



west virginia department of environmental protection

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

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

Thursday, July 06, 2017
WELL WORK PERMIT
Horizontal 6A / New Drill

NOBLE ENERGY, INC. (A)
1000 NOBLE ENEGY DRIVE

CANONSBURG, PA 15317

Re: Permit approval for SHL 27 EHS
47-051-01939-00-00

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

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

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

James A. Martin
Chief

Operator's Well Number: SHL 27 EHS
Farm Name: WARD, STEVE & ED
U.S. WELL NUMBER: 47-051-01939-00-00
Horizontal 6A / New Drill
Date Issued: 7/6/2017

Promoting a healthy environment.

07/07/2017

PERMIT CONDITIONS

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

CONDITIONS

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

PERMIT CONDITIONS

11. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, completion of any other permitted well work, and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov.

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

1) Well Operator: Noble Energy, Inc. 494501907 Marshall Franklin Powhatan Point
Operator ID County District Quadrangle

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

3) Farm Name/Surface Owner: Steve and Ed Ward Public Road Access: Irish Ridge Road

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

Jr 4/26/17

6) Existing Pad: Yes or No Yes-this well pad has been built.

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus at 6486'/6537' and 51' in thickness. Anticipated pressure at 4314#.

8) Proposed Total Vertical Depth: 6527'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 16,633'

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11) Proposed Horizontal Leg Length: 8,833'

12) Approximate Fresh Water Strata Depths: 349'

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13) Method to Determine Fresh Water Depths: Offset Well data

Office of Oil and Gas

14) Approximate Saltwater Depths: none noted in offsets

WV Dept. of Environmental Protection

15) Approximate Coal Seam Depths: 634' to 644'

16) Approximate Depth to Possible Void (coal mine, karst, other): None - drilling into an interior barrier

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

WW-6B
(04/15)

API NO. 47-051 - 01939
 OPERATOR WELL NO. SHL 27 EHS
 Well Pad Name: SHL 27

18)

CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	30"	New	LS	117	40	40	CTS
Fresh Water	20"	New	LS	94	449'	449'	CTS 30% excess Yield = 1.18
Coal	13 3/8"	New	J-55	54.5	1044'	1044'	30% excess Yield = 1.18
Intermediate	9 5/8"	New	HCK-55	36	3032' or 250' below 5th sand	3032' or 250' below 5th sand	20% excess Yield = 1.19
Production	5 1/2"	New	P-110	20	15,643' <i>for</i>	15,643'	10% Excess Yield = 1.27 TOC >= 200' above shoe
Tubing					16,633'	16,633'	
Liners							

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	30"	36"	.375				CTS
Fresh Water	20"	24"	.438	2730	1200	Type 1	30% Excess Yield = 1.18
Coal	13 3/8"	17 1/2"	.380	2730		Type 1/Class A	30% Excess Yield = 1.18
Intermediate	9 5/8"	12 3/8"	.352	3520		Type 1/Class A	20% Excess Yield = 1.19
Production	5 1/2"	8 3/4" & 8 1/2"	.361	12,640	10,000	Type 1/Class A	1.27 TOC >= 200' above 9.625" shoe
Tubing							
Liners							

PACKERS

Kind:				
Sizes:				
Depths Set:				

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JUN 21 2017

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JK
4/26/17

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. Should we encounter Red Rock formation issues install 13 3/8" to next component formation. 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. See attached list. Maximum pressure not to exceed 10,000 lb.

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21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 19.325 (this is a built pad)

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

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23) Describe centralizer placement for each casing string:

No centralizers will be used with conductor casing. Freshwater/Surface - centralized every three joints to surface. Coal - Bow Spring in first two joints then every third joint from 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:

Conductors-Type 1 to Surface. Surface 15.6 ppg Type 1 +2% Cacl, 0.25#Lost circ 30% Excess Yield 1.18. Coal - 15.6 ppg Type 1 +2% CaCl, 0.25# Lost Circ 30% Excess Yield = 1.18 Intermediate 15.6ppg Class A +0.4% Ret. 0.15% Disp. 0.2% Anti Foam, 0.125#/sk Lost Circ 20% Excess Yield +1.19 to surface. Production 14.8ppg Class A 25:75:0system +2.6% Cement extender, 0.7% Fluid Loss additive, 0.45% high temp retarder, 0.2% friction reducer 10% Excess Yield+1.27 TOC>+200" above 9.625" shoe.

25) Proposed borehole conditioning procedures:

Conductor-The hole is drilled w/air and casing is run on air. Apart from insuring the hole is clean via air circulation at TD, there are no other conditioning procedures. Surface-The hole is drilled w/air and casing is run on air. 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 Coal-The hole is drilled and cased w/air or on Freshwater based mud. Once casing is at setting depth, the hole is filled w/KCl water and a minimum of one hole volume is circulated prior to pumping cement. Intermediate-Once surface casing is set and cemented, intermediate hole is drilled either on air or SOBm and filled with KCl water once drilled to TD. Production-The hole is drilled with SOBm and once to TD, circulated at maximum 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.

*Note: Attach additional sheets as needed.

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

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51-01939



DRILLING WELL PLAN

SHL 27E

Macellus Shale Horizontal
Marshall County, WV

Handwritten: Jue 4/21/17

SHL 27E SHL

533023.387N 1695647.585E

Ground Elevation

1159'

SHL 27E LP

533458.492N 1697043.178E

Azm

159°

SHL 27E BHL

525155.009N 1700065.399E

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, 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
			Water String		449					
	17 1/2	13-3/8" 54.5# J-55 BTC	Pittsburgh Coal	634	644	AIR	15.6 ppg Type 1 + 2% CaCl, 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
			Int. Casing		1044					
	12 3/8	9-5/8" 36# HCK-55 BTC	Big Lime	1639	1719	AIR	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
			Gordon	2639	2652					
			Fifth Sand	2748	2782					
			Int. Casing		3032					
	8.75" Vertical	5-1/2" 20# HCP-110 TXP BTC	Warren Sand	4224	4233	8.0ppg - 9.0ppg SOBM	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 10% Excess Yield=1.27 TOC >= 200' above 9.625" shoe	Rigid Bow Spring every third joint from KOP to TOC	Once at TD, circulate at max allowable pump rate for at least 6x bottoms up. Once on bottom with casing, circulate a minimum of one hole volume prior to pumping cement.	Production casing = 0.361" wall thickness Burst=12640 psi Note:Actual centralizer schedules may be changed due to hole conditions
			Java Shale	4891	5062					
			Angola Shale	5119	5744					
8.75" Curve	Rhinestreet		5744	6160	11.5ppg-12.5ppg SOBM	Rigid Bow Spring every joint to KOP				
	Cashaqua		6150	6238						
	Middlesex		6238	6271						
	West River		6271	6326						
	Burkett		6326	6346						
	Tully Limestone		6346	6373						
	Hamilton		6373	6486						
8.75" - 8.5" Lateral	Marcellus	6486	6537	11.5ppg-12.5ppg SOBM						
TD	16633	6523								
	Onondaga	6537								

LP @ 6523' TVD / 7800' MD

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

+/-8833' ft Lateral

TD @ +/-6523' TVD +/-16633' MD

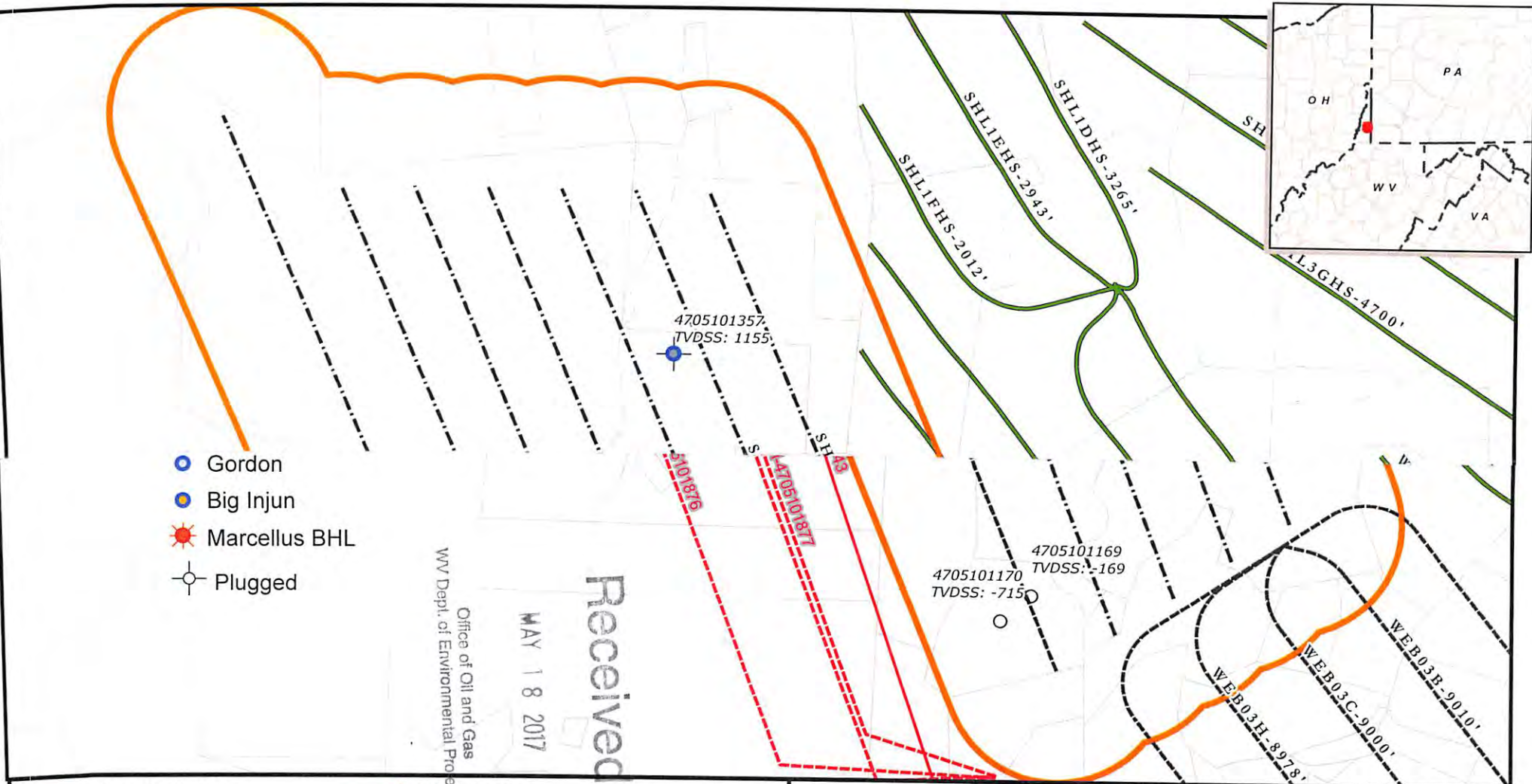
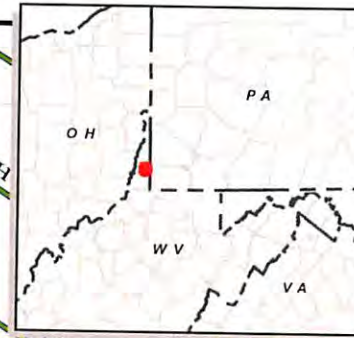
X=centralizers

