

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

API 47-051-01629 County Marshall District Franklin
Quad Powhatan Point Pad Name MND 9 Field/Pool Name NA
Farm name Consolidated Coal Company Well Number MND 9 FHS
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 4409094.90 Easting 518221.91
Landing Point of Curve Northing 4409276.19 Easting 518187.20
Bottom Hole Northing 4411452.41 Easting 516614.69

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 6/12/13 Date drilling ceased 10/13/13
Date completion activities began 5/22/14 Date completion activities ceased 8/23/14
Verbal plugging (Y/N) N Date permission granted _____ Granted by NOV 03 2014

RECEIVED
Office of Oil and Gas

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

WV Department of
Environmental Protection

Freshwater depth(s) ft 756 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 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

Reviewed by:

12/12/2014

API 47-051 - 01629 Farm name Consolidated Coal Company Well number MND 9 FHS

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	1216	N	J-55 54.5#		Y
Coal							Y
Intermediate 1	12 3/8	9 5/8	2504.7	N	J-55 36#		Y
Intermediate 2							
Intermediate 3							
Production	8 3/4	5 1/2	15589	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	1135	15.6	1.19	241	0	8
Coal							
Intermediate 1	Class A	985	15.6	1.19	198	0	8
Intermediate 2							
Intermediate 3							
Production	Class A	Lead-246 Tail1-1680 Tail2-223	Lead-14.2 Tail1-14.6 Tail2-14	Lead-1.54 Tail1-1.38 Tail2-1.38	Lead-150 Tail1-427 Tail2-55	777	8
Tubing							

Drillers TD (ft) 15598 Loggers TD (ft) 15507
 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 _____

Perforation Record

API: 47-051-01629

Farm name: _____

Consolidated Coal
Company

Well Name: MND-9F-HS

Stage No.	Stim Date	Top Perf	Bottom Perf	# of Perfs	Formation
1	5/23/2014	15224	15423	48	Marcellus
2	5/23/2014	14923	15177	40	Marcellus
3	5/24/2014	14623	14877	40	Marcellus
4	5/24/2014	14323	14577	40	Marcellus
5	5/24/2014	14023	14277	40	Marcellus
6	5/24/2014	13723	13977	40	Marcellus
7	6/17/2014	13423	13677	40	Marcellus
7B	6/17/2014	13415	13470	32	Marcellus
8	6/17/2014	13123	13377	40	Marcellus
9	6/18/2014	12823	13077	40	Marcellus
10	6/18/2014	12523	12777	40	Marcellus
11	6/18/2014	12223	12477	40	Marcellus
12	6/19/2014	11923	12177	40	Marcellus
13	6/19/2014	11623	11877	40	Marcellus
14	6/19/2014	11323	11577	40	Marcellus
15	6/19/2014	11023	11277	40	Marcellus
16	6/20/2014	10723	10977	40	Marcellus
17	6/20/2014	10475	10677	40	Marcellus
18	6/20/2014	10225	10427	40	Marcellus
19	6/21/2014	9923	10177	40	Marcellus
20	6/21/2014	9623	9877	40	Marcellus
21	6/21/2014	9323	9577	40	Marcellus
22	6/21/2014	9023	9277	40	Marcellus
23	6/21/2014	8723	8977	40	Marcellus
24	6/22/2014	8423	8677	40	Marcellus
24B (reperf)	6/23/2014	8417	8463	24	Marcellus
24C (reperf B)	6/23/2014	8410	8433	48	Marcellus
25	6/24/2014	8123	8377	40	Marcellus
26	6/24/2014	7823	8077	40	Marcellus
26B	6/24/2014	7909	7992	40	Marcellus
26C	6/24/2014	7813	8023	48	Marcellus
27	6/24/2014	7523	7777	40	Marcellus
28	6/25/2014	7223	7477	40	Marcellus
29	6/25/2014	6923	7177	40	Marcellus
30	6/25/2014	6623	6877	40	Marcellus

12/12/2014

STIMULATION INFORMATION PER STAGE

API: 47-051-01629

Farm name:

Consolidated Coal Company

Well Name: MND-9F-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 Inj Test	5/22/2014	11.8	7327	9235		0	405.43	
1	5/23/2014	88.8	7702	5020	2414	414731	9293.46	
2	5/23/2014	88.9	7908	5365	2954	500997	10111.11	
3	5/24/2014	88.6	7830	5012	2784	500337	9887.65	
4	5/24/2014	88.6	7894	4981	2904	499703	11035.37	
5	5/24/2014	88.3	7463	5247	3694	497378	9560.77	
6	5/24/2014	89.1	7135	5321		499382	8937.31	
6 Inj Test	5/26/2014	5.9	5885			0	144.76	
7 Inj Test	6/9/2014	32.8	5369		4415	0	522.88	
7	6/17/2014	57.8	8131	5337	4857	11381	3384.52	
7B	6/17/2014	70.1	7633	6189	3600	491018	12523.41	
8	6/17/2014	86.3	7378	5413	3903	500533	11203.54	
9	6/18/2014	85.9	6978	5601	4040	500401	11025.70	
10	6/18/2014	86.5	6936	5478	3908	502670	10823.99	
11	6/18/2014	88.8	7077	5854	3777	501058	11082.88	
12	6/19/2014	88.5	6842	5733	3863	500427	11154.31	
13	6/19/2014	67.9	7631	5714	3648	498101	13350.83	
14	6/19/2014	80.9	7324	5528	3649	500114	12801.48	
15	6/19/2014	67.7	7824	5531	3426	498904	12807.18	
16	6/20/2014	81.4	6907	5829	3480	499304	10957.51	
17	6/20/2014	86.9	6800	5247	3701	415383	10706.02	
18	6/20/2014	89.2	7114	6036	4116	413731	9350.53	
19	6/21/2014	89.3	6537	5618	3662	500005	10888.71	
20	6/21/2014	88.2	6488	6097	3785	499366	10567.74	
21	6/21/2014	87.6	6472	5432	3603	500208	10125.64	
22	6/21/2014	89.9	6573	5081	3826	501263	11079.35	
23	6/21/2014	89.4	6790	5763	4295	500525	10879.64	
24	6/22/2014	81.7	8249	5692		8107	2579.90	
24 Inj Test	6/23/2014	8.9	8673		4736	0	750.99	
24B (reperf)	6/23/2014	43.8	8175		8296	3729	3419.45	
24C (reperf B)	6/23/2014	75.4	8260		3090	494986	13463.80	
25	6/24/2014	85.9	7734	5935	3368	494045	10810.28	
26	6/24/2014	42.0	8079	6453	6034	3368	2660.49	
26B	6/24/2014	52.4	7572		6493	1845	1512.41	
26C	6/24/2014	74.4	7322		4044	489109	11349.85	
27	6/24/2014	88.3	6401	6358	3560	495362	10504.90	
28	6/25/2014	89.6	6472	6127	4157	494759	10406.44	
29	6/25/2014	89.1	6025	5869	3766	497116	10404.10	
30	6/25/2014	90.2	5021	4814	2954	493297	10235.82	

12/12/2014

MND9 F

47-051-01629

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



51-01629

Job Start Date:	5/22/2014
Job End Date:	6/25/2014
State:	West Virginia
County:	Marshall
API Number:	47-051-01629-00-00
Operator Name:	Noble Energy, Inc.
Well Name and Number:	MND9 F
Longitude:	-80.78723900
Latitude:	39.83158300
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	6,231
Total Base Water Volume (gal):	14,776,565
Total Base Non Water Volume:	0

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	88.63647	Density = 8.400
40/70 SAND - PREMIUM WHITE	Halliburton	Proppant					
			Crystalline silica, quartz	14808-60-7	100.00000	5.47353	
100 Mesh Sand - Premium White	Halliburton	Proppant					
			Crystalline silica, quartz	14808-60-7	100.00000	5.03294	
HCl < 10%	Halliburton	Solvent					
			Hydrochloric acid	7647-01-0	100.00000	0.68485	
HCl > 10%	Halliburton	Solvent					
			Hydrochloric acid	7647-01-0	100.00000	0.02876	
FR-66	Halliburton	Friction Reducer					
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.01896	
GC-36 UC	Halliburton	Liquid Gel Concentrate					
			Naphtha, hydrotreated heavy	64742-48-9	60.00000	0.00483	
			Guar gum	9000-30-0	60.00000	0.00483	
BE-9	Halliburton	Biocide					
			Tributyl tetradecyl phosphonium chloride	81741-28-8	10.00000	0.00392	

