

#### 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

September 29, 2015

## WELL WORK PERMIT

#### Horizontal 6A Well

This permit, API Well Number: 47-6101719, issued to NORTHEAST NATURAL ENERGY LLC, 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: EDDY 9H

Farm Name: EDDY, MARK V. & BETTY A.

API Well Number: 47-6101719

Permit Type: Horizontal 6A Well

Date Issued: 09/29/2015

Promoting a healthy environment.

### 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 one hundred (100) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
- 3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
- 4. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
- 5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
- 6. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.
- 7. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
- 8. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.
- 9. 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.



#### west virginia department of environmental protection

Oil and Gas Conservation Commission 601 57<sup>th</sup> Street, SE Charleston, WV 25304 (304)926-0499, Ext 1656 Earl Ray Tomblin, Governor Randy C. Huffman, Cabinet Secretary dep.wv.org

July 13, 2015

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

RE: Application for Deep Well Permit - API #47-061-01709

COMPANY: Northeast Natural Energy

FARM: Eddy #9H

COUNTY: Monongalia DISTRICT: Clay QUAD: Blacksville

The deep well review of the application for the above company is <u>approved</u> to <u>drill</u> to <u>HELDERBERG -- MARCELLUS completion</u>. If operator wishes to drill deeper than the HELDERBERG, additional approval must be obtained from the OGCC.

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

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

Sincerely,

Cindy Raines Executive Assistant



#### west virginia department of environmental protection

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

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

# ORDER ISSUED UNDER WEST VIRGINIA CODE, CHAPTER 22, ARTICLE 6A

TO: Northeast Natural Energy LLC 707 Virginia Street East, Suite 1200 Charleston WV, 25301

DATE: September 16, 2015 ORDER NO.: 2015-W-9

#### INTRODUCTION

This Order (hereinafter "Order") is issued by the Office of Oil and Gas (hereinafter "OOG"), by and through its Chief, pursuant to the authority of W. Va. Code §§ 22-1-1, 22-6-1 and 22-6A-1 et seq. to Northeast Natural Energy LLC (hereinafter "NNE" or "Operator"), collectively the "Parties."

#### FINDINGS OF THE CHIEF

In support of this Order, the Chief hereby finds the following:

- 1. OOG, an office within the West Virginia Department of Environmental Protection, is the agency with the duty and authority to execute and enforce W. Va. Code §22-6-1 and §22-6A-1 *et seq.*, and the rules and regulations promulgated thereunder.
- 2. NNE is a "person" as defined by W. Va. Code §22-6-1(n), with a corporate address as 707 Virginia Street East, Suite 1200, Charleston, West Virginia.
- On June 12, 2015, NNE submitted well work permit applications identified as API#s 47-061-01718 and 47-061-01719. The two proposed wells are to be located on the Eddy Pad in Clay District of Monongalia County, West Virginia.
- 4. On June 12, 2015, NNE requested a waiver for Wetland #1, as outlined in Attachment 1, from well location restriction requirements in W. Va. Code §22-6A-12(b) for well work permit applications identified as 47-061-01718 and 47-061-01719.

#### **CONCLUSIONS OF LAW**

- 1. West Virginia Code §22-1-6(d) requires, in part, that "[i]n addition to other powers, duties and responsibilities granted and assigned to the secretary by this chapter, the secretary is authorized and empowered to...(3) Enter private lands to make surveys and inspections for environmental protection purposes; to investigate for violations of statutes or rules which the Office of Oil and Gas is charged with enforcing; to serve and execute warrants and processes; to make arrests; issue orders, which for the purposes of this chapter include consent agreements; and to otherwise enforce the statutes or rules which the Office of Oil and Gas is charged with enforcing."
- 2. West Virginia Code §22-6A-2(a)(6) requires, in part, that "Concomitant with the broad powers to condition the issuance of well work permits, the secretary should also have broad authority to waive certain minimum requirements of this article when, in his or her discretion, such waiver is appropriate: *Provided*, That the secretary shall submit a written report of the number of waivers granted to the Legislature commencing January 1, 2013, and each year thereafter."
- 3. West Virginia Code §22-6A-12(b) requires, in part, that "[n]o 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 Office of Oil and Gas 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 Office of Oil and Gas 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."

#### **ORDER**

West Virginia Code §22-6A-12(b) requires, in part, that "[n]o 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. The Office of Oil and Gas grants the request for a waiver for Wetland #1, from well location restriction requirements in W. Va. Code §22-6A-12(b) for well work permit applications identified as API#s 47-061-01718 and 47-061-01719. The Office of Oil and Gas hereby ORDERS that NNE shall meet the following site construction and operational requirements for the Eddy well pad:

- a. A berm shall be constructed around the perimeter of the pad to contain any potential spills and storm water runoff. Berm is to be at least two feet (2') in height;
- b. Filter/silt socks and erosion control blankets shall be installed on all slopes and down gradient locations of the pad and topsoil pile areas as erosion and sediment controlling BMPs;
- c. Wetland #1 shall have a 32" compost filter sock backed by super silt fence installed in three locations adjacent to the wetland;
- d. Disturbed areas not used for operations shall be seeded and mulched per the seeding tables in the WVDEP-OOG Erosion and Sediment Control Manual;
- e. Drill cuttings and associated drilling mud shall be disposed of in a permitted landfill;
- f. Waste generated by the flowback treatment systems shall be sent to offsite disposal at a permitted landfill;
- g. Weekly site inspections shall be conducted to monitor and maintain the integrity of the BMP storm water controls;
- h. Weekly storm water and spill prevention inspections shall be conducted focusing on storm water and spill prevention BMPs and maintenance of these BMPs;
- i. Inspections of the storm water and spill prevention measures shall be conducted after any major storm event defined as a half inch (½") rain within any twenty-four (24) hour period;
- j. Pad inspections shall be conducted no less than once a week to identify and mitigate potential deficiencies;
- k. All records from inspections shall be maintained on site for the life of the project and be available upon request.

Thus ORDERED, the 16th day of September, 2015.

#### IN THE NAME OF THE STATE OF WEST VIRGINIA:

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

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API Number

Status

6101719

Approved

Comment Date

06/18/2015 01:20:12

Comment

As a resident who would be living within close proximity of this proposed well, there are several major concerns regarding the location of this well. The first major concern is the access road leading to this proposed site, specifically Hagans Rd. Hagans Rd. is an extremely narrow road with many blind spots that is traveled by the residents of this area. The road is not wide enough to allow a car and large truck to pass by each other and there are no pull over spots along this road. There is no conceivable way that two large trucks can pass by each other going in different directions. This road is also traveled by school buses each day; a school bus and large truck will not be able to pass by each other on this road. It is a very real safety concern to have a school bus and heavy truck enter a blind turn from opposite directions leading to a head on collision leading to the injury of children on the bus. Another concern is that this road has a one lane bridge which is more than likely not rated for the weight of many of the trucks which will travel it due to a horizontal well being proposed in this current location. Additionally, this is the third well now being proposed for Hagans Rd. (See comments for well 061-01715 The second major concern with the location of this well is the presence of several abandoned and unplugged conventional wells located less than a mile of this proposed unit. Two abandoned and unplugged wells that I am specifically aware of are wells 061-00080 and 061-71425 located on my property, although inspection of WV-DEP maps show many other potential abandoned and unplugged wells in this immediate area. Your office has previously shown that new horizontal wells can stimulate old conventional wells in the immediate area and with these old conventional wells being unplugged, could lead to massive escapes of methane and other by-products associated with horizontal well fracturing. Further, I have a water well that is used sparingly on my property less than a mile from this proposed site. A situation in Pennsylvania recently occurred where a fracked well caused a house to blow up in these same circumstances (REF: http://triblive.com/news/armstrong/8495712-74/gas-family-anthony#axzz3cagJprQV). Due to these reasons, it is my opinion that a

permit should not be granted for this horizontal well at the current time. Scott Hendricks 182 Merle Yost Rd Maidsville, WV 26541

6/17/1

API Number
Status
Approved
Comment Date
Comment
I will be living within a mile of 3 different wells if these permits are granted. I am concerned about the health issues living this close to these wells. Also, the road we live on is not wide enough for myself to pass a large truck. For these reasons, this permit should not be granted for this well. Glenda Facemire 1664 Hagans Rd. Core, WV 26541

API Number

Status

6101719

Comment Date

Approved

06/21/2015 06:07:27

Comment

Con in € 0: 11

I wanted to comment on the wells that have applied for permits in Hagans. While I understand the reasons for the wells being put in; however, I have many concerns of this being brought to fruitation. First, my primary concern is the sand that is used in the fracking that then gets into the air. My oldest son has compromised lungs with only a 45% capacity due to a syrnex in his spinal cord, putting the sand in the air can cause silicois which can cause further damage to his lungs just by us spending time outside of our house since get therapy in the pool. Second, we live in Hagans for the cleaner environment and the chemicals that are used in these wells will

we are downwind of these wells the majority of the time. During the warmer months he needs to spend time outside daily in order to affect our environment negatively. Third, there is an uncapped well within a few hundred feet from my house that will allow methane into the air that could also impact my son's lungs. Next, Hagan's road is not wide enough for two vehicles to pass in many spots or to pass a school bus let alone passing the trucks that will be running the road. Finally, the road is already extremely deteriorated and running the trucks on them on a regular basis will only further deteriorate the road causing damage to those vehicles that have to travel it. I'm happy to further discuss this or answer any questions that you might have regarding my concerns. Sincerely, Charla Blosser 170 Merle Yost Rd Core, WV 26541 momma4499@aol.com

