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GPS and Total Station Plane Survey of the Unexcavated 24BE2206 Site in the Big Hole Valley of Montana

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GPS and Total Station Plane Survey of the Unexcavated 24BE2206 Site in the Big Hole Valley of Montana

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Background & Significance
Archaeological excavations reveal size and social structure, subsistence strategies, time of occupation & site usage for past human groups. When materials are removed from the excavation site, their provenience can be lost if not carefully recorded.

Methods
Leica GS 15 and Leica TS 11 were used to record the location of artifacts and features in order to preserve their provenience. Established GPS base stations with GS 15. Shot all grid points from base stations with TS 11. As each artifact and feature was revealed, the TS 11 was used to record its location.

Results
Downloaded data from TS, plotted location points in AutoCAD, and elevations in Microsoft Excel. Artifact/feature distribution and densities can be seen in the figures below.

Conclusions
Unit S1E1 yielded the highest number of artifacts at 21, while units S5E15 and N0E14 yielded the lowest at 1 artifact each. Due to erosion and deposition of material downslope, western units may yield more artifacts over greater depth. Each excavated unit yielded artifacts, at all depths up to 130 cm below surface level, indicating a long history of usage dating back to at least the Middle Archaic period, and likely well beyond this cultural horizon.

Lessons Learned
Have a well established labeling system before beginning the survey. Double check that all equipment is in boxes before leaving for the site. Ensure to survey in additional subdivision of units as dig progresses.

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