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

December 09, 2015

WELL WORK PERMIT

Horizontal 6A Well

This permit, API Well Number: 47-5101868, 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: MND 20 BU
Farm Name: CONSOLIDATION COAL COMPA
API Well Number: 47-5101868
Permit Type: Horizontal 6A Well
Date Issued: 12/09/2015

Promoting a healthy environment.

API Number: 51-01868

PERMIT CONDITIONS

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

CONDITIONS

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

2. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than one hundred (100) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.

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

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

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

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

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

west virginia department of environmental protection

Oil and Gas Conservation Commission
601 57th Street, SE Charleston, WV 25304
(304)926-0499, Ext 1656

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

November 3, 2015

Department of Environmental Protection
Office of Oil and Gas
Charleston, WV 25304

RE: Application for Deep Well Permit – API #47-051-01868

COMPANY: Noble Energy, Inc.

FARM: Consolidation Coal MND20 BU

COUNTY: Marshall DISTRICT: Clay QUAD: Powhatan Point

The deep well review of the application for the above company is **APPROVED TO ~~UTICA~~** Pt. Pleasant.
Exception location hearing Docket 236-226

The applicant has complied with the provision of Chapter 22C-9, of the Code of West Virginia, nineteen hundred and thirty-one (1931), as amended, Oil and Gas Conservation Commission as follows:

1. Comments to Notice of Deviation filed? none
2. Provided a certified copy of duly acknowledged and recorded consent and easement form from all surface owners; yes
3. Provided a tabulation of all deep wells within one mile of the proposed location, including the API number of all deep wells, well name, and the name and address of the operator; @see below
4. Provided a plat showing that the proposed location is a distance of 400+ feet from the nearest lease line or unit boundary and showing the following wells drilled to or capable of producing from the objective formation within 3,000 feet of the proposed location.

Sincerely,
Cindy Raines
Cindy Raines
Program Administrator

*2000' from lateral (47-051-01732)
**1000' from lateral (47-051-01867)
**1,000' from lateral (47-051-01869)
**2,000' from lateral (47-051-01870)

**drilled from MND 20 pad

WW-6B
(04/15)

API NO. 47- 051 - 01868H6A
OPERATOR WELL NO. MND 20 BU
Well Pad Name: MND 20

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) | 051-Marshall (County) | Franklin (District) | Powhatan Point (Quadrangle)

2) Operator's Well Number: MND 20 BU Well Pad Name: MND 20

3) Farm Name/Surface Owner: Murray Energy (Consolidation Coal Company) Public Road Access: Taylors Ridge Road

4) Elevation, current ground: 1080.18 Elevation, proposed post-construction: 1058.4

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

JW 8/17/15

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Point Pleasant 10662'-10782' / 120' Thick / 9668 psi

8) Proposed Total Vertical Depth: 10,742'

9) Formation at Total Vertical Depth: Point Pleasant

10) Proposed Total Measured Depth: 19,960'

11) Proposed Horizontal Leg Length: 8,295'

12) Approximate Fresh Water Strata Depths: 445', 708', 805'

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

14) Approximate Saltwater Depths: na

15) Approximate Coal Seam Depths: 526'-536'

16) Approximate Depth to Possible Void (coal mine, karst, other): None anticipated, drilling in pillar - maps attached

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

(a) If Yes, provide Mine Info: Name: McElroy Mine
Depth: 526-536'
Seam: Pittsburgh #8
Owner: Consolidation Coal Company

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(04/15)

API NO. 47- 051 - 01868
OPERATOR WELL NO. MND 20 BU
Well Pad Name: MND 20

18) **CASING AND TUBING PROGRAM**

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	30"	New	LS	94	40'	40'	Surface to TD
Fresh Water	20"	New	J-55	94	936'	936'	CTS
I Intermediate	13 3/8"	New	J-55	54.5	2154'	2154'	CTS
Intermediate	9 5/8"	New	P-110	47	9400'	9400'	CTS
Production	5 1/2"	New	P-110	23.0	19,960'	19,960'	10% excess TOC=1000' above 9.625 shoe
Tubing							
Liners							

JW 8/17/15

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	30"	36"	0.375			Type I	Surface to TD
Fresh Water	20"	24"	0.438	2110		Class A	30% excess Yield =1.18
Coal Intermediate	13 3/8"	17.5"	0.380	2730		Class A	30% excess Yield =1.18
Intermediate	9 5/8"	12.375" / 12.25	0.472	9440		Class A	20% Excess to Surface
Production	5 1/2"	8.5"	0.415	16,510	13,000	Class H	10% excess Yield TOC =1000' above 9.625" shoe
Tubing							
Liners							

PACKERS

Kind:				
Sizes:				
Depths Set:				

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WW-6B
(10/14)

API NO. 47- 051 - 01868
OPERATOR WELL NO. MND 20 BU
Well Pad Name: MND 20

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

Drill the vertical depth to the Point Pleasant at an estimated total vertical depth of approximately 10,742 feet. Drill Horizontal leg - stimulate and produce the Point Pleasant Formation. Should we encounter formation issues, set the 20" 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.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 17.39

22) Area to be disturbed for well pad only, less access road (acres): 9.69

23) Describe centralizer placement for each casing string:

Conductor - No centralizers used. Fresh Water/Surface - Bow Spring centralizers every 3 joints to 100' from surface. 1st Intermediate - Bow Spring centralizers every 3 joints to 100' from surface. Intermediate - Bow Spring centralizers every 3 joints to 100' from surface. Production - Rigid Bow Spring every third joint form KOP to TOC. Rigid Every joint to KOP.

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

See attached sheet - Conductor - Type I to Surface. Surface/ Fresh Water - 15.6 ppg Class A + 2% CaCl, 0.25# Lost Circ 30% Excess Yield = 1.18. 1st Intermediate - 15.6 ppg Class A +2% CaCl, 0.25# Lost Circ. 30% Excess Yield = 1.18.
Intermediate - 2 Stage Cement Job with 14.5ppg Class A lead + additives (antisettling, antifoam, fluid loss, retarder, salt,viscosifer) & 15.6ppg Class A tail with additives (antisettling, antifoam, fluid loss, retarder, salt, dispersant or 12.0 Class A Lead + additives (+/-5% dispersant, 10% light weight additive, .75% fluid loss additive and 1.15% fluid loss additive, Yield =2.47) 13.5 ppg Class A tail + additive (+/-.5%fluid loss additive, .25% freewater additive, & .5% light weight additive, Yield =1.57), 0.125#/sk lost Circ 20% excess to Surface.
Production - 14.8ppg Class H Lead + additives and 15.8ppg Class H Tail + additives (antifoam, antisettling,extender,dispersant) 10% Excess TOC >=1000' 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 or Freshwater based mud and casing is run on air. Once casing is at setting depth, fill with KCl water circulate a minimum of one hole volume prior to pumping cement. First Intermediate - Drilled on air. Once casing is at a setting depth, circulate a minimum of once hole volume prior to pumping cement. Second Intermediate - Drilled on air. fill with salt saturated water once drilled to TD. Once casing is at setting depth, circulate a minimum of one hole volume prior to pumping cement. Production - drilled on +/- 14.5ppg SOBM. 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.

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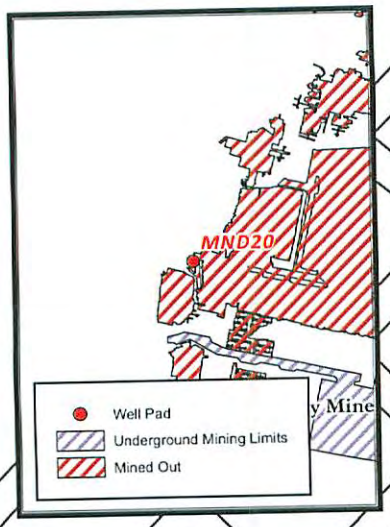
*Note: Attach additional sheets as needed.

51-01868

IRELAND MINE
CONSOL WEST VIRGINIA COAL CO.



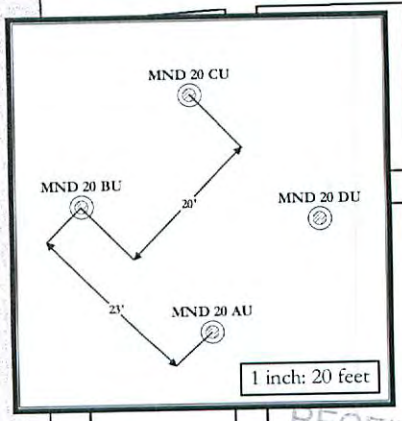
Depth To Pittsburgh Coal Seam Base = 533 Feet

Approx: 85'

Approx: 85'

INTERIOR BARRIER 456990.92 SQ. FT.

MND 20 SURFACE LOCATION @ 20 FT SPACING



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

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MND 20 SITE SAFETY PLAN
- WELLHEAD TOPHOLE LOCATION -

0 35 70 140 Feet

Scale 1" = 70'

Projection: NAD_1927_StatePlane_West_Virginia_North_FIPS_4701
Units: Feet US

MND20 Surface Holes
Target Coal Pillar
Existing Mine Polyline
Well to Coal Length

noble energy

Date: 8/17/2015

Author: Christopher Glover

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

Document Path: G:\Canonsburg\GIS\Projects\District_30\Appalachia\MXDs\EHSR\Permitting\Moundsville\MND20\SSP\D30_PA_WV_5_MND20_Tophole_Mine_Locations.mxd

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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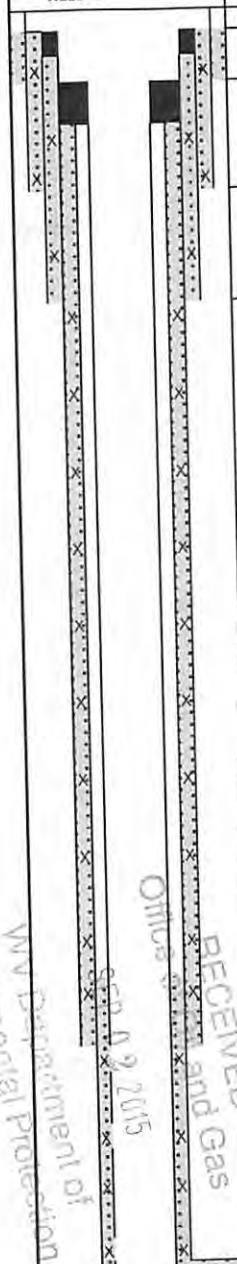
noble energy

DRILLING WELL PLAN
MND-20B-UHS (Utica HZ)
Utica Shale Horizontal
Marshall County, WV

		MND-20B SHL (Lat/Long)	(494962.73N, 1634099.22E) (NAD27)
Ground Elevation	1059'	MND-20B LP (Lat/Long)	(493965.85N, 1632316.76E) (NAD27)
Azm	145°	MND-20B BHL (Lat/Long)	(487172.65N, 1637073.41E) (NAD27)

WELLBORE DIAGRAM



HOLE	CASING	GEOLOGY	TOP	BOTTOM	MUD	CEMENT	CENTRALIZERS	CONDITIONING	COMMENTS
36"	30" 94# LS	Conductor	40		Air	Type 1 to surface	N/A	Ensure the hole is clean at TD.	Stabilize surface fill/soil. Conductor casing = 0.375" wall thickness
24"	20" 94# J-55 BTC	Pittsburgh Coal	526	526	Air or Fresh Water Based Mud	15.6 ppg Class A + 2% CaCl, 0.25# Lost Circ 30% Excess Yield = 1.18	Bow spring centralizers every 3 joints to 100' from surface	Once casing is at setting depth, circulate a minimum of one hole volume prior to pumping cement.	Water protection & coal isolation string, casing set 400' below Pit coal, Surface casing = 0.438" wall thickness Burst=2110 psi
		Surface Casing	936						
17.5"	13-3/8" 54.5# J-55 BTC	Big Lime	1625	1741	Air	15.6 ppg Class A + 2% CaCl, 0.25# Lost Circ 30% Excess Yield = 1.18	Bow spring centralizers every 3 joints to 100' from surface	Once casing is at setting depth, circulate a minimum of one hole volume prior to pumping cement.	Isolate Big Injun, casing set 300' below Big Injun, Intermediate casing = 0.380" wall thickness Burst=2730 psi
		Big Injun	1741	1854					
		1st Intermediate Casing	2154						
12.375"-12.25"	9-5/8" 47# P-110 BTC	5th Sand	2599	2628	Air	2 Stage Cement Job with 14.5ppg Class A lead + additives (antisettling, antifoam, fluid loss, retarder, salt, viscosifer) & 15.6ppg Class A tail with additives (antisettling, antifoam, fluid loss, retarder, salt, dispersant) or 12.0 ppg Class A lead + additives (+/-5% dispersant, 10% light weight additive, .75% fluid loss additive and 1.15% fluid loss additive, Yield = 2.47)/13.5 ppg Class A tail + additives (+/-.5% fluid loss additive, .25% freewater additive, & 5% light weight additive, Yield = 1.57), 0.125#/sk Lost Circ 20% Excess To Suface	Bow spring centralizers every 3 joints to 100' from surface	Fill with salt saturated water once drilled to TD. Once casing is at setting depth, circulate a minimum of one hole volume prior to pumping cement.	Intermediate casing to be set 400' into the Queenston. Intermediate Casing = 0.472" wall thickness Burst= 9440 psi Collapse=5300psi
		Speechley	3156	3202					
		Warren	3770	3784					
		Java	4707	4802					
		Pipe Creek	4802	4889					
		Angola	4889	5471					
		Rheinstreet	5471	5792					
		Cashaqua	5792	5864					
		Middlesex	5864	5887					
		West River	5887	5948					
		Burkett	5948	5973					
		Tully Limestone	5973	5997					
		Hamilton	5997	6032					
		Marcellus	6032	6087					
		Onondaga	6087	6095					
		Huntersville	6095	6309					
		Oriskany	6309	6421					
		Helderburg	6421	6681					
		Bass Island Dolomite	6681	6760					
		Salina G - "Big Lime"	6760	6960					
		Salina F	6960	7759					
		Lockport	7759	8081					
		Rochester Shale	8081	8386					
		Dayton Fm/Packer Shell	8386	8492					
		Clinton	8492	8575					
		Medina	8575	8674					
		Queenston	8674	9431					
		Intermediate Casing	9074' TVD, +/-9400' MD						
8.5" Curve	5-1/2" 23# HCP-110 Wedge 563	Reedsville	9431	10049	+/-14.5ppg SOBM	14.8ppg Class H Lead + additives and 15.8ppg Class H Tail + additives (antifoam, antisettling, extender, dispersant) 10% Excess TOC >= 1000' 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 = 0.415" wall thickness Burst=16510 psi Note:Actual centralizer schedules may be changed due to hole conditions
		Utica	10049	10662					
		Point Pleasant	10662	10782					
8.5" Lateral	5-1/2" 23# HCP-110 TXP BTC	TARGET	10742				Rigid Bow Spring every joint to KOP		

LP @ 10742' TVD / 11710' MD

8.5 Hole - Cemented Long String
5-1/2" 23# HCP-110 TXP BTC/ Wedge 563

+/-8295' ft Lateral

TD @ +/-10742' TVD
+/-19960' MD

X=centralizers

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WW-9
(2/15)

API Number 47 - 051 - 01868
Operator's Well No. MND 20 BU

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 Short Creek - Ohio River Quadrangle Powhatan Point

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

Will a pit be used? Yes ☐ No ☑

If so, please describe anticipated pit waste: _____

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

Proposed Disposal Method For Treated Pit Wastes:

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

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

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

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

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

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

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

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

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

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

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

Company Official Signature Dee Swiger

Company Official (Typed Name) Dee Swiger

Company Official Title Regulatory Analyst III

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Department of Environmental Protection

Subscribed and sworn before me this 12th day of August, 20 15

Regina Logue Notary Public

My commission expires 07/07/2018

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

S1-01868

Form WW-9

Operator's Well No. MND 20 BU

Noble Energy, Inc.

Proposed Revegetation Treatment: Acres Disturbed 17.39 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: [signature]

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

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Title: Oil and Gas Inspector Date: 8/7/15

Field Reviewed? (_____) Yes (_____) No

51-01868

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
412-384-7569

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

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

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

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

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Office of Oil and Gas
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51-01868

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

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

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

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

Water Haul off Companies:

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

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

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

Nuverra Environmental Solutions
11942 Veterans Memorial Highway
Masontown, WV 26542

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

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

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

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

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

Equipment Transport
1 Tyler Court
Carlisle, PA 17015

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

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

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Disposal Locations:

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

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

Adams #1 (Buckeye Brine, LLC)
Permit # 34-031-2-7177
23986 Airport Road
Coshocton, OH 43812
740-575-4484
512-478-6545

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

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

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

S1-01868

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

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

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

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

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

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

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

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

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

51-01868

Site Safety Plan

Noble Energy, Inc.

