



west virginia department of environmental protection

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

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

Monday, April 1, 2019
WELL WORK PERMIT
Horizontal 6A / New Drill

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

Re: Permit approval for SHR37OHSM
47-095-02588-00-00

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: SHR37OHSM
Farm Name: KAREN BAKER
U.S. WELL NUMBER: 47-095-02588-00-00
Horizontal 6A New Drill
Date Issued: 4/1/2019

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.

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.

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 Tyler Centerville West Union
Operator ID County District Quadrangle

2) Operator's Well Number: SHR37OHSM Well Pad Name: SHR37

3) Farm Name/Surface Owner: _____ Public Road Access: _____

4) Elevation, current ground: 828' Elevation, proposed post-construction: 828'

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

(b) If Gas Shallow X Deep _____
Horizontal X

JCB
12/20/18

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Target formation is Marcellus Shale @ 6292'-6337' TVD, 45' thick, expected formation pressure ~4000 psi

8) Proposed Total Vertical Depth: 6315'

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

10) Proposed Total Measured Depth: 7894'

11) Proposed Horizontal Leg Length: 1157'

12) Approximate Fresh Water Strata Depths: 137', 247'

13) Method to Determine Fresh Water Depths: Offset well information

14) Approximate Saltwater Depths: 1712'

15) Approximate Coal Seam Depths: No known mineable coal seams; trace @ 971'

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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WW-6B
(04/15)

4709502588
04/05/2019
API NO. 47- _____
OPERATOR WELL NO. SHR37OHSM
Well Pad Name: SHR37

18) CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	20	New	L/S	<94.0	100	100 ✓	96 / CTS
Fresh Water	13.375	New	J-55	54.5	400	400 ✓	278 / CTS
Coal	N/A						
Intermediate	9.625	New	J-55	36.0	2390	2390 ✓	768 / CTS
Production	5.5	New	P-110	20.0	7894	7894	1261 / TC @ 1890'
Tubing	2.375	New	J-55	4.7		TBD	N/A
Liners	N/A						

JEB
12/20/18

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20	24	0.375	N/A	N/A	Type 1	1.18
Fresh Water	13.375	17.5	0.380	2730	<500	Class A	1.19
Coal	N/A						
Intermediate	9.625	12.25	0.352	3520	<2815	Class A	1.19
Production	5.5	8.75 x 8.5	0.361	12360	~10000 during frac	Class H	1.10
Tubing	2.375	N/A	0.190	7700	N/A	N/A	N/A
Liners	N/A						

PACKERS

Kind:	N/A			
Sizes:				
Depths Set:				

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

Utilize conductor rig to set 20" conductor into solid rock and cement back to surface. MIRU drilling rig. Air drill 17-1/2" hole. Run and cement 13-3/8" fresh water casing. Note that there are no known mineable coal seams in this area. Air drill 12-1/4" hole. Run and cement 9-5/8" intermediate casing. Air drill 8-3/4" production hole to curve KOP (this section is typically directionally drilled with a slant/tangent profile for anti-collision and for lateral spacing). Displace hole with 12.0-12.8 ppg SOBMs. 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.

JPB
12/20/18

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): 8.5

22) Area to be disturbed for well pad only, less access road (acres): 8

23) Describe centralizer placement for each casing string:

Fresh water string: centralize shoe joint and every other 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 TOC - utilize single piece/rigid bow centralizers. Actual centralizer placement may be changed based on hole conditions.

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

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

25) Proposed borehole conditioning procedures:

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

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*Note: Attach additional sheets as needed.

SHR37 Cement Additives

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

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National Flood Hazard Layer FIRMMette



39°21'27.98"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE) Zone A, V, A99
- With BFE or Depth Zone AE, AO, AH, VE, AR
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD

- 0.2% Annual Chance Flood Hazard, Area of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone J
- Future Conditions 1% Annual Chance Flood Hazard Zone X
- Area with Reduced Flood Risk due to Levee. See Notes. Zone X
- Area with Flood Risk due to Levee Zone D

OTHER AREAS

- NO SCREEN Area of Minimal Flood Hazard Zone X
- Effective LOMRs
- Area of Undetermined Flood Hazard Zone

GENERAL STRUCTURES

- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES

- 20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
- 17.5 Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS

- Digital Data Available
- No Digital Data Available
- Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 12/19/2018 at 11:31:08 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

WW-9
(4/16)

4709502505 04/05/2019

API Number 47 - _____ - _____

Operator's Well No. SHR37OHSM

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) Headwaters Middle Island Creek Quadrangle West Union

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

Will a pit be used? Yes No

If so, please describe anticipated pit waste: no pits

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

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number 47-001-00561, 47-097-01514, 47-097-01613, 34-013-2-0609)
- Reuse (at API Number SHR35 wells API TBD)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain No Pits)

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

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc.

-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.

