



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

May 03, 2013

WELL WORK PERMIT

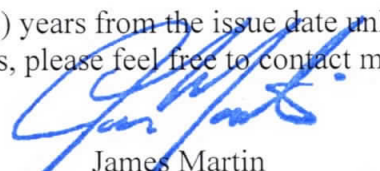
Horizontal 6A Well

This permit, API Well Number: 47-5101628, issued to NOBLE ENERGY, INC., is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.



James Martin
Chief

Operator's Well No: MNDS9EHS
Farm Name: CONSOLIDATION COAL COMPA
API Well Number: 47-5101628
Permit Type: Horizontal 6A Well
Date Issued: 05/03/2013

Promoting a healthy environment.

INSPECTORS PERMIT SUMMARY FORM

GPS YES [] NO []

DATE STARTED/LOCATION: _____ OPERATOR: NOBLE ENERGY, INC.
 DRILLING COMMENCED: _____ FARM: CONSOLIDATION COAL COMPANY
 TO DATE: _____ DEPTHS: _____ Well No: MNDS9EHS
 WATER DEPTHS: _____ COAL DEPTHS _____

QUESTIONS FOR THIS REPORT ARE IN ACCORDANCE OF WV CODE 22-6-30 AND REGULATIONS 35CSR 4-12.1 AND 35CSR 4-16 AND THE GENERAL WATER POLLUTION CONTROL PERMIT.

POINTS ARE TO BE GIVEN UP TO MAXIMUM AS SHOWN BASED ON PERFORMANCE.

1. DID OPERATOR GIVE PROPER NOTICE TO INSPECTOR BEFORE THE FOLLOWING:
 - A. CONSTRUCTION YES [] NO [] (2_PTS) (4_PTS) _____
 - B. DRILLING YES [] NO [] (2_PTS)
2. WAS THE TIMBER CUT, STACKED, AND BRUSH USED FOR SEDIMENT BARRIERS BEFORE DIRT WORK STARTED? YES [] NO [] (2_PTS) (4_PTS) _____
3. ARE ALL LOCATION AND/OR ROAD BANKS BEING SLOPED? YES [] NO [] (4_PTS) (4_PTS) _____
4. CONSTRUCTIONS:
WERE THE FOLLOWING SEDIMENT CONTROL STRUCTURES PROPERLY INSTALLED/MAINTAINED?
 - A. ROAD DITCHES (1)_ (2)_ (3)_ (4)_ (PTS) B. CROSS DRAINS (1)_ (2)_ (3)_ (4)_ (5)_ (PTS)
 - C. CULVERTS (1)_ (2)_ (3)_ (4)_ (5)_ (PTS) D. CREEK CROSSINGS (1)_ (2)_ (3)_ (PTS)
 - E. DIVERSION DITCHES (1)_ (2)_ (3)_ (PTS) F. BARRIERS (1)_ (2)_ (3)_ (PTS)
 - G. TEMPORARY SEEDING YES [] NO [] (10_PTS)

POINTS AVAILABLE FOR QUESTION 4: (33_PTS) _____

5. HAS TOP SOIL (IF ANY) BEEN STOCKED PILED? YES [] NO [] (2_PTS) (2_PTS) _____
6. IS THE PIT PROPERLY INSTALLED AND MAINTAINED? YES [] NO [] (9_PTS) (9_PTS) _____
7. RECLAMATION:
 - A. ROADWAY (1)_ (2)_ (3)_ (PTS) B. LOCATION (1)_ (2)_ (3)_ (PTS)
 - C. PITS (1)_ (2)_ (3)_ (PTS) D. PIPELINES (1)_ (2)_ (3)_ (PTS)
 - E. TANK DIKES (1)_ (2)_ (3)_ (PTS) F. API INSTALLED YES [] NO [] (3_PTS)
 - G. ADEQUATE SEEDING MATERIALS (1)_ (2)_ (3)_ (PTS)
 - H. WAS SEED BED ADEQUATE (1)_ (2)_ (3)_ (PTS)

POINTS AVAILABLE FOR QUESTION 7: (24_PTS) _____

8. WAS RECLAMATION COMPLETED WITHIN:
6 MTHS OF TD 6_PTS ONLY; 4 MTHS OF TD 12_PTS ONLY; 2 MTHS OF TD 19_PTS ONLY;

POINTS AVAILABLE FOR QUESTION 8: (19_PTS) _____

TOTAL MAXIMUM POSSIBLE SCORE OF 99.

TOTAL RECLAMATION SCORE: _____

DATE RELEASED

INSPECTOR'S SIGNATURE

PERMIT CONDITIONS

West Virginia Code § 22-6A-8(d) allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
2. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the fill material shall be within plus or minus 2% (unless soil test results show a greater range of moisture content is appropriate and 95% compaction can still be achieved) of the optimum moisture content as determined by the standard proctor density test, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort. Each lift must meet 95 % compaction of the optimum density based on results from the standard proctor density test of the actual soils used in specific engineered fill sites. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
3. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
4. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
5. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
W.VA. CODE §22-6A - WELL WORK PERMIT APPLICATION

1) Well Operator: Noble Energy, Inc. 494501907 Marshall Franklin Powhatan Point
 Operator ID County District Quadrangle

2) Operator's Well Number: MNDS 9 EHS Well Pad Name: MNDS 9

3 Elevation, current ground: 1221.03 Elevation, proposed post-construction: 1223'

4) Well Type: (a) Gas Oil _____
 Other _____
 (b) If Gas: Shallow Deep _____
 Horizontal

5) Existing Pad? Yes or No: YES(currently being built)

6) Proposed Target Formation(s), Depth(s), Anticipated Thicknesses and Associated Pressure(s):
Target - Marcellus, Depth - 6327', Thickness - 46', Pressure - 2912#

7) Proposed Total Vertical Depth: 6327'

8) Formation at Total Vertical Depth: Marcellus

9) Proposed Total Measured Depth: 15,971'

10) Approximate Fresh Water Strata Depths: 756'

11) Method to Determine Fresh Water Depth: Offset well data - Seneca Technology data base

12) Approximate Saltwater Depths: 1718'

13) Approximate Coal Seam Depths: Sewickley 667.4 - 670.7 and Pittsburgh - 756.9 - 762.8 We will be drilling into a Pillar

14) Approximate Depth to Possible Void (coal mine, karst, other): We will be drilling into a Pillar *See attached MSHA letter

15) Does land contain coal seams tributary or adjacent to, active mine? Yes - Mc Elroy Mine

16) Describe proposed well work: Drill the vertical depth to the Marcellus at an estimated total vertical depth of approximately 6,327 feet.
Drill Horizontal leg - stimulate and produce the Marcellus Formation.
If we should encounter an unanticipated void we will install casing at a minimum of 20' below the void but not more than 50' below the void, set a basket and grout to surface.

