



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

Jim Justice , Governor
Austin Caperton , Cabinet Secretary
www.dep.wv.gov

Tuesday, August 01, 2017
WELL WORK PERMIT
Horizontal 6A / Fracture

CNX GAS COMPANY LLC
POST OFFICE BOX 1248

JANE LEW, WV 263786506

Re: Permit approval for SHR 40 DHS
47-095-02212-00-00

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

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

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



James A. Martin
Chief

Operator's Well Number: SHR 40 DHS
Farm Name: NOBLE ENERGY, INC.
U.S. WELL NUMBER: 47-095-02212-00-00
Horizontal 6A / Fracture
Date Issued: 8/1/2017

Promoting a healthy environment.

08/04/2017

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. 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.
2. 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.
3. 24 hours prior to the initiation of the completion process the operator shall notify the Chief or his designee.
4. During the completion process the operator shall monitor annular pressures and report any anomaly noticed to the chief or his designee immediately.
5. 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.
6. 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.
7. The entire well pad shall be bermed so as to prevent runoff from leaving the pad during drilling and completion operations, including a mountable berm at pad entrance.

4/21

WW-6B
(04/15)

API NO. 47-95 - 02212 F
OPERATOR WELL NO. SHR40DHS
Well Pad Name: SHR40

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

1) Well Operator: CNX GAS COMPANY LLC 494458046 095-Tyler Centerville Shirley
Operator ID County District Quadrangle

2) Operator's Well Number: SHR40DHS Well Pad Name: SHR40

3) Farm Name/Surface Owner: Noble Energy Public Road Access: County Rt. 18

4) Elevation, current ground: 771' Elevation, proposed post-construction: 771'

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

(b) If Gas Shallow Deep
Horizontal

6) Existing Pad: Yes or No Yes *DMDH 4/24/17*

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus 6325-6389 / 64' thick / 4217 psi

8) Proposed Total Vertical Depth: 6381

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 16145'

11) Proposed Horizontal Leg Length: 8580.58'

12) Approximate Fresh Water Strata Depths: 357'

13) Method to Determine Fresh Water Depths: nearest offset wells

14) Approximate Saltwater Depths: None noted for offsets

15) Approximate Coal Seam Depths: None

16) Approximate Depth to Possible Void (coal mine, karst, other): None

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes No

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

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08/04/2017

WW-6B
(04/15)

API NO. 47- 95 - 02212 F
 OPERATOR WELL NO. SHR400HS
 Well Pad Name: SHR40

18)

CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	20"	NEW	LS	94	40'	40'	GTS
Fresh Water	13 3/8"	NEW	J-55 54.5#	54.5	500.4'	500.4	70
Coal							
Intermediate	9 5/8"	NEW	HCK-55 36#	36.0	2226.6	2226.6	171
Production	5 1/2"	NEW	P-110 20#	20.0	16,127.1	16,127.1	356
Tubing							
Liners							

DWH 4/24/17

Existing

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20"	36"	0.438	2730			
Fresh Water	13 3/8"	17.5"	.380	2730		Class A	1.18
Coal							
Intermediate	9 5/8"	13 3/8"	.352	3520		Class A	1.18
Production	5 1/2"	8 3/4"	.361	12,640	9600 psi.	Class A	1.31
Tubing							
Liners							

PACKERS

Kind:				
Sizes:				
Depths Set:				

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WW-6B
(10/14)

API NO. 47-95 - 02212 F
OPERATOR WELL NO. SHR40DHS
Well Pad Name: SHR40

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

Well previously drilled by Noble Energy. Submitting permit application to complete hydraulic fracturing operations and produce the well.

DMH 4/24/17

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

The completions phase will be multiple stages over the lateral length of the well, stage spacing is dependent upon engineering design. Slickwater fracturing technique will be utilized on each stage using sand water and chemicals. Max Pressure 9,600 PSI, Max Rate 100 BPM

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 0

22) Area to be disturbed for well pad only, less access road (acres): 0

23) Describe centralizer placement for each casing string:

PREVIOUSLY COMPLETED. From original NOBLE ENERGY submittal "Conductor- No centralizers used. Fresh Water/Surface- Bow spring centralizers every 3 joints to surface. Intermediate- Bow spring centralizers on every joint to KOP, one every third joint from KOP to 100' surface. Production - Rigid bow spring every third joint from KOP to TOC, rigid bow spring every joint to KOP"

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

PREVIOUSLY COMPLETED. From original Noble Energy submittal "Conductor - fill/soil to surface Fresh Water - 15.6 ppg Type 1 cement +2% CaCl, 0.25# lost circ., 3%-excess yield =1.18. Intermediate- 15.6 ppg Class A +0.4% Ret, 0.15% Disp, 0.2% anti Foam, 0.125# sk Lost circ. 20% Excess Yield = 1.19 to surface. Production - 14.8 ppg Class A 25:75:0 System +2.6% cement Extender, 0.7% Fluid Loss additive, 0.45% high temp retarder, 0.2% friction reducer 10% excess yield=1.27 TOC>=200' above 9.625" shoe. See attached approved variance from WV DEP.

25) Proposed borehole conditioning procedures:

PREVIOUSLY COMPLETED. From original Noble Energy submittal Conductor - The hole is drilled w/air and casing is run in air. apart from insuring the hole is clean via air circulation at TD, There are no other conditioning procedures. Fresh Water/Surface - The hole is drilled w/air and casing is at setting depth, circulate a minimum of one hole volume prior to pumping cement. Intermediate - Once surface casing is set and cemented intermediate hole is drilled either on air or SOBM and filled w/ KCl water once filled w/ KCl water once drilled to TD. The well is conditioned with KCl circulation prior to running casing. Once casing is at setting depth, the well is circulated a minimum of one hole volume prior to pumping cement. Production - The hole is drilled with synthetic oil base mud and once at TD the hole is circulated at a maximum allowable drilling pump rate for at least 6X bottoms up. Once on bottom with casing, circulate a minimum of one hole volume prior to pumping cement.

*Note: Attach additional sheets as needed.

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EQT PRODUCTION COMPANY
 120 PROFESSIONAL PLACE
 BRIDGEPORT, WV 26330

CONSOL Energy Inc.

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

phone: (724) 485 – 4040

e-mail: PCR@consolenergy.com

web: www.consolenergy.com

CNX GAS PRODUCTION TEAM

Re: Tyler County Hydraulic Fracturing Notice

Dear Sir or Madam,

CNX Gas Company LLC (CNX) has developed a Marcellus pad SHR40HS located in Tyler County, West Virginia. Through CNX's evaluation pursuant to WV Code 35 CSR 8(5.11), you have been identified as the owner or operator of a well within a 500' radius of the surface location or lateral section of the wellbore. Due to the apparent presence of unique geological conditions, communication between CNX hydraulic fracturing operations and the identified well is a possibility. As an owner or operator of a conventional natural gas well in this area, we are requesting your assistance in monitoring for changes that would indicate communication between your well(s) and our planned operation.

CNX anticipates conducting hydraulic fracturing activity at the SHR40HS Pad beginning as early as 3rd Quarter 2017 (July-September) and potentially continuing through 4th Quarter 2017 (October-December). Plats for each well being hydraulically fractured on this pad are included for your reference.

We recommend that conventional operators conduct the following activities before, during, and after fracturing operations.

- Inspect surface equipment prior to fracturing, to establish mechanical integrity and confirm well conditions.
- Monitor wells during and after fracturing and monitor for abnormal increases in fluid, gas, or pressure.
- Inspect and upgrade master valves or other necessary equipment for wellhead integrity as you see fit.
- Notify the OOG and CNX if any changes in fluid, gas production, pressure, or other conditions that cause abnormal risk or concern.

Please feel free to contact CNX's Production Control Room at 724-485-4040 (staffed 24/7) with any questions or comments. You may also contact the West Virginia Office of Oil and Gas at 304-926-0499.

