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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

April 02, 2014

**WELL WORK PERMIT**  
**Horizontal 6A Well**

This permit, API Well Number: 47-1706455, 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: OXF4AHS  
Farm Name: TURNER, GERALD C. & JUANIT/  
**API Well Number: 47-1706455**  
**Permit Type: Horizontal 6A Well**  
Date Issued: 04/02/2014

**Promoting a healthy environment.**

## 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.

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### CONDITIONS

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1. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACOE). Through this permit, you are hereby being advised to consult with USACOE regarding this proposed activity.
2. 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.
3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. 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.
4. 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.
5. 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.
6. 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.
7. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
8. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.

Energy

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7013 1710 0001 5388 9170

7013 1710 0001 5388 9170

Gerald & Juanita Turner  
Rt 1 Box 65 (58 Turner Drive)  
West Union, WV 26456

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Gerald & Juanita Turner  
Rt 1 Box 65 (58 Turner Drive)  
West Union, WV 26456

See reverse for instructions

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FEB 13 2014

Office of Oil and Gas  
WV Dept. of Environmental Protection

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WV Dept. of Environmental Protection

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FEB 13 2014

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT  
OF THE RETURN ADDRESS, FOLD AT DOTTED LINE

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY	
<ul style="list-style-type: none"> <li>Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</li> <li>Print your name and address on the reverse so that we can return the card to you.</li> <li>Attach this card to the back of the mailpiece, or on the front if space permits.</li> </ul>	A. Signature <b>X</b> <input type="checkbox"/> Agent <input type="checkbox"/> Addressee	
1. Article Addressed to:	B. Received by ( <i>Printed Name</i> )	C. Date of Delivery
D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No		

Gerald & Juanita Turner  
Rt 1 Box 65 (58 Turner Drive)  
West Union, WV 26456

Service Type	<input type="checkbox"/> Express Mail
Registered Mail	<input type="checkbox"/> Return Receipt for Merchandise
Insured Mail	<input type="checkbox"/> C.O.D.
4. Restricted Delivery? ( <i>Extra Fee</i> ) <input type="checkbox"/> Yes	

2. Article Number (Transfer from service label)      7013 1710 0001 5388 9170

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SW-257  
Rev. 8/01

WEST VIRGINIA DEPARTMENT OF HEALTH AND HUMAN RESOURCES



# PERMIT



Owner Gerald and Juanita Turner and Driller John Turner

are hereby issued a permit to \_\_\_\_\_ construct \_\_\_\_\_ a well located  
(Construct, Modify, or Abandon)  
at 58 Turner Drive, West Union, WV 26456

in accordance with Chapter 16, Article 1, Section 9 of the Code of West Virginia.

Date issued: 7-23-13

Mark Whittaker  R.S.  
Issuing Officer Title

Expires: 7-23-14

Permit No.: DW-09-13-09 Doddridge  
County Health Department

This permit is not transferable and any change of information submitted in application dated will automatically render this permit invalid

**THIS PERMIT IS NOT APPLICABLE TO PUBLIC WATER SUPPLIES**

Received

FEB 13 2014

Office of Oil and Gas  
WV Dept. of Environmental Protection

333 Technology Drive  
Suite 110  
Canonsburg, PA 15317-9504

Tel: 724-820-3000  
Fax: 724-820-3098  
www.nobleenergyinc.com



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COPY



July 18, 2013

Gerald and Juanita Turner  
Rt. 1 Box 65  
West Union, WV 26456

**Via Certified Mail, Return Receipt Requested**

Dear Gerald and Juanita Turner:

Enclosed is the State of West Virginia Department of Environmental Protection, Office of Oil and Gas Notice of Entry for Plat Survey. Please contact me if you have any questions at 724-830-3076 or at [jjohnson@nobleenergyinc.com](mailto:jjohnson@nobleenergyinc.com)

Respectfully,

A handwritten signature in blue ink, appearing to read 'Jayson Johnson', with a long horizontal flourish extending to the right.

