



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

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

Monday, September 12, 2016
WELL WORK PERMIT
Horizontal 6A / Horizontal 6A Well - 1

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

Re: Permit approval for MEPCO 9H
47-061-01760-00-00

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: MEPCO 9H
Farm Name: MEPCO LLC
U.S. WELL NUMBER: 47-061-01760-00-00
Horizontal 6A / Horizontal 6A Well - 1
Date Issued: 9/12/2016

Promoting a healthy environment.

09/16/2016

PERMIT CONDITIONS470610176
06101760

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. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
8. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.
9. 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.

09/16/2016

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 3 BLACKSVILLE 256
Operator ID County District Quadrangle

2) Operator's Well Number: MEPCO 9H Well Pad Name: MEPCO

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

4) Elevation, current ground: 1453.30' Elevation, proposed post-construction: 1424.00'

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

(b) If Gas Shallow Deep _____
Horizontal

6) Existing Pad: Yes or No NO

MDK 5/23/2016

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus, 8,222', 103', 3600 PSI

470610

8) Proposed Total Vertical Depth: 8,222'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 17,399.63'

11) Proposed Horizontal Leg Length: 7,942'

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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Office of Oil & Gas
JUN 06 2016*

18)

CASING AND TUBING PROGRAM

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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	1,423'	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	17,400'	17,370'	4,052 Cu. Ft.
Tubing	2-7/8"	New	N-80	6.5	NA	8,500'	NA
Liners							

MSK 5/23/2016

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	NA
Fresh Water	13-3/8"	17 1/2"	.38"	2,760	2,000	Class A	1.23
Coal							
Intermediate	9-5/8"	12 1/4"	.395"	3,950	3,000	Class A	1.3
Production	5-1/2"	8 3/4"	.361"	12,530	9,700	50:50 Poz	1.21
Tubing	2-7/8"	NA	.217"	10,570	3,600	NA	NA
Liners							

PACKERS

Kind:				
Sizes:				
Depths Set:				

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 Office of Oil & Gas
 JUN 06 2016

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 6,057.71' TVD/MD. The well will then be horizontally drilled on synthetic based mud from the KOP to approximately 8,222' TVD / 17,399.63' MD along a 323 degree azimuth 1760

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): 12.8

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.

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.

JUN 06 2016

*Note: Attach additional sheets as needed.

MEPCO 9H - Area c

API Number	Well Name	Well Number	Operator
47-061-00615		1	Consolidated Coal Company
47-061-00613		J.W. Wright #13	Operator Unknown
47-061-00578	ARKWRIGHT	226	KEYSTONE GAS CO. (CRESCENT HILL
47-061-00582	JOHN W WRIGHT	13	PENNZOIL COMPANY
47-061-30160	MATTIE E MARTIN	3	OPER IN MIN.OWNER FLD,NO CODE A
47-061-71193	J R MOORE		OPER IN MIN.OWNER FLD,NO CODE A
47-061-71281	M WRIGHT	13	MYERS, BURLEY K.

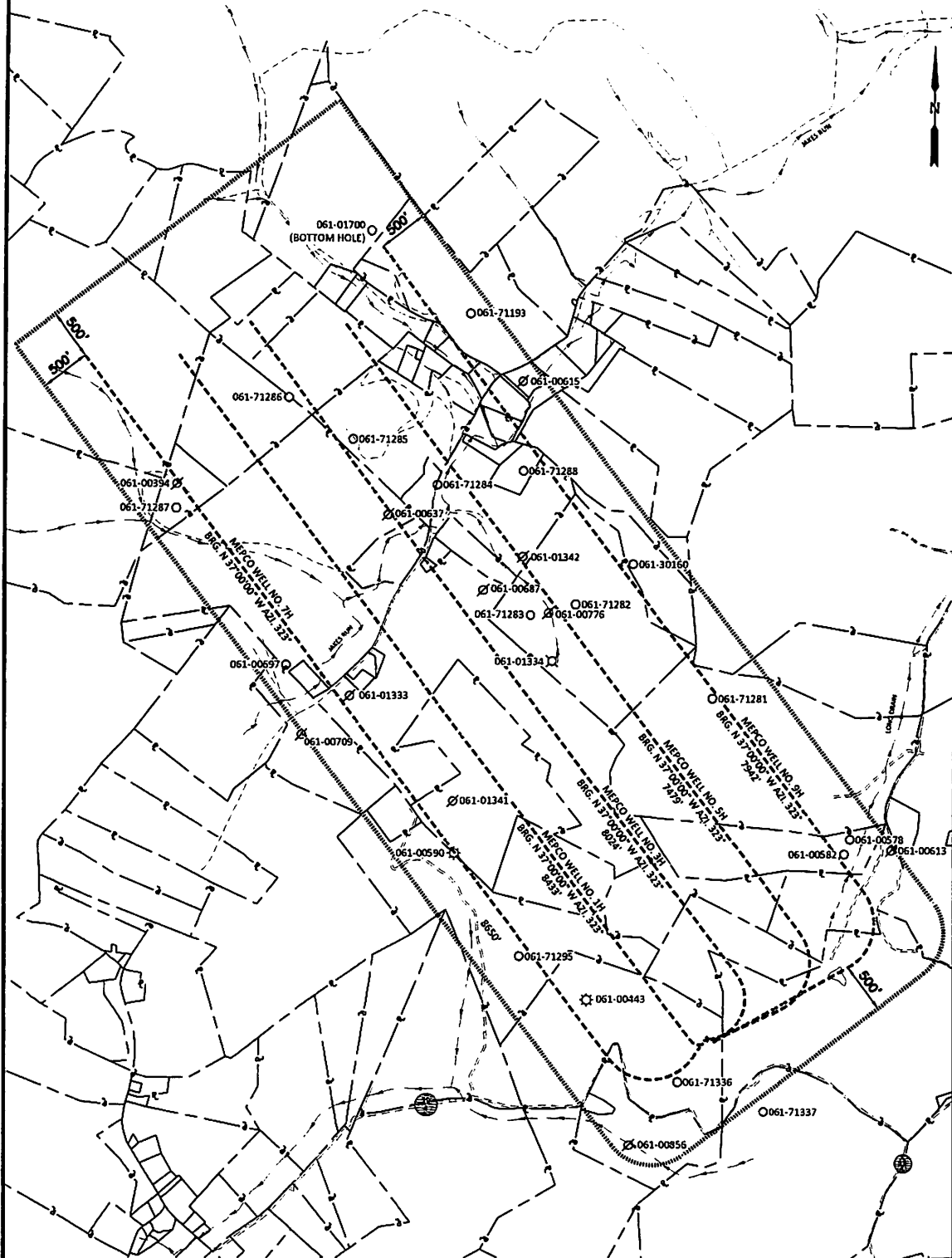
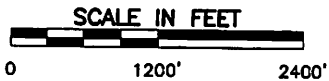
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of Review

Latitude (NAD 27)	Longitude (NAD 27)	TMD	TVD	Producing Formation
39.68070	-80.15914	n/a	950'	plugged
39.672862	-80.146191	n/a	2072'	big injun-plugged
39.66830	-80.14770	8-11-43		unknown
39.66790	-80.14790	8-11-43		unknown
39.67570	-80.15540	8-11-40.1		unknown
39.68240	-80.16120	8-11.26		Pre 1929 No Records
39.67210	-80.15260	8-11.42		Pre 1929 No Records

4706101760

**NORTHEAST NATURAL ENERGY LLC
MEPCO NORTH WELLS**



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

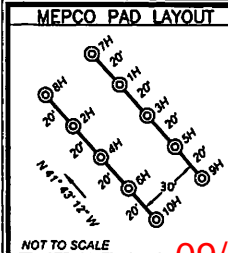
Civil & Environmental Consultants, Inc.

DATE: AUGUST 31, 2016
SCALE: 1"=1200'

AREA OF REVIEW

SURFACE BOUNDARY	---
CREEK/STREAM	~~~~~
ROADS	=====
PROPOSED LATERAL	-----
500' LATERAL OFFSET	-----
EXISTING GAS WELL (active)	○
EXISTING GAS WELL (plugged)	○
EXISTING GAS WELL (abandoned)	○
GAS WELL (never drist)	○
EXISTING GAS WELL (prior to 1979)	○

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



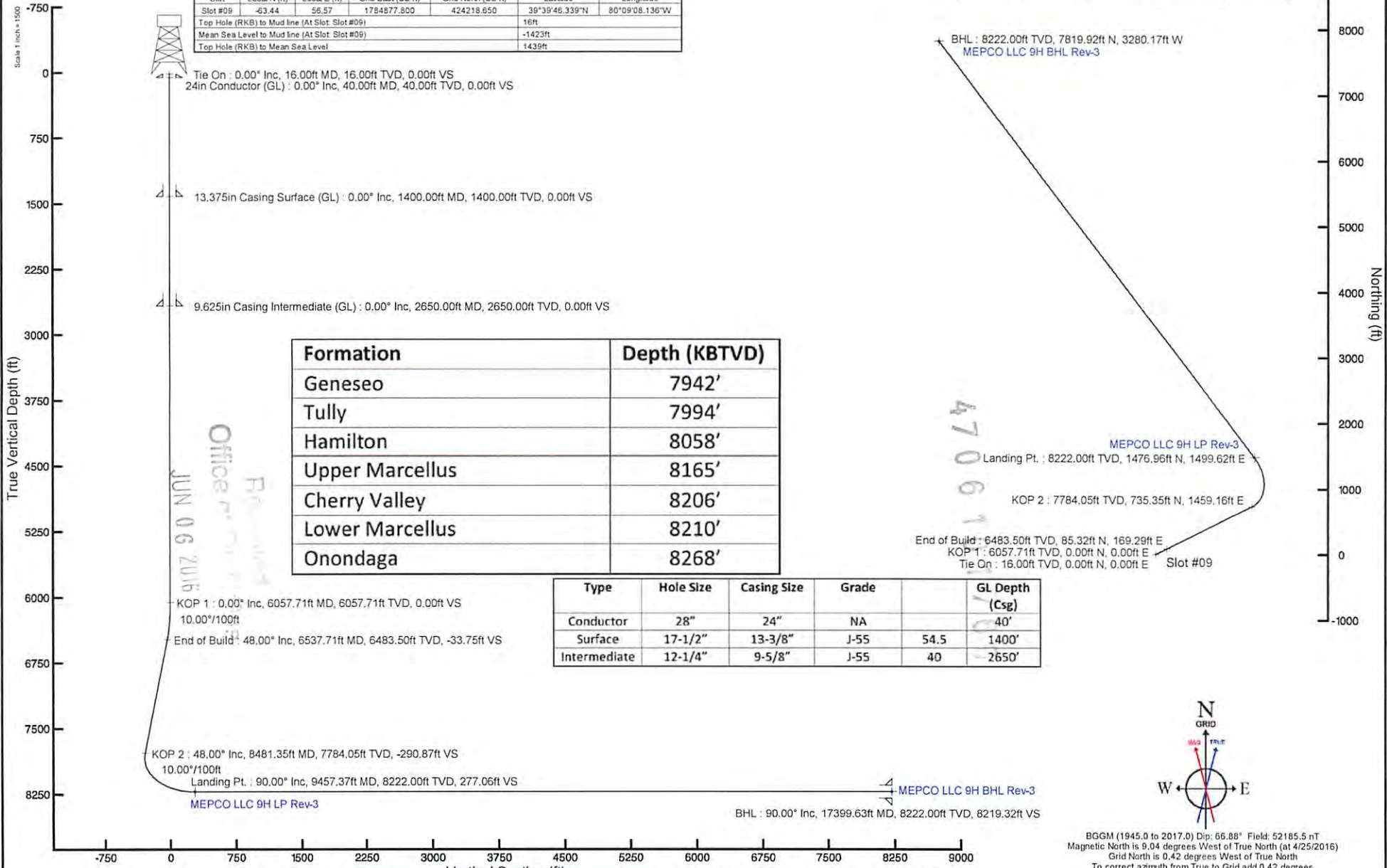
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NORTHEAST NATURAL ENERGY, LLC

