

pm

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

API 47-051-01626 County Marshall District Franklin
Quad Powhatan Point Pad Name MND 9 Field/Pool Name NA
Farm name Consolidated Coal Company Well Number MND 9 BHS
Operator (as registered with the OOG) Noble Energy, Inc.
Address 333 Technology Drive, Suite 116 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 4409071.15 Easting 518216.27
Landing Point of Curve Northing 4409017.05 Easting 5127818.18
Bottom Hole Northing 4411352.24 Easting 516125.91

Elevation (ft) 1221.03 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 5/3/13 Date drilling commenced 7/16/13 Date drilling ceased 12/13/13
Date completion activities began 6/26/14 Date completion activities ceased 8/7/14
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 of plugging.

Freshwater depth(s) ft 756 Open mine(s) (Y/N) depths NOV 03 2014
Salt water depth(s) ft None noted for Offsets Void(s) encountered (Y/N) depths N
Coal depth(s) ft Sewickley 667.4-670/7, Pittsburgh 756.9-762.8 Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

RECEIVED
Office of Oil and Gas

WV Department of
Environmental Protection

Reviewed by: _____

12/12/2014

API 47-051 - 01626 Farm name Consolidated Coal Company Well number MND 9 BHS

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	30	20	40	N	J-55		
Surface	17 1/2	13 3/8	1206.7	N	J-55 54.5#		Y
Coal							Y
Intermediate 1	12 3/8	9 5/8	2492.9	N	J-55 36#		Y
Intermediate 2							
Intermediate 3							
Production	8 3/4	5 1/2	16568	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 I	1155	15.6	1.19	244	0	8
Coal							
Intermediate 1	Class A	Lead-706 Tail-118	15.6	Lead-1.42 Tail-1.19	Lead-178 Tail-25	0	8
Intermediate 2							
Intermediate 3							
Production	Class A	Lead-680 Tail-1890	Lead-14.2 Tail-1890	Lead-14.2 Tail-14.8	Lead-1.57 Tail-470	1967	8
Tubing							

Drillers TD (ft) 16580 Loggers TD (ft) 16530
 Deepest formation penetrated Marcellus Plug back to (ft) Not a Pilot Hole
 Plug back procedure Not a Pilot Hole

Kick off depth (ft) _____

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 _____

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- 051 - 01626 Farm name Consolidated Coal Company Well number MND 9 BHS

PERFORATION RECORD

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

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)

Please insert additional pages as applicable.

Perforation Record

API: 47-051-01626

Farm name: _____

Consolidated Coal
Company

Well Name: MND-9B-HS

Stage No.	Stim Date	Top Perf	Bottom Perf	# of Perfs	Formation
1	6/26/2014	16173	16430	48	Marcellus
2	6/26/2014	15873	16127	40	Marcellus
3	6/29/2014	15573	15827	40	Marcellus
4	6/29/2014	15273	15527	40	Marcellus
5	6/30/2014	14973	15227	40	Marcellus
6	6/30/2014	14673	14927	40	Marcellus
7	6/30/2014	14373	14627	40	Marcellus
8	6/30/2014	14073	14327	40	Marcellus
9	7/1/2014	13773	14027	40	Marcellus
10	7/6/2014	13473	13727	40	Marcellus
11	7/6/2014	13173	13425	40	Marcellus
12	7/7/2014	12873	13127	40	Marcellus
13	7/7/2014	12625	12827	40	Marcellus
14	7/7/2014	12323	12577	40	Marcellus
15	7/8/2014	12075	12277	40	Marcellus
16	7/8/2014	11773	11964	40	Marcellus
17	7/8/2014	11473	11727	40	Marcellus
18	7/9/2014	11173	11427	40	Marcellus
19	7/9/2014	10873	11127	40	Marcellus
20	7/9/2014	10573	10827	40	Marcellus
21	7/10/2014	10273	10527	40	Marcellus
22	7/10/2014	9973	12/31/1927	40	Marcellus
23	7/10/2014	9673	9927	40	Marcellus
24	7/11/2014	9373	9627	40	Marcellus
25	7/11/2014	9073	9327	40	Marcellus
26	7/11/2014	8773	9027	40	Marcellus
27	7/12/2014	8473	8727	40	Marcellus
28	7/12/2014	8173	8427	40	Marcellus
29	7/12/2014	7873	8127	40	Marcellus
30	7/13/2014	7573	7827	40	Marcellus
31	7/13/2014	7273	7527	40	Marcellus
32	7/13/2014	6973	7227	40	Marcellus

