



west virginia department of environmental protection

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

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

July 24, 2013

WELL WORK PERMIT

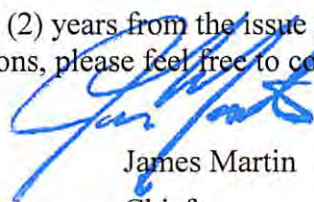
Horizontal 6A Well

This permit, API Well Number: 47-6101658, issued to NORTHEAST NATURAL ENERGY LLC, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.



James Martin
Chief

Operator's Well No: STATLER NO. 4H
Farm Name: MOORE, REBECCA & STATLER, S
API Well Number: 47-6101658
Permit Type: Horizontal 6A Well
Date Issued: 07/24/2013

Promoting a healthy environment.

PERMIT CONDITIONS

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

CONDITIONS

1. 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 fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
2. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the fill material shall be within plus or minus 2% (unless soil test results show a greater range of moisture content is appropriate and 95% compaction can still be achieved) of the optimum moisture content as determined by the standard proctor density test, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort. Each lift must meet 95 % compaction of the optimum density based on results from the standard proctor density test of the actual soils used in specific engineered fill sites. 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.
3. 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.
4. 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.
5. 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.

WW - 6B
(3/13)

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

61 03 256

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

2) Operator's Well Number: Statler 4H Well Pad Name: Statler

3 Elevation, current ground: 1,061 Elevation, proposed post-construction: Same

4) Well Type: (a) Gas Oil Underground Storage

Other

(b) If Gas: Shallow Deep

Horizontal

5) Existing Pad? Yes or No: Yes

SDW
5/27/2013

6) Proposed Target Formation(s), Depth(s), Anticipated Thicknesses and Associated Pressure(s):
Marcellus, Top 7,780' and Base 7,876', 96' Thick, 3,400 psi

7) Proposed Total Vertical Depth: 7,860'

8) Formation at Total Vertical Depth: Marcellus

9) Proposed Total Measured Depth: 15,867'

10) Approximate Fresh Water Strata Depths: 850'

11) Method to Determine Fresh Water Depth: Driller's Logs from Offset Wells

12) Approximate Saltwater Depths: 1,800'

13) Approximate Coal Seam Depths: 850'

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

15) Does proposed well location contain coal seams directly overlying or adjacent to an active mine? If so, indicate name and depth of mine: No

16) Describe proposed well work: Drill and complete a horizontal Marcellus well. Drill vertical section to a KOP of approximately 5,966'. Build angle and commence drilling the horizontal section at a vertical depth of 7,860' to a total measured depth of approximately 15,867'. The horizontal well will be drilled in a South Eastern direction at an azimuth of S42 10' 45"E (137.82).

17) Describe fracturing/stimulating methods in detail:
NNE will be performing a high rate slick water fracturing of the lower section of the Marcellus formation. The first stage will be perforated via coiled tubing and/or a burst disc. The remaining stages will be conventionally perforated with pump down guns and isolated with composite frac plugs. Any off-set wells will be completed with the same frac crew, alternating between wells at each stage. Once half of the total stages have been completed, a bridge plug will be set so that pressure can be bled down and all surface equipment checked. Once completed, the plugs will be drilled out conventionally with a rig and snubbing unit.

18) Total area to be disturbed, including roads, stockpile area, pits, etc, (acres): Existing Pad

19) Area to be disturbed for well pad only, less access road (acres): Existing Pad

Received
JUN 11 2013
Office of Oil and Gas
Dept. of Environmental Protection
Existing Pad

WW - 6B
(3/13)

20)

CASING AND TUBING PROGRAM

TYPE	Size	New or Used	Grade	Weight per ft.	FOOTAGE: For Drilling	INTERVALS: Left in Well	CEMENT: Fill -up (Cu. Ft.)
Conductor	20"	New	N/A	94	36'	36'	Grout to Surface
Fresh Water	13-3/8"	New	J-55	54.5	1,000'	1,000'	CTS
Coal							
Intermediate	9-5/8"	New	J-55	36	2,222'	2,222'	CTS
Production	5-1/2"	New	P-110	20	15,867'	15,867'	3,857
Tubing	2-3/8"	New	J-55	4.7	N/A	N/A	N/A
Liners							

SDW
5/23/2013

TYPE	Size	Wellbore Diameter	Wall Thickness	Burst Pressure	Cement Type	Cement Yield
Conductor	20"	25"	0.438"	2,110	Grout	N/A
Fresh Water	13-3/8"	17.5"	0.38"	2,730	Type 1	1.23
Coal						
Intermediate	9-5/8"	12.25"	0.361"	3,510	Type 1	1.3
Production	5-1/2"	8.75"	0.361"	12,530	50:50 Poz	1.21
Tubing	2-3/8"	N/A	0.190	7,700	N/A	N/A
Liners						

PACKERS

Kind:			
Sizes:			
Depths Set:			

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21) Describe centralizer placement for each casing string. _____

Surface string will have bow springs every third joint

Intermediate string will have bow springs every third joint

Production string will have spiral set every fourth joint

22) Describe all cement additives associated with each cement type. _____

Surface string will be a Type I Cement +

0.05% bwoc Static Free + 1% bwoc Calcium Chloride + 0.5% bwoc EC-1 + 0.75 gals/100 sack FP-6L + 0.05% bwoc BA-10A + 48.5% Fresh Water