Sincerely,
 CNX Production

08/04/2017

Well is located on topo map 598 feet south of Latitude: 39° 25' 00"



Sheffler & Company, Inc.
ENGINEERING • SURVEYING

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

FILE # SHR 40 AHS

DRAWING #: SHR 40 AHS

SCALE: 1"=2500'

MINIMUM DEGREE OF ACCURACY: 1/2500

PROVEN SOURCE OF ELEVATION: USGS MONUMENT A 142-724.61'

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

SIGNED: *[Signature]*

R.P.E.: _____ L.L.S.: P.S. NO. _____



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

DATE: APRIL 18, 2017

OPERATOR'S WELL #: SHR 40 AHS

API WELL # 47 095 2206
STATE COUNTY PERMIT

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

WATERSHED: MIDDLE ISLAND CREEK ELEVATION: 771'

COUNTY/DISTRICT: CENTERVILLE / TYLER QUADRANGLE: SHIRLEY, W. VA

SURFACE OWNER: NOBLE ENERGY, INC ACREAGE: 543.35

OIL & GAS ROYALTY OWNER: DAVID L. MAPLE, ET AL. ACREAGE: 351.16

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

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 6,387' ± TMD: 16,202' ±

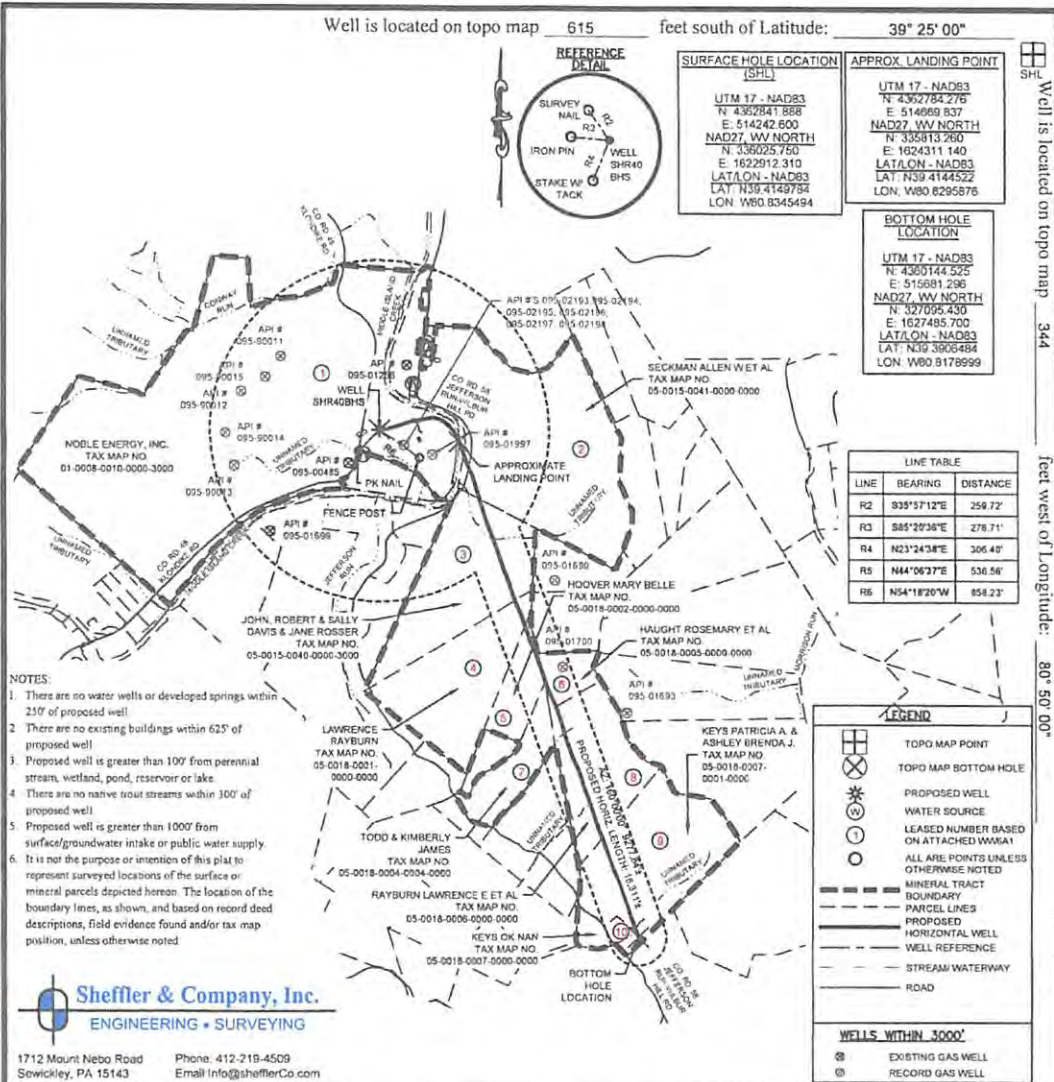
WELL OPERATOR: CNX GAS COMPANY, LLC DESIGNATED AGENT: CHRIS TURNER
Address: 1000 CONSOL ENERGY DRIVE, CANNONSBURG, PA 15317 Address: 1 DOMINION DRIVE
City CANONSBURG State PA Zip Code 15317 City JANE LEW State WV Zip Code 26378

Well is located on topo map 333 feet west of Longitude: 80° 50' 00"

08/04/2017

Well is located on topo map 615 feet south of Latitude: 39° 25' 00"

Well is located on topo map 344 feet west of Longitude: 80° 50' 00"



Sheffler & Company, Inc.
ENGINEERING • SURVEYING

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

FILE #: SHR 40 BHS
DRAWING #: SHR 40 BHS
SCALE: 1"=2500'
MINIMUM DEGREE OF ACCURACY: 1/2500
PROVEN SOURCE USGS MONUMENT
OF ELEVATION: A 142, 724.61'

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

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



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



DATE: APRIL 18, 2017
OPERATOR'S WELL #: SHR 40 BHS
API WELL # 47 095 2204
STATE COUNTY PERMIT

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

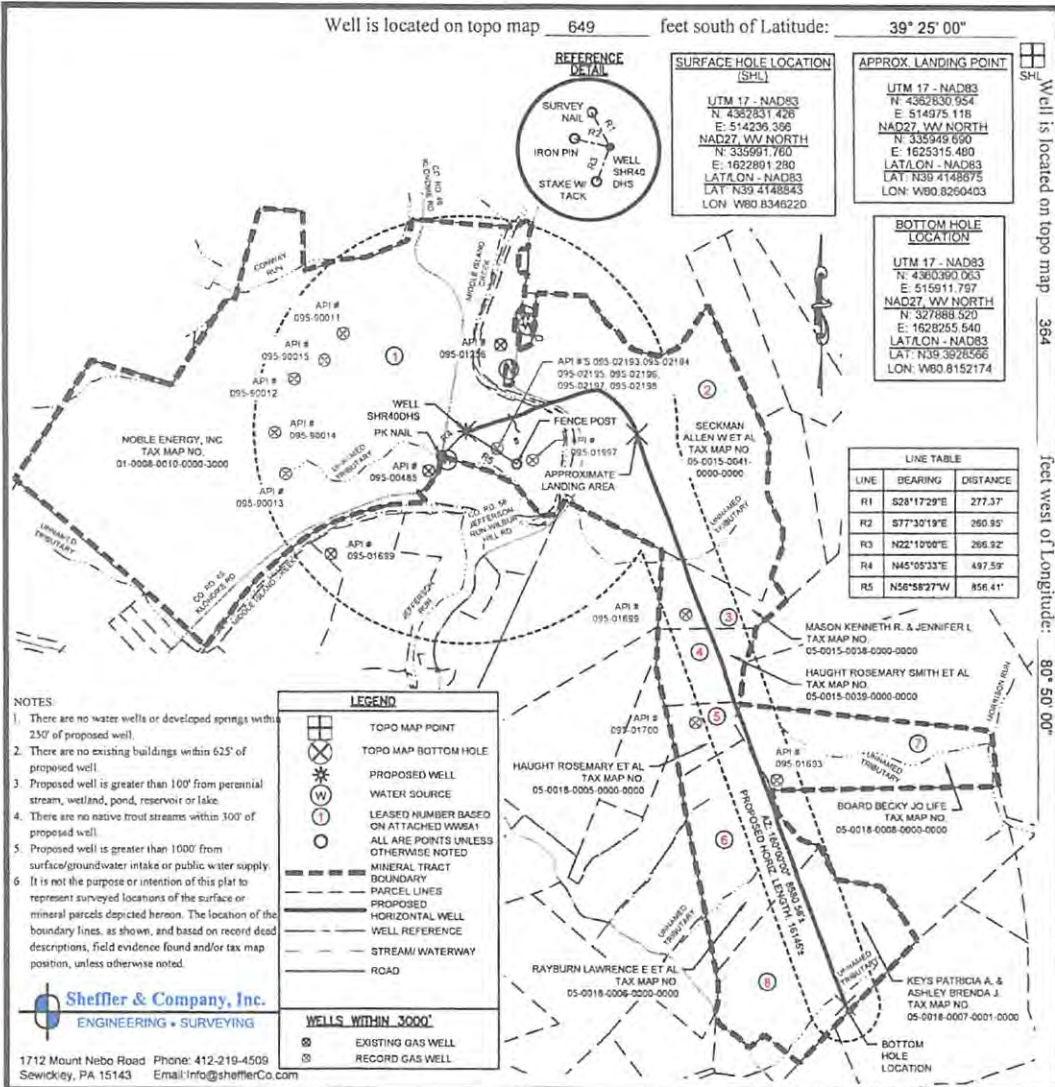
WATERSHED: MIDDLE ISLAND CREEK ELEVATION: 771'
COUNTY/DISTRICT: CENTERVILLE / TYLER QUADRANGLE: SHIRLEY, W. VA
SURFACE OWNER: NOBLE ENERGY, INC ACREAGE: 543.35
OIL & GAS ROYALTY OWNER: DAVID L. MAPLE, ET AL. ACREAGE: 351.16

