west virginia department of environmental protection

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

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

April 17, 2015

WELL WORK PERMIT

Horizontal 6A Well

This permit, API Well Number: 47-9502233, issued to NOBLE ENERGY, INC., is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

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

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

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.

James Martin
Chief

Operator's Well No: SHR 30 EHS
Farm Name: SECKMAN, ALLEN W. ET AL
API Well Number: 47-9502233
Permit Type: Horizontal 6A Well
Date Issued: 04/17/2015

Promoting a healthy environment.

west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
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Earl Ray Tomblin, Governor
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April 17, 2015

WELL WORK PERMIT

Horizontal 6A Well

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James Martin
Chief

Operator's Well No: SHR 30 EHS
Farm Name: SECKMAN, ALLEN W. ET AL
API Well Number: 47-9502233
Permit Type: Horizontal 6A Well
Date Issued: 04/17/2015

Promoting a healthy environment.

API Number: 9502233

PERMIT CONDITIONS

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

CONDITIONS

1. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACE). Through this permit, you are hereby being advised to consult with USACE regarding this proposed activity.

2. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.

3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.

4. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.

5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations,* 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.

6. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.

7. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.

8. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.

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

WW-6B
(9/13)

95 02233

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

1) Well Operator: Noble Energy, Inc. | 494501907 (Operator ID) | 095-Tyler (County) | Mc Elroy (District) | Shirley (Quadrangle)

2) Operator's Well Number: SHR 30 EHS Well Pad Name: SHR 30

3) Farm Name/Surface Owner: Allen W. Seckman, et al Public Road Access: County Rt. 58

4) Elevation, current ground: 920' Elevation, proposed post-construction: 920'

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

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Associated Pressure(s):
Marcellus 6514 - 6578' / 64' Thick / 4341 psi

8) Proposed Total Vertical Depth: 6,568'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 15,743'

11) Proposed Horizontal Leg Length: 8,293'

12) Approximate Fresh Water Strata Depths: 466'

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

14) Approximate Saltwater Depths: 1761'

15) Approximate Coal Seam Depths: None

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

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

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

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(9/13)

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18) **CASING AND TUBING PROGRAM**

TYPE	Size	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling	INTERVALS: Left in Well	CEMENT: Fill-up (Cu. Ft.)
Conductor	20"	New	LS	94	40' minimum or to next competent formation, but no deeper than 1st freshwater	40' minimum or to the next competent formation, but no deeper than 1st freshwater	Fill/Soil to surface
Fresh Water	13 3/8"	New	J-55	54.5	566' or to next competent formation not deeper than elevation.	566' or to next competent formation, but no deeper than elevation.	CTS 30% excess Yield =1.18
Coal							
Intermediate	9 5/8"	New	J-55	36.0	2373' or 250' below the fifth sand	2373' or 250' below the fifth sand	CTS 20% excess Yield = 1.19
Production	5 1/2"	New	P-110	20.0	15,743'	15,743'	10% excess Yield = 1.27 TOC=200' above 9.625" shoe
Tubing							
Liners							

TYPE	Size	Wellbore Diameter	Wall Thickness	Burst Pressure	Cement Type	Cement Yield (cu. ft./k)
Conductor	20"	24"	0.438	2730	Stabilize to surface with fill/soil	to surface
Fresh Water	13 3/8"	17.5"	0.380	2730	Type 1	30% excess Yield = 1.18
Coal						
Intermediate	9 5/8"	12.38"	.352	3520	Class A	20% excess Yield = 1.19 to surface
Production	5 1/2"	8.75" - 8.5"	.361	12,640	Class A	10% excess Yield = 1.27 TOC=200' above 9.625" shoe
Tubing						
Liners						

MDG
12-17-2014

PACKERS

Kind:				
Sizes:				
Depths Set:				

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95 02233

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 6568 feet. Drill Horizontal leg - stimulate and produce the Marcellus Formation. Should we encounter formation issues, set the 13 3/8 into next competent formation but not deeper than elevation. Should we encounter a unanticipated void we will install a minimum of 20' of casing below the void but not more than 100' below the void, set a basket and grout to surface.

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

The stimulation will be multiple stages divided over the lateral length of the well. Stage spacing is dependent upon engineering design. Slickwater fracturing technique will be utilized on each stage using sand, water, and chemicals. our maximum pressure is not to exceed 10,000 lbs. Please refer to attached list.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 41.57

22) Area to be disturbed for well pad only, less access road (acres): 7.42

23) Describe centralizer placement for each casing string:

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

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

See attached sheets - Conductor - fill/soil to surface. Fresh Water - 15.6 ppg Type 1 cement +2% CaCl (CA-100), 0.25# lost circ. (CLC-CPF), 30%excess yield =1.18. Intermediate- 15.6 ppg Class A +0.4% Ret, 0.15% Disp, 0.2% Anti Foam, 0.125# sk Lost circ. 20% Excess Yield =1.19 To Surface. Production - 14.8 ppg Class A 25:75:0 System +2.6% cement extender, 0. 7% Fluid Loss additive, 0.45% high temp retarder, 0.2% fiction 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 in air. Apart from insuring the hole is clean via air circulation at TD, there are no other conditioning procedures. Fresh Water/Surface -The hole is drilled w/air and casing is run in air. Once casing is at setting depth, circulate a minimum of one hole volume prior to pumping cement. Intermediate - Once surface casing is set and cemented Intermediate hole is drilled either on air or SOBM and filled w/ KCl water once filled w/ KCl water once drilled to TD. The well is conditioned with KCl circulation prior to running casing. Once casing is at setting depth, the well is circulated a minimum of one hole volume prior to pumping cement. Production - The hole is drilled with synthetic oil base mud and once at TD the hole is circulated at maximum allowable drilling pump rate for at least 6X bottoms up. Once on bottom with casing, circulate a minimum of one hole volume prior to pumping cement.

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*Note: Attach additional sheets as needed.

95 02233

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

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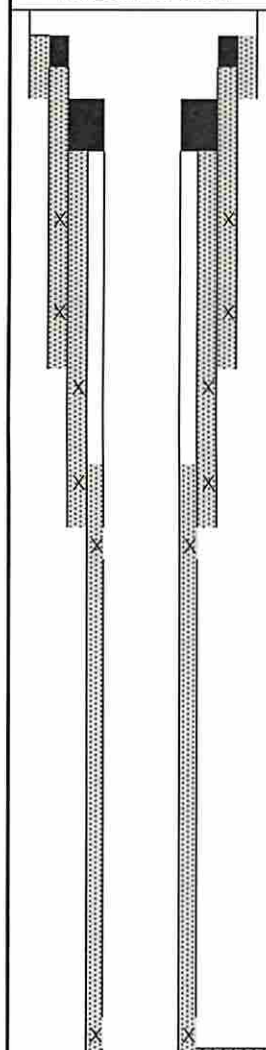
noble energy

DRILLING WELL PLAN
SHR-30E-HS (Marcellus HZ)
Macellus Shale Horizontal
Tyler County, WV

		SHR-30E SHL (Lat/Long)	(335439.54N, 1628465.13E) (NAD27)
Ground Elevation	920'	SHR-30E LP (Lat/Long)	(336003.5N, 1629156.21E) (NAD27)
Azm	210°	SHR-30E BHL (Lat/Long)	(328208.02N, 1631993.52E) (NAD27)

WELLBORE DIAGRAM



HOLE	CASING	GEOLOGY	TOP	BASE	MUD	CEMENT	CENTRALIZERS	CONDITIONING	COMMENTS
24	20" 94#	Conductor	40	40	AIR	To Surface	N/A	Ensure the hole is clean at TD.	Stabilize surface fill/soil. Conductor casing = 0.438" wall thickness Burst=2730psi
17 1/2	13-3/8" 54.5# J-55 BTC	Int. Casing	566	566	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	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.	Intermediate casing = 0.380" wall thickness Burst=2730 psi
12 3/8	9-5/8" 36# HCK-55 LTC	Big Lime	2048	2119	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.	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.	Casing to be ran 250' below the 5th Sand. Intermediate casing = 0.352" wall thickness Burst=3520 psi
		Big Injun	2119	2173					
		Price Formation	2173						
		Weir	2326	2430					
		Int. Casing	2373	2373					
8.75" Vertical	5-1/2" 20# HCP-110 TXP BTC	Berea	2517	2525	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
		Top Devonian Shale	2525						
		Gordon	2943	2962					
		Warren Sand	3436	3482					
		Lower Huron	3834		12.0ppg-12.5ppg SOBM		Rigid Bow Spring every joint to KOP		
8.75" Curve		Benson	5004	5048					
		Alexander	5248	5306					
		Cashaqua	6247	6358					
		Middlesex	6358	6392					
		West River	6392	6460					
		Burkett	6460	6494					
		Tully Limestone	6494	6497					
		Hamilton	6497	6514					
8.75" - 8.5" Lateral		Marcellus	6514	6578	12.0ppg-12.5ppg SOBM				
		TD	15743	6568					
		Onondaga	6578	6585					

LP @ 6568' TVD / 7450' MD

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

+/-8293' ft Lateral

TD @ +/-6568' TVD
+/-15743' MD

X=centralizers

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JAN 26 2015

WW-9
(9/13)

API Number 47 - 095 - 95 02233
Operator's Well No. SHR 30 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) huc-10 Mc Elroy Creek Quadrangle Shirley

Elevation 920' County 095-Tyler District Mc Elroy

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

Will a pit be used? Yes ☐ No ☑

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

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

MAC
12-17-2014

Proposed Disposal Method For Treated Pit Wastes:

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

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

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

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

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

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

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

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

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

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

Company Official Signature

Company Official (Typed Name) Kim Ward/Dee Swiger

Company Official Title Regulatory Analyst

Official Seal
Notary Public
State of West Virginia
Dolores J Swiger
235 Cottage Avenue
Weston WV 26452
My Comm. Exp. 9-19-23

Subscribed and sworn before me this 15 day of Jan, 20 15

Notary Public

My commission expires 09/19/2023

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Form WW-9

Operator's Well No. SHR 30 EHS

Noble Energy, Inc.

Proposed Revegetation Treatment: Acres Disturbed 41.57 Prevegetation pH 6.0

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

Fertilizer type 10-20-20 or equal

Fertilizer amount 500 lbs/acre

Mulch Hay or Straw at 2 Tons/acre

Seed Mixtures

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

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

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Michael Daff

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

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JAN 26 2015

Title: Oil and Gas Inspector Date: 12-17-2014

Field Reviewed? (✓) Yes ( ) No

95 02233

Additives to be used in drilling medium:

Calcium Chloride Powder

Carbo Tec

Carbo Gel2

Carbo Tec S

Ecco-Block, Lime

MIL-Carb TM

Mil-Clean

Mil-Seal

Next base eC, Next Drill

Next Hold

Next Mul

Omni Cote

Mil Bar

Next Mul HT

Soda Ash

Potassium Chloride

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APR 02 2015

WV Department of
Environmental Protection

95 02233

Cuttings Disposal/Site Water

Cuttings –Haul off Company:

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

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

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

Disposal Locations:

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

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

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

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

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

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

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

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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

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

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

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

Water Haul off Companies:

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

Disposal Locations:

Solidification
Waste Management, Arden Landfill Permit # 100172
200 Rangos Lane
Washington, PA 15301
724-225-1589

Solidification/Incineration
Soil Remediation, Inc. Permit # 02-20753
6065 Arrel-Smith Road
Lowelville, OH 44436
330-536-6825

Adams #1
Permit # 34-031-2-7177
23986 Airport Road
Coshocton, OH 43812
740-575-4484

Adams #2
Permit # 34-031-2-7178
740-575-4484

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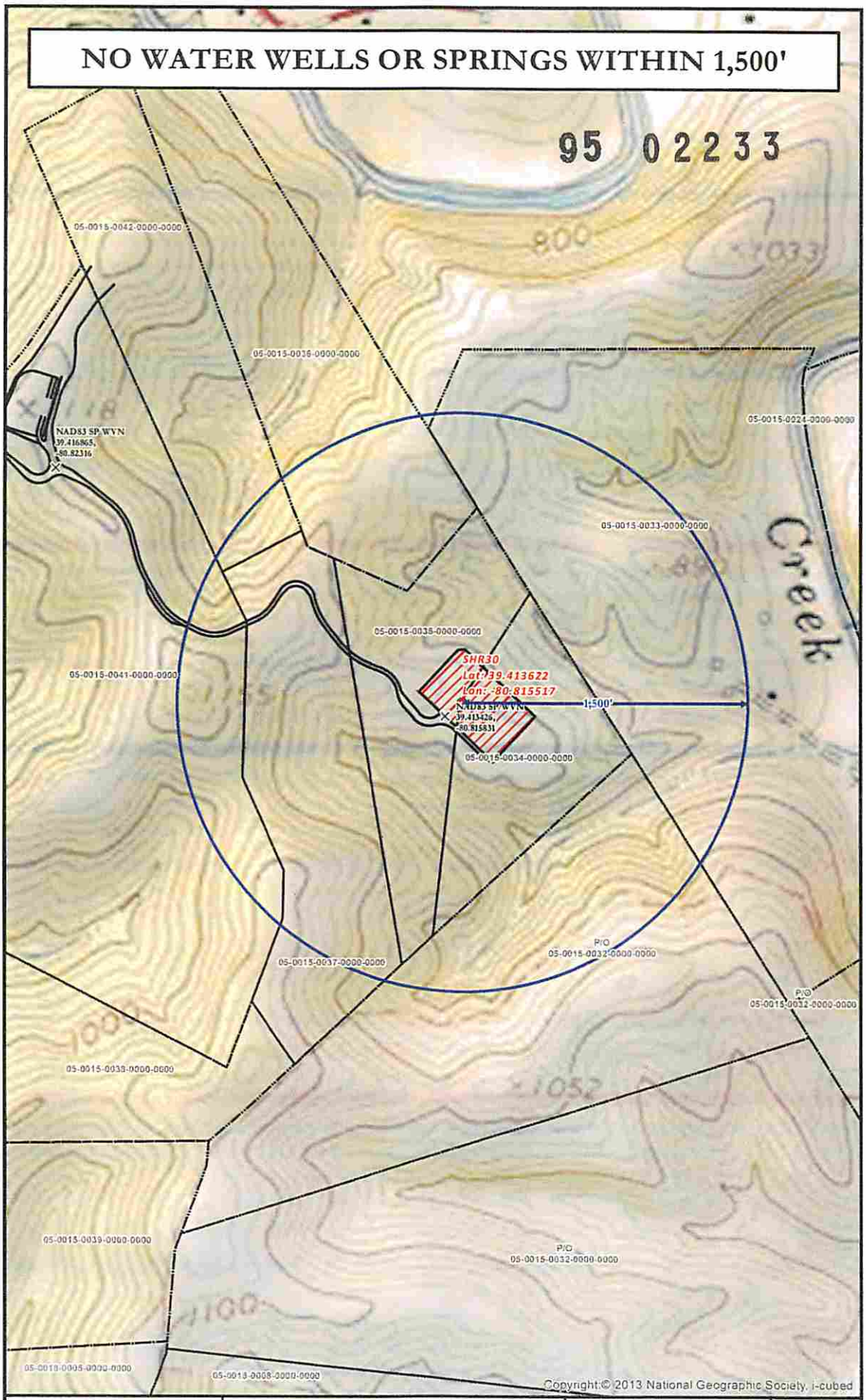
JAN 26 2015

NO WATER WELLS OR SPRINGS WITHIN 1,500'



SHR 30 SITE SAFETY PLAN

- WATER WELL PURVEYORS -

0 300 600 1,200 Feet

1 Inch = 600 Feet

Well Pad
Cistern
Water Well
Intersection
Access Road
1500' Water Wells 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.

