



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

April 02, 2015

WELL WORK PERMIT

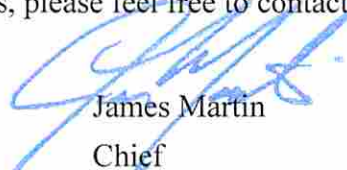
Horizontal 6A Well

This permit, API Well Number: 47-5101814, 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: SHL 27 BHS
Farm Name: WARD, STEVE & ED
API Well Number: 47-5101814
Permit Type: Horizontal 6A Well
Date Issued: 04/02/2015

Promoting a healthy environment.

PERMIT CONDITIONS

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

CONDITIONS

1. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACE). Through this permit, you are hereby being advised to consult with USACE regarding this proposed activity.
2. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than 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.

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

1) Well Operator: Noble Energy, Inc.

<u>494501907</u>	<u>051 - Marshall</u>	<u>Webster</u>	<u>Majorsville</u>
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Operator ID County District Quadrangle

2) Operator's Well Number: SHL 27 BHS Well Pad Name: SHL 27

3) Farm Name/Surface Owner: Steve & Ed Ward Public Road Access: Irish Ridge Road / Co. Rt 046

4) Elevation, current ground: 1167.4' Elevation, proposed post-construction: 1158'

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

(b) If Gas Shallow Deep
Horizontal

6) Existing Pad: Yes or No No

JW 3/31/15

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Associated Pressure(s):
Marcellus 6486' / 6537' Thick 51' / 4314 psi

8) Proposed Total Vertical Depth: 6523'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 8,812'

11) Proposed Horizontal Leg Length: 1,012'

12) Approximate Fresh Water Strata Depths: from 349' to 994'

13) Method to Determine Fresh Water Depths: nearest offset wells and nearby deep water well (PA#115834)

14) Approximate Saltwater Depths: 1408' - 1830'

15) Approximate Coal Seam Depths: 634-644

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: Shoemaker Mine
Depth: 634-644' - drilling into a interior barrier 934' from proposed mining
Seam: Pittsburgh No. 8
Owner: Consolidation Coal Company (Murray American Energy Inc.)

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MAR 31 2015

18)

CASING AND TUBING PROGRAM

TYPE	Size	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling	INTERVALS: Left in Well	CEMENT: Fill-up (Cu. Ft.)
Conductor	20"	New	LS	94#	40' Minimum or to the next component formation, but no deeper than 1st Freshwater	40'	Type III from Surface to TD
Fresh Water	13 3/8"	New	LS	54.5#	1044' or to next component formation, not deeper than elevation	1044' or to next component formation, not deeper than elevation	CTS 30% excess Yield = 1.18
Coal	13 3/8"	New	J-55	54.5#	1044' due to formation issues	1044' due to formation issues	CTS 30% excess Yield = 1.18
Intermediate	9 5/8"	New	HCK-55	36.0#	3032' or 250' below 5th sand	3032' or 250' below 5th sand	CTS 30% excess Yield = 1.19
Production	5 1/2"	New	P-110	20.0#	8,812'	8,812'	10% excess Yield = 1.27 TOC=200' above 9.625" shoe
Tubing							
Liners							

JN 3/31/15

TYPE	Size	Wellbore Diameter	Wall Thickness	Burst Pressure	Cement Type	Cement Yield (cu. ft./k)
Conductor	20"	26"	0.438		Type III	surface to TD
Fresh Water	13 3/8"	17.5"	0.380	2730	Class A	30% excess Yield = 1.18
Coal	13 3/8"	17.5"	0.380	2730	Class A	30% Excess Yield = 1.18
Intermediate	9 5/8"	12 3/8"	0.352	3520	Class A	30% excess Yield = 1.19 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				**Max associated surface pressure (psi) (13 3/8) Freshwater casing 1200		

PACKERS

Kind:				
Sizes:				
Depths Set:				

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MAR 31 2015

WV Department of
Environmental Protection

WW-6B
(9/13)

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 6,527 feet. Drill Horizontal leg - stimulate and be capable of producing from the Benson to the Marcellus Formation. Due to Red Rock/ Formation issues install the 13 3/8" to 1044' 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): 19.325

22) Area to be disturbed for well pad only, less access road (acres): 10.228

23) Describe centralizer placement for each casing string:

Conductor - No centralizers used. Fresh Water/Surface - centralized every three joints to surface. Coal - Bow Spring 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. Fresh Water/Coal - 15.6 ppg Class A CaCl (CA-100), 0.25# lost circ. (CLC-CPF), 30% excess yield = 1.18. Intermediate- Allied 16.2 ppg Class A + 0.2 lb/sk C-16A, 0.3 lb/sk C-35, 0.25 lb/sk C-41P 30% Excess Yield = 1.10. Production - 14.6 ppg 65/35 Class A/POZ +/-0.5% fluid loss additive, +/-0.3% retarder, +/-0.6% dispersant, +/-0.2% antifoam, +/-0.1% antisetling 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. Coal and 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 SOBMs 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.

*Note: Attach additional sheets as needed.

51-01814

JN 3/31/15

DRILLING WELL PLAN		SHL 27B SHL										SHL 27B LP										SHL 27B BHL										COMMENTS									
SHL 27B Macellus Shale Horizontal Marshall County, WV		532988.152N 1695599.024E										532923.03N 1695322.553E										524164.344N 1698510.452E																			
		Ground Elevation		1159'		159°		GEOLOGY		TOP		BASE		MUD		CEMENT		CENTRALIZERS		CONDITIONING		COMMENTS																			
Azim		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	Pittsburgh Coal	634	644	AIR / FRESH WATER MIST	15.6 ppg Class A 0.25# Lost Circ 30% Excess Yield = 1.18	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.	Combined Fresh Water and Coal Protection String Surface casing = 0.380" wall thickness Burst=2730 psi																															
	12 3/8	9-5/8" 36# HCK-55 BTC	Int. Casing	1639	1719	AIR	Allied 16.2 ppg Class A + 0.2 lb/sk C-16A, 0.3 lb/sk C-35, 0.25 lb/sk C-41P Yield = 1.10	Bow spring centralizers every joint to 200' above storage zone, then 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.	Casing to be ran 250' below the 5th Sand. Intermediate casing = 0.352" wall thickness Burst=3520 psi																															
	8.75" Vertical	5-1/2" 20# HCP-110 TXP BTC	Warren Sand	4224	4233	AIR	14.6ppg 65/35 Class A/Poz +/0.5% fluid Loss additive, +/0.3% retarder, +/0.6% dispersant, +/0.2% antifoam, +/0.1% antisetling	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																															
	8.75" Curve	8.75" 8.5" Lateral	Java Shale	4891	5062	12.0ppg-12.5ppg SOBIM	10% Excess Yield=1.27 TOC >= 200' above 9.625" shoe	Rigid Bow Spring every joint to KOP																																	
			Angola Shale	5119	5744																																				
			Rhinesireet	5744	6160																																				
			Cashaqua	6150	6238																																				
			Middlesex	6238	6271																																				
			West River	6271	6326																																				
		Burkett	6326	6346																																					
		Tully Limestone	6346	6373																																					
		Hamilton	6373	6486																																					
		Marcellus	6486	6537																																					
		TD	8812	8523																																					
		Onondaga	6537																																						
LP @ 6523' TVD / 7800' MD		8.75" / 8.5" Hole - Cemented Long String		5-1/2" 20# HCP-110 TXP BTC		+/-1012' ft Lateral		TD @ +/-6523' TVD +/-8812' MD		X=centralizers																															

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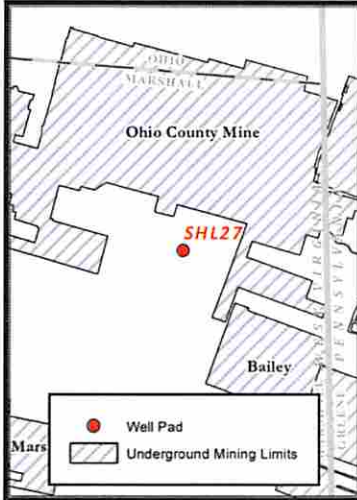
Fresh Water Protection String:		Cement Additives	
Allied Material Name	Additive (Material) Type	Additive (Material) Description	CAS #
CAC (Class A Common)	Base Cement	Grey powder	65997-15-1
A-100	Accelerator	White, flake	10043-52-4 7447-40-7 7732-18-5
LC-CPF (Cellophane Flakes)	Lost Circulation Aid	White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

