



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

Wednesday, January 8, 2020
WELL WORK PERMIT
Horizontal 6A / New Drill

CNX GAS COMPANY LLC
1000 CONSOL ENERGY DR
CANONSBURG, PA 15370

Re: Permit approval for SHR 37 FHSM
47-095-02665-00-00

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

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

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

James A. Martin
Chief

Operator's Well Number: SHR 37 FHSM
Farm Name: CNX GAS COMPANY
U.S. WELL NUMBER: 47-095-02665-00-00
Horizontal 6A New Drill
Date Issued: 1/8/2020

Promoting a healthy environment.

PERMIT CONDITIONS

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

CONDITIONS

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

API Number: _____

PERMIT CONDITIONS

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.

WW-6B
(04/15)

4709502665
API NO. 47- _____
OPERATOR WELL NO. SHR37FHSM
Well Pad Name: SHR37

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: SHR37FHSM Well Pad Name: SHR37

3) Farm Name/Surface Owner: CNX GAS COMPANY LLC Public Road Access: DUCKWORTH RIDGE ROAD

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

JEB
10/15/2019

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Target formation is Marcellus Shale @ 6290'-6337' TVD, 47' thick, expected formation pressure ~4000 psi

8) Proposed Total Vertical Depth: 6302'

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

10) Proposed Total Measured Depth: 19,480'

11) Proposed Horizontal Leg Length: 12,720'

12) Approximate Fresh Water Strata Depths: 92', 126', 144', 148', 150', 176', 220'

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

14) Approximate Saltwater Depths: 1748', 2458'

15) Approximate Coal Seam Depths: No mineable coal seams; trace @ 154', 526', 618', 955', 992', 1044'

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: _____

RECEIVED
Office of Oil and Gas

OCT 18 2019

18)

CASING AND TUBING PROGRAM

TYPE	<u>Size (in)</u>	<u>New or Used</u>	<u>Grade</u>	<u>Weight per ft. (lb/ft)</u>	<u>FOOTAGE: For Drilling (ft)</u>	<u>INTERVALS: Left in Well (ft)</u>	<u>CEMENT: Fill-up (Cu. Ft.)/CTS</u>
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	13.375	New	J-55	54.5	400	400	278/CTS
Intermediate	9.625	New	J-55	36.0	2600	2600	834 / CTS
Production	5.5	New	P-110	20.0	19,480	19,480	3981 / TOC @ 2100'
Tubing	2.375	New	J-55	4.7		TBD	N/A
Liners	N/A						

JEB
10/15/2019

TYPE	<u>Size (in)</u>	<u>Wellbore Diameter (in)</u>	<u>Wall Thickness (in)</u>	<u>Burst Pressure (psi)</u>	<u>Anticipated Max. Internal Pressure (psi)</u>	<u>Cement Type</u>	<u>Cement Yield (cu. ft./k)</u>
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	14340	~11000 during frac	Class A or 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:				

RECEIVED
Office of Oil and Gas

 OCT 18 2019

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.

JCB
10/15/2019

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 ~11,000 psi and max anticipated treating pump rate is ~100 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 A or Class H 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.

RECEIVED
Office of Oil and Gas

*Note: Attach additional sheets as needed.

OCT 18 2019

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 A or Class H 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.

RECEIVED
Office of Oil and Gas

 OCT 18 2019

WV Department of
Environmental Protection



DRILLING WELL PLAN
SHR-37F-HSM (Marcellus HZ)
Marcellus Shale Horizontal
Tyler County, WV

		SHR-37F-HSM SHL			N 313561.07, E 1619487.36 (NAD27)				
Ground Elevation	828 GL Elevation			SHR-37F-HSM LP			N 313696.67, E 1619234.42 (NAD27)		
Azimuth	341°			SHR-37F-HSM BHL			N 325723.95, E 1615093.1 (NAD27)		

WELLBORE DIAGRAM	HOLE	CASING	GEOLOGY	MD	TVD	MUD	CEMENT	CENTRALIZERS	CONDITIONING	COMMENTS
		24"	20" L/S	Conductor	100	100	AIR	To Surface	N/A	N/A
17-1/2"		13-3/8" 54.5# J-55 BTC	Shallowest Fresh Water		92	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		220					
			Fresh Water Casing	400	400					
12-1/4"		9-5/8" 36.0# J-55 LTC	No mineable 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		1683					
			Big Injun		1748					
			Price		1888					
			Weir		2018					
			Berea		2238					
			Gordon		2458					
Intermediate Casing		2600	2600							
8-3/4" Tangent 8-1/2" Curve & Lateral		5-1/2" 20.0# P-110 VAR	Warren		3153	AIR	15.0 ppg Class A or 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
	Benson			4733						
	Alexander			4978						
	Cashaqua			5978						
	Middlesex			6083						
	West River			6123						
	Burkett			6193						
	Tully			6223						
	Hamilton			6243						
	Marcellus			6251						
Production Casing	19480	6302								

LP @ +/- 6302' TVD

8-3/4" x 8-1/2" Hole - Cemented Long String
 5-1/2" 20.0# VA-EP-P110-NY VAR (115-125 MYS, 95% RBW, API Modified BTC)

+/- 12720' Lateral

TD @ +/- 6302' TVD

Jeb
10/15/2019

4709502665

WV Department of
 OCT 18 2019
 Office of Oil and Gas
 RECEIVED

Wade,

No wells have been drilled on this Pad as of now so we do not have any new confirmed depths or completion reports. The water depths are based on a study we had completed that took the local water depths from our pre-drill sampling and iterated to our site location, an additional buffer was added to be conservative.

See attached.

Let me know if you require anything else.

-Ray

From: Stansberry, Wade A [<mailto:Wade.A.Stansberry@wv.gov>]
Sent: Wednesday, December 11, 2019 1:19 PM
To: Hoon, Raymond <RaymondHoon@cnx.com>; Rhodes, Jacob K <Jacob.K.Rhodes@wv.gov>
Cc: Weigand, Sarah <sarahweigand@cnx.com>; Zachwieja, Becky <BeckyZachwieja@cnx.com>; Simmons, Walter G <Walter.G.Simmons@wv.gov>; Kees, Kelly L <Kelly.L.Kees@wv.gov>; Adkins, Laura L <Laura.L.Adkins@wv.gov>
Subject: RE: [EXTERNAL] RE: SHR37 Permit applications

Ray,

I have a question about the approximate water strata depths. On the 95-02588, the depths were given 137' & 247' for freshwater.

I'm just wondering if you are pulling the new depths from well records in the area or if you got the new water depth approximations from drilling?

Whichever one, could you send me an API # or #s of the nearby/offset wells you used or the completion report of 95-02588 to have that entered each of the SHR 37 applications.

Everything looks good in terms of the WW-6B and the casing plan.

Thank you,

Wade A. Stansberry
Environmental Resources Specialist 3
West Virginia Department of Environmental Protection
Office of Oil & Gas
601 57th St. SE
Charleston, WV 25304
(304) 926-0499 ext. 1653
(304) 926-0452 fax
Wade.A.Stansberry@wv.gov

RECEIVED
Office of Oil and Gas

DEC 12 2019

WV Department of
Environmental Protection

National Flood Hazard Layer FIRMette



39°21'27.98"N



Legend

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

- | | |
|---|--|
| <p>SPECIAL FLOOD HAZARD AREAS</p> | <ul style="list-style-type: none"> Without Base Flood Elevation (BFE)
<i>Zone A, V, A99</i> With BFE or Depth <i>Zone AE, AD, AH, VE, AR</i> Regulatory Floodway |
| <p>OTHER AREAS OF FLOOD HAZARD</p> | <ul style="list-style-type: none"> 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 <i>Zone 1</i> Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i> Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i> Area with Flood Risk due to Levee <i>Zone D</i> |
| <p>OTHER AREAS</p> | <ul style="list-style-type: none"> NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i> Effective LOMRs Area of Undetermined Flood Hazard <i>Zone</i> |
| <p>GENERAL STRUCTURES</p> | <ul style="list-style-type: none"> Channel, Culvert, or Storm Sewer Levee, Dike, or Floodwall |
| <p>OTHER FEATURES</p> | <ul style="list-style-type: none"> Cross Sections with 1% Annual Chance Water Surface Elevation 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 |
| <p>MAP PANELS</p> | <ul style="list-style-type: none"> 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.



SHR37 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 SHR37 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 Producing Formation at Total Depth. See following pages, including (Figures 3 and 4).

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

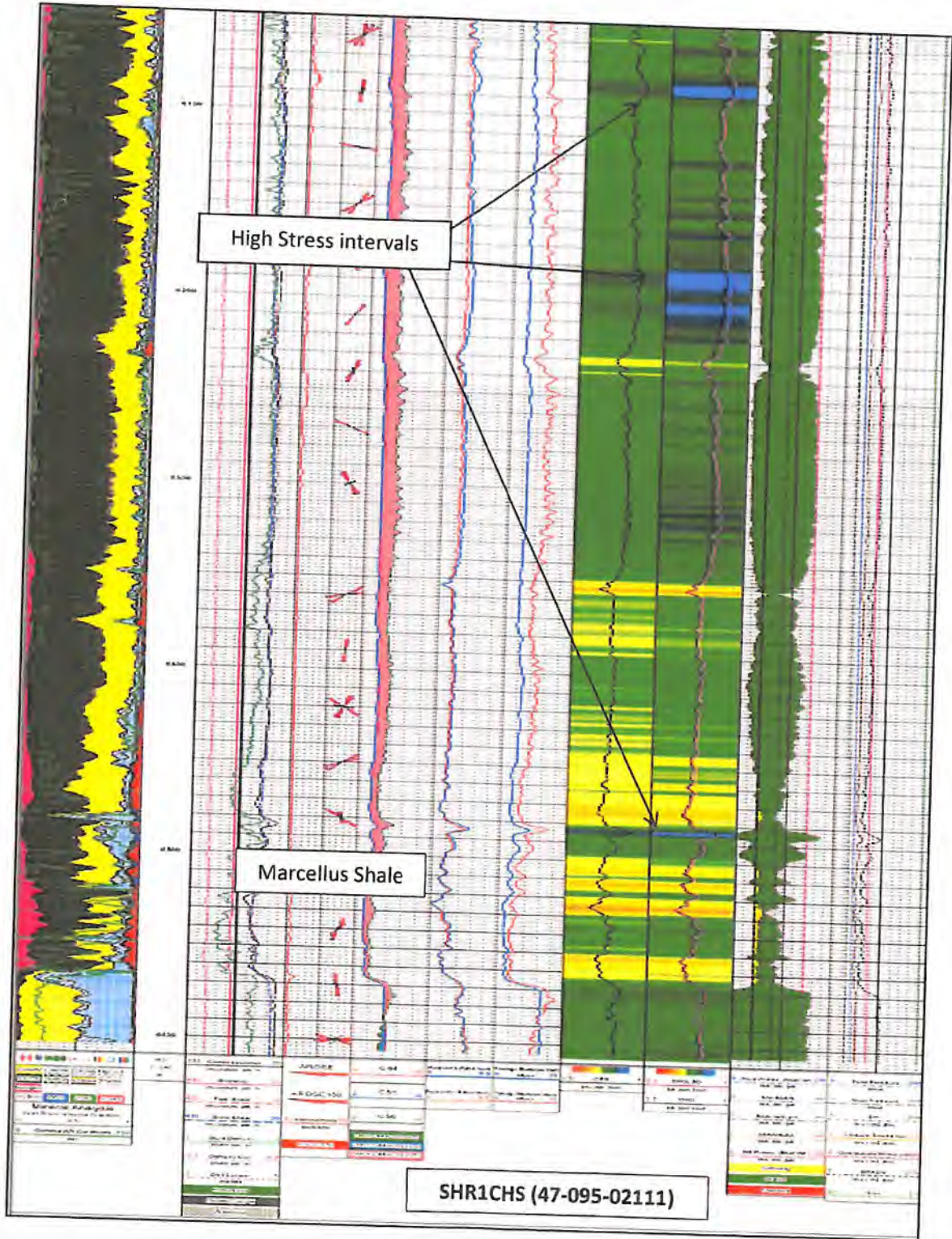
The current hypothesis for SOG Communication is that Marcellus frac fluids and pressure intersect and migrate up a nearby fault that acts as a conduit for upward migration and intersection with high permeability reservoirs of the Alexander and Benson. Both of these reservoirs are primarily depleted, allowing an easier pressure migration throughout these formations. Geomechanical data is collected from dipole sonic logs. CNX's nearest sonic data is from the SHR1C well (Figure 1), immediately north of the SHR38 pad. Frac modeling (Figure 2) of the Marcellus in the area does not show significant upward frac growth. In fact, typical frac height would need to be more than double to reach the Alexander, approximately 1000' above the Marcellus Shale.

RECEIVED
Office of Oil and Gas

OCT 18 2019

WV Department of
Environmental Protection

Figure 1. Stratigraphic intervals of high stress should serve as adequate confining layers, or frac barriers, for a Marcellus frac, seen below in the SHR1C Stress Profile log.

