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**SURFACE-TO-BEDROCK, SHEAR-WAVE AND GEOTECHNICAL
INVESTIGATION OF THE MISSISSIPPI EMBAYMENT BETWEEN THE
35TH AND 36TH PARALLELS: COLLABORATIVE RESEARCH WITH THE
UNIVERSITY OF KENTUCKY AND UNIVERSITY OF MEMPHIS**

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ABSTRACT

The objective of this study is to derive a well-constrained shear-wave velocity model of the post-Paleozoic sediments across the Upper Mississippi Embayment between the latitudes of 35.3 and 35.5°N. The methodology used in the study is to integrate deep P-wave and SH-wave soundings with near-surface (≤ 100 m) SH-wave velocity profiles, drill-hole data, and travel-time differences between the *S* and *Sp* phases at seismic stations in the study area. During the first year of the 2-year study, we have nearly completed our P-wave studies, have acquired near-surface SH-wave data at the sites in northeastern Arkansas, and have begun acquiring the near-surface SH-wave data in western Tennessee. We have also begun integrating the results of our study with published seismic lines, drill-hole data, and travel-time differences between the *S* and *Sp* phases at the three seismic stations in the study area.