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

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 6,372' ± TMD: 16,311' ±
WELL OPERATOR: CNX GAS COMPANY, LLC DESIGNATED AGENT: CHRIS TURNER
Address: 1000 CONSOL ENERGY DRIVE, CANNONSBURG, PA 15317 Address: 1 DOMINION DRIVE
City: CANNONSBURG State: PA Zip Code: 15317 City: JANE LEW State: WV Zip Code: 26378

08/04/2017

Well is located on topo map 649 feet south of Latitude: 39° 25' 00"



Well is located on topo map 364 feet west of Longitude: 80° 50' 00"

FILE #: SHR 40 DHS
DRAWING #: SHR 40 DHS
SCALE: 1"=2500'
MINIMUM DEGREE OF ACCURACY: 1/2500
PROVEN SOURCE: USGS MONUMENT A 142: 724.61'

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

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



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

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

WATERSHED: MIDDLE ISLAND CREEK
COUNTY/DISTRICT: CENTERVILLE / TYLER
SURFACE OWNER: NOBLE ENERGY, INC
OIL & GAS ROYALTY OWNER: DAVID L. MAPLE, ET AL.

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

TARGET FORMATION: MARCELLUS
WELL OPERATOR: CNX GAS COMPANY, LLC
Address: 1000 CONSOL ENERGY DRIVE, CANNONSBURG, PA 15317
City: CANNONSBURG State: PA Zip Code: 15317

DATE: APRIL 18, 2017
OPERATOR'S WELL #: SHR 40 DHS
API WELL # 47 095 2212
STATE COUNTY PERMIT

ELEVATION: 771'
QUADRANGLE: SHIRLEY, W. VA
ACREAGE: 543.35
ACREAGE: 351.16

ESTIMATED DEPTH: TVD: 6,381' ± TMD: 16,145'±
DESIGNATED AGENT: CHRIS TURNER
Address: 1 DOMINION DRIVE
City: JANE LEW State: WV Zip Code: 26378

08/04/2017

WW-9
(4/16)

API Number 47 - 95 - 02206 F
Operator's Well No. SHR40AHS

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name CNX GAS COMPANY LLC OP Code 494458046

Watershed (HUC 10) Headwaters Middle Island Creek Quadrangle Shirley

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

Will a pit be used? Yes No

If so, please describe anticipated pit waste: no utilization of a pit

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

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number _____)
- Reuse (at API Number _____ at next anticipated wells SHR3 A,B,C,D. 4709502193, 4709502124, 470952194, 4709502195)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain No drilling activity, unused frac water will be reused at other wells in the area.)

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

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. NA No Drilling

-If oil based, what type? Synthetic, petroleum, etc. NA No Drilling

Additives to be used in drilling medium? NA No Drilling

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. NA No Drilling

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

-Landfill or offsite name/permit number? NA

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

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

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

Company Official Signature *Matt Hanley*

Company Official (Typed Name) Matt Hanley

Company Official Title Manager - Permitting

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Subscribed and sworn before me this 9th day of February, 2017

Shelli Kucan
Notary Public

WV Department of Environmental Protection
MARTINSBURG, WEST VIRGINIA
COUNTY
My Commission Expires Dec 11, 2017

My commission expires 12-11-17

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WV Department of Environmental Protection

Title: Oil and Gas Inspector

Date: 9-9-17

Field Reviewed? Yes No

Form WW-9

Operator's Well No. SHR 40 AHS

Noble Energy, Inc.

Proposed Revegetation Treatment: Acres Disturbed 5.42 Prevegetation pH 6.0

Lime 2-3 Tons/acre or to correct to pH 10-20-20 or equal

Fertilizer type _____

Fertilizer amount 500 lbs/acre

Mulch Hay or Straw at 2 Tons/acre

Seed Mixtures

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

**alternative seed mixtures are shown on the Site Design.

Attach:

Drawing(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided)

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Michael Daff

Comments: Pre seed and mulch all cut area, maintain all E & S during operation.

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04/2017

Title: Oil and Gas Inspector

Date: 9-9-14

Field Reviewed? Yes No

9502212F



Safety Plan for SHR40 Well Pad

Wells SHR40AHS, SHR40BHS, SHR40DHS, SHR40FHS

CNX Gas Company LLC



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INVASIVE SPECIES TRANSFER PREVENTION PLAN



Revised: December 19, 2016

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08/04/2017

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Introduction

The invasion of aquatic habitats by non-indigenous species, also known as non-native and exotic species can compete with native species for food, habitat, and can directly or indirectly kill native species, degrade habitat, and alter food webs.

Aquatic Invasive Species (AIS) may enter water bodies through various human assisted vectors¹. Oil and gas drilling activities associated with the withdrawal and transport of water may unknowingly introduce AIS into new waters.

Actions taken to prevent the introduction of new AIS will include best management practices for the withdrawal of water of streams and transport of water.

Purpose of the Plan

The purpose of this Best Management Plan (BMP) is to identify measures to deter the transfer of aquatic invasive species between water bodies associated with oil and gas drilling activities. AIS are plants and animals that have been introduced into new ecosystems causing unintended environmental, recreational, economic or health impacts. This BMP will outline actions recommended to be newly implemented, in addition to existing efforts, in order to close pathways and prevent new aquatic invasive species from entering and becoming established.

Vector and Pathway Definition

A vector is a physical means by which a non-indigenous species is transported to a new region, primarily by humans, whether deliberate or accidental. Within a vector, one or more pathways or routes of transfer exist by which an invasive species is transferred from one ecosystem to another.

Various vectors provide a mechanism through which AIS may enter a water body. This BMP addresses potential AIS invasion.

;

¹ Vectors are the modes of transmission, and pathways are routes taken.

Prevention

The most effective method of preventing the unintentional introduction of non-native species is to identify the pathways by which they are introduced and to develop environmentally sound methods to interdict introductions. Water intake structures and water transportation equipment have been identified as potential pathways in the oil and gas industry.

Define Vulnerable Receiving Environment

The receiving environment is that in which the activity takes place. This is taken to include any transit environments. It is important that all locations within the project site or operation area—not just the final destination – are considered. Areas outside the destination may include vehicles or infrastructure en route to the project or operation area.

Invasion of aquatic habitats by non-indigenous species via vehicles and/or machinery en route to the well location is not a concern within project areas as no stream crossings are located along the access road to the proposed well site and no in-stream work is required.

Awareness

Raising awareness of AIS among “on the ground” personnel (including oil and gas company staff and external contractors and service providers) has two main functions. Firstly, it increases the knowledge of AIS, which can help prevent their potential transmission, and secondly, it increases vigilance in detecting any infestations at an early stage – the only point at which eradication of an infestation is likely to be effective. Key species should be highlighted and personnel made aware of AIS (that are both visible and easily recognized) where the species have been a cause of concern. Where key AIS are not visible (eg. spores, fungi) ensure that the pathway and methods for preventing transmission are highlighted.

Existing or New AIS Infestation

Projects and operations are likely to be operating in environments where at least some AIS are already present. Measures should be taken to contain and prevent local transfer of the AIS. Where it is necessary or desirable to use infested areas, movement through the area should be limited as much as possible. Activities should be implemented to restrict AIS pathways.

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WV Department of
Environmental Protection

Monitoring should be undertaken to record any spread of infestation. If expansion of the population is recorded, investigation of the pathways responsible is encouraged.

Engineering Controls at Intake Assembly

Water intake shall include check valves, backflow preventers, or other alternatives designed to prevent a pathway of backflow water from water transportation equipment to the water source.

Cleaning/Drying of Equipment

The following procedures to prevent vectors and pathways should be performed in the withdrawal assembly, which should be relocated to another body of water:

1. The assembly should be dismantled into individual components.
2. All vegetation, mud, silt, sediment, and/or other debris shall be physically removed from each individual component.
3. Allow all individual components to remain continually dry and in the original waterbody's flood plain for a minimum of 5 days.
4. All equipment will be visual inspected for any apparent invasive species before transporting for using in another area

It is recommended that no biocides, algacides, or other chemicals be used to clean the assembly or its individual components at or near the water source without appropriate cautionary measures.

