

PM

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

API 47-051-01625 County Marshall District Franklin  
Quad Powhatan Point Pad Name MND 9 Field/Pool Name NA  
Farm name Consolidated Coal Company Well Number MND 9 AHS  
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 4409064.98 Easting 518215.10  
Landing Point of Curve Northing 4408897.51 Easting 517622.40  
Bottom Hole Northing 4411186.27 Easting 515957.65

Elevation (ft) 1221.0 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 5/3/2013 Date drilling commenced 6/2/2013 Date drilling ceased 12/21/2013  
Date completion activities began 6/26/2014 Date completion activities ceased 8/10/2014  
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 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

RECEIVED  
Office of Oil and Gas  
NOV 03 2014  
Reviewed by:  
WV Department of  
Environmental Protection

12/12/2014

API 47-051 - 01625 Farm name Consolidated Coal Company Well number MND 9 AHS

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	912	N	J-55 94#		Y
Coal							Y
Intermediate 1	12 3/8	9 5/8	2509	N	J-55 36#		Y
Intermediate 2							
Intermediate 3							
Production	8 3/4	5 1/2	16743	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 <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor							
Surface	Type I	877	15.6	1.19	186	0	8
Coal							
Intermediate 1	Class A	1305	15.6	1.19	204	0	8
Intermediate 2							
Intermediate 3							
Production	Class A	Lead-732 Tail-1882	Lead-14.2 Tail-14.8	Lead-1.57 Tail-1.4	Lead-204 Tail-469	2000	8
Tubing							

Drillers TD (ft) 16748 Loggers TD (ft) 16645  
 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: 47-051-01625

Farm name: \_\_\_\_\_

Consolidated Coal  
Company

Well Name: MND-9A-HS

Stage No.	Stim Date	Top Perf	Bottom Perf	# of Perfs	Formation
1	6/26/2014	16433	16595	58	Marcellus
2	6/26/2014	16184	16388	58	Marcellus
2B (Reperf)	6/27/2014	16198	16366	48	Marcellus
3	6/27/2014	15934	16138	58	Marcellus
3B	6/27/2014	15949	16124	48	Marcellus
4	6/28/2014	15684	15888	58	Marcellus
5	6/28/2014	15434	15638	58	Marcellus
6	7/14/2014	15184	15388	58	Marcellus
7	7/14/2014	14934	15138	58	Marcellus
8	7/14/2014	14684	14888	58	Marcellus
9	7/15/2014	14434	14638	58	Marcellus
10	7/15/2014	14184	14386	58	Marcellus
11	7/15/2014	13934	14138	58	Marcellus
12	7/16/2014	13684	13888	58	Marcellus
13	7/16/2014	13434	13637	58	Marcellus
14	7/17/2014	13184	13388	58	Marcellus
15	7/17/2014	12934	13138	58	Marcellus
16	7/18/2014	12684	12888	58	Marcellus
17	7/18/2014	12434	12638	58	Marcellus
18	7/19/2014	12184	12388	58	Marcellus
19	7/19/2014	11934	12138	58	Marcellus
20	7/19/2014	11684	11888	58	Marcellus
21	7/23/2014	11434	11638	58	Marcellus
22	7/23/2014	11184	11388	58	Marcellus
23	7/24/2014	10934	11138	58	Marcellus
24	7/24/2014	10684	10888	58	Marcellus
25	7/20/2014	10434	10638	58	Marcellus
26	7/24/2014	10184	10388	58	Marcellus
27	7/24/2014	9934	10138	58	Marcellus
28	7/25/2014	9684	9888	58	Marcellus
29	7/25/2014	9434	9638	58	Marcellus
30	7/25/2014	9184	9388	58	Marcellus
31	7/25/2014	8934	9138	58	Marcellus
32	7/25/2014	8684	8888	58	Marcellus
33	7/26/2014	8434	8638	58	Marcellus
34	7/26/2014	8184	8388	58	Marcellus
35	7/26/2014	7934	8138	58	Marcellus
36	7/26/2014	7684	7888	58	Marcellus
37	7/26/2014	7434	7638	58	Marcellus
38	7/26/2014	7184	7388	58	Marcellus

12/12/2014

STIMULATION INFORMATION PER STAGE

API: 47-051-01625

Farm name:

Consolidated Coal Company

Well Name: MND-9A-HS

Stage No.	Stim Date	Avg Rate (bpm)	ATP (psi)	Max BD Pressure	ISIP (psi)	Proppant (lbs)	Water (BBLS)	Amount of N <sup>2</sup> / other
1Inj Test	6/22/2014	14.4	7514		7503		485.24	
1	6/26/2014	76.2	7365		2703	412,774	9,118.53	
2	6/26/2014	42	8162	6311	4827	9,603	5,736.62	
2B (Reperf)	6/27/2014	81.3	7765		3099	412,399	10,881.53	
3	6/27/2014	41.1	7833	5602	5381	5,626	3,922.27	
3B	6/27/2014	74.7	7891		3667	411,992	11,328.07	
4	6/28/2014	87.6	7071	5427	3350	414,306	9,294.50	
5	6/28/2014	81.6	7041	5203	3824	412,432	9,814.20	
6	7/14/2014	63.2	7332	5684	3687	417,237	14,244.59	
7	7/14/2014	80.9	7376	5118	3678	409,300	12,121.75	
8	7/14/2014	80.1	6790	5080	4254	414,163	13,333.33	
9	7/15/2014	79.6	6720	5111	4013	412,650	10,339.24	
10	7/15/2014	84.1	6928	5107	3765	412,640	8,950.51	
11	7/15/2014	79.7	6769	5276	3842	416,628	9,821.27	
12	7/16/2014	87	7045	5341	3626	415,639	8,905.15	
13	7/16/2014	83.9	6849	5553	3765	417,114	9,026.00	
14	7/17/2014	84.5	6978	5123	3782	412,142	8,782.96	
15	7/17/2014	85.1	7002	5050	3851	415,487	12,478.65	
16	7/18/2014	85	7011	5580	3774	411,648	9,839.01	
17	7/18/2014	81.9	6613	5223	3862	414,031	11,316.95	
18	7/19/2014	86.7	6911	5415	4053	412,181	8,767.37	
19	7/19/2014	85.9	6807	4960	3965	412,087	8,776.01	
20	7/19/2014	86.8	6623	5220	4024	415,268	9,049.27	
21 Inj Test	7/23/2014	17.5	5481	4952	4536	-	555.31	
21	7/23/2014	79.6	6480	5037	4107	411,553	9,144.83	
22	7/23/2014	79.4	6493	5391	4043	412,867	9,201.58	
23	7/24/2014	82.5	6776	5280	4393	416,055	8,836.84	
24	7/24/2014	85	6739	5157	4180	415,247	8,884.35	
25	7/20/2014	84.8	6482	5298	3658	413,414	9,025.49	
25 - Biovert S	7/22/2014					-	1,107.82	
26	7/24/2014	86.2	6508	6090	3832	413,624	8,728.26	
27	7/24/2014	84.8	6437	5259	4154	413,800	8,965.57	
28	7/25/2014	85	6420	5202	4433	413,000	8,843.78	
29	7/25/2014	87.5	6547	5044	4487	414,333	8,543.77	
30	7/25/2014	87.9	6457	5227	4656	409,813	8,560.11	
31	7/25/2014	87.3	6414	5183	3946	413,136	8,524.27	
32	7/25/2014	87.7	6318	5184	4336	391,585	8,521.75	
33	7/26/2014	86.7	6211	5524	4400	433,739	9,565.13	
34	7/26/2014	87.2	6271	5428	4394	413,453	8,387.32	
35	7/26/2014	87.3	6382	5765	4348	411,791	8,532.93	
36	7/26/2014	88	6173	5023	4517	412,878	8,417.33	
37	7/26/2014	88.3	6198	5495	4707	408,154	8,535.01	
38	7/26/2014	88.6	6141	6024	4652	419,976	8,472.41	



