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**west virginia** department of environmental protection

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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

July 18, 2014

**WELL WORK PLUGGING PERMIT**

**Plugging**

This permit, API Well Number: 47-8509636, 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: A. HALL 2  
Farm Name: FOX, RUSSELL E. SR., ET UX  
**API Well Number: 47-8509636**  
**Permit Type: Plugging**  
Date Issued: 07/18/2014

**Promoting a healthy environment.**

## PERMIT CONDITIONS

West Virginia Code §22-6-11 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

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1. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
2. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
3. Well work activities shall not constitute a hazard to the safety of persons.
4. Must follow attached Variance From Well Plugging Regulations for installation of monument.

1) Date June 10, 2014  
2) Operator's  
Well No. A Hall 2  
3) API Well No. 47-085 - 09636

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 XX / Liquid injection \_\_\_ / Waste disposal \_\_\_ /  
(If "Gas, Production \_\_\_ or Underground storage \_\_\_) Deep \_\_\_ / Shallow XX

5) Location: Elevation 816' Watershed North Fork Hughes River huc-10  
District Clay County Ritchie Quadrangle Ellenboro

6) Well Operator Noble Energy, Inc. 7) Designated Agent Steven M. Green  
Address 333 Technology Drive Suite 116 Address 500 Virginia Street East, United Center Suite 590  
Canonsburg, PA 15317 Charleston, WV 25301

8) Oil and Gas Inspector to be notified  
Name Dave Cowan  
Address 1597 Devil Hole Road  
Harrisville, WV 26362

9) Plugging Contractor  
Name Appalachian Well Service (subject to change)  
Address P.O Box 636  
Indiana, PA 15701

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

Received

JUN 18 2014

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 6-11-14

VARIANCE FROM WELL PLUGGING REGULATIONS

As required under 35CSR4-18, the Office of Oil and Gas is providing public notice and seeking comment for a 20-day period on the proposal described below. Please direct all comments to:

James Martin, Chief  
Office of Oil and Gas  
601 57<sup>th</sup> Street  
Charleston, WV 25304  
E-mail: jmartin@wvdep.org

The Office of Oil and Gas is considering granting a general variance to the requirements under 35CSR4-5.5b of erecting a monument upon the plugging of certain wells. If granted, the following conditions will be met:

- 1) the well will be surveyed and a plat constructed as required under 22-6 of the WV Code and 35CSR4,
- 2) a readily visible, permanent offset marker, in as close proximity as reasonably possible, will be erected and will provide distance and bearing information to the plugged well,
- 3) the plugging affidavit (form WR-38), will document the absence of a monument at the well location and document the existence and location of the offset marker,
- 4) a steel plate no smaller than one square foot shall be affixed to the well casing no deeper than three feet below the ground surface and be inscribed with the api number of the well.

To qualify under the general variance, an operator may make a variance request to the Chief of the Office of Oil and Gas for a specific well(s) in conjunction with a showing of good cause by the surface owner.

APPROVED BY CHIEF ON 7/17/14.

JMM

Plug & Abandon Procedure

Hall #2

Ritchie County, WV

1. MIRU Workover Unit pull tubing
2. Load hole with at least 75 bbls of H2O.
3. Wait at least 24 hrs. for water to settle.
4. Run CBL/CCL from TD (6035') to clear top of cement (approx. 4200').
5. Run Gyro as per Drillings recommendations.
6. MIRU cement company.
7. TIH to top of perforations (approx. 5970') with tubing and retainer.
8. Set Retainer.
9. Squeeze perforations with cement (API Class A Portland <3% CaCl and no other additives).
10. Pump 6% gel plug from top of <sup>≈ 5940'</sup> squeeze to 4700'.
11. Spot 150' cement plug (API Class A Portland <3% CaCl and no other additives) from 4700' to 4550' (to cover Benson).
12. Spot 6% gel plug from 4550' to within 50' of cement top.
13. Pull Tubing.
14. Perform stretch test on 4 1/2" casing.
15. RIH with jet cutter at free point and cut casing.
16. Pump stump plug across casing cut. *CASING CUT PLUG MUST BE A MINIMUM OF 100'.*
17. Pull 4 1/2"
18. TIH with 2 3/8" tubing.
19. Cement (API Class A Portland <3% CaCl and no other additives) back to 1834' (100' inside of 6 5/8" surface casing) through tubing. *FROM CASING CUT*
20. Spot 6% gel plug from 1834' to within <sup>150'</sup> 100' of surface. *COVER FRESH WATER DEPTH OF 145'*
21. Pump <sup>150'</sup> 100' cement plug (API Class A Portland <3% CaCl and no other additives) at surface.
- ★ 22. Install monument with API number. (Monuments will be buried and surveyed in per the surface owner's request).

