

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

API 47 - 085 - 10010 County Ritche District Clay
Quad Pennsboro Pad Name PENS 1HS Field/Pool Name _____
Farm name CNX Gas Company LLC Well Number PENS 1DHS
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 4353951.45 Easting 500620.75
Landing Point of Curve Northing 4353669.90 Easting 500647.98
Bottom Hole Northing 4352305.14 Easting 501833.56

Elevation (ft) 1121 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 1/31/2013 Date drilling commenced 5/17/2013 Date drilling ceased 11/29/2013
Date completion activities began 4/10/2014 Date completion activities ceased 8/26/2014
Verbal plugging (Y/N) N Date permission granted 1/31/2013 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

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Reviewed by: _____

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API 47- 085 - 10010 Farm name CNX Gas Company LLC Well number PENS 1DHS

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	J-55 106.50#		
Surface	17-1/2	13-3/8	640.0	N	J-55 54.50#		Y
Coal							
Intermediate 1	12-1/4	9-5/8	5343.0	N	HCK-55 36#		Y
Intermediate 2							
Intermediate 3							
Production	8-3/4	5-1/2	12805.6	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	Class H	557	15.6	1.19	119	0	8
Coal							
Intermediate 1	Class H	Lead-966 Tail-278	Lead-12 Tail-15.6	Lead-1.81 Tail-1.19	Lead-311 Tail-59	0	8
Intermediate 2							
Intermediate 3							
Production	Class A	Lead-386 Tail-1343	Lead-13 Tail-14.8	Lead-1.62 Tail-1.41	Lead-111 Tail-338	0	8
Tubing							

Drillers TD (ft) 12825 Loggers TD (ft) _____
 Deepest formation penetrated Marcellus Plug back to (ft) _____
 Plug back procedure _____

Kick off depth (ft) ⁵⁴⁸⁰ _____

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) 108 Centralizers on Intermediate (1 every 3rd joint) 204 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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PERFORMANCE RECORD

API: 47-085-10010

Farm name: CNX Gas Company, LLC

Well Name: PEN 1DHS

Stage No.	Perf Date	Top Perf	Bottom Perf	# of Perfs	Formation
Toe Sleeve	3/8/2014	12,675	12,677	NA	Marcellus
1	4/10/2014	12,573	12,665	48	Marcellus
2	4/13/2014	12,425	12,505	50	Marcellus
3	4/13/2014	12,275	12,377	40	Marcellus
4	4/13/2014	12,129	12,227	40	Marcellus
5	4/14/2014	11,975	12,077	40	Marcellus
6	4/14/2014	11,825	11,927	40	Marcellus
7	4/14/2014	11,675	11,777	40	Marcellus
8	4/15/2014	11,525	11,629	40	Marcellus
9	4/15/2014	11,375	11,477	40	Marcellus
10	4/16/2014	11,225	11,327	40	Marcellus
11	4/16/2014	11,075	11,171	40	Marcellus
12	4/16/2014	10,925	11,027	40	Marcellus
13	4/17/2014	10,775	10,877	40	Marcellus
14	4/17/2014	10,625	10,727	40	Marcellus
15	4/18/2014	10,475	10,577	40	Marcellus
16	4/18/2014	10,325	10,427	40	Marcellus
17	4/20/2014	10,175	10,277	40	Marcellus
18	4/23/2014	10,025	10,123	40	Marcellus
19	4/23/2014	9,875	9,977	40	Marcellus
19B	4/24/2014	9,882	9,917	32	Marcellus
20	4/24/2014	9,725	9,827	40	Marcellus
21	4/26/2014	9,575	9,677	40	Marcellus
22	4/28/2014	9,425	9,529	40	Marcellus
23	4/28/2014	9,278	9,377	40	Marcellus
24	4/29/2014	9,125	9,227	40	Marcellus
25	4/29/2014	8,975	9,077	40	Marcellus
26	4/30/2014	8,825	8,927	40	Marcellus
27	4/30/2014	8,680	8,777	40	Marcellus
28	5/1/2014	8,525	8,627	40	Marcellus
29	5/1/2014	8,375	8,477	40	Marcellus
30	5/2/2014	8225	8327	40	Marcellus
31	5/2/2014	8075	8176	40	Marcellus
32	5/4/2014	7925	8027	40	Marcellus
33	5/5/2014	7775	7877	40	Marcellus
34	5/5/2014	7625	7732	40	Marcellus
35	5/6/2014	7475	7577	40	Marcellus
36	5/6/2014	7325	7427	40	Marcellus
37	5/6/2014	7175	7277	40	Marcellus
38	5/7/2014	7025	7127	40	Marcellus
39	5/7/2014	6875	6977	40	Marcellus
40	5/7/2014	6725	6827	40	Marcellus

