

#### west virginia department of environmental protection

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

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

Monday, April 09, 2018 WELL WORK PERMIT Horizontal 6A / New Drill

CNX GAS COMPANY LLC POST OFFICE BOX 1248

JANE LEW, WV 263786506

Re: Permit approval for SHR 31 EHSM

47-095-02492-00-00

This well work permit is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to any additional specific conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas Inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0450.

James A. Martin

Chief

Operator's Well Number: SHR 31 EHSM ALLEN W. SECKMAN, ET AL.

U.S. WELL NUMBER: 47-095-02492-00-00

Horizontal 6A New Drill Date Issued: 4/9/2018

API Number: 95-02492

# PERMIT CONDITIONS

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

#### **CONDITIONS**

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

API Number: <u>95-0249</u>

# **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.

| API NO. 47-95        | 02492 |
|----------------------|-------|
| <b>OPERATOR WELL</b> |       |
| Well Pad Name:       | SHR31 |

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

| 1) Well Opera                    | tor: CNX G     | as Compar         | ny, LLC   | 494458046              | Tyler               | McElroy   | Shirley                  |
|----------------------------------|----------------|-------------------|-----------|------------------------|---------------------|---|--------------------------|
| _                                |                |                   |           | Operator ID            | County              | District  | Quadrangle               |
| 2) Operator's                    | Well Number    | :: SHR31EH        | HSM       | Well Pac               | Name: SHR3          | 1   |                          |
| 3) Farm Name                     | /Surface Ow    | ner: Seckm        | an        | Public Roa             | d Access: CR        | 58  |                          |
| 4) Elevation, o                  | urrent groun   | d: <u>1091'</u>   | E         | Elevation, proposed    | post-construction   | on: 1091'   |                          |
| 5) Well Type                     | (a) Gas        | X                 | _ Oil _   | Unde                   | erground Storag     | ge  |                          |
|                                  | Other          |                   |           | ·····                  |                     |   |                          |
|                                  | (b)If Gas      | Shallow           |           | C Deep                 |                     | <del>, , , , , , , , , , , , , , , , , , , </del> |                          |
|                                  |                | Horizontal        |           | <u> </u>               |                     |   |                          |
| 6) Existing Pa                   | d: Yes or No   |                   | Ye        | S                      |                     |   |                          |
| · •                              | •              |                   |           | cipated Thickness a    | •                   | ` '   |                          |
| Target form                      | ation is Marce | ellus Shale @     | 6683'-67  | '31' TVD, 48' thick, e | xpected formation   | n pressure  | ~4000 psi                |
| 8) Proposed T                    | otal Vertical  | Depth: <u>672</u> | 25' TVD 8 | at TD (dependent u     | upon formation      | dip)  |                          |
| 9) Formation a                   | nt Total Verti | cal Depth:        | Marcellu  | is Shale (will not pe  | enetrate Onone      | daga)   |                          |
| 10) Proposed                     | Fotal Measur   | ed Depth:         | 16,240'   | MD at TD               |                     |   |                          |
| 11) Proposed                     | Horizontal Le  | eg Length:        | 8050'     |                        |                     |   |                          |
| 12) Approxim                     | ate Fresh Wa   | ter Strata De     | epths:    | 125', 580'             |                     |   |                          |
| 13) Method to                    | Determine F    | resh Water I      | Depths:   | Depth of bit when wat  | er shows in flowlir | ne or depth w                                     | when misting is required |
| 14) Approxim                     | ate Saltwater  | Depths: 22        | 271'      |                        |                     |   |                          |
| 15) Approxim                     | ate Coal Sear  | n Depths: N       | lo know   | n coal seams           |                     |   |                          |
| 16) Approxim                     | ate Depth to   | Possible Voi      | d (coal n | nine, karst, other):   | None anticipat      | ed  |                          |
| 17) Does Prop<br>directly overly |                |                   |           |                        | No                  |   | X                        |
| (a) If Yes, pr                   | ovide Mine I   | nfo: Name         | »:<br>    |                        |                     |   |                          |
|                                  |                | Depth             | ı:        |                        |                     |   |                          |
|                                  |                | Seam              | :         |                        |                     |   |                          |
|                                  |                | Owne              | er:       |                        |                     |   |                          |

API NO. 47-95 - 02492

OPERATOR WELL NO. SHR31EHSM
Well Pad Name: SHR31

#### 18)

### **CASING AND TUBING PROGRAM**

| TYPE         | Size<br>(in) | New<br>or<br>Used | Grade | Weight per ft.<br>(lb/ft) | FOOTAGE: For<br>Drilling (ft) | INTERVALS:<br>Left in Well<br>(ft) | CEMENT:<br>Fill-up<br>(Cu. Ft.)/CTS |
|--------------|--------------|-------------------|-------|---------------------------|-------------------------------|------------------------------------|-------------------------------------|
| Conductor    | 20           | New               | L/S   | <94.0                     | 129                           | 100                                | 96 / CTS                            |
| Fresh Water  | 13.375       | New               | J-55  | 54.5                      | 709                           | 680                                | 472 / CTS                           |
| Coal         | N/A          |                   |       |                           |                               |                                    |                                     |
| Intermediate | 9.625        | New               | J-55  | 36.0                      | 2604                          | 2575                               | 840 / CTS                           |
| Production   | 5.5          | New               | P-110 | 20.0                      | 16269                         | 16240                              | 3130 / TOC @ 2075'                  |
| Tubing       | 2.375        | New               | J-55  | 4.7                       | Above assumes RF=29'          | TBD                                | N/A                                 |
| Liners       | N/A          |                   |       |                           |                               |                                    |                                     |

# DMH 11/21/17

| ТҮРЕ         | Size (in) | Wellbore<br>Diameter (in) | <u>Wall</u><br><u>Thickness</u><br>(in) | Burst Pressure<br>(psi) | Anticipated  Max. Internal  Pressure (psi) | Cement<br>Type | Cement Yield (cu. ft./k) |
|--------------|-----------|---------------------------|---|-------------------------|--|----------------|--------------------------|
| Conductor    | 20        | 24                        | 0.375                                   | N/A                     | N/A  | Type 1         | 1.18                     |
| Fresh Water  | 13.375    | 17.5                      | 0.380                                   | 2730                    | <500                                       | Class A        | 1.19                     |
| Coal         | N/A       |                           |   |                         |  |                |                          |
| Intermediate | 9.625     | 12.25                     | 0.352                                   | 3520                    | <2815                                      | Class A        | 1.19                     |
| Production   | 5.5       | 8.75 x 8.5                | 0.361                                   | 12360                   | ~10000 during frac                         | Class H        | 1.07                     |
| Tubing       | 2.375     | N/A                       | 0.190                                   | 7700                    | N/A  | N/A            | N/A                      |
| Liners       | N/A       |                           |   |                         |  |                |                          |

# **PACKERS**

| Kind:       | N/A |  |                               |
|-------------|-----|--|-------------------------------|
| Sizes:      |     |  | RECEIVED<br>Office of Oil and |
| Depths Set: |     |  | NOV 28 2017                   |

WV Department of Environmental Protection

| WW-6B   |
|---------|
| (10/14) |

API NO. 47-95. 02492

OPERATOR WELL NO. SHR31EHSM

Well Pad Name: SHR31

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

Utilize conductor rig to set 20" conductor into solid rock and cement back to surface. MIRU drilling rig. Air drill 17-1/2" hole. Run and cement 13-3/8" fresh water casing. Note that there are no known coal seams in this area. Air drill 12-1/4" hole. Run and cement 9-5/8" intermediate casing. Air drill 8-3/4" production hole to curve KOP (this section is typically directionally drilled with a slant/tangent profile for anti-collision and for lateral spacing). Displace hole with 12.0-12.5 ppg SOBM. Drill 8-1/2" curve from KOP to landing point. Continue drilling 8-1/2" lateral to TD (geosteer this section to remain in Marcellus target window). Perform clean-up cycle to condition well. Run and cement 5-1/2" production casing. Suspend well and skid to next well or RDMO drilling rig.

DMH 11/21/17

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

Run CBL to ~60 degrees in the curve and back to surface to determine production casing TOC. Test production casing and toe prep well. MIRU stimulation/hydraulic fracturing equipment. Fracture well by pumping required number of stages utilizing plug-and-perf method. Max anticipated treating pressure is <10,000 psi and max anticipated treating pump rate is 80-90 bpm. Number of stages and stage spacing to be finalized after drilling. After last stimulation stage, drill out frac plugs and clean-out well to PBTD. Flow back and clean-up well. Tie well into production. Run tubing when required.

- 21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 41.57
- 22) Area to be disturbed for well pad only, less access road (acres): 7.42
- 23) Describe centralizer placement for each casing string:

Fresh water string: centralize shoe joint and every 3rd joint to surface - utilize bow spring centralizers. Intermediate string: centralize shoe joint and every 3rd joint to surface - utilize bow spring centralizers. Production string: centralize every joint from shoe to KOP and then every 3rd joint from KOP to TOC - utilize single piece/rigid bow centralizers. Actual centralizer placement may be changed based on hole conditions.

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

Fresh water string: Class A cement with 1%-3% CaCl2 and 1/4 pps cello-flake/LCM. Intermediate string: Class A cement with 0%-2% CaCl2 and 1/4 pps cello-flake/LCM. Production string: Class H cement or Class H:Poz blend with dry blend and/or liquid additives including retarder, suspension agent, gas block, defoamer, fluid loss control, extender, dispersant, anti-settling agent. Actual cement blends may vary slightly depending upon cementing service company utilized.

25) Proposed borehole conditioning procedures:

Air sections are typically vertical holes - will ensure the hole is clean at section TD prior to TOOH to run casing (may require mist and/or soap to clean the hole). For the production hole - once at TD, circulate at max flowrate with max rotation until the shakers clean-up (typically requires multiple bottometry). For the production casing - once on bottom with casing, circulate a minimum of one hele wollding prior to pumping cement.

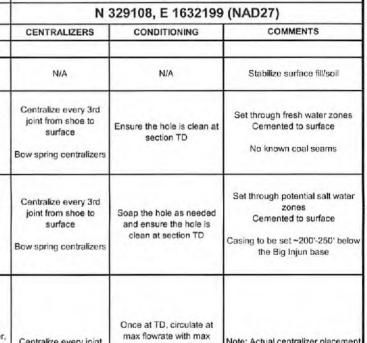
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\*Note: Attach additional sheets as needed.

#### **SHR31 Cement Additives**

- Fresh water string: Class A cement with 1%-3% CaCl2 and 1/4 pps cello-flake/LCM.
- Intermediate string: Class A cement with 0%-2% CaCl2 and 1/4 pps cello-flake/LCM.
- Production string: Class H cement or Class H:Poz blend with dry blend and/or liquid additives including retarder, suspension agent, gas block, defoamer, fluid loss control, extender, dispersant, anti-settling agent.
- Actual cement blends may vary slightly depending upon cementing service company utilized.







## DRILLING WELL PLAN SHR31EHSM (Marcellus HZ) Marcellus Shale Horizontal Tyler County WV

|                  |                         |                           |                           |                     |  |   |  | Tyler County, WV                        |   |   |   |  |
|------------------|-------------------------|---------------------------|---------------------------|---------------------|--|---|--|---|---|---|---|--|
|                  |                         |                           |                           |                     | SI                                     | IR31EH  | SM SHL   | N                                       | 337903, E 1626634                                       | (NAD27)   |   |  |
| Ground Elevation | 1                       | 091' GL E                 | levation                  |                     | S                                      | HR31EH  | ISM LP   | N 336805, E 1629596 (NAD27)             |   |   |   |  |
| Azimuth          |                         | 161                       | 0                         |                     | SI                                     | IR31EH  | SM BHL   | N 329108, E 1632199 (NAD27)             |   |   |   |  |
| WELLBORE DIAGRAM | HOLE                    | CASING                    | GEOLOGY                   | MD                  | TVD                                    | MUD   | CEMENT   | CENTRALIZERS                            | CONDITIONING  | COMMENTS  |   |  |
|                  | 244                     | 2001.00                   |                           |                     |  | AIR   | 7.0.6  | N/A                                     | N/A   | Chalding and an Ollen II                                |   |  |
|                  | 24"                     | 20" L/S                   | Conductor                 | 100                 | 100                                    | AIR   | To Surface   | N/A                                     | N/A   | Stabilize surface fill/soil                             |   |  |
|                  |                         |                           | Shallowest Fresh Water    |                     | 125                                    | AUD /   | 15.6 ppg Class A<br>+ 1% to 3% CaCl2                     | + 1% to 3% CaCl2                        | + 1% to 3% CaCl2 Cen                                    | Centralize every 3rd joint from shoe to                 | For the balance of                        | Set through fresh water zones<br>Cemented to surface |
|                  | 17-1/2"                 | 13-3/8" 54.5#<br>J-55 BTC | Deepest Fresh Water       |                     | 580                                    | AIR /<br>FW Mist                                  | + 1/4 pps Flake<br>20% OH Excess<br>Yield = 1.19         | surface  Bow spring centralizers        | Ensure the hole is clean at section TD                  | No known coal seams                                     |   |  |
|                  |                         |                           | Fresh Water Casing        | 730                 | 730                                    |   | TOC @ surface  |   |   |   |   |  |
|                  |                         |                           | No known coal zones       |                     | N/A                                    |   |  |   |   |   |   |  |
|                  |                         |                           |                           | Big Lime            |  | 2200  |  | 15.6 ppg Class A<br>+ 0% to 2% CaCl2    | Centralize every 3rd                                    |   | Set through potential salt water<br>zones |  |
|                  | 12-1/4"                 | 9-5/8" 36.0#              |                           | + 1/4 pps Flake     | joint from shoe to<br>surface          | Soap the hole as needed<br>and ensure the hole is | Cemented to surface                                      |   |   |   |   |  |
|                  | 12-11-4                 | J-55 LTC                  | Price                     |                     | 2325                                   | Soap  | 20% OH Excess<br>Yield = 1.19                            | Bow spring centralizers                 | clean at section TD                                     | Casing to be set ~200'-250' below<br>the Big Injun base |   |  |
|                  |                         |                           | Weir                      |                     | 2478                                   |   | TOC @ surface  |   |   |   |   |  |
|                  |                         |                           | Intermediate Casing       | 2575                | 2575                                   |   |  |   |   |   |   |  |
|                  |                         |                           | Berea                     |                     | 2669                                   |   |  |   |   |   |   |  |
|                  |                         |                           | Gordon                    |                     | 3095                                   |   |  |   |   |   |   |  |
|                  | 8-3/4"                  |                           | Warren                    |                     | 3588                                   | AIR   | 15.2 ppg Class H<br>50:50 Class H:Poz                    |   | Once at TD, circulate at                                |   |   |  |
|                  | Tangent                 |                           | Lower Huron               |                     | 3986                                   | 7,011   | with additives (retarder,                                | Centralize every joint                  | max flowrate with max                                   | Note: Actual centralizer placemen                       |   |  |
|                  |                         |                           | Benson                    |                     | 5156                                   |   | suspension agent, gas<br>block, defoamer, fluid          | from shoe to KOP -                      | rotation until shakers clean-<br>up (typically requires | may be changed due to hole                              |   |  |
|                  |                         | 5-1/2" 20.0#              | Alexander                 |                     | 5400                                   |   | loss, extender, etc.)                                    | then every 3rd joint<br>from KOP to TOC | multiple bottoms-up)                                    | conditions  |   |  |
|                  | P-110 VAR Cashaqua 6399 | 10% OH Excess             |                           | Once on bottom with | Note: Actual cement blends may         |   |  |   |   |   |   |  |
|                  |                         |                           | Burkett 6614 Yield = 1.07 |                     | Single-piece/rigid bow<br>centralizers | casing, circulate a minimum                       | vary slightly depending upon<br>service company utilized |   |   |   |   |  |
|                  | 8-1/2" Curve            |                           | Tully                     |                     | 6646                                   | 12.0-12.5   | TOC @ >= 500' above                                      |   | of one hole volume prior to<br>pumping cement           |   |   |  |
|                  | & Lateral               |                           | Hamilton                  |                     | 6667                                   | ppg SOBM  | 9-5/8" shoe  |   | Parity of Samuel  |   |   |  |
| Officer          |                         |                           | Marcellus                 |                     | 6683                                   |   |  |   |   |   |   |  |
| Z Ton            |                         |                           | Production Casing         | 16240               | 6725                                   |   |  |   |   |   |   |  |

LP @ +/- 6725' TVD

8-3/4" x 8-1/2" Hole - Cemented Long String 5-1/2" 20.0# P-110 VAR

+/- 8125' Lateral

TD @ +/- 6725' TVD



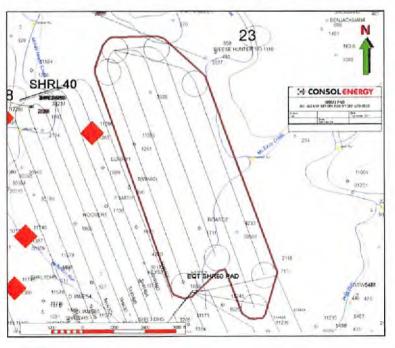
#### SHR31 Pad Frac - SOG Review

In accordance with WVDEP 35CSR8 Section 5.11, all known shallow oil and gas (SOG) wells have been identified within a 500' radius of the SHR31 pad. Any SOG well that falls within the Area of Review (AOR) has been reviewed and is provided in a list that includes API, Operator, Well Name, Well Number, Current Status, Total Depth, Producing Formation at Total Depth, and Permit Date. See following pages, including (Figures 4 and 5).

The Marcellus Shale of the Shirley area is found at an approximate True Vertical Depth (TVD) of 6500'. In the Shirley area, there are very few producing formations between the Big Injun and the Benson Sand. Most wells are either approximately 2000' or 5000' deep. Although there are a significant number of SOG Communication events in the Shirley area (Figure 1), it is highly unlikely that communication will occur with any wells producing from formations shallower than the Benson Sand, found at an approximate TVD of 5000'. This is based on previous experience and study of SOG Communication with Marcellus fracs throughout Ritchie and Doddridge counties.

The current hypothesis for SOG Communication is that Marcellus frac fluids and pressure intersect and migrate up a nearby fault that acts as a conduit for upward migration and intersection with high permeability reservoirs of the Alexander and Benson. Both of these reservoirs are primarily depleted, allowing an easier pressure migration throughout these formations. Geomechanical data is collected from dipole sonic logs. CONSOL's nearest sonic data is from the SHRL1C well (Figure 2), immediately west of the SHRL3 pad. Frac modeling (Figure 3) of the Marcellus in the area does not show significant upward frac growth. In fact, typical frac height would need to be more than double to reach the Alexander, approximately 1000' above the Marcellus Shale.

Figure 1. SOG Communication events in the SHR31 area are represented by red diamonds below. These events were conjunction with the SHRL1, SHRL3, and SHRL40 fracs (pads immediately to the west, already completed).



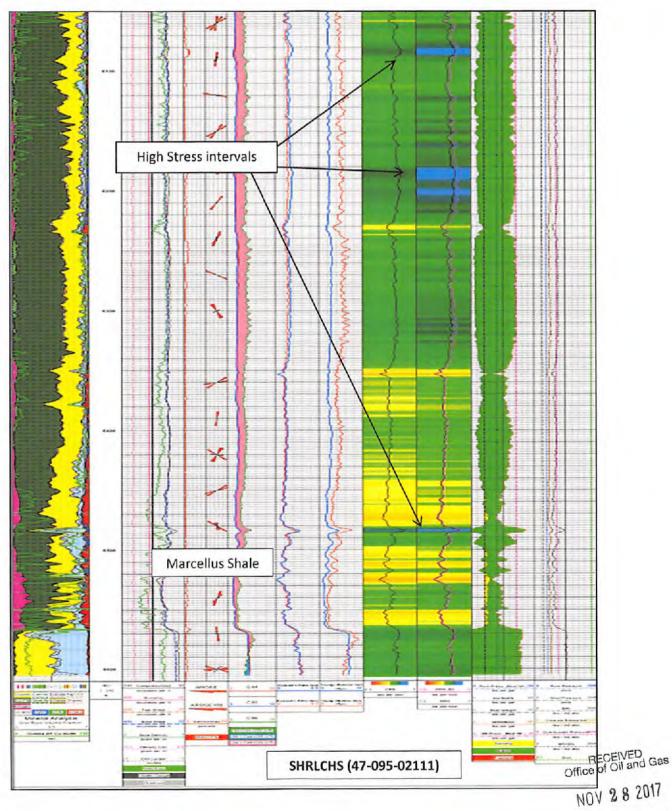
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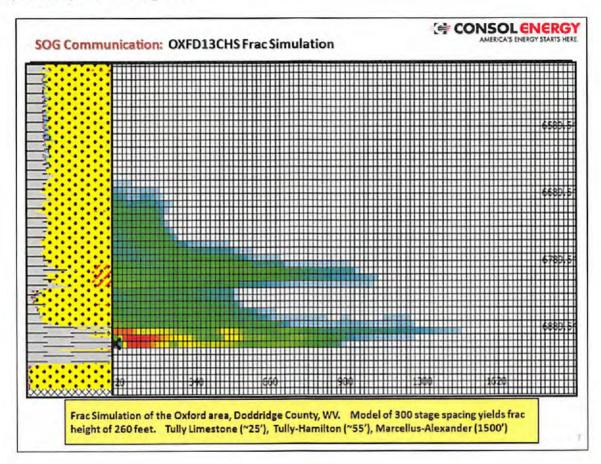
Figure 2. Stratigraphic intervals of high stress should serve as adequate confining layers, or frac barriers, for a Marcellus frac, seen below in the SHRL1C Stress Profile log.



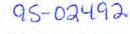
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Figure 3. Stratigraphic intervals of high stress should serve as adequate frac barriers for a Marcellus frac. The frac modeling example below is from the Oxford area of western Doddridge County, where the Marcellus and adjacent shallower shales are lithologically similar to Pennsboro. Frac modeling only yields frac height of approximately 300' and falls far short of the 1000' required to communicate with the Alexander or Benson formations. Therefore, faulting is the primary suspect for upward frac migration.









o BENJACKMAN4 698 1491 WEESE HUNTER NO 1110 SHRL40 CONSOLENERGY SHEEL PAD SO: AREA OF REVIEW FOR WYDER AND CRED 11595 1261 cui 11001 30384 01251 30315 GSW5480 EQT SHREE PAD 1174HRL1DHS \$ ° 1306 11576 ¢ 5457 11235 433

Figure 4. All wells within 500' buffer around the SHR31 pad have been reviewed and listed below.

