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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

Jim Justice, Governor  
Austin Caperton, Cabinet Secretary  
www.dep.wv.gov

November 2, 2017  
PERMIT MODIFICATION APPROVAL  
Horizontal 6A / Horizontal 6A Well - 1

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

Re: Permit Modification Approval for MEPCO 1H  
47-061-01755-00-00

**Well Location**

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.

James A. Martin  
Chief

Operator's Well Number: MEPCO 1H  
Farm Name: MEPCO LLC  
U.S. WELL NUMBER: 47-061-01755-00-00  
Horizontal 6A / Horizontal 6A Well - 1  
Date Issued: November 2, 2017

Promoting a healthy environment.

11/03/2017

*MOD*  
*Coordinating updated 10/30/17*

WW-6B  
 (04/15)

API NO. 47-061 - 01755 MOD  
 OPERATOR WELL NO. MEPCO 1H  
 Well Pad Name: MEPCO

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                        
Operator ID County District Quadrangle

2) Operator's Well Number: MEPCO 1H Well Pad Name: MEPCO

3) Farm Name/Surface Owner: MEPCO, LLC Public Road Access: CR 29/4

4) Elevation, current ground: 1,448.16' Elevation, proposed post-construction: 1,424.00'

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

(b) If Gas Shallow  Deep   
 Horizontal

6) Existing Pad: Yes or No NO *MSK 9/6/2017*

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
MARCELLUS, 8,222', 103', 3,600 PSI

8) Proposed Total Vertical Depth: 8,222'

9) Formation at Total Vertical Depth: MARCELLUS

10) Proposed Total Measured Depth: 18,245.88'

11) Proposed Horizontal Leg Length: 9,470.00'

12) Approximate Fresh Water Strata Depths: 50', 1,307'

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

14) Approximate Saltwater Depths: 1,947', 2,589'

15) Approximate Coal Seam Depths: 662', 1,305'

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

(a) If Yes, provide Mine Info: Name: \_\_\_\_\_  
 Depth: \_\_\_\_\_  
 Seam: \_\_\_\_\_  
 Owner: \_\_\_\_\_

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18)

**CASING AND TUBING PROGRAM**

<b>TYPE</b>	<b>Size (in)</b>	<b>New or Used</b>	<b>Grade</b>	<b>Weight per ft. (lb/ft)</b>	<b>FOOTAGE: For Drilling (ft)</b>	<b>INTERVALS: Left in Well (ft)</b>	<b>CEMENT: Fill-up (Cu. Ft.)/CTS</b>
Conductor	24"	New	NA	94.71	40'	40'	GTS
Fresh Water	13-3/8"	New	J-55	54.5	1,423'	1,400'	CTS
Coal							
Intermediate	9-5/8"	New	J-55	40	2,680'	2,650'	CTS
Production	5-1/2"	New	P-110	20	18,245.88'	18215.88'	4,265 Cu. Ft.
Tubing	2-7/8"	New	N-80	6.5	NA	8,500'	NA
Liners							

*MJK 9/6/2017*

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

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**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 6,405.7' TVD/MD. The well will then be horizontally drilled on synthetic based mud from the KOP to approximately 8,222' TVD / 18,245.88' MD along a 323 degree 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 110 BPM with a maximum allowable surface pressure of 9,500 PSI. Composite bridge plugs will be set at the end of the last stage to isolate the treated formation.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 12.80

22) Area to be disturbed for well pad only, less access road (acres): 11

23) Describe centralizer placement for each casing string:

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

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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.

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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.

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61-01753 MOP

WW-6A1  
(5/13)

Operator's Well No. MEPCO 1H MOP

**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
Please See Attached				

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

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

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

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

Well Operator: Northeast Natural Energy LLC  
 By: Hollie M. Medley  
 Its: Regulatory Manager

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61-01755



# northeast

NATURAL ENERGY

## MEPCO 1H

### SITE SAFETY PLAN

August 31, 2017

*Wayne J. Krutner*  
9/6/2017

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61-01755 map

**SITE NAME** MEPCO 1H

**911 ADDRESS** 579 MEPCO Road Fairview, WV 26570

**COUNTY** Monongalia

**ACCESS ROAD ENTRANCE** 39.662110, -80.149169 (NAD 83)

N 4390601.7282, E 572983.9047 (UTM83)

**DIRECTIONS TO SITE:**

**From I-79**, take exit 155. Merge onto Chaplin Hill Road/CR-19/24N toward US-19/WV-7/Star City. If traveling from the south, this will be a right off the exit. If traveling from the north, this will be a left off the exit. After approximately 0.8 miles, turn left at light onto US-19/WV-7. Continue on US-19/WV-7 for approximately 1.7 miles. Turn left on WV-7 and continue on route for approximately 5.2 miles, then turn left on Pedlar Run Road for approximately 1.3 miles. Take a slight right onto Stull Hollow Road for approximately 1.5 miles, turn right onto Long Drain Road for approximately 0.6 miles, take a sharp left onto County Route 29/4 for approximately 0.3 miles. The MEPCO Pad Access Road Entrance will be on the right.

**From Blacksville**, take WV-7E for approximately 3.8 miles. Turn right onto Jakes Run Road for approximately 1.7 miles, then turn left onto Mooresville Road for approximately 0.3 miles. Turn right onto Long Drain Road for approximately 1.5 miles, take a slight right onto County Route 29/4 for approximately 0.3 miles. The MEPCO Pad Access Road Entrance will be on the right.

