

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

API 47 - 085 - 10076 County Ritche District Clay
Quad Pennsboro Pad Name PEN 2 Field/Pool Name NA
Farm name Terry & Helen Kiessling Well Number PEN 2 LHS
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 4354142.99 Easting 498933.88
Landing Point of Curve Northing 4354548.25 Easting 499248.22
Bottom Hole Northing 4356070.77 Easting 497931.50

Elevation (ft) 1084 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 01/14/2014 Date drilling ceased 08/13/2014
Date completion activities began 11/30/2014 Date completion activities ceased 1/24/2015
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 1244 Void(s) encountered (Y/N) depths none
Coal depth(s) ft no coal Cavern(s) encountered (Y/N) depths none
Is coal being mined in area (Y/N) N

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Reviewed by:
A.L. 5/19/15
W.S. 06/12/2015

API 47-085 - 10076 Farm name Terry & Helen Kiessling Well number PEN 2 LHS

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	N			
Surface	17 1/2	13 3/8	592.4	N	J-55 54.5#		Y
Coal							
Intermediate 1	12 3/8	9 5/8	5,670.0	N	J-55 36#		Y
Intermediate 2							
Intermediate 3							
Production	8 3/4	5 1/2	13,541.0	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 ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor							
Surface	TYPE 1	542.0	15.6	1.20	650	0	8
Coal							
Intermediate 1							
Intermediate 2	Class A	901	14.8	1.19	1072	0	8
Intermediate 3							
Production	Class A	Lead 430 Tail 1446	Lead 14.2 Tail 14.8	Lead 1.54 Tail 1.37	Lead 662 Tail 1981	5290	8
Tubing							

Drillers TD (ft) 13,561 Loggers TD (ft) 13,481
 Deepest formation penetrated Marcellus Plug back to (ft) Not a Pilot Hole
 Plug back procedure Not a Pilot Hole

Kick off depth (ft) 7369

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 - 72 centralizers - bow spring centralizers on every joint to KOP, on every third joint from KOP to 100' from surface.
Production - 205 centralizers - rigid bow spring every third joint from KOP to TOC, rigid bow spring every joint to KOP.

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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 _____

API 47- 085 - 10076 Farm name Terry & Helen Kiessling Well number PEN 2 LHS

PERFORATION RECORD

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

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)

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Please insert additional pages as applicable.

Perforation Record

API: 47-085-10076 Farm name: Kiessling, Terry & Helen Well Name: PEN-2-L-HS

Stage No.	Stim Date	Top Perf	Bottom Perf	# of Perfs	Formation
1	11/30/2014	13,234	13,392	50	Marcellus
2	11/30/2014	13,038	13,196	50	Marcellus
2B	11/30/2014	13,028	13,054	24	Marcellus
3	11/30/2014	12,842	13,000	50	Marcellus
4	12/1/2014	12,646	12,804	50	Marcellus
5	12/1/2014	12,450	12,608	50	Marcellus
6	12/1/2014	12,254	12,412	50	Marcellus
7	12/2/2014	12,058	12,216	50	Marcellus
8	12/2/2014	11,862	12,020	50	Marcellus
9	12/3/2014	11,666	11,824	50	Marcellus
9 Inj Test	12/7/2014	-	-	-	Marcellus
10	12/9/2014	11,470	11,628	50	Marcellus
11	12/9/2014	11,274	11,432	50	Marcellus
12	12/10/2014	11,078	11,236	50	Marcellus
13	12/11/2014	10,882	11,040	50	Marcellus
14	12/11/2014	10,686	10,844	50	Marcellus
15	12/14/2014	10,490	10,648	50	Marcellus
16	12/14/2014	10,294	10,452	50	Marcellus
17	12/15/2014	10,098	10,256	50	Marcellus
18	12/15/2014	9,902	10,060	50	Marcellus
19	12/16/2014	9,706	9,864	50	Marcellus
20	12/16/2014	9,510	9,668	50	Marcellus
21	12/17/2014	9,314	9,472	50	Marcellus
22	12/17/2014	9,118	9,276	50	Marcellus
23	12/18/2014	8,922	9,080	50	Marcellus
24	12/18/2014	8,726	8,884	50	Marcellus
25	12/18/2014	8,530	8,688	50	Marcellus
26	12/19/2014	8,334	8,492	50	Marcellus
27	12/19/2014	8,138	8,296	50	Marcellus
28	12/19/2014	7,942	8,100	50	Marcellus
29	12/20/2014	7,746	7,904	50	Marcellus
30	12/20/2014	7,550	7,708	50	Marcellus
31	12/20/2014	7,354	7,512	50	Marcellus
32	12/20/2014	7,158	7,316	50	Marcellus
33	12/21/2014	6,962	7,120	50	Marcellus
34	12/21/2014	6,766	6,924	50	Marcellus