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STIMULATION INFORMATION PER STAGE

API: 47-085-10010

Farm name: CNX Gas Company LLC

Well Name: PEN 1DHS

Stage No.	Stim Date	Avg Rate (bpm)	ATP (psi)	Max BD Pressure	ISIP (psi)	Proppant (lbs)	Water (BBLS)	Amount of N ² / other
1	4/10/2014	72.0	9050	9281	6669	227,740	7,823	
2	4/13/2014	82.0	8164	8599	4648	245,240	7,407	
3	4/13/2014	83.5	8,166	5970	5483	253,880	6,830	
4	4/13/2014	88.6	8,518	5,214	5294	247,740	8,010	
5	4/14/2014	83.0	8,100	8,396	3362	246,280	7,690	
6	4/14/2014	78.9	7,970	9,246	5402	260,460	10,494	
7	4/15/2014	77.0	8,317	5,395	5248	248,420	10,710	
8	4/15/2014	86.0	8,064	7,683	4667	247,160	8,042	
9	4/15/2014	83.8	7,861	5,962	5390	247,200	6,045	
10	4/16/2014	87.0	7,951	8,248	5085	247,080	6,570	
11	4/16/2014	85.6	7,934	5,516	5281	246,200	6,078	
12	4/17/2014	66.0	8,115	6,137	4106	246,160	12,710	
13	4/17/2014	79.0	7,989	5,621	4929	241,020	7,377	
14	4/18/2014	82.2	8,078	5,571	5348	254,600	6,184	
15	4/18/2014	85.1	7,996	5,795	5255	250,060	6,028	
16	4/20/2014	87.7	7,989	5,625	5781	248,260	6,169	
17	4/21/2014	87.2	9,351	5,383	9488	248,440	5,908	
18	4/21/2014	84.4	8,140	5,530	5054	247,900	8,445	
19	4/24/2014	39.0	7,279	5,401	5085	222,080	7,349	
19B (RP)	4/24/2014	72.0	8,210	7,253	4763		9,358	
20	4/26/2014	85.0	7,958	5,801	5321	249,540	6,471	
21	4/28/2014	88.0	7,999	5643	4955	256,300	6,491	
22	4/28/2014	76.0	8,148	5,630	4854	256,260	7,590	
23	4/29/2014	77.7	8,076	5,679	4943	242,640	8,380	
24	4/29/2014	87.4	7,817	5,590	5038	245,720	5,989	
25	4/30/2014	88.2	7,660	6,278	4933	247,900	6,053	
26	4/30/2014	89.1	7,646	5,480	5092	248,300	6,166	
27	5/1/2014	87.8	7,774	5,396	4948	247,560	6,018	
28	5/1/2014	90.1	7,538	6,201	5127	249,960	6,025	
29	5/2/2014	88.0	7,513	7,839	5157	246,760	6,649	
30	5/2/2014	88.5	7,521	6,116	5291	249,000	6,230	
31	5/3/2014	60.1	8,124	5,972	4346	256,360	10,086	
32	5/5/2014	88.6	7789	5293	4732	246,420	6991.57	
32 inj test	5/5/2014	3.2	5047			-	588.95	
33	5/5/2014	87.5	7791	5545	5123	250,680	5956.57	
34	5/6/2014	89.0	7961	6253	4929	247,240	7111.57	
35	5/6/2014	85.5	7979	5457	4539	248,620	8018.57	
36	5/6/2014	87.9	7397	5681	4198	251,640	6749.57	
37	5/7/2014	90.1	7377	6312	4482	252,760	6061.57	
38	5/7/2014	89.9	7387	6097	4208	248,880	5876.57	
39	5/7/2014	88.6	7399	6835	5542	257,660	6003.66	
40	5/8/2014	90.8	7446	7134	5608	247,540	6133.57	

API 47- 085 - 10010 Farm name CNX Gas Company LLC Well number PEN 1DHS

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Marcellus</u>	<u>6387.9'</u> TVD	<u>12846.0'</u> MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

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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 1392 mcfpd Oil 18 bpd NGL 18 bpd Water 532 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 ₂ S, ETC)
	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 (Please See Attached for additional)
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

