



west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary
www.dep.wv.gov

Friday, March 30, 2018
WELL WORK PERMIT
Horizontal 6A / New Drill

NORTHEAST NATURAL ENERGY LLC
707 VIRGINIA STREET EAST
STE 1200
CHARLESTON, WV 25301

Re: Permit approval for KASSAY 10H
47-061-01797-00-00

This well work permit 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 any additional specific 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 of 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.

Per 35 CSR 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- 0450.

James A. Martin
Chief

Operator's Well Number: KASSAY 10H
Farm Name: PATTY A KASSAY
U.S. WELL NUMBER: 47-061-01797-00-00
Horizontal 6A New Drill
Date Issued: 3/30/2018

PERMIT CONDITIONS 4706101797

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

CONDITIONS

1. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACE). Through this permit, you are hereby being advised to consult with USACE regarding this proposed activity.
2. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than one hundred (100) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
4. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
6. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.
7. 24 hours prior to the initiation of the completion process the operator shall notify the Chief or his designee.
8. During the completion process the operator shall monitor annular pressures and report any anomaly noticed to the chief or his designee immediately.
9. 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.
10. 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.

PERMIT CONDITIONS 4706101797

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

WW-6B
(04/15)

4706101797
API NO. 47- _____
OPERATOR WELL NO. 10H
Well Pad Name: Kassay

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

1) Well Operator: Northeast Natural Energy LLC 494498281 Monongalia Clay Blacksville
Operator ID County District Quadrangle

2) Operator's Well Number: 10H Well Pad Name: Kassay

3) Farm Name/Surface Owner: Patty Kassay Public Road Access: County Route 25/3 (Yank Hollow Road)

4) Elevation, current ground: 1,534' Elevation, proposed post-construction: 1,534'

5) Well Type (a) Gas Oil _____ Underground Storage _____

Other _____

(b) If Gas Shallow Deep _____

Horizontal _____

MDK 3/8/2018

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus; 8,288'; 103'; 3,600 PSI

8) Proposed Total Vertical Depth: 8,288'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 19,607.53'

11) Proposed Horizontal Leg Length: 10,649'

12) Approximate Fresh Water Strata Depths: 50' ; 1,120'

13) Method to Determine Fresh Water Depths: DRILLERS LOG FROM OFFSET WELLS

14) Approximate Saltwater Depths: 1,946' ; 2,320'

15) Approximate Coal Seam Depths: 125' ; 1,098'

16) Approximate Depth to Possible Void (coal mine, karst, other): N/A

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

(a) If Yes, provide Mine Info: Name: _____

Depth: _____

Seam: _____

Owner: _____

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MAR 16 2018

03/30/2018
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4706101797

WW-6B
(04/15)

API NO. 47- _____
OPERATOR WELL NO. 10H _____
Well Pad Name: Kassay

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	1,220'	1,190'	CTS
Coal							
Intermediate	9-5/8"	New	J-55	40	2,780'	2,750'	CTS
Production	5-1/2"	New	P-110	20	19,607.53'	19,577.53'	4,636 Cu. Ft.
Tubing	2-7/8"	New	N-80	6.5	N/A	8,500'	N/A
Liners							

MJK 3/8/2018

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	24"	30"	.375	415		4,500 psi Grout	N/A
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"	N/A	.217"	10,570	3,600	N/A	N/A
Liners							

PACKERS

Kind:				
Sizes:				
Depths Set:				

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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 5,500,' TVD/MD. The well will then be horizontally drilled on fluid from KOP to approximately 8,288' TVD / 19,607.53' MD along a 143° azimuth.

20) Describe fracturing/stimulating methods in detail, including anticipated 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 100 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): N/A

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

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 other 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 + 20 lbs/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 + 1 gal/bbl SS-2 Spacer @ 13.5 ppg prior to cement.

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*Note: Attach additional sheets as needed.

NORTHEAST NATURAL ENERGY, LLC

Location: Monongalia County, WV
 Field: Monongalia
 Facility: Kassay Pad

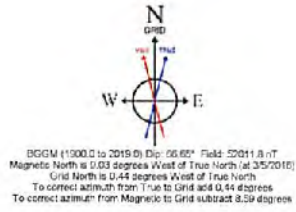
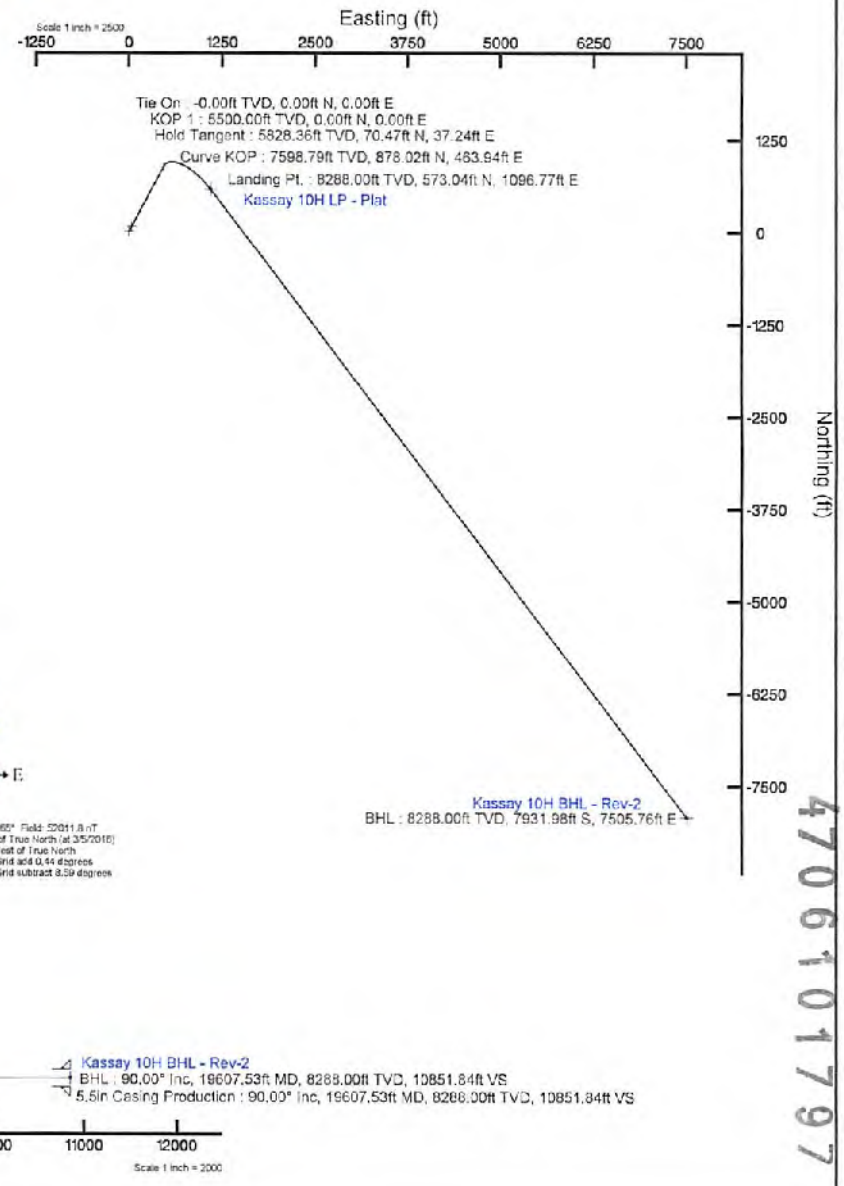
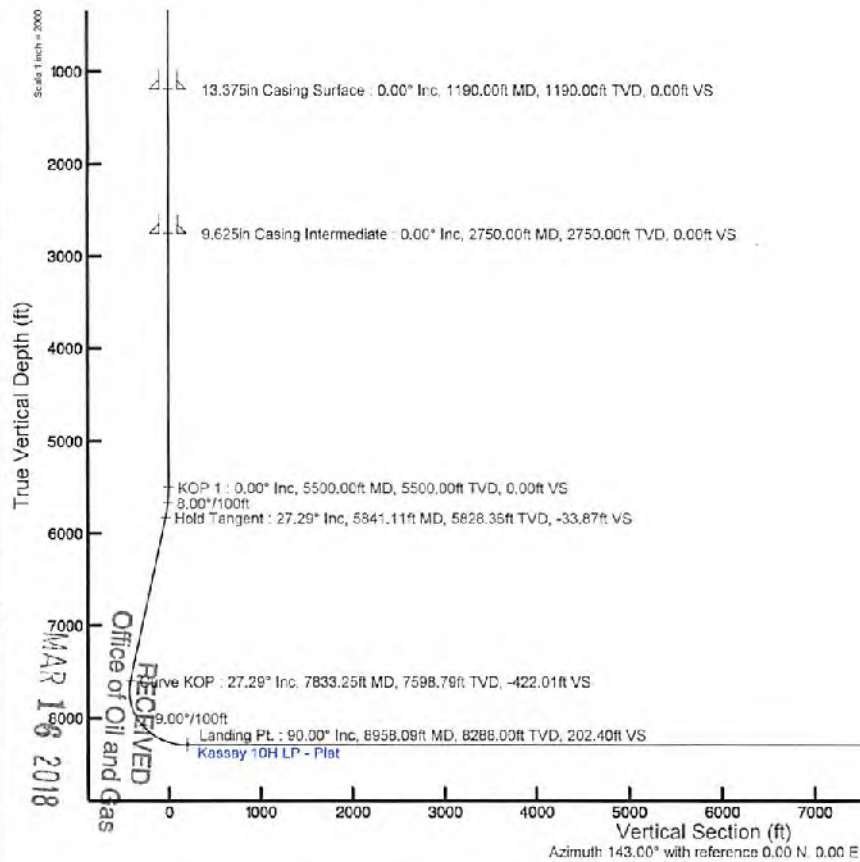
Slot: Slot #10
 Well: Kassay 10H
 Wellbore: Kassay 10H PWB



Location Information				
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Kassay Pad	1772945.670	422665.830	39°39'30.118"N	80°11'40.564"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)
Slot #10	92.38	82.24	1773027.000	422759.200
			Latitude	Longitude
			39°39'31.037"N	80°11'39.521"W
Ground Level (GL) to Ground level (At Slot: Slot #10)	0ft			
Mean Sea Level to Ground level (At Slot: Slot #10)	-1634ft			
Ground Level (GL) to Mean Sea Level	-1534ft			

Type	Hole Size	Casing Size	Grade		GL Depth (Csg)
Conductor	28"	24"	NA		40'
Surface	17-1/2"	13-3/8"	J-55	54.5	1190'
Intermediate	12-1/4"	9-5/8"	J-55	40	2750'

Formation	Depth (KBTVD)
Tully	8040'
Hamilton	8090'
Upper Marcellus	8198'
Lower Marcellus	8246'
Onondaga	8301'



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Northeast Natural Energy LLC Mine Contingency Plan



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.

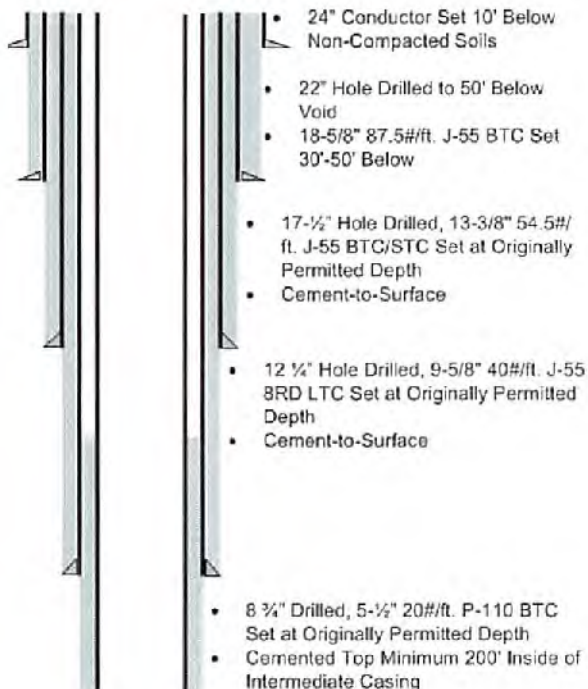
All casings programs submitted to the state incorporate the use of a 24" conductor over the previously used 20" that has long been the industry standard for a typical Marcellus design. The use of 24" conductor casing allows the use of a 22" bit to ream the surface hole, and drill 50' below the void to 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.

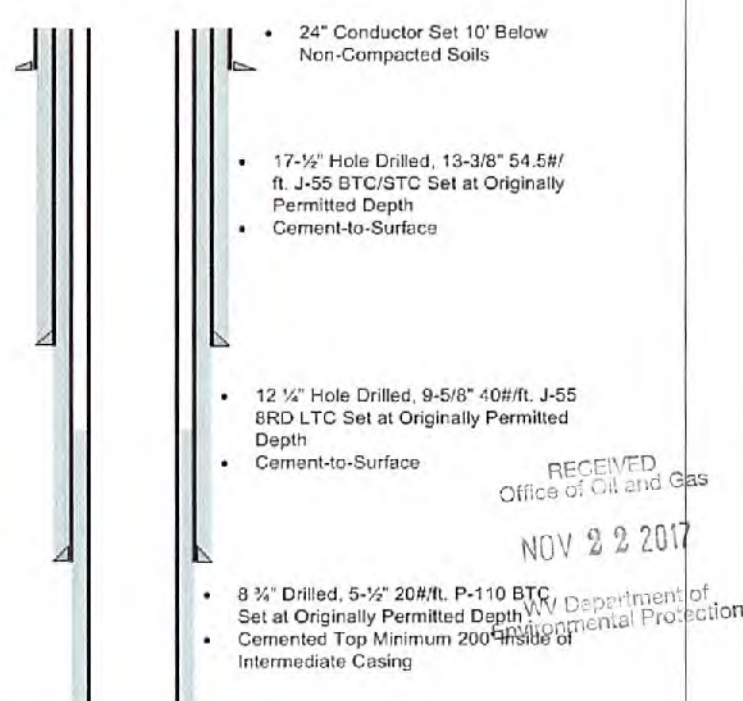
With the use of these string sizes and techniques, the surface and intermediate strings do not need to be altered. After a proper WOC time, the surface section of the well would continue to be drilled with a 17-1/2" bit and the 13-3/8" 54.50#/ft freshwater casing would be set at the originally permitted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

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

Casing Schematic w/ Mine String



Casing Schematic w/o Mine String



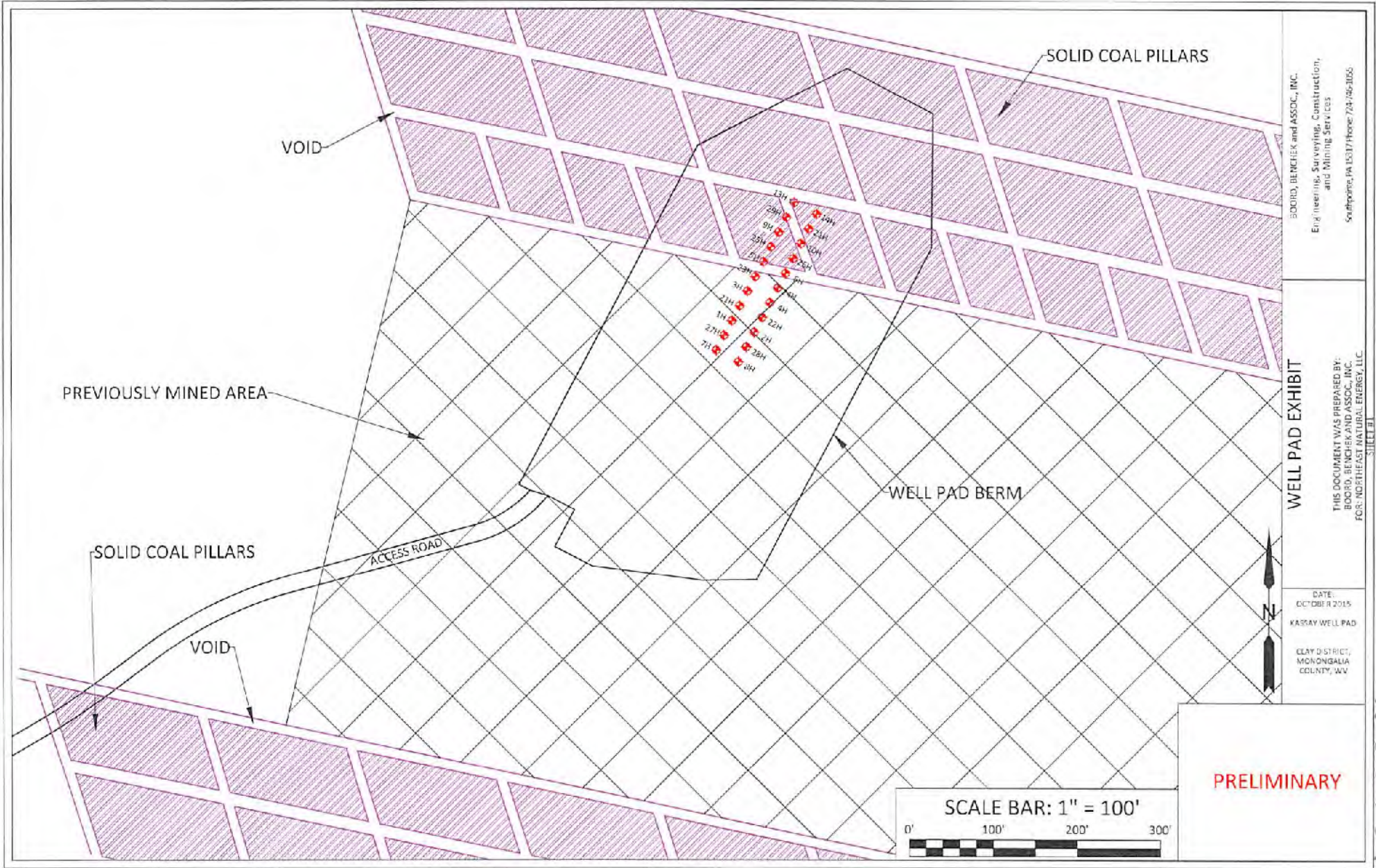
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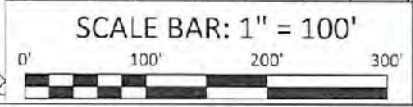


BOORD, BENCHKAD AND ASSOC., INC.
 Engineering, Surveying, Construction,
 and Mining Services
 Southpointe, PA 15317 Phone: 724-765-1005

WELL PAD EXHIBIT
 THIS DOCUMENT WAS PREPARED BY:
 BOORD, BENCHKAD AND ASSOC., INC.
 FOR: NORTHEAST NATURAL ENERGY, LLC.

