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AN ENERGY-DISPERSIVE X-RAY FLUORESCENCE ANALYSIS OF OBSIDIAN ARTIFACTS FROM FOUR SITES IN SOUTHWESTERN COLORADO

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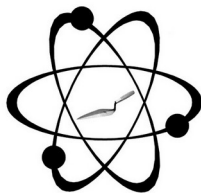
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## **LETTER REPORT**

# **AN ENERGY-DISPERSIVE X-RAY FLUORESCENCE ANALYSIS OF OBSIDIAN ARTIFACTS FROM FOUR SITES IN SOUTHWESTERN COLORADO**

21 July 2017

Jamie Merewether  
Crow Canyon Archaeological Center  
23390 Road K  
Cortez, CO 81321

Dear Jamie,

As with the previous project at the Dillard Site, this was an interesting assemblage (Shackley 2013; Table 1 and Figure 1 here). Jemez Mountains and Mount Taylor sources dominate, with one sample from 5MT10709 from the Wild Horse Canyon source in Beaver County, western Utah.

All analyses for this study were conducted on a ThermoScientific *Quant'X* XRF spectrometer at the Geoarchaeological XRF Laboratory, Albuquerque, New Mexico. Specific instrumental methods and source standard data can be found at <http://www.swxrflab.net>, and Shackley (2005).

Sincerely,

M. Steven Shackley, Ph.D.  
Director

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<http://www.swxrflab.net/>

## REFERENCES CITED

Shackley, M.S.

2005 *Obsidian: Geology and Archaeology in the North American Southwest*. University of Arizona Press, Tucson.

2013 An Energy-Dispersive X-Ray Fluorescence Analysis of Obsidian Artifacts from the Dillard Site (5MT10647), Southwestern Colorado. Report prepared for Crow Canyon Archaeological Center, Colorado.

Table 1. Elemental concentrations for the archaeological samples and USGS RGM-1 obsidian rock standard. Measurements in parts per million.

Sample	Site	Ti	Mn	Fe	Rb	Sr	Y	Zr	Nb	Ba	Source
75	5MT106 31	123 4	71 6	1224 3	52 0	14	75	12 9	18 4	0	Grants Ridge-Mt Taylor, NM
1084	5MT106 47	892	42 4	7861	15 7	12	21	75	45	0	El Rechuelos, NM
1239	5MT106 47	750	70 1	8820	53 4	10	72	11 1	18 5	1	Grants Ridge-Mt Taylor, NM
1664	5MT106 47	975	41 5	8018	15 7	15	26	78	48	27	El Rechuelos, NM
1746	5MT106 47	139 3	15 6	9074	1	12 0	26	18	4	41 2	not obsidian
59	5MT107 09	106 6	34 4	8658	19 4	47	23	11 8	28	21 7	Wild Horse Cyn, UT
66	5MT107 09	130 8	58 9	1068 9	43 5	15	70	11 1	16 8	0	Grants Ridge-Mt Taylor, NM
12	5MT107 11	951	40 8	8017	15 3	12	24	79	46	0	El Rechuelos, NM
RGM1-S4		154 1	29 7	1325 2	14 6	10 7	26	21 9	8	78 7	standard

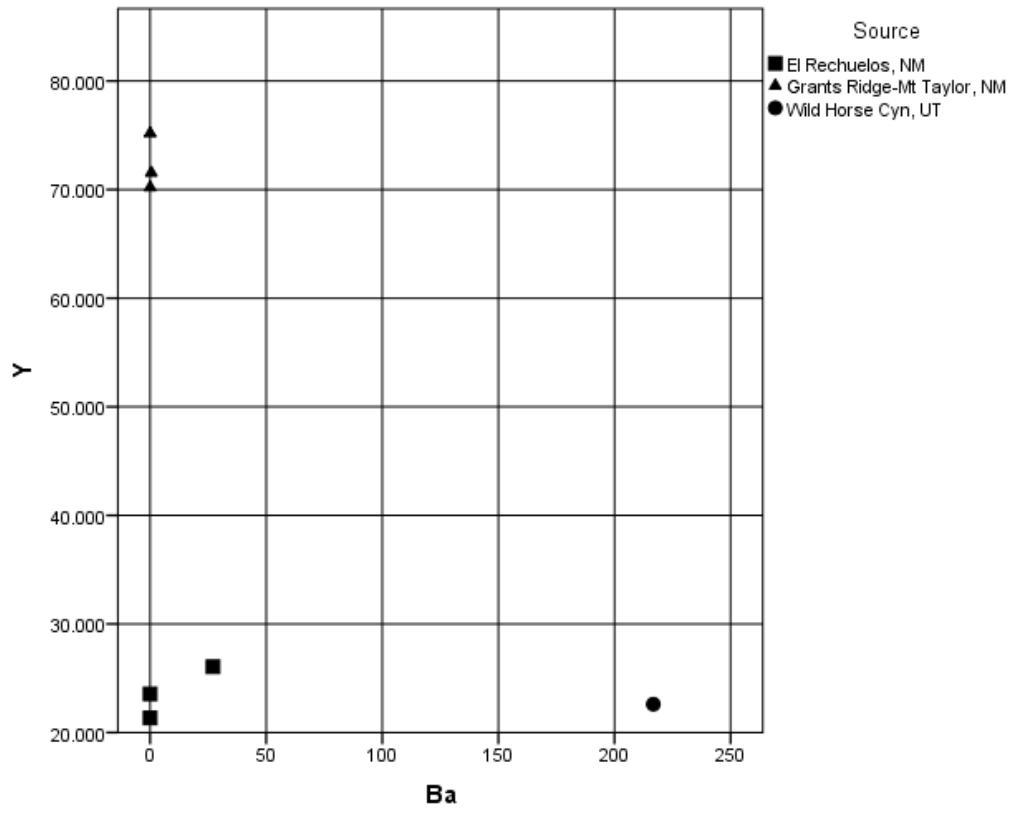


Figure 1. Ba versus Y bivariate plot of the archaeological specimens.