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west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Monday, August 12, 2019  
PERMIT MODIFICATION APPROVAL  
Horizontal 6A / New Drill

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

Re: Permit Modification Approval for MATTEO 4H  
47-061-01831-00-00

**Modified Lateral**

NORTHEAST NATURAL ENERGY LLC

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before permitted well work is commenced.

If there are any questions, please feel free to contact me at (304) 926-0450.

A blue ink signature of James A. Martin, written in a cursive style.

James A. Martin  
Chief

Operator's Well Number: MATTEO 4H  
Farm Name: SAMUEL W. & STACEY L. MATTEO  
U.S. WELL NUMBER: 47-061-01831-00-00  
Horizontal 6A New Drill  
Date Modification Issued: August 12, 2019

Promoting a healthy environment.

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: 4H Well Pad Name: Matteo

3) Farm Name/Surface Owner: Samuel W & Stacey L Matteo Public Road Access: Yank Hollow Road

4) Elevation, current ground: 1,510' Elevation, proposed post-construction: 1,491'

5) Well Type (a) Gas  Oil \_\_\_\_\_ Underground Storage \_\_\_\_\_

Other \_\_\_\_\_

(b) If Gas Shallow  Deep \_\_\_\_\_

Horizontal

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Marcellus, 8,190', 103', 4500 PSI

8) Proposed Total Vertical Depth: 8,190'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 20,656.42'

11) Proposed Horizontal Leg Length: 11,864.62'

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): NA

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

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(a) If Yes, provide Mine Info: Name: \_\_\_\_\_ AUG - 8 2019

Depth: \_\_\_\_\_

Seam: \_\_\_\_\_

Owner: \_\_\_\_\_

WV Department of  
Environmental Protection

*MJK 8/7/2019*

WW-6B  
(04/15)

API NO. 47- 061 - 01831 *mod*  
 OPERATOR WELL NO. 4H  
 Well Pad Name: Matteo

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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: Fillup (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	2,750'	2,719'	CTS
Production	5-1/2"	New	P-110	20	20,657'	20,627'	4,244 Cu. Ft.
Tubing	2-3/8"	New	P-110	4.7	NA	8,500'	NA
Liners							

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"	28"	.375"	415		4,500 psi grout	NA
Fresh Water	13-3/8"	17-1/2"	.38"	2,760	2,000	Class A	1.23
Coal							
Intermediate	9-5/8"	12-1/4"	.395"	3,950	3,000	Class A	1.3
Production	5-1/2"	8-3/4"	.361"	12,530	9,700	50:50 Poz	1.21
Tubing	2-3/8"	NA	.217"	10,570	3,600	NA	NA
Liners							

**PACKERS**

Kind:				
Sizes:				
Depths Set:				