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STIMULATION INFORMATION PER STAGE

API: 47-085-10076

Farm name: Kiessling, Terry & Helen

Well Name: PEN-2 -L-HS

Stage No.	Stim Date	Avg Rate (bpm)	ATP (psi)	Max BD Pressure	ISIP (psi)	Proppant (lbs)	Water (BBLs)	Amount of N ² / other (units)
Trigger toe	11/29/2014	14.0	8,268	10,235	5,225	-	317	
1	11/30/2014	74.0	7,997	6,090	4,753	326,320	10,048	
2	11/30/2014	80.0	8,243	5,809	4,785	229,860	6,392	
2B	11/30/2014	74.6	8,563	5,862	4,674	100,500	4,980	
3	11/30/2014	71.2	8,498	6,351	4,334	328,700	9,440	
4	12/1/2014	73.2	8,348	5,933	4,499	331,400	9,249	
5	12/1/2014	81.9	8,321	6,816	4,159	330,600	7,759	
6	12/1/2014	84.7	8,084	6,845	4,613	330,700	8,103	
7	12/2/2014	83.1	8,026	6,405	3,186	330,900	8,908	
8	12/2/2014	84.3	7,975	5,339	4,091	332,300	8,146	
9	12/3/2014	85.0	7,939	5,540	-	255,650	6,150	
9 Inj Test	12/7/2014	9.3	6,252	5,769	-	-	1,913	
10	12/9/2014	81.0	8,362	5,718	3,855	335,860	10,087	
11	12/9/2014	87.4	8,197	5,465	5,929	330,850	9,410	
12	12/10/2014	86.0	8,079	5,590	6,398	330,340	8,313	
13	12/11/2014	82.6	7,952	5,443	5,679	330,500	7,834	
14	12/11/2014	82.0	8,250	4,978	5,550	331,360	10,382	
15	12/14/2014	80.0	8,050	5,533	5,475	294,520	8,719	
16	12/14/2014	85.0	8,024	4,975	5,908	360,560	10,901	
17	12/15/2014	88.2	8,030	5,404	4,667	329,750	8,862	
18	12/15/2014	88.0	7,898	5,311	3,909	330,240	8,123	
19	12/16/2014	88.0	7,937	5,060	3,694	330,900	7,962	
20	12/16/2014	85.0	7,267	5,314	3,952	330,260	7,904	
21	12/17/2014	88.1	7,353	6,344	3,337	330,700	7,847	
22	12/17/2014	90.2	7,575	6,580	3,519	331,100	7,882	
23	12/18/2014	90.0	7,507	6,530	4,349	330,700	7,982	
24	12/18/2014	87.4	7,288	6,219	3,648	330,400	7,812	
25	12/18/2014	89.0	7,350	6,019	3,834	328,680	7,782	
26	12/19/2014	89.8	7,401	5,758	4,381	329,750	7,750	
27	12/19/2014	89.2	7,371	5,819	3,455	330,200	7,777	
28	12/19/2014	89.0	7,047	6,083	3,852	330,500	7,501	
29	12/20/2014	88.0	7,100	7,181	3,830	329,500	7,627	
30	12/20/2014	89.0	7,079	6,670	3,784	330,150	7,761	
31	12/20/2014	89.8	7,227	5,450	4,528	330,350	7,714	
32	12/20/2014	89.0	7,050	7,499	5,547	330,360	7,532	
33	12/21/2014	90.0	7,170	6,813	5,543	330,250		
34	12/21/2014	88.0	7,115	7,301	4,113	331,470		