17) Describe fracturing/stimulating methods in detail:
The stimulation will be multiple stages divided over the lateral length of the well. Stage spacing is dependent upon engineering design. Slickwater fracturing technique will be utilized on each stage using sand, water, and chemicals.

18) Total area to be disturbed, including roads, stockpile area, pits, etc, (acres): 19.2 acres

19) Area to be disturbed for well pad only, less access road (acres): 10.0 acres (no access road using private CONSOL road)

20)

CASING AND TUBING PROGRAM

TYPE	Size	New or Used	Grade	Weight per ft.	FOOTAGE: For Drilling	INTERVALS: Left in Well	CEMENT: Fill -up (Cu. Ft.)
Conductor	20"	N	LS	52	40'	40'	CTS
Fresh Water	13 3/8"	N	J55	54.5	906'	906'	CTS / 15.6 ppg Yield 1.18
Coal	13 3/8"	N	J55	54.5	906'	906'	CTS / 15.6 ppg Yield 1.18
Intermediate	9 5/8"	N	J55	36.0	3725'	3725'	CTS / 15.6 ppg Yield 1.19
Production	5 1/2"	N	P110	20.0	15,971'	15,971'	TOC 200' above 9.625 shoe
Tubing							
Liners							

Handwritten: KLC
5-3-13

We would like to drill through all the freshwater and coal bearing zones into a more stable rock before setting casing. Once we set the casing string it will be circulated with cement to surface.

TYPE	Size	Wellbore Diameter	Wall Thickness	Burst Pressure	Cement Type	Cement Yield
Conductor	20"	26"	.25		Type 1	CTS
Fresh Water	13 3/8"	17 1/2"	.380	2730	Type 1	1.18
Coal	13 3/8"	17 1/2"	.380	2730	Type 1	1.18
Intermediate	9 5/8"	12 3/8"	.352	3520	Class A	1.19
Production	5 1/2"	8 3/4" & 8 1/2"	.361	12,640	Class A	1.27
Tubing						
Liners						

PACKERS

Kind:				
Sizes:				
Depths Set:				

Handwritten: MAY 9 5 2013

SI-01628

WW - 6B
(1/12)

21) Describe centralizer placement for each casing string. Conductor - No centralizers used. Fresh Water & Coal -
Fresh Water - "15.6 ppg Type 1 + 2% CaCl, 0.25# Lost Circ 20% Excess Yield = 1.18
Intermediate - "15.6ppg Class A +0.4% Ret, 0.15% Disp, 0.2% AntiFoam, 0.125#/sk Lost Circ 30% Excess Yield=1.19 To Surface
Production: "14.8ppg Class A 25:75:0 System +2.6% Cement extender, 0.7% Fluid Loss additive, 0.45% high temp retarder, 0.2% friction reducer
15% Excess Yield=1.27 TOC >= 200' above 9.625" shoe.

22) Describe all cement additives associated with each cement type. Conductor - 1.15% CaCl2.
Fresh Water - "15.6 ppg Type 1 + 2% CaCl, 0.25# Lost Circ 20% Excess Yield = 1.18
Intermediate - "15.6ppg Class A +0.4% Ret, 0.15% Disp, 0.2% AntiFoam, 0.125#/sk Lost Circ 30% Excess Yield=1.19 To Surface
Production: "14.8ppg Class A 25:75:0 System +2.6% Cement extender, 0.7% Fluid Loss additive, 0.45% high temp retarder, 0.2% friction reducer
15% Excess Yield=1.27 TOC >= 200' above 9.625" shoe.

23) Proposed borehole conditioning procedures. Conductor - The hole is drilled w/ air and casing is run in air. Apart from insuring
the hole is clean via air circulation at TD, there are no other conditioning procedures. Fresh Water -The hole is drilled w/air and casing
is run in air. Fill with KCl water once drilled to TD. Once casing is at setting depth, circulate a minimum of one hole volume prior to pumping cement.
Coal -The hole is drilled w/air and casing is run in air. Once casing is at setting depth, the hole is filled w/ KCl water and a
minimum of one hole volume is circulated prior to pumping cement. Intermediate - Once surface casing is set and cemented Intermediate hole is drilled either on air or SOBM and filled w/ KCl water once
drilled to TD. The well is conditioned with KCl circulation prior to running casing. Once casing is at setting depth, the well is circulated
a minimum of one hole volume prior to pumping cement. Production - The hole is drilled with synthetic oil base mud and
Once at TD, circulate at max allowable pump rate for at least 6x bottoms up. Once on bottom with casing, circulate a minimum of one hole volume prior to pumping cement.

*Note: Attach additional sheets as needed.