MND 20 Well Pad

BU

August 2015: Version 1

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

8/7/15

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

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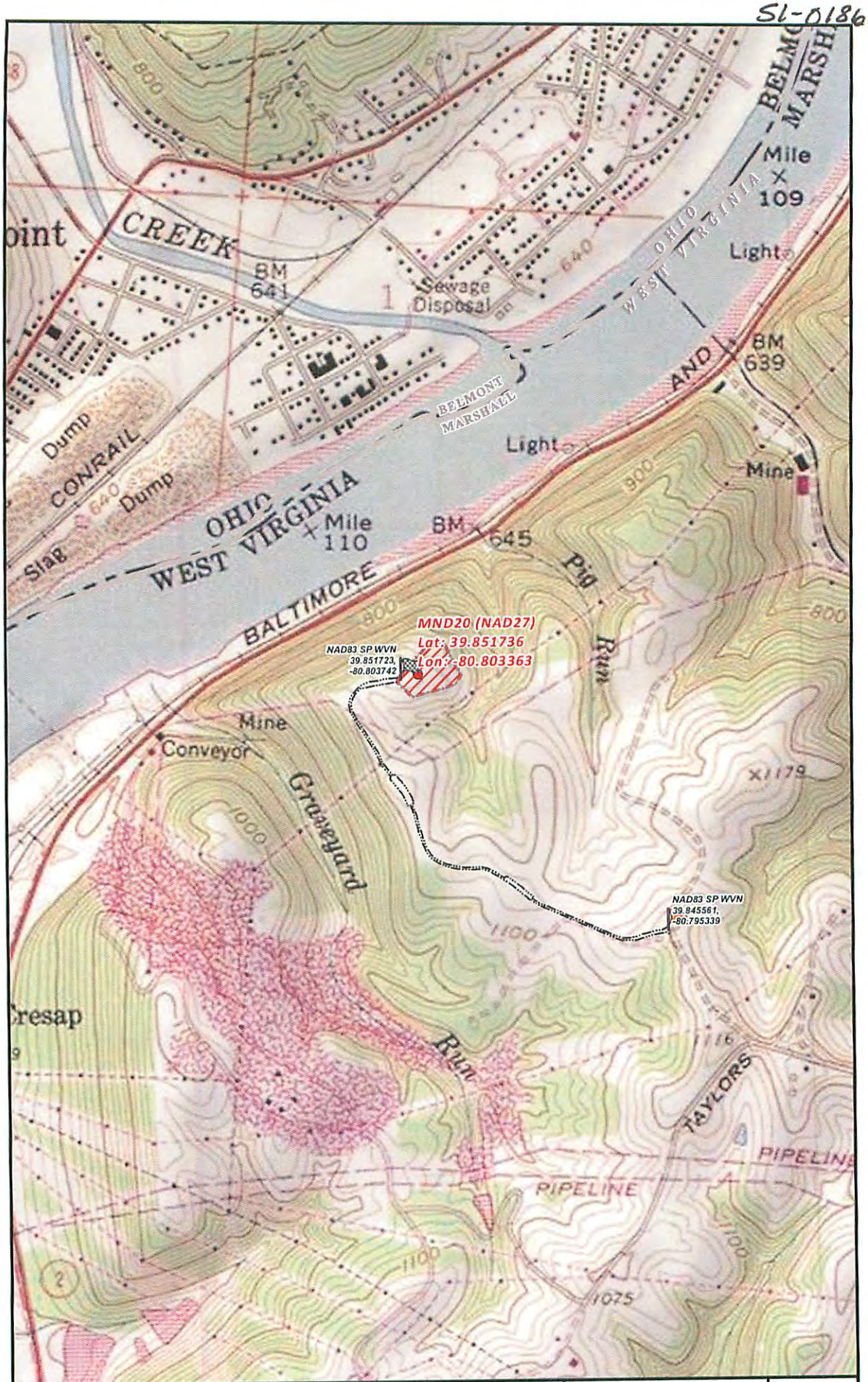


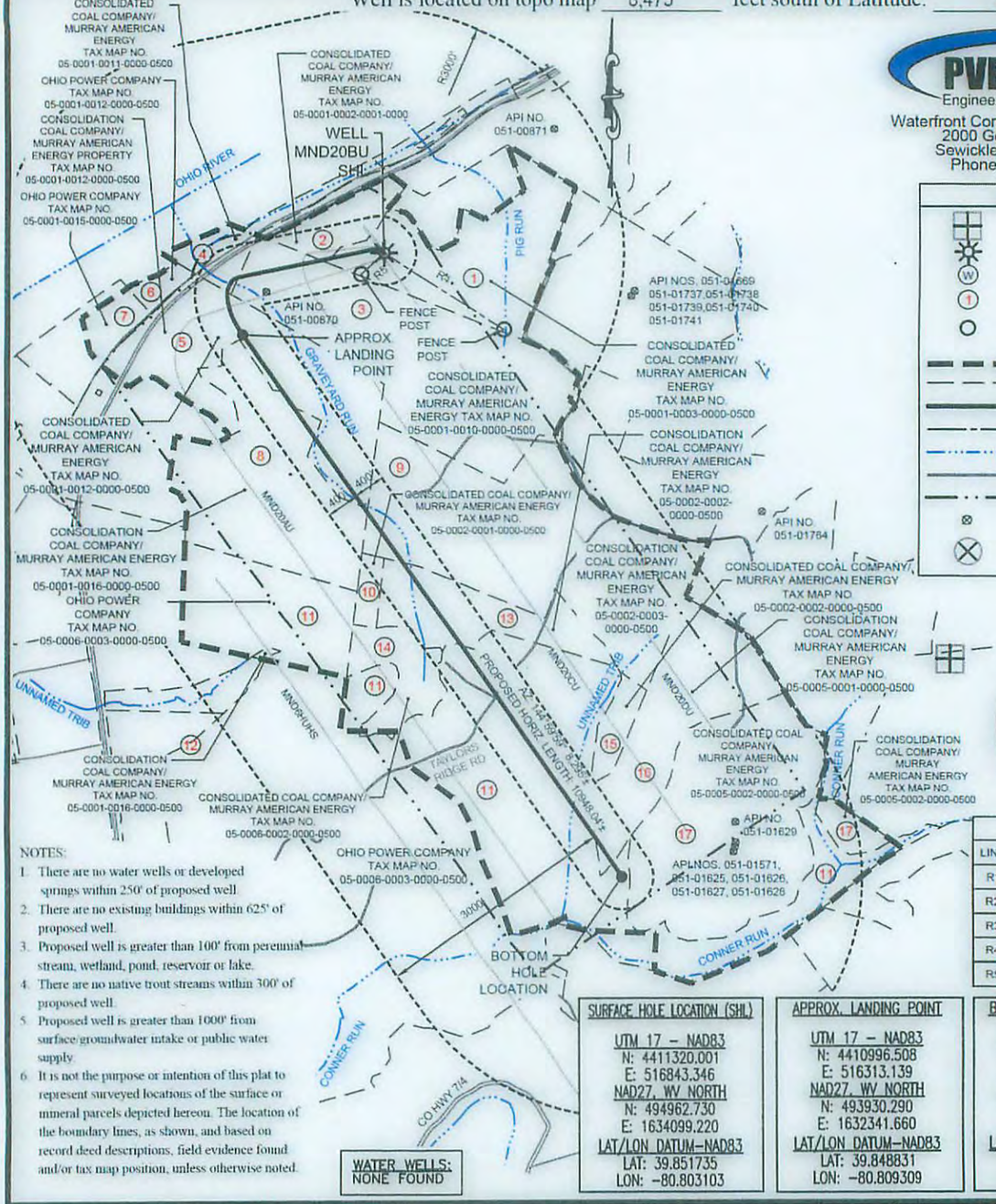
MND 20 SITE SAFETY PLAN - SITE WELL LOCATION -	0 500 1,000 2,000 Feet 1 Inch = 1,000 Feet	noble energy	Date: 8/6/2015 Author: ChristopherGlover
Site Entrance · Well Pad · Well Pad Entrance · Proposed Access Road · Well Pad Boundary	Projection: NAD 1927 UTM Zone 17N Units: Foot US **Disclaimer: All data is licensed for use by Noble Energy Inc. use only.**		1 / 6

Document Path: G:\Carlonsburg\GIS\Projects\District_30\Appalachia\MXDs\EHSR\Permitting\Moundsville\MND20\SSP\D30_PA_WV_1_MND20_Well_Location.mxd

Well is located on topo map 8,475 feet south of Latitude: 39° 52' 30"

Well is located on topo map 3,211 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



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
- UNIT BOUNDARY
- EXISTING GAS WELL
- TOPO MAP BOTTOM HOLE

REFERENCE DETAIL

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.

LINE TABLE

LINE	BEARING	DISTANCE
R1	N89°24'28"E	290.54'
R2	N83°45'40"W	158.91'
R3	N12°29'02"W	147.54'
R4	N58°58'39"W	1773.13'
R5	N47°13'14"E	388.75'

WATER WELLS: NONE FOUND

SURFACE HOLE LOCATION (SHL)
UTM 17 – NAD83
N: 4411320.001
E: 516843.346
NAD27, WV NORTH
N: 494962.730
E: 1634099.220
LAT/LON DATUM–NAD83
LAT: 39.851735
LON: –80.803103

APPROX. LANDING POINT
UTM 17 – NAD83
N: 4410996.508
E: 516313.139
NAD27, WV NORTH
N: 493930.290
E: 1632341.660
LAT/LON DATUM–NAD83
LAT: 39.848831
LON: –80.809309

BOTTOM HOLE LOCATION
UTM 17 – NAD83
N: 4408961.882
E: 517789.084
NAD27, WV NORTH
N: 487172.650
E: 1637073.410
LAT/LON DATUM–NAD83
LAT: 39.830469
LON: –80.792112

FILE #: MND 20 BU

DRAWING #: MND 20 BU

SCALE: 1"=2000'

MINIMUM DEGREE OF ACCURACY: 1/2500

PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT H 138: 638.58'

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.: 21452 L.L.S.: P.S. NO. _____

GARY A. SHEFFLER JR. REGISTERED 21452 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: AUGUST 19, 2015 - REV: OCTOBER 15, 2015

OPERATOR'S WELL #: MND 20 BU

API WELL # 47 (STATE) 051 (COUNTY) 01868 HUA (PERMIT)

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

☒ Gas ☐ Liquid Injection ☐ Storage ☐ Shallow

WATERSHED: SHORT CREEK-OHIO RIVER ELEVATION: 1080.18'

COUNTY/DISTRICT: MARSHALL / CLAY QUADRANGLE: POWHATAN POINT, W. VA./OHIO

SURFACE OWNER: CONSOLIDATION COAL COMPANY/ MURRAY ENERGY ACREAGE: 70.55

OIL & GAS ROYALTY OWNER: CNX GAS COMPANY ACREAGE: 70.55

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: POINT PLEASANT ESTIMATED DEPTH: TVD: 10,742' ± TMD: 19,960±

WELL OPERATOR: NOBLE ENERGY, INC. DESIGNATED AGENT: JESSICA ALSOP

Address: 1000 NOBLE ENERGY DRIVE Address: 1031 BRETTWALD DRIVE

City CANONSBURG State PA Zip Code 15317 City MORGANTOWN State WV Zip Code 26508

47-051-01868

Bottom Hole is located on topo map 1,043 feet south of Latitude: 39° 50' 00"

Bottom Hole is located on topo map 125 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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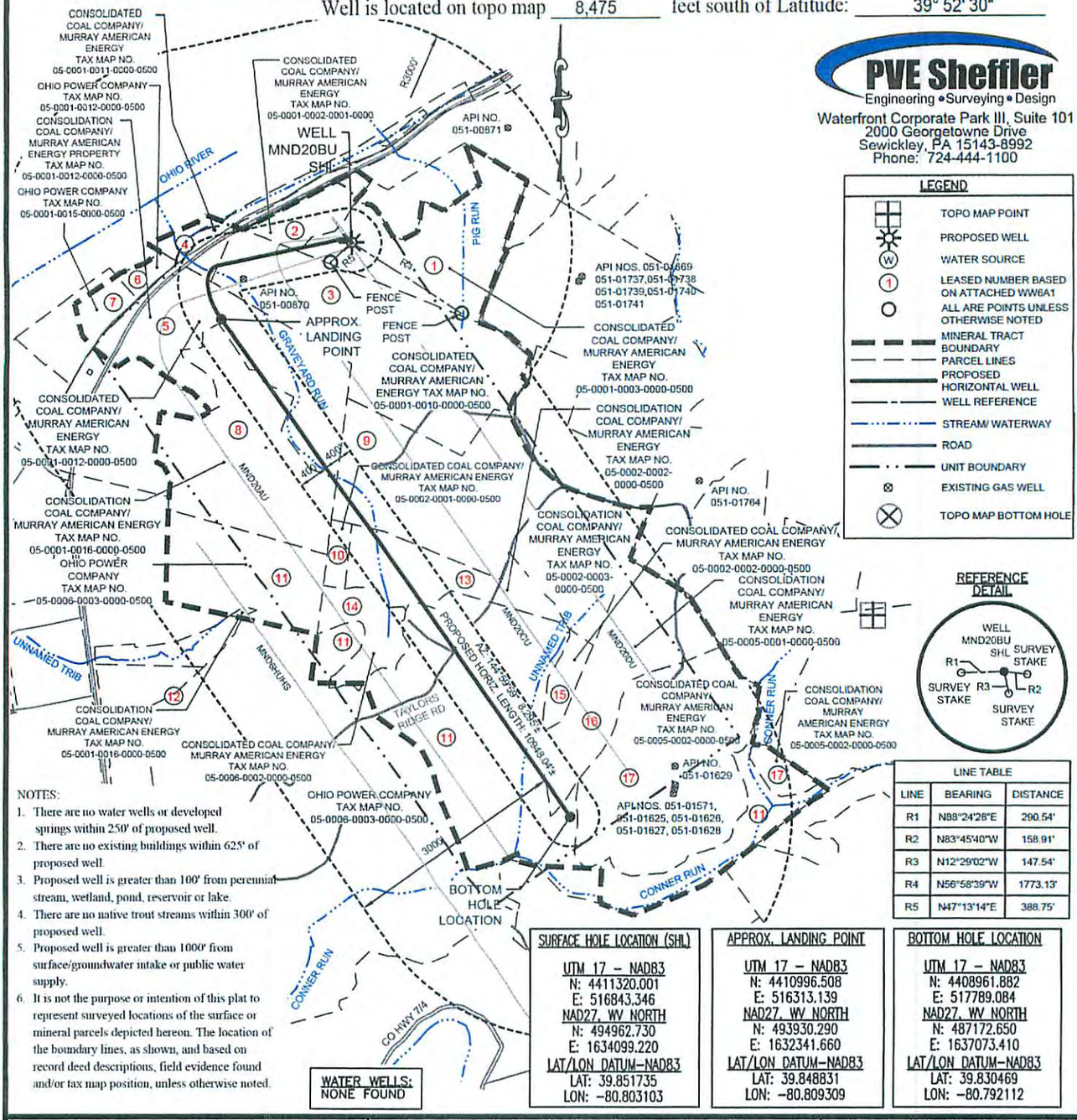

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R4	N56°58'39"W	1773.13'
R5	N47°13'14"E	388.75'

SURFACE HOLE LOCATION (SHL)	APPROX. LANDING POINT	BOTTOM HOLE LOCATION
UTM 17 – NAD83	UTM 17 – NAD83	UTM 17 – NAD83
N: 4411320.001	N: 4410996.508	N: 4408961.882
E: 516843.346	E: 516313.139	E: 517789.084
NAD27, WV NORTH	NAD27, WV NORTH	NAD27, WV NORTH
N: 494962.730	N: 493930.290	N: 487172.650
E: 1634099.220	E: 1632341.660	E: 1637073.410
LAT/LON DATUM–NAD83	LAT/LON DATUM–NAD83	LAT/LON DATUM–NAD83
LAT: 39.851735	LAT: 39.848831	LAT: 39.830469
LON: –80.803103	LON: –80.809309	LON: –80.792112

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WVDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25304

DATE: AUGUST 19, 2015 - REV: OCTOBER 15, 2015

OPERATOR'S WELL #: MND 20 BU

API WELL # 47 (STATE) 051 (COUNTY) 01868 H6A (PERMIT)

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SURFACE OWNER: CONSOLIDATION COAL COMPANY/ MURRAY ENERGY ACREAGE: 70.55

OIL & GAS ROYALTY OWNER: CNX GAS COMPANY ACREAGE: 70.55

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CLEAN OUT & REPLUG ☐ OTHER CHANGE ☐ (SPECIFY)

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City CANONSBURG State PA Zip Code 15317 City MORGANTOWN State WV Zip Code 26508

Bottom Hole is located on topo map 1,043 feet south of Latitude: 39° 50' 00"

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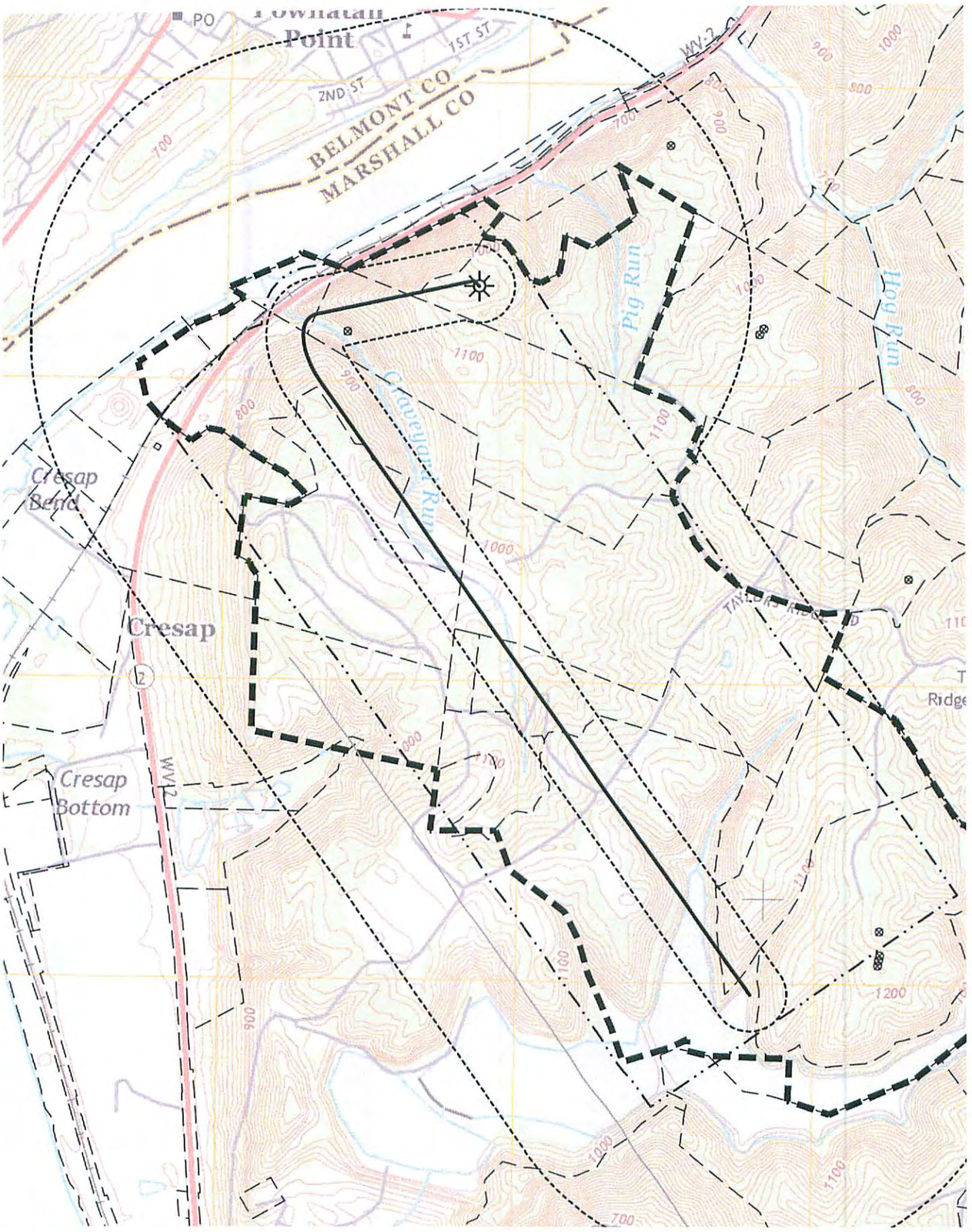

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WVDEP
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601 57TH STREET
CHARLESTON, WV 25304

