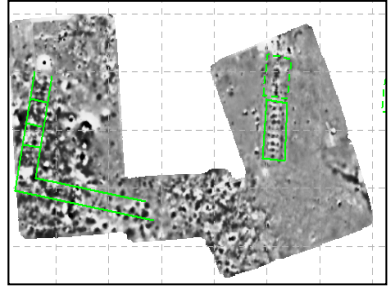


BACKGROUND

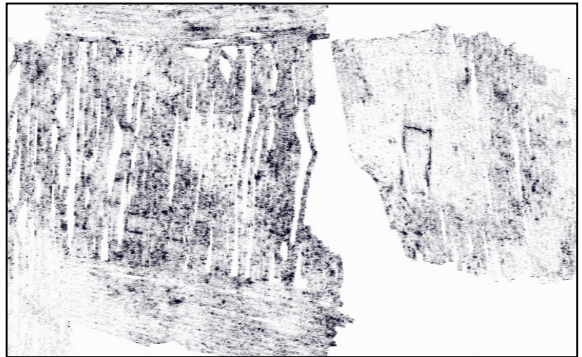
UIT participated with Time Team America and Oregon Public Broadcasting and other professionals in geoscience and archaeology to perform a dig at the Ft. James site in South Dakota. The work was filmed for an episode of the television series TIME TEAM AMERICA. The producers asked the experts to spend only three intensive days mapping with geophysics, performing geologic analysis of the site and then digging to unlock the history of Ft James.



Above: Map of magnetometer data integrated in SPADE®. Proposed locations of old building footings are shown.

SCOPE & RESULTS

UIT's sophisticated data integration capabilities were utilized not only for data collected by UIT but for all of the data brought in and collected by all of the scientists working on the site. Data from TerraVision II® GPR, frequency domain EMI, magnetometer, geology, soils, old site maps and areal photos were integrated in UIT SPADE® software to interpret the results and choose the dig locations for the archaeologists.



Above: Depth slice (1.2 ft) through 3D GPR data set gathered with the TerraVision II®. Buried footings can be seen as rectangular shapes in the data.

METHODOLOGY

The geophysical tools deployed for this project were the UIT 14-channel TerraVision II® GPR, the Dual EM frequency domain electromagnetic (EMI) and the Foerster magnetic gradiometer. GPR and EMI data were positioned using the Navcom GPS system. GPS, GPR and EMI data were collected and integrated with the UIT DAS data acquisition shell software. All data sets were imported with high quality position control into the SPADE® 3D software and interpreted simultaneously.