Consulting Party Meeting

for the Portsmouth Gaseous Diffusion Plant
Decontamination and Decommissioning (D&D) Project

December 10, 2012

Agenda

Welcome and Introductions.....John Godec, Facilitator

Highlights since
the 5/24/12 Consulting Party meeting......Amy Lawson, US DOE

Prehistoric Archaeological Sites
within PORTS, Pike County, Ohio.....Albert Pecora, Ph.D.
Ohio Valley Archaeology, Inc.

Regulatory Review Process and
Mitigation Measures.....Eric Woods, Fluor-B&W Portsmouth

Facilitated Discussion.....John Godec, Facilitator

Highlights

since the May 24, 2012, Consulting Party Meeting

Presented by
Amy Lawson, US DOE

Highlights

US DOE received the following comments and suggestions during the Consulting Party Meeting on 5/24/12:

- *Document the details about the families whose properties were purchased by the Atomic Energy Commission, and add to oral histories/interviews.*
- *Document the details about construction personnel from Peter Kiewit & Sons.*
- *Provide information about the economic impact of plant construction and operations on the local community and tax payers, in particular the impact of the AEC project on local government's dealing with the influx of 20,000+ construction workers into the community.*
- *Consider funding the construction of a multipurpose building to display artifacts and historical information.*
- *Consider physical preservation of certain buildings.*

Highlights

US DOE Response:

- A Historic Context Report is being prepared, and will include information about the families, construction workers, economic impact, and other recollections and details of the facility.
- FBP personnel contacted representatives of the Peter Kiewit & Sons' Company (now known as the Kiewit Company) and has received some information about the PORTS construction history.
- Additional interviews and oral histories, including those with families whose property was purchased by the Atomic Energy Commission, will be captured and incorporated into the Virtual Museum.
- All decisions related to displaying artifacts and historical information, as well as the physical preservation of certain buildings, will be documented through the CERCLA process, which takes into account public comments including those made during Consulting Party meetings.

Highlights

US DOE met with four Tribal Nations on November 14, 2012:

- Eastern Shawnee Tribe of Oklahoma, Seneca, MO.
- Shawnee Tribe, Wyandotte, OK.
- Absentee-Shawnee Tribe of Indians of Oklahoma, Shawnee, OK.
- Seneca-Cayuga Tribe of Oklahoma, Grove, OK.

Highlights

Review of meeting with Tribal Nations:

- Established an intergovernmental relationship with four Tribal Nations
- Discussed scope and schedule of D&D Project.
- Reviewed information on prehistoric archaeological sites.
- Asked for input on mitigation approaches if an adverse effect results from the proposed undertakings.
- Discussed future tribal participation interests.
- Planning onsite visit.

Highlights

US DOE has completed the following actions:

- Ohio Valley Archaeology completed Phase II Archeological Investigations in September 2012.
- Survey information was discussed with the Ohio Historic Preservation Office in October and December 2012.
- US DOE hosted a Public Meeting on October 22, 2012.

US DOE plans to make a presentation on prehistoric archaeological sites on the PORTS property to PORTS EM Site Specific Advisory Board on December 11, 2012.

Prehistoric Archaeological Sites Within PORTS, Pike County, Ohio

Presented by
Ohio Valley Archaeology, Inc.
Albert Pecora, Ph.D. and Jarrod Burks, Ph.D.

PREHISTORIC ARCHAEOLOGICAL SITES WITHIN PORTS, PIKE COUNTY, OHIO

Phase II Investigations of Four Prehistoric Archaeological Sites

By Albert M. Pecora, Ph.D. and Jarrod Burks, Ph.D.

Ohio Valley Archaeology, Inc.

2012

Ohio's Timeline

Period Names	Subperiods	Cultural Periods	Calendar Years	Years Before Present
Historic-Era		PORTS-Era Farmstead-Era Euro-American Settlement	A.D.2012	Today
			A.D.1800	212
Late-Prehistoric		Fort Ancient	A.D.1650	362
			A.D.1000	1012
Woodland	Late	"Intrusive Mound"	A.D.450	1562
	Middle	Hopewell	200 B.C.	2212
	Early	Adena	1000 B.C.	3012
Archaic	Late	Glacial Kame/ Maple Creek	3000 B.C.	5012
	Middle		5000 B.C.	7012
	Early		8000 B.C.	10,012
Paleoindian		Folsom/ Clovis	12,000 B.C.	14,012

Lithic Debris

Fire-Cracked Rock

Archaeological Survey Efforts

- Archaeological Surveys
  - 1997 ASC Group, Inc. Survey
  - Phase II Archaeological Surveys of 13 Historic-era Farmstead Sites
  - Reconnaissance Surveys of Additional Historically Mapped Farmsteads
  - Enhanced Phase I Surveys of Historic-era Farmsteads
  - **Phase I Prehistoric Settlement Surveys**

Combined Survey Results

- Documentation of 53 Archaeological Sites with Prehistoric Artifacts within PORTS
  - i.e., PORTS contains 53 prehistoric archaeological sites
  - 18 overlap with historic-era farmstead sites and cemeteries

Site Types?