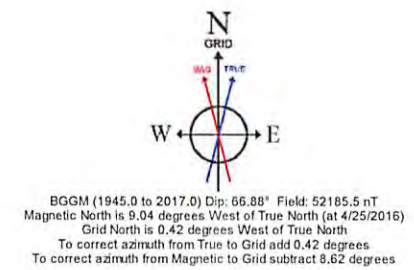
Location: Monongalia County, WV
 Field: Monongalia
 Facility: MEPCO Pad

Slot: Slot #09
 Well: MEPCO LLC 9H
 Wellbore: MEPCO LLC 9H PWB

Location Information					
Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
MEPCO Pad		1784821.230	424282.090	39°39'46.952"N	80°09'08.866"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Longitude
Slot #09	-63.44	56.57	1784877.800	424218.650	80°09'08.136"W
Top Hole (RKB) to Mud line (At Slot Slot#09)				16ft	
Mean Sea Level to Mud line (At Slot Slot#09)				-1423ft	
Top Hole (RKB) to Mean Sea Level				1439ft	



Azimuth 323.00° with reference 0.00 N, 0.00 E



WW-9
(4/16)

API Number 47 - _____ - _____
Operator's Well No. MEPCO 9H

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) Jakes Run of Dunkard Creek Quadrangle Blacksville

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) 06101760

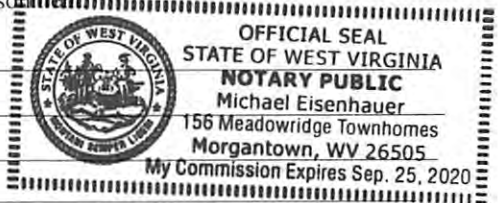
-Landfill or offsite name/permit number? Please See Attachment "A"

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.

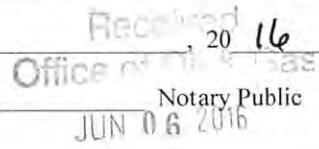
I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations 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 M Medley
Company Official (Typed Name) Hollie M. Medley
Company Official Title Regulatory Coordinator



Subscribed and sworn before me this 23 day of May
Michael Eisenhauer / [Signature]



My commission expires September 25, 2020

09/16/2016

Northeast Natural Energy LLC

Proposed Revegetation Treatment: Acres Disturbed 12.80 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: [Signature]

Comments: _____
_____ 4706101760

Title: Inspection

Date: 5/23/2016 Received Office of Oil & Gas

Field Reviewed? () Yes () No

JUN 06 2016

Attachment A to WW-9

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

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

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

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

- Fairmont Brine Processing (WV NPDES #0116408)
- Green Hunter M. E. Elder 1 Disposal Well (Permit # 47-085-05151)
- Green Hunter Mason 1 Disposal Well (Permit #47-085-09721)
- Green Hunter Warren Disposal Well (Permit #34-121-2-3995)
- 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 #2D0732549)
- Appalachian Oil Purchaser BW#4 Disposal Well (Permit # 2D0732523)

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JUN 06 2016

09/16/2016



northeast
NATURAL ENERGY

MEPCO 9H
SITE SAFETY PLAN

May 9, 2016

MJK
5/23/2016

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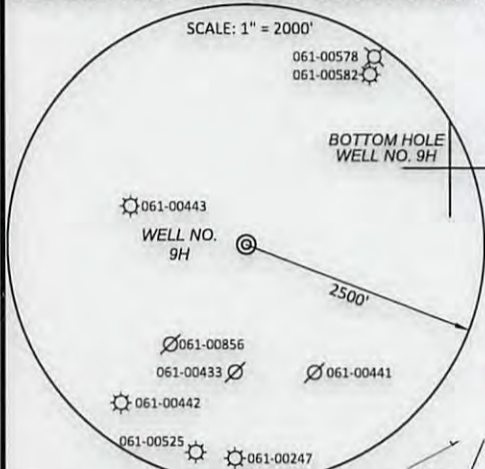
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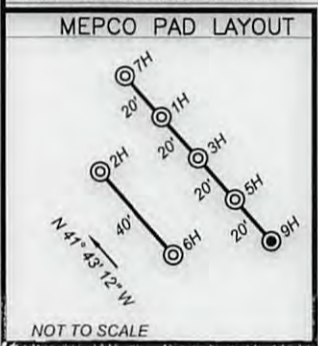
NOTES ON SURVEY

- 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.
- NO WATER WELLS OR DEVELOPED SPRINGS USED FOR HUMAN OR DOMESTIC ANIMAL CONSUMPTION WERE FOUND WITHIN 250'.
- SURFACE OWNERSHIP TAKEN FROM THE MONONGALIA COUNTY TAX ASSESSOR AND COUNTY CLERK OFFICES IN OCTOBER, 2015.
- WELL LATITUDE AND LONGITUDE FROM SURVEY GRADE VRS SOLUTIONS.
- BEARINGS SHOWN ARE BASED UPON THE WV STATE PLANE COORDINATE SYSTEM, NAD 83 GRID NORTH ZONE.
- LEASE INFORMATION PROVIDED BY NORTHEAST NATURAL ENERGY LLC.
- PARCEL AND LEASE BOUNDARY LOCATIONS ARE APPROXIMATE AND BASED UPON RELEVANT GIS INFORMATION, FIELD LOCATION BOUNDARY EVIDENCE AND DEED DESCRIPTIONS.

NORTHEAST NATURAL ENERGY LLC
MEPCO WELL NO. 9H
LEASE NO. WV-061-003478-001



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



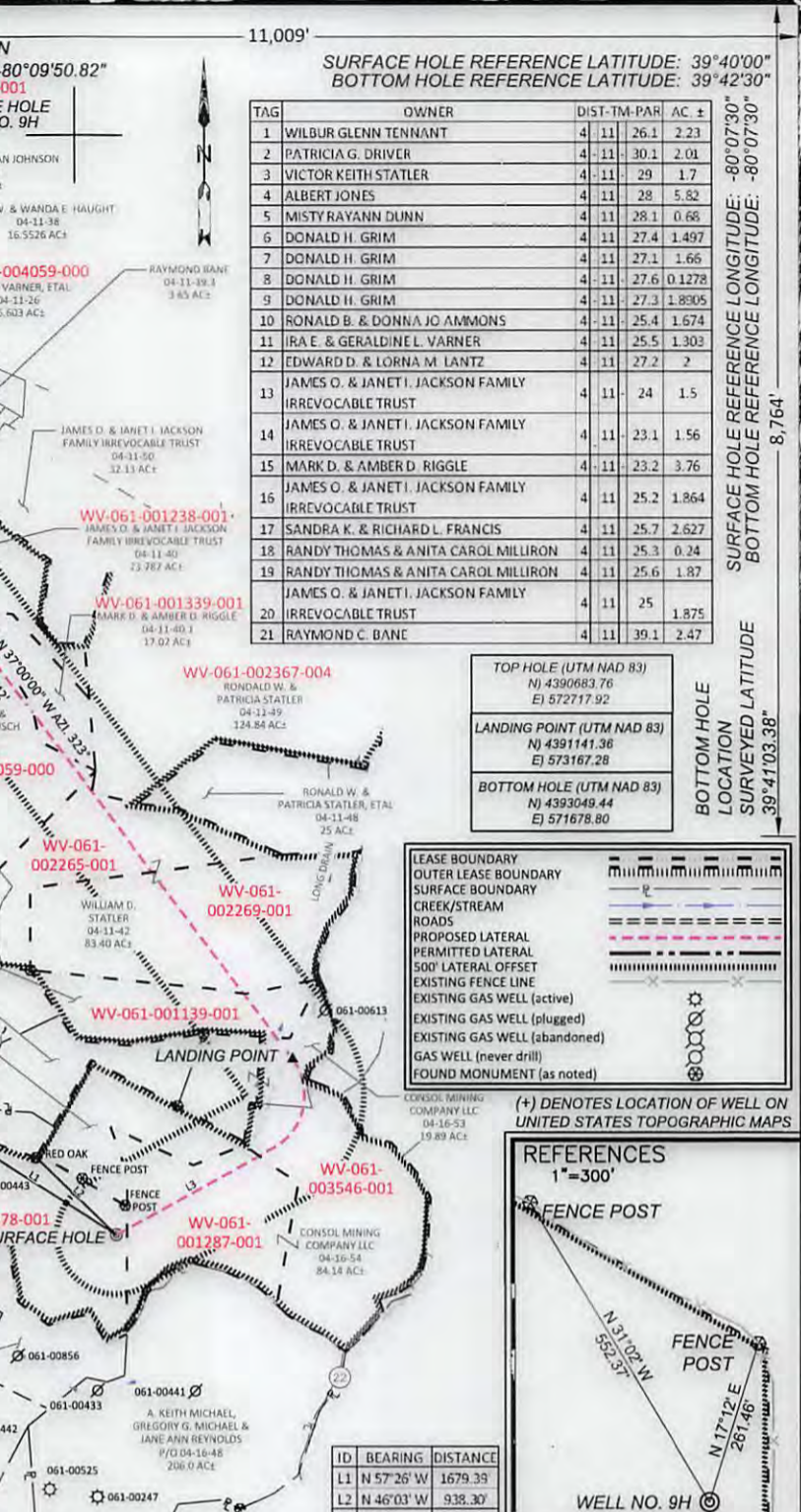
NOT TO SCALE

600 Marketplace Avenue, Suite 200
Bridgeport, WV 26330
Toll Free 855-488-9539
Fax 304-933-3327
Civil & Environmental Consultants, Inc.