noble energy

Date: 11/20/2014

Author: ChristopherGlover

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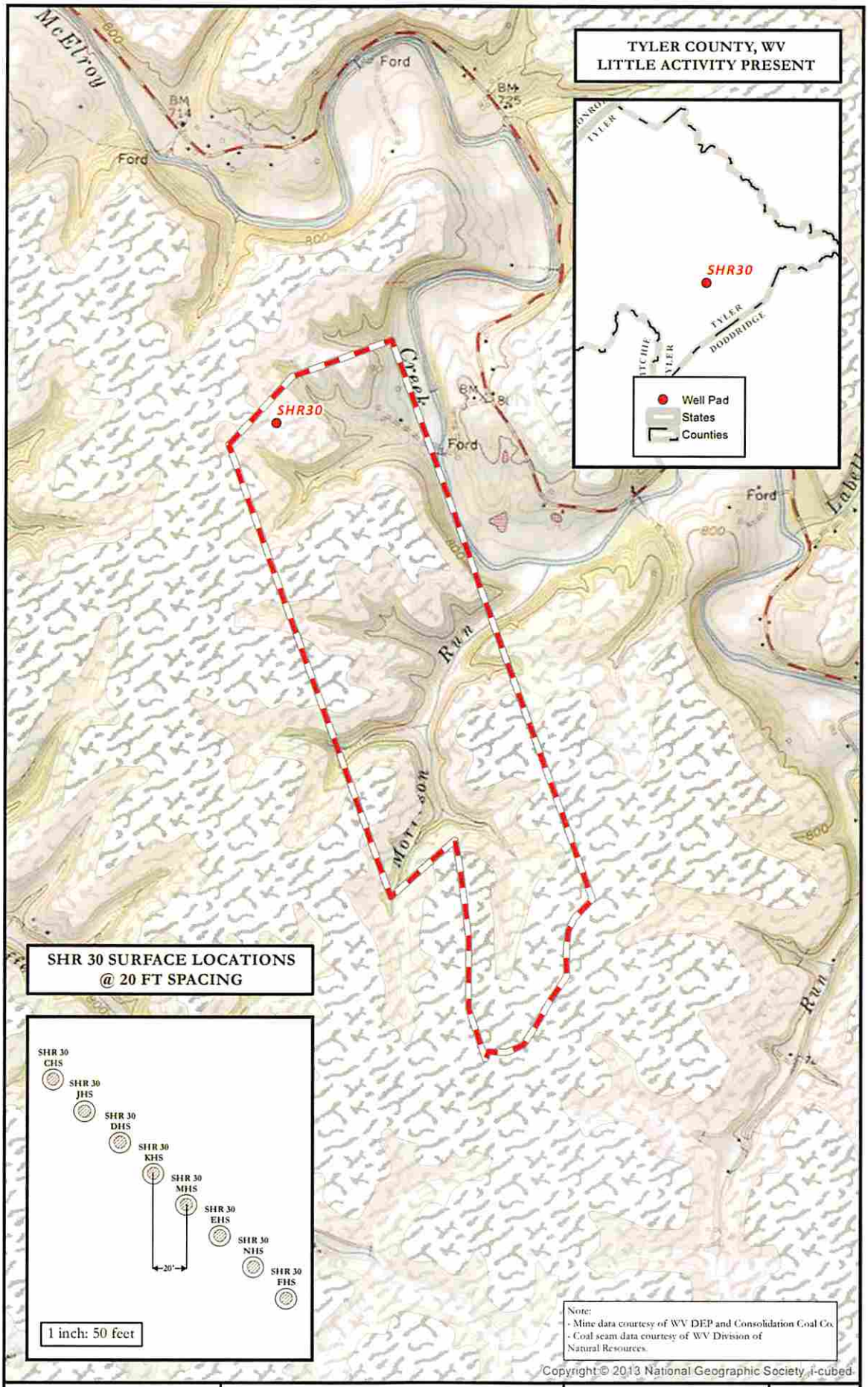
Document Path: G:\Canonsburg\GIS\Projects\District_30\Appalachia\MXDs\Ent\SR\Permitting\Shirley\SHR30\SP_D30_PA_WV_6_SHR30_Water_Wells.mxd



SHR 30 SITE SAFETY PLAN
-WELLHEAD TOPHOLE LOCATION-

0 750 1,500 3,000 Feet
1 Inch = 1,500 Feet

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

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

noble energy

Date: 11/20/2014
Author: ChristopherGlover
5 / 6

Document Path: G:\Canonsburg\GIS\Projects\District_30\Appalachia\MXDs\EHSR\Permitting\Shirley\SHR30\D30_PA_WV_5_SHR30_Tophole_Mine_Activity.mxd

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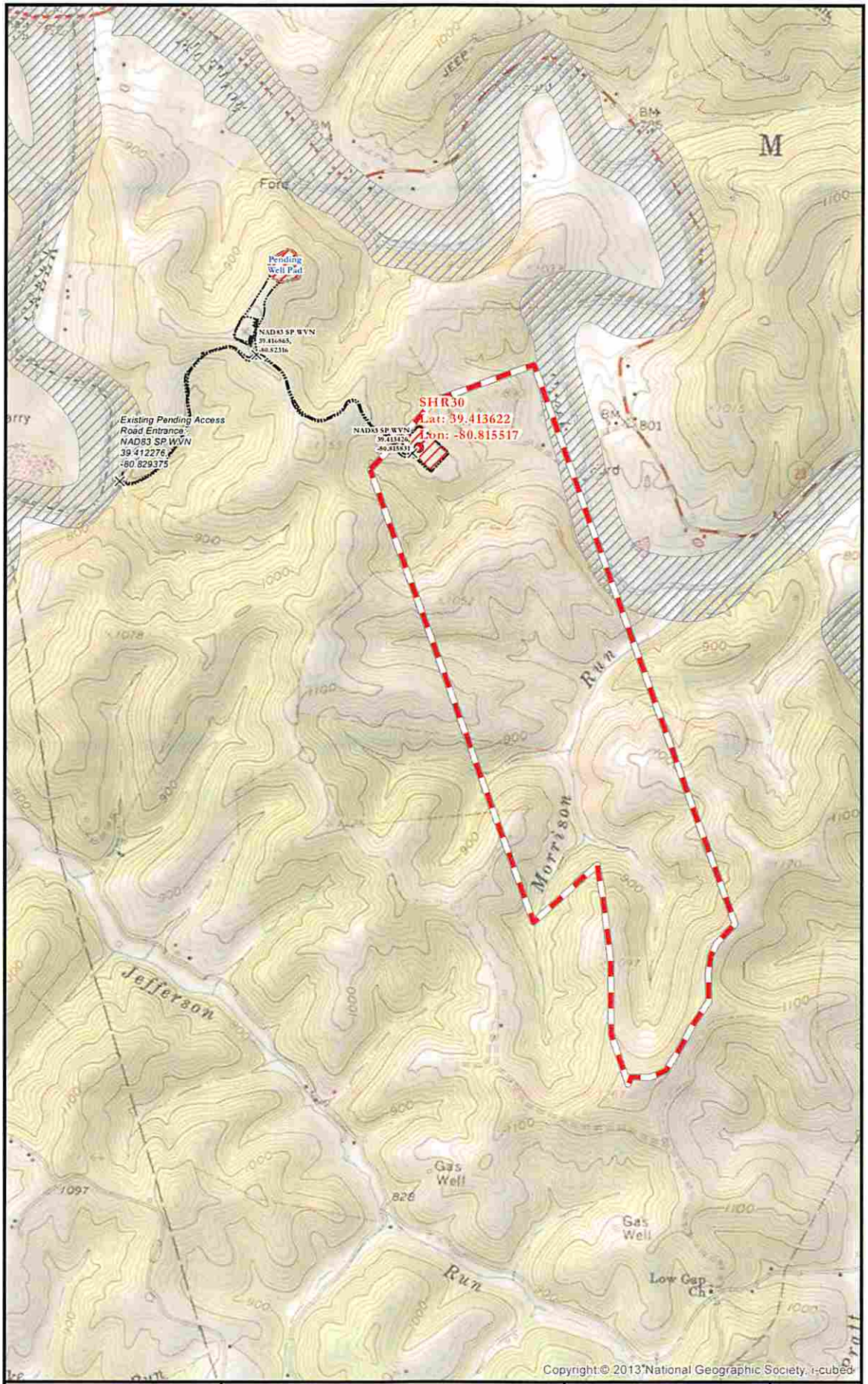

SHR 30 SITE SAFETY PLAN

- FLOODPLAIN ZONES -

0 750 1,500 3,000 Feet

1 Inch = 1,500 Feet

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

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

noble energy

Date: 11/20/2014

Author: ChristopherGlover

2 / 6

Well Pad
Access Road Intersection
Hydrology
Proposed Access Road
Low Sand to Drilling
Floodplain
Well Pad Boundary

Document Path: G:\Canonsburg\GIS\Projects\District_30\Appalachia\MXDs\EHSR\Permitting\Shirley\SHR30\SSP\D30_PA_WV_2_SHR30_Floodplains.mxd

95 02233

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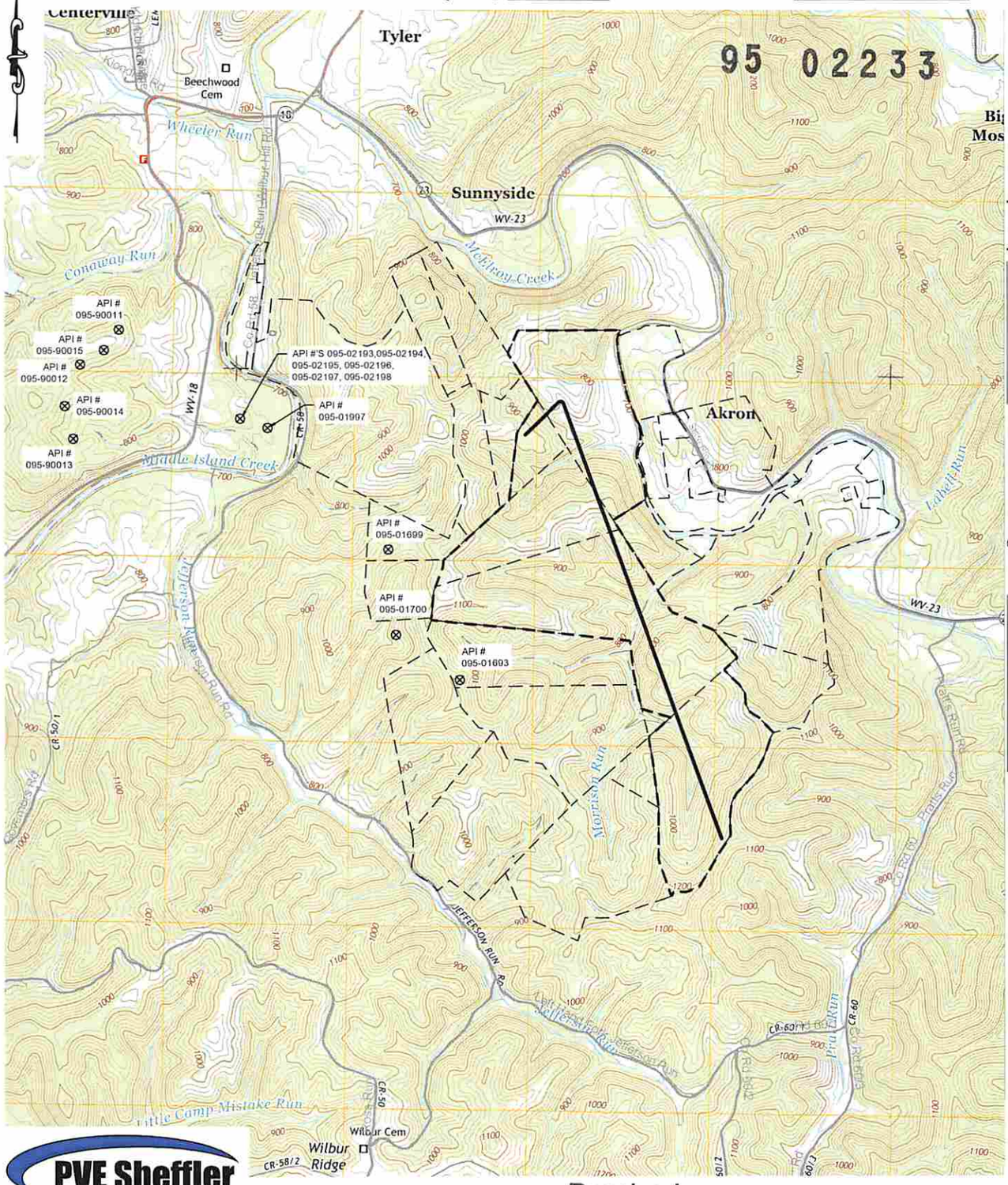
Well is located on topo map 1120 feet south of Latitude: 39° 25' 00"

Well is located on topo map 6558 feet west of Longitude: 80° 47' 30"



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

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JAN 26 2015

2500' 5000'

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

DATE: DECEMBER 30, 2014 - REV. JANUARY 7, 2015

OPERATOR'S WELL #: SHR 30 EHS

API WELL # 47 095 ____
STATE COUNTY PERMIT

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

☒ Gas ☐ Liquid Injection ☐ Storage ☒ Shallow

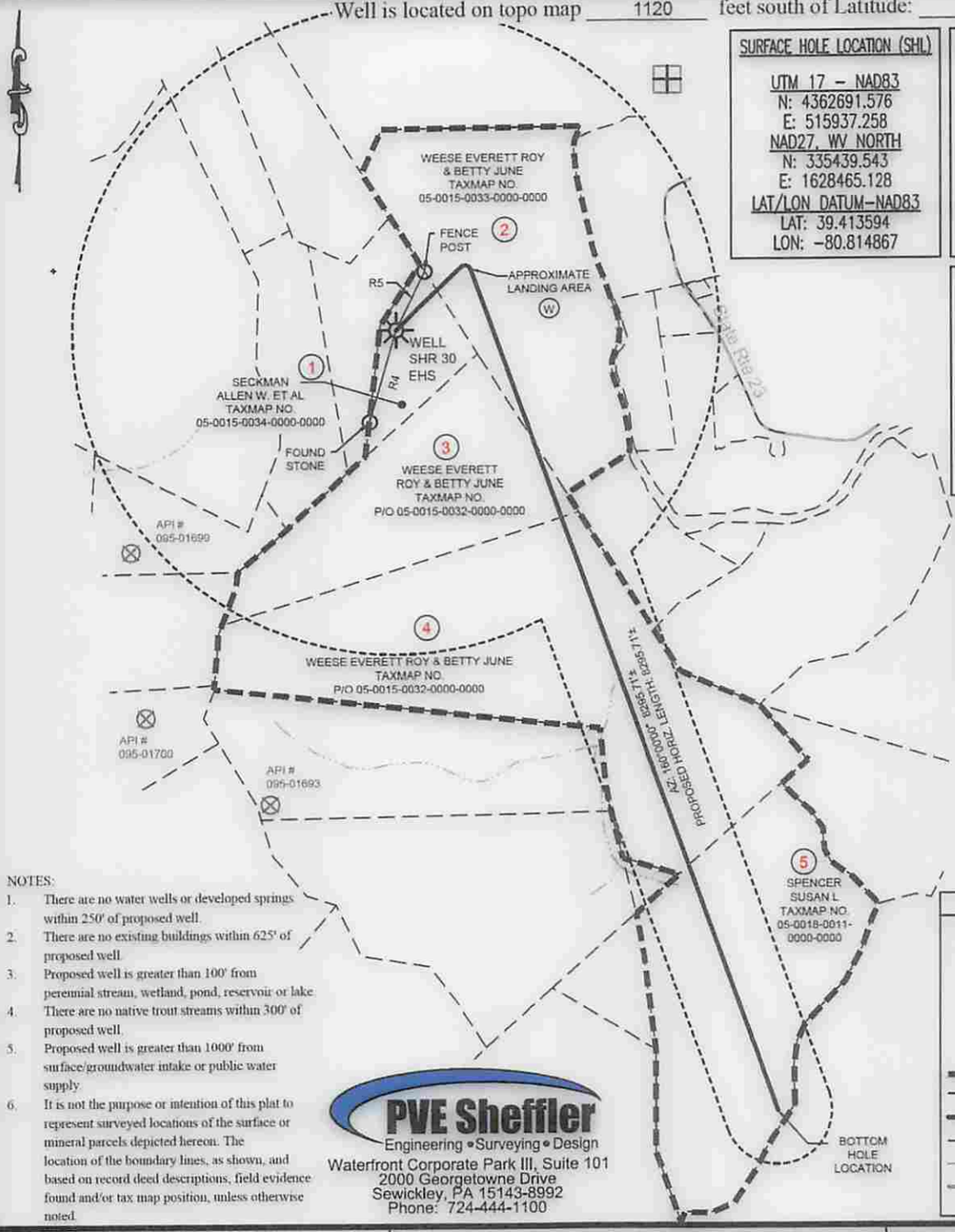
WATERSHED: McELROY CREEK
ELEVATION: 919.92
COUNTY/DISTRICT: McELROY / TYLER
QUADRANGLE: SHIRLEY, W. VA
SURFACE OWNER: ALLEN W. SECKMAN, ET AL.
ACREAGE: 20.02
OIL & GAS ROYALTY OWNER: ALLEN W. SECKMAN, ET AL.
ACREAGE: 20.02