- 29 Isolated Finds
  - Locations where a single prehistoric artifact was found
- 24 Lithic Scatters
  - Locations where multiple prehistoric artifacts were found

Survey Recommendations

- Phase II Surveys were Recommended for Four Prehistoric Sites
  - Site A
  - Site B
  - Site C
  - Site D
  - 33Pk210 (Duvall & Associates 2003)

Phase II Field Methods

- Geophysical Survey
  - Magnetometer Survey
  - Magnetic Susceptibility Survey
- 5-meter (15 ft) Interval Shovel Testing
- 1x1 m Unit Excavation (Artifact Sampling)
- Selected Feature Documentation and Excavation

Archaeological Features

- The remains of below-ground “facilities”

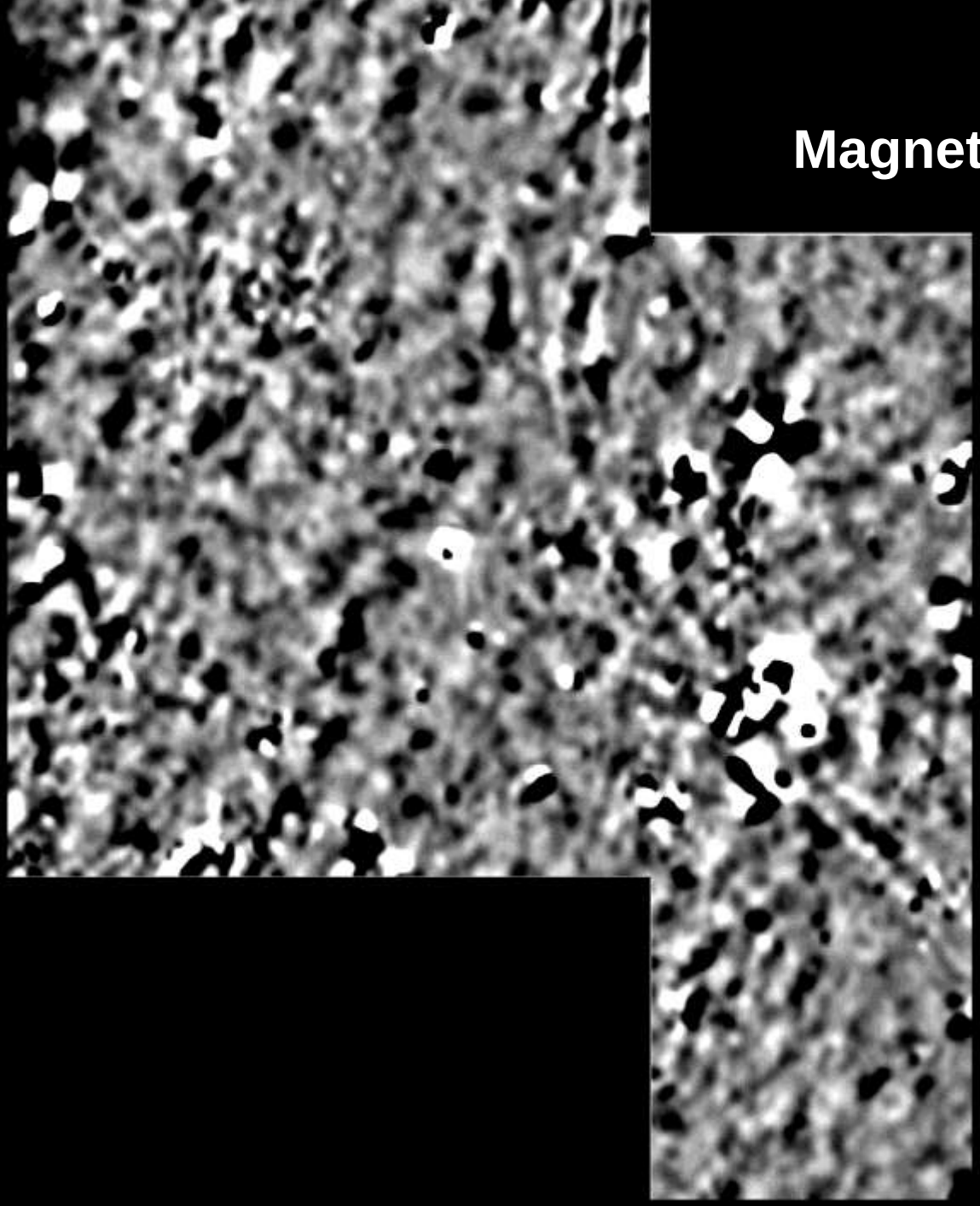
- Examples
  - Earth Ovens
  - Hearths
  - Structural Post Molds
  - Storage Pits

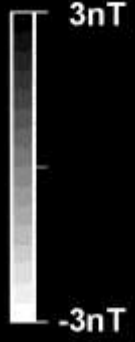
Temporal Data

- **Temporally Diagnostic Artifacts**
  - **Projectile Point Typology**
  - **Pottery**
  - **Micro-Drill Technology?**

