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west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Friday, April 06, 2018  
WELL WORK PERMIT  
Horizontal 6A / New Drill

CNX GAS COMPANY LLC  
POST OFFICE BOX 1248

JANE LEW, WV 263786506

Re: Permit approval for SHR 31 CHSM  
47-095-02490-00-00

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

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

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

  
James A. Martin  
Chief

Operator's Well Number: SHR 31 CHSM  
Farm Name: ALLEN W. SECKMAN, ET AL.  
U.S. WELL NUMBER: 47-095-02490-00-00  
Horizontal 6A New Drill  
Date Issued: 4/6/2018

## 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

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

## PERMIT CONDITIONS

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

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

1) Well Operator: CNX Gas Company, LLC    494458046    Tyler    McElroy    Shirley  
Operator ID    County    District    Quadrangle

2) Operator's Well Number: SHR31CHSM    Well Pad Name: SHR31

3) Farm Name/Surface Owner: Seckman    Public Road Access: CR 58

4) Elevation, current ground: 1091'    Elevation, proposed post-construction: 1091'

5) Well Type (a) Gas X    Oil \_\_\_\_\_    Underground Storage \_\_\_\_\_

Other \_\_\_\_\_

(b) If Gas Shallow X    Deep \_\_\_\_\_

Horizontal X

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 @ 6683'-6731' TVD, 48' thick, expected formation pressure ~4000 psi

8) Proposed Total Vertical Depth: 6725' TVD at TD (dependent upon formation dip)

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

10) Proposed Total Measured Depth: 14,930' MD at TD

11) Proposed Horizontal Leg Length: 7608'

12) Approximate Fresh Water Strata Depths: 125', 580'

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

14) Approximate Saltwater Depths: 2271'

15) Approximate Coal Seam Depths: No known coal seams

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: \_\_\_\_\_

18) **CASING AND TUBING PROGRAM**

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	20	New	L/S	<94.0	129	100	96 / CTS
Fresh Water	13.375	New	J-55	54.5	709	680	472 / CTS
Coal	N/A						
Intermediate	9.625	New	J-55	36.0	2604	2575	840 / CTS
Production	5.5	New	P-110	20.0	14959	14930	2830 / TOC @ 2075'
Tubing	2.375	New	J-55	4.7	Above assumes RF=29'	TBD	N/A
Liners	N/A						

*DMH 11/21/17*

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

**PACKERS**

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Kind:	N/A			NOV 28 2017
Sizes:				WV Department of Environmental Protection
Depths Set:				



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

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

*DW 11/21/17*

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

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

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 41.57

22) Area to be disturbed for well pad only, less access road (acres): 7.42

23) Describe centralizer placement for each casing string:

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

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

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

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25) Proposed borehole conditioning procedures:

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

WV Department of Environmental Protection

\*Note: Attach additional sheets as needed.

### SHR31 Cement Additives

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

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**DRILLING WELL PLAN**  
**SHR31CHSM (Marcellus HZ)**  
**Marcellus Shale Horizontal**  
**Tyler County, WV**

95-02490

Ground Elevation		1091' GL Elevation		SHR31CHSM SHL		SHR31CHSM LP		SHR31CHSM BHL		CENTRALIZERS		CONDITIONING		COMMENTS			
Azimuth		161°															
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	Stabilize surface fill/soil						
	17-1/2"	13-3/8" 54.5# J-55 BTC	Shallowest Fresh Water		125				15.5 ppg Class A + 1% to 3% CaCl2 + 1/4 pps Flake + 20% OH Excess Yield = 1.19 TOC @ surface	Centralize every 3rd joint from shoe to surface Bow spring centralizers	Ensure the hole is clean at section TD	Set through fresh water zones Cemented to surface No known coal seams					
			Deepest Fresh Water		580					Centralize every 3rd joint from shoe to surface Bow spring centralizers							
			Fresh Water Casing		730												
	12-1/4"	9-5/8" 36.0# J-55 LTC	No known coal zones			N/A			15.6 ppg Class A + 0% to 2% CaCl2 + 1/4 pps Flake + 20% OH Excess Yield = 1.19 TOC @ surface	Centralize every 3rd joint from shoe to surface Bow spring centralizers	Soap the hole as needed and ensure the hole is clean at section TD	Set through potential salt water zones Cemented to surface Casing to be set ~200'-250' below the Big Injun base					
			Big Lime			2200											
			Big Injun			2271											
			Price			2325											
	8-3/4" Tangent	5-1/2" 20.0# P-110 VAR	Weir			2478											
			Intermediate Casing			2575											
Berea					2669												
Gordon					3095												
Warren					3598												
Lower Huron					3686												
Benson					5156												
Alexander					5400												
Cashaqua					6399												
Burkett					6614												
8-1/2" Curve & Lateral		Tully			6646												
		Hamilton			6667												
		Marcellus			6683												
		Production Casing			14930												
						12.0-12.5 ppg SOBMM		10% OH Excess Yield = 1.07		15.2 ppg Class H 50:50 Class H:PoZ with additives (retarder, suspension agent, gas block, defoamer, fluid loss, extender, etc.)		Centralize every joint from shoe to KOP - then every 3rd joint from KOP to TOC		Once at TD, circulate at max flowrate with max rotation until shakers clean-up (typically requires multiple bottoms-up)		Note: Actual centralizer placement may be changed due to hole conditions	
								TOC @ >= 500' above 9-5/8" shoe		Single-piece/rigid bow centralizers		Once on bottom with casing, circulate a minimum of one hole volume prior to pumping cement		Note: Actual cement blends may vary slightly depending upon service company utilized			

LP @ +/- 6725' TVD  
 8-3/4" x 8-1/2" Hole - Cemented Long String  
 5-1/2" 20.0# P-110 VAR

+/- 7508' Lateral  
 TD @ +/- 6725' TVD

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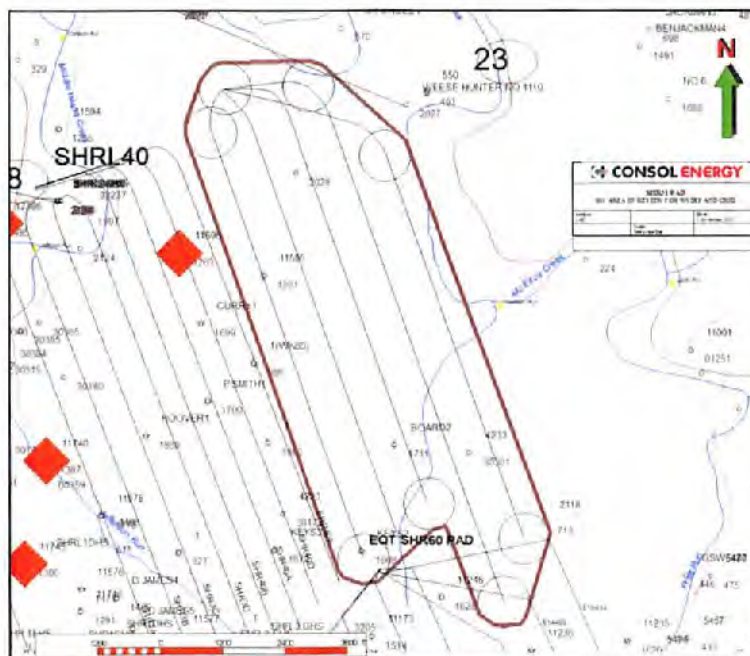
## SHR31 Pad Frac - SOG Review

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

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

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

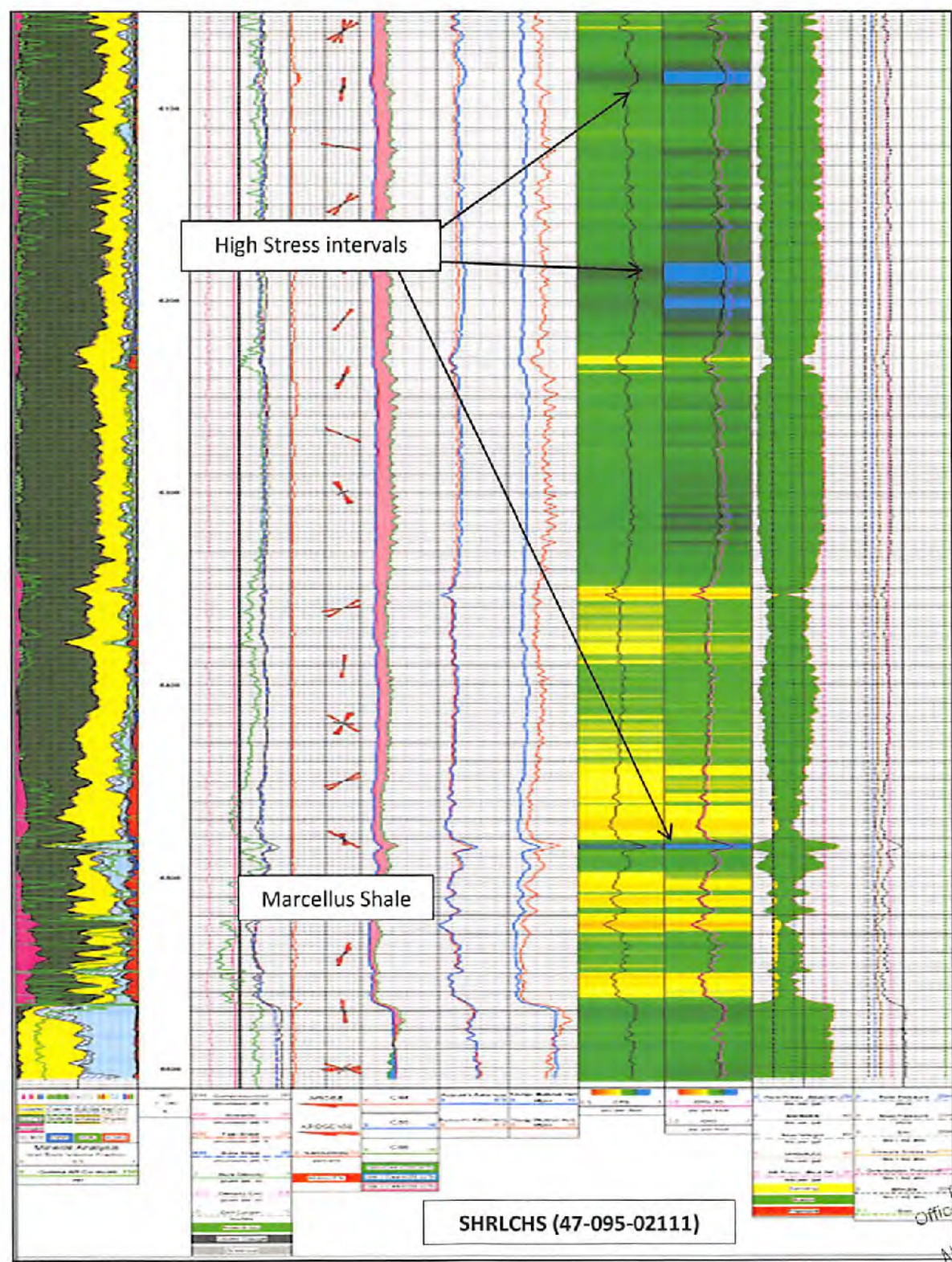
Figure 1. SOG Communication events in the SHR31 area are represented by red diamonds below. These events were in conjunction with the SHRL1, SHRL3, and SHRL40 fracs (pads immediately to the west, already completed).



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

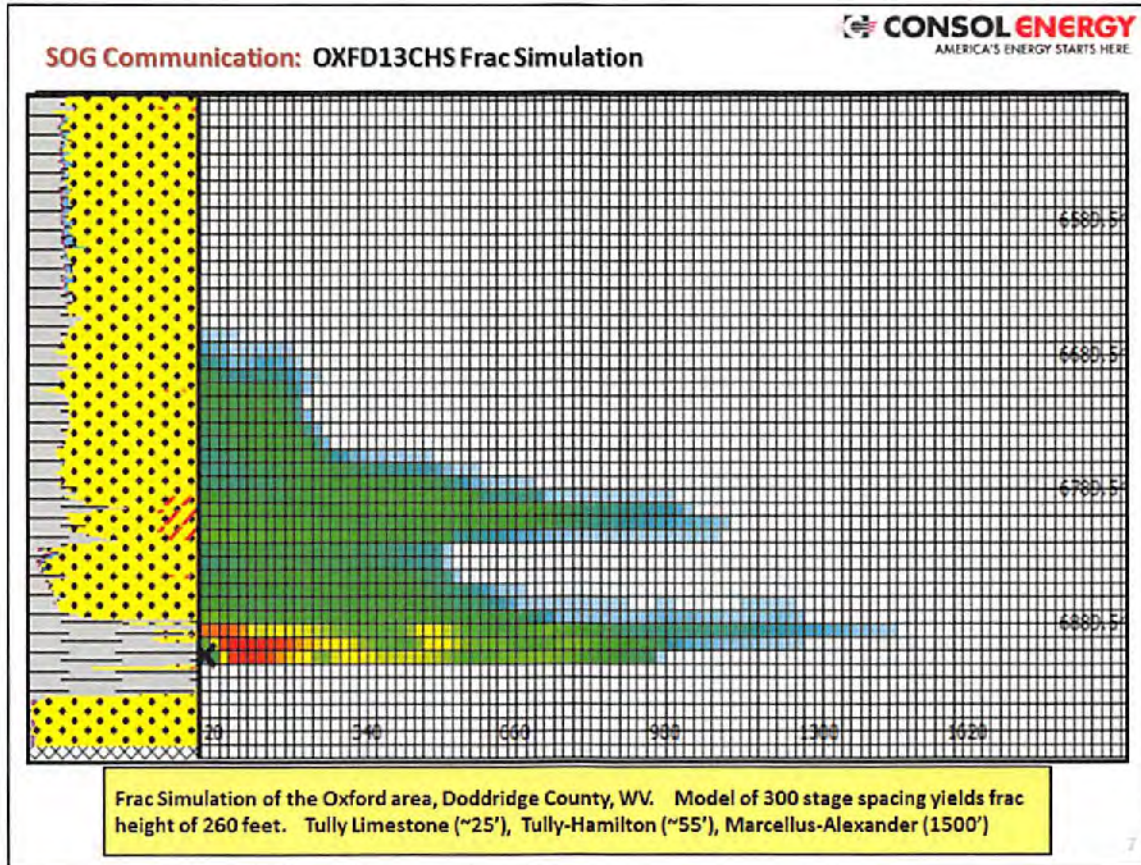


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Figure 3. Stratigraphic intervals of high stress should serve as adequate frac barriers for a Marcellus frac. The frac modeling example below is from the Oxford area of western Doddridge County, where the Marcellus and adjacent shallower shales are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