Figure 5. All wells within 500' buffer around the SHR31 pad have been reviewed and listed below.

|   | PERMIT DATE | FROM<br>LATERAL | STATUS COMMENTS                | TD   | STATUS        | LONG      | LAT      | WELL#                | WELL NAME    | OPERATOR                 | API       |
|---|-------------|-----------------|--------------------------------|------|---------------|-----------|----------|----------------------|--------------|--------------------------|-----------|
|   | 4/27/1971   | 460"            | ABANDONED BIG INJUN            | 2731 | ABANDONED     | -80.80017 | 39.39715 | 2118                 | UNDERWOOD W  | Abandoned                | 709500713 |
| Ī | 10/6/1988   | 30"             | PRODUCING BENSON,<br>RILEY     | 5292 | GAS           | 80.81914  | 39.4102  | 11595                | SECKMAN L    | CONSOL                   | 709501261 |
| Ξ | 11/3/1996   | 10"             | PRODUCING BIG INJUN            | 2230 | GAS           | -80.81254 | 39.39563 | KEYS2                | KEYS MARY    | ALLIANCE PETROLEUM CORP  | 09501668  |
|   | 6/4/2001    | 240"            | PRODUCING GORDON,<br>BIG INJUN | 2956 | GAS           | -80.81027 | 39,40126 | BOARD2               | BOARD MARVIN | ALLIANCE PETROLEUM CORP  | 709501711 |
| Ī | 4/25/2011   | 245*            | CANCELLED<br>MARCELLUSPERMIT   |      | CANBH         | -80.81692 | 39.41564 | WEESE HUNTER NO 1111 | WEESE PAD    | Triad Hunter, LLC.       | 709502028 |
|   | 4/25/2011   | 356*            | PRODUCING MARCELLUS  LATERAL   | 5407 | GAS           |           |          | WEESE HUNTER NO 1110 | WEESE PAD    | Triad Hunter, LLC.       | 709502027 |
|   | 8/30/1916   | 330"            | PLUGGED GORDON<br>2/18/1944    | 2620 | ABDGAS        | -80.80517 | 39,40085 | 4233                 | D N Furbee   | Hope Natural Gas Company | 709530361 |
| Ī | 10/17/2016  | 510"            | PERMITTED MARCELLUS<br>LATERAL | 1 1  | PERMIT ISSUED |           |          | 515434               | SHR60 PAD    | EQT PRODUCTION CO        | 709502365 |
|   | 3/31/2016   | 465*            | PERMITTED MARCELLUS<br>LATERAL |      | PERMIT ISSUED |           |          | 514466               | SHR60 PAD    | EQT PRODUCTION CO        | 709502342 |
|   | 3/31/2016   | 390"            | PERMITTED MARCELLUS<br>LATERAL |      | PERMIT ISSUED |           |          | 514465               | SHR60 PAD    | EQT PRODUCTION CO        | 709502341 |
|   | 7/23/2015   | 380"            | PERMITTED MARCELLUS<br>LATERAL |      | PERMIT ISSUED |           |          | 514461               | SHR60 PAD    | FOT PRODUCTION CO        | 709502764 |
|   | 7/23/2015   | 380'            | PERMITTED MARCELLUS<br>LATERAL |      | PERMIT ISSUED |           |          | 514460               | SHR60 PAD    | EQT PRODUCTION CO        | 709502257 |
|   | 7/23/2015   | 3801            | PERMITTED MARCELLUS<br>LATERAL |      | PERMIT ISSUED |           |          | 514464               | SHR60 PAD    | EQT PRODUCTION CO        | 709502256 |
|   | 3/24/2015   | 380*            | PERMITTED MARCELLUS<br>LATERAL |      | PERMIT ISSUED |           |          | 514463               | SHR60 PAD    | EQT PRODUCTION CO        | 709502220 |
|   | 7/23/2015   | 380'            | PERMITTED MARCELLUS            |      | PERMIT ISSUED |           |          | 514462               | SHR60 PAD    | EQT PRODUCTION CO        | 709502255 |

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SHR31 Pad Frac SOG Review / CRSD Review Tuesday, November 7, 2017

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# SHR31 PAD GEOLOGICAL PROGNOSIS

| Top Depth from<br>Ground<br>Elevation (TVD) |   | Possible Show      | Coal Seam<br>Thickness<br>(FEET) | Minable<br>Coal<br>Seam | General Rock Type | Drilling<br>Problems   | Type of<br>Formation<br>Evaluation                      |
|---|---|--------------------|----------------------------------|-------------------------|-------------------|--|---|
| 0   | Soil & Colluvium                              |                    |                                  |                         | Soil & Rock       |  |   |
| 470, 580                                    | Deepest Fresh Water                           |                    |                                  |                         |                   |  |   |
|   | No known coals this far west                  |                    | none                             | no                      |                   |  |   |
|   | Sand and Red Rock                             |                    |                                  |                         | Sand & Shale      |  |   |
| 2200  | Big Lime (no red rock deeper than this depth) |                    |                                  |                         | Limestone         | luce oil   |   |
| 2271  | Big Injun Top                                 | GAS /<br>SALTWATER |                                  |                         | Sand              | The Big Injun and Gordon Sands may produce oil and/or water. |   |
| 2325  | Price Formation                               |                    |                                  |                         | Sandstone         | nds r  | - P   |
| 2478  | Weir Sand                                     |                    |                                  |                         | Sandstone         | Gordon Sand<br>and/or water.                                 | No pilot hole logs will be ran on one well on this pad. |
| 2669  | Berea   |                    |                                  |                         | Sandstone         | Gord<br>and/o  | on t  |
| 2677  | Devonian Shale Top                            |                    |                                  |                         | Grey Shale        | and  | well  |
| 3095  | Gordon  |                    |                                  |                         | Sandstone         | In Ju  | one   |
| 3588  | Warren Sand                                   |                    |                                  |                         | Sandstone         | e Bi   | 6   |
| 3986  | Lower Huron                                   | GAS                |                                  |                         | Grey Shale        | É  | e la  |
| 5156  | Benson  |                    |                                  |                         | Siltstone         |  |   |
| 5400  | Alexander                                     | GAS                |                                  |                         | Siltstone         | are  | 085   |
| 6399  | Cashaqua Shale                                | CONF               | INING LAYER                      |                         | Grey Shale        | a. T   | ole I   |
| 6505  | Middlesex                                     |                    |                                  |                         | Grey Shale        | roble  | lot h   |
| 6546  | West River                                    |                    |                                  |                         | Grey Shale        | lling probler<br>anticipated.                                | 9   |
| 6614  | Burket Shale                                  | GAS                |                                  |                         | Black Shale       | No drilling problems are<br>anticipated.                     |   |
| 6646  | Tully Limestone                               | CON                | INING LAYER                      |                         | Limestone         | 8  |   |
| 6667  | Hamilton                                      |                    |                                  |                         | Grey Shale        |  |   |
| 6683  | Upper Marcellus                               | GAS                |                                  |                         | Black Shale       | vi   |   |
| 6699  | Middle Marcellus                              | GAS                |                                  |                         | Black Shale       | llus i<br>to be<br>ured                                      |   |
| 6713  | Cherry Valley                                 | GAS                |                                  |                         | Limestone         | The Marcellus is<br>expected to be<br>overpressured          |   |
| 6720  | Lower Marcellus                               | GAS                |                                  |                         | Black Shale       | he M<br>xpec   |   |
| 6731  | Onondaga Limestone                            |                    |                                  |                         | Limestone         | F 0 0  |   |

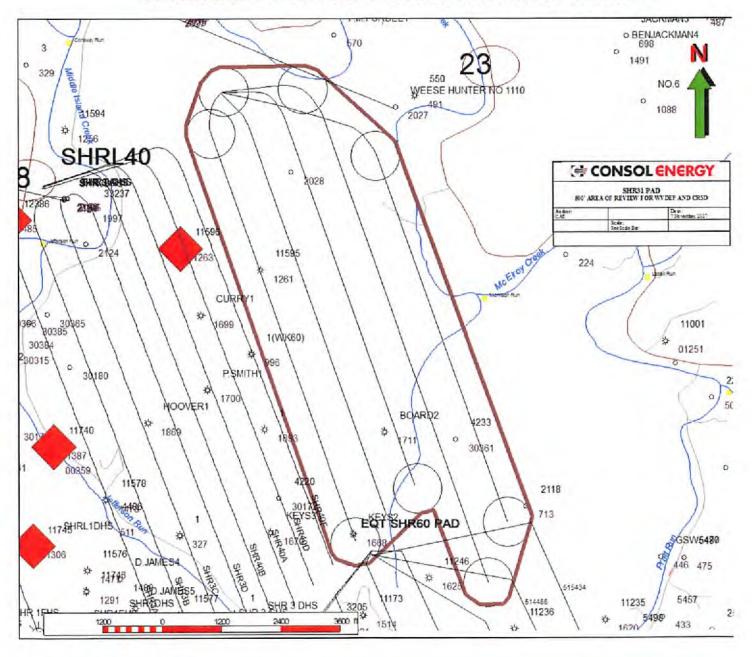
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# SHRL AREA WITH SOG COMMUNICATION WELLS



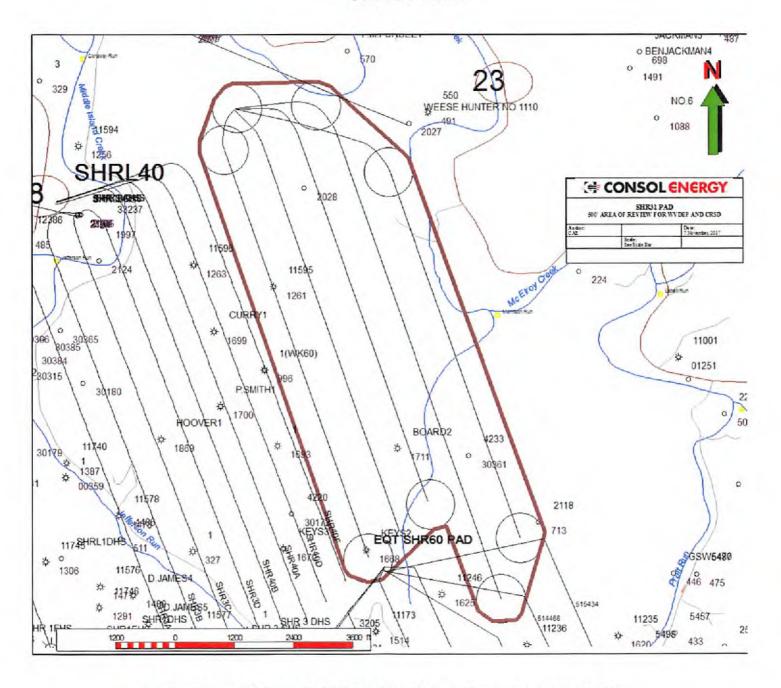
The SHR31 Pad to be frac'd (in maroon) is in an area of pervasive communication.

Many Shallow O&G wells are being effected by gas migration from the Marcellus pad fracs, charging the Benson reservoir, which is the primary producing reservoir of the SOG wells.

Pressure migration with the vertical Shallow Oil and Gas wells above the pads is believed to sell and Gas due to faulting in the area. Frac modeling shows that it is hypothetically impossible to frac over 1000' upwards to the Alexander and Benson formations.



### SHR31 PAD



All wells within a 500' buffer have been reviewed.

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# SHR31 WELL REVIEW WITHIN 500' AREA OF REVIEW

| API        | OPERATOR                 | WELL NAME    | WELL#                | LAT      | LONG      | STATUS        | TD   | STATUS COMMENTS                | DISTANCE<br>FROM<br>LATERAL | PERMIT DATE |
|------------|--------------------------|--------------|----------------------|----------|-----------|---------------|------|--------------------------------|-----------------------------|-------------|
| 4709500713 | Abandoned                | UNDERWOOD W  | 2118                 | 39.39715 | -80.80017 | ABANDONED     | 2731 | ABANDONED BIG INJUN            | 460'                        | 4/27/1971   |
| 4709501261 | CONSOL                   | SECKMAN L    | 11595                | 39.4102  | -80.81914 | GAS           | 5292 | PRODUCING BENSON,<br>RILEY     | 30'                         | 10/6/1988   |
| 4709501668 | ALLIANCE PETROLEUM CORP  | KEYS MARY    | KEYS2                | 39.39563 | -80.81254 | GAS           | 2230 | PRODUCING BIG INJUN            | 10'                         | 11/3/1996   |
| 4709501711 | ALLIANCE PETROLEUM CORP  | BOARD MARVIN | BOARD2               | 39.40126 | -80.81027 | GAS           | 2956 | PRODUCING GORDON,<br>BIG INJUN | 240'                        | 5/4/2001    |
| 4709502028 | Triad Hunter, LLC.       | WEESE PAD    | WEESE HUNTER NO 1111 | 39.41564 | -80.81692 | CANBH         |      | CANCELLED<br>MARCELLUSPERMIT   | 245'                        | 4/25/2011   |
| 4709502027 | Triad Hunter, LLC.       | WEESE PAD    | WEESE HUNTER NO 1110 |          |           | GAS           | 5407 | PRODUCING MARCELLUS  LATERAL   | 356'                        | 4/25/2011   |
| 4709530361 | Hope Natural Gas Company | D N Furbee   | 4233                 | 39.40085 | -80.80517 | ABOGAS        | 2620 | PLUGGED GORDON<br>2/18/1944    | 330'                        | 8/30/1916   |
| 4709502365 | EQT PRODUCTION CO        | SHR60 PAD    | 515434               |          |           | PERMIT ISSUED |      | PERMITTED MARCELLUS<br>LATERAL | 510'                        | 10/17/201   |
| 4709502342 | EQT PRODUCTION CO        | 5HR60 PAD    | 514466               |          |           | PERMIT ISSUED |      | PERMITTED MARCELLUS  LATERAL   | 465'                        | 3/31/2018   |
| 4709502341 | EQT PRODUCTION CO        | 5HR60 PAD    | 514465               |          |           | PERMIT ISSUED |      | PERMITTED MARCELLUS  LATERAL   | 380'                        | 3/31/2016   |
| 4709502254 | EQT PRODUCTION CO        | SHR60 PAD    | 514461               |          |           | PERMIT ISSUED |      | PERMITTED MARCELLUS  LATERAL   | 380'                        | 7/23/2015   |
| 4709502257 | EQT PRODUCTION CO        | SHR60 PAD    | 514460               |          |           | PERMIT ISSUED |      | PERMITTED MARCELLUS<br>LATERAL | 380'                        | 7/23/2015   |
| 4709502256 | EQT PRODUCTION CO        | SHR60 PAD    | 514464               |          |           | PERMIT ISSUED |      | PERMITTED MARCELLUS<br>LATERAL | 380'                        | 7/23/2015   |
| 4709502220 | EQT PRODUCTION CO        | SHR60 PAD    | 514463               |          |           | PERMIT ISSUED |      | PERMITTED MARCELLUS<br>LATERAL | 380'                        | 3/24/2015   |
| 4709502255 | EQT PRODUCTION CO        | SHR60 PAD    | 514462               |          |           | PERMIT ISSUED |      | PERMITTED MARCELLUS<br>LATERAL | 380'                        | 7/23/2015   |

CONSOL wells to monitor in pink.

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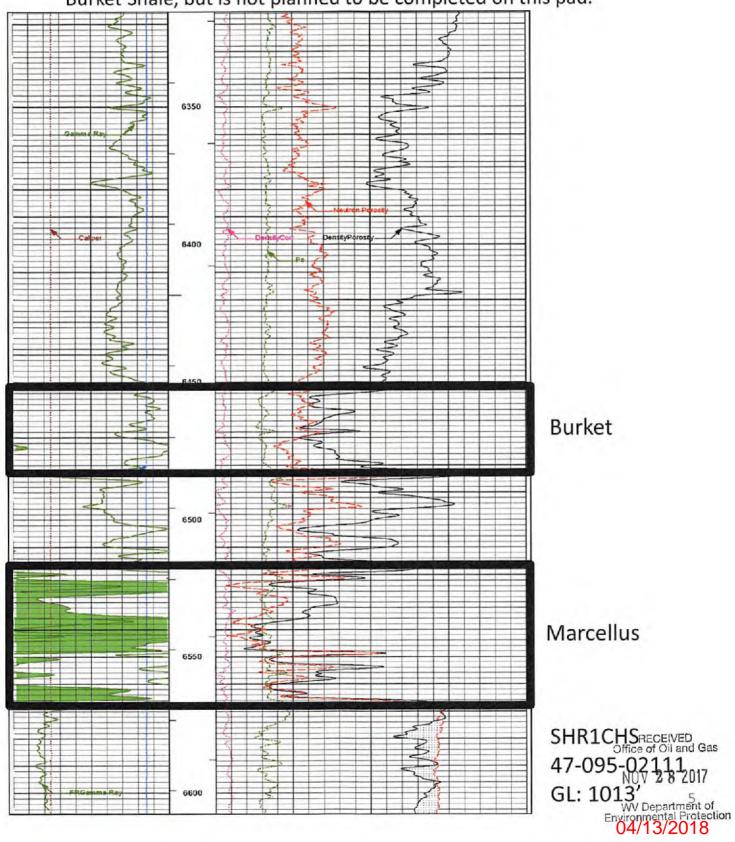
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# SHRL Area Type Log (SHRL1C)



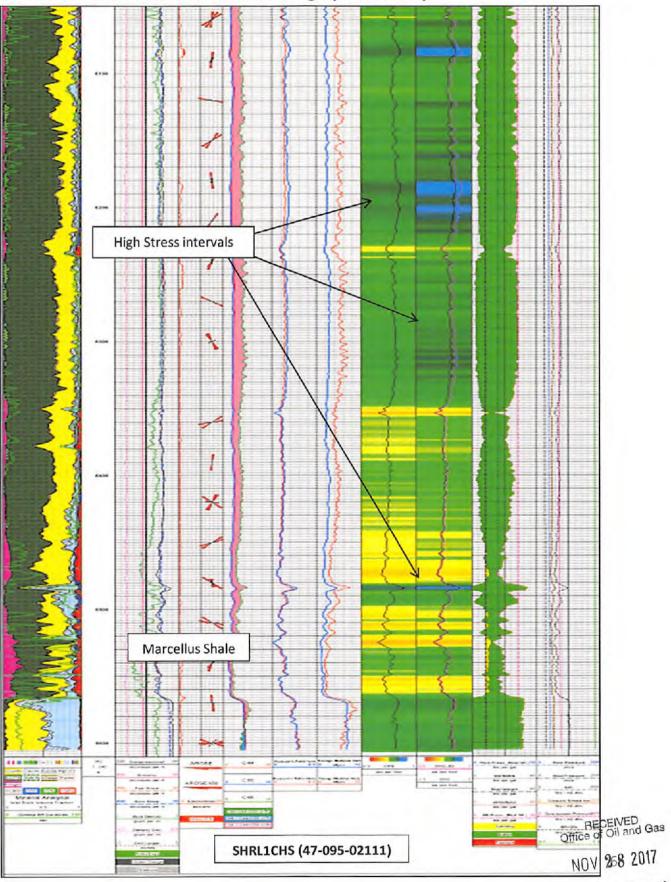
- The Tully Limestone in conjunction with the Hamilton Shale is the confining layer for the Marcellus Shale frac.
- Also, the Rhinestreet and Cashaqua provide confinement for the Burket Shale, but is not planned to be completed on this pad.





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# SHRL Area Stress Profile Log (SHRL1C)



En047/1637/20918

API Number 47 - 95 - 02492 Operator's Well No. shr31HSM

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

| FLUIDS/ CUTTINGS DISPOSAL & RE   | CLAMATION PLAN   |
|--|--|
| Operator Name CNX Gas Company LLC  | OP Code _494458046   |
| Watershed (HUC 10) McElroy Creek Quadra  | ngle Shirley   |
| Do you anticipate using more than 5,000 bbls of water to complete the proposition of the used? Yes No V  If so, please describe anticipated pit waste: Closed Loop- No utility   |  |
| Will a synthetic liner be used in the pit? Yes No  |  |
|  | If so, what ml.?   |
| Proposed Disposal Method For Treated Pit Wastes:   | DMH 11/21/17   |
| Land Application Underground Injection (UIC Permit Number_se   |  |
| Reuse (at API Number at next anticipated well  |  |
| Off Site Disposal (Supply form WW-9 for dispos   | al location)   |
| Will closed loop system be used? If so, describe:yes   |  |
| Drilling medium anticipated for this well (vertical and horizontal)? Air, fres   | hwater, oil based, etc. Animater based must brough intermediate suring then SORM   |
| -If oil based, what type? Synthetic, petroleum, etc. Synthetic   |  |
| Additives to be used in drilling medium? Please see attached sheet   |  |
| Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc   |  |
| -If left in pit and plan to solidify what medium will be used? (ceme   |  |
| -Landfill or offsite name/permit number? please see attached sheet   | m, imo, sevidoti   |
|  |  |
| Permittee shall provide written notice to the Office of Oil and Gas of any loa West Virginia solid waste facility. The notice shall be provided within 24 ho where it was properly disposed.   | d of drill cuttings or associated waste rejected at any<br>urs of rejection and the permittee shall also disclose  |
| I certify that I understand and agree to the terms and conditions of on August 1, 2005, by the Office of Oil and Gas of the West Virginia Depart provisions of the permit are enforceable by law. Violations of any term or law or regulation can lead to enforcement action.  I certify under penalty of law that I have personally examined a application form and all attachments thereto and that, based on my inquipolationing the information, I believe that the information is true, accurate penalties for submitting false information, including the possibility of fine or | ment of Environmental Protection. I understand that the condition of the general permit and/or other applicable and am familiar with the information submitted on this uity of those individuals immediately responsible for and complete. I am aware that there are SECOTIONED. |
| Company Official Signature   | NOV 2 8 2017   |
| Company Official (Typed Name) Raymond Hoon   | WV Department of   |
| Company Official Title Permitting Supervisor   | Environmental Protection   |
| Subscribed and sworn before me this 8 day of November  My commission expires 111 27/2021   | Notary Public  JONATHAN D. JONES Notary Public Official Seal State of West Virginia My Comm. Expires Nov 27, 2021 One Dominion Drive Jane Lew WV 26378   |

| Operator's | Well No | SHR31HSM |
|------------|---------|----------|
|------------|---------|----------|

| Proposed Revegetation Treatment: Acres Disturbed 41.5   | Prevegetation pH 6.0  |
|---|---|
| Lime 2-3 Tons/acre or to correct to   |   |
| Fertilizer type 10-20-20 or equal   | <del></del>   |
| Fertilizer amount 500   | lbs/acre  |
| Mulch hay or straw at 2   | ons/acre  |
|   | Seed Mixtures   |
| Temporary   | Permanent   |
| Seed Type lbs/acre  | Seed Type lbs/acre  |
| Tall Fescue 40  | Tall Fescue 40  |
| Ladino Clover 5   | Ladino Clover 5   |
| **alternative seed mixtures are shown on the site design.   |   |
| Maps(s) of road, location, pit and proposed area for land a   | pplication (unless engineered plans including this info have been de dimensions (L x W x D) of the pit and dimensions (L x W) and a   |
| Maps(s) of road, location, pit and proposed area for land a provided). If water from the pit will be land applied, includenceage, of the land application area.   | pplication (unless engineered plans including this info have been de dimensions (L x W x D) of the pit, and dimensions (L x W), and a |
| provided). If water from the pit will be land applied, included applied, included application area.  Photocopied section of involved 7.5' topographic sheet.  | pplication (unless engineered plans including this info have been de dimensions (L x W x D) of the pit, and dimensions (L x W), and a |
| Maps(s) of road, location, pit and proposed area for land a provided). If water from the pit will be land applied, includer creage, of the land application area. Photocopied section of involved 7.5' topographic sheet.  Plan Approved by: Derse M. Haught    | de dimensions (L x W x D) of the pit, and dimensions (L x W), and a   |
| Maps(s) of road, location, pit and proposed area for land a provided). If water from the pit will be land applied, included applied, included applied, application area.  | de dimensions (L x W x D) of the pit, and dimensions (L x W), and a   |
| Maps(s) of road, location, pit and proposed area for land a rovided). If water from the pit will be land applied, include creage, of the land application area. Photocopied section of involved 7.5' topographic sheet.   | de dimensions (L x W x D) of the pit, and dimensions (L x W), and a   |
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| Maps(s) of road, location, pit and proposed area for land a provided). If water from the pit will be land applied, included accreage, of the land application area.  Photocopied section of involved 7.5' topographic sheet.  Plan Approved by: Derse M. Haught | de dimensions (L x W x D) of the pit, and dimensions (L x W), and a   |
| Maps(s) of road, location, pit and proposed area for land a provided). If water from the pit will be land applied, included accreage, of the land application area.  Photocopied section of involved 7.5' topographic sheet.  Plan Approved by: Derse M. Haught | de dimensions (L x W x D) of the pit, and dimensions (L x W), and a   |

95-02lly

## **Cuttings Disposal/Site Water**

#### Cuttings -Haul off Company:

Eap Industries, Inc. DOT # 0876278 1575 Smith Two State Rd. Atlasburg, PA 15004 1-888-294-5227

Waste Management 200 Rangos Lane Washington, PA 15301 724-222-3272

Environmental Coordination Services & Recycling (ECS&R) 3237 US Highway 19 Cochranton, PA 16314 814-425-7773

#### **Disposal Locations:**

Apex Environnemental, LLC Permit # 06-08438 11 County Road 78 Amsterdam, OH 43903 740-543-4389

Westmoreland Waste, LLC Permit # 100277 111 Conner Lane Belle Vernon, PA 15012 724-929-7694

Sycamore Landfill Inc. Permit #R30-079001 05-2010 4301 Sycamore Ridge Road Hurricane, WV 25526 304-562-2611

Max Environnemental Technologies, Inc. facility Permit # PAD004835146 / 301071 233 Max Lane Yukon, PA 25968 724-722-3500

Max Environnemental Technologies, Inc. Facility Permit # PAD05087072 / 301359 200 Max Drive Bulger, PA 15019 724-796-1571

Waste Management Kelly Run Permit # 100663 1901 Park Side Drive Elizabeth, PA 15037

Waste Management South Hills (Arnoni) Permit # 100592 3100 Hill Road Library, PA 15129 724-348-7013

Waste Management Arden Permit # 100172 200 Rangos Lane Washington, PA 15301 724-222-3272

Waste Management Meadowfill Permit # 1032 1488 Dawson Drive Bridgeport, WV 26330

Brooke County Landfill Permit # SWF-103-97 / WV 0109029 Rd 2 Box 410 Colliers, WV 26035 304-748-0014

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Wetzel County Landfill Permit # SWF-1021-97 / WV 0109185 Rt 1 Box 156A New Martinsville, WV 26035 304-455-3800