\*See Attached Maps

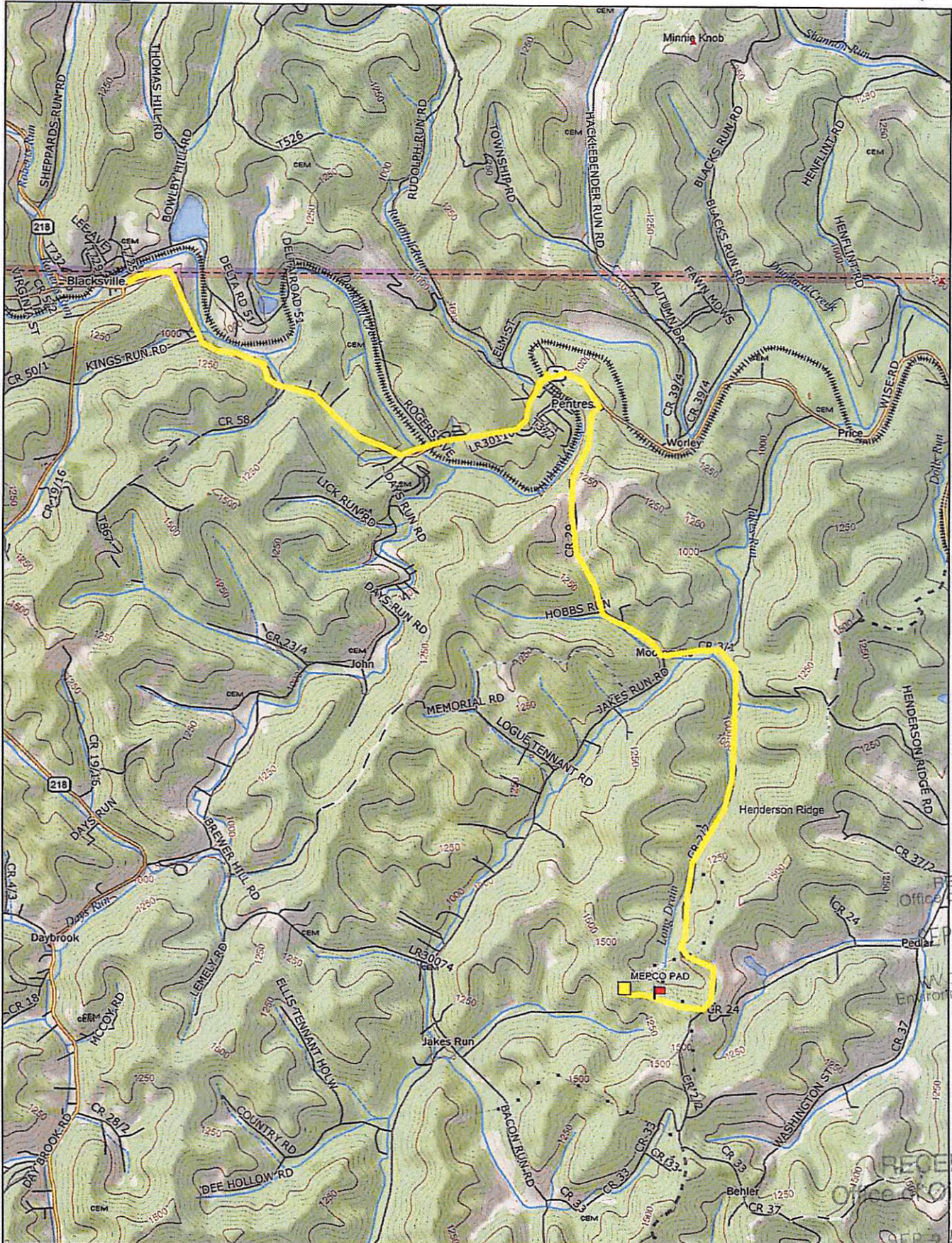
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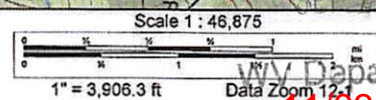
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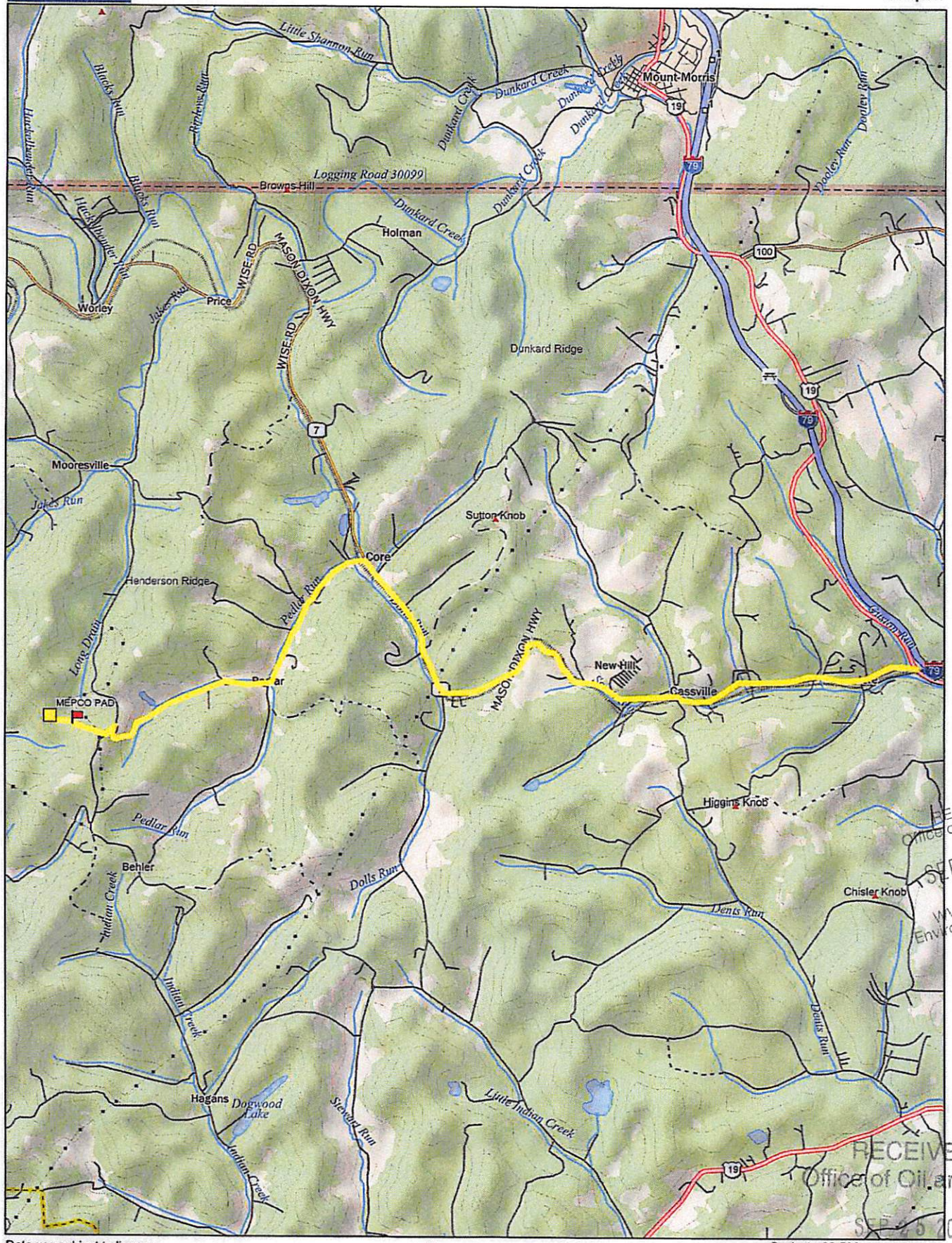
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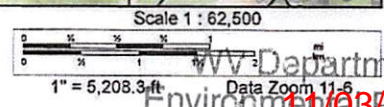
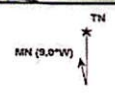
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WW-6A1

Operator's Well No.

