



**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](http://www.dep.wv.gov)

April 02, 2015

**WELL WORK PERMIT**

**Horizontal 6A Well**

This permit, API Well Number: 47-5101813, 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 AHS  
Farm Name: WARD, STEVE & ED  
**API Well Number: 47-5101813**  
**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](mailto: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. 494501907 051 - Marshall Webster Majorsville  
Operator ID County District Quadrangle

2) Operator's Well Number: SHL 27 AHS 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: 1169.0' 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

*JN 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: 9,008'

11) Proposed Horizontal Leg Length: 1,208'

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

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

14) Approximate Saltwater Depths: 1408' to 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.)

RECEIVED  
Office of Oil and Gas

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, not deeper than 1st Freshwater	40'	Type III to TD
Fresh Water	13 3/8"	New	J-55	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 = 1.18
Production	5 1/2"	New	P-110	20.0#	9,008'	9,008'	10% excess Yield = 1.27 TCC=200' above 9 5/8" 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"	0.375		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	20% excess Yield = 1.18 to surface
Production	5 1/2"	8.75" - 8.5"	0.361	12,640	Class A	10% excess Yield = 1.27 TCC=200' above 9 5/8" shoe
Tubing						
Liners						

\*\*Max Associated Surface Pressure (psi) (13 3/8) Freshwater casing 1200

PACKERS

Kind:				
Sizes:				
Depths Set:				

RECEIVED  
Office of Oil and Gas

MAR 31 2015

WV Department of  
Environmental Protection

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.

JN 3/31/15

DRILLING WELL PLAN		SHL 27A									
Macellus Shale Horizontal		Marshall County, WV									
SHL 27A SHL		532976.406N 1695582.838E									
SHL 27A LP		532723.363N 1694756.717E									
SHL 27A BHL		523835.579N 1697991.606E									
WELLBORE DIAGRAM	HOLE	CASING	GEOLOGY	TOP	BASE	MUD	CEMENT	CENTRALIZERS	CONDITIONING	COMMENTS	
	25	20" 9.4#	Conductor	40	40	AIR	Type III surface to TD	N/A	Ensure the hole is clean at TD.	Conductor casing = 0.436" 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. -3% Excess Yield = 1.18	Bow Spring on first 2 joints then every third joint to 100' from surface	Fill with <3% KCl water based casing is at setting depth, circulate a minimum of one hole volume prior to pumping cement.	Combined Fresh Water and Coal Production Slime Surface casing = 0.381" wall thickness Burst=2730 psi	
	12 3/8	9-5/8" 36# HCK-55 BTC	Int. Casing	1044	1044	AIR	Allied 18.2 ppg Class A + 0.2 lb/bk C-16A, 0.3 lb/bk C-35, 0.25 lb/bk C-41F -3% Excess 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 run 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 85/85 Class A/Poz +10.5% Fluid Loss additive, +10.3% retarder, +10.6% dispersant, +10.2% anti foam, +1-0.1% antisetting 10% Excess Yield=1.27	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 activities may be changed due to hole conditions	
	8.75" Curve	5-1/2" 20# HCP-110 TXP BTC	Java Shale	4891	5062						
	8.75" - 8.5" Lateral		8.75" Vertical	Angola Shale	5119	5744					
				Rhinestreet	5744	6160					
				Cathaque	6150	6238					
			Middlesex	6238	6271						
			West River	6271	6326	12.0ppg SOBMM					
			Burkott	6326	6346						
			Tully Limestone	6346	6373						
			Hamilton	6373	6496						
			Marcellus	6486	6537						
			TD	9008	9523	12.0ppg-12.5ppg SOBMM					
		Onondaga	6537	6537							

LP @ 6523' TVD / 7800' MD  
 8.75" / 8.5" Hole - Cemented Long String  
 6-1/2" 20# HCP-110 TXP BTC  
 +/-1208' # Lateral  
 TD @ +/-8523' TVD +/-9008' MD  
 X Centralizers

RECEIVED  
 Office of Oil and Gas

MAR 31 2015

51 - 01813

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

RECEIVED  
Office of Oil and Gas

MAR 31 2015

WV Department of  
Environmental Protection





4705101813

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Noble Energy, Inc. OP Code 494501907

Watershed (HUC 10) 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 EOBM

-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.