Intermediate string will be a Type I Cement + 0.05% bwoc Static Free + 0.5% bwoc EC-1 + 0.75 gals/100 sack FP-6L + 0.5% bwoc Sodium Metasilicate + 0.5% bwoc BA-10A + 53.4% Fresh Water

Production string will have 50:50 Poz and an anti-gas migration additive

23) Proposed borehole conditioning procedures. _____

Surface string - 50.0 bbls Bentonite Pill w/Flake & Fed Seal +

50 lbs Cello Flake + 20 lbs/bbl Bentonite - Sacked + 160 lbs Fed Seal @ 8.4 ppg & 10.0 bbls Fresh Water Spacer

Intermediate string - 35.0 bbls Fresh Water + 25 lbs Cello Flake + 20 lbs/bbl Bentonite - Sacked + 80 lbs Fed Seal @ 8.4 ppg & 10.0 bbls Fresh Water Spacer

Production string - Borehole Conditioned w/ Water Based Spacer with an emulsifier

*Note: Attach additional sheets as needed.

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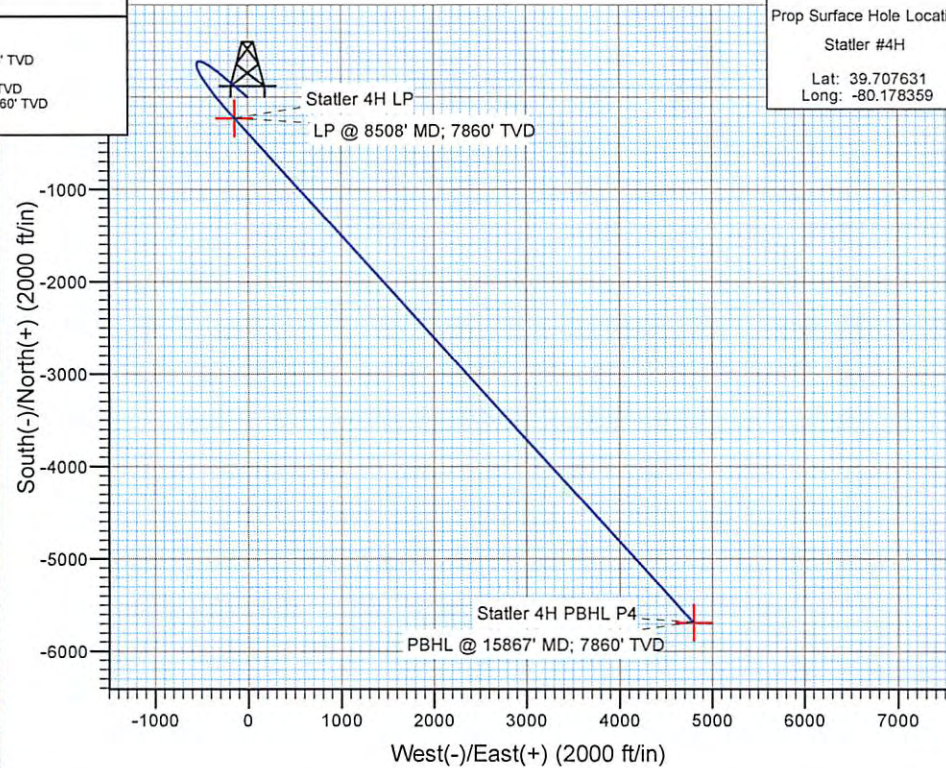
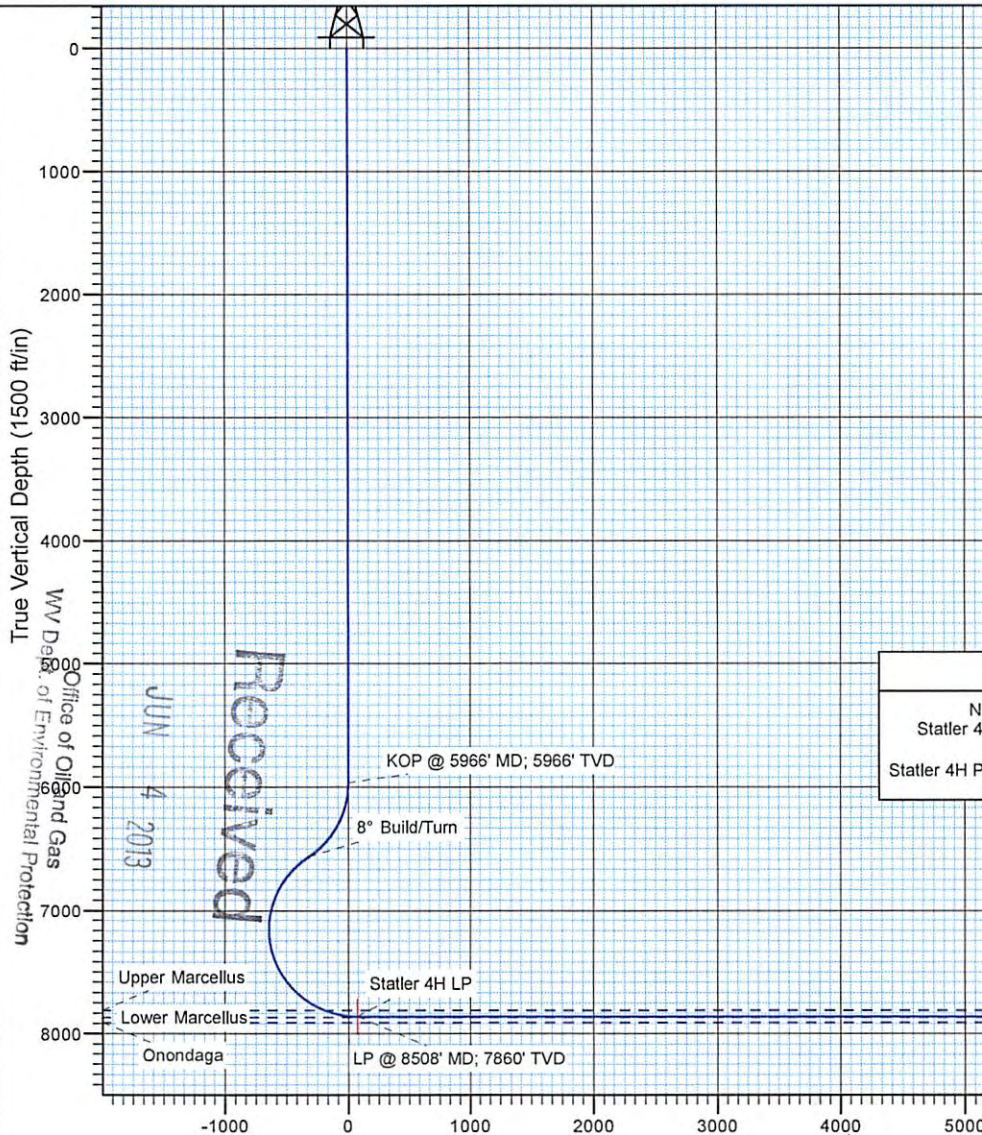
Project: Monongalia County, WV
 Site: Statler
 Well: Statler #4H
 Wellbore: HZ
 Design: Plan #4



