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GEOARCHAEOLOGICAL XRF LAB

GEOARCHAEOLOGICAL X-RAY FLUORESCENCE SPECTROMETRY LABORATORY

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LETTER REPORT

AN ENERGY-DISPERSIVE X-RAY FLUORESCENCE ANALYSIS OF AN OBSIDIAN ARTIFACT FROM 34GT47, GRANT COUNTY, OKLAHOMA

7 November 2013

Robert Bartlett
ODOT
Oklahoma Archaeological Survey
University of Oklahoma
111 E Chesapeake, Rm. 102
Norman, OK 73019-5111

Dear Robert:

The one obsidian artifact was produced from Obsidian Cliff, Wyoming obsidian. 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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<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. All measurements in parts per million (ppm).

Sample	Ti	Mn	Fe	Zn	Rb	Sr	Y	Zr	Nb	Ba	Pb	Th	Source
34GT47-1	651	214	10558	135	243	8	77	173	40	10	32	34	Obsidian Cliff, WY
RGM1-S4	1546	267	13297	42	152	107	26	222	8	733	25	16	standard