

JK

WR-35  
Rev. 8/23/13

Page \_\_\_ of \_\_\_

State of West Virginia  
Department of Environmental Protection - Office of Oil and Gas  
Well Operator's Report of Well Work

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API 47 - 085 - 10034 County Ritche District Clay  
Quad Pennsboro Pad Name PENS 1HS Field/Pool Name \_\_\_\_\_  
Farm name CNX Gas Company LLC Well Number PENS 1JHS  
Operator (as registered with the OOG) Noble Energy, Inc.  
Address 333 Technology Drive Suite 110 City Canonsburg State PA Zip 15317

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing 4353964.70 Easting 500622.18  
Landing Point of Curve Northing 4354260.55 Easting 500716.42  
Bottom Hole Northing 4356109.08 Easting 499113.21

Elevation (ft) 1111 GL Type of Well  New  Existing Type of Report  Interim  Final  
Permit Type  Deviated  Horizontal  Horizontal 6A  Vertical Depth Type  Deep  Shallow  
Type of Operation  Convert  Deepen  Drill  Plug Back  Redrilling  Rework  Stimulate  
Well Type  Brine Disposal  CBM  Gas  Oil  Secondary Recovery  Solution Mining  Storage  Other \_\_\_\_\_  
Type of Completion  Single  Multiple Fluids Produced  Brine  Gas  NGL  Oil  Other \_\_\_\_\_  
Drilled with  Cable  Rotary

Drilling Media Surface hole  Air  Mud  Fresh Water Intermediate hole  Air  Mud  Fresh Water  Brine  
Production hole  Air  Mud  Fresh Water  Brine  
Mud Type(s) and Additive(s)  
Synthetic Oil Based

Date permit issued 4/12/2013 Date drilling commenced 5/27/2013 Date drilling ceased 1/19/2014  
Date completion activities began 7/9/2014 Date completion activities ceased 9/12/2014  
Verbal plugging (Y/N) N Date permission granted 4/12/2013 Granted by \_\_\_\_\_

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 130' Open mine(s) (Y/N) depths N  
Salt water depth(s) ft 1525', 1805' Void(s) encountered (Y/N) depths N  
Coal depth(s) ft \_\_\_\_\_ Cavern(s) encountered (Y/N) depths N  
Is coal being mined in area (Y/N) N

Reviewed by:  
12/05/2014

API 47-085-10034 Farm name CNX Gas Company LLC Well number PENS 1JHS

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor	24	20	40	N			
Surface	17-1/2	13-3/8	669	N	J-55 54.5#		Y
Coal							
Intermediate 1	12-1/4	9-5/8	5340	N	HCK 36#		Y
Intermediate 2							
Intermediate 3							
Production	8-3/4	5-1/2	15167	N	HCP-110 20#		Y
Tubing							
Packer type and depth set							

Comment Details \_\_\_\_\_

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor							
Surface	Type 1	578	15.6	1.19	123	0	8
Coal							
Intermediate 1	Class A	Lead- 965 Tail- 280	Lead- 12 Tail- 15.6	Lead- 1.83 Tail- 1.19	Lead- 314 Tail- 59	0	8
Intermediate 2							
Intermediate 3							
Production	Class A	Lead- 388 Tail- 1800	Lead- 13 Tail- 14.8	Lead- 1.63 Tail- 1.41	Lead- 112 Tail- 452	3400	8
Tubing							

Drillers TD (ft) 15180 Loggers TD (ft) \_\_\_\_\_

Deepest formation penetrated Marcellus Plug back to (ft) \_\_\_\_\_

Plug back procedure \_\_\_\_\_

Kick off depth (ft) 5376

Check all wireline logs run  
 caliper    density    deviated/directional    induction  
 neutron    resistivity    gamma ray    temperature    sonic

Well cored  Yes  No    Conventional    Sidewall   Were cuttings collected  Yes  No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING \_\_\_\_\_