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		
2	5966.0	0.00	0.00	5966.0	0.0	0.0	0.00	0.00	0.0		KOP @ 5966' MD; 5966' TVD
3	6677.8	56.93	311.35	6566.3	215.1	-244.3	8.00	311.35	-323.4		8° Build/Turn
4	8508.0	90.00	137.82	7860.0	-229.1	-143.8	8.00	-168.27	73.2	Statler 4H LP	LP @ 8508' MD; 7860' TVD
5	15867.6	90.00	137.82	7860.0	-5682.7	4798.0	0.00	0.00	7432.8	Statler 4H PBHL P4	PBHL @ 15867' MD; 7860' TVD

Prop Surface Hole Location
 Statler #4H
 Lat: 39.707631
 Long: -80.178359



DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Statler 4H LP	7860.0	-229.1	-143.8	440339.11	1809008.60	39.706999	-80.178864
- plan hits target center							
Statler 4H PBHL P4	7860.0	-5682.7	4798.0	434885.49	1813950.43	39.692128	-80.161157
- plan hits target center							

WELL DETAILS: Statler #4H						
+N/-S	+E/-W	Northing	Ground Level: Easting	1061.0 Latitude	Longitude	Slot
0.0	0.0	440568.23	1809152.41	39.707631	-80.178359	

Length of Lateral
7,359.6 Feet

**TARGET LINE
7860' TVD @ 0° VS; 90°**

Azimuths to Grid North
 True North: 0.43°
 Magnetic North: -8.52°

Magnetic Field
 Strength: 52576.5nT
 Dip Angle: 67.17°
 Date: 4/22/2013
 Model: IGRF2010

Vertical Section at 137.82° (1500 ft/in)

85510-19

WW-9
(5/13)

Page 1 of 3
API Number 47 - 061 - 01658
Operator's Well No. Statler 4H

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Northeast Natural Energy LLC OP Code 494498281

Watershed (HUC 10) Dunkard Quadrangle Blacksville, WV

Elevation 1,061' County Monongalia District Clay

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No

Will a pit be used for drill cuttings? Yes No

If so, please describe anticipated pit waste: _____

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

Proposed Disposal Method For Treated Pit Wastes:

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

*SDW
5/23/2013*

Will closed loop system be used? Yes on both top hole and the horizontal section

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. Air - Vertical Section, Oil Based - Horizontal Section

-If oil based, what type? Synthetic, petroleum, etc. Synthetic

Additives to be used in drilling medium? Mide fatty acid, Organophil clay, Leonardite, Lime, CaCl, Barite

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Removed Offsite

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) _____

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

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 *John Adams*

Company Official (Typed Name) John Adams

Company Official Title Vice President - Operations

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JUN 4 2013

Subscribed and sworn before me this 16th day of May, 20 13

Brenda J. Fleisher

Office of Oil and Gas
Notary Public
WV Dept. of Environmental Protection



My commission expires February 7, 2020

61-01658

Form WW-9

Operator's Well No. Statler 4H

Northeast Natural Energy LLC

Proposed Revegetation Treatment: Acres Disturbed 12.7 Prevegetation pH 6.0

Lime 2.0 Tons/acre or to correct to pH 6.5

Fertilizer (10-20-20 or equivalent) 500 lbs/acre (500 lbs minimum)

Mulch Hay/Straw Tons/acre

Seed Mixtures

Area I		Area II	
Seed Type	lbs/acre	Seed Type	lbs/acre
Kentucky Bluegrass	20	Kentucky Bluegrass	20
Red Top	15	Red Top	15
White Clover	15	White Clover	15

Attach:
Drawing(s) of road, location, pit and proposed area for land application.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: S. P. O. W...