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PEN 1D
47-085-10010

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	1650	
Sandstone	1649	1691	1650	1692	
Shale and Sandstone	1691	1793	1692	1794	
Maxton Sand	1793	1876	1794	1877	
Shale and Sandstone	1876	1999	1877	2000	
Big Lime	1999	2054	2000	2055	
Big Injun	2054	2189	2055	2190	
Price	2189	2461	2190	2462	
Weir	2461	2500	2462	2978	
Shale	2500	2780	2501	2781	
Gordon	2780	2797	2781	2798	
Shale and Sandstone	2797	2977	2798	2978	
5th Sand	2977	2989	2978	2990	
Shale	2989	3132	2990	3133	
Sandstone	3132	3146	3133	3147	
Shale	3146	3554	3147	3555	
Warren	3554	3616	3555	3617	
Shale	3616	3950	3617	3951	
Sandstone	3950	3987	3951	3988	
Shale and Sandstone	3987	4981	3988	4982	
Benson	4981	5043	4982	5044	
Shale	5043	5203	5044	5204	
Alexander	5203	5271	5204	5272	
Shale	5271	5781	5272	5797	
Rheinstreet	5781	6107	5797	6223	
Cashaqua	6107	6199	6223	6378	
Middlesex	6199	6228	6378	6436	
West River	6228	6272	6436	6531	
Burkett	6272	6315	6531	6644	
Tully Limestone	6315	6316	6644	6647	
Hamilton	6316	6317	6647	6650	
Marcellus	6317	6376	6650	not encountered	Gas
Onondaga	6376	6393	not encountered	not encountered	
Huntersville	6393	not encountered	not encountered	not encountered	

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	4/10/2014
Job End Date:	5/8/2014
State:	West Virginia
County:	Ritchie
API Number:	47-085-10010-00-00
Operator Name:	Noble Energy, Inc.
Well Name and Number:	PENS1D
Longitude:	-80.99296700
Latitude:	39.33490800
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	6,387
Total Base Water Volume (gal):	12,468,220
Total Base Non Water Volume:	634,604



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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	Operator	Base Carrier Fluid	Water	7732-18-5	100.00000	90.82779	
Sand	Operator	Proppants	Silicon Dioxide	14808-60-7	100.00000	8.66802	
28% Hydrochloric Acid	Reagent	Scale Dissolver	Water	7732-18-5	64.79000	0.21525	
			Hydrogen Chloride	7647-01-0	36.93000	0.12269	
FR900	Nalco	Friction Reducers	Proprietary	Proprietary	100.00000	0.09576	
BIO-CLEAR 2000	Clearwater International, LLC	Iron Controller / Reducers	Polyethylene Glycol Mixture	25322-68-3	60.00000	0.02854	
			2,2-Dibromo-3-Nitrilopropionamide	10222-01-2	20.00000	0.00951	
Plexgel 907L-EB	Chemplex, L.C.	Gelling Agents	Distillate, petroleum, hydrotreated light	64742-47-8	60.00000	0.00734	
			Propylene Pentamer	15220-87-8	60.00000	0.00734	
			C14 n-alkanes, mixed	629-59-4	20.00000	0.00245	
			C12 n-alkanes, mixed	112-40-3	20.00000	0.00245	
			C11 n-alkanes, mixed	1120-21-4	20.00000	0.00245	

			C13 n-alkanes, mixed	629-50-5	20.00000	0.00245
MSI-7	National Petrochem	Scale Inhibitors				
			Hydrogen Chloride	7647-01-0	100.00000	0.00905
FE-4	Chemplex, L.C.	Iron Controller / Reducers				
			Water	7732-18-5	55.00000	0.00203
			Citric Acid Anhydrous	77-92-9	55.00000	0.00203
I-22	Nalco	Acid Corrosion Inhibitors				
			Formic Acid	64-18-6	60.00000	0.00127
			Oxyalkylated Fatty Acid Derivative	Proprietary	30.00000	0.00064
			Quaternary ammonium compound	Proprietary	30.00000	0.00064
			Aromatic aldehyde	Proprietary	30.00000	0.00064
			Isopropanol	67-63-0	10.00000	0.00021
			Cyclic alkanes	Proprietary	5.00000	0.00011
			2-Mercaptoethyl Alcohol	60-24-2	5.00000	0.00011
			Quaternary ammonium compound	Proprietary	5.00000	0.00011
			Methanol	67-56-1	5.00000	0.00011
Plexgel Breaker 10L	Chemplex, L.C.	Gel Breakers/Delayed Breakers				
			No Hazardous Ingredients	Proprietary	100.00000	0.00087
MNE-N34	CESI	Emulsifiers / Viscosifiers				
			Petroleum Distillates	64741-68-0	75.00000	0.00051
			Isopropanol	67-63-0	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(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