6 Centralizers on Surface (1 every 3rd joint) 60 Centralizers on Intermediate (1 every 3rd joint) 264 Centralizers on Production (1 every 3rd to Curve, then 1 every joint to TD)

WAS WELL COMPLETED AS SHOT HOLE  Yes  No   DETAILS \_\_\_\_\_

WAS WELL COMPLETED OPEN HOLE?  Yes  No   DETAILS \_\_\_\_\_

WERE TRACERS USED  Yes  No   TYPE OF TRACER(S) USED Spectra Chem

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 Office of Oil & Gas  
 NOV 21 2014

12/05/2014

API 47- 085 - 10034 Farm name CNX Gas Company LLC Well number PENS 1JHS

**PERFORATION RECORD**

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)

Please See Attached

Please insert additional pages as applicable.

**STIMULATION INFORMATION PER STAGE**

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)

Please See Attached

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NOV 21 2014

Please insert additional pages as applicable.

PERFORATION RECORD

API: 47-085-10034

Farm name: CNX Gas Company, LLC

Well Name: PEN 1JHS

Stage No.	Perf Date	Top Perf	Bottom Perf	# of Perfs	Formation
Toe Sleeve	3/8/2014	15,035	15,037	NA	Marcellus
1	7/9/2014	14,773	15,025	48	Marcellus
2	7/10/2014	14,473	14,727	40	Marcellus
3	7/10/2014	14,173	14,427	40	Marcellus
4	7/10/2014	13,925	14,127	40	Marcellus
5	7/10/2014	13,623	13,877	40	Marcellus
05B	7/11/2014	13,643	13,694	36	Marcellus
6	7/11/2014	13,323	13,577	40	Marcellus
7	7/11/2014	13,020	13,279	40	Marcellus
8	7/12/2014	12,723	12,977	40	Marcellus
9	7/12/2014	12,423	12,677	40	Marcellus
10	7/12/2014	12,123	12,377	40	Marcellus
11	7/13/2014	11,823	12,077	40	Marcellus
12	7/13/2014	11,523	11,777	40	Marcellus
13	7/13/2014	11,223	11,477	40	Marcellus
14	7/14/2014	10,923	11,177	40	Marcellus
15	7/14/2014	10,623	10,877	40	Marcellus
16	7/15/2014	10,323	10,577	40	Marcellus
17	7/15/2014	10,023	10,277	40	Marcellus
18	7/15/2014	9,723	9,977	40	Marcellus
19	7/16/2014	9,423	9,677	40	Marcellus
20	7/16/2014	9,123	9,377	40	Marcellus
21	7/16/2014	8,823	9,077	40	Marcellus
22	7/17/2014	8,523	8,777	40	Marcellus
23	7/17/2014	8,223	8,477	40	Marcellus
24	7/17/2014	7,923	8,177	40	Marcellus
25	7/18/2014	7,623	7,877	40	Marcellus
26	7/18/2014	7,323	7,577	40	Marcellus
27	7/18/2014	7,025	7,279	40	Marcellus
28	7/18/2014	6,725	6,979	40	Marcellus

