Honeaite

Crystal Data: Orthorhombic.  *Point Group: 2/m 2/m 2/m.*  As irregular inclusions to 300 μm.

*D(calc.) = 11.18

*R₁-R₂: (470) 50.9-51.7 (37.4-37.6)_oil, (546) 51.1-51.3 (36.7-37.6)_oil, (589) 50.7-51.8 (36.3-38.0)_oil, (650) 50.2-51.2 (35.5-37.5)_oil

**Cell Data:**  *Space Group: Pbcm.*  
*a* = 8.9671(4)  *b* = 8.8758(4)  *c* = 7.8419(5)  *Z = 4*

**X-ray Powder Pattern:**  Calculated pattern.  
2.938 (100), 2.095 (47), 2.989 (31), 2.833 (23), 1.853 (17), 1.960 (16), 2.219 (15)

**Chemistry:**

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Au</td>
<td>56.33</td>
<td>56.25</td>
</tr>
<tr>
<td>Tl</td>
<td>19.68</td>
<td>19.46</td>
</tr>
<tr>
<td>Te</td>
<td>24.30</td>
<td>24.29</td>
</tr>
<tr>
<td>Total</td>
<td>100.31</td>
<td>100.00</td>
</tr>
</tbody>
</table>

(1) Karonie gold deposit, Eastern Goldfields province, Western Australia, Australia; average of 17 electron microprobe analyses; corresponding to *Au₃₋₀₂Tl₁₋₀₂Te₂₋₀₀.*  (2) *Au₂TlTe₂.*

**Occurrence:**  In microvugs and microfractures roughly following the metamorphic banding, mainly within areas of epidote and prehnite alteration (greenschist facies) of quartz amphibolite.

**Association:**  Gold (low Ag), tellurobismuthite, molybdenite, petzite, hessite, calaverite, melonite, mottagamite, frohbergite, altaite, pyrrhotite, ferrohornblende, calcic plagioclase (An₃₁), ilmenite, pyrite, zircon.

**Distribution:**  From the Main Zone orebody, Karonie gold deposit, Eastern Goldfields province, Western Australia, Australia.

**Name:**  Honors Professor Russell M. Honea (1929-2002), University of Colorado, Boulder, Colorado, USA.

**Type Material:**  Natural History Museum, London, England (BM 2015, 36).