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Noble Energy PENS1DHS Gyro+MWD 0ft to 12825ft MD Survey Report



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(Def Survey)

Report Date: December 02, 2013 - 11:11 AM
Client: Noble Energy
Field: WV Ritchie County (NAD27)
Structure / Slot: Noble Energy PENS1 Pad / PENS1DHS
Well: PENS1DHS
Original Borehole: Unknown / Unknown
UWI / API#: Noble Energy PENS1DHS Gyro+MWD 0ft to 12825ft MD
Survey Date: November 19, 2013
Tort / AHD / DDI / ERD Ratio: 199.217' / 6985.551 ft / 6.446 / 1.094
Coordinate Reference System: NAD27 West Virginia State Plane, Northern Zone, US Feet
Location Lat / Long: N 39° 20' 5.66700", W 80° 59' 34.67000"
Location Grid NE YX: N 30759.023 ftUS, E 1577724.726 ftUS
CRS Grid Convergence Angle: -0.9522°
Grid Scale Factor: 0.99995358
Version / Patch: 2.7.998.0

Vertical / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 144.610° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: KB
Seabed / Ground Elevation: 1138.030 ft above MSL
Magnetic Declination: -7.801°
Total Gravity Field Strength: 999.302mgals (9.80665 Basead)
Gravity Model: GARM
Total Magnetic Field Strength: 52298.512 nT
Magnetic Dip Angle: 66.880°
Declination Date: November 19, 2013
Magnetic Declination Model: HDGM 2013
North Reference: Grid North
Grid Convergence Used: -0.9522°
Total Corr Mag North-Grid North: -6.8487°
Local Coord Referenced To: Well Head

Table with columns: Comments, MD (ft), Incl (°), Azim Grid (°), TVD (ft), TVDSS (ft), YSEC (ft), NS (ft), EW (ft), DLS (ft/100ft), BR (ft/100ft), TR (ft/100ft), Northing (ftUS), Easting (ftUS), Latitude (N/S °'"), Longitude (E/W °'"), Directional Difficulty Index