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

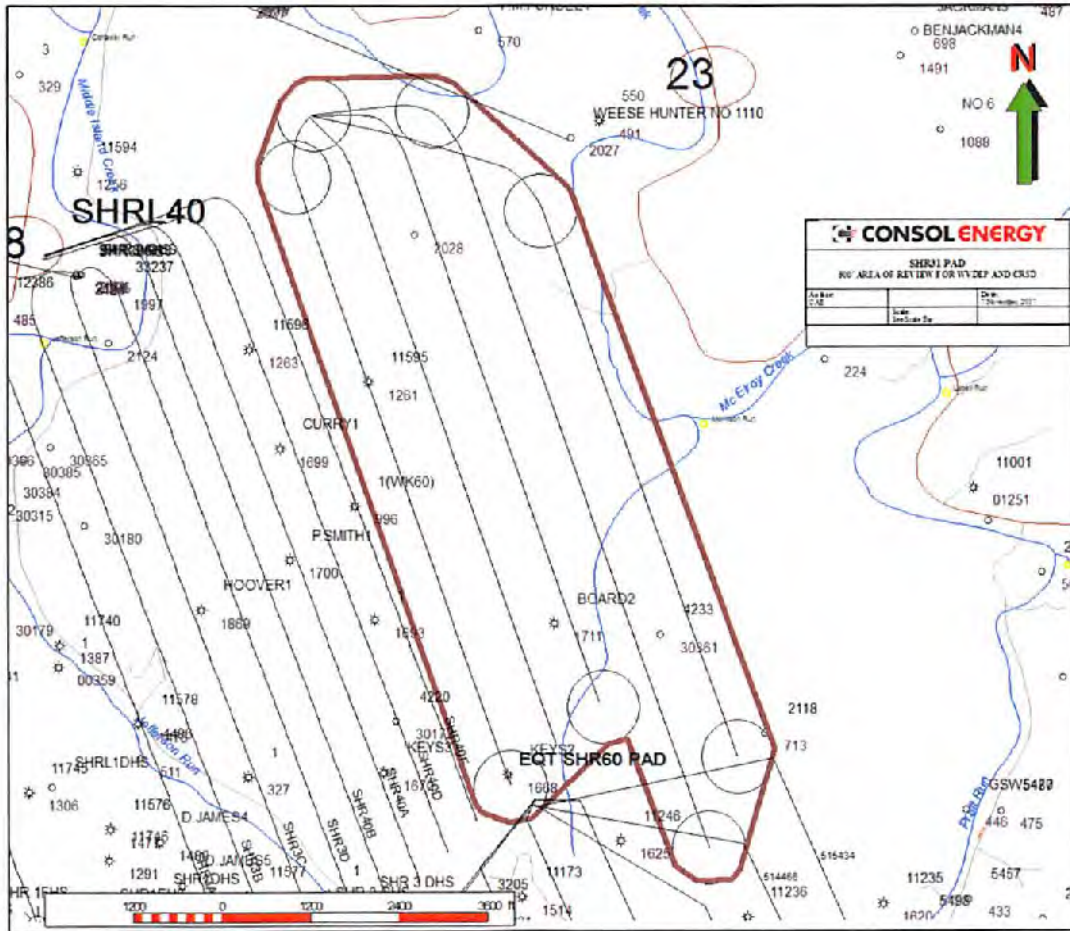


Figure 5. All wells within 500' buffer around the SHR31 pad have been reviewed and listed below.

API	OPERATOR	WELL NAME	WELL #	LAT	LONG	STATUS	TD	STATUS COMMENTS	DISTANCE FROM LATERAL	PERMIT DATE
4709500713	Abandoned	UNDERWOOD W	2118	39.39715	-80.80017	ABANDONED	2731	ABANDONED BIG INJUN PRODUCING DENSON, RILEY	400'	4/27/1971
4709501261	CONSOL	SECKMAN L	11595	39.4102	-80.81014	GAS	5292	PRODUCING GORDON, BIG INJUN	30'	10/6/1988
4709501668	ALLIANCE PETROLEUM CORP	KEYS MARY	KEYS2	39.39563	-80.81234	GAS	2230	PRODUCING GORDON, BIG INJUN	10'	11/3/1996
4709501711	ALLIANCE PETROLEUM CORP	BOARD MARVIN	BOARD2	39.40126	-80.81027	GAS	2956	CANCELLED MARCELLUS PERMIT	240'	6/4/2001
4709502028	Triad Hunter, LLC.	WEESE PAD	WEESE HUNTER NO 1111	39.41564	-80.81692	CANBH		PRODUCING MARCELLUS LATERAL	245'	4/25/2011
4709502027	Triad Hunter, LLC.	WEESE PAD	WEESE HUNTER NO 1110			GAS	6407	PLUGGED GORDON 2/18/1944	350'	4/25/2011
4709530361	Hope Natural Gas Company	D N Furbee	4233	39.40085	-80.80517	ABDGAS	2620	PERMITTED MARCELLUS LATERAL	330'	8/30/1916
4709502365	EQT PRODUCTION CO	SHR60 PAD	515434			PERMIT ISSUED		PERMITTED MARCELLUS LATERAL	510'	10/17/2016
4709502342	EQT PRODUCTION CO	SHR60 PAD	514466			PERMIT ISSUED		PERMITTED MARCELLUS LATERAL	465'	3/31/2016
4709502341	EQT PRODUCTION CO	SHR60 PAD	514465			PERMIT ISSUED		PERMITTED MARCELLUS LATERAL	380'	3/31/2016
4709502364	EQT PRODUCTION CO	SHR60 PAD	514461			PERMIT ISSUED		PERMITTED MARCELLUS LATERAL	380'	7/23/2015
4709502257	EQT PRODUCTION CO	SHR60 PAD	514460			PERMIT ISSUED		PERMITTED MARCELLUS LATERAL	380'	7/23/2015
4709502256	EQT PRODUCTION CO	SHR60 PAD	514464			PERMIT ISSUED		PERMITTED MARCELLUS LATERAL	380'	7/23/2015
4709502220	EQT PRODUCTION CO	SHR60 PAD	514463			PERMIT ISSUED		PERMITTED MARCELLUS LATERAL	380'	3/24/2015
4709502255	EQT PRODUCTION CO	SHR60 PAD	514462			PERMIT ISSUED		PERMITTED MARCELLUS LATERAL	380'	7/23/2015

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## SHR31 PAD GEOLOGICAL PROGNOSIS

Top Depth from Ground Elevation (TVD)	Formation	Possible Show	Coal Seam Thickness (FEET)	Minable Coal Seam	General Rock Type	Drilling Problems	Type of Formation Evaluation
0	Soil & Colluvium				Soil & Rock		
470, 580	Deepest Fresh Water						
	No known coals this far west		none	no			
	Sand and Red Rock				Sand & Shale		
2200	Big Lime (no red rock deeper than this depth)				Limestone		
2271	Big Injun Top	GAS / SALTWATER			Sand		
2325	Price Formation				Sandstone		
2478	Weir Sand				Sandstone		
2669	Berea				Sandstone		
2677	Devonian Shale Top				Grey Shale		
3095	Gordon				Sandstone		
3588	Warren Sand				Sandstone		
3986	Lower Huron	GAS			Grey Shale		
5156	Benson				Siltstone		
5400	Alexander	GAS			Siltstone		
6399	Cashaqua Shale				Grey Shale		
6505	Middlesex				Grey Shale		
6546	West River				Grey Shale		
6614	Burket Shale	GAS			Black Shale		
6646	Tully Limestone				Limestone		
6667	Hamilton				Grey Shale		
6683	Upper Marcellus	GAS			Black Shale		
6699	Middle Marcellus	GAS			Black Shale		
6713	Cherry Valley	GAS			Limestone		
6720	Lower Marcellus	GAS			Black Shale		
6731	Onondaga Limestone				Limestone		

The Big Injun and Gordon Sands may produce oil and/or water.

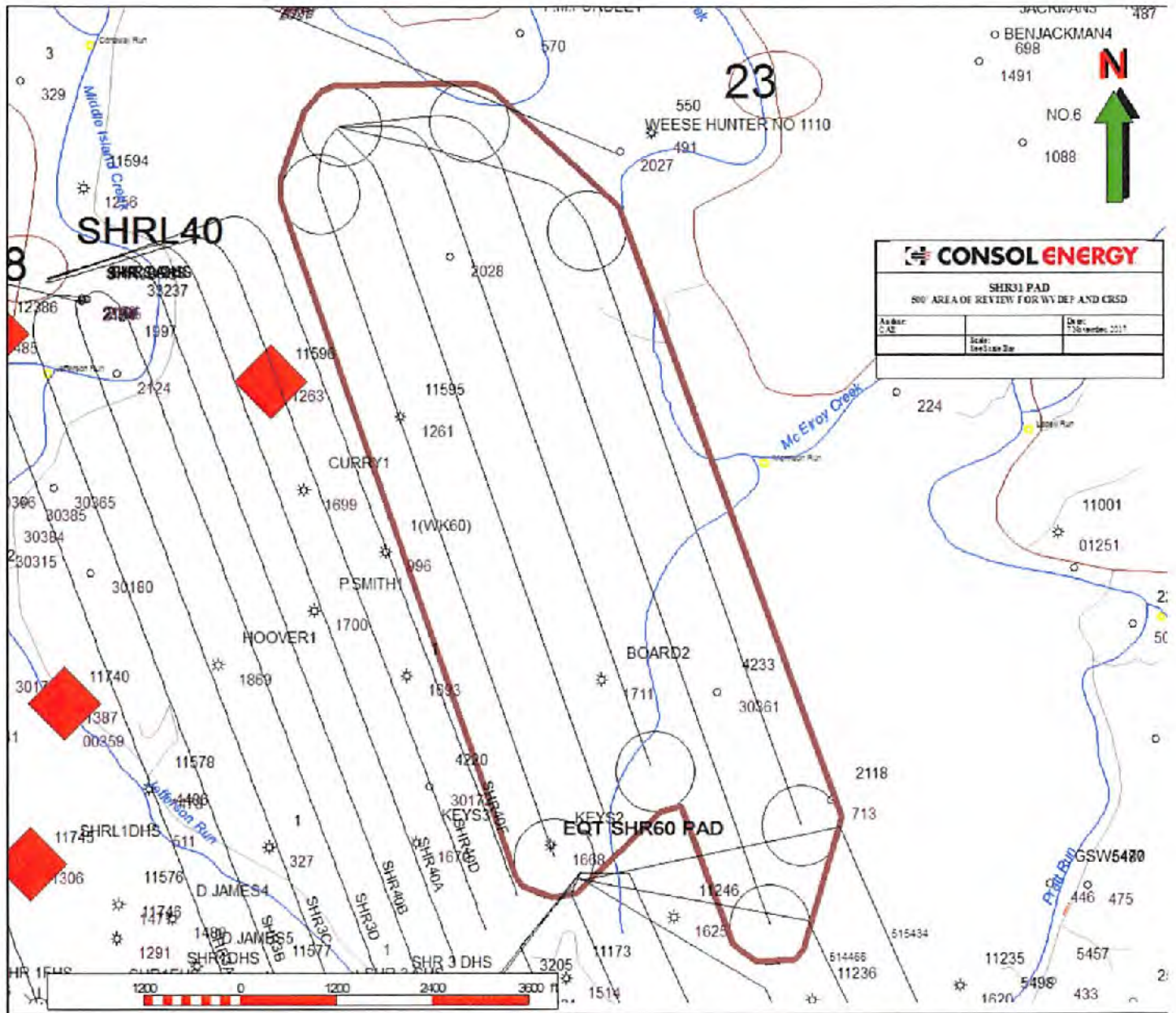
No drilling problems are anticipated.

The Marcellus is expected to be overpressured

No pilot hole logs will be ran on one well on this pad.

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## SHRL AREA WITH SOG COMMUNICATION WELLS



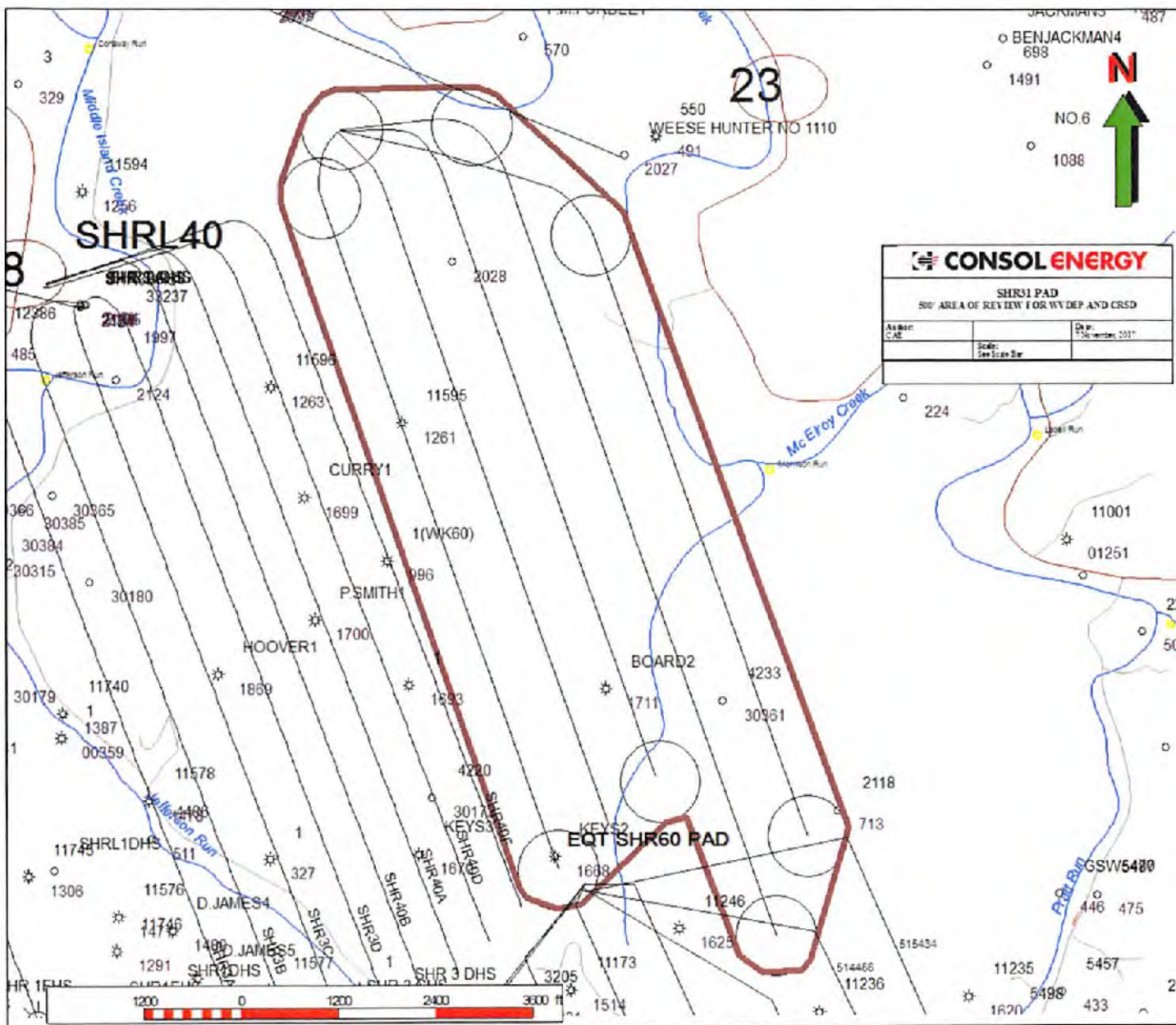
The SHR31 Pad to be frac'd (in maroon) is in an area of pervasive communication. Many Shallow O&G wells are being effected by gas migration from the Marcellus pad fracs, charging the Benson reservoir, which is the primary producing reservoir of the SOG wells.

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

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# SHR31 PAD



All wells within a 500' buffer have been reviewed.