FE-1A ACIDIZING COMPOSITION	Halliburton	Additive					
			Acetic acid	64-19-7	60.00000	0.00230	
			Acetic anhydride	108-24-7	100.00000	0.00041	
Scalechek(R) LP-65 Scale Inhibitor	Halliburton	Scale Inhibitor					
			Ammonium chloride	12125-02-9	10.00000	0.00241	
LOSURF-300D	Halliburton	Non-ionic Surfactant					
			Ethanol	64-17-5	60.00000	0.00077	
			Heavy aromatic petroleum naphtha	64742-94-5	30.00000	0.00039	
			Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	5.00000	0.00006	
			Naphthalene	91-20-3	5.00000	0.00006	
			1,2,4 Trimethylbenzene	95-63-6	1.00000	0.00001	
PermVis VFR-10	Halliburton	Friciton Reducer					
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.00075	
			9-Octadecenamamide, n,n-bis-2-(hydroxy-ethyl)-, (Z)	93-83-4	5.00000	0.00012	
			Ammonium chloride	12125-02-9	10.00000	0.00011	
			Alcohols, C12-16, ethoxylated	68551-12-2	10.00000	0.00011	
LCA-1	Halliburton	Solvent					
			Paraffinic solvent	Confidential	100.00000	0.00050	Denise Tuck, Halliburton 3000 N. Sam Houston Pkwy E., Houston, TX 77032 281-871-6226
HAI-OS ACID INHIBITOR	Halliburton	Corrosion Inhibitor					
			Methanol	67-56-1	60.00000	0.00038	
			Propargyl alcohol	107-19-7	10.00000	0.00006	
SP BREAKER	Halliburton	Breaker					
			Sodium persulfate	7775-27-1	100.00000	0.00015	
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		0.09233	
		Other Ingredient(s)					
			Polyacrylamide copolymer	Confidential		0.01896	
		Other Ingredient(s)					
			Alcohols ethoxylated	Confidential		0.00316	
		Other Ingredient(s)					
			Amide	Confidential		0.00316	
		Other Ingredient(s)					
			Ammonium chloride	12125-02-9		0.00316	
		Other Ingredient(s)					
			Sodium chloride	7647-14-5		0.00316	
		Other Ingredient(s)					

51-01629

		Organic phosphonate	Confidential		0.00158
	Other Ingredient(s)				
		Inorganic salt	Confidential		0.00075
	Other Ingredient(s)				
		Sorbitan monooleate polyoxyethylene derivative	9005-65-6		0.00061
	Other Ingredient(s)				
		Sorbitan, mono-9-octadecenoate, (Z)	1338-43-8		0.00061
	Other Ingredient(s)				
		Quaternary ammonium compounds, bis(hydrogenated tallow alkyl) dimethyl, salts with bentonite	68953-58-2		0.00040
	Other Ingredient(s)				
		Oxyalkylated phenolic resin	Confidential		0.00039
	Other Ingredient(s)				
		Formaldehyde	50-00-0		0.00024
	Other Ingredient(s)				
		Alcohols, C14-C15, ethoxylated	68951-67-7		0.00019
	Other Ingredient(s)				
		Fatty acids, tall oil	Confidential		0.00019
	Other Ingredient(s)				
		Reaction product of acetophenone, formaldehyde, thiourea and oleic acid in dimethyl formamide	68527-49-1		0.00019
	Other Ingredient(s)				
		Oxyalkylated phenolic resin	Confidential		0.00013
	Other Ingredient(s)				
		Fatty acid ester	Confidential		0.00012
	Other Ingredient(s)				
		Fatty alcohol polyglycol ether surfactant	9043-30-5		0.00008
	Other Ingredient(s)				
		Olefins	Confidential		0.00003
	Other Ingredient(s)				
		Olefins	Confidential		0.00003
	Other Ingredient(s)				
		Crystalline silica, quartz	14808-60-7		0.00001
	Other Ingredient(s)				
		Olefins	Confidential		0.00001
	Other Ingredient(s)				
		Olefins	Confidential		0.00001
	Other Ingredient(s)				
		Sodium sulfate	7757-82-6		0.00000
	Other Ingredient(s)				
		Polyacrylate	Confidential		

51-01629

51-01629

* 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 640' feet south of Latitude: 39° 50' 00"

Well is located on topo map 10,470' feet west of Longitude: 80° 45' 00"

AS DRILLED PLAT

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.