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

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

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 - Permitting

Commonwealth of Pennsylvania County of Washington
Subscribed and sworn before me this 28th day of December, 2018

Joy L Walker Notary Public
My commission expires February 23, 2019

COMMONWEALTH OF PENNSYLVANIA
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 15.57 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: [Signature]

Comments: _____

Title: Oil & Gas Inspector Date: 12/20/18

Field Reviewed? Yes No

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Standard Operating Procedure

TASK: BOS-106 STRIP MUD

Document Control

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

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Revision & Approval Record

Revision	Date	Description/changes:
Original	Jan. 29, 2007	Original Release of Standard
02	Aug. 24, 2011	<changes made to the original>
03	Mar. 12, 2012	<changes made to the original>
<above +1>		

Prepared by:

John Richardson
 Clayton Cameron
 Clayton Cameron

Competency Review

Employee Supervisor

Date
 Competent Yes No
 If No Insert Follow Up Date

Follow Up Date:

Revised < 12/03/12>

SOP # BOS-106



MAR 26 2019

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• 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

SOP # BOS-106



- TASK: STRIP MUD**

	Steps of task in order:	Hazards with each step:
5	<p>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.</p>	<p>Physical stress, Potential Energy- Pressurized Gases/Liquids, Slips trips and falls, Pinch points, Lifting and handling, Potential fumes</p>

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- TASK: STRIP MUD

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- TASK: STRIP MUD
- RISK Ranking

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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

SOP # BOS-106



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- **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

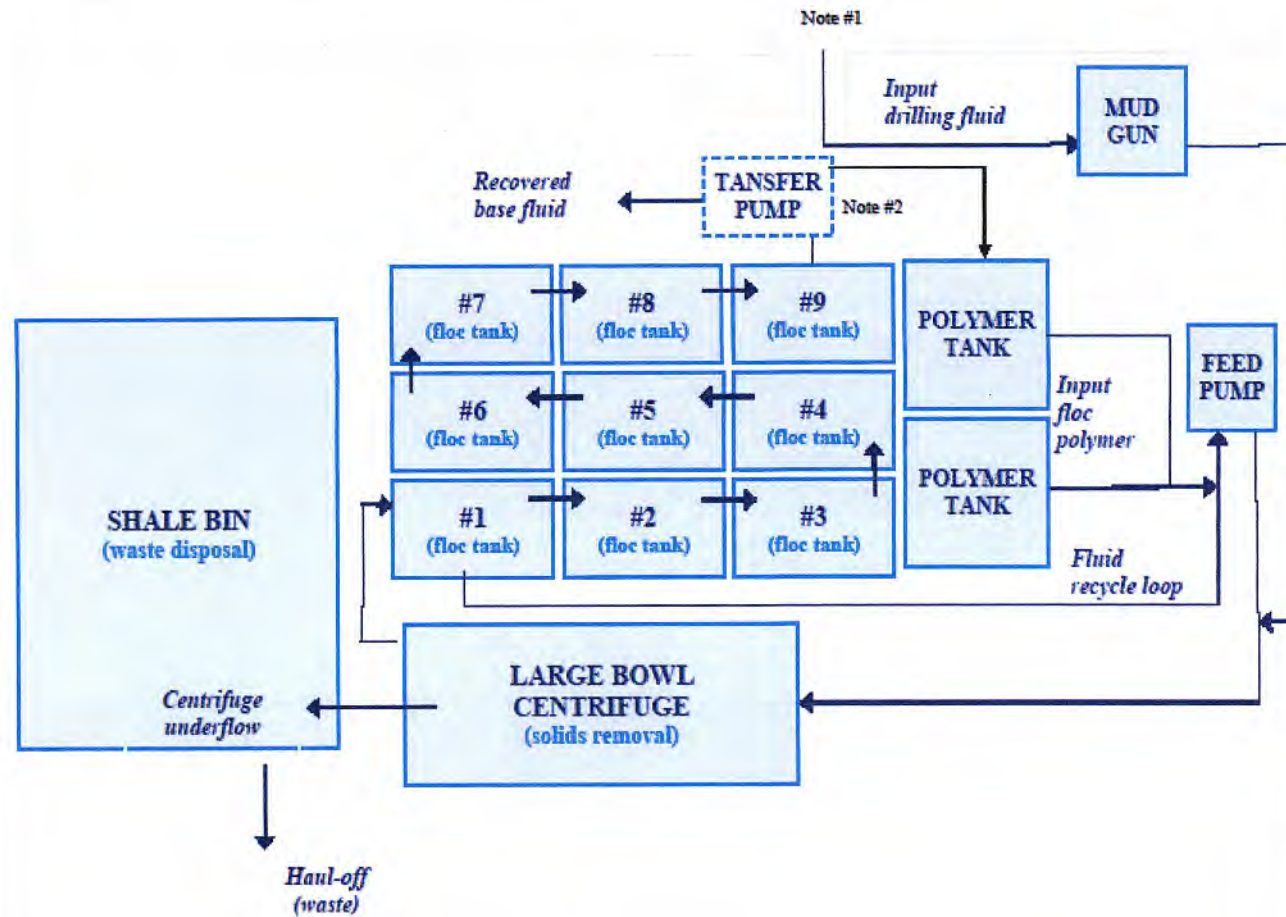
FLOW CHART MUD AND SLURRY DEWATERING RECOMMENDED RIG UP



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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 1-22-2019