STIMULATION INFORMATION PER STAGE

API: 47-051-01626

Farm name:

Consolidated Coal Company

Well Name: MND-9B-HS

Stage No.	Stim Date	Avg Rate (bpm)	ATP (psi)	Max BD Pressure	ISIP (psi)	Proppant (lbs)	Water (BBLS)	Amount of N ² / other
1	6/26/2014	83.8	7076		3161	493,766	11,723.06	
2	6/26/2014	85.5	7279	6253	3335	495,668	10,897.83	
3	6/29/2014	86.9	7190	6691	3316	495,599	10,831.15	
4	6/29/2014	81.7	7624	6207	3472	497,889	12,382.91	
5	6/30/2014	85.8	7193	5826	3482	494,864	10,734.39	
6	6/30/2014	81.3	7030	5783	4184	494,730	12,154.20	
7	6/30/2014	78.4	7379	5672	3392	499,177	11,804.04	
8	6/30/2014	75.2	6782	6002	3901	495,528	10,807.12	
9	7/1/2014	77.4	7172	5900	3630	496,372	11,163.69	
10	7/6/2014	83.5	6864	6385	3580	496,037	10,194.13	
11	7/6/2014	83.3	6906	6433	3795	499,254	10,485.33	
12	7/7/2014	75.3	6617	6135	3740	495,710	13,231.60	
13	7/7/2014	80.5	6991	6031	3893	415,356	10,244.49	
14	7/7/2014	82.6	6762	6108	4081	497,031	11,108.61	
15	7/8/2014	75	6851	6108	4224	413,858	10,823.38	
16	7/8/2014	86.8	6895	6136	4166	493,108	10,380.99	
17	7/8/2014	89.2	6541	5490	3677	495,002	10,693.30	
18	7/9/2014	78.2	6114	6379	4021	494,357	10,305.04	
19	7/9/2014	88.5	6713	6281	3986	495,560	10,275.62	
20	7/9/2014	79	6592	6505	3918	497,030	12,301.49	
21	7/10/2014	88.7	6759	6479	3873	496,098	10,500.58	
22	7/10/2014	88.3	6791	5967	4489	495,755	10,229.65	
23	7/10/2014	82.7	6823	6271	4265	495,953	10,786.11	
24	7/11/2014	83.2	6839	6505	4213	495,968	10,791.77	
25	7/11/2014	88.2	6557	6405	4146	492,417	10,263.22	
26	7/11/2014	88.4	6541	6102	3787	494,840	10,395.09	
27	7/12/2014	89.1	6375	6616	3540	497,192	10,228.61	
28	7/12/2014	83.2	6645	6164	4454	497,428	10,391.82	
29	7/12/2014	88.9	6415	6352	3928	495,151	10,412.90	
30	7/13/2014	87.6	6360	6837	3983	496,755	10,329.80	
31	7/13/2014	89.7	6257	6240	3826	497,259	10,420.92	
32	7/13/2014	88.9	6438	6092	4321	482,169	9,486.93	

WR-35
Rev. 8/23/13

API 47- 051 - 01626 Farm name Consolidated Coal Company Well number MND9 AHS

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Marcellus</u>	<u>6212</u>	<u>16580</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 1344 mcfpd Oil 432 bpd NGL 376 bpd Water 1488 bpd
GAS MEASURED BY Estimated Orifice Pilot

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

Please insert additional pages as applicable.