DATE AUGUST 22, 2016
SCALE 1" = 1600' ACCURACY 1:2500
OPERATORS WELL No. 9H
47 - 061 - 01760464
API No.

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: 17,399.63'

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 1453.30' (EXISTING), 1424.00' (PROPOSED)
WATERSHED JAKES RUN OF DUNKARD CREEK
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 607.30 ±

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

SURVEYED LONGITUDE -80°09'08.14"

7,674'

LATITUDE: 39°40'00"

LONGITUDE: -80°07'30"
SURVEYED LATITUDE 39°39'46.34"

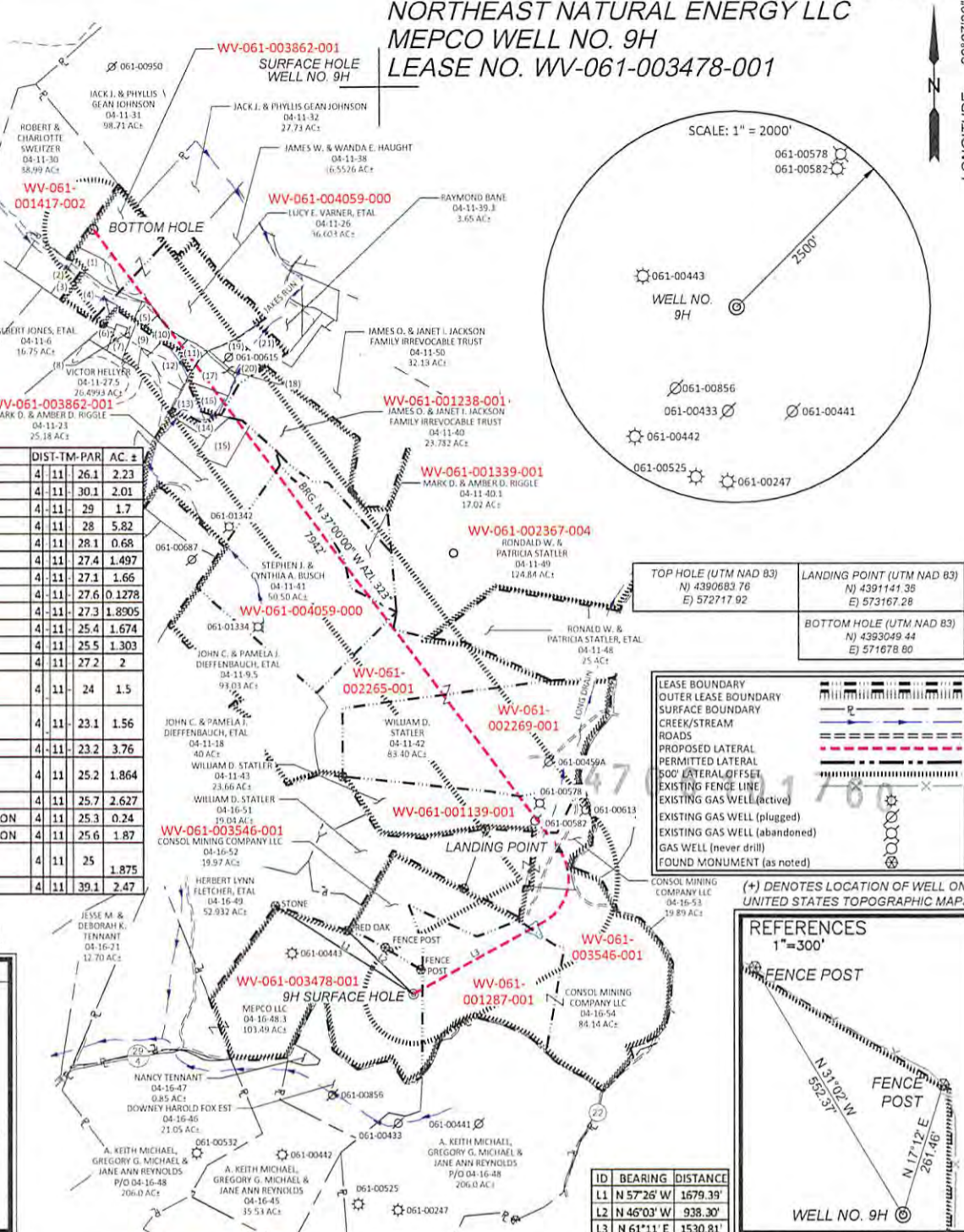
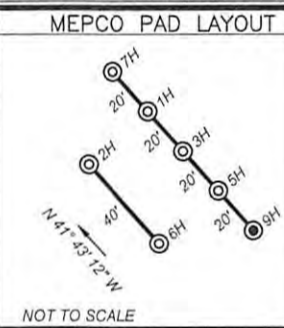
NORTHEAST NATURAL ENERGY LLC MEPCO WELL NO. 9H LEASE NO. WV-061-003478-001

NOTES ON SURVEY

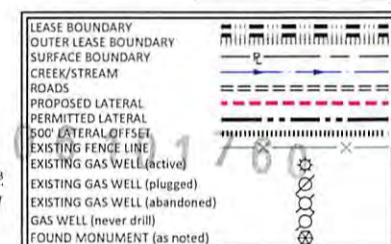
- NO OCCUPIED DWELLINGS OR BUILDINGS 2500 SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER DAIRY CATTLE OR POULTRY HUSBANDRY WITHIN 825' OF THE CENTER OF THE WELL PAD WERE OBSERVED
- NO WATER WELLS OR DEVELOPED SPRINGS USED FOR HUMAN OR DOMESTIC ANIMAL CONSUMPTION WERE FOUND WITHIN 250' SURFACE OWNERSHIP TAKEN FROM THE MONONGALIA COUNTY TAX ASSESSOR AND COUNTY CLERK OFFICES IN OCTOBER, 2015
- WELL LATITUDE AND LONGITUDE FROM SURVEY GRADE VRS SOLUTIONS
- BEARINGS SHOWN ARE BASED UPON THE WV STATE PLANE COORDINATE SYSTEM, NAD 83 GRID NORTH ZONE
- LEASE INFORMATION PROVIDED BY NORTHEAST NATURAL ENERGY LLC
- PARCEL AND LEASE BOUNDARY LOCATIONS ARE APPROXIMATE AND BASED UPON RELEVANT GIS INFORMATION, FIELD LOCATION BOUNDARY EVIDENCE AND DEED DESCRIPTIONS.

TAG	OWNER	DIST	TM	PAR	AC ±
1	WILBUR GLENN TENNANT	4	11	26.1	2.23
2	PATRICIA G. DRIVER	4	11	30.1	2.01
3	VICTOR KEITH STATLER	4	11	29	1.7
4	ALBERT JONES	4	11	28	5.82
5	MISTY RAYANN DUNN	4	11	28.1	0.68
6	DONALD H. GRIM	4	11	27.4	1.497
7	DONALD H. GRIM	4	11	27.1	1.66
8	DONALD H. GRIM	4	11	27.6	0.1278
9	DONALD H. GRIM	4	11	27.3	1.8905
10	RONALD B. & DONNA JO AMMONS	4	11	25.4	1.674
11	IRA E. & GERALDINE L. VARNER	4	11	25.5	1.303
12	EDWARD D. & LORNA M. LANTZ	4	11	27.2	2
13	JAMES O. & JANET I. JACKSON FAMILY IRREVOCABLE TRUST	4	11	24	1.5
14	JAMES O. & JANET I. JACKSON FAMILY IRREVOCABLE TRUST	4	11	23.1	1.56
15	MARK D. & AMBER D. RIGGLE	4	11	23.2	3.76
16	JAMES O. & JANET I. JACKSON FAMILY IRREVOCABLE TRUST	4	11	25.2	1.864
17	SANDRA K. & RICHARD L. FRANCIS	4	11	25.7	2.627
18	RANDY THOMAS & ANITA CAROL MILLIRON	4	11	25.3	0.24
19	RANDY THOMAS & ANITA CAROL MILLIRON	4	11	25.6	1.87
20	JAMES O. & JANET I. JACKSON FAMILY IRREVOCABLE TRUST	4	11	25	1.875
21	RAYMOND C. BANE	4	11	39.1	2.47

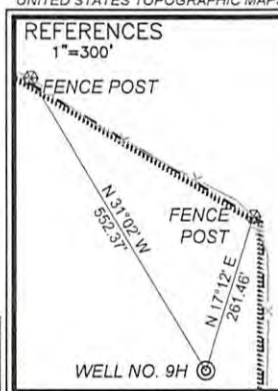
(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS



TOP HOLE (UTM NAD 83)	LANDING POINT (UTM NAD 83)
N) 4390683.76 E) 572717.92	N) 4391141.36 E) 573167.28
BOTTOM HOLE (UTM NAD 83)	N) 4393049.44 E) 571678.80



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



ID	BEARING	DISTANCE
L1	N 57°26' W	1679.39'
L2	N 45°03' W	938.30'
L3	N 61°11' E	1530.81'

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.

Dennis E. Miller

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

DATE MAY 19, 2015

SCALE 1" = 1600' ACCURACY 1:2500

OPERATORS
WELL No. 9H

47 - 061 - 01760 WVR
API No.

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: 17,399.63'

WELL AREA & LOCATION INFORMATION:

ELEVATION SOURCE DGPS (OPUS)

ELEVATION 1453.30' (EXISTING), 1424.00' (PROPOSED)

WATERSHED JAKES RUN OF DUNKARD CREEK DISTRICT CLAY

COUNTY MONONGALIA TOPO QUAD BLACKSBURG **09/16/2016**

SURFACE OWNER MEPCO LLC

ACREAGE 103.49 ±

ROYALTY OWNER NNE LLC ET AL (LEASE NO. WV-061-003478-001)