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

Drawing/ Revision Date: December 12, 2011

Approved By: Andrew Pow



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

RISE 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 Linings	Waste Brine	Contaminated Soil (Including Petroleum)	Construction & Demolition Waste	Industrial Waste	Sludge	Friable Asbestos	Non-Friable Asbestos	Process Waste	Solidification Services	
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											X
Lee County	Dixon	IL	X	X	X	X	X	X	X	X	X	X	X
Upper Rock Island	East Moline	IL	X	X	X	X	X	X	X	X	X	X	X
Bond County	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
Environtech	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
Sansamon 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	Morantown	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											X

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

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

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

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Waste Management		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	
Arden Landfill	Washington	PA	X	X	X	X	X	X	X		X	X	X
South Hills (Armon)	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
Charleston Landfill (Kanawha County)	Charleston	WV	X	X	X	X	X	X			X		X
Meadowhill 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
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	X
Coshocton Landfill***	Coshocton	OH	X	X	X	X	X						X
Mahoning Landfill	New Springfield	OH	X	X	X	X	X			X	X		X

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	
Westmoreland Waste (WWLC Group)	111 Conner Lane, Belle Vernon, PA 15012	PA	X	X	X	X	X	X	X	X		X	X
MAX Environmental (Pulger Facility)	200 Max Drive, Bulger, PA 15010	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, MI Sterling (Pumke 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 1st, 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

** 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 PADEP rules regarding "TENORM" testing requirement are pending.
 Notes: * Drill Cuttings include frac sand for the purpose of this table (Contact facility directly to verify waste streams accepted).

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DRILLING WELL PLAN
SHR37OHSM (Marcellus HZ)
Marcellus Shale Horizontal
Tyler County, WV

Ground Elevation			828 GL Elevation		SHR37OHSM SHL			N 313718.4, E 1619397.61 (NAD27)		
Azimuth			161°		SHR37OHSM LP			N 313034.78, E 1619266.44 (NAD27)		
WELLBORE DIAGRAM			161°		SHR37OHSM BHL			N 311941.03, E 1619643.04 (NAD27)		
HOLE	CASING	GEOLOGY	MD	TVD	MUD	CEMENT	CENTRALIZERS	CONDITIONING	COMMENTS	
24"	20" L/S	Conductor	100	100	AIR	To Surface	N/A	N/A	Stabilize surface fill/soil	
17-1/2"	13-3/8" 54.5# J-55 BTC	Shallowest Fresh Water		137	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 other joint from shoe to surface Bow spring centralizers	Ensure the hole is clean at section TD	Set through fresh water zones Cemented to surface No known mineable coal seams	
		Deepest Fresh Water		247						
		Fresh Water Casing	400	400						
12-1/4"	9-5/8" 36.0# J-55 LTC	No known coal zones		N/A	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 below the Big Injun and Berea and into Devonian Shale	
		Big Lime		1712						
		Big Injun		1777						
		Price		1917						
		Weir		2077						
		Berea		2267						
Intermediate Casing	2390	2390								
8-3/4" Tangent	5-1/2" 20.0# P-110 VAR	Gordon		2487	AIR	15.0 ppg Class H with additives (retarder, suspension agent, gas block, defoamer, fluid loss, extender, etc.) 10% OH Excess Yield = 1.10 TOC @ >= 500' above 9-5/8" shoe	Centralize every joint from shoe 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: Actual centralizer placement may be changed due to hole conditions Note: Actual cement blends may vary slightly depending upon service company utilized	
		Warren		3182						
		Benson		4762						
		Alexander		5007						
		Cashaqua		6007						
		Middlesex		6112						
		West River		6152						
		Burkett		6222						
		Tully		6236						
		Hamilton		6257						
Marcellus		6292								
Production Casing	7894	8315	12.0-12.8 ppg SOBMM							

LP @ +/- 6315' TVD

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

+/- 1157' Lateral

TD @ +/- 6315' TVD

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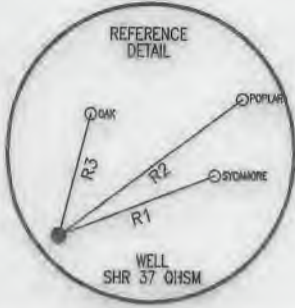
Site Safety Plan for Well SHR37OHSM CNX Gas Company, LLC.



JEB
12/20/18

BHL is located on topo map 9,570 feet south of Latitude: 39° 22' 30"
 SHL is located on topo map 7,796 feet south of Latitude: 39° 22' 30"

SEE PAGE 2 FOR SURFACE OWNERS AND LESSORS



LINE	BEARING	DISTANCE
R1	N 69°44'20" E	171.80'
R2	N 54°25'22" E	232.63'
R3	N 14°59'16" E	124.77'
R4	N 29°14'53" W	511.62'
R5	S 68°25'22" E	853.57'
R6	S 35°01'38" E	1177.81'

SURFACE HOLE LOCATION (SHL)	
UTM 17-NAD83	
N:	4356027.99
E:	513285.26
NAD83, WV NORTH	
N:	313753.288
E:	1587956.469
LAT/LON DATUM-NAD83	
LAT:	39°21'12.9440"
LON:	80°50'44.8999"

APPROX. LANDING POINT	
UTM 17-NAD83	
N:	4355819.06
E:	513248.78
NAD83, WV NORTH	
N:	313069.666
E:	1587825.294
LAT/LON DATUM-NAD83	
LAT:	39°21'06.1685"
LON:	80°50'46.4393"

