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An Energy-Dispersive X-Ray Fluorescence Analysis of Obsidian Artifacts from the La Villa Site (AZ T:12:128 ASM), Maricopa County, Arizona

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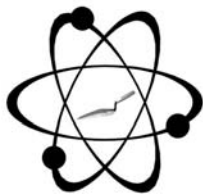
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Supplemental Material

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GEOARCHAEOLOGICAL XRF LAB

ARCHAEOLOGICAL X-RAY FLUORESCENCE SPECTROMETRY LABORATORY
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LETTER REPORT

AN ENERGY-DISPERSIVE X-RAY FLUORESCENCE ANALYSIS OF OBSIDIAN ARTIFACTS FROM THE LA VILLA SITE (AZ T:12:128 ASM), MARICOPA COUNTY, ARIZONA

1 October 2012

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

Dear Stacy,

The assemblage is quite diverse, but dominated by Coconino Plateau sources (Government Mountain and RS Hill/Sitgreaves), rather typical for Preclassic contexts in the Phoenix Basin (Fertelmes et al. 2012; Shackley 2005). All analyses for this study were conducted on the ThermoScientific Quant'X XRF spectrometer at the Geoarchaeological XRF Laboratory, Albuquerque, New Mexico. 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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INTERNET: shackley@berkeley.edu
<http://www.swxrflab.net/>

REFERENCES CITED

Fertelmes, C.M., D.R. Abbott, and M.S. Shackley

2012 Obsidian Source Characterization at Las Colinas: Shifting Exchange Patterns during the Hohokam Sedentary-Classic Transition. *Kiva* 77:281-312.

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. All measurements in parts per million (ppm).

Sample	Ti	Mn	Fe	Rb	Sr	Y	Zr	Nb	Pb	Th	Source
115	1160	356	8934	138	43	17	129	22	23	9	Vulture
185	885	415	1034	382	10	85	159	238	82	47	RS
			6								Hill/Sitgreaves
309	801	546	1003	108	84	20	80	50	34	11	Government Mtn
			6								
428	806	455	1109	404	11	89	167	261	80	51	RS
			7								Hill/Sitgreaves
667	1715	327	1163	169	109	28	189	19	21	23	Sauceda Mtns
			5								
1011	756	457	8819	97	75	21	74	48	25	11	Government Mtn
1072	1538	387	1072	158	72	34	193	21	19	26	Sauceda Mtns
			4								
1122	781	527	9968	108	81	20	78	51	34	12	Government Mtn
1270	825	457	9064	98	75	16	75	52	28	14	Government Mtn
1458	770	521	9486	111	83	17	84	51	33	12	Government Mtn
RGM1-S4	1639	301	1328	149	108	24	214	6	20	12	standard
			0								