- Radiometric Dates
  - Obtained from Carbon Samples Extracted from Features

Site A
Magnetic Survey Results



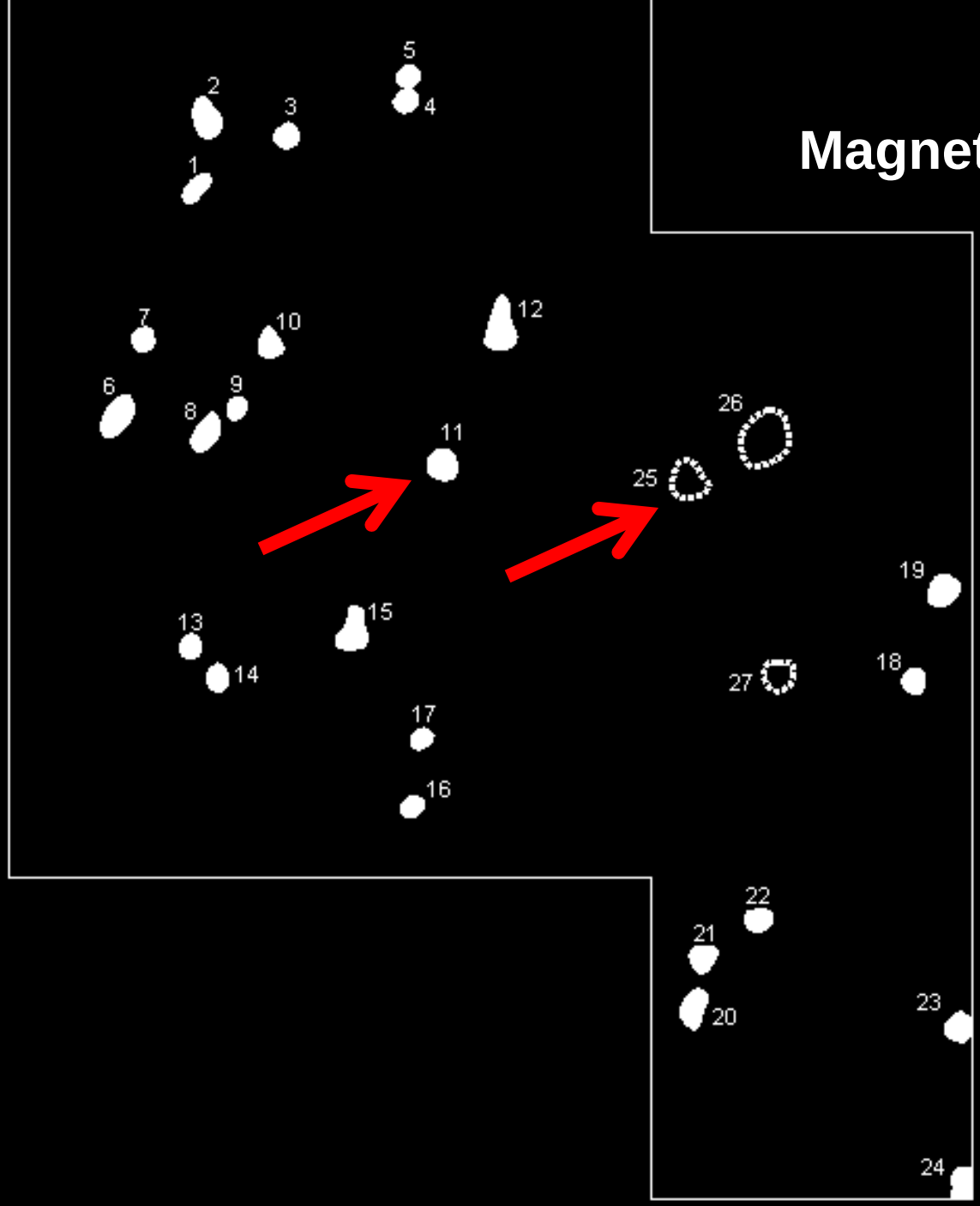


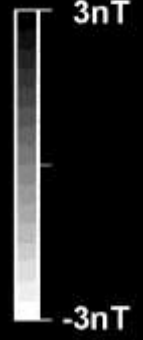
about 0.9 acres

65 feet

20 meters

Site A
Magnetic Survey Results





about 0.9 acres

65 feet

20 meters

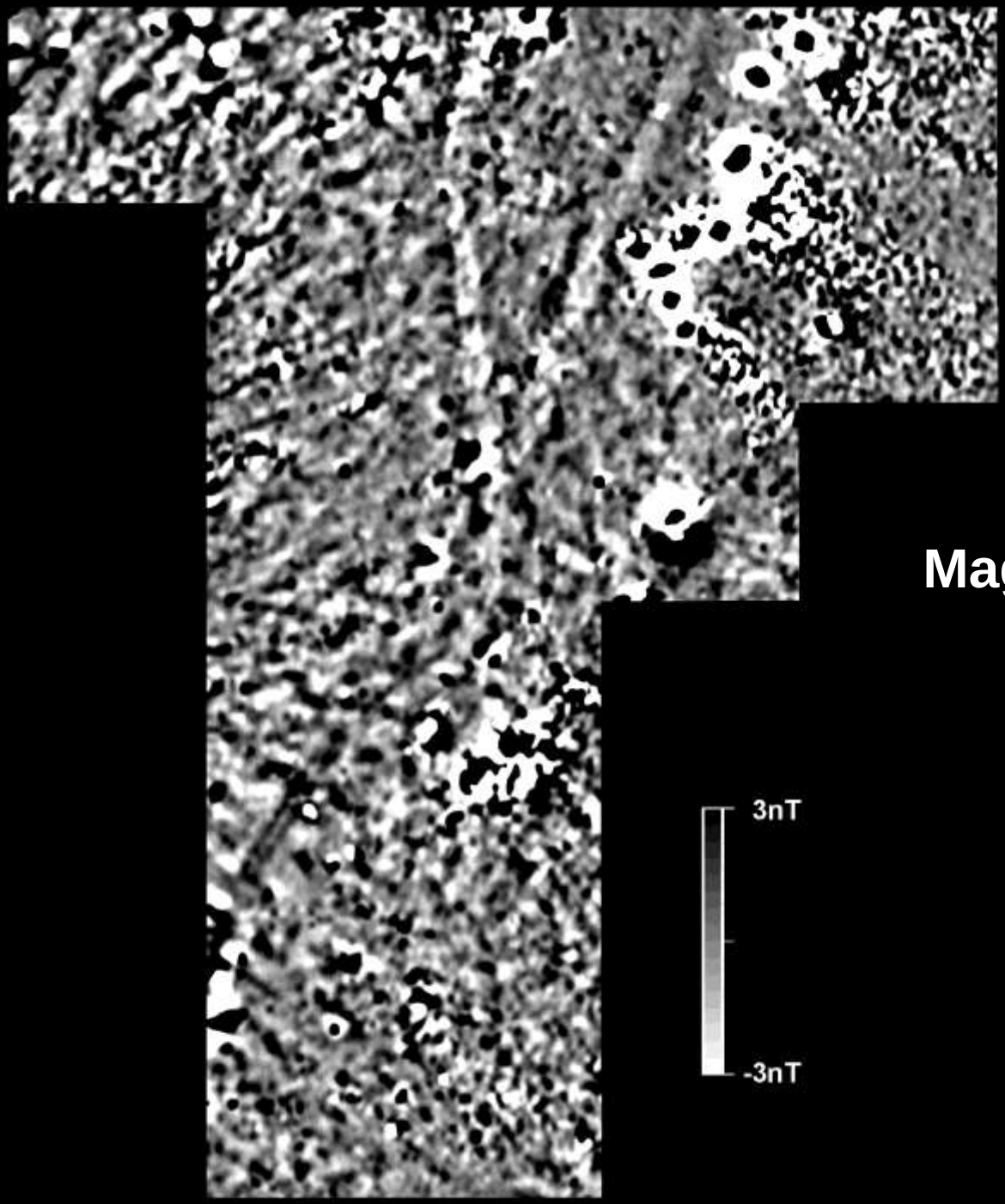
Site A Artifacts

Projectile Point
A.D. 700-1200

Projectile Point
4000-1700 B.C.