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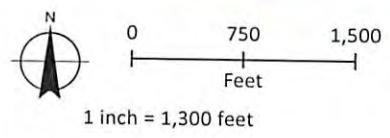
51-01939



- Gordon
- Big Injun
- Marcellus BHL
- Plugged

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- | | |
|--------------------------|--------------------------------|
| NBL Well Pads | OBO-Drilled |
| Undefined Value | Offset Completions Buffer Area |
| NBL-Proposed, Marcellus | State Line |
| NBL-Planned, Marcellus | County Line |
| NBL-Completed, Marcellus | Tax Parcel |
| OBO-Status Unk | |



Author: devinreighton
 Date Created: 4/18/2017
 Date Saved: 4/20/2017

Main Data Frame
 Coordinate System:
 NAD 1927 UTM Zone
 17N FootUS

Units: Foot US

Disclaimer: All data is licensed for Noble Energy, Inc. use only. Noble Energy, Inc. makes every effort to ensure this map is free of errors, but does not warrant the map or its features are either spatially or temporally accurate or fit for a particular use. Noble Energy, Inc. provides this map without any warranty of any kind whatsoever, either

SI-01939

SI-07939

Noble Energy Addendum

SHL-27 site proposed well procedures

- Operators of all deep offset wells within a 1,000' perimeter of the pad will be contacted prior to fracturing, per the table below:

Offset Deep Wells:

API	TVD	Surface Owner	Current Operator	TVDS	Formation
4705101743	6730	D Russell & C Strobe	SWN Production Company	-5453	Marcellus

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WW-9
(4/16)

API Number 47 - 051 - 01939
Operator's Well No. SHL 27 EHS

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 (HUC 10) Quadrangle Majorsville

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 Pit will be utilized

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

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number _____)
- Reuse (at API Number TBD - 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 thru coal string, then SOBM

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

Additives to be used in drilling medium? Calcium Chloride Powder, Carbo Tec, Carbo Gel2, Carbo Tec S, Eco-Block, Lime, ML-Carb TM, MI-Clean, MI Seal, Next Base eC, Next Drill, Next Hold, Next Mud, Omni-Cole, MI Bar, Next Mud HT, Soda Ash, Potassium Chloride

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

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

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

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

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

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

Company Official Signature Dee Swiger

Company Official (Typed Name) Dee Swiger

Company Official Title Regulatory Analyst, III

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Subscribed and sworn before me this 11th day of May, 2017

Regina Logue Notary Public

My commission expires July 7, 2018

Office of Oil and Gas
WV Dept. of Environmental Protection

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

Noble Energy, Inc.

Proposed Revegetation Treatment: Acres Disturbed 19.325 Prevegetation pH _____

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

Fertilizer type 10-20-20

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
See site plans for full list	

Seed Type	lbs/acre
Tall Fescue	40
Ladino Clover	5
See site plans for full list	

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, include dimensions (L x W x D) of the pit, and dimensions (L x W), and area in acreage, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: _____

Jim Wickham

Comments: _____

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Title: Office of Oil and Gas - Inspector

Date: 4/26/17

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Field Reviewed? Yes No

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Cuttings Disposal/Site Water

Cuttings –Haul off Company:

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

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

Environmental Coordination Services & Recycling (ECS&R)
3237 US Highway 19
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
412-384-7569

Waste Management South Hills (Arnoni) Permit # 100592
3100 Hill Road
Library, PA 15129
724-348-7013
412-384-7569

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

Energy Solutions, LLC Permit # UT 2300249
 423 West 300 South
 Suite 200
 Salt Lake City, UT 84101

Energy Solutions Services, Inc. Permit # R-73006-L24
 1560 Bear Creek Road
 Oak Ridge, TN 37830

Northern A-1 Environmental Services Permit ID MID020906814
 3947 US 131 North, PO Box 1030
 Kalkaska, MI 49646
 231-258-9961

Water Haul off Companies:

Dynamic Structures, Clear Creek DOT # 720485
 3790 State Route 7
 New Waterford, OH 44445
 330-892-0164

Nabors Completion & Production Services Co.
 PO Box 975682
 Dallas, TX 75397-5682

Select Energy Services, LLC
 PO Box 203997
 Dallas, TX 75320-3997

Nuverra Environmental Solutions
 11942 Veterans Memorial Highway
 Masontown, WV 26542

Mustang Oilfield Services LLC
 PO Box 739
 St. Clairsville, OH 43950

Wilson's Outdoor Services, LLC
 456 Cracraft Road
 Washington, PA 15301

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 (Buckeye Brine, LLC)
 Permit # 34-031-2-7177
 23986 Airport Road
 Coshocton, OH 43812
 740-575-4484
 512-478-6545

CMS of Delaware Inc. DBA CMS Oilfield Serv
 301 Commerce Drive
 Moorestown, NJ 08057

Force, Inc.
 1380 Rte. 286 Hwy. E, Suite 303
 Indiana, PA 15701

Solo Construction
 P.O. Box 544
 St. Mary's, WV 26170

Equipment Transport
 1 Tyler Court
 Carlisle, PA 17015

Myers Well Service, Inc.
 2001 Ballpark Court
 Export, PA 15632

Burns Drilling & Excavating
 618 Crabapple Road P.O. Box 41
 Wind Ridge, PA 15380

Nichlos 1-A (SWIW #13)
 Permit # 3862
 300 Cherrington Pkwy, Suite 200
 Coraopolis, PA 15108
 412-329-7275

Groselle (SWIW #34)
 Permit # 4096
 Rt. 88
 Garrettsville, OH
 713-275-4816

Kemble 1-D Well
 Permit # 8780
 7675 East Pike
 Norwich, Oh 43767
 614-648-8898
 740-796-6495

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Adams #2 (Buckeye Brine, LLC)
2205 Westover Road
Austin Tx 78703
Permit # 34-031-2-7178
740-575-4484
512-478-6545

Adams #3 (Buckeye Brine, LLC)
Permit #34-031-2-7241-00-00
2630 Exposition, Suite 117
Austin, TX 78703
512-478-6545

Mozena #1 Well (SWIW # 13)
Permit # 34-157-2-5511-00-00
5367 E. State Street
Newcomerstown, OH 43832
740-763-3966

Goff SWD #1 (SWIW # 27)
Permit # 34-119-2-8776-000
300 Cherrington Pkwy, Suite 200
Coraopolis, PA 15108
412-329-7275

SOS D#1 (SWIW #12)
Permit # 34-059-2-4202-00-00
Silcor Oilfield Services, Inc.
2939 Hubbard Road
Youngstown, PH 44505

Dudley #1 UIC (SWIW #1)
Permit # 34-121-2-2459-00-00
Select Energy Services, LLC
7994 S. Pleasants Hwy
St. Marys, WV 26170
304-665-2652

OH UIC #1 Buckeye UIC Barnesville 1 & 2
CNX Gas Company, LLC
1000 Consol Energy Drive
Permit # 34-013-2-0609-00-00
Permit # 34-013-2-0614-00-00
304-323-6568

US Steele 11385
Permit # 47-001-00561
200 Evergreen Drive
Waynesburg, PA 15730
304-323-6568

Chapin #7 UIC (SWIW #7)
Permit # 34-083-2-4137-00-00
Elkhead Gas& Oil Company
12163 Marne Rd. NE
Newark, OH 43055
740-763-3966

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Office of Oil and Gas
WV Dept. of Environmental Protection

07/07/2017

51-01939



Site Safety Plan

Noble Energy, Inc.

