chloride<br>Ammonium Chloride<br>N,N-bis (2-hvdroxyethyl) oleamide<br>Petroleum Distillate<br>Ammonium Chloride<br>Oleic Acid Diethanolamide<br>Alcohols, C12-16, Exoxylated<br>Water<br>Hydrotreated light distillate (petroleum)<br>Propenoic acid, polymer with propenamide<br>Diethylenetriamine penta (methylene phosphonic acid)<br>Copolymer of 2-propenaminde<br>Distillates (petroleum), hydotreated light<br>Ammonium chloride ((NH4)CI)<br>Oleic Acid Diethnolamide<br>Tetrakis (hydroxymethyl) phosphonium sulphate<br>Acrylic acid terpolymer containing carboxylate phosphonate and sulfonate<br>groups<br>Hydrotreated light petroleum distillate  | 93-83-4<br>12125-02-9<br>64742-47-8<br>7647-14-5<br>12125-02-9<br>93-83-4<br>64742-47-8<br>12125-02-9<br>93-83-4<br>68551-12-2<br>7732-15-5<br>64742-47-8<br>9003-06 9<br>15827-30-8<br>69418-26-4<br>64742-47-8<br>12125-02-9<br>93-83-4<br>55566-30-8<br>397256-50-7<br>64742-47-8                              |         |
| Plexslick 953<br>Plexslick 957<br>WFRA-2000 (U.S. Well Services)<br>Plexaid 655 NM<br>Plexslick 922<br>Folcide PSS0A   | Friction Reducer Anionic Friction Reducer Scale Inhibitor no data available Biocidal product                  | Oleic Acid Diethanolamide<br>Ammonium Chloride<br>Petroleum Distillate<br>Sodium Chloride<br>Ammonium Chloride<br>N,N-bis (2-hvdroxyethyl) oleamide<br>Petroleum Distillate<br>Ammonium Chloride<br>Oleic Acid Diethanolamide<br>Alcohols, C12-16, Exoxylated<br>Water<br>Hydrotreated light distillate (petroleum)<br>Propenoic acid, polymer with propenamide<br>Diethylenetriamine penta (methylene phosphonic acid)<br>Copolymer of 2-propenaminde<br>Distillates (petroleum), hydotreated light<br>Ammonium chloride (NH4)CI)<br>Oleic Acid Diethnolamide<br>Tetrakis (hydroxymethyl) phosphonium sulphate<br>Acrylic acid terpolymer containing carboxylate phosphonate and sulfonate<br>groups<br>Hydrotreated light petroleum distillate<br>Ethoxylated alcohol   | 93-83-4<br>12125-02-9<br>64742-47-8<br>7647-14-5<br>12125-02-9<br>93-83-4<br>64742-47-8<br>12125-02-9<br>93-83-4<br>68551-12-2<br>7732-15-5<br>64742-47-8<br>9003-06 9<br>15827:30-8<br>69418-26-4<br>64742-47-8<br>12125-02-9<br>93-83-4<br>55566-30-8<br>397256-50-7<br>64742-47-8<br>Proprietery               |         |
| Plexslick 957<br>WFRA-2000 (U.S. Well Services)<br>Plexald 655 NM<br>Plexslick 922<br>Folcide PS50A  | Friction Reducer Anionic Friction Reducer Scale Inhibitor no data available Biocidal product Friction Reducer | Oleic Acid Diethanolamide<br>Ammonium Chloride<br>Petroleum Distillate<br>Sodium Chloride<br>Ammonium Chloride<br>Ammonium Chloride<br>N,N-bis (2-hvdroxyethyl) oleamide<br>Petroleum Distillate<br>Ammonium Chloride<br>Oleic Acid Diethanolamide<br>Alcohols, C12-16, Exoxylated<br>Water<br>Hydrotreated light distillate (petroleum)<br>Propenoic acid, polymer with propenamide<br>Diethylenetriamine penta (methylene phosphonic acid)<br>Copolymer of 2-propenaminde<br>Distillates (petroleum), hydotreated light<br>Ammonium chloride ((NH4)CI)<br>Oleic Acid Diethnolamide<br>Tetrakis (hydroxymethyl) phosphonium sulphate<br>Acrylic acid terpolymer containing carboxylate phosphonate and sulfonate<br>groups<br>Hydrotreated light petroleum distillate<br>Ethoxylated alcohol<br>Poly (oxy-1.2-ethanediyl) alphatridecylomegahydroxy-, branched | 93-83-4<br>12125-02-9<br>64742-47-8<br>7647-14-5<br>12125-02-9<br>93-83-4<br>64742-47-8<br>12125-02-9<br>93-83-4<br>68551-12-2<br>7732-15-5<br>64742-47-8<br>9003-06 9<br>15827-30-8<br>69418-26-4<br>64742-47-8<br>12125-02-9<br>93-83-4<br>55566-30-8<br>397256-50-7<br>64742-47-8<br>Propriotary<br>69011-36-5 |         |
| Plexslick 957<br>NFRA-2000 (U.S. Well Services)<br>Plexald 655 NM<br>Plexslick 922<br>Folcide PSSOA  | Friction Reducer Anionic Friction Reducer Scale Inhibitor no data available Biocidal product                  | Oleic Acid Diethanolamide<br>Ammonium Chloride<br>Petroleum Distillate<br>Sodium Chloride<br>Ammonium Chloride<br>N,N-bis (2-hvdroxyethyl) oleamide<br>Petroleum Distillate<br>Ammonium Chloride<br>Oleic Acid Diethanolamide<br>Alcohols, C12-16, Exoxylated<br>Water<br>Hydrotreated light distillate (petroleum)<br>Propenoic acid, polymer with propenamide<br>Diethylenetriamine penta (methylene phosphonic acid)<br>Copolymer of 2-propenaminde<br>Distillates (petroleum), hydotreated light<br>Ammonium chloride (NH4)CI)<br>Oleic Acid Diethnolamide<br>Tetrakis (hydroxymethyl) phosphonium sulphate<br>Acrylic acid terpolymer containing carboxylate phosphonate and sulfonate<br>groups<br>Hydrotreated light petroleum distillate<br>Ethoxylated alcohol   | 93-83-4<br>12125-02-9<br>64742-47-8<br>7647-14-5<br>12125-02-9<br>93-83-4<br>64742-47-8<br>12125-02-9<br>93-83-4<br>68551-12-2<br>7732-15-5<br>64742-47-8<br>9003-06 9<br>15827:30-8<br>69418-26-4<br>64742-47-8<br>12125-02-9<br>93-83-4<br>55566-30-8<br>397256-50-7<br>64742-47-8<br>Proprietery               |         |