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Comments	MD (ft)	Incl (°)	Adm Ghd (ft)	TYD (ft)	TVDBS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	BR (ft/100ft)	TR (ft/100ft)	Northing (mUS)	Easting (mUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')	Directional Difficulty Index
	7225.00	89.79	141.39	6361.33	5223.32	1130.96	-1178.49	293.92	0.13	0.06	0.11	308420.50	1578018.83	N 39 10 54.07 W	80 50 30.60	5.39
	7320.00	89.24	141.86	6362.18	5224.13	1225.82	-1252.86	353.03	0.64	-0.58	0.28	308346.22	1578077.73	N 39 10 53.34 W	80 50 29.92	5.42
	7416.00	90.21	142.29	6362.62	5224.50	1321.72	-1326.48	412.16	1.20	1.01	0.66	308270.60	1578136.87	N 39 10 52.61 W	80 50 29.15	5.48
	7512.00	90.58	142.81	6361.95	5223.92	1417.65	-1404.69	470.53	0.68	0.39	0.54	308194.40	1578195.24	N 39 10 51.86 W	80 50 28.50	5.49
	7607.00	90.27	141.42	6361.25	5223.22	1512.56	-1470.67	528.87	1.50	-0.33	-1.46	308119.43	1578253.57	N 39 10 51.13 W	80 50 27.63	5.53
	7705.00	89.45	139.36	6361.48	5223.45	1608.29	-1553.62	580.07	2.31	-0.85	-2.15	308045.48	1578311.74	N 39 10 50.41 W	80 50 26.84	5.56
	7798.00	89.97	139.65	6361.97	5223.94	1702.01	-1625.86	651.78	0.63	0.31	0.59	307973.24	1578370.45	N 39 10 49.71 W	80 50 26.04	5.59
	7894.00	90.82	139.58	6361.30	5223.27	1798.57	-1690.20	713.70	0.95	0.89	0.34	307899.90	1578430.39	N 39 10 48.99 W	80 50 25.24	5.62
	7990.00	90.21	139.51	6360.44	5222.41	1894.22	-1772.46	775.73	0.80	-0.64	-0.49	307826.65	1578490.42	N 39 10 48.28 W	80 50 24.43	5.64
	8085.00	89.73	139.95	6360.49	5222.46	1988.80	-1844.41	837.77	0.78	-0.51	-0.50	307754.70	1578550.46	N 39 10 47.58 W	80 50 23.63	5.67
	8181.00	87.84	138.21	6362.53	5224.50	2084.24	-1916.38	901.26	2.11	-0.77	-0.77	307682.74	1578610.95	N 39 10 46.88 W	80 50 22.80	5.70
	8278.00	88.66	139.03	6365.43	5227.40	2178.68	-1987.83	964.03	1.22	0.86	0.86	307611.49	1578670.91	N 39 10 46.18 W	80 50 21.99	5.72
	8371.00	89.35	139.93	6367.08	5229.05	2273.21	-2059.29	1026.37	0.73	-0.11	-0.11	307539.63	1578731.05	N 39 10 45.48 W	80 50 21.18	5.75
	8467.00	89.69	138.59	6367.88	5229.85	2368.70	-2131.48	1089.66	0.50	0.35	-0.35	307467.65	1578791.33	N 39 10 44.78 W	80 50 20.36	5.77
	8562.00	90.58	138.55	6367.66	5229.63	2463.17	-2202.70	1152.52	0.94	0.94	-0.04	307395.43	1578851.79	N 39 10 44.09 W	80 50 19.55	5.79
	8658.00	90.65	138.37	6366.63	5229.60	2558.62	-2274.55	1216.18	0.20	0.07	-0.19	307324.58	1578912.84	N 39 10 43.39 W	80 50 18.72	5.81
	8754.00	90.58	140.00	6365.60	5227.57	2654.18	-2347.29	1278.92	1.70	-0.07	-1.70	307253.93	1578973.58	N 39 10 42.68 W	80 50 17.91	5.84
	8849.00	90.76	140.06	6364.49	5226.46	2748.87	-2420.01	1339.93	0.21	0.10	0.06	307179.13	1579034.50	N 39 10 41.97 W	80 50 17.12	5.86
	8945.00	90.55	140.27	6363.39	5225.36	2844.58	-2493.74	1401.41	0.29	-0.22	0.20	307105.41	1579095.66	N 39 10 41.25 W	80 50 16.32	5.87
	9041.00	90.17	140.09	6362.78	5224.75	2940.29	-2567.47	1462.88	0.44	-0.40	-0.19	307031.68	1579157.54	N 39 10 40.53 W	80 50 15.52	5.89
	9136.00	90.03	139.15	6362.62	5224.59	3034.93	-2639.84	1524.43	1.00	-0.15	-0.99	306959.91	1579219.08	N 39 10 39.83 W	80 50 14.72	5.91
	9232.00	90.21	139.50	6362.42	5224.39	3130.52	-2712.64	1587.00	0.11	0.10	0.36	306886.51	1579281.64	N 39 10 39.12 W	80 50 13.91	5.93
	9327.00	89.79	139.21	6362.42	5224.39	3225.12	-2784.73	1648.88	0.54	-0.44	-0.31	306814.43	1579344.52	N 39 10 38.42 W	80 50 13.11	5.95
	9423.00	90.03	139.74	6362.57	5224.54	3320.73	-2857.70	1711.25	0.81	0.25	0.55	306741.46	1579407.99	N 39 10 37.71 W	80 50 12.30	5.97
	9519.00	90.10	141.25	6362.52	5224.49	3416.40	-2931.82	1772.28	1.68	0.00	1.68	306667.35	1579472.00	N 39 10 36.98 W	80 50 11.51	5.99
	9614.00	90.10	141.78	6362.41	5224.38	3511.35	-3006.23	1831.31	0.46	0.07	0.45	306593.26	1579536.95	N 39 10 36.26 W	80 50 10.74	6.00
	9710.00	89.00	142.05	6362.41	5224.38	3607.25	-3081.79	1890.53	0.35	-0.21	0.28	306519.38	1579601.16	N 39 10 35.52 W	80 50 9.97	6.02
	9805.00	89.97	142.64	6362.52	5224.49	3702.17	-3157.01	1948.56	0.63	0.07	0.62	306444.17	1579665.19	N 39 10 34.79 W	80 50 9.22	6.03
	9901.00	89.86	142.20	6362.66	5224.63	3798.10	-3233.09	2007.11	0.47	-0.11	-0.48	306369.09	1579731.74	N 39 10 34.05 W	80 50 8.46	6.05