SHL 27 Well Pad

672 Irish Ridge Road

Cameron, WV

*for
4/26/17*

April 2017: Version 2

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

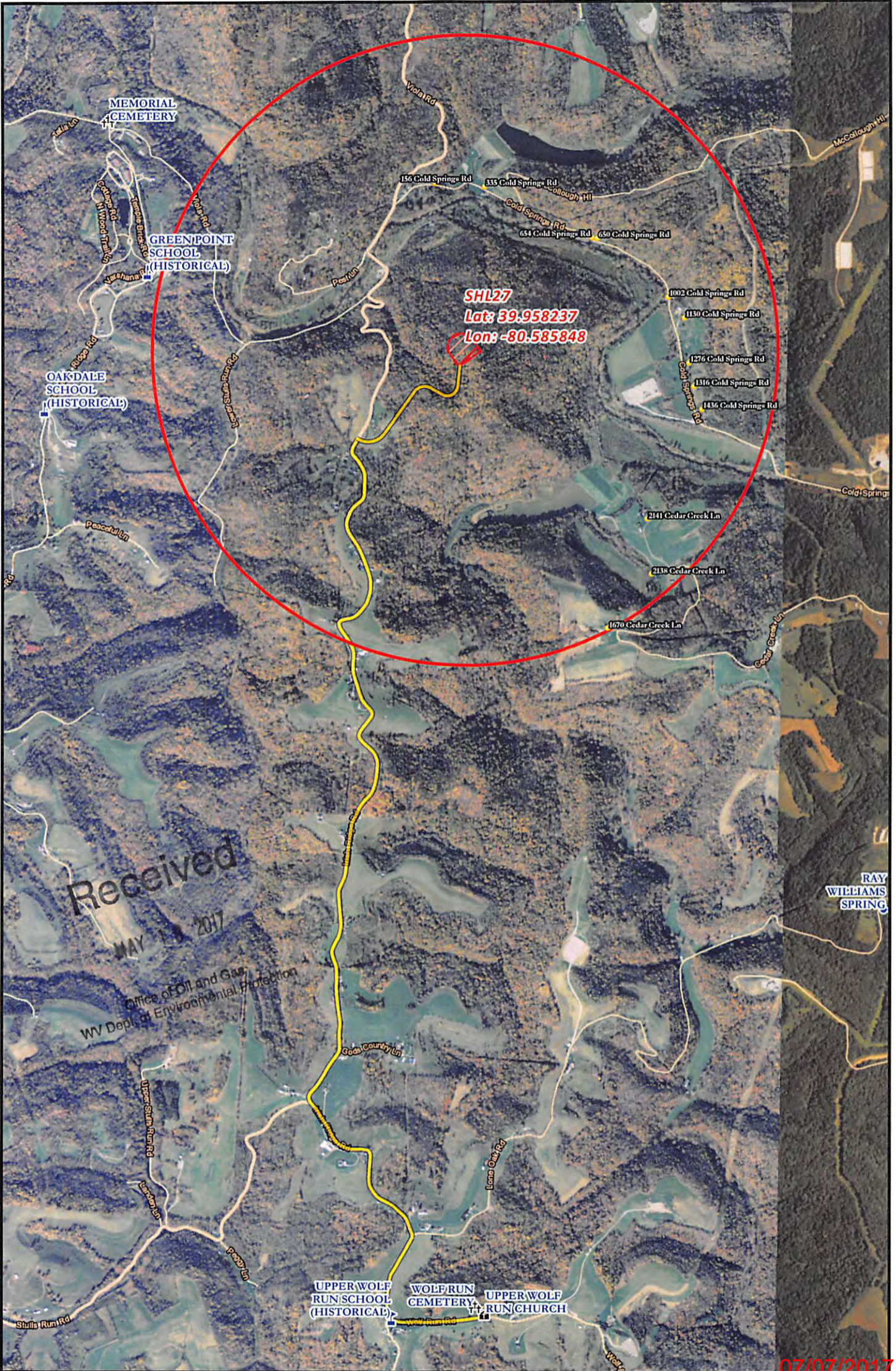
Noble Energy, Inc.
Appalachia Offices
1000 Noble Energy Drive
Canonsburg, PA 15317-9504

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Office of Oil and Gas
WV Dept. of Environmental Protection

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WV Dept. of Environmental Protection

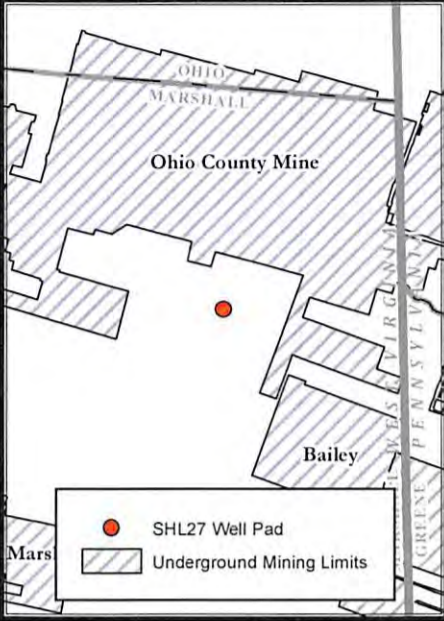
07/07/2017

911 Addressing	Church (WV)
Cemetery (WV)	School
	Spring
	Evacuation Route
	Well Pad Boundary
	Well Pad 1 Mile Evacuation Buffer
Projection: NAD 1927 StatePlane West Virginia North FIPS 4701 Units: Foot US	
** Disclaimer: All data is licensed for use by Noble Energy Inc. use only. **	

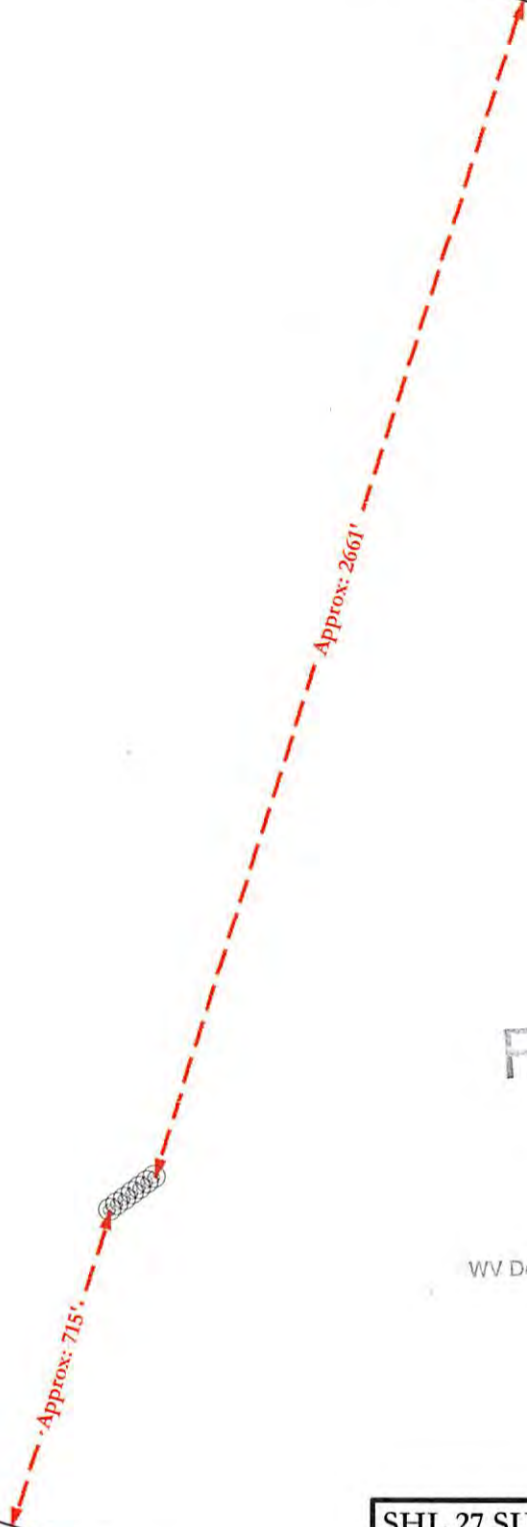
Site Evacuation Route Directions - Wolf Run Cemetery	
Exit the Pad Site heading Southwest via the Access Rd. Turn left, heading South, on Irish Ridge Rd (Go 2.5 miles). Irish Ridge Rd. turns slightly left becoming Moore Rd. (Follow 0.6 Miles). Slight right onto Irish Ridge Rd (Go 0.3 Miles). Take the 1st left onto Cross Roads/ Wolf Run (Go 0.3 Miles). Cemetery will be on the left.	
<p>1 Inch = 2,000 Feet</p>	

SHL 27 SITE SAFETY PLAN	
- SITE EVACUATION PLAN -	
Author: devincrighton	Date: 4/18/2017
	<div style="display: flex; justify-content: space-around; align-items: center;"> 4 6 </div>

OHIO COUNTY MINE
OHIO COUNTY COAL COMPANY



Depth To Pittsburgh Coal Seam Base = 692 Feet

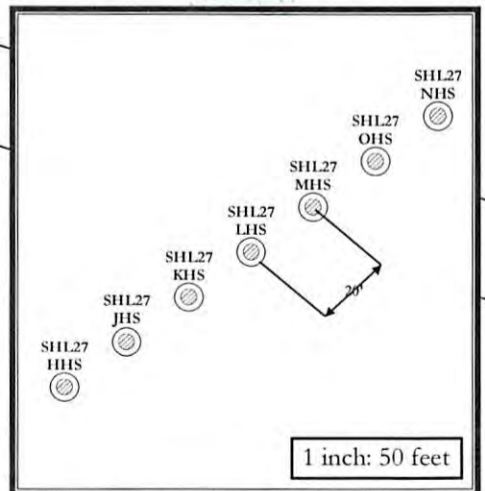


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Office of Oil and Gas
WV Dept. of Environmental Protection

SHL 27 SURFACE LOCATION @ 20 FT SPACING

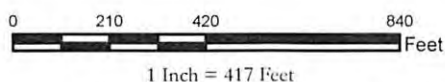


Note:
- Mine data courtesy of WV Department of Environmental Protection and Consol Coal Co.
- Coal seam data courtesy of WV Division of Natural Resources.

07/07/2017

SHL 27 SITE SAFETY PLAN
- WELLHEAD TOPHOLE LOCATION -

Surface Hole Locations
 Well to Well Length
 Mine Polyline



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: 10/29/2014
Author: sambyron



Formation Tops List of anticipated freshwater, saltwater, oil and gas, hydrogen sulfide, thief zones and high pressure and volume zones and their expected depths.

