west virginia department of environmental protection

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

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

June 25, 2015

WELL WORK PERMIT

Horizontal 6A Well

This permit, API Well Number: 47-9502245, issued to NOBLE ENERGY, INC., 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 all 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 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.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-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) 926-0499 ext. 1654.

James Martin
Chief

Operator's Well No: SHR 08 L
Farm Name: ASH, JAMES E.
API Well Number: 47-9502245
Permit Type: Horizontal 6A Well
Date Issued: 06/25/2015

Promoting a healthy environment.

API Number: 9502245

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 fifty (50) 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. 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.

8. 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.

9. Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced on this well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

WW-6B
(12/14)

API NO. 47- 095 - 02245
OPERATOR WELL NO. SHR 08 L
Well Pad Name: SHR 08 / 81

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

1) Well Operator: Noble Energy, Inc.

494501907	095- Tyler	Centerville	West Union
Operator ID	County	District	Quadrangle

2) Operator's Well Number: SHR 08 L Well Pad Name: SHR 08 / 81

3) Farm Name/Surface Owner: James E. Ash, et al Public Road Access: County Rt. 58/2

4) Elevation, current ground: 1018.72 Elevation, proposed post-construction: 1006.28'

5) Well Type (a) Gas ☑ Oil ☐ Underground Storage ☐
Other ☐
(b)If Gas Shallow ☑ Deep ☐
Horizontal ☑

Michael Doff
3/4/2015

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Associated Pressure(s):
Marcellus 6610 - 6674' / 64' Thick / 4405 psi

8) Proposed Total Vertical Depth: 6,664

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 17,275'

11) Proposed Horizontal Leg Length: 9,811'

12) Approximate Fresh Water Strata Depths: 552'

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

14) Approximate Saltwater Depths: 1847'

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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MAR 13 2015

API NO. 47- 095 -
OPERATOR WELL NO. SHR 08 L
Well Pad Name: SHR 08 / 81

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' minimum or to next competent formation, but no deeper than 1st freshwater	40' minimum or to next competent formation, but no deeper than 1st freshwater	CTS
Fresh Water	13 3/8"	New	J-55	54.5	602' or to next competent formation no deeper than elevation	602' or to next competent formation no deeper than elevation	CTS 30% excess Yield =1.18
Coal							
Intermediate	9 5/8"	New	J-55	36.0	2469' or 250' below the fifth sand	2469' or 250' below the fifth sand	CTS 30% excess Yield = 1.18
Production	5 1/2"	New	P-110	20.0	17,275'	17,275'	10% excess Yield = 1.27 TOC=200' above 9.625 shoe
Tubing							
Liners							

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Max. Associated Surface Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20"	26"	0.438	2730		Type III	CTS
Fresh Water	13 3/8"	17.5"	0.380	2730	1200	Class A	30% excess Yield =1.18
Coal							
Intermediate	9 5/8"	12.38	0.325	3520		Class A	30% excess Yield =1.18 to surface
Production	5 1/2"	8.75"-8.5"	0.361	12,640		Class A	10% excess Yield = 1.27 TOC=200' above 9.625" shoe
Tubing							
Liners							

MDG
3/11/2015

PACKERS

Kind:				
Sizes:				
Depths Set:				

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MAR 13 2015

API NO. 47- 095 -
OPERATOR WELL NO. SHR 08 L
Well Pad Name: SHR 08 / 81

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

Drill the vertical depth to the Marcellus at an estimated total vertical depth of approximately 6664 feet. Drill Horizontal leg - stimulate and produce the Marcellus Formation. Should we encounter formation issues, set the 13 3/8 into next competent formation but not deeper than elevation. Should we encounter a unanticipated void we will install a minimum of 20' of casing below the void but not more than 100' below the void, set a basket and grout to surface.

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

The stimulation will be multiple stages divided 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. our maximum pressure is not to exceed 10,000 lbs. Please refer to attached list.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 27.77

22) Area to be disturbed for well pad only, less access road (acres): 25.64

23) Describe centralizer placement for each casing string:

Conductor - No centralizers used. Fresh Water/Surface - Bow spring centralizers on first two joints then every third joint to 100' from surface. Intermediate - Bow Springs centralizers every third joint to 100' from Surface. Production - Rigid bow springs every third joint from KOP to TOC, rigid bow springs every joint to KOP.

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

See attached sheet - Conductor - Type III CTS. Fresh Water - 15.6 ppg Class A (CA-100), 0.25 lbs/sk Lost Circ 30% excess Yield = 1.18 to surface. (CLC-CPF), Intermediate- 15.6 ppg Class A +0.25% bwoc cellophane flakes (CLC-CPF) 30% Excess Yield = 1.18 to surface. Production - 14.6 ppg 65/35 Class A/POZ +/- 0.4% fluid loss additive, +/- 0. 3% retarder, +/- 0.6% dispersant, +/- 0.2% antifoam, +/- 0.1% antisetting 10% Excess Yield= 1.27 TOC >= 200' above 9.625" shoe.

25) Proposed borehole conditioning procedures:

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 run in air. Once 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 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.

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MAR 13 2015

*Note: Attach additional sheets as needed.

Fresh Water Protetcion String:		Cement Additives	
Allied Material Name	**Additive (Material) Type**	**Additive (Material) Description**	**CAS #**
CCAC (Class A Common)	Base Cement	Grey powder	65997-15-1
CA-100	Accelerator	White, flake	10043-52-4 7447-40-7 7732-18-5 7647-14-5
CLC-CPF (Cellophane Flakes)	Lost Circulation Aid	White and colored flake	Non-Hazardous

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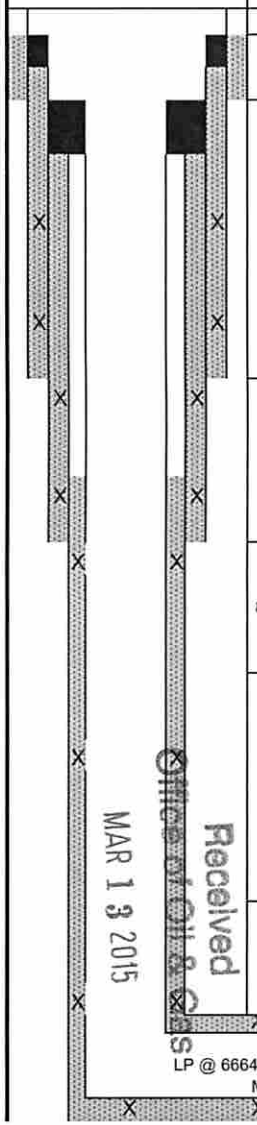
MAR 13 2015

DRILLING WELL PLAN
SHR-08L HS
Marcellus Shale Horizontal
Tyler County, WV

		SHR-08L SHL	320142.95N 1622422.2E
Ground Elevation	1006'	SHR-08L LP	319663.627N 1621117.508E
Azm	159°	SHR-08L BHL	310443.173N 1624470.152E

WELLBORE DIAGRAM



HOLE	CASING	GEOLOGY	TOP	BASE	MUD	CEMENT	CENTRALIZERS	CONDITIONING	COMMENTS
26	20" 94#	Conductor	40	40	AIR	Type III Surface to TD	N/A	Ensure the hole is clean at TD.	Conductor casing = 0.438" wall thickness
17 1/2	13-3/8" 54.5# J-55 BTC	FW Shows	552	552	Air or Fresh Water Based Mud	15.6 ppg Class A, 0.25 lb/sk Lost Circ 30% Excess Yield = 1.18 To Surface	Bow Spring on first 2 joints then every third joint to 100' form surface	Fill with <3% KCl water once casing is at setting depth, circulate a minimum of one hole volume prior to pumping cement.	Surface casing = 0.380" wall thickness Burst=2730 psi
		Surface Casing	**602**	**602**					
12 3/8	9-5/8" 36# J-55 LTC	Big Lime	2144	2215	Air or 8.0 SOBM	15.6ppg Class A +0.25% bwoc cellophane flakes 30% Excess Yield=1.18 To Surface	Bow spring centralizers every third joint to 100' feet from surface.	Once casing is at setting depth, circulate a minimum of one hole volume prior to pumping cement.	Intermediate casing = 0.352" wall thickness Burst=3520 psi
		Big Injun	2215	2269					
		Price Formation	2269						
		Weir	2422	2526					
		Int. Casing	**2469**	**2469**					
8.75" Vertical	5-1/2" 20# HCP-110 TXP BTC	Gordon	3039	3058	Air or 8.0 SOBM	14.6ppg 65/35 Class A/Poz +/-0.4% fluid Loss additive, +/-0.3% retarder, +/-0.6% dispersant, +/-0.2% antifoam, +/- 0.1% antisettling 10% Excess Yield=1.27 TOC >= 200' above 9.625" shoe	Rigid Bow Spring every third joint from KOP to TOC	Once at TD, circulate at max allowable pump rate for at least 6x bottoms up. Once on bottom with casing, circulate a minimum of one hole volume prior to pumping cement.	Production casing = 0.361" wall thickness Burst=12640 psi Note:Actual centralizer schedules may be changed due to hole conditions
		Warren Sand	3532	3578					
		Lower Huron	3930						
		Benson	5100	5144					
8.75" Curve		Alexander	5344	5402	12.0ppg-12.5ppg SOBM		Rigid Bow Spring every joint to KOP		
		Cashaqua	6343	6454					
		Middlesex	6454	6488					
		West River	6488	6556					
		Burkett	6556	6590					
		Tully Limestone	6590	6593					
		Hamilton	6593	6610					
8.75" - 8.5" Lateral		Marcellus	6610	6674	12.0ppg-12.5ppg SOBM				
		Target	6659	6669					
		Onondaga	6674	6681					

LP @ 6664' TVD / 7464' MD

8.75 / 8.5 Hole - Cemented Long String
5-1/2" 20# HCP-110 TXP BTC

+/-9811' ft Lateral

TD @ +/-6664' TVD
+/-17275' MD

X=centralizers

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MAR 13 2015

WW-9
(2/15)

API Number 47 - 095 -
Operator's Well No. SHR 08 L

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Noble Energy, Inc. OP Code 494501907

Watershed (HUC 10) huc-10 Middle Island Creek Quadrangle West Union

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

Will a pit be used? Yes ☐ No ☑

If so, please describe anticipated pit waste: _____

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

MDC 3/4/2015

Proposed Disposal Method For Treated Pit Wastes:

- ____ Land Application
- ■ Underground Injection (UIC Permit Number See attached sheet)
- ■ Reuse (at API Number at next anticipated well)
- ■ Off Site Disposal (Supply form WW-9 for disposal location)
- ____ Other (Explain _____

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

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. Air/water based mud through coal string then SOBM

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

Additives to be used in drilling medium? Calcium Chloride Powder, Carbo Tec, Carbo Gel2, Carbo Tec S, Ecco-Block, Lime, MIL-Carb TM, Mil-Clean, Mil-Seal, Next base eC, Next Drill, Next Hold, Next Mul, Omni Cote, Mil Bar, Next Mul HT, Soda Ash, Potassium Chloride

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

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

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

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

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

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

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Company Official Signature Dee Swiger

Company Official (Typed Name) Dee Swiger

Company Official Title Regulatory Analyst III

Subscribed and sworn before me this 9th day of March, 20 15

Regina Logue Notary Public

My commission expires 07/07/2018

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
Regina Logue, Notary Public
New Sewickley Twp., Beaver County
My Commission Expires July 7, 2018
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

Form WW-9

Operator's Well No. SHR 08 L

Noble Energy, Inc.

Proposed Revegetation Treatment: Acres Disturbed 27.77 Prevegetation pH 6.0

Lime 2-3 Tons/acre or to correct to pH _____

Fertilizer type 10-20-20 or equal

Fertilizer amount 500 lbs/acre

Mulch Hay or Straw at 2 Tons/acre

Seed Mixtures

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

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

Attach:
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 Hoff

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

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MAR 13 2015

Title: Oil and Gas Inspector Date: 3/4/2015

Field Reviewed? (✓) Yes ( ) No

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

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MAR 13 2015

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

Site Safety Plan

Noble Energy, Inc.

SHR 8 Well Pad L

February 2015: Version 1

For Submission to
West Virginia Department of Environmental Protection,
Office of Oil and Gas

Noble Energy, Inc.
Appalachia Offices
1000 Noble Energy Drive
Canonsburg, PA 15317-9504

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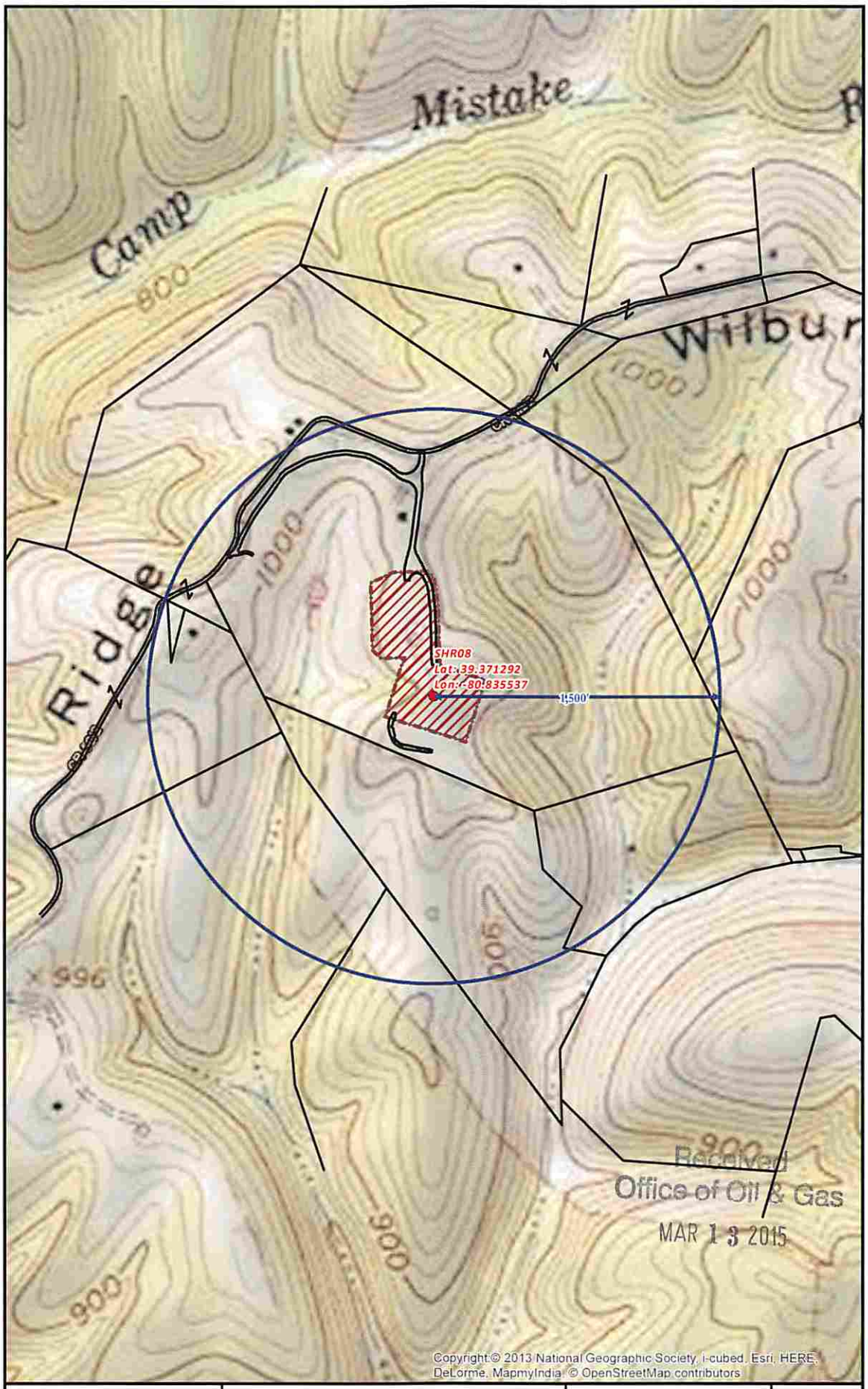
Office of Oil & Gas
MAR 13 2015

Michael Goff
3/4/2015



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SHR 08 SITE SAFETY PLAN

- WATER WELL PURVEYORS -

0 300 600 1,200 Feet

1 Inch = 600 Feet

Well Pad
Cistern
Water Well
Intersection
Access Road
Surveyed Property Lines
Well Pad Boundary
1500' Water Wells Buffer

Projection: NAD 1927 StatePlane West Virginia North FIPS 4701
Units: Foot US

Disclaimer: All data is licensed for use by Noble Energy Inc. use only.

noble energy

Date: 3/3/2015

Author: ChristopherGlover

6 / 6

Document Path: G:\Canonsburg\GIS\Projects\District_10\Appalachia\MXDs\EHSR\Permitting\Shirley\SHR08\SSP\D10_PA_WV_6_SHR08_Water_Wells.mxd

Well is located on topo map 1328 feet south of Latitude: 39° 22' 30"

Well is located on topo map 601 feet west of Longitude: 80° 50' 00"

SURFACE HOLE LOCATION (SHL)

UTM 17 – NAD83
N: 4358000.647
E: 514174.042
NAD27, WV NORTH
N: 320142.950
E: 1622422.200
LAT/LON DATUM–NAD83
LAT: 39.37135655
LON: –80.83544830

APPROX. LANDING POINT

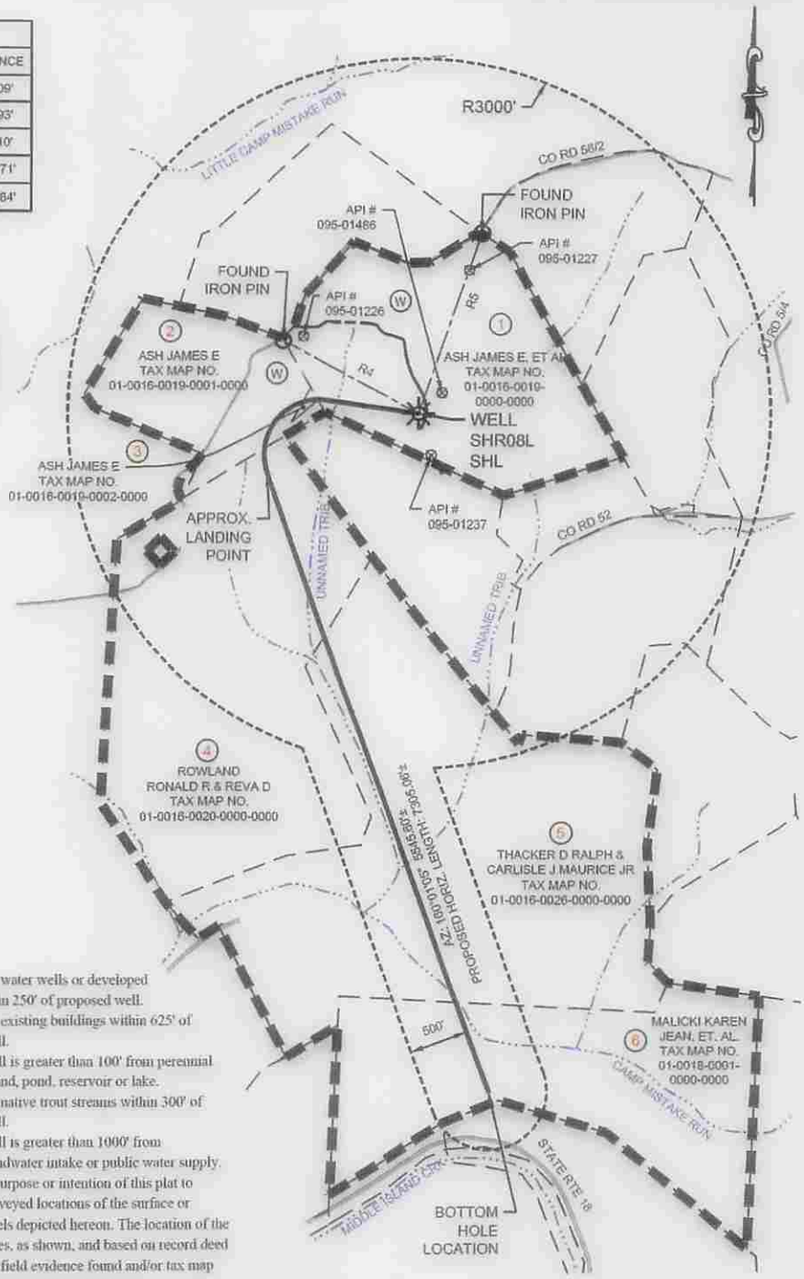
UTM 17 – NAD83
N: 4357836.439
E: 513783.418
NAD27, WV NORTH
N: 319625.525
E: 1621131.365
LAT/LON DATUM–NAD83
LAT: 39.36988324
LON: –80.83998656

BOTTOM HOLE LOCATION

UTM 17 – NAD83
N: 4356258.303
E: 514387.252
NAD27, WV NORTH
N: 314413.733
E: 1623026.445
LAT/LON DATUM–NAD83
LAT: 39.35565320
LON: –80.83301046

LINE TABLE		
LINE	BEARING	DISTANCE
R1	S17°07'23"E	347.09'
R2	S47°42'32"W	266.93'
R3	N03°18'36"W	192.10'
R4	S62°15'04"E	1311.71'
R5	S19°02'45"W	1623.64'

REFERENCE DETAIL



LEGEND

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

NOTES:

1. There are no water wells or developed springs within 250' of proposed well.
2. There are no existing buildings within 625' of proposed well.
3. Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake.
4. There are no native trout streams within 300' of proposed well.
5. Proposed well is greater than 1000' from surface/groundwater intake or public water supply.
6. It is not the purpose or intention of this plat to represent surveyed locations of the surface or mineral parcels depicted 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.

PVE Sheffler
Engineering • Surveying • Design
Waterfront Corporate Park III, Suite 101
2000 Georgetowne Drive
Sewickley, PA 15143-8992
Phone: 724-444-1100

FILE #: SHR08L

DRAWING #: SHR08L

SCALE: 1"=1500'

MINIMUM DEGREE OF ACCURACY: 1/2500

PROVEN SOURCE OF ELEVATION: USGS MONUMENT G 142: 736.51'

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:

R.P.E.: 18766 L.L.S.: P.S. NO.

JAMES MICHAEL JENTURE REGISTERED 18766 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

PLACE SEAL HERE

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

DATE: FEBRUARY 9, 2015, REV: FEBRUARY 11, 2015

OPERATOR'S WELL #: SHR08L

API WELL # 47 (STATE) 095 (COUNTY) 02245 (PERMIT)

Well Type: ☐ Oil ☐ Waste Disposal ☒ Production ☐ Deep

☒ Gas ☐ Liquid Injection ☐ Storage ☒ Shallow

WATERSHED: HEADWATERS MIDDLE ISLAND CREEK ELEVATION: 1018.72'

COUNTY/DISTRICT: TYLER / CENTERVILLE QUADRANGLE: WEST UNION, WV

SURFACE OWNER: JAMES E. ASH, ET AL ACREAGE: 90.41 AC.

OIL & GAS ROYALTY OWNER: RALPH E PHILLIPS, ET AL. ACREAGE: 90.41 AC.

