

#### west virginia department of environmental protection

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

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

Friday, 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 BHSM

47-095-02489-00-00

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 easing. 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 BHSM

Farm Name: ALLEN W. SECKMAN, ET AL.

U.S. WELL NUMBER: 47-095-02489-00-00

Horizontal 6A New Drill

Date Issued: 4/6/2018

API Number: <u>95-02489</u>

#### PERMIT CONDITIONS

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

#### **CONDITIONS**

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

API Number: 95-02489

# **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.

API NO. 47-95 - 02489	_
OPERATOR WELL NO. SHR31BHSM	
Well Pad Name: SHR31	

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

1) Well Operato	r: CNX G	as Compan	y, LLC	494458046	Tyler	McElroy	Shirley
				Operator ID	County	District	Quadrangle
2) Operator's W	eli Number	: SHR31BH	ISM	Well Pad	Name: SHR3	1	
3) Farm Name/S	Surface Own	ner: Seckma	an	Public Road	d Access: CR	58	
4) Elevation, cur	rrent ground	d: 1091'	E	levation, proposed p	oost-construction	on: 1091'	
5) Well Type	(a) Gas	X	Oil	Unde	rground Storag	e	
	Other						
	(b)If Gas	Shallow	X	Deep			
		Horizontal	X				
6) Existing Pad:	Yes or No		Yes				
•	•			ipated Thickness ar	-	` '	
Target formati	ion is Marce	llus Shale @	6683'-673	31' TVD, 48' thick, ex	spected formation	n pressure	~4000 psi
8) Proposed Tot	al Vertical I	Depth: 672	5' TVD a	t TD (dependent u	pon formation	dip)	
9) Formation at	Total Vertic	cal Depth: _	Marcellus	s Shale (will not pe	enetrate Onone	daga)	
10) Proposed To	tal Measure	ed Depth:	15,440' N	/ID at TD			
11) Proposed Ho	orizontal Le	g Length: _8	3298'		<del>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</del>	· · · · · · · · · · · · · · · · · · ·	
12) Approximate	e Fresh Wat	ter Strata De <sub>l</sub>	pths:	125', 580'			
13) Method to D	etermine F	resh Water D	epths:	Depth of bit when wate	er shows in flowlin	ne or depth w	when misting is required
14) Approximate	e Saltwater	Depths: 22	71'				
15) Approximate	e Coal Sean	n Depths: N	o known	coal seams			
16) Approximate	e Depth to I	Possible Void	d (coal m	ine, karst, other): _	None anticipat	ed	
17) Does Propos directly overlyin				ms Yes	No		х
(a) If Yes, prov	vide Mine Iı	nfo: Name:	:				
-		Depth	:				
		Seam:					
		Owner	:				

WW-6B	
(04/15)	

API NO. 47-47 0 9 5 0 2 4 8 9

OPERATOR WELL NO. SHR31BHSM
Well Pad Name: SHR31

#### 18)

#### **CASING AND TUBING PROGRAM**

ТҮРЕ	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	15469	15440	2947 / TOC @ 2075'
Tubing	2.375	New	J-55	4.7	Above assumes RF=29'	TBD	N/A
Liners	N/A						

# DMH 11/21/17

ТҮРЕ	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						

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## **PACKERS**

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Kind:	N/A		
Sizes:			
Depths Set:			

WW-6B (10/14) 4709502489

API NO. 47-

OPERATOR WELL NO. SHR31BHSM

Well Pad Name: SHR31

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.

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

25) Proposed borehole conditioning procedures:

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

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\*Note: Attach additional sheets as needed.

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#### **SHR31 Cement Additives**

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

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1091'GL Elevation		Ž O	<b>20</b>	CONSOL ENER	5	i			SHR31BHSM Marcellus Sh Tyler Co	SHR31BHSM (Marcellus HZ) Marcellus Shale Horizontal Tyler County, WV	
1091' GL Elevation						SH	R31BHS	SM SHL	Z	337878, E 162658(	(NAD27)
HOLE   CASING   GEOLOGY   MD   TVD   MUD   CEMENT   CENTRALIZERS   CONDITIONING	ound Elevation		1091' GL	Elevation		SH	R31BH	SMLP	z	337193, E 162708;	(NAD27)
HOLE   CASING   GEOLOGY   MD   TVD   MUD   CEMENT   CENTRALIZERS   CONDITIONING	Azimuth		161			SH	R31BHS	SM BHL	Z	329330, E 1629733	3 (NAD27)
17-172   13-518° 54.5#   Shallowest Fresh Water Casing   15.5 pog Class A   15.5 pog Cl	WELLBORE DIAGRAM		CASING	GEOLOGY	MD	TVD	MUD	CEMENT	CENTRALIZERS	CONDITIONING	COMMENTS
12-112		24"	20° L/S	Conductor	100	100	AIR	To Surface	N/A	N/A	Stabilize surface fill/soil
17-172   13-38° 54.58				7.5		125		15.6 ppg Class A + 1% to 3% CaCl2	Centralize every 3rd		Set through fresh water.
12-114   9-5/8-36.04   15-6 pgg Class A   15-6 pg		17-1/2"	13-3/8" 54.5# J-55 BTC				AIR / FW Mist	+ 1/4 pps Flake 20% OH Excess Yield = 1.19	surface Surface	Ensure the hole is clean at section TD	Cemented to surfac
12-1/4"   9-5/8-36.0#   Big Injun   2271   2705   9-5/8-26.0#   Big Injun   2271   4-1/4 pps Flake   1-1/4   9-5/8-36.0#   Big Injun   2271   4-1/4 pps Flake   1-1/4 pps Fl				Fresh Water Casing	730	730		TOC @ surface	pow spring centralizers		
12-1/4"   9-5/87-36.0#   Big Injun   2271   AIR /				No known coal zones		N/A					
12-114*   9-58-78-0.3#   Big Injun   2271   AIR / + 1/4 pps Flake   Price   2325   Soap   Proce   2325   Proce   232				Big Lime		2200		15.6 ppg Class A + 0% to 2% CaCl2	Centralize every 3rd		Set through potential salt zones
Price   2325   Soap   20% OH Excess   TOC @ surface		19-1/4"	9-5/8" 36.0#	Big Injun		2271	AIR /	+ 1/4 pps Flake	joint from shoe to	Soap the hole as needed	Cemented to surface
Neir   100			J-55 LTC	Price		2325	Soap	20% OH Excess		clean at section TD	Casing to be set ~2001-250
Berea   Cordon   2569   AIR   Control   Cont				Weir		2478		TOC @ surface	Bow spring centralizers		the Big Injun base
Benea   2668   AIR   60:50 Class H: Poz   AIR   60:50 Class H: Poz   AIR   60:50 Class H: Poz   AIR				Intermediate Casing	2575	2575					
S-3/4"   Warren   3986				Berea		2669					
15.2 ppg Class H				Gordon		3095					
Tangent Lower Huron 3986 with additives (retrader, gas pension agent, gas pension agent, gas pension agent, gas pock, defoamer, fluid loss, extender, etc.)  Alexander 5406 P-110 VAR Cashaqua 6899 Burkett 6614 Burkett 6646 12.0-12.5  Alexander 6596 Burkett 6650 Burk		8-3/4"		Warren		3588	O.V	15.2 ppg Class H		to otelumin OT to away	
S-1/2*20.0#		Tangent		Lower Huron		3986		with additives (relarder,	Control collection	max flowrate with max	Motor Anticol control
Concerned the norm of the no				Benson		5156		suspension agent, gas	from shoe to KOP -	rotation until shakers clean-	
P-110 VAR   Cashaqua   6399   10% OH Excess   Single-piecefrigid bow   Casing, circulate a minimum   Centralizers   P-110 VAR   Burkett   6614   Yield = 1.07   Single-piecefrigid bow   Casing, circulate a minimum   Centralizers   Once on bottom with   Casing, circulate a minimum   Centralizers   Once on bottom with   Casing, circulate a minimum   Centralizers   Once on bottom with   Casing, circulate a minimum   Centralizers   Once on bottom with   Casing, circulate a minimum   Centralizers   Once on bottom with   Casing, circulate a minimum   Centralizers   Once on bottom with   Casing, circulate a minimum   Casing, circulate a minimum   Centralizers   Once on bottom with   Casing, circulate a minimum   Casing, ci			5-1/2" 20.0#		N	5400		loss, extender, etc.)	then every 3rd joint	multiple bottoms-up)	conditions
Burkett   E614   Yield = 1.07   Single-piecel/rigid bow   Centralizers   Curve or pumping cement   Production Casing   15.0-12.5   Production Casing   15.410   6725   Production Casing   15440   6725   Production Casing   15440   6725   Production Casing   15440   6725   Production Casing   15440			P-110 VAR			6388		n 100 ya		Ones on hother will	Note: Actual cement blends may
## Section of one hole volume prior to programme pr	C			Burkett		6614		Yield = 1.07	Single-piece/rigid bow	casing, circulate a minimum	-
8 Lateral Hamilton 6667 ppg SOBM 100億 3=300 above 9-5/8 shoe 9-5		8-1/2" Curve	Į.	Tully		$\overline{}$			cellidizers	of one hole volume prior to	
Marcellus IIII		& Lateral		Hamilton		$\overline{}$		9-5/8" shoe		pumping cement	
Production Casing 15440	CE of O			Marcellus		6683					
				Production Casing	15440	6725					

SHR31 Pad Frac SOG Review / CRSD Review Tuesday, November 7, 2017



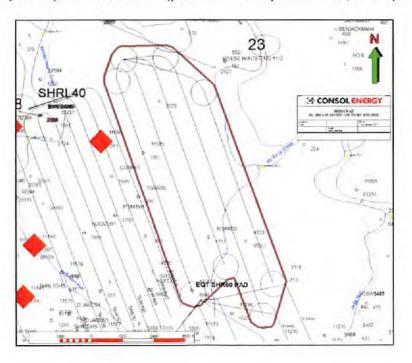
#### SHR31 Pad Frac - SOG Review

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 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.