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## SHR31 WELL REVIEW WITHIN 500' AREA OF REVIEW

API	OPERATOR	WELL NAME	WELL #	LAT	LONG	STATUS	TD	STATUS COMMENTS	DISTANCE FROM LATERAL	PERMIT DATE
4709500713	Abandoned	UNDERWOOD W	2118	39.39715	-80.80017	ABANDONED	2731	ABANDONED BIG INJUN	460'	4/27/1971
4709501261	CONSOL	SECKMAN L	11595	39.4102	-80.81914	GAS	5292	PRODUCING BENSON, RILEY	30'	10/6/1988
4709501668	ALLIANCE PETROLEUM CORP	KEYS MARY	KEYS2	39.39563	-80.81254	GAS	2230	PRODUCING BIG INJUN	10'	11/3/1996
4709501711	ALLIANCE PETROLEUM CORP	BOARD MARVIN	BOARD2	39.40126	-80.81027	GAS	2956	PRODUCING GORDON, BIG INJUN	240'	6/4/2001
4709502028	Triad Hunter, LLC.	WEESE PAD	WEESE HUNTER NO 1111	39.41564	-80.81692	CANBH		CANCELLED MARCELLUS PERMIT	245'	4/25/2011
4709502027	Triad Hunter, LLC.	WEESE PAD	WEESE HUNTER NO 1110			GAS	6407	PRODUCING MARCELLUS LATERAL	356'	4/25/2011
4709530361	Hope Natural Gas Company	D N Furbee	4233	39.40085	-80.80517	ABDGAS	2620	PLUGGED GORDON 2/18/1944	330'	8/30/1916
4709502365	EQT PRODUCTION CO	SHR60 PAD	515434			PERMIT ISSUED		PERMITTED MARCELLUS LATERAL	510'	10/17/2016
4709502342	EQT PRODUCTION CO	SHR60 PAD	514466			PERMIT ISSUED		PERMITTED MARCELLUS LATERAL	465'	3/31/2016
4709502341	EQT PRODUCTION CO	SHR60 PAD	514465			PERMIT ISSUED		PERMITTED MARCELLUS LATERAL	380'	3/31/2016
4709502264	EQT PRODUCTION CO	SHR60 PAD	514461			PERMIT ISSUED		PERMITTED MARCELLUS LATERAL	380'	7/23/2015
4709502257	EQT PRODUCTION CO	SHR60 PAD	514460			PERMIT ISSUED		PERMITTED MARCELLUS LATERAL	380'	7/23/2015
4709502256	EQT PRODUCTION CO	SHR60 PAD	514464			PERMIT ISSUED		PERMITTED MARCELLUS LATERAL	380'	7/23/2015
4709502220	EQT PRODUCTION CO	SHR60 PAD	514463			PERMIT ISSUED		PERMITTED MARCELLUS LATERAL	380'	3/24/2015
4709502255	EQT PRODUCTION CO	SHR60 PAD	514462			PERMIT ISSUED		PERMITTED MARCELLUS LATERAL	380'	7/23/2015

CONSOL wells to monitor in pink.

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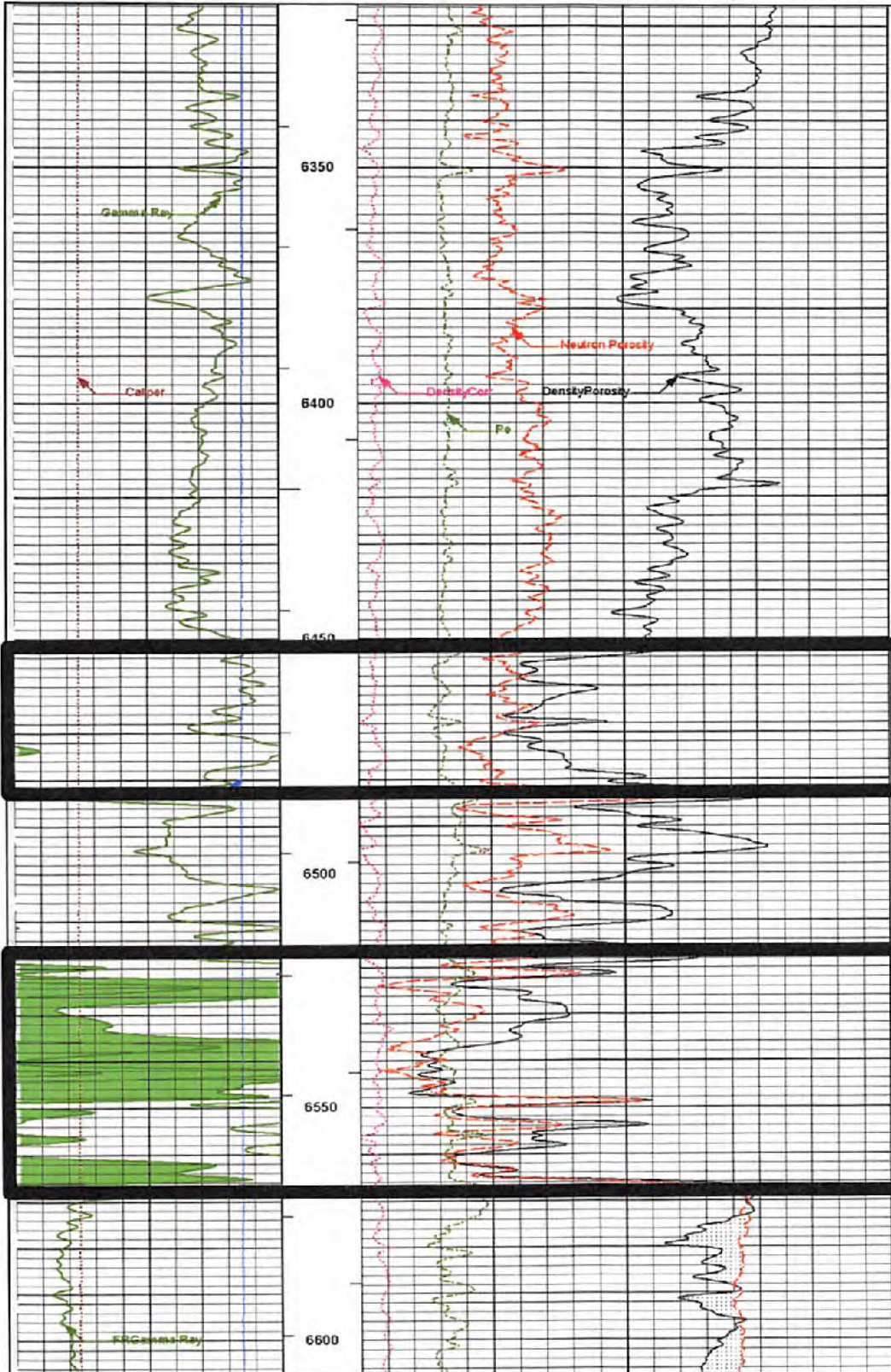
WV Department of  
Environmental Protection  
4

04/6/2018



# SHRL Area Type Log (SHRL1C)

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



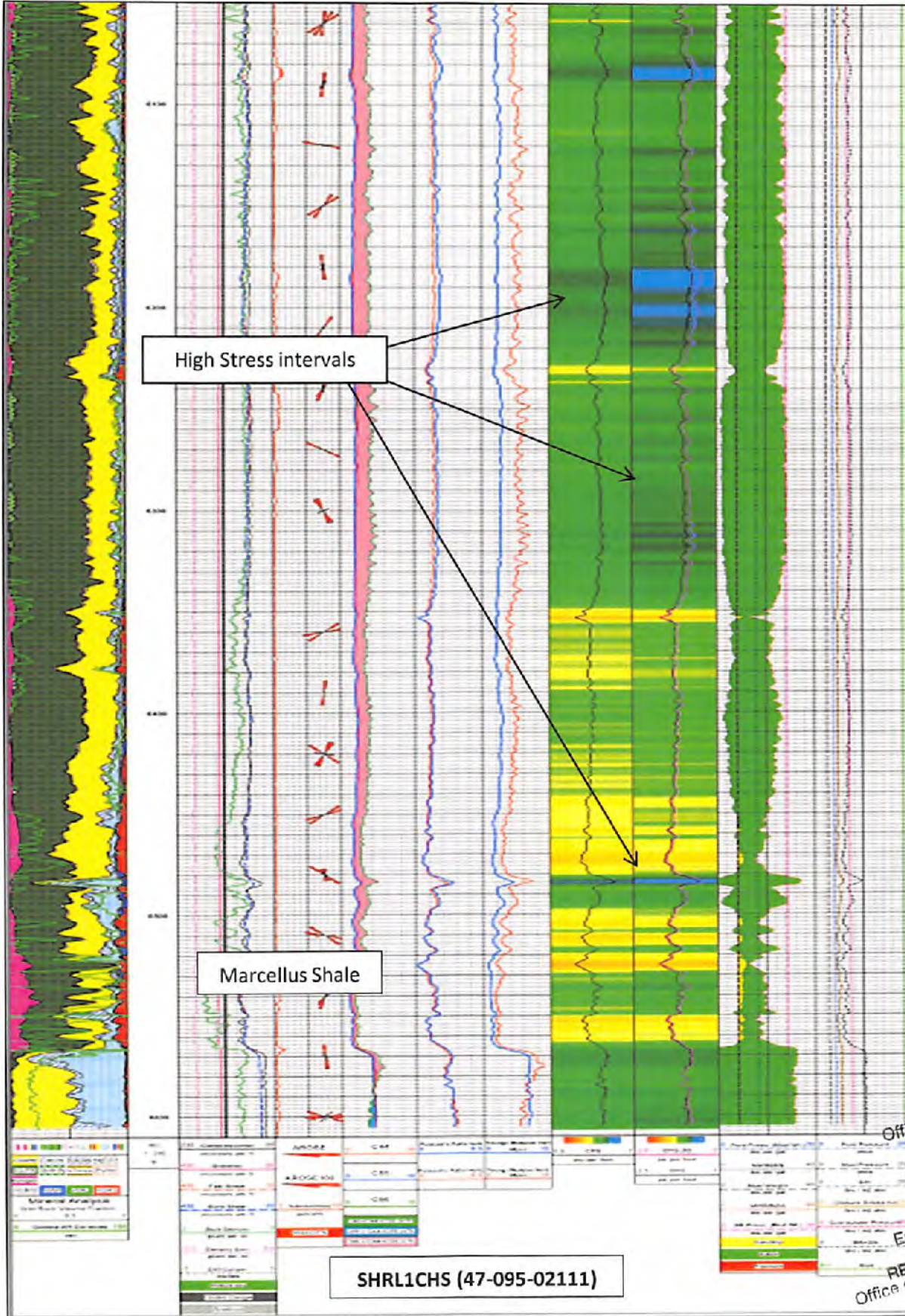
Burket

Marcellus  
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 Environmental Protection

SHR1CHS  
 47-095-02111  
 GL: 1013'



# SHRL Area Stress Profile Log (SHRL1C)



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WW-9  
(4/16)

API Number 47 - 95 02490  
Operator's Well No. SHR31HSM

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) McElroy Creek Quadrangle Shirley

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: Closed Loop- No utilization of a pit

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

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection ( UIC Permit Number see attached )
- Reuse (at API Number at next anticipated well )
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain \_\_\_\_\_)

*DMAH 11/21/17*

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

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. Air/water based mud through intermediate string than 500M

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

Additives to be used in drilling medium? Please see attached sheet

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc.

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

-Landfill or offsite name/permit number? please see attached sheet

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

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

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

Company Official Signature *Raymond Hoon*

Company Official (Typed Name) Raymond Hoon

Company Official Title Permitting Supervisor

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Environmental Protection

Subscribed and sworn before me this 8<sup>th</sup> day of November, 20 17

*[Signature]*

Notary Public



My commission expires 11/27/2021

04/6/2018

CNX Gas Company LLC

Proposed Revegetation Treatment: Acres Disturbed 41.57 Prevegetation pH 6.0

Lime 2-3 Tons/acre or to correct to pH \_\_\_\_\_

Fertilizer type 10-20-20 or equal

Fertilizer amount 500 lbs/acre

Mulch hay or straw at 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Tall Fescue	40	Tall Fescue	40
Ladino Clover	5	Ladino Clover	5

\*\*alternative seed mixtures are shown on the site design.

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: Derek M. Haught

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Title: Oil & Gas Inspector

Date: 11/21/17

Field Reviewed?  Yes  No

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## Cuttings Disposal/Site Water

### Cuttings –Haul off Company:

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

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

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

### Disposal Locations:

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

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

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

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

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

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

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

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

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

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

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

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

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

**Water Haul off Companies:**

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

**Disposal Locations:**

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

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

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

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

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

*DMH 11/29/17*





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



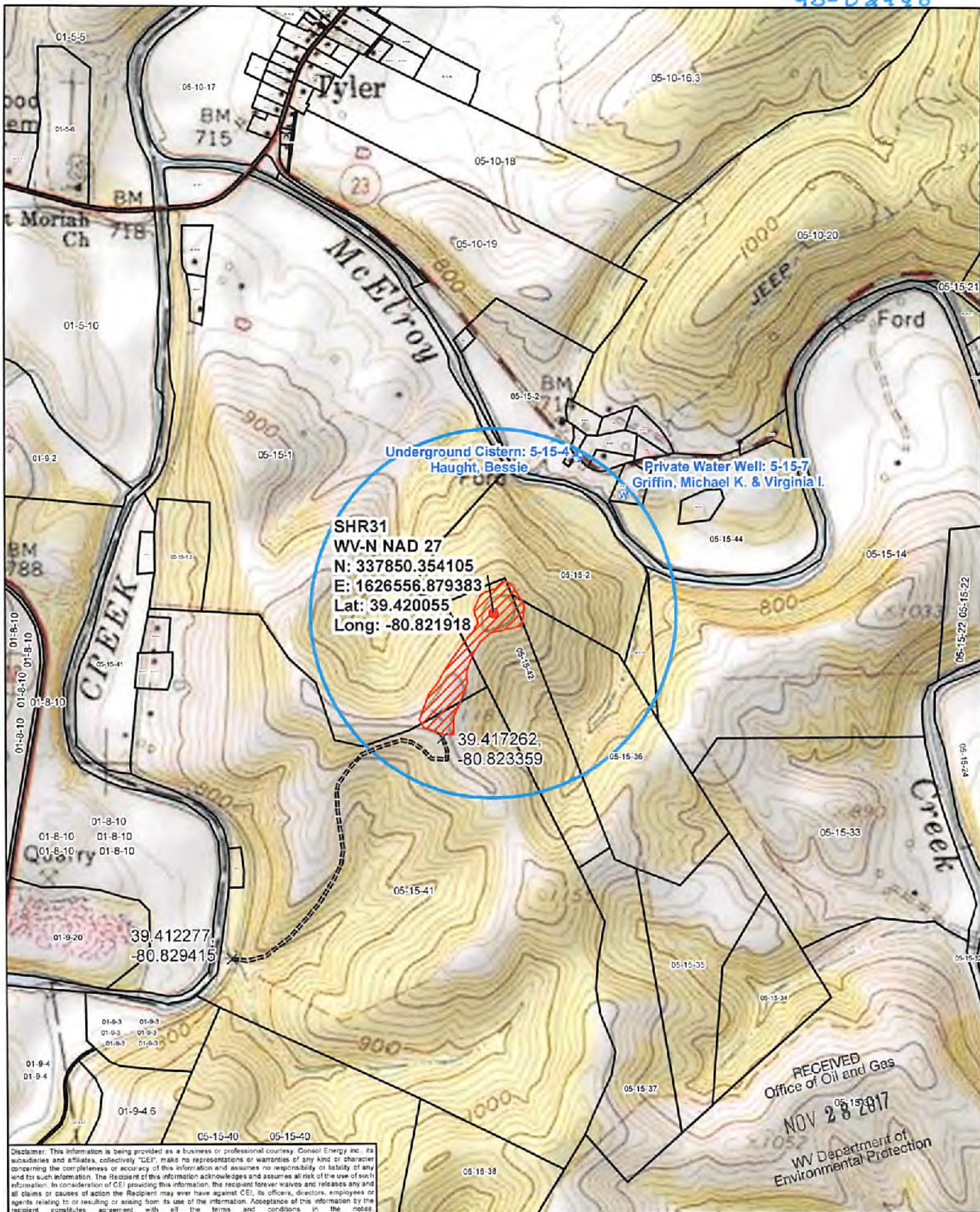
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Underground Cistern: 5-15-4  
 Haught, Bessie

Private Water Well: 5-15-7  
 Griffin, Michael K. & Virginia I.

