Please keep confidential for One (1) Year

Amended Report

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

API 47 - 051 - 01732 County Marshall District Franklin

Quad Powhatan Point Pad Name MND 9 Field/Pool Name NA

Farm name Consolidated Coal Company Well Number MND 6 HHS

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 4407541.33 Easting 517840.19

Landing Point of Curve Northing 4407831.59 Easting 517857.10

Bottom Hole Northing 44100470.62 Easting 516227.00

Elevation (ft) 719.9 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 4/3/2014 Date drilling commenced 12/25/2014 Date drilling ceased 2/12/2015

Date completion activities began 7/9/2015 Date completion activities ceased 8/12/2015

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 128' and 265' Open mine(s) (Y/N) depths N

Salt water depth(s) ft None noted for Offsets Void(s) encountered (Y/N) depths N

Coal depth(s) ft NA Cavern(s) encountered (Y/N) depths N

Is coal being mined in area (Y/N) N

Reviewed by:

Reviewed 2/21/19

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API 47- 051 - 01732 Farm name Consolidated Coal Company Well number MND 6 HHS

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	142.9	N	X-70		Y
Surface	24	20	743.0	N	J-55 94#		Y
Coal							
Intermediate 1	17 1/2	13 3/8	2,060.0	N	J-55 54.5#		Y
Intermediate 2	12 3/8	9 5/8	8,950.3	N	P-110 53.5		Y
Intermediate 3							
Production	8 1/2	5 1/2	20,228.6	N	P-110 23#		N
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	Class A	435	15.6	1.19	516.5	0	96
Surface	Class A	1125	15.6	1.19	1338.8	0	8
Coal							
Intermediate 1	Class A	1685	15.6	1.19	2005	0	9
Intermediate 2	Class A	Lead 2136 Tail 259	Lead 14.5 Tail 15.6	Lead 1.51 Tail 1.19	Lead 2965 Tail 965	0	9
Intermediate 3							
Production	Class H	Lead 694 Tail 2695	Lead 14 8 Tail 15.8	Lead 1.44 Tail 1.16	Lead 1000 Tail 3126	2247	9
Tubing							

Drillers TD (ft) 20,309 Loggers TD (ft) 20,284

Deepest formation penetrated Utica Plug back to (ft) 9,180

Plug back procedure Bottom Plug: 10,763 - 9,730: 338 sks, 0.94 ft3/sk, 175 prg Class H, Top Plug: 9,730 - 9,180: 238 sks 0.94 ft3/sk, 17.5 ppg Class H

Kick off depth (ft) 9,080

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 has no centralizers.
7 Centralizer on Surface casing, 18 Centralizers on Intermediate 1 casing, 69 Centralizers on Intermediate 2 casing, 200 7 7/8" CCentralizers on Production casing.
On the Surface, and Intermediate strings the centralizer are on every 3rd joint of casing
On the Production string, the centralizers are on every 3rd from the Surface to Top of curve, then every joint until 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

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API 47- 051 - 01732 Farm name Consolidated Coal Company Well number MND 6 HHS

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
	PLEASE 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)
	PLEASE SEE							
	ATTACHED							
	STIMULATION PER							
	STAGE SHEET							

Please insert additional pages as applicable.

Perforation Record

API: MND6HHS 47-051-01732-08-00		Farm name:	Consolidted Coal Company	Well Name: MND6H	
Stage No.	**Stim Date**	**Top Perf**	**Bottom Perf**	**# of Perfs**	**Formation**
1	7/9/2015	19827	20069	50	Utica
2	7/9/2015	19525	19767	50	Utica
3	7/10/2015	19223	19465	50	Utica
4	7/10/2015	18921	19163	50	Utica
5	7/11/2015	18619	18861	50	Utica
6	7/23/2015	18265	18467	50	Utica
7	7/24/2015	18015	18217	50	Utica
8	7/24/2015	17713	17955	50	Utica
8B	7/24/2015	17623	17685	30	Utica
9	7/25/2015	17396	17546	50	Utica
9B	7/25/2015	17306	17368	30	Utica
10	7/25/2015	17101	17268	50	Utica
11	7/26/2015	16799	17041	50	Utica
12	7/27/2015	16497	16739	50	Utica
13	7/27/2015	16195	16437	50	Utica
14	7/27/2015	15893	16135	50	Utica
15	7/28/2015	15591	15833	50	Utica
16	7/28/2015	15289	15531	50	Utica
16C	7/29/2015	14987	15531	50	Utica
17	7/30/2015	14685	14927	50	Utica
18	7/30/2015	14383	14625	50	Utica
19	7/30/2015	14081	14323	50	Utica
20	7/30/2015	13779	14021	50	Utica
21	7/31/2015	13477	13719	50	Utica
22	7/31/2015	13175	13417	50	Utica
23	8/1/2015	12873	13115	50	Utica
23B	8/1/2015	12783	12845	30	Utica
24	8/2/2015	12511	12729	50	Utica
24B	8/2/2015	12421	12483	30	Utica
25	8/2/2015	12121	12339	50	Utica
26	8/2/2015	11885	12077	50	Utica
27	8/3/2015	11630	11842	50	Utica
28	8/3/2015	11328	11570	50	Utica
29	8/3/2015	11026	11268	50	Utica
30	8/4/2015	10724	10966	50	Utica

STIMULATION INFORMATION PER STAGE

API: MND6 HHS 47-051-01732-08-00		Farm name:		Consolidted Coal Company		Well Name: MND6H		
Stage No.	**Stim Date**	**Avg Rate (bpm)**	**ATP (psi)**	**Max BD Pressure**	**ISIP (psi)**	**Proppant (lbs)**	**Water (BBLS)**	**Amount of N^2/ other (units)**
1	7/9/2015	58.3	11408	8073	7092	264,257	11,780	
2	7/9/2015	56.6	11508	9172	7740	378,077	14,268	
3	7/10/2015	63.7	10350	9539	8230	472,669	15,794	
4	7/10/2015	58.7	11213	8743	8389	479,330	16,879	
5	7/11/2015	63.0	11296	8861	7912	499,053	17,369	
6 Inj Test	7/21/2015	22.7	10278	7885	9671		1,695	
6	7/23/2015	61.2	10646	10242	12818	478,809	16,057	
6 Inj Test 2	7/23/2015	7.8	9709	10093	12233		476	
6 Inj Test 3	7/23/2015	9.8	8643	8372	8867		2,374	
7	7/24/2015	71.1	10725	10012	8370	415,496	14,473	
8	7/24/2015	54.7	11606	9438	7871	9,745	3,547	
8B	7/24/2015	68.7	10626	8954	7482	442,907	13,207	
9	7/25/2015	52.9	12353	10046	8337	1,676	2,744	
9B	7/25/2015	67.3	10673	8878	8015	472,156	14,236	
10	7/25/2015	68.9	10566	9181	11608	499,379	13,438	
10 Inj test	7/26/2015	12.4	8570		7974	-	799	
11	7/26/2015	65.5	10492	8520	7616	465,873	15,635	
12	7/27/2015	70.1	10350	9110	7513	462,899	14,565	
13	7/27/2015	76.2	10922	10208	7734	503,258	16,133	
14	7/27/2015	73.9	10832	9728	8042	505,948	16,297	
15	7/28/2015	77.6	10589	9518	7471	457,584	13,446	
16	7/28/2015	61.9	11595	10320	11876	384,376	13,728	
16.1 Inj Test	7/29/2015	5.8	8186	7134	12136	-	424	
16.2 Inj test	7/29/2015	13.4	8739		8312	-	578	
16C	7/29/2015	65.3	10208	8455	6929	549,172	19,450	
17	7/30/2015	74.3	10419	8788	7384	529,646	18,264	
18	7/30/2015	77.5	10627	8564	7838	553,970	17,661	
19	7/30/2015	79.6	10957	8752	7764	551,073	18,906	
20	7/30/2015	72.9	10252	8808	7400	529,884	16,661	
21	7/31/2015	79.5	10720	9682	7909	553,899	16,418	
22	7/31/2015	70.6	10626	9354	7351	551,917	15,428	
23	8/1/2015	48.7	11756	9642	9336	3,700	2,022	
23B	8/1/2015	73.5	10933	9825	8252	552,896	17,441	
24	8/2/2015	60.2	11551	10083	9212	402,883	18,527	
24B	8/2/2015	58.2	11257	9292	7450	152,549	7,007	
25	8/2/2015	78.2	10,929	10,467	7,810	534,333	16,476	
26	8/2/2015	80.3	10,461	11,020	7,576	554,302	15,588	
27	8/3/2015	79.9	10,507	9,207	8,129	515,245	14,501	
28	8/3/2015	79.0	11,019	9,517	7,479	551,050	15,585	
29	8/3/2015	80.9	10,478	9,699	6,693	541,747	15,167	
30	8/4/2015	76.8	9,766	7,775	7,264	553,617	15,399	