Energy Solutions, LLC Permit # UT 2300249 423 West 300 South Suite 200 Salt Lake City, UT 84101

Energy Solutions Services, Inc. Permit # R-73006-L24 1560 Bear Creek Road Oak Ridge, TN 37830

#### **Water Haul off Companies:**

Dynamic Structures, Clear Creek DOT # 720485 3790 State Route 7 New Waterford, OH 44445 330-892-0164

#### **Disposal Locations:**

Solidification Waste Management, Arden Landfill Permit # 100172 200 Rangos Lane Washington, PA 15301 724-225-1589

Solidification/Incineration Soil Remediation, Inc. Permit # 02-20753 6065 Arrel-Smith Road Lowelville, OH 44436 330-536-6825

Adams #1 Permit # 34-031-2-7177 23986 Airport Road Coshocton, OH 43812 740-575-4484

Adams #2 Permit # 34-031-2-7178 740-575-4484

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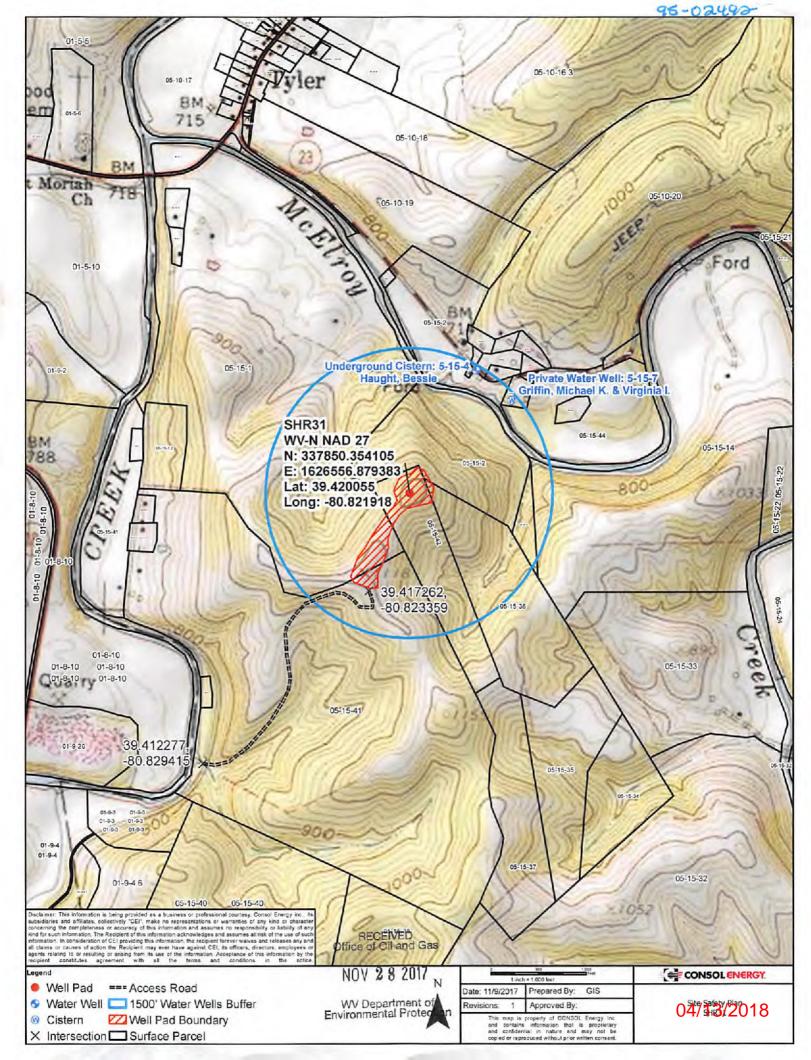
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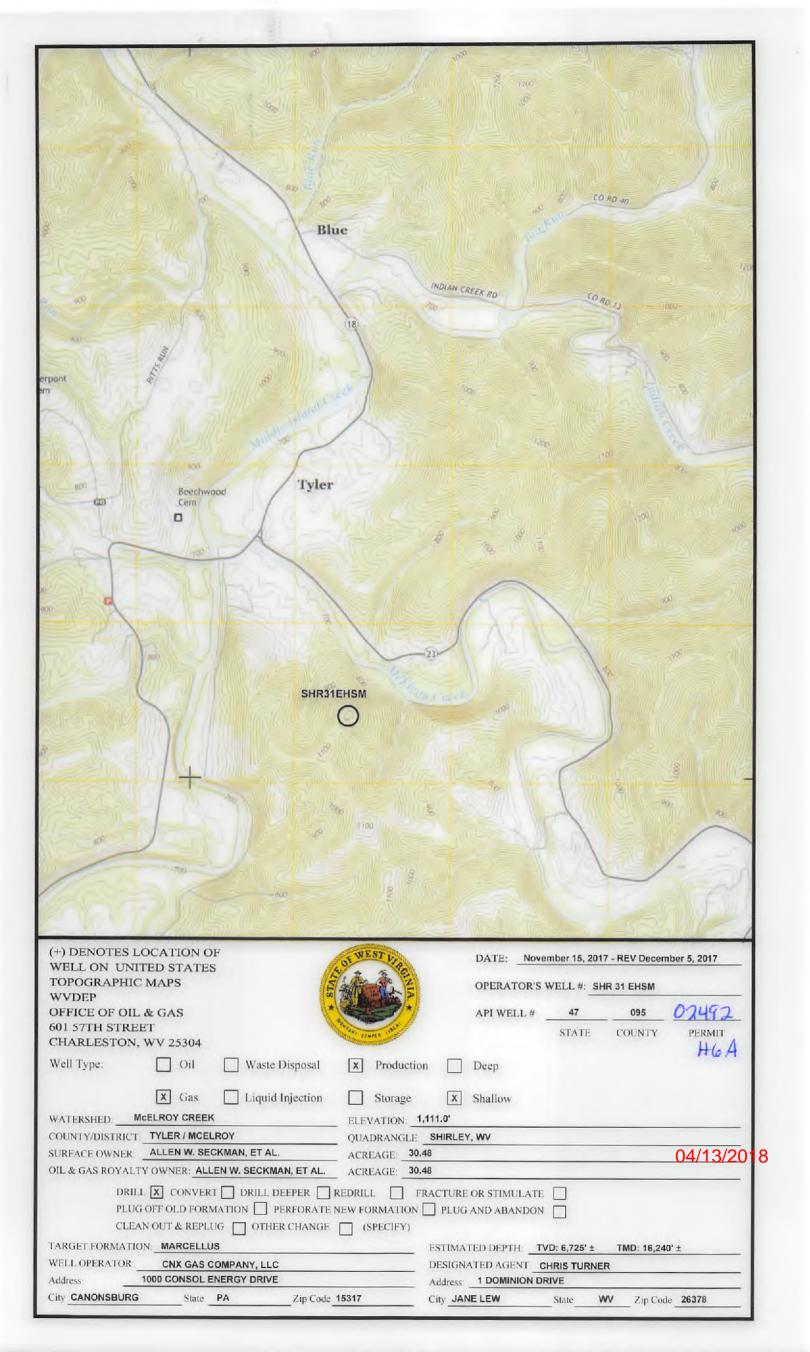
WV Department of Environmental Protection

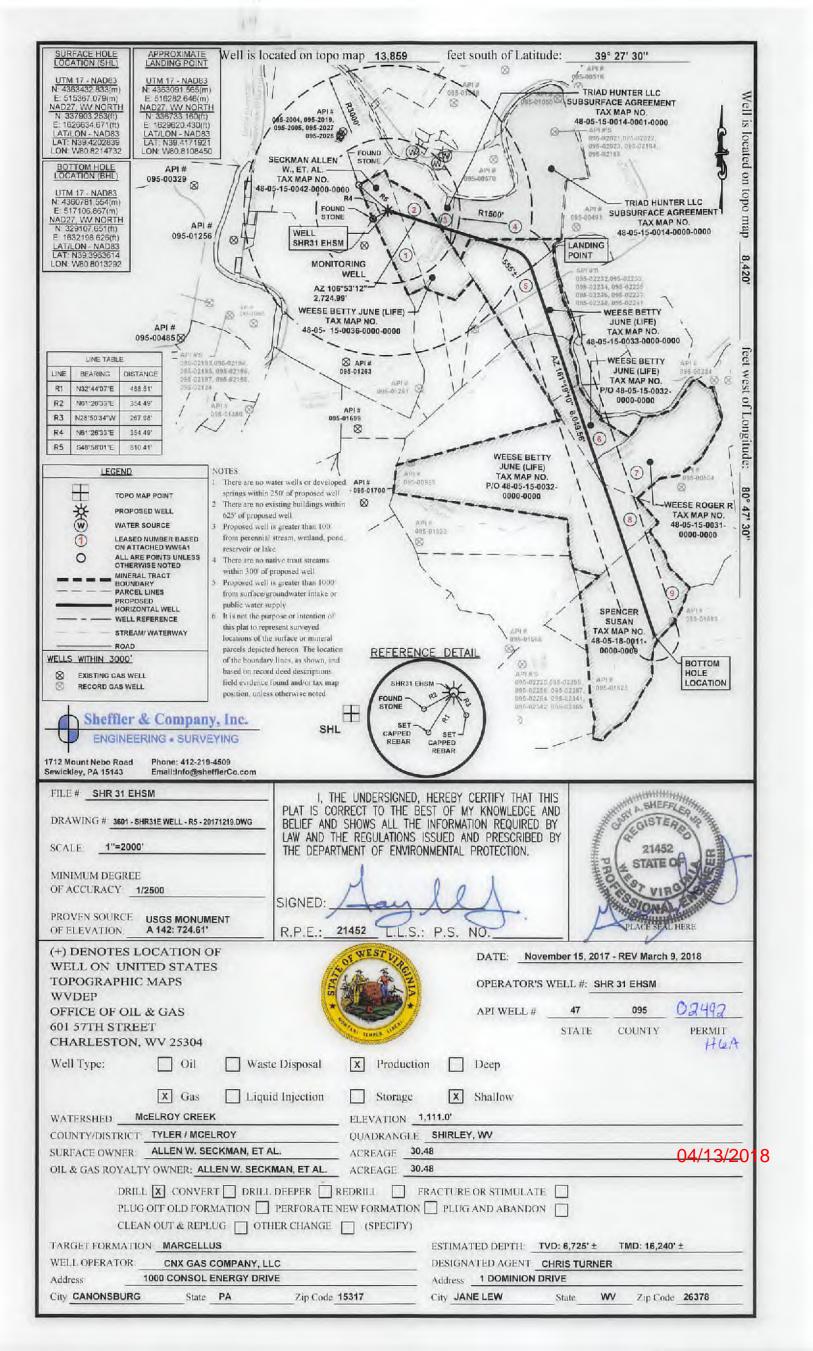
# Site Safety Plan for Well SHR31HSM CNX Gas Company, LLC.

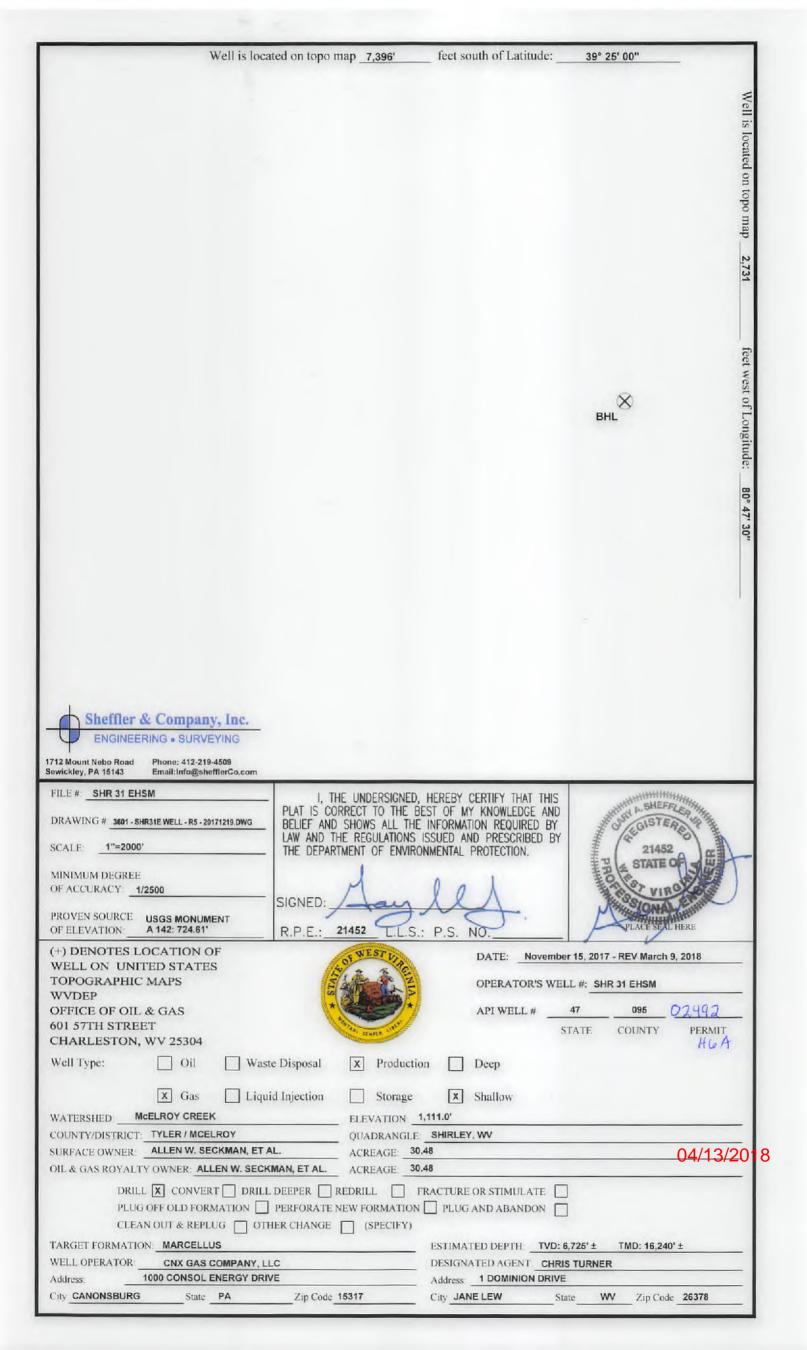
DMH 11/29/17



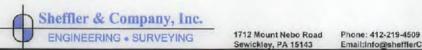






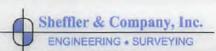


| Tax Map &<br>Parcel  | Title Opinion<br>QLS # | Grantor, Lessor, etc                              | Grantee, Lessee, etc                                 | Royalty                              | Book/Page                      |
|----------------------|------------------------|---|--|--------------------------------------|--------------------------------|
| 05-15-42             | 261711000              | Lillie Seckman                                    | Drilling Appalachian Corporation                     | Not less than 1/8                    | DB 268/475                     |
|                      |                        | Drilling Appalachian Corporation                  | Dominion Appalachian Development<br>Properties LLC   | Assignment                           | 322/190                        |
|                      |                        | Dominion Appalachian Development Properties LLC   | CONSOL Gas Appalachian Development<br>Properties LLC | Certificate of Incorporation         | CIB 9/124                      |
|                      |                        | CONSOL Gas Appalachian Development Properties LLC | CONSOL Gas Reserves Inc.                             | Merger                               | CIB 9/144                      |
|                      |                        | CONSOL Gas Reserves Inc.                          | CONSOL Gas Company                                   | Merger                               | CIB 9/156                      |
|                      |                        | CONSOL Gas Company                                | CNX Gas Company LLC                                  | Merger                               | Barbour CIB 17/1               |
|                      |                        | CNX Gas Company LLC                               | Noble Energy Inc.                                    | 50% Assignment                       | DB 388/286                     |
|                      |                        | CNX Gas Company LLC                               | Drilling Appalachian Corporation                     | Corrective Assignment                | 401/342                        |
|                      |                        | Noble Energy Inc.                                 | CNX Gas Company LLC                                  | Corrective Assignment                | 402/704                        |
|                      |                        | Drilling Appalachian Corporation                  | Antero Resources Appalachian<br>Corporation          | Assignment                           | 401/499                        |
|                      |                        | Antero Resources Corporation                      | CNX Gas Company LLC and Noble<br>Energy Inc.         | Assignment                           | LB 422/517                     |
|                      |                        | Noble Energy Inc.                                 | CNX Gas Company LLC                                  | Assignment                           | DB 550/273                     |
| Tax Map &<br>Parcel  | Title Opinion<br>QLS#  | Grantor, Lessor, etc                              | Grantee, Lessee, etc                                 | Royalty                              | Book/Page                      |
| 5-15-36              | 282099000              | Everett Roy Weese and Betty June Weese            | Triad Hunter LLC                                     | Not less than 1/8                    | 378/195                        |
|                      |                        | Triad Hunter LLC                                  | CNX Gas Company LLC                                  | Assignment                           | Unrecorded                     |
| Tax Map & Parcel     | Title Opinion<br>QLS#  | Grantor, Lessor, etc                              | Grantee, Lessee, etc                                 | Royalty                              | Book/Page                      |
| 5-15-14<br>5-15-14.1 | 282097000<br>282098000 | Everett Roy Weese and Betty June Weese            | Triad Hunter LLC                                     | Not less than 1/8                    | 378/195                        |
|                      |                        | Triad Hunter LLC                                  | CNX Gas Company LLC                                  | Subsurface Easement and Right of Way | Not yet recorded<br>(Attached) |



| ENGINEERING TO   | Sewickley, PA 15143  | Email:Info@s   | hefflerCo.com |               |               |
|--|--|----------------|---------------|---------------|---------------|
| (+) DENOTES LOCATION OF<br>WELL ON UNITED STATES                                 | OF WEST VIAC   | DATE: Nove     | ember 15, 201 | 7 - REV March | 9, 2018       |
| TOPOGRAPHIC MAPS   | E AND E  | OPERATOR'S     | WELL#: SH     | IR 31 EHSM    |               |
| WVDEP<br>OFFICE OF OIL & GAS<br>601 57TH STREET                                  |  | API WELL#      |               |               | D2492         |
| CHARLESTON, WV 25304   | THE STATE OF THE S |                | STATE         | COUNTY        | PERMIT<br>HOA |
| Well Type: Oil Waste Dis   | sposal X Production  | Deep           |               |               |               |
| X Gas Liquid Inj   | ection Storage X   | Shallow        |               |               |               |
| WATERSHED: MCELROY CREEK   | ELEVATION: 1,111.0   |                |               |               |               |
| COUNTY/DISTRICT: TYLER / MCELROY   | QUADRANGLE: SHIRLE   | Y, WV          |               |               |               |
| SURFACE OWNER: ALLEN W. SECKMAN, ET AL.  | ACREAGE: 30.48   |                |               |               | 04/13/201     |
| OIL & GAS ROYALTY OWNER: ALLEN W. SECKMAN,                                       | ET AL. ACREAGE: 30.48  |                |               |               |               |
| DRILL X CONVERT DRILL DEED PLUG OFF OLD FORMATION PER CLEAN OUT & REPLUG OTHER O | FORATE NEW FORMATION PLUG  |                | -             |               |               |
| TARGET FORMATION: MARCELLUS  | ESTIMA   | ATED DEPTH: T  | VD: 6,725' ±  | TMD: 16,24    | 0' ±          |
| WELL OPERATOR: CNX GAS COMPANY, LLC  | DESIGN   | NATED AGENT: C | HRIS TURNE    | R             |               |
| Address. 1000 CONSOL ENERGY DRIVE  |  | 1 DOMINION D   |               |               |               |
| City CANONSBURG State PA   | Zin Code 15317 City IA   | NETEW          | State 1       | MV Zin Cox    | 26378         |

| 5-15-33 |           |  |  |                       | Book/Page       |  |
|---------|-----------|--|--|-----------------------|-----------------|--|
|         | 238357000 | Everett Roy Weese and Betty June Weese, h/w  | KEPCO, Inc.  | Not less than 1/8     | 232/30          |  |
|         |           | KEPCO, Inc.  | Swift Energy Company   | Assignment (50%)      | 254/5           |  |
|         |           | KEPCO  | Union Drilling, Inc.   | Merger                | WV Sec of State |  |
|         |           | Union Drilling Inc.  | Equitable Resources Exploration, Inc.  | Name Change           | WV Sec of State |  |
|         |           | Equitable Resources Exploration, Inc.  | Swift Energy Company   | Assignment (50%)      | 275/566         |  |
|         |           | Swift Energy Company   | Swift Energy Income Partners 1987-D<br>Ltd. (34%)<br>Swift Energy Income Partners 1988-A<br>Ltd. (33%)<br>Swift Energy Income Partners 1988-B<br>Ltd. (22%)<br>Swift Energy Income Partners 1988-1<br>Ltd. (11%) | Assignment            | 287/352         |  |
|         |           | Swift Energy Income Partners 1987-D Ltd. (34%)<br>Swift Energy Income Partners 1988-A Ltd. (33%)<br>Swift Energy Income Partners 1988-B Ltd. (22%)<br>Swift Energy Income Partners 1988-1 Ltd. (11%) | Peake Energy, Inc.   | Assignment            | 319/291         |  |
|         |           | Swift Energy Income Partners 1987-D Ltd. (34%)<br>Swift Energy Income Partners 1988-A Ltd. (33%)<br>Swift Energy Income Partners 1988-B Ltd. (22%)<br>Swift Energy Income Partners 1988-1 Ltd. (11%) | Peake Energy, Inc.   | Corrective Assignment | 321/652         |  |
|         |           | Peake Energy, Inc.   | North Coast Energy Eastern, Inc.   | Name Change           | WV Sec of State |  |
|         |           | North Coast Energy Eastern, Inc.   | EXCO - North Coast Energy Eastern, Inc.  | Name Change           | WV Sec of State |  |
|         |           | EXCO Resources (WV), LLC   | EXCO Resources (WV), Inc. (49.75%)<br>EXCO Resources (PA), Inc. (0.5%)<br>BG Production Company (WV), LLC<br>(49.75%)  | Assignment            | 374/808         |  |
|         |           | EXCO Resources (WV), Inc. (49.75%)   | EXCO Production Company (WV), LLC (49.75%)   | Name Change           | WV Sec of State |  |
|         |           | EXCO Production Company (WV), LLC (49.75%) EXCO Resources (PA), Inc. (0.5%) BG Production Company (WV), LLC (49.75%)   | Antero Resources Corporation   | Assignment            | 406/195         |  |
|         |           | Antero Resources Corporation   | CNX Gas Company LLC and Noble<br>Energy, Inc.  | Assignment            | 422/517         |  |
|         |           | Noble Energy, Inc.   | CNX Gas Company LLC  | Assignment            | 550/273         |  |
|         |           | Gloria Morris  | Four Leaf Land Company   | Not less than 1/8     | 397/669         |  |
|         |           | Ralph T. Sweeney and Shelley A. Sweeney  | Four Leaf Land Company   | Not less than 1/8     | 397/675         |  |
|         |           | Donald Lee Sweeney   | Four Leaf Land Company   | Not less than 1/8     | 370/605         |  |
|         |           | Rodger A. Sweeney  | Four Leaf Land Company   | Not less than 1/8     | 370/611         |  |
|         |           | Devon Ruth Horsley (Sweeney)   | Four Leaf Land Company   | Not less than 1/8     | 370/629         |  |
|         |           | Anna Sweeney   | Four Leaf Land Company   | Not less than 1/8     | 370/635         |  |
|         |           | LaMoyne Sweeney  | Four Leaf Land Company   | Not less than 1/8     | 370/617         |  |
|         |           | Four Leaf Land Company   | Antero Resources Appalachian<br>Corporation  | Assignment            | 403/566         |  |
|         |           | Antero Resources Corporation   | CNX Gas Company LLC and Noble<br>Energy, Inc.  | Assignment            | 422/517         |  |
|         |           | Noble Energy, Inc.   | CNX Gas Company LLC  | Assignment            | 550/273         |  |
|         |           | Four Leaf Land Company   | Antero Resources Appalachian<br>Corporation  | Not less than 1/8     | 403/561         |  |
|         |           | Antero Resources Corporation   | CNX Gas Company LLC and Noble<br>Energy, Inc.  | Assignment            | 422/517         |  |
|         |           | Noble Energy, Inc.   | CNX Gas Company LLC  | Assignment            | 550/273         |  |
|         |           | Mary Sue Furbee Zebley   | Noble Energy, Inc.   | Not less than 1/8     | 440/447         |  |
|         |           | Thomas Val Furbee and Katherine Shelek-Furbee, h/w   | Noble Energy, Inc.   | Not less than 1/8     | 440/443         |  |
|         |           | Allison McKay Hardin (Allison Furbee Herring)  | Noble Energy, Inc.   | Not less than 1/8     | 440/453         |  |
|         |           | Rani J. Boyt   | Noble Energy, Inc.   | Not less than 1/8     | 445/835         |  |
| -       |           | Noble Energy, Inc.   | CNX Gas Company LLC  | Assignment            | 484/288         |  |
|         |           | means energy, me.  | and doe company too  | rasignment            | 404/200         |  |