Jayson Johnson  
Land Negotiator  
Noble Energy

Received

FEB 13 2014

Office of Oil and Gas  
WV Dept. of Environmental Protection

WW-6A3  
(1/12)

Operator Well No. OXF 4

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
NOTICE OF ENTRY FOR PLAT SURVEY

Notice Time Requirement: Notice shall be provided at least SEVEN (7) days but no more than FORTY-FIVE (45) days prior to entry

Date of Notice: 07/18/2013 Date of Planned Entry: 07/29/2013

Delivery method pursuant to West Virginia Code § 22-6A-10a

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

Pursuant to West Virginia Code § 22-6A-10(a), Prior to filing a permit application, the operator shall provide notice of planned entry on to the surface tract to conduct any plat surveys required pursuant to this article. Such notice shall be provided at least seven days but no more than forty-five days prior to such entry to: (1) The surface owner of such tract; (2) to any owner or lessee of coal seams beneath such tract that has filed a declaration pursuant to section thirty-six, article six, chapter twenty-two of this code; and (3) any owner of minerals underlying such tract in the county tax records. The notice shall include a statement that copies of the state Erosion and Sediment Control Manual and the statutes and rules related to oil and gas exploration and production may be obtained from the Secretary, which statement shall include contact information, including the address for a web page on the Secretary's web site, to enable the surface owner to obtain copies from the secretary.

Notice is hereby provided to:

SURFACE OWNER(s)

Name: Gerald and Juanita Turner  
 Address: RL 1 Box 65  
West Union, WV 26456  
 Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

COAL OWNER OR LESSEE

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

MINERAL OWNER(s)

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

\*please attach additional forms if necessary

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-10(a), notice is hereby given that the undersigned well operator is planning entry to conduct a plat survey on the tract of land as follows:

State: <u>West Virginia</u>	Approx. Latitude & Longitude: <u>39.25256, -80.82129 (NAD83)</u>
County: <u>Doddridge</u>	Public Road Access: _____
District: _____	Watershed: <u>Arnolds Creek</u>
Quadrangle: <u>Oxford</u>	Generally used farm name: <u>Turner</u>

Copies of the state Erosion and Sediment Control Manual and the statutes and rules related to oil and gas exploration and production may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450). Copies of such documents or additional information related to horizontal drilling may be obtained from the Secretary by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

Notice is hereby given by:

Well Operator: <u>Noble Energy, Inc.</u>	Address: _____
Telephone: <u>724-820-3076</u>	<u>333 Technology Drive, Suite 116</u>
Email: <u>jjohnson@nobleenergyinc.com</u>	Facsimile: <u>724-820-3095</u>

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](mailto:depprivacyofficer@wv.gov).

Approved  
 FEB 13 2014  
 Office of Oil and Gas  
 WV Dept. of Environmental Protection

333 Technology Drive  
Suite 116  
Canonsburg, PA 15317



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Gerald and Juanita Turner  
Rt. 1 Box 65  
West Union, WV 26456

*ATL*  
*MS*

*Received*



2645639655

Received  
FEB 13 2014  
Office of Oil and Gas  
WV Dept. of Environmental Protection

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
WELL WORK PERMIT APPLICATION

1) Well Operator: Noble Energy, Inc. 494501907 017-Doddridge West Union West Union  
Operator ID County District Quadrangle

2) Operator's Well Number: OXF4AHS Well Pad Name: OXF4

3) Farm Name/Surface Owner: Gerald and Juanita Turner Public Road Access: County Route 11/3

4) Elevation, current ground: 1080' Elevation, proposed post-construction: 1067.40

5) Well Type (a) Gas  Oil  Underground Storage

Other

(b) If Gas Shallow  Deep

Horizontal

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Associated Pressure(s):  
Marcellus 6633-6688' / 55' Thick / 4414 psi

8) Proposed Total Vertical Depth: 6678'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 17003'

11) Proposed Horizontal Leg Length: 9439'

12) Approximate Fresh Water Strata Depths: 238', 545'