MND9 A

47-051-01625

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



51-01625

Job Start Date:	6/26/2014
Job End Date:	7/26/2014
State:	West Virginia
County:	Marshall
API Number:	47-051-01625-00-00
Operator Name:	Noble Energy, Inc.
Well Name and Number:	MND9 A
Longitude:	-80.78731900
Latitude:	39.83131400
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	6,202
Total Base Water Volume (gal):	16,372,851
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	88.85008	Density = 8.337
SAND - PREMIUM WHITE	Halliburton	Proppant	Crystalline silica, quartz	14808-60-7	100.00000	6.04561	
SSA-2	Halliburton	Proppant	Crystalline silica, quartz	14808-60-7	100.00000	4.17952	
HYDROCHLORIC ACID 5-10%	Halliburton	Solvent	Hydrochloric acid	7647-01-0	10.00000	0.07674	
FR-66	Halliburton	Friction Reducer	Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.02244	
LGC-36 UC	Halliburton	Liquid Gel Concentrate	Guar gum	9000-30-0	60.00000	0.00745	
			Naphtha, hydrotreated heavy	64742-48-9	60.00000	0.00745	
FE-1A ACIDIZING COMPOSITION	Halliburton	Additive	Acetic anhydride	108-24-7	100.00000	0.00411	
			Acetic acid	64-19-7	60.00000	0.00247	
BE-9	Halliburton	Biocide					



			Tributyl tetradecyl phosphonium chloride	81741-28-8	10.00000	0.00397	
Scalechek® LP-65 Scale Inhibitor	Halliburton	Scale Inhibitor					
			Ammonium chloride	12125-02-9	10.00000	0.00236	
LoSurf-300D	Halliburton	Non-ionic Surfactant					
			Ethanol	64-17-5	60.00000	0.00083	
			Heavy aromatic petroleum naphtha	64742-94-5	30.00000	0.00041	
			Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	5.00000	0.00007	
			Naphthalene	91-20-3	5.00000	0.00007	
			1,2,4 Trimethylbenzene	95-63-6	1.00000	0.00001	
HAI-OS ACID INHIBITOR	Halliburton	Corrosion Inhibitor					
			Methanol	67-56-1	60.00000	0.00041	
			Propargyl alcohol	107-19-7	10.00000	0.00007	
Biovert NWB	Halliburton	Viscosifier					
			Poly lactide resin	Confidential	100.00000	0.00047	Denise Tuck, Halliburton 3000 N. Sam Houston Pkwy E., Houston, TX 77032 281-871-6226
SP BREAKER	Halliburton	Breaker					
			Sodium persulfate	7775-27-1	100.00000	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)					
			Water	7732-18-5		0.86611	
		Other Ingredient(s)					
			Polyacrylamide copolymer	Confidential		0.02244	
		Other Ingredient(s)					
			Organic phosphonate	Confidential		0.01415	
		Other Ingredient(s)					
			Ammonium chloride	12125-02-9		0.00374	
		Other Ingredient(s)					
			Alcohols, C12-16, ethoxylated	68551-12-2		0.00374	
		Other Ingredient(s)					
			Fatty acid tall oil amide	Confidential		0.00374	
		Other Ingredient(s)					
			Sodium chloride	7647-14-5		0.00374	
		Other Ingredient(s)					
			Sorbitan, mono-9-octadecenoate, (Z)	1338-43-8		0.00075	
		Other Ingredient(s)					
			Sorbitan monooleate polyoxyethylene derivative	9005-65-6		0.00075	
		Other Ingredient(s)					

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			Quaternary ammonium compounds, bis(hydrogenated tallow alkyl) dimethyl salts with bentonite	68953-58-2		0.00062	
		Other Ingredient(s)					
			Oxyalkylated phenolic resin	Confidential		0.00041	
		Other Ingredient(s)					
			Formaldehyde	50-00-0		0.00024	
		Other Ingredient(s)					
			Reaction product of acetophenone, formaldehyde, thiourea and oleic acid in dimethyl formamide	68527-49-1		0.00020	
		Other Ingredient(s)					
			Alcohols, C14-C15, ethoxylated	68951-67-7		0.00020	
		Other Ingredient(s)					
			Fatty acids, tall oil	Confidential		0.00020	
		Other Ingredient(s)					
			Oxyalkylated phenolic resin	Confidential		0.00014	
		Other Ingredient(s)					
			Fatty alcohol polyglycol ether surfactant	9043-30-5		0.00012	
		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	

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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)

Well is located on topo map 737 feet south of Latitude: 39° 50' 00"

Well is located on topo map 10,492 feet west of Longitude: 80° 45' 00"

