



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

November 18, 2013

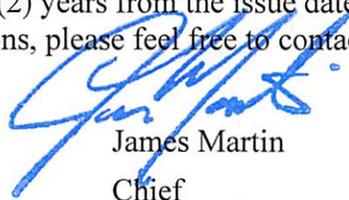
WELL WORK PERMIT
Rework/Horizontal 6A Well

This permit, API Well Number: 47-5101472, issued to CNX GAS COMPANY 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: SHL6JHS
Farm Name: DAGUE, CHARLES W. & ELVIRA
API Well Number: 47-5101472
Permit Type: Rework/Horizontal 6A Well
Date Issued: 11/18/2013

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. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACOE). Through this permit, you are hereby being advised to consult with USACOE 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 fifty (50) 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.

Farm Name: Dague, Charles W. & Elvira H. _____ Operator Well No: SHL-6J-HS

LOCATION: SHL 6 Elevation: 834.05 Quadrangle: MAJORSVILLE

District: Sand Hill County: MARSHALL
Latitude: _____ Feet South of _____ Deg. _____ Min. _____ Sec. 39.956050
Longitude: _____ Feet South of _____ Deg. _____ Min. _____ Sec. -80.575520

Company: CNX Gas Company	Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. Ft.
Address: 200 Evergreene Drive Waynesburg, PA 15370	20	80.0	80.0	Grouted in
Agent: Steven Greene	13 3/8	617.0	617.0	660 sxs (150 bbls) cement to surface
Inspector: Derek Haught	9 5/8	2,895.0	2,895.0	948 sxs (215 bbls) cement to surface
Date Permit Issued: 7/5/2011	5 1/2	9,437.0	9,437.0	1555 sxs (352 bbls) cement
Date Well Work Commenced: 7/27/2011				
Date Well Work Completed: 10/31/2012				Pilot Hole was plugged back with solid cement. a KOP was set with 552 sxs
Verbal Plugging:				D901, 0.75% BWOC D065, 0.2% BWOC D046, 0.5% BWOC D201 yield 1.09. 107 bbl @ 16.2
Date Permission granted on: 7/27/2011				
Rotary Cable Rig X				
Total Vertical Depth (ft): Original Hole - 6148' pilot hole 6229.47 TVD at td of lateral leg				
Total Measured Depth (ft): 9,474'				
Fresh Water Depth (ft): 200'				
Salt Water Depth (ft): None				
Is coal being mined in the area (N/Y)? Y				
Coal Depths (ft.): 314' - 320' ; Pittsburgh Seam				
Void(s) encountered (N/Y) Depth(s)				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 6,208
Gas: Initial open flow 803 MCF/d Oil: Initial open flow 4 Bbl/d
Final open flow 925 MCF/d Final open flow 7 Bbl/d
Time of open flow between initial and final tests 24 Hours
Static rock Pressure 905 psig (surface pressure) after 24 Hours

Second producing formation _____ Pay zone depth (ft) _____
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ Hours
Static rock Pressure _____ psig (surface pressure) after _____ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the 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.

[Signature] 11-5-13
Signature Date

Were core samples taken? Yes__ No_x__

Were cuttings caught during drilling? Yes_x_ No__

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list: Gamma Ray Logs, Bond Log

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing or Stimulating:

Top Depth (ftKB)	Bottom Depth (ftKB)
6,357.00	9,317.00

Plug Back Details including Plug Type and Depth(s): PBD: 9347'

Surface: _____

Formations Encountered:

See attached sheet		
--------------------	--	--

These are Measured Depths from the Pilot Hole.

Formations	Top MD	Base MD	
Sand and Shale	0	297.05	
Pittsburgh Coal	297.05	302.74	
Shale	302.74	813.7	
Dunkard Sand	813.7	836.45	
Shale	836.45	952.11	
Gas Sand	952.11	1005.2	
Shale	1005.2	1095.25	
1st Salt Sand	1095.25	1104.73	
Shale	1104.73	1140.76	
2nd Salt Sand	1140.76	1159.72	
Shale	1159.72	1239.35	
3rd Salt Sand	1239.35	1266.84	
Shale	1266.84	1277.27	
Maxton Sand	1277.27	1361.64	
Shale	1361.64	1369.22	
Big Lime	1369.22	1381.55	
Big Injun (Loyal Hanna)	1381.55	1445.06	
Pocano Big Injun	1445.06	1591.05	
Shale	1591.05	1943.7	
Murrysville (Berea)	1943.7	1951.29	
Shale	1951.29	2163.63	
50' Sand	2163.63	2169.32	
Shale	2169.32	2253.69	
Gordon Stray	2253.69	2268.86	
Shale	2268.86	2307.6	
Gordon	2307.6	2316.23	
Shale	2316.23	2414.84	
Fifth Sand	2414.84	2451.81	
Upper Devonian Shale Undiff.	2451.81	4794.33	
Angola Shale	4794.33	5413.03	
Rhinestreet	5413.03	5826.2	
Cashaqua	5826.2	5912.46	
Middlesex	5912.46	5948.97	
West River	5948.97	5997.34	estimated depth
Burkett	5997.34	6021.51	estimated depth
Tully	6021.51	6051.63	estimated depth
Hamilton	6051.63	6161	estimated depth
Marcellus	6161	not encountered	estimated depth

WW - 6B
(3/13)

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

1) Well Operator: CNX Gas Company, LLC 494458046 Marshall Sand Hill Majorsville
Operator ID County District Quadrangle

2) Operator's Well Number: SHL6JHS Well Pad Name: SHL6

3 Elevation, current ground: 831.06 Elevation, proposed post-construction: 830

4) Well Type: (a) Gas Oil Underground Storage
Other _____
(b) If Gas: Shallow Deep
Horizontal