DATE:
 OCTOBER 2015
 KASRAY WELL PAD
 CLAY DISTRICT,
 MONONGALIA
 COUNTY, WV

PRELIMINARY



SHEET #

4706101797

Kassay 10H Area of Review

API Number	Well Name	Well Number	Operator	Latitude (NAD 83)	Longitude (NAD 83)	TMP	TVD	Producing Formation
47-061-00751	Jesse Sine	1	Consolidation Coal Co.	39.655291	-80.187847	4-17-60	NA	RePlug Plat 02-24-1984
47-061-01121	Virginia L Tennant	1	East Resources, INC.	39.65053	-80.182734	4-17-80	NA	Plugged on 08-19-1994
47-061-00745	Rosemary Marie Saunders	NA	Consolidation Coal Co.	39.650796	-80.18053	4-17-85.3	NA	Plugged on 04-27-1984
47-061-00752	Jesse Sine	NA	Consolidation Coal Co.	39.657322	-80.185972	4-17-60	NA	Plugged on 05-21-1985
47-061-00816	Terry & Lydia Eddy	M1-531	Consolidation Coal Co.	39.662401	-80.192739	4-17-65	NA	Plugged on 06-20-1986
47-061-01158	Albert & Merle J. Eddy	MI-470	Consolidation Coal Co.	39.639921	-80.171901	4-21-03	NA	Plugged 06-20-1994

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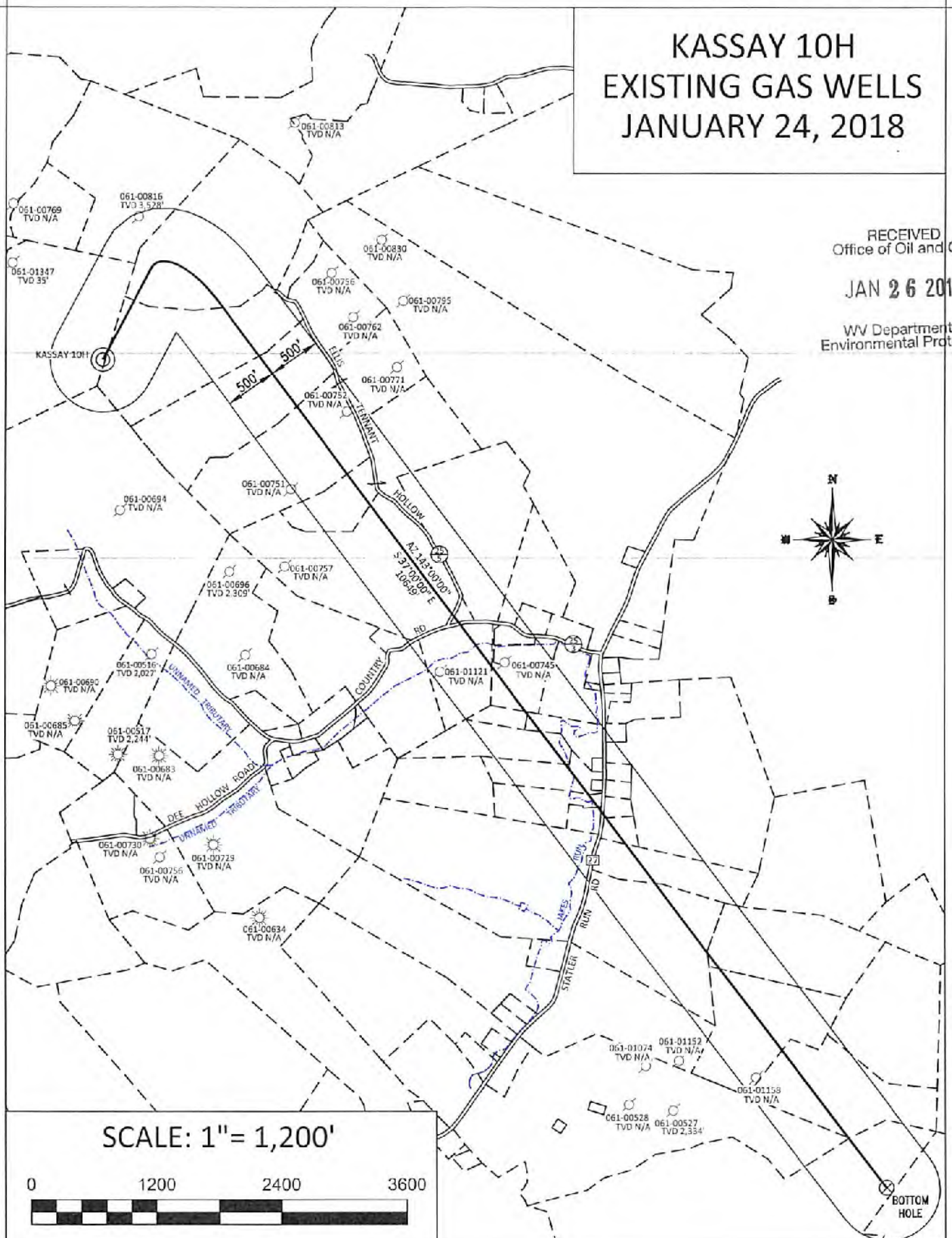
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KASSAY 10H EXISTING GAS WELLS JANUARY 24, 2018

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SCALE: 1" = 1,200'



03/30/2018

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Northeast Natural Energy LLC OP Code 494498281

Watershed (HUC 10) 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

If so, please describe anticipated pit waste: N/A

Will a synthetic liner be used in the pit? Yes No If so, what ml.? N/A

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number _____)
- Reuse (at API Number unknown at this time, TBD)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain _____)

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

-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

Drill 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) _____

-Landfill or offsite name/permit number? Please See Attachment "A"

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

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

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

Company Official Signature Hollie Medley
Company Official (Typed Name) Hollie Medley
Company Official Title Regulatory Manager

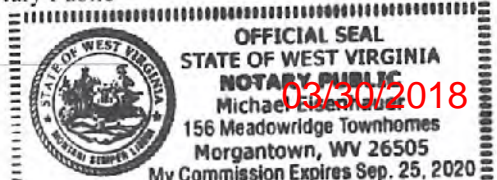
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Subscribed and sworn before me this 15 day of November, 2017

[Signature]

My commission expires 9/25/2020

Notary Public



Northeast Natural Energy LLC

Proposed Revegetation Treatment: Acres Disturbed 15.85 Prevegetation pH 5-7

Lime 2 Tons/acre or to correct to pH 7

Fertilizer type 19-19-19

Fertilizer amount 300 lbs/acre

Mulch 2 Tons/acre

Seed Mixtures

Temporary				Permanent			
Seed Type		lbs/acre		Seed Type		lbs/acre	
Orchard Grass		46		Orchard Grass		46	
Red Clover		8		Red Clover		8	
Tetraploid Perennial Rye		16		Tetraploid Perennial Rye		16	
Timothy	15	Annual Rye	15	Timothy	15	Annual Rye	15

Attach:
Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, include dimensions (L x W x D) of the pit, and dimensions (L x W), and area in acreage, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: *Maureen J. Kintner*

Comments: _____

Title: Inspector Date: 11/16/2017

Field Reviewed? Yes No

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Attachment A to WW-9

Northeast Natural Energy LLC (“NNE”) plans to utilize a closed loop process for its drilling of the Kassay 10H 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 half-round tanks where they will be solidified on site and taken to disposal as they are accumulated.

Kassay 10H 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)
- Green Hunter Travis Unit Disposal Well (Permit #34-121-2-4086)
- Viking Energy Corporation 20320 Disposal Well (Permit#47-039-02210)
- Ohio Oil Gathering Killbuck Disposal Well (Permit #34-075-24527)
- Ohio Oil Gathering Moran Disposal Well (Permit #34-089-24792)
- Ohio Oil Gathering Bells Run Disposal Well (Permit #34-167-29395)
- Ohio Oil Gathering Long Run Disposal Well (Permit #34-167-29658)
- 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)

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northeast

NATURAL ENERGY

Kassay 10H

SITE SAFETY PLAN

January 17, 2018

Magnum Kintu
1/24/2018

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JAN 26 2018

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03/30/2018

WELL NAME: KASSAY No. 10H
QUAD: BLACKSVILLE, WV

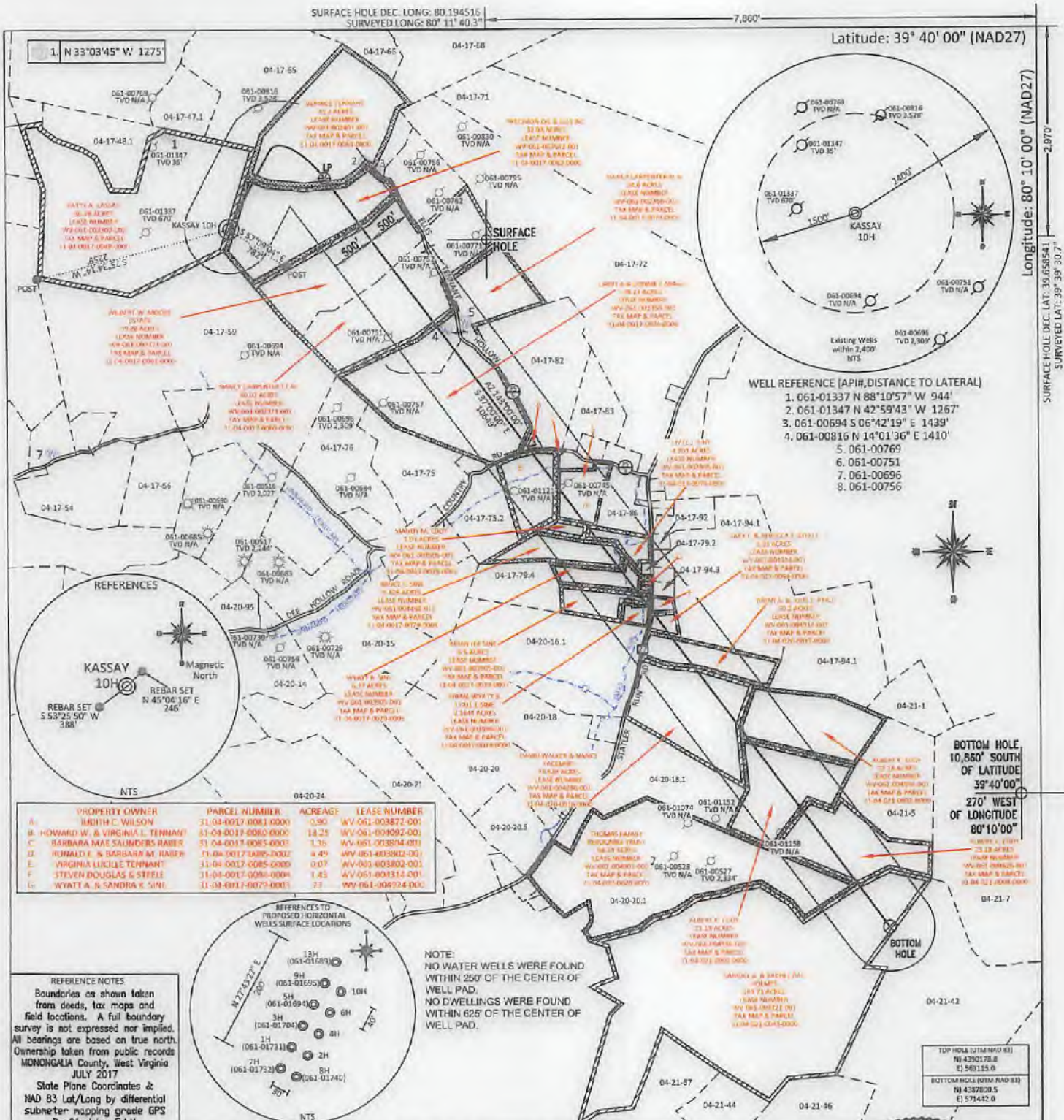
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03/30/2018



GRAPHIC SCALE



FILE #: NNE15
 DRAWING #: 2820
 SCALE: PLAT: 1" = 1600'
TICK: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: 1/200
 PROVEN SOURCE OF ELEVATION: SUBMETER MAPPING GRADE GPS

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

Signed: [Signature]
 L.L.S. #2124 : Ernest J. Benchek III



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP

OFFICE OF OIL & GAS
 601 5TH STREET
 CHARLESTON, WV 25304

Well Type: Oil Waste Disposal Production Deep
 Gas Liquid Injection Storage Shallow

WATERSHED: DUNKARD CREEK
 COUNTY/DISTRICT: MONONGALIA / CLAY
 SURFACE OWNER: PATTY A. KASSAY
 OIL & GAS ROYALTY OWNER: Patty A. Kassay, et al
 LEASE NUMBERS: _____

DATE: MARCH 5, 2018
 OPERATOR'S WELL #: KASSAY 10H
 API WELL #: 47 61 1797
 STATE COUNTY PERMIT

CURRENT ELEVATION: 1,534'
 QUADRANGLE: BLACKSVILLE
 ACREAGE: 86.78 +/-
 ACREAGE: 721.0074 +/-

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF FORMATION PERFORATE NEW FORMATION PLUG & ABANDON
 CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY): _____

TARGET FORMATION: MARCELLUS
 ESTIMATED DEPTH: TVD: 8,288' TMD: 19,607.53'
 WELL OPERATOR: NORTHEAST NATURAL ENERGY LLC
 DESIGNATED AGENT: JOHN ADAMS
 ADDRESS: 707 VIRGINIA STREET EAST, SUITE 1200
 ADDRESS: 707 VIRGINIA STREET EAST, SUITE 1200
 CITY: CHARLESTON STATE: WV ZIP CODE: 25301
 CITY: CHARLESTON STATE: WV ZIP CODE: 25301

03/30/2018

WW-6A1
(5/13)

Operator's Well No. Kassay 10H

**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
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Please 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

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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 LLC
 By: Hollie M. Medley *Hollie M Medley*
 Its: Regulatory Manager

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WW-6A1 Operator's Well No. 10H Kassay

