PERMIT MODIFICATION APPROVAL

October 22, 2013

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

Re: Permit Modification Approval for API Number 5101638, Well #: SHL 13AHS1
Casing Extended

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,

Gene Smith
Regulatory/Compliance Manager
Office of Oil and Gas
July 25, 2013

West Virginia Department of Environmental Protection
601 57th Street, SE
Charleston, WV 25304-2345

Re: SHL 13 API# 47-5101638 - 47-05101639-47-05101655 - 47-05101640-47-05101641
47-05101642- 47-05101643

Dear Laura:

Enclosed please find modifications to the casing string for the above referenced well. We would like to extend the 13 3/8” to 1200’ if order to try and avoid red rock issues. This change has been approved by the state inspector. This well is located in Marshall County, WV.

Should you have any questions, or desire any additional information, please do not hesitate to contact me at 724-820-3061 or via email at dswiger@nobleenergyinc.com.

Sincerely,

Dee Swiger

Regulatory Analyst
DS/

Enclosures:

Received
JUL 2 9 2013

Office of Oil and Gas
WV Dept. of Environmental Protection

10/25/2013
## CASING AND TUBING PROGRAM

<table>
<thead>
<tr>
<th>TYPE</th>
<th>Size</th>
<th>New or Used</th>
<th>Grade</th>
<th>Weight per ft.</th>
<th>FOOTAGE: For Drilling</th>
<th>INTERVALS: Left in Well</th>
<th>CEMENT: Fill-up (Cu. Ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conductor</td>
<td>30&quot;</td>
<td>N</td>
<td>J55</td>
<td>94.0</td>
<td>40'</td>
<td>40'</td>
<td>CTS</td>
</tr>
<tr>
<td>Fresh Water</td>
<td>20&quot;</td>
<td>N</td>
<td>J55</td>
<td>94.0</td>
<td>400'</td>
<td>400'</td>
<td>CTS</td>
</tr>
<tr>
<td>Coal</td>
<td>13 3/8&quot;</td>
<td>N</td>
<td>J55</td>
<td>54.5</td>
<td>1200'</td>
<td>1200'</td>
<td>CTS</td>
</tr>
<tr>
<td>Intermediate</td>
<td>9 5/8&quot;</td>
<td>N</td>
<td>J55</td>
<td>36.0</td>
<td>3218'</td>
<td>3218'</td>
<td>CTS</td>
</tr>
<tr>
<td>Production</td>
<td>5 1/2&quot;</td>
<td>N</td>
<td>P110</td>
<td>20.0</td>
<td>12267'</td>
<td>12267'</td>
<td>TOC 200' above 9,625' shoe</td>
</tr>
</tbody>
</table>

**Notes:**
- TOC 200' above 9,625' shoe

### Cement Schedule

<table>
<thead>
<tr>
<th>TYPE</th>
<th>Size</th>
<th>Wellbore Diameter</th>
<th>Wall Thickness</th>
<th>Burst Pressure</th>
<th>Cement Type</th>
<th>Cement Yield</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conductor</td>
<td>30&quot;</td>
<td>36&quot;</td>
<td>.25</td>
<td>2730</td>
<td>Type 1</td>
<td>CTS</td>
</tr>
<tr>
<td>Fresh Water</td>
<td>20&quot;</td>
<td>26&quot;</td>
<td>.438</td>
<td>2730</td>
<td>Type 1</td>
<td>1.18</td>
</tr>
<tr>
<td>Coal</td>
<td>13 3/8&quot;</td>
<td>17 1/2&quot;</td>
<td>.380</td>
<td>2730</td>
<td>Type 1</td>
<td>1.18</td>
</tr>
<tr>
<td>Intermediate</td>
<td>9 5/8&quot;</td>
<td>12 3/8&quot;</td>
<td>.352</td>
<td>3520</td>
<td>Class A</td>
<td>1.19</td>
</tr>
<tr>
<td>Production</td>
<td>5 1/2&quot;</td>
<td>8 3/4&quot;</td>
<td>.361</td>
<td>12640</td>
<td>Class A</td>
<td>1.27</td>
</tr>
</tbody>
</table>

**Notes:**
- TOC 200' above 9,625' shoe

### Packers

**Kind:**

**Sizes:**

**Depths Set:**

Received: JUL 2-9-2013

**Office of Oil and Gas**

**WV Dept. of Environmental Protection**

10/25/2013
Well is located on topo map 13° 63' 30" south of Latitude: 40° 02' 30".

BLUE MOUNTAIN ENGINEERING
11025 MAISON OX KNIGHT KNIGHT KNIGHT KNIGHT KNIGHT
P.O. BOX 1106
MARLBORO, WV 25134

FILE #: SHL13AH1
DRAWING #: SHL13AH1
SCALE: 1" = 2000'

MINIMUM DEGREE OF ACCURACY: 1/2500
PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT

LEGEND
- TOPO MAP POINT
- WELL
- ALL ME POINTS UNLESS OTHERWISE NOTED
- WELD EXCEPT
- STATE NUMBER BASED ON THOMAS 1498.81'
- MINERAL LAND BOUNDARY
- M 1960
- WELD REFERENCES
- PROPOSED
- HORIZONTAL WELL
- - NO
- STRONG CENTER LINE
- WELLS WITHIN 3000'
- - CREDIT WELLS
- - PLUNGED WELLS

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.: [Signature]
L.L.S.: P.S. No. 2000
PLACE SEAL HERE

DATE: APRIL 17, 2013
OPERATOR'S WELL #: SHL13AH1
API WELL #: 47 51
STATE: WEST VIRGINIA
COUNTY: PUTNAM
PERMIT: 1638 HCA

WATERSHED: TURKEY Run
WATER: [] Oil [] Waste Disposal [] Production [] Deep
[] Gas [] Liquid Injection [] Storage [] Shallow

COUNTY/DISTRICT: MARSHALL / SAND HILL
SURFACE OWNER: PAMELA H. & ANNETTE A. HEMSLY
OIL & GAS ROYALTY OWNER: SEE ATTACHED WW-6A

DRILL [] CONVERT [] DRILL DEEPER [] REDRILL [] FRACTURE / STIMULATE
PLUG OFF OLD FORMATION [] PERFORATE NEW FORMATION [] PLUG & ABANDON []
CLEAN OUT & REPLUG [] OTHER CHANGE [] (SPECIFY):
TARGET FORMATION: MARCELUS
ESTIMATED DEPTH: TBD: 6781' + TBD: 1260' +

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

[Map and technical details]