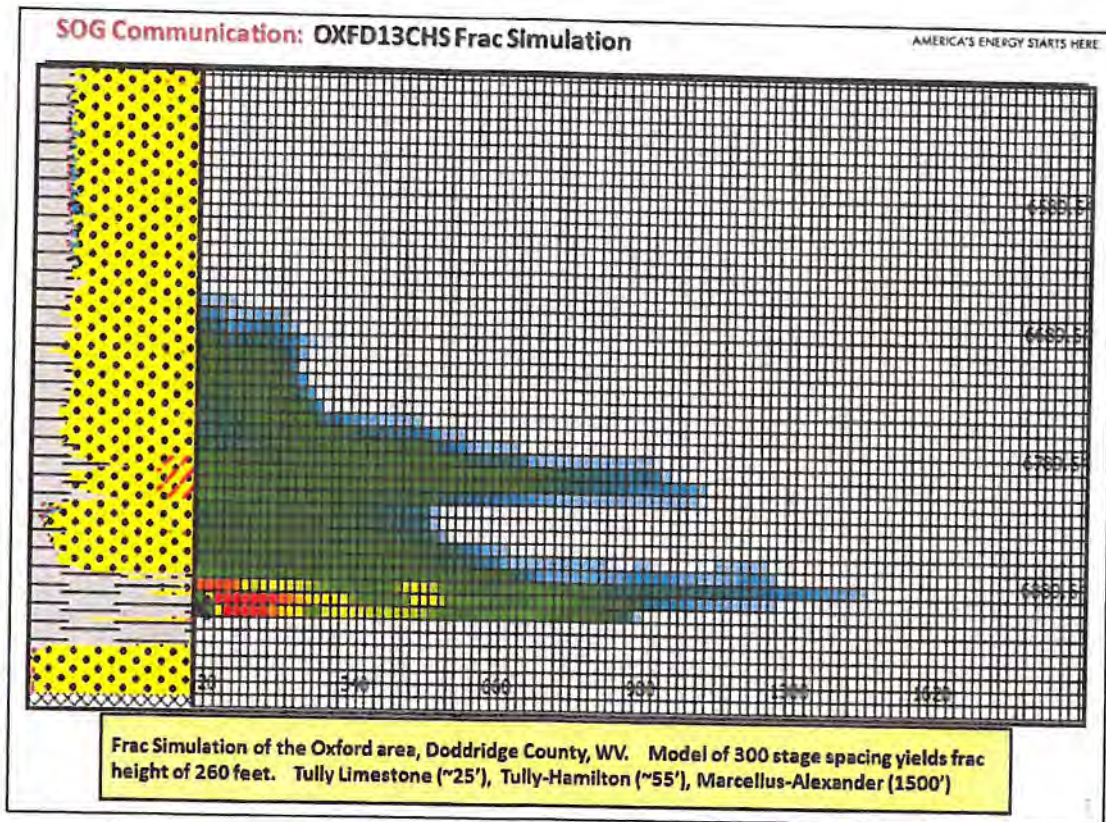


RECEIVED
Office of Oil and Gas

OCT 18 2019

WV Department of
Environmental Protection

Figure 2. Stratigraphic intervals of high stress should serve as adequate frac barriers for a Marcellus frac. The frac modeling example below is from the Oxford area of western Doddridge County, where the Marcellus and adjacent shallower shales are lithologically similar to Pennsboro. Frac modeling only yields frac height of approximately 300' and falls far short of the 1000' required to communicate with the Alexander or Benson formations. Therefore, faulting is the primary suspect for upward frac migration.



RECEIVED
Office of Oil and Gas

OCT 18 2019

WV Department of
Environmental Protection



Figure 4. All wells within a 500' buffer around the SHR37 pad have been reviewed and listed below. Pink highlights mean that no data exists for the well.

API	STATE	COUNTY	LATITUDE	LONGITUDE	OPERATOR	STATUS	WELL NAME	WELL NO	PLUG DATE	TD	FMTD	ELEVATION	COMMENTS
4709501442	WV	Tyler	39.53517	-80.8356774		Cancelled Permit				D		804	
470950102	WV	Tyler	39.5755024	-80.8548587	Carnegie Natural Gas Co	Gas	Laura Conroy	1		D		735	Ground Level
4701708452	WV	Doddridge	39.53517	-80.8356774		Cancelled Permit				D		804	
4701771435	WV	Doddridge	39.5308665	-80.83576	Hope Natural Gas Company	not available	Elias Thomas			D		871	
4701704570	WV	Doddridge	39.5185292	-80.8390069		unknown	McKendry Dotson 1			D		958	
4709508980	WV	Tyler	39.535578	-80.8529416	Hope Natural Gas Company	not available	Robert Doak	1		D		1116	Spirit Level
4701771456	WV	Doddridge	39.5369753	-80.8299341		unknown	McCutchen-Haines 1			D		930	
4709500044	WV	Tyler	39.5951738	-80.8557597		unknown	B S Smith	1		D		816	Ground Level
4701704186	WV	Doddridge	39.5257924	-80.8412618	Ritchie Petroleum Corp	not available	Brake Samuel 1			D		1091	
4701771447	WV	Doddridge	39.5211421	-80.833294	Hope Natural Gas Company	not available	Lawrence James			D		893	
4701701082	WV	Doddridge	39.5202021	-80.8542167	Prior, Ferrell L DBA Prior Oil Company	not available	W H Pigott 1			D		890	
4701771448	WV	Doddridge	39.5207062	-80.8366799		unknown	5 Yeater			D		751	
4701703945	WV	Doddridge	39.53517	-80.8336774		unknown				D		804	
4701771435	WV	Doddridge	39.5370634	-80.83852	Hope Natural Gas Company	not available	Wagner			D		746	
4709501060	WV	Tyler	39.5281125	-80.8464057	Hope Construction & Refining	not available	E M Jackson	7		D		1115	Ground Level
4701771438	WV	Doddridge	39.5301405	-80.833294		unknown	S Hendershot 1			D		762	
4701771429	WV	Doddridge	39.5250282	-80.8460267		unknown	Cisco Dotson			D		989	
4701771427	WV	Doddridge	39.5280282	-80.8376269	Oper in Min owner fld no code assign(Orphan well proj)	not available	Mary Montgomery 1			D		790	
4709502092	WV	Tyler	39.5458127	-80.8411859	Oper in Min owner fld no code assign(Orphan well proj)	not available	W A Ford et ux	1		D		841	Spirit Level
4701771428	WV	Doddridge	39.5157864	-80.8411738		unknown	Cisco Dotson 1			D		1040	
4701709402	WV	Doddridge	39.53517	-80.8356774		unknown				D		804	
4701730895	WV	Doddridge	39.5311418	-80.8400528		unknown	5 Yeater			D		766	
4709501493	WV	Tyler	39.53517	-80.8336774		unknown				D		804	
4701704599	WV	Doddridge	39.53517	-80.8336774		unknown				D		804	
4701771425	WV	Doddridge	39.5228854	-80.8437868		unknown	Arlington Dotson 2			D		819	
4709501159	WV	Tyler	39.53317	-80.8336774		unknown				D		804	
4701705946	WV	Doddridge	39.53317	-80.8336774		unknown				D		804	
4701730182	WV	Doddridge	39.5189643	-80.8421958	Philadelphia Oil Co	not available	F Dotson			D		840	
4701771434	WV	Doddridge	39.5327524	-80.8391059	Hope Natural Gas Company	not available	Wagner			D		884	
4709502158	WV	Tyler	39.5289215	-80.8482707	Hope Construction & Refining	not available	E M Jackson	5		D		1187	Spirit Level
4701771431	WV	Doddridge	39.5295605	-80.8443558		unknown	Alfred Dotson 1			D		1087	
4701703944	WV	Doddridge	39.53517	-80.8356774		unknown				D		804	
4708505470	WV	Roche	39.55317	-80.8356774		unknown				D		804	
4709500280	WV	Tyler	39.5499118	-80.9445398	Duty Oil	Dry	Goldie McKittrick	1	9/22/1959	945	1st Cow Rn/Moundsville	818	Ground Level
4708500715	WV	Tyler	39.5395255	-80.8387489	Industrial Gas Associates	Dry	W Paul McCutchen	5	abandoned	948	1st Frnt 5s/Front 5s	790	Ground Level
4708500303	WV	Tyler	39.5462759	-80.8521136	Bachelor, D	Dry	Sarah H Moore	1	8/14/1951	1096	1st Cow Rn/Moundsville	1084	Ground Level
4709500205	WV	Tyler	39.5458049	-80.8518976	Bachelor, D	Dry	S M Doak Heirs	1	11/29/1951	1100	Mehonig 5s/Big Dunk	1056	Ground Level
4709500367	WV	Tyler	39.5483810	-80.8505527	Bachelor, Chogull & Ray, Inc.	Dry	Elias Jenkins Heirs	1	4/9/1956	1103	1st Cow Rn/Moundsville	1109	Ground Level
4709500397	WV	Tyler	39.5471569	-80.8499557	Bachelor, D	Dry	Maggie Doak et al	1	11/4/1955	1193	1st Cow Rn/Moundsville	1109	Field Topo Map
4701701070	WV	Doddridge	39.5210902	-80.8390949	Prior, Ferrell L DBA Prior Oil Company	Oil	D Garner 1			1792	Big in un (undrff)	728	Ground Level
4701730056	WV	Doddridge	39.5356704	-80.83464	Hope Natural Gas Company	Gas	Austin Doak			1800	Big in un (undrff)	759	Ground Level
4709500300	WV	Tyler	39.5595159	-80.839415	Prior, Ferrell L	Gas	Alexander Doak Heirs	1		1836	Big in un (undrff)	785	Ground Level
4701700014	WV	Doddridge	39.5128924	-80.8457855	Foley Oil & Gas	Oil and Gas	Arthur Yeater	2		1845	Big in un (undrff)	775	Ground Level
4709500288	WV	Tyler	39.5384627	-80.8472267	Oper in Min owner fld no code assign(Orphan well proj)	Gas	Dale Ash	1		1849	Big in un (undrff)	857	Ground Level
4701701092	WV	Doddridge	39.5212513	-80.8412985	Hickman, Charles L	Dry w/ O&G Show	Arlington Dotson Hrs 5		1964	1865	Big in un (undrff)	790	Ground Level
4701730101	WV	Doddridge	39.5330283	-80.83464	Deem, F. S.	Oil and Gas	Henderson Walton	1		1880	Big in un (undrff)	802	Ground Level
4701750445	WV	Doddridge	39.5183665	-80.8426678	Clifton Oil & Gas	Oil and Gas	McKendry Dotson	2		1882	Big in un (undrff)	820	Ground Level
4709500395	WV	Tyler	39.5857067	-80.8628425	Mann Drilling	Oil	H B Smith & Ash	1		1900	Big in un (undrff)	805	Ground Level