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API 47- 085 - 10076 Farm name Terry & Helen Kiessling Well number PEN 2 LHS

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Marcellus</u>	<u>6,266</u> TVD	<u>13,561</u> 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 2,441 mcfpd Oil 93 bpd NGL 340 bpd Water 992 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 ₂ S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	
	<u>0</u>		<u>0</u>		
	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 2/18/2015

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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	



February 18, 2015

Mr. John Kearney
West Virginia Department of Environmental Protection
Office of Oil & Gas
601 57th street, SE
Charleston, WV 25304-2345

To whom it may concern:

Enclosed is the Well Operator's Report of Well Work, WR-35 for the following Wells, located in Ritchie County, District Clay.

Well	Permit Number
PEN 2 LHS	47-085-10076
PEN 2 MHS	47-085-10066

If you require any additional information or have questions please feel free to contact me at rlogue@nobleenergyinc.com or by calling my office number 724-820-3559.

Sincerely,

A handwritten signature in black ink that reads 'Regina Logue'.

Regina Logue
Regulatory Analyst

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	11/30/2014
Job End Date:	12/21/2014
State:	West Virginia
County:	Ritchie
API Number:	47-085-10076-00-00
Operator Name:	Noble Energy, Inc.
Well Name and Number:	Pen 2 L
Longitude:	-81.01253900
Latitude:	39.33663300
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	6,266
Total Base Water Volume (gal):	12,097,302
Total Base Non Water Volume:	573,832



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	89.63981	
40/70 Sand	J.S. Well Services, LLC	Proppant	Crystalline Silica, quartz	14808-60-7	100.00000	7.01721	
70/140 Sand	J.S. Well Services, LLC	Proppant	Crystalline Silica, quartz	14808-60-7	100.00000	2.89480	
HCL Acid (12.6%-18.0%)	J.S. Well Services, LLC	Bulk Acid	Water	7732-18-5	87.50000	0.23804	
			Hydrogen Chloride	7647-01-0	18.00000	0.05686	
WERA-405	J.S. Well Services, LLC	Friction Reducer	Anionic Polyacrylamide	Proprietary	40.00000	0.03289	
			Water	7732-18-5	40.00000	0.03289	
			Petroleum Distillates	34742-47-8	40.00000	0.02648	
			Ethoxylated alcohol blend	Proprietary	5.00000	0.00411	
			Crystalline Salt	12125-02-9	5.00000	0.00411	
SI-1100	J.S. Well Services, LLC	Scale Inhibitor	DI Water	7732-18-5	80.00000	0.01318	

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				Ethylene Glycol	107-21-1	40.00000	0.00745
				Potassium salt of diethylene triamine penta (methylene phosphonic acid)	15827-60-8	10.00000	0.00222
				2-Phosphonobutane 1,2,4 dicarboxylic salt	37971-36-1	10.00000	0.00212
				hexamethylenediamine tetra (methylene phosphonic acid)	38820-59-6	10.00000	0.00206
				Copolymer of Maleic and Acrylic acid	26677-99-6	10.00000	0.00194
				bis (hexamethylene) tramine penta (methylene phosphonic acid) - phosphate acid	40623-75-4	10.00000	0.00189
				Acrylic polymer	52255-49-9	5.00000	0.00082
X-BAC 1020	J.S. Well Services, LLC	Anti-Bacterial Agent					
				2,2-dibromo-3-nitropropionamide	10222-01-2	20.00000	0.00798
WFRA-2100	J.S. Well Services, LLC	Friction Reducer		Deionized Water	7732-18-5	28.00000	0.00456
				Di Water	7732-18-5	60.00000	0.00290
				Hydrotreated light distillate (petroleum)	64742-47-8	30.00000	0.00119
LGC-15	J.S. Well Services, LLC	Gelling Agents		2-Propenoic acid, polymer with 2-propenamide	29003-06-9	30.00000	0.00017
				Guar Gum	9000-30-0	50.00000	0.00138
				Petroleum Distillates	64742-47-8	60.00000	0.00131
				Suspending agent (solid)	14808-60-7	3.00000	0.00021
				Surfactant	68439-51-0	3.00000	0.00008
AI-301	J.S. Well Services, LLC	Acid Corrosion Inhibitors		Diethylene Glycol	111-46-6	30.00000	0.00037
				Methenamine	100-97-0	20.00000	0.00029
				Hydrogen Chloride	7647-01-0	10.00000	0.00013
				Polyethylene polyamine	68603-67-8	10.00000	0.00011
				Coco amine	61791-14-8	5.00000	0.00005
CA-800	J.S. Well Services, LLC	Iron Control Additive		Erythorbic Acid	89-65-6	100.00000	0.00033
AP One	J.S. Well Services, LLC	Gel Breakers		Ammonium Persulfate	7727-54-0	100.00000	0.00003