\* SET 100' CEMENT PLUG INSIDE 4 1/2" @ ELEVATION 816' - 716'

Received

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*David Williams*  
6-11-14

★ SEE VARIANCE DOCUMENT ATTACHED.

WR-35  
Rev (5-01)

DATE: 12-10-07  
API #:47-85-09636

8509636P

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas

Well Operator's Report of Well Work

Farm name: Russell Fox

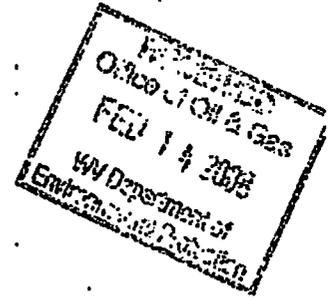
Operator Well: A. Hall #2

LOCATION: Elevation: 816'

Quadrangle: Ellenboro 7.5'

District: Clay County: Ritchie  
Latitude: 3205 Feet South of 39 Deg. 19' Min. 28.5" Sec.  
Longitude 4375 Feet West of 81 Deg .00' Min .55.5" Sec.

Company: Hall Drilling LLC



	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address:				
P.O. Box 249 Ellenboro WV 26346	9 5/8	160	160	50sks
Agent: Mike Hall				
Inspector: David Gilbert				
Date Permit Issued: 10/10/07	7	1960	1960	271sks
Date Well Work Commenced: 11/5/07				
Date Well Work Completed: 11/20/07	4 1/2	6072	6072	60sks
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig				
Total Depth (feet): 6072				
Fresh Water Depth (ft.): 90				
Salt Water Depth (ft.):				
Is coal being mined in area (N/Y)? n				
Coal Depths (ft.):				

OPEN FLOW DATA

Producing formation Marcelous Pay zone depth (ft) 5992-6053  
Gas: Initial open flow 40 MCF/d Oil: Initial open flow 0 Bbl/d  
Final open flow 50 MCF/d Final open flow 0 Bbl/d  
Time of open flow between initial and final tests 72 Hours  
Static rock Pressure 250 psig (surface pressure) after 48 Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Signed:

By: Hall Drilling LLC / Bluestone Energy Partners  
Date: 12/11/07

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Office of Oil and Gas  
WV Dept. of Environmental Protection

A Hall 2  
47-85-09636

Stage #1	Perfs	sand	avg rate	isip
Marcelous	5974-6053	1727sks	51.6 bpm	4204#

Log Driller

Electric Log Tops

Marcelous 5974'-6053'

Soil	0	15
Sd/sh	15	320
Sd	320	450
Sd/sh	450	985
Sd	985	1165
Sd/Sh	1165	1435
Sd	1435	1470
Sh	1470	1810
Sd	1810	1870
Sh	1870	1975
Sh	1975	2060
Sd	2060	2132
Sh	2132	2181
Sd	2181	2600
Sh	2600	2700
Sd	2700	2990
Sh	2990	3001
Sd	3001	3200
Sh	3200	3600
Sd	3600	4300
Sh	4300	4910
Sd	4910	5412
Benson	5412	5417
Sh	5417	5542
Sd	5542	5972
Marcelous	5972'	6053'
TD		6085

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Office of Oil and Gas  
WV Dept. of Environmental Protection

12/11/07

WR-35  
Rev (5-01)

DATE: 02-07-09  
API #: 47-085-09636

8509636P

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas

Well Operator's Report of Well Work

Farm name: Hall Operator Well No.: Hall #2

LOCATION: Elevation: 816' Quadrangle: Ellenboro 7.5'

District: Clay County: Ritchie  
Latitude: 3,025 Feet South of 39 Deg. 20 Min. 00 Sec.  
Longitude 4,375 Feet West of 81 Deg. 00 Min. 00 Sec.