BOTTOM HOLE LOCATION (BHL)	
UTM 17-NAD83	
N:	4355487.76
E:	513369.07
NAD83, WV NORTH	
N:	311975.926
E:	1588201.900
LAT/LON DATUM-NAD83	
LAT:	39°20'55.4150"
LON:	80°50'41.4369"

BHL is located on topo map 3,255 feet west of Longitude: 80° 50' 00"
 SHL is located on topo map 3,527 feet west of Longitude: 80° 50' 00"



LEGEND

- TOPO MAP POINT
- WELL
- ALL ARE POINTS UNLESS OTHERWISE NOTED.
- LEASE NUMBER
- MINERAL TRACT BOUNDARY
- PARCEL LINES
- LEASE BOUNDARY
- WELL REFERENCE
- PROPOSED HORIZONTAL WELL
- ROAD
- STREAM CENTER LINE
- GAS WELLS**
 - EXISTING WELLS
 - PLUGGED WELLS
 - ABANDON WELLS

- NOTES:
- There are water wells or developed springs within 250' of proposed well.
 - There is an existing house and 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, are based on record deed descriptions, field evidence found and/or tax map position, unless otherwise noted.

Blue Mountain
 11023 MASON DIXON HIGHWAY
 BURTON, WV 25562
 PHONE: (304) 662-6486

FILE #: SHR 37 OHSM
 DRAWING #: SHR 37 OHSM
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: 1/2500
 PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT THOMAS 1498.81'

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: *George D. Six*
 R.P.E.: _____ L.L.S.: P.S. No. 2000



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP

OFFICE OF OIL & GAS
 601 57TH STREET
 CHARLESTON, WV 25304

DATE: DECEMBER 12, 2018
 OPERATOR'S WELL #: SHR 37 OHSM
 API WELL #: 47 95 02588
 STATE COUNTY PERMIT

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

WATERSHED: HEADWATERS MIDDLE ISLAND CREEK ELEVATION: 828.57±
 COUNTY/DISTRICT: TYLER / CENTERVILLE QUADRANGLE: WEST UNION, WV 7.5'
 SURFACE OWNER: KAREN BAKER ACREAGE: 18±
 OIL & GAS ROYALTY OWNER: ELEANOR V. & DEAN A. EARNHEART, ET AL ACREAGE: 66.483±

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

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 6,315± TMD: 7,894±
 WELL OPERATOR: CNX GAS COMPANY LLC DESIGNATED AGENT: CHRIS TURNER
 Address: 1000 CONSOL ENERGY DRIVE Address: 1 DOMINION DR.
 City: CANONSBURG State: PA Zip Code: 15317 City: JANE LEW State: WV Zip Code: 26378

SHR 37 OHSM

PAGE 2 OF 2

04/05/2019

	SURFACE OWNER	LESSOR	DIST-TM/PAR
1	KAREN BAKER	ELEANOR V. EARNHEART AND DEAN A. EARNHEART, H/W CLELLA BOICE LUELLA L. MCCONNELL AGNESS GODWIN NANCY P. MCCLAIN AND RALPH E. MCCLAIN, H/W GEORGIA P. SNYDER BRADIE PIPES AND GOLDIE PIPES, H/W PURSIE PIPES AND NORMA J. PIPES, H/W DOROTHY BELLE WELLS AND BYRON WELLS, H/W WANDA WEEKLEY MYRNA MORGAN AND DAVID MORGAN, H/W	1-17/5
2	SAMUEL V. ASH & DENISE RULE	A. E. DOAK AND CALLIE DOAK, H/W	1-17/4
3	WEST VIRGINIA DIVISION OF NATURAL RESOURCES	WEST VIRGINIA DIVISION OF NATURAL RESOURCES	N/A

SURFACE HOLE LOCATION (SHL)
UTM 17-NAD83 N:4356027.99 E:513285.26 NAD83, WV NORTH N:313753.288 E:1587956.469 LAT/LON DATUM-NAD83 LAT:39°21'12.9440" LON:80°50'44.8999"

APPROX. LANDING POINT
UTM 17-NAD83 N:4355819.06 E:513248.78 NAD83, WV NORTH N:313069.666 E:1587825.294 LAT/LON DATUM-NAD83 LAT:39°21'06.1685" LON:80°50'46.4393"

BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83 N:4355487.76 E:513369.07 NAD83, WV NORTH N:311975.926 E:1588201.900 LAT/LON DATUM-NAD83 LAT:39°20'55.4150" LON:80°50'41.4369"

DECEMBER 12, 2018

WW-6A1
(5/13)

Operator's Well No. SHR37OHSM

**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				

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**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