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: 6,664 ± TMD: 17,275

WELL OPERATOR: NOBLE ENERGY, INC. DESIGNATED AGENT: STEVEN M. GREEN

Address: 1000 NOBLE ENERGY DRIVE Address: 500 VIRGINIA STREET EAST, UNITED CENTER SUITE 590

City CANONSBURG State PA Zip Code 15317 City CHARLESTON State WV Zip Code 25301

WW-6A1 Operator's Well No. SHR08-L

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 EXHIBIT "A"

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:

Received
Office of Oil & Gas
MAR 13 2015

- 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: NOBLE ENERGY, INC.
By: [signature]
Its: OPERATIONS LANDMAN

SHR08-L **WW-6A1 Exhibit "A"**

Plat #	Parcel #	Lessor/Grantor	Lessee/Grantee	Royalty	Book/Page
1	**p/o 1-16-19**				
	Lease	**Verna O. Ash, et al**	**Drilling Appalachian Corporation**	**Not less than 1/8th**	**DB 269-571**
	Lease	**Ralph E. Phillips, et ux**	**Drilling Appalachian Corporation**	**Not less than 1/8th**	**DB 271-103**
	Assignment	Drilling Appalachian Corporation	Reilly Industries, Inc. et al		DB 324-439
	Assignment	Reilly Industries, Inc. et al	Dominion Appalachian Development, Inc.		DB 324-338
	Clarification of Assignment	Drilling Appalachian Corporation	Dominion Exploration & Production, Inc.		DB 372-413
	Assignment	CNX Gas Company LLC	Drilling Appalachian Corporation		DB 401-343
	Assignment	Drilling Appalachian Corporation	Dominion Appalachian Development Properties, LLC		DB 322-190
	Assignment	Dominion Transmissions, Inc.	CONSOL Energy Holdings LLC XVI		DB 374-187
	Affidavit	CNX Gas Company LLC	Affidavit of Name Changes and Mergers		DB 384-191
	Assignment	CNX Gas Company LLC	Noble Energy, Inc.		DB 388-286
	Assignment	Drilling Appalachian Corporation	Noble Energy, Inc.		TO BE RECORDED
2, 3	**1-16-19.1, 1-16-19.2**				
	Lease	**Gale V. Davisson, et al**	**Drilling Appalachian Corporation**	**Not less than 1/8th**	**DB 271-726**
	Lease	**Eleanor L. Roth, POA for the J. D. and Ruth Foley Heirs**	**Drilling Appalachian Corporation**	**Not less than 1/8th**	**DB 271-728**
	Lease	**Rosemary Eagle**	**Drilling Appalachian Corporation**	**Not less than 1/8th**	**DB 272-297**
	Assignment	Drilling Appalachian Corporation	Reilly Industries, Inc. et al		DB 324-439
	Assignment	Reilly Industries, Inc. et al	Dominion Appalachian Development, Inc.		DB 324-338
	Assignment	Drilling Appalachian Corporation	Dominion Appalachian Development Properties, LLC		DB 322-190
	Assignment	Drilling Appalachian Corporation	Dominion Exploration & Production, Inc.		DB 372-413

Received
Office of Oil & Gas
MAR 13 2015

	Affidavit	CNX Gas Company LLC	Affidavit of Name Changes and Mergers		DB 384-191
	Assignment	CNX Gas Company LLC	Noble Energy, Inc.		DB 388-286
	Lease	**Richard A. Glover, et ux**	**Noble Energy, Inc.**	**Not less than 1/8th**	**TO BE RECORDED**
4	**1-16-20**				
	Lease	**Jacob L. Dillon, et ux**	**Royal Resources Corporation**	**Not less than 1/8th**	**DB 196-302**
	Assignment	Royal Resources Corporation	Columbia Gas Transmission Corporation		DB196-166
	Farmout Agreement	Columbia Gas Transmission Corporation	L&M Exploration, Inc.		(Unrecorded)
	Consolidation Agreement	L&M Associates, Inc.			DB 230-323
	Assignment	L&M Associates, Inc.	Anvil Oil Co., Inc.		DB 258-90
	Assignment	Anvil Oil Co., Inc	Excel Energy, Inc.		DB 263-635
	Assignment	Excel Energy, Inc.	Anvil Oil Co., Inc		DB 269-143
	Assignment and Sublease	Columbia Gas Transmission Corporation	Anvil Oil Company, Inc.		DB 265-107
	Assignment	Justin L. Henderson, individually and d/b/a Anvil Oil and Gas Company, et al	Dominion Appalachian Development, Inc.		DB 323-383
	Affidavit	CNX Gas Company LLC	Affidavit of Name Changes and Mergers		DB 384-191
	Assignment	CNX Gas Company LLC	Noble Energy, Inc.		DB 388-286
5	**1-16-26**				
	Lease	**Betty L. Conklin**	**J&J Enterprises, Inc.**	**Not less than 1/8th**	**DB 259-582**
	Lease	**George B. Conklin, et ux**	**J&J Enterprises, Inc.**	**Not less than 1/8th**	**DB259-584**
	Lease	**John A. Conklin, et ux**	**J&J Enterprises, Inc.**	**Not less than 1/8th**	**DB 259-586**
	Lease	**Charles W. Henderson, et ux and as POA for A.I. Doak Heirs**	**J&J Enterprises, Inc.**	**Not less than 1/8th**	**DB259-588**
	Assignment	J&J Enterprises, Inc.	Eastern American Energy Corporation		DB 282-296
	Lease	**William Lartz, et ux**	**Eastern American Energy Corporation**	**Not less than 1/8th**	**DB 282-83**

Received
Office of Oil & Gas
MAR 13 2015

	Lease	**Robert Lee Reed**	**Eastern American Energy Corporation**	**Not less than 1/8th**	**DB 282-87**
	Lease	**William Crabill, et ux**	**Eastern American Energy Corporation**	**Not less than 1/8th**	**DB 282-95**
	Lease	**Robert Bartholomew, et ux**	**Eastern American Energy Corporation**	**Not less than 1/8th**	**DB 282-71 and DB 396-502**
	Lease	**Melissa Coll**	**Eastern American Energy Corporation**	**Not less than 1/8th**	**DB 282-75**
	Lease	**Betty L. Melivin**	**Eastern American Energy Corporation**	**Not less than 1/8th**	**DB 282-79**
	Lease	**Phillip Melvin**	**Eastern American Energy Corporation**	**Not less than 1/8th**	**DB 396-498**
	Lease	**Ralph O'Rear, et ux**	**Eastern American Energy Corporation**	**Not less than 1/8th**	**DB 282-67**
	Lease	**Gerald Greenman and Joanne Greenman**	**Eastern American Energy Corporation**	**Not less than 1/8th**	**DB 282-99**
	Lease	**Lewis H. Reed and Carol J. Reed**	**Eastern American Energy Corporation**	**Not less than 1/8th**	**DB 282-103**
	Lease	**Kathy Pranger**	**Eastern American Energy Corporation**	**Not less than 1/8th**	**DB 282-91**
	Lease	**Robert H. Melivin**	**Eastern American Energy Corporation**	**Not less than 1/8th**	**DB 282-399**
	Assignment	Eastern American Energy Corporation	Energy Corporation of America		DB 371-528
	Assignments	Energy Corporation of America	Antero Resources Appalachian Corporation		DB 398-416, DB 398-433, DB 398-440, DB 420-301, DB 420-316
	Assignment	Antero Resources Corporation	Noble Energy, Inc.		DB 427-564
6	**1-18-1, 1-18-1.1**				
	Lease	**Paul W. Hylbert, et ux**	**Kepco, Inc.**	**Not less than 1/8th**	**DB 242-513**
	Merger and Stipulation of Interest	Kepco, Inc.	Equitable Resources Energy Company		DB308-119
	Assignment	Equitable Resources Energy Company	Ener Vest East Limited Partnership		DB 313-145
	Assignment	Ener Vest East Limited Partnership	The Houston Exploration Company		DB 342-160
	Assignment	The Houston Exploration Company	Seneca-Upshur Petroleum, Inc.		DB 344-158
	Assignment	Seneca-Upshur Petroleum, Inc.	Seneca-Upshur Petroleum, LLC		DB 381-540

Received
Office of Oil & Gas
MAR 13 2015

Assignment	Seneca-Upshur Petroleum, LLC	Antero Resources Appalachian Corporation	DB 402-132
Assignment	Antero Resources Corporation	Noble Energy, Inc. and CNX Gas Company, LLC	DB 427-564

Received
Office of Oil & Gas
MAR 13 2015

MEMORANDUM OF
PARTIAL ASSIGNMENT OF OIL AND GAS LEASES

STATE OF WEST VIRGINIA	§	
	§	KNOW ALL MEN BY THESE PRESENTS:
COUNTY OF TYLER	§	

A **PARTIAL ASSIGNMENT OF OIL AND GAS LEASES** (hereinafter, "**Assignment**") has been executed by and **DRILLING APPALACHIAN CORPORATION**, a West Virginia Corporation, having a mailing address of P.O. Box 99, Alma, West Virginia 26320-0099, (whether one or more, "**Assignor**"), and **NOBLE ENERGY, INC.**, a Delaware corporation having a mailing address of 1000 Noble Energy Drive, Canonsburg, PA 15317 (hereinafter, together with its employees, affiliates, partners, joint venture partners, successors, assigns, contractors and representatives, "**Assignee**"). This Memorandum of Partial Assignment of Oil and Gas Leases is executed for the purpose of providing notice to third parties of the execution of said Assignment.

In the Assignment, dated effective as of the 24th day of February, 2015 (hereinafter, the "**Effective Date**"), in consideration of the sum of Ten Dollars ($10.00) and the mutual covenants and agreements set forth therein, and other good and valuable consideration, the receipt and sufficiency of which having been acknowledged by Assignor and Assignee, Assignor **GRANTS, BARGAINS, SELLS, TRANSFERS, CONVEYS AND DELIVERS** unto Assignee all of Assignor's right, title and interest in, to and under the oil and gas leases set forth on **Exhibit "A"** attached hereto and made a part hereof (collectively, as any one or more of the same may have been modified or amended of record, the "**Leases**"), being an undivided one hundred percent (100%) of 8/8ths working interest, **INSOFAR AND ONLY INSOFAR** as said Leases cover those certain subsurface strata described as all of the following subsurface depths:

> From the stratigraphic equivalent of the top of the Burkett formation in the DEPI #14815 (API 47 47-001-02850) at 7350' MD through to the stratigraphic equivalent of the top of the Onondaga formation at 7710' MD, as said depths and formations may be adjusted to conform to the depths and formations at the geographic location(s) of the Leases subject to this Assignment.

(the "**Assigned Depths**"), which includes, without limitation, all oil, gas, casinghead gas, condensate, distillate, liquid hydrocarbons, gaseous hydrocarbons, and all other products refined or extracted therefrom, and all minerals produced in association therewith in and thereunder, together with all right, title, and interest of Assignor appurtenant thereunto as expressly set forth in and/or implied by said Leases, including, but not limited to, such surface rights, easements, and any and all other rights and privileges set forth in or associated with the Leases that are necessary or convenient for access to the lands covered thereby or otherwise for the ownership, development, operation, and/or maintenance of the Assigned Depths, **EXCEPTING AND RESERVING** unto Assignor:

(a) any and all existing oil and/or gas wells currently upon the lands covered by the Leases, together with any future well(s) drilled thereupon to produce the Retained Formations (as that term is defined below);

(b) all rights under the Leases insofar and only insofar as such rights cover depths and formations other than the Assigned Depths (the "**Retained Formations**");

(c) all rights granted under the Leases to the extent relating to, or necessary in connection with, the ownership and operation of the Retained Formations;

(d) the concurrent right to use the surface of the lands under any Lease for the operation and enjoyment of any other Retained Right, provided that such concurrent right does not interfere with the rights granted to Assignee hereunder;

(e) any other rights, properties, or interests relating to, or necessary in connection with, the ownership of the Retained Formations;

Received
Office of Oil & Gas
MAR 13 2015

(f) the express right to drill through and penetrate the Assigned Depths in order to develop and produce Hydrocarbons, all minerals and any other substances from the Retained Formations, provided that Assignor shall not produce any Hydrocarbons or other substances from the Assigned Depths; and

(g) an overriding royalty interest equal to the difference between the existing Lease burdens (on an individual Lease basis) and Eighteen percent (18%), delivering a net revenue interest of Eighty-Two percent (82%) (of 8/8ths) to Assignee in and to the Assigned Depths, and any extension, renewal or new lease of the Leases prior to or within one (1) year after the expiration date of such Leases.

The Assignment is effective as of the Effective Date.

The Assignment contains various other terms, provisions and conditions, all of which are incorporated herein by reference, and made a part hereof in all respects as though the same were fully set forth herein.

IN WITNESS WHEREOF, Assignor and Assignee have caused their names to be hereunto placed and witness the following signature(s), effective as of the date first herein appearing above.

ASSIGNOR:

WITNESS:

DRILLING APPALACHIAN CORPORATION

By: Janet Kimball
Printed Name: Janet Kimball

By: Kenneth R Mason
Printed Name: Kenneth R. Mason
Title: President

ASSIGNEE:

WITNESS:

NOBLE ENERGY, INC.

By: _____
Printed Name:

By: _____
Printed Name: Mark A. Acree
Title: Attorney-in-Fact

Received
Office of Oil & Gas
MAR 13 2015

ASSIGNOR ACKNOWLEDGMENT

STATE OF WEST VIRGINIA §
§
COUNTY OF ~~WASHINGTON~~ Tyler §

On this the 26th day of February, 2015, before me, the undersigned authority, personally appeared **Kenneth R. Mason**, who acknowledged himself to be the President of **DRILLING APPALACHIAN CORPORATION**, a West Virginia Corporation, and that he as such President, being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by himself as President.

IN WITNESS WHEREOF, I hereto set my hand and official seal.

MY COMMISSION EXPIRES: 2-16-2016

Janet Kimbaer
Notary Public

Received
Office of Oil & Gas
MAR 13 2015

ASSIGNEE ACKNOWLEDGMENT

COMMONWEALTH OF PENNSYLVANIA §
§
COUNTY OF WASHINGTON §

On this the _____ day of _____, 2015, before me, _____the undersigned authority, personally appeared **Mark A. Acree**, who acknowledged himself to be the Attorney-in-Fact of **NOBLE ENERGY, INC.**, a Delaware corporation, and that he as such Attorney-in-Fact, being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by himself as Attorney-in-Fact.

IN WITNESS WHEREOF, I hereto set my hand and official seal.

MY COMMISSION EXPIRES:

_____
Notary Public

Received
Office of Oil & Gas
MAR 13 2015

EXHIBIT "A"

to

Memorandum of Partial Assignment of Oil and Gas Leases dated February 24th, 2015

Leases

Original Lessor	Original Lessee	Instrument Date	County	District	Map/Parcel	Gross Acreage	Book/Page
Verna O. Ash, *et al*	Drilling Appaladuan Corporation	8/13/1987	Tyler	Centerville	16-19	111	269/571
Ralph E. Phillips, *et ux*	Drilling Appaladuan Corporation	1/21/1988	Tyler	Centerville	16-19	111	271/103

PREPARED BY/RETURN TO:
NOBLE ENERGY, INC.
ATTENTION: LAND DEPARTMENT
1000 Noble Energy Drive
Canonsburg, PA 15317

Received
Office of Oil & Gas
MAR 13 2015

PARTIAL ASSIGNMENT OF OIL AND GAS LEASES

THIS PARTIAL ASSIGNMENT OF OIL AND GAS LEASES (this "**Assignment**") is entered into this 26th day of February, 2015 (the "**Effective Date**"), by and between **DRILLING APPALACHIAN CORPORATION**, a West Virginia Corporation, having an address of P.O. Box 99, Alma, West Virginia 26320-0099 ("**Assignor**"), and **NOBLE ENERGY, INC.**, a Delaware corporation, having an address of 333 Technology Drive, Suite 116, Canonsburg, PA 15317 ("**Assignee**"). Assignor and Assignee are sometimes hereinafter individually referred to as a "**Party**," and collectively as the "**Parties**."

WITNESSETH:

WHEREAS, Assignor, directly or through one or more assignments, is the lessee of record under those certain oil and gas leases set forth on **Exhibit "A"** attached hereto and made a part hereof (collectively, as any one or more of the same may have been modified or amended of record, the "**Leases**"); and

WHEREAS, Assignor desires to assign certain of Assignor's rights and obligations under the Leases to Assignee, and Assignee desires to assume such rights and obligations, all upon the terms, and subject to the conditions, set forth in this Assignment.

NOW, THEREFORE, in consideration of the sum of **TEN DOLLARS ($10.00)** and the mutual covenants and agreements herein set forth, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereto, intending to be legally bound hereby, agree as follows:

Section 1. **Assignment.** Assignor does hereby **GRANT, BARGAIN, SELL, TRANSFER, ASSIGN, CONVEY AND DELIVER** unto Assignee, all of Assignor's right, title and interest in, to and under the Leases, being an undivided one hundred percent (100%) of 8/8ths working interest, **INSOFAR AND ONLY INSOFAR** as said Leases cover the Assigned Depths (as that term is defined in **Section 2** of this Assignment), which includes, without limitation, all oil, gas, casinghead gas, condensate, distillate, liquid hydrocarbons, gaseous hydrocarbons, and all other products refined or extracted therefrom, and all minerals produced in association therewith (collectively, "**Hydrocarbons**") in and under the Assigned Depths, together with all right, title, and interest of Assignor appurtenant thereunto as expressly set forth in and/or implied by said Leases, including, but not limited to, such surface rights, easements, and any and all other rights and privileges set forth in or associated with the Leases that are necessary or convenient for access to the lands covered thereby or otherwise for the ownership, development, operation, and/or maintenance of the Assigned Depths, **EXCEPTING AND RESERVING** unto Assignor only the Retained Rights (as that term is defined in **Section 3** of this Assignment) and the Overriding Royalty Interest set forth in **Section 10** of this Assignment.

It is the express intent of the Parties that all of Assignor's right, title, and interest in and to the Assigned Depths be assigned to Assignee regardless of whether such right, title, and interest are properly described unless the same are Retained Rights, and regardless of whether the lands covered thereby or the recording references are accurately recited herein.

Notwithstanding the foregoing paragraph to the contrary, Assignor hereby grants to Assignee the perpetual right and easement through and to penetrate, but not perforate or stimulate, formations from the surface of the earth to the top of the Assigned Depths.

TO HAVE AND TO HOLD the same unto Assignee, its successors and assigns, forever, subject only to the matters set forth herein. **Section 2.** **Assigned Depths.** For purposes of this Assignment, the term "**Assigned Depths**" shall mean the oil and gas interests under the Leases in those certain subsurface strata described as all of the following subsurface depths:

> From the stratigraphic equivalent of the top of the Burkett formation in the DEPI #14815 (API 47-001-02850) at 7350' MD through to the stratigraphic equivalent of the top of the Onondaga formation at 7710' MD.

Section 3. **Retained Rights.** The following rights are hereby expressly retained by Assignor (collectively, the "**Retained Rights**"):

(a) any and all existing oil and/or gas wells currently upon the lands covered by the Leases, together with any future well(s) drilled thereupon to produce the Retained Formations (as that term is defined below);

Received
Office of Oil & Gas
MAR 13 2015

(b) all rights under the Leases insofar and only insofar as such rights cover depths and formations other than the Assigned Depths (the "**Retained Formations**");

(c) all rights granted under the Leases to the extent relating to, or necessary in connection with, the ownership and operation of the Retained Formations;

(d) the concurrent right to use the surface of the lands under any Lease for the operation and enjoyment of any other Retained Right, provided that such concurrent right does not interfere with the rights granted to Assignee hereunder; and

(e) any other rights, properties, or interests relating to, or necessary in connection with, the ownership of the Retained Formations; and

(f) the express right to drill through and penetrate the Assigned Depths in order to develop and produce Hydrocarbons, all minerals and any other substances from the Retained Formations, provided that Assignor shall not produce any Hydrocarbons or other substances from the Assigned Depths.

Notwithstanding any language in this Assignment to the contrary, Assignor shall not penetrate the Assigned Depths for any purpose without first providing Assignee with proposed drilling locations and obtaining Assignee's written approval prior to actual drilling, which consent shall not be unreasonably withheld. Assignee may withhold consent to Assignor's proposed drilling locations only if Assignee, reasonably determines that such proposed drilling locations could penetrate, encroach upon, or otherwise interfere with, any existing or proposed wells of Assignee lying, or proposed to lie, within the Assigned Depths.

Section 4. Indemnification.

(a) Neither Party shall have any control over the drilling, testing, completing, or other operations of the other Party upon the Leases and each Party shall be responsible for all costs and expenses incurred by such Party in connection with such Party's operations including, without limitation, the proper payment of royalties. Each Party (an "**Indemnifying Party**") shall defend, indemnify and hold the other Party (and each of it the other Party's equity holders, officers, directors, managers, employees, agents, contractors, subcontractors, affiliates, and joint venture partners) (collectively, the "**Indemnified Parties**"), harmless against and from any and all claims, losses, damages, expenses, causes of action, or lawsuits of every kind and nature, arising out of or caused by such Indemnifying Party's, and/or those of its agents, contractors, and/or subcontractors, operations related in any way to the Leases.

(b) Each Indemnifying Party shall additionally assume all liability for and defend, indemnify, and hold each Indemnified Party harmless against and from any penalty, loss, injury, or damage caused from pollution, contamination, or environmental damage of any kind, or as a result of any other statutory or regulatory obligation relating to the production of Hydrocarbons under any Lease, including, but not limited to, abandoned well plugging liability, which arises out of or results from such Indemnifying Party's and/or its contractors' or subcontractors' operations, and such Indemnifying Party shall control and remove such pollution or contamination and/or plug any abandoned wells, and, as necessary, remediate the lands affected thereby, in any such event in accordance with all applicable laws, rules and regulations.

(c) The indemnification rights and obligations set forth in this **Section 4** shall survive indefinitely the termination of this Assignment.

Section 5. Representations, Warranties and Covenants of Assignor.

(a) In addition to any other representations and/or warranties set forth in this Assignment, Assignor hereby represents and warrants to Assignee that: (i) each of the Leases is in full force and effect and Assignor has received no notice alleging any default under any of the terms of any of the Leases; (ii) Assignor is not aware of any breach of or default under the Leases; (iii) no third party right of first refusal or consent obligations burden any Lease; (iv) Assignor has the valid right and authority to sell and assign the interests and rights assigned to Assignee hereunder, and that the same are free and clear of all liens, claims, clouds and encumbrances created by, through and under Assignor; and (v) Assignor has not entered into any other agreement to sell, assign, transfer or convey the Assigned Depths to any third party.

(b) Assignor covenants and agrees to maintain each Lease in its secondary term by performance of one (1) or more of the following actions, in each event in the manner as expressly required and/or permitted by each individual Lease: (i) maintenance of production to the extent that production actively exists in paying quantities at the time of this Assignment; (ii) payment of rents, royalties, and/or shut-in payments; and/or (iii) compliance with any other action which would reasonably maintain the secondary term of any such Lease in full force and effect without any further development or drilling operations.

Received
Office of Oil & Gas
MAR 13 2015

Section 6. **Obligations of Assignor Under the Leases.** Assignor covenants and agrees to discharge all obligations of the lessee under any Lease, regardless of whether such obligations relate to Retained Rights or otherwise, unless and until Assignee commences operations on such Lease, or any lease(s) (which may include one or more Leases) pooled or unitized therewith, whereupon the obligations and/or burdens of the lessee under each said Lease shall apply to Assignee with respect to, and only with respect to, Assignee's operations on any said Lease, or any lease(s) (which may include one or more Leases) pooled or unitized therewith.

Section 7. **Notices.** All notices and communications required or permitted to be given hereunder shall be sufficient in all respects if given in writing and delivered personally, or sent by a national overnight courier, or mailed by U.S. Express Mail or by Certified or Registered U.S. Mail, in each such instances with all postage and shipping charges fully prepaid, or sent by facsimile or email transmission (provided any such transmission is confirmed either orally or by written confirmation), as follows:

If to Assignee:

NOBLE ENERGY, INC.

NOBLE ENERGY, INC.
333 Technology Drive, Suite 116
Canonsburg, Pennsylvania 15317
Attention: Senior Land Manager
Telephone: 724.820.3000
Facsimile: 724.820.3098
Email: macree@nobleenergyinc.com

With a copy to:

NOBLE ENERGY, INC.
333 Technology Drive
Canonsburg, Pennsylvania 15317
Attention: Legal Department
Telephone: 724.820.3000
Facsimile: 724.820.3098
Email: jalsop@nobleenergy.com

If to Assignor:

DRILLING APPALACHIAN CORPORATION
P.O. Box 99
Alma, West Virginia 26320-0099
Attention: Kenneth R. Mason
Telephone: 304.758.4638
Facsimile: 304.758.2433
Email: kenneth.mason@dacenergy.com

Section 8. **Miscellaneous.**

(a) Recording. Assignor and Assignee acknowledge and agree that this Assignment, or a memorandum hereof, may be filed in the recorder's office of the county(ies) in which the lands under the Leases are located in order to establish of record the respective rights and obligations thereof. If a memorandum hereof is requested by Assignee to be filed in lieu of this Assignment, Assignor agrees to execute such memorandum contemporaneously upon its execution of this Assignment. The cost and expense of recording this Assignment or memorandum hereof, and the obligation to present said Assignment or memorandum hereof to the applicable recording office located in the county(ies) in which the lands are located, shall be the sole responsibility of Assignee.

(b) Additional Assurances. Assignor and Assignee will execute and deliver all such other additional instruments, notices, releases, and/or other documents, and will do such other acts and things as may be necessary to assign to Assignee or its successors or assigns all of the respective rights, titles, and interests herein and hereby granted or intended to be granted and to comply with any of the provisions hereof.

(c) Entire Agreement. This Assignment constitutes the entire agreement between the parties hereto regarding the subject matter hereof, and supersedes all prior verbal and/or written agreements, understandings, negotiations and discussions between the parties hereto regarding the subject matter hereof.

(d) Severability. If any term or provision of this Assignment is declared invalid, void or unenforceable by any rule of applicable law or public policy, all other terms and provisions of this Assignment shall nevertheless remain valid, binding and enforceable.

(e) Governing Law. This Assignment shall be governed, construed and enforced in accordance with the laws of the State of West Virginia without regard to the conflicts of law provisions thereof.

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(f) Binding Agreement. This Assignment shall be binding upon, and shall inure to the benefit of, each of the parties hereto and each of their respective affiliates, heirs, devisees, executors, administrators, representatives, successors, and/or assigns.

(g) Amendment. This Assignment may only be amended or modified by an instrument in writing executed by all of the parties hereto and expressly identified as an amendment or modification hereof.

(h) Counterpart Execution. This Assignment may be executed in multiple counterparts, each of which shall be deemed to be an original and all of which, when taken together, shall constitute one and the same instrument.

(i) Captions. Captions, titles and headings appearing at the beginning of any sections, subsections, paragraphs or other subdivisions of this Assignment are inserted for convenience of reference only, do not constitute any part of this Assignment, and shall be disregarded in construing the language hereof.

(j) Assignment. Assignor shall not assign this Assignment without the express written consent of Assignee, which consent may be granted or denied in the sole discretion of Assignee.

Section 9. **Bonus.** In exchange for Assignor delivering to Assignee no less than an Eighty-Two percent (82%) net revenue interest (of 8/8ths) in the Assigned Depths and other appurtenances thereto as expressly provided for herein, Assignee shall pay to Assignor upon Assignor's execution and delivery of this Assignment to Assignee, the sum of Three Thousand Five Hundred Dollars ($3,500) per net mineral acre of Assigned Depths assigned.

Section 10. **Overriding Royalty Interest.** Assignor excepts and reserves unto Assignor an overriding royalty interest equal to the difference between the existing Lease burdens (on an individual Lease basis) and Eighteen percent (18%), delivering a net revenue interest of Eighty-Two percent (82%) (of 8/8ths) to Assignee in and to the Assigned Depths, and any extension, renewal or new lease of the Leases prior to or within one (1) year after the expiration date of such Leases.

IN WITNESS WHEREOF, and intending to be legally bound hereby, Assignors and Assignee have caused this Assignment to be duly executed on the dates specified in the acknowledgement forms below, but effective for all purposes as of the Effective Date first above written.

ASSIGNOR:

DRILLING APPALACHIAN CORPORATION

By: _____
Name: Kenneth R. Mason
Title: President

ASSIGNEE:

NOBLE ENERGY, INC.

By: _____
Name: Mark A. Acree
Title: Attorney-in-Fact

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CORPORATE ACKNOWLEDGEMENT

STATE/~~COMMONWEALTH~~ OF WEST VIRGINIA)
COUNTY OF Tyler)

On this the 26th day of February, 2015, before me, the undersigned authority, personally appeared **Kenneth R. Mason**, who acknowledged himself to be the President of **DRILLING APPALACHIAN CORPORATION**, a West Virginia Corporation, and that he as such President, being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by himself as President.

IN WITNESS WHEREOF, I hereto set my hand and official seal.

MY COMMISSION EXPIRES: 2 16 2016

Janet Kimbal
Notary Public

CORPORATE ACKNOWLEDGEMENT

STATE/COMMONWEALTH OF PENNSYLVANIA)
COUNTY OF WASHINGTON)

On this the _____ day of _____, 2015, before me, _____ the undersigned authority, personally appeared **Mark A. Acree**, who acknowledged himself to be the Attorney-in-Fact of **NOBLE ENERGY, INC.**, a Delaware corporation, and that he as such Attorney-in-Fact, being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by himself as Attorney-in-Fact.

IN WITNESS WHEREOF, I hereto set my hand and official seal.

MY COMMISSION EXPIRES:

_____
Notary Public

PREPARED BY AND RETURN TO AFTER RECORDATION:
NOBLE ENERGY, INC
333 Technology Drive, Suite 116
Canonsburg, PA 15317

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EXHIBIT "A"
to
Partial Assignment of Oil and Gas Leases

Leases

Original Lessor	Original Lessee	Instrument Date	County	District	Map/Parcel	Gross Acreage	Book/Page
Verna O. Ash, *et al.*	Drilling Appalachian Corporation	8/13/1987	Tyler	Centerville	16-19	111	269/571
Ralph E. Phillips, *et ux.*	Drilling Appalachian Corporation	1/21/1988	Tyler	Centerville	16-19	111	271/103

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MEMORANDUM OF LEASE

This **MEMORANDUM OF LEASE**, dated this 6TH day of November, 2014, is utilized to indicate the existence of a PAID-UP OIL AND GAS LEASE (hereinafter, "Lease") of even date herewith, by and between **Richard A. Glover, a/k/a Richard Alan Glover, a married man dealing in his sole and separate property**, whose mailing address is: **844 Valley View Drive, Brookfield, OH 44403** (hereinafter, "Lessor" whether one or more), and **NOBLE ENERGY, INC.**, a Delaware corporation, whose address is at 333 Technology Drive, Suite 116, Canonsburg, Pennsylvania 15317, (hereinafter, "Lessee").