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*MSJK 8/7/2019*

61-01831

MOD



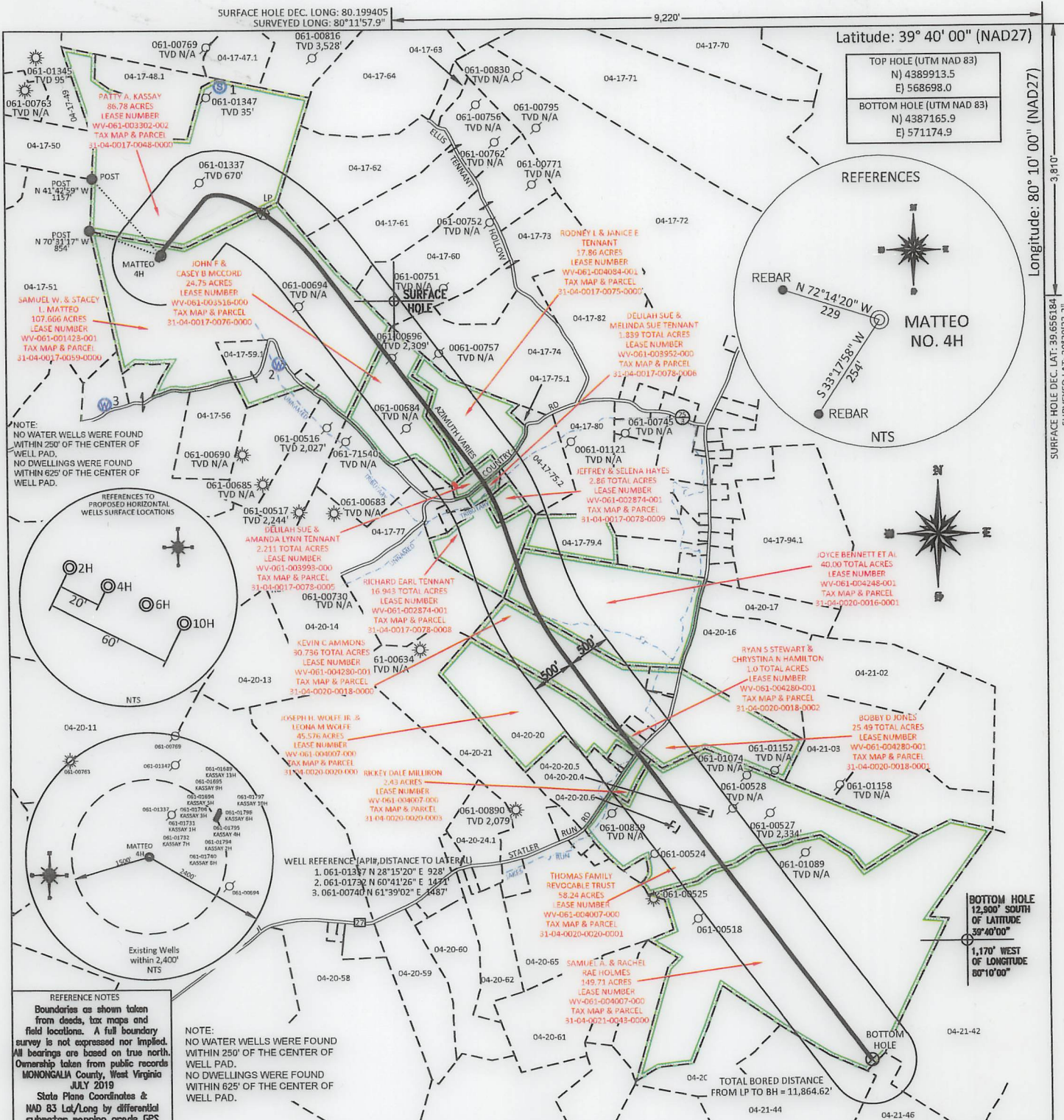
**northeast**  
NATURAL ENERGY

**Matteo 4H**  
**SITE SAFETY PLAN**

August 2019

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Latitude: 39° 40' 00" (NAD27)  
 Longitude: 80° 10' 00" (NAD27)



NOTE: NO WATER WELLS WERE FOUND WITHIN 250' OF THE CENTER OF WELL PAD.  
 NO DWELLINGS WERE FOUND WITHIN 625' OF THE CENTER OF WELL PAD.

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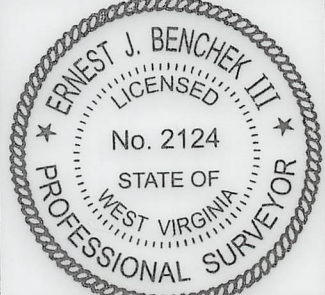
FILE #: NNE15  
 DRAWING #: 2870  
 SCALE: 1" = 1600'  
 TICK: 1" = 2000'

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 57TH STREET  
 CHARLESTON, WV 25304

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

WATERSHED: DUNKARD CREEK  
 COUNTY/DISTRICT: MONONGALIA / CLAY  
 SURFACE OWNER: SAMUEL W. & STACEY L. MATTEO  
 OIL & GAS ROYALTY OWNER:  
 LEASE NUMBERS:

TARGET FORMATION: MARCELLUS

WELL OPERATOR: NORTHEAST NATURAL ENERGY LLC  
 ADDRESS: 707 VIRGINIA STREET EAST, SUITE 1200  
 CITY: CHARLESTON STATE: WV ZIP CODE: 25301

DATE: AUGUST 5, 2019

OPERATOR'S WELL #: MATTEO 4H

API WELL #: 47 61 01831 MOD  
 STATE COUNTY PERMIT

AS-BUILT ELEVATION: 1,492.50'  
 QUADRANGLE: BLACKSVILLE  
 ACREAGE: 107.666 +/-  
 ACREAGE: 642.373 +/-

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

ESTIMATED DEPTH: TVD: 8,190' TMD: 20,656.42'  
 DESIGNATED AGENT: JOHN ADAMS  
 ADDRESS: 707 VIRGINIA STREET EAST, SUITE 1200  
 CITY: CHARLESTON STATE: WV ZIP CODE: 25301



**northeast**  
NATURAL ENERGY

August 7, 2019

Ms. Laura Adkins  
WV Department of Environmental Protection  
Office of Oil and Gas  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304

Re: URGENT – Matteo 4H Modification

Dear Ms. Adkins,

As discussed, please find enclosed the expedited permit modification request for the Matteo 4H well, located in Clay District, Monongalia County (API# 47-061-01831). Enclosed is an updated plat, WW-6B form, and Site Safety Plan for the Matteo 4H well.

Should you have any questions please contact me at 304.212.0445 or by email at [kbrooks@nne-llc.com](mailto:kbrooks@nne-llc.com).

Sincerely,

Kristen Brooks  
Operations Analyst

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