

west virginia department of environmental protection

Office of Oil and Gas 601 57th Street SE Charleston, WV 25304 (304) 926-0450 (304) 926-0452 fax Earl Ray Tomblin, Governor Randy C. Huffman, Cabinet Secretary www.dep.wv.gov

April 17, 2015

WELL WORK PERMIT

Horizontal 6A Well

This permit, API Well Number: 47-9502237, issued to NOBLE ENERGY, INC., is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

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

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

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

James Martin

Chief

Operator's Well No: SHR 30 MHS

Farm Name: SECKMAN, ALLEN W. ET AL

API Well Number: 47-9502237

Permit Type: Horizontal 6A Well

Date Issued: 04/17/2015

API Number: <u>9502237</u>

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. <u>Failure to adhere to the specified permit conditions may result in enforcement action.</u>

CONDITIONS

- 1. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACE). Through this permit, you are hereby being advised to consult with USACE regarding this proposed activity.
- 2. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
- 3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
- 4. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
- 5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
- 6. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.
- 7. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
- 8. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.
- 9. Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced on this well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

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

1) Well Operator: Noble Energy, Inc.	494501907	095-Tyler	Mc Elroy	Shirley
× 1 × 1 × 1 × 1 × 1 × 1 × 1 × 1 × 1 × 1	Operator ID	County	District	Quadrangle
2) Operator's Well Number: SHR 30 MHS	Well Pad	Name: SHR	30	
3) Farm Name/Surface Owner: Allen W. Seckman, et	Public Road	d Access: Cou	ınty Rt. 5	8
4) Elevation, current ground: 921' Ele	evation, proposed p	oost-construction	on: 920'	
5) Well Type (a) Gas Oil	Unde	rground Storag	е	
Other				
(b)If Gas Shallow	Deep			
Horizontal				
6) Existing Pad: Yes or No No				
7) Proposed Target Formation(s), Depth(s), Antici				
Burkett 6460 - 6494' / 34' Thick / 4286 psi / N	larcellus 6514 - 6	578' / 64' Thick	(/ 4341 ps	si
8) Proposed Total Vertical Depth: 6,568'				-
9) Formation at Total Vertical Depth: Marcellus		= 1 = = = = = = = = = = = = = = = = = =		#
10) Proposed Total Measured Depth: 15,957'				
11) Proposed Horizontal Leg Length: 8,507'	·			
12) Approximate Fresh Water Strata Depths:	466'			
13) Method to Determine Fresh Water Depths:n	earest offset well	S		
14) Approximate Saltwater Depths: 1761'				
15) Approximate Coal Seam Depths: None				
16) Approximate Depth to Possible Void (coal min	ne, karst, other): _	None		
17) Does Proposed well location contain coal sean directly overlying or adjacent to an active mine?	Yes	No	V	
(a) If Yes, provide Mine Info: Name: NA				
Depth:				
Seam:				
Owner:	REC Office of (EIVED		

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18)

CASING AND TUBING PROGRAM

TYPE	Size	New	Grade	Weight per ft.	FOOTAGE: For	INTERVALS:	CEMENT:
		<u>or</u>		(lb/ft)	Drilling	Left in Well	Fill-up (Cu.
		<u>Used</u>					<u>Ft.)</u>
Conductor	20"	New	LS	94	40' minimum or to next competent formation, but no deeper than 1st freshwater	40' minimum or to the next competent formation, but no deeper than 1st freshwater	Fill/Soil to surface
Fresh Water	13 3/8"	New	J-55	54.5	566' or to next competent formation not deeper than elevation.	566' or to next competent formation, but no deeper than elevation.	CTS 30% excess Yield =1.18
Coal							
Intermediate	9 5/8"	New	J-55	36.0	2373' or 250' below the fifth sand	2373' or 250' below the fifth sand	CTS 20% excess Yield = 1.19
Production	5 1/2"	New	P-110	20.0	15,957'	15,957'	10% excess Yield = 1.27 TOC=200' above 9.625" shoe
Tubing							
Liners							

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

MDG 12-17-2014

PACKERS

Kind:			
Sizes:			
Depths Set:		050	NEIVED

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19) Describe proposed well work, including the drilling and plugging back of any pilot hole:
Drill the vertical depth to the Marcellus at an estimated total vertical depth of approximately 6568 feet. Drill Horizontal leg-stimulate and produce the Burkett Formation and/or the Marcellus Formation. Should we encounter formation issues, set the 13 3/8 into next competent formation but not deeper than elevation. Should we encounter a unanticipated void we will install a minimum of 20' of casing below the void but not more than 100' below the void, set a basket and grout to surface.
20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:
The stimulation will be multiple stages divided over the lateral length of the well. Stage spacing is dependent upon engineering design. Slickwater fracturing technique will be utilized on each stage using sand, water, and chemicals, our maximum pressure is not to exceed 10,000 lbs. Please refer to attached list.
21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 41.57
22) Area to be disturbed for well pad only, less access road (acres): 7.42
23) Describe centralizer placement for each casing string:
Conductor - No centralizers used. Fresh Water/Surface - Bow spring centralizers on first two joints then every third joint to 100' from surface. Intermediate - Bow Springs centralizers every third joint to 100' from Surface. Production - Rigid bow springs every third joint from KOP to TOC, rigid bow springs every joint to KOP.
24) Describe all cement additives associated with each cement type:
See attached sheets - Conductor - fill/soil to surface. Fresh Water - 15.6 ppg Type 1 cement +2% CaCl, 0.25# lost circ., 30%excess yield =1.18. Intermediate- 15.6 ppg Class A +0.4% Ret, 0.15% Disp, 0.2% Anti Foam, 0.125# sk Lost circ. 20% Excess Yield =1.19 To Surface. Production - 14.8 ppg Class A 25:75:0 System +2.6% cement extender, 0.7% Fluid Loss additive, 0.45% high temp retarder, 0.2% fiction reducer 10% excess Yield =1.27 TOC >= 200' above 9.625" shoe.

25) Proposed borehole conditioning procedures:

Conductor - The hole is drilled w/ air and casing is run in air. Apart from insuring the hole is clean via air circulation at TD, there are no other conditioning procedures. Fresh Water/Surface -The hole is drilled w/air and casing is run in air. Once casing is at setting depth, circulate a minimum of one hole volume prior to pumping cement. Intermediate - Once surface casing is set and cemented Intermediate hole is drilled either on air or SOBM and filled w/ KCI water once filled w/ KCI water once drilled to TD. The well is conditioned with KCI circulation prior to running casing. Once casing is at setting depth, the well is circulated a minimum of one hole volume prior to pumping cement. Production - The hole is drilled with synthetic oil base mud and once at TD the hole is circulated at maximum allowable drilling pump rate for at least 6X bottoms up. Once on bottom with casing, circulate a minimum of one hole volume prior to pumping cement.

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*Note: Attach additional sheets as needed.

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	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
			10043-52-4
CA-100	Accelerator	White flake	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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WV Department of Environmental Protection

04/17/2015

																		K.							×			WELLBORE DIAGRAM	74111	Δ7m	Ground Elevation		7
LP @ 6484' TVD / 7450' MD		Lateral	8.75" - 8.5"						8.75" Curve						o./o venica	0 7E" Vol.					12 3/8				17 1/2	24		HOLE					
	Onon							19 19 19	HCP-110	20#	5-1/2"										9-5/8" 36# HCK-55 LTC				13-3/8" 54.5# J-55 BTC	20* 94#		CASING	710	2100	920'		noble energy
	Onondaga	Onondana	TD	Marcellus	Hamilton	Tully Limestone	Burkett	West River	Middlesex	Casnaqua	Alexander	Benson	Lower Huron	Andren Squa	Gordon	op pevoliali oliale	Ton Devonian Shall	Berea	Int. Casing	Weir	Price Formation	Big Injun	Big Lime	Int. Casing		Conductor		GEOLOGY					gγ
8.75 / 8.5 Hole - Cemented Long String 5-1/2" 20# HCP-110 TXP BTC	05/8	6579	15957	6514	6497	6494	6460	6392	6358	6247	5248	5004	3834	0400	243	+	-	2517	2373	2326	2173	2119	2048	566		40		4OF					,
emented Lo P-110 TXP	888888888	5555	6484	6578	6514	6497	6494	6460	6392	6358	5306	5048		20402	2082	200		2525	2373	2430		2173	2119	566		40		BASE	0117-00	SHB-30	SHR-3	SHR-30	
ng String BTC	X	SOBM	12.0ppg- 12.5ppg						12.5ppg SOBM	12.0ppg-					SOBM	9.0ppg	8.0ppg -				AIR				AIR	AIR		MOD	יא טוור	BL	OM LP	M SHL	
						above 9.625" shoe	TOC >= 200'	Yield=1.27	10% Excess	reducer	0.45% high temp retarder, 0.2% friction	0.7% Fluid Loss additive.	System	14.8ppg Class A 25:75:0					To Surface	20% Excess	0.125#/sk Lost Circ	+0.4% Ret, 0.15% Disp, 0.2% AntiFoam	15.6ppg Class A		15.6 ppg Type 1 + 2% CaCl, 0.25# Lost Circ 30% Excess Vield = 118	To Surface		CEMENT	OTIN-30M BITE (Faucoug)	(I at/I and)	SHR-30M LP (Lat/Long)	SHR-30M SHL (Lat/Long)	
							joint to KOP	Rigid Bow Spring every							TOC	third joint from KOP to	Rigid Bow Spring every			feet from surface.	every third joint to 100'	Bow spring centralizers		Contract	Bow Spring on first 2 joints then every third joint to 100' form	NA		CENTRALIZERS	(32/0	(2278	(33588	(3354	SHR-30M-HS (Marcellus H Burkett Shale Horizontal Tyler County, WV
+/-8507' ft Lateral							pumping cement.	hole volume prior to	circulate a minimum of one	least 6x bottoms up. Once	allowable pump rate for at			•					cement	volume prior to pumping	at setting depth, circulate a	drilled to TD. Once casing is	Fill with KCl water once	cement.	Fill with KCl water once drilled to TD. Once casing is at setting depth, circulate a minimum of one hole	Ensure the hole is clean at TD.		CONDITIONING	(32/86/.3N, 103//90.9ZE) (NADZI)	27 EN 1621700 07	(335883.76N, 1628880.54E) (NAD27)	(335453.21N, 1628450.53E) (NAD27)	30M-HS (Marcellus HZ) kett Shale Horizontal Tyler County, WV
								due to hole conditions	sche	Вш	Production casing = 0.361" wall thickness										2				is Intermediate casing = 0.380* a wall thickness Burst=2730 psi	Stabilize surface fill/soil. Conductor casing = 0.438* wall thickness Burst=2730psi	RI office	COMMENTS	(INADZ/)[] O	543	4E) (NAD27)上 an		Gas

API Number 47 - 095

Operator's Well No. SHR 30 MHS

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Noble Energy, Inc.	OP Code _494501907
Watershed (HUC 10) huc-10 Mc Elroy Creek Quadrang	gle Shirley
Elevation 921' County 095-Tyler	District Mc Elroy
Do you anticipate using more than 5,000 bbls of water to complete the propose Will a pit be used? Yes No	
If so, please describe anticipated pit waste:closed loop-no utiliz	
Will a synthetic liner be used in the pit? Yes No	If so, what ml.? M \(\sigma \)
Proposed Disposal Method For Treated Pit Wastes:	1f so, what ml.?
Land Application Underground Injection (UIC Permit Number_see Reuse (at API Number_at next anticipated well Off Site Disposal (Supply form WW-9 for disposal	e attached sheet
Other (Explain_	
Will closed loop system be used? If so, describe: <u>yes</u>	*
Drilling medium anticipated for this well (vertical and horizontal)? Air, freshv	water, oil based, etc. Air/water based mud through intermediate string then SOBM
-If oil based, what type? Synthetic, petroleum, etc.Synthetic	
Additives to be used in drilling medium? Please see attached sheet	
Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc	
-If left in pit and plan to solidify what medium will be used? (cemen	
-Landfill or offsite name/permit number? please see attached sheet	
I certify that I understand and agree to the terms and conditions of the on August 1, 2005, by the Office of Oil and Gas of the West Virginia Departm provisions of the permit are enforceable by law. Violations of any term or claw or regulation can lead to enforcement action. I certify under penalty of law that I have personally examined and application form and all attachments thereto and that, based on my inqui obtaining the information, I believe that the information is true, accurate, penalties for submitting false information, including the possibility of fine or in	tent of Environmental Protection. I understand that the condition of the general permit and/or other applicable d am familiar with the information submitted on this iry of those individuals immediately responsible for and complete. I am aware that there are significant
Company Official Signature	IAN O P MAR
Company Official (Typed Name) Kim Ward	JAN 2 6 2015
Company Official Title Regulatory Analyst	WV Department of
	Environmental Protection
Subscribed and sworn before me this 15 day of 4an	, 20 15
Note Div	Notary Public 04/17/2015
My commission expires 09/19/2023	

Title: Oil and Gas Inspector

(Y) Yes

Field Reviewed?

Form WW-9 SHR 30 MHS Operator's Well No. Noble Energy, Inc. 41.57 Prevegetation pH 6.0 Proposed Revegetation Treatment: Acres Disturbed Tons/acre or to correct to pH _____ 10-20-20 or equal Fertilizer type _____ Fertilizer amount 500 lbs/acre Hay or Straw at 2 Tons/acre Seed Mixtures Temporary Permanent Seed Type Seed Type lbs/acre lbs/acre Tall Fescue Tall Fescue 40 40 Ladino Clover Ladino Clover 5 **alternative seed mixtures are shown on the Site Design. Drawing(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided) Photocopied section of involved 7.5' topographic sheet. Plan Approved by: Michael Comments: Pre seed and mulch all cut area, maintain all E & S during operation. RECEIVED Office of Oil and Gas JAN 2 6 2015 WV Department of Environmental Protection

Date: 12 -17- 2014

04/17/2015

Additives to be used in drilling medium:

Calcium Chloride Powder

Carbo Tec

Carbo Gel2

Carbo Tec S

Ecco-Block, Lime

MIL-Carb TM

Mil-Clean

Mil-Seal

Next base eC, Next Drill

Next Hold

Next Mul

Omni Cote

Mil Bar

Next Mul HT

Soda Ash

Potassium Chloride

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Cuttings Disposal/Site Water

Cuttings – Haul off Company:

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

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

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

Disposal Locations:

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

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

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

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

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

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

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

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

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

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

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

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

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

Water Haul off Companies:

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

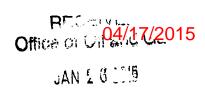
Disposal Locations:

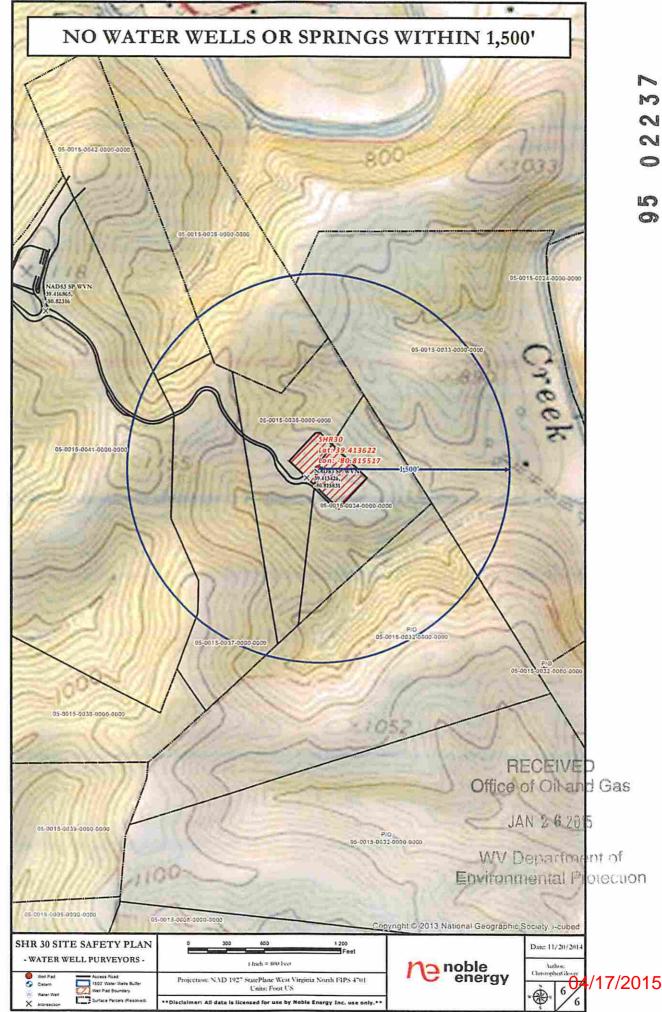
Solidification
Waste Management, Arden Landfill Permit # 100172
200 Rangos Lane
Washington, PA 15301
724-225-1589

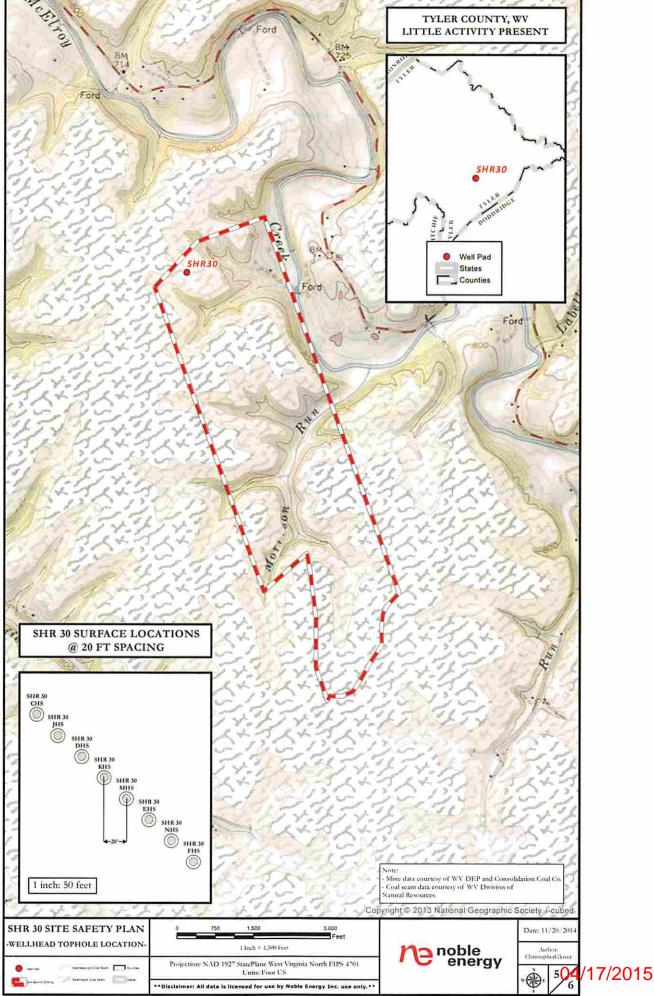
Solidification/Incineration Soil Remediation, Inc. Permit # 02-20753 6065 Arrel-Smith Road Lowelville, OH 44436 330-536-6825