Core

Early Stage Biface Blank

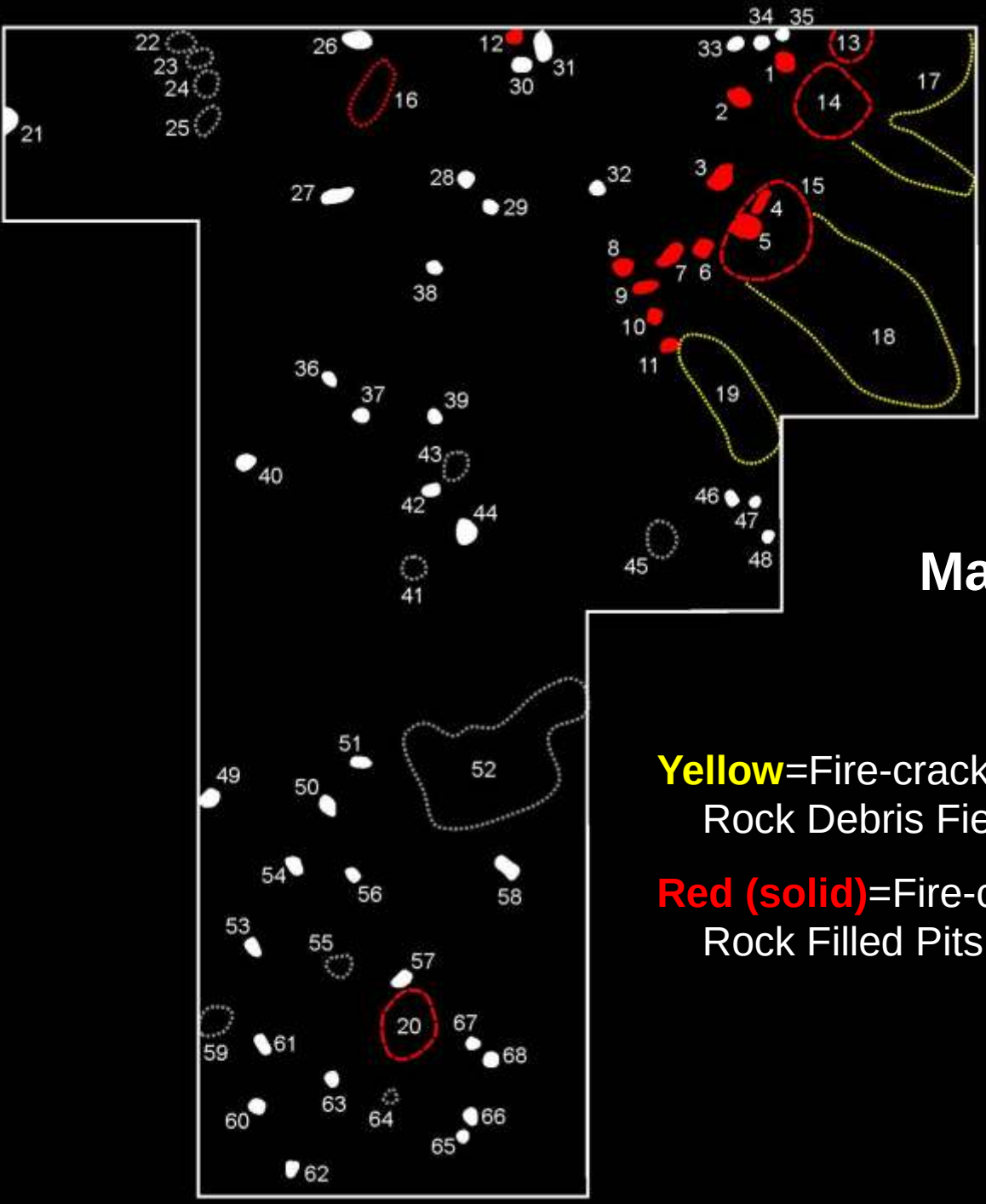


Site B
Magnetic Survey Results

about 1.8 acres

65 feet

20 meters



Site B
Magnetic Survey Results

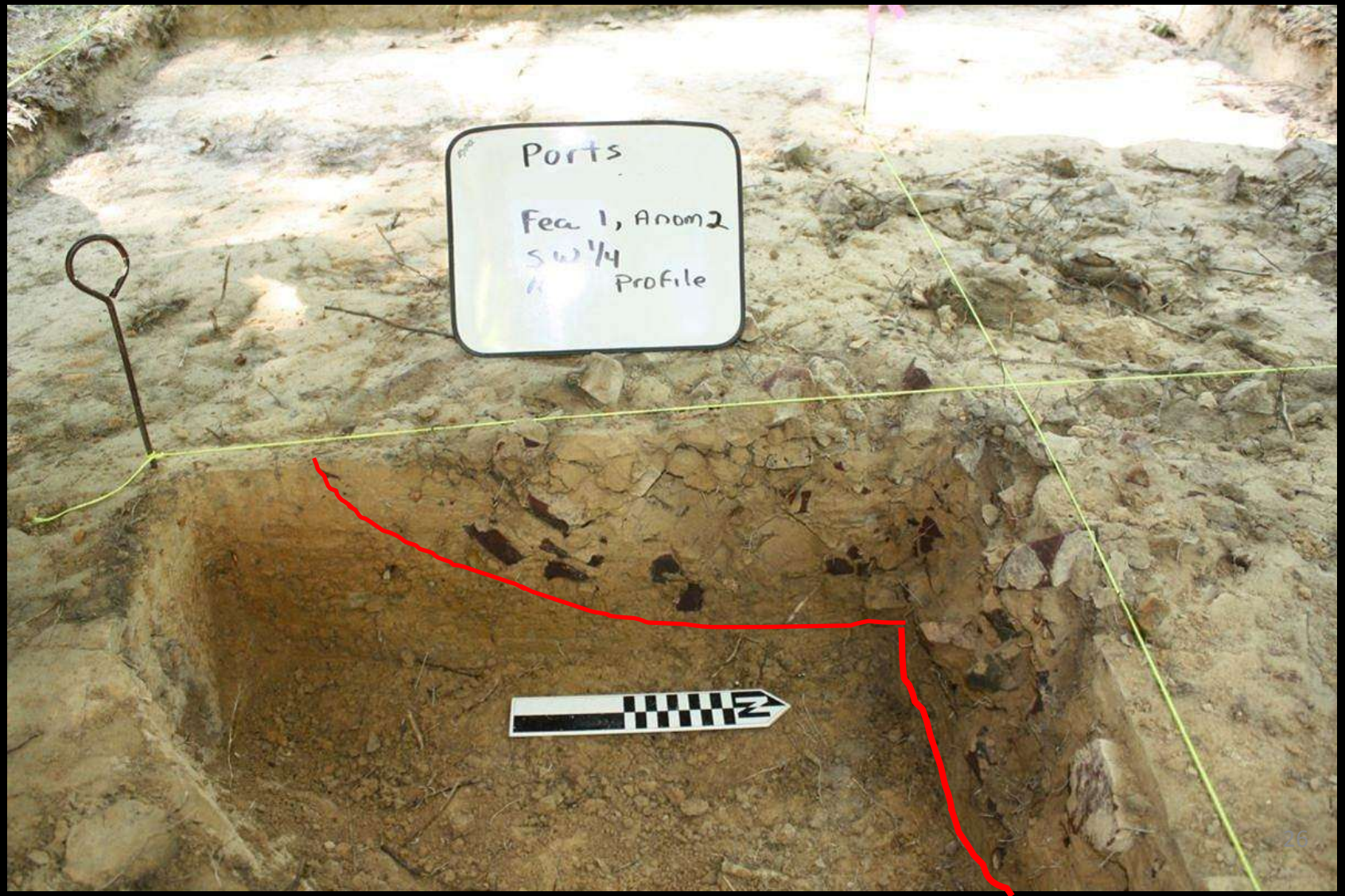