Comments: Upgrade E&S as necessary. Seed & mulch where needed

Title: Oil & Gas Inspector Date: 5/23/2013

Field Reviewed? (X) Yes () No

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Attachment A to WW-9

The two impoundments associated with the Statler well pad will be lined and contain fresh water only at all times. Northeast Natural Energy LLC (“NNE”) plans to utilize a closed loop process for its drilling of the Statler 4H well. No waste shall be placed into an earthen impoundment or pit. Water created during the drilling and completions process will be contained within steel frac-tanks until able to be reused or properly disposed of. Cuttings will be diverted to steel half-round tank where they will then be transferred by an operator to lined steel boxes for transport.

Statler 4H Drill Cuttings will be taken to disposal at one or more of the following disposal/approved waste facilities:

- Westmoreland Landfill (Permit # 100277)
- Meadowfill Landfill (Permit # SWF 103298)
- Soil Remediation, Inc. (EPA # 0250050885P902)
- Max Environmental – Yukon, PA (PAD004835146 and 301071)
- Max Environmental – Bulger, PA (PAD059087072 and 301359)

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 all, of the following disposal/approved waste facilities:

- 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)
- Patriot Water Treatment (Ohio) (Permit # EPA 748163)
- Soil Remediation, Inc. (EPA # 0250050885P902)
- Fairmont Brine Processing (WV NPDES #0116408)

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Water Management Plan: Primary Water Sources



WMP-01317

API/ID Number: 047-061-01658

Operator:

North East Natural Energy

Statler 4H

Important:

For each proposed primary water source (including source intakes for purchased water sources) identified in your water management plan, and summarized herein, DEP has made an evaluation concerning water availability over the specified date range. DEP's assessment is based on the following considerations:

- Statistical analysis of historical USGS stream gauge data (transferred to un-gauged locations as necessary);
- Identification of sensitive aquatic life (endangered species, mussels, etc.);
- Quantification of known existing demands on the water supply (Large Quantity Users);
- Minimum flows required by the Army Corps of Engineers; and
- Designated stream uses.

Based on these factors, DEP has provided, for each intake location (and origination point for purchased water), a reference gauge location and discharge flow reading which must be surpassed prior to withdrawals. Additionally, DEP has established a minimum passby flow at the withdrawal location which must also be surpassed prior to withdrawals. These thresholds are considered terms of the permit and are enforceable as such.

DEP is aware that some intake points will be used for multiple wells and well sites. In these cases, the thresholds set by the Water Management Plan are to be interpreted as total withdrawal limits for each location over the specified date range regardless of how many wells are supported by that intake.

For all purchased water intakes, determinations of water availability are made at the original source intake location. It is the responsibility of the Oil and Gas Operator, not the seller, to cease withdrawal of water from the seller when flows are less than the minimum gauge reading at the stream gauge referenced by the Water Management Plan in order to protect stream uses.

Note that the determinations made herein are based on the best available data, but it is impossible to predict water availability in the future. While the DEP has carefully established these minimum withdrawal thresholds, it remains the operator's responsibility to protect aquatic life at all times. Approval to withdrawal is contingent upon permission from the land owner. It is the responsibility of the operator to secure and maintain permission prior to any withdrawals.

The operator is reminded that 24-48 hours prior to withdrawing (or purchasing) water, DEP must be notified by email at DEP.water.use@wv.gov.

APPROVED JUN 30 2013

Source Summary

WMP- 01317

API Number:

047-061-01658

Operator:

North East Natural Energy

Statler 4H

Stream/River

● Source **Dunkard Creek @ Statler Withdrawal Site** Monongalia Owner: **Benjamin M. Statler**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
8/15/2013	8/15/2014	8,400,000		39.711487	-80.178871

Regulated Stream? Ref. Gauge ID: 3062500 DECKERS CREEK AT MORGANTOWN, WV

Max. Pump rate (gpm): **1,800** Min. Gauge Reading (cfs): **21.51** Min. Passby (cfs) **33.56**

DEP Comments:

● Source **Monongahela River @ Morgantown Industrial Park** Monongalia Owner: **Enrout Properties LLC**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
8/15/2013	8/15/2014	8,400,000		39.604042	-79.969827

Regulated Stream? MGF @ Opekiska Dam Ref. Gauge ID: 3057000 TYGART VALLEY RIVER AT COLFAX, WV

Max. Pump rate (gpm): **600** Min. Gauge Reading (cfs): **508.57** Min. Passby (cfs) **580.11**

DEP Comments:

Source Summary

WMP- 01317

API Number:

047-061-01658

Operator:

North East Natural Energy

Statler 4H

Purchased Water

Source **Clay Battelle PSD** **Monongalia** Owner: **Clay Battelle PSD**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
8/15/2013	8/15/2014	8,400,000	125,000	-	-

Regulated Stream? **MGF @ Opekiska Dam** Ref. Gauge ID: **3057000** **TYGART VALLEY RIVER AT COLFAX, WV**

Max. Pump rate (gpm): **Min. Gauge Reading (cfs): 505.23** **Min. Passby (cfs) 555.36**

DEP Comments:

Source Detail

WMP-01317

API/ID Number: 047-061-01658

Operator: North East Natural Energy

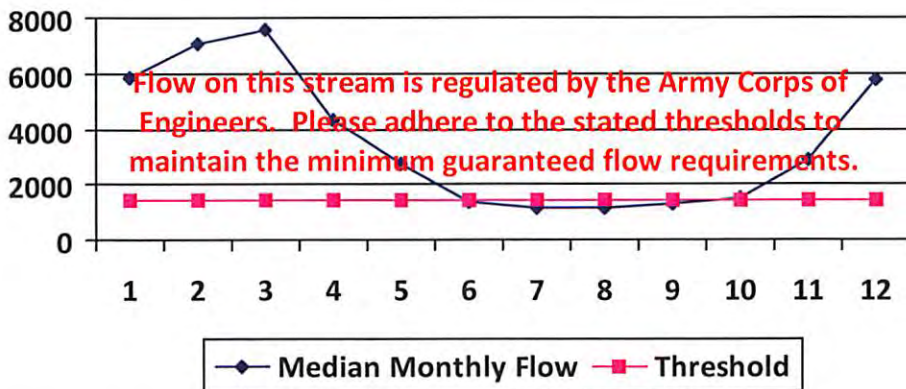
Statler 4H

Source ID: 20198	Source Name: Clay Battelle PSD Clay Battelle PSD	Source Latitude: - Source Longitude: -
HUC-8 Code: 5020003	Drainage Area (sq. mi.): 2571.54 County: Monongalia	Anticipated withdrawal start date: 8/15/2013 Anticipated withdrawal end date: 8/15/2014
<input type="checkbox"/> Endangered Species?	<input checked="" type="checkbox"/> Mussel Stream?	Total Volume from Source (gal): 8,400,000
<input type="checkbox"/> Trout Stream?	<input type="checkbox"/> Tier 3?	Max. Pump rate (gpm):
<input checked="" type="checkbox"/> Regulated Stream?	MGF @ Opekiska Dam	Max. Simultaneous Trucks:
<input checked="" type="checkbox"/> Proximate PSD?	Morgantown Utility Board	Max. Truck pump rate (gpm):
<input type="checkbox"/> Gauged Stream?		

Reference Gaug	3057000	TYGART VALLEY RIVER AT COLFAX, WV	Gauge Threshold (cfs):	624
Drainage Area (sq. mi.)	1,363.00			

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	5,862.09	-	-
2	7,077.64	-	-
3	7,563.14	-	-
4	4,322.38	-	-
5	2,712.43	-	-
6	1,372.93	-	-
7	1,154.52	-	-
8	1,171.93	-	-
9	1,307.09	-	-
10	1,492.42	-	-
11	2,917.62	-	-
12	5,736.71	-	-

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs):	-
Upstream Demand (cfs):	126.43
Downstream Demand (cfs):	30.36
Pump rate (cfs):	-
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	294.32
<hr/>	
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP- 01317

API/ID Number: 047-061-01658

Operator: North East Natural Energy

Statler 4H

Source ID: 20196 Source Name: Dunkard Creek @ Statler Withdrawal Site
Benjamin M. Statler

Source Latitude: 39.711487

Source Longitude: -80.178871

HUC-8 Code: 5020005

Drainage Area (sq. mi.): 121.19 County: Monongalia

Anticipated withdrawal start date: 8/15/2013

Anticipated withdrawal end date: 8/15/2014

Endangered Species? Mussel Stream?

Trout Stream? Tier 3?

Total Volume from Source (gal): 8,400,000

Regulated Stream?

Max. Pump rate (gpm): 1,800

Proximate PSD?

Max. Simultaneous Trucks:

Gauged Stream?

Max. Truck pump rate (gpm) 0

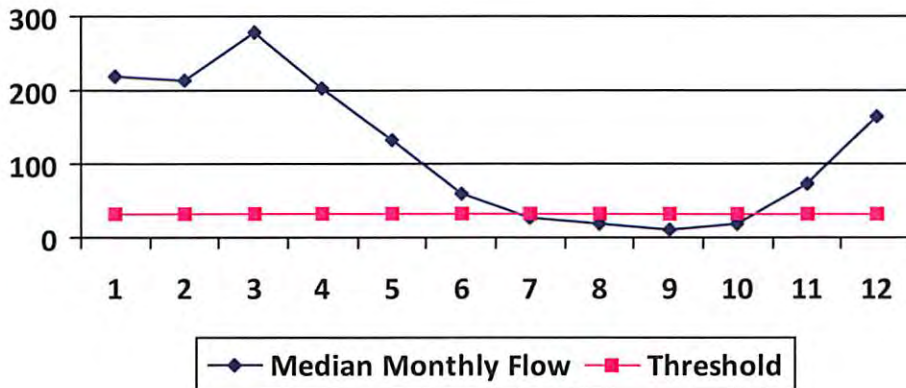
Reference Gaug: 3062500 DECKERS CREEK AT MORGANTOWN, WV

Drainage Area (sq. mi.): 63.20

Gauge Threshold (cfs): 14

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	219.96	37.57	182.50
2	214.17	37.57	176.71
3	278.79	37.57	241.33
4	201.73	37.57	164.27
5	133.30	37.57	95.84
6	60.40	37.57	22.94
7	27.71	37.57	-9.75
8	19.98	37.57	-17.48
9	11.76	37.57	-25.70
10	19.42	37.57	-18.04
11	72.93	37.57	35.47
12	164.66	37.57	127.20