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

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

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

Stimulating Company Halliburton Energy SRCS
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 A. Logue Title Regulatory Analyst Date 10/31/14

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

12/12/2014

MND9 B

47-051-01626

Formations	Top TVD	Base TVD	Top MD	Base MD	Fluid
Shale and Sandstone	0	790	0	790	
Pittsburgh Coal	790	800	790	800	
Shale and Sandstone	800	1148	800	1148	
Dunkard Sand	1148	1169	1148	1169	
Shale	1169	1318	1169	1318	
Gas Sand	1318	1389	1318	1389	
Shale	1389	1458	1389	1458	
1st Salt Sand	1458	1474	1458	1474	
Shale	1474	1581	1474	1581	
2nd Salt Sand	1581	1610	1581	4315	
Shale and Sandstone	1610	1740	1610	5039	
Maxton Sand	1740	1787	1740	5124	
Shale	1787	1805	1787	5200	
Big Lime	1805	1877	1805	5791	
Big Injun	1877	2147	1877	6114	
Price	2147	2245	2147	6189	
Murrysville	2245	2352	2245	6213	
Shale and Sandstone	2352	2890	2352	6279	
Gordon	2890	2920	2890	6306	
Shale and Sandstone	2920	3441	2920	6336	
Fifth Sand	3441	3494	3443	6377	
Shale and Sandstone	3494	4296	3496	not encountered	
Warren Sand	4296	4305	4306	not encountered	
Shale	4305	5022	4315	5039	
Java Shale	5022	5106	5039	5124	
Pipe Creek Shale	5106	5181	5124	5200	
Angola Shale	5181	5765	5200	5791	
Rhinestreet	5765	6084	5791	6114	
Cashaqua	6084	6156	6114	6189	
Middlesex	6156	6179	6189	6213	
West River	6179	6240	6213	6279	
Burkett	6240	6264	6279	6306	
Tully Limestone	6264	6290	6306	6336	
Hamilton	6290	6325	6336	6377	Gas
Marcellus	6325	6378	6377	not encountered	
Onondaga	6378	6385	not encountered	not encountered	
Huntersville	6385	not encountered	not encountered	not encountered	

12/12/2014

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	6/26/2014
Job End Date:	7/13/2014
State:	West Virginia
County:	Marshall
API Number:	47-051-01626-00-00
Operator Name:	Noble Energy, Inc.
Well Name and Number:	MND9 B
Longitude:	-80.78730600
Latitude:	39.83136900
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	6,212
Total Base Water Volume (gal):	14,954,800
Total Base Non Water Volume:	0



5/10/16/26

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	88.16686	Density = 8.340
SAND - PREMIUM WHITE	Halliburton	Proppant					
			Crystalline silica, quartz	14808-60-7	100.00000	6.60006	
SAND - COMMON WHITE	Halliburton	Proppant					
			Crystalline silica, quartz	14808-60-7	100.00000	4.48537	
HYDROCHLORIC ACID 10-30%	Halliburton	Solvent					
			Hydrochloric acid	7647-01-0	30.00000	0.17453	
FR-66	Halliburton	Friction Reducer					
			Hydrotreated light petroleum distillate	54742-47-8	30.00000	0.02424	
FE-1A ACIDIZING COMPOSITION	Halliburton	Additive					
			Acetic anhydride	108-24-7	100.00000	0.00311	
			Acetic acid	64-19-7	60.00000	0.00187	
LGC-36 UC	Halliburton	Liquid Gel Concentrate					
			Naphtha, hydrotreated heavy	54742-48-9	60.00000	0.00249	
			Guar gum	9000-30-0	60.00000	0.00249	
BE-9	Halliburton	Biocide					