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: 6,568' ± TMD: 15,743'±
WELL OPERATOR: NOBLE ENERGY, INC.
DESIGNATED AGENT: STEVEN M. GREEN
Address: 333 TECHNOLOGY DRIVE, SUITE 116
Address: 500 VIRGINIA STREET EAST, UNITED CENTER SUITE 590
City CANONSBURG State PA Zip Code 15317
City CHARLESTON State WV Zip Code 25301

Well is located on topo map 1120 feet south of Latitude: 39° 25' 00"

Well is located on topo map 6558 feet west of Longitude: 80° 47' 30"



SURFACE HOLE LOCATION (SHL)
UTM 17 – NAD83
N: 4362691.576
E: 515937.258
NAD27, WV NORTH
N: 335439.543
E: 1628465.128
LAT/LON DATUM–NAD83
LAT: 39.413594
LON: –80.814867

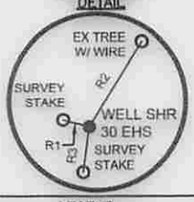
APPROX. LANDING POINT
UTM 17 – NAD83
N: 4362866.906
E: 516144.930
NAD27, WV NORTH
N: 336003.499
E: 1629156.209
LAT/LON DATUM–NAD83
LAT: 39.415170
LON: –80.812450

BOTTOM HOLE LOCATION
UTM 17 – NAD83
N: 4360506.433
E: 517048.955
NAD27, WV NORTH
N: 328208.017
E: 1631993.519
LAT/LON DATUM–NAD83
LAT: 39.393883
LON: –80.802009

LINE TABLE

LINE	BEARING	DISTANCE
R1	N74°48'06"W	153.43'
R2	N31°09'38"E	571.94'
R3	S07°46'58"W	256.03'
R4	S16°15'39"W	883.21'
R5	N26°12'33"E	604.23'

REFERENCE DETAIL



LEGEND

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

NOTES:

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

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

FILE #: SHR 30 EHS

DRAWING #: SHR 30 EHS

SCALE: 1"=1500'

MINIMUM DEGREE OF ACCURACY: 1/2500

PROVEN SOURCE OF ELEVATION: USGS MONUMENT A 142: 724.61

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

SIGNED:

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

JAMES MICHAEL VENTURE REGISTERED 18766 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

PLACE SEAL HERE

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

DATE: DECEMBER 30, 2014 - REV. JANUARY 7, 2015

OPERATOR'S WELL #: SHR 30 EHS 1HGA

API WELL # 47 095 02233
STATE COUNTY PERMIT

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PLUG OFF OLD FORMATION ☐ PERFORATE NEW FORMATION ☐ PLUG AND ABANDON ☐

CLEAN OUT & REPLUG ☐ OTHER CHANGE ☐ (SPECIFY)

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 6,568' ± TMD: 15,743'±

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

Address: 333 TECHNOLOGY DRIVE, SUITE 116 Address: 500 VIRGINIA STREET EAST, UNITED CENTER SUITE 590

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

95 02233

WW-6A1
(5/13)

Operator's Well No. SHR30EHS

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
DAD36993001	Lillie Seckman	Drilling Appalachia Corporation	not less than 1/8	DB 202-513
DAD36993001	Drilling Appalachia Corporation	Dominion Appalachian Development Properties, LLC	N/A	DB 322-190
DAD36993001	Dominion Appalachian Development Properties, LLC	Consol Gas Appalachian Development Properties, LLC	N/A	COI 9-124
DAD36993001	Consol Gas Appalachian Development Properties, LLC	Consol Gas Reserves, Inc.	N/A	COI 9-144
DAD36993001	Consol Gas Reserves, Inc.	Consol Gas Company	N/A	COI 9-156
DAD36993001	Consol Gas Company	CNX Gas Company, LLC	N/A	COI 17-1

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

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

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

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

Well Operator: Noble Energy, Inc.
By: [signature]
Its: Operations Landman

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Office of Oil & Gas
JAN 26 2015

95 02233

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	SHR 30 EHS Book/Page
1: Continued: DAD36993001	CNX Gas Company, LLC	Noble Energy, Inc.	N/A	DB 388-286
2: No Lease Number	Roy D. Hadley	Kepco	not less than 1/8	DB 232-30
	Jay Bee Production	Kepco	not less than 1/8	DB 232-30
	Donald Seckman	Kepco	not less than 1/8	DB 232-30
	Thomas W. Furbee	Kepco	not less than 1/8	DB 232-30
	Betty Weese & Roger Weese	Kepco	not less than 1/8	DB 232-30
	Linda Weese	Kepco	not less than 1/8	DB 232-30
	Kepco	Peake Energy, Inc.	N/A	DB 319-291
	Peake Energy, Inc.	Four Leaf Land Company	N/A	DB 403-566
	Four Leaf Land Company	Antero Resources Appalachian Corporation	N/A	DB 403-566
	Antero Resources Appalachian Corporation	Noble Energy, Inc.	N/A	DB 422-517
	Ralph T. Sweeney	Four Leaf Land Company	not less than 1/8	DB 370-599
	Anna Sweeney	Four Leaf Land Company	not less than 1/8	DB 370-635
	Lamoyne Sweeney	Four Leaf Land Company	not less than 1/8	DB 370-617
	Gloria A. Morris	Four Leaf Land Company	not less than 1/8	DB 397-669
	Donald L. Sweeney	Four Leaf Land Company	not less than 1/8	DB 370-605
	Devon R. Horsley	Four Leaf Land Company	not less than 1/8	DB 370-629
	Rodger A. Sweeney	Four Leaf Land Company	not less than 1/8	DB 370-611
	Four Leaf Land Company	Antero Resources Appalachian Corporation	not less than 1/8	DB 403-561
	Antero Resources Appalachian Corporation	Noble Energy, Inc.	N/A	DB 422-517
	Mary S. Furbee Zebley	Noble Energy, Inc.	not less than 1/8	DB 440-447
	Thomas Val Furbee	Noble Energy, Inc.	not less than 1/8	DB 440-443
	Allison Furbee Hardin	Noble Energy, Inc.	not less than 1/8	DB 440-453
	Rani J. Boyt	Noble Energy, Inc.	not less than 1/8	DB 445-835
	Mary Chidester	Noble Energy, Inc.	not less than 1/8	DB 449-523
	Thomas Daniel Spencer	Noble Energy, Inc.	not less than 1/8	DB 449-553
	Norma R. Spencer, Trustee	Noble Energy, Inc.	not less than 1/8	DB 465-262
	Clara Catherine Carpenter	Noble Energy, Inc.	not less than 1/8	DB 449-529
	David Dean	Noble Energy, Inc.	not less than 1/8	DB 448-749
	WV Minerals, Inc.	Noble Energy, Inc.	not less than 1/8	DB 460-590
	Thomas Kilcoyne	JB Exploration I, LLC	not less than 1/8	DB 404-107
	Patricia Catarello	JB Exploration I, LLC	not less than 1/8	DB 410-174
	JB Exploration I, LLC	Noble Energy, Inc.	N/A	DB 461-628
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Environmental Protection

	Mary S. Furbee Zebley	Noble Energy, Inc.	not less than 1/8	DB 440-447
	Thomas Val Furbee	Noble Energy, Inc.	not less than 1/8	DB 440-443
	Allison Furbee Hardin	Noble Energy, Inc.	not less than 1/8	DB 440-453
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	JB Exploration I, LLC	Noble Energy, Inc.	N/A	DB 461-628
5: Q088841003	Susan Spencer & James Spencer	Noble Energy, Inc.	not less than 1/8	DB 465-266
Q088841005	Leola Frances Ray & Kenna Ray	Noble Energy, Inc.	not less than 1/8	DB 465-529
	Charles Gary Carder	Noble Energy, Inc.	not less than 1/8	DB471-690
Q088841002	Lloyd Underwood & Betty Underwood	Noble Energy, Inc.	not less than 1/8	DB 465-532
Q088841006	Mona Lee Williams	Noble Energy, Inc.	not less than 1/8	DB 465-523
Q088841001	Raymond Underwood & Doris Underwood	Noble Energy, Inc.	not less than 1/8	DB 465-535
Q088841004	Robert Monroe & Sandra Monroe	Noble Energy, Inc.	not less than 1/8	DB 465-526
	Wayne Allen Carder	Noble Energy, Inc.	not less than 1/8	DB 471-694

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APR 07 2015

WV Department of
Environmental Protection

MEMORANDUM OF LEASE

This **MEMORANDUM OF LEASE**, dated this **15th** day of **August**, 2014, is utilized to indicate the existence of a PAID-UP OIL AND GAS LEASE (hereinafter, "Lease") of even date herewith, by and between **WV Minerals, Inc., a West Virginia Corporation**, whose mailing address is: **57 Mountain Park Drive, Fairmont, WV 26554** (hereinafter, "Lessor" whether one or more), and **NOBLE ENERGY, INC.**, a Delaware corporation, whose address is at 333 Technology Drive, Suite 116, Canonsburg, Pennsylvania 15317, (hereinafter, "Lessee").

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

1. PRIMARY TERM: The primary term of the Lease is for a period of five (5) years commencing on the date immediately set forth above, and for so long thereafter as oil, gas, or other substances covered by the Lease are capable of being produced in paying quantities from the Leased Premises or from lands pooled therewith, or the Lease is otherwise maintained or prolonged pursuant to the provisions contained in the Lease, including an extension of term contained therein. Lessee may extend the primary term of the Lease for an additional **three (3)** years after the end of the primary term, thereby continuing the term of the Lease to the end of the "extended" primary term.

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

On the North by: **Rosemary Haught, Daniel & Lisa K. Hadley, William O. & Mable O. Roberts**

On the East by: **Robert J. Kocher et al, Mitchell D. Herrick**

On the South by: **Roger R. Weese**

On the West by: **Betty June Weese**

and being the same land acquired by Lessor by virtue of instrument recorded in the Office of Clerk of the County Commission in **Deed Book 432, Page 381**, said land being identified for tax purposes as **P/O 05-15-32, 05-15-28, 05-15-28.1, 05-15-28.2, 05-15-28.3, 05-15-28.4**, on this date, and stipulated to contain, for the purpose of calculating payments, **One Hundred Fifty and 00/100 (150.00)** acres, more or less ("Leased Premises").

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

WITNESS:

Ashley R. Sinners
Signature

Ashley R. Sinners
Printed Name

LESSOR:
WV MINERALS, INC.

Dean Harris
Dean Harris, President

WITNESS:

Signature

Printed Name

LESSEE:

NOBLE ENERGY, INC.

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

Received
Office of Oil & Gas
JAN 26 2015

CORPORATE ACKNOWLEDGMENT

STATE / COMMONWEALTH OF West Virginia §
COUNTY OF Harrison §

On this 15th day of August, 2014, before me, the undersigned officer, personally appeared **Dean Harris**, acting as **President of WV Minerals, Inc., a West Virginia Corporation**, personally known to me (or satisfactorily proven) to be the **person** whose **name** is subscribed to the within instrument and acknowledged to me that **he** executed the same for the purposes and consideration therein contained, at the direction of and on behalf of said entity.

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

MY COMMISSION EXPIRES:

NOTARY PUBLIC OFFICIAL SEAL
MARK A. MUDRICK
State of West Virginia
My Commission Expires November 30, 2022
328 SOUTH VIEW DR. SUITE #3, BRIDGEPORT, WV 26330

Signature

Mark A. Mudrick
Printed Name
Notary Public

CORPORATE ACKNOWLEDGMENT

COMMONWEALTH OF PENNSYLVANIA §
COUNTY OF WASHINGTON §

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

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

MY COMMISSION EXPIRES:

Signature

Printed Name
Notary Public

Received
Office of Oil & Gas
JAN 26 2015

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

MEMORANDUM OF LEASE

This **MEMORANDUM OF LEASE**, dated this 5th day of March, 2014, is utilized to indicate the existence of a PAID-UP OIL AND GAS LEASE (hereinafter, "Lease") of even date herewith, by and between **Noma R. Spencer, acting as Trustee for the Allan P. Spencer Living Trust, dated 9/30/2003**, whose mailing address is: **2367 Brafferton Ave., Hudson, OH 44236** (hereinafter, "Lessor" whether one or more), and **NOBLE ENERGY, INC.**, a Delaware corporation, whose address is at 333 Technology Drive, Suite 116, Canonsburg, Pennsylvania 15317, (hereinafter, "Lessee").

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

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

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

On the North by: Everett Roy and Betty J. Weese
On the East by: Roger R. Weese
On the South by: Becky Jo Board (Life Estate)
On the West by: Larry Henthorn, Rosemary Smith Haught

and being the same land acquired by Lessor by virtue of instrument recorded in the Office of Clerk of the County Commission in **Will** Book **34**, Page **642**, said land being identified for tax purposes as **p/o 05-15-32** on this date, and stipulated to contain, for the purpose of calculating payments, **Fifteen (15.00)** acres, more or less ("Leased Premises").

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

WITNESS:

James B Chapman
Signature

James B Chapman
Printed Name

LESSOR:
ALLAN P. SPENCER LIVING TRUST DATED 9/30/2003

Noma R. Spencer, Trustee
Signature
Printed Name : **Noma R. Spencer, Trustee**
2367 Brafferton Ave.
Address Hudson, Ohio
44236

WITNESS:

Signature

Printed Name

LESSEE:

NOBLE ENERGY, INC.

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

Received
Office of Oil & Gas
JAN 26 2015

INDIVIDUAL ACKNOWLEDGMENT

STATE / COMMONWEALTH OF Ohio §

COUNTY OF Summit §

The foregoing instrument was acknowledged before me, this _____ day of _____, 2014, by Noma R. Spencer, acting as Trustee for the Allan P. Spencer Living Trust, dated 9/30/2003.

MY COMMISSION EXPIRES:

James B Chapman

Signature JAMES B. CHAPMAN, Attorney At Law
My Commission Has No Expiration Date
Section 147.03 R.C.