1712 Mount Nebo Road Phone: 412-219-4509 Sewickley, PA 15143 Email:Info@shefflerCo.com

| (+) DENOTES LOWELL ON UNIT    |               | · A   | OF WI     | ESTVIR   |          | DATE: _   | November  | 15, 201 | 7 - REV March | 9, 2018         |   |
|-------------------------------|---------------|---|-----------|--|----------|-----------|-----------|---------|---------------|-----------------|---|
| TOPOGRAPHIC                   |               |   | <b>金</b>  | The second   |          | OPERATO   | OR'S WELL | #: SH   | IR 31 EHSM    |                 |   |
| WVDEP<br>OFFICE OF OIL        | & GAS         | *   |           |  |          | API WELI  | L#4       | 7       | 095           | 02492           |   |
| 601 57TH STREE<br>CHARLESTON, |               | **  | DE ANY AL | WHO WAS TO SEE STATE OF THE PARTY OF THE PAR |          |           | STA       | ATE     | COUNTY        | PERMIT<br>H6A   |   |
| Well Type:                    | Oil           | Waste Disposal  | X         | Production   |          | Deep      |           |         |               |                 |   |
|                               | X Gas         | Liquid Injection  |           | Storage  | X        | Shallow   |           |         |               |                 |   |
| WATERSHED: M                  | CELROY CREEK  |   | ELE       | VATION: 1,11   | 1.0'     |           |           |         |               |                 |   |
| COUNTY/DISTRICT:              | TYLER / MCEL  | ROY   | QUA       | DRANGLE: \$  | HIRLE    | r, wv     |           |         |               |                 |   |
| SURFACE OWNER:                | ALLEN W. SE   | CKMAN, ET AL.   | ACR       | EAGE: 30.48  |          |           |           |         |               | 04/13/20        | 8 |
| OIL & GAS ROYALT              | Y OWNER: ALL  | EN W. SECKMAN, ET AL.   | ACR       | REAGE: 30.48   |          |           |           |         |               |                 | Ĭ |
| PLUG                          | OFF OLD FORM  | T DRILL DEEPER DATE DEFINED DEFINED DEFENDED DEFENDED DEFENDED. | NEW FO    | and the same of th |          |           |           |         |               |                 |   |
| TARGET FORMATIC               | N: MARCELLU   | S   |           |  | STIMA    | TED DEPTH | TVD: 6,7  | 25' ±   | TMD: 16,24    | 40' ±           |   |
| WELL OPERATOR:                | CNX GAS       | OMPANY, LLC   |           | 1  | DESIGN   | ATED AGEN | T: CHRIS  | TURNE   | R             |                 |   |
| Address:                      | 1000 CONSOL E | NERGY DRIVE   |           | - 1  | Address: | 1 DOMINIO | ON DRIVE  |         |               |                 |   |
| City CANONSBURG               | State         | PA Zip Code   | 15317     |  | ity JAI  | NE LEW    | State     |         | W Zip Co      | de <b>26378</b> |   |

| ax Map &<br>Parcel | Title Opinion<br>QLS #   | Grantor, Lessor, etc   | Grantee, Lessee, etc   | antee, Lessee, etc Royalty |                 |  |  |  |
|--------------------|--|--|--|----------------------------|-----------------|--|--|--|
| Part of<br>5-15-32 | 238357000  | Everett Roy Weese and Betty June Weese, h/w  | KEPCO, Inc.  | Not less than 1/8          | 232/30          |  |  |  |
|                    |  | KEPCO, Inc.  | Swift Energy Company   | Assignment (50%)           | 254/5           |  |  |  |
|                    |  | KEPCO  | Union Drilling, Inc.   | Merger                     | WV Sec of State |  |  |  |
|                    |  | Union Drilling Inc.  | Equitable Resources Exploration, Inc.  | Name Change                | WV Sec of State |  |  |  |
|                    |  | Equitable Resources Exploration, Inc.  | Swift Energy Company   | Assignment (50%)           | 275/566         |  |  |  |
|                    |  | Swift Energy Company   | Swift Energy Income Partners 1987-D<br>Ltd. (34%)<br>Swift Energy Income Partners 1988-A<br>Ltd. (33%)<br>Swift Energy Income Partners 1988-B<br>Ltd. (22%)<br>Swift Energy Income Partners 1988-1<br>Ltd. (11%) | Assignment                 | 287/352         |  |  |  |
|                    |  | Swift Energy Income Partners 1987-D Ltd. (34%)<br>Swift Energy Income Partners 1988-A Ltd. (33%)<br>Swift Energy Income Partners 1988-B Ltd. (22%)<br>Swift Energy Income Partners 1988-1 Ltd. (11%) | Peake Energy, Inc.   | Assignment                 | 319/291         |  |  |  |
|                    |  | Swift Energy Income Partners 1987-D Ltd. (34%)<br>Swift Energy Income Partners 1988-A Ltd. (33%)<br>Swift Energy Income Partners 1988-B Ltd. (22%)<br>Swift Energy Income Partners 1988-1 Ltd. (11%) | Peake Energy, Inc.   | Corrective Assignment      | 321/652         |  |  |  |
|                    |  | Peake Energy, Inc.   | North Coast Energy Eastern, Inc.   | Name Change                | WV Sec of Stat  |  |  |  |
|                    |  | North Coast Energy Eastern, Inc.   | EXCO - North Coast Energy Eastern, Inc.  | Name Change                | WV Sec of Stat  |  |  |  |
|                    |  | EXCO Resources (WV), LLC   | EXCO Resources (WV), Inc. (49.75%)<br>EXCO Resources (PA), Inc. (0.5%)<br>BG Production Company (WV), LLC<br>(49.75%)  | Assignment                 | 374/808         |  |  |  |
|                    |  | EXCO Resources (WV), Inc. (49.75%)   | EXCO Production Company (WV), LLC (49.75%)   | Name Change                | WV Sec of Stat  |  |  |  |
|                    | EXCO Production Company (WV), LLC (49.75%) EXCO Resources (PA), Inc. (0.5%) BG Production Company (WV), LLC (49.75%) |  | Antero Resources Corporation   | Assignment                 | 406/195         |  |  |  |
|                    |  | Antero Resources Corporation   | CNX Gas Company LLC and Noble<br>Energy, Inc.  | Assignment                 | 422/517         |  |  |  |
|                    |  | Noble Energy, Inc.   | CNX Gas Company LLC  | Assignment                 | 550/273         |  |  |  |
|                    |  | Gloria Morris  | Four Leaf Land Company   | Not less than 1/8          | 397/669         |  |  |  |
|                    |  | Ralph T. Sweeney and Shelley A. Sweeney  | Four Leaf Land Company   | Not less than 1/8          | 397/675         |  |  |  |
|                    |  | Donald Lee Sweeney   | Four Leaf Land Company   | Not less than 1/8          | 370/605         |  |  |  |
|                    |  | Rodger A. Sweeney  | Four Leaf Land Company   | Not less than 1/8          | 370/611         |  |  |  |
|                    |  | Devon Ruth Horsley (Sweeney)   | Four Leaf Land Company   | Not less than 1/8          | 370/629         |  |  |  |
|                    |  | Anna Sweeney   | Four Leaf Land Company   | Not less than 1/8          | 370/635         |  |  |  |
|                    |  | LaMoyne Sweeney  | Four Leaf Land Company   | Not less than 1/8          | 370/617         |  |  |  |
|                    |  | Four Leaf Land Company   | Antero Resources Appalachian<br>Corporation  | Assignment                 | 403/566         |  |  |  |
|                    |  | Antero Resources Corporation   | CNX Gas Company LLC and Noble Energy, Inc.   | Assignment                 | 422/517         |  |  |  |
|                    |  | Noble Energy, Inc.   | CNX Gas Company LLC  | Assignment                 | 550/273         |  |  |  |
|                    |  | Four Leaf Land Company   | Antero Resources Appalachian<br>Corporation  | Not less than 1/8          | 403/561         |  |  |  |
|                    |  | Antero Resources Corporation   | CNX Gas Company LLC and Noble<br>Energy, Inc.  | Assignment                 | 422/517         |  |  |  |
|                    |  | Noble Energy, Inc.   | CNX Gas Company LLC  | Assignment                 | 550/273         |  |  |  |
|                    |  | Mary Sue Furbee Zebley   | Noble Energy, Inc.   | Not less than 1/8          | 440/447         |  |  |  |
|                    |  | Thomas Val Furbee and Katherine Shelek-Furbee, h/w   | Noble Energy, Inc.   | Not less than 1/8          | 440/443         |  |  |  |
|                    |  | Allison McKay Hardin (Allison Furbee Herring)  | Noble Energy, Inc.   | Not less than 1/8          | 440/453         |  |  |  |
|                    |  | Rani J. Boyt   | Noble Energy, Inc.   | Not less than 1/8          | 445/835         |  |  |  |
|                    |  | Noble Energy, Inc.   | CNX Gas Company LLC  | Assignment (50%)           | 484/288         |  |  |  |
|                    |  | Noble Energy, Inc.   | CNX Gas Company LLC  | Assignment                 | 550/273         |  |  |  |



1712 Mount Nebo Road Phone: 412-219-4509 Sewickley, PA 15143 Email:Info@shefflerCo.com

| (+) DENOTES LO<br>WELL ON UNIT |  |  | OF WEST WARE      |         | DATE: _   | November 15 | , 2017 - F | REV March | 9, 2018     |
|--------------------------------|--|--|-------------------|---------|-----------|-------------|------------|-----------|-------------|
| TOPOGRAPHIC                    | MAPS   | 57.4   | AND AZ            |         | OPERATO   | OR'S WELL#  | : SHR 3    | 1 EHSM    |             |
| WVDEP<br>OFFICE OF OIL         | & GAS  | *  |                   |         | API WELI  | _ # _ 47    |            | 095       | 02492       |
| 601 57TH STREE<br>CHARLESTON,  | No. of the Contract of the Con | ***  | TOTAL SENSE TOTAL |         |           | STAT        | TE C       | COUNTY    | PERMIT      |
| Well Type:                     | Oil  | Waste Disposal   | x Production      |         | Deep      |             |            |           | HLEA        |
|                                | X Gas  | Liquid Injection   | Storage           | X       | Shallow   |             |            |           |             |
| WATERSHED Me                   | CELROY CREEK   |  | ELEVATION: 1,11   | 1.0'    |           |             |            |           |             |
| COUNTY/DISTRICT                | TYLER / MCEL   | ROY  | QUADRANGLE: \$    | HIRLEY  | , wv      |             |            |           |             |
| SURFACE OWNER:                 | ALLEN W. SEC   | CKMAN, ET AL.  | ACREAGE: 30.48    |         |           |             |            |           | 04/13/201   |
| OIL & GAS ROYALT               | Y OWNER: ALL   | EN W. SECKMAN, ET AL.  | ACREAGE 30.48     |         |           |             |            |           | 0 17 10/201 |
| PLUG                           | OFF OLD FORM   | T DRILL DEEPER DEMATION DEPERFORATE FOR DEPERFORATE FOR DEPERT OF THE PROPERTY | NEW FORMATION     |         |           |             |            |           |             |
| TARGET FORMATIO                | N. MARCELLU  | s  |                   | STIMA   | TED DEPTH | TVD: 6,725  | 5'± T      | MD: 16,24 | 0' ±        |
| WELL OPERATOR                  | CNX GAS C  | OMPANY, LLC  | D                 | ESIGN   | ATED AGEN | T: CHRIS TU | IRNER      |           |             |
| Address:                       | 1000 CONSOL E  | NERGY DRIVE  |                   |         | 1 DOMINIC |             |            |           |             |
| City CANONSBURG                | State  | PA Zip Code  | 15317             | ity JAN | IE LEW    | State       | wv         | Zip Cod   | e 26378     |

| ax Map &<br>Parcel | Title Opinion<br>QLS# | Grantor, Lessor, etc   | Grantee, Lessee, etc   | Royalty               | Book/Page       |
|--------------------|-----------------------|--|--|-----------------------|-----------------|
| Part of<br>5-15-32 | 238357000             | Everett Roy Weese and Betty June Weese, h/w  | KEPCO, Inc.  | Not less than 1/8     | 232/30          |
|                    |                       | KEPCO, Inc.  | Swift Energy Company   | Assignment (50%)      | 254/5           |
|                    |                       | KEPCO  | Union Drilling, Inc.   | Merger                | WV Sec of State |
|                    |                       | Union Drilling Inc.  | Equitable Resources Exploration, Inc.  | Name Change           | WV Sec of State |
|                    |                       | Equitable Resources Exploration, Inc.  | Swift Energy Company   | Assignment (50%)      | 275/566         |
|                    |                       | Swift Energy Company   | Swift Energy Income Partners 1987-D<br>Ltd. (34%)<br>Swift Energy Income Partners 1988-A<br>Ltd. (33%)<br>Swift Energy Income Partners 1988-B<br>Ltd. (22%)<br>Swift Energy Income Partners 1988-1<br>Ltd. (11%) | Assignment            | 287/352         |
|                    |                       | Swift Energy Income Partners 1987-D Ltd. (34%)<br>Swift Energy Income Partners 1988-A Ltd. (33%)<br>Swift Energy Income Partners 1988-B Ltd. (22%)<br>Swift Energy Income Partners 1988-1 Ltd. (11%) | Peake Energy, Inc.   | Assignment            | 319/291         |
|                    |                       | Swift Energy Income Partners 1987-D Ltd. (34%)<br>Swift Energy Income Partners 1988-A Ltd. (33%)<br>Swift Energy Income Partners 1988-B Ltd. (22%)<br>Swift Energy Income Partners 1988-1 Ltd. (11%) | Peake Energy, Inc.   | Corrective Assignment | 321/652         |
|                    |                       | Peake Energy, Inc.   | North Coast Energy Eastern, Inc.   | Name Change           | WV Sec of Stat  |
|                    |                       | North Coast Energy Eastern, Inc.   | EXCO - North Coast Energy Eastern, Inc.  | Name Change           | WV Sec of Stat  |
|                    |                       | EXCO Resources (WV), LLC   | EXCO Resources (WV), Inc. (49.75%)<br>EXCO Resources (PA), Inc. (0.5%)<br>BG Production Company (WV), LLC<br>(49.75%)  | Assignment            | 374/808         |
|                    |                       | EXCO Resources (WV), Inc. (49.75%)   | EXCO Production Company (WV), LLC (49.75%)   | Name Change           | WV Sec of Stat  |
|                    |                       | EXCO Production Company (WV), LLC (49.75%)<br>EXCO Resources (PA), Inc. (0.5%)<br>BG Production Company (WV), LLC (49.75%)   | Antero Resources Corporation   | Assignment            | 406/195         |
|                    |                       | Antero Resources Corporation   | CNX Gas Company LLC and Noble<br>Energy, Inc.  | Assignment            | 422/517         |
|                    |                       | Noble Energy, Inc.   | CNX Gas Company LLC  | Assignment            | 550/273         |
|                    |                       | Gloria Morris  | Four Leaf Land Company   | Not less than 1/8     | 397/669         |
|                    |                       | Ralph T. Sweeney and Shelley A. Sweeney  | Four Leaf Land Company   | Not less than 1/8     | 397/675         |
|                    |                       | Donald Lee Sweeney   | Four Leaf Land Company   | Not less than 1/8     | 370/605         |
|                    |                       | Rodger A. Sweeney  | Four Leaf Land Company   | Not less than 1/8     | 370/611         |
|                    |                       | Devon Ruth Horsley (Sweeney)   | Four Leaf Land Company   | Not less than 1/8     | 370/629         |
|                    |                       | Anna Sweeney   | Four Leaf Land Company   | Not less than 1/8     | 370/635         |
|                    |                       | LaMoyne Sweeney  | Four Leaf Land Company   | Not less than 1/8     | 370/617         |
|                    |                       | Four Leaf Land Company   | Antero Resources Appalachian<br>Corporation  | Assignment            | 403/566         |
|                    |                       | Antero Resources Corporation   | CNX Gas Company LLC and Noble<br>Energy, Inc.  | Assignment            | 422/517         |
|                    |                       | Noble Energy, Inc.   | CNX Gas Company LLC  | Assignment            | 550/273         |
|                    |                       | Four Leaf Land Company   | Antero Resources Appalachian<br>Corporation  | Not less than 1/8     | 403/561         |
|                    |                       | Antero Resources Corporation   | CNX Gas Company LLC and Noble<br>Energy, Inc.  | Assignment            | 422/517         |
|                    |                       | Noble Energy, Inc.   | CNX Gas Company LLC  | Assignment            | 550/273         |
|                    |                       | Thomas J. Kilcoyne   | JB Exploration I, LLC  | Not less than 1/8     | 404/107         |
|                    |                       | JB Exploration I, LLC  | Noble Energy, Inc. and CNX Gas<br>Company LLC  | Assignment            | 488/786         |
|                    |                       | JB Exploration I, LLC  | Noble Energy, Inc. and CNX Gas<br>Company LLC  | Assignment            | 461/628         |
|                    |                       | Noble Energy, Inc.   | CNX Gas Company LLC  | Assignment            | 550/273         |
|                    |                       | Patricia J. Jones Catarello, Trustee of the Jones-Catarello<br>Oil and Gas Trust   | JB Exploration I LLC   | Not less than 1/8     | 410/174         |



| ENGINEERING • SURVE   |                      |                | 19-4509<br>hefflerCo.com |               |                 |
|---|----------------------|----------------|--------------------------|---------------|-----------------|
| (+) DENOTES LOCATION OF<br>WELL ON UNITED STATES  | OI WEST VIAC         | DATE: Nove     | ember 15, 201            | 7 - REV March | 1 9, 2018       |
| TOPOGRAPHIC MAPS  | E AND E              | OPERATOR'S     | WELL#: SH                | HR 31 EHSM    |                 |
| WVDEP<br>OFFICE OF OIL & GAS  | *                    | API WELL#      | 47                       | 095           | 02492           |
| 601 57TH STREET<br>CHARLESTON, WV 25304   | SCHOOL SCHOOL STATE  |                | STATE                    | COUNTY        | PERMIT<br>HGA   |
| Well Type: Oil Waste Disposal   | x Production         | Deep           |                          |               | 77.027.         |
| X Gas Liquid Injection  | Storage X            | Shallow        |                          |               |                 |
| WATERSHED: McELROY CREEK  | ELEVATION: 1,111.0'  |                |                          |               |                 |
| COUNTY/DISTRICT: TYLER / MCELROY  | QUADRANGLE: SHIRLE   | Y, WV          |                          |               |                 |
| SURFACE OWNER: ALLEN W. SECKMAN, ET AL.   | ACREAGE: 30.48       |                |                          |               | 04/13/2018      |
| OIL & GAS ROYALTY OWNER: ALLEN W. SECKMAN, ET AL  | - ACREAGE: 30.48     |                |                          |               |                 |
| DRILL X CONVERT DRILL DEEPER PLUG OFF OLD FORMATION PERFORACE CLEAN OUT & REPLUG OTHER CHANGE | TE NEW FORMATION PLU |                |                          |               |                 |
| TARGET FORMATION: MARCELLUS   | ESTIM                | ATED DEPTH: _T | VD: 6,725' ±             | TMD: 16,24    | 40' ±           |
| WELL OPERATOR: CNX GAS COMPANY, LLC   | DESIG                | NATED AGENT    | HRIS TURNE               | R             |                 |
| Address: 1000 CONSOL ENERGY DRIVE   | Address              | 1 DOMINION D   | RIVE                     |               |                 |
| City CANONSBURG State PA Zip Co   | de 15317 City JA     | NE LEW         | State 1                  | W Zip Co      | de <b>26378</b> |

|                     |                       | JB Exploration I, LLC   | Noble Energy, Inc. and CNX Gas<br>Company LLC   | Assignment   | 461/628  |
|---------------------|-----------------------|---|---|--|--|
|                     |                       | JB Exploration I, LLC   | Noble Energy, Inc. and CNX Gas<br>Company LLC   | Assignment (Corrective)  | 488/786  |
|                     |                       | Noble Energy, Inc.  | CNX Gas Company LLC   | Assignment   | 550/273  |
|                     |                       |   |   |  |  |
|                     |                       | Mary Sue Furbee Zebley  | Noble Energy, Inc.  | Not less than 1/8  | 440/447  |
|                     |                       | Thomas Val Furbee and Katherine Shelek-Furbee, h/w  | Noble Energy, Inc.  | Not less than 1/8  | 440/443  |
|                     |                       | Allison McKay Hardin (Allison Furbee Herring)   | Noble Energy, Inc.  | Not less than 1/8  | 440/453  |
|                     |                       | Rani J. Boyt  | Noble Energy, Inc.  | Not less than 1/8  | 445/835  |
|                     |                       | Noble Energy, Inc.  | CNX Gas Company LLC   | Assignment (50%)   | 484/288  |
|                     |                       | Noble Energy, Inc.  | CNX Gas Company LLC   | Assignment   | 550/273  |
|                     |                       | WV Minerals, Inc.   | Noble Energy, Inc.  | Not less than 1/8  | 465/590  |
|                     |                       | Noble Energy Inc.   | CNX Gas Company LLC   | Assignment (50%)   | 499/447  |
|                     |                       | Noble Energy Inc.   | CNX Gas Company LLC   | Assignment   | 550/273  |
|                     |                       | David Harold Dean and Kimberly Dean   | Noble Energy, Inc.  | Not less than 1/8  | 448/749  |
|                     |                       | Noble Energy Inc.   | CNX Gas Company LLC   | Assignment (50%)   | 493/223  |
|                     |                       | Noble Energy Inc.   | CNX Gas Company LLC   | Assignment   | 550/273  |
| Tax Map &<br>Parcel | Title Opinion<br>QLS# | Grantor, Lessor, etc  | Grantee, Lessee, etc  | Royalty  | Book/Page  |
| 5-15-31             | 263460000             | William H. Underwood  | Joseph Schlesinger  | Not less than 1/8  | 23/426   |
|                     |                       | Joseph Schlesinger  | Walter A. Frazier   | Assignment   | 24/44  |
|                     |                       | Walter A. Frazier   | Joseph Schlesinger  | Assignment   | 28/268   |
|                     |                       | Joseph Schlesinger  | B. Forst  | Assignment   | 28/269   |
|                     |                       |   |   |  | 29/400   |
|                     |                       | Joseph Schlesinger  | B. Forst  | Assignment   | 23/400   |
|                     |                       |   | B. Forst The Philadelphia Company of West Virginia  | Assignment<br>Assignment   | 20040020   |
|                     |                       | Joseph Schlesinger  B. Forst  The Philadelphia Company of West Virginia   | The Philadelphia Company of West  |  |  |
|                     |                       | B. Forst  | The Philadelphia Company of West<br>Virginia<br>Pittsburgh and West Virginia Gas  | Assignment   | Unrecorded   |
|                     |                       | B. Forst The Philadelphia Company of West Virginia  | The Philadelphia Company of West<br>Virginia<br>Pittsburgh and West Virginia Gas<br>Company   | Assignment Assignment  | Unrecorded   |
|                     |                       | B. Forst  The Philadelphia Company of West Virginia  Pittsburgh and West Virginia Gas Company   | The Philadelphia Company of West<br>Virginia<br>Pittsburgh and West Virginia Gas<br>Company<br>Equitable Gas Company  | Assignment Assignment Assignment   | Unrecorded<br>101/36<br>132/414                    |
|                     |                       | B. Forst  The Philadelphia Company of West Virginia  Pittsburgh and West Virginia Gas Company  Pittsburgh and West Virginia Gas Company   | The Philadelphia Company of West<br>Virginia<br>Pittsburgh and West Virginia Gas<br>Company<br>Equitable Gas Company<br>Equitable Gas Company   | Assignment Assignment Assignment Corrective Assignment                   | 101/36<br>132/414<br>132/445                       |
|                     |                       | B. Forst  The Philadelphia Company of West Virginia  Pittsburgh and West Virginia Gas Company  Pittsburgh and West Virginia Gas Company  Equitable Gas Company  | The Philadelphia Company of West<br>Virginia  Pittsburgh and West Virginia Gas<br>Company  Equitable Gas Company  Equitable Gas Company  Equitable Gas Company  Equitans, Inc.                                    | Assignment Assignment Assignment Corrective Assignment Assignment        | 101/36<br>132/414<br>132/445<br>274/471            |
|                     |                       | B. Forst  The Philadelphia Company of West Virginia Pittsburgh and West Virginia Gas Company Pittsburgh and West Virginia Gas Company Equitable Gas Company Equitans, Inc. Equitable Gas Company, LLC, Equitable Resources, Inc., | The Philadelphia Company of West<br>Virginia  Pittsburgh and West Virginia Gas<br>Company  Equitable Gas Company  Equitable Gas Company  Equitable Gas Company  Equitable Gas Company  Equitable Gas Company, LLC | Assignment Assignment Assignment Corrective Assignment Assignment Merger | 101/36<br>132/414<br>132/445<br>274/471<br>433/738 |