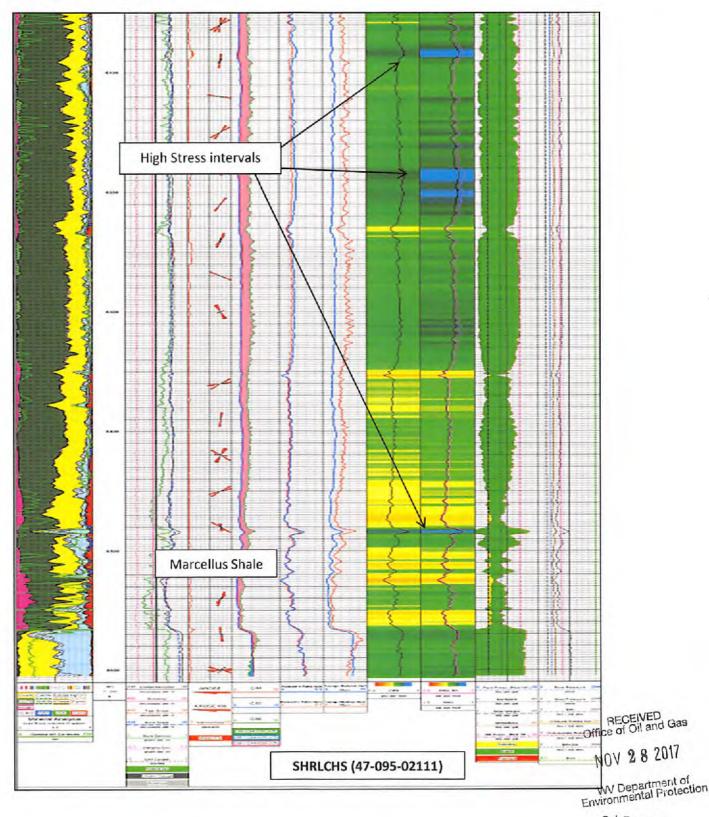
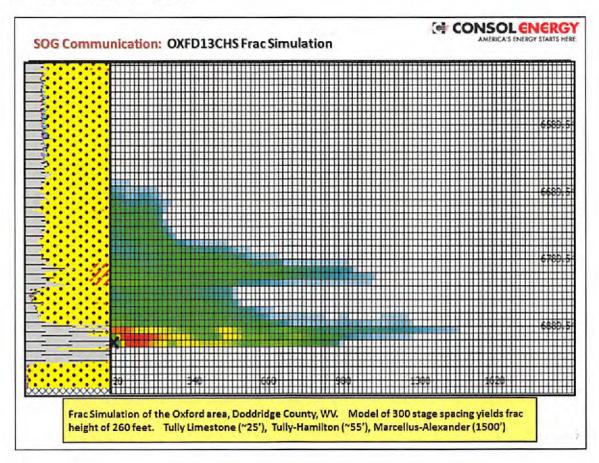




Figure 3. Stratigraphic intervals of high stress should serve as adequate frac barriers for a Marcellus frac. The frac modeling example below is from the Oxford area of western Doddridge County, where the Marcellus and adjacent shallower shales are lithologically similar to Pennsboro. Frac modeling only 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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o BENJACKMAN4 1491 329 WEESE HUNTER NO 1110 2027 2027 SHRL40 CONSOLENERGY SHEAT PAD SEC AREA OF REVIEW FOR WY DEF AND CRED 11001 3038 01251 30315 30179 1387 2118 ECT SHR60 PAD 1174HRL1DHS SSW5480 o 1306 446 475 11236 11235 5457 433

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	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	KEY52	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	-80.81592	CANBH		CANCELLED MARCELLUSPERMIT	245'	4/25/2011
4709502027	Triad Hunter, LLC.	WEESE PAD	WEESE HUNTER NO 1110			GA5	6407	PRODUCING MARCELLUS LATERAL	355'	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	10/17/201
4709502342	EQT PRODUCTION CO	SHR60 PAD	514466			PERMIT ISSUED		PERMITTED MARCELLUS LATERAL	465'	3/31/201
4709502341	EQT PRODUCTION CO	SHR60 PAD	514465			PERMIT ISSUED		PERMITTED MARCELLUS LATERAL	380'	3/31/2010
4709502264	EQT PRODUCTION CO	SHR60 PAD	514461			PERMIT ISSUED		PERMITTED MARCELLUS LATERAL	380'	7/23/201
4709502257	EQT PRODUCTION CO	SHR60 PAD	514460			PERMIT ISSUED		PERMITTED MARCELLUS LATERAL	380	7/23/201
4709502256	EQT PRODUCTION CO	SHR60 PAD	514464			PERMIT ISSUED		PERMITTED MARCELLUS LATERAL	380	7/23/201
4709502220	EQT PRODUCTION CO	SHR60 PAD	514463			PERMIT ISSUED		PERMITTED MARCELLUS LATERAL	380'	3/24/201
4709502255	EQT PRODUCTION CO	SHR60 PAD	514452			PERMIT ISSUED		PERMITTED MARCELLUS	380	7/2035

MOVP age

04/6/2000 Protection

( CONSOL ENERGY.

AMERICA'S ENERGY STARTS HERE

SHR31 Pad Frac SOG Review / CRSD Review Tuesday, November 7, 2017

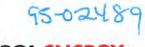
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## SHR31 PAD GEOLOGICAL PROGNOSIS

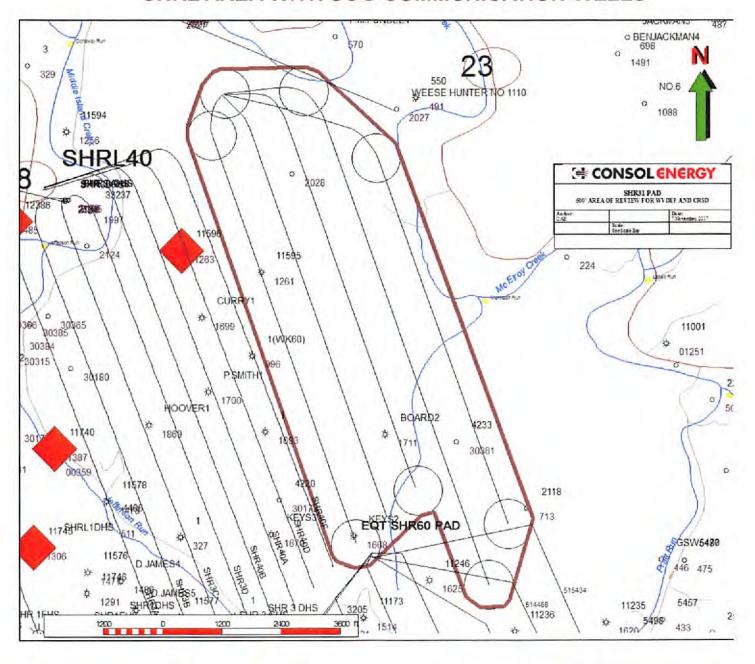
Top Depth from Ground Elevation (TVD)		Possible Show	Coal Seam Thickness (FEET)	Minable Coal Seam	General Rock Type	Drilling Problems	Type of Formation Evaluation
0	Soil & Colluvium				Soil & Rock		
470, 580	Deepest Fresh Water						
	No known coals this far west		none	no			
	Sand and Red Rock				Sand & Shale		
2200	Big Lime (no red rock deeper than this depth)				Limestone	luce oil	
2271	Big Injun Top	GAS / SALTWATER			Sand	The Big Injun and Gordon Sands may produce oil and/or water.	
2325	Price Formation				Sandstone	nds n	Ď.
2478	Weir Sand				Sandstone	Gordon Sandi and/or water.	is pa
2669	Berea				Sandstone	Gord and/o	on th
2677	Devonian Shale Top				Grey Shale	and	Well
3095	Gordon				Sandstone	Inju	one
3588	Warren Sand				Sandstone	e 89	0
3986	Lower Huron	GAS			Grey Shale	É	e rar
5156	Benson				Siltstone		vill b
5400	Alexander	GAS			Siltstone	are	v 28c
6399	Cashaqua Shale	CONF	INING LAYER		Grey Shale	Ems.	ele l
6505	Middlesex				Grey Shale	roble	lot h
6546	West River				Grey Shale	No drilling problems are anticipated.	No pilot hole logs will be ran on one well on this pad.
6614	Burket Shale	GAS			Black Shale	d li	-
6646	Tully Limestone	CONF	INING LAYER		Limestone	S	
6667	Hamilton				Grey Shale		
6683	Upper Marcellus	GAS			Black Shale	v	
6699	Middle Marcellus	GAS			Black Shale	llus i to be ured	
6713	Cherry Valley	GAS			Limestone	larce cted	
6720	Lower Marcellus	GAS			Black Shale	The Marcellus is expected to be overpressured	
6731	Onondaga Limestone				Limestone	_ • •	

Office of Oil and Gas
NOV 28 2017
W Department of Environmental Protection





#### SHRL AREA WITH SOG COMMUNICATION WELLS



The SHR31 Pad to be frac'd (in maroon) is in an area of pervasive communication.

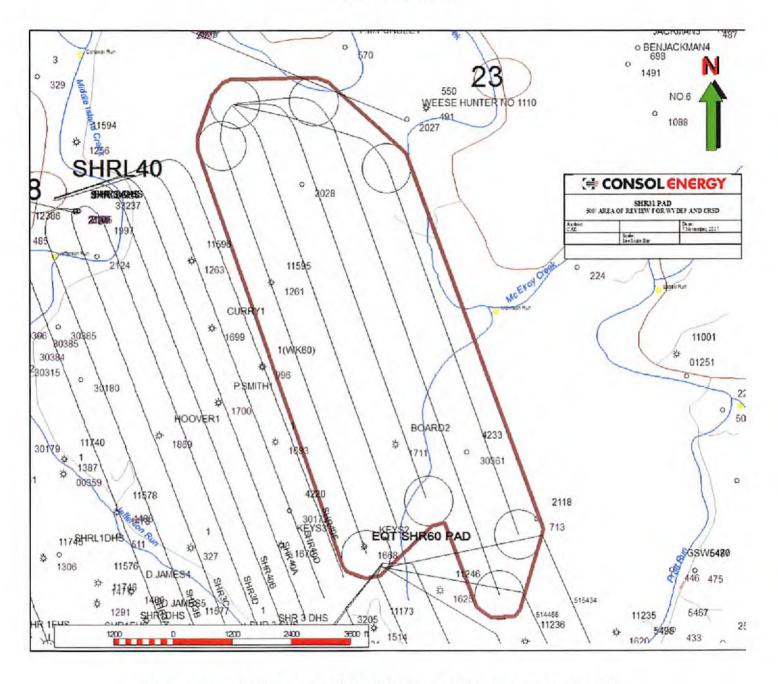
Many Shallow O&G wells are being effected by gas migration from the Marcellus pad fracs, charging the Benson reservoir, which is the primary producing reservoir of the SOG wells.

Pressure migration with the vertical Shallow Oil and Gas wells above the pads is believed to be 2017 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.

W Department of the pads is believed to be 2017 and the pads is



#### SHR31 PAD



All wells within a 500' buffer have been reviewed.





### 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	KEY52	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 MARCELLUSPERMIT	245'	4/25/201:
4709502027	Triad Hunter, LLC.	WEESE PAD	WEESE HUNTER NO 1110			GAS	6407	PRODUCING MARCELLUS  LATERAL	356'	4/25/201
4709530351	Hope Natural Gas Company	D N Furbee	4233	39.40085	-80.80517	ABDGAS	2620	PLUGGED GORDON 2/18/1944	330	8/30/191
4709502355	EQT PRODUCTION CO	SHR60 PAD	515434			PERMIT ISSUED		PERMITTED MARCELLUS LATERAL	510'	10/17/201
4709502342	EQT PRODUCTION CO	SHR60 PAD	514466			PERMIT ISSUED		PERMITTED MARCELLUS LATERAL	465'	3/31/201
4709502341	EQT PRODUCTION CO	SHR60 PAD	514465			PERMIT ISSUED		PERMITTED MARCELLUS LATERAL	380'	3/31/201
4709502264	EQT PRODUCTION CO	SHR50 PAD	514461			PERMIT ISSUED	10	PERMITTED MARCELLUS LATERAL	380'	7/23/201
4709502257	EQT PRODUCTION CO	SHR60 PAD	514460			PERMIT ISSUED		PERMITTED MARCELLUS LATERAL	380'	7/23/201
4709502256	EQT PRODUCTION CO	SHR60 PAD	514464			PERMIT ISSUED		PERMITTED MARCELLUS LATERAL	380'	7/23/201
4709502220	EQT PRODUCTION CO	SHR60 PAD	514463			PERMIT ISSUED		PERMITTED MARCELLUS LATERAL	380'	3/24/201
4709502255	EQT PRODUCTION CO	SHR60 PAD	514462			PERMIT ISSUED		PERMITTED MARCELLUS LATERAL	380'	7/23/201

CONSOL wells to monitor in pink.