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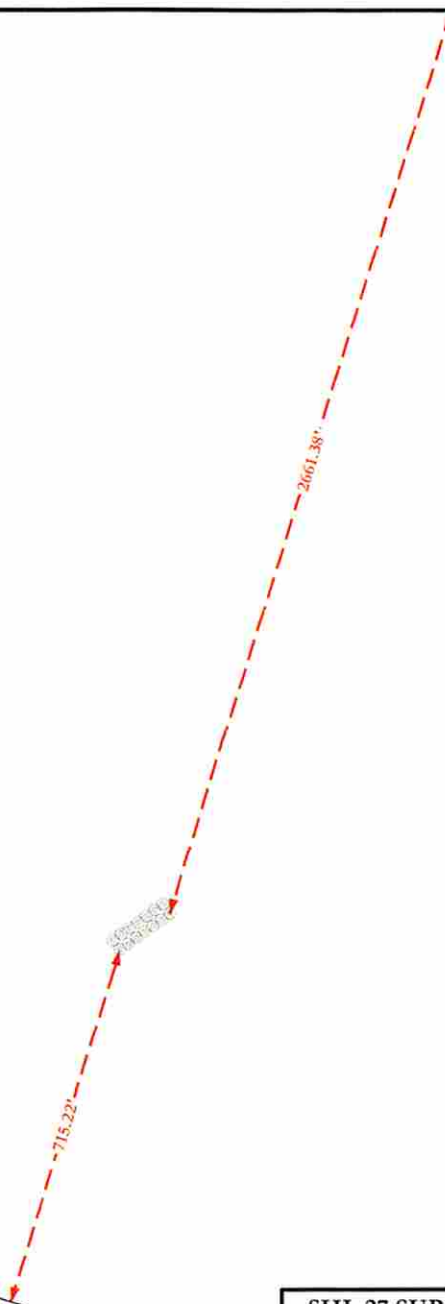
WV Department of
Environmental Protection

OHIO COUNTY MINE
OHIO COUNTY COAL COMPANY

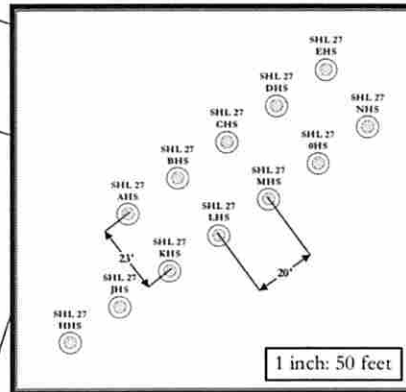


Depth To Pittsburgh Coal
Seam Base = 643 Feet

4705101814



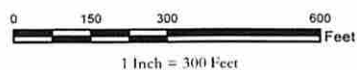
**SHL 27 SURFACE LOCATION
@ 20 FT SPACING**



Note:
- Mine data courtesy of WV Department of Environmental Protection and Control Coal Co
- Coal seam data courtesy of WV Division of Natural Resources.

Office of Oil & Gas
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**SHL 27 SITE SAFETY PLAN
- WELLHEAD TOPHOLE LOCATION -**

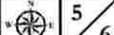


Projection: NAD 1927 StatePlane West Virginia North FIPS 4701
Units: Foot US



Date: 12/9/2014
Author:
Christopher Glover

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





DRILLING WELL PLAN
SHL 27B
Macellus Shale Horizontal
Marshall County, WV

Ground Elevation	1159'	SHL 27B SHL	532988.152N 1695599.024E
Azm	159°	SHL 27B LP	532923.03N 1695322.553E
		SHL 27B BHL	524164.344N 1698510.452E

WELLBORE DIAGRAM		HOLE	CASING	GEOLOGY	TOP	BASE	MUD	CEMENT	CENTRALIZERS	CONDITIONING	COMMENTS	
	36	30" 117#	Conductor	40	40	AIR	To Surface	N/A	Ensure the hole is clean at TD.	Stabilize surface fill/soil. Conductor casing = 0.375" wall thickness		
	24	20" 94#	Fresh Water	349		AIR	15.6 ppg Type 1 + 2% CaCl ₂ , 0.25# Lost Circ 30% Excess Yield = 1.18	Centralized every 3 joints to surface	Fill with KCl water once drilled to TD. Once casing is at setting depth, circulate a minimum of one hole volume prior to pumping cement.	Surface casing = 0.438" wall thickness Burst=2730 psi		
				449	Water String							
	17 1/2	13-3/8" 54.5# J-55 BTC	Pittsburgh Coal	644	634	AIR	15.6 ppg Type 1 + 2% CaCl ₂ , 0.25# Lost Circ 30% Excess Yield = 1.18	Bow Spring on first 2 joints then every third joint to 100' form surface	Circulate and condition mud at TD. Once casing is at setting depth, circulate a minimum of one hole volume prior to pumping cement.	Intermediate casing = 0.380" wall thickness Burst=2730 psi		
				1044	Int. Casing							
				1719	Big Lime	1639			15.6ppg Class A +0.4% Ret. 0.15% Disp. 0.2% AntiFoam, 0.125#/sk Lost Circ 20% Excess Yield=1.19 To Surface	Bow spring centralizers every third joint to 100' feet from surface.	Circulate and condition mud at TD. Once casing is at setting depth, circulate a minimum of one hole volume prior to pumping cement.	Casing to be ran 250' below the 5th Sand. Intermediate casing = 0.352" wall thickness Burst=3520 psi
				2652	Gordon	2639						
	12 3/8	9-5/8" 36# HCK-55 BTC	Fifth Sand	2782	2748							
				3032	Int. Casing							
	8.75" Vertical			4224	4224	8.0ppg - 9.0ppg SOBIM	14.8ppg Class A 25:75:0 System +2.6% Cement extender, 0.7% Fluid Loss additive, 0.45% high temp retarder, 0.2% friction reducer	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		
				5062	Java Shale	4891						
				5744	Angola Shale	5119						
6160				Rhinestreet	5744							
6238				Cashaqua	6150							
6271				Middlesex	6238	11.5ppg-12.5ppg SOBIM						
6326				West River	6271							
6346				Burkett	6326							
6373				Tully Limestone	6346							
6486				Hamilton	6373							
8.75" - 8.5" Lateral			6486	6486								
			6537	Marcellus	6486							
			6523	TD	8812							
			6537	Onondaga	6537							

LP @ 6523' TVD / 7800' MD
 8.75' / 8.5' Hole - Cemented Long String
 5-1/2" 20# HCP-110 TXP BTC
 +/-1012' ft Lateral
 TD @ +/-6523' TVD +/-8812' MD

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Received
 Office of Oil & Gas
 JAN 20 2015

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN **4705101814**

Operator Name Noble Energy, Inc. OP Code 494501907

Watershed (HUC 10) Wheeling Creek (undefined) Quadrangle Majorsville

Elevation 1158.0' County 051 - Marshall District Webster

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

Will a pit be used? Yes No

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

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

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number See attached 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 intermediate string then SOB

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

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

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

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

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

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

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

Company Official Signature [Signature]
Company Official (Typed Name) Kim Ward
Company Official Title Regulatory Analyst I



Subscribed and sworn before me this 14 day of Jan, 2015
[Signature] Notary Public
My commission expires 09/19/2023

Office of Oil & Gas
JAN 20 2015

Noble Energy, Inc.

Proposed Revegetation Treatment: Acres Disturbed 19.325 Prevegetation pH 4705101814
6.0

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

Fertilizer type _____

Fertilizer amount 500 lbs/acre

Mulch Hay or Straw at 2 Tons/acre

Seed Mixtures

Temporary

Permanent

Seed Type	lbs/acre
Tall Fescue	40
Ladino Clover	5

Seed Type	lbs/acre
Tall Fescue	40
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: *James Unhosen*

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

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Office of Oil & Gas
JAN 20 2015

Title: Oil and Gas Inspector

Date: 1/14/2015

Field Reviewed? () Yes () No

Cuttings Disposal/Site Water

4705101814

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

Max Environmental 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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JAN 20 2015

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

4705101814

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

Escrowed
Office of Gas
JAN 20 2015

4705101814



Site Safety Plan

Noble Energy, Inc.