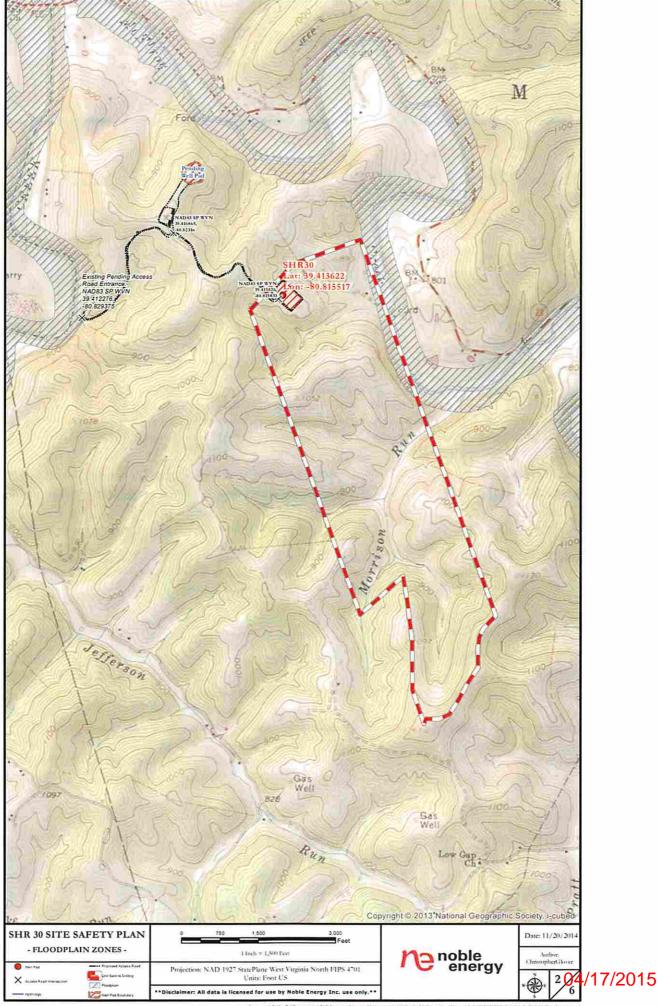
Adams #1 Permit # 34-031-2-7177 23986 Airport Road Coshocton, OH 43812 740-575-4484

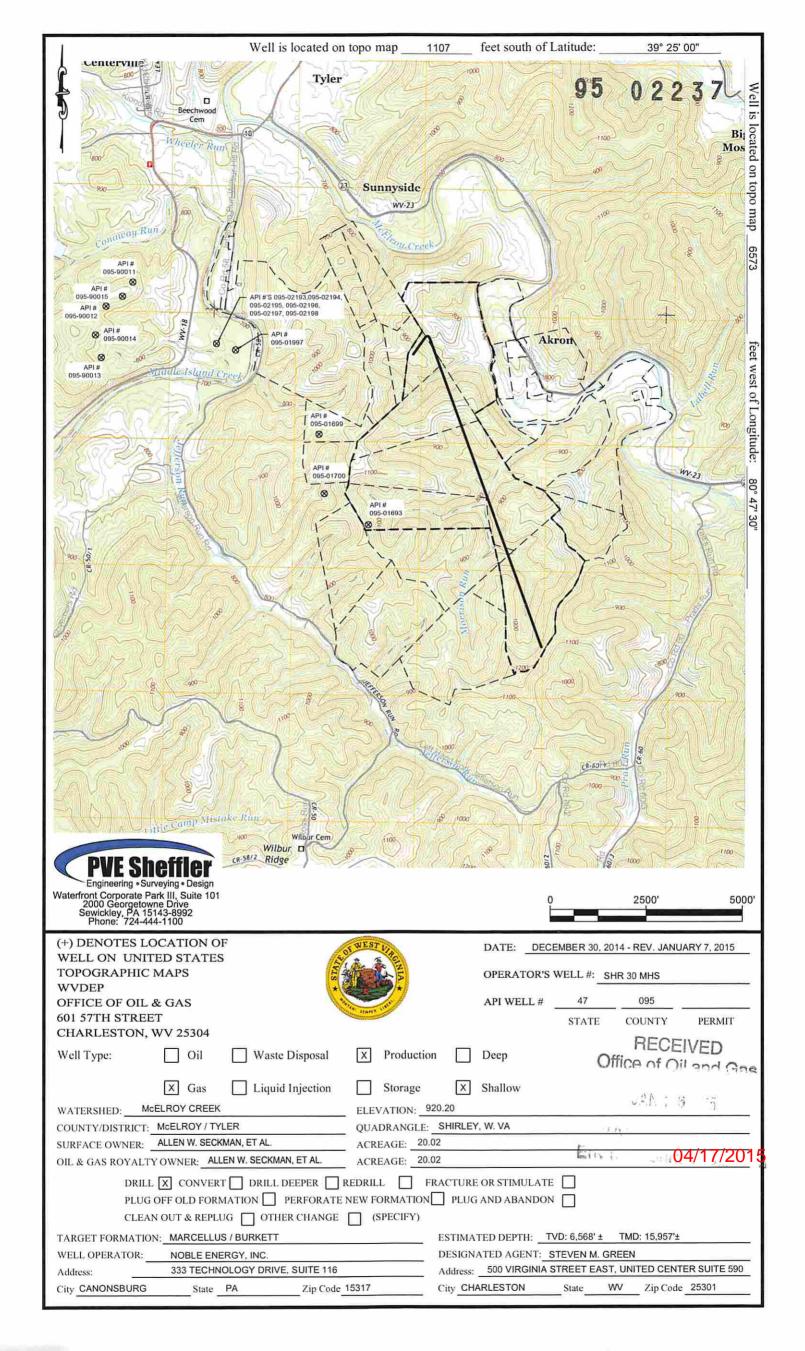
Adams #2 Permit # 34-031-2-7178 740-575-4484

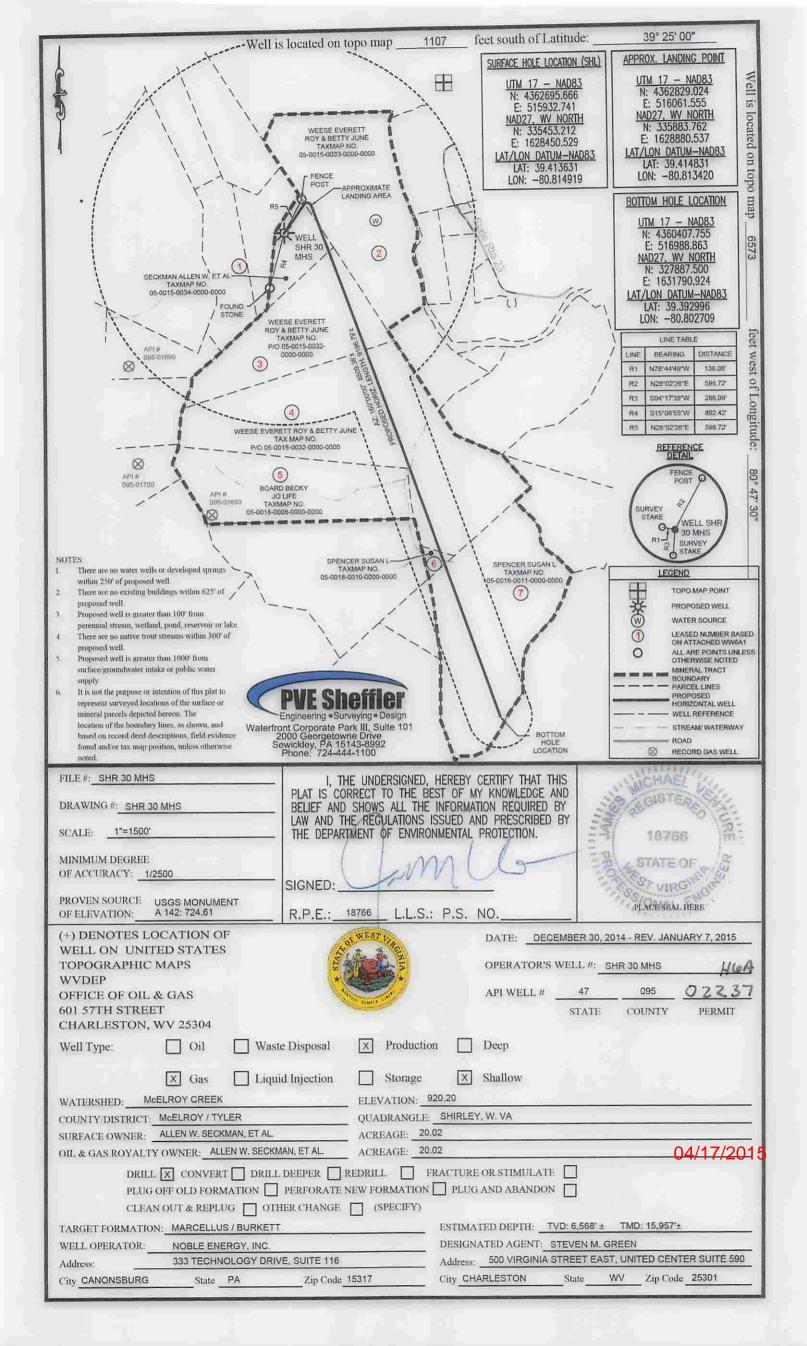












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(5/	13)	

Operator's	Well No.	SHR30MHS	

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

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

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
DAD36993001	Lillie Seckman	Drilling Appalachia Corporation	not less than 1/8	DB 202-513
DAD36993001	Drilling Appalachia Corporation	Dominion Appalachian Development Properties, LLC	N/A	DB 322-190
DAD36993001	Dominion Appalachian Development Properties, LLC	Consol Gas Appalachian Development Properties, LLC	N/A	COI 9-124
DAD36993001	Consol Gas Appalachian Development Properties, LLC	Consol Gas Reserves, Inc.	N/A	COI 9-144
DAD36993001	Consol Gas Reserves, Inc.	Consol Gas Company	N/A	COI 9-156
DAD36993001	Consol Gas Company	CNX Gas Company, LLC	N/A	COI 17-1

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

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

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

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

NOBLE ENERGY, INC.
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Page 1 of ____

Lease Name or Number 1: Continued: DAD36993001	Grantor, Lessor, etc. CNX Gas Company, LLC	Grantee, Lessee, etc. Noble Energy, Inc.	Royalty N/A	Book/Page SHR 30 f DB 388-286	инѕ		
			1999	55 500 250			
2: No Lease Number	Roy D. Hadley	Kepco	not less than 1/8	DB 232-30			
	Jay Bee Production	Керсо	not less than 1/8	D8 232-30			
	Donald Seckman	Керсо	not less than 1/8	DB 232-30			
	Thomas W. Furbee						
		Kepco	not less than 1/8	DB 232-30			
	Betty Weese & Roger Weese	Керсо	not less than 1/8	DB 232-30			
	Linda Weese	Керсо	not less than 1/8	DB 232-30			
	Керсо	Peake Energy, Inc.	N/A	DB 319-291			
	Peake Energy, Inc.	Four Leaf Land Company	N/A	DB 403-566			
	Four Leaf Land Company	Antero Resources Appalachian	C N/A	DB 403-566			
	Antero Resources Appalachian Corporation	Noble Energy, Inc.	N/A	DB 422-517			
	Ralph T. Sweeney	Four Leaf Land Company	not less than 1/8	DB 370-599			
	Anna Sweeney	Four Leaf Land Company	not less than 1/8	DB 370-635			
	Lamoyne Sweeney	Four Leaf Land Company	not less than 1/B	DB 370-617			
	Gloria A. Morris	Four Leaf Land Company	not less than 1/8	DB 397-669			
	Donald L. Sweeney	Four Leaf Land Company	not less than 1/8	DB 370-605			
	Devon R. Horsley	Four Leaf Land Company	not less than 1/8	DB 370-629			
	Rodger A. Sweeney						
		Four Leaf Land Company	not less than 1/8	DB 370-611			
	Four Leaf Land Company	Antero Resources Appalachian		DB 403-561			
	Antero Resources Appalachian Corporation	Noble Energy, Inc.	N/A	DB 422-517			
	Mary S. Furbee Zebley	Noble Energy, Inc.	not less than 1/8	DB 440-447			
	Thomas Val Furbee	Noble Energy, Inc.	not less than 1/8	DB 440-443			
	Allison Furbee Hardin	Noble Energy, Inc.	not less than 1/B	DB 440-453			
	Rani J. Boyt	Noble Energy, Inc.	not less than 1/8	DB 445-835			
	Mary Chidester	Noble Energy, Inc.	not less than 1/8	DB 449-523			
	Thomas Daniel Spencer	Noble Energy, Inc.	not less than 1/8	DB 449-553			
	Norma R. Spencer, Trustee	Noble Energy, Inc.	not less than 1/8	DB 465-262			
	Clara Catherine Carpenter	Noble Energy, Inc.	not less than 1/8	DB 449-529			
	David Dean	The state of the s					
		Noble Energy, Inc.	not less than 1/8	DB 448-749			
	WV Minerals, Inc.	Noble Energy, Inc.	not less than 1/8	DB 460-590			
	Thomas Kilcoyne	JB Exploration I, LLC	not less than 1/8	DB 404-107			
	Patricia Catarello	JB Exploration I, LLC	not less than 1/8	DB 410-174			
	JB Exploration I, LLC	Noble Energy, Inc.	N/A	DB 461-628			
3: No Lease Number	Roy D. Hadley	Керсо	not less than 1/8	DB 232-30			
	Jay Bee Production	Kepco	not less than 1/8	DB 232-30			
	Donald Seckman	Керсо	not less than 1/8	DB 232-30			
	Thomas W. Furbee	Керсо	not less than 1/8	DB 232-30			
	Betty Weese & Roger Weese	Керсо	not less than 1/8	DB 232-30			
	Linda Weese						
		Kepco	not less than 1/8	DB 232-30			
	Kepco	Peake Energy, Inc.	N/A	DB 319-291			
	Peake Energy, Inc.	Four Leaf Land Company	N/A	DB 403-566			
	Four Leaf Land Company	Antero Resources Appalachian	C N/A	DB 403-566			
	Antero Resources Appalachian Corporation	Noble Energy, Inc.	N/A	DB 422-517			
	Ralph T. Sweeney	Four Leaf Land Company	not less than 1/8	DB 370-599			
	Anna Sweeney	Four Leaf Land Company	not less than 1/8	DB 370-635			
	Lamoyne Sweeney	Four Leaf Land Company	not less than 1/8	DB 370-617			
	Gloria A. Morris	Four Leaf Land Company	not less than 1/8	DB 397-669			
	Donald L. Sweeney	Four Leaf Land Company	not less than 1/8	DB 370-605			
	Devon R. Horsley	Four Leaf Land Company	not less than 1/8				
	Rodger A. Sweeney	Four Leaf Land Company		DB 370-629			
	51		not less than 1/8	DB 370-611			
	Four Leaf Land Company	Antero Resources Appalachian (DB 403-561			\subseteq
	Antero Resources Appalachian Corporation	Noble Energy, Inc.	N/A	DB 422-517	(0)		Ō
	Mary S. Furbee Zebley	Noble Energy, Inc.	not less than 1/8	DB 440-447	Gas		4-
	Thomas Val Furbee	Noble Energy, Inc.	not less than 1/8	DB 440-443	10		00
	Allison Furbee Hardin	Noble Energy, Inc.	not less than 1/8	DB 440-453	0		- (I)
	Rani J. Boyt	Noble Energy, Inc.	not less than 1/B	DB 445-835	/ED and	100	
	Mary Chidester	Noble Energy, Inc.	not less than 1/8	DB 449-523	\Box	2015	00
	Thomas Daniel Spencer	Noble Energy, Inc.	not less than 1/8	DB 449-553	LU E	2	50
	Norma R. Spencer, Trustee	Noble Energy, Inc.	not less than 1/8	DB 465-262	> ~		
	Clara Catherine Carpenter	Noble Energy, Inc.	not less than 1/8	DB 449-529	1116	10	= 0
	David Dean	Noble Energy, Inc.	not less than 1/8	DB 448-749	×0	0	0 =
	WV Minerals, Inc.	Noble Energy, Inc.		DB 440-743	- u		Q 75
	Thomas Kilcoyne	JB Exploration I, LLC	not less than 1/8	DB 460-590 DB 404-107	RECEIVE of Oil an	APR	0 9
			not less than 1/B		03	-1	
	Patricia Catarello JB Exploration I, LLC	JB Exploration I, LLC	not less than 1/8	DB 410-174	25		- C
	Is exploration i, LLC	Noble Energy, Inc.	N/A	DB 461-628	Office		WV Department of Environmental Protecti
4: No Lease Number	Roy D. Hadley	Керсо	not less than 1/8	DB 232-30	0		3 5
	Jay Bee Production	Керсо	not less than 1/8	DB 232-30	Sec.		5
	Donald Seckman	Керсо	not less than 1/8	DB 232-30			1.3.3
	Thomas W. Furbee	Керсо					100%
	Betty Weese & Roger Weese		not less than 1/8	DB 232-30			
		Kepco	not less than 1/8	DB 232-30			
	Linda Weese	Kepco	not less than 1/8	DB 232-30			
	Kepco	Peake Energy, Inc.	N/A	DB 319-291			
	Peake Energy, Inc.	Four Leaf Land Company	N/A	DB 403-566			
	Four Leaf Land Company	Antero Resources Appalachian		DB 403-566			
	Antero Resources Appalachian Corporation	Noble Energy, Inc.	N/A	DB 422-517			
	Ralph T. Sweeney	Four Leaf Land Company	not less than 1/8	DB 370-599			
	Anna Sweeney	Four Leaf Land Company	not less than 1/8	DB 370-635			
	Lamoyne Sweeney	Four Leaf Land Company	not less than 1/8	DB 370-617			

