



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

August 29, 2013

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-5101571, 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.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. The above named operator will also file, as required in WV Code 22-6-23, an affidavit on form WR-38 by two experienced persons in the operator's employment and the Oil and Gas inspector that the work authorized under this permit was performed and a description given. Failure to abide by all statutory and regulatory provisions governing all duties and operations here under may result in suspensions or revocation of this permit and in addition may result in civil and/or criminal penalties being imposed upon the operator.

This permit will expire in two (2) years from date of issue. If there are any questions, please free to contact me at (304) 926-0499 ext. 1654.

James Martin
Chief

Operator's Well No: MND9DHS
Farm Name: CONSOLIDATION COAL COMPA
API Well Number: 47-5101571
Permit Type: Plugging
Date Issued: 08/29/2013

Promoting a healthy environment.

1) Date: July 23, 2013
2) Operator's Well Number
MND9DHS
3) API Well No.: 47 - 51 - 1571

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL

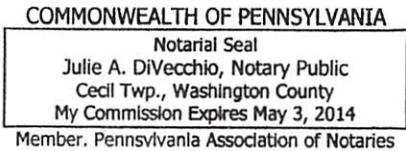
4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Consolidation Coal Company</u> <i>W</i>	Name <u>Consolidation Coal Company</u> <i>W</i>
Address <u>1000 Consol Energy Drive</u>	Address <u>1000 Consol Energy Drive</u>
<u>Canonsburg, PA 15317</u>	<u>Canonsburg, PA 15317</u>
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name _____
	Address _____
(c) Name _____	Name _____
Address _____	Address _____
6) Inspector <u>Bill Hendershot</u>	(c) Coal Lessee with Declaration
Address <u>403 James Street</u>	Name _____
<u>Mannington, WV 26582</u>	Address _____
Telephone <u>304-206-7750</u>	

TO THE PERSONS NAMED ABOVE: You should have received this Form and the following documents:

- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
- (2) The plat (surveyor's map) showing the well location on Form WW-6.

The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverse side. However, you are not required to take any action at all.

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to the well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, and the plat have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Chief.



Well Operator Noble Energy, Inc.
 By: Dee Swiger *Dee Swiger*
 Its: Regulatory Analyst
 Address 333 Technology Drive, Suite 116
Canonsburg, PA 15317
 Telephone 3724-820-3061

Received

JUL 31 2013

Subscribed and sworn before me this 26th day of July 2013
Julie A. DiVecchio Notary Public
 My Commission Expires May 3, 2014

Office of Oil and Gas
 WV Dept. of Environmental Protection

Oil and Gas Privacy Notice

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a 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 depprivacyoffier@wv.gov.

1) Date July 23, 2013
2) Operator's
Well No. MND9DHS
3) API Well No. 47-051 - 01571

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

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

4) Well Type: Oil ___ / Gas X / Liquid injection ___ / Waste disposal ___ /
(If "Gas, Production X or Underground storage ___) Deep X / Shallow ___

5) Location: Elevation 1221.03 Watershed Conner Run
District Franklin County Marshall Quadrangle Powhatan Point

6) Well Operator Noble Energy, Inc 7) Designated Agent Steven M. Greene
Address 333 Technology Drive, Suite 116 Address 500 Virginia Street East
Canonsburg, PA 15317 Charleston, WV 25301

8) Oil and Gas Inspector to be notified 9) Plugging Contractor
Name Bill Hendershot Name Schlumberger
Address 403 James Street Address 4600 J Barry Court Suite 200
Mannington, WV 26582 Canonsburg, PA 15317

10) Work Order: The work order for the manner of plugging this well is as follows:
see attached sheets.

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Office of Oil and Gas
WV Dept. of Environmental Protection

Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

Work order approved by inspector _____ Date _____

PLUGGING PROGNOSIS

MND-9D

Marshall, COUNTY, WEST VIRGINIA
API # 47-510-1571

BY: Michael Abendschein & Jarred Inman
DATE: 7/11/2013

CURRENT STATUS:

Elevation: 1219.5'
20" Conductor @ 40'
17.5" Hole TD @ 1228'
13 3/8" Csg @ 1208.1'
TOC at Surface in csg annulus
TOC Inside Csg- 1079'

Oil Shows @ n/a

Gas shows none reported

Stimulation: Well not completed.

