LETTER REPORT

AN ENERGY-DISPERSIVE X-RAY FLUORESCENCE ANALYSIS OF OBSIDIAN ARTIFACTS FROM A SITE IN ORANGE COUNTY, CALIFORNIA

23 April 2007

Gavin Archer
Stantec, Inc.
19 Technology Drive
Irvine, CA 92618

Dear Gavin,

Unfortunately, one of the samples is not obsidian, and the other could not be assigned to source (Table 1). It does not match any published source in western North America available at this lab. The computer for the spectrometer was down for a while, and we apologize for the long wait. There is no charge for the analysis.

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/anlysis.htm. Analysis of the USGS RGM-1 standard indicates high machine precision for the elements of interest (Govnidaraju 1994; Table 1 here).

Sincerely,

M. Steven Shackley, Ph.D.
Director

VOICE: (510) 642-2533
INTERNET: shackley@berkeley.edu
http://www.swxrflab.net/
REFERENCES CITED

Govindaraju, K.

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>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>119-7</td>
<td>1192</td>
<td>406</td>
<td>8134</td>
<td>107</td>
<td>72</td>
<td>17</td>
<td>99</td>
<td>13</td>
<td>unknown</td>
</tr>
<tr>
<td>1003</td>
<td>3760</td>
<td>13830</td>
<td>16650</td>
<td>11</td>
<td>200</td>
<td>11</td>
<td>131</td>
<td>0</td>
<td>not obsidian</td>
</tr>
<tr>
<td>rgbm-1</td>
<td>1390</td>
<td>295</td>
<td>13126</td>
<td>148</td>
<td>97</td>
<td>31</td>
<td>221</td>
<td>10</td>
<td>standard</td>
</tr>
</tbody>
</table>