Office of Oil and Gas

NOV 28 2017

WV Department of Environmental Protection
04/6/2018

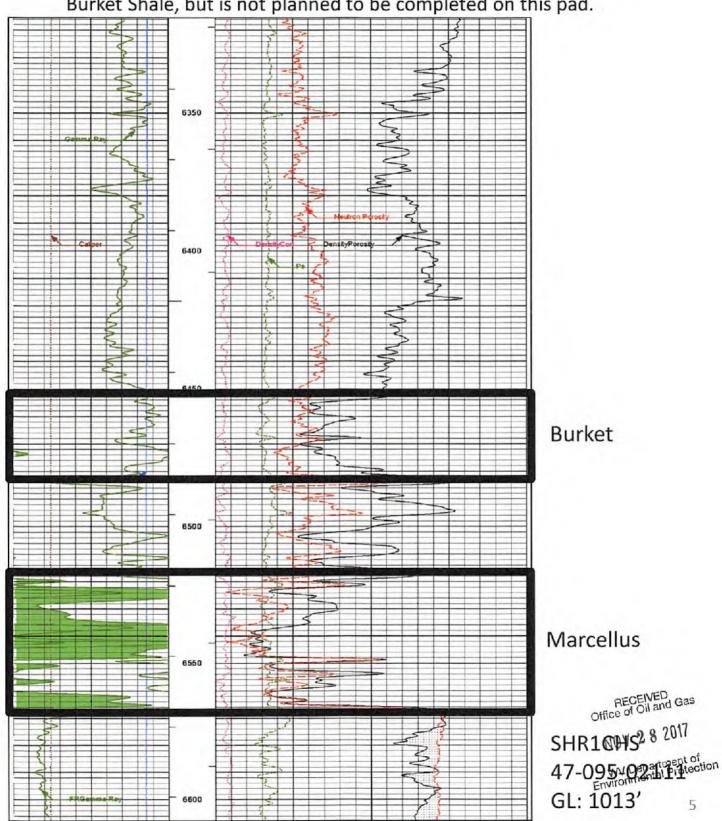


04/6/2018

## 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.





# CONSOLENERGY AMERICA'S ENERGY STARTS HERE.

## SHRL Area Stress Profile Log (SHRL1C)



WW-9 (4/16)

API Number 47 -	
Operator's Well No.	SHR31HSM

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

	OP Code 494458046
Vatershed (HUC 10) McElroy Creek	Quadrangle Shirley
Oo you anticipate using more than 5,000 bbls of water to Vill a pit be used? Yes No VIII a pit be used? Yes Down No VIII waste: C	
시시, 이렇게 하는 이번 이렇게 되었다면 하는 사람이 되었다면 하는 것이 되었다면 하는 것이다.	
	No If so, what ml.?
Proposed Disposal Method For Treated Pit Was	Permit Number_see attached
Land Application Underground Injection ( UIC	Permit Number see attached
Reuse (at API Number at next	anticipated well
	m WW-9 for disposal location)
Other (Explain	
Vill closed loop system be used? If so, describe: yes	
rilling medium anticipated for this well (vertical and ho	prizontal)? Air, freshwater, oil based, etc.
-If oil based, what type? Synthetic, petroleum,	A CALL TO THE PROPERTY OF THE
dditives to be used in drilling medium? Please see atta	
	noved offsite, etc
	will be used? (cement, lime, sawdust)
-Landfill or offsite name/permit number? please	
-Eardin of offsite name/perint number:	o de dilatino di cet
Permittee shall provide written notice to the Office of Oil West Virginia solid waste facility. The notice shall be provided it was properly disposed.	and Gas of any load of drill cuttings or associated waste rejected at any ovided within 24 hours of rejection and the permittee shall also disclose
Vest Virginia solid waste facility. The notice shall be providere it was properly disposed.  I certify that I understand and agree to the terms in August 1, 2005, by the Office of Oil and Gas of the Wrovisions of the permit are enforceable by law. Violating or regulation can lead to enforcement action.  I certify under penalty of law that I have perspelication form and all attachments thereto and that.	s and conditions of the GENERAL WATER POLLUTION PERMIT issued vest Virginia Department of Environmental Protection. I understand that the ions of any term or condition of the general permit and/or other applicable sonally examined and am familiar with the information submitted on this based on my inquiry of those individuals immediately responsible for on is true, accurate, and complete. I am aware that there are significant
I certify that I understand and agree to the terms of August 1, 2005, by the Office of Oil and Gas of the Wovisions of the permit are enforceable by law. Violate wor regulation can lead to enforcement action.  I certify under penalty of law that I have persophication form and all attachments thereto and that obtaining the information, I believe that the information enalties for submitting false information, including the product of the penalty of the penalties for submitting false information, including the penalties false information in the penalties false in the	s and conditions of the GENERAL WATER POLLUTION PERMIT issued lest Virginia Department of Environmental Protection. I understand that the ions of any term or condition of the general permit and/or other applicable sonally examined and am familiar with the information submitted on this based on my inquiry of those individuals immediately responsible for in is true, accurate, and complete. I am aware that there are significant possibility of fine or imprisonment.
I certify that I understand and agree to the terms of August 1, 2005, by the Office of Oil and Gas of the Wordsions of the permit are enforceable by law. Violation or regulation can lead to enforcement action.  I certify under penalty of law that I have persopplication form and all attachments thereto and that obtaining the information, I believe that the information enalties for submitting false information, including the proportion of the penalty of	s and conditions of the GENERAL WATER POLLUTION PERMIT issued vest Virginia Department of Environmental Protection. I understand that the ions of any term or condition of the general permit and/or other applicable sonally examined and am familiar with the information submitted on this based on my inquiry of those individuals immediately responsible for on is true, accurate, and complete. I am aware that there are significant
I certify that I understand and agree to the terms of August 1, 2005, by the Office of Oil and Gas of the Wovisions of the permit are enforceable by law. Violate wor regulation can lead to enforcement action.  I certify under penalty of law that I have persoplication form and all attachments thereto and that obtaining the information, I believe that the information enalties for submitting false information, including the propagatory Official Signature    August 1, 2005, by the Office of Oil and Gas of the Workington of the person of the perso	s and conditions of the GENERAL WATER POLLUTION PERMIT issued lest Virginia Department of Environmental Protection. I understand that the ions of any term or condition of the general permit and/or other applicable sonally examined and am familiar with the information submitted on this based on my inquiry of those individuals immediately responsible for in is true, accurate, and complete. I am aware that there are significant possibility of fine or imprisonment.
Vest Virginia solid waste facility. The notice shall be providere it was properly disposed.  I certify that I understand and agree to the terms in August 1, 2005, by the Office of Oil and Gas of the Ward of the permit are enforceable by law. Violating or regulation can lead to enforcement action.  I certify under penalty of law that I have persupplication form and all attachments thereto and that braining the information, I believe that the information enalties for submitting false information, including the properties of the persupplication of	s and conditions of the GENERAL WATER POLLUTION PERMIT issued Vest Virginia Department of Environmental Protection. I understand that the ions of any term or condition of the general permit and/or other applicable sonally examined and am familiar with the information submitted on this based on my inquiry of those individuals immediately responsible for on is true, accurate, and complete. I am aware that there are significant possibility of fine or imprisonment.  **RECEIVED**Office of Oil and Gas**

Operator's Well No. SHR31HSM

Proposed Revegetation Treatment: Acres Disturbed 41.57	Prevegetati	on pH 6.0	)
Lime 2-3 Tons/acre or to correct to pl	н		
Fertilizer type 10-20-20 or equal			
Fertilizer amount_500	bs/acre		
Mulch hay or straw at 2 Tons	/acre		
Sac	ed Mixtures		
Temporary		ermanent	
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 area.  The proposed area for land applied applied, include discreage, of the land application area.  The proposed section of involved 7.5' topographic sheet.	cation (unless engineered plans imensions (L x W x D) of the pi	including th	nis info have been nsions (L x W), and area i
Maps(s) of road, location, pit and proposed area for land application. If water from the pit will be land applied, include d creage, of the land application area.  Thotocopied section of involved 7.5' topographic sheet.	imensions (L x W x D) of the pi	t, and dime	nsions (L x W), and area i
Maps(s) of road, location, pit and proposed area for land application applied. If water from the pit will be land applied, include d creage, of the land application area. Photocopied section of involved 7.5' topographic sheet.  Clan Approved by: Desk M. Haught	imensions (L x W x D) of the pi	t, and dime	nsions (L x W), and area i
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Maps(s) of road, location, pit and proposed area for land application applied. If water from the pit will be land applied, include d creage, of the land application area. Photocopied section of involved 7.5' topographic sheet.  Clan Approved by: Desk M. Haught	imensions (L x W x D) of the pi	t, and dime	nsions (L x W), and area i

#### **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 Cochranton, 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 RECEIVED
Office of Oil and Gas

NOV 28 2017

WV Department of Environmental Protection 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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Office of Oil and Gas