5) Existing Pad? Yes or No: Yes

6) Proposed Target Formation(s), Depth(s), Anticipated Thicknesses and Associated Pressure(s):
Marcellus 6161 - 6213; thickness 52'; pressure 4100 psi

7) Proposed Total Vertical Depth: 6148' TVD

8) Formation at Total Vertical Depth: Hamilton

9) Proposed Total Measured Depth: 9111'

10) Approximate Fresh Water Strata Depths: 200'

11) Method to Determine Fresh Water Depth: Seneca Technology nearest offset well

12) Approximate Saltwater Depths: none

13) Approximate Coal Seam Depths: 314-320

14) Approximate Depth to Possible Void (coal mine, karst, other): None encountered (well is drilled)

15) Does proposed well location contain coal seams directly overlying or adjacent to an active mine? If so, indicate name and depth of mine: Yes

16) Describe proposed well work: The following well is planned to be re-completed in the previously stimulated Marcellus formation.
A slickwater frac job will be performed with the addition of new perforations in the Marcellus formation.

17) Describe fracturing/stimulating methods in detail:
The stimulation will be multiple stages divided over the lateral length of the well. Stage spacing is dependent upon engineering design. Slickwater fracturing technique will be utilized on each stage using sand, water, and chemicals. See attached list.

18) Total area to be disturbed, including roads, stockpile area, pits, etc, (acres): 11.10

19) Area to be disturbed for well pad only, less access road (acres): 10.61

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20)

CASING AND TUBING PROGRAM

<u>TYPE</u>	<u>Size</u>	<u>New or Used</u>	<u>Grade</u>	<u>Weight per ft.</u>	<u>FOOTAGE: For Drilling</u>	<u>INTERVALS: Left in Well</u>	<u>CEMENT: Fill -up (Cu. Ft.)</u>
Conductor	20"	New	J-55	99#	80	80	CTS
Fresh Water	13 3/8"	New	J-55	54#	637.8	637.8	585 sxs (133 bbls) CTS
Coal							
Intermediate	9 5/8"	New	J-55	36#	2667	2667	950 sxs (216 bbls) CTS
Production	5 1/2"	New	P-110	20#	9051	9051	1535 sxs (347 bbls) Cement
Tubing							
Liners							

WRH
9-4-13

<u>TYPE</u>	<u>Size</u>	<u>Wellbore Diameter</u>	<u>Wall Thickness</u>	<u>Burst Pressure</u>	<u>Cement Type</u>	<u>Cement Yield</u>
Conductor	20"	26	.438	.25	Type 1	CTS
Fresh Water	13 3/8"	17 1/2	.380	2730	Type 1	585 sxs (133 bbls) CTS
Coal						
Intermediate	9 5/8"	12 3/8	.352	2730	Class A	950 sxs (216 bbls) CTS
Production	5 1/2"	8 3/4	.361	12640	Class A	1535 sxs (347 bbls) Cement
Tubing						
Liners						

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PACKERS

SEP 05 2013

Kind:				
Sizes:				
Depths Set:				

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SEP 05 2013

21) Describe centralizer placement for each casing string.

NA-This well has is already drilled.

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

NA- well is already drilled

23) Proposed borehole conditioning procedures.

NA - well is already drilled

*Note: Attach additional sheets as needed.

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name CNX Gas Company, LLC OP Code 494458046

Watershed (HUC 10) Wheeling Creek Quadrangle Majorsville

Elevation 831.06 County Marshall District Sand Hill

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

Will a pit be used for drill cuttings? Yes _____ No X

If so, please describe anticipated pit waste: none anticipated

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

Proposed Disposal Method For Treated Pit Wastes:

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

Will closed loop system be used? yes

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. NA -this is a re-fracture

-If oil based, what type? Synthetic, petroleum, etc. None this is a re-fracture

Additives to be used in drilling medium? none this is a re-fracture

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. none this is a re-fracture

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

-Landfill or offsite name/permit number? see attached sheet

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 [Signature]
Company Official (Typed Name) Daniel Bitz
Company Official Title Director Environmental Permitting



Subscribed and sworn before me this 4th day of September, 2013 WW Department of Environmental Protection
[Signature] Notary Public

My commission expires November 23, 2015

Form WW-9

Operator's Well No. SHL6JHS

CNX Gas Company, LLC

Proposed Revegetation Treatment: Acres Disturbed _____ Prevegetation pH _____

Lime 2 to 3 Tons/acre or to correct to pH _____

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

Mulch hay or straw at 2 Tons/acre

Seed Mixtures

Area I			Area II		
Seed Type	lbs/acre		Seed Type	lbs/acre	
Tall Fescue	40		Tall Fescue	40	
Ladino Clover	5		Ladino Clover	5	

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: *Bill [Signature]*

Comments: _____

Title: Oil and Gas Inspector

Date: 9-4-13

Field Reviewed? Yes No

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Environmental Protection



Water Management Plan: Primary Water Sources



WMP-01543

API/ID Number: 047-051-01472

Operator: Noble Energy, Inc

SHL6JHS

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 NOV 07 2013

Source Summary

WMP-01543

API Number:

047-051-01472

Operator:

Noble Energy, Inc

SHL6JHS

Purchased Water

● Source **West Virginia American Water - Weston Water Treatme** Lewis Owner: **West Virginia American Water**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
8/29/2013	8/29/2014	4,000,000	500,000	-	-

Regulated Stream? Stonewall Jackson Dam Ref. Gauge ID: 3061000 WEST FORK RIVER AT ENTERPRISE, WV

Max. Pump rate (gpm): Min. Gauge Reading (cfs): **170.57** Min. Passby (cfs)

DEP Comments:

● Source **Bethlehem Water Department** Ohio Owner: **Bethlehem Water Department**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
8/29/2013	8/29/2014	4,000,000	200,000	-	-

Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): Min. Gauge Reading (cfs): **6,468.00** Min. Passby (cfs)

DEP Comments:

Bethlehem Water Department purchases all its water from the City of Wheeling. Thresholds are set based on the location of the City of Wheeling's raw water intake.