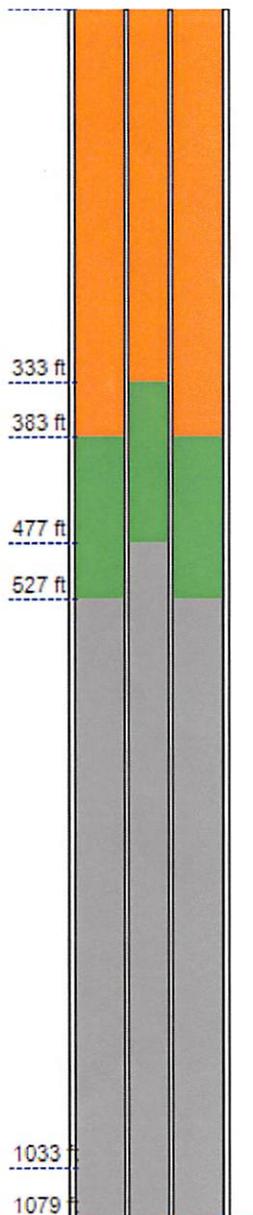
1. Notify State Inspector prior to commencing operations.
2. TIH w/ 1000' of tbg stinger (2-7/8" O.D 6.5#/ft) on 4.5" DP to 1075', Circulate bottoms up.
 - Rabbit tubing when picking it up.
3. Set Plug #1- 539' Balanced Cement Plug @1079'-540'. (91.7 Bbls)
4. TOO H to 500' at 30'/min then circulate while waiting on cement
5. Set Plug #2 (91.8 bbls) Balanced Cement Plug to ground level Plug set from (540'-GL).
6. TOO H @ 30'/min. Top off as needed
7. Circulate tubing clean in cellar. Pump cellar out after cleaning.
8. Cut depth for casing cap 3-4 feet below ground level and install abandonment cap.
9. Cement Cellar to be even with ground level.
10. Get monument ready and leave in cellar to be installed after operations in pad are finalized. As per WV-DEP Specifications, monument has to extend at least 3 feet above ground level with a plate reading: Noble Energy Well MND-9D. API 47-510-1571

GS
8/8/13

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WV Dept. of Environmental Protection



WELL DATA



Well Data	
Job Type:	Abandonment Plug
Rig Type:	Land
Total Depth (Measured):	1080 ft
True Vertical Depth (TVD):	1080 ft
TOC in pipe before POOH:	476.9 ft
TOC in annulus before POOH:	526.7 ft

Open Hole			
Bottom Depth	Mean Calliper Diameter	Mean Excess	Mean Equiv. Diameter
1080 ft	17.5 in	0 %	17.932 in

Drill Pipe			
Bottom Measured Depth	OD	ID	Weight
1079 ft	4 in	3.34 in	0 lbm/ft

Casing			
Bottom Measured Depth	OD	ID	Weight
1079 ft	13.375 in	12.615 in	0 lbm/ft

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FLUIDS DATA

Fluids Data							
Name	Type	Density, lbm/gal	Model	Consistency, lbf.s ⁿ /100ft ²	Power Index	Ty, lbf/100ft ²	Gel Strength, lbf/100ft ²
Mud	MUD	8.3	Newtonian	0.01044	1	0	0
Spacer	SPACER	8.6	Bingham	0.02715	1	1	0
Cement	SLURRY	14.5	Bingham	0.03759	1	26	0

PLACEMENT VOLUMES

Placement Summary	
Volume Optimization	Underdisplacement Sensitivity Mode
Plug Length	539 ft
Plug top MD after POOH	540 ft
Plug Volume	83.32 bbl
Original Fluid	Mud
Underdisplacement Volume	0.5 bbl
Drill Pipe Volume	11.69 bbl

Fluid Sequence						
Name	Balanced	Volume, bbl	Annular Length, ft	Top MD, ft	Density, lbm/gal	Length, ft
Mud		53.2	382.8	0	8.3	382.8
Spacer		20	143.8	382.8	8.6	143.8
Cement		76.8	552.3	526.7	14.5	552.3
Cement		0.5	0	1032.9	14.5	46.1
Cement		6	0	476.9	14.5	555.9
Spacer		1.6	0	333.1	8.6	143.8
Mud		3.6	0	0	8.3	333.1

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 WV Dept. of Environmental Protection