Early Detection and Rapid Response

Even the best prevention efforts cannot stop all introductions. Early detection of incipient invasions and quick coordinated responses will be used to eradicate or contain invasive species before they become too widespread. West Virginia Department of Environmental Protection (WVDEP), the West Virginia Division of Natural Resources (WVDNR), and the US Fish and Wildlife Service (USFWS) will be notified if initial evidence of an invasion is suspected. Contacts for the agencies are listed below. A professional biologist will assess the watershed for the suspected invasive species and provide a proper plan of eradication or containment.

Agency Contact Information:

West Virginia Division of Natural Resources
Wildlife Resources Section
304-558-2771
Mussel Specific Introductions:
Ms. Janet Clayton
Mussel Program Leader
304-637-0245
Janet.L.Clayton@wv.gov

United States Fish and Wildlife Service
West Virginia Field Office
Partners for Fish and Wildlife Program
Invasive Species
304-636-6586
nicholas_millett@fws.gov

West Virginia Department of Environmental Protection
Emergency Response
304-558-5938
Rusty.T.Joins@wv.gov

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References:

Pennsylvania Fish and Boat Commission – Clean Your Gear.

www.fish.state.pa.us/cleanyourgear.htm

Sea Grants Invasive Species Inventory – www.pserie.psu.edu/seagrant/ais/

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Entrainment and Impingement Prevention Plan

The proposed withdrawal and intake will be made temporary and tamper-resistant. The system shall consist of a floating intake device, associated piping, an intake filter, quick-connect couplings and a pump. The intake device will be constructed with an intake screen with maximum openings of 3/4 inch. The intake screen length and diameter will be sized accordingly to provide sufficient open area to maintain an intake velocity less than 1 feet per second. The final screen length and diameter will be determined based on site conditions, pump selection and approved withdrawal volume.

The intake device will be connected to the pump using aluminum and/or corrugated plastic quick-connect piping and couplings. The intake piping will have a pressure rating of at least 100 pounds per square inch. The final piping diameter and length will be determined based upon the site conditions, pump selection and approved withdrawal volume. The intake device will be held in place to stationary supports and will float in a deeper portion of the stream. The cam-lock quick-connect couplings will be locked when not in use to prevent connection and unauthorized water withdrawal.

The screen opening and intake velocity for water at the screen surface will prevent fish from being entrained or impinged on the screen. The intake screen will be periodically monitored during operations to ensure that the screening remains in good working condition to ensure that there are no openings or gaps in the screen greater than 3/4 inch and that the screen has not become blocked by debris. Additionally, the watercourse will not be blocked to the passage of fish.

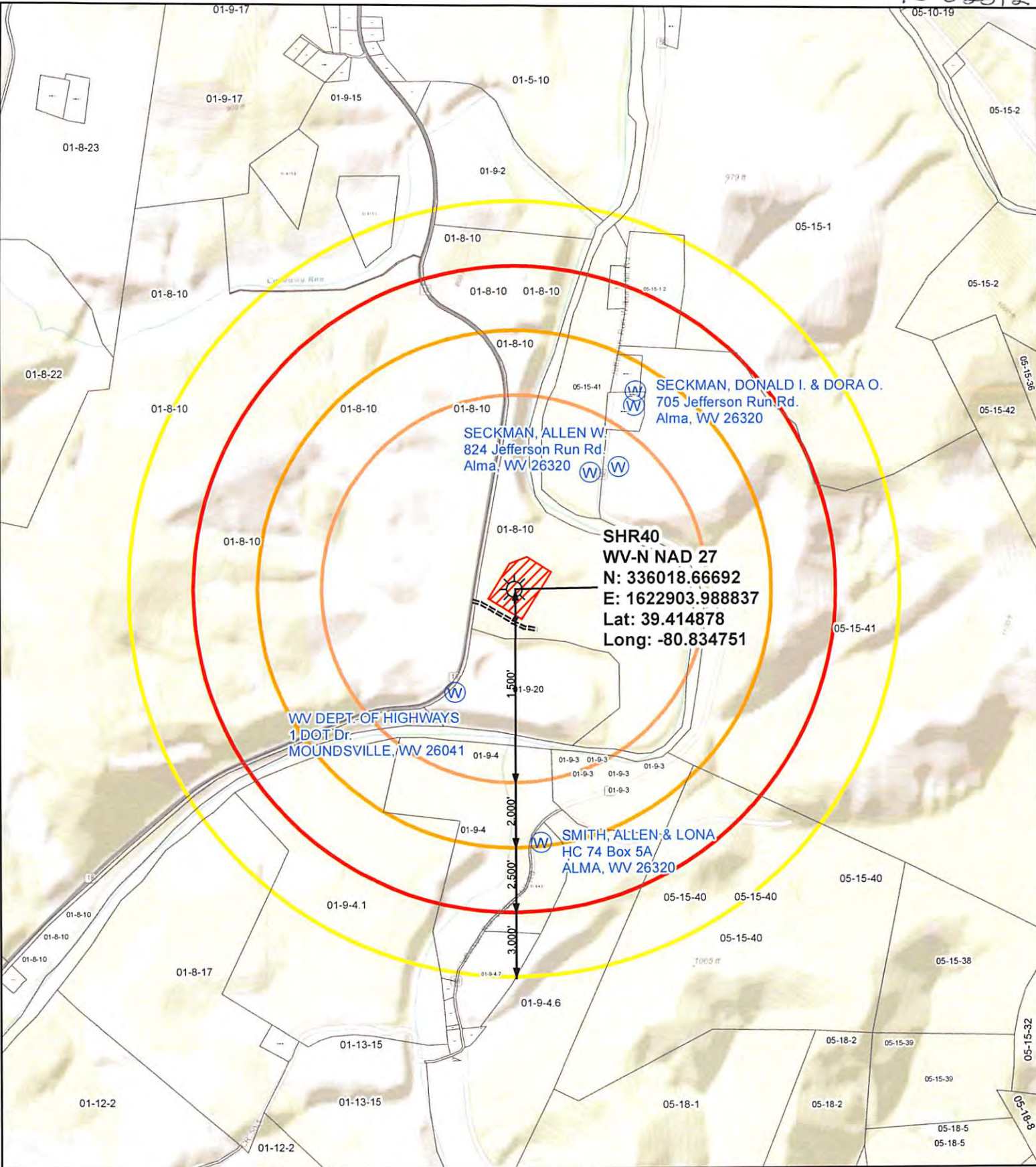
The selected pump will be either electric or diesel powered and capable of flow rates of 4200 gallons per minute (gpm). The water system including the pump piping and valves will be designed to restrict the instantaneous flow rate at or below 4200 gpm. Final product selection and site design, including pump type, pipe sizing and anchoring will be determined based on site conditions and the permitted withdrawal volume but shall adhere to the requirements mentioned above.

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95-02212



SECKMAN, DONALD I. & DORA O.
705 Jefferson Run Rd.
Alma, WV 26320

SECKMAN, ALLEN W.
824 Jefferson Run Rd.
Alma, WV 26320

SHR40
WV-N NAD 27
N: 336018.66692
E: 1622903.988837
Lat: 39.414878
Long: -80.834751

WV DEPT. OF HIGHWAYS
1 DOT Dr.
MOUNDSVILLE, WV 26041

SMITH, ALLEN & LONA
HC 74 Box 5A
ALMA, WV 26320

Legend

- Water Wells
- Well Site
- Access Road
- Well Pad
- Surface Parcel

Buffer Distance

- 1500 ft
- 2000 ft
- 2500 ft
- 3000 ft

0 1,000 2,000 Feet
1 inch = 1,000 feet

Original Date: 4/20/2017	Prepared By: Julie Long
Revision Date: 4/20/2017	Approved By: Ray Hoon

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CONSOL ENERGY
CNX Center, Canonsburg, PA

SHR40
Water Purveyer Map
08/04/2017

Well is located on topo map 649 feet south of Latitude: 39° 25' 00"