Est. Formation Tops*	TVD	Producing Zone
Fresh Water	349'	
Coal	634-344'	
Dunkard Sand	110-1121'	
Gas Sand (Top Storage)	1288-1318	
1 st Salt Sand	1423-1447'	
2 nd Salt Sand	1456-1501'	
Big Lime	1639-1719'	
Big Injun	1719-1913'	
Price Formation	1913-2271'	
Murrysville	2271-2285'	
50' Sand	2482-2484'	
Gordon Stray	2588-2603'	
Gordon	2639-2652'	
5 th Sand (Base Storage)	2748-2782'	
Speechley	3188-3216'	
Warren	4224-4233'	
Java Shale	4891-5062'	
Pipe Creek Shale	5062-5119'	
Angola Shale	5119-5744'	
Rhinestreet	5744-6150'	
Cashaqua	6150-6238'	
Middlesex	6238-6271'	
West River	6271-6326'	
Burkett	6326-6346'	
Tully Limestone	6346-6373'	
Hamilton	6373-6486'	
Marcellus	6486-6537'	4314 psi

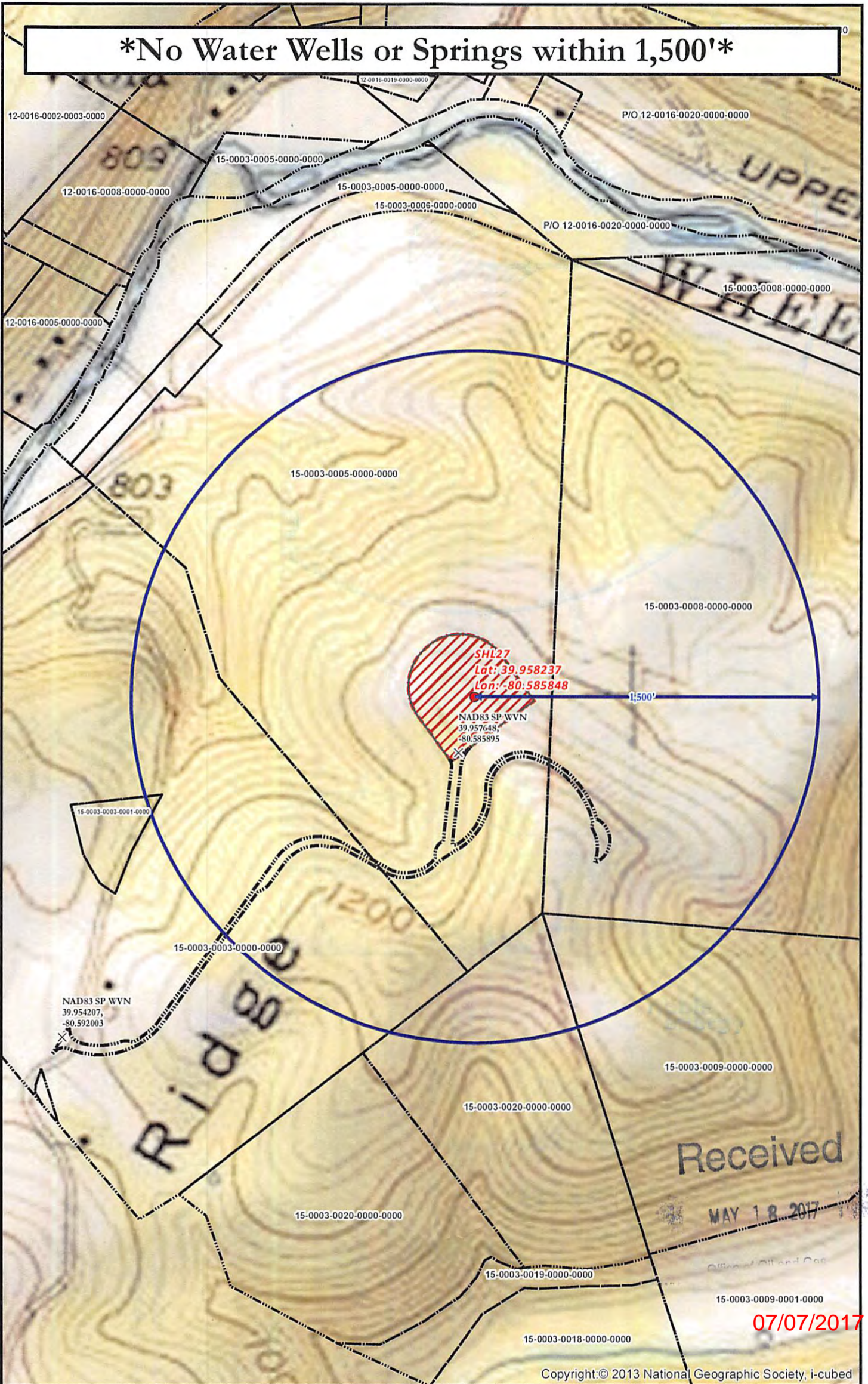
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WV Dept. of Environmental Protection

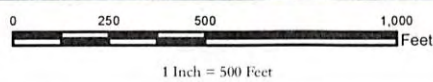
There is no known H²S gas present. Likewise, we are not aware of any potential thief zones, oil or significant saltwater.

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)



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.****



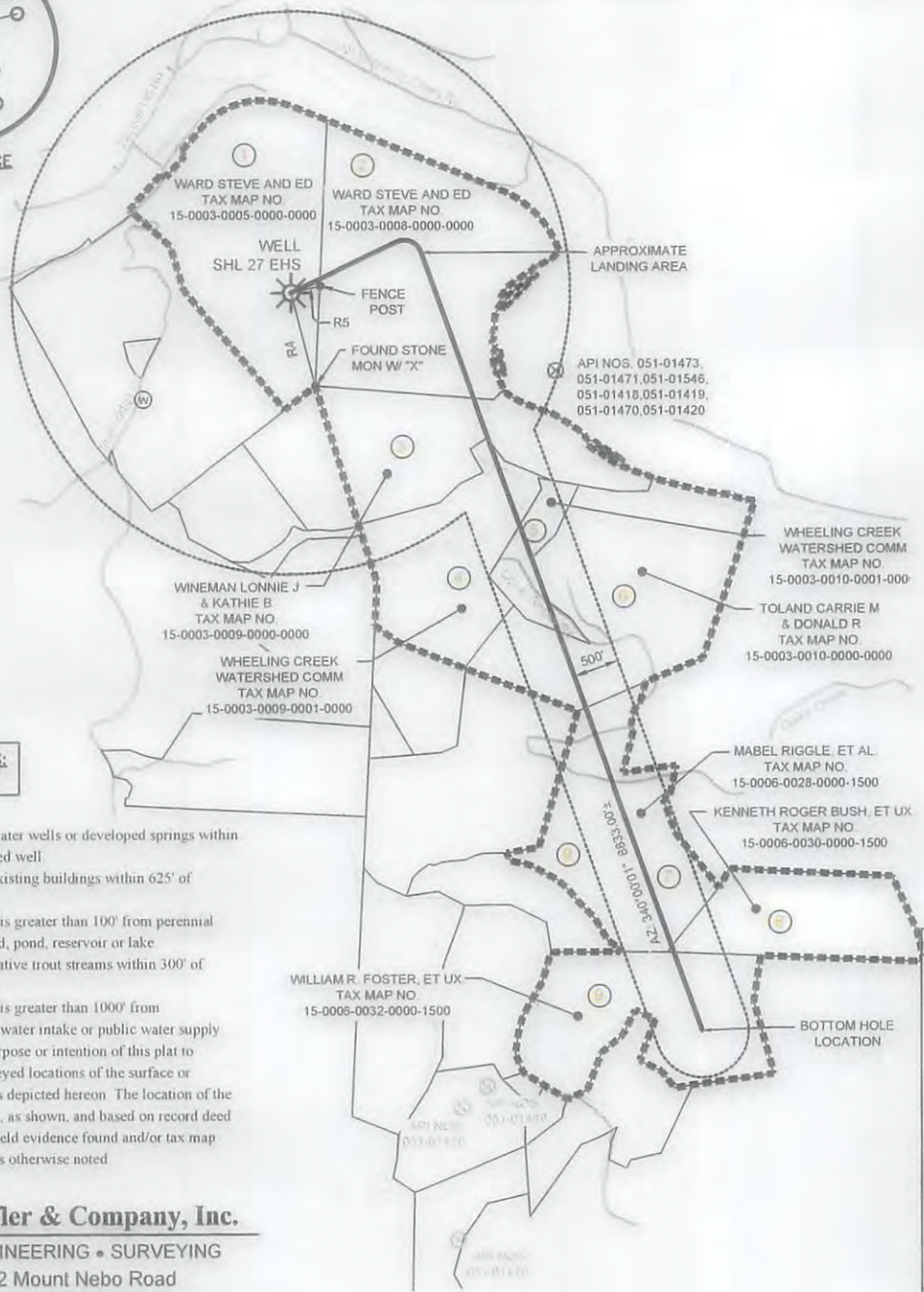
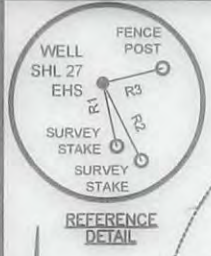
Date: 10/31/2014

Author:
Christopher Glover



Well is located on topo map 15,131 feet south of Latitude: 40° 00' 00"

Well is located on topo map 613 feet west of Longitude: 80° 35' 00"



SURFACE HOLE LOCATION (SHL)

UTM 17 - NAD83
 N: 4423229.080
 E: 535401.090
 NAD27, WV NORTH
 N: 533023.387
 E: 1695647.585
 LAT/LON DATUM-NAD83
 LAT: 39.958461
 LON: -80.585523

APPROX. LANDING POINT

UTM 17 - NAD83
 N: 4423368.754
 E: 535824.060
 NAD27, WV NORTH
 N: 533458.492
 E: 1697043.178
 LAT/LON DATUM-NAD83
 LAT: 39.959702
 LON: -80.580564

BOTTOM HOLE LOCATION

UTM 17 - NAD83
 N: 4420854.503
 E: 536787.093
 NAD27, WV NORTH
 N: 525155.009
 E: 1700065.399
 LAT/LON DATUM-NAD83
 LAT: 39.937008
 LON: -80.569431

LINE TABLE

LINE	BEARING	DISTANCE
R1	N12°39'07"W	333.98'
R2	N26°47'16"W	446.43'
R3	S76°26'15"W	320.13'
R4	N14°36'05"W	1037.06'
R5	S76°26'15"W	320.13'

LEGEND

- TOPO MAP POINT
- PROPOSED WELL
- WATER SOURCE
- LEASED NUMBER BASED ON ATTACHED WMSA1
- 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 herein. 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

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

FILE # SHL 27 EHS
 DRAWING # SHL 27 EHS
 SCALE: 1"=2000'
 MINIMUM DEGREE OF ACCURACY: 1/2500
 PROVEN SOURCE OF ELEVATION: USGS MONUMENT 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:

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



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

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

WATERSHED: WHEELING CREEK ELEVATION: 1,158.6'
 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

DATE: OCTOBER 16, 2014 - REV. APRIL 28, 2017

OPERATOR'S WELL #: SHL 27 EHS

API WELL # 47 051 01939
 STATE COUNTY PERMIT

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: 16,633' ±
 WELL OPERATOR: NOBLE ENERGY, INC. DESIGNATED AGENT: STEVEN GREENE
 Address: 1000 NOBLE ENERGY DRIVE Address: 300 SUMMERS STREET, SUITE 1000
 City CANONSBURG State PA Zip Code 15317 City CHARLESTON State WV Zip Code 25301

07/07/2017

Well is located on topo map 7,769 feet south of Latitude: 39° 57' 30"

Well is located on topo map 7,785 feet west of Longitude: 80° 32' 30"



Sheffler & Company, Inc.