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NOV 21 2014

12/05/2014

STIMULATION INFORMATION PER STAGE

API: 47-085-10034

CNX Gas  
Farm name: Company, LLC

Well Name: PEN 1JHS

Stage No.	Stim Date	Avg Rate (bpm)	ATP (psi)	Max BD Pressure	ISIP (psi)	Proppant (lbs)	Water (BBLs)	Amount of N <sup>2</sup> / other
1 Inj Test	7/9/2014	13.7	7781		7407	-	604	
1	7/9/2014	84.4	7,706		3805	497,484	13,123	
2	7/10/2014	86.7	7,536	5,579	3509	498,181	11,163	
3	7/10/2014	77.3	7,423	5,984	3485	499,314	11,379	
4	7/10/2014	83.2	7,505	6,012	3565	411,632	9,649	
5	7/11/2014	49.1	8,652	6,421	6054	1,030	3,974	
5B	7/11/2014	66.5	7,474	6,479	3830	496,676	11,672	
6	7/11/2014	83.4	7,472	6,789	3497	495,100	11,149	
7	7/12/2014	86.5	7,312	6,468	3701	497,035	10,815	
8	7/12/2014	82.1	6,936	6,301	3649	497,924	10,980	
9	7/12/2014	81.0	6,971	6,155	3366	495,278	10,990	
10	7/13/2014	87.0	7,036	6,625	3490	495,011	10,669	
11	7/13/2014	82.1	7,245	6,372	3746	492,869	10,861	
12	7/13/2014	64.0	7,505	6,075	7554	391,405	11,683	
13	7/14/2014	88.0	7,287	6,718	3356	494,584	11,069	
14	7/14/2014	84.7	7,283	5,949	3255	497,393	11,120	
15	7/15/2014	89.0	6,958	6,132	3711	495,850	11,069	
16	7/15/2014	86.0	6,991	6,047	3611	497,793	10,801	
17	7/15/2014	88.7	6,865	6,126	4103	495,297	10,398	
18	7/16/2014	89.9	7,125	6,043	3478	496,028	10,988	
19	7/16/2014	87.0	6,717	6049	3706	496,174	10,640	
20	7/16/2014	87.2	6,677	6,172	3664	497,933	10,709	
21	7/16/2014	90.3	6,507	6,505	3624	496,299	10,397	
22	7/17/2014	88.0	6,516	6,418	3545	497,658	10,609	
23	7/17/2014	87.8	6,262	7,430	3296	496,292	10,636	
24	7/17/2014	89.8	6,163	7,338	3452	495,212	10,260	
25	7/18/2014	86.7	6,354	6,493	3161	498,342	10,651	
26	7/18/2014	87.0	6,613	6,200	3286	500,499	10,804	
27	7/18/2014	90.7	6,017	6,344	3205	495,007	10,432	
28	7/18/2014	89.3	5,677	6,927	3163	497,646	9,935	

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NOV 21 2014

12/05/2014

API 47- 085 - 10034 Farm name CNX Gas Company LLC Well number PEN 1JHS

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Marcellus</u>	<u>6,353.6'</u> TVD	<u>15,180'</u> MD
_____	_____	_____
_____	_____	_____

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NOV 21 2014

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface \_\_\_\_\_ psi Bottom Hole \_\_\_\_\_ psi DURATION OF TEST \_\_\_\_\_ hrs

OPEN FLOW Gas 6266 mcfpd Oil 128 bpd NGL 407 bpd Water 1534 bpd GAS MEASURED BY  Estimated  Orifice  Pilot

LITHOLOGY/ FORMATION	TOP	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H <sub>2</sub> S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	
	0		0		
			Please See Attached		

Please insert additional pages as applicable.

Drilling Contractor Nomac 78  
Address 40 Lamoka Road City Sayre State PA Zip 18840

Logging Company \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Cementing Company Schlumberger  
Address 4600 J Barry Court, Suite 200 City Canonsburg State PA Zip 15317

Stimulating Company CUDD Energy Services  
Address 2897 Route 414 City Canton State PA Zip 17724

Please insert additional pages as applicable.