RECEIVED
Office of Oil and Gas

MAR 18 2019

WV Department of
Environmental Protection



SHR37 Pad Frac SOG Review / CRSD Review Tuesday, March 12, 2019

4709570189	WV	Tyler	39.38691336	-80.8544647	Philadelphia Company, The	Gas	W N Moore			1901	Big Injun (undiff)	830	Ground Level
4709500492	WV	Tyler	39.549477	-80.8520106	Consolidated Gas Supply Corp.	Gas	G Doak			1916	Squaw	862	Ground Level
4701700204	WV	Doddridge	39.3321733	-80.832923	F & M Oil Co.	Dry w/ O&G Show	Harley Talkington	1		1916	Big Injun (undiff)	883	Ground Level
4709530526	WV	Tyler	39.3841701	-80.8539826	Pittsburgh & WV Gas	Gas w/ Oil Show	Moeh & Laura Duckworth	2		1923	Big Injun (undiff)	888	Ground Level
4701730160	WV	Doddridge	39.3324635	-80.8314361	Hope Natural Gas Company	Gas	E A Hendershot			1950	Big Injun (undiff)	870	Ground Level
4701731184	WV	Doddridge	39.3266565	-80.8393059	Hope Natural Gas Company	Gas	Cisco Dotson	1		1873	Big Injun (undiff)	961	Ground Level
4701750277	WV	Doddridge	39.3272425	-80.8478867	Hickman, Charles L	Oil and Gas	Austin Doak			1978	Squaw	899	Ground Level
4701701065	WV	Doddridge	39.3185952	-80.8393659	Hope Construction & Refining	Oil w/ Gas Show	W H Piggitt Hrs 1			1985	Big Injun (undiff)	1010	Ground Level
4701730102	WV	Doddridge	39.3320294	-80.8376279	Prior, Ferrell L DBA Prior Oil Company	Oil w/ Gas Show	Ohy Washburn			1987	Big Injun (undiff)	816	Barometer
4701730286	WV	Doddridge	39.3390824	-80.8325411	Deem, F. S.	Oil and Gas	Lewis Maxwell Heirs	1		2010	Big Injun (undiff)	1053	Ground Level
4709500428	WV	Tyler	39.3767876	-80.8591176	Warren Drilling Co. (John R. Warren)	Gas w/ Oil Show	Dale Ash	1		2052	Weir	720	Ground Level
4709550520	WV	Tyler	39.347689	-80.8563055	Hope Natural Gas Company	Gas w/ Oil Show	A Gorrell Doak	8		2105	Big Injun (undiff)	1072	Ground Level
4709530993	WV	Tyler	39.351699	-80.8546256	Deem, F. S.	Gas	L G Hemmer 1			2110	Big Injun (undiff)	1082	Ground Level
4701701359	WV	Doddridge	39.3368394	-80.8328811	Deem, F. S.	Gas	N Shepherd 1			2300	Weir	918	Ground Level
4701702356	WV	Doddridge	39.3294574	-80.8375199	Industrial Gas Associates	Oil and Gas	Hattie Bradford	2		2303	Weir	920	Ground Level
4709500679	WV	Tyler	39.3402015	-80.835698	Industrial Gas Associates	Oil and Gas	Paul James 1			2313	Weir	780	Ground Level
4701702514	WV	Doddridge	39.3270163	-80.8370789	Industrial Gas Associates	Oil and Gas	Edith H Griffin	2		2465	Berea 3s	1010	Ground Level
4709500851	WV	Tyler	39.3445459	-80.8505147	L & M Petroleum Co.	Gas	Paul McCutchen	1		2466	Fifty-foot	950	Ground Level
4709500676	WV	Tyler	39.3412227	-80.8452958	Industrial Gas Associates	Oil and Gas	W P Bradford			2485	Gantz	862	Ground Level
4709530600	WV	Tyler	39.3422726	-80.8383739	Hope Natural Gas Company	Gas	Fred Dotson et al	2		2521	Berea 3s	959	Kelly Bushing
4709501821	WV	Tyler	39.3508471	-80.8563066	Murvin & Meier Oil Co.	Dry w/ Gas Show	Elizabeth Thomas 1			2553	Big Injun (undiff)	771	Ground Level
4701701079	WV	Doddridge	39.3246812	-80.8349229	Prior, Ferrell L DBA Prior Oil Company	Dry	Okey R & Ora Nelson Moore	1		2608	Gordon	752	Ground Level
4709500220	WV	Tyler	39.3861746	-80.8539307	Oper in Min. owner fld. no code assign (Orphan well prod)	Dry w/ O&G Show	Dale Ash Jr	1		2610	Weir	816	Ground Level
4709500400	WV	Tyler	39.3779476	-80.8604265	Quaker State Oil Refining Co.	Dry w/ O&G Show	William Smith			2823	Fifth	745	Ground Level
4709530830	WV	Tyler	39.3456086	-80.835201	Hope Natural Gas Company	Gas	Frank Dillon	1		3400	Warren First	810	Ground Level
4709500813	WV	Tyler	39.3661544	-80.8565535	L & M Petroleum Co.	Gas w/ Oil Show	Mildred Gregg et al	1		4795	Benson	719	Ground Level
4709501150	WV	Tyler	39.3542621	-80.8542536	Anvil Oil Co., Inc	Gas	Randell & Doretta Ash	1		4858	Benson	729	Ground Level
4709501298	WV	Tyler	39.3753565	-80.8581856	Coastal Corp. The	Gas	Duane & Sandra Clark	8		4855	Benson	797	Ground Level
4709501817	WV	Tyler	39.3718094	-80.8542587	Coastal Corp. The	Gas	John McPatrick et al	1		4866	Benson	815	Ground Level
4709501567	WV	Tyler	39.3494768	-80.8450989	Appalachian Energy Development	Gas	David Gregg et al	6		4892	Benson	746	Ground Level
4709501310	WV	Tyler	39.3628183	-80.8583655	Anvil Oil Co., Inc	Gas	Danny C Harris	1		4919	Benson	778	Ground Level
4709501204	WV	Tyler	39.3558978	-80.8436069	Union Drilling, Inc	Gas	Duane Clark et al	1		4928	Benson	758	Ground Level
4709501304	WV	Tyler	39.3738402	-80.8458918	Coastal Corp. The	Gas	Ralph Ash et us	2		4927	Benson	727	Ground Level
4709501299	WV	Tyler	39.3780926	-80.8624815	Coastal Corp. The	Gas w/ Oil Show	Elden E & Nancy Pratt	1		4927	Benson	833	Ground Level
4709501200	WV	Tyler	39.3552776	-80.8488967	Union Drilling, Inc	Gas	Char Shinespring			4951	Benson	892	Ground Level
4701703558	WV	Doddridge	39.3368604	-80.835761	Stonewall Gas Co., Inc	Gas	James Ellis Jenkins heirs	1		4954	Benson	850	Ground Level
4709501223	WV	Tyler	39.3512619	-80.8486487	Stonewall Gas Co., Inc	Gas	Mary E Roberts/Mary J Kahler	5		4954	Benson	858	Ground Level
4709501316	WV	Tyler	39.3690542	-80.8461788	Stonewall Gas Co., Inc	Gas	Mary E Roberts/Mary J Kahler	5		4955	Benson	877	Ground Level
4709501355	WV	Tyler	39.3857786	-80.8537017	Eastern American Energy Corp	Gas	Marx A. Mazzullo et us	1		4955	Benson	877	Ground Level
4709501224	WV	Tyler	39.361076	-80.8428739	DAC, Inc.	Gas	Ronald Rowland	1		5020	Benson	865	Ground Level
					Anvil Oil Co., Inc	Gas							

RECEIVED
Office of Oil and Gas
OCT 18 2019
WV Department of
Environmental Protection



SHR37 Pad Frac SOG Review / CRSD Review Tuesday, March 12, 2019

4709501315	WV	Tyler	39.3668793	-80.8519497	Eastern American Energy Corp.	Gas	Mary E Roberts/Mary J Kahler	2											
4709500992	WV	Tyler	39.3468557	-80.8420509	J & E Drilling and Development Co	Gas	R McKittrick Heirs & C Wagner			5014	Benson	917	Ground Level						
4709501305	WV	Tyler	39.3747104	-80.8509957	Coastal Corp. The	Gas w/ Oil Show	Mildred Gregg	7		5014	Benson	960	Ground Level						
4709501207	WV	Tyler	39.3349736	-80.8441636	Stonewall Gas Co., Inc.	Gas	Charter D Stinespring	2		5016	Benson	810	Ground Level						
4709501208	WV	Tyler	39.3623832	-80.8531347	Anvill Oil Co., Inc	Gas	David C Gregg et al	5		5056	Benson	1007	Ground Level						
4701702797	WV	Doddridge	39.5212243	-80.8403468	J & J Enterprises, Inc	Gas	L Shepherd			5068	Benson	891	Ground Level						
4709500782	WV	Tyler	39.3430745	-80.834618	J & J Enterprises, Inc.	Gas	Delmer Mulvay			5070	Alexander	750	Ground Level						
4709501311	WV	Tyler	39.3647041	-80.8520086	Eastern American Energy Corp.	Gas	Mary E Roberts/Mary J Kahler	1		5100	Alexander	800	Ground Level						
4709501328	WV	Tyler	39.3842827	-80.8589336	Eastern American Energy Corp.	Gas	Lawrence L & Thelma James	4		5127	Benson	910	Ground Level						
4709500850	WV	Tyler	39.3511867	-80.83758	Coastal Corp. The	Gas w/ Oil Show	George W & Carolyn Moore	1		5180	Alexander	800	Ground Level						
4709501319	WV	Tyler	39.3608431	-80.8482778	J & J Enterprises, Inc.	Gas	Edwin D Mulvay			5188	Benson	965	Ground Level						
4701705839	WV	Doddridge	39.5396705	-80.8482778	Eastern American Energy Corp.	Gas	Mary E Roberts/Mary J Kahler	2		5188	Alexander	800	Ground Level						
4709501669	WV	Tyler	39.3390357	-80.8490197	Stonewall Gas Co., Inc	Gas	Charter Stinespring 3			5141	Benson	995	Ground Level						
4709501495	WV	Tyler	39.3327536	-80.8490197	DAC, Inc.	Gas	Leonard & Renie Smith	1		5150	Benson	1043	Ground Level						
4701704124	WV	Doddridge	39.5246825	-80.8467757	Nugent & Sons, Inc.	Gas	Marice J Carlisle/Ralph Thacker	2		5175	Benson	1051	Ground Level						
4701702964	WV	Doddridge	39.5261578	-80.853554	Key Oil Co.	Gas	Samuel J Brake 2			5180	Alexander	807	Ground Level						
4701703018	WV	Doddridge	39.5393254	-80.8511561	J & J Enterprises, Inc.	Gas	Lonnie James			5216	Alexander	802	Ground Level						
4709501587	WV	Tyler	39.3561355	-80.8408029	J & J Enterprises, Inc	Gas	W P McCutchen			5267	Alexander	865	Ground Level						
4701703389	WV	Doddridge	39.5213121	-80.851994	Key Oil Co.	Gas w/ Oil Show	Robert E Burgess Sr	1		5305	Alexander	920	Ground Level						
4701704161	WV	Doddridge	39.5295633	-80.836512	J & J Enterprises, Inc.	Gas	L James			5321	Alexander	1020	Ground Level						
4709500820	WV	Tyler	39.3846178	-80.8634185	Key Oil Co.	Gas	Lonnie James 1			5321	Alexander	866	Ground Level						
4701704200	WV	Doddridge	39.5198462	-80.8361389	Triad Hunter, LLC	Gas	Kenneth Sinclair			5336	Alexander	962	Ground Level						
4701703249	WV	Doddridge	39.5349753	-80.8312541	Murvin Oil Corp	Gas	Carri G James 2			5337	Alexander	780	Ground Level						
4701704126	WV	Doddridge	39.5211513	-80.8439748	J & J Enterprises, Inc.	Gas	W P Bush et ux			5350	Alexander	1049	Ground Level						
4709500925	WV	Tyler	39.5414527	-80.8439708	Key Oil Co.	Gas	Carroll Shepherd 2			5363	Benson	965	Ground Level						
4701704123	WV	Doddridge	39.5278224	-80.8411748	J & J Enterprises, Inc.	Gas	W Paul McCutchen			5375	Alexander	1030	Ground Level						
4709501171	WV	Tyler	39.350147	-80.8551316	Key Oil Co.	Gas	Samuel J Brake 1			5428	Alexander	1025	Ground Level						
4709501310	WV	Tyler	39.3498208	-80.8482757	J & J Enterprises, Inc.	Gas	Mattie Dotson Flint et al			5456	Alexander	1078	Ground Level						
4709500831	WV	Tyler	39.3465506	-80.836001	Eastern American Energy Corp.	Gas	Lawrence L & Thelma E James	5		5469	Alexander	848	Ground Level						
4709501170	WV	Tyler	39.3459969	-80.8523826	J & J Enterprises, Inc.	Gas	Edwin D Mulvay			5490	Alexander	1065	Ground Level						
4701704162	WV	Doddridge	39.5299975	-80.8436567	J & J Enterprises, Inc.	Gas	Lawrence L James et al			5512	Alexander	840	Ground Level						
4709501195	WV	Tyler	39.3583231	-80.8511386	Key Oil Co.	Gas	Lonnie James 2			5530	Alexander	1052	Ground Level						
4709501086	WV	Tyler	39.3695444	-80.8572466	Anvill Oil Co., Inc	Gas	Mildred Gregg et al	3		5532	Alexander	1170	Ground Level						
4709500427	WV	Tyler	39.3664912	-80.8511807	Kepeco, Inc.	Gas	Thelma Ferguson et al			5578	Brallier	923	Ground Level						
					Quaker State Oil Refining Co.	Dry w/ Oil Show	C D Cottrill	1	9/17/1955	5556	Rhinestreet Sh	729	Ground Level						
										5516		857	Ground Level						

RECEIVED
Office of Oil and Gas

OCT 18 2019

WV Department of
Environmental Protection

WW-9
(4/16)

API Number 47 - _____
Operator's Well No. SHR37FHSM

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 Pens3 and Pens21 wells API TBD)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain No Pits)

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

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

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

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

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc.
Land Application of soil conductor cuttings only, 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) 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 *Sarah Weigand*

Company Official (Typed Name) Sarah Weigand

Company Official Title Manager Upstream Permitting

Subscribed and sworn before me this 8 day of October, 20 19

Todd Fleming Notary Public

My commission expires September 23, 2020

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
Todd Fleming, Notary Public
Cecil Twp., Washington County
My Commission Expires Sept. 23, 2020
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

JEB
10/15/2019

WV Department of Environmental Protection

OCT 18 2019

RECEIVED
Office of Oil and Gas

Environmental Protection
Law Enforcement of

NOV 10 2019

Office of Oil and Gas
RECEIVED

MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES
My Commission Expires Sept. 23, 2020
Cecil Twp., Washington County
Todd Fleming, Notary Public
NOTARIAL SEAL
COMMONWEALTH OF PENNSYLVANIA

Form WW-9

Operator's Well No. SHR37FHSM

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: 10/15/2009

Field Reviewed? Yes No

RECEIVED
Office of Oil and Gas

OCT 18 2019

WV Department of
Environmental Protection



47 09 502665

Sarah Weigand
Manager Upstream Permitting
Work: 724-485-3244
Email: sarahweigand@cnx.com

CNX Center
1000 CONSOL Energy Drive
Canonsburg, PA 15317-6506
724-485-4000

West Virginia Department of Environmental Protection
601 57th Street, SE
Charleston, WV 25304

Dear Sir or Madam:

Pursuant to West Virginia Code §22-6A-8(g2), CNX Gas Company, LLC is requesting an approval from the office to land apply cuttings associated with the drilling of the conductor (unconsolidated materials) on location for pad SHR37. CNX Gas Company, LLC is the surface landowner of parcel 01-17-0005 in Tyler County and therefore consents to this method.