LEASE ACREAGE 607.30 ±

WELL OPERATOR NORTHEAST NATURAL ENERGY LLC

ADDRESS 707 VIRGINIA STREET EAST, SUITE 1200
CHARLESTON, WV 25301

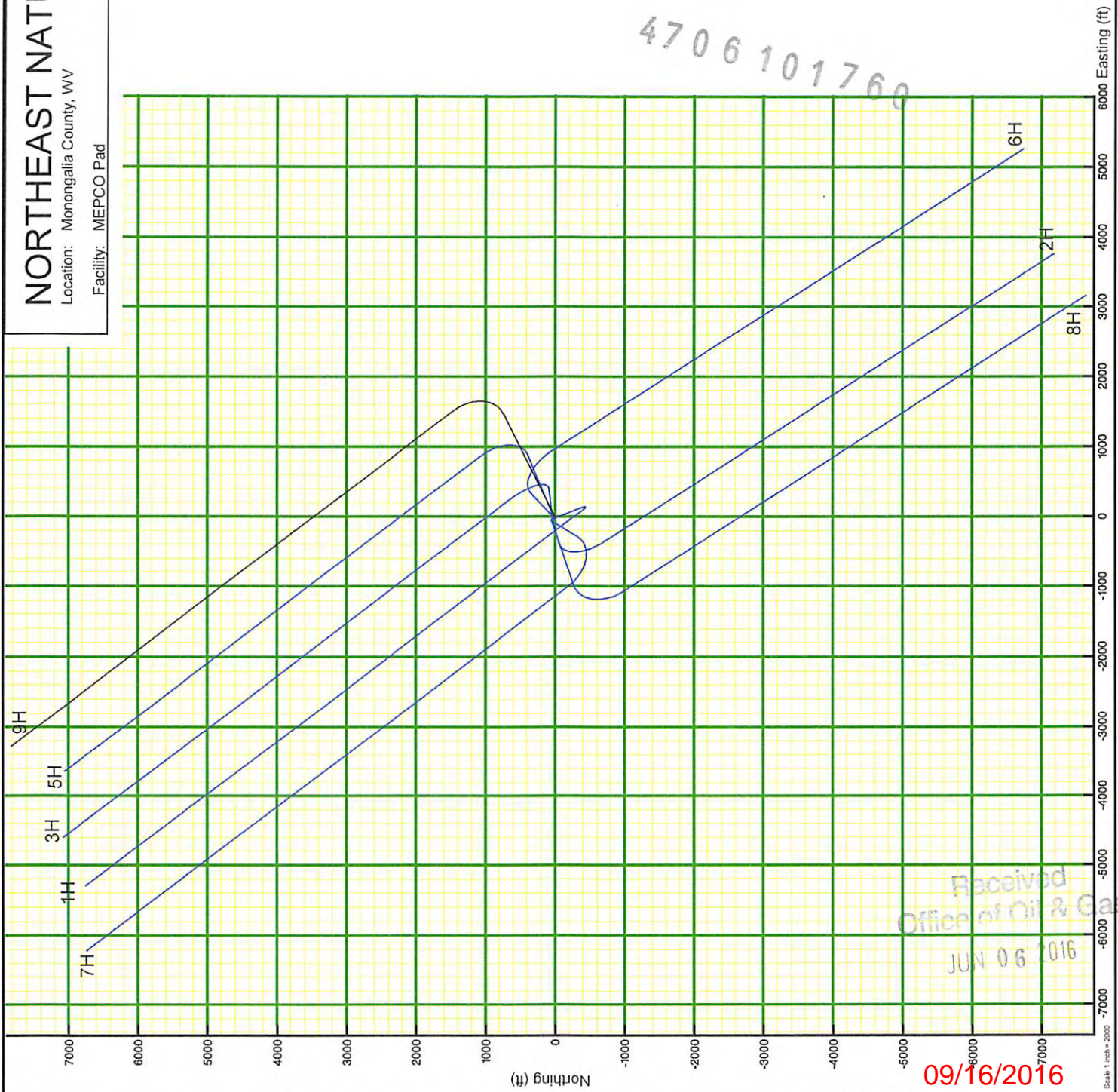
DESIGNATED AGENT JOHN ADAMS

ADDRESS 707 VIRGINIA STREET EAST, SUITE 1200
CHARLESTON, WV 25301

NORTHEAST NATURAL ENERGY, LLC

Location: Monongalia County, WV

Facility: MEPCO Pad



09/16/2016

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Scale: 1 inch = 2000'

**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 attachment

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

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

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

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

Well Operator: Northeast Natural Energy LLC

By: Hollie M. Medley *Hollie M. Medley*

Its: Regulatory Coordinator

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NNE Lease No.	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
WV-061-003862-001	WILSON-BLACK, TAMARA J.	Northeast Natural Energy LLC	Deed	1545-370
WV-061-003862-001	WILSON-BLACK, TAMARA J.	Northeast Natural Energy LLC	Deed	1545-370
WV-061-003862-001	WILSON-BLACK, TAMARA J.	Northeast Natural Energy LLC	Deed	1545-370
WV-061-003862-001	WILSON-BLACK, TAMARA J.	Northeast Natural Energy LLC	Deed	1545-370
WV-061-004059-000	MOORE, DANIEL	*Chartiers Oil Co.	0.125 or greater	52/24
WV-061-001417-001	SWEITZER, ROBERT AND CHARLOTTE	*Chesapeake Appalachia, LLC	0.125 or greater	1375/323
WV-061-001417-002	STATLER, RUBY	*Chesapeake Appalachia, LLC	0.125 or greater	1384/410
WV-061-001417-003	SWEITZER, ROBERT AND CHARLOTTE	Northeast Natural Energy LLC	0.125 or greater	1513/615
WV-061-001238-001	ARMISTEAD, GEORGE B.	*Chesapeake Appalachia, LLC	0.125 or greater	1507/086
WV-061-001238-002	ARMISTEAD, CHARLES S.	*Chesapeake Appalachia, LLC	0.125 or greater	1507/095
WV-061-001238-003	ARMISTEAD, WILLIAM B.	*Chesapeake Appalachia, LLC	0.125 or greater	1511/513
WV-061-001339-001	ARMISTEAD, GEORGE B.	*Chesapeake Appalachia, LLC	0.125 or greater	1398/481
WV-061-001339-002	ARMISTEAD, CHARLES S.	*Chesapeake Appalachia, LLC	0.125 or greater	1399/575
WV-061-001339-003	ARMISTEAD, WILLIAM B.	*Chesapeake Appalachia, LLC	0.125 or greater	1404/244
WV-061-004059-000	MOORE, DANIEL	*Chartiers Oil Co.	0.125 or greater	52/24
WV-061-002265-001	WRIGHT, KENNETH L.	*Chesapeake Appalachia, LLC	0.125 or greater	1508/553
WV-061-002265-002	CODY, DOROTHY C.	*Chesapeake Appalachia, LLC	0.125 or greater	1508/568
WV-061-002265-003	MYERS, JUNE C.	*Chesapeake Appalachia, LLC	0.125 or greater	1507/461
WV-061-002265-004	WRIGHT, WILLIS G.	*Chesapeake Appalachia, LLC	0.125 or greater	1510/429
WV-061-001107-000	SHUMAN, INC.	*Chesapeake Appalachia, LLC	0.125 or greater	1429/371
WV-061-002269-001	WRIGHT, KENNETH L.	*Chesapeake Appalachia, LLC	0.125 or greater	1508/608
WV-061-002269-002	CODY, DOROTHY C.	*Chesapeake Appalachia, LLC	0.125 or greater	1508/569
WV-061-002269-003	SMYRES, ETHEL	*Chesapeake Appalachia, LLC	0.125 or greater	1508/576
WV-061-002269-004	MYERS, JUNE C.	*Chesapeake Appalachia, LLC	0.125 or greater	1507/462
WV-061-002269-005	LONDOT, WILMA	*Chesapeake Appalachia, LLC	0.125 or greater	1510/162
WV-061-002269-006	WRIGHT, WILLIS G.	*Chesapeake Appalachia, LLC	0.125 or greater	1510/428
WV-061-002269-007	DUNLAP, DOROTHY	*Chesapeake Appalachia, LLC	0.125 or greater	1509/781
WV-061-002269-008	ADAMS, BETTY JEAN	Northeast Natural Energy LLC	0.125 or greater	1539/220
WV-061-002269-009	ACKERMAN, WILMA MABEL AND HAROLD	Northeast Natural Energy LLC	Deed	1539/220
WV-061-002269-010	KELLEY, EARL F.	Northeast Natural Energy LLC	Deed	1539/400
WV-061-002269-011	LIPP, KENDALL J. AND PATRICIA	Northeast Natural Energy LLC	0.125 or greater	1538/330
WV-061-002269-012	HYATT, MARY JO AND EDWARD EARL	Northeast Natural Energy LLC	Deed	1539/228
WV-061-002269-013	MARPLE, STEPHEN L.	Northeast Natural Energy LLC	0.125 or greater	1539/66
WV-061-002269-014	RANSDLELL, DORIS M.	Northeast Natural Energy LLC	Deed	1530/603
WV-061-002269-017	MCKINSEY, RICHARD T. AND IMOGENE A.	Northeast Natural Energy LLC	Deed	1539/224
WV-061-002269-018	RANSDLELL, SHIRLEY ANN	Northeast Natural Energy LLC	Deed	1541/406
WV-061-002269-020	SMART, LORRAINE E.	Northeast Natural Energy LLC	Deed	1541/402
WV-061-002269-023	ANGELOTTI, ROBERT	Northeast Natural Energy LLC	Deed	1529/488
WV-061-001139-001	WRIGHT, EMILY B.	*Chesapeake Appalachia, LLC	0.125 or greater	1472/594
WV-061-001139-002	WRIGHT, KENNETH	*Chesapeake Appalachia, LLC	0.125 or greater	1472/595
WV-061-001139-003	WRIGHT, WILLIS	*Chesapeake Appalachia, LLC	0.125 or greater	1472/596
WV-061-002367-004	TRADER, FLORENCE	Northeast Natural Energy LLC	0.125 or greater	1510/68
WV-061-003478-001	LORING, GARY G.	Northeast Natural Energy LLC	Deed	1521/99
WV-061-003600-001	LORING, GARY G.	Northeast Natural Energy LLC	DEED	1550/343
WV-061-003541-001	LORING, GARY G.	Northeast Natural Energy LLC	DEED	1548/780
WV-061-004001-000	WRIGHT, JOHN W.	*South Penn Oil Co.	0.125 or greater	39/202
WV-061-004002-000	TENNANT, NIMROD AND NANCY	*South Penn Oil Co.	0.125 or greater	39/361
WV-061-003546-001	ASHCRAFT, JOHN RICHARD	Northeast Natural Energy LLC	Deed	1529/785
WV-061-003546-002	CRANE, SHIRLEY MARIE ASHCRAFT	Northeast Natural Energy LLC	Deed	1529/701
WV-061-003546-003	ASHCRAFT, CHARLES FRANCIS	Northeast Natural Energy LLC	Deed	1524/229
WV-061-003546-004	ASHCRAFT, RICKY LYNN	Northeast Natural Energy LLC	Deed	1529/792
WV-061-003546-005	ASHCRAFT, JAMES PATRICK	Northeast Natural Energy LLC	Deed	1533/701
WV-061-003546-006	ASHCRAFT, DAYTON	Northeast Natural Energy LLC	Deed	1533/705
WV-061-003546-007	ASHCRAFT, DUSTIN	Northeast Natural Energy LLC	Deed	1533/709
WV-061-003546-001	ASHCRAFT, JOHN RICHARD	Northeast Natural Energy LLC	Deed	1529/785
WV-061-003546-002	CRANE, SHIRLEY MARIE ASHCRAFT	Northeast Natural Energy LLC	Deed	1529/701
WV-061-003546-003	ASHCRAFT, CHARLES FRANCIS	Northeast Natural Energy LLC	Deed	1524/229
WV-061-003546-004	ASHCRAFT, RICKY LYNN	Northeast Natural Energy LLC	Deed	1529/792
WV-061-003546-005	ASHCRAFT, JAMES PATRICK	Northeast Natural Energy LLC	Deed	1533/701
WV-061-003546-006	ASHCRAFT, DAYTON	Northeast Natural Energy LLC	Deed	1533/705
WV-061-003546-007	ASHCRAFT, DUSTIN	Northeast Natural Energy LLC	Deed	1533/709
WV-061-003754-001	STULL, PATRICIA	Northeast Natural Energy LLC	Deed	1541/707
WV-061-001287-001	ASHCRAFT, ROGER ALLEN	*Chesapeake Appalachia, LLC	0.125 or greater	1370/532
WV-061-001287-002	ASHCRAFT, RALPH EDWARD	*Chesapeake Appalachia, LLC	0.125 or greater	1370/310
WV-061-001287-003	ASHCRAFT, RICKY LYNN	*Chesapeake Appalachia, LLC	0.125 or greater	1370/313
WV-061-001287-004	ASHCRAFT, CHARLES FRANCIS	*Chesapeake Appalachia, LLC	0.125 or greater	1371/437
WV-061-001291-001	CRANE, SHIRLEY MARIE ASHCRAFT	*Chesapeake Appalachia, LLC	0.125 or greater	1370/316