10/02/2015

		_	л		A	API NO. 47	_
47	0	6	1	O	Ţ	OPERATOR WELL NO. Eddy 9H	
	_					Well Pad Name: Eddy	

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

1) Well Operato	r: Northeast	Natural Energy LLC	494498281	Monongalia	Clay	Blacksville
	<del>}</del>		Operator ID	County	District	Quadrangle
2) Operator's W	ell Number:	Eddy 9H	Well Pad	Name: Eddy		
3) Farm Name/S	Surface Owne	er: Mark V. & Betty A	. Eddy Public Road	d Access: Shur	man Run Ro	pad (State Route 37/3)
4) Elevation, cu	rrent ground:	<b>1436'</b> E	levation, proposed j	post-construction	on: 1414.9	92'
5) Well Type	(a) Gas X	Oil	Unde	erground Storag	ge	
	Other _					==
		Shallow	Deep	X		
6) Evicting Pod.		Horizontal X		AAK:	5 26 201	2
6) Existing Pad:	-		inated Thisleness			
		n(s), Depth(s), Antio Horizontal: Marcellus	*		essure(s):	
		epth: Pilot: 8,500'			/	
9) Formation at	Total Vertica	l Depth: Pilot: Hel	ldersburg; Horizor	ntal: Marcellus		
10) Proposed To						
11) Proposed Ho	orizontal Leg	Length: 5,800'				
12) Approximate	e Fresh Water	r Strata Depths:	50' , 1,129'			
13) Method to D	etermine Fre	sh Water Depths:	Driller's Log from (	Offset Wells		
14) Approximate	e Saltwater D	Depths: 1,827', 2,5	77'			
15) Approximate	e Coal Seam	Depths: 197', 1,12	27'			
16) Approximate	e Depth to Po	ossible Void (coal m	ine, karst, other):	N/A		
		ion contain coal sea		<b>a.</b> **	V	
directly overlyin	g or adjacent	to an active mine?	Yes	No	^	-11/ED
(a) If Yes, prov	vide Mine Inf	°o: Name:			RE	CEIVED of Oil and Gas
		Depth:			Office	0015
		Seam:			JL	JN 1 2 2015
		Owner:			5 A (X / 1	Department of
					Toviron	Department of mental Protection

API NO. 47		
OPERATOR WELL	NO. Eddy 9H	
Well Pad Name:	Eddy	

## 18)

## CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	24"	New	NA	94.71	40'	40'	GTS
Fresh Water	13-3/8"	New	J-55	54.5	1,210'	1,180'	CTS
Coal							
Intermediate	9-5/8"	New	J-55	40	2,660'	2,630'	стѕ
Production	5-1/2"	New	P-110	20	14,835'	14,805'	3,344 Cu. Ft.
Tubing	2-7/8"	New	N-80	6.5	NA	8,500'	NA
Liners						RECEIVED	
						Office of Oil and G	88

AUG 1 9 2015

TYPE	Size (in)	Wellbore Diameter (in)	<u>Wall</u> <u>Thickness</u> <u>(in)</u>	Burst Pressure (psi)	Eronnic Date ent Max. Internal Pressure (psi)	of ctop ment Type	Cement Yield (cu. ft./k)
Conductor	24"	30"	.375	415		4,500 psi Grout	NA
Fresh Water	13-3/8"	17 1/2"	.38"	2,760	2,000	Class A	1.23
Coal							
Intermediate	9-5/8"	12 1/4"	.395"	3,950	3,000	Class A	1.3
Production	5-1/2"	8 3/4"	.361"	12,530	9,700	50:50 Poz	1.21
Tubing	2-7/8"	NA	.217"	10,570	3,600	NA	NA
Liners							-

### **PACKERS**

Kind:		
Sizes:		
Depths Set:		

WW-6B
(10/14)

API NO. 47		
OPERATOR WELL NO.	Eddy 9H	
Well Pad Name: Eddy		

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

Drilling and completion of a horizontal Marcellus well. The well will be drilled on air to an approximate depth of 7,921' TVD/MD. A pilot hole will then be drilled on synthetic based mud to an approximate depth of 8,500' and plugged back with solid cement to the KOP at approximately 5,600' TVD. The well will then be horizontally drilled on synthetic based mud from the KOP to approximately 8,169' TVD / 14,835' MD along a 324 degree azimuth.

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

Multi-stage / high-rate slickwater fracture treatment using various size sands as proppant. First stage will be initiated via pressurization against a burst disc ran in the production casing string or perforated with coiled tubing. Subsequent stages will be perforated with pumped down guns ran on wireline. Individual stages will be isolated with composite frac plugs. Maximum pump rate during any stage will be 110 BPM with a maximum allowable surface pressure of 9,500 PSI. Composite bridge plugs will be set at the end of the last stage to isolate the treated formation.

- 21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 30.62
- 22) Area to be disturbed for well pad only, less access road (acres): 17.34
- 23) Describe centralizer placement for each casing string:

Surface and intermediate casing strings will have bow spring centralizers placed every third joint (~120') from the shoe joint to surface. Production casing will have rigid body centralizers placed at a minimum of every fourth joint (~160') from TD to surface.

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

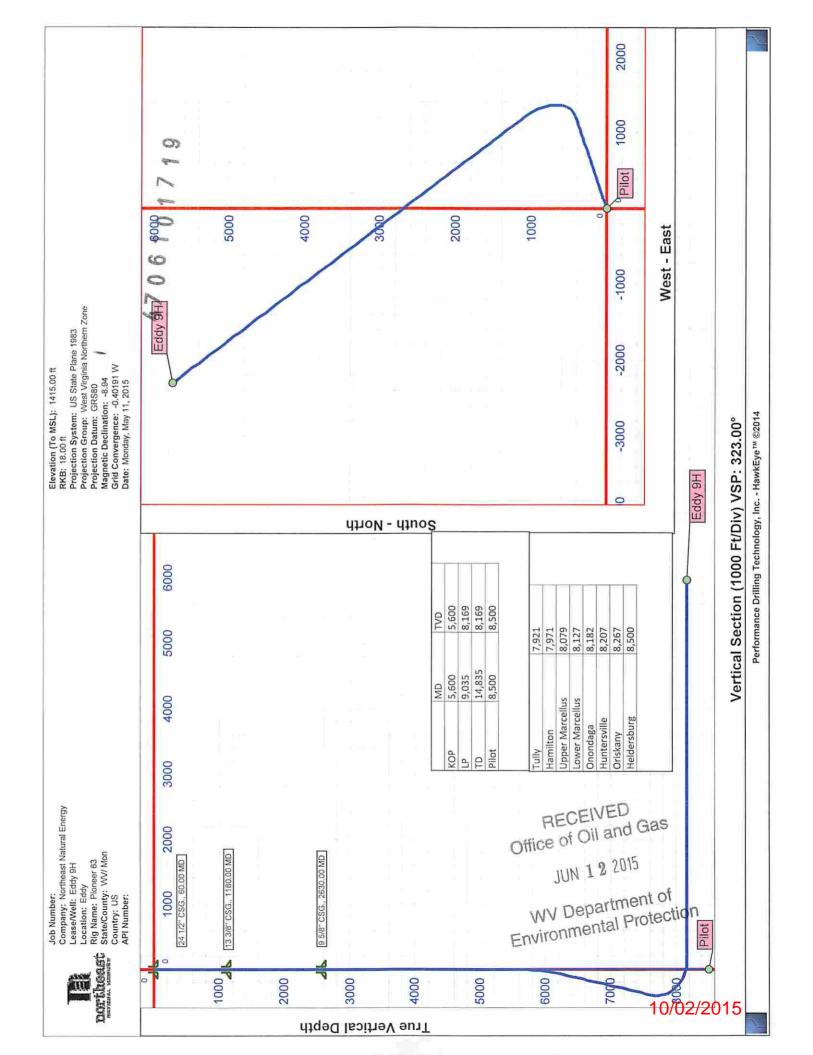
Surface string cement will be a Class A + Max 3% bwoc Calcium Chloride Fresh Water blend. Intermediate string cement will be a Class A Cement + Max 3% bwoc Calcium Chloride + Fresh Water. Production string cement will be (50:50) Poz (Fly Ash): Type I Cement with a gas migration additive.

25) Proposed borehole conditioning procedures:

Surface string will use a 25.0 bbls Gel Pill + LCM + 25 lbs Cello Flake⊕120 bs/bbl Bentonite @ 8.4 ppg & 10 bbls fresh water spacer prior to cement. Intermediate string will use a 25.0 bbls Gel Pill + LCM + 25 lbs Cello Flake + 20 lbs/bbl Bentonite @ 8.4 ppg & 10 bbls fresh water spacer prior to cement. Production string will use a 50.0 bbls SealBond 25 + 1 gal/bbl US-40 + 275 lbs/bbl Barite + dfgal/bbl SS-2 Spacer @ 13.5 ppg prior to cement. Environmental Protection SS-2 Spacer @ 13.5 ppg prior to cement.

\*Note: Attach additional sheets as needed.

