WATER SALINITY TO GRADIENT CONVERSION

NOTES:

- Presented gradients below are *estimations* only.
- Water densities derived from the website, [http://www.csgnetwork.com/h2odenscalc.html](http://www.csgnetwork.com/h2odenscalc.html), assuming constant conditions of 30°C and 101 kPa.*
- Water densities converted to water gradients using the equation \( p = hdg \).

*Density effects from temperature and pressure with depth may be significant in some cases.

**TABLE**

<table>
<thead>
<tr>
<th>Water Salinity (ppm)</th>
<th>Water Gradient (kPa/m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,000</td>
<td>9.79</td>
</tr>
<tr>
<td>10,000</td>
<td>9.83</td>
</tr>
<tr>
<td>20,000</td>
<td>9.90</td>
</tr>
<tr>
<td>30,000</td>
<td>9.98</td>
</tr>
<tr>
<td>40,000</td>
<td>10.05</td>
</tr>
<tr>
<td>50,000</td>
<td>10.12</td>
</tr>
<tr>
<td>60,000</td>
<td>10.20</td>
</tr>
<tr>
<td>70,000</td>
<td>10.27</td>
</tr>
<tr>
<td>80,000</td>
<td>10.35</td>
</tr>
<tr>
<td>90,000</td>
<td>10.43</td>
</tr>
<tr>
<td>100,000</td>
<td>10.50</td>
</tr>
<tr>
<td>110,000</td>
<td>10.58</td>
</tr>
<tr>
<td>120,000</td>
<td>10.66</td>
</tr>
<tr>
<td>130,000</td>
<td>10.74</td>
</tr>
<tr>
<td>140,000</td>
<td>10.82</td>
</tr>
<tr>
<td>150,000</td>
<td>10.90</td>
</tr>
<tr>
<td>160,000</td>
<td>10.98</td>
</tr>
<tr>
<td>170,000</td>
<td>11.06</td>
</tr>
<tr>
<td>180,000</td>
<td>11.14</td>
</tr>
<tr>
<td>190,000</td>
<td>11.22</td>
</tr>
<tr>
<td>200,000</td>
<td>11.31</td>
</tr>
<tr>
<td>210,000</td>
<td>11.39</td>
</tr>
<tr>
<td>220,000</td>
<td>11.48</td>
</tr>
<tr>
<td>230,000</td>
<td>11.56</td>
</tr>
<tr>
<td>240,000</td>
<td>11.65</td>
</tr>
<tr>
<td>250,000</td>
<td>11.74</td>
</tr>
<tr>
<td>300,000</td>
<td>12.19</td>
</tr>
<tr>
<td>350,000</td>
<td>12.65</td>
</tr>
</tbody>
</table>
Graph

Water Salinity to Gradient Conversion

\[ y = 8 \times 10^{-6} x + 9.706 \]

Gradient (kPa/m) vs. Water Salinity (ppm)