



 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

Friday, January 4, 2019
 WELL WORK PERMIT
 Horizontal 6A / New Drill

CNX GAS COMPANY LLC
 POST OFFICE BOX 1248
 JANE LEW, WV 263786506

Re: Permit approval for WDTN5GHSM
 47-061-01823-00-00

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

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

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

James A. Martin
 Chief

Operator's Well Number: WDTN5GHSM
 Farm Name: JOHN M. WISE, ET UX., ET AL
 U.S. WELL NUMBER: 47-061-01823-00-00
 Horizontal 6A New Drill
 Date Issued: 1/4/2019

PERMIT CONDITIONS

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

CONDITIONS

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

API Number: 61-01823 H6A 01/09/2019

PERMIT CONDITIONS

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

61-01823

WW-6B
(04/15)

API NO. 47- _____ - 01/04/2019
OPERATOR WELL NO. WDTN5GHSM
Well Pad Name: WDTN5

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: WDTN5GHSM Well Pad Name: WDTN5

3) Farm Name/Surface Owner: Wise Public Road Access: CR6 Wise Run

4) Elevation, current ground: 1412' Elevation, proposed post-construction: 1390'

5) Well Type (a) Gas X Oil _____ Underground Storage _____
Other _____

(b) If Gas Shallow X Deep _____
Horizontal X

6) Existing Pad: Yes or No No *MJK 9/27/2018*

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Target formation is Marcellus Shale @ 7670'-7740' 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: 17,991' MD at TD

11) Proposed Horizontal Leg Length: ~9468'

12) Approximate Fresh Water Strata Depths: Shallowest at ~125' and deepest at ~1070'

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: 2115', 2565'

15) Approximate Coal Seam Depths: 709'-712'; 970'-976'; 1058'-1062'; 1063'-1070'

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 X

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

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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	129	100	96 / CTS
Fresh Water	13.375	New	J-55	54.5	1409	1380	959 / CTS
Coal	13.375	New	J-55	54.5	1409	1380	959 / CTS
Intermediate	9.625	New	J-55	36.0	3084	3055	1025 / CTS
Production	5.5	New	P-110	20.0	18020	17991	3422 / TOC @ 2855
Tubing	2.375	New	J-55	4.7	Above assumes RF=29'	TBD	N/A
Liners	N/A						

MJK 9/27/2018

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	24	0.375	N/A	N/A	Type 1	1.18
Fresh Water	13.375	17.5	0.380	2730	<500	Class A	1.19
Coal	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:				RECEIVED Office of Oil and Gas
Depths Set:				UC 03 2018

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WW-6B
(10/14)

API NO. 47- _____ - 01/04/2019
OPERATOR WELL NO. WDTN5GHSM
Well Pad Name: WDTN5
4706 01823

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 12.0-12.5 ppg SOBM. Drill 8-1/2" curve from KOP to landing point. Continue drilling 8-1/2" lateral to TD (geosteer this section to remain in Marcellus target window). Perform clean-up cycle to condition well. Run and cement 5-1/2" production casing. Suspend well and skid to next well or RDMO drilling rig.

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): 46.9

22) Area to be disturbed for well pad only, less access road (acres): 5.4

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 TOOH to run casing (may require mist and/or soap to clean the hole). For the production hole - once at TD, circulate at max flowrate with max rotation until the shakers clean-up (typically requires multiple hole volumes). 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.

01/04/2019

4706 * 01823

WDTN5 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-5G-HSM (Marcellus HZ)
Marcellus Shale Horizontal
Monongalia County, WV

Office of Oil and Gas
 WV Department of Environmental Protection

		WDTN-5G-HSM SHL		N 440508.69 E 1764409.85 (NAD27)	
Ground Elevation	1390' GL Elevation	WDTN-5G-HSM LP		N 439352.04 E 1763806.98 (NAD27)	
Azimuth	313.5°	WDTN-5G-HSM BHL		N 445869.18 E 1756139.33 (NAD27)	

WELLBORE DIAGRAM	HOLE	CASING	GEOLOGY	MD	TVD	MUD	CEMENT	CENTRALIZERS	CONDITIONING	COMMENTS
	24"	20" L/S				AIR	To Surface	N/A	N/A	Stabilize surface fill/soil
			Conductor	100	100					
	17-1/2"	13-3/8" 54.5# J-55 BTC	Shallowest Fresh Water		125	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 1 Coal		709					
			Sewickley Coal		970					
			Roof Coal		1058					
			Pittsburgh Coal		1063					
	FW/Coal Casing		1380	1380						
	12-1/4"	9-5/8" 36.0# J-55 LTC	Salt Sand		2115	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 ~200'-250' below the Big Injun base
			Big Lime		2475					
			Big Injun		2565					
			Price		2805					
	Intermediate Casing		3055	3055						
	8-3/4" Tangent 8-1/2" Curve & Lateral	5-1/2" 20.0# P-110 VAR	50 Foot		3255	AIR 12.0-12.5 ppg SOBM	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		3390					
Fifth				3515						
Bayard				3565						
Elks				5165						
Cashaqua				7360						
Burkett				7505						
Tully				7530						
Hamilton				7565						
Marcellus				7670						
Production Casing		17991	7715							

LP @ +/- 7715' TVD

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

+/- 9468' Lateral

TD @ +/- 7715' TVD

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

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

Republic Services (Allied Waste) 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		
McLean County	Bloomington	IL	X	X	X	X	X	X	X	X	X	X	X		
ERC/Coles County	Charleston	IL	X	X	X	X	X	X	X	X	X	X	X		
Brickyard Disposal	Danville	IL	X	X	X	X	X	X	X	X	X	X	X		
Southern Illinois Regional	De Soto	IL													
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	Greensville	IL	X	X	X	X	X	X	X	X	X	X	X		
Illinois	Hoopeston	IL	X	X	X	X	X	X	X	X	X	X	X		
LandComp	LaSalle	IL	X	X	X	X	X	X	X	X	X	X	X		
Litchfield-Hillsboro	Litchfield	IL	X	X	X	X	X	X	X	X	X	X	X		
Envirotech	Morris	IL	X	X	X	X	X	X	X	X	X	X	X		
Livingston	Pontiac	IL	X	X	X	X	X	X	X	X	X	X	X		
Roxana	Roxana	IL	X	X	X	X	X	X	X	X	X	X	X		
Sangamon Valley	Springfield	IL	X	X	X	X	X	X	X	X	X	X	X		
Benson Valley	Frankfort	KY	X	X	X	X	X	X	X	X	X	X	X		
Blue Ridge	Irvine	KY	X	X	X	X	X	X	X	X	X	X	X		
Morehead	Morehead	KY	X	X	X	X	X	X	X	X	X	X	X		
Green Valley	Rush	KY	X	X	X	X	X	X	X	X	X	X	X		
Cherokee Run	Bellefontaine	OH			X	X	X	X	X	X	X	X	X		
Williams County	Bryan	OH			X	X	X	X	X	X	X	X	X		
County Environmental	Carey	OH			X	X	X	X	X	X	X	X	X		
Celina	Celina	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 Sparta	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	Shiloh	OH			X	X	X	X	X	X	X	X	X		
Imperial	Imperial	PA			X	X	X	X	X	X	X	X	X		
Conestoga	Morgantown	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	Little Plymouth	VA			X	X	X	X	X	X	X	X	X		
Old Dominion	Richmond	VA			X	X	X	X	X	X	X	X	X		
Sycamore	Hurricane	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													

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

Jack Palermo:
work: 330-536-8013
cell: 330-806-9660

Barbara Harsanye:
work: 330-536-8013 x 120
cell: 330-423-7267

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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	X	X	
South Hills (Arnoni)	South Park	PA	X	X		X	X	X			X	X	X	
Kelly Run	Elizabeth	PA	X	X	X	X	X	X			X	X	X	
Valley Landfill	Irwin	PA	X	X	X	X	X	X	X	X	X	X	X	
Evergreen Landfill	Blairsville	PA	X	X	X	X	X	X					X	
Charleston Landfill (Kanawha County)	Charleston	WV	X	X	X	X	X	X			X		X	
Meadowfill Landfill	Bridgeport	WV	X	X	X	X	X	X	X	X	X	X	X	
Northwestern Landfill	Parkersburg	WV	X	X	X	X	X	X			X	X	X	
S&S Grading Landfill	Clarksburg	WV	X	X	X	X	X	X			X	X	X	
American Landfill	Waynesburg	OH	X	X	X	X	X	X	X	X	X	X	X	
Suburban RDF	Glenford	OH	X	X	X	X	X	X	X	X	X	X		
Coshocton Landfill***	Coshocton	OH	X	X	X	X	X						X	
Mahoning Landfill	New Springfield	OH	X	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		X	X	
MAX Environmental (Bulger Facility)	200 Max Drive, Bulger, PA 15019	PA	X	X	X	X	X	X				X	X	
MAX Environmental (Yukon Facility)	233 MAX Lane Yukon, PA 15698	PA	X	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	X	
Rumpke, Mt. Sterling (Rumpke Consolidated)	30 Larison Rd, Jeffersonville, KY 40337	KY	X	X	X	X	X		X	X			X	
Laurel Ridge Landfill (Waste Connections of KY)	3612 E. State Highway 552 Lily, KY 40740	KY	X	X	X	X	X		X	X	X		X	
Advanced Disposal	Chestnut Valley 1184 McClellandtown Rd, McClellandtown, PA 15458	PA	X	X	X	X	X	X					X	
	Greentree Landfill: 635 Toby Rd.; Kersey, PA	PA	X	X	X	X	X	X					X	
	Mostoller Landfill: 7035 Glades Pike Rd.; Somerset, PA	PA	X	X	X	X	X	X					X	

Mike Horne: 412-552-4427
Mark Thomas: 724-929-7694

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

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

Carl Walter: 513-623-2471

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

Tony Labenne
6184 Route 219, Brockway, PA 15824
814-590-9906

- ** Ohio "TENORM" - requires Radium 226/228 analysis by load before leaving the well pad. Solid waste landfills in Ohio can only accept TENORM waste with combined concentration less than 5 picocuries 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 PAD rules regarding "TENORM" testing requirement are pending.
- * Drill Cuttings include frac sand for the purpose of this table (Contact facility directly to verify waste streams accepted).

Notes:

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BLACKSVILLE MINE

1160 ft

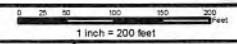
WDTN5GHSM

625 ft

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FEDERAL NO 2 MINE

- Legend**
- Well Location
 - Active Permit
 - Remaining Coal
 - Mine Workings
 - Mined Out

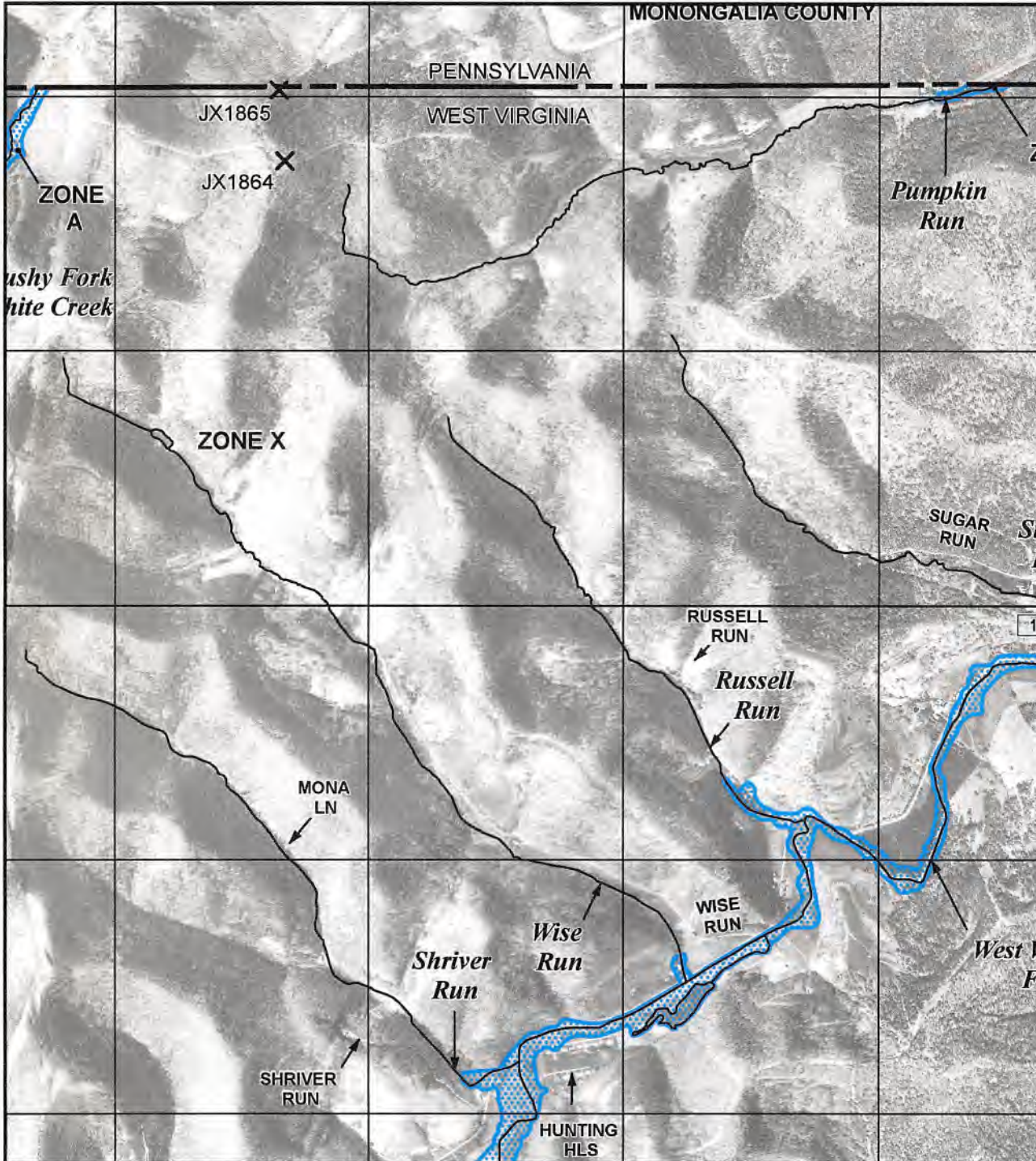


Date: 9/24/2018	Prepared By: GIS
Revisions: 1	Approved By:

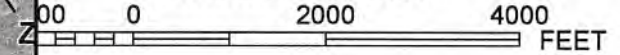
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**WDTN5GHSM
Mine Map**



MAP SCALE 1" = 2000'



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0050E

FIRM
FLOOD INSURANCE RATE MAP

**MONONGALIA COUNTY,
WEST VIRGINIA
AND INCORPORATED AREAS**

PANEL 50 OF 325

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
MONONGALIA COUNTY	540139	0050	E

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



**MAP NUMBER
54061C0050E**

**EFFECTIVE DATE
JANUARY 20, 2010**

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

WDTN5 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 WDTN5 pad. Any SOG well that falls within the Area of Review (AOR) has been reviewed and is provided in a list that includes API, Operator, Well Name, Well Number, Current Status, Total Depth, and Permit Date.

The Marcellus Shale of the Wadestown area is found at an approximate True Vertical Depth (TVD) of 7900'. In the Wadestown area, there were very few wells that produced from formations deeper than the Bayard Sand (approximately 3500'). 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 WDTN5 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 19.8 miles north of the Wadestown area. Frac modeling (Figure 3) of the Marcellus in the area does not show significant upward frac growth.