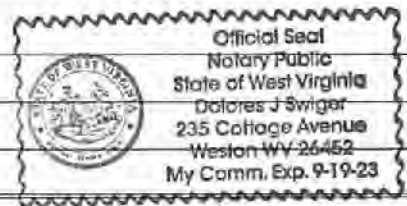
-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) \_\_\_\_\_

-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

**Noble Energy, Inc.**

**4705101813**  
6.0

Proposed Revegetation Treatment: Acres Disturbed 19.325 Prevegetation pH 6.0

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

Fertilizer type \_\_\_\_\_

Fertilizer amount 500 lbs/acre

Mulch Hay or Straw at 2 Tons/acre

Seed Mixtures

**Temporary**

**Permanent**

Seed Type	lbs/acre
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 M. ...*

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

Received  
Oil and Gas  
JAN 20 2015

Title: Oil and Gas Inspector

Date: 1/14/2015

Field Reviewed?  Yes  No

# Cuttings Disposal/Site Water

4705101813

## Cuttings –Haul off Company:

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

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

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

## Disposal Locations:

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

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

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

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

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

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

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

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

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

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

Received  
Office of Public Gas

JAN 29 2015

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

4705101813

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

Printed  
City of Gas  
JAN 20 2015

4705101813



# Site Safety Plan

**Noble Energy, Inc.**

**SHL 27 Well Pad**

AHS

**January 2015: Version 1**

*File  
1/14/2015*

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

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

Received  
Office of Oil & Gas

JAN 20 2015

**\*No Water Wells or Springs within 1,500'\***

4705101813



**SHL 27 SITE SAFETY PLAN**  
**• SITE WELL LOCATION •**

- Well Pier
- Spring
- 1500' Zone Well Buffer
- Well Pier Boundary
- Water Vault
- Intersection
- Access Road
- 1500' Zone Well Buffer
- Well Pier Boundary
- Gutter Pans (Revised)

0 250 500 1,000 Feet  
 1 Inch = 500 Feet

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

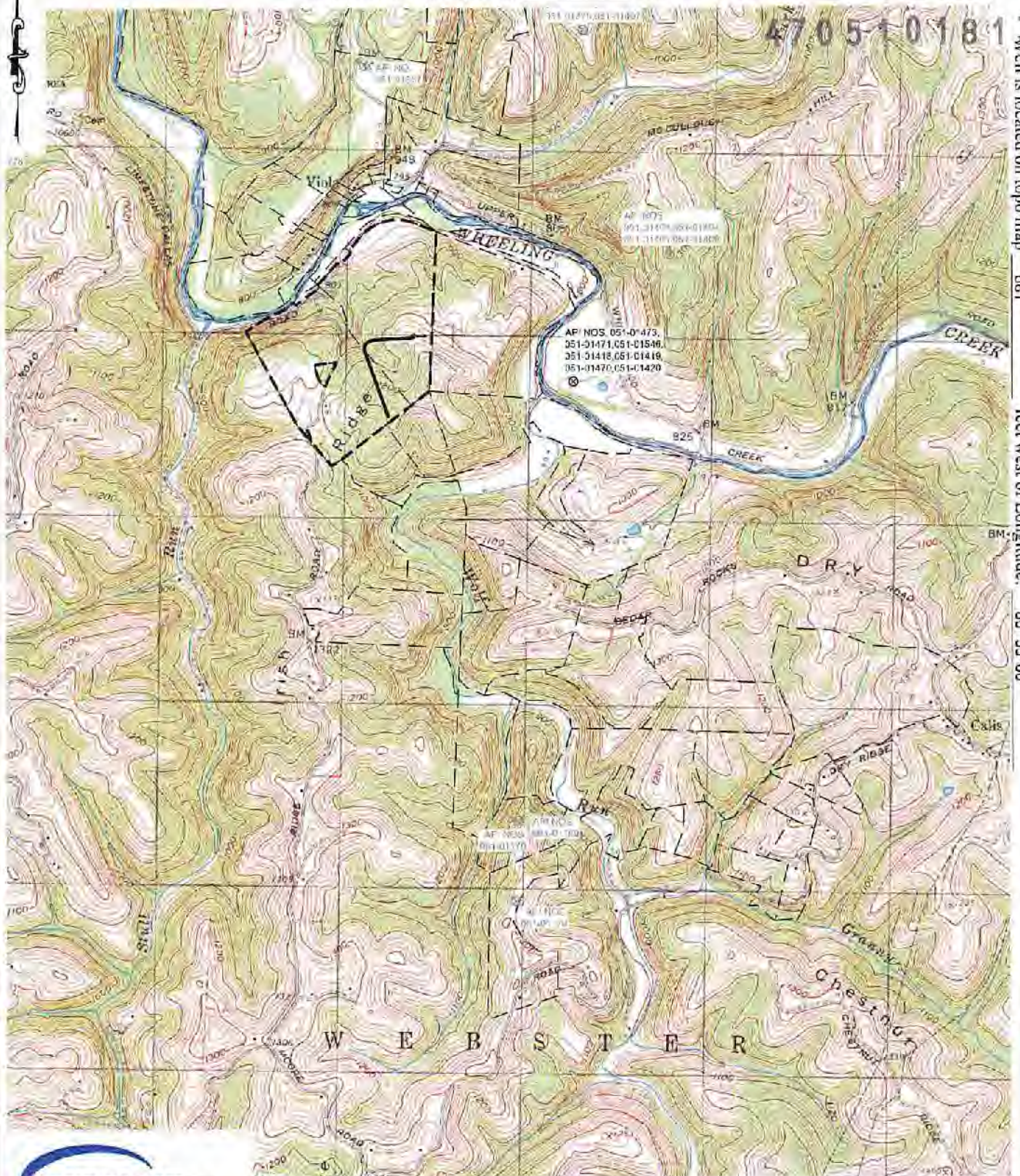
**\*\*Disclaimer: All data is licensed for use by Noble Energy Inc. use only.\*\***

