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LETTER REPORT

AN ENERGY-DISPERSIVE X-RAY FLUORESCENCE ANALYSIS OF OBSIDIAN ARTIFACTS FROM THE HODGE SITE (34CU40), CUSTER COUNTY, OKLAHOMA

18 May 2004

Christopher Cojeen
Cojeen Archaeological Services
PO Box 1186
Norman, OK 73070

Dear Christopher,

The artifacts analyzed were produced from obsidian from two sources; Sample 1 from the Malad, Idaho source, and Sample 2 from the Valle Grande source in northern New Mexico. Source determination was made using source standards at Berkeley (<http://www.swxrflab.net/>; Shackley 2004), and reference to Fred Nelson's unpublished data.

The samples were analyzed with a Spectrace (ThermoNoran) *QuanX* EDXRF spectrometer in the Archaeological XRF Laboratory, University of California, Berkeley. Instrumental methods can be found at <http://www.swxrflab.net/anlysis.htm>. Analysis of the USGS RGM-1 standard indicates high machine precision for the elements of interest (Govnidaraju 1994; Table 1 here).

Sincerely,

M. Steven Shackley, Ph.D.
Director

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REFERENCES CITED

Govindaraju, K.

1994 1994 Compilation of Working Values and Sample Description for 383 Geostandards. *Geostandards Newsletter* 18 (special issue).

Shackley, M.S.

2004 *Obsidian in the North American Southwest: Geology, Archaeology, and History*. University of Arizona Press, in press.

Table 1. Elemental concentrations for the archaeological samples. All measurements in parts per million (ppm).

Sample	Ti	Mn	Fe	Rb	Sr	Y	Zr	Nb	Source
1	875	277	8128	123	76	32	84	24	Malad, ID
2	935	403	8754	152	5	42	155	60	Valle Grande, NM
RGM1-H1	160	316	12940	146	112	23	226	10	standard