**API Form 19B-Section 1**

**Service Company:** Schlumberger

**Gun OD & Trade Name:** 6.62-in. HP High Shot Density

**Charge Name:** PowerFlow Max 6618, HMX

**Manufacturer:** Schlumberger

**Date of Manufacture:** 22MAR11B-11B

**Gun Type:** TCP and Wireline Hollow Carrier, Non Reusable

**Date of Section 1 Test:** 04/26/11

**Remarks/Exceptions per Section 1.11**

**Casing Data**

<table>
<thead>
<tr>
<th>OD</th>
<th>Weight lb/ft</th>
<th>API Grade</th>
<th>Date of Section 1 Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 5/8</td>
<td>47.0</td>
<td>L-80</td>
<td>04/26/11</td>
</tr>
</tbody>
</table>

**Target Data**

<table>
<thead>
<tr>
<th>OD</th>
<th>Amount of Cement</th>
<th>Amount of Sand</th>
<th>Date of Compressive Strength Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>96</td>
<td>10,785 lb</td>
<td>21,600 lb</td>
<td>04/26/11</td>
</tr>
</tbody>
</table>

**Manufacturer Charge Part No.:** 100803590

**Date of Manufacture:** 22MAR11B-11B

**Gun Type:** TCP and Wireline Hollow Carrier, Non Reusable

**Shots/ft:** N/A

**Charging Weight:** 35.0 38.8 gm, HMX

**Explosive weight:** 38.8 gm, HMX

<table>
<thead>
<tr>
<th>Powder, Case Material</th>
<th>Steel</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 hr</td>
<td>3 hr</td>
</tr>
<tr>
<td>350</td>
<td>300</td>
</tr>
</tbody>
</table>

**Recommended Minimum ID for Running:** N/A

**Shots/ft:** N/A

**Explosive weight:** 35.0 38.8 gm, HMX

**Debris Description:** Small steel chips.

**Remarks Witnessed by:** Allan Pettigrew & Truda Stevens for API

**Manufacturer’s Certification**

I certify that these tests were made according to the procedures as outlined in API RP 19B: Recommended Practices for Evaluation of Well Perforators, Second Edition, September 2006. All of the equipment used in these tests, such as the guns, jet charges, detonator cord, etc., was standard equipment with our company for the use in the gun being tested and was not changed in any manner for the test. Furthermore, the equipment was chosen at random from stock and therefore will be substantially the same as the equipment, which would be furnished to perforate a well for any operator.

API neither endorses these test results nor recommends the use of the perforator system described.

**Effective Date:** 3-30-2011

**Name of test as it should appear on website:** 6.62-in. HP HSD w/ PowerFlow Max 6618, HMX

**Name of test as it should appear on application and application date:** 6.62-in. HP HSD w/ PowerFlow Max 6618, HMX 3-30-2011
**API Form 19B-Section 1**

Conforms to All requirements of Section 1

<table>
<thead>
<tr>
<th>Service Company</th>
<th>Schlumberger</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gun OD &amp; Trade Name</strong></td>
<td>6.62-in. HP High Shot Density</td>
</tr>
<tr>
<td><strong>Charge Name</strong></td>
<td>PowerFlow Max 6618, HMX</td>
</tr>
</tbody>
</table>

**Maximum Pressure Rating**

| Pressure | 27,000 psi |

**Maximum Temp, °F**

- 1 hr: 350°F
- 3 hr: 300°F
- 24 hr: 200°F

**Explosive weight**

- 38.8 gm

**Powder, Case Material**

- HMX

**Gun Type**

- TCP and Wireline Hollow Carrier, Non Reusable

**Shots/ft**

- 18

**Shot Density Tested**

- 6.62-in. HP High Shot Density

**Rated Data Sheet Perforating System Evaluation, API RP 19B Section 1**

**Conforms to All requirements of Section 1 Special test - See Remarks/Exceptions below**

**Remarks/Exceptions per Section 1.11**

- Remarks Witnessed by: Allan Pettigrew & Truda Stevens for API

**Registered Data Sheet Perforating System Evaluation, API RP 19B Section 1**

**Type of Certification:**

- Self [X]
- Third Party

I certify that these tests were made according to the procedures as outlined in API RP 19B: Recommended Practices for Evaluation of Well Perforators, Second Edition, September 2006. All of the equipment used in these tests, such as the guns, jet charges, detonator cord, etc., was standard equipment with our company for the use in the gun being tested and was not changed in any manner for the test. Furthermore, the equipment was chosen at random from stock and therefore will be substantially the same as the equipment, which would be furnished to perforate a well for any operator.

API neither endorses these test results nor recommends the use of the perforator system described.

**Certified by:**

- Engineering Manager, PSPG

**Address:**

- 14910 Airline Road Rosharon, TX 77583

**Name of test as it should appear on application and application date:**

- 6.62-in. HP HSD w/ PowerFlow Max 6618, HMX 3-30-2011

**Name of test as it should appear on website:**

- 6.62-in. HP HSD w/ PowerFlow Max 6618, HMX