

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

API 47-085-10072 County Ritchie District Clay  
Quad Pennsboro Pad Name PEN 2 Field/Pool Name NA  
Farm name Terry & Helen Kiessling Well Number PEN 2 GHS  
Operator (as registered with the OOG) Noble Energy, Inc.  
Address 1000 Noble Energy Drive 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 4354138.67 Easting 498922.63  
Landing Point of Curve Northing 4354335.13 Easting 498831.00  
Bottom Hole Northing 4356384.60 Easting 497041.55

Elevation (ft) 1074.85 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 10/30/2013 Date drilling commenced 01/09/2014 Date drilling ceased 03/31/2014  
Date completion activities began 10/25/2014 Date completion activities ceased 2/20/2015  
Verbal plugging (Y/N) N Date permission granted \_\_\_\_\_ Granted by \_\_\_\_\_

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

Freshwater depth(s) ft 454 Open mine(s) (Y/N) depths none  
Salt water depth(s) ft None noted for Offsets Void(s) encountered (Y/N) depths none  
Coal depth(s) ft no coal Cavern(s) encountered (Y/N) depths RECEIVED  
Is coal being mined in area (Y/N) N **Office of Oil and Gas**

Reviewed by:  
APR 09 2015  
W.A.S 04/01/15  
A.L. 5/26/15  
WV Department of Environmental Protection  
06/12/2015

API 47-085 - 10072 Farm name Terry & Helen Kiessling Well number PEN 2 GHS

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	36	30	40				
Surface	17 1/2	13 3/8	599.2	N	J-55 54.5#		Y
Coal							
Intermediate 1	12 3/8	9 5/8	5,410.0	N	K-55 36#		Y
Intermediate 2							
Intermediate 3							
Production	8 3/4	5 1/2	15,573.3	N	P-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	532	15.6	1.20	115	0	8
Coal							
Intermediate 1	Class A	Lead 925 Tail 292	Lead 12.0 Tail 15.6	Lead 1.93 Tail 1.19	Lead 201 Tail 207	0	8
Intermediate 2							
Intermediate 3							
Production	Class A	Lead 400 Tail 1891	Lead 12.3 Tail 14.8	Lead 1.61 Tail 1.37	Lead 167 Tail 208	5324	8
Tubing							

Drillers TD (ft) 15,588      Loggers TD (ft) 15,504  
 Deepest formation penetrated Marcellus      Plug back to (ft) Not a Pilot Hole  
 Plug back procedure Not a Pilot Hole

Kick off depth (ft) 6,940

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    Conductor - No centralizers used. Fresh Water/Surface-  
 Surface - 5 centralizers used, one every third joint    Intermediate - 66 centralizers - bow spring centralizers on every joint to KOP, on every third joint from KOP to 100' from surface.  
 Production - 266 centralizers - rigid bow spring every third joint from KOP to TOC, rigid bow spring every joint to KOP.