● Source **Wellsburg Water Department** Brooke Owner: **Wellsburg Water Department**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
8/29/2013	8/29/2014	4,000,000	200,000	-	-

Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): Min. Gauge Reading (cfs): **6,468.00** Min. Passby (cfs)

DEP Comments:

This alluvial groundwater well is, to some extent, under the influence of the Ohio River. Please adhere to stated minimum flow requirements on the Ohio River for withdrawals. <http://www.erh.noaa.gov/er/ohrfc/flows.shtml>

Source **Moundsville Water Board** Marshall Owner: **Moundsville Water Treatment Plant**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
8/29/2013	8/29/2014	4,000,000	2,000,000	-	-

Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): Min. Gauge Reading (cfs): **6,468.00** Min. Passby (cfs)

DEP Comments: This alluvial groundwater well is, to some extent, under the influence of the Ohio River. Please adhere to stated minimum flow requirements on the Ohio River for withdrawals. <http://www.erh.noaa.gov/er/ohrfc/flows.shtml>

Source **Dean's Water Service** Ohio Owner: **Dean's Water Service**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
8/29/2013	8/29/2014	4,000,000	600,000	-	-

Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): Min. Gauge Reading (cfs): **6,468.00** Min. Passby (cfs)

DEP Comments:

Source **Wheeling Water Department** Ohio Owner: **Wheeling Water Department**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
8/29/2013	8/29/2014	4,000,000	17,500	-	-

Regulated Stream? Ohio River Min. Flow Ref. Gauge ID: 9999999 Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm): Min. Gauge Reading (cfs): **6,468.00** Min. Passby (cfs)

DEP Comments: Refer to the specified sation on the National Weather Service's Ohio River forecasts at the following website: <http://www.erh.noaa.gov/ohrfc//flows.shtml>

Source **Ohio County PSD** Ohio Owner: **Ohio county PSD**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
8/29/2013	8/29/2014	4,000,000	720,000	-	-

Regulated Stream? **Ohio River Min. Flow** Ref. Gauge ID: **9999999** Ohio River Station: **Willow Island Lock & Dam**

Max. Pump rate (gpm): **Min. Gauge Reading (cfs): 6,468.00** **Min. Passby (cfs)**

DEP Comments: **Refer to the specified station on the National Weather Service's Ohio River forecast website: <http://www.erh.noaa.gov/ohrfc//flows.shtml>**

Source Detail

WMP- 01543

API/ID Number: 047-051-01472

Operator: Noble Energy, Inc

SHL6JHS

Source ID: 27597 Source Name: West Virginia American Water - Weston Water Treat
West Virginia American Water

Source Latitude: -
Source Longitude: -

HUC-8 Code: 5020002

Drainage Area (sq. mi.): 104.83 County: Lewis

Anticipated withdrawal start date: 8/29/2013

Anticipated withdrawal end date: 8/29/2014

Total Volume from Source (gal): 4,000,000

Endangered Species? Mussel Stream?

Trout Stream? Tier 3?

Regulated Stream? Stonewall Jackson Dam

Proximate PSD? Weston WTP

Gauged Stream?

Max. Pump rate (gpm):

Max. Simultaneous Trucks:

Max. Truck pump rate (gpm):

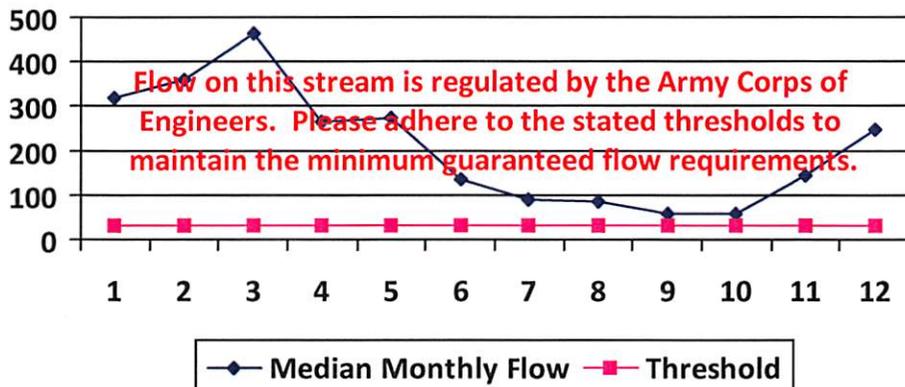
Reference Gaug: 3061000 WEST FORK RIVER AT ENTERPRISE, WV

Drainage Area (sq. mi.): 759.00

Gauge Threshold (cfs): 234

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	321.23	-	-
2	361.67	-	-
3	465.85	-	-
4	266.43	-	-
5	273.47	-	-
6	137.03	-	-
7	88.78	-	-
8	84.77	-	-
9	58.98	-	-
10	57.83	-	-
11	145.12	-	-
12	247.76	-	-

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs): -

Upstream Demand (cfs): 24.32

Downstream Demand (cfs): 0.00

Pump rate (cfs):

Headwater Safety (cfs): 8.08

Ungauged Stream Safety (cfs): 0.00

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- 01543

API/ID Number: 047-051-01472

Operator: Noble Energy, Inc

SHL6JHS

Source ID: 27598 Source Name: Bethlehem Water Department Source Latitude: -
 Bethlehem Water Department Source Longitude: -

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 25000 County: Ohio

Anticipated withdrawal start date: 8/29/2013

Anticipated withdrawal end date: 8/29/2014

Endangered Species? Mussel Stream?