ENGINEERING • SURVEYING
1712 Mount Nebo Road
Sewickley, PA 15143
Office Phone: 412-219-4509
Email: Info@ShefflerCo.com

FILE #: SHL 27 EHS
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I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

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



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



DATE: OCTOBER 16, 2014 - REV. APRIL 28, 2017
OPERATOR'S WELL #: SHL 27 EHS
API WELL # 47 051 01939 HeA
STATE COUNTY PERMIT

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

WATERSHED: WHEELING CREEK ELEVATION: 1,158.6'
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

07/07/2017

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

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 6,527' ± TMD: 16,633' ±
WELL OPERATOR: NOBLE ENERGY, INC. DESIGNATED AGENT: STEVEN GREENE
Address: 1000 NOBLE ENERGY DRIVE Address: 300 SUMMERS STREET, SUITE 1000
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. Q086779000 Tax Map 15-3-8	American Premier Underwriters, Inc., formerly, The Penn Central Corporation	TriEnergy Holdings, LLC	Not less than 1/8	709/67
	American Premier Underwriters, Inc., formerly known as 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.	N/A	28/356
	Chevron U.S.A. Inc.	Statoil USA Onshore Properties Inc.	N/A	30/494
	Chevron U.S.A. Inc.	Chesapeake Appalachia, L.L.C.	N/A	30/532

(Please see attached for continued Leasehold chains)

**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

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MAY 18 2017

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: [Signature]

**SHL 27 - EHS
LEASEHOLD CHAIN**

51-01939

ITEM NUMBER	LEASE NAME OR NUMBER	GRANTOR/LESSOR	GRANTEE/LESSEE	ROYALTY	BOOK/PAGE
1 15-3-8 (continued)	Q086779000 (continued)	Chesapeake Appalachia, L.L.C. and Statoil USA Onshore Properties Inc.	Noble Energy, Inc. and CNX Gas Company, LLC	N/A	32/526
		Bounty Minerals, LLC	Noble Energy, Inc. and CNX Gas Company, LLC	not less than 1/8	879/249
		CNX Gas Company, LLC	Noble Energy, Inc.	N/A	37/169
2 15-3-5	Q086779000 (continued)	American Premier Underwriters, Inc., formerly, The Penn Central Corporation	TriEnergy Holdings, LLC	not less than 1/8	709/67
		American Premier Underwriters, Inc., formerly known as 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.	N/A	28/356
		Chevron U.S.A., Inc.	Statoil USA Onshore Properties Inc.	N/A	30/494
		Chevron U.S.A., Inc.	Chesapeake Appalachia, L.L.C.	N/A	30/532
		Chesapeake Appalachia, L.L.C. and Statoil USA Onshore Properties Inc.	Noble Energy, Inc. and CNX Gas Company, LLC	N/A	32/526
Bounty Minerals, LLC	Noble Energy, Inc. and CNX Gas Company, LLC	not less than 1/8	879/249		
CNX Gas Company, LLC	Noble Energy, Inc.	N/A	37/169		
3 15-3-9	3027757	W. Frank Wineman, as guardian for Lonnie J. Wineman and Kathie B. Wineman, his wife, both infants, and W. Frank Wineman and Louise M. Wineman, his wife, and Wesley C. Fisher and Mary L. Fisher, his wife	Columbia Gas Transmission Corporation, Successor to The Manufacturers Light and Heat Company	not less than 1/8	417/498

Office of Oil and Gas
Environmental Protection

Mar 8 2017

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**SHL 27 - EHS
LEASEHOLD CHAIN**

ITEM NUMBER	LEASE NAME OR NUMBER	GRANTOR/LESSOR	GRANTEE/LESSEE	ROYALTY	BOOK/PAGE
3 15-3-9 (continued)	3027757 (continued)	Columbia Gas Transmission Corporation	Columbia Gas Transmission, LLC	N/A	683/459
		Columbia Gas Transmission, LLC	NiSource Energy Ventures, LLC	N/A	21/428
		NiSource Energy Ventures, LLC, with the joinder of Columbia Gas Transmission, LLC	CNX Gas Company, LLC	N/A	685/136
		NiSource Energy Ventures, LLC, with the joinder of Columbia Gas Transmission, LLC	CNX Gas Company, LLC	N/A	697/295
		CNX Gas Company, LLC	Noble Energy, Inc.	N/A	26/225
		Columbia Energy Ventures, LLC	CNX Gas Company LLC and Noble Energy, Inc.	N/A	37/129
		CNX Gas Company LLC	Noble Energy, Inc.	N/A	37/169
4 15-3-9.1	3027757	W. Frank Wineman, as guardian for Lonnie J. Wineman and Kathie B. Wineman, his wife, both infants, and W. Frank Wineman and Louise M. Wineman, his wife, and Wesley C. Fisher and Mary L. Fisher, his wife	Columbia Gas Transmission Corporation, Successor to The Manufacturers Light and Heat Company	not less than 1/8	417/498
		Columbia Gas Transmission Corporation	Columbia Gas Transmission, LLC	N/A	683/459
		Columbia Gas Transmission, LLC	NiSource Energy Ventures, LLC	N/A	21/428
		NiSource Energy Ventures, LLC, with the joinder of Columbia Gas Transmission, LLC	CNX Gas Company, LLC	N/A	685/136
		NiSource Energy Ventures, LLC, with the joinder of Columbia Gas Transmission, LLC	CNX Gas Company, LLC	N/A	693/414
		CNX Gas Company, LLC	Noble Energy, Inc.	N/A	26/225
		Columbia Energy Ventures, LLC	CNX Gas Company LLC and Noble Energy, Inc.	N/A	37/129
CNX Gas Company LLC	Noble Energy, Inc.	N/A	37/169		
5 15-3-10.1	3028062	H. L. Daugherty and Carrie Daugherty, his wife	The Manufacturers Light and Heat Company	not less than 1/8	375/401
		The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation	N/A	422/204

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MAY 18 2017

Office of Oil and Gas
WV Dept. of Environmental Protection

51-01939

**SHL 27 - EHS
LEASEHOLD CHAIN**

ITEM NUMBER	LEASE NAME OR NUMBER	GRANTOR/LESSOR	GRANTEE/LESSEE	ROYALTY	BOOK/PAGE
5 15-3-10.1 (continued)	3028062 (continued)	Columbia Gas Transmission Corporation	Columbia Gas Transmission, LLC	N/A	683/459
		Columbia Gas Transmission, LLC	NiSource Energy Ventures, LLC	N/A	21/428
		NiSource Energy Ventures, LLC, with the joinder of Columbia Gas Transmission, LLC	CNX Gas Company, LLC	N/A	685/136 693/414
		NiSource Energy Ventures, LLC, with the joinder of Columbia Gas Transmission, LLC	CNX Gas Company, LLC	N/A	697/295
		CNX Gas Company, LLC	Noble Energy, Inc.	N/A	26/225
		Wheeling Creek Watershed and Flood Protection Commission	Columbia Energy Ventures, LLC f/k/a NiSource Energy Ventures, Columbia Gas Transmission, CNX Gas Company LLC and Noble Energy, Inc.	not less than 1/8	862/191
		Columbia Energy Ventures, LLC	CNX Gas Company LLC and Noble Energy, Inc.	N/A	37/129
		CNX Gas Company LLC	Noble Energy, Inc.	N/A	37/169
6 15-3-10	3028062	H. L. Daugherty and Carrie Daugherty, his wife	The Manufacturers Light and Heat Company	not less than 1/8	375/401
		The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation	N/A	422/204
		Columbia Gas Transmission Corporation	Columbia Gas Transmission, LLC	N/A	683/459
		Columbia Gas Transmission, LLC	NiSource Energy Ventures, LLC	N/A	21/428
		NiSource Energy Ventures, LLC, with the joinder of Columbia Gas Transmission, LLC	CNX Gas Company, LLC	N/A	685/136 693/414
		NiSource Energy Ventures, LLC, with the joinder of Columbia Gas Transmission, LLC	CNX Gas Company, LLC	N/A	697/295
		CNX Gas Company, LLC	Noble Energy, Inc.	N/A	26/225
		Donald R. Toland and Susan Toland, his wife, and Carrie M. Toland, a widow	NiSource Energy Ventures, Columbia Gas Transmission, CNX Gas Company LLC and Noble, Inc. [sic]	not less than 1/8	833/54