SHL 27 Well Pad

BNS

January 2015: Version 1

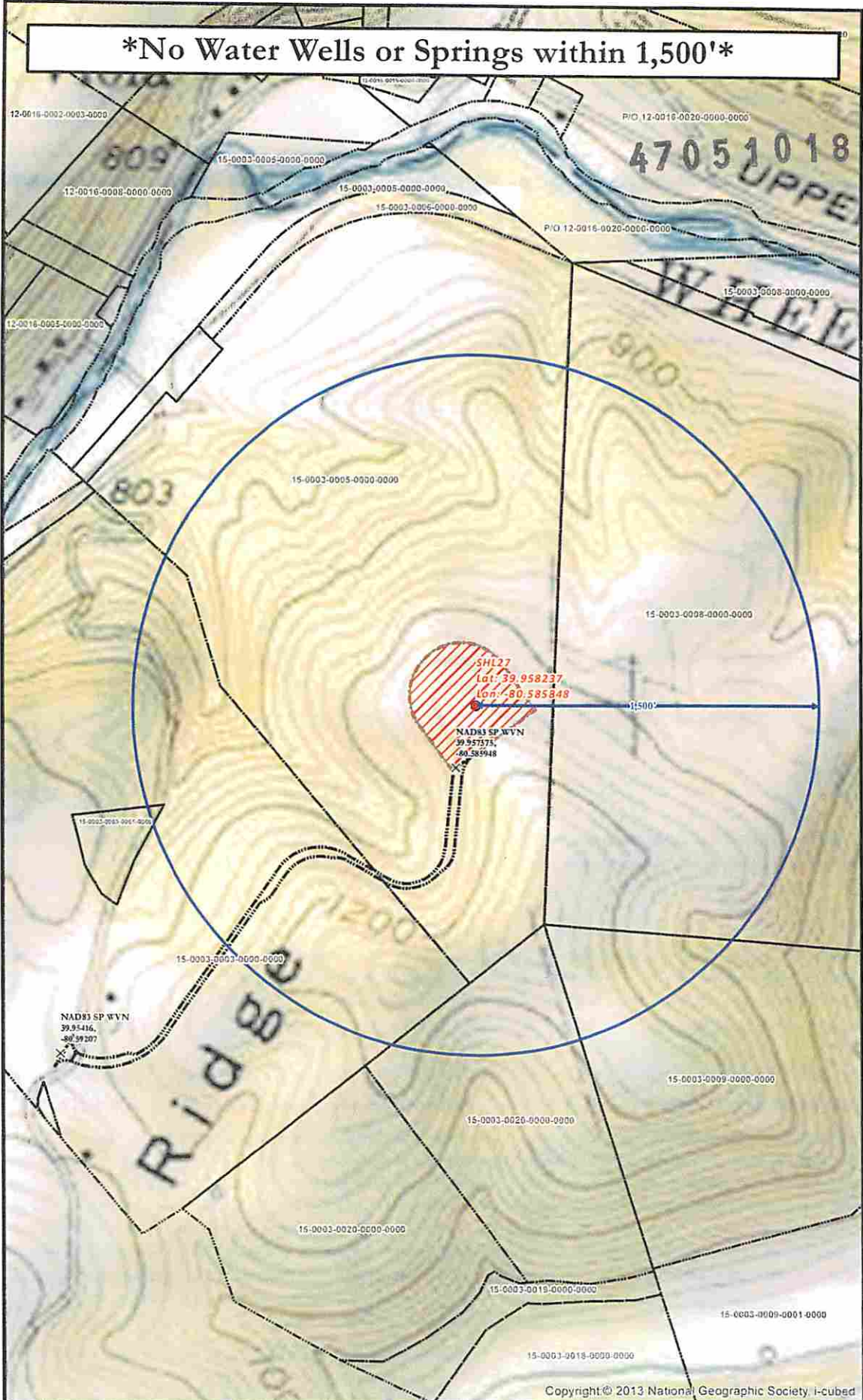
For Submission to *JL*
1/14/2015
**West Virginia Department of Environmental Protection,
Office of Oil and Gas**

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

Received
Office of Oil & Gas

JAN 20 2015

No Water Wells or Springs within 1,500'



SHL 27 SITE SAFETY PLAN
- SITE WELL LOCATION -

- Well Pad
- Spring
- Water Well
- Intersection
- Access Road
- 1500' Water Well Buffer
- Well Pad Boundary
- Surface Parcels (Revised)

0 250 500 1000
Feet
1 Inch = 500 Feet

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

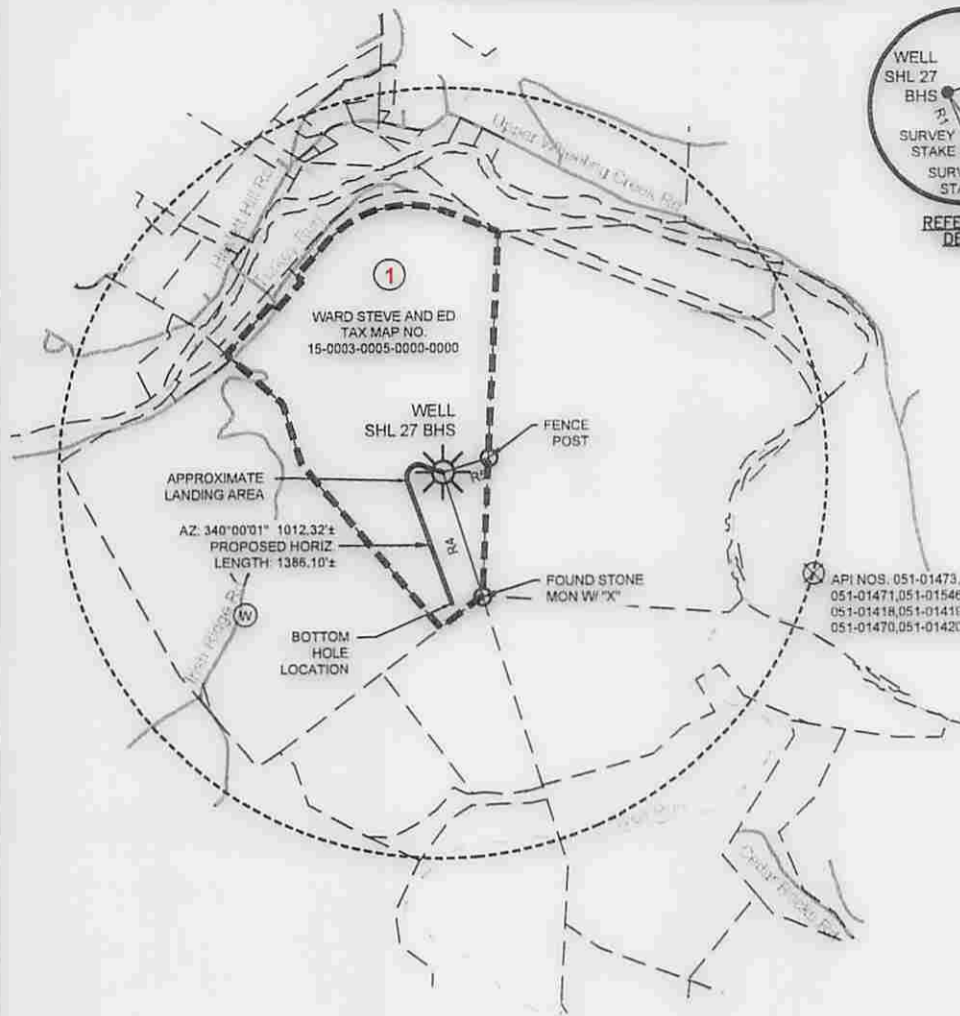
****Disclaimer: All data is licensed for use by Noble Energy Inc. use only.****

noble energy

Date: 12/9/2014

Author:
Christopher Zivner

6/6



SURFACE HOLE LOCATION (SHL)

UTM 17 - NAD83
 N: 4423218.098
 E: 535386.475
 NAD27, WV NORTH
 N: 532988.152
 E: 1695599.024
 LAT/LON DATUM-NAD83
 LAT: 39.958363
 LON: -80.585695

APPROX. LANDING POINT

UTM 17 - NAD83
 N: 4423196.848
 E: 535302.576
 NAD27, WV NORTH
 N: 532923.029
 E: 1695322.552
 LAT/LON DATUM-NAD83
 LAT: 39.958175
 LON: -80.586678

BOTTOM HOLE LOCATION

UTM 17 - NAD83
 N: 4422908.805
 E: 535412.904
 NAD27, WV NORTH
 N: 531971.749
 E: 1695668.788
 LAT/LON DATUM-NAD83
 LAT: 39.955575
 LON: -80.585402

LINE	BEARING	DISTANCE
R1	N22°43'24"W	315.09'
R2	N34°30'32"W	440.86'
R3	S72°57'14"W	376.30'
R4	N17°45'07"W	1016.74'
R5	S72°57'14"W	376.30'

LEGEND

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

WELLS WITHIN 3000'

- EXISTING GAS WELL
- RECORD GAS WELL

**WATER WELLS:
NONE FOUND**

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

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

FILE #: SHL 27 BHS
 DRAWING #: SHL 27 BHS
 SCALE: 1"=1500'
 MINIMUM DEGREE OF ACCURACY: 1/2500
 PROVEN SOURCE: USGS MONUMENT
 OF ELEVATION: U 124: 951.16'

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

SIGNED: *[Signature]*
 R.P.E.: 18766 L.L.S.: P.S. NO.