Total Volume from Source (gal): 4,000,000

Trout Stream?

Tier 3?

Max. Pump rate (gpm):

Regulated Stream?

Ohio River Min. Flow

Max. Simultaneous Trucks:

Proximate PSD?

City of Wheeling

Max. Truck pump rate (gpm):

Gauged Stream?

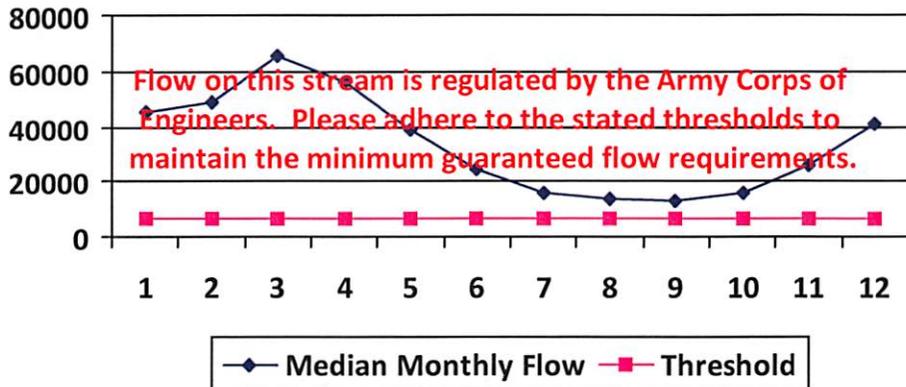
Reference Gaug: 9999999 Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00

Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs): -

Upstream Demand (cfs):

Downstream Demand (cfs):

Pump rate (cfs):

Headwater Safety (cfs): 0.00

Ungauged Stream Safety (cfs): 0.00

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- 01543

API/ID Number: 047-051-01472

Operator: Noble Energy, Inc

SHL6JHS

Source ID: 27599 Source Name: Wellsburg Water Department Source Latitude: -
 Wellsburg Water Department Source Longitude: -

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 25000 County: Brooke

Anticipated withdrawal start date: 8/29/2013

Anticipated withdrawal end date: 8/29/2014

Endangered Species? Mussel Stream?

Total Volume from Source (gal): 4,000,000

Trout Stream? Tier 3?

Max. Pump rate (gpm):

Regulated Stream? Ohio River Min. Flow

Max. Simultaneous Trucks:

Proximate PSD? Wellsburg Water Department

Max. Truck pump rate (gpm):

Gauged Stream?

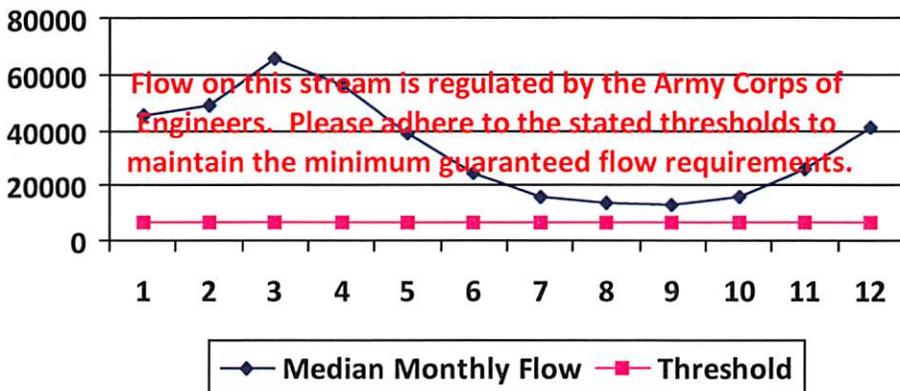
Reference Gaug: 9999999 Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00

Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs): -

Upstream Demand (cfs):

Downstream Demand (cfs):

Pump rate (cfs):

Headwater Safety (cfs): 0.00

Ungauged Stream Safety (cfs): 0.00

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- 01543

API/ID Number: 047-051-01472

Operator: Noble Energy, Inc

SHL6JHS

Source ID: 27600 Source Name: Moundsville Water Board Source Latitude: -
 Moundsville Water Treatment Plant Source Longitude: -

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 25000 County: Marshall

Anticipated withdrawal start date: 8/29/2013

Anticipated withdrawal end date: 8/29/2014

Endangered Species? Mussel Stream?

Total Volume from Source (gal): 4,000,000

Trout Stream?

Tier 3?

Max. Pump rate (gpm):

Regulated Stream? Ohio River Min. Flow

Max. Simultaneous Trucks:

Proximate PSD?

Max. Truck pump rate (gpm):

Gauged Stream?