Office of Oil and Gas
West Dept. of Environmental Protection

RECEIVED
MAY 18 2017

**SHL 27 - EHS
LEASEHOLD CHAIN**

ITEM NUMBER	LEASE NAME OR NUMBER	GRANTOR/LESSOR	GRANTEE/LESSEE	ROYALTY	BOOK/PAGE
6 15-3-10 (continued)	3028062 (continued)	Columbia Energy Ventures, LLC	CNX Gas Company LLC and Noble Energy, Inc.	N/A	37/129
		CNX Gas Company LLC	Noble Energy, Inc.	N/A	37/169
7 15-6-28	3023816	Ota E. Elliott, widow	The Manufacturers Light and Heat Company	not less than 1/8	326/339
		The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation	N/A	422/204
		Columbia Gas Transmission Corporation	Columbia Gas Transmission, LLC	N/A	683/459
		Columbia Gas Transmission, LLC	NiSource Energy Ventures, LLC	N/A	21/428
		NiSource Energy Ventures, LLC, with the joinder of Columbia Gas Transmission, LLC	CNX Gas Company, LLC	N/A	685/136
		NiSource Energy Ventures, LLC, with the joinder of Columbia Gas Transmission, LLC	CNX Gas Company, LLC	N/A	693/414
		CNX Gas Company, LLC	Noble Energy, Inc.	N/A	697/295
		Robert B. Elliott	NiSource Energy Ventures and Columbia Gas Transmission	N/A	26/225
		Mable L. Riggle and Nicholas R. Riggle	NiSource Energy Ventures and Columbia Gas Transmission	not less than 1/8	773/117
		CNX Gas Company, LLC	Noble Energy, Inc.	not less than 1/8	773/166
8 15-6-30	3023207	Lloyd Bush and Charlotte Bush, his wife	The Manufacturers Light and Heat Company	N/A	37/169
		The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation	not less than 1/8	395/582
		Columbia Gas Transmission Corporation	Columbia Gas Transmission, LLC	N/A	422/204
		Columbia Gas Transmission, LLC	NiSource Energy Ventures, LLC	N/A	683/459
		NiSource Energy Ventures, LLC, with the joinder of Columbia Gas Transmission, LLC	CNX Gas Company, LLC	N/A	21/428
		NiSource Energy Ventures, LLC, with the joinder of Columbia Gas Transmission, LLC	CNX Gas Company, LLC	N/A	685/136
		CNX Gas Company, LLC	CNX Gas Company, LLC	N/A	693/414
		CNX Gas Company, LLC	CNX Gas Company, LLC	N/A	697/295

WV Dept. of Environmental Protection

MAY 17 2017

RECORDED

51-01939

**SHL 27 - EHS
LEASEHOLD CHAIN**

ITEM NUMBER	LEASE NAME OR NUMBER	GRANTOR/LESSOR	GRANTEE/LESSEE	ROYALTY	BOOK/PAGE
8 15-6-30 (continued)	3023207 (continued)	CNX Gas Company, LLC	Noble Energy, Inc.	N/A	26/225
		Kenneth R. Bush, Jeri Lynn Bush and Shawn R. Bush	NiSource Energy Ventures, LLC, Columbia Gas Transmission, LLC and CNX Gas Company LLC	not less than 1/8	780/606
		CNX Gas Company, LLC	Noble Energy, Inc.	N/A	37/169
9 15-6-32	3023799	Elmer F. Riggle and Alvia H. Riggle, his wife	The Manufacturers Light and Heat Company	not less than 1/8	395/604
		The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation	N/A	422/204
		Columbia Gas Transmission Corporation	Columbia Gas Transmission, LLC	N/A	683/459
		Columbia Gas Transmission, LLC	NiSource Energy Ventures, LLC	N/A	21/428
		NiSource Energy Ventures, LLC, with the joinder of Columbia Gas Transmission, LLC	CNX Gas Company, LLC	N/A	685/136 693/414
		NiSource Energy Ventures, LLC, with the joinder of Columbia Gas Transmission, LLC	CNX Gas Company, LLC	N/A	697/295
		CNX Gas Company, LLC	Noble Energy, Inc.	N/A	26/225
		William R. Foster and Janet L. Foster, husband and wife	Columbia Energy Ventures, LLC, f/k/a NiSource Energy Ventures, LLC, Columbia Gas Transmission, CNX Gas Company LLC and Noble Energy, Inc.	not less than 1/8	879/207
CNX Gas Company, LLC	Noble Energy, Inc.	N/A	37/169		

Office of Oil and Gas
WV Dept. of Environmental Protection

MAY 18 2017

Received

51-01939



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 black ink, appearing to read 'Dee Swiger', written over the printed name.

Dee Swiger
Regulatory Analyst III

DS/

Enclosures:

Received

MAY 18 2017

Office of Oil and Gas
WV Dept. of Environmental Protection

07/07/2017

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

Date of Notice Certification: 5/11/17

API No. 47- 051 - 01939
Operator's Well No. SHL 27 EHS
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>535401.090</u>
County: <u>Marshall</u>	Northing: <u>4423229.079</u>
District: <u>Webster</u>	Public Road Access: <u>Irish Ridge Road</u>
Quadrangle: <u>Majorsville</u>	Generally used farm name: <u>Steve and Ed Ward</u>
Watershed: <u>Wheeling Creek (HUC 10)</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>
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Received
MAY 11 2017

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.

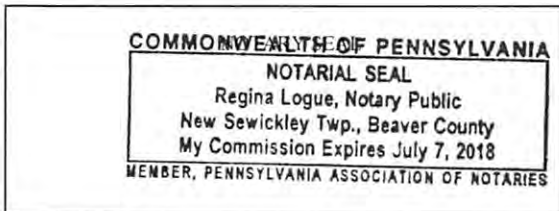
Office of Oil and Gas
WV Dept. of Environmental Protection

Certification of Notice is hereby given:

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

Well Operator: Noble Energy, Inc.
By: Dee Swiger
Its: Regulatory Analyst, III
Telephone: 724-820-3061

Address: 1000 Noble Energy Drive
Canonsburg, PA 15317
Facsimile: 724-820-3098
Email: dee.swiger@nbleenergy.com



Subscribed and sworn before me this 11th day of May 2017.
Regina Logue Notary Public
My Commission Expires July 7, 2018

Oil and Gas Privacy Notice:

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

Received

MAY 17 2017

Oil and Gas
Regulatory Protection

07/07/2017

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

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

Date of Notice: 5/11/17 **Date Permit Application Filed:** 5/12/17

Notice of:

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

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

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

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

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

SURFACE OWNER(s)
Name: Steve and Ed Ward
Address: 500 California Street
Farmersville, OH 45325

Name: _____
Address: _____

SURFACE OWNER(s) (Road and/or Other Disturbance)
Name: Richard Markonich and Sharon Hupp
Address: 614 Irish Ridge Road
Cameron, WV 26003

Name: _____
Address: _____

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

COAL OWNER OR LESSEE
Name: Murray American Energy, Inc. (Consolidation Coal Company)
Address: 46226 National Road
St. Clairsville, OH 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: _____
Address: _____

Received

*Please attach additional forms if necessary

MAY 18 2017

Notice is hereby given:

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

This Notice Shall Include:

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

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

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

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

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

Well Location Restrictions

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

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)

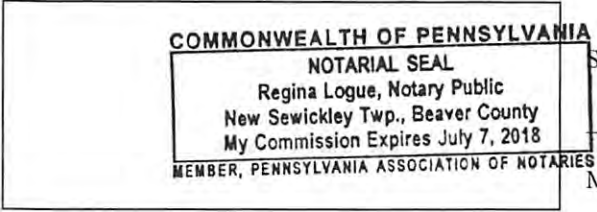
API NO. 47-051 - 01939
OPERATOR WELL NO. SHL 27 EHS
Well Pad Name: SHL 27

Notice is hereby given by: Dee Swiger
Well Operator: Noble Energy, Inc.
Telephone: 724-820-3061
Email: dee.swiger@nblenergyinc.com

Address: 1000 Noble Energy Drive
Canonsburg, PA 15317
Facsimile: 724-820-3098

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.



Subscribed and sworn before me this 11th day of May, 2017.
Regina Logue Notary Public
My Commission Expires July 7, 2018

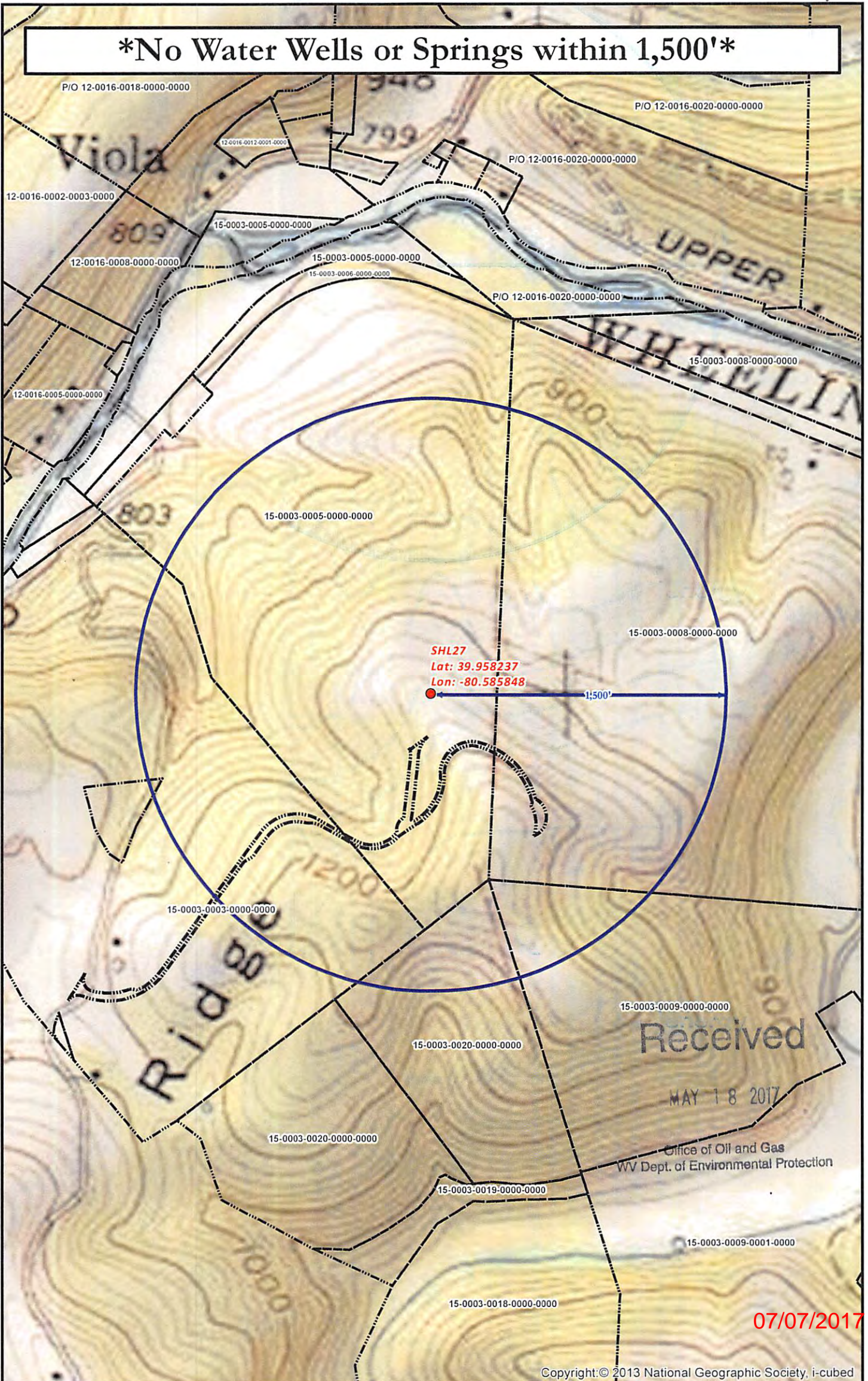
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MAY 18 2017