# AS DRILLED PLAT



LEGEND	
	- TOPO MAP POINT
	- WELL
	- ALL OTHER 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
	- PROPOSED WELLS

LINE	BEARING	DISTANCE
R1	N 61°43'25" W	204.67'
R2	N 56°24'22" W	292.26'
R3	N 67°48'03" E	248.63'
R4	S 18°00'20" W	1718.90'
R5	S 19°07'47" E	1309.13'
R6	S 88°23'41" E	1449.67'

**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.

PERMITTED  
BOTTOM HOLE LOCATION (BHL)

UTM 17-NAD83  
N:4411184.58  
E:515958.21

NAD27, WV NORTH  
N:494566.945  
E:1631187.294

AS DRILLED  
BOTTOM HOLE LOCATION (BHL)

UTM 17-NAD83  
N:4411186.27  
E:515957.65

NAD27, WV NORTH  
N:494572.513  
E:1631185.542

AS DRILLED  
APPROX. LANDING POINT

UTM 17-NAD83  
N:4408897.51  
E:517622.40

NAD27, WV NORTH  
N:486970.562  
E:1636522.919

PERMITTED  
APPROX. LANDING POINT

UTM 17-NAD83  
N:4408863.88  
E:517641.68

NAD27, WV NORTH  
N:486859.149  
E:1636584.349

PERMITTED  
SURFACE HOLE LOCATION (SHL)

UTM 17-NAD83  
N:4409065.125  
E:518215.041

NAD27, WV NORTH  
N:487488.053  
E:1638476.814

AS DRILLED  
SURFACE HOLE LOCATION (SHL)

UTM 17-NAD83  
N:4409064.98  
E:518215.10

NAD27, WV NORTH  
N:487487.572  
E:1638476.984

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

FILE #: MND9AHS-AS DRILLED

DRAWING #: MNDS9AHS-AS DRILLED

SCALE: 1" = 2000'

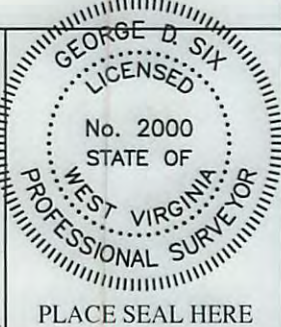
MINIMUM DEGREE OF ACCURACY: 1/2500

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



(+) 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 #: MNDS9AHS-AS DRILLED

API WELL #:	47	51	01625
	STATE	COUNTY	PERMIT

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

WATERSHED: CONNER RUN ELEVATION: 1232.55'

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: 640.066±

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: 17,004'±

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 737 feet south of Latitude: 39° 50' 00"

Well is located on topo map 10,492 feet west of Longitude: 80° 45' 00"

# AS DRILLED PLAT

**PERMITTED  
BOTTOM HOLE LOCATION (BHL)**  
UTM 17-NAD83  
N:4411184.58  
E:515958.21  
NAD27\_WV NORTH  
N:494566.945  
E:1631187.294

**AS DRILLED  
BOTTOM HOLE LOCATION (BHL)**  
UTM 17-NAD83  
N:4411186.27  
E:515957.65  
NAD27\_WV NORTH  
N:494572.513  
E:1631185.542



LINE	BEARING	DISTANCE
R1	N 61°43'25" W	204.67'
R2	N 56°24'22" W	292.26'
R3	N 67°48'03" E	248.63'
R4	S 18°00'20" W	1718.90'
R5	S 19°07'47" E	1309.13'
R6	S 88°23'41" E	1449.67'