Lessor did **LEASE, LET, GRANT, and DEMISE** exclusively unto Lessee, its successors and/or assigns, the rights to explore, develop, produce, and market oil and/or gas and all constituent products, including methane gas present in or associated with any coal seam, from the premises described below, subject to the provisions contained in the Lease including, but not limited to the following:

1. PRIMARY TERM: The primary term of the Lease is for a period of five (5) years commencing on the date immediately set forth above, and for so long thereafter as oil, gas, or other substances covered by the Lease are capable of being produced in paying quantities from the Leased Premises or from lands pooled therewith, or the Lease is otherwise maintained or prolonged pursuant to the provisions contained in the Lease, including an extension of term contained therein. Lessee may extend the primary term of the Lease for an additional five (5) years after the end of the primary term, thereby continuing the term of the Lease to the end of the "extended" primary term.

2. DESCRIPTION / LEASED PREMISES: All those certain tracts of land situate in the District of **Centerville**, County of **Tyler**, State of West Virginia, generally bounded now or formerly as follows:

On the North by: Diana Boger
On the East by: Verna O. Ash; John R. Anders, II
On the South by: Ronald R. and Reva D. Rowland
On the West by: Mary J. Kahler

and being the same land acquired by Lessor by virtue of instrument recorded in the Office of Clerk of the County Commission in **Deed** Book **42**, Page **110**, said land being identified for tax purposes as **p/o 01-16-19.1; 01-16-19.2** on this date, and stipulated to contain, for the purpose of calculating payments, **13.00** (**thirteen**) acres, more or less ("Leased Premises").

This Memorandum of Lease has been executed for the purpose of providing notice of the existence of the Lease and shall not be considered in any way a modification or alteration of the Lease.

WITNESS:

Signature

LAUREME S. SAINILA
Printed Name

LESSOR:

Signature
Printed Name: **Richard A. Glover, a/k/a Richard Alan Glover**
Address: 844 VALLEY VIEW DRIVE
BROOKFIELD, OH 44403

WITNESS:

Signature

Printed Name

LESSEE:

NOBLE ENERGY, INC.

Signature
By: MARK A. ACREE
Its: Attorney-In-Fact

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MAR 13 2015

INDIVIDUAL ACKNOWLEDGMENT

STATE / COMMONWEALTH OF PA §

COUNTY OF Mercer §

The foregoing instrument was acknowledged before me, this 6 day of November, 2014, by **Richard A. Glover, a/k/a Richard Alan Glover, a married man dealing in his sole and separate property.**

MY COMMISSION EXPIRES:

Signature Pamela J. O'Neill

PAMELA J. O'NEILL

Printed Name
Notary Public

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Pamela J. O'Neill, Notary Public
City of Sharon, Mercer County
My Commission Expires Sept. 27, 2017
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

CORPORATE ACKNOWLEDGMENT

COMMONWEALTH OF PENNSYLVANIA §
COUNTY OF WASHINGTON §

On this _____ day of _____, 20____, before me, the undersigned officer, personally appeared MARK A. ACREE, as Attorney-in-Fact for **NOBLE ENERGY, INC.**, a Delaware corporation, personally known to me to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same for the purposes therein contained and on behalf of said corporation.

In witness thereof, I hereunto set my hand and affixed my seal.

MY COMMISSION EXPIRES:

Signature

Printed Name
Notary Public

PREPARED BY / UPON RECORDATION, RETURN TO:
Land Department
NOBLE ENERGY, INC.
333 Technology Drive, Suite 116
Canonsburg, PA 15317

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Office of Oil & Gas
MAR 13 2015

PAID-UP OIL AND GAS LEASE

This PAID-UP OIL AND GAS LEASE (hereinafter, "Lease") is made and entered into this 6th day of November, 2014, (hereinafter, "Effective Date") between Richard A. Glover, a/k/a Richard Alan Glover, a married man dealing in his sole and separate property, whose mailing address is: 844 Valley View Drive, Brookfield, OH 44403 (hereinafter, "Lessor," whether one or more), and NOBLE ENERGY, INC., a Delaware corporation, whose address is 333 Technology Drive, Suite 116, Canonsburg, Pennsylvania 15317, (hereinafter, "Lessee"), with Lessor and Lessee being sometimes hereinafter referred to as "Parties".

1. **LEASE:** In consideration of ONE DOLLAR ($1.00) and other good and valuable consideration, including the bonus consideration paid, the receipt and sufficiency of which are hereby acknowledged, and in further consideration of the covenants and agreements herein contained, Lessor does hereby **LEASE, LET, GRANT and DEMISE** exclusively unto Lessee, its successors and/or assigns, the lands and interests hereafter described for the purpose of exploring for, developing, producing and marketing oil, gas and/or other related substances produced in association therewith, including methane gas present in or associated with any coal seam, by any methods now or hereafter known or discovered, in and under the Leased Premises (defined below).

2. **DESCRIPTION / LEASED PREMISES:** All those certain tracts of land situate in the District of Centerville, County of Tyler, State of West Virginia, generally bounded now or formerly:

On the North by: Diana Boger

On the East by: Verna O. Ash; John R. Anders, II

On the South by: Ronald R. and Reva D. Rowland

On the West by: Mary J. Kahler

being the same land acquired by Lessor by virtue of instrument recorded in the Office of Clerk of the County Commission in Deed Book 42, Page 110 said land being identified for tax purposes as p/o 01-16-19.1; 01-16-19.2 on this date and stipulated to contain for the purpose of calculating all payments required hereunder 13.00 (thirteen) acres, more or less, hereinafter, "Leased Premises." The Leased Premises shall be deemed to include all accreted or submerged lands contiguous to the Leased Premises claimed or owned by Lessor as well as all strips or parcels of land or interests therein now owned or hereafter acquired by Lessor which adjoin the lands described above.

3. **TERM:** Subject to the other provisions contained herein, this Lease shall be in force for a primary term of five (5) years (hereinafter, "Primary Term") and for so long thereafter as oil, gas or other substances covered hereby are capable of being produced in paying quantities from the Leased Premises, or from lands pooled or unitized therewith, or this Lease is otherwise maintained pursuant to the provisions hereof. It is understood that so long as this Lease is extended beyond the Primary Term by any provision of this Lease, Lessee may commence, resume, or continue the exercise of any of the rights, privileges, or purposes hereof during such extension.

4. **EXTENSION OF TERM:** At Lessee's option, Lessee may extend the Primary Term of this Lease for an additional period equal to the Primary Term hereof by paying or tendering to Lessor an extension payment equal to one hundred percent (100%) of the initial bonus consideration payable at any time prior to the expiration of the Primary Term. If Lessee exercises this option, the Primary Term shall be considered to be continuous commencing on the date hereof, and continuing to the end of the Primary Term so extended.

5. **ROYALTY PAYMENT:** For oil and gas, along with all hydrocarbon and non-hydrocarbon substances produced in association therewith (except storage gas), Lessee shall deliver to Lessor, as royalty, twelve and one-half percent (12.50%) of the net amount realized by Lessee computed at the wellhead. As used in this Lease, the term "net amount realized by Lessee computed at the wellhead" shall mean the gross proceeds received by the Lessee from the sale of oil and gas minus the post-production costs incurred by Lessee between the wellhead and the point of sale. As used in this Lease, the term "post-production costs" shall mean all costs and expenses related to: (a) treatment and processing of oil and gas; (b) separating liquids from gas; (c) transporting oil and gas from wellhead to production or treatment facilities and/or point of sale; (d) compression or dehydration; (e) any and all other reasonable costs and expenses of any kind or nature incurred involving the handling of oil and/or gas from the wellhead to the point of sale. Lessee may pay all taxes and fees levied upon the oil and gas as produced including, but not limited to, gross production, privilege, surveillance, and/or severance taxes or fees, if any imposed now or during the life of this Lease, and deduct a proportionate share of the amount so paid from any amounts payable to Lessor hereunder.

6. **LESSOR'S INTEREST:** If Lessor owns an interest in the Leased Premises less than the entire and undivided estate herein leased then all payments herein provided shall be paid by Lessee only in the proportion to which Lessor's interest bears to the whole and undivided estate. If Lessee receives written notice of adverse claim(s) to the Leased Premises, Lessee, may, in its sole discretion, withhold payment(s), without obligation to pay interest or penalty thereon, until such time as Lessor's ownership is determined, either by compromise or final decree of any court of competent jurisdiction. If the Leased Premises shall hereafter be subdivided, the Leased Premises shall nevertheless be developed and operated as one lease. Lessee shall not be bound by any change in the ownership of the Leased Premises or any change of the address of Lessor, or any heirs, representatives, successors, and/or assigns until Lessee shall have been furnished with written documentation from Lessor as Lessee may reasonably require.

7. **DIRECTION OF PAYMENT:** All payments required to be paid to Lessor herein shall be directed to the Lessor or deposited to Lessor's credit or to the credit of Lessor's respective heirs or assigns by check payable to the order and address as set forth above (or any changed address as may be provided to Lessee in the manner required under this Lease). Lessee shall not be obligated to alter payments as directed above until Lessee receives written notice from Lessor, or Lessor's representatives, heirs, successors, and/or assigns directing Lessee otherwise. Lessee shall not be obligated to make payments until such payments exceed the sum of TWENTY-FIVE DOLLARS ($25.00), but, in any case, payments shall be made at least once each calendar year.

8. **CONTINUING OPERATIONS:** If at the end of the Primary Term or any subsequent extension thereof this Lease is not being maintained by any other provision hereof but Lessee has commenced operations for drilling, completing, reworking, equipping, or any other operations to obtain production on the Leased Premises or lands pooled or unitized therewith, this Lease shall remain in full force and effect as long as such operations are conducted in a reasonably prudent manner. At any time after the expiration of the Primary Term, if this Lease is not being maintained by any other provision hereof, the Lease shall nevertheless be extended one (1) year beyond the completion of plugging operations of the last well on Leased Premises to permit Lessee to deepen, rework, or recomplete any well on the Leased Premises or lands pooled or unitized therewith, or to commence operations for the drilling of another well on the Leased Premises or lands pooled or unitized therewith, and if such operations result in the production of any substance covered hereby, this Lease will be extended as long thereafter as production continues in paying quantities.

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MAR 13 2015

9. **POOLING AND UNITIZATION:** Lessee is hereby granted the right to pool or unitize the Leased Premises, or any part thereof, with any other lands for the production of any substance covered hereby, so as to create one (1) or more drilling or production units. Furthermore, Lessee shall in no event be required to drill more than one (1) well on such unit. Said drilling or production unit(s) shall conform to the rules and regulations of any governmental authority claiming jurisdiction. In the event this Lease is so pooled or unitized, the Lessor agrees to accept, in lieu of the royalty herein recited, such proportion of the royalty above described as the acreage contributed by this Lease bears to the total acreage comprising any unit or units.

Lessee shall create the unit by executing an instrument identifying and describing the pooled acreage and shall mail a copy thereof to the Lessor's last known address. Within the parameters of governmental regulations, Lessee shall have the recurring and unrestricted right to enlarge, diminish, or otherwise revise any unit formed hereunder either before or after commencement of production. At any time a pool or unit is not being operated as aforesaid, Lessee may revise or surrender all or any part of any such pool or unit, which modification or cancellation document shall be placed of record in the appropriate county(ties). Any cancellation or surrender of a Declaration of Pooling or unit order shall neither cause nor be deemed a surrender or cancellation of this Lease. Lessee will provide a copy of any documents to Lessor's last known address, and the proportion of unit production on which royalties are payable hereunder shall thereafter be adjusted accordingly. Commencement of operations for drilling, completing, reworking, equipping, or any other operations to obtain production, or production anywhere on a unit which includes all or any part of the Leased Premises shall, except for the payment of royalties, be treated as if it were commencement of operations for drilling, completing, reworking, equipping, or any other operations to obtain production, or production on the Leased Premises.

10. **GAS STORAGE:** Lessee shall have the exclusive right to use any formation underlying the Leased Premises for the storage of gas and shall have all rights necessary or incidental to store and produce such stored gas. At the time of exercising the rights to store gas hereunder, Lessee shall pay, in accordance with the royalty herein recited, Lessor's proportionate share of the estimated recoverable gas remaining in the relevant well located on the Leased Premises using methods of calculating gas reserves as are generally accepted by the oil and gas industry. Lessee agrees to pay Lessor an annual rental of FIVE AND NO/100 DOLLARS ($5.00) per acre for all Leased Premises which Lessee wishes to use for the storage of gas payable in advance while the Leased Premises are so used, and so long as such storage payment is made all provisions of this Lease shall remain in full effect as to the entire Leased Premises.

11. **ANCILLARY RIGHTS:** Lessor grants to Lessee the right of ingress, egress and regress over, under, and through said Leased Premises together with the exclusive right to conduct such operations on the Leased Premises as may be necessary for or incidental to the exploration and production of oil, gas or other related substances covered hereby, including but not limited to geophysical operations, the drilling of wells, and the construction and use of roads, production flowlines, gathering lines, pipelines, and/or gas transmission lines, tanks, water wells, disposal wells, injection wells, pits, water or other impoundments, electric and/or telephone lines, solar facilities, and/or other facilities necessary, useful, or convenient to produce, save, take care of, treat, process, store, and/or transport oil, gas, and/or other products, regardless of the source of such products, with the right to transport via flowlines, gathering lines, pipelines, transmission lines, and/or otherwise, oil, gas, water and/or their constituents from and across the Leased Premises and/or other lands, regardless of the source of such substances, and the exclusive rights to inject water, air, brine, gas, and/or other fluids into subsurface strata. Lessee shall also have the right of placing solar panels, electric, and/or telephone lines over the Leased Premises; the right to erect necessary buildings, tanks, towers, stations, or other structures thereon; and the rights to use, free from royalty, sufficient oil, gas, and/or water produced from the Leased Premises for all operations thereon (provided Lessor shall pay the reasonable and customary cost of any such water sources located on the Leased Premises). Lessor agrees that no part of the Leased Premises shall be leased, let, granted, or licensed by Lessor to any other party for the location, construction, or maintenance of structures, tanks, pits, reservoirs, equipment, and/or machinery for the purpose of exploring, developing, or operating adjacent lands for oil or gas during the term hereof.

Lessee at any time, and from time to time, may surrender this Lease as to all or any part thereof by recording an appropriate instrument of surrender in the proper county, and thereupon this Lease and the rights, rentals, and obligations of the Parties hereunder shall terminate as to the part so surrendered; provided however, that upon each surrender as to any part of the Lease, Lessee shall maintain all easement rights in, to, and/or under the surrendered portion of the Leased Premises described in this Lease.

When requested by Lessor in writing, Lessee shall bury its pipelines below plow depth in areas utilized for farming operations. Lessee shall pay for reasonable damage caused by its operations to growing crops and marketable timber thereon. Lessee shall have the right to remove its fixtures, equipment, and materials, including well casing, from the Leased Premises during the term of this Lease, and within a reasonable time thereafter; however, nothing in this Lease shall be construed as a mandate for Lessee to remove any underground fixtures, including, but in no way limited to, pipe, casing, pipelines, and/or flowlines, and Lessor specifically waives, on behalf of Lessor and any of Lessor's heirs, representatives, successors, and/or assigns, any all future claims of damage and/or trespass if Lessee elects to leave all underground fixtures and/or lines in place.

12. **SHUT-IN ROYALTY:** If, after the Primary Term of this Lease, all wells on the Leased Premises or within a unit that includes all or a part of the Leased Premises, are shut-in, suspended, or otherwise not producing for any reason whatsoever for a period of twelve (12) consecutive months, and there is no current production of oil and gas or operations on said Leased Premises sufficient to keep this Lease in force and this Lease is not otherwise kept in force by other provisions of this Lease, Lessee may maintain this Lease in effect by tendering to Lessor as shut-in royalty, a sum equal to FIVE DOLLARS ($5.00) per acre. Said shut-in royalty shall be paid or tendered to Lessor on or before the next ensuing yearly anniversary of the date of this Lease, and thereafter, on or before each yearly anniversary of the date hereof while the wells are shut-in or production therefrom is not being marketed by Lessee. Upon payment of the shut-in royalty as provided herein, this Lease will continue in force during all of the time or times while all wells are shut-in, but failure to properly pay shut-in royalties shall render Lessee liable only for the amount due and shall not operate to terminate this Lease.

13. **TAXES:** Subject to the royalty provisions hereinabove regarding post-production costs, all taxes assessed or payable on the oil and gas produced from the Leased Premises or from leases, lands, and/or interests pooled or unitized therewith, including any ad valorem, production, severance, business, occupation, excise, privilege, surveillance, or other taxes of any nature whatsoever, or any increase in the real estate taxes, or taxes in lieu of real estate taxes imposed because of the oil and/or gas operations or production under this Lease shall be paid by the Parties hereto in proportion to their interest.

14. **LIENS:** Lessee may, at its option, pay and discharge any past due taxes, mortgages, judgments, and/or other liens and encumbrances on or against any land or interest included in the Leased Premises. Lessee shall be entitled to recover any such amounts paid from Lessor, with legal interest and costs, by deduction from any future payments due Lessor or by any other lawful means.

15. **FORCE MAJEURE:** Should Lessee be prevented from complying with any expressed or implied covenant of this Lease, from conducting drilling, completing, equipping, or reworking operations thereon, or from producing oil and gas or other substances by reason of scarcity of or inability to obtain or use equipment, men or material, or by operation of force majeure such as storm, flood, fire, tornado, hurricane, earthquake, seismic disturbance, or other acts of God, war, rebellion, insurrection, riot, strikes, differences with workmen, failure of carriers to transport or furnish facilities for transportation, as a result of a lawsuit or some law, order, or regulation of the government, as a result of shortage in material or equipment, or as a result of any cause whatsoever beyond the reasonable control of the Lessee, then while so prevented, Lessee's obligation to comply with such covenant shall be suspended for so long as compliance is thus prevented, and for an additional twelve (12) months thereafter.

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MAR 13 2015

16. **DEFAULT:** No default shall be declared against the Lessee for failure to make payment or perform any conditions provided for herein unless the Lessee shall refuse or neglect to pay or perform the same for ninety (90) days after having received written notice from Lessor.

17. **SUCCESSORS AND ASSIGNS:** All covenants and conditions between the Parties hereto shall extend to Lessor's heirs, executors, successors, representatives, and/or assigns, and Lessor hereby warrants and agrees to defend the title to the Leased Premises; however, no change or division in ownership of the Leased Premises shall operate to enlarge the obligations or diminish the rights of the Lessee.

18. **UNDERSTANDING OF PARTIES:** This Lease contains all of the agreements and understanding by and between Lessor and Lessee respecting the subject matter hereof, and no implied covenants, obligations, verbal representations, or promises have been made or relied upon by Lessor or Lessee supplementing or modifying this Lease, or as an inducement thereto. The failure of either party to enforce or exercise any provision of this Lease shall not constitute or be considered as a waiver of the provision in the future unless the same is expressed in writing and signed by the respective Parties.

19. **REPRESENTATION OF NON-PRODUCTION:** Lessor hereby represents that, to the best of Lessor's knowledge, information, and/or belief that: (a) no wells have been drilled on the Leased Premises or any lands purportedly pooled or unitized therewith that have not been plugged or abandoned prior to the date hereof; (b) there has been no oil and/or gas produced from the Leased Premises or any lands purportedly pooled or unitized therewith during the last five (5) years; (c) during the last two (2) years Lessor has not received, and is not now receiving, any bonus, delay rental, royalty, shut-in, or any other compensation under, or by virtue, or pursuant to the terms of a prior oil and gas lease, coal bed methane gas lease, or any other lease or contract for the exploration or development of the oil and/or gas in and under the Leased Premises; (d) the Leased Premises are not now subject to any valid, subsisting, or enforceable lease, option, and/or other contract affecting the oil, gas, and/or coal bed methane estate; and (e) there exists no contract or agreement, and/or no condition or event has occurred or is anticipated to occur, which would affect Lessee's use of the surface of the Leased Premises in the exercise of the rights granted hereunder.

20. **SEVERANCE:** If any provision of this Lease is held invalid or unenforceable by any court of competent jurisdiction, the other provisions of this Lease shall remain in full force and effect.

21. **NOTICES:** All notices shall be deemed given when deposited with the United States Postal Service and forwarded via United States Certified Mail, Return Receipt Requested, postage prepaid. A facsimile or emailed message shall be deemed delivered only when if also delivered via the method set out above. All notices shall be delivered to the address shown on the face of this Lease for the Party to be notified, unless a change-of-address had been forwarded to the other Party hereto via the above-described method of notice.

22. **CAPTIONS:** Captions, titles and headings appearing at the beginning of any sections, paragraphs or other subdivisions of this Lease are inserted for convenience of reference only, do not constitute any part of this Lease, and shall be disregarded in construing or interpreting the language hereof.

*****SEE ADDENDUM ATTACHED HERETO AND BY THIS REFERENCE MADE A PART HEREOF*****

EXECUTED on the dates set forth in the notary acknowledgements attached hereto, but effective for all purposes as of the Effective Date hereinabove specified. This document may be executed in multiple counterparts, any one of which shall be considered an original and binding upon the signatory parties for all purposes herein.

WITNESS:

Lawrence S. Shipula
Signature

LAWRENCE S. SHIPULA
Printed Name

LESSOR:

Signature
Printed Name: **Richard A. Glover, a/k/a Richard Alan Glover**
Address: 844 VALLEY VIEW DRIVE
BROOKFIELD, OH 44403

INDIVIDUAL ACKNOWLEDGMENT

STATE / COMMONWEALTH OF PA §
COUNTY OF Mercer §

The foregoing instrument was acknowledged before me, this 6 day of November, 2014, by **Richard A. Glover, a/k/a Richard Alan Glover, a married man dealing in his sole and separate property**.

MY COMMISSION EXPIRES:

Pamela J. O'Neill
Signature
PAMELA J. O'NEILL
Printed Name
Notary Public

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Pamela J. O'Neill, Notary Public
City of Sharon, Mercer County
My Commission Expires Sept. 27, 2017
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

Received
Office of Oil & Gas
MAR 13 2015

ADDENDUM TO OIL AND GAS LEASE DATED November 6, 2014
FROM RICHARD A. GLOVER, A/K/A RICHARD ALAN GLOVER, A MARRIED MAN DEALING IN HIS SOLE AND SEARATE PROPERTY, AS LESSOR,
IN FAVOR OF NOBLE ENERGY, INC., AS LESSEE

1. **Conflict of Terms:** In the event of a conflict or inconsistency between the printed terms in the Lease to which this Addendum is attached, the terms of this Addendum shall control and be deemed to supersede the terms of said lease in all respects.

2. **Standard Lease to Remain Effective:** Except to the extent modified by this Addendum, the terms, covenants, conditions, rights, duties, and obligations of the Parties set forth in the Lease to which this Addendum is attached shall remain in full force and effect in accordance with the terms thereof. The holding of any part of said Lease and/or this Addendum to be ineffective or unenforceable shall not act to alter any other provisions hereof.

3. **ROYALTIES WITHOUT DEDUCTION:** Royalties shall be paid without deductions for the costs of producing, gathering, storing, separating, treating, dehydrating, compressing, processing, transporting, or otherwise making the oil, gas, and/or related products produced from the Leased Premises ready for sale or use. All oil and/or gas royalty shall be delivered free of cost into the tank or pipeline (for oil) and into the pipeline (for gas), with the exception of Lessor's prorated share of taxes, measured by volume, on the oil and/or gas royalty.

4. **Royalty Payment:** Section (5) of this Lease is hereby amended by striking only the words "twelve and one-half percent (12.50%)" and replacing with the following: "fifteen percent (15.00%)". All other provisions of Section (5) shall remain unchanged.

5. **INDEMNITY AND HOLD HARMLESS:** Lessee shall indemnify and hold Lessor harmless against and from any and all liability, liens, demands, judgments, suits, and claims of any kind or character arising solely out of, solely in connection with, or relating solely to Lessee's operations under the terms of this Lease, including, but not limited to, environmental issues, claims for injury to, or death of any persons, or damage, loss, or destruction of any property, real or personal (hereinafter, individually referred to as a "Claim", and collectively as "Claims"). Lessee further covenants and agrees to defend any suits brought against Lessor by virtue of any such Claims, and to pay any judgment against Lessor resulting from any Claim adversely decided against Lessor. Lessor, if it so elects, shall have the right to participate, at Lessor's own cost and expense, in its defense of any Claims, without relieving Lessee of the obligation to defend Lessor against any such Claim. It is the intention of Lessee and Lessor that Lessee shall not be liable to Lessor in respect of (and the foregoing indemnity shall not cover) any Claim(s) to the extent the same resulted from the gross negligence, willful misconduct, or bad faith of Lessor.

LESSOR IDENTIFICATION AND APPROVAL:	LESSEE IDENTIFICATION AND APPROVAL:
Signature Printed Name : Richard A. Glover, a/k/a Richard Alan Glover Date: November 6, 2014	NOBLE ENERGY, INC. Signature/ Printed Name : _____ Date: _____

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MAR 13 2015

Misc. Assign.
4683

COLUMBIA GAS TRANSMISSION CORPORATION

ADDRESS REPLY TO
POST OFFICE BOX 1273
CHARLESTON WEST VIRGINIA 25325

April 21, 1980

L & M Exploration, Inc.
Box A, Station C
Canton, OH 44708

Gentlemen:

FARMOUT AGREEMENT

This letter sets forth the terms and conditions under which Columbia Gas Transmission Corporation (hereinafter called "Columbia") grants L & M Exploration, Inc. (hereinafter called "L & M") the right to earn a sub-lease of certain rights from the surface of the earth to the top of the Onondaga Formation in Columbia's interest in certain oil and gas leases containing a total of 8,836.5 acres, more or less, situate in Centerville, Ellsworth, Lincoln and Meade Districts, Tyler County, West Virginia, said leases being listed on Exhibit "A" attached hereto and made a part hereof.