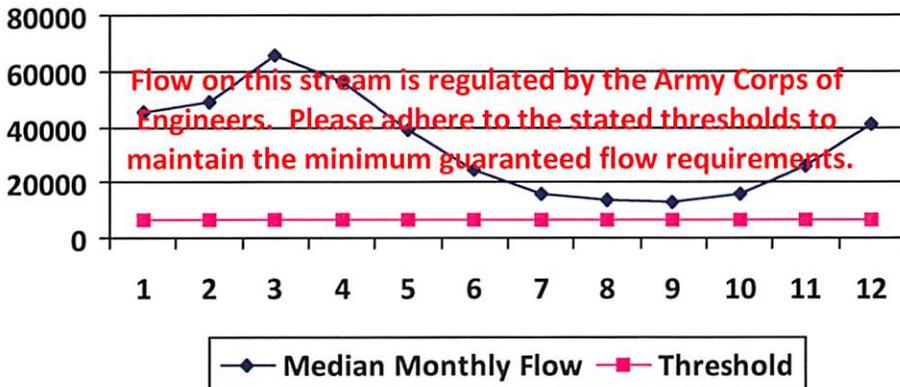
Reference Gaug: 9999999 Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00

Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs): -

Upstream Demand (cfs):

Downstream Demand (cfs):

Pump rate (cfs):

Headwater Safety (cfs): 0.00

Ungauged Stream Safety (cfs): 0.00

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- 01543

API/ID Number: 047-051-01472

Operator: Noble Energy, Inc

SHL6JHS

Source ID: 27601 Source Name: Dean's Water Service Source Latitude: -
 Dean's Water Service Source Longitude: -

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 25000 County: Ohio

Anticipated withdrawal start date: 8/29/2013

Anticipated withdrawal end date: 8/29/2014

Endangered Species? Mussel Stream?

Total Volume from Source (gal): 4,000,000

Trout Stream?

Tier 3?

Max. Pump rate (gpm):

Regulated Stream? Ohio River Min. Flow

Max. Simultaneous Trucks:

Proximate PSD?

Max. Truck pump rate (gpm):

Gauged Stream?

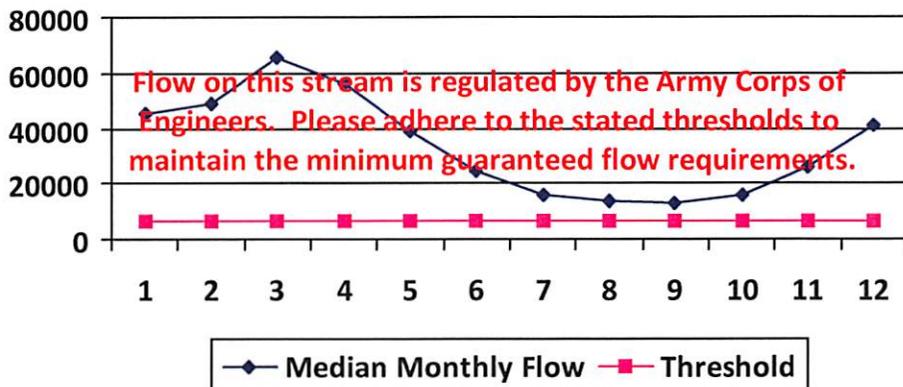
Reference Gaug: 9999999 Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00

Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs): -

Upstream Demand (cfs): 0.00

Downstream Demand (cfs): 0.00

Pump rate (cfs):

Headwater Safety (cfs): 0.00

Ungauged Stream Safety (cfs): 0.00

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- 01543 API/ID Number: 047-051-01472 Operator: Noble Energy, Inc
 SHL6JHS

Source ID: 27603 Source Name: Wheeling Water Department Source Latitude: -
 Wheeling Water Department Source Longitude: -

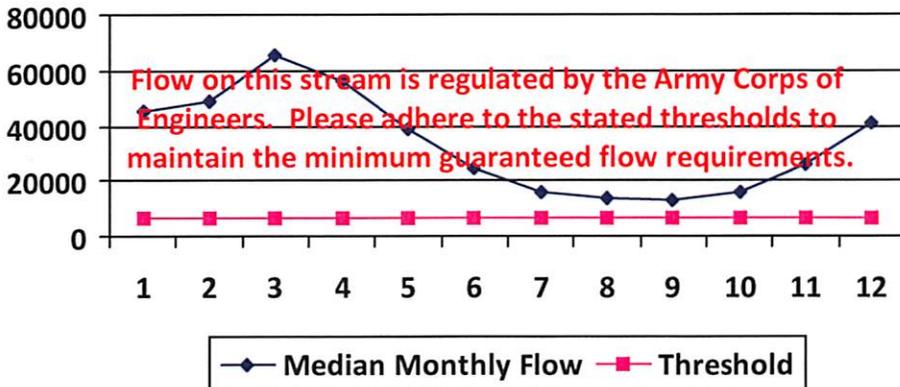
HUC-8 Code: 5030106 Anticipated withdrawal start date: 8/29/2013
 Drainage Area (sq. mi.): 25000 County: Ohio Anticipated withdrawal end date: 8/29/2014

Endangered Species? Mussel Stream?
 Trout Stream? Tier 3?
 Regulated Stream? Ohio River Min. Flow Total Volume from Source (gal): 4,000,000
 Proximate PSD? Wheeling Water Department Max. Pump rate (gpm):
 Gauged Stream? Max. Simultaneous Trucks:
 Max. Truck pump rate (gpm):

Reference Gaug: 9999999 Ohio River Station: Willow Island Lock & Dam
 Drainage Area (sq. mi.): 25,000.00 Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs): -
 Upstream Demand (cfs):
 Downstream Demand (cfs):
 Pump rate (cfs):
 Headwater Safety (cfs): 0.00
 Ungauged Stream Safety (cfs): 0.00
 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- 01543

API/ID Number: 047-051-01472

Operator: Noble Energy, Inc

SHL6JHS

Source ID: 27604 Source Name: Ohio County PSD Source Latitude: -
Ohio county PSD Source Longitude: -

HUC-8 Code: 5030106

Drainage Area (sq. mi.): 25000 County: Ohio

Anticipated withdrawal start date: 8/29/2013

Anticipated withdrawal end date: 8/29/2014

Endangered Species? Mussel Stream?