Completed by Regina A. Logue Telephone 724-820-3559  
Signature Regina A. Logue Title Regulatory Analyst Date 11/18/2014

Submission of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

12/05/2014

PEN 1J  
47-085-10034

Formations	Top TVD	Base TVD	Top MD	Base MD	Fluid
Shale and Sandstone	0	1365	0	1365	
Sandstone	1365	1489	1365	1479	
Shale and Sandstone	1479	1649	1479	1649	
Sandstone	1649	1691	1649	1691	
Shale and Sandstone	1691	1793	1691	1793	
Maxton Sand	1793	1876	1793	1876	
Shale and Sandstone	1876	1999	1876	1999	
Big Lime	1999	2054	1999	2054	
Big Injun	2054	2189	2054	2189	
Price	2189	2461	2189	2461	
Weir	2461	2500	2461	2977	
Shale	2500	2780	2500	2780	
Gordon	2780	2797	2780	2797	
Shale and Sandstone	2797	2977	2797	2977	
5th Sand	2977	2989	2977	2989	
Shale	2989	3132	2989	3132	
Sandstone	3132	3146	3132	3146	
Shale	3146	3554	3146	3554	
Warren	3554	3616	3554	3616	
Shale	3616	3950	3616	3950	
Sandstone	3950	3987	3950	3987	
Shale and Sandstone	3987	4981	3987	4982	
Benson	4981	5043	4982	5044	
Shale	5043	5203	5044	5204	
Alexander	5203	5271	5204	5272	
Shale	5271	5781	5272	5793	
Rheinstreet	5781	6107	5793	6316	
Cashaqua	6107	6199	6316	6527	
Middlesex	6199	6228	6527	6597	
West River	6228	6272	6597	6709	
Burkett	6272	6315	6709	6840	
Tully Limestone	6315	6316	6840	6843	
Hamilton	6316	6317	6843	6847	
Marcellus	6317	6376	6847	not encountered	Gas
Onondaga	6376	6393	not encountered	not encountered	
Huntersville	6393	not encountered	not encountered	not encountered	

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NOV 21 2014

12/05/2014

# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	7/9/2014
Job End Date:	7/18/2014
State:	West Virginia
County:	Ritchie
API Number:	47-085-10034-00-00
Operator Name:	Noble Energy, Inc.
Well Name and Number:	Pen1 J
Longitude:	-80.99295000
Latitude:	39.33502800
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	6,353
Total Base Water Volume (gal):	12,987,610
Total Base Non Water Volume:	0

NOV 21 2014  
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85-10034

## Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Fresh Water	Operator	Base Fluid					
			Fresh Water	7732-18-5	100.00000	88.07358	Density = 8.330
40/70 White	Halliburton	Proppant					
			Crystalline silica, quartz	14808-60-7	100.00000	6.68496	
100 MESH	Halliburton	Proppant					
			Crystalline silica, quartz	14808-60-7	100.00000	4.48407	
HYDROCHLORIC ACID 5-10%	Halliburton	Solvent					
			Hydrochloric acid	7647-01-0	10.00000	0.05275	
HYDROCHLORIC ACID 10-30%	Halliburton	Solvent					
			Hydrochloric acid	7647-01-0	30.00000	0.02638	
FR-66	Halliburton	Friction Reducer					
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.01989	
LGC-36 UC	Halliburton	Liquid Gel Concentrate					
			Guar gum	9000-30-0	60.00000	0.00313	
			Naphtha, hydrotreated heavy	64742-48-9	60.00000	0.00313	
FE-1A ACIDIZING COMPOSITION	Halliburton	Additive					
			Acetic anhydride	108-24-7	100.00000	0.00350	



