Title
An Energy-Dispersive X-Ray Fluorescence Analysis of an Obsidian Artifact from 41TA107, Taylor County, Texas

Permalink
https://escholarship.org/uc/item/2647m1j5

Author
Shackley, M. Steven

Publication Date
2015-08-25

Supplemental Material
https://escholarship.org/uc/item/2647m1j5#supplemental

Data Availability
The data associated with this publication are in the supplemental files.

License
CC BY-NC 4.0
LETTER REPORT

AN ENERGY-DISPERSIVE X-RAY FLUORESCENCE ANALYSIS OF AN OBSIDIAN ARTIFACT FROM 41TA107, TAYLOR COUNTY, TEXAS

25 August 2015

Steve Carpenter
SWCA Environmental Consultants
4407 Monterey Oaks Blvd.
Austin, TX 78749

Dear Steve:

The one obsidian artifact was produced from obsidian procured from the Malad source in eastern Idaho, not unusual in northern Texas, particularly in Archaic sites. 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
### 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>Rb</th>
<th>Sr</th>
<th>Y</th>
<th>Zr</th>
<th>Nb</th>
<th>Ba</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>P05</td>
<td>1183</td>
<td>238</td>
<td>9648</td>
<td>125</td>
<td>81</td>
<td>30</td>
<td>84</td>
<td>12</td>
<td>1797</td>
<td>Malad, ID</td>
</tr>
<tr>
<td>RGM1-S5</td>
<td>1624</td>
<td>303</td>
<td>13149</td>
<td>145</td>
<td>104</td>
<td>19</td>
<td>213</td>
<td>11</td>
<td>677</td>
<td>standard</td>
</tr>
</tbody>
</table>