REFERENCE DETAIL



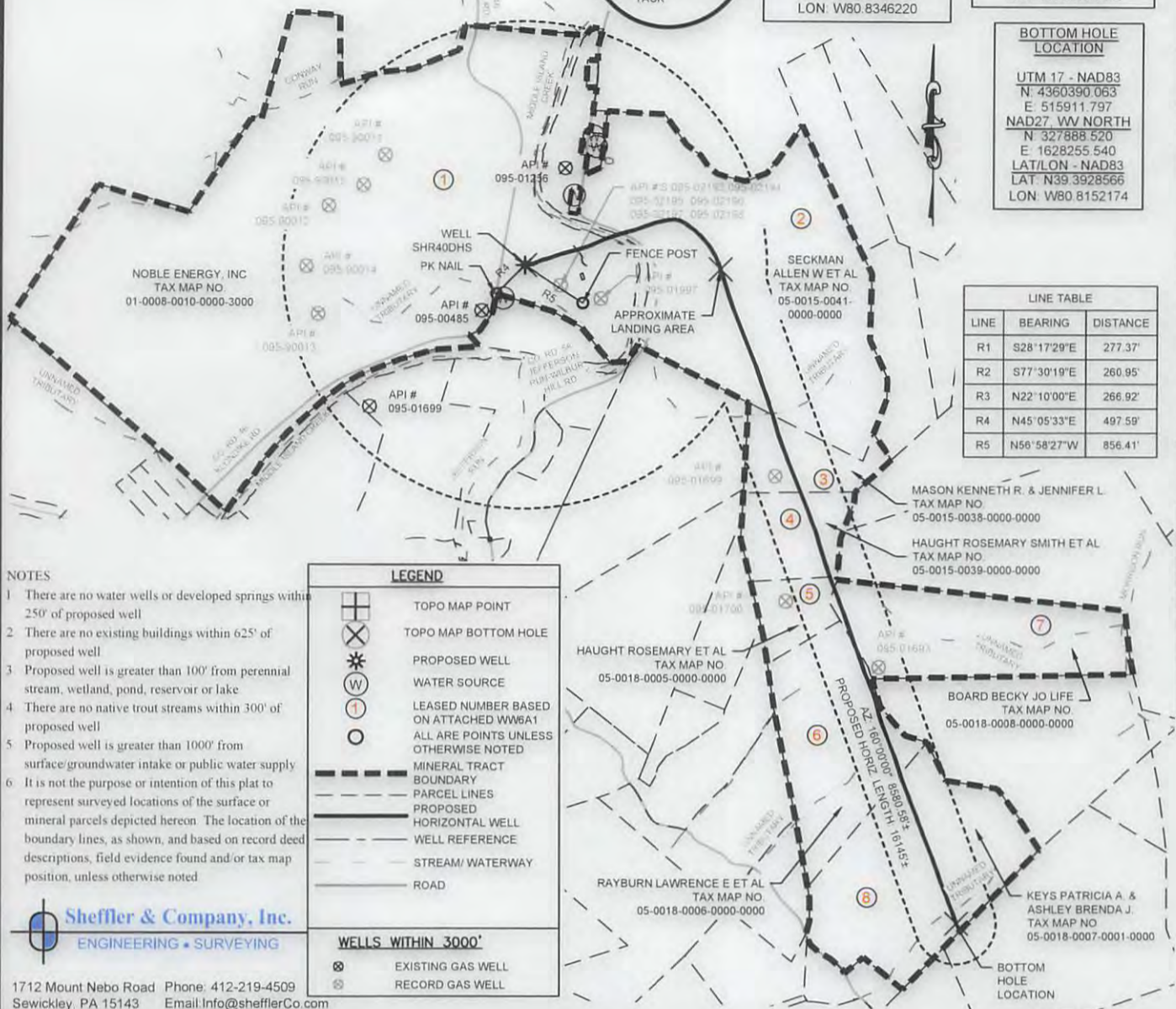
SURFACE HOLE LOCATION (SHL)
 UTM 17 - NAD83
 N: 4362831.426
 E: 514236.366
NAD27, WV NORTH
 N: 335991.760
 E: 1622891.280
LAT/LON - NAD83
 LAT: N39.4148843
 LON: W80.8346220

APPROX. LANDING POINT
 UTM 17 - NAD83
 N: 4362830.954
 E: 514975.118
NAD27, WV NORTH
 N: 335949.690
 E: 1625315.480
LAT/LON - NAD83
 LAT: N39.4148675
 LON: W80.8260403

BOTTOM HOLE LOCATION
 UTM 17 - NAD83
 N: 4360390.063
 E: 515911.797
NAD27, WV NORTH
 N: 327888.520
 E: 1628255.540
LAT/LON - NAD83
 LAT: N39.3928566
 LON: W80.8152174

LINE TABLE

LINE	BEARING	DISTANCE
R1	S28°17'29"E	277.37'
R2	S77°30'19"E	260.95'
R3	N22°10'00"E	266.92'
R4	N45°05'33"E	497.59'
R5	N56°58'27"W	856.41'



- NOTES**
- There are no water wells or developed springs within 250' of proposed well
 - There are no existing buildings within 625' of proposed well
 - Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake
 - There are no native trout streams within 300' of proposed well
 - Proposed well is greater than 1000' from surface/groundwater intake or public water supply
 - It is not the purpose or intention of this plat to represent surveyed locations of the surface or mineral parcels depicted hereon. The location of the boundary lines, as shown, and based on record deed descriptions, field evidence found and/or tax map position, unless otherwise noted

LEGEND

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

WELLS WITHIN 3000'

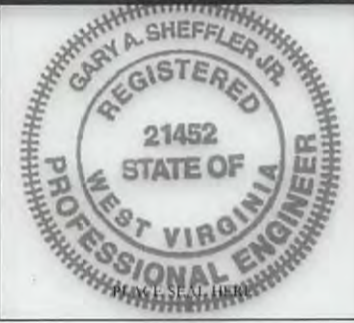
- EXISTING GAS WELL
- RECORD GAS WELL

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

FILE # SHR 40 DHS
 DRAWING # SHR 40 DHS
 SCALE 1"=2500'
 MINIMUM DEGREE OF ACCURACY 1/2500
 PROVEN SOURCE USGS MONUMENT
 OF ELEVATION: A 142: 724.61'

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

SIGNED: *Gayle*
 R.P.E.: _____ L.L.S.: P.S. NO. _____



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

WATERSHED: MIDDLE ISLAND CREEK ELEVATION: 771'
 COUNTY/DISTRICT: CENTERVILLE / TYLER QUADRANGLE: SHIRLEY, W. VA
 SURFACE OWNER: NOBLE ENERGY, INC ACREAGE: 543.35
 OIL & GAS ROYALTY OWNER: DAVID L. MAPLE, ET AL ACREAGE: 351.16

DATE: APRIL 18, 2017

OPERATOR'S WELL #: SHR 40 DHS

API WELL # 47 095 2212 F
 STATE COUNTY PERMIT
H6A

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

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

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 6,381' ± TMD: 16,145' ±
 WELL OPERATOR: CNX GAS COMPANY, LLC DESIGNATED AGENT: CHRIS TURNER
 Address: 1000 CONSOL ENERGY DRIVE, CANNONSBURG, PA 15317 Address: 1 DOMINION DRIVE
 City CANONSBURG State PA Zip Code 15317 City JANE LEW State WV Zip Code 26378

08/04/2017

Well is located on topo map 8.673 feet south of Latitude: 39° 25' 00"

Well is located on topo map 6.654 feet west of Longitude: 80° 47' 30"



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

FILE #: SHR 40 DHS
DRAWING #: SHR 40 DHS
SCALE: 1"=2500'
MINIMUM DEGREE OF ACCURACY: 1/2500
PROVEN SOURCE OF ELEVATION: USGS MONUMENT A 142: 724.61'

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

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



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



DATE: APRIL 18, 2017
OPERATOR'S WELL #: SHR 40 DHS
API WELL # 47 095 2212F
STATE COUNTY PERMIT
H6A

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

WATERSHED: MIDDLE ISLAND CREEK ELEVATION: 771'
COUNTY/DISTRICT: CENTERVILLE / TYLER QUADRANGLE: SHIRLEY, W. VA
SURFACE OWNER: NOBLE ENERGY, INC ACREAGE: 543.35
OIL & GAS ROYALTY OWNER: DAVID L MAPLE, ET AL ACREAGE: 351.16

08/04/2017

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

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 6,381' ± TMD: 16,145' ±
WELL OPERATOR: CNX GAS COMPANY, LLC DESIGNATED AGENT: CHRIS TURNER
Address: 1000 CONSOL ENERGY DRIVE, CANNONBURG, PA 15317 Address: 1 DOMINION DRIVE
City CANONSBURG State PA Zip Code 15317 City JANE LEW State WV Zip Code 26378

WW-6A1
(5/13)

Operator's Well No. SHR40DHS

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

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

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

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

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

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

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

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

Well Operator: CNX GAS COMPANY LLC
 By: Matt Hanley  RECEIVED
 Its: Manager - Permitting Office of Oil and Gas

APR 21 2017
 Page 1 of _____
 WV Department of Environmental Protection
 08/04/2017

