

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

API 47-085-10066 County Ritchie District Clay
Quad Pennsboro Pad Name PEN 2 Field/Pool Name NA
Farm name Terry & Helen Kiessling Well Number PEN 2 MHS
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 4354137.44 Easting 498936.03
Landing Point of Curve Northing 4354324.56 Easting 499448.58
Bottom Hole Northing 4352176.30 Easting 501314.35

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 01/20/2014 Date drilling ceased 09/24/2014
Date completion activities began 10/25/2014 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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06/12/2015
w.s. 6/01/15

API 47- 085 - 10066 Farm name Terry & Helen Kiessling Well number PEN 2 MHS

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	605.0	N	J-55 54.5#		Y
Coal							
Intermediate 1	12 3/8	9 5/8	5,630.6	N	K-55 36#		Y
Intermediate 2							
Intermediate 3							
Production	8 3/4	5 1/2	16,640.7	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 ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor							
Surface	TYPE 1	532	15.6	1.20	638	0	8
Coal							
Intermediate 1							
Intermediate 2	Class A	Lead 963 Tail 302	Lead 2.0 Tail 15.6	Lead 1.62 Tail 1.37	Lead 1560 Tail 414	0	8
Intermediate 3							
Production	Class A	Lead 425 Tail 2266	Lead 14.2 Tail 14.8	Lead 1.62 Tail 1.37	Lead 688 Tail 3104	5510	8
Tubing							

Drillers TD (ft) 16,612 Loggers TD (ft) 16,518

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 - 68 centralizers - bow spring centralizers on every joint to KOP, on every third joint from KOP to 100' from surface.
Production - 292 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 _____

API 47- 085 - 10066 Farm name Terry & Helen Kiessler Well number PEN 2 MHS

PERFORATION RECORD

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

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)
		SEE ATTACHED STIMULATION INFORMATION PER STAGE RECORD						

Please insert additional pages as applicable.

Perforation Record

Kiessling, Terry &

API: 47-085-10066

Farm name: Helen

Well Name: PEN-2-M-HS

Stage No.	Stim Date	Top Perf	Bottom Perf	# of Perfs	Formation
1	10/25/2014	16,291	16,495	36	Marcellus
2	10/26/2014	15,987	16,191	36	Marcellus
3	10/28/2014	15,684	15,888	36	Marcellus
4	10/29/2014	15,381	15,585	36	Marcellus
5	10/30/2014	15,077	15,282	36	Marcellus
6	10/31/2014	14,774	14,978	36	Marcellus
7	11/2/2014	14,471	14,675	36	Marcellus
8	11/3/2014	14,167	14,372	36	Marcellus
9	11/4/2014	13,864	14,068	36	Marcellus
10	11/5/2014	13,561	13,765	36	Marcellus
11	11/6/2014	13,258	13,462	36	Marcellus
12	11/8/2014	12,954	13,158	36	Marcellus
13	11/9/2014	12,651	12,855	36	Marcellus
14	11/10/2014	12,348	12,552	36	Marcellus
15	11/10/2014	12,044	12,249	36	Marcellus
16	11/10/2014	11,741	11,945	36	Marcellus
17	11/11/2014	11,438	11,642	36	Marcellus
18A	11/11/2014	11,134	11,339	36	Marcellus
18B	11/11/2014	11,119	11,204	36	Marcellus
19	11/12/2014	10,831	11,035	36	Marcellus
20	11/13/2014	10,528	10,732	36	Marcellus
21	11/13/2014	10,225	10,429	36	Marcellus
22	11/14/2014	9,921	10,125	36	Marcellus
23	11/14/2014	9,618	9,822	36	Marcellus
23B Inj Test	11/24/2014	-	-	-	Marcellus
23B	11/25/2014	9,580	9,607	36	Marcellus
24	11/26/2014	9,315	9,519	36	Marcellus
25	11/26/2014	9,011	9,216	36	Marcellus
26	11/26/2014	8,708	8,912	36	Marcellus
27	11/27/2014	8,405	8,609	36	Marcellus
28	11/27/2014	8,101	8,306	36	Marcellus
29	11/27/2014	7,798	8,002	36	Marcellus
30	11/28/2014	7,495	7,699	36	Marcellus
31	11/28/2014	7,192	7,396	36	Marcellus
32	11/28/2014	6,888	7,092	36	Marcellus