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 \_\_\_\_\_

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Perforation Record

API: 47-085-10072

Farm name: TERRY & HELEN KIESSLING

Well Name: PEN-2-G-HS

Stage No.	Stim Date	Top Perf	Bottom Perf	# of Perfs	Formation
Trigger Toe	10/25/2014	15,443	15,446	-	Marcellus
1	10/26/2014	15,193	15,431	60	Marcellus
2	10/27/2014	14,900	15,138	60	Marcellus
3	10/28/2014	14,607	14,845	60	Marcellus
4	10/29/2014	14,314	14,552	60	Marcellus
5	10/31/2014	14,021	14,259	60	Marcellus
6	11/1/2014	13,728	13,966	60	Marcellus
7	11/2/2014	13,435	13,673	60	Marcellus
8	11/4/2014	13,142	13,380	60	Marcellus
9	11/5/2014	12,849	13,087	60	Marcellus
10	11/6/2014	12,556	12,794	60	Marcellus
11	11/7/2014	12,263	12,501	60	Marcellus
11 Inj Test	11/8/2014	-	-	-	Marcellus
11B (Reperf)	11/12/2014	12,292	12,396	36	Marcellus
12	11/18/2014	11,970	12,208	60	Marcellus
13	11/18/2014	11,677	11,915	60	Marcellus
14	11/18/2014	11,384	11,622	60	Marcellus
15	11/19/2014	11,091	11,329	60	Marcellus
16	11/19/2014	10,798	11,036	60	Marcellus
17	11/19/2014	10,505	10,743	60	Marcellus
18	11/20/2014	10,212	10,450	60	Marcellus
19	11/20/2014	9,919	10,157	60	Marcellus
20	11/20/2014	9,626	9,864	60	Marcellus
21	11/21/2014	9,333	9,571	60	Marcellus
22	11/21/2014	9,040	9,278	60	Marcellus
23	11/22/2014	8,747	8,985	60	Marcellus
24	11/22/2014	8,454	8,692	60	Marcellus
25	11/22/2014	8,161	8,399	60	Marcellus
26	11/22/2014	7,868	8,106	60	Marcellus
27	11/23/2014	7,575	7,813	60	Marcellus
28	11/23/2014	7,282	7,520	60	Marcellus
29	11/23/2014	6,989	7,227	60	Marcellus
30	11/24/2014	6,696	6,934	60	Marcellus
31	11/25/2014	6,403	6,641	60	Marcellus

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STIMULATION INFORMATION PER STAGE

API: 47-085-10072

Farm name: TERRY & HELEN KIESSLING

Well Name: PEN-2 -G-HS

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 (units)
Trigger Toe	10/25/2014	-	-	9,527	-	-	201	
1	10/26/2014	88.0	7,357	-	5,317	607,000	14,542	
2	10/27/2014	85.6	7,605	5,827	4,930	602,400	14,128	
3	10/28/2014	85.0	7,734	5,447	5,214	601,900	14,410	
4	10/29/2014	84.7	7,311	6,151	2,707	596,800	12,791	
5	10/31/2014	85.0	7,648	5,929	2,829	598,500	12,634	
6	11/1/2014	86.9	7,798	5,865	2,886	600,800	14,289	
7	11/2/2014	86.9	7,673	5,851	3,440	600,050	12,599	
8	11/4/2014	83.9	7,706	5,862	3,033	603,250	14,364	
9	11/5/2014	85.5	7,830	6,080	3,330	598,250	11,826	
10	11/6/2014	89.5	7,892	5,268	3,211	601,950	12,711	
11	11/7/2014	50.0	8,017	5,744	6,065	432,550	11,430	
11 Inj Test	11/8/2014	13.8	7,552	-	5,307	-	1,254	
11B (Reperf)	11/12/2014	39.6	8,667	6,677	4,452	158,000	14,615	
12	11/18/2014	85.0	7,981	5,347	3,430	600,500	12,599	
13	11/18/2014	86.8	7,846	7,138	3,644	600,550	12,575	
14	11/18/2014	83.3	7,372	6,702	3,555	599,700	12,562	
15	11/19/2014	88.9	7,701	6,298	3,269	600,750	12,544	
16	11/19/2014	90.7	7,742	5,422	3,887	601,450	12,539	
17	11/19/2014	80.0	6,771	6,187	3,405	602,100	12,549	
18	11/20/2014	89.9	7,098	6,266	4,942	599,700	12,541	
19	11/20/2014	90.5	7,440	5,783	3,237	601,050	12,468	
20	11/20/2014	91.0	7,248	5,626	4,656	602,400	12,593	
21	11/21/2014	90.3	7,647	5,296	4,424	573,150	12,284	
22	11/21/2014	80.3	7,040	5,211	3,476	629,430	13,794	
23	11/22/2014	90.6	7,430	5,397	3,462	601,925	12,510	
24	11/22/2014	90.0	7,408	6,166	3,644	599,000	12,298	
25	11/22/2014	89.0	7,102	5,046	3,569	601,126	12,275	
26	11/22/2014	90.5	7,317	6,262	3,859	597,000	12,355	
27	11/23/2014	90.8	7,025	6,416	3,970	602,350	12,342	
28	11/23/2014	91.0	6,971	6,373	3,848	601,160	12,190	
29	11/23/2014	89.7	7,146	5,733	3,573	600,159	12,253	
30	11/24/2014	84.6	6,888	7,060	3,204	603,084	12,127	
31	11/25/2014	88.4	6,823	5,847	3,022	601,264	12,352	

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API 47- 085 - 10072 Farm name Terry & Helen Kiessler Well number PEN 2 FHS

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
Marcellus	6,217 TVD	15,588 MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

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 3358 mcfpd Oil 86 bpd NGL 460 bpd Water 902 bpd GAS MEASURED BY  Estimated  Orifice  Pilot

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

Please insert additional pages as applicable.

