



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

Tuesday, August 6, 2019
WELL WORK PERMIT
Horizontal 6A / New Drill

CNX GAS COMPANY LLC
POST OFFICE BOX 1248

JANE LEW, WV 263786506

Re: Permit approval for WDTN18MHSM
47-061-01859-00-00

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

A blue ink signature of James A. Martin, written in a cursive style.

Operator's Well Number: WDTN18MHSM
Farm Name: CONSOL MINING COMPANY
U.S. WELL NUMBER: 47-061-01859-00-00
Horizontal 6A New Drill
Date Issued: 8/6/2019

PERMIT CONDITIONS**4706101859**

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: _____

PERMIT CONDITIONS 4706101859

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.

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

1) Well Operator: CNX Gas Company, LLC 494458046 Monongalia Battelle Wadestown
Operator ID County District Quadrangle

2) Operator's Well Number: WDTN18MHSM Well Pad Name: WDTN18

3) Farm Name/Surface Owner: Consol Public Road Access: Camp Run Road CR 4

4) Elevation, current ground: 1215 Elevation, proposed post-construction: 1201

5) Well Type (a) Gas Oil Underground Storage

Other _____

(b) If Gas Shallow Deep

Horizontal

MJIC 6/18/2019

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Target formation is Marcellus Shale @ 7715'-7785' TVD, 70' thick, expected formation pressure ~4600 psi

8) Proposed Total Vertical Depth: 7715' TVD at TD (dependent upon formation dip)

9) Formation at Total Vertical Depth: Marcellus Shale (will not penetrate Onondaga)

10) Proposed Total Measured Depth: 11,774' MD at TD

11) Proposed Horizontal Leg Length: 3574'

12) Approximate Fresh Water Strata Depths: Shallowest at ~125' and deepest at ~193'

13) Method to Determine Fresh Water Depths: Depth of bit when water shows in flowline or depth when misting is required

14) Approximate Saltwater Depths: 2138', 2275'

15) Approximate Coal Seam Depths: 625', 976'

16) Approximate Depth to Possible Void (coal mine, karst, other): None anticipated

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

(a) If Yes, provide Mine Info: Name: _____

Depth: _____

Seam: _____

Owner: _____

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WW-6B
(04/15)

API NO. 47-061 -
OPERATOR WELL NO. WDTN18MHSM
Well Pad Name: WDTN18

18)

CASING AND TUBING PROGRAM

| TYPE | Size (in) | New or Used | Grade | Weight per ft. (lb/ft) | FOOTAGE: For Drilling (ft) | INTERVALS: Left in Well (ft) | CEMENT: Fill-up (Cu. Ft.)/CTS |
|--------------|------------------|--------------------|--------------|-------------------------------|-----------------------------------|-------------------------------------|--------------------------------------|
| Conductor | 20 | New | L/S | <94.0 | 100 | 100 | 151 / CTS |
| Fresh Water | 13.375 | New | J-55 | 54.5 | 1190 | 1190 | 827 / CTS |
| Coal | 13.375 | New | J-55 | 54.5 | 1190 | 1190 | 827 / CTS |
| Intermediate | 9.625 | New | J-55 | 36.0 | 2750 | 2750 | 920 / CTS |
| Production | 5.5 | New | P-110 | 20.0 | 11774 | 11774 | 2067 / TOC @ 2550' |
| Tubing | 2.375 | | J-55 | 4.7 | | TBD | N/A |
| Liners | N/A | | | | | | |

MDK 6/18/2019

| TYPE | Size (in) | Wellbore Diameter (in) | Wall Thickness (in) | Burst Pressure (psi) | Anticipated Max. Internal Pressure (psi) | Cement Type | Cement Yield (cu. ft./k) |
|--------------|------------------|-------------------------------|----------------------------|-----------------------------|---|--------------------|---------------------------------|
| Conductor | 20 | 26 | 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 | 13.375 | 17.5 | 0.380 | 2730 | <500 | Class A | 1.19 |
| 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: | | | | |
| Depths Set: | | | | |

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WW-6B
(10/14)

4706 - 01859
API NO. 47-061 -
OPERATOR WELL NO. WDTN18MHSM
Well Pad Name: WDTN18

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

Construct well pad and access road. 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/coal casing. Note that the FW/coal casing will be set just above elevation - the casing will NOT be set below ground level (setting depth to isolate sloughing formations and red beds below the Pittsburgh coal seam). 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 12.0-13.0 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.

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): 23.17 AC

22) Area to be disturbed for well pad only, less access road (acres): 13.96 AC

23) Describe centralizer placement for each casing string:

Fresh water/coal 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/coal 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 TOC 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 bottoms-up). For the production casing - once on bottom with casing, circulate a minimum of one hole volume prior to pumping cement.

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*Note: Attach additional sheets as needed.

WDTN18 Cement Additives

Fresh water/coal 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.

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DRILLING WELL PLAN
WDTN-18M-HSM (Marcellus HZ)
Marcellus Shale Horizontal
Monongalia County, WV

| Ground Elevation | | | WDTN-18M-HSM SHL | | | | N 434369.45, E 1758354.37 (NAD27) | | | | | |
|--------------------|--|-------------------|------------------|------------------------|------------------------|------|-----------------------------------|---------------|--|---|---|---|
| 1201' GL Elevation | | | WDTN-18M-HSM LP | | | | N 434125.07, E 1757620.72 (NAD27) | | | | | |
| Azimuth | | | WDTN-18M-HSM BHL | | | | N 436579.34, E 1755022.77 (NAD27) | | | | | |
| WELLBORE DIAGRAM | | | HOLE | CASING | GEOLOGY | MD | TVD | MUD | CEMENT | CENTRALIZERS | CONDITIONING | COMMENTS |
| | | | 26" | 20" L/S | Conductor | 100 | 100 | AIR | To Surface | N/A | N/A | Stabilize surface fill/soil |
| | | | | | Shallowest Fresh Water | | 125 | | | | | |
| | | | 17-1/2" | 13-3/8" 54.5# J-55 BTC | Deepest Fresh Water | | 193 | AIR / FW Mist | 15.6 ppg Class A + 1% to 3% CaCl2 + 1/4 pps Flake 20% OH Excess Yield = 1.19 TOC @ surface | Centralize every 3rd joint from shoe to surface Bow spring centralizers | Ensure the hole is clean at section TD | Set through fresh water zones Set through coal zones Cemented to surface 13-3/8" shoe NOT to be set deeper than ground level |
| | | | | | Waynesburg Coal | | 625 | | | | | |
| | | | | | Pittsburgh Coal | | 976 | | | | | |
| | | | | | Red Beds | | | | | | | |
| | | | | | FW/Coal Casing | 1190 | 1190 | | | | | |
| | | | 12-1/4" | 9-5/8" 36.0# J-55 LTC | Big Lime | | 2138 | AIR / Soap | 15.6 ppg Class A + 0% to 2% CaCl2 + 1/4 pps Flake 20% OH Excess Yield = 1.19 TOC @ surface | Centralize every 3rd joint from shoe to surface Bow spring centralizers | Soap the hole as needed and ensure the hole is clean at section TD | Set through potential salt water zones Cemented to surface Casing to be set ~300' below the Big Injun base |
| | | | | | Keener | | 2230 | | | | | |
| | | | | | Big Injun | | 2275 | | | | | |
| | | | | | Price | | 2452 | | | | | |
| | | | | | Intermediate Casing | 2750 | 2750 | | | | | |
| | | | 8-3/4" Tangent | 5-1/2" 20.0# P-110 BTC | 50 Foot | | 2885 | AIR | 15.2 ppg Class H 50:50 Class H:Poz with additives (retarder, suspension agent, gas block, defoamer, fluid loss, extender, etc.) 10% OH Excess Yield = 1.07 TOC @ >= 200' above 9-5/8" shoe | Centralize every joint from shoe to KOP - then every 3rd joint from KOP to TOC Single-piece/rigid bow centralizers | Once at TD, circulate at max flowrate with max rotation until shakers clean-up (typically requires multiple bottoms-up) Once on bottom with casing, circulate a minimum of one hole volume prior to pumping cement | Note: For all strings, actual centralizer placements may be changed due to hole conditions Note: For all strings, actual cement blends may vary slightly depending upon service company utilized |
| | | | | | Gordon | | 3003 | | | | | |
| | | | | | Fifth | | 3112 | | | | | |
| Bayard | | 3225 | | | | | | | | | | |
| Elks | | 5030 | | | | | | | | | | |
| Rhinestreet | | 7190 | | | | | | | | | | |
| Burkett | | 7550 | | | | | | | | | | |
| Tully | | 7575 | | | | | | | | | | |
| Hamilton | | 7610 | | | | | | | | | | |
| Marcellus | | 7715 | | | | | | | | | | |
| | | Production Casing | 11774 | 7715 | | | | | | | | |

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 LP @ 7715' TVD

8-3/4" x 8-1/2" Hole - Cemented Long String
 5-1/2" 20.0# P-110 BTC (or modified buttress)

+/- 3574' Lateral
 TD @ +/- 7715' TVD

47061859

WDTN18 Pad Frac SOG Review / CRSD Review Thursday, April 25, 2019

WDTN18 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 WDTN18 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, Status, Formation at TD, Total Depth, and Lat/Long.

The Marcellus Shale of the Wadestown area is found at an approximate True Vertical Depth (TVD) of 8000'. In the Wadestown area, there were very few wells that produced from formations deeper than the Bayard Sand (approximately 3600'). Based on our experience with frac communication and shallow wells, CNX Geology feels that it is highly unlikely for communication to occur with any wells producing in the area above the WDTN18 Pad.

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. These reservoirs are not developed in the Wadestown. Geomechanical data is collected from dipole sonic logs. CNX's nearest sonic data is from the NV20CCV well (Figure 2), approximately 21.4 miles north of the WDTN18 pad. Frac modeling (Figure 3) of the Marcellus in the area does not show significant upward frac growth.

Figure 1. 14 wells lie within a 500' buffer around the WDTN18 Pad that penetrate the Big Injun Sand or deeper horizons (highlighted green in the table on page 3). The deepest well is 3740' and produces from the Bayard Sand. No known SOG Communication events have occurred in this area.

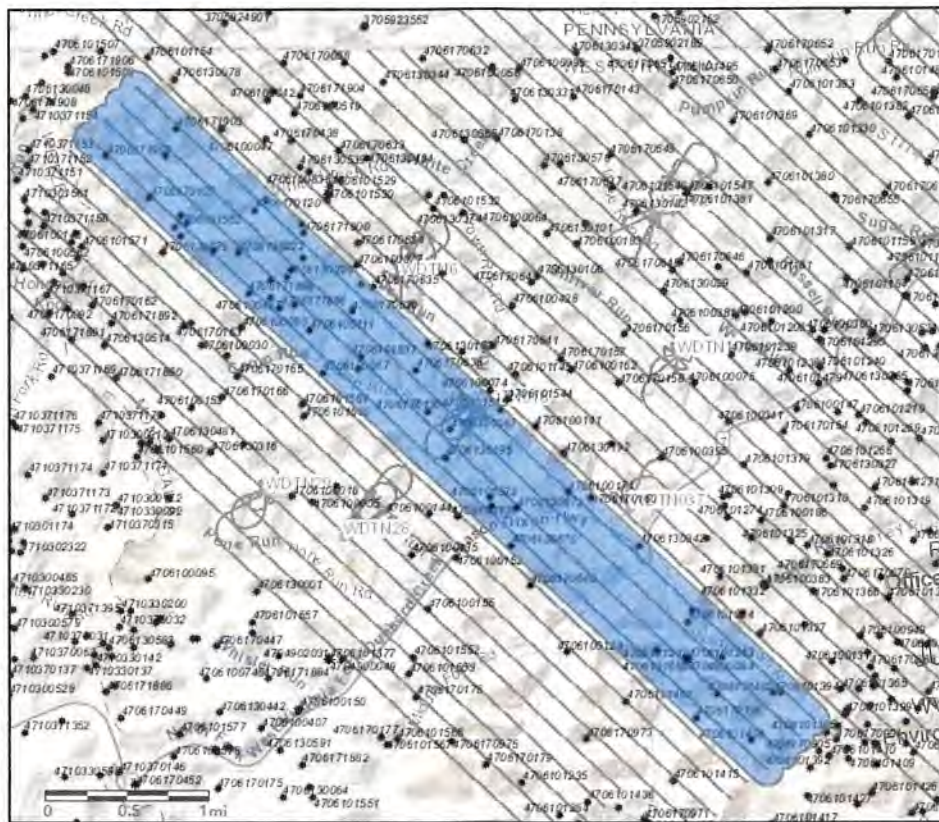


Figure 2. Stratigraphic intervals of high stress should serve as adequate confining layers, or frac barriers, for a Marcellus frac, seen below in the Wadestown Area Stress Profile log.