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API 47- 051 - 01732 Farm name Consolidated Coal Company Well number MND 6 HHS

PRODUCING FORMATION(S)	DEPTHS		
Utica	10,478 TVD	20,309 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 15,331 mcfpd Oil 0 bpd NGL 0 bpd Water 384 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_2S, ETC)
	PLEASE SEE ATTACHED FORMATION SHEET		0		

Please insert additional pages as applicable.

Drilling Contractor NOMAC 79 Drilling
Address 171 Locust Avenue Ext. City Mt. Morris State PA Zip 15349

Logging Company Baker Hughes
Address 400 Technology Drive City Canonsburg State PA Zip 15317

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

Stimulating Company Halliburton Energy Services
Address 121 Champion Way, Suite 110 City Canonsburg State PA Zip 15317

Please insert additional pages as applicable.

Completed by Regina A. Logue Telephone 724-820-3559
Signature Regina Logue Title Regulatory Analyst Date 11/12/2015

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

MND 6 HHS

47-051-01732

Formations	Top TVD	Base TVD	Top MD	Base MD	Fluid
Shale and Sandstone	0	284	0	284	
Pittsburgh Coal	284	294	284	294	
Shale and Sandstone	294	706	294	706	
Dunkard Sand	706	727	706	727	
Shale	727	876	727	876	
Gas Sand	876	947	876	5972	
Shale	947	1016	947	6191	
1st Salt Sand	1016	1032	1016	6313	
Shale	1032	1139	1032	6719	
2nd Salt Sand	1139	1168	1139	7118	
Shale and Sandstone	1168	1298	1168	7333	
Maxton Sand	1298	1345	1298	8194	
Shale	1345	1363	1345	8194	
Big Lime	1363	1435	1363	8541	
Big Injun	1435	1705	1435	8869	
Price	1705	1803	1705	8890	
Murrysville	1803	1910	1803	8983	
Shale and Sandstone	1910	2448	1910	8998	
Gordon	2448	2478	2448	9073	
Shale and Sandstone	2478	2999	2478	9179	
Fifth Sand	2999	3052	2999	9995	
Shale and Sandstone	3052	3854	3052	9179	
Warren Sand	3854	3863	3860	9995	
Shale	3863	4580	3869	10660	
Java Shale	4580	4664	4593	not encountered	
Pipe Creek Shale	4664	4739	4678	not encountered	
Angola Shale	4739	5323	4754	not encountered	
Rhinestreet	5323	5642	5344	not encountered	
Cashaqua	5642	5714	5666	not encountered	
Middlesex	5714	5737	5739	not encountered	
West River	5737	5798	5762	not encountered	
Burkett	5798	5822	5824	not encountered	
Tully Limestone	5822	5848	5848	not encountered	
Hamilton	5848	5883	5875	not encountered	
Marcellus	5883	5936	5910	not encountered	
Onondaga	5936	5944	5964	not encountered	
Huntersville	5944	6158	5972	6191	
Oriskany	6158	6270	6191	6313	
Helderburg	6270	6530	6313	6719	
Bass Island Dolomite	6530	6609	6719	7118	
Salina G Big Lime	6609	6809	7118	7333	
Salina F	6809	7608	7333	8194	
Lockport Dolomite	7608	7930	8194	8541	
Rochester Shale	7930	8235	8541	8869	
Dayton Fm/Packer Shell	8235	8254	8869	8890	

Shale	8254	8341	8890	8983	
Clinton Sand	8341	8355	8983	8998	
Shale	8355	8424	8998	9073	
Medina Sand	8424	8523	9073	9179	
Queenston Shale	8523	9280	9179	9995	
Reedsville Shale	9280	9898	9995	10660	Gas
Utica Shale	9898	10511	10660	not encountered	
Point Pleasant	10511	10631	not encountered	not encountered	
Trenton Limestone	10631		not encountered	not encountered	

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	7/9/2015
Job End Date:	8/4/2015
State:	West Virginia
County:	Marshall
API Number:	47-051-01732-08-00
Operator Name:	Noble Energy, Inc.
Well Name and Number:	MND 6 HHS
Longitude:	-80.79174100
Latitude:	39.81759300
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	10,478
Total Base Water Volume (gal):	22,020,117
Total Base Non Water Volume:	133,000

FracFocus Chemical Disclosure Registry

GROUNDWATER PROTECTION COUNCIL

Interstate Oil & Gas Compact Commission

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	91.53027	Density = 8.330
EconoProp 30/50	Halliburton	Proppant					
			Mullite	1302-93-8	100.00000	3.27057	
			Crystalline silica, cristobalite	14464-46-1	30.00000	0.98117	
			Silica, amorphous - fumed	7631-86-9	30.00000	0.98117	
Premium White 40/70	Halliburton	Proppant					
			Crystalline silica, quartz	14808-60-7	100.00000	3.61525	
Common White 100M	Halliburton	Proppant					
			Crystalline silica, quartz	14808-60-7	100.00000	0.79159	
HCl < 10%	Halliburton	Solvent					
			Hydrochloric Acid	7647-01-0	100.00000	0.53490	
WG-36 GELLING AGENT	Halliburton	Gelling Agent					
			Guar gum	9000-30-0	100.00000	0.07370	
HCl > 10%	Halliburton	Solvent					
			Hydrochloric Acid	7647-01-0	100.00000	0.03352	
FR-76	Halliburton	Friction Reducer					
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.02670	