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

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

WATERSHED: WHEELING CREEK
 COUNTY/DISTRICT: MARSHALL / WEBSTER
 SURFACE OWNER: STEVE WARD AND ED WARD
 OIL & GAS ROYALTY OWNER: BOUNTY MINERALS, LLC

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

TARGET FORMATION: MARCELLUS
 WELL OPERATOR: NOBLE ENERGY, INC.
 Address: 333 TECHNOLOGY DRIVE, SUITE 116
 City CANONSBURG State PA Zip Code 15317

DATE: OCTOBER 16, 2014 - REV. FEBRUARY 12, 2015

OPERATOR'S WELL #: SHL 27 BHS

API WELL # 47 051 01814
 STATE COUNTY PERMIT

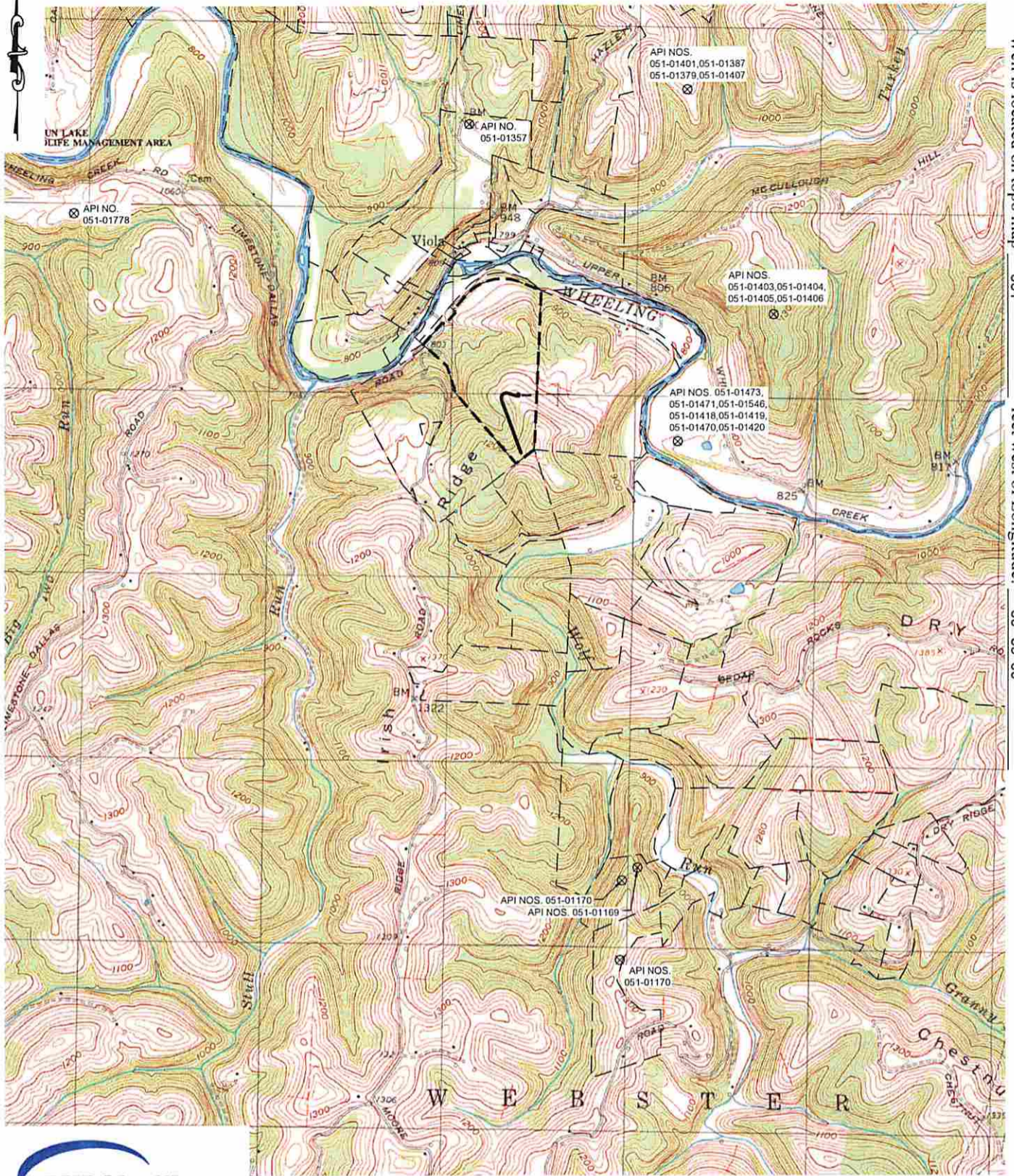
ELEVATION: 1,167.4'
 QUADRANGLE: MAJORSVILLE, W. VA
 ACREAGE: 122.47
 ACREAGE: 122.47

ESTIMATED DEPTH: TVD: 6,527' ± TMD: 8,812' ±
 DESIGNATED AGENT: STEVEN M. GREEN
 Address: 500 VIRGINIA STREET EAST, UNITED CENTER SUITE 590
 City CHARLESTON State WV Zip Code 25301



Well is located on topo map 15,166 feet south of Latitude: 40° 00' 00"

Well is located on topo map 661 feet west of Longitude: 80° 35' 00"



Waterfront Corporate Park III, Suite 101
2000 Georgetowne Drive
Sewickley, PA 15143-8992
Phone: 724-444-1100

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



DATE: OCTOBER 16, 2014 - REV. FEBRUARY 12, 2015

OPERATOR'S WELL #: SHL 27 BHS

API WELL #	<u>47</u>	<u>051</u>	
	STATE	COUNTY	PERMIT

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

WATERSHED: WHEELING CREEK ELEVATION: 1,167.4'
COUNTY/DISTRICT: MARSHALL / WEBSTER QUADRANGLE: MAJORSVILLE, W. VA
SURFACE OWNER: STEVE WARD AND ED WARD ACREAGE: 122.47
OIL & GAS ROYALTY OWNER: BOUNTY MINERALS, LLC ACREAGE: 122.47

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: 6,527' ± TMD: 8,812'±
WELL OPERATOR: NOBLE ENERGY, INC. DESIGNATED AGENT: STEVEN M. GREEN
Address: 333 TECHNOLOGY DRIVE, SUITE 116 Address: 500 VIRGINIA STREET EAST, UNITED CENTER SUITE 590
City CANONSBURG State PA Zip Code 15317 City CHARLESTON State WV Zip Code 25301

**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
1. Tax Map 15-3-5	American Premier Underwriters, Inc.	TriEnergy Holdings, LLC (See attached Leasehold chain)	not less than 1/8	709/67

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

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

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

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

Well Operator: Noble Energy, Inc.
 By: *[Signature]*
 Its: Operations Landman Land Advisor

Received
Office of Oil & Gas

JAN 20 2015

**SHL 27 - BHS
LEASEHOLD CHAIN**

ITEM NUMBER	GRANTOR/LESSOR	GRANTEE/LESSEE	ROYALTY	BOOK/PAGE
1 15-3-5	American Premier Underwriters, Inc. formerly The Penn Central Corporation	TriEnergy Holdings, LLC	not less than 1/8	709/67
	American Premier Underwriters, Inc. formerly The Penn Central Corporation	TriEnergy Holdings, LLC	not less than 1/8	731/36
	TriEnergy Holdings, LLC and TriEnergy, Inc.	Chevron U.S.A., Inc.	not less than 1/8	28/356
	Chevron U.S.A., Inc.	Statoil USA Onshore Properties, Inc.	not less than 1/8	30/494
	Chevron U.S.A., Inc.	Chesapeake Appalachia, LLC	not less than 1/8	30/532
	Chesapeake Appalachia, LLC and Statoil USA Onshore Properties, Inc.	Noble Energy, Inc. and CNX Gas Company, LLC	not less than 1/8	840/180

15-3-5
 SHL 27 - BHS
 JAN 20 2015



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,

A handwritten signature in blue ink, appearing to read 'Dee Swiger'.

Dee Swiger
Regulatory Analyst III

DS/

Enclosures:

Received
Office of Oil & Gas
JAN 20 2015

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

Date of Notice Certification: 1.14.15

API No. 47- 051 -
 Operator's Well No. SHL 27 BHS
 Well Pad Name: SHL 27

Notice has been given:

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

State: <u>West Virginia</u>	UTM NAD 83	Easting: <u>535386.474</u>
County: <u>051 - Marshall</u>		Northing: <u>4423218.097</u>
District: <u>Webster</u>	Public Road Access: <u>Irish Ridge Road / Co. Rt 046</u>	
Quadrangle: <u>Majorsville</u>	Generally used farm name: <u>Steve and Ed Ward</u>	
Watershed: <u>Wheeling Creek (undefined)</u>		

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

<p>Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:</p> <p>*PLEASE CHECK ALL THAT APPLY</p> <p><input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED</p> <p><input type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or</p> <p style="padding-left: 40px;"><input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)</p> <p><input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION</p> <p><input checked="" type="checkbox"/> 5. PUBLIC NOTICE</p> <p><input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION</p>	<p>OOG OFFICE USE ONLY</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p>
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

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.