Total Volume from Source (gal): 4,000,000

Trout Stream?

Tier 3?

Max. Pump rate (gpm):

Regulated Stream?

Ohio River Min. Flow

Max. Simultaneous Trucks:

Proximate PSD?

Wheeling Water Department

Max. Truck pump rate (gpm):

Gauged Stream?

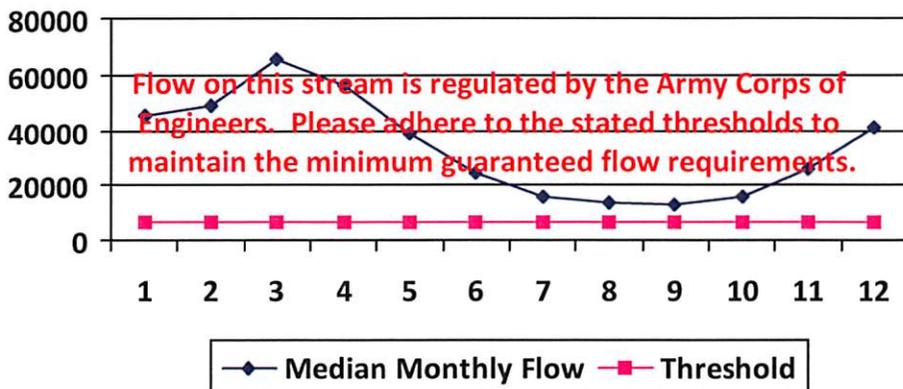
Reference Gaug: 9999999 Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00

Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs): -

Upstream Demand (cfs):

Downstream Demand (cfs):

Pump rate (cfs):

Headwater Safety (cfs): 0.00

Ungauged Stream Safety (cfs): 0.00

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- 01543	API/ID Number	047-051-01472	Operator:	Noble Energy, Inc
SHL6JHS				

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:	27605	Source Name	SHL #3 Pad Tank Farm		Source start date:	8/29/2013
					Source end date:	8/29/2014
Source Lat:	39.971171	Source Long:	-80.556856	County	Marshall	
Max. Daily Purchase (gal)		Total Volume from Source (gal):	4,000,000			
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-1435

WMP-01543

API/ID Number

047-051-01472

Operator:

Noble Energy, Inc

SHL6JHS

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:	27606	Source Name	SHL #4 Pad Tank Farm		Source start date:	8/29/2013
					Source end date:	8/29/2014
Source Lat:	39.956739	Source Long:	-80.5515	County	Marshall	
Max. Daily Purchase (gal)		Total Volume from Source (gal):	4,000,000			
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-1436

Source ID:	27607	Source Name	SHL #1 Centralized Freshwater Impoundment		Source start date:	8/29/2013
					Source end date:	8/29/2014
Source Lat:	39.979696	Source Long:	-80.579465	County	Marshall	
Max. Daily Purchase (gal)		Total Volume from Source (gal):	4,000,000			
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-200

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: 27608	Source Name	SHL #2 Centralized Waste Pit		Source start date:	8/29/2013
				Source end date:	8/29/2014
	Source Lat:	39.966973	Source Long:	-80.561377	County
					Marshall
	Max. Daily Purchase (gal)		Total Volume from Source (gal):		4,000,000
DEP Comments:	WV51-WPC-00001				

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-201

Source ID: 27609	Source Name	SHL #3 Centralized Waste Pit		Source start date:	8/29/2013
				Source end date:	8/29/2014
	Source Lat:	39.974133	Source Long:	-80.55527	County
					Marshall
	Max. Daily Purchase (gal)		Total Volume from Source (gal):		4,000,000
DEP Comments:	WV51-WPC-00002				

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-202

WMP- 01543

API/ID Number

047-051-01472

Operator:

Noble Energy, Inc

SHL6JHS

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:	27610	Source Name	SHL #4 Centralized Waste Pit		Source start date:	8/29/2013
					Source end date:	8/29/2014
Source Lat:	39.963284	Source Long:	-80.562743	County	Marshall	
Max. Daily Purchase (gal)		Total Volume from Source (gal):	4,000,000			
DEP Comments:	WV51-WPC-00003					

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-204

Purchased Water

Source ID:	27602	Source Name	Bridgeport Ohio Water Department Public Water Provider		Source start date:	8/29/2013
					Source end date:	8/29/2014
Source Lat:	40.08348	Source Long:	-80.736488	County		
Max. Daily Purchase (gal)	200,000	Total Volume from Source (gal):	4,000,000			
DEP Comments:	Please ensure that purchases from this source are approved by, and completed in accordance with, requirements set forth by the State of Ohio Department of Environmental Protection.					

WMP-01543

API/ID Number

047-051-01472

Operator:

Noble Energy, Inc

SHL6JHS

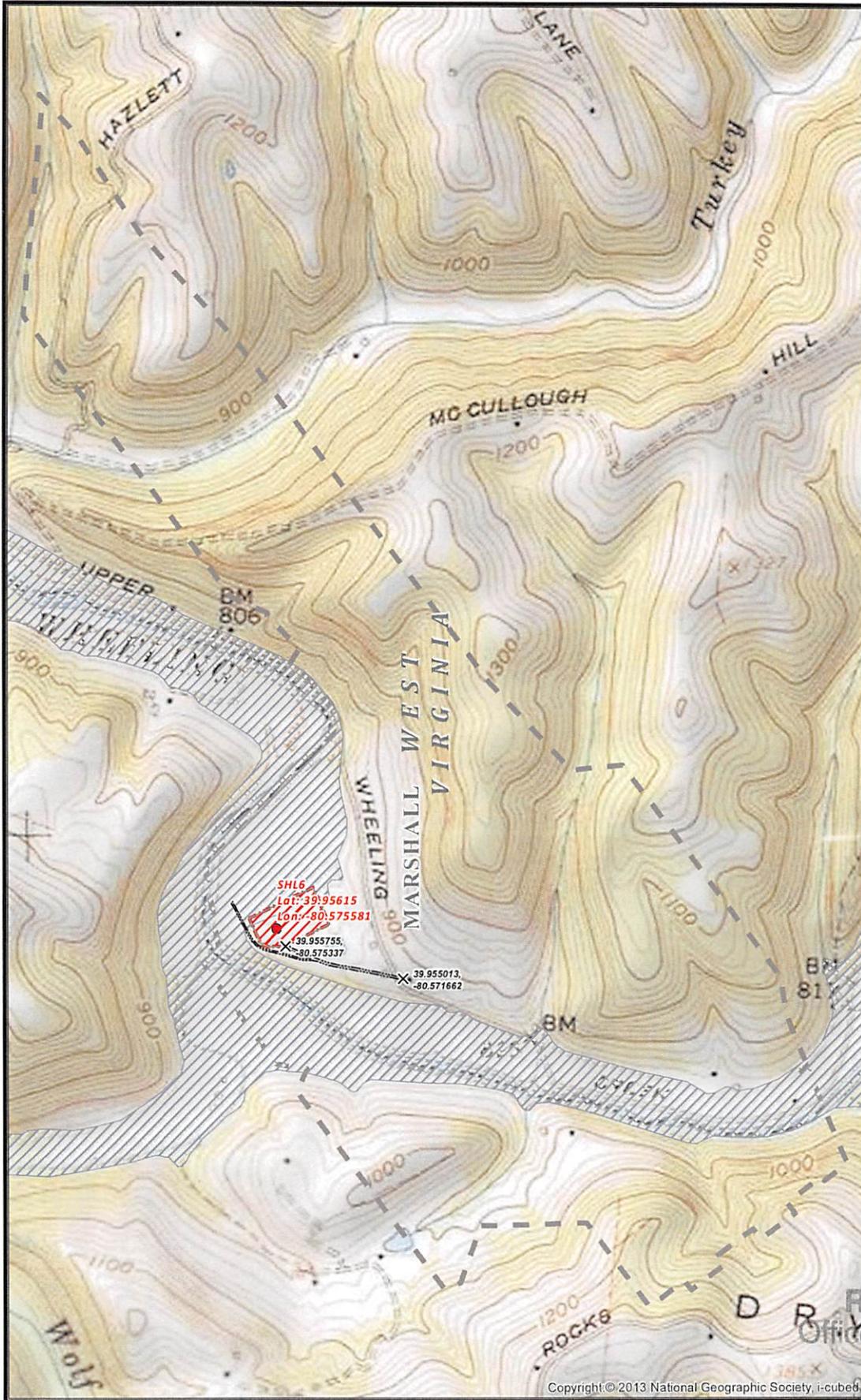
Important:

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.

Recycled Frac Water

Source ID:	27611	Source Name	Various		Source start date:	8/29/2013
					Source end date:	8/29/2014
Source Lat:		Source Long:		County		
Max. Daily Purchase (gal)		Total Volume from Source (gal):	4,000,000			
DEP Comments:	Sources include, but are not limited to, the SHL8 and WEB4 well pads					



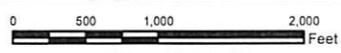
RECEIVED
Office of Oil & Gas

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SEP 05 2013

SHL6 SITE SAFETY PLAN
- FLOODPLAIN ZONES -

✕ Road Intersection	▨ Floodplain	▭ States
▭ Well Pad Boundary	▭ Proposed Unit	▭ Counties



Projection: NAD_1983_StatePlane_West_Virginia_North_FIPS_4701
Units: Foot US

noble energy

Disclaimer: All data is licensed for use by Noble Energy Inc. use only.

Date: 9/3/2013
Charleston, WV

2/5

WV Department of Environmental Protection

LEGEND

- ⊕ - TOPO MAP POINT
- ☀ - WELL
- - ALL ARE POINTS UNLESS OTHERWISE NOTED.
- ⊙ - WATER SOURCE
- - MINERAL TRACT BOUNDARY
- - PARCEL LINES
- - WELL REFERENCE
- - PROPOSED HORIZONTAL WELL
- - ROAD
- - STREAM CENTER LINE
- - WELLS WITHIN 3,000'
- - EXISTING WELLS

COORDINATES:
9,476' WEST
845' SOUTH



Latitude: 39°57'30"

LINE	BEARING	DISTANCE
R1	S 61°33'48" W	234.34'
R2	S 14°33'31" W	204.92'
R3	S 16°11'20" E	218.37'

GAS LESSORS		
TAX MAP#	PARCEL#	OIL & GAS ROYALTY OWNERS
12-15	17	CHARLES W. & ELVIRA H. DAGUE
12-15	18	THE PENN CENTRAL CORPORATION
13-03	10	CARRIE M. TOLAND
15-03	11	DAVID E. HAGAN
15-03	09	LONNIE J. WINEMAN