NOV 28 2017

WV Department of Environmental Protection



RECEIVED
Office of Oil and Gas

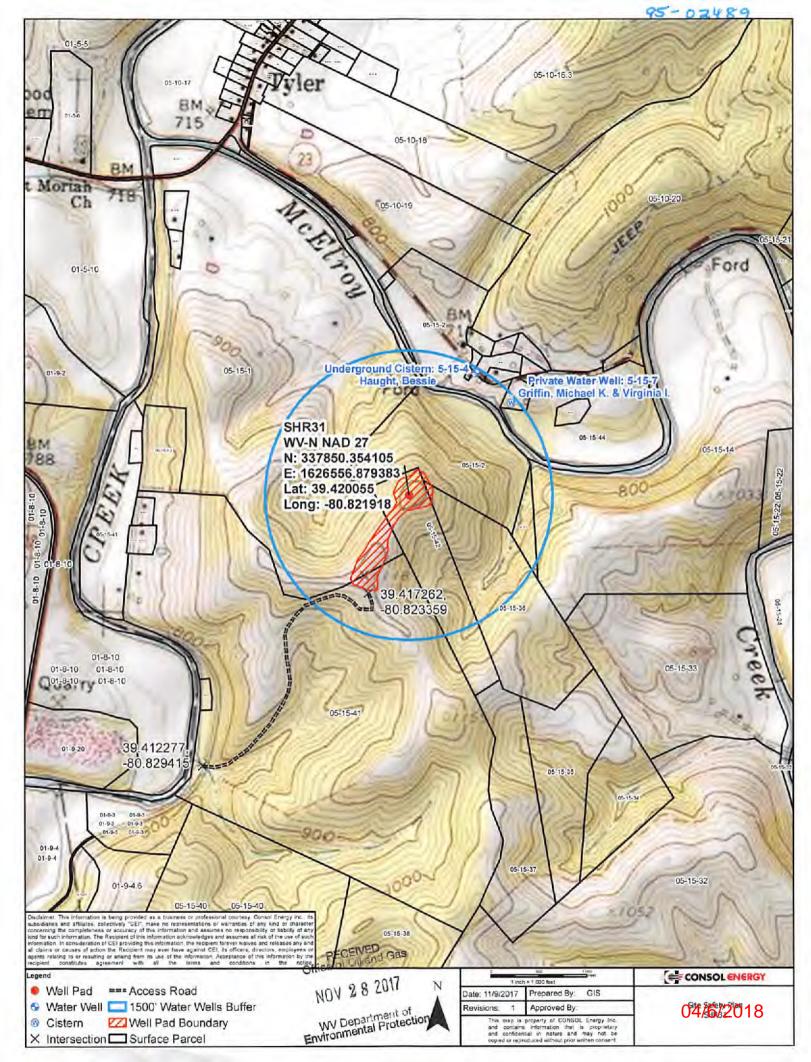
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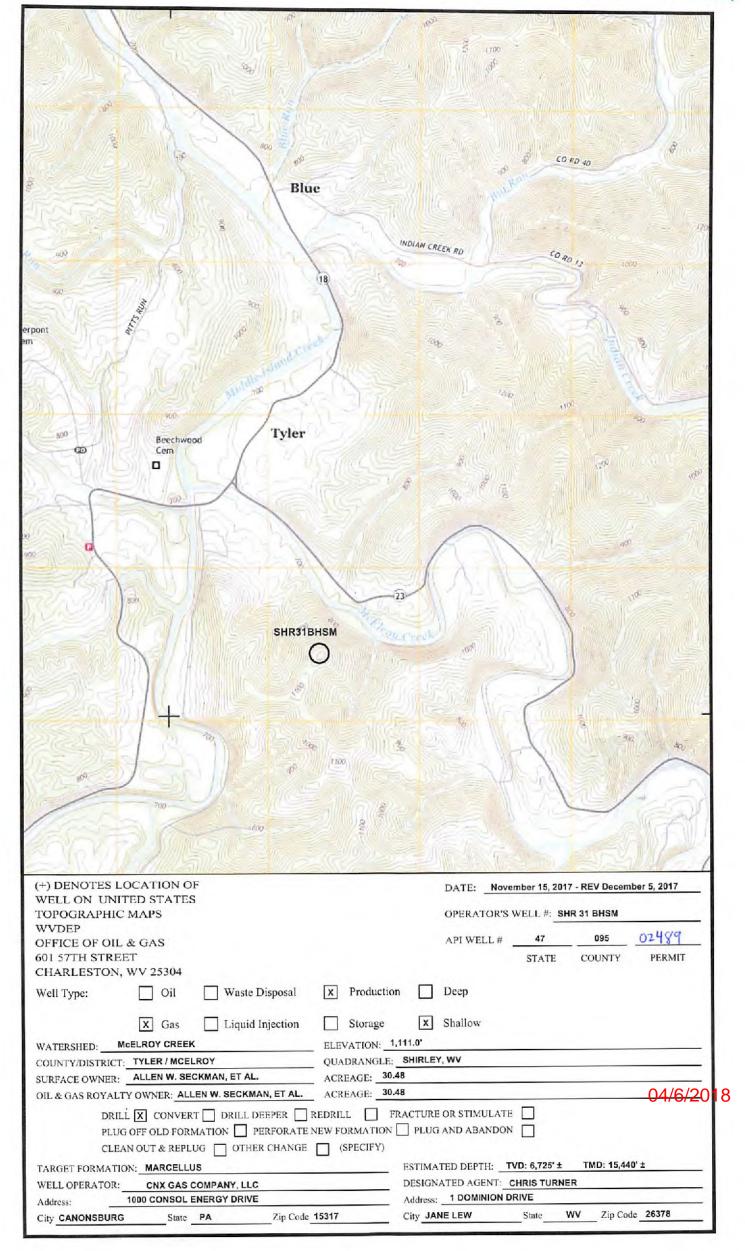
WV Department of Environmental Protection

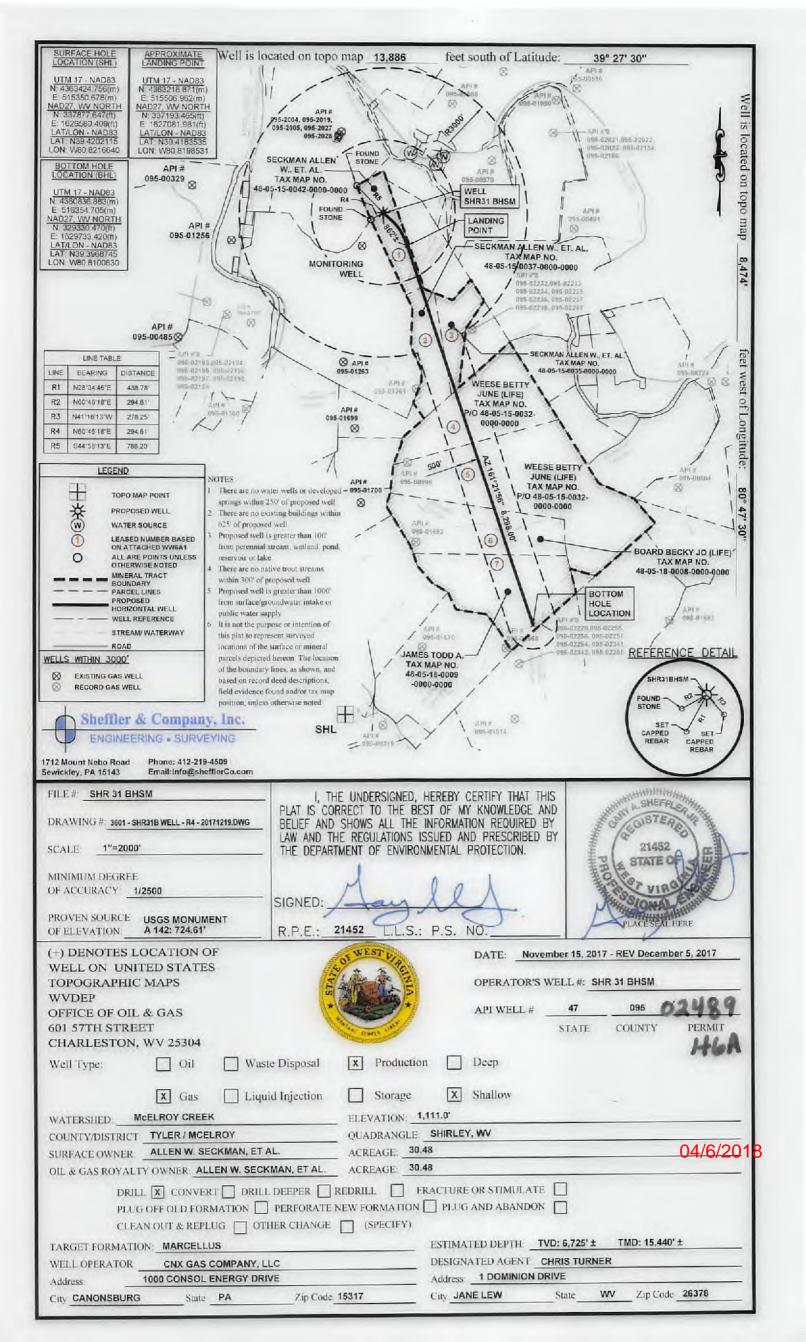
# Site Safety Plan for Well SHR31HSM CNX Gas Company, LLC.

DMH 11/29/17









Well is lo	cated on topo map 7,210'	feet south of Latitude:	39° 25' 00"
			Well is located on topo map
			locate
			ed on 1
			topo
			map_
			5,199
			9
			feet
		BHL	feet west of Longitude:
		8	of Lo
			ngitu
			d.
			80° 47' 30"
			7' 30"
1		- 4	
Sheffler & Company, Inc. ENGINEERING • SURVEYING			
1712 Mount Nebo Road Phone: 412-219-4509 Sewickley, PA 15143 Email:Info@shefflerCo.com			
FILE#: SHR 31 BHSM	I, THE UNDERSIGNED	, HEREBY CERTIFY THAT THIS	SHEFFE
DRAWING #: 3601 - SHR31B WELL - R4 - 20171219.DWG	BELIEF AND SHOWS ALL THI	BEST OF MY KNOWLEDGE AND E INFORMATION REQUIRED BY	SE CISTERE TO THE
SCALE <u>1"=2000'</u>	THE DEPARTMENT OF ENVIR	ISSUED AND PRESCRIBED BY ONMENTAL PROTECTION.	21452 STATE OF
MINIMUM DEGREE OF ACCURACY: 1/2500	1	0 a l	ON VIRO
PROVEN SOURCE USGS MONUMENT	SIGNED:	1	ONAL PHANTER
OF ELEVATION: A 142: 724.61'		.: P.S. NO	PLACE SEAL HERE
(+) DENOTES LOCATION OF WELL ON UNITED STATES	SI WEST VIRE		15, 2017 - REV December 19, 2017
TOPOGRAPHIC MAPS WVDEP	18 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	OPERATOR'S WELL  API WELL #	47 095 <b>02489</b>
OFFICE OF OIL & GAS 601 57TH STREET	The state of the s		TATE COUNTY PERMIT
CHARLESTON, WV 25304  Well Type: Oil W	aste Disposal X Product	ion Deep	HGA
		X Shallow	
X Gas Li WATERSHED: Mcelroy Creek	quid Injection Storage  ELEVATION:		
COUNTY/DISTRICT: TYLER / MCELROY	QUADRANGL	E: SHIRLEY, WV	04/6/ <u>20</u> 1
OIL & GAS ROYALTY OWNER: ALLEN W. SE			<del></del>
DRILL X CONVERT DR	ILL DEEPER REDRILL PERFORATE NEW FORMATION	FRACTURE OR STIMULATE	
	OTHER CHANGE (SPECIFY)		and the second
TARGET FORMATION: MARCELLUS WELL OPERATOR: CNX GAS COMPANY	THE	ESTIMATED DEPTH: TVD: 6 DESIGNATED AGENT CHRIS	
Address 1000 CONSOL ENERGY I	DRIVE	Address. 1 DOMINION DRIVE	
City CANONSBURG State PA	Zip Code 15317	City JANE LEW Sta	te Zip Code 26378

Tax Map & Title Opinion Parcel 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 (attached)
Tax Map & Parcel	Title Opinion QL5#	Grantor, Lessor, etc	Grantee, Lessee, etc	Royalty	Book/Page
05-15-37	266306000	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 17/3
		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
			CNX Gas Company LLC		