LEGEND

- - TPO MAP POINT
- ☀ - WELL
- - ALL ARE POINTS UNLESS OTHERWISE NOTED
- ⊕ - WATER SOURCE
- ⊖ - MINERAL TRACT ON ATTACHED WW-6A1
- - MINERAL TRACT BOUNDARY
- - PARCEL LINES
- - WELL REFERENCE
- - PROPOSED HORIZONTAL WELL
- - ROAD
- - STREAM CENTER LINE
- - AS DRILLED

WELLS WITHIN 3000'

- - EXISTING WELLS
- - PLUGGED WELLS

PERMITTED APPROX. LANDING POINT
 UTM 17-NAD83
 N:4409256.64
 E:518205.23
 NAD27, WV NORTH
 N:488117.058
 E:1638455.115

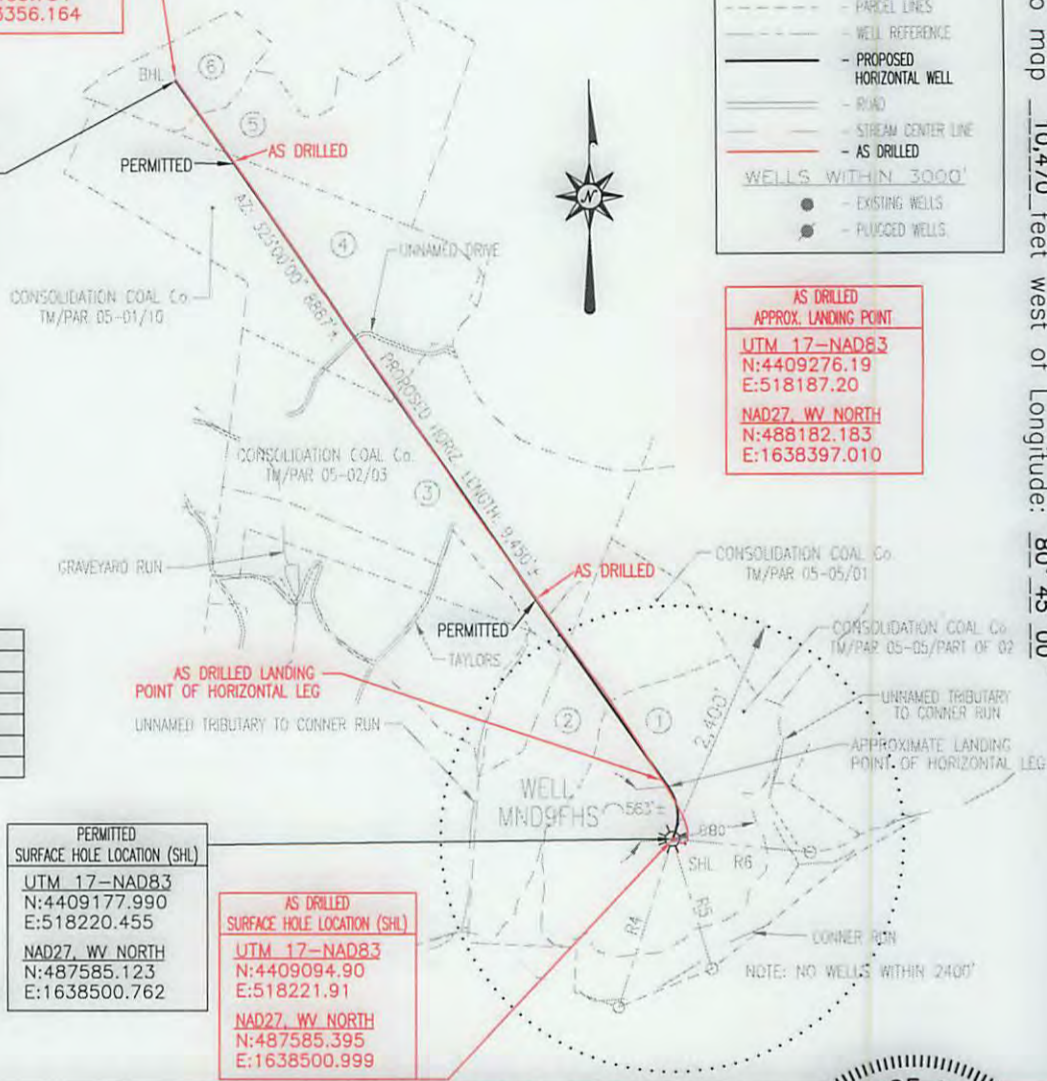
AS DRILLED BOTTOM HOLE LOCATION (BHL)
 UTM 17-NAD83
 N:4411452.41
 E:516614.69
 NAD27, WV NORTH
 N:495409.794
 E:1633356.164