	9995.00	89.49	141.29	6363.19	5225.16	3893.98	-3309.90	2065.31	1.05	-0.39	-0.97	306292.28	1579799.94	N 39 10 33.33 W	80 50 7.70	6.07
	10091.00	89.48	140.73	6364.06	5226.03	3987.70	-3381.51	2125.71	0.58	-0.01	-0.58	306217.67	1579869.33	N 39 10 32.60 W	80 50 6.91	6.08
	10186.00	89.55	140.53	6364.98	5226.83	4082.55	-3454.95	2185.97	0.22	0.07	-0.21	306144.24	1579939.50	N 39 10 31.88 W	80 50 6.13	6.10
	10282.00	89.69	141.60	6365.50	5227.47	4178.37	-3529.62	2246.30	1.12	0.15	1.11	306069.07	1579970.91	N 39 10 31.15 W	80 50 5.35	6.11
	10378.00	89.52	140.29	6366.16	5228.13	4274.17	-3604.17	2308.78	1.38	-0.18	-1.36	305995.03	1580031.39	N 39 10 30.43 W	80 50 4.56	6.13
	10474.00	89.59	140.50	6366.91	5228.88	4369.00	-3678.13	2367.98	0.23	0.07	0.22	305921.07	1580092.50	N 39 10 29.71 W	80 50 3.77	6.14
	10569.00	89.62	139.65	6367.56	5229.53	4464.80	-3750.98	2429.94	0.90	0.00	-0.89	305848.22	1580153.55	N 39 10 29.00 W	80 50 2.98	6.16
	10664.00	89.62	138.46	6368.19	5230.16	4559.15	-3822.73	2491.20	1.25	0.00	-1.25	305774.87	1580215.49	N 39 10 28.30 W	80 50 2.17	6.17
	10760.00	89.66	138.42	6368.79	5230.79	4654.60	-3894.57	2554.88	0.06	0.04	-0.04	305704.65	1580279.49	N 39 10 27.60 W	80 50 1.35	6.19
	10855.00	89.21	138.27	6369.73	5231.70	4749.02	-3965.54	2618.02	0.50	-0.47	-0.16	305633.67	1580342.62	N 39 10 26.91 W	80 50 0.53	6.20
	10951.00	89.24	137.84	6371.03	5233.00	4844.40	-4037.00	2682.12	0.35	0.03	-0.34	305562.22	1580406.72	N 39 10 26.21 W	80 50 0.70	6.21
	11047.00	89.24	137.99	6372.30	5234.27	4923.74	-4108.29	2746.40	0.65	0.00	0.65	305490.93	1580470.90	N 39 10 25.52 W	80 50 0.87	6.22
	11143.00	89.48	137.62	6373.37	5235.34	5005.06	-4179.41	2810.87	0.46	0.25	-0.39	305419.81	1580535.46	N 39 10 24.82 W	80 50 0.03	6.24
	11238.00	89.83	139.19	6373.95	5235.92	5129.50	-4250.45	2873.93	1.69	0.37	1.65	305348.78	1580598.52	N 39 10 24.13 W	80 50 0.21	6.25
	11334.00	89.83	140.81	6374.23	5236.20	5225.18	-4323.99	2935.84	1.69	0.00	1.69	305275.24	1580660.22	N 39 10 23.42 W	80 50 0.61	6.27
	11430.00	89.86	141.36	6374.49	5236.46	5321.00	-4398.89	2995.94	0.57	0.03	0.57	305202.55	1580720.52	N 39 10 22.69 W	80 50 0.53	6.28
	11526.00	89.50	141.18	6375.79	5237.76	5416.83	-4472.57	3056.00	1.34	-1.32	-0.19	305129.67	1580780.56	N 39 10 21.96 W	80 50 0.85	6.29
	11621.00	89.42	142.06	6377.44	5239.41	5511.68	-4548.03	3114.97	1.27	0.87	0.93	305053.22	1580839.55	N 39 10 21.23 W	80 50 0.48	6.31
	11718.00	89.11	142.01	6378.66	5240.63	5606.58	-4622.92	3173.41	0.33	-0.33	-0.05	304976.33	1580897.98	N 39 10 20.50 W	80 50 0.32	6.32
	11812.00	89.11	141.07	6380.15	5242.12	5702.43	-4698.08	3233.11	0.98	0.00	-0.98	304901.17	1580957.68	N 39 10 19.77 W	80 50 0.55	6.33
	11908.00	89.21	139.94	6381.56	5243.53	5798.17	-4772.15	3294.16	1.19	0.10	-1.18	304827.10	1581018.73	N 39 10 19.05 W	80 50 0.78	6.34
	12003.00	89.38	139.77	6382.73	5244.70	5892.84	-4844.78	3355.40	0.25	0.18	-0.18	304754.40	1581079.97	N 39 10 18.34 W	80 50 0.96	6.35
	12099.00	89.45	139.62	6383.71	5245.68	5988.48	-4917.97	3417.50	0.17	0.07	-0.16	304681.29	1581142.06	N 39 10 17.63 W	80 50 0.16	6.36
	12194.00	89.73	139.65	6384.39	5246.36	6083.12	-4990.35	3479.02	0.30	0.29	0.03	304608.91	1581203.56	N 39 10 16.92 W	80 50 0.36	6.37
	12290.00	89.10	139.36	6384.53	5246.50	6178.74	-5063.37	3541.35	0.48	0.39	-0.28	304535.00	1581265.91	N 39 10 16.21 W	80 50 0.85	6.39
	12385.00	89.45	138.54	6384.00	5246.87	6273.28	-5135.02	3603.73	1.12	-0.68	-0.68	304464.26	1581328.28	N 39 10 15.51 W	80 50 0.74	6.40
	12481.00	89.70	138.69	6385.54	5247.51	6368.76	-5207.16	3667.07	0.51	0.35	0.36	304392.12	1581391.61	N 39 10 14.81 W	80 50 0.92	6.41
	12578.00	89.28	138.91	6386.31	5248.28	6463.29	-5278.74	3729.51	0.54	-0.04	0.02	304320.54	1581454.06	N 39 10 14.11 W	80 50 0.61	6.42
	12672.00	89.93	139.89	6386.97	5248.94	6558.89	-5351.63	3791.99	1.22	0.68	1.02	304247.65	1581516.53	N 39 10 13.40 W	80 50 0.50	6.43
Final Survey 29- Now-13 PTB	12741.00	89.50	140.32	6387.26	5249.23	6627.68	-5404.57	3836.24	0.79	-0.49	0.82	302194.72	1581580.78	N 39 10 12.68 W	80 50 0.44	6.44
	12825.00	89.50	140.32	6387.88	5249.83	6711.44	-5469.21	3889.87	0.00	0.00	0.00	302130.07	1581644.41	N 39 10 12.25 W	80 50 0.44	6.45