			Tributyl tetradecyl phosphonium chloride	81741-28-8	10.00000	0.00408	
Scalechek® LP-65 Scale Inhibitor	Halliburton	Scale Inhibitor					
			Ammonium chloride	12125-02-9	10.00000	0.00245	
LCA-1	Halliburton	Solvent					
			Paraffinic solvent	Confidential	100.00000	0.00150	Denise Tuck, Halliburton 3000 N. Sam Houston Pkwy E., Houston, TX 77032 281-871-6226
LoSurf-300D	Halliburton	Non-ionic Surfactant					
			Ethanol	64-17-5	60.00000	0.00063	
			Heavy aromatic petroleum naphtha	64742-94-5	30.00000	0.00031	
			Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	5.00000	0.00005	
			Naphthalene	91-20-3	5.00000	0.00005	
			1,2,4 Trimethylbenzene	95-63-6	1.00000	0.00001	
HYDROCHLORIC ACID 5-10%	Halliburton	Solvent					
			Hydrochloric acid	7647-01-0	10.00000	0.00095	
HAI-OS ACID INHIBITOR	Halliburton	Corrosion Inhibitor					
			Methanol	67-56-1	60.00000	0.00031	
			Propargyl alcohol	107-19-7	10.00000	0.00005	
SP BREAKER	Halliburton	Breaker					
			Sodium persulfate	7775-27-1	100.00000	0.00009	
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)					
			Water	7732-18-5		0.69518	
		Other Ingredient(s)					
			Polyacrylamide copolymer	Confidential		0.02424	
		Other Ingredient(s)					
			Organic phosphonate	Confidential		0.01470	
		Other Ingredient(s)					
			Alcohols, C12-16, ethoxylated	68551-12-2		0.00404	
		Other Ingredient(s)					
			Sodium chloride	7647-14-5		0.00404	
		Other Ingredient(s)					
			Ammonium chloride	12125-02-9		0.00404	
		Other Ingredient(s)					
			Fatty acid tall oil amide	Confidential		0.00404	
		Other Ingredient(s)					
			Sorbitan, mono-9-octadecenoate, (Z)	1338-43-8		0.00081	
		Other Ingredient(s)					

51-01626

		Sorbitan monooleate polyoxyethylene derivative	9005-65-6		0.00081
	Other Ingredient(s)				
		Oxyalkylated phenolic resin	Confidential		0.00031
	Other Ingredient(s)				
		Formaldehyde	50-00-0		0.00024
	Other Ingredient(s)				
		Quaternary ammonium compounds, bis(hydrogenated tallow alkyl) dimethyl, salts with bentonite	68953-58-2		0.00021
	Other Ingredient(s)				
		Reaction product of acetophenone, formaldehyde, thiourea and oleic acid in dimethyl formamide	68527-49-1		0.00015
	Other Ingredient(s)				
		Fatty acids, tall oil	Confidential		0.00015
	Other Ingredient(s)				
		Alcohols, C14-C15, ethoxylated	68951-67-7		0.00015
	Other Ingredient(s)				
		Oxyalkylated phenolic resin	Confidential		0.00010
	Other Ingredient(s)				
		Fatty alcohol polyglycol ether surfactant	9043-30-5		0.00004
	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)				
		Crystalline silica, quartz	14808-60-7		0.00000
	Other Ingredient(s)				
		Sodium sulfate	7757-82-6		0.00000

51-01626

* Total Water Volume sources may include fresh water, produced water, and/or recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

Well is located on topo map 718' feet south of Latitude: 39° 50' 00"

Well is located on topo map 10,488' feet west of Longitude: 80° 45' 00"

LEGEND

- TOPO MAP POINT
 - WELL
 - ALL ARE POINTS UNLESS OTHERWISE NOTED.
 - LEASE NUMBER BASED ON ATTACHED WW-6A1
 - MINERAL TRACT BOUNDARY
 - PARCEL LINES
 - WELL REFERENCE
 - PROPOSED HORIZONTAL WELL
 - ROAD
 - STREAM CENTER LINE
 - AS DRILLED
- WELLS WITHIN 2,400'**
- EXISTING WELLS
 - PLUGGED WELLS

**PERMITTED
BOTTOM HOLE LOCATION (BHL)**
UTM 17-NAD83
N:4411345.43
E:516125.54
NAD27, WV NORTH
N:495085.570
E:1631745.167