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs):	26.85
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	4.01
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	6.71
Min. Gauge Reading (cfs):	21.51
Passby at Location (cfs):	33.56

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Source Detail

WMP- 01317

API/ID Number: 047-061-01658

Operator: North East Natural Energy

Statler 4H

Source ID: 20197 Source Name: Monongahela River @ Morgantown Industrial Park
Enrout Properties LLC

Source Latitude: 39.604042
Source Longitude: -79.969827

HUC-8 Code: 5020003

Drainage Area (sq. mi.): 2571.2 County: Monongalia

Anticipated withdrawal start date: 8/15/2013

Anticipated withdrawal end date: 8/15/2014

Endangered Species? Mussel Stream?

Total Volume from Source (gal): 8,400,000

Trout Stream? Tier 3?

Max. Pump rate (gpm): 600

Regulated Stream? MGF @ Opekiska Dam

Max. Simultaneous Trucks: 0

Proximate PSD? Morgantown Utility Board

Max. Truck pump rate (gpm): 0

Gauged Stream?

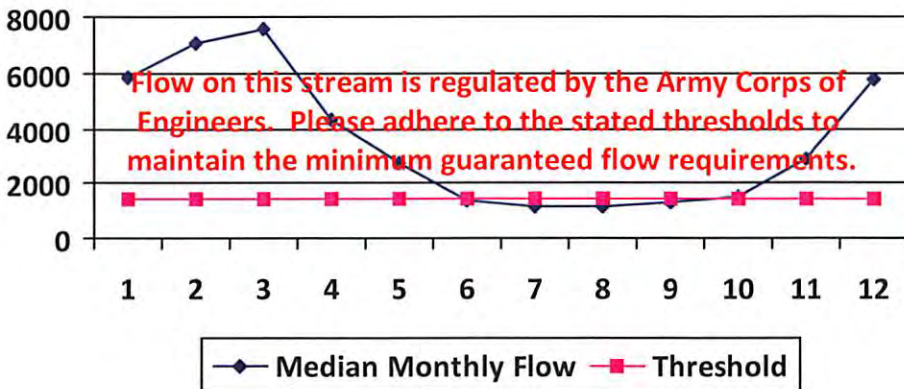
Reference Gaug: 3057000 TYGART VALLEY RIVER AT COLFAX, WV

Drainage Area (sq. mi.): 1,363.00

Gauge Threshold (cfs): 624

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	5,861.31	-	-
2	7,076.70	-	-
3	7,562.14	-	-
4	4,321.80	-	-
5	2,712.07	-	-
6	1,372.75	-	-
7	1,154.37	-	-
8	1,171.78	-	-
9	1,306.92	-	-
10	1,492.22	-	-
11	2,917.23	-	-
12	5,735.96	-	-

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs):	-
Upstream Demand (cfs):	126.43
Downstream Demand (cfs):	55.11
Pump rate (cfs):	1.34
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	294.28
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.



Water Management Plan: Secondary Water Sources



WMP- 01317

API/ID Number: 047-061-01658

Operator: North East Natural Energy

Statler 4H

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

- For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.
- For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Multi-site impoundment

Source ID:	20203	Source Name	MIP Freshwater Impoundment A		Source start date:	8/15/2013
					Source end date:	8/15/2014
Source Lat:	39.60021	Source Long:	-79.97578	County	Monongalia	
Max. Daily Purchase (gal)				Total Volume from Source (gal):	8,400,000	

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted.

Reference: WMP-1062

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

- For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.
- For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Other

Source ID:	20199	Source Name	Statler Farm Pond		Source start date:	8/15/2013	
					Source end date:	8/15/2014	
		Source Lat:	39.7128	Source Long:	-80.1821	County	Monongalia
		Max. Daily Purchase (gal)		Total Volume from Source (gal):			8,400,000

DEP Comments:

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

- For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.
- For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Purchased Water

Source ID:	20200	Source Name	Southwestern Pennsylvania Water Authority Public Water Provider	Source start date:	8/15/2013
				Source end date:	8/15/2014
Source Lat:	39.768776	Source Long:	-80.225171	County	
Max. Daily Purchase (gal)	100,000	Total Volume from Source (gal):	8,400,000		
DEP Comments:	Please ensure that purchases from this facility are in compliance with all applicable rules and regulations established by PADEP.				

Source ID:	20201	Source Name	My Water, LLC. Commercial Supplier	Source start date:	8/15/2013
				Source end date:	8/15/2014
Source Lat:	39.648808	Source Long:	-80.217074	County	Monongalia
Max. Daily Purchase (gal)	50,000	Total Volume from Source (gal):	8,400,000		
DEP Comments:	Water obtained from commercial groundwater well located at 39.648808, -80.217074.				