STIMULATION INFORMATION PER STAGE

API: 47-085-10066

Farm name: Kiessling, Terry & Helen

Well Name: PEN-2 -M-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 Toes	10/25/2014	0.0	-	9,560	6,180	-	527	
1	10/25/2014	79.4	7,692	5,822	3,254	595,650	12,477	
2	10/26/2014	81.2	7,583	6,092	3,609	596,500	14,651	
3	10/28/2014	82.0	7,950	5,532	4,705	600,500	14,533	
4	10/29/2014	84.2	7,728	5,293	3,440	604,800	12,518	
5	10/30/2014	83.0	7,800	5,486	3,365	599,900	12,853	
6	10/31/2014	83.5	7,912	6,022	2,336	600,550	14,273	
7	11/2/2014	78.0	8,051	5,833	3,458	603,000	12,381	
8	11/3/2014	73.2	8,127	5,772	4,224	600,800	17,925	
9	11/4/2014	83.4	7,806	6,326	3,383	601,900	12,146	
10	11/5/2014	82.5	7,909	5,704	3,580	603,450	12,811	
11	11/6/2014	71.0	7,704	6,444	3,483	600,850	20,252	
12	11/8/2014	80.2	7,980	6,262	3,562	601,400	14,295	
13	11/9/2014	75.0	8,458	5,987	3,330	600,450	16,628	
14	11/10/2014	78.3	8,418	6,709	3,054	600,750	13,130	
15	11/10/2014	84.1	8,229	5,540	3,211	601,650	12,653	
16	11/10/2014	88.0	7,609	5,014	3,086	601,900	12,775	
17	11/11/2014	87.3	7,581	5,068	3,022	600,420	12,540	
18A	11/11/2014	84.4	8,276	6,073	5,068	236,940	9,521	
18B	11/11/2014	68.0	8,122	6,351	5,168	269,450	11,662	
19	11/12/2014	66.1	7,924	5,926	3,040	695,000	17,354	
20	11/13/2014	71.0	7,739	5,261	3,294	603,100	19,638	
21	11/13/2014	71.9	8,118	5,507	3,244	601,600	14,966	
22	11/14/2014	90.0	8,374	5,304	3,093	607,850	12,473	
23	11/14/2014	82.0	8,407	5,676	4,967	129,450	8,981	
23B Inj Test	11/24/2014	10.1	6,422	6,548	4,978	-	401	
23B	11/25/2014	74.6	8,040	6,598	3,651	472,000	12,417	
24	11/26/2014	84.9	7,894	7,482	3,465	599,940	12,576	
25	11/26/2014	86.6	7,802	5,779	3,819	601,482	14,419	
26	11/26/2014	85.1	7,686	7,313	3,240	603,250	13,722	
27	11/27/2014	87.4	7,608	4,549	3,676	599,740	12,529	
28	11/27/2014	87.1	7,529	5,193	3,519	599,810	12,628	
29	11/27/2014	88.3	7,579	6,373	3,333	603,500	12,263	
30	11/28/2014	89.0	7,200	5,515	3,172	599,400	12,197	
31	11/28/2014	89.0	7,053	5,479	3,279	600,400	12,932	
32	11/28/2014	90.2	6,565	6,823	3,051	600,750	12,172	

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<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Marcellus</u>	<u>6,323</u> TVD	<u>16,612</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 3,832 mcfpd Oil 134 bpd NGL 390 bpd Water 1023 bpd
GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/ FORMATION	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 Baker Hughes
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

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

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	

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	10/25/2014
Job End Date:	11/28/2014
State:	West Virginia
County:	Ritchie
API Number:	47-085-10066-00-00
Operator Name:	Noble Energy, Inc.
Well Name and Number:	Pen 2 M
Longitude:	-81.01251400
Latitude:	39.33658300
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	6,323
Total Base Water Volume (gal):	19,413,198
Total Base Non Water Volume:	965,974



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	89.02343	
4070 Sand	J.S. Well Services, LLC	Proppant	Crystalline Silica, quartz	14808-60-7	100.00000	7.34466	
70/140 Sand	J.S. Well Services, LLC	Proppant	Crystalline Silica, quartz	14808-60-7	100.00000	3.23335	
HCL Acid (12.6%-18.0%)	J.S. Well Services, LLC	Bulk Acid	Water	7732-18-5	87.50000	0.18039	
WFRA-405e	J.S. Well Services, LLC	Friction Reducer	Hydrogen Chloride	7647-01-0	18.00000	0.04309	
			Anionic Polyacrylamide	Proprietary	40.00000	0.02641	
			Water	7732-18-5	40.00000	0.02641	
			Sodium Chloride	7647-14-5	20.00000	0.01321	
			Petroleum Distillates	64742-47-8	20.00000	0.01063	
			Ethoxylated alcohol blend	Proprietary	5.00000	0.00330	
LGC-15	J.S. Well Services, LLC	Gelling Agents	Guar Gum	9000-30-0	50.00000	0.01384	