	Gloria A. Morris	Four Leaf Land Company	not less than 1/8	DB 397-669
	Donald L. Sweeney	Four Leaf Land Company	not less than 1/8	DB 370-605
	Devon R. Horsley	Four Leaf Land Company	not less than 1/8	DB 370-629
	Rodger A. Sweeney	Four Leaf Land Company	not less than 1/8	D8 370-611
	Four Leaf Land Company	Antero Resources Appalachian (DB 403-561
	Antero Resources Appalachian Corporation	Noble Energy, Inc.	N/A	DB 422-517
	Mary S. Furbee Zebley	Noble Energy, Inc.	not less than 1/8	DB 440-447
	Thomas Val Furbee	Noble Energy, Inc.	not less than 1/8	DB 440-443
	Allison Furbee Hardin	Noble Energy, Inc.	not less than 1/8	DB 440-453
	Rani J. Boyt	Noble Energy, Inc.	not less than 1/8	DB 445-835
	Mary Chidester	Noble Energy, Inc.	not less than 1/8	DB 449-523
	Thomas Daniel Spencer	Noble Energy, Inc.	not less than 1/8	DB 449-553
	Norma R. Spencer, Trustee	Noble Energy, Inc.	not less than 1/8	DB 465-262
	Clara Catherine Carpenter David Dean	Noble Energy, Inc.	not less than 1/8	DB 449-529
	WV Minerals, Inc.	Noble Energy, Inc.	not less than 1/8	DB 448-749
		Noble Energy, Inc.	not less than 1/8	DB 460-590
	Thomas Kilcoyne	JB Exploration I, LLC	not less than 1/8	DB 404-107
	Patricia Catarello	JB Exploration I, LLC	not less than 1/8	DB 410-174
	IB Exploration I, LLC	Noble Energy, Inc.	N/A	DB 461-628
5: Q080517002	Kevin Board	Drilling Appalachian Corporation	not less than 1/8	DB 330-426
Q080517002	David Board	Drilling Appalachian Corporation		DB 330-426
Q080517002	Terry Board	Drilling Appalachian Corporation		DB 330-426
Q080517011	Jennifer Sexson	Drilling Appalachian Corporation		DB 330-657
Q080517013	Howard Stubbs and Nelda Stubbs	Drilling Appalachian Corporation		DB 330-241
Q080517009	Joe Seckman	Drilling Appalachian Corporation	and the second s	DB 330-507
Q080517008	Lori Lynn Briggs	Drilling Appalachian Corporation		DB 330-579
Q080517010	Walter Seckman	Drilling Appalachian Corporation		DB 330-430
Q080517001	Camilla Ash	Drilling Appalachian Corporation	7	DB 330-430 DB 330-575
Q080517016	Antonia Underwood	Drilling Appalachian Corporation		DB 330-575
Q080517003	Michael E. Fisher	Drilling Appalachian Corporation	Complete Com	DB 330-503
Q080517007	Pamela Ann Higginbotham	Drilling Appalachian Corporation		DB 330-237
Q080517017	Donna S. Wolther	Drilling Appalachian Corporation		DB 330-742
Q080517004	Glenda Gregory	Drilling Appalachian Corporation		DB 330-549
Q080517006	Eva Jean Hoover	Drilling Appalachian Corporation		DB 330-542
Q080517005	Creal Hoover	Drilling Appalachian Corporation		DB 330-491
Q080517015	Robert Travis	Drilling Appalachian Corporation		DB 330-487
Q080517014	Joseph Travis	Drilling Appalachian Corporation	and the state of t	DB 330-511
Q080517012	Josephine Spencer	Drilling Appalachian Corporation		DB 330-233
No Lease Number	Drilling Appalachian Corporation	Antero Resources Appalachian (DB 391-416
No Lease Number	Antero Resources Appalachian Corporation	Noble Energy, Inc.	N/A	DB 422-517
No Lease Number	Jacqueline Bonnell	Orilling Appalachian Corporation		DB 409-253
No Lease Number	Kimberly Dawn Jackson	Drilling Appalachian Corporation		DB 395-795
No Lease Number	Scott Seckman	Drilling Appalachian Corporation		DB 395-797
No Lease Number	Drilling Appalachian Corporation	Noble Energy, Inc.	N/A	DB 452-641
No Lease Number	Iris Rheinhardt	Noble Energy, Inc.	not less than 1/8	DB 485-642
No Lease Number	Gary A. Rheinhardt, Jr.	Noble Energy, Inc.	not less than 1/8	DB 449-527
Q080517018	Charles D. Rheinhardt	Noble Energy, Inc.	not less than 1/8	DB 459-531
Q080517022	David Rheinhardt	Noble Energy, Inc.	not less than 1/8	DB 453-633
Q080517021	Randall Rheinhardt	Noble Energy, Inc.	not less than 1/8	DB 453-535
No Lease Number	Tami Rheinhardt	Noble Energy, Inc.	not less than 1/8	DB 465-270
Q080517020	Keith Rheinhardt	Noble Energy, Inc.	not less than 1/8	DB 449-525
6: Q088053001	Susan Spencer & James Spencer	Noble Energy, Inc.	not less than 1/8	DB 462-527
Q088053004	Leola Frances Ray & Kenna Ray	Noble Energy, Inc.	not less than 1/8	DB 465-529
Q088053007	Charles Gary Carder	Noble Energy, Inc.	not less than 1/8	DB 471-690
Q088053003	Lloyd Underwood & Betty Underwood	Noble Energy, Inc.	not less than 1/8	DB 465-532
Q088053002	Mona Lee Williams	Noble Energy, Inc.	not less than 1/8	DB 465-523
Q088053005	Raymond Underwood & Doris Underwood	Noble Energy, Inc.	not less than 1/8	DB 465-523
Q088053006	Robert Monroe & Sandra Monroe	Noble Energy, Inc.	not less than 1/8	DB 465-526
Q088053008	Wayne Allen Carder	Noble Energy, Inc.	not less than 1/8	DB 471-694
	Andrew Agents and the second	ovar isi o		
7: Q088841003	Susan Spencer & James Spencer	Noble Energy, Inc.	not less than 1/8	DB 465-266
Q088841005	Leola Frances Ray & Kenna Ray	Noble Energy, Inc.	not less than 1/8	DB 465-529
200220000	Charles Gary Carder	Noble Energy, Inc.	not less than 1/8	DB 471-690
Q088841002	Lloyd Underwood & Betty Underwood	Noble Energy, Inc.	not less than 1/8	DB 465-532
Q088841006	Mona Lee Williams	Noble Energy, Inc.	not less than 1/8	DB 465-523
C088841001	Raymond Underwood & Doris Underwood	Noble Energy, Inc.	not less than 1/8	DB 465-535
Q088841004	Robert Monroe & Sandra Monroe	Noble Energy, Inc.	not less than 1/8	DB 465-526
	Wayne Allen Carder	Noble Energy, Inc.	not less than 1/8	DB 471-694

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APR 07 2015

This MEMORANDUM OF LEASE, dated t	his 5th day of March , 2014, is
utilized to indicate the existence of a PAID-UP OIL AND	CIAS I FASE (hereingfler "I ence") of suce data bear to the
corporation, whose address is at 333 Technology Drive	sssor whether one or more), and NOBLE EMERGY, INC., a Delaware Suite 116. Canonsburg, Pennsylvania 15317, (hereinafter, "Lessee").
Lessor did LEASE, LET, GRANT, and DE	MISE exclusively unto Lessee, its successors and/or assigns, the rights to
limited to the following:	ow, subject to the provisions contained in the Lease including, but not
to all following.	
1. PRIMARY TERM: The primary term of the Les	ase is for a period of five (5) years commencing on the date immediately
	has provide differential, or the Lease is otherwise maintained or prolonged luding an extension of term contained therein. Lessee may extend the ars after the end of the primary term, thereby continuing the term of the
Lease to the end of the "extended" primary term.	as ance the end of the primary term, thereby continuing the term of the
2. DESCRIPTION / LEASED PREMISES: All those of	ertain tracts of land situate in the District of McElroy, County of Tyler,
State of West Virginia, generally bounded now or for	merly as follows:
On the North by: Everett Roy and Betty J. Weese	
On the East by: Roger R. Weese	
On the South by: Becky Jo Board (Life Estate)	
On the West by: Larry Henthorn, Rosemary Smith Ha	
and being the same land acquired by Lessor by virtue of	instrument recorded in the Office of Clerk of the County Commission in
purpose of calculating payments, Fifteen (15.00) acres, n	nore or less ("Leased Premises").
This Memorandum of Lease has been execute	d for the purpose of providing notice of the existence of the Lease and
shall not be considered in any way a modification or alter	ration of the Lease.
WPENECO.	**************************************
WYENESS:	LESSOR:
Varant 12 (10,000	ALLAN P. SPENCER LIVING TRUST DATED 9/30/2003
Stopatine	α (α)
- Salamic	Today & Jan 1 1/2 1
Tames D. Share	Signature Signature
James B Chapman Printed Name	Printed Name: Noma R. Spencer, Trustee
. I mice i temic	A Court of Court R. Spencer, 1 rustee
	3367 Druffertin (Sine.
	Address Q ()
	1/4234
	449 00
	LESSEE:
WITNESS:	43-5-5-5-5-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-
	NOBLE ENERGY, INC.
	ay ALTO
Signature	Signature
	By: MARK A. ACREE
	Its: Attorney-In-Fact
Printed Name	

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Office of Oil and Gas

JAN 2 6 2015

INDIVIDUAL ACKNOWLEDGMENT

STATE/COMMONWEALTH OF_	Ohio §
COUNTY OF Summit	
The foregoing instrument was ackn R. Spencer, acting as Trustee for the Allan	owledged before me, this day of, 2014. by Noma P. Spencer Living Trust, dated 9/30/2003.
MY COMMISSION EXPIRES:	Signature JAMES B. CHAPMAN, Allohay At LEA
	My Commiss on Hat the Expension Date
	Printed Name
	Notary Public
COMMONWEALTH OF PENNSYLVANIA COUNTY OF WASHINGTON	\$
	DBLE ENERGY, INC., a Delaware corporation, personally known to me to be the in instrument and acknowledged to me that he executed the same for the purposes ation.
In witness thereof, I hereunto set my	hand and affixed my seal.
My Commission Expires:	
	Signature
	Printed Name
	Notary Public

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

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Office of Oil and Gas

JAN 2 6 2015

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

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

- PRIMARY TERM: The primary term of the Lease is for a period of five (5) years commencing on the date immediately
 set forth above, and for so long thereafter as oil, gas, or other substances covered by the Lease are capable of being produced in
 paying quantities from the Leased Premises or from lands pooled therewith, or the Lease is otherwise maintained or prolonged
 pursuant to the provisions contained in the Lease, including an extension of term contained therein. Lessee may extend the
 primary term of the Lease for an additional five (5) years after the end of the primary term, thereby continuing the term of the
 Lease to the end of the "extended" primary term.
- DESCRIPTION / LEASED PREMISES: All those certain tracts of land situate in the District of McElroy, County of Tyler, State of West Virginia, generally bounded now or formerly as follows:

On the North by:
On the East by:
On the South by:
On the West by:
Underwood Blaine Est and Wells Vivian Janice

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

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

Signature Signature Printed Name	Signature Printed Name: Lloyd W. Underwoo Address: 1316 10 5t	<u>d</u>
Signature Signature But Printed Name	LESSOR: Betty Jean Una Signature Printed Name: Betty Jean Underwo Address: 1314 (0 P St.	<u>od</u>
WITNESS:	LESSEE: NOBLE ENERGY, INC.	
Signature Printed Name	Signature By: MARK A. ACREE Its: Attorney-In-Fact	RECEIVED
		Office of Oil and Gas

JAN 2 6 2015

INDIVIDUAL ACKNOWLEDGMENT

STATE / COMMO	NWEALTH OF	last Maria
	The second secon	N62. 411 71 240 8
COUNTY OF	Wood	
The foregoing W. Underwood and B	g instrument was acknow etty Jean Underwood, h	ledged before me, this 22 day of September. 2014, by Lloye is wife.
My Commission Expir	RES:	Christ .
		Signature
O	FICIAL SEAL	ReAT
Notary Publ	c, State Of West Virginia	Printed Name
	SON BETTS P O Box 6598	Notary Public
	elina, WV 26003 R	
	CC	RPORATE ACKNOWLEDGMENT
COMMONWEALTH C	DE DENDENI MANUA	W
COUNTY OF WASHIN		§ 8
		,
On this	day of	, 20, before me, the undersigned officer, personally appeared
MARK A. ACREE, as A	ttorney-in-Fact for NOB	E ENERGY, INC., a Delaware corporation, personally known to me to be the
therein contained and or	subscribed to the within behalf of said corporati	instrument and acknowledged to me that he executed the same for the purposes
morem comanica and of	i benan or said corporati	AL.
In witness the	reof, I hereunto set my h	nd and affixed my seal.
MY COMMISSION EXPIR	ES:	
		Signature
		Printed Name
		Notary Public

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JAN 2 6 2015

WV Department of Environmental Protection

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

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

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

- PRIMARY TERM: The primary term of the Lease is for a period of five (5) years commencing on the date immediately
 set forth above, and for so long thereafter as oil, gas, or other substances covered by the Lease are capable of being produced in
 paying quantities from the Leased Premises or from lands pooled therewith, or the Lease is otherwise maintained or prolonged
 pursuant to the provisions contained in the Lease, including an extension of term contained therein. Lessee may extend the
 primary term of the Lease for an additional five (5) years after the end of the primary term, thereby continuing the term of the
 Lease to the end of the "extended" primary term.
- DESCRIPTION / LEASED PREMISES: All those certain tracts of land situate in the District of MeElroy, County of Tyler,
 State of West Virginia, generally bounded now or formerly as follows:

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

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

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

WITNESS:	LESSOR
Signature N	Signature Allan Carder
Jahn Bert	Printed Name: Wayne Allan Carder Address: 204 57 = 5t
Printed Name	Vienny WV 26105
WITNESS:	LESSEE:
	NOBLE ENERGY, INC.
Signature	
	Signature By: MARK A. ACREE
Printed Name	Its: Attorney-In-Fact

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JAN 26 7015

COMMONWEALTH OF PENNSYLVANIA §
COUNTY OF WASHINGTON §

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

Notary Public

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

MY COMMISSION EXPIRES:

Signature
Printed Name

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Office of Oil and Gas

JAN 2 6 2015

WV Department of Environmental Protection

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

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

- PRIMARY TERM: The primary term of the Lease is for a period of five (5) years commencing on the date immediately
 set forth above, and for so long thereafter as oil, gas, or other substances covered by the Lease are capable of being produced in
 paying quantities from the Leased Premises or from lands pooled therewith, or the Lease is otherwise maintained or prolonged
 pursuant to the provisions contained in the Lease, including an extension of term contained therein. Lessee may extend the
 primary term of the Lease for an additional five (5) years after the end of the primary term, thereby continuing the term of the
 Lease to the end of the "extended" primary term.
- DESCRIPTION / LEASED PREMISES: All those certain tracts of land situate in the District of McElroy, County of Tyler, State of West Virginia, generally bounded now or formerly as follows:

On the North by:
On the East by:
On the South by:
On the West by:

Everette Roy Weese and Betty June Weese

James Edward Cumberledge and Linda L. Davoli

Rayburn & Sheila Lawrence and Billy J & Jacky Jo

Underwood Blaine Est and Wells Vivian Janice

and being the same land acquired by Lessor by virtue of instrument recorded in the Office of Clerk of the County Commission in Deed Book 388, Page 164, said land being identified for tax purposes as 95-18-11 on this date, and stipulated to contain, for the purpose of calculating payments, One Hunded Thirty-One and 00/100 (131.00) acres, more or less ("Leased Premises").

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

WITNESS:	LESSOR:
Signature Signature Printed Name	Signature Printed Name: Susan L. Spencer Address: HC 74 Box 98 Alma W 76320
Signature Signature Printed Name	LESSOR: James Spener Signature Printed Name: James Spencer Address: HC 24 Box 98 Afra WU 26320
WITNESS:	LESSEE:
	NOBLE ENERGY, INC.
Signature	7
	Signature By: MARK A. ACREE
Printed Name	Its: Attorney-In-Fact

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Office of Oil and Gas

JAN 2 6 2015

INDIVIDUAL ACKNOWLEDGMENT

STATE / COMMONWEALTH OF West	- Vicona - 8
COUNTY OF Tyles	8
The foregoing instrument was acknowledged b	efore me, this like day of Start 2014 by Samuel
Spencer and James Spencer, her husband.	efore me, this ve day of xet. , 2014, by Susan L.
OFFICIAL SEAL Notary Public, State Of West Virginia JASON BETTS P O Box 6598 Wheeling, WV 28003 My Commission Expires May 14, 2023	Signature Some But Some Printed Name Notary Public
CORPORA	TE ACKNOWLEDGMENT
COMMONWEALTH OF PENNSYLVANIA § COUNTY OF WASHINGTON §	
MARK A. ACREE, as Attorney-in-Fact for NOBLE ENE	RGY, INC., a Delaware corporation, personally known to me to be the nt and acknowledged to me that he executed the same for the purposes
In witness thereof, I hereunto set my hand and a	affixed my seal.
My Commission Expires:	
	Signature
	Printed Name Notary Public
	aroung a dolle

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Office of Oil and Gas

JAN 2 6 2015

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

116, Canonsburg, Pennsylvania 15317, (hereinafter, "Lessee").