**AS DRILLED
BOTTOM HOLE LOCATION (BHL)**
UTM 17-NAD83
N:4411352.24
E:516125.91
NAD27, WV NORTH
N:495107.907
E:1631746.764

**PERMITTED
APPROX. LANDING POINT**
UTM 17-NAD83
N:4409000.06
E:517826.90
NAD27, WV NORTH
N:487295.863
E:1637199.579

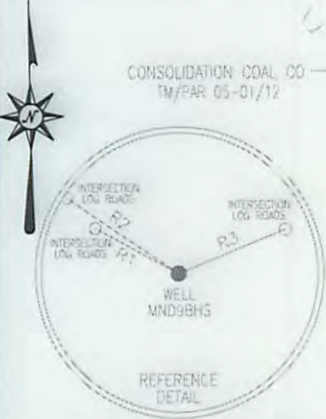
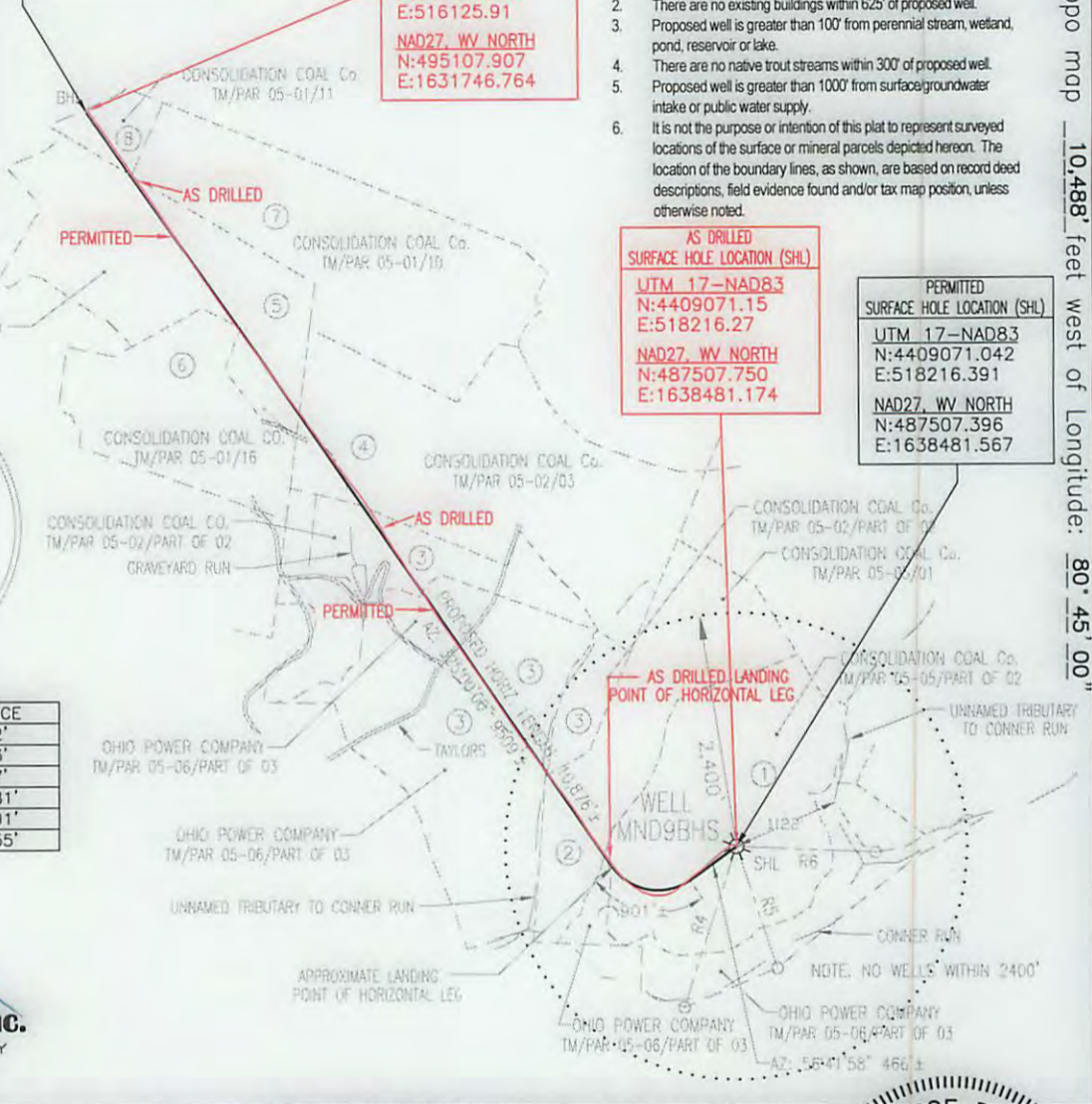
**AS DRILLED
APPROX. LANDING POINT**
UTM 17-NAD83
N:4409017.05
E:517818.18
NAD27, WV NORTH
N:487352.092
E:1637171.923