13) Method to Determine Fresh Water Depths: nearest offset wells

14) Approximate Saltwater Depths: None

15) Approximate Coal Seam Depths: None

16) Approximate Depth to Possible Void (coal mine, karst, other): None

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes  No

(a) If Yes, provide Mine Info: Name: NA

Depth: \_\_\_\_\_

Seam: \_\_\_\_\_

Owner: \_\_\_\_\_

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Office of Oil and Gas

JAN 23 2014

18)

**CASING AND TUBING PROGRAM**

<u>TYPE</u>	<u>Size</u>	<u>New or Used</u>	<u>Grade</u>	<u>Weight per ft. (lb/ft)</u>	<u>FOOTAGE: For Drilling</u>	<u>INTERVALS: Left in Well</u>	<u>CEMENT: Fill-up (Cu. Ft.)</u>
Conductor	20"	New	LS	94	40'	40'	CTS
Fresh Water	13 3/8"	New	J-55	54.5	595'	595'	CTS 30% excess Yield = 1.18
Coal		New					
Intermediate	9 5/8"	New	J-55	36.0	2737'	2737'	CTS 20% excess Yield = 1.19
Production	5 1/2"	New	HCP-110	20.0	17003'	17003'	10% excess Yield = 1.27 TOC=200' above 9.625" shoe
Tubing							
Liners							

*DCW  
1-16-2014*

<u>TYPE</u>	<u>Size</u>	<u>Wellbore Diameter</u>	<u>Wall Thickness</u>	<u>Burst Pressure</u>	<u>Cement Type</u>	<u>Cement Yield (cu. ft./k)</u>
Conductor	20"	24"	0.438	2730		
Fresh Water	13 3/8"	17.5"	.380	2730	Type 1	30% excess Yield = 1.18
Coal						
Intermediate	9 5/8"	12.25"	.352	3520	Class A	20% excess Yield = 1.19 to surface
Production	5 1/2"	8.75"	.361	12,640	Class A	10% excess Yield = 1.27 TOC=200' above 9.625" shoe
Tubing						
Liners						

**PACKERS**

Kind:				
Sizes:				
Depths Set:				

19) Describe proposed well work, including the drilling and plugging back of any pilot hole:

Drill the vertical depth to the Marcellus at an estimated total vertical depth of approximately 6678 feet. Drill Horizontal leg - stimulate and produce the Marcellus Formation. Should we encounter a unanticipated void we will install a minimum of 20' of casing below the void but not more than 50' set a basket and grout to surface.

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

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. Please refer to attached list.

*DCN*

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 13.25

22) Area to be disturbed for well pad only, less access road (acres): 4.64

23) Describe centralizer placement for each casing string:

Conductor - No centralizers used. Fresh Water/Surface - Bow spring centralizers on first two joints then every third joint to 100' from surface. Intermediate - Bow Springs centralizers every third joint to 100' from Surface. Production - Rigid bow springs every third joint from KOP to TOC, rigid bow springs every joint to KOP.

24) Describe all cement additives associated with each cement type:

See attached sheets - Conductor - 1.15% CaCl. Fresh Water - Class A Portland cement with flake and 1.15% CaCl<sub>2</sub>, 30% excess yield =1.18. Intermediate- 15.6 ppg Class A +0.4% Ret, 0.15% Disp, 0.2% AntiFoam, 0.125#sk Lost Circ 20% excess Yield 1.19 to surface. Production: 14.8 ppg Class A 25:75:0 System +2.6% Cement extender, 0.7% fluid loss additive, 0.45% high temp retarder, 0.2% friction reducer 10% excess Yield=1.27 TOC>=200' above 9.625" shoe.

25) 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. Once casing is on bottom, the hole is filled w/ KCl water and a minimum of one hole volume is circulated 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 SOBMs and filled w/ KCl water once 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 the hole is circulated at maximum allowable drilling 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.