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09/16/2016

WW-6A1

Operator's Well No. MEPCO 9H

NNE Lease No.	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
WV-061-001291-002	ASHCRAFT, JAMES PATRICK	*Chesapeake Appalachia, LLC	0.125 or greater	1370/319
WV-061-001291-003	STATLER, DORIS PAULINE	*Chesapeake Appalachia, LLC	0.125 or greater	1485/760
WV-061-001291-004	ASHCRAFT, JOHN RICHARD	*Chesapeake Appalachia, LLC	0.125 or greater	1488/417
WV-061-001291-005	THE HENRIETTA HANULA TRUST	*Chesapeake Appalachia, LLC	0.125 or greater	1510/387
WV-061-001291-014	VARNER, JOY	*Chesapeake Appalachia, LLC	0.125 or greater	1485/771
WV-061-001291-015	KETCHEM, JOYCE	*Chesapeake Appalachia, LLC	0.125 or greater	1487/371
WV-061-001291-016	KING, CHRISTINA J.	*Chesapeake Appalachia, LLC	0.125 or greater	1487/372
WV-061-001291-018	BANE, JANET S.	Northeast Natural Energy LLC	0.125 or greater	1510/244
WV-061-001291-019	TENNANT, HARRY R.	*Chesapeake Appalachia, LLC	0.125 or greater	1485/175

*See Attachment

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Chesapeake Appalachia, LLC.

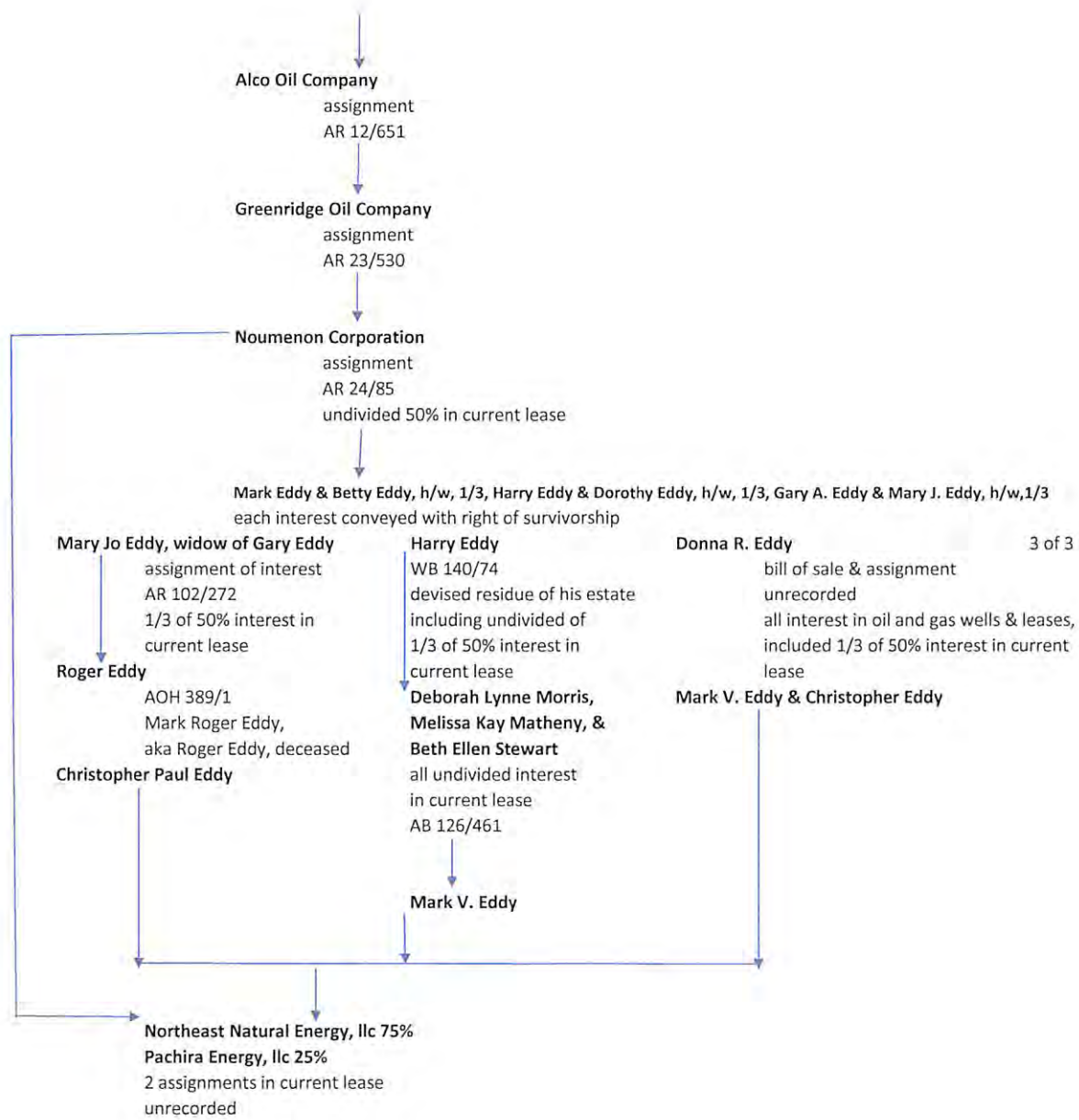


Northeast Natural Energy
Assignment
BK 120/769

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4706107780

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South Penn Oil Company
Assignment
DR 32/240
South Penn Oil Company
|
South Penn Natural Gas Company
Assignment
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

470610175

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WW-60
(7-01)

DATE: June 1, 20 16

OPERATOR'S
WELL NO. MEPCO 1H, 3H, 5H, 7H, 8H and 9H

API NO: 47-
State County Permit No.

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

A F F I D A V I T

State of West Virginia

County of Monongalia

I, Britney Crookshanks (the designated owner or operator, or authorized representative thereof), after being duly sworn, do declare that the undersigned is authorized by the owner of the working interest in the well permit application to which this affidavit is attached to state that (he, she, or it) shall tender to the owner of the oil and gas in place not less than one-eighth of the total amount paid to or received by or allowed to the owner of the working interest at the wellhead for the oil or gas so extracted, produced, or marketed before deducting the amount to be paid or set aside for the owner of the oil or gas in place, or all such oil or gas to be extracted, produced, or marketed from the well. West Virginia Code 22-6-8(e).

Signed: *Britney Crookshanks*

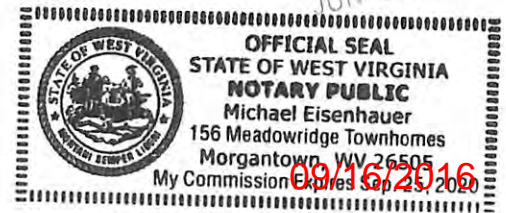
4700109760
07/16/16

Taken, subscribed and sworn to before me this 1 day of June, 20 16.

Michael Eisenhauer
Notary Public

My Commission expires: September 25, 2020

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Office of Oil & Gas
JUN 06 2016





February 12, 2016

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

RE: MEPCO 1H, 3H, 5H, 7H, and 9H

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 Wright Bridge Road (State Route 29/5), Jakes Run Road (State Route 29), Mt. Hermon (State Route 29/4); Louge Tennant Road (State Route 20/1) 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

470610176
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STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE CERTIFICATION

Date of Notice Certification: 05/26/2016

API No. 47- _____ - _____
Operator's Well No. MEPCO 9H
Well Pad Name: MEPCO

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>572717.92</u>
County: <u>Monongalia</u>		Northing: <u>4390683.76</u>
District: <u>Clay</u>	Public Road Access:	<u>County Route 29/4</u>
Quadrangle: <u>Blacksville</u>	Generally used farm name:	<u>MEPCO</u>
Watershed: <u>Jakes Run of 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 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 style="text-align: center;">OOG OFFICE USE ONLY</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input checked="" type="checkbox"/> RECEIVED</p> <p><input 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.

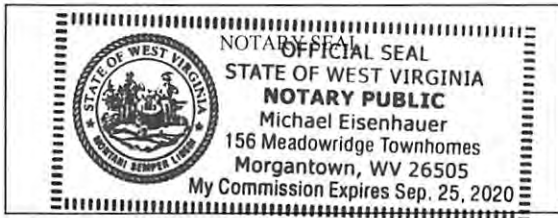
Office of Oil and Gas
JUN 06 2016

09/16/2016

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 Coordinator</u>	Facsimile:	<u>304.241.5972</u>
Telephone:	<u>304.212.0422</u>	Email:	<u>hmedley@nne-llc.com</u>



Hollie Medley
 Subscribed and sworn before me this 26 day of May, 2016.
Michael Eisenhauer Notary Public
 My Commission Expires Sep. 25, 2020

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.

4706101760

Received
Office of Oil & Gas
JUN 06 2016

WW-6A
(9-13)

API NO. 47- _____ -
OPERATOR WELL NO. MEPCO 9H
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: 5/9/2016 **Date Permit Application Filed:** 5/31/2016

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 Attachment
Address: _____

Name: _____
Address: _____

SURFACE OWNER(s) (Road and/or Other Disturbance)
Name: Please See Attachment
Address: _____

Name: _____
Address: _____

SURFACE OWNER(s) (Impoundments or Pits)
Name: _____
Address: _____

COAL OWNER OR LESSEE
Name: Please See Attachment
Address: _____

COAL OPERATOR
Name: _____
Address: _____

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Name: Please See Attachment
Address: _____

OPERATOR OF ANY NATURAL GAS STORAGE FIELD
Name: _____
Address: _____

*Please attach additional forms if necessary

Received
Office of Oil & Gas
JUN 06 2016

09/16/2016

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

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

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.**

10/16/2016
Office of Oil & Gas
Sept 16, 2016

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.