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NNE Lease No.	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
WV-061-003478-001	GARY G LORING	NORTHEAST NATURAL ENERGY LLC	DEED	1521/99
WV-061-003600-001	GARY G LORING	NORTHEAST NATURAL ENERGY LLC	DEED	1550/343
WV-061-004327-001	REED ENERGY SERVICES LLC	NORTHEAST NATURAL ENERGY LLC	DEED	1577/831
WV-061-004001-000	JOHN W WRIGHT	*SOUTH PENN OIL CO	0.125 OR GREATER	39/202
WV-061-004002-000	NIMROD TENNANT AND NANCY TENNANT	*SOUTH PENN OIL CO	0.125 OR GREATER	39/361
WV-061-004001-000	JOHN W WRIGHT AND AMANDA WRIGHT	*SOUTH PENN OIL CO	0.125 OR GREATER	39/202
WV-061-004327-001	REED ENERGY SERVICES LLC	NORTHEAST NATURAL ENERGY LLC	DEED	1577/831
WV-061-001125-001	MARILYN DARLENE JOSHI	*CHESAPEAKE APPALACHIA LLC	0.125 OR GREATER	1359/538
WV-061-001125-002	BRUCE ALLEN CHISLER	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1543/800
WV-061-002836-001	NANCY ARLENE PRICE AND MATTHEW BROWN PRICE	*CHESAPEAKE APPALACHIA LLC	0.125 OR GREATER	1424/781
WV-061-001128-001	DOROTHY C CODY	*CHESAPEAKE APPALACHIA LLC	0.125 OR GREATER	1473/268
WV-061-001128-002	JUNE C MYERS	*CHESAPEAKE APPALACHIA LLC	0.125 OR GREATER	1473/269
WV-061-001128-003	WILMA LANDOT	*CHESAPEAKE APPALACHIA LLC	0.125 OR GREATER	1472/589
WV-061-001128-004	KENNETH L WRIGHT	*CHESAPEAKE APPALACHIA LLC	0.125 OR GREATER	1472/590
WV-061-001128-005	WILLIS G WRIGHT	*CHESAPEAKE APPALACHIA LLC	0.125 OR GREATER	1472/591
WV-061-001128-006	EMILY WRIGHT	*CHESAPEAKE APPALACHIA LLC	0.125 OR GREATER	1474/264
WV-061-001128-007	ETHEL L SMYRES	*CHESAPEAKE APPALACHIA LLC	0.125 OR GREATER	1474/365
WV-061-001128-008	MARGARET H CRYDER	*CHESAPEAKE APPALACHIA LLC	0.125 OR GREATER	1474/366
WV-061-001128-009	DOROTHY W DUNLAP	*CHESAPEAKE APPALACHIA LLC	0.125 OR GREATER	1474/367
WV-061-002165-001	CYNTHIA CRYDER	*CHESAPEAKE APPALACHIA LLC	0.125 OR GREATER	1505/728
WV-061-002165-002	LAURA K CRYDER YOUNG	*CHESAPEAKE APPALACHIA LLC	0.125 OR GREATER	1505/738
WV-061-002165-003	JASON R CRYDER	*CHESAPEAKE APPALACHIA LLC	0.125 OR GREATER	1507/258
WV-061-002165-001	CYNTHIA CRYDER	*CHESAPEAKE APPALACHIA LLC	0.125 OR GREATER	1399/684
WV-061-002165-002	LAURA K CRYDER YOUNG	*CHESAPEAKE APPALACHIA LLC	0.125 OR GREATER	1398/306
WV-061-002165-003	JASON R CRYDER	*CHESAPEAKE APPALACHIA LLC	0.125 OR GREATER	1398/309
WV-061-002165-004	MARY H HANSEN	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1564/132
WV-061-002165-006	WILMA I LANDOT	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1585/531
WV-061-002165-007	ETHEL L SMYRES	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1586/450
WV-061-002165-008	MARGARET H CRYDER	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1586/452
WV-061-004471-001	JANET D SHIPLEY	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1585/217
WV-061-003766-002	MARY WRITE SUSKIND AND I. RUSSELL SUSKIND	NORTHEAST NATURAL ENERGY LLC	DEED	1570/119
WV-061-001107-000	SHUMAN, INC.	CHESAPEAKE APPALACHIA, L.L.C.	LEASE	1429/371
WV-061-003663-000	SHUMAN INC	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1564/453
WV-061-002265-001	KENNETH L WRIGHT	*CHESAPEAKE APPALACHIA LLC	0.125 OR GREATER	1400/500
WV-061-002265-002	DOROTHY C CODY	*CHESAPEAKE APPALACHIA LLC	0.125 OR GREATER	1399/745
WV-061-002265-003	JUNE C MYERS	*CHESAPEAKE APPALACHIA LLC	0.125 OR GREATER	1399/768
WV-061-002265-004	WILLIS G WRIGHT	*CHESAPEAKE APPALACHIA LLC	0.125 OR GREATER	1400/503
WV-061-002265-005	MARGARET CRYDER AND RICHARD L CRYDER	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1566/717
WV-061-002265-006	JASON CRYDER	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1566/59
WV-061-002265-007	LEA ANN EASTON	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1566/49
WV-061-002265-008	LAURA CRYDER YOUNG	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1566/405
WV-061-002265-009	WILMA I LANDOT	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1567/262
WV-061-002265-010	MARY H HANSEN	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1566/47
WV-061-002265-011	FRANK H DUNLAP AND COLLEEN K DUNLAP	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1566/41

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WV-061-002265-012	ETHEL SMYRES	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1566/57
WV-061-002265-013	CYNTHIA E CRYDER	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1565/528
WV-061-002265-014	SHUMAN INC	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1564/394
WV-061-003983-001	HAPPY ENDINGS LLC	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1564/467
WV-061-003663-000	SHUMAN INC	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1564/453
WV-061-003733-001	PAUL T LINDERMAN JR AND KIMBERLY RUTH LINDERMAN	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1542/26
WV-061-003733-002	RONALD N MALOTT AND PATRICIA S MALOTT	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1541/844
WV-061-003733-003	ROBERTA L DUELL	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1548/5
WV-061-003733-004	MARTHA E LIPSCOMB AND BRUCE A LIPSCOMB	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1545/315
WV-061-003733-005	DELORES J MOORE	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1559/137
WV-061-003733-006	MARGARET I MADDEN	NORTHEAST NATURAL ENERGY LLC	DEED	1560/760
WV-061-003733-007	WILL E MORRIS TRUST	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1566/715
WV-061-003733-008	SA SMITH AND C BURKE MORRIS TRUST	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1565/505
WV-061-003777-001	PATRICIA TENNANT	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1542/526
WV-061-003777-002	WILLIAM A JOHNSON	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1545/84
WV-061-003777-003	EDWIN KEITH HATFIELD	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1545/78
WV-061-003778-001	ALBERT D JONES AND CAROLYN S JONES	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1542/390
WV-061-003778-002	JANET M LEMLEY AND EARL W LEMLEY	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1541/782
WV-061-003824-001	MARY FRANCIS ZABOROWSKI	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1545/76
WV-061-003826-001	MARCELLUS MINERAL GROUP LLC	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1545/368
WV-061-003978-001	MARK K SCHMIDT AND WILBURN Y SCHMIDT	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1563/73
WV-061-003622-001	MARGARET WRIGHT KRIER	NORTHEAST NATURAL ENERGY LLC	DEED	1539/195
WV-061-003622-002	MARY WRIGHT SISKIND	NORTHEAST NATURAL ENERGY LLC	DEED	1539/234
WV-061-003622-003	M DONLAD WRIGHT	NORTHEAST NATURAL ENERGY LLC	DEED	1539/531
WV-061-003752-001	MARTIN E VARNER	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1553/270
WV-061-003752-002	VERNON C VARNER AND TAMMY R VARNER	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1547/828
WV-061-003752-003	WILLIAM B VARNER	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1545/453
WV-061-003752-004	RONALD J VARNER	NORTHEAST NATURAL ENERGY LLC	DEED	1560/511
WV-061-003752-005	RICHARD VARNER AND MICHELE VARNER	NORTHEAST NATURAL ENERGY LLC	DEED	1560/507
WV-061-003752-006	JODY MANN AND JONATHAN MANN	NORTHEAST NATURAL ENERGY LLC	DEED	1561/293
WV-061-003752-007	TAMMY ROY AND DENNIS ROY JR	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1558/813
WV-061-003752-008	WEBSTER M VARNER AND DONNA J VARNER	NORTHEAST NATURAL ENERGY LLC	DEED	1557/235
WV-061-003752-009	DEBRA JEAN MOORE	NORTHEAST NATURAL ENERGY LLC	DEED	1557/231
WV-061-003752-010	TERRI LIVENGOOD AND TERRY LIVENGOOD	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1565/616
WV-061-003752-011	DOUGLAS VARNER AND VICKI VARNER	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1565/624
WV-061-003752-012	RODNEY VARNER	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1565/614
WV-061-003752-013	LESTER D VARNER JR	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1565/291
WV-061-003752-014	MATTHEW EDDY	NORTHEAST NATURAL ENERGY LLC	DEED	1580/170
WV-061-003752-015	AMANDA HARRIS	NORTHEAST NATURAL ENERGY LLC	DEED	1580/173
WV-061-003752-016	RUSSELL WALLS	NORTHEAST NATURAL ENERGY LLC	DEED	1580/176
WV-061-003752-017	JEFF ROUSH	NORTHEAST NATURAL ENERGY LLC	DEED	1582/58
WV-061-003752-018	CURTIS MOORE AND CRYSAAN MOORE	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1589/712
WV-061-003752-019	PENNY HOLMES AND BRADLEY HOLMES	NORTHEAST NATURAL ENERGY LLC	0.125 OR GREATER	1589/817

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Chesapeake Appalachia, LLC.