HCl = 10%	Halliburton	Solvent					
			Hydrochloric Acid	7647-01-0	100.00000	0.00655	
FE-1A ACIDIZING COMPOSITION	Halliburton	Additive					
			Acetic anhydride	108-24-7	100.00000	0.00322	
			Acetic acid	64-19-7	60.00000	0.00193	
BE-9	Halliburton	Biocide					
			Tributyl tetradecyl phosphonium chloride	81741-28-8	10.00000	0.00425	
PermVis VFR-10	Halliburton	Friction Reducer					
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.00143	
			Ammonium chloride	12125-02-9	10.00000	0.00048	
			Alcohols, C12-16, ethoxylated	68551-12-2	10.00000	0.00048	
			9-Octadecenamide, n,n-bis-2 (hydroxy-ethyl)-,(Z)	93-83-4	5.00000	0.00024	
SP BREAKER	Halliburton	Breaker					
			Sodium persulfate	7775-27-1	100.00000	0.00254	
LOSURF-300D	Halliburton	Non-ionic Surfactant					
			Ethanol	64-17-5	60.00000	0.00066	
			Heavy aromatic petroleum naphtha	64742-94-5	30.00000	0.00033	
			Naphthalene	91-20-3	5.00000	0.00006	
			Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	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	0.00032	
			Propargyl alcohol	107-19-7	10.00000	0.00005	
LP-65 MC	Halliburton	Scale Inhibitor					
			Ammonium Chloride	12125-02-9	5.00000	0.00026	
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)					
			Aluminum Silicate	1302-76-7		3.27057	
		Other Ingredient(s)					
			Water	7732-18-5		0.08154	
		Other Ingredient(s)					
			Water	7732-18-5		0.04248	
		Other Ingredient(s)					
			Polyacrylate	Confidential		0.02980	
		Other Ingredient(s)					
			Bentonite, benzyl(hydrogenated tallow alkyl) dimethylammonium stearate complex	121888-68-4		0.00368	
		Other Ingredient(s)					
			Surfactant mixture	Confidential		0.00074	
		Other Ingredient(s)					

			Surfactant mixture	Confidential		0.00074	
		Other Ingredient(s)					
			Silica gel	112926-00-8		0.00074	
		Other Ingredient(s)					
			Oxyalkylated phenolic resin	Confidential		0.00033	
		Other Ingredient(s)					
			Fatty acids, tall oil	Confidential		0.00016	Denise Tuck, Halliburton 3000 N. Sam Houston Pkwy E., Houston, TX 77032 281-871-6226
		Other Ingredient(s)					
			Reaction product of acetophenone, formaldehyde, thiourea and oleic acid in dimethyl formamide	68527-49-1		0.00016	
		Other Ingredient(s)					
			Alcohols, C14-C15, ethoxylated	68951-67-7		0.00016	
		Other Ingredient(s)					
			Oxyalkylated phenolic resin	Confidential		0.00011	
		Other Ingredient(s)					
			Crystalline Silica, Quartz	14808-60-7		0.00007	
		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)					
			Sodium sulfate	7757-82-6		0.00000	

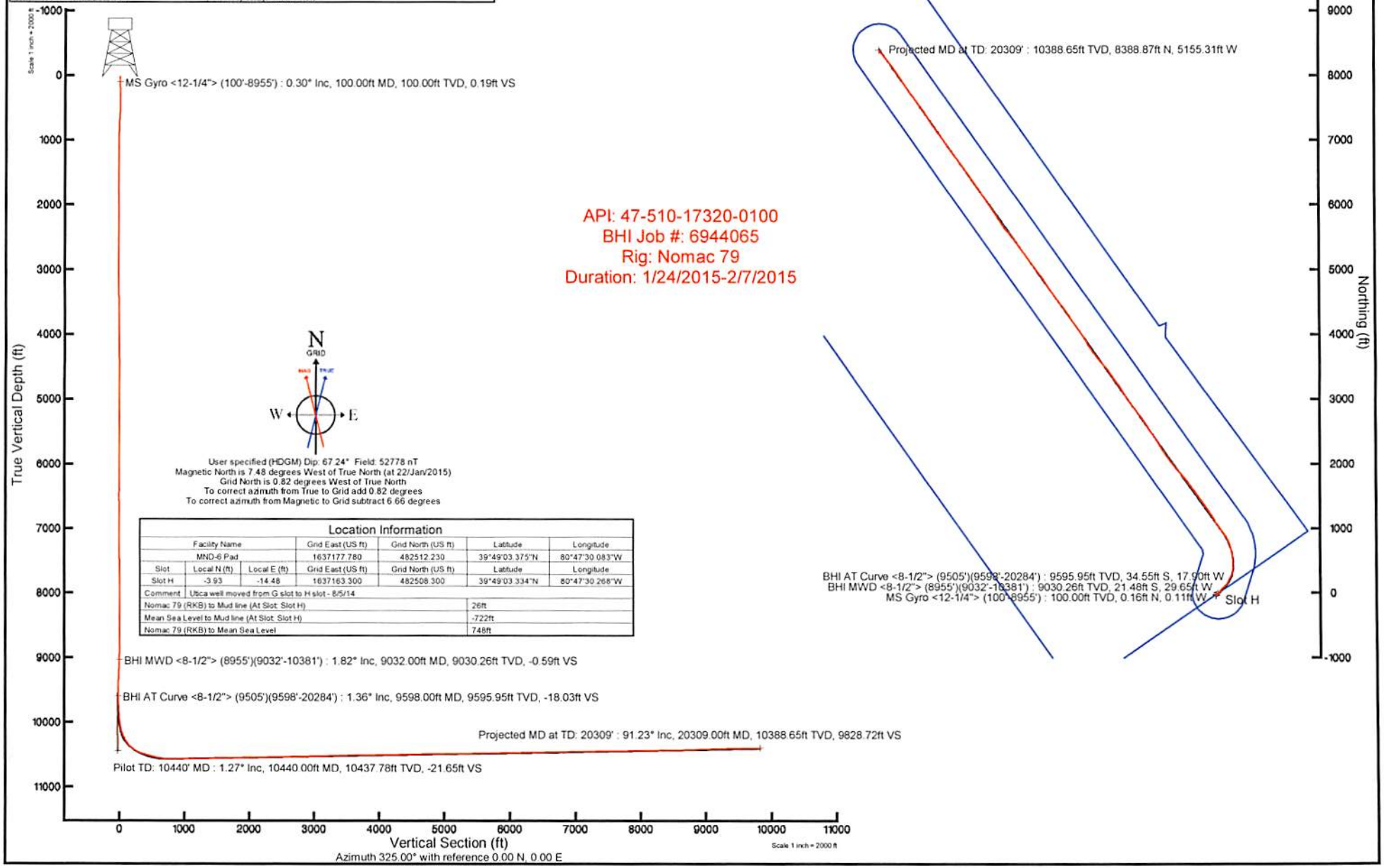
* Total Water Volume sources may include fresh water, produced water, and/or recycled water
** Information is based on the maximum potential for concentration and thus the total may be over 100%

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)

NOBLE ENERGY

Location: Marshall County, WV
Field: Marshall
Facility: MND-6 Pad
Slot: Slot H
Well: MND-6H-UHS ST01
Wellbore: MND-6H-UHS ST01 PWB

Plot reference wellpath is MND-6H-UHS ST01 PWP Rev A.0	
True vertical depths are referenced to Nomac 79 (RKB)	Grid System: NAD27 / Lambert West Virginia SP, Northern Zone (4701), US feet
Measured depths are referenced to Nomac 79 (RKB)	North Reference: Grid north
Nomac 79 (RKB) to Mean Sea Level: 748 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: Slot H): -722 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: eduryea on 24/Feb/2015



Location Information					
Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
MND-6 Pad		1637177.780	482512.230	39°49'03.375"N	80°47'30.083"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Slot H	-3.93	-14.48	1637163.300	482508.300	39°49'03.334"N	80°47'30.268"W
Comment	Ubca well moved from G slot to H slot - 8/5/14					
Nomac 79 (RKB) to Mud line (At Slot: Slot H)				26ft		
Mean Sea Level to Mud line (At Slot: Slot H)				-722ft		
Nomac 79 (RKB) to Mean Sea Level				748ft		

API: 47-510-17320-0100
BHI Job #: 6944065
Rig: Nomac 79
Duration: 1/24/2015-2/7/2015

Confidential request
11/17/2015

noble energy

Released
By OGCC
2/6/19

November 12, 2015

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 Amended Well Operator's Report of Well; Work, WR-35 for the following Well, located in Tyler County, District Centerville.