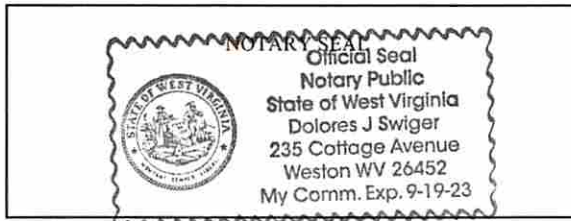
Received
 Office of Oil & Gas
 JAN 20 2015

Certification of Notice is hereby given:

THEREFORE, I Kim Ward, 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.
By: Kim Ward
Its: Regulatory Analyst I
Telephone: 724-820-3061

Address: 1000 Noble Energy Drive
Canonsburg, PA 15317
Facsimile: 724-743-0050
Email: dee.swiger@nblenergy.com



Subscribed and sworn before me this 14 day of Jan. 2015.
[Signature] Notary Public
My Commission Expires 09/19/2023

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
JAN 23 2015

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

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

Date of Notice: 1-14-15 **Date Permit Application Filed:** 1-15-15

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: Steve and Ed Ward
 Address: 50 California Street
Farmersville, OH 45325
 Name: Ohio Valley Heart Institute
 Address: P.O. Box 6154
Wheeling, WV 26003

SURFACE OWNER(s) (Road and/or Other Disturbance)
 Name: Richard Markonich and Sharon Hupp
 Address: 614 Irish Ridge Road
Cameron, WV 26033
 Name: Lonnice J. and Kathie B. Wineman
 Address: 173 Elm Street
Wheeling, WV 26003

SURFACE OWNER(s) (Impoundments or Pits)
 Name: _____
 Address: _____

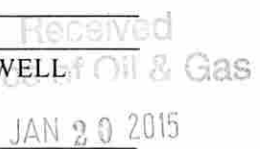
COAL OWNER OR LESSEE
 Name: Consolidation Coal Company (Murray Energy) Attn: Alex O'Neill
 Address: 46226 National Road
St. Clairsville, Ohio 43950

COAL OPERATOR
 Name: same as above
 Address: _____

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
 Name: none within 1500'
 Address: _____

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

*Please attach additional forms if necessary



Notice is hereby given:

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

This Notice Shall Include:

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

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

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

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

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

Well Location Restrictions

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

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

Water Well Testing:

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

Water Testing Laboratories:

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

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

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

Written Comment:

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

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

Office of Oil and Gas
JAN 20 2015

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.**

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
JAN 20 2015


Received
Office of Oil & Gas
JAN 20 2015

WW-6A
(8-13)

API NO. 47-051 - -
OPERATOR WELL NO. SHL 27 BHS
Well Pad Name: SHL 27

Notice is hereby given by:

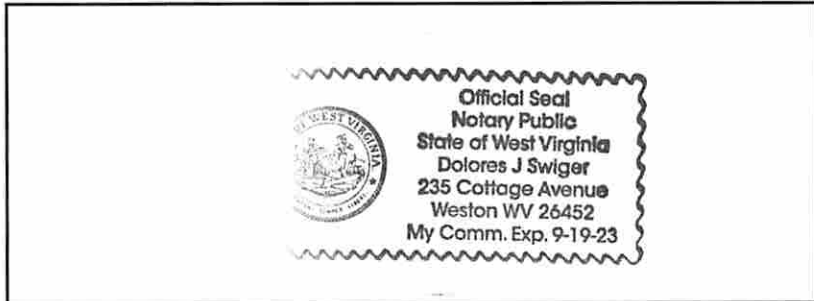
Well Operator: Noble Energy, Inc.
Telephone: 724-820-3061
Email: dee.swiger@nblenergy.com



Address: 1000 Noble Energy Drive
Canonsburg, PA 15317
Facsimile: 724-743-0050

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 deprivacyofficer@wv.gov.

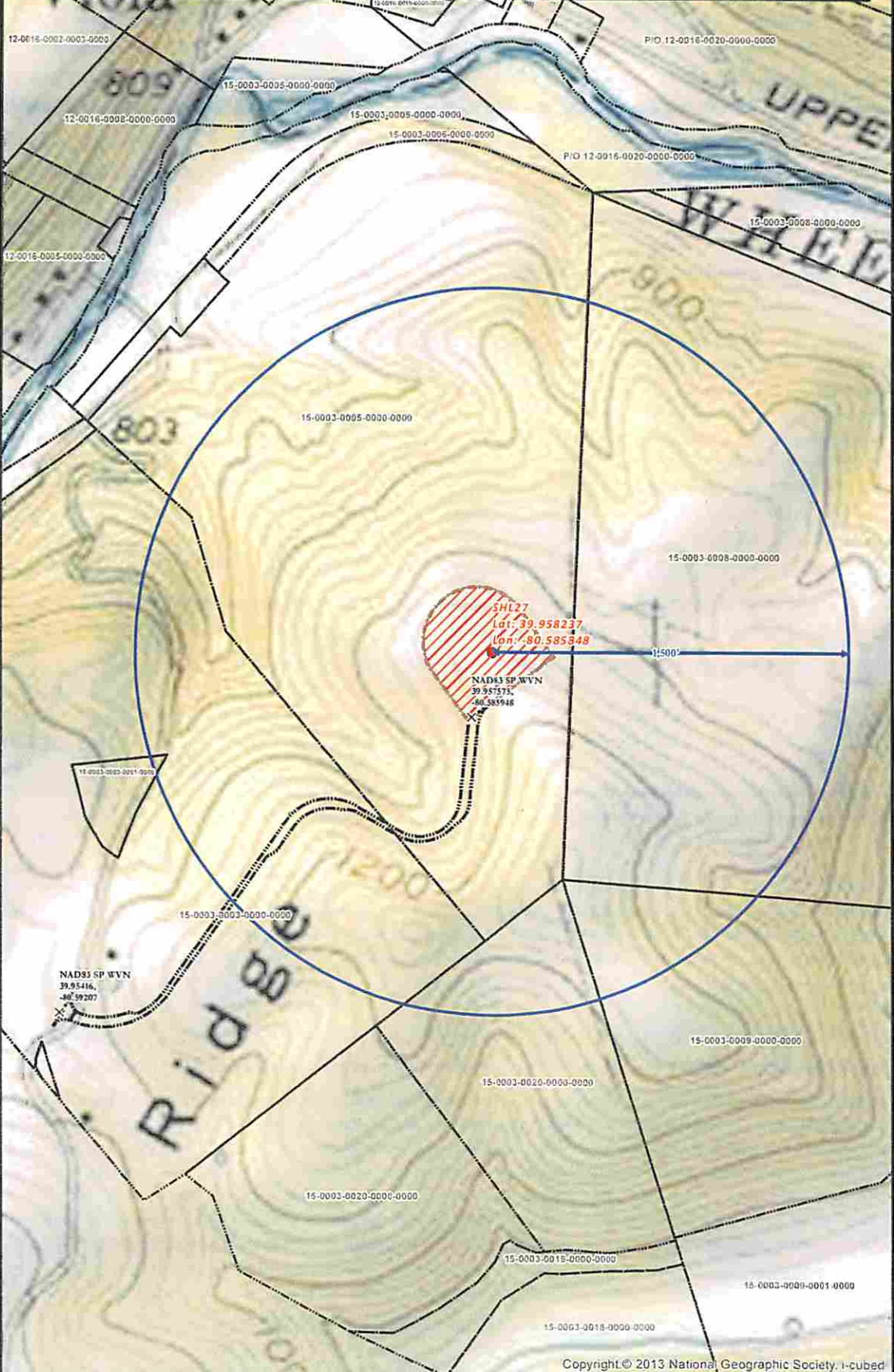


Subscribed and sworn before me this 14 day of Jan, 2015.

Dolores Swiger Notary Public

My Commission Expires 09/19/2023

No Water Wells or Springs within 1,500'



SHL 27 SITE SAFETY PLAN
- SITE WELL LOCATION -

- Well Pad
- Spring
- Water Well
- Intersection
- Access Road
- 1,500' Water Well Buffer
- Well Pad Boundary
- Surface Parcels (Resolved)

0 250 500 1000
 Feet
 1 Inch = 300 Feet

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.****

Date: 12/9/2014
 Author: Christopher Jover

6
 6

Office of Oil & Gas

JAN 20 2015

WW-6A3
(1/12)

Operator Well No. SHL 27 AHS - OHS

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: 9/19/2014 **Date of Planned Entry:** by 10/27/2014

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

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

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

Notice is hereby provided to:

SURFACE OWNER(S)

Name: Steve and Ed Ward

Address: 50 California Street
Farmersville, Ohio 45325

Name: _____

Address: _____

Name: _____

Address: _____

COAL OWNER OR LESSEE

Name: Consolidation Coal Company (Murray Energy) Attn: Alex O'Neill

Address: 46226 National Road
St. Clairsville, OH 43950

MINERAL OWNER(S)

Name: Noble Energy, Inc.