4	Sheffler & Company, Inc.
	ENGINEERING • SURVEYING

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

Email:Info@shefflerCo.com

(+) DENOTES LO WELL ON UNIT					DATE: N	lovember 15, 201	17 - REV Nover	nber 21, 2017
TOPOGRAPHIC WVDEP	MAPS				OPERATO	R'S WELL#: SI	HR 31 BHSM	400
OFFICE OF OIL	& GAS				API WELL	# 47	095	02489 Hie
601 57TH STREE CHARLESTON,						STATE	COUNTY	PERMIT
Well Type:	Oil	Waste Disposal	X Producti	on	Deep			
	X Gas	Liquid Injection	Storage	x	Shallow			
WATERSHED: MC	ELROY CREEK		ELEVATION:	1,111.0'				
COUNTY/DISTRICT	TYLER / MCEL	.ROY	QUADRANGLI	SHIRLE	Y, WV			
SURFACE OWNER:	ALLEN W. SE	CKMAN, ET AL.	ACREAGE: 3	0.48				04/6/201
OIL & GAS ROYALT	Y OWNER: ALL	EN W. SECKMAN, ET AL.	ACREAGE: 3	0.48				
PLUG	OFF OLD FORM	T DRILL DEEPER DATE MATION PERFORATE UG OTHER CHANGE	NEW FORMATIO					
TARGET FORMATIO	N: MARCELLU	us		ESTIMA	TED DEPTH:	TVD: 6,725' ±	TMD: 15,44	40' ±
WELL OPERATOR:		COMPANY, LLC				CHRIS TURN	ER	
Address	1000 CONSOL E	NERGY DRIVE		Address	1 DOMINIO	N DRIVE		
City CANONSBURG	State	PA Zip Code	15317	City JA	NE LEW	State	WV Zip Co	de <b>26378</b>

Tax Map & Parcel	Title Opinion QL5#	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
		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
		Donald L Seckman and Dora Seckman	Noble Energy Inc.	Not less than 1/8	471/686
	10	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 yet recorde
		John Dudash	CNX Gas Company LLC	Not less than 1/8	(Attached) Not yet recorde
				Not less than 1/8	(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 recorder (Attached)
		Karen Solak	CNX Gas Company LLC	Not less than 1/8	Not yet recorder (Attached)
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 17/2
		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

4	Sheffler & Company, Inc.
	ENGINEERING . SURVEYING

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

- Control of the Cont

(+) DENOTES LOCATION OF		DATE: Nove	mber 15, 201	7 - REV Noven	nber 21, 2017
WELL ON UNITED STATES					
TOPOGRAPHIC MAPS		OPERATOR'S	WELL#: SH	IR 31 BHSM	
WVDEP OFFICE OF OIL & GAS		API WELL#	47	095	02489 HLA
601 57TH STREET CHARLESTON, WV 25304			STATE	COUNTY	PERMIT
Well Type: Oil Waste Disposal	X Production	Deep			
X Gas Liquid Injection	Storage x	Shallow			
WATERSHED: McELROY CREEK	ELEVATION: 1,111.0'				
COUNTY/DISTRICT: TYLER / MCELROY	QUADRANGLE: SHIRLE	Y, WV			
SURFACE OWNER. ALLEN W. SECKMAN, ET AL.	ACREAGE: 30.48				04/6/2018
OIL & GAS ROYALTY OWNER: ALLEN W. SECKMAN, ET AL.					04/0/2010
DRILL X CONVERT DRILL DEEPER F PLUG OFF OLD FORMATION PERFORATE N CLEAN OUT & REPLUG OTHER CHANGE	REDRILL FRACTURE NEW FORMATION PLUG				
TARGET FORMATION: MARCELLUS	ESTIMA	TED DEPTHTV	VD: 6,725' ±	TMD: 15,44	40' ±
WELL OPERATOR: CNX GAS COMPANY, LLC	DESIGN	ATED AGENT: C	HRIS TURNE	R	
Address: 1000 CONSOL ENERGY DRIVE	Address:	1 DOMINION DE	RIVE		
City CANONSBURG State PA Zip Code	15317 City JA	NE LEW	State 1	WV Zip Coo	de 26378

Parcel	Title Opinion QLS#	Grantor, Lessor, etc	Grantee, Lessee, etc	Royalty	Book/Page	
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 Stat	
		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	Assignment		
		Sant Electric Company	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,	Name Change	WV Sec of State	
		EV60 P	Inc.			
		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	
		Raiph 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		
		Rodger A. Sweeney	Four Leaf Land Company		370/605	
		Devon Ruth Horsley (Sweeney)	Four Leaf Land Company	Not less than 1/8	370/611	
	-	Anna Sweeney	Four Leaf Land Company	Not less than 1/8	370/629	
		LaMoyne Sweeney	CONTRACTOR	Not less than 1/8	370/635	
			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	
-			The second secon		71175	
-		Noble Energy, Inc.	CNX Gas Company LLC	Assignment (50%)	484/288	

Sheffler & Company, Inc.

	Y	ENGINEERING . SURV	/EYING 1712 Mount Neb		12-219-4509 o@shefflerCo.co	om	
(+) DENOTES L WELL ON UNI	TED STATES			DATE: Nov	ember 15, 201	7 - REV Novem	ber 21, 2017
TOPOGRAPHIC	MAPS			OPERATOR'S	WELL#: SH	HR 31 BHSM	
WVDEP OFFICE OF OIL	a transfer and a second			API WELL #	47	095	02489 Hu
601 57TH STREE CHARLESTON,					STATE	COUNTY	PERMIT
Well Type:	Oil	Waste Disposal	X Production	Deep			
	X Gas	Liquid Injection	Storage X	Shallow			
WATERSHED: M	CELROY CREEK	(	ELEVATION: 1,111.0'				
COUNTY/DISTRICT:	TYLER / MCEL	LROY	QUADRANGLE: SHIRLE	Y, WV			
SURFACE OWNER:	ALLEN W. SE	CKMAN, ET AL.	ACREAGE: 30.48				
	The state of the s	EN W. SECKMAN, ET AL.	ACREAGE: 30.48				04/6/20
PLUC	OFF OLD FORM	T DRILL DEEPER DEMATION PERFORATE NO THER CHANGE	NEW FORMATION PLU		The state of the s		
TARGET FORMATIC	N: MARCELLL	JS	ESTIMA	TED DEPTH:	TVD: 6,725' ±	TMD: 15,440	0' ±
WELL OPERATOR:	CNX GAS	COMPANY, LLC	DESIGN	NATED AGENT:	CHRIS TURNE	R	
Address:	1000 CONSOL E	ENERGY DRIVE	Address	1 DOMINION	DRIVE		
City CANONSBURG	State	PA Zip Code	15317 City JA	NE LEW	State \	W Zip Cod	e 26378

Parcel	Title Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc	Royalty	Book/Page
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 Stat
		Union Drilling Inc.	Equitable Resources Exploration, Inc.	Name Change	WV Sec of Stat
		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 Stat
		North Coast Energy Eastern, Inc.	EXCO - North Coast Energy Eastern, Inc.	Name Change	WV Sec of Stat
		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 Stat
		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
		LaMoyne 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		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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1712 Mount Nebo Road Phone: 412-219-4509 Sewickley, PA 15143 Email:Info@shefflerCo.com

(+) DENOTES LO					DATE: Nov	ember 15, 201	7 - REV Novem	ber 21, 2017
TOPOGRAPHIC		•			OPERATOR'S	WELL#: SH	IR 31 BHSM	
WVDEP OFFICE OF OIL	& GAS				API WELL#	47	095	02489 HBA
601 57TH STREE CHARLESTON,						STATE	COUNTY	PERMIT
Well Type:	Oil	Waste Disposal	<b>X</b> Production		Deep			
	X Gas	Liquid Injection	Storage	x	Shallow			
WATERSHED: Mc	ELROY CREEK	(	ELEVATION: 1,111.	.0'				
COUNTY/DISTRICT	TYLER / MCEL	ROY	QUADRANGLE: SH	IRLEY,	, wv			
SURFACE OWNER	ALLEN W. SE	CKMAN, ET AL.	ACREAGE: 30.48					04/6/201
OIL & GAS ROYALT	Y OWNER: ALL	EN W. SECKMAN, ET AL.	ACREAGE: 30.48					
PLUG	OFF OLD FORM	T DRILL DEEPER IN INTERPRETATION DEFENDANCE INTO THE CHANGE	NEW FORMATION [					
TARGET FORMATIO	N. MARCELLU	JS	ES	TIMAT	ED DEPTH:T	VD: 6,725' ±	TMD: 15,440	)' ±
WELL OPERATOR.	CNX GAS	COMPANY, LLC	DE	SIGNA	TED AGENT:	CHRIS TURNE	R	
Address:	1000 CONSOL E	ENERGY DRIVE	Ad	dress:	1 DOMINION	RIVE		
City CANONSBURG	State	PA Zip Code	15317 Cit	y JAN	E LEW	State V	NV Zip Cod	e 26378

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
5-10-0	100307000	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
			Drilling Appalachian Corporation	Not less than 1/8	330/511
		Joseph Travis and Carole Travis, h/w	Drilling Appalachian Corporation	Not less than 1/8	330/542
		Eva Jean Hoover		Not less than 1/8	330/546
		Glenda Gregory	Antero Resources Appalachian	Assignment	391/416
		Drilling Appalachian Corporation	Corporation	V331Bument	331/410
		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
		Issauking Coopers and David Coopers h (w	Drilling Appalachian Corporation	Not less than 1/8	330/233
		Josephine Spencer and David Spencer, h/w		Not less than 1/8	330/430
		Walter Seckman and Eva Seckman, h/w	Drilling Appalachian Corporation		1000
		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
			Noble Energy, Inc.	Assignment	452/641
-		Drilling Appalachian Corporation  Noble Energy, Inc.	CNX Gas Company LLC	Assignment	542/147
		Notice Energy, inc.	City on Company LLC	Assignment	342/24/
		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
Гах Мар &	Title Opinion	Grantor, Lessor, etc	Grantee, Lessee, etc		
Parcel	QL5#		For the black of the control of the	Royalty	Book/Page
5-18-9	281687000	Wm. Blaine Underwood and Laura J. 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	Not less than 1/8	186/86
		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	
			Equitable Gas Company LLC		433/755
		Equitable Gas Company LLC and EQT Corporation	CANCELLO CONTROL CONTR	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

Sheffler & Company, Inc.