Well	Permit Number
MND 6 HHS	47-051-01732

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,

Regina Logue

Regina Logue
Regulatory Analyst

Please keep confidential for 1 year

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- 051 - 01732 County Marshall District Franklin
Quad Powhatan Point Pad Name MND 6 Field/Pool Name NA
Farm name Consolidated Coal Company Well Number MND 6 HHS
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 4407541.33 Easting 517840.19
Landing Point of Curve Northing 4407831.59 Easting 517857.10
Bottom Hole Northing 44100470.62 Easting 516227.00

Elevation (ft) 719.9 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 4/3/2014 Date drilling commenced 12/25/2014 Date drilling ceased 2/12/2015
Date completion activities began 7/9/2015 Date completion activities ceased 8/12/2015
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 128' and 265' Open mine(s) (Y/N) depths N
Salt water depth(s) ft None noted for Offsets Void(s) encountered (Y/N) depths N
Coal depth(s) ft NA Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by:

WR-35
Rev. 8/23/13

API 47- 051 - 01732 Farm name Consolidated Coal Company Well number MND 6 HHS

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	142.9	N	X-70		Y
Surface	24	20	743.0	N	J-55 94#		Y
Coal							
Intermediate 1	17 1/2	13 3/8	2,060.0	N	J-55 54.5#		Y
Intermediate 2	12 3/8	9 5/8	8,950.3	N	P-110 53.5		Y
Intermediate 3							
Production	8 1/2	5 1/2	20,228.6	N	P-110 23#		N
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	Class A	435	15.6	1.19	516.5	0	96
Surface	Class A	1125	15.6	1.19	1338.8	0	8
Coal							
Intermediate 1	Class A	1685	15.6	1.19	2005	0	9
Intermediate 2	Class A	Lead 2136 Tail 259	Lead 14.5 Tail 15.6	Lead 1.51 Tail 1.19	Lead 2965 Tail 965	0	9
Intermediate 3							
Production	Class H	Lead 694 Tail 2695	Lead 14.8 Tail 15.8	Lead 1.44 Tail 1.16	Lead 1000 Tail 3126	2247	9
Tubing							

Drillers TD (ft) 20,309 Loggers TD (ft) 20,284

Deepest formation penetrated Utica Plug back to (ft) 9,180

Plug back procedure Bottom Plug: 10,783 - 9,730: 336 sks, 0.94 ft3/sk, 175 prg Class H, Top Plug: 9,730 - 9,180: 238 sks 0.94 ft3/sk, 17.5 ppg Class H

Kick off depth (ft) 9,080

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 has no centralizers.
7 Centralizer on Surface casing, 18 Centralizers on Intermediate 1 casing, 69 Centralizers on Intermediate 2 casing, 40 Centralizers on Intermediate 2 casing, 290 7 7/8" CCentralizers on Production casing.
On the Surface, and Intermediate strings the centralizer are on every 3rd joint of casing
On the Production string, the centralizers are on every 3rd from the Surface to Top of curve, then every joint until 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

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API 47- 051 - 01732 Farm name Consolidated Coal Company Well number MND 6 HHS

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
	PLEASE 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)
	PLEASE SEE							
	ATTACHED							
	STIMULATION PER							
	STAGE SHEET							

Please insert additional pages as applicable.

Perforation Record

API: MND6HHS 47-051-01732-08-00		Farm name:	Consolidted Coal Company	Well Name: MND6H	
Stage No.	**Stim Date**	**Top Perf**	**Bottom Perf**	**# of Perfs**	**Formation**
1	7/9/2015	19827	20069	50	Utica
2	7/9/2015	19525	19767	50	Utica
3	7/10/2015	19223	19465	50	Utica
4	7/10/2015	18921	19163	50	Utica
5	7/11/2015	18619	18861	50	Utica
6	7/23/2015	18265	18467	50	Utica
7	7/24/2015	18015	18217	50	Utica
8	7/24/2015	17713	17955	50	Utica
8B	7/24/2015	17623	17685	30	Utica
9	7/25/2015	17396	17546	50	Utica
9B	7/25/2015	17306	17368	30	Utica
10	7/25/2015	17101	17268	50	Utica
11	7/26/2015	16799	17041	50	Utica
12	7/27/2015	16497	16739	50	Utica
13	7/27/2015	16195	16437	50	Utica
14	7/27/2015	15893	16135	50	Utica
15	7/28/2015	15591	15833	50	Utica
16	7/28/2015	15289	15531	50	Utica
16C	7/29/2015	14987	15531	50	Utica
17	7/30/2015	14685	14927	50	Utica
18	7/30/2015	14383	14625	50	Utica
19	7/30/2015	14081	14323	50	Utica
20	7/30/2015	13779	14021	50	Utica
21	7/31/2015	13477	13719	50	Utica
22	7/31/2015	13175	13417	50	Utica
23	8/1/2015	12873	13115	50	Utica
23B	8/1/2015	12783	12845	30	Utica
24	8/2/2015	12511	12729	50	Utica
24B	8/2/2015	12421	12483	30	Utica
25	8/2/2015	12121	12339	50	Utica
26	8/2/2015	11885	12077	50	Utica
27	8/3/2015	11630	11842	50	Utica
28	8/3/2015	11328	11570	50	Utica
29	8/3/2015	11026	11268	50	Utica
30	8/4/2015	10724	10966	50	Utica