SHR31  
 WV-N NAD 27  
 N: 337850.354105  
 E: 1626556.879383  
 Lat: 39.420055  
 Long: -80.821918

39.417262,  
 -80.823359

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- Legend
- Well Pad
  - ⊕ Water Well
  - ⊙ Cistern
  - ✕ Intersection
  - === Access Road
  - 1500' Water Wells Buffer
  - ▨ Well Pad Boundary
  - Surface Parcel

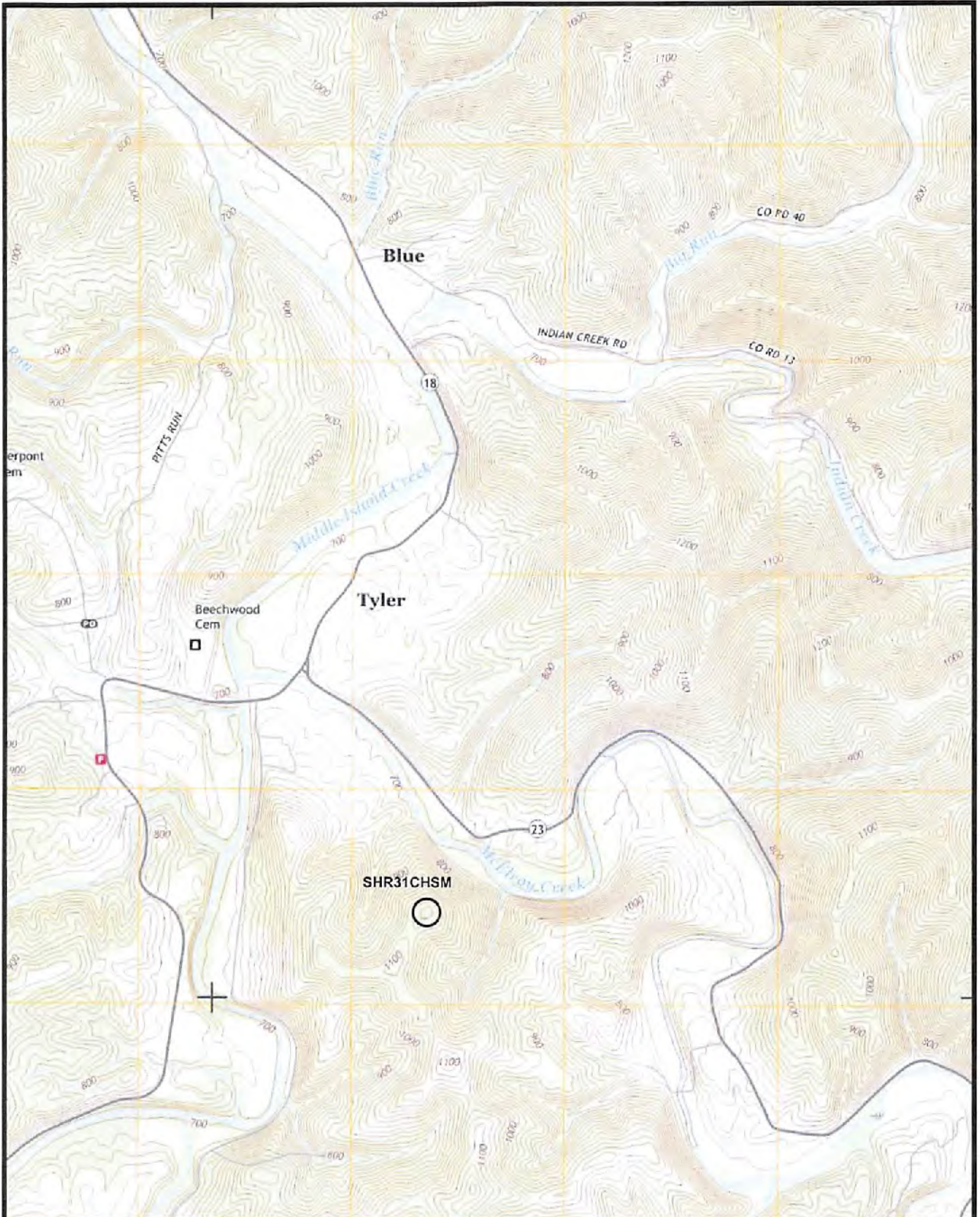


Date: 11/9/2017		Prepared By: GIS	
Revisions: 1		Approved By:	
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**CONSOL ENERGY**

Site Safety Plan  
 04/6/2018





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



DATE: November 15, 2017 - REV December 5, 2017

OPERATOR'S WELL #: SHR 31 CHSM

API WELL # 47 095 02490  
 STATE COUNTY PERMIT

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

WATERSHED: McELROY CREEK ELEVATION: 1,111.0'  
 COUNTY/DISTRICT: TYLER / MCELROY QUADRANGLE: SHIRLEY, WV  
 SURFACE OWNER: ALLEN W. SECKMAN, ET AL. ACREAGE: 30.48  
 OIL & GAS ROYALTY OWNER: ALLEN W. SECKMAN, ET AL. ACREAGE: 30.48

04/6/2018

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

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 6,725' ± TMD: 14,930' ±  
 WELL OPERATOR: CNX GAS COMPANY, LLC DESIGNATED AGENT: CHRIS TURNER  
 Address: 1000 CONSOL ENERGY DRIVE Address: 1 DOMINION DRIVE  
 City CANONSBURG State PA Zip Code 15317 City JANE LEW State WV Zip Code 26378



**SURFACE HOLE LOCATION (SHL)**

UTM 17 - NAD83  
N: 4363427.448(m)  
E: 515356.145(m)  
NAD27 W W NORTH  
N: 337896.182(ft)  
E: 1626598.496(ft)  
LAT/LON - NAD83  
LAT: N39 4202355  
LON: W80 8216004

**APPROXIMATE LANDING POINT**

UTM 17 - NAD83  
N: 4363190.061(m)  
E: 515751.987(m)  
NAD27 W W NORTH  
N: 337094.935(ft)  
E: 1627917.271(ft)  
LAT/LON - NAD83  
LAT: N39 4180893  
LON: W80 8163912

Well is located on topo map **13,877** feet south of Latitude: **39° 27' 30"**

Well is located on topo map **8,456'**

Feet west of Longitude: **80° 47' 30"**

**BOTTOM HOLE LOCATION (BHL)**

UTM 17 - NAD83  
N: 4361005.059(m)  
E: 516539.326(m)  
NAD27 W W NORTH  
N: 329875.454(ft)  
E: 1630348.523(ft)  
LAT/LON - NAD83  
LAT: N39 3983954  
LON: W80 8079148

LINE	BEARING	DISTANCE
R1	N30°03'57"E	455.08'
R2	N61°01'27"E	314.56'
R3	N37°14'16"W	273.41'
R4	N61°01'27"E	314.56'
R5	S46°10'38"E	795.18'

**LEGEND**

- TOPO MAP POINT
- PROPOSED WELL
- WATER SOURCE
- LEASED NUMBER BASED ON ATTACHED WW6A1
- ALL ARE POINTS UNLESS OTHERWISE NOTED
- MINERAL TRACT BOUNDARY
- PARCEL LINES
- PROPOSED HORIZONTAL WELL
- WELL REFERENCE
- STREAM/WATERWAY
- ROAD

**WELLS WITHIN 3000'**

- EXISTING GAS WELL
- RECORD GAS WELL

**NOTES**

- 1 There are no water wells or developed springs within 250' of proposed well
- 2 There are no existing 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 herein. The location of the boundary lines, as shown, and based on record deed descriptions, field evidence found and/or tax map position, unless otherwise noted.

JAMES TODD A.  
TAX MAP NO.  
48-05-18-0009-0000-0000

WEESE BETTY JUNE (LIFE)  
TAX MAP NO.  
P/O 48-05-15-0032-0000-0000

SECKMAN ALLEN W., ET. AL.  
TAX MAP NO.  
48-05-15-0034-0000-0000

WEESE BETTY JUNE (LIFE)  
TAX MAP NO.  
48-05-15-0036-0000-0000

SECKMAN ALLEN W., ET. AL.  
TAX MAP NO.  
48-05-15-0042-0000-0000

WELL SHR31 CHSM

MONITORING WELL  
AZ 105°43'03"  
957.72'

WEESE BETTY JUNE (LIFE)  
TAX MAP NO.  
P/O 48-05-15-0032-0000-0000

BOARD BECKY JO (LIFE)  
TAX MAP NO.  
48-05-18-0008-0000-0000

BOTTOM HOLE LOCATION

**REFERENCE DETAIL**



**Sheffler & Company, Inc.**  
ENGINEERING • SURVEYING

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

FILE #: **SHR 31 CHSM**  
DRAWING #: **3601 - SHR31C WELL - R4 - 20171219.DWG**  
SCALE: **1"=2000'**  
MINIMUM DEGREE OF ACCURACY: **1/2500**  
PROVEN SOURCE OF ELEVATION: **USGS MONUMENT A 142: 724.61'**

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

SIGNED: *[Signature]*  
R.P.E.: **21452** L.L.S.: P.S. NO.



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



DATE: **November 15, 2017 - REV December 19, 2017**  
OPERATOR'S WELL #: **SHR 31 CHSM**  
API WELL # **47 095 02490**  
STATE COUNTY PERMIT  
**H6A**

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

WATERSHED: **McELROY CREEK** ELEVATION: **1,111.0'**  
COUNTY/DISTRICT: **TYLER / MCELROY** QUADRANGLE: **SHIRLEY, WV**  
SURFACE OWNER: **ALLEN W. SECKMAN, ET AL.** ACREAGE: **30.48**  
OIL & GAS ROYALTY OWNER: **ALLEN W. SECKMAN, ET AL.** ACREAGE: **30.48**

04/6/2018

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

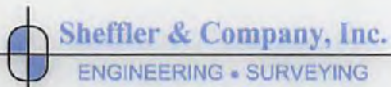
TARGET FORMATION: **MARCELLUS** ESTIMATED DEPTH: **TVD: 6,725' ± TMD: 14,930' ±**  
WELL OPERATOR: **CNX GAS COMPANY, LLC** DESIGNATED AGENT: **CHRIS TURNER**  
Address: **1000 CONSOL ENERGY DRIVE** Address: **1 DOMINION DRIVE**  
City **CANONSBURG** State **PA** Zip Code **15317** City **JANE LEW** State **WV** Zip Code **26378**



Well is located on topo map 6,656' feet south of Latitude: 39° 25' 00"

Well is located on topo map 4,592 feet west of Longitude: 80° 47' 30"

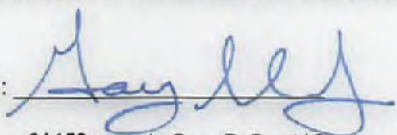
BHL 



1712 Mount Nebo Road Phone: 412-219-4509  
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SIGNED:   
R.P.E.: 21452 L.L.S.: P.S. NO. \_\_\_\_\_



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API WELL # 47 095 02490  
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H6A

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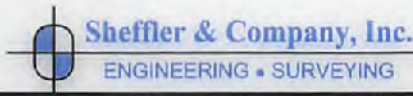
04/6/2018

DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE   
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City CANONSBURG State PA Zip Code 15317 City JANE LEW State WV Zip Code 26378



Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc	Royalty	Book/Page
05-15-42	261711000	Lillie Seckman	Drilling Appalachian Corporation	Not less than 1/8	DB 268/475
		Drilling Appalachian Corporation	Dominion Appalachian Development Properties LLC	Assignment	322/190
		Dominion Appalachian Development Properties LLC	CONSOL Gas Appalachian Development Properties LLC	Certificate of Incorporation	CIB 9/124
		CONSOL Gas Appalachian Development Properties LLC	CONSOL Gas Reserves Inc.	Merger	CIB 9/144
		CONSOL Gas Reserves Inc.	CONSOL Gas Company	Merger	CIB 9/156
		CONSOL Gas Company	CNX Gas Company LLC	Merger	Barbour CIB 17/1
		CNX Gas Company LLC	Noble Energy Inc.	50% Assignment	DB 388/286
		CNX Gas Company LLC	Drilling Appalachian Corporation	Corrective Assignment	401/342
		Noble Energy Inc.	CNX Gas Company LLC	Corrective Assignment	402/704
		Drilling Appalachian Corporation	Antero Resources Appalachian Corporation	Assignment	401/499
		Antero Resources Corporation	CNX Gas Company LLC and Noble Energy Inc.	Assignment	LB 422/517
		Noble Energy Inc.	CNX Gas Company LLC	Assignment	DB 550/273
Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc	Royalty	Book/Page
5-15-36	282099000	Everett Roy Weese and Betty June Weese	Triad Hunter LLC	Not less than 1/8	378/195
		Triad Hunter LLC	CNX Gas Company LLC	Assignment	Not yet recorded
Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc	Royalty	Book/Page
5-15-35	282100000	Lillie Seckman	Drilling Appalachian Corporation	Not less than 1/8	DB 268/475
		Drilling Appalachian Corporation	Dominion Appalachian Development Properties LLC	Assignment	322/190
		Dominion Appalachian Development Properties LLC	CONSOL Gas Appalachian Development Properties LLC	Certificate of Incorporation	CIB 9/124
		CONSOL Gas Appalachian Development Properties LLC	CONSOL Gas Reserves Inc.	Merger	CIB 9/144
		CONSOL Gas Reserves Inc.	CONSOL Gas Company	Merger	CIB 9/156
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		Antero Resources Corporation	CNX Gas Company LLC and Noble Energy Inc.	Assignment	LB 422/517
		Noble Energy Inc.	CNX Gas Company LLC	Assignment	DB 550/273
		Donald L Seckman and Dora Seckman	Noble Energy Inc.	Not less than 1/8	471/686
		Noble Energy Inc.	CNX Gas Company LLC	Assignment (50%)	499/447
		Noble Energy Inc.	CNX Gas Company LLC	Assignment	DB 550/273
		Gary Solak	CNX Gas Company LLC	Not less than 1/8	Not yet recorded (Attached)
		John Dudash	CNX Gas Company LLC	Not less than 1/8	Not yet recorded (Attached)
		Holly Dudash	CNX Gas Company LLC	Not less than 1/8	Not yet recorded (Attached)
		Delores Church	CNX Gas Company LLC	Not less than 1/8	Not yet recorded (Attached)
		Karen Solak	CNX Gas Company LLC	Not less than 1/8	Not yet recorded (Attached)