RECEIVED



API Number 47 -	-
Operator's Well N	No. Eddy 9H

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

#### FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Watershed (HUC 10) Upper Monongahela River, Dunkard Creek Quadrangle Blacksville, WV  Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No  Will a pit be used? Yes No		Operator Name Northeast Natural Energy LLC OP Code 494498281
Will a pit be used? Yes No		Watershed (HUC 10) Upper Monongahela River, Dunkard Creek Quadrangle Blacksville, WV
If so, please describe anticipated pit waste: NA  Will a synthetic liner be used in the pit? Yes No If so, what ml.? NA O 6 1 0 1 7 1 9  Proposed Disposal Method For Treated Pit Wastes:  Land Application		Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes Vo
Will a synthetic liner be used in the pit? Yes No If so, what ml.? NAT 0 6 1 0 1 1 1 Proposed Disposal Method For Treated Pit Wastes: Land Application		Will a pit be used? Yes No 🗸
Proposed Disposal Method For Treated Pit Wastes:  Land Application	7 4 0	
Land Application	1/19	
		•
Onderground injection (OIC Permit Number)	χ.	
■ Reuse (at API Number unknown at this time, TBD )		
Off Site Disposal (Supply form WW-9 for disposal location)		2000 3 To 100 To
Other (Explain		
Will closed loop system be used? If so, describe: Yes, Please See Attachment "A"		Will closed loop system be used? If so, describe: Yes, Please See Attachment "A"
Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. Air-Vertical; Oil Based - Curve & Horizontal	ve & Horizontal	Orilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. Air-Vertical; Oil Based - Curve 8
-If oil based, what type? Synthetic, petroleum, etc. Synthetic Oil Based Mud		-If oil based, what type? Synthetic, petroleum, etc. Synthetic Oil Based Mud
Additives to be used in drilling medium? Organophilic Clay Viscosifiers, Lime, Unsaturated Fatty Acids, CaCl, Barite, Emulsifiers, Mica LCM, Water Loss Agents	Loss Agents	Additives to be used in drilling medium? Organophilic Clay Viscosifiers, Lime, Unsaturated Fatty Acids, CaCl, Barite, Emulsifiers, Mica LCM, Water Lo
Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Removed Offsite - Please See Attachment "A"		Orill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Removed Offsite - Please See Attachment "A"
-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust)		-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust)
-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust)  -Landfill or offsite name/permit number? Please See Attachment "A" RECENTIAN GAS		-Landfill or offsite name/permit number? Please See Attachment "A" RECEI and Gas
Permittee chall provide written notice to the Ottice of Oil and Gas of any food of drill cuttimacion decorated waste rejected at any	ected at any	Permittee chall provide written notice to the Ottice of Oil and Gas of any load of drill cuttimas or geograped waste reject
West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.  I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issues A waste 1, 2005, but the Office of Oil and Gen of the West Virginia Department of the Content of the Cont	so disclose	West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also
where it was properly disposed.		where it was properly disposed.
I certify that I understand and agree to the terms and conditions of the GENERARI WATER POLILITION PERMIT issu	PERMIT issued	I certify that I understand and agree to the terms and conditions of the GENERATIWATER POLILITION PE
on August 1, 2003, by the Office of On and Gas of the West Virginia Department of Environmental Protection. I understand that	erstand that the	of August 1, 2003, by the Office of On and Gas of the West Virginia Department of Environmental Frotection. I under
provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applical law or regulation can lead to enforcement action.	other applicable	
I certify under penalty of law that I have personally examined and am familiar with the information submitted on t	bmitted on this	
application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible		
obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are signific penalties for submitting false information, including the possibility of fine or imprisonment.	are significant	potaining the information, I believe that the information is true, accurate, and complete. I am aware that there are
Company Official Signature Holli Woll		11 00 00 0
Company Official (Typed Name) Hollie Medley		
Company Official Title Regulatory Coordinator		Company Official Title Regulatory Coordinator
L Charles		i.
Subscribed and sworn before me this 215th day of May, 20 15	OFFICIAL SEAL NOTARY PUBLIC	Subscribed and sworn before me this 215 day of May, 20 15
Notary Public State of West vin	STATE OF WEST VIRGINIA. Kristen M. Vernore	Notary Public No
22 Pointe Drive		My commission expires January 28, 2020

Proposed Revegetation Treatment: Acre	es Disturbed 30.62	.62 Prevegetation pH 5-7			
Lime 2 Tons/	acre or to correct to pH	7			
Fertilizer type 19-19-19			4700		
Fertilizer amount 300	lbs	s/acre	. , 0 6	9017	10
Mulch 2	Tons/a	cre			1 3
	Seed	Mixtures			
Temporary			Pe	ermanent	
Seed Type lbs/a	acre		Seed Type	lbs/	acre
Orchard Grass	46	Orchard	Grass		46
Red Clover	8	Red Clov	/er		8
Tetraploid Perennial Rye	e 16	Tetraploi	d Perenn	ial Rye	16
Timothy 15 Annual Ry	e 15	Timothy	15 A	nnual Rye	15
provided)		lication (unless e	ngineered plan	ns including this	info have
Photocopied section of involved 7.5' top  Plan Approved by:   Comments:	ographic sheet.				
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	ographic sheet.		Office (	CEIVED OF Oil and Got Oil and	Cain 85

### Attachment A to WW-9

Northeast Natural Energy LLC ("NNE") plans to utilize a closed loop process for its drilling of the Eddy 9H well. Return flow from the well will be separated into its liquid and solid form. Liquids will be held in steel tanks and reused in the drilling and completion process or disposed of at an approved facility listed below. Solids removed from the stream will be diverted to steel halfround tanks where they will be solidified on site and taken to disposal as they are accumulated.

Eddy 9H Drill Cuttings will be taken to disposal at one or more of the following disposal/approved waste facilities, unless listed facilities are no longer approved to accept waste at time of disposal:

- Westmoreland Landfill (Tervita) Belle Vernon, PA (Permit # 100277)
- Meadowfill Landfill (Waste Management) Bridgeport, WV (Permit # SWF 103298)
- Max Environmental Yukon, PA (PAD004835146 and 301071)
- Max Environmental Bulger, PA (PAD059087072 and 301359)
- Chestnut Valley Landfill (Advanced Disposal) Export, PA (Permit # 101421)

NNE plans to reuse and recycle all flowback fluid and/or reach out to other operators in the area who may be able to reuse and recycle such fluid. However, in the event that reuse is not obtainable the fluid will be disposed of at one, or multiple, of the following disposal/approved waste facilities unless listed facilities are no longer approved to accept waste at time of disposal:

- Fairmont Brine Processing (WV NPDES #0116408)
- Green Hunter M. E. Elder 1 Disposal Well (Permit # 47-085-05151)
- Green Hunter Mason 1 Disposal Well (Permit #47-085-09721)
- Green Hunter Warren Disposal Well (Permit #34-121-2-3995 F. Oil and Green Hunter Travis Unit Disposal Well (Permit #34-121-2-3995)

  Viking Energy Corporation 20220 Disposal Well (Permit #34-121-2-3995)

  Output

  Disposal Well (Permit #34-121-2-3995)

- Ohio Oil Gathering Moran Disposal Well (Permit #34-075-24527)
   Ohio Oil Gathering Bells Rup Disposal Well (Permit #34-089-24792) Ohio Oil Gathering Long Run Disposal Well (Permit #34-089-247/92)

  Ohio Oil Gathering Long Run Disposal Well (Permit #34-167/129395)

- Ohio Oil Gathering Newell Run Disposal Well (Permit #34-167-29685)
- Appalachian Oil Purchaser Greens Run Disposal Well (Permit #2D0732540)
- Appalachian Oil Purchaser BW#4 Disposal Well (Permit # 2D0732523)