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

- PRIMARY TERM: The primary term of the Lease is for a period of five (5) years commencing on the date immediately set forth above, and for so long thereafter as oil, gas, or other substances covered by the Lease are capable of being produced in paying quantities from the Leased Premises or from lands pooled therewith, or the Lease is otherwise maintained or prolonged pursuant to the provisions contained in the Lease, including an extension of term contained therein. Lessee may extend the primary term of the Lease for an additional five (5) years after the end of the primary term, thereby continuing the term of the Lease to the end of the "extended" primary term.
- DESCRIPTION / LEASED PREMISES: All those certain tracts of land situate in the District of McElroy, County of Tyler, State of West Virginia, generally bounded now or formerly as follows:

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

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

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

Signature Signature Printed Name	Signature Printed Name: Robert Errol Monroe Address: 78 Canaan Daive Scott Deg-t, WV 25520-7686
WITNESS: Robert Eurl Mourn Signature Printed Name	LESSOR: Signature Printed Name: Sandra Monroe Address: 78 Congan Dr. Ve Scott Legat, WV 25560-7686
WITNESS:	LESSEE:
Signature	NOBLE ENERGY, INC. Signature By: MARK A. ACREE
Printed Name	lts: Attorney-In-Fact

RECEIVED Office of Oil and Gas

JAN 2 6 2015

INDIVIDUAL ACKNOWLEDGMENT STATE / COMMONWEALTH OF COUNTY OF day of October, 2014, by Robert The foregoing instrument was acknowledged before me, this 2 Errol Monroe and Sandra Monroe, his wife. MY OSIMISSION EXPINES OFFICIAL SEAL Notary Public, State Of West Virginia JASON BETTS P O Box 6598 Minagling, WV 28093 Signature (Whosling, WV 26003 My Commission Expires May 14, 2023 Printed Name Notary Public CORPORATE ACKNOWLEDGMENT COMMONWEALTH OF PENNSYLVANIA COUNTY OF WASHINGTON On this _____day of _____, 20____, before me, the undersigned officer, personally appeared MARK A. ACREE, as Attorney-in-Fact for NOBLE ENERGY, INC., a Delaware corporation, personally known to me to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same for the purposes therein contained and on behalf of said corporation. In witness thereof, I hereunto set my hand and affixed my seal. MY COMMISSION EXPIRES: Signature

Printed Name Notary Public

> RECEIVED Office of Oil and Gas

> > JAN 2 6 2015

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

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

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

- PRIMARY TERM: The primary term of the Lease is for a period of five (5) years commencing on the date immediately
 set forth above, and for so long thereafter as oil, gas, or other substances covered by the Lease are capable of being produced in
 paying quantities from the Leased Premises or from lands pooled therewith, or the Lease is otherwise maintained or prolonged
 pursuant to the provisions contained in the Lease, including an extension of term contained therein. Lessee may extend the
 primary term of the Lease for an additional five (5) years after the end of the primary term, thereby continuing the term of the
 Lease to the end of the "extended" primary term.
- Description / Leased Premises: All those certain tracts of land situate in the District of McElroy, County of Tyler, State of West Virginia, generally bounded now or formerly as follows:

On the North by:
On the East by:
On the South by:
On the West by:

Everette Roy Weese and Betty June Weese
James Edward Cumberledge and Linda L. Davoli
Rayburn & Sheila Lawrence and Billy J & Jacky Jo
Underwood Blaine Est and Wells Vivian Janice

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

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

Signature Printed Name	LESSOR: Laymond V Underwood Signature Printed Name: Raymond V. Underwood Address: 12 965 Purkabag WV 26104
Signature Printed Name	LESSOR: Waris Underwood Signature Printed Name: Doris Underwood Address: 12965 Cms. Ne. Prints by W. 26107
WITNESS:	LESSEE: NOBLE ENERGY, INC.
Signature	Signature By: MARK A. ACREE
Printed Name	Its: Attorney-In-Fact

RECEIVED
Office of Oil and Gas

JAN 2 6 2015

INDIVIDUAL ACKNOWLEDGMENT

STATE / COMMONWEALTH OF	ect Virginia 8
COUNTY OF	
The foregoing instrument was acknowledg Raymond V. Underwood and Doris Underwood,	ed before me, this 22 day of September, 2014, by
My Commission Expires:	12
OFFICIAL SEAL Notary Public, State Of West Virginia JASON BETTS P O Box 6568	Signatura Poby
Wheeling, WV 26003 My Commission Expires May 14, 2023	Notary Public
COMMONWEALTH OF PENNSYLVANIA § SCOUNTY OF WASHINGTON §	DRATE ACKNOWLEDGMENT
MARK A. ACREE, as Attorney-in-Fact for NOBLE	, 20 , before me, the undersigned officer, personally appeared ENERGY, INC., a Delaware corporation, personally known to me to be the nument and acknowledged to me that he executed the same for the purposes
In witness thereof, I hereunto set my hand	and affixed my seal.
MY COMMISSION EXPIRES:	
	Signature
	Printed Name
	Notary Public

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

RECEIVED Office of Oil and Gas

JAN 2 6 2015

PAGE2 WV Department of Environmental Protection 04/17/2015

Pennsylvania 15317, (hereinafter, "Lessee").

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

- 1. PRIMARY TERM: The primary term of the Lease is for a period of five (5) years commencing on the date immediately set forth above, and for so long thereafter as oil, gas, or other substances covered by the Lease are capable of being produced in paying quantities from the Leased Premises or from lands pooled therewith, or the Lease is otherwise maintained or prolonged pursuant to the provisions contained in the Lease, including an extension of term contained therein. Lessee may extend the primary term of the Lease for an additional five (5) years after the end of the primary term, thereby continuing the term of the Lease to the end of the "extended" primary term.
- DESCRIPTION / LEASED PREMISES: All those certain tracts of land situate in the District of McElroy, County of Tyler, State of West Virginia, generally bounded now or formerly as follows:

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

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

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

WITNESS:	LESSOR:
Signature Jason Bray	Signature Printed Name: Mona Lee Williams Address:
Printed Name	
WITNESS:	LESSEE:
	NOBLE ENERGY, INC.
Signature	
Printed Name	Signature By: MARK A. ACREE Its: Attorney-In-Fact

RECEIVED Office of Oil and Gas

JAN 2 6 2015

INDIVIDUAL ACKNOWLEDGMENT STATE / COMMONWEALTH OF West Virginia S COUNTY OF CARACA SEAL Notary Public, State Of West Virginia JASON BETTS POBEX 6558 Wheeling, WY 26003 My Commission Expires May 14, 2023 CORPORATE ACKNOWLEDGMENT COMMONWEALTH OF PENNSYLVANIA S COUNTY OF WASHINGTON S On this day of 20 before me, the undersigned officer, personally appeared MARK A. ACREE, as Attorney-in-Fact for NOBLE ENERGY, INC., a Delaware corporation, personally known to me to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same for the purposes therein contained and on behalf of said corporation.

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

MY COMMISSION EXPIRES:

Signature
Printed Name

Notary Public

RECEIVED
Office of Oil and Gas

JAN 2 6 2015

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

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

- PRIMARY TERM: The primary term of the Lease is for a period of five (5) years commencing on the date immediately
 set forth above, and for so long thereafter as oil, gas, or other substances covered by the Lease are capable of being produced in
 paying quantities from the Leased Premises or from lands pooled therewith, or the Lease is otherwise maintained or prolonged
 pursuant to the provisions contained in the Lease, including an extension of term contained therein. Lessee may extend the
 primary term of the Lease for an additional five (5) years after the end of the primary term, thereby continuing the term of the
 Lease to the end of the "extended" primary term.
- DESCRIPTION / LEASED PREMISES: All those certain tracts of land situate in the District of McElrov. County of Tyler, State of West Virginia, generally bounded now or formerly as follows:

On the North by:
On the East by:
On the South by:
On the West by:
Underwood Blaine Est and Wells Vivian Janice

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

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

	WITNESS:	LESSOR:
	Signature	Lyola Kary Signature
	Jasan Butts	Printed Name : Leola Frances Ray a/k/a Leola Ray Address :
	Printed Name	
	WITNESS:	LESSOR:
K	Signature /	K Kenn & Ry Signature
	Leola Ray	Printed Name : Kenna Ray Address :
	Printed Name	
	WITNESS:	LESSEE:
		NOBLE ENERGY, INC.
	Signature	
		Signature By: MARK A. ACREE
	Printed Name	Its: Attorney-In-Fact

RECEIVED
Office of Oil and Gas

JAN 2 6 7015

INDIVIDUAL ACKNOWLEDGMENT

STATE / COMMONWEALTH OF West	10-15
1 - 20	VICPAIL S
COUNTY OF Kananha	§ .
The foregoing instrument was acknowledged b Frances Ray a/k/a Leola Ray and Kenna Ray, her hus	
MY COMMISSION EXPIRES:	- Q 2 B 5
OFFICIAL SEAL Notary Public, State Of West Virginia	Signature Jasa Rotts
JASON BETTS P O Box 6598 Wheeling, WV 26003 My Commission Expires May 14 2023	Printed Name Notary Public
CORPORA	TE ACKNOWLEDGMENT
COMMONWEALTH OF PENNSYLVANIA § COUNTY OF WASHINGTON §	
MARK A. ACREE, as Attorney-in-Fact for NOBLE ENE	, 20, before me, the undersigned officer, personally appeared RGY, INC., a Delaware corporation, personally known to me to be the nt and acknowledged to me that he executed the same for the purposes
In witness thereof, I hereunto set my hand and a	affixed my seal.
MY COMMISSION EXPIRES:	
	Signature
	Printed Name
	Notary Public

RECEIVED Office of Oil and Gas

JAN 2 6 2015

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

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

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

- PRIMARY TERM: The primary term of the Lease is for a period of five (5) years commencing on the date immediately
 set forth above, and for so long thereafter as oil, gas, or other substances covered by the Lease are capable of being produced in
 paying quantities from the Leased Premises or from lands pooled therewith, or the Lease is otherwise maintained or prolonged
 pursuant to the provisions contained in the Lease, including an extension of term contained therein. Lessee may extend the
 primary term of the Lease for an additional five (5) years after the end of the primary term, thereby continuing the term of the
 Lease to the end of the "extended" primary term.
- DESCRIPTION / LEASED PREMISES: All those certain tracts of land situate in the District of McElroy. County of Tyler, State of West Virginia, generally bounded now or formerly as follows:

On the North by:	Everette Roy Weese and Betty June Weese
On the East by:	Susan L. Spencer
On the South by:	Rayburn & Sheila Lawrence and Billy J & Jacky Jo
On the West by:	Underwood Blaine Est and Wells Vivian Janice
WIII BOOK 101, P	e land acquired by Lessor by virtue of instrument recorded in the Office of Clerk of the County Commission in age 297 and recorded in Wood County, WY, said land being identified for tax purposes as 05-18-11 on this d to contain, for the purpose of calculating payments, One Hundred Thirty-One and 00/100 (131,00) acres, sed Premises").

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

WITNESS:	LESSOR:
Signature	Signature Sary Landen
Jasa Barr	Printed Name: Charles Gary Carder Address: 944 Hi Charles Ed
Printed Name	Waterford, ott 45786-6195
WITNESS:	LESSEE:
	NOBLE ENERGY, INC.
Signature	
	Signature By: MARK A. ACREE
Printed Name	Its: Attorney-In-Fact

RECEIVED
Office of Oil and Gas

JAN 26 2015

STATE/COMMONWEALTH OF	108
COUNTY OF PALMER	§
The foregoing instrument was acknowledge Gary Carder, a single man.	ed before me, this 20 day of October, 2014, by Charles
MY COMMISSION EXPIRES:	1 N
Sworn to and subscribed	Signature
before me this	Signature
20 day of Oct 2014	Printed Name
Station District	Notary Public
JASON BETTE	
HOTARY PUBLIC, STATE OF CERO	
My Commission Expires 672 COLP O	RATE ACKNOWLEDGMENT
COMMONWEALTH OF PENNSYLVANIA § COUNTY OF WASHINGTON §	
MARK A. ACREE, as Augmey-in-Fact for NOBLE F.	NERGY, INC., a Delaware corporation, personally known to me to be the ment and acknowledged to me that he executed the same for the purposes
In witness thereof, I hereunto set my hand as	nd affixed my seal.
MY COMMISSION EXPIRES:	
	Signature
	Printed Name
	Notary Public

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

RECEIVED Office of Oil and Gas

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

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

- PRIMARY TERM: The primary term of the Lease is for a period of five (5) years commencing on the date immediately
 set forth above, and for so long thereafter as oil, gas, or other substances covered by the Lease are capable of being produced in
 paying quantities from the Leased Premises or from lands pooled therewith, or the Lease is otherwise maintained or prolonged
 pursuant to the provisions contained in the Lease, including an extension of term contained therein. Lessee may extend the
 primary term of the Lease for an additional five (5) years after the end of the primary term, thereby continuing the term of the
 Lease to the end of the "extended" primary term.
- DESCRIPTION / LEASED PREMISES: All those certain tracts of land situate in the District of McElroy, County of Tyler, State of West Virginia, generally bounded now or formerly as follows:

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

Will Book 101. Page 297 and recorded in Wood County, WY, said land being identified for tax purposes as 05-18-10 on this date, and stipulated to contain, for the purpose of calculating payments, Two and Ninety-Two Hundredths (2.92) acres, more or less ("Leased Premises").

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

WITNESS:	LESSOR:
0 n=	Wayne Allaw Carder
Signature	Signature
Juan Brotts	Printed Name: Wavne Allan Carder Address: 209 57 Street
Printed Name	Vienna, WV 26105
WITNESS:	LESSEE:
	NOBLE ENERGY, INC.
Signature	
	Signature
	By: MARK A. ACREE
Printed Name	Its: Attorney-In-Fact

RECEIVED
Office of Oil and Gas

INDIVIDUAL ACKNOWLEDGMENT STATE / COMMONWEALTH OF WEST VICENZ COUNTY OF_ The foregoing instrument was acknowledged before me, this 22 day of 0(As 2014, by Wayne Allan Carder, a married man dealing with his sole and separate property. MY COMMISSION EXPIRES: OFFICIAL SEAL
Notary Public, State Of West Virginia
JASON BETTS
P O Box 6598 Signature Printed Name Wheeling, WV 26003 My Commission Expires May 14, 2023 Notary Public CORPORATE ACKNOWLEDGMENT COMMONWEALTH OF PENNSYLVANIA COUNTY OF WASHINGTON On this _____day of _____, 20_____, before me, the undersigned officer, personally appeared MARK A. ACREE, as Attorney-in-Fact for NOBLE ENERGY, INC., a Delaware corporation, personally known to me to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same for the purposes therein contained and are backlef fortil contained. therein contained and on behalf of said corporation. In witness thereof, I hereunto set my hand and affixed my seal. MY COMMISSION EXPIRES: Signature Printed Name

Notary Public

RECEIVED
Office of Oil and Gas

JAN 2 6 2015

WV Department of Environmental Protection

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

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

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

- PRIMARY TERM: The primary term of the Lease is for a period of five (5) years commencing on the date immediately set forth above, and for so long thereafter as oil, gas, or other substances covered by the Lease are capable of being produced in paying quantities from the Leased Premises or from lands pooled therewith, or the Lease is otherwise maintained or prolonged pursuant to the provisions contained in the Lease, including an extension of term contained therein. Lessee may extend the primary term of the Lease for an additional five (5) years after the end of the primary term, thereby continuing the term of the Lease to the end of the "extended" primary term.
- DESCRIPTION / LEASED PREMISES: All those certain tracts of land situate in the District of McElroy, County of Tyler, State of West Virginia, generally bounded now or formerly as follows:

On the North by:	Everette Roy Weese and Betty June Weese
On the East by:	Susan L. Spencer
On the South by:	Rayburn & Sheila Lawrence and Billy J & Jacky Jo
On the West by:	Underwood Blaine Est and Wells Vivian Janice
Deed Book 388, P	e land acquired by Lessor by virtue of instrument recorded in the Office of Clerk of the County Commission i age 164, said land being identified for tax purposes as 95-18-10 on this date, and stipulated to contain, for the ting payments, Two and Ninety-Two Hundredths (2.92) acres, more or less ("Leased Premises").

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

Signature Jasin Berts Printed Name	Signature Printed Name: Susan L. Spencer Address: HC 74 BA 94 Alma WV 2632
WITNESS: Signature Jason Borry Printed Name	LESSOR: Signature Printed Name: James Spencer Address: 40 14 Bot 98 Alma W 26328
WITNESS:	LESSEE:
Signature Printed Name	NOBLE ENERGY, INC. Signature By: MARK A. ACREE Its: Attorney-In-Fact
Printed Name	ALC: FAROTHEY THE LOCK

RECEIVED Office of Oil and Gas

This MEMORANDUM OF LEASE, dated this 20 day of August. 2014, is utilized to indicate the existence of a PAID-UP OIL AND GAS LEASE (hereinafter, "Lease") of even date herewith, by and between Robert Errol Monroe and Sandra Monroe, his wife, whose mailing address is: 78 Cannan Drive, Scott Depot, WV 25560-7686 (hereinafter, "Lessor" whether one or more), and NOBLE ENERGY, INC., a Delaware corporation, whose address is at 333 Technology Drive, Suite 116, Canonsburg, Pennsylvania 15317, (hereinafter, "Lessoe").