1712 Mount Nebo Road Phone: 412-219-4509
Sewickley, PA 15143 Email:Info@shefflerCo.com

| (+) DENOTES LO<br>WELL ON UNIT<br>TOPOGRAPHIC           | TED STATE      |  | OF WEST VIACON |          |           |          |             | 7 - REV March | 9, 2018                  |
|---|----------------|--|----------------|----------|-----------|----------|-------------|---------------|--------------------------|
| WVDEP<br>OFFICE OF OIL<br>601 57TH STREE<br>CHARLESTON, | ET             | -  | Tan sans       |          | API WEL   | -        | 47<br>STATE | 095<br>COUNTY | 02492<br>PERMIT<br>1+6 A |
| Well Type:  | Oil            | Waste Disposal   | X Productio    | n 🗌      | Deep      |          |             |               |                          |
|   | X Gas          | Liquid Injection   | Storage        | X        | Shallow   |          |             |               |                          |
| WATERSHED: M  | CELROY CREEK   | (  | ELEVATION: 1   | ,111.0   |           |          |             |               |                          |
| COUNTY/DISTRICT   | 1000 1000 1000 |  | QUADRANGLE     | SHIRLE   | Y, WV     |          |             |               |                          |
| SURFACE OWNER   | ALLEN W. SE    | CKMAN, ET AL.  | ACREAGE 30.    | 48       |           |          |             |               | 04/13/201                |
| OIL & GAS ROYALT  | Y OWNER: ALI   | EN W. SECKMAN, ET AL.  | ACREAGE: 30.   | 48       |           |          |             |               |                          |
| PLUG  | OFF OLD FOR    | T DRILL DEEPER DEMATION PERFORATE OF DEFENDENCE DESCRIPTION DESCRIPTION DE DESCRI | NEW FORMATION  |          |           |          |             |               |                          |
| TARGET FORMATIO   | N MARCELLI     | JS   |                | ESTIMA   | TED DEPTH | TVD:     | 6,725' ±    | TMD: 16,24    | 40' ±                    |
| WELL OPERATOR:  | CNX GAS        | COMPANY, LLC   |                | DESIGN   | ATED AGEN | T: CHR   | S TURNE     | R             |                          |
| Address:  | 1000 CONSOL I  | NERGY DRIVE  |                | Address: | 1 DOMINI  | ON DRIVE |             |               |                          |
| City CANONSBURG   | State          | PA Zip Code  | 15317          |          | NE LEW    | Si       |             | W Zin Co      | de 26378                 |

| x Map &<br>Parcel  | Title Opinion<br>QLS # | Grantor, Lessor, etc   | Grantee, Lessee, etc   | Royalty               | Book/Page       |
|--------------------|------------------------|--|--|-----------------------|-----------------|
| Part of<br>5-15-32 | 238357000              | Everett Roy Weese and Betty J. Weese, h/w  | KEPCO, Inc.  | Not less than 1/8     | DB 232/30       |
|                    |                        | KEPCO, Inc.  | Swift Energy Company   | Assignment (50%)      | 254/5           |
|                    |                        | KEPCO  | Union Drilling, Inc.   | Merger                | WV Sec of Stat  |
|                    |                        | Union Drilling Inc.  | Equitable Resources Exploration, Inc.  | Name Change           | WV Sec of Stat  |
|                    |                        | Equitable Resources Exploration, Inc.  | Swift Energy Company   | Assignment (50%)      | 275/566         |
|                    |                        | Swift Energy Company   | Swift Energy Income Partners 1987-D<br>Ltd. (34%)<br>Swift Energy Income Partners 1988-A<br>Ltd. (33%)<br>Swift Energy Income Partners 1988-B<br>Ltd. (22%)<br>Swift Energy Income Partners 1988-1<br>Ltd. (11%) | Assignment            | 287/352         |
|                    |                        | Swift Energy Income Partners 1987-D Ltd. (34%)<br>Swift Energy Income Partners 1988-A Ltd. (33%)<br>Swift Energy Income Partners 1988-B Ltd. (22%)<br>Swift Energy Income Partners 1988-1 Ltd. (11%) | Peake Energy, Inc.   | Assignment            | 319/291         |
|                    |                        | Swift Energy Income Partners 1987-D Ltd. (34%)<br>Swift Energy Income Partners 1988-A Ltd. (33%)<br>Swift Energy Income Partners 1988-B Ltd. (22%)<br>Swift Energy Income Partners 1988-1 Ltd. (11%) | Peake Energy, Inc.   | Corrective Assignment | 321/652         |
|                    |                        | Peake Energy, Inc.   | North Coast Energy Eastern, Inc.   | Name Change           | WV Sec of State |
|                    |                        | North Coast Energy Eastern, Inc.   | EXCO - North Coast Energy Eastern, Inc.  | Name Change           | WV Sec of Stat  |
|                    |                        | EXCO Resources (WV), LLC   | EXCO Resources (WV), Inc. (49.75%)<br>EXCO Resources (PA), Inc. (0.5%)<br>BG Production Company (WV), LLC<br>(49.75%)  | Assignment            | 374/808         |
|                    |                        | EXCO Resources (WV), Inc. (49.75%)   | EXCO Production Company (WV), LLC (49.75%)   | Name Change           | WV Sec of Stat  |
|                    |                        | EXCO Production Company (WV), LLC (49.75%)<br>EXCO Resources (PA), Inc. (0.5%)<br>BG Production Company (WV), LLC (49.75%)   | Antero Resources Corporation   | Assignment            | 406/195         |
|                    |                        | Antero Resources Corporation   | CNX Gas Company LLC and Noble<br>Energy, Inc.  | Assignment            | 422/517         |
|                    |                        | Noble Energy, Inc.   | CNX Gas Company LLC  | Assignment            | 550/273         |
|                    |                        | Gloria Morris  | Four Leaf Land Company   | Not less than 1/8     | 397/669         |
|                    |                        | Ralph T. Sweeney and Shelley A. Sweeney  | Four Leaf Land Company   | Not less than 1/8     | 397/675         |
|                    |                        | Donald Lee Sweeney   | Four Leaf Land Company   | Not less than 1/8     | 370/605         |
|                    |                        | Rodger A. Sweeney  | Four Leaf Land Company   | Not less than 1/8     | 370/611         |
|                    |                        | Devon Ruth Horsley (Sweeney)   | Four Leaf Land Company   | Not less than 1/8     | 370/629         |
|                    |                        | Anna Sweeney   | Four Leaf Land Company   | Not less than 1/8     | 370/635         |
|                    |                        | LaMoyne Sweeney  | Four Leaf Land Company   | Not less than 1/8     | 370/617         |
|                    |                        | Four Leaf Land Company   | Antero Resources Appalachian<br>Corporation  | Assignment            | 403/566         |
|                    |                        | Antero Resources Corporation   | CNX Gas Company LLC and Noble<br>Energy, Inc.  | Assignment            | 422/517         |
|                    |                        | Noble Energy, Inc.   | CNX Gas Company LLC  | Assignment            | 550/273         |
|                    |                        | Four Leaf Land Company   | Antero Resources Appalachian<br>Corporation  | Not less than 1/8     | 403/561         |
|                    |                        | Antero Resources Corporation   | CNX Gas Company LLC and Noble<br>Energy, Inc.  | Assignment            | 422/517         |
|                    |                        | Noble Energy, Inc.   | CNX Gas Company LLC  | Assignment            | 550/273         |
|                    |                        | Mary Sue Furbee Zebley   | Noble Energy, Inc.   | Not less than 1/8     | 440/447         |
|                    |                        | Thomas Val Furbee and Katherine Shelek-Furbee, h/w   | Noble Energy, Inc.   | Not less than 1/8     | 440/443         |
|                    | 1                      | Allison McKay Hardin (Allison Furbee Herring)  | Noble Energy, Inc.   | Not less than 1/8     | 440/453         |
|                    |                        | Rani J. Boyt   | Noble Energy, Inc.   | Not less than 1/8     | 445/835         |
|                    |                        | Noble Energy, Inc.   | CNX Gas Company LLC  | Assignment (50%)      | 484/288         |
|                    |                        | Noble Energy, Inc.   | CNX Gas Company LLC  | Assignment            | 550/273         |

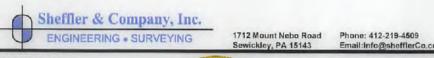
Sheffler & Company, Inc.
ENGINEERING • SURVEYING

1712 Mount Nebo Road Phon Sewickley, PA 15143 Email

Phone: 412-219-4509 Email:Info@shefflerCo.com

| (+) DENOTES LO                          |             | E A  | OF WEST VIA         | DATE: Nove     | mber 15, 201 | 7 - REV March | 9, 2018         |
|---|-------------|--|---------------------|----------------|--------------|---------------|-----------------|
| WELL ON UNIT<br>TOPOGRAPHIC             |             |  | 1 2                 | OPERATOR'S     | WELL#: SI    | HR 31 EHSM    |                 |
| WVDEP<br>OFFICE OF OIL 4                | & GAS       | *  | -                   | API WELL#      | 47           | 095           | 02492           |
| 601 57TH STREE<br>CHARLESTON, V         |             | ***************************************  | Maria Create Cital  |                | STATE        | COUNTY        | PERMIT<br>HOA   |
| Well Type:                              | Oil         | Waste Disposal   | X Production        | ] Deep         |              |               |                 |
|   | X Gas       | Liquid Injection   | Storage             | Shallow        |              |               |                 |
| WATERSHED MC                            | ELROY CREEK | <  | ELEVATION 1,111.0'  |                |              |               |                 |
| COUNTY/DISTRICT:                        |             |  | QUADRANGLE: SHIRL   | EY, WV         |              |               |                 |
| SURFACE OWNER: ALLEN W. SECKMAN, ET AL. |             |  | ACREAGE 30.48       |                |              |               | 04/13/20        |
| OIL & GAS ROYALTY                       | OWNER: ALI  | LEN W. SECKMAN, ET AL.   | ACREAGE 30.48       |                |              |               |                 |
| PLUG                                    | OFF OLD FOR | T DRILL DEEPER DEATH DEEPER DE | NEW FORMATION   PLU |                |              |               |                 |
| TARGET FORMATIO                         | N: MARCELLI | JS   | ESTIM               | ATED DEPTH: _T | VD: 6,725' ± | TMD: 16,24    | 40' ±           |
| WELL OPERATOR:                          | 0.000       | CARLO CONTROL  | DESIG               | NATED AGENT (  | CHRIS TURNI  | ER            |                 |
| Address:                                | 1000 CONSOL | ENERGY DRIVE   | Addres              | s 1 DOMINION D | RIVE         |               |                 |
| City CANONSBURG State PA Zip Code 18    |             |  | 15317 City J.       | ANE LEW        | State        | WV Zip Co     | de <b>26378</b> |

| Tax Map &<br>Parcel | Title Opinion<br>QLS #                   | Grantor, Lessor, etc   | Grantee, Lessee, etc                           | Royalty                   | Book/Page                                   |
|---------------------|--|--|--|---------------------------|---|
| 5-18-11 262762000   |  | William Underwood Et al                                      | The Hope Natural Gas Company, West<br>Virginia | Not less than 1/8         | 55/370                                      |
|                     |  | Hope Natural Gas Company                                     | Consolidated Gas Supply Corporation            | Merger                    | 169/26                                      |
|                     |  | Consolidated Gas Supply Corporation                          | Consolidated Gas Transmission<br>Corporation   | Assignment                | 249/287                                     |
|                     |  | Consolidated Gas Transmission Corporation                    | CNG Development Company                        | Assignment                | 253/57                                      |
|                     |  | CNG Development Company                                      | CNG Producing Company                          | Certificate of Withdrawal | WV Sec. of State                            |
|                     |  | CNG Producing Company  | Dominion Exploration and Production            | Articles of Incorporation | Harrison County Art.<br>Of Inc. Book 58/366 |
|                     | Dominion Exploration and Production Inc. | CONSOL Gas Company   | Affidavit of Name Change                       | 384/191                   |   |
|                     |  | CONSOL Gas Company   | CNX Gas Company LLC                            | Affidavit of Name Change  | 384/191                                     |
|                     |  | Susan L. Spencer and James Spencer, her husband              | Noble Energy, Inc.                             | Not less than 1/8         | 465/268                                     |
|                     |  | Robert Errol Monroe and Sandra Monroe, his wife              | Noble Energy, Inc.                             | Not less than 1/8         | 465/622                                     |
|                     |  | Leola Frances Ray a/k/a Leola Ray and Kenna Ray, her husband | Noble Energy, Inc.                             | Not less than 1/8         | 465/624                                     |
|                     |  | Mona Lee Williams, a widow                                   | Noble Energy, Inc.                             | Not less than 1/8         | 465/626                                     |
|                     |  | Noble Energy Inc.  | CNX Gas Company LLC                            | Assignment (50%)          | 499/447                                     |
|                     |  | Noble Energy Inc.  | CNX Gas Company LLC                            | Assignment                | 550/273                                     |



| (+) DENOTES L          |  |  | OF WEST VIA   |                    | DATE:     | Novembe   | er 15, 201 | 7 - REV March | 9, 2018       |
|------------------------|--|--|---------------|--------------------|-----------|-----------|------------|---------------|---------------|
| TOPOGRAPHIC            | MAPS   | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1                        | A Z           |                    | OPERAT    | OR'S WEI  | LL #: SI   | HR 31 EHSM    |               |
| WVDEP<br>OFFICE OF OIL | & GAS  | *  |               |                    | API WEL   | L#        | 47         | 095           | 02492         |
| 601 57TH STRE          | The same of the sa |  | THE COCK      |                    |           | S         | TATE       | COUNTY        | PERMIT<br>HGA |
| Well Type:             | Oil  | Waste Disposal   | x Productio   | n 🔲                | Deep      |           |            |               | 11401         |
|                        | X Gas  | Liquid Injection   | Storage       | x                  | Shallow   |           |            |               |               |
| WATERSHED: M           | CELROY CREEK   | <  | ELEVATION: 1  | 111.0'             |           |           |            |               |               |
| COUNTY/DISTRICT:       | TYLER / MCE  | LROY   | QUADRANGLE:   | N. W. Colonial St. | Y, WV     |           |            |               |               |
| SURFACE OWNER:         | ALLEN W. SE  | CKMAN, ET AL.  | ACREAGE: 30.  | 18                 |           |           |            |               | 04/13/201     |
| OIL & GAS ROYALT       | Y OWNER: ALI   | LEN W. SECKMAN, ET AL.                                       | ACREAGE: 30.  | 48                 |           |           |            |               | 0 1/ 10/20    |
| PLUC                   | OFF OLD FOR  | T DRILL DEEPER DE MATION DEEPER DE PERFORATE DE DE DE CHANGE | NEW FORMATION |                    |           | _         | -          |               |               |
| TARGET FORMATIC        | N: MARCELLU  | JS   |               | ESTIMA             | TED DEPTH | TVD: 6    | 6,725' ±   | TMD: 16,24    | 0' ±          |
| WELL OPERATOR          | CNX GAS  | COMPANY, LLC   |               |                    | ATED AGE  | 100000    |            |               |               |
| Address:               | 1000 CONSOL E  | ENERGY DRIVE   |               | Address:           | 1 DOMIN   | ION DRIVE |            |               |               |
| City CANONSBURG        | State  | PA Zip Code  | 15317         | City JAI           | NE LEW    | Sta       | ate 1      | AV Zip Coo    | ie 26378      |

| WW-6A  | 1 |
|--------|---|
| (5/13) |   |

| Operator's | Well No. | SHR31EHSM   |
|------------|----------|-------------|
|            |          | <del></del> |

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

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

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

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

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

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

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

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

| Well Operator: | CNX Gas Company, LL   | .c      |
|----------------|-----------------------|---------|
| By:            | Raymond Hoon          | Imalha. |
| Its:           | Permitting Supervisor |         |
|                |                       |         |

Page 1 of



Erika Whetstone Permitting Manager 1000 Consol Energy Dr. Canonsburg, PA 15317 (724) 485-4035

April 9, 2018

West Virginia Department of Environmental Protection Office of Oil & Gas 601 57<sup>th</sup> Street, SE Charlestown, WV 25304-2345

#### Marcellus well "SHR31EHSM"

Dear Reviewer,

This well indicated by this permit application contains a Subsurface Easement Agreement for non-productive portions of the well bore. Attached is a Memorandum of Subsurface Use Agreement which gives CNX the right to drill below the surface of tracts 5-15-14 and 5-15-14.1 shown on the well plat.

CNX Gas Company, LLC understands that the WVDEP will issue the permit in the normal process subject to the completeness of the requirements of the Office of Oil and Gas and does not take a position with regards to the property rights under this agreement.

CNX Gas Company, LLC agrees that the WVDEP's issuance of the permit is in no way an affirmance or validation of CNX Gas Company's claimed rights.

If any further information or correspondence is required, please contact me at (724) 485-4035 or <a href="mailto:ErikaWhetstone@cnx.com">ErikaWhetstone@cnx.com</a>.

Sincerely,

Erika Whetstone Permitting Manager

#### Attachment - Form WW-6A-1 for SHRL31EHS

|   |                      | TH. 0.11               |  |  |   |   |
|---|----------------------|------------------------|--|--|---|---|
|   | Parcel               | QLS#                   | Grantor, Lessor, etc   | Grantee, Lessee, etc   | Royalty   | Book/Page   |
|   | Tax Map &<br>Parcel  | Title Opinion<br>QLS # | Grantor, Lessor, etc   | Grantee, Lessee, etc   | Royalty   | Book/Page   |
| ✓ | 05-15-42             | 261711000              | Lillie Seckman  Drilling Appalachian Corporation  Dominion Appalachian Development Properties LLC  CONSOL Gas Appalachian Development Properties LLC  CONSOL Gas Company  CNX Gas Company  LC  CNX Gas Company LLC  Noble Energy Inc.  Drilling Appalachian Corporation  Antero Resources Corporation  Noble Energy Inc. | Drilling Appalachian Corporation Dominion Appalachian Development Properties I CONSOL Gas Appalachian Development Propertie CONSOL Gas Reserves Inc. CONSOL Gas Reserves Inc. CONSOL Gas Company CNX Gas Company LLC Noble Energy Inc. Drilling Appalachian Corporation CNX Gas Company LLC Antero Resources Appalachian Corporation CNX Gas Company LLC and Noble Energy Inc. CNX Gas Company LLC |   | DB 268/475<br>322/190<br>CIB 9/124<br>CIB 9/144<br>CIB 9/156<br>Barbour CIB 17/1<br>DB 388/286<br>401/342<br>402/704<br>401/499<br>18 422/517<br>DB 550/273 |
| 1 | Tax Map &            | Title Opinion          | Grantor, Lessor, etc   | Grantee, Lessee, etc   | Royalty   | Book/Page   |
|   | 5-15-36              | 282099000              | Everett Roy Weese and Betty June Weese<br>Triad Hunter LLC   | Triad Hunter LLC<br>CNX Gas Company LLC  | Not less than 1/8 Assignment  | 378/195<br>582/188  |
| / | Tax Map &<br>Parcel  | Title Opinion<br>QL5 # | Grantor, Lessor, etc   | Grantee, Lessee, etc   | Royalty   | Book/Page   |
| 1 | 5-15-14<br>5-15-14-1 | 282097000<br>282098000 | Everett Roy Weese and Betty June Weese   | Triad Hunter LLC   | 200-200   | 378/195   |
| 1 |                      |                        | Triad Hunter LLC   | CNX Gas Company LLC  | Not less than 1/8 Subsurface Easement and Right of Way  | 582/199   |
| 1 |                      |                        | THOU THERE ELL   | CHA GOS CAMPANY CO.  | Substitute Casement and right of way  |   |
| 7 | Parcel               | QLS #                  | Grantor, Lessor, etc   | Grantee, Lessee, etc   | Royalty   | Book/Page   |
|   | 5-15-33              | 238357000              | Everett Ray Weese and Betty June Weese, h/w<br>KEPCO, Inc.<br>KEPCO<br>Union Drilling Inc.<br>Equitable Resources Exploration, Inc.  | KEPCO, Inc. Swift Energy Company Union Drilling, Inc. Equitable Resources Exploration, Inc. Swift Energy Company   | Not less than 1/8 Assignment (50%) Merger Name Change Assignment (50%)                                | 232/30<br>254/5<br>WV Sec of State<br>WV Sec of State<br>275/566  |
|   |                      |                        | Swift Energy Company   | Swift Energy Income Partners 1987-D Ltd. (34%)<br>Swift Energy Income Partners 1988-A Ltd. (33%)<br>Swift Energy Income Partners 1988-B Ltd. (22%)<br>Swift Energy Income Partners 1988-1 Ltd. (11%)   | Assignment  | 287/352   |
|   |                      |                        | Swift Energy Income Partners 1987-D Ltd. (34%) Swift Energy Income Partners 1988-A Ltd. (33%) Swift Energy Income Partners 1988-B Ltd. (22%) Swift Energy Income Partners 1988-1 Ltd. (11%) Swift Energy Income Partners 1987-D Ltd. (34%)   | Peake Energy, Inc.   | Assignment  | 319/291   |
|   |                      |                        | Swift Energy Income Partners 1988-A Ltd. (33%)<br>Swift Energy Income Partners 1988-B Ltd. (22%)<br>Swift Energy Income Partners 1988-1 Ltd. (11%)   | Peake Energy, Inc.   | Corrective Assignment   | 321/652   |
|   |                      |                        | Peake Energy, Inc. North Coast Energy Eastern, Inc.  | North Coast Energy Eastern, Inc.<br>EXCO - North Coast Energy Eastern, Inc.  | Name Change<br>Name Change  | WV Sec of State<br>WV Sec of State  |
|   |                      |                        | EXCO Resources (WV), LLC   | EXCO Resources (WV), Inc. (49.75%)<br>EXCO Resources (PA), Inc. (0.5%)<br>BG Production Company (WV), LLC (49.75%)   | Assignment  | 374/808   |
|   |                      |                        | EXCO Resources (WV), Inc. (49,75%)   | EXCO Production Company (WV), LLC (49.75%)   | Name Change   | WV Sec of State   |
|   |                      |                        | EXCO Production Company (WV), LLC (49.75%) EXCO Resources (PA), Inc. (0.5%) BG Production Company (WV), LLC (49.75%)   | Antero Resources Corporation   | Assignment  | 406/195   |
|   |                      |                        | Antero Resources Corporation Noble Energy, Inc.  | CNX Gas Company LLC and Noble Energy, Inc.<br>CNX Gas Company LLC  | Assignment<br>Assignment  | 422/517<br>550/273  |
|   |                      |                        | Gloria Morris<br>Ralph T. Sweeney and Shelley A. Sweeney<br>Donald Lee Sweeney<br>Rodger A. Sweeney<br>Devon Ruth Horsley (Sweeney)  | Four Leaf Land Company   | Not less than 1/8<br>Not less than 1/8<br>Not less than 1/8<br>Not less than 1/8<br>Not less than 1/8 | 397/669<br>397/675<br>370/605<br>370/611<br>370/629   |
|   |                      |                        | Anna Sweeney<br>LaMoyne Sweeney  | Four Leaf Land Company Four Leaf Land Company  | Not less than 1/8<br>Not less than 1/8  | 370/635<br>370/617  |
|   |                      |                        | Four Leaf Land Company Antero Resources Corporation Noble Energy, Inc.   | Antero Resources Appalachian Corporation<br>CNX Gas Company LLC and Noble Energy, Inc.<br>CNX Gas Company LLC  | Assignment Assignment   | 403/566<br>422/517<br>550/273   |
|   |                      |                        |  |  | Assignment  | 550/273   |
|   |                      |                        | Four Leaf Land Company Antero Resources Corporation Noble Energy, Inc.   | Antero Resources Appalachian Corporation<br>CNX Gas Company LLC and Noble Energy, Inc.<br>CNX Gas Company LLC.   | Not less than 1/8 Assignment Assignment   | 403/561<br>422/517<br>550/273   |
|   |                      |                        | Mary Sue Furbee Zebley Thomas Val Furbee and Katherine Shelek-Furbee, h/w  | Noble Energy, Inc.<br>Noble Energy, Inc.   | Not less than 1/8<br>Not less than 1/8  | 440/447<br>440/443  |
|   |                      |                        | Allison McKay Hardin (Allison Furbee Herring)  | Noble Energy, Inc.   | Not less than 1/8   | 440/453   |



