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Title
An Energy-Dispersive X-Ray Fluorescence Analysis of Obsidian Artifacts from Techado Spring and Tri-R Pueblo, New Mexico

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LETTER REPORT

AN ENERGY-DISPERSIVE X-RAY FLUORESCENCE ANALYSIS OF OBSIDIAN ARTIFACTS FROM TECHADO SPRING AND TRI-R PUEBLO, NEW MEXICO

15 November 2010

Matt Peeples
Department of Anthropology
Arizona State University
Tempe, AZ 85287

Dear Matt,

Similar to other larger studies in the region, the obsidian source provenance analysis indicates artifacts produced from sources in western New Mexico (Mule Mountains/Mule Creek, and Gwynn/Ewe Canyon) and sources from the Jemez Mountains, most likely procured from the Rio Grande alluvium to the east (Shackley 2005, 2010; Table 1 here).

The samples were analyzed with a Thermo Scientific Quant’X EDXRF spectrometer in the Archaeological XRF Laboratory, El Cerrito, California. Specific instrumental methods can be found at http://www.swxrflab.net/analysis.htm, and Shackley (2005). Samples assigned to source by comparison to source standards at Berkeley (Shackley 2005). 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

VOICE: (510) 642-2533
INTERNET: shackley@berkeley.edu
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>
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<tr>
<th>Site/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>7685</td>
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<td>120</td>
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<td>202</td>
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<td>174</td>
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<td>9437</td>
<td>232</td>
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<td>375</td>
<td>9925</td>
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<td>13063</td>
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