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

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



DATE: November 15, 2017 - REV November 21, 2017

OPERATOR'S WELL #: SHR 31 CHSM

API WELL # 47 095 02490

STATE COUNTY PERMIT #6A

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

WATERSHED: McELROY CREEK ELEVATION: 1,111.0'  
COUNTY/DISTRICT: TYLER / MCELROY QUADRANGLE: SHIRLEY, WV  
SURFACE OWNER: ALLEN W. SECKMAN, ET AL. ACREAGE: 30.48  
OIL & GAS ROYALTY OWNER: ALLEN W. SECKMAN, ET AL. ACREAGE: 30.48

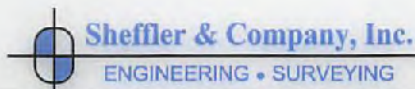
04/6/2018

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

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 6,725' ± TMD: 14,930' ±  
WELL OPERATOR: CNX GAS COMPANY, LLC DESIGNATED AGENT: CHRIS TURNER  
Address: 1000 CONSOL ENERGY DRIVE Address: 1 DOMINION DRIVE  
City CANONSBURG State PA Zip Code 15317 City JANE LEW State WV Zip Code 26378



Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc	Royalty	Book/Page
5-15-34	261709000	Lillie Seckman	Drilling Appalachian Corporation	Not less than 1/8	DB 268/475
		Drilling Appalachian Corporation	Dominion Appalachian Development Properties LLC	Assignment	322/190
		Dominion Appalachian Development Properties LLC	CONSOL Gas Appalachian Development Properties LLC	Certificate of Incorporation	CIB 9/124
		CONSOL Gas Appalachian Development Properties LLC	CONSOL Gas Reserves Inc.	Merger	CIB 9/144
		CONSOL Gas Reserves Inc.	CONSOL Gas Company	Merger	CIB 9/156
		CONSOL Gas Company	CNX Gas Company LLC	Merger	Barbour CIB 17/1
		CNX Gas Company LLC	Noble Energy Inc.	50% Assignment	DB 388/286
		CNX Gas Company LLC	Drilling Appalachian Corporation	Corrective Assignment	401/342
		Noble Energy Inc.	CNX Gas Company LLC	Corrective Assignment	402/704
		Drilling Appalachian Corporation	Antero Resources Appalachian Corporation	Assignment	401/499
		Antero Resources Corporation	CNX Gas Company LLC and Noble Energy Inc.	Assignment	LB 422/517
		Noble Energy Inc.	CNX Gas Company LLC	Assignment	DB 550/273



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*H/A*

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05-15-32	238357000	Everett Roy Weese and Betty J. Weese, h/w	KEPCO, Inc.	Not less than 1/8	DB 232/30
		KEPCO, Inc.	Swift Energy Company	Assignment (50%)	254/5
		KEPCO	Union Drilling, Inc.	Merger	WV Sec of State
		Union Drilling Inc.	Equitable Resources Exploration, Inc.	Name Change	WV Sec of State
		Equitable Resources Exploration, Inc.	Swift Energy Company	Assignment (50%)	275/566
		Swift Energy Company	Swift Energy Income Partners 1987-D Ltd. (34%) Swift Energy Income Partners 1988-A Ltd. (33%) Swift Energy Income Partners 1988-B Ltd. (22%) Swift Energy Income Partners 1988-1 Ltd. (11%)	Assignment	287/352
		Swift Energy Income Partners 1987-D Ltd. (34%) Swift Energy Income Partners 1988-A Ltd. (33%) Swift Energy Income Partners 1988-B Ltd. (22%) Swift Energy Income Partners 1988-1 Ltd. (11%)	Peake Energy, Inc.	Assignment	319/291
		Swift Energy Income Partners 1987-D Ltd. (34%) Swift Energy Income Partners 1988-A Ltd. (33%) Swift Energy Income Partners 1988-B Ltd. (22%) Swift Energy Income Partners 1988-1 Ltd. (11%)	Peake Energy, Inc.	Corrective Assignment	321/652
		Peake Energy, Inc.	North Coast Energy Eastern, Inc.	Name Change	WV Sec of State
		North Coast Energy Eastern, Inc.	EXCO - North Coast Energy Eastern, Inc.	Name Change	WV Sec of State
		EXCO Resources (WV), LLC	EXCO Resources (WV), Inc. (49.75%) EXCO Resources (PA), Inc. (0.5%) BG Production Company (WV), LLC (49.75%)	Assignment	374/808
		EXCO Resources (WV), Inc. (49.75%)	EXCO Production Company (WV), LLC (49.75%)	Name Change	WV Sec of State
		EXCO Production Company (WV), LLC (49.75%) EXCO Resources (PA), Inc. (0.5%) BG Production Company (WV), LLC (49.75%)	Antero Resources Corporation	Assignment	406/195
		Antero Resources Corporation	CNX Gas Company LLC and Noble Energy, Inc.	Assignment	422/517
		Noble Energy, Inc.	CNX Gas Company LLC	Assignment	550/273
		Gloria Morris	Four Leaf Land Company	Not less than 1/8	397/669
		Ralph T. Sweeney and Shelley A. Sweeney	Four Leaf Land Company	Not less than 1/8	397/675
		Donald Lee Sweeney	Four Leaf Land Company	Not less than 1/8	370/605
		Rodger A. Sweeney	Four Leaf Land Company	Not less than 1/8	370/611
		Devon Ruth Horsley (Sweeney)	Four Leaf Land Company	Not less than 1/8	370/629
		Anna Sweeney	Four Leaf Land Company	Not less than 1/8	370/635
		LaMoyn Sweeney	Four Leaf Land Company	Not less than 1/8	370/617
		Four Leaf Land Company	Antero Resources Appalachian Corporation	Assignment	403/566
		Antero Resources Corporation	CNX Gas Company LLC and Noble Energy, Inc.	Assignment	422/517
		Noble Energy, Inc.	CNX Gas Company LLC	Assignment	550/273
		Four Leaf Land Company	Antero Resources Appalachian Corporation	Not less than 1/8	403/561
		Antero Resources Corporation	CNX Gas Company LLC and Noble Energy, Inc.	Assignment	422/517
		Noble Energy, Inc.	CNX Gas Company LLC	Assignment	550/273
		Mary Sue Furbie Zebley	Noble Energy, Inc.	Not less than 1/8	440/447
		Thomas Val Furbie and Katherine Shelek-Furbie, h/w	Noble Energy, Inc.	Not less than 1/8	440/443
		Allison McKay Hardin (Allison Furbie Herring)	Noble Energy, Inc.	Not less than 1/8	440/453
		Rani J. Boyt	Noble Energy, Inc.	Not less than 1/8	445/835
		Noble Energy, Inc.	CNX Gas Company LLC	Assignment (50%)	484/288
		Noble Energy, Inc.	CNX Gas Company LLC	Assignment	550/273



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		KEPCO	Union Drilling, Inc.	Merger	WV Sec of State
		Union Drilling Inc.	Equitable Resources Exploration, Inc.	Name Change	WV Sec of State
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		Swift Energy Company	Swift Energy Income Partners 1987-D Ltd. (34%) Swift Energy Income Partners 1988-A Ltd. (33%) Swift Energy Income Partners 1988-B Ltd. (22%) Swift Energy Income Partners 1988-1 Ltd. (11%)	Assignment	287/352
		Swift Energy Income Partners 1987-D Ltd. (34%) Swift Energy Income Partners 1988-A Ltd. (33%) Swift Energy Income Partners 1988-B Ltd. (22%) Swift Energy Income Partners 1988-1 Ltd. (11%)	Peake Energy, Inc.	Assignment	319/291
		Swift Energy Income Partners 1987-D Ltd. (34%) Swift Energy Income Partners 1988-A Ltd. (33%) Swift Energy Income Partners 1988-B Ltd. (22%) Swift Energy Income Partners 1988-1 Ltd. (11%)	Peake Energy, Inc.	Corrective Assignment	321/652
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		Noble Energy, Inc.	CNX Gas Company LLC	Assignment	550/273
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		LaMoyné Sweeney	Four Leaf Land Company	Not less than 1/8	370/617
		Four Leaf Land Company	Antero Resources Appalachian Corporation	Assignment	403/566
		Antero Resources Corporation	CNX Gas Company LLC and Noble Energy, Inc.	Assignment	422/517
		Noble Energy, Inc.	CNX Gas Company LLC	Assignment	550/273
		Four Leaf Land Company	Antero Resources Appalachian Corporation	Not less than 1/8	403/561
		Antero Resources Corporation	CNX Gas Company LLC and Noble Energy, Inc.	Assignment	422/517
		Noble Energy, Inc.	CNX Gas Company LLC	Assignment	550/273
		Mary Sue Furbee Zebley	Noble Energy, Inc.	Not less than 1/8	440/447
		Thomas Val Furbee and Katherine Shelek-Furbee, h/w	Noble Energy, Inc.	Not less than 1/8	440/443
		Allison McKay Hardin (Allison Furbee Herring)	Noble Energy, Inc.	Not less than 1/8	440/453
		Rani J. Boyt	Noble Energy, Inc.	Not less than 1/8	445/835
		Noble Energy, Inc.	CNX Gas Company LLC	Assignment (50%)	484/288
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(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
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ACREAGE: 30.48

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ACREAGE: 30.48

04/6/2018

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TARGET FORMATION: MARCELLUS

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Address: 1000 CONSOL ENERGY DRIVE

Address: 1 DOMINION DRIVE

City CANONSBURG State PA Zip Code 15317

City JANE LEW State WV Zip Code 26378



Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc	Royalty	Book/Page
5-18-8	108567000	Leota B. McKinney and Lester McKinney, h/w	Drilling Appalachian Corporation	Not less than 1/8	330/237
		Howard Stubbs and Nelda Stubbs, h/w	Drilling Appalachian Corporation	Not less than 1/8	330/241
		Marvin G. Board and Becky Jo Board, h/w	Drilling Appalachian Corporation	Not less than 1/8	330/426
		Robert Travis and Carol Travis, h/w	Drilling Appalachian Corporation	Not less than 1/8	330/487
		Creal Hoover	Drilling Appalachian Corporation	Not less than 1/8	330/491
		Joseph Travis and Carole Travis, h/w	Drilling Appalachian Corporation	Not less than 1/8	330/511
		Eva Jean Hoover	Drilling Appalachian Corporation	Not less than 1/8	330/542
		Glenda Gregory	Drilling Appalachian Corporation	Not less than 1/8	330/546
		Drilling Appalachian Corporation	Antero Resources Appalachian Corporation	Assignment	391/416
		Drilling Appalachian Corporation	Antero Resources Corporation	Corrective Assignment	421/130
		Antero Resources Corporation	CNX Gas Company LLC and Noble Energy, Inc.	Assignment	422/517
		Noble Energy, Inc.	CNX Gas Company LLC	Assignment	550/273
		Josephine Spencer and David Spencer, h/w	Drilling Appalachian Corporation	Not less than 1/8	330/233
		Walter Seckman and Eva Seckman, h/w	Drilling Appalachian Corporation	Not less than 1/8	330/430
		Michael Fisher	Drilling Appalachian Corporation	Not less than 1/8	330/503
		Joe Seckman	Drilling Appalachian Corporation	Not less than 1/8	330/507
		Antonia Underwood	Drilling Appalachian Corporation	Not less than 1/8	330/550
		Camella Ash	Drilling Appalachian Corporation	Not less than 1/8	330/575
		Jill Robinson	Drilling Appalachian Corporation	Not less than 1/8	330/579
		Donna Wolther	Drilling Appalachian Corporation	Not less than 1/8	330/742
		Jennifer Sexson	Drilling Appalachian Corporation	Not less than 1/8	330/657
		Drilling Appalachian Corporation	Antero Resources Appalachian Corporation	Assignment	401/499
		Drilling Appalachian Corporation	Antero Resources Corporation	Corrective Assignment	421/138
		Antero Resources Corporation	CNX Gas Company LLC and Noble Energy, Inc.	Assignment	422/517
		Noble Energy, Inc.	CNX Gas Company LLC	Assignment	550/273
		Kimberly Dawn Jackson	Drilling Appalachian Corporation	Not less than 1/8	395/795
		Scott Seckman	Drilling Appalachian Corporation	Not less than 1/8	395/797
		James F. Bonnell and Jacqueline S. Bonnell, h/w	Drilling Appalachian Corporation	Not less than 1/8	409/253
		Drilling Appalachian Corporation	Noble Energy, Inc.	Assignment	452/641
		Noble Energy, Inc.	CNX Gas Company LLC	Assignment	542/147
		Keith E. Rheinhardt	Noble Energy, Inc.	Not less than 1/8	DB 449/525
		Gary A. Rheinhardt, Jr.	Noble Energy, Inc.	Not less than 1/8	DB 449/527
		Charles D. Rheinhardt and Denise M. Rheinhardt, h/w	Noble Energy, Inc.	Not less than 1/8	DB 449/531
		Randall Rheinhardt, a single man	Noble Energy, Inc.	Not less than 1/8	DB 453/535
		David Rheinhardt, a single man	Noble Energy, Inc.	Not less than 1/8	DB 453/633
		Iris Rheinhardt, a single woman	Noble Energy, Inc.	Not less than 1/8	DB 458/642
		Tami Dawn Rheinhardt	Noble Energy, Inc.	Not less than 1/8	DB 465/270
		Noble Energy, Inc.	CNX Gas Company LLC	Assignment	550/273
Tax Map & Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc	Royalty	Book/Page
5-18-9	281687000	Wm. Blaine Underwood and Laura J. Underwood, h/w, Donald Underwood, Hugh Underwood and Pearlina Underwood, h/w, and D.L. Haught and Susan O. Haught, h/w	Equitable Gas Company	Not less than 1/8	185/86
		Equitable Gas Company	Equitrans, Inc.	Assignment	274/471
		Equitrans, Inc.	Equitable Gas Company LLC	Merger	433/738
		Equitable Resources, Inc.	Equitable Gas Company LLC	Merger	433/755
		Equitable Gas Company LLC and EQT Corporation	Equitrans, LP	Assignment	433/777
		Equitrans, LP	EQT Production Company	Sublease	396/640
		Equitrans, LP	EQT Production Company	Sublease	420/10
		EQT Production Company	CNX Gas Company LLC and Noble Energy, Inc.	Farmout	411/252
		EQT Production Company	CNX Gas Company LLC and Noble Energy, Inc.	Assignment	449/480
		Noble Energy, Inc.	CNX Gas Company LLC	Assignment	550/273



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Address: 1 DOMINION DRIVE

City CANONSBURG State PA Zip Code 15317

City JANE LEW State WV Zip Code 26378



WW-6A1  
(5/13)

Operator's Well No. SHR31CHSM

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

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

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

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

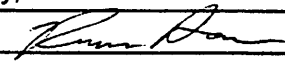
See attached.