NNE LEASE NUMBER	LESSOR NAME	LESSEE NAME	ROYALTY	BOOK/PG
WV-061-003302-002	Patty A. Kassay	Northeast Natural Energy LLC	0.125 OR GREATER	1506/143
WV-061-003654-001	Dorsey Neil Strickler and Nancy E. Strickler	Northeast Natural Energy LLC	DEED	1541/383
WV-061-003654-002	Lois Marie John	Northeast Natural Energy LLC	DEED	1541/379
WV-061-003654-003	Paul T. and Sharon Strickler	Northeast Natural Energy LLC	DEED	1537/194
WV-061-003654-004	Mary Rose Butler	Northeast Natural Energy LLC	DEED	1537/198
WV-061-003654-005	Wilbur Randolph Strickler	Northeast Natural Energy LLC	DEED	1557/257
WV-061-002401-001	Mary J. Pemberton	*Chesapeake Appalachia LLC	0.125 OR GREATER	1441/724
WV-061-002371-001	Mary R Mccullough	*Chesapeake Appalachia LLC	0.125 OR GREATER	1421/402
WV-061-002371-002	Mary Liming	*Chesapeake Appalachia LLC	0.125 OR GREATER	1421/373
WV-061-002371-004	Kristi Virgie Vedis	*Chesapeake Appalachia LLC	0.125 OR GREATER	1425/327
WV-061-002371-005	Karen M Cain	*Chesapeake Appalachia LLC	0.125 OR GREATER	1425/283
WV-061-002371-006	Donna Lynn Chase	*Chesapeake Appalachia LLC	0.125 OR GREATER	1425/200
WV-061-002371-012	Myrtle L Sine	*Chesapeake Appalachia LLC	0.125 OR GREATER	1426/122
WV-061-002371-013	Walden J Cook Jr	*Chesapeake Appalachia LLC	0.125 OR GREATER	1427/591
WV-061-002371-015	Twyla Hinds Snopps	*Chesapeake Appalachia LLC	0.125 OR GREATER	1428/185
WV-061-002371-016	Rebecca Gail Foley	*Chesapeake Appalachia LLC	0.125 OR GREATER	1427/186
WV-061-002371-017	C W Sine	*Chesapeake Appalachia LLC	0.125 OR GREATER	1427/369
WV-061-002371-023	Donald R Sine And Irma Sine	*Chesapeake Appalachia LLC	0.125 OR GREATER	1438/671
WV-061-002371-026	Darlene Eddy	*Chesapeake Appalachia LLC	0.125 OR GREATER	1445/158
WV-061-002371-036	Jarrod Williams	*Chesapeake Appalachia LLC	0.125 OR GREATER	1454/66
WV-061-002371-039	Janet Varner	*Chesapeake Appalachia LLC	0.125 OR GREATER	1454/365
WV-061-002371-043	Betty C Lyons	*Chesapeake Appalachia LLC	0.125 OR GREATER	1462/541
WV-061-002371-045	Pamela J Yurisko	Northeast Natural Energy LLC	0.125 OR GREATER	1521/732
WV-061-002371-046	Richard Tennant And Oneida P	Northeast Natural Energy LLC	0.125 OR GREATER	1524/265
WV-061-002371-047	Larry Blaine Tennant Estate	Northeast Natural Energy LLC	0.125 OR GREATER	1524/774
WV-061-002371-048	Loretta Fluharty	Northeast Natural Energy LLC	0.125 OR GREATER	1524/780
WV-061-002371-049	Rickey Jane Buchanan	Northeast Natural Energy LLC	0.125 OR GREATER	1526/132
WV-061-002371-050	Alice Wise	Northeast Natural Energy LLC	0.125 OR GREATER	1526/134
WV-061-002371-051	Emza Parsons	Northeast Natural Energy LLC	0.125 OR GREATER	1530/21
WV-061-002371-052	Ginger K Estle	Northeast Natural Energy LLC	0.125 OR GREATER	1553/623
WV-061-002371-053	Troy L Tennant And Ana Tennant	Northeast Natural Energy LLC	0.125 OR GREATER	1552/813
WV-061-002371-054	Donna Raye Raber And Fred Raber	Northeast Natural Energy LLC	0.125 OR GREATER	1551/795
WV-061-002371-055	Tina L Fluharty And Richard Fluharty	Northeast Natural Energy LLC	0.125 OR GREATER	1549/624
WV-061-002371-056	Lydia Robinson	Northeast Natural Energy LLC	0.125 OR GREATER	1553/616
WV-061-002371-057	Jennifer Sue Mccormick	Northeast Natural Energy LLC	0.125 OR GREATER	1555/11
WV-061-002371-058	Richard Keith Steele	Northeast Natural Energy LLC	0.125 OR GREATER	1553/633
WV-061-002371-059	Jimmy Randall Tennant	Northeast Natural Energy LLC	0.125 OR GREATER	1564/808
WV-061-002371-060	Billy Ray Tennant And Brenda K	Northeast Natural Energy LLC	0.125 OR GREATER	1553/644
WV-061-002371-061	Rodney Wayne Tennant And Pamela	Northeast Natural Energy LLC	0.125 OR GREATER	1553/642
WV-061-002371-062	Roxana Cahill And Michael Cahill	Northeast Natural Energy LLC	0.125 OR GREATER	1541/697
WV-061-002371-063	Donald Dean Wheeler Jr And Kathy	Northeast Natural Energy LLC	0.125 OR GREATER	1562/180
WV-061-002371-064	Louise Varner	Northeast Natural Energy LLC	0.125 OR GREATER	1568/799
WV-061-002371-065	Paul Varner	Northeast Natural Energy LLC	0.125 OR GREATER	1568/797
WV-061-002371-066	Steven Varner Sr And Tina Varner	Northeast Natural Energy LLC	0.125 OR GREATER	1568/795
WV-061-002371-067	Mark Varner	Northeast Natural Energy LLC	0.125 OR GREATER	1568/793
WV-061-002371-068	Deborah Sudduth And Samuel	Northeast Natural Energy LLC	0.125 OR GREATER	1570/293
WV-061-002371-069	Pamela Brown And Carl Brown	Northeast Natural Energy LLC	0.125 OR GREATER	1570/303
WV-061-002371-070	Ruby E Vanfossin	Northeast Natural Energy LLC	0.125 OR GREATER	1570/305
WV-061-002371-071	Jody L Varner	Northeast Natural Energy LLC	0.125 OR GREATER	1570/307
WV-061-002371-072	Tamela Simeral	Northeast Natural Energy LLC	0.125 OR GREATER	1570/308
WV-061-002371-073	Robert Varner	Northeast Natural Energy LLC	0.125 OR GREATER	1507/311

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WV-061-002371-074	Connie Varner	Northeast Natural Energy LLC	0.125 OR GREATER	1570/313
WV-061-002371-075	Lisa Mccammon And William	Northeast Natural Energy LLC	0.125 OR GREATER	1570/315
WV-061-002371-076	James Varner	Northeast Natural Energy LLC	0.125 OR GREATER	1570/317
WV-061-002371-077	Almeada J Barber	Northeast Natural Energy LLC	0.125 OR GREATER	1573/56
WV-061-002371-078	Sonya R David And Michael P Davis	Northeast Natural Energy LLC	0.125 OR GREATER	1575/258
WV-061-002371-079	Neal L Sine And Brenda Louise Sine	Northeast Natural Energy LLC	0.125 OR GREATER	1576/835
WV-061-002392-003	Kenneth F Clevenger	Northeast Natural Energy LLC	0.125 OR GREATER	1536/517
WV-061-002392-004	Helen L Cummings And David R	Northeast Natural Energy LLC	0.125 OR GREATER	1537/377
WV-061-003542-001	Velda E Moore	Northeast Natural Energy LLC	0.125 OR GREATER	1526/104
WV-061-003542-002	Rebecca H Haught Bailey	Northeast Natural Energy LLC	0.125 OR GREATER	1523/694
WV-061-003542-003	Lois R Roberetson An Dkenneth A	Northeast Natural Energy LLC	0.125 OR GREATER	1530/224
WV-061-003542-004	Sharon G Earl And Michael P Earl	Northeast Natural Energy LLC	0.125 OR GREATER	1530/756
WV-061-003542-005	Linda M Satterfield And Jon J	Northeast Natural Energy LLC	0.125 OR GREATER	1555/9
WV-061-003542-006	Delbert Mayles	Northeast Natural Energy LLC	0.125 OR GREATER	1564/800
WV-061-003542-007	Sarah Varner	Northeast Natural Energy LLC	0.125 OR GREATER	1555/5
WV-061-003542-008	Gary Varner	Northeast Natural Energy LLC	0.125 OR GREATER	1555/7
WV-061-003681-001	James W Joseph And Rita Joseph	Northeast Natural Energy LLC	0.125 OR GREATER	1539/423
WV-061-003990-001	Albert Mercer	Northeast Natural Energy LLC	DEED	1589/482
WV-061-004200-001	Chesapeake Appalachia Llc	Northeast Natural Energy LLC	0.125 OR GREATER	1564/88
WV-061-004382-001	Xto Energy Inc.	Northeast Natural Energy LLC	0.125 OR GREATER	1578/472
WV-061-002006-005	Raymer Tennant	*Chesapeake Appalachia LLC	0.125 OR GREATER	1396/635
WV-061-002006-006	Freddy W Williams	*Chesapeake Appalachia LLC	0.125 OR GREATER	1398/282
WV-061-002006-007	Everett A Sine Jr	*Chesapeake Appalachia LLC	0.125 OR GREATER	1398/285
WV-061-002006-008	Lyall A Sine	*Chesapeake Appalachia LLC	0.125 OR GREATER	1399/599
WV-061-002006-009	Nola M Williams	*Chesapeake Appalachia LLC	0.125 OR GREATER	1399/602
WV-061-002006-010	Cheryl Lisabeth Gallagher	*Chesapeake Appalachia LLC	0.125 OR GREATER	1398/519
WV-061-002006-011	W Richard Williams	*Chesapeake Appalachia LLC	0.125 OR GREATER	1398/522
WV-061-002006-012	Betty L Sine	*Chesapeake Appalachia LLC	0.125 OR GREATER	1399/605
WV-061-002006-013	Kimberly Sue Brummage	*Chesapeake Appalachia LLC	0.125 OR GREATER	1399/608
WV-061-002006-014	Doris L Sine	*Chesapeake Appalachia LLC	0.125 OR GREATER	1404/286
WV-061-002006-015	Mabel L Mcafee	*Chesapeake Appalachia LLC	0.125 OR GREATER	1399/611
WV-061-002006-016	Patricia Van Tassel	*Chesapeake Appalachia LLC	0.125 OR GREATER	1418/729
WV-061-002006-017	Celeste M Frickleton	*Chesapeake Appalachia LLC	0.125 OR GREATER	1399/614
WV-061-002006-018	Varner L Moore	*Chesapeake Appalachia LLC	0.125 OR GREATER	1401/82
WV-061-002006-019	Rita J Tanner	*Chesapeake Appalachia LLC	0.125 OR GREATER	1404/289
WV-061-002006-020	Delilah M Wilson	*Chesapeake Appalachia LLC	0.125 OR GREATER	1404/292
WV-061-002006-021	Ellen J Woodruff	*Chesapeake Appalachia LLC	0.125 OR GREATER	1404/295
WV-061-002006-022	Gail Church	*Chesapeake Appalachia LLC	0.125 OR GREATER	1401/85
WV-061-002006-023	Larry K Sine	*Chesapeake Appalachia LLC	0.125 OR GREATER	1404/298
WV-061-002006-024	Sue Ann Strickland	*Chesapeake Appalachia LLC	0.125 OR GREATER	1404/301
WV-061-002006-025	Donald Rex Williams	*Chesapeake Appalachia LLC	0.125 OR GREATER	1401/90
WV-061-002006-026	Carol I Wise	*Chesapeake Appalachia LLC	0.125 OR GREATER	1403/127
WV-061-002006-027	Leonard D Moore	*Chesapeake Appalachia LLC	0.125 OR GREATER	1403/130
WV-061-002006-028	Sandra Faye Wilson	*Chesapeake Appalachia LLC	0.125 OR GREATER	1405/232
WV-061-002006-029	Patricia Ann Hostutler	*Chesapeake Appalachia LLC	0.125 OR GREATER	1404/304
WV-061-002006-030	Pamela Rena Hall	*Chesapeake Appalachia LLC	0.125 OR GREATER	1405/877
WV-061-002006-031	Leonard L Tennant	*Chesapeake Appalachia LLC	0.125 OR GREATER	1405/880
WV-061-002006-032	Donald R Sine	*Chesapeake Appalachia LLC	0.125 OR GREATER	1410/572
WV-061-002401-002	Robert Ora Wheeler And Paula K	*Chesapeake Appalachia LLC	0.125 OR GREATER	1441/14
WV-061-002401-003	Rebecca Lynne Strahler And Rodney	*Chesapeake Appalachia LLC	0.125 OR GREATER	1441/8
WV-061-002401-004	James Everett Williams Ii And Lisa W	*Chesapeake Appalachia LLC	0.125 OR GREATER	1441/724
WV-061-002401-005	Karen J Taylor And Kenneth Taylor	*Chesapeake Appalachia LLC	0.125 OR GREATER	1440/681
WV-061-002401-006	Joyce Ann Berga And Ronald Berga	*Chesapeake Appalachia LLC	0.125 OR GREATER	1440/686
WV-061-002401-007	Dennis Keith Williams And Sheryl	*Chesapeake Appalachia LLC	0.125 OR GREATER	1448/436

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WV-061-002401-008	Susan L Michael And Chester L	*Chesapeake Appalachia LLC	0.125 OR GREATER	1440/680
WV-061-003965-001	Sara Varner	Northeast Natural Energy LLC	0.125 OR GREATER	1555/368
WV-061-003965-002	Gary Varner	Northeast Natural Energy LLC	0.125 OR GREATER	1554/793
WV-061-003990-002	Albert B Eddy Jr	Northeast Natural Energy LLC	0.125 OR GREATER	1568/789
WV-061-002350-002	Sonya R David And Michael P Davis	Northeast Natural Energy LLC	0.125 OR GREATER	1552/760
WV-061-002350-003	Sandra Faye Wilson And Wayne L	Northeast Natural Energy LLC	0.125 OR GREATER	1541/846
WV-061-002350-004	Rita J Tanner And Dennis Tannner	Northeast Natural Energy LLC	0.125 OR GREATER	1552/762
WV-061-002350-005	Tina L Fluharty And Richard Fluharty	Northeast Natural Energy LLC	0.125 OR GREATER	1553/286
WV-061-002350-006	Ginger K Estle	Northeast Natural Energy LLC	0.125 OR GREATER	1559/176
WV-061-002350-007	Patricia Ann Hostutler	Northeast Natural Energy LLC	0.125 OR GREATER	1553/305
WV-061-002350-008	Troy L Tennant And Ana Tennant	Northeast Natural Energy LLC	0.125 OR GREATER	1557/369
WV-061-002350-009	Kimberly Sue Brummage And Daniel	Northeast Natural Energy LLC	0.125 OR GREATER	1557/415
WV-061-002350-010	Helen Cummings And David Russell	Northeast Natural Energy LLC	0.125 OR GREATER	1557/419
WV-061-002350-011	Kenneth F Clevenger	Northeast Natural Energy LLC	0.125 OR GREATER	1557/423
WV-061-002350-012	Doris L Sine	Northeast Natural Energy LLC	0.125 OR GREATER	1551/231
WV-061-002350-013	Pamela Brown And Carl Brown	Northeast Natural Energy LLC	0.125 OR GREATER	1555/254
WV-061-002350-014	Lydia Robinson	Northeast Natural Energy LLC	0.125 OR GREATER	1562/379
WV-061-002350-015	Kristi Virgie Vedis	Northeast Natural Energy LLC	0.125 OR GREATER	1551/233
WV-061-002350-016	James W Joseph And Rita Joseph	Northeast Natural Energy LLC	0.125 OR GREATER	1562/217
WV-061-002350-017	Donald Rex Williams And Valerie R	Northeast Natural Energy LLC	0.125 OR GREATER	1568/307
WV-061-002350-018	Mark Varner	Northeast Natural Energy LLC	0.125 OR GREATER	1557/417
WV-061-002350-019	Patricia Van Tassel And Richard Van	Northeast Natural Energy LLC	0.125 OR GREATER	1552/830
WV-061-002350-020	Myrtle Miller And Lyle Miller	Northeast Natural Energy LLC	0.125 OR GREATER	1564/264
WV-061-002350-021	Delilah M Sine	Northeast Natural Energy LLC	0.125 OR GREATER	1557/427
WV-061-002350-022	Steven Varner Sr And Tina Varner	Northeast Natural Energy LLC	0.125 OR GREATER	1557/425
WV-061-002350-023	Lois R Robertson And Kenneth	Northeast Natural Energy LLC	0.125 OR GREATER	1557/433
WV-061-002350-024	Paul Varner	Northeast Natural Energy LLC	0.125 OR GREATER	1552/434
WV-061-002350-025	Louise Varner	Northeast Natural Energy LLC	0.125 OR GREATER	1567/831
WV-061-002350-026	Rebecca Bailey	Northeast Natural Energy LLC	0.125 OR GREATER	1557/429
WV-061-002350-027	James Varner	Northeast Natural Energy LLC	0.125 OR GREATER	1557/431
WV-061-002350-028	Connie Varner	Northeast Natural Energy LLC	0.125 OR GREATER	1562/377
WV-061-002350-029	Gary Varner	Northeast Natural Energy LLC	0.125 OR GREATER	1560/94
WV-061-002350-030	Sarah Varner	Northeast Natural Energy LLC	0.125 OR GREATER	1560/308
WV-061-002350-031	Robert Varner	Northeast Natural Energy LLC	0.125 OR GREATER	1560/300
WV-061-002350-032	Peggy A Morris And Raymond G	Northeast Natural Energy LLC	0.125 OR GREATER	1566/98
WV-061-002350-033	Tamela Varner	Northeast Natural Energy LLC	0.125 OR GREATER	1565/622
WV-061-002350-034	Sharon G Earl And Micheal Earl	Northeast Natural Energy LLC	0.125 OR GREATER	1565/608
WV-061-002350-035	Sue Ann Strickland	Northeast Natural Energy LLC	0.125 OR GREATER	1563/98
WV-061-002350-036	Karen Cain And Richard L Cain	Northeast Natural Energy LLC	0.125 OR GREATER	1564/258
WV-061-002350-037	Janet M Tennant	Northeast Natural Energy LLC	0.125 OR GREATER	1564/639
WV-061-002350-038	Richard Tennant And Oneida P	Northeast Natural Energy LLC	0.125 OR GREATER	1564/651
WV-061-002350-039	Loretta Fluharty	Northeast Natural Energy LLC	0.125 OR GREATER	1564/653
WV-061-002350-040	Ellen J Woodruff	Northeast Natural Energy LLC	0.125 OR GREATER	1559/466
WV-061-002350-041	Larry K Sine And Colleen Sine	Northeast Natural Energy LLC	0.125 OR GREATER	1563/440
WV-061-002350-042	Joyce Ann Berga And Ronald Berga	Northeast Natural Energy LLC	0.125 OR GREATER	1564/210
WV-061-002350-043	Denzil Eugene Bell And Alberta Diane	Northeast Natural Energy LLC	DEED	1561/176
WV-061-002350-044	Orville William Bell Sr And Josephine	Northeast Natural Energy LLC	DEED	1561/377
WV-061-002350-045	Almeada Ruth Cospser	Northeast Natural Energy LLC	DEED	1561/382
WV-061-002350-046	Carolyn Sue Greinert And Ralph	Northeast Natural Energy LLC	DEED	1561/239
WV-061-002350-047	Emily Alice Foley	Northeast Natural Energy LLC	DEED	1561/392
WV-061-002350-048	Charles Frederick Bell	Northeast Natural Energy LLC	DEED	561/425
WV-061-002350-049	Sharon Lemley And Terry R Lemeley	Northeast Natural Energy LLC	DEED	1561/442
WV-061-002350-050	Jackie Wilson And Peggy Sue Wilson	Northeast Natural Energy LLC	DEED	1560/374
WV-061-002350-051	Larry Wilson	Northeast Natural Energy LLC	DEED	1560/371