Received
Office of Oil & Gas
JUN 06 2016

09/16/2016

WW-6A
(8-13)

API NO. 47- _____
OPERATOR WELL NO. MEPCO 9H
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.

Helli Medley



Subscribed and sworn before me this 31 day of May 2016.

Michael Eisenhauer Notary Public

My Commission Expires SEP 25, 2020

4706101760

Received
Office of Oil & Gas
JUN 06 2016

09/16/2016

Surface Owner(s)

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

MEPCO, LLC
Attn: Will Oliver
308 Dents Run
Morgantown, WV 26501

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

Consolidation Coal Company
Attn: Melissa Wilson
Land Agent Dipositions – 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

4706101760

Office of Oil & Gas
JUN 06 2016

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

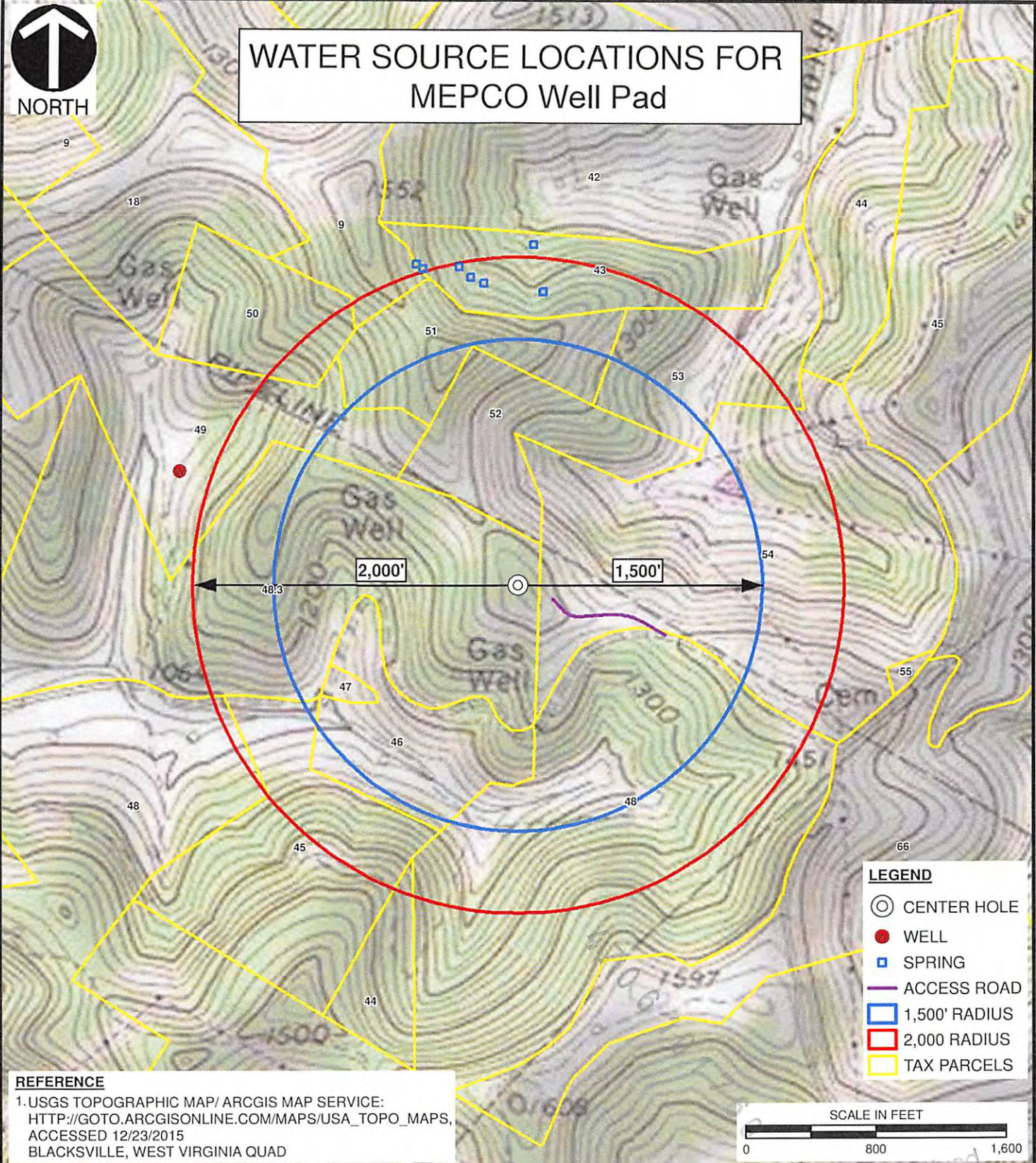
William D. Statler ✓
578 Long Drain Road
Core, WV 26541

4706101760

Received
Office of Oil & Gas
JUN 06 2016

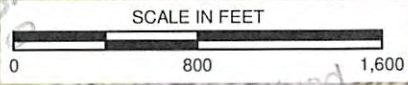


WATER SOURCE LOCATIONS FOR MEPCO Well Pad



- LEGEND**
- ⊙ CENTER HOLE
 - WELL
 - SPRING
 - ACCESS ROAD
 - 1,500' RADIUS
 - 2,000 RADIUS
 - TAX PARCELS

REFERENCE
 1. USGS TOPOGRAPHIC MAP/ ARCGIS MAP SERVICE:
[HTTP://GOTO.ARCGISONLINE.COM/MAPS/USA_TOPO_MAPS](http://gto.arcgis.com/maps/usa_topo_maps),
 ACCESSED 12/23/2015
 BLACKSVILLE, WEST VIRGINIA QUAD



Civil & Environmental Consultants, Inc.
 600 Marketplace Suite 200 - Bridgeport, WV 26330-2820
 Ph: 304-933-3119 Toll: 855-488-9539 Fax: 304-933-3327
www.ccecinc.com

NORTHEAST NATURAL ENERGY LLC
 MEPCO PAD
 MONONGALIA COUNTY, WEST VIRGINIA

WATER SOURCES FOR MEPCO PAD

DRAWN BY: MAF	CHECKED BY: JDR	APPROVED BY: * Hand signature on file SAC*	FIGURE NO: WT
DATE: 12/21/2015	SCALE: 1" = 800'	PROJECT NO: 150-445.0021	09/16/2016

I:\Svr-bridgeport\150-445-GIS\Maps\Task_0021150445_WATER_WELL_TOPO.mxd 12/21/2015 (mfrank)

MEPCO

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

TMP 16-49

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

TMP 16-43

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

470610-11
Received
Office of Oil & Gas
JUN 06 2016

09/16/2016

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: 10/5/2015 **Date of Planned Entry:** 10/13/2015

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: Please See Attachment
Address: _____

Name: _____
Address: _____

Name: _____
Address: _____

COAL OWNER OR LESSEE
Name: Please See Attachment
Address: _____

MINERAL OWNER(s)
Name: Please 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>4390683.76, 572717.92 (UTM NAD 83)</u>
County: <u>Monongalia</u>	Public Road Access: <u>State Route 29/4</u>
District: <u>Clay</u>	Watershed: <u>Dunkard Creek</u>
Quadrangle: <u>Blacksville</u>	Generally used farm name: <u>MEPCO</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: 304.212.0422
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.

09/16/2016

4706100100

Received
Office of Oil & Gas
10/16/2016

MEPCO - Entry for Plat Survey

TMP	Surface Owner - Drill Site	Address
16-48.3	MEPCO, LLC, Attn: Will Oliver	308 Dents Run, Morgantown, WV 26501
16-54,52	Consolidation Coal Company, Attn: Melissa Wilson	CNX Center, 1000 Consol Energy Drive, Canonsburg, PA 15317

TMP	Surface Owner - Access Road	Address
16-48.3	MEPCO, LLC, Attn: Will Oliver	308 Dents Run, Morgantown, WV 26501
16-54,52	Consolidation Coal Company, Attn: Analyst	CNX Center, 1000 Consol Energy Drive, Canonsburg, PA 15317

TMP	Mineral Owner	Address
16-48.3	Telluric Company, Attn: Joseph Swiger	143 Distributer Drive, Morgantown, WV 26508
16-48.3	Greg Michael	1176 Sands Drive, Fairmont, WV 26554
16-48.3	Jane Reynolds	2 West Hill Drive, Fairmont, WV 26554
16-48.3	A. Keith Michael	241 Jefferson St., Bridgeport, WV 26330

TMP	Coal Owner	Address
	Consolidated Coal Company, Attn: Analyst	CNX Center, 1000 Consol Energy Drive, Canonsburg, PA 15317
	Murray Energy Corporation, Attn: Alex P. O'Neill, Coal, Oil & Gas Relations Manager	46226 National Road, St. Clairsville, OH 43950

Received
Office of Oil & Gas
JUN 06 2016

09/16/2016

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: 05/09/2016 **Date Permit Application Filed:** 05/31/2016

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

Name: MEPCO, LLC, Attn: Will Oliver
Address: 308 Dents Run Road
Morgantown, WV 26501

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>572717.92</u>
County:	<u>Monongalia</u>		Northing:	<u>4390683.76</u>
District:	<u>Clay</u>	Public Road Access:	<u>County Route 29/4</u>	
Quadrangle:	<u>Blacksville</u>	Generally used farm name:	<u>MEPCO</u>	
Watershed:	<u>Jakes Run of 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: 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

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 & Gas
JUN 06 2016

09/16/2016

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, William Oliver, 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 8, 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>572717.92</u>
County:	<u>Monongalia</u>	UTM NAD 83 Northing:	<u>4390883.78</u>
District:	<u>Clay</u>	Public Road Access:	<u>County Route 29/4</u>
Quadrangle:	<u>Blacksville</u>	Generally used farm name:	<u>MEPCO</u>
Watershed:	<u>Jakes Run of 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 checked="" 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 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>MEPCO, LLC</u></p> <p>By: <u>William Oliver</u></p> <p>Its: <u>LAND MANAGER</u></p> <p>Signature: _____</p> <p>Date: <u>5/29/16</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 or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

09/16/2016

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.

4706101760

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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, GARY G. LORING, 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 8, 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	Eastings:	<u>572717.92</u>
County:	<u>Monongalia</u>		Northing:	<u>4390683.76</u>
District:	<u>Clay</u>	Public Road Access:	<u>County Route 29/4</u>	
Quadrangle:	<u>Blacksville</u>	Generally used farm name:	<u>MEPCO</u>	
Watershed:	<u>Jakes Run of 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: <u>Gary G. Loring</u></p> <p>Print Name: <u>Gary G. Loring</u></p> <p>Date: _____</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.