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west virginia department of environmental protection

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

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

October 31, 2013

Schlumberger  
Attn: Daniel L. Sikorski  
4600 J Barry Court  
Suite 200  
Canonsburg, PA 15317

RE: Cement Variance Request

Dear Sir:

This agency has approved a variance request for the cement blend listed below to be used on surface and coal protection casing only. The variance cannot be used without an oil and gas operator requesting its use on a permit application and approved by this agency:

- 2% Accelerator (S001)
- 0.2% Antifoam (D046)
- 0.125 lb/sk Polyester Flake (D0130)

If you have any questions regarding this matter feel free to contact me at 304-926-0499, ext. 1653.

Sincerely,

James Peterson  
Environmental Resources Analyst

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JAN 23 2014

WV Department of  
Environmental Protection

017-210-6490

**AWS Cement Additives- Noble Energy**

	Product Name	Product Use	Chemical Name	CAS Number
Surface & Intermediate	Calcium Chloride Flake	Cement Accelerator	Calcium Chloride Potassium Chloride Water Sodium Chloride	10043-52-4 7447-40-7 7732-18-5 7647-14-5
	C-41L	De-foamer	Methyl Alcohol Tributyl Phosphate	67-56-1 126-73-8
	Pol-E-Flake	LCM	Polyester	Non-Hazardous

Spacer	Bentonite Gel	Viscosifier	Crystalline Silica, Quartz	14808-60-7
	Baro-Seal	LCM	Mixture	Non-Hazardous
	Pol-E-Flake	LCM	Polyester	Non-Hazardous

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 NY Department of  
 Environmental Protection

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Kick Off Plug	Product Name	Product's Purpose	Chemical Ingredients	CAS Number
	DCP-AC2	Accelerator	Calcium Oxide	1305-78-8
	DCP-FR2	Friction Reducer	No hazardous components.	N/A
	DCP-RT1	Retarder	No hazardous components.	N/A
	<b>SPACER</b>			
	Dynaflush 2W	Viscosity	No hazardous components.	N/A
	DCP-GL1	Suspension Agent	Welan Gum	96949-22-3
	DAP-401	Mutual Solvent	Ethoxylated alcohols	Trade Secret
			Alkoxylated terpene	Trade Secret
Polyethylene glycol			25322-68-3	

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JAN 23 2014

U.S. Department of  
Environmental Protection

Product Name	Product's Purpose	Chemical Ingredients	CAS Number
DCP-EX1	Extender	Sodium metasilicate, anhydrous	6834-92-0
DCP-EX2	Extender	Silicon dioxide Iron Oxide Silicon Carbide Aluminum Oxide Calcium Oxide Magnesium Oxide Silicon dioxide	69012-64-2 1309-37-1 409-21-2 1344-28-1 1305-78-8 1309-48-4 14808-60-7
DCP-FL1	Fluid Loss Agent	No hazardous components.	N/A
DCP-FR2	Friction Reducer	No hazardous components.	N/A
DCP-RT3	Retarder	No hazardous components.	N/A
<b>SPACER</b>			
Dynaflush 2W	Viscosity	No hazardous components.	N/A
DCP-GL1	Suspension Agent	Welan Gum	96949-22-3
DAP-401	Mutual Solvent	Ethoxylated alcohols Alkoxyated terpene Polyethylene glycol	Trade Secret Trade Secret 25322-68-3
Barite	Weighting Agent	Inorganic barium salt	7727-43-7

Production Cement

JAN 28 2014

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Environmental Protection

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WW-9  
(9/13)

API Number 47 - 017 **017** **06455**  
Operator's Well No. OXF40HS

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Noble Energy, Inc. OP Code 494501907

Watershed (HUC 10) Headwaters Middle Island Creek Quadrangle West Union

Elevation 1080' County 017-Doddridge District West Union

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

Will a pit be used? Yes  No

If so, please describe anticipated pit waste: closed loop-no utilization of a pit

Will a synthetic liner be used in the pit? Yes  No  If so, what ml.?