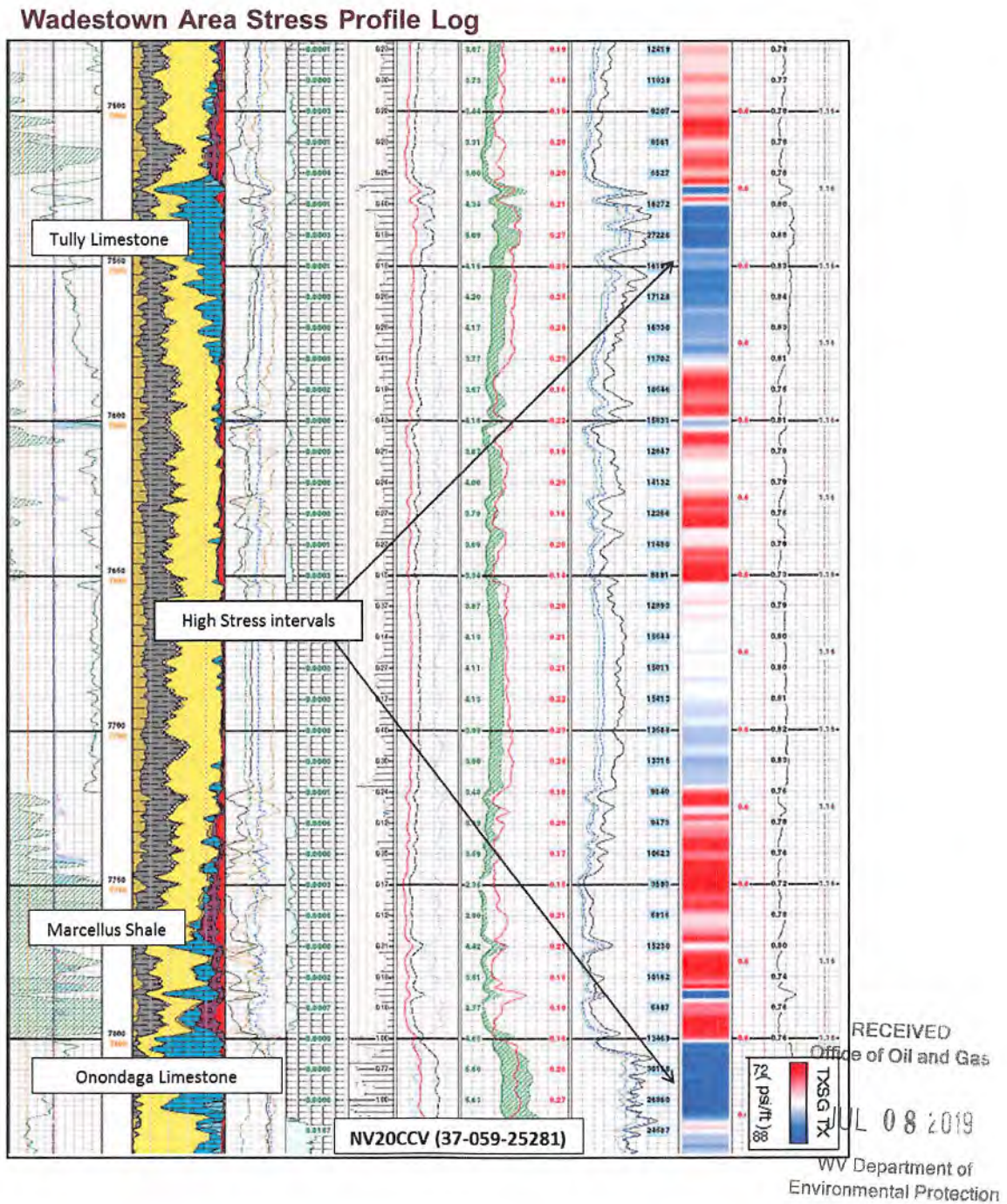
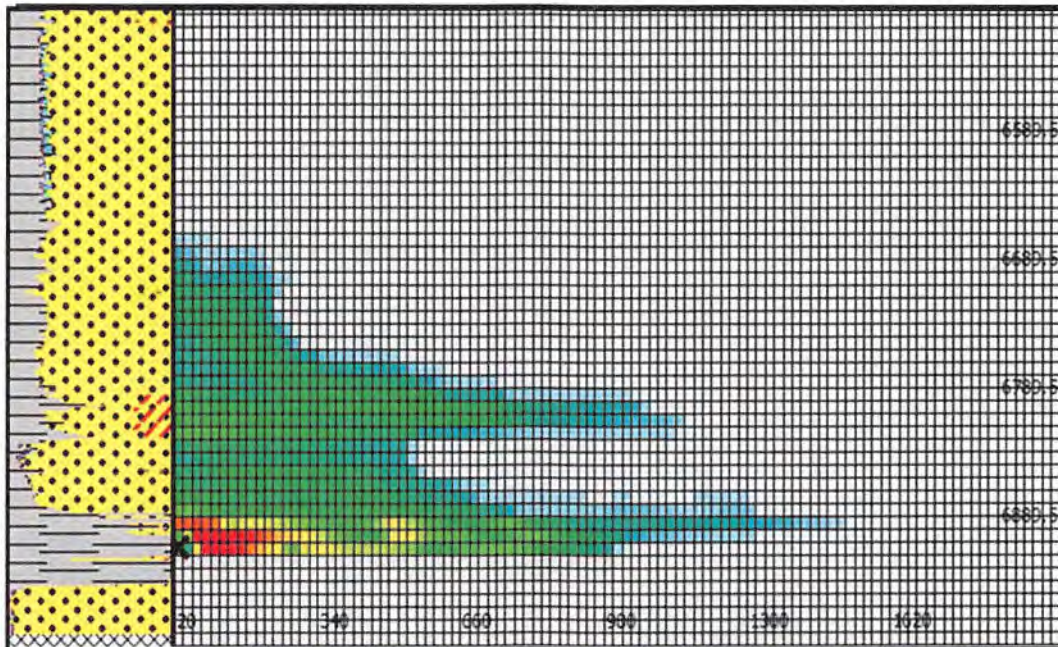


Figure 3. Stratigraphic intervals of high stress should serve as adequate frac barriers for a Marcellus frac. The frac modeling example below is from the Oxford area of western Doddridge County, where the Hamilton and Tully are much thinner than Wadestown. Frac modeling only yields frac height of approximately 300'.



Frac Simulation of the Oxford area, Doddridge County, WV. Model of 300 stage spacing yields frac height of 260 feet. Tully Limestone (~25'), Tully-Hamilton (~55'), Marcellus-Alexander (1500')

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WDTN18 Pad Frac SOG Review / CRSD Review Thursday, April 25, 2019

| API | STATE | COUNTY | LATITUDE | LONGITUDE | OPERATOR | STATUS | WELL_NAME | WELL_NO | TD | FMTD | ELEVATION |
|------------|-------|------------|------------|-------------|----------------------------------|-------------------|-----------------------|---------|------|---------------------|-----------|
| 4706100141 | WV | Monongalia | 39.6873911 | -80.351444 | n.owner fld,no code assign(Orpha | Gas | Charles F Shriver 1 | | 3740 | Bayard | 1482 |
| 4706130229 | WV | Monongalia | 39.7007928 | -80.380256 | Pittsburgh & WV Gas | Gas | E C Clovis Heirs | 1 | 3576 | Bayard | 1315 |
| 4706130222 | WV | Monongalia | 39.7029678 | -80.3858879 | Pittsburgh & WV Gas | Gas | E C Clovis Heirs | 2 | 3543 | Bayard | 1331 |
| 4706170120 | WV | Monongalia | 39.7067379 | -80.3840112 | unknown | not available | James L White | 1 | 3520 | Bayard | 1240 |
| 4706130195 | WV | Monongalia | 39.6846969 | -80.3618586 | Manufacturers Light & Heat Co. | Gas | Arzle Tennant | 1 | 3477 | Bayard | 1285 |
| 4706101145 | WV | Monongalia | 39.6920921 | -80.3537912 | A V Company | Gas | E Haines | | 3471 | Bayard | 1275 |
| 4706170130 | WV | Monongalia | 39.6887569 | -80.3639247 | n.owner fld,no code assign(Orpha | not available | R S Clovis | 1 | 3432 | Bayard | 1045 |
| 4706100074 | WV | Monongalia | 39.690642 | -80.356794 | Pittsburgh & WV Gas | Gas | Freeman Tennant | | 3385 | Bayard | 1115 |
| 4706130193 | WV | Monongalia | 39.6940271 | -80.3599861 | Pittsburgh & WV Gas | Gas | Dossy Clovis | 1 | 3366 | Bayard | 1146 |
| 4706100017 | WV | Monongalia | 39.6922378 | -80.3761266 | Pittsburgh & WV Gas | Dry | B F & Eva H Clovis | | 3362 | Bayard | 1108 |
| 4706100135 | WV | Monongalia | 39.6793318 | -80.3605433 | Manufacturers Light & Heat Co. | Gas w/ Oil Show | David S Kent | 1 | 3354 | Bayard | 1110 |
| 4706100171 | WV | Monongalia | 39.681595 | -80.3476648 | n.owner fld,no code assign(Orpha | Gas | Ernest Bell | 1 | 3293 | Bayard | 1070 |
| 4706130672 | WV | Monongalia | 39.6801069 | -80.3536005 | Moore, D. K., etal | Gas | R S & E Clovis | | 3278 | Bayard | 1033 |
| 4706100067 | WV | Monongalia | 39.6871619 | -80.3612967 | Manufacturers Light & Heat Co. | Gas | Charles F Shriver | 1 | 3188 | Fifth | 1108 |
| 4706100154 | WV | Monongalia | 39.7025329 | -80.3783791 | n.owner fld,no code assign(Orpha | Dry | E C Clovis Heirs | 2 | 1630 | Mahonig Ss/Big Dunk | 1357 |
| 4706100143 | WV | Monongalia | 39.7013729 | -80.379693 | n.owner fld,no code assign(Orpha | Gas w/ Oil Show | FJ & CE & CH Clovis | 1 | 1464 | Mahonig Ss/Big Dunk | 1197 |
| 4706101537 | WV | Monongalia | 39.6936879 | -80.3716228 | CNX Gas Co. LLC (North) | Methane (CBM) | Consol Coal | | 1270 | Pittsburgh coal | 1240 |
| 4706101573 | WV | Monongalia | 39.6810719 | -80.3567905 | CNX Gas Co. LLC (North) | Methane (CBM) | Terra Firma Co | | 1250 | Pittsburgh coal | 1193 |
| 4706101544 | WV | Monongalia | 39.6897721 | -80.354729 | CNX Gas Co. LLC (North) | Methane (CBM) | Consolidation Coal Co | | 1210 | Pittsburgh coal | 1144 |
| 4706101545 | WV | Monongalia | 39.688902 | -80.35548 | CNX Gas Co. LLC (North) | Dry Methane (CBM) | Consolidation Coal Co | | 1210 | Pittsburgh coal | 1150 |
| 4706101538 | WV | Monongalia | 39.6925278 | -80.3719977 | CNX Gas Co. LLC (North) | Methane (CBM) | Consol Coal Co | | 1001 | Pittsburgh coal | 996 |
| 4706100165 | WV | Monongalia | 39.700157 | -80.3717031 | n.owner fld,no code assign(Orpha | Dry | Alex Hennen Hrs | 1 | 920 | Allegheny Fm | 1190 |
| 4706130015 | WV | Monongalia | 39.7031127 | -80.3888909 | ngahela West Penn Public Serv | Gas | Charles White | | 0 | | 1428 |
| 4706130201 | WV | Monongalia | 39.7054829 | -80.3785753 | Pittsburgh & WV Gas | not available | Chas White | 1 | 0 | | 1270 |
| 4706130670 | WV | Monongalia | 39.6767718 | -80.3543503 | Manufacturers Light & Heat Co. | not available | R S & E Clovis | | 0 | | 1035 |
| 4706170161 | WV | Monongalia | 39.7005028 | -80.3821329 | Manufacturers Light & Heat Co. | not available | Elijah C Clovis | 1 | 0 | | 1171 |
| 4706170637 | WV | Monongalia | 39.694836 | -80.3639241 | unknown | not available | Mahlon Tennant | | 0 | | 1220 |
| 4706170638 | WV | Monongalia | 39.6925129 | -80.3652379 | Philadelphia Oil Co. | not available | Robert Clovis | | 0 | | 1252 |
| 4706170640 | WV | Monongalia | 39.6732098 | -80.3521002 | Philadelphia Oil Co. | not available | Homer Tennant | | 0 | | 1329 |
| 4706170641 | WV | Monongalia | 39.6945451 | -80.3564172 | Philadelphia Oil Co. | not available | S S White | | 0 | | 1118 |
| 4706171895 | WV | Monongalia | 39.6983188 | -80.3793159 | unknown | not available | Alex Hennen 1 | | 0 | | 1264 |
| 4706171898 | WV | Monongalia | 39.6993347 | -80.3847598 | Philadelphia Oil Co. | not available | Elijah Clovis | | 0 | | 1151 |
| 4706171899 | WV | Monongalia | 39.7044147 | -80.3926419 | n.owner fld,no code assign(Orpha | not available | Charles White 1 | | 0 | | 1495 |
| 4706171900 | WV | Monongalia | 39.7047049 | -80.3783782 | Hope Natural Gas Company | not available | Charles White | | 0 | | 1318 |
| 4706171901 | WV | Monongalia | 39.7076079 | -80.3826953 | unknown | not available | R Pethle 1 | | 0 | | 1231 |

35 wells lie within the 500' buffer of the entire WDTN6 Pad. 14 of them penetrate the Big Injun Sand or deeper stratigraphy (green). 6 wells are CBM or vent holes associated with GOB production. 15 wells have no Formation or TD information available (status highlighted pink). Completion reports are not available for these on the WVGES website.