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

- PRIMARY TERM: The primary term of the Lease is for a period of five (5) years commencing on the date immediately
 set forth above, and for so long thereafter as oil, gas, or other substances covered by the Lease are capable of being produced in
 paying quantities from the Leased Premises or from lands pooled therewith, or the Lease is otherwise maintained or prolonged
 pursuant to the provisions contained in the Lease, including an extension of term contained therein. Lesse may extend the
 primary term of the Lease for an additional five (5) years after the end of the primary term, thereby continuing the term of the
 Lease to the end of the "extended" primary term.
- DESCRIPTION / LEASED PREMISES: All those certain tracts of land situate in the District of McElroy. County of Tyler.
 State of West Virginia, generally bounded now or formerly as follows:

On the North by:	Everette Roy Weese and Betty June Weese	36
On the East by:	Susan L. Spencer	r
On the South by: Rayburn & Sheila Lawrence and Billy J & Jacky Jo		
On the West by:	Underwood Blaine Est and Wells Vivian Janice	

and being the same land acquired by Lessor by virtue of instrument recorded in the Office of Clerk of the County Commission in Will Book 742. Page 134 and recorded in Kanawha County, WY, said land being identified for tax purposes as 05-18-10 on this date, and stipulated to contain, for the purpose of calculating payments, Two and Ninety-Two Hundredths (2.92) acres, more or less ("Leased Premises").

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

Signature Printed Name	Signature Printed Name: Robert Errol Monroe Address: 78 Cansan Doins, Sott Dept, W
WITNESS: Signature Signature B. A.S. Printed Name	Signature Printed Name: Sandra Monroe Address: 73 Canadan Dave, Scott Dept, W
WITNESS:	LESSEE: NOBLE ENERGY, INC.
Signature	Signature
Printed Name	By: MARK A. ACREE Its: Attorney-In-Fact

RECEIVED
Office of Oil and Gas

STATE / COMMONWEALTH OF	1000
COUNTY OF Patram	\$ a
The foregoing instrument was acknowledged by	sefore me, this 28 day of August, 2014, by Robert
Errol Monroe and Sandra Monre, his wife.	20 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
At- Ca	1) 05
OFFICIAL SEAL	- Chr
Notary Public, State Of West Virginia JASON BETTS	Signature
P O Box 6598	Jum Bets
Wheeling, WV 26003 My Commission Expires May 14, 2023	Printed Name
thy Commission Explies may 14, 2023 y	Notary Public
CORPORA	TE ACKNOWLEDGMENT
COMMONWEALTH OF PENNSYLVANIA 6	
COUNTY OF WASHINGTON &	
On this day of	, 20, before me, the undersigned officer, personally appeared
MARK A. ACREE, as Attorney-in-Fact for NOBLE ENE	RGY, INC., a Delaware corporation, personally known to me to be the
therein contained and on behalf of said corporation.	ent and acknowledged to me that he executed the same for the purposes
The state of the state of sale corporation.	
In witness thereof, I hereunto set my hand and	affixed my seal.
My Commission Expires:	
ITT COMMISSION EXPIRES.	
	Signature
	Printed Name
	Notary Public
	LIVING LADIO

PREPARED BY / UPON RECORDATION, RETURN TO: Land Department NOBLE ENERGY, INC. 333 Technology Drive, Suite 116 Canonsburg, PA 15317 RECEIVED
Office of Oil and Gas

JAN 1 6 7315

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

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

- PRIMARY TERM: The primary term of the Lease is for a period of five (5) years commencing on the date immediately set forth above, and for so long thereafter as oil, gas, or other substances covered by the Lease are capable of being produced in paying quantities from the Leased Premises or from lands pooled therewith, or the Lease is otherwise maintained or prolonged pursuant to the provisions contained in the Lease, including an extension of term contained therein. Lessee may extend the primary term of the Lease for an additional five (5) years after the end of the primary term, thereby continuing the term of the Lease to the end of the "extended" primary term.
- DESCRIPTION / LEASED PREMISES: All those certain tracts of land situate in the District of McElroy, County of Tyler, State of West Virginia, generally bounded now or formerly as follows:

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

and being the same land acquired by Lessor by virtue of instrument recorded in the Office of Clerk of the County Commission in FR Book 66. Page 316 and recorded in Wood County, WV, said land being identified for tax purposes as 05-18-10 on this date, and stipulated to contain, for the purpose of calculating payments, Two and Ninety-Two Hundredths (2.92) acres, more or less ("Leased Premises").

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

Signature Jas Brots Printed Name	Signiture Printed Name: Raymond V. Underwood Address: 12 945 Emrs Ma
WITNESS: Signature JA222 Bears Printed Name	Signature Printed Name: Doris Underwood Address: 12965 Encom Are. Printed Name: WV26104
WITNESS:	LESSEE: NOBLE ENERGY, INC.
Signature Printed Name	Signature By: MARK A. ACREE Its: Attorney-In-Fact

RECEIVED Office of Oil and Gas

STATE / COMMONWEALTH OF WOST	Virginia &
COUNTY OF NOOD	§ 2.
The foregoing instrument was acknowledged be Raymond V, Underwood and Doris Underwood, his w	
My Commission Expires:	1. 125
OFFICIAL SEAL Notary Public, State Of West Virginia JASON BETTS P O Box 5598	Signature Jasa Buts
Wheeling, WV 26003	Printed Name
My Commission Expires May 14, 2023	Notary Public
COMMONWEALTH OF PENNSYLVANIA § COUNTY OF WASHINGTON §	
MARK A. ACREE, as Attorney-in-Fact for NOBLE ENE	, 20, before me, the undersigned officer, personally appeared RGY, INC., a Delaware corporation, personally known to me to be the nt and acknowledged to me that he executed the same for the purposes
In witness thereof, I hereunto set my hand and a	affixed my seal.
My COMMISSION EXPIRES:	
	Signature
	Printed Name
	Notary Public

PREPARED BY / UPON RECORDATION, RETURN TO: Land Department NOBLE ENERGY, INC. 333 Technology Drive, Suite 116 Canonsburg, PA 15317 RECEIVED
Office of Oil and Gas

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

- PRIMARY TERM: The primary term of the Lease is for a period of five (5) years commencing on the date immediately
 set forth above, and for so long thereafter as oil, gas, or other substances covered by the Lease are capable of being produced in
 paying quantities from the Leased Premises or from lands pooled therewith, or the Lease is otherwise maintained or prolonged
 pursuant to the provisions contained in the Lease, including an extension of term contained therein. Lessee may extend the
 primary term of the Lease for an additional five (5) years after the end of the primary term, thereby continuing the term of the
 Lease to the end of the "extended" primary term.
- Description / Leased Premises: All those certain tracts of land situate in the District of McElroy, County of Tyler.
 State of West Virginia, generally bounded now or formerly as follows:

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

and being the same land acquired by Lessor by virtue of instrument recorded in the Office of Clerk of the County Commission in Will Book 742, Page 134 and recorded in Kanawha County, WV, said land being identified for tax purposes as 05-18-10 on this date, and stipulated to contain, for the purpose of calculating payments, Two and Ninety-Two Hundredths (2.92) acres, more or less ("Leased Premises").

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

Signature Signature Printed Name	Signature Printed Name: Mona Lee Williams Address: 822 Chest + 5+ Charleston, WV
WITNESS:	LESSEE: NOBLE ENERGY, INC.
Signature	Signature
Printed Name	By: MARK A. ACREE Its: Attorney-In-Fact

RECEIVED
Office of Oil and Gas

STATE / COMMONWEALTH OF West	-Vigina &
COUNTY OF Putnem	§
The foregoing instrument was acknowledged Lee Williams, a widow.	before me, this 28 day of Argust, 2014, by Mona
My Commission Expires:	(1) P3
OFFICIAL SEAL Notary Public, State Of West Virginia JASON BETTS P O Box 5599 Wheeling, WV 28063 My Commission Expires May 14, 2023	Printed Name Notary Public
CORPOR	RATE ACKNOWLEDGMENT
COMMONWEALTH OF PENNSYLVANIA § COUNTY OF WASHINGTON §	
MARK A. ACREE, as Attorney-in-Fact for NOBLE EN	, 20, before me, the undersigned officer, personally appeared NERGY, INC., a Delaware corporation, personally known to me to be the ment and acknowledged to me that he executed the same for the purposes
In witness thereof, I hereunto set my hand an	d affixed my seal.
My COMMISSION EXPIRES:	
	Signature
	Printed Name

RECEIVED Office of Oil and Gas

JAN 2 6 2015

PREPARED BY / UPON RECORDATION, BETURN TO: Land Department NOBLE ENERGY, Inc. NOBLE ENERGY, Inc. S33 Technology Drive, Suite 116 Canonsburg, PA 15317

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

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

- PRIMARY TERM: The primary term of the Lease is for a period of five (5) years commencing on the date immediately
 set forth above, and for so long thereafter as oil, gas, or other substances covered by the Lease are capable of being produced in
 paying quantities from the Leased Premises or from lands pooled therewith, or the Lease is otherwise maintained or prolonged
 pursuant to the provisions contained in the Lease, including an extension of term contained therein. Lessee may extend the
 primary term of the Lease for an additional five (5) years after the end of the primary term, thereby continuing the term of the
 Lease to the end of the "extended" primary term.
- DESCRIPTION / LEASED PREMISES: All those certain tracts of land situate in the District of McElroy, County of Tyler, State of West Virginia, generally bounded now or formerly as follows:

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

and being the same land acquired by Lessor by virtue of instrument recorded in the Office of Clerk of the County Commission in Deed Book 16. Page 612, said land being identified for tax purposes as 05-18-10 on this date, and stipulated to contain, for the purpose of calculating payments, Two and Ninety-Two Hundredths (2.92) acres, more or less ("Lessed Premises").

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

Signature Jason Botts	Signature Printed Name: Lloyd W. Underwalddress: 1316 - 107	ood STreeT
Printed Name	VIUNNA, W. VA	26105
Signature Jas-Buts Printed Name	Signature Printed Name: Betty Jean Under Address: 1316 - 105 S	wood
WITNESS:	LESSEE: NOBLE ENERGY, INC.	
Signature		
Printed Name	Signature By: MARK A. ACREE Its: Attorney-In-Fact	RECEIVED Office of Oil and Gas

JAN 2 6 2015

STATE / COMMONWEALTH OF	Jest Virginia 8
COUNTY OF Wood	8
The foregoing instrument was acknow W. Underwood and Betty Jean Underwood, I	vledged before me, this 12 day of August , 2014, by Lloye
MY COMMISSION EXPIRES:	Q 85
OFFICIAL SEAL Motary Public, State Of West Virginia JASON BETTS P O Box 6538 Wheeting, WY 28003 My Commission Expires May 14, 2023	Signature Printed Name Notary Public
cc	DRPORATE ACKNOWLEDGMENT
COMMONWEALTH OF PENNSYLVANIA COUNTY OF WASHINGTON	§ §
	20 before me, the undersigned officer, personally appeared LE ENERGY, INC., a Delaware corporation, personally known to me to be the instrument and acknowledged to me that he executed the same for the purposes on.
In witness thereof, I hereunto set my hi	and and affixed my seal.
MY COMMISSION EXPIRES:	
	Signature
	Printed Name
	Notary Public

RECEIVED
Office of Oil and Gas

JAN 2 6 2015

WV Department of Environmental Protection

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

This MEMORANDUM OF LEASE, dated this \(\frac{1}{2} \frac{1}{2} \) day of \(\frac{August}{2}, \) 2014, is utilized to indicate the existence of a PAID-UP OIL AND GAS LEASE (hereinafter, "\(\frac{1}{2}\text{ease}" \)) of even date herewith, by and between \(\frac{1}{2}\text{eola Frances Ray a/k/a Leola Ray and Kenna Ray, her husband, whose mailing address is: \(\frac{824}{2} \) Chestnut Street, \(\frac{Charleston, WV 25309-2034}{2} \) (hereinafter, "\(\frac{1}{2}\text{essor}" \) whether one or more), and NOBLE ENERGY, INC., a Delaware corporation, whose address is at 333 Technology Drive, Suite 116, Canonsburg, Pennsylvania 15317, (hereinafter, "\(\frac{1}{2}\text{essec}" \)).

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

- PRIMARY TERM: The primary term of the Lease is for a period of five (5) years commencing on the date immediately
 set forth above, and for so long thereafter as oil, gas, or other substances covered by the Lease are capable of being produced in
 paying quantities from the Leased Premises or from lands pooled therewith, or the Lease is otherwise maintained or prolonged
 pursuant to the provisions contained in the Lease, including an extension of term contained therein. Lessee may extend the
 primary term of the Lease for an additional five (5) years after the end of the primary term, thereby continuing the term of the
 Lease to the end of the "extended" primary term.
- Description / Leased Premises: All those certain tracts of land situate in the District of McElroy, County of Tyler, State of West Virginia, generally bounded now or formerly as follows:

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

and being the same land acquired by Lessor by virtue of instrument recorded in the Office of Clerk of the County Commission in Will Book 742, Page 134 and recorded in Kanawha County, WV, said land being identified for tax purposes as 05-18-10 on this date, and stipulated to contain, for the purpose of calculating payments, Two and Ninety-Two Hundredths (2.92) acres, more or less ("Leased Premises").

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

WITNESS: Signature Printed Name	LESSOR: Leola Frances Ray a/k/a Address: 324 Chestart St	Leola Ray
Signature Signature Printed Name	Signature Printed Name: Kenna Ray Address: By Chestrat St.	Charleston, WV
WITNESS:	LESSEE: NOBLE ENERGY, INC.	
Signature	Signature	
Printed Name	By: MARK A. ACREE Its: Attorney-In-Fact	RECEIVED Office of Oil and Gas

STATE / COMMONWEALTH OF Nest	V-Rynin 8
COUNTY OF Putrom	§
The foregoing instrument was acknowledged Frances Ray a/k/a Leola Ray and Kenna Ray, her h	before me, this 28 day of August, 2014, by Leola
Company and Device Star and Itema Institute a	
My COMMISSION EXPIRES:	11,125
OFFICIAL SEAL	Signature
Notary Public, State Of West Virginia JASON BETTS	Just Butts
P O Box 6598	Printed Name
Whoeling, WV 26003 My Commission Expires May 14, 2023	Notary Public
	1.0000
CORPOR	ATE ACKNOWLEDGMENT
COLUMN TAL THE OF BRIDGE COLUMN TO A	
COMMONWEALTH OF PENNSYLVANIA § COUNTY OF WASHINGTON 8	
COUNTY OF WASHINGTON 9	
On this day of	, 20, before me, the undersigned officer, personally appeared
MARK A. ACREE, as Attorney-in-Fact for NOBLE EN	ERGY, INC., a Delaware corporation, personally known to me to be the
person whose name is subscribed to the within instrum	nent and acknowledged to me that he executed the same for the purposes
therein contained and on behalf of said corporation.	
In witness thereof, I hereunto set my hand and	d affixed my seal.
My Commission Expires:	
	Signature
	Printed Name
	Notary Public

PREPARED BY / UPON RECORDATION, RETURN TO: Land Department NOBLE ENERGY, INC. 333 Technology Drive, Suite 116 Canonsburg, PA 15317 RECEIVED Office of Oil and Gas

JAN 2 6 2015

This MEMORANDUM OF LEASE, dated this 10 day of October, 2014, is utilized to indicate the existence of a PAID-UP OIL AND GAS LEASE (hereinafter, "Lease") of even date herewith, by and between Charles Gary Carder, a single man, whose mailing address is: 944 Hickman Road, Waterford, OH 45786-6195 (hereinafter, "Lessor" whether one or more), and NOBLE ENERGY, INC., a Delaware corporation, whose address is at 333 Technology Drive, Suite 116, Canonsburg, Pennsylvania 15317, (hereinafter, "Lessee").

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

- PRIMARY TERM: The primary term of the Lease is for a period of five (5) years commencing on the date immediately
 set forth above, and for so long thereafter as oil, gas, or other substances covered by the Lease are capable of being produced in
 paying quantities from the Leased Premises or from lands pooled therewith, or the Lease is otherwise maintained or prolonged
 pursuant to the provisions contained in the Lease, including an extension of term contained therein. Lessee may extend the
 primary term of the Lease for an additional five (5) years after the end of the primary term, thereby continuing the term of the
 Lease to the end of the "extended" primary term.
- DESCRIPTION / LEASED PREMISES: All those certain tracts of land situate in the District of McElroy, County of Tyler, State of West Virginia, generally bounded now or formerly as follows:

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

and being the same land acquired by Lessor by virtue of instrument recorded in the Office of Clerk of the County Commission in Will Book 101, Page 297 and recorded in Wood County, WV, said land being identified for tax purposes as 05-18-10 on this date, and stipulated to contain, for the purpose of calculating payments, Two and Ninety-Two Hundredths (2.92) acres, more or less ("Leased Premises").