Printed Name
Notary Public

CORPORATE ACKNOWLEDGMENT

COMMONWEALTH OF PENNSYLVANIA §
COUNTY OF WASHINGTON §

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

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

MY COMMISSION EXPIRES:

Signature

Printed Name
Notary Public

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

Received
Office of Oil & Gas
JAN 26 2015

95 02233

MEMORANDUM OF LEASE

This **MEMORANDUM OF LEASE**, dated this 22nd day of September, 2014, is utilized to indicate the existence of a PAID-UP OIL AND GAS LEASE (hereinafter, "Lease") of even date herewith, by and between Lloyd W. Underwood and Betty Jean Underwood, his wife, whose mailing address is: 1316 10th Street, Vienna, WV 26105 (hereinafter, "Lessor" whether one or more), and **NOBLE ENERGY, INC.**, a Delaware corporation, whose address is at 333 Technology Drive, Suite 116, Canonsburg, Pennsylvania 15317, (hereinafter, "Lessee").

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

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

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

On the North by: Everette Roy Weese and Betty June Weese
On the East by: James Edward Cumberledge and Linda L. Davoli
On the South by: Rayburn & Sheila Lawrence and Billy J & Jacky Jo
On the West by: Underwood Blaine Est and Wells Vivian Janice

and being the same land acquired by Lessor by virtue of instrument recorded in the Office of Clerk of the County Commission in Deed Book 66, Page 645, said land being identified for tax purposes as 05-18-11 on this date, and stipulated to contain, for the purpose of calculating payments, One Hunded Thirty-One and 00/100 (131.00) acres, more or less ("Leased Premises").

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

WITNESS:

Signature

Jason Bias
Printed Name

LESSOR:

Lloyd W. Underwood
Signature
Printed Name : Lloyd W. Underwood
Address : 1316 10th St
Vienna, WV 26105

WITNESS:

Signature

Jason Bias
Printed Name

LESSOR:

Betty Jean Underwood
Signature
Printed Name : Betty Jean Underwood
Address : 1316 10th St.
Vienna, WV 26105

WITNESS:

Signature

Printed Name

LESSEE:

NOBLE ENERGY, INC.

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

Received
Office of Oil & Gas
JAN 26 2015

INDIVIDUAL ACKNOWLEDGMENT

STATE / COMMONWEALTH OF West Virginia §
COUNTY OF Wood §

The foregoing instrument was acknowledged before me, this 22nd day of September, 2014, by Lloyd W. Underwood and Betty Jean Underwood, his wife.

MY COMMISSION EXPIRES:

Signature

Jason Betts
Printed Name
Notary Public

OFFICIAL SEAL
Notary Public, State Of West Virginia
JASON BETTS
PO Box 6598
Wheeling, WV 26003
My Commission Expires 14, 2023

CORPORATE ACKNOWLEDGMENT

COMMONWEALTH OF PENNSYLVANIA §
COUNTY OF WASHINGTON §

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

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

MY COMMISSION EXPIRES:

Signature

Printed Name
Notary Public

Received
Office of Oil & Gas
JAN 26 2015

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

95 02233

MEMORANDUM OF LEASE

This **MEMORANDUM OF LEASE**, dated this 22 day of October, 2014, is utilized to indicate the existence of a PAID-UP OIL AND GAS LEASE (hereinafter, "Lease") of even date herewith, by and between Wayne Allan Carder, a married man dealing with his sole and separate property, whose mailing address is: 204 57th Street, Vienna, WV 26105-2020 (hereinafter, "Lessor" whether one or more), and **NOBLE ENERGY, INC.**, a Delaware corporation, whose address is at 333 Technology Drive, Suite 116, Canonsburg, Pennsylvania 15317, (hereinafter, "Lessee").

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

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

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

On the North by: Everette Roy Weese and Betty June Weese
On the East by: Susan L. Spencer
On the South by: Rayburn & Sheila Lawrence and Billy J & Jacky Jo
On the West by: Underwood Blaine Est and Wells Vivian Janice

and being the same land acquired by Lessor by virtue of instrument recorded in the Office of Clerk of the County Commission in Will Book 101, Page 297 and recorded in Wood County, WV, said land being identified for tax purposes as 05-18-11 on this date, and stipulated to contain, for the purpose of calculating payments, One Hundred Thirty-One and 00/100 (131.00) acres, more or less ("Leased Premises").

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

WITNESS:

Signature

Jasa Betts
Printed Name

LESSOR:

Wayne Allan Carder
Signature
Printed Name : Wayne Allan Carder
Address : 204 57th St
Vienna, WV 26105

WITNESS:

Signature

Printed Name

LESSEE:

NOBLE ENERGY, INC.

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

Received
Office of Oil & Gas
JAN 26 2015

INDIVIDUAL ACKNOWLEDGMENT

STATE / COMMONWEALTH OF West Virginia §

COUNTY OF Wood §

The foregoing instrument was acknowledged before me, this 22 day of October, 2014, by **Wayne Allan Carder, a married man dealing with his sole and separate property**.

MY COMMISSION EXPIRES:

OFFICIAL SEAL
Notary Public, State Of West Virginia
JASON BETTS
P O Box 6500
Wheeling, WV 26003
My Commission Expires May 14, 2023

Signature

Printed Name
Notary Public

CORPORATE ACKNOWLEDGMENT

COMMONWEALTH OF PENNSYLVANIA §
COUNTY OF WASHINGTON §

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

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

MY COMMISSION EXPIRES:

Signature

Printed Name
Notary Public

Received
Office of Oil & Gas
JAN 26 2015

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

MEMORANDUM OF LEASE

This **MEMORANDUM OF LEASE**, dated this 16th day of **September**, 2014, is utilized to indicate the existence of a PAID-UP OIL AND GAS LEASE (hereinafter, "Lease") of even date herewith, by and between **Susan L. Spencer and James Spencer, her husband**, whose mailing address is: **HC 74 Box 98, Alma, WV 26320-9710** (hereinafter, "Lessor" whether one or more), and **NOBLE ENERGY, INC.**, a Delaware corporation, whose address is at 333 Technology Drive, Suite 116, Canonsburg, Pennsylvania 15317, (hereinafter, "Lessee").

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

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

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

On the North by: Everette Roy Weese and Betty June Weese
On the East by: James Edward Cumberledge and Linda L. Davoli
On the South by: Rayburn & Sheila Lawrence and Billy J & Jacky Jo
On the West by: Underwood Blaine Est and Wells Vivian Janice

and being the same land acquired by Lessor by virtue of instrument recorded in the Office of Clerk of the County Commission in **Deed** Book **388**, Page **164**, said land being identified for tax purposes as **05-18-11** on this date, and stipulated to contain, for the purpose of calculating payments, **One Hunded Thirty-One and 00/100 (131.00)** acres, more or less ("Leased Premises").

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

WITNESS:

Signature

Susan Betts
Printed Name

LESSOR:

Susan L. Spencer
Signature
Printed Name : **Susan L. Spencer**
Address : HC 74 Box 98
Alma WV 26320

WITNESS:

Signature

Susan Betts
Printed Name

LESSOR:

James Spencer
Signature
Printed Name : **James Spencer**
Address : HC 74 Box 98
Alma WV 26320

WITNESS:

Signature

Printed Name

LESSEE:

NOBLE ENERGY, INC.

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

Received
Office of Oil & Gas
JAN 26 2015

INDIVIDUAL ACKNOWLEDGMENT

STATE / COMMONWEALTH OF West Virginia §

COUNTY OF Tyler §

The foregoing instrument was acknowledged before me, this 16th day of Sept., 2014, by **Susan L. Spencer and James Spencer, her husband**.

MY COMMISSION EXPIRES:

OFFICIAL SEAL
Notary Public, State Of West Virginia
JASON BETTS
P O Box 6598
Wheeling, WV 26003
My Commission Expires May 14, 2023

Signature

Jason Betts
Printed Name
Notary Public

CORPORATE ACKNOWLEDGMENT

COMMONWEALTH OF PENNSYLVANIA §
COUNTY OF WASHINGTON §

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

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

MY COMMISSION EXPIRES:

Signature

Printed Name
Notary Public

Received
Office of Oil & Gas
JAN 26 2015

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

MEMORANDUM OF LEASE

This **MEMORANDUM OF LEASE**, dated this 7th day of October, 2014, is utilized to indicate the existence of a PAID-UP OIL AND GAS LEASE (hereinafter, "Lease") of even date herewith, by and between **Robert Errol Monroe and Sandra Monroe, his wife**, whose mailing address is: **78 Canaan Drive, Scott Depot, WV 25560-7686** (hereinafter, "Lessor" whether one or more), and **NOBLE ENERGY, INC.**, a Delaware corporation, whose address is at 333 Technology Drive, Suite 116, Canonsburg, Pennsylvania 15317, (hereinafter, "Lessee").

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

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

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

On the North by: Everette Roy Weese and Betty June Weese
On the East by: James Edward Cumberledge and Linda L. Davoli
On the South by: Rayburn & Sheila Lawrence and Billy J & Jacky Jo
On the West by: Underwood Blaine Est and Wells Vivian Janice

and being the same land acquired by Lessor by virtue of instrument recorded in the Office of Clerk of the County Commission in **Will** Book **49**, Page **276**, said land being identified for tax purposes as **05-18-11** on this date, and stipulated to contain, for the purpose of calculating payments, **One Hunded Thirty-One and 00/100 (131.00)** acres, more or less ("Leased Premises").

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

WITNESS:

Signature

Jason Betts
Printed Name

LESSOR:

Robert Errol Monroe
Signature
Printed Name : **Robert Errol Monroe**
Address : 78 Canaan Drive
Scott Depot, WV 25560-7686

WITNESS:

x Robert Errol Monroe
Signature

Robert Errol Monroe
Printed Name

LESSOR:

x Sandra Monroe
Signature
Printed Name : **Sandra Monroe**
Address : 78 Canaan Drive
Scott Depot, WV 25560-7686

WITNESS:

Signature

Printed Name

LESSEE:

NOBLE ENERGY, INC.

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

Received
Office of Oil & Gas
JAN 26 2015

INDIVIDUAL ACKNOWLEDGMENT

STATE / COMMONWEALTH OF West Virginia §

COUNTY OF Kanawha §

The foregoing instrument was acknowledged before me, this 2nd day of October, 2014, by **Robert Errol Monroe and Sandra Monroe, his wife**.

MY COMMISSION EXPIRES:

OFFICIAL SEAL
Notary Public, State Of West Virginia
JASON BETTS
P O Box 6598
Wheeling, WV 26003
My Commission Expires May 14, 2023

Signature

Jason Betts

Printed Name
Notary Public

CORPORATE ACKNOWLEDGMENT

COMMONWEALTH OF PENNSYLVANIA §
COUNTY OF WASHINGTON §

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

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

MY COMMISSION EXPIRES:

Signature

Printed Name
Notary Public

Received
Office of Oil & Gas
JAN 26 2015

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

MEMORANDUM OF LEASE

This **MEMORANDUM OF LEASE**, dated this 22nd day of **September**, 2014, is utilized to indicate the existence of a PAID-UP OIL AND GAS LEASE (hereinafter, "Lease") of even date herewith, by and between **Raymond V. Underwood and Doris Underwood, his wife**, whose mailing address is: **12965 Emerson Avenue, Parkersburg, WV 26104** (hereinafter, "Lessor" whether one or more), and **NOBLE ENERGY, INC.**, a Delaware corporation, whose address is at 333 Technology Drive, Suite 116, Canonsburg, Pennsylvania 15317, (hereinafter, "Lessee").

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

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

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

On the North by: Everette Roy Weese and Betty June Weese
On the East by: James Edward Cumberledge and Linda L. Davoli
On the South by: Rayburn & Sheila Lawrence and Billy J & Jacky Jo
On the West by: Underwood Blaine Est and Wells Vivian Janice

and being the same land acquired by Lessor by virtue of instrument recorded in the Office of Clerk of the County Commission in **Fiduciary Record** Book **66**, Page **316 and recorded in Wood County, WV**, said land being identified for tax purposes as **05-18-11** on this date, and stipulated to contain, for the purpose of calculating payments, **One Hunded Thirty-One and 00/100 (131.00)** acres, more or less ("Leased Premises").

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

WITNESS:

Signature

Jada Betts
Printed Name

LESSOR:

Raymond V Underwood
Signature
Printed Name : **Raymond V. Underwood**
Address : 12965 Emerson Ave
Parkersburg, WV 26104

WITNESS:

Signature

Jada Betts
Printed Name

LESSOR:

Doris Underwood
Signature
Printed Name : **Doris Underwood**
Address : 12965 Emerson Ave.
Parkersburg, WV 26104

WITNESS:

Signature

Printed Name

LESSEE:

NOBLE ENERGY, INC.

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

Received
Office of Oil & Gas
JAN 26 2015

INDIVIDUAL ACKNOWLEDGMENT

STATE / COMMONWEALTH OF West Virginia §
COUNTY OF Wood §

The foregoing instrument was acknowledged before me, this 22nd day of September, 2014, by Raymond V. Underwood and Doris Underwood, his wife.

MY COMMISSION EXPIRES:

OFFICIAL SEAL
Notary Public, State Of West Virginia
JASON BETTS
P O Box 6598
Wheeling, WV 26003
My Commission Expires May 14, 2023

Signature

Jason Betts
Printed Name
Notary Public

CORPORATE ACKNOWLEDGMENT

COMMONWEALTH OF PENNSYLVANIA §
COUNTY OF WASHINGTON §

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

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

MY COMMISSION EXPIRES:

Signature

Printed Name
Notary Public

Received
Office of Oil & Gas
JAN 26 2015

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

MEMORANDUM OF LEASE

This **MEMORANDUM OF LEASE**, dated this 2nd day of October, 2014, is utilized to indicate the existence of a PAID-UP OIL AND GAS LEASE (hereinafter, "Lease") of even date herewith, by and between **Mona Lee Williams, a widow**, whose mailing address is: **822 Chestnut Street, Charleston, WV 25309-2034** (hereinafter, "Lessor" whether one or more), and **NOBLE ENERGY, INC.**, a Delaware corporation, whose address is at 333 Technology Drive, Suite 116, Canonsburg, Pennsylvania 15317, (hereinafter, "Lessee").

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

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

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

On the North by: Everette Roy Weese and Betty June Weese
On the East by: James Edward Cumberledge and Linda L. Davoli
On the South by: Rayburn & Sheila Lawrence and Billy J & Jacky Jo
On the West by: Underwood Blaine Est and Wells Vivian Janice

and being the same land acquired by Lessor by virtue of instrument recorded in the Office of Clerk of the County Commission in **Will** Book **49**, Page **276**, said land being identified for tax purposes as **05-18-11** on this date, and stipulated to contain, for the purpose of calculating payments, **One Hunded Thirty-One and 00/100 (131.00)** acres, more or less ("Leased Premises").

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

WITNESS:

Signature

Jason Bates
Printed Name

LESSOR:

Mona Lee Williams
Signature
Printed Name : **Mona Lee Williams**
Address :

WITNESS:

Signature

Printed Name

LESSEE:

NOBLE ENERGY, INC.

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

Received
Office of Oil & Gas
JAN 26 2015

INDIVIDUAL ACKNOWLEDGMENT

STATE / COMMONWEALTH OF West Virginia §

COUNTY OF Kanawha §

The foregoing instrument was acknowledged before me, this 2nd day of October, 2014, by **Mona Lee Williams, a widow**.

