

## **Preliminary analysis on sourcing clay sediments used in pottery production at Kukulik, Saint Lawrence Island, Alaska**

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The archaeological site of Kukulik on Saint Lawrence Island was excavated by Otto Geist from 1931-1935 (Geist 1936) and includes pottery, wood, bone and ivory artifacts. Pottery fragments are one of the most abundant artifacts found at the site. The source of the pottery clay remains a matter of debate. Geist, in his report, stated that the clay source was located on a lagoon, approximately 35 miles northwest of the site. Another source (Silook, 1976) recounts elders telling of a site 10 miles away. I suggest that the people of Kukulik were utilizing various local sources of clay to produce their pottery and that these sources changed over time. Employing geological methods to characterize the pottery and “fingerprint” the clay, I will test this hypothesis. Currently, trace element analysis using X-ray Fluorescence is being used to fingerprint the different clay sediments collected from sites around the island and a sampling of pottery shards. Upon completion of this project, I will be able to produce a chronology of the pottery source over the time period of the site. Trends in the mineralogical data related to the depth of the artifacts will indicate whether the source area for the clay changed over time and where the source was located. Analysis of the pottery, including petrographic analysis, will indicate if there were changes in pottery production over the time span of the site, which can indicate outside influences such as trade or the influx of new peoples from other regions or cultures. Recognition of these trends has implications to the study of other prehistoric sites in the arctic and the movement of prehistoric people within the Bering Sea area.