The wells planned to be drilled on this pad are:

- SHR37DHSM
- SHR37EHSM
- SHR37FHSM - 95-02665
- SHR37GHSM
- SHR37HHSM
- SHR37IHSM
- SHR37KHSM
- SHR37LHSM
- SHR37MHSM
- SHR37NHSM
- SHR37OHSM (API 47-095-02588)
- SHR37PHSM
- SHR37QHSM
- SHR37RHSM

Sincerely,

Sarah Weigand

RECEIVED
Office of Oil and Gas

▶ OCT 18 2019

WV Department of
Environmental Protection

CNX RESOURCES CORPORATION - HSE APPROVED ELEVATED NORM/TENORM TSD* FACILITIES**

TENORM Transfer/ Treatment/Downblending Facility	Location		Accepted Waste Streams	Contact Information
Austin Master Services - Treatment, Downblending, and Transfer Facility	Martins Ferry Facility	OH	Non-radioactive material, low level radioactive material, (NORM/TENORM), and high level TENORM material handling, storage, downblending, transport/loading to rail, tank cleaning, radiological sampling/testing analysis/lab.	Office: 740-609-3800 Jack Bement CEO Austin Master Services LLC 355 Circle of Progress Potstown PA, 19464 Ph:(585) 704-2744 Fax: 484 624-5506
Belmont Solids Control				
Buckeye Solids, Recycling, and Lab Facility	64054 Wintergreen Rd Lore City, Ohio 43725	OH	Non-radioactive material, low level radioactive material, (NORM/TENORM), and high level TENORM material handling, storage, downblending, transport/loading to rail, tank cleaning, radiological sampling/testing analysis/lab.	Bill Dawson 740-591-4393 bill@buckeyebrine.com Billing Address: 64054 Wintergreen Rd Lore City, Ohio 43725
Ground Tech LLC	240 Sinter Court, Youngstown, OH 44510	OH	Non-radioactive material, low level radioactive material (NORM/TENORM), and high level TENORM material handling, storage, and transport. (TENORM downblending of low level TENORM material (≤ 85 pCi) on-site. High level TENORM (< 85 pCi) materials will be directed to Austin Master Services in Martins Ferry, Ohio by Ground Tech).	Office: (330) 270-9900 Larry Chamberlain 530-398-5919 lchamberlain@ivc-inc.com
Mud Masters LLC	64054 Wintergreen Rd Lore City, Ohio 43725	OH	Non-radioactive material, low level radioactive material (NORM/TENORM), and high level TENORM material handling, storage, downblending, transport/loading to rail, tank cleaning, radiological sampling/testing analysis/lab. Non-radioactive material & radioactive material handling (NORM/TENORM), solids separation, material downblending, tank cleaning, radiological sampling/testing analysis/lab. Liquid/semi-solids treatment and separation for waste disposal.	Tom Meinert 740-255-0357 heavymudmasters@gmail.com Billing Address: 739 Southgate Pkwy, Cambridge, Ohio 43725
PETTA Enterprises LLC	38 Technology Dr Triadelphia, WV 26059	WV	Non-radioactive material, low level radioactive material (NORM/TENORM) material handling, storage, downblending, transport/loading to rail, tank cleaning, radiological sampling/testing analysis/lab. Non-radioactive material & radioactive material handling (NORM/TENORM), solids separation, material downblending, tank cleaning, radiological sampling/testing analysis/lab. Liquid/semi-solids treatment and separation for waste disposal.	Office: 740-341-6396 Kylie Feldner PETTA Enterprises Sales Representative 614-477-1368
	713 North Third Street, Cambridge	OH		
Pressure Tech	7675 East Pike Norwich, Ohio 43767	OH	Non-TENORM wastes including cement water and oil or water based drilling mud only. Are not to accept waste that is known to have elevated levels of TENORM or compressor station water.	Bob Orr: 614-648-8898
Secur - Bens Run Facility	160 Industrial Park Road, Friendly, WV 26146	WV	Non-radioactive material, low level radioactive material, (NORM/TENORM), and high level TENORM material handling, storage, downblending, transport/loading to rail, tank cleaning, radiological sampling/testing analysis/lab.	Melissa Adams 740-502-6039 melissa.adams@securllc.com

*NORM/TENORM = Naturally Occurring Radioactive Material /Technologically Enhanced Naturally Occurring Radioactive Material

**TSD = Treatment, Storage, and Disposal Facility

Note: Contact the CNX - HSE Department when any hazardous water or material containing elevated NORM/TENORM is encountered to review proper handling, disposal requirements, and capabilities of approved facilities.

OCT 18 2019

RECEIVED
Office of Oil and Gas

WV Department of

Environmental Protection

CNX RESOURCES CORPORATION - HSE APPROVED HAZARDOUS WASTE DISPOSAL FACILITIES

Hazardous Disposal Facility		Accepted Waste Streams	Contact Information
Disposal Facility	Location		
Waste Management	Model City NY	RCRA/TSCA Waste, PCB Transformers & Capacitors, PCB Soil/Debris, Non-Hazardous Wastes, Asbestos Waste, Solidification Services	Linda Davis: 716-286-0365 or 716-754-8231 or 800-963-4776

RECEIVED
Office of Oil and Gas



OCT 18 2019

WV Department of
Environmental Protection

CNX RESOURCES CORPORATION - HSE APPROVED NON-HAZARDOUS WASTE DISPOSAL FACILITIES

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	
Republic Services - Benson Valley	Frankfort	KY	X	X	X	X	X	X	X	X	X	X	X	X
Republic Services - Blue Ridge	Irvine	KY	X	X	X	X	X	X	X	X	X	X	X	X
Republic Services - Morehead	Morehead	KY	X	X	X	X	X	X	X	X	X	X	X	X
Republic Services - Green Valley	Rush	KY	X	X	X	X	X	X	X	X	X	X	X	X
Republic Services - Carbon-Li	Lowellville	OH	X	X	X	X	X	X	X	X	X	X	X	X
Republic Services - Imperial	Imperial	PA	X	X	X	X	X	X	X	X	X	X	X	X
Republic Services - Brunswick	Lawrenceville	VA	X	X	X	X	X	X	X	X	X	X	X	X
Republic Services - King and Queen	Little Plymouth	VA	X	X	X	X	X	X	X	X	X	X	X	X
Republic Services - Old Dominion	Richmond	VA	X	X	X	X	X	X	X	X	X	X	X	X
Republic Services - Sycamore	Hurricane	WV	X	X	X	X	X	X	X	X	X	X	X	X
Republic Services - Short Creek	Wheeling (Short Creek)	WV	X	X	X	X	X	X	X	X	X	X	X	X
WM - Arden Landfill	Washington	PA	X	X	X	X	X	X	X	X	X	X	X	X
WM - South Hills (Armoni)	South Park	PA	X	X	X	X	X	X	X	X	X	X	X	X
WM - Kelly Run	Elizabeth	PA	X	X	X	X	X	X	X	X	X	X	X	X
WM - Valley Landfill	Irwin	PA	X	X	X	X	X	X	X	X	X	X	X	X
WM - Evergreen Landfill	Blairsville	WV	X	X	X	X	X	X	X	X	X	X	X	X
WM - Meadowfill Landfill	Bridgeport	WV	X	X	X	X	X	X	X	X	X	X	X	X
WM - Northwestern Landfill	Parkersburg	WV	X	X	X	X	X	X	X	X	X	X	X	X
WM - S&S Grading Landfill	Clarksburg	WV	X	X	X	X	X	X	X	X	X	X	X	X
WM - American Landfill	Wavnesburg	OH	X	X	X	X	X	X	X	X	X	X	X	X
WM - Suburban RDF	Glenford	OH	X	X	X	X	X	X	X	X	X	X	X	X
WM - Mahoning Landfill	New Springfield	OH	X	X	X	X	X	X	X	X	X	X	X	X
Noble Environmental Landfill (Former Westmoreland Waste)	111 Connor Lane, Belle Vernon, PA 15012	PA	X	X	X	X	X	X	X	X	X	X	X	X
MAX Environmental (Bulger Facility)	Bulger, PA 15019	PA	X	X	X	X	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	X	X	X	X
Rumpke, Mt. Sterling (Rumpke Consolidated)	30 Larison Rd, Jeffersonville, KY 40337	KY	X	X	X	X	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	X	X	X
Advanced Disposal - Chestnut Valley LF	Chestnut Valley, 1184 McClellandtown Rd, McClellandtown, PA 15458	PA	X	X	X	X	X	X	X	X	X	X	X	X
Advanced Disposal - Greentree LF	Greentree Landfill, 635 Toby Rd., Kersy, PA	PA	X	X	X	X	X	X	X	X	X	X	X	X

Customer Service: 1 (866) 909-4458

Mark A. Thomas: 412-522-0610
mthoma15@wm.com

Tom Farnsworth: C- 330-204-4244
F- 866-477-6117

Customer Service: (724) 929-7694

Corporate Office: 412-343-4900

Landfill Office: (740) 543-4389

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

Landfill Contact: (859) 498-1572

Carl Walter: 513-623-2471

(606) 864-7996 or 866-428-4208

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

Ph 724-892-2199
Fax 724-437-7378
Donald.Henrichs@AdvancedDisposal.com

Ph 814-265-1744
Fax 814-265-8745
Donald.Henrichs@AdvancedDisposal.com

** 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.

Notes: New PADEP 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).

RECEIVED
Office of Oil and Gas

OCT 18 2019

WV Department of
Environmental Protection

CNX RESOURCES CORPORATION - HSE APPROVED BRINE WATER INJECTION & RECYCLING FACILITIES

Unconventional or Conventional Brine/Produced Fluid Water Disposal					Accepted Waste Streams	Contact Information
Company Name	Permit	Location	Coordinates			
Buckeye Brine Injection Facility	34-031-27177-00-00	23986 Airport Road, Coshocton, OH 43812	OH	40.301051 -81.851189	Brine (Produced Water)	Bill Dawson 740-591-4393 bill@buckeyebrine.com
	34-031-27178-00-00					
	34-031-27241-00-00					
CNX Resources Corporation (CNX Gas)	VAS2D960BBUC	Buchanan Co.	VA	-	CNX Owned UIC SWIWs: Frac water, brine, produced water	Contact Ops Groups
	VAS2D930BBUC	Buchanan Co.	VA	-		
	VAS2D926BBUC	Buchanan Co.	VA	-		
	VAS2D970BRUS	Russell Co.	VA	-		
	34-013-2-0609 UIC #609	Barnsville, Bellmont Co.	OH	-		
Camp Creek Disposal Services, Inc. (Gas Field Services, Inc.)	UIC: UIC2D0550319 API: 47-055-00319	200 Camp Creek Road, Camp Creek, WV 25820	WV	37.495138 -81.105161	Class II injection fluids that are in connection with conventional oil or gas production and may be commingled with waste waters from gas plants unless those waters are classified as hazardous wastes at the time of injection.	Zachery Reed zacheryr4@yahoo.com PO Box 555, Rosedale, VA 24280 Phone: (276) 880-2323
Cambrian Well Services - Kemble (Orr Petroleum Corporation)	34-119-2-8780	Zanesville, Muskingum County, Perry Township	OH	39.974954 -81.845389	Brine (Produced Water)	Bob Orr 740-796-6495 614-648-8898 orrpetro@gmail.com
Central Environmental Services	34-009-2-3821	Troy Township, Athens County, Ohio	OH	39.226075 -81.761403	Brine (Produced Water)	Jeff Harper 304-893-9978 Jeff Harper jharper@centrallenvironmentalservices.com
	34-009-2-3823			39.234815 -81.757167		
	34-009-2-3824			39.235082 -81.748312		
DeepRock Disposal Solutions	Issued: 9/24/2015	2341 State Route 821, Building 11C, Marietta, OH 45750	OH	39.426278 -81.502379	Brine (Produced Water)	Wes Mossor General Manager DeepRock Disposal Solutions LLC Office: 740.371.5078 ext. 206 Cell: 304.588.0936
	Issued: 12/21/2105			39.425172 -81.507900		
	Issued: 12/21/2015			39.429867 -81.511020		
Environmental Energy Services LLC (Force, Inc.) - Pattison 1-D	34-119-2-8803	Muskingum County, Perry Township	OH	39.973643 -81.825727	Brine (Produced Water)	Bryan Force Mobile: 412.289.0069 Office: 724.465.9399 bforce@forceincorporated.com or Bob Orr 740-796-6495 614-648-8898 orrpetro@gmail.com