Attachment VI Frac Additives

#### NOTES

1. THIS PLAN IS FOR GRADING, STORMWATER SYSTEMS, AND EROSION AND SEDIMENT CONTROL PURPOSES ON Y

2. PROPERTY INFORMATION SHOWN HEREON IS FROM GIS DATA PROVIDED BY SOUTHWESTERN ENERGY PRODUCTION COMPANY AND HAS NOT BEEN FIELD VERIFIED.

3 THE CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS SET FOR OTHER PERTINENT INFORMATION. IT IS NOT THE ENGINEERS INTENT THAT ANY SINGLE PLAN SET FULLY OFFICTS ALL WORK ASSOCIATED WITH THIS PROJECT.

4. SOIL TYPE BOUNDARY, AND CHARACTERISTICS SHOWN HEREON WERE ACQUIRED FROM NECS WEB SOIL SURVEY

5. THE TOPOGRAPHIC SURVEY USED FOR THIS BASE MAPPING INSIDE THE LOD WAS PERFORMED BY JHA COMPANIES FROM JUNE 01, 2018 TO JUNE 04, 2018. TOPOGRAPHIC MAPPING OUTSIDE OF THE LOD IS FROM LIDAR DATA FROM WW GIS TECHNICAL CENTER.

6. NO TOPSOIL REMOVAL BETWEEN LIMIT OF CONSTRUCTION AND LIMIT OF DISTURBANCE, VEGETATIVE BUFFER TO REMAIN.

7. FILL WILL BE COMPACTED TO 95% OF STANDARD PROCTOR DENSITY (ASTM-698). FILL LIFT THICKNESS WILL BE NO GREATER THAN 12", NOTHING FROZEN OR TOO WET WILL BE PLACED IN FILL AREAS. PARTICLE SIZE OF THE FILL WILL BE NO GREATER THAN 6" AND FREE OF OBJECTIONABLE MATERIAL