**noble energy**

Date: 12/9/2014  
 Author: Christopher Glover

6  
 6

Well is located on topo map 2 feet south of Latitude: 40° 00' 00"



Well is located on topo map 681 feet west of Longitude: 80° 35' 00"

**PVE Sheffler**  
 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. JANUARY 6, 2015  
 OPERATOR'S WELL #: SHL 27 AHS  
 API WELL # 47 051  
 STATE COUNTY PERMIT

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

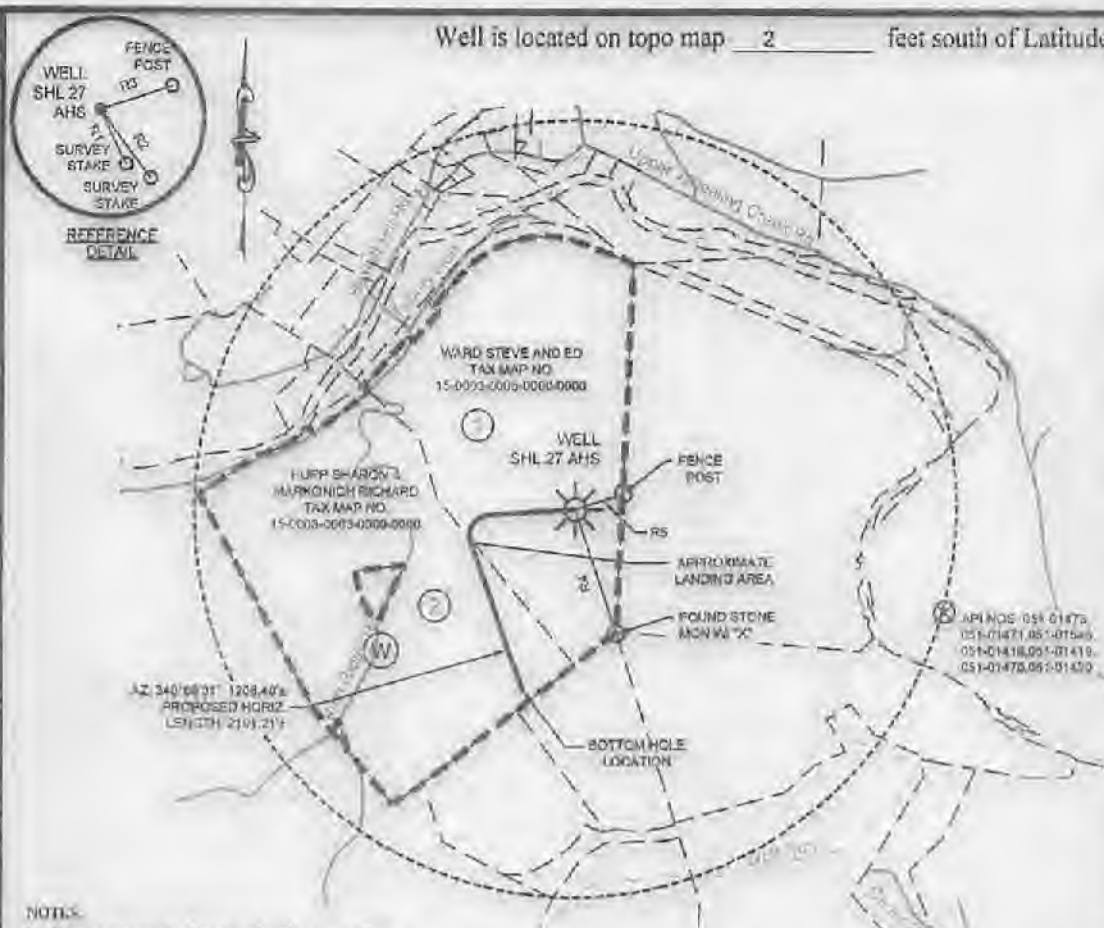
WATERSHED: WHEELING CREEK ELEVATION: 1,169.0'  
 COUNTY/DISTRICT: MARSHALL / WEBSTER QUADRANGLE: MAJORSVILLE, W. VA  
 SURFACE OWNER: STEVE WARD AND ED WARD ACREAGE: 122.47  
 OIL & GAS ROYALTY OWNER: BOUNTY MINERALS, LLC ACREAGE: 122.47