Oil and Gas
Environmental Protection

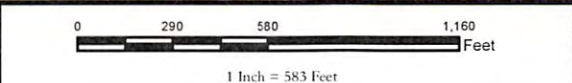
07/07/2017

No Water Wells or Springs within 1,500'



SHL27 SITE SAFETY PLAN
- SITE WELL LOCATION -

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



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: 10/28/2014

Author: sambyron



**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 *Waiver ✓*
Address: 46226 National Road
St. Clairsville, OH 43950

MINERAL OWNER(s)
Name: Noble Energy, Inc. *Waiver ✓*
Address: 333 Technology Drive Suite 116
Canonsburg, PA 15317

*please attach additional forms if necessary

Office of Oil and Gas
WV Dept. of Environmental Protection

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: <u>Noble Energy, Inc.</u>	Address: <u>333 Technology Drive, Suite 116</u>
Telephone: <u>724-820-3061</u>	<u>Canonsburg, PA 15317</u>
Email: <u>dswiger@nobleenergyinc.com</u>	Facsimile: <u>724-743-0050</u>

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.

07/07/2017

W-70
rev. 7/01

Affidavit of Personal Service

Received

MAY 18 2017

State Of Pennsylvania
County Of Washington

Office of Oil and Gas
WV Dept. of Environmental Protection

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) 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--

oble 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]

or 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.

or 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.

or 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.

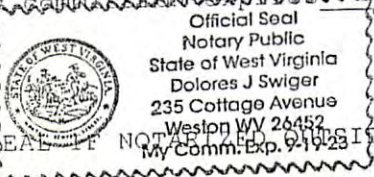
or a corporation:

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 9-23.

07/07/2017



[Signature]
Notary Public

AFFIX SEAL IF NOT AFFIXED OUTSIDE THE STATE)

WW-70
Rev. 7/01

Received

MAY 18 2017

Affidavit of Personal Service

Office of Oil and Gas
WV Dept. of Environmental Protection

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
- (2) Application on Form WW-2(B) / WW-3(B) / WW-4(B) / WW-5(B) / WW-6(B) Survey
- (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, 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:

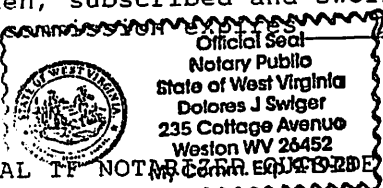
[] Handing it to the general partner, named , or, because the general partner refused to take it when I tried to hand it over, by leaving it in the presence of the general partner.

For a corporation:

[X] Handing it to the corporation's employee X / officer / director / attorney in fact / named 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 07/07/2017



[Signature]
Notary Public

(AFFIX SEAL IF NOTARY PUBLIC IN THE STATE)

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
VOLUNTARY STATEMENT OF NO OBJECTION

Instructions to Persons Named on Page WW-6A

The well operator named on page WW-6A is applying for a permit from the State of West Virginia to conduct oil or gas well work. Well work permits are valid for twenty-four (24) months. Please contact the listed well operator and the Office of Oil and Gas if you do not own any interest in the listed surface tract.

Comment and Waiver Provisions

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.

Pursuant to West Virginia Code § 22-6A-8(b) No permit may be issued less than thirty days after the filing date of the application for any well work except plugging or replugging; and no permit for plugging or replugging may be issued less than five days after the filing date of the application except a permit for plugging or replugging a dry hole: *Provided*, That if the applicant certifies that all persons entitled to notice of the application under the provisions of subsection (b), section ten of this article have been served in person or by certified mail, return receipt requested, with a copy of the well work application, including the erosion and sediment control plan, if required, and the well plat, and further files written statements of no objection by all such persons, the secretary may issue the well work permit at any time.

VOLUNTARY STATEMENT OF NO OBJECTION

I, _____, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through _____, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

State:	<u>West Virginia</u>	UTM NAD 83 Easting:	<u>535401.090</u>
County:	<u>Marshall</u>	Northing:	<u>4423229.079</u>
District:	<u>Webster</u>	Public Road Access:	<u>Irish Ridge Road</u>
Quadrangle:	<u>Majorsville</u>	Generally used farm name:	<u>Steve and Ed Ward</u>
Watershed:	<u>Wheeling Creek (HUC 10)</u>		

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

<p>*Please check the box that applies</p> <p><input checked="" type="checkbox"/> SURFACE OWNER</p> <p><input type="checkbox"/> SURFACE OWNER (Road and/or Other Disturbance)</p> <p><input type="checkbox"/> SURFACE OWNER (Impoundments/Pits)</p> <p><input type="checkbox"/> COAL OWNER OR LESSEE</p> <p><input type="checkbox"/> COAL OPERATOR</p> <p><input type="checkbox"/> WATER PURVEYOR</p> <p><input type="checkbox"/> OPERATOR OF ANY NATURAL GAS STORAGE FIELD</p>	<p>FOR EXECUTION BY A NATURAL PERSON</p> <p>Signature: _____</p> <p>Print Name: _____</p> <p>Date: _____</p>
	<p>FOR EXECUTION BY A CORPORATION, ETC.</p> <p>Company: _____</p> <p>By: _____</p> <p>Its: _____</p> <p>Signature: _____</p> <p>Date: _____</p>

Received
MAY 18 2017

Office of Oil and Gas
Department of Environmental Protection

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.

07/07/2017

WW-6AW
(1-12)

API NO. 51-01939
OPERATOR WELL NO. SHL27EHS
Well Pad Name: SHL27

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
VOLUNTARY STATEMENT OF NO OBJECTION

Instructions to Persons Named on Page WW-6A

The well operator named on page WW-6A is applying for a permit from the State of West Virginia to conduct oil or gas well work. Well work permits are valid for twenty-four (24) months. Please contact the listed well operator and the Office of Oil and Gas if you do not own any interest in the listed surface tract.

Comment and Waiver Provisions

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.

Pursuant to West Virginia Code § 22-6A-8(b) No permit may be issued less than thirty days after the filing date of the application for any well work except plugging or replugging; and no permit for plugging or replugging may be issued less than five days after the filing date of the application except a permit for plugging or replugging a dry hole. *Provided*, That if the applicant certifies that all persons entitled to notice of the application under the provisions of subsection (b), section ten of this article have been served in person or by certified mail, return receipt requested, with a copy of the well work application, including the erosion and sediment control plan, if required, and the well plat, and further files written statements of no objection by all such persons, the secretary may issue the well work permit at any time.

VOLUNTARY STATEMENT OF NO OBJECTION

I, Alex O'Neill, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through _____, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

State:	<u>West Virginia</u>	WVSPN NAD 27	Eastings:	<u>1,695,657.585</u>
County:	<u>Marshall</u>		Northing:	<u>533,023.387</u>
District:	<u>Webster</u>	Public Road Access:		<u>Irish Ridge Road</u>
Quadrangle:	<u>Majorsville</u>	Generally used farm name:		<u>Steve and Ed Ward</u>
Watershed:	<u>Wheeling Creek</u>			

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials, **provided that NOBLE ENERGY, INC. drills the well on WV North NAD27 coordinates of North 533,023.387, East 1,695,657.585 in accordance with the Agreement between Consolidation Coal Company, Murray American Energy, Inc. and Noble Energy, Inc. dated 2/2/2015.**

*Please check the box that applies <input type="checkbox"/> SURFACE OWNER <input type="checkbox"/> SURFACE OWNER (Road and/or Other Disturbance) <input type="checkbox"/> SURFACE OWNER (Impoundments/Pits) <input checked="" type="checkbox"/> COAL OWNER OR LESSEE <input checked="" type="checkbox"/> COAL OPERATOR <input type="checkbox"/> WATER PURVEYOR <input type="checkbox"/> OPERATOR OF ANY NATURAL GAS STORAGE FIELD	FOR EXECUTION BY A NATURAL PERSON Signature: _____ Print Name: _____ Date: _____
	FOR EXECUTION BY A CORPORATION, ETC. Company: <u>Consolidation Coal Company</u> By: <u>Alex O'Neill</u> Its: <u>Coal, Oil & Gas Relations Manager</u> Signature: <u><i>Alex O'Neill</i></u> Date: <u>4/24/2017</u>

Received

MAY 18 2017

Office of Oil and Gas
WV Dept. of Environmental Protection

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07/07/2017

51-01939



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

Reissued April 19, 2017

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

Subject: DOH Permit for the SHL-27 and SHL-72 Well Pads, Marshall County

Dear Mr. Martin, [↓] 47-051-01939

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,

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

MAY 18 2017

Office of Oil and Gas
WV Dept. of Environmental Protection
07/07/2017

Hydraulic Fracturing Fluid Product Component Information Disclosure

Hydraulic Fracturing Fluid Composition:

SI-01939

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

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

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

Received

MAY 18 2017

Office of Oil and Gas
 WV Dept. of Environmental Protection

07/07/2017

**WVDEP OOG
ACCEPTED AS-BUILT**
WJH 7/6/2017

CONSTRUCTION QUANTITIES:
 AREA IN CUT 406,864.0 S.F. 9.34 ACRES
 AREA IN FILL 434,927.6 S.F. 9.98 ACRES
 TOTAL INCLUSION AREA 841,792.5 S.F. 19.32 ACRES
 CUT TO FILL RATIO 1.02
 AVERAGE CUT DEPTH 5.68
 AVERAGE FILL DEPTH 5.90
 MAX CUT DEPTH 34.34 MAX FILL DEPTH 26.28
 CUT VOLUME 2,312,764.0 C.F. 83,838.67 C.Y.
 FILL VOLUME 2,259,920.5 C.F. 83,700.79 C.Y.
 PAD AND ROAD STONE QUANTITIES AT 4" THICK.
 VOLUME 89,544.97 C.F. 3,154.65 C.Y.
 *NO STONE INCLUDED IN CUT/FILL VOLUMES

GENERAL NOTES:
 1. DRAWING UTILIZES PRE-EXISTING AND POST-CONSTRUCTION AERIAL MAPPING COMBINED WITH SURVEY DATA. ALL PROVIDED BY BLUE MOUNTAIN. PRE-EXISTING PHOTOGRAPHY DATE 04/05/13. POST-CONSTRUCTION PHOTOGRAPHY DATE 07/24/15. POST-CONSTRUCTION SURVEY DATE 07/25/15.
 2. COORDINATE SYSTEM: NAD83 WEST VIRGINIA STATE PLANE, NORTH ZONE, US FOOT.