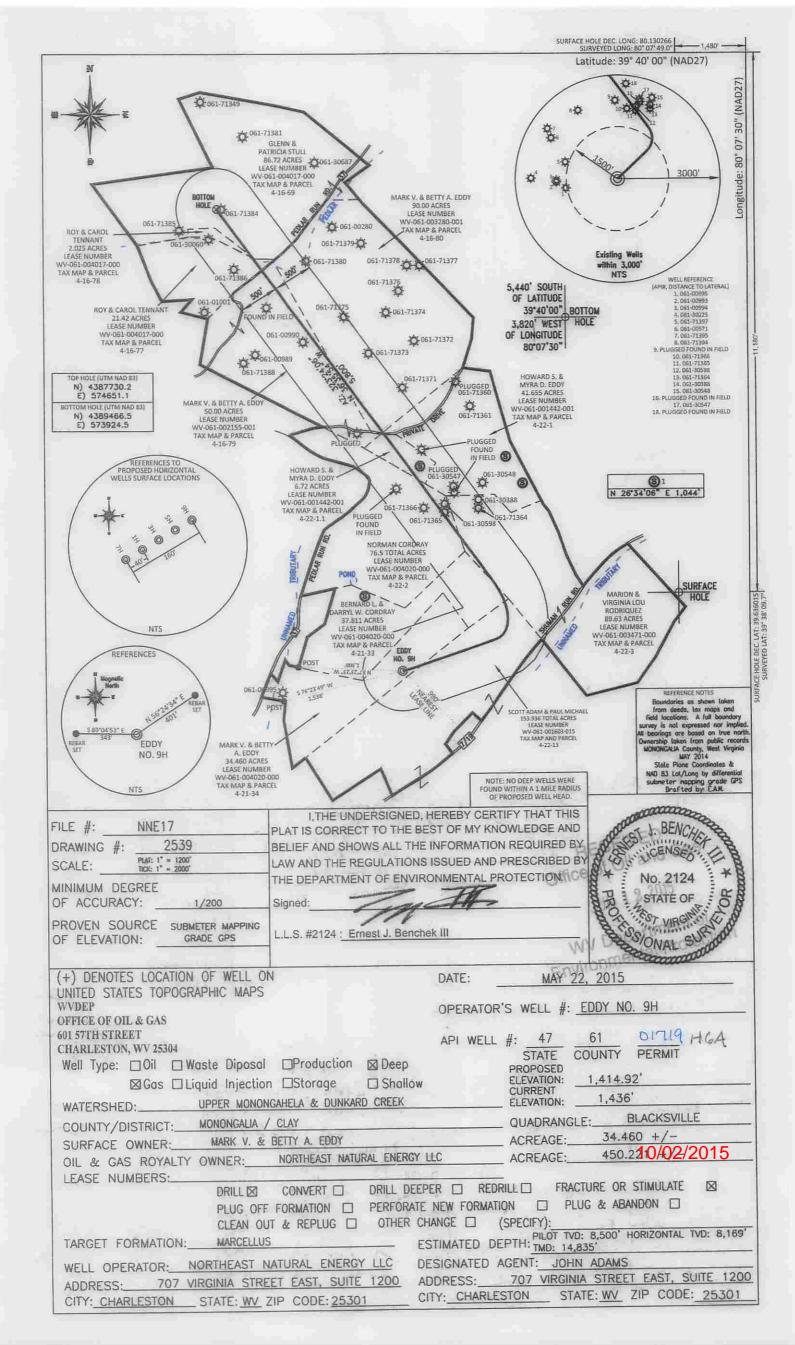
## Eddy 9H SITE SAFETY PLAN

June 4, 2015

Office of Oil and Gas

JUN 12 2015

WV Department of
Environmental Protection



#### 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
See Attachment	See Attachment	See Attachment	See Attachment	See Attachment

#### 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:	Northeast Natural Energy LL	RECEIVED
By:	Hollie M. Medley	
Its:	Regulatory Coordinator	JUN 1 2 2015
		2010

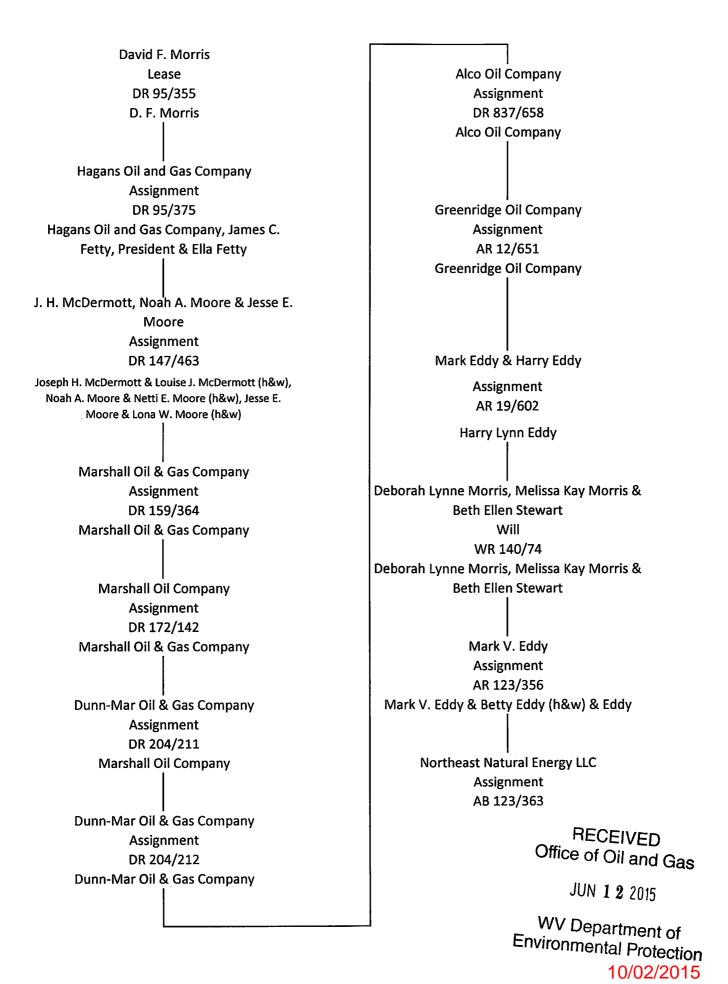


NNE Lease No.	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page	Tax Map & Parcel
WV-061-004008-001	EDDY, DAVID J.	*Morris, David F.	.125 or greater	123/363	21-34
WV-061-004020-000	EDDY, MARK V. AND BETTY A.	Northeast Natural Energy LLC	.125 or greater	1505/572	21-33, 34; 22-2,1; 16-78
WV-061-001603-015	MYERS, JUNE CORE	Northeast Natural Energy LLC	.125 or greater	1517/63	22-13
WV-061-001603-016	CORDRAY, JACK AND SHARON	Northeast Natural Energy LLC	.125 or greater	1521/175	22-13
WV-061-001603-017	CORDRAY, SHAWN M.	Northeast Natural Energy LLC	.125 or greater	1520/316	22-13
WV-061-001603-018	CORDRAY, MARY	Northeast Natural Energy LLC	.125 or greater	1521/173	22-13
WV-061-001603-019	CORDRAY, SANDRA AND CARL E. BARIBAULT	Northeast Natural Energy LLC	.125 or greater	1520/68	22-13
WV-061-001603-013	BARKER, BONNIE J.	*Chesapeake Appalachia, LLC	.125 or greater	1505/598	22-13
WV-061-002310-001	MYERS, JUNE CORE	*Chesapeake Appalachia, LLC	.125 or greater	1510/61	22-13
WV-061-002310-002	STEWART, MALINDA ANN	*Chesapeake Appalachia, LLC	.125 or greater	1508/554	22-13
WV-061-002310-003	CORDRAY, AGNES	*Chesapeake Appalachia, LLC	.125 or greater	1510/169	22-13
WV-061-002310-004	CORDRAY, NELLIE N.	*Chesapeake Appalachia, LLC	.125 or greater	1510/170	22-13
WV-061-002310-008	BARKER, BONNIE	*Chesapeake Appalachia, LLC	.125 or greater	1510/729	22-13
WV-061-002310-009	MYERS, VIRGINIA J.	*Chesapeake Appalachia, LLC	.125 or greater	1516/635	22-13
WV-061-003314-001	MC MINERAL COMPANY LLC	*Chesapeake Appalachia, LLC	.125 or greater	1436/49	22-13
WV-061-002307-001	STEWART, MALINDA ANN	*Chesapeake Appalachia, LLC	.125 or greater	1508/575	22-13
WV-061-002307-002	BARKER, BONNIE	*Chesapeake Appalachia, LLC	.125 or greater	1510/395	22-13
WV-061-003471-000	RODRIGUEZ, MARION	Northeast Natural Energy LLC	.125 or greater	1518/31	22-3
WV-061-001442-001	FETTY, MARTHA E.	*Chesapeake Appalachia, LLC	.125 or greater	1384/380	22-1.1,1
WV-061-001442-002	FETTY, WILLIAM CLARENCE	*Chesapeake Appalachia, LLC	.125 or greater	1384/389	22-1.1,1
WV-061-001442-006	SMITH, VIOLA	Northeast Natural Energy LLC	.125 or greater	1506/675	22-1.1,1
WV-061-001858-008	FETTY, ANNA BELLE	*Chesapeake Appalachia, LLC	.125 or greater	1385/388	22-1.1,1
WV-061-001858-009	WESTWOOD, FELIX E. AND MARYANNE KEENA	*Chesapeake Appalachia, LLC	.125 or greater	1385/391	22-1.1,1
WV-061-001858-010	WESTWOOD, ROBERT	*Chesapeake Appalachia, LLC	.125 or greater	1385/394	22-1.1,1
WV-061-001858-011	CAMPBELL, HAROLD	*Chesapeake Appalachia, LLC	.125 or greater	1391/694	22-1.1,1
WV-061-001858-012	JOHN, SANDRA	*Chesapeake Appalachia, LLC	.125 or greater	1391/697	22-1.1,1
WV-061-001858-013	GALLION, CAROL	*Chesapeake Appalachia, LLC	.125 or greater	1391/705	22-1.1,1
WV-061-001858-014	ADAMS, JAMES ARTHUR	*Chesapeake Appalachia, LLC	.125 or greater	1399/590	22-1.1,1
WV-061-001858-015	FETTY, ROBERT	*Chesapeake Appalachia, LLC	.125 or greater	1407/222	22-1.1,1
WV-061-001858-016	FETTY, RODGER NELSON	*Chesapeake Appalachia, LLC	.125 or greater	1407/225	22-1.1,1
WV-061-001442-004	FETTY, GREGORY W. AND NANCY S.	Northeast Natural Energy LLC	.125 or greater	1511/773	22-1
WV-061-001442-005	HARVEY, JR., CLARENCE	Northeast Natural Energy LLC	.125 or greater	1511/759	22-1
WV-061-001442-007	MILLER, ELEANOR WYATT AND HOLLIS	Northeast Natural Energy LLC	.125 or greater	1510/402	22-1
WV-061-003340-001	FETTY, ISAAC KENNETH	Northeast Natural Energy LLC	.125 or greater	1509/775	22-1
WV-061-002155-001	TAFT, ELIZABETH "BETTIE" ENOCH	*Chesapeake Appalachia, LLC	.125 or greater	1397/637	16-79
WV-061-002155-002	ENOCH, BARBARA	*Chesapeake Appalachia, LLC	.125 or greater	1407/246	16-79
WV-061-004017-000	WILDMAN, JARRETT ET AL	*Scott, J.W.	.125 or greater	27/145	16-77
WV-061-003280-001	CHESAPEAKE APPALACHIA LLC	*Chesapeake Appalachia, LLC	.125 or greater	1487/252	16-80
WV-061-004017-000	WILDMAN, JARRETT ET AL	*Scott, J.W.	.125 or greater	27/145	16-69,78

RECEIVED
Office of Oil and Gas

JUN 1 2 2015

WV Department of Environmental Protection 10/02/2015



Chesapeake Appalachia, LLC.