|   |                     |               | Rani J. Boyt Noble Energy, Inc. Noble Energy, Inc.   | Noble Energy, Inc. CNX Gas Company LLC CNX Gas Company LLC   | Not less than 1/8 Assignment Assignment | 445/835<br>484/288<br>550/273      |
|---|---------------------|---------------|--|--|---|------------------------------------|
| 1 | Tax Map &           | Title Opinion | Grantor, Lessor, etc   | Grantee, Lessee, etc   | Royalty                                 | Book/Page                          |
| 1 | Part of 5-15-       | 238357000     | Everett Roy Weese and Betty June Weese, h/w  | KEPCO, Inc.  | Not less than 1/8                       | 232/30                             |
|   | 32                  |               | KEPCO, Inc.  | Swift Energy Company   | Assignment (50%)                        | 254/5                              |
|   |                     |               | KEPCO  | Union Drilling, Inc.   | Merger                                  | WV Sec of State                    |
|   |                     |               | Union Drilling Inc.  | Equitable Resources Exploration, Inc.  | Name Change                             | WV Sec of State                    |
|   |                     |               | Equitable Resources Exploration, Inc.  | Swift Energy Company   | Assignment (50%)                        | 275/566                            |
|   |                     |               | Swift Energy Company   | Swift Energy Income Partners 1987-D Ltd. (34%)<br>Swift Energy Income Partners 1988-A Ltd. (33%)<br>Swift Energy Income Partners 1988-B Ltd. (22%)<br>Swift Energy Income Partners 1988-1 Ltd. (11%) | Assignment                              | 287/352                            |
|   |                     |               | Swift Energy Income Partners 1987-D Ltd. (34%) Swift Energy Income Partners 1988-A Ltd. (33%) Swift Energy Income Partners 1988-B Ltd. (22%) Swift Energy Income Partners 1988-1 Ltd. (11%)  | Peake Energy, Inc.   | Assignment                              | 319/291                            |
|   |                     |               | Swift Energy Income Partners 1987-D Ltd. (34%) Swift Energy Income Partners 1988-A Ltd. (33%) Swift Energy Income Partners 1988-B Ltd. (22%)   | Peake Energy, Inc.   | Corrective Assignment                   | 321/652                            |
|   |                     |               | Swift Energy Income Partners 1988-1 Ltd. (11%) Peake Energy, Inc.  | North Coast Energy Eastern, Inc.   | Name Change                             | WV Sec of State                    |
|   |                     |               | North Coast Energy Eastern, Inc.   | EXCO - North Coast Energy Eastern, Inc.  | Name Change                             | W Sec of State                     |
|   |                     |               | EXCO Resources (WV), LLC   | EXCO Resources (WV), Inc. (49.75%)<br>EXCO Resources (PA), Inc. (0.5%)<br>BG Production Company (WV), LLC (49.75%)   | Assignment                              | 374/808                            |
|   |                     |               | EXCO Resources (WV), Inc. (49.75%)   | EXCO Production Company (WV), LLC (49.75%)   | Name Change                             | WV Sec of State                    |
|   |                     |               | EXCO Production Company (WV), LLC (49.75%) EXCO Resources (PA), Inc. (0.5%) BG Production Company (WV), LLC (49.75%)   | Antero Resources Corporation   | Assignment                              | 406/195                            |
|   |                     |               | Antero Resources Corporation Noble Energy, Inc.  | CNX Gas Company LLC and Noble Energy, Inc.<br>CNX Gas Company LLC  | Assignment<br>Assignment                | 422/517<br>550/273                 |
|   |                     |               | Gloria Morris  | Four Leaf Land Company   | Not less than 1/8                       | 397/669                            |
|   |                     |               | Ralph T. Sweeney and Shelley A. Sweeney  | Four Leaf Land Company   | Not less than 1/8                       | 397/675                            |
|   |                     |               | Donald Lee Sweeney   | Four Leaf Land Company   | Not less than 1/8                       | 370/605                            |
|   |                     |               | Rodger A. Sweeney Devon Ruth Horsley (Sweeney)   | Four Leaf Land Company Four Leaf Land Company  | Not less than 1/8<br>Not less than 1/8  | 370/611<br>370/629                 |
|   |                     |               | Anna Sweeney   | Four Leaf Land Company   | Not less than 1/8                       | 370/635                            |
|   |                     |               | LaMoyne Sweeney  | Four Leaf Land Company   | Not less than 1/8                       | 370/617                            |
|   |                     |               | Four Leaf Land Company   | Antero Resources Appalachian Corporation   | Assignment                              | 403/566                            |
|   |                     |               | Antero Resources Corporation Noble Energy, Inc.  | CNX Gas Company LLC and Noble Energy, Inc.<br>CNX Gas Company LLC  | Assignment<br>Assignment                | 422/517<br>550/273                 |
|   |                     |               | Four Leaf Land Company   | Antero Resources Appalachian Corporation   | Not less than 1/8                       | 403/561                            |
|   |                     |               | Antero Resources Corporation Noble Energy, Inc.  | CNX Gas Company LLC and Noble Energy, Inc.<br>CNX Gas Company LLC  | Assignment<br>Assignment                | 422/517<br>550/273                 |
|   |                     |               | Mary Sue Furbee Zebley   | Noble Energy, Inc.   | Not less than 1/8                       | 440/447                            |
|   |                     |               | Thomas Val Furbee and Katherine Shelek-Furbee, h/w   | Noble Energy, Inc.   | Not less than 1/8                       | 440/443                            |
|   |                     |               | Allison McKay Hardin (Allison Furbee Herring)  | Noble Energy, Inc.   | Not less than 1/8                       | 440/453                            |
|   |                     |               | Rani J. Boyt<br>Noble Energy, Inc.   | Noble Energy, Inc. CNX Gas Company LLC   | Not less than 1/8<br>Assignment (50%)   | 445/835<br>484/288                 |
|   |                     |               | Noble Energy, Inc.   | CNX Gas Company LLC  | Assignment                              | 550/273                            |
|   | Tax Map & Parcel    | Title Opinion | Grantor, Lessor, etc   | Grantee, Lessee, etc   | Royalty                                 | Book/Page                          |
|   | Part of 5-15-<br>32 | 238357000     | Everett Ray Weese and Betty June Weese, h/w  | KEPCO, Inc.  | Not less than 1/8                       | 232/30                             |
|   | 34                  |               | KEPCD, Inc.  | Swift Energy Company   | Assignment [50%]                        | 254/5                              |
|   |                     |               | KEPCO  | Union Drilling, Inc.   | Merger                                  | WV Sec of State                    |
|   |                     |               | Union Drilling Inc. Equitable Resources Exploration, Inc.  | Equitable Resources Exploration, Inc.<br>Swift Energy Company  | Name Change<br>Assignment [50%]         | WV Sec of State<br>275/566         |
|   |                     |               | Swift Energy Company   | Swift Energy Income Partners 1987-0 Ltd. (34%)<br>Swift Energy Income Partners 1988-7 Ltd. (33%)<br>Swift Energy Income Partners 1988-8 Ltd. (22%)<br>Swift Energy Income Partners 1988-1 Ltd. (11%) | Assignment                              | .287 <b>/</b> 352                  |
|   |                     |               | Swift Energy Income Partners 1987-D 1td. [34%]<br>Swift Energy Income Partners 1988-A Ltd. (33%)<br>Swift Energy Income Partners 1988-B Ltd. (22%)<br>Swift Energy Income Partners 1988-D Ltd. (31%)<br>Swift Energy Income Partners 1987-D Ltd. (34%) | Peake Energy, Inc.   | Assignment                              | 319/291                            |
|   |                     |               | Swift Energy Income Partners 1988-A Ltd. (33%) Swift Energy Income Partners 1988-B Ltd. (22%) Swift Energy Income Partners 1988-1 Ltd. (11%)   | Peake Energy, Inc.   | Corrective Assignment                   | 321/552                            |
|   |                     |               | Peake Energy, Inc. North Coast Energy Eastern, Inc.  | North Coast Energy Eastern, Inc.<br>EXCO - North Coast Energy Eastern, Inc.  | Name Change<br>Name Change              | WV Sec of State<br>WV Sec of State |

|                                     | EXCO Resources (WV), LLC  | EXCO Resources (WV), Inc. (49.75%)<br>EXCO Resources (PA), Inc. (0.5%)<br>BG Production Company (WV), LLC (49.75%) | Assignment                             | 374/808                            |
|-------------------------------------|---|--|--|------------------------------------|
|                                     | EXCO Resources (WV), Inc. (49.75%)  | EXCO Production Company (WV), LLC (49.75%)   | Name Change                            | WV Sec of State                    |
|                                     | EXCO Production Company (WV), LLC (49.75%) EXCO Resources (PA), inc. (0.5%)                   | Antero Resources Corporation   | Assignment                             | 406/195                            |
|                                     | BG Production Company (WV), LLC (49.75%) Antero Resources Corporation Noble Energy, Inc.      | CNX Gas Company LLC and Noble Energy, Inc. CNX Gas Company LLC   | Assignment<br>Assignment               | 422/517<br>550/273                 |
|                                     | Gloria Morris   | Form Look Land Commons   |  | 202/550                            |
|                                     | Raiph T. Sweeney and Shelley A. Sweeney   | Four Leaf Land Company Four Leaf Land Company  | Not less than 1/8<br>Not less than 1/8 | 397/669<br>397/675                 |
|                                     | Donald Lee Sweeney  | Four Leaf Land Company   | Not less than 1/8                      | 370/605                            |
|                                     | Rodger A. Sweeney   | Four Leaf Land Company   | Not less than 1/8                      | 370/611                            |
|                                     | Devon Ruth Horsley (Sweeney) Anna Sweeney   | Four Leaf Land Company Four Leaf Land Company  | Not less than 1/8                      | 370/629                            |
|                                     | LaMoyne Sweeney   | Four Leaf Land Company   | Not less than 1/8<br>Not less than 1/8 | 370/635<br>370/617                 |
|                                     | Four Leaf Land Company  | Antero Resources Appalachian Corporation   | Assignment                             | 403/566                            |
|                                     | Antero Resources Corporation  | CNX Gas Company LLC and Noble Energy, Inc.   | Assignment                             | 422/517                            |
|                                     | Noble Energy, Inc.  | CNX Gas Company LLC  | Assignment                             | 550/273                            |
|                                     | Four Leaf Land Company  | Antero Resources Appalachian Corporation   | Not less than 1/8                      | 403/561                            |
|                                     | Antero Resources Corporation  | CNX Gas Company LLC and Noble Energy, Inc.   | Assignment                             | 422/517                            |
|                                     | Noble Energy, Inc.  | CNX Gas Company LLC  | Assignment                             | 550/273                            |
|                                     | Thomas J. Kilcoyne  | IB Exploration I, LLC  | Not less than 1/8                      | 404/107                            |
|                                     | JB Exploration I, LLC   | Noble Energy, Inc. and CNX Gas Company LLC   | Assignment                             | 488/786                            |
|                                     | 18 Exploration I, LLC   | Noble Energy, Inc. and CNX Gas Company LLC   | Assignment                             | 461/628                            |
|                                     | Noble Energy, Inc.  | CNX Gas Company LLC  | Assignment                             | 550/273                            |
|                                     | Patricia J. Jones Catarello, Trustee of the Jones-Catarello Oil and Gas                       | IB Exploration I LLC   | Not less than 1/8                      | 410/174                            |
|                                     | Trust JB Exploration I, LLC   | Noble Energy, Inc. and CNX Gas Company LLC   | Assignment                             | 461/628                            |
|                                     | JB Exploration I, LLC   | Noble Energy, Inc. and CNX Gas Company LLC   | Assignment (Corrective)                | 488/786                            |
|                                     | Noble Energy, Inc.  | CNX Gas Company LLC  | Assignment                             | 550/273                            |
|                                     | Mary Sue Furbee Zebley  | Noble Energy, Inc.   | Not less than 1/8                      | 440/447                            |
|                                     | Thomas Val Furbee and Katherine Shelek-Furbee, h/w  | Noble Energy, Inc.   | Not less than 1/8                      | 440/443                            |
|                                     | Allison McKay Hardin (Allison Furbee Herring)   | Noble Energy, Inc.   | Not less than 1/8                      | 440/453                            |
|                                     | Rani J. Boyt  | Noble Energy, Inc.   | Not less than 1/8                      | 445/835                            |
|                                     | Noble Energy, Inc. Noble Energy, Inc.   | CNX Gas Company LLC CNX Gas Company LLC  | Assignment (50%) Assignment            | 484/288<br>550/273                 |
|                                     | room crarge, no.  | CHA GOS COMPANY EEC  | Assignment                             | 350/275                            |
|                                     | WV Minerals, Inc.   | Noble Energy, Inc.   | Not less than 1/8                      | 465/590                            |
|                                     | Noble Energy Inc. Noble Energy Inc.   | CNX Gas Company LLC CNX Gas Company LLC  | Assignment (50%) Assignment            | 499/447<br>550/273                 |
|                                     | <del>-</del>  |  | _                                      |                                    |
|                                     | David Harold Dean and Kimberty Dean   | Noble Energy, Inc.   | Not less than 1/8                      | 448/749                            |
|                                     | Noble Energy Inc. Noble Energy Inc.   | CNX Gas Company LLC CNX Gas Company LLC  | Assignment (50%) Assignment            | 493/223<br>550/273                 |
|                                     |   |  |  |                                    |
| Tax Map & Title Opinio Percel QLS # | <u>Grantor, Lessor, etc</u>   | Grantee, Lessee, etc   | Royalty                                | Book/Page                          |
| 5-15-31 263460000                   |   | Joseph Schlesinger   | Not less than 1/8                      | 23/426                             |
|                                     | Joseph Schlesinger  | Walter A. Frazier  | Assignment                             | 24/44                              |
|                                     | Walter A. Frazier Joseph Schlesinger  | Joseph Schlesinger<br>B. Forst   | Assignment                             | 28/268<br>28/269                   |
|                                     | Joseph Schlesinger  | B. Forst   | Assignment<br>Assignment               | 29/400                             |
|                                     | B. Forst  | The Philadelphia Company of West Virginia  | Assignment                             | Unrecorded                         |
|                                     | The Philadelphia Company of West Virginia   | Pittsburgh and West Virginia Gas Company   | Assignment                             | 101/36                             |
|                                     | Pittsburgh and West Virginia Gas Company  | Equitable Gas Company  | Assignment                             | 132/414                            |
|                                     | Pittsburgh and West Virginia Gas Company Equitable Gas Company                                | Equitable Gas Company  Equitrans, Inc.   | Corrective Assignment<br>Assignment    | 132/445<br>274/471                 |
|                                     | Equitrans, Inc.   | Equitable Gas Company, LLC   | Merger                                 | 433/738                            |
|                                     | Equitable Gas Company, LLC, Equitable Resources, Inc., and EQT                                | Equitrans, LP  | Confirmatory Assignment                | 433/777                            |
|                                     | Corporation EQT Production Company  | Noble Energy, Inc. and CNX Gas Company LLC   | Partial Term Assignment                | 471/436                            |
|                                     | Noble Energy, Inc.  | CNX Gas Company, LLC   | Assignment                             | 550/273                            |
| Tax Map & Title Opinio              | n   |  |  |                                    |
| Parcel QLS#                         | Grantor, Lessor, etc  | Grantee, Lessee, etc   | Davisla                                | Book/Dage                          |
| Part of 5-15-<br>238357000          | Everett Roy Weese and Betty J. Weese, h/w   | MEDICA Inc.  | Royalty                                | Book/Page                          |
| 32 238357000                        |   | KEPCO, Inc.  | Not less than 1/8                      | DB 232/30                          |
|                                     | KEPCO, Inc.<br>KEPCO  | Swift Energy Company<br>Union Drilling, Inc.   | Assignment (50%)                       | 254/5                              |
|                                     | Union Drilling Inc.   | Equitable Resources Exploration, Inc.  | Merger<br>Name Change                  | WV Sec of State<br>WV Sec of State |
|                                     | Equitable Resources Exploration, Inc.   | Swift Energy Company   | Assignment (50%)                       | 275/566                            |
|                                     |   |  |  |                                    |
|                                     |   | Swift Energy Income Partners 1987-D Ltd. (34%)   |  |                                    |
|                                     | Swift Energy Company  | Swift Energy Income Partners 1988-A Ltd. (33%)   | Assignment                             | 287/352                            |
|                                     |   | Swift Energy Income Partners 1988-8 Ltd. (22%)   | rangini)Elli                           | 231332                             |
|                                     |   | Swift Energy Income Partners 1988-1 Ltd. (11%)   |  |                                    |
|                                     |   |  |  |                                    |
|                                     | Swift Energy Income Partners 1987-D Ltd. (34%) Swift Energy Income Partners 1988-A Ltd. (33%) |  |  |                                    |
|                                     | Swift Energy Income Partners 1988-8 Ltd. (22%)  | Peake Energy, Inc.   | Assignment                             | 319/291                            |
|                                     | Swift Energy Income Partners 1988-1 Ltd. (11%)  |  |  |                                    |
|                                     |   |  |  |                                    |

|             |                        | Swift Energy Income Partners 1987-D Ltd. (34%) Swift Energy Income Partners 1988-A Ltd. (33%) Swift Energy Income Partners 1988-B Ltd. (22%) Swift Energy Income Partners 1988-1 Ltd. (11%) Peake Energy, Inc. North Coast Energy Eastern, Inc.         | Peake Energy, Inc.  North Coast Energy Eastern, Inc.  EXCO - North Coast Energy Eastern, Inc.   | Corrective Assignment  Name Change  Name Change  | 321/652<br>WV Sec of State<br>WV Sec of State                          |
|-------------|------------------------|---|---|--|--|
|             |                        | EXCO Resources (WV), LLC  | EXCO Resources (WV), Inc. (49.75%) EXCO Resources (PA), Inc. (0.5%) BG Production Company (WV), LLC (49.75%)  | Assignment   | 374/808  |
|             |                        | EXCO Resources (WV), Inc. (49.75%)  | EXCO Production Company (WV), LLC (49.75%)  | Name Change  | WV Sec of State  |
|             |                        | EXCO Production Company (WV), LLC (49.75%) EXCO Resources (PA), Inc. (0.5%) BG Production Company (WV), LLC (49.75%)  | Antero Resources Corporation  | Assignment   | 406/195  |
|             |                        | Antero Resources Corporation Noble Energy, Inc.   | CNX Gas Company ELC and Noble Energy, Inc.<br>CNX Gas Company LLC   | Assignment<br>Assignment   | 422/517<br>550/273   |
|             |                        | Gloria Morris<br>Ralph T. Sweeney and Shelley A. Sweeney  | Four Leaf Land Company Four Leaf Land Company   | Not less than 1/8<br>Not less than 1/8   | 397/669<br>397/675   |
|             |                        | Donald Lee Sweeney Rodger A. Sweeney Devon Ruth Horsley (Sweeney)   | Four Leaf Land Company<br>Four Leaf Land Company<br>Four Leaf Land Company  | Not less than 1/8<br>Not less than 1/8<br>Not less than 1/8  | 370/605<br>370/611<br>370/629  |
|             |                        | Anna Sweeney LaMoyne Sweeney Four Leaf Land Company   | Four Leaf Land Company Four Leaf Land Company Antero Resources Appalachian Corporation  | Not less than 1/8<br>Not less than 1/8<br>Assignment   | 370/635<br>370/617<br>403/566  |
|             |                        | Antero Resources Corporation Noble Energy, Inc.   | CNX Gas Company LLC and Noble Energy, Inc.<br>CNX Gas Company LLC   | Assignment<br>Assignment   | 422/517<br>550/273   |
|             |                        | Four Leaf Land Company<br>Antero Resources Corporation<br>Noble Energy, Inc.  | Antero Resources Appalachian Corporation<br>CNX Gas Company LLC and Noble Energy, Inc.<br>CNX Gas Company LLC   | Not less than 1/8<br>Assignment<br>Assignment  | 403/561<br>422/517<br>550/273  |
|             |                        | Mary Sue Furbee Zebley Thomas Val Furbee and Katherine Shelek-Furbee, h/w Allison McKay Hardin (Allison Furbee Herring) Rani J. Boyt Noble Energy, Inc. Noble Energy, Inc.  | Noble Energy, Inc. Noble Energy, Inc. Noble Energy, Inc. Noble Energy, Inc. CNX Gas Company LLC CNX Gas Company LLC   | Not less than 1/8<br>Not less than 1/8<br>Not less than 1/8<br>Not less than 1/8<br>Assignment (50%)<br>Assignment | 440/447<br>440/443<br>440/453<br>445/835<br>484/288<br>550/273         |
| Tax Map & ] | Title Opinion<br>QLS # | Grantor, Lessor, etc  | Grantee, Lessee, etc  | - 6  |  |
| 5-18-11     |                        | William Underwood Et al Hope Natural Gas Company Consolidated Gas Supply Corporation Consolidated Gas Transmission Corporation CNG Development Company  | The Hope Natural Gas Company, West Virginia<br>Consolidated Gas Supply Corporation<br>Consolidated Gas Transmission Corporation<br>CNG Development Company<br>CNG Producing Company | Royalty Not less than 1/8 Merger Assignment Assignment Certificate of Withdrawal                                   | Book/Page<br>55/370<br>169/26<br>249/287<br>253/57<br>WV Sec. of State |
|             |                        | CNG Producing Company   | Dominion Exploration and Production   | Articles of Incorporation  | Harrison County Art. Of<br>Inc. Book 58/366                            |
|             |                        | Dominion Exploration and Production Inc. CONSOL Gas Company   | CONSOL Gas Company CNX Gas Company LLC  | Affidavit of Name Change<br>Affidavit of Name Change   | 384/191<br>384/191   |
|             |                        | Susan L. Spencer and James Spencer, her husband Robert Errol Monroe and Sandra Monroe, his wife Leola Frances Ray a <sup>†</sup> /u <sup>†</sup> a Leola Ray and Kenna Ray, her husband Monza Lee Williams, a widow Noble Energy Inc. Noble Energy Inc. | Noble Energy, Inc. Noble Energy, Inc. Noble Energy, Inc. Noble Energy, Inc. CNX Gas Company LLC CNX Gas Company LLC   | Not less than 1/8<br>Not less than 1/8<br>Not less than 1/8<br>Not less than 1/8<br>Assignment (50%)<br>Assignment | 465/268<br>465/622<br>465/624<br>465/626<br>499/447<br>550/273         |

#### SUBSURFACE EASEMENT AND RIGHT-OF-WAY

WHEREAS, TRIAD HUNTER, LLC, a Delaware limited liability company, with an address at 125 Putnam Street, Marietta, OH 45750 ("Grantor"), is the owner of certain leasehold interest in the oil and gas leases more particularly described on Exhibit A attached hereto (the "Subject Leases");

WHEREAS, CNX GAS COMPANY LLC, a Virginia limited liability company with an address at 1000 CONSOL Energy Drive, Canonsburg, Pennsylvania 15317 ("Grantee"), has requested from Grantor a non-exclusive subsurface easement and right-of-way to drill one or more wellbores in, under, through, and across the Subject Leases for the purposes of drilling, completing, reworking, deepening, plugging back, recompleting, injecting, operating, and plugging and abandoning one or more horizontal or directional wells drilled from a surface location located off of the Subject Leases to access, explore for, and produce hydrocarbons ("Subsurface Easement"); and

WHEREAS, to the extent Grantor owns certain rights in the Subject Leases, Grantor has agreed to grant the Subsurface Easement to Grantee on the terms and conditions set forth herein;

#### NOW, THEREFORE, WITNESSETH:

That Grantor, for and in consideration of the sum of Ten Dollars (\$10.00) and other good and valuable consideration in hand paid to Grantor, the receipt and sufficiency of which are hereby acknowledged, does hereby GRANT, BARGAIN, AND CONVEY unto Grantee, limited to its rights under the Subject Leases, the Subsurface Easement; provided, however, that such easement shall not permit Grantee to produce hydrocarbons from the Subject Leases insofar as the Subject Leases fall within the Weese Hunter Unit as shown on Exhibit "B" attached hereto, or to cause, make, conduct, or perform, as the case may be, perforations, open hole completions, fracture operations, or other stimulation operations which could result in Grantee accessing or otherwise producing minerals, beneath the Subject Leases insofar as the Subject Leases fall within the Weese Hunter Unit as shown on Exhibit "B" attached hereto, provided that such limitations shall not restrict Grantee from removing material and associated minerals in the drilling of the wellbore subject to this Subsurface Easement.