09/16/2016



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
Division of Highways

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

Earl Ray Tomblin
Governor

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

January 6, 2016

4706101760

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 Mepco Pad, Monongalia County
Mepco 9H

Dear Mr. Martin,

This well site will be accessed from a permit #04-2015-1144 issued to Northeast Natural Energy Corporation for access to the State Road for a well site located off of Monongalia County Route 29/4 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

Received
Office of Oil & Gas
1/16/16

09/16/2016

MEPCO LLC PAD FINAL SITE DESIGN, CONSTRUCTION PLANS, & EROSION & SEDIMENT CONTROL PLANS NORTHEAST NATURAL ENERGY LLC

LAT./LONG: N 39° 39' 46.85" W 80° 9' 8.64"
(APPROXIMATE CENTER OF PROJECT)



WEST VIRGINIA 811 ONE CALL WAS PERFORMED IN OCTOBER, 2015.
THE FOLLOWING UTILITY COMPANIES MAY BE PRESENT IN THE PROJECT AREA:

- FRONTIER COMMUNICATIONS (FORMERLY VERIZON)
- BLACKSVILLE OIL AND GAS COMPANY
- COMBUSTION
- FIRSTENERGY CORP
- WESTSIDE TELECOMMUNICATIONS

PROJECT OWNER/CLIENT

NORTHEAST NATURAL ENERGY LLC
727 VIRGINIA STREET SUITE 1205
CHARLESTON, WV 25301
PH: (304) 241-2333
CONTACT: DAVID WOODRUFF

WVDEP

DISTRICT FOUR
PH: (304) 843-1550
CONTACT: DISTRICT MANAGER
RHY LINDSEY

CONSULTANTS

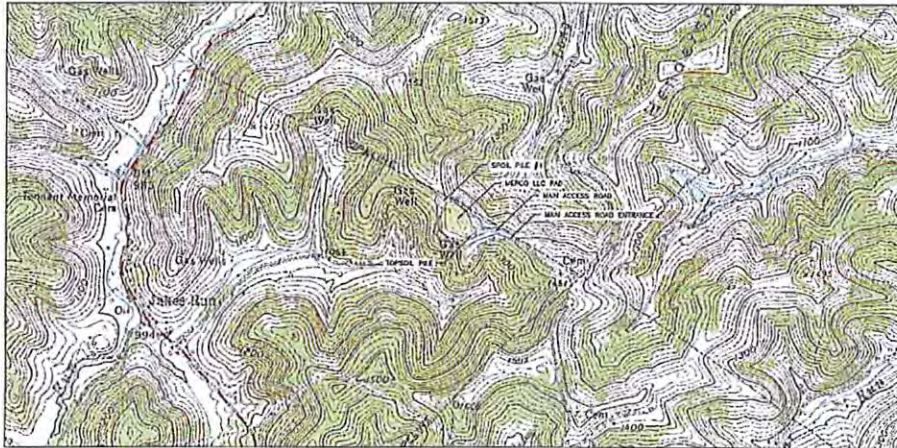
CIVIL & ENVIRONMENTAL
CONSULTANTS, INC.
600 MARKETPLACE AVENUE SUITE 200
SPRINGPORT, WV 26160
PH: (304) 933-3110
CONTACT: JOSEPHINE BOHNSON, P.E.

REGULATORY AGENCIES

WEST VIRGINIA DEPARTMENT OF
ENVIRONMENTAL PROTECTION (WVDEP)
PH: (304) 843-2074

NATIONAL RESPONSE CENTER
PH: (800) 434-6302

LOCAL EMERGENCY SERVICES		
SERVICE	NAME	TELEPHONE NO.
AMBULANCE	911	911
HOSPITAL EMERGENCY DEPARTMENT	WVU MEMORIAL HOSPITAL	(304) 256-3000
FIRE DEPARTMENT	911	911
POLICE DEPARTMENT	911	911
POISON CONTROL CENTER	WEST VIRGINIA POISON CENTER	(800) 283-1027

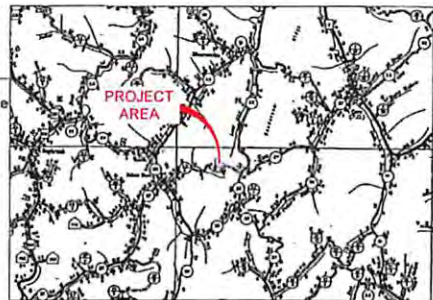


LIMITS OF DISTURBANCE PARCEL BREAKUPS		
ITEM	MEPCO LLC	
TAX MAP	16	PARCEL 48.3
DEED BOOK	1302	PAGE 73
ACREAGE	103.49	
AFFECTED AREA FROM MAIN ACCESS ROAD	0.00	AC
AFFECTED AREA FROM WELL PAD	8.48	AC
AFFECTED AREA FROM TOTAL	8.48	AC
CONTRIBUTION COAL COMPANY		
ITEM		
TAX MAP	16	PARCEL 54
DEED BOOK	656	PAGE 238
ACREAGE	84.14	
AFFECTED AREA FROM MAIN ACCESS ROAD	1.81	AC
AFFECTED AREA FROM WELL PAD	2.51	AC
AFFECTED AREA FROM TOTAL	4.32	AC

L.O.D. AREAS	
DESCRIPTION	ACRES
MAIN ACCESS ROAD	1.81
WELL PAD	10.99
TOTAL	12.80
WOODS	11.91

LOCATION MAP

BLACKSVILLE USGS 7.5' QUAD
SCALE IN FEET
1 INCH = 1000 FEET



VICINITY MAP

MONONGALIA COUNTY ROAD
SCALE IN FEET
1 INCH = 1 MILE



SITE LOCATIONS	
W8511F (WEST VIRGINIA NORTH ZONE)	
CENTERS OF PAD	14N70E15E 10N07W10E
MAIN ACCESS ROAD ENTRANCE	14N70E15E 10N07W10E

SITE LOCATIONS	
UTM83-17 (WEST VIRGINIA NORTH ZONE)	
CENTERS OF PAD	18QUG17E 18QUG17E
MAIN ACCESS ROAD ENTRANCE	18QUG17E 18QUG17E

FLOOD PLAIN CONDITIONS	
DO SITE CONDITIONS ACTIVITIES TAKE PLACE IN FLOODPLAIN	NO
PERMIT REQUIRED FROM COUNTY FLOODPLAIN COORDINATOR	NO
HEC HAS 6 FLOOY COMPLETED	NO
FLOODPLAIN DESIGN OR DRAINAGE	NO
WVDEP MAP DRAINAGE FOR SITE	NO
ACREAGE OF CONSTRUCTION IN FLOODPLAIN	0.00

APPROVED WVDEP OOG
WAS 1/28/2016

PLAN REPRODUCTION WARNING
THE PLANS HAVE BEEN CREATED ON A350 (22" X 34") SHEETS.
FOR REDUCTIONS, REFER TO GRAPHIC SCALE.
THE PLANS HAVE BEEN CREATED FOR FULL COLOR PLOTTING.
ANY SET OF THE PLANS THAT IS NOT PLOTTED IN FULL COLOR
SHALL NOT BE CONSIDERED ADEQUATE FOR CONSTRUCTION
PURPOSES.
WARNING INFORMATION MAY BE LOST IN COPYING ANOTHER
GRAYSCALE PLOT.

SHEET INDEX	
SHEET 1 OF 20	COVER SHEET
SHEETS 2-3 OF 20	WELL SAFETY PLAN MAPS
SHEET 4 OF 20	PERMIT CONDITIONS PLAN
SHEET 5 OF 20	CONSTRUCTION NOTICES
SHEET 6 OF 20	SUMMARY OF QUANTITIES
SHEET 7 OF 20	OVERALL SITE DESIGN
SHEET 8 OF 20	FINAL DESIGN PLAN
SHEETS 9-11 OF 20	WELL PAD TRENCH & COLES SECTIONS
SHEET 12 OF 20	MAIN ACCESS ROAD PROFILE & CROSS SECTIONS
SHEETS 13-16 OF 20	CONSTRUCTION DETAILS
SHEET 17 OF 20	RECLAMATION PLAN



REVISION RECORD		
NO.	DATE	DESCRIPTION
1	1/28/2016	ISSUED FOR PERMIT

C&E
Civil & Environmental Consultants, Inc.
600 Marketplace Avenue, Suite 200 - Bridgeport, WV 26309
PH: 304.933.3110 • FAX: 304.933.3327
www.candec.com

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

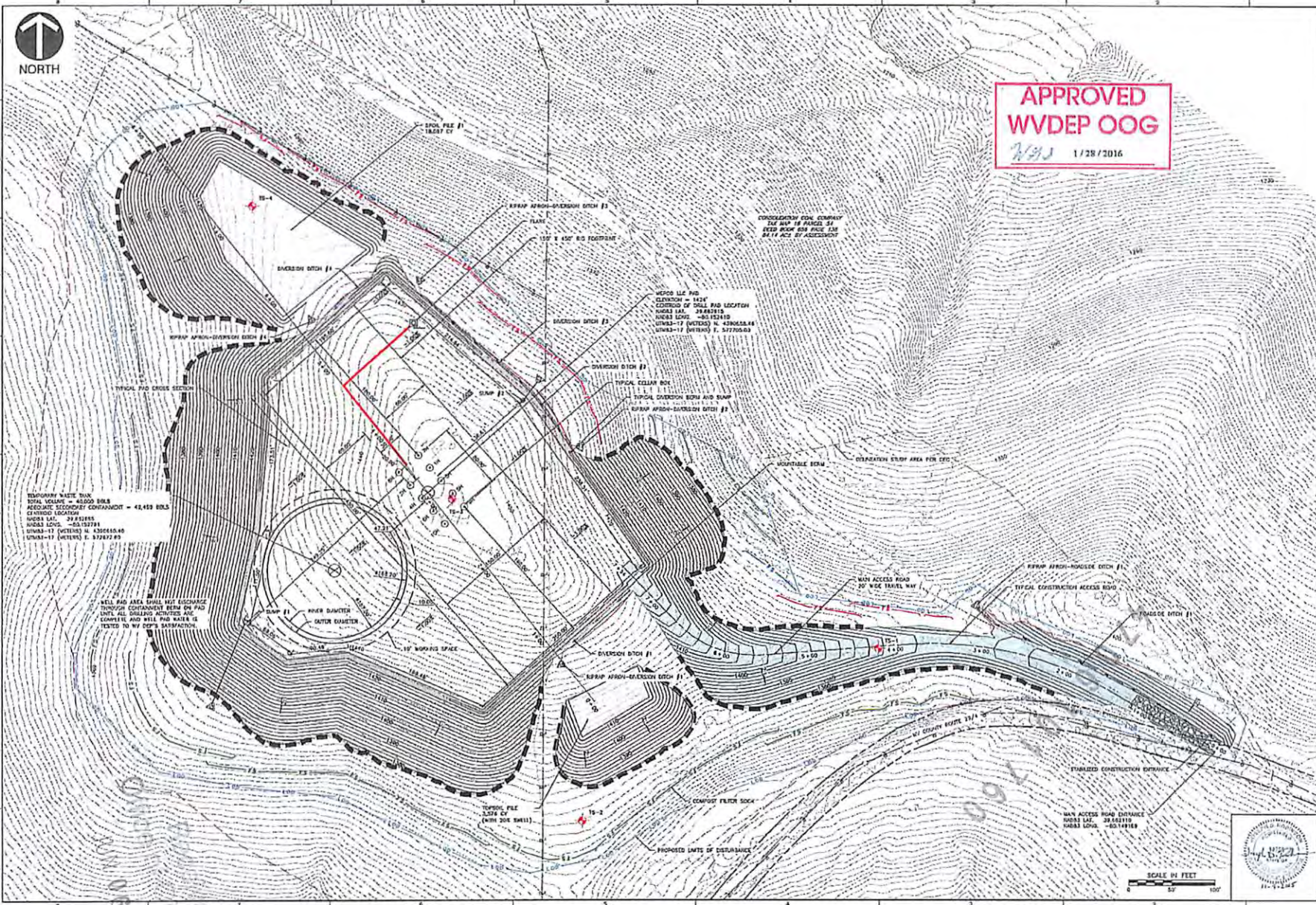
COVER SHEET	
DATE	BY
NOVEMBER 2015	DAVID WOODRUFF
AS SHOWN	DAVID WOODRUFF
PROJECT NO.	15-0445
DATE	1/28/2016
BY	JOSEPHINE BOHNSONG