DmH
2-13-13

COB
2-13-13

Received
Office of Oil & Gas

FEB 19 2013

51-01628



DRILLING WELL PLAN
MND-9E-HS
Macellus Shale Horizontal
Marshall County, WV

Ground Elevation		1213'		MND-9E SHL (Lat/Long)		(487565.636N, 1638495.947E) (NAD27)			
Azm		324°		MND-9E LP (Lat/Long)		(488613.023N, 1639021.299E) (NAD27)			
WELLBORE DIAGRAM		MND-9E BHL (Lat/Long)		(495739.258N, 1634031.462E) (NAD27)					
HOLE	CASING	GEOLOGY	MD	TVD	MUD	CEMENT	CENTRALIZERS	CONDITIONING	COMMENTS
26	20" 52# LS	Conductor	40	40	AIR	To Surface	NA	Ensure the hole is clean at TD.	Conductor casing = 0.25" wall thickness
17 1/2	13 3/8" 54.5# J-55 BTC	Sewickly Coal Seam	673	673	AIR	15.6 ppg Type 1 + 2% CaCl, 0.25# Lost Circ 20% Excess Yield = 1.18	Bow Spring on first 2 joints then every third joint to 100' from surface	Fill with KCl water once drilled to TD. Once casing is at setting depth, circulate a minimum of one hole volume prior to pumping cement.	Conductor casing = 0.25" wall thickness
		Pittsburgh Coal	763	763					Surface casing = 0.380" wall thickness
		Base of Freshwater	756	756					Burst=2730 psi
		Int. Casing	906	906					
12 3/8	9-5/8" 36# J-55 LTC	Weir Sand	2451	2451	AIR	15.6ppg Class A +0.4% Ret, 0.15% Disp, 0.2% AntiFoam, 0.125#/sk Lost Circ 30% Excess Yield=1.19 To Surface	Bow spring centralizers every third joint to 100' feet from surface.	Fill with KCl water once drilled to TD. Once casing is at setting depth, circulate a minimum of one hole volume prior to pumping cement.	Intermediate casing = 0.352" wall thickness
		Berea Sand	2644	2644					Burst=3520 psi
		Gordon	2877	2877					
		Speechley	3607	3607					
		Int. Casing	3725	3725					
8.75" Vertical		Java		5086	8.0ppg - 9.0ppg SOBM	14.8ppg Class A 25:75:0 System +2.6% Cement extender, 0.7% Fluid Loss additive, 0.45% high temp retarder, 0.2% friction reducer	Rigid Bow Spring every third joint from KOP to TOC		
		Angola		5294					
		Rheinstreet		5859					
8.75" Curve	5-1/2" 20# HCP-110 TXP BTC	Sonyea		6156	12.0ppg-12.5ppg SOBM	15% Excess Yield=1.27	Rigid Bow Spring every joint to KOP	Once at TD, circulate at max allowable pump rate for at least 6x bottoms up. Once on bottom with casing, circulate a minimum of one hole volume prior to pumping cement.	Production casing = 0.361" wall thickness
		Cashaqua		6175					Burst=12640 psi
		Middlesex		6182					Note: Actual centralizer schedules may be changed due to hole conditions
		West River		6227					
		Burkett		6271					
		Tully Limestone		6298					
8.75" - 8.5" Lateral		Hamilton		6307	12.0ppg-12.5ppg SOBM	TOC >= 200' above 9.625" shoe			
		Marcellus		6327					
		TD	15971	6600					
		Onondaga		6391					

8.75 / 8.5 Hole - Cemented Long String
 5-1/2" 20# HCP-110 TXP BTC

+/-8700 ft Lateral

TD @ +/-6600 TVD
 +/-15971 MD

X=centralizers

MAR 22 2018

WW-9
Rev. 1/12

API No. 47 - 051 - 01628
Operator's Well No. MNDS 9 EHS

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM
GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE

Operator Name Noble Energy, Inc. OP Code 494501907

Watershed Conner Run Quadrangle Powhatan Point

Elevation 1221.03 County Marshall District Franklin

Description of anticipated Pit Waste: None - Closed loop system

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No

Will a synthetic liner be used in the pit? n/a. If so, what mil.? _____

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number _____)
- Reuse (at API Number next anticipated well)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain _____)

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. Top Hole Air, Freshwater/Bottom Hole Synthetic Oil Based Mud.
-If oil based, what type? Synthetic, petroleum, etc. Synthetic

Additives to be used? Bactericide, polymers, and weighting agents

Will closed loop system be used? Yes

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. All cuttings will be taken off site to an approved facility
-If left in pit and plan to solidify what medium will be used? Cement, lime,

-Landfill or offsite name/permit number? See attachment - Site Water/Cuttings Disposal

*DMH
2-13-13
Curt
2-13-13*

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature Laura Adkins

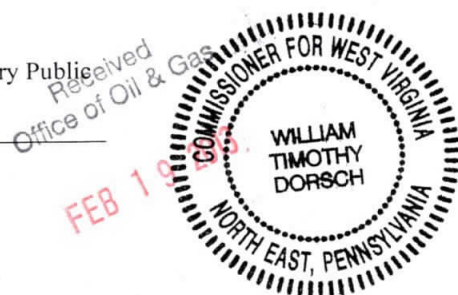
Company Official (Typed Name) Laura Adkins