MY COMMISSION EXPIRES:

OFFICIAL SEAL
Notary Public, State Of West Virginia
JASON BETTS
P O Box 6598
Wheeling, WV 26003
My Commission Expires May 14, 2023

Signature

Jason Betts
Printed Name
Notary Public

CORPORATE ACKNOWLEDGMENT

COMMONWEALTH OF PENNSYLVANIA §
COUNTY OF WASHINGTON §

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

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

MY COMMISSION EXPIRES:

Signature

Printed Name
Notary Public

Received
Office of Oil & Gas
JAN 26 2015

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

MEMORANDUM OF LEASE

This **MEMORANDUM OF LEASE**, dated this 12nd day of October, 2014, is utilized to indicate the existence of a PAID-UP OIL AND GAS LEASE (hereinafter, "Lease") of even date herewith, by and between **Leola Frances Ray a/k/a Leola Ray and Kenna Ray, her husband**, whose mailing address is: **824 Chestnut Street, Charleston, WV 25309-2034** (hereinafter, "Lessor" whether one or more), and **NOBLE ENERGY, INC.**, a Delaware corporation, whose address is at 333 Technology Drive, Suite 116, Canonsburg, Pennsylvania 15317, (hereinafter, "Lessee").

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

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

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

On the North by: Everette Roy Weese and Betty June Weese
On the East by: James Edward Cumberledge and Linda L. Davoli
On the South by: Rayburn & Sheila Lawrence and Billy J & Jacky Jo
On the West by: Underwood Blaine Est and Wells Vivian Janice

and being the same land acquired by Lessor by virtue of instrument recorded in the Office of Clerk of the County Commission in **Will** Book **49**, Page **276**, said land being identified for tax purposes as **05-18-11** on this date, and stipulated to contain, for the purpose of calculating payments, **One Hunded Thirty-One and 00/100 (131.00)** acres, more or less ("Leased Premises").

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

WITNESS:

Signature

Jason Butts
Printed Name

LESSOR:

Leola Ray
Signature
Printed Name : **Leola Frances Ray a/k/a Leola Ray**
Address :

WITNESS:

x Leola Ray
Signature

Leola Ray
Printed Name

LESSOR:

x Kenna Ray
Signature
Printed Name : **Kenna Ray**
Address :

WITNESS:

Signature

Printed Name

LESSEE:

NOBLE ENERGY, INC.

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

Received
Office of Oil & Gas
JAN 26 2015

INDIVIDUAL ACKNOWLEDGMENT

STATE / COMMONWEALTH OF West Virginia §
COUNTY OF Kanawha §

The foregoing instrument was acknowledged before me, this 2nd day of October, 2014, by **Leola Frances Ray a/k/a Leola Ray and Kenna Ray, her husband**.

MY COMMISSION EXPIRES:

OFFICIAL SEAL
Notary Public, State Of West Virginia
JASON BETTS
P O Box 6598
Wheeling, WV 26003
My Commission Expires May 14, 2023

Signature

Jason Betts
Printed Name
Notary Public

CORPORATE ACKNOWLEDGMENT

COMMONWEALTH OF PENNSYLVANIA §
COUNTY OF WASHINGTON §

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

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

MY COMMISSION EXPIRES:

Signature

Printed Name
Notary Public

Received
Office of Oil & Gas
JAN 26 2015

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

MEMORANDUM OF LEASE

This **MEMORANDUM OF LEASE**, dated this 20 day of **October**, 2014, is utilized to indicate the existence of a PAID-UP OIL AND GAS LEASE (hereinafter, "Lease") of even date herewith, by and between **Charles Gary Carder, a single man**, whose mailing address is: **944 Hickman Road, Waterford, OH 45786-6195** (hereinafter, "Lessor" whether one or more), and **NOBLE ENERGY, INC.**, a Delaware corporation, whose address is at 333 Technology Drive, Suite 116, Canonsburg, Pennsylvania 15317, (hereinafter, "Lessee").

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

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

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

On the North by: Everette Roy Weese and Betty June Weese
On the East by: Susan L. Spencer
On the South by: Rayburn & Sheila Lawrence and Billy J & Jacky Jo
On the West by: Underwood Blaine Est and Wells Vivian Janice

and being the same land acquired by Lessor by virtue of instrument recorded in the Office of Clerk of the County Commission in **Will** Book **101**, Page **297 and recorded in Wood County, WV**, said land being identified for tax purposes as **05-18-11** on this date, and stipulated to contain, for the purpose of calculating payments, **One Hundred Thirty-One and 00/100 (131.00)** acres, more or less ("Leased Premises").

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

WITNESS:

Signature

Jason Butts
Printed Name

LESSOR:

Charles Gary Carder
Signature
Printed Name : **Charles Gary Carder**
Address : 944 Hickman Rd
Waterford, OH 45786-6195

WITNESS:

Signature

Printed Name

LESSEE:

NOBLE ENERGY, INC.

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

Received
Office of Oil & Gas
JAN 26 2015

INDIVIDUAL ACKNOWLEDGMENT

STATE / COMMONWEALTH OF Ohio §
COUNTY OF PALMER §

The foregoing instrument was acknowledged before me, this 20 day of October, 2014, by Charles Gary Carder, a single man.

MY COMMISSION EXPIRES:
Sworn to and subscribed
before me this
20 day of Oct, 2014

Signature

Jason Betts
Printed Name
Notary Public

JASON BETTS
NOTARY PUBLIC, STATE OF OHIO
My Commission Expires 6/12/2017

CORPORATE ACKNOWLEDGMENT

COMMONWEALTH OF PENNSYLVANIA §
COUNTY OF WASHINGTON §

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

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

MY COMMISSION EXPIRES:

Signature

Printed Name
Notary Public

Received
Office of Oil & Gas
JAN 26 2015

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

MEMORANDUM OF LEASE

This **MEMORANDUM OF LEASE**, dated this **5th** day of **September**, 2014, is utilized to indicate the existence of a PAID-UP OIL AND GAS LEASE (hereinafter, "Lease") of even date herewith, by and between **Tami Rheinhardt a/k/a Tami Dawn Rheinhardt, a single woman**, whose mailing address is: **1291 East Main Street, Salem, West Virginia 26426** (hereinafter, "Lessor" whether one or more), and **NOBLE ENERGY, INC.**, a Delaware corporation, whose address is at 333 Technology Drive, Suite 116, Canonsburg, Pennsylvania 15317, (hereinafter, "Lessee").

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

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

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

On the North by: Everett Roy Weese and Betty June Weese
On the East by: Everett Roy Weese and Betty June Weese
On the South by: Lawrence Rayburn, et al
On the West by: Lawrence Rayburn, et al

and being the same land acquired by Lessor by virtue of instrument recorded in the Office of Clerk of the County Commission in **Deed** Book **449; 454**, Page **741; 443**, said land being identified for tax purposes as **05-18-8** on this date, and stipulated to contain, for the purpose of calculating payments, **eighty-three and sixty-two hundredths (83.62)** acres, more or less ("Leased Premises").

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

WITNESS:

David E. Rheinhardt
Signature

DAVID E. RHEINHARDT
Printed Name

LESSOR:

Tami Rheinhardt
Signature
Printed Name : **Tami Rheinhardt a/k/a Tami Dawn Rheinhardt**
Address : 1291 E Main St
Salem WV 26426

WITNESS:

Signature

Printed Name

LESSEE:

NOBLE ENERGY, INC.

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

Received
Office of Oil & Gas
JAN 26 2015

INDIVIDUAL ACKNOWLEDGMENT

STATE / COMMONWEALTH OF West Virginia §

COUNTY OF Harrison §

The foregoing instrument was acknowledged before me, this 5TH day of SEPTEMBER, 2014, by Tami Rheinhardt a/k/a Tami Dawn Rheinhardt, a single woman.

MY COMMISSION EXPIRES:

OFFICIAL SEAL
Notary Public, State Of West Virginia
WILLIAM J ROBINSON
156 N Elk St
Gassaway, WV 26624
My Commission Expires December 21, 2022

Signature

WILLIAM J ROBINSON
Printed Name
Notary Public

CORPORATE ACKNOWLEDGMENT

COMMONWEALTH OF PENNSYLVANIA §
COUNTY OF WASHINGTON §

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

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

MY COMMISSION EXPIRES:

Signature

Printed Name
Notary Public

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

Received
Office of Oil & Gas
JAN 26 2015

95 02233

noble energy

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

December 15, 2014

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 dswiger@nobleenergyinc.com or 724-820-3061.

Sincerely,

Dee Swiger
Regulatory Analyst III

DS/

Enclosures:

Received
Office of Oil & Gas
JAN 26 2015

WW-6AC
(1/12)

95_ 02233

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

Date of Notice Certification: 1-22-15

API No. 47- 095 -
Operator's Well No. SHR 30 EHS
Well Pad Name: SHR 30

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

State:	West Virginia	UTM NAD 83	Easting:	515937.258
County:	095-Tyler		Northing:	4362691.576
District:	Mc Elroy	Public Road Access:		County Rt. 58
Quadrangle:	Shirley	Generally used farm name:		Seckman
Watershed:	huc-10 Mc Elroy Creek			

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

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

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

Received
Office of Oil & Gas
JAN 26 2015

WW-6AC
(1/12)

95 02233

Certification of Notice is hereby given:

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

Well Operator:	Noble Energy, Inc.	Address:	333 Technology Drive, Suite 116
By:			Canonsburg, PA 15317
Its:	Regulatory Analyst	Facsimile:	724-743-0050
Telephone:	724-820-3061	Email:	dswiger@nobleenergyinc.com

NOTARY SEAL
Official Seal
Notary Public
State of West Virginia
Dolores J Swiger
235 Cottage Avenue
Weston WV 26452
My Comm. Exp. 9-19-23

Subscribed and sworn before me this 15 day of Jan. 2015.

Notary Public

My Commission Expires 09/19/2023

Oil and Gas Privacy Notice:

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

Received
Office of Oil & Gas
JAN 26 2015

WW-6A
(9-13)

API NO. 47- 095 - 95 02233
OPERATOR WELL NO. SHR 30 EHS
Well Pad Name: SHR 30

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

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

Date of Notice: 1-22-15 **Date Permit Application Filed:** 1-23-15

Notice of:

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

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

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

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

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

☑ SURFACE OWNER(s)
Name: George G. Hamilton
Address: 2812 McElroy Creek Road
Alma, WV 26320
Name: Gary L. Hamilton
Address: 102 Big Flint Road
West Union, WV 26456

☐ SURFACE OWNER(s) (Road and/or Other Disturbance)
Name:
Address:
Name:
Address:

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

☐ COAL OWNER OR LESSEE
Name: none
Address:

☐ COAL OPERATOR
Name: none
Address:

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

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

*Please attach additional forms if necessary

Received
Office of Oil & Gas
JAN 26 2015

WW-6A
(9-13)

95 02233

API NO. 47- 095 -
OPERATOR WELL NO. SHR 30 EHS
Well Pad Name: SHR 30

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

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

Date of Notice: 1-22-15 **Date Permit Application Filed:** 1-23-15

Notice of:

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

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

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

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

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

☑ SURFACE OWNER(s)
Name: Donald L. Seckman
Address: 705 Jefferson Run Road
Alma, WV 26320
Name: Beverly J. Seckman
Address: 353 Foundry Street
New Martinsville, WV 26155

☐ SURFACE OWNER(s) (Road and/or Other Disturbance)
Name:
Address:
Name:
Address:

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

☐ COAL OWNER OR LESSEE
Name: none
Address:

☐ COAL OPERATOR
Name: none
Address:

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

Received
Office of Oil & Gas
JAN 26 2015

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

*Please attach additional forms if necessary

WW-6A
(9-13)

API NO. 47- 095 - 95 02233
OPERATOR WELL NO. SHR 30 EHS
Well Pad Name: SHR 30

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

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

Date of Notice: 1-22-15 **Date Permit Application Filed:** 1-23-15

Notice of:

☑ PERMIT FOR ANY WELL WORK

☐ CERTIFICATE OF APPROVAL FOR THE CONSTRUCTION OF AN IMPOUNDMENT OR PIT

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

☐ PERSONAL SERVICE

☐ REGISTERED MAIL

☑ METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

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

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

☑ SURFACE OWNER(s)
Name: Stanley E. Seckman
Address: 659 Jefferson Run Road
Alma, WV 26320
Name: Allen W. Seckman
Address: 824 Jefferson Run Road
Alma, WV 26320

☐ SURFACE OWNER(s) (Road and/or Other Disturbance)
Name:
Address:
Name:
Address:

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

☐ COAL OWNER OR LESSEE
Name: none
Address:

☐ COAL OPERATOR
Name: none
Address:

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

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

*Please attach additional forms if necessary

Received
Office of Oil & Gas
JAN 26 2015

WW-6A
(9-13)

API NO. 47- 095 - 95 02233
OPERATOR WELL NO. SHR 30 EHS
Well Pad Name: SHR 30

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: 22-15 **Date Permit Application Filed:** 1-23-15

Notice of:

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

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

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

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

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

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

☐ SURFACE OWNER(s) (Road and/or Other Disturbance)
Name:
Address:
Name:
Address:

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

☐ COAL OWNER OR LESSEE
Name: none
Address:

☐ COAL OPERATOR
Name: none
Address:

☑ SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Name: Michael K. & Virginia L. Griffin
Address: P.O. Box 254
Middlebourne, WV 26149

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

*Please attach additional forms if necessary

Received
Office of Oil & Gas
JAN 26 2015

WW-6A
(9-13)

API NO. 47- 095 - 95 02233
OPERATOR WELL NO. SHR 30 EHS
Well Pad Name: SHR 30

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

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

Date of Notice: 1-22-15 **Date Permit Application Filed:** 1-23-15

Notice of:

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

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

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

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

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

☑ SURFACE OWNER(s)
Name: Charles E. Hamilton, Jr.
Address: 17095 WV Rt. 23 N
West Union, WV 26456
Name:
Address:

☐ SURFACE OWNER(s) (Road and/or Other Disturbance)
Name:
Address:
Name:
Address:

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

☐ COAL OWNER OR LESSEE
Name: none
Address:

☐ COAL OPERATOR
Name: none
Address:

☑ SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Name: Everett Roy & Betty June Weese
Address: 2524 McElroy Creek Road
Alma, WV 26320

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

*Please attach additional forms if necessary

Received
Office of Oil & Gas
JAN 26 2015

WW-6A
(8-13)

95 02233

API NO. 47- 095 - -
OPERATOR WELL NO. SHR 30 EHS
Well Pad Name: SHR 30

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.

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Office of Oil & Gas
JAN 26 2015

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

Received
Office of Oil & Gas
JAN 26 2015

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

95 02233

API NO. 47- 095 -
OPERATOR WELL NO. SHR 30 EHS
Well Pad Name: SHR 30

Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

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

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

Received
Office of Oil & Gas
JAN 26 2015

Received
Office of Oil & Gas
JAN 26 2015

WW-6A
(8-13)

API NO. 47- 095 -
OPERATOR WELL NO. SHR 30 EHS
Well Pad Name: SHR 30

Notice is hereby given by:

Well Operator: Noble Energy, Inc.
Telephone: 724-820-3061
Email: dswiger@nobleenergyinc.com

Address: 333 Technology Drive Suite 116
Canonsburg, PA 15317
Facsimile: 724-743-0050

Oil and Gas Privacy Notice:

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

Official Seal
Notary Public
State of West Virginia
Dolores J Swiger
235 Cottage Avenue
Weston WV 26452
My Comm. Exp. 9-19-23

Subscribed and sworn before me this 15 day of Jan., 2015.

