

Remote Sensing Techniques

Nondestructive detection of phenomena unnoticed by the human eye

Aerial Photography and Radar	Space-based Laser Imaging
Satellite Mapping	Side-scan Sonar and Magnetometers

Survey

- **Walking**
 - Systematic
 - “Eyes on the ground”
 - Dig holes/trenches
- **Geophysical Survey**
 - Noninvasive
 - Metal detector
 - Magnetometer
 - Ground-penetrating radar (GPR)

Sampling

Sampling is determined by:


- Environment
- Project specifications
- Background information
- Survey data

Judgment Sample	Statistical Sample
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Recording Sites

- **Recognizing**
 - Surface finds
 - Changes in vegetation, soil chemistry
 - Animal signs
 - Outcroppings

- **Recording**
 - Name/ number
 - Description
 - Establish boundaries
 - Map




Excavating Sites

Sites thought to contain important information


Sites chosen for salvage reasons

Mapping the Site

- **Mapping**
 - Grid lines
 - Triangulation
 - Provenience
 - Site datum



- **Technology**
 - Standard transit
 - Total stations
 - GPS systems
 - Computers



Deciding Where to Dig

Excavation plans have to be flexible and are usually based on:

- **Background research**
- **Information from Mapping**
- **Survey Information**
- **Test-level Excavation**
- **Surface Collection**

Digging

Excavation units vary depending on the type of information sought:

- **Auger Probes** (10 to 30 cm in diameter)
- **Shovel-test Pits** (about 50 cm square)
- **Standard Units** (1 to 2 meters square)
- **Block Excavations** (2 meters square and up)
- **Trenches** (1 to several meters wide)

Digging

Excavation tools vary depending on the type of information sought:



- **Trowels**
- **Brushes**
- **Toothpicks**
- **Shovels**
- **Bulldozers**



Digging

Mapping unit locations reveals contextual information.

Vertical Context

Horizontal Context

Recovering and Cataloging Data

Workers maintain a record of all the information from their units.

<ul style="list-style-type: none">• <i>In situ</i><ul style="list-style-type: none">• Excavate• Map• Photograph	<ul style="list-style-type: none">• Screening<ul style="list-style-type: none">• Dry-screening• Wet-screening• Mesh size
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Recovering and Cataloging Data

In the laboratory, artifacts and ecofacts are:

- **Sorted**
- **Cleaned**
- **Measured**
- **Classified**
- **Catalogued**

Working with Specialists

- Geologists
- Geomorphologists
- Palynologists
- Osteologists
- Chemists
- Physicists
- Botanists
- Zoologists
- Molecular Biologists
- Computer Scientists



Practical Aspects of Fieldwork

Funding and Staffing

Curation

Occupational Hazards

Ethics in Archaeological Fieldwork

Legal Issues

Humanistic Issues

Professional Obligations
