Title
An Energy-Dispersive X-Ray Fluorescence Analysis of Obsidian Artifacts from LA 177527, Southeastern New Mexico

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

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LETTER REPORT

AN ENERGY-DISPERSIVE X-RAY FLUORESCENCE ANALYSIS OF OBSIDIAN ARTIFACTS FROM LA 177527, SOUTHEASTERN NEW MEXICO

21 August 2015

Dr. Kenneth Brown
TRC Environmental Corp.
4221-A Balloon Park Road NE
Albuquerque, NM 87109

Dear Ken and Chris:

The two obsidian artifacts were produced from Cerro Toledo Rhyolite obsidian, the primary source of which is in the Jemez Mountains in northern New Mexico (Table 1). However, nodules of Cerro Toledo obsidian are available as secondary deposits in Rio Grande Quaternary alluvium at least as far south as Las Cruces (see Church 2000; Shackley 2012). Specific instrumental methods can be found at http://www.swxrflab.net/analysis.htm, and Shackley (2005). Source assignment was made by comparison to the laboratory data base and 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

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


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>167</td>
<td>91</td>
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<td>752</td>
<td>540</td>
<td>12630</td>
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<td>10</td>
<td>63</td>
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<tr>
<td>RGM1-S4</td>
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<td>279</td>
<td>13675</td>
<td>141</td>
<td>109</td>
<td>28</td>
<td>214</td>
<td>9</td>
<td>Rhy standard</td>
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