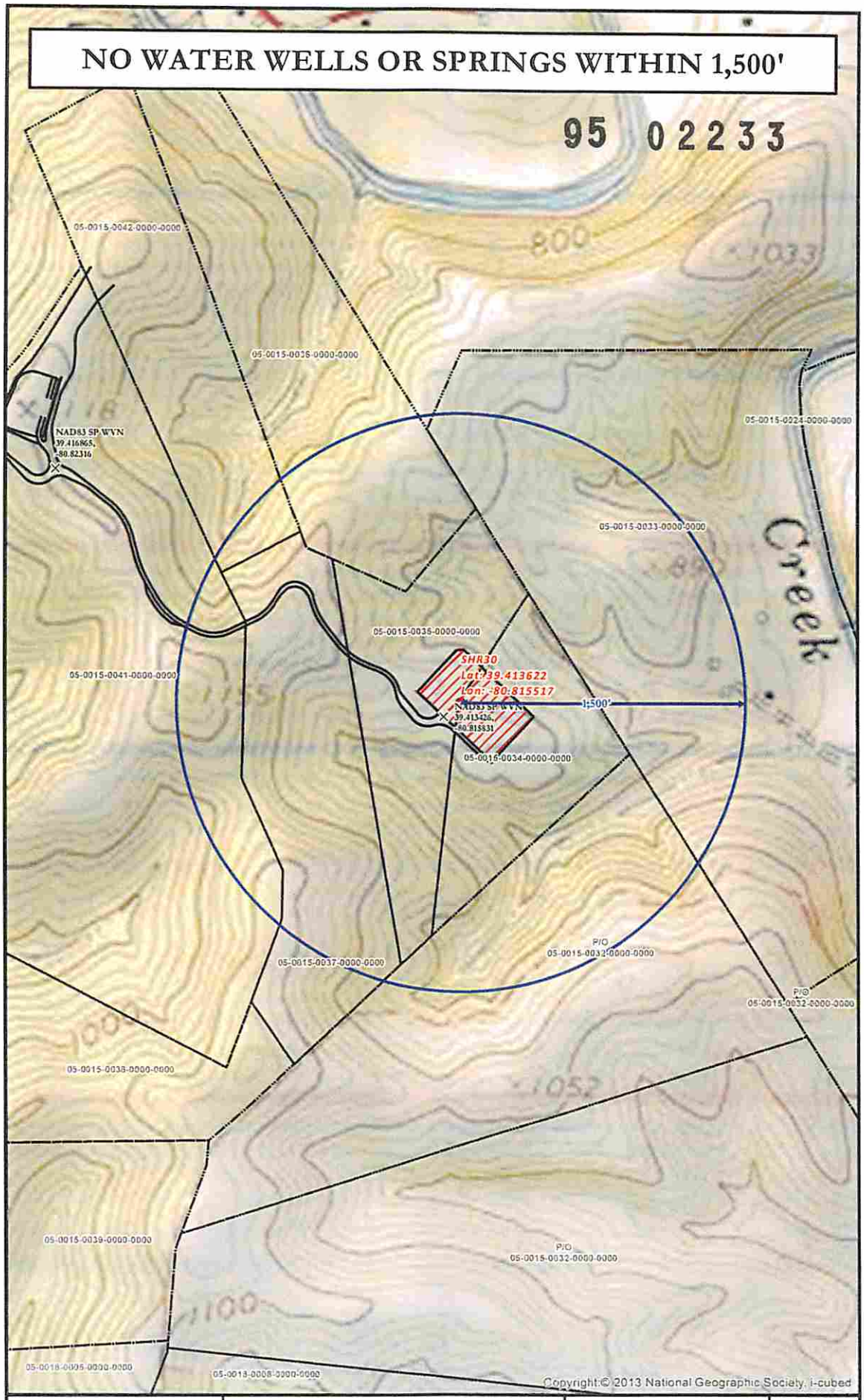
Notary Public

My Commission Expires 09/19/2023

95 02233

NO WATER WELLS OR SPRINGS WITHIN 1,500'

95 02233



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SHR 30 SITE SAFETY PLAN - WATER WELL PURVEYORS -	0 300 600 1 200 Feet 1 Inch = 600 Feet	noble energy	Date: 11/20/2014
Well Pad, Cistern, Water Well, Intersection, Access Road, 1500' Water Wells Buffer, Well Pad Boundary, Surface Parcels (Resolved)	Projection: NAD 1927 StatePlane West Virginia North FIPS 4701 Units: Foot US		Author: ChristopherGlover
	Disclaimer: All data is licensed for use by Noble Energy Inc. use only.		6 / 6

Document Path: G:\Canonsburg\GIS\Projects\District_50\Appalachia\HKDs\EHSR\Permitting\Shirley\SHR30\SSP_D30_PA_WV_6_SHR30_Water_Wells.mxd

Received
Office of Oil & Gas
JAN 26 2015

WW-6A3
(1/12)

Operator Well No. SHR 30 AHS - ~~MHS~~

95 02233

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: 10/6/2014 **Date of Planned Entry:** by 11/20/2014

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: Rebecca A. Seckman a/k/a Rebecca A. Barth
Address: 5042 Tyler Highway
Sistersville, WV 26175

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

Name: Stanley E. Seckman
Address: 659 Jefferson Run Road
Alma, WV 26320

☐ COAL OWNER OR LESSEE

Name:
Address:

☒ MINERAL OWNER(s)

Name: George G. Hamilton
Address: 2812 McElroy Road
Alma, WV 26320

*please attach additional forms if necessary

Notice is hereby given:

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

State:	West Virginia	Approx. Latitude & Longitude:	North 39.413713 West 80.815143 E 515913.46 N 4362704.70
County:	Tyler	Public Road Access:	County Rt. 23
District:	McElroy	Watershed:	huc-10 McElroy Creek
Quadrangle:	Shirley	Generally used farm name:	Seckman

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

Received
Office of Oil & Gas
JAN 26 2015

Notice is hereby given by:

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

Oil and Gas Privacy Notice:

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

WW-6A3
(1/12)

Operator Well No. SHR 30 AHS - NHS

95 02233

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: 10/6/2014 **Date of Planned Entry:** by 11/20/2014

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: Rebecca A. Seckman a/k/a Rebecca A. Barth
Address: 5042 Tyler Highway
Sistersville, WV 26175

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

Name: Stanley E. Seckman
Address: 659 Jefferson Run Road
Alma, WV 26320

☐ COAL OWNER OR LESSEE

Name:
Address:

☒ MINERAL OWNER(s)

Name: Gary L. Hamilton
Address: 102 Big Flint Road
West Union, WV 26456

*please attach additional forms if necessary

Notice is hereby given:

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

State:	West Virginia	Approx. Latitude & Longitude:	North 39.413713 West 80.815143 E 515913.46 N 4362704.70
County:	Tyler	Public Road Access:	County Rt. 23
District:	McElroy	Watershed:	huc-10 McElroy Creek
Quadrangle:	Shirley	Generally used farm name:	Seckman

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

Received
Office of Oil & Gas
JAN 26 2015

Notice is hereby given by:

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

Oil and Gas Privacy Notice:

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

WW-6A3
(1/12)

Operator Well No. SHR 30 AHS - ~~UHS~~
95 02233

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: 10/6/2014 **Date of Planned Entry:** by 11/20/2014

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

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

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Notice is hereby provided to:

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

☐ COAL OWNER OR LESSEE
Name:
Address:

☒ MINERAL OWNER(s)
Name: Charles E. Hamilton, Jr.
Address: 17095 WV Rt. 23 N
West Union, WV 26456
*please attach additional forms if necessary

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

State:	West Virginia	Approx. Latitude & Longitude:	North 39.413713 West 80.815143 E 515913.46 N 4362704.70
County:	Tyler	Public Road Access:	County Rt. 23
District:	McElroy	Watershed:	huc-10 McElroy Creek
Quadrangle:	Shirley	Generally used farm name:	Seckman

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

Received
Office of Oil & Gas
JAN 26 2015

Notice is hereby given by:

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

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WW-6A3
(1/12)

Operator Well No. SHR 30 AHS - MHS

95 02233

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: 10/6/2014 **Date of Planned Entry:** by 11/20/2014

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: Allen W. Seckman
Address: 824 Jefferson Run Road
Alma, WV 26320

Name: Donald L. Seckman
Address: 705 Jefferson Run Road
Alma, WV 26320

Name: Beverly J. Seckman
Address: 353 Foundry Street
New Martinsville, WV 26155

☐ COAL OWNER OR LESSEE

Name:
Address:

☒ MINERAL OWNER(s)

Name: same as listed surface owners
Address:

*please attach additional forms if necessary

Notice is hereby given:

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

State:	West Virginia	Approx. Latitude & Longitude:	North 39.413713 West 80.815143 E 515913.46 N 4362704.70
County:	Tyler	Public Road Access:	County Rt. 23
District:	McElroy	Watershed:	huc-10 McElroy Creek
Quadrangle:	Shirley	Generally used farm name:	Seckman

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

Received
Office of Oil & Gas
JAN 26 2015

Notice is hereby given by:

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

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WW-6A5
(1/12)

Operator Well No. SHR 30 EHS

95 02233

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

Notice Time Requirement: notice shall be provided no later than the **filing date of permit application.**
Date of Notice: 1-22-15 **Date Permit Application Filed:** 1-23-15

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

☒ CERTIFIED MAIL RETURN RECEIPT REQUESTED ☐ HAND DELIVERY

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

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

Name: Rebecca A. Seckman AKA Rebecca A. Barth
Address: 5042 Tyler Highway
Sistersville, WV 26175

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

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

State:	West Virginia	UTM NAD 83	Easting:	515937.258
County:	095-Tyler		Northing:	4362691.576
District:	Mc Elroy	Public Road Access:		County Rt. 58
Quadrangle:	Shirley	Generally used farm name:		Seckman
Watershed:	huc-10 Mc Elroy Creek			

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

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

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Received
Office of Oil & Gas
JAN 26 2015

WW-6A5
(1/12)

Operator Well No. SHR 30 EHS

95 02233

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

Notice Time Requirement: notice shall be provided no later than the **filing date of permit application.**
Date of Notice: 1-22-15 **Date Permit Application Filed:** 1-23-15

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

☒ CERTIFIED MAIL RETURN RECEIPT REQUESTED ☐ HAND DELIVERY

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

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

Name: Charles E. Hamilton, Jr.
Address: 17095 WV Rt. 23 N
West Union, WV 26456

Name:
Address:

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

State:	West Virginia	UTM NAD 83	Easting:	515937.258
County:	095-Tyler		Northing:	4362691.576
District:	Mc Elroy	Public Road Access:		County Rt. 58
Quadrangle:	Shirley	Generally used farm name:		Seckman
Watershed:	huc-10 Mc Elroy Creek			

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

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

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Received
Office of Oil & Gas
JAN 26 2015

WW-6A5
(1/12)

Operator Well No. SHR 30 EHS

95 02233

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

Notice Time Requirement: notice shall be provided no later than the **filing date of permit application.**
Date of Notice: 1-22-15 **Date Permit Application Filed:** 1-23-15

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

☒ CERTIFIED MAIL RETURN RECEIPT REQUESTED ☐ HAND DELIVERY

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

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

Name: George G. Hamilton
Address: 2812 McElroy Creek Road
Alma, WV 26320

Name: Gary L. Hamilton
Address: 102 Big Flint Road
West Union, WV 26456

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

State: West Virginia
County: 095-Tyler
District: Mc Elroy
Quadrangle: Shirley
Watershed: huc-10 Mc Elroy Creek

UTM NAD 83 Easting: 515937.258
Northing: 4362691.576
Public Road Access: County Rt. 58
Generally used farm name: Seckman

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

Well Operator: Noble Energy, Inc.
Telephone: 724-820-3061
Email: dswiger@nobleenergyinc.com

Address: 333 Technology Drive, Suite 116
Canonsburg, PA 15317
Facsimile: 724-743-0050

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Received
Office of Oil & Gas
JAN 26 2015

WW-6A5
(1/12)

Operator Well No. SHR 30 EHS

95 02233

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

Notice Time Requirement: notice shall be provided no later than the **filing date of permit application.**
Date of Notice: 1-22-15 **Date Permit Application Filed:** 1-23-15

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

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

Name: Donald L. Seckman
Address: 705 Jefferson Run Road
Alma, WV 26320

Name: Beverly J. Seckman
Address: 353 Foundry Street
New Martinsville, WV 26155

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

State: West Virginia
County: 095-Tyler
District: Mc Elroy
Quadrangle: Shirley
Watershed: huc-10 Mc Elroy Creek

UTM NAD 83 Easting: 515937.258
Northing: 4362691.576
Public Road Access: County Rt. 58
Generally used farm name: Seckman

This Notice Shall Include:
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Well Operator: Noble Energy, Inc.
Telephone: 724-820-3061
Email: dswiger@nobleenergyinc.com

Address: 333 Technology Drive, Suite 116
Canonsburg, PA 15317
Facsimile: 724-743-0050

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Received
Office of Oil & Gas
JAN 26 2015

WW-6A5
(1/12)

Operator Well No. SHR 30 EHS

95 02233

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

Notice Time Requirement: notice shall be provided no later than the **filing date of permit application.**
Date of Notice: 1-22-15 **Date Permit Application Filed:** 1-23-15

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

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

Name: Stanley E. Seckman
Address: 659 Jefferson Run Road
Alma, WV 26320

Name: Allen W. Seckman
Address: 824 Jefferson Run Road
Alma, WV 26320

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

State: West Virginia
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District: Mc Elroy
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Watershed: huc-10 Mc Elroy Creek

UTM NAD 83 Easting: 515937.258
Northing: 4362691.576
Public Road Access: County Rt. 58
Generally used farm name: Seckman

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Telephone: 724-820-3061
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Address: 333 Technology Drive, Suite 116
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Received
Office of Oil & Gas
JAN 26 2015

95 02233

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

Earl Ray Tomblin
Governor

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

November 5, 2014

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

Subject: DOH Permit for the SHR-30 and SHR-31 Well Pads, Tyler County

Dear Mr. Martin,

The West Virginia Division of Highways has issued Permit #06-2014-0719 for the subject site to Noble Energy, Inc. for access to the State Road for the well sites located off of Marshall County Route 58 SLS.

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

Very Truly Yours,

Gary K. Clayton

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

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

Received
Office of Oil & Gas
JAN 26 2015

E.E.O./AFFIRMATIVE ACTION EMPLOYER

RECEIVED
MAY 14 2012
MAINTENANCE DIVISION

OIL AND GAS ROAD STATEWIDE BONDING AGREEMENT

THIS AGREEMENT, executed in duplicate, made and entered into this _2_ day of _May__, 2012, by and between the WEST VIRGINIA DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS, hereinafter called "DEPARTMENT," and Noble Energy, Inc. a Delaware, company, hereinafter called "COMPANY."

WITNESSETH:

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

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

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

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

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

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

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

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

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

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

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

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

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JAN 26 2015

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

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

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

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

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

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

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

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

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

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JAN 26 2015

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

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

WEST VIRGINIA DEPARTMENT OF
TRANSPORTATION,
DIVISION OF HIGHWAYS

Witness

By: _____
State Highway Engineer

Witness

By: _____
Robert Ovitz
Title: Senior Operations Manager

(To be executed in duplicate)

RECEIVED
MAY 14 2012
MAINTENANCE DIVISION

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

ATTORNEY LEGAL DIVISION
WEST VIRGINIA DIVISION
OF HIGHWAYS

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Office of Oil & Gas
JAN 26 2015

Hydraulic Fracturing Fluid Product Component Information Disclosure

Hydraulic Fracturing Fluid Composition:

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

* Total Water Volume sources may include fresh water, produced water, and/or recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

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

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JAN 26 2015

95 02233

NOBLE ENERGY, INC.