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

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

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

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

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

Attachment - Form WW-6A-1 for SHRL31CHS

<u>Tax Map &amp; Parcel</u>	<u>Title Opinion QLS #</u>	<u>Grantor, Lessor, etc</u>	<u>Grantee, Lessee, etc</u>	<u>Royalty</u>	<u>Book/Page</u>
05-15-42	261711000	Lillie Seckman Drilling Appalachian Corporation Dominion Appalachian Development Properties LLC CONSOL Gas Appalachian Development Properties LLC CONSOL Gas Reserves Inc. CONSOL Gas Company CNX Gas Company LLC CNX Gas Company LLC Noble Energy Inc. Drilling Appalachian Corporation Antero Resources Corporation Noble Energy Inc.	Drilling Appalachian Corporation Dominion Appalachian Development Properties I CONSOL Gas Appalachian Development Properti CONSOL Gas Reserves Inc. CONSOL Gas Company CNX Gas Company LLC Noble Energy Inc. Drilling Appalachian Corporation CNX Gas Company LLC Antero Resources Appalachian Corporation CNX Gas Company LLC and Noble Energy Inc. CNX Gas Company LLC	Not less than 1/8 Assignment Certificate of Incorporation Merger Merger Merger 50% Assignment Corrective Assignment Corrective Assignment Assignment Assignment Assignment	DB 268/475 322/190 CIB 9/124 CIB 9/144 CIB 9/156 Barbour CIB 17/1 DB 388/286 401/342 402/704 401/499 LB 422/517 DB 550/273
5-15-36	282099000	Everett Roy Weese and Betty June Weese Triad Hunter LLC	Triad Hunter LLC CNX Gas Company LLC	Not less than 1/8 Assignment	378/195 582/188
5-15-35	282100000	Lillie Seckman Drilling Appalachian Corporation Dominion Appalachian Development Properties LLC CONSOL Gas Appalachian Development Properties LLC CONSOL Gas Reserves Inc. CONSOL Gas Company CNX Gas Company LLC CNX Gas Company LLC Noble Energy Inc. Drilling Appalachian Corporation Antero Resources Corporation Noble Energy Inc.  Donald L Seckman and Dora Seckman Noble Energy Inc. Noble Energy Inc.  Gary Solak John Dudash Holly Dudash Delores Church Karen Solak	Drilling Appalachian Corporation Dominion Appalachian Development Properties I CONSOL Gas Appalachian Development Properti CONSOL Gas Reserves Inc. CONSOL Gas Company CNX Gas Company LLC Noble Energy Inc. Drilling Appalachian Corporation CNX Gas Company LLC Antero Resources Appalachian Corporation CNX Gas Company LLC and Noble Energy Inc. CNX Gas Company LLC  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	Not less than 1/8 Assignment Certificate of Incorporation Merger Merger Merger 50% Assignment Corrective Assignment Corrective Assignment Assignment Assignment Assignment  Not less than 1/8 Assignment (50%) 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	DB 268/475 322/190 CIB 9/124 CIB 9/144 CIB 9/156 Barbour CIB 17/1 DB 388/286 401/342 402/704 401/499 LB 422/517 DB 550/273  471/686 499/447 DB 550/273  581/653 581/658 581/648 581/643 581/663
5-15-34	261709000	Lillie Seckman Drilling Appalachian Corporation Dominion Appalachian Development Properties LLC CONSOL Gas Appalachian Development Properties LLC CONSOL Gas Reserves Inc. CONSOL Gas Company CNX Gas Company LLC CNX Gas Company LLC Noble Energy Inc. Drilling Appalachian Corporation Antero Resources Corporation Noble Energy Inc.	Drilling Appalachian Corporation Dominion Appalachian Development Properties I CONSOL Gas Appalachian Development Properti CONSOL Gas Reserves Inc. CONSOL Gas Company CNX Gas Company LLC Noble Energy Inc. Drilling Appalachian Corporation CNX Gas Company LLC Antero Resources Appalachian Corporation CNX Gas Company LLC and Noble Energy Inc. CNX Gas Company LLC	Not less than 1/8 Assignment Certificate of Incorporation Merger Merger Merger 50% Assignment Corrective Assignment Corrective Assignment Assignment Assignment Assignment	DB 268/475 322/190 CIB 9/124 CIB 9/144 CIB 9/156 Barbour CIB 17/1 DB 388/286 401/342 402/704 401/499 LB 422/517 DB 550/273
05-15-32	238357000	Everett Roy Weese and Betty J. Weese, h/w KEPCO, Inc. KEPCO Union Drilling Inc. Equitable Resources Exploration, Inc.  Swift Energy Company  Swift Energy Income Partners 1987-D Ltd. (34%) Swift Energy Income Partners 1988-A Ltd. (33%) Swift Energy Income Partners 1988-B Ltd. (22%) Swift Energy Income Partners 1988-1 Ltd. (11%) Swift Energy Income Partners 1987-D Ltd. (34%) Swift Energy Income Partners 1988-A Ltd. (33%) Swift Energy Income Partners 1988-B Ltd. (22%) Swift Energy Income Partners 1988-1 Ltd. (11%) Peake Energy, Inc. North Coast Energy Eastern, Inc.	KEPCO, Inc. Swift Energy Company Union Drilling, Inc. Equitable Resources Exploration, Inc. Swift Energy Company  Swift Energy Income Partners 1987-D Ltd. (34%) Swift Energy Income Partners 1988-A Ltd. (33%) Swift Energy Income Partners 1988-B Ltd. (22%) Swift Energy Income Partners 1988-1 Ltd. (11%)  Peake Energy, Inc.  Peake Energy, Inc.  North Coast Energy Eastern, Inc. EXCO - North Coast Energy Eastern, Inc.	Not less than 1/8 Assignment (50%) Merger Name Change Assignment (50%)  Assignment  Assignment  Name Change Name Change	DB 232/30 254/5 WV Sec of State WV Sec of State 275/566  287/352  319/291  321/652  WV Sec of State WV Sec of State



EXCO Resources (WV), LLC	EXCO Resources (WV), Inc. (49.75%) EXCO Resources (PA), Inc. (0.5%) BG Production Company (WV), LLC (49.75%)	Assignment	374/808
EXCO Resources (WV), Inc. (49.75%) EXCO Production Company (WV), LLC (49.75%) EXCO Resources (PA), Inc. (0.5%) BG Production Company (WV), LLC (49.75%) Antero Resources Corporation Noble Energy, Inc.	EXCO Production Company (WV), LLC (49.75%)	Name Change	WV Sec of State
Gloria Morris Ralph T. Sweeney and Shelley A. Sweeney Donald Lee Sweeney Rodger A. Sweeney Devon Ruth Horsley (Sweeney) Anna Sweeney LaMoynne Sweeney Four Leaf Land Company Antero Resources Corporation Noble Energy, Inc.	Antero Resources Corporation CNX Gas Company LLC and Noble Energy, Inc. CNX Gas Company LLC	Assignment Assignment Assignment	406/195 422/517 550/273
Four Leaf Land Company Antero Resources Corporation Noble Energy, Inc.	Four Leaf Land Company Four Leaf Land Company Four Leaf Land Company Four Leaf Land Company Four Leaf Land Company Four Leaf Land Company Four Leaf Land Company Antero Resources Appalachian Corporation CNX Gas Company LLC and 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 Assignment Assignment Assignment	397/669 397/675 370/605 370/611 370/629 370/635 370/617 403/566 422/517 550/273
Mary Sue Furbee Zebley Thomas Val Furbee and Katherine Shelek-Furbee, h/w Allison McKay Hardin (Allison Furbee Herring) Rani J. Boyt Noble Energy, Inc. Noble Energy, Inc.	Antero Resources Appalachian Corporation CNX Gas Company LLC and Noble Energy, Inc. CNX Gas Company LLC	Not less than 1/8 Assignment Assignment	403/561 422/517 550/273
	Noble Energy, Inc. Noble Energy, Inc. Noble Energy, Inc. Noble Energy, Inc. CNX Gas Company LLC CNX Gas Company LLC	Not less than 1/8 Not less than 1/8 Not less than 1/8 Not less than 1/8 Assignment (50%) Assignment	440/447 440/443 440/453 445/835 484/288 550/273

**Tax Map & Title Opinion**

<u>Parcel</u>	<u>QLS #</u>	<u>Grantor, Lessor, etc</u>	<u>Grantee, Lessee, etc</u>	<u>Royalty</u>	<u>Book/Page</u>
05-15-32	238357000	Everett Roy Weese and Betty J. Weese, h/w KEPCO, Inc. KEPCO Union Drilling Inc. Equitable Resources Exploration, Inc.	KEPCO, Inc. Swift Energy Company Union Drilling, Inc. Equitable Resources Exploration, Inc. Swift Energy Company	Not less than 1/8 Assignment (50%) Merger Name Change Assignment (50%)	DB 232/30 254/5 WV Sec of State WV Sec of State 275/566
		Swift Energy Company	Swift Energy Income Partners 1987-D Ltd. (34%) Swift Energy Income Partners 1988-A Ltd. (33%) Swift Energy Income Partners 1988-B Ltd. (22%) Swift Energy Income Partners 1988-1 Ltd. (11%) Swift Energy Income Partners 1987-D Ltd. (34%) Swift Energy Income Partners 1988-A Ltd. (33%) Swift Energy Income Partners 1988-B Ltd. (22%) Swift Energy Income Partners 1988-1 Ltd. (11%) Peake Energy, Inc.	Assignment	287/352
		Swift Energy Income Partners 1987-D Ltd. (34%) Swift Energy Income Partners 1988-A Ltd. (33%) Swift Energy Income Partners 1988-B Ltd. (22%) Swift Energy Income Partners 1988-1 Ltd. (11%) Swift Energy Income Partners 1987-D Ltd. (34%) Swift Energy Income Partners 1988-A Ltd. (33%) Swift Energy Income Partners 1988-B Ltd. (22%) Swift Energy Income Partners 1988-1 Ltd. (11%) Peake Energy, Inc. North Coast Energy Eastern, Inc.	Peake Energy, Inc. Peake Energy, Inc. North Coast Energy Eastern, Inc. EXCO - North Coast Energy Eastern, Inc.	Assignment Corrective Assignment Name Change Name Change	319/291 321/652 WV Sec of State WV Sec of State
		EXCO Resources (WV), LLC	EXCO Resources (WV), Inc. (49.75%) EXCO Resources (PA), Inc. (0.5%) BG Production Company (WV), LLC (49.75%)	Assignment	374/808
		EXCO Resources (WV), Inc. (49.75%) EXCO Production Company (WV), LLC (49.75%) EXCO Resources (PA), Inc. (0.5%) BG Production Company (WV), LLC (49.75%) Antero Resources Corporation Noble Energy, Inc.	EXCO Production Company (WV), LLC (49.75%) Antero Resources Corporation CNX Gas Company LLC and Noble Energy, Inc. CNX Gas Company LLC	Name Change Assignment Assignment	WV Sec of State 406/195 422/517 550/273
		Gloria Morris Ralph T. Sweeney and Shelley A. Sweeney Donald Lee Sweeney Rodger A. Sweeney Devon Ruth Horsley (Sweeney) Anna Sweeney LaMoynne Sweeney Four Leaf Land Company Antero Resources Corporation Noble Energy, Inc.	Four Leaf Land Company Four Leaf Land Company Four Leaf Land Company Four Leaf Land Company Four Leaf Land Company Four Leaf Land Company Four Leaf Land Company Antero Resources Appalachian Corporation CNX Gas Company LLC and 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 Assignment Assignment Assignment	397/669 397/675 370/605 370/611 370/629 370/635 370/617 403/566 422/517 550/273
		Four Leaf Land Company Antero Resources Corporation Noble Energy, Inc.	Antero Resources Appalachian Corporation CNX Gas Company LLC and Noble Energy, Inc. CNX Gas Company LLC	Not less than 1/8 Assignment Assignment	403/561 422/517 550/273
		Mary Sue Furbee Zebley Thomas Val Furbee and Katherine Shelek-Furbee, h/w Allison McKay Hardin (Allison Furbee Herring) Rani J. Boyt Noble Energy, Inc. Noble Energy, Inc.	Noble Energy, Inc. Noble Energy, Inc. Noble Energy, Inc. Noble Energy, Inc. CNX Gas Company LLC CNX Gas Company LLC	Not less than 1/8 Not less than 1/8 Not less than 1/8 Not less than 1/8 Assignment (50%) Assignment	440/447 440/443 440/453 445/835 484/288 550/273

<u>Tax Map &amp; Parcel</u>	<u>Title Opinion QLS #</u>	<u>Grantor, Lessor, etc</u>	<u>Grantee, Lessee, etc</u>	<u>Royalty</u>	<u>Book/Page</u>
5-18-8	108567000	Leota B. McKinney and Lester McKinney, h/w Howard Stubbs and Nelda Stubbs, h/w Marvin G. Board and Becky Jo Board, h/w Robert Travis and Carol Travis, h/w Creal Hoover Joseph Travis and Carole Travis, h/w Eva Jean Hoover Glenda Gregory Drilling Appalachian Corporation Drilling Appalachian Corporation Antero Resources Corporation Noble Energy, Inc.	Drilling Appalachian Corporation Drilling Appalachian Corporation Drilling Appalachian Corporation Drilling Appalachian Corporation Drilling Appalachian Corporation Drilling Appalachian Corporation Drilling Appalachian Corporation Antero Resources Appalachian Corporation Antero Resources Corporation CNX Gas Company LLC and 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 Assignment Corrective Assignment Assignment Assignment	330/237 330/241 330/426 330/487 330/491 330/511 330/542 330/546 391/416 421/130 422/517 550/273
		Josephine Spencer and David Spencer, h/w Walter Seckman and Eva Seckman, h/w Michael Fisher Joe Seckman Antonla Underwood Camella Ash Jill Robinson Donna Wolther Jennifer Sexson Drilling Appalachian Corporation Drilling Appalachian Corporation Antero Resources Corporation Noble Energy, Inc.	Drilling Appalachian Corporation Drilling Appalachian Corporation Drilling Appalachian Corporation Drilling Appalachian Corporation Drilling Appalachian Corporation Drilling Appalachian Corporation Drilling Appalachian Corporation Drilling Appalachian Corporation Antero Resources Appalachian Corporation Antero Resources Corporation CNX Gas Company LLC and 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 Assignment Corrective Assignment Assignment Assignment	330/233 330/430 330/503 330/507 330/550 330/575 330/579 330/742 330/657 401/499 421/138 422/517 550/273
		Kimberly Dawn Jackson Scott Seckman James F. Bonnell and Jacqueline S. Bonnell, h/w Drilling Appalachian Corporation Noble Energy, Inc.	Drilling Appalachian Corporation Drilling Appalachian Corporation Drilling Appalachian Corporation Noble Energy, Inc. CNX Gas Company LLC	Not less than 1/8 Not less than 1/8 Not less than 1/8 Assignment Assignment	395/795 395/797 409/253 452/641 542/147
		Keith E. Rheinhardt Gary A. Rheinhardt, Jr. Charles D. Rheinhardt and Denise M. Rheinhardt, h/w Randal Rheinhardt, a single man David Rheinhardt, a single man Iris Rheinhardt, a single woman Tami Dawn Rheinhardt Noble Energy, Inc.	Noble Energy, Inc. Noble Energy, Inc. Noble Energy, Inc. Noble Energy, Inc. Noble Energy, Inc. Noble Energy, Inc. 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 Assignment	DB 449/525 DB 449/527 DB 449/531 DB 453/535 DB 453/633 DB 458/642 DB 465/270 550/273

<u>Tax Map &amp; Parcel</u>	<u>Title Opinion QLS #</u>	<u>Grantor, Lessor, etc</u>	<u>Grantee, Lessee, etc</u>	<u>Royalty</u>	<u>Book/Page</u>
5-18-9	281687000	Wm. Blaine Underwood and Laura I. Underwood, h/w, Donald Underwood, Hugh Underwood and Pearline Underwood, h/w, and D.L. Haught and Susan O. Haught, h/w Equitable Gas Company Equitrans, Inc. Equitable Resources, Inc. Equitable Gas Company LLC and EQT Corporation Equitrans, LP Equitrans, LP EQT Production Company EQT Production Company Noble Energy, Inc.	Equitable Gas Company Equitrans, Inc. Equitable Gas Company LLC Equitable Gas Company LLC Equitrans, LP EQT Production Company EQT Production Company CNX Gas Company LLC and Noble Energy, Inc. CNX Gas Company LLC and Noble Energy, Inc. CNX Gas Company LLC	Not less than 1/8 Assignment Merger Merger Assignment Sublease Sublease Farmout Assignment Assignment	186/86 274/471 433/738 433/755 433/777 396/640 420/10 411/252 449/480 550/273





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

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

**RE: Road Letter – SHR 31 Well Pad**

To Whom It May Concern:

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

Should you have any questions or need additional information, please do not hesitate to contact me at [erikawhetstone@consolenergy.com](mailto:erikawhetstone@consolenergy.com) or 724-485-4035.