Survey Type:

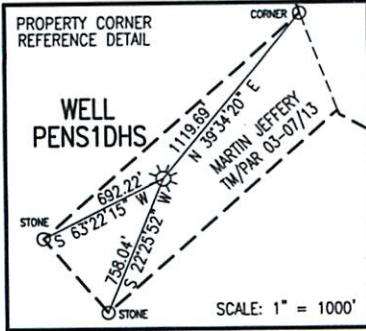
Latitude: 39°22'30"

Longitude: 80°57'30"



LEGEND

- TOPO MAP POINT
 - PROPOSED GAS WELL
 - ALL ARE POINTS UNLESS OTHERWISE NOTED.
 - WATER SOURCE
 - LEASE NUMBER
 - SURFACE BOUNDARY
 - LEASE BOUNDARY
 - PARCEL LINES
 - WELL REFERENCE
 - PROPOSED HORIZONTAL WELL
 - ROAD
 - STREAM CENTER LINE
 - AS DRILLED
- WELLS WITHIN 3000'**
- EXISTING WELLS
 - PLUGGED WELLS



SURFACE HOLE LOCATION (SHL)

UTM 17
N:4353951.367
E:500621.065

NAD27_WY NORTH
N:307598.742
E:1577725.744

LAT/LOG DATUM-WGS84
LAT:39°20'05.95"
LON:80°59'34.06"

SURFACE HOLE LOCATION (SHL)

UTM 17
N:4353951.45
E:500620.75

NAD27_WY NORTH
N:307599.023
E:1577724.726

LAT/LOG DATUM-WGS84
LAT:39°20'05.95"
LON:80°59'34.07"

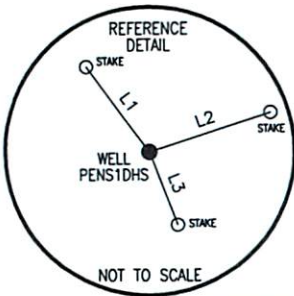
APPROX LANDING POINT

UTM 17-NAD83
N:4353669.896
E:500647.976
NAD27_WY NORTH
N:306673.611
E:1577798.630
LAT/LOG DATUM-WGS84
LAT:39°19'56.82"
LON:80°59'32.93"

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.

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	DAVID L. MAPLE ET AL
6	DAVID L. MAPLE ET AL
7	DAVID L. MAPLE ET AL



LINE	BEARING	DISTANCE
L1	N 36°16'29" W	218.23'
L2	N 72°03'24" E	263.82'
L3	S 20°48'59" E	163.02'

Blue Mountain Inc.