Figure 1. Only 19 wells lie within a 500' buffer around the WDTN5 Pad that penetrate the Big Injun Sand or deeper horizons. The deepest well is 3700' and produces from the 5th Sand. No known SOG Communication events have occurred in this area.

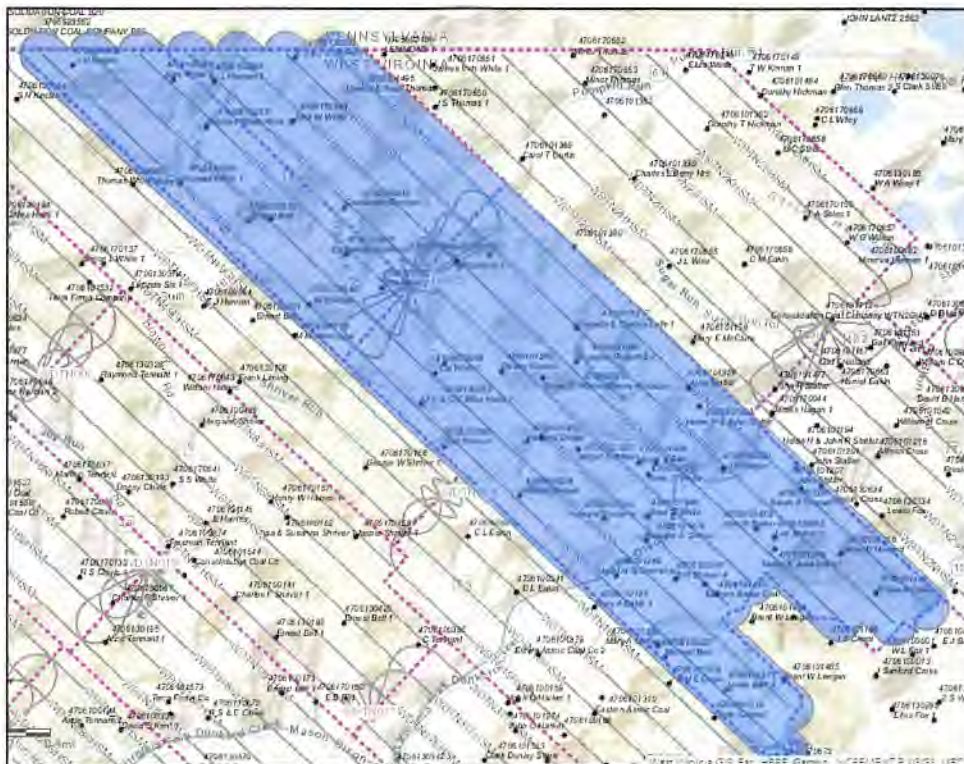


Figure 2. Stratigraphic intervals of high stress should serve as adequate confining layers, or frac barriers, for a Marcellus frac, seen below in the Wadestown Area Stress Profile log.

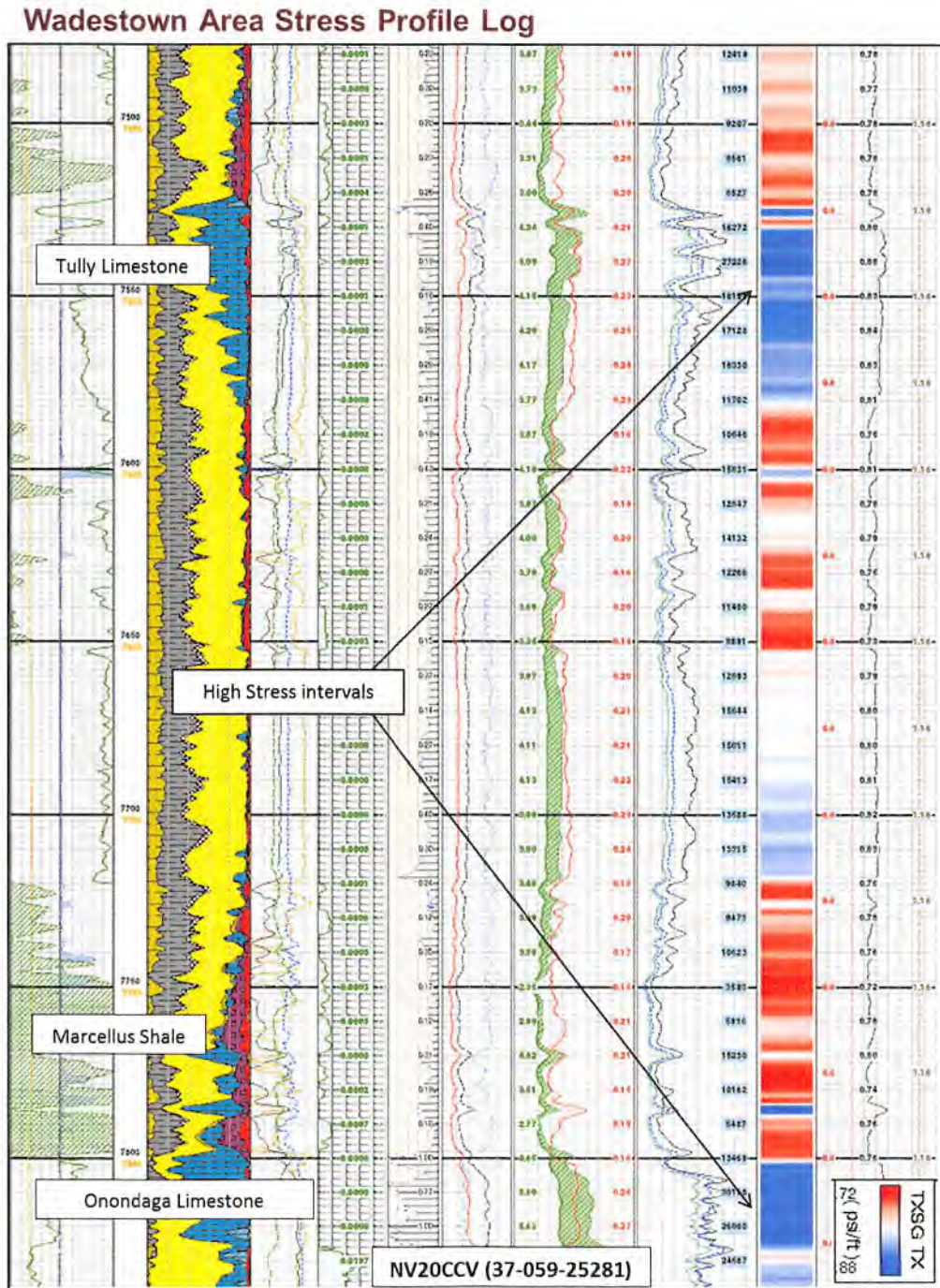
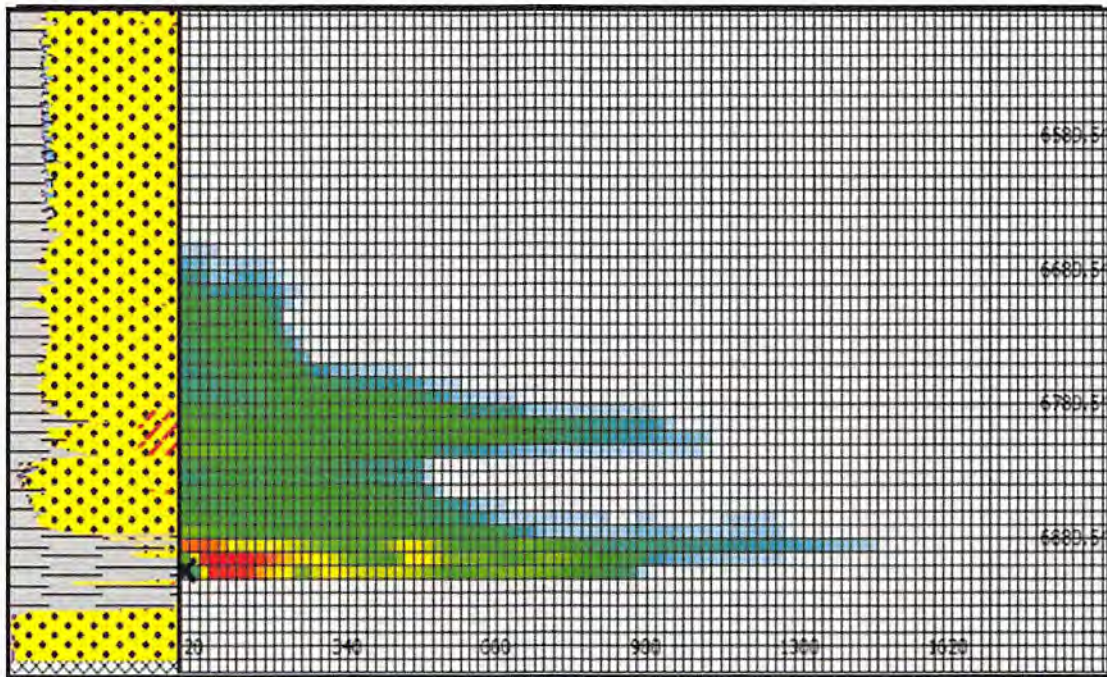


Figure 3. Stratigraphic intervals of high stress should serve as adequate frac barriers for a Marcellus frac. The frac modeling example below is from the Oxford area of western Doddridge County, where the Hamilton and Tully are much thinner than Wadestown. Frac modeling only yields frac height of approximately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

7



WDTN5 Pad Frac SOG Review / CRSD Review Monday, September 24, 2018

API	STATE	COUNTY	LATITUDE	LONGITUDE	OPERATOR	STATUS	WELL_NAI	WELL_NO	TD	FMTD	ELEVATION	FIELD_NAI	FMPROD	COMMENTS
4706101275	WV	Monongal	39.69746	-80.327	CNG Prodi	Gas	Howard A	1		3700 Fifth	1261	Maple-W		Ground Level
4706101289	WV	Monongal	39.70152	-80.3301	CNG Prodi	Gas	Dewey Ru			3655 Bayard	1454	Maple-W		Ground Level
4706101485	WV	Monongal	39.68238	-80.3074	Dominion	Gas	Brent W L			3620 Bayard	1322	Maple-W		Ground Level
4706101329	WV	Monongal	39.7005	-80.3151	CNG Prodi	Gas	John Statl			3588 Fifth	1298	Maple-W		Ground Level
4706130182	WV	Monongal	39.70659	-80.3397	Pittsburg	Gas	Zoa Wise			3558 Bayard	1250	Maple-W		Ground Level
4706130265	WV	Monongal	39.69122	-80.3082	Hope Nati	Gas	Leo Shrive	1		3492 Fifth	1283	Maple-W		Ground Level
4706100381	WV	Monongal	39.69688	-80.3346	Hope Nati	Gas	Sol Shrive			3452 Bayard	1190	Maple-W		Topo Estimation
4706101290	WV	Monongal	39.69514	-80.3183	CNG Prodi	Gas	Anna S Wl			3450 Bayard	1087	Maple-W		Ground Level
4706130345	WV	Monongal	39.72071	-80.3467	Manufact	Gas	E J & J L H	1		3448 Bayard	1260	Maple-W		Ground Level
4706101479	WV	Monongal	39.69108	-80.3185	Dominion	Gas	Howard A			3429 Bayard	997	Maple-W		Ground Level
4706101478	WV	Monongal	39.6918	-80.3097	Dominion	Gas	John R Sta			3334 Bayard	998	Maple-W		Ground Level
4706130331	WV	Monongal	39.7165	-80.3538	Manufact	Gas	Thomas W	3		3331 Bayard	1164	Maple-W		Ground Level
4706130327	WV	Monongal	39.68388	-80.317	Hope Nati	Gas w/ Oil	Michael B			3324 Fourth	1308	Maple-W		Ground Level
4706100056	WV	Monongal	39.7194	-80.3564	Manufact	Gas	Alex Whit	2		3305 Thirty-foo	1280	Maple-W		Ground Level
4706130524	WV	Monongal	39.69543	-80.3123	Hope Nati	Oil and Ga	J H Hagan			3300 Bayard	1043	Maple-W		Ground Level
4706100147	WV	Monongal	39.68866	-80.3161	Hope Nati	Gas	S H Shrive	4		3300 Fifth	1148	Maple-W		Ground Level
4706100098	WV	Monongal	39.71926	-80.3532	Carnegie I	Gas	J L Henner	1		3083 Fifth	1053	Maple-W		Ground Level
4706100380	WV	Monongal	39.69586	-80.3178	Hope Nati	Gas	Solomon	2		3075 Fifty-foot	1020	Maple-W		Barometer
4706130578	WV	Monongal	39.7107	-80.3504	Equitable	Gas	Ernest Bel			2440 Big Injun	1414	Maple-W		Ground Level
4706101206	WV	Monongal	39.69673	-80.324	CNG Prodi	Methane	Mabel G V			1093 Pittsburg	1366	Blacksvill		Ground Level
4706101245	WV	Monongal	39.6905	-80.3082	CNG Prodi	Methane	Helen & J			1028 Pittsburg	1309	Blacksvill		Ground Level
4706101256	WV	Monongal	39.69021	-80.3029	CNG Prodi	Methane	Jesse D H			1015 Pittsburg	1317	Blacksvill		Ground Level
4706101184	WV	Monongal	39.69934	-80.3142	CNG Prodi	Methane	Helen H &			1009 Pittsburg	1303	Blacksvill		Ground Level
4706101200	WV	Monongal	39.69717	-80.3281	CNG Prodi	Methane	Howard Sl			970 Pittsburg	1242	Blacksvill		Ground Level
4706101181	WV	Monongal	39.70108	-80.3268	CNG Prodi	Methane	Mabel G V			940 Conemaug	1223	Blacksvill		Ground Level
4706101209	WV	Monongal	39.69441	-80.3044	CNG Prodi	Methane	John & He			916 Pittsburg	1208	Blacksvill		Ground Level
4706101240	WV	Monongal	39.69253	-80.3183	CNG Prodi	Methane	Anna S Wl			860 Pittsburg	1160	Blacksvill		Ground Level
4706101208	WV	Monongal	39.69586	-80.3191	CNG Prodi	Methane	Anna S Ba			837 Pittsburg	1114	Blacksvill		Ground Level
4706101215	WV	Monongal	39.69557	-80.3123	CNG Prodi	Methane	John & He			750 Pittsburg	1051	Blacksvill		Ground Level
4706101238	WV	Monongal	39.69238	-80.3219	CNG Prodi	Methane	Howard Sl			715 Pittsburg	1019	Blacksvill		Ground Level



WDTN5 PAD GEOLOGICAL PROGNOSIS

WELL NAME:	WDTN5 MARCELLUS PROGNOSIS	
STATE:	WEST VIRGINIA	
COUNTY:	MONONGALIA	
DISTRICT:	BATTELLE	GEOLOGIST: CAE
7.5' QUADRANGLE:	WADESTOWN	DATE SUBMITTED: 10/4/2017
PROSPECT AREA:	WADESTOWN	TARGET FM: MARCELLUS
ELEVATION:	1390'	PROJECTED TD: 7830'