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

WITNESS:	LESSOR:
9.00	Charles Gary Carder
Signature	Signature
Jason Berts	Printed Name: Charles Gary Carder Address: 944 Hackman Rd
Printed Name	Waterfiel , OH 45786-6195
	1
WITNESS:	LESSEE:
	NOBLE ENERGY, INC.
Signature	
	Signature By MARY A ACRES
Printed Name	By: MARK A. ACREE lts: Attorney-In-Fact

RECEIVED
Office of Oil and Gas

JAN 2 6 2015

STATE / COMMONWEALTH OF _OHIO	S
COUNTY OF _ Palmer	8
The foregoing instrument was acknowledged Gary Carder, a single man.	before me, this 20 day of October . 2014, by Charles
MY COMMISSION EXPIRES: JASON BETTS HOTARY PUBLIC, STATE OF ORIO My Commission Expires 5/13/2017 Sworn to and subscribed before me this day of Ock , 2014	Signature Printed Name Notary Public
CORPOR	ATE ACKNOWLEDGMENT
COMMONWEALTH OF PENNSYLVANIA § COUNTY OF WASHINGTON §	
MARK A. ACREE, as Attorney-in-ract for NOBLE EN	20, before me, the undersigned officer, personally appeared ERGY, INC., a Delaware corporation, personally known to me to be the sent and acknowledged to me that he executed the same for the purposes
In witness thereof, I hereunto set my hand and	d affixed my seal.
My Commission Expires:	
	Signature
	Printed Name Notary Public

PREPARED BY / UFON RECORDATION, RETURN TO: Land Department NOBLE ENERGY, INC. 333 Technology Drive, Suite 116 Canonsburg, PA 15317 RECEIVED
Office of Oil and Gas

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

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

- 1. PRIMARY TERM: The primary term of the Lease is for a period of five (5) years commencing on the date immediately set forth above, and for so long thereafter as oil, gas, or other substances covered by the Lease are capable of being produced in paying quantities from the Leased Premises or from lands pooled therewith, or the Lease is otherwise maintained or prolonged pursuant to the provisions contained in the Lease, including an extension of term contained therein. Lessee may extend the primary term of the Lease for an additional five (5) years after the end of the primary term, thereby continuing the term of the Lease to the end of the "extended" primary term.
- DESCRIPTION / LEASED PREMISES: All those certain tracts of land situate in the District of McFiroy. County of Tyler.
 State of West Virginia, generally bounded now or formerly as follows:

On the North by:	Everett Roy Weese and Betty June Weese
On the East by:	Everett Roy Weese and Betty June Weese
On the South by:	Lawrence Rayburn, et al
On the West by:	Lawrence Rayburn, et al
Deed Book 449:	e land acquired by Lessor by virtue of instrument recorded in the Office of Clerk of the County Commission i 454. Page 741: 443, said land being identified for tax purposes as 05-18-8 on this date, and stipulated to urpose of calculating payments, eighty-three and sixty-two hundredths (83.62) acres, more or less ("Leaso

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

WITNESS:	LESSOR:
David E. Elepart	Janu & Ren be sualt
Signature	Signature
200000	Printed Name: Tami Rheinhardt a/k/a Tami Dawn
DAVIDE. RHEINHARDT	Rheinhardt
Printed Name	Address: 1291 F. Main 21
	Salem WV 26426
WITNESS:	LESSEE:
	NOBLE ENERGY, INC.
Signature	
	Signature
	By: MARK A. ACREE
Printed Name	Its: Attorney-In-Fact

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Office of Oil and Gas

STATE/COMMONWEALTH OF WEST	<u> ۷، ۲۵، ۸ 8</u>
COUNTY OF HARRISON	§
The foregoing instrument was acknowledged b Rheinhardt a/k/a Tami Dawn Rheinhardt, a single wo	efore me, this <u>574</u> day of <u>SEPTEMBER</u> , 2014, by <u>Tami</u> man.
My CONMISSION EXPIRES:	willing Offi
	Signature
Notary Public, State Of West Virginia WILLIAM J ROBINSON 155 N Ex 51 Greenery NV 28724	WILLIAM J ROBINSON
156 N Etk S1	Printed Name
Gassaway, WV 26624 My Commission Expires December 21, 2022	Notary Public
CORPORA	TE ACKNOWLEDGMENT
COMMONWEALTH OF PENNSYLVANIA § COUNTY OF WASHINGTON §	
MAKK A. ACREE, as Attorney-in-Fact for NOBLE ENE	20 before me, the undersigned officer, personally appeared RGY, INC., a Delaware corporation, personally known to me to be the nt and acknowledged to me that he executed the same for the purposes
In witness thereof, I hereunto set my hand and a	offixed my seal.
MY COMMISSION EXPIRES:	
	Signature
	Printed Name
	Notary Public

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

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Office of Oil and Gas

and Dora Seekm "Lessor" whether	ian, husband and wife, whose maili	er, "Lease") of even date herewith, by and being address is: 705 Jefferson Run Rd., Alm	- W// 26220 (hard-0-)
explore, develop,	produce, and market oil and/or gas an um, from the premises described belo	MISE exclusively unto Lessee, its successors of all constituent products, including methane ow, subject to the provisions contained in the	
paying quantities pursuant to the pr primary term of the	from the Leased Premises or from lar rovisions contained in the Lease incl	ase is for a period of five (5) years commenci- rother substances covered by the Lease are cands pooled therewith, or the Lease is otherwi- luding an extension of term contained thereians after the end of the primary term, thereby	spable of being produced in se maintained or prolonged
2. <u>Descrip</u> State of West Virg	TION / LEASED PREMISES: All those coinia, generally bounded now or former	ertain tracts of land situate in the District of I rly as follows:	McElroy, County of Tyler,
On the North by:	(05-15-36)		
On the East by:	Lillie Seckman heirs (05-15-34)		
On the South by:	(05-15-38)	· · · · · · · · · · · · · · · · · · ·	
On the West by:	Lillie Seekman heirs (05-15-37)		
nesa Rook 281' h	age 422, said land being identified for	instrument recorded in the Office of Clerk of r tax purposes as <u>05-15-35</u> on this date, and stres, more or less (" <u>Leased Premises</u> ").	the County Commission in tipulated to contain, for the
This Mer shall not be conside	morandum of Lease has been execute ered in any way a modification or alter	ed for the purpose of providing notice of the ration of the Lease.	existence of the Lease and
WITNESS: Signature Blake	W Jus	LESSOR: Nonal J. Jectoma Signature Printed Name: Donald L. Seckman Address: 20 S Taffer Sol	Run Rd.
Printed Name		ALMA WV Z63	20
Signature Shake T	not ha	Signature	Penald.
Printed Name	Maritha	alma, w. V 24.3.	
WITNESS:		LESSEE:	
		NOBLE ENERGY, INC.	
Signature			
Printed Name		Signature By: MARK A. ACREE Its: Attorney-In-Fact	RECEIVED Office of Oil and Gas
			Cince of Oil and Gas
			JAN 2 6 2015

STATE / COMMONWEALTH OF	w v
COUNTY OF Tyler	
My Commission Expires:	wiedged before me, this 31 day of October . 2014, by Donald wife.
Official Seal Notiny Public State of West Virginic Blake Thatcher 1937 Journant Roses Charleston, WY 25317 My commission expires Fobruary 5, 26	
COMMONWEALTH OF PENNSYLVANIA COUNTY OF WASHINGTON	ORPORATE ACKNOWLEDGMENT § §
therein contained and on behalf of said corporat	, 20, before me, the undersigned officer, personally appeared BLE ENERGY, INC., a Delaware corporation, personally known to me to be the instrument and acknowledged to me that he executed the same for the purposes tion.
In witness thereof, I hereunto set my h	iand and affixed my seal.
MY COMMISSION EXPIRES:	
	Signature
	Printed Name Notary Public
	rotal fuone

RECEIVED
Office of Oil and Gas

JAN 2 6 2015

WV Department of Environmental Protection

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

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

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

- 1. PRIMARY TERM: The primary term of the Lease is for a period of five (5) years commencing on the date immediately set forth above, and for so long thereafter as oil, gas, or other substances covered by the Lease are capable of being produced in paying quantities from the Leased Premises or from lands pooled therewith, or the Lease is otherwise maintained or prolonged pursuant to the provisions contained in the Lease, including an extension of term contained therein. Lessee may extend the primary term of the Lease for an additional three (3) years after the end of the primary term, thereby continuing the term of the Lease to the end of the "extended" primary term.
- DESCRIPTION / LEASED PREMISES: All those certain tracts of land situate in the District of McElroy, County of Tyler,
 State of West Virginia, generally bounded now or formerly as follows:

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

Robert J. Kocher et al, Mitchell D. Herrick

On the East by:

On the South by: Roger R. Weese
On the West by: Betty June Weese

Deed Book 432, Page 381, said land being identified	of instrument recorded in the Office of Clerk of the County Commission in d for tax purposes as <u>P/O 05-15-32</u> , 05-15-28, 05-15-28.1, 05-15-28.2, 05-contain, for the purpose of calculating payments, <u>One Hundred Fifty and s</u> ").
This Memorandum of Lease has been exec shall not be considered in any way a modification or a	tuted for the purpose of providing notice of the existence of the Lease and alteration of the Lease.
WITNESS: Oldey R. Sinners Oshley R. Sinners Printed Name	LESSOR: WV MINERALS; INC. Dean Harris, President
WITNESS:	LESSEE:
	NOBLE ENERGY, INC.
ignature	
Neinted Mana	Signature By: MARK A. ACREE

RECEIVED
Office of Oil and Gas

JAN 2 6 2015

CORPORATE ACKNOWLEDGMENT

	STATE / COMMONWEALTH OF L	est U	icuinia 8
	STATE / COMMONWEALTH OF L.		§
	On this 15th day of 4 vacs+ Harris, acting as President of WV Minerals,	Inc., a We	2014, before me, the undersigned officer, personally appeared Deast Virginia Corporation, personally known to me (or satisfactorii the within instrument and acknowledged to me that he accounted the
	In witness thereof, I hereunto set my h	and and affi	ixed my official seal.
	My Commission Expires:		777.2
8	MOTARY RELIC OF CALL SEAL MARK A. MUDRICK State of West Veryinia Ny Commission Empires Hovember 30, 2022 23 SOUTH NEW DR. SLEE COL BROGEFORT, NY 2000	7	Signature Mosk A. Modscel Printed Name Notary Public
	co	RPORATE	ACKNOWLEDGMENT
	COMMONWEALTH OF PENNSYLVANIA COUNTY OF WASHINGTON	§ §	
	On this day of	nstrument z	, 20, before me, the undersigned officer, personally appeared by, INC., a Delaware corporation, personally known to me to be the and acknowledged to me that he executed the same for the purposes
	In witness thereof, I hereunto set my ha	nd and affin	ked my seal.
	MY COMMISSION EXPIRES:		
		3	Signature
		Ī	Printed Name
		1	Notary Public

RECEIVED
Office of Oil and Gas

JAN 2 6 2015

WV Department of Environmental Protection

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



Office of Oil & Gas 601 57th street, SE Charleston, WV 25304-2345 December 15, 2014

Re: Drilling Under Roads

To Whom It May Concern:

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

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

Sincerely,

Dee Swiger

Regulatory Analyst III

DS/

Enclosures:

RECEIVED
Office of Oil and Gas

JAN 2 6 2015

Date of Notice Certification:

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

API No. 47- 095

		Wall Pod N	Name: SHR 3	
		Wen I au I	vame. Sinco	3
as been given:				
to the provisions in West Virginia Code § 22-6A, t	the Operator has prov	ided the rec	luired parties w	vith the Notice Forms listed
the tract of land as follows:				
West Virginia		Easting:	515932.741	
095-Tyler	OTM NAD 65	Northing:	4362695.666	
Mc Elroy	Public Road Acce	ess:	County Rt. 58	
	Generally used fa	rm name:	Seckman	
d: huc-10 Mc Elroy Creek				
d by the secretary, shall be verified and shall contained the owners of the surface described in surface or required by subsections (b) and (c), section sixted the surface owner notice of entry to survey pursents of subsection (b), section sixteen of this article 22-6A-11(b), the applicant shall tender pro	ain the following inforbdivisions (1), (2) are teen of this article; (ii) suant to subsection (a icle were waived in	rmation: (14 nd (4), subs) that the rea a), section to writing by	4) A certification (b), section (b), section (c), section (d), section	on from the operator that (in the cition ten of this article, the deemed satisfied as a result cle six-a; or (iii) the notice owner; and Pursuant to Wes
		is Notice C	ertification	
Operator has properly served the required parties	with the following:			
CHECK ALL THAT APPLY				OOG OFFICE USE ONLY
				RECEIVED/
SEISMI	IC ACTIVITY WAS	CONDUC	TED	NOT REQUIRED
NOTICE OF ENTRY FOR PLAT SURVEY or	O PLAT SURVE	EY WAS CO	ONDUCTED	RECEIVED
NOTIC	E OF ENTRY FOR P			RECEIVED/ NOT REQUIRED
		BY SURFAC	CE OWNER	
NOTICE OF PLANNED OPERATION				☑ RECEIVED
PUBLIC NOTICE				☐ RECEIVED
NOTICE OF APPLICATION				RECEIVED
	to the provisions in West Virginia Code § 22-6A, the tract of land as follows: West Virginia 095-Tyler Mc Elroy Stirley d: huc-10 Mc Elroy Creek to West Virginia Code § 22-6A-7(b), every per doubt the secretary, shall be verified and shall contained the owners of the surface described in surface of entry to survey purents of subsections (b) and (c), section sixtension for the surface owner notice of entry to survey purents of subsection (b), section sixteen of this art Code § 22-6A-11(b), the applicant shall tender profice have been completed by the applicant. It to West Virginia Code § 22-6A, the Operator has Operator has properly served the required parties. CHECK ALL THAT APPLY NOTICE OF SEISMIC ACTIVITY or NOTICE OF ENTRY FOR PLAT SURVEY or NOTICE OF INTENT TO DRILL or NOTICE WAS CO	to the provisions in West Virginia Code § 22-6A, the Operator has proven the tract of land as follows: West Virginia	to the provisions in West Virginia Code § 22-6A, the Operator has provided the receptor that tract of land as follows: West Virginia	to the provisions in West Virginia Code § 22-6A, the Operator has provided the required parties we the tract of land as follows: West Virginia

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 and of Notice to the person may be made by affidavit of personal service, the return receipt card or other postal receipt for certified mailing.

JAN 2 6 2015

Certification of Notice is hereby given:

THEREFORE, 1	Kim Ward,, have read	d and understand	the notice requirements within West Virginia Code § 22-
6A. I certify tha	at as required under West Virginia Code §	22-6A, I have se	erved the attached copies of the Notice Forms, identified
above, to the re	quired parties through personal service, by	registered mail	or by any method of delivery that requires a receipt or
signature confirm	nation. 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	t based on my i	nquiry of those individuals immediately responsible for
obtaining the in	formation, I believe that the information is	true, accurate and	d complete. I am aware that there are significant penalties
	alse information, including the possibility of		
=			
Well Operator:	Noble Energy, Inc.	Address:	333 Technology Drive, Suite 116
By:	Hou		Canonsburg, PA 15317
Its:	Regulatory Analyst	Facsimile:	724-743-0050
Telephone:	724-820-3061	Email:	dswiger@nobleenergyinc.com
		-	
			1
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	NOTAR Stiffeld Seal Su	bscribed and swo	rgn before me this 5 day of ano. 2015.
N STWES	Notary Public	//	
S Contract	State of West Virginia	Ne 1	Notary Public
/(.漫藝	Dolores J Swiger 235 Cottage Avenue	/	
1	Weston WV 26452 My	y Commission Ex	pires 09/19/2023

Oil and Gas Privacy Notice:

Weston WV 26452 My Comm. Exp. 9-19-23

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

> RECEIVED Office of Oil and Gas

> > JAN 2 6 2015

WV Department of Environmental Prod<mark>94/17/2015</mark>

95 02237

OPERATOR WELL NO. SHR 30 MHS
Well Pad Name: SHR 30

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

Notice Time Requirement: notice shall be provided no later than the filing date of permit application. Date of Notice: Date Permit Application Filed: Notice of: PERMIT FOR ANY ☐ CERTIFICATE OF APPROVAL FOR THE WELL WORK CONSTRUCTION OF AN IMPOUNDMENT OR PIT Delivery method pursuant to West Virginia Code § 22-6A-10(b) PERSONAL REGISTERED ✓ METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION SERVICE MAIL 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) COAL OWNER OR LESSEE Name: Rebecca A. Seckman AKA Rebecca A. Barth Name: none Address: _______RECEIVED Address: 5042 Tyler Highway Sistersville, WV 26175 Name: Kathy A. Seckman AKA Kathy A. Roberts ☐ COAL OPERATOR Address: 42842 Trail Run Road Name: none New Maramoras, OH 45767 Address: ☐ SURFACE OWNER(s) (Road and/or Other Disturbance) SURFACE OWNER OF WATER WELLVV Department of Name: AND/OR WATER PURVEYOR(s) Environmental Protection Address: ____ Address: P.O. Box 254 Name: Middlebourne, WV 26149 Address: ☐ OPERATOR OF ANY NATURAL GAS STORAGE FIELD ☐ SURFACE OWNER(s) (Impoundments or Pits) Name: none Address: Name: Address: -04/17/2015*Please attach additional forms if necessary

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

Notice Time Requirement: notice shall be provided no later the	an the filing date of permit application.
Date of Notice: Date Permit Application Filed: Notice of:	
PERMIT FOR ANY WELL WORK CONSTRUCTION OF	PROVAL FOR THE AN IMPOUNDMENT OR PIT
Delivery method pursuant to West Virginia Code § 22-6A-10	O(b)
☐ PERSONAL ☐ REGISTERED ☑ METH	IOD OF DELIVERY THAT REQUIRES A
SERVICE MAIL RECE	IPT OR SIGNATURE CONFIRMATION
sediment control plan required by section seven of this article, and the surface of the tract on which the well is or is proposed to be loc oil and gas leasehold being developed by the proposed well work, i described in the erosion and sediment control plan submitted pursu operator or lessee, in the event the tract of land on which the well p more coal seams; (4) The owners of record of the surface tract or tr well work, if the surface tract is to be used for the placement, const impoundment or pit as described in section nine of this article; (5) have a water well, spring or water supply source located within one provide water for consumption by humans or domestic animals; and proposed well work activity is to take place. (c)(1) If more than the subsection (b) of this section hold interests in the lands, the applicance records of the sheriff required to be maintained pursuant to section provision of this article to the contrary, notice to a lien holder is not	the tenants in common or other co-owners of interests described in the new serve the documents required upon the person described in the eight, article one, chapter eleven-a of this code. (2) Notwithstanding any tontice to a landowner, unless the lien holder is the landowner. W. Va. provide the Well Site Safety Plan ("WSSP") to the surface owner and any
☐ Application Notice ☐ WSSP Notice ☐ E&S Plan Notice	e ☑ Well Plat Notice is hereby provided to:
SURFACE OWNER(s)	COAL OWNER OR LESSEE
Name: Charles E. Hamilton, Jr. Address: 17095 WV Rt. 23 N	Name: none RECEIVED
West Union, WV 26456	Address: Office of Oil and Gas
Name:	COAL OPERATOR
Address:	Name: none JAN 2 6 2015
	A didmond.
☐ SURFACE OWNER(s) (Road and/or Other Disturbance)	WV Department of
Name:	SURFACE OWNER OF WATER/WEDMental Protection
Address:	AND/OR WATER PURVEYOR(s)
Managemen	Name: Everett Roy & Betty June Weese Address: 2524 McElroy Creek Road
Name:	Alma, WV 26320
Address:	OPERATOR OF ANY NATURAL GAS STORAGE FIELD
SURFACE OWNER(s) (Impoundments or Pits)	Name: none
Name:	Address:
Address:	04/17/2015
	*Please attach additional forms if necessary