DATE: AUGUST 19, 2015 - REV: SEPTEMBER 10, 2015

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QUADRANGLE: POWHATAN POINT, W. VA./OHIO

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City CANONSBURG State PA Zip Code 15317
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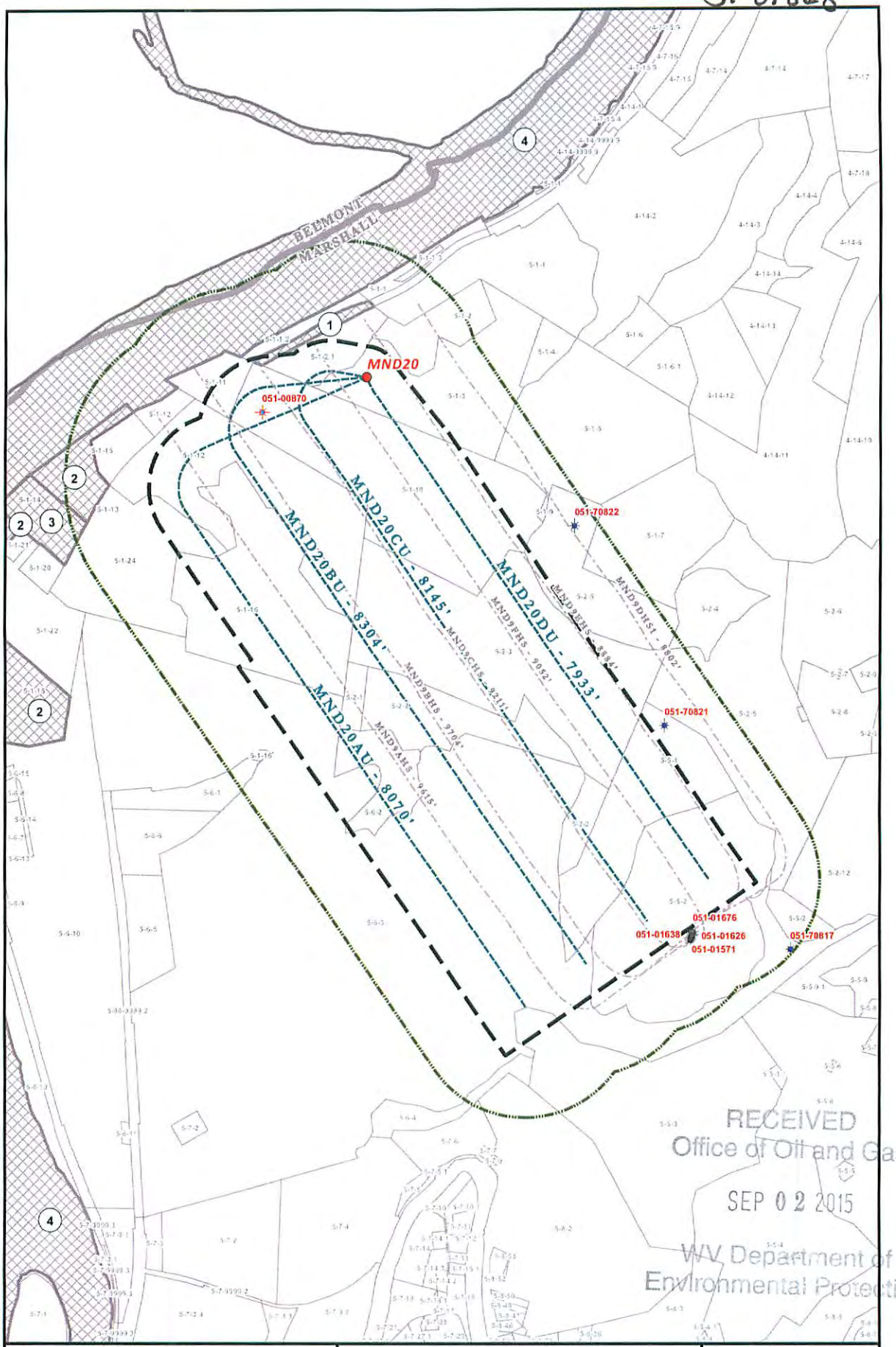

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SEP 02 2015
WV Department of
Environmental Protection

NBL Well Pad
Abandoned Well
Active Noble Well
Pre-1929 Well
Proposed Utica Well
Noble Marcellus
1500' Lateral Buffer
Unit Boundary
Deep Rights - Offset Operator
Surface Parcels
Counties
States

MND 20 Utica Well Pad
Offset Operators Map - Marshall County, WV

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

Author: ChristopherGlover
Date: August 26, 2015

noble energy

N W E S

1 / 2

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

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

Document Path: G:\Canonsburg\GIS\Projects\District_30\Appalachia\MXDs\EHSR\Permitting\Moundsville\MND20\MND20_Offset_Operators_Permit_Page1.mxd

51-01868

Noble Energy, Inc.: MND 20 Utica Unit - Offset Operators List		
Map Index	Owner/Operator (Utica)	Address
1	CSX Transportation Inc.	500 Water Street, Jacksonville, FL 32202
2	CNX Gas Company, LLC	1001 Consol Energy Drive, Canonsburg, PA 15317-6506
	Noble Energy, Inc.	334 Technology Dr., Suite 116, Canonsburg, PA 15317-9504
	AEP Generation Resources/Kentucky Power Company	P.O. Box 24424, Canton, OH 44701-4424
	Mary Witten Neal Wiseman	525 Ridgewood Road, Huntington, WV 25701
	Dorothy Ann Neal	1302 Hornage Road, Ball Ground, GA 30107
	Joseph Moore Neal	11278 Marine View Drive, SW, Seattle WA 98146
	Margery J. Witten	106 Franklin Street, St. Clairsville, OH 43950
	Ann Alexander	PO Box 3824, Bellevue, WA 98010
	Frances Gale Neal	115 Stonewood Drive, Huntington, WV 25705
	Susan Witten Neal Meyers	911 Wharfside Road, San Mateo, CA 94404
	Jane Witten Voth	1218 Acer Court East, Dayton, OH 45458
	Jane R. Peterseim	38368 Kingsbury Drive, North Ridgeville, OH 44039
3	CNX Gas Company, LLC	1000 Consol Energy Drive, Canonsburg, PA 15317-6506
	Noble Energy, Inc.	333 Technology Dr., Suite 116, Canonsburg, PA 15317-9504
	AEP Generation Resources/Kentucky Power Company	P.O. Box 24424, Canton, OH 44701-4424
4	West Virginia Division of Natural Resources	324 Fourth Avenue, South Charleston, WV 25303

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Please Refer to Map on Page "1/2" for Tract Location Reference

MND 20 Utica Well Pad
Offset Operators Map - Marshall County, WV

noble energy

Scale Not Applicable

Author: ChristopherGlover

Date: August 26, 2015

N W E S

2 / 2

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

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

Document Path: G:\Canonsburg\GIS\Projects\District_30\Appalachia\MXDs\HSR\Permitting\Moundsville\MND20\MND20_Offset_Operators_Permit_Page2.mxd

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WW-6A1
(5/13)

Operator's Well No. **MND 20 BU**

INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6A, Section 5(a)(5)
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

(1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;

(2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
1) 623175	Consolidation Coal Company, et al	CNX Gas Company, LLC	100% Fee Mineral	646/493
Q090929000	CNX Gas Company, LLC	Noble Energy Inc.	50% Fee Mineral	851/220

SEE EXHIBIT A

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

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

- 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: Brian Leonhard
Its: Operations Landman

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Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
1.) Q091150023	Barbara G. Matthews, by Gay L. Matthews, her attorney in fact	CNX Gas Company, LLC	Not less than 1/8	793/209
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q091150001	Dara Marner and Douglas D. Marner, both individually and as wife and husband	CNX Gas Company, LLC	Not less than 1/8	794/43
Q089063000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/550
Q091150003	Jessica McNabb fka Jesica Faye Hoover, a married woman dealing in her sole and separate property	CNX Gas Company, LLC	Not less than 1/8	794/49
Q089063000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/550
Q091150002	Cheryl Sullivan, a single woman	CNX Gas Company, LLC	Not less than 1/8	794/46
Q089063000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/550
Q091150006	George H. Wells and Nancy Eklund Wells, both individually and as husband and wife	CNX Gas Company, LLC	Not less than 1/8	794/58
Q089063000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/550
Q091150007	William C.M. Wilson and Hiram C. Wilson, as Trustees of The Nancy L. Wilson Revocable Trust	CNX Gas Company, LLC	Not less than 1/8	800/626
Q089063000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/550
Q091150004	Wayland W. Bowser, a married man dealing in his sole and separate property	CNX Gas Company, LLC	Not less than 1/8	794/52
Q089063000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/550
Q091150005	Belinda Eddy FKA Belinda Page Hoover, a married woman dealing in her sole and separate property	CNX Gas Company, LLC	Not less than 1/8	794/55
Q089063000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/550
2.) 623356	Consolidation Coal Company	CNX Gas Company, LLC	0%	646/493
Q090929000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	851/220
3.) Q081362003	Larry R. Jefferson	CNX Gas Company, LLC	Not less than 1/8	781/19
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q081362002	Ruth Ann Ferris	CNX Gas Company, LLC	Not less than 1/8	778/264
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446

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623346	Consolidation Coal Company	CNX Gas Company, LLC	0%	646/493
Q090929000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	851/220
	Noble Marcellus LP	Anacapa Holdings, LLC	Not less than 1/8	781/267
Q072175000	Anacapa Holdings, LLC	Noble Energy Inc.	0.50%	AB 28/275
4.) 623343	Consolidation Coal Company	CNX Gas Company, LLC	0%	646/493
Q090929000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	851/220
5.) Q074011023	Susan Witten Neal Meyers AKA Susan Neal Ilfeld Meyers, individually, and as Susan N. Meyers, Trustee of the Susan N. Meyers Revocable Trust	Noble Energy, Inc.	Not less than 1/8	859/508
Q074011013	Mary Witten Neal Wiseman FKA Mary Witten Neal	Noble Energy, Inc.	Not less than 1/8	851/216
Q074011024	Mary Witten Hart Ehlers	Noble Energy, Inc.	Not less than 1/8	859/491
Q074011015	Margery J. Witten	Noble Energy, Inc.	Not less than 1/8	851/398
Q074011017	Joseph Moore Neal	Noble Energy, Inc.	Not less than 1/8	859/512
Q074011019	Jane Witten Voth	Noble Energy, Inc.	Not less than 1/8	853/306
Q074011014	Frances Gale Neal	Noble Energy, Inc.	Not less than 1/8	851/218
Q074011016	Dorothy Ann Neal by her power of attorney Jerry L. Berthold	Noble Energy, Inc.	Not less than 1/8	851/396
Q074011022	Donald R. Hart Jr.	Noble Energy, Inc.	Not less than 1/8	859/493
Q074011018	Cathy Hart Price	Noble Energy, Inc.	Not less than 1/8	853/308
Q074011020	Ann Alexander	Noble Energy, Inc.	Not less than 1/8	853/310
Q074011047	Jane R. Peterseim AKA Jane Peterseim	CNX Gas Company, LLC	Not less than 1/8	781/37
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
623023	Consolidation Coal Company	CNX Gas Company, LLC	0%	646/493
Q090929000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	851/220

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6.) Q074011023	Susan Witten Neal Meyers AKA Susan Neal Ilfeld Meyers, individually, and as Susan N. Meyers, Trustee of the Susan N. Meyers Revocable Trust	Noble Energy, Inc.	Not less than 1/8	859/508
Q074011013	Mary Witten Neal Wiseman FKA Mary Witten Neal	Noble Energy, Inc.	Not less than 1/8	851/216
Q074011024	Mary Witten Hart Ehlers	Noble Energy, Inc.	Not less than 1/8	859/491
Q074011015	Margery J. Witten	Noble Energy, Inc.	Not less than 1/8	851/398
Q074011017	Joseph Moore Neal	Noble Energy, Inc.	Not less than 1/8	859/512
Q074011019	Jane Witten Voth	Noble Energy, Inc.	Not less than 1/8	853/306
Q074011014	Frances Gale Neal	Noble Energy, Inc.	Not less than 1/8	851/218
Q074011016	Dorothy Ann Neal by her power of attorney Jerry L. Berthold	Noble Energy, Inc.	Not less than 1/8	851/396
Q074011022	Donald R. Hart Jr.	Noble Energy, Inc.	Not less than 1/8	859/493
Q074011018	Cathy Hart Price	Noble Energy, Inc.	Not less than 1/8	853/308
Q074011020	Ann Alexander	Noble Energy, Inc.	Not less than 1/8	853/310
Q074011047	Jane R. Peterseim AKA Jane Peterseim	CNX Gas Company, LLC	Not less than 1/8	781/37
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
623023	Consolidation Coal Company	CNX Gas Company, LLC	0%	646/493
Q090929000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	851/220
7.) Q074011023	Susan Witten Neal Meyers AKA Susan Neal Ilfeld Meyers, individually, and as Susan N. Meyers, Trustee of the Susan N. Meyers Revocable Trust	Noble Energy, Inc.	Not less than 1/8	859/508
Q074011013	Mary Witten Neal Wiseman FKA Mary Witten Neal	Noble Energy, Inc.	Not less than 1/8	851/216
Q074011024	Mary Witten Hart Ehlers	Noble Energy, Inc.	Not less than 1/8	859/491
Q074011015	Margery J. Witten	Noble Energy, Inc.	Not less than 1/8	851/398

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Q074011017	Joseph Moore Neal	Noble Energy, Inc.	Not less than 1/8	859/512
Q074011019	Jane Witten Voth	Noble Energy, Inc.	Not less than 1/8	853/306
Q074011014	Frances Gale Neal	Noble Energy, Inc.	Not less than 1/8	851/218
Q074011016	Dorothy Ann Neal by her power of attorney Jerry L. Berthold	Noble Energy, Inc.	Not less than 1/8	851/396
Q074011022	Donald R. Hart Jr.	Noble Energy, Inc.	Not less than 1/8	859/493
Q074011018	Cathy Hart Price	Noble Energy, Inc.	Not less than 1/8	853/308
Q074011020	Ann Alexander	Noble Energy, Inc.	Not less than 1/8	853/310
Q074011047	Jane R. Peterseim AKA Jane Peterseim	CNX Gas Company, LLC	Not less than 1/8	781/37
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
623023	Consolidation Coal Company	CNX Gas Company, LLC	0%	646/493
Q090929000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	851/220
8.) 623347	Consolidation Coal Company	CNX Gas Company, LLC	0%	646/493
Q090929000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	851/220
9.) 623353	Consolidation Coal Company	CNX Gas Company, LLC	0%	646/493
Q090929000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	851/220
10.) 624132	Consolidation Coal Company	CNX Gas Company, LLC	0%	646/493
Q090929000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	851/220
11.) 624136	Consolidation Coal Company	CNX Gas Company, LLC	0%	646/493
Q090929000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	851/220
12.) 624136	Consolidation Coal Company	CNX Gas Company, LLC	0%	646/493
Q090929000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	851/220
13.) 624132	Consolidation Coal Company	CNX Gas Company, LLC	0%	646/493
Q090929000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	851/220
14.) 624136	Consolidation Coal Company	CNX Gas Company, LLC	0%	646/493
Q090929000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	851/220
15.) 624136	Consolidation Coal Company	CNX Gas Company, LLC	0%	646/493
Q090929000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	851/220

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16.) Q074011048	Margaret Games	CNX Gas Company, LLC	Not less than 1/8	763/441
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
500772-002	Elizabeth Patterson	CNX Gas Company, LLC	Not less than 1/8	763/437
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011051	Charles J. Wiesner	CNX Gas Company, LLC	Not less than 1/8	763/429
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011050	John Wiesner	CNX Gas Company, LLC	Not less than 1/8	763/433
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011052	Kenneth Schmitt	CNX Gas Company, LLC	Not less than 1/8	763/421
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011053	Mary Ellen Sedon	CNX Gas Company, LLC	Not less than 1/8	763/417
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011054	Alfred Kaczorowski, Jr., and Sharon M. Kaczorowski, his wife	CNX Gas Company, LLC	Not less than 1/8	763/425
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011030	Herbert J. Richmond individually, and as a married man and Anna Mae Richmond individually, and as his wife	CNX Gas Company, LLC	Not less than 1/8	782/6
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011031	Jeremy M. Richmond	CNX Gas Company, LLC	Not less than 1/8	782/163
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011034	Darrin C. Richmond individually, and as a married man, Anissa L. Richmond, individually, and as his wife	CNX Gas Company, LLC	Not less than 1/8	782/10
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011032	Norma J. Carter FKA Norma J. Sawyers	CNX Gas Company, LLC	Not less than 1/8	782/192
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011033	Glenn M. Leyman, a single man	CNX Gas Company, LLC	Not less than 1/8	782/26
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011025	Michael J. Hoskin, individually, and as a married man, and Tricia A. Hoskin, individually, and as his wife	CNX Gas Company, LLC	Not less than 1/8	782/36
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011027	Barbara Kosap, a single woman	CNX Gas Company, LLC	Not less than 1/8	782/33
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011026	Phyllis M. Moslander	CNX Gas Company, LLC	Not less than 1/8	783/451

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Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011037	Ronald J. Blanton, individually, and as a married man, and Tammy J. Richmond-Blanton, individually, and as his wife	CNX Gas Company, LLC	Not less than 1/8	782/17
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011028	Ann Marie Lilly Yost	CNX Gas Company, LLC	Not less than 1/8	781/23
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011029	Phillip M. Fulton and Carolyn W. Fulton, both individually, and as husband and wife	CNX Gas Company, LLC	Not less than 1/8	782/30
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011036	Mary Ann Moore, a married woman dealing in her sole and separate property	CNX Gas Company, LLC	Not less than 1/8	783/454
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011037	Ronald Walker	CNX Gas Company, LLC	Not less than 1/8	782/14
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011038	Carole Loeffler, a widowed woman	CNX Gas Company, LLC	Not less than 1/8	782/22
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011039	Connie Richmond, a single woman	CNX Gas Company, LLC	Not less than 1/8	781/34
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011040	Samuel A. Mudd Jr. AKA Alex Mudd and Michelle A. Mudd, both individually and as husband and wife	CNX Gas Company, LLC	Not less than 1/8	784/542
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011044	David K. Booth and Barabara J. Booth, both individually and as husband and wife	CNX Gas Company, LLC	Not less than 1/8	783/447
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011041	Amber E. Fisher	CNX Gas Company, LLC	Not less than 1/8	784/546
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011042	Steven W. Fisher, as legal guardian for Christopher Fisher	CNX Gas Company, LLC	Not less than 1/8	784/549
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011045	Deborah Sellner Potter by her power of attorney, William T. Sellner	CNX Gas Company, LLC	Not less than 1/8	794/373
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446