Sincerely,

A handwritten signature in blue ink that reads 'Erika Whetstone'.

Erika Whetstone  
CNX Gas Company LLC

RECEIVED  
Office of Oil and Gas

NOV 28 2017

WV Department of  
Environmental Protection

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

Date of Notice Certification: 11-21-17

API No. 47- 95 - 02490  
Operator's Well No. SHR31CHSM  
Well Pad Name: SHR31HSM

**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>515356.145</u>
County: <u>Tyler</u>		Northing: <u>4363427.449</u>
District: <u>McElroy</u>	Public Road Access: <u>County Route 58</u>	
Quadrangle: <u>Shirley</u>	Generally used farm name: <u>Seckman</u>	
Watershed: <u>McElroy Creek</u>		

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

<p>Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:</p> <p>*PLEASE CHECK ALL THAT APPLY</p> <p><input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or</p> <p style="padding-left: 100px;"><input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)</p> <p><input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION</p> <p><input checked="" type="checkbox"/> 5. PUBLIC NOTICE</p> <p><input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION</p>	<p><b>OOG OFFICE USE ONLY</b></p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p>
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**Required Attachments:**

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

NOV 28 2017

04/6/2018  
WV Department of  
Environmental Protection

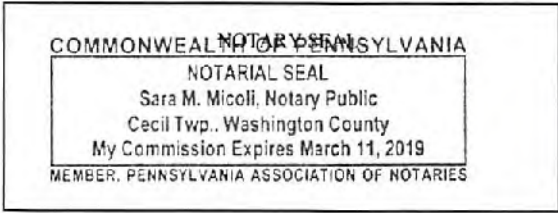


**Certification of Notice is hereby given:**

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

Well Operator: CNX Gas Company, LLC  
By: Raymond Hoon  
Its: Permitting Supervisor  
Telephone: 724-485-3540

Address: 1000 Consol Energy Drive  
Canonsburg, PA 15317  
Facsimile: \_\_\_\_\_  
Email: RaymondHoon@ConsolEnergy.com



Subscribed and sworn before me this 21 day of Nov, 2017.  
Sara M. Micoli Notary Public  
My Commission Expires 3/11/19

**Oil and Gas Privacy Notice:**

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

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WV Department of  
Environmental Protection

04/6/2018

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: 11-22-17 Date Permit Application Filed: 11-27-17

Notice of:

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

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

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

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

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

SURFACE OWNER(s)

Name: See attached.

Address: \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_

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

Name: See attached.

Address: \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_

SURFACE OWNER(s) (Impoundments or Pits)

Name: \_\_\_\_\_

Address: \_\_\_\_\_

COAL OWNER OR LESSEE

Name: See attached.

Address: \_\_\_\_\_

COAL OPERATOR

Name: \_\_\_\_\_

Address: \_\_\_\_\_

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

Name: See attached.

Address: \_\_\_\_\_

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: EQT Corporation

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

\*Please attach additional forms if necessary

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Office of Oil and Gas

NOV 28 2017

WV Department of  
Environmental Protection

04/6/2018



**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 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

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Environmental Protection

**Well Location Restrictions**

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

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

**Water Well Testing:**

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

**Water Testing Laboratories:**

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

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

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

**Written Comment:**

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

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

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

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

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

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

**Comment Requirements**

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

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

**Permit Denial or Condition**

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

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

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

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

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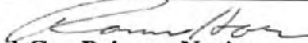
WW-6A  
(8-13)

API NO. 47- 95 - 02490  
OPERATOR WELL NO. SHR31CHSM  
Well Pad Name: SHR31

**Notice is hereby given by:**

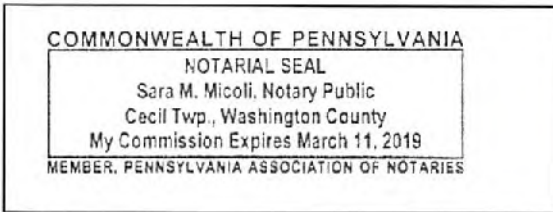
Well Operator: CNX Gas Company, LLC  
Telephone: 724-485-3540  
Email: RaymondHoon@ConsolEnergy.com

Address: 1000 Consol Energy Drive  
Canonsburg, PA 15317  
Facsimile: \_\_\_\_\_



**Oil and Gas Privacy Notice:**

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



Subscribed and sworn before me this 21 day of Nov., 2017.

Sara M Micoli Notary Public

My Commission Expires 3/11/19

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

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

824 Jefferson Run Road, Alma, WV 26320

Donald L. Seckman

705 Jefferson Run Road, Alma, WV 26320

Potts Place LLC

353 Foundry St., New Martinsville, WV 26155

Becannray LLC

5042 Tyler Highway, Sistersville, WV 26175

STS Enterprises LLC

659 Jefferson Run Road, Alma, WV 26320

George G. Hamilton

2812 McElroy Creek Road, Alma, WV 26320

Charles E. Hamilton, Jr.

17095 WV Rt 23 N, West Union, WV 26456

Gary L. Hamilton

102 Big Flint Road, West Union, WV 26456

Nicole Eastham

34973 State Route 800, New Matamoras, OH 45767

Alexandria Fetty

44958 Benwood Road, Sardis, OH 43946

Rachelle Hise

44832 State Route 78, Woodsfield, OH 43793

**Coal Owner(s):**

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

Dated November 29, 2016

824 Jefferson Run Road, Alma WV 26320

Donald L. Seckman

705 Jefferson Run Road, Alma, WV 26320

George G. Hamilton

2812 McElroy Creek Road, Alma, WV 26320

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

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

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

Becannray LLC  
5042 Tyler Highway, Sistersville, WV 26175

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

Alexandria Fetty  
44958 Benwood Road, Sardis, OH 43946

Rachelle Hise  
44832 State Route 78, Woodsfield, OH 43793

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

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

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

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

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

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

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

Bessie Haught  
771 McElroy Creek Rd, Alma, WV 26320

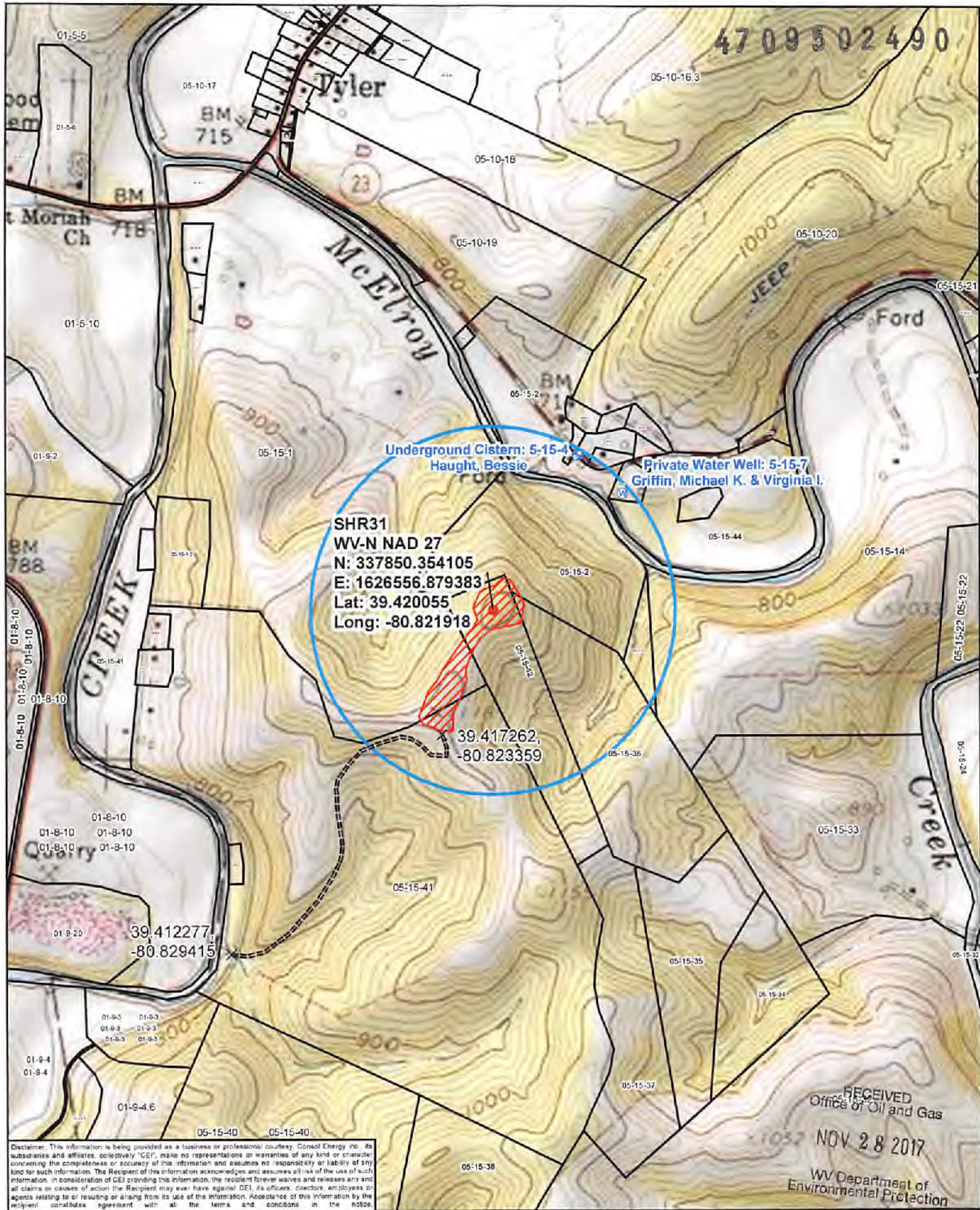
Michael K & Virginia L Griffin  
PO Box 254, Middlebourne, WV 26149

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

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

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Disclaimer: This information is being provided as a business or professional courtesy. Consol Energy Inc., its subsidiaries and affiliates, collectively "CEI", make no representations or warranties of any kind or character concerning the completeness or accuracy of this information and assumes no responsibility or liability of any kind for such information. The Recipient of this information acknowledges and assumes all risk of the use of such information. In consideration of CEI providing this information, the recipient forever waives and releases any and all claims or causes of action the Recipient may ever have against CEI, its officers, directors, employees or agents relating to or resulting or arising from its use of the information. Acceptance of this information by the recipient constitutes agreement with all the terms and conditions in the notice.

- Legend**
- Well Pad
  - ⊕ Water Well
  - ⊗ Cistern
  - ✕ Intersection
  - == Access Road
  - 1500' Water Wells Buffer
  - ▨ Well Pad Boundary
  - Surface Parcel



Date: 11/9/2017		Prepared By: GIS	
Revisions: 1		Approved By:	
This map is property of CONSOL Energy Inc. and contains information that is proprietary and confidential in nature and may not be copied or reproduced without prior written consent.			

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

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

**Date of Notice:** 10/11/17      **Date of Planned Entry:** 10/19/17

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

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

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

**Notice is hereby provided to:**

SURFACE OWNER(s)

Name: See attached  
Address: \_\_\_\_\_

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

COAL OWNER OR LESSEE

Name: See attached  
Address: \_\_\_\_\_

MINERAL OWNER(s)

Name: See attached  
Address: \_\_\_\_\_

\*please attach additional forms if necessary

**Notice is hereby given:**

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

State: West Virginia	Approx. Latitude & Longitude: 39.420055, -80.821918
County: Tyler	Public Road Access: County Route 58
District: McElroy	Watershed: McElroy Creek
Quadrangle: Shirley	Generally used farm name: Seckman

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

**Notice is hereby given by:**

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

Address: 1000 Consol Energy Drive  
Canonsburg, PA 15317  
Facsimile: \_\_\_\_\_

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**Oil and Gas Privacy Notice:**

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

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SHR31EHS

WW6A3 Attachment

**SURFACE OWNER(S):**

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

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

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

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

Becannray LLC  
5042 Tyler Highway,  
Sisterville, WV 26175

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

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

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

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

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

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



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Alexandria Fetty  
44958 Benwood Road,  
Sardis, OH 43946




Rachelle Hise  
44832 State Route 78,  
Woodsfield, OH 43793

**COAL OWNER OR LESSEE:**

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

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

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



Charles E. Hamilton, Jr.  
17095 WV Rt 23 N,  
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Middlebourne, West Virginia 26149



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

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

**MINERAL OWNER(S):**

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

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



George G. Hamilton  
2812 McElroy Creek Road,  
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Potts Place LLC  
353 Foundry St.,  
New Martinsville, WV 26155

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Woodsfield, OH 43793

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

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

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



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

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

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

**Date of Notice:** 11-22-17      **Date Permit Application Filed:** 11-27-17

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

- HAND DELIVERY       CERTIFIED MAIL RETURN RECEIPT REQUESTED

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

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

Name: <u>See attached</u>	Name: _____
Address: _____	Address: _____

**Notice is hereby given:**

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

State: <u>West Virginia</u>	UTM NAD 83	Easting: <u>515356.145</u>
County: <u>Tyler</u>		Northing: <u>4363427.449</u>
District: <u>McElroy</u>	Public Road Access: <u>County Route 58</u>	
Quadrangle: <u>Shirley</u>	Generally used farm name: <u>Seckman</u>	
Watershed: <u>McElroy Creek</u>		

**This Notice Shall Include:**

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

**Notice is hereby given by:**

Well Operator: <u>CNX Gas Company, LLC</u>	Authorized Representative: <u>Raymond Hoon</u>
Address: <u>1000 Consol Energy Drive</u>	Address: <u>1000 Consol Energy Drive</u>
<u>Canonsburg, PA 15317</u>	<u>Canonsburg, PA 15317</u>
Telephone: <u>724-485-3540</u>	Telephone: <u>724-485-3540</u>
Email: <u>RaymondHoon@ConsolEnergy.com</u>	Email: <u>RaymondHoon@ConsolEnergy.com</u>
Facsimile: _____	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](mailto:depprivacyofficer@wv.gov).

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**Surface Owner(s):**

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

824 Jefferson Run Road, Alma, WV 26320

Donald L. Seckman

705 Jefferson Run Road, Alma, WV 26320

Potts Place LLC

353 Foundry St., New Martinsville, WV 26155

Becannray LLC

5042 Tyler Highway, Sisterville, WV 26175

STS Enterprises LLC

659 Jefferson Run Road, Alma, WV 26320

George G. Hamilton

2812 McElroy Creek Road, Alma, WV 26320

Charles E. Hamilton, Jr.