Company:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Hall Drilling, LLC				
Address:				
P.O. Box 249 Ellenboro WV 26346	9 5/8	160	160	175 sks
Agent: Mike Hall				
Inspector: David Gilbert	6 5/8	1934	1934	275 sks
Date Permit Issued: 10/10/2007				
Date Well Work Commenced: 11/04/07	4 1/2	6040	6035	100 sks
Date Well Work Completed: 11/10/07				
Verbal Plugging:				
Date Permission granted on:				
Rotary X Cable Rig				
Total Depth (feet): 6040'				
Fresh Water Depth (ft.): 145'				
Salt Water Depth (ft.): N/A				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): N/A				

OPEN FLOW DATA

Producing formation Marcellus Pay zone depth (ft) 5970-6025  
Gas: Initial open show MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow 300 MCF/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests \_\_\_\_\_ Hours  
Static rock Pressure 855# psig (surface pressure) after 48 Hours

Second producing formation Pay zone depth (ft)  
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests \_\_\_\_\_ Hours  
Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

\* = commingled zones

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS,

Signed: Andrew R. Allphin  
By: ANDREW R. ALLPHIN  
Date: 02/07/09

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Office of Oil and Gas  
WV Dept. of Environmental Protection

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ANY INFORMATION...  
...

Hall #2  
47-017-05638

WRONG  
API

Stage #1	perfs	sand	avg rate	isip
Marcellus	5940-6015 95 holes	1,670 sks	30 bpm	2150#

Drillers Log

Sh	0	15
Sd/Sh	15	325
Sd	325	340
Sd/Sh	340	815
Sd	815	815
Sd/Sh	815	1215
Sd	1215	1330
Sh	1330	1610
Sd	1610	1750
Sh	1750	1800
Lime	1800	1810
Sd	1810	1930
Sh	1930	2650
Sd	2650	2670
Sh	2670	4640
Sd	4640	4650
Shale	4650	5940
Bl Shale	5940	6030
Lime	6030	6040
Td	6040	

gas ck @ TD = show

Electric Log Tops

Benson	4650
Tully	N/A
Marcellus	5940-6026
Onandoga	6026

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Office of Oil and Gas  
WV Dept. of Environmental Protection

WW-4A  
Revised 6-07

1) Date: June 10, 2014  
2) Operator's Well Number  
A Hall 2

3) API Well No.: 47 - 085 - 09636

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

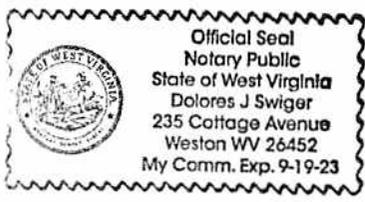
4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Russell E. Fox and Norma J. Fox</u>	Name <u>None</u>
Address <u>4278 Bonds Creek Road</u> <u>Pennsboro, WV 26415</u>	Address _____
(b) Name _____	(b) Coal Owner(s) with Declaration <b>RECEIVED</b>
Address _____	Name <u>na</u> <b>Office of Oil and Gas</b>
(c) Name _____	Address _____
Address _____	Name _____ <b>JUL 17 2014</b>
6) Inspector <u>Dave Cowan</u>	(c) Coal Lessee with Declaration <b>WV Department of</b>
Address <u>1597 Devil Hole Road</u>	Name <u>na</u> <b>Environmental Protection</b>
<u>Harrisville, WV 26362</u>	Address _____
Telephone <u>304-389-3509</u>	Address _____