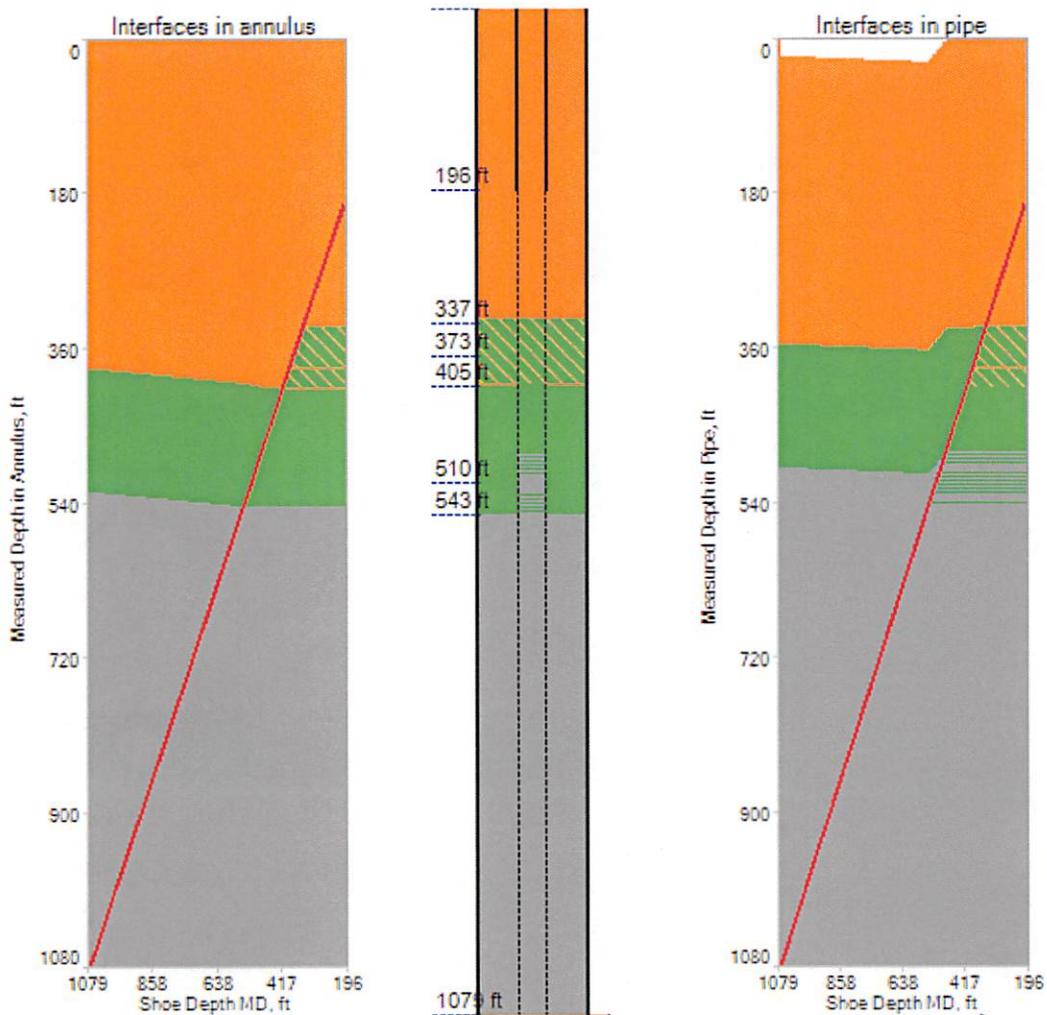


STATIC PULL OUT OF HOLE (POOH)

POOH Summary

Final drill pipe shoe depth after POOH:	196.16 ft
Length of uncontaminated cement after POOH:	536.28 ft
Length of contaminated cement after POOH:	63.51 ft
Top MD of uncontaminated cement after POOH:	542.72 ft

POOH Simulation Results



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 WV Dept. of Environmental Protection
Schlumberger