PERMITTED BOTTOM HOLE LOCATION (BHL)
 UTM 17-NAD83
 N:4411448.36
 E:516615.33
 NAD27, WV NORTH
 N:495396.465
 E:1633358.024

AS DRILLED APPROX. LANDING POINT
 UTM 17-NAD83
 N:4409276.19
 E:518187.20
 NAD27, WV NORTH
 N:488182.183
 E:1638397.010



LINE	BEARING	DISTANCE
R1	S 89°58'07" W	204.20'
R2	N 76°24'37" W	275.10'
R3	S 89°07'49" E	206.28'
R4	S 17°46'43" W	1818.61'
R5	S 16°53'29" E	1394.02'
R6	S 84°28'59" E	1431.76'



PERMITTED SURFACE HOLE LOCATION (SHL)
 UTM 17-NAD83
 N:4409177.990
 E:518220.455
 NAD27, WV NORTH
 N:487585.123
 E:1638500.762

AS DRILLED SURFACE HOLE LOCATION (SHL)
 UTM 17-NAD83
 N:4409094.90
 E:518221.91
 NAD27, WV NORTH
 N:487585.395
 E:1638500.999

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

FILE #: MND9FHS-AS DRILLED
 DRAWING #: MND9FHS-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

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 #: MND9FHS-AS DRILLED
 API WELL #: 47 51 01629
 STATE COUNTY PERMIT

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

WATERSHED: CONNER RUN ELEVATION: 1212.58'
 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: 586.527±

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: 6,600'± TMD: 15,867'±
 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 640' feet south of Latitude: 39° 50' 00"

Well is located on topo map 10,470' feet west of Longitude: 80° 45' 00"

AS DRILLED PLAT

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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 herein. 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.

LEGEND

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

WELLS WITHIN 3000'