Attachment - Form WW-6A-1 for SHR40DHS

<u>Tract ID</u>	<u>Tax Map & Parcel</u>	<u>Title Opinion QLS #</u>	<u>Grantor, Lessor, etc</u>	<u>Grantee, Lessee, etc</u>	<u>Royalty</u>	<u>Book/Page</u>
1	1-8-10	279251000	David H. Weekley and Linda C. Weekley, h/w	Antero Resources Corporation	Not less than 1/8	507/246
			Daniel A. Weekley and Suzanne L. Weekly, h/w	Antero Resources Corporation	Not less than 1/8	507/241
			Antero Resources Corporation	CNX Gas Company and Noble Energy, Inc.	Assignment	534/460
			AMP Fund III, LP	Noble Energy, Inc.	Not less than 1/8	527/465
			Noble Energy, Inc.	CNX Gas Company LLC	Assignment	534/483

<u>Tract ID</u>	<u>Tax Map & Parcel</u>	<u>Title Opinion QLS #</u>	<u>Grantor, Lessor, etc</u>	<u>Grantee, Lessee, etc</u>	<u>Royalty</u>	<u>Book/Page</u>
2	5-15-41	108628000	Lillie Seckman	Drilling Appalachian Corporation	Not less than 1/8	268/457
			George V. Myers and Merle V. Myers, h/w	Drilling Appalachian Corporation	Not less than 1/8	273/278
			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 and Noble Energy, Inc.	Assignment	422/517
			Noble Energy, Inc.	CNX Gas Company	Assignment	550/273
			Allen W. Seckman and Nancy J. Seckman, h/w	Noble Energy, Inc.	Not less than 1/8	465/594
			Noble Energy, Inc.	CNX Gas Company	Assignment	550/273

<u>Tract ID</u>	<u>Tax Map & Parcel</u>	<u>Title Opinion QLS #</u>	<u>Grantor, Lessor, etc</u>	<u>Grantee, Lessee, etc</u>	<u>Royalty</u>	<u>Book/Page</u>
3	5-15-38	108503000	Kenneth R. Mason and Jennifer L. Mason, h/w	Acropolis, Inc.	Not less than 1/8	331/475
			Acropolis, Inc.	Drilling Appalachian Corporation	Assignment	331/483
			Drilling Appalachian Corporation	Antero Resources Appalachian Corporation	Assignment	391/416
			Antero Resources Corporation	CNX Gas Company and Noble Energy, Inc.	Assignment	422/517
			Noble Energy, Inc.	CNX Gas Company	Assignment	550/273

<u>Tract ID</u>	<u>Tax Map & Parcel</u>	<u>Title Opinion QLS #</u>	<u>Grantor, Lessor, etc</u>	<u>Grantee, Lessee, etc</u>	<u>Royalty</u>	<u>Book/Page</u>
4, 5	5-8-39	261710000	Rosemary Haught	Drilling Appalachian Corporation	Not less than 1/8	331/102
			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 and Noble Energy, Inc.	Assignment	422/517
			Noble Energy, Inc.	CNX Gas Company	Assignment	550/273

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Janette M. Pekula (McCann) and Steven Pekula, h/w	Noble Energy, Inc.	Not less than 1/8	444/69
Diana Goodpasture	Noble Energy, Inc.	Not less than 1/8	438/122
Bradley Toothman	Noble Energy, Inc.	Not less than 1/8	445/826
Christopher Toothman	Noble Energy, Inc.	Not less than 1/8	445/832
Kimberly Toothman Raphael	Noble Energy, Inc.	Not less than 1/8	445/829
Hylbert Clarence Heflin	Noble Energy, Inc.	Not less than 1/8	440/457
Marion L. Wharton	Noble Energy, Inc.	Not less than 1/8	445/839
Scott Wharton	Noble Energy, Inc.	Not less than 1/8	445/837
Lee H. Pratt Revocable Trust dated 11/24/2004, by Bonnie E. Pratt, acting as Trustee	Noble Energy, Inc.	Not less than 1/8	452/690
Derek Lee Bell and Allison Schermerhorn, h/w	Noble Energy, Inc.	Not less than 1/8	444/32
Jason S. Heflin and Jessica L. Heflin, h/w	Noble Energy, Inc.	Not less than 1/8	457/675
Jeffrey Todd Heflin	Noble Energy, Inc.	Not less than 1/8	457/673
Noble Energy, Inc.	CNX Gas Company LLC	Assignment	550/273
Anna B. Weiss and Carl F. Weiss, h/w	CNX Gas Company LLC	Not less than 1/8	414/435
David A. Buck and Jamie H. Buck, h/w	CNX Gas Company LLC	Not less than 1/8	414/440
Berdina Rose and Norman W. Rose, h/w	CNX Gas Company LLC	Not less than 1/8	416/619
Betty W. Embry	CNX Gas Company LLC	Not less than 1/8	414/445
Kenneth A. Tracewell and Kimberly L. Tracewell, h/w	CNX Gas Company LLC	Not less than 1/8	416/629
Charles M. Pratt Jr. and Betty L. Pratt, h/w	CNX Gas Company LLC	Not less than 1/8	406/119
V. Ruth Utter	CNX Gas Company LLC	Not less than 1/8	406/109
Stella C. Hickman	CNX Gas Company LLC	Not less than 1/8	406/114
Wilma L. Devine and William P. Devine, h/w	CNX Gas Company LLC	Not less than 1/8	406/99
Melody K. Lemley and Gregory H. Lemley, h/w	CNX Gas Company LLC	Not less than 1/8	406/104
Linda L. Campbell	CNX Gas Company LLC	Not less than 1/8	405/269
Beth E. Hendrix and Ronald R. Hendrix	CNX Gas Company LLC	Not less than 1/8	416/639
Abby E. Kyle	CNX Gas Company LLC	Not less than 1/8	416/634
Susan M. Williams and Dwayne R. Williams, h/w	CNX Gas Company LLC	Not less than 1/8	409/234
Rebecca L. Meredith	CNX Gas Company LLC	Not less than 1/8	414/460
Deborah Wharton and Christopher Wharton, h/w	CNX Gas Company LLC	Not less than 1/8	416/644
James L. Smith	CNX Gas Company LLC	Not less than 1/8	414/450
Meredith Monroe	CNX Gas Company LLC	Not less than 1/8	414/455
Robert L. Monroe	CNX Gas Company LLC	Not less than 1/8	414/460
Judith R. Wigal and James R. Wigal, h/w	CNX Gas Company LLC	Not less than 1/8	416/609
James D. Mattern and Linda K. Mattern, h/w	CNX Gas Company LLC	Not less than 1/8	416/614
Donald L. Headley	CNX Gas Company LLC	Not less than 1/8	416/624
Noble Energy, Inc.	CNX Gas Company LLC	Assignment	550/273

Title Opinion
QLS #
 108567000

Grantor, Lessor, etc

Leota B. McKinney and Lester McKinney, h/w
 Howard Stubbs and Nelda Stubbs, h/w
 Marvin G. Board and Becky Jo Board, h/w
 Robert Travis and Carol Travis, h/w
 Creal Hoover

Grantee, Lessee, etc

Drilling Appalachian Corporation
 Drilling Appalachian Corporation
 Drilling Appalachian Corporation
 Drilling Appalachian Corporation
 Drilling Appalachian Corporation