**LEGEND**

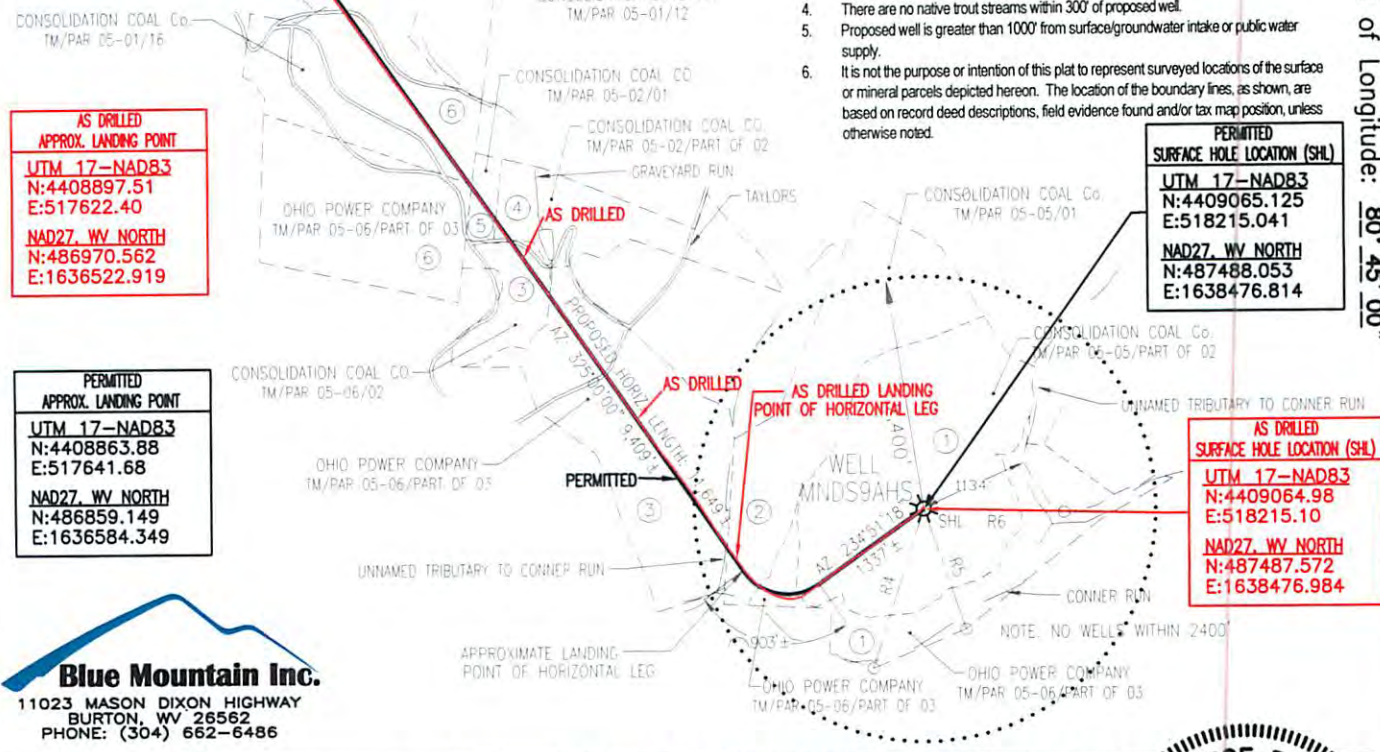
- TOPO MAP POINT
- WELL
- ALL ARE POINTS UNLESS OTHERWISE NOTED
- WATER SOURCE
- LEASE NUMBER BASED ON ATTACHED WW-6A1
- MINERAL TRACT BOUNDARY
- PARCEL LINES
- WELL REFERENCE
- PROPOSED HORIZONTAL WELL
- ROAD
- STREAM CENTER LINE
- AS DRILLED

WELLS WITHIN 2,400'

- EXISTING WELLS
- PLUGGED WELLS

**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  
APPROX. LANDING POINT**  
UTM 17-NAD83  
N:4408897.51  
E:517622.40  
NAD27\_WV NORTH  
N:486970.562  
E:1636522.919

**PERMITTED  
APPROX. LANDING POINT**  
UTM 17-NAD83  
N:4408863.88  
E:517641.68  
NAD27\_WV NORTH  
N:486859.149  
E:1636584.349

**PERMITTED  
SURFACE HOLE LOCATION (SHL)**  
UTM 17-NAD83  
N:4409065.125  
E:518215.041  
NAD27\_WV NORTH  
N:487488.053  
E:1638476.814

**AS DRILLED  
SURFACE HOLE LOCATION (SHL)**  
UTM 17-NAD83  
N:4409064.98  
E:518215.10  
NAD27\_WV NORTH  
N:487487.572  
E:1638476.984

**Blue Mountain Inc.**  
11023 MASON DIXON HIGHWAY  
BURTON, WV 28562  
PHONE: (304) 662-6486

FILE #: MND9AHS-AS DRILLED  
DRAWING #: MNDS9AHS-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 #: MNDS9AHS-AS DRILLED  
API WELL #: 47 51 01625  
STATE COUNTY PERMIT

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

WATERSHED: CONNER RUN ELEVATION: 1232.55'  
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: 640.066±

DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE   
PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION  PLUG & ABANDON   
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