NOTES:

1. There are no water wells or developed springs within 250' of proposed well.
2. There are no existing buildings within 625' of proposed well.
3. Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake.
4. There are no native trout streams within 300' of proposed well.
5. Proposed well is greater than 1000' from surface/groundwater intake or public water supply.
6. It is not the purpose or intention of this plat to represent surveyed locations of the surface or mineral parcels depicted hereon. The location of the boundary lines, as shown, are based on record deed descriptions, field evidence found and/or tax map position, unless otherwise noted.

**AS DRILLED
SURFACE HOLE LOCATION (SHL)**
UTM 17-NAD83
N:4409071.15
E:518216.27
NAD27, WV NORTH
N:487507.750
E:1638481.174

**PERMITTED
SURFACE HOLE LOCATION (SHL)**
UTM 17-NAD83
N:4409071.042
E:518216.391
NAD27, WV NORTH
N:487507.396
E:1638481.567



LINE	BEARING	DISTANCE
R1	N 67°14'25" W	200.62'
R2	N 60°09'42" W	286.13'
R3	N 71°41'30" E	237.47'
R4	S 17°57'31" W	1738.81'
R5	S 18°39'35" E	1325.91'
R6	S 87°37'19" E	1445.55'

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

FILE #: MND9BHS-AS DRILLED
DRAWING #: MND9BHS-AS DRILLED
SCALE: 1" = 2000'
MINIMUM DEGREE OF ACCURACY: 1/2500
PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT THOMAS 1498.81'

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

Signed: [Signature]
R.P.E.: _____ L.L.S.: P.S. No. 2000

GEORGE D. SIX
LICENSED
No. 2000
STATE OF WEST VIRGINIA
PROFESSIONAL SURVEYOR

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25304



DATE: OCTOBER 21, 2014
OPERATOR'S WELL #: MND9BHS-AS DRILLED
API WELL #: 47 51 01626
STATE COUNTY PERMIT

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

WATERSHED: CONNER RUN ELEVATION: 1229.40'
COUNTY/DISTRICT: MARSHALL / FRANKLIN QUADRANGLE: POWHATAN POINT, WV-OH 7.5'
SURFACE OWNER: CONSOLIDATION COAL COMPANY ACREAGE: 123.244±
OIL & GAS ROYALTY OWNER: SEE ATTACHED WW-6A1 ACREAGE: 774.032±

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: 6,327'± TMD: 16,756'±
WELL OPERATOR NOBLE ENERGY INC. DESIGNATED AGENT STEVEN M. GREEN
Address 333 TECHNOLOGY DRIVE Address 500 VIRGINIA STREET EAST, UNITED CENTER SUITE 1001
City CANONSBURG State PA Zip Code 15317 City CHARLESTON State WV Zip Code 25301

12/12/2014

Well is located on topo map 718 feet south of Latitude: 39° 50' 00"

Well is located on topo map 10,488 feet west of Longitude: 80° 45' 00"

