LETTER REPORT

AN ENERGY-DISPERSIVE X-RAY FLUORESCENCE ANALYSIS OF OBSIDIAN ARTIFACTS FROM TWO SITES NEAR PAYSON, CENTRAL ARIZONA

14 October 2004

Michael R. Robbins
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Dear Michael,

One of the artifacts was produced from obsidian procured from Superior (Picketpost Mountain), and the other from obsidian procured from Government Mountain, both sources in opposite directions from Payson. The one artifact produced from Superior obsidian (1449.88) appears similar to rejuvenated Late Archaic San Pedro or Elko Corner-notched dart points. The other highly patinated artifact produced from Government Mountain obsidian is similar to the level of patination found in Archaic contexts rather than Hohokam contexts, although a number of variables can produce patination at a variety of rates.

The samples were analyzed with a Spectrace (ThermoNoran) QuanX EDXRF spectrometer in the Archaeological XRF Laboratory, University of California, Berkeley. Instrumental methods can be found at http://www.swxrflab.net/analysis.htm. Analysis of the USGS RGM-1 standard indicates high machine precision for the elements of interest (Govindaraju 1994; Table 1 here). Source determination was made using source standards at Berkeley, and reference to Shackley (1995, 2004).

Sincerely,

M. Steven Shackley, Ph.D.
Director

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REFERENCES CITED

Govindaraju, K.

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>Rb</th>
<th>Sr</th>
<th>Y</th>
<th>Zr</th>
<th>Nb</th>
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<td>1549-88.1</td>
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<td>57</td>
<td>6177</td>
<td>11</td>
<td>21</td>
<td>20</td>
<td>98</td>
<td>36</td>
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<td>1550.38.1</td>
<td>743</td>
<td>56</td>
<td>8341</td>
<td>10</td>
<td>73</td>
<td>20</td>
<td>77</td>
<td>53</td>
<td>Government Mtn</td>
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<td>RGM1-H1</td>
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<td>32</td>
<td>1324</td>
<td>15</td>
<td>11</td>
<td>20</td>
<td>21</td>
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<td>standard</td>
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<td>H1</td>
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