Northeast Natural Energy  
Assignment  
BK 120/769

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11/03/2017

61-01753

South Penn Oil Company  
 Assignment  
 DR 32/240  
 South Penn Oil Company  
 |  
 South Penn Natural Gas Company  
 Assingment  
 DR 304/547  
 South Penn Natural Gas Company  
 |  
 South Penn Oil Company  
 Assignment  
 DR 580/311  
 South Penn Oil Company merged with  
 Pennzoil Company and United Gas  
 |  
 Pennzoil United Inc.  
 Assignment  
 DR 672/665  
 Pennzoil United Inc.  
 |  
 W. H. Allen  
 Assignment  
 DR 695/557  
 W. H. Allen  
 |  
 Union Trust & Deposit Company  
 Assignment  
 DR 695/556  
 W.H. Allen and James A. Allen

Edwin Associates, Inc.  
 Assignment  
 DR 754/594  
 Union Trust National Bank, as successor by conversion of Union  
 Trust & Deposit Company  
 |  
 Edwin Associates, Inc.  
 Edwin Associates, Inc.  
 |  
 J. T. Carson  
 Assignment  
 DR 754/600  
 J. T. Carson  
 |  
 Thompson/Texas Associates Partnership  
 Assignment  
 DR 754/606  
 Thompson/Texas Associates Partnership, Thompson Pipe and Supply Company, Jack O.  
 Thompson, Harold J. Arnsteen, Equidyne Investment Associates, Inc., individually and as  
 partners and/or joint venturers in that entity known as Thompson/Texas Associates  
 Partnership  
 |  
 Mark Eddy  
 Assignment  
 AR 21/22  
 |  
 Beth Eddy, Debbie Eddy and Melissa Eddy  
 Assignment  
 AR 21/582  
 |  
 Beth Stewart, Debbie Morris and Melissa Matheny  
 |  
 Mark V. Eddy  
 Assignment  
 AR 102/275  
 |  
 Mark V. Eddy & Betty Eddy (h&w) & Eddy Brothers  
 |  
 Northeast Natural Energy LLC  
 Assignment  
 AB 123/363

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 Office of Oil and Gas  
 SEP 29 2017  
 WV Department of  
 Environmental Protection

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 Office of Oil and Gas  
 SEP 25 2017  
 WV Department of  
 Environmental Protection  
 11/08/2017

SURFACE HOLE SURVEYED LONGITUDE -80°09'08.97"

BOTTOM HOLE SURVEYED LONGITUDE -80°10'35.59" 7,740'

2,782'

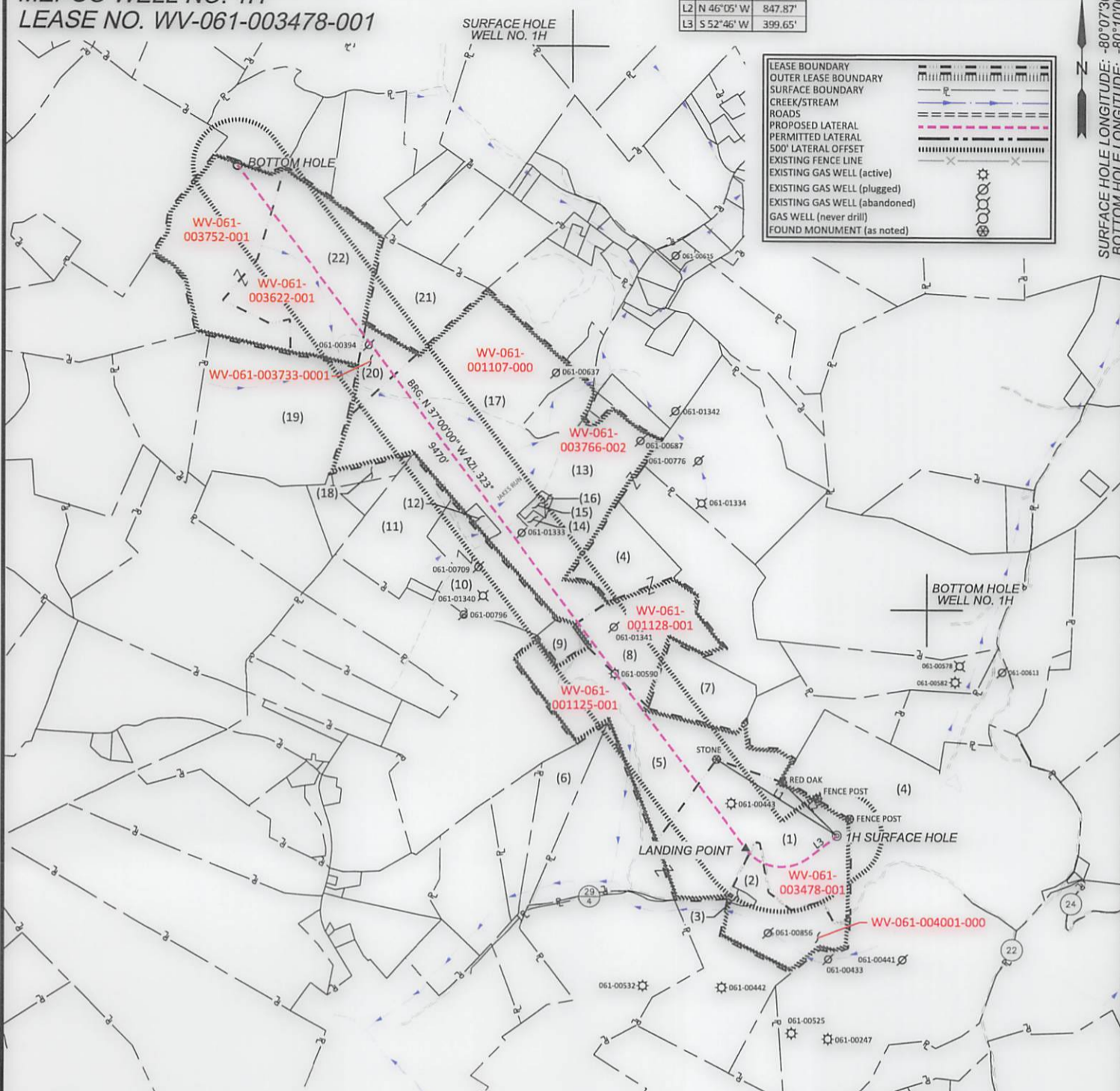
NORTHEAST NATURAL ENERGY LLC  
MEPCO WELL NO. 1H  
LEASE NO. WV-061-003478-001

SURFACE HOLE LATITUDE: 39°40'00"  
BOTTOM HOLE LATITUDE: 39°42'30"