Modification

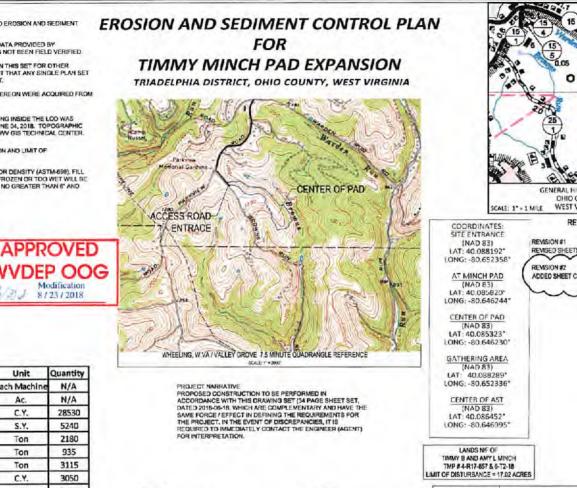
8/23/2018

#### CUT/FILL QUANTITIES

PAD CUT - 8,910 CY FEL . 13 890 CY TOTAL COMBINED - 22,800

AST -CUT - 5,710 CY FILL . 20 CY TOTAL COMBINED - 5,730 CY

| Item Description                   | Unit         | Quantity |
|------------------------------------|--------------|----------|
| Mobilization per machine           | Each Machine | N/A      |
| Clearing, Grubbing                 | Ac.          | N/A      |
| Earthwork                          | C.Y.         | 28530    |
| Geotextile                         | S.Y.         | 5240     |
| #1(3") Base Rock Delivered to Site | Ton          | 2180     |
| 467's Top Rock Delivered to Site   | Ton          | 935      |
| Spreading Stone                    | Ton          | 3115     |
| Toe Bench Material                 | C.Y.         | 3050     |
| Toe Key Drains                     | L.F.         | 3660     |
| Pad Perimeter Underdrain           | Each Outlet  | 7        |
| Seed & Straw Mulch                 | Ac.          | 3.9      |
| Straw Slope Matting                | S.Y.         | 6370     |
| 12" Filter Sock                    | L.F.         | N/A      |
| 18" Filter Sock                    | L.F.         | 531      |
| 24" Filter Sock                    | LF.          | 592      |
| 32" Filter Sock                    | L.F.         | N/A      |
| Super Silt Fence                   | LF.          | N/A      |



PROJECT CONTACTS OPERATOR: SOUTHWESTERN ENERGY, LLC 179 INNOVATION DRIVE JANE LEW, WV 26378 PHONE: (304) 884-1618 WWW.SWN.COM

#### PROJECT COORDINATOR SHAWN JACKSON SOUTHWESTERN ENERGY, LLC FIELD PLANNING SUPERVISOR - WV DIV.

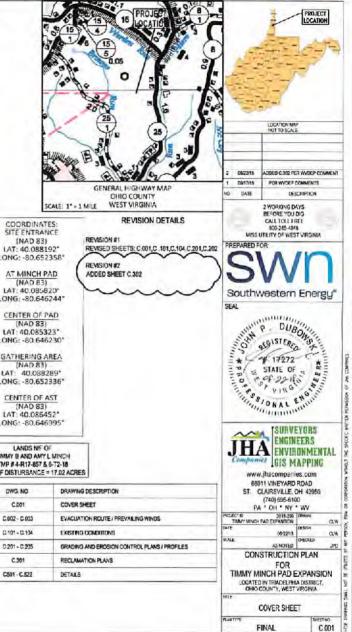
179 INNOVATION DRIVE JANE LEW, WV 26378 PHONE: (304) 884-1618 EMAIL SHAWN\_JACKSON@SWN.COM

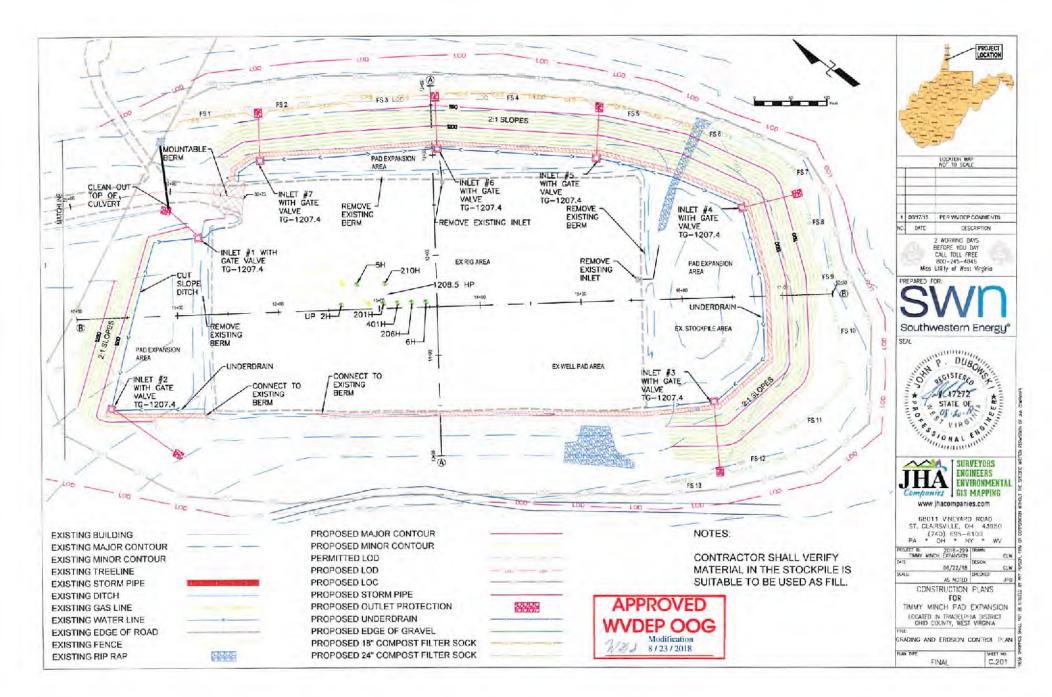
ENGINEER JHA COMPANIES 68011 VINEYARD ROAD ST. CLAIRSVILLE, OHIO 43950 PHONE- 17401 695-6100 FAX: (740) 449-2343