17095 WV Rt 23 N, West Union, WV 26456

Gary L. Hamilton

102 Big Flint Road, West Union, WV 26456

Nicole Eastham

34973 State Route 800, New Matamoras, OH 45767

Alexandria Fetty

44958 Benwood Road, Sardis, OH 43946

Rachelle Hise

44832 State Route 78, Woodsfield, OH 43793

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04/6/2018



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: 11-22-17 Date Permit Application Filed: 11-27-17

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

- CERTIFIED MAIL RETURN RECEIPT REQUESTED
- HAND DELIVERY

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

Notice is hereby provided to the SURFACE OWNER(s)

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

Name: See attached. Name: \_\_\_\_\_  
 Address: \_\_\_\_\_ Address: \_\_\_\_\_

Notice is hereby given:

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

State: <u>West Virginia</u>	UTM NAD 83	Easting: <u>515356.145</u>
County: <u>Tyler</u>		Northing: <u>4363427.449</u>
District: <u>McElroy</u>	Public Road Access: <u>County Route 58</u>	
Quadrangle: <u>Shirley</u>	Generally used farm name: <u>Seckman</u>	
Watershed: <u>McElroy Creek</u>		

This Notice Shall Include:

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

Well Operator: CNX Gas Company, LLC Address: 1000 Consol Energy Drive  
 Telephone: 724-485-3540 Canonsburg, PA 15317  
 Email: RaymondHoon@ConsolEnergy.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](mailto:depprivacyofficer@wv.gov).

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WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
**Division of Highways**

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

Jim Justice  
 Governor

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

October 31, 2017

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

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

Dear Mr. Martin,

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

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

Very Truly Yours,

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

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

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 Environmental Protection

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

Type: Water CAS: 7732-18-5

Type: Silica CAS: 14808-60-7

Type: Hydrochloric Acid CAS: 7647-01-0

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

Type: Petroleum distillate CAS: 64742-47-8

Type: Glutaraldehyde CAS: 111-30-8

Type: Ethylene glycol CAS: 107-21-1

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

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

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

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

Type: Ammonium chloride CAS: 12125-02-9

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

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

Type: Metanol CAS: 67-56-1

Type: Formaldehyde CAS: 50-00-0

Type: Thiourea CAS: 62-56-6

Type: Acetophenone CAS: 98-86-2

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LOCATION MAP  
NOT TO SCALE



LOCATION MAP  
SHIRLEY, WV 26157 Quadrangle



CNX RESOURCES CORPORATION  
1000 CONSOL ENERGY DRIVE  
CANONSBURG, PA 15317

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

### PROPERTY OWNERS

- 05-15-41  
ALLEN W SECKMAN ET AL  
824 JEFFERSON RUN RD  
ALMA, WV 26320
- 05-15-42  
ALLEN W SECKMAN ET AL  
824 JEFFERSON RUN RD  
ALMA, WV 26320
- 05-15-37  
ALLEN W SECKMAN ET AL  
824 JEFFERSON RUN RD  
ALMA, WV 26320
- 05-15-35  
ALLEN W SECKMAN ET AL  
824 JEFFERSON RUN RD  
ALMA, WV 26320

### SHR30 WELL SITE LOCATION

NAD 83 - LAT: N 39°24'49.181"; LONG: W 80°48'54.273"  
NAD 27 - LAT: N 39°24'48.891"; LONG: W 80°48'54.894"

### SHR31 WELL SITE LOCATION

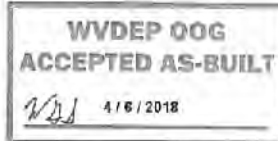
NAD 83 - LAT: N 39°25'12.404"; LONG: W 80°49'18.123"  
NAD 27 - LAT: N 39°25'12.114"; LONG: W 80°49'18.744"

### ENTRANCE LOCATION

NAD 83 - LAT: N 39°24'44.598"; LONG: W 80°49'45.062"  
NAD 27 - LAT: N 39°24'44.309"; LONG: W 80°49'45.683"

MCELROY DISTRICT  
TYLER COUNTY, WEST VIRGINIA

DATE: APRIL 5TH, 2018



Blue Mountain Inc.  
Engineers and Land Surveyors  
10125 Mason Dixon Hwy.  
Buckton, WV 26562-9656  
(304) 662-6486

### SHR 30 WELL PAD

API #'S  
047-095-02232  
047-095-02241  
047-095-02233  
047-095-02234  
047-095-02235  
047-095-02236  
047-095-02237  
047-095-02238

### SHR 31 WELL PAD

API #'S  
047-095-02221  
047-095-02217  
047-095-02218  
047-095-02219

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

### ENGINEER CERTIFICATION

I DO HEREBY CERTIFY THAT THE AS-BUILT CONDITIONS DEPICTED IN THESE PLANS AND DIMENSIONS WERE OBTAINED FROM THE DATA PROVIDED BY THE CLIENT. TO THE BEST OF MY KNOWLEDGE, THE DATA HAS BEEN ACCURATELY INCORPORATED INTO THESE PLANS WITH THE EXCEPTIONS NOTED TO THESE CONDITIONS AND DIMENSIONS.

*[Signature]* BRUCE R. SOLEY, P.E.

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

**Blue Mountain Inc.**  
Engineers and Land Surveyors  
10125 Mason Dixon Hwy.  
Buckton, WV 26562-9656  
(304) 662-6486

---

CNX RESOURCES CORPORATION  
1000 CONSOL ENERGY DRIVE  
CANONSBURG, PA 15317

---

**CNX**

POST MODIFICATION AS-BUILT COVER SHEET  
SHR 31 WELL PAD, TANK PAD, SHR 30 WELL PAD, AND ACCESS ROADS

---

REVISIONS


---

WILLIAM P. FIELD  
REGISTERED PROFESSIONAL ENGINEER  
4445  
STATE OF  
WEST VIRGINIA  
EXPIRES 12/31/2018

---

OWNER: CNX  
DRAWN BY: JPL  
DATE: 04/05/18  
SCALE: AS SHOWN  
APP NO: 10174 & 21118  
CHECKED BY: BRUCE R. SOLEY, P.E.

---

SHEET 1

**WVDEP O&G  
ACCEPTED AS-BUILT**

*WJL* 4/16/2018

**Blue Mountain Inc.**  
Engineers and Land Surveyors  
1012 Maple Glen Hwy  
Berlin, WV 25310-8806  
(304) 337-1400

THE RESOURCES CORPORATION  
1600 CONCO, ENERGY DRIVE  
CANNONBURG, VA 24517

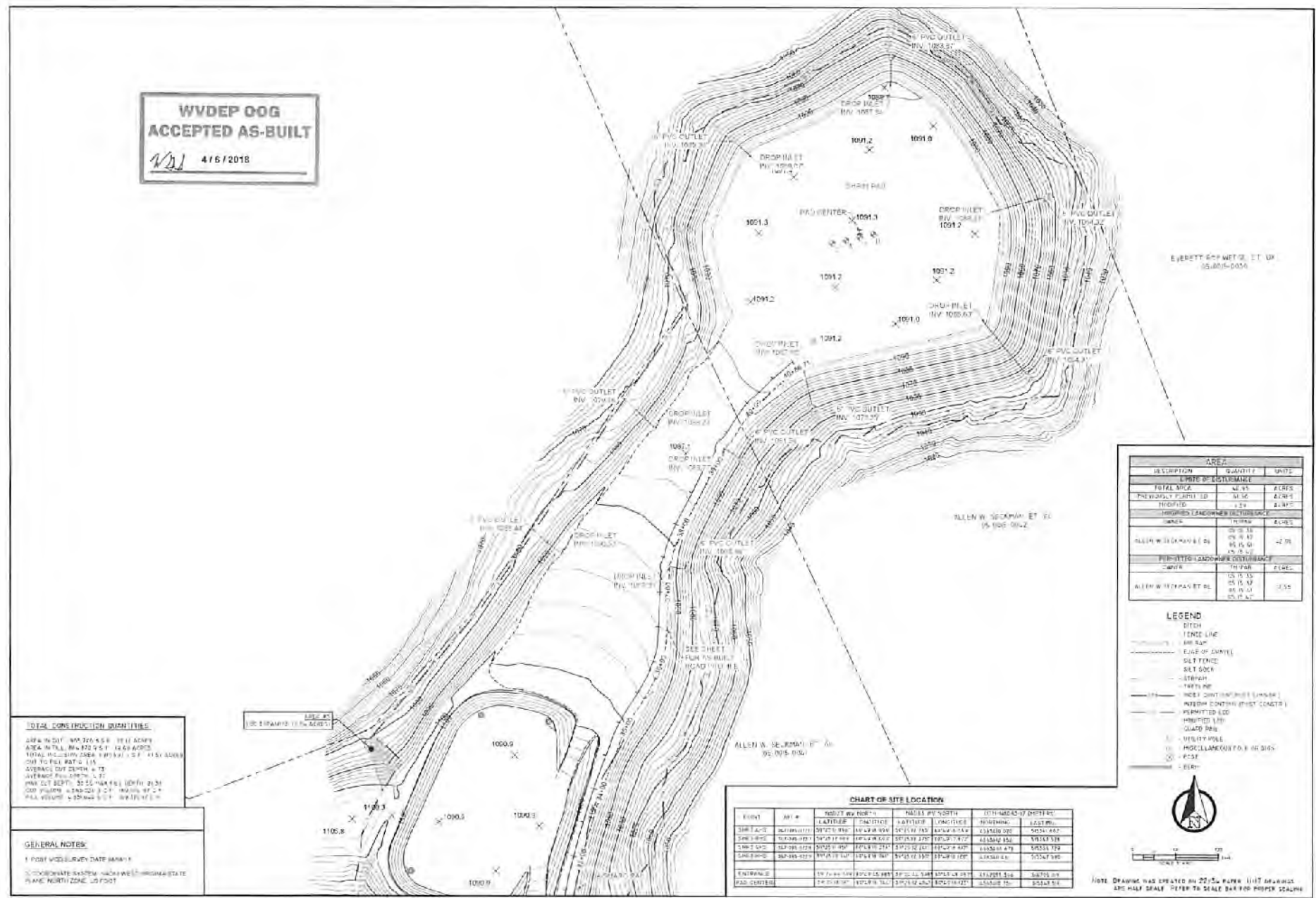
**CNX**  
POST MODIFICATION AS-BUILT  
SHR 31 WELL PAD, TANK PAD, SHR 30 WELL PAD,  
AND ACCESS ROADS

**REVISIONS**

DATE	BY



Drawn By: WCA  
Checked By: BLS  
Date: 5/10/18  
Title: AS-BUILT  
Scale: AS SHOWN  
Drawing Date: 4/16/18  
Project Name: SHR 31 WELL PAD, TANK PAD, SHR 30 WELL PAD, AND ACCESS ROADS



DESCRIPTION	QUANTITY	UNITS
<b>AREA</b>		
<b>PERMITS OCCURRENCE</b>		
TOTAL AREA	41.95	SQ.FT.
PREVIOUSLY PERMITTED	16.50	SQ.FT.
ADDED	25.45	SQ.FT.
<b>PERMITTED OCCURRENCE</b>		
OWNER	74.00	SQ.FT.
ALLEN W. SECORAN ET AL	25.45	SQ.FT.
<b>PERMITTED OCCURRENCE</b>		
OWNER	74.00	SQ.FT.
ALLEN W. SECORAN ET AL	25.45	SQ.FT.

- LEGEND**
- DITCH
  - FENCE LINE
  - 8" PIPE
  - EDGE OF DRIVE
  - SILT FENCE
  - SILT SOCK
  - STRECH
  - TREE LINE
  - HOSE CONTAINMENT LINES
  - PERMITTED LEO
  - PROPOSED LEO
  - GUARD RAIL
  - VISIBILITY POLE
  - MISCELLANEOUS P.O.B. OR SIGN
  - POST
  - BERRY



NOTE: DRAWING WAS CREATED ON 22x36 PAPER. IF IT IS DRAWN AT A DIFFERENT SCALE, REFER TO SCALE BAR FOR PROPER SCALING.

**TOTAL CONSTRUCTION QUANTITIES**

DRIP IN DITCH: 114,320.45 FT. OF ACRES  
 AREA IN TANK: 164,872.95 FT. OF ACRES  
 TOTAL PERMITTED: 280,193.40 FT. OF ACRES  
 DITCH TO FILL: 107.11 FT.  
 AVERAGE DITCH DEPTH: 4.75 FT.  
 AVERAGE FILL DEPTH: 1.35 FT.  
 MAX. CUT DEPTH: 35.55 FT. (4.1% SLOPE)  
 MAX. FILL DEPTH: 4.50 FT. (2.0% SLOPE)  
 FULL VOLUME: 1,204,000.00 CU. YD.

**GENERAL NOTES**

1. POST MOD SURVEY DATE 5/10/18  
 2. COORDINATE SYSTEM: NAD83 WGS84  
 3. PLANE: NORTH ZONE, US FOOT

**CHART OF SITE LOCATION**

POINT	APR #	NAD83 BY NORTH	NAD83 BY NORTH	UTM X	UTM Y	UTM ZONE
SHR 31-1	1000000000	507119.88	401484.88	18QUR 74N	635482.82	18QUR 74N
SHR 31-2	1000000000	507119.88	401484.88	18QUR 74N	635482.82	18QUR 74N
SHR 31-3	1000000000	507119.88	401484.88	18QUR 74N	635482.82	18QUR 74N
SHR 31-4	1000000000	507119.88	401484.88	18QUR 74N	635482.82	18QUR 74N
SHR 31-5	1000000000	507119.88	401484.88	18QUR 74N	635482.82	18QUR 74N
SHR 31-6	1000000000	507119.88	401484.88	18QUR 74N	635482.82	18QUR 74N
SHR 31-7	1000000000	507119.88	401484.88	18QUR 74N	635482.82	18QUR 74N
SHR 31-8	1000000000	507119.88	401484.88	18QUR 74N	635482.82	18QUR 74N
SHR 31-9	1000000000	507119.88	401484.88	18QUR 74N	635482.82	18QUR 74N
SHR 31-10	1000000000	507119.88	401484.88	18QUR 74N	635482.82	18QUR 74N
SHR 31-11	1000000000	507119.88	401484.88	18QUR 74N	635482.82	18QUR 74N
SHR 31-12	1000000000	507119.88	401484.88	18QUR 74N	635482.82	18QUR 74N
SHR 31-13	1000000000	507119.88	401484.88	18QUR 74N	635482.82	18QUR 74N
SHR 31-14	1000000000	507119.88	401484.88	18QUR 74N	635482.82	18QUR 74N
SHR 31-15	1000000000	507119.88	401484.88	18QUR 74N	635482.82	18QUR 74N
SHR 31-16	1000000000	507119.88	401484.88	18QUR 74N	635482.82	18QUR 74N
SHR 31-17	1000000000	507119.88	401484.88	18QUR 74N	635482.82	18QUR 74N
SHR 31-18	1000000000	507119.88	401484.88	18QUR 74N	635482.82	18QUR 74N
SHR 31-19	1000000000	507119.88	401484.88	18QUR 74N	635482.82	18QUR 74N
SHR 31-20	1000000000	507119.88	401484.88	18QUR 74N	635482.82	18QUR 74N