

west virginia department of environmental protection

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

April 17, 2015

WELL WORK PERMIT

Horizontal 6A Well

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

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

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

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

James Martin

Chief

Operator's Well No: SHR 30 EHS

Farm Name: SECKMAN, ALLEN W. ET AL

API Well Number: 47-9502233

Permit Type: Horizontal 6A Well

Date Issued: 04/17/2015



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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	y, Inc.	494501907	095-Tyler	Mc Elroy	Shirley						
		Operator ID	County	District	Quadrangle						
2) Operator's Well Number: SF	HR 30 EHS	Well Pad	Name: SHR	30							
3) Farm Name/Surface Owner:	Allen W. Seckman, et a	Public Road	d Access: Cou	ınty Rt. 5	8						
4) Elevation, current ground:	920' Ele	evation, proposed p	oost-constructio	on: 920'							
5) Well Type (a) Gas	Oil	Unde	rground Storag	e							
Other											
(b)If Gas Sha	allow _	Deep									
Но	rizontal										
6) Existing Pad: Yes or No No											
7) Proposed Target Formation(s			nd Associated I	Pressure(s):	:						
Marcellus 6514 - 6578' / 64											
8) Proposed Total Vertical Depth: 6,568'											
Formation at Total Vertical I	9) Formation at Total Vertical Depth: Marcellus										
10) Proposed Total Measured D	Depth: 15,743'										
11) Proposed Horizontal Leg Le	ength: 8,293'										
12) Approximate Fresh Water S	Strata Depths:	466'									
13) Method to Determine Fresh	Water Depths: _n	earest offset wells	S								
14) Approximate Saltwater Dep	oths: 1761'										
15) Approximate Coal Seam De	epths: None										
16) Approximate Depth to Poss	ible Void (coal mir	ne, karst, other): 1	None								
17) Does Proposed well location directly overlying or adjacent to		rs Yes	No	V							
(a) If Yes, provide Mine Info:	Name: NA										
25: 25: 11.	Depth:										
	Seam:	atr	RECEIVED of Oil and	Gas							
	Owner:	Omce	OI OILOITO								
	\ <u>-</u>		APR 0 2 2015								

WV Department of Environmental Protection 18)

CASING AND TUBING PROGRAM

95 02233

TYPE	Size	New	Grade	Weight per ft.	FOOTAGE: For	INTERVALS:	CEMENT:
		or		(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	15,743'	15,743'	10% excess Yield = 1.27 TOC=200 above 9.625" shoe
Tubing							
Liners							

TYPE	Size	Wellbore	Wall	Burst Pressure	Cement Type	Cement Yield
		<u>Diameter</u>	<u>Thickness</u>			(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						

12-17-2014

PACKERS

Kind:		
Sizes:		
Depths Set:		

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JAN 2 6 2015

10) Describe was and small words in the district of all lines and alternating heals of any allot halos
19) Describe proposed well work, including the drilling and plugging back of any pilot hole: Drill the vertical depth to the Marcellus at an estimated total vertical depth of approximately 6568 feet. Drill Horizontal leg - stimulate and produce the Marcellus Formation. Should we encounter formation issues, set the 13 3/8 into next competent formation but not deeper than elevation. Should we encounter a unanticipated void we will install a minimum of 20' of casing below the void but not more than 100' below the void, set a basket and grout to surface.
20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:
The stimulation will be multiple stages divided over the lateral length of the well. Stage spacing is dependent upon engineering design. Slickwater fracturing technique will be utilized on each stage using sand, water, and chemicals. our maximum pressure is not to exceed 10,000 lbs. Please refer to attached list.
21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 41.57
7.42
22) Area to be disturbed for well pad only, less access road (acres):
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 coment additives associated with each coment type:
24) Describe all cement additives associated with each cement type: See attached sheets - Conductor - fill/soil to surface. Fresh Water - 15.6 ppg Type 1 cement +2% CaCl (CA-100), 0.25# lost circ. (CLC-CPF), 30%excess yield =1.18. Intermediate- 15.6 ppg Class A +0.4% Ret, 0.15% Disp, 0.2% Anti Foam, 0.125# sk Lost circ. 20% Excess Yield =1.19 To Surface. Production - 14.8 ppg Class A 25:75:0 System +2.6% cement extender, 0.7% Fluid Loss additive, 0.45% high temp retarder, 0.2% fiction reducer 10% excess Yield =1.27 TOC >= 200' above 9.625" shoe.
25) Proposed borehole conditioning procedures:
Conductor - The hole is drilled w/ air and casing is run in air. Apart from insuring the hole is clean via air circulation at TD, there are no other conditioning procedures. Fresh Water/Surface -The hole is drilled w/air and casing is run in air. Once casing is at setting depth, circulate a minimum of one hole volume prior to pumping cement. Intermediate - Once surface casing is set and cemented Intermediate hole is drilled either on air or SOBM and filled w/ 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.

*Note: Attach additional sheets as needed.Office of Oil & Gas

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

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LP @ 6568' TVD / 7450' 8.75 / 8.5 Hole - Cemented Long String +/-8293' ft Lateral TD @ +/-5568' TVD #CP-110 TXP BTC +/-8293' ft Lateral +/-15743' MD		×			******			*****						******				*		×					× ×		WELLBORE DIAGRAM	Azm	Ground Elevation			۲
68' TVD / 7450' MD	***************************************		8.75" - 8.5" Lateral	01					8.75" Curve						And of the state o	8.75" Vertical					12 3/8				17 1/2	24	HOLE					no
	×								TXP BTC	20#	5-1/2"										9-5/8" 36# HCK-55 LTC				13-3/8" 54.5# J-55 BTC	20" 94#	CASING	210°	920'			ble nergy
8.75 / 8. 5-1		Onondaga	10	Marcellus	Hamilton	I ully Limestone	Burkett	AND LONG	Wast Piver	Cashaqua	Alexander	Benson	rower nuron	I amos II mass	Warren Sand	Gordon	Top Devonian Shale	Berea	Int. Casing	Weir	Price Formation	Big Injun	Big Lime	Int. Casing		Conductor	GEOLOGY					Υg
5 Hole - Cen /2" 20# HCP-	X	6578	15743	6514	6497	6494	6460	2600	6358	6247	5248	5004	3034	2024	3436	2943	2525	2517	2373	2326	2173	2119	2048	566		40	ТОР	(0		(0		
nented Long		6585	6568	6578	6514	6497	6494	0400	6392	6358	5306	5048			3482	2062		2525	2373	2430		2173	2119	566		40	BASE	HR-30	SHR-30	SHR-30E		
String 'C		ODIN.	12.5ppg	12 Oppo-					SOBM SOBM	12.0ppg-					CON	9.0ppg	8.0ppg -				AIR				AIR	AIR	MUD	EBHL ()E LP (L			
						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 +2.6% Cement extender.	14.8ppg Class A 25:75:0					To Surface	Yield=1.19	0.125#/sk Lost Circ	+0.4% Ret, 0.15% Disp. 0.2% AntiFoam	15.6ppg Class A	1.10	15.6 ppg Type 1 + 2% CaCl, 0.25# Lost Circ 30% Excess	To Surface	CEMENT	SHR-30E BHL (Lat/Long)	SHR-30E LP (Lat/Long)	SHL (Lat/Long)		
+/-820							joint to KOP	Rigid Bow Spring every							G	third joint from KOP to	Rigid Bow Spring every			teet from surface.	every third joint to 100'	Bow spring centralizers		Suidce	Bow Spring on first 2 joints then every third joint to 100' form	A'N	CENTRALIZERS	(3282)	(3360	(3354:	Tyler County, WV	SHR-30E-HS (Macellus Sha
13' ft Lateral							boundarily content.	numning coment	circulate a minimum of one	on bottom with casing	allowable pump rate for at	Once at TD circulate at max		,					cement.	volume prior to pumping	at setting depth, circulate a	drilled to TD. Once casing is	Fill with KCI water once	cement.	Fill with KCI water once drilled to TD. Once casing is at setting depth, circulate a minimum of one hole sections of the property.	Ensure the hole is clean at TD.	CONDITIONING	(328208.02N, 1631993.52E) (NAD27)	(336003.5N, 1629156.21E) (NAD27)	(335439.54N, 1628465.13E) (NAD27)	unty, WV	DRILLING WELL PLAN SHR-30E-HS (Marcellus HZ) Macellus Shale Horizontal
TD @ +/-6568' TVD +/-15743' MD								due to hole conditions	Note:Actual centralizer schedules may be changed	Burst=12640 psi	Production casing = 0.361" wall thickness									Burst=3520 psi	the 5th Sand. Intermediate casing = 0.352" wall thickness				Intermediate casing = 0.380* wall thickness Burst=2730 psi	Stabilize surface fill/soil. Conductor casing = 0.438" wall thickness Burst=2730psi	COMMENTS	?E) (NAD27)	E) (NAD27)	3E) (NAD27)		

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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 Quadra	angle Shirley
Elevation 920' County 095-Tyler	District_ Mc Elroy
Do you anticipate using more than 5,000 bbls of water to complete the prop Will a pit be used? Yes No	
If so, please describe anticipated pit waste: closed loop-no ut	ilization of a pit
Will a synthetic liner be used in the pit? Yes No	_ If so, what ml.?
Proposed Disposal Method For Treated Pit Wastes:	12-17-201
Land Application Underground Injection (UIC Permit Number Service Reuse (at API Number at next anticipated well Off Site Disposal (Supply form WW-9 for disposal (Explain Service Reuse)	sal location)
Will closed loop system be used? If so, describe: yes	
Drilling medium anticipated for this well (vertical and horizontal)? Air, free	shwater, 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? (cem	ent, lime, sawdust)
-Landfill or offsite name/permit number? please see attached she	et
I certify that I understand and agree to the terms and conditions of on August 1, 2005, by the Office of Oil and Gas of the West Virginia Depart provisions of the permit are enforceable by law. Violations of any term of law or regulation can lead to enforcement action. I certify under penalty of law that I have personally examined application form and all attachments thereto and that, based on my into obtaining the information, I believe that the information is true, accurate penalties for submitting false information, including the possibility of fine of	the the the three
Company Official Signature	Official Seal
Company Official (Typed Name) Kim Ward/Dee Swiger	Notary Public State of West Virginia
Company Official Title Regulatory Analyst	Dolores J Swiger 235 Cottage Avenue Weston WV 26452 My Comm. Exp. 9-19-23
Subscribed and sworn/before me this 15 day of 4an	My Comm. Exp. 9-19-23 Processed —————————————————————————————————
My commission expires 09/19/2023	

Form WW-9

Operator's Well No.____

Noble Energy, in	iC.	44.55	,	28.2	
Proposed Revegetation Tre	eatment: Acres Disturbed	41.57	Prevegetation pl	I	
Lime	Tons/acre or to corre	ct to pH _			
10)-20-20 or equal				
Fertilizer amount		lbs/a	cre		
Mulch_ Hay or \$	Straw at 2	Tons/acre			
Mulcii_		_10113/4014	•		
		Seed N	<u>lixtures</u>		
n	Геmporary		Perma	nent	
Seed Type	lbs/acre		Seed Type	lbs/a	cre
Tall Fescue	40	_	Tall Fescue	40	
Ladino Clover	5		Ladino Clover	5	
**alternative seed mixtures	s are shown on the Site Desig	jn.			/
Plan Approved by:	olved 7.5' topographic sheet.		S during operation.		
				=	
		Rece			
	Of		Oil & Gas		
		JAN 26	201 5		
Title: Oil and Gas Insp	pector		Date: 12 -17 - 2	-014	
Field Reviewed?	(V) Yes () No		04/17/20

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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WV Department of Environmental Protection

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:

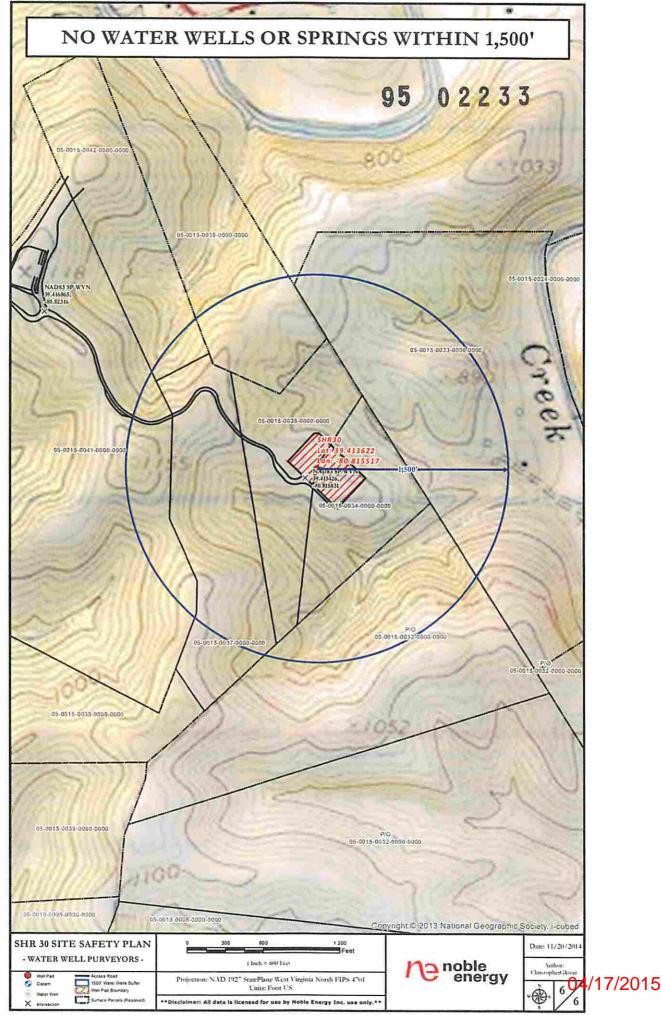
Solidification
Waste Management, Arden Landfill Permit # 100172
200 Rangos Lane
Washington, PA 15301
724-225-1589

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

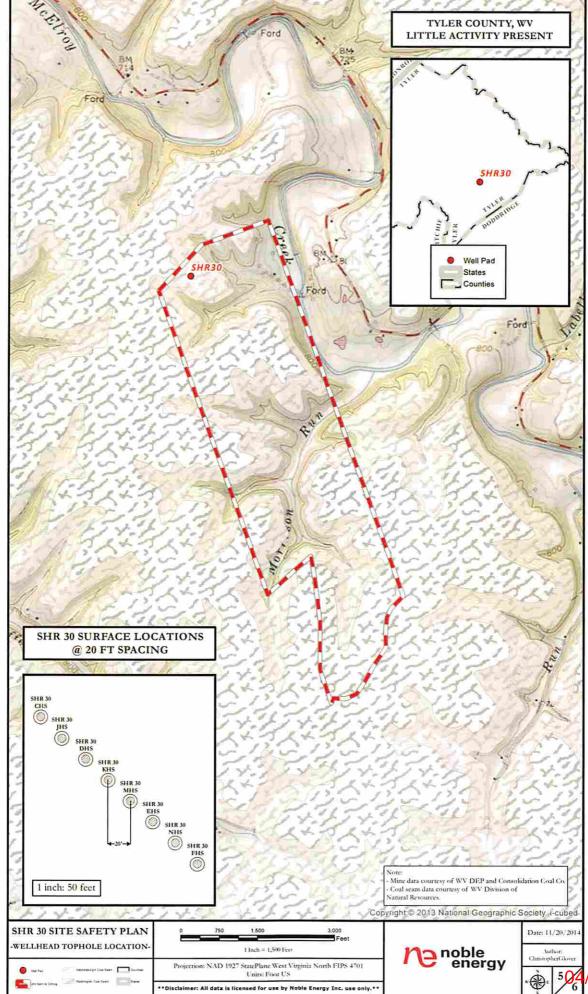
Adams #1 Permit # 34-031-2-7177 23986 Airport Road Coshocton, OH 43812 740-575-4484

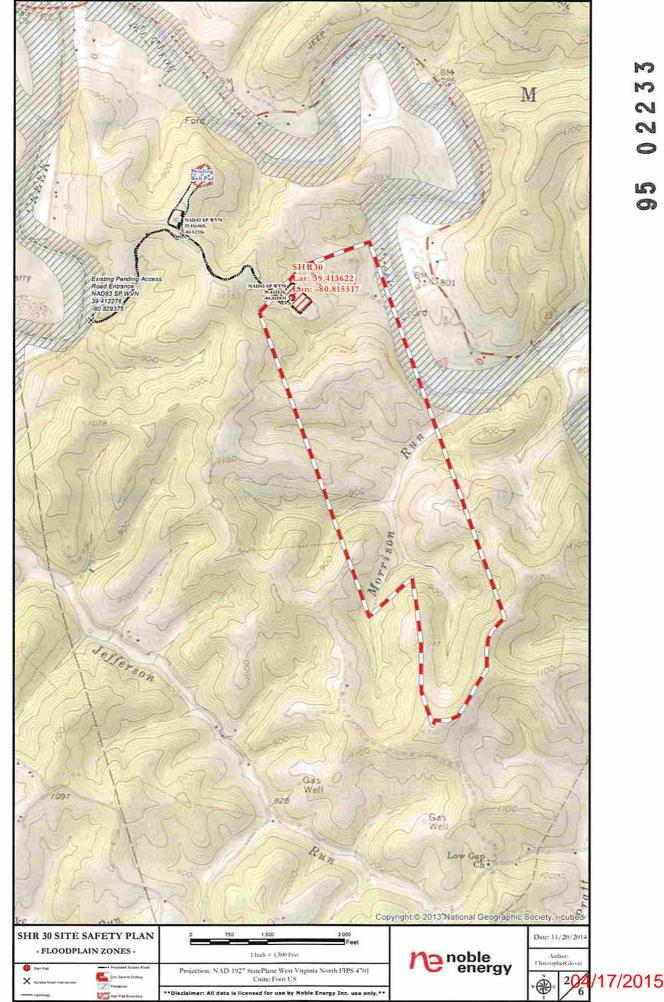
Adams #2 Permit # 34-031-2-7178 740-575-4484

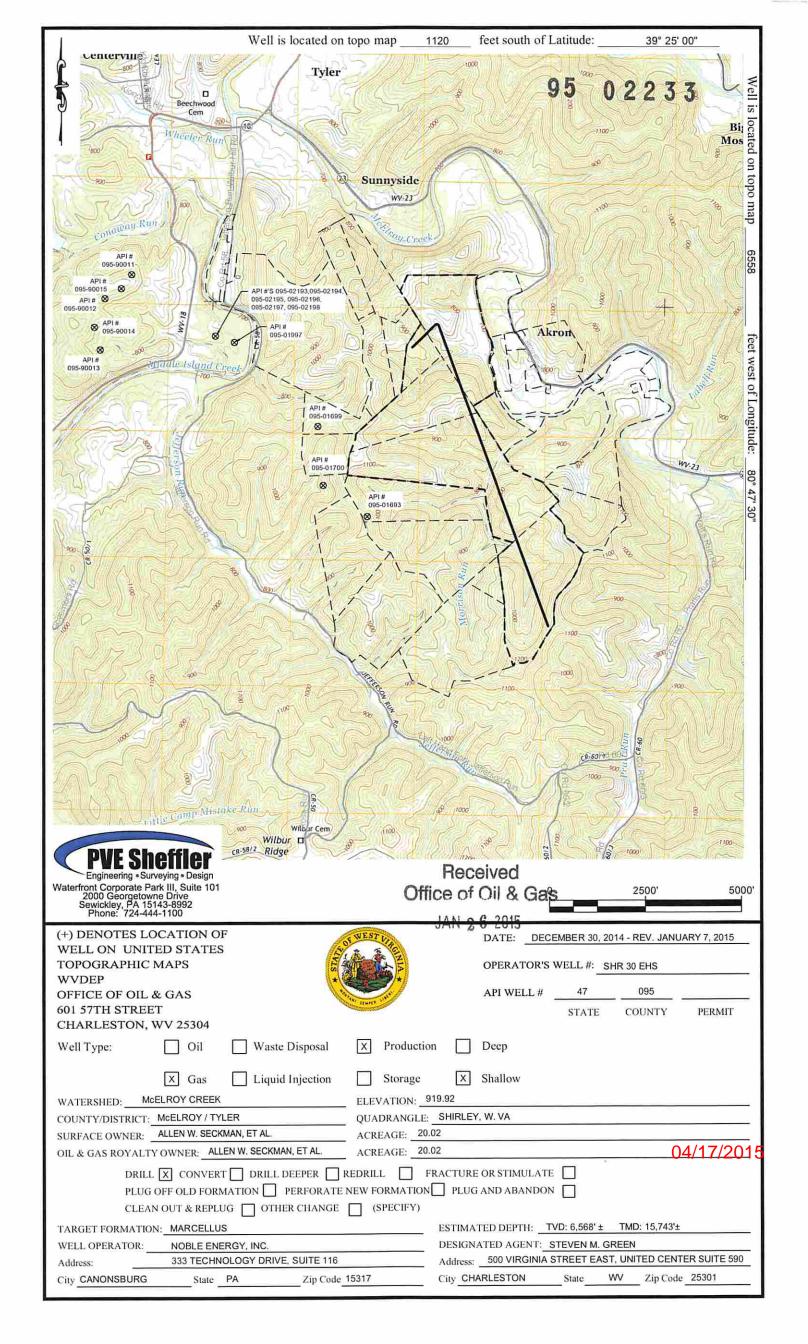
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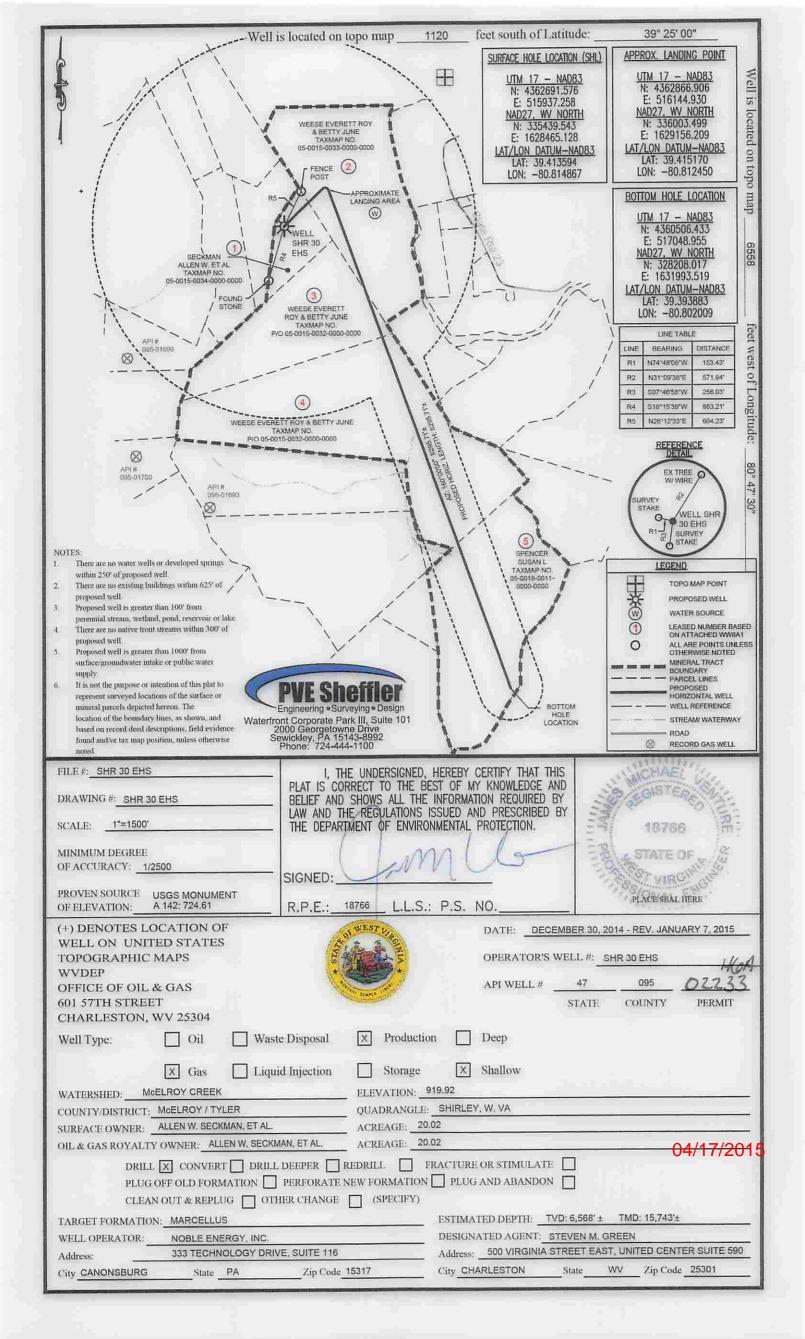












