Title
An Energy-Dispersive X-Ray Fluorescence Analysis of an Obsidian Artifact from 34GT47, Grant County, Oklahoma

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LETTER REPORT

AN ENERGY-DISPERSIVE X-RAY FLUORESCENCE ANALYSIS OF AN OBSIDIAN ARTIFACT FROM 34GT47, GRANT COUNTY, OKLAHOMA

7 November 2013

Robert Bartlett
ODOT
Oklahoma Archaeological Survey
University of Oklahoma
111 E Chesapeake, Rm. 102
Norman, OK 73019-5111

Dear Robert:

The one obsidian artifact was produced from Obsidian Cliff, Wyoming obsidian. 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/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,

M. Steven Shackley, Ph.D.
Director

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http://www.swxrflab.net/
REFERENCE CITED

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>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>Ba</th>
<th>Pb</th>
<th>Th</th>
<th>Source</th>
</tr>
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<tbody>
<tr>
<td>34GT47-1</td>
<td>651</td>
<td>214</td>
<td>10558</td>
<td>135</td>
<td>243</td>
<td>8</td>
<td>77</td>
<td>173</td>
<td>40</td>
<td>10</td>
<td>32</td>
<td>34</td>
<td>Obsidian Cliff, WY standard</td>
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<tr>
<td>RGM1-S4</td>
<td>1546</td>
<td>267</td>
<td>13297</td>
<td>42</td>
<td>152</td>
<td>107</td>
<td>26</td>
<td>222</td>
<td>8</td>
<td>733</td>
<td>25</td>
<td>16</td>
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