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Q074011043	Chrystal Sellner	CNX Gas Company, LLC	Not less than 1/8	787/389
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011021	Bert Bryner and Frances S. Bryner, both individually and as husband and wife	CNX Gas Company, LLC	Not less than 1/8	784/124
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
624131	Consolidation Coal Company	CNX Gas Company, LLC	0%	646/493
Q090929000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	851/220
17.) Q074011048	Margaret Games	CNX Gas Company, LLC	Not less than 1/8	763/441
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
500772-002	Elizabeth Patterson	CNX Gas Company, LLC	Not less than 1/8	763/437
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011051	Charles J. Wiesner	CNX Gas Company, LLC	Not less than 1/8	763/429
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011050	John Wiesner	CNX Gas Company, LLC	Not less than 1/8	763/433
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011052	Kenneth Schmitt	CNX Gas Company, LLC	Not less than 1/8	763/421
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011053	Mary Ellen Sedon	CNX Gas Company, LLC	Not less than 1/8	763/417
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011054	Alfred Kaczorowski, Jr., and Sharon M. Kaczorowski, his wife	CNX Gas Company, LLC	Not less than 1/8	763/425
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011030	Herbert J. Richmond individually, and as a married man and Anna Mae Richmond individually, and as his wife	CNX Gas Company, LLC	Not less than 1/8	782/6
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011031	Jeremy M. Richmond	CNX Gas Company, LLC	Not less than 1/8	782/163
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011034	Darrin C. Richmond individually, and as a married man, Anissa L. Richmond, individually, and as his wife	CNX Gas Company, LLC	Not less than 1/8	782/10
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011032	Norma J. Carter FKA Norma J. Sawyers	CNX Gas Company, LLC	Not less than 1/8	782/192
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446

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Q074011033	Glenn M. Leyman, a single man	CNX Gas Company, LLC	Not less than 1/8	782/26
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011025	Michael J. Hoskin, individually, and as a married man, and Tricia A. Hoskin, individually, and as his wife	CNX Gas Company, LLC	Not less than 1/8	782/36
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011027	Barbara Kosap, a single woman	CNX Gas Company, LLC	Not less than 1/8	782/33
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011026	Phyllis M. Moslander	CNX Gas Company, LLC	Not less than 1/8	783/451
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011037	Ronald J. Blanton, individually, and as a married man, and Tammy J. Richmond-Blanton, individually, and as his wife	CNX Gas Company, LLC	Not less than 1/8	782/17
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011028	Ann Marie Lilly Yost	CNX Gas Company, LLC	Not less than 1/8	781/23
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011029	Phillip M. Fulton and Carolyn W. Fulton, both individually, and as husband and wife	CNX Gas Company, LLC	Not less than 1/8	782/30
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011036	Mary Ann Moore, a married woman dealing in her sole and separate property	CNX Gas Company, LLC	Not less than 1/8	783/454
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011037	Ronald Walker	CNX Gas Company, LLC	Not less than 1/8	782/14
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011038	Carole Loeffler, a widowed woman	CNX Gas Company, LLC	Not less than 1/8	782/22
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011039	Connie Richmond, a single woman	CNX Gas Company, LLC	Not less than 1/8	781/34
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011040	Samuel A. Mudd Jr. AKA Alex Mudd and Michelle A. Mudd, both individually and as husband and wife	CNX Gas Company, LLC	Not less than 1/8	784/542
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446

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Q074011044	David K. Booth and Barabara J. Booth, both individually and as husband and wife	CNX Gas Company, LLC	Not less than 1/8	783/447
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011041	Amber E. Fisher	CNX Gas Company, LLC	Not less than 1/8	784/546
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011042	Steven W. Fisher, as legal guardian for Christopher Fisher	CNX Gas Company, LLC	Not less than 1/8	784/549
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011045	Deborah Sellner Potter by her power of attorney, William T. Sellner	CNX Gas Company, LLC	Not less than 1/8	794/373
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011043	Chrystal Sellner	CNX Gas Company, LLC	Not less than 1/8	787/389
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
Q074011021	Bert Bryner and Frances S. Bryner, both individually and as husband and wife	CNX Gas Company, LLC	Not less than 1/8	784/124
Q088085000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	AB 32/446
624140	Consolidation Coal Company	CNX Gas Company, LLC	0%	646/493
Q090929000	CNX Gas Company, LLC	Noble Energy, Inc.	0%	851/220

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FORM

THIS EASEMENT AGREEMENT (this "**Agreement**") dated as of the 12 day of August, 2015 (the "**Effective Date**"), by and between McElroy Coal Company, a Delaware corporation and The Marshall County Coal Company, a Delaware corporation whose address is c/o Murray American Energy, 46226 National Road, St. Clairsville, Ohio 43950 ("**Grantor**"), and Noble Energy, Inc., a Delaware corporation, whose address is located at 1000 Noble Energy Dr. Canonsburg, PA 15317("**Grantee**") (each a "**Party**," and collectively the "**Parties**").

WITNESSETH:

WHEREAS, pursuant to the following agreements: Memorandum of Surface Use Agreement dated effective as of September 30, 2011, and recorded in the County Clerk's office of Marshall County, West Virginia; Memorandum of First and Second Amendments to Surface Use Agreement dated effective as of November 15, 2013 and recorded in the County Clerk's office of Marshall County, West Virginia; and the Corrective Addendum to Second Amendment to Surface Use Agreement dated effective November 15, 2013 (to be recorded in the County Clerk's office of Marshall County, West Virginia), CNX Gas Company LLC, *et al.* ("CONSOL Granting Entities") made certain surface rights owned or controlled by the CONSOL Granting Entities available for use by Grantee in connection with the exploration, production and development of certain oil and gas rights (all of the foregoing being hereinafter collectively referred to as the "**SUA**"); and

WHEREAS, by way of a series of mergers, referenced by State of Delaware Certificate of Merger dated November 19, 2013, and recorded in the County Clerk's office of Marshall County, West Virginia; and State of Delaware Certificate of Merger dated November 25, 2013, and recorded in the County Clerk's office of Marshall County, West Virginia, certain of the CONSOL Granting Entities were merged with and into Grantor or affiliates or subsidiaries of Grantor, and, as a result thereof, (a) Grantor owns or controls surface rights in and to the Premises described in **Section 1(B)**, and (b) Grantor is a successor party to said certain CONSOL Granting Entities under the SUA (Grantor and/or one or more Grantor affiliates being a "Coal Party" and/or "Coal Parties" thereunder); and

WHEREAS, Grantee (being a "Gas Party" under the SUA) desires to obtain anon-exclusive, limited easement to use the Premises for certain purposes provided for under the SUA, and Grantor is willing to grant Grantee such easement, under the terms and subject to the conditions of this Agreement.

NOW, THEREFORE, for good and valuable consideration, the sufficiency and adequacy of which are acknowledged, and intending to be legally bound, the Parties agree as follows:

1. **EASEMENT GRANT.** Grantor grants to Grantee, subject to the terms and conditions herein:

   A. **TYPE:** a non-exclusive easement (the "**Easement**").

   B. **BURDENED PREMISES:** located on, under and through a portion of those lands situate in Franklin District, Marshall County, West Virginia, being the same land conveyed to Grantor by Quitclaim Deed, Assignment and Bill of Sale, dated November 25, 2013, of

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record in the Office of the Recorder of the aforesaid County in Deed Book 811, Page 0001, containing 245.40 acres, more or less, being Tax Maps 05-0001-0003-0000-0500, 05-0001-0010-0000-0500 and 05-0002-0005-0000-0500, as more particularly described on **Exhibit "A"** attached hereto and made a part hereof (the "**Premises**").

C. **RIGHTS:** to construct, reconstruct, install, lay, use, repair, maintain, improve, alter, replace, operate, inspect, service, and remove roads, pad sites, drilling locations and other surface facilities, and water pipelines reasonably necessary for such Grantee to develop the Oil and Gas Rights with respect to certain subsurface strata underlying the Premises or lands of others (collectively, the "**Facilities**").

D. **DESCRIPTION OF FACILITIES:**[1]

ACCESS ROAD(S)
1. **Number:** one (1).
2. **Width:** 40 feet.
3. **Length:** 4,500 feet.

WELL PAD(S)
1. **Number:** one (1).
2. **Width:** 500 feet.
3. **Length:** 600 feet.

E. **USES:** for ingress and egress, and construction of a well pad, and for no other purposes.

F. **EASEMENT ACCESS RIGHTS:** with the right to access the Facilities from neighboring, coterminous or adjacent lands through and across such areas of the Premises as may be approved by Grantor from time to time.

G. **LOCATION:** The location, width and other bounds of the Easement and the Facilities are shown on **Exhibit A**, and the Easement consists of a strip of land containing forty (40) feet (twenty (20) feet on each side) in width for the access road, as well as 300,000 square feet for the well pad as shown on **Exhibit A** (the "**Easement Area**").

2. **EASEMENT REQUIREMENTS.**

A. **SURVEY PLAT OF FACILITIES.** Grantee shall, at Grantee's expense, deliver an as-built/as-drilled plat/survey depicting the location(s) of the Facilities to Grantor promptly upon completion of construction of the Facilities. Grantee shall promptly furnish to Grantor, upon Grantor's request, at Grantee's expense, any existing or future information, other surveys and other data and information with respect to the Premises, the Easement, the Facilities, or Grantee's Operations that Grantee, now or in the future,

[1] Please select the applicable Facility option(s) and complete the relevant information. Inapplicable options should be deleted.

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has in its possession or control that is needed or useful in order for Grantor to obtain or to comply with any permits or approvals for Grantor's operations on the Premises or any neighboring, coterminous or adjacent lands or to comply with any Applicable Laws.

B. **TAXES.** Grantee shall pay all taxes and any increases assessed by any governmental authorities that are directly attributable to the Easement, the Facilities, or any Grantee Operations or related improvements of Grantee.

C. **ACCESS.** In addition to those rights which are inherent with the ownership of the Premises, Grantor shall have access to the Easement from time to time for any purpose.

D. **DIG NOTICE.** Grantee agrees to give Grantor written notice not less than three (3) days prior to the commencement of the initial construction and prior to any digging on the Premises.

E. **MARKERS.** Readily visible markers of the Facilities shall be installed and maintained by Grantee, and to the extent that the Facilities constitute pipelines, such markers shall be at intervals not to exceed fifty (50) feet along the length of such pipeline(s).

F. **REIMBURSEMENT OF CERTAIN COSTS.** Grantee shall reimburse Grantor for any costs associated with the maintenance of that portion of the Premises forming the Easement Area (on the basis of usage or other allocation methodology reasonably calculated to reflect Grantor's use of the Easement Area in proportion to the total use of the Premises by the Parties) and/or any direct or third party costs payable under permits and any third party agreements burdening the Premises.

3. **EASEMENT PAYMENT.** This Easement grant shall be royalty-free.

4. **TERM.** This Agreement and all rights granted herein shall terminate automatically (except those provisions that expressly survive expiration or termination), and the Easement shall automatically revert to Grantor, upon the earlier to occur of the following events: (a) twelve (12) months after the Effective Date if Grantee has not commenced the installation of the Facilities on the Premises by such date; (b) termination of Grantor's surface rights in and to the Premises; (c) termination of Grantee's operations with respect to the Easement and the Facilities; (d) any breach by Grantee under this Agreement that remains uncured after the applicable cure period; or (e) if any creditor or lender of Grantee exercises any rights against the Facilities or the Easement grant.

   Upon Grantor's request, Grantee shall execute any instruments terminating the Easement, transferring the Easement to Grantor, or its designee, or waiving or releasing any rights of Grantee herein consistent with the foregoing. All obligations of Grantee in this **Section 4** shall survive expiration or termination of this Agreement.

5. **GENERAL TERMS AND CONDITIONS.** All rights and benefits conveyed or created pursuant to this Agreement shall be subject to the following general terms, provisions and conditions:

   A. Joint Use. Grantor shall have the right to fully use and enjoy the Premises for Grantor Operations, subject only to the terms and conditions of this Agreement. Grantor reserves

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the right to limit any Grantee Operations that would unreasonably interfere with Grantor Operations. Subject to the terms of this Agreement, all Grantee Operations shall be performed in such a manner as not to unreasonably interfere with any Grantor Operations, and all Grantor Operations shall be performed in such a manner as not to unreasonably interfere with any Grantee Operations.

B. Coordination. Grantee shall coordinate all Grantee Operations with Grantor Operations. The Parties acknowledge that as part of a coordination process specified in Section 5(b) of the SUA, (i) the Grantor will work with Grantee to locate any Grantee wells on the Premises in pillars and barriers to minimize conflicts with Grantor's mining operations, and (ii) Grantor will work with Grantee to locate the Facilities in locations reasonably likely to minimize the likelihood of any required relocation. Each Party, promptly upon becoming aware of any potential operational conflict relative to the Premises, shall provide written notice to the other Party whose Operations will be or are likely to be impacted by such notifying Party's planned operations in, on or under the Premises.

C. Use Requirements. Grantee, in conducting Grantee Operations, shall comply with the reasonable requirements (as the same may be amended from time to time) of Grantor, including safety plans and programs, operating hours and other relevant regulations and procedures. Notwithstanding the foregoing requirements, each Party shall be solely responsible for initiating, maintaining, implementing, controlling and supervising all health, safety and environmental precautions, rules and programs in connection with their respective Operations.

D. Permits. Each Party shall be responsible for obtaining all necessary permits, title reports, licenses and bonds related to their respective Operations. Each Party, to the extent practicable, shall cooperate and support the other Party's permitting and regulatory approval activities pertaining to the Premises and, in connection therewith, but subject to the provisions of **Section 11**, the Parties agree to cooperate in the resolution of all regulatory proceedings and litigation where the rights or obligations of the Parties may be implicated.

E. Compliance with Permits and Agreements; Maintenance. Grantee shall comply with all applicable permits and agreements burdening the interests of Grantor in the Premises of which Grantee has been notified, and Grantee shall maintain and repair its roads, rights of way, drill sites and other surface facilities, in each case, located on the Premises, in accordance with the terms of all such permits and agreements.

F. Grantee Activities; Grantor Property. Grantee shall: (i) perform all Grantee Operations in a good and workmanlike manner, in accordance with good and safe construction methods, standards and practices and in compliance with Applicable Laws; (ii) promptly (a) repair any damage to the Premises or any other property of Grantor (collectively, the "**Grantor Property**") affected by Grantee Operations, or (b) if such repairs are impossible or impracticable, replace any such Grantor Property that is personal property or a fixture, in each case, in order that the physical condition of the Grantor Property is approximately the same following such Grantee Operations as it was prior thereto; (iii)

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keep the Grantor Property free and clear of any mechanics', materialman's or other construction liens or, if any such lien is placed on the Grantor Property, cause any such lien to be released or transferred to security bond within twenty (20) days following the filing thereof against any of the Grantor Property; and (iv) pay for all costs of such Grantee Operations at its sole cost and expense. Notwithstanding anything in this Agreement to the contrary, Grantor shall not have any liability for any damage, alteration, change or modification of any Facilities or other property of Grantee caused by any subsidence relating to mining operations in, on or under the Premises. For the avoidance of doubt, the obligations contained in this **Section 5(F)** shall survive the expiration or termination of this Agreement.

G. Relocation. If at any time the location of any Facilities (or wells associated therewith) or Grantee Operations is reasonably expected by Grantor to interfere with its present or planned Grantor Operations (whether such operations or uses relate to Grantor's coal, surface, oil, gas or otherwise), then upon the written request of Grantor, Grantee shall, in coordination with Grantor, (i) subject to **Sections 5(H)** and **5(I)** with respect to wells, relocate such interfering Facility and/or Grantee Operation to another location within the Premises (which location may be within a Coal Area or within a Non-Coal Area), and (ii) Grantor shall deliver to Grantee an easement with respect to such new location that is materially consistent with the Easement and on substantially the same terms and conditions. Grantor's right to cause Grantee to relocate the Easement (or the Facilities or Grantee Operations permitted hereunder), but excluding in all cases any well, may not be exercised more than once with respect to this Agreement and/or the Facilities or Grantee Operations permitted hereunder unless the costs of relocation is borne by Grantor. Except to the extent provided in the preceding sentence and in **Section 5(I)**, all costs and expenses of Grantee associated with any such relocation shall be borne 100% by Grantee. For the avoidance of doubt, the relocation obligations contained in this **Section 5(G)** shall survive the expiration or termination of this Agreement.

H. Coal Areas. Subject to the terms hereof, Grantee shall have the right to locate and drill oil and gas wells attributable to the Oil and Gas Rights in the Coal Areas of the Premises.

1. Prior to drilling any such well in a Coal Area of the Premises, Grantee shall obtain the written consent of Grantor to drill such well in such Coal Area. Upon the receipt of a written request from Grantee (which request shall include the proposed drilling location for such well), Grantor shall elect one of the following options with respect to such well: (a) consent to such well and approve the proposed location, and thereafter such well shall be considered a "**Protected Well**" for purposes of **Section 5(I)(2)**; (b) consent to such well but not approve the proposed location of such well (a "**Non-Protected Well**"), in which case Grantee shall be entitled to drill such Non-Protected Well on such proposed location, but the provisions of **Section 5(H)(2)** shall apply to such Non-Protected Well, its associated reserves and any related Facilities; or (c) not consent to such well and not approve the proposed location; *provided* that if Grantor elects the option set forth in subsection (c) of this **Section 5(H)(1)**, Grantor shall meet with Grantee in order to attempt to locate

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mutually acceptable location for such proposed well (which location, for the avoidance of doubt, may or may not result in such well, when drilled, being a "Protected Well" for purposes of **Section 5(I)(2)**).

2. If Grantor requests that a Non-Protected Well be relocated pursuant to **Section 5(G)**, Grantee shall properly plug and abandon, at its sole cost and expense and without compensation from Grantor, such Non-Protected Well for mine through in accordance with Applicable Law. For the avoidance of doubt, if Grantor mines through Grantee's Non-Protected Well, Grantee will bear 100% of the loss of the value of such Non-Protected Well without any compensation from such Grantor.

3. For the avoidance of doubt, the obligations contained in this **Section 5(H)** shall survive the expiration or termination of this Agreement.

I. Non-Coal Areas. Subject to the terms hereof, Grantee shall have the right to locate and drill oil and gas wells attributable to the Oil and Gas Rights in the Non-Coal Areas of the Premises.

1. Any well that is drilled by Grantee on a location that was in a Non-Coal Area at the time such well was drilled is referred to herein as a "**Protected Well**".