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  
 WELL OPERATOR: NOBLE ENERGY, INC.  
 Address: 333 TECHNOLOGY DRIVE, SUITE 116  
 City CANONSBURG State PA Zip Code 16317  
 ESTIMATED DEPTH: TVD: 6,527' ± TMD: 9,003' ±  
 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 2 feet south of Latitude: 39° 57' 00"

Well is located on topo map 681 feet west of Longitude: 80° 35' 00"



**SURFACE HOLE LOCATION (SHL)**  
 UTM 17 - NAD83  
 N: 4423214.437  
 E: 535381.603  
 NAD27 WY NORTH  
 N: 532976.406  
 E: 1695582.838  
 LAT/LON DATUM - NAD83  
 LAT: 39.958330  
 LON: -80.585752

**APPROX. LANDING POINT**  
 UTM 17 - NAD83  
 N: 4423133.133  
 E: 535131.203  
 NAD27 WY NORTH  
 N: 532723.363  
 E: 1694756.717  
 LAT/LON DATUM - NAD83  
 LAT: 39.957688  
 LON: -80.586689

**BOTTOM HOLE LOCATION**  
 UTM 17 - NAD83  
 N: 4422783.298  
 E: 535262.902  
 NAD27 WY NORTH  
 N: 531587.826  
 E: 1695170.018  
 LAT/LON DATUM - NAD83  
 LAT: 39.954505  
 LON: -80.587185

**LINE TABLE**

LINE	BEARING	DISTANCE
R1	N26°30'00"W	311.12
R2	N37°00'31"W	440.81
R3	S72°00'00"W	293.27
R4	N18°45'44"W	1010.85
R5	S72°00'00"W	389.27

- NOTES:**
1. There are no water wells or developed springs within 250' of proposed well.
  2. There are no existing hollows within a 25' of proposed well.
  3. Proposed well is greater than 100' from permitted streams, wetland, pond, reservoir or lake.
  4. There are no native trout streams within 300' of proposed well.
  5. Proposed well is greater than 1000' from surface/groundwater intake or public water supply.
  6. It is not the purpose or intention of this plat to represent surveyed locations of the surface or mineral parcels depicted hereon. The location of the boundary lines, as shown, are based on record deed descriptions, field evidence found and/or on map position, unless otherwise noted.



Waterfront Corporate Park III, Suite 101  
 2000 Georgetown Drive  
 Sewickley, PA 15143-8992  
 Phone: 724-414-1100

**WATER WELLS:  
 NONE FOUND**

**LEGEND**

- TOP MAP POINT
- PROPOSED WELL
- WATER SOURCE
- LEASED NUMBER BASED ON ATTACHED UMSAT ALL ARE FORTY-FOUR PERCENT OTHERWISE NOTED
- MINERAL TRACT BOUNDARY
- PARCEL LINES
- PROPOSED
- MINERAL WELL
- WELL REFERENCE
- STREAM WATERWAY
- ROAD

**WELLS WITHIN 2000'**

- W EXISTING GAS WELL
- S RECORD GAS WELL

FILE # SHL 27 AHS  
 DRAWING # SHL 27 AHS  
 SCALE 1"=1500'  
 MINIMUM DEGREE OF ACCURACY 1/2500'  
 PROVEN SOURCE OF ELEVATION USGS MONUMENT U 124 851 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: Charles Douglas Davidson  
 R.P.E.: \_\_\_\_\_ L.L.S.: P.S. NO. 819



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
 WYDEP  
 OFFICE OF OIL & GAS  
 601 5TH STREET  
 CHARLESTON, WV 25304

DATE: OCTOBER 16 2014 - REV. JANUARY 6, 2015  
 OPERATOR'S WELL # SHL 27 AHS  
 API WELL # 47 051 01813 H6A  
 STATE COUNTY PERMIT

WELL TYPE:  Oil  Waste Disposal  Production  Deep  
 Gas  Liquid Injection  Storage  Shallow

WATERSHED: WHEELING CREEK ELEVATION: 1,169.0'  
 COUNTY/DISTRICT: MARSHALL / WEBSTER QUADRANGLE: MAJORSVILLE W.V.A.  
 SURFACE OWNER: STEVE WARD AND ED WARD ACREAGE: 122.47  
 OIL & GAS ROYALTY OWNER: COUNTY MINERALS, LLC ACREAGE: 122.47