CONSTRUCTION PLANS FOR

SHR 31 WELL PAD, TANK PAD, AND ACCESS ROAD

McELROY DISTRICT, TYLER COUNTY, WV

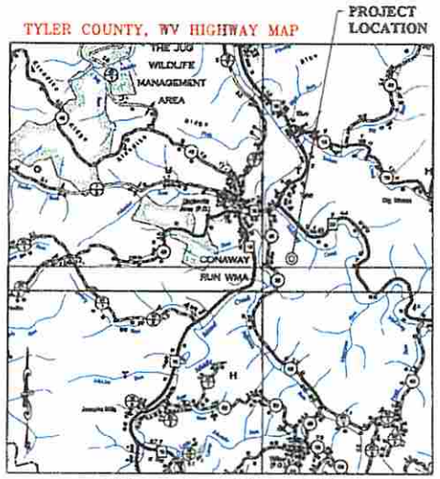
OCTOBER 31, 2014

noble energy

NOBLE ENERGY, INC.
333 Technology Drive, Suite 116
Canonsburg, Pennsylvania 15317
(724) 820-3000

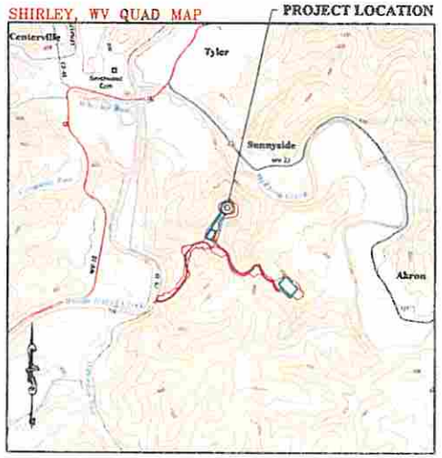
Michael Doff
12-17-2014

TYLER COUNTY, WV HIGHWAY MAP



HIGHWAY MAP SCALE

SHIRLEY, WV QUAD MAP



VICINITY MAP SCALE

SHEET INDEX

SHEET	DESCRIPTION
1	TITLE SHEET
2	EXISTING CONDITIONS
3	OVERALL SITE PLAN
4 - 6	SHR 31 ACCESS ROAD PLAN AND PROFILE
7 - 12	SHR 31 ACCESS ROAD SECTIONS
13	TANK PAD AND STAGING AREA PLAN
14	TANK PAD AND STAGING AREA PROFILE
15	TANK PAD ROAD PLAN AND PROFILE
16	TANK PAD AND STAGING AREA SECTIONS
17	SHR 31 WELL PAD PLAN
18	SHR 31 WELL PAD PROFILE
19	SHR 31 WELL PAD SECTIONS
20 - 22	SHR 30 ACCESS ROAD PLAN AND PROFILE
23 - 26	SHR 30 ACCESS ROAD SECTIONS
27	SHR 30 WELL PAD PLAN
28	SHR 30 WELL PAD PROFILE △1
29	SHR 30 WELL PAD SECTIONS
30	SITE RECLAMATION PLAN
31	GENERAL NOTES
32 - 36	DETAILS

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Office of Oil & Gas
JAN 26 2015

SHR 31 WELL PAD TOPHOLE COORDINATES

Well Number	WV83-N Latitude	WV83-N Longitude	WV83-N Northing	WV83-N Easting	WV27-N Latitude	WV27-N Longitude	WV27-N Northing	WV27-N Easting	UTM 83-17 Northing	UTM 83-17 Easting
1	N 39 420104°	W 80 821631°	337873 544 ft	1595147 951 ft	N 39 420024°	W 80 821804°	337838 417 ft	1626589 109 ft	4363412 850 m	515353 528 m
2	N 39 420092°	W 80 821700°	337869 304 ft	1595128 406 ft	N 39 420011°	W 80 821873°	337834 178 ft	1626569 564 ft	4363411 459 m	515347 595 m
3	N 39 420079°	W 80 821769°	337865 065 ft	1595108 860 ft	N 39 419999°	W 80 821942°	337829 940 ft	1626550 018 ft	4363410 068 m	515341 662 m
4	N 39 420067°	W 80 821838°	337860 826 ft	1595089 315 ft	N 39 419986°	W 80 822011°	337825 701 ft	1626530 473 ft	4363408 677 m	515335 728 m
Road Entrance	N 39 412355°	W 80 829198°	335062 816 ft	1592968 739 ft	N 39 412274°	W 80 829370°	335047 753 ft	1624409 892 ft	4362551 586 m	514703 814 m
Well Pad Center	N 39 420108°	W 80 821758°	337875 312 ft	1595112 151 ft	N 39 420027°	W 80 821930°	337840 186 ft	1626553 309 ft	4363413 206 m	515342 613 m
Tank Pad Center	N 39 417860°	W 80 823422°	337063 730 ft	1594630 066 ft	N 39 417780°	W 80 823594°	337028 619 ft	1626071 243 ft	4363163 504 m	515195 877 m

DRIVING DIRECTIONS FROM THE INTERSECTION OF US 50 AND WV 18 NEAR WEST UNION, WV

1. TRAVEL APPROXIMATELY 18.3 MILES NORTH ON WV 18.
2. TURN RIGHT ONTO JEFFERSON RUN ROAD (CR 58).
3. TRAVEL APPROXIMATELY 1.3 MILES SOUTH ON CR 58.
4. TURN LEFT ONTO THE EXISTING ACCESS ROAD.

DRIVING DIRECTIONS FOR EQUIPMENT THAT EXCEEDS THE POSTED WEIGHT LIMITS ON WV18 FROM THE INTERSECTION OF US 50 AND WV 18 NEAR WEST UNION, WV

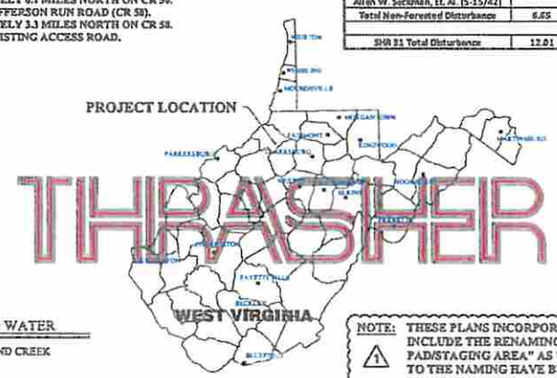
1. TRAVEL APPROXIMATELY 10.3 MILES NORTH ON WV 18.
2. TURN RIGHT ONTO DUCKWORTH RIDGE ROAD (CR 58/2).
3. TRAVEL APPROXIMATELY 3.2 MILES NORTHEAST ON CR 58/2.
4. TURN LEFT ONTO ROSS ROAD (CR 58).
5. TRAVEL APPROXIMATELY 0.1 MILES NORTH ON CR 58.
6. TURN RIGHT ONTO JEFFERSON RUN ROAD (CR 58).
7. TRAVEL APPROXIMATELY 3.3 MILES NORTH ON CR 58.
8. TURN RIGHT ONTO EXISTING ACCESS ROAD.

SHR 31 DISTURBANCE SUMMARY

Property Owner (Tax Map / Parcel)	SHR 31 Access Road Disturbance	SHR 31 Well Pad & Tank Pad Disturbance	SHR 30 Access Road Disturbance	SHR 30 Well Pad Disturbance	Total Disturbance
Forested					
Allen W. Seckman, Et. Al. (5-15/34)			0.00	0.46	0.46
Allen W. Seckman, Et. Al. (5-15/35)			0.09	0.02	0.11
Allen W. Seckman, Et. Al. (5-15/37)			0.65		0.65
Allen W. Seckman, Et. Al. (5-15/41)	5.36	0.33	0.49		6.17
Allen W. Seckman, Et. Al. (5-15/42)		4.85			4.85
Total Forested Disturbance	5.36	5.18	1.23	0.48	12.24
Non-Forested					
Allen W. Seckman, Et. Al. (5-15/34)			0.39	4.69	5.08
Allen W. Seckman, Et. Al. (5-15/35)			1.91	2.25	4.16
Allen W. Seckman, Et. Al. (5-15/37)			2.25		2.25
Allen W. Seckman, Et. Al. (5-15/41)	6.65	5.96	4.07		16.67
Allen W. Seckman, Et. Al. (5-15/42)		1.16			1.16
Total Non-Forested Disturbance	6.65	7.12	8.62	6.94	29.33
Total					
SHR 31 Total Disturbance	12.01	12.30	9.84	7.42	41.57

ROBERT R. MILNE
REGISTERED
14177
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER
12/15/14

PROJECT LOCATION



THRASHER

■ APPROVED FOR PERMITS	DATE: 10/31/14	BY: RM
☐ APPROVED FOR BIDS	DATE:	BY:
☐ APPROVED FOR CONSTRUCTION	DATE:	BY:

REVISION NUMBER	REVISED SHEETS	BY	DATE	DESCRIPTION
1	1,3-13,15-17,19-30,32,36	RBM	12/15/14	REVISED FOR SHR 30 PERMIT APPLICATION

ONE CALL UTILITY SYSTEM CONTACT INFO

WEST VIRGINIA 811

SITE TICKET NUMBER: 1426149137

CONTRACTOR SHALL NOTIFY THE ONE-CALL SYSTEM OF THE INTENDED EXCAVATION OR DEMOLITION NOT LESS THAN FORTY-EIGHT (48) HOURS, EXCLUDING SATURDAYS, SUNDAYS AND LEGAL FEDERAL OR STATE HOLIDAYS, NOR MORE THAN TEN (10) WORK DAYS PRIOR TO THE BEGINNING OF SUCH WORK.

RECEIVING WATER

MIDDLE ISLAND CREEK

NOTE: △1 THESE PLANS INCORPORATE THE PROPOSED SHR 30 WELL PAD AND INCLUDE THE RENAMING OF THE "PROPOSED FUTURE WELL PAD/STAGING AREA" AS "PROPOSED SHR 30 WELL PAD". REFERENCES TO THE NAMING HAVE BEEN REVISED WHERE NOTED IN THESE PLANS. NO OTHER FEATURES OF THE PLANS HAVE BEEN MODIFIED.

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THRASHER
THE THRASHER GROUP, INC.
600 WHITE OAKS BOULEVARD – BRIDGEPORT, WV 26330
PHONE (304) 624-4108 • FAX (304) 624-7831

CAD FILE: (5:\035-2580 – Noble Energy – SHR 30 & SHR 31 Well Pads\Drawing\2580-Cover.dwg PLOT DATE/TIME: 12/15/2014 3:54 PM USER: brad.f. massengar

NOBLE ENERGY, INC.

CONSTRUCTION PLANS FOR

SHR 31 WELL PAD, TANK PAD, △4 SHR 30 WELL PAD, AND ACCESS ROADS

McELROY DISTRICT, TYLER COUNTY, WV

OCTOBER 31, 2014

Electronic version of these plans may be viewed at: Q:\OIL GAS\SAY FILES\REVIEWS

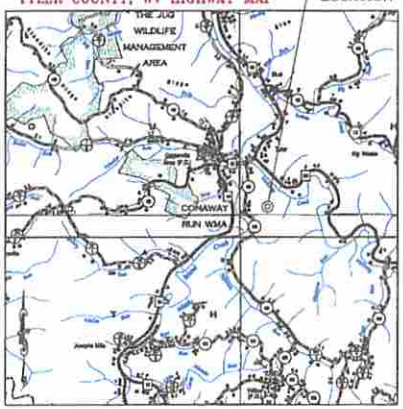
noble energy

NOBLE ENERGY, INC.
333 Technology Drive, Suite 116
Canonsburg, Pennsylvania 15317
(724) 820-3000

API# 9502232
API# 9502233
API# 9502234
API# 9502235
API# 9502236
API# 9502237
API# 9502238
API# 9502241

APPROVED
WVDEP OOG
4/16/2015

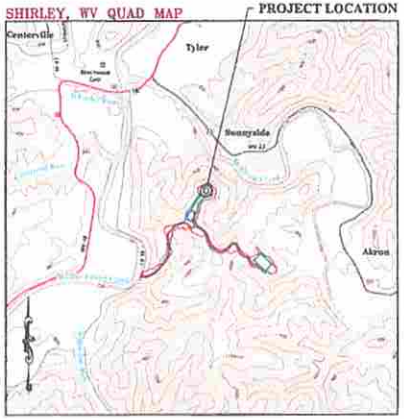
TYLER COUNTY, WV HIGHWAY MAP



1 MILE 0 1 MILE 2 MILES

HIGHWAY MAP SCALE

SHIRLEY, WV QUAD MAP



2000' 0 2000' 4000'

VICINITY MAP SCALE

SHR 31 WELL PAD TOPHOLE COORDINATES

Well Number	WV83-N Latitude	WV83-N Longitude	WV83-N Northing	WV83-N Easting	WV27-N Latitude	WV27-N Longitude	WV27-N Northing	WV27-N Easting	UTM 83-17 Northing	UTM 83-17 Easting
1	N 39.420104°	W 80.821631°	337873.544 ft	1595147.951 ft	N 39.420024°	W 80.821804°	337838.437 ft	1626589.109 ft	4363412.850 m	515353.529 m
2	N 39.420092°	W 80.821700°	337869.304 ft	1595128.406 ft	N 39.420011°	W 80.821873°	337834.178 ft	1626559.564 ft	4363411.459 m	515347.595 m
3	N 39.420079°	W 80.821769°	337865.065 ft	1595108.860 ft	N 39.419999°	W 80.821942°	337829.940 ft	1626550.018 ft	4363410.068 m	515341.662 m
4	N 39.420067°	W 80.821838°	337860.826 ft	1595089.315 ft	N 39.419986°	W 80.822011°	337825.701 ft	1626530.473 ft	4363408.677 m	515335.729 m
Road Entrance	N 39.412335°	W 80.829198°	335082.816 ft	1592968.739 ft	N 39.412274°	W 80.829370°	335047.753 ft	1624409.892 ft	4362551.566 m	514703.814 m
Well Pad Center	N 39.420104°	W 80.821758°	337875.312 ft	1595112.151 ft	N 39.420027°	W 80.821920°	337840.186 ft	1626553.309 ft	4363413.206 m	515342.613 m
Tank Pad Center	N 39.417860°	W 80.821421°	337063.730 ft	1594630.066 ft	N 39.417780°	W 80.821593°	337029.619 ft	1626071.243 ft	4363163.504 m	515199.877 m

SHR 30 WELL PAD TOPHOLE COORDINATES

Well Number	WV83-N Latitude	WV83-N Longitude	WV83-N Northing	WV83-N Easting	WV27-N Latitude	WV27-N Longitude	WV27-N Northing	WV27-N Easting	UTM 83-17 Northing	UTM 83-17 Easting
1	N 39.413520°	W 80.814761°	335447.3395 ft	1597093.1420 ft	N 39.413440°	W 80.814935°	335412.167 ft	1628454.307 ft	4362683.386 m	515946.287 m
2	N 39.413537°	W 80.814815°	335461.0297 ft	1597038.5630 ft	N 39.413417°	W 80.814987°	335425.868 ft	1628479.718 ft	4362687.486 m	515943.776 m
3	N 39.413554°	W 80.814867°	335474.7091 ft	1597023.9833 ft	N 39.413514°	W 80.815040°	335439.537 ft	1628465.128 ft	4362691.576 m	515937.258 m
4	N 39.413631°	W 80.814918°	335488.3784 ft	1597009.3837 ft	N 39.413551°	W 80.815093°	335453.207 ft	1628450.519 ft	4362695.666 m	515932.741 m
5	N 39.413668°	W 80.814972°	335501.0477 ft	1596994.7641 ft	N 39.413588°	W 80.815144°	335466.877 ft	1628435.919 ft	4362699.756 m	515928.224 m
6	N 39.413705°	W 80.815024°	335515.7171 ft	1596980.1644 ft	N 39.412825°	W 80.815197°	335480.547 ft	1628421.329 ft	4362703.846 m	515923.706 m
7	N 39.413742°	W 80.815076°	335529.3864 ft	1596964.5648 ft	N 39.413561°	W 80.815251°	335494.216 ft	1628405.730 ft	4362707.931 m	515918.684 m
8	N 39.412729°	W 80.813139°	335343.1793 ft	1596950.7797 ft	N 39.413699°	W 80.815302°	335508.009 ft	1628391.944 ft	4362712.063 m	515914.615 m
Road Entrance	N 39.412335°	W 80.829198°	335082.816 ft	1592968.739 ft	N 39.412274°	W 80.829370°	335047.753 ft	1624409.892 ft	4362551.566 m	514703.814 m
Well Pad Center	N 39.413691°	W 80.815065°	335510.7128 ft	1596964.4296 ft	N 39.413610°	W 80.815237°	335475.543 ft	1628409.794 ft	4362702.263 m	515920.218 m

△4

SHEET INDEX

SHEET	DESCRIPTION
1	TITLE SHEET
2	EXISTING CONDITIONS
3	OVERALL SITE PLAN
4 - 6	SHR 31 ACCESS ROAD PLAN AND PROFILE
7 - 12	SHR 31 ACCESS ROAD SECTIONS
13	TANK PAD AND STAGING AREA PLAN
14	TANK PAD AND STAGING AREA PROFILE
15	TANK PAD ROAD PLAN AND PROFILE
16	TANK PAD AND STAGING AREA SECTIONS
17	SHR 31 WELL PAD PLAN
18	SHR 31 WELL PAD PROFILE
19	SHR 31 WELL PAD SECTIONS
20 - 22	SHR 30 ACCESS ROAD PLAN AND PROFILE
23 - 26	SHR 30 ACCESS ROAD SECTIONS
27	SHR 30 WELL PAD PLAN
28	SHR 30 WELL PAD PROFILE
29	SHR 30 WELL PAD SECTIONS
30	SITE RECLAMATION PLAN
31	GENERAL NOTES
32 - 36	DETAILS

△1

DRIVING DIRECTIONS FROM THE INTERSECTION OF US 50 AND WV 18 NEAR WEST UNION, WV

1. TRAVEL APPROXIMATELY 18.2 MILES NORTH ON WV 18.
2. TURN RIGHT ONTO JEFFERSON RUN ROAD (CR 58).
3. TRAVEL APPROXIMATELY 1.3 MILES SOUTH ON CR 58.
4. TURN LEFT ONTO THE EXISTING ACCESS ROAD.