ID	BEARING	DISTANCE
L1	N 58°06' W	1590.89'
L2	N 46°05' W	847.87'
L3	S 52°46' W	399.65'

LEGEND

- LEASE BOUNDARY
- OUTER LEASE BOUNDARY
- SURFACE BOUNDARY
- CREEK/STREAM
- ROADS
- PROPOSED LATERAL
- PERMITTED LATERAL
- 500' LATERAL OFFSET
- EXISTING FENCE LINE
- EXISTING GAS WELL (active)
- EXISTING GAS WELL (plugged)
- EXISTING GAS WELL (abandoned)
- GAS WELL (never drill)
- FOUND MONUMENT (as noted)



SURFACE HOLE LONGITUDE: -80°07'30"  
 BOTTOM HOLE LONGITUDE: -80°10'00"  
 SURFACE HOLE SURVEYED LATITUDE 39°39'46.96"  
 BOTTOM HOLE SURVEYED LATITUDE 39°40'59.80"

600 Marketplace Avenue, Suite 200  
 Bridgeport, WV 26330  
 Toll Free 855-488-9539  
 Fax 304-933-3327



Civil & Environmental Consultants, Inc.

DATE SEPTEMBER 5, 2017

SCALE 1" = 1600' ACCURACY 1:2500

OPERATORS 1H  
 WELL No. 47 - 061 - 01755 H6A

API No. 01755 H6A  
MDD

TYPE OF WELL:

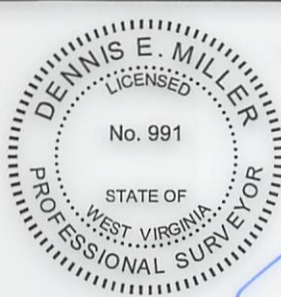
GAS:  
 Production  Storage  \*Deep  \*Shallow

PROPOSED WORK ON LOCATION:

Drill  Drill Deeper  Redrill  Convert   
 Fracture/ Stimulate  \*Plug off to Formation   
 Perforate New Formation  Plug and Abandon   
 Clean/ Replug  Other Than Above   
 If "Other" Please see Details below -  
 DETAILS OF PROPOSED WORK \_\_\_\_\_

\*TARGET FORMATION MARCELLUS  
 ESTIMATED DEPTH TVD: 8,222' TMD: 18,245.88'

WELL OPERATOR NORTHEAST NATURAL ENERGY LLC  
 ADDRESS 707 VIRGINIA STREET EAST, SUITE 1200  
CHARLESTON, WV 25301



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 rules issued and prescribed by the Division of Environmental Protection.

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



WELL AREA & LOCATION INFORMATION:

ELEVATION SOURCE DGPS (OPUS)  
 ELEVATION 1448.16' (EXISTING), 1424.00' (PROPOSED)  
 WATERSHED JAKES RUN OF DUNKARD CREEK DISTRICT  
 COUNTY MONONGALIA TOPO QUAD BLACKSVILLE  
 SURFACE OWNER MEPCO LLC  
 ACREAGE 103.49 ±  
 ROYALTY OWNER NNE LLC ET AL (LEASE NO. WV-061-003478-001)  
 LEASE ACREAGE 361.72 ±

11/03/2017

DESIGNATED AGENT JOHN ADAMS  
 ADDRESS 707 VIRGINIA STREET EAST, SUITE 1200  
CHARLESTON, WV 25301

SURFACE HOLE SURVEYED LONGITUDE -80°09'08.97"

BOTTOM HOLE SURVEYED LONGITUDE -80°10'35.59"

7,740'

2,782'

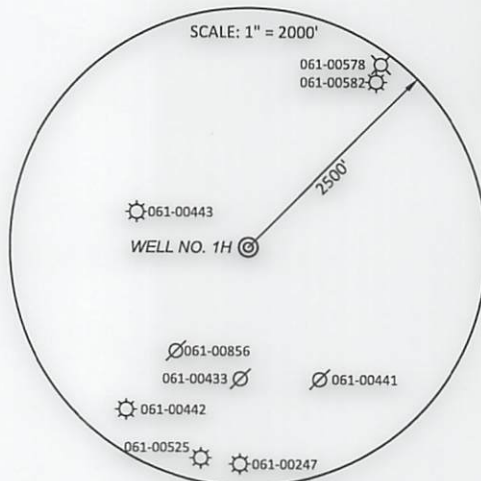
NORTHEAST NATURAL ENERGY LLC  
MEPCO WELL NO. 1H  
LEASE NO. WV-061-003478-001

SURFACE HOLE LATITUDE: 39°40'00"  
BOTTOM HOLE LATITUDE: 39°42'30"

SURFACE HOLE WELL NO. 1H

Table with 3 columns: TOP HOLE (NAD 83), LP HOLE (NAD 83), BOTTOM HOLE (NAD 83). Includes coordinates and UTM data for various points.

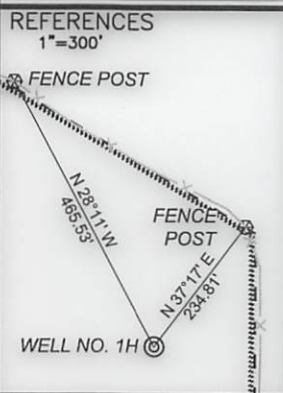
Table with 3 rows: TOP HOLE (UTM NAD 83), LANDING POINT (UTM NAD 83), BOTTOM HOLE (UTM NAD 83). Includes UTM coordinates.



SURFACE HOLE LONGITUDE: -80°07'30"  
BOTTOM HOLE LONGITUDE: -80°10'00"  
SURFACE HOLE SURVEYED LATITUDE 39°39'46.96"  
BOTTOM HOLE SURVEYED LATITUDE 39°40'59.80"

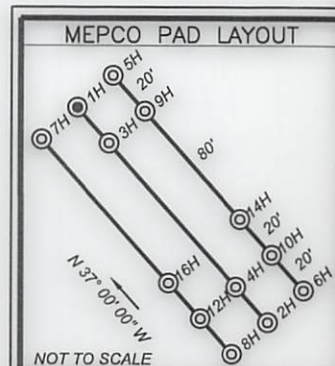
Table with 4 columns: TAG, OWNER, DIST-TM-PAR, AC. ±. Lists property owners and acreage for the well pad area.

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



NOTES ON SURVEY

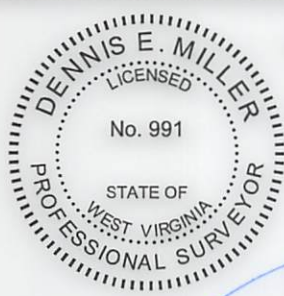
- 1. NO OCCUPIED DWELLINGS OR BUILDINGS 2500 SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER DAIRY CATTLE OR POULTRY HUSBANDRY WITHIN 625' OF THE CENTER OF THE WELL PAD WERE OBSERVED.
2. NO WATER WELLS OR DEVELOPED SPRINGS USED FOR HUMAN OR DOMESTIC ANIMAL CONSUMPTION WERE FOUND WITHIN 250'.
3. SURFACE OWNERSHIP TAKEN FROM THE MONONGALIA COUNTY TAX ASSESSOR AND COUNTY CLERK OFFICES IN OCTOBER, 2015.
4. WELL LATITUDE AND LONGITUDE FROM SURVEY GRADE VRS SOLUTIONS.
5. BEARINGS SHOWN ARE BASED UPON THE WV STATE PLANE COORDINATE SYSTEM, NAD 83 GRID NORTH ZONE.
6. LEASE INFORMATION PROVIDED BY NORTHEAST NATURAL ENERGY LLC.
7. PARCEL AND LEASE BOUNDARY LOCATIONS ARE APPROXIMATE AND BASED UPON RELEVANT GIS INFORMATION, FIELD LOCATION BOUNDARY EVIDENCE AND DEED DESCRIPTIONS.



