

# UC Berkeley

## Archaeological X-ray Fluorescence Reports

### Title

An Energy-Dispersive X-Ray Fluorescence Analysis of Two Obsidian Artifacts from Oklahoma

### Permalink

<https://escholarship.org/uc/item/03j7q42g>

### Author

Shackley, M. Steven

### Publication Date

2015-10-21

### Supplemental Material

<https://escholarship.org/uc/item/03j7q42g#supplemental>

### License

[CC BY-NC 4.0](#)



GEOARCHAEOLOGICAL XRF LAB

GEOARCHAEOLOGICAL X-RAY FLUORESCENCE SPECTROMETRY LABORATORY

8100 Wyoming Blvd., Ste M4-158

USA

Albuquerque, NM 87113

## ***LETTER REPORT***

# **AN ENERGY-DISPERSIVE X-RAY FLUORESCENCE ANALYSIS OF TWO OBSIDIAN ARTIFACTS FROM OKLAHOMA**

21 October 2015

Leland Bement  
Oklahoma Archaeological Survey  
University of Oklahoma  
111 E Chesapeake, Rm 102  
Norman, OK 73019-5111

Dear Lee:

The projectile point was produced from the Cochetope Dome source in Colorado, and the debitage sample from Cerro Toledo Rhyolite obsidian in the Jemez Mountains, northern New Mexico (Table 1). Specific instrumental methods can be found at <http://www.swxrflab.net/anlysis.htm>, and Shackley (2005). Source assignment was made by comparison to source data in the lab and Shackley (2005; Table 1 here).

Sincerely,

M. Steven Shackley, Ph.D.  
Director

VOICE: 510-393-3931  
INTERNET: [shackley@berkeley.edu](mailto: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
Washita River 1	909	319	8974	192	11	30	97	27	Cochetope Dome, CO
34Ci488 2	931	502	10964	226	12	64	188	100	Cerro Toledo Rhy, NM
RGM1-S4 6	152	282	13267	148	105	26	223	15	standard