Attachment - Form WW-6A-1 for SHR370HSM

<u>Tract ID</u>	<u>Tax Map & Parcel</u>	<u>Title Opinion QLS #</u>	<u>Grantor, Lessor, etc</u>	<u>Grantee, Lessee, etc</u>	<u>Royalty</u>	<u>Book/Page</u>
1	TMP 1-17-5	269278000	Eleanor V. Earnheart and Dean A. Earnheart, her husband Clella Bolce, widow Luella I. McConnell, widow Agnes Godwin, widow Nancy P. McClain and Ralph E. McClain, wife and husband Georgia P. Snyder, divorced Bradle Pipes and Goldie Pipes, his wife Pursie Pipes and Norma J. Pipes, husband and wife Dorothy Belle Wells and Byron Wells, her husband Wanda Weekley, widow Myrna Morgan and David Morgan, her husband Sefco Enterprises, Inc. Eastern American Energy Corporation Seneca-Upshur Petroleum, Inc. Seneca-Upshur Petroleum, LLC Antero Resources Appalachian Corporation Antero Resources Corporation Noble Energy, Inc.	Sefco Enterprises, Inc. Sefco Enterprises, Inc. Sefco Enterprises, Inc. Sefco Enterprises, Inc. Sefco Enterprises, Inc. Sefco Enterprises, Inc. Sefco Enterprises, Inc. Sefco Enterprises, Inc. Sefco Enterprises, Inc. Sefco Enterprises, Inc. Sefco Enterprises, Inc. Eastern American Energy Corporation Seneca-Upshur Petroleum, Inc. Seneca-Upshur Petroleum, LLC Antero Resources Appalachian Corporation Antero Resources Corporation CNX Gas Company, LLC & Noble Energy Inc. CNX Gas Company, LLC	Not less than 1/8 Not less than 1/8 Not less than 1/8 Not less than 1/8 Not less than 1/8 Not less than 1/8 Not less than 1/8 Not less than 1/8 Not less than 1/8 Not less than 1/8 Not less than 1/8 Assignment Assignment Assignment Assignment Assignment Assignment Assignment Assignment Assignment Assignment	267/74 267/76 267/78 267/80 267/82 267/84 267/86 267/88 267/90 267/581 267/640 285/650 354/757 381/540 402/132 WVSOS 425/701 427/564 550/273

<u>Tract ID</u>	<u>Tax Map & Parcel</u>	<u>Title Opinion QLS #</u>	<u>Grantor, Lessor, etc</u>	<u>Grantee, Lessee, etc</u>	<u>Royalty</u>	<u>Book/Page</u>
2	TMP 1-17-4	266301000	A. E. Doak and Callie Doak, husband and wife J. E. Trainer W. W. Hepburn Eastern Petroleum Company The Pennsylvania Company for Insurances on Lives and Granting Annuities Eastern Petroleum Company Clifton Oil & Gas Company Quaker State Oil Refining Corporation Quaker State Corporation Belden & Blake Corporation Peake Energy, Inc. North Coast Energy Eastern, Inc. EXCO- North Coast Energy Eastern, Inc. EXCO Resources (WV), Inc. EXCO Resources (WV), LLC EXCO Production Company (WV), LLC BG Production Company (WV), LLC EXCO Resources (PA), LLC Antero Resources Appalachian Corporation Antero Resources Corporation Noble Energy, Inc.	J. E. Trainer W. W. Hepburn Eastern Petroleum Company The Pennsylvania Company for Insurances on Lives and Granting Annuities Clifton Oil & Gas Company Clifton Oil & Gas Company Quaker State Oil Refining Corporation Quaker State Corporation Belden & Blake Corporation Peake Energy, Inc. North Coast Energy Eastern, Inc. EXCO- North Coast Energy Eastern, Inc. EXCO Resources (WV), Inc. EXCO Resources (WV), LLC BG Production Company (WV), LLC EXCO Resources (PA), LLC EXCO Production Company (WV), LLC Antero Resources Appalachian Corporation Antero Resources Corporation CNX Gas Company, LLC & Noble Energy Inc. CNX Gas Company, LLC	Not less than 1/8 Assignment Assignment Deed of Trust Assignment Assignment Assignment Name Change Assignment Assignment Name Change Assignment Name Change Name Change Name Change Merger Name Change Assignment Name Change Assignment Assignment	71/174 80/346 80/338 17/1 94/71 94/61 270/111 WVSOS 311/584 311/590 321/340 321/344 8/702 9/80 WVSOS 374/808 WVSOS 406/195 WVSOS 433/7 550/273

<u>Tract ID</u>	<u>Tax Map & Parcel</u>	<u>Title Opinion QLS #</u>	<u>Grantor, Lessor, etc</u>	<u>Grantee, Lessee, etc</u>	<u>Royalty</u>	<u>Book/Page</u>
3	Middle Island Creek	N/A	West Virginia Division of Natural Resources Antero Resources Corporation	Antero Resources Corporation CNX Gas Company, LLC	Not less than 1/8 Affidavit of Agreement	553/295 624/332

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2 of 2



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 – SHR37 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 in a cursive style.