WW-6A1
(5/13)

Operator's	Well	No.	SHR30EHS	

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

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

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

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

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

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

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

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

	Well Operator: By:	Nogre Every, INC.
Received Office of Oil & Gas	Its:	OPERATIONS LANDMAN
JAN 2 6 2015		Page 1 of

				SHR 30 EHS
Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
1: Continued: DAD36993001	CNX Gas Company, LLC	Noble Energy, Inc.	N/A	DB 388-286
2. No Lease Number	Roy D. Hadley	Керсо	not less than 1/8	DB 232-30
	Jay Bee Production	Керсо	not less than 1/8	DB 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	Kepco	not less than 1/8	DB 232-30
	Керса	Peake Energy, Inc.	N/A	DB 319-291
	Peake Energy, Inc.	Four Leaf Land Company	N/A	DB 403-566
	Four Leaf Land Company	Antero Resources Appalachian Corporation	N/A	DB 403-566
	Antero Resources Appalachian Corporation	Noble Energy, Inc.	N/A	DB 422-517
	Ralph T. Sweeney	Four Leaf Land Company	not less than 1/8	DB 370-599
	Anna Sweeney	Four Leaf Land Company	not less than 1/8	DB 370-635
	Lamoyne Sweeney	Four Leaf Land Company	not less than 1/8	DB 370-617
	Gloria A. Morris	Four Leaf Land Company	not less than 1/8	DB 397-669
	Donald L. Sweeney	Four Leaf Land Company	not less than 1/8	DB 370-605
	Devon R. Horsley	Four Leaf Land Company	not less than 1/8	DB 370-629
	Rodger A. Sweeney	Four Leaf Land Company	not less than 1/8	DB 370-611
	Four Leaf Land Company	Antero Resources Appalachian Corporation	not less than 1/8	DB 403-561
	Antero Resources Appalachian Corporation	Noble Energy, Inc.	N/A	DB 422-517
	Mary S. Furbee Zebley	Noble Energy, Inc.	not less than 1/8	DB 440-447
	Thomas Val Furbee	Noble Energy, Inc.	not less than 1/8	DB 440-443
	Allison Furbee Hardin	Noble Energy, Inc.	not less than 1/8	
	Rani J. Boyt	Noble Energy, Inc.	not less than 1/8	DB 440-453 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	5000 S.
	Norma R. Spencer, Trustee	Noble Energy, Inc.	*	DB 449-553
	Clara Catherine Carpenter	Noble Energy, Inc.	not less than 1/8	DB 465-262
	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
	Thomas Kilcoyne	JB Exploration I, LLC	not less than 1/8	DB 460-590
	Patricia Catarello	JB Exploration I, LLC	not less than 1/8	DB 404-107
	JB Exploration I, LLC	Noble Energy, Inc.	not less than 1/8	DB 410-174
	TO EXPIONATION 1, LEG	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	Керсо	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 DB 232-30
	Betty Weese & Roger Weese	Керсо	not less than 1/8	DB 232-30
	Linda Weese	Kepco	not less than 1/8	Section 1
	Керсо	Peake Energy, Inc.	N/A	DB 232-30
	Peake Energy, Inc.	Four Leaf Land Company	N/A	DB 319-291 DB 403-566
	Four Leaf Land Company	Antero Resources Appalachian Corporation	N/A	
	Antero Resources Appalachian Corporation	Noble Energy, Inc.	N/A	DB 403-566 DB 422-517
	Raiph T. Sweeney	Four Leaf Land Company	not less than 1/8	DB 422-517 DB 370-599
	Anna Sweeney	Four Leaf Land Company	not less than 1/8	
	Lamoyne Sweeney	Four Leaf Land Company	not less than 1/8	DB 370-635 DB 370-617
	Gloria A. Morris	Four Leaf Land Company	not less than 1/8	
	Donald L. Sweeney	Four Leaf Land Company		DB 397-669
	Devon R. Horsley	Four Leaf Land Company	not less than 1/8 not less than 1/8	DB 370-605
	Rodger A. Sweeney	Four Leaf Land Company	not less than 1/8	DB 370-629
	Four Leaf Land Company	Antero Resources Appalachian Corporation	not less than 1/8	DB 370-611
	Antero Resources Appalachian Corporation	Noble Energy, Inc.	N/A	DB 403-561 DB 422-517
			13/W	UB 422-51/

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WV Department of Environmental Protection

	Mary S. Furbee Zebley	Noble Energy, Inc.	not less than 1/8	DB 440-447
	Thomas Val Furbee	Noble Energy, Inc.	not less than 1/8	DB 440-443
	Allison Furbee Hardin	Noble Energy, Inc.	not less than 1/8	DB 440-453
	Rani J. Boyt	Noble Energy, Inc.	not less than 1/8	DB 445-835
	Mary Chidester	Noble Energy, Inc.	not less than 1/8	DB 449-523
	Thomas Daniel Spencer	Noble Energy, Inc.	not less than 1/8	DB 449-553
	Norma R. Spencer, Trustee	Noble Energy, Inc.	not less than 1/8	DB 465-262
	Clara Catherine Carpenter	Noble Energy, Inc.	not less than 1/8	DB 449-529
	David Dean	Noble Energy, Inc.	not less than 1/8	DB 448-749
	WV Minerals, Inc.	Noble Energy, Inc.	not less than 1/8	DB 460-590
	Thomas Kilcoyne	JB Exploration I, LLC	not less than 1/8	DB 404-107
	Patricia Catarello	JB Exploration I, LLC	not less than 1/8	DB 410-174
	JB Exploration I, LLC	Noble Energy, Inc.	N/A	DB 461-628
			100000	7.50.135.355
4: No Lease Number	Roy D. Hadley	Керсо	not less than 1/8	DB 232-30
	Jay Bee Production	Керсо	not less than 1/8	DB 232-30
	Donald Seckman	Kepco	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	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 Corporation	N/A	DB 403-566
	Antero Resources Appalachian Corporation	Noble Energy, Inc.	N/A	DB 422-517
	Ralph T. Sweeney	Four Leaf Land Company	nat 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. Harsley	Four Leaf Land Company	not less than 1/8	DB 370-629
	Rodger A. Sweeney	Four Leaf Land Company	not less than 1/8	DB 370-611
	Four Leaf Land Company	Antero Resources Appalachian Corporation	not less than 1/8	DB 403-561
	Antero Resources Appalachian Corporation	Noble Energy, Inc.	N/A	DB 422-517
	Mary S. Furbee Zebley	Noble Energy, Inc.	not less than 1/8	DB 440-447
	Thomas Val Furbee	Noble Energy, Inc.	not less than 1/8	DB 440-443
	Allison Furbee Hardin	Noble Energy, Inc.	not less than 1/8	DB 440-453
	Rani J. Boyt	Noble Energy, Inc.	not less than 1/8	DB 445-835
	Mary Chidester	Noble Energy, Inc.	not less than 1/8	DB 449-523
	Thomas Daniel Spencer	Noble Energy, Inc.	not less than 1/8	DB 449-553
	Norma R. Spencer, Trustee	Noble Energy, Inc.	not less than 1/8	DB 465-262
	Clara Catherine Carpenter	Noble Energy, Inc.	not less than 1/8	DB 449-529
	David Dean	Noble Energy, Inc.	not less than 1/8	DB 448-749
	WV Minerals, Inc.	Noble Energy, Inc.	not less than 1/8	DB 460-590
	Thomas Kilcoyne	JB Exploration I, LLC	not less than 1/8	DB 404-107
	Patricia Catarello	JB Exploration I, LLC	not less than 1/8	DB 410-174
	JB Exploration I, LLC	Noble Energy, Inc.	N/A	DB 461-628
	, , , , , , , , , , , , , , , , , , , ,		30.00	55 101 525
5: Q088841003	Susan Spencer & James Spencer	Noble Energy, Inc.	not less than 1/8	DB 465-266
Q088841005	Leola Frances Ray & Kenna Ray	Noble Energy, Inc.	not less than 1/8	DB 465-529
	Charles Gary Carder	Noble Energy, Inc.	not less than 1/8	DB471-690
Q088841002	Lloyd Underwood & Betty Underwood	Noble Energy, Inc.	not less than 1/8	DB 465-532
Q088841006	Mona Lee Williams	Noble Energy, Inc.	not less than 1/8	DB 465-523
Q088841001	Raymond Underwood & Doris Underwood	Noble Energy, Inc.	not less than 1/8	DB 465-535
Q088841004	Robert Monroe & Sandra Monroe	Noble Energy, Inc.	not less than 1/8	DB 465-526
	Wayne Allen Carder	Noble Energy, Inc.	not less than 1/8	DB 471-694
		A September 1 and the sept		-7.55

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WV Department of Environmental Protection

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:

- 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
On the East by:	Robert J. Kocher et al, Mitchell I	
On the South by:	Roger R. Weese	
On the West by:	Betty June Weese	
15-28.3, 05-15-28. 00/100 (150.00) ac	age 381, said land being identified 4. on this date, and stipulated to co res, more or less ("Leased Premises"	ted for the purpose of providing notice of the existence of the Leave and
WITNESS: Oshley R. Printed Name	Sinners	LESSOR: WV MINERALS, INC. Dean Harris, President
WITNESS:		LESSEE:
		NOBLE ENERGY, INC.
Signature		

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

Received Office of Oil & Gas

Printed Name

CORPORATE ACKNOWLEDGMENT STATE / COMMONWEALTH OF West Windows & COUNTY OF Aday of Aday of Aday - 2014, before me, the undersigned officer, personally appeared Dean Harris, acting as President of WV Minerals, Inc., a West Virginia Corporation, personally known to me (or satisfactorily proven) to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same for the purposes and consideration therein contained, at the direction of and on behalf of said entity.

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

MOTARY PUBLIC OFFICIAL SEAL
MARK A. MUDRICK

MY COMMISSION EXPIRES:

MARK A. MUDRICK

MARK A. MUDRICK

Sata of West Veginia

My Commission Expires November 30, 2022

28 SOUTH WEST OR, SUFFE GO, BROSEFORT, WY 2000

Signature

Mark A. Modrick

Printed Name

CORPORATE ACKNOWLEDGMENT

Notary Public

COMMONWEALTH OF PENNSYLVANIA COUNTY OF WASHINGTON

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

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

MY COMMISSION EXPIRES:

Signature

Printed Name Notary Public

Received
Office of Oil & Gas

JAN 26 2015

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

This M	EMORANDUM OF LEASE, dated	this 5th day of March 2014;
utilized to indicat	e the existence of a Pain-Lip Oil an	D GAS FASE (hereinafter "Legge") of over descharges
MODELLICE TO SPECIFICE	i. XCURY AS ITUSTED FOR THE ALIEN P	'. Shencer I iving Trust dated 0/20/2002b.c
DIAMETURA AVE	RUUSDD, UM 44736 Incrematter "	PSSOF Whether one or more) and MODI E EMERGY THIS
corporation, whos	e address is at 333 Technology Drive	c, Suite 116. Canonsburg, Pennsylvania 15317, (hereinafter, "Lessee").
Lessor of explore, develop, with any coal sea limited to the follow. 1. PRIMAR' set forth above, at paying quantities pursuant to the purimary term of the Lease to the end of	did LEASE, LET, GRANT, and DI produce, and market oil and/or gas a m, from the premises described be awing: Y TERM: The primary term of the L did for so long thereafter as oil, gas, from the Leased Premises or from the rovisions contained in the Lease, in the Lease for an additional five (5) y fithe "extended" primary term.	EMISE exclusively unto Lessee, its successors and/or assigns, the rights to and all constituent products, including methane gas present in or associated low, subject to the provisions contained in the Lease including, but no ease is for a period of five (5) years commencing on the date immediately or other substances covered by the Lease are capable of being produced in ands pooled therewith, or the Lease is otherwise maintained or prolonged cluding an extension of term contained therein. Lessee may extend the ears after the end of the primary term, thereby continuing the term of the
State of West 1	IION / LEASED PREMISES: All those Virginia, generally bounded now or f	certain tracts of land situate in the District of McElroy, County of Tyler,
State of West	against generally bounded flow or i	ormerly 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 I	laught
purpose of calculat This Mershall not be conside WYTNESS: Signature	ing payments, <u>Fifteen</u> (15.00) acres,	led for the purpose of providing puts. Cat
WITNESS:		LESSEE: NOBLE ENERGY, INC.
Signature		Signature
- -		By: MARK A. ACREE
		Its: Attomey-In-Fact
Printed Name	_	• • •

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Office of Oil & Gas

INDIVIDUAL ACKNOWLEDGMENT STATE / COMMONWEALTH OF Ohio § COUNTY OF Summit § The foregoing instrument was acknowledged before me, this ______ day of _______. 2014. by Noma R. Spencer, acting as Trustee for the Allan P. Spencer Living Trust, dated 9/3072003. MY COMMISSION EXPIRES: Signature JPMES B. CHAPMAR, Altychev Pt Tea by Commission Date Printed Name Notary Public

CORPORATE ACKNOWLEDGMENT

COMMONWEALTH OF PENNSYLVANIA \$ COUNTY OF WASHINGTON \$

On this _____ day of _____ 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.