Twenty (20) wells are to be drilled on the aforesaid leases, or on drilling units including parts of the subject leases, within one year from the date of this agreement, and twenty (20) wells are to be drilled on the subject acreage, or on such drilling units, each subsequent year until the acreage is fully developed. Each well, if productive of oil and/or gas shall earn L & M a sub-lease, which Columbia will make upon written request, of only those rights acquired by Columbia in and to the oil and gas down to the stratigraphic equivalent of total depth of the well in the lease or in parts of leases included in a drilling unit upon which the well is situate. Each productive well will operate one hundred and sixty (160) acres, or Columbia's acreage in the drilling unit, whichever is the lesser.

Failure to maintain the aforesaid drilling schedule will make this Farmout voidable as to the undeveloped acreage at the election of Columbia, which election shall be exercised by Columbia giving L & M written notice thereof, sent to L & M's last known mailing address.

Columbia reserves the right to purchase any and all gas produced by L & M from said leases or drilling units including parts of the herein described leases. In addition, L & M will dedicate to Columbia any and all gas produced from acreage now held in its own right or acreage acquired in its own right in the area of interest after the date of this agreement. All gas purchases will be at the rate or price prevailing in the field and on the terms of Columbia's standard gas purchase contract, a copy of which is attached hereto and made a part hereof as Exhibit "B".

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Farmout No. 4683

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Columbia excepts and reserves unto itself an overriding royalty of 1/16 of 7/8 of any oil produced and 1/32 of 7/8 of any gas produced from said leases, which overriding royalty shall be reduced to that proportionate part that Columbia's acreage contributed to a drilling unit bears to the total acreage in the drilling unit. The above overrides reserved unto Columbia will be reduced by the existing overriding royalties on the subject acreage. L & M will pay Columbia $5.00 per acre for each acre earned and sublet to L & M.

All operations conducted by L & M upon said premises shall be subject to and in accordance with the terms and conditions of the aforesaid leases. L & M agrees to save harmless Columbia, its successors and assigns, from any and all claims, damages or liabilities of any kind whatsoever, including, but without limitation, an obligation to plug and abandon any well in compliance with then existing laws and regulations.

It is agreed that L & M will furnish the Chief Geologist of Columbia, at this address, with a plat showing the location and surface elevation of the well as staked. It is also agreed that L & M will furnish Columbia with a complete set of all logs, including but not limited to Gamma Ray, Neutron, Density and Resistivity Logs for all wells drilled.

L & M shall promptly notify Columbia, attention, Director, Lease and Land Rights, of the completion of any well capable of production on the aforesaid leases, furnishing a plat of the drilling unit and a copy of the unit designation, if applicable.

Rights granted under this Farmout Agreement shall not be assigned, sub-let, mortgaged or encumbered by L & M without the prior written consent of Columbia.

Columbia does not warrant title to the premises described in Exhibit "A" and represents that it will sublet only those rights held by Columbia in the aforesaid leases.

In the event of the development of acreage, L & M shall, before plugging and abandoning or otherwise terminating production or surrendering rights, notify Columbia in writing of its proposed action, and shall, if Columbia desires, execute and deliver to Columbia such surrenders or other documents as may be appropriate to evidence reinstatement of Columbia's full leasehold rights.

L & M shall reimburse Columbia for all land and delay rentals and shut-in royalty payments attributable to the acreage subject to this Farmout Agreement falling due during the term of said agreement and will pay the landowner's royalty and any overriding royalty in respect to subject horizons. In the event L & M fails to pay all rentals, royalties, or other liabilities accruing by virtue hereof, Columbia shall have the right to reserve and deduct a sufficient sum or sums from any amount due L & M on account of the sale of gas from said premises by L & M to Columbia under and pursuant to the standard gas purchase contract made between L & M

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MAR 13 2015
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MAR 13 2015

and Columbia. In the event production has not been established or gas purchase revenues are not sufficient to offset all rentals or shut-in royalty payments made by Columbia on the farmout acreage, L & M's failure to reimburse Columbia for any and all such payments within sixty (60) days after billing will make this farmout voidable as to the undeveloped acreage at the election of Columbia, which election shall be exercised by Columbia giving ten (10) days written notice thereof and sent by registered or certified mail or delivered to L & M's last known address.

In the drilling of any well or wells and otherwise complying with the terms and provisions of this agreement, L & M is acting independently of Columbia and not as a partner in any capacity, mining or otherwise. Columbia shall have no responsibility whatsoever in connection with the drilling of any well or wells and all drilling will be at L & M's sole cost, risk and expense.

The renewing and extending of undeveloped leases committed to this Farmout shall be handled by Columbia, and such renewals and extensions shall be held subject to said Farmout so long as it remains in force and effect as to such acreage.

All covenants and conditions between the parties hereto shall extend to their successors and assigns.

If this letter, which is submitted in duplicate, is satisfactory and you desire to proceed accordingly, please sign the acceptance provided below and return one (1) copy to this office, attention of R. Joe Johnson, Manager, Leases and Fee Lands, within ten (10) days.

COLUMBIA GAS TRANSMISSION CORPORATION

By [signature]
Vice President

ACCEPTED this the 21 day of
[illegible] 1980.

L & M EXPLORATION, INC.

By Chris Figge
(ITS)
vice president

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Office of Oil & Gas
MAR 13 2015

460—
L & M Exploration Inc
4-21-80
R/R 217

EXHIBIT "A"
PROPOSED FARMOUT TO
L & M EXPLORATION, INC.
~~PLEASANTS~~ & TYLER COUNTIES, WEST VIRGINIA

LEASE NO.	LESSOR	LESSEE	DATE	TERM	ACRES	DISTRICT	COUNTY	BOOK	PAGE	O.R.R.I.
34609	Arthur Eugene Jones, et ux	Royal Resources Corp.	4-02-71	10	252	Ellsworth	Tyler	188	465	None
34610	Arthur Eugene Jones, et ux	Royal Resources Corp.	4-02-71	10	220	Ellsworth	Tyler	188	467	None
34611	Grace Meredith	Royal Resources Corp.	4-09-71	10	200	Lincoln	Tyler	188	469	None
34613	Joseph Ben Thomas, et ux	Royal Resources Corp.	4-09-71	10	117	Meade	Tyler	188	473	None
34614	Goldie O. Cox, et con	Royal Resources Corp.	4-09-71	10	140	Meade	Tyler	188	475	None
34616	W. C. Stevens, et ux	Royal Resources Corp.	4-10-71	10	85	Ellsworth	Tyler	188	479	None
34617	O. E. Hadley, et ux	Royal Resources Corp.	4-10-71	10	162	Ellsworth Meade	Tyler	188	481	None
34619	H. W. Shepard, et ux	Royal Resources Corp.	4-21-71	10	45	Meade	Tyler	188	485	None
34622	A. B. Lowther, et ux	Royal Resources Corp.	2-21-71	10	280	Meade	Tyler	188	491	None
34623	C. B. Winland, et ux	Royal Resources Corp.	4-10-71	10	112	Ellsworth	Tyler	188	493	None
34624	C. B. Winland, et ux	Royal Resources Corp.	4-15-71	10	197	Ellsworth	Tyler	188	495	None
34641	Glenn Wells, et ux	Royal Resources Corp.	4-13-71	10	217	Ellsworth	Tyler	188	527	None
34642	Glenn Wells, et ux	Royal Resources Corp.	4-13-71	10	142	Lincoln	Tyler	188	529	None
40466	J. W. Newbrough, Sr., etux	Royal Resources Corp.	9-01-71	10	53	Ellsworth	Tyler	190	516	None
40467	Burl Baker, et ux	Royal Resources Corp.	9-01-71	10	72	Ellsworth	Tyler	190	614	None
40468	Burl Baker, et ux	Royal Resources Corp.	9-01-71	10	175	Ellsworth	Tyler	190	612	None
40469	Guy L. Ryner, et ux	Royal Resources Corp.	9-01-71	10	135	Ellsworth	Tyler	190	510	None
40470	Floyd Fox, et ux	Royal Resources Corp.	9-01-71	10	270	Ellsworth	Tyler	190	508	None
40472	Florence B. Folger, et con	Royal Resources Corp.	9-15-71	10	45	Ellsworth	Tyler	190	504	None
40474	Earl K. Stephen, et ux	Royal Resources Corp.	9-15-71	10	62	Ellsworth	Tyler	190	500	None
40475	Clem Amos, Sr., et ux	Royal Resources Corp.	9-15-71	10	33	Lincoln	Tyler	190	498	None
40482	Fredrick L. Dotson, et ux	Royal Resources Corp.	10-01-71	10	98	Ellsworth	Tyler	190	484	None
40484	O. E. Freeland	Royal Resources Corp.	3-25-72	10	100	Meade	Tyler	190	480	None
40485	Charles Heintzman, et ux	Royal Resources Corp.	6-14-71	10	111	Lincoln	Tyler	190	304	None
40486	Emerson Lawrence Moore, etux	Royal Resources Corp.	10-01-71	10	168	Centerville	Tyler	190	478	None
40487	Ernest Virgil Mathews, etux	Royal Resources Corp.	10-01-71	10	102	Ellsworth	Tyler	190	476	None
40488	Arza Folger, et ux	Royal Resources Corp.	10-01-71	10	130	Ellsworth	Tyler	190	474	None
40489	Arza Folger, et ux	Royal Resources Corp.	10-01-71	10	16	Ellsworth	Tyler	190	472	None
40490	A. B. Lowther, et ux	Royal Resources Corp.	9-01-71	10	95	Lincoln	Tyler	191	59	None
40491	A. B. Lowther, et ux	Royal Resources Corp.	9-01-71	10	140	Lincoln	Tyler	191	57	None
42768	Robert N. McCammon, et ux	Royal Resources Corp.	10-26-73	10	69	Ellsworth	Tyler	196	188	1/64 of 8/8

EXHIBIT "A"

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Office of Oil & Gas
MAR 13 2015

LEASE NO.	LESSOR	LESSEE	DATE	TERM	ACRES	DISTRICT	COUNTY	BOOK	PAGE	O.R.R.I.
42778	Howard Yost, et al	Royal Resources Corp.	2-12-73	10	41	Ellsworth	Tyler	196	256	1/64 of 8/8
42781	Mildred Hurst	Royal Resources Corp.	12-27-72	10	100	Centerville	Tyler	196	264	1/64 of 8/8
42783	Jacob Cottrill	Royal Resources Corp.	12-27-72	10	290	Centerville	Tyler	196	268	1/64 of 8/8
42786	Robert C. Ferguson, et ux	Royal Resources Corp.	12-05-72	10	21	Centerville	Tyler	196	274	1/64 of 8/8
42787	Emerson L. Moore, et ux	Royal Resources Corp.	12-27-72	10	13	Centerville	Tyler	196	276	1/64 of 8/8
42791	Jacob Cottrill, et al	Royal Resources Corp.	12-27-72	10	290	Ellsworth	Tyler			1/64 of 8/8
42792	Gladys S. Hamilton	Royal Resources Corp.	12-27-72	10	142	Ellsworth	Tyler	196	290	1/64 of 8/8
42799	Jacob L. Dillion, et ux	Royal Resources Corp.	12-12-72	10	45	Centerville	Tyler	196	298	1/64 of 8/8
42801	Jacob L. Dillion, et ux	Royal Resources Corp.	12-12-72	10	105	Centerville	Tyler	196	302	1/64 of 8/8
42804	Clarence Hadley, et ux	Royal Resources Corp.	10-20-72	10	177	Centerville	Tyler	197	295	1/64 of 8/8
42806	Clarence Hadley, et ux	Royal Resources Corp.	10-20-72	10	155	Ellsworth	Tyler	196	310	1/64 of 8/8
42807	Shirley E. Wells, et al	Royal Resources Corp.	12-20-72	10	69	Lincoln	Tyler	196	314	1/64 of [illegible]
42808	Shirley E. Wells, et al	Royal Resources Corp.	12-25-72	10	98	Lincoln	Tyler	196	316	1/64 of [illegible]
42809	Shirley E. Wells, et al	Royal Resources Corp.	12-25-72	10	40	Lincoln	Tyler	196	318	1/64 of 8/8
42817	L. B. Myres	R. W. Keener	11-01-72	10	162	Ellsworth	Tyler	196	208	1/64 of 8/8
42819	Ernest C. McMullen, et ux	R. W. Keener	11-01-72	10	120	Ellsworth	Tyler	196	212	1/64 of 8/8
42820	Ernest C. McMullen, et ux	R. W. Keener	11-01-72	10	93	Ellsworth	Tyler	196	214	1/64 of 8/8
42824	Lonie Doak, et al	R. W. Keener	11-27-72	10	150	Centerville	Tyler	176	222	1/64 of 8/8
42825	Robert Skinner, et al	R. W. Keener	11-09-72	10	261	Ellsworth	Tyler	176	224	1/64 of 8/8
42829	O. W. Griffith, et al	R. W. Keener	12-08-72	10	56	Centerville	Tyler	197	299	1/64 of 8/8
42830	O. W. Griffith, et ux	R. W. Keener	12-08-72	10	340	Centerville	Tyler	196	232	1/64 of 8/8
42831	O. W. Griffith, et ux	R. W. Keener	12-08-72	10	220	Centerville	Tyler	196	234	1/64 of 8/8
42832	O. W. Griffith, et ux	R. W. Keener	12-08-72	10	24	Centerville	Tyler	196	236	1/64 of 8/8
42833	Violet Gregg, et al	R. W. Keener	11-30-72	10	114	Centerville	Tyler	196	238	1/64 of 8/8
42834	Violet Gregg, et al	R. W. Keener	11-30-72	10	40	Centerville	Tyler	196	240	1/64 of 8/8
42835	Violet Gregg, et al	R. W. Keener	11-30-72	10	8	Centerville	Tyler	196	242	1/64 of 8/8
42836	Violet Gregg, et al	R. W. Keener	11-30-72	10	90	Centerville	Tyler	196	244	1/64 of 8/8
42837	Violet Gregg, et al	R. W. Keener	11-30-72	10	32	Centerville	Tyler	196	246	1/64 of [illegible]
42838	Violet Gregg, widow	R. W. Keener	11-30-72	10	35	Centerville	Tyler	196	235	1/64 of [illegible]
42839	Mildred Gregg, widow	R. W. Keener	11-30-72	10	32	Centerville	Tyler	196	250	1/64 of 8/8
42840	E. J. Williamson, et al	R. W. Keener	2-12-73	10	95	Centerville	Tyler	196	260	1/64 of 8/8
42844	Ada Weekley	R. W. Keener	11-30-72	10	98	Ellsworth	Tyler	196	312	1/64 of 8/8
42845	Verna O. Ash	R. W. Keener	1-04-73	10	180	Centerville	Tyler	196	324	1/64 of 8/8
43198	E. Glenn Moore, et al	Royal Resources Corp.	1-16-73	10	255	Ellsworth	Tyler	197	267	1/64 of 8/8
43206	Harry M. Spencer, et ux	Opal K. Trach	2-05-73	10	225	Ellsworth	Tyler	197	293	1/64 of 8/8
43211	Charles G. Evans	Donley K. Shultz	2-15-73	10	69	Lincoln	Tyler	197	249	1/64 of 8/8
43213	Ola Froeland, et al	Donley K. Shultz	2-05-73	10	100	Ellsworth	Tyler	197	233	1/64 of 8/8
43216	Jennie Shinn	M. S. Lantz	2-05-73	10	70	Ellsworth	Tyler	197	275	1/64 of 8/8
43218	Fred Fairbee, et ux	M. S. Lantz	2-05-73	10	41	Ellsworth	Tyler	197	271	1/64 of 8/8
43219	Fred Fairbee, et ux	M. S. Lantz	2-05-73	10	25	Ellsworth	Tyler	197	269	1/64 of 8/8

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LEASE NO.	LESSOR	LESSEE	DATE	TERM	ACRES	DISTRICT	COUNTY	BOOK	PAGE	O.R.R.I.
43223	Harry M. Spencer, et ux	M. S. Lantz	2-05-73	10	40	Ellsworth	Tyler	197	257	1/64 of 8/8
*43227	Mary E. Doak	Royal Resources Corp.	3-06-73	10	66	Meade	Tyler	197	237	1/64 of 8/8
170139	James R. Ash, et ux	Col. Gas Trans. Corp.	3-12-74	10	92	Centerville	Tyler	202	24	None
170140	James R. Ash, et ux	Col. Gas Trans. Corp.	3-12-74	10	27	Centerville	Tyler	202	20	None
170141	James R. Ash, et ux	Col. Gas Trans. Corp.	3-12-74	10	21.5	Centerville	Tyler	202	16	None
170142	James R. Ash, et ux	Col. Gas Trans. Corp.	3-12-74	10	15	Centerville	Tyler	202	12	None
				TOTAL:	8,836.5					

*Not Mapped

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MAR 13 2015

denotes copy attached hereto

Noble Energy, Inc

DB 409/657
D 10-1-2012
R 3-11-2013

A) An undivided 50 % of all Assignor's right , title and interest in and to the
Following assets and properties:

I) The oil, gas and/or mineral leases more particularly described in Exhibit A, insofar and only
Insofar as such leases cover depths within the Marcellus Formation (such 50 % of Assignor's
Interest in such leases as so limited, collectively, the Leases), including all working interest,
Overriding royalty interest, net profits interest, carried interests or similar rights or interest in the
Leases, together with all rights, privileges, benefits and powers conferred upon the holder of the
Leases with respect to the use and occupation of the surface of the lands covered thereby that
may be necessary, convenient or incidental to the possession and enjoyment of the leases .....

CNX Gas Company LLC,

DB 402 704
D 7-24-2012
R 10-29-2012

Whereas, assignee previously assigned to Assignor an undivided 50 % of Assignee's right title and interest.....In DB 388/286. The prior assignment did not sufficiently describe the acreage being assigned for each lease. Whereas, Assignor desires to execute this Assignment for the purposes of correcting these discrepancies.....Subject tract listed

Noble Energy, Inc

DB 388/286
D 7-1-2011
R 11-2-2011

Whereas, assignor desires to assign to assignee, and assignee desires to receive from assignor , and undivided 50 % of assignor's right, title and interest .....Subject to terms and conditions of this agreement..... Subject tract listed.

CNX Gas Company LLC,

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Office of Oil and Gas

JUN 8 2015

WV Department of
Environmental Protection

CNX Gas Company LLC,

DB 384/191
D 4-30-2010
R 6-8-2010

Affidavit of Name changes and mergers

1. CNX is as of the date hereof, following the consummation of the transactions described in sections 2 through 7 below, the record owner of certain real property located in Tyler County WV.
2. A purchase and sale agreement ,dated as of March 14,2010, and was entered into by and among Dominion Resources Inc., ECT..... And Consol Energy Holdings LLC VI became the purchaser. ECT....Purchaser agreed to purchase, certain oil and gas properties, rights and related assets ECT.... The purchase and sale agreement closed on April 30,2010.
7. On January 1,2011 by several mergers was merged with and into CNX. Accordingly, the name of the record owner of the properties in now CNX Gas Company LLC.

Consol Energy Holdings LLC XVI

DB 374/187
D 4-30-2010
R 5-4 2010

Assignment of oil and gas interests and assets
Herby grants, bargains , sells, assigns and conveys unto Assignee, and assignee hereby accepts from assignor, all assignors right, title and interest in and to the following (collectively the Assets)
Reserving , subject to section 1.1 (e) and (1) of this assignment, to assignor the right to operate, maintain, use and access for reasonable business purposes any part of the surface overlying the mineral interest, including, roads, easements and rights-of-ways on or related thereto, and to construct additional roads, pipelines and power lines and related equipment and facilities thereon, in each case in reasonable cooperation with assignee.

Dominion Transmission , Inc

DB 355/701
D 5-31-2007
R 6-15-2007

Release and termination agreement
By and between USB Americas, Inc., and USB AG, a bank.
Whereas, pursuant to the terms of the production payment purchase and sale agreement, USB AG entered into a natural gas sales contract with Dominion Exploration & production, Inc. covering all hydrocarbons that USB Americas Inc. is entitled to receive under the conveyance of term overriding royalty in relation to properties located in Utah and West Virginia, which were sold to USB AG pursuant to the USB forward sales contract (the Dominion purchase contract)

USB Americas , USB AG

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JUN 8 2015

WV Department of
Environmental Protection

Drilling Appalachian Corporation

DB 372/413
D 2-1-2010
R 3-22-2010

DAC and Dominion agree that the retained acreage, as defined in Paragraph 2 of the prior assignment shall henceforth mean the acreages, and, where applicable, Wells, not assigned unto assignees by the prior assignment, the same being set forth on exhibit A attached hereto and made a part hereof, said acreage being held by leases also described on the aforesaid exhibit A. The parties hereto intend that the said exhibit A supersede and replace exhibit A-2 to the prior assignment.
Subject tract listed retained acreage 18.03.
Lease acreage 45

Dominion Exploration & Production, INC.

Amendment and Clarification

Dominion Appalachian Development Properties, L.L.C.,

DB 322/190
D 12-30-1997
R 1-5-1998

Assignor hereby acknowledged, does hereby grant, bargain, sell, convey, set over, assign and transfer unto Assignee the interest.
A) ARTI in Exhibits A-1 and A-2 .....
B) ARTI in working and revenue interest
C) ARTI in contracts .....
D) ARTI in personal property, fixtures .....

Drilling Appalachian Corporation

Drilling Appalachian Corporation

DB 401/343
D 7-24-2012
R 10-1-2012

Whereas, Drilling Appalachian Corporation and Dominion Exploration & Production, INC. entered into that certain amendment.... DB 372/413 and Whereas, Assignee previously assigned to Assignor, or its predecessors.....DB 322/190.
Whereas, Assignor desires to execute this Assignment for purposes of correcting these discrepancies.....Subject tract listed.

Assignment

CNX

Dominion Appalachian Development Properties, L.L.C.,

DB 322/190
D 12-30-1997
R 1-5-1998

Assignor hereby acknowledged, does hereby grant, bargain, sell, convey, set over, assign and transfer unto Assignee the interest.
A) ARTI in Exhibits A-1 and A-2 .....
B) ARTI in working and revenue interest
C) ARTI in contracts .....
D) ARTI in personal property, fixtures .....

Drilling Appalachian Corporation

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WV Department of
Environmental Protection

Lease History page 3
TM 01-016-0019
Centerville District
Tyler County, WV
111 acres

USB America Inc.

DB 345/589
D 3-2-2005
R 3-8-2005

Conveyance of term overriding royalty
Including assignment of interests in oil and gas wells and leases
Assignor, for and in consideration of the sum of Ten dollars and other good and valuable consideration to assignor in hand paid by assignee, the receipt and sufficiency of which are hereby acknowledged, has sold, granted, conveyed, assigned, set over and delivered , and by these presents does hereby sell, grant, convey, assign, set over and deliver, unto assignee as a term overriding royalty, an undivided interest (herein referred to as the Production Payment)

Dominion Exploration & Production, Inc.,
Dominion Black Warrior Basin, Inc.,
Dominion Reserves, Inc.
Dominion Appalachian Development Properties, LLC, and
San Juan Partners, LLC

Dominion Appalachian Development, Inc.

DB 324/338
D 7-1-1998
R 9-11-1998

By these presents do hereby grant, bargain, sell, convey, assign, transfer, set over and deliver unto the grantee.
A) Except as specifically excluded hereinbelow, all of the grantors' right title and interest in, to and under the wells described in Exhibit A including , but not limited to, those net revenue interest and working interest indicated in Exhibit A attached hereto; all of the grantors' right title and interest in, to and under the oil, gas and/or mineral leases.....

(TREK), Reilly Industries, Inc.,
North American Search Associates, Inc., (NASA) and
Edward B. Kime, (Kime)

Drilling Appalachian Corporation,

DB 322/209
D: 11-1-1997
R: 1-6-1998

Does hereby grant, bargain, sell, convey, release, assign, transfer, set over & deliver...
..20833% working interest in that certain oil & gas well...
Ash #1
API # 47-095-1226

Susan Reilly

Reilly Industries, Inc., F/K/A Reilly Tar & Chemical Corporation (Reilly),
North American Search Associates, Inc., (NASA),
Edward B. Kime, (Kime)
Park Place Partners, (Park Place),and
REOFF, (REOFF)

DB 324/439
D 7-25-1994
R 9-22-1998

A. Assignor is the lessee under oil and gas leases for certain land in Tyler, Doddridge and Ritchie Counties, WV. (Individually, a Lease and Collectively, the Leases) , with the wells located on such leases identified on Exhibit A-1 hereto (Individually, a well and collectively , the wells).
B. Assignor is the grantee under right-of-way agreements for certain land in Tyler, Doddridge and Ritchie Counties, WV. Identified on Exhibit C, attached hereto and incorporated herein by reference (individually, a right-of-way agreement and collectively, the right-of-way agreements).
C. Assignor has heretofore entered into separate assignments of working interest in each well with one or more of the assignees, whereby, inter alia, Assignor has assigned to the assignees certain percentages of Assignor's working interest in wells as lessee under the leases all summarized on Exhibit A-1 hereto (the working interest assignments). The percentage of working interest not assigned as listed on Exhibit A-1 is retained by Assignor.
D. The working interest assignments cross-referenced on Exhibit A-1 in turn described and cross-reference the leases.
E. The working interest assignments do not assign any interest in the leases, and the parties now desire to designate certain acreage surrounding each well for assignment to assignees, as indicated on Exhibit A-2 hereto, and as designated and shown on the surveyed plats for each well, attached hereto as Exhibit B (the plats).
F. Assignor now desires to partially assign its rights as lessee under the leases, and other rights pertaining to leases to assignees.
G. Assignor now desires to partially assign its rights as grantee under the right-of-way agreements to assignees.

Drilling Appalachian Corporation,

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Charles A. Partato

DB 273/24
D: 5-6-1988
R: 5-31-1988

Does transfer, assign & convey... 1.250% working interest ... Ash #2 API# 47-095-1227 111 acres

Marden Petroleum Exploration Company

Robert J. Reger, Jr.

DB 273/16
D: 5-6-1988
R: 5-31-1988

Does transfer, assign & convey... 0.416667% working interest ... Ash #1 API# 47-095-1226 111 acres

Marden Petroleum Exploration Company

Barda Corporation

DB 273/26
D: 5-6-1988
R: 5-31-1988

Does transfer, assign & convey... 1.000% working interest ... Ash #2 API# 47-095-1227 111 acres

Marden Petroleum Exploration Company

Pioneer Brook Investments Corp. N.V.

DB 273/29
D: 5-6-1988
R: 5-31-1988

Does transfer, assign & convey... 1.041666% working interest ... Ash #2 API# 47-095-1227 111 acres

Marden Petroleum Exploration Company

W. Haircourt Woods & Donna E. Simon (jointly)

DB 273/22
D: 5-6-1988
R: 5-31-1988

Does transfer, assign & convey... 1.250% working interest ... Ash #2 API# 47-095-1227 111 acres

Marden Petroleum Exploration Company

Robert J. Reger, Jr.