STIMULATION INFORMATION PER STAGE

API: MND6 HHS 47-051-01732-08-00		Farm name:		Consolidted Coal Company		Well Name: MND6H		
Stage No.	Stim Date	Avg Rate (bpm)	ATP (psi)	Max BD Pressure	ISIP (psi)	Proppant (lbs)	Water (BBLS)	Amount of N^2/ other (units)
1	7/9/2015	58.3	11408	8073	7092	264,257	11,780	
2	7/9/2015	56.6	11508	9172	7740	378,077	14,268	
3	7/10/2015	63.7	10350	9539	8230	472,669	15,794	
4	7/10/2015	58.7	11213	8743	8389	479,330	16,879	
5	7/11/2015	63.0	11296	8861	7912	499,053	17,369	
6 Inj Test	7/21/2015	22.7	10278	7885	9671		1,695	
6	7/23/2015	61.2	10646	10242	12818	478,809	16,057	
6 Inj Test 2	7/23/2015	7.8	9709	10093	12233		476	
6 Inj Test 3	7/23/2015	9.8	8643	8372	8867		2,374	
7	7/24/2015	71.1	10725	10012	8370	415,496	14,473	
8	7/24/2015	54.7	11606	9438	7871	9,745	3,547	
8B	7/24/2015	68.7	10626	8954	7482	442,907	13,207	
9	7/25/2015	52.9	12353	10046	8337	1,676	2,744	
9B	7/25/2015	67.3	10673	8878	8015	472,156	14,236	
10	7/25/2015	68.9	10566	9181	11608	499,379	13,438	
10 Inj test	7/26/2015	12.4	8570		7974	-	799	
11	7/26/2015	65.5	10492	8520	7616	465,873	15,635	
12	7/27/2015	70.1	10350	9110	7513	462,899	14,565	
13	7/27/2015	76.2	10922	10208	7734	503,258	16,133	
14	7/27/2015	73.9	10832	9728	8042	505,948	16,297	
15	7/28/2015	77.6	10589	9518	7471	457,584	13,446	
16	7/28/2015	61.9	11595	10320	11876	384,376	13,728	
16.1 Inj Test	7/29/2015	5.8	8186	7134	12136	-	424	
16.2 Inj test	7/29/2015	13.4	8739		8312	-	578	
16C	7/29/2015	65.3	10208	8455	6929	549,172	19,450	
17	7/30/2015	74.3	10419	8788	7384	529,646	18,264	
18	7/30/2015	77.5	10627	8564	7838	553,970	17,661	
19	7/30/2015	79.6	10957	8752	7764	551,073	18,906	
20	7/30/2015	72.9	10252	8808	7400	529,884	16,661	
21	7/31/2015	79.5	10720	9682	7909	553,899	16,418	
22	7/31/2015	70.6	10626	9354	7351	551,917	15,428	
23	8/1/2015	48.7	11756	9642	9336	3,700	2,022	
23B	8/1/2015	73.5	10933	9825	8252	552,896	17,441	
24	8/2/2015	60.2	11551	10083	9212	402,883	18,527	
24B	8/2/2015	58.2	11257	9292	7450	152,549	7,007	
25	8/2/2015	78.2	10,929	10,467	7,810	534,333	16,476	
26	8/2/2015	80.3	10,461	11,020	7,576	554,302	15,588	
27	8/3/2015	79.9	10,507	9,207	8,129	515,245	14,501	
28	8/3/2015	79.0	11,019	9,517	7,479	551,050	15,585	
29	8/3/2015	80.9	10,478	9,699	6,693	541,747	15,167	
30	8/4/2015	76.8	9,766	7,775	7,264	553,617	15,399	

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Page ___ of ___

API 47- 051 - 01732 Farm name Consolidated Coal Company Well number MND 6 HHS

PRODUCING FORMATION(S)	DEPTHS		
Utica	10,478 TVD	20,309 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 15,590 mcfpd Oil 0 bpd NGL 0 bpd Water No Flow Back yet bpd GAS MEASURED BY ■ Estimated ☐ Orifice ☐ Pilot

LITHOLOGY/ FORMATION NAME	TOP DEPTH IN FT 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_2S, ETC)
	PLEASE SEE ATTACHED FORMATION SHEET		0		

Please insert additional pages as applicable.

Drilling Contractor NOMAC 79 Drilling
Address 171 Locust Avenue Ext. City Mt. Morris State PA Zip 15349

Logging Company Baker Hughes
Address 400 Technology Drive City Canonsburg State PA Zip 15317

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

Stimulating Company Halliburton Energy Services
Address 121 Champion Way, Suite 110 City Canonsburg State PA Zip 15317

Please insert additional pages as applicable.

Completed by Regina A. Logue Telephone 724-820-3559
Signature Regina Logue Title Regulatory Analyst Date 9/17/15

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

MND 6 HHS

47-051-01732

Formations	Top TVD	Base TVD	Top MD	Base MD	Fluid
Shale and Sandstone	0	284	0	284	
Pittsburgh Coal	284	294	284	294	
Shale and Sandstone	294	706	294	706	
Dunkard Sand	706	727	706	727	
Shale	727	876	727	876	
Gas Sand	876	947	876	5972	
Shale	947	1016	947	6191	
1st Salt Sand	1016	1032	1016	6313	
Shale	1032	1139	1032	6719	
2nd Salt Sand	1139	1168	1139	7118	
Shale and Sandstone	1168	1298	1168	7333	
Maxton Sand	1298	1345	1298	8194	
Shale	1345	1363	1345	8194	
Big Lime	1363	1435	1363	8541	
Big Injun	1435	1705	1435	8869	
Price	1705	1803	1705	8890	
Murrysville	1803	1910	1803	8983	
Shale and Sandstone	1910	2448	1910	8998	
Gordon	2448	2478	2448	9073	
Shale and Sandstone	2478	2999	2478	9179	
Fifth Sand	2999	3052	2999	9995	
Shale and Sandstone	3052	3854	3052	9179	
Warren Sand	3854	3863	3860	9995	
Shale	3863	4580	3869	10660	
Java Shale	4580	4664	4593	not encountered	
Pipe Creek Shale	4664	4739	4678	not encountered	
Angola Shale	4739	5323	4754	not encountered	
Rhinestreet	5323	5642	5344	not encountered	
Cashaqua	5642	5714	5666	not encountered	
Middlesex	5714	5737	5739	not encountered	
West River	5737	5798	5762	not encountered	
Burkett	5798	5822	5824	not encountered	
Tully Limestone	5822	5848	5848	not encountered	
Hamilton	5848	5883	5875	not encountered	
Marcellus	5883	5936	5910	not encountered	
Onondaga	5936	5944	5964	not encountered	
Huntersville	5944	6158	5972	6191	
Oriskany	6158	6270	6191	6313	
Helderburg	6270	6530	6313	6719	
Bass Island Dolomite	6530	6609	6719	7118	
Salina G Big Lime	6609	6809	7118	7333	
Salina F	6809	7608	7333	8194	
Lockport Dolomite	7608	7930	8194	8541	
Rochester Shale	7930	8235	8541	8869	
Dayton Fm/Packer Shell	8235	8254	8869	8890	

Shale	8254	8341	8890	8983	
Clinton Sand	8341	8355	8983	8998	
Shale	8355	8424	8998	9073	
Medina Sand	8424	8523	9073	9179	
Queenston Shale	8523	9280	9179	9995	
Reedsville Shale	9280	9898	9995	10660	Gas
Utica Shale	9898	10511	10660	not encountered	
Point Pleasant	10511	10631	not encountered	not encountered	
Trenton Limestone	10631		not encountered	not encountered	

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	7/9/2015
Job End Date:	8/4/2015
State:	West Virginia
County:	Marshall
API Number:	47-051-01732-08-00
Operator Name:	Noble Energy, Inc.
Well Name and Number:	MND 6 HHS
Longitude:	-80.79174100
Latitude:	39.81759300
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	10,478
Total Base Water Volume (gal):	22,020,117
Total Base Non Water Volume:	133,000