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WV-061-002350-052	Rebecca Gail Foley	Northeast Natural Energy LLC	DEED	1564/695
WV-061-002350-053	Donald Dean Wheeler Jr And Kathy	Northeast Natural Energy LLC	DEED	1562/168
WV-061-002350-054	Jimmy Randall Tennant	Northeast Natural Energy LLC	0.125 OR GREATER	1573/42
WV-061-002350-055	Billy Ray Tennant And Brenda K	Northeast Natural Energy LLC	0.125 OR GREATER	1573/44
WV-061-002350-056	Rodney Wayne Tennant And Pamela	Northeast Natural Energy LLC	0.125 OR GREATER	1573/46
WV-061-002350-057	Roxana Cahill And Michael Cahill	Northeast Natural Energy LLC	0.125 OR GREATER	1575/540
WV-061-002350-058	Richard K Steele	*XTO Energy Inc.	0.125 OR GREATER	1448/248
WV-061-002350-059	Donna R Raber	*XTO Energy Inc.	0.125 OR GREATER	1448/251
WV-061-002350-060	Dolores Michael	*XTO Energy Inc.	0.125 OR GREATER	1445/275
WV-061-002350-061	Walden J Cook Jr And Yvonne L Cook	*XTO Energy Inc.	0.125 OR GREATER	1586/454
WV-061-002350-062	Stone Hill Minerals Holdings Llc	Northeast Natural Energy LLC	0.125 OR GREATER	1587/197
WV-061-003149-001	Lyall A Sine	*Chesapeake Appalachia LLC	0.125 OR GREATER	1440/630
WV-061-003149-002	Pamela Rena Hall	*Chesapeake Appalachia LLC	0.125 OR GREATER	1441/825
WV-061-003149-003	Rhonda L Moore	*Chesapeake Appalachia LLC	0.125 OR GREATER	1441/837
WV-061-003149-004	Donald R Sine And Irma Sine	*Chesapeake Appalachia LLC	0.125 OR GREATER	1441/829
WV-061-003149-005	Neal L Sine And Brenda Louise Sine	*Chesapeake Appalachia LLC	0.125 OR GREATER	1442/172
WV-061-003149-006	Sandra Faye Wilson And Wayne L	*Chesapeake Appalachia LLC	0.125 OR GREATER	1442/549
WV-061-003149-007	Patricia Ann Hostutler	*Chesapeake Appalachia LLC	0.125 OR GREATER	1442/553
WV-061-003149-008	Mary E Liming	*Chesapeake Appalachia LLC	0.125 OR GREATER	1442/557
WV-061-003149-009	Rickey Jane Buchanan And James A	*Chesapeake Appalachia LLC	0.125 OR GREATER	1444/300
WV-061-003149-010	Mary R Mccullough	*Chesapeake Appalachia LLC	0.125 OR GREATER	1445/163
WV-061-003149-011	Leonard L Tennant And Susan P	*Chesapeake Appalachia LLC	0.125 OR GREATER	1445/468
WV-061-003149-012	Roger L Sine And Jane A Sine	*Chesapeake Appalachia LLC	0.125 OR GREATER	1445/450
WV-061-003149-013	Mabel L McAfee	*Chesapeake Appalachia LLC	0.125 OR GREATER	1445/446
WV-061-003149-014	Noia M Williams	*Chesapeake Appalachia LLC	0.125 OR GREATER	1446/642
WV-061-003149-015	Michelle Dawn Johnson And Eric B	*Chesapeake Appalachia LLC	0.125 OR GREATER	1446/617
WV-061-003149-016	Jarrod Williams	*Chesapeake Appalachia LLC	0.125 OR GREATER	1447/405
WV-061-003149-017	Diana Beth Thomas And Curtis L	*Chesapeake Appalachia LLC	0.125 OR GREATER	1447/409
WV-061-003149-018	Freddy W Williams And Norma J	*Chesapeake Appalachia LLC	0.125 OR GREATER	1447/413
WV-061-003149-019	Varner L Moore And Mary E Moore	*Chesapeake Appalachia LLC	0.125 OR GREATER	1447/417
WV-061-003149-020	Leonard D Moore And Velda Moore	*Chesapeake Appalachia LLC	0.125 OR GREATER	1447/421
WV-061-003149-021	Gail Church And Victor R Church	*Chesapeake Appalachia LLC	0.125 OR GREATER	1447/425
WV-061-003149-022	Carol I Wise And Victor E Wise	*Chesapeake Appalachia LLC	0.125 OR GREATER	1447/429
WV-061-003149-026	William R Williams And Peggy	*Chesapeake Appalachia LLC	0.125 OR GREATER	1451/454
WV-061-003149-028	Susan Lynette Michael And Chester L	*Chesapeake Appalachia LLC	0.125 OR GREATER	1454/435
WV-061-003149-029	Cheryl Lisabeth Gallagher And	*Chesapeake Appalachia LLC	0.125 OR GREATER	1454/427
WV-061-003149-031	Dennis Keith Williams And Sheryl	*Chesapeake Appalachia LLC	0.125 OR GREATER	1454/410
WV-061-003149-032	Everett A Sine Jr And Betty L Sine	*Chesapeake Appalachia LLC	0.125 OR GREATER	1454/379
WV-061-003149-033	Raymer Tennant	*Chesapeake Appalachia LLC	0.125 OR GREATER	1454/682
WV-061-003149-034	Celeste M Frickleton	*Chesapeake Appalachia LLC	0.125 OR GREATER	1454/666
WV-061-003149-035	James Everett Williams Ii And Lisa W	*Chesapeake Appalachia LLC	0.125 OR GREATER	1454/873
WV-061-003149-036	Karen J Taylor And Kenneth Taylor	*Chesapeake Appalachia LLC	0.125 OR GREATER	1454/869
WV-061-003149-037	Rebecca Lynne Strahler And Rodney	*Chesapeake Appalachia LLC	0.125 OR GREATER	1456/756
WV-061-003149-038	Alice Wise	*Chesapeake Appalachia LLC	0.125 OR GREATER	1462/537
WV-061-003149-039	Betty C Lyons	*Chesapeake Appalachia LLC	0.125 OR GREATER	1463/569
WV-061-003149-040	Pamela J Yurisko	Northeast Natural Energy LLC	0.125 OR GREATER	1521/594
WV-061-003149-041	Mary Jane Pemberton	Northeast Natural Energy LLC	0.125 OR GREATER	1553/200
WV-061-003149-042	Robert Ora Wheeler And Paula K	Northeast Natural Energy LLC	0.125 OR GREATER	1553/282
WV-061-003149-043	Donna Lynn Chase And Brian D Chase	Northeast Natural Energy LLC	0.125 OR GREATER	1554/424
WV-061-003149-045	Twyla R Snopps And Kenneth E	Northeast Natural Energy LLC	0.125 OR GREATER	1559/178
WV-061-003149-046	Linda M Satterfield And Jon J	Northeast Natural Energy LLC	0.125 OR GREATER	1560/106
WV-061-003149-047	Jody L Varner	Northeast Natural Energy LLC	0.125 OR GREATER	1557/411
WV-061-003149-048	Lisa Mccammon And William	Northeast Natural Energy LLC	0.125 OR GREATER	1568/315
WV-061-003149-049	Emza Parsons	Northeast Natural Energy LLC	0.125 OR GREATER	1568/315

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WV-061-003149-050	Ruby E Vanfossin	Northeast Natural Energy LLC	0.125 OR GREATER	1562/345
WV-061-003149-051	Deborah Sudduth And Samual	Northeast Natural Energy LLC	0.125 OR GREATER	1559/458
WV-061-003149-052	Clarence W Sine	Northeast Natural Energy LLC	0.125 OR GREATER	1559/460
WV-061-003149-053	Almeada J Barber	Northeast Natural Energy LLC	0.125 OR GREATER	1572/661
WV-061-003853-001	Doris Jean Wilson And William	Northeast Natural Energy LLC	DEED	1550/222
WV-061-003872-001	Don R Williams And Valerie R	Northeast Natural Energy LLC	0.125 OR GREATER	1576/426
WV-061-004157-001	Haymaker Properties Lp	Northeast Natural Energy LLC	0.125 OR GREATER	1567/245
WV-061-003271-001	Chesapeake Appalachia Llc	*Chesapeake Appalachia LLC	0.125 OR GREATER	1487/244
WV-061-003271-002	Statoil Usa Onshore Properties	*Statoil USA Onshore Properties Inc	0.125 OR GREATER	1488/744
WV-061-003888-001	Delbert Mayles	Northeast Natural Energy LLC	0.125 OR GREATER	1568/311
WV-061-002101-001	Betty L Sine	*Chesapeake Appalachia LLC	0.125 OR GREATER	1399/660
WV-061-002101-002	Kimberly Sue Brummage	*Chesapeake Appalachia LLC	0.125 OR GREATER	1399/663
WV-061-002101-003	Doris L Sine	*Chesapeake Appalachia LLC	0.125 OR GREATER	1404/331
WV-061-002101-004	Mabel L McAfee	*Chesapeake Appalachia LLC	0.125 OR GREATER	1399/666
WV-061-002101-005	Patricia Van Tassell	*Chesapeake Appalachia LLC	0.125 OR GREATER	1399/669
WV-061-002101-006	Celeste M Frickleton	*Chesapeake Appalachia LLC	0.125 OR GREATER	1399/672
WV-061-002101-007	Vарner L Moore	*Chesapeake Appalachia LLC	0.125 OR GREATER	1401/105
WV-061-002101-008	Rita J Tanner	*Chesapeake Appalachia LLC	0.125 OR GREATER	1404/334
WV-061-002101-009	Gail Church	*Chesapeake Appalachia LLC	0.125 OR GREATER	1400/479
WV-061-002101-010	Delilah M Wilson	*Chesapeake Appalachia LLC	0.125 OR GREATER	1404/337
WV-061-002101-011	Sue Ann Strickland	*Chesapeake Appalachia LLC	0.125 OR GREATER	1404/340
WV-061-002101-012	Ellen J Woodruff	*Chesapeake Appalachia LLC	0.125 OR GREATER	1404/343
WV-061-002101-013	Larry K Sine	*Chesapeake Appalachia LLC	0.125 OR GREATER	1404/346
WV-061-002101-014	Donald Rex Williams	*Chesapeake Appalachia LLC	0.125 OR GREATER	1401/108
WV-061-002101-015	Carol I Wise	*Chesapeake Appalachia LLC	0.125 OR GREATER	1403/136
WV-061-002101-016	Sandra Faye Wilson And Wayne L	*Chesapeake Appalachia LLC	0.125 OR GREATER	1405/244
WV-061-002101-017	Patricia Ann Hostutler	*Chesapeake Appalachia LLC	0.125 OR GREATER	1404/349
WV-061-002101-018	Leonard L Tennant	*Chesapeake Appalachia LLC	0.125 OR GREATER	1405/247
WV-061-002101-019	Pamela Rena Hall	*Chesapeake Appalachia LLC	0.125 OR GREATER	1405/883
WV-061-002101-020	Donald R Sine	*Chesapeake Appalachia LLC	0.125 OR GREATER	1410/557
WV-061-002101-021	Peggy A Morris	*Chesapeake Appalachia LLC	0.125 OR GREATER	1410/554
WV-061-002101-023	Raymer Tennant	*Chesapeake Appalachia LLC	0.125 OR GREATER	1396/641
WV-061-002101-024	Freddy W Williams	*Chesapeake Appalachia LLC	0.125 OR GREATER	1398/294
WV-061-002101-025	Everett A Sine Jr	*Chesapeake Appalachia LLC	0.125 OR GREATER	1398/297
WV-061-002101-026	Lyall A Sine	*Chesapeake Appalachia LLC	0.125 OR GREATER	1399/651
WV-061-002101-027	Nola M Williams	*Chesapeake Appalachia LLC	0.125 OR GREATER	1399/657
WV-061-002101-028	W Richard Williams	*Chesapeake Appalachia LLC	0.125 OR GREATER	1398/528
WV-061-002101-029	And Nelson D Gallagher	*Chesapeake Appalachia LLC	0.125 OR GREATER	1398/531
WV-061-003996-001	Jacqueline Straight	Northeast Natural Energy LLC	0.125 OR GREATER	1562/27
WV-061-003996-002	Warren E Barth	Northeast Natural Energy LLC	0.125 OR GREATER	1562/154
WV-061-003996-003	Paul E. Kurtzwell	Northeast Natural Energy LLC	0.125 OR GREATER	1597/399
WV-061-003996-004	John Riggs Jr	Northeast Natural Energy LLC	0.125 OR GREATER	1564/24
WV-061-003996-005	Richard Glenn Gump	Northeast Natural Energy LLC	INACTIVE	1564/30
WV-061-003996-006	Randall Scott Albino	Northeast Natural Energy LLC	0.125 OR GREATER	1564/142
WV-061-003996-007	Regina L And Robert M Black	Northeast Natural Energy LLC	0.125 OR GREATER	1564/140
WV-061-003996-008	Lorrie E And Jeff B Smith	Northeast Natural Energy LLC	0.125 OR GREATER	1564/138
WV-061-003996-009	Lila N And Robert Lee Mercer	Northeast Natural Energy LLC	0.125 OR GREATER	1566/214
WV-061-003996-010	Sybil M Straight	Northeast Natural Energy LLC	DEED	1563/288
WV-061-003996-011	Michael Haught	Northeast Natural Energy LLC	DEED	1579/841
WV-061-003996-012	Francis And Richard A Mercer	Northeast Natural Energy LLC	INACTIVE	1579/213
WV-061-003996-013	Mary E Schipono	Northeast Natural Energy LLC	INACTIVE	1579/236
WV-061-003996-014	Ruth Ann Cutrone	Northeast Natural Energy LLC	INACTIVE	1579/215
WV-061-003996-015	Bradley Scott Hetrick	Northeast Natural Energy LLC	INACTIVE	RECEIVED
WV-061-003996-016	Deborah Dawn Davis	Northeast Natural Energy LLC	INACTIVE	Office of Oil and Gas

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WV-061-003996-017	Kathy Jean Denham	Northeast Natural Energy LLC	INACTIVE	1579/221
WV-061-003996-018	Jeffery Wayne Fetty	Northeast Natural Energy LLC	INACTIVE	1579/223
WV-061-003996-027	Praben Mark Kurtzwell	Northeast Natural Energy LLC	0.125 OR GREATER	1581/305
WV-061-003996-028	Gary D Yost	Northeast Natural Energy LLC	INACTIVE	1584/776
WV-061-003996-029	Lorri E Kuhn	Northeast Natural Energy LLC	INACTIVE	1584/778
WV-061-003996-030	Kelli D Wilson	Northeast Natural Energy LLC	INACTIVE	1584/780
WV-061-003996-031	Donald E Straight	Northeast Natural Energy LLC	0.125 OR GREATER	
WV-061-004314-001	Reed Energy Services Llc	Northeast Natural Energy LLC	DEED	1580/200
WV-061-004507-001	Richard Glenn Gump	Northeast Natural Energy LLC	DEED	1589/35
WV-061-003905-001	Dwg Oil & Gas Acquisitions Llc	Northeast Natural Energy LLC	DEED	124/34
WV-061-004458-001	Kelli D Wilson	Northeast Natural Energy LLC	0.125 OR GREATER	1585/1
WV-061-004458-002	Lorri E Kuhn	Northeast Natural Energy LLC	0.125 OR GREATER	1584/839
WV-061-004458-003	Gary D Yost	Northeast Natural Energy LLC	0.125 OR GREATER	1584/845
WV-061-004458-004	Kathy Jean Denhem	Northeast Natural Energy LLC	0.125 OR GREATER	1585/3
WV-061-004458-005	Bradley Scott Hetrick	Northeast Natural Energy LLC	0.125 OR GREATER	1585/7
WV-061-004458-006	Frank Nimrod Straight And Patsy	Northeast Natural Energy LLC	0.125 OR GREATER	1585/13
WV-061-004458-007	Jeffrey Wayne Fetty	Northeast Natural Energy LLC	0.125 OR GREATER	1585/17
WV-061-004458-008	Mary E Schipono	Northeast Natural Energy LLC	0.125 OR GREATER	1584/837
WV-061-004458-009	Deborah Dawn Davis	Northeast Natural Energy LLC	0.125 OR GREATER	1584/841
WV-061-004458-010	Richard A Mercer And Francis Mercer	Northeast Natural Energy LLC	0.125 OR GREATER	1584/843
WV-061-004458-011	Ruth Ann Cutrone	Northeast Natural Energy LLC	0.125 OR GREATER	1584/847
WV-061-004458-012	Jacqueline Straight	Northeast Natural Energy LLC	0.125 OR GREATER	1584/829
WV-061-004458-013	Robert L Mercer And Lila N Mercer	Northeast Natural Energy LLC	0.125 OR GREATER	1589/184
WV-061-004458-014	David B Tennant And David Blair	Northeast Natural Energy LLC	DEED	1590/280
WV-061-004458-015	Clifton E Tennant Sr	Northeast Natural Energy LLC	DEED	1590/404
WV-061-004458-016	Patricia A Whitehead	Northeast Natural Energy LLC	DEED	1590/283
WV-061-004458-017	Wilma G Williams	Northeast Natural Energy LLC	DEED	1590/286
WV-061-004458-018	Randall Scott Albino	Northeast Natural Energy LLC	0.125 OR GREATER	1590/304
WV-061-004458-019	Gregory L Tennant	Northeast Natural Energy LLC	DEED	1591/261
WV-061-004458-020	Kathy Brown	Northeast Natural Energy LLC	DEED	1591/264
WV-061-004458-021	Monica Miller	Northeast Natural Energy LLC	DEED	1591/267
WV-061-004458-022	Deborah L Hill	Northeast Natural Energy LLC	DEED	1591/298
WV-061-004458-023	Judith Williams	Northeast Natural Energy LLC	DEED	1591/301
WV-061-004458-024	William Raymond Swick Jr	Northeast Natural Energy LLC	DEED	1591/343
WV-061-004458-025	Sybil M Straight	Northeast Natural Energy LLC	DEED	1591/346
WV-061-004458-026	John Vernon Williams	Northeast Natural Energy LLC	DEED	1591/349
WV-061-004458-027	Denzil C Wilson	Northeast Natural Energy LLC	DEED	1591/358
WV-061-004458-028	Sara Beth Hensley	Northeast Natural Energy LLC	DEED	1591/361
WV-061-004458-029	Krishnan R Lannen	Northeast Natural Energy LLC	DEED	1591/364
WV-061-004458-030	Donna Luketic	Northeast Natural Energy LLC	DEED	1591/367
WV-061-004458-031	Betty Lea Vandetta	Northeast Natural Energy LLC	0.125 OR GREATER	1591/272
WV-061-004458-032	Connie Sue Wolfe	Northeast Natural Energy LLC	0.125 OR GREATER	1591/274
WV-061-004458-033	Ronald Walls	Northeast Natural Energy LLC	0.125 OR GREATER	1591/276
WV-061-004458-034	Lorrie E Smith And Jeff B Smith	Northeast Natural Energy LLC	0.125 OR GREATER	1591/278
WV-061-004458-035	Mary Fluharty	Northeast Natural Energy LLC	DEED	1591/844
WV-061-004458-036	Gary W Tennant	Northeast Natural Energy LLC	DEED	1592/1
WV-061-004458-037	Douglas W Tennant	Northeast Natural Energy LLC	DEED	1592/8
WV-061-004458-038	Richard Joseph Wilson	Northeast Natural Energy LLC	DEED	1593/792
WV-061-004458-039	James Earl Cooper	Northeast Natural Energy LLC	DEED	1593/799
WV-061-004458-040	Helen Kay Stone	Northeast Natural Energy LLC	DEED	1593/826
WV-061-004458-041	Johnny Eugene Williams	Northeast Natural Energy LLC	DEED	1593/833
WV-061-004458-042	Barbara Ann Bonnell	Northeast Natural Energy LLC	0.125 OR GREATER	1593/693
WV-061-004458-043	Sarah Kathy Riggi And Michael Riggi	Northeast Natural Energy LLC	0.125 OR GREATER	1593/696
WV-061-004458-044	John A Swiger And Julie Swiger	Northeast Natural Energy LLC	0.125 OR GREATER	1593/697