600 Marketplace Avenue, Suite 200  
Bridgeport, WV 26330  
Toll Free 855-488-9539  
Fax 304-933-3327



Civil & Environmental Consultants, Inc.



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 rules issued and prescribed by the Division of Environmental Protection.

DATE SEPTEMBER 5, 2017  
SCALE 1" = 1600' ACCURACY 1:2500  
OPERATORS WELL No. 1H  
47 - 061 - 01755HbA  
API No. mod  
TYPE OF WELL:  
GAS: Production X Storage \_\_\_ \*Deep \_\_\_ \*Shallow X  
PROPOSED WORK ON LOCATION:  
Drill X Drill Deeper \_\_\_ Redrill \_\_\_ Convert \_\_\_  
Fracture/Stimulate X \*Plug off to Formation \_\_\_  
Perforate New Formation \_\_\_ Plug and Abandon \_\_\_  
Clean/ Replug \_\_\_ Other Than Above \_\_\_  
If "Other" Please see Details below-  
DETAILS OF PROPOSED WORK  
\*TARGET FORMATION MARCELLUS  
ESTIMATED DEPTH TVD: 8,222' TMD: 18,245.88'

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



WELL AREA & LOCATION INFORMATION:  
ELEVATION SOURCE DGPS (OPUS)  
ELEVATION 1448.16' (EXISTING), 1424.00' (PROPOSED)  
WATERSHED JAKES RUN OF DUNKARD CREEK DISTRICT 11/03/2017  
COUNTY MONONGALIA TOPO QUAD BLACKSVILLE  
SURFACE OWNER MEPCO LLC  
ACREAGE 103.49 ±  
ROYALTY OWNER NNE LLC ET AL (LEASE NO. WV-061-003478-001)  
LEASE ACREAGE 361.72 ±

WELL OPERATOR NORTHEAST NATURAL ENERGY LLC DESIGNATED AGENT JOHN ADAMS  
ADDRESS 707 VIRGINIA STREET EAST, SUITE 1200 CHARLESTON, WV 25301  
ADDRESS 707 VIRGINIA STREET EAST, SUITE 1200 CHARLESTON, WV 25301

WW-6A  
(9-13)

API NO. 47-061 - 01755 mod  
OPERATOR WELL NO. MEPCO 1H  
Well Pad Name: MEPCO

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: 9/6/2017 Date Permit Application Filed: 9/20/2017

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: Please See Attached  
Address: \_\_\_\_\_

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

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

Name: Please See Attached  
Address: \_\_\_\_\_

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

SURFACE OWNER(s) (Impoundments or Pits)

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

COAL OWNER OR LESSEE

Name: Please See Attached  
Address: \_\_\_\_\_

COAL OPERATOR

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

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

Name: Please See Attached  
Address: \_\_\_\_\_

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

\*Please attach additional forms if necessary

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Office of Oil and Gas

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WV Department of  
Environmental Protection  
11/03/2017



SEP 29 2017

WV Department of  
Environmental Protection

**Notice is hereby given:**

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

**This Notice Shall Include:**

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

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

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

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

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

11/03/2017

WW-6A  
(8-13)

API NO. 47- 61 - 01755 MOD  
OPERATOR WELL NO. MEPCO 1H  
Well Pad Name: MEPCO

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

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Office of Oil and Gas  
SEP 29 2017  
WV Department of  
Environmental Protection

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.**

11/03/2017

**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)

API NO. 47-061 - 01755 MOB  
OPERATOR WELL NO. MEPCO 1H  
Well Pad Name: MEPCO

**Notice is hereby given by:**

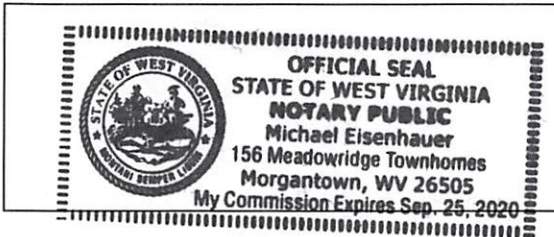
Well Operator: Northeast Natural Energy LLC  
Telephone: 304-212-0422  
Email: hmedley@nne-llc.com

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](mailto:depprivacyofficer@wv.gov).

*Hall Medley*



Subscribed and sworn before me this 21 day of September, 2017

*Michael Eisenhauer* Notary Public

My Commission Expires 9/25/2020

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WW-6A

MEPCO 1H

**Surface Owner(s)**

Consolidation Coal Company ✓  
Attn: Melissa Wilson  
Land Agent Depositions – Rentals  
CNX Center  
1000 Consol Energy Drive  
Canonsburg, PA 15317

MEPCO, LLC ✓  
Attn: Will Oliver  
103 Corporate Drive, Suite 102  
Morgantown, WV 26501

**Surface Owner(s) (Road and/or Other Disturbance)**

Consolidation Coal Company  
Attn: Melissa Wilson ✓  
Land Agent Depositions – Rentals  
CNX Center  
1000 Consol Energy Drive  
Canonsburg, PA 15317

**Coal Owner or Lessee**

Consol Mining Company, LLC ✓  
Attn: Analyst, Engineering and Operations Support – Coal  
CNX Center  
1000 Consol Energy Drive  
Canonsburg, PA 15317

Murray Energy Corp. ✓  
Attn: Alex P. O'Neill  
Coal – Oil and Gas Relations Manager  
46226 National Road  
St. Clairsville, OH 43950

Gary G. Loring ✓  
139 Thistledown Lane  
Morgantown, WV 26508

A. Keith Michael ✓  
241 Jefferson St.  
Bridgeport, WV 26330

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11/03/2017

WW-6A

MEPCO 1H

Gregory G. Michael ✓  
1176 Sands Drive  
Fairmont, WV 26554

Jane Ann Reynolds ✓  
2 West Hill Drive  
Fairmont, WV 26554

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

Diane K. Braun, co-executrix of James E. Fletcher Estate ✓  
44 Luther Park Road  
Fairview, WV 26570

William D. Statler ✓  
578 Long Drain Road, Core, WV 26541

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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:** 09/06/2017      **Date Permit Application Filed:** 09/20/2017

**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: MEPCO, LLC, Attn: Brian Osburn      Name: \_\_\_\_\_  
Address: 103 Corporate Drive, Suite 102      Address: \_\_\_\_\_  
Morgantown, WV 26501      \_\_\_\_\_

**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: West Virginia      UTM NAD 83      Easting: 572697.82  
County: Monongalia      Northing: 4390702.61  
District: Clay      Public Road Access: County Route 29/4  
Quadrangle: Blacksville      Generally used farm name: MEPCO  
Watershed: Jakes Run of Dunkard Creek

**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 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

**Notice is hereby given by:**

Well Operator: Northeast Natural Energy LLC      Authorized Representative: Hollie Medley, Regulatory Manager  
Address: 707 Virginia Street East, Suite 1200      Address: 48 Donley Street, Suite 601  
Charleston, WV 25301      Morgantown, WV 26501  
Telephone: 304-414-7060      Telephone: 304-212-0422  
Email: hmedley@nne-llc.com      Email: hmedley@nne.ll.com  
Facsimile: 304-414-7061      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](mailto:depprivacyofficer@wv.gov).**