RECEIVED
Office of Oil and Gas

OCT 18 2019

EGO Water Solutions LLC - Mozena	34-157-2-5511	5367 E. State Street, Newcomerstown, OH 43832	OH	40.283293 -81.578068	Brine (Produced Water)	Michael Chapin: Ph. 740-763-3966 Cell 740-403-9664 tantrumr@aol.com Robert Schenken Director Business Development HydroEdge Solutions Wisconsin White Sand rschenken@hydroedgesolutions.com Cell 412.295.3614
Greene County Water Treatment, Inc.	WMGR123SW010	401 Jefferson Rd. Waynesburg, PA 15370	PA		Oil and Gas Fluids with minimal oil and solids present	Gary Carpenter 267-246-6176 JRBCarpenter@aol.com
Hydro Recovery	WMGR123SW019	572 Route 18 Burgettstown, PA 15021	PA		Oil and Gas Fluids with minimal oil and solids present	Ashley Cromley 570-394-4450 Ashley.cromlev@hydrorecoverylp.com
Nuverra	34-059-2-4445-00 34-059-2-4473-00 34-119-2-8776-00	64036 Wintergreen Road, Lore City, Ohio 43755	OH		Oil and Gas Fluids with any amount of oil and solids	Rob Bealko 304-291-0383 Office 304-282-8814 Cell rob.bealko@nuverra.com
Reserved Environmental Services (RES)	WMGR123SW005	1119 Old Route 119 South Mt. Pleasant, PA 15666	PA		Oil and Gas Fluids with minimal oil and solids present	Matt Kicinski 814-574-9701 mkicinski@reswater.com
Secur - Bens Run Facility	Regis Number: 483100	160 Industrial Park Road, Friendly, WV 26146	WV		Oil and Gas Fluids with any amount of oil and solids	Melissa Adams 740-502-6039
ShaleLogix LLC	34-007-21847	5035 State Rt. 46, Jefferson, OH 44047 (Ashtabula County, New Lyme Township)	OH	41.613214 -80.782835	Brine (Produced Water)	Michael Alvetro cell: 330-307-5303
Silcor Oilfield Services, Inc.	34-059-24202	Cambridge, OH	OH	39.993615 -81.572975	Brine (Produced Water)	Matt Brewer HydroEdge Solutions mbrewer@hydroedgesolutions.com (412) 439-7866
Fluid Recovery Services	NPDES - PA0095273	931 Bells Mills Rd. Josephine, PA 15750	PA	40.482410 -79.171193	Approved for treatment of conventional brine (produced water) only. (Not approved for unconventional waste	Jim Donovan 724.746.5300 x227 donovanj@fluidrecovery.com
	NPDES - PA0095443	5035 U.S. Route 110 West, Creeside, PA 15732	PA		Approved for treatment of conventional brine (produced water) only. (Not approved for unconventional waste	Jim Donovan 724.746.5300 x227 donovanj@fluidrecovery.com
	NPDES - PA0101508	5148 Rt. 322, Franklin, PA 16323	PA	41.373037 -79.798620	Approved for treatment of conventional brine (produced water) only. (Not approved for unconventional waste	Jim Donovan 724.746.5300 x227 donovanj@fluidrecovery.com

RECEIVED
Office of Oil and Gas

OCT 18 2019

WV Department of
Environmental Protection

CNX RESOURCES CORPORATION - HSE APPROVED TREATMENT & RECYCLING FACILITIES				
Specialty Recycling			Waste Services Provided	Contacts
Company Name	Location			
Enviro Clean Services, Inc.	515 Industrial Blvd., Wooster, OH 44691	OH	Non-hazardous wastewater, transportation, treatment and disposal facility. Also offer transportation and solidification services.	Rishi Bhanot Director of Operations 330-264-8080 (O) rishi.bhanot@etcch.com www.etcch.com
Ergon - Marietta Terminal	35020 OH Route 7, Newport, OH 45768	OH	Oil purchaser and transportation.	Keith Britton, Purchasing: 330-284-4343 Tom Leyda, Transportation: 800-846-2550
Everclear of Ohio	3700 Oakwood Ave., Austintown, OH 44515	OH	Approved for non-haz water treatment of oil & water mix, oil, oil filters, and antifreeze only.	330-792-2120 www.everclearoil.com
Heritage-Crystal Clean, LLC	Multiple Locations in Most States	Multi, State	Approved for non-haz water treatment of oil & water mix. Also offer transportation and solidification services. Capable of other types of waste disposal and handling with prior Environmental and Supply Chain approval.	Paul Reddington Heritage Crystal Clean, LLC 304.904.5020 paul.reddington@crystal-clean.com
Necessary Oil Co.	Main Office - 1300 Georgia Avenue Bristol, TN 37620-4048	TN	Approved for non-haz water treatment of oil & water mix, oil, oil filters, and antifreeze only. Also offer transportation services.	Local Phone 764-4533 Toll-Free 800-764-4533 Fax 423-764-2175
	Fleet Trucking Management NTC Acquisition Company - PO Box 875 Bristol, VA 24201	VA		
	Purchasing - Virginia (Roanoke Metro) Norfolk & Western Avenue Cloverdale, VA 24077	VA		
	Drum Services, Processing & Fleet Trucking - 111 East Mary St., Bristol, VA 24201	VA		
	Solids Processing - 215 North Industrial Drive Industrial Park Bristol, TN 37620	TN		
Petromax, Ltd.	301 Prestley Avenue, Carnegie, PA 15106	PA	Approved for lubricants, coolants, pipeline pressure fluids, transmission fluids, oil, and oily water. PA Residual Waste Processing and Transfer Facility Permit # 301294 PA DEP Facility ID 30-23918 NPDES Stormwater Permit # PAR706105 EPA ID # PAD982684458 CWT Discharge Permit # P2-0102	Adam Hall 412-279-9040 412-276-2011 Fax: 412-279-9041 Cell: 412-554-0233 ahall@petromaxld.com
Spirit Services, Inc	15801 Lockwood Road, Williamsport, MD 21795	Multi, State	Approved for non-haz water treatment of oil & water mix. Also offer transportation and solidification services. Capable of other types of waste disposal and handling with prior Environmental and Supply Chain approval.	1-866-670-9034 Joe Staton 717-360-7916 Office: 301-223-1251 Fax: 301-223-1253 jstaton@spiritservices.com
Valcor Environmental Services LLC (Formerly United Wastewater)	401 Industrial Drive, Franklin, OH 45005	OH	Approved for non-haz water treatment of oil & water mix, oil, oil filters, and antifreeze only.	Corporate Number: 734-442-2353 www.valcor.com or Steve Atkinson 937-746-7944 304-522-8028 SAtkinson@valcor.com
	1045 Reed Dr, Monroe, OH 45050	OH		
	515 N. 8th Ave, Huntington, WV 25201	WV		
	11807 Reading Rd, Cincinnati, OH 45241	OH		

Note: Facilities approved for disposal/treatment of oily water mixtures only unless otherwise indicated.

RECEIVED
Office of Oil and Gas

OCT 18 2019

WV Department of
Environmental Protection

CNX RESOURCES CORPORATION - HSE APPROVED ALTERNATIVE MUNICIPAL SOLID WASTE LANDFILLS				
Landfill	Location		Municipal Solid Waste	Contact Information
Cumberland Plateau Regional Authority - Buchanan County	Buchanan County	VA	X	They transfer municipal waste to Advanced Disposal – Tennessee Landfill Eco Safe MSW Landfill (See above)
Tazewell County (TC) Landfill 2475 Lynn Hollow Rd. North Tazewell, VA 24630	Route 649 Gratton, VA 24651	VA	X	(276) 988-4003 or Chris Hurley: 276-988-4310 or Megan Hurley mhurely@tazewellcounty.org (276)-988-1200
Buchanan County Landfill	Oakwood, VA 24631	VA	X	Customer Service: (276) 498-4403

Note: Waste Management and Republic Services landfills should be utilized instead of these Municipal Solid Waste Landfills when possible.

RECEIVED
Office of Oil and Gas

▶ OCT 18 2019

WV Department of
Environmental Protection

CNX RESOURCES CORPORATION - HSE APPROVED SOLID WASTE RECYCLING & BENEFICIAL USE FACILITIES

Specialty Recycling			Waste Services Provided	Contacts
Company Name	Location			
JaSar Recycling, Inc.	183 Edgeworth Ave. East Palestine, OH 44413	OH	Recycle a full range of commodities including liners, fibers, plastics (#1-#7), glass, paper, ferrous metals and non-ferrous metals.	(330) 426-2538 [inquiries] (330) 426-6243 [sales] sales@jasarrecycling.com
Ultra-Poly Corporation	Berwick, PA; Portland, PA; transfer facility in Weirton, WV	PA	Polyethylene and polypropylene oil and gas waste plastic (liners, etc.).	Joe Barcelona jbarcelona@untra-poly.com 412-495-5962

RECEIVED
Office of Oil and Gas

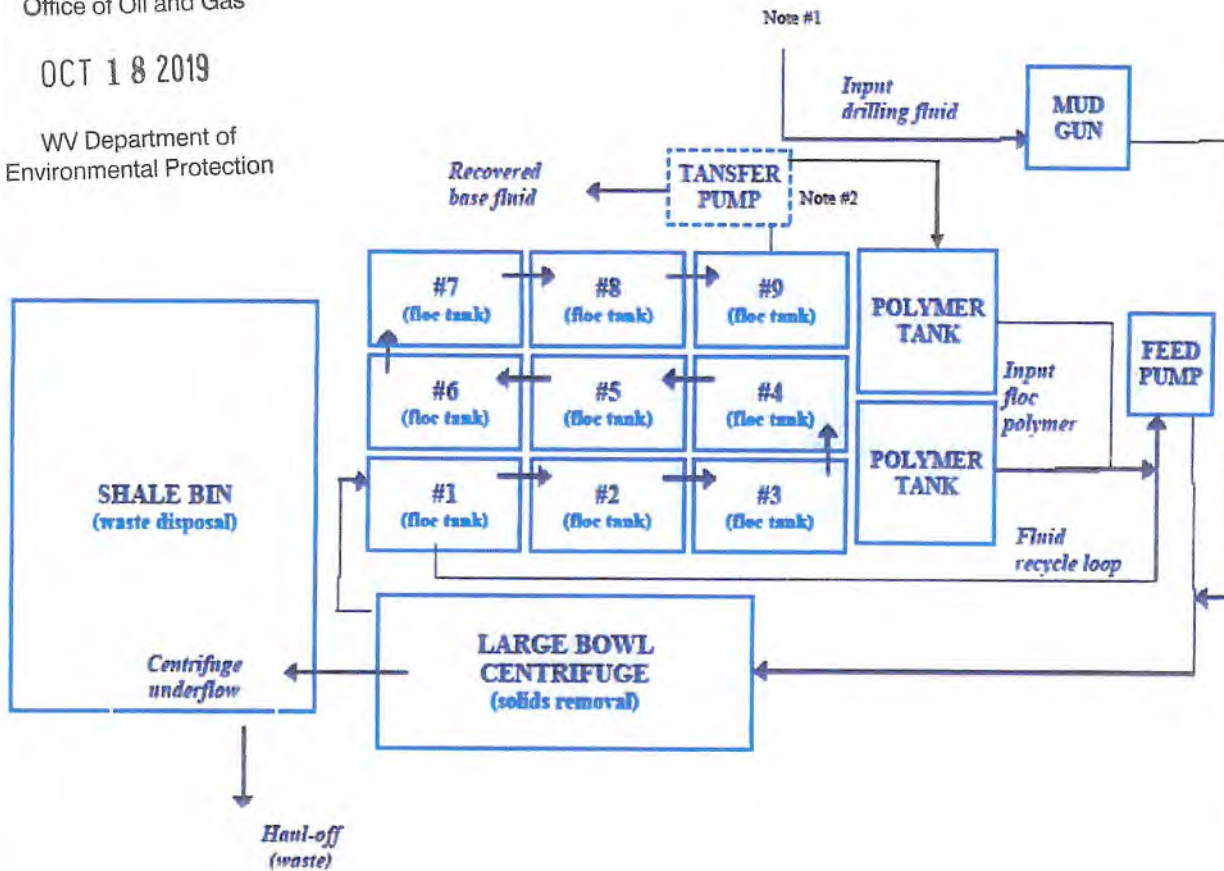
OCT 18 2019

WV Department of
Environmental Protection

FLOW CHART MUD AND SLURRY DEWATERING RECOMMENDED RIG UP



RECEIVED
Office of Oil and Gas
OCT 18 2019
WV Department of
Environmental Protection



Notes/ Comments:

