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Project Title: Archeological Investigation of the Elbee Site, Knife River Indian Villages National Historic Site

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Phase One: Magnetic Gradient Geophysical Survey of the Northern Portion of the Elbee Site (32ME408), Mercer County, North Dakota

Abstract: Between September 16 and September 27, 2002, Midwest Archeological Center (MWAC) staff conducted magnetic geophysical investigations at the Elbee site (32ME408) within Knife River Indian Villages National Historic Site (KNRI). This is the initial phase of a project to assess the archeological record of the northern portion of the Elbee site that is being dramatically impacted by erosion of a vertical cutbank along the Knife River. The follow-up phase of the project will be test excavations by the University of North Dakota in 2003 to investigate magnetic anomalies and confirm the presence or absence of significant archeological deposits in the threatened portion of the site.

An FM-36 fluxgate gradiometer and metal detectors were used to conduct the survey. In total, portions of 27 whole and partial 20-x-20-m blocks were surveyed in the northern portion of the Elbee site. The results of the metal detection investigation indicate numerous and widespread distribution of modern metal objects, especially in the southern portion of the surveyed area. The magnetic gradient survey resulted in the identification of at least 6 anomalies with "high" potential of being caused by prehistoric activity. Numerous other anomalies were identified at a lower confidence classification. The area that is being impacted most heavily by erosion of the vertical cutbank of the Knife River contains a square shaped outline of slightly magnetic values and two other anomalies of intermediate confidence. It is recommended that the anomalies identified across the survey area be tested through controlled archeological investigations.