SEP 29 2017

WV Department of Environmental Protection  
11/03/2017

61-01753

**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:** 09/06/2017      **Date Permit Application Filed:** 09/20/2017

**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: MEPCO, LLC, Attn: Brian Osburn  
Address: 103 Corporate Drive, Suite 102  
Morgantown, WV 26501

Name: Consolidation Coal Company, Attn: Melissa Wilson  
Address: CNX Center, 1000 Consol Energy Drive  
Canonsburg, PA 15317

**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: West Virginia                                      UTM NAD 83      Easting: 572697.82  
County: Monongalia                                      Northing: 4390702.61  
District: Clay                                      Public Road Access: County Route 29/4  
Quadrangle: Blacksville                                      Generally used farm name: MEPCO  
Watershed: Jakes Run of Dunkard Creek

**This Notice Shall Include:**

Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1) A copy of this code section; (2) The 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 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

Well Operator: Northeast Natural Energy LLC  
Telephone: 304-212-0422  
Email: hmedley@nne-llc.com

Address: 707 Virginia Street East, Suite 1200  
Charleston, WV 25301  
Facsimile: 304-241-5972

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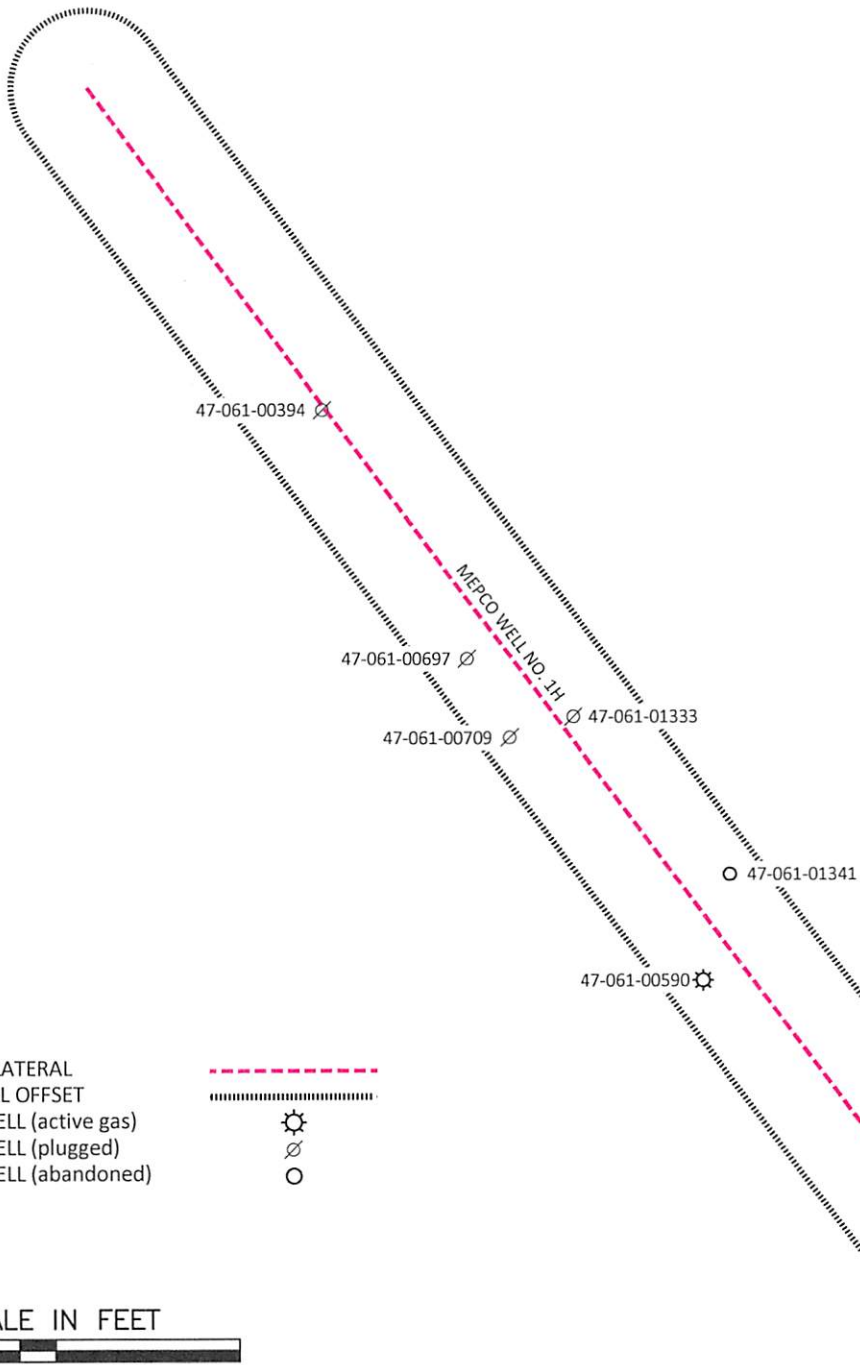
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Environmental Protection  
11/03/2017



61-01755 MOD

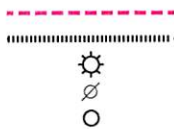


NORTH



LEGEND

- PROPOSED LATERAL
- 500' LATERAL OFFSET
- EXISTING WELL (active gas)
- EXISTING WELL (plugged)
- EXISTING WELL (abandoned)



SCALE IN FEET



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**Civil & Environmental Consultants, Inc.**

600 Marketplace Ave · Suite 200 · Bridgeport, WV 26330  
Ph: 304.933.3119 · Fax: 304.933.3327  
www.cecinc.com

NORTHEAST NATURAL ENERGY LLC  
MEPCO LLC  
CLAY DISTRICT, MONONGALIA COUNTY  
WEST VIRGINIA

MEPCO WELL NO. 1H  
AREA OF REVIEW

DRAWN BY:	LDM	CHECKED BY:	DMY	APPROVED BY:	DEM	FIGURE NO.:	
DATE:	SEPTEMBER 21, 2017	DWG SCALE:	1"=1,200'	PROJECT NO:	150-445		11/03/2017

P:\2015\150-445\Survey\Dwg\Well Plats\FINAL PLATS\AREA OF REVIEW\NORTH\150445-SRV-MEPCO WELL 1H AOR.dwg(MEPCO 1H AOR) LS:(9/21/2017 - Moody) - LP: 9/21/2017 2:55 PM

**AREA OF REVIEW  
MEPCO WELL 1H**

UNIT ( API NUMBER)	WELL NAME	WELL NUMBER	OPERATOR	WV DEP STATUS	TD	GROUND ELEVATION	COMMENTS
4706100443	J.W. WRIGHT	14	NNE RESOURCES LLC	ABANDONED	3262'	1272'	
4706100590	UNKNOWN	1	CHISLER BROTHERS CONTRACTING, LLC	ACTIVE GAS	Pre 1929	UNKNOWN	
4706101341	3-28	3-28	NOUMENON CORPORATION	ABANDONED	UNKNOWN	1393'	Permit to Plug 1/5/2015
4706101333	UNKNOWN	3-26	NOUMENON CORPORATION	PLUGGED	UNKNOWN	1018'	Plugged 12/1/2015
4706100709	LATHAM TENNANT #1	1	CONSOLIDATION COAL COMPANY	PLUGGED	UNKNOWN	1036.93'	Plugged 4/5/1983
4706100697	MIKE WRIGHT #2	2	CONSOLIDATION COAL COMPANY	PLUGGED	UNKNOWN	1044.63'	Plugged 11/3/1982
4706100394	UNKNOWN	5069	CNX GAS COMPANY LLC	PLUGGED	3185'	1181.75'	Plugged 12/15/2014