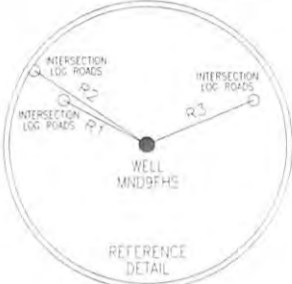
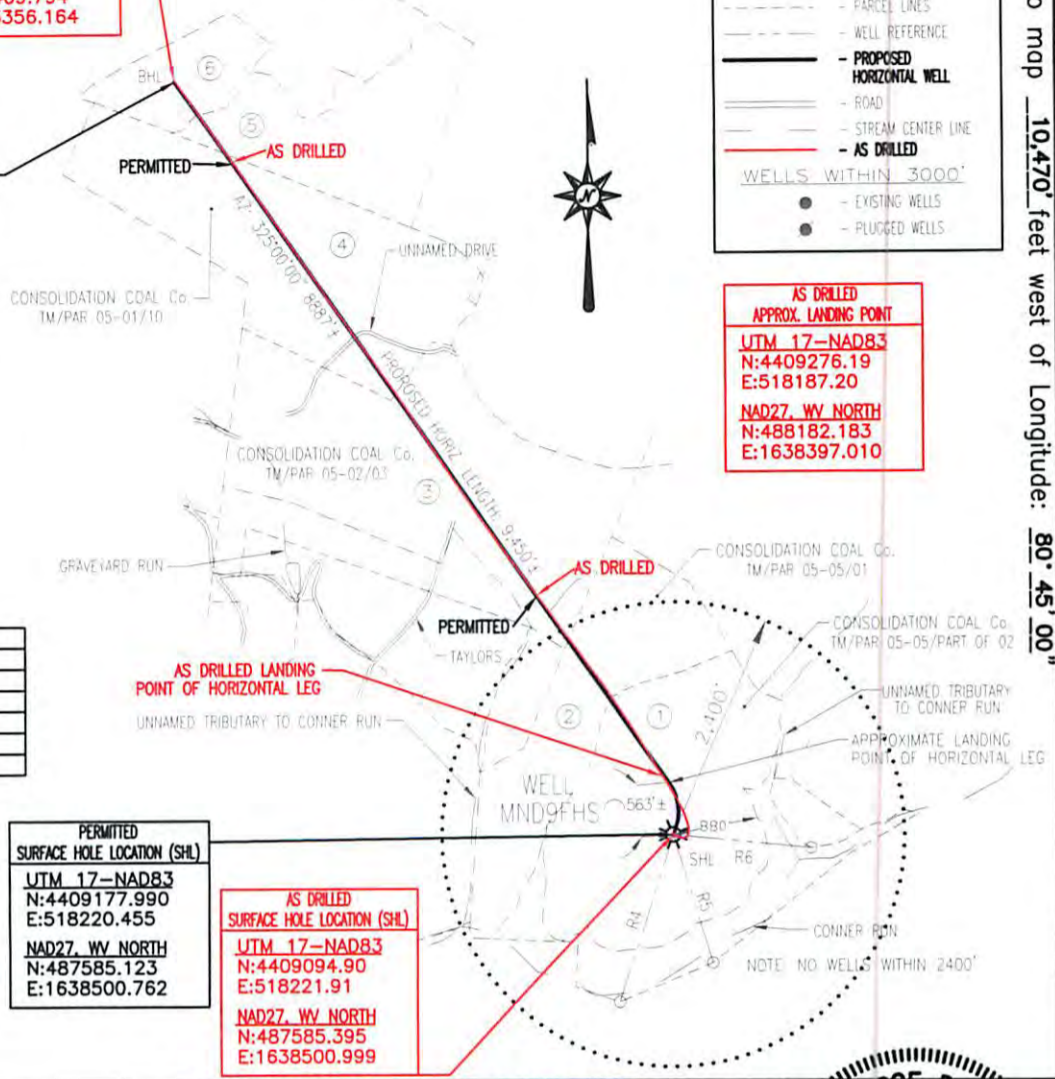
- EXISTING WELLS
- PLUGGED WELLS

PERMITTED APPROX. LANDING POINT
 UTM 17-NAD83
 N:4409256.64
 E:518205.23
 NAD27, WV NORTH
 N:488117.058
 E:1638455.115

AS DRILLED BOTTOM HOLE LOCATION (BHL)
 UTM 17-NAD83
 N:4411452.41
 E:516614.69
 NAD27, WV NORTH
 N:495409.794
 E:1633356.164

PERMITTED BOTTOM HOLE LOCATION (BHL)
 UTM 17-NAD83
 N:4411448.36
 E:516615.33
 NAD27, WV NORTH
 N:495396.465
 E:1633358.024

AS DRILLED APPROX. LANDING POINT
 UTM 17-NAD83
 N:4409276.19
 E:518187.20
 NAD27, WV NORTH
 N:488182.183
 E:1638397.010



LINE	BEARING	DISTANCE
R1	S 89°58'07" W	204.20'
R2	N 76°24'37" W	275.10'
R3	S 89°07'49" E	206.28'
R4	S 17°46'43" W	1818.61'
R5	S 16°53'29" E	1394.02'
R6	S 84°28'59" E	1431.76'

PERMITTED SURFACE HOLE LOCATION (SHL)
 UTM 17-NAD83
 N:4409177.990
 E:518220.455
 NAD27, WV NORTH
 N:487585.123
 E:1638500.762

AS DRILLED SURFACE HOLE LOCATION (SHL)
 UTM 17-NAD83
 N:4409094.90
 E:518221.91
 NAD27, WV NORTH
 N:487585.395
 E:1638500.999

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

FILE #: MND9FHS-AS DRILLED
 DRAWING #: MND9FHS-AS DRILLED
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: 1/2500
 PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT THOMAS 1498.81'

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

Signed: *George W. Six*
 R.P.E.: _____ L.L.S.: P.S. No. 2000

GEORGE W. 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 #: MND9FHS-AS DRILLED
 API WELL #: 47 51 01629
 STATE COUNTY PERMIT

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

WATERSHED: CONNER RUN ELEVATION: 1212.58'
 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: 586.527±

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: 6,600'± TMD: 15,867'±
 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