DB 273/18
D: 5-6-1988
R: 5-31-1988

Does transfer, assign & convey... 0.416667% working interest ... Ash #2 API# 47-095-1227 111 acres

Marden Petroleum Exploration Company

J. Carter Glass & Margaret S. Glass (jointly)

DB 273/21
D: 5-6-1988
R: 5-31-1988

Does transfer, assign & convey... 0.416667% working interest ... Ash #2 API# 47-095-1227 111 acres

Marden Petroleum Exploration Company

David R. Hardy

DB 273/19
D: 5-6-1988
R: 5-31-1988

Does transfer, assign & convey... 0.416667% working interest ... Ash #2 API# 47-095-1227 111 acres

Marden Petroleum Exploration Company

Clive D. Conley & Susan R. Conley (jointly)

DB 273/27
D: 5-6-1988
R: 5-31-1988

Does transfer, assign & convey... 0.208333% working interest ... Ash #2 API# 47-095-1227 111 acres

Marden Petroleum Exploration Company

W. Haircourt Woods & Donna E. Simon (jointly)

DB 273/9
D: 5-6-1988
R: 5-31-1988

Does transfer, assign & convey... 1.250% working interest ... Ash #1 API# 47-095-1226 111 acres

Marden Petroleum Exploration Company

J. Carter Glass & Margaret S. Glass (jointly)

DB 273/10
D: 5-6-1988
R: 5-31-1988

Does transfer, assign & convey... 0.416667% working interest ... Ash #1 API# 47-095-1226 111 acres

Marden Petroleum Exploration Company

Pioneer Brook Investments Corp. N.V.

DB 273/12
D: 5-6-1988
R: 5-31-1988

Does transfer, assign & convey... 1.041666% working interest ... Ash #1 API# 47-095-1226 111 acres

Marden Petroleum Exploration Company

David R. Hardy

DB 273/13
D: 5-6-1988
R: 5-31-1988

Does transfer, assign & convey... 0.416667% working interest ... Ash #1 API# 47-095-1226 111 acres

Marden Petroleum Exploration Company

Clive D. Conley & Susan R. Conley (jointly)

DB 273/15
D: 5-6-1988
R: 5-31-1988

Does transfer, assign & convey... 0.208333% working interest ... Ash #1 API# 47-095-1226 111 acres

Marden Petroleum Exploration Company

Marden Petroleum Exploration Company

DB 272/429
D: 4-21-1988
R: 5-12-1988

Does hereby bargain, sell, set over, transfer, assign, grant & convey... 6% working interest in a certain oil & gas well ... known as Ash #1
PR DB 269 & 271
page 571 & 103

Drilling Appalachian Corporation

Marden Petroleum Exploration Company

DB 272/428
D: 5-11-1988
R: 5-12-1988

Does hereby bargain, sell, set over, transfer, assign, grant & convey... 6% working interest in a certain oil & gas well ... known as Ash #2
PR DB 269 & 271
page 571 & 103

Drilling Appalachian Corporation

Reilly Tar & Chemical Corporation

DB 272/215
D: 3-30-1988
R: 4-6-1988

Does hereby bargain, sell, set over, transfer, assign, grant & convey... 70% working interest in a certain oil & gas well ... known as Ash #2
PR DB 269 & 271
page 571 & 103

Drilling Appalachian Corporation

North American Search Associates, Inc.

DB 272/310
D: 4-21-1988
R: 4-22-1988

Does hereby bargain, sell, set over, transfer, assign, grant & convey... 24% working interest in a certain oil & gas well ... known as Ash #1
PR DB 269 & 271
page 571 & 103

Drilling Appalachian Corporation

Reilly Tar & Chemical Corporation

DB 272/214
D: 3-30-1988
R: 4-6-1988

Does hereby bargain, sell, set over, transfer, assign, grant & convey... 70% working interest in a certain oil & gas well ... known as Ash #1
PR DB 269 & 271
page 571 & 103

Drilling Appalachian Corporation

North American Search Associates, Inc.

DB 272/311
D: 4-21-1988
R: 4-22-1988

Does hereby bargain, sell, set over, transfer, assign, grant & convey... 24% working interest in a certain oil & gas well ... known as Ash #2
PR DB 269 & 271
page 571 & 103

Drilling Appalachian Corporation

Reilly Tar & Chemical Corporation

DB 273/294
D: 6-20-1988
R: 6-22-1988

Does hereby bargain, sell, set over, transfer, assign, grant & convey... 70% working interest in a certain oil & gas well ... known as Ash #3
PR DB 269 & 271
page 571 & 103

Drilling Appalachian Corporation

North American Search Associates, Inc.

DB 273/469
D: 7-7-1988
R: 7-15-1988

Does hereby bargain, sell, set over, transfer, assign, grant & convey... 30% working interest in a certain oil & gas well ... known as Ash #3
PR DB 269 & 271
page 571 & 103

Drilling Appalachian Corporation

Drilling Appalachian Corporation

DB 269/571
D: 8-13-1987
R: 9-30-1987

111 acres +/-

2 year term from the date hereof, and as much longer as oil or gas is found in paying quantities thereon...

Verna O. Ash ; James E. Ash & Thelma B. Ash ; Bessie Haught & Harold Warner ; Ernest G. Seckman & O. Joanne Seckman

Drilling Appalachian Corporation

DB 271/103
D: 1-21-1988
R: 1-21-1988

111 acres +/-

2 year term from the date hereof, and as much longer as oil or gas is found in paying quantities thereon...

Ralph E. Phillips & Velinda Phillips, his wife

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8. **FARMOUT AGREEMENTS**

None of record.

****

IV.
ANALYSIS OF CURRENT OIL AND GAS LEASES, ASSIGNMENTS AND RELATED INSTRUMENTS

1. **CURRENT OIL AND GAS LEASES**

A.

Instrument:	**Oil and Gas Lease** (Exhibit 33) ("Current Oil and Gas Lease A")
Dated:	August 13, 1987
Filed:	September 30, 1987
Recorded:	Deed Record 269, Page 571
Lessors:	Verna O. Ash; James E. Ash and Thelma B. Ash; Bessie Haught and Harold Warner; and Ernest G. Seckman and O. Jo Anne Seckman
Lessee:	Drilling Appalachian Corporation
Description:	111 acres, including the Subject Land
Interest Covered:	Oil and gas
Primary Term:	2 years
Royalty:	12.5%
Delay Rentals:	$5.00 per acre per year
Shut-In Royalty:	Not stated in lease.
Unitization/Pooling:	Not stated in lease.
Special Provisions:	Free gas

COMMENT NO. 10: Primary Term of Current Oil and Gas Leases Expired. The primary terms of the Current Oil and Gas Leases described above and below in this Section IV(1) have expired. The Materials Examined contain several instruments pertaining to the Current Oil and Gas Leases dated and recorded after the expiration of the primary terms, and as recently as October 29, 2012, indicating that they are likely held by production and in their secondary terms.

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REQUIREMENT NO. 10: Prior to conducting operations on the Subject Land, we strongly recommend that you satisfy yourselves that the Current Oil and Gas Leases have been maintained by production and are in their secondary term. If you determine that the Current Oil and Gas Leases have terminated, you should obtain and record new oil and gas leases covering the Subject Land.

COMMENT NO. 11: Current Oil and Gas Leases Do Not Allow Pooling or Unitization. The Current Oil and Gas Leases do not allow for the lessee to pool the Subject Land with other tracts to create a drilling or production unit. Consequently, production from a unitized well affecting the Subject Land may give rise to a cause of action against the operator or result in the termination of the leases for failure to operate in accordance with the terms thereof. See W. Va. Code §§ 55-7-10, 37-7-2, and 37-7-4. See also *Bryan v. Big Two Mile Gas Co.*, 213 W. Va. 110, Syl. Pt. 8 (2001). We assess the risk posed by the foregoing to be high, and make the following curative recommendation.

REQUIREMENT NO. 11: Prior to obtaining an interest in the Current Oil and Gas Leases, you should conduct an additional search of the county records to verify whether the current or former owners of the Oil and Gas Estate have executed pooling amendments affecting the Current Oil and Gas Leases. If you cannot locate such amendments in the county records, you should obtain amendments and ratifications of the Current Oil and Gas Leases from the owners of the Oil and Gas Estate with language allowing for the lands covered by the Current Oil and Gas Leases to be pooled and unitized for the purpose of producing oil and gas.

B.	Instrument:	**Oil and Gas Lease** (Exhibit 34) ("Current Oil and Gas Lease B")
	Dated:	January 21, 1988
	Filed:	January 21, 1988
	Recorded:	Deed Record 271, Page 103
	Lessors:	Ralph E. Phillips and Velinda Phillips, husband and wife

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Lessee:	Drilling Appalachian Corporation
Description:	111 acres, including the Subject Land
Interest Covered:	Oil and gas
Primary Term:	2 years
Royalty:	12.5%
Delay Rentals:	$5.00 per acre per year
Shut-In Royalty:	Not stated in lease.
Unitization/Pooling:	Not stated in lease.
Special Provisions:	Free gas

See Comments and Requirements Nos. 10 and 11.

2. **ASSIGNMENTS AND RELATED INSTRUMENTS**

A.

Instrument:	**Partial Assignment of Oil and Gas Leases and Rights-of-Way** (Exhibit 35)
Dated:	July 25, 1994
Filed:	September 22, 1998
Recorded:	Deed Record 324, Page 439
Assignor:	Drilling Appalachian Corporation
Assignees:	Reilly Industries, Inc. (f/k/a Reilly Tar and Chemical Corporation), North American Search Associates, Inc., Edward B. Kime, Park Place Partners and REOFF
Interests Assigned:	An undivided 70% working interest relating to a 22 acre tract surrounding the Ash #1, #2 and #3 Wells to Reilly Industries, Inc.; along with an undivided 24% working interest relating to a 22 acre tract surrounding the Ash #1 and #2 Wells and an undivided 30% working interest relating to a 22 acre tract surrounding the Ash #3 Well to North American Search Associates, Inc.
NOTE:	The purpose of the above Assignment was to assign a working interest in the Current Oil and Gas Leases as to certain land surrounding the Ash #1, #2 and #3 Wells.

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	Amendment:	By Amendment and Clarification of Retained Acreage Under Partial Assignment of Oil and Gas Lease and Rights-of-Way effective February 1, 2010, the Assignor and Dominion Exploration and Production, Inc. (successor in interest to the above Assignees) desired to clarify and amend the acreage assigned in the above assignment to now be 45 total acres surrounding the Ash Wells, with all remaining acreage in the Current Oil and Gas Leases to be retained by the Assignor (DR 372/413, Exhibit 36).
	Amendment:	By Assignment effective July 24, 2012, the Assignor and CNX Gas Company, LLC (successor in interest to the above Assignees) desired to again clarify and amend the acreage assigned in the above assignment and amendment to clarify that the Assignor was to retain 45 acres, while CNX Gas Company, LLC was to have 66 acres out of the Current Oil and Gas Lease (DR 401/343, Exhibit 37).
B.	Instrument:	**Assignment** (Exhibit 38)
	Dated:	December 30, 1997
	Filed:	January 5, 1998
	Recorded:	Deed Record 322, Page 190
	Assignor:	Drilling Appalachian Corporation
	Assignee:	Dominion Appalachian Development Properties, L. L. C.
	Interests Assigned:	All of Assignor's right, title and interest in various leases, including Current Oil and Gas Lease A, along with operating rights and interests associated therewith in various wells, including the Ash #1, #2 and #3 Wells.
	NOTE:	This assignment is also located in Exhibit B, below, as it also pertains to the Ash #1, #2 and #3 Wells.

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NOTE: Current Oil and Gas Lease B was not included in the above assignment, however, because it is listed in subsequent assignments, we believe this was an inadvertent omission.

NOTE: The Materials Examined indicate that through a series of mergers and name changes Dominion Appalachian Development Properties, L.L.C. eventually became CNX Gas Company, LLC (DR 384/191, Exhibit 39).

C.

Instrument:	**Assignment** (Exhibit 40)
Dated:	April 30, 2010
Filed:	May 4, 2010
Recorded:	Deed Record 374, Page 187
Assignor:	Dominion Transmission, Inc.
Assignee:	CONSOL Energy Holdings LLC XVI
Interests Assigned:	All right, title and interest in various leases and wells, and certain surface rights connected to those properties listed as "Company Mineral Interests and Excluded DEPI Interests," including the Current Oil and Gas Leases.

NOTE: The Current Oil and Gas Leases are listed on Exhibit A-3 to the above assignment, containing "Company Mineral Interests and Excluded DEPI Interests." Therefore, the above Assignment conveys only the right to use the surface of the acreage covered by the Current Oil and Gas Leases, and does not assign any interests in the leases themselves or wells drilled pursuant to the leases.

COMMENT NO. 12: Unrecorded Documents Potentially Affecting Leasehold Interests. The respective percentages of oil and gas leasehold/net revenue interests set forth in Section II(6) of this Opinion are based on those instruments identified and described in Section IV, Analysis of Current Oil and Gas Leases, Assignments and Related Instruments. Such instruments internally reference agreements that exist between the parties thereto which are not of record.

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REQUIREMENT NO. 12: You should request all related agreements, including those listed below, and satisfy yourselves that the terms and conditions of such agreements do not alter or affect the respective interests of the oil and gas leasehold or net revenue interests of the above-named parties. You may provide such documentation and information to us for review in a supplemental opinion.

1. A Purchase and Sale Agreement dated March 14, 2010 between Dominion Transmission, Inc., Dominion Resources, Inc., Dominion Energy, Inc. and CONSOL Energy Holdings LLC XVI;
2. An Asset Acquisition Agreement dated August 17, 2011 between CNX Gas Company, LLC and Noble Energy, Inc.;
3. A Joint Venture Agreement between Drilling Appalachian Corporation and an unidentified party; and
4. A Purchase and Sale Agreement dated July 1, 1998 between Trek, Incorporated; Reilly Industries, Inc.; North American Search Associates, Inc.; Edward B. Kime; and Dominion Appalachian Development, Inc.

D.	Instrument:	**Assignment** (Exhibit 41)
	Dated:	September 28, 2011; effective July 1, 2011
	Filed:	November 2, 2011
	Recorded:	Deed Record 388, Page 286
	Assignor:	CNX Gas Company, LLC
	Assignee:	Noble Energy, Inc.
	Interests Assigned:	An undivided 50% interest in various leases, including the Current Oil and Gas Leases, but only as to the depths within the Marcellus Formation.
	NOTE:	The above Assignment defines the "Marcellus Formation" in West Virginia as being "from the stratigraphic equivalent of the top of the Burkett in DEPI #14815 (API 47-001-02850) at 7350'MD through the stratigraphic equivalent of the top of the Onondaga at 7710'MD."

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Assigned OB 272-428 Assigned OB 272-423 Assigned OB 273 Page 1 Item 29 Assignment DB-322, pg. 190 Assignment DB 345 pg. 589 269-571

OIL AND GAS LEASE

This Agreement, Made this 13th day of August, 1987, between Verna O. Ash; James E. Ash and Thelma B. Ash; Bessie Haught and Harold Warner; Ernest G. Seckman and O. Joanne Seckman, of Alma, West Virginia, County of Tyler, and State of West Virginia, Lessor, and DRILLING APPALACHIAN CORPORATION, of Box 99, Alma, West Virginia, 26320, State of West Virginia, Lessee.

Witnesseth That the Lessor in consideration of Five Dollars ($5.00), the receipt of which is hereby acknowledged, and of other valuable consideration does hereby demise and grant unto the Lessee, its heirs or assigns, a lease on all the oil and gas in and under the following described tract of land, and also the said tract of land for the purpose and with the exclusive right of operating thereon for said oil and gas, together with the right-of-way, the right to lay pipes over, and to use water from said premises, and also the right to erect, or remove, at any time, all property placed there by the Lessee, which tract of land is situated in the District of Centerville, County of Tyler, and State of West Virginia, and bounded and described as follows, to-wit:

North by lands of Dillon,

East by lands of Pratt,

South by lands of Doak/Andras Kanham

West by Doak/Ash,

and containing 111 acres, more or less.

To have and to hold the same unto the Lessee, its heirs and assigns for the terms and period of two (2) years from the date hereof, and as much longer as oil or gas is found in paying quantities thereon, yielding and paying to the Lessor the 1/8 part or proportionate part of all the oil produced and saved from the premises, delivered free of expense into tanks or pipe lines to the Lessor's credit, and should any well produce gas in sufficient quantities to justify the marketing, the Lessor shall be paid at the rate of 1/8 Field Market Value or proportionate part, as long as the gas therefrom is sold.

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In case no well shall be commenced on the above described premises within two (2) years from the date hereof, this lease shall become null and void, and without any further effect whatever. The Lessee shall pay for the delay at the rate of $5.00 per acre per year, payable quarterly in advance, until a well shall be commenced. Such payment may be made in hand or by check to

Verna O Ash, Alma, West Virginia.

And it is Further Agreed that the Lessor, in consideration of the agreements of the Lessee herein contained, agree that the Lessee, its heirs or assigns, may at any time surrender up this lease, by delivering same back to the Lessor, his heirs or assigns, endorsed with a surrender thereof, signed by him, and be forever discharged and relased from all moneys due or to become due and from all obligations accrued or to accrue under this lease, and thereupon this lease shall be and remain null and void, and of no further effect, and whatever moneys shall have been received by the Lessor herein shall be retained by him.

It is Further Agreed there shall be free gas from Lessee's gas well on said lands for use for light and heat in one dwelling house on said land, in the amount of 200,000 cubic feet per dwelling per year. Lessor further covenants and agrees that his taking and use of gas shall be wholly at his own risk, the Lessee not to be held liable for any accident or damage caused thereby nor shall Lessee be liable for any shortage or failure in the supply of gas for said domestic use.

In Witness Whereof, The said parties have hereunto set their hands and seals, the day and year first above written.

WITNESSES:

Kenny Mason	Verna O. Ash (Seal)
Kenny Mason	Lance E. Ash (Seal)
Kenny Mason	William B. Ash (Seal)
Kenny Mason	Bessie Haught (Seal)
Kenny Mason	Harold Warren (Seal)
Kenny Mason	Ernest E. Seckman (Seal)
Kenny Mason	Olive Joanne Seckman (Seal)

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261-593

ACKNOWLEDGEMENT

STATE OF WEST VIRGINIA,

COUNTY OF Tyler, to-wit:

I, J. L. Mason, a Notary Public in and for the County and State aforesaid, do hereby certify that Verna O Ash, James E. Ash, Thelma B. Ash, Bessie Haught, Harold Warner, Ernest G. Seckman, and O. Joanne Seckman

whose names are signed to the foregoing instrument bearing the date the 13th day of August, 19 87, have each this day acknowledged the same before me in my said county.

Given under my hand this 29th day of September, 1987.

My commission expires: June 28.

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
J. L. MASON
P. O. Box 48
Alma, West Virginia 26320
My Commission Expires Jan. 28, 1997

J. L. Mason
Notary Public

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This instrument prepared for Drilling Appalachian Corporation by:

J. L. Mason
P. O. Box 99
Alma, WV 26320-0099

STATE OF WEST VIRGINIA, COUNTY OF TYLER, TO-WIT:
OFFICE OF THE CLERK OF THE COUNTY COMMISSION OF TYLER COUNTY.

The foregoing paper writing was this day Sept. 30 19 87, at 3:52 PM presented for record in my office, and thereupon, together with the certificate thereto annexed, is admitted to record

Drilling Appalachian Corp.
Box 99
Alma, WV 26320

Teste: Clerk.

County Commission of Tyler County

C. & H. 80732-A

Assigned 272-425
" 272-427
" 272-8 thru 29
Assignment DB 345 pg. 589

101

OIL AND GAS LEASE

271-103

This Agreement, Made this 21st day of January, 1988, between Ralph E. Phillips and Velinda Phillips, his wife, of New Martinsville, County of Wetzel, and State of West Virginia, Lessor, and DRILLING APPALACHIAN CORPORATION, of Box 99, Alma, West Virginia, 26320, State of West Virginia, Lessee.

Witnesseth That the Lessor in consideration of Five Dollars ($5.00), the receipt of which is hereby acknowledged, and of other valuable consideration does hereby demise and grant unto the Lessee, its heirs or assigns, a lease on all the oil and gas in and under the following described tract of land, and also the said tract of land for the purpose and with the exclusive right of operating thereon for said oil and gas, together with the right-of-way, the right to lay pipes over, and to use water from said premises, and also the right to erect, or remove, at any time, all property placed there by the Lessee, which tract of land is situated in the District of Centerville, County of Tyler, and State of West Virginia, and bounded and described as follows, to wit:

North by lands of Dillon,

East by lands of Pratt,

South by lands of Doak/Andras Kanham

West by Doak/Ash,

and containing 111 acres, more or less.

To have and to hold the same unto the Lessee, its heirs and assigns for the terms and period of 2 ( ) years from the date hereof, and as much longer as oil or gas is found in paying quantities thereon, yielding and paying to the Lessor the 1/8 part or proportionate part of all the oil produced and saved from the premises, delivered free of expense into tanks or pipe lines to the Lessor's credit, and should any well produce gas in sufficient quantities to justify the marketing, the Lessor shall by paid at [illegible] as the gas therefrom is sold.

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271-104

In case no well shall be commenced on the above described premises within 2 ( ) years from the date hereof, this lease shall become null and void, and without any further effect whatever. The Lessee shall pay for the delay at the rate of $ 5/ per acre per year, payable ~~quarterly~~ YEARLY in advance, until a well shall be commenced. Such payment may be made in hand or by check to Ralph E. Phillips and Velinda Phillips, West Virginia.

And it is Further Agreed that the Lessor, in consideration of the Agreements of the Lessee herein contained, agree that the Lessee, its heirs or assigns, may at any time surrender up this lease, by delivering same back to the Lessor, his heirs or assigns, endorsed with a surrender thereof, signed by him, and be forever discharged and released from all moneys due or to become due and from all obligations accrued or to accrue under this lease, and thereupon this lease shall be and remain null and void, and of no further effect, and whatever moneys shall have been received by the Lessor herein shall be retained by him.

It is Further Agreed there shall be free gas from Lessee's gas well on said lands for use for light and heat in one dwelling house on said land, in the amount of 200,000 cubic feet per dwelling per year. Lessor further covenants and agrees that his taking and use of gas shall be wholly at his own risk, the Lessee not to be held liable for any accident or damage caused thereby nor shall Lessee by liable for any shortage or failure in the supply of gas for said domestic use.

In Witness Whereof, The said parties have hereunto set their hands and seals, the day and year first above written.

WITNESSES:

Kenneth Thomas — Ralph E. Phillips (Seal)

Kenneth Thomas — Velinda Phillips (Seal)

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105

271-105

ACKNOWLEDGEMENT

STATE OF WEST VIRGINIA,

COUNTY OF Tyler, to-wit:

I, J L Mason, a Notary Public in and for the County and State aforesaid, do hereby certify that Ralph E. Phillips + Velinda Phillips

whose names are signed to the foregoing instrument bearing the date the 21st day of Janaury, 1988, have each this day acknowledged the same before me in my said county.

Given under my hand this 21st day of January, 1988.

My commission expires: Jan. 28, 1997.

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
J. L. MASON
P. O. Box 48
Alma, West Virginia 26320
My Commission Expires Jan. 28, 1997

J L Mason
Notary Public

This instrument prepared for Drilling Appalachian Corporation by:

J. L. Mason
P. O. Box 99
Alma, WV 26320-0099

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STATE OF WEST VIRGINIA, COUNTY OF TYLER, TO-WIT:
OFFICE OF THE CLERK OF THE COUNTY COMMISSION OF TYLER COUNTY.

The foregoing paper writing was this day [illegible] 21 1988, at [illegible] presented for record in my office and [illegible]

Drilling Appalachian Corp.
Box 99
Alma, WV 26320

Teste: Donna J Thomas Clerk,

County Commission of Tyler County

DB 372-413

DRILLING APPALACHIAN CORPORATION
P.O. BOX 99
ALMA, WV 26320-0099

AMENDMENT AND CLARIFICATION OF RETAINED ACREAGE UNDER PARTIAL ASSIGNMENT OF OIL AND GAS LEASES AND RIGHTS-OF-WAY

THIS AMENDMENT AND CLARIFICATION OF RETAINED ACREAGE UNDER PARTIAL ASSIGNMENT OF OIL AND GAS LEASES AND RIGHTS-OF-WAY is made and entered into effective as of the 1st day of February, 2010, by and between **DRILLING APPALACHIAN CORPORATION, a West Virginia corporation** (referred to hereinbelow as "DAC"), and **DOMINION EXPLORATION & PRODUCTION, INC., a Delaware corporation** (referred to hereinbelow as "Dominion").

RECITALS

WHEREAS, by that certain Partial Assignment of Oil and Gas Leases and Rights-of-Way (the "Prior Assignment") dated July 25, 1994, by and between DAC, as "Assignor" therein, and Reilly Industries, Inc., an Indiana corporation, North American Search Associates, Inc., a Delaware corporation, Edward B. Kime, Park Place Partners, an Indiana partnership, and Reoff, an Indiana Partnership, collectively referred to as "Assignee" or "Assignees" therein (hereinafter, the "Assignees"), DAC assigned unto the aforesaid Assignees certain Working Interests (as defined therein) in all of its right, title, and interest, as lessee or otherwise, in and to the acreage set forth on Exhibit A-2 thereto and depicted on Exhibit B thereto, surrounding the Wells drilled pursuant to the Leases (both as defined therein) (hereinafter referred to as the "Leases"), as set forth on Exhibit A-1 thereto, along with an undivided percentage interest commensurate with the assigned Working Interests in all of its right, title, and interest, as grantee or otherwise, in and to the Right-of-Way Agreements set forth on Exhibit C thereto;

WHEREAS, Paragraph No. 2 of the Prior Assignment states, in part, that "all acreage not assigned . . . to Assignees [thereunder] shall be retained by Assignor . . . (the "Retained Acreage")" (hereinafter, the "Retained Acreage");

WHEREAS, through various *mesne* conveyances and mergers, Dominion is the successor in interest to the Assignees in the Prior Assignment; and

WHEREAS, DAC and Dominion now desire to clarify, memorialize, and more specifically define the Retained Acreage not assigned unto the Assignees by the Prior Assignment, the leasehold interest in which Retained Acreage is now owned by DAC.

NOW THEREFORE, in consideration of such premises, the mutual covenants and agreements hereinafter contained, and other good and valuable consideration, the sufficiency of which is hereby acknowledged, the parties hereto agree as follows:

1. DAC and Dominion agree that the Retained Acreage, as defined in Paragraph No. 2 of the Prior Assignment, shall henceforth mean the acreages, and, where applicable, Wells, not assigned unto Assignees by the Prior Assignment, the same being set forth on Exhibit A attached hereto and made a part hereof, said acreage being held by the Leases also described on the aforesaid Exhibit A. The parties hereto intend that the said Exhibit A supersede

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and replace Exhibit A-2 to the Prior Assignment. The parties hereto agree that any acreage which is part of "Lease Acreage" on Exhibit A, and not classified as "Assigned Acreage" thereon, shall be deemed "Retained Acreage." The parties hereto also agree that all Retained Acreage may not, and need not, be shown and depicted on Exhibit B to the Prior Assignment.