PROJECT MANAGER: OHN DUBOWSKI

TOPOGRAPHIC INFORMATION:

GROUND SURVEY DATED JUNE 4, 2018 DATUM: HORZ, NAD 83 WEST VIRGINA NORTH VERT, NAVE 8







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1. THIS PLAN IS FOR GRADING, STORMWATER SYSTEMS, AND EROSION AND BEDIMENT CONTROL PURPOSES ONLY.

2. PROPERTY INFORMATION SHOWN HEREON IS FROM GIS DATA PROVIDED BY SOUTHWESTERN ENERGY PRODUCTION COMPANY AND HAS NOT BEEN FIELD VERIFIED.

3. THE CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS SET FOR OTHER PERTMENT INFORMATION. IT IS NOT THE EXCINEEDS INTENT THAT ANY SINGLE PLAN SET FULLY DEPICTS ALL WORKASSOCIATED WITH THIS PROJECT.

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6. NO TOPSOL REMOVAL DETWEEN LIMIT OF CONSTRUCTION AND LIMIT OF NCE, VEGETATIVE BUFFER TO REA

7. FIL WILL BE COMPACTED TO 95% OF STANDARD PROCTOR DENSITY (ASTM-895), FILL LIFTTHICKNESS WILL BE NO GREATER THAN 12, NOTHING PROCEINGR TOO WET WILL BE PLACED IN FILL AREAS, PANTICLE BEZ OF THE FILL WILL BE NO GREATER THAN IF AND FREE OF OBJECTICHABLE MATERIAL

| CUTFEL CUMITIES  |              |         |
|--|--------------|---------|
| PND-<br>CUT - 8310 CY<br>FILL - 13,890 CY<br>TDTAL COMBINED - 22,891 |              |         |
| ASY<br>(UIT - 5,710 GY<br>FUL - 20 GY<br>7,014, COMBRED - 5,730 GY   |              |         |
| tem Description  | Unit         | Quantit |
| obilization per machine  | Each Machine | N/A     |
| Clearing, Grubbing   | Ac.          | N/A     |
| Earthwork  | C.Y.         | 28530   |
| Geotextile   | S.Y.         | 5240    |
| #1(3") Base Rock Delivered to Site                                   | Ton          | 2180    |
| 467's Top Rock Delivered to Site                                     | Ton          | 935     |
| Spreading Stone  | Ton          | 3115    |
| Toe Bench Material   | C.Y.         | 3050    |
| Toe Key Drains   | L.F.         | 3660    |
| Pad Perimeter Underdrain   | Each Outlet  | 7       |
| Seed & Straw Mulch   | Ac.          | 3.9     |
| Straw Slope Matting  | 5.Y.         | 6370    |
| 12" Filter Sock  | LF.          | N/A     |
| 18" Filter Sock  | L.F.         | 531     |
| 24" Filter Sock  | L.F.         | 592     |
| 32" Filter Sock  | LF.          | N/A     |
| Super Silt Fence   | LF.          | N/A     |



FOR INTERPRETATION.

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TOPOGRAPHIC INFORMATION: GROUND SURVEY DATED JUNE 4, 2018

VERT. NAVO ES

PROJECT MANAGER: IOHN CUBOWSKI

PROJECT CONTACTS OPERATOR: SOUTHWESTERN ENERGY, LLC 179 INNOVATION DRIVE JANELEW, WV 26378 PHONE (304) 884-1518 WWW.SWN.COM

#### PROJECT COORDINATOR:

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