BE-9	Halliburton	Biocide	Acetic acid	64-19-7	60.00000	0.00210	
			Tributyl tetradecyl phosphonium chloride	81741-28-8	10.00000	0.00405	
Scalechek® LP-65 Scale Inhibitor	Halliburton	Scale Inhibitor					
			Ammonium chloride	12125-02-9	10.00000	0.00246	
LoSurf-300D	Halliburton	Non-ionic Surfactant					
			Ethanol	64-17-5	60.00000	0.00071	
			Heavy aromatic petroleum naphtha	64742-94-5	30.00000	0.00035	
			Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	5.00000	0.00006	
			Naphthalene	91-20-3	5.00000	0.00006	
			1,2,4 Trimethylbenzene	95-63-6	1.00000	0.00001	
HAI-OS ACID INHIBITOR	Halliburton	Corrosion Inhibitor					
			Methanol	67-56-1	60.00000	0.00035	
			Propargyl alcohol	107-19-7	10.00000	0.00006	
SP BREAKER	Halliburton	Breaker					
			Sodium persulfate	7775-27-1	100.00000	0.00012	
Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.							
		Other Ingredient(s)					
			Water	7732-18-5		0.71046	
		Other Ingredient(s)					
			Polyacrylamide copolymer	Confidential		0.01989	
		Other Ingredient(s)					
			Organic phosphonate	Confidential		0.01474	
		Other Ingredient(s)					
			Sodium chloride	7647-14-5		0.00331	
		Other Ingredient(s)					
			Fatty acid tall oil amide	Confidential		0.00331	Denise Tuck, Halliburton 3000 N. Sam Houston Pkwy E., Houston, TX 77032 281-871-6226
		Other Ingredient(s)					
			Alcohols, C12-16, ethoxylated	68551-12-2		0.00331	
		Other Ingredient(s)					
			Ammonium chloride	12125-02-9		0.00331	
		Other Ingredient(s)					
			Sorbitan, mono-9-octadecenoate, (Z)	1338-43-8		0.00066	
		Other Ingredient(s)					
			Sorbitan monooleate polyoxyethylene derivative	9005-65-6		0.00066	
		Other Ingredient(s)					
			Oxyalkylated phenolic resin	Confidential		0.00035	

85-10034

Office of  
NOV 21 2014

	Other Ingredient(s)					
		Quaternary ammonium compounds, bis(hydrogenated tallow alkyl) dimethyl, salts with bentonite	68953-58-2		0.00026	
	Other Ingredient(s)					
		Formaldehyde	50-00-0		0.00025	
	Other Ingredient(s)					
		Fatty acids, tall oil	Confidential		0.00017	
	Other Ingredient(s)					
		Alcohols, C14-C15, ethoxylated	68951-67-7		0.00017	
	Other Ingredient(s)					
		Reaction product of acetophenone, formaldehyde, thiourea and oleic acid in dimethyl formamide	68527-49-1		0.00017	
	Other Ingredient(s)					
		Oxyalkylated phenolic resin	Confidential		0.00012	
	Other Ingredient(s)					
		Fatty alcohol polyglycol ether surfactant	9043-30-5		0.00005	
	Other Ingredient(s)					
		Olefins	Confidential		0.00003	
	Other Ingredient(s)					
		Olefins	Confidential		0.00003	
	Other Ingredient(s)					
		Olefins	Confidential		0.00001	
	Other Ingredient(s)					
		Olefins	Confidential		0.00001	
	Other Ingredient(s)					
		Crystalline silica, quartz	14808-60-7		0.00001	
	Other Ingredient(s)					
		Sodium sulfate	7757-82-6		0.00000	

85-10034

\* Total Water Volume sources may include fresh water, produced water, and/or recycled water

\*\* Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided. Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

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 NOV 21 2014

Well is located on topo map 14,560' feet south of Latitude: 39° 22' 30"

Well is located on topo map 9,799' feet west of Longitude: 80° 57' 30"

**LEGEND**

- ⊕ - TOPO MAP POINT
- ☀ - PROPOSED GAS WELL
- - ALL ARE POINTS UNLESS OTHERWISE NOTED.
- ⊙ - WATER SOURCE
- Ⓢ - LEASE NUMBER
- - SURFACE BOUNDARY
- - PARCEL LINES
- - WELL REFERENCE
- - PROPOSED HORIZONTAL WELL
- == - ROAD
- - STREAM CENTER LINE
- - AS DRILLED