AS DRILLED PLAT

PERMITTED APPROX. LANDING POINT
 UTM 17-NAD83
 N:4409000.06
 E:517826.90
 NAD27, WV NORTH
 N:487295.863
 E:1637199.579

AS DRILLED APPROX. LANDING POINT
 UTM 17-NAD83
 N:4409017.05
 E:517818.18
 NAD27, WV NORTH
 N:487352.092
 E:1637171.923

PERMITTED BOTTOM HOLE LOCATION (BHL)
 UTM 17-NAD83
 N:4411345.43
 E:516125.54
 NAD27, WV NORTH
 N:495085.570
 E:1631745.167

AS DRILLED BOTTOM HOLE LOCATION (BHL)
 UTM 17-NAD83
 N:4411352.24
 E:516125.91
 NAD27, WV NORTH
 N:495107.907
 E:1631746.764

- NOTES:
- There are no water wells or developed springs within 250' of proposed well.
 - There are no existing buildings within 625' of proposed well.
 - Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake.
 - There are no native trout streams within 300' of proposed well.
 - Proposed well is greater than 1000' from surface/groundwater intake or public water supply.
 - It is not the purpose or intention of this plat to represent surveyed locations of the surface or mineral parcels depicted hereon. The location of the boundary lines, as shown, are based on record deed descriptions, field evidence found and/or tax map position, unless otherwise noted.

AS DRILLED SURFACE HOLE LOCATION (SHL)
 UTM 17-NAD83
 N:4409071.15
 E:518216.27
 NAD27, WV NORTH
 N:487507.750
 E:1638481.174

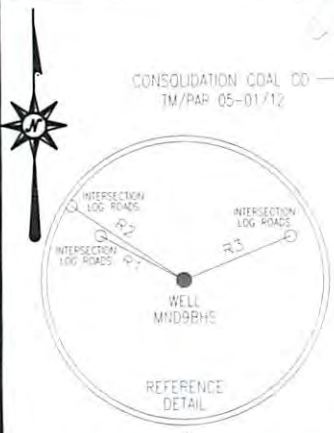
PERMITTED SURFACE HOLE LOCATION (SHL)
 UTM 17-NAD83
 N:4409071.042
 E:518216.391
 NAD27, WV NORTH
 N:487507.396
 E:1638481.567

LEGEND

- TOPO MAP POINT
- WELL
- ALL ARE POINTS UNLESS OTHERWISE NOTED
- WATER SOURCE
- LEASE NUMBER BASED ON ATTACHED WW-6A1
- MINERAL TRACT BOUNDARY
- PARCEL LINES
- WELL REFERENCE
- PROPOSED HORIZONTAL WELL
- ROAD
- STREAM CENTER LINE
- AS DRILLED