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 13,939' feet south of Latitude: 39° 22' 30"

Well is located on topo map 3,507' feet west of Longitude: 81° 00' 00"

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.

**AS DRILLED
BOTTOM HOLE LOCATION (BHL)**
UTM 17-NAD83
N:4356070.77
E:497931.50
NAD27, WV NORTH
N:314701.17
E:1569015.92
LAT/LON DATUM-NAD83
LAT:39.354081
LON:-81.024008

AS DRILLED PLAT

LEASE	LESSORS
1	TERRY KIESSLING ET AL
2	TERRY KIESSLING ET AL
3	JAY-BEE PRODUCTION COMPANY ET AL
4	ST LUKE'S UNITED METHODIST CHURCH ET AL
5	JOHN A. SMITH ET AL
6	JOHN A. SMITH ET AL
7	COASTAL FOREST RESOURCES COMPANY
8	LOUANNA CONKLIN ET AL

**AS DRILLED
APPROX. LANDING POINT**
UTM 17-NAD83
N:4354548.25
E:499248.22
NAD27, WV NORTH
N:309632.76
E:1573253.39
LAT/LON DATUM-NAD83
LAT:39.340364
LON:-81.008724

**PERMITTED
APPROX. LANDING POINT**
UTM 17-NAD83
N:4354564.81
E:499237.94
NAD27, WV NORTH
N:309687.66
E:1573220.57
LAT/LON DATUM-NAD83
LAT:39.340513
LON:-81.008843