Raymond Hoon
Permitting Supervisor

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

Date of Notice Certification: 12-27-18

API No. 47- _____ - _____
Operator's Well No. SHR37OHSM
Well Pad Name: SHR37

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>513285.2620</u>
County:	<u>Tyler</u>		Northing:	<u>4356027.9910</u>
District:	<u>Centerville</u>	Public Road Access:	<u>Duckworth Ridge Road (CR 58/2)</u>	
Quadrangle:	<u>West Union</u>	Generally used farm name:	<u>CNX</u>	
Watershed:	<u>Headwaters Middle Island 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 <input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED <input type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input checked="" type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED <input checked="" type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or <input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH) <input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION <input checked="" type="checkbox"/> 5. PUBLIC NOTICE <input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION		OOG OFFICE USE ONLY <input type="checkbox"/> RECEIVED/ NOT REQUIRED <input type="checkbox"/> RECEIVED <input type="checkbox"/> RECEIVED/ NOT REQUIRED <input type="checkbox"/> RECEIVED <input type="checkbox"/> RECEIVED <input type="checkbox"/> RECEIVED
RECEIVED Office of Oil and Gas JAN 2 2018 WV Department of Environmental Protection		

Required Attachments:

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

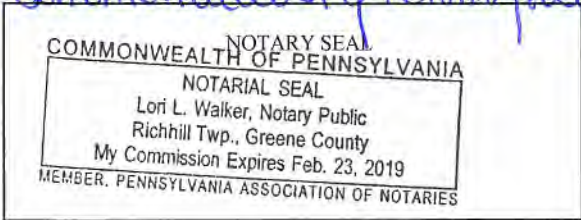
Certification of Notice is hereby given:

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

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

Commonwealth of Pennsylvania

County of Washington



Subscribed and sworn before me this 28th day of December 2018.

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

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

COAL OWNER OR LESSEE
Name: CNX Gas Company LLC ✓
Address: 1000 Consol Energy Drive
Canonsburg, PA 15317

Name: _____
Address: _____

COAL OPERATOR
Name: _____
Address: _____

SURFACE OWNER(s) (Road and/or Other Disturbance)
Name: _____
Address: _____

Name: _____
Address: _____

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Name: See attached.
Address: _____

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

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

*Please attach additional forms if necessary

JAN 2 2018

Notice is hereby given:

WV Department of
Environmental Protection

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.dep.wv.gov/oil-and-gas/pages/default.aspx.

Well Location Restrictions

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

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

Water Well Testing:

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

Water Testing Laboratories:

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

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

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

Written Comment:

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

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

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WV Department of
Environmental Protection

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

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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WV Department of
Environmental Protection

Notice is hereby given by:

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

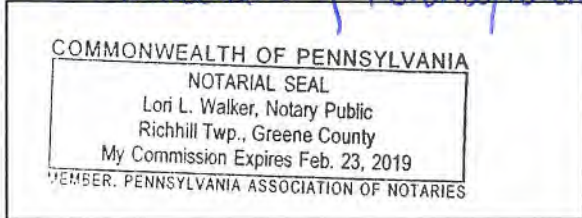
Address: 1000 Consol Energy Drive
Canonsburg, PA 15317
Facsimile: _____

Oil and Gas Privacy Notice:

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

Commonwealth of Pennsylvania

County of Washington



Subscribed and sworn before me this 28th day of December 2018

Lori L. Walker Notary Public

My Commission Expires February 23, 2019

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Environmental Protection

Surface Owner of Water Well and/or Water Purveyor(s):