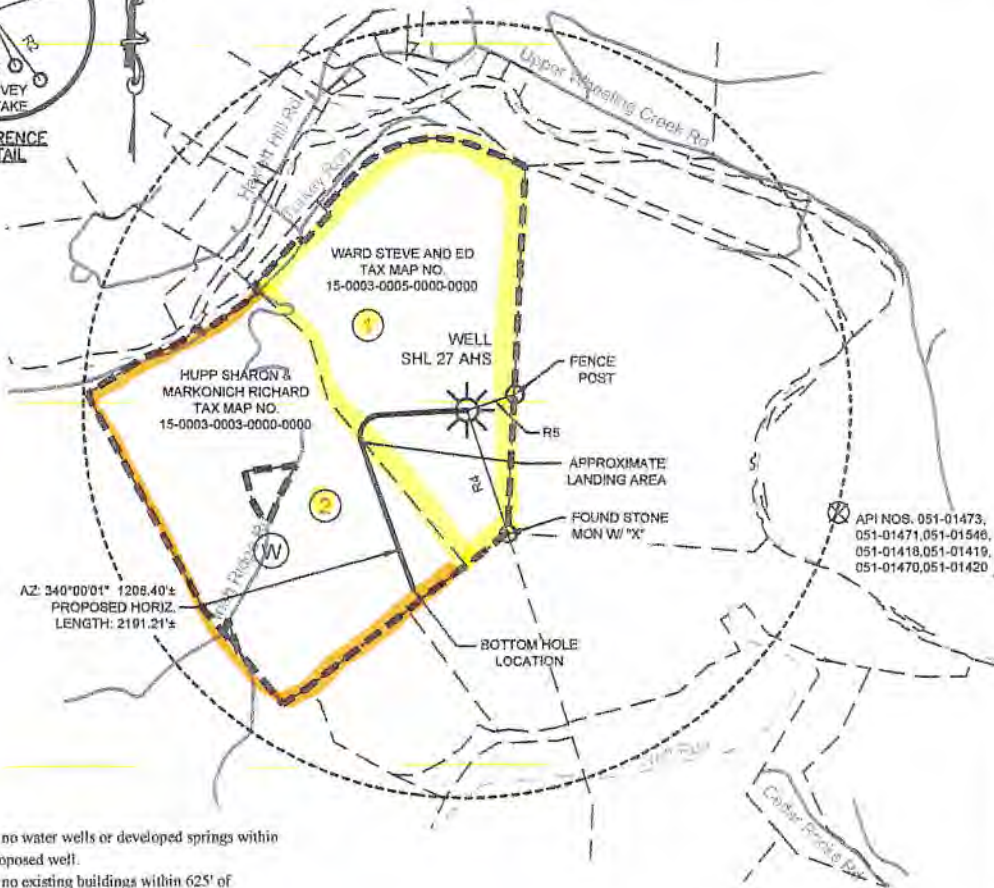
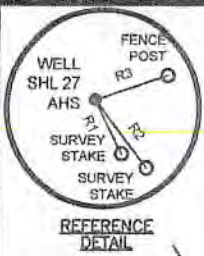
DRILL  COMPLET  DRILL DEEPER  REGRILL  FRACTURE STIMULATE   
 PLUG OLD FORMATION  PERFORATE NEW FORMATION  PLUG AND ABANDON   
 TELECHUTE RIGGING  OTHER CHANGE:  (SPEEIFY)

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 9527' ± TMD: 8,000'  
 WELL OPERATOR: NOBLE ENERGY, INC. DESIGNATION/AGENT: STEVEN M. GREEN  
 Address: 580 TECHNOLOGY DRIVE, SUITE 116 Address: 500 VIRGINIA STREET EAST, UNITED CENTER SUITE 800  
 City: DANBURG State: PA Zip Code: 16847 City: CHARLESTON State: WV Zip Code: 25301



Well is located on topo map 2 feet south of Latitude: 39° 57' 00"

Well is located on topo map 681 feet west of Longitude: 80° 35' 00"



**SURFACE HOLE LOCATION (SHL)**  
 UTM 17 - NAD83  
 N: 4423214.437  
 E: 535381.603  
 NAD27, WV NORTH  
 N: 532976.406  
 E: 1695582.838  
 LAT/LON DATUM-NAD83  
 LAT: 39.958330  
 LON: -80.585752

**APPROX. LANDING POINT**  
 UTM 17 - NAD83  
 N: 4423133.133  
 E: 535131.203  
 NAD27, WV NORTH  
 N: 532723.363  
 E: 1694756.717  
 LAT/LON DATUM-NAD83  
 LAT: 39.957608  
 LON: -80.588686

**BOTTOM HOLE LOCATION**  
 UTM 17 - NAD83  
 N: 4422789.298  
 E: 535262.902  
 NAD27, WV NORTH  
 N: 531587.826  
 E: 1695170.018  
 LAT/LON DATUM-NAD83  
 LAT: 39.954505  
 LON: -80.587165

