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

**Type of Certification:**

- **Self**
- **Third Party**

**Remarks:**

Witnessed by: Jerry Baldwin representing API

**Debris Description:** Small steel chips.

### Casing Data
- **9-7/8" Q-125 casing does not meet API Section 1 Table 2 requirements**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No 1</td>
<td>0.62</td>
<td>0.93</td>
<td>0.83</td>
<td>0.93</td>
<td>7.0</td>
<td>0.17</td>
</tr>
<tr>
<td>No 2</td>
<td>1.18</td>
<td>0.87</td>
<td>0.90</td>
<td>0.89</td>
<td>7.6</td>
<td>0.20</td>
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<tr>
<td>No 3</td>
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<td>0.77</td>
<td>0.84</td>
<td>0.75</td>
<td>6.4</td>
<td>0.07</td>
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<tr>
<td>No 4</td>
<td>0.80</td>
<td>0.86</td>
<td>0.92</td>
<td>0.75</td>
<td>6.8</td>
<td>0.13</td>
</tr>
<tr>
<td>No 5</td>
<td>1.38</td>
<td>0.56</td>
<td>0.75</td>
<td>0.92</td>
<td>5.8</td>
<td>0.07</td>
</tr>
<tr>
<td>No 6</td>
<td>0.80</td>
<td>0.81</td>
<td>0.90</td>
<td>0.92</td>
<td>6.2</td>
<td>0.10</td>
</tr>
<tr>
<td>No 7</td>
<td>0.62</td>
<td>0.88</td>
<td>0.99</td>
<td>0.78</td>
<td>6.3</td>
<td>0.09</td>
</tr>
<tr>
<td>No 8</td>
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<td>0.74</td>
<td>0.96</td>
<td>0.74</td>
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<tr>
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<td>5.6</td>
<td>0.11</td>
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<tr>
<td>No 10</td>
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<td>0.77</td>
<td>0.74</td>
<td>6.1</td>
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<tr>
<td>No 11</td>
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<td>0.70</td>
<td>0.77</td>
<td>0.70</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks/Exceptions per Section 1.11**

9-7/8" Q-125 casing does not meet API Section 1 Table 2 requirements.

**Remarks:**

API neither endorses these test results nor recommends the use of the perforator system described.
### Registered Data Sheet Perforating System Evaluation, API RP 19B Section 1

**Conforms to All requirements of Section 1**: Yes

**Service Company**: Schlumberger

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

**Manufacturer Charge Part No.**: 100803590

**Date of Manufacture**: 02MAR11B1-11B

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### API Form 19B-Section 1

<table>
<thead>
<tr>
<th><strong>Explosive weight</strong></th>
<th><strong>HMX Powder, gm</strong></th>
<th><strong>Case Material</strong></th>
<th><strong>Steel</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>38.8</td>
<td>350</td>
<td>1 hr</td>
<td>100 hr</td>
</tr>
<tr>
<td></td>
<td>24 hr</td>
<td>200 hr</td>
<td></td>
</tr>
</tbody>
</table>

**Phasing Tested**: 120/60 Bottom up

**Maximum Pressure Rating**: 27,000 psi

**Casing Data**

- **Debris Description**: Small steel chips.
- **Debris gm/charge**: 18
- **Shots/ft**: 18
- **Firing Order**: X Top down Bottom up
- **Available Firing Mode**: X Simultaneous

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### Remarks/Exceptions per Section 1.11

- **9-7/8" 62.8# Q-125 casing does not meet API Section 1 Table 2 requirements**

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### Target Data

- **Target OD**: 9-7/8 in.
- **Weight**: 62.8 lb/ft
- **Amount of Cement**: 12,005 lb
- **Amount of Sand**: 24,000 lb
- **Amount of Water**: 6,216 lb

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### Date of Compressive Strength Test

- **Date**: 05/10/11
- **Briquette Compressive Strength**: 5,346 psi
- **Age of Target**: 28 days

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### Casing Data

- **Casing OD**: 9-7/8 in.
- **OD**: 0.65
- **Weight**: 62.8 lb/ft
- **API Grade**: Q-125
- **Date of Section 1 Test**: 05/10/11
- **Burr Height, in.**: 0.08
- **Average Casing Hole Diameter, Short Axis, in.**: 0.62
- **Total Depth, in.**: 28
- **Average Casing Hole Diameter, Long Axis, in.**: 0.72
- **Burr Height, in.**: 0.14

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### Remarks

**Witnessed by**: Jerry Baldwin representing API

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### Manufacturer’s Certification

**Type of Certification**: Self X Third Party

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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.

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**Certified by**: Engineering Manager, PSG 5/12/2011 Schlumberger 14910 Airline Road Rosharon, TX 77583

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