2. To the extent the Prior Assignment inadvertently assigned any of the Retained Acreage set forth on Exhibit A to the Assignees in the Prior Assignment, Dominion hereby grants, assigns, sets over, and re-conveys unto DAC, all of its right, title, and interest in and to any such acreages.

3. The parties hereto agree to further modify and define the Retained Acreage should information become available that would warrant such modification, such as revised surveys and/or field investigations.

4. The sole purpose of this Agreement is to more specifically define the Retained Acreage as defined in the Prior Assignment. All other terms and provisions of the Prior Assignment shall remain in full force and effect.

IN WITNESS WHEREOF, Drilling Appalachian Corporation and Dominion Exploration & Production, Inc. have caused their duly authorized representatives to execute this Agreement as of the date first above written.

DRILLING APPALACHIAN CORPORATION,
a West Virginia corporation

By _____
Kenneth R. Mason
Its: President

DOMINION EXPLORATION & PRODUCTION, INC.,
a Delaware corporation

By _____
Its **Benjamin A. Hardesty**
President

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STATE OF WEST VIRGINIA,

COUNTY OF TYLER, TO-WIT:

The foregoing instrument was acknowledged before me this 9th day of March, 2010, by Kenneth R. Mason, the President of Drilling Appalachian Corporation, a West Virginia corporation, on behalf of said corporation

Given under my hand this 9th day of March, 2010.

My commission expires: April 4, 2015

Jami Morris
Notary Public

(NOTARIAL SEAL)

STATE OF West Virginia.

COUNTY OF Lewis, TO-WIT:

The foregoing instrument was acknowledged before me this 11th day of March, 2010, by Benjamin A. Hardesty, the President of Dominion Exploration & Production, Inc., a Delaware corporation, on behalf of said corporation.

Given under my hand this 11th day of March, 2010.

My commission expires: 2/24/2016

Jamie I. Cassell
Notary Public

(NOTARIAL SEAL)

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
JAMIE I. CASSELL
ROUTE 4 BOX 221
BRIDGEPORT, WV 26330
My commission expires February 24, 2016

This instrument was prepared by:

Drilling Appalachian Corporation
P.O. Box 99
Alma, WV 26320

LORA G THOMAS
TYLER County 01:24:40 PM
Instrument No 44285
Date Recorded 03/22/2010
Document Type AMEND/OG
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Exhibit A

Assigned Well Name	Assigned API #	District	County	State	Lessor	Date of Lease	Book/Page	Parcel	Assigned Acreage	Exhibit ID	Retained Acreage	Lease Acreage	Retained Well Name	Retained API #
Ash 1	47-095-01226	Centerville	Tyler	WV	Verna O. Ash, etal	8/13/87	268/571	A	22	1				
Ash 2	47-095-01227	Centerville	Tyler	WV	Verna O. Ash, etal	8/13/87	268/571	B	22	2				
Ash 3	47-095-01237	Centerville	Tyler	WV	Verna O. Ash, etal	8/13/87	268/571	C	22	3	45	111		
B. Smith 1	47-017-03885	Grant	Doddridge	WV	Blonda Smith	6/12/90	163/194	A	40	4				
B. Smith 1	47-017-03885	Grant	Doddridge	WV	Clarence Mutscheiknaus	6/20/87	163/576	A	40	4				
B. Smith 1	47-017-03885	Grant	Doddridge	WV	Ruth N. Underwood	3/22/90	160/192	A	40	4				
B. Smith 1	47-017-03885	Grant	Doddridge	WV	Wanda Jett	3/1/91	162/682	A	40	4				
B. Smith 1	47-017-03885	Grant	Doddridge	WV	Lula W. & Boyd E. Davis	6/12/89	158/338	A	40	4				
B. Smith 1	47-017-03885	Grant	Doddridge	WV	Thelma Underwood	3/1/91	162/676	A	40	4				
B. Smith 1	47-017-03885	Grant	Doddridge	WV	Joe E. Jett	9/10/90	162/678	A	40	4				
B. Smith 1	47-017-03885	Grant	Doddridge	WV	Sandra Jett	10/28/90	162/680	A	40	4				
B. Smith 1	47-017-03885	Grant	Doddridge	WV	Olive J. Perky	10/28/90	162/684	A	40	4				
B. Smith 1	47-017-03885	Grant	Doddridge	WV	Roberta J. & Howard K. Sullivan	10/28/90	162/686	A	40	4				
B. Smith 1	47-017-03885	Grant	Doddridge	WV	Kathleen & Emil Bologa	10/28/90	162/688	A	40	4				
B. Smith 1	47-017-03885	Grant	Doddridge	WV	Pearl Maureen Jett	10/28/90	162/690	A	40	4				
B. Smith 1	47-017-03885	Grant	Doddridge	WV	Edna V. Kinney	10/28/90	162/692	A	40	4				
B. Smith 1	47-017-03885	Grant	Doddridge	WV	James W. & Mary Jett	10/28/90	162/694	A	40	4				
B. Smith 1	47-017-03885	Grant	Doddridge	WV	James J. & Nadine Jones	6/12/89	158/347	A	40	4				
B. Smith 1	47-017-03885	Grant	Doddridge	WV	Steven & Sun Underwood	6/12/89	158/332	A	40	4				
B. Smith 1	47-017-03885	Grant	Doddridge	WV	Bradley L. & Kim Underwood	6/12/89	158/330	A	40	4				
B. Smith 1	47-017-03885	Grant	Doddridge	WV	Gary & Katherine Underwood	6/12/89	158/328	A	40	4				
B. Smith 1	47-017-03885	Grant	Doddridge	WV	Glenn & Antonia Underwood	6/21/89	158/324	A	40	4				
B. Smith 1	47-017-03885	Grant	Doddridge	WV	David K. & Jacqueline Underwood	6/12/89	158/322	A	40	4				
B. Smith 1	47-017-03885	Grant	Doddridge	WV	Donald L. & Thelma Underwood	6/12/89	158/320	A	40	4				
B. Smith 1	47-017-03885	Grant	Doddridge	WV	Brenda & Burl E. Travis, Jr.	6/12/89	158/326	A	40	4				
B. Smith 1	47-017-03885	Grant	Doddridge	WV	Edgar S. & Icy Mae Jones	6/12/89	158/316	A	40	4				
B. Smith 1	47-017-03885	Grant	Doddridge	WV	Jacqueline & Harold Burgess	6/12/89	158/312	A	40	4				
B. Smith 1	47-017-03885	Grant	Doddridge	WV	Janice M. Elliffitt	6/12/89	158/314	A	40	4				
B. Smith 1	47-017-03885	Grant	Doddridge	WV	David D. Jones	6/12/89	158/318	A	40	4				
B. Smith 1	47-017-03885	Grant	Doddridge	WV	Betty & Kenneth Hamilton	6/12/89	158/334	A	40	4				
B. Smith 1	47-017-03885	Grant	Doddridge	WV	Ruby Jean & John J. Saccone	6/12/89	158/336	A	40	4				
B. Smith 2	47-017-03886	Grant	Doddridge	WV	Blonda Smith	6/12/90	163/194	B	40	5				
B. Smith 2	47-017-03886	Grant	Doddridge	WV	Clarence Mutscheiknaus	6/20/87	163/576	B	40	5				
B. Smith 2	47-017-03886	Grant	Doddridge	WV	Ruth N. Underwood	3/22/90	160/192	B	40	5				
B. Smith 2	47-017-03886	Grant	Doddridge	WV	Wanda Jett	3/1/91	162/682	B	40	5				
B. Smith 2	47-017-03886	Grant	Doddridge	WV	Lula W. & Boyd E. Davis	6/12/89	158/338	B	40	5				
B. Smith 2	47-017-03886	Grant	Doddridge	WV	Thelma Underwood	3/1/91	162/676	B	40	5				
B. Smith 2	47-017-03886	Grant	Doddridge	WV	Joe E. Jett	9/10/90	162/678	B	40	5				
B. Smith 2	47-017-03886	Grant	Doddridge	WV	Sandra Jett	10/28/90	162/680	B	40	5				
B. Smith 2	47-017-03886	Grant	Doddridge	WV	Olive J. Perky	10/28/90	162/684	B	40	5				
B. Smith 2	47-017-03886	Grant	Doddridge	WV	Roberta J. & Howard K. Sullivan	10/28/90	162/686	B	40	5				
B. Smith 2	47-017-03886	Grant	Doddridge	WV	Kathleen & Emil Bologa	10/28/90	162/688	B	40	5				
B. Smith 2	47-017-03886	Grant	Doddridge	WV	Pearl Maureen Jett	10/28/90	162/690	B	40	5				
B. Smith 2	47-017-03886	Grant	Doddridge	WV	Edna V. Kinney	10/28/90	162/692	B	40	5				
B. Smith 2	47-017-03886	Grant	Doddridge	WV	James W. & Mary Jett	10/28/90	162/694	B	40	5				
B. Smith 2	47-017-03886	Grant	Doddridge	WV	James J. & Nadine Jones	6/12/89	158/347	B	40	5				
B. Smith 2	47-017-03886	Grant	Doddridge	WV	Steven & Sun Underwood	6/12/89	158/332	B	40	5				

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TYLER COUNTY, WV

ASSIGNMENT

This ASSIGNMENT (this "***Assignment***") is from CNX GAS COMPANY LLC, a Virginia limited liability company ("***Assignor***"), whose address is 1000 CONSOL Energy Drive, Canonsburg, PA 15317, to DRILLING APPALACHIAN CORPORATION, a West Virginia corporation ("***Assignee***"), whose address is P.O. Box 99, Alma, WV 26320-0099, and is effective as of 7:01 a.m. (Central Time) on July 24, 2012 (the "***Effective Time***").

RECITALS

WHEREAS, Assignee previously assigned to Assignor, or its predecessors in interest, all of Assignee's right, title and interest in the oil and gas within and underlying the Leases, as more particularly described on **Exhibit A**, by an assignment of record in the Office of the Clerk of the County Commission of Tyler County, West Virginia, in Deed Book 322, Page 190 ("Prior Assignment');

WHEREAS, Drilling Appalachian Corporation and Dominion Exploration & Production, Inc. entered into that certain Amendment and Clarification of Retained Acreage Under Partial Assignment of Oil and Gas Leases and Rights-of-Way date February 1, 2010 of record in the Office of the Clerk of the County Commission of Tyler County, West Virginia, in Deed Book 372, Page 413, which intended to clarify the rights assigned and retained rights of Assignor and Assignee ("Clarification Assignment");

WHEREAS, the Prior Assignment did not adequately and sufficiently describe the acreage being assigned for each Lease, nor did it reflect the intent of the parties thereto, nor was the Clarification Assignment executed by the proper owner of record at the time; and,

WHEREAS, Assignor desires to execute this Assignment for purposes of correcting these discrepancies by assigning to Assignee the leasehold acreage and rights that were inadvertently assigned by the Prior Assignment and Clarification Assignment, while still retaining all leasehold acreage and rights that were intended to be retained.

NOW, THEREFORE, for and in consideration of the mutual promises contained herein, the benefits to be derived by each party hereunder, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Assignor and Assignee agree as follows:

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1.1 ***Assignment.*** Subject to the terms and conditions of this Assignment, Assignor does hereby give, grant, convey, remise, release, assign, transfer and forever quitclaim to Assignee, and Assignee agrees to acquire, all the right, title and interest of Assignor in and to the DAC Acreage of the Leases, as defined on Exhibit A (***"Conveyed Interests"***), but expressly excluding the CNX Acreage attributable to the Leases, as defined on Exhibit A and depicted on Exhibit B.

1.2 ***CNX Acreage.*** The Conveyed Interests shall not include, and Assignor hereby excepts, reserves and retains therefrom the CNX Acreage, as more particularly described on Exhibit A and depicted on Exhibit B. Additionally, the Conveyed Interests covered by this Assignment do not include any fee, royalty, executory or other real estate interest that the Assignor may own in the oil and gas within and underlying the tracts of land covered by the Leases.

1.3 ***No Warranty.*** This assignment is conveyed without warranty, express or implied. Nevertheless, it is the intent of the Assignor to convey all of its right, title and interest in and to DAC Acreage regardless of whether these interests are accurately or completely reflected on Exhibit A or depicted on Exhibit B.

1.4 ***Certain Definitions.*** The following terms, as used herein, have the meanings set forth below:

"***CNX Acreage***" means those portions of various leasehold estates, together with all valid rights to operate the same, which are not being assigned herein, but are being retained by the Assignor. This CNX Acreage is more particularly described on Exhibit A and depicted on Exhibit B.

"***Lease/Leases***" means Assignor's interest in the leases, which are more particularly described on Exhibit A.

"***DAC Acreage***" means those portions of various leasehold estates being assigned to the Assignee by this Assignment. This DAC Acreage is more particularly described on Exhibit A and depicted on Exhibit B.

1.5 ***Exhibits.*** The lessors and/or lessees named in the Exhibits to this Assignment may be historic parties in the leasehold chain of title, and, in some cases, said parties may not be the current lessor and/or lessee of the applicable lease.

1.6 ***Successors and Assigns.*** This Assignment shall bind and inure to the benefit of the parties hereto and their respective successors and assigns.

1.7 ***Counterparts.*** This Assignment may be executed in any number of counterparts, and each such counterpart hereof shall be deemed to be an original instrument, but all of such counterparts shall constitute for all purposes one agreement. To facilitate recordation, there are omitted from the Exhibits to this Assignment in certain counterparts descriptions of the Conveyed Interests and/or the Subsurface Access Easement located in recording jurisdictions other than the jurisdiction in which the counterpart is to be filed or recorded.

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IN WITNESS WHEREOF, this Assignment has been executed by the parties hereto as of September 14, 2012, but is effective for all purposes as of the Effective Time.

ASSIGNOR:

CNX GAS COMPANY LLC

By: Richard K. Elswick

Name: Richard K. Elswick

Its: Vice President

STATE OF West Virginia
COUNTY OF Lewis, TO-WIT:

I, the undersigned, a notary public of the said county, do hereby certify that on this 24th day of September 2012, before me personally appeared Richard K. Elswick, who acknowledged himself to be the Vice President of CNX GAS COMPANY LLC, and that he as such officer, being so authorized to do so, executed the foregoing instrument for the purposes therein contained, by signing the name of the company by himself as said officer.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

Karime Leonard
Notary Public

My commission expires January 2, 2022.
(Notarial Seal)

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
KARIME LEONARD
Rt 6 Box 728, Clarksburg, WV 26301
My Commission Expires January 2, 2022

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IN WITNESS WHEREOF, this Assignment has been executed by the parties hereto as of September 14, 2012, but is effective for all purposes as of the Effective Time.

ASSIGNEE:

DRILLING APPALACHIAN CORPORATION

By: Kenneth R. Mason

Name: Kenneth R. Mason

Its: President & CEO

STATE OF West Virginia
COUNTY OF Ritchie, TO-WIT:

I, the undersigned, a notary public of the said county, do hereby certify that on this 27th day of September 2012, before me personally appeared Kenneth R. Mason, who acknowledged himself to be the President & CEO of DRILLING APPALACHIAN CORPORATION, and that he as such officer, being so authorized to do so, executed the foregoing instrument for the purposes therein contained, by signing the name of the company by himself as said officer.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

Karime Leonard
Notary Public

My commission expires: January 2, 2022
(Notarial Seal)

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
KARIME LEONARD
Rt 5 Box 728, Clarksburg, WV 26301
My Commission Expires January 2, 2022

This document was prepared by:
CNX Gas Company LLC
One Energy Dr.
Jane Lew, WV 26378

ANTERO RESOURCES

Please Return To:
Antero Resources
P.O. Box 410
Bridgeport, WV 26330

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EXHIBIT A - LEASES
Tyler County, WV

District	CNX Lease Number	Lessor	Lease Date	Book	Page	Called Leasehold Acres	Gross Acres on Lease	Acres Determined from Surveys attached as Exhibit B	DAC Acreage	CNX Acreage	EXHIBIT B Full Reference Symbols
Centerville	DAD41258/001	Verna D. Ash, James E. Ash And	5/13/1957	299	371	111.26	111.26				
Centerville	DAD41259/002	Ralph E. Phillips and Velinda	1/31/1956	271	503	111.00	111.00				
Tract Total								111.00	48.00	48.00	1, 2, 3
Centerville	DAD35672	Gary M. Davis, et ux.	3/29/1949	272	516	18.32	18.87				
Tract Total								18.87	20.34	20.34	18
Centerville	DAD35736/0001	Dale V. Dankson, et al	3/26/1958	271	728	69.00	69.00				
Centerville	DAD35736/002	Rosemary Eagle	4/12/1966	272	297	68.00	69.00				
Centerville	DAD41712/003	Bonnie L. Nash As Pres Fdr	3/23/1966	271	728	69.00	69.00				
Tract Total								69.00	38.44	38.44	19
Centerville	DAD42964/001	Edna Dillon	3/3/1964	271	604	45.00	45.00				
Centerville	DAD42964/002	Samuel David Dillon And	5/11/1964	271	477	43.00	46.00				
Centerville	DAD42964/003	Howard D. Spurlock And	4/14/1964	273	87	45.00	46.00				
Centerville	DAD42964/004	Edith M. Gant, Single	3/28/1964	273	85	46.00	47.00				
Centerville	DAD42964/005	Pearl G. Hinshaw, Single	3/26/1964	272	95	45.00	45.00				
Centerville	DAD42964/006	Paul Inscoe	3/26/1964	273	112	45.00	45.00				
Centerville	DAD42964/007	Annie Wallace and Ruth	3/25/1964	273	138	45.00	42.00				
Centerville	DAD42964/008	Stella L. Day, Single	3/11/1964	273	374	45.00	45.00				
Centerville	DAD42964/009	Edith M. Mantye	3/9/1964	271	668	45.00	45.00				
Centerville	DAD42964/010	Star Furniture Company, Of	3/3/1964	271	608	45.00	45.00				
Tract Total								45.00	16.40	26.57	20
McElroy	DAD41046/001	L. Brooks Coffman and	1/9/1950	278	8	66.13	66.13				
McElroy	DAD41245/002	Robert Bennett, Single	3/1/1950	240	398	66.13	66.13				
McElroy	DAD41046/003	Hosea Cook, Single	1/1/1950	240	193	66.13	66.13				
McElroy	DAD41046/004	Allen E. Smith And Lena M.	3/12/1950	240	488	66.13	66.13				
McElroy	DAD41046/005	Rosemary Hewitt And Ray S.	3/16/1950	240	172	66.13	66.13				
McElroy	DAD41046/006	Cecile Flaherty, Single	7/7/1950	240	375	66.13	66.13				
McElroy	DAD41046/007	Pauline Burkman And	2/7/1950	240	114	66.13	66.13				
McElroy	DAD41046/008	Gerald Hulon And Leona	1/1/1950	240	164	66.13	66.13				
McElroy	DAD41046/009	Gerald Bailey	2/14/1950	240	447	66.13	66.13				
McElroy	DAD41046/010	Gertrude Fletcher	2/18/1950	240	527	66.13	66.13				
McElroy	DAD41046/011	James D. Tennant And Wanda	3/13/1950	236	432	66.13	66.13				
McElroy	DAD41046/012	Kelly Lehman And William J.	3/6/1950	236	97	66.13	66.13				
McElroy	DAD41046/013	Michael D. Pratt	3/3/1950	237	544	66.13	66.13				
McElroy	DAD41046/014	Wally Meyers	7/26/1950	237	8	66.13	66.13				
McElroy	DAD41046/015	Kimberly Hartman	8/18/1950	236	150	66.13	66.13				
McElroy	DAD41046/016	Mary E. Pratt, Single	8/4/1950	236	178	66.13	66.13				
McElroy	DAD41046/017	Lois I. Anderson, Single	8/8/1950	240	377	66.13	66.13				
McElroy	DAD41046/018	Donald K. Anderson And	7/14/1950	240	373	66.13	66.13				
McElroy	DAD41046/019	Noah S. Wells	2/3/1950	250	198	66.13	66.13				
McElroy	DAD41046/020	Russell E. Smith, Single	7/7/1950	240	524	66.13	66.13				
Tract Total								66.13	12.34	46.14	24
McElroy	DAD42936/001	James E. Jeffers And Violet R.	12/8/1951	253	33	63.00	63.00				
McElroy	DAD42936/002	Carl S. Pritchard And Marine	3/22/1951	248	602	63.00	63.00				
McElroy	DAD42936/003	Earnest E. Underwood	3/22/1951	244	624	63.00	63.00				
Tract Total								63.00	61.34	61.34	34
Centerville	DAD35248	Exhall Minister	2/14/1948	274	311	121.44	126.49				
Tract Total								121.44	76.98	24.93	35
McElroy	DAD38816/001	Lillie Brosman	5/17/1957	268	475	268.00	268.00				
McElroy	DAD38816/002	Gladys V. Myers	9/2/1946	273	279	348.90	337.00				
Tract Total								348.90	296.84	132.76	42,43,44
Centerville	DAD33091	Geneva B. Brown	9/1/1957	269	211	51.45	50.00				
Tract Total								51.45	44.34	40.91	23

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Additional $6.00

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LAND ADMINISTRATION CNX GAS COMPANY, LLC
P O BOX 1248
JANE LEW, WV 26378-1248

ASSIGNMENT

This ASSIGNMENT (this "***Assignment***") is from NOBLE ENERGY, INC., a Delaware corporation ("***Assignor***"), whose address is 100 Glenborough Drive, Suite 100, Houston, Texas 77067, to CNX GAS COMPANY LLC, a Virginia limited liability company ("***Assignee***"), whose address is 1000 CONSOL Energy Drive, Canonsburg, PA 15317, and is effective as of 7:00 a.m. (Central Time) on July 24, 2012 (the "***Effective Time***").

RECITALS

WHEREAS, Assignee previously assigned to Assignor an undivided fifty (50%) percent of Assignee's right, title and interest in the Marcellus Formations within and underlying the Leases, as more particularly described on **Exhibit A**, by an assignment of record in the Office of the Clerk of the County Commission of Tyler County, West Virginia, in Lease Book 388, Page 286 ("Prior Assignment').

WHEREAS, the Prior Assignment did not sufficiently describe the acreage being assigned for each Lease.

WHEREAS, Assignor desires to execute this Assignment for purposes of correcting these discrepancies by assigning to Assignee the leasehold acreage and rights that were inadvertently assigned by the Prior Assignment ("Unearned Acreage"), while still retaining all leasehold acreage and rights that was validly assigned ("Earned Acreage").

NOW, THEREFORE, for and in consideration of the mutual promises contained herein, the benefits to be derived by each party hereunder, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Assignor and Assignee agree as follows:

1.1 Assignment. Subject to the terms and conditions of this Assignment, Assignor does hereby give, grant, convey, remise, release, assign, transfer and forever quitclaim to Assignee, and Assignee agrees to acquire, all the right, title and interest of Assignor in and to the Unearned Acreage attributable to the Leases, as defined on **Exhibit A**, being an undivided fifty (50%) interest ("***Conveyed Interests***"):

1.2 Earned Acreage. The Conveyed Interests shall not include, and Assignor hereby excepts, reserves and retains therefrom the Earned Acreage, as more particularly described on **Exhibit A**. Additionally, the Conveyed Interests covered by this Assignment shall not include

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402-705

Mineral Interests and any of the assets covered by the Mineral Interest Deed, to the extent said Mineral Interests and assets were conveyed to Assignee by the Mineral Interest Deed.

1.3 No Warranty. This assignment is conveyed without warranty, express or implied. Nevertheless, it is the intent of the Assignor to convey all of its right, title and interest in and to Unearned Acreage regardless of whether these interests are accurately or completely reflected on **Exhibit A**.

1.4 Certain Definitions. The following terms, as used herein, have the meanings set forth below:

"***Earned Acreage***" means those portions of various leasehold estates, together with all valid rights to operate the same, which are not being assigned herein, but are being retained by the Assignor. This Earned Acreage is more particularly described on Exhibit A.

"***Lease/Leases***" means the 50% of Assignor's interest in such Unearned Acreage secured by the leases, which are more particularly described on Exhibit A.

"***Marcellus Formation***" means, (a) in central Pennsylvania, specifically from the stratigraphic equivalent of the top of the Burkett in the DeArmitt #1 (API 37-129-27246) and 7000'MD through to the stratigraphic equivalent of the top of the Onondaga at 7530'MD; (b) in southwest Pennsylvania, specifically from the stratigraphic equivalent of the top of the Burkett in the GH-10C-CV (API 37-059-25397) at 7600'MD through to the stratigraphic equivalent of the top of the Onondaga at 7900'MD; and (c) in West Virginia, specifically from the stratigraphic equivalent of the top of the Burkett in the DEPI #14815 (API 47-001-02850) at 7350'MD through to the stratigraphic equivalent of the top of the Onondaga at 7710'MD.

"***Mineral Interest***" means those certain oil and gas and mineral fee interests granted by Assignor to Assignee pursuant to the Mineral Interest Deed.

"***Mineral Interest Deed***" means that certain Mineral Interest Deed between Assignor and Assignee dated effective as of July 1, 2011, including all recorded counterparts thereof.

"***Prior Assignment***" means that assignment of record in the Office of the Clerk of the County Commission of Tyler County, West Virginia, in Lease Book 388, Page 286.

"***Unearned Acreage***" means those portions of various leasehold estates being assigned to the Assignee by this Assignment. This Affected Acreage is more particularly described on Exhibit A.

1.5 Exhibits. The lessors and/or lessees named in the Exhibits to this Assignment may be historic parties in the leasehold chain of title, and, in some cases, said parties may not be the current lessor and/or lessee of the applicable lease.

1.6 Successors and Assigns. This Assignment shall bind and inure to the benefit of the parties hereto and their respective successors and assigns.

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WV Department of
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402-706

1.7 ***Counterparts*** This Assignment may be executed in any number of counterparts, and each such counterpart hereof shall be deemed to be an original instrument, but all of such counterparts shall constitute for all purposes one agreement. To facilitate recordation, there are omitted from the Exhibits to this Assignment in certain counterparts descriptions of the Conveyed Interests and/or the Subsurface Access Easement located in recording jurisdictions other than the jurisdiction in which the counterpart is to be filed or recorded.

IN WITNESS WHEREOF, this Assignment has been executed by the parties hereto as of August 31, 2012, but is effective for all purposes as of the Effective Time.

ASSIGNOR:

NOBLE ENERGY, INC.