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

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

Drawing/ Revision Date: December 12, 2011

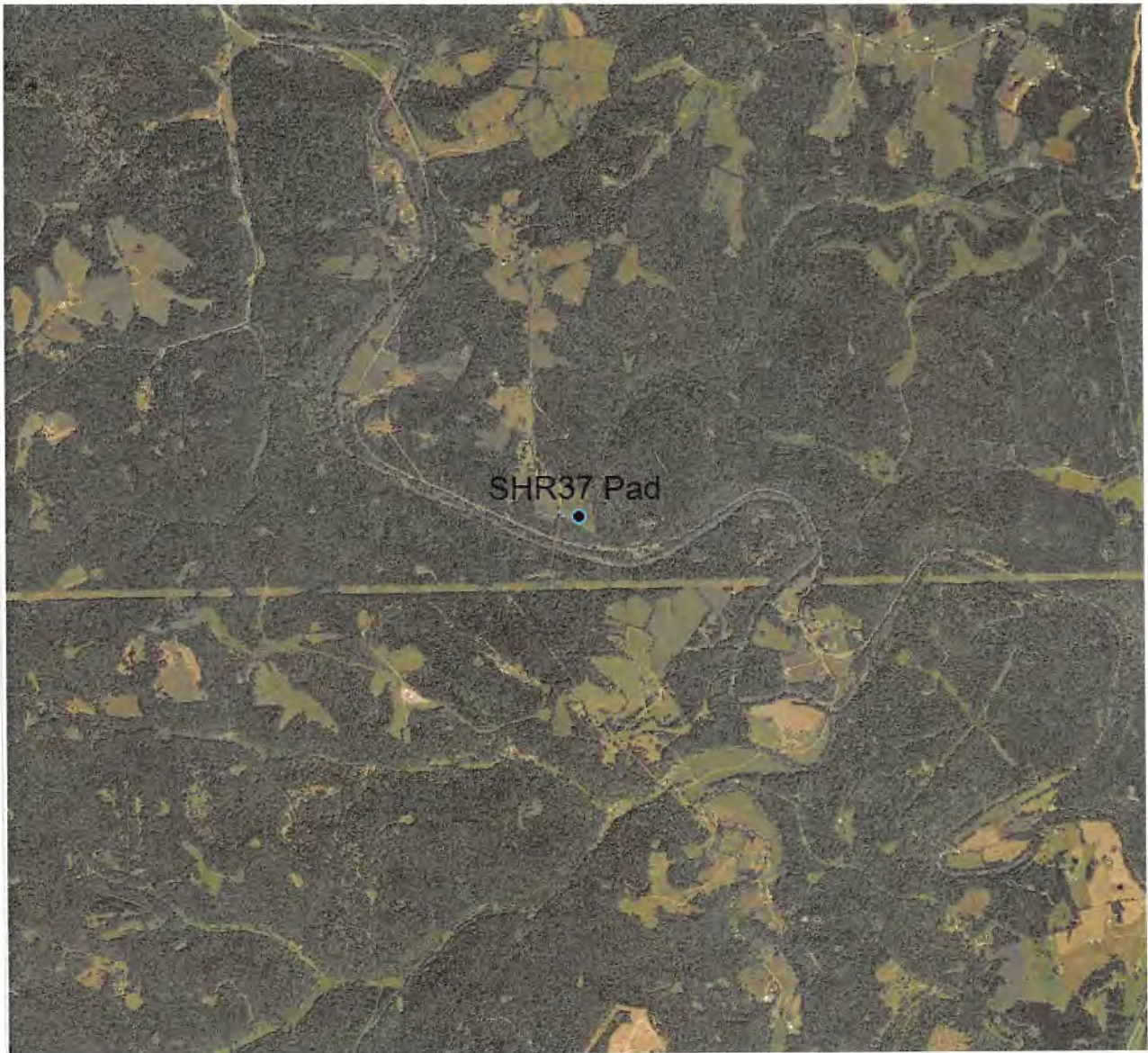
Approved By: Andrew Pow



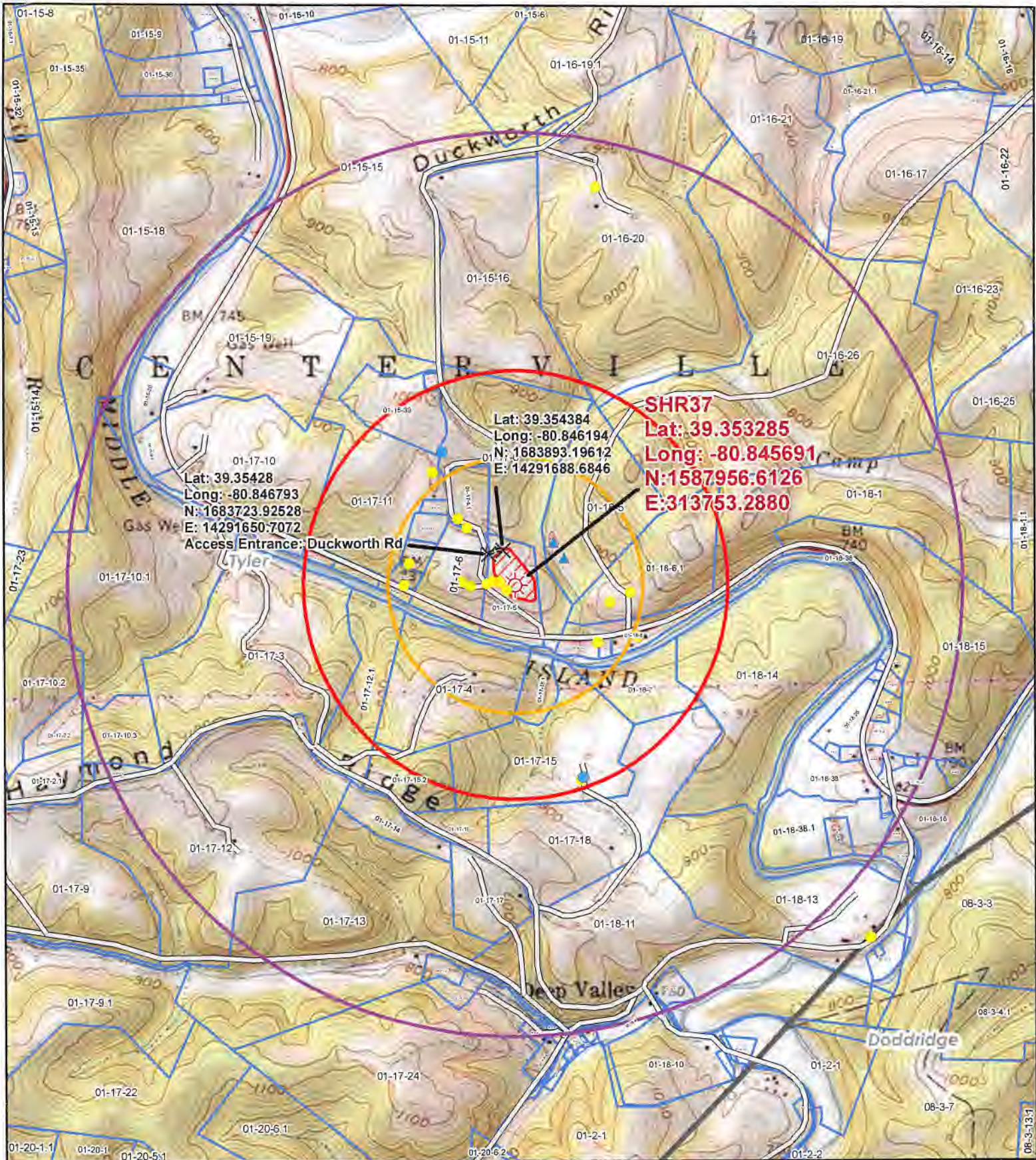


Site Safety Plan for Well SHR37FHSM

CNX Gas Company, LLC.



JEB
10/15/2019

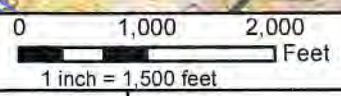


Lat: 39.354384
 Long: -80.846194
 N: 1683893.19612
 E: 14291688.6846
 Access Entrance: Duckworth Rd

SHR37
Lat: 39.353285
Long: -80.845691
N: 1587956.6126
E: 313753.2880

Legend

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



Original Date: 12/14/2018

Prepared By: GIS

Revision Date: 12/14/2018

Approved By: GIS

Topographic Well Map
SHR37

This map is property of CNX Land Resources Inc. and contains information that is proprietary and confidential in nature and may not be copied or reproduced without prior written consent.
© Copyright CNX Land Resources Inc. 2011

Path: \\cnx\gis\business_unit_support\gis\com\map\top31\shr37\topo_water_well\shr37_topo_water_well_map.mxd - 1/10/18

BHL is located on topo map 11,033 feet south of Latitude: 39° 25' 00"
 SHL is located on topo map 7,952 feet south of Latitude: 39° 22' 30"

SEE PAGE 2 FOR PLAT DUE TO LENGTH OF LATERAL

SEE PAGE 3 FOR SURFACE OWNERS AND LESSORS

BHL is located on topo map 8,009 feet west of Longitude: 80° 50' 00"
 SHL is located on topo map 3,435 feet west of Longitude: 80° 50' 00"

SURFACE HOLE LOCATION (SHL)	APPROX. LANDING POINT	BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83 N:4356980.52 E:513313.40 NAD83, WV NORTH N:313595.959 E:1588046.215 LAT/LON DATUM-NAD83 LAT:39°21'11.402" LON:80°50'43.727"	UTM 17-NAD83 N:4356020.54 E:513235.66 NAD83, WV NORTH N:313731.555 E:1587793.276 LAT/LON DATUM-NAD83 LAT:39°21'12.705" LON:80°50'46.973"	UTM 17-NAD83 N:4359663.59 E:511912.85 NAD83, WV NORTH N:325758.749 E:1583651.974 LAT/LON DATUM-NAD83 LAT:39°23'10.950" LON:80°51'42.011"



THRASHER

CIVIL • ENVIRONMENTAL • CONSULTING • FIELD SERVICES
 800 WHITE OAKS BOULEVARD, BRIDGEPORT, WV 26330
 PHONE (304) 624-4108 • FAX (304) 624-7831

FILE #: SHR 37 FHSM
 DRAWING #: SHR 37 FHSM
 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



PLACE SEAL HERE

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



DATE: OCTOBER 3, 2019
 OPERATOR'S WELL #: SHR 37 FHSM
 API WELL #: 47 95 02665
 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: CNX GAS COMPANY ACREAGE: 18±

OIL & GAS ROYALTY OWNER: ELEANOR V. & DEAN A. EARNHEART, ET AL ACREAGE: 538.724±

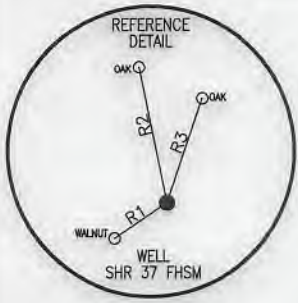
DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG & ABANDON
 CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY): _____

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 6,302'± TMD: 19,480'±

WELL OPERATOR CNX GAS COMPANY LLC DESIGNATED AGENT ANTHONY KENDZIORA
 Address 1000 CONSOL ENERGY DRIVE Address 1000 CONSOL ENERGY DRIVE
 City CANONSBURG State PA Zip Code 15317 City CANONSBURG State PA Zip Code 15317

SHR 37 FHSM

PAGE 2 OF 3



NOTES:

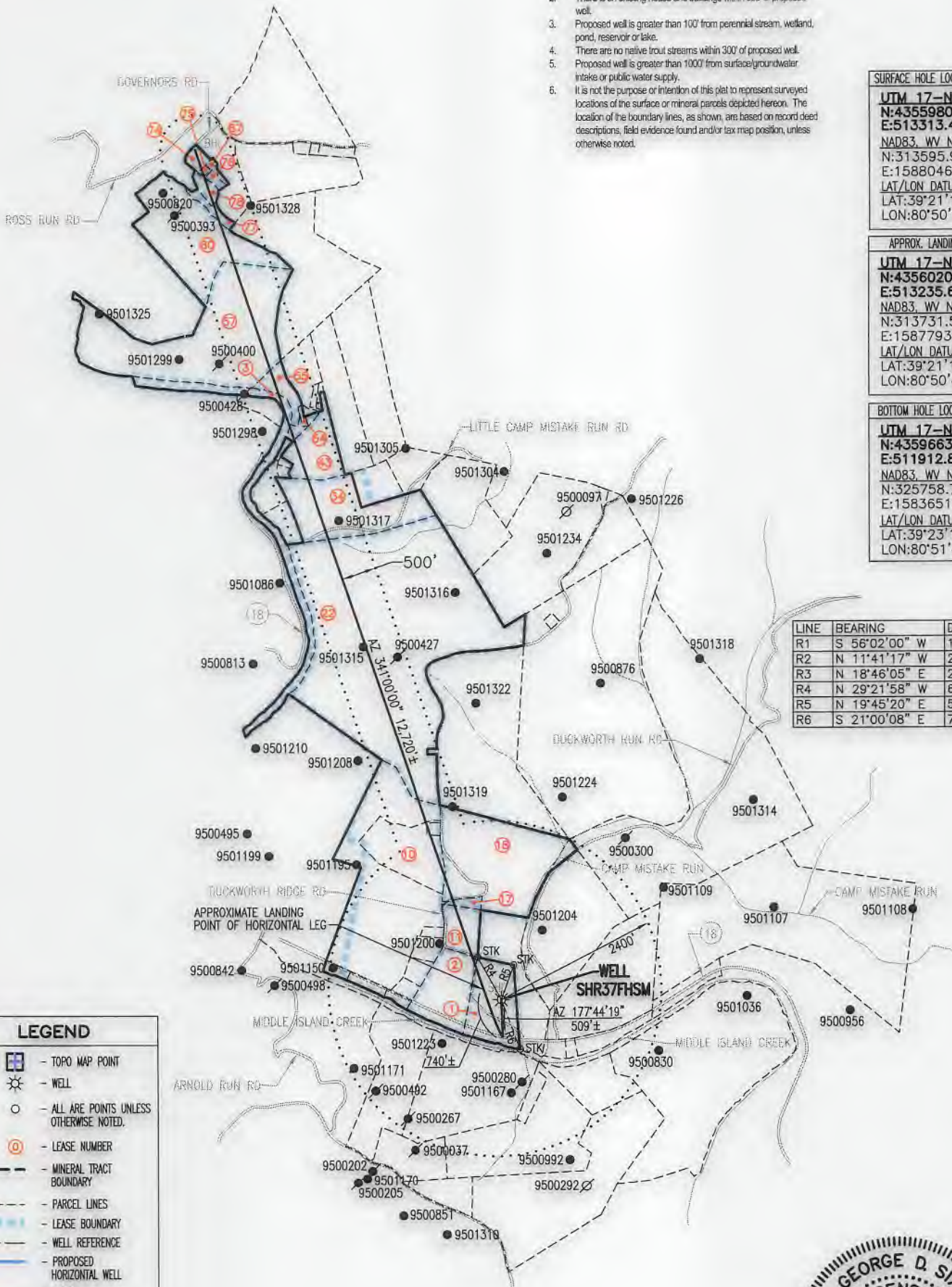
1. There are water wells or developed springs within 250' of proposed well.
2. There is an existing house and buildings within 625' of proposed well.
3. Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake.
4. There are no native trout streams within 300' of proposed well.
5. Proposed well is greater than 1000' from surface/groundwater intake or public water supply.
6. 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.