Address: 333 Technology Drive Suite 116
Canonsburg, PA 15317

*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: <u>West Virginia</u>	Approx. Latitude & Longitude: <u>535376.070 E 4423201.512 N</u>
County: <u>051 - Marshall</u>	Public Road Access: <u>Irish Ridge Road</u>
District: <u>Webster</u>	Watershed: <u>Wheeling Creek HUC 10</u>
Quadrangle: <u>Majorsville</u>	Generally used farm name: <u>Steve and Ed Ward</u>

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.

Notice is hereby given by:

Well Operator: Noble Energy, Inc.

Telephone: 724-820-3061

Email: dswiger@nobleenergyinc.com

Address: 333 Technology Drive, Suite 116
Canonsburg, PA 15317

Facsimile: 724-743-0050

Received
Office of Oil & Gas
JAN 20 2015

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.

Affidavit of Personal Service

State Of Pennsylvania

County Of Washington

The undersigned, being first duly sworn, says that the undersigned served a true and complete copy of all sides of--

- (1) Notice on Form WW-2(A)___/ WW-3(A)___/ WW-4(A)___/ WW-5(A)___/ WW-6(A) 2 / Notice of Service
- (2) Application on Form WW-2(B)___/ WW-3(B)___/ WW-4(B)___/ WW-5(B)___/ WW-6(B)___
- (3) Plat showing the well location on Form WW-6, and
- (4) Construction and Reclamation Plan on Form WW-9

--all with respect to operator's Well No. SHL 27 and 72 pads located in Webster District, Marshall County, West Virginia, upon the person or organization named--

Noble Energy, Inc.

--by delivering the same in Washington County, State of Pennsylvania on the 22 day of September, 2014 in the manner specified below.

[COMPLETE THE APPROPRIATE SECTION]

For an individual:
[] Handing it to him___/ her___/ or, because he___/ she___/ refused to take it when offered it, by leaving it in his___/ her___/ presence.

[] Handing it to a member of his or her family above the age of 16 years named _____ who resides at the usual place of abode of the person to be served, and asking the family member to give it to the person to be served as soon as possible.

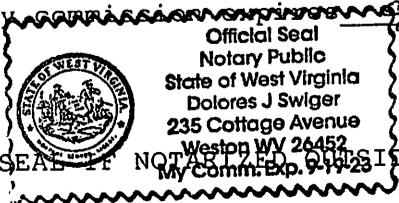
For a partnership:
[] Handing it to _____, a partner of the partnership or, because the partner refused to take it when I handed it over, by leaving it in the presence of the partner.

For a limited partnership:
[] Handing it to the general partner, named _____, or, because the general partner refused to take it when I tried to hand it over, by leaving it in the presence of the general partner.

For a corporation:
[X] Handing it to the corporation's employee X / officer___/ director___/ attorney in fact___/ named Kim Walker.

[Signature]
(Signature of person executing service)

Taken, subscribed and sworn before me this 28 day of Oct. 2014.
My Commission Expires 19-23



[Signature]
Notary Public

Received
Office of Oil & Gas
JAN 20 2015

(AFFIX SEAL IF NOTARIALIZED OUTSIDE THE STATE)

Affidavit of Personal Service

State Of Pennsylvania

County Of Washington

The undersigned, being first duly sworn, says that the undersigned served a true and complete copy of all sides of--

- (1) Notice on Form WW-2(A) ___ / WW-3(A) ___ / WW-4(A) ___ / WW-5(A) ___ / WW-6(A) 3 ✓ Notice of Survey
- (2) Application on Form WW-2(B) ___ / WW-3(B) ___ / WW-4(B) ___ / WW-5(B) ___ / WW-6(B) ___
- (3) Plat showing the well location on Form WW-6, and
- (4) Construction and Reclamation Plan on Form WW-9

--all with respect to operator's Well No. SHL 27 and 72 pads located in Webster District, Marshall County, West Virginia, upon the person or organization named--

Consolidation Coal Company (Murray Energy)
--by delivering the same in Washington County, State of Pennsylvania on the 22 day of September, 20 in the manner specified below.

[COMPLETE THE APPROPRIATE SECTION]

For an individual:

[] Handing it to him ___ / her ___ / or, because he ___ / she ___ / refused to take it when offered it, by leaving it in his ___ / her ___ / presence.

[] Handing it to a member of his or her family above the age of 16 years named _____ who resides at the usual place of abode of the person to be served, and asking the family member to give it to the person to be served as soon as possible.

For a partnership:

[] Handing it to _____, a partner of the partnership or, because the partner refused to take it when I handed it over, by leaving it in the presence of the partner.

For a limited partnership:

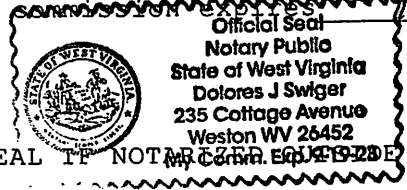
[] Handing it to the general partner, named _____, or, because the general partner refused to take it when I tried to hand it over, by leaving it in the presence of the general partner.

For a corporation:

[X] Handing it to the corporation's employee X / officer ___ / director ___ / attorney in fact ___ / named Alex O'Neil.

[Signature]
(Signature of person executing service)

Taken, subscribed and sworn before me this 28 day of Oct. 2014.
My commission expires 1/19/23.



[Signature]
Notary Public

(AFFIX SEAL IF NOTARIAL COMMISSION IS IN THE STATE)

CRITICAL Gas
JAN 20 2015

Affidavit of Personal Service

State Of West Virginia
County Of Marshall

The undersigned, being first duly sworn, says that the undersigned served a true and complete copy of all sides of--

- (1) Notice on Form WW-2(A) / WW-3(A) / WW-4(A) / WW-5(A) / WW-6(A)
- (2) Application on Form WW-2(B) / WW-3(B) / WW-4(B) / WW-5(B) / WW-6(B)
- (3) Plat showing the well location on Form WW-6, and
- (4) Construction and Reclamation Plan on Form WW-9

--all with respect to operator's Well No. SHL27 AHS-OHS located in Webster District, Marshall County, West Virginia, upon the person or organization named--

Steve Ward

--by delivering the same in Marshall County, State of West Virginia on the 27th day of January, 2015 in the manner specified below.

[COMPLETE THE APPROPRIATE SECTION]

For an individual:

Handing it to him / her / or, because he / she / refused to take it when offered it, by leaving it in his / her / presence.

Handing it to a member of his or her family above the age of 16 years named who resides at the usual place of abode of the person to be served, and asking the family member to give it to the person to be served as soon as possible.

X Handing to Christian Turak, attorney for Steve Ward

For a partnership:

Handing it to , a partner of the partnership or, because the partner refused to take it when I handed it over, by leaving it in the presence of the partner.

For a limited partnership:

Handing it to the general partner, named , or, because the general partner refused to take it when I tried to hand it over, by leaving it in the presence of the general partner.

For a corporation:

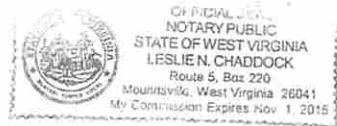
Handing it to the corporation's employee / officer / director / attorney in fact / named

Charles C. Simmons
(Signature of person executing service)

Taken, subscribed and sworn before me this 27 day of January, 2015.
My commission expires Nov. 1, 2015

Leslie Chaddock
Notary Public

(AFFIX SEAL IF NOTARIZED OUTSIDE THE STATE)



RECEIVED
Office of Oil and Gas

JAN 27 2015

WV Department of
Environmental Protection

Affidavit of Personal Service

State Of West Virginia
County Of Marshall

The undersigned, being first duly sworn, says that the undersigned served a true and complete copy of all sides of--

- (1) Notice on Form WW-2(A) / WW-3(A) / WW-4(A) / WW-5(A) / WW-6(A)
- (2) Application on Form WW-2(B) / WW-3(B) / WW-4(B) / WW-5(B) / WW-6(B)
- (3) Plat showing the well location on Form WW-6, and
- (4) Construction and Reclamation Plan on Form WW-9

--all with respect to operator's Well No. SHL27 AHS-OHS located in Webster District, Marshall County, West Virginia, upon the person or organization named--

Ed Ward

--by delivering the same in Marshall County, State of West Virginia on the 27th day of January, 2015 in the manner specified below.

[COMPLETE THE APPROPRIATE SECTION]

For an individual:

Handing it to him / her / or, because he / she / refused to take it when offered it, by leaving it in his / her / presence.

Handing it to a member of his or her family above the age of 16 years named who resides at the usual place of abode of the person to be served, and asking the family member to give it to the person to be served as soon as possible.

Handing to Christian Turak, attorney for Ed Ward

For a partnership:

Handing it to , a partner of the partnership or, because the partner refused to take it when I handed it over, by leaving it in the presence of the partner.

For a limited partnership:

Handing it to the general partner, named , or, because the general partner refused to take it when I tried to hand it over, by leaving it in the presence of the general partner.

