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An Energy-Dispersive X-Ray Fluorescence Analysis of Obsidian Artifacts from CA-SDI-8125, San Diego County, California

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The data associated with this publication are in the supplemental files.

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LETTER REPORT

AN ENERGY-DISPERSIVE X-RAY FLUORESCENCE ANALYSIS OF OBSIDIAN ARTIFACTS FROM CA-SDI-8125, SAN DIEGO COUNTY, CALIFORNIA

19 November 2015

Dr. Tim Gross
Anthropology Program
Serra Hall
University of San Diego
San Diego, CA 92110

Dear Tim:

As typical for San Diego County sites, one of the artifacts was produced from the Obsidian Butte source in Imperial County, California, and the other from the West Sugarloaf source in the Coso Volcanic Field, Inyo County, California. Specific instrumental methods can be found at <http://www.swxrflab.net/anlysis.htm>, and Shackley (2005). Source assignment was made by comparison to data in the laboratory, and Ericson and Glascock (2004) and Hughes (1988). 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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REFERENCES CITED

Ericson, J.E., and M.D. Glascock

2004 Subsource Characterization: Obsidian Utilization of Subsources of the Coso Volcanic Field, Coso Junction, California, USA. *Geoarchaeology* 19:779-805.

Hughes, R.E.

1988 The Coso Volcanic Field Reexamined: Implications for Obsidian Sourcing and Hydration Dating Research. *Geoarchaeology* 3:253-265.

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	Zn	Rb	Sr	Y	Zr	Nb	Source
BARN UNIT1	1361	389	17110	105	141	37	118	339	26	Obsidian Butte
10-866	621	248	11234	66	204	18	46	138	38	W Sugarloaf, Coso
RGM1-S4	1530	290	13751	40	150	106	27	220	9	standard