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WV-061-004458-045	Gary S Williams	Northeast Natural Energy LLC	0.125 OR GREATER	1593/699
WV-061-004458-046	Martha Ellen Peters	Northeast Natural Energy LLC	DEED	1594/756
WV-061-004458-047	Terri Ann Marratta	Northeast Natural Energy LLC	DEED	1594/759
WV-061-004458-048	Joyce E Walls	Northeast Natural Energy LLC	DEED	1594/762
WV-061-004458-049	Linda Lou Barker	Northeast Natural Energy LLC	DEED	1595/40
WV-061-004458-050	Susan Renee Edwards	Northeast Natural Energy LLC	DEED	1595/43
WV-061-004458-051	Betty Lou Morris	Northeast Natural Energy LLC	DEED	1595/834
WV-061-004458-052	Robert Wayne Eddy	Northeast Natural Energy LLC	DEED	1595/840
WV-061-004458-053	Mary Josephine Bryant	Northeast Natural Energy LLC	DEED	1595/46
WV-061-004458-054	Melvin Williams	Northeast Natural Energy LLC	DEED	1595/49
WV-061-004458-055	Timothy Alan Walls And Jennifer K	Northeast Natural Energy LLC	DEED	1595/113
WV-061-004458-056	David Colwell Gallatin	Northeast Natural Energy LLC	DEED	1595/843
WV-061-004458-057	Jane Ann Jones	Northeast Natural Energy LLC	DEED	1595/807
WV-061-004458-058	Linda M Tennant	Northeast Natural Energy LLC	DEED	1595/816
WV-061-004458-059	Alice M Milliron	Northeast Natural Energy LLC	0.125 OR GREATER	1595/269
WV-061-004458-060	Robin Trotto	Northeast Natural Energy LLC	0.125 OR GREATER	1595/456
WV-061-004458-061	Shirley Mohamed	Northeast Natural Energy LLC	0.125 OR GREATER	1595/458
WV-061-004458-062	John Douglas Trotto	Northeast Natural Energy LLC	0.125 OR GREATER	1595/460
WV-061-004458-063	Michael Angelo Trotto	Northeast Natural Energy LLC	0.125 OR GREATER	1595/462
WV-061-004458-064	Daryl Glenn Gallatin And Kristine M	Northeast Natural Energy LLC	DEED	1597/274
WV-061-004458-065	Heather M Lannen	Northeast Natural Energy LLC	DEED	1597/277
WV-061-004458-066	Sandra Jo And Edwin L Merrifield	Northeast Natural Energy LLC	0.125 OR GREATER	1597/209
WV-061-004458-067	Clarence W Moore II And Delores J	Northeast Natural Energy LLC	0.125 OR GREATER	1597/211
WV-061-004458-068	Gregg Stephen Moore And Barbara	Northeast Natural Energy LLC	0.125 OR GREATER	1597/555
WV-061-004458-069	William Elsworth Swiger Jr	Northeast Natural Energy LLC	DEED	1600/353
WV-061-004458-070	Regina L Black And Robert M Black	Northeast Natural Energy LLC	0.125 OR GREATER	1598/405
WV-061-004458-071	Darrell Conaway And Alice M	Northeast Natural Energy LLC	0.125 OR GREATER	1598/407
WV-061-004458-072	Francis Dwight Conaway And Cheryl	Northeast Natural Energy LLC	0.125 OR GREATER	1598/409
WV-061-004458-073	John G Conaway And Patricia D	Northeast Natural Energy LLC	0.125 OR GREATER	1598/411
WV-061-004458-074	Suzan Hood	Northeast Natural Energy LLC	0.125 OR GREATER	
WV-061-004458-075	Charles Nathan Tennant	Northeast Natural Energy LLC	0.125 OR GREATER	1598/761
WV-061-004458-076	Susan Lynn Sandor	Northeast Natural Energy LLC	0.125 OR GREATER	1598/759
WV-061-004458-077	Robert Dwaine Gump Jr	Northeast Natural Energy LLC	DEED	1600/550
WV-061-004458-078	Donald L Hawkins And Bonnie K	Northeast Natural Energy LLC	DEED	1600/585
WV-061-004458-079	Robert Jennings Michael	Northeast Natural Energy LLC	DEED	1600/559
WV-061-004458-080	Elaine S Chandler	Northeast Natural Energy LLC	DEED	1600/608
WV-061-004458-081	Chantal Key Freeland	Northeast Natural Energy LLC	DEED	1600/659
WV-061-004458-082	Merle Lee Hawkins	Northeast Natural Energy LLC	0.125 OR GREATER	1598/763
WV-061-004458-083	Cynthia Sue Phillips And Gregory W	Northeast Natural Energy LLC	0.125 OR GREATER	1598/765
WV-061-004458-084	Martha Habig	Northeast Natural Energy LLC	DEED	1600/547
WV-061-004458-085	Warren E Barth	Northeast Natural Energy LLC	0.125 OR GREATER	1598/716
WV-061-004458-13	Lila N And Robert Lee Mercer	Northeast Natural Energy LLC	0.125 OR GREATER	1589/184
WV-061-003996-019	Richard Allen Mercer	*XTO Energy Inc.	0.125 OR GREATER	1574/813
WV-061-003996-020	Ruth Ann Cutrone	*XTO Energy Inc.	0.125 OR GREATER	1574/814
WV-061-003996-021	Nancy C Yost	*XTO Energy Inc.	0.125 OR GREATER	1574/815
WV-061-003996-022	Mary Ellen Schipono	*XTO Energy Inc.	0.125 OR GREATER	1574/819
WV-061-003996-023	Ellen Ruth Yost	*XTO Energy Inc.	0.125 OR GREATER	1574/820
WV-061-003996-024	Willa Jean Hetrick	*XTO Energy Inc.	0.125 OR GREATER	1574/817
WV-061-003996-025	Jennie L Allen	*XTO Energy Inc.	0.125 OR GREATER	1574/818
WV-061-003996-026	Frank N Straight	*XTO Energy Inc.	0.125 OR GREATER	1574/816
WV-061-003998-001	Brian L Sine	Northeast Natural Energy LLC	INACTIVE	1562/162
WV-061-003998-002	Lyall J Sine	Northeast Natural Energy LLC	INACTIVE	1564/200
WV-061-003998-003	Aleta J Tenney	Northeast Natural Energy LLC	INACTIVE	RECEIVED
WV-061-003998-004	Wyatt A Sine	Northeast Natural Energy LLC	INACTIVE	Office of Oil and Gas

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WV-061-003998-005	Bruce E Sine	Northeast Natural Energy LLC	INACTIVE	1564/42
WV-061-004280-001	Joy Smith	Northeast Natural Energy LLC	0.125 OR GREATER	1572/34
WV-061-004249-001	Shuman Inc	Northeast Natural Energy LLC	0.125 OR GREATER	1568/775
WV-061-004260-001	Heritage Resources - Marcellus	Northeast Natural Energy LLC	0.125 OR GREATER	1570/835
WV-061-004248-001	Piney Holdings Inc	Northeast Natural Energy LLC	0.125 OR GREATER	1568/777
WV-061-004007-000	Nimrod A. Tennant And Margaret J.	Dewitt, Ira	0.125 OR GREATER	26/359
WV-061-004150-001	Shuman Inc	Northeast Natural Energy LLC	0.125 OR GREATER	1567/678
WV-061-004556-001	Katherin L. Valls	Northeast Natural Energy LLC	0.125 OR GREATER	1591/738
WV-061-004556-002	Douglas Elliot Smith	Northeast Natural Energy LLC	0.125 OR GREATER	1591/740
WV-061-004556-003	Joy Smith	Northeast Natural Energy LLC	0.125 OR GREATER	1592/597
WV-061-004556-004	Deborah S. Couper	Northeast Natural Energy LLC	0.125 OR GREATER	1592/599
WV-061-004626-001	Douglas Elliot Smith	Northeast Natural Energy LLC	0.125 OR GREATER	1596/588
WV-061-004626-002	Deborah S. Couper	Northeast Natural Energy LLC	0.125 OR GREATER	1596/590
WV-061-004626-003	Katharine L. Valls, a/k/a Katharine	Northeast Natural Energy LLC	0.125 OR GREATER	1600/689
WV-061-003721-001	Mary D. Fluharty And Roger Fluharty	Northeast Natural Energy LLC	DEED	1561/563
WV-061-003721-002	Eugene Armstrong	Northeast Natural Energy LLC	DEED	1557/170
WV-061-003721-003	Judith Williams	Northeast Natural Energy LLC	DEED	1559/795
WV-061-003721-004	Monica Miller	Northeast Natural Energy LLC	DEED	1560/579
WV-061-003721-005	David B. Tennant And Patricia J.	Northeast Natural Energy LLC	DEED	1560/384
WV-061-003721-006	Clifton E. Tennant And Loretta	Northeast Natural Energy LLC	DEED	1560/392
WV-061-003721-007	Olan W. Tennant	Northeast Natural Energy LLC	DEED	1560/392
WV-061-003721-008	Wilma G. Williams	Northeast Natural Energy LLC	DEED	1560/388
WV-061-003721-009	Denzil C. Wilson	Northeast Natural Energy LLC	DEED	1560/380
WV-061-003721-010	Martha Peters	Northeast Natural Energy LLC	DEED	1560/337
WV-061-003721-011	Kathy Brown	Northeast Natural Energy LLC	DEED	1561/559
WV-061-003721-012	Sara Beth Hensley And Ronald H	Northeast Natural Energy LLC	DEED	1561/555
WV-061-003721-013	Betty L. Vandetta	Northeast Natural Energy LLC	DEED	1557/247
WV-061-003721-014	Connie S. Wolfe	Northeast Natural Energy LLC	DEED	1557/243
WV-061-003721-015	Ronald D. Walls And Sue Walls	Northeast Natural Energy LLC	DEED	1557/239
WV-061-003721-016	Joyce E. Walls	Northeast Natural Energy LLC	DEED	1560/784
WV-061-003721-017	Melvin Carl Williams And Jean A.	Northeast Natural Energy LLC	DEED	1559/439
WV-061-003721-018	Terri Ann Marratta	Northeast Natural Energy LLC	DEED	1561/323
WV-061-003721-019	Virginia Ellen Stiles	Northeast Natural Energy LLC	DEED	1561/209
WV-061-003721-020	Dortohy Jean Johns	Northeast Natural Energy LLC	DEED	1570/119
WV-061-003721-021	Mary Margaret Headlee	Northeast Natural Energy LLC	DEED	1570/119
WV-061-003721-022	David S. Bracken And Jane A. Bracken	Northeast Natural Energy LLC	DEED	1570/119
WV-061-003721-023	Linda M. Tennant	Northeast Natural Energy LLC	DEED	1570/119
WV-061-003721-024	Timothy Alan Walls And Jennifer	Northeast Natural Energy LLC	DEED	1570/119
WV-061-003721-025	Johnny Eugene Williams	Northeast Natural Energy LLC	DEED	1570/119
WV-061-003721-026	John Vernon Williams And Catha	Northeast Natural Energy LLC	DEED	1570/119
WV-061-003721-027	William Raymond Swick, Jr.	Northeast Natural Energy LLC	DEED	1570/119
WV-061-003721-028	Krishnan R. Lannen	Northeast Natural Energy LLC	DEED	1570/119
WV-061-003721-030	Jane Ann Jones	Northeast Natural Energy LLC	DEED	1578/132
WV-061-003721-031	Heather M. Lannen	Northeast Natural Energy LLC	DEED	1596/445
WV-061-003721-032	David Colwell Gallatin	Northeast Natural Energy LLC	DEED	1570/119
WV-061-003721-033	Patricia A. Whitehead	Northeast Natural Energy LLC	DEED	1570/119
WV-061-003721-034	Gary W. Tennant	Northeast Natural Energy LLC	DEED	1570/119
WV-061-003721-035	Douglas W. Tennant And Barbara	Northeast Natural Energy LLC	DEED	1570/119
WV-061-003721-036	Deborah L. Hill	Northeast Natural Energy LLC	DEED	1570/119
WV-061-003721-037	Gregory L. Tennant	Northeast Natural Energy LLC	DEED	1570/119
WV-061-003721-038	Barbara A. Bonnell, Aka Barbara A.	Northeast Natural Energy LLC	DEED	1570/119
WV-061-003721-040	Susan R. Edwards And David	Northeast Natural Energy LLC	DEED	1570/119
WV-061-003721-041	Linda L. Barker And William H. Baker	Northeast Natural Energy LLC	DEED	1570/119
WV-061-003721-042	Steven Richard Freeland And	Northeast Natural Energy LLC	DEED	1578/132

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WV-061-003721-043	Daryl Glenn Gallatin And Kristine M.	Northeast Natural Energy LLC	DEED	1570/119
WV-061-003721-044	James Earl Cooper	Northeast Natural Energy LLC	DEED	1570/119
WV-061-003721-045	Robert D. Gump, Jr. And Kelly S.	Northeast Natural Energy LLC	DEED	1570/119
WV-061-003721-046	Chantal Kay Freeland	Northeast Natural Energy LLC	DEED	1570/119
WV-061-003721-047	David R. Tennant, Jr.	Northeast Natural Energy LLC	DEED	1570/119
WV-061-003721-048	Sybil Larita Tennant	Northeast Natural Energy LLC	DEED	1570/119
WV-061-003721-049	Shelia Anderson-Freeland	Northeast Natural Energy LLC	DEED	1578/132
WV-061-003721-050	Donna Luketic And Donald Luketic	Northeast Natural Energy LLC	DEED	1569/567
WV-061-003721-052	Richard Joseph Wilson	Northeast Natural Energy LLC	DEED	1570/119
WV-061-003721-053	Carol M. Standifrod And Grant W.	Northeast Natural Energy LLC	DEED	1577/12
WV-061-003721-054	Thomas A. Morris	Northeast Natural Energy LLC	0.125 OR GREATER	1595/763
WV-061-003721-029	Mary Catherine Walls	Northeast Natural Energy LLC	0.125 OR GREATER	1563/753

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Chesapeake Appalachia, LLC.



Northeast Natural Energy
Assignment
BK 120/769

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Chesapeake Appalachia, LLC.
And
Statoil USA Onshore Properties Inc.

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Northeast Natural Energy
Assignment
BK 120/769

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XTO Energy Inc.

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Northeast Natural Energy
Assignment
BK 132/311

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James S. Walker & Nancy Walker

Ira De Witt
Lease
DR 26/273
Ira De Witt, et al

Thomas M. Jackson, et al
Deed
DR 27/485
Ira De Witt

William S. Stevenson
Assignment
DR 28/522
Ira De Witt

South Penn Oil Company
Assignment
DR 29/53
Thomas M. Jackson, et al

South Penn Oil Company
Assignment
DR 31/79
Ira D. De Witt

Lucy D. De Witt
Last Will and Testament
WR 12/252
Lucy Smith De Witt

North Central Trust Company, et al
Last Will and Testatment
WR 12/186
North Central Trust Company, et al

Frances De Witt Marshall, et al
Assignment
DR 162/192
Frances De Witt Marshall, et al

South Penn Oil Company
Deed and Assignment
DR 265/145
South Penn Oil Company

South Penn Natural Gas Company
Agreement
DR 304/457
South Penn Natural Gas Company

South Penn Oil Company
Assignment
DR 580/311
South Penn Oil Company

Pennzoil United, Inc.
Assignment
DR 672/665
Pennzoil United, Inc.

Pennzoil Company
Name Change
Per Sec. of State Website 7/31/1963
Pennzoil Company

Pennzoil Products Company
Assignment
AR 23/280
Pennzoil Products Company

Eddy Brothers
Assignment
AR 34/563
Eddy Brothers

Northeast Natural Energy LLC
Assignment
AR 123/363

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03/06/2018
WV Department of Environmental Protection



4706101797

November 15, 2017

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

RE: Kassay 6H and 10H

Dear Permit Reviewer:

Please be advised that Northeast Natural Energy LLC has the right to drill, extract and produce the minerals beneath the roads identified as Country Road (State Route 25/3) and Dee Hollow Road (State Route 919) on the enclosed survey plat.

Sincerely,

A handwritten signature in blue ink that reads 'Jeannie Morgan Johnson'.