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WW-9
(4/16)

API Number 47 - _____ - _____
Operator's Well No. WDTN18MHSM

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name CNX Gas Company, LLC OP Code 494458046

Watershed (HUC 10) Dunkard Creek Quadrangle Wadestown

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

Will a pit be used? Yes No

If so, please describe anticipated pit waste: no pits

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

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number 47-001-00561, 47-097-01514, 47-097-01613, 34-013-2-0609)
- Reuse (at API Number WDTN28 wells API TBD)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain No pits)

Will closed loop system be used? If so, describe: yes

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc.
Vertical: air from spud/surface to curve kick-off point (KOP)
Horizontal: synthetic oil-based mud (SOBM) from curve KOP to lateral TD

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

Additives to be used in drilling medium? Bactericide, Polymers, and Weighting Agents

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Removal offsite to an approved landfill RECEIVED
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-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) NA JUL - 3 2019

-Landfill or offsite name/permit number? See attached. WV Department of
Environmental Protection

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

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

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

Company Official Signature Erika Whetstone

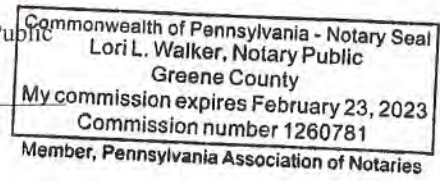
Company Official (Typed Name) Erika Whetstone

Company Official Title Permitting Manager

Commonwealth of Pennsylvania County of Washington
Subscribed and sworn before me this 23rd day of July, 2019

Lori L. Walker Notary Public

My commission expires February 23, 2023



CNX Gas Company, LLC

Proposed Revegetation Treatment: Acres Disturbed 23.17 Prevegetation pH 6.5

Lime according to pH test Tons/acre or to correct to pH 7.0

Fertilizer type 10-20-20

Fertilizer amount 500 lbs/acre

Mulch hay or straw @ 2 Tons/acre

Seed Mixtures

Temporary

Permanent

| Seed Type | lbs/acre |
|-------------------|----------|
| Orchard Grass | 25 |
| Birdsfoot Trefoil | 15 |
| Ladino Clover | 10 |

| Seed Type | lbs/acre |
|-------------------|----------|
| Orchard Grass | 25 |
| Birdsfoot Trefoil | 15 |
| Ladino Clover | 10 |

Attach:

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: *Maureen J. K... (signature)*

Comments: _____

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JUN 24 2019

Title: Inspector

Date: 6/18/2019

WV Department of
Environmental Protection

Field Reviewed? () Yes () No

Disclaimer: Vendors have been approved for the below category by ENV. UPDATED AGREEMENT with MSCM MUST BE CONFIRMED.

USE: APPROVED NON-HAZARDOUS WASTE DISPOSAL FACILITIES (version 05-23-2016)

| Republic Services (Aired Waste) Industrial Landfill | | Gas Specific Waste Streams | | | Other Accepted Waste Streams | | | | | | | | | Contact Information |
|---|------------------------|----------------------------|-----------------|----------------|--|------------------------------------|---------------------|--------|--------------------|------------------------|------------------|----------------------------|--------------------------|---------------------|
| Landfill | Location | Drill * Caplines | Waste Liners | Waste Briar | Contaminated Soil (Including Petroleum) | Construction & Demolition Waste | Industrial Waste | Sludge | Frable Asbestos | Non-Frable Asbestos | Process Waste | Solidification Services | Municipal Solid Waste | |
| McLean County | Bloomington | IL | X | X | X | X | X | X | X | X | X | X | X | |
| ERC/Coler County | Charleston | IL | X | X | X | X | X | X | X | X | X | X | X | |
| Briarland Disposal | Danville | IL | X | X | X | X | X | X | X | X | X | X | X | |
| Southern Illinois Regional | De Soto | IL | | | | | | | | | | | X | |
| Lee County | Dixon | IL | X | X | X | X | X | X | X | X | X | X | X | |
| Upper Rock Island | East Moline | IL | X | X | X | X | X | X | X | X | X | X | X | |
| Bond County | Greenville | IL | X | X | X | X | X | X | X | X | X | X | X | |
| Illinois LandComp | Hoyleston | IL | X | X | X | X | X | X | X | X | X | X | X | |
| Litchfield-Hillsboro | LaSalle | IL | X | X | X | X | X | X | X | X | X | X | X | |
| Bavintonch | Litchfield | IL | X | X | X | X | X | X | X | X | X | X | X | |
| Livinston | Morris | IL | X | X | X | X | X | X | X | X | X | X | X | |
| Roxana | Pontiac | IL | X | X | X | X | X | X | X | X | X | X | X | |
| Stamper Valley | Roxana | IL | X | X | X | X | X | X | X | X | X | X | X | |
| Benton Valley | Springfield | IL | X | X | X | X | X | X | X | X | X | X | X | |
| Blue Ridge | Frankfort | KY | X | X | X | X | X | X | X | X | X | X | X | |
| Morehead | Evins | KY | X | X | X | X | X | X | X | X | X | X | X | |
| Oven Walk | Morehead | KY | X | X | X | X | X | X | X | X | X | X | X | |
| Charlize Run | Booth | KY | X | X | X | X | X | X | X | X | X | X | X | |
| Williams County | Bellefontaine | OH | | | X | X | X | X | X | X | X | X | X | |
| County Environmental | Carey | OH | | | X | X | X | X | X | X | X | X | X | |
| Cadins | Calins | OH | | | X | X | X | X | X | X | X | X | X | |
| Carbon-Limestone** | Lowellville | OH | X | X | X | X | X | X | X | X | X | X | X | |
| Countywide Landfill** | East Huron | OH | X | X | X | X | X | X | X | X | X | X | X | |
| Lorain County | Oberlin | OH | | | X | X | X | X | X | X | X | X | X | |
| Oakland Marsh | Stich | OH | | | X | X | X | X | X | X | X | X | X | |
| Imperial | Imperial | PA | | | X | X | X | X | X | X | X | X | X | |
| Conestoga | Mirantown | PA | | | X | X | X | X | X | X | X | X | X | |
| Brunswick | Lawrenceville | VA | | | X | X | X | X | X | X | X | X | X | |
| King and Queen | Edinborough | VA | | | X | X | X | X | X | X | X | X | X | |
| Old Dominion | Richmond | VA | | | X | X | X | X | X | X | X | X | X | |
| Spencer | Farmington | WV | | | X | X | X | X | X | X | X | X | X | |
| Short Creek | Wheeling (Short Creek) | WV | X | X | X | X | X | X | X | X | X | X | X | |
| Carter Valley | Church Hill | TN | | | | | | | | | | | X | |

317-921-1667 or 480-627-2700
1-800-634-0215

Jack Palermo:
work: 330-336-8013
cell: 330-806-9660

Barbara Hannon:
work: 330-336-8013 x 120
cell: 330-423-7267

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Environmental Protection

47 06 01859

| Waste Management Industrial Landfills | | Gas Specific Waste Streams | | | | | Other Accepted Waste Streams | | | | | | | Contact Information |
|---------------------------------------|-----------------|----------------------------|--------------|-------------|---|---------------------------------|------------------------------|--------|------------------|----------------------|---------------|-------------------------|-----------------------|---------------------|
| Landfill | Location | Drill * Cuttings | Waste Liners | Waste Brine | Contaminated Soil (Including Petroleum) | Construction & Demolition Waste | Industrial Waste | Sludge | Friable Asbestos | Non-Friable Asbestos | Process Waste | Solidification Services | Municipal Solid Waste | |
| Arden Landfill | Washington | PA | X | X | | X | X | X | | | X | X | X | |
| South Hills (Armont) | South Park | PA | X | X | | X | X | X | | | X | X | X | |
| Kelly Run | Elizabethtown | PA | X | X | | X | X | X | | | X | X | X | |
| Vicki Landfill | Irwin | PA | X | X | | X | X | X | X | | X | X | X | |
| Byrystown Landfill | Blainville | PA | X | X | | X | X | X | | | X | X | X | |
| Charleston Landfill (Kanyzha Corp.) | Charleston | WV | X | X | | X | X | X | | | X | | X | |
| Meadow Hill Landfill | Bridgeton | WV | X | X | | X | X | X | X | | X | X | X | |
| Northwestern Landfill | Parktonburg | WV | X | X | | X | X | X | | | X | X | X | |
| S&S Omdins Landfill | Chickadee | WV | X | X | | X | X | X | | | X | X | X | |
| American Landfill | Winnebago | OH | X | X | | X | X | X | X | | X | X | X | |
| Suburban RDF | Glenford | OH | X | X | | X | X | X | X | | X | X | X | |
| Coshocton Landfill*** | Coshocton | OH | X | X | | X | X | X | | | X | | X | |
| Mohrman Landfill | New Springfield | OH | X | X | | X | X | X | | | X | | X | |

Scott Allen: 412-604-2256

Patty Landolt: 262-532-8001
John Miller: 1-800-963-4776

| Additional Landfills | | Gas Specific Waste Streams | | | | | Other Accepted Waste Streams | | | | | | | Contact Information |
|--|---|----------------------------|--------------|-------------|---|---------------------------------|------------------------------|--------|------------------|----------------------|---------------|-------------------------|-----------------------|---------------------|
| Landfill | Location | Drill* Cuttings | Waste Liners | Waste Brine | Contaminated Soil (Including Petroleum) | Construction & Demolition Waste | Industrial Waste | Sludge | Friable Asbestos | Non-Friable Asbestos | Process Waste | Solidification Services | Municipal Solid Waste | |
| Westmoreland Waste (WWLC Group) | 111 Conner Lane, Belle Vernon, PA 15012 | PA | X | X | | X | X | X | X | | | X | X | |
| MAX Environmental (Bluest Facility) | 200 Max Drive, Butler, PA 15010 | PA | X | X | | X | X | X | | | | X | X | |
| MAX Environmental (Yellow Facility) | 233 MAX Lane, Yukon, PA 15698 | PA | X | X | | X | X | X | | | | X | X | |
| Apex Sanitary Landfill (Apex Environmental) | 11 County Road 78, Amsterdam, Ohio 43903 | OH | X | X | | X | X | X | | | | X | X | |
| Rumpke, Mt. Sterling (Rumpke Consolidated) | 30 Larson Rd, Jeffersonville, KY 40337 | KY | X | X | | X | X | X | X | | | | X | |
| Luxon Ridge Landfill (Waste Connections of KY) | 3612 E State Highway 452 Lb., KY 40740 | KY | X | X | | X | X | X | X | | X | | X | |
| Advanced Disposal | Chemist Valley 1184 McClellandtown Rd, McClellandtown, PA 15458 | PA | X | X | | X | X | X | | | | | X | |
| | Greentree Landfill; 635 Toby Rd.; Kossay, PA | PA | X | X | | X | X | X | | | | | X | |
| | Moskoff Landfill; 7035 Otaden Pike Rd.; Somerset, PA | PA | X | X | | X | X | X | | | | | X | |

Mike Home: 412-532-4427
Mark Thomas: 724-929-7694

Carl Spadaro: 412-343-4900
cell: 412-445-9789

Joe Toturic: 740-275-2887
joet@els-company.com

Carl Walter: 513-623-2471

Bruce Crouch: Work: 606-864-7996
Cell: 606-219-0261

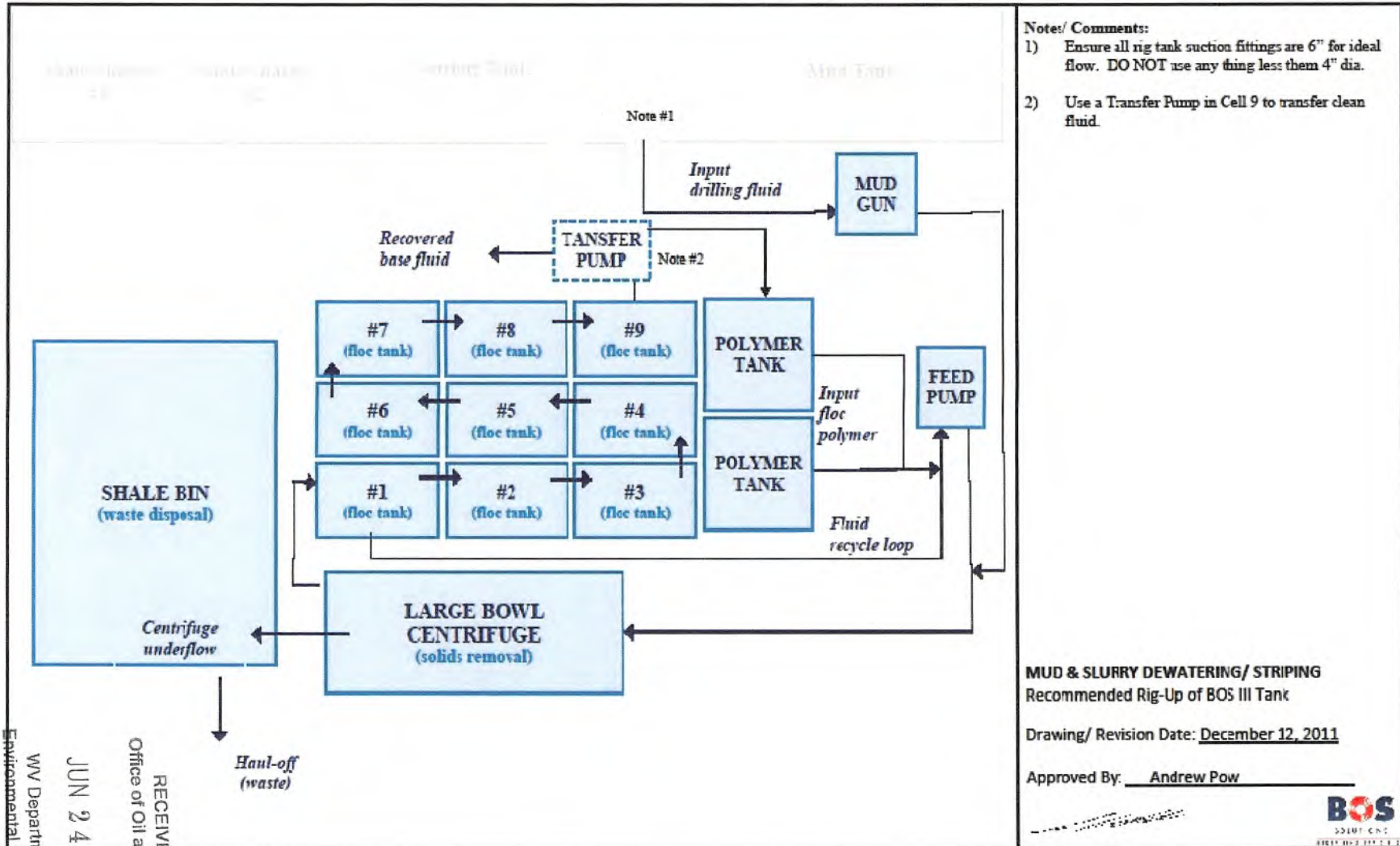
Tony Labonne
6184 Route 219, Brockway, PA 15624
814-690-9906

** Ohio "TENORM" - requires Radon 226/228 analysis by land before leaving the well pad. Solid waste landfills in Ohio can only accept TENORM waste with combined concentration less than 5 picocurie per gram above the natural background level.
*** Accepts drilling wastes but profile for disposal is not currently completed.
X Waste stream accepted by facility.
Waste stream is not or may not be accepted by facility. Contact facility directly to verify waste streams accepted.
New PADEP rules regarding "TENORM" testing requirements are pending.
* Drill Cuttings include frac sand for the purpose of this table (Contact facility directly to verify waste streams accepted).