ENGINEERING \* SURVEYING

1712 Mount Nebo Road Sewickley, PA 15143

Phone: 412-219-4509 Email:Info@shefflerCo.com

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(+) DENOTES LO WELL ON UNIT	ED STATE						17 - REV Novem	nber 21, 2017
TOPOGRAPHIC	MAPS				OPERATOR'	S WELL #: SI	HR 31 BHSM	22.0
OFFICE OF OIL					API WELL #	47	095	62489
601 57TH STREE CHARLESTON,						STATE	COUNTY	PERMIT
Well Type:	Oil	Waste Disposal	X Production	on 🗌	Deep			
	X Gas	Liquid Injection	Storage	x	Shallow			
WATERSHED: MC	ELROY CREE	K	ELEVATION:	,111.0'				
COUNTY/DISTRICT	TYLER / MCE	LROY	QUADRANGLE	SHIRLE	Y, WV			
SURFACE OWNER:	ALLEN W. SE	CKMAN, ET AL.	ACREAGE: 30					04/6/201
OIL & GAS ROYALTY	YOWNER: ALI	LEN W. SECKMAN, ET AL.						0 1/ 0/ 20 1
PLUG	OFF OLD FOR	RT DRILL DEEPER DEMANDER DEEPER DESCRIPTION DE PERFORATE DE UG DESCRIPTION DE PERFORATE DE PERFO	NEW FORMATION					
TARGET FORMATIO	N: MARCELLI	us		ESTIM/	TED DEPTH:	TVD: 6,725' ±	TMD: 15,44	0' ±
WELL OPERATOR:	CNX GAS	COMPANY, LLC			ATED AGENT:			
Address:	1000 CONSOL I	ENERGY DRIVE		Address	1 DOMINION	DRIVE		
City CANONSBURG	State	PA Zip Code	15317		NE LEW		WV Zip Cod	le 26378
City CANONSBURG	State	PA Zip Code	15317	City JA	NE LEW	State	WV Zip Cod	le 26378

WW-6A	l
(5/13)	

Operator's	Well No.	SHR31BHSM

# 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.			Nojuniy	200.61 450	

# 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	I'm Hen			
Its:	Permitting Supervisor				

Page 1 of \_\_\_\_

Attachment - Form WW-6A-1 for SHRL31BHS

Tax Map & Title	Opinion				
The second second	QLS#	Grantor, Lessor, etc	Grantee, Lessee, etc	Royalty	Book/Page
05-15-42 260	1711000	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	Drilling Appalachian Corporation Dominion Appalachian Development Properties U CONSOL Gas Appalachian Development Propertie CONSOL Gas Reserves Inc. CONSOL Gas Company CNX Gas Company CNX Gas Company LLC Noble Energy Inc. Drilling Appalachian Corporation	Not less than 1/8 Assignment Certificate of Incorporation Merger Merger Merger Merger Soft Assignment Corrective Assignment	DB 268/475 322/190 CIB 9/124 CIB 9/144 CIB 9/156 Barbour CIB 17/1 DB 388/286 401/342
Tay Man 9 Tible	Onlaign	Noble Energy Inc. Drilling Appalachian Corporation Antero Resources Corporation Noble Energy Inc.	CNX Gas Company LLC Antero Resources Appalachian Corporation CNX Gas Company LLC and Nobile Energy Inc. CNX Gas Company LLC	Corrective Assignment Assignment Assignment Assignment	402/704 401/499 LB 422/517 DB 550/273
Parcel /	QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc	Royalty	Book/Page
5-15-36 V 28	2099000	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
Tax Map & Title	Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc	Royalty	Book/Page
05-15-37 26	6305000	Liffie Seckman  Drilling Appalachian Corporation  Dominion Appalachian Development Properties LLC  CONSOL Gas Appalachian Development Properties LLC  CONSOL Gas Reserves Inc.  CONSOL Gas Company  CNK Gas Company LLC  CNK Gas Company LLC  Noble Energy Inc.  Drilling Appalachian Corporation  Antero Resources Corporation  Noble Energy Inc.	Drilling Appalachian Corporation Dominion Appalachian Development Properties LI CONSOL Gas Appalachian Development Propertie 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 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 S0% Assignment Corrective Assignment Corrective Assignment Assignment Assignment Assignment Assignment	DB 268/475 322/190 Cl8 9/124 Cl8 9/124 Cl8 9/144 Cl8 9/146 Barbour Cl8 17/1 DB 388/286 401/342 402/704 401/499 LB 422/517 DB 550/273
Tax Map & Title	Opinion QLS #	Grantor, Lessor, etc.	Grantee, Lessee, etc		
1		Lilife Seckman  Drilling Appalachian Corporation  Dominion Appalachian Development Properties LLC  CONSOL Gas Appalachian Development Properties LLC  CONSOL Gas Reserves Inc.  CONSOL Gas Company  CKK Gas Company LLC  CKX Gas Company LLC  Noble Energy Inc.  Drilling Appalachian Corporation  Noble Energy Inc.  Noble Energy Inc.	Drilling Appalachian Corporation Dominion Appalachian Development Properties U CONSOL Gas Appalachian Development Propertie 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 Antero Resources Appalachian Corporation CNX Gas Company LLC and Noble Energy Inc. CNX Gas Company LLC and Noble Energy Inc.	Royalty Not less than 1/8 Assignment Certificate of incorporation Merger Merger Merger 50% Assignment Corrective Assignment Corrective Assignment Assignment Assignment Assignment Assignment	Book/Page DB 268/475 372/190 CB 9/124 CB 9/124 CB 9/146 CB 9/156 Barbour CB 17/1 DB 388/286 401/342 402/704 401/499 LB 422/517 DB 550/273
		Donald L Seckman and Dora Seckman Noble Energy Inc. Noble Energy Inc.	Noble Energy Inc. CNX Gas Company LLC CNX Gas Company LLC	Not less than 1/8 Assignment (50%) Assignment	471/586 499/447 DB 550/273
		Gary Solak John Dudash Holly Dudash Delores Church Karen Solak	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	581/658 581/658 581/648 581/643 581/663
Tax Map & Title	Opinion QLS#	Grantor, Lessor, etc	Grantee, Lessee, etc		
¥	WILLIAM .	Lillie Seckman Drilling Appalachian Corporation Dominion Appalachian Development Properties LLC CONSDL Gas Appalachian Development Properties LLC CONSDL Gas Reserves Inc. CONSDL 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 Li CONSOL Gas Appalachian Development Propertie CONSOL Gas Reserves Inc. CONSOL Gas Company CNX 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 and Noble Energy Inc. CNX Gas Company LLC	Royalty Not less than 1/8 Assignment Certificate of Incorporation Merger Merger Merger Merger S0% Assignment Corrective Assignment Corrective Assignment Assignment Assignment Assignment Assignment Assignment	Book/Page DB 268/475 322/190 CI8 9/124 CI8 9/144 CI8 9/156 Barbour CIB 17/1 DB 388/286 401/342 402/704 401/499 LB 422/517 DB 550/273
Tax Map & Title	Opinion QLS #	Grantor, Lessor, etc	Grantee, Lessee, etc	2.76	
1	8357000	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	Royalty Not less than 1/8 Assignment (50%) Merger Name Change Assignment (50%)	Book/Page 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-B Ltd. (33%) Swift Energy Income Partners 1988-B Ltd. (22%) Swift Energy Income Partners 1988-1 Ltd. (11%)	Assignment	287/352
		Switz neighborne Fardiers 1960-1 Etc. [119]		
	Swift Energy Income Partners 1987-D Ltd. (34%) Swift Energy Income Partners 1988-B 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%)	Peake Energy, Inc.	Assignment	319/291
	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.	North Coast Energy Eastern, Inc. EXCO - North Coast Energy Eastern, Inc.	Name Change Name Change	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%)	Name Change	WV Sec of State
	EXCO Production Company (WV), U.C (49.75%) EXCO Resources (PA), Inc. (0.5%)	Antero Resources Corporation	Assignment	406/195
	BG Production Company (WV), LLC (49.75%) 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 Donald Lee Sweeney	Four Leaf Land Company Four Leaf Land Company	Not less than 1/8 Not less than 1/8	397/675 370/605
	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
	LaMoyne Sweeney	Four Leaf Land Company	Not less than 1/8	370/617
	Four Leaf Land Company Antero Resources Corporation	Antero Resources Appalachian Corporation CNX Gas Company LLC and Noble Energy, Inc.	Assignment Assignment	403/565 422/517
	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 Noble Energy, Inc.	CNX Gas Company LLC and Noble Energy, Inc. CNX Gas Company LLC	Assignment Assignment	422/517 550/273
	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. Noble Energy, Inc.	CNX Gas Company LLC CNX Gas Company LLC	Assignment (50%) Assignment	484/288 550/273
Parcel QL5 #	Grantor, Lessor, etc	Grantee, Lessee, etc		1000000
		urara t	Royalty	Book/Page
05-15-32 238357000	Everett Roy Weese and Betty J. Weese, h/w KEPCO, Inc.	KEPCO, Inc. Swift Energy Company	Not less than 1/8 Assignment (50%)	DB 232/30 254/5
	KEPCO	Union Drilling, Inc.	Merger	WV Sec of State
	Union Drilling Inc. Equitable Resources Exploration, Inc.	Equitable Resources Exploration, Inc. Swift Energy Company	Name Change Assignment (50%)	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%)	Assignment	287/352
	Swift Energy Income Partners 1987-D Ltd. (34%)			
	Swift Energy Income Partners 1988-8 Ltd. (33%) Swift Energy Income Partners 1988-8 Ltd. (22%) Swift Energy Income Partners 1988-1 Ltd. (11%) Swift Energy Income Partners 1987-10 Ltd. (34%)	Peake Energy, Inc.	Assignment	319/291
	Swift Energy Income Partners 1988 A Ltd. (33%) Swift Energy Income Partners 1988 B Ltd. (22%)	Peake Energy, Inc.	Corrective Assignment	321/652
	Swift Energy Income Partners 1988-1 Ltd. (11%) 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%)	Antero Resources Corporation	Assignment	406/195
	BG Production Company (WV), LLC (49.75%) Antero Resources Corporation Noble Energy, Inc.	CNX Gas Company LLC and Noble Energy, Inc. CNX Gas Company LLC	Assignment Assignment	422/517 550/273
			1	
	Gloria Morris Ralph T. Sweeney and Shelley A. Sweeney Donald Lee Sweeney	Four Leaf Land Company Four Leaf Land Company Four Leaf Land Company	Not less than 1/8 Not less than 1/8 Not less than 1/8	397/669 397/675 370/605

		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
		LaMoyne 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
		44	No. 1.1. Communication	n	******
		Mary Sue Furbee Zebley Thomas Val Furbee and Katherine Shelek-Furbee, h/w	Noble Energy, Inc. Noble Energy, Inc.	Not less than 1/8 Not less than 1/8	440/447 440/443
		Allison McKey Hardin (Allison Furbee Herring)	Nable 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
				_	
Tax Map & Parcel	Title Opinion	Grantor, Lessor, etc	Grantee, Lessee, etc		
				Royalty	Book/Page
5-18-8	108567000	Leota B. McKinney and Lester McKinney, h/w	Drilling Appelachian Corporation	Not less than 1/8	330/237
		Howard Stubbs and Neida 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 Appelachian Corporation	Not less than 1/8	330/430
		Michael Fisher	Drilling Appelachian Corporation	Not less than 1/8	330/503
		Joe Seckman		Not less than 1/8	330/507
		Antonia Underwood	Drilling Appalachian Corporation		
			Drilling Appalachian Corporation	Not less than 1/8	330/550
		Carnella Ash	Drilling Appalachian Corporation	Not less than 1/8	330/575
		III 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
		Windowsky Company to allow	tuilling dans lanking days and a	N-1	205/205
		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/B	409/253
		Drilling Appalachian Corporation	Noble Energy, Inc.	Assignment	452/641
		Noble Energy, Inc.	CNX Gas Company LLC	Assignment	542/147
		Kelth E. Rheinhardt	Noble Energy, Inc.	Not less than 1/8	D8 449/525
		Gary A. Rheinhardt, Ir.	Noble Energy, Inc.	Not less than 1/8	DB 449/527
		Charles D. Rheinhardt and Denise M. Rheinhardt, h/w	Nobie Energy, Inc.	Not less than 1/8	DB 449/S31
		Randall Rheinhardt, a single man	Noble Energy, Inc.	Not less than 1/8	D8 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	D8 458/642
		Tami Dawn Rheinhardt	Noble Energy, Inc.	Not less than 1/8	D8 465/270
		Noble Energy, Inc.	CNX Gas Company LLC	Assignment	550/273
	Title Opinion	Grantor, Lessor, etc	Grantee, Lessee, etc		
Parcel	QLS#			Royalty	Book/Page
		Wm. Blaine Underwood and Laura J. Underwood, h/w, Donald		<del></del>	
5-18-9	281687000	Underwood, Hugh Underwood and Pearline Underwood, h/w, and D.L.	Equitable Gas Company	Not less than 1/8	186/86
		Haught and Susan O. Haught, h/w			
		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 and Noble Energy, Inc.	Assignment	550/273
		read and 67, 18th	and was company and	readiment.	230/2/3



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 or 724-485-4035.