**Northeast Natural Energy** Assignment BK 120/769

RECEIVED
Office of Oil and Gas

JUN 1 2 2015

WV Department of Environmental Protection

J. W. Scott Lease Edwin Associates, Inc. DR 27/145 Assignment J. W. Scott DR 754/594 William Munhall and George P. Hukill Union Trust National Bank, as successor by conversion of Union Assignment Trust & Deposit Company DR 28/447 Edwin Associates, Inc. William Munhall and George P. Hukill and J. W, Scott, doing business as Mountain State Assignment Oil Company DR 754/598 Edwin Associates, Inc. South Penn Oil Company J. T. Carson Assignment DR 32/240 Assignment DR 754/600 South Penn Oil Company J. T. Carson South Penn Natural Gas Company Assingment Thompson/Texas Associates Partnership DR 304/547 Assignment DR 754/606 South Penn Natural Gas Company Thompson/Texas Associates Partnership, Thompson Pipe and Supply Company, Jack O. Thompson, Harold J. Arnsteen, Equidyne Investment Associates, Inc., individually and as partners and/or joint venturers in that entity known as Thompson/Texas Associates Partnership South Penn Oil Company Mark Eddy Assignment DR 580/311 Assignment AR 21/22 Thompson/Texas Associates Partnership, Thompson Pipe and Supply Company, Jack O. Thompson, Harold J. Arnsteen, Equidyne Investment Associates, Inc., individually and as South Penn Oil Company merged with partners and/or joint venturers in that entity known as Thompson/Texas Associates Pennzoil Company on July 31, 1963 Partnership Pennzoil Company and United Gas Corporation Beth Eddy, Debbie Eddy and Melissa Eddy Pennzoil United Inc. Assignment AR 21/582 Assignment DR 672/665 Beth Stewart, Debbie Morris and Melissa Matheny Pennzoil United Inc. Mark V. Eddy W. H. Allen Assignment AR 102/275 Assignment Mark V. Eddy & Betty Eddy (h&w) & Eddy Brothers DR 695/557 W. H. Allen RECEIVED

Northeast Natural CHIES U.C. Oil and Gas Union Trust & Deposit Company Assignment Assignment AB 123/363 DR 695/556 JUN 1 2 2015 W. H. Allen and James A. Allen WV Department of Environmental Protection 10/02/20



May 27, 2015

WV Department of Environmental Protection Office of Oil and Gas Management 601 57<sup>th</sup> Street, SE Charleston, West Virginia 25304

4706101719

RE: Eddy 9H

Dear Permit Reviewer:

Please be advised that Northeast Natural Energy LLC has the right to drill, extract and produce the minerals beneath the road identified as Pedlar Run Road (State Route 37) on the enclosed survey plat.

Sincerely,

Jeannie Worgan Johnson, CPL

Land Manager

Enclosure

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

	ce Certification: 06/11/2015	API No. 4/-	API No. 4/		
		Operator's '	Well No. Eddy	9H	
		Well Pad N	ame: Eddy		
Notice has	been given:			<u> </u>	
		e § 22-6A, the Operator has provided the requ	uired parties v	vith the Notice Forms lister	
	tract of land as follows:	- 3, F F			
State:	West Virginia	Easting:	B74651.14 7	19	
County:	Monongalia	UTM NAD 83 Easting: 6	4387730.2		
District:	Clay		Shuman Run Ro	ad (State Route 37/3)	
Quadrangle:	Blacksville	<del></del>	Eddy		
Watershed:	Upper Monongahela, Dunkard Creek	Gonorany used farm name.			
watershed.	oppor monorigancia, pantara orden				
prescribed by it has provid information r of giving the requirements Virginia Cod	the secretary, shall be verified and ed the owners of the surface desc equired by subsections (b) and (c), surface owner notice of entry to of subsection (b), section sixteen	), every permit application filed under this I shall contain the following information: (14) ribed in subdivisions (1), (2) and (4), subsessection sixteen of this article; (ii) that the required pursuant to subsection (a), section to of this article were waived in writing by the I tender proof of and certify to the secretary thant.	) A certificati ection (b), securificati ection (b), securification (c), securificatio	on from the operator that ( ction ten of this article, the deemed satisfied as a resu cle six-a; or (iii) the notice vner; and Pursuant to Wes	
that the Ope	West Virginia Code § 22-6A, the Grator has properly served the requieck ALL THAT APPLY	Operator has attached proof to this Notice Ce red parties with the following:	ertification	OOG OFFICE USE ONLY	
☐ 1. NO	FICE OF SEISMIC ACTIVITY	or NOTICE NOT REQUIRED BECAU SEISMIC ACTIVITY WAS CONDUCT		☐ RECEIVED/ NOT REQUIRED	
■ 2. NO	TICE OF ENTRY FOR PLAT SU	RVEY or D NO PLAT SURVEY WAS CO	NDUCTED	☐ RECEIVED	
■ 3. NO	TICE OF INTENT TO DRILL 0	r ☐ NOTICE NOT REQUIRED BECAU NOTICE OF ENTRY FOR PLAT SURV WAS CONDUCTED or		RECEIVED/ NOT REQUIRED	
		☐ WRITTEN WAIVER BY SURFAC (PLEASE ATTACH)	CE OWNER		
				<ul> <li>1 *** *** ** * * * * * * * * * * * * *</li></ul>	
■ 4. NO	TICE OF PLANNED OPERATION	٧		☐ RECEIVED	
	TICE OF PLANNED OPERATION	N		☐ RECEIVED☐ RECEIVED	

Required Attachments:

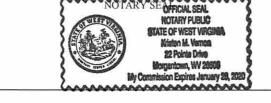
The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator staffatector only and Cassii Legal Advertisement with publication date verification 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.

WV Department of **Environmental Protection** 

#### Certification of Notice is hereby given:

THEREFORE, I Hollie M. Medley , 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: Northeast Natural Energy LLC Address: 707 Virginia Street East, Suite 1200 By: Hollie M. Medley Charleston, WV 25301 Its: Facsimile: Regulatory Coordinator 304-241-5972 Telephone: 304-241-5752, ext. 7108 Email: hmedley@nne-llc.com Subscribed and sworn before me this 10th day of June 2015 OFFICIAL SEAL MOTARY PURI 16



Notary Public

My Commission Expires

#### Oil and Gas Privacy Notice:

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

4706101719

RECEIVED Office of Oil and Gas

JUN 1 2 2015

WV Department of Environmental Protection WW-6A (9-13)

API NO. 47	
OPERATOR WELL NO.	Eddy 9H
Well Pad Name: Eddy	

## 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	n the filing date of permit application.
Date of Notice: 5/22/2015 Date Permit Application Filed: 6/11/2	
Notice of:	<i>R</i> ~
PERMIT FOR ANY WELL WORK CONSTRUCTION OF A	ROVAL FOR THE IN IMPOUNDMENT OR PIT 101719
Delivery method pursuant to West Virginia Code § 22-6A-10(	(b)
	DD OF DELIVERY THAT REQUIRES A PT OR SIGNATURE CONFIRMATION
the surface of the tract on which the well is or is proposed to be local oil and gas leasehold being developed by the proposed well work, if described in the erosion and sediment control plan submitted pursual 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 of the surface tract is to be used for the placement, construint of this article; (5) A have a water well, spring or water supply source located within one the 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 exprovision of this article to the contrary, notice to a lien holder is not a section of the sheriff required to the contrary, notice to a lien holder is not a section of the sherification.	the well plat to each of the following persons: (1) The owners of record of ted; (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 not to subsection (c), section seven of this article; (3) The coal owner, poposed to be drilled is located [sic] is known to be underlain by one or cots 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 elemants in common or other co-owners of interests described in the 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:
☑ SURFACE OWNER(s)	☑ COAL OWNER OR LESSEE
Name: See Attachment	Name: See Attachment
Address:	Address:
Name:	COAL OPERATOR
Address:	Name:
	Address:
SURFACE OWNER(s) (Road and/or Other Disturbance)	
Name: See Attachment	SURFACE OWNER OF WATER WELL
Address:	AND/OR WATER PURVEYOR(s)
	Name: See Attachment
Name:	Address:
Address:	RECEIVED
	OPERATOR OF ANY NATURAD MASS STORAGE FIELD
SURFACE OWNER(s) (Impoundments or Pits)	Name:
Name:	Address:
Address:	*Please attach additional forms if necessary
	WV Department of

**Environmental Protection** 

WW-6A	
(8-13)	

API NO. 47-	7
OPERATOR WE	LL NO. Eddy 9H
Well Pad Name:	Eddy

#### 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 57<sup>th</sup> 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>.