2. If Grantor requests that a Protected Well be relocated pursuant to **Section 5(G)**, the following provisions will apply: (a) Grantee shall properly plug and abandon such Protected Well for mine through in accordance with Applicable Law, (b) Grantor shall reimburse Grantee for 100% of the reasonable and documented costs and expenses associated with such plugging and abandonment operations, (c) Grantor shall compensate Grantee for the value of such plugged and abandoned Protected Well and the proved developed producing oil and gas reserves lost due to such Coal Party's mining operations which caused the relocation of such Protected Well, and (d) subject to the provisions of **Schedule 5(i)** of the SUA, Grantor shall compensate Grantee for the value of the lease(s) underlying such plugged and abandoned Protected Well. The value of such Protected Well, the proved developed producing oil and gas reserves and the underlying lease(s), in each case, for which the Gas Party is entitled to compensation pursuant to this **Section 5(I)** shall be determined pursuant to the procedures set forth on **Schedule 5(i)** of the SUA.

3. For the avoidance of doubt, the obligations contained in this **Section 5(I)** shall survive the expiration or termination of this Agreement.

6. **INDEPENDENT CONTRACTORS.** This Agreement does not make either Party an employee, contractor, partner, joint venturer, agent or representative of the other Party.

7. **SECURITY.** Grantee shall be responsible for Grantee Parties' security, including the security of all Grantee Parties' property brought onto, located at, or constructed in or upon the Premises.

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8. **PROHIBITED ACTIVITIES.** Grantee shall not permit animals, alcohol, drugs, firearms, hunting or any unlawful activity of any kind at the Premises. Grantee shall not dump or dispose of any waste or refuse in, on or under any portion of the Premises. Grantee shall not permit any operation or activity to be conducted at the Premises except as otherwise specifically permitted or otherwise required in this Agreement.

9. **NO CONVEYANCE; NO WARRANTIES OF TITLE; DISCLAIMERS.**

   A. No warranty of title is made by Grantor with respect to the Premises, whether express implied or statutory, and Grantee acknowledges that the Facilities will be constructed, and Grantee Operations undertaken, at Grantee's sole risk.

   B. GRANTOR MAKES NO REPRESENTATIONS OR WARRANTIES, EXPRESS, STATUTORY OR IMPLIED, AND EXPRESSLY DISCLAIMS ALL LIABILITY AND RESPONSIBILITY FOR ANY REPRESENTATION, WARRANTY, STATEMENT OR INFORMATION MADE OR COMMUNICATED (ORALLY OR IN WRITING) TO GRANTEE OR ANY OF ITS AFFILIATES, EMPLOYEES, AGENTS, CONSULTANTS OR REPRESENTATIVES (INCLUDING ANY OPINION, INFORMATION, PROJECTION OR ADVICE THAT MAY HAVE BEEN PROVIDED TO GRANTEE BY A MEMBER OR AFFILIATE OF GRANTOR). GRANTOR HAS NOT AND WILL NOT MAKE ANY REPRESENTATION OR WARRANTY REGARDING ANY MATTER OR CIRCUMSTANCE RELATING TO (I) THE QUALITY OF, OR SUITABILITY FOR ANY PURPOSE OF, THE PREMISES, (II) THE CONTINUED AVAILABILITY OF THE PREMISES, OR (III) ANY CONDITION, ENVIRONMENTAL OR OTHERWISE, RELATING TO THE PREMISES, AND NOTHING IN THIS AGREEMENT OR OTHERWISE SHALL BE CONSTRUED AS SUCH A REPRESENTATION OR WARRANTY. GRANTEE SHALL BE DEEMED TO BE USING THE PREMISES "AS IS" AND "WHERE IS" WITH ALL FAULTS FOR PURPOSES OF ITS CONDITION, ENVIRONMENTAL OR OTHERWISE, AND GRANTEE HAS MADE OR CAUSED TO BE MADE SUCH INSPECTIONS AS GRANTEE DEEMS APPROPRIATE. THE PARTIES AGREE THAT, TO THE EXTENT REQUIRED BY APPLICABLE LAW TO BE EFFECTIVE, THE DISCLAIMERS OF CERTAIN REPRESENTATIONS AND WARRANTIES CONTAINED IN THIS **SECTION 9** ARE "CONSPICUOUS" DISCLAIMERS FOR THE PURPOSE OF ANY APPLICABLE LAW.

10. **Remedies.** In the event either Party fails to comply with any of the terms, covenants or conditions of this Agreement, the other Party suffering such default shall be entitled to seek damages, injunctive relief and any other remedies available under Applicable Law or in equity. If it becomes necessary for Grantor or Grantee to file a suit to enforce this Agreement or any provisions contained herein, the Party prevailing in such action shall be entitled to recover, in addition to all other remedies or damages, reasonable attorneys' fees and court costs incurred by such prevailing Party.

11. **Release; Indemnity; Waiver of Certain Damages.**

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A. Grantee shall be responsible for, shall pay on a current basis, and hereby releases, defends, indemnifies and holds harmless the Grantor Parties from and against any and all liabilities, whether or not relating to third party Claims or incurred in the investigation or defense of any of the same, arising from, based upon, related to or associated with Claims for bodily injury, illness or death arising out of or related to the Facilities or Grantee Operations, including the use of the Easement.

B. IN NO EVENT SHALL EITHER PARTY BE LIABLE HEREUNDER FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES OR LOSS OF PROFITS OR DAMAGES FOR BUSINESS INTERRUPTION ARISING FROM OR CAUSED BY THE ACTION OR INACTION OR COMPARATIVE OR SOLE NEGLIGENCE OF SUCH PARTY UNDER THIS AGREEMENT. EACH PARTY RELEASES THE OTHER PARTY AND SUCH PARTY'S OFFICERS, DIRECTORS, EMPLOYEES, AGENTS AND AFFILIATES FROM, AND COVENANTS NOT TO SUE ANY OF THEM FOR, ANY SUCH SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR BUSINESS INTERRUPTION.

C. The provisions of this **Section 11** shall not restrict any Party's right to seek injunctive relief or specific performance. Each Party shall be entitled to enforce specifically the terms and provisions of this Agreement in addition to any other remedy to which such holder may be entitled at Applicable Law, in equity or otherwise.

12. **PRIOR ENCUMBRANCES.** This Agreement shall be subject and subordinate to any and all encumbrances, easements, licenses, rights-of-way, servitudes, permits, encroachments, gores, strips, roadways, estates, covenants, conditions, exceptions, reservations, restrictions, disputes, closure errors, prior grants, including, without limitation, grants or reservations of coal, oil, gas or other minerals and mining rights and restrictions, now or hereafter granted or reserved by Grantor or any predecessor in title, apparent with a physical inspection of the Premises, implied by law or shown, or referred to, by grants or instruments, unrecorded or of record. Grantor shall be under no obligation hereunder to preserve the Premises or its rights thereto by payment of fee or other obligation to incur costs or expenses.

13. **SURRENDER.** Upon the expiration or termination of this Agreement, the Facilities or any portion thereof shall either (a) be removed by Grantee, at Grantee's sole cost and expense, or (b) if acceptable to Grantor, be surrendered and remain in place on the Premises and become the property of Grantor, at no cost to Grantor or any payment to Grantee. Grantee shall, at its sole cost and expense, restore the Premises to substantially the same condition as existed prior to the installation of the Facilities, except as Grantor may otherwise agree. In the event that the Facilities or any portion thereof shall be surrendered and remain in place on the Premises and become the property of Grantor, then upon request of Grantor, Grantee shall execute a Bill of Sale or other transfer documents transferring the Facilities to Grantor, or its designee, consistent with the foregoing. All obligations of Grantee in this **Section 13** shall survive the expiration or termination of this Agreement.

14. **RECLAMATION.** Grantee shall promptly commence and diligently pursue reclamation of all disturbed areas of the Premises related to the Facilities or to Grantee Operations in accordance with Applicable Laws. Upon completion of reclamation, Grantee Parties shall

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remove all equipment and personal property placed upon the Premises. The obligations of Grantee in this **Section 14** shall survive the expiration or termination of this Agreement.

15. ASSUMPTION OF RISK. Grantee knowingly and voluntarily accepts and assumes all risks and hazards associated with the Premises and Grantee Operations, including, but not limited to, possible injury, damage or loss of life and any resulting Claims. **Grantee accepts all risk of damage from the condition of the Premises or any past, present or future subsidence of the surface thereof, and Grantee hereby accepts all risk of damage to the Facilities, the Easement Area, Grantee Parties or any property of Grantee from the condition of the Premises or such subsidence in, on or under the Premises.**

16. ASSIGNMENT. Grantee agrees not to transfer, assign, sublet, pledge or encumber, in whole or in part, this Agreement, the Easement, the Facilities or the rights granted herein without Grantor's prior written consent which consent shall not be unreasonably withheld, conditioned or delayed. Any attempted transfer in violation of the provisions above shall be void and of no force or effect.

17. BINDING EFFECT. This Agreement shall be binding upon and inure to the benefit of the Parties and their respective permitted transferees, successors and assigns and is for their sole benefit.

18. THIRD PARTY BENEFICIARIES. Nothing herein, express or implied, is intended to or shall confer upon any other person or entity any legal or equitable right, benefit, or remedy of any nature whatsoever under or by reason of this Agreement.

19. ENTIRE AGREEMENT. This Agreement includes all the agreements and stipulations between the Parties pertaining to the subject matter hereof, and no representations, oral or written, have been made, modifying, adding to, or changing the terms hereof.

20. COMPLIANCE WITH LAWS. Grantee shall comply in all material respects with all Applicable Laws which at any time now or in the future may apply to the Facilities, the Easement Area, the Premises or the Grantee Operations.

21. GOVERNING LAW. This Agreement shall be governed by the law of the state in which the Premises is situated, without regard to such state's conflicts of law provisions; **provided, however**, that if the Premises straddles multiple states, the applicable law shall be that in which the largest portion of the Premises is situated.

22. DEFAULT. Grantee agrees to materially abide by and perform all terms, covenants and conditions of this Agreement, and if any default thereof exists, and Grantee fails to correct said default within fifteen (15) days after written notification of such default, then Grantor shall have the option to either (a) terminate this Agreement, and all rights and privileges hereunder shall absolutely terminate except those provisions that expressly survive expiration or termination hereof, or (b) cure any such default, and Grantee shall promptly pay to Grantor all amounts expended, or advanced by Grantor in connection with such curative measures.

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23. **RESERVATIONS.** Grantor excepts from the Easement, and reserves unto Grantor and Grantor's successors and assigns, any rights not expressly granted to Grantee under this Agreement. Grantor shall have the right to enter upon the surface of the Premises to make all surveys necessary to Grantor Operations as well as its operations in neighboring, coterminous or adjacent lands. The rights herein reserved are in addition to those which are inherent with the ownership of coal, oil, gas and other minerals.

24. **INSURANCE REQUIREMENTS.** Grantee agrees to keep and maintain at all times during the term of this Agreement, and to cause its Grantee Parties who enter the Premises to keep and maintain, insurance coverages and amounts reasonably acceptable to Grantor, including without limitation, the insurance requirements set forth on **Exhibit "B"**.

25. **AMENDMENTS.** No modification, amendment, or change of this Agreement shall be valid or binding unless the same is in writing and signed by both Parties.

26. **DEFINITIONS.** Capitalized terms used herein, and not otherwise defined, shall have the following meanings:

    A. "**Affiliates**" shall mean any individual, corporation, partnership, limited liability company or other entity that, now or in the future, directly or indirectly through one or more intermediaries, controls, is controlled by, or is under common control with the given entity. For this purpose, "**control**" means possession, directly or indirectly, of power to direct or cause the direction of management or policies (whether through ownership of securities or other ownership interest, by contract, or otherwise).

    B. "**Applicable Laws**" shall mean all federal, state, local, municipal, laws, statutes, codes, acts, constitutions, ordinances, judgments, decrees, injunctions, advisories, circulars, orders, resolutions, rules, regulations, permits, licenses, authorizations, administrative orders, standards, directives, and other requirements of any governmental entity, whether now or hereafter enacted, created or promulgated, of any kind or nature, including, without limitation, all zoning, land use, building, health, security and environmental laws.

    C. "**Claims**" shall mean any and all losses, suits, proceedings, actions, or causes of action, in law or at equity, demands, penalties, fees, charges, assessments, liabilities (including, without limitation, environmental or natural resources liability or damages), damages, claims, judgments, and executions, costs and expenses of any kind, fines taxes, interest, including, without limitation, attorney's fees, expert's fees, court costs and other out-of-pocket fees) and disbursements, whether existing or incurred or asserted in the future, in connection with: (i) any such claim or the defense thereof, (ii) amounts paid in settlement, orders, liens, or decrees, or (iii) any injury of any kind and nature to persons (including sickness, illness and death), mines, wells, or property claims or to the Premises, natural resources, and (iv) consequential, punitive damages, contribution or indemnity, and with respect to any of the foregoing, whether known or unknown, foreseen or unforeseen, contingent or otherwise, whether threatened or actual, direct or indirect, and whether sustained or brought by or against any Grantee Parties, any Grantor Parties or any other persons or entities.

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D. "**Coal Area**" means, at any time, that portion of the Premises (i) where mining operations are being conducted by Grantor at such time or (b) which is included in Grantor's ten year mining plan as of such time.

E. "**Grantor Operations**" shall mean Grantor Parties' use and occupancy of the Premises and all activities and operations of any Grantor Parties conducted on, from or underlying the Premises.

F. "**Grantee Operations**" shall mean any Grantee Parties' use and occupancy of the Premises and all activities and operations of any Grantee Parties conducted on, from or underlying the Premises, including all activities in connection with the Easement and the rights granted herein.

G. "**Grantee Parties**" shall mean Grantee and its Affiliates and each of their respective shareholders, partners, directors, officers, members, employees, consultants, contractors, subcontractors, agents, visitors, licensees, invitees, successors and assigns.

H. "**Grantor Parties**" shall mean Grantor and its Affiliates and each of their respective shareholders, partners, directors, officers, members, employees, consultants, contractors, subcontractors, agents, visitors, licensees, invitees, successors and assigns.

I. "**Non-Coal Area**" means, at any time, that portion of the Premises that is not a Coal Area at such time.

J. "**Oil and Gas Rights**" shall have the meaning ascribed thereto in the SUA.

K. "**Section**" shall mean a Section of this Agreement, and "**Exhibit**" shall mean an Exhibit to this Agreement, except as otherwise expressly indicated.

27. **CONFLICT**. Grantor and Grantee acknowledge and agree that this Agreement is subject to the terms and conditions set forth in the SUA as each of their respective interests appear of record with respect to the subject matter hereof and thereof. In the event of a conflict between the terms and provisions of this Agreement and any Exhibit hereto and the terms and provisions of the SUA, the terms and provisions of the SUA shall govern and control; *provided, however*, that the inclusion of any term or provision in this Agreement or the Exhibits hereto not addressed in the SUA shall not be deemed a conflict, and all such additional terms and provisions shall be given full force and effect, subject to this **Section 27**.

[SIGNATURES ON FOLLOWING PAGE]

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WITNESS the due execution, Grantor and Grantee execute this Agreement as of the Effective Date.

WITNESS/ATTEST:

Catherine R. Parsons

GRANTOR:

McElroy Coal Company

By: Jason D. Witt, Secretary

The Marshall County Coal Company

Catherine R. Parsons

By: Jason D. Witt, Secretary

WITNESS/ATTEST:

_____

GRANTEE:

NOBLE ENERGY, INC.

By: Casey M. Kimble

Casey M. Kimble
Attorney-in-Fact

Exhibits:

Exhibit A: Premises and Easement Description/Map
Exhibit B: Insurance

PREPARED BY/RETURN TO:
Noble Energy, Inc.
Attention: Land Department
1000 Noble Energy Drive
Canonsburg, PA 15317

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ACKNOWLEDGEMENTS

STATE OHIO :
: **ss.**
COUNTY OF BELMONT :

On this, the 12th day of August, 2015 before me the undersigned officer, personally appeared Jason D. Witt, who acknowledged himself/herself to be the Secretary of McElroy Coal Company, a Delaware corporation, and that he/she as such officer, being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the Secretary by himself/herself as such officer.

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

NOTARY PUBLIC STATE OF OHIO
GARY M. BROADBENT
Notary Public, State of Ohio
My Commission Has No Expiration Date

Notary Public

STATE OHIO :
: **ss.**
COUNTY OF BELMONT :

On this, the 12th day of August, 2015 before me the undersigned officer, personally appeared Jason D. Witt, who acknowledged himself/herself to be the Secretary of The Marshall County Coal Company, a Delaware corporation, and that he/she as such officer, being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the Secretary by himself/herself as such officer.

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

NOTARY PUBLIC STATE OF OHIO
GARY M. BROADBENT
Notary Public, State of Ohio
My Commission Has No Expiration Date

Notary Public

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51-01868

COMMONWEALTH OF PENNSYLVANIA :
: ss.
COUNTY OF WASHINGTON :

On this 25th day of August, 2015, before me, the undersigned officer, personally appeared Casey M. Kimble, as Attorney-in-Fact of Noble Energy, Inc., a(n) Corporation, and acknowledges that, being authorized to do so, the above-referenced individual and officer of said entity executed the foregoing instrument for the purposes and consideration therein contained.