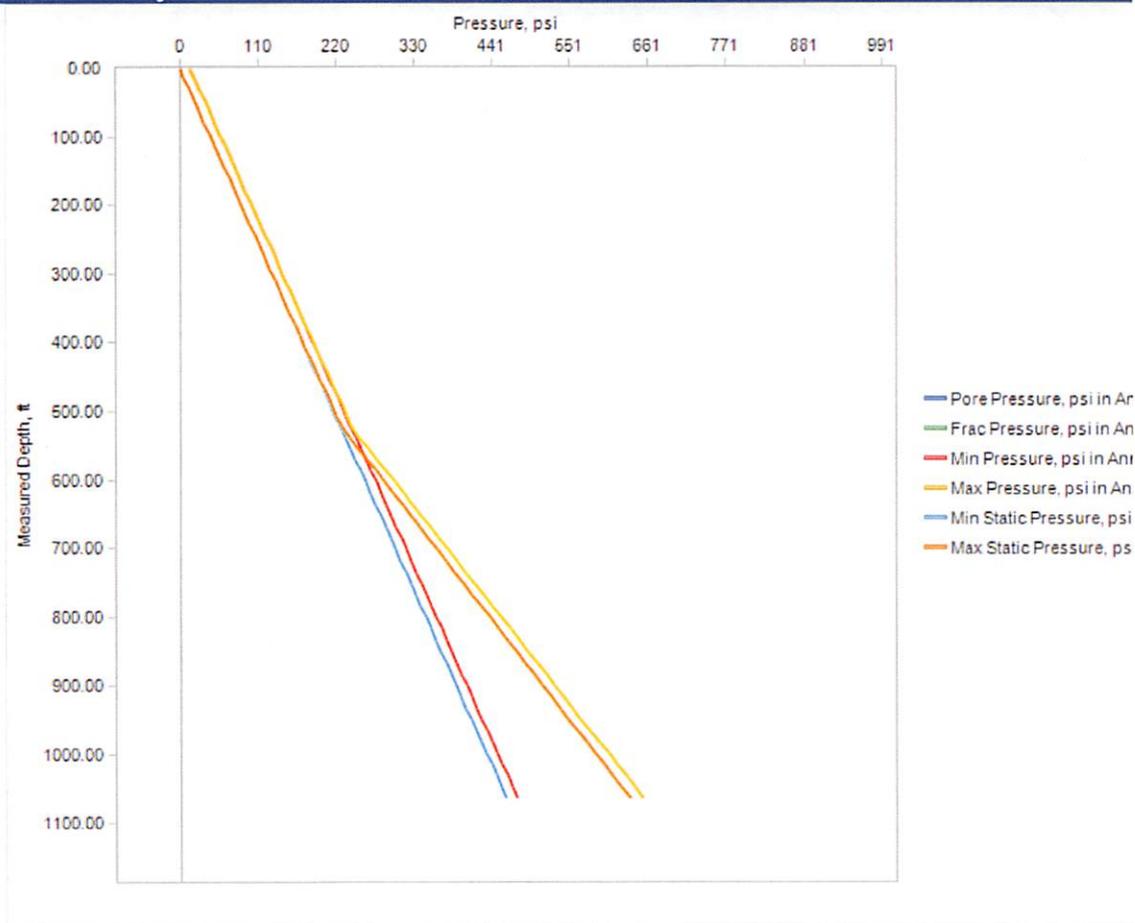


PLACEMENT

Pumping Schedule

Fluid Name	Flow Rate, bbl/min	Volume, bbl	Time, min	Backpressure, psi	Cumulative Time, min
Spacer	3	20	6.67	0	6.67
Cement	3	77.3	25.77	0	32.43
Cement	3	6.02	2.01	0	34.44
Spacer	3	1.56	0.52	0	34.96
Mud	3	3.61	1.2	0	36.16

Well Security



Dynamic Well Security	Pore	Min annular pore security 27.6% (104.4psi) at MD = 1080ft.
	Frac	Min annular frac security 27.4% (251.4psi) at MD = 1080ft.
Static Well Security	Pore	Min annular static pore security 23.8% (89.9psi) at MD = 1080ft.
	Frac	Min annular static frac security 29.5% (270.7psi) at MD = 1080ft.

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: closed loop

Will a synthetic liner be used in the pit? na

Proposed Disposal Method For Treated Pit Wastes:

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

Proposed Work For Which Pit Will Be Used:

- Drilling
- Workover
- Other (Explain _____)
- Swabbing
- Plugging

Received

JUL 31 2013

Office of Oil and Gas
WV Dept. of Environmental Protection

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 *Dee Swiger*

Company Official (Typed Name) Dee Swiger

Company Official Title Regulatory Analyst

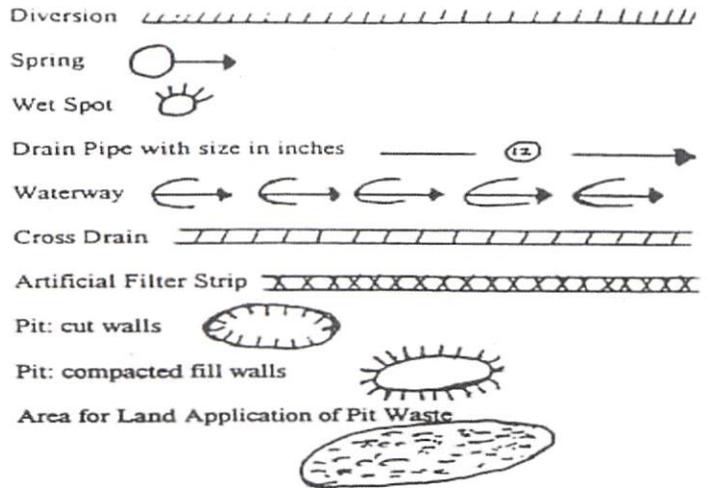
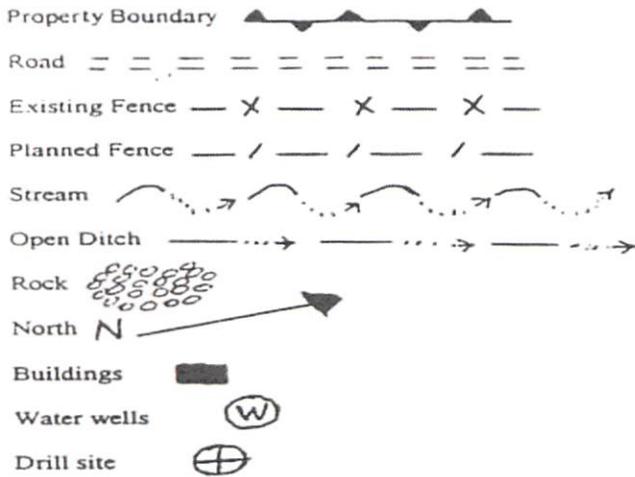
Subscribed and sworn before me this 24 day of July, 2013

Julie A. DiVecchio

My commission expires May 3, 2014

COMMONWEALTH OF PENNSYLVANIA Public