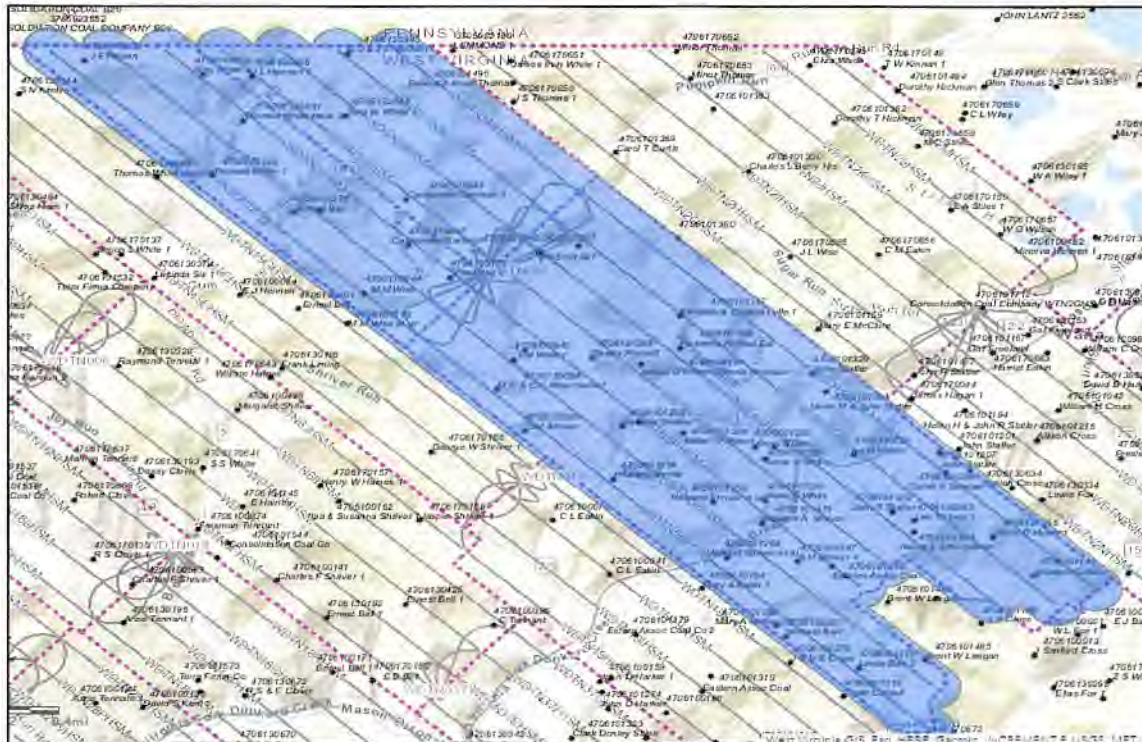
<u>ESTIMATED DEPTHS:</u>	<u>TOP</u>	<u>BOTTOM</u>	<u>GAS CHECKS</u>
WAYNESBURG 1 COAL	709	712	
SEWICKLEY COAL	970	976	
ROOF COAL	1058	1062	
PITTSBURGH COAL	1063	1070	
SALT SAND	2115	2205	2250
BIG LIME	2475	2565	
BIG INJUN SAND	2565	2805	2850
PRICE FM	2805	3255	
50 FT SAND	3255	3335	3350
GORDON SAND	3390	3480	3500
5TH SAND	3515	3555	3560
BAYARD SAND	3565	3575	3600
ELKS	5165	5700	4500
CASHAQUA	7360	7505	5500
BURKET SHALE	7505	7530	6500
TULLY LIMESTONE	7530	7565	7000
HAMILTON SHALE	7565	7670	7600
MARCELLUS SHALE	7670	7740	
TD		7830	TD AND AFTER 4.5" CSG

FRESH WATER: 25'

SALT WATER: 2180, 2625



WDTN5 PAD WITH 500' AREA OF REVIEW



The WDTN5 Pad to be frac'd is in an area of no known frac communication with shallow wells.

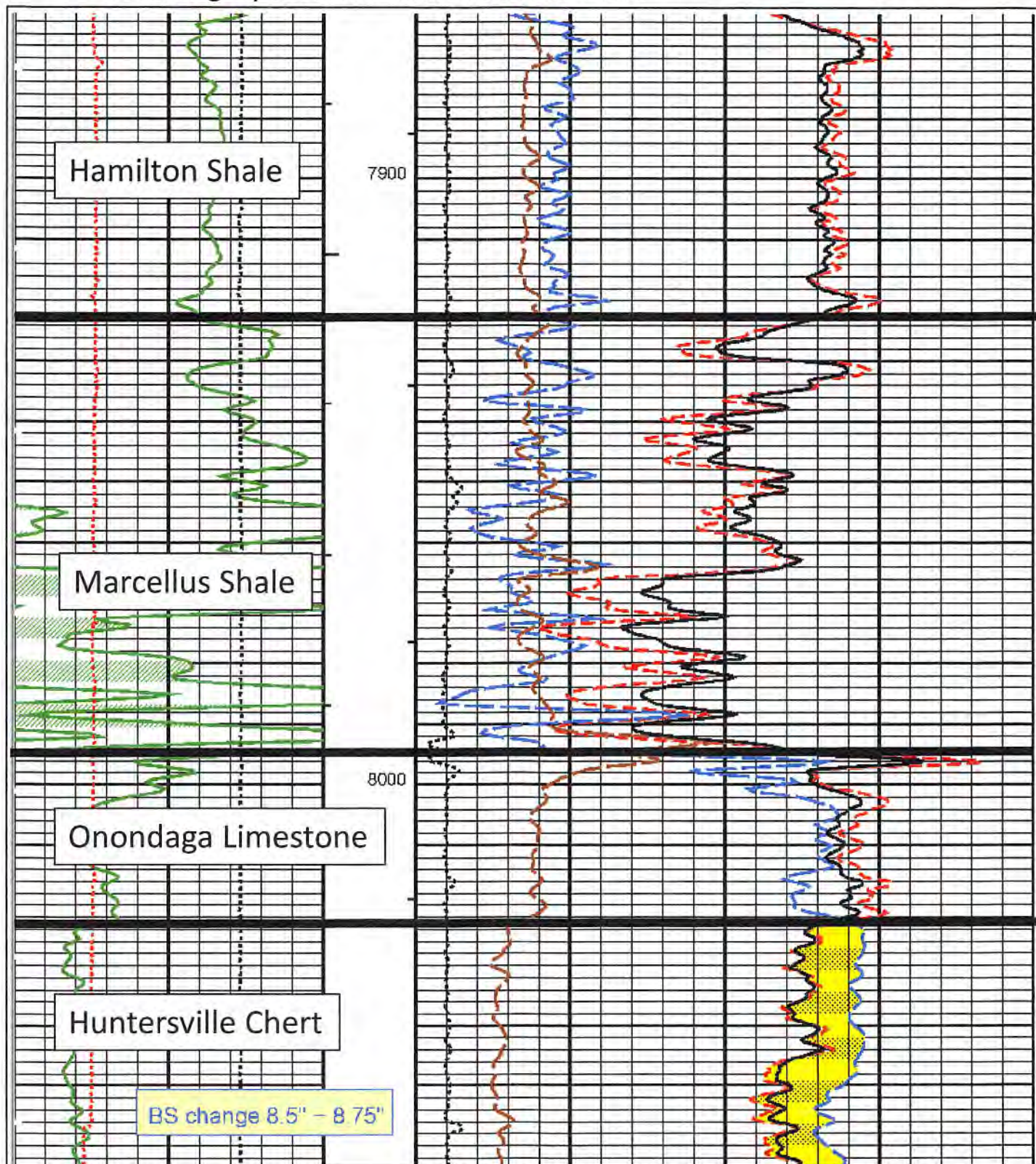
API	STATE	COUNTY	LATITUDE	LONGITUDE	OPERATOR	STATUS	WELL_NAI	WELL_NO	TD	FMTD	ELEVATION	FIELD_NAI	FMPROD	COMMENTS
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4706130182	WV	Monongal	39.70659	-80.3397	Pittsburgh Gas		Zoa Wise	2	3558	Bayard	1250	Maple-We		Ground Level
4706130265	WV	Monongal	39.69122	-80.3082	Hope Nati Gas		Leo Shrive	1	3492	Fifth	1283	Maple-We		Ground Level
4706100381	WV	Monongal	39.69688	-80.3346	Hope Nati Gas		Sol Shrive		3452	Bayard	1190	Maple-We		Topo Estimation
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All SOG wells above the WDTN5 Marcellus pad have been plugged and were less than 3700' TD.



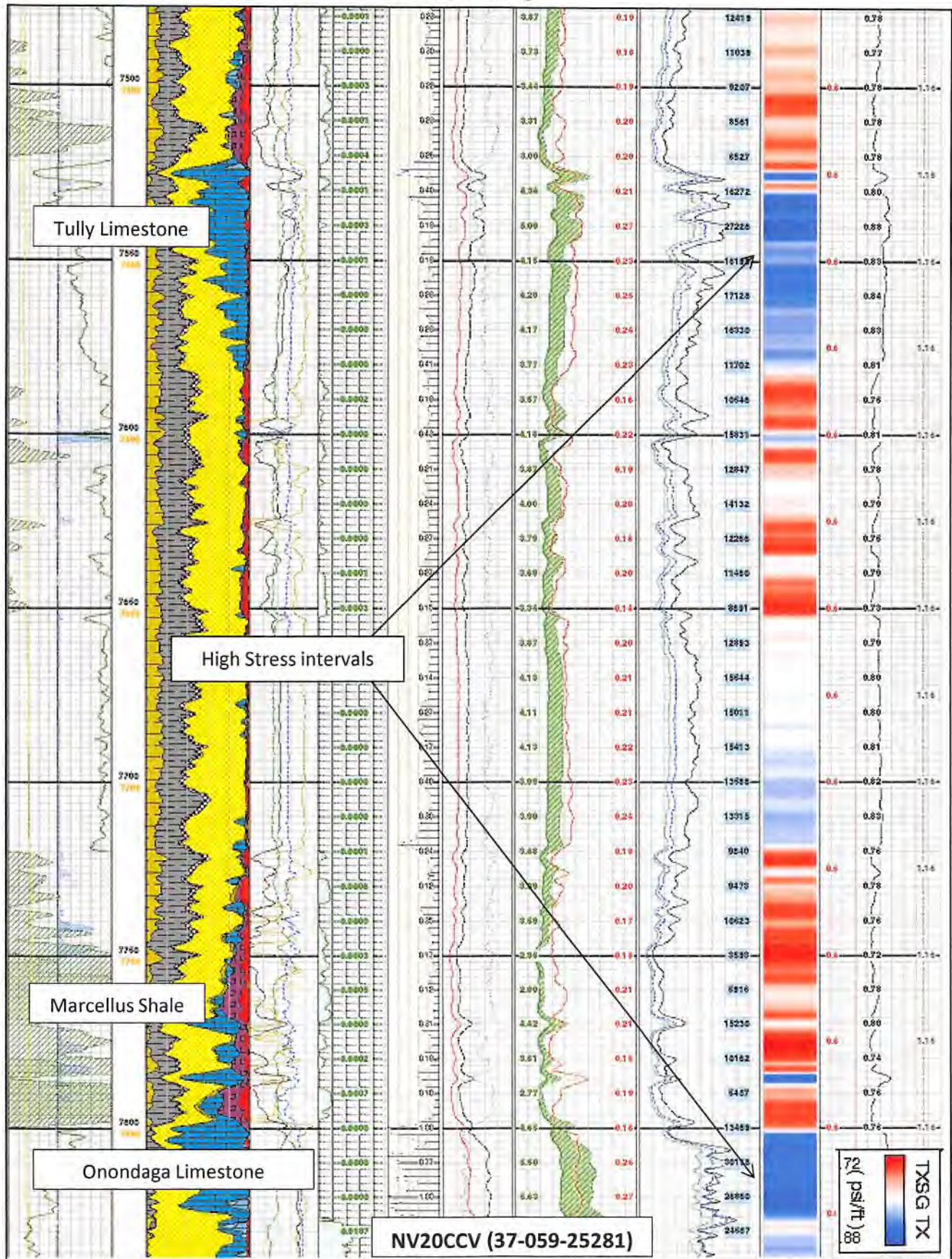
WADESTOWN Area Type Log Esther Clark 3H (47-061-01623)

- The Tully Limestone in conjunction with the Hamilton Shale is the confining layer for the Marcellus Shale frac.





Wadestown Area Stress Profile Log



**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, WV

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.? N/A

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 WDTN2 Wells (APIs 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 (see attached pgs 1-7)

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc.
Vertical: pit 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.
Land Application of only soil conductor cuttings, all other cuttings will be taken to an approved Landfill

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

-Landfill or offsite name/permit number? See attached list.

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 *Raymond Hoon*

Company Official (Typed Name) Raymond Hoon

Company Official Title Supervisor - Gas Permitting

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Office of Oil and Gas
OCT 03 2018
WV Department of
Environmental Protection

Subscribed and sworn before me this 1st day of October, 2018
Commonwealth of Pennsylvania County of Washington

Lori L. Walker
My commission expires February 23, 2019

COMMONWEALTH OF PENNSYLVANIA
Notary Public NOTARIAL SEAL
Lori L. Walker, Notary Public
Richhill Twp., Greene County
My Commission Expires Feb. 23, 2019
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

CNX Gas Company LLC

Proposed Revegetation Treatment: Acres Disturbed 46.9 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

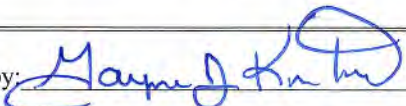
Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Orchard Grass	25	Orchard Grass	25
Birdsfoot Trefoil	15	Birdsfoot Trefoil	15
Ladino Clover	10	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: 

Comments: _____

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OCT 03 2018

WV Department of
Environmental Protection

Title: Inspector

Date: 9/27/2018

Field Reviewed? Yes No

Standard Operating Procedure


TASK: BOS-106 STRIP MUD

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JAN 04 2019

WV Department of
Environmental Protection

Document Control

Owner: Operations, Leduc
 Author: Clayton Cameron, Field Supervisor
 Reviewer: Technical Advisor
 Approver: Andrew Pow 

Revision & Approval Record

Revision	Date	Description/changes:	Prepared by:	Competency Review
Original	Jan. 29, 2007	Original Release of Standard	John Richardson	Employee Supervisor
02	Aug. 24, 2011	<changes made to the original>	Clayton Cameron	
03	Mar. 12, 2012	<changes made to the original>	Clayton Cameron	
<above +1>				
	Date			Competent Yes No
				If No Insert Follow Up Date
				Follow Up Date:
				Revised < 12/03/12>

SOP # BOS-106



• TASK: STRIP MUD

	Steps of task in order:	Hazards with each step:
i	Meet with Site Supervisor to discuss scope of work to be performed	
ii	Perform walk around check to complete Pre-job Risk Assessment, speaking with Derrick , Mud and Company Men to establish understanding of fluid to be processed and were to ship processed fluid along with properties to be reached. A pilot mud test should be completed to better understand best way to treat fluid to be processed.	Uneven ground, Weather, Pinch points, Physical stress, Slips trips and falls, Check and verify Mud Report Check MSDS of all fluids and chemicals being used.
1	First set up the BOS tank so centrifuge overflows is going in to cell #1	Physical stress, Potential Energy-Pressurized Gases/Liquids, Slips trips and falls, Potential fumes
2	Close all other bridge gates, Open up the bridge gate in cell#1. Fill cell #1 to 75% capacity with fresh water. While filling mix in one bag of calcium nitrate.	Physical stress, Slips trips and falls, Pinch points, Potential fumes
3	Start to fill you poly tank with water, As you fill the poly tanks you can add your chemicals. Once they are full you can hook up your poly injection lines in the pump room to the suction side of appropriate centrifuge feed pumps. Place mud gun pump discharge line/s into feed pump discharge lines by plumbing in stripping y/s and valves.	Potential Energy-Pressurized Gases/Liquids, Slips trips and falls, Potential fumes
4	Set up centrifuges, adjust accordingly for maintaining clear water loop and plumb mud gun pump suction with appropriate vessel containing mud to be processed.	Physical stress, Potential Energy-Pressurized Gases/Liquids, Slips trips and falls, Potential fumes

