MEMORANDUM

To: Robert Aten - Project Coordinator
From: John Bassett - Hydrogeologist
Subject: Midco Slug Test Computations

This memo transmits a revised calculation sheet for the Midco slug test data. The revision corrects a slight discrepancy in the manner in which the Midco I and II data were handled. The revision involves only the basal sand aquifer wells at Midco II, and is explained in the following.

Using the Bouwer and Rice Methodology, 2 formulas are used in computing the ln Re/rw factor, depending on whether the well is regarded as fully or partially penetrating. A separate formula for an absolutely fully penetrating well is a mathematical necessity. The separate formulas were used in the case of 10 and 30 foot wells at both Midco I and II, but only data derived for the partially penetrating formula was displayed in the Midco II computation sheet. For wells that are "almost" fully penetrating, as the Midco II wells are, the results obtained by the two formulas are very similar. The revisions made for the purpose of making consistent interpretations of the Midco data. Note that the mean value of conductivity changes only in the second decimal place.
### Table 1 - Slug Test Permeability Calculation

<table>
<thead>
<tr>
<th>MILL. WS.</th>
<th>x (ft)</th>
<th>y (ft)</th>
<th>r (ft)</th>
<th>L (ft)</th>
<th>Static</th>
<th>t (ffl)</th>
<th>D (ft sec)</th>
<th>H (ft)</th>
<th>lift</th>
<th>lift in (y)</th>
<th>K (ft/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A 10</td>
<td>0.040</td>
<td>0.006</td>
<td>0.194</td>
<td>0.003</td>
<td>50.0</td>
<td>0.099</td>
<td>56.5</td>
<td>5.1</td>
<td>2.4</td>
<td>516.79</td>
<td>516.0</td>
</tr>
<tr>
<td>A 10</td>
<td>0.580</td>
<td>0.580</td>
<td>0.580</td>
<td>0.580</td>
<td>50.5</td>
<td>0.099</td>
<td>56.5</td>
<td>5.1</td>
<td>2.4</td>
<td>516.79</td>
<td>516.0</td>
</tr>
<tr>
<td>B 10</td>
<td>0.360</td>
<td>0.360</td>
<td>0.360</td>
<td>0.360</td>
<td>50.5</td>
<td>0.099</td>
<td>56.5</td>
<td>5.1</td>
<td>2.4</td>
<td>516.79</td>
<td>516.0</td>
</tr>
</tbody>
</table>

### Table 2 - Slug Test Permeability Calculation

<table>
<thead>
<tr>
<th>MILL. WS.</th>
<th>x (ft)</th>
<th>y (ft)</th>
<th>r (ft)</th>
<th>L (ft)</th>
<th>Static</th>
<th>t (ffl)</th>
<th>D (ft sec)</th>
<th>H (ft)</th>
<th>lift</th>
<th>lift in (y)</th>
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</thead>
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</tr>
<tr>
<td>B 10</td>
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<td>0.360</td>
<td>0.360</td>
<td>0.360</td>
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</tr>
</tbody>
</table>

**Note:** The tables contain data for various parameters such as mill widths, x and y coordinates, radii, and other measurements relevant to a slug test calculation for permeability. The values are used to calculate the permeability (K) of the material under test.