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

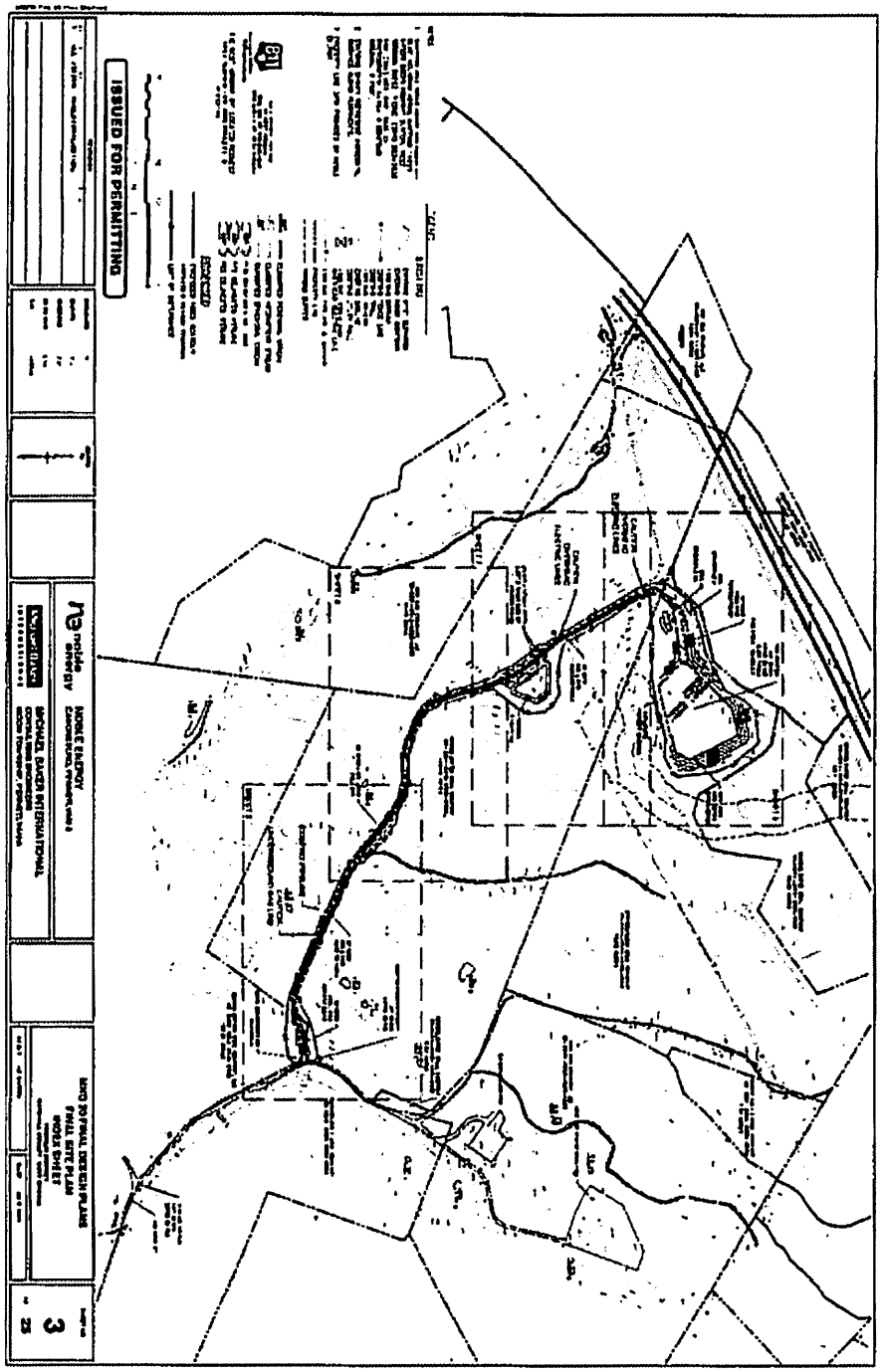
COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Jill A. Morrow, Notary Public
Cecil Twp., Washington County
My Commission Expires Jan. 9, 2017
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

Jill A. Morrow
Notary Public

51-01868

Exhibit A

PREMISES AND EASEMENT DESCRIPTION/MAP



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51-01868

Exhibit B

INSURANCE REQUIREMENTS

GENERAL LIABILITY (Comprehensive or Commercial Insurance)	For bodily injury and property damage, including, without limitation, Products/Completed Operations, Independent Contractors, Contractual Liability, and Premises Operations, $1,000,000 combined single limit per occurrence With a deductible acceptable to Grantor
CONSTRUCTION	During any construction on the Premises, Products/Completed Operations coverage for two (2) years following the final payment to any contractor or subcontractor performing the construction work and if any demolition work is to be performed, general liability coverage must be increased to $5,000,000 combined single limit per occurrence
WORKERS' COMPENSATION	Statutory Limits, or Evidence that Grantee is a "Qualified Self Insurer"
EMPLOYER'S LIABILITY	$1,000,000 each bodily injury by accident $1,000,000 policy limit for bodily injury by disease $1,000,000 each employee bodily injury by disease
COMMERCIAL AUTOMOBILE	For bodily Injury and property damage covering owned, non-owned and hired automobiles with at least $1,000,000 combined single limit per occurrence
UMBRELLA/EXCESS LIABILITY	For (bodily injury and property damage) with contractual liability insurance to cover liability assumed under this Agreement, with at least $9,000,000 combined single limit per occurrence Which must extend over and above the required Comprehensive or Commercial General Liability, Employer's Liability, and Automobile Bodily Injury and Property Damage Liability limits

ADDITIONAL INSURED(S)

Grantor and any Grantor Parties specified by Grantor must be named as additional insureds on all Liability Insurance specified above.

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POLICY REQUIREMENTS

All insurance policies shall be: (i) primary, and non-contributory; (ii) written on an occurrence basis, except as permitted below; (iii) include a waiver of subrogation against Grantor and Grantor Parties, where permitted by law; (iv) maintained without interruption from the date of commencement of any Grantee Operations until Grantee and all equipment, machinery, materials and other property of Grantee have been removed from the Premises; and (v) issued by insurance companies having an A.M. Best rating of at least A-VII or better and authorized to do business in the state where the Premises is located. All policies of insurance shall include a written undertaking from the insurer to notify all insureds and additional insureds at least ten (10) days' prior to cancellation for nonpayment of premiums, and at least thirty (30) days' prior to cancellation, expiration or modification of coverage for any other reason. Grantee does not have the right to self-insure any and all coverages required above other than Worker's Compensation Insurance. Insurance may be written on a claims made basis by Grantee (but not by any of its contractors, sub-contractors or agents), if and only if any and all claims made policies expressly include a retroactive coverage date that is on or before the Effective Date, and that any replacement policies issued during any time that this Agreement is effective also include a retroactive coverage date that is on or before the Effective Date. With respect to any and all Claims against Grantor or any Grantor Parties by any employee of Grantee or Grantee Parties, the indemnification obligations under this Agreement shall not be reduced in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for Grantee or any Grantee Party under workers' or workmen's compensation acts, disability acts or other employee benefit acts.

CERTIFICATE OF INSURANCE

Prior to the commencement of any Grantee Operations on the Premises, Grantee will issue certificates of insurance or evidence of self-insurance satisfying the foregoing insurance requirements, disclosing deductibles and any self-insurance. The certificates of insurance, both current and renewals, will be provided to Grantor prior to Grantee performing any Grantee Operations and from time to time upon request of Grantor, addressed as follows:

[MURRAY ENTITY]
Attn: Jason D. Wilm
46226 National Road
St. Clairsville OH 43950
(740) 338-3100

CONTRACTORS, SUBCONTRACTORS AND AGENTS

Grantee shall require each of its contractors, subcontractors and agents who enter the Premises to obtain and maintain all of the foregoing coverages under the terms and conditions set forth above, and Grantor and Grantor Parties specified by Grantor shall be named as additional insureds thereon.

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SI-01868

noble energy

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

Re: *Drilling Under Roads*

To Whom It May Concern:

Noble Energy, Inc. has the right to drill, stimulate and produce wells that are drilled under the County and State Roads as designated on the plats.

Should you have any questions or desire additional information, please do not hesitate to contact me at dee.swiger@nblenergy.com or 724-820-3061.

Sincerely,

Dee Swiger
Regulatory Analyst III

DS/

Enclosures:

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WW-6AC
(1/12)

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

Date of Notice Certification: 8/28/15

API No. 47- 051 - 01868
Operator's Well No. MND 20 BU
Well Pad Name: MND 20

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:	516843.346
County:	051-Marshall	Northing:	4411320.002
District:	Franklin	Public Road Access:	Taylors Ridge Road
Quadrangle:	Powhatan Point	Generally used farm name:	Murray Energy
Watershed:	huc-10 Short Creek - Ohio River		

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	☐ RECEIVED/ NOT REQUIRED
	☐ WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)	
☒ 4. NOTICE OF PLANNED OPERATION		☐ RECEIVED
☒ 5. PUBLIC NOTICE		☐ RECEIVED
☒ 6. NOTICE OF APPLICATION		☐ RECEIVED

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

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(1/12)

51-01868

Certification of Notice is hereby given:

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

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

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

Subscribed and sworn before me this 12th day of August 2015.

Regina Logue Notary Public

My Commission Expires 07/07/2018

Oil and Gas Privacy Notice:

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

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WW-6A
(9-13)

API NO. 47- 051 - 01868
OPERATOR WELL NO. MND 20 BU
Well Pad Name: MND 20

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: 8/28/15 **Date Permit Application Filed:** 8/28/15

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: Murray Energy (Consolidation Coal Company)
Address: 46226 National Road
St. Clairsville, OH 43950
Name:
Address:

☑ SURFACE OWNER(s) (Road and/or Other Disturbance)
Name: Consol Mining Company, LLC
Address: 1000 Consol Energy Drive
Canonsburg, PA 15317
Name:
Address:

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

☑ COAL OWNER OR LESSEE
Name: Murray Energy (Consolidation Coal Company)
Address: 46226 National Road
St. Clairsville, OH 43950

☑ COAL OPERATOR
Name: same as above
Address:

☐ SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Name: None
Address:

☐ OPERATOR OF ANY NATURAL GAS STORAGE FIELD
Name:
Address:

*Please attach additional forms if necessary

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(8-13)

API NO. 47- 051 - 01868
OPERATOR WELL NO. MND 20 BU
Well Pad Name: MND 20

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

WW-6A
(8-13)

API NO. 47- 051 - 01868
OPERATOR WELL NO. MND 20 BU
Well Pad Name: MND 20

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.

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Environmental Protection

WW-6A
(8-13)

API NO. 47- 051 - 01868
OPERATOR WELL NO. MND 20 BU
Well Pad Name: MND 20

Notice is hereby given by:

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

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

Oil and Gas Privacy Notice:

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

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

Subscribed and sworn before me this 12th day of Aug, 2015.

Regina Logue Notary Public

My Commission Expires 07/07/2018

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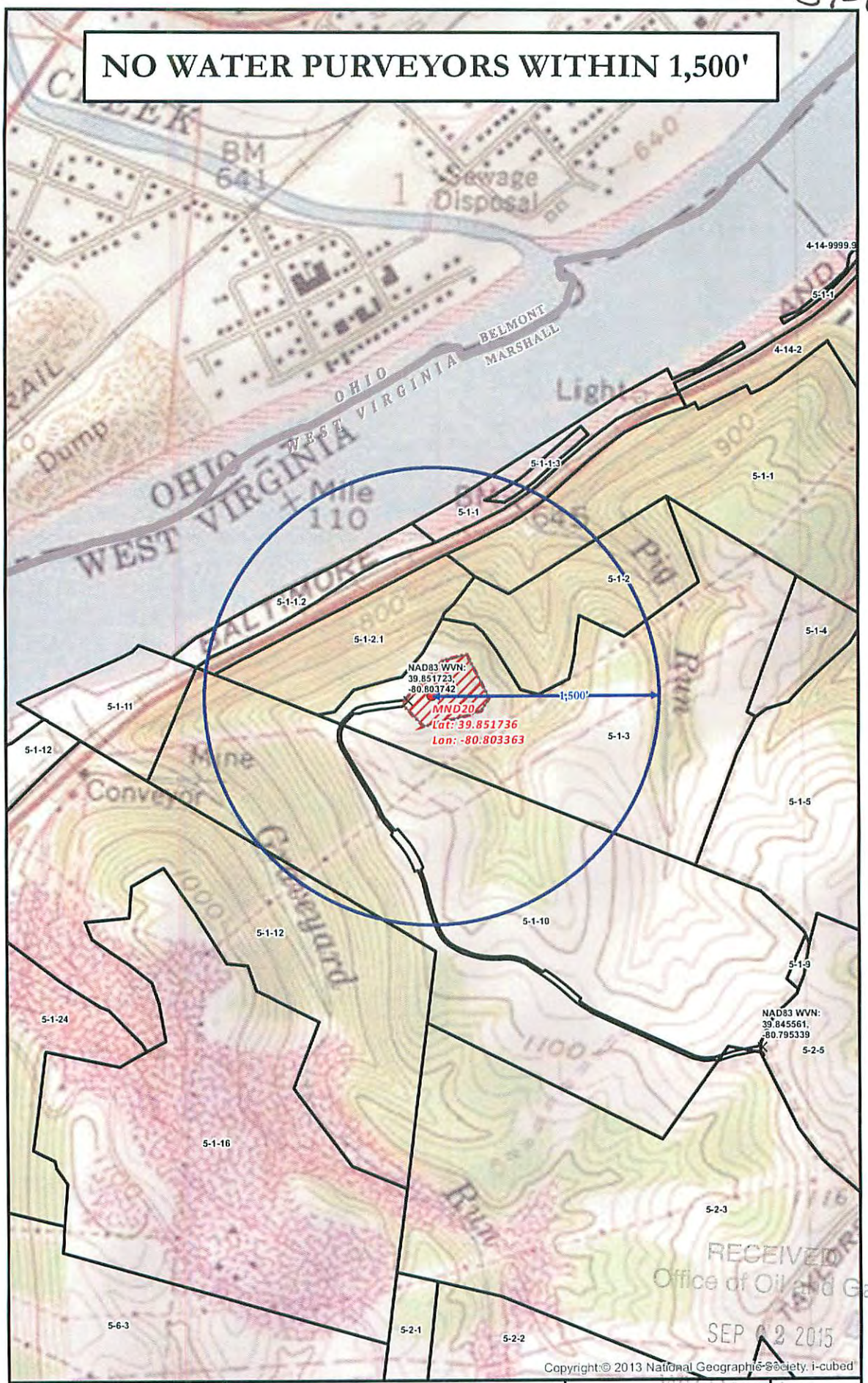
WV Department of
Environmental Protection

51-01868

NO WATER PURVEYORS WITHIN 1,500'



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MND 20 SITE SAFETY PLAN

- WATER WELL PURVEYORS -

0 375 750 1,500 Feet

1 Inch = 750 Feet

Well Pad
Cistern
Water Well
Access Road Intersect
Well Pad Boundary
1500' Water Wells Buffer
Access Road

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: 8/17/2015

Author: ChristopherGlover

6/6

Document Path: G:\Canonsburg\GIS\Projects\District_30\Appalachia\MXDs\EHSR\Permitting\Moundsville\MND20\SSP\D30_PA_WV_6_MND20_Water_Wells.mxd

51-01868

WW-6A3
(1/12)

Operator Well No. MND 20 A-G

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: 06/17/2015 **Date of Planned Entry:** by August 1, 2015

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

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

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

Notice is hereby provided to:

☒ SURFACE OWNER(s)
Name: Murray Energy (Consolidation Coal Company)
Address: 46226 National Road
St. Clairsville, OH 43950
Name:
Address:
Name:
Address:

☒ COAL OWNER OR LESSEE
Name: Consolidation Coal Company (Alex O'Neill)
Address: 46226 National Road 1000 Consol Energy Drive
St. Clairsville, OH 43950 Canonsburg, PA 15317

☒ MINERAL OWNER(s)
Name: Noble Energy, Inc.
Address: 1000 Noble Energy Drive
Canonsburg, PA 15317
*please attach additional forms if necessary

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

State:	West Virginia	Approx. Latitude & Longitude:	N.4411323.364 E. 516854.054
County:	Marshall	Public Road Access:	Taylors Ridge
District:	Franklin	Watershed:	Short Creek - Ohio River
Quadrangle:	Powhatan Point	Generally used farm name:	Murray Energy

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

Notice is hereby given by:

Well Operator:	Noble Energy, Inc.	Address:	1000 Noble Energy Drive Canonsburg, PA 15317
Telephone:	724-820-3061		
Email:	dee.swiger@nblenergy.com	Facsimile:	724-820-3098

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

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WW-6A3
(1/12)

Operator Well No. MND 20 A-G

S1-01868

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

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Notice is hereby provided to:

☒ SURFACE OWNER(s)

Name: Murray Energy (Consolidation Coal Company)
Address: 46226 National Road
St. Clairsville, OH 43950

Name: Consol Mining Company
Address: 1000 Consol Energy Drive
Canonsburg, PA 15317

Name:
Address:

☒ COAL OWNER OR LESSEE

Name: Murray Energy Corporation / Consolidation Coal Company
Address: 46226 National Road
St. Clairsville, OH 43950

☒ MINERAL OWNER(s)

Name: CNX Gas Company, LLC
Address: 1000 Consol Energy Drive
Canonsburg, PA 15317

*please attach additional forms if necessary

Notice is hereby given:

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

State:	West Virginia	Approx. Latitude & Longitude:	N.4411323.364 E. 516854.054
County:	Marshall	Public Road Access:	Taylors Ridge
District:	Franklin	Watershed:	Short Creek - Ohio River
Quadrangle:	Powhatan Point	Generally used farm name:	Murray Energy

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

Notice is hereby given by:

Well Operator:	Noble Energy, Inc.	Address:	1000 Noble Energy Drive Canonsburg, PA 15317
Telephone:	724-820-3061		
Email:	dee.swiger@nblenergy.com	Facsimile:	724-820-3098

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51-01868

WW-70
Rev. 7/01

Affidavit of Personal Service

State Of Pennsylvania

County Of Washington

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

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

--all with respect to operator's Well No. MND 20A-G located in Franklin District, Marshall County, West Virginia, upon the person or organization named--

Noble Energy, Inc.

--by delivering the same in Washington County, State of Pennsylvania on the 17th day of June, 20___ in the manner specified below.

[COMPLETE THE APPROPRIATE SECTION]

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

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

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

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

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

(Signature of person executing service)

Taken, subscribed and sworn before me this 12th day of August 20 15.
My commission expires July 7, 2018.

Regina Logue
Notary Public

(AFFIX SEAL IF NOTARIZED OUTSIDE THE STATE)

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

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WV Department of
Environmental Protection

S1-01868

Operator Well No. MND 20 BU

WW-6A5
(1/12)

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

Notice Time Requirement: notice shall be provided no later than the **filing date of permit application.**
Date of Notice: 8/28/15 **Date Permit Application Filed:** 8/28/15

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: Murray Energy (Consolidation Coal Company)
Address: 46226 National Road
St. Clairsville, OH 43950

Name: Consol Mining Company, LLC
Address: 1000 Consol Energy Drive
Canonsburg, PA 15317

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: 051-Marshall
District: Franklin
Quadrangle: Powhatan Point
Watershed: huc-10 Short Creek - Ohio River

UTM NAD 83 Easting: 516843.346
Northing: 4411320.002
Public Road Access: Taylors Ridge Road
Generally used farm name: Murray Energy

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

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

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

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51-01868

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

May 18, 2015

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

Subject: DOH Permit for the MND-20 Well Pad, Marshall County

Dear Mr. Martin,

The West Virginia Division of Highways has issued Permit #06-2012-0609 for the subject site to Noble Energy, Inc. for access to the State Road for the well sites located off of Marshall County Route 2/1 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

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WV Department of
Environmental Protection

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

51-01868

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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WV Department of
Environmental Protection

APPROVED
WVDEP OOG
10 / 1 / 2015

MND 20 WELL PAD
ISSUED FOR PERMITTING
FRANKLIN DISTRICT, MARSHALL COUNTY
WEST VIRGINIA
FOR
NOBLE ENERGY, INC.

1000 NOBLE ENERGY DRIVE
CANONSBURG, PENNSYLVANIA 15317
(724) 820-3000

VICINITY MAP

N.T.S.