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47 06 01859

FLOW CHART MUD AND SLURRY DEWATERING RECOMMENDED RIG UP



Notes/ Comments:

- 1) Ensure all rig tank suction fittings are 6" for ideal flow. DO NOT use any thing less than 4" dia.
- 2) Use a Transfer Pump in Cell 9 to transfer clean fluid.

MUD & SLURRY DEWATERING/ STRIPING
Recommended Rig-Up of BOS III Tank

Drawing/ Revision Date: December 12, 2011

Approved By: Andrew Pow



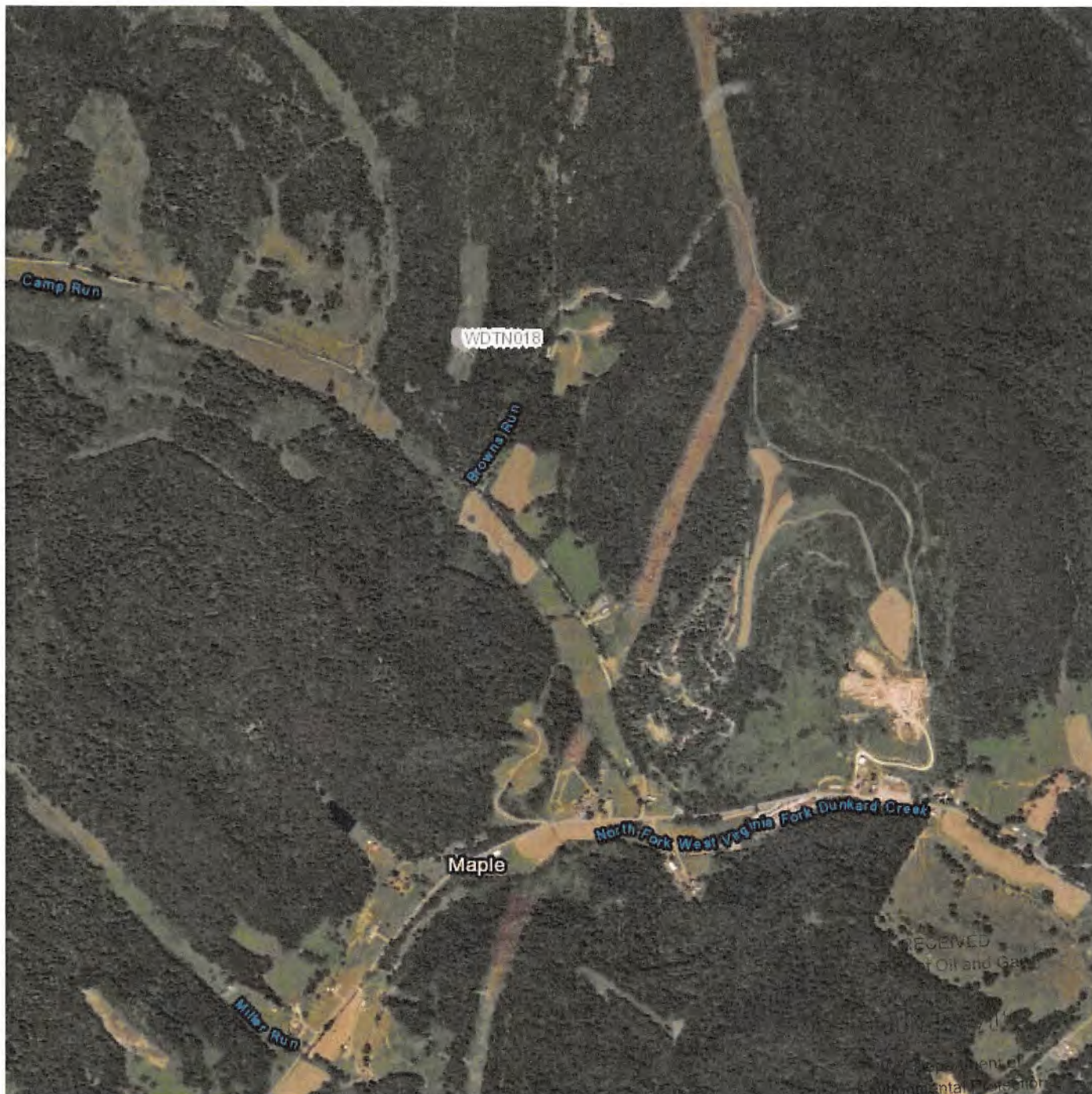
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 Environmental Protection
 JUN 24 2019

47 06 * 01859



Site Safety Plan for Well WDTN18MHSM

CNX Gas Company, LLC.



Approval Sheet

The Office of Oil and Gas and the Oil and Gas Conservation Commission have set forth minimum requirements for necessary equipment and procedures that must be addressed in a Safety Plan ("Plan") and shall be submitted and approved prior to drilling a deep well. A deep well shall be any well which meets the definition as provided for in Chapter 22C, Article 9 of the West Virginia Code.

A site specific Safety Plan must be submitted with each deep well application or no later than one week prior to spudding. Approved Plans shall be maintained and available at the drilling rig at all times.

The Office of Oil and Gas must approve all changes and modifications to previously approved plans.

This plan has met the requirements of the Policy Statement Deep Well Drilling Procedures and Site Safety Plan Requirements as set forth by:

West Virginia Division of Environmental Protection, Office of Oil and Gas

And

West Virginia Oil and Gas Conservation Commission.

Approved this day 18 of month June, 2019 by

Maureen J. Kubiak

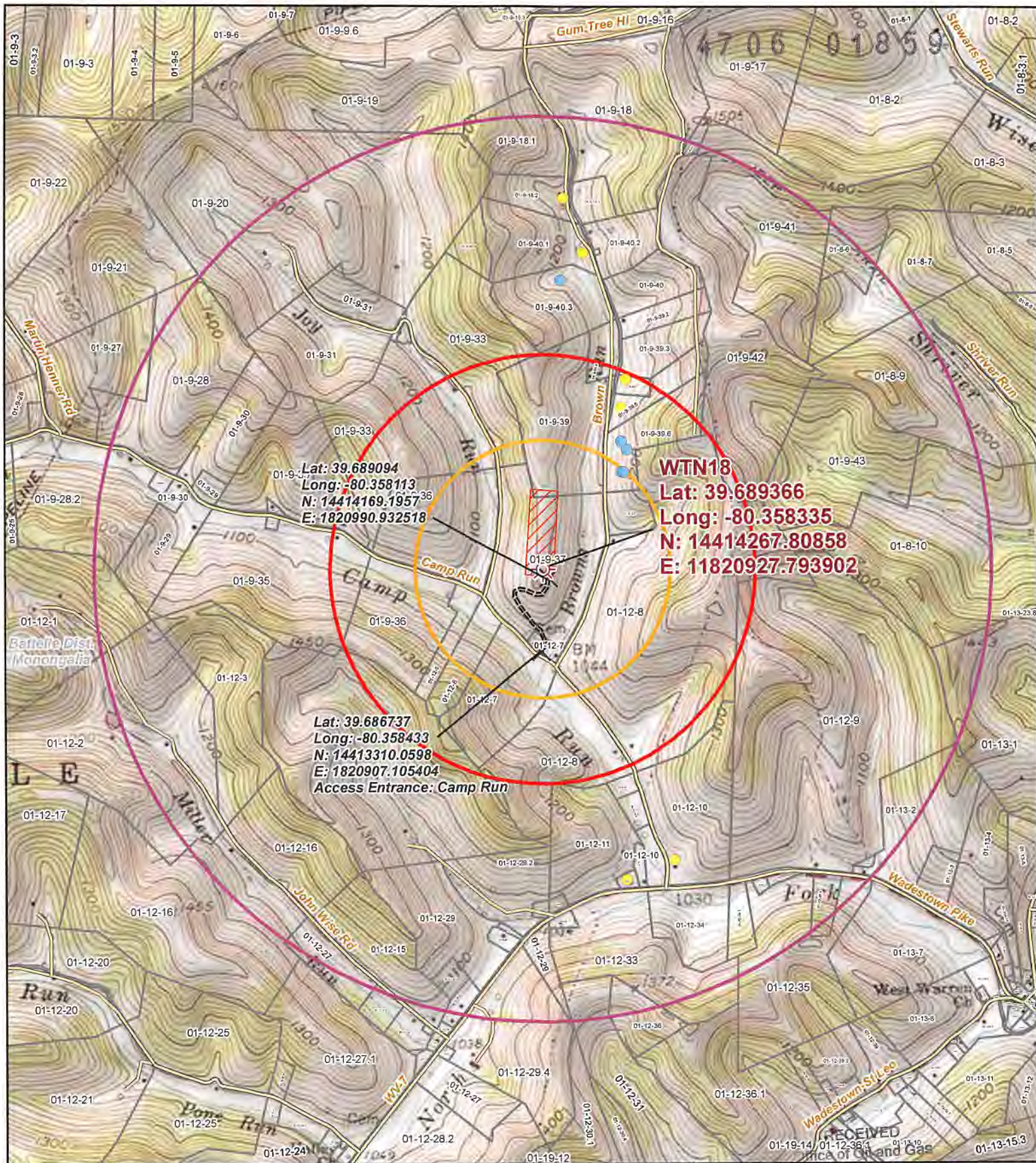
Date: 6/18/2019

Date: _____

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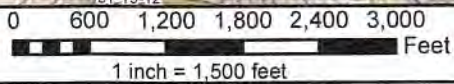
JUN 24 2019

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Legend

- Wellbore
- Access Points
- Water Well
- Spring
- Access Road
- 1,500 ft Buffer
- 2,500 ft Buffer
- 1 Mile Buffer
- WDN18 Pad LOD
- Surface Parcel



| | |
|--|------------------|
| Original Date: 4/29/2019 | Prepared By: GIS |
| Revision Date: 4/29/2019 | Approved By: GIS |
| This map is property of CNX Land Resources Inc. and contains information that is proprietary and confidential in nature and may not be copied or reproduced without prior written consent. | |
| © Copyright CNX Land Resources Inc. 2011 | |

CNX
 JUN 24 2019

WV Department of
 Environmental Protection
Topographic Well Map

WDN18

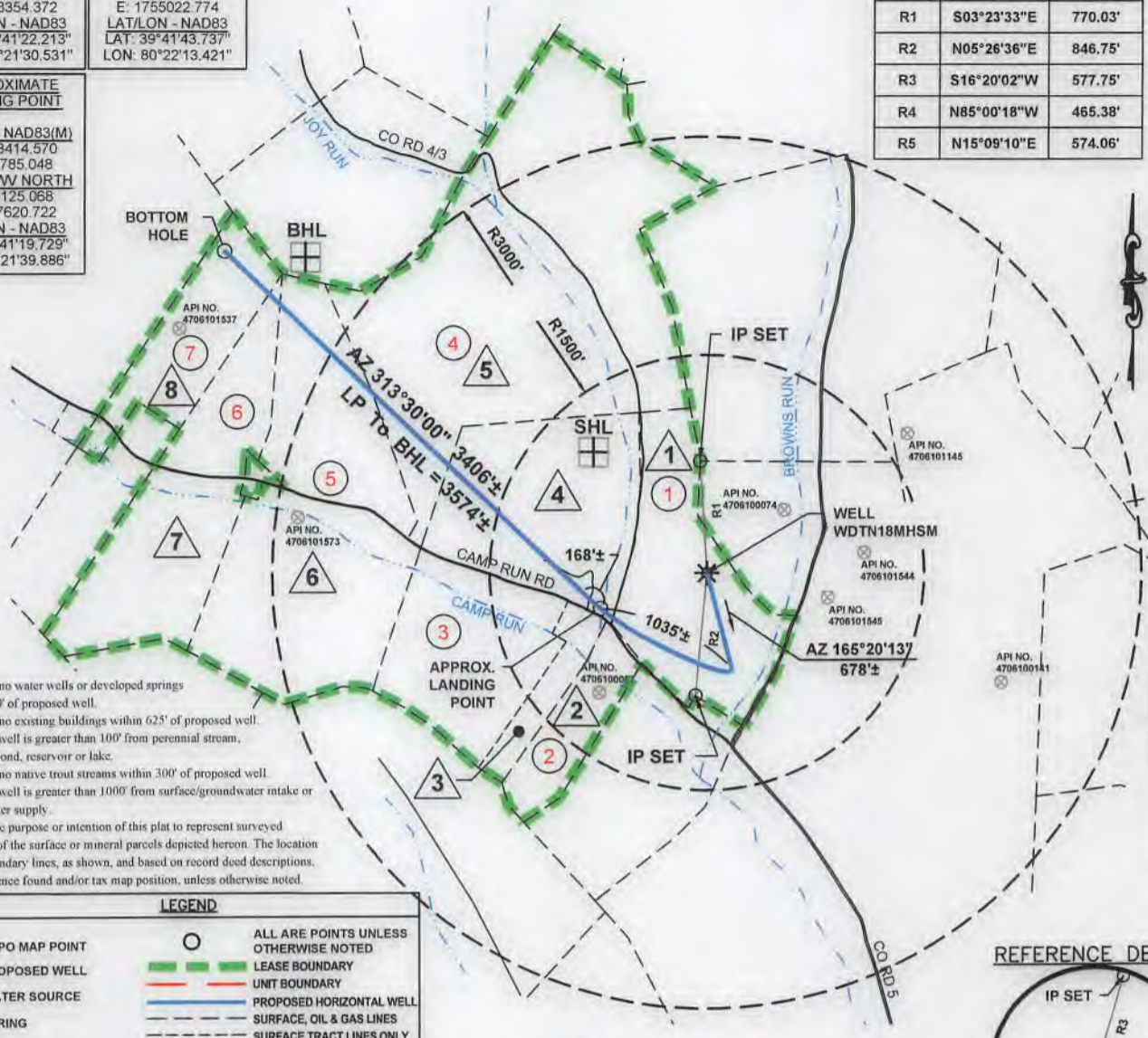
SURFACE HOLE LOCATION (SHL)
 UTM 17 - NAD83(M)
 N: 4393492.756
 E: 555007.324
NAD27, WV NORTH
 N: 434369.450
 E: 1758354.372
LAT/LON - NAD83
 LAT: 39°41'22.213"
 LON: 80°21'30.531"