**LINE TABLE**

LINE	BEARING	DISTANCE
R1	N26°18'39"W	311.12'
R2	N37°08'31"W	440.81'
R3	S72°00'50"W	395.27'
R4	N18°40'44"W	1010.66'
R5	S72°00'50"W	395.27'

**LEGEND**

- TOPO MAP POINT
- PROPOSED WELL
- WATER SOURCE
- LEASED NUMBER BASED ON ATTACHED WVA61 ALL ARE POINTS UNLESS OTHERWISE NOTED
- MINERAL TRACT BOUNDARY
- PARCEL LINES
- PROPOSED HORIZONTAL WELL
- WELL REFERENCE
- STREAM/WATERWAY
- ROAD

**WELLS WITHIN 3000'**

- EXISTING GAS WELL
- RECORD GAS WELL

**NOTES:**

- 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.



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

**WATER WELLS:  
 NONE FOUND**

FILE #: SHL 27 AHS

DRAWING #: SHL 27 AHS

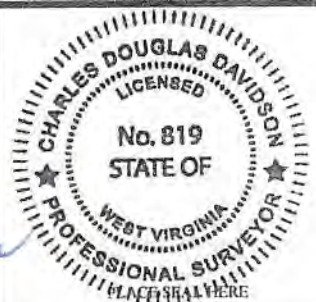
SCALE: 1"=1500'

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: *Charles Douglas Davidson*  
 R.P.E.: \_\_\_\_\_ L.L.S.: P.S. NO. 819



(+) 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. JANUARY 6, 2015

OPERATOR'S WELL #: SHL 27 AHS

API WELL # 47 051  
 STATE COUNTY PERMIT

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

WATERSHED: WHEELING CREEK ELEVATION: 1,189.0'  
 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: 9,008' ±  
 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

WW-6A1  
(3/13)

Operator's Well No. SHL 27 - AHS

**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
2. Tax Map 15-3-3	Sharon Hupp and Richard Markonich	Noble Energy, Inc. (See attached for Additional Lessors and Leasehold chain)	not less than 1/8	851/400

**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 Operations Land Advisor

RECEIVED  
Office of Oil and Gas

MAR 31 2015

Page 1 of 1

WV Department of  
Environmental Protection

ADDITIONAL LESSORS

Item Number	Lease Number	Grantor/Lessor	Grantee/ Lessee	Royalty	Book/Page
2 15-3-3	47-0000110-001	George E. Livingston and Beverly Jo Livingston, husband and wife	Chesapeake Appalachia, LLC	not less than 1/8	801/206
	47-0000110-002	Marilyn Izzi, married doing business in her sole and separate right	Chesapeake Appalachia, LLC	not less than 1/8	801/212
	47-0000110-003	Judith Anne Crites and Ronald E. Crites, wife and husband	Chesapeake Appalachia, LLC	not less than 1/8	802/213
	47-0000110-004	Michael Livingston and Molly Livingston, his wife	Chesapeake Appalachia, LLC	not less than 1/8	810/9
	47-0000110-005	Susan E. Livingston Barker and John D. Barker, her husband	Chesapeake Appalachia, LLC	not less than 1/8	802/219
	47-0000110-006	Paul D. Livingston and Loranel R. Breyley, his wife	Chesapeake Appalachia, LLC	not less than 1/8	808/568
	47-0000110-007	Jerry B. Livingston-Joy and Suzanne Joy-Livingston, husband and wife	Chesapeake Appalachia, LLC	not less than 1/8	808/575
	47-0000110-008	Gary Livingston and Janet A. Livingston, his wife	Chesapeake Appalachia, LLC	not less than 1/8	806/475
	47-0000110-009	Theodore F. Livingston and Veronica S. Livingston, his wife	Chesapeake Appalachia, LLC	not less than 1/8	806/481
	47-0000110-010	Randal G. Livingston, a/k/a Randall Guy Livingston, a single man, appearing herein through Theodore Livingston his Agent and Attorney in Fact, by Power of Attorney dated March 22, 2010 and recorded in AFN# 201003240161, in Cuyahoga County, OH	Chesapeake Appalachia, LLC	not less than 1/8	806/487
	47-0000110-011	Karole Ann Strachan and Ronald S. Strachan, her husband	Chesapeake Appalachia, LLC	not less than 1/8	806/493
	47-0000110-012	Clyde S. Olk, Jr. a single man	Chesapeake Appalachia, LLC	not less than 1/8	812/398
	47-0000110-013	Patricia April Fisher, married and doing business in her sole and separate right	Chesapeake Appalachia, LLC	not less than 1/8	812/404
	47-0000110-014	Linda Marie Olk, a widow	Chesapeake Appalachia, LLC	not less than 1/8	822/581