Drilling Contractor NOMAC  
Address 171 Locust Avenue Ext. City Mt. Morris State PA Zip 15349

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

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

Stimulating Company U. S Well Service  
Address 533 Industrial Park Drive City Jane Lew State WV Zip 26378

Please insert additional pages as applicable.

Completed by Regina A. Logue Telephone 724-820-3559  
Signature Regina A. Logue Title Regulatory Analyst Date 4/6/2015

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

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Formations	Top TVD	Base TVD	Top MD	Base MD	Fluid
Shale and Sandstone	0	1309	0	1309	
Sandstone	1309	1433	1309	1423	
Shale and Sandstone	1423	1593	1423	1593	
Sandstone	1593	1635	1593	1635	
Shale and Sandstone	1635	1737	1635	1737	
Maxton Sand	1737	1820	1737	1820	
Shale and Sandstone	1820	1943	1820	1943	
Big Lime	1943	1998	1943	1998	
Big Injun	1998	2133	1998	2133	
Price	2133	2405	2133	2405	
Weir	2405	2444	2405	2444	
Shale	2444	2724	2444	2724	
Gordon	2724	2741	2724	6301	
Shale and Sandstone	2741	2921	2741	6302	
5th Sand	2921	2933	2921	6371	
Shale	2933	3076	2933	not encountered	
Sandstone	3076	3090	3076	not encountered	
Shale	3090	3498	3090	not encountered	
Warren	3498	3560	3500	6300	
Shale	3560	3894	3562	6301	
Sandstone	3894	3931	3900	6302	
Shale and Sandstone	3931	4925	3937	6371	
Benson	4925	4987	4941	not encountered	
Shale	4987	5147	5004	not encountered	
Alexander	5147	5215	5166	not encountered	
Shale	5215	5725	5234	not encountered	
Rheinstreet	5725	6051	5750	not encountered	
Cashaqua	6051	6143	6080	not encountered	
Middlesex	6143	6172	6176	not encountered	
West River	6172	6216	6206	not encountered	
Burkett	6216	6259	6253	not encountered	
Tully Limestone	6259	6260	6300	not encountered	
Hamilton	6260	6261	6301	6302	Gas
Marcellus	6261	6320	6302	6371	
Onondaga	6320		6371	not encountered	

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# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	10/25/2014
Job End Date:	11/25/2014
State:	West Virginia
County:	Ritchie
API Number:	47-085-10072-00-00
Operator Name:	Noble Energy, Inc.
Well Name and Number:	Pen 2 G
Longitude:	-81.01266900
Latitude:	39.33659400
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	6,217
Total Base Water Volume (gal):	17,284,848
Total Base Non Water Volume:	922,848



## 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
Water	Noble Energy	Base Fluid	Water	7732-18-5	100.00000	88.26722	
40/70 Sand	J.S. Well Services, LLC	Proppant	Crystalline Silica, quartz	14808-60-7	100.00000	7.94806	
100 Mesh Sand	J.S. Well Services, LLC	Proppant	Crystalline Silica, quartz	14808-60-7	100.00000	3.45263	
HCL Acid (12.6% - 18.0%)	J.S. Well Services, LLC	Bulk Acid	Water	7732-18-5	87.50000	0.15623	
WV Department of Environmental Protection	J.S. Well Services, LLC	Friction Reducer	Hydrogen Chloride	7647-01-0	18.00000	0.03732	
WV Department of Environmental Protection	J.S. Well Services, LLC	Friction Reducer	Water	7732-18-5	40.00000	0.01912	
WV Department of Environmental Protection	J.S. Well Services, LLC	Friction Reducer	Anionic Polyacrylamide	Proprietary	40.00000	0.01912	
WV Department of Environmental Protection	J.S. Well Services, LLC	Friction Reducer	Petroleum Distillates	34742-47-8	40.00000	0.01539	
WV Department of Environmental Protection	J.S. Well Services, LLC	Friction Reducer	Crystalline Salt	12125-02-9	5.00000	0.00239	
WV Department of Environmental Protection	J.S. Well Services, LLC	Friction Reducer	Ethoxylated alcohol blend	Proprietary	5.00000	0.00239	
WV Department of Environmental Protection	J.S. Well Services, LLC	Friction Reducer	Anionic Polyacrylamide	Proprietary	40.00000	0.01221	