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SOP # BOS-106



- TASK: STRIP MUD**

	Steps of task in order:	Hazards with each step:
5	Once all rigged in start centrifuge/s to process the clear water loop ensuring all valving is set accordingly. Start and set poly pumps, begin injecting mud and slowly increase feed rate and adjust settings to optimize maximum process rates. once the clean water gets to cell # 9 transfer you will then be able to transfer. Transfer is best done with a submersible pump to be located in cell #9, this pump is also able to be used for filling polymer injection tanks. Before transferring processed fluid it must be checked for ph and calcium to ensure within pre-set limits, also check to see that polymer is not being over injected and being carried in overflow.	Physical stress, Potential Energy- Pressurized Gases/Liquids, Slips trips and falls, Pinch points, Lifting and handling, Potential fumes

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SOP # BOS-106



- TASK: STRIP MUD



WV Department of
Environmental Protection

SOP # BOS-106



- TASK: STRIP MUD
- RISK Ranking

SEVERITY ↩	<i>Likelihood – Probability – Frequency</i>				
	<i>Impractical - Improbable - Rarely (1)</i>	<i>Unlikely - Not Probable - Infrequent (2)</i>	<i>Likely - Probable - Frequent (3)</i>	<i>More Likely - More Probable More Frequent (4)</i>	<i>Very Likely- Very Probable Very Frequent (5)</i>
Catastrophic (4)	4	8	12	16	20
Major (3)	3	6	9	12	15
Serious (2)	2	4	6	8	10
Minor (1)	1	2	3	4	5

Level III Unacceptable RISK
No Work until additional Safety Controls are implemented and with Manager approval

Level II Undesirable RISK
Proceed with additional Safety Controls and Supervisor approval

Level I Acceptable RISK
Proceed with Caution

JAN 04 2019

SOP # BOS-106



- **TASK: STRIP MUD**
- **Controls <List Controls to make task safe>**



Elimination Control:	Administrative Control:	PPE:
Guards	Standard Operating Procedures #106	Fire Retardant Coveralls
Valves	Pre Job Risk Assessments	Steel Toed Safety Boots
Gates	HSE Policy	Safety Glasses
	PPE Standards	Hearing Protection
	Training/ New hire, equipment, PPE, ERP	Hard Hat
		Gloves/ per task
		Rubber Boots/ per task
		Rain Suit / per task
		Respirator/ per task

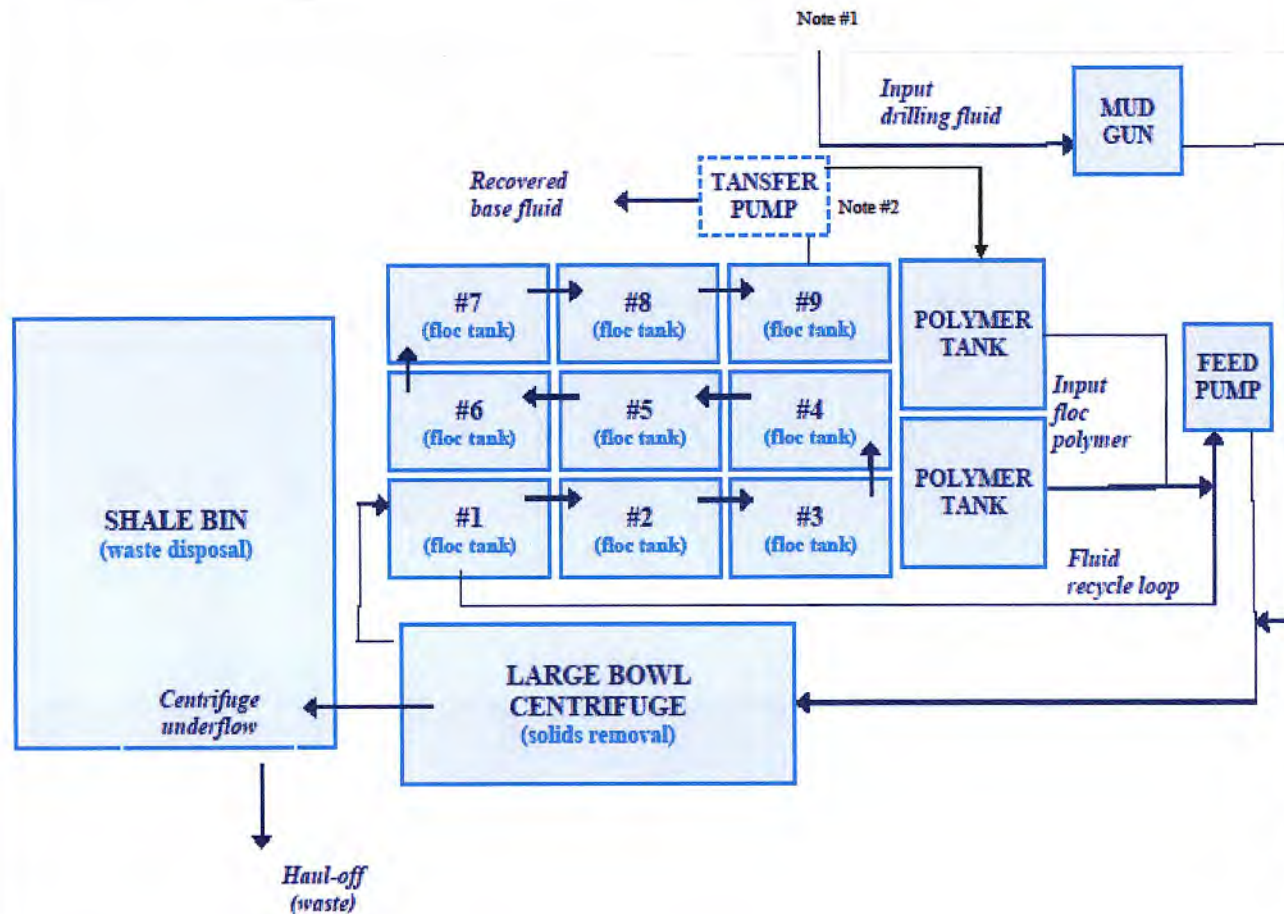
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FLOW CHART MUD AND SLURRY DEWATERING RECOMMENDED RIG UP



Notes/ Comments:

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



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Environmental Protection

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

Drawing/ Revision Date: December 12, 2011

Approved By: Andrew Pow

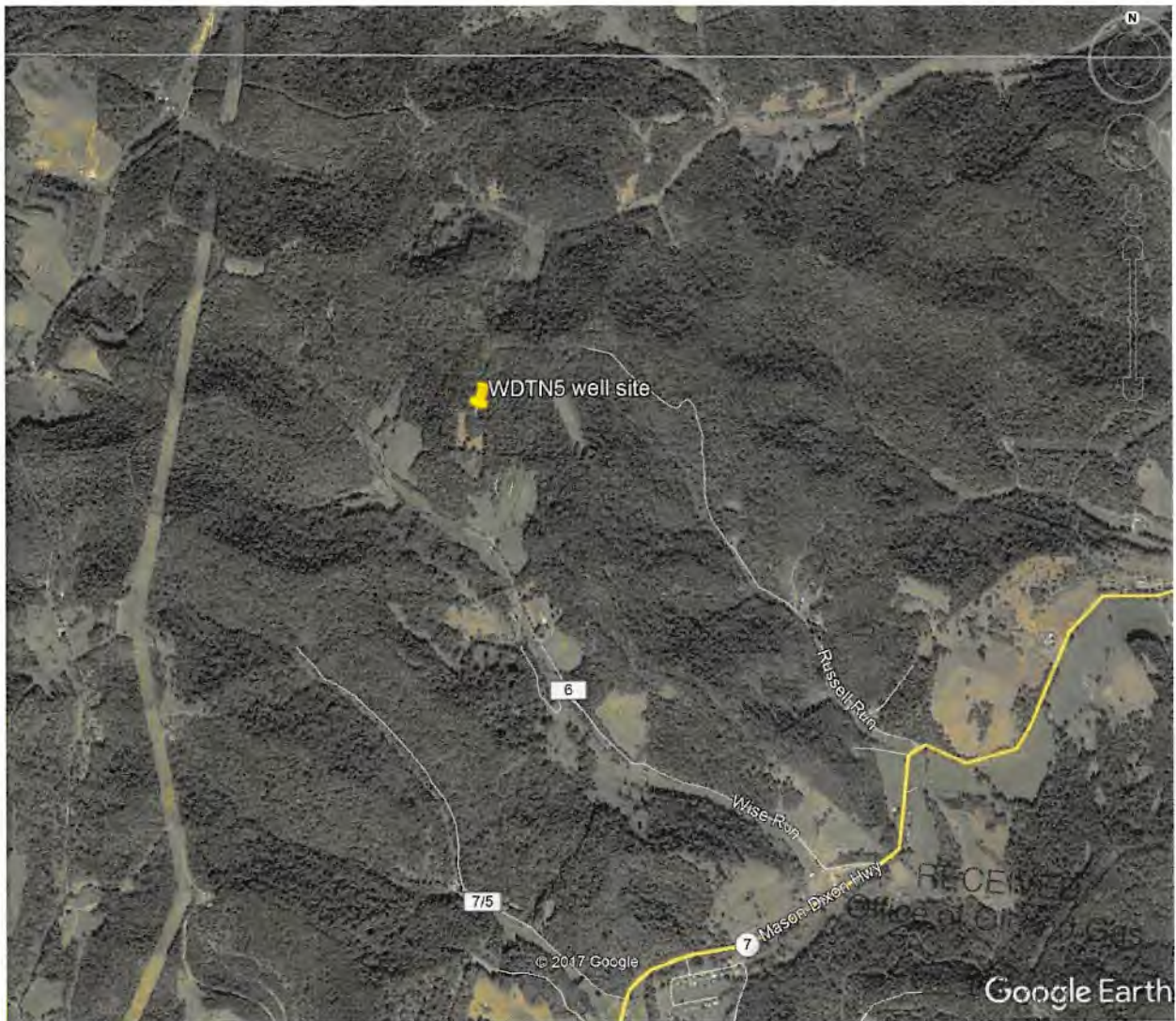




4706101823

Site Safety Plan for Well WDTN5GHSM

CNX Gas Company, LLC.



WV Department of
Environmental Protection

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 27 of month September, 2018 by



Date: 9/27/2018

Date: _____

SHL is located on topo map 662 feet south of Latitude: 39° 42' 30"
 BHL is located on topo map 10,415 feet south of Latitude: 39° 45' 00"



SURFACE TRACT OWNERS & TAX PARCEL

- | | |
|------------------------------------|---------------|
| 1. DINA M WISE ET AL | TMH# 1-8-2 |
| 2. BARBARA J. WAGNER | TMH# 1-8-3.1 |
| 3. BARBARA J. WAGNER | TMH# 1-8-3 |
| 4. CONSOL MINING COMPANY LLC | TMH# 1-9-17 |
| 5. ROBERT ANTHONY LAUER III | TMH# 1-2-16 |
| 6. THOMAS M. BARNHOUSE | TMH# 1-2-17 |
| 7. DELORES J. HARRISON | TMH# 1-2-16.2 |
| 8. FREDERICK JR. & PATRICIA MORGAN | TMH# 1-2-17.1 |
| 9. DAVID & NANCY LIMING | TMH# 1-2-14 |
| 10. HUSKIE LUMBER COMPANY INC | TMH# 1-2-13 |
| 11. CONSOL MINING COMPANY LLC | TMH# 1-2-12 |

SHL is located on topo map 1,078
 BHL is located on topo map 9,308
 feet west of Longitude: 80° 20' 00"
 feet west of Longitude: 80° 20' 00"



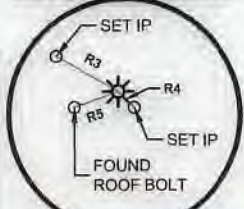
SURFACE HOLE LOCATION (SHL)
 UTM 17 - NAD83(M)
 N: 4395393.967
 E: 556821.033
 NAD27 WV NORTH
 N: 440508.688
 E: 1764409.850
 LAT/LON - NAD83
 LAT: 39°42'23.451"
 LON: 80°20'13.797"

APPROXIMATE LANDING POINT
 UTM 17 - NAD83(M)
 N: 4395034.440
 E: 556399.504
 NAD27 WV NORTH
 N: 439352.035
 E: 1763006.982
 LAT/LON - NAD83
 LAT: 39°42'11.890"
 LON: 80°20'31.609"

LINE #	BEARING	DISTANCE
R1	S14°16'03"W	955.22'
R2	N70°34'02"E	243.78'
R3	S60°21'48"E	373.64'
R4	N46°01'20"W	117.47'
R5	N70°34'02"E	243.78'

BOTTOM HOLE LOCATION (BHL)
 UTM 17 - NAD83(M)
 N: 4396985.067
 E: 554274.065
 NAD27 WV NORTH
 N: 445869.183
 E: 1756139.322
 LAT/LON - NAD83
 LAT: 39°43'15.655"
 LON: 80°22'00.279"

REFERENCE DETAIL



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		ALL ARE POINTS UNLESS OTHERWISE NOTED
	PROPOSED WELL		LEASE BOUNDARY
	WATER SOURCE		PROPOSED HORIZONTAL WELL
	SPRING		SURFACE, OIL & GAS LINES
	SURFACE TRACT		SURFACE TRACT LINES ONLY
	LEASED NUMBER BASED ON ATTACHED WY6A1		GAS LEASE LINES ONLY
	RECORD GAS WELL		WELL REFERENCE
	UNKNOWN WELL		STREAM/ WATERWAY
			ROAD

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

FILE #: WDTN5GHSM
 DRAWING #: 3601 - WDTN5G.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:

R.P.E.: 21452 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

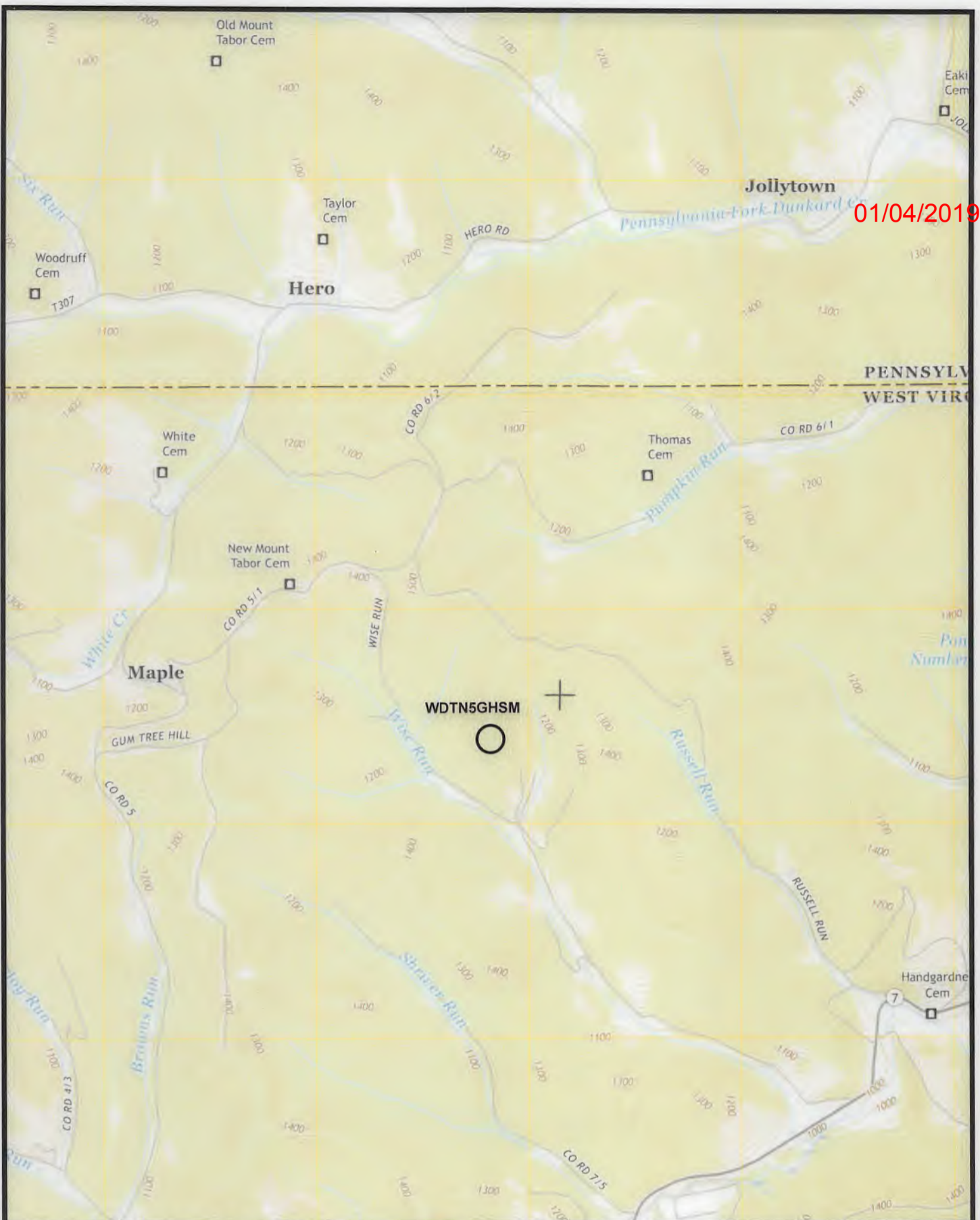
Well Type: Oil Waste Disposal Production Deep
 Gas Liquid Injection Storage Shallow

WATERSHED: DUNKARD CREEK ELEVATION: 1412'
 COUNTY/DISTRICT: MONONGALIA / BATTELLE QUADRANGLE: WADESTOWN, WV
 SURFACE OWNER: JOHN M. WISE, ET UX., ET AL. ACREAGE: 207.36
 OIL & GAS ROYALTY OWNER: RICHARD W. WISE, ET AL. ACREAGE: 207.36

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: 17,991' ±
 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

DATE: September 21, 2018, Rev. September 24, 2018
 OPERATOR'S WELL #: WDTN5GHSM
 API WELL # 47 061 01823
 STATE COUNTY PERMIT



01/04/2019

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



DATE: September 21, 2018, Rev. September 24, 2018

OPERATOR'S WELL #: WDTN5GHSU

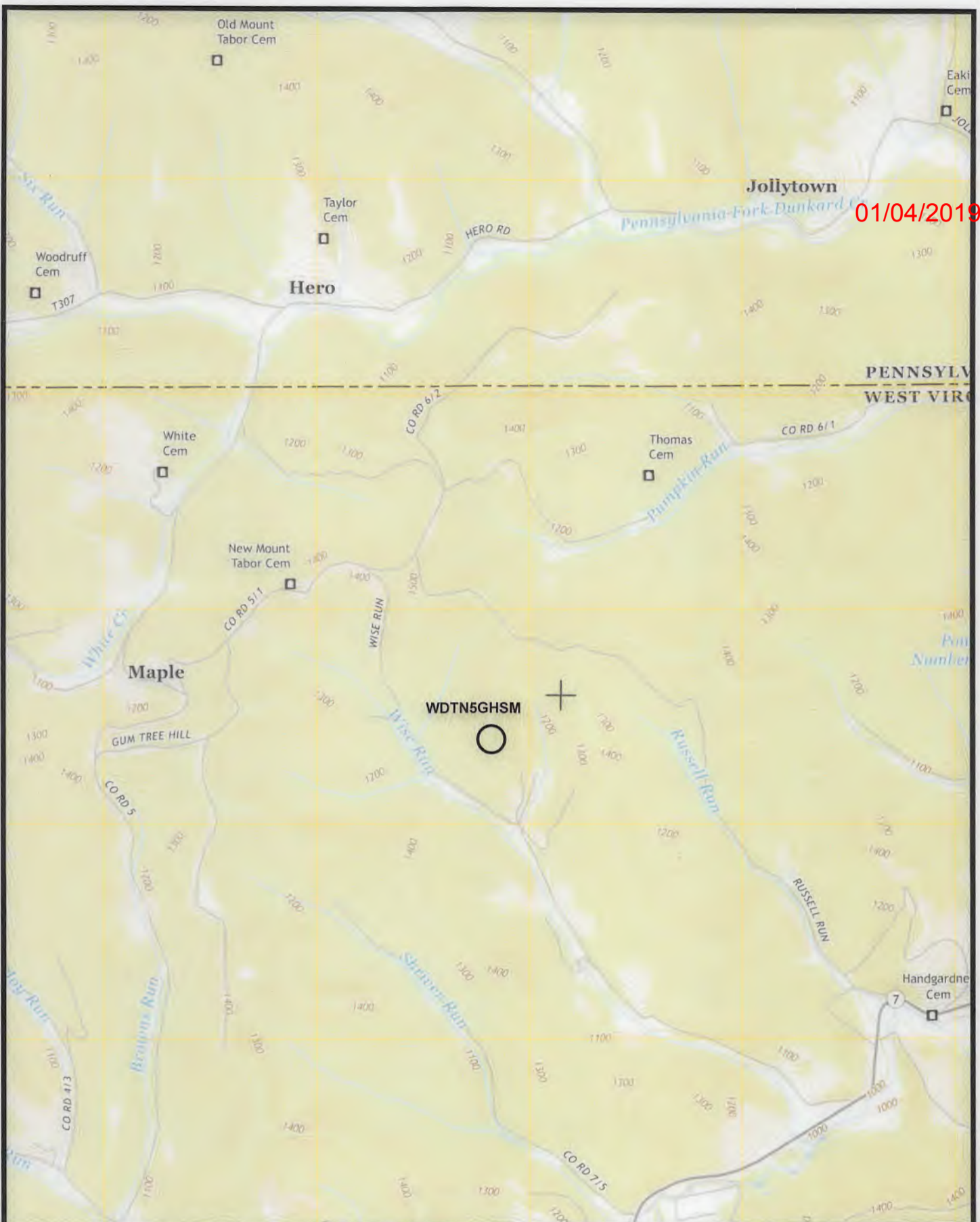
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	STATE	COUNTY	PERMIT

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Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc
1	1-8-2	189010000	Richard L. McCauley	CNX Gas Company LLC
			Judy A. Eckman	CNX Gas Company LLC
			Thomas E. McCauley	CNX Gas Company LLC
			Regina Wise Myers, aka Violet Regina Myers	CNX Gas Company LLC
			Eyalee A. Everly Shaheen	CNX Gas Company LLC
			Zelda Ruth Brummage	CNX Gas Company LLC
			Dexter Murle Stewart	CNX Gas Company LLC
			Walter C. Ord	CNX Gas Company LLC
			James Freeman Stewart	CNX Gas Company LLC
			Clifford J. Wise	CNX Gas Company LLC
			Victor E. Wise, a single man	CNX Gas Company LLC
			Jesse D. Jones, a married man	CNX Gas Company LLC
			Phyllis J. Petrosky, a widowed woman	CNX Gas Company LLC
			Annette E. Stewart, single	CNX Gas Company LLC
			Harold M. Jones, Jr., a single man	CNX Gas Company LLC
			Robert Stewart	CNX Gas Company LLC
			Richard W. Wise	CNX Gas Company LLC
			Walter R. Currence	CNX Gas Company LLC
			Donald D. Wise, aka Donald G. Wise	CNX Gas Company LLC
			Maureen S. Currence	CNX Gas Company LLC
			Opal Jane Wise, Life Estate Holder and John Matthew Wise and Dina M. Wise, Remaindermen	CNX Gas Company LLC
			Michelle L. Currence	CNX Gas Company LLC
			Justin P. Stewart, single	CNX Gas Company LLC
			Debra Goff	CNX Gas Company LLC
			Eleanor J. Wise, single	CNX Gas Company LLC
			Donald E. Nunley and Deborah L. Nunley	CNX Gas Company LLC
			Fred C. Wise and Alice F. Wise	CNX Gas Company LLC
			Patricia J. Mumaw and Richard L. Mumaw	CNX Gas Company LLC
			Richard A. Nunley and Diana K. Nunley	CNX Gas Company LLC
			Mary Nunley Stepelton and Donald Stepelton	CNX Gas Company LLC
			Linda Stapp	CNX Gas Company LLC
			Melissa A. Bookout	CNX Gas Company LLC
			Jane Irons, widow	CNX Gas Company LLC
			Eileen Ann Lyle	CNX Gas Company LLC
			Robert Eugene Michael, Sr.	CNX Gas Company LLC
			Frank Dennis Michael, Jr.	CNX Gas Company LLC
			Evelyn June Michael	CNX Gas Company LLC
			Tonya Chersin	CNX Gas Company LLC
			Boyd Hawkins	CNX Gas Company LLC
Becky L. Hawkins f/k/a Becky Bortnick	CNX Gas Company LLC			
Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc
2	1-8-3 1-8-3.1	204769000	Barbara J. Wagner, a widow	CNX Gas Company LLC
			Donald L. White, et al	CNX Gas Company LLC
			Arnold D. Anderson, individually, and as Trustee of the Arnold D. Anderson and Barbara J. Anderson Living Trust UTD May 14th, 2008	CNX Gas Company LLC
Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc
3	1-9-17	188699000	Ralph Six	Antero Resources Corporation
Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc
4	1-2-16 1-2-16.2 p/o 1-2-16.1 p/o 1-2-17 p/o 1-2-17.1	188578000	XTO Energy, Inc.	CNX Gas Company, LLC
			Three Rivers Royalty II, LLC	CNX Gas Company, LLC
			Elizabeth A. Martineau, a/k/a, Elizabeth Ada Snyder, a/k/a, Elizabeth Snyder Martineau	CNX Gas Company, LLC
			Rebecca Snyder Bromley, a/k/a Alice Rebecca Snyder Bromley	CNX Gas Company, LLC
			James Brant Snyder	CNX Gas Company, LLC
			Sharon White Bartholomew, a/k/a Sharon R. W. Bartholomew, a/k/a, Sharon Ruth White Bartholomew	CNX Gas Company, LLC
			David T. White and Sarah K. White, h/w, as JTROS	CNX Gas Company, LLC
			Glenn L. White, individually and as trustee of Glenn L. White Trust	CNX Gas Company, LLC
			Alice T. Boone	CNX Gas Company, LLC
			Eldon Bryant Tucker, et ux	CNX Gas Company, LLC
			Charles Tucker, et ux	CNX Gas Company, LLC
			Robert Earl, et ux	CNX Gas Company, LLC
			David Tucker	CNX Gas Company, LLC
			James Tucker, et ux	CNX Gas Company, LLC
			Cheryl Molesky	CNX Gas Company, LLC
			Laurence D. Hare	CNX Gas Company, LLC
			James F. Hare III, et ux	CNX Gas Company, LLC
			Lacy L. Adams, et vir	CNX Gas Company, LLC
			Donald Pelger	CNX Gas Company, LLC
			Carl L. Anderson, et ux	CNX Gas Company, LLC
			David Wayne Anderson	CNX Gas Company, LLC

01/04/2019

(+) 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 Phone: 412-219-4509
Sewickley, PA 15143 Email: info@shefflerCo.com

DATE: September 21, 2018, Rev. September 24, 2018

Well Type: Oil Waste Disposal Production Deep
 Gas Liquid Injection Storage Shallow
 OPERATOR'S WELL #: WDTN5GHSU
 API WELL # 47 061 01823
 STATE COUNTY PERMIT
 WATERSHED: DUNKARD CREEK ELEVATION: 1412'
 COUNTY/DISTRICT: MONONGALIA / BATTELLE QUADRANGLE: WADESTOWN, WV
 SURFACE OWNER: JOHN M. WISE, ET UX., ET AL. ACREAGE: 207.36
 OIL & GAS ROYALTY OWNER: RICHARD W. WISE, ET AL. ACREAGE: 207.36

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 City CANONSBURG State PA Zip Code 15317 City JANE LEW State WV Zip Code 26378

01/04/2019

Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc		
4 (CONT.)	1-2-16 1-2-16.2 p/o 1-2-16.1 p/o 1-2-17 p/o 1-2-17.1	188578000	Deborah Horton, Trustee and Beneficiary of the Ronald L. Horton Revocable Living Trust	CNX Gas Company, LLC		
			Chris Pelger	CNX Gas Company, LLC		
			Shannon Harker	CNX Gas Company, LLC		
			Chase Schwersenska	CNX Gas Company, LLC		
			John Pelger	CNX Gas Company, LLC		
			Holly Pelger	CNX Gas Company, LLC		
			Brenda Murphy	EQT Production Company		
			Vickie L. Simmons	EQT Production Company		
			Sherry C. McCoy	EQT Production Company		
			David C. Anderson	EQT Production Company		
			Kelly Dilbeck	CNX Gas Company, LLC		
5	1-2-17.2 p/o 1-2-17 p/o 1-2-17.1 p/o 1-2-16.1	239935000	XTO Energy, Inc.	CNX Gas Company, LLC		
			Three Rivers Royalty II, LLC	CNX Gas Company, LLC		
			Elizabeth A. Martineau, a/k/a, Elizabeth Ada Snyder, a/k/a/, Elizabeth Snyder Martineau	CNX Gas Company, LLC		
			Rebecca Snyder Bromley, a/k/a Alice Rebecca Snyder Bromley	CNX Gas Company, LLC		
			James Brant Snyder	CNX Gas Company, LLC		
			Sharon White Bartholomew, a/k/a Sharon R. W. Bartholomew, a/k/a, Sharon Ruth White Bartholomew	CNX Gas Company, LLC		
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			Eldon Bryant Tucker, et ux	CNX Gas Company, LLC		
			Charles Tucker, et ux	CNX Gas Company, LLC		
			Robert Earl, et ux	CNX Gas Company, LLC		
			David Tucker	CNX Gas Company, LLC		
			James Tucker, et ux	CNX Gas Company, LLC		
			Cheryl Molesky	CNX Gas Company, LLC		
			Laurence D. Hare	CNX Gas Company, LLC		
			James F. Hare III, et ux	CNX Gas Company, LLC		
			Lacy L. Adams, et vir	CNX Gas Company, LLC		
			Donald Pelger	CNX Gas Company, LLC		
			Carl L. Anderson, et ux	CNX Gas Company, LLC		
			David Wayne Anderson	CNX Gas Company, LLC		
			Deborah Horton, Trustee and Beneficiary of the Ronald L. Horton Revocable Living Trust	CNX Gas Company, LLC		
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			David C. Anderson	EQT Production Company		
			Kelly Dilbeck	CNX Gas Company, LLC		
6	1-2-14	188577000	XTO Energy, Inc.	CNX Gas Company, LLC		
			David Liming and Nancy Liming	CNX Gas Company, LLC		
			Three Rivers Royalty II, LLC	CNX Gas Company, LLC		
			Elizabeth A. Martineau, a/k/a, Elizabeth Ada Snyder, a/k/a/, Elizabeth Snyder Martineau	CNX Gas Company, LLC		
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			Carl L. Anderson, et ux	EQT Production Company		
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API WELL # 47 061 01823
STATE COUNTY PERMIT