BOTTOM HOLE LOCATION (BHL)
 UTM 17 - NAD83(M)
 N: 4394149.091
 E: 553981.080
NAD27, WV NORTH
 N: 436579.336
 E: 1755022.774
LAT/LON - NAD83
 LAT: 39°41'43.737"
 LON: 80°22'13.421"

SHL is located on topo map 6,758 feet south of Latitude: 39° 42' 30"
 BHL is located on topo map 4,524 feet south of Latitude: 39° 42' 30"

| LINE # | BEARING | DISTANCE |
|--------|-------------|----------|
| R1 | S03°23'33"E | 770.03' |
| R2 | N05°26'36"E | 846.75' |
| R3 | S16°20'02"W | 577.75' |
| R4 | N85°00'18"W | 465.38' |
| R5 | N15°09'10"E | 574.06' |

APPROXIMATE LANDING POINT
 UTM 17 - NAD83(M)
 N: 4393414.570
 E: 554785.048
NAD27, WV NORTH
 N: 434125.068
 E: 1757620.722
LAT/LON - NAD83
 LAT: 39°41'19.729"
 LON: 80°21'39.886"



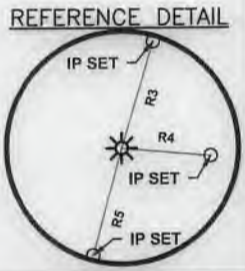
- NOTES
- There are no water wells or developed springs within 250' of proposed well.
 - There are no existing buildings within 625' of proposed well.
 - Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake.
 - There are no native trout streams within 300' of proposed well.
 - Proposed well is greater than 1000' from surface/groundwater intake or public water supply.
 - It is not the purpose or intention of this plat to represent surveyed locations of the surface or mineral parcels depicted hereon. The location of the boundary lines, as shown, and based on record deed descriptions, field evidence found and/or tax map position, unless otherwise noted.

LEGEND

| | | | | | | | | | | | |
|--|--------------------------|--|----------------------|--|----------------|--|-----------------|--|--------------------------|--|--|
| | TOPO MAP POINT | | PROPOSED WELL | | WATER SOURCE | | SPRING | | SURFACE TRACT | | LEASED NUMBER BASED ON ATTACHED WDN18M |
| | RECORD GAS WELL | | UNKNOWN WELL | | LEASE BOUNDARY | | UNIT BOUNDARY | | PROPOSED HORIZONTAL WELL | | SURFACE, OIL & GAS LINES |
| | SURFACE TRACT LINES ONLY | | GAS LEASE LINES ONLY | | WELL REFERENCE | | STREAM/WATERWAY | | ROAD | | FORCED POOLING AREAS |

ALL ARE POINTS UNLESS OTHERWISE NOTED

Sheffler & Company, Inc.
 ENGINEERING • SURVEYING
 1712 Mount Nebo Road
 Sewickley, PA 15143
 Phone: 412-219-4509
 Email: info@shefflerCo.com



FILE #: WDTN18MHSM
 DRAWING #: 3601 - WDTN18M.DWG
 SCALE: 1"=2000'
 MINIMUM DEGREE OF ACCURACY: 1/2500
 PROVEN SOURCE OF ELEVATION: USGS MONUMENT JX1864: 1,496.32'

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

SIGNED: [Signature]
 R.P.E.: _____ L.L.S.: P.S. NO. _____



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 WVDEP
 OFFICE OF OIL & GAS
 601 57TH STREET
 CHARLESTON, WV 25304



DATE: May 10, 2019
 OPERATOR'S WELL #: WDTN18MHSM
 API WELL # 47 061 1859
 STATE COUNTY PERMIT

Well Type: Oil Waste Disposal Production Deep
 Gas Liquid Injection Storage Shallow

WATERSHED: DUNKARD CREEK ELEVATION: 1215'
 COUNTY/DISTRICT: MONONGALIA / BATTELLE QUADRANGLE: WADESTOWN, WV
 SURFACE OWNER: CONSOL MINING COMPANY LLC ACREAGE: 328.11
 OIL & GAS ROYALTY OWNER: BOUNTY MINERALS, LLC ACREAGE: 328.11

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON
 CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY)

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 7,715 ± TMD: 11,774 ±
 WELL OPERATOR: CNX GAS COMPANY, LLC DESIGNATED AGENT: CHRIS TURNER
 Address: 1000 CONSOL ENERGY DRIVE Address: 1 DOMINION DRIVE
 City CANONSBURG State PA Zip Code 15317 City JANE LEW State WV Zip Code 26378

SHL is located on topo map 7,179 feet west of Longitude: 80° 20' 00"
 BHL is located on topo map 10,494 feet west of Longitude: 80° 20' 00"

| Tract ID | Tax Map & Parcel | Grantor, Lessor, etc | Surface Owner |
|----------|----------------------|--|---------------------------|
| 1A | 1-9-37 | Consol Mining Company LLC | CONSOL MINING COMPANY LLC |
| 2 | 1-12-6 | Terra Firma Company | TERRA FIRMA COMPANY |
| 4 | 1-12-5 P/O 1-9-36 | Bruce Scott Carpenter and Patricia S. Carpenter, h/w Patti Carpenter Bruce P. Carpenter Jeannine Osmanski and Robert E. Osmanski, w/h Larry A. Kerr Martha Sue Kerr | CONSOL MINING COMPANY LLC |
| 5 | 1-9-33 | Consol Mining Company | CONSOL MINING COMPANY LLC |
| 6 | 1-9-34 1-9-34.1 | Consol Mining Company | CONSOL MINING COMPANY LLC |
| 7A, 7B | 1-9-35 | Consol Mining Company W. James Shannon Nancy Paulovicks Martha Pryor Earlene Owens and Robert Owens, w/h David Allen Jolliffe Lisa Ellen May and Gary A. May, w/h Leon E. Delaney George William Cummins Jr. Mary Ellen Bell Martha Ann Prince Joseph S. Delaney Lee E. Delaney Jeff T. Delaney Michael S. Delaney | CONSOL MINING COMPANY LLC |
| 10 | 1-9-30 | Consol Mining Company | CONSOL MINING COMPANY LLC |

SURFACE TRACT OWNERS & TAX PARCEL

| | | |
|----|---------------------------|------------|
| 1. | CONSOL MINING COMPANY LLC | TM# 1-9-37 |
| 2. | TERRA FIRMA COMPANY | TM# 1-12-6 |
| 3. | CONSOL MINING COMPANY LLC | TM# 1-12-5 |
| 4. | CONSOL MINING COMPANY LLC | TM# 1-9-36 |
| 5. | CONSOL MINING COMPANY LLC | TM# 1-9-33 |
| 6. | CONSOL MINING COMPANY LLC | TM# 1-9-35 |
| 7. | CONSOL MINING COMPANY LLC | TM# 1-9-35 |
| 8. | CONSOL MINING COMPANY LLC | TM# 1-9-30 |

| WDTN18MHSM UNIT = 327.077 ACRES TOTAL | | |
|---------------------------------------|-------------------------------|------------|
| BATTELLE DISTRICT | | |
| # | TAX MAP & PARCEL | UNIT ACRES |
| 1 | 1-9, P/O PARCEL 37 | 31.871 Ac. |
| 2 | 1-12, PARCEL 12 | 11.147 Ac. |
| 3 | 1-12, PARCEL 5, 1-9 PARCEL 36 | 69.403 Ac. |
| 4 | 1-9, PARCEL 33 | 98.681 Ac. |
| 5 | 1-9, P/O PARCEL 35 | 61.587 Ac. |
| 6 | 1-9, P/O PARCEL 35 | 36.174 Ac. |
| 7 | 1-9, PARCEL 30 | 18.214 Ac. |

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
WVDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25304



Sheffler & Company, Inc.
ENGINEERING • SURVEYING
1712 Mount Nebo Road
Sewickley, PA 15143
Phone: 412-219-4509
Email: info@shefflerCo.com

DATE: May 10, 2019

Well Type: Oil Waste Disposal Production Deep
 Gas Liquid Injection Storage Shallow
OPERATOR'S WELL #: WDTN18MHSM
API WELL # 47 061
STATE COUNTY PERMIT

WATERSHED: DUNKARD CREEK ELEVATION: 1215'
COUNTY/DISTRICT: MONONGALIA / BATTELLE QUADRANGLE: WADESTOWN, WV
SURFACE OWNER: CONSOL MINING COMPANY LLC ACREAGE: 328.11
OIL & GAS ROYALTY OWNER: BOUNTY MINERALS, LLC ACREAGE: 328.11

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON
CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY)

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 7,715 ± TMD: 11,774' ±
WELL OPERATOR: CNX GAS COMPANY, LLC DESIGNATED AGENT: CHRIS TURNER
Address: 1000 CONSOL ENERGY DRIVE Address: 1 DOMINION DRIVE
City CANONSBURG State PA Zip Code 15317 City JANE LEW State WV Zip Code 26378

WW-6A1
(5/13)

Operator's Well No. WDTN18MHSM

**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

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

Well Operator: CNX Gas Company, LLC
 By: Erika Whetstone *Erika Whetstone*
 Its: Permitting Manager

Attachment - Form WW-6A-1 for WDTN18MHSM

| <u>Tract ID</u> | <u>Tax Map & Parcel</u> | <u>Title Opinion QLS #</u> | <u>Grantor, Lessor, etc</u> | <u>Grantee, Lessee, etc</u> | <u>Royalty</u> | <u>Book/Page</u> |
|-----------------|-----------------------------|----------------------------|---|--|---|---|
| 1 | 1-9-37 | 189033000 | Consol Mining Company LLC | CNX Gas Company LLC | Subsurface Easement | 1648/625 |
| 2 | 1-12-6 | 189031000 | Terra Firma Company CNX Land LLC | CNX Land LLC CNX Gas Company LLC | Fee Deed | CB 60/312 1665/248 |
| 3 | 1-12-5 1-9-36 | 189015000 | Bruce Scott Carpenter and Patricia S. Carpenter, h/w Patti Carpenter Bruce P. Carpenter Jeannine Osmanski and Robert E. Osmanski, w/h Larry A. Kerr Martha Sue Kerr | CNX Gas Company LLC CNX Gas Company LLC CNX Gas Company LLC CNX Gas Company LLC CNX Gas Company LLC CNX Gas Company LLC | Not less than 1/8 Not less than 1/8 Not less than 1/8 Not less than 1/8 Not less than 1/8 Not less than 1/8 | 1527/680 1527/684 1527/688 1527/692 1577/294 1577/297 |
| 4 | 1-9-32 1-9-33 | 188616000 | Consol Mining Company CNX Resource Holdings LLC | CNX Resource Holdings LLC CNX Gas Company LLC | Fee Deed | 1603/78 1667/86 |
| 5, 6 | 1-9-35 | 188605000 | Consol Mining Company CNX Resource Holdings LLC W. James Shannon Nancy Paulovicks Martha Pryor Earlene Owens and Robert Owens, w/h David Allen Jolliffe Lisa Ellen May and Gary A. May, w/h Leon E. Delaney George William Cummins Jr. Mary Ellen Bell Martha Ann Prince Joseph S. Delaney Lee E. Delaney Jeff T. Delaney Michael S. Delaney | CNX Resource Holdings LLC CNX Gas Company LLC CNX Gas Company, LLC CNX Gas Company, LLC CNX Gas Company, LLC CNX Gas Company, LLC CNX Gas Company, LLC CNX Gas Company, LLC CNX Gas Company, LLC CNX Gas Company, LLC CNX Gas Company, LLC CNX Gas Company, LLC CNX Gas Company, LLC CNX Gas Company, LLC CNX Gas Company, LLC CNX Gas Company, LLC CNX Gas Company, LLC CNX Gas Company, LLC | Fee Deed Not less than 1/8 Not less than 1/8 Not less than 1/8 Not less than 1/8 Not less than 1/8 Not less than 1/8 Not less than 1/8 Not less than 1/8 Not less than 1/8 Not less than 1/8 Not less than 1/8 Not less than 1/8 Not less than 1/8 Not less than 1/8 Not less than 1/8 Not less than 1/8 | 1603/78 1670/669 1631/47 1631/57 1631/42 1631/52 1634/90 1636/305 1629/515 1639/537 1634/121 1635/231 1631/37 1634/75 1629/510 1631/32 |
| 7 | 1-9-30 | 188602000 | Consol Mining Company CNX Resource Holdings LLC | CNX Resource Holdings LLC CNX Gas Company LLC | Fee Deed | 1603/78 1667/86 |

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2 of 2



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

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

RE: Road Letter – WDTN18 Well Pad Drilling Applications

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.