By: Shawn E Conner

Name: Shawn E. Conner

Its: Vice President - Business Development and Land

Commonwealth ~~STATE~~ OF Pennsylvania

COUNTY OF Washington, TO-WIT:

I, the undersigned, a notary public of the said county, do hereby certify that on this 31st day of August 2012, before me personally appeared Shawn E Conner, who acknowledged himself to be the Vice President - Business Development and Land of NOBLE ENERGY, INC., and that he as such officer, being so authorized to do so, executed the foregoing instrument for the purposes therein contained, by signing the name of the company by himself as said officer.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

H Charles Baird

Notary Public

My commission expires: May 13, 2013.
(Notarial Seal)

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
W. Charles Baird, Notary Public
North Franklin Twp., Washington County
My Commission Expires May 13, 2013
Member, Pennsylvania Association of Notaries

3

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WV Department of
Environmental Protection

402-701

IN WITNESS WHEREOF, this Assignment has been executed by the parties hereto as of September 13th, 2012, but is effective for all purposes as of the Effective Time.

ASSIGNEE:

CNX GAS COMPANY LLC

By: Richard K. Elswick

Name: Richard K. Elswick

Its: Vice President

STATE OF West Virginia
COUNTY OF Lewis, TO-WIT:

I, the undersigned, a notary public of the said county, do hereby certify that on this 13th day of September 2012, before me personally appeared Richard K. Elswick, who acknowledged himself to be the Vice President of CNX GAS COMPANY LLC, and that he as such officer, being so authorized to do so, executed the foregoing instrument for the purposes therein contained, by signing the name of the company by himself as said officer.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

Karime Leonard
Notary Public

My commission expires: January 2, 2022.
(Notarial Seal)

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
KARIME LEONARD
Rt 5 Box 728, Clarksburg, WV 26301
My Commission Expires January 2, 2022

This document was prepared by:
CNX Gas Company LLC
One Energy Dr.
Jane Lew, WV 26378

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EXHIBIT A

LEASES

Lease No.	Reference #	Lessor	Lease Date	Book/Page	Total Lease Acreage	Gross Unearned Acreage	Net Unearned Acreage	Earned Acreage	District	County
1	DAD41259/001	Verna O. Ash, James E. Ash And	8/13/1987	269/571	111	(See Below)	(See Below)	(See Below)	Centerville	Tyler
1	DAD41259/002	Ralph E. Phillips and Velinda	1/21/1988	271/103	111	(See Below)	(See Below)	(See Below)	Centerville	Tyler
AGGREGATE LEASE ACREAGE FOR DAD41259 (Lease No. 1):					**111**	**45**	**22.5**	**66**	**Centerville**	**Tyler**
2	DAD36575	Gary W. Davis, et ux.	3/29/1988	272/216	38.5	23.86	11.93	14.64	Centerville	Tyler
AGGREGATE LEASE ACREAGE FOR DAD36575 (Lease No. 2):					**38.5**	**23.86**	**11.93**	**14.64**	**Centerville**	**Tyler**
3	DAD38736/0001	Gale V. Davisson, et al.	2/22/1988	271/726	69	(See Below)	(See Below)	(See Below)	Centerville	Tyler
3	DAD38736/002	Rosemary Eagle	4/12/1988	272/297	69	(See Below)	(See Below)	(See Below)	Centerville	Tyler
3	DAD38736/003	Eleanor L. Roth As Poa For	2/22/1988	271/728	69	(See Below)	(See Below)	(See Below)	Centerville	Tyler
AGGREGATE LEASE ACREAGE FOR DAD38736 (Lease No. 3):					**69**	**25.84**	**12.93**	**43.16**	**Centerville**	**Tyler**
4	DAD40964/001	Edna Dillon	3/3/1988	271/604	45	(See Below)	(See Below)	(See Below)	Centerville	Tyler
4	DAD40964/002	Samuel David Dillon And	5/31/1988	273/472	45	(See Below)	(See Below)	(See Below)	Centerville	Tyler
4	DAD40964/003	Howard D. Spurlock And	5/10/1988	273/97	45	(See Below)	(See Below)	(See Below)	Centerville	Tyler
4	DAD40964/004	Edith M. Doak, single	5/26/1988	273/93	45	(See Below)	(See Below)	(See Below)	Centerville	Tyler
4	DAD40964/005	Pearl G. Meintrye, Single	5/26/1988	273/95	45	(See Below)	(See Below)	(See Below)	Centerville	Tyler

EXHIBIT A

402-408

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WV Department of
Environmental Protection

noble energy

Office of Oil & Gas
601 57th street, SE
Charleston, WV 25304-2345

Re: *Drilling Under Roads*

To Whom It May Concern:

Noble Energy, Inc. 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 desire additional information, please do not hesitate to contact me at dee.swiger@nblenergy.com or 724-820-3061.

Sincerely,

Dee Swiger
Regulatory Analyst III

DS/

Enclosures:

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MAR 13 2015

WW-6AC
(1/12)

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

Date of Notice Certification: _____

API No. 47- 095 - _____
Operator's Well No. SHR 08 L
Well Pad Name: SHR 08 / 81

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:	West Virginia	UTM NAD 83	Easting:	514174.04
County:	095-Tyler		Northing:	4358000.65
District:	Centerville	Public Road Access:		County Rt. 58/2
Quadrangle:	West Union	Generally used farm name:		Seckman
Watershed:	huc-10 Middle Island Creek			

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

Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following: *PLEASE CHECK ALL THAT APPLY	OOG OFFICE USE ONLY
☐ 1. NOTICE OF SEISMIC ACTIVITY or ☒ NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED	☑ RECEIVED/ NOT REQUIRED
☒ 2. NOTICE OF ENTRY FOR PLAT SURVEY or ☐ NO PLAT SURVEY WAS CONDUCTED	☑ RECEIVED
☐ 3. NOTICE OF INTENT TO DRILL or ☒ NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or ☐ WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)	☑ RECEIVED/ NOT REQUIRED
☒ 4. NOTICE OF PLANNED OPERATION	☑ RECEIVED
☒ 5. PUBLIC NOTICE	☑ RECEIVED
☒ 6. NOTICE OF APPLICATION	☑ RECEIVED

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

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MAR 13 2015

WW-6AC
(1/12)

Certification of Notice is hereby given:

THEREFORE, I Dee Swiger, 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:	Noble Energy, Inc.	Address:	1000 Noble Energy Drive
By:			Canonsburg, PA 15317
Its:	Regulatory Analyst III	Facsimile:	724-416-5248
Telephone:	724-820-3061	Email:	dee.swiger@nblenergy.com

NOTARY SEAL
COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
Regina Logue, Notary Public
New Sewickley Twp., Beaver County
My Commission Expires July 7, 2018
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

Subscribed and sworn before me this 9th day of March 2015.

Regina Logue Notary Public

My Commission Expires 07/07/2018

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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Office of Oil & Gas
MAR 13 2015

WW-6A
(9-13)

API NO. 47- 095 -
OPERATOR WELL NO. SHR 08 L
Well Pad Name: SHR 08 / 81

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

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: James Eli Ash
Address: 8707 Middle Island Road
Alma, WV 26320
Name: Bessie Eileen Warner
Address: HC 74 Box 78
Alma, WV 26320

☐ 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: none
Address: _____

☐ COAL OPERATOR
Name: none
Address: _____

☑ SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Name: James Eli Ash
Address: 8707 Middle Island Road
Alma, WV 26320

☐ OPERATOR OF ANY NATURAL GAS STORAGE FIELD
Name: none
Address: _____

*Please attach additional forms if necessary

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MAR 13 2015

WW-6A
(9-13)

API NO. 47- 095 -
OPERATOR WELL NO. SHR 08 L
Well Pad Name: SHR 08 / 81

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

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: Beverly Seckman
Address: 353 Foundry St.
New Martinsville, WV 26155
Name: Stanly Seckman
Address: 659 Jefferson Run Road
Alma, WV 26320

☐ 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: none
Address: _____

☐ COAL OPERATOR
Name: none
Address: _____

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

☐ OPERATOR OF ANY NATURAL GAS STORAGE FIELD
Name: none
Address: _____

*Please attach additional forms if necessary

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MAR 13 2015

WW-6A
(9-13)

API NO. 47- 095 -
OPERATOR WELL NO. SHR 08 L
Well Pad Name: SHR 08 / 81

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

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: Rebecca A. Seckman AKA Rebecca A. Barth
Address: 5042 Tyler Highway
Sistersville, WV 26175
Name: Kathy A. Seckman AKA Kathy A. Roberts
Address: 42842 Trail Run Road
New Maramoras, OH 45767

☐ 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: none
Address: _____

☐ COAL OPERATOR
Name: none
Address: _____

☑ SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Name: Bessie Eileen Warner
Address: HC 74 Box 78
Alma, WV 26320

Received
Office of Oil & Gas
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☐ OPERATOR OF ANY NATURAL GAS STORAGE FIELD
Name: none
Address: _____

*Please attach additional forms if necessary

WW-6A
(8-13)

API NO. 47- 095 -
OPERATOR WELL NO. SHR 08 L
Well Pad Name: SHR 08 / 81

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

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

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

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

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

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

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

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

Water Well Testing:

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

Water Testing Laboratories:

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

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

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

Written Comment:

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

Received
Office of Oil & Gas
MAR 13 2015

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

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

WW-6A
(8-13)

API NO. 47- 095 -
OPERATOR WELL NO. SHR 08 L
Well Pad Name: SHR 08 / 81

Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

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

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

Received
Office of Oil & Gas
MAR 13 2015

WW-6A
(8-13)

API NO. 47- 095 -
OPERATOR WELL NO. SHR 08 L
Well Pad Name: SHR 08 / 81

Notice is hereby given by:

Well Operator: Noble Energy, Inc.
Telephone: 724-820-3061
Email: dee.swiger@nblenergy.com

Address: 1000 Noble Energy Drive
Canonsburg, PA 15317
Facsimile: 724-416-5248

Oil and Gas Privacy Notice:

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

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
Regina Logue, Notary Public
New Sewickley Twp., Beaver County
My Commission Expires July 7, 2018
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

Received
Office of Oil & Gas
MAR 13 2015

Subscribed and sworn before me this 9th day of March, 2015.

Regina Logue Notary Public

My Commission Expires 07/07/2018

WW-6A3
(1/12)

Operator Well No. SHR 8 & SHR 81

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

Notice Time Requirement: Notice shall be provided at least **SEVEN (7)** days but no more than **FORTY-FIVE (45)** days prior to entry
Date of Notice: 01/12/2015 **Date of Planned Entry:** by 02/20/2015

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

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

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

Notice is hereby provided to:

☒ SURFACE OWNER(s) and Mineral Owner(s)
Name: James Eli Ash
Address: 8707 Middle Island Road
Alma, WV 26320
Name: Bessie Eileen Warner
Address: HC 74 Box 78
Alma, WV 26320
Name: Beverly J. Seckman
Address: 353 Foundry Street
New Martinsville, WV 26155

☐ COAL OWNER OR LESSEE
Name:
Address:

☒ MINERAL OWNER(s)
Name: Ralph E. Phillips
Address: 6411 Veterans Highway
New Martinsville, WV 26155
*please attach additional forms if necessary

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

State:	West Virginia	Approx. Latitude & Longitude:	latitude 39.374884 Longitude -80.835658
County:	Tyler	Public Road Access:	County Rt. 58/2
District:	Centerville	Watershed:	huc-10 Middle Island Creek
Quadrangle:	West Union	Generally used farm name:	Seckman

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

Received
Office of Oil & Gas
MAR 13 2015

Notice is hereby given by:

Well Operator:	Noble Energy, Inc.	Address:	1000 Noble Energy Drive, Canonsburg, PA 15317
Telephone:	724-820-3061		
Email:	dee.swiger@nblenergy.com	Facsimile:	724-743-0050

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.

WW-6A3
(1/12)

Operator Well No. SHR 8 & SHR 81

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

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

Date of Notice: 01/12/2015 **Date of Planned Entry:** by 02/20/2015

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

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

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

Notice is hereby provided to:

☒ SURFACE OWNER(s) and Mineral

Name: Rebecca A. Seckman a/k/a Rebecca A. Barth
Address: 5042 Tyler Highway
Sistersville, WV 26175
Name: Kathy A. Seckman a/k/a Kathy A. Roberts
Address: 42842 Trail Run Road
New Maramoras, OH 45767
Name: Stanley E. Seckman
Address: 659 Jefferson Run Road
Alma, WV 26320

☐ COAL OWNER OR LESSEE

Name:
Address:

☐ MINERAL OWNER(s)

Name:
Address:

*please attach additional forms if necessary

Notice is hereby given:

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

State:	West Virginia	Approx. Latitude & Longitude:	Latitude 39.374884 Longitude -80.835658
County:	Tyler	Public Road Access:	County Rt. 58/2
District:	Centerville	Watershed:	huc-10 Middle Island Creek
Quadrangle:	West Union	Generally used farm name:	Seckman

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

Received
Office of Oil & Gas
MAR 13 2015

Notice is hereby given by:

Well Operator:	Noble Energy, Inc.	Address:	1000 Noble Energy Drive, Canonsburg, PA 15317
Telephone:	724-820-3061		
Email:	dee.swiger@nblenergy.com	Facsimile:	724-743-0050

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.

WW-6A5
(1/12)

Operator Well No. SHR 08 L

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

Notice Time Requirement: notice shall be provided no later than the **filing date of permit application.**
Date of Notice: _____ **Date Permit Application Filed:** _____

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

☒ CERTIFIED MAIL 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: James Eli Ash
Address: 8707 Middle Island Road
Alma, WV 26320

Name: Bessie Eileen Warner
Address: HC 74 Box 78
Alma, WV 26320

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

State:	West Virginia	UTM NAD 83	Easting:	514174.04
County:	095-Tyler		Northing:	4358000.65
District:	Centerville	Public Road Access:		County Rt. 58/2
Quadrangle:	West Union	Generally used farm name:		Seckman
Watershed:	huc-10 Middle Island Creek			

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

Well Operator:	Noble Energy, Inc.	Address:	1000 Noble Energy Drive
Telephone:	724-820-3061		Canonsburg, PA 15317
Email:	dee.swiger@nblenergy.com	Facsimile:	724-416-5248

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

Received
Office of Oil & Gas
MAR 13 2015

WW-6A5
(1/12)

Operator Well No. SHR 08 L

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

Notice Time Requirement: notice shall be provided no later than the **filing date of permit application.**
Date of Notice: _____ **Date Permit Application Filed:** _____

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

☒ CERTIFIED MAIL 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: Rebecca A. Seckman AKA Rebecca A. Barth
Address: 5042 Tyler Highway
Sistersville, WV 26175

Name: Kathy A. Seckman AKA Kathy A. Roberts
Address: 42842 Trail Run Road
New Maramoras, OH 45767

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

State: West Virginia
County: 095-Tyler
District: Centerville
Quadrangle: West Union
Watershed: huc-10 Middle Island Creek

UTM NAD 83 Easting: 514174.04
Northing: 4358000.65
Public Road Access: County Rt. 58/2
Generally used farm name: Seckman

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: Noble Energy, Inc.
Telephone: 724-820-3061
Email: dee.swiger@nblenergy.com

Address: 1000 Noble Energy Drive
Canonsburg, PA 15317
Facsimile: 724-416-5248

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

Received
Office of Oil & Gas
MAR 13 2015

WW-6A5
(1/12)

Operator Well No. SHR 08 L

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

Notice Time Requirement: notice shall be provided no later than the **filing date of permit application.**
Date of Notice: _____ **Date Permit Application Filed:** _____

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

☒ CERTIFIED MAIL 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: Beverly Seckman
Address: 353 Foundry St.
New Martinsville, WV 26155

Name: Stanly Seckman
Address: 659 Jefferson Run Road
Alma, WV 26320

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

State:	West Virginia	UTM NAD 83	Easting:	514174.04
County:	095-Tyler		Northing:	4358000.65
District:	Centerville	Public Road Access:		County Rt. 58/2
Quadrangle:	West Union	Generally used farm name:		Seckman
Watershed:	huc-10 Middle Island Creek			

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

Well Operator:	Noble Energy, Inc.	Address:	1000 Noble Energy Drive
Telephone:	724-820-3061		Canonsburg, PA 15317
Email:	dee.swiger@nblenergy.com	Facsimile:	724-416-5248

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

Received
Office of Oil & Gas
MAR 13 2015

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
Division of Highways
1900 Kanawha Boulevard East • Building Five • Room 110
Charleston, West Virginia 25305-0430 • (304) 558-3505

Earl Ray Tomblin
Governor

Paul A. Mattox, Jr., P. E.
Secretary of Transportation/
Commissioner of Highways

March 10, 2015

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-08 Well Site, Tyler County

Dear Mr. Martin,

The West Virginia Division of Highways has assigned Permit #06-2015-0053 for the subject site to the application submitted by Noble Energy, Inc. for access to the State Road for the well site located off of Tyler County Route 58/2 SLS.

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

Very Truly Yours,

Gary K. Clayton

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

Cc: James L. McCune
Noble Energy, Inc.
CH, OM, D-6
File

RECEIVED
Office of Oil and Gas

JUN 8, 2015

WV Department of
Environmental Protection

E.E.O./AFFIRMATIVE ACTION EMPLOYER

Hydraulic Fracturing Fluid Product Component Information Disclosure

Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**
Fresh Water	Operator				100.00%
HYDROCHLORIC ACID 5-10%	Halliburton		Hydrochloric acid	7647-01-0	10.00%
SAND - COMMON WHITE	Halliburton	Proppant	Crystalline silica, quartz	14808-60-7	100.00%
SAND - PREMIUM WHITE	Halliburton	Proppant	Crystalline silica, quartz	14808-60-7	100.00%
FR-66	Halliburton	Friction Reducer	Hydrotreated light petroleum distillate	64742-47-8	30.00%
BE-9	Halliburton	Biocide	Tributyl tetradecyl phosphonium chloride	81741-28-8	10.00%
Scalechek® LP-65 Scale Inhibitor	Halliburton	Scale Inhibitor	Ammonium chloride	12125-02-9	10.00%
LGC-36 UC	Halliburton	Liquid Gel Concentrate	Guar gum	9000-30-0	60.00%
			Naphtha, hydrotreated heavy	64742-48-9	60.00%
LCA-1	Halliburton	Solvent	Paraffinic solvent	Confidential Business Information	100.00%
HAI-OS ACID INHIBITOR	Halliburton	Corrosion Inhibitor	Methanol	67-56-1	60.00%
			Propargyl alcohol	107-19-7	10.00%
FE-1A ACIDIZING COMPOSITION	Halliburton	Additive	Acetic acid	64-19-7	60.00%
			Acetic anhydride	108-24-7	100.00%
LoSurf-300D	Halliburton	Non-ionic Surfactant	1,2,4 Trimethylbenzene	95-63-6	1.00%
			Ethanol	64-17-5	60.00%
			Heavy aromatic petroleum naphtha	64742-94-5	30.00%
			Naphthalene	91-20-3	5.00%
			Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	5.00%
SP BREAKER	Halliburton	Breaker	Sodium persulfate	7775-27-1	100.00%
WG-36 GELLING AGENT	Halliburton	Gelling Agent	Guar gum	9000-30-0	100.00%

* Total Water Volume sources may include fresh water, produced water, and/or recycled water
** Information is based on the maximum potential for concentration and thus the total may be over 100%
Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

All component information listed was obtained from the supplier's Material Safety Data Sheets (MSDS). As such, the Operator is not responsible for inaccurate and/or incomplete information. Any questions regarding the content of the MSDS should be directed to the supplier who provided it. The Occupational Safety and Health Administration's (OSHA) regulations govern the criteria for the disclosure of this information. Please note that Federal Law protects "proprietary", "trade secret", and

Received
Office of Oil & Gas
MAR 13 2015

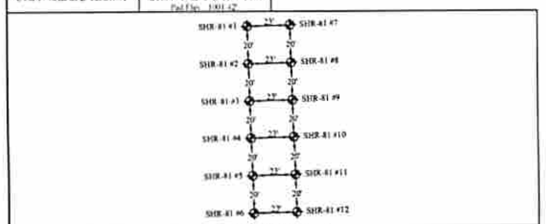
SHR-08 & SHR-81 Well Pad Sites

Site Design, Construction Plan, &
Erosion and Sediment Control Plans
Noble Energy, Inc.
Tyler County
Centerville District
Latitude 39.374884°
Longitude -80.835658°

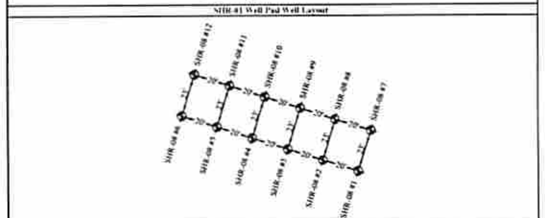
Final Design: Issued for Permitting

Site Entrance	Center of SHR-81 Well Pad	Center of SHR-08 Well Pad
WV-N NAD 83 N: 321463.57	WV-N NAD 83 N: 320617.39	WV-N NAD 83 N: 320179.93
WV-N NAD 83 E: 1590940.88	WV-N NAD 83 E: 1590834.36	WV-N NAD 83 E: 1591015.12
WV-N NAD 27 N: 321428.59	WV-N NAD 27 N: 320582.61	WV-N NAD 27 N: 320144.95
WV-N NAD 27 E: 1622382.03	WV-N NAD 27 E: 1622275.51	WV-N NAD 27 E: 1622454.27
Lat. NAD 83: 39.374884	Lat. NAD 83: 39.372558	Lat. NAD 83: 39.371363
Lon. NAD 83: -80.835658	Lon. NAD 83: -80.835990	Lon. NAD 83: -80.835335
Lat. NAD 27: 39.374803	Lat. NAD 27: 39.372477	Lat. NAD 27: 39.371282
Lon. NAD 27: -80.835830	Lon. NAD 27: -80.836162	Lon. NAD 27: -80.835507
UTM 17 NAD 83 N: 4358392.12	UTM 17 NAD 83 N: 4358133.84	UTM 17 NAD 83 N: 4358001.42
UTM 17 NAD 83 E: 514155.27	UTM 17 NAD 83 E: 514127.12	UTM 17 NAD 83 E: 514183.80
	Pad Elev.: 1096.08'	Pad Elev.: 1096.28'

Tank Pad Entrance	Center of Tank Pad
WV-N NAD 83 N: 320919.02	WV-N NAD 83 N: 321206.27
WV-N NAD 83 E: 1589927.85	WV-N NAD 83 E: 1590247.66
WV-N NAD 27 N: 320884.06	WV-N NAD 27 N: 321171.30
WV-N NAD 27 E: 1621369.00	WV-N NAD 27 E: 1621688.81
Lat. NAD 83: 39.373348	Lat. NAD 83: 39.374150
Lon. NAD 83: -80.839212	Lon. NAD 83: -80.838096
Lat. NAD 27: 39.373267	Lat. NAD 27: 39.374069
Lon. NAD 27: -80.839384	Lon. NAD 27: -80.838268
UTM 17 NAD 83 N: 4358221.07	UTM 17 NAD 83 N: 4358310.20
UTM 17 NAD 83 E: 513849.41	UTM 17 NAD 83 E: 513945.38
	Pad Elev.: 1101.42'



SHR-81 Well Pad Well Layout



SHR-08 Well Pad Well Layout

Well Location Restrictions:

All Pad and Fracture Pit construction complies with the following restrictions:

*250' from an existing well or developed spring used for human or domestic animals.

*625' from an occupied dwelling or barn greater than 2,500 SF used for poultry or dairy measured from the center of the pad.

*100' from the edge of disturbance to wetlands, perennial streams, natural or artificial lake, pond or reservoir.

*300' from the edge of disturbance to a naturally reproducing trout stream.

*1,000' from a surface or ground water intake to a public water supply.

(Well Location Restrictions of WV Code 22-6A-12)

Geotechnical:

Geotechnical investigation as provided by American Geotech, Inc dated October 2013

Environmental:

Wetland Delineations as provided by Allstar Ecology dated December 5, 2014

Topographic Information:

The topographic information shown herein is based on aerial photography by Blue Mountain Aerial Mapping, Burton, WV

MISS UTILITY OF WEST VIRGINIA
1-800-245-4848
West Virginia State Law
Section XIV: Chapter 24-C requires that you call two business days before you dig in the state of West Virginia.
IT'S THE LAW

811 Know what's below. Call before you dig.

Note:

Noble Energy will obtain an Encroachment Permit (Form MM-109) from the West Virginia Department of Transportation, Division of Highways, prior to the commencement of construction activities.

Floodplain Conditions	
Do site construction activities take place in a floodplain:	NO
Permit needed from county floodplain coordinator:	NO
Flood Hazard Zone	X
HEC-RAS Study completed:	N/A
Floodplain shown on drawings:	N/A
FIRM Map Number(s) for site:	54095C0XXX
Acreages of construction in floodplain	N/A

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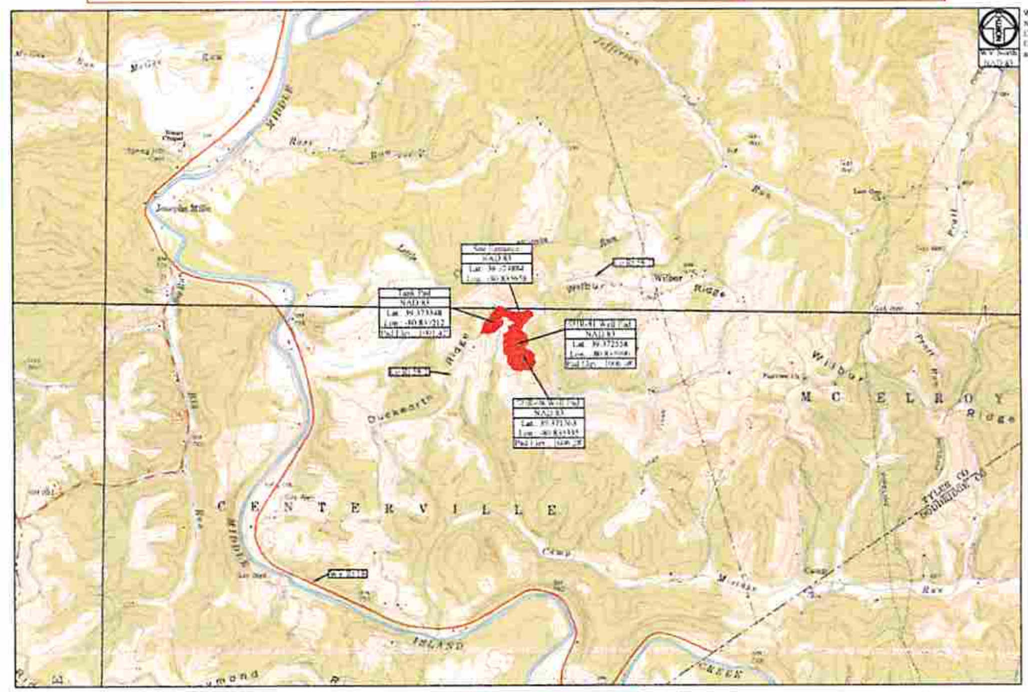
Office of Oil & Gas
MAR 13 2015



WV State Plane Coordinate System
North Zone, NAD 83
Elevations Based on NAVD88
Established By Survey Grade GPS
and OPUS Post-Processing

0 2000 4000 6000
USGS 7.5' Quadrangle: West Union
Watershed: Headwaters Middle Island Creek

Project Contacts

Noble Energy

Ben Dereume
Work: (724) 820-3119
Mobile: (814) 591-2061
Email: Ben.Dereume@nblenergy.com

Survey and Engineer

Kenneth Kelly
304-338-6985 Off.
Mobile: (304) 642-7863
Email: ksurveying@gmail.com

John P. See
304-442-0220 Off.