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61-01755JW09



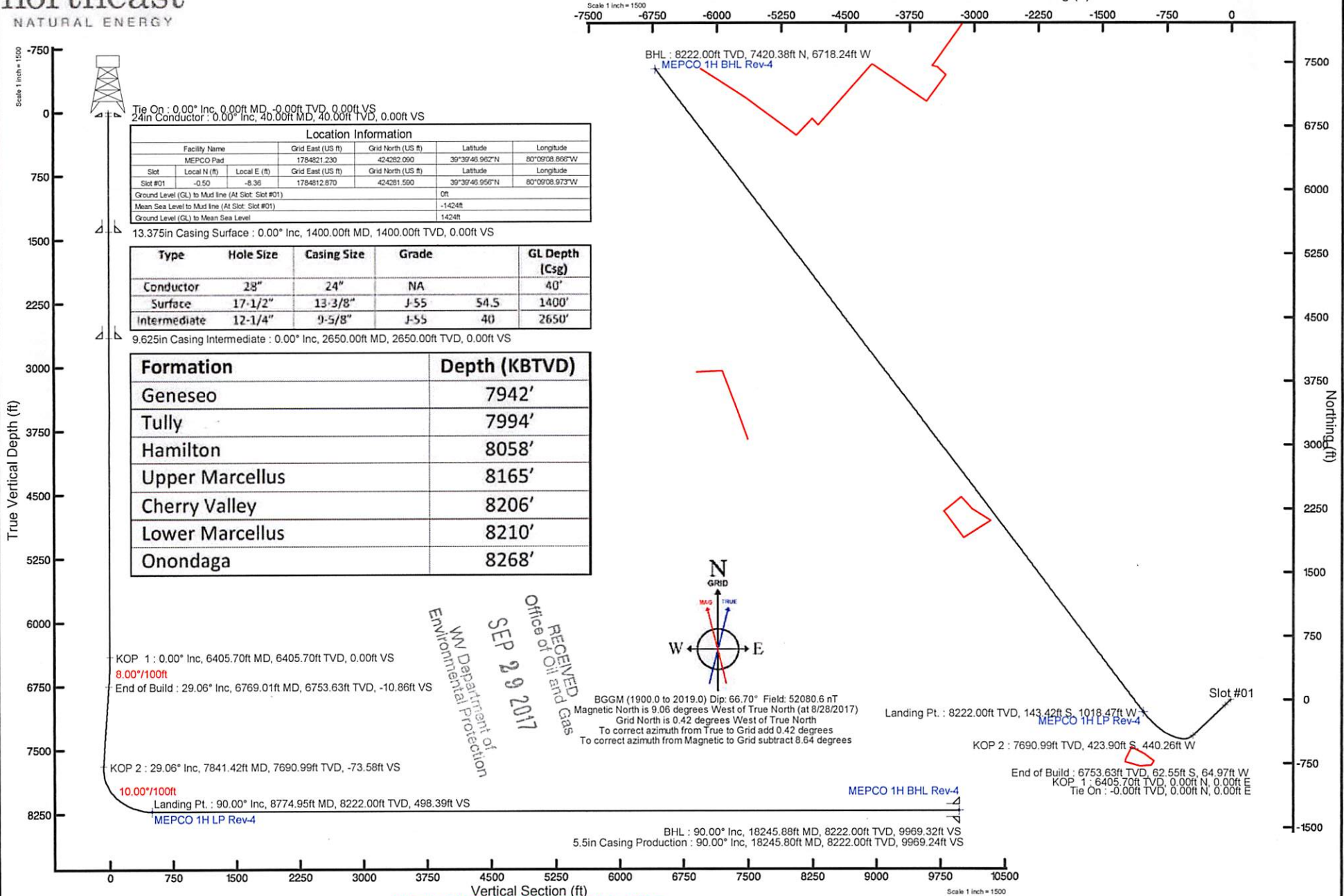
**northeast**  
NATURAL ENERGY

# NORTHEAST NATURAL ENERGY, LLC

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

Slot: Slot #01  
Well: MEPCO LLC 1H  
Wellbore: MEPCO LLC 1H PWB

**BAKER HUGHES**  
a GE company



Tie On : 0.00° Inc, 0.00ft MD, -0.00ft TVD, 0.00ft VS  
24in Conductor : 0.00° Inc, 40.00ft MD, 40.00ft TVD, 0.00ft VS

Location Information					
Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
MEPCO Pad		1784821.230	424262.090	39°39'46.962"N	80°09'08.866"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Longitude
Slot #01	-0.50	-8.36	1784812.870	424261.590	39°39'46.956"N 80°09'08.973"W
Ground Level (GL) to Mud line (At Slot: Slot #01) 0ft					
Mean Sea Level to Mud line (At Slot: Slot #01) -1424ft					
Ground Level (GL) to Mean Sea Level 1424ft					

13.375in Casing Surface : 0.00° Inc, 1400.00ft MD, 1400.00ft TVD, 0.00ft VS

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 1400'
Intermediate	12-1/4"	9-5/8"	J-55	40 2650'

9.625in Casing Intermediate : 0.00° Inc, 2650.00ft MD, 2650.00ft TVD, 0.00ft VS

Formation	Depth (KBTVS)
Geneseo	7942'
Tully	7994'
Hamilton	8058'
Upper Marcellus	8165'
Cherry Valley	8206'
Lower Marcellus	8210'
Onondaga	8268'

KOP 1 : 0.00° Inc, 6405.70ft MD, 6405.70ft TVD, 0.00ft VS

8.00°/100ft

End of Build : 29.06° Inc, 6769.01ft MD, 6753.63ft TVD, -10.86ft VS

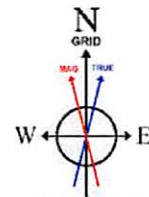
KOP 2 : 29.06° Inc, 7841.42ft MD, 7690.99ft TVD, -73.58ft VS

10.00°/100ft

Landing Pt. : 90.00° Inc, 8774.95ft MD, 8222.00ft TVD, 498.39ft VS

MEPCO 1H LP Rev-4

BGGM (1900.0 to 2019.0) Dip: 66.70° Field: 52080.6 nT  
Magnetic North is 9.06 degrees West of True North (at 8/28/2017)  
Grid North is 0.42 degrees West of True North  
To correct azimuth from True to Grid add 0.42 degrees  
To correct azimuth from Magnetic to Grid subtract 8.64 degrees



Landing Pt. : 8222.00ft TVD, 143.42ft S, 1018.47ft W  
MEPCO 1H LP Rev-4

KOP 2 : 7690.99ft TVD, 423.90ft S, 440.26ft W

End of Build : 6753.63ft TVD, 62.55ft S, 64.97ft W  
KOP 1 : 6405.70ft TVD, 0.00ft N, 0.00ft E  
Tie On : -0.00ft TVD, 0.00ft N, 0.00ft E

BHL : 90.00° Inc, 18245.88ft MD, 8222.00ft TVD, 9969.32ft VS  
5.5in Casing Production : 90.00° Inc, 18245.80ft MD, 8222.00ft TVD, 9969.24ft VS

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