



GEOARCHAEOLOGICAL XRF LAB

GEOARCHAEOLOGICAL X-RAY FLUORESCENCE SPECTROMETRY LABORATORY

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Albuquerque, NM 87113

## ***LETTER REPORT***

# **AN ENERGY-DISPERSIVE X-RAY FLUORESCENCE ANALYSIS OF OBSIDIAN ARTIFACTS FROM AZ DD:1:75 (ASM), SOUTHERN ARIZONA, AND AZ T:12:148 (THE LA VILLA SITE), CENTRAL ARIZONA**

7 October 2014

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

Dear Stacy,

The one artifact from AZ DD:1:75 was produced from Los Vidrios, Sonora obsidian, and the artifacts from AZ T:12:148 were produced from San Francisco Volcanic Field obsidian (Government Mountain and RS Hill/Sitgreaves Peak). San Francisco Volcanic Field obsidian is frequently recovered in Preclassic Hohokam sites in the Lower Salt River basin (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

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## 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	Pb	Th	Source
<b>DD:1:175</b>											
311	710	270	13358	250	15	69	213	29	29	35	Los Vidrios, SON
<b>T:12:148</b>											
5123	375	545	11605	115	82	19	81	58	33	10	Government Mtn, AZ
5173	514	395	11812	385	11	79	163	238	84	46	RS Hill/Sitgreaves Mtn, AZ
5342	321	440	11101	105	80	25	78	52	32	19	Government Mtn, AZ
5410	387	454	11232	106	79	19	79	52	31	13	Government Mtn, AZ
6298	424	499	11526	107	81	21	84	51	30	14	Government Mtn, AZ
6405	450	505	11493	109	81	18	78	50	30	10	Government Mtn, AZ
RGM1-S4	1501	285	13669	152	105	22	220	10	21	13	standard