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AN ENERGY-DISPERSIVE X-RAY FLUORESCENCE ANALYSIS OF OBSIDIAN ARTIFACTS FROM LA 193369, SOUTHERN NEW MEXICO

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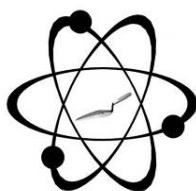
Shackley, M. Steven

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LETTER REPORT

AN ENERGY-DISPERSIVE X-RAY FLUORESCENCE ANALYSIS OF OBSIDIAN ARTIFACTS FROM LA 193369, SOUTHERN NEW MEXICO

26 November 2019

Dr. Jim Railey
SWCA Environmental Consultants
5647 Jefferson Street, NE
Albuquerque, NM 87109

Dear Jim:

The two obsidian debitage pieces are both produced from Valles Rhyolite (Cerro del Medio) obsidian in the Jemez Mountains, northern New Mexico (Table 1).

Specific instrumental methods can be found at <http://www.swxrflab.net/analysis.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

VOICE: 510-393-3931
INTERNET: shackley@berkeley.edu
<http://www.swxrflab.net/>

REFERENCE CITED

Shackley, M.S.

2005 *Obsidian: Geology and Archaeology in the North American Southwest*. University of Arizona Press, Tucson.

Table 1. Elemental concentrations for the archaeological samples and USGS RGM-1 rhyolite standard. All measurements in parts per million (ppm).

Sample	Ti	Mn	Fe	Rb	Sr	Y	Zr	Nb	Source
19	805	440	12567	183	16	47	172	58	Valles Rhy (Cerro del Medio)
21	1234	466	12450	161	10	43	145	49	Valles Rhy (Cerro del Medio)
RGM1-S4	1509	309	13693	148	104	24	222	14	standard