If any further information or correspondence is required, please contact me at (724) 485-4035 or ErikaWhetstone@cnx.com.

Sincerely,

A handwritten signature in blue ink that reads "Erika Whetstone". The signature is fluid and cursive.

Erika Whetstone
Permitting Manager

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

Date of Notice Certification: 6/18/19

API No. 47- 061 -
Operator's Well No. WDTN18MHSM
Well Pad Name: WDTN18

Notice has been given:

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

| | | |
|---------------------------------|--|------------------------------|
| State: <u>WEST VIRGINIA</u> | UTM NAD 83 | Easting: <u>555007.324</u> |
| County: <u>MONONGALIA</u> | | Northing: <u>4393492.756</u> |
| District: <u>BATTELLE</u> | Public Road Access: <u>CAMP RUN ROAD (CR4)</u> | |
| Quadrangle: <u>WADESTOWN</u> | Generally used farm name: <u>CONSOL</u> | |
| Watershed: <u>DUNKARD CREEK</u> | | |

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

| | |
|---|--|
| <p>Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:</p> <p>*PLEASE CHECK ALL THAT APPLY</p> <p><input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or</p> <p style="padding-left: 40px;"><input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)</p> <p><input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION</p> <p><input checked="" type="checkbox"/> 5. PUBLIC NOTICE</p> <p><input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION</p> | <p>OOG OFFICE USE ONLY</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input checked="" type="checkbox"/> RECEIVED</p> <p><input checked="" type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input checked="" type="checkbox"/> RECEIVED</p> <p><input checked="" type="checkbox"/> RECEIVED</p> <p><input checked="" type="checkbox"/> RECEIVED</p> |
|---|--|

Required Attachments:

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

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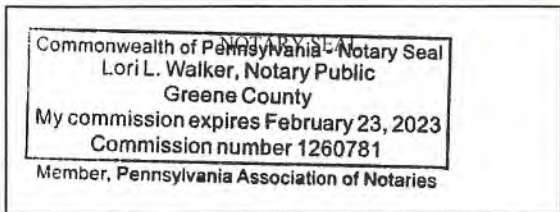
WV Department of
Environmental Protection

Certification of Notice is hereby given:

THEREFORE, I ERIKA WHETSTONE, 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
By: ERIKA WHETSTONE *Erika Whetstone*
Its: PERMITTING MANAGER
Telephone: 724-485-4035

Address: 1000 CONSOL ENERGY DRIVE
CANONSBURG, PA 15317
Facsimile: _____
Email: ERIKAWHETSTONE@CNX.COM



Commonwealth of Pennsylvania County of Washington
Subscribed and sworn before me this 18th day of June 2019.
Lori L Walker Notary Public
My Commission Expires February 23, 2023

Oil and Gas Privacy Notice:

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

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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: 6/19/19 Date Permit Application Filed: 6/21/19

Notice of:

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

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

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

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

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

SURFACE OWNER(s)
Name: CONSOL MINING COMPANY, LLC
Address: 1000 CONSOL ENERGY DRIVE
CANONSBURG, PA 15317

Name: _____
Address: _____

SURFACE OWNER(s) (Road and/or Other Disturbance)
Name: CONSOL MINING COMPANY, LLC
Address: 1000 CONSOL ENERGY DRIVE
CANONSBURG, PA 15317

Name: _____
Address: _____

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

COAL OWNER OR LESSEE
Name: SEE ATTACHED
Address: _____

COAL OPERATOR
Name: _____
Address: _____

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Name: SEE ATTACHED
Address: _____

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

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*Please attach additional forms if necessary WV Department of Environmental Protection

Notice is hereby given:

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

This Notice Shall Include:

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

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

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

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

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

Well Location Restrictions

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

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

Water Well Testing:

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

Water Testing Laboratories:

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

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

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

Written Comment:

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

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

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

Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

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

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

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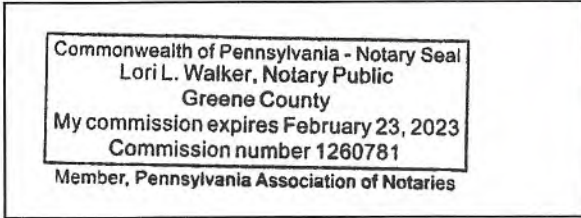
Notice is hereby given by:

Well Operator: CNX GAS COMPANY, LLC Erika Whetstone
Telephone: 724-485-4035
Email: ERIKAWHETSTONE@CNX.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 depprivacyofficer@wv.gov.



Commonwealth of Pennsylvania County of Washington
Subscribed and sworn before me this 18th day of June, 2019.
Lori L. Walker Notary Public
My Commission Expires February 23, 2023

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WV Department of
Environmental Protection

4706101859

WW-6A NOTICE OF APPLICATION ATTACHMENT

WDTN18MHSM

COAL OWNER OR LESSEE:

Consolidation Coal Company
46226 National Road
St. Clairsville, Ohio 43950

Murray Energy Corporation
46226 National Road
St. Clairsville, Ohio 43950

Ohio Valley Resources, Inc.
46226 National Road
St. Clairsville, Ohio 43950

CCC Land Resources LLC
46226 National Road
St. Clairsville, Ohio 43950

CCC RCPC LLC
46226 National Road
St. Clairsville, Ohio 43950

The Marion County Coal Company
46226 National Road
St. Clairsville, Ohio 43950

CONSOL MINING COMPANY, LLC
1000 CONSOL ENERGY DRIVE
CANONSBURG, PA 15317

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

SHAWN D. HENDERSON
274 BROWN RUN RD
BURTON, WV 26562

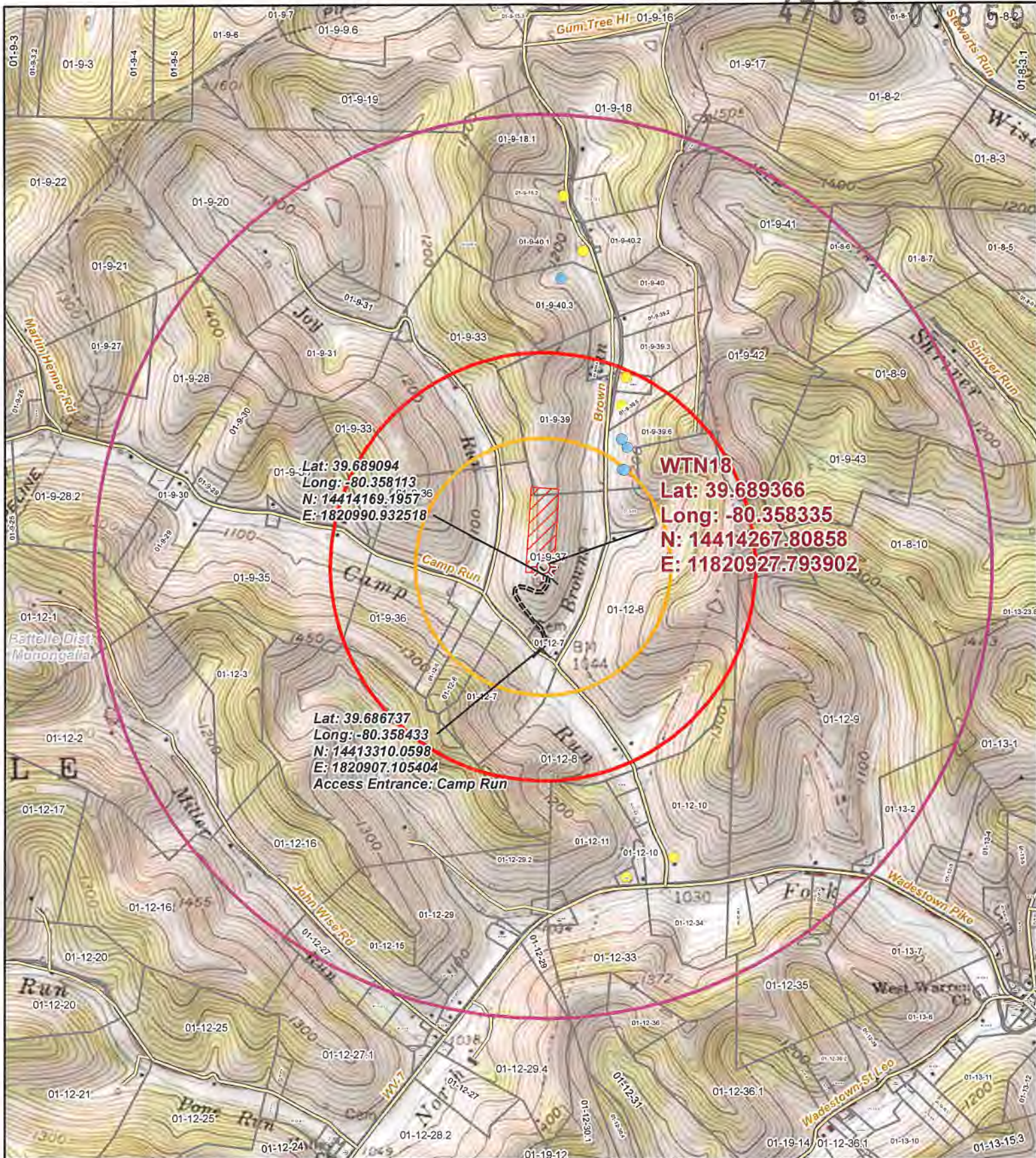
GARY L. & TERESA S. FORQUER
218 BROWN RUN RD
BURTON, WV 26562

CHRISTOPHER PRICE
121 MAPLE RIDGE RD
GREENSBORO, PA 15338

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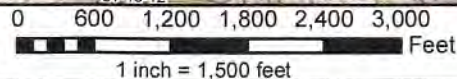
Lat: 39.689094
 Long: -80.358113
 N: 14414169.195736
 E: 1820990.932518

WTN18
 Lat: 39.689366
 Long: -80.358335
 N: 14414267.80858
 E: 11820927.793902

Lat: 39.686737
 Long: -80.358433
 N: 14413310.0598
 E: 1820907.105404
 Access Entrance: Camp Run

Legend

- Wellbore
- Access Points
- Water Well
- Spring
- Access Road
- 1,500 ft Buffer
- 2,500 ft Buffer
- 1 Mile Buffer
- WDTN18 Pad LOD
- Surface Parcel



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Original Date: 4/29/2019 Prepared By: GIS

Revision Date: 4/29/2019 Approved By: GIS

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JUN 24 2019
 Topographic Well Map
 WV Department of Environmental Protection
WDTN18

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

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

Date of Notice: 4/15/19 **Date of Planned Entry:** 4/22/19

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

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

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

Notice is hereby provided to:

SURFACE OWNER(s)

Name: Consol Mining Company, LLC
 Address: 1000 Consol Energy Drive
 Canonsburg, PA 15317
 Name: _____
 Address: _____
 Name: _____
 Address: _____

COAL OWNER OR LESSEE

Name: See attached
 Address: _____

MINERAL OWNER(s)

Name: Bounty Minerals, LLC
 Address: 777 Main Street, Suite 3400
 Forth Worth, TX 76102
 *please attach additional forms if necessary

Notice is hereby given:

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

| | |
|-----------------------|---|
| State: West Virginia | Approx. Latitude & Longitude: 39.689503660, -80.358480718 |
| County: Monongalia | Public Road Access: Camp Run Road CR4 |
| District: Battelle | Watershed: Dunkard Creek |
| Quadrangle: Wadestown | Generally used farm name: Consol |

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

Notice is hereby given by:

| | |
|-------------------------------------|-----------------------------------|
| Well Operator: CNX Gas Company, LLC | Address: 1000 Consol Energy Drive |
| Telephone: 724-485-4035 | Canonsburg, PA 15317 |
| Email: Erikawhelstone@cnx.com | Facsimile: _____ |

Oil and Gas Privacy Notice:

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

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 WV Department of
 Environmental Protection

WW6A3 Notice of Entry for Plat Survey – WDTN18MHSM

COAL OWNER OR LESSEE

| | |
|--------------------------------|--|
| Consolidation Coal Company | 1000 Consol Energy Drive, Canonsburg, PA |
| Consolidation Coal Company | 46226 National Road St. Clairsville, Ohio 43950 |
| Murray Energy Corporation | 46226 National Road St. Clairsville, Ohio 43950 |
| Ohio Valley Resources, Inc. | 46226 National Road St. Clairsville, Ohio 43950 |
| CCC Land Resources LLC | 46226 National Road St. Clairsville, Ohio 43950 |
| CCC RCPC LLC | 46226 National Road St. Clairsville, Ohio 43950 |
| The Marion County Coal Company | 46226 National Road St. Clairsville, Ohio 43950 |

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

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

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

Date of Notice: 6/19/19 **Date Permit Application Filed:** 6/21/19

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

- HAND DELIVERY CERTIFIED MAIL RETURN RECEIPT REQUESTED

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

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

Name: CONSOL MINING COMPANY, LLC
Address: 1000 CONSOL ENERGY DRIVE
CANONSBURG, PA 15317

Name: _____
Address: _____

Notice is hereby given:

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

| | | | | |
|-------------|----------------------|---------------------------|-----------|----------------------------|
| State: | <u>WEST VIRGINIA</u> | UTM NAD 83 | Easting: | <u>555007.324</u> |
| County: | <u>MONONGALIA</u> | | Northing: | <u>4393492.756</u> |
| District: | <u>BATTELLE</u> | Public Road Access: | | <u>CAMP RUN ROAD (CR4)</u> |
| Quadrangle: | <u>WADESTOWN</u> | Generally used farm name: | | <u>CONSOL</u> |
| Watershed: | <u>DUNKARD CREEK</u> | | | |

This Notice Shall Include:

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

Notice is hereby given by:

Well Operator: CNX GAS COMPANY LLC
Address: 1000 CONSOL ENERGY DRIVE
CANONSBURG PA 15317
Telephone: 724-485-4035
Email: ERIKAWHETSTONE@CNX.COM
Facsimile: _____

Authorized Representative: ERIKA WHETSTONE
Address: 1000 CONSOL ENERGY DRIVE
CANONSBURG PA 15317
Telephone: 724-485-4035
Email: ERIKAWHETSTONE@CNX.COM
Facsimile: _____

Oil and Gas Privacy Notice:

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

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

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

Date of Notice: 6/19/19 **Date Permit Application Filed:** 6/21/19

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

- CERTIFIED MAIL
RETURN RECEIPT REQUESTED
- HAND
DELIVERY

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

Notice is hereby provided to the SURFACE OWNER(s)

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

Name: CONSOL MINING COMPANY, LLC
Address: 1000 CONSOL ENERGY DRIVE
CANONSBURG, PA 15317

Name: _____
Address: _____

Notice is hereby given:

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

| | | | | |
|-------------|----------------------|---------------------------|----------------------------|--------------------|
| State: | <u>WEST VIRGINIA</u> | UTM NAD 83 | Eastings: | <u>555007.324</u> |
| County: | <u>MONONGALIA</u> | | Northing: | <u>4393492.756</u> |
| District: | <u>BATTELLE</u> | Public Road Access: | <u>CAMP RUN ROAD (GR4)</u> | |
| Quadrangle: | <u>WADESTOWN</u> | Generally used farm name: | <u>CONSOL</u> | |
| Watershed: | <u>DUNKARD CREEK</u> | | | |

This Notice Shall Include:

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

Well Operator: CNX GAS COMPANY LLC
Telephone: 724-485-4035
Email: ERIKAWHETSTONE@CNX.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 depprivacyofficer@wv.gov.

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JUN 24 2019
WV Department of
Environmental Protection



47 06 * 01859

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
Division of Highways

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

Byrd E. White, III
Secretary of Transportation

June 21, 2019

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

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

Subject: DOH Permit for the WDTN 18 Pad, Monongalia County
WDTN18MHSM Well site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #04-2018-1103 issued to CNX Resources Corporation for access to the State Road for a well site located off of Monongalia County Route 4 SLS.

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

Very Truly Yours,

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

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Office of Oil and Gas

Cc: Shannon Miller
CNX Resources Corporation
CH, OM, D-4
File

JUN 24 2019

WV Department of
Environmental Protection

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

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Office of Oil and Gas

JUN 24 2019
WV Department of
Environmental Protection

**APPROVED
WVDEP OOG**

K/S 7/23/2019

WDTN18 WELL PAD

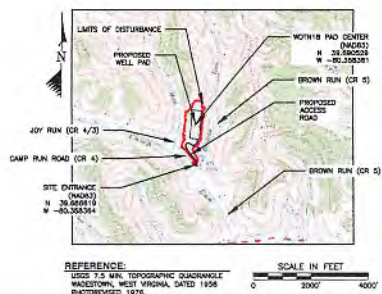
EROSION & SEDIMENTATION CONTROL & SITE RESTORATION PLAN

BATTELLE DISTRICT, MONOGALIA COUNTY, WEST VIRGINIA FOR



CNX GAS COMPANY

| SHEET INDEX | |
|--------------|-------------------------------------|
| SHEET NUMBER | SHEET TITLE |
| 001 | COVER SHEET |
| 002 | GENERAL NOTES |
| 900 | EXISTING CONDITIONS |
| 901 | SOILS MAP |
| 902 | PROPOSED SITE PLAN |
| 903 | PROPOSED SITE PLAN |
| 904 | ACCESS ROAD PROFILE |
| 904A | ACCESS ROAD CROSS SECTIONS |
| 905 | WELL PAD CROSS SECTIONS |
| 906 | STOCKPILE CROSS SECTIONS |
| 907 | TOE KEY DETAILS |
| 908 | EROSION AND SEDIMENT CONTROL DETAIL |
| 909 | EROSION AND SEDIMENT CONTROL DETAIL |
| 910 | SITE RESTORATION PLAN |
| 911 | REVEGETATION PLAN |
| 912 | QUANTITY SUMMARY |



| Parcel ID | Property Name | Disturbance within Property (acres) | Access Road Disturbance within Property (acres) | Well Pad & Stockpiles Disturbance within Property (acres) | Meadow Disturbance (acres) | Wooded Disturbance (acres) |
|------------------------------------|---------------------------|-------------------------------------|---|---|----------------------------|----------------------------|
| 1-12-7 | CONSOL MINING COMPANY LLC | 0.50 | 0.50 | 0.00 | 0.14 | 0.36 |
| 1-8-27 | CONSOL MINING COMPANY LLC | 19.91 | 5.99 | 13.96 | 6.80 | 13.11 |
| 1-8-39 | CONSOL MINING COMPANY LLC | 2.79 | 2.79 | 0.00 | 0.24 | 2.55 |
| Total Limit of Disturbance: | | 23.17 | 9.21 | 13.96 | 7.18 | 16.00 |

LOCATION MAP
KEYSTONE CONSULTANTS, INC.

OCTOBER 2018

| REVISIONS | | | REVISIONS | | |
|-----------|------|-------------|-----------|------|-------------|
| NO. | DATE | DESCRIPTION | NO. | DATE | DESCRIPTION |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |



CNX
CNX GAS COMPANY
1000 CONSOL ENERGY DRIVE
CANCNSBURG, PA 15317

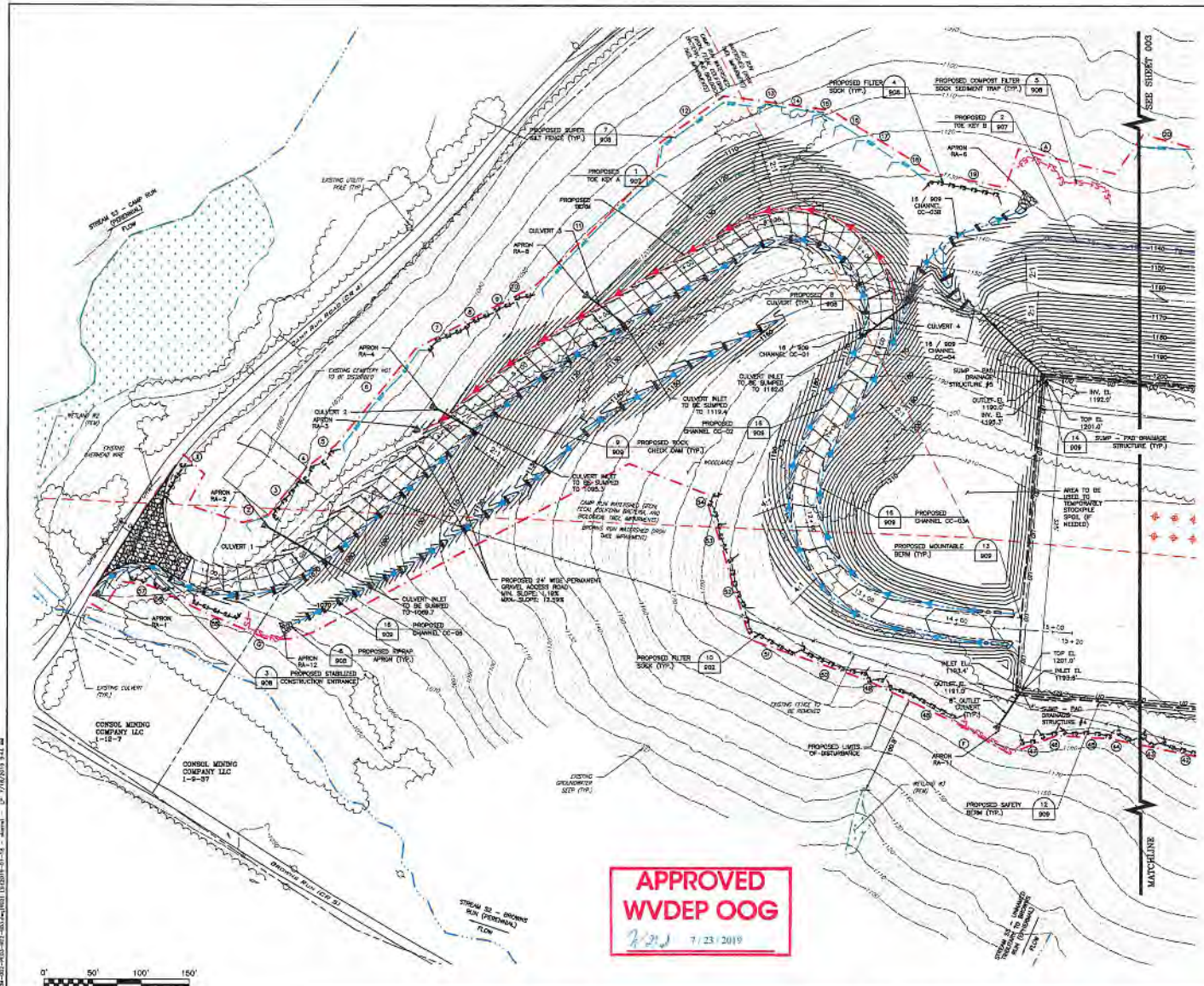
KEYSTONE CONSULTANTS, INC.
32 EAST MAIN STREET
CARNEGIE, PA 15106
724.842.2249 FAX 724.842.7324
www.keystoneconsultants.com

DRAWN: ALL
CHECKED: SAS
APPROVED: EAZ
DATE: 10/25/18
SCALE: 1"=200'
COORDINATE: NAD83
SHEET: 001 OF 10
FIGURE: 18091-001

WDTN18 WELL PAD

COVER SHEET

DRAWING NUMBER
001
SHEET 01 OF 10
REVISION



- LEGEND**
- EXISTING FENCE
 - EXISTING PROPERTY LINE (TAX MAPPING)
 - EXISTING INDEX CONTOUR
 - EXISTING INTERMEDIATE CONTOUR
 - EXISTING PAVED ROADWAY
 - EXISTING UNPAVED DRIVEWAY
 - EXISTING PAVED DRIVEWAY
 - EXISTING TRAIL CENTERLINE
 - EXISTING CULVERT
 - EXISTING UTILITY POLE
 - EXISTING OVERHEAD WIRE
 - EXISTING PRESERVE
 - EXISTING WATER BODY CENTERLINE
 - EXISTING WETLAND
 - PUBLIC DATA WATERSHED BOUNDARY
 - EXISTING GROUNDWATER SEEP
 - EXISTING INDEX CONTOUR
 - PROPOSED INTERMEDIATE CONTOUR
 - PROPOSED GRAVEL BOUNDARY
 - PROPOSED LIMIT OF DISTURBANCE/PERMIT BOUNDARY
 - PROPOSED STABILIZED CONSTRUCTION ENTRANCE
 - PROPOSED COMPOST FILTER SOAK (TYP.)
 - PROPOSED TRIPLE STACKED COMPOST SOAK SEDIMENT TRAP
 - PROPOSED SUPER SUEF FILTER
 - PROPOSED REPAIR APRON
 - PROPOSED ROCK CHECK DAM
 - PROPOSED CULVERT
 - PROPOSED SWAMP
 - PROPOSED CHANNEL
 - PROPOSED BEAM
 - PROPOSED UNDERDRAIN
 - PROPOSED CONTAINMENT BERM
 - PROPOSED TIE BEACH DRAIN A
 - PROPOSED TIE BEACH DRAIN B
 - PROPOSED TIE BEACH DRAIN C
 - PROPOSED UTILITY WELL LOCATION
 - PROPOSED MARCELLUS WELL LOCATION

- NOTES:**
1. EXISTING CONTOUR INFORMATION, AREA MAPPING, AND PLANIMETRICS PROVIDED BY BLUE MOUNTAIN AERIAL INC. INFORMATION DATED 4-5-13 AND 3-11-18.
 2. PARCEL INFORMATION OBTAINED FROM PUBLICLY AVAILABLE TAX MAPPING DATA. DATA SHOULD BE USED AS REFERENCE ONLY.
 3. EXISTING UTILITIES ARE SHOWN FOR REFERENCE ONLY. ALL UTILITIES SHOULD BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
 4. EXISTING STREAM AND WETLAND INFORMATION FIELD LOCATED BY KEYSTONE CONSULTANTS, INC. IN MARCH 2018. DELINEATED STREAM STREAM INFORMATION IS SUPPLEMENTED BY NATIONAL HYDROGRAPHIC DATASET STREAMS, U.S. GEOLOGICAL SURVEY, 2007-2014, NATIONAL HYDROGRAPHIC DATASET AVAILABLE ON THE WORLD WIDE WEB (WWW.FEDERALREGULATIONS.ACCESSED.MAR.2018). THERE WILL BE NO STREAM OR WETLAND IMPACTS ASSOCIATED WITH THE LIMIT OF DISTURBANCE FOR THIS PROJECT.
 5. THE DISTURBANCE FOR THIS PROJECT IS LOCATED ON 1000 MAP NUMBER 5481000000, EFFECTIVE DATE JANUARY 20, 2010. THE DISTURBANCE IS LOCATED WITHIN ZONE 16 AS DENIED BY THE MAP.
 6. EROSION CONTROL BARRIERS TO BE PLACED ON ALL DISTURBED SLOPES GREATER THAN OR EQUAL TO 3%.
 7. THE RECEIVING WATERS FOR THIS PROJECT ARE UNPAVED TERRACES TO DREAINS RUN, DREAINS RUN, JOY RUN, AND CAMP RUN. ALL RECEIVING WATERS FOR THIS PROJECT ARE TYPICAL WATERSHEDS DUE TO SOIL IMPAIRMENT. CAMP RUN ADDITIONALLY IS A TYPICAL WATERSHED DUE TO FECAL COLIFORM BACTERIA AND BIOLOGICAL IMPAIRMENTS.
 8. NO WORK OUTSIDE OF THE LIMITS OF DISTURBANCE SHOWN ON THIS PLAN IS AUTHORIZED.