Jeannie Morgan Johnson, CPL
Vice President – Land Operations

Enclosure

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

03/30/2018

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

Date of Notice Certification: 11/20/2017

API No. 47-
Operator's Well No. Kassay 10H
Well Pad Name: Kassay

Notice has been given:

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

State: <u>West Virginia</u>	UTM NAD 83 Easting: <u>569115.0</u>
County: <u>Monongalia</u>	Northing: <u>4390178.8</u>
District: <u>Clay</u>	Public Road Access: <u>County Route 25/3 (Yank Hollow Road)</u>
Quadrangle: <u>Blacksville</u>	Generally used farm name: <u>Kassay</u>
Watershed: <u>Dunkard Creek</u>	

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

<p>Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:</p> <p>*PLEASE CHECK ALL THAT APPLY</p> <p><input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or</p> <p style="padding-left: 100px;"><input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)</p> <p><input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION</p> <p><input checked="" type="checkbox"/> 5. PUBLIC NOTICE</p> <p><input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION</p>	<p align="center">OOG OFFICE USE ONLY</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input checked="" type="checkbox"/> RECEIVED</p> <p><input checked="" type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input checked="" type="checkbox"/> RECEIVED</p> <p><input checked="" type="checkbox"/> RECEIVED</p> <p><input checked="" type="checkbox"/> RECEIVED</p>
--	---

Required Attachments:

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

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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:	<u>Northeast Natural Energy LLC</u>	Address:	<u>707 Virginia Street East, Suite 1200</u>
By:	<u>Hollie M. Medley</u>		<u>Charleston, WV 25301</u>
Its:	<u>Regulatory Manager</u>	Facsimile:	<u>304-241-5972</u>
Telephone:	<u>304-212-0422</u>	Email:	<u>hmedley@nne-llc.com</u>



Hollie M Medley
 Subscribed and sworn before me this 21 day of November, 2017.
Christopher Patterson Notary Public
 My Commission Expires June 18, 2018

Oil and Gas Privacy Notice

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

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WW-6A
(9-13)

API NO. 47- _____ - _____
OPERATOR WELL NO. Kassay 10H
Well Pad Name: Kassay

**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: 11/9/2017 **Date Permit Application Filed:** 11/20/2017

Notice of:

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

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

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

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

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

SURFACE OWNER(s)

Name: See Attachment
Address: _____

Name: _____
Address: _____

SURFACE OWNER(s) (Road and/or Other Disturbance)

Name: See Attachment
Address: _____

Name: _____
Address: _____

SURFACE OWNER(s) (Impoundments or Pits)

Name: _____
Address: _____

COAL OWNER OR LESSEE

Name: See Attachment
Address: _____

COAL OPERATOR

Name: _____
Address: _____

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)

Name: See Attachment
Address: _____

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: _____
Address: _____

*Please attach additional forms if necessary

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Notice is hereby given:

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

This Notice Shall Include:

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

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

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

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

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

Well Location Restrictions

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

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

Water Well Testing:

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

Water Testing Laboratories:

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

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

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

Written Comment:

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

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

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

Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

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

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

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WW-6A
(8-13)

4706101797
API NO: 47-
OPERATOR WELL NO. Kassay 10H
Well Pad Name: Kassay

Notice is hereby given by:

Well Operator: Northeast Natural Energy LLC
Telephone: 304-212-0422
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 depprivacyofficer@wv.gov.

Halle M Medley



Subscribed and sworn before me this 21 day of November, 2017.

Christopher Patterson Notary Public

My Commission Expires June 18, 2018

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Surface Owner(s):

Precision Oil and Gas, Inc.
P.O. Box 884
Bridgeport, WV 26330

Patty Kassay
1991 Daybrook Road
Fairview, WV 26570

Mr. Samuel W. and Stacy L. Matteo,
C/o Ileen Morton Matteo (life estate)
404 Country Road
Fairview, WV 26570

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

Patty Kassay
1991 Daybrook Road
Fairview, WV 26570

Mr. Samuel W. and Stacy L. Matteo
C/o Ileen Morton Matteo (life estate)
404 Country Road
Fairview, WV 26570

Coal Owner or Lessee:

CONSOL Mining Company LLC
Attn: Analyst
CNX Center
1000 Consol Energy Drive
Canonsburg, PA 15317-6506

Murray American Energy
46226 National Road
St. Clairsville, OH 43950

4706101797

Kassay 10H

Surface Owner of Water Well and/or Water Purveyor:

Patty Kassay
1991 Daybrook Road
Fairview, WV 26570

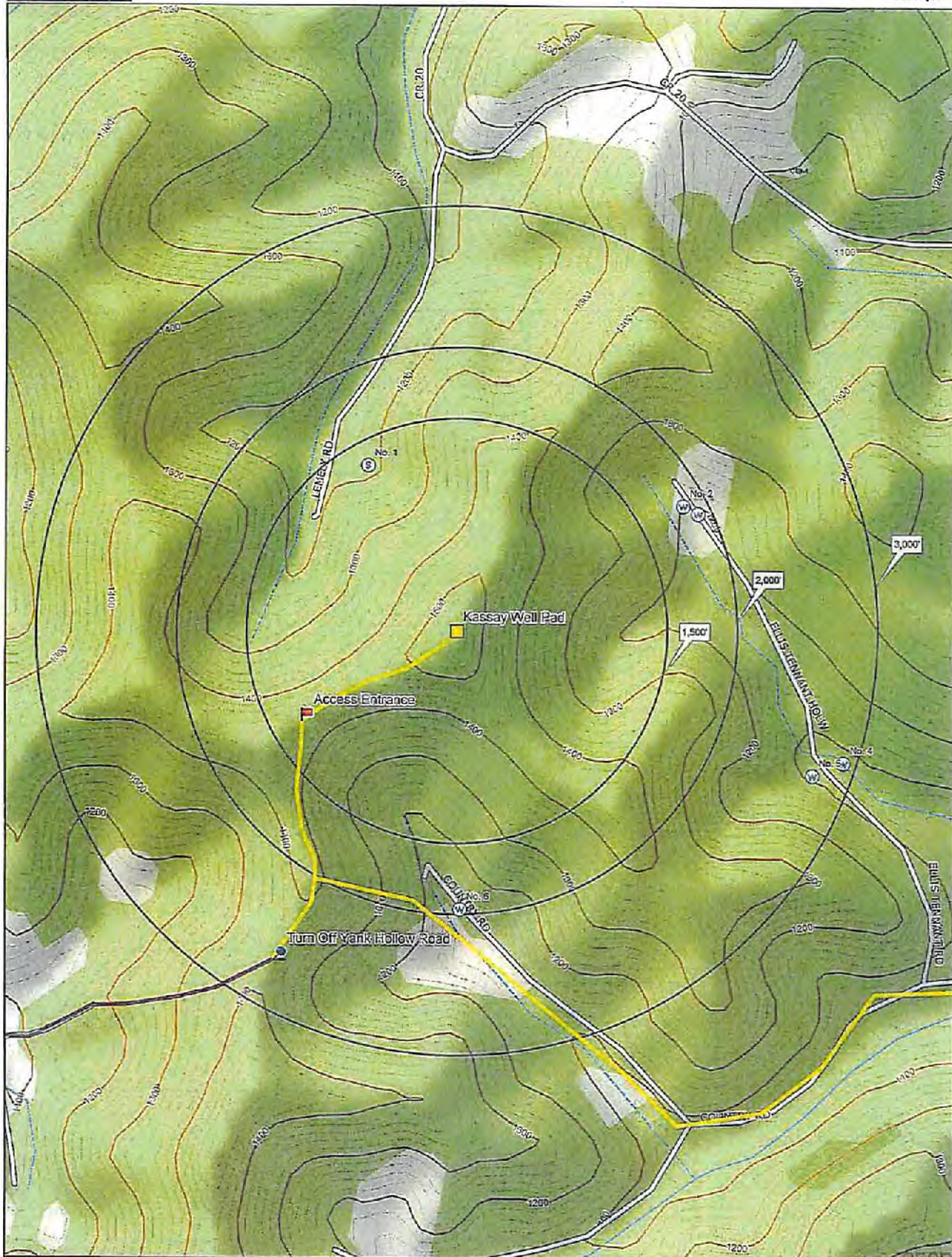
Bernice Tennant
299 Ellis Tennant Hollow
Fairview, WV 26570

Nancy Carpenter, et al
1343 Bunner Ridge Road
Fairmont, WV 26554

Angela Martin Mayle
477 Country Road
Fairview, WV 26570

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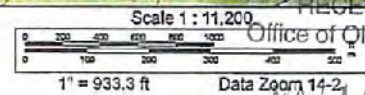
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MAK 16 2018
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Kassay Water Well Location

	Surface Owner/Water Purveyor	Supply Type	Tax Map and Parcel	Latitude/Longitude
1	Patty Kassay	Spring Fed Pond	Tax Map 17, Parcel 48	39.661540, -80.196811
2	Bernice Tennant	Well	Tax Map 17, Parcel 64	39.660746, -80.188790
3	Bernice Tennant	Well	Tax Map 17, Parcel 64	39.660598, -80.188415
4	Nancy Carpenter, et al	Well	Tax Map 17, Parcel 73	39.655795, -80.184712
5	Nancy Carpenter, et al	Well	Tax Map 17, Parcel 73	39.655544, -80.185504
6	Angela M. Mayle	Well	Tax Map 17, Parcel 59.1	39.652950, -80.194444

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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 Requirement: Notice shall be provided at least **SEVEN (7)** days but no more than **FORTY-FIVE (45)** days prior to entry

Date of Notice: 12/18/2013 **Date of Planned Entry:** 12/28/2013

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

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

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

Notice is hereby provided to:

SURFACE OWNER(s)

Name: See Attachment

Address: _____

Name: _____

Address: _____

Name: _____

Address: _____

COAL OWNER OR LESSEE

Name: See Attachment

Address: _____

MINERAL OWNER(s)

Name: See Attachment

Address: _____

*please attach additional forms if necessary

Notice is hereby given:

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

State: <u>West Virginia</u>	Approx. Latitude & Longitude: <u>569112.37, 4390193.76 (UTM NAD)</u>
County: <u>Monongalia</u>	Public Road Access: <u>State Rt. 20 (Memorial Road)</u>
District: <u>Clay</u>	Watershed: <u>Dunkard</u>
Quadrangle: <u>Blacksville, WV</u>	Generally used farm name: <u>Kassay</u>

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

Notice is hereby given by:

Well Operator: Northeast Natural Energy LLC

Telephone: 304.241.5752

Email: hmedley@nne-llc.com

Address: 707 Virginia Street East, Suite 1200

Charleston, WV 25301

Facsimile: 304.241.5972

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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.

03/30/2018

Surface Owner	Address
Nehemiah Kassay Patty Kassay	1991 Daybrook Road, Fairview, WV 26570
Precision Oil and Gas Inc.	P.O. Box 884, Bridgeport, WV 26330

Surface Owner - Access Road	Address
Nehemiah Kassay Patty Kassay	1991 Daybrook Road, Fairview, WV 26570

Mineral Owner	Address
Alice Wise, A Widow	8615 Tiber Hollow Court Louisville, KY 40219
Alma M. Joseph, A Widower	510 Brewer Street Akron, OH 44305
Almeada J. Barber, A Widow	22 Kurtz Street Apt 206 Athens, OH 45701
Ardella J. Clevenger	3 Karen Court Fairmont, WV 26554
Betty C. Lyons	316 North Main Street Bishop, CA 93514
Betty Lee Sine, Widow	Rt 1 Box 450 Riversville WV 26588
Billy Ray Tennant	658 Mooresville Road Core, WV 26541
C.W. Sine, A Single Man	4014 Trent Avenue Cleveland, OH 44109
Carol I Wise, Married	159 Pine Drive Poca, WV 26559
Celeste M Frickleton	11724 Dry River Ct. Reston, VA 20191
Cheryl Lisabeth Gallagher	2094 Croosroads Road Fairview, WV 26570
Connie Varner, A Single Woman	16005 Fleming Road Amesville, OH 45711
Darlene Eddy, A/K/A Darlene S.	910 Harlem Fairmont, WV 26554
Deborah Sudduth And Samuel	8480 Rural Dale Road Blue Rock, OH 43760
Dennis Keith Williams	Rt 1 Box 174 Fairmont, WV 26554
Diana Beth Thomas, A/K/A Diane	404 Brown Run Rd. Burton, WV 26590
Diane Beth Thomas And Curtis	404 Brown Run Rd. Burton, WV 26590
Donald R Sine, Married	5097 W. 148th Street Brook Park, OH 44142
Donald R. Sine And Irma Sine,	5097 W. 148th Street Brook Park, OH 44142
Donald Rex Williams	153 South Heritage Drive Jenkins, KY 41537
Donna Lynn Chase, Married	2833 West Roy E. Furman Highway Rogersville, PA 15359
Doris L Sine, Widow	4430 Fairmont Road Morgantown , WV 26501
Ellen J Woodruff, Widow	7529 Praire Road, NE, Albuquerque, NM 87109-1801
Emza M. Parsons, A Widow	607 Bryan Avenue Barrackville, WV 26559
Everett A Sine, Jr, Married	101 Mount Harmon Road Fairview, WV 26570
Freddy W Williams, Married	222 Happy Lane Fairview, WV 26570
Gail Church, Married	127 Dewey Ave. Spraggs, PA 15362
Ginger K. Estle	46 Breezy Drive Morgantown, WV 26501
Helen Cummings, A Widow	P.O. Box 277 Grant Town, WV 26574
James Everett Williams li	21200 State Rt. 676 Marietta, OH 45750
James Varner, A Single Man	16170 Fleming Road Amesville, OH 45711
Janet Varner, A Widow	16005 Fleming Road Amesville, OH 45711
Jarrod Williams	P.O. Box 311 Pentress, WV 26544
Jimmy Randall Tennant	15 Clint Moore Road Fairview, WV 26570
Jody L. Varner, A Single Man	P.O. Box 102 181 Water Street Duncan Falls, OH 43734
Joyce Ann Berga, A/K/A Joyce	619 Ruby Street Belmont, WV 26134
Karen J. Taylor, F/K/A Karen	50711 State Rt 7 New Matamoras, OH 45767
Karen M. Cain, A/K/A Karen	645 Hillwood Drive Morgantown, WV 26508
Kimberly Sue Brummage	2596 Daybrook Road Fairview, WV 26570

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Kristie Virgie Vedis	631 Daybrook Road Fairview, WV 26579
Larry K Sine, Married	1101 Buffalo Road Mannington, WV 26582
Larry Tennant, A Married Man	1110 Plum Road Mannington, WV 26582
Leonard D Moore, Married	10754 Mason Dixon HWY Burton, WV 26562
Leonard L Tennant, Married	206 Putney Road Cumberland, V A 23040
Lisa And William Mccammon	6549 South Blackburn Road Athens, OH 45701
Loretta Fluharty	Rt 3 Box 155A Mannington, WV
Louise Varner, A Widow	99 Bean Road Lot 4 The Plains, OH 45780
Lyall A Sine, Aka Lyal A Sine	355 Statler Run Road Fairview, WV 26570
Lydia L. Troutman	46 Breezy Drive Morgantown, WV 26501
Mabel L McAfee, Married	5208 Secretariat Run Spring Hill, FL 34609
Mabel L. McAfee, A Widow	5208 Secretariat Run Spring Hill, FL 34609
Mark Varner, A Single Man	480 High Street Nelsonville, OH 45764
Mary J. Pemberton, A/K/A Mary	149 Honeysuckle Lane Huntington, WV 25701
Mary Liming, A Married Woman	4341 Mason Dixon Highway Core, WV
Mary R. Mccullough, A Widow	1646 Morris Stret Washington, PA 15301
Michelle Dawn Johnson And Eric	3306 Mason Dixon HWY Core, WV 26541
Myrtle L. Sine	8044 Smokey Drain Road Core, WV 26529
Nehemiah Kassay and Patty A. Kassay	1991 Daybrook Road, Fairview, WV 26570
Nehemiah Kassay And Patty A. Kassay	1991 Daybrook Road, Fairview, WV 26570
Nola M Williams, Widow	61 Vermillion Drive Pentress, WV 26544
Pamela Brown And Carl Brown	1327 Irish Road Philo, OH 43771
Pamela J. Yurisko	RR 3 Box 197B Shinnston, WV26431
Pamela Rena Hall, Married	290 Oak Street Waynesburg, PA 15370
Patricia Ann Hostutler, Single	1460 Jakes Run Road Fairview, WV 26570
Patricia Van Tassell, Married	7024 Pam Drive Millington, TN 38053
Paul Varner, A Single Man	472 Scott Street Nelsonville, OH 45764
Peggy A Morris, Married	37534 Landis Ave. Zephyrhills, FL 33541
Raymer Tennant	154 Behler Road Fairview, WV 26570
Rebecca Gail Foley	1175 Range Road Wadestown, WV 26590
Rebecca Lynne Strahler	307 Marion Street Marietta, OH 45750
Richard Tennant	Rt 2 Box 335 C Fayetteville, WV 25840
Rickey Jane Buchanan, A	4603 Red Tail Hawk Lane Waxhaw, NC 28173
Robert Ora Wheeler And Paula	5210 Cass Street Oak Lawn, IL 60453
Robert Varner, A Single Man	16005 Fleming Road Amesville, OH 45711
Rodney Wayne Tennant	1733 Jakes Run Road Fairview, WV 26570
Roxana Cahill	609 South Pine Grove Road Virginia Beach, VA 23452
Ruby E. Van Fossen	1390 West Jackson Hill Court Laecanto, FL 34461
Sandra Faye Wilson And Wayne	7725 Mason Dixon Highway Wana, WV 26590
Steven Varner Sr. And Tina	21 Robbins Road Nelsonville, OH 45764
Sue Ann Strickland, Married	6412 Colleen Ave., NE Albuquerque, NM 87109
Susan L. Michael, A/K/A Susan	4256 Crossroads Road Fairview, WV 26570
Tamela R. Simeral And Jerry	2207 Armco Avenue Zanesville, OH 43701
Tina L. Fluharty And Richard	41 Finch Lane Mannington, WV 26582
Tommy J. Eddy, Sr., A/K/A	3027 Daybrook Road Fairview, WV 26570
Troy L. Tennant And Anna L.	Rt. 1 Box 169 B Fairmont, WV 26554
Twyla Hinds Snopps	Rt 2 Box 367 Lost Creek, WV 26385

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Varner L Moore, Married	7368 Mason Dixon HWY Wana, WV 26590
W Richard Williams, Married	10809 US Highway 27 South Sebring, FL 33876
Walden J. Cook, Jr.	340 1171st Street Middleton, IL 62666

RS ✓
? ✓

Coal Owner	Address
Consolidated Coal Company	1000 Consol Energy Drive, Canonsburg, PA

✓

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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 Requirement: Notice shall be provided at least **TEN (10)** days prior to filing a permit application.