Company Official Title Regulatory Analyst

Subscribed and sworn before me this 4th day of February, 2013

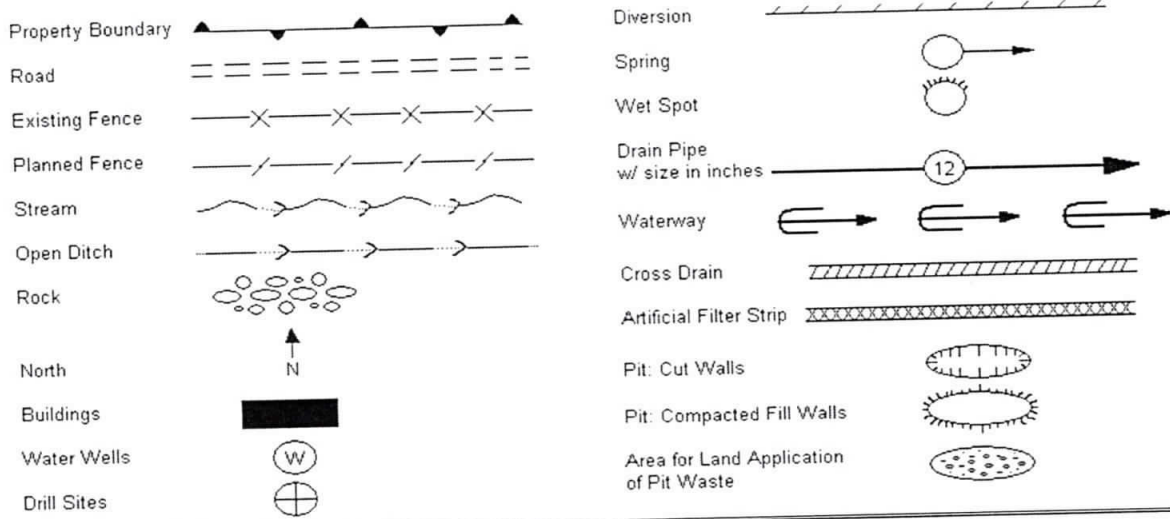
William T. Dorsch Notary Public

My commission expires 14 June 2016



WW-9
Rev. 1/12

API No. 47 - 051 - 01628
Operator's Well No. MNDS 9 EHS



Proposed Revegetation Treatment: Acres Disturbed 19.2 Prevegetation pH _____

Lime 2 to 3 tons Tons/acre or to correct to pH _____

Fertilizer (10-20-20 or equivalent) 500 lbs/acre (500 lbs minimum)

Mulch hay or straw at 2 tons Tons/acre

Seed Mixtures

Seed Type	Area I lbs/acre	Seed Type	Area II lbs/acre
Tall Fescue	40	Tall Fescue	40
Ladino Clover	5	Ladino Clover	5

Attach:
Drawing(s) of road, location, pit and proposed area for land application.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: [Signature]

Comments: _____

Title: Oil and Gas Inspector Date: 2-13-13

Field Reviewed? Yes No

Received
Office of Oil & Gas
FEB 19 2013

SI-01628



Site Safety Plan

Noble Energy, Inc.
Moundsville 9 EHS

January 2013: Version 1

For Submission to
West Virginia Department of Environmental Protection,
Office of Oil and Gas

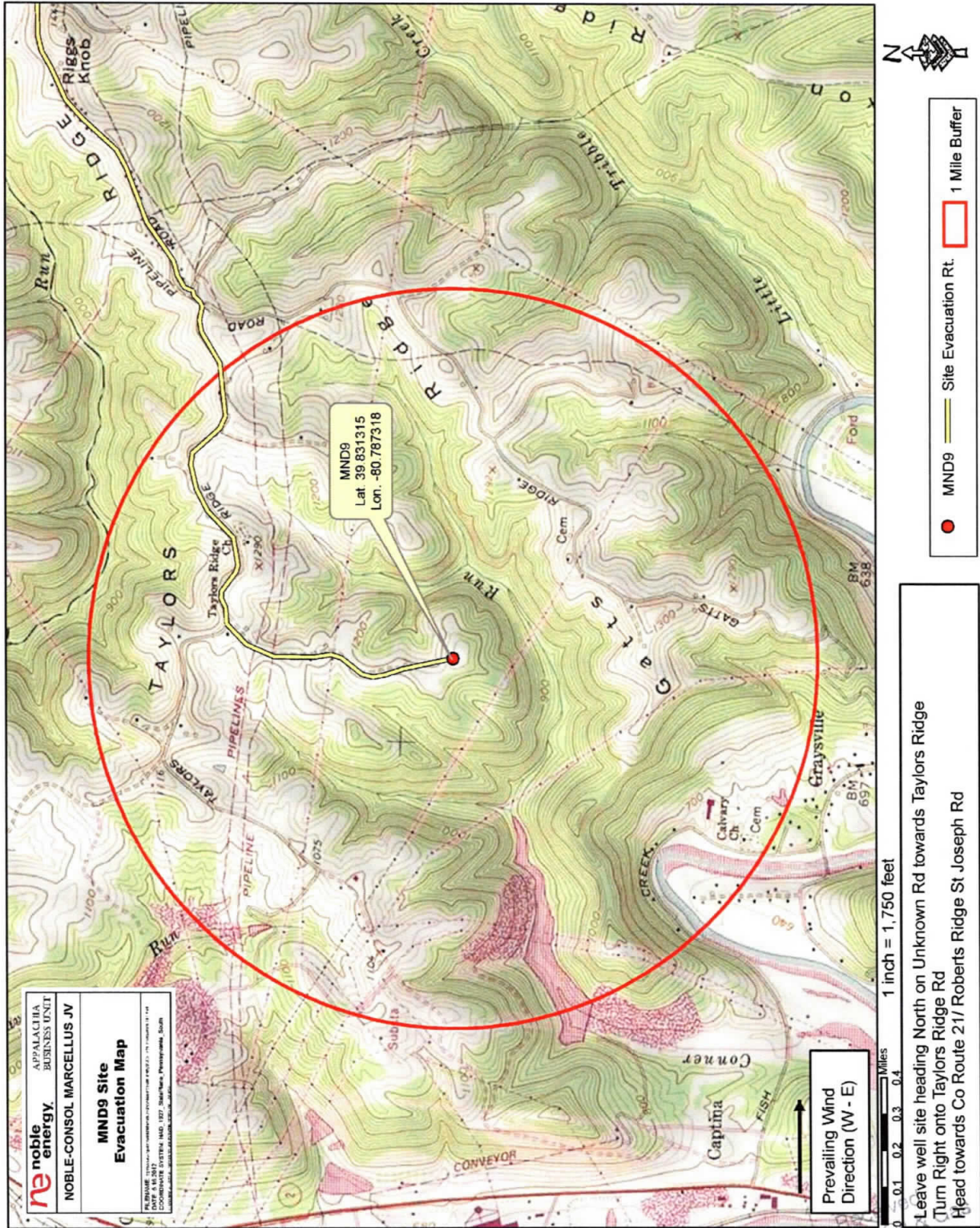
Noble Energy, Inc.
Appalachia Offices
333 Technology Drive, Suite 116
Canonsburg, PA 15317-9504

Dmit
2-13-13

Received
Office of Oil & Gas

[Signature]
2-13-13
FEB 19 2013

Site Safety Plan, Moundville 9 EHS Well



Office of...
FEB 19 2013

Well is located on topo map 659' feet south of Latitude: 39° 50' 00"