Access Road & Pad Driveway to Wellpad

| Cut (CY) | Fill (CY) | Net (CY) |
|----------|-----------|--------------|
| 147324 | 134555 | 137869 (CUM) |

- CUT/FILL NUMBERS ARE APPROXIMATE BASED OFF AT-RISK VOLUMES. ASSUMING 0.5' OF TOLERANCE. NUMBERS DO NOT TAKE INTO ACCOUNT SHARP/LEVEL. ACTUAL EARTHWORK VOLUMES VARY BASED OFF FIELD CONDITIONS.
- TYPICAL STOCKPILE VOLUME BASED OFF 0.5' DEPTH ACROSS GRADED AREA. THIS VOLUME WAS COMPUTED AS APPROXIMATELY 11,500 CY.

Topsoil/Seed Stockpile

| Cut (CY) | Fill (CY) | Net (CY) |
|----------|-----------|-------------|
| 0 | 14786 | 14786 (940) |

- OF 12,789 EXCESS MATERIAL AFTER DRAINING TO SUBGRADE, DISPOSAL ACCORDING TO APPROXIMATELY 11,500 CY. REMAINING STOCKPILE IS 1,289 CY. THE GRADED STOCKPILE SHOWS A SLIGHTLY LARGER VOLUME TO ACCOUNT FOR SOME ERROR/INCONSISTENCIES IN TYPICAL DEPTH.

APPROVED
WVDEP OOG

7/23/2019



| REVISIONS | | REVISIONS | |
|-----------|------|-------------|--|
| NO. | DATE | DESCRIPTION | |
| | | | |
| | | | |
| | | | |



CNX
 CNX GAS COMPANY
 1000 CONSOL ENERGY DRIVE
 CANONSBURG, PA 15317

KEYSTONE CONSULTANTS, INC.
 12 EAST MAIN STREET
 CARNEGIE, PA 15106
 PH: 412.274.9191 FAX: 412.274.9192
 www.keystoneconsultants.com

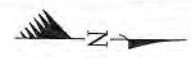
| | |
|--------------|-----------|
| DATE: | 4.1 |
| DESIGNED: | SSS |
| APPROVED: | ESJ |
| DATE: | 07/23/19 |
| SCALE: | AS SHOWN |
| COORDINATOR: | SSS |
| CHECKER: | SSS |
| PROJECT: | 18020-002 |

WOTM18 WELL PAD

PROPOSED SITE PLAN

DRAWING NUMBER
902
SHEET 06 OF 15
REVISION

07/23/19 UPDATE THE RESPONSE TO DEP COMMENTS



APPROVED WVDEP OOG
7/23/2019

- LEGEND**
- EXISTING FENCE
 - EXISTING PROPERTY LINE (TAX MAPING)
 - EXISTING ADJACENT CENTERLINE
 - EXISTING INTERMEDIATE CONTOUR
 - EXISTING PAVED ROADWAY
 - EXISTING UNPAVED DRIVEWAY
 - EXISTING PAVED DRIVEWAY
 - EXISTING TRAIL CENTERLINE
 - EXISTING DULVITY
 - EXISTING UTILITY POLE
 - EXISTING OVERHEAD WIRE
 - EXISTING TIE LINE
 - EXISTING WATER BODY CENTERLINE
 - EXISTING WETLAND
 - PUBLIC DATA WATERSHED BOUNDARY
 - EXISTING GROUNDWATER BEEP
 - PROPOSED INDEX CONTOUR
 - PROPOSED INTERMEDIATE CONTOUR
 - PROPOSED GRAVEL BOUNDARY
 - PROPOSED LIMIT OF DISTURBANCE/TORBAT BOUNDARY
 - PROPOSED STABILIZED CONSTRUCTION ENTRANCE
 - PROPOSED COMPOST FILTER SOCK SEGMENT TRAP
 - PROPOSED TRIPLE STACKED COMPOST SOCK SEGMENT TRAP
 - PROPOSED SUPER SILT FENCE
 - PROPOSED RIPRAP APRON
 - PROPOSED ROCK CHECK DAM
 - PROPOSED CULVERT
 - PROPOSED SUMP
 - PROPOSED CHANNEL
 - PROPOSED BEEM
 - PROPOSED UNDERDRAIN
 - PROPOSED CONTAINMENT BEEM
 - PROPOSED TOE BEEM DRAIN A
 - PROPOSED TOE BEEM DRAIN B
 - PROPOSED TOE BEEM DRAIN C
 - PROPOSED UTIGA WELL LOCATION
 - PROPOSED MARCELLUS WELL LOCATION

- NOTES:**
- EXISTING CONTOUR INFORMATION, AERIAL MAPPING, AND PLANIMETRICS PROVIDED BY BLUE MOUNTAIN AERIAL, INC. INFORMATION DATED 4-6-13 AND 3-11-18.
 - PARCEL INFORMATION OBTAINED FROM PUBLICLY AVAILABLE TAX MAPING DATA. DATA SHOULD BE USED AS REFERENCE ONLY.
 - EXISTING UTILITIES ARE SHOWN FOR REFERENCE ONLY. ALL UTILITIES SHOULD BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
 - EXISTING STREAM AND WETLAND INFORMATION FIELD LOCATED BY KEYSTONE CONSULTANTS, INC. IN MARCH 2018. ADJACENT STREAM STREAM INFORMATION IS SUPPLEMENTED BY NATIONAL HYDROGRAPHY DATASET (NHD) FROM THE U.S. GEOLOGICAL SURVEY (2007-2014, NATIONAL HYDROGRAPHY DATASET AVAILABLE ON THE WEB) AND WITH (OTIS/CANADIANUS.COM), ACCESSIBLE MAY 2018. THERE WILL BE NO STREAM OR WETLAND IMPACTS ASSOCIATED WITH THE LIMIT OF DISTURBANCE FOR THIS PROJECT.
 - THE DISTURBANCE FOR THIS PROJECT IS LOCATED ON FIRM MAP NUMBER 5406700000, EFFECTIVE DATE JANUARY 20, 2016. THE DISTURBANCE IS LOCATED WITHIN ZONE 3, AS DESIGNATED BY THE MAP.
 - EROSION CONTROL BLANKET IS TO BE PLACED ON ALL DISTURBED SLOPES GREATER THAN OR EQUAL TO 5:1.
 - THE RECEIVING WATERS FOR THIS PROJECT ARE UNNAMED WATERSHEDS TO BRONKS RUN, BROOKS RUN, JOY RUN, AND CAMP RUN. ALL RECEIVING WATERS FOR THIS PROJECT ARE "WOL" WATERSHEDS DUE TO SOIL IMPROVEMENT. CAMP RUN ADDITIONALLY IS A "WOL" WATERSHED DUE TO FERAL COLIFORM BACTERIA AND BIOLOGICAL IMPAIRMENTS.
 - NO WORK OUTSIDE OF THE LIMITS OF DISTURBANCE SHOWN ON THIS PLAN IS AUTHORIZED.
 - ANY SOIL ENCOUNTERED ON SITE DURING EARTHWORK OPERATIONS SHOULD NOT BE USED IN STRUCTURAL FILL. SOIL SHALL BE STOCKPILED ON SITE IN AN AREA THAT IS NOT TO BE EXPOSED TO GROUNDWATER OR SURFACE RUNOFF.

Access Road & Pad Grading to Subbase

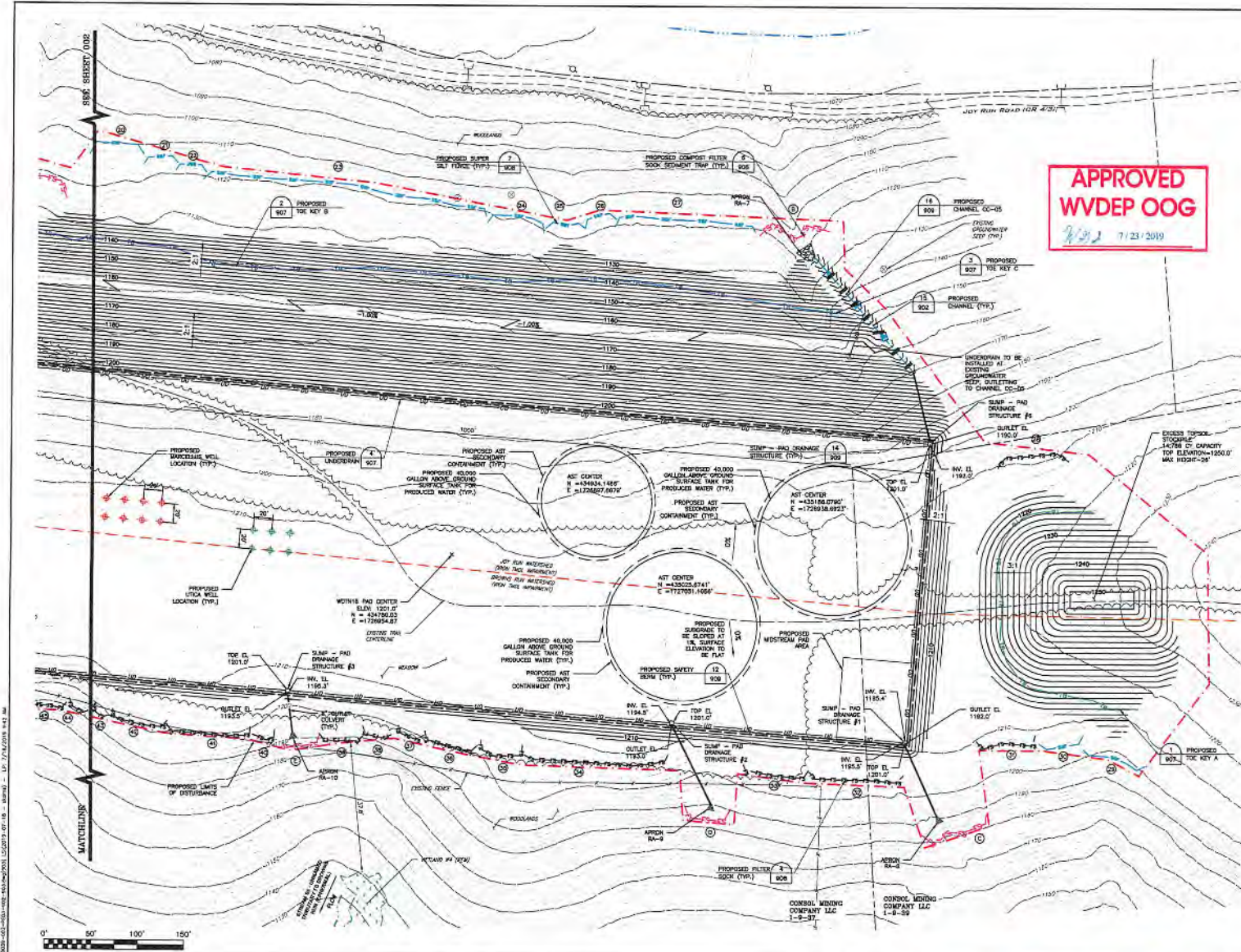
| Cut (CY) | Fill (CY) | Net (CY) |
|----------|-----------|----------|
| 147824 | 334555 | 178731 |

- * CUT/FILL NUMBERS ARE APPROPRIATE BASED OFF AIRCROSS VOLUMES, ASSUMING 0.5' OF TORSION. NUMBERS DO NOT TAKE INTO ACCOUNT SLOPE/PAVEMENT. ACTUAL EARTHWORK VOLUMES VARY BASED OFF FIELD CONDITIONS.
- * TORSION, STOCKPILE VOLUME BASED OFF 5.0' DEPTH ACCESS SPACE AREA. THIS VOLUME WAS COMPUTED AS APPROXIMATELY 11,240 CY.

Topsoil/Seed Stockpile

| Cut (CY) | Fill (CY) | Net (CY) |
|----------|-----------|----------|
| 0 | 14786 | 14786 |

- * OF 12,789 EXCESS MATERIAL AFTER GRADING TO SUBGRADE, TORSION ACCOUNTS FOR APPROXIMATELY 11,200 CY. REMAINING VOLUME SHOWN THE GRADED STOCKPILE SHOWS A SLIGHTLY LARGER VOLUME TO ACCOUNT FOR SOME EROSION/IMPACTS IN TORSION DEPTH.



REVISIONS

| NO. | DATE | DESCRIPTION |
|-----|----------|---------------------------------------|
| 1 | 10/27/18 | ISSUED FOR RESPONSE TO OWNER COMMENTS |

REVISIONS

| NO. | DATE | DESCRIPTION |
|-----|------|-------------|
| | | |



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CANNONSBURG, PA 15317

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WDTN18 WELL PAD
DRAWING NUMBER
903
SHEET 06 OF 15

PROPOSED SITE PLAN