					Water	7732-18-5	40.00000	0.01221
					Sodium Chloride	7647-14-5	20.00000	0.00611
					Petroleum Distillates	64742-47-8	20.00000	0.00491
					Ethoxylated alcohol blend	Proprietary	5.00000	0.00153
SI-1100	J.S. Well Services, LLC	Scale Inhibitor						
					DI Water	7732-18-5	80.00000	0.01061
					Ethylene Glycol	107-21-1	40.00000	0.00600
					Potassium salt of diethylene triamine penta (methylene phosphonic acid)	15827-60-8	10.00000	0.00179
					2-Phosphonobutane 1,2,4 tricarboxylic salt	37971-36-1	10.00000	0.00171
					hexamethylenediamine tetra (methylene phosphonic acid)	38820-59-6	10.00000	0.00166
					Copolymer of Maleic and Acrylic acid	26677-99-6	10.00000	0.00157
					bis (hexamethylene) triamine penta (methylene phosphonic acid) - phosphate acid	40623-75-4	10.00000	0.00153
					Acrylic polymer	52255-49-9	5.00000	0.00066
X-BAC 1020	J.S. Well Services, LLC	Anti-Bacterial Agent						
					2,2-dibromo-3-nitropropanamide	10222-01-2	20.00000	0.00583
					Deionized Water	7732-18-5	28.00000	0.00333
LGC-15	J.S. Well Services, LLC	Gelling Agents						
					Guar Gum	9000-30-0	50.00000	0.00292
					Petroleum Distillates	64742-47-8	60.00000	0.00277
					Suspending agent (solid)	14808-60-7	3.00000	0.00045
					Surfactant	68439-51-0	3.00000	0.00018
WFRA-2100	J.S. Well Services, LLC	Friction Reducer						
					DI Water	7732-18-5	60.00000	0.00078
					Hydrotreated light distillate (petroleum)	64742-47-8	30.00000	0.00032
					2-Propenoic acid, polymer with 2-propenamide	9003-06-9	30.00000	0.00005
AI-301	J.S. Well Services, LLC	Acid Corrosion Inhibitors						
					Diethylene Glycol	111-46-6	30.00000	0.00024
					Methanamine	100-97-0	20.00000	0.00019
					Hydrogen Chloride	7647-01-0	10.00000	0.00008
					Polyethylene polyamine	68603-67-8	10.00000	0.00007
					Coco amine	61791-14-8	5.00000	0.00003
CA-800	J.S. Well Services, LLC	Iron Control Additive						
					Erythorbic Acid	89-65-6	100.00000	0.00021
pH-15L	J.S. Well Services, LLC	pH Buffer						
					Sodium Hydroxide	1310-73-2	25.00000	0.00011

AP One	J.S. Well Services, LLC	Gel Breakers	Ammonium Persulfate	7727-54-0	100.00000	0.00007
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.						