Notarial Seal
Julie A. DiVecchio, Notary Public
Cecil Twp., Washington County
My Commission Expires May 3, 2014
Member, Pennsylvania Association of Notaries

LEGEND



Proposed Revegetation Treatment: Acres Disturbed 10.1 Prevegetation pH _____

Lime ^{2 to 3} _____ 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		Seed Type	Area II	
		lbs/acre			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.

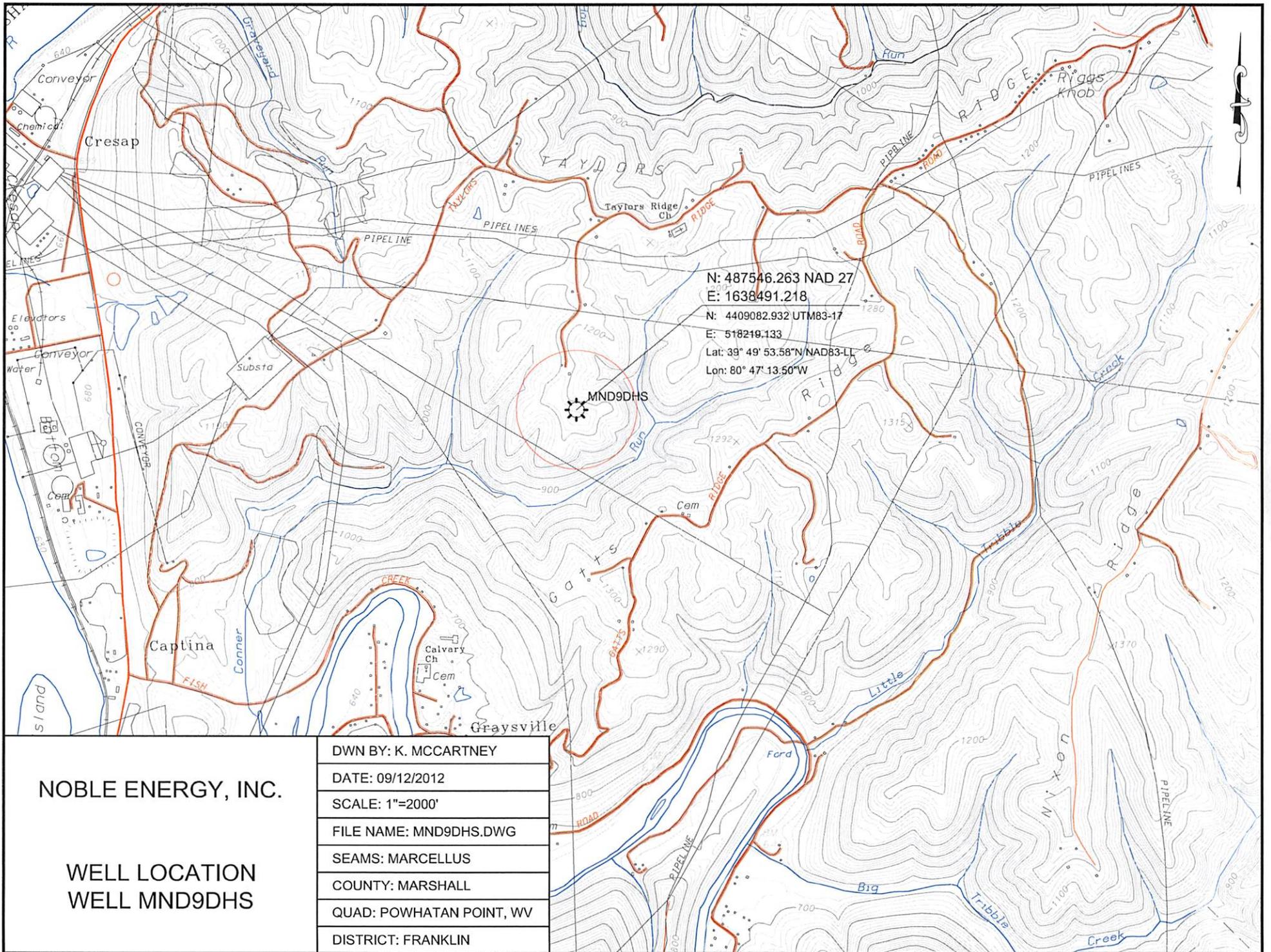
Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: *Bill Anderson*

