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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](http://www.dep.wv.gov)

## PERMIT MODIFICATION APPROVAL

April 11, 2014

NOBLE ENERGY, INC.  
333 TECHNOLOGY DRIVE, SUITE 110  
CANONSBURG, PA 15317

Re: Permit Modification Approval for API Number 5101688 , Well #: SHL23CHS

Oil and Gas Operator:

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before permitted well work is commenced.

Please call James Martin at 304-926-0499, extension 1654 if you have any questions.

Sincerely,

for

Gene Smith  
Regulatory/Compliance Manager  
Office of Oil and Gas



4705101688  
MOD

Laura Adkins  
Regulatory Analyst  
412-841-9567

Ashley LeMasters  
West Virginia Department of Environmental Protection  
Office of Oil and Gas  
Environmental Resource Specialist III  
601 57<sup>th</sup> St. S.E  
Charleston, WV 25304

Permit Modification Request – SHL 23 CHS API 51-01688

Dear Ashley,

Noble Energy, Inc. requests a modification of the above reference well work permit. A lease has been obtained since permitting which will allow us to drill a more efficient lateral. The WW6B will not need to be modified as the same casing will be used and all of the technical information remains the same. I have enclosed a new mylar plat and WW6A1 showing the revised mineral exhibit.

Please let me know if you require further information.