Well is located on topo map 10,474' feet west of Longitude: 80° 45' 00"

SURFACE HOLE LOCATION (SHL)

UTM 17-NAD83
N:4409088.858
E:518220.475
 NAD27, WV NORTH
 N:487565.636
 E:1638495.947

APPROX. LANDING POINT

UTM 17-NAD83
N:4409410.62
E:518375.20
 NAD27, WV NORTH
 N:488613.023
 E:1639021.299

BOTTOM HOLE LOCATION (BHL)

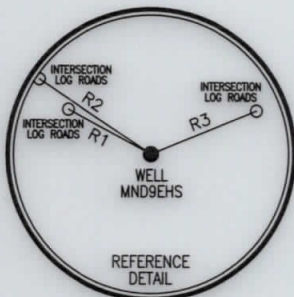
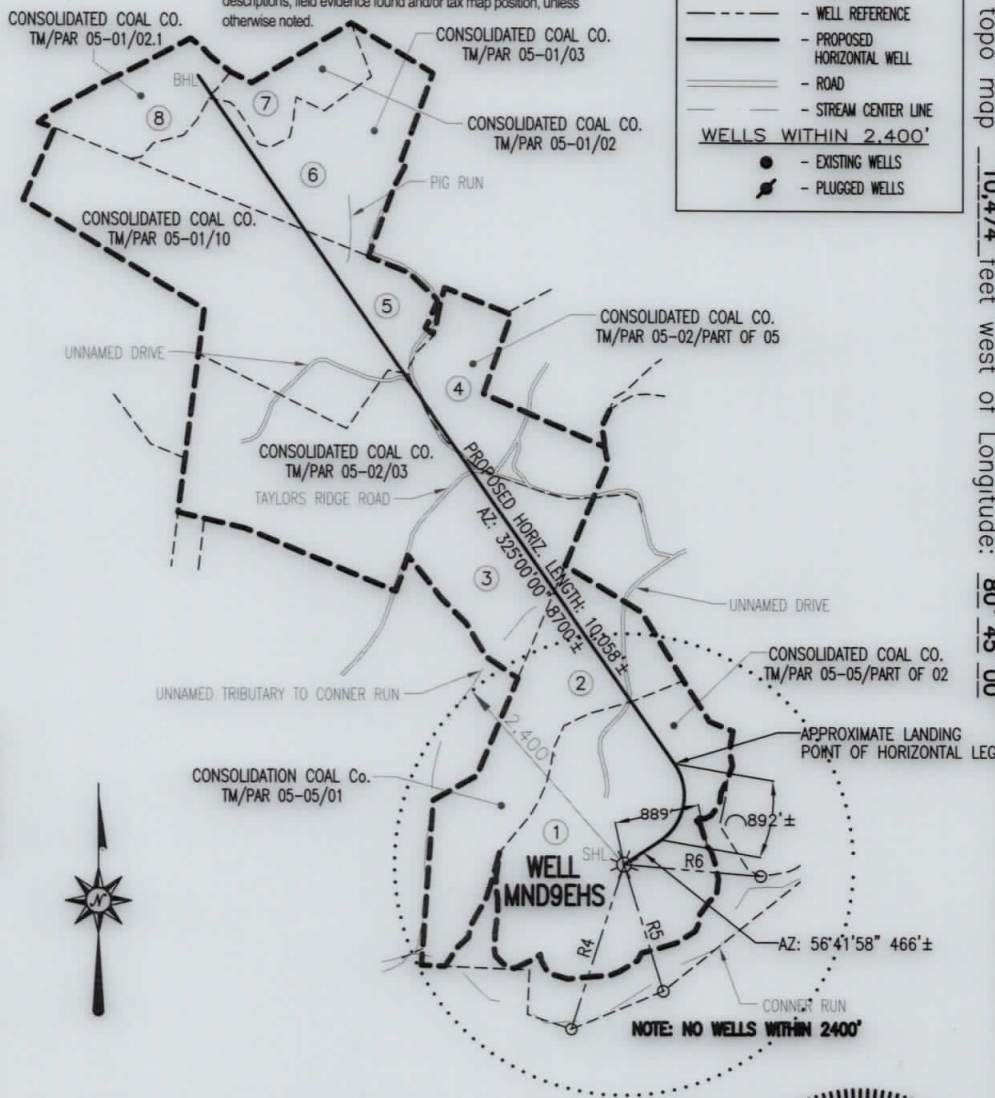
UTM 17-NAD83
N:4411556.23
E:516818.75
 NAD27, WV NORTH
 N:495739.258
 E:1634031.462

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

- TOPO MAP POINT
- WELL
- ALL ARE POINTS UNLESS OTHERWISE NOTED.
- WATER SOURCE
- MINERAL TRACT BOUNDARY
- PARCEL LINES
- WELL REFERENCE
- PROPOSED HORIZONTAL WELL
- ROAD
- STREAM CENTER LINE
- WELLS WITHIN 2,400'
- EXISTING WELLS
- PLUGGED WELLS



LINE	BEARING	DISTANCE
R1	N 84°26'59" W	200.32'
R2	N 72°14'08" W	275.73'
R3	N 85°34'08" E	211.70'
R4	S 17°49'20" W	1798.66'
R5	S 17°19'01" E	1376.87'
R6	S 85°16'24" E	1434.80'

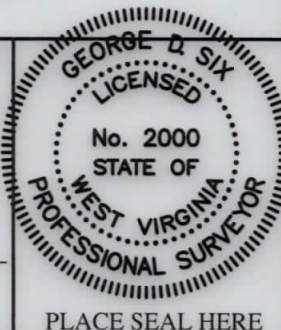


Blue Mountain Engineering
 11023 MASON DIXON HIGHWAY
 BURTON, WV 26562
 PHONE: (304) 662-6486

FILE #: MND9EHS
 DRAWING #: MND9EHS
 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: MARCH 6, 2013
 OPERATOR'S WELL #: MND9EHS
 API WELL #: 47 51 01628 H6A
 STATE COUNTY PERMIT