SURFACE HOLE LOCATION (SHL)	
UTM 17-NAD83	N:4355980.52
	E:513313.40
NAD83, WV NORTH	N:313595.959
	E:1588046.215
LAT/LON DATUM-NAD83	LAT:39°21'11.402"
	LON:80°50'43.727"

APPROX. LANDING POINT	
UTM 17-NAD83	N:4356020.54
	E:513235.66
NAD83, WV NORTH	N:313731.555
	E:1587793.276
LAT/LON DATUM-NAD83	LAT:39°21'12.705"
	LON:80°50'46.973"

BOTTOM HOLE LOCATION (BHL)	
UTM 17-NAD83	N:4359663.59
	E:511912.85
NAD83, WV NORTH	N:325758.749
	E:1583651.974
LAT/LON DATUM-NAD83	LAT:39°23'10.950"
	LON:80°51'42.011"

LINE	BEARING	DISTANCE
R1	S 56°02'00" W	130.62'
R2	N 11°41'17" W	283.74'
R3	N 18°46'05" E	225.67'
R4	N 29°21'58" W	692.76'
R5	N 19°45'20" E	533.05'
R6	S 21°00'08" E	754.97'



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

API WELL #: 47 95 02465

STATE COUNTY PERMIT

OCTOBER 3, 2019



George D. Six



CIVIL • ENVIRONMENTAL • CONSULTING • FIELD SERVICES
600 WHITE OAKS BOULEVARD, BRIDGEPORT, WV 26330
PHONE (304) 624-4108 • FAX (304) 624-7831

WW-6A1
(5/13)

Operator's Well No. SHR37FHSM

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

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

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

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

See attached

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

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

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

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

RECEIVED
Office of Oil and Gas

OCT 18 2019

WV Department of
Environmental Protection

Well Operator: CNX Gas Company, LLC
 By: Sarah Weigand *Sarah Weigand*
 Its: Manager Upstream Permitting

Attachment - Form WW-6A-1 for SHR37FHSM

<u>Tract ID</u>	<u>Tax Map & Parcel</u>	<u>Title Opinion QLS</u> #	<u>Grantor, Lessor, etc</u>	<u>Grantee, Lessee, etc</u>	<u>Royalty</u>	<u>Book/Page</u>
1	1-17-5	269278000	Eleanor V. Earnheart and Dean A. Earnheart, w/h Ciella Bolce, widow Luella I. McConnell, widow Agnes Godwin, widow Nancy P. McClain and Ralph E. McClain, w/h Georgia P. Snyder, divorced Bradie Pipes and Goldie Pipes, his wife Pursie Pipes and Norma J. Pipes, husband and wife Dorothy Belle Wells and Byron Wells, her husband 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. 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 Assignment Assignment Assignment Assignment Assignment Assignment Assignment Assignment	267/74 267/76 267/78 267/80 267/82 267/84 267/86 267/88 267/90 267/640 285/650 354/757 381/540 402/132 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	1-17-6	266300000	Eleanor V. Earnheart and Dean A. Earnheart, w/h Ciella Bolce, widow Luella I. McConnell, widow Agnes Godwin, widow Nancy P. McClain and Ralph E. McClain, w/h Georgia P. Snyder, divorced Bradie Pipes and Goldie Pipes, his wife Pursie Pipes and Norma J. Pipes, husband and wife Dorothy Belle Wells and Byron Wells, her husband 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. Reva Rowland and Ronald Royce Rowland	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 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 Assignment Assignment Assignment Assignment Assignment Assignment Assignment Assignment Not less than 1/8	267/74 267/76 267/78 267/80 267/82 267/84 267/86 267/88 267/90 267/640 285/650 354/757 381/540 402/132 WVSOS 425/701 427/564 550/273 661/312 ✓

<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 Assignment	553/295 629/658 ✓

<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>
10	1-15-38 1-15-39 1-17-11 1-17-11.1 through 11.8	263403000	Artis Hope Jack Parker, Attorney-in-Fact for Colen C. Jack J&J Enterprises Eastern American Energy Corporation Seneca-Upshur Petroleum, Inc. Seneca-Upshur Petroleum, LLC Antero Resources Appalachian Corporation Antero Resources Corporation Noble Energy, Inc.	J&J Enterprises 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 Assignment Assignment Assignment Assignment Assignment Assignment Assignment Assignment	257/620 282/296 354/757 381/540 402/132 WVSOS 425/701 550/273 ✓

<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>
11	1-17-6.1	266299000	Eleanor V. Earnheart and Dean A. Earnheart, w/h Ciella Bolce, widow Luella I. McConnell, widow Agnes Godwin, widow Nancy P. McClain and Ralph E. McClain, w/h Georgia P. Snyder, divorced Bradie Pipes and Goldie Pipes, his wife Pursie Pipes and Norma J. Pipes, husband and wife Dorothy Belle Wells and Byron Wells, her husband 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. 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 Assignment Assignment Assignment Assignment Assignment Assignment Assignment Assignment	267/74 267/76 267/78 267/80 267/82 267/84 267/86 267/88 267/90 267/640 285/650 354/757 381/540 402/132 WVSOS 425/701 427/564 550/273 ✓

RECEIVED
Office of Oil and Gas

OCT 18 2019

WV Department of
Environmental Protection

Reva Rowland and Ronald Royce Rowland

CNX Gas Company, LLC

Not less than 1/8

661/312

<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>
17	1-17-6.1	266299000	Eleanor V. Earnheart and Dean A. Earnheart, w/h Clella Boice, widow Luella I. McConnell, widow Agnes Godwin, widow Nancy P. McClain and Ralph E. McClain, w/h Georgia P. Snyder, divorced Bradie Pipes and Goldie Pipes, his wife Pursie Pipes and Norma J. Pipes, husband and wife Dorothy Belle Wells and Byron Wells, her husband 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. Reva Rowland and Ronald Royce Rowland	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 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 Name Change Assignment Assignment Assignment Not less than 1/8	267/74 267/76 267/78 267/80 267/82 267/84 267/86 267/88 267/90 267/640 285/650 354/757 381/540 402/132 402/132 WVSOS 425/701 427/564 550/273 661/312

<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>
18	1-17-6	266300000	Eleanor V. Earnheart and Dean A. Earnheart, w/h Clella Boice, widow Luella I. McConnell, widow Agnes Godwin, widow Nancy P. McClain and Ralph E. McClain, w/h Georgia P. Snyder, divorced Bradie Pipes and Goldie Pipes, his wife Pursie Pipes and Norma J. Pipes, husband and wife Dorothy Belle Wells and Byron Wells, her husband 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. Reva Rowland and Ronald Royce Rowland	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 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 Name Change Assignment Assignment Assignment Not less than 1/8	267/74 267/76 267/78 267/80 267/82 267/84 267/86 267/88 267/90 267/640 285/650 354/757 381/540 402/132 402/132 WVSOS 425/701 427/564 550/273 661/312

<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>
22	1-15-15	266749000	Jacob C. Cottrill, Attorney-In-Fact for Charles D. Cottrill Helrs; Jacob C. Cottrill and Shirley A. Cottrill, h/w J&J Enterprises Eastern American Energy Corporation Energy Corporation of America Energy Corporation of America Antero Resources Appalachian Corporation Noble Energy, Inc.	J & J Enterprises, Inc. Eastern American Energy Corporation Energy Corporation of America Antero Resources Appalachian Corporation Antero Resources Appalachian Corporation CNX Gas Company, LLC Noble Energy Inc. CNX Gas Company, LLC	Not less than 1/8 Assignment Assignment Assignment Assignment Assignment Assignment Assignment Assignment Assignment	258/220 282/296 371/528 398/416 420/316 427/564 550/273

<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>
34	1-15-10	266291000	Sandra Sue Clark and Clarence Duane Clark, h/w and Mildred Gregg Sandra Sue Clark and Clarence Duane Clark, h/w and Mildred Gregg Manna Oil and Gas Co. Anvil Oil Company Antero Resources Corporation Noble Energy, Inc. David C. Gregg Anvil Oil Co., Inc. Anvil Oil & Gas Co., Inc. Anvil Oil Company Antero Resources Corporation Noble Energy, Inc.	Manna Oil and Gas Co. Manna Oil and Gas Co. Anvil Oil Company Antero Resources Corporation CNX Gas Company, LLC Noble Energy Inc. CNX Gas Company, LLC Anvil Oil Co., Inc. Anvil Oil & Gas Co., Inc. Anvil Oil Company Antero Resources Corporation CNX Gas Company, LLC Noble Energy Inc. CNX Gas Company, LLC	Not less than 1/8 Not less than 1/8 Name Change Assignment Assignment Assignment Not less than 1/8 Name Change Name Change Assignment Assignment Assignment Assignment	265/415 279/88 265/417 279/90 Unrecorded 445/774 468/769 550/273 265/407 WVSOS WVSOS 445/774 468/769 550/273

<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>
43	1-15-3.1	291198000	Roy Dean Ash Mary Frances Carpenter Recon Resources, LLC	Recon Resources, LLC Recon Resources, LLC CNX Gas Company LLC	Not less than 1/8 Not less than 1/8 Assignment	659/712 659/706 665/593

<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>
54	1-15-5.8	293318000	Dominion Energy Transmission, Inc.	CNX Gas Company LLC	Not less than 1/8	632/237

<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>
-----------------	-----------------------------	-------------------------------	-----------------------------	-----------------------------	----------------	------------------

Tract ID	Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc	Royalty	Book/Page
55	1-15-5.7	293318000	Dominion Energy Transmission, Inc.	CNX Gas Company LLC	Not less than 1/8	632/237
57	1-15-2	279175000	Ernest Lantz Ronald Lee Ash Ralph Arnold Ash Randall Dale Ash and Doretta Lynn Ash The Coastal Corporation Pardee Gas Company Pardee Exploration Company Pardee Resources Group, Inc. Pardee Minerals, LLC Antero Resources Appalachian Corporation Antero Resources Corporation Noble Energy, Inc.	The Coastal Corporation The Coastal Corporation The Coastal Corporation The Coastal Corporation Pardee Gas Company Pardee Exploration Company Pardee Resources Group, Inc. Pardee Minerals, 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 Merger Deed Merger Merger Assignment Name Change Assignment Assignment	279/244 278/554 278/556 278/558 WVSOS 301/416 8/580 WVSOS 416/465 WVSOS 468/769 550/273
74	1-12-20	267434000	Vada Sue Kissner	CNX Gas Company LLC	Not less than 1/8	See Attached
75	1-12-20.3	267434000	Elkhorn Mineral, LLC	CNX Gas Company LLC	Not less than 1/8	659/745
76	1-12-20.4	267434000	Elkhorn Mineral, LLC	CNX Gas Company LLC	Not less than 1/8	659/745
77	1-12-20.1	267434000	Vada Sue Kissner	CNX Gas Company LLC	Not less than 1/8	See Attached
78	1-12-20.5	267434000	Vada Sue Kissner	CNX Gas Company LLC	Not less than 1/8	See Attached
80	1-12-18	266282000	Sandra L. Spence Barbara J. Druchniak Patty L. Buterbaugh Richard B. Smith Antero Resources Corporation Noble Energy, Inc. Charles Alan McCullough and Freda McCullough Noble Energy, Inc. Donald Burl Smith Ronald Carleton Moore Jr. Cheryl Ann Calkins Benny Edwin Smith Roy Lee Smith Jeremy J. Lopez Mariah F. Rittman	Antero Resources Corporation Antero Resources Corporation Antero Resources Corporation Antero Resources Corporation CNX Gas Company, LLC Noble Energy Inc. CNX Gas Company, LLC Noble Energy, Inc. CNX Gas Company, LLC CNX Gas Company, LLC CNX Gas Company LLC CNX Gas Company LLC CNX Gas Company LLC CNX Gas Company LLC CNX Gas Company LLC CNX Gas Company LLC	Not less than 1/8 Not less than 1/8 Not less than 1/8 Not less than 1/8 Assignment Assignment Not less than 1/8 Assignment 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	444/333 444/335 444/337 444/339 468/769 550/273 480/843 550/273 639/318 653/215 653/230 653/225 653/220 See Attached See Attached
87	1-12-21.1	267434000	Elkhorn Mineral, LLC	CNX Gas Company LLC	Not less than 1/8	659/745

RECEIVED
Office of Oil and Gas

OCT 18 2019

WV Department of
Environmental Protection

4014



Sarah Weigand 4709502665
Manager Upstream Permitting
Work: 724-485-3244
Email: SarahWeigand@cnx.com
CNX Center
1000 CONSOL Energy Drive
Canonsburg, PA 15317-6506
724-485-4000
cnx.com

September 26, 2019

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) 485-3244 or SarahWeigand@cnx.com.

