GEOMORPHIC AND GEOGRAPHIC INFORMATION SYSTEM APPROACH TO ARCHEOLOGICAL STUDIES IN NORTHWEST LOUISIANA AND EAST TEXAS

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ABSTRACT

A geomorphic investigation of the Shreveport, Louisiana to Daingerfield, Texas navigational project is being performed in order to provide a geomorphic framework for archeological investigations. The objectives of this study are to: (a) delineate geomorphic features including historic channels and canals on 7.5 minute (1:24,000 scale) base maps, (b) reconstruct the Holocene geomorphic development of the study area, and (c) determine a survey and site sample selection strategy.

The predominant geomorphic features of the study area are abandoned channels, point bars, and terraces. Prehistoric cultures appear to have focused on terraces and abandoned channels. Buried sites are anticipated to occur along terrace boundaries and valley walls in colluvial areas. A predictive model for site selection will be based on a Geographical Information System (GIS) combining soil, geomorphic, and geologic parameters with documented cultural findings. The analysis of the area will use multiple condition overlay procedures to yield zones of greatest potential for archeological and historical cultural resources.

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