CNX RESOURCES CORPORATION
1000 CONSOL ENERGY DRIVE
CANONSBURG, PA 15317

RYAN & DAVIS CARRIE L DAVIS
730 THRUST DRIVE
VASS, NC 28394

RIKI NICOLE DUNCAN (RILEY)
8100 SHAW AVENUE
HAMLIN, WV 25523

DANNY CARL & PATRICIA J HARRIS
16269 MIDDLE ISLAND ROAD
WEST UNION, WV 26456

EDWIN D & PATRICIA L MULVAY
3665 SHORT RUN ROAD
PENNSBORO, WV 26415

FORREST G. POWELL
PO BOX 91
ALMA, WV 26320

ELDEN L, RODNEY DEAN, & TIMOTHY RAY PRATT
873 DUCKWORTH RIDGE ROAD
ALMA, WV 26320

RODNEY D. PRATT
365 DUCKWORTH RIDGE ROAD
ALMA, WV 26320

RONALD ROYCE & REVA D. ROWLAND
358 DUCKWORTH RIDGE ROAD
ALMA, WV 26320

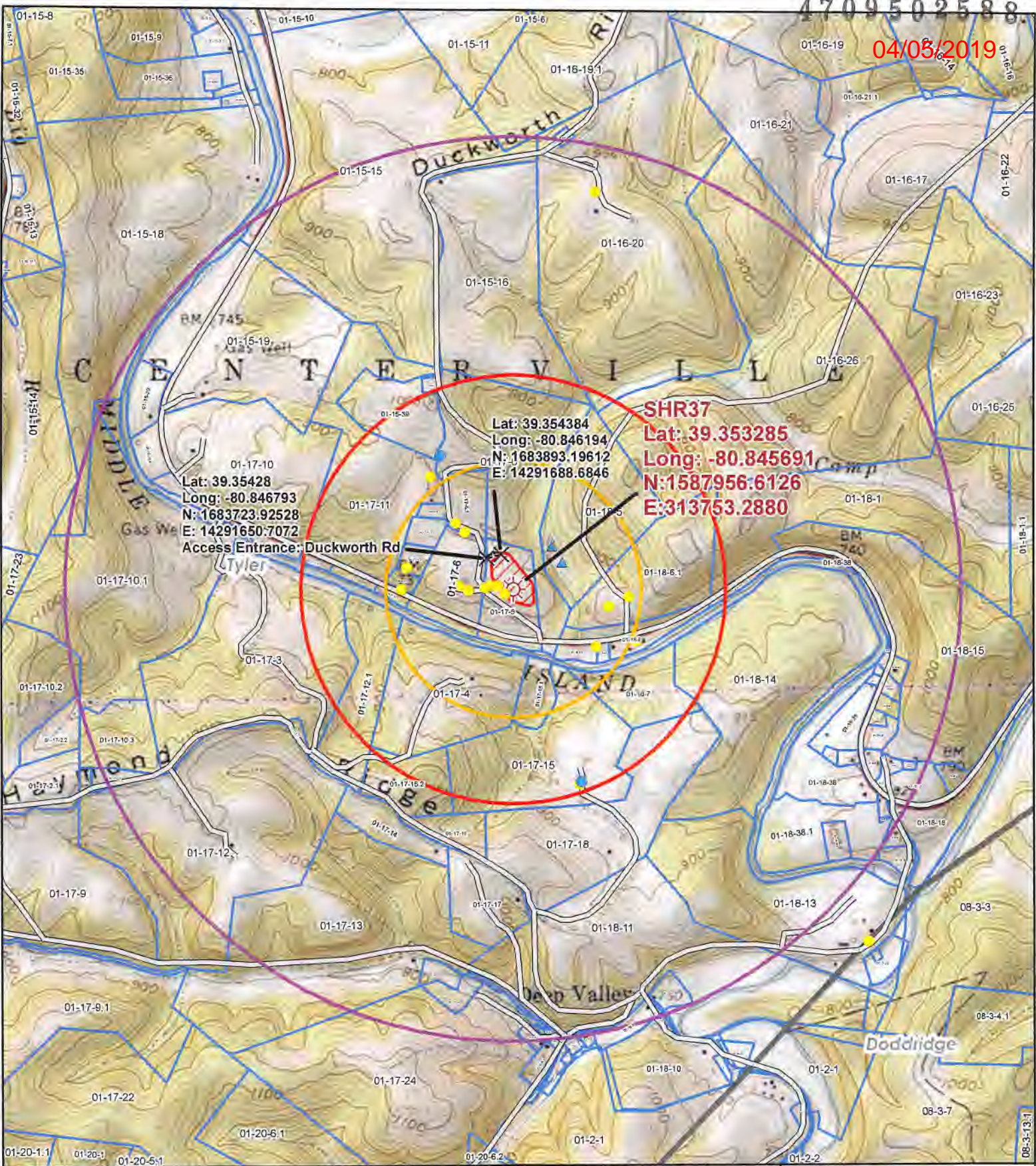
GAIL WILLIAMSON
195 DUCKWORTH RIDGE ROAD
ALMA, WV 26320

DOUG LANTZ
1376 MIDWAY ROAD
BELINGTON, WV 26250

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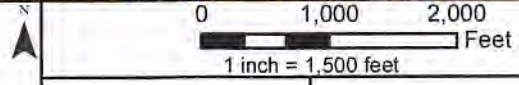
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WV Department of
Environmental Protection



Legend

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



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JAN 2 2019

Original Date: 12/14/2018
Revision Date: 12/14/2018

Prepared By: GIS
Approved By: GIS



Topographic Well Map
SHR37

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04/05/2019

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

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

Name: _____
Address: _____

Notice is hereby given:

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

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>513285.2620</u>
County:	<u>Tyler</u>		Northing:	<u>4356027.9910</u>
District:	<u>Centerville</u>	Public Road Access:	<u>Duckworth Ridge Road (CR 58/2)</u>	
Quadrangle:	<u>West Union</u>	Generally used farm name:	<u>CNX</u>	
Watershed:	<u>Headwaters Middle Island 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: _____

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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04/05/2019

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

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

CERTIFIED MAIL HAND
RETURN RECEIPT REQUESTED DELIVERY

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

Notice is hereby provided to the SURFACE OWNER(s)

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

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

Name: _____
Address: _____

Notice is hereby given:

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

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>513285.2620</u>
County:	<u>Tyler</u>		Northing:	<u>4356027.9910</u>
District:	<u>Centerville</u>	Public Road Access:	<u>Duckworth Ridge Road (CR 58/2)</u>	
Quadrangle:	<u>West Union</u>	Generally used farm name:	<u>CNX</u>	
Watershed:	<u>Headwaters Middle Island Creek</u>			

This Notice Shall Include:

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

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

Address: 1000 Consol Energy Drive
Canonsburg, PA 15317
Facsimile: _____

Oil and Gas Privacy Notice:

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

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WV Department of
Environmental Protection

04/05/2019

WW-6RW (1-12) CNX # 294099001

4709502588
API NO. 47-
OPERATOR WELL NO. See Exhibit A
Well Pad Name: SHR 37

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS **WELL LOCATION RESTRICTION WAIVER**

The well operator, CNX GAS COMPANY LLC is applying for a permit from the State of West Virginia to conduct oil or gas well work. Please be advised that well work permits are valid for twenty-four (24) months.

Well Location Restrictions

Pursuant to West Virginia Code § 22-6A-12(a), 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.