Yellow=Fire-cracked Rock Debris Fields

Red (solid)=Fire-cracked Rock Filled Pits

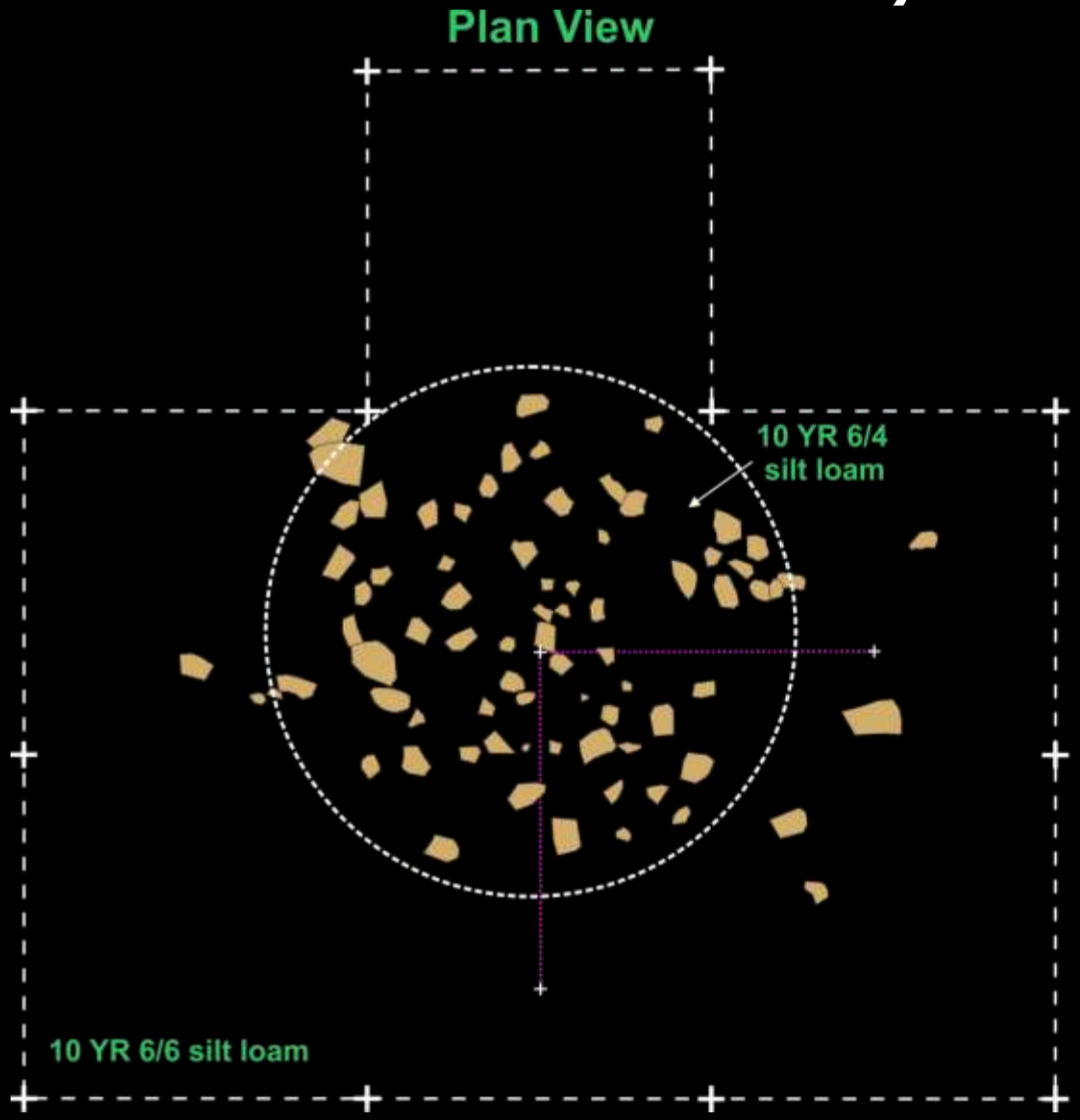
65 feet

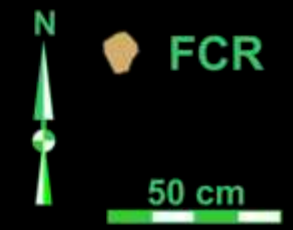
20 meters

Feature 1, Site B

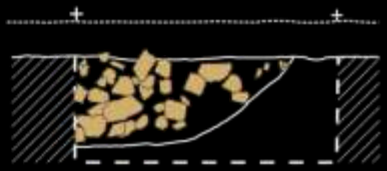