Grantee, at its sole cost and expense, shall comply in all material respects with all applicable federal, state, and local laws, including rules, regulations, and safety standards, in connection with Grantee's use of the Subsurface Easement.

Grantee shall and hereby does agree to indemnify and hold harmless Grantor, its officers, directors, agents, contractors, servants, employees, successors, and assigns ("Grantor Group"), from and against all liability, damages, suits, actions, costs, and expenses of whatsoever nature (including reasonable attorneys' fees) to persons or property caused by or arising out of

Grantee's use of the Subsurface Easement, except where such claims result from the gross negligence or willful misconduct of one or more of the Grantor Group, as the case may be.

This Subsurface Easement shall terminate automatically upon actual abandonment. "Actual abandonment" shall occur upon the earlier of the following: (1) Grantee provides Grantor with a written notice of abandonment or (2) the Subsurface Easement is no longer being used by Grantee for a continuous period of two years. In the event of termination, and at the request of Grantor, Grantee shall execute and deliver to Grantor a written release in recordable form memorializing said termination. Notwithstanding anything in this agreement to the contrary, the Subsurface Easement shall survive to the extent necessary for Grantee to meet any obligations it may have to plug and abandon a horizontal or directional well accessed through said easement.

Any notice provided or permitted to be given in this agreement must be in writing and may be given by depositing the notice in the United States mail, postage prepaid, certified with return receipt requested, and addressed to the party to be notified. Notice deposited in the mail in the foregoing manner shall be deemed received five (5) days after it is so deposited, excluding Sundays and Postal holidays. Notice given in any other manner shall be effective only if and when actually received by the party to be notified. For purposes of notice, the addresses of the parties shall be as follows until changed as herein provided:

#### **GRANTOR:**

TRIAD HUNTER, LLC 125 Putnam Street Marietta, OH 45750 Attn: Jacob Biehl, Senior Landman

#### **GRANTEE:**

CNX GAS COMPANY LLC 1000 CONSOL Energy Drive Canonsburg, PA 15317-6506 Attn: Derek Fitzwater, Senior Landman

Either party, by notifying the other party hereto in the manner provided in this paragraph, may designate a different address for receipt of subsequent notices.

The person and officer signing below on behalf of Grantor represents and warrants that the person signing below on behalf of Grantor was authorized to do so.

This agreement, and all terms, provisions, and obligations hereof, shall be covenants running with the Subject Leases and shall be binding upon Grantor, and inure to the benefit of Grantee, and their respective legal representatives, executors, administrators, agents, servants, employees, contractors, heirs, successors, and assigns.

Each of the parties agrees to execute and deliver such instruments and documents, and to take such further actions, as the other may, from time to time, reasonably request in order to effectuate the purposes and to carry out the terms of this agreement.

This agreement shall be governed by and construed in accordance with the laws of the State of Ohio without giving effect to any conflict of law rules or statutes that would mandatorily require the application of the laws of any other state.

This agreement may be executed in multiple counterparts all of which when taken together shall constitute a single agreement with the same force and effect as if all parties had signed the same copy of this agreement.

This grant contains all of the understandings, representations, and agreements between the parties with respect to the subject matter hereof, and no prior understandings, representations, or agreements, verbal or written, have been made modifying, adding to or changing the terms of the agreement. No amendments, modifications or revisions hereof shall be effective unless made in writing and signed by the parties hereto.

[Signature and Acknowledgement Pages Follow]

IN WITNESS WHEREOF, Grantor has caused this agreement to be executed by its duly authorized representative on the date set forth in the acknowledgment below.

#### GRANTOR:

TRIAD HUNTER, LLC

Name: John K. Reinhart

Title: President and Chief Executive Officer

#### **ACKNOWLEDGMENT**

| STATE OF TEXAS   | ) |    |
|------------------|---|----|
|                  | ) | SS |
| COUNTY OF DALLAS | ) |    |

On this the 104h day of October, 2017, before me, the undersigned authority, personally appeared John K. Reinhart, who acknowledged himself to be the President and Chief Executive Officer of Triad Hunter, LLC, a Delaware limited liability company, and that he as such President and Chief Executive Officer, being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by himself as President and Chief Executive Officer.

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

My Commission Expires 41-2021

Notary Public

JACOB M BIEHL
Notary Public State of OhMy Commission Expire:
September 1, 2021

IN WITNESS WHEREOF, Grantee has caused this agreement to be executed by its duly authorized representative on the date set forth in the acknowledgment below.

#### GRANTEE:

CNX GAS COMPANY LLC

Title: Assistant Vice President

#### ACKNOWLEDGMENTS

| COMMONWEALTH OF PENNSYLVANIA   | )  |
|--|--|
|  | ) SS:  |
| COUNTY OF WASHINGTON   | )  |
| On this the 10th day of 00th or personally appeared Timothy Surmick, who are | , 2017, before me, the undersigned authority, cknowledged himself to be the Assistant Vice |
| President of CNX Gas Company LLC, a Virgin                                   |  |
| Assistant Vice President, being authorized to de                             | o so, executed the foregoing instrument for the  |
| purposes therein contained by signing the name                               | of the limited liability company by himself as   |
| Assistant Vice President.  |  |
| IN WITNESS WHEDEOE I herounto not  | t my hand and official soci  |

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

My Commission Expires 3-122619

COMMONWEALTH OF PENNSYLVANIA

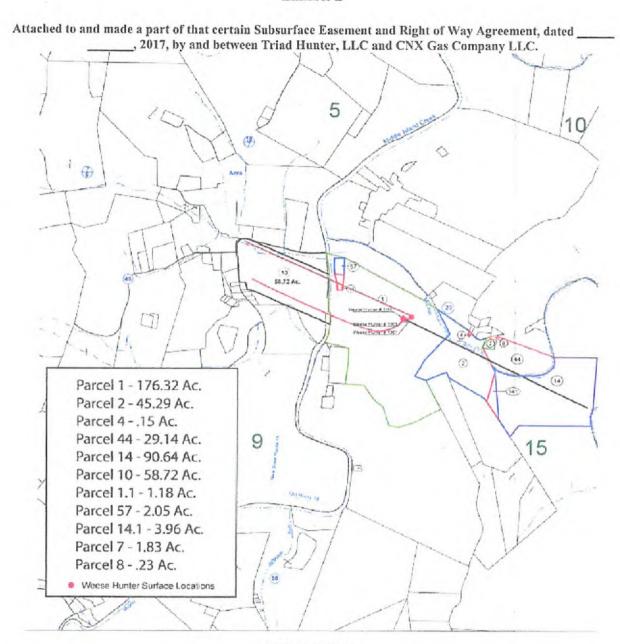
NOTARIAL SEAL Casey Yantko, Notary Public
Cecil Twp., Washington County
My Commission Expires March 12, 2019
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

Exhibit A

Attached to and made a part of that certain Subsurface Easement and Right of Way Agreement, dated October 10, 2017, by and between Triad Hunter, LLC and CNX Gas Company LLC.

| Lessor                | Lessee            | Lease Date  | Recording | Parcel    | District | County | Gross Acres |
|-----------------------|-------------------|-------------|-----------|-----------|----------|--------|-------------|
| Roger R. Weese, et al | Triad Hunter, LLC | 11/16/2010  | 378/195   | 5-15-14   | McElroy  | Tyler  | 94.6        |
|                       |                   |             |           | 5-15-14.1 |          |        |             |
| Arnold Schulberg      | Triad Hunter, LLC | 6/3/2010    | 376/412   | 5-15-2    | McElroy  | Tyler  | 45.29       |
| Charles Conaway       | Triad Hunter, LLC | 6/10/2010   | 376/415   | 5-15-2    | McElroy  | Tyler  | 45.29       |
| Margaret Torok        | Triad Hunter, LLC | 7/12/2010   | 376/409   | 5-15-2    | McElroy  | Tyler  | 45.29       |
| Mary Belle Hoover     | Triad Hunter, LLC | 10/23/2010  | 378/174   | 5-15-2    | McElroy  | Tyler  | 45.29       |
| Lavaughn Crawford     | Triad Hunter, LLC | 8/10/2010   | 377/448   | 5-15-2    | McElroy  | Tyler  | 45.29       |
| James Thomas          | Triad Hunter, LLC | 10/5/2010   | 380/192   | 5-15-2    | McElroy  | Tyler  | 45.29       |
| Wilmadeen Minger      | Triad Hunter, LLC | 10/6/2010   | 378/135   | 5-15-2    | McElroy  | Tyler  | 45.29       |
| Ralph & Mary McKinney | Triad Hunter, LLC | 10/14/2010  | 378/117   | 5-15-2    | McElroy  | Tyler  | 45.29       |
| Gloria McKinney Smith | Triad Hunter, LLC | 10/15/2010  | 380/180   | 5-15-2    | McElroy  | Tyler  | 45.29       |
| Mary Jane McKinney    | Triad Hunter, LLC | 12/24/2010  | 380/225   | 5-15-2    | McElroy  | Tyler  | 45.29       |
| Alice Leota Shreve    | Triad Hunter, LLC | 11/4/2010   | 380/201   | 5-15-2    | McElroy  | Tyler  | 45.29       |
| Benny Thomas          | Triad Hunter, LLC | 1/12/2011   | 383/78    | 5-15-2    | McElroy  | Tyler  | 45.29       |
| Denver Thomas         | Triad Hunter, LLC | 12/24/2010  | 380/216   | 5-15-2    | McElroy  | Tyler  | 45.29       |
| Freda James           | Triad Hunter, LLC | 10/18/2010  | 380/186   | 5-15-2    | McElroy  | Tyler  | 45.29       |
| Ernie Thomas          | Triad Hunter, LLC | 10/7/2010   | 378/108   | 5-15-2    | McElroy  | Tyler  | 45.29       |
| Eddie & Shirley Hayes | Triad Hunter, LLC | 11/5/2010   | 380/171   | 5-15-2    | McElroy  | Tyler  | 45.29       |
| Lavern Hayes          | Triad Hunter, LLC | 8/19/2010   | 377/451   | 5-15-2    | McElroy  | Tyler  | 45.29       |
| Johanna Tustin        | Triad Hunter, LLC | 12/27/2010` | 380/219   | 5-15-2    | McElroy  | Tyler  | 45.29       |
| Robert Haught         | Triad Hunter, LLC | 8/16/2010   | 377/445   | 5-15-2    | McElroy  | Tyler  | 45.29       |
| Shelia & James Pogue  | Triad Hunter, LLC | 9/20/2010   | 378/96    | 5-15-2    | McElroy  | Tyler  | 45.29       |
| Sandra & Paul Wentz   | Triad Hunter, LLC | 9/27/2010   | 378/105   | 5-15-2    | McElroy  | Tyler  | 45.29       |
| Glenda & Joe Hamner   | Triad Hunter, LLC | 10/15/2010  | 378/120   | 5-15-2    | McElroy  | Tyler  | 45.29       |
| Melissa Ward          | Triad Hunter, LLC | 10/11/2010  | 380/204   | 5-15-2    | McElroy  | Tyler  | 45.29       |
| Leslie C. Hayes       | Triad Hunter, LLC | 11/10/2010  | 380/234   | 5-15-2    | McElroy  | Tyler  | 45.29       |

Exhibit B



# UNIT MAP Total Unit Acreage, 409.51 Ac. Weese Hunter # 1001 & # 1003 & # 1110 Tyler County West Virginia

#### TRIAD HUNTER



Erika Whetstone Manager – Gas Permitting CONSOL Energy Inc. 1000 CONSOL Energy Drive Canonsburg, PA 15317

West Virginia Department of Environmental Protection Office of Oil and Gas 601 57<sup>th</sup> Street SE Charleston, WV 25304-2345

RE: Road Letter - SHR 31 Well Pad

To Whom It May Concern:

CNX Gas Company LLC has the right to drill, stimulate and produce wells that are drilled under the County and State Roads as designated on the plats.

Should you have any questions or need additional information, please do not hesitate to contact me at <a href="mailto:erikawhetstone@consolenergy.com">erikawhetstone@consolenergy.com</a> or 724-485-4035.

Sincerely,

Erika Whetstone

CNX Gas Company LLC

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

|  | ce Certification: //-22-11   | AI  | PI No. 47-   |  |  |
|--|--|---|--|--|--|
|  |  |   | perator's Well No. 8   | HR31EHSM   |  |
|  |  | W   | ell Pad Name: SHF  | 31HSM  |  |
| Notice has l   |  |   |  |  |  |
| Pursuant to th   | ne provisions in West Virginia Code  | § 22-6A, the Operator has provide   | ed the required partie   | s with the Notice Forms listed   |  |
| below for the State:   | tract of land as follows:<br>West Virginia   | Fo  | sting: 515367.079  |  |  |
| County:  | Tyler  |   | orthing: 4363432.834   |  |  |
| District: McElroy  |  | Public Road Access:   | -  | :58  |  |
| Quadrangle:  | Shirley  | Generally used farm   |  |  |  |
| Watershed:   | McElroy Creek  |   | see turn name.   |  |  |
| information r<br>of giving the<br>requirements<br>Virginia Cod | ed the owners of the surface descri-<br>equired by subsections (b) and (c), so<br>surface owner notice of entry to su<br>of subsection (b), section sixteen of<br>e § 22-6A-11(b), the applicant shall thave been completed by the applicant | ection sixteen of this article; (ii) the<br>arvey pursuant to subsection (a),<br>if this article were waived in wr<br>ender proof of and certify to the s | nat the requirement v<br>section ten of this a<br>iting by the surface | vas deemed satisfied as a result<br>article six-a; or (iii) the notice<br>owner; and Pursuant to West  |  |
| Pursuant to  | West Virginia Code § 22-6A, the Op   |   | Notice Certification   |  |  |
| that the Ope   | erator has properly served the require<br>ECK ALL THAT APPLY   | ad parties with the following:  |  | OOG OFFICE USE<br>ONLY   |  |
| that the Ope   |  |   |  | The state of the s |  |
| *PLEASE CHI  | ECK ALL THAT APPLY   | ■ NOTICE NOT REQUIRED SEISMIC ACTIVITY WAS CO   | ONDUCTED   | ONLY  RECEIVED/ NOT REQUIRED   |  |
| *PLEASE CHI  1. NO   | ECK ALL THAT APPLY TICE OF SEISMIC ACTIVITY or   | ■ NOTICE NOT REQUIRED SEISMIC ACTIVITY WAS CO VEY or □ NO PLAT SURVEY   | ONDUCTED  WAS CONDUCTE  D BECAUSE                                      | ONLY  RECEIVED/ NOT REQUIRED   |  |
| *PLEASE CHI  1. NO   | ECK ALL THAT APPLY TICE OF SEISMIC ACTIVITY or TICE OF ENTRY FOR PLAT SURY   | ■ NOTICE NOT REQUIRED SEISMIC ACTIVITY WAS COVEY OF □ NO PLAT SURVEY □ NOTICE NOT REQUIRED NOTICE OF ENTRY FOR PLAT                                       | ONDUCTED  WAS CONDUCTE  D BECAUSE  AT SURVEY                           | ONLY  RECEIVED/ NOT REQUIRED  RECEIVED/ NOT REQUIRED   |  |
| *PLEASE CHI  1. NO  2. NO  3. NO                               | ECK ALL THAT APPLY TICE OF SEISMIC ACTIVITY or TICE OF ENTRY FOR PLAT SURY   | ■ NOTICE NOT REQUIRED SEISMIC ACTIVITY WAS COVEY OF □ NO PLAT SURVEY □ NOTICE NOT REQUIRED NOTICE OF ENTRY FOR PLAY WAS CONDUCTED OF □ WRITTEN WAIVER BY  | ONDUCTED  WAS CONDUCTE  D BECAUSE  AT SURVEY                           | ONLY  RECEIVED/ NOT REQUIRED  RECEIVED/ NOT REQUIRED   |  |
| *PLEASE CHI 1. NO 2. NO 3. NO                                  | ECK ALL THAT APPLY  FICE OF SEISMIC ACTIVITY OF  TICE OF ENTRY FOR PLAT SURY  TICE OF INTENT TO DRILL OF   | ■ NOTICE NOT REQUIRED SEISMIC ACTIVITY WAS COVEY OF □ NO PLAT SURVEY □ NOTICE NOT REQUIRED NOTICE OF ENTRY FOR PLAY WAS CONDUCTED OF □ WRITTEN WAIVER BY  | ONDUCTED  WAS CONDUCTE  D BECAUSE  AT SURVEY                           | ONLY  RECEIVED/ NOT REQUIRED  RECEIVED  RECEIVED/ NOT REQUIRED  R  |  |

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-11(b), the Certification of Notice to the person may be made by affidavit of personal services the return receipt card or other postal receipt for certified mailing.

04/13/2018

WW-6AC (1/12)

| Certification of | of Notice is | hereby | given: |
|------------------|--------------|--------|--------|
|------------------|--------------|--------|--------|

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

 Well Operator:
 CNX Gas Company, LLC
 Address:
 1000 Consol Energy Drive

 By:
 Raymond Hoon
 Canonsburg, PA 15317

 Its:
 Permitting Supervisor
 Facsimile:

 Telephone:
 724-485-3540
 Email:
 RaymondHoon@ConsolEnergy.com

COMMONWEALTH OF PENNSYLVANIA

NOTARIAL SEAL
Sara M. Micoli, Notary Public
Cecil Twp., Washington County
My Commission Expires March 11, 2019
MBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

| Subscribed and sworn before me this 2 day of / | VOV | 12011 |
|--|-----|-------|
|--|-----|-------|

My Commission Expires 3/11/19

#### 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 <a href="mailto:depprivacyofficer@wv.gov">depprivacyofficer@wv.gov</a>.

WW-6A (9-13) PI NO. 474709502492

OPERATOR WELL NO. SHR31EHSM
Well Pad Name: SHR31HSM

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

Notice Time Requirement: notice shall be provided no later than the filing date of permit application. Date of Notice: 1/-22-17 Date Permit Application Filed: 1/-27-17 Notice of: PERMIT FOR ANY ☐ CERTIFICATE OF APPROVAL FOR THE WELL WORK CONSTRUCTION OF AN IMPOUNDMENT OR PIT Delivery method pursuant to West Virginia Code § 22-6A-10(b) ☑ REGISTERED ☐ METHOD OF DELIVERY THAT REQUIRES A PERSONAL RECEIPT OR SIGNATURE CONFIRMATION SERVICE MAIL Pursuant to W. Va. Code § 22-6A-10(b) no later than the filing date of the application, the applicant for a permit for any well work or for a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well 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 (e), 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: COAL OWNER OR LESSEE ☐ SURFACE OWNER(s) Name: See attached. Name: See attached. Address: Address: COAL OPERATOR Name: Name: Address: Address: SURFACE OWNER(s) (Road and/or Other Disturbance) ☑ SURFACE OWNER OF WATER WELL Name: See attached AND/OR WATER PURVEYOR(s) Address: Name: See attached Address: Name: OPERATOR OF ANY NATURAL GAS STORAGE FIELD ☐ SURFACE OWNER(s) (Impoundments or Pits) Name: EQT Corporation Address: EQT Plaza, 625 Liberty Ave, Ste 1700 Name: Pittsburgh, PA 15222 Address: \*Please attach additional forms if necessary

WW-6A (8-13)

Office of Oil and was

NOV 2 8 2017

OPERATOR WELL NO. SHR31EHSM

Well Pad Name: SHR31HSM

WV Department of Environmental Protection

Notice is hereby given:

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

#### This Notice Shall Include:

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

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

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

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

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

#### Well Location Restrictions

Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No well pad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, nothing contained in this section prevents an operator from conducting the activities permitted or authorized by a Clean Water Act Section 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state or within the restricted areas referenced in this section. (d) The well location restrictions set forth in this section shall not apply to any well on a multiple well pad if at least one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 31, 2012, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items 04/13/2018

API NO. **4-7 0 9 5 0 2 4 9 2**OPERATOR WELL NO. SHR31EHSM

Well Pad Name: SHR31HSM

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 location or construction of the applicant's proposed well work to the Secretary at:

Chief, Office of Oil and Gas

Department of Environmental Protection

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

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

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#### Time Limits and Methods for Filing Comments.

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

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

#### **Comment Requirements**

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

Disclaimer: All comments received will be placed on our web site <a href="http://www.dep.wv.gov/oil-and-gas/Horizontal-Permits/Pages/default.aspx">http://www.dep.wv.gov/oil-and-gas/Horizontal-Permits/Pages/default.aspx</a> 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) 4709502492

API NO. 47-\_\_\_OPERATOR WELL NO. SHR31EHSM
Well Pad Name: SHR31

Notice is hereby given by:

Well Operator: CNX Gas Company, LLC Telephone: 724-485-3540

Email: RaymondHoon@ConsolEnergy.com

Address: 1000 Consol Energy Drive

Canonsburg, PA 15317

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 <a href="mailto:deprivacyofficer@wv.gov">deprivacyofficer@wv.gov</a>.

COMMONWEALTH OF PENNSYLVANIA

NOTARIAL SEAL
Sara M. Micoli, Notary Public
Cecil Twp., Washington County
My Commission Expires March 11, 2019
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

Subscribed and sworn before me this 11 day of Nov , 2017

Daras M. Micoli

Notary Public

My Commission Expires 3/11/19

RECEIVED Gas
Office of Oil and Gas
NOV 28 2017
NOV Department of Environmental Protection

#### Surface Owner(s) (Well Site, Road and/or Other Disturbance):

Allen W. Seckman and Nancy J. Seckman, trustees of the Allen and Nancy Seckman Irrevocable Trust dated November 29, 2016

824 Jefferson Run Road, Alma, WV 26320

Donald L. Seckman

705 Jefferson Run Road, Alma, WV 26320

Potts Place LLC

353 Foundry St., New Martinsville, WV 26155

Becannray LLC

5042 Tyler Highway, Sisterville, WV 26175

STS Enterprises LLC

659 Jefferson Run Road, Alma, WV 26320

George G. Hamilton

2812 McElroy Creek Road, Alma, WV 26320

Charles E. Hamilton, Jr.

