

# UC Berkeley

## Archaeological X-ray Fluorescence Reports

### Title

An Energy-Dispersive X-Ray Fluorescence Analysis of Obsidian Artifacts from AZ U:9:2 And AZ U:9:310 (ASM), Maricopa County, Arizona

### Permalink

<https://escholarship.org/uc/item/1hj6z29m>

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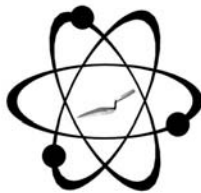
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### Supplemental Material

<https://escholarship.org/uc/item/1hj6z29m#supplemental>

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## ***LETTER REPORT***

# **AN ENERGY-DISPERSIVE X-RAY FLUORESCENCE ANALYSIS OF OBSIDIAN ARTIFACTS FROM AZ U:9:2 AND AZ U:9:310 (ASM), MARICOPA COUNTY, ARIZONA**

24 July 2014

Stacy Ryan  
Desert Archaeology, Inc.  
3975 N Tucson Blvd.  
Tucson, AZ 85716

Dear Stacy,

The artifact from site 9:2 was produced from Saucedo Mountain obsidian in western Maricopa County, and the artifact from 9:310 was produced from the RS Hill/Sitgreaves Peak source in the San Francisco Volcanic Field in northern Arizona (Table 1). San Francisco Volcanic Field obsidian is frequently recovered in Sacaton Phase Hohokam sites along the Lower Salt River (Shackley 2005). 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](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).

| Site/Sample       | Ti   | Mn  | Fe    | Rb  | Sr  | Y  | Zr  | Nb  | Ba   | Pb | Th | Source                   |
|-------------------|------|-----|-------|-----|-----|----|-----|-----|------|----|----|--------------------------|
| AZ U:9:2<br>179   | 1553 | 360 | 10989 | 161 | 78  | 32 | 199 | 25  | 1150 | 21 | 19 | Sauceda Mtns             |
| AZ U:9:310<br>676 | 739  | 414 | 10431 | 386 | 10  | 92 | 161 | 255 | <1   | 81 | 52 | RS Hill/Sitgreaves<br>Pk |
| RGM1-S4           | 1537 | 276 | 13336 | 150 | 110 | 21 | 214 | 7   | 827  | 19 | 18 | standard                 |