Comments: _____

Title: Oil and Gas Inspector Date: 7-25-13

Field Reviewed? () Yes () No



N: 487546.263 NAD 27
 E: 1638491.218
 N: 4409082.932 UTM83-17
 E: 518219.133
 Lat: 39° 49' 53.58"N/NAD83-LL
 Lon: 80° 47' 13.50"W

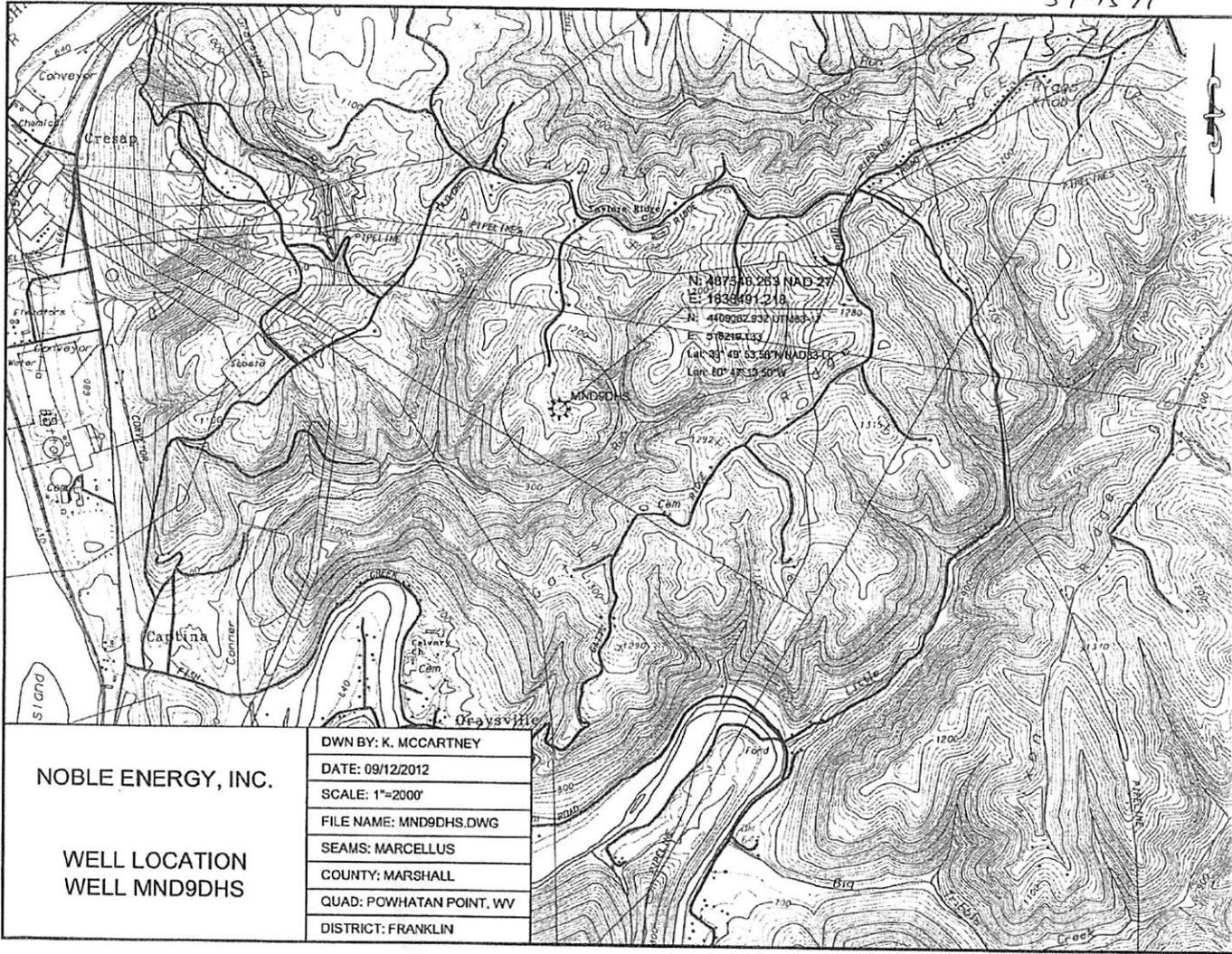
MND9DHS

NOBLE ENERGY, INC.

WELL LOCATION
 WELL MND9DHS

DWN BY: K. MCCARTNEY
DATE: 09/12/2012
SCALE: 1"=2000'
FILE NAME: MND9DHS.DWG
SEAMS: MARCELLUS
COUNTY: MARSHALL
QUAD: POWHATAN POINT, WV
DISTRICT: FRANKLIN

51-1571



WW-7
8-30-06

MS



West Virginia Department of Environmental Protection
Office of Oil and Gas
WELL LOCATION FORM: GPS

API: 47-5101571 WELL NO.: MND9DHS
FARM NAME: Consolidation Coal Company
RESPONSIBLE PARTY NAME: Noble Energy, Inc.
COUNTY: Marshall DISTRICT: Franklin
QUADRANGLE: Powhatan Point
SURFACE OWNER: Consolidation Coal Company
ROYALTY OWNER: CNX Gas Company
UTM GPS NORTHING: 4409082.932
UTM GPS EASTING: 538219.133 GPS ELEVATION: 1221.03

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit or assigned API number on the above well. The Office of Oil and Gas will not accept GPS coordinates that do not meet the following requirements:

1. Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
2. Accuracy to Datum – 3.05 meters
3. Data Collection Method:

Survey grade GPS : Post Processed Differential _____

Real-Time Differential _____

Mapping Grade GPS _____ : Post Processed Differential _____

Real-Time Differential _____

4. **Letter size copy of the topography map showing the well location.**

I the undersigned, hereby certify this data 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 Office of Oil and Gas.


Signature

Regulatory Analyst 8/27/13
Title Date

Well is located on topo map 679 feet south of Latitude: 39° 50' 00"

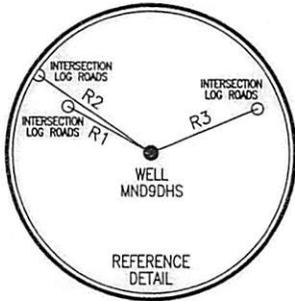
Well is located on topo map 10,479 feet west of Longitude: 80° 45' 00"

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 3000'