Royalty

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

Book/Page

330/237
 330/241
 330/426
 330/487
 330/491

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Joseph Travis and Carole Travis, h/w	Drilling Appalachian Corporation	Not less than 1/8	330/511
Eva Jean Hoover	Drilling Appalachian Corporation	Not less than 1/8	330/542
Glenda Gregory	Drilling Appalachian Corporation	Not less than 1/8	330/546
Drilling Appalachian Corporation	Antero Resources Appalachian Corporation	Assignment	391/416
Drilling Appalachian Corporation	Antero Resources Corporation	Corrective Assignment	421/130
Antero Resources Corporation	CNX Gas Company LLC and Noble Energy, Inc.	Assignment	422/517
Noble Energy, Inc.	CNX Gas Company LLC	Assignment	550/273
Josephine Spencer and David Spencer, h/w	Drilling Appalachian Corporation	Not less than 1/8	330/233
Walter Seckman and Eva Seckman, h/w	Drilling Appalachian Corporation	Not less than 1/8	330/430
Michael Fisher	Drilling Appalachian Corporation	Not less than 1/8	330/503
Joe Seckman	Drilling Appalachian Corporation	Not less than 1/8	330/507
Antonia Underwood	Drilling Appalachian Corporation	Not less than 1/8	330/550
Camella Ash	Drilling Appalachian Corporation	Not less than 1/8	330/575
Jill Robinson	Drilling Appalachian Corporation	Not less than 1/8	330/579
Donna Wolther	Drilling Appalachian Corporation	Not less than 1/8	330/742
Jennifer Sexson	Drilling Appalachian Corporation	Not less than 1/8	330/657
Drilling Appalachian Corporation	Antero Resources Appalachian Corporation	Assignment	401/499
Drilling Appalachian Corporation	Antero Resources Corporation	Corrective Assignment	421/138
Antero Resources Corporation	CNX Gas Company LLC and Noble Energy, Inc.	Assignment	422/517
Noble Energy, Inc.	CNX Gas Company LLC	Assignment	550/273
Kimberly Dawn Jackson	Drilling Appalachian Corporation	Not less than 1/8	395/795
Scott Seckman	Drilling Appalachian Corporation	Not less than 1/8	395/797
James F. Bonnell and Jacqueline S. Bonnell, h/w	Drilling Appalachian Corporation	Not less than 1/8	409/253
Drilling Appalachian Corporation	Noble Energy, Inc.	Assignment	452/641
Noble Energy, Inc.	CNX Gas Company LLC	Assignment	542/147
Keith E. Rheinhardt	Noble Energy, Inc.	Not less than 1/8	DB 449/525
Gary A. Rheinhardt, Jr.	Noble Energy, Inc.	Not less than 1/8	DB 449/527
Charles D. Rheinhardt and Denise M. Rheinhardt, h/w	Noble Energy, Inc.	Not less than 1/8	DB 449/531
Randall Rheinhardt, a single man	Noble Energy, Inc.	Not less than 1/8	DB 453/535
David Rheinhardt, a single man	Noble Energy, Inc.	Not less than 1/8	DB 453/633
Iris Rheinhardt, a single woman	Noble Energy, Inc.	Not less than 1/8	DB 458/642
Tami Dawn Rheinhardt	Noble Energy, Inc.	Not less than 1/8	DB 465/270
Noble Energy, Inc.	CNX Gas Company LLC	Assignment	550/273

<u>Tract</u>	<u>Tax Map & Parcel #</u>	<u>Title Opinion</u>	<u>Grantor, Lessor, etc</u>	<u>Grantee, Lessee, etc</u>	<u>Royalty</u>	<u>Book/Page</u>
		<u>QLS #</u>				
		257270000	Mary Keys and Haskeil Keys, h/w, and John L. Seckman	J.M.L. Smith	Not less than 1/8	158/214
			J.M.L. Smith	Duncan Sartain	Assignment	158/235
			Duncan Sartain	W.E. Pope	Assignment	158/439
			Duncan Sartain	W.E. Pope	Assignment	159/377
			Duncan Sartain	Douglas A. Williams	Assignment	158/459

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05-02212F

Douglas A. Williams	W. Truett Smith, Frank Rose and George S. Finley	Assignment	158/429
Douglas A. Williams	Walter F. Tucker	Assignment	158/460
Douglas A. Williams	Joe H. Foy	Assignment	158/478
Douglas A. Williams	Archie Bean	Assignment	158/479
Douglas A. Williams	R.C. Crabb	Assignment	159/326
Douglas A. Williams	Marvin Hanz	Assignment	158/577
W. Truett Smith, Frank Rose and George S. Finley	W.E. Pope	Assignment	216/304
W. Truett Smith, Frank Rose and George S. Finley	W.E. Pope	Assignment	216/307
W.F. Tucker	W.E. Pope	Assignment	163/216
Joe H. Foy	W.E. Pope	Assignment	216/303
Archie Bean	W.E. Pope	Assignment	216/306
W.E. Pope	Judith A. Pope, as Executrix	Recital in Assignment	311/655
Estate of W.E. Pope, acting through Independent Executrix	Drilling Appalachian Corporation	Assignment	311/655
Judith A. Pope	Southwest Savings and Loan Association	Assignment	176/264
R.C. Crabb	Hugh Spencer	Assignment	Unrecorded
Southwest Savings and Loan Association	Drilling Appalachian Corporation	Assignment	315/466
Spencer Enterprises, by Hugh Spencer, owner	Drilling Appalachian Corporation	Assignment	313/243
Mary Hanz	Antero Resources Appalachian Corporation	Assignment	391/416
Drilling Appalachian Corporation	Antero Resources Appalachian Corporation	Corrective Assignment	421/130
Drilling Appalachian Corporation			
Antero Resources Corporation	CNX Gas Company LLC and Noble Energy, Inc.	Assignment	422/517
Noble Energy, Inc.	CNX Gas Company LLC	Assignment	550/273

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Environmental Protection

95-02212F



Matthew Hanley
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 57th Street SE
Charleston, WV 25304-2345

RE: Road Letter – SHR 40 Well Pad Rework Applications

To Whom It May Concern:

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

Should you have any questions or need additional information, please do not hesitate to contact me at matthanley@consolenergy.com or 724-485-3011.

Sincerely,

A handwritten signature in blue ink that reads 'Matthew Hanley'.

Matthew Hanley
CNX Gas Company LLC

08/04/2017

95-02212 F

WW-6AC
(1/12)

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

Date of Notice Certification: 4-20-17

API No. 47- 95 - 02212 F
Operator's Well No. SHR40DHS
Well Pad Name: SHR40

Notice has been given:

Pursuant to the provisions in West Virginia Code § 22-6A, the Operator has provided the required parties with the Notice Forms listed below for the tract of land as follows:

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>514245.726</u>
County:	<u>095-Tyler</u>		Northing:	<u>4362847.122</u>
District:	<u>Centerville</u>	Public Road Access:		<u>County Rt. 18</u>
Quadrangle:	<u>Shirley</u>	Generally used farm name:		<u>Noble Energy, Inc</u>
Watershed:	<u>Headwaters Middle Island Creek</u>			

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

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

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

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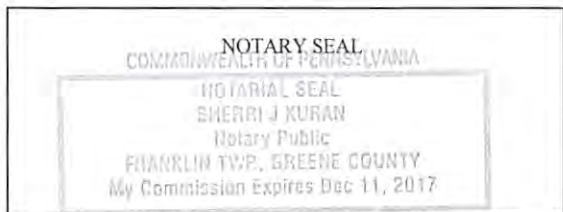
WV Department of
Environmental Protection
08/04/2017

WW-6AC
(1/12)

Certification of Notice is hereby given:

THEREFORE, I Matt Hanley, 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 Dr
By:	Matt Hanley <i>[Signature]</i>		Canonsburg, PA 15317
Its:	Manager - Permitting	Facsimile:	
Telephone:	724-485-3011	Email:	Matthanley@consolenergy.com



Subscribed and sworn before me this 9th day of February 2017.
Sherril Kurian Notary Public
 My Commission Expires 12-11-17

Oil and Gas Privacy Notice:

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

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Environmental Protection
08/04/2017

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: 4/20/17 **Date Permit Application Filed:** 4/20/17

Notice of:

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

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

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

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

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

- SURFACE OWNER(s)
 - Name: Noble Energy, Inc
 - Address: 1000 Noble Energy Drive
 - Canonsburg, PA 15317
 - Name: _____
 - Address: _____
- SURFACE OWNER(s) (Road and/or Other Disturbance)
 - Name: _____
 - Address: _____
 - Name: _____
 - Address: _____
- SURFACE OWNER(s) (Impoundments or Pits)
 - Name: _____
 - Address: _____

- COAL OWNER OR LESSEE
 - Name: _____
 - Address: _____
- COAL OPERATOR
 - Name: _____
 - Address: _____
- SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
 - Name: Allen W. Seckman
 - Address: 824 Jefferson Run Rd.
 - Alma, WV 26320
- OPERATOR OF ANY NATURAL GAS STORAGE FIELD
 - Name: _____
 - Address: _____

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

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

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

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

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

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

SURFACE OWNER(s)

Name: Noble Energy, Inc
Address: 1000 Noble Energy Drive
Canonsburg, PA 15317

Name: _____
Address: _____

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

Name: _____
Address: _____

Name: _____
Address: _____

SURFACE OWNER(s) (Impoundments or Pits)

Name: _____
Address: _____

COAL OWNER OR LESSEE

Name: _____
Address: _____

COAL OPERATOR

Name: _____
Address: _____

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

Name: WV Department of Highways
Address: 1 DOT Drive
Moundsville, WV 26041

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: _____
Address: _____

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*Please attach additional forms if necessary APR 21 2017

Notice is hereby given:

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

This Notice Shall Include:

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

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

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

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

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

Well Location Restrictions

Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No well pad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, nothing contained in this section prevents an operator from conducting the activities permitted or authorized by a Clean Water Act Section 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state or within the sensitive 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, 2017, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items

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08/04/2017

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

Water Well Testing:

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

Water Testing Laboratories:

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

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

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

Written Comment:

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

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

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

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WV Department of
Environmental Protection

Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

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

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

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WV Department of
Environmental Protection
08/04/2017

WW-6A
(8-13)