FracFocus Chemical Disclosure Registry

GROUNDWATER PROTECTION COUNCIL

Oil & Gas

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	91.53027	Density = 8.330
EconoProp 30/50	Halliburton	Proppant					
			Mullite	1302-93-8	100.00000	3.27057	
			Crystalline silica, cristobalite	14464-46-1	30.00000	0.98117	
			Silica, amorphous - fumed	7631-86-9	30.00000	0.98117	
Premium White 40/70	Halliburton	Proppant					
			Crystalline silica, quartz	14808-60-7	100.00000	3.61525	
Common White 100M	Halliburton	Proppant					
			Crystalline silica, quartz	14808-60-7	100.00000	0.79159	
HCl < 10%	Halliburton	Solvent					
			Hydrochloric Acid	7647-01-0	100.00000	0.53490	
WG-36 GELLING AGENT	Halliburton	Gelling Agent					
			Guar gum	9000-30-0	100.00000	0.07370	
HCl > 10%	Halliburton	Solvent					
			Hydrochloric Acid	7647-01-0	100.00000	0.03352	
FR-76	Halliburton	Friction Reducer					
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.02670	

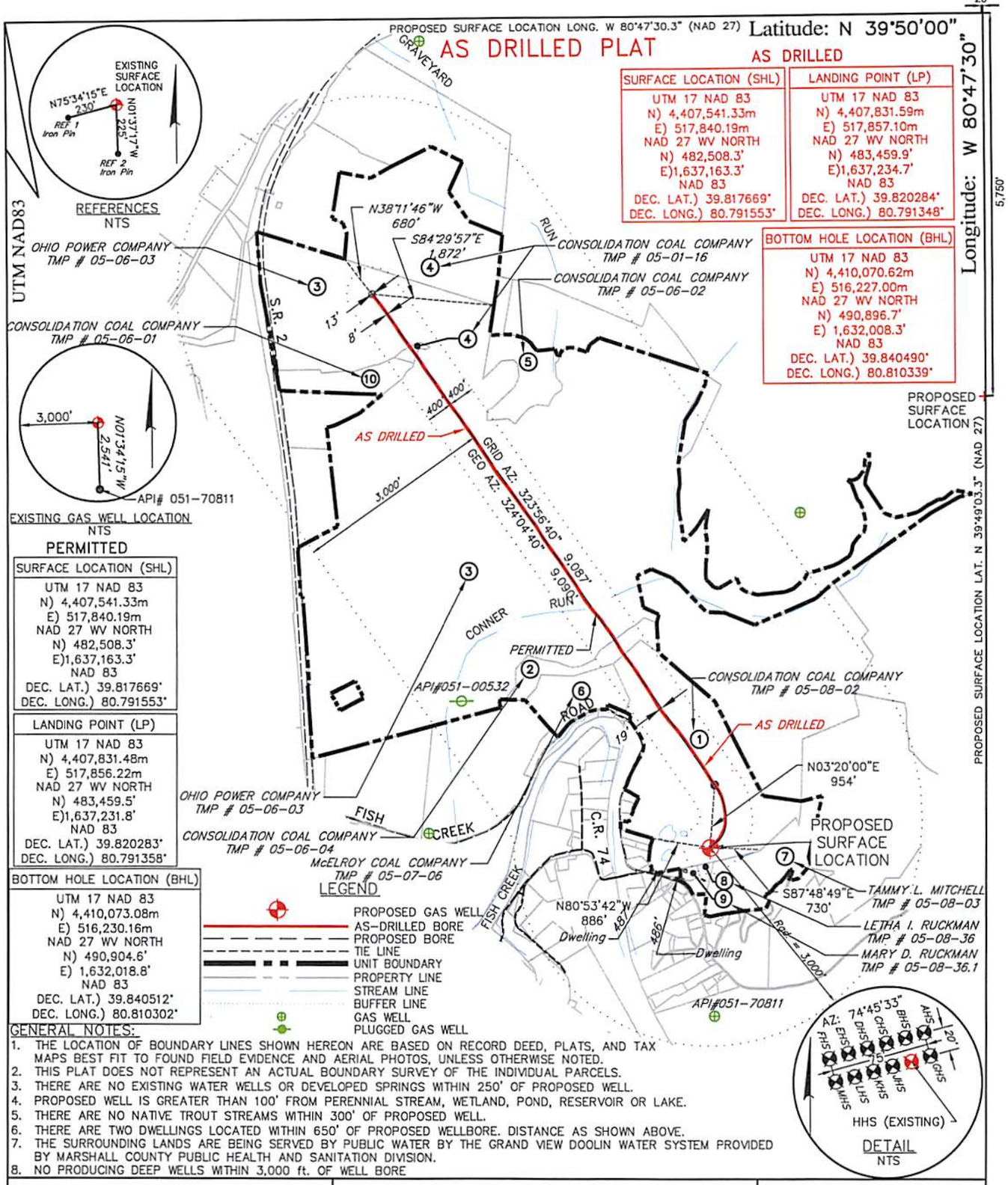
HCl = 10%	Halliburton	Solvent					
			Hydrochloric Acid	7647-01-0	100.00000	0.00655	
FE-1A ACIDIZING COMPOSITION	Halliburton	Additive					
			Acetic anhydride	108-24-7	100.00000	0.00322	
			Acetic acid	64-19-7	60.00000	0.00193	
BE-9	Halliburton	Biocide					
			Tributyl tetradecyl phosphonium chloride	81741-28-8	10.00000	0.00425	
PermVis VFR-10	Halliburton	Friction Reducer					
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.00143	
			Ammonium chloride	12125-02-9	10.00000	0.00048	
			Alcohols, C12-16, ethoxylated	68551-12-2	10.00000	0.00048	
			9-Octadecenamide, n,n-bis-2 (hydroxy-ethyl)-,(Z)	93-83-4	5.00000	0.00024	
SP BREAKER	Halliburton	Breaker					
			Sodium persulfate	7775-27-1	100.00000	0.00254	
LOSURF-300D	Halliburton	Non-ionic Surfactant					
			Ethanol	64-17-5	60.00000	0.00066	
			Heavy aromatic petroleum naphtha	64742-94-5	30.00000	0.00033	
			Naphthalene	91-20-3	5.00000	0.00006	
			Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	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	0.00032	
			Propargyl alcohol	107-19-7	10.00000	0.00005	
LP-65 MC	Halliburton	Scale Inhibitor					
			Ammonium Chloride	12125-02-9	5.00000	0.00026	
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)					
			Aluminum Silicate	1302-76-7		3.27057	
		Other Ingredient(s)					
			Water	7732-18-5		0.08154	
		Other Ingredient(s)					
			Water	7732-18-5		0.04248	
		Other Ingredient(s)					
			Polyacrylate	Confidential		0.02980	
		Other Ingredient(s)					
			Bentonite, benzyl(hydrogenated tallow alkyl) dimethylammonium stearate complex	121888-68-4		0.00368	
		Other Ingredient(s)					
			Surfactant mixture	Confidential		0.00074	
		Other Ingredient(s)					

			Surfactant mixture	Confidential		0.00074	
		Other Ingredient(s)					
			Silica gel	112926-00-8		0.00074	
		Other Ingredient(s)					
			Oxyalkylated phenolic resin	Confidential		0.00033	
		Other Ingredient(s)					
			Fatty acids, tall oil	Confidential		0.00016	Denise Tuck, Halliburton 3000 N. Sam Houston Pkwy E., Houston, TX 77032 281-871-6226
		Other Ingredient(s)					
			Reaction product of acetophenone, formaldehyde, thiourea and oleic acid in dimethyl formamide	68527-49-1		0.00016	
		Other Ingredient(s)					
			Alcohols, C14-C15, ethoxylated	68951-67-7		0.00016	
		Other Ingredient(s)					
			Oxyalkylated phenolic resin	Confidential		0.00011	
		Other Ingredient(s)					
			Crystalline Silica, Quartz	14808-60-7		0.00007	
		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)					
			Sodium sulfate	7757-82-6		0.00000	