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 \_\_\_\_\_)

Will closed loop system be used? If so, describe: yes

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. As water based mud through intermediate string then SOBIM \_\_\_\_\_

-If oil based, what type? Synthetic, petroleum, etc. Synthetic

Additives to be used in drilling medium? Please see attached sheet

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. landfill / offsite locations see attached sheet

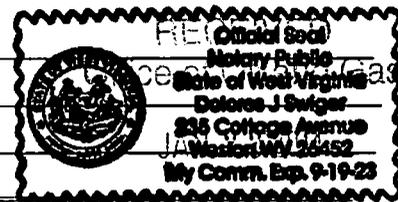
-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) \_\_\_\_\_

-Landfill or offsite name/permit number? please see attached sheet

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 [Signature]  
Company Official (Typed Name) Dee Synger - Kim Ward  
Company Official Title Regulatory Analyst



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

WV Department of Environmental Protection  
Notary Public

My commission expires 9-19-23

Noble Energy, Inc.

Proposed Revegetation Treatment: Acres Disturbed 13.25 Prevegetation pH \_\_\_\_\_

Lime 2-3 Tons/acre or to correct to pH \_\_\_\_\_  
10-20-20 or equal

Fertilizer type \_\_\_\_\_

Fertilizer amount 500 lbs/acre

Mulch Hay or Straw at 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Tall Fescue	40	Tall Fescue	40
Ladino Clover	5	Ladino Clover	5

\*\*alternative seed mixtures are shown on the Site Design.

Attach:

Drawing(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided)

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Douglas Newton

Comments: Preserve & Mulch install BRS to WU  
Dep regulations

Title: Oil and Gas Inspector

Date: 7-16-2014

Field Reviewed?  Yes  No

# Site Water/Cuttings Disposal <sup>017</sup> 06455

## Cuttings

### Haul off Company:

Eap Industries, Inc. DOT # 0876278  
1575 Smith Twp State Rd. Atlasburg PA 15004  
1-888-294-5227

### Disposal Locations:

Apex Environmental, LLC Permit # 06-08438  
11 County Road 78  
Amsterdam, OH 43903  
740-543-4389

Westmoreland Waste, LLC Permit # 100277  
111 Conner Lane  
Belle Vernon, PA 15012  
724-929-7694

Sycamore Landfill (Allied Waste) R30-07900105-2010  
4301 Sycamore Ridge Road  
Hurricane, WV 25526  
304-562-2611

MAX Environmental Technologies, Inc. facility  
233 Max Lane  
Yukon, PA 25698  
724-722-3500

## Water

### Haul off Company:

Dynamic Structures, Clear Creek DOT # 720485  
3790 State Route 7  
New Waterford, OH 44445  
330-892-0164

### Disposal Location:

Solidification  
Waste Management, Arden Landfill Permit # 100172  
200 Rangos Lane  
Washington, PA 15301  
724-225-1589

Solidification/Incineration  
Soil Remediation, Inc. Permit # 02-20753  
6065 Arrel-Smith Road  
Lowelville, OH 44436  
330-536-6825

RECEIVED  
Office of Oil and Gas

JAN 23 2014  
WV Department of  
Environmental Protection

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Office of Oil and Gas

JAN 23 2014  
WV Department of  
Environmental Protection

017

06455



**Site Safety Plan**  
**Noble Energy, Inc.**  
**OXF4 Well Pad**  
**Doddridge County, WV**  
**January 2014: 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