Feature 1, Site B

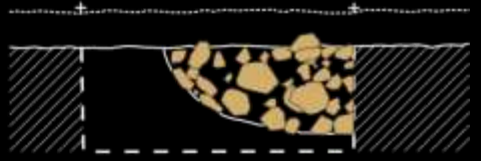


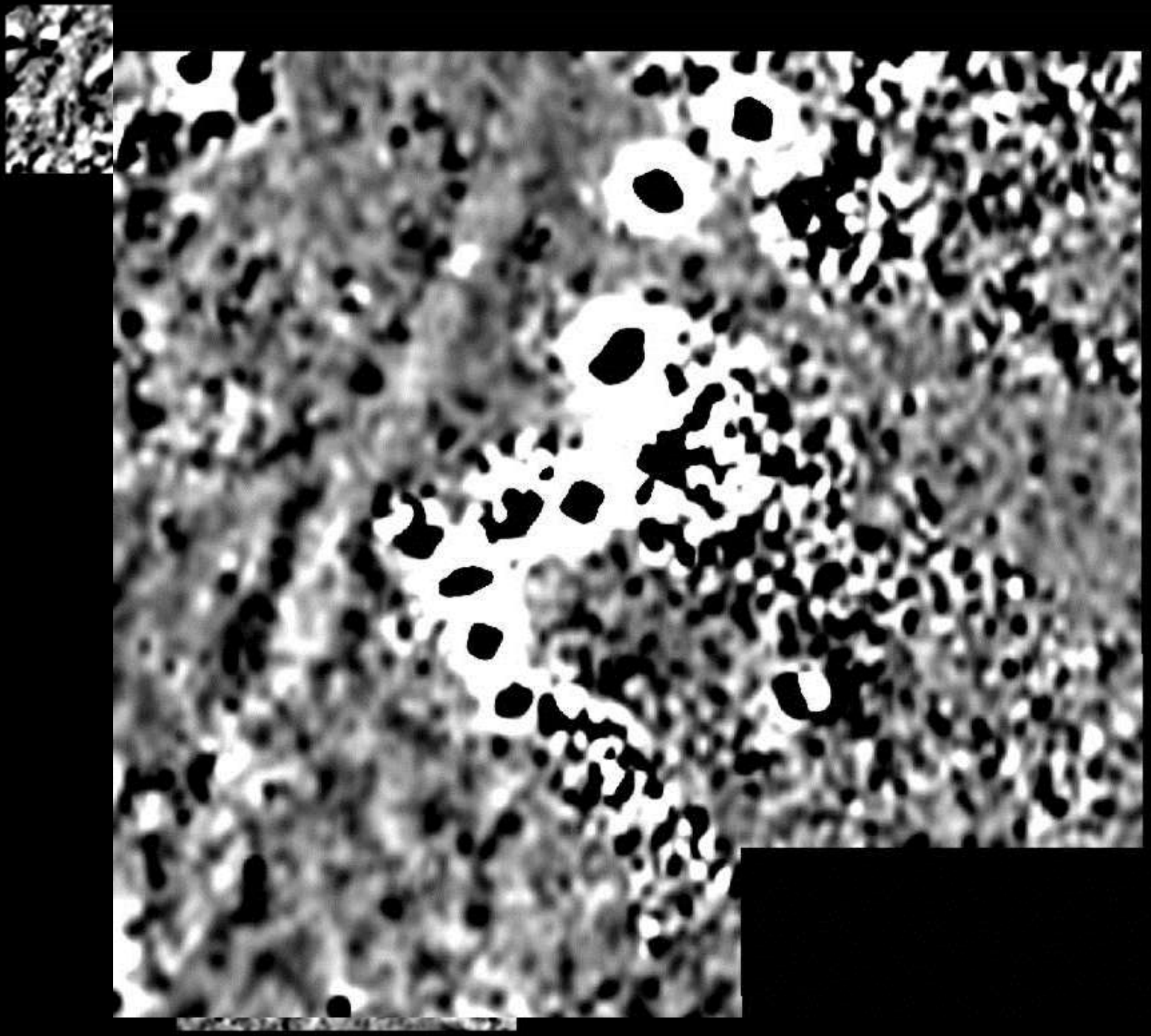


East-West Profile



North-South Profile





Results

acres

rs

Site B Artifacts

Micro-Drill Bits