#### Well Location Restrictions

Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No well pad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures; facilities @ mactices to be employed during well site construction, drilling and operations to protect the waters of the state 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 part at least one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 3 1 2012 creams to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling will be well as they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items

WW-6A	
(8-13)	

API NO. 47
OPERATOR WELL NO. Eddy 9H
Well Pad Name: Eddy

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:

4706101719

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 57<sup>th</sup> St. SE
Charleston, WV 25304
(304) 926-0450

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JUN 1 2 2015

Such persons may request, at the time of submitting written comments, notice of the permit decision and plishers of the permit decision and plants of the permit

WW-6A	
(8-13)	

API NO. 47-	2		
OPERATOR WE	LL NO.	Eddy 9H	
Well Pad Name:	Eddy		

#### 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.

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(8-13)	

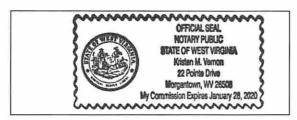
	ELL NO. Eddy 9H
ell Pad Name:	Eddy
en rad rame.	

Notice is hereby given b	y	1
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Well Operator: Northeast Natural Energy LLC
Telephone: 304-241-5752, ext. 7108
Email: hmedley@nne-llc.com
Address: 707 Virginia Street E., Suite 1200
Charleston, WV 25301
Facsimile: 304-241-5972

#### 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:deprivacyofficer@wv.gov">deprivacyofficer@wv.gov</a>.



Subscribed and sworn before me this 10th day of June, 2015

My Commission Expires January 28, 2000

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#### Surface Owner(s):

Mark Eddy 537 Pedlar Run Road Core, WV 26541

Bernard L. & Darryl W. Cordray 1741 Pedlar Run Road Core, WV 26541

Michael Paul & Scott Adam Wade 106 Bluff Oak Street Maidsville, WV 26541

#### Surface Owner(s) (Road and/or Other Disturbance):

Mark Eddy 537 Pedlar Run Road Core, WV 26541

Bernard L. & Darryl W. Cordray 1741 Pedlar Run Road Core, WV 26541

Michael Paul & Scott Adam Wade 106 Bluff Oak Street Maidsville, WV 26541

Frank C. Lemley 1920 Hagans Road Core, WV 26541

#### Surface Owner of Water Well and/or Water Purveyor(s):

Bernard L. & Darryl W. Cordray 1741 Pedlar Run Road Core, WV 26541

Michael Paul & Scott Adam Wade 106 Bluff Oak Street Maidsville, WV 26541 4706101719

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WV Department of Environmental Protection

10/02/2015

Operator W	ell No.	Eddy	

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

	ime Requirement	t: Notice shall be provid	ded at least SEV	EN (7) day	s but no more that	n FORTY-FIVE (45) days prior to			
Date of I	Notice: 10/16/2014	Date of Planı	ned Entry: 10/24/	2014					
Delivery	method pursuan	t to West Virginia Cod	de § 22-6A-10a						
☐ PEF	RSONAL	ONAL REGISTERED METHOD OF DELIVERY THAT REQUIRES A							
	SERVICE MAIL RECEIPT OR SIGNATURE CONFIRMATION								
on to the but no me beneath s owner of and Sedin Secretary	surface tract to co ore than forty-five uch tract that has minerals underlyi- ment Control Man , which statement	nduct any plat surveys days prior to such entrifiled a declaration pursung such tract in the coulual and the statutes and	required pursuan y to: (1) The surf ant to section th nty tax records. rules related to of formation, inclu-	t to this ar ace owner irty-six, ar The notice oil and gas	ticle. Such notice s of such tract; (2) ticle six, chapter to shall include a state exploration and p	shall provide notice of planned entry shall be provided at least seven days to any owner or lessee of coal seams wenty-two of this code; and (3) any attement that copies of the state Erosion roduction may be obtained from the age on the Secretary's web site, to			
Notice is	hereby provided	to:							
■ SURFACE OWNER(s)				COAL OWNER OR LESSEE  Name: See Attachment  Address:  MINERAL OWNER(s)					
Name: See Attachment  Name: See Attachment				01					
				Address:					
NT					1.1	0 -			
Address:	Name: MINERAL OWNER(s)								
Addiess.				Name: See					
Name:									
Address:									
*please attach additional forms if necessary						cessary			
Pursuant	vey on the tract of West Virginia Monongalia Clay		App Pub Wat	orox. Latitu lic Road A tershed:	ıde & Longitude:	doperator is planning entry to conduct 4387796.2, 574625.9 (UTM NAD 83) Pedlar Run Road (State Route 37) Upper Monongahela River, Dunkard Creek Eddy			
may be o Charlesto obtained	btained from the Son, WV 25304 (30 from the Secretary shereby given berator: Northeast Nat	Secretary, at the WV Dec. 04-926-0450). Copies of y by visiting www.dep.vistral Energy LLC	epartment of Env of such document wv.gov/oil-and-g	ironmenta ts or additi	l Protection headq onal information r	il and gas exploration and production uarters, located at 601 57 <sup>th</sup> Street, SE, related to horizontal drilling may be			
Linati.	nmedley@nne	e-nc.com		assimile.	***************************************	BECEIVED			
Oil and	Gas Privacy No	otice:				RECEIVED			
The Office	ce of Oil and Gas	processes your persona	l information, su	ch as name	e, address and tele	phone number, as part of du Gagalatory			

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 Ad Inquests 2015 office will

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

appropriately secure your personal information. If you have any questions about our use or your personal information, please contact WV Department of Environmental 0/02/2015

Eddy Well Pad

#### Surface Owner(s):

Mark Eddy 537 Pedlar Run Road Core, WV 26541

Bernard L. & Darryl W. Cordray 1741 Pedlar Run Road Core, WV 26541

#### Coal Owner or Lessee:

Consolidated Coal Company
Engineering & Operations Support – Coal
Attn: Analyst
CNX Center
1000 Consol Energy Drive
Canonsburg, PA 15317

4706101719

#### Mineral Owner(s):

Northeast Natural Energy LLC

Operator	Well	No.	Eddy 9H	

### STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF INTENT TO DRILL

Pursuant to W. Va. Code § 22-6A-16(b), the Notice of Intent to Drill is only required if the notice requirements of W. Va. Code § 22-6A-10(a) have NOT been met or if the Notice of Intent to Drill requirement has NOT been waived in writing by the surface owner.

Notice Time l Date of Notic		Notice shall be prov		EN (10) days p plication Filed		g a pe	rmit	app	lica	tion	*				
Delivery met	nod pursuant	to West Virginia C	ode § 22-6A-1	6(b)											
□ HAND DELIVE		CERTIFIED MAII RETURN RECEIF		ED		47	0	6	1	0	4	7	1	9	
receipt reques drilling a hori of this subsect subsection ma and if availabl	ted or hand del zontal well: P ion as of the di y be waived in e, facsimile nu	2-6A-16(b), at least ivery, give the surfarovided, That notice attempting by the surfamber and electronic to the SURFAC	ace owner notice given pursuant rovided to the sace owner. The mail address of	ce of its intent to to subsection surface owner: e notice, if requ of the operator a	to enter upor n (a), section Provided, h nired, shall in	the ten ower clud	surfact the surface of the surface o	ace on the contract of the con	ticle the ne,	er's e sat noti addr	land tisfice ress,	d for es the equ tele	r the ne re iren epho	purp equirents	oose of ements of this
Name: See Attac		i to the SUKFAC	E OWNER(												
Address:			_	Address:											
he surface ow State: County: District: Quadrangle: Watershed:	West Virginia Monongalia Clay Blacksville	he purpose of drilli		well on the tra UTM NAD 83 Public Road Ao Generally used	Easting: Northing: ccess:	57 43 Sh	4651 8773		Roa	d (Sta	ate R	oute	37/3)	i i	
Pursuant to V facsimile num- related to hori- ocated at 601	ber and electr zontal drilling 57 <sup>th</sup> Street, SE	Code § 22-6A-16(bonic mail address of may be obtained fit, Charleston, WV 2	of the operator	and the opera ary, at the WV	ntor's author Departmen	ized t of I	repr Envi	esen ronn	itati nent	ve al P	Add rote	litio	nal n he	infori eadqu	mation arters,
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wen Operator Address:	Northeast Natu			Address:	cepreseman	C.		e Med onley	-				паша	ioi.	
		eet East, Suite 1200		Morgantown, W	V 26501		40 D	onley	Sue	et, 3t	inte o	V I			
Charleston, WV 2 Felephone:				Telephone:	v 2000 i		304	241-5	750	avt 7	108				
Email:	304-414-7060 hmedley@nne-	lle com		Email:				24 1-5 dley@		0 85-00	_				
Facsimile:	304-414-7061	iio.com		Facsimile:				241-5							
acsimile.	304-414-7001			r desimile.			304-	-11 (1-0)	012						