Date of Notice: 11/09/2017 **Date Permit Application Filed:** 11/20/2017

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

HAND DELIVERY **CERTIFIED MAIL RETURN RECEIPT REQUESTED**

Pursuant to W. Va. Code § 22-6A-16(b), at least ten days prior to filing a permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner notice of its intent to enter upon the surface owner's land for the purpose of drilling a horizontal well: *Provided*, That notice given pursuant to subsection (a), section ten of this article satisfies the requirements of this subsection as of the date the notice was provided to the surface owner: *Provided, however*, That the notice requirements of this subsection may be waived in writing by the surface owner. The notice, if required, shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative.

Notice is hereby provided to the SURFACE OWNER(s):

Name: Please See Attachment Name: Please See Attachment
Address: _____ Address: _____

Notice is hereby given:

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

State: <u>West Virginia</u>	UTM NAD 83	Easting: <u>569115.0</u>
County: <u>Monongalia</u>		Northing: <u>4390178.8</u>
District: <u>Clay</u>	Public Road Access: <u>County Route 25/3 (Yank Hollow Road)</u>	
Quadrangle: <u>Blacksville</u>	Generally used farm name: <u>Kassay</u>	
Watershed: <u>Dunkard Creek</u>		

This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(b), this notice shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Notice is hereby given by:

Well Operator: Northeast Natural Energy LLC
Address: 707 Virginia Street East, Suite 1200
Charleston, WV 25301
Telephone: 304-414-7060
Email: hmedley@nne-llc.com
Facsimile: 304-414-7061

Authorized Representative: Hollie Medley, Regulatory Manager
Address: 48 Donley Street, Suite 601
Morgantown, WV 26501
Telephone: 304-212-0422
Email: hmedley@nne-llc.com
Facsimile: 304-241-5972

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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.

WV Department of
Environmental Protection

4706101797

Kassay 10H

Surface Owner(s):

Precision Oil and Gas, Inc.
P.O. Box 884
Bridgeport, WV 26330

Patty Kassay
1991 Daybrook Road
Fairview, WV 26570

✓

Mr. Samuel W. and Stacy L. Matteo,
C/o Ileen Morton Matteo (life estate)
404 Country Road
Fairview, WV 26570

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

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

Date of Notice: 11/09/2017 **Date Permit Application Filed:** 11/20/2017

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

- CERTIFIED MAIL HAND
- RETURN RECEIPT REQUESTED DELIVERY

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

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

Name: <u>Please See Attached</u>	Name: <u>Please See Attached</u>
Address: _____	Address: _____
_____	_____

Notice is hereby given:

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

State: <u>West Virginia</u>	UTM NAD 83	Easting: <u>569115.0</u>	
County: <u>Morngalia</u>		Northing: <u>4390178.8</u>	
District: <u>Clay</u>	Public Road Access: <u>County Route 25/3 (Yank Hollow Road)</u>		
Quadrangle: <u>Blacksville</u>	Generally used farm name: <u>Kassay</u>		
Watershed: <u>Dunkard Creek</u>			

This Notice Shall Include:

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

Well Operator: <u>Northeast Natural Energy LLC</u>	Address: <u>707 Virginia Street East, Suite 1200</u>
Telephone: <u>304-414-7060</u>	<u>Charleston, WV 25301</u>
Email: <u>hmedley@nne-llc.com</u>	Facsimile: <u>304-414-7061</u>

Oil and Gas Privacy Notice:

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Kassay 10H

Surface Owner(s):

Precision Oil and Gas, Inc. ✓
P.O. Box 884
Bridgeport, WV 26330

Patty Kassay ✓
1991 Daybrook Road
Fairview, WV 26570

Mr. Samuel W. and Stacy L. Matteo, ✓
C/o Ileen Morton Matteo (life estate)
404 Country Road
Fairview, WV 26570

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STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
VOLUNTARY STATEMENT OF NO OBJECTION

Instructions to Persons Named on Page WW-6A

The well operator named on page WW-6A is applying for a permit from the State of West Virginia to conduct oil or gas well work. Well work permits are valid for twenty-four (24) months. Please contact the listed well operator and the Office of Oil and Gas if you do not own an interest in the listed surface tract.

Comment and Waiver Provisions

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.

Pursuant to West Virginia Code § 22-6A-8(b) No permit may be issued less than thirty days after the filing date of the application for any well work except plugging or replugging; and no permit for plugging or replugging may be issued less than five days after the filing date of the application except a permit for plugging or replugging a dry hole: *Provided*, That if the applicant certifies that all persons entitled to notice of the application under the provisions of subsection (b), section ten of this article have been served in person or by certified mail, return receipt requested, with a copy of the well work application, including the erosion and sediment control plan, if required, and the well plat, and further files written statements of no objection by all such persons, the secretary may issue the well work permit at any time.

VOLUNTARY STATEMENT OF NO OBJECTION

I, Paul Smith, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through _____, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

State:	<u>West Virginia</u>	UTM NAD 83 Easting:	<u>(2H) 569098.6 ; (4H) 569104.1 ; (6H) 569109.5 ; (10H) 569116.0</u>
County:	<u>Monongalia</u>	UTM NAD 83 Northing:	<u>(2H) 4390146.1 ; (4H) 4390157.0 ; (6H) 4390167.9 ; (10H) 4390178.8</u>
District:	<u>Clay</u>	Public Road Access:	<u>County Route 26/3 (Yank Hollow Road)</u>
Quadrangle:	<u>Blacksville</u>	Generally used farm name:	<u>Kassay</u>
Watershed:	<u>Dunkard Creek</u>		

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

*Please check the box that applies

- SURFACE OWNER
- SURFACE OWNER (Road and/or Other Disturbance)
- SURFACE OWNER (Impoundments/Pits)
- COAL OWNER OR LESSEE
- COAL OPERATOR
- WATER PURVEYOR
- OPERATOR OF ANY NATURAL GAS STORAGE FIELD

FOR EXECUTION BY A NATURAL PERSON

Signature: [Signature]
Print Name: Paul E. Smith
Date: 11/14/17

FOR EXECUTION BY A CORPORATION, ETC.

Company: Precision Oil and Gas, Inc.
By: _____
Its: _____

Signature: _____
Date: _____

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Environmental Protection

Oil and Gas Privacy Notice:

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

4706101797

WW-6AW
(1-12)

API NO. 47- _____
OPERATOR WELL NO. Kassay 2H,4H,6H,10H
Well Pad Name: Kassay

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
VOLUNTARY STATEMENT OF NO OBJECTION

Instructions to Persons Named on Page WW-6A

The well operator named on page WW-6A is applying for a permit from the State of West Virginia to conduct oil or gas well work. Well work permits are valid for twenty-four (24) months. Please contact the listed well operator and the Office of Oil and Gas if you do not own any interest in the listed surface tract.

Comment and Waiver Provisions

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.

Pursuant to West Virginia Code § 22-6A-8(b) No permit may be issued less than thirty days after the filing date of the application for any well work except plugging or replugging; and no permit for plugging or replugging may be issued less than five days after the filing date of the application except a permit for plugging or replugging a dry hole: *Provided*, That if the applicant certifies that all persons entitled to notice of the application under the provisions of subsection (b), section ten of this article have been served in person or by certified mail, return receipt requested, with a copy of the well work application, including the erosion and sediment control plan, if required, and the well plat, and further files written statements of no objection by all such persons, the secretary may issue the well work permit at any time.

VOLUNTARY STATEMENT OF NO OBJECTION

I, Bernie Adenant, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through _____, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

State:	<u>West Virginia</u>	UTM NAD 83 Easting:	<u>(2H) 569098.6 ; (4H) 569104.1 ; (6H) 569109.5 ; (10H) 569115.0</u>
County:	<u>Monongalia</u>	UTM NAD 83 Northing:	<u>(2H) 4390146.1 ; (4H) 4390157.0 ; (6H) 4390167.9 ; (10H) 4390178.8</u>
District:	<u>Clay</u>	Public Road Access:	<u>County Route 25/3 (Yank Hollow Road)</u>
Quadrangle:	<u>Blacksville</u>	Generally used farm name:	<u>Kassay</u>
Watershed:	<u>Dunkard Creek</u>		

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

<p>*Please check the box that applies</p> <p><input type="checkbox"/> SURFACE OWNER</p> <p><input type="checkbox"/> SURFACE OWNER (Road and/or Other Disturbance)</p> <p><input type="checkbox"/> SURFACE OWNER (Impoundments/Pits)</p> <p><input type="checkbox"/> COAL OWNER OR LESSEE</p> <p><input type="checkbox"/> COAL OPERATOR</p> <p><input checked="" type="checkbox"/> WATER PURVEYOR</p> <p><input type="checkbox"/> OPERATOR OF ANY NATURAL GAS STORAGE FIELD</p>	<p>FOR EXECUTION BY A NATURAL PERSON</p> <p>Signature: <u>Bernie Adenant</u></p> <p>Print Name: <u>Bernie Adenant</u></p> <p>Date: <u>11-12-2017</u></p> <p>FOR EXECUTION BY A CORPORATION, ETC.</p> <p>Company: _____</p> <p>By: _____</p> <p>Its: _____</p> <p>Signature: _____</p> <p>Date: _____</p>
--	--

Oil and Gas Privacy Notice:

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

RECEIVED
Office of Oil and Gas
NOV 22 2017
WV Department of
Environmental Protection
03/30/2018

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
VOLUNTARY STATEMENT OF NO OBJECTION

Instructions to Persons Named on Page WW-6A

The well operator named on page WW-6A is applying for a permit from the State of West Virginia to conduct oil or gas well work. Well work permits are valid for twenty-four (24) months. Please contact the listed well operator and the Office of Oil and Gas if you do not own any interest in the listed surface tract.

Comment and Waiver Provisions

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.

Pursuant to West Virginia Code § 22-6A-8(b) No permit may be issued less than thirty days after the filing date of the application for any well work except plugging or replugging; and no permit for plugging or replugging may be issued less than five days after the filing date of the application except a permit for plugging or replugging a dry hole: *Provided*, That if the applicant certifies that all persons entitled to notice of the application under the provisions of subsection (b), section ten of this article have been served in person or by certified mail, return receipt requested, with a copy of the well work application, including the erosion and sediment control plan, if required, and the well plat, and further files written statements of no objection by all such persons, the secretary may issue the well work permit at any time.

VOLUNTARY STATEMENT OF NO OBJECTION

I, Casey V. Saunders, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through 16, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

State:	<u>West Virginia</u>	UTM NAD 83 Easting:	<u>(2H) 569098.0 ; (4H) 569104.1 ; (6H) 569109.5 ; (10H) 569115.0</u>
County:	<u>Monongalia</u>	UTM NAD 83 Northing:	<u>(2H) 4390146.1 ; (4H) 4390157.0 ; (6H) 4390167.9 ; (10H) 4390179.5</u>
District:	<u>Clay</u>	Public Road Access:	<u>County Route 25/3 (Yank Hollow Road)</u>
Quadrangle:	<u>Blacksville</u>	Generally used farm name:	<u>Kassay</u>
Watershed:	<u>Dunkard Creek</u>		

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

<p>*Please check the box that applies</p> <p><input type="checkbox"/> SURFACE OWNER</p> <p><input type="checkbox"/> SURFACE OWNER (Road and/or Other Disturbance)</p> <p><input type="checkbox"/> SURFACE OWNER (Impoundments/Pits)</p> <p><input checked="" type="checkbox"/> COAL OWNER OR LESSEE</p> <p><input type="checkbox"/> COAL OPERATOR</p> <p><input type="checkbox"/> WATER PURVEYOR</p> <p><input type="checkbox"/> OPERATOR OF ANY NATURAL GAS STORAGE FIELD</p>	<p>FOR EXECUTION BY A NATURAL PERSON</p> <p>Signature: _____</p> <p>Print Name: _____</p> <p>Date: _____</p>
	<p>FOR EXECUTION BY A CORPORATION, ETC.</p> <p>Company: <u>CONSOL Mining Company LLC</u></p> <p>By: <u>Casey V. Saunders</u></p> <p>Its: <u>Manager Coal/Gas Coordination</u></p> <p>Signature: <u><i>Casey V. Saunders</i></u></p> <p>Date: <u>03/08/2018</u></p>

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

RECEIVED
Office of Oil and Gas
MAR 16 2018
03/30/2018
WV Department of
Environmental Protection

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
VOLUNTARY STATEMENT OF NO OBJECTION

Instructions to Persons Named on Page WW-6A

The well operator named on page WW-6A is applying for a permit from the State of West Virginia to conduct oil or gas well work. Well work permits are valid for twenty-four (24) months. Please contact the listed well operator and the Office of Oil and Gas if you do not own any interest in the listed surface tract.

Comment and Waiver Provisions

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.


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VOLUNTARY STATEMENT OF NO OBJECTION

I, Alex O'Neill, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through 16, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

State:	<u>West Virginia</u>	UTM NAD 83 Easting:	<u>(2H) 569008.6 ; (4H) 569104.1 ; (6H) 569109.5 ; (10H) 569115.0</u>
County:	<u>Monongalia</u>	UTM NAD 83 Northing:	<u>(2H) 4390148.1 ; (4H) 4390157.0 ; (6H) 4390167.9 ; (10H) 4390178.8</u>
District:	<u>Clay</u>	Public Road Access:	<u>County Route 25/3 (Yank Hollow Road)</u>
Quadrangle:	<u>Blacksville</u>	Generally used farm name:	<u>Kassay</u>
Watershed:	<u>Dunkard Creek</u>		

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

<p>*Please check the box that applies</p> <p><input type="checkbox"/> SURFACE OWNER</p> <p><input type="checkbox"/> SURFACE OWNER (Road and/or Other Disturbance)</p> <p><input type="checkbox"/> SURFACE OWNER (Impoundments/Pits)</p> <p><input checked="" type="checkbox"/> COAL OWNER OR LESSEE</p> <p><input type="checkbox"/> COAL OPERATOR</p> <p><input type="checkbox"/> WATER PURVEYOR</p> <p><input type="checkbox"/> OPERATOR OF ANY NATURAL GAS STORAGE FIELD</p>	<p>FOR EXECUTION BY A NATURAL PERSON</p> <p>Signature: _____</p> <p>Print Name: _____</p> <p>Date: _____</p>
	<p>FOR EXECUTION BY A CORPORATION, ETC.</p> <p>Company: <u>Murray American Energy, Inc.</u></p> <p>By: <u>Alex O'Neill</u></p> <p>Its: <u>Coal, Oil and Gas Relations Manager</u></p> <p>Signature: </p> <p>Date: <u>03/12/2018</u></p>

Oil and Gas Privacy Notice:

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RECEIVED
Office of Oil and Gas
MAR 16 2018
03/30/2018
WV Department of
Environmental Protection



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

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

Jim Justice
Governor

Thomas J. Smith, P. E.
Secretary of Transportation/
Commissioner of Highways

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 Kassay Pad, Monongalia County
Kassay 10H

Dear Mr. Martin,

This well site will be accessed from a permit #04-2014-0914 issued to Northeast Natural Energy Corporation for access to the State Road for a well site located off of Monongalia Route 25/3 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: Hollie Medley
Northeast Natural Energy Corporation
CH, OM, D-4
File

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Office of Oil and Gas

NOV 22 2017

WV Department of
Environmental Protection

Planned Additives to be used in Fracturing Stimulations

Trade Name	Purpose	Ingredients	Chemical Abstract Service Number (CAS#)
Water	Carrier	Water	7732-18-5
HCl, 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 Propargyl Alcohol	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
Scaletrol 720	Scale Inhibitor	Diethylene Glycol	111-46-6

RECEIVED
Office of Oil and Gas
NOV 22 2017
WV Department of
Environmental Protection

4706101797

KASSAY WELL PAD AS-BUILT

CLAY DISTRICT, MONONGALIA COUNTY, WV

JANUARY 2017 (REVISED DECEMBER 2017)

WEST VIRGINIA 811
TWO WORKING DAYS PRIOR TO EXCAVATION, THE CONTRACTOR MUST CONTACT THE WV ONE CALL SYSTEM, INC., 1-800-245-4848

PLANS PREPARED BY:

BOORD BENCHEK & ASSOCIATES, INC.
ENGINEERING, SURVEYING, CONSTRUCTION AND MINING SERVICES
SOUTHPOINTE, PA 15317 PHONE: 724-746-1055



Andrew Benchek 12-14-17

ANDREW BENCHEK DATE
P.E.

