

**LANCE FORMATION ELEMENTAL CONSTITUENT ANALYSES FROM SELECTED SAMPLING SITES IN EASTERN WYOMING.** Blake C. Moore, [moore2b7@mail.uc.edu](mailto:moore2b7@mail.uc.edu), Amanda M. Hunt, Ph.D., [huntad@ucmail.uc.edu](mailto:huntad@ucmail.uc.edu), Geology Undergraduate Research, University of Cincinnati Clermont College, U.S.A.

The Upper Cretaceous (Maastrichtian) Lance Formation of eastern Wyoming has been noted for yielding well preserved vertebrate fossils, including dinosaurs, often found as bone beds deposited in fluvial point bars or deep channel lagerstätten. Samples from measured stratigraphic sections collected during the course of field work during the 2017-2018 summer field season were processed and prepared for analysis. Sample preparation protocol recommended by the manufacturer, Thermo-Scientific Fisher, includes pulverizing rock to powder for increased surface area. Samples are then enclosed in tool specific sample containers for optimal analytical results. A Niton GOLDD T3 hand-held XRF was used in the laboratory to analyze the elemental constituents and their concentrations in the samples. The identification and the relative abundance of the individual constituents may assist in evaluating sedimentary sources and environmental conditions that existed pene-contemporaneously with deposition, as well as the variability between sample locations and through time in older and younger strata.

**KEYWORDS: Geology; Lance Formation; Composition**