Biface Fragments

Flake Tool

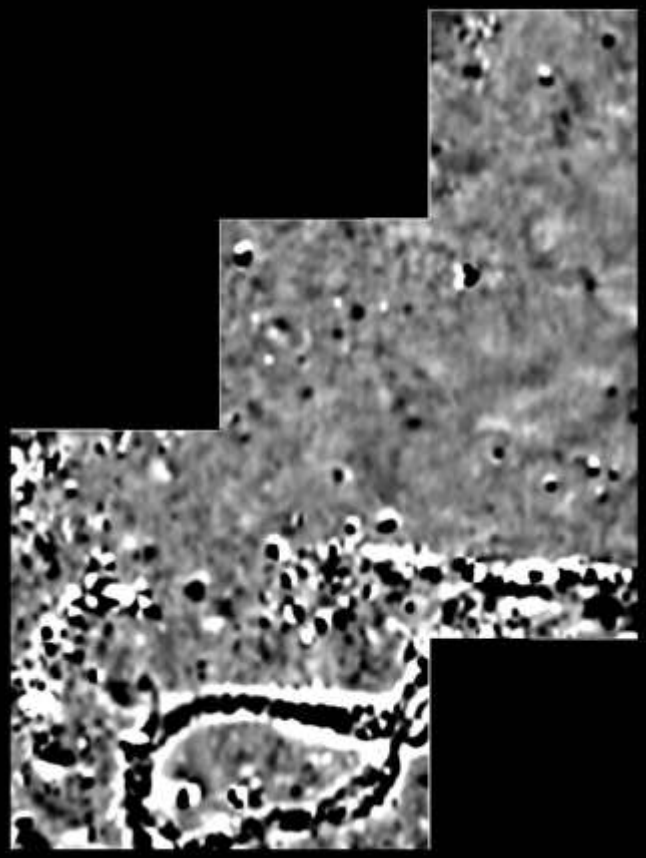
Chipped Sandstone Hoe

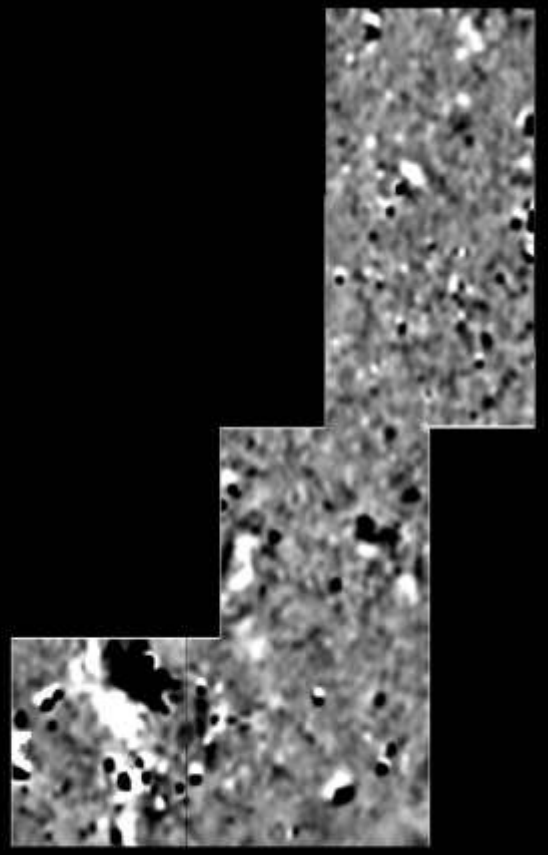
Cup-stone/ Nutting Stone

Core

Site C
Magnetic Survey Results

about 1.3 acres