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

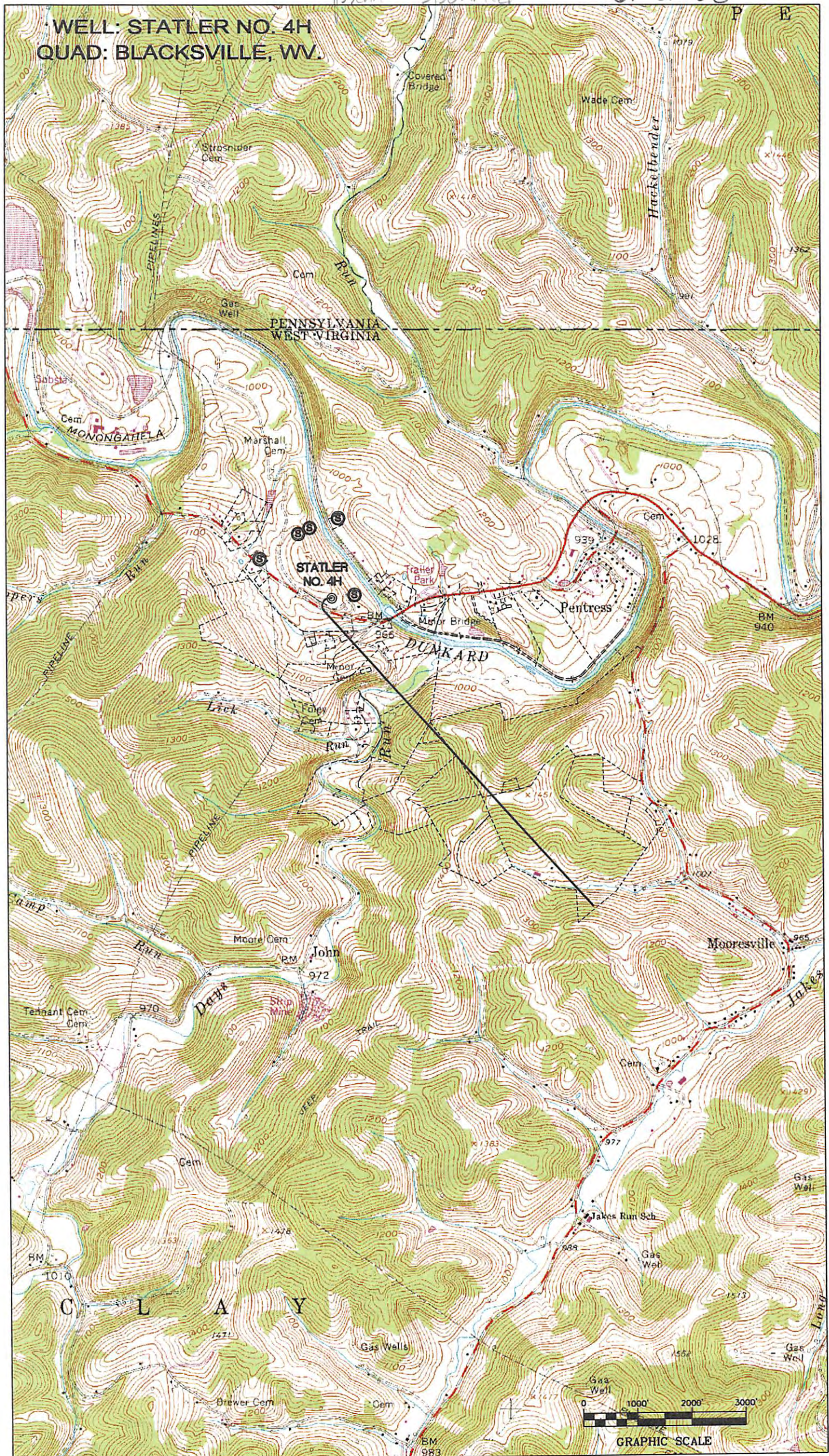
- For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.
- For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID:	20202	Source Name	J&E Sanitation Commercial Supplier	Source start date:	8/15/2013
				Source end date:	8/15/2014
Source Lat:	39.9607	Source Long:	-80.1777	County	
Max. Daily Purchase (gal)	216,000	Total Volume from Source (gal):	8,400,000		
DEP Comments:	Please ensure that purchases from this facility are in compliance with all applicable rules and regulations established by PADEP.				

plat spotted

61-01658

WELL: STATLER NO. 4H
QUAD: BLACKSVILLE, WV.



SURFACE HOLE DEC. LONG: 80.178359
 SURVEYED LONG: 80° 10' 42.1"