API NO. 47- 95 - 02212 F
OPERATOR WELL NO. SHR40DHS
Well Pad Name: SHR40

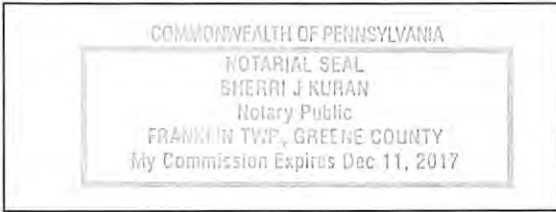
Notice is hereby given by:

Well Operator: CNX GAS COMPANY LLC *Matthew Hanley*
Telephone: 724-485-3011
Email: MattHanley@consolenergy.com

Address: 1000 CONSOL ENERGY DRIVE
Canonsburg, PA 15317
Facsimile: _____

Oil and Gas Privacy Notice:

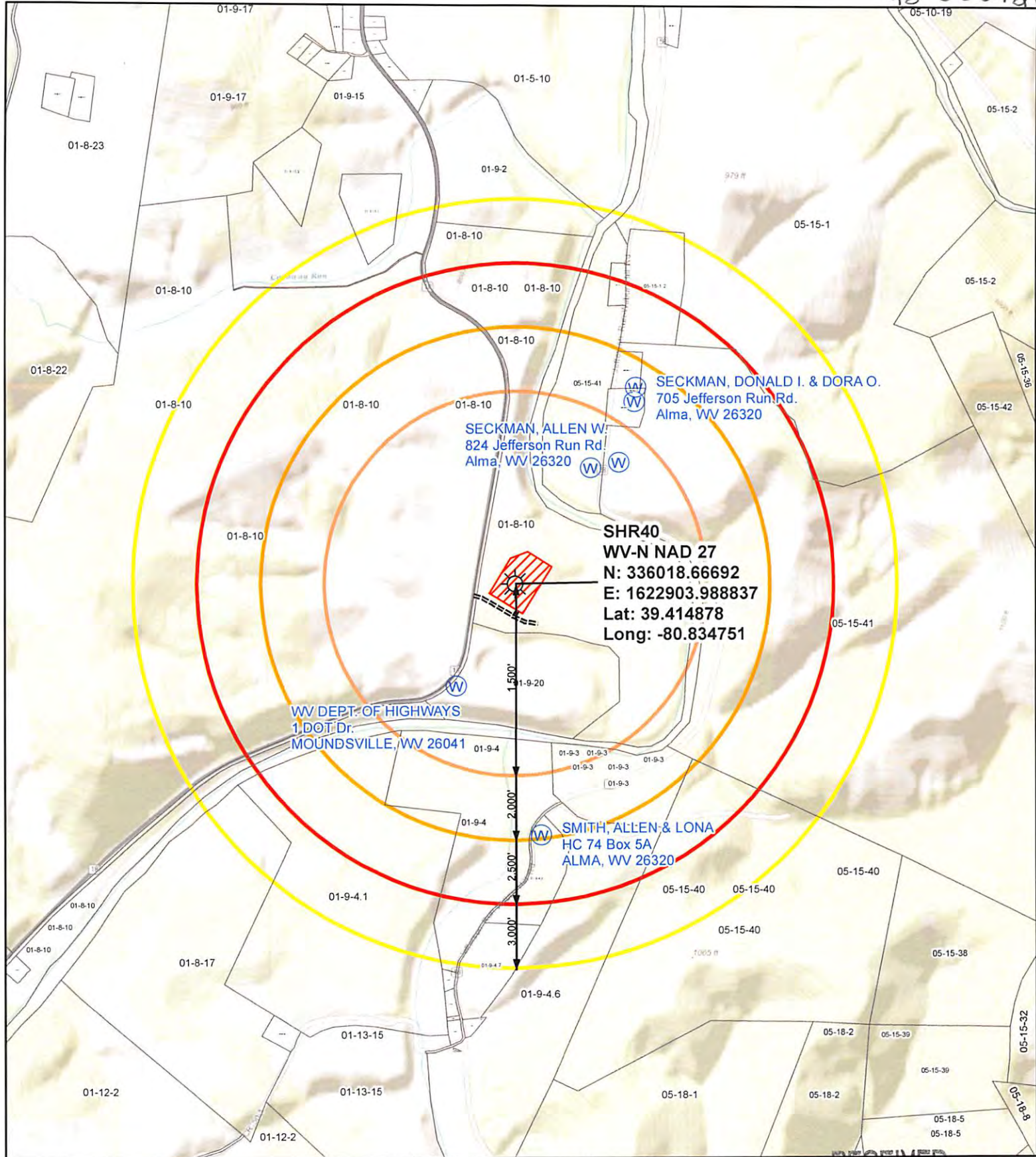
The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory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



Subscribed and sworn before me this 9th day of February 2017.
Sherri J. Kuran Notary Public
My Commission Expires 12-11-17

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WV Department of
Environmental Protection 08/04/2017



SECKMAN, ALLEN W.
824 Jefferson Run Rd.
Alma, WV 26320

SECKMAN, DONALD I. & DORA O.
705 Jefferson Run Rd.
Alma, WV 26320

SHR40
WV-N NAD 27
N: 336018.66692
E: 1622903.988837
Lat: 39.414878
Long: -80.834751

WV DEPT. OF HIGHWAYS
1, DOT Dr.
MOUNDSVILLE, WV 26041

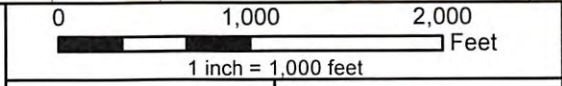
SMITH, ALLEN & LONA
HC 74 Box 5A
ALMA, WV 26320

Legend

- Water Wells
- Well Site
- Access Road
- Well Pad
- Surface Parcel

Buffer Distance

- 1500 ft
- 2000 ft
- 2500 ft
- 3000 ft



Original Date: 4/20/2017 Prepared By: Julie Long

Revision Date: 4/20/2017 Approved By: Ray Hoon

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CONSOL ENERGY
Office of Oil and Gas
CNX Center, Canonsburg, PA

APR 21 2017

WV Department of
Environmental Protection

09/04/2017

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

Notice Time Requirement: notice shall be provided no later than the **filing date of permit application.**

Date of Notice: 9/20/17 **Date Permit Application Filed:** 9/20/17

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

- CERTIFIED MAIL RETURN RECEIPT REQUESTED
- HAND DELIVERY

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

Notice is hereby provided to the SURFACE OWNER(s)
(at the address listed in the records of the sheriff at the time of notice):

Name: <u>Noble Energy, Inc</u>	Name: _____
Address: <u>1000 Noble Energy Drive</u> <u>Canonsburg, PA 15317</u>	Address: _____

Notice is hereby given:

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

State: <u>West Virginia</u>	UTM NAD 83 Easting: <u>514245.726</u>
County: <u>095-Tyler</u>	Northing: <u>4362847.122</u>
District: <u>Centerville</u>	Public Road Access: <u>County Rt.18</u>
Quadrangle: <u>Shirley</u>	Generally used farm name: <u>Noble Energy, Inc</u>
Watershed: <u>Headwaters Middle Island Creek</u>	

This Notice Shall Include:

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

Well Operator: <u>CNX GAS COMPANY LLC</u>	Address: <u>1000 Consol Energy Dr</u>
Telephone: <u>724-495-3011</u>	<u>Canonsburg, PA 15317</u>
Email: <u>Malthanley@consolenergy.com</u>	Facsimile: _____

Oil and Gas Privacy Notice:

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

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WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

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

Jim Justice
Governor

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

February 28, 2017

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

Subject: DOH Permit for the SHR-40 Pad, Tyler County
SHR-40 Well Site

47-095-02212 -DHS

Dear Mr. Martin,

The West Virginia Division of Highways has transferred Permit #06-2013-0420 for the subject site to CNX Gas Company LLC, for access to the State Road for the well site located off of WV Route 18 in Tyler County.

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

Very Truly Yours,

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

Cc: Ray Hoon
CNX Gas Company LLC
CH, OM, D-6
File

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08/04/2017

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

Type: Water CAS: 7732-18-5

Type: Silica CAS: 14808-60-7

Type: Hydrochloric Acid CAS: 7647-01-0

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

Type: Petroleum distillate CAS: 64742-47-8

Type: Glutaraldehyde CAS: 111-30-8

Type: Ethylene glycol CAS: 107-21-1

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

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

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

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

Type: Ammonium chloride CAS: 12125-02-9

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

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

Type: Metanol CAS: 67-56-1

Type: Formaldehyde CAS: 50-00-0

Type: Thiourea CAS: 62-56-6

Type: Acetophenone CAS: 98-86-2

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