JAN 29 2015

Oil and Gas

**SHL 27 - AHS  
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
2 15-3-3	George E. Livingston and Beverly Jo Livingston, et al (See attached Additional Lessors)	Chesapeake Appalachia, LLC	not less than 1/8	See Attached Additional Lessors
	Chesapeake Appalachia, LLC	Statoil USA Onshore Properties, Inc.	not less than 1/8	31/93
	Chesapeake Appalachia, LLC and Statoil USA Onshore Properties, Inc.	Noble Energy, Inc. and CNX Gas Company, LLC	not less than 1/8	840/180

Produced by  
CNX Gas

JAN 20 2015

MEMORANDUM OF LEASE

This MEMORANDUM OF LEASE, dated this \_\_\_\_\_ day of November, 2014, is utilized to indicate the existence of a PAID-UP OIL AND GAS LEASE (hereinafter, "Lease") of even date herewith, by and between Sharon Hupp (divorced and not remarried) and Richard Markonich (divorced and not remarried), (hereinafter, "Lessor" whether one or more), and NOBLE ENERGY, INC., a Delaware corporation, whose address is at 333 Technology Drive, Suite 116, Canonsburg, Pennsylvania 15317, (hereinafter, "Lessee").

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

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

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

- On the North by: Robert Lee Keller
On the East by: Ed and Steve Ward
On the South by: Ohio Valley Heart Institute
On the West by: Richard Markonich

and being the same land acquired by Lessor by virtue of instrument recorded in the Office of Clerk of the County Commission in Deed Book 618, Page 269, said land being identified for tax purposes as Parcel 15-01003-0003-0000-1500, on this date, and stipulated to contain, for the purpose of calculating payments, One Hundred eight and 14/100 (108.14) acres, more or less ("Leased Premises").

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

WITNESS: [Signature]
Printed Name: CHRISTIAN E. WARD

WITNESS: [Signature]
Printed Name: CHRISTIAN E. WARD

WITNESS:
Printed Name:
Address:

WITNESS:
Printed Name:
Address:

WITNESS:
Printed Name:
Address:

Printed Name:
Address:

LESSOR
Sharon Hupp
Printed Name: Sharon Hupp
Address: 37 Acosta Ave Apt 1
Martinsburg, WV 26003

Richard Markonich
Printed Name: Richard Markonich
Address: 614 S. MISSISSIPPI RD
CANTON, WV 26033

Printed Name:
Address:

Printed Name:
Address:

LESSEE
NOBLE ENERGY, INC.
By: MARK A. ACREE, Attorney-In-Fact

Oil & Gas
JAN 20 2015

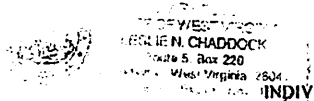
INDIVIDUAL ACKNOWLEDGMENT

COMMONWEALTH/STATE OF WV §  
COUNTY OF Marshall §

The foregoing instrument was acknowledged before me this 17 day of November, 2014, by Richard Markonich

My Commission expires:

(Seal)



Leslie N. Chaddock  
Printed Name: Leslie N. Chaddock  
Notary Public

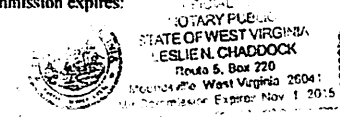
INDIVIDUAL ACKNOWLEDGMENT

COMMONWEALTH/STATE OF WV §  
COUNTY OF Marshall §

The foregoing instrument was acknowledged before me this 17 day of November, 2014, by Sharon MPP

My Commission expires:

(Seal)



Leslie N. Chaddock  
Printed Name: Leslie N. Chaddock  
Notary Public

INDIVIDUAL ACKNOWLEDGMENT

COMMONWEALTH/STATE OF \_\_\_\_\_ §  
COUNTY OF \_\_\_\_\_ §

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by \_\_\_\_\_.

My Commission expires:

(Seal)

Printed Name: \_\_\_\_\_  
Notary Public

INDIVIDUAL ACKNOWLEDGMENT

COMMONWEALTH/STATE OF \_\_\_\_\_ §  
COUNTY OF \_\_\_\_\_ §

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by \_\_\_\_\_.

My Commission expires:

(Seal)

Printed Name: \_\_\_\_\_  
Notary Public

CORPORATE ACKNOWLEDGMENT

COMMONWEALTH/STATE OF \_\_\_\_\_ §  
COUNTY OF \_\_\_\_\_ §

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by \_\_\_\_\_ of \_\_\_\_\_, on behalf of said \_\_\_\_\_.