WATERSHED: DUNKARD CREEK ELEVATION: 1412'
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6 (CONT.)	1-2-14	188577000	Chase Schwersenska	CNX Gas Company, LLC
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			Kelly Dilbeck	CNX Gas Company, LLC
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7	1-2-13	188610000	Ralph Six	CNX Gas Company LLC
			Huskie Lumber Co., Inc.	Antero Resources Corporation

01/04/2019

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City CANONSBURG State PA Zip Code 15317 City JANE LEW State WV Zip Code 26378

**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.				

RECEIVED
Office of Oil and Gas
OCT 03 2018
WV Department of
Environmental Protection

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

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

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

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

Well Operator: CNX Gas Company LLC
 By: Raymond Hoon 
 Its: Permitting Supervisor

4706101823

Attachment - Form WW-6A-1 for WTN5GHS									
Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc	Royalty	Book/Page			
1	1-8-2	189010000	Richard L. McCauley	CNX Gas Company LLC	Not less than 1/8	1442/707			
			Judy A. Eckman	CNX Gas Company LLC	Not less than 1/8	1442/711			
			Thomas E. McCauley	CNX Gas Company LLC	Not less than 1/8	1442/715			
			Regina Wise Myers, aka Violet Regina Myers	CNX Gas Company LLC	Not less than 1/8	1450/740			
			Evaloe A. Everly Shaheen	CNX Gas Company LLC	Not less than 1/8	1501/321			
			Zelda Ruth Brummage	CNX Gas Company LLC	Not less than 1/8	1500/762			
			Dexter Murle Stewart	CNX Gas Company LLC	Not less than 1/8	1500/277			
			Walter C. Ord	CNX Gas Company LLC	Not less than 1/8	1501/803			
			James Freeman Stewart	CNX Gas Company LLC	Not less than 1/8	1501/806			
			Clifford J. Wise	CNX Gas Company LLC	Not less than 1/8	1525/130			
			Victor E. Wise, a single man	CNX Gas Company LLC	Not less than 1/8	1501/813			
			Jesse D. Jones, a married man	CNX Gas Company LLC	Not less than 1/8	1509/468			
			Phyllis J. Petrosky, a widowed woman	CNX Gas Company LLC	Not less than 1/8	1510/203			
			Annette E. Stewart, single	CNX Gas Company LLC	Not less than 1/8	1510/806			
			Harold M. Jones, Jr., a single man	CNX Gas Company LLC	Not less than 1/8	1511/101			
									1520/433
						Robert Stewart	CNX Gas Company LLC	Not less than 1/8	1520/785
						Richard W. Wise	CNX Gas Company LLC	Not less than 1/8	1516/36
						Walter R. Currence	CNX Gas Company LLC	Not less than 1/8	1524/530
						Donald D. Wise, aka Donald G. Wise	CNX Gas Company LLC	Not less than 1/8	1516/486
						Maureen S. Currence	CNX Gas Company LLC	Not less than 1/8	1520/781
						Opal Jane Wise, Life Estate Holder and John Matthew Wise and Dina M. Wise, Remaindermen	CNX Gas Company LLC	Not less than 1/8	1520/481
						Michelle L. Currence	CNX Gas Company LLC	Not less than 1/8	1528/431
						Justin P. Stewart, single	CNX Gas Company LLC	Not less than 1/8	1520/625
						Debra Goff	CNX Gas Company LLC	Not less than 1/8	1529/256
						Eleanor J. Wise, single	CNX Gas Company LLC	Not less than 1/8	1501/809
						Donald E. Nunley and Deborah L. Nunley	CNX Gas Company LLC	Not less than 1/8	1596/260
						Fred C. Wise and Alice F. Wise	CNX Gas Company LLC	Not less than 1/8	1597/89
						Patricia J. Mumaw and Richard L. Mumaw	CNX Gas Company LLC	Not less than 1/8	1598/230
						Richard A. Nunley and Diana K. Nunley	CNX Gas Company LLC	Not less than 1/8	1597/99
						Mary Nunley Stempelton and Donald Stempelton	CNX Gas Company LLC	Not less than 1/8	1597/85
						Linda Stapp	CNX Gas Company LLC	Not less than 1/8	1601/621
			Melissa A. Bookout	CNX Gas Company LLC	Not less than 1/8	1602/113			
			Jane Irons, widow	CNX Gas Company LLC	Not less than 1/8	1602/108			
			Eileen Ann Lyle	CNX Gas Company LLC	Fee	1600/462			
			Robert Eugene Michael, Sr.	CNX Gas Company LLC	Fee	1599/282			
			Frank Dennis Michael, Jr.	CNX Gas Company LLC	Fee	1599/267			
			Evelyn June Michael	CNX Gas Company LLC	Fee	1600/800			
			Tonya Chersin	CNX Gas Company LLC	Fee	1601/148			
			Boyd Hawkins	CNX Gas Company LLC	Fee	1601/152			
			Becky L. Hawkins f/k/a Becky Bortnick	CNX Gas Company LLC	Fee	1605/324			
Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc	Royalty	Book/Page			
2	1-8-3.1	204769000	Barbara J. Wagner, a widow	CNX Gas Company LLC	Not less than 1/8	1506/533			
			Donald L. White, et al	CNX Gas Company LLC	Not less than 1/8	1507/427			
			Arnold D. Anderson, individually, and as Trustee of the Arnold D. Anderson and Barbara J. Anderson Living Trust UTD May 14th, 2008	CNX Gas Company LLC	Not less than 1/8	1515/794			
Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc	Royalty	Book/Page			
3	1-9-17	188599000	Ralph Six	Antero Resources Corporation	Not less than 1/8	1589/90			
			Antero Resources Corporation	CNX Gas Company LLC	Assignment	133/438 137/387			
Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc	Royalty	Book/Page			
4	1-2-16 1-2-16.2 p/o 1-2-16.1 p/o 1-2-17 p/o 1-2-17.1	188578000	XTO Energy, Inc.	CNX Gas Company, LLC	Fee	1629/449			
			Three Rivers Royalty II, LLC	CNX Gas Company, LLC	Not less than 1/8	1616/673			
			Elizabeth A. Martineau, a/k/a, Elizabeth Ada Snyder, a/k/a/a, Elizabeth Snyder Martineau	CNX Gas Company, LLC	Not less than 1/8	1521/781			
			Rebecca Snyder Bromley, a/k/a Alice Rebecca Snyder Bromley	CNX Gas Company, LLC	Not less than 1/8	1522/563			
			James Brant Snyder	CNX Gas Company, LLC	Not less than 1/8	1523/111			
			Sharon White Bartholomew, a/k/a Sharon R. W. Bartholomew, a/k/a, Sharon Ruth White Bartholomew	CNX Gas Company, LLC	Not less than 1/8	1529/268			
			David T. White and Sarah K. White, h/w, as JTROS	CNX Gas Company, LLC	Not less than 1/8	1543/430			
			Glenn L. White, individually and as trustee of Glenn L. White Trust	CNX Gas Company, LLC	Not less than 1/8	1516/48			
			Alice T. Boone	CNX Gas Company, LLC	Not less than 1/8	1602/805			
			Eldon Bryant Tucker, et ux	CNX Gas Company, LLC	Not less than 1/8	1602/828			
			Charles Tucker, et ux	CNX Gas Company, LLC	Not less than 1/8	1602/811			
			Robert Earl, et ux	CNX Gas Company, LLC	Not less than 1/8	1602/822			
			David Tucker	CNX Gas Company, LLC	Not less than 1/8	1602/840			
James Tucker, et ux	CNX Gas Company, LLC	Not less than 1/8	1602/798						
Cheryl Molesky	CNX Gas Company, LLC	Not less than 1/8	1605/334						
Laurence D. Hare	CNX Gas Company, LLC	Not less than 1/8	1605/618						
James F. Hare III, et ux	CNX Gas Company, LLC	Not less than 1/8	1604/615						

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Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc	Royalty	Book/Page
			Lacy L. Adams, et vlr	CNX Gas Company, LLC	Not less than 1/8	1612/566
			Donald Pelger	CNX Gas Company, LLC	Not less than 1/8	1612/550
			Carl L. Anderson, et ux	CNX Gas Company, LLC	Not less than 1/8	1614/309
			David Wayne Anderson	CNX Gas Company, LLC	Not less than 1/8	1614/153
			Deborah Horton, Trustee and Beneficiary of the Ronald L. Horton Revocable Living Trust	CNX Gas Company, LLC	Not less than 1/8	1612/572
			Chris Pelger	CNX Gas Company, LLC	Not less than 1/8	1614/639
			Shannon Harker	CNX Gas Company, LLC	Not less than 1/8	1615/704
			Chase Schwersenska	CNX Gas Company, LLC	Not less than 1/8	1614/712
			John Pelger	CNX Gas Company, LLC	Not less than 1/8	1621/329
			Holly Pelger	CNX Gas Company, LLC	Not less than 1/8	1635/236
			Brenda Murphy	EQT Production Company	Not less than 1/8	1615/281
			EQT Production Company	CNX Gas Company, LLC	Assignment	136/258
			Vickie L. Simmons	EQT Production Company	Not less than 1/8	1615/276
			EQT Production Company	CNX Gas Company, LLC	Assignment	136/258
			Sherry C. McCoy	EQT Production Company	Not less than 1/8	1615/278
			EQT Production Company	CNX Gas Company, LLC	Assignment	136/258
			David C. Anderson	EQT Production Company	Not less than 1/8	1615/285
			EQT Production Company	CNX Gas Company, LLC	Assignment	136/258
			Kelly Dilbeck	CNX Gas Company, LLC	Not less than 1/8	131/31
Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc	Royalty	Book/Page
5	1-2-17.2 p/o 1-2-17 p/o 1-2-17.1 p/o 1-2-16.1	239935000	XTO Energy, Inc.	CNX Gas Company, LLC	Fee	1629/449
			Three Rivers Royalty II, LLC	CNX Gas Company, LLC	Not less than 1/8	1616/673
			Elizabeth A. Martineau, a/k/a, Elizabeth Ada Snyder, a/k/a/j, Elizabeth Snyder Martineau	CNX Gas Company, LLC	Not less than 1/8	1521/781
			Rebecca Snyder Bromley, a/k/a Alice Rebecca Snyder Bromley	CNX Gas Company, LLC	Not less than 1/8	1522/563
			James Brant Snyder	CNX Gas Company, LLC	Not less than 1/8	1523/111
			Sharon White Bartholomew, a/k/a Sharon R. W. Bartholomew, a/k/a, Sharon Ruth White Bartholomew	CNX Gas Company, LLC	Not less than 1/8	1529/268
			David T. White and Sarah K. White, h/w, as JTROS	CNX Gas Company, LLC	Not less than 1/8	1543/430
			Glenn L. White, individually and as trustee of Glenn L. White Trust	CNX Gas Company, LLC	Not less than 1/8	1516/48
			Alice T. Boone	CNX Gas Company, LLC	Not less than 1/8	1602/805
			Eldon Bryant Tucker, et ux	CNX Gas Company, LLC	Not less than 1/8	1602/828
			Charles Tucker, et ux	CNX Gas Company, LLC	Not less than 1/8	1602/811
			Robert Earl, et ux	CNX Gas Company, LLC	Not less than 1/8	1602/822
			David Tucker	CNX Gas Company, LLC	Not less than 1/8	1602/840
			James Tucker, et ux	CNX Gas Company, LLC	Not less than 1/8	1602/798
			Cheryl Molesky	CNX Gas Company, LLC	Not less than 1/8	1605/334
			Laurence D. Hare	CNX Gas Company, LLC	Not less than 1/8	1605/618
			James F. Hare III, et ux	CNX Gas Company, LLC	Not less than 1/8	1604/615
			Lacy L. Adams, et vlr	CNX Gas Company, LLC	Not less than 1/8	1612/566
			Donald Pelger	CNX Gas Company, LLC	Not less than 1/8	1612/550
			Carl L. Anderson, et ux	CNX Gas Company, LLC	Not less than 1/8	1614/309
			David Wayne Anderson	CNX Gas Company, LLC	Not less than 1/8	1614/153
			Deborah Horton, Trustee and Beneficiary of the Ronald L. Horton Revocable Living Trust	CNX Gas Company, LLC	Not less than 1/8	1612/572
			Chris Pelger	CNX Gas Company, LLC	Not less than 1/8	1614/639
			Shannon Harker	CNX Gas Company, LLC	Not less than 1/8	1615/704
			Chase Schwersenska	CNX Gas Company, LLC	Not less than 1/8	1614/712
			John Pelger	CNX Gas Company, LLC	Not less than 1/8	1621/329
			Holly Pelger	CNX Gas Company, LLC	Not less than 1/8	1635/236
			Brenda Murphy	EQT Production Company	Not less than 1/8	1615/281
			EQT Production Company	CNX Gas Company, LLC	Assignment	136/258
			Vickie L. Simmons	EQT Production Company	Not less than 1/8	1615/276
			EQT Production Company	CNX Gas Company, LLC	Assignment	136/258
			Sherry C. McCoy	EQT Production Company	Not less than 1/8	1615/278
			EQT Production Company	CNX Gas Company, LLC	Assignment	136/258
			David C. Anderson	EQT Production Company	Not less than 1/8	1615/285
			EQT Production Company	CNX Gas Company, LLC	Assignment	136/258
			Kelly Dilbeck	CNX Gas Company, LLC	Not less than 1/8	131/29
Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc	Royalty	Book/Page
6	1-2-14	188577000	XTO Energy, Inc.	CNX Gas Company, LLC	Fee	1629/449
			David Liming and Nancy Liming	CNX Gas Company, LLC	Not less than 1/8	1616/673
			Three Rivers Royalty II, LLC	CNX Gas Company, LLC	Not less than 1/8	1616/673
			Elizabeth A. Martineau, a/k/a, Elizabeth Ada Snyder, a/k/a/j, Elizabeth Snyder Martineau	CNX Gas Company, LLC	Not less than 1/8	1521/781
			Rebecca Snyder Bromley, a/k/a Alice Rebecca Snyder Bromley	CNX Gas Company, LLC	Not less than 1/8	1522/563
			James Brant Snyder	CNX Gas Company, LLC	Not less than 1/8	1523/111
			Sharon White Bartholomew, a/k/a Sharon R. W. Bartholomew, a/k/a, Sharon Ruth White Bartholomew	CNX Gas Company, LLC	Not less than 1/8	1529/268
			David T. White and Sarah K. White, h/w, as JTROS	CNX Gas Company, LLC	Not less than 1/8	1543/430
			Glenn L. White, individually and as trustee of Glenn L. White Trust	CNX Gas Company, LLC	Not less than 1/8	1516/48
			Alice T. Boone	CNX Gas Company, LLC	Not less than 1/8	1602/805
			Eldon Bryant Tucker, et ux	CNX Gas Company, LLC	Not less than 1/8	1602/828
			Charles Tucker, et ux	CNX Gas Company, LLC	Not less than 1/8	1602/811
			Robert Earl, et ux	CNX Gas Company, LLC	Not less than 1/8	1602/822
			David Tucker	CNX Gas Company, LLC	Not less than 1/8	1602/840
			James Tucker, et ux	CNX Gas Company, LLC	Not less than 1/8	1602/798
			Cheryl Molesky	CNX Gas Company, LLC	Not less than 1/8	1605/334