* 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)

AS DRILLED PLAT



SURFACE LOCATION (SHL)	LANDING POINT (LP)
UTM 17 NAD 83 N) 4,407,541.33m E) 517,840.19m NAD 27 WV NORTH N) 482,508.3' E)1,637,163.3' NAD 83 DEC. LAT.) 39.817669° DEC. LONG.) 80.791553°	UTM 17 NAD 83 N) 4,407,831.59m E) 517,857.10m NAD 27 WV NORTH N) 483,459.9' E)1,637,234.7' NAD 83 DEC. LAT.) 39.820284° DEC. LONG.) 80.791348°

AS DRILLED

BOTTOM HOLE LOCATION (BHL)
UTM 17 NAD 83 N) 4,410,070.62m E) 516,227.00m NAD 27 WV NORTH N) 490,896.7' E) 1,632,008.3' NAD 83 DEC. LAT.) 39.840490° DEC. LONG.) 80.810339°

PERMITTED

SURFACE LOCATION (SHL)
UTM 17 NAD 83 N) 4,407,541.33m E) 517,840.19m NAD 27 WV NORTH N) 482,508.3' E)1,637,163.3' NAD 83 DEC. LAT.) 39.817669° DEC. LONG.) 80.791553°

LANDING POINT (LP)
UTM 17 NAD 83 N) 4,407,831.48m E) 517,856.22m NAD 27 WV NORTH N) 483,459.5' E)1,637,231.8' NAD 83 DEC. LAT.) 39.820283° DEC. LONG.) 80.791358°

BOTTOM HOLE LOCATION (BHL)
UTM 17 NAD 83 N) 4,410,073.08m E) 516,230.16m NAD 27 WV NORTH N) 490,904.6' E) 1,632,018.8' NAD 83 DEC. LAT.) 39.840512° DEC. LONG.) 80.810302°

LEGEND

- PROPOSED GAS WELL
- AS-DRILLED BORE
- PROPOSED BORE
- TIE LINE
- UNIT BOUNDARY
- PROPERTY LINE
- STREAM LINE
- BUFFER LINE
- GAS WELL
- PLUGGED GAS WELL

GENERAL NOTES:

1. THE LOCATION OF BOUNDARY LINES SHOWN HEREON ARE BASED ON RECORD DEED, PLATS, AND TAX MAPS BEST FIT TO FOUND FIELD EVIDENCE AND AERIAL PHOTOS, UNLESS OTHERWISE NOTED.
2. THIS PLAT DOES NOT REPRESENT AN ACTUAL BOUNDARY SURVEY OF THE INDIVIDUAL PARCELS.
3. THERE ARE NO EXISTING WATER WELLS OR DEVELOPED SPRINGS WITHIN 250' OF PROPOSED WELL.
4. PROPOSED WELL IS GREATER THAN 100' FROM PERENNIAL STREAM, WETLAND, POND, RESERVOIR OR LAKE.
5. THERE ARE NO NATIVE TROUT STREAMS WITHIN 300' OF PROPOSED WELL.
6. THERE ARE TWO DWELLINGS LOCATED WITHIN 650' OF PROPOSED WELLBORE. DISTANCE AS SHOWN ABOVE.
7. THE SURROUNDING LANDS ARE BEING SERVED BY PUBLIC WATER BY THE GRAND VIEW DOOLIN WATER SYSTEM PROVIDED BY MARSHALL COUNTY PUBLIC HEALTH AND SANITATION DIVISION.
8. NO PRODUCING DEEP WELLS WITHIN 3,000 ft. OF WELL BORE

FILE #: 093842010

DRAWING #: 093842010_SV-Plat

SCALE: PLAT & TICK: 1" = 2,000'

MINIMUM DEGREE OF ACCURACY: 1/2,500

PROVEN SOURCE OF ELEVATION: NGS (CORS)

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 RULES ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

SIGNED: Craig R. West

R.P.E.: _____ L.L.S.: 2241

CRAIG ROBERT WEST LICENSED No. 2241 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

8/31/15

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 24, 2015

OPERATOR'S WELL #: MND 06 HHS

API WELL #: 47 (STATE) 051 (COUNTY) 01732 (PERMIT)

WELL TYPE: ☐ OIL ☒ GAS ☐ WASTE DISPOSAL ☐ LIQUID INJECTION ☒ PRODUCTION ☐ STORAGE ☒ DEEP ☐ SHALLOW

WATERSHED: FISH CREEK

ELEVATION: 719.9'-DESIGN (NAVD 88)

COUNTY/DISTRICT: MARSHALL / FRANKLIN

QUADRANGLE: POWHATAN POINT, OHIO-W.VA

SURFACE OWNER: CONSOLIDATION COAL COMPANY

ACREAGE: 136.587±

OIL & GAS ROYALTY OWNER: CNX GAS COMPANY LLC and NOBLE ENERGY, INC.

ACREAGE: 136.587±

☐ CONVERT ☐ DRILL DEEPER ☐ REDRILL ☒ FRACTURE OR STIMULATE ☐ PERFORATE NEW FORMATION ☐ PLUG & ABANDON

☒ DRILL ☐ PLUG OFF OLD FORMATION ☐ CLEAN OUT & REPLUG ☐ OTHER CHANGE (SPECIFY):

TARGET FORMATION: UTICA and POINT PLEASANT

ESTIMATED DEPTH: TVD: 10,412±ft. TMD: 20,115±ft.

WELL OPERATOR: NOBLE ENERGY, INC.