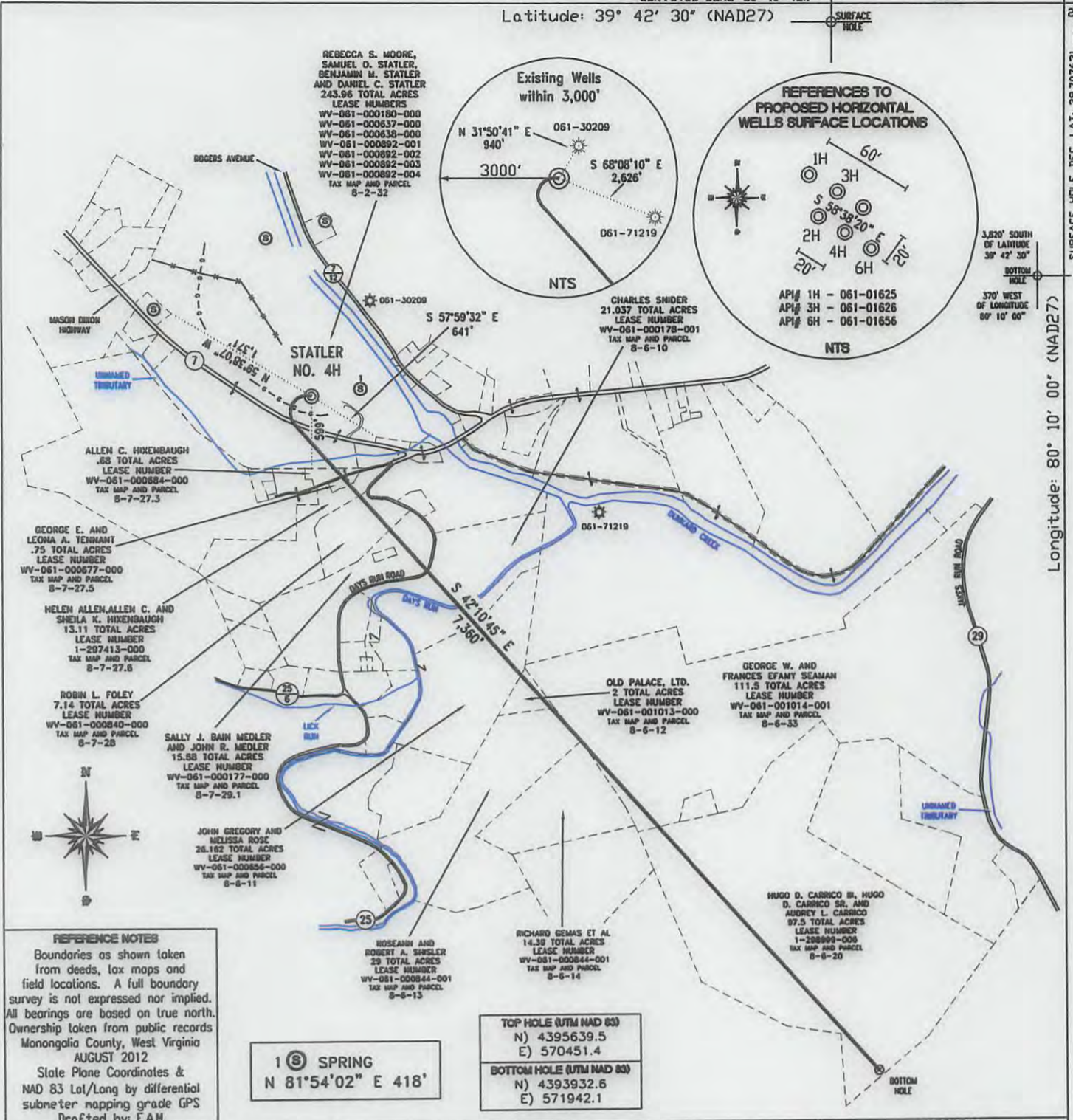
Latitude: 39° 42' 30" (NAD27)

3,290'

260'

SURFACE HOLE DEC. LAT: 39° 42' 27.5"

Longitude: 80° 10' 00" (NAD27)



REFERENCE NOTES
 Boundaries as shown taken from deeds, tax maps and field locations. A full boundary survey is not expressed nor implied. All bearings are based on true north. Ownership taken from public records Monongalia County, West Virginia AUGUST 2012
 State Plane Coordinates & NAD 83 Lat/Long by differential submeter mapping grade GPS
 Drafted by: E.A.M.

1 (S) SPRING
 N 81°54'02" E 418'

TOP HOLE (UTM NAD 83)
 N) 4395639.5
 E) 570451.4
 BOTTOM HOLE (UTM NAD 83)
 N) 4393932.6
 E) 571942.1

FILE #: NNE 008
 DRAWING #: 2191
 SCALE: 1" = 1200'
 MINIMUM DEGREE OF ACCURACY: 1/200
 PROVEN SOURCE OF ELEVATION: SUBMETER MAPPING GRADE GPS

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.
 Signed: *[Signature]*
 L.L.S. #2124: Ernest J. Benchek III



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP
OFFICE OF OIL & GAS
 601 57TH STREET
 CHARLESTON, WV 25304

DATE: MAY 14, 2013
 OPERATOR'S WELL #: STATLER NO. 4H
 API WELL #: 47 61
 STATE COUNTY PERMIT

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

WATERSHED: DUNKARD
 COUNTY/DISTRICT: MONONGALIA / CLAY
 SURFACE OWNER: REBECCA S. MOORE, SAMUEL O. STATLER, BENJAMIN M. STATLER, DANIEL C. STATLER
 OIL & GAS ROYALTY OWNER: REBECCA S. MOORE, SAMUEL O. STATLER, BENJAMIN M. STATLER, DANIEL C. STATLER
 LEASE NUMBERS:

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

TARGET FORMATION: MARCELLUS
 WELL OPERATOR: NORTHEAST NATURAL ENERGY LLC
 ADDRESS: 707 VIRGINIA STREET - SUITE 1200
 CITY: CHARLESTON STATE: WV ZIP CODE: 25301

ELEVATION: 1,061'
 QUADRANGLE: BLACKSVILLE, WV
 ACREAGE: 243.96 +/-
 ACREAGE: 582.909 +/-

ESTIMATED DEPTH: TVD: 7,860' TMD: 15,867'
 DESIGNATED AGENT: JOHN ADAMS
 ADDRESS: 707 VIRGINIA STREET - SUITE 1200
 CITY: CHARLESTON STATE: WV ZIP CODE: 25301