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

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

Noti	ce Time Requirement: notice shall be provi	ded no later	than the filing date of permit appl	ication.
	of Notice: Date Permit Applica	tion Filed: _		
v			PPROVAL FOR THE F AN IMPOUNDMENT OR PIT	
Deli	very method pursuant to West Virginia Co	de § 22-6A-	10(b)	
	PERSONAL REGISTERED SERVICE MAIL		THOD OF DELIVERY THAT REC	
sedin the st oil ar descr opera more well impo have provi propo subse recor provi Code	tered mail or by any method of delivery that recent control plan required by section seven of the trace of the tract on which the well is or is produced by the trace of the proposition of the erosion and sediment control plans attor or lessee, in the event the tract of land on vertical seams; (4) The owners of record of the survork, if the surface trace is to be used for the proposition of the surface trace is to be used for the produced water well, spring or water supply source located water for consumption by humans or domestical water for consumption by humans or domestical water for consumption by humans or domestical water for the produced water for consumption by humans or domestical water for consumption by humans or domes	his article, an posed to be led well work ubmitted pure which the well arface tract or lacement, contact within or stic animals; af more than the day, the application to section attor shall also attor shall also	d the well plat to each of the following coated; (2) The owners of record of the first of the surface tract is to be used for a suant to subsection (c), section seven proposed to be drilled is located [sic tracts overlying the oil and gas leased struction, enlargement, alteration, rep.) Any surface owner or water purvey the thousand five hundred feet of the first of the out (6) The operator of any natural gas aree tenants in common or other co-ocant may serve the documents require the interest of the first of the first of the operator of the control of the operator of the control of the operator of the control of the operator of t	ng persons: (1) The owners of record of the surface tract or tracts overlying the roads or other land disturbance as of this article; (3) The coal owner, is known to be underlain by one or hold being developed by the proposed pair, removal or abandonment of any or who is known to the applicant to center of the well pad which is used to storage field within which the wners of interests described in the of this code. (2) Notwithstanding any tien holder is the landowner. W. Va. WSSP") to the surface owner and any
	pplication Notice ☑ WSSP Notice ☑ E&	S Plan Noti	·	
	IRFACE OWNER(s) e: George G. Hamilton		COAL OWNER OR LESSEI	
20000000	ress: 2812 McElroy Creek Road	-	Address:	RECEIVED
	WV 26320	=	Address.	Office of Oil and Gas
	e: Gary L. Hamilton	_	COAL OPERATOR	and Gas
	ress: 102 Big Flint Road	-	Name: none	JAN 2 6 2015
West	Union, WV 26456	_	Address:	
□su	JRFACE OWNER(s) (Road and/or Other Dis	sturbance)		MAN D
Nam	e:	.	☐ SURFACE OWNER OF WA	THE THEORY OF THE PROPERTY OF
Addı	ress:	- 01		(-)
			Name:	
Nam	e:	-	Address:	
Addı	ress:	- 2	DOBEDATOR OF ANY NATI	URAL GAS STORAGE FIELD
	RFACE OWNER(s) (Impoundments or Pits	-	N. none	
	e:			
Add	ess.	=	Address:	
, radi	ress:	— T	7.27	04/17/2015

*Please attach additional forms if necessary

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

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

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

Date	of Notice: Date Permit Application Filed:	
Noti	ce of:	
V	PERMIT FOR ANY	PROVAL FOR THE
	The second control of	AN IMPOUNDMENT OR PIT
Deliv	very method pursuant to West Virginia Code § 22-6A-10	(b)
П	PERSONAL REGISTERED METH	OD OF DELIVERY THAT REQUIRES A
		IPT OR SIGNATURE CONFIRMATION
Durei	tant to W. Va. Code 8.22-64-10(h) no later than the filing date	of the application, the applicant for a permit for any well work or for a
registised in the su oil are described operation operati	tered mail or by any method of delivery that requires a receipt of the nent control plan required by section seven of this article, and the tract of the tract on which the well is or is proposed to be located gas leasehold being developed by the proposed well work, if the ibed in the erosion and sediment control plan submitted pursual attor or lessee, in the event the tract of land on which the well proposed seams; (4) The owners of record of the surface tract or trackwork, if the surface tract is to be used for the placement, construindment or pit as described in section nine of this article; (5) As a water well, spring or water supply source located within one de water for consumption by humans or domestic animals; and used well work activity is to take place. (c)(1) If more than three tection (b) of this section hold interests in the lands, the applicant distribution of this article to the contrary, notice to a lien holder is not	It as required by this article shall deliver, by personal service or by or signature confirmation, copies of the application, the erosion and he well plat to each of the following persons: (1) The owners of record of ated; (2) The owners of record of the surface tract or tracts overlying the of the surface tract is to be used for roads or other land disturbance as and to subsection (c), section seven of this article; (3) The coal owner, proposed to be drilled is located [sic] is known to be underlain by one or acts overlying the oil and gas leasehold being developed by the proposed fraction, enlargement, alteration, repair, removal or abandonment of any any surface owner or water purveyor who is known to the applicant to thousand five hundred feet of the center of the well pad which is used to defend the common or other co-owners of interests described in an any serve the documents required upon the person described in the eight, article one, chapter eleven-a of this code. (2) Notwithstanding any notice to a landowner, unless the lien holder is the landowner. W. Va. rovide the Well Site Safety Plan ("WSSP") to the surface owner and any as provided in section 15 of this rule.
☑A	pplication Notice WSSP Notice E&S Plan Notice	☑ Well Plat Notice is hereby provided to:
	RFACE OWNER(s)	COAL OWNER OR LESSEE
	e: Donald L. Seckman	Name: none RECEIVED
	ress: 705 Jefferson Run Road	Address: Office of Oil and Gas
	WV 26320 e: Beverly J. Seckman	- COAL OPERATOR
	ress: 353 Foundry Street	COAL OPERATOR Name: none JAN 2 6 2015
	Martinsville, WV 26155	Name: none
	RFACE OWNER(s) (Road and/or Other Disturbance)	Address: WV Department of
		SURFACE OWNER OF WATER WEDLENTAL Protection
Addr	e:	AND/OR WATER PURVEYOR(s)
Addi	ess:	
Nam	ρ'	Name:Address:
Addr	e:ess:	11001000
Audi		OPERATOR OF ANY NATURAL GAS STORAGE FIELD
	RFACE OWNER(s) (Impoundments or Pits)	Name
_	e:	Address:
Addr	ess:	
. raui		*Please attach additional forms if necessary

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

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

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

	e of Notice: Date Permit Application Filed:	
Noti	ce oi:	V.
V	PERMIT FOR ANY	APPROVAL FOR THE
=		OF AN IMPOUNDMENT OR PIT
	WEEL WORK CONSTRUCTION	OF AIN IMPOONDMENT ORTH
Deli	very method pursuant to West Virginia Code § 22-6	A-10(b)
	PERSONAL ☐ REGISTERED ☑ MI	ETHOD OF DELIVERY THAT REQUIRES A
7		ECEIPT OR SIGNATURE CONFIRMATION
	, , , , , , , , , , , , , , , , , , ,	
regis sedir the s oil and description well important important proving subservers of the control	tered mail or by any method of delivery that requires a recoment control plan required by section seven of this article, a surface of the tract on which the well is or is proposed to be and gas leasehold being developed by the proposed well wo ribed in the erosion and sediment control plan submitted position or lessee, in the event the tract of land on which the way coal seams; (4) The owners of record of the surface tract work, if the surface tract is to be used for the placement, coundment or pit as described in section nine of this article; a water well, spring or water supply source located within ide water for consumption by humans or domestic animals losed well work activity is to take place. (c)(1) If more than section (b) of this section hold interests in the lands, the appreciation of this article to the contrary, notice to a lien holder is	eight or signature confirmation, copies of the application, the erosion and and the well plat to each of the following persons: (1) The owners of record of clocated; (2) The owners of record of the surface tract or tracts overlying the rk, if the surface tract is to be used for roads or other land disturbance as arsuant to subsection (c), section seven of this article; (3) The coal owner, ell proposed to be drilled is located [sic] is known to be underlain by one or or tracts overlying the oil and gas leasehold being developed by the proposed construction, enlargement, alteration, repair, removal or abandonment of any (5) Any surface owner or water purveyor who is known to the applicant to one thousand five hundred feet of the center of the well pad which is used to c; and (6) The operator of any natural gas storage field within which the three tenants in common or other co-owners of interests described in colicant may serve the documents required upon the person described in the cition eight, article one, chapter eleven-a of this code. (2) Notwithstanding any is not notice to a landowner, unless the lien holder is the landowner. W. Va. Iso provide the Well Site Safety Plan ("WSSP") to the surface owner and any ting as provided in section 15 of this rule.
☑ A	pplication Notice ☑ WSSP Notice ☑ E&S Plan No	tice Well Plat Notice is hereby provided to:
	JRFACE OWNER(s)	COAL OWNER OR LESSEE
	e: Stanley E. Seckman	Name: none
	ress: 659 Jefferson Run Road	Address: RECEIVED
200000	e: Allen W. Seckman	COAL OPERATOR Office of Oil and Gas
	ress: 824 Jefferson Run Road	Name: none
	, WV 26320	Name: none Address: JAN 2 6 2015
-	JRFACE OWNER(s) (Road and/or Other Disturbance)	
2000	e:	SURFACE OWNER OF WATER WELL Partment of
	ress:	AND/OR WATER PURVEYOR(s) ironmental Protection
141000000		Name:
Nam	e:	Address:
Add	ress:	
		OPERATOR OF ANY NATURAL GAS STORAGE FIELD
□ SU	JRFACE OWNER(s) (Impoundments or Pits)	Name: none
Nam	e:	Address:
	ress:	04/17/2015
		*Please attach additional forms if necessary

API NO. 47-095

OPERATOR WELL NO. SHR 30 MHS

Well Pad Name: SHR 30

Notice is hereby given:

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

This Notice Shall Include:

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

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

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

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

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

Well Location Restrictions

Office of Oil and Gas 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 retain 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

API NO. 47-095

OPERATOR WELL NO. SHR 30 MHS

Well Pad Name: SHR 30

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: RECEIVED

Chief, Office of Oil and Gas Department of Environmental Protection 601 57th St. SE Charleston, WV 25304

Office of Oil and Gas

JAN 2 6 2015

(304) 926-0450

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

API NO. 47- 095

OPERATOR WELL NO. SHR 30 MHS

Well Pad Name: SHR 30

Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

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

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

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Office of Oil and Gas

JAN 2 6 2015

WV Department of Environmental 04/47/2015

RECEIVED Office of Oil and Gas

WW-6A WV Department of (8-13) Environmental Protection

API NO. 47- 095 - OPERATOR WELL NO. SHR 30 MHS

Well Pad Name: SHR 30

Notice is hereby given by:

Well Operator: Noble Energy, Inc.

Telephone: 724-820-3061 Email: dswiger@nobleenergyinc.com

Address: 333 Technology Drive Suite 116

Canonsburg, PA 15317 Facsimile: 724-743-0050

Oil and Gas Privacy Notice:

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

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

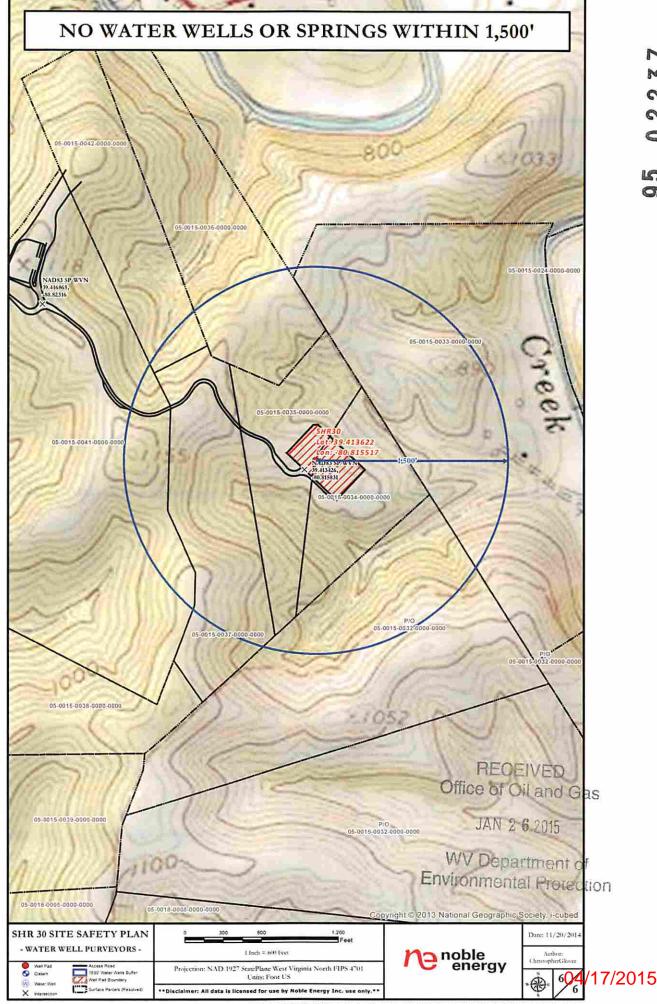
Subscribed and sworn before me this 15 day of Jan, 2015

Evnires 09/19/2023

Notary Public

My Commission Expires 09/19/2023

95 0223



STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF ENTRY FOR PLAT SURVEY

Notice	Time Ro	equirement:	Notice shall be provi	ded at l	least SEVEN (7) day	s but no more than	FORTY-FIVE (45) days prior to
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	Operator:	Noble Energy, Inc.	3)		Address:		2 6 2015
Teleph		724-820-3061	:		and the state of the second of	333 Technology Driv	re, Suite 116 Cenon sburg PA 15317
Email:			leenergyinc.com		Facsimile:	724-743-0050	Environmental Protection
							- Individual Protection

Oil and Gas Privacy Notice:

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

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF ENTRY FOR PLAT SURVEY

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04/17/2015

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF ENTRY FOR PLAT SURVEY

		quirement:	Notice shall be provided at	least SEVEN (7)	ays but no more that	FORTY-FIVE (45) days prior to
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	ne: Allen W. Se			Name:		
	ress: 824 Jeff	erson Run Roa	ad	Address		
_	a, WV 26320	S. d				
	ne: Donald L. S Iress: 705 Jeff		ad	■ MD	IEDAL ONAIEDO	
	a, WV 26320	erson Kun Ko	au.		VERAL OWNER(s)	
-	ne: Beverly J.	Seckman			ame as listed surface ow	
	ress: 353 Fou			Address		
New	Martinsville, W	V 26155		*please att	ach additional forms if ne	ecessary
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	tice is herel		y:	g 4231		
	ll Operator:	Noble Energy, Inc		Address:		JAN 2 6 2015
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STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF PLANNED OPERATION

	of Notice:	Date Pern		ation Filed:	date of permit	аррисацоп. ——
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■	CERTIFII RETURN	ED MAIL RECEIPT REQUESTED	☐ HAI	ND LIVERY		
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Well	Operator:	Noble Energy, Inc.		Address:	333 Technology D	Drive. Suite 116
	hone:	724-820-3061			Canonsburg, PA	
Email		dswiger@nobleenergyinc.com		Facsimile:	724-743-0050	A7 7 A 7
	25					
Oil a	nd Gas Pr	ivacy Notice:				

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 of your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

Operator Well No. SHR 30 MHS 95 0 2 2 3 7

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

		equirement: notice shall be provided no : Date Permit Ap	later than the filing plication Filed:		
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		listed in the records of the sheriff at the til . Hamilton, Jr.			
		WV Rt. 23 N	Address		
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Pursua operati State:	nt to We on on th	by given: st Virginia Code § 22-6A-16(c), notice is se surface owner's land for the purpose of West Virginia		well on the trace Easting:	ct of land as follows: 515932.741
County		095-Tyler	- nullium nulli	Northing:	4362695.666
Distric Quadra	_	Mc Elroy Shirley	_ Public Road A	d farm name:	County Rt. 58 Seckman
Waters	_	nuc-10 Mc Elroy Creek	_ Generally use	d farm name:	Seckman
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Well O	perator:	Noble Energy, Inc.	Address:	333 Technology D	Drive. Suite 116
Teleph	5	724-820-3061		Canonsburg, PA	
Email:		dswiger@nobleenergyinc.com	Facsimile:	724-743-0050	Market Company
Oil an	d Gas P	rivacy Natice		<u> </u>	

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 pour personal information, please contact

DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

JAN 2 8 2015

Office of Oil and Gas

STATE OF WEST VIRGINIA 95 0 2 2 3 7 DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF PLANNED OPERATION

	Time R	equirement: notice shall be provided Date Perm		ater than the filing lication Filed:	date of permit	application.
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(at the Name: Addres	address l Donald L.	y provided to the SURFACE OW isted in the records of the sheriff at Seckman fferson Run Road		ne of notice): Name: ! Address	Beverly J. Seckman 333 Foundry Str rtinsville, WV 2615	reet
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Quadra		Shirley			ed farm name:	Seckman
Waters	_	nuc-10 Mc Elroy Creek)	
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Office of Oil and Gas

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

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ddress:	333 Technology D	Drive, Suite 116
	Canonsburg, PA	
acsimile:	724-743-0050	
	or filing the hose land all include to a surface compensent the date owner a see): Name: Address Alma, Worken that the horizontal M NAD 8. Hic Road Aerally use clude: (1) her whose agreement ges are conhe Secreta 25304 (ddress:	or filing the permit applications land will be used for hall include: (1) A copy to a surface owner whose compensation agreement ent the damages are compensation agreement ent the damages are compensation agreement ent the damages are compensation agreement at the address list see): Name: Allen W. Seckman Address: 824 Jefferson Realma, WV 26320 Ven that the undersigned whorizontal well on the track Easting: Northing: lic Road Access: erally used farm name: clude: (1)A copy of this clude: (1)A copy of this clude whose land will be unagreement containing and agreement containing and agree

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Office of Oil and Gas

Operator Well No. SHR 30 MHS

STATE OF WEST VIRGINIA 95 0 2 2 3 7 DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF PLANNED OPERATION

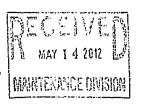
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		sted in the records of the sheriff at	the time		Cathy A. Saakman	AKA Kathu A Dahada
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	ville, WV 26				: 42842 Trail Run ramoras, OH 45767	
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Office of Oil and Gas

OIL AND GAS ROAD STATEWIDE BONDING AGREEMENT



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

WITNESSETII:

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

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

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

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

- For purposes of this Bonding Agreement, "Project Transportation Usage" of the Company shall be understood to mean use of one or more State Owned Roads for the delivery and removal of drilling materials and drilling equipment at the site or location of one or more of Company's horizontal gas well pad locations. To the extent reasonably practical, prior to commencing use of a State Owned Road for Project Transportation Usage after January 1, 2011, the Company shall submit to the Department a section or sections of current official WVDOH County Highway maps identifying the exact location of the proposed project and the State Owned Roads that the Company will utilize for the Project Transportation Usage.
- Company and Department shall within 14 days of the Company's submittal, agree to a list of these sections of State Owned Roads, hereinafter called "Project Roads List", to be utilized for each of Company's projects, identified by route number and milepost; at a time to be mutually agreed to by the parties prior to initial commencement of Project Transportation Usage of a particular State Owned Road on a Project Roads List, the Company and Department will jointly review the condition of the roads and bridges on the Project Roads List. The Department will document the road type and surface condition and general right-of-way width of each section of road on the Project Road List. Either party may supplement this documentation with photographs, video or other evidence of the present condition of the road surface, shoulders, ditches, culverts, bridges or other structures or appurtenances of roads on the Project Road List, as well as approaches to the roads, utility facilities located within or along the right-of-way, or any other condition, including third-party activities, that may affect the duties affice of Oil and Gas responsibilities of the parties under this Agreement. A copy of any such documentation must be made and provided to the other party within ten business days after the joint review of the roads on the Project Roads List.

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Department shall issue a Project Agreement or Project Permit, as appropriate, tWV Department of Company to use State Owned Roads and may include any minor or major improvemental Protection required of Company prior to, during or after Project with the assignment of responsibilities of both parties prior to, during and after the operator has completed well-fracturing... 04/17/2015

- IV. In the Project Agreement/Project Permit, the Department shall not require the use of State Owned Roads other than the roads proposed by Company unless the Department has safety concerns as to the Company's proposed roads. A failure to agree on roads that may otherwise be lawfully used for a particular Project Transportation Usage shall result in the designation of the State Owned Roads proposed by Company, with milepost determinations as designated by Department. This Agreement shall only cover portions of State Owned Roads designated on the Project Roads List.
- ٧. For the duration of Company's Project Transportation Usage of the Stated Owned Roads on the Project Roads List, whether by the Company, its contractors (while working on behalf of Company), agents, independent contractors or suppliers of drilling materials or drilling equipment, or employees, the Company agrees to pay for all reasonable maintenance and repair costs incurred by the Department to repair areas of the State Owned Roads included in the Project Roads List that were directly damaged by Company's Project Transportation Usage, as determined to be reasonably necessary and appropriate by the Department. The Department shall keep a record of all labor performed by Department employees and contractors for such maintenance and repairs and shall send an invoice for the same to Company.
- Company shall be responsible for the cost of all maintenance and repairs reasonably necessary to put the existing roadways, bridges and appurtenances on the Project Roads List utilized for the Project Transportation Usage in the condition that existed immediately prior to the Project Transportation Usage. Company shall not be required to pay for maintenance or repairs to put any areas of such roadways, bridges and appurtenances on the Project Roads List in a condition better than the condition that existed immediately prior to the Project Transportation Usage. Company shall also not be required to pay for maintenance or repairs to any areas of these roadways, bridges or appurtenances on the Project Roads List that are not actually utilized for the Project Transportation Usage or for damage not caused by Project Transportation Usage.
- VII. Company shall notify the Department in writing of Company's final completion of Project Transportation Usage for particular roadways, bridges and appurtenances on the Project Roads List. Within fourteen days after its receipt of written notification of the completion of the Project Transportation Usage for all roads on a Project Roads List, the Department will review the condition of the roadways, bridges and appurtenances on the Project Roads List actually utilized for the Project Transportation Usage and advise Company of any final repairs reasonably necessary to leave these roads, bridges and appurtenances in a condition reasonably deemed by Department to be equal to their condition prior to commencement of Project Transportation Usage; and, upon completion of all such final repairs by or on behalf of Company and acceptance by Department, the Company shall be released from all further liability for maintenance or repairs to roads, bridges, or appurtenances on said Project Roads List. Any maintenance or repair work under the Project Agreement/Project Permit for roads, bridges or appurtenances on the Project Roads List may be performed by a contractor directly chosen by the Company as approved by the Department, the Department's workforce, or a private contractor hired by the Department through the public bid process in accordance with state law, all of which work shall be subject to the standards and specifications of the Department.

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

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- 1X. Company shall maintain Commercial General Liability Insurance in the amount of two million dollars, with a minimum coverage of one million dollars per occurrence, for personal injury or death to persons, or for property damage, resulting from Company's Project Transportation Usage and shall present evidence of such insurance to Department upon request.
- X. Company's usage of State Owned Roads under the Project Agreement/Project Permit shall comply with all applicable Federal, State and local laws and regulations including, but not limited to, to the extent applicable, the National Environmental Policy Act, Section 404 of the Clean Water Act, Section 106 of the National Historic Preservation Act, Rare, Threatened and Endangered Species Act, Section 401 Water Quality Certification, and hazardous waste requirements. Further, upon reasonable written request of Department, Company shall furnish Department with acceptable documentation of such compliance which is in the possession of the Company.
- XI. Company shall defend, indemnify and hold Department harmless from and against any and all losses, damage, and liability, and from all claims for damages on account of or by reason of bodily injury, including death, which may be sustained, or claimed to be sustained, by any person or persons, including employees of Department, and from and against any and all claims, losses or liabilities for damages to property, arising out of the negligent or willful acts or omissions of Company, its agents, independent contractors and suppliers of drilling materials or drilling equipment, employees and contractors, in the performance of all Project Transportation Usage activities undertaken pursuant to this Agreement (collectively, "claims"). The Company shall not be responsible to indemnify, defend or hold harmless Department for any claims caused by the negligent or willful acts or omissions of the Department or its agents, employees and contractors or third parties not performing work at the direction of Company or delivering drilling equipment or drilling materials, including water, for use by or for company.
- XII. If a provision of this Agreement is or becomes illegal, invalid or unenforceable in any jurisdiction, that shall not affect the validity or enforceability of any other provision of this Agreement; or the validity or enforceability in other jurisdictions of that or any other provision of this Agreement.
- XIII. Department shall give Company a minimum of thirty days written notice of default under the terms of this Bonding Agreement and the opportunity to cure this default during such thirty-day period. If a default is not cured to the satisfaction of Department, or provision acceptable to Department is not made for a cure, Department may then elect to terminate this Bonding Agreement in whole or in part, and may in addition exercise its rights under the Master Bond or seek any other lawful relief available. Company may terminate this Bonding Agreement upon thirty days written notice to Department for any reason. In the event Company terminates this Agreement for any reason, it shall be liable for the repair and maintenance costs set forth above for prior Project Transportation Usage.
- XIV. Nothing herein shall be construed to mean that Company shall have any jurisdiction or control over any public roads in the state road system.
- XV. Company, its contractors, agents, employees and suppliers shall at all times be subject to applicable provisions of state and federal law, including without limitation laws requiring operation of vehicles in accordance with legal size and weight restrictions and posted weight limits. Oversize/overweight permits for vehicle or loads not otherwise conforming with law must be obtained in accordance with law; Department agrees to work in good faith with Company to review and grant (where authorized by law) such permits in a timely manner upon request by Company.
- XVI. This Bonding Agreement shall be construed and enforced in accordance with the laws of the State of West Virginia, as they may be amended.

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 Take of West Virginia, as they may be amended.
- XVII. This Bonding Agreement shall be binding upon the successors and assigns of delta 2015 party hereto.

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

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS

Witness

State Highway Engineer

Witness

Robert Ovitz

Title: Senior Operations Mahager

(To be executed in duplicate)



APPROVED AS TO FORM THIS 29 DAY OF 20 12

ATTORNEY LEGAL DIVISION WEST VIRGINIA DIVISION OF HIGHWAYS

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Office of Oil and Gas

JAN 2 6 2015

WV Departmondal Average Environmental Projection



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

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

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

November 5, 2014

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

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

Dear Mr. Martin,

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

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

Very Truly Yours,

Day t. Clayton

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

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Office of Oil and Gas

JAN 26 2015

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

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

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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Office of Oil and Gas

JAN 2 6 2015

WW Department of Fewer of Profest 04/17/2015

^{**} 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.

NOBLE ENERGY, INC.

- PROJECT LOCATION

COUNTY, WV HIGHWAY MAP

energy

To noble

NOBLE ENERGY, INC.
333 Technology Drive, Suite 116
Canonsburg, Pennylynnia 15317
(724) 829-3000

CONSTRUCTION PLANS FOR

SHR 31 WELL PAD, TANK PAD, **AND ACCESS ROAD**

McELROY DISTRICT, TYLER COUNTY, WV

SHEET INDEX

OCTOBER 31, 2014

SHR 31 WELL PAD TOPHOLE COORDINATES

Well	WVE3-N Lathude	Longtude	WVB3-H Northing	WVE3-N Easting	WV27-N	Longitude	Morthing Northing	N-CZANA Easting	UTM \$3-17 Northing	UTM 83-17 Easting
	N 39 420104"	W 80 821651"	337873 S44 ft	1555147 951 ft	N 39 420024"	W 80 821504"	337838417 ft	1626589 109 ft	4363412350 m	\$15353 528 m
3	N 35 420092"	W 30 521700	337869 304 ft	1595128 406 ft	N 39 470011"	W 80 831873"	337834 176 ft.	1626569 564 ft	4363411 459 m	\$15347 595 m
1	H 39 420079*	W 60 821769"	337665 065 ft	1595108 860 ft	N 39 415995"	W 80 821942"	337829 940 ft	1626550 018 ft	4363410 068 m	515341 662 m
7	N 39 420067*	W E0 521832"	337350 \$26 ft	1595049 315 #	N 39 415936"	W 80 822011"	337825.701 A	1626530 473 M	4363408 677 m	\$15335 729 m
Agaid frazance	N 39 411355	W 50 219195"	315062 815 ft	1592568 739 h	N 39 412274"	W 80 825330"	335047.753 ft.	1624409 892 ft	4362551 556 m	\$14763 \$14m
vell Pad Center	N 39 420108"	W 50.521755"	337875 312 ft	1595117 151 ft	N 39 420027"	W 80 821930"	337840 185 ft	1626553 309 h	4363413 206 m	\$15342 613 m
net 2nd Centur	WIND ATTREM	WERESTERN	STATES TRA PER	*CRAZIONNE &	W 32 41778A1	**** *** *** ***	dance areas	Acres sentes	- Publisher	- 440.004.44

SHR 31 DISTURBANCE SUMMARY

OVERALL SITE PLAN
STREET HAN PROFILE
STREET HAN PROFILE
STREET HAN FROM SECTIONS
TANK PAD AND STAGING AREA PLAN
TANK PAD AND STAGING AREA PROFILE
TANK PAD SAND STAGING AREA PROFILE
TANK PAD SAND STAGING AREA PROFILE
TANK PAD STAGING AREA PROFILE
TANK PAD PAD STAGING AREA SECTIONS
STREET HELL PAD PLAN
STREET HELL PAD PROFILE
STREET HELL PAD PROFILE
STREET HAN PROFILE
STREE





Dimerimon Dimerimon Dimerimon Dimerimon Dimerimon District Dist	- 7	Access Road	SHR 31 Well Pad & Tank Ped	SHI 30 Acces Ross	Sett 30 Well Peri	Total Disturbance
10 10 10 10 10 10 10 10		Description	Disturbance	Distraction of the last	Courte General	
15 15 15 15 15 15 15 15		Fe	prestor			
12 12 12 12 12 12 12 12	(5-15/34)			000	0.45	0.46
1 5.55 0.55 0.4	(5-15/35)			80.0	200	0.11
41) 5.56 (0.3) 0.49 (0.4) (0.4	(5-15/37)			0.65		0.55
423 4.435 1.23 0.648 1.23 0.648 1.23 1.23 1.23 1.23 1.23 1.23 1.23 1.23	(5-15/41)		0.33	0.49		5.17
336 34.8 34.9 3	(5-15/42)	1	4.85			5879
	rbance	\$36	5,18	123	0.48	12.24
0.39 4.59 1.50 2.59 4.59 4.55 2.59 4.07 4.55 1.16 5.50 7.33 8.62 6.54		Man	Forested			
1 555 554 4.77 5.54 6.54 6.54 6.54 6.54 6.55 6.54 6.77 6.54 6.55 6.54 6.55 6.54 6.55 6.54 6.54	(5-15/34)			0.39	4.55	\$.08
1 665 529 4.07 4.05 1.16 6.54 1.25 7.33 8.62 6.54	(5-15/35)			191	225	4.16
1 655 556 4.07 1.16 1.16 8.62 6.54 Total	(5-15/37)	E		2.23	la manage d	225
1.16 1.16 8.62 6.94 Fort	(5-15/41)	\$ 55	\$58	4.07		15.57
6.55 7.32 8.62 6.54 Total	(5-15/42)		1.16			1.16
Total	turbanos	6.53	7.12	8.62	5.54	29.33
			Total			

Allen W. Seckman, Et.

DRIVING DIRECTIONS FOR EQUIPMENT THAT EXCEEDS THE POSTED WEIGHT LIMITS ON WV18 FROM THE INTERSECTION

OF US 50 AND WV 18 NEAR WEST UNION, WV

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

PROJECT LOCATION

DOODO

TRAVEL APPROXIMATELY 12.1 MELES NORTH ON WYV 18.
TURN RIGHT OFFO LEFFESON RUN ROAD (CR. SP.
TRAVEL APPROXIMATELY 1.3 MELES SOUTH OH CR. SE.
TURN LEFT ONYO THE ZUSTYNG ACCESS ROAD.

TRAVEL APPROXIMATELY INS MILES NORTH ON WY 11.

TRAVEL APPROXIMATELY SANTHER EDGE NORTHER SAY,

TRAVEL APPROXIMATELY 33 MILES NORTHERS TO NCR SET.

TRAVEL APPROXIMATELY 33 MILES NORTHERS TO NCR SET.

TRAVEL APPROXIMATELY 34 MILES NORTH ON CR SET.

TRAVEL APPROXIMATELY 34 MILES NORTH ON CR SET.

THAN RICHT ONTO LEFFERSON RUN ROAD (CR SE).

THAN RICHT ONTO LEFFERSON RUN ROAD (CR SE).

THAN RICHT ONTO LEFFERSON RUN ROAD (CR SE).

APPROVED FOR PERMITS	APPROVED FOR BIDS	APPROVED FOR CONSTRUCTI

PROJECT LOCATION

BY: RM

DATE: 10/31/14

BY: BY:

DATE: ON DATE:

	RENSED FOR		S S S
Company of	12/15/14		
1,000	PBM		
SHEETS	1,3-13,15-		D AND CRENCES RE OTHER
NUMBER			A 30 WELL PAD AND TURE WELL L PAD", REFERENC TYED IN THESE VE BEEN MODIFIED.
			E PROPOSED SHR 30 WE E "PROPOSED FUTURE SED SHR 30 WELL PAD" ASED WHERE NOTED II

SHR 30 PERMIT APPLICATION

DESCR PTION

NOTE: \leq

THESE PLANS INCORPORATE THE PROPOSED STRESS WELL PAD AND INCLEDE THE RENAMING OF THE "PROPOSED FUTURE WELL. MADSTAGGING AREA", AS "PROPOSED STRESS WELL AND." REFERENCE TO THE NAMING HAY'S BEIN REYELS WHERE NOTED IN THESE PLANS. NO OTHER FEATURES OF THE FLANS HAYE BEEN MODIFIED.

WHITE DAKS BOULEVARD - BRIDGEPORT, WV 25330 PHONE (304) 524-4108 * FAX (304) 524-7831

HE INCOMMEND CONTAKTO NETER G INL BOLF PROPERTY OF THE THANKER SHOW, HE, HENDOUGHON OF THEIR BROWNING STREET, THOUSING, STREET, FROMBITED.

SHOCKUPITS IN SHOLE DO IN WAIT, 100 MENT SELECTED THE MENTER STREET, WE.

RECEIVING WATER MIDDLE ISLAND CREEK

CONTACTOR SHALL NOTPY THE ONE-CALL SYSTEM OF THE INTENDED EXCAVATION ON DEMOLITRON NOT LESS THAN PROTY-EIGHT (BY DUOUS, EXCLUDING SATURONYS, SUNDAYS AND LEGAL FEDERAL OR TATE HOLIDAYS, NOR MORE THAN TEN (IO) WORK LAN'S KROR TO THE BEDINNING OF SLCH WORK. 17/2015 Office of Oil and Gas

ONE CALL UTILITY SYSTEM CONTACT INFO

SITE TICKET NUMBER: 1426169137 MEST WIRE WOOD

DOSCOSO 2 2000' 400

JAN 2 6 2015

WV Department of Environmental Protection