My Commission expires:

(Seal)

Printed Name: \_\_\_\_\_  
Notary Public

Richard  
Office of Oil & Gas  
JAN 23 2015

CORPORATE ACKNOWLEDGMENT

COMMONWEALTH OF PENNSYLVANIA §  
COUNTY OF WASHINGTON §

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

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

MY COMMISSION EXPIRES:

\_\_\_\_\_  
Notary Public

Received  
Office of Oil & Gas  
JAN 20 2015

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



Office of Oil & Gas  
601 57<sup>th</sup> 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](mailto: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:

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 AHS  
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>535381.603</u>
County: <u>051 - Marshall</u>		Northing: <u>4423214.435</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><b>OOG OFFICE USE ONLY</b></p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p>
---	---

**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.

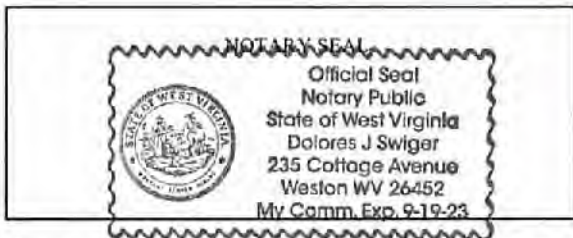
*[Faint signature and stamp]*

**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.  
Dolores Swiger 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](mailto:depprivacyofficer@wv.gov).

STAMP: 180 8 7 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: Lonnie 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 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

**Well 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 57<sup>th</sup> 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.

WW-6A  
(8-13)


Oil and Gas  
Division  
Jan 27 2015

Notice is hereby given by:

Well Operator: Noble Energy, Inc.

Telephone: 724-820-3061

Email: dee.swiger@nbenergy.com

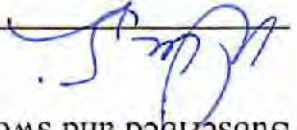


**Oil and Gas Privacy Notice:**

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



Notary Public



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

My Commission Expires 09/19/2023

API NO. 47-051 -

OPERATOR WELL NO. SHL 27 AHS

Well Pad Name: SHL 27

Address: 1000 Noble Energy Drive

Canonsburg, PA 15317

Facsimile: 724-743-0050





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 *A*

MINERAL OWNER(S)

Name: Noble Energy, Inc.  
Address: 333 Technology Drive Suite 116 *A*  
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: West Virginia  
 County: 051 - Marshall  
 District: Webster  
 Quadrangle: Majorsville

Approx. Latitude & Longitude: 535376.070 E 4423201.512 N  
 Public Road Access: Irish Ridge Road  
 Watershed: Wheeling Creek HUC 10  
 Generally used farm name: Steve and Ed Ward

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

**Oil and Gas Privacy Notice:**

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

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
- (2) Application on Form WW-2(B)\_\_\_/ WW-3(B)\_\_\_/ WW-4(B)\_\_\_/ WW-5(B)\_\_\_/ WW-6(B)\_\_\_ of
- (3) Plat showing the well location on Form WW-6, and Survey
- (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.

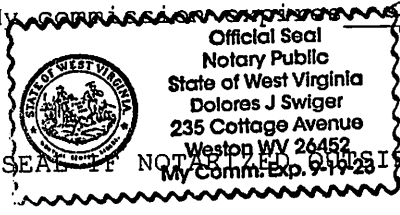
For a partnership:  
[ ] Handing it to \_\_\_\_\_, a partner of the partnership or, because the partner refused to take it when I handed it over, by leaving it in the presence of the partner.

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 9-19-23



[Signature]  
Notary Public

Received  
Office of U.S. Gas  
JAN 20 2015

(AFFIX SEAL IF NOTARIED 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:

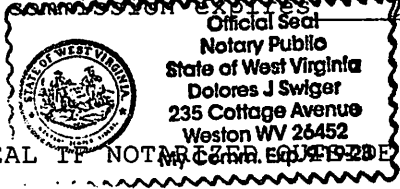
[ ] Handing it to the general partner, named \_\_\_\_\_, or, because the general partner refused to take it when I tried to hand it over, by leaving it in the presence of the general partner.

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 7/19/23.



[Signature]  
Notary Public

Recorded  
Office of DEP 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:

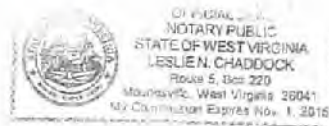
Handing it to the corporation's employee    / officer    / director    / attorney in fact    / named   

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 Chadcock  
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:** 8-14-15      **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>535381.603</u>
County:	<u>051 - Marshall</u>		Northing:	<u>4423214.436</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 Craak (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 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

Well Operator: Noble Energy, Inc.  
Telephone: 724-820-3061  
Email: dee.swiger@nbleenergy.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](mailto:depprivacyofficer@wv.gov).

*[Faint signature and stamp]*



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 57<sup>th</sup> 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

Received  
Office of Oil & 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%
Scaledtek® 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	67-58-1	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 naphthe	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