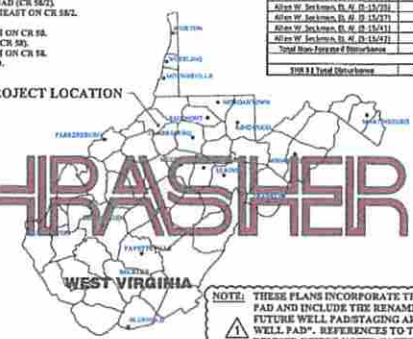
DRIVING DIRECTIONS FOR EQUIPMENT THAT EXCEEDS THE POSTED WEIGHT LIMITS ON WV18 FROM THE INTERSECTION OF US 50 AND WV 18 NEAR WEST UNION, WV

1. TRAVEL APPROXIMATELY 18.3 MILES NORTH ON WV 18.
2. TURN RIGHT ONTO DUCKWORTH RIDGE ROAD (CR 58/2).
3. TRAVEL APPROXIMATELY 3.2 MILES NORTHEAST ON CR 58/2.
4. TURN LEFT ONTO ROSS ROAD (CR 58).
5. TRAVEL APPROXIMATELY 0.1 MILES NORTH ON CR 58.
6. TURN RIGHT ONTO JEFFERSON RUN ROAD (CR 58).
7. TRAVEL APPROXIMATELY 3.3 MILES NORTH ON CR 58.
8. TURN RIGHT ONTO EXISTING ACCESS ROAD.

DISTURBANCE SUMMARY

Property Owner (Tax Map / Parcel)	SHR 31 Access Road Disturbance	SHR 31 Well Pad & Tank Pad Disturbance	SHR 30 Access Road Disturbance	SHR 30 Well Pad Disturbance	Total Disturbance
Forested					
Allen W. Jackman, Et. Al. (1-15/34)			0.00	0.46	0.46
Allen W. Jackman, Et. Al. (1-15/35)			0.09	0.02	0.11
Allen W. Jackman, Et. Al. (1-15/37)			0.65		0.65
Allen W. Jackman, Et. Al. (1-15/41)	5.28	0.43	0.49		6.17
Allen W. Jackman, Et. Al. (1-15/42)		4.83			4.83
Total Forested Disturbance	5.28	5.18	1.23	0.48	12.24
Non-Forested					
Allen W. Jackman, Et. Al. (1-15/34)			0.29	4.69	5.08
Allen W. Jackman, Et. Al. (1-15/35)			1.91	2.25	4.16
Allen W. Jackman, Et. Al. (1-15/37)			2.25		2.25
Allen W. Jackman, Et. Al. (1-15/41)	5.65	3.83	4.07		13.57
Allen W. Jackman, Et. Al. (1-15/42)		1.16			1.16
Total Non-Forested Disturbance	5.65	7.33	8.61	6.94	28.53
Total					
SHR 31 Total Disturbance	10.93	12.50	9.84	7.42	41.77

PROJECT LOCATION



THRASHER

ONE CALL UTILITY SYSTEM CONTACT INFO

WEST VIRGINIA 811

SITE TICKET NUMBER: 1426169137

CONTRACTOR SHALL NOTIFY THE ONE-CALL SYSTEM OF THE INTENDED EXCAVATION OR DEMOLITION NOT LESS THAN FORTY-EIGHT (48) HOURS, EXCLUDING SATURDAYS, SUNDAYS AND LEGAL FEDERAL OR STATE HOLIDAYS, NOR MORE THAN TEN (10) WORK DAYS PRIOR TO THE BEGINNING OF SUCH WORK.

RECEIVING WATER

MIDDLE ISLAND CREEK

△1 NOTE: THESE PLANS INCORPORATE THE PROPOSED SHR 30 WELL PAD AND INCLUDE THE RENAMING OF THE "PROPOSED FUTURE WELL PAD/STAGING AREA" AS "PROPOSED SHR 30 WELL PAD". REFERENCES TO THE NAMING HAVE BEEN REVISED WHERE NOTED IN THESE PLANS. NO OTHER FEATURES OF THE PLANS HAVE BEEN MODIFIED.

ROBERT R. MILNE REGISTERED PROFESSIONAL ENGINEER 14177 STATE OF WEST VIRGINIA
3/31/2015

APPROVED FOR PERMITS	DATE: 10/31/14	BY: RM	
APPROVED FOR BIDS	DATE:	BY:	
APPROVED FOR CONSTRUCTION	DATE:	BY:	

REVISION NUMBER	REVISED SHEETS	BY	DATE	DESCRIPTION
1	1,3-13,15-17,19-30,32,36	RBM	12/15/14	REVISED FOR SHR 30 PERMIT APPLICATION
2	35	RBM	1/27/15	TOE KEY DETAIL REVISIONS
3	30-31, 34-35	RBM	2/18/15	ADDRESSED WVDEP COMMENTS AND REVISED TOE KEY DETAIL
4	ALL	RBM	3/31/15	ADDRESSED WVDEP COMMENTS FOR SHR 30 PERMIT

THRASHER
THE THRASHER GROUP, INC.
800 WHITE OAKS BOULEVARD - BRIDGEPORT, WV 26330
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APPROVED
WVDEP OOG
4/16/2015

PROPOSED LIMIT OF DISTURBANCE (TYP)
EXISTING TREELINE (TYP)
NGE B-3
PROPOSED 8-IN COMPOST FILTER SOCK, TO BE INSTALLED ON FACE OF FILL SLOPE AT FINISH GRADE, SEE DETAIL #6 (TYP)
PROPOSED TOE KEY, SEE DETAIL #29 (TYP)
PROPOSED 24-IN COMPOST FILTER SOCK, SEE DETAIL #6 (TYP)
PROPOSED CONTAINMENT TRENCH, SEE DETAIL #16 (TYP)
PROPOSED CONTAINMENT SUMP, SEE DETAILS #14 AND #15 (TYP)
510'
140'
APPROXIMATE CUT-FILL INTERFACE (TYP)
PROPOSED BERM, SEE DETAIL #4 (TYP)
PROPOSED ORANGE CONSTRUCTION FENCE, SEE DETAIL #25 (TYP)
PROPOSED EROSION CONTROL MATTING LINED DITCH, SEE DETAILS #7 AND #24 (TYP)
NGE B-2
SHR 30 WELL PAD BASELINE
220'
20' TYP
150'
20+00
21+00
22+00
23+00
24+00
25+00
26+00
27+00
28+00
29+00
303'
284'
PROPOSED SHR 30 WELL PAD, SEE DETAIL #3
100-FT WETLAND BUFFER (TYP)
EXISTING ACCESS ROAD (TYP)
NGE B-1
PROPOSED TOPSOIL STOCKPILE #3
PROPOSED CULVERT C-12, SEE DETAIL #10 (TYP)
PROPOSED MOUNTABLE BERM, SEE DETAIL #22 (TYP)
239+00
483+50
400+00
401+00
402+00
403+00
NGE B-4
ALLEN W. SECKMAN, ET. AL. TM 5-15 PAR 34
226+00
227+00
228+00
229+00
PROPOSED OUTLET PROTECTION, SEE DETAIL #13 (TYP)
PROPOSED SHR 30 WELL PAD SOUTH ACCESS ROAD, SEE DETAIL #1
DELINEATED EPHEMERAL STREAM (TYP)
PROPOSED ROCK LINED DITCH, SEE DETAIL #24 (TYP)
SHR 30 WELL PAD ACCESS ROAD CENTERLINE
LIMIT OF ENVIRONMENTAL DELINEATION PERFORMED BY THRASHER (TYP)
DELINEATED INTERMITTENT STREAM (TYP)
EXISTING FENCE (TYP)
EXISTING STREAM (TYP)
ALLEN W. SECKMAN, ET. AL. TM 5-15 PAR 35
40 ft. 0 40 ft. 80 ft.

PLAN LEGEND

- PROPERTY LINE
- EXISTING CONTOURS
- EXISTING PAVED ROAD EDGE
- EXISTING UNPAVED ROAD EDGE
- EXISTING ACCESS ROAD EDGE
- EXISTING CULVERT
- EXISTING GAS LINE
- EXISTING GAS FACILITY
- EXISTING BUILDING
- EXISTING FENCE
- EXISTING FARM STRUCTURE
- EXISTING TREE LINE
- ADI — ENVIRONMENTAL DELINEATION AREA OF INTEREST
- DELINEATED STREAM - PERENNIAL
- DELINEATED STREAM - INTERMITTENT
- DELINEATED STREAM - EPHEMERAL
- DELINEATED WETLAND
- STREAM BUFFER
- WETLAND BUFFER
- NGE B-12 — NGE GEOTECHNICAL BORING LOCATION
- GpF — NRCS SOIL TYPE AND BOUNDARY
- LOD — LIMIT OF DISTURBANCE
- PROPOSED CONSTRUCTION FENCE
- PROPOSED 8-IN COMPOST FILTER SOCK
- PROPOSED 24-IN COMPOST FILTER SOCK
- PROPOSED CONTOURS
- PROPOSED TOE KEY - SEE GEOTECH REPORT
- C — PROPOSED CUT LIMIT
- F — PROPOSED FILL LIMIT
- PROPOSED EROSION CONTROL MATTING LINED DITCH
- PROPOSED ROCK LINED DITCH
- RCD — PROPOSED ROCK CHECK DAM
- PROPOSED OUTLET PROTECTION
- C-F — APPROXIMATE CUT-FILL INTERFACE - ZERO CUT LINE
- PROPOSED EDGE OF ACCESS ROAD
- PROPOSED GUARDRAIL
- PROPOSED EDGE OF BENCH
- PROPOSED EDGE OF WELL PAD
- PROPOSED MOUNTABLE WELL PAD BERM
- PROPOSED EDGE OF WELL PAD CONTAINMENT AREA
- PROPOSED WELL PAD CONTAINMENT TRENCH
- PROPOSED WELL PAD SUMP AND OUTLET PIPE
- PROPOSED EDGE OF STAGING AREA
- PROPOSED EDGE OF TANK PAD
- PROPOSED EDGE OF TOPSOIL STOCKPILE

NOTES

1. PROPERTY LINES SHOWN ARE A COMBINATION OF PROPERTY SURVEY PERFORMED BY PVE SHEFFLER, LLC AND THRASHER. PROPERTY LINES FROM PVE SHEFFLER, LLC WERE PROVIDED BY NOBLE ENERGY IN JUNE AND SEPTEMBER 2014, AND ADDITIONAL HARDLINE SURVEY WAS PERFORMED BY THRASHER IN OCTOBER 2014.
2. EXISTING FEATURES AND CONTOURS ARE BASED ON AERIAL MAPPING PROVIDED BY BLUE MOUNTAIN, INC. IN JULY AND SEPTEMBER 2014. MAPPING WAS ESTABLISHED FROM ORTHO PHOTOGRAPHY TAKEN ON 18 APRIL 2014.
3. ENVIRONMENTAL DELINEATIONS WERE PERFORMED BY THRASHER IN JULY, AUGUST, AND SEPTEMBER 2014.
4. SOIL MAPPING SHOWN IS FROM USDA NRCS WEB SOIL SURVEY OBTAINED IN SEPTEMBER 2014 AND IS BASED ON SURVEY AREA DATA FROM 26 DECEMBER 2013.
5. NGE BORING LOCATIONS REPRESENT GEOTECHNICAL INVESTIGATION DRILLING LOCATIONS PERFORMED IN SEPTEMBER 2014.
6. LIMIT OF DISTURBANCE REPRESENTS LIMIT OF CLEARING. EXISTING FENCE SHALL BE REMOVED AT ALL LOCATIONS WITHIN THE LIMIT OF DISTURBANCE.
7. TOE KEY IS SHOWN FOR REFERENCE ONLY. TOE KEY SHALL BE LOCATED AND CONSTRUCTED IN ACCORDANCE WITH FINAL GEOTECHNICAL RECOMMENDATIONS.
8. CONTRACTOR SHALL INSTALL EROSION CONTROL SLOPE MATTING ON ALL CONSTRUCTED SLOPES.
9. CONTRACTOR SHALL INSTALL TYPE I, CLASS II GUARDRAIL IN ACCORDANCE WITH WVDOH SPECIFICATIONS AND DETAILS.
10. ALL SLOPES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT. ALL CUTS SHALL BE 2H:1V THROUGH THE SOIL OVERBURDEN AND MAY BE STEEPENED TO 1.5H:1V OR GREATER DEPENDING ON THE ROCK TYPE. ALL ENGINEERED FILL SLOPES SHALL BE 2H:1V. 1

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NO.	BY	DATE	DESCRIPTION
1	RBM	12/15/14	REVISED FOR SHR 30 PERMIT APPLICATION
4	RBM	03/27/15	ADDRESSED WVDEP COMMENTS FOR SHR 30 PLANS

noble energy

SCALE:
DRAWN: DATE:
CHECKED: DATE:
APPROVED: DATE:
SURVEY DATE:
SURVEY BY:
FIELD BOOK No.:

THRASHER
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600 WHITE OAKS BOULEVARD, BRIDGEPORT, WV 26330
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PHASE No.
CONTRACT No.
PROJECT No. 101-030-2590

NOBLE ENERGY, INC. 4
CONSTRUCTION PLANS FOR SHR 31 & SHR 30
WELL PADS, TANK PAD, & ACCESS ROAD
McELROY DISTRICT, TYLER COUNTY, WV
SHR 30 WELL PAD PLAN 1

SHEET No. 27

LAYOUT TAB: 27-Plan Plan
CAD FILE: R:\030-2590 - Noble Energy - SHR 30 & SHR 31 Well Pads\Drawing\2590-SitePlan.dwg
PLOT DATE/TIME: 3/31/2015 1:22 PM