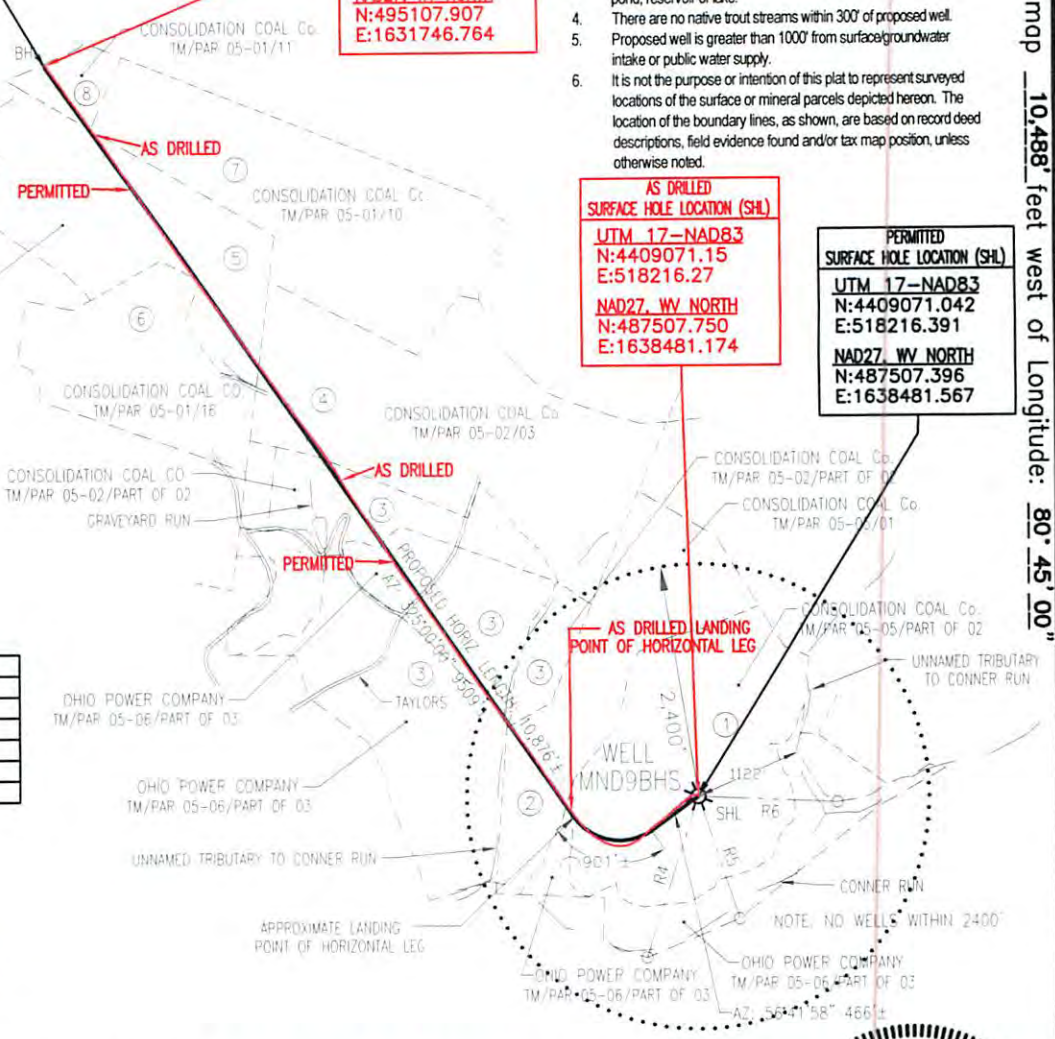
WELLS WITHIN 2,400'

- EXISTING WELLS
- PLUGGED WELLS



LINE	BEARING	DISTANCE
R1	N 67°14'25" W	200.62'
R2	N 60°09'42" W	286.13'
R3	N 71°41'30" E	237.47'
R4	S 17°57'31" W	1738.81'
R5	S 18°39'35" E	1325.91'
R6	S 87°37'19" E	1445.55'

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



FILE #: MND9BHS-AS DRILLED
 DRAWING #: MND9BHS-AS DRILLED
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: 1/2500
 PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT THOMAS 1498.81'

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

Signed: [Signature]
 R.P.E.: _____ L.L.S.: P.S. No. 2000

GEORGE D. SIX
 LICENSED
 No. 2000
 STATE OF WEST VIRGINIA
 PROFESSIONAL SURVEYOR

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP
 OFFICE OF OIL & GAS
 601 57TH STREET
 CHARLESTON, WV 25304



DATE: OCTOBER 21, 2014
 OPERATOR'S WELL #: MND9BHS-AS DRILLED
 API WELL #: 47 51 01626
 STATE COUNTY PERMIT

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

WATERSHED: CONNER RUN ELEVATION: 1229.40'
 COUNTY/DISTRICT: MARSHALL / FRANKLIN QUADRANGLE: POWHATAN POINT, WV-OH 7.5'
 SURFACE OWNER: CONSOLIDATION COAL COMPANY ACREAGE: 123.244±
 OIL & GAS ROYALTY OWNER: SEE ATTACHED WW-6A1 ACREAGE: 774.032±

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