*DCW*  
*10-16-2014*

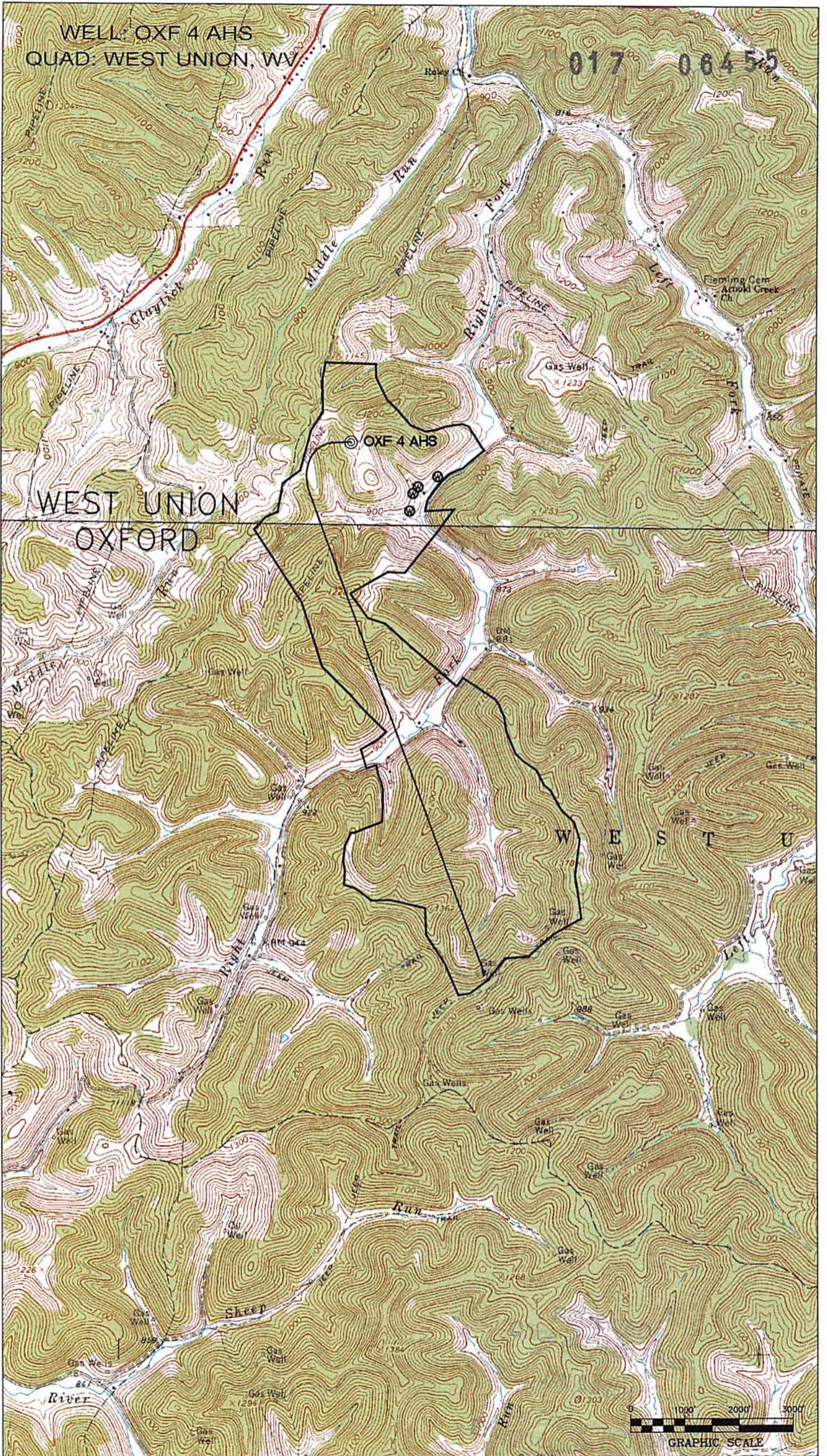
RECEIVED  
Office of Oil and Gas

JAN 23 2014

WV Department of  
Environmental Protection

WELL: OXF 4 AHS  
QUAD: WEST UNION, WV

017 06455



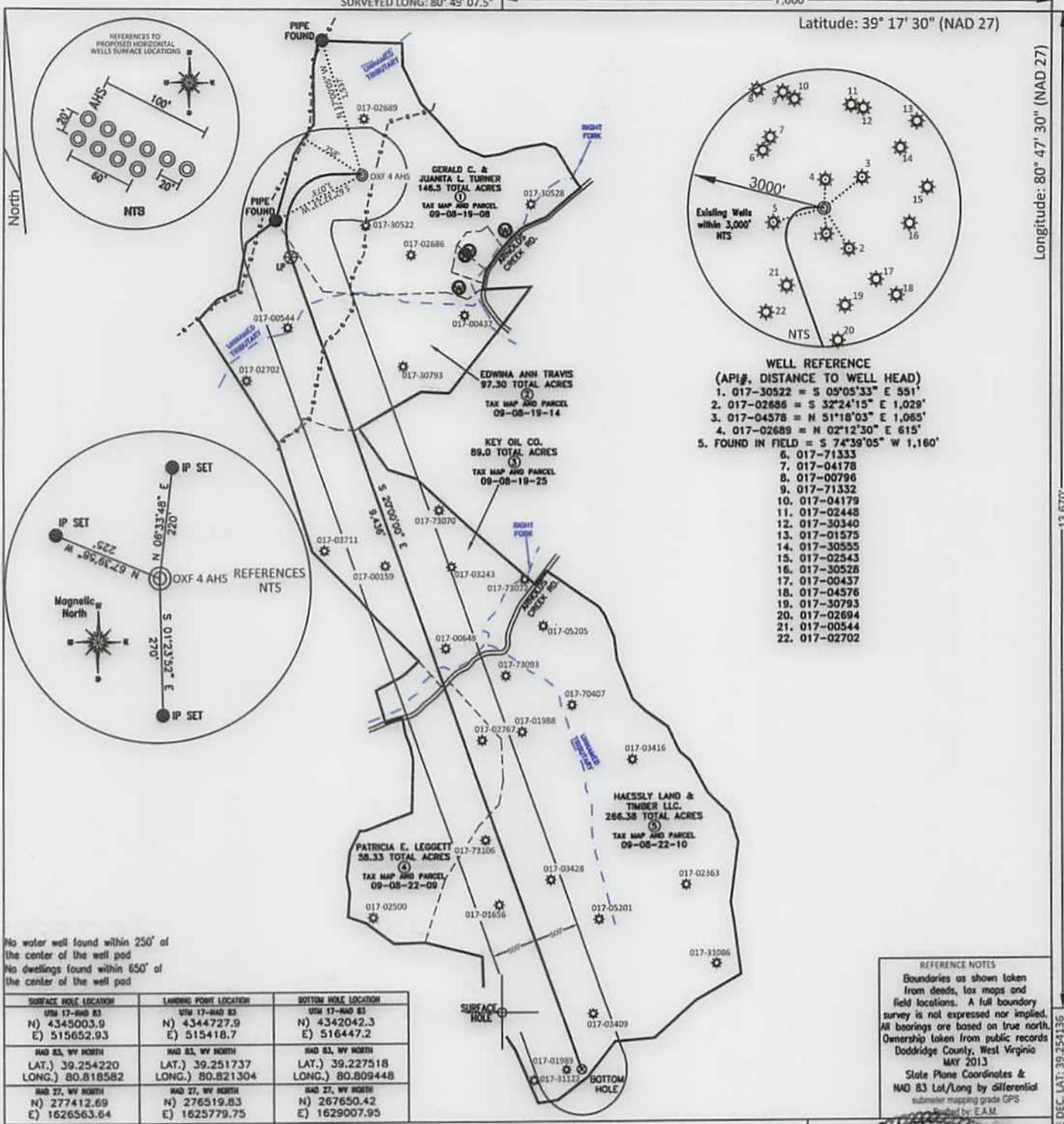
Resolution

SURFACE HOLE DEC. LONG: 80.818754  
SURVEYED LONG: 80° 49' 07.5"

7,660'

Latitude: 39° 17' 30" (NAD 27)

Longitude: 80° 47' 30" (NAD 27)



- WELL REFERENCE (API#, DISTANCE TO WELL HEAD)**
- 017-30522 = S 05°05'33" E 551'
  - 017-02686 = S 32°24'15" E 1,029'
  - 017-04578 = N 51°18'03" E 1,065'
  - 017-02689 = N 02°12'30" E 615'
  - FOUND IN FIELD = S 74°39'05" W 1,160'
  - 017-71333
  - 017-04178
  - 017-00796
  - 017-71332
  - 017-04179
  - 017-02448
  - 017-30340
  - 017-01575
  - 017-30555
  - 017-02543
  - 017-30528
  - 017-00437
  - 017-04576
  - 017-30793
  - 017-02694
  - 017-00544
  - 017-02702