### 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:deprivacyofficer@wv.gov">deprivacyofficer@wv.gov</a>.

WV Department 0/02/2015

### Surface Owner(s):

Mark Eddy 537 Pedlar Run Road Core, WV 26541

Bernard L. & Darryl W. Cordray 1741 Pedlar Run Road Core, WV 26541

Michael Paul & Scott Adam Wade 106 Bluff Oak Street Maidsville, WV 26541

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

	Time Re of Notice:	equirement: notice shall be provided  Objection Date Permit	no later than Application	the filing Filed: 06/1	date of permit	applic	ation			
Delive	ry metho	d pursuant to West Virginia Code	§ 22-6A-16(	2)						
		ED MAIL ERCEIPT REQUESTED	HAND DELIVE	RY	47 (	6	10	) 1	1	7 1 0
return the pla require drilling damag	receipt re anned ope ed to be po g of a house es to the se e notices	Va. Code § 22-6A-16(c), no later the quested or hand delivery, give the substantion. The notice required by this rovided by subsection (b), section terrizontal well; and (3) A proposed substantiate affected by oil and gas operate required by this section shall be give	rface owner v subsection s n of this articl urface use and ions to the ex	whose land thall include to a surfact compensitent the date.	will be used for de: (1) A copy ace owner whos ation agreemen mages are comp	r the dof this land contact	rilling code will be aining	g of second us an allowed great grea	a hetiosed	orizontal well notice of in; (2) The information in conjunction with the er of compensation for cle six-b of this chapter.
(at the	is hereb address l	y provided to the SURFACE OWN sted in the records of the sheriff at the	ER(s) ne time of not	ice): Name:						
	ss:				¥					<del></del> ,
operati State:	ion on the	t Virginia Code § 22-6A-16(c), notice surface owner's land for the purpos	e of drilling a		I well on the tra	of la 574651	ind as			
County		lonongalia Iay	Pu	blic Road		438773 Shuma		Road (	Stat	te Route 37/3)
Quadra		lacksville	Ge	nerally use	d farm name:	Eddy				
Waters	shed: U	pper Monongahela River, Dunkard Creek								
Pursua to be p horizon surface inform headqu	int to Wes provided ntal well; e affected action rela	all Include: st Virginia Code § 22-6A-16(c), this by W. Va. Code § 22-6A-10(b) to and (3) A proposed surface use and by oil and gas operations to the ex sted to horizontal drilling may be of beated at 601 57 <sup>th</sup> Street, SE, Ch lt.aspx.	a surface ow compensation tent the dama otained from	ner whose n agreemen nges are co the Secret	land will be unt containing an ompensable und ary, at the WV	sed in offer er artic Depar	conj of co cle si rtmen	unct mper x-b of	nsa of t En	n with the drilling of a tion for damages to the this chapter. Additional evironmental Protection
Well C	Operator:	Northeast Natural Energy LLC	y.	Address:	707 Virginia Street E	ast, Suite	e 1200			
Teleph	- 80	304-241-5752 ext. 7108			Charleston, WV 253		an also die			
Email:		hmedley@nne.ll.com	T I	acsimile:	304-241-5972					
Oil an	d Gas Pr	ivacy Notice:								

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

JUN 1 2 2015

WV Department of Environmental Protection

### Surface Owner(s):

le AS

Mark Eddy 537 Pedlar Run Road Core, WV 26541

Bernard L. & Darryl W. Cordray 1741 Pedlar Run Road Core, WV 26541

Michael Paul & Scott Adam Wade 106 Bluff Oak Street Maidsville, WV 26541 4706101719

### Surface Owner(s) (Road and/or Other Disturbance):

Mark Eddy 537 Pedlar Run Road Core, WV 26541

Bernard L. & Darryl W. Cordray 1741 Pedlar Run Road Core, WV 26541

Michael Paul & Scott Adam Wade 106 Bluff Oak Street Maidsville, WV 26541

Frank C. Lemley 1920 Hagans Road Core, WV 26541

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10/02/2015



### WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways
1900 Kanawha Boulevard East • Building Five • Room 110

Charleston, West Virginia 25305-0430 • (304) 558-3505

Paul A. Mattox, Jr., P. E. Secretary of Transportation/ 4706101 Sommissioner of Highways

June 5, 2015

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

Subject: DOH Permit for the Eddy Pad, Monongalia County Eddy 9H

Dear Mr. Martin,

Earl Ray Tomblin

Governor

Northeast Natural Energy LLC has been issued permit #04-2015-0563 to access the State Road for a well site located off of Monongalia County Route 37/3 SLS.

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

Very Truly Yours,

Gary K. Clayton, P.E.

Regional Maintenance Engineer Central Office O&G Coordinator

Cc: Dave McDougal

Northeast Natural Energy Corporation

CH, OM, D-4

File

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JUN 1 2 2015

WV Department of Environmental Protection

10/02/2015

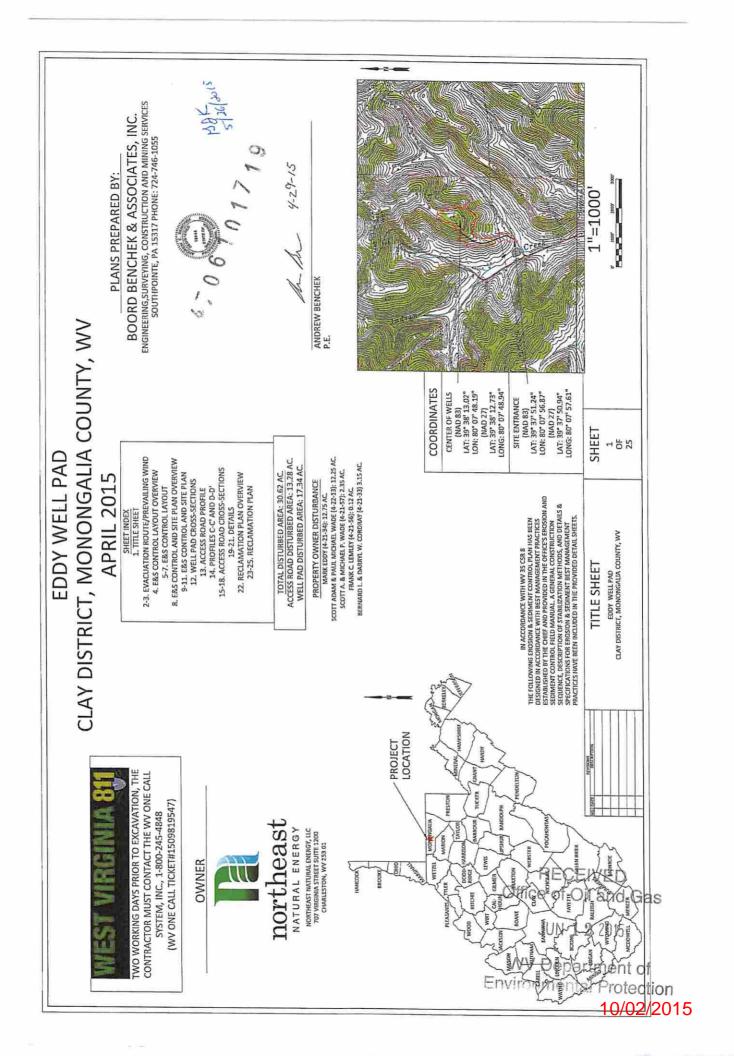
# Planned Additives to be used in Fracturing Stimulations