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

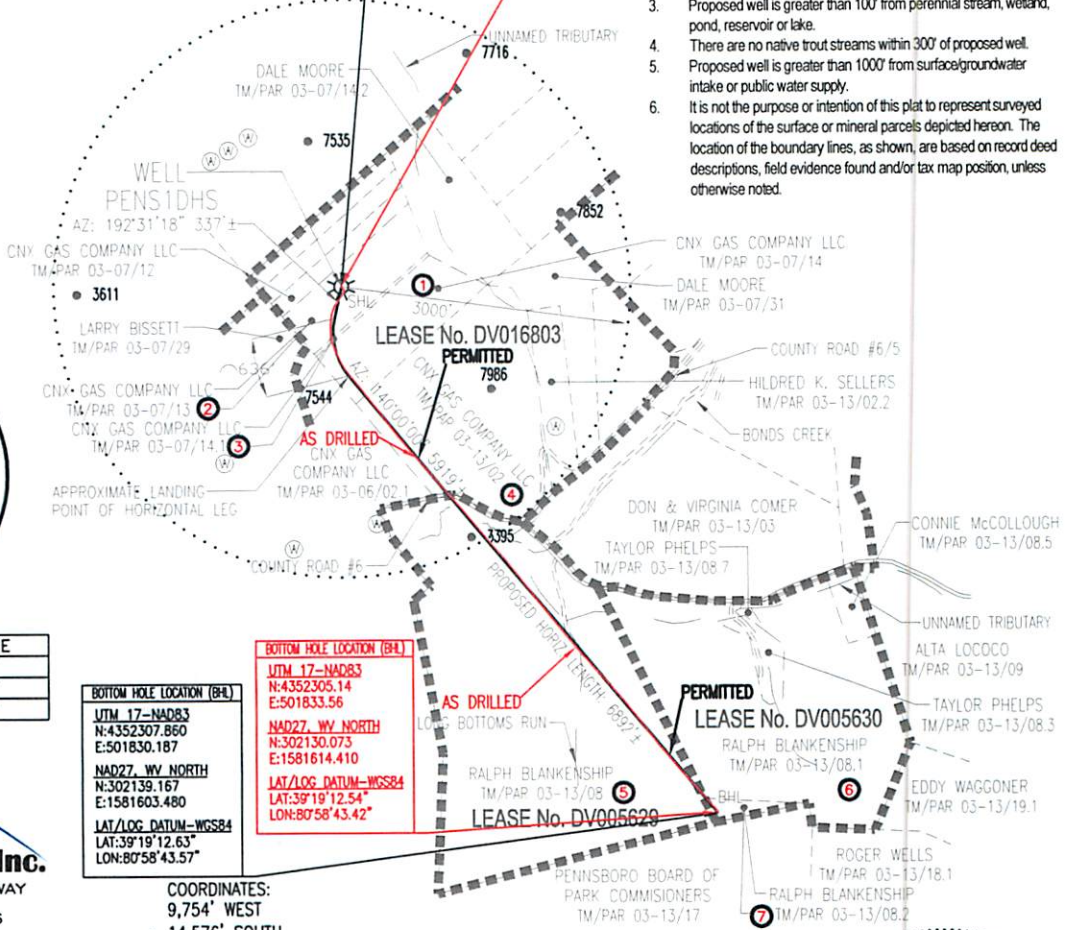
BOTTOM HOLE LOCATION (BHL)

UTM 17-NAD83
N:4352307.860
E:501830.187

NAD27_WY NORTH
N:302139.167
E:1581603.480

LAT/LOG DATUM-WGS84
LAT:39°19'12.63"
LON:80°58'43.57"

COORDINATES:
9,754' WEST
14,576' SOUTH



FILE #: PENS1DHS-AS DRILLED

DRAWING #: PENS1DHS-AS DRILLED

SCALE: 1" = 2000'

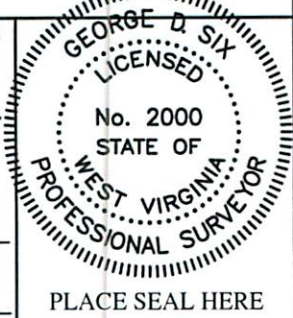
MINIMUM DEGREE OF ACCURACY: 1/2500

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 D. 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: AUGUST 26, 2014

OPERATOR'S WELL #: PENS1DHS-AS DRILLED

API WELL #:	47	85	10010H6A
	STATE	COUNTY	PERMIT

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

WATERSHED: UNNAMED TRIBUTARY TO BONDS CREEK ELEVATION: 1120.35'

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

SURFACE OWNER: CNX GAS COMPANY LLC ACREAGE: 19.759±

OIL & GAS ROYALTY OWNER: SEE TABLE ABOVE ACREAGE: 420.556±

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: 6,400'± TMD: 15,000'±

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