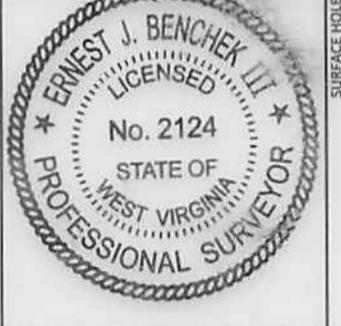
No water well found within 250' of the center of the well pad  
No dwellings found within 650' of the center of the well pad

SURFACE HOLE LOCATION	LABRING POINT LOCATION	BOTTOM HOLE LOCATION
UTM 17-RAD 83 N) 4345003.9 E) 515652.93	UTM 17-RAD 83 N) 4344727.9 E) 515418.7	UTM 17-RAD 83 N) 4342042.3 E) 516447.2
RAD 83, WV NORTH LAT.) 39.254220 LONG.) 80.818582	RAD 83, WV NORTH LAT.) 39.251737 LONG.) 80.821304	RAD 83, WV NORTH LAT.) 39.227518 LONG.) 80.809448
RAD 27, WV NORTH N) 277412.69 E) 1626563.64	RAD 27, WV NORTH N) 276519.83 E) 1625779.75	RAD 27, WV NORTH N) 267650.42 E) 1629007.95

**REFERENCE NOTES**  
Boundaries as shown taken from deeds, tax maps and field locations. A full boundary survey is not expressed nor implied. All bearings are based on true north. Ownership taken from public records Doddridge County, West Virginia MAY 2013  
State Plane Coordinates & NAD 83 Lat/Long by differential submeter mapping grade GPS  
Prepared by E.A.M.

FILE #: NOB 008  
DRAWING #: 2306  
SCALE: PLAT - 1" = 1600'  
TICK MARK - 1" = 2000'  
MINIMUM DEGREE OF ACCURACY: 1/200  
PROVEN SOURCE OF ELEVATION: SUBMETER MAPPING GRADE GPS

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:   
L.L.S. #2124 : Ernest J. Benchek III



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WYDEP  
OFFICE OF OIL & GAS  
601 57TH STREET  
CHARLESTON, WV 25304

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

WATERSHED: HEADWATERS MIDDLE ISLAND CREEK  
COUNTY/DISTRICT: DODDRIDGE / WEST UNION  
SURFACE OWNER: GERALD C. & JUANITA L. TURNER  
OIL & GAS ROYALTY OWNER: Corporate owned shares  
LEASE NUMBERS: \_\_\_\_\_

DATE: DECEMBER 18, 2013  
OPERATOR'S WELL #: OXF 4 AHS  
API WELL #: 47 STATE 17 COUNTY 06455 PERMIT HGA

ELEVATION: 1,080'  
QUADRANGLE: WEST UNION WV.  
ACREAGE: 146.50 +/-  
ACREAGE: 657.51 +/-

DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE   
PLUG OFF FORMATION  PERFORATE NEW FORMATION  PLUG & ABANDON   
CLEAN OUT & REPLUG  OTHER CHANGE  (SPECIFY): \_\_\_\_\_

TARGET FORMATION: MARCELLUS  
WELL OPERATOR: NOBLE ENERGY, INC.  
ADDRESS: 333 TECHNOLOGY DRIVE SUITE 116  
CITY: CANONSBURG STATE: PA ZIP CODE: 15317

ESTIMATED DEPTH: TVD: 6,678' TMD: 17,003'  
DESIGNATED AGENT: STEVEN M. GREEN  
ADDRESS: 500 VIRGINIA STREET EAST  
CITY: CHARLESTON STATE: WV ZIP CODE: 25301