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

WATERSHED: CONNER RUN ELEVATION: 1218.78'

COUNTY/DISTRICT: MARSHALL / FRANKLIN QUADRANGLE: POWHATAN POINT, WV-OH 7.5'

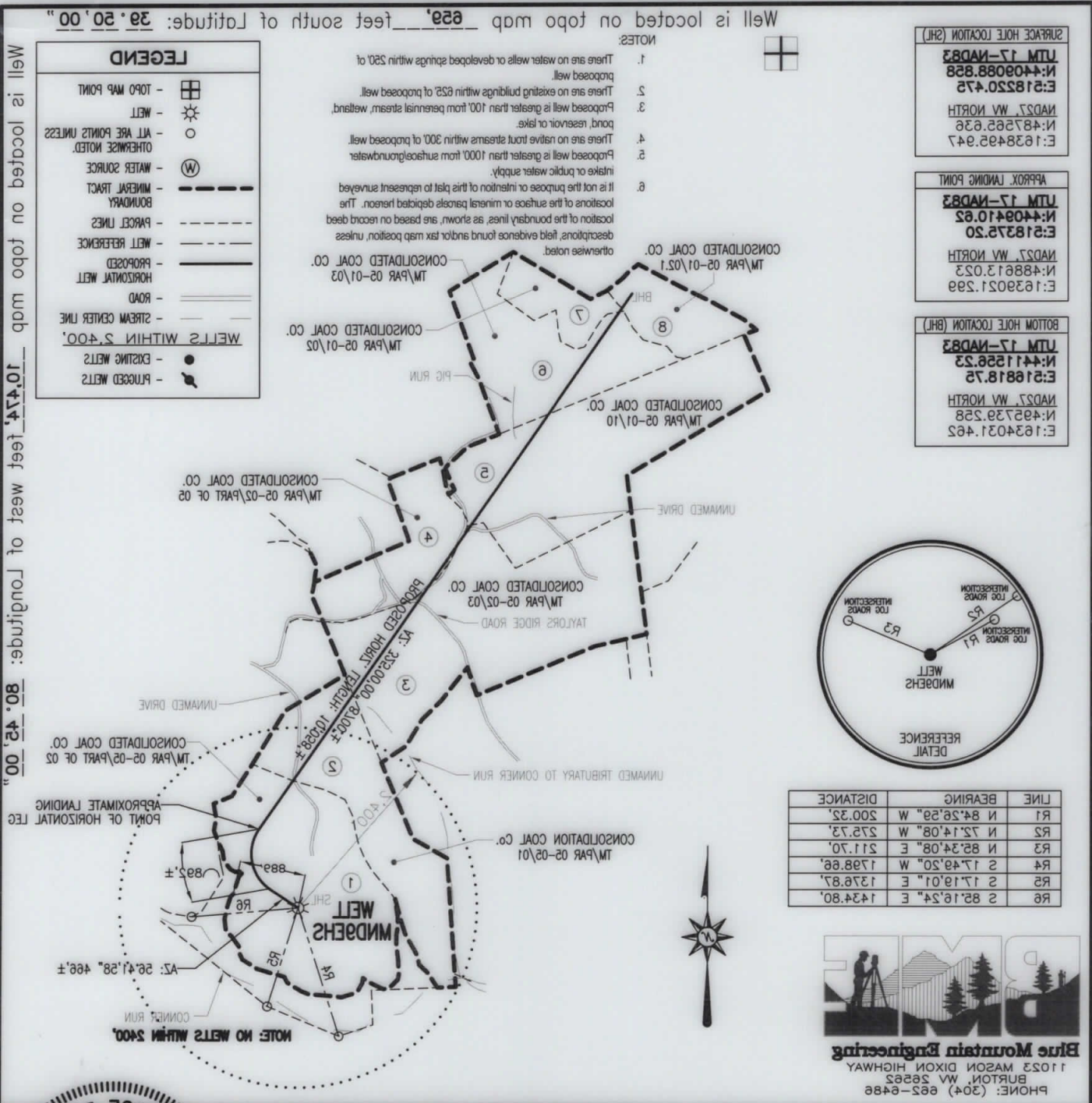
SURFACE OWNER: CONSOLIDATION COAL COMPANY ACREAGE: 123.244±

OIL & GAS ROYALTY OWNER: SEE ATTACHED WW-6A1 ACREAGE: 653.407±

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: 15,971'±

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



Well is located on top map 39.50'00" west of Longitude: 80.42.00" and 10.47.44" feet west of Longitude: 80.42.00"

SURFACE HOLE LOCATION (SH)
UTM 17-ND83 E: 218250.475 N: 440888.888
APPROX. LANDING POINT
UTM 17-ND83 E: 218375.20 N: 440410.82
BOTTOM HOLE LOCATION (BH)
UTM 17-ND83 E: 218818.75 N: 441588.23



LINE	BEARING	DISTANCE
R1	N 84°28'29" W	200.32'
R2	N 72°14'08" W	278.73'
R3	N 85°34'08" E	211.70'
R4	S 17°49'20" W	178.88'
R5	S 17°19'01" E	137.87'
R6	S 85°16'24" E	143.80'

Blue Mountain Engineering
 11023 MASON DIXON HIGHWAY
 BURTON, WV 25822
 PHONE: (304) 682-6486



I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAN 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

FILE #: MND825
 DRAWING #: MND825
 SCALE: 1" = 200'
 MINIMUM DEGREE OF ACCURACY: 1/2500
 PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT THOMAS 1498.81'

DATE: MARCH 6, 2013
 OPERATOR'S WELL #: MND825
 API WELL #: 47
 STATE COUNTY PERMIT 01258 HRA

WELL TYPE: Gas Liquid Injection Oil Waste Disposal
 Shallow Storage Production Deep

WATERSHED: CONNER RUN
 COUNTY/DISTRICT: MARSHALL \ FRANKLIN
 SURFACE OWNER: CONSOLIDATION COAL COMPANY
 OIL & GAS ROYALTY OWNER: SEE ATTACHED WW-6A1