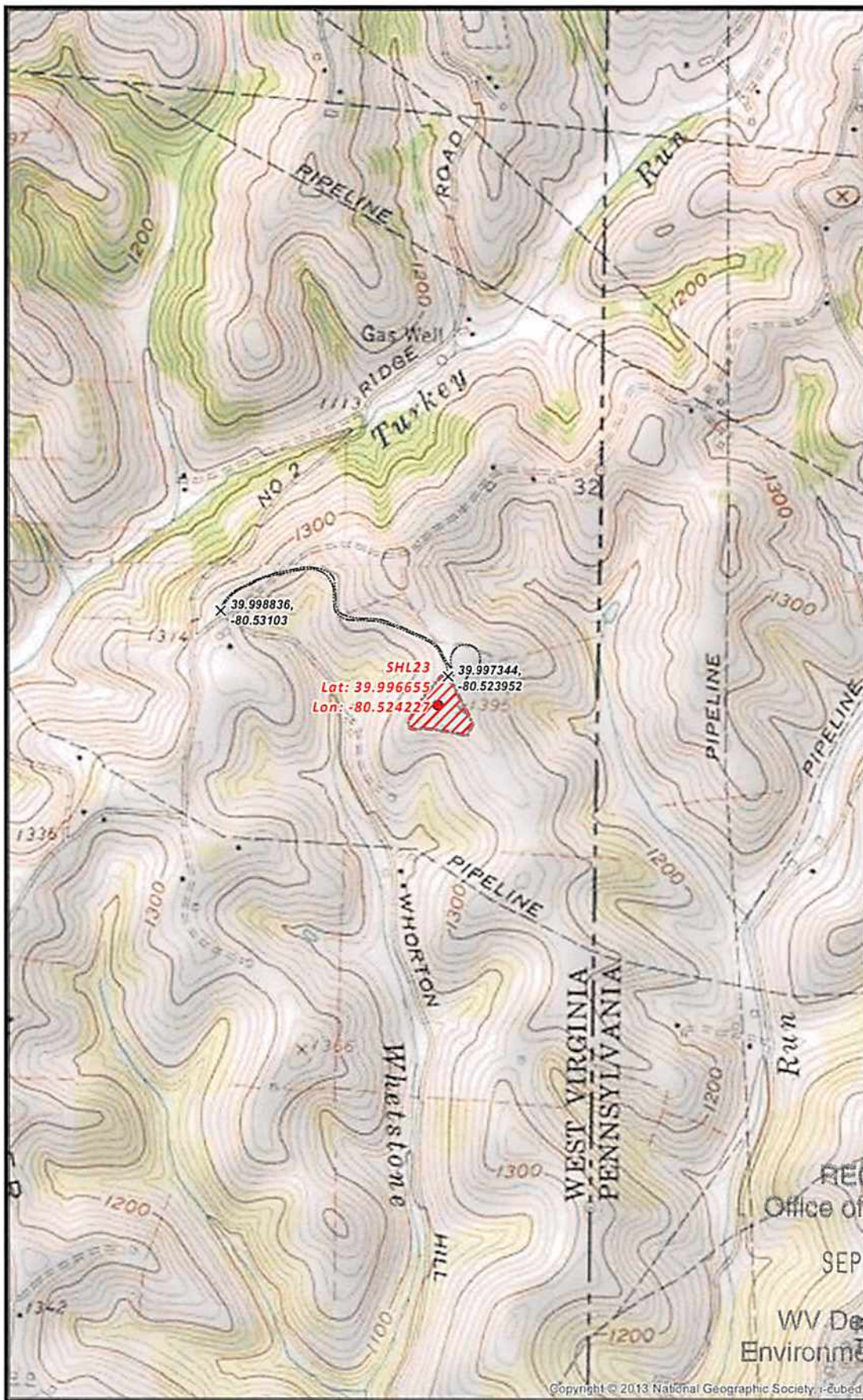
Sincerely,

  
Laura Adkins

Enclosure(s):

RECEIVED  
Office of Oil and Gas  
APR 08 2014  
WV Department of  
Environmental Protection

04/11/2014



RECEIVED  
Office of Oil and Gas

SEP 30 2013

WV Department of  
Environmental Protection

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**SHL23 SITE SAFETY PLAN**  
- SITE WELL LOCATION -

X Access Road Intersection      ● Well Pad  
--- Proposed Road      ■ Well Pad Boundary

0 500 1,000 2,000 Feet

Scale 1" = 1,000'

Projection: NAD\_1983\_StatePlane\_West\_Virginia\_North\_FPS\_4701  
Units: Feet US

**noble energy**

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

Date: 7/24/2013  
Author: Christopher Glover

1/6

04/11/2014



NOTES

Well is located on topo map 1,231' feet south of Latitude: 40° 00' 00"

Well is located on topo map 6,739' feet west of Longitude: 80° 30' 00"

- 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.

**SURFACE HOLE LOCATION (SHL)**  
**UTM 17-NAD83**  
**N:4427499.43**  
**E:540646.88**  
**NAD27, WV NORTH**  
**N:546748.36**  
**E:1713095.34**  
**LAT/LON DATUM-NAD83**  
**LAT:39.9966243**  
**LOX:-80.5240475**

**APPROX. LANDING POINT**  
**UTM 17-NAD83**  
**N:4428500.30**  
**E:540965.04**  
**NAD27, WV NORTH**  
**N:550015.23**  
**E:1714194.29**  
**LAT/LON DATUM-NAD83**  
**LAT:40.0056264**  
**LOX:-80.5202577**

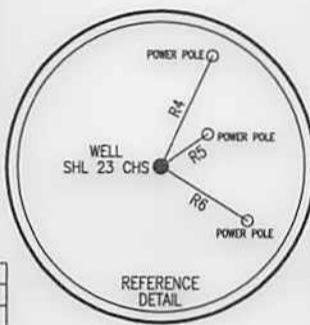
**BOTTOM HOLE LOCATION (BHL)**  
**UTM 17-NAD83**  
**N:4429802.70**  
**E:540020.17**  
**NAD27, WV NORTH**  
**N:554341.00**  
**E:1711165.36**  
**LAT/LON DATUM-NAD83**  
**LAT:40.0174060**  
**LOX:-80.5312466**