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Tract ID	Tax Map & Parcel	Title Opinion OLS #	Grantor, Lessor, etc	Grantee, Lessee, etc	Royalty	Book/Page
			Laurence D. Hare	CNX Gas Company, LLC	Not less than 1/8	1607/618
			James F. Hare III, et ux	CNX Gas Company, LLC	Not less than 1/8	1604/615
			Lacy L. Adams, et vir	CNX Gas Company, LLC	Not less than 1/8	1612/566
			Donald Pelger	CNX Gas Company, LLC	Not less than 1/8	1612/550
			Carl L. Anderson, et ux	EQT Production Company	Not less than 1/8	1616/275
			EQT Production Company	CNX Gas Company, LLC	Assignment	136/258
			David Wayne Anderson	CNX Gas Company, LLC	Not less than 1/8	1614/153
			Deborah Horton, Trustee and Beneficiary of the Ronald L. Horton Revocable Living Trust	CNX Gas Company, LLC	Not less than 1/8	1612/572
			Chris Pelger	CNX Gas Company, LLC	Not less than 1/8	1614/639
			Shannon Harker	CNX Gas Company, LLC	Not less than 1/8	1615/704
			Chase Schwersenska	CNX Gas Company, LLC	Not less than 1/8	1614/712
			John Pelger	CNX Gas Company, LLC	Not less than 1/8	1621/329
			Holly Pelger	CNX Gas Company, LLC	Not less than 1/8	1635/236
			Brenda Murphy	EQT Production Company	Not less than 1/8	1614/845
			EQT Production Company	CNX Gas Company, LLC	Assignment	136/258
			Vickie L. Simmons	EQT Production Company	Not less than 1/8	1614/843
			EQT Production Company	CNX Gas Company, LLC	Assignment	136/258
			Sherry C. McCoy	EQT Production Company	Not less than 1/8	1614/847
			EQT Production Company	CNX Gas Company, LLC	Assignment	136/258
			David C. Anderson	EQT Production Company	Not less than 1/8	1615/1
			EQT Production Company	CNX Gas Company, LLC	Assignment	136/258
			Kelly Dilbeck	CNX Gas Company, LLC	Not less than 1/8	131/35
7	1-2-13	188610000	Ralph Six	CNX Gas Company LLC	Not less than 1/8	1620/122
			Huskie Lumber Co., Inc.	Antero Resources Corporation	Not less than 1/8	1589/96
			Antero Resources Corporation	CNX Gas Company LLC	Assignment	133/438
						137/387

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Raymond Hoon
Permitting Supervisor
1000 Consol Energy Dr.
Canonsburg, PA 15317
(724) 485-3540

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

RE: Road Letter – WDTN5 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) 485-3540 or RaymondHoon@cnx.com.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Raymond Hoon', written over a horizontal line.

Raymond Hoon
Permitting Supervisor

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01/04/2019

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

Date of Notice Certification: 10-1-18

API No. 47- _____
Operator's Well No. WDTN5GHSM
Well Pad Name: WDTN5

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>556821.0330</u>
County: <u>Monongalia</u>		Northing: <u>4395393.9670</u>
District: <u>Battelle</u>	Public Road Access: <u>CR6 Wise Run</u>	
Quadrangle: <u>Wadestown</u>	Generally used farm name: <u>Wise</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.

Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:

*PLEASE CHECK ALL THAT APPLY

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

OOG OFFICE USE ONLY

- RECEIVED/ NOT REQUIRED
- RECEIVED
- RECEIVED/ NOT REQUIRED
- RECEIVED
- RECEIVED

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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.

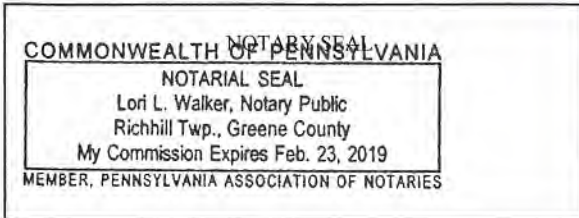
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Certification of Notice is hereby given:

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

Well Operator:	<u>CNX Gas Company, LLC</u>	Address:	<u>1000 Consol Energy Drive</u>
By:	<u>Raymond Hoon</u>		<u>Canonsburg, PA 15317</u>
Its:	<u>Permitting Supervisor</u>	Facsimile:	<u></u>
Telephone:	<u>724-485-3540</u>	Email:	<u>RaymondHoon@CNX.com</u>



Commonwealth of Pennsylvania
County of Greene Washington
 Subscribed and sworn before me this 1st day of October.
Lori L. Walker Notary Public
 My Commission Expires February 23, 2019

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: 9-27-18 **Date Permit Application Filed:** 10-1-18

Notice of:

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

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

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

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

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

SURFACE OWNER(s)

Name: See attached

Address: _____

Name: _____

Address: _____

SURFACE OWNER(s) (Road and/or Other Disturbance)

Name: See attached

Address: _____

Name: _____

Address: _____

SURFACE OWNER(s) (Impoundments or Pits)

Name: N/A

Address: _____

COAL OWNER OR LESSEE

Name: See attached

Address: _____

COAL OPERATOR

Name: N/A

Address: _____

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

Name: N/A

Address: _____

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: N/A

Address: _____

*Please attach additional forms if necessary

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WV Department of
Environmental Protection

Notice is hereby given:

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

This Notice Shall Include:

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

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

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

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

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

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Well Location Restrictions

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

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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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WW-6A
(8-13)

API NO. 47- _____ - _____
OPERATOR WELL NO. WDTN5GHSM
Well Pad Name: WDTN5 **01/04/2019**

Notice is hereby given by:

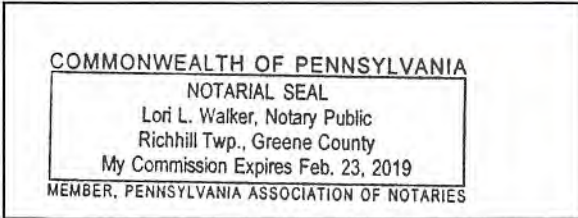
Well Operator: CNX Gas Company, LLC
Telephone: 724-485-3540
Email: RaymondHoon@CNX.com



Address: **4706 01823** 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 1st day of October 2018.
Lori L. Walker Notary Public
My Commission Expires February 23, 2018

WW6A Notice of Application - Attachment

WDTN5GHSM

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

Annette Stewart
41 Mimosa Dr., Martinsburg, WV 25404

Brandon Sweeney
18501 Clagget Landing, Upper Marlboro, MD 20774

Brianna Skyler Sweeney
18502 Clagget Landing, Upper Marlboro, MD 20774

Bryan Kevin Goff
9325 Beaverdam Rd., Nanjemoy, MD 20662

Clifford J. Wise
2394 County Road 137, Obrien, FL 32071

CNX Gas Company LLC
1000 Consol Energy Drive, Canonsburg, PA 15317

Dawn Hughes
1134 Brooke Rd., Stafford, VA 22405

Dexter Murle Stewart
1283 Crossroads Road, Fairview, WV 26570

Donald Nunley
36 Autumn Drive, Core, WV 26541

Eleanor Wise
126 Fairview Ave., Waynesburg, PA 15370

Evalee A. Everly
1325 Citrus Gardens Dr., Apt A, Orlando, FL 32807

Frederick C. Wise
1 West Hills Drive, Fairmont, WV 26554

Harold M. Jones
317 Crest Ave., Charleroi, PA 15022

James Freeman Stewart
1206 Marion Ave. Fairmont, WV 26554

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Jane Irons
P.O. Box 681, Tellico Plains, TN 37385

Jesse D. Jones
308 1/2 Crest Ave., Charleroi, PA 15022

John Matthew Wise and Dina Wise
2255 East 6500 South, Price, UT 84501

Judy Eckman
630 Coniston Drive, Leland, NC 28451-9754

Justin P. Stewart
132 Radiant Drive, Martinsburg, WV 25404

Mary Nunley Stepelton
7739 South Hampton Terrace, Unit G204, Tamarac, FL 33321

Maureen Currence
203 Silver Maple Ct., Holly Ridge, NC 28445

Melissa Bookout
311 West Walnut St., Madisonville, TN 37354

Michelle Currence
1 Carroll Drive, Stafford, VA 22554

Opal Wise
2002 West 600 North Hilltop Road, Price, UT 84501

Patricia Mumaw
3344 Northridge Drive, Wooster, OH 44691

Phyllis Petrosky
110 Chess St., Apt 401, New Eagle, PA 15067

Regina W. Myers
1200 Carroll Heights Blvd., Hagerstown, MD 21742

Richard McCauley
2589 Timothy Ave., Louisville, OH 44641

Richard Nunley
261 Festival Drive, Oceanside, CA 92057

Robert Stewart
Lot 1, Route 21 MHP, Carmichaels, PA 15320

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Thomas McCauley
220 Kennedy Street, Apt 5, Louisville, OH 44641

Victor E. Wise
PO Box 7437, Charleston, WV 25356

Wally Currence
16200 Bealle Hill Road, Waldorf, MD 20601

Walter C. Ord
P.O. Box 802, McDowell, KY 41647

Zelma Ruth Brummage
3036 Main St., Farmington, WV 26571

Barbara J. Wagner
573 Wise Run Road Wana, WV 26590

Coal Owner or Lessee:

Annette Stewart
41 Mimosa Dr., Martinsburg, WV 25404

Brandon Sweeney
18501 Clagget Landing, Upper Marlboro, MD 20774

Brianna Skyler Sweeney
18502 Clagget Landing, Upper Marlboro, MD 20774

Bryan Kevin Goff
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1000 Consol Energy Drive, Canonsburg, PA 15317

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1134 Brooke Rd., Stafford, VA 22405

Dexter Murle Stewart
1283 Crossroads Road, Fairview, WV 26570

Donald Nunley
36 Autumn Drive, Core, WV 26541

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126 Fairview Ave., Waynesburg, PA 15370

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110 Chess St., Apt 401, New Eagle, PA 15067

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3036 Main St., Farmington, WV 26571

John David Wise
3 Cross Roads Road, Wana, WV 26590

Kathy A. Sine
343 Statler Run Road, Fairview, WV 26570

Linda Stapp
124 Reservoir Rd., St. Clairsville, OH 43950

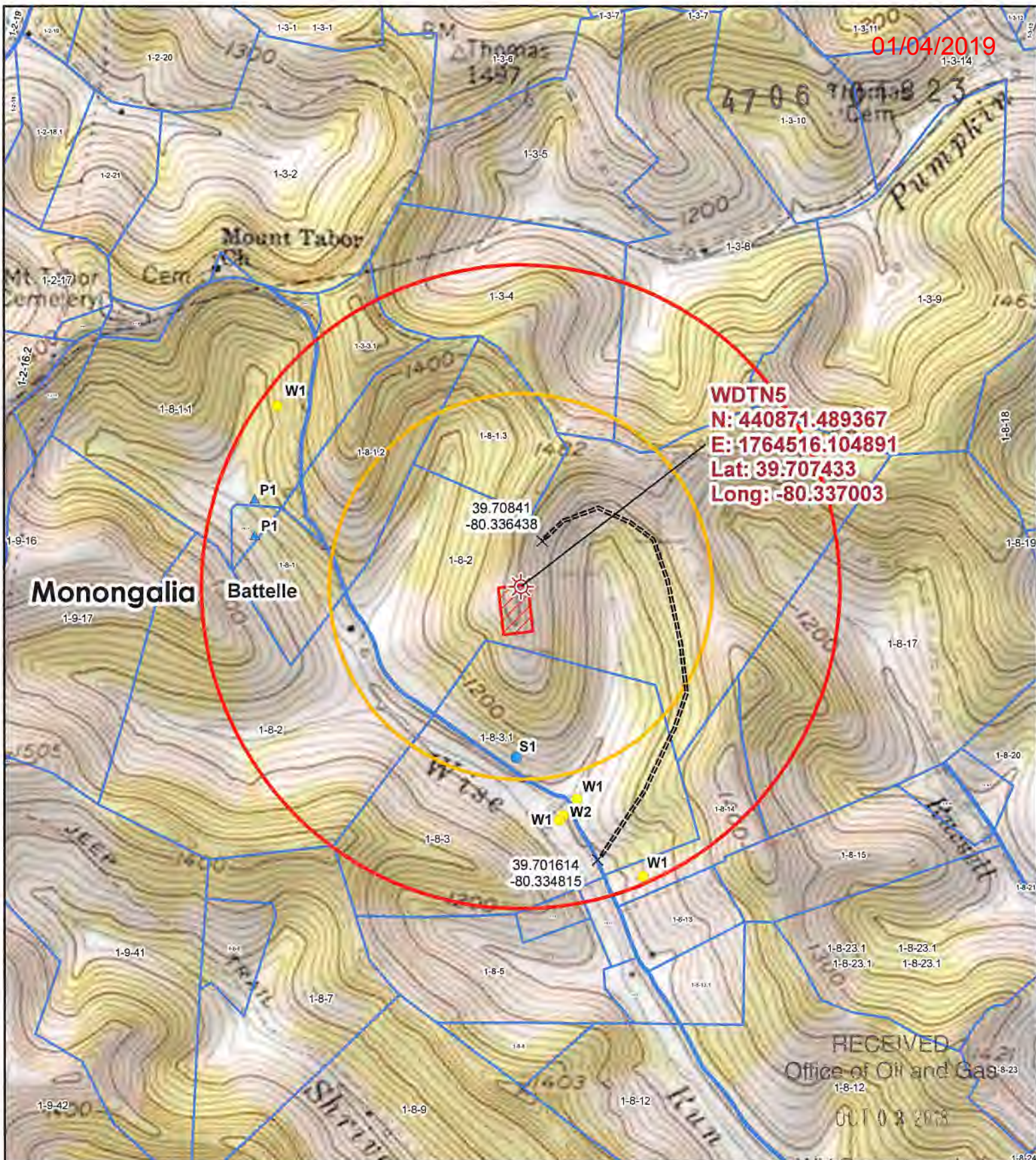
Richard W. Wise
7817 Mason Dixon Highway, Wana, WV 26590

CCC RCPC LLC
1001 CONSOL Energy Drive, Canonsburg, PA 15317

CNX RCPC LLC
1000 CONSOL Energy Drive, Canonsburg, PA 15317

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01/04/2019



WDTN5
N: 440871.489367
E: 1764516.104891
Lat: 39.707433
Long: -80.337003

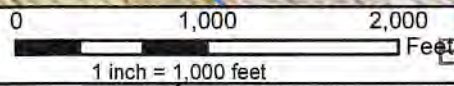
Monongalia

Battelle

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Legend

- Wellbore
- Wells
- Spring
- Ponds
- Access Points
- Access Road
- 2,500 Foot Buffer
- 1,500 Foot Buffer
- Well Pad
- Surface Parcel



Consol Energy
 Environmental Protection
 CNX Center, Canonsburg, PA

Original Date: 11/13/2017 Prepared By: GIS

Revision Date: 11/13/2017 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.
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Topographic Well Map
WDTN5

Path: \\cnx\gis\business_unit_support\gas_processing\gas31\wtdn5\water_well_map\wtdn5_topo_water_well_map.mxd - 11/20/17

4706101823 01/04/2019

**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: 9-27-18 **Date Permit Application Filed:** 10-1-18

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: <u>See attached</u>	Name: _____
Address: _____	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>556821.0330</u>
County: <u>Monongalia</u>	Northing: <u>4395393.9670</u>
District: <u>Battelle</u>	Public Road Access: <u>CR6 Wise Run</u>
Quadrangle: <u>Wadestown</u>	Generally used farm name: <u>Wise</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: 724-485-3540
 Email: RaymondHoon@CNX.com
 Facsimile: _____

Authorized Representative: Raymond Hoon
 Address: 1000 Consol Energy Drive
Canonsburg, PA 15317
 Telephone: 724-485-3540
 Email: RaymondHoon@CNX.com
 Facsimile: _____

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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.