For a corporation:

Handing it to the corporation's employee / officer / director / attorney in fact / named

Charles C. Simmons
(Signature of person executing service)

Taken, subscribed and sworn before me this 27 day of January, 2015.
My commission expires Nov. 1, 2015

Leslie Chaddock
Notary Public

(AFFIX SEAL IF NOTARIZED OUTSIDE THE STATE)



RECEIVED
Office of Oil and Gas

JAN 27 2015

WV Department of
Environmental Protection

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: 1-14-15 **Date Permit Application Filed:** 1-15-15

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

- CERTIFIED MAIL HAND
RETURN RECEIPT REQUESTED DELIVERY

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

Notice is hereby provided to the SURFACE OWNER(s)

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

Name: Steve and Ed Ward
Address: 50 California Street
Farmersville, OH 45325

Name: Richard Markonich and Sharon Hupp
Address: 614 Irish Ridge Road
Cameron, WV 26033

Notice is hereby given:

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

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>535386.474</u>
County:	<u>051 - Marshall</u>		Northing:	<u>4423218.097</u>
District:	<u>Webster</u>	Public Road Access:	<u>Irish Ridge Road / Co. Rt 046</u>	
Quadrangle:	<u>Majorsville</u>	Generally used farm name:	<u>Steve and Ed Ward</u>	
Watershed:	<u>Wheeling Creek (undefined)</u>			

This Notice Shall Include:

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

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

Address: 1000 Noble Energy Drive
Canonsburg, PA 15317
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.

Received
Office of Oil & Gas
JAN 20 2015

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: 1-14-15 **Date Permit Application Filed:** 1-15-15

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

CERTIFIED MAIL **HAND**
RETURN RECEIPT REQUESTED **DELIVERY**

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

Notice is hereby provided to the SURFACE OWNER(s)

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

Name: Ohio Valley Heart Institute
Address: P.O. Box 6154
Wheeling, WV 26003

Name: Lonnie J. and Kathie B. Wineman
Address: 173 Elm Street
Wheeling, WV 26003

Notice is hereby given:

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

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>535386.474</u>
County:	<u>051 - Marshall</u>		Northing:	<u>442318.097</u>
District:	<u>Webster</u>	Public Road Access:	<u>Irish Ridge Road / Co. Rt 046</u>	
Quadrangle:	<u>Majorsville</u>	Generally used farm name:	<u>Steve and Ed Ward</u>	
Watershed:	<u>Wheeling Creek (undefined)</u>			

This Notice Shall Include:

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

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

Address: 1000 Noble Energy Drive
Canonsburg, PA 15317
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.

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WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
Division of Highways

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

Earl Ray Tomblin
Governor

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

November 5, 2014

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 SHL-27 and SHL-72 Well Pads, Marshall County

Dear Mr. Martin,

The West Virginia Division of Highways has issued Permit #06-2014-0641 for the subject site to Noble Energy, Inc. for access to the State Road for the well sites located off of Marshall County Route 48 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,

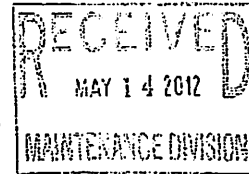
A handwritten signature in blue ink that reads "Gary K. Clayton".

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

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

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*OIL AND GAS ROAD
STATEWIDE BONDING AGREEMENT*



THIS AGREEMENT, executed in duplicate, made and entered into this 2 day of May, 2012, by and between the WEST VIRGINIA DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS, hereinafter called "DEPARTMENT," and Noble Energy, Inc. a Delaware, company, hereinafter called "COMPANY."

WITNESSETH:

WHEREAS, Company has horizontal gas well drilling operations in certain areas of West Virginia; and

WHEREAS, the Department believes that the frequent and repetitive use of certain sections of highways in the State by Company, its contractors, agents, independent contractors or suppliers of drilling materials or drilling equipment, and employees contributes to increased wear and tear to public roads in the state road system in the State, including local roads ("State Owned Roads"); and,

WHEREAS, the Department and Company have entered into this Agreement to satisfy the requirements of the Department's policy entitled "Oil & Gas Road Policy" dated January 3, 2012, as issued by Paul A. Mattox, Jr., Secretary of Transportation / Commissioner of Highways, and any subsequent related policies, hereinafter called "Policy", a copy of which is made a part of this Bonding Agreement and is identified as Attachment 1.

NOW, THEREFORE, for and in consideration of the mutual agreements hereinafter set forth, the parties agree as follows:

I. For purposes of this Bonding Agreement, "Project Transportation Usage" of the Company shall be understood to mean use of one or more State Owned Roads for the delivery and removal of drilling materials and drilling equipment at the site or location of one or more of Company's horizontal gas well pad locations. To the extent reasonably practical, prior to commencing use of a State Owned Road for Project Transportation Usage after January 1, 2011, the Company shall submit to the Department a section or sections of current official WVDOT County Highway maps identifying the exact location of the proposed project and the State Owned Roads that the Company will utilize for the Project Transportation Usage.

II. Company and Department shall within 14 days of the Company's submittal, agree to a list of these sections of State Owned Roads, hereinafter called "Project Roads List", to be utilized for each of Company's projects, identified by route number and milepost; at a time to be mutually agreed to by the parties prior to initial commencement of Project Transportation Usage of a particular State Owned Road on a Project Roads List, the Company and Department will jointly review the condition of the roads and bridges on the Project Roads List. The Department will document the road type and surface condition and general right-of-way width of each section of road on the Project Road List. Either party may supplement this documentation with photographs, video or other evidence of the present condition of the road surface, shoulders, ditches, culverts, bridges or other structures or appurtenances of roads on the Project Road List, as well as approaches to the roads, utility facilities located within or along the right-of-way, or any other condition, including third-party activities, that may affect the duties and responsibilities of the parties under this Agreement. A copy of any such documentation must be made and provided to the other party within ten business days after the joint review of the roads on the Project Roads List.

III. Department shall issue a Project Agreement or Project Permit, as appropriate, to Company to use State Owned Roads and may include any minor or major improvements required of Company prior to, during or after Project with the assignment of responsibilities of both parties prior to, during and after the operator has completed well fracturing.

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IV. In the Project Agreement/Project Permit, the Department shall not require the use of State Owned Roads other than the roads proposed by Company unless the Department has safety concerns as to the Company's proposed roads. A failure to agree on roads that may otherwise be lawfully used for a particular Project Transportation Usage shall result in the designation of the State Owned Roads proposed by Company, with milepost determinations as designated by Department. This Agreement shall only cover portions of State Owned Roads designated on the Project Roads List.

V. For the duration of Company's Project Transportation Usage of the Stated Owned Roads on the Project Roads List, whether by the Company, its contractors (while working on behalf of Company), agents, independent contractors or suppliers of drilling materials or drilling equipment, or employees, the Company agrees to pay for all reasonable maintenance and repair costs incurred by the Department to repair areas of the State Owned Roads included in the Project Roads List that were directly damaged by Company's Project Transportation Usage, as determined to be reasonably necessary and appropriate by the Department. The Department shall keep a record of all labor performed by Department employees and contractors for such maintenance and repairs and shall send an invoice for the same to Company.

VI. Company shall be responsible for the cost of all maintenance and repairs reasonably necessary to put the existing roadways, bridges and appurtenances on the Project Roads List utilized for the Project Transportation Usage in the condition that existed immediately prior to the Project Transportation Usage. Company shall not be required to pay for maintenance or repairs to put any areas of such roadways, bridges and appurtenances on the Project Roads List in a condition better than the condition that existed immediately prior to the Project Transportation Usage. Company shall also not be required to pay for maintenance or repairs to any areas of these roadways, bridges or appurtenances on the Project Roads List that are not actually utilized for the Project Transportation Usage or for damage not caused by Project Transportation Usage.

VII. Company shall notify the Department in writing of Company's final completion of Project Transportation Usage for particular roadways, bridges and appurtenances on the Project Roads List. Within fourteen days after its receipt of written notification of the completion of the Project Transportation Usage for all roads on a Project Roads List, the Department will review the condition of the roadways, bridges and appurtenances on the Project Roads List actually utilized for the Project Transportation Usage and advise Company of any final repairs reasonably necessary to leave these roads, bridges and appurtenances in a condition reasonably deemed by Department to be equal to their condition prior to commencement of Project Transportation Usage; and, upon completion of all such final repairs by or on behalf of Company and acceptance by Department, the Company shall be released from all further liability for maintenance or repairs to roads, bridges, or appurtenances on said Project Roads List. Any maintenance or repair work under the Project Agreement/Project Permit for roads, bridges or appurtenances on the Project Roads List may be performed by a contractor directly chosen by the Company as approved by the Department, the Department's workforce, or a private contractor hired by the Department through the public bid process in accordance with state law, all of which work shall be subject to the standards and specifications of the Department.