OWNER

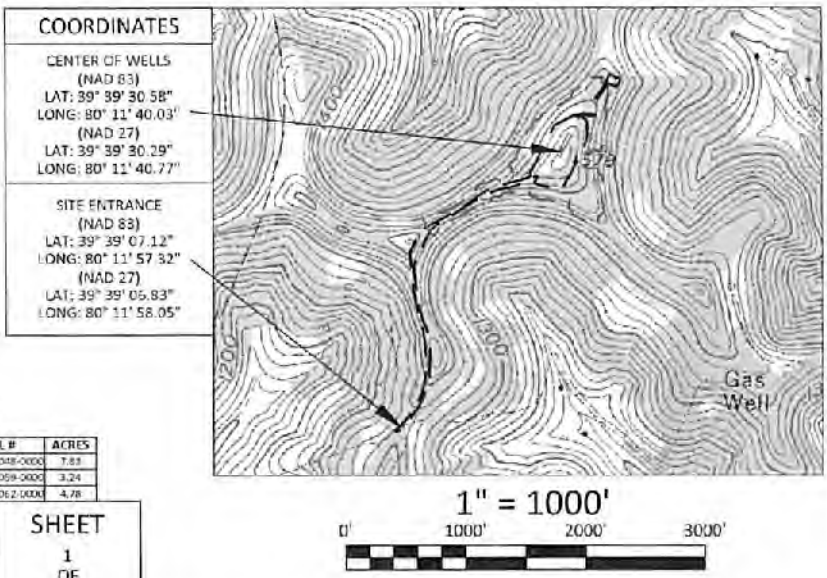
northeast
NATURAL ENERGY
707 VIRGINIA STREET
SUITE 1200 CHARLESTON, WV 25301

**WVDEP 00G
ACCEPTED AS-BUILT**
1/5/2018

SHEET INDEX
1. TITLE SHEET
2-3. EVACUATION ROUTE/PREVAILING WINDS
4. AS-BUILT OVERVIEW
5. 11 AS BUILT
12-13. ACCESS ROAD PROFILES
13a. MOUNTABLE BERM PROFILE AND CELLAR DE FAIL
14. RECLAMATION PLAN OVERVIEW
15-21. RECLAMATION PLAN

TOTAL DISTURBED AREA: 15.85 ACRES
ROAD DISTURBED AREA: 2.83 ACRES
WELL PAD DISTURBED AREA: 13.04 ACRES
ACCESS ROAD LENGTH: 2,843'
ACCESS ROAD AVG. WIDTH: 24'
WELL PAD ELEVATION: 1534'

API NUMBERS
KASSAY 1H - 061-01731
KASSAY 3H - 061-01704
KASSAY 5H - 061-01694
KASSAY 8H - 061-01740
KASSAY 9H - 061-01695
KASSAY 13H - 061-01689



WV INSPECTOR: _____

PROPERTY OWNER	PARCEL #	ACRES
NEHEMIAH KASSAY	31-05-0017-0048-0000	7.83
SAMUEL W. & STACEY L. MATTEO	31-05-0017-0059-0000	3.24
PRECISION OIL & GAS INC.	31-01-0017-0062-0000	4.78

TITLE SHEET
KASSAY WELL PAD
CLAY DISTRICT, MONONGALIA COUNTY, WV

SHEET
1
OF
21

4706101797

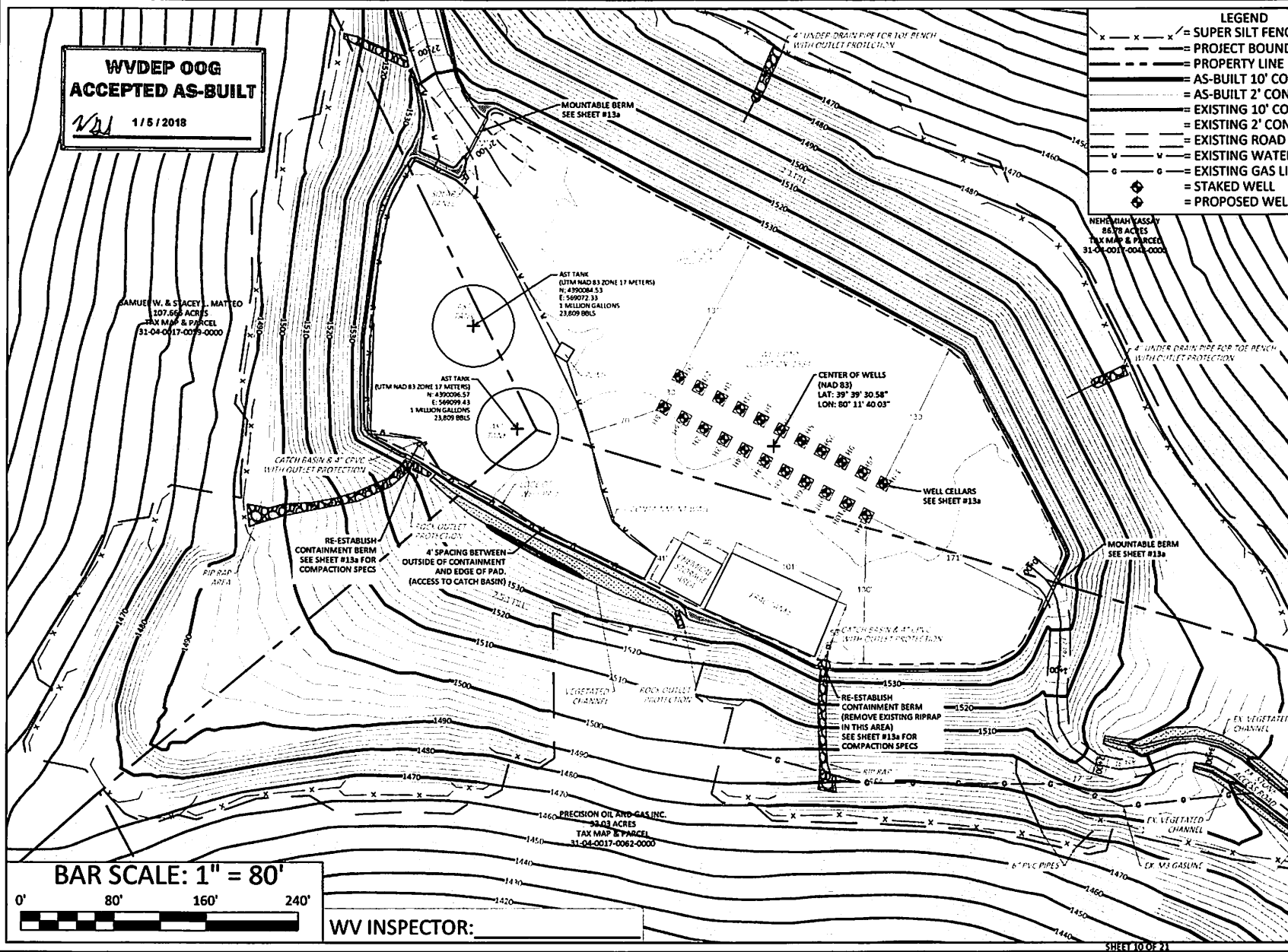
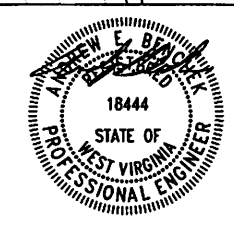
**WVDEP OOG
ACCEPTED AS-BUILT**
1/5/2018

- LEGEND**
- x-x-x- = SUPER SILT FENCE (SSF)
 - - - - - = PROJECT BOUNDARY (15.85 ACRES)
 - - - - - = AS-BUILT 10' CONTOURS
 - - - - - = AS-BUILT 2' CONTOURS
 - - - - - = EXISTING 10' CONTOURS
 - - - - - = EXISTING 2' CONTOURS
 - - - - - = EXISTING ROAD
 - - - - - = EXISTING WATERLINE
 - - - - - = EXISTING GAS LINE
 - o = STAKED WELL
 - o = PROPOSED WELL

BOORD, BENCHEK and ASSOC., INC.
Engineering, Surveying, Construction,
and Mining Services
Southpointe, PA 15317 Phone: 724-746-1025

AS-BUILT
THIS DOCUMENT WAS PREPARED BY:
BOORD, BENCHEK AND ASSOC., INC.
FOR: NORTHEAST NATURAL ENERGY, L.L.C.

DATE:
JANUARY 2017
(REVISED DECEMBER
2017)
KASSAY
WELL PAD
CLAY DISTRICT,
MONONGALIA
COUNTY, WV



BAR SCALE: 1" = 80'
0' 80' 160' 240'

WV INSPECTOR: _____

APPROVED
WVDEP OOG
12/29/2014

EROSION & SEDIMENT CONTROL PLAN

KASSAY WELL PAD

MONONGALIA COUNTY, WEST VIRGINIA

FOR

NORTHEAST NATURAL ENERGY LLC

API#6101689
API#6101694
API#6101695

Electronic Version of These Plans May Be Viewed at: Q:\OIL GAS\KASSAY FILES\REVIEWS



REFERENCE: USGS - BLACKSVILLE QUADRANGLE, WV 7.5 MINUTE SERIES



PROJECT NO. 1338001
DECEMBER 2014

DIEFFENBAUCH & HRITZ, LLC



INDEX	
DRAWING NO.	TITLE
1	TITLE SHEET
2	GENERAL NOTES
3	EXISTING SITE PLAN
4	OVERALL SITE PLAN
5-A	PROPOSED ETE PLAN
6-10	ACCESS ROAD PROFILE
11	SOILS PLAN
12-16	SITE RESTORATION PLAN
18	REVEGETATION PLAN
19	TYPICAL SECTIONS
18-20	EMO DETAILS

KASSAY LIMITS OF DISTURBANCE BREAKDOWN:
OVERALL LIMITS OF DISTURBANCE: 15.89 AC
PROPOSED DESIGN ELEMENTS:
ACCESS ROAD: 2.89 AC
WELL PAD: 13.00 AC
LAND OWNERS:
KASSAY: T&E AC
MATED: 2.94 AC
PRELIMINARY D&E: 4.78 AC

WV Department of Environmental Protection

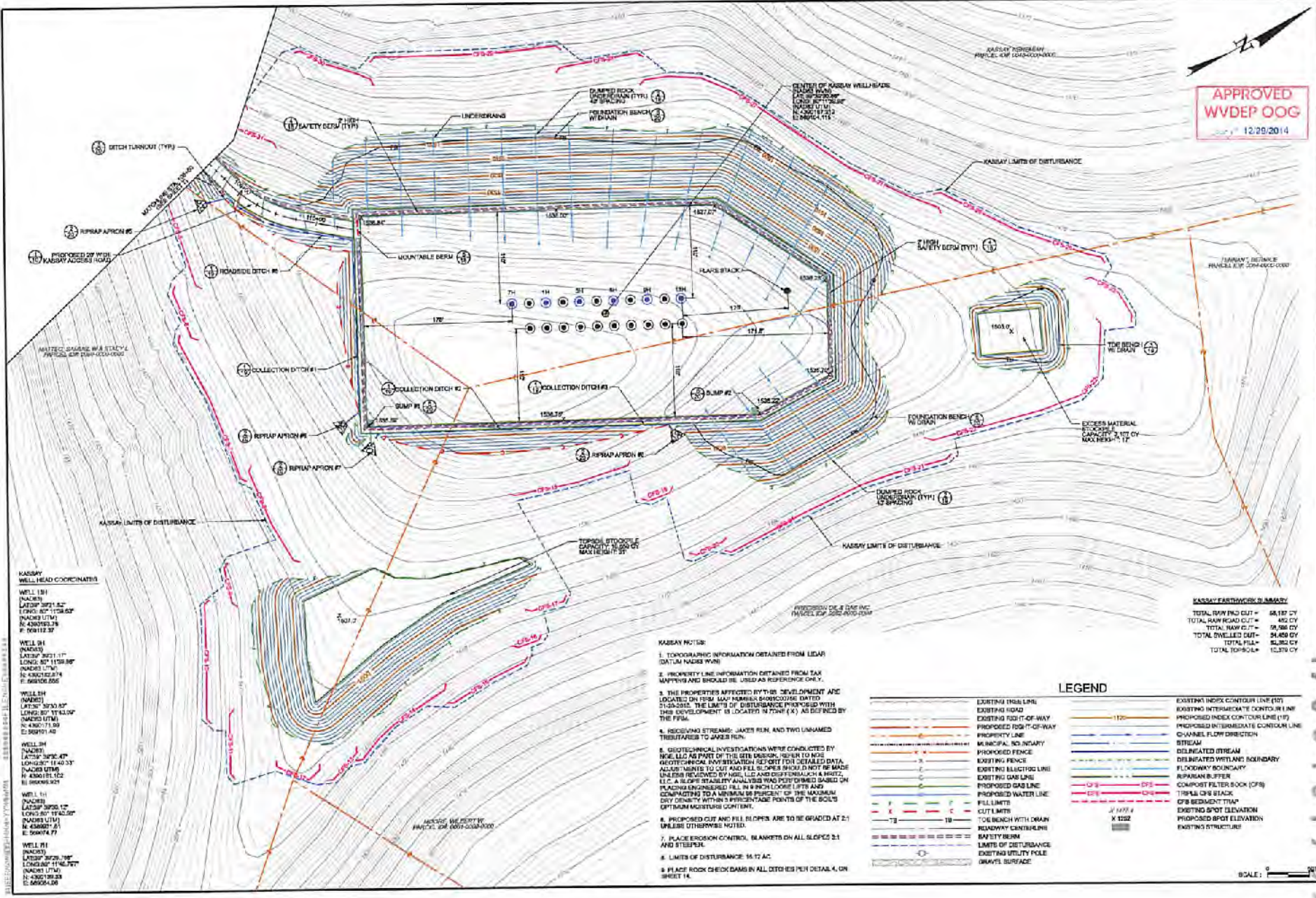
NOV 22 2017

RECEIVED
Office of Oil and Gas

DATE: 12/29/2014
SCALE: AS SHOWN
DESIGNER: DIEFFENBAUCH & HRITZ, LLC
PROJECT NO: 1338001
SHEET NO: 1
TITLE: KASSAY WELL SITE
PROJECT: NORTHEAST NATURAL ENERGY LLC

4706401797

APPROVED
WVDEP OOG
12/29/2014



KASSAY WELL HEAD COORDINATES

WELL 191
(NACRIS)
LAT: 39° 50' 11.82"
LONG: 80° 11' 08.80"
NAD83 UTM
N: 409162.19
E: 598112.37

WELL 191A
(NACRIS)
LAT: 39° 50' 21.17"
LONG: 80° 11' 58.90"
NAD83 UTM
N: 409162.74
E: 598106.06

WELL 191B
(NACRIS)
LAT: 39° 50' 30.47"
LONG: 80° 11' 43.00"
NAD83 UTM
N: 409161.102
E: 598095.021

WELL 191C
(NACRIS)
LAT: 39° 50' 28.10"
LONG: 80° 11' 42.50"
NAD83 UTM
N: 409161.45
E: 598074.77

WELL 191D
(NACRIS)
LAT: 39° 50' 28.78"
LONG: 80° 11' 46.70"
NAD83 UTM
N: 409159.28
E: 598064.98

- KASSAY NOTICE:**
1. TOPOGRAPHIC INFORMATION OBTAINED FROM LIDAR (DATUM NAD83 WGS 84)
 2. PROPERTY LINE INFORMATION OBTAINED FROM TAX MAPS AND SHOULD BE USED AS REFERENCE ONLY.
 3. THE PROPERTIES AFFECTED BY THIS DEVELOPMENT ARE LOCATED ON FPM MAP NUMBER SAK000000000 DATED 01-03-08. THE LIMITS OF DISTURBANCE PROPOSED WITH THIS DEVELOPMENT IS LOCATED IN THE (X) AS DEFINED BY THE FPM.
 4. RECEIVING STREAMS: JAMES RUN AND TWO UNNAMED TRIBUTARIES TO JAMES RUN.
 5. GEOTECHNICAL INVESTIGATIONS WERE CONDUCTED BY NEE, LLC AS PART OF THE SITE DESIGN. REFER TO NEE GEOTECHNICAL INVESTIGATION REPORT FOR DETAILED DATA. ALLOWANCES TO CUT AND FILL SLOPES SHOULD NOT BE MADE UNLESS REVIEWED BY NEE, LLC AND DIFFENBAUGH & HIRTZ, LLC. A SLOPE STABILITY ANALYSIS WAS PERFORMED BASED ON PLACING ENGINEERED FILL IN 8 INCH LAYERS WITH AND COMPACTING TO A MINIMUM 95 PERCENT OF THE MAXIMUM DRY DENSITY WITHIN 5 PERCENTAGE POINTS OF THE SOIL'S OPTIMUM MOISTURE CONTENT.
 6. PROPOSED CUT AND FILL SLOPES ARE TO BE GRADDED AT 2:1 UNLESS OTHERWISE NOTED.
 7. PLACE EROSION CONTROL, BLANKETS ON ALL SLOPES 2:1 AND STEEPER.
 8. LIMITS OF DISTURBANCE: 16.12 AC.
 9. PLACE ROCK CHECK DAMS IN ALL DITCHES PER DETAIL 4, ON SHEET 14.

LEGEND

EXISTING TRAIL LINE	EXISTING INDEX CONTOUR LINE (10')
EXISTING ROAD	EXISTING INTERMEDIATE CONTOUR (5' IN 10')
EXISTING FOOT-OF-WAY	PROPOSED INDEX CONTOUR LINE (10')
PROPOSED FOOT-OF-WAY	PROPOSED INTERMEDIATE CONTOUR LINE
PROPERTY LINE	CHANNEL FLOW DIRECTION
MUNICIPAL BOUNDARY	STREAM
PROPOSED FENCE	DELEGATED STREAM
EXISTING ELECTRIC LINE	DELEGATED WYLAND BOUNDARY
EXISTING GAS LINE	FLOODWAY BOUNDARY
PROPOSED GAS LINE	REPAIR BUFFER
PROPOSED WATER LINE	COMPOST FILTER SOCK (CFB)
FILL LIMITS	TRIPLE ONE STACK
CUT LIMITS	EXISTING SPOT ELEVATION
TOE BENCH WITH DRAIN	PROPOSED SPOT ELEVATION
ROADWAY CENTERLINE	EXISTING STRUCTURE
RAVINE BERM	
LIMITS OF DISTURBANCE	
EXISTING UTILITY POLE	
GRAVEL SURFACE	

KASSAY EARTHWORK SUMMARY

TOTAL RAW FILL CUT = 66,187 CY
 TOTAL RAW ROAD CUT = 482 CY
 TOTAL RAW CUT = 66,669 CY
 TOTAL SWELLED CUT = 84,980 CY
 TOTAL FILL = 84,980 CY
 TOTAL TOPSOIL = 15,379 CY

SCALE: 1" = 40'