\* 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)



Well is located on topo map 13,953' feet south of Latitude: 39° 22' 30"

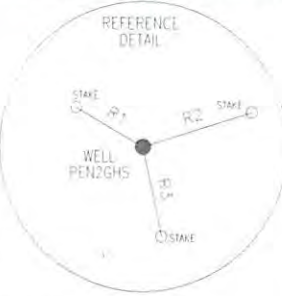
# AS DRILLED PLAT

Well is located on topo map 3,545' feet west of Longitude: 81° 00' 00"

**PERMITTED BOTTOM HOLE LOCATION (BHL)**

UTM 17-NAD83  
N:4356371.11  
E:497060.31  
NAD27, WV NORTH  
N:315734.55  
E:1566173.53  
LAT/LON DATUM-NAD83  
LAT:39.356785  
LON:-81.034121

LINE	BEARING	DISTANCE
R1	N 59°44'40" W	161.55'
R2	N 72°40'53" E	237.13'
R3	S 11°34'02" E	189.54'
R4	N 59°14'20" W	1818.75'
R5	N 20°10'53" W	1811.29'
R6	N 15°31'37" E	1625.80'



**NOTES:**

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

**AS DRILLED BOTTOM HOLE LOCATION (BHL)**

UTM 17-NAD83  
N:4356384.60  
E:497041.55  
NAD27, WV NORTH  
N:315779.85  
E:1566112.71  
LAT/LON DATUM-NAD83  
LAT:39.356906  
LON:-81.034339

**LEASE LESSORS**

1	TERRY KIESSLING ET AL
2	JOHN A. SMITH ET AL
3	COASTAL FOREST RESOURCES COMPANY
4	MARY JANE MATHESSE ET AL
5	JAMES P. JONES JR ET AL

**LEGEND**

- TOPO MAP POINT
- WELL
- ALL ARE POINTS UNLESS OTHERWISE NOTED
- LEASE NUMBER
- MINERAL TRACT BOUNDARY
- PARCEL LINES
- WELL REFERENCE
- PROPOSED HORIZONTAL WELL
- ROAD
- STREAM CENTER LINE
- AS DRILLED
- EXISTING WELLS
  - EXISTING WELLS
  - PLUGGED WELLS

**Blue Mountain Inc.**  
10125 MASON DIXON HIGHWAY  
BURTON, WV 26562  
PHONE: (304) 662-6486

**PERMITTED APPROX. LANDING POINT**

UTM 17-NAD83  
N:4354358.31  
E:498805.83  
NAD27, WV NORTH  
N:309033.75  
E:1571791.24  
LAT/LON DATUM-NAD83  
LAT:39.338652  
LON:-81.013857

**AS DRILLED APPROX. LANDING POINT**

UTM 17-NAD83  
N:4354335.13  
E:498831.00  
NAD27, WV NORTH  
N:308956.30  
E:1571872.58  
LAT/LON DATUM-NAD83  
LAT:39.338443  
LON:-81.013565

**PERMITTED SURFACE HOLE LOCATION (SHL)**

UTM 17-NAD83  
N:4354138.67  
E:498922.57  
NAD27, WV NORTH  
N:308306.57  
E:1572162.31  
LAT/LON DATUM-NAD83  
LAT:39.336673  
LON:-81.012502

**AS DRILLED SURFACE HOLE LOCATION (SHL)**

UTM 17-NAD83  
N:4354138.67  
E:498922.63  
NAD27, WV NORTH  
N:308306.58  
E:1572162.48  
LAT/LON DATUM-NAD83  
LAT:39.336673  
LON:-81.012501

FILE #: PEN2GHS-AS DRILLED

DRAWING #: PEN2GHS-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

**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: FEBRUARY 11, 2015

OPERATOR'S WELL #: PEN2GHS-AS DRILLED

API WELL #: 47 85 10072  
STATE COUNTY PERMIT

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

WATERSHED: NORTH FORK HUGHES RIVER ELEVATION: 1084±

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

SURFACE OWNER: TERRY & HELEN KIESSLING ACREAGE: 79.242±

OIL & GAS ROYALTY OWNER: TERRY KIESSLING ET AL ACREAGE: 514.582±

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

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: IVD: 6,314±' TMD: 15,563±'

WELL OPERATOR NOBLE ENERGY, INC. DESIGNATED AGENT STEVEN M. GREEN  
Address 333 TECHNOLOGY DRIVE, SUITE 116 Address 500 VIRGINIA STREET EAST UNITED CENTER SUITE 590  
City CANONSBURG State PA Zip Code 15317 City CHARLESTON State WV Zip Code 25301

06/12/2015

**RECEIVED**  
Office of Oil and Gas  
APR 09 2015  
WV Department of Environmental Protection