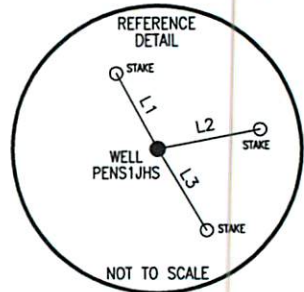
**WELLS WITHIN 3000'**

- - EXISTING WELLS
- ⊕ - PLUGGED WELLS

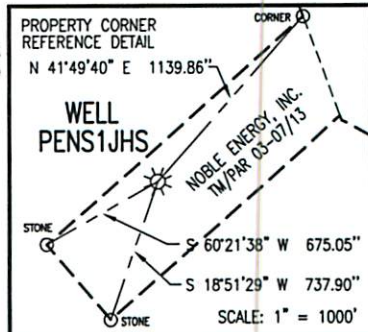
**BOTTOM HOLE LOCATION (BHL)**  
**UTM 17-NAD83**  
**N:4356105.65**  
**E:499114.93**  
**NAD27, WV NORTH**  
**N:314750.71**  
**E:1572901.34**

**NOTES:**

1. There are no water wells or developed springs within 250' of proposed well.
2. There are no existing buildings within 625' of proposed well.
3. Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake.
4. There are no native trout streams within 300' of proposed well.
5. Proposed well is greater than 1000' from surface/groundwater intake or public water supply.
6. 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.



LINE	BEARING	DISTANCE
L1	N 28°03'20" W	180.49'
L2	N 79°14'04" E	217.25'
L3	S 31°08'53" E	197.51'



**APPROX LANDING POINT**  
**UTM 17-NAD83**  
**N:4354260.55**  
**E:500716.42**  
**NAD27, WV NORTH**  
**N:308608.09**  
**E:1578055.61**

TRACT	LESSORS
1	JOSEPH F. & JOYCE A. SCHMIDLE
2	JOSEPH F. & JOYCE A. SCHMIDLE
3	JOSEPH F. & JOYCE A. SCHMIDLE
4	JOSEPH F. & JOYCE A. SCHMIDLE
5	CLARENCE W. & MARY FRANCES MUTSCHELKNAUS
6	DAVID T. MIHLBAUER ET AL
7	DONALD H. CARNEY ET AL
8	RICHARD L. CLARK ET AL
9	KENNETH R. & JENNIFER MASON ET AL
10	<b>NOT PERMITTED</b>

**SURFACE HOLE LOCATION (SHL)**  
**UTM 17-NAD83**  
**N:4353964.917**  
**E:500622.023**  
**NAD27, WV NORTH**  
**N:307643.15**  
**E:1577729.63**

**SURFACE HOLE LOCATION (SHL)**  
**UTM 17-NAD83**  
**N:4353964.70**  
**E:500622.18**  
**NAD27, WV NORTH**  
**N:307642.450**  
**E:1577730.148**

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

FILE #: PENS1JHS-AS DRILLED  
 DRAWING #: PENS1JHS-AS DRILLED  
 SCALE: 1" = 2000'  
 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

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 26, 2014  
 OPERATOR'S WELL #: PENS1JHS-AS DRILLED  
 API WELL #: 47 85 MOD10034H6A  
 STATE COUNTY PERMIT

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

WATERSHED: BONDS CREEK ELEVATION: 1117.96'

COUNTY/DISTRICT: RITCHIE / CLAY QUADRANGLE: PENNSBORO, WV 7.5'

SURFACE OWNER: NOBLE ENERGY, INC. ACREAGE: 19.759±

OIL & GAS ROYALTY OWNER: SEE TABLE ABOVE ACREAGE: 453.743±

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: 6,359'± TMD: 14,842±

WELL OPERATOR NOBLE ENERGY, INC. DESIGNATED AGENT STEVEN M. GREEN  
 Address 333 TECHNOLOGY DRIVE, SUITE 110 Address 500 VIRGINIA STREET EAST, UNITED CENTER SUITE 1001  
 City CANONSBURG State PA Zip Code 15317 City CHARLESTON State WV Zip Code 25301

12/05/2014