VIII. In order to ensure performance of Company's performance and payment obligations under this Bonding Agreement, the Company shall post a corporate surety bond, hereinafter called "Master Bond", with the Department named as the beneficiary, which form of bond shall be subject to the consent of the Department, not to be unreasonably withheld. The amount and form of the bond shall be in accordance with the Policy as set forth above. However, the amount of the Master Bond does not limit the amount of claims that may be made by the Department against the Company under this Bonding Agreement. The Company shall provide the Master Bond to the Department within one (1) month after the execution of this Bonding Agreement. The Master Bond shall secure the good faith performance of all payment obligations of Company under the terms of this Bonding Agreement respecting the roads, bridges and appurtenances on the Project Roads List for each Project Transportation Usage undertaken by the Company, and shall remain in effect until termination of this Agreement. Company shall not be obligated to provide any other bonds, sureties, or other guarantees of performance to the Department for Company's use of State Owned Roads, except as required in this Agreement.

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IX. Company shall maintain Commercial General Liability Insurance in the amount of two million dollars, with a minimum coverage of one million dollars per occurrence, for personal injury or death to persons, or for property damage, resulting from Company's Project Transportation Usage and shall present evidence of such insurance to Department upon request.

X. Company's usage of State Owned Roads under the Project Agreement/Project Permit shall comply with all applicable Federal, State and local laws and regulations including, but not limited to, to the extent applicable, the National Environmental Policy Act, Section 404 of the Clean Water Act, Section 106 of the National Historic Preservation Act, Rare, Threatened and Endangered Species Act, Section 401 Water Quality Certification, and hazardous waste requirements. Further, upon reasonable written request of Department, Company shall furnish Department with acceptable documentation of such compliance which is in the possession of the Company.

XI. Company shall defend, indemnify and hold Department harmless from and against any and all losses, damage, and liability, and from all claims for damages on account of or by reason of bodily injury, including death, which may be sustained, or claimed to be sustained, by any person or persons, including employees of Department, and from and against any and all claims, losses or liabilities for damages to property, arising out of the negligent or willful acts or omissions of Company, its agents, independent contractors and suppliers of drilling materials or drilling equipment, employees and contractors, in the performance of all Project Transportation Usage activities undertaken pursuant to this Agreement (collectively, "claims"). The Company shall not be responsible to indemnify, defend or hold harmless Department for any claims caused by the negligent or willful acts or omissions of the Department or its agents, employees and contractors or third parties not performing work at the direction of Company or delivering drilling equipment or drilling materials, including water, for use by or for company.

XII. If a provision of this Agreement is or becomes illegal, invalid or unenforceable in any jurisdiction, that shall not affect the validity or enforceability of any other provision of this Agreement; or the validity or enforceability in other jurisdictions of that or any other provision of this Agreement.

XIII. Department shall give Company a minimum of thirty days written notice of default under the terms of this Bonding Agreement and the opportunity to cure this default during such thirty-day period. If a default is not cured to the satisfaction of Department, or provision acceptable to Department is not made for a cure, Department may then elect to terminate this Bonding Agreement in whole or in part, and may in addition exercise its rights under the Master Bond or seek any other lawful relief available. Company may terminate this Bonding Agreement upon thirty days written notice to Department for any reason. In the event Company terminates this Agreement for any reason, it shall be liable for the repair and maintenance costs set forth above for prior Project Transportation Usage.

XIV. Nothing herein shall be construed to mean that Company shall have any jurisdiction or control over any public roads in the state road system.

XV. Company, its contractors, agents, employees and suppliers shall at all times be subject to applicable provisions of state and federal law, including without limitation laws requiring operation of vehicles in accordance with legal size and weight restrictions and posted weight limits. Oversize/overweight permits for vehicle or loads not otherwise conforming with law must be obtained in accordance with law; Department agrees to work in good faith with Company to review and grant (where authorized by law) such permits in a timely manner upon request by Company.

XVI. This Bonding Agreement shall be construed and enforced in accordance with the laws of the State of West Virginia, as they may be amended.

XVII. This Bonding Agreement shall be binding upon the successors and assigns of each party hereto.

IN WITNESS WHEREOF, the parties hereto have caused this Bonding Agreement to

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be executed by their duly authorized officers effective as of the date first above written.

WEST VIRGINIA DEPARTMENT OF
TRANSPORTATION,
DIVISION OF HIGHWAYS

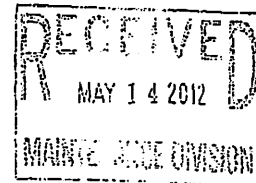
Doreen Banner
Witness

By: *Robert M. Murphy*
State Highway Engineer

Maude
Witness

By: *Robert Ovitz*
Robert Ovitz
Title: Senior Operations Manager

(To be executed in duplicate)



APPROVED AS TO FORM THIS
29th DAY OF May 20 12

[Signature]
ATTORNEY LEGAL DIVISION
WEST VIRGINIA DIVISION
OF HIGHWAYS

Office of the State Gas

JAN 20 2015

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

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EROSION & SEDIMENTATION CONTROL PLANS

NOBLE ENERGY

SHL-27 WELL SITE

WEBSTER DISTRICT - MARSHALL COUNTY - WEST VIRGINIA

ISSUED FOR PERMITTING

NOVEMBER 19, 2014

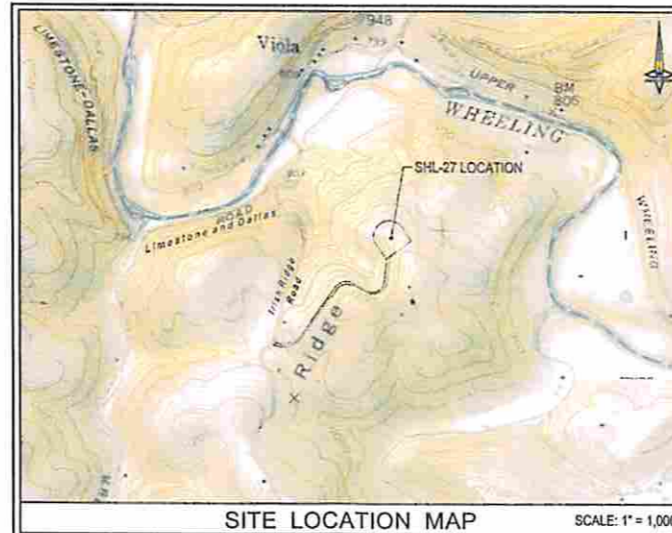
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MAIN OFFICE
4031 ALLPORT CUTOFF
MORRISDALE, PA 16858
PHONE: (814) 342-7090
FAX: (814) 342-7099
EMAIL: INFO@GEOTECH-ENGINEERING.COM
WEB SITE: WWW.GEOTECH-ENGINEERING.COM

BRANCH OFFICE
200 BURSCA DRIVE
BRIDGEVILLE, PA 15017
PHONE: (724) 221-1824
FAX: (412) 221-1825

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2	OVERALL EXISTING CONDITIONS PLAN
3	OVERALL SITE PLAN
4	DRAINAGE AREA AND SOIL MAP
5	ACCESS ROAD PLAN & PROFILE - STA. 0+00 TO STA. 13+00
6	ACCESS ROAD PLAN & PROFILE - STA. 13+00 TO STA. 26+00
7	PROFILE SECTIONS - ACCESS ROAD STA. 1+00 TO 15+00
8	PROFILE SECTIONS - ACCESS ROAD STA. 16+00 TO 23+00
9	WELL PAD SHL-27 - SITE PLAN
10	DRILLING LAYOUT PLAN
11	SEEDING AND LINING PLAN
12	SITE RESTORATION PLAN - SHL-27
13	EROSION AND SEDIMENTATION CONTROL NOTES
14	EROSION AND SEDIMENTATION CONTROL DETAILS
15	EROSION AND SEDIMENTATION CONTROL DETAILS



DIRECTIONS TO WELL SITE
FROM EXIT 11 ON I-70, FOLLOW DALLAS PIKE RD. FOR 5.2 MILES TO STONE CHURCH RD. (CR 43 / 1) TRAVEL ON STONE CHURCH RD. FOR APPROXIMATELY 1.8 MILES AND TURN LEFT ON SANDHILL RD. (CR007). FOLLOW SANDHILL RD. (CR007) FOR 3.4 MILES TO LIMESTONE AND DALLAS RD. (CR007) TURN LEFT ON LIMESTONE AND DALLAS RD. (CR007) AND FOLLOW FOR 1.9 MILES TO IRISH RIDGE RD. (CR046) TURN LEFT ON IRISH RIDGE RD. (CR046) AND FOLLOW FOR APPROXIMATELY 0.4 MILES TO ACCESS ON LEFT.



Owner:
noble energy
Noble Energy Inc.
333 Technology Drive
Suite 116, Canonsburg
PA 15317
Phone: (724) 820-3000



BASEMAPPING DERIVED FROM BLUE MOUNTAIN FLIGHT DATA FLOWN 04-08-13. PROPERTIES AS SHOWN SUPPLIED BY NOBLE ENERGY AND REPRESENT RESOLVED PARCEL DATA.