17095 WV Rt 23 N, West Union, WV 26456

Gary L. Hamilton

102 Big Flint Road, West Union, WV 26456

Nicole Eastham

34973 State Route 800, New Matamoras, OH 45767

Alexandria Fetty

44958 Benwood Road, Sardis, OH 43946

Rachelle Hise

44832 State Route 78, Woodsfield, OH 43793

#### Coal Owner(s):

Allen W Seckman and Nancy J. Seckman, trustees of the Allen and Nancy Seckman Irrevocable Trust

Dated November 29, 2016

824 Jefferson Run Road, Alma WV 26320

Donald L. Seckman

705 Jefferson Run Road, Alma, WV 26320

George G. Hamilton

2812 McElroy Creek Road, Alma, WV 26320

Office of Oil and Gas

NOV 28 2017

WV Department of Environmental Protection

Page 1 of 2 04/13/2018 Charles E. Hamilton, Jr. 17095 WV Rt 23 N, West Union, WV 26456

Gary L. Hamilton 102 Big Flint Road, West Union, WV 26456

Potts Place LLC 353 Foundry St., New Martinsville, WV 26155

Becannray LLC 5042 Tyler Highway, Sisterville, WV 26175

Nicole Eastham 34973 State Route 800, New Matamoras, OH 45767

Alexandria Fetty 44958 Benwood Road, Sardis, OH 43946

Rachelle Hise 44832 State Route 78, Woodsfield, OH 43793

STS Enterprises LLC 659 Jefferson Run Road, Alma, WV 26320

William P. Ingram 471 Next Road, Sisterville, WV 26175

Jeffrey Alan Baker 1640 Gorrells Run Road, Middlebourne, WV 26149

Debra Kay Jenkins 305 Fair Avenue, Middlebourne, West Virginia 26149

William M. Baker 753 Middle Island Road, Middlebourne, WV 26149

Donald K. Baker 995 Gorrells Run Road, Middlebourne, WV 26149

#### Surface Owner of Water Well And/Or Water Purveyor(s):

Bessie Haught 771 McElroy Creek Rd, Alma, WV 26320

Michael K & Virginia L Griffin PO Box 254, Middlebourne, WV 26149

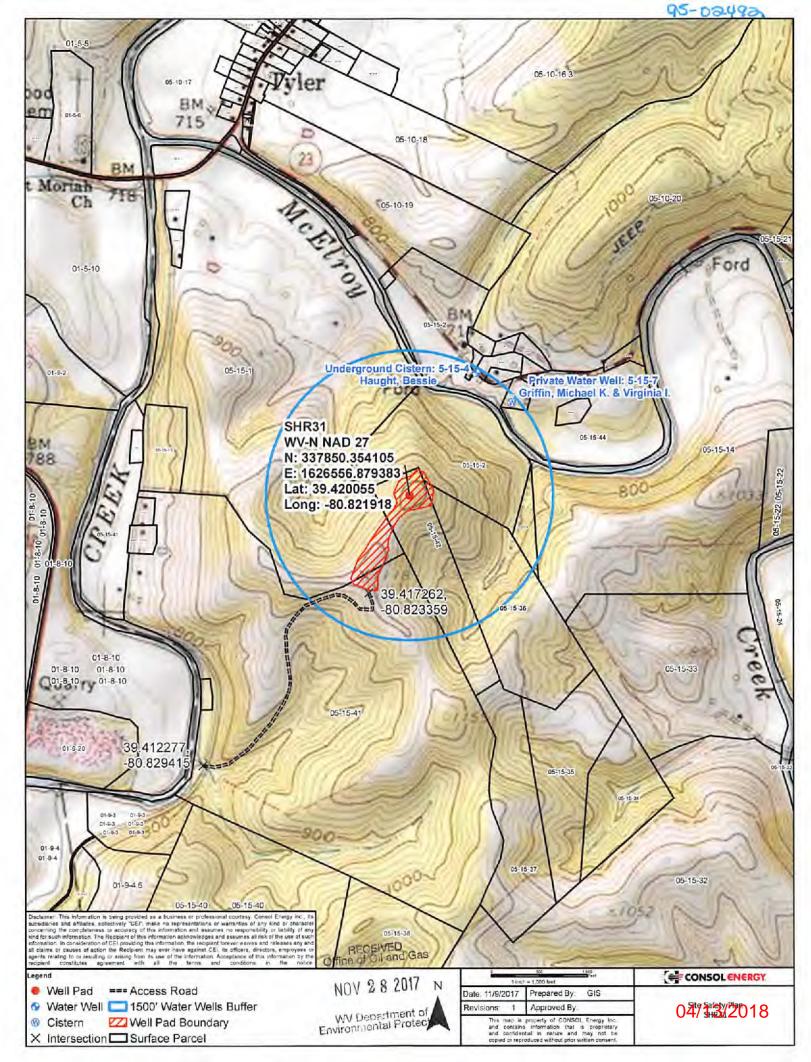
#### Operator of Any Natural Gas Storage Field:

EQT Corporation

EQT Plaza, 625 Liberty Ave, Ste 1700, Pittsburgh, PA 15222



Page **2** of **2** 04/13/2018



WW-6A3 (1/12)

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

|  |   | equirement:   | Notice shall be prov  | ided at  | least SEVEN (7) da   | ys but no more that  | n FORTY-FIVE (4  | 5) days prior to  |
|--|---|---|---|--|--|--|--|---|
| Date   |   | 10/11/17  | Date of Plan  | ned E  | ntrv: 10/19/17   |  |  |   |
| Dutt   | or i totacc.  |   |   | med D  |  |  |  |   |
| Deliv  | ery metho   | od pursuant t   | o West Virginia Co  | ode § 2  | 2-6A-10a   |  |  |   |
|  | PERSONA   | AL  | REGISTERED  |  | METHOD OF DEL  | IVERY THAT RE  | EQUIRES A  |   |
|  | SERVICE   |   | MAIL  |  | RECEIPT OR SIGN  | NATURE CONFIR  | MATION   |   |
| on to<br>but n<br>benea<br>owne<br>and S<br>Secre<br>enabl | the surface<br>o more that<br>ath such tra-<br>er of mineral<br>Sediment Contary, which<br>te the surface | e tract to cond<br>n forty-five do<br>not that has fil-<br>als underlying<br>control Manua<br>h statement sh<br>ce owner to o | duct any plat surveys<br>ays prior to such ented a declaration pure<br>such tract in the coll and the statutes and<br>all include contact in<br>btain copies from the | require<br>ry to: (<br>suant to<br>unty tax<br>d rules<br>nforma | filing a permit applied pursuant to this at 1) The surface owner section thirty-six, at records. The notice related to oil and gation, including the attary. | rticle. Such notice s<br>r of such tract; (2)<br>rticle six, chapter t<br>e shall include a sta<br>s exploration and p | shall be provided at<br>to any owner or less<br>wenty-two of this co<br>atement that copies<br>roduction may be of | least seven days see of coal seams ode; and (3) any of the state Erosion btained from the |
|  |   | y provided to   | );  |  | <b>□</b>   | . OUDED OD LE  | 2000   |   |
|  |   | OWNER(s)  |   |  |  | L OWNER OR LE  |  |   |
|  | e: See attache  |   |   |  | Name: See  | attached   |  | -   |
| Adar   |   |   |   | -  | Address:   |  |  | 3   |
| Name   | e:  |   |   |  | -  | English Adams and American   |  | 7   |
| Addr   | ess:  |   |   |  |  | ERAL OWNER(s)  |  |   |
|  |   |   |   |  |  |  |  |   |
| Name   | e:  |   |   | -  | Address:   |  |  |   |
| Addi   | css   |   |   |  | *please attac  | h additional forms if ne   | cessary  | 2   |
| NT - 45  |   | La alaaa  |   |  |  |  |  |   |
| Pursi  | ent to Wes  | by given:<br>st Virginia Co   | de 8 22-6A-10(a) n  | otice is   | hereby given that th   | e undersigned well   | l operator is plannin  | g entry to conduct  |
|  |   |   | nd as follows:  |  | moreo, green man   | o annotaigned were   | operator to prantiti   | 6 anny to contain   |
| State  |   | Vest Virginia   | Market San  |  | Approx. Latit  | ude & Longitude:   | 39.420055, -80.821918  |   |
| Coun   | ty: T   | yler  |   |  |  | Access:  | County Route 58  |   |
| Distr  | _   | McElroy   |   |  | Watershed:   | 24 - A - A - A   | McElroy Creek  |   |
| Quad   | rangle: s   | hirley  |   |  | _ Generally use  | d farm name:   | Seckman  |   |
| may l<br>Charl   | be obtained<br>eston, WV  | from the Sec<br>25304 (304-   | retary, at the WV D<br>926-0450). Copies  | epartm<br>of such  | and the statutes an<br>ent of Environmenta<br>documents or addit<br>//oil-and-gas/pages/   | l Protection headqi<br>ional information r   | uarters, located at 60   | 01 57th Street, SE,   |
| Noti   | ce is here  | by given by   |   |  |  |  |  | RECEIVED<br>Office of Oil and Gas   |
|  | Operator:   | CNX Gas Compa   |   |  | Address:   | 1000 Consol Energy Dr  | ive  |   |
|  | hone:   | 724-485-3540  | 71.   |  |  | Canonsburg, PA 15317   |  | NOV 28 2017   |
| Emai   |   | 7.64 3.64 3.64  | ConsolEnergy.com  |  | Facsimile:   | 7.50   |  | tenant of   |
|  |   |   | <b>9</b>  |  |  |  |  | Environmental Protection  |
| Oil  | nd Cas P  | rivacy Noti   | ce.   |  |  |  |  | -   |

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. 04/13/2018 SHR31CHS

WW6A3 Attachment

#### SURFACE OWNER(S):

Allen W. Seckman and Nancy J. Seckman, trustees of the Allen and Nancy Seckman Irrevocable Trust dated November 29, 2016
824 Jefferson Run Road,
Alma, WV 26320

Donald L. Seckman 705 Jefferson Run Road, Alma, WV 26320

Mary Belle Ashenhart Star Rt Cp Box 80, West Union, WV 26456

Potts Place LLC 353 Foundry St., New Martinsville, WV 26155

Becannray LLC 5042 Tyler Highway, Sisterville, WV 26175

Kathy A. Roberts 42842 Trail Run Road, New Matamoras, OH 45767

STS Enterprises LLC 659 Jefferson Run Road, Alma, WV 26320

George G. Hamilton 2812 McElroy Creek Road, Alma, WV 26320

Charles E. Hamilton, Jr. 17095 WV Rt 23 N, West Union, WV 26456

Gary L. Hamilton 102 Big Flint Road, West Union, WV 26456

Nicole Eastham 34973 State Route 800, New Matamoras, OH 45767 RECEIVED Office of Oil and Gas

NOV 2 8 2017

WV Department of Environmental Protection

> Page 1 of 4 04/13/2018

Alexandria Fetty 44958 Benwood Road, Sardis, OH 43946

Rachelle Hise 44832 State Route 78, Woodsfield, OH 43793

#### COAL OWNER OR LESSEE:

Allen W Seckman and Nancy J. Seckman, trustees of the Allen and Nancy Seckman Irrevocable Trust Dated November 29, 2016 824 Jefferson Run Road, Alma WV 26320

Donald L. Seckman 705 Jefferson Run Road, Alma, WV 26320

George G. Hamilton 2812 McElroy Creek Road, Alma, WV 26320

Charles E. Hamilton, Jr. 17095 WV Rt 23 N, West Union, WV 26456

Gary L. Hamilton 102 Big Flint Road, West Union, WV 26456

Potts Place LLC 353 Foundry St., New Martinsville, WV 26155

Becannray LLC 5042 Tyler Highway, Sisterville, WV 26175

Nicole Eastham 34973 State Route 800, New Matamoras, OH 45767

Alexandria Fetty 44958 Benwood Road, Sardis, OH 43946 RECEIVED Office of Oil and Gas

NOV 28 2017

WV Department of Environmental Protection

Page 2 of 4 04/13/2018 Rachelle Hise 44832 State Route 78, Woodsfield, OH 43793

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Debra Kay Jenkins 305 Fair Avenue, Middlebourne, West Virginia 26149

William M. Baker 753 Middle Island Road, Middlebourne, WV 26149

Donald K. Baker 995 Gorrells Run Road, Middlebourne, WV 26149

#### MINERAL OWNER(S):

Charles E. Hamilton, Jr. 17095 WV Rt 23 N, West Union, WV 26456

Gary L. Hamilton 102 Big Flint Road, West Union, WV 26456

George G. Hamilton 2812 McElroy Creek Road, Alma, WV 26320

Potts Place LLC 353 Foundry St., New Martinsville, WV 26155 Office of Oil and Gas

NOV 28 2017

MV Department of Environmental Protection

Page 3 of 4 04/13/2018 Becannray LLC 5042 Tyler Highway, Sisterville, WV 26175

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Donald L. Seckman 705 Jefferson Run Road, Alma, WV 26320

Office of Oil and Gas

NOV 2 8 2017

WV Department of Environmental Protection

### 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.

|   | Requirement: Notice shall be provided at e:  | least TEN (10) days prior to filing a mit Application Filed: 11 - 27-  | permit application.  |  |
|---|--|--|--|--|
| Delivery met  | hod pursuant to West Virginia Code § 22  | 2-6A-16(b)   |  |  |
| ☐ HAND  | ■ CERTIFIED MAIL   |  |  |  |
| DELIVE  |  | UESTED   |  |  |
| receipt reques<br>drilling a hori<br>of this subsect<br>subsection ma<br>and if availab | Va. Code § 22-6A-16(b), at least ten day ted or hand delivery, give the surface owner zontal well: <i>Provided</i> , That notice given pation as of the date the notice was provided by be waived in writing by the surface owner, facsimile number and electronic mail addressly previously to the SURFACE OW | er notice of its intent to enter upon the pursuant to subsection (a), section tent to the surface owner: <i>Provided, hower</i> . The notice, if required, shall includes of the operator and the operator | ne surface owner's land for the purpose of<br>in of this article satisfies the requirements<br>sever, That the notice requirements of this<br>add the name, address, telephone number, |  |
| Notice is ner   | reby provided to the SURFACE OW  | NER(s):<br>Name:   |  |  |
| Address:  |  | Address:   |  |  |
| State:<br>County:<br>District:<br>Quadrangle:<br>Watershed:                             | West Virginia Tyler McEiroy Shirley McElroy Creek  |  | 515367.079<br>4363432.834<br>County Route 58<br>Seckman  |  |
| This Notice<br>Pursuant to Vifacsimile nun<br>related to hor                            | Shall Include: West Virginia Code § 22-6A-16(b), this raber and electronic mail address of the opizontal drilling may be obtained from the 57th Street, SE, Charleston, WV 25304 (3)   | perator and the operator's authorize<br>Secretary, at the WV Department of   | d representative. Additional information f Environmental Protection headquarters,  |  |
| Notice is her   | reby given by:   |  |  |  |
| Well Operator: CNX Gas Company, LLC   |  | Authorized Representative:   | Raymond Hoon   |  |
| Address:  | 1000 Consol Energy Drive   | Address:   | 1000 Consol Energy Drive   |  |
| Canonsburg, PA  |  | Canonsburg, PA 15317   |  |  |
| Telephone:  | 724-485-3540   | Telephone:   | 724-485-3540   |  |
| Email:<br>Facsimile:  | RaymondHoon@ConsolEnergy.com   | Email: Facsimile:  | RaymondHoon@ConsolEnergy.com   |  |
|   | and and Cleanor  |  |  |  |

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 <a href="mailto:depprivacyofficer@wv.gov">depprivacyofficer@wv.gov</a>.

\*\*RECEIVED\*\*

\*\*RECEIV

N04/13/2018

WV Department of Environmental Protection

#### WW6A Notice of Intent to Drill - Attachment

SHR31HSM

#### **Surface Owner(s):**

Allen W. Seckman and Nancy J. Seckman, trustees of the Allen and Nancy Seckman Irrevocable Trust dated November 29, 2016 824 Jefferson Run Road, Alma, WV 26320

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Alexandria Fetty 44958 Benwood Road, Sardis, OH 43946

Rachelle Hise 44832 State Route 78, Woodsfield, OH 43793

Office of Sill and Gre
NITY 28 2517

WV Department of Silvery of S

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

| Date of Notic  |   | 12.0 2.424   |  |
|--|---|--|--|
| Delivery met   | hod pursuant to West Virginia Code § 22   | 2-6A-16(c)   |  |
| ■ CERTI  | FIED MAIL     1   | HAND   |  |
|  |   | DELIVERY   |  |
| return receipt the planned of required to be drilling of a l damages to th (d) The notice of notice.  Notice is here   | requested or hand delivery, give the surface operation. The notice required by this subsprovided by subsection (b), section ten of norizontal well; and (3) A proposed surface surface affected by oil and gas operations as required by this section shall be given to be provided to the SURFACE OWNER.   | e owner whose land will be used for section shall include: (1) A copy this article to a surface owner whose use and compensation agreement to the extent the damages are compensation the surface owner at the address life.   | ication, an operator shall, by certified mail for the drilling of a horizontal well notice of of this code section; (2) The information see land will be used in conjunction with the not containing an offer of compensation for appensable under article six-b of this chapter, sted in the records of the sheriff at the time   |
| Name: See atta<br>Address:   | eby given:<br>/est Virginia Code § 22-6A-16(c), notice is<br>the surface owner's land for the purpose of  | Name: Address: hereby given that the undersigned drilling a horizontal well on the tra   | well operator has developed a planned act of land as follows:  |
| Name: See attack Address:  Notice is here Pursuant to Woperation on State:   | eby given: /est Virginia Code § 22-6A-16(c), notice is the surface owner's land for the purpose of West Virginia  | Name: Address: hereby given that the undersigned drilling a horizontal well on the transcription.  LITM NAD 83 Easting:  | well operator has developed a planned act of land as follows: 515367.079   |
| Name: See attack Address:  Notice is here Pursuant to Woperation on State: County:   | eby given:  Vest Virginia Code § 22-6A-16(c), notice is the surface owner's land for the purpose of West Virginia  Tyler  | Name: Address: hereby given that the undersigned drilling a horizontal well on the tra UTM NAD 83 Easting: Northing:   | well operator has developed a planned act of land as follows:  515367.079  4363432.834   |
| Name: See attack Address:  Notice is here Pursuant to Woperation on State: County: District:   | eby given: Vest Virginia Code § 22-6A-16(c), notice is the surface owner's land for the purpose of West Virginia Tyler McElroy  | Name: Address: hereby given that the undersigned drilling a horizontal well on the tra UTM NAD 83 Public Road Access:  | well operator has developed a planned act of land as follows:  515367.079  4363432.834  County Route 58  |
| Name: See attack Address:  Notice is here Pursuant to Woperation on State: County:   | eby given:  Vest Virginia Code § 22-6A-16(c), notice is the surface owner's land for the purpose of West Virginia  Tyler  | Name: Address: hereby given that the undersigned drilling a horizontal well on the tra UTM NAD 83 Easting: Northing:   | well operator has developed a planned act of land as follows:  515367.079  4363432.834   |
| Name: See atta- Address:  Notice is here Pursuant to Woperation on State: County: District: Quadrangle: Watershed:  This Notice Sepursuant to Woperation to Woperation on State:  Output:  This Notice Sepursuant to Woperation to Woperation of Sepursuant to Woperation of Sepursuant of | Peby given:  Vest Virginia Code § 22-6A-16(c), notice is the surface owner's land for the purpose of West Virginia  Tyler  McElroy  Shirley  McElroy Creek  Shall Include:  Vest Virginia Code § 22-6A-16(c), this notice do by W. Va. Code § 22-6A-10(b) to a sull; and (3) A proposed surface use and comed by oil and gas operations to the extent elated to horizontal drilling may be obtain located at 601 57th Street, SE, Charles | Name: Address: Addres | well operator has developed a planned act of land as follows:  515367.079  4363432.834  County Route 58  |
| Name: See atta- Address:  Notice is her- Pursuant to Woperation on State: County: District: Quadrangle: Watershed:  This Notice Sepursuant to Woto be provide thorizontal we surface affect information readquarters, gas/pages/def  | eby given:  Vest Virginia Code § 22-6A-16(c), notice is the surface owner's land for the purpose of West Virginia  Tyler  McElroy  Shirley  McElroy Creek  Shall Include:  Vest Virginia Code § 22-6A-16(c), this notice do by W. Va. Code § 22-6A-10(b) to a sull; and (3) A proposed surface use and come leasted to horizontal drilling may be obtain located at 601 57th Street, SE, Charles ault.aspx.                               | Name: Address:  Address:  hereby given that the undersigned drilling a horizontal well on the trace of the company of the comp | well operator has developed a planned act of land as follows:  515367.079  4363432.834  County Route 58  Seckman  code section; (2) The information required used in conjunction with the drilling of a n offer of compensation for damages to the der article six-b of this chapter. Additional Department of Environmental Protection or by visiting www.dep.wv.gov/oil-and-           |
| Name: See atta- Address:  Notice is her Pursuant to Woperation on State: County: District: Quadrangle: Watershed:  This Notice S Pursuant to W to be provide horizontal we surface affect information r headquarters,  | eby given:  Vest Virginia Code § 22-6A-16(c), notice is the surface owner's land for the purpose of West Virginia  Tyler  McElroy  Shirley  McElroy Creek  Shall Include:  Vest Virginia Code § 22-6A-16(c), this notice do by W. Va. Code § 22-6A-10(b) to a sull; and (3) A proposed surface use and come leasted to horizontal drilling may be obtain located at 601 57th Street, SE, Charles ault.aspx.                               | Name: Address: Addres | well operator has developed a planned act of land as follows:  515367.079  4363432.834  County Route 58  Seckman  code section; (2) The information required used in conjunction with the drilling of a n offer of compensation for damages to the der article six-b of this chapter. Additional / Department of Environmental Protection ) or by visiting www.dep.wv.gov/oil-and-yprive |

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 Gas NOV 28 2017

#### **WW6A Notice of Planned Operations - Attachment**

SHR31HSM

#### **Surface Owner(s):**

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Rachelle Hise 44832 State Route 78, Woodsfield, OH 43793

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Ciffice of Oil and Gas
NOV 2 8 2017
WV Department of
Environmental Protection
Page 1 of 1

04/13/2018



#### WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

#### **Division of Highways**

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

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

October 31, 2017

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

Subject: DOH Permit for the SHR-31 Well Pad, Tyler County SHR31 EHSM

Dear Mr. Martin,

Jim Justice

Governor

The West Virginia Division of Highways has transferred Permit #06-2014-0719 for the subject site to CNXGAS for access to the State Road for the well sites located off of Tyler County Route 58 SLS.

The operator has signed an OIL AND GAS ROAD MAINTENANCE BONDING AGREEMENT and provided the required Bond. This operator is currently in compliance with the DOH OIL AND GAS POLICY dated January 3, 2012.

Very Truly Yours,

Gary K. Clayton

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

Cc: Shannon Miller CNXGAS CH, OM, D-6

File

Office of Oil and Gas
NOV 28 2017
WV Department of
Entropmental Protection
Entropmental 2018

#### Section V – Proposed Additives to be used in Fracturing or Stimulations

Type: Water CAS: 7732-18-5

Type: Silica CAS: 14808-60-7

Type: Hydrochloric Acid CAS: 7647-01-0

Type: Copolymer of Two Propenamide CAS: 69418-26-4

Type: Petroleum distillate CAS: 64742-47-8

Type: Glutaraldehyde CAS: 111-30-8

Type: Ethylene glycol CAS: 107-21-1

Type: Diethylene glycol mono n-butyl ether CAS: 112-34-5

Type: Oleic acid diethanolamide CAS: 93-83-4

Type: Alcohols, C12-16, ethoxylated CAS: 68551-12-2

Type: Quaternary ammonium compound CAS: 68424-85-1

Type: Ammonium chloride CAS: 12125-02-9

Type: Short chained glycol ether CAS: 112-34-5

Type: Ethoxylated (C10-16) alcohols CAS: 68002-97-1

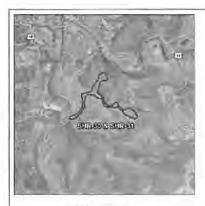
Type: Metanol CAS: 67-56-1

Type: Formaldehyde CAS: 50-00-0

Type: Thiourea CAS: 62-56-6

Type: Acetophenone CAS: 98-86-2

Office of Oil and Gas
NOV 28 2017
NOV Department of Environmental Protection





#### PROPERTY OWNERS

- 1 05-15-41 ALLEN W SECKMAN ET AL 824 JEFFERSON RUN RD ALMA WV 26320
- 2. 05-15-42 ALLEN W SECKMAN ET AL 824 JEFFERSON RUN RD ALMA WV 26320
- 3. 05-15-37 ALLEN W SECKMAN ET AL 824 JEFFERSON RUN RD ALMA. WV 26320
- ALLEN W SECKMAN ET AL 824 JEFFERSON RUN RD ALMA. WV 26320



CNX RESOURCES CORPORATION 1000 CONSOL ENERGY DRIVE CANONSBURG, PA 15317

#### POST MODIFICATION AS-BUILT PLANS FOR THE SHR 31 WELL PAD, TANK PAD, SHR 30 WELL PAD, AND ACCESS ROAD



LOCATION MAP

SHR 31 WELL PAD

API #'S

047-095-02221

047-095-02217

047-095-02218

047-095-02219

#### SHR30 WELL SITE LOCATION

NAD 83 - LAT: N 39°24'49.IBI": LONG: W 80°48'54.273" NAD 27 - LAT. N 39°24'48.891" LONG: W 80°48'54.894"

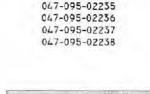
#### SHR31 WELL SITE LOCATION

NAD 83 - LAT: N 39°25'12.404"; LONG: W 80°49'18.123" NAD 27 - LAT: N 39°25'12, II4"; LONG: W 80°49'18, 744"

#### ENTRANCE LOCATION

NAD 83 - LAT N 39°24'44 598" LONG W 80°49'45 062" NAD 27 - LAT: N 39°24'44.309", LONG: W 80°49'45.683"

> MCELROY DISTRICT TYLER COUNTY, WEST VIRGINIA DATE: APRIL 5TH, 2018



SHR 30 WELL PAD

API #'S

047-095-02232

047-095-02241

047-095-02233

047-095-02234

| SHEET INDEX    |                           |  |  |
|----------------|---------------------------|--|--|
| DRAWING NUMBER | DRAWING NAME              |  |  |
| 1              | COVER SHEET               |  |  |
| 2              | OVERALL POST MOD AS-BUILT |  |  |
| 3-7            | POST MOD AS-BUILT         |  |  |
| 8              | AS-BUILT ROAD PROFILES    |  |  |

#### WVDEP OOG ACCEPTED AS-BUILT Whl 4/6/2018



Engineers and Land Surveyors 10125 Mason Dixon Hwy. Burton, WV 26562-9656 (304) 562-6486

ENGINEER CERTIFICATION

William College removement

Blue Mountain In

SACES C SAL ENE SBLRG.



REVISIONS



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SHEET

NOTE: DRAWING WAS CREATED ON 22x34 PAPER. 11x17 DRAWINGS ARE HALF SCALE. REFER TO SCALE BAR FOR PROPER SCALING.