**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 reverses 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: Kim Ward *[Signature]*  
 Its: Regulatory Analyst II  
 Address 333 Technology Drive Suite 116  
Canonsburg, PA 15317  
 Telephone 724-820-3061

Subscribed and sworn before me this 17 day of July  
*[Signature]* Notary Public

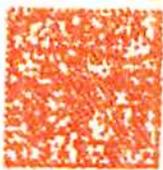
My Commission Expires 09/19/2023

**Oil and Gas Privacy Notice**

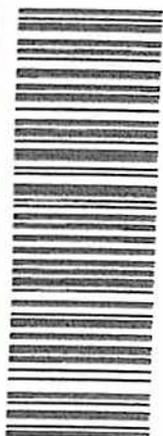
The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory 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 [depprivacyofficer@wv.gov](mailto:depprivacyofficer@wv.gov).

8509636P

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 Street, Apt. 1  
 or PO Box N  
 City, State, Z  
**Russell E. Fox Sr. & Norma J. Fox**  
**4278 Bonds Creek Road**  
**Pennsboro, WV 26415**

PS Form 3800, August 2006 See Reverse for Instructions

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Office of Oil and Gas  
WV Dept. of Environmental Protection

Noble Energy, Inc.  
Dee Swiger  
Technology Drive, Suite 116  
Anonsburg, PA 15317-6506

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 North Fork Hughes River huc-10 Quadrangle Ellenboro

Elevation 816' County Ritchie District Clay

Description of anticipated Pit Waste: None

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 \_\_\_\_\_ at next anticipated well.
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain \_\_\_\_\_)

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Office of Oil and Gas

JUL 17 2014

Proposed Work For Which Pit Will Be Used:

- Drilling
- Workover
- Other (Explain \_\_\_\_\_)
- Swabbing
- Plugging

WV Department 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 *Kim Ward*

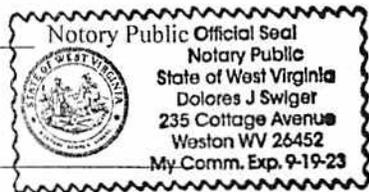
Company Official (Typed Name) Kim Ward

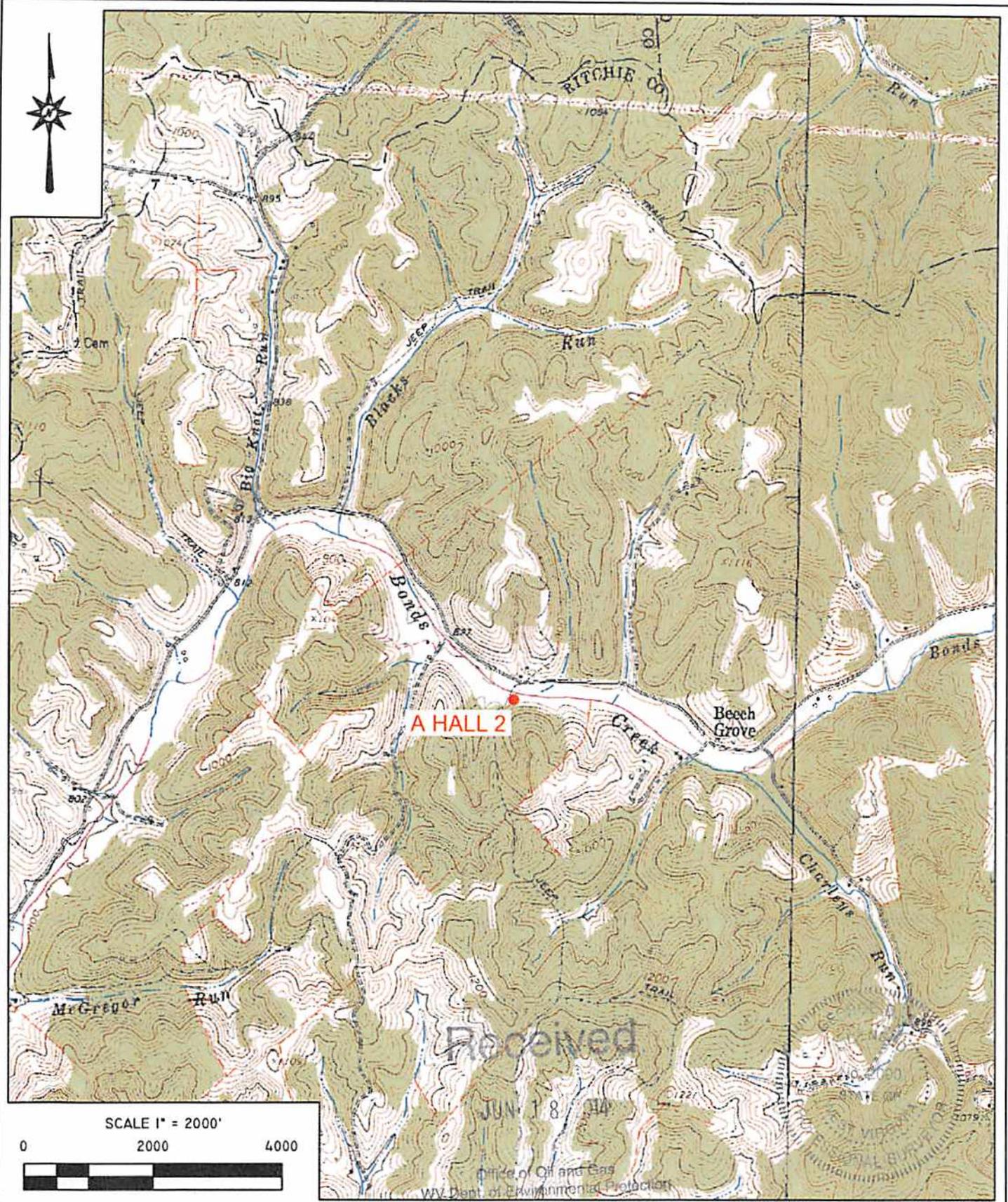
Company Official Title Regulatory Analyst II

Subscribed and sworn before me this 17 day of July, 2014

*Notary Signature*

My commission expires 09/19/2023






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

PREPARED FOR:  
 NOBLE ENERGY, INC.  
 333 TECHNOLOGY DRIVE, SUITE 116  
 CANONSBURG, PA 15317

**A HALL 2**  
**TOPO SECTION OF ELLENBORO 7.5'**  
**USGS TOPO QUADRANGLE**

JUNE 12, 2014

WW-7  
8-30-06



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

API: 47-085-09636 WELL NO.: A Hall 2

FARM NAME: Russell E. Fox, Sr., Et Ux

RESPONSIBLE PARTY NAME: Noble Energy, Inc.

COUNTY: Ritchie 85 DISTRICT: Clay 1

QUADRANGLE: Ellenboro 337

Received

SURFACE OWNER: Russell E. Fox, Sr., Et Ux

JUN 18 2014

ROYALTY OWNER: \_\_\_\_\_

UTM GPS NORTHING: 4352811.233 Meters

Office of Oil and Gas  
WV Dept. of Environmental Protection

UTM GPS EASTING: 498684.188 Meters GPS ELEVATION: 250.78 Meters 822.6 FT

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:

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

Survey grade GPS  : Post Processed Differential \_\_\_\_\_

Real-Time Differential

Mapping Grade GPS \_\_\_\_\_ : Post Processed Differential \_\_\_\_\_

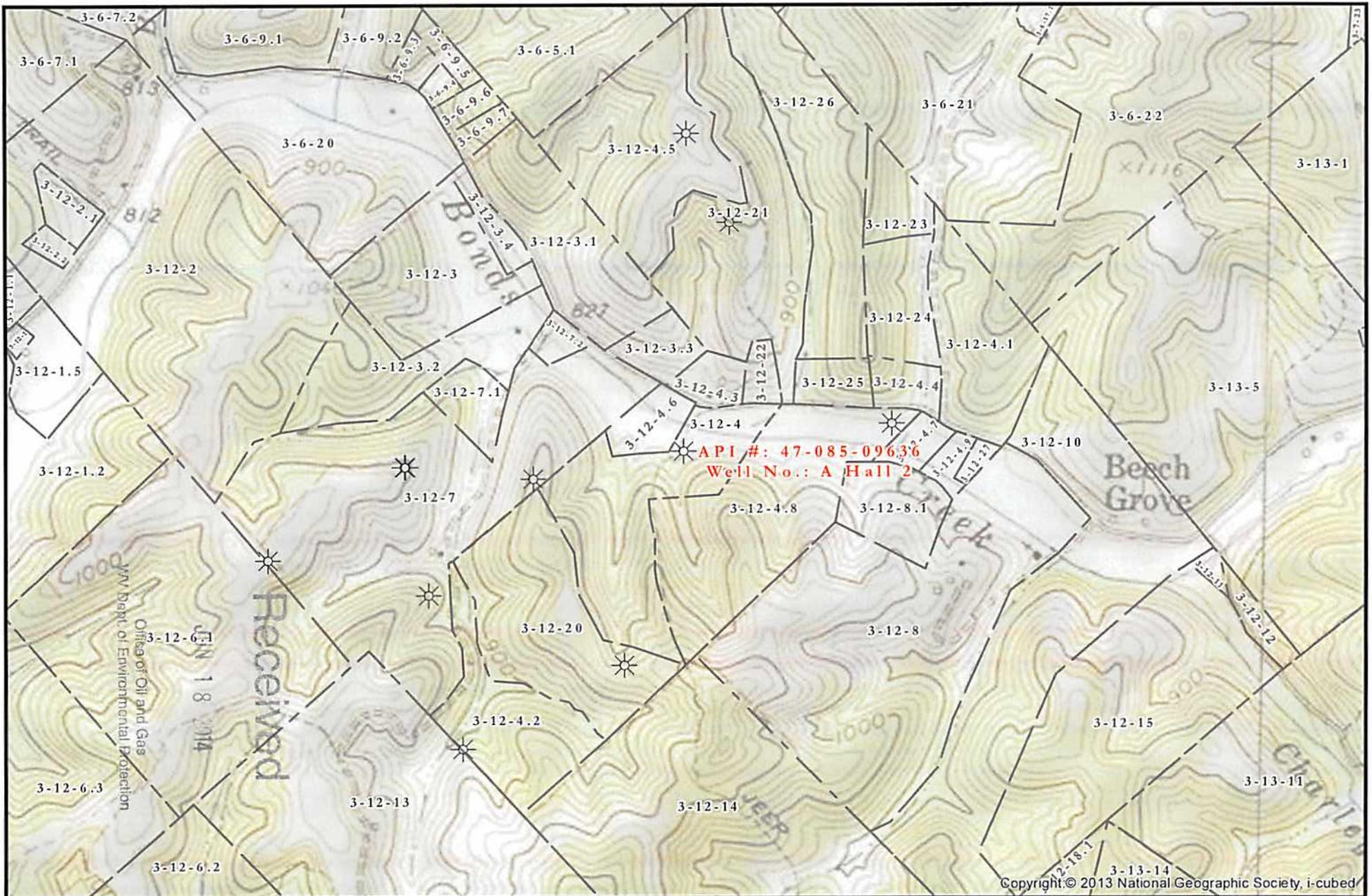
Real-Time Differential \_\_\_\_\_

- 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] Professional Surveyor 6-12-14  
Signature Title Date





Well
 Parcel Boundary

**\*\* Disclaimer: All data is licensed for use by Noble Energy Inc. use only. \*\***

**Plugging Permit Topographic Map**  
 API #: 47-085-09636

0 250 500 1,000 Feet  
 1 inch = 1,000 feet

Projection: NAD 1927 StatePlane West Virginia North FIPS 4701  
 Units: Foot US

Author: Tim Husson  
 Date: June 10, 2014



1  
 1

8509636P

*Dred*