- EXISTING WELLS
- PLUGGED WELLS

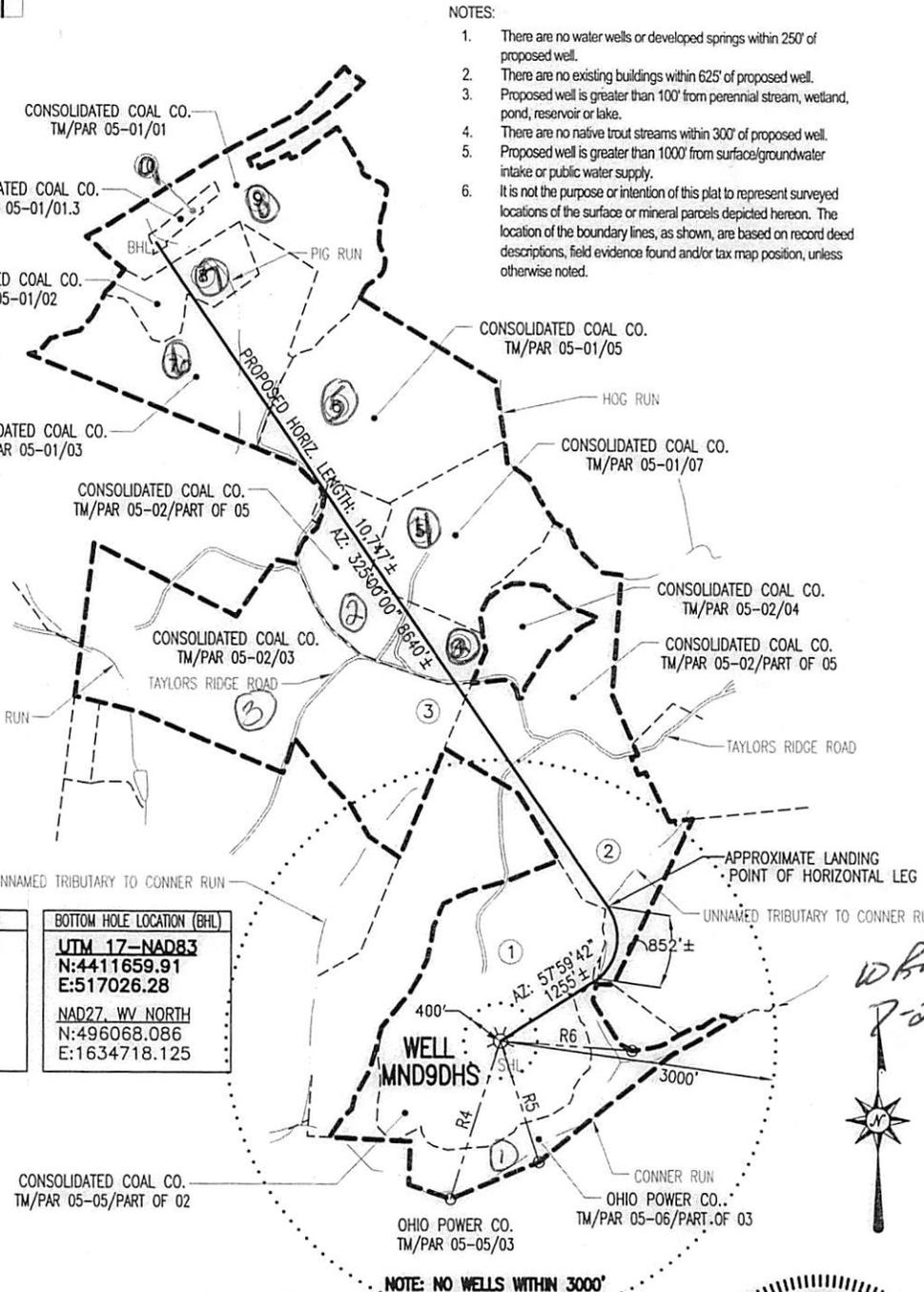


LINE	BEARING	DISTANCE
R1	N 78°44'30" W	198.47'
R2	N 68°07'48" W	277.85'
R3	N 80°35'56" E	218.73'
R4	S 17°52'02" W	1778.71'
R5	S 17°45'09" E	1359.80'
R6	S 86°03'35" E	1438.09'

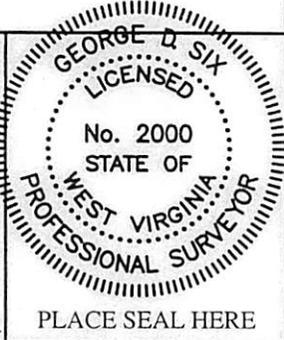
SURFACE HOLE LOCATION (SHL)	APPROX. LANDING POINT	BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83 N:4409082.932 E:518219.133	UTM 17-NAD83 N:4409525.76 E:518567.38	UTM 17-NAD83 N:4411659.91 E:517026.28
NAD27, WV NORTH N:487546.263 E:1638491.218	NAD27, WV NORTH N:488980.289 E:1639658.229	NAD27, WV NORTH N:496068.086 E:1634718.125



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



- 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.



FILE #: MND9DHS

DRAWING #: MND9DHS

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 #: MND9DHS
SERIAL No.: WV0510629HS

API WELL #: 47 51
STATE COUNTY PERMIT

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

WATERSHED: CONNER RUN ELEVATION: 1221.03'

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: 791.169±

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: 16,186±

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