BERKELEY ARCHAEOLOGICAL XRF LAB

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LETTER REPORT

AN ENERGY-DISPERSIVE X-RAY FLUORESCENCE ANALYSIS OF OBSIDIAN ARTIFACTS FROM 42Ws4474, SOUTHERN UTAH

1 December 2011

Byl Bryce
800 W. Forest Meadows, #150
Flagstaff, AZ 86003

Dear Byl,

As I said in the e-mail, the samples were produced from obsidian sources in eastern Nevada and western Utah, both relatively common in Utah sites (Table 1).

The samples were analyzed with a Thermo Scientific *Quant'X* EDXRF spectrometer in the Archaeological XRF Laboratory, Albuquerque, New Mexico. Specific instrumental methods can be found at http://www.swxrflab.net/anlysis.htm, and Shackley (2005). Samples assigned to source by comparison to source standards at Berkeley (Shackley 2005), and Haarklau et al. (2005). 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

Haarklau, L, L, Johnson, and D.L. Wagner
2005 Fingerprints in the Sand: The Nellis Air Force Base Regional Obsidian Sourcing Study. U.S. Army Corps of Engineers, Fort Worth District.

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 specimens and USGS RGM-1 standard. All measurements in parts per million (ppm).

Sample	Ti	Mn	Fe	Rb	Sr	Y	Zr	Nb	Source
153	1119	313	9225	205	84	29	125	19	Panaca Summit (Modena) NV-UT
136A	1146	345	10072	211	88	28	130	18	Panaca Summit (Modena) NV-UT
136B	1097	267	11866	204	23	53	184	37	Kane Springs Wash Caldera, E NV
204	1094	306	11253	222	39	38	152	31	Kane Springs Wash Caldera, E NV
RGM1-S4	1626	295	13289	149	106	25	220	10	standard