LETTER REPORT

AN ENERGY-DISPERSIVE X-RAY FLUORESCENCE ANALYSIS OF AN OBSIDIAN PROJECTILE POINT FROM AR-03-04-06-01274, NEAR SEDONA, ARIZONA

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Dear Byl,

The obsidian point was produced from the Topaz Basin source in the Transition Zone near Arnold Mesa along Cienega Creek, Prescott National Forest, approximately 50 km south of Mescal Mountain (Table 1, Figures 1 and 2; Shackley 2009) All analyses for this study were conducted on the ThermoScientific Quant’X XRF spectrometer at the Geoarchaeological XRF Laboratory, Albuquerque, New Mexico. Specific instrumental methods can be found at http://www.swxrflab.net/analysis.htm, and Shackley (2005). Source assignment was made by comparison to source standard data in the laboratory and Shackley (2005, 2009). Analysis of the USGS RGM-1 standard indicates high machine precision for the elements of interest (Table 1 here).

Sincerely,

M. Steven Shackley, Ph.D.  
Director

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REFERENCE CITED

Shackley, M.S.


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

<table>
<thead>
<tr>
<th>Sample</th>
<th>Ti</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>
</tr>
</thead>
<tbody>
<tr>
<td>FS02</td>
<td>549</td>
<td>616</td>
<td>1000</td>
<td>96</td>
<td>130</td>
<td>29</td>
<td>21</td>
<td>54</td>
<td>65</td>
<td>34</td>
<td>16</td>
<td>Topaz Basin, AZ</td>
</tr>
<tr>
<td>RGM1-S4</td>
<td>1576</td>
<td>286</td>
<td>1372</td>
<td>40</td>
<td>149</td>
<td>108</td>
<td>25</td>
<td>215</td>
<td>10</td>
<td>19</td>
<td>15</td>
<td>standard</td>
</tr>
</tbody>
</table>

![Graph showing elemental concentrations for the archaeological sample.](www.escholarship.org/uc/item/65v0w13n)
Figure 1. Nb versus Rb bivariate plot of the archaeological sample and Topaz Basin source standards.

Figure 2. Aerial image of the location of Mescal Mountain, the Topaz Basin source and prominent features.