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

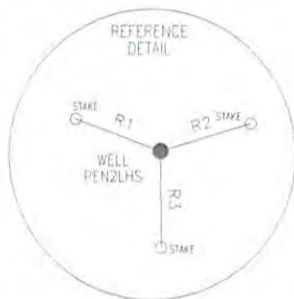
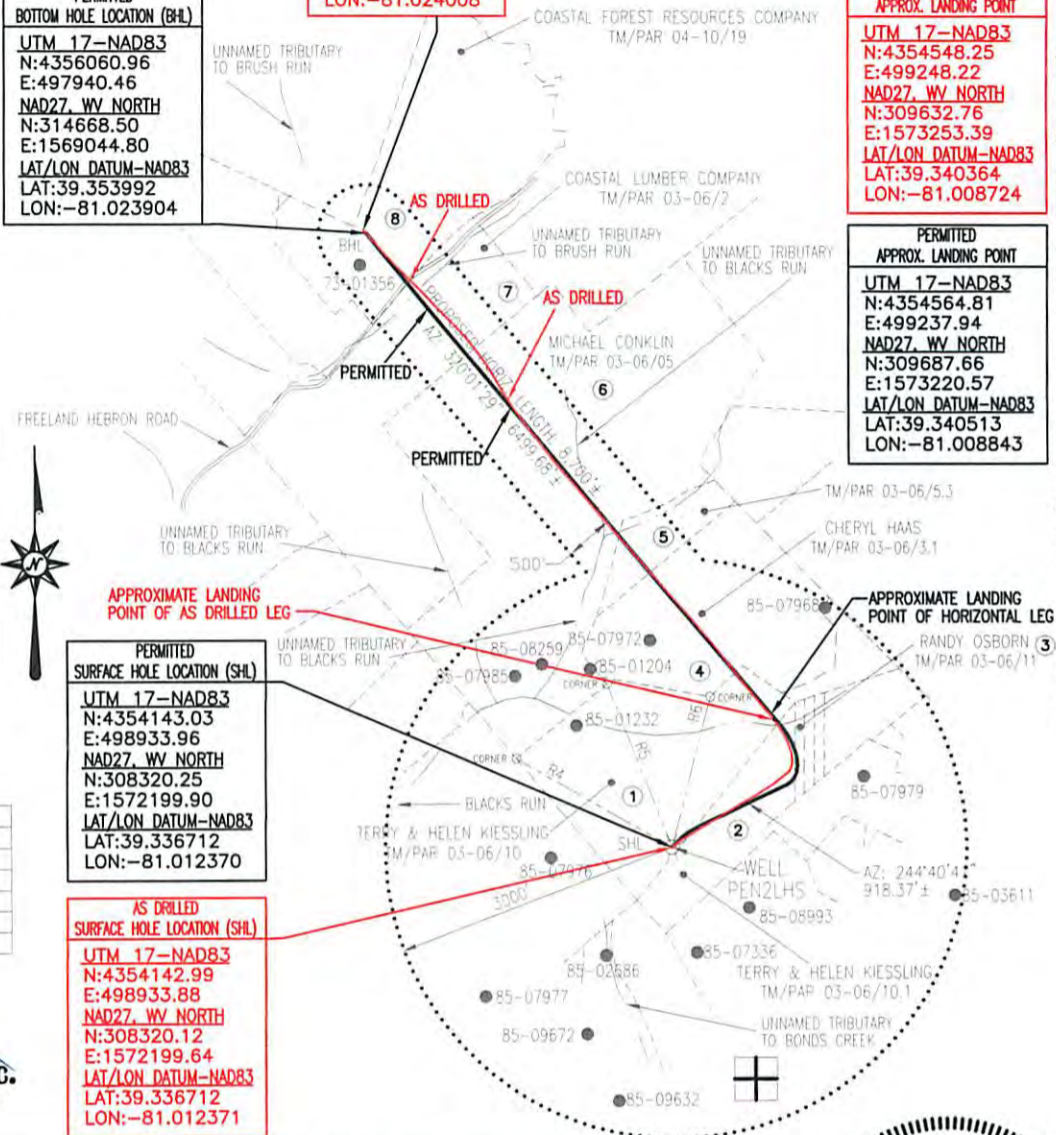
EXISTING WELLS

- EXISTING WELLS
- PLUGGED WELLS

**PERMITTED
BOTTOM HOLE LOCATION (BHL)**
UTM 17-NAD83
N:4356060.96
E:497940.46
NAD27, WV NORTH
N:314668.50
E:1569044.80
LAT/LON DATUM-NAD83
LAT:39.353992
LON:-81.023904

**PERMITTED
SURFACE HOLE LOCATION (SHL)**
UTM 17-NAD83
N:4354143.03
E:498933.96
NAD27, WV NORTH
N:308320.25
E:1572199.90
LAT/LON DATUM-NAD83
LAT:39.336712
LON:-81.012370

**AS DRILLED
SURFACE HOLE LOCATION (SHL)**
UTM 17-NAD83
N:4354142.99
E:498933.88
NAD27, WV NORTH
N:308320.12
E:1572199.64
LAT/LON DATUM-NAD83
LAT:39.336712
LON:-81.012371



LINE	BEARING	DISTANCE
R1	N 69°04'41" W	189.64'
R2	N 73°13'29" E	197.18'
R3	S 00°07'10" E	199.37'
R4	N 60°12'06" W	1844.31'
R5	N 21°26'47" W	1811.86'
R6	N 14°21'47" E	1602.88'

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

FILE #: PEN2LHS-AS DRILLED
DRAWING #: PEN2LHS-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: *George W. Six*
R.P.E.: _____ L.L.S.: P.S. No. 2000



(+) 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 #: PEN2LHS-AS DRILLED
API WELL #: 47 85 10076
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 25
SURFACE OWNER: TERRY & HELEN KIESSLING ACREAGE: 79.242±
OIL & GAS ROYALTY OWNER: TERRY KIESSLING ET AL ACREAGE: 647.719±

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: 6,314'± TMD: 13,693'±
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

RECORDED
FEB 23 2015
06/12/2015