Signature

Printed Name Notary Public

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

MY COMMISSION EXPIRES:

Received Office of Oil & Gas

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

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 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 Runs	LESSOR: Signature Printed Name: Lloyd W. Underwood Address: _13 6 6 6
Printed Name	Vienna, WV 26105
WITNESS: Signature	LESSOR: Betty Jean Underwood Printed Name: Betty Jean Underwood
Printed Name	Address: 1314 10P St. Vienne, WV 2665
WITNESS:	LESSEE: NOBLE ENERGY, INC.
Signature	
Printed Name	Signature By: MARK A. ACREE Its: Attorney-In-Fact

Received
Office of Oil & Gas

WestVizzinin STATE/COMMONWEALTH OF COUNTY OF Wood The foregoing instrument was acknowledged before me, this W. Underwood and Betty Jean Underwood, his wife. MY COMMISSION EXPIRES: Signatur OFFICIAL SEAL Notary Public Grate Of West Virginia JASCH BETTS POEM SEATS Wheeling WV 28003 Hy Commission Explication 14, 2023 Printed Name Notary Public CORPORATE ACKNOWLEDGMENT COMMONWEALTH OF PENNSYLVANIA COUNTY OF WASHINGTON On this _____ day of ______ 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

INDIVIDUAL ACKNOWLEDGMENT

Received Office of Oil & Gas

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 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:

- 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 MeElroy, County of Tyler, State of West Virginia, generally bounded now or formerly as follows:

On the North by:

On the East by:
On the East by:
Susan L. Spencer
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 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 60/100 (131.00) acres, more or less ("Leased Premises").

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

WITNESS:

Signature

Printed Name

WITNESS:

LESSEE:

NOBLE ENERGY, INC.

Signature

Signature

Signature

Signature

Signature

By: MARK A. ACREE

its: Attorney-In-Fact

Received
Office of Oil & Gas

Printed Name

INDIVIDU	JAL ACKNOWLEDGMENT
STATE / COMMONWEALTH OF _ \ / \	Nirsial 8
COUNTY OF Word	8
The foregoing instrument was acknowledged Allan Carder, a married man dealing with his sole at	before me, this 22 day of October, 2014, by Wayne
MY COMMISSION EXPIRES	a-n=
Notary Public, State Of West Virgidia JASON BETTS PO Box 6599	Signature Jusa Beatt
My Complission Expires May 14, 2233	Printed Name Notary Public
CORPORA	ATE ACKNOWLEDGMENT
COMMONWEALTH OF PENNSYLVANIA \$ COUNTY OF WASHINGTON \$	
On this day of	. 20 before me, the undersigned officer, personally appeared
	ERGY, INC., a Delaware corporation, personally known to me to be the ent 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

Received Office of Oil & Gas

JAN 26 2015

PREPARED BY / UPON RECORDATION, RETURN 10: Land Department NOBLE ENERGY, INC. 333 Technology Drive, Suite 116 Canonsburg, PA 15317

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

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: Everette Roy Weese and Betty June Weese

On the East by: James Edward Cumberledge and Linda L. Davoli

Rayburn & Sheila Lawrence and Billy J & Jacky Jo

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

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

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

WITNESS:	LESSOR:
135	Jusu & Spomer
Signature	Signature
- Jan Bits	Printed Name: Susan L. Spencer Address: HC 74 Bog 98
Printed Name	alma WU 26320
WITNESS:	LESSOR:
Signature	James Spenen
Data	Signature Printed Name ; <u>James Spencer</u>
Distribution String	Address: HC 24 Box 98
Printed Name	A/MG WU 26320
WITNESS:	LESSEE:
	NOBLE ENERGY, INC.
Signature	
	Signature
	By: MARK A. ACREE
Printed Name	Its: Attorney-In-Fact

Received Office of Oil & Gas

	DUAL ACKNOWLEDGMENT
STATE / COMMONWEALTH OF	at Virginias
COUNTY OF 716	
The foregoing instrument was acknowledge Spencer and James Spencer, her husband.	d before me, this ve day of to to 2014, by Susan L.
My Completion Express OFFICIAL SEAL	J-12=
Notary Public, State Of West Virginia JASON BETTS P O Box 6598	Signature Jana BUTS
Wheeling, WV 26003 My Commission Expires May 14, 2023	Printed Name Notary Public
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	riolary Fubile
CORPO	RATE ACKNOWLEDGMENT
COMMONWEALTH OF PENNSYLVANIA & COUNTY OF WASHINGTON &	
On this day of	, 20, before me, the undersigned officer, personally appeared NERGY, INC., a Delaware corporation, personally known to me to be the
person whose name is subscribed to the within instru therein contained and on behalf of said corporation.	ment and acknowledged to me that he executed the same for the purposes
In witness thereof, I hereunto set my hand at	nd affixed my seal.
MY COMMISSION EXPIRES:	
	Signature
	Printed Name
	Notary Public

Received Office of Oil & Gas

JAN 26 2015

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

This MEMORANDUM OF LEASE, dated this ______day of _______2014, is utilized to indicate the existence of a Paid-UP Oil. AND Gas Lease (hereinafter, "l_ease") of even date herewith, by and between <u>Robert Errol Monroe and Sandra Monroe</u>, his wife, whose mailing address is: <u>78 Canaan Drive</u>, Scott Depot, WV 25560-7686 (hereinafter, "l_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, "l_essee").

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
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 Corpora Poisse Scott Degrit, WV 25520-7686
WITNESS:  X Pobut Eurl Meury Signature  Robert For I Monore Printed Name	LESSOR:  X Sandra Menroe Signature Printed Name: Sandra Monroe Address: 78 Concan Dr. Ve  Scott Depart, WV 25560-7688
WITNESS:	LESSEE:
	NOBLE ENERGY, INC.
Signature	
	Signature By: MARK A. ACREE
Printed Name	lts: Attorney-In-Fact

Received Office of Oil & Gas

INDIVIDUAL ACK	NOWLEDGMENT
STATE / COMMONWEALTH OF WESTVICE	min 6
COUNTY OF KANAULA	§ .
The foregoing instrument was acknowledged before me Errol Monroe and Sandra Monroe, his wife.	this 2 day of October, 2014, by Robert
My COMMISSION EXPINES OFFICIAL SEAL Notary Public, State Of West Virginia Sign	g~ B=
JASON BETTS PO Box 6588	ature Jasa Betts
U MY COMMISSION EXPIRES May 14, 2023, A	ed Name ry Public
CORPORATE ACK	NOWLEDGMENT
COMMONWEALTH OF PENNSYLVANIA § COUNTY OF WASHINGTON §	
On this day of	before me, the undersigned officer, personally appeared NC., a Delaware corporation, personally known to me to be the cknowledged to me that he executed the same for the purposes
In witness thereof, I hereunto set my hand and affixed m	y scal.
MY COMMISSION EXPIRES:	•
Signa	ture
	d Name

#### Received Office of Oil & Gas

JAN 26 2015

PREPARED BY LUPON RECORDATION, RETURN TO: Land Department NOBLE EMERGY, 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 scam, 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
Rayburn & Sheila Lawrence and Billy J & Jacky Jo
On the West by: Underwood Blaine Est and Wells Vivian Janice

- 3:

Fiduciary Record Book 66, Page 316 and recorded 18-11 on this date, and stipulated to contain, for the (131.00) acres, more or less ("Leased Premises").	of instrument recorded in the Office of Clerk of the County Commission is in Wood County, WY, said land being identified for tax purposes as 05 e purpose of calculating payments, One Hunded Thirty-One and 00/10 cuted for the purpose of providing notice of the existence of the Lease an alteration of the Lease.
Signature  Printed Name	LESSOR:    Kaymond V Underwood   Signature   Printed Name: Raymond V. Underwood   Address: 12 965   Enga Av.     Purkaby g WV 26104
WITNESS: Signature Printed Name	LESSOR:  Waris Underwood  Signature  Printed Name: Doris Underwood  Address: 12965 Ems. Ave.  Perent by WV 26104
WITNESS:	LESSEE: NOBLE ENERGY, INC.
Signature	Signature By: MARK A. ACREE
Printed Name	Its: Attorney-In-Fact

Received Office of ∩il & Gas

INDIVIDUA	L ACKNOWLEDGMENT
STATE / COMMONWEALTH OF Wort	-Virginia &
	•
The foregoing instrument was acknowledged be Raymond V. Underwood and Daris Underwood, his wi	fore me, this 22 day of September, 2014, by
My Commission Expires:	(h.13-
OFFICIAL SEAL Notary Public, State Offwert Virginia JASON BETTS P O Box 6598	Signatury Printed Name
Wheeling, WV 26003 My Commission Expires May 14, 2023	Notary Public
CORPORAT	TE ACKNOWLEDGMENT
COMMONWEALTH OF PENNSYLVANIA § COUNTY OF WASHINGTON §	
MARK A. ACREE, as Attorney-in-Fact for NOBLE ENER	, 20 before me, the undersigned officer, personally appeared RGV, INC., a Delaware corporation, personally known to me to be the a and acknowledged to me that he executed the same for the purposes
In witness thereof, I hereunto set my hand and al	ffixed my seal.
My Commission Expires:	
	Signature
	Printed Name
MY COMMISSION EXPIRES:	

Received
Office of Oil & Gas

JAN 2 6 2015

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

MEMORANDUM OF	F	OF	LEASE
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_day of Ocho This MEMORANDUM OF LEASE, dated this 1 2014, is utilized to indicate the existence of a PAID-UP OIL AND GAS LEASE (hereinafter, "Lease") of even date herewith, by and between Mona Lee Williams, a widow, whose mailing address is: 822 Chestnut Street, Charleston, WV 25309-2034 (hereinafter, "Lessor" whether one or more), and NOBLE ENERGY, INC., a Delaware corporation, whose address is at 333 Technology Drive, Suite 116, Canonsburg, Pennsylvania 15317, (hereinafter, "Lessee").

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

- 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

Signature

Printed Name

Printed Name

LESSOR:

Signature

Printed Name: Mona Lee Williams Address:

WITNESS:

LESSEE:

NOBLE ENERGY, INC.

Signature

Signature By: MARK A. ACREE

Its: Attorney-In-Fact

Received Office of Oil & Gas

IAN 26 2015

INDIVIDU	AL ACKNOWLEDGMENT
STATE/COMMONWEALTH OF West	Virgina 8
COUNTY OF Kanawha	
The foregoing instrument was acknowledged b Lee Williams, a widow.	efore me, this day of 2014, by Mona
My Commission Expires:	Q 25
OFFICIAL SEAL  Notary Public, State Of West Virginia  JASON BETTS	Signature Lawn Butt
P O 8cx 6598 Wheeling, WV 25003 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
5	Printed Name Notary Public

Received Office of Oil & Gas

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

### MEMORANDUM OF LEASE

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 Tvler, 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
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: Leola Frances Ray a/k/a Leola Ray Address:
WITNESS:  Signature  Leolo Roy  Printed Name	LESSOR:  X Kenn J ly  Signature Printed Name: Kenna Ray Address:
WITNESS:	LESSEE: NOBLE ENERGY, INC.
Signature	Signature
Printed Name	By: MARK A. ACREE Its: Attorney-In-Fact

Received Office of Oil & Gas

# INDIVIDUAL ACKNOWLEDGMENT

Approximately 1 1 1 5	
STATE / COMMONWEALTH OF Wes	Winnin 8
COUNTY OF Kangulha	§
The foregoing instrument was acknowledged Frances Ray a/k/a Leola Ray and Kenna Ray, her h	before me, this 2 day of Och by 2014, by Leola usband.
My Commission Expires:	0 - 35
Notary OFFICIAL SEAL Notary Public, State Of West Virginia JASON BETTS	Signature Communication Rettly Printed Name
PO 8 or 6598 Wheeling WV 26003 My Commission Expires May 14, 2023	Notary Public
CORPOR	ATE ACKNOWLEDGMENT
COMMONWEALTH OF PENNSYLVANIA § COUNTY OF WASHINGTON §	
MARK A. ACREE, as Allomey-in-ract for NORLE EN	20, before me, the undersigned officer, personally appeared ERGY, INC., a Delaware corporation, personally known to me to be the nent 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

Received Office of Oil & Gas

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

# MEMORANDUM OF LEASE

This MEMORANDUM OF LEASE, dated this \( \frac{10}{20} \) day of \( \text{October}, 2014, \) is utilized to indicate the existence of a PAID-UP OIL AND GAS LEASE (hereinafter, "Lease") of even date herewith, by and between \( \text{Charles Gary Carder, a single man, whose mailing address is: \( \frac{944}{2014} \) Hickman Road, \( \text{Waterford, OH 45786-6195} \) (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

- 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 05-18-11 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.