WW6A4 Notice of Intent to Drill - Attachment

WDTN5GHSM

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

Annette Stewart

41 Mimosa Dr., Martinsburg, WV 25404

Brandon Sweeney

18501 Clagget Landing, Upper Marlboro, MD 20774

Brianna Skyler Sweeney

18502 Clagget Landing, Upper Marlboro, MD 20774

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9325 Beaverdam Rd., Nanjemoy, MD 20662

Clifford J. Wise

2394 County Road 137, Obrien, FL 32071

CNX Gas Company LLC

1000 Consol Energy Drive, Canonsburg, PA 15317

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1206 Marion Ave. Fairmont, WV 26554

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Environmental Protection

Jane Irons
P.O. Box 681, Tellico Plains, TN 37385 ✓

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308 1/2 Crest Ave., Charleroi, PA 15022 ✓

John Matthew Wise and Dina Wise
2255 East 6500 South, Price, UT 84501 ✓

Judy Eckman
630 Coniston Drive, Leland, NC 28451-9754 ✓

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Lot 1, Route 21 MHP, Carmichaels, PA 15320 ✓

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WV Department of
Environmental Protection

Thomas McCauley
220 Kennedy Street, Apt 5, Louisville, OH 44641 /

Victor E. Wise
PO Box 7437, Charleston, WV 25356 /

Wally Currence
16200 Bealle Hill Road, Waldorf, MD 20601 /

Walter C. Ord
P.O. Box 802, McDowell, KY 41647 /

Zelma Ruth Brummage
3036 Main St., Farmington, WV 26571 /

Barbara J. Wagner
573 Wise Run Road Wana, WV 26590 /

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OCT 03 2018
WV Department of
Environmental Protection

01/04/2019

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: 9-27-18 **Date Permit Application Filed:** 12-1-18

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: See attached Name: _____
 Address: _____ Address: _____

Notice is hereby given:

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

State: <u>West Virginia</u>	UTM NAD 83 Easting: <u>556821.0330</u>
County: <u>Monongalia</u>	Northing: <u>4395393.9670</u>
District: <u>Battelle</u>	Public Road Access: <u>CR6 Wise Run</u>
Quadrangle: <u>Wadestown</u>	Generally used farm name: <u>Wise</u>
Watershed: <u>Dunkard Creek</u>	

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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 Address: 1000 Consol Energy Drive
 Telephone: 724-485-3540 Canonsburg, PA 15317
 Email: RaymondHoon@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.

WW6A5 Notice of Planned Operation - Attachment

WDTN5GHSM

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

Annette Stewart
41 Mimosa Dr., Martinsburg, WV 25404

Brandon Sweeney
18501 Clagget Landing, Upper Marlboro, MD 20774

Brianna Skyler Sweeney
18502 Clagget Landing, Upper Marlboro, MD 20774

Bryan Kevin Goff
9325 Beaverdam Rd., Nanjemoy, MD 20662

Clifford J. Wise
2394 County Road 137, Obrien, FL 32071

CNX Gas Company LLC
1000 Consol Energy Drive, Canonsburg, PA 15317

Dawn Hughes
1134 Brooke Rd., Stafford, VA 22405

Dexter Murle Stewart
1283 Crossroads Road, Fairview, WV 26570

Donald Nunley
36 Autumn Drive, Core, WV 26541

Eleanor Wise
126 Fairview Ave., Waynesburg, PA 15370

Evalee A. Everly
1325 Citrus Gardens Dr., Apt A, Orlando, FL 32807

Frederick C. Wise
1 West Hills Drive, Fairmont, WV 26554

Harold M. Jones
317 Crest Ave., Charleroi, PA 15022

James Freeman Stewart
1206 Marion Ave. Fairmont, WV 26554

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Jane Irons
P.O. Box 681, Tellico Plains, TN 37385

Jesse D. Jones
308 1/2 Crest Ave., Charleroi, PA 15022

John Matthew Wise and Dina Wise
2255 East 6500 South, Price, UT 84501

Judy Eckman
630 Coniston Drive, Leland, NC 28451-9754

Justin P. Stewart
132 Radiant Drive, Martinsburg, WV 25404

Mary Nunley Stepelton
7739 South Hampton Terrace, Unit G204, Tamarac, FL 33321

Maureen Currence
203 Silver Maple Ct., Holly Ridge, NC 28445

Melissa Bookout
311 West Walnut St., Madisonville, TN 37354

Michelle Currence
1 Carroll Drive, Stafford, VA 22554

Opal Wise
2002 West 600 North Hilltop Road, Price, UT 84501

Patricia Mumaw
3344 Northridge Drive, Wooster, OH 44691

Phyllis Petrosky
110 Chess St., Apt 401, New Eagle, PA 15067

Regina W. Myers
1200 Carroll Heights Blvd., Hagerstown, MD 21742

Richard McCauley
2589 Timothy Ave., Louisville, OH 44641

Richard Nunley
261 Festival Drive, Oceanside, CA 92057

Robert Stewart
Lot 1, Route 21 MHP, Carmichaels, PA 15320

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4706 01/04/2019
01823

Thomas McCauley /
220 Kennedy Street, Apt 5, Louisville, OH 44641

Victor E. Wise /
PO Box 7437, Charleston, WV 25356

Wally Currence /
16200 Bealle Hill Road, Waldorf, MD 20601

Walter C. Ord /
P.O. Box 802, McDowell, KY 41647

Zelma Ruth Brummage /
3036 Main St., Farmington, WV 26571

Barbara J. Wagner /
573 Wise Run Road Wana, WV 26590

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4706101823 01/04/2019

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
Division of Highways

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

Jim Justice
Governor

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

December 6, 2017

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

Subject: DOH Permit for the WDTN5 Pad, Monongalia County
WDTN5GHSM Well Site

Dear Mr. Martin,

The West Virginia Division of Highways has issued Permit #04-2017-0929 for the subject site to CNX Gas Company LLC, for access to the State Road for the well site located off of Monongalia County Route 6.

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

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Environmental Protection

Very Truly Yours,

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

Cc: Ray Hoon
CNX Gas Company LLC
CH, OM, D-4
File

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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EROSION & SEDIMENT CONTROL PLAN AND SITE RESTORATION PLAN

WDTN5 WELL SITE MONONGALIA COUNTY, WEST VIRGINIA

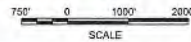
FOR



DISTURBANCE BREAKDOWN		
LANDOWNER	DISTURBANCE FROM ACCESS ROAD & STOCKPILES (ACRES)	DISTURBANCE FROM WELL PAD & STOCKPILES (ACRES)
BARBARA WAGNER TAMAR 1-611 DB/PG 1300584	7.5	87
BRANDON T WISE ET AL TAMAR 1-612 DB/PG 1321037	18.9	11.8



REFERENCES: UNITED STATES GEOLOGICAL SURVEY - WADSWORTH QUADRANGLE, WV, 7.5 MINUTE SERIES



PROJECT NO. 17016-023
DECEMBER 2017

DIEFFENBAUCH & HRITZ, LLC



INDEX	
DRAWING NO.	TITLE
1	TITLE SHEET
2	GENERAL NOTES
3	EXISTING SITE PLAN
4	SOILS PLAN
5	OVERALL SITE PLAN
6-10	PROPOSED SITE PLAN
11	ACCESS ROAD PROFILE
12-14	ACCESS ROAD CROSS SECTIONS
15	WELL PAD CROSS SECTION
16-17	TOE BENCH DETAILS
18-19	EAS DETAILS
20	SITE RESTORATION PLAN
21	SEED & MULCH PLAN
22	QUANTITY SUMMARY

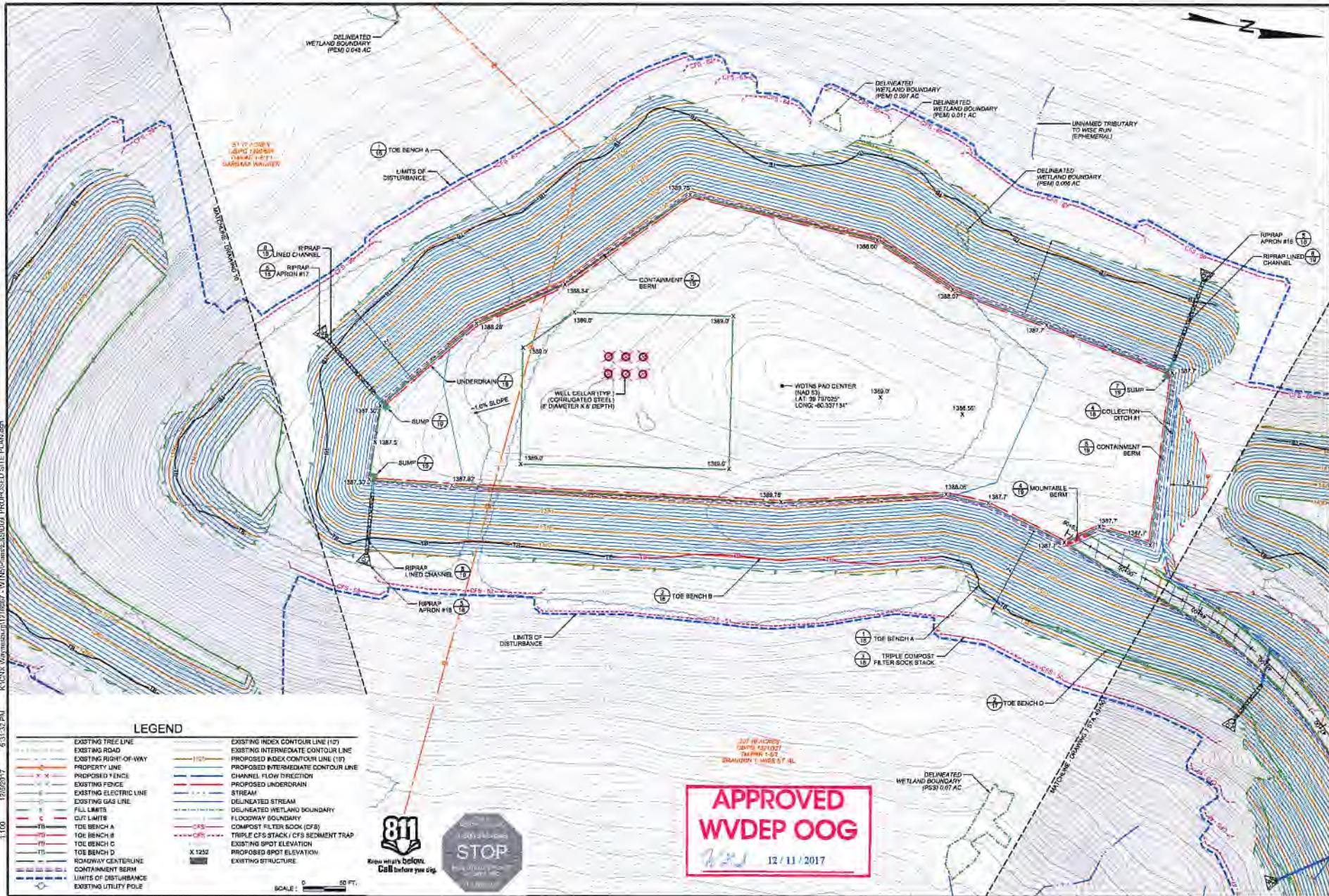
1:2000 12/26/2017 8:34:08 PM K:\CNX\Wsp\restat\g1216097 - WTN5\Plan\EL500D1 - TITLE SHEET.dgn



PROJECT: WDTN5 WELL SITE
 TITLE: TITLE SHEET
 SHEET: 1
 DATE: 12/11/2017
 DRAWN BY: JKB
 CHECKED BY: BNS
 APPROVED BY: HLP
 PROJECT NO: 17016-023
 REVISIONS:
 NO. DATE BY
 1 12/11/2017 JKB

KUCK Worksheet 19/18667 - WTNP/Contam/ESR009 PROPOSED SITE PLAN/Jan

1.00 1/25/2017 6:31:32 PM



LEGEND

- EXISTING TREE LINE
- EXISTING ROAD
- EXISTING RIGHT-OF-WAY
- PROPERTY LINE
- PROPOSED FENCE
- EXISTING FENCE
- EXISTING ELECTRIC LINE
- EXISTING GAS LINE
- FILL LIMITS
- CUT LIMITS
- TOE BENCH A
- TOE BENCH B
- TOE BENCH C
- TOE BENCH D
- ROADWAY CENTERLINE
- CONTAINMENT BERM
- LIMITS OF DISTURBANCE
- EXISTING UTILITY POLE
- EXISTING INDEX CONTOUR LINE (10')
- EXISTING INTERMEDIATE CONTOUR LINE
- PROPOSED INDEX CONTOUR LINE (10')
- PROPOSED INTERMEDIATE CONTOUR LINE
- CHANNEL FLOW DIRECTION
- PROPOSED UNDERDRAIN
- STREAM
- DELINEATED STREAM
- DELINEATED WETLAND BOUNDARY
- FLOODWAY BOUNDARY
- COMPOST FILTER BOOK (CFB)
- TRIPLE CFS STACK / CFS SEDIMENT TRAP
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- EXISTING STRUCTURE

SCALE: 0 50 FT.



APPROVED WVDEP OOG
 JWS 12/11/2017

DATE	12/11/2017
BY	JWS
CHECKED	BMD
DATE	01/17/2018
PROJECT NO.	17016-023
PROJECT NAME	PROPOSED SITE PLAN
CLIENT	WOTING WELL SITE
DESIGNER	DIFFENBAUGH & HIRTZ LLC
ADDRESS	105 CHURCH ROAD, SUITE 200
CITY	WHEELING, WV
STATE	WEST VIRGINIA
ZIP	26061
PHONE	304.253.5555
FAX	304.253.5557