DESIGNATED AGENT: STEVE M. GREEN

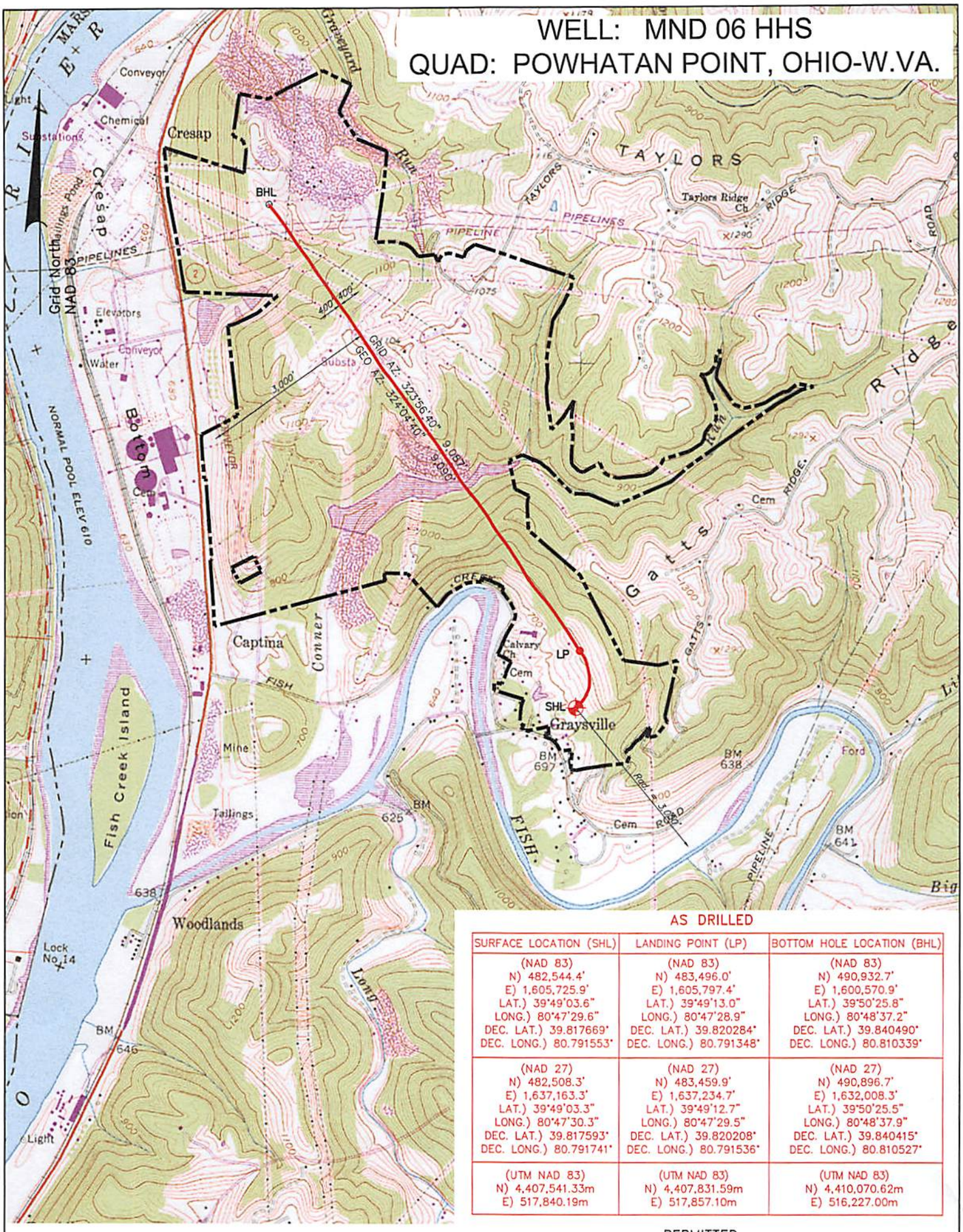
ADDRESS: 333 TECHONOLOGY DRIVE, SUITE 116

ADDRESS: 500 VIRGINIA STREET EAST, UNITED CENTER SUITE 590

CITY: CANONSBURG STATE: PA ZIP CODE: 15317

CITY: CHARLESTON STATE: WV ZIP CODE: 25301

WELL: MND 06 HHS
QUAD: POWHATAN POINT, OHIO-W.VA.



AS DRILLED

SURFACE LOCATION (SHL)	LANDING POINT (LP)	BOTTOM HOLE LOCATION (BHL)
(NAD 83) N) 482,544.4' E) 1,605,725.9' LAT.) 39°49'03.6" LONG.) 80°47'29.6" DEC. LAT.) 39.817669° DEC. LONG.) 80.791553°	(NAD 83) N) 483,496.0' E) 1,605,797.4' LAT.) 39°49'13.0" LONG.) 80°47'28.9" DEC. LAT.) 39.820284° DEC. LONG.) 80.791348°	(NAD 83) N) 490,932.7' E) 1,600,570.9' LAT.) 39°50'25.8" LONG.) 80°48'37.2" DEC. LAT.) 39.840490° DEC. LONG.) 80.810339°
(NAD 27) N) 482,508.3' E) 1,637,163.3' LAT.) 39°49'03.3" LONG.) 80°47'30.3" DEC. LAT.) 39.817593° DEC. LONG.) 80.791741°	(NAD 27) N) 483,459.9' E) 1,637,234.7' LAT.) 39°49'12.7" LONG.) 80°47'29.5" DEC. LAT.) 39.820208° DEC. LONG.) 80.791536°	(NAD 27) N) 490,896.7' E) 1,632,008.3' LAT.) 39°50'25.5" LONG.) 80°48'37.9" DEC. LAT.) 39.840415° DEC. LONG.) 80.810527°
(UTM NAD 83) N) 4,407,541.33m E) 517,840.19m	(UTM NAD 83) N) 4,407,831.59m E) 517,857.10m	(UTM NAD 83) N) 4,410,070.62m E) 516,227.00m

AS DRILLED PLAT

SCALE: 1"=2000'

0 1000' 2000' 4000'

PERMITTED

SURFACE LOCATION (SHL)	LANDING POINT (LP)	BOTTOM HOLE LOCATION (BHL)
(NAD 83) N) 482,544.4' E) 1,605,726.0' LAT.) 39°49'03.6" LONG.) 80°47'29.6" DEC. LAT.) 39.817669° DEC. LONG.) 80.791553°	(NAD 83) N) 483,495.7' E) 1,605,794.4' LAT.) 39°49'13.0" LONG.) 80°47'28.9" DEC. LAT.) 39.820283° DEC. LONG.) 80.791358°	(NAD 83) N) 490,940.6' E) 1,600,581.4' LAT.) 39°50'25.8" LONG.) 80°48'37.1" DEC. LAT.) 39.840512° DEC. LONG.) 80.810302°
(NAD 27) N) 482,508.3' E) 1,637,163.3' LAT.) 39°49'03.3" LONG.) 80°47'30.3" DEC. LAT.) 39.817593° DEC. LONG.) 80.791741°	(NAD 27) N) 483,4459.6' E) 1,637,231.8' LAT.) 39°49'12.7" LONG.) 80°47'29.6" DEC. LAT.) 39.820207° DEC. LONG.) 80.791546°	(NAD 27) N) 490,904.6' E) 1,632,018.8' LAT.) 39°50'25.6" LONG.) 80°48'37.8" DEC. LAT.) 39.840437° DEC. LONG.) 80.810490°
(UTM NAD 83) N) 4,407,541.33m E) 517,840.20m	(UTM NAD 83) N) 4,407,831.48m E) 517,856.22m	(UTM NAD 83) N) 4,410,073.08m E) 516,230.16m

GENERAL NOTE:
THE PURPOSE OF THIS PLAT IS FOR THE LOCATION OF PROPOSED GAS WELLS AND DOES NOT REPRESENT A CLOSED BOUNDARY SURVEY. PROPERTY LINES AND OWNERS WERE OBTAINED FROM VARIOUS FIELD EVIDENCE, TAX RECORDS AND AERIAL MAPPING.

LEGEND

- EXISTING GAS WELL
- PROPOSED BOTTOM HOLE
- AS-DRILLED BORE
- UNIT BOUNDARY

Applicant / Well Operator Name NOBLE ENERGY, INC.	Well(Farm) Name MND06	Well # HHS	Serial #
Address 333 TECHNOLOGY DRIVE, SUITE 116, CANONSBURG, PA 15317	County - Code MARSHALL – 051	District FRANKLIN	
Surface Landowner / Lessor CONSOLIDATION COAL COMPANY	USGS 7½ Quadrangle Map Name POWHATAN POINT, OHIO–W.VA	Scale: 1" = 2,000'	