WAIVER

I, Timothy Surmick, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through ALL, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

State: <u>West Virginia</u>	UTM NAD 83 Easting: <u>513285.2620 m</u>
County: <u>Tyler</u>	UTM NAD 83 Northing: <u>4356027.9910 m</u>
District: <u>Centerville</u>	Public Road Access: <u>Duckworth Ridge Road (CR 58/2)</u>
Quadrangle: <u>West Union</u>	Generally used farm name: <u>CNX</u>
Watershed: <u>Headwaters Middle Island Creek</u>	

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials and I therefore waive all well site restrictions listed under West Virginia Code § 22-6A-12(a).

WELL SITE RESTRICTIONS BEING WAIVED
*Please check all that apply

EXISTING WATER WELLS

DEVELOPED SPRINGS

DWELLINGS

AGRICULTURAL BUILDINGS

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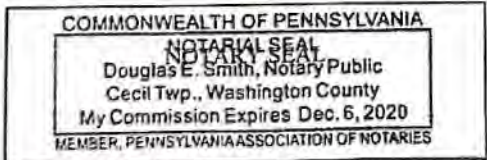
WV Department of
Environmental Protection

FOR EXECUTION BY A NATURAL PERSON
Signature: _____
Print Name: _____
Date: _____

FOR EXECUTION BY A CORPORATION, ETC.
Company: CNX Gas Company LLC
By: Timothy Surmick
Its: Assistant Vice President
Signature: _____
Date: 12/17/2018

Well Operator: CNX GAS COMPANY LLC
By: Raymond Hoon
Its: Permitting Supervisor

Signature: _____
Telephone: 724-485-3540



Subscribed and sworn before me this 17 day of December
Douglas E. Smith Notary Public
My Commission Expires 12-6-2020

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 denprivacyofficer@wv.gov.

WW-6RW Well Location Restriction Waiver

EXHIBIT A

SHR37HSM

Operator Well No.

- SHR37DHSM
- SHR37EHSM
- SHR37FHSM
- SHR37GHSM
- SHR37HHSM
- SHR37IHSM
- SHR37KHSM
- SHR37LHSM
- SHR37MHSM
- SHR37NHSM
- SHR37OHSM
- SHR37PHSM
- SHR37QHSM
- SHR37RHSM

SAVANNAH SMILACK
 CAMPBELL DEVELOPMENT
 2006 E CARSON STREET
 PITTSBURGH, PA 15203-1902

Neil A Archer II
 TYLER County 10:31:58 AM
 Instrument No 1191946
 Date Recorded 12/18/2018
 Document Type OG
 Pages Recorded 2
 Book-Page 627-619
 Recording Fee \$5.00
 Additional \$6.00

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4709502588
04/05/2019

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

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

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

December 14, 2018

Jill M. Newman
Deputy Commissioner

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

Subject: DOH Permit for the SHR-37 Well Pad, Tyler County
shr37ohsm Well Site

Dear Mr. Martin,

The West Virginia Division of Highways has issued Permit #06-2018-0949 for the subject site to CNX Gas Company for access to the State Road for the well sites located off of Tyler County Route 58/2 SLS.

The operator has signed an OIL AND GAS ROAD MAINTENANCE BONDING AGREEMENT and provided the required Bond. This operator is currently in compliance with the DOH OIL AND GAS POLICY dated October 1, 2018.

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Environmental Protection

Very Truly Yours,

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

Cc: Shannon Miller
CNX Gas Company, LLC
CH, OM, D-6
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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WV Department of
Environmental Protection

SHR-37 WELL PAD

Erosion & Sedimentation Control Plan

Centerville District, Tyler County, West Virginia

Prepared For:

CNX GAS COMPANY, LLC

1000 CONSOL Energy Drive
Canonsburg, PA 15317

Issue Date: November 19, 2018
Revised: January 16, 2019

SITE ENTRANCE
COORDINATES:

N39°21'15.37"
W80°50'48.61"

(39.354269, -80.846836)

WELL PAD
CENTER:

N39°21'12.90"
W80°50'44.67"

(39.353583, -80.845742)



DRAWING SCHEDULE

SHEET NO.	SHEET TITLE
1 OF 13	TITLE SHEET
2 OF 13	GENERAL NOTES
3 OF 13	EXISTING CONDITIONS PLAN
4 OF 13	SITE SOILS PLAN
5 OF 13	EROSION & SEDIMENTATION CONTROL AND GRADING PLAN
6 OF 13	ACCESS ROAD PROFILES, SECTIONS, AND OFFSET EXHIBIT
7 OF 13	WELL PAD PROFILES
8 OF 13	GEOTECHNICAL DETAILS
9 OF 13	EROSION AND SEDIMENTATION CONTROL DETAILS
10 OF 13	CONSTRUCTION DETAILS
11 OF 13	SITE RESTORATION PLAN
12 OF 13	SITE REVEGETATION PLAN
13 OF 13	QUANTITY SUMMARY

SITE VICINITY MAP



SITE LOCATION MAP



LANDOWNER IMPACT TABLE

ACRES	LANDOWNER
8.5	CNX Gas Company, LLC 01-17-5



Prepared By:

Sheffler & Company, Inc.
ENGINEERING • SURVEYING

1712 Mt. Nebo Road
Seewickley, PA 15143

Office Phone: 412-219-4509
Email: Info@ShefflerCo.com

