Sourcing galena from archaeological sites in Southeast United States

VIRGINIE RENSON¹, JEFFREY ALVEY², DIANA GREENLEE³, TIFFANY RAYMOND⁴ AND JANET RAFFERTY⁵

Galena was used by prehistoric people in diverse cultures and time periods across the southeast US, where it is most often recovered from mortuary contexts but is also found in domestic contexts. The mineral was used as a pigment but also shaped into artifacts such as plummets or pendants. Processing of the material does not affect its isotopic composition, which makes lead isotopes a prime tool for identifying provenance. Because of the geographic distribution of the geological formations bearing galena in the central and eastern US, and the existence of comparative data in the literature, galena represents a material that holds great potential to inform on the existence of longdistance exchange networks. Despite the success of the study conducted by Farquhar and Fletcher (1980, 1984) that used lead isotopes to identify the source of galena recovered at sites in northeastern North America, few other studies have been conducted to source this material. This paper presents the lead isotopic analysis of modified and unmodified galena pieces from Mississippi and Louisiana that represent artifacts found in different contexts (domestic and mortuary) that date to different periods (Late Archaic and Middle Woodland) and that are associated with different cultures (the Poverty Point and Miller cultures). The results are compared with data available in the literature for the major galena districts in the central and eastern US. Results show a recurring association with districts located in southern Missouri or Northern Arkansas, and unlike what had been proposed in the past are not primarily associated with the Upper Mississippi Valley. These findings reveal that the use of more distant galena sources by prehistoric peoples has been overstated and that the exploitation of those sources nearest to the sites from which the artifacts were recovered was the more common situation.

Farquhar, R. M., and I. R. Fletcher 1980 Lead Isotope Identification of Sources of Galena from Some Prehistoric Indian Sites in Ontario, Canada. Science 207:640–643.

Farquhar, R. M., and I. R. Fletcher 1984 The Provenience of Galena from Archaic/Woodland Sites in Northeastern North America: Lead Isotope Evidence. American Antiquity 49:774–785.

¹University of Missouri Research Reactor

²Advisory Council on Historic Preservation

³University of Louisiana Monroe

⁴Binghamton University (SUNY)

⁵Mississippi State University