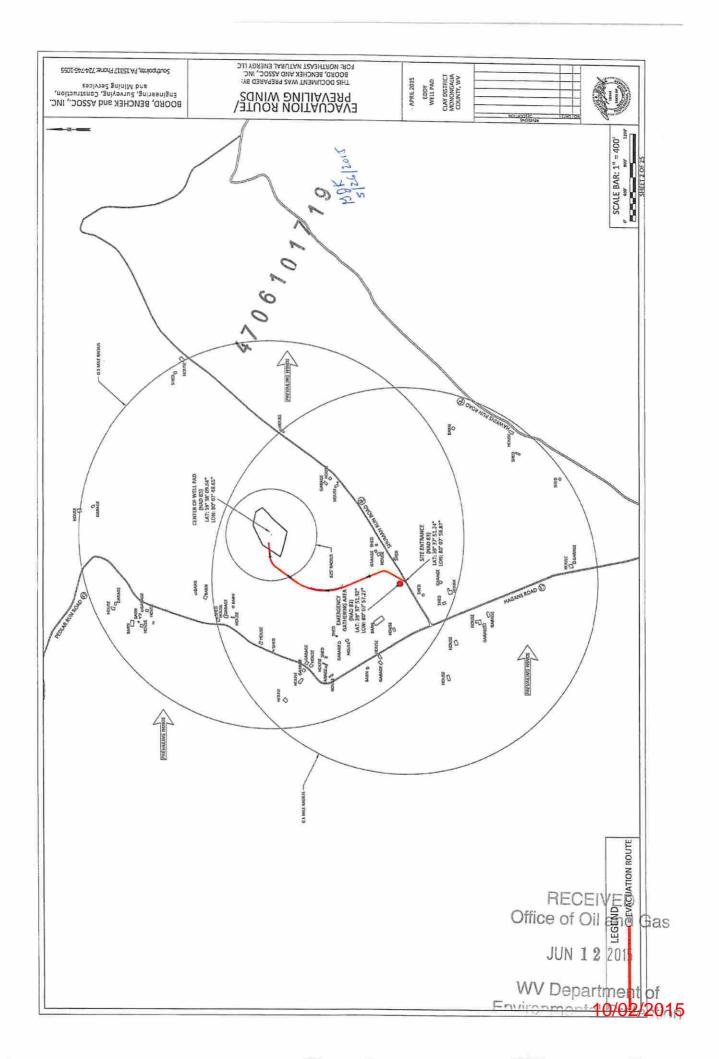
Trade Name	Purpose	Ingredients	Chemical Abstract Service Number (CAS#)
Water	Carrier	Water	7732-18-5
HCI, 10.1-15%	Acidizing	Hydrochloric Acid Water	7647-01-0 7732-18-5
Alpha 1427	Biocide	Alkyl Dimethyl Benzyl Ammonium Chloride (C12-16) Ethanol Glutaraldehyde Quaternary Ammonium Chloride Water	68424-85-1 64-17-5 111-30-8 7173-51-5 7732-18-5
Enzyme G-NE	Breaker	Hemicellulase Enzyme Concentrate Water	9025-56-3 7732-18-5
CI-14	Corrosion Inhibitor	Fatty Acids Methanol Olefin Polyoxyalkylenes	N.A. 67-56-1 N.A. N.A. 107-19-7
FRW-18	Friction Reducer	Hydrotreated Light Distillate	64742-47-8
GW-3LDF	Gelling Agent	Guar Gum Petroleum Distillate Blend	9000-30-0 CBI
Ferrotrol 300L	Iron Control	Citric Acid	77-92-9
Sand, White, 40/70	Proppant	Crystalline Silica (Quartz)	14808-60-7
Sand, White, 100 mesh	Proppant	Crystalline Silica (Quartz)	14808-60-7
Saletrol 720 jiji	Scale Inhibitor	Diethylene Glycol	111-46-6
REC Se of ( JUN 1 Depa			

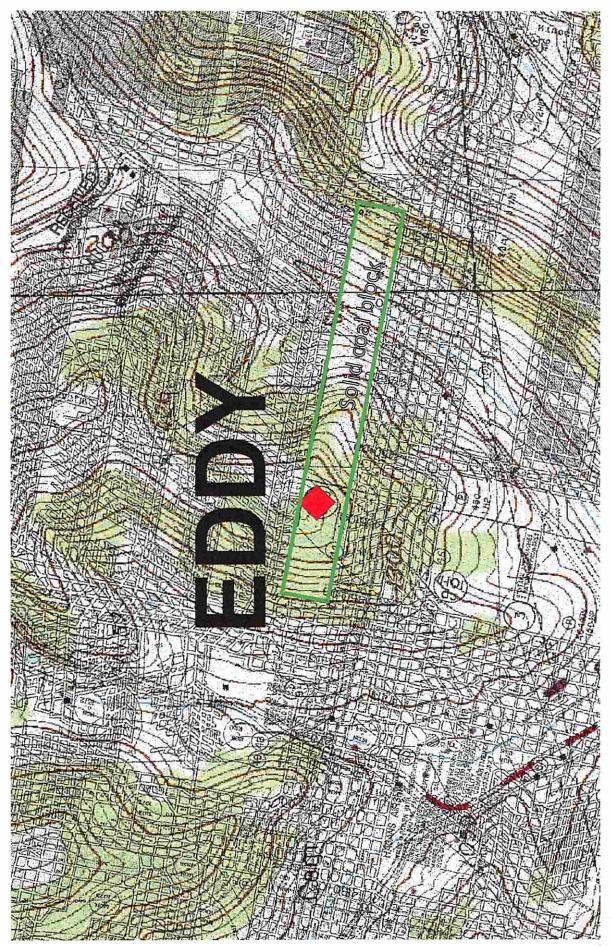
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Department of mmental Protection 10/02/2015









## CLAY DISTRICT, MONONGALIA COUNTY, WV **EDDY WELL PAD**

### **APRIL 2015**

1. TITLE SHEET

 WELL PAD AND TOPSOIL PILE #4 CROSS-SECTIONS 2-3. EVACUATION ROUTE/PREVAILING WIND 5-7. E&S CONTROL LAYOUT
8. E&S CONTROL AND SITE PLAN OVERVIEW 4. E&S CONTROL LAYOUT OVERVIEW 9-11. E&S CONTROL AND SITE PLAN

13. ACCESS ROAD PROFILE 14. PROFILES C-C' AND D-D' 15-18. ACCESS ROAD CROSS-SECTIONS 22. RECLAMATION PLAN OVERVIEW 23-25. RECLAMATION PLAN 19-21, DETAILS

TOTAL DISTURBED AREA: 30.62 AC. ACCESS ROAD DISTURBED AREA: 13.28 AC.

WELL PAD DISTURBED AREA: 17.34 AC PROPERTY OWNER DISTURBANCE

SCOTT ADAM & PAUL MICHAEL WADE (4-22-13): 12.25 AC. SCOTT A. & MICHAEL P. WADE (4-21-57): 2.35 AC. BERNARD L. & DARRYL W. CORDRAY (4-21-33) 3.15 AC. FRANK C. LEMLEY (4-21-56): 0.12 AC.

LOCATION

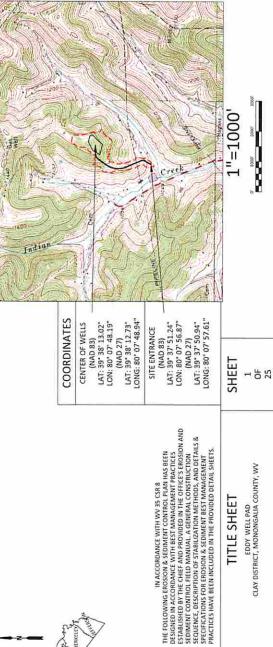
BOORD BENCHEK & ASSOCIATES, INC. ENGINEERING, SURFYING, CONSTRUCTION AND MINING SERVICES SOUTHPOINTE, PA 15317 PHONE: 724-746-1055 PLANS PREPARED BY: APPROVED

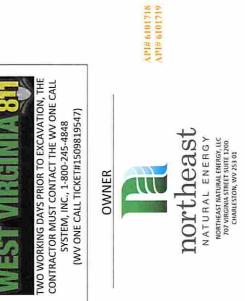


**MVDEP OOG** 

TON Y

ANDREW BENCHEK P.E.





CLAY DISTRICT, MONONGALIA COUNTY, WV TITLE SHEET

### Northeast Natural Energy LLC Mine Contingency Plan



Casing Schematic w/o Mine String

On all wells drilled, Northeast Natural Energy LLC ("NNE") has contingency strategies in place should an unanticipated void or mine be encountered while drilling the surface section of the well. If encountered, any accumulated gases will be diverted a safe distance away from the drilling operations through the blooey line and/or flare.

All casings programs submitted to the state incorporate the use of a 24" conductor over the previously used 20" that has long been the industry standard for a typical Marcellus design. The use of 24" conductor casing allows the use of a 22" bit to ream the surface hole, and drill 50' below the void to run a string of 18-5/8" 87.50#/ft J-55 through the section when needed.

The 18-5/8" would be set 30-50' below the void with cement baskets placed directly above and below. The section of pipe below the void would be cemented using the balance method with 100% excess. The section above the void would be cemented separately by using remedial top fill techniques and 30% excess.

With the use of these string sizes and techniques, the surface and intermediate strings do not need to be altered. After a proper WOC time, the surface section of the well would continue to be drilled with a 17-1/2" bit and the 13-3/8" 54.50#/ft freshwater casing would be set at the originally permitted depth.

\*The diagram below visually shows the alternative casing plan should an unanticipated void be encountered.

Casing Schematic w/ Mine String

### 24" Conductor Set 10' Below 24" Conductor Set 10' Below Non-Compacted Soils Non-Compacted Soils 22" Hole Drilled to 50' Below 18-5/8" 87.5#/ft. J-55 BTC Set 30'-50' Below 17-1/2" Hole Drilled, 13-3/8" 54.5#/ ft. J-55 BTC/STC Set at Originally Permitted Depth 17-1/2" Hole Drilled, 13-3/8" 54.5#/ Cement-to-Surface ft. J-55 BTC/STC Set at Originally Permitted Depth Cement-to-Surface 12 1/4" Hole Drilled, 9-5/8" 40#/ft. J-55 8RD LTC Set at Originally Permitted 12 1/2" Hole Drilled, 9-5/8" 40#/ft. J-55 8RD LTC Set at Originally Permitted Depth Cement-to-Surface Depth Cement-to-Surface 8 3/4" Drilled, 5-1/3" 20#/ft, P-110 BTC 8 3/4" Drilled, 5-1/2" 20#/ft. P-110 BTC Set at Originally Permitted Depth Set at Originally Permitted Depth Cemented Top Minimum 200 Inside of Intermediate Casing Cemented Top Minimum 200' Inside of Office of Oil and Gas Intermediate Casing

WV Department of Environment of 1/11 - IC

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