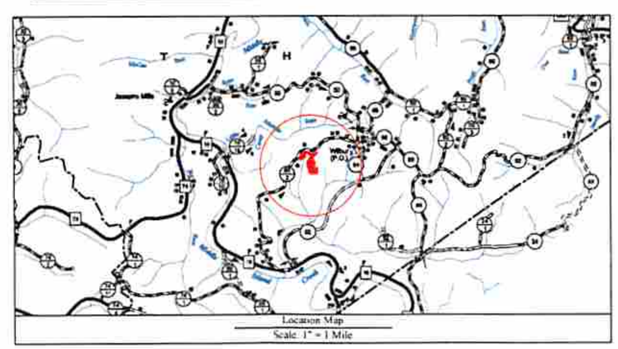
Zackary Summerfield
304-338-6987 Off.
Mobile: (304) 704-9562
Email: ksurveying@gmail.com

Approach Routes:

From US Rt 50, turn onto WV Rt 18 North at West Union. Follow WV Rt 18 North for 10.3 mi. Turn Right onto Co Rt 7 (Duckworth Ridge). Follow Co Rt 7 for 2.4 mi. The site entrance will be on the Right (South) side of the road.

Site Locations (NAD 27)		
Structure	Latitude (DD)	Longitude (DD)
Site Entrance	39.374803	-80.835830
Center of SHR-81 Well Pad	39.372477	-80.836162
Center of SHR-08 Well Pad	39.371282	-80.835507
Tank Pad Entrance	39.373267	-80.839384
Center of Tank Pad	39.374069	-80.838268

Site Locations (NAD 83)		
Structure	Latitude (DD)	Longitude (DD)
Site Entrance	39.374884	-80.835658
Center of SHR-81 Well Pad	39.372558	-80.835990
Center of SHR-08 Well Pad	39.371363	-80.835335
Tank Pad Entrance	39.373348	-80.839212
Center of Tank Pad	39.374150	-80.838096



Location Map
Scale: 1" = 1 Mile

Property Owner Information - SHR-08 & SHR-81 Site Design								
Centerville District - Tyler County								
Owner	TM - Parcel	SHR-81	SHR-08	Tank Pad	Access Road	Topsoil Excess	Add. Clearing	Total Disturbed
Verna Ash c/o Bessie Warner	16-19	4.99	4.69	1.93	2.13	1.76	12.27	27.77
	Site Totals (Ac)	4.99	4.69	1.93	2.13	1.76	12.27	27.77

Property Owner Information - Clearing Type			
Centerville District - Tyler County			
Owner	TM - Parcel	Forested Clearing	Non-Forested Clearing
Verna Ash c/o Bessie Warner	16-19	5.28	21.49
	Site Totals (Ac)	5.28	21.49

Access Road			
Surface Owner	TM - Parcel	Road Length	Type
Verna Ash c/o Bessie Warner	16-19	576.71'	SHR-81 Well Pad Access Road
Verna Ash c/o Bessie Warner	16-19	523.00'	SHR-08 Well Pad Access Road
Verna Ash c/o Bessie Warner	16-19	1,293.95'	Tank Pad Access Road
Verna Ash c/o Bessie Warner	16-19	117.49'	Existing Well Access Road 1
Verna Ash c/o Bessie Warner	16-19	555.61'	Existing Well Access Road 2

Disturbed Area	
SHR-81 Well Pad Construction	4.99 Ac
SHR-08 Well Pad Construction	4.69 Ac
Tank Pad Construction	1.93 Ac
Access Road Construction	2.13 Ac
Topsoil Excess Material	1.76 Ac
Additional Clearing	12.27 Ac
Total Disturbed Area	27.77 Ac
Additional Information	
Total Wooded Acres Disturbed	5.28 Ac
Total Linear Feet of Access Road	3,066.76'

SHR-08 & SHR-81 Site Design Quantities						
Description	Cut (CY)	Fill (CY)	Spoil (CY)	Borrow (CY)	Max. Slope	Length of Slope
SHR-81 Well Pad	20,194.98	33,635.41		13,440.43	N/A	N/A
SHR-08 Well Pad	67,914.48	18,495.00	49,419.48		N/A	N/A
Tank Pad	10,960.10	7,900.10	3,060.00		N/A	N/A
SHR-81 Well Pad Access Road	488.46	794.75		306.29	10.16%	173.93
SHR-08 Well Pad Access Road	0.00	459.28		459.28	9.16%	92.57
Tank Pad Access Road	4,437.09	5,214.76		777.67	12.18%	227.56
Existing Well Access Road 1	138.78	0.18	138.60		20.16%	85.37
Existing Well Access Road 2	47.88	243.50		195.62	15.49%	119.94
Topsoil Excess Material Stockpile	0.00	22,004.28		19,364.27	N/A	N/A
Totals	104,141.77	109,147.26	52,778.08	35,083.36		
	Total Spoil (CY) =	-5,005.49	(Excess Spoil Capacity)			

Michael Goff 3/11/15

Sheet	Description
1	Cover Sheet
2	Pre-Construction Site Conditions
3	Site Soil Map
4	Overall Plan View
5-7	E&S Plan View
8-10	Plan View
11	Disturbed Area
12	Cross Sections - SHR-81 Well Pad
13	Cross Sections - SHR-08 Well Pad
14	Cross Sections - Tank Pad
15	Cross Sections - Well Pad Access Road
16	Cross Sections - Tank Pad Access Road
17	Cross Sections - Existing Well Access Roads
S1	Site Seeding Plan
R1-R3	Site Reclamation Plan
N1	Erosion and Sediment Control Notes
D1-D2	Site Reclamation Details
T1	Tree Clearing Exhibit

Seal: JOHN P. SEE, REGISTERED PROFESSIONAL ENGINEER, STATE OF WEST VIRGINIA

Design Certification

The drawings, construction notes and reference diagrams attached hereto have been prepared in accordance with the West Virginia Code of State Rules, Division of Environmental Protection, Office of Oil and Gas 35CSR8.

All Plans, Sheets, and/or Reference Diagrams included in this design constitute a complete set of plans. A complete set of plans is necessary to interpret the site in accordance with the design.

John P. See KPE 16151, Kelly Surveying PLLC — Date: 02.16.2015

As-Built Certification

Date: ____

Revision: Design — Date: 02-15-2015

noble energy

THIS DOCUMENT PREPARED FOR NOBLE ENERGY

Kelly Surveying

SHR-08 & SHR-81 Well Pad Sites
Cover Sheet
Centerville District
Tyler County, WV

Date: 02/15/2015
Scale: As Shown
Designed By: ZS
File No.
Sheet 1 of 17

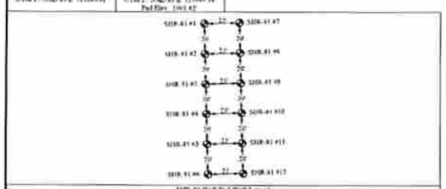
SHR-08 & SHR-81 Well Pad Sites

Site Design, Construction Plan, &
Erosion and Sediment Control Plans
Noble Energy, Inc.
Tyler County
Centerville District
Latitude 39.374884°
Longitude -80.835658°

Final Design: Issued for Permitting

Site Entrance	Center of SHR-81 Well Pad	Center of SHR-08 Well Pad
[illegible]	[illegible]	[illegible]

Tank Pad Entrance	Center of Tank Pad
[illegible]	[illegible]



Well Location Restrictions

All Pad and Fracture Pit construction complies with the following restrictions:

*250' from an existing well or developed spring used for human or domestic animals

*625' from an occupied dwelling or barn greater than 2,500 SF used for poultry or dairy measured from the center of the pad

*100' from the edge of disturbance to wetlands, perennial streams, natural or artificial lake, pond or reservoir

*300' from the edge of disturbance to a naturally reproducing trout stream

*1,000' from a surface or ground water intake to a public water supply

(Well Location Restrictions of WV Code 22-6A-12)

Geotechnical:

Geotechnical investigation as provided by American Geotech, Inc. dated October 2013

Environmental:

Wetland Delineations as provided by Allstar Ecology dated December 5, 2014

Topographic Information:

The topographic information shown herein is based on aerial photography by Blue Mountain Aerial Mapping, Burton, WV

MISS UTILITY OF WEST VIRGINIA
1-800-245-4848
West Virginia State Law Section XIV: Chapter 24-C requires that you call two business days before you dig in the state of West Virginia.
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811 Know what's below. Call before you dig.

Note:

Noble Energy will obtain an Encroachment Permit (Form MM-109) from the West Virginia Department of Transportation, Division of Highways, prior to the commencement of construction activities.

Floodplain Conditions	
Do site construction activities take place in a floodplain:	NO
Permit needed from county floodplain coordinator:	NO
Flood Hazard Zone	X
HEC-RAS Study completed	N/A
Floodplain shown on drawings	N/A
FIRM Map Number(s) for site	[illegible]
Acreage of construction in floodplain	N/A

Project Contacts

Noble Energy:

Ben Dorsemo
Work: (724) 820-3119
Mobile: (814) 591-2061
Email: Ben.Dorsemo@nblenergy.com

Survey and Engineer:

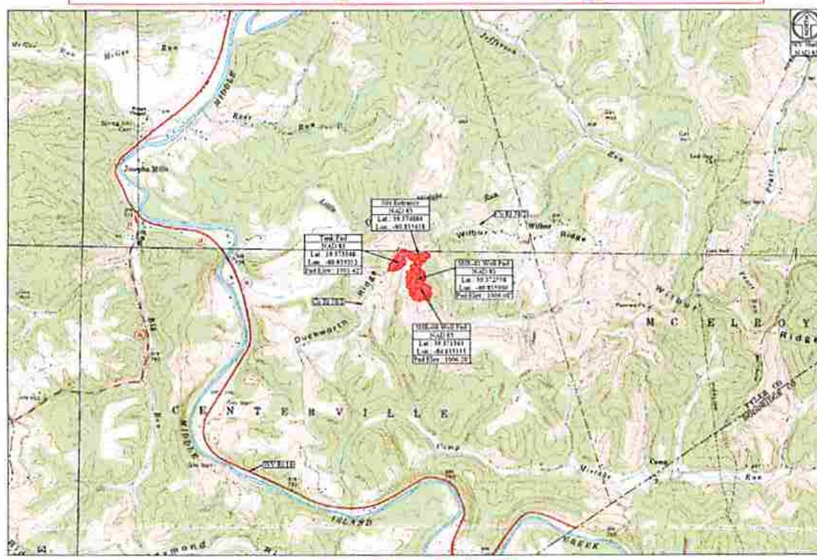
Kenneth Kelly
304-338-6987 Off.
Mobile: (304) 642-7863
Email: kserveying@gmail.com

John P. See
304-442-0220 Off.

Zachary Summerfield
304-338-6987 Off.
Mobile: (304) 704-9542
Email: kserveying@gmail.com

Approach Routes:

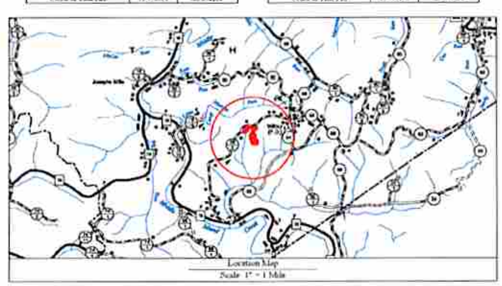
From US Rt 50, turn onto WV Rt 18 North at West Union. Follow WV Rt 18 North for 10.3 mi. Turn Right onto Co Rt 9/? (Duckworth Ridge). Follow Co Rt 9/? for 2.4 mi. The site entrance will be on the Right (South) side of the road.



0 2000 4000 6000
USGS 7.5' Quadrangle: West Union
Watershed: Headwaters Middle Island Creek

Site Locations (NAD 27)		
Structure	Latitude (DD)	Longitude (DD)
Site Entrance	[illegible]	-80.835838
Center of SHR-81 Well Pad	[illegible]	[illegible]
Center of SHR-08 Well Pad	[illegible]	[illegible]
Tank Pad Entrance	[illegible]	[illegible]
Center of Tank Pad	[illegible]	[illegible]

Site Locations (NAD 83)		
Structure	Latitude (DD)	Longitude (DD)
Site Entrance	39.374884	-80.835658
Center of SHR-81 Well Pad	[illegible]	[illegible]
Center of SHR-08 Well Pad	[illegible]	[illegible]
Tank Pad Entrance	[illegible]	[illegible]
Center of Tank Pad	[illegible]	[illegible]



Property Owner Information - SHR-08 & SHR-81 Site Design								
Centerville District - Tyler County								
Owner	TM - Parcel	SHR-81	SHR-08	Tank Pad	Access Road	Topsoil/Excess	Add. Clearing	Total Disturbed
Verna Ash c/o Bernie Warner	16-19	4.99	4.69	1.95	2.13	1.76	12.27	27.77
	Site Totals (Ac)	4.99	4.69	1.95	2.13	1.76	12.27	27.77

Property Owner Information - Clearing Type			
Centerville District - Tyler County			
Owner	TM - Parcel	Forested Clearing	Non-Forested Clearing
Verna Ash c/o Bernie Warner	16-19	4.28	31.49
	Site Totals (Ac)	4.28	31.49

Access Road			
Surface Owner	TM - Parcel	Road Length	Type
Verna Ash c/o Bernie Warner	16-19	476.71'	SHR-81 Well Pad Access Road
Verna Ash c/o Bernie Warner	16-19	423.00'	SHR-08 Well Pad Access Road
Verna Ash c/o Bernie Warner	16-19	1,293.35'	Tank Pad Access Road
Verna Ash c/o Bernie Warner	16-19	117.49'	Existing Well Access Road #1
Verna Ash c/o Bernie Warner	16-19	335.43'	Existing Well Access Road #2

Disturbed Area	
SHR-81 Well Pad Construction	4.99 Ac
SHR-08 Well Pad Construction	4.69 Ac
Tank Pad Construction	1.95 Ac
Access Road Construction	2.13 Ac
Topsoil / Excess Material	1.76 Ac
Additional Clearing	12.27 Ac
Total Disturbed Area	27.77 Ac
Additional Information	
Total Wooded Acres Disturbed	4.28 Ac
Total Linear Feet of Access Road	[illegible]

SHR-08 & SHR-81 Site Design Quantities						
Description	Cut (CY)	Fill (CY)	Spoil (CY)	Borrow (CY)	Max. Slope	Length of Slope
SHR-81 Well Pad	[illegible]	[illegible]		[illegible]	N/A	N/A
SHR-08 Well Pad	[illegible]	[illegible]	[illegible]		N/A	N/A
Tank Pad	[illegible]	[illegible]	[illegible]		N/A	N/A
SHR-81 Well Pad Access Road	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]
SHR-08 Well Pad Access Road	0.00	[illegible]		[illegible]	[illegible]	[illegible]
Tank Pad Access Road	[illegible]	[illegible]		[illegible]	12.00%	[illegible]
Existing Well Access Road #1	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
Existing Well Access Road #2	47.88	[illegible]		[illegible]	[illegible]	[illegible]
Topsoil/Excess Material Stockpile	0.00	[illegible]		[illegible]	N/A	N/A
Totals	[illegible]	[illegible]	[illegible]	[illegible]		
	Total Spoil (CY) =	[illegible]	(Excess Spoil Capacity)			

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WVDEP OOG
6-9-2015

Sheet	Description
1	Cover Sheet
2	Pre-Construction Site Conditions
3	Site Soil Map
4	Overall Plan View
5-7	E&S Plan View
8-10	Plan View
11	Disturbed Area
12	Cross Sections - SHR-81 Well Pad
13	Cross Sections - SHR-08 Well Pad
14	Cross Sections - Tank Pad
15	Cross Sections - Well Pad Access Road
16	Cross Sections - Tank Pad Access Road
17	Cross Sections - Existing Well Access Roads
S1	Site Seeding Plan
R1-R3	Site Reclamation Plan
N1	Erosion and Sediment Control Notes
D1-D2	Site Reclamation Details
T1	Tree Clearing Exhibit

Design Certification

Seal: JOHN P. SEE, REGISTERED, STATE OF WEST VIRGINIA, PROFESSIONAL ENGINEER

Date: 05/19/2015

As-Built Certification

Revision	Date
Design	02-15-2015
WVDEP Modifications	05-19-2015

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Kelly Surveying

Cover Sheet

SHR-08 & SHR-81 Well Pad Sites

Centerville District
Tyler County, WV

Date: 02/15/2015
Scale: As Shown
Designed By: ZS
File No.
Sheet 1 of 17

SHR-08 & SHR-81 Well Pad Sites

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Final Design: Issued for Permitting

SHR-08 #1	SHR-08 #2	SHR-08 #3	SHR-08 #4	SHR-08 #5	SHR-08 #6
WV-84 NAD 83 N: 320133.99	WV-84 NAD 83 N: 320139.94	WV-84 NAD 83 N: 320165.94	WV-84 NAD 83 N: 320171.99	WV-84 NAD 83 N: 320177.94	WV-84 NAD 83 N: 320183.92
WV-84 NAD 83 E: 1595107.10	WV-84 NAD 83 E: 1595098.19	WV-84 NAD 83 E: 1595010.22	WV-84 NAD 83 E: 1595001.05	WV-84 NAD 83 E: 1594992.07	WV-84 NAD 83 E: 1594984.07
WV-84 NAD 27 N: 320119.01	WV-84 NAD 27 N: 320124.99	WV-84 NAD 27 N: 320150.98	WV-84 NAD 27 N: 320156.97	WV-84 NAD 27 N: 320162.95	WV-84 NAD 27 N: 320168.94
WV-84 NAD 27 E: 1522604.74	WV-84 NAD 27 E: 1522596.93	WV-84 NAD 27 E: 1522445.15	WV-84 NAD 27 E: 1522437.39	WV-84 NAD 27 E: 1522429.22	WV-84 NAD 27 E: 1522421.11
Lat. NAD 83: 39.371256	Lat. NAD 83: 39.371315	Lat. NAD 83: 39.371625	Lat. NAD 83: 39.371684	Lat. NAD 83: 39.371741	Lat. NAD 83: 39.371797
Lon. NAD 83: -80.835177	Lon. NAD 83: -80.835245	Lon. NAD 83: -80.835915	Lon. NAD 83: -80.835983	Lon. NAD 83: -80.836046	Lon. NAD 83: -80.836114
Lat. NAD 27: 39.371315	Lat. NAD 27: 39.371229	Lat. NAD 27: 39.371544	Lat. NAD 27: 39.371460	Lat. NAD 27: 39.371380	Lat. NAD 27: 39.371274
Lon. NAD 27: -80.835349	Lon. NAD 27: -80.835417	Lon. NAD 27: -80.836085	Lon. NAD 27: -80.836153	Lon. NAD 27: -80.836215	Lon. NAD 27: -80.836282
UTM 17 NAD 83 N: 4367995.74	UTM 17 NAD 83 N: 4367995.67	UTM 17 NAD 83 N: 4367967.68	UTM 17 NAD 83 N: 4367966.95	UTM 17 NAD 83 N: 4367966.43	UTM 17 NAD 83 N: 4367966.38
UTM 17 NAD 83 E: 514197.41	UTM 17 NAD 83 E: 514191.54	UTM 17 NAD 83 E: 514187.71	UTM 17 NAD 83 E: 514179.49	UTM 17 NAD 83 E: 514170.64	UTM 17 NAD 83 E: 514168.23
SHR-08 #7	SHR-08 #8	SHR-08 #9	SHR-08 #10	SHR-08 #11	SHR-08 #12
WV-84 NAD 83 N: 320193.56	WV-84 NAD 83 N: 320203.92	WV-84 NAD 83 N: 320187.91	WV-84 NAD 83 N: 320203.90	WV-84 NAD 83 N: 320209.88	WV-84 NAD 83 N: 320205.87
WV-84 NAD 83 E: 1595060.27	WV-84 NAD 83 E: 1595048.19	WV-84 NAD 83 E: 1595036.30	WV-84 NAD 83 E: 1595007.03	WV-84 NAD 83 E: 1594987.88	WV-84 NAD 83 E: 1594968.89
WV-84 NAD 27 N: 320205.95	WV-84 NAD 27 N: 320214.94	WV-84 NAD 27 N: 320212.93	WV-84 NAD 27 N: 320154.91	WV-84 NAD 27 N: 320154.90	WV-84 NAD 27 N: 320176.88
WV-84 NAD 27 E: 1522405.42	WV-84 NAD 27 E: 1522484.34	WV-84 NAD 27 E: 1522467.23	WV-84 NAD 27 E: 1522448.17	WV-84 NAD 27 E: 1522429.09	WV-84 NAD 27 E: 1522410.01
Lat. NAD 83: 39.371431	Lat. NAD 83: 39.371375	Lat. NAD 83: 39.371186	Lat. NAD 83: 39.371491	Lat. NAD 83: 39.371417	Lat. NAD 83: 39.371439
Lon. NAD 83: -80.835234	Lon. NAD 83: -80.835222	Lon. NAD 83: -80.835189	Lon. NAD 83: -80.835187	Lon. NAD 83: -80.835425	Lon. NAD 83: -80.835493
Lat. NAD 27: 39.371375	Lat. NAD 27: 39.371288	Lat. NAD 27: 39.371099	Lat. NAD 27: 39.371326	Lat. NAD 27: 39.371334	Lat. NAD 27: 39.371312
Lon. NAD 27: -80.835528	Lon. NAD 27: -80.835594	Lon. NAD 27: -80.835562	Lon. NAD 27: -80.835529	Lon. NAD 27: -80.835557	Lon. NAD 27: -80.835665
UTM 17 NAD 83 N: 4368000.44	UTM 17 NAD 83 N: 4368002.19	UTM 17 NAD 83 N: 4368001.93	UTM 17 NAD 83 N: 4368005.54	UTM 17 NAD 83 N: 4368007.17	UTM 17 NAD 83 N: 4368008.84
UTM 17 NAD 83 E: 514199.41	UTM 17 NAD 83 E: 514194.56	UTM 17 NAD 83 E: 514181.91	UTM 17 NAD 83 E: 514187.72	UTM 17 NAD 83 E: 514176.65	UTM 17 NAD 83 E: 514178.18
Site Entrance		Center of SHR-81 Well Pad		Center of SHR-08 Well Pad	
WV-84 NAD 83 N: 321465.37		WV-84 NAD 83 N: 322617.58		WV-84 NAD 83 N: 320675.73	
WV-84 NAD 83 E: 1595984.98		WV-84 NAD 83 E: 1596085.54		WV-84 NAD 83 E: 1595015.13	
WV-84 NAD 27 N: 322468.19		WV-84 NAD 27 N: 320582.61		WV-84 NAD 27 N: 320146.91	
WV-84 NAD 27 E: 1522367.49		WV-84 NAD 27 E: 1522275.75		WV-84 NAD 27 E: 1522494.27	
Lat. NAD 83: 39.374884		Lat. NAD 83: 39.372574		Lat. NAD 83: 39.371363	
Lon. NAD 83: -80.835078		Lon. NAD 83: -80.835990		Lon. NAD 83: -80.835139	
Lat. NAD 27: 39.374903		Lat. NAD 27: 39.372477		Lat. NAD 27: 39.371282	
Lon. NAD 27: -80.835854		Lon. NAD 27: -80.836242		Lon. NAD 27: -80.835305	
UTM 17 NAD 83 N: 4358932.32		UTM 17 NAD 83 N: 4358133.04		UTM 17 NAD 83 N: 4358040.42	
UTM 17 NAD 83 E: 514127.27		UTM 17 NAD 83 E: 514127.12		UTM 17 NAD 83 E: 514187.80	
		Pad Elev. 1006.94'		Pad Elev. 1006.28'	

APPROVED
WVDEP OOG
6-9-2015

Verna Ash
c/o Bessie Warner
Tax Map 16
Parcel 19

John & Sandra
Anders
Tax Map 16
Parcel 21

Legend

Existing Features	Proposed Features
Original Ground 2' Contour	Centre of Structure
Original Ground 10' Contour	Clearing Limits
PGW Wetland	Area of Interest
Perennial Stream	Guard Rail
Intermittent Stream	Rock Filter
Ephemeral Stream	Gravel Area
Potential Bill	24" Compost Filter Sock
Existing Gas Line	Compost Filter Sock Stack
Existing Utility Pole/Line	12" Staple
Property Line	Tree Ring
	Erosion Control Blanket Slope Area
	Seeding Area
	Stone Lined Ditch

Aerial Photographs Date: 03/06/2015

0 50 100 150

SHR-08 Well Pad Access Road Profile

Existing Well Access Road #2 Profile

Disturbed Area	
SHR-81 Well Pad Construction	4.99 Ac.
SHR-08 Well Pad Construction	4.69 Ac.
Total Pad Construction	9.69 Ac.
Access Road Construction	2.55 Ac.
Topsoil / Excess Material	3.74 Ac.
Additional Clearing	11.87 Ac.
Total Disturbed Area	27.86 Ac.
Additional Information	
Total Wooded Acres Disturbed	9.38 Ac.
Total Linear Feet of Access Road	9,080.70'

Access Road			
Surface Owner	TM / Parcel	Road Length	Type
Verna Ash c/o Bessie Warner	16-19	476.71'	SHR-81 Well Pad Access Road
Verna Ash c/o Bessie Warner	16-19	423.00'	SHR-08 Well Pad Access Road
Verna Ash c/o Bessie Warner	16-19	1,295.93'	Tank Pad Access Road
Verna Ash c/o Bessie Warner	16-19	117.14'	Existing Well Access Road #1
Verna Ash c/o Bessie Warner	16-19	379.23'	Existing Well Access Road #2

Revision
Date
Description
02-13-2015 Issued for Permitting
03-16-2015 WVDEP Modifications

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Kelly Surveying

Site Erosion and Sediment Control Plan

SHR-08 & SHR-81 Well Pad Sites

Centerville District
Tyler County, WV

Date: 02/13/2015
Scale: As Shown
Designed By: ZS
File No.
Sheet 6 of 17