Title
An Energy-Dispersive X-Ray Fluorescence Analysis of Obsidian Artifacts from LA 33085, Southwestern Texas

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3 January 2012

Michael Stowe
Geo-Marine, Inc.
4725 Ripley Dr. Suite A
El Paso, TX 79922

Dear Michael,

The artifacts submitted were all produced from one of the major sources derived from the Valles Caldera, Cerro Toledo Rhyolite and Valles Rhyolite (Shackley 2005; Table 1 here). Valles Rhyolite has not been found in Rio Grande Quaternary alluvium this far south, and must have been originally procured from some point north of Albuquerque, and likely in the caldera proper (Shackley 2010). See Tim Church’s paper on secondary deposits in southern New Mexico (Church 2000). All analyses for this study were conducted on a ThermoScientific Quant’X XRF spectrometer at the Archaeological 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 Archaeological XRF Laboratory. Analysis of the USGS RGM-1 standard indicates high machine precision for the elements of interest (USGS; Table 1 here).

Sincerely,

M. Steven Shackley, Ph.D.
Director

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

Church, T.

Shackley, M.S.


Table 1. Elemental concentrations for the archaeological samples. All measurements in parts per million (ppm).

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<th>Sample</th>
<th>Ti</th>
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<th>Y</th>
<th>Zr</th>
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