

Subsurface Imaging for Archaeology
 Geosciences 495, 3 credits
 Spring Semester 2009
 Professor: Steve Sheriff, Geosciences
www.umt.edu/geosciences/course_webpgs.htm

Early in the semester we will focus on background theory, case studies, and experimental design. The latter part of the semester will include integration of fieldwork, subsequent data processing, presentation, and project reports. All projects will have a classroom presentation.

Prerequisites and skills: I expect previous fulfillment of general education requirements in math and natural science or permission of instructor. In addition, there is spreadsheet manipulation and processing of your data as well as use of specialized software for data processing and visualization. I expect you to have a working knowledge of archaeological site surveying.

My goals for the course:

- Introduce you to some of the techniques in magnetics, gravity, radar, and electrical methods pertinent to archaeological targets.
- Teach some of the standard mathematical/geophysical techniques you will need to understand the methods.
- Get you to a level where you can read and understand geophysical literature so you can: 1) evaluate geophysical applications to archaeological problems, and 2) investigate the use of geophysics in those problems.
- I believe that any senior level course should prepare you to read the professional literature for the course's topic –that's an excellent way for you to evaluate a course as well. I talk about problem solving and experimental design; any good course in science should teach you the techniques and problems of the discipline.

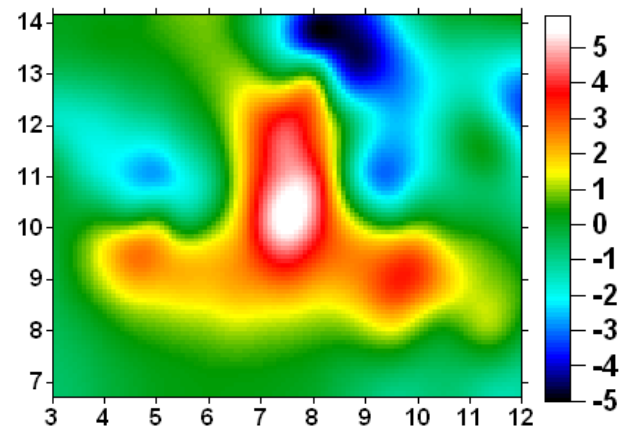


Figure 1. Magnetic anomaly over an excavation unit (2m x 1m x 0.3m) opened six years before the magnetic survey. The unit was no longer apparent on the ground surface. Distance units are meters, magnetic intensity in nanoteslas.