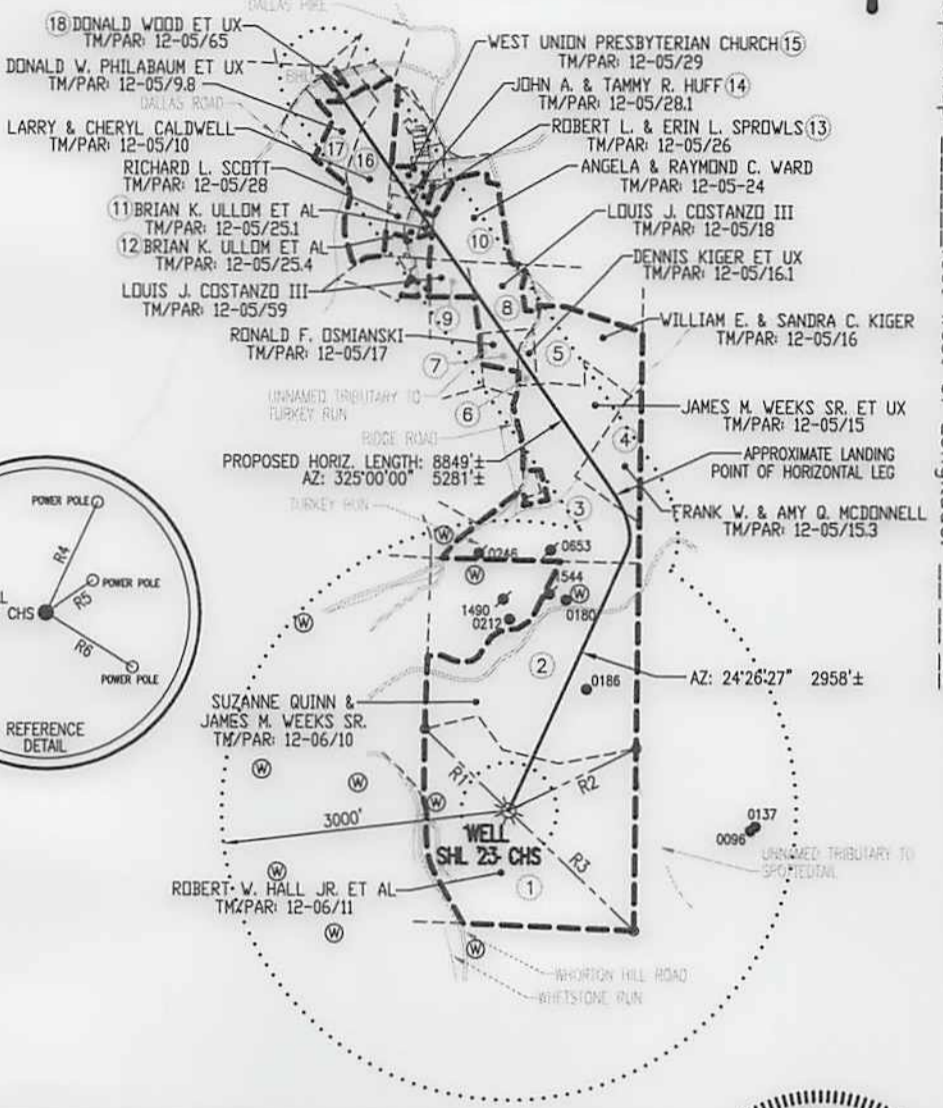
**LEGEND**

- ⊕ - TOPO MAP POINT
- ☼ - WELL
- - ALL ARE POINTS UNLESS OTHERWISE NOTED.
- ⊙ - WATER SOURCE
- ⊖ - LEASE NUMBER BASED ON ATTACHED WW-6A1
- - MINERAL TRACT BOUNDARY
- - - - - PARCEL LINES
- - - - - WELL REFERENCE
- — — — — PROPOSED HORIZONTAL WELL
- — — — — ROAD
- — — — — STREAM CENTER LINE
- - EXISTING WELLS
- ⊖ - PLUGGED WELLS

**WELLS WITHIN 3000'**



LINE	BEARING	DISTANCE
R1	N 46°09'35" W	1219.58'
R2	N 64°03'31" E	1476.34'
R3	S 46°23'03" E	1805.36'
R4	N 25°05'30" E	253.44'
R5	N 55°33'21" E	118.76'
R6	S 58°28'15" E	212.90'



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

FILE #: SHL 23 CHS  
 DRAWING #: SHL 23 CHS  
 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 27, 2014  
 OPERATOR'S WELL #: SHL 23 CHS  
 API WELL #: 47 51 MOD 01688 H6A  
 STATE COUNTY PERMIT

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

WATERSHED: ROBINSON FORK - ENLOW FORK ELEVATION: 1376.00'  
 COUNTY/DISTRICT: MARSHALL / SAND HILL QUADRANGLE: MAJORSVILLE, WV 7.5'  
 SURFACE OWNER: ROBERT W. HALL JR. ET AL ACREAGE: 92.80±  
 OIL & GAS ROYALTY OWNER: SEE ATTACHED WW-6A1 ACREAGE: 304.288±

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: 6,944'± TMD: 13,670'±  
 WELL OPERATOR NOBLE ENERGY, INC. DESIGNATED AGENT STEVEN M. GREEN  
 Address 333 TECHNOLOGY DRIVE, SUITE 116 Address 500 VIRGINIA STREET EAST, UNITED CENTER SUITE 590  
 City CANONSBURG State PA Zip Code 15317 City CHARLESTON State WV Zip Code 25301

04/11/2014