PROPERTY OWNERS / LAND DISTURBANCE TABLE

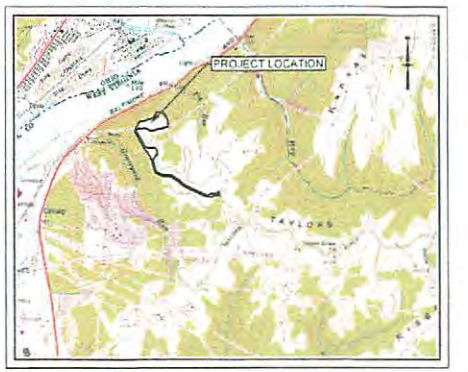
NAME	DEED ACREAGE	LIMIT OF DISTURBANCE	CLEAR & GRUB (FORESTED)	CLEAR & GRUB (NON-FORESTED)	TOTAL CLEAR & GRUB
MURRAY ENERGY/CONSOLIDATION					
05-0001-0023-0000-0500	70.55	9.89	9.04	0.85	9.89
05-0001-0010-0000-0500	129.00	6.98	2.78	4.20	6.98
05-0002-0006-0000-0500	40.80	0.05	0.00	0.05	0.05
CONSOL MINING CO., LLC					
02-0002-0003-0000-0500	153.60	0.67	0.44	0.23	0.67
TOTAL		17.39	12.26	5.13	17.39

EARTHWORK SUMMARY

	CUT	FILL	NET
WELL PAD ACCESS ROAD	11,888	6,648	4,740 (CUT)
WELL PAD	63,185	66,832	3,647 (FILL)
TOTAL EARTHWORK	74,873	73,780	1,093 (CUT)
TOTAL FACTORED EARTHWORK*	78,617	73,780	4,837 (CUT)
OPTIONAL SOIL STOCKPILE #1	–	1,470	1,470
OPTIONAL SOIL STOCKPILE #2	–	3,180	2,180
TOPSOIL STOCKPILE**	–	15,417	15,417

ASSUMPTIONS:
*SWELL FACTOR = 5%
**TOPSOIL THICKNESS = 12"

SHEET	DATE	TITLE
1	JULY 2015	COVER SHEET
2	JULY 2015	EXISTING CONDITIONS PLAN (WITH ORTHO PHOTOGRAPHY)
3	JULY 2015	INDEX SHEET
4	JULY 2015	DRAINAGE AREAS AND SOILS MAP
5	JULY 2015	EROSION AND SEDIMENTATION CONTROL PLAN
6	JULY 2015	EROSION AND SEDIMENTATION CONTROL PLAN
7	JULY 2015	EROSION AND SEDIMENTATION CONTROL PLAN
8	JULY 2015	EROSION AND SEDIMENTATION CONTROL PLAN
9	JULY 2015	ACCESS ROAD SITE PLAN AND PROFILE
10	JULY 2015	ACCESS ROAD SITE PLAN AND PROFILE
11	JULY 2015	ACCESS ROAD SITE PLAN AND PROFILE
12	JULY 2015	ACCESS ROAD SITE PLAN AND PROFILE
13	JULY 2015	ACCESS ROAD CROSS SECTIONS
14	JULY 2015	ACCESS ROAD CROSS SECTIONS
15	JULY 2015	ACCESS ROAD CROSS SECTIONS
16	JULY 2015	WELL PAD AND ROADWAY CROSS SECTIONS
17	JULY 2015	SEEDING AND LINING PLAN
18	JULY 2015	SEEDING AND LINING PLAN
19	JULY 2015	WELL PAD RECLAMATION PLAN
20	JULY 2015	SITE CONSTRUCTION DETAILS
21	JULY 2015	SITE CONSTRUCTION DETAILS
22	JULY 2015	EROSION AND SEDIMENTATION CONTROL NOTES
23	JULY 2015	EROSION AND SEDIMENTATION CONTROL NOTES
24	JULY 2015	EROSION AND SEDIMENTATION CONTROL DETAILS
25	JULY 2015	EROSION AND SEDIMENTATION CONTROL DETAILS



LOCATION MAP

DIRECTIONS TO MND 20 WELL PAD:
FROM MOUNDSVILLE, WV HEAD WEST ONTO WV-2 S (1 MI). TURN LEFT ONTO STATE ROUTE 2 ALT. TURN LEFT IMMEDIATELY ONTO ROBERTS RIDGE ROAD (2.8 MI). CONTINUE ONTO ROBERTS RIDGE ST JOSEPH ROAD (1.9 MI). SLIGHT RIGHT ON TAYLORS RIDGE ROAD (1.2 MI). TURN RIGHT ONTO THE MND 03 ACCESS ROAD (0.25 MI). TURN LEFT ONTO THE MND 20 ACCESS ROAD. THE WELL PAD WILL BE LOCATED APPROXIMATELY 0.70 MI FROM THIS INTERSECTION.

DIRECTIONS TO MND 20 WELL PAD FOR HEAVY EQUIPMENT:
FROM WV ROUTE 2 SOUTH AT TRAFFIC SIGNAL, MAKE A LEFT TURN ONTO WV ALTERNATE 2 (ROUND BOTTOM HILL ROAD) AND TRAVEL 1.54 MILES TO CR 88/5 (LINDSAY LANE), MAKE A RIGHT ONTO LINDSAY LANE AND TRAVEL 1.77 MILES TO CR 21 (ROBERTS RIDGE ROAD), MAKE A RIGHT ONTO ROBERTS RIDGE ROAD AND TRAVEL 3.38 MILES TO CR 2/1 (TAYLORS RIDGE/McFARLAND RUN), MAKE A RIGHT ONTO TAYLORS RIDGE/McFARLAND RUN ROAD AND TRAVEL 1.26 MILES TO INTERSECTION, MAKE A RIGHT AND FOLLOW ROAD UNTIL YOU REACH A GATE. TRAVEL THROUGH THE GATE TO INTERSECTION, MAKE A RIGHT AND TRAVEL FOR 800 FEET TO THE LEASE ROAD ON THE RIGHT.

RECEIVING WATERWAY:

PIG RUN
CLASS B1 – WARM WATER (AQUATIC)
RESIDING IN UPPER OHIO SOUTH WATERSHED

Know what's below. Call before you dig.

THE WEST VIRGINIA 811 SERIAL NUMBER FOR THIS PROJECT IS: 1510522099

ISSUED FOR PERMITTING

MND 20 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 (M)	UTM 83-17 EASTING (M)	UTM 27-17 NORTHING (M)	UTM 27-17 EASTING (M)
MND20-1	39.851730833	80.802994722	494996.930	1602692.386	39.851695833	80.812349444	494960.840	1634129.630	4411319.582	516852.621	4411101.451	516836.996
MND20-2	39.850858056	80.803044167	494982.680	1602678.365	39.851616111	80.803231944	494946.590	1634115.630	4411315.169	516848.423	4411097.038	516832.797
MND20-3	39.851774444	80.803054167	495012.999	1602675.996	39.851695167	80.803241944	494976.910	1634113.240	4411324.394	516847.546	4411106.263	516831.921
MND20-4	39.851735000	80.803103333	494998.819	1602661.975	39.851659722	80.803291389	494962.730	1634099.220	4411320.002	516843.346	4411101.871	516827.721
MND20-5	39.851695278	80.803152500	494984.559	1602647.945	39.851620000	80.803340556	494948.470	1634085.190	4411315.587	516839.145	4411097.456	516823.521
ROAD ENTRANCE	39.845560986	80.795339278	492718.482	1604809.085	39.845485139	80.795527545	492682.355	1636246.313	4410636.221	517509.078	4410418.078	517493.448
WELL PAD CENTER	39.851830659	80.802895966	495032.842	1602720.673	39.851755405	80.803063991	494996.752	1634157.916	4411330.666	516861.056	4411112.535	516845.430

REVISIONS

NO	BY	DATE	DESCRIPTION
1	MJL	7/31/2015	ISSUED FOR PERMITTING
2	MJL	9/24/2015	PER WVDEP COMMENTS DATED 9/17/2015

DESIGNED	MJL
DRAWN	MJL
CHECKED	SJR
REVIEWED	CAR
S.O.	144126

NORTH

noble energy — NOBLE ENERGY, CANONSBURG, PENNSYLVANIA

Michael Baker INTERNATIONAL — MICHAEL BAKER INTERNATIONAL, CONSULTING ENGINEERS, MOON TOWNSHIP, PENNSYLVANIA

WILLIAM D. MOREAN REGISTERED 20082 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

MND 20 FINAL DESIGN PLANS
COVER SHEET
FRANKLIN DISTRICT
MARSHALL COUNTY, WEST VIRGINIA

SCALE AS SHOWN | DATE JULY, 2015

SHEET NO. 1 OF 25

MND20_Final_01_Cover.dwg

80810-15

NOTES:

1. MAPPING AND TOPOGRAPHY PREPARED BY: BLUE MOUNTAIN AERIAL MAPPING 11023 MASON DIXON HIGHWAY BURTON, WEST VIRGINIA 26562 PHONE: (304) 662-2626 FAX: (304) 662-6501 DATE OF PHOTOGRAPHY: 4-16-14 CONTOUR INTERVAL: 2 FOOT.
2. STATIONS SHOWN REPRESENT HORIZONTAL DISTANCE ALONG ALIGNMENTS.
3. WELL PAD AREA: ~ 164,815 S.F.
4. LIMIT OF DISTURBANCE: ~ 17.39 ACRES
5. PROPERTY LINE DATA PROVIDED BY NOBLE ENERGY.

CALL BEFORE YOU DIG IN WEST VIRGINIA DIAL 811 OR 800.245.4848 MSS UTILITY OF WEST VIRGINIA

THE WEST VIRGINIA 811 LOCATED REQUEST TICKT NUMBER FOR THIS PROJECT IS: 1510522099

LEGEND

EXISTING

- EXISTING SPOT ELEVATION
- EXISTING INDEX CONTOUR
- EXISTING INTERIM CONTOUR
- EXISTING STREAM
- EXISTING FENCE LINE
- EXISTING TRAIL
- EXISTING TREELINE
- EXISTING GASLINE
- EXISTING UTILITY POLE
- EXISTING TOWER AND OVERHEAD ELECTRIC LINE
- EXISTING PIPELINE & MARKER
- PROPERTY LINE
- STREAM BUFFER
- SOIL BOUNDARY AND TYPE
- SURVEY CONTROL MONUMENT
- CLASSIFIED PERENNIAL STREAM
- CLASSIFIED INTERMITTENT STREAM
- CLASSIFIED EPHEMERAL STREAM
- PEM DELINEATED WETLAND
- PFO DELINEATED WETLAND
- PSS DELINEATED WETLAND

PROPOSED

- PROPOSED INDEX CONTOUR
- PROPOSED INTERIM CONTOUR
- LIMIT OF CUT
- LIMIT OF FILL
- LIMIT OF DISTURBANCE
- NEW TREE LINE
- COMPOST FILTER SOCK
- STONE STABILIZATION
- EROSION CONTROL BLANKET
- COLLECTION CHANNEL
- DRAINAGE PIPE
- ROCK APRON
- FLOW DIRECTION

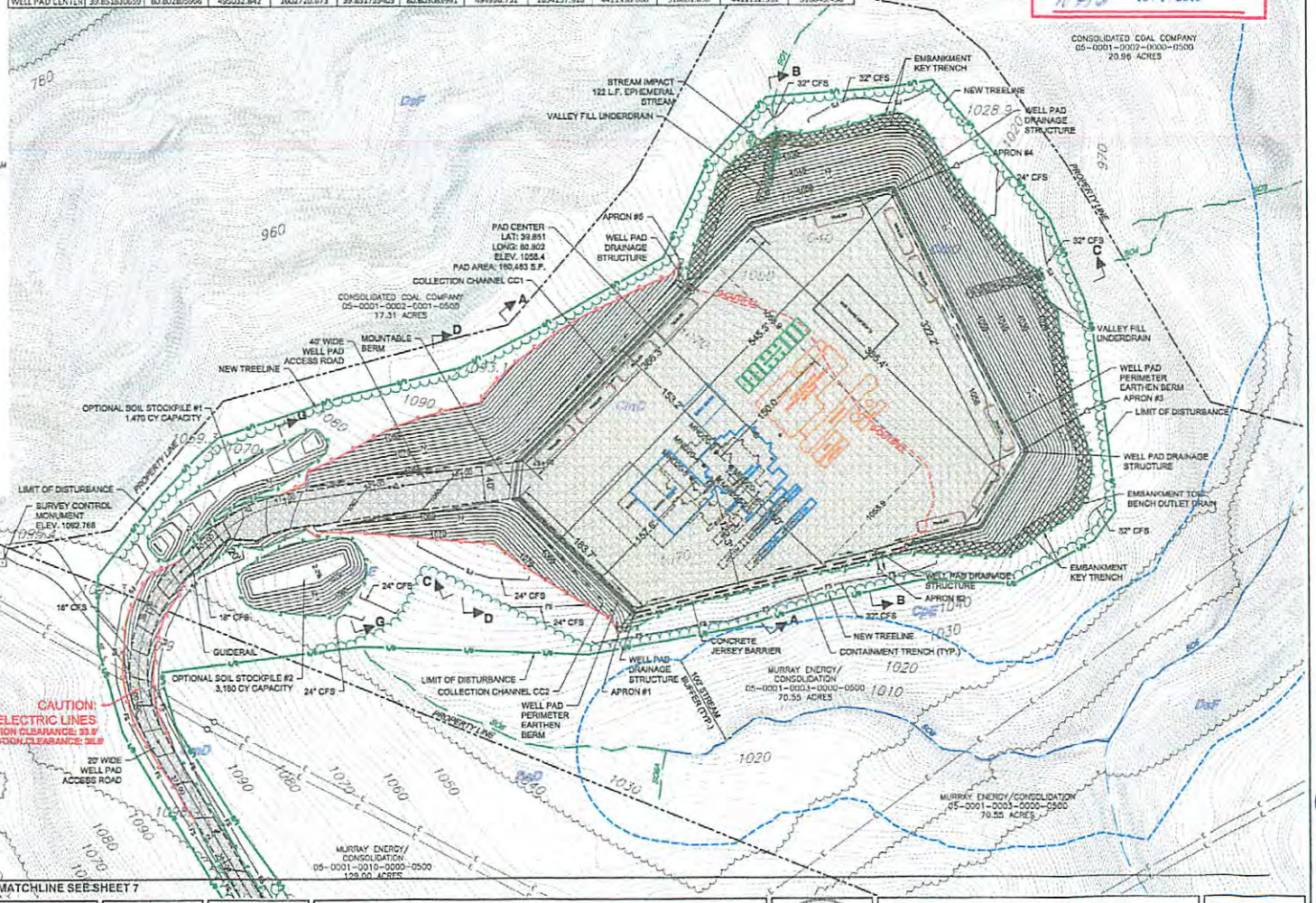
AQUATIC IMPACTS

WETLAND: 0.01 AC
PERENNIAL STREAM: 0 L.F.
INTERMITTENT STREAM: 0 L.F.
EPHEMERAL STREAM: 122 L.F.

60 0 60 120 240
SCALE IN FEET

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 (M)	UTM 83-17 EASTING (M)	UTM 27-17 NORTHING (M)	UTM 27-17 EASTING (M)
MND20-1	39.851730833	80.802964722	494996.930	1602692.366	39.851655833	80.812349444	494960.840	1634129.630	4411319.582	516852.621	4411101.451	516836.996
MND20-2	39.850858056	80.803044167	494982.680	1602678.365	39.851616111	80.803231944	494946.590	1634115.630	4411315.169	516848.422	4411097.038	516832.797
MND20-3	39.851774444	80.803054167	495012.999	1602675.996	39.851699167	80.803241944	494976.910	1634113.240	4411324.394	516847.546	4411106.263	516831.921
MND20-4	39.851735000	80.803103333	494998.819	1602661.975	39.851695722	80.803291389	494962.730	1634099.220	4411320.002	516843.346	4411101.871	516827.721
MND20-5	39.851695278	80.803152500	494984.559	1602647.945	39.851620000	80.803340556	494948.470	1634085.190	4411315.587	516839.145	4411097.456	516823.521
ROAD ENTRANCE	39.845560556	80.795139278	492718.482	1600809.085	39.845485139	80.795527545	492682.355	1636246.313	4410636.221	517509.078	4410418.078	517403.448
WELL PAD CENTER	39.851830659	80.802805966	495032.842	1602720.673	39.851755405	80.803083991	494996.752	1634157.916	4411330.666	516861.056	4411112.535	516845.430

APPROVED
WVDEP OOG
10/1/2015



ISSUED FOR PERMITTING

REVISIONS			
NO.	BY	DATE	DESCRIPTION
1	MJL	7/31/2015	ISSUED FOR PERMITTING
2	MJL	9/24/2015	PER WVDEP COMMENTS DATED 9/17/2015

DESIGNED GEO
DRAWN MJL
CHECKED BJH
REVIEWED CAR
S.O. 144856

NORTH

noble energy
NOBLE ENERGY
CANONSBURG, PENNSYLVANIA

Michael Baker INTERNATIONAL
MICHAEL BAKER INTERNATIONAL
CONSULTING ENGINEERS
MOON TOWNSHIP, PENNSYLVANIA

WILLIAM D. NEUMAN REGISTERED 20082 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER
9/29/15

MND 20 FINAL DESIGN PLANS
EROSION AND SEDIMENTATION CONTROL PLAN
FRANKLIN DISTRICT
MARSHALL COUNTY, WEST VIRGINIA

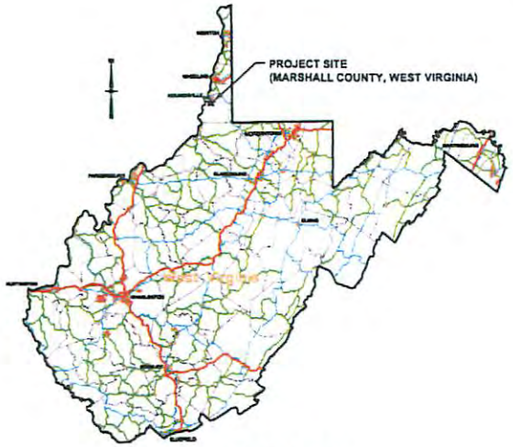
SCALE AS SHOWN
DATE JULY, 2015

SHEET NO. 8 OF 25

51-01808

MND 20 WELL PAD
ISSUED FOR PERMITTING
FRANKLIN DISTRICT, MARSHALL COUNTY
WEST VIRGINIA
FOR
NOBLE ENERGY, INC.