Mag. Gradient Intensity

3nT

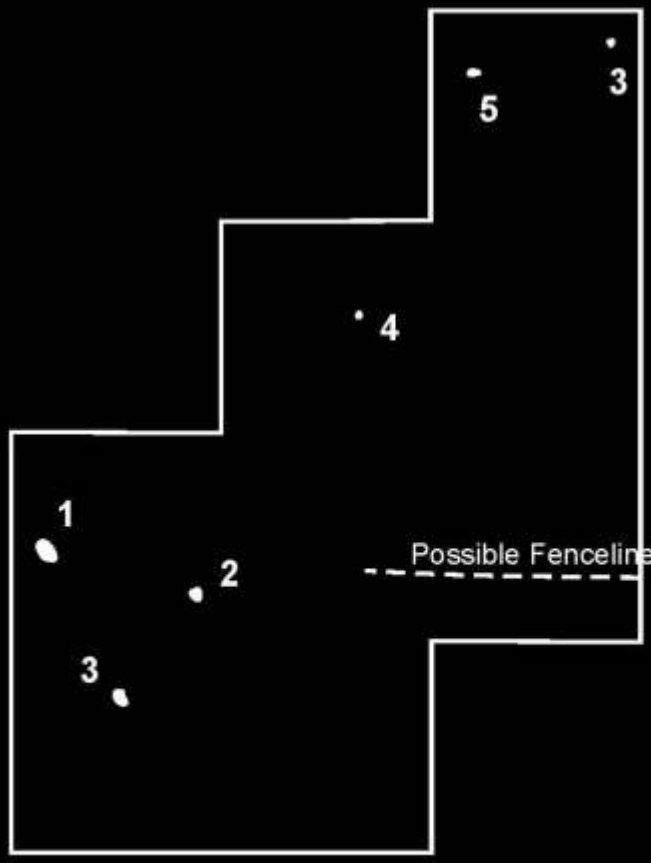
-3nT

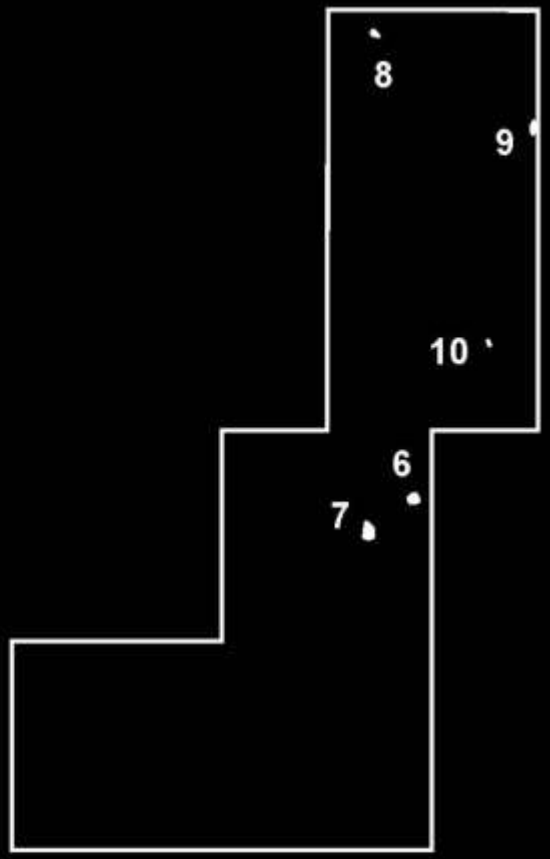
65 feet

20 meters

Site C
Magnetic Survey Results

about 1.3 acres

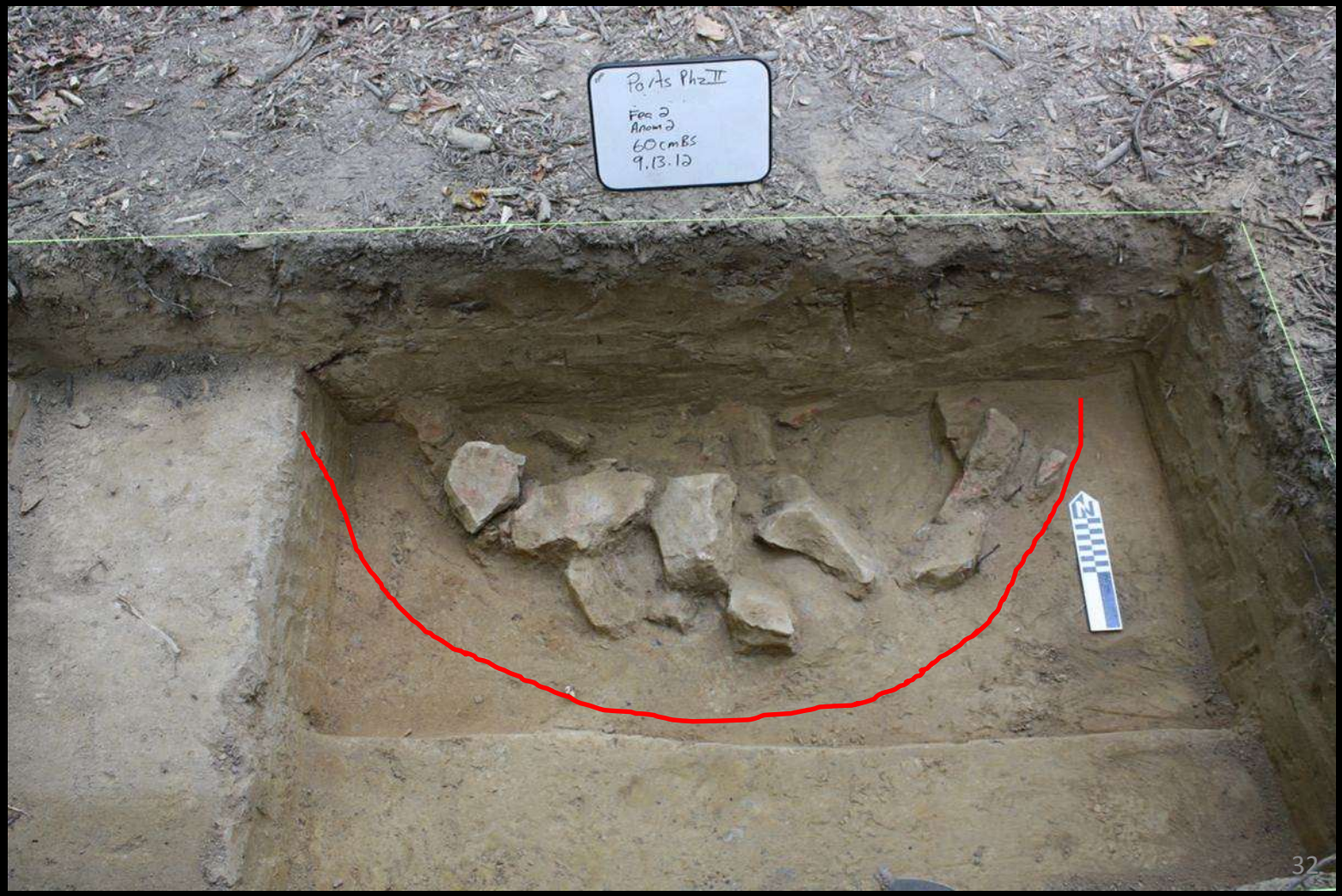