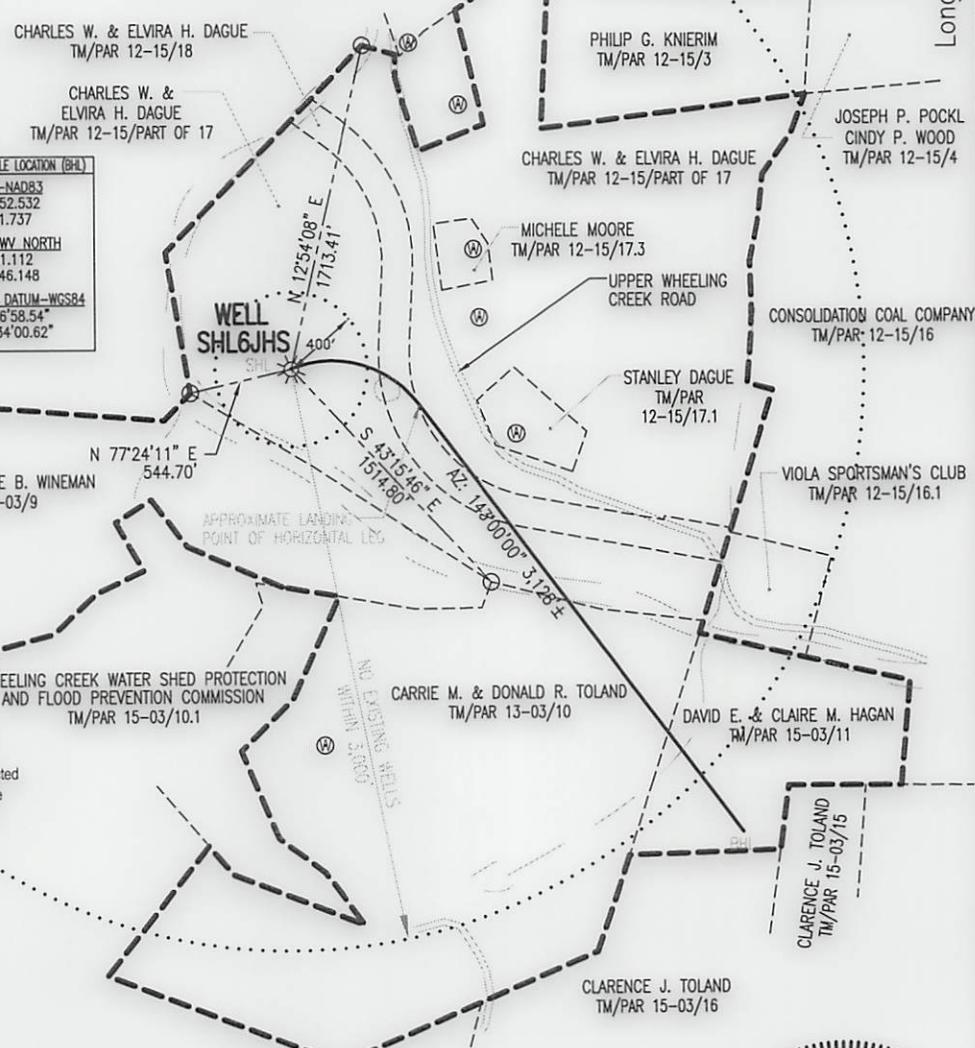
Longitude: 80°32'30"

SURFACE HOLE LOCATION (SHL)	APPROX. LANDING POINT	BOTTOM HOLE LOCATION (BHL)
UTM 17 N:4422974.185 E:536274.327 NAD27, WV NORTH N:532138.825 E:1698498.822 LAT/LOG DATUM-WGS84 LAT:39°57'22.06" LON:80°34'31.13"	UTM 17-NAD83 N:4422920.905 E:536480.294 NAD27, WV NORTH N:531953.097 E:1699171.762 LAT/LOG DATUM-WGS84 LAT:39°57'20.30" LON:80°34'22.46"	UTM 17-NAD83 N:4422252.532 E:537001.737 NAD27, WV NORTH N:529731.112 E:1700846.148 LAT/LOG DATUM-WGS84 LAT:39°56'58.54" LON:80°34'00.62"

- NOTES:
- There are no dwellings within 200' of proposed well.
 - Proposed well is greater than 100' from the mineral line
 - It is not the purpose or intention of this plat to represent surveyed locations of the surface or mineral parcels depicted hereon. The location of the boundary lines, as shown, are based on record deed descriptions, field evidence found and/or tax map position, unless otherwise noted.



Blue Mountain Engineering
11023 MASON DIXON HIGHWAY
BURTON, WV 26562
PHONE: (304) 662-6486



FILE #: SHL6JHS
DRAWING #: SHL6JHS
SCALE: 1" = 1000'
MINIMUM DEGREE OF ACCURACY: 1/2500
PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT THOMAS 1498.81'

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]*
R.P.E.: _____ L.L.S.: P.S. No. 2000

GEORGE D. SIX
LICENSED
No. 2000
STATE OF WEST VIRGINIA
PROFESSIONAL SURVEYOR

PLACE SEAL HERE

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



DATE: AUGUST 28, 2013
OPERATOR'S WELL #: SHL6JHS SERIAL No.: WV0510588HS
API WELL #: 47 051 01472H6A
STATE COUNTY PERMIT

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

WATERSHED: WHEELING CREEK ELEVATION: 834.05'

COUNTY/DISTRICT: MARSHALL / SAND HILL QUADRANGLE: MAJORSVILLE, WV-PA 7.5'

SURFACE OWNER: CHARLES W. & ELVIRA H. DAGUE ACREAGE: 47.739±

OIL & GAS ROYALTY OWNER: SEE ABOVE GAS LESSORS CHART ACREAGE: 353.141±

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

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 6,212'± TMD: 10,194'±

WELL OPERATOR: CNX Gas Company LLC DESIGNATED AGENT: KENT WRIGHT
Address: 200 EVERGREENE DR. Address: ONE ENERGY DRIVE
City: WAYNESBURG State: PA Zip Code: 15370 City: JANE LEW State: WV Zip Code: 26378