1000 NOBLE ENERGY DRIVE
CANONSBURG, PENNSYLVANIA 15317
(724) 820-3000



VICINITY MAP

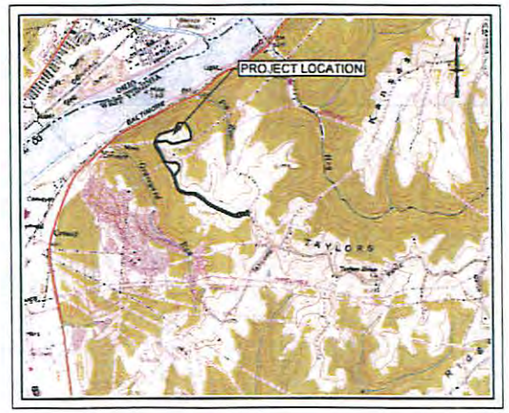
N.T.S.

PROPERTY OWNERS / LAND DISTURBANCE TABLE					
NAME	DEED ACREAGE	LIMIT OF DISTURBANCE	CLEAR & GRUB (FORESTED)	CLEAR & GRUB (NON-FORESTED)	TOTAL CLEAR & GRUB
MURRAY ENERGY/CONSOLIDATION					
05-0001-0003-0000-0500	70.55	8.69	8.04	0.65	8.69
05-0001-0010-0000-0500	129.00	6.98	2.78	4.20	6.98
05-0002-0005-0000-0500	45.85	0.05	0.00	0.05	0.05
CONSOL MINING CO., LLC					
05-0002-0003-0000-0500	153.80	0.67	0.44	0.23	0.67
TOTAL		17.39	12.26	5.13	17.39

EARTHWORK SUMMARY			
	CUT	FILL	NET
WELL PAD ACCESS ROAD	11,688	6,948	4,740 (CUT)
WELL PAD	63,185	66,832	3,647 (FILL)
TOTAL EARTHWORK	74,873	73,780	1,093 (CUT)
TOTAL FACTORED EARTHWORK*	78,617	73,780	4,837 (CUT)
OPTIONAL SOIL STOCKPILE #1	-	1,570	1,570
OPTIONAL SOIL STOCKPILE #2	-	3,270	3,270
TOPSOIL STOCKPILE**	-	15,417	15,417

ASSUMPTIONS:
*SWELL FACTOR = 5%
**TOPSOIL THICKNESS = 12"

SHEET	DATE	TITLE
1	JULY 2015	COVER SHEET
2	JULY 2015	EXISTING CONDITIONS PLAN (WITH ORTHO PHOTOGRAPHY)
3	JULY 2015	INDEX SHEET
4	JULY 2015	DRAINAGE AREAS AND SOILS MAP
5	JULY 2015	EROSION AND SEDIMENTATION CONTROL PLAN
6	JULY 2015	EROSION AND SEDIMENTATION CONTROL PLAN
7	JULY 2015	EROSION AND SEDIMENTATION CONTROL PLAN
8	JULY 2015	EROSION AND SEDIMENTATION CONTROL PLAN
9	JULY 2015	ACCESS ROAD SITE PLAN AND PROFILE
10	JULY 2015	ACCESS ROAD SITE PLAN AND PROFILE
11	JULY 2015	ACCESS ROAD SITE PLAN AND PROFILE
12	JULY 2015	ACCESS ROAD SITE PLAN AND PROFILE
13	JULY 2015	ACCESS ROAD CROSS SECTIONS
14	JULY 2015	ACCESS ROAD CROSS SECTIONS
15	JULY 2015	ACCESS ROAD CROSS SECTIONS
16	JULY 2015	WELL PAD AND ROADWAY CROSS SECTIONS
17	JULY 2015	SEEDING AND LINING PLAN
18	JULY 2015	SEEDING AND LINING PLAN
19	JULY 2015	WELL PAD RECLAMATION PLAN
20	JULY 2015	SITE CONSTRUCTION DETAILS
21	JULY 2015	SITE CONSTRUCTION DETAILS
22	JULY 2015	EROSION AND SEDIMENTATION CONTROL NOTES
23	JULY 2015	EROSION AND SEDIMENTATION CONTROL NOTES
24	JULY 2015	EROSION AND SEDIMENTATION CONTROL DETAILS
25	JULY 2015	EROSION AND SEDIMENTATION CONTROL DETAILS



LOCATION MAP

SCALE IN FEET

DIRECTIONS TO MND 20 WELL PAD:
FROM MOUNDSVILLE, WV HEAD WEST ONTO WV-2 S (1 MI), TURN LEFT ONTO STATE ROUTE 2 ALT. TURN LEFT IMMEDIATELY ONTO ROBERTS RIDGE ROAD (2.8 MI). CONTINUE ONTO ROBERTS RIDGE ST JOSEPH ROAD (1.9 MI). SLIGHT RIGHT ON TAYLORS RIDGE ROAD (1.2 MI). TURN RIGHT ONTO THE MND 03 ACCESS ROAD (0.25 MI). TURN LEFT ONTO THE MND 20 ACCESS ROAD. THE WELL PAD WILL BE LOCATED APPROXIMATELY 0.70 MI FROM THIS INTERSECTION.

DIRECTIONS TO MND 20 WELL PAD FOR HEAVY EQUIPMENT:
FROM WV ROUTE 2 SOUTH AT TRAFFIC SIGNAL, MAKE A LEFT TURN ONTO WV ALTERNATE 2 (ROUND BOTTOM HILL ROAD) AND TRAVEL 1.54 MILES TO CR 88/5 (LINDSAY LANE), MAKE A RIGHT ONTO LINDSAY LANE AND TRAVEL 1.77 MILES TO CR 21 (ROBERTS RIDGE ROAD), MAKE A RIGHT ONTO ROBERTS RIDGE ROAD AND TRAVEL 3.38 MILES TO CR 2/1 (TAYLORS RIDGE/McFARLAND RUN), MAKE A RIGHT ONTO TAYLORS RIDGE/McFARLAND RUN ROAD AND TRAVEL 1.26 MILES TO INTERSECTION, MAKE A RIGHT AND FOLLOW ROAD UNTIL YOU REACH A GATE. TRAVEL THROUGH THE GATE TO INTERSECTION, MAKE A RIGHT AND TRAVEL FOR 800 FEET TO THE LEASE ROAD ON THE RIGHT.

RECEIVING WATERWAY:

PIG RUN
CLASS B1 - WARM WATER (AQUATIC)
RESIDING IN UPPER OHIO SOUTH WATERSHED

Know what's below. Call before you dig.

THE WEST VIRGINIA 811 SERIAL NUMBER FOR THIS PROJECT IS: 1510522099

ISSUED FOR PERMITTING

MND 20 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 (M)	UTM 83-17 EASTING (M)	UTM 27-17 NORTHING (M)	UTM 27-17 EASTING (M)
MND20-1	39.851730833	80.802994722	494996.930	1602692.386	39.851655833	80.812349444	494960.840	1634129.630	4411319.582	516852.621	4411101.451	516836.996
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REVISIONS			
NO	BY	DATE	DESCRIPTION
1	MJL	7/31/2015	ISSUED FOR PERMITTING

DESIGNED MJL
DRAWN MJL
CHECKED BJR
REVIEWED CAR
S.O. 144126

NORTH

noble energy — NOBLE ENERGY, CANONSBURG, PENNSYLVANIA

Michael Baker INTERNATIONAL — MICHAEL BAKER INTERNATIONAL, CONSULTING ENGINEERS, MOON TOWNSHIP, PENNSYLVANIA

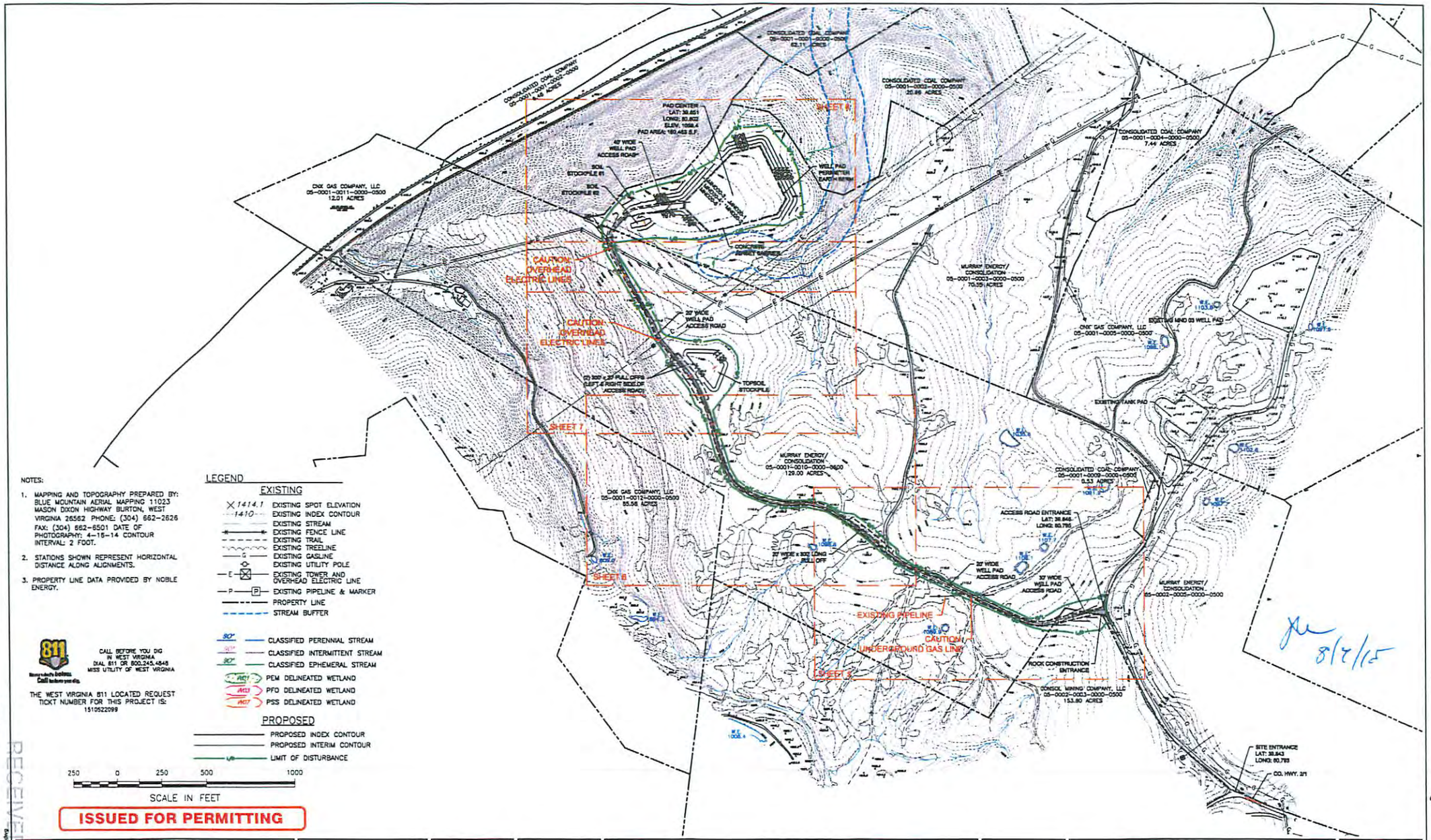
MND 20 FINAL DESIGN PLANS
COVER SHEET
FRANKLIN DISTRICT
MARSHALL COUNTY, WEST VIRGINIA

SCALE AS SHOWN | DATE JULY, 2015

SHEET NO. 1 OF 25

RECEIVED
Office of Oil and Gas
SEP 08 2015
WV Department of Environmental Protection

S1-01808



NOTES:

1. MAPPING AND TOPOGRAPHY PREPARED BY: BLUE MOUNTAIN AERIAL MAPPING 11023 MASON DIXON HIGHWAY BURTON, WEST VIRGINIA 26562 PHONE: (304) 662-2626 FAX: (304) 662-6501 DATE OF PHOTOGRAPHY: 4-16-14 CONTOUR INTERVAL: 2 FOOT.
2. STATIONS SHOWN REPRESENT HORIZONTAL DISTANCE ALONG ALIGNMENTS.
3. PROPERTY LINE DATA PROVIDED BY NOBLE ENERGY.

CALL BEFORE YOU DIG
IN WEST VIRGINIA
DIAL 811 OR 800.245.4848
MISS UTILITY OF WEST VIRGINIA

THE WEST VIRGINIA 811 LOCATED REQUEST TICKET NUMBER FOR THIS PROJECT IS: 1510522099

LEGEND

EXISTING

- 1414.1 EXISTING SPOT ELEVATION
- 1410 EXISTING INDEX CONTOUR
- EXISTING STREAM
- EXISTING FENCE LINE
- EXISTING TRAIL
- EXISTING TREELINE
- G EXISTING GASLINE
- EXISTING UTILITY POLE
- E EXISTING TOWER AND OVERHEAD ELECTRIC LINE
- P EXISTING PIPELINE & MARKER
- PROPERTY LINE
- STREAM BUFFER
- 50' CLASSIFIED PERENNIAL STREAM
- 50' CLASSIFIED INTERMITTENT STREAM
- 50' CLASSIFIED EPHEMERAL STREAM
- PEM1 PEM DELINEATED WETLAND
- PFO1 PFO DELINEATED WETLAND
- PSS1 PSS DELINEATED WETLAND

PROPOSED

- PROPOSED INDEX CONTOUR
- PROPOSED INTERIM CONTOUR
- LOD LIMIT OF DISTURBANCE

250 0 250 500 1000

SCALE IN FEET

ISSUED FOR PERMITTING

REVISIONS			
NO.	BY	DATE	DESCRIPTION
1	MJL	7/31/2015	ISSUED FOR PERMITTING

DESIGNED	MJL
DRAWN	MJL
CHECKED	BLR
REVIEWED	CAR
S.O.	145544

NORTH N

noble energy — NOBLE ENERGY, CANONSBURG, PENNSYLVANIA

Michael Baker INTERNATIONAL — MICHAEL BAKER INTERNATIONAL, CONSULTING ENGINEERS, MOON TOWNSHIP, PENNSYLVANIA

MND 20 FINAL DESIGN PLANS
FINAL SITE PLAN
INDEX SHEET
FRANKLIN DISTRICT
MARSHALL COUNTY, WEST VIRGINIA

SCALE AS SHOWN | DATE JULY, 2015

SHEET NO. 3 OF 25

MND20_Final_03_Index Sheet.dwg

8/7/15

S1-01868

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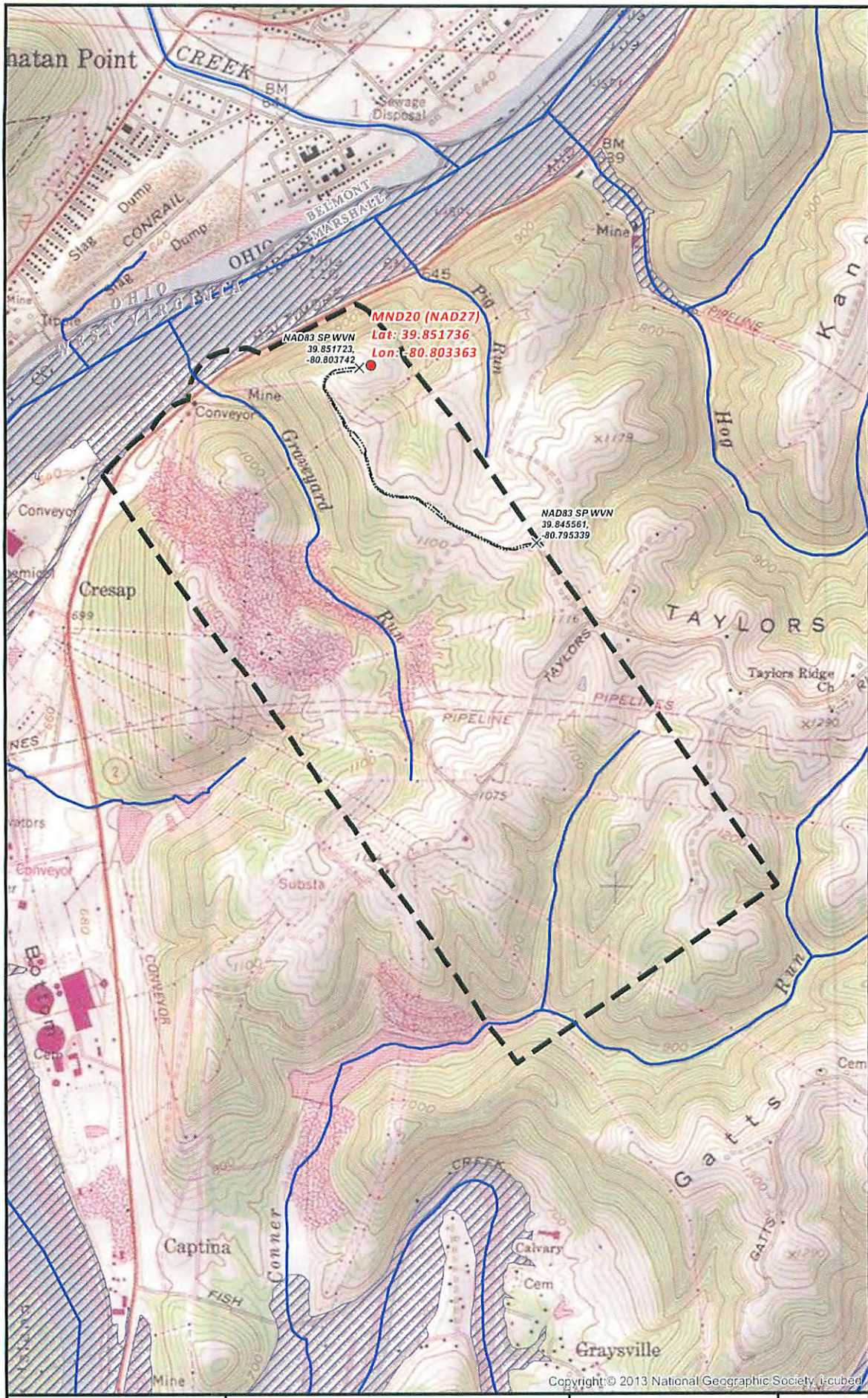
Office of Oil and Gas
SEP 02 2015
WV Department of Environmental Protection

51-01868



MND 20 SITE SAFETY PLAN

- FLOODPLAIN ZONES -

0 750 1,500 3,000 Feet

1 Inch = 1,500 Feet

Well Pad
Access Road Intersection
Hydrology
Proposed Access Road
Proposed Units
Floodplain

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: 8/17/2015

Author: ChristopherGlover

2 / 6

Document Path: G:\Canonsburg\GIS\Projects\District_30\Appalachia\MXDs\EHSR\Permitting\Moundsville\MND20\SSP\D30_PA_WV_2_MND20_Floodplains.mxd