TARGET FORMATION: MARCELLUS
 ESTIMATED DEPTH: TVD: 6,600' ± TMD: 12,971' ±
 CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY):
 DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG & ABANDON

CITY: CHARLESTON STATE: WV ZIP CODE: 25301
 WELL OPERATOR: NOBLE ENERGY INC. ADDRESS: 333 TECHNOLOGY DRIVE
 DESIGNATED AGENT: STEVEN M. GREEN
 ADDRESS: 500 VIRGINIA STREET EAST, UNITED CENTER SUITE 1001
 CITY: CHARLESTON STATE: WV ZIP CODE: 25301

WW-6AC
(1/12)

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE CERTIFICATION

Date of Notice Certification: 2/8/13

API No. 47- 051 - 01628
Operator's Well No. MNDS 9 EHS
Well Pad Name: MNDS 9

Notice has been given:

Pursuant to the provisions in West Virginia Code § 22-6A, the Operator has provided the required parties with the Notice Forms listed below for the tract of land as follows:

State: <u>West Virginia</u>	UTM NAD 83	Easting: <u>518215.041</u>
County: <u>Marshall</u>		Northing: <u>4409065.125</u>
District: <u>Franklin</u>	Public Road Access: <u>Fish Creek Road</u>	
Quadrangle: <u>Powhatan Point</u>	Generally used farm name: <u>Consol</u>	
Watershed: <u>Conner Run</u>		

Pursuant to West Virginia Code § 22-6A-7(b), every permit application filed under this section shall be on a form as may be prescribed by the secretary, shall be verified and shall contain the following information: (14) A certification from the operator that (i) it has provided the owners of the surface described in subdivisions (1), (2) and (4), subsection (b), section ten of this article, the information required by subsections (b) and (c), section sixteen of this article; (ii) that the requirement was deemed satisfied as a result of giving the surface owner notice of entry to survey pursuant to subsection (a), section ten of this article six-a; or (iii) the notice requirements of subsection (b), section sixteen of this article were waived in writing by the surface owner; and Pursuant to West Virginia Code § 22-6A-11(b), the applicant shall tender proof of and certify to the secretary that the notice requirements of section ten of this article have been completed by the applicant.

<p>Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:</p> <p>*PLEASE CHECK ALL THAT APPLY</p> <p><input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED</p> <p><input type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input checked="" type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or</p> <p style="padding-left: 100px;"><input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)</p> <p><input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION</p> <p><input checked="" type="checkbox"/> 5. PUBLIC NOTICE</p> <p><input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION</p>	<p style="text-align: center;">OOG OFFICE USE ONLY</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input checked="" type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input checked="" type="checkbox"/> RECEIVED</p> <p><input checked="" type="checkbox"/> RECEIVED</p> <p><input checked="" type="checkbox"/> RECEIVED</p>
--	---

Required Attachments:

The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication date verification or the associated Affidavit of Publication. The attached Notice Forms and Certifications of Notice shall serve as proof that the required parties have been notified as required under West Virginia Code § 22-6A. Pursuant to West Virginia Code § 22-6A-11(b), the Certification of Notice to the person may be made by affidavit of personal service, the return receipt card or other postal receipt for certified mailing.

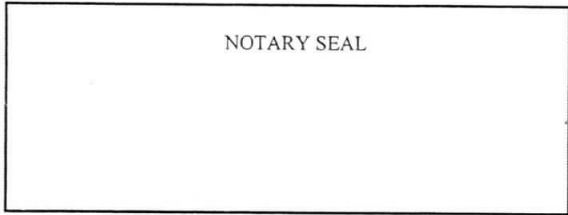
FEB 19 2013

WW-6AC
(1/12)

Certification of Notice is hereby given:

THEREFORE, I Laura Adkins, have read and understand the notice requirements within West Virginia Code § 22-6A. I certify that as required under West Virginia Code § 22-6A, I have served the attached copies of the Notice Forms, identified above, to the required parties through personal service, by registered mail or by any method of delivery that requires a receipt or signature confirmation. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Notice Certification and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator:	<u>Noble Energy, Inc.</u>	Address:	<u>333 Technology Drive, Suite 116</u>
By:	<u>Laura Adkins</u>		<u>Canonsburg, PA 15317</u>
Its:	<u>Regulatory Analyst</u>	Facsimile:	<u>724-820-3098</u>
Telephone:	<u>724-820-3061</u>	Email:	<u>ladkins@nobleenergyinc.com</u>



Subscribed and sworn before me this 4th day of February.
Maria A. Yanni Notary Public

My Commission Expires COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Maria A. Yanni, Notary Public
Cecil Twp., Washington County
My Commission Expires May 10, 2015
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

Received
Office of Oil & Gas
FEB 19 2013

WW-6A
(1-12)

API NO. 47-051 - 01628
OPERATOR WELL NO. MNDS 9 EHS
Well Pad Name: MNDS 9

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF APPLICATION

Notice Time Requirement: notice shall be provided no later than the **filing date of permit application.**

Date of Notice: 2/16/13 Date Permit Application Filed: 2/16/13

Notice of:

- PERMIT FOR ANY WELL WORK CERTIFICATE OF APPROVAL FOR THE CONSTRUCTION OF AN IMPOUNDMENT OR PIT

Delivery method pursuant to West Virginia Code § 22-6A-10(b)

- PERSONAL SERVICE REGISTERED MAIL METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

Pursuant to W. Va. Code § 22-6A-10(b), no later than the filing date of the application, the applicant for a permit for any well work or for a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner.