PROJECT NO. **C000**

Office of Mining & Reclamation
1/28/2016



APPROVED WVDEP OOG
 2/10 1/28/2016



TEMPORARY WASTE TANK
 TOTAL VOLUME = 42,000 GALS
 REQUIRED SECURITY CONTAINMENT = 42,450 GALS
 CENTERED LOCATION
 HUBER LAL - 38.828219
 HUBER LON - 80.191878
 UMMS-17 (METERS) N. 4320655.48
 UMMS-17 (METERS) E. 5277062.83

WELL PAD AREA SHALL NOT BE OCCUPIED THROUGH CONTAINMENT BEING ON PAD UNLESS ALL SILLING ACTIVITIES ARE COMPLETE AND WELL PAD WATER IS TESTED TO MY CREEP'S SATISFACTION.

MEPCO LLC PAD
 ELEVATION = 1424
 CENTER OF DOME PAD LOCATION
 HUBER LAL - 38.828219
 HUBER LON - 80.191878
 UMMS-17 (METERS) N. 4320655.48
 UMMS-17 (METERS) E. 5277062.83

CONCRETE FILTER SOCK COMPANY
 SEE MAP 18 PAGES 54
 24 1/2' ACRES BY ACCESSION

REVISION RECORD	
NO.	DATE
1	1/28/2016
2	2/10/2016
3	2/10/2016

CEE
 Civil & Environmental Consultants, Inc.
 600 Marketplace Avenue, Suite 200 - Bridgeport, WV 26300
 Ph: 304.333.1119 • Fax: 304.333.3327
 www.ceeinc.com

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

FINAL DESIGN PLAN	
DATE	FILED BY
NOVEMBER 2015	DAVID
1" = 50'	CHECKED BY
PROJECT NO.	153-345
APPROVED BY	DEM

CONTRACT NO. **C303**
 SHEET 4 OF 35



SCALE IN FEET
 0 50 100

02/10/2016
 Red
 & Gas

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.

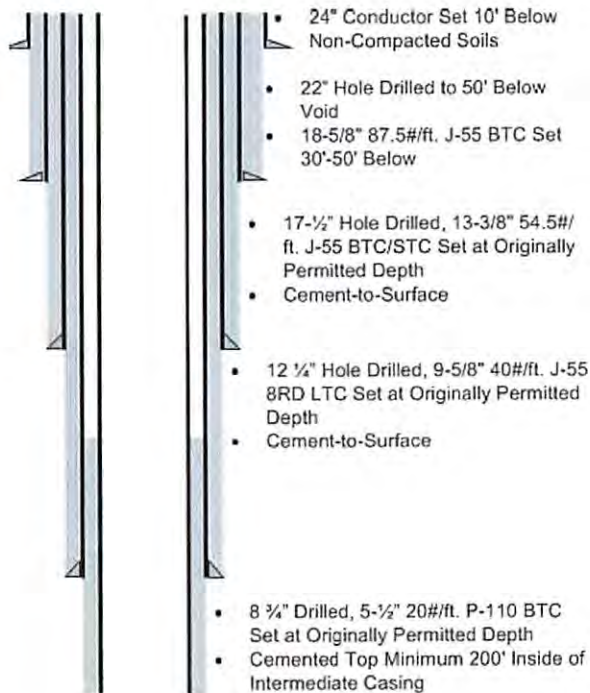
All casings programs submitted to the state incorporate the use of a 24” conductor over the previously used 20” that has long been the industry standard for a typical Marcellus design. The use of 24” conductor casing allows the use of a 22” bit to ream the surface hole, and drill 50’ below the void to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

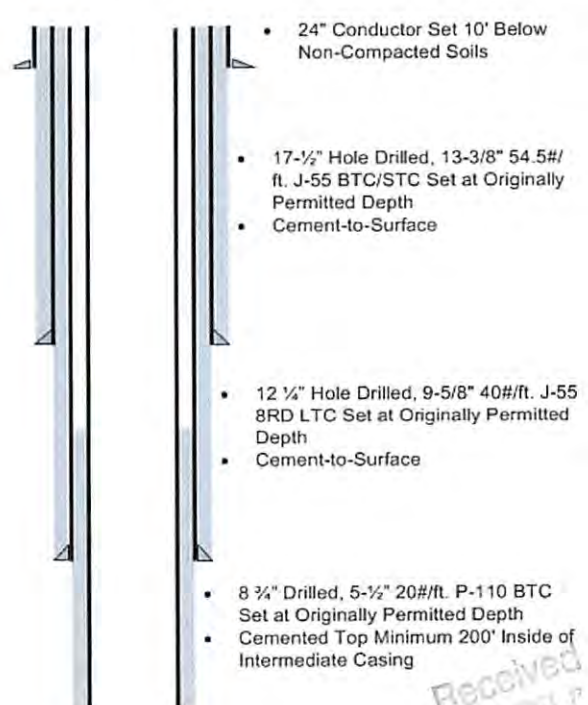
With the use of these string sizes and techniques, the surface and intermediate strings do not need to be altered. After a proper WOC time, the surface section of the well would continue to be drilled with a 17-1/2” bit and the 13-3/8” 54.50#/ft freshwater casing would be set at the originally permitted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

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

Casing Schematic w/ Mine String



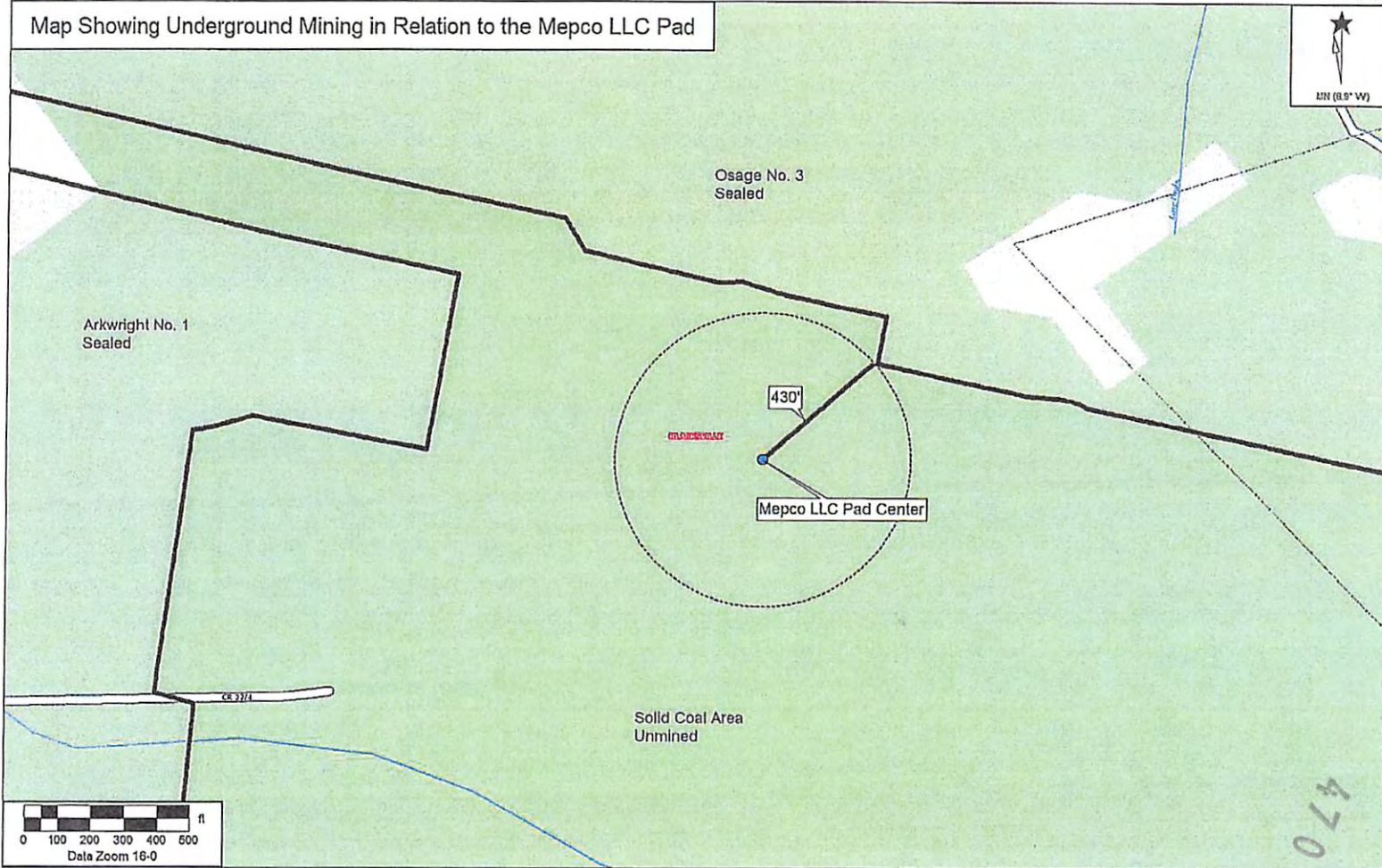
Casing Schematic w/o Mine String



Received
Office of Oil & Gas
Jan 06 2016
11/11 - IC

09/16/2016

Map Showing Underground Mining in Relation to the Mepco LLC Pad



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© DeLorme, XMap07.
www.delorme.com

Received
Office of the
June 3, 2015

4706101,