The two artifacts were produced from the Valles Rhyolite (Cerro del Medio) source in the Jemez Mountains, northern New Mexico (Table 1). The Valles Rhyolite event did not produce a large ash fall, and thus did not enter the Rio Grande in any quantity (Shackley 2005). Results of the Church (2000) study in southern Rio Grande Quaternary alluvium and my study from Española to San Antonio in Rio Grande alluvium did not recover Valles Rhyolite south or Albuquerque and only in very small quantities and nodule sizes (Shackley 2012). The raw material for these artifacts was likely procured from Valles Caldera proper rather than from Rio Grande alluvium. Specific instrumental methods can be found at http://www.swxrflab.net/anlysis.htm, and Shackley (2005). Source assignment was made by comparison to source standard data in the laboratory. Analysis of the USGS RGM-1 standard indicates high machine precision for the elements of interest (Table 1 here).

Sincerely,

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Director

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REFERENCES CITED

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Shackley, M.S.  


Table 1. Elemental concentrations for the archaeological samples. All measurements in parts per million (ppm).

<table>
<thead>
<tr>
<th>SAMPLE</th>
<th>Mn</th>
<th>Fe</th>
<th>Zn</th>
<th>Rb</th>
<th>Sr</th>
<th>Y</th>
<th>Zr</th>
<th>Nb</th>
<th>Pb</th>
<th>Th</th>
<th>Source</th>
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<td>FS-JAR-11</td>
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<td>1224</td>
<td>99</td>
<td>182</td>
<td>15</td>
<td>45</td>
<td>181</td>
<td>54</td>
<td>29</td>
<td>29</td>
<td>Valles Rhy (Cerro del Medio)</td>
</tr>
<tr>
<td>CN-115A</td>
<td>391</td>
<td>1191</td>
<td>104</td>
<td>163</td>
<td>11</td>
<td>45</td>
<td>154</td>
<td>51</td>
<td>26</td>
<td>18</td>
<td>Valles Rhy (Cerro del Medio)</td>
</tr>
<tr>
<td>RGM1-S4</td>
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<td>1372</td>
<td>37</td>
<td>150</td>
<td>108</td>
<td>24</td>
<td>219</td>
<td>9</td>
<td>21</td>
<td>15</td>
<td>standard</td>
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