Sincerely,

Sarah Weigand

RECEIVED
Office of Oil and Gas

OCT 18 2019

WV Department of
Environmental Protection

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

Date of Notice Certification: 10-16-19

API No. 47- _____
Operator's Well No. SHR37FHSM
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>513313.40</u>
County: <u>Tyler</u>		Northing: <u>4355980.52</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		OOG OFFICE USE ONLY
<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"/> RECEIVED/ NOT REQUIRED
<input type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input checked="" type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED		<input type="checkbox"/> RECEIVED
<input 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 checked="" type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)		<input type="checkbox"/> RECEIVED/ NOT REQUIRED
<input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION		<input type="checkbox"/> RECEIVED
<input checked="" type="checkbox"/> 5. PUBLIC NOTICE	RECEIVED Office of Oil and Gas	<input type="checkbox"/> RECEIVED
<input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION	OCT 18 2019	<input type="checkbox"/> RECEIVED

Required Attachments:

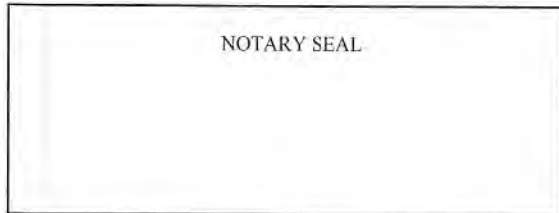
The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication 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.

WV Department of
Environmental Protection

Certification of Notice is hereby given:

THEREFORE, I Sarah Weigand, 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>Sarah Weigand <i>Sarah Weigand</i></u>		<u>Canonsburg, PA 15317</u>
Its:	<u>Manager Upstream Permitting</u>	Facsimile:	<u></u>
Telephone:	<u>724-485-3244</u>	Email:	<u>SarahWeigand@CNX.com</u>



Subscribed and sworn before me this 8 day of October.
Todd Fleming Notary Public
My Commission Expires September 23, 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 depprivacyofficer@wv.gov.

COMMONWEALTH OF PENNSYLVANIA
 NOTARIAL SEAL
 Todd Fleming, Notary Public
 Cecil Twp., Washington County
 My Commission Expires Sept. 23, 2020
 MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

RECEIVED
Office of Oil and Gas

OCT 18 2019

WV Department of
Environmental Protection

WW-6A
(9-13)

4709-02665
API NO. 47-
OPERATOR WELL NO. SHR37FHSM
Well Pad Name: SHR37

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: 10-16-19 Date Permit Application Filed: 10-17-19

Notice of:

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

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

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

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

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

SURFACE OWNER(s)
Name: CNX Gas Company LLC
Address: 1000 Consol Energy Drive
Canonsburg, PA 15317
Name: _____
Address: _____

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

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

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.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

WW-6A
(8-13)

API NO. 47- _____ - _____
 OPERATOR WELL NO. SHR37FHSM
 Well Pad Name: SHR37

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

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

WW-6A
(8-13)

API NO. 47- _____ - _____
 OPERATOR WELL NO. SHR37FHSM
 Well Pad Name: SHR37

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.

RECEIVED
Office of Oil and Gas

OCT 18 2019

WV Department of
Environmental Protection

WW-6A
(8-13)

47 09 02665

API NO. 47- _____
OPERATOR WELL NO. SHR37FHSM
Well Pad Name: SHR37

Notice is hereby given by:

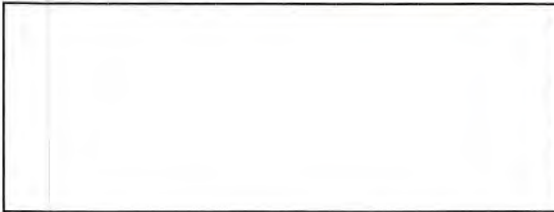
Well Operator: CNX Gas Company, LLC
Telephone: 724-485-3244
Email: SarahWeigand@CNX.com

Sarah Weigand

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.



Subscribed and sworn before me this 8 day of October 2019.

Todd Fleming Notary Public

My Commission Expires September 23, 2020

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
Todd Fleming, Notary Public
Cecil Twp., Washington County
My Commission Expires Sept. 23, 2020
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

RECEIVED
Office of Oil and Gas

OCT 18 2019

WV Department of
Environmental Protection

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

CNX RESOURCES CORPORATION
1000 CONSOL ENERGY DRIVE
CANONSBURG, PA 15317

RYAN & 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

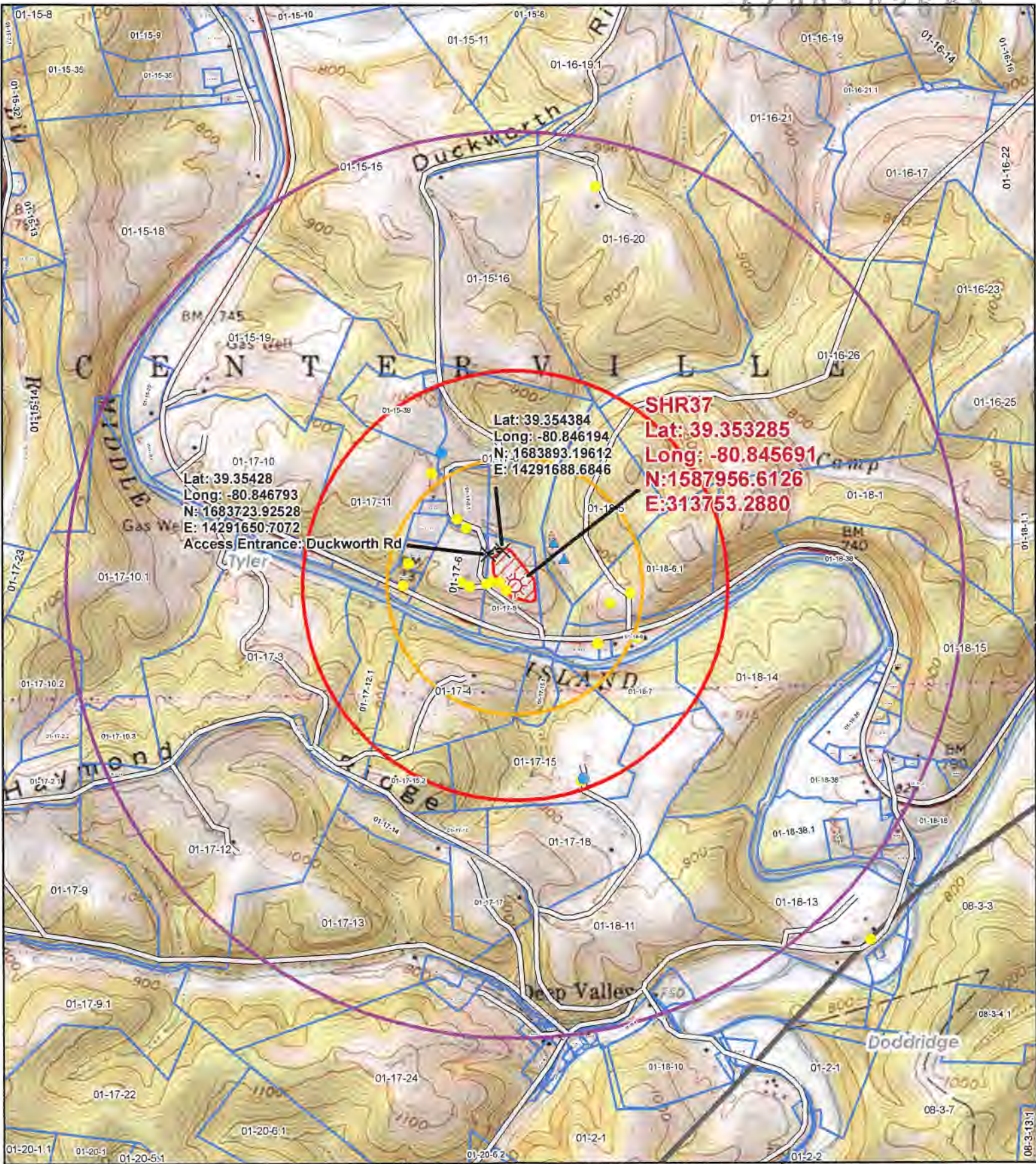
GAIL WILLIAMSON
195 DUCKWORTH RIDGE ROAD
ALMA, WV 26320

DOUG LANTZ
1376 MIDWAY ROAD
BELINGTON, WV 26250

RECEIVED
Office of Oil and Gas

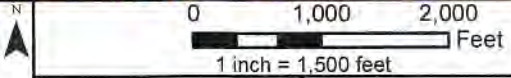
OCT 18 2019

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



Original Date: 12/14/2018 Prepared By: GIS

Revision Date: 12/14/2018 Approved By: GIS

This map is property of CNX Land Resources Inc, and contains information that is proprietary and confidential in nature and may not be copied or reproduced without prior written consent.

© Copyright CNX Land Resources Inc. 2011

Topographic Well Map
SHR37

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: _____ **Date Permit Application Filed:** _____

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

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: West Virginia	UTM NAD 83	Easting: 513313.40	
County: Tyler		Northing: 4355980.52	
District: Centerville	Public Road Access:	Duckworth Ridge Road (CR 58/2)	
Quadrangle: West Union	Generally used farm name:	CNX	
Watershed: Headwaters Middle Island Creek			

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: 724-485-3244	Canonsburg, PA 15317
Email: SarahWeigand@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.

RECEIVED
Office of Oil and Gas

OCT 18 2019

WV Department of
Environmental Protection

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

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

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

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
Douglas E. Smith, Notary Public
Cecil Twp., Washington County
My Commission Expires Dec. 6, 2020
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

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 of your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@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

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

Neil A Archer II
 Tyler County 10:31:59 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

RECEIVED
 Office of Oil and Gas

OCT 18 2019

WV Department of
 Environmental Protection



Sarah Weigand
Manager Upstream Permitting
Work: 724-485-3244
Email: SarahWeigand@cnx.com

CNX Center
1000 CONSOL Energy Drive
Canonsburg, PA 15317-6506
724-485-4000
cnx.com

October 4, 2019

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

RE: SHR37FHSM Waiver Request

To Whom It May Concern:

CNX Gas Company LLC (CNX) as surface and coal owner of the SHR37FHSM drill tract hereby waives the right to receive the Notice of Intent to Drill. An executed Voluntary Statement of No Objection form has been included with this application.

If any further information or correspondence is required, please contact me at (724) 485-3244 or SarahWeigand@cnx.com.

Sincerely,

A handwritten signature in blue ink that reads 'Sarah Weigand'.

Sarah Weigand

RECEIVED
Office of Oil and Gas

OCT 18 2019

WV Department of
Environmental Protection



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
shr37fhs 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.

Very Truly Yours,

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

RECEIVED
Office of Oil and Gas

OCT 18 2019

WV Department of
Environmental Protection

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

RECEIVED
Office of Oil and Gas

OCT 18 2019

WV Department of
Environmental Protection



LOCATION MAP
USGS- WEST UNION, WV
Scale: 1"=200'

CNX RESOURCES CORPORATION

SHIRLEY 37 WELL PAD

AS-BUILT

ENTRANCE LOCATION

NAD 83 - LAT: 39° 21' 15.32"; LONG: 80° 50' 48.62"

NAD 27 - LAT: 39° 21' 15.02"; LONG: 80° 50' 49.24"

CENTERVILLE DISTRICT,
TYLER COUNTY, WEST VIRGINIA

DATE: JULY 02, 2019



LOCATION MAP
Scale: 1"=200'

I hereby certify that I am a licensed engineer in the state of West Virginia. This As-Built certifies, to the best of my knowledge, information and belief, the Well Pad constructed by Anderson Excavating in Tyler County, WV on behalf of CNX Resources Corporation, has been constructed in general conformance to the plans and specifications and, in my professional opinion, is in compliance with applicable laws, codes, and ordinances.



**WVDEP OOG
ACCEPTED AS-BUILT**

VBJ 10/31/2019



Know what's below.
Call before you dig.



SHEET INDEX	
DWG #	DRAWING NAME
1	COVER SHEET
2	PLAN VIEW
3	PLAN VIEW WITH ORTHO
4	ACCESS ROAD PROFILE

Note: Drawing was created on 22x34 paper. 11x17 drawings are half scale. Refer to scale bar for proper scaling.

THE INFORMATION CONTAINED HEREIN IS THE SOLE PROPERTY OF THE THRASHER GROUP INC. REPRODUCTION OF THESE DOCUMENTS IN WHOLE OR IN PART, FOR ANY REASON WITHOUT PRIOR WRITTEN PERMISSION, IS STRICTLY PROHIBITED. COPYRIGHT © 2018 THE THRASHER GROUP INC.

1	DATE	DESCRIPTION
2	DATE	DESCRIPTION
3	DATE	DESCRIPTION
4	DATE	DESCRIPTION



DESIGNER	DATE
CHECKED	DATE
REVIEWED	DATE
APPROVED	DATE
DATE	



1720 WILSON DRIVE HIGHWAY
BURTON WV 26022
www.thrashereng.com

PHASE NO.	
CONTRACT NO.	
PROJECT NO.	050-10290

CNX RESOURCES CORPORATION
SHIRLEY 37 SITE
PAD AS-BUILT
TYLER COUNTY, WEST VIRGINIA
COVER SHEET

SHEET NO.
1