Sincerely,

Erika Whetstone

CNX Gas Company LLC

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

	e Certification: 11-21-17	API No. 47-	5. 02489
		Operator's Wel	
		Well Pad Name	
Notice has l	oeen given:		
		§ 22-6A, the Operator has provided the required	parties with the Notice Forms listed
	tract of land as follows:		
State:	West Virginia	Easting: 5153	50.678
County:	Tyler	— UIIMINALI 83	424.757
District:	McElroy	Public Road Access: Cour	ty Route 58
Quadrangle:	Shirley	Generally used farm name: Seck	man
Watershed:	McElroy Creek		
of giving the requirements Virginia Cod of this article  Pursuant to that the Ope	surface owner notice of entry to su of subsection (b), section sixteen of a \$ 22-6A-11(b), the applicant shall thave been completed by the applicant	perator has attached proof to this Notice Certific	f this article six-a; or (iii) the notice urface owner; and Pursuant to West he notice requirements of section ten
☐ 1. NO	FICE OF SEISMIC ACTIVITY or	■ NOTICE NOT REQUIRED BECAUSE IS SEISMIC ACTIVITY WAS CONDUCTED	
■ 2. NO	TICE OF ENTRY FOR PLAT SURV	VEV or NO DLAT SLIDVEV WAS COND	
		VET OF EL NOTEAT SURVET WAS COND	UCTED RECEIVED
	TICE OF INTENT TO DRILL or	□ NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or	UCTED RECEIVED  RECEIVED/ NOT REQUIRED
	TICE OF INTENT TO DRILL or	☐ NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY	☐ RECEIVED/ NOT REQUIRED
■ 3. NO	TICE OF INTENT TO DRILL or	☐ NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED OF ☐ WRITTEN WAIVER BY SURFACE OF	☐ RECEIVED/ NOT REQUIRED
■ 3. NO		☐ NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED OF ☐ WRITTEN WAIVER BY SURFACE OF	☐ RECEIVED/ NOT REQUIRED  WNER

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-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.

WW-6AC (1/12)

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

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

NOTARY SEAL
COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
Sara M. Micoli. Notary Public
Cecil Twp.. Washington County
My Commission Expires March 11, 2019
MEMBER. FENNSYLVANIA ASSOCIATION OF NOTARIES

Subscribed and sworn before me this 11 day of	Vov, 2017.
Daras 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 <a href="mailto:deprivacyofficer@wv.gov">deprivacyofficer@wv.gov</a>.

RECEIVED Office of Oil and Gas

NOV 28 2017

1 NO. 47-

OPERATOR WELL NO. SHR31BHSM Well Pad Name: SHR31HSM

## 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: 1-22-17 Date Permit Application Filed: 1-27-17 Notice of: PERMIT FOR ANY ☐ CERTIFICATE OF APPROVAL FOR THE WELL WORK CONSTRUCTION OF AN IMPOUNDMENT OR PIT Delivery method pursuant to West Virginia Code § 22-6A-10(b) ✓ REGISTERED ☐ METHOD OF DELIVERY THAT REQUIRES A PERSONAL SERVICE RECEIPT OR SIGNATURE CONFIRMATION MAIL 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: COAL OWNER OR LESSEE ☑ SURFACE OWNER(s) Name: See attached. Name: See attached. Address: Address: RECEIVED
Office of Oil and Gas COAL OPERATOR Name: NOV 2 8 2017 Address: Name: Address: WV Department of ☑ SURFACE OWNER(s) (Road and/or Other Disturbance) SURFACE OWNER OF WATER WELL Name: See attached. AND/OR WATER PURVEYOR(s) Address: Name: See attached. Address: Name: Address: PIOPERATOR OF ANY NATURAL GAS STORAGE FIELD ☐ SURFACE OWNER(s) (Impoundments or Pits) Name: EQT Corporation Address: EQT Plaza, 625 Liberty Ave, Ste 1700 Name: Pittsburgh, PA 15222 Address: \*Please attach additional forms if necessary

RECEIVED Office of Oil and Gas

NOV 2 8 2017

4/ 49 3 4 2 4 8 9 API NO. 47-OPERATOR WELL NO. SHR31BHSM Well Pad Name: SHR31HSM

Notice is hereby given:

WV Department of
Environmental Protection
Environmental Protection
Environmental Protection
Environmental Protection
Environmental Protection
Environmental Protection well work or for a certificate of approval for the construction of an impoundment or pit.

#### This Notice Shall Include:

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

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

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

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

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

#### Well Location Restrictions

Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No well pad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, nothing contained in this section prevents an operator from conducting the activities permitted or authorized by a Clean Water Act Section 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state or within the restricted areas referenced in this section. (d) The well location restrictions set forth in this section shall not apply to any well on a multiple well pad if at least one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 31, 2012, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items 04/6/2018

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API NO. 47-OPERATOR WELL NO. SHR31BHSM

Well Pad Name: SHR31HSM

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 confidence to the location or construction of the applicant's proposed well work to the Secretary at:

Chief, Office of Oil and Gas

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

WV Department of Environmental Protection

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

API NO. 4**47-0-9-5-0-2-4-8-9**OPERATOR WELL NO. SHR31BHSM
Well Pad Name: SHR31HSM

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

#### Permit Denial or Condition

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

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

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

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

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WV Department of
Environmental Protection

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API NO. 47OPERATOR WELL NO. SHR31BHSM
Well Pad Name: SHR31

Notice is hereby given by:

Well Operator; CNX Gas Company, LLC
Telephone: 724-485-3540

Address: 1000 Consol Energy Drive 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 <a href="mailto:deprivacyofficer@wv.gov">deprivacyofficer@wv.gov</a>.

COMMONWEALTH OF PENNSYLVANIA

NOTARIAL SEAL
Sara M. Micoli, Notary Public
Cecil Twp., Washington County
My Commission Expires March 11, 2019
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

Subscribed and sworn before me this 2 day of Nov, 2017.

Notary Public My Commission Expires 3/11/19

Office of Oil and Gas

#### SHR31HSM

#### 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, 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

#### Coal Owner(s):

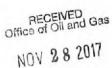
Allen W Seckman and Nancy J. Seckman, trustees of the Allen and Nancy Seckman Irrevocable Trust Dated November 29, 2016

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





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, Sisterville, 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, Sisterville, 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:

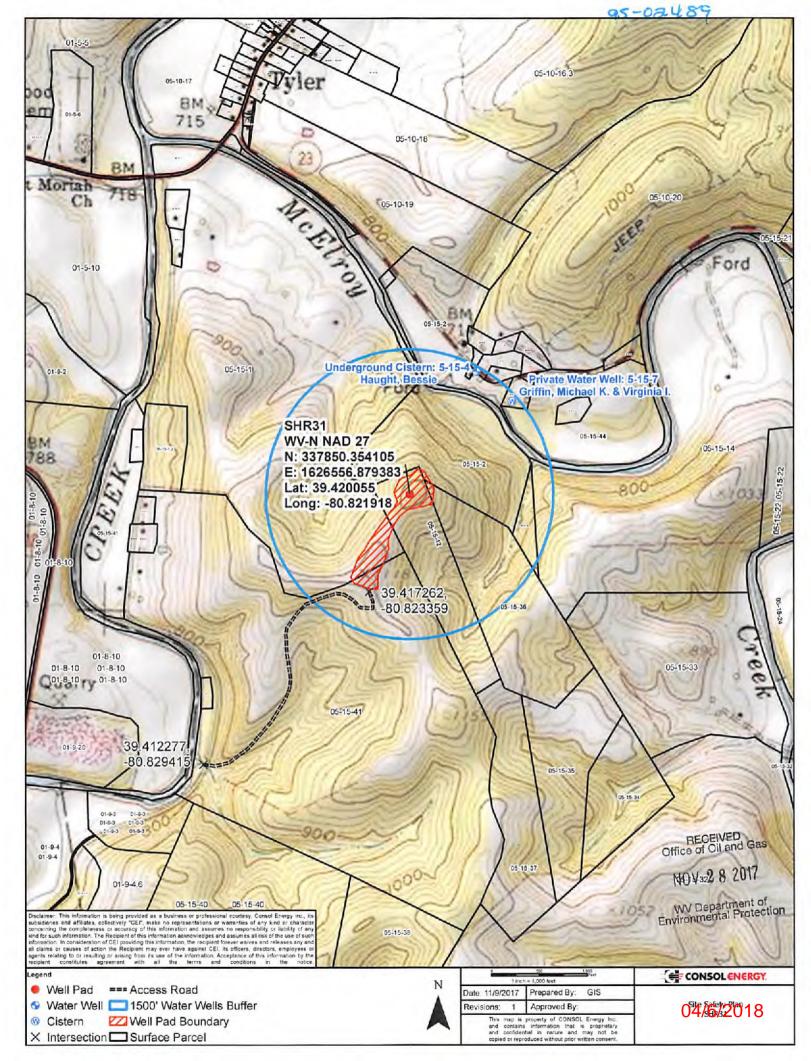
EQT Corporation EQT Plaza, 625 Liberty Ave, Ste 1700, Pittsburgh, PA 15222











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

Notice Time entry	Requirement:	Notice shall be prov	vided at	least SEVEN (7) da	ys but no more tha	n FORTY-FI	VE (45) days prior to
	ice: 10/11/17	Date of Plan	nned E	ntry: 10/19/17			
Delivery me	thod pursuant	to West Virginia C	ode § 2	2-6A-10a			
☐ PERSO	NAL 🗉	REGISTERED		METHOD OF DEI	IVERY THAT RE	EOUIRES A	
SERVI	CE	MAIL		RECEIPT OR SIGN			
on to the sur but no more beneath such owner of min and Sedimer Secretary, we enable the su	face tract to cond than forty-five d tract that has fil nerals underlying it Control Manua hich statement sl	duct any plat surveys ays prior to such en- led a declaration pur g such tract in the co- al and the statutes an hall include contact obtain copies from the	s require try to: ( suant to ounty tan id rules informa	ed pursuant to this and the surface owner of section thirty-six, as a records. The notice related to oil and gastion, including the a	ticle. Such notice s r of such tract; (2) t rticle six, chapter to e shall include a sta s exploration and p	shall be provide to any owner of wenty-two of atement that co roduction may	notice of planned entry ded at least seven days or lessee of coal seams this code; and (3) any opies of the state Erosion be obtained from the retary's web site, to
		0.		<b>■</b> 20.4	L OWNER OR LE	COPP	
	CE OWNER(s)				4 4 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	OC PIPO	
Name: See at			-	Address:	attached		<del></del>
			2				
Name:			ý.,	■ vov.	DAL OUDERA		
Address:			-,		ERAL OWNER(s)		
Name:			-	Name: See	attached		
Address:				Address.			
				*please attac	h additional forms if ne	cessary	
Pursuant to V	on the tract of la West Virginia			Approx. Latit	ude & Longitude:		
Quadrangle:	Shirley			Generally use	d farm name:	Seckman	
may be obtain Charleston, Nobtained from	ned from the Sec VV 25304 (304	cretary, at the WV I -926-0450). Copies by visiting <u>www.dep</u>	Departm of such	ent of Environmenta	l Protection headquional information r	uarters, located	loration and production d at 601 57 <sup>th</sup> Street, SE, contal drilling may be  Office of Oil and Gas
Well Operate				Address:	1000 Consol Energy Dri	ive	NOV 2 8 2017
Telephone:	724-485-3540	71.22			Canonsburg, PA 15317		- WVD-
Email:		ConsolEnergy.com		Facsimile:			Environmental Protection
01 1 C-	e Drivoev Noti	210					tection

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 <a href="mailto:depprivacyofficer@wv.gov">depprivacyofficer@wv.gov</a>.