Notice is hereby provided to:

SURFACE OWNER(s)
Name: Consolidation Coal Company
Address: 1000 Consol Energy Drive
Canonsburg, PA 15317

Name: _____
Address: _____

SURFACE OWNER(s) (Road and/or Other Disturbance)
Name: _____
Address: _____
Name: _____
Address: _____

SURFACE OWNER(s) (Impoundments/Pits)
Name: _____
Address: _____

COAL OWNER OR LESSEE
Name: Consolidation Coal Company
Address: 1000 Consol Energy Drive
Canonsburg, PA 15317

COAL OPERATOR
Name: Consolidation Coal Company
Address: 1000 Consol Energy Drive
Canonsburg, PA 15317

WATER PURVEYOR(s)
Name: none
Address: _____

OPERATOR OF ANY NATURAL GAS STORAGE FIELD
Name: _____
Address: _____

*Please attach additional forms if necessary

Received
Office of Oil & Gas
FEB 19 2013

WW-6A
(1-12)

API NO. 47-051 -
OPERATOR WELL NO. MNDS 9 EHS
Well Pad Name: MNDS 9

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-10(b), notice is hereby given that the undersigned well operator has applied for a permit for well work or for a certificate of approval for the construction of an impoundment or pit.

This Notice Shall Include:

Pursuant to W. Va. Code § 22-6A-10(b), this notice shall include: (1) copies of the application; (2) the erosion and sediment control plan required by section seven of this article; and (3) the well plat.

Pursuant to W. Va. Code § 22-6A-10(f), this notice shall also include: (1) a statement of the time limits for filing written comments; (2) who may file written comments; (3) the name and address of the secretary for the purpose of filing the comments and obtaining additional information; and (4) a statement that the persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Water Well Testing:

Pursuant to West Virginia Code § 22-6A-10(d), notification shall be made, with respect to surface landowners identified in subsection (b) or water purveyors identified in subdivision (5), subsection (b) of this section, of the opportunity for testing their water well.

Water Testing Laboratories:

Pursuant to West Virginia Code § 22-6A-10(i), persons entitled to notice pursuant to subsection (b) of this section may contact the department to ascertain the names and locations of water testing laboratories in the subject area capable and qualified to test water supplies in accordance with standard accepted methods. In compiling that list of names the department shall consult with the state Bureau for Public Health and local health departments.

Well Location Restrictions

Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No well pad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, nothing contained in this section prevents an operator from conducting the activities permitted or authorized by a Clean Water Act Section 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state or within the restricted areas referenced in this section. (d) The well location restrictions set forth in this section shall not apply to any well on a multiple well pad if at least one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 31, 2012, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items examined in the study required by this subsection, the secretary shall have the authority to propose for promulgation legislative rules establishing guidelines and procedures regarding reasonable levels of noise, light, dust and volatile organic compounds relating to drilling horizontal wells, including reasonable means of mitigating such factors, if necessary.

Revised 6/2008
Checked by C. G. G.
FEB 1 8 2010

WW-6A
(1-12)

API NO. 47- 051 -
OPERATOR WELL NO. MNDS 9 EHS
Well Pad Name: MNDS 9

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-10(b), notice is hereby given that the undersigned well operator has applied for a permit for well work or for a certificate of approval for the construction of an impoundment or pit.

This Notice Shall Include:

Pursuant to W. Va. Code § 22-6A-10(b), this notice shall include: (1) copies of the application; (2) the erosion and sediment control plan required by section seven of this article; and (3) the well plat.

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WW-6A
(1-12)

API NO. 47-051 -
OPERATOR WELL NO. MNDS 9 EHS
Well Pad Name: MNDS 9

Notice is hereby given by:

Well Operator: Noble Energy, Inc. *Laura Belkum* Address: 333 Technology Drive, Suite 116
Telephone: 724-820-3061 Canonsburg, PA 15317
Email: ladkins@nobleenergyinc.com Facsimile: 724-820-3098

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at deprivacyofficer@wv.gov.

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FEB 19 2013

1/2/2

1/2/2

CAS Number

Chemical Name

Product Use

Product Name

<u>Product Name</u>	<u>Product Use</u>	<u>Chemical Name</u>	<u>CAS Number</u>	
Intermediate	Antifoam	Fuller's earth (attapulgitite)	8031-18-3	
		Polypropylene glycol	25322-69-4	
	Polyester Flake	polyethylene terephthalate	25038-59-9	
	Retarder	Sodium lignosulfonate	8061-51-6	
		Calcium lignosulfonate	8061-52-7	
	Solid Dispersant	sulphonated synthetic polymer	proprietary	
		formaldehyde (impurity)	50-00-0	
	<u>SPACER</u>			
	D020	bentonite extender	bentonite	1302-78-9
	D130	polyester flake - lcm	polyethylene terephthalate	25038-59-9

Production	Bentonide Extender	Bentonite	1302-78-9	
	Dispersant	Sodium Polynaphthalene sulfonate	9008-63-3	
		Sodium Sulfate	7757-82-6	
	Antifoam	Fuller's earth (attapulgitite)	8031-18-3	
		Polypropylene glycol	25322-69-4	
	Retarder	Sodium lignosulfonate	8061-51-6	
		Calcium lignosulfonate	8061-52-7	
	Fluid Loss	Aliphatic amide polymer	proprietary	
		sulfonated organic polymer	proprietary	
	MUSPUSH* II Spacer	glucoside polymer	proprietary	
		barium sulfate	7727-43-7	
	barite	fatty acid amine	proprietary	
		ethoxylated alcohol	proprietary	
		glycerol	56-81-5	
	B220	surfactant	2,2'-Iminodiethanol	111-42-2

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Office of Oil & Gas

EPB 19 2013

CONSTRUCTION AND EROSION & SEDIMENT CONTROL PLANS

MND9HS WELL SITE

MARSHALL COUNTY,
WEST VIRGINIA

FOR NOBLE ENERGY INC



APPROVED
WVDEP OOG
SAY 9/21/12

LOCATION MAP
1500' 0 2000' 4000'
SCALE

PROJECT NO. 1218013
SUBMITTED: APRIL 10, 2012
REVISED: SEPTEMBER 18, 2012

DIEFFENBAUCH & HRITZ



DRAWING NO	TITLE
1	TITLE SHEET
2-3	GENERAL NOTES
4	EXISTING SITE PLAN
5	OVERALL SITE PLAN
6	PROPOSED SITE PLAN
7	ACCESS ROAD PROFILE
8	SOIL PLAN
9	SITE RESTORATION PLAN
10	TYPICAL SECTIONS
11-12	BASELINE DATA
13	QUANTITY SUMMARY