- LEGEND**
- DITCH
 - FENCE LINE
 - RIP RAP
 - EDGE OF GRAVEL
 - 8" - SILT FENCE
 - SS - SILT SOCK
 - STREAM
 - TREELINE
 - INDEX CONTOUR (POST CONSTR.)
 - INTERIM CONTOUR (POST CONSTR.)
 - CONTOUR (PRE-EXISTING)
 - DESIGN LOD
 - - UTILITY POLE
 - - MISCELLANEOUS POLE OR SIGN
 - - POST
 - - BERM



NOTE: DRAWING WAS CREATED ON 22x34 PAPER. 11x17 DRAWINGS ARE HALF SCALE. REFER TO SCALE BAR FOR PROPER SCALING.

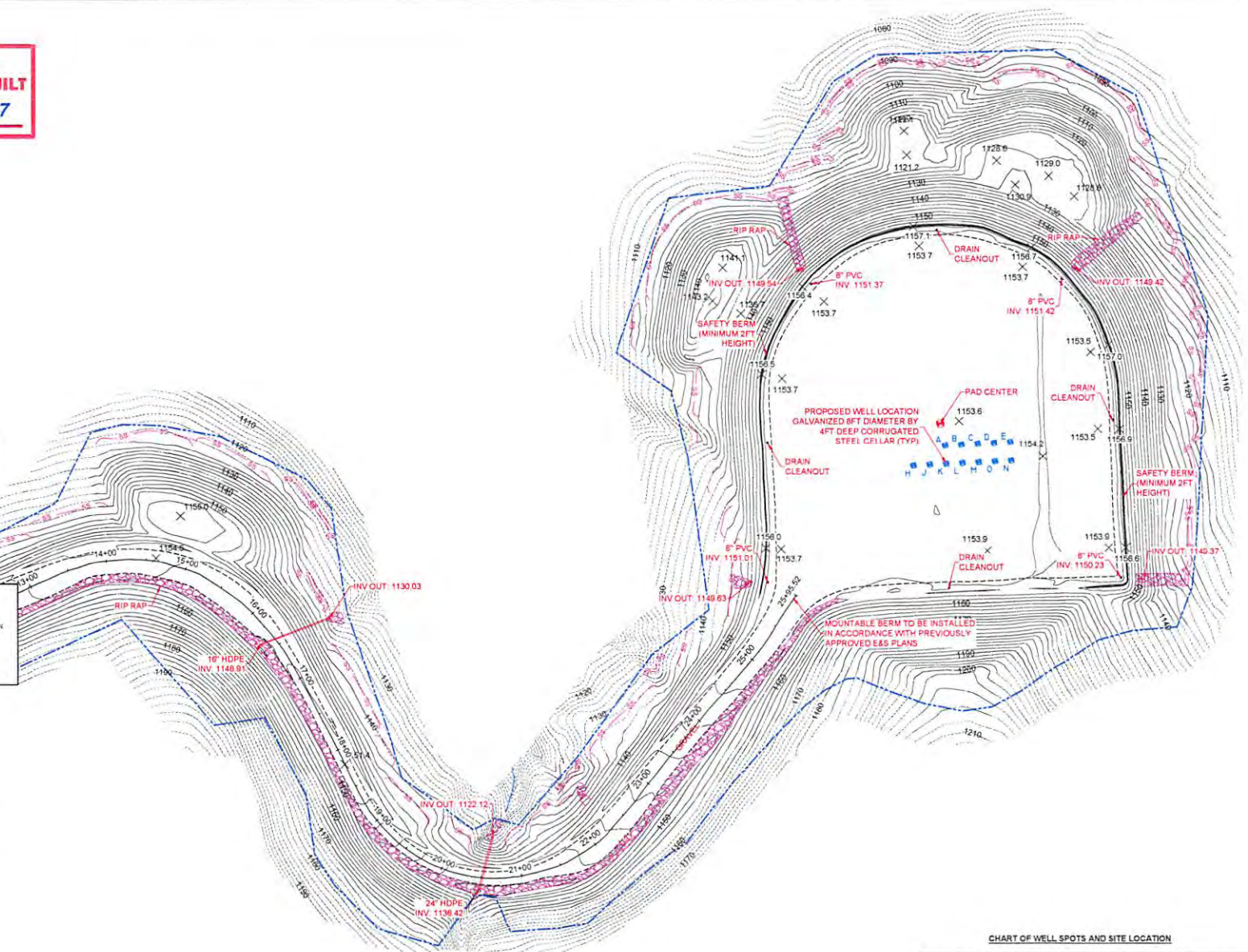


CHART OF WELL SPOTS AND SITE LOCATION

POINT	NAD27 WY NORTH		NAD83 WY NORTH		UTM-NAD83-17 (METERS)	
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	NORTHING	EASTING
ENTRANCE	39°57'14.83"	80°35'52.63"	39°57'19.07"	80°35'51.34"	4423782.278	534847.328
PAD CENTER	39°57'29.88"	80°35'09.88"	39°57'30.10"	80°35'08.95"	4423228.037	535375.634

Blue Mountain Inc.
 Engineers and Land Surveyors
 1101 Mount Olive Hwy
 Boone, NC 28608
 704.762.0242

NOBLE ENERGY
 1000 NOBLE ENERGY DRIVE
 CANONSBURG, PA 15317

noble energy

SHL27 WELL PAD
 AS-BUILT

REVISIONS

DATE	TYPE
6/16/15	UPDATED ASBUILT
6/17/15	UPDATED ASBUILT

WILLIAM R. FELT
 LICENSED
 No. 4448
 STATE OF
 WEST VIRGINIA
 PROFESSIONAL ENGINEER

William R. Felt

DRAWN BY: DEC
 CHECKED BY: HCH
 DATE: 07/28/15
 SCALE: 1" = 60'
 JOB NO: 0998-03

DRAWING NAME:
 SHL27_COMPLETE_ASBUILT.DWG



LOCATION MAP
NOT TO SCALE



NOBLE ENERGY,
1000 NOBLE ENERGY
CANONSBURG, PA 15317
TEL: (724) 820-3000

SHL27 WELL

WELL SITE LOCATION

NAD 83 - LAT: N 39°57'30.171"; L
NAD 27 - LAT: N 39°57'29.899"; L

ENTRANCE LOCATION

NAD 83 - LAT: N 39°57'15.078"; L
NAD 27 - LAT: N 39°57'14.806"; L

PROPERTY OWNERS

1. STEVE AND ED WARD 15-3-5
50 CALIFORNIA ST
FARMERSVILLE, OH 45325
2. SHARON HUPP AND RICHARD MARKONICH 15-3-3
614 IRISH RIDGE RD
CAMERON, WV 26033

MAJORSVILLE QUADRANGLE
MARSHALL COUNTY, WV

DATE: JULY 28, 2017



Engineers and Land Surveyors

11023 Mason Dixon Road
Burton, WV 26562-9000
(304) 662-6486

NOTE: DRAWING WAS CREATED ON 22X34 SHEETS.
ALL DIMENSIONS ARE HALF SCALE. REFER TO SCALE FOR DETAILS.

07/07/2017

Energy

NC.
DRIVE
5317
000

L SITE

ATION
NG: W 80°35'08.959"
ONG: W 80°35'09.687"
ATION
ONG: W 80°35'31.316"
ONG: W 80°35'32.043"

DRANGLE
WEST VIRGINIA
2015

n Inc.
veyors
wy.
56

4 PAPER. 11x17 DRAWINGS
LE BAR FOR PROPER SCALING.



LOCATION MAP
MAJORSVILLE 7.5M USGS QUADRANGLE
SCALE: 1"=2000'

*Re
4/26/17*

SHEET INDEX	
DRAWING NUMBER	DRAWING NAME
1	COVER SHEET
2,3	AS-BUILT CONDITIONS PLAN
4,5	AS-BUILT CONDITIONS PLAN W/ ORTHO

Received

MAY 18 2017

Office of Oil and Gas
WV Dept. of Environmental Protection

Blue Mountain Inc.
Engineers and Land Surveyors
11033 Mason Dixon Hwy.
Barton, WV 26562-9656
(304) 662-6486

NOBLE ENERGY
1000 NOBLE ENERGY DRIVE
CANONSBURG, PA 15317



SHL27 WELL PAD
AS-BUILT COVER SHEET

REVISIONS

DATE	TYPE
8-10-15	UPDATED ASBUILT



William P. Foley

DRAWN BY:	DEC
CHECKED BY:	MCH
DATE:	07/28/15
SCALE:	AS SHOWN
JOB NO.:	0988-15
DRAWING NAME:	SHL27_COMPLETE_ASBUILT.DWG

07/07/2017
SHEET 1 OF 3