SHR31BHS

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 Ashenhart 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 Office of Oil and Gas

NOV 28 2017

WV Department of Environmental Protection

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, 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, Sisterville, 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, Sisterville, 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

#### 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, Alma, WV 26320

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

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04/6/2018

Becannray LLC 5042 Tyler Highway, Sisterville, 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

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



Office of Oil and Gas

NOV 2 8 2017

WV Department of Environmental Protection

Operator Well No. SHR31BHSM

4709502489

### 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.

	Requirement: Notice shall be provided at lee: Date Perm		
Delivery met	hod pursuant to West Virginia Code § 22	2-6A-16(b)	
☐ HAND	■ CERTIFIED MAIL		
DELIVE	ERY RETURN RECEIPT REQU	JESTED	
receipt reques drilling a hor of this subsection ma	V. Va. Code § 22-6A-16(b), at least ten days sted or hand delivery, give the surface owner izontal well: <i>Provided</i> , That notice given putton as of the date the notice was provided that be waived in writing by the surface owner le, facsimile number and electronic mail address.	er notice of its intent to enter upon the bursuant to subsection (a), section to to the surface owner: <i>Provided</i> , hower. The notice, if required, shall include:	he surface owner's land for the purpose of en of this article satisfies the requirements wever, That the notice requirements of this lude the name, address, telephone number,
	reby provided to the SURFACE OWN		
Name: See atta		Name:	
Address.		Address.	
State: County:	West Virginia Tyler	UTM NAD 83 Easting: Northing:	515350.678 4363424.757
District:	McElroy	Public Road Access:	County Route 58
Quadrangle: Watershed:	Shirley McElroy Creek	Generally used farm name:	Seckman
Pursuant to Y facsimile nur related to hor	Shall Include: West Virginia Code § 22-6A-16(b), this makes and electronic mail address of the optizontal drilling may be obtained from the start of the Street, SE, Charleston, WV 25304 (30)	perator and the operator's authorize Secretary, at the WV Department of	ed representative. Additional information of Environmental Protection headquarters,
Notice is he	reby given by:		
Well Operato	r: CNX Gas Company, LLC	Authorized Representative:	Raymond Hoon
Address:	1000 Consol Energy Drive	Address:	1000 Consol Energy Drive
Canonsburg, PA	15317	Canonsburg, PA 15317	Office of Oil and G
Telephone:	724-485-3540	Telephone:	
Email:	RaymondHoon@ConsolEnergy.com	Email:	RaymondHoon@ConsolEnergy.cold V 2 8 2017
Facsimile:		Facsimile:	1981

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.

SHR31HSM

#### WW6A Notice of Intent to Drill - 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

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

Office of Oil and Gas

NOV 2 8 2017

WV Department of Environmental Protection

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

		rovided no later than the filing date of permi Permit Application Filed:	
Delivery met	thod pursuant to West Virginia	1 Code § 22-6A-16(c)	
■ CERTI	FIED MAIL	☐ HAND	
	RN RECEIPT REQUESTED	DELIVERY	
return receipt the planned of required to be drilling of a damages to the (d) The notice of notice.	requested or hand delivery, give operation. The notice required e provided by subsection (b), sect horizontal well; and (3) A propo- ne surface affected by oil and gas es required by this section shall be eby provided to the SURFACE		for the drilling of a horizontal well notice of of this code section; (2) The information are land will be used in conjunction with the not containing an offer of compensation for appensable under article six-b of this chapter.
(at the addres	is listed in the records of the sher ched.	Name:	
(at the addres Name: See atta Address:  Notice is her	eby given:	Name: Address:	usil argenter has developed a planned
(at the addres Name: See atta Address:	eby given: Vest Virginia Code § 22-6A-16(c	Name:	act of land as follows: 515350.678
(at the addres Name: See atta Address:	eby given: Vest Virginia Code § 22-6A-16(c the surface owner's land for the West Virginia Tyler McElroy Shirley	Name: Address:  c), notice is hereby given that the undersigned purpose of drilling a horizontal well on the tr  UTM NAD 83  Easting: Northing:	act of land as follows: 515350.678 4363424.757
(at the addres Name: See atta Address: Notice is her Pursuant to V operation on State: County: District: Quadrangle: Watershed: This Notice is Pursuant to V to be provide horizontal we surface affect information in	reby given: Vest Virginia Code § 22-6A-16(conthe surface owner's land for the West Virginia  Tyler McElroy Shirley McElroy Creek  Shall Include: Vest Virginia Code § 22-6A-16(conthe dell; and (3) A proposed surface outed by oil and gas operations to related to horizontal drilling may located at 601 57th Street, SE	Name: Address:  c), notice is hereby given that the undersigned purpose of drilling a horizontal well on the tree to the company of the compa	scode section; (2) The information required used in conjunction with the drilling of a un offer of compensation for damages to the der article six-b of this chapter. Additional
(at the addres Name: See atta Address:	reby given: Vest Virginia Code § 22-6A-16(conthe surface owner's land for the West Virginia  Tyler McElroy Shirley McElroy Creek  Shall Include: Vest Virginia Code § 22-6A-16(content of the surface of	Name: Address:  a), notice is hereby given that the undersigned purpose of drilling a horizontal well on the transport of the company of the	act of land as follows:  515350.678  4363424.757  County Route 58  Seckman  Second section; (2) The information required used in conjunction with the drilling of a un offer of compensation for damages to the der article six-b of this chapter. Additional V Department of Environmental Protection (b) or by visiting www.dep.wv.gov/oil-and-
(at the addres Name: See atta Address: County: District: Quadrangle: Watershed: See atta See affect information in headquarters, see atta Address: See atta	reby given: Vest Virginia Code § 22-6A-16(conthe surface owner's land for the West Virginia  Tyler McElroy Shirley McElroy Creek  Shall Include: Vest Virginia Code § 22-6A-16(content of the surface of	Name: Address:  c), notice is hereby given that the undersigned purpose of drilling a horizontal well on the tree to the company of the compa	act of land as follows:  515350.678  4363424.757  County Route 58  Seckman  Second section; (2) The information required used in conjunction with the drilling of a moffer of compensation for damages to the ider article six-b of this chapter. Additional V Department of Environmental Protection (2) or by visiting www.dep.wv.gov/oil-and-gy Drive

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory The Office of Oil and Gas processes your personal duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of the duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of the duties will needed to comply with statutory or regulatory requirements, including Freedom of Information Act requestoring will appropriately secure your personal information. If you have any questions about our use or your personal information, please confident will be appropriately secure your personal information. When the description of the description will appropriately secure your personal information. If you have any questions about our use or your personal information, please confident will be appropriately secure your personal information. When the description is a secure your personal information are confident will be appropriately secure your personal information. If you have any questions about our use or your personal information, please confident will be appropriately secure your personal information.

SHR31HSM

#### 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



Office of Oil and Gas

NOV 2 8 2017

WV Department of Environmental Protection



#### WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

## **Division of Highways**

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

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

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 BHSM

Dear Mr. Martin,

Jim Justice

Governor

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,

Dary K. Clayton

Gary K. Clayton P.E. Regional Maintenance Engineer

Central Office Oil & Gas Coordinated oil and Gas

NOV 2 8 2017

WW Department of Environmental Protection

Cc: Shannon Miller CNXGAS

CH, OM, D-6

File

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

Type: Water CAS: 7732-18-5

Type: Silica CAS: 14808-60-7

Type: Hydrochloric Acid CAS: 7647-01-0

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

Type: Petroleum distillate CAS: 64742-47-8

Type: Glutaraldehyde CAS: 111-30-8

Type: Ethylene glycol CAS: 107-21-1

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

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

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

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

Type: Ammonium chloride CAS: 12125-02-9

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

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

Type: Metanol CAS: 67-56-1

Type: Formaldehyde CAS: 50-00-0

Type: Thiourea CAS: 62-56-6

Type: Acetophenone CAS: 98-86-2

RECEIVED
Office of Oil and Gas

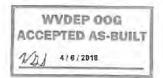
NOV 28 2017



LOCATION MAP

#### PROPERTY OWNERS

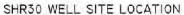
- I, 05-15-41 ALLEN W SECKMAN ET AL 824 JEFFERSON RUN RD ALMA, WV 26320
- 2: 05-15-42 ALLEN W SECKMAN ET AL 824 JEFFERSON RUN RD ALMA, WV 26320
- 3. 05-15-37 ALLEN W SECKMAN ET AL 824 JEFFERSON RUN RD ALMA, WV 26320
- 4. 05-I5-35 ALLEN W SECKMAN ET AL 824 JEFFERSON RUN RD ALMA, WV 26320





CNX RESOURCES CORPORATION 1000 CONSOL ENERGY DRIVE CANONSBURG, PA 15317

## POST MODIFICATION AS-BUILT PLANS FOR THE SHR 3I WELL PAD, TANK PAD, SHR 30 WELL PAD, AND ACCESS ROAD



NAD 83 - LAT: N 39°24'49 [8]"; LONG: W 80°48'54, 273" NAD 27 - LAT: N 39°24'48.89|"; 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 85 - LAT: N 59°24'44.598"; LONG: W 80°49'45 062" NAD 27 - LAT: N 59°24'44.509", LONG: W 80°49'45 685"

McELROY DISTRICT
TYLER COUNTY, WEST VIRGINIA
DATE, APRIL 5th, 2018



Engineers and Land Surveyors 10125 Mason Dixon Hwy. Buston, WV 26562-9656 (304) 662-6486



LOCATION MAP

S	HR 30 WELL PAD
	API #'S
	047-095-02232
	047-095-02241
	047-095-02233
ď	047-095-02234
	047-095-02235
	047-095-02236
	047-095-02237

047-095-02238

SHR 31 WELL PAD API #'s 047-095-0221 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

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William Filly momerouses

Blue Mountain Inc

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T MODIFICATION

REVISIONS

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NOTE: DRAWING WAS CREATED ON 22X34 PAPER. IIXI7 DRAWINGS ARE HALF SCALE. REFER TO SCALE BAR FOR PROPER SCALING.