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			Petroleum Distillates	54742-47-8	60.00000	0.01310	
			Suspending agent (solid)	14809-60-7	3.00000	0.00212	
			Surfactant	58439-51-0	3.00000	0.00083	
MFRA-405	U.S. Well Services, LLC	Friction Reducer	Anionic Polyacrylamide	Proprietary	40.00000	0.00902	
			Water	7732-18-5	40.00000	0.00902	
			Petroleum Distillates	54742-47-8	40.00000	0.00726	
			Crystalline Salt	12125-02-9	5.00000	0.00113	
			Ethoxylated alcohol blend	Proprietary	5.00000	0.00113	
SI-1100	U.S. Well Services	Scale Inhibitor	DI Water	7732-18-5	80.00000	0.01094	
			Ethylene Glycol	107-21-1	40.00000	0.00618	
			Potassium salt of diethylene triamine penta (methylene phosphonic acid)	15827-60-8	10.00000	0.00185	
			2-Phosphonobutane 1,2,4 dicarboxylic acid	3797-136-1	10.00000	0.00176	
			hexamethylenediamine tetra (methylene phosphonic acid)	38820-59-6	10.00000	0.00171	
			Copolymer of Maleic and Acrylic acid	26677-99-6	10.00000	0.00161	
			tris (hexamethylene) triamine penta (methylene phosphonic acid) - phosphate acid	40623-75-4	10.00000	0.00157	
			Acrylic polymer	52255-49-9	5.00000	0.00068	
K-BAC 1020	U.S. Well Services, LLC	Anti-Bacterial Agent					
			2,2-dibromo-3-nitropropionamide	10222-01-2	20.00000	0.00607	
			Deionized Water	7732-18-5	28.00000	0.00347	
AI-301	U.S. Well Services, LLC	Acid Corrosion Inhibitors	Diethylene Glycol	111-46-6	30.00000	0.00028	
			Methanamine	100-97-0	20.00000	0.00022	
			Hydrogen Chloride	7647-01-0	10.00000	0.00010	
			Polyethylene polyamine	88603-67-8	10.00000	0.00008	
			Coco amine	31791-14-8	5.00000	0.00004	
AP One	U.S. Well Services, LLC	Gel Breakers	Ammonium Persulfate	7727-54-0	100.00000	0.00070	
CA-800	U.S. Well Services	Iron Control Additive	Erythorbic Acid	89-65-6	100.00000	0.00024	
pH-15L	U.S. Well Services	pH Buffer	Sodium Hydroxide	1310-73-2	25.00000	0.00017	

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.

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* 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(f) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

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06/12/2015

Well is located on topo map 13,957' feet south of Latitude: 39° 22' 30"

AS DRILLED PLAT

Well is located on topo map 3,500' feet west of Longitude: 81° 00' 00"

PERMITTED
SURFACE HOLE LOCATION (SHL)
UTM 17-NAD83
N:4354137.33
E:498936.14
NAD27, WV NORTH
N:308301.45
E:1572206.74
LAT/LON DATUM-NAD83
LAT:39.336661
LON:-81.012345

PERMITTED
APPROX. LANDING POINT
UTM 17-NAD83
N:4354332.94
E:499441.13
NAD27, WV NORTH
N:308915.62
E:1573874.64
LAT/LON DATUM-NAD83
LAT:39.338424
LON:-81.006485

AS DRILLED
SURFACE HOLE LOCATION (SHL)
UTM 17-NAD83
N:4354137.44
E:498936.03
NAD27, WV NORTH
N:308301.80
E:1572206.41
LAT/LON DATUM-NAD83
LAT:39.336662
LON:-81.012346

AS DRILLED
APPROX. LANDING POINT
UTM 17-NAD83
N:4354324.56
E:499448.58
NAD27, WV NORTH
N:308887.71
E:1573898.62
LAT/LON DATUM-NAD83
LAT:39.338348
LON:-81.006399

AS DRILLED
BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83
N:4352176.30
E:501314.35
NAD27, WV NORTH
N:301735.51
E:1579903.51
LAT/LON DATUM-NAD83
LAT:39.318990
LON:-80.984753

PERMITTED
BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83
N:4352177.18
E:501310.65
NAD27, WV NORTH
N:301738.84
E:1579891.42
LAT/LON DATUM-NAD83
LAT:39.318998
LON:-80.984796

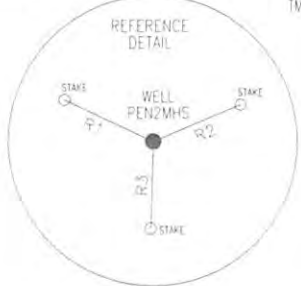
LEGEND

- TOP-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

LEASE	LESSORS
1	TERRY KIESSLING ET AL
2	TERRY KIESSLING ET AL
3	JAY-BEE PRODUCTION COMPANY ET AL
4	JAY-BEE PRODUCTION COMPANY ET AL
5	JAY-BEE PRODUCTION COMPANY ET AL
6	TERRY KIESSLING ET AL
7	STEVE HAMMOND ET AL
8	MARY LEE LILLY ET AL
9	ELIZABETH SMITH BARBER ET AL
10	JOSEPH F. SCHMIDLE ET UX
11	JOSEPH F. SCHMIDLE ET UX
12	JOSEPH F. SCHMIDLE ET UX
13	DAVID B. OWINGS ET AL
14	DAVID L. WAFLE ET AL



LINE	BEARING	DISTANCE
R1	N 64°48'49" W	203.31'
R2	N 67°24'28" E	197.07'
R3	S 02°02'15" W	180.88'
R4	N 59°48'13" W	1859.63'
R5	N 21°25'50" W	1831.86'
R6	N 13°57'49" E	1619.44'

- 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.

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

FILE #: PEN2MHS-AS DRILLED

DRAWING #: PEN2MHS-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

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: 623.760±

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: 16,702'±

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



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West Virginia Department of Environmental Protection