Signature  Jaka Butt  Printed Name	Signature Printed Name: Charles Gary Carder Address: 944 th character Rd  Waterford of 45786-6199
WITNESS:	LESSEE: NOBLE ENERGY, INC.
Signature	Signature Ry MARK A ACRES

Received Office of Oil & Gas

Its: Attorney-In-Fact

JAN 26 2015

Printed Name

# INDIVIDUAL ACKNOWLEDGMENT

STATE / COMMONWEALTH OF	<u>)                                    </u>
COUNTY OF PALMER	
The foregoing instrument was acknowledged Gary Carder, a single man.	before me, this 20 day of October, 2014, by Charles
My Commission Expires: Sworn to and subscribed before me this Zo day of Other 2014  JASON BETTS	Signature Butt
HOTARY PUBLIC, STATE OF CHEO htly Commission Explices CT 2017 OR A	TE ACKNOWLEDGMENT
COMMONWEALTH OF PENNSYLVANIA § COUNTY OF WASHINGTON §	
On thisday of	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	affixed my seal.
My Commission Expires:	
	Signature
	Printed Name
	Notary Public

Received
Office of Oil & Gas

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

### MEMORANDUM OF LEASE

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

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

- 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:

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

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

Premises").

Printed Name

This Memorandum of Lease has been ex shall not be considered in any way a modification or	ecuted for the purpose of providing notice of the existence of the Lease and ralteration of the Lease.
WITNESS:	LESSOR: Tanni & Rem Di oualt
Signature  DAVIDE. RHEINHARDT	Signature Printed Name : Tami Rheinhardt a/k/a Tami Dawn Rheinhardt
Printed Name	Address: 1291 F Main St
√ ½ <u>.</u>	Salem WV 36426
WITNESS:	LESSEE:
	NOBLE ENERGY, INC.
Signature	
	Signature

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

Received Office of Oil & Gas

# INDIVIDUAL ACKNOWLEDGMENT STATE / COMMONWEALTH OF USEST VIRENIA 8 COUNTY OF HARRISOLD 8 The foregoing instrument was acknowledged before me, this 5th day of SEPTEMBER. 2014, by Taml Rheinhardt afk/a Tami Dawn Rheinhardt, a single woman. My Commission Express: WILLIAM J ROBINSON 1550 RER SI 1550 RER S

Signature
Printed Name
Notary Public

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

MY COMMISSION EXPIRES:

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

Received
Office of Oil & Gas

JAx 2 6 2015



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:

Date of Notice Certification: 1-22-15

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

API No. 47- 095

Operator's Well No. SHR 30 EHS Well Pad Name: SHR 30

TOTICE	has been giver	l:				
			de § 22-6A, the Operator has pro-	vided the req	quired parties v	vith the Notice Forms listed
	for the tract of lan					
State:	West Virgin	nia	UTM NAD 83	Easting:	515937.258	
County	: 095-Tyler		O I M NAD 83	Northing:	4362691.576	
District	: Mc Elroy		Public Road Acc	ess:	County Rt. 58	
Quadra	ngle: Shirley		Generally used fa	arm name:	Seckman	
Waters	hed: huc-10 Mo	Elroy Creek				
prescril it has prescrit information of giving require Virgini	bed by the secretary or ovided the own ation required by the surface own ments of subsects a Code § 22-6A-1	ry, shall be verified an ers of the surface des subsections (b) and (c) oner notice of entry to ion (b), section sixteen	(b), every permit application file and shall contain the following informations (1), (2) and (2), section sixteen of this article; (in the survey pursuant to subsection of the article were waived in all tender proof of and certify to the icant.	ormation: (14 and (4), subs i) that the red (a), section to writing by	4) A certificati section (b), sec quirement was ten of this arti the surface ov	on from the operator that (i) etion ten of this article, the deemed satisfied as a resul- cle six-a; or (iii) the notice wher; and Pursuant to West
that th		roperly served the requ	e Operator has attached proof to to uired parties with the following:	his Notice C	ertification	OOG OFFICE USE ONLY
□ 1	. NOTICE OF S	EISMIC ACTIVITY	or NOTICE NOT REQUIRES SEISMIC ACTIVITY WAS			RECEIVED/ NOT REQUIRED
<b>■</b> 2	. NOTICE OF E	NTRY FOR PLAT SU	JRVEY or D NO PLAT SURV	EY WAS CO	ONDUCTED	RECEIVED
□ 3	. NOTICE OF IN	NTENT TO DRILL	or NOTICE NOT REQUII NOTICE OF ENTRY FOR WAS CONDUCTED or			RECEIVED/ NOT REQUIRED
			☐ WRITTEN WAIVER (PLEASE ATTACH)		CE OWNER	
■ 4	. NOTICE OF P	LANNED OPERATIO	ON			RECEIVED .
<b>■</b> 5	. PUBLIC NOTI	CE				RECEIVED
		PPLICATION				RECEIVED

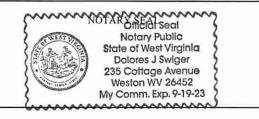
Required Attachments:

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

### Certification of Notice is hereby given:

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

Well Operator:	Noble Energy, Inc.	Address:	333 Technology Drive, Suite 116	
By:	18 Toca		Canonsburg, PA 15317	
Its:	Regulatory Analyst	Facsimile:	724-743-0050	
Telephone:	724-820-3061	Email:	dswiger@nobleenergyinc.com	



Subscribed and sworn before me this 5 day of fan . 2015.

Notary Public

My Commission Expires 09/19/2023

### Oil and Gas Privacy Notice:

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

WW-6A (9-13)

API NO. 47- 095

OPERATOR WELL NO. SHR 30 EHS

# Well Pad Name: SHR 30

*Please attach additional forms if necessary

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

Notice Time Req	uirement: notice shall be provide	no later than the filing date of perm	it application.
Date of Notice: _ Notice of:	Date Permit Applicat	Filed: 1-23-15	
PERMIT FO		TE OF APPROVAL FOR THE CTION OF AN IMPOUNDMENT OF	t PIT
Delivery method	pursuant to West Virginia Co	§ 22-6A-10(b)	
☐ PERSONAL	REGISTERED	✓ METHOD OF DELIVERY THA	T REOLURES A
SERVICE	MAIL	RECEIPT OR SIGNATURE CO	
sediment control p the surface of the t oil and gas leaseho described in the er- operator or lessee, more coal seams; ( well work, if the su impoundment or p have a water well, provide water for c proposed well wor subsection (b) of the records of the sher- provision of this ar Code R. § 35-8-5.7	lan required by section seven of the ract on which the well is or is proposed by the proposed osion and sediment control plan suggested in the event the tract of land on well. The owners of record of the suggested in the event is to be used for the plantage tract is to be used for the plantage of the suggested in section nine of the spring or water supply source located consumption by humans or domestic activity is to take place. (c)(1) If his section hold interests in the land iff required to be maintained pursuative to the contrary, notice to a life of a requires, in part, that the operations and service is the contrary, and the operation is the contrary, in the contrary is proposed to the contrary, that the operation is the contract of the contract is the contract of t	article, and the well plat to each of the feed to be located; (2) The owners of recovered well work, if the surface tract is to be us nitted pursuant to subsection (c), section the well proposed to be drilled is locate tract or tracts overlying the oil and gament, construction, enlargement, alternaticle; (5) Any surface owner or water within one thousand five hundred feet animals; and (6) The operator of any nature than three tenants in common or oth the applicant may serve the documents to section eight, article one, chapter elabolder is not notice to a landowner, unless the section eight, article one, chapter elabolder is not notice to a landowner, unless the section eight, article one, chapter elabolder is not notice to a landowner, unless the section eight, article one, chapter elabolder is not notice to a landowner, unless the section eight, article one, chapter elabolder is not notice to a landowner, unless the section eight.	er co-owners of interests described in required upon the person described in the even-a of this code. (2) Notwithstanding any ess the lien holder is the landowner. W. Va. Plan ("WSSP") to the surface owner and any
☑ Application N	otice WSSP Notice E&	lan Notice Well Plat Notice is	hereby provided to:
SURFACE OW	NER(s)	COAL OWNER OR L	ESSEE
Name: George G. H		Name: none	
Address: 2812 Mcl	Elroy Creek Road	Address:	
Alma, WV 26320			
Name: Gary L. Han		COAL OPERATOR	
Address: 102 Big F		Name: none	
West Union, WV 264			
	NER(s) (Road and/or Other Dis		DE WATER WELL
Name:		SURFACE OWNER (	1 19-01 \ 19-02   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03   19-03
Address:		AND/OR WATER PUR	/ Making a mai / Mil O / Man
		Name:	33
Address:		Address.	JAN 2 6 2015
		DOPERATOR OF ANY	NATURAL GAS STORAGE FIELD
	NER(s) (Impoundments or Pits)	Name: none	NATURAL GAS STORAGE FIELD
Address:			
		*Please attach additional	forms if necessary 04/17/2015

04/17/2015

*Please attach additional forms if necessary

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

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

Notice Time Requirement: notice shall be provided no later than the filing date of permit application. Date of Notice: 1-22-15 Date Permit Application Filed: 1-23-15 Notice of: PERMIT FOR ANY ☐ CERTIFICATE OF APPROVAL FOR THE WELL WORK CONSTRUCTION OF AN IMPOUNDMENT OR PIT Delivery method pursuant to West Virginia Code § 22-6A-10(b) REGISTERED ☑ METHOD OF DELIVERY THAT REQUIRES A PERSONAL SERVICE MAIL RECEIPT OR SIGNATURE CONFIRMATION Pursuant to W. Va. Code § 22-6A-10(b) no later than the filing date of the application, the applicant for a permit for any well work or for a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site Safety Plan ("WSSP") to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule. ☑ Application Notice ☑ WSSP Notice ☑ E&S Plan Notice ☑ Well Plat Notice is hereby provided to: COAL OWNER OR LESSEE M SURFACE OWNER(s) Name: Donald L. Seckman Name: none Address: 705 Jefferson Run Road Address: Alma, WV 26320 Name: Beverly J. Seckman □ COAL OPERATOR Address: 353 Foundry Street Name: none New Martinsville, WV 26155 Address: ☐ SURFACE OWNER(s) (Road and/or Other Disturbance) SURFACE OWNER OF WATER WELL Received Name: Address: Name: Office of Oil & Gas Address: Name: JAN 2 6 2015 Address: □ OPERATOR OF ANY NATURAL GAS STORAGE FIELD Name: none ☐ SURFACE OWNER(s) (Impoundments or Pits) Address: Name:

Address:

WW-6A (9-13) API NO. 47- 095 0 2 2 3 3 OPERATOR WELL NO. SHR 30 EHS
Well Pad Name: SHR 30

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

Noti	ce Time Requiremen	t: notice shall be provide	ed no later tha	n the filing date of permit appl	ication.	
	e of Notice: 1-22-15 ce of:	Date Permit Application	on Filed:	<u>23-1</u> 5		
V	PERMIT FOR ANY WELL WORK			ROVAL FOR THE AN IMPOUNDMENT OR PIT		
Deli	very method pursuan	t to West Virginia Cod	le § 22-6A-10	(b)		
	PERSONAL SERVICE	REGISTERED MAIL		OD OF DELIVERY THAT REC	27	
certification ce	ficate of approval for the tered mail or by any mement control plan requireurface of the tract on what gas leasehold being or ribed in the erosion and ator or lessee, in the every coal seams; (4) The own work, if the surface trace a water well, spring or ide water for consumptions of the sheriff required is ion of this article to the R. § 35-8-5.7.a required.	e construction of an import thou of delivery that required by section seven of this inch the well is or is proposed sediment control plan substituted in the tract of land on whomers of record of the surfect is to be used for the planted in section nine of this water supply source location by humans or domestic is to take place. (c)(1) If it is hold interests in the land of the decontrary, notice to a lier es, in part, that the operat	sundment or pitires a receipt of sarticle, and the osed to be local discounties with the well work, if the bmitted pursuation the well proceed that the well proceed that the canimals; and more than threeds, the applicant to section en holder is not or shall also proceed to section the sarticle of the section that the section th	of the application, the applicant for the application, the application of the standard plant for signature confirmation, copies of the well plat to each of the following ted; (2) The owners of record of the surface tract is to be used for not to subsection (c), section seven to oposed to be drilled is located [side cts overlying the oil and gas lease uction, enlargement, alteration, reparts surface owner or water purvey thousand five hundred feet of the (6) The operator of any natural gase tenants in common or other cook that the second the server the documents required the server the documents required the server the server the safety Plan ("as provided in section 15 of this reparts of the server the second to the second the s	eliver, by personal server of the application, the end of the application, the end of the surface tract or tract roads or other land districted in this article; (3) The end of the surface hold being developed by pair, removal or abandor who is known to the center of the well pad was storage field within volves of interests descreted upon the person description of this code. (2) Notwillien holder is the landor twesty.	rosion and ners of record of s overlying the turbance as coal owner, clain by one or by the proposed comment of any expelicant to which is used to which the ribed in cribed in the ithstanding any wner. W. Va.
	2.7	WSSP Notice ☐ E&S	Plan Notice	☑ Well Plat Notice is hereby		
_	JRFACE OWNER(s)			COAL OWNER OR LESSE	E	
	e: Stanley E. Seckman	No. 2 1				
	ress: 659 Jefferson Run F	Road		Address:		
-	, WV 26320			- COAL OPERATOR		
	e: Allen W. Seckman	200		COAL OPERATOR	Rec	eived
	ress: 824 Jefferson Run F	1080		Name: none Address:	Office of	Oil & Gae
	, WV 26320	Road and/or Other Distu		Address:		
-	25 100 25		irbance)	SURFACE OWNER OF WA	TED WELL JAN 2	6 2015
A dd.	e			AND/OR WATER PURVEYO		
Addi	ess.					
Nam	e'			Name:		
Add.	·ecc:			Address:		
Auul	Coo			OPERATOR OF ANY NAT	IIDAL CAS STODAC	CE EIEI D
I 2 I	IREACE OWNER(s)	Impoundments or Pits)		Name none		JE FIELD
					<del></del>	
Add.	.ecc.			Address:		
Auul				*Please attach additional forms	if necessary 04	4/17/2015

WW-6A (9-13) API NO. 47- 095 0 2 2 3 3 OPERATOR WELL NO. SHR 30 EHS

Well Pad Name: SHR 30

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

Noti	ce Time Requirement	notice shall be provided	no later that	n the filing date of permit application	n.
	e of Notice: <u>22-15</u> l	Date Permit Application	Filed: <u>[* 23</u>	-15_	
V	PERMIT FOR ANY WELL WORK			ROVAL FOR THE AN IMPOUNDMENT OR PIT	
Deli	very method pursuant	to West Virginia Code §	22-6A-10	(b)	
	PERSONAL SERVICE	REGISTERED MAIL		OD OF DELIVERY THAT REQUIRE PT OR SIGNATURE CONFIRMATION	
certification ce	ficate of approval for the tered mail or by any metionent control plan require urface of the tract on which did gas leasehold being deribed in the erosion and stator or lessee, in the every coal seams; (4) The ownwork, if the surface tract undment or pit as descripa water well, spring or wide water for consumptions description (b) of this section description of the sheriff required is ion of this article to the R. § 35-8-5.7.a require	construction of an impoun- hod of delivery that require d by section seven of this a ich the well is or is propose eveloped by the proposed we dediment control plan submant the tract of land on which mers of record of the surface is to be used for the placer bed in section nine of this a vater supply source located on by humans or domestic a se to take place. (c)(1) If mo hold interests in the lands, it to be maintained pursuant e contrary, notice to a lien h se, in part, that the operator	dment or pit s a receipt o rticle, and th d to be loca vell work, if itted pursual the well pre e tract or tra- ment, constru- tricle; (5) A within one t mimals; and re than three the applican to section e older is not shall also pr	of the application, the applicant for a pet as required by this article shall deliver, or signature confirmation, copies of the application of the following persected; (2) The owners of record of the surface tract is to be used for roads on to subsection (c), section seven of this oposed to be drilled is located [sic] is known of the coverlying the oil and gas leasehold be used overlying the oil and gas leasehold b	by personal service or by pplication, the erosion and sons: (1) The owners of record of face tract or tracts overlying the or other land disturbance as a article; (3) The coal owner, nown to be underlain by one or eing developed by the proposed emoval or abandonment of any o is known to the applicant to of the well pad which is used to age field within which the of interests described in the person described in the scode. (2) Notwithstanding any older is the landowner. W. Va.
☑ A	pplication Notice	WSSP Notice ☐ E&S P	lan Notice	☑ Well Plat Notice is hereby prov	ided to:
Nam Addi Siste Nam Addi New SU Nam	e:	Road and/or Other Disturb	ance)	☐ COAL OWNER OR LESSEE  Name: none  Address: ☐ COAL OPERATOR  Name: none  Address: ☐ SURFACE OWNER OF WATER	Received Office of Oil & Gas  JAN 2 6 2015
Add	ress:			AND/OR WATER PURVEYOR(s) Name: Michael K. & Virginia L. Griffin	
	e: ress:			Address: P.O. Box 254  Middlebourne, WV 26149  OPERATOR OF ANY NATURAL	
Nam	JRFACE OWNER(s) (I	.5\ E-11		Name: none Address:	
Add	ress:			*Please attach additional forms if nec	essary 04/17/2015

OPERATOR WELL NO. SHR 30 EHS

Well Pad Name: SHR 30

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

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

Date of Notice: Date Permit Application Filed: Notice of:	3-1 <u>5</u>
PERMIT FOR ANY WELL WORK  CONSTRUCTION OF A	ROVAL FOR THE N IMPOUNDMENT OR PIT
Delivery method pursuant to West Virginia Code § 22-6A-10(	b)
The state of the s	DD OF DELIVERY THAT REQUIRES A PT OR SIGNATURE CONFIRMATION
certificate of approval for the construction of an impoundment or pit registered mail or by any method of delivery that requires a receipt of sediment control plan required by section seven of this article, and the the surface of the tract on which the well is or is proposed to be located oil and gas leasehold being developed by the proposed well work, if described in the erosion and sediment control plan submitted pursuar operator or lessee, in the event the tract of land on which the well promore coal seams; (4) The owners of record of the surface tract or trace well work, if the surface tract is to be used for the placement, construint impoundment or pit as described in section nine of this article; (5) As have a water well, spring or water supply source located within one to provide water for consumption by humans or domestic animals; and proposed well work activity is to take place. (c)(1) If more than three subsection (b) of this section hold interests in the lands, the applicant records of the sheriff required to be maintained pursuant to section expression of this article to the contrary, notice to a lien holder is not a	r signature confirmation, copies of the application, the erosion and e well plat to each of the following persons: (1) The owners of record of red; (2) The owners of record of the surface tract or tracts overlying the the surface tract is to be used for roads or other land disturbance as at to subsection (c), section seven of this article; (3) The coal owner, posed to be drilled is located [sic] is known to be underlain by one or ests overlying the oil and gas leasehold being developed by the proposed action, enlargement, alteration, repair, removal or abandonment of any my surface owner or water purveyor who is known to the applicant to housand five hundred feet of the center of the well pad which is used to (6) The operator of any natural gas storage field within which the tenants in common or other co-owners of interests described in a may serve the documents required upon the person described in the light, article one, chapter eleven-a of this code. (2) Notwithstanding any notice to a landowner, unless the lien holder is the landowner. W. Va. ovide the Well Site Safety Plan ("WSSP") to the surface owner and any
☐ Application Notice ☐ WSSP Notice ☐ E&S Plan Notice	☑ Well Plat Notice is hereby provided to:
Name: Charles E. Hamilton, Jr. Address: 17095 WV Rt. 23 N	COAL OWNER OR LESSEE  Name: none  Address:
West Union, WV 26456	COAL OPERATOR Received
Name:Address:	Name: none Office of Oil & Gas
SURFACE OWNER(s) (Road and/or Other Disturbance)	JAN_26 2015
Name:Address:	SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s) Name: Everett Roy & Betty June Weese
Name:	Address: 2524 McElroy Creek Road
Address:	Alma, WV 26320
	OPERATOR OF ANY NATURAL GAS STORAGE FIELD
SURFACE OWNER(s) (Impoundments or Pits) Name:	Name: none Address:
Address:	*Please attach additional forms if necessary

WW-6A (8-13)

API NO. 47-095

OPERATOR WELL NO. SHR 30 EHS

Well Pad Name: SHR 30

# Notice is hereby given:

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

### This Notice Shall Include:

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

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

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

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

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

Received

Well Location Restrictions

Office of Oil & Gas

# Well Location Restrictions

Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within 2005 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 appeared by 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 EHS

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:

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

Received Office of Oil & Gas

JAN 26 2015

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

WW-6A (8-13)

API NO. 47- 095

OPERATOR WELL NO. SHR 30 EHS

Well Pad Name: SHR 30

# Time Limits and Methods for Filing Comments.

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

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

### **Comment Requirements**

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

Disclaimer: All comments received will be placed on our web site <a href="http://www.dep.wv.gov/oil-and-gas/Horizontal-Permits/Pages/default.aspx">http://www.dep.wv.gov/oil-and-gas/Horizontal-Permits/Pages/default.aspx</a> 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.

5

Notary Public

Office of Oil & Gas Received

WW-6A (8-13) Notice is hereby given by:

Well Operator: Noble Energy, Inc.

Telephone: 724-820-3061

Email: dswiger@nobleenergyinc.com

Address: 333 Technology Drive Suite 116

SHR 30 EHS

OPERATOR WELL NO. Well Pad Name: SHR 30

API NO. 47-095

Canonsburg, PA 15317

Facsimile: 724-743-0050

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

Official Seal fate of West Virginia 235 Coffage Avenue Weston WV 26452 Dolores J Swiger Notary Public

Subscribed and sworn before me this 15 day of

My Commission Expires 09/19/2023

04/17/2015

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

Notice Time entry	Requirement: Notice shall be provid	ed at least	SEVEN (7) days	but no more than	FORTY-FIVE (45) days prior to		
Date of Notic	ee: 10/6/2014 Date of Plann	ed Entry:	by 11/20/2014				
Delivery met	hod pursuant to West Virginia Cod	e § 22-6A	-10a				
☐ PERSO	NAL REGISTERED	■ ME	THOD OF DELL	VERY THAT RE	OTHERS A		
SERVIC				TURE CONFIR			
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	eby provided to: CE OWNER(s)		П соац	OWNER OR LES	SSEE		
	ca A. Seckman a/k/a Rebecca A. Barth						
Address: 504:			Name:Address:				
Sistersville, WV							
	A. Seckman a/k/a Kathy A. Roberts 🗸						
	42 Trail Run Road			AL OWNER(s)			
New Maramoras Name: Stanley				ge G. Hamilton			
	Jefferson Run Road		Address: 28 Alma, WV 263	12 McElroy Road			
Alma, WV 2632			*please attach additional forms if necessary				
a plat survey State:	Vest Virginia Code § 22-6A-10(a), not on the tract of land as follows:  West Virginia	tice is here	Approx. Latitud	le & Longitude:	operator is planning entry to conduct  North 39.413713 West 80.815143 E 515913.46 N 4362704.70		
County:	Tyler		Public Road Ad	ccess:	County Rt. 23		
District:	McElroy		Watershed:	<i>C</i>	huc-10 McElroy Creek		
Quadrangle:	Shirley		Generally used	farm name:	Seckman		
may be obtain Charleston, V	state Erosion and Sediment Control Need from the Secretary, at the WV De VV 25304 (304-926-0450). Copies on the Secretary by visiting						

# Oil and Gas Privacy Notice:

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

notice Time Re	quirement: Notice shall	be provided at lea	ast SEVEN (7) day	s but no more than	FORTY-FIVE (45) days prior to
entry Date of Notice:	10/6/2014 Date	of Planned Enti	ry: by 11/20/2014		
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Denvery metho	d pursuant to West Virg	inia Code § 22-	5A-10a		
☐ PERSONA	L REGISTER	ED 🔳 N	IETHOD OF DEL	IVERY THAT RE	OLURES A
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Notice is hereby	- 2 <del>7</del> 21		<u> </u>		
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	A. Seckman a/k/a Rebecca A. E	arth	Name:		
Address: 5042 T			Address: _		
Sistersville, WV 26					
	eckman a/k/a Kathy A. Roberts		Table to the second		
Address: 42842			■ MINE	ERAL OWNER(s)	
New Maramoras, O			Name: Gar	ry L. Hamilton	
Name: Stanley E.				102 Big Flint Road	
Address: 659 Jei	ferson Run Road	<del></del>	West Union,		
Alma, WV 26320			*please attacl	n additional forms if neo	cessary
a plat survey on State:   County:   District:   M	et Virginia Code § 22-6A- the tract of land as follow Vest Virginia yler McElroy		5.18	ude & Longitude: Access:	Operator is planning entry to conduct  North 39.413713 West 80.815143 E 515913.46 N 4382704.70  County Rt. 23  huc-10 McElroy Creek
Quadrangle: _5	Shirley		Generally use	d farm name:	Seckman
may be obtained Charleston, WV	I from the Secretary, at th	e WV Departmen Copies of such o	nt of Environmenta locuments or addit	l Protection headquional information r	il and gas exploration and production uarters, located at 601 57 th Street, SE, related to horizontal drilling may be
Notice is hors	hy given hy:				Office of Oil & Gas
Notice is here Well Operator:			Address:		Office of Off & Gas
Telephone:	Noble Energy, Inc. 724-820-3061			333 Technology Driv	ve, Suite 116 Canon Shirg 2-6 12015
Email:	dswiger@nobleenergyinc.com	n	Facsimile:	724-743-0050	to, outcome outside the least to
	damigat@nobleenergyinc.com	Mr.			

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

		tequiremen	t: Notice shall be prov	ided at	least SEVEN (7) day	s but no more than	FORTY-FIVE (45) days prior to	
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		Tyler Highway	n/k/a Rebecca A. Barth		Name:			
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	, WV 26320		M23/4-25	-		additional forms if ne	cessary	
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		eby given			A of Juneau		Gince of Oil & G	30
	1 Operator:				Address:		ve, Suite 116 Canonsburg, A 18367 2015	~
	phone:	724-820-30					/e, Suite 116 Canonsbuit, PA 15307 ZU15	
Ema	ul:	dswiger@n	obleenergyinc.com		Facsimile:	724-743-0050		į

# Oil and Gas Privacy Notice:

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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

Noti	ice Time Rec	uirement:	Notice shall be prov	ided at	least SEVEN (7) day	s but no more than	FORTY-FIVE (45) days prior to
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	SURFACE (	-			П сом	OWNER OR LE	CCE
	ne: Allen W. Se						
	ress: 824 Jeffe		ad		Address:		
	a, WV 26320						
	ne: Donald L. S			_			
	lress: 705 Jeffe	erson Run Ro	ad		■ MINE	RAL OWNER(s)	
	a, WV 26320				Name: san	ne as listed surface ow	vners
	ne: Beverly J. S			-	Address:		
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Qua	drangle: S	nirley			Generally use	d farm name:	Seckman
may	y be obtained orleston, WV	from the Se 25304 (304	ecretary, at the WV I 4-926-0450). Copies	epartr of suc	nent of Environmenta	l Protection headq ional information i	oil and gas exploration and production quarters, located at 601 57th Street, SE, related to horizontal drilling may be THECEIVED  Office of Oil & Gas
No	tice is herel	y given b	y:				
	ll Operator:	Noble Energy, Inc.			Address:		JAN 26 2015
	ephone:	724-820-306	1			333 Technology Dri	ive, Suite 116 Canonsburg, PA 15317
Em	ail:	dswiger@nol	oleenergyinc.com		Facsimile:	724-743-0050	

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

	ee: Date Permit Application			аррисанов. ——
Delivery met	hod pursuant to West Virginia Code § 22-6A-1	6(c)		
	FIED MAIL HAND RN RECEIPT REQUESTED DELIV			
return receipt the planned or required to be drilling of a l damages to th	V. Va. Code § 22-6A-16(c), no later than the dat requested or hand delivery, give the surface owner peration. The notice required by this subsection provided by subsection (b), section ten of this art norizontal well; and (3) A proposed surface use as e surface affected by oil and gas operations to the est required by this section shall be given to the surface.	er whose land n shall includicted to a surfa and compens extent the da	I will be used for de: (1) A copy ace owner whose ation agreement amages are comp	r the drilling of a horizontal well notice of of this code section; (2) The information e land will be used in conjunction with the t containing an offer of compensation for pensable under article six-b of this chapter.
(at the address		Name: ! Address	Kathy A. Seckman 3: 42842 Trail Run ramoras, OH 45767	
Sistersville, vvv	261/5	New Ma	ramoras, OH 45767	<u> </u>
	Vest Virginia Code § 22-6A-16(c), notice is hereby the surface owner's land for the purpose of drilling West Virginia 095-Tyler Mc Elroy	g a horizonta UTM NAD 8 Public Road A	I well on the trac Easting: Northing:	
Pursuant to W to be provide horizontal we surface affect information r	Finall Include:  Vest Virginia Code § 22-6A-16(c), this notice shall defeated by W. Va. Code § 22-6A-10(b) to a surface of a surface of the state of	owner whose tion agreement mages are common the Secret	e land will be un nt containing an ompensable und ary, at the WV	sed in conjunction with the drilling of a offer of compensation for damages to the er article six-b of this chapter. Additional Department of Environmental Protection
Well Operato	r: Noble Energy, Inc.	Address:	333 Technology D	Drive, Suite 116
Telephone:	724-820-3061		Canonsburg, PA	
Email:	dswiger@nobleenergyinc.com	Facsimile:	724-743-0050	
Oil and Gas	Privacy Notice:			

Received Office of Oil & Gas JAN 2.6 2015

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

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Operator Well No. SHR 30 EHS

95 02233

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

	e: Date Permit App	plication Filed:		application.				
Delivery met	hod pursuant to West Virginia Code § 22	2-6A-16(c)						
		HAND DELIVERY						
return receipt the planned of required to be drilling of a lanages to the	requested or hand delivery, give the surfac peration. The notice required by this sub provided by subsection (b), section ten of norizontal well; and (3) A proposed surface e surface affected by oil and gas operations	the owner whose land osection shall include this article to a surface use and compens to the extent the da	will be used for de: (1) A copy ace owner whos ation agreemen mages are comp	cation, an operator shall, by certified mail or the drilling of a horizontal well notice of of this code section; (2) The information we land will be used in conjunction with the t containing an offer of compensation for pensable under article six-b of this chapter. Sted in the records of the sheriff at the time				
	5 WV Rt. 23 N	me of notice): Name:	·					
	est Virginia Code § 22-6A-16(c), notice is the surface owner's land for the purpose of West Virginia  095-Tyler  Mc Elroy  Shirley huc-10 Mc Elroy Creek		Well on the tra Easting: Northing: Access:					
Pursuant to We be provide norizontal we surface affect information re	d by W. Va. Code § 22-6A-10(b) to a sull; and (3) A proposed surface use and comed by oil and gas operations to the extent elated to horizontal drilling may be obtain located at 601 57 th Street, SE, Charles	arface owner whose inpensation agreement the damages are contact and from the Secret	land will be un at containing an empensable und ary, at the WV	code section; (2) The information required used in conjunction with the drilling of a coffer of compensation for damages to the ter article six-b of this chapter. Additional Department of Environmental Protection or by visiting <a (5)<="" 1="" href="https://www.dep.wv.gov/oil-and-damages-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked-new-marked&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;Well Operator&lt;/td&gt;&lt;td&gt;: Noble Energy, Inc.&lt;/td&gt;&lt;td&gt;Address:&lt;/td&gt;&lt;td&gt;333 Technology I&lt;/td&gt;&lt;td&gt;Drive, Suite 116&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;Telephone:&lt;/td&gt;&lt;td&gt;724-820-3061&lt;/td&gt;&lt;td&gt;F!&lt;/td&gt;&lt;td&gt;Canonsburg, PA&lt;/td&gt;&lt;td&gt;15317&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;Email:&lt;/td&gt;&lt;td&gt;dswiger@nobleenergyinc.com&lt;/td&gt;&lt;td&gt;Facsimile:&lt;/td&gt;&lt;td&gt;724-743-0050&lt;/td&gt;&lt;td&gt;&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;0" td=""><td>Dulanasa Nationa</td><td></td><td></td><td></td></a>	Dulanasa Nationa			

### 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 <a href="mailto:depprivacyofficer@wv.gov">depprivacyofficer@wv.gov</a>.

Received Office of Oil & Gas WW-6A5 (1/12)

Operator Well No. SHR 30 EHS

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

Notice Time Requirement: notice shall be provided no later than the filing date of permit application.  Date of Notice:					
Delivery method pursuant to West Virginia Code § 22-6A	x-16(c)				
CERTIFIED MAIL HAY RETURN RECEIPT REQUESTED DEI	ND LIVERY				
Pursuant to W. Va. Code § 22-6A-16(c), no later than the return receipt requested or hand delivery, give the surface of the planned operation. The notice required by this subsection (b), section ten of this drilling of a horizontal well; and (3) A proposed surface us damages to the surface affected by oil and gas operations to the of notice.	wner whose land tion shall include article to a surface se and compense the extent the da	I will be used for de: (1) A copy ace owner whos ation agreemen amages are comp	or the drilling of a horizontal well notice of of this code section; (2) The information e land will be used in conjunction with the t containing an offer of compensation for pensable under article six-b of this chapter.		
Notice is hereby provided to the SURFACE OWNER(s) (at the address listed in the records of the sheriff at the time of Name: George G. Hamilton Address: 2812 McElroy Creek Road Alma, WV 26320	Name: 9	Gary L. Hamilton s: 102 Big Flint Ro nion, WV 26456	ad		
Notice is hereby given:  Pursuant to West Virginia Code § 22-6A-16(c), notice is here operation on the surface owner's land for the purpose of dril State:  West Virginia  County:  O95-Tyler  District:  Mc Elroy  Quadrangle:  Watershed:  Mc Elroy Creek	lling a horizonta UTM NAD 8 Public Road	l well on the tra Easting: Northing:			
This Notice Shall Include: Pursuant to West Virginia Code § 22-6A-16(c), this notice is to be provided by W. Va. Code § 22-6A-10(b) to a surface horizontal well; and (3) A proposed surface use and compensurface affected by oil and gas operations to the extent the information related to horizontal drilling may be obtained headquarters, located at 601 57th Street, SE, Charleston gas/pages/default.aspx.	ce owner whose sation agreemed damages are confrom the Secret	e land will be un nt containing an empensable und eary, at the WV	ased in conjunction with the drilling of a n offer of compensation for damages to the ler article six-b of this chapter. Additional Department of Environmental Protection		
Well Operator: Noble Energy, Inc.	Address:	333 Technology I			
Telephone: 724-820-3061 Email: dswiger@nobleenergyinc.com	Facsimile:	724-743-0050	15517		

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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 <a href="mailto:depprivacyofficer@wv.gov">depprivacyofficer@wv.gov</a>.

WW-6A5 (1/12)

Operator Well No. SHR 30 EHS

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

	Requirement: notice shall be provided no later to be: Date Permit Applicat			application.
Delivery met	hod pursuant to West Virginia Code § 22-6A-	16(c)		
CERTII	FIED MAIL HAN	D		
		VERY		
return receipt the planned of required to be drilling of a l damages to th	V. Va. Code § 22-6A-16(c), no later than the date requested or hand delivery, give the surface own operation. The notice required by this subsection provided by subsection (b), section ten of this approximately and (3) A proposed surface use e surface affected by oil and gas operations to the server required by this section shall be given to the server required by this section shall be given to the server required by this section shall be given to the server required by this section shall be given to the server required by this section shall be given to the server required by this section shall be given to the server required by this section shall be given to the server required by this section shall be given to the server required by this section shall be given to the server required by this section shall be given to the server required by this section shall be given to the server required by this section shall be given to the server required by this section shall be given to the server required by this section shall be given to the server required by this section shall be given to the server required by this section shall be given to the server required by this section shall be given to the server required by the server required by the section shall be given to the server required by the section shall be given to the server required by the section shall be given to the section shall be given	ner whose land on shall inclu- rticle to a surfa- and compense e extent the da	I will be used for de: (1) A copy ace owner whos sation agreement amages are comp	or the drilling of a horizontal well notice of of this code section; (2) The information e land will be used in conjunction with the t containing an offer of compensation for pensable under article six-b of this chapter.
Notice is here	eby provided to the SURFACE OWNER(s)			
	s listed in the records of the sheriff at the time of	notice):		
Name: Donald			Beverly J. Seckmar	
	Jefferson Run Road		353 Foundry Str	
Alma, WV 2632	0	New Ma	rtinsville, WV 2615	5
operation on State: County: District:	rest Virginia Code § 22-6A-16(c), notice is hereby the surface owner's land for the purpose of drilli West Virginia    095-Tyler   Mc Elroy	ng a horizonta UTM NAD 8 Public Road	l well on the traces Easting: Northing: Access:	ct of land as follows: 515937.258 4362691.576 County Rt. 58
Quadrangle: Watershed:	huc-10 Mc Elroy Creek	Generally use	ed farm name:	Seckman
This Notice S Pursuant to W to be provide horizontal we surface affect information re	Shall Include:  Vest Virginia Code § 22-6A-16(c), this notice shad by W. Va. Code § 22-6A-10(b) to a surface ll; and (3) A proposed surface use and compensed by oil and gas operations to the extent the delated to horizontal drilling may be obtained frolocated at 601 57th Street, SE, Charleston,	owner whose ation agreeme lamages are co om the Secret	e land will be un nt containing an empensable und eary, at the WV	sed in conjunction with the drilling of a offer of compensation for damages to the er article six-b of this chapter. Additional Department of Environmental Protection
Well Operator	: Noble Energy, Inc.	Address:	333 Technology [	Drive Suite 116
Telephone:	724-820-3061		Canonsburg, PA	
Email:	dswiger@nobleenergyinc.com	Facsimile:	724-743-0050	100.11
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Received Office of Oil & Gas

Operator Well No. SHR 30 EHS

02233

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

Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1)A copy of this code section; (2) The into be provided by W. Va. Code § 22-6A-10(b) to a surface owner whose land will be used in conjunction with horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this conformation related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environment and Conformation related at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.d	ication.
Pursuant to W. Va. Code § 22-6A-16(c), no later than the date for filing the permit application, an operator shal return receipt requested or hand delivery, give the surface owner whose land will be used for the drilling of a horizontal purity provided by subsection (b), section ten of this article to a surface owner whose land will be used in cerequired to be provided by subsection (b), section ten of this article to a surface owner whose land will be used in cerequired to be provided by subsection (b), section ten of this article to a surface owner whose land will be used in cerequired to the provided by subsection (b), section ten of this article to a surface owner whose land will be used in cerequired to the surface affected by oil and gas operations to the extent the damages are compensable under article side (d) The notices required by this section shall be given to the surface owner at the address listed in the records of the of notice.  Notice is hereby provided to the SURFACE OWNER(s) (at the address listed in the records of the sheriff at the time of notice):  Name: Stanley E. Seckman  Address: 659 Jefferson Run Road  Alma, WV 26320  Notice is hereby given:  Pursuant to West Virginia Code § 22-6A-16(c), notice is hereby given that the undersigned well operator has developeration on the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:  State: West Virginia  County: 095-Tyler  District: Me Elroy  Public Road Access: County Rt. 58  Oquadrangle: Shirley  Generally used farm name: Seckman  This Notice Shall Include:  Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1)A copy of this code section; (2) The into the provided by W. Va. Code § 22-6A-10(b) to a surface owner whose land will be used in conjunction with horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this	
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Quadrangle: Shirley huc-10 Mc Elroy Creek  This Notice Shall Include: Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1)A copy of this code section; (2) The into be provided by W. Va. Code § 22-6A-10(b) to a surface owner whose land will be used in conjunction with horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this conformation related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environ the headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.d	
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	in conjunction with the drilling of a r of compensation for damages to the cicle six-b of this chapter. Additional artment of Environmental Protection
Well Operator: Noble Energy, Inc. Address: 333 Technology Drive, Suite 116	0.014-440
With the second	6.00,000,000
Telephone: 724-820-3061 Canonsburg, PA 15317	
Email: dswiger@nobleenergyinc.com Facsimile: 724-743-0050	

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> Received Office of Oil & Gas



# WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

# **Division of Highways**

Earl Ray Tomblin Charleston, West Virginia 25305-0430 • (304) 558-3505
Governor

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

November 5, 2014

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

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

Dear Mr. Martin,

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

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

Very Truly Yours,

Day & Clayton

Gary K. Clayton P.E. Regional Maintenance Engineer

Central Office Oil &Gas Coordinator

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

# OIL AND GAS ROAD STATEWIDE BONDING AGREEMENT



THIS AGREEMENT, executed in duplicate, made and entered into this 2 day of May, 2012, by and between the WEST VIRGINIA DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS, bereinafter 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, 11. agree to a list of these sections of State Owned Roads, hereinafter called "Project Roads List", to be utilized for each of Company's projects, identified by route number and milepost; at a time to be mutually agreed to by the parties prior to initial commencement of Project Transportation Usage of a particular State Owned Road on a Project Roads List, the Company and Department will jointly review the condition of the roads and bridges on the Project Roads List. The Department will document the road type and surface condition and general right-of-way width of each section of road on the Project Road List. Either party may supplement this documentation with photographs, video or other evidence of the present condition of the road surface, shoulders, ditches, culverts, bridges or other structures or appurtenances of roads on the Project Road List, as well as approaches to the roads, utility facilities located within or along the right-of-way, or any other condition, including third-party activities, that may affect the duties and responsibilities of the parties under this Agreement. A copy of any such documentation must be made and provided to the other party within ten business days after the joint review of the roads on the Project Roads List.

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

- IV. In the Project Agreement/Project Permit, the Department shall not require the use of State Owned Roads other than the roads proposed by Company unless the Department has safety concerns as to the Company's proposed roads. A failure to agree on roads that may otherwise be lawfully used for a particular Project Transportation Usage shall result in the designation of the State Owned Roads proposed by Company, with milepost determinations as designated by Department. This Agreement shall only cover portions of State Owned Roads designated on the Project Roads List.
- V. For the duration of Company's Project Transportation Usage of the Stated Owned Roads on the Project Roads List, whether by the Company, its contractors (while working on behalf of Company), agents, independent contractors or suppliers of drilling materials or drilling equipment, or employees, the Company agrees to pay for all reasonable maintenance and repair costs incurred by the Department to repair areas of the State Owned Roads included in the Project Roads List that were directly damaged by Company's Project Transportation Usage, as determined to be reasonably necessary and appropriate by the Department. The Department shall keep a record of all labor performed by Department employees and contractors for such maintenance and repairs and shall send an invoice for the same to Company.
- VI. Company shall be responsible for the cost of all maintenance and repairs reasonably necessary to put the existing roadways, bridges and appurtenances on the Project Roads List utilized for the Project Transportation Usage in the condition that existed immediately prior to the Project Transportation Usage. Company shall not be required to pay for maintenance or repairs to put any areas of such roadways, bridges and appurtenances on the Project Roads List in a condition better than the condition that existed immediately prior to the Project Transportation Usage. Company shall also not be required to pay for maintenance or repairs to any areas of these roadways, bridges or appurtenances on the Project Roads List that are not actually utilized for the Project Transportation Usage or for damage not caused by Project Transportation Usage.
- 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.
- In order to ensure performance of Company's performance and payment obligations under this Bonding Agreement, the Company shall post a corporate surety bond. hereinafter called "Master Bond", with the Department named as the beneficiary, which form of bond shall be subject to the consent of the Department, not to be unreasonably withheld. The amount and form of the bond shall be in accordance with the Policy as set forth above. However, the amount of the Master Bond does not limit the amount of claims that may be made by the Department against the Company under this Bonding Agreement. The Company shall provide the Master Bond to the Department within one (1) month after the execution of this Bonding Agreement. The Master Bond shall secure the good faith performance of all payment obligations of Company under the terms of this Bonding Agreement respecting the roads, bridges 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 office of Oil 8. Company's use of State Owned Roads, except as required in this Agreement.

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

Received party hereto.

Office of Oil & Gas

IN III

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

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS

Witness

y: State Highway Engli

Witness

Robert Ovitz

Title: Senior Operations Manager

(To be executed in duplicate)

DECEIVED

MAING MUE DIVISION

APPROVED AS TO FORM THIS 29 DAY OF 20 12

ATTORNEY LEGAL DIVISION WEST VIRGINIA DIVISION OF HIGHWAYS

# Hydraulic Fracturing Fluid Product Component Information Disclosure Hydraulic Fracturing Fluid Composition:

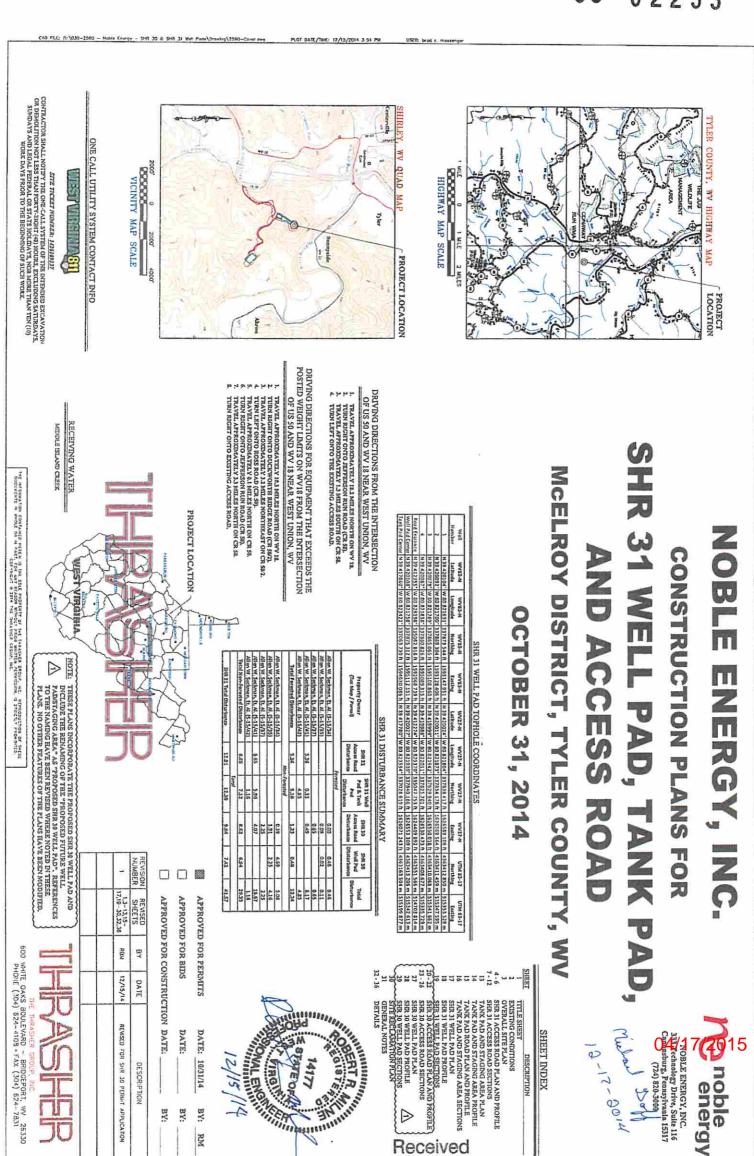
Trade Name Supplier Purpo		Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	
Fresh Water	Operator				100.00%	
HYDROCHLORIC ACID 5-10%	Halliburton		Hydrochloric acid	7647-01-0	10.00%	
SAND - COMMON WHITE	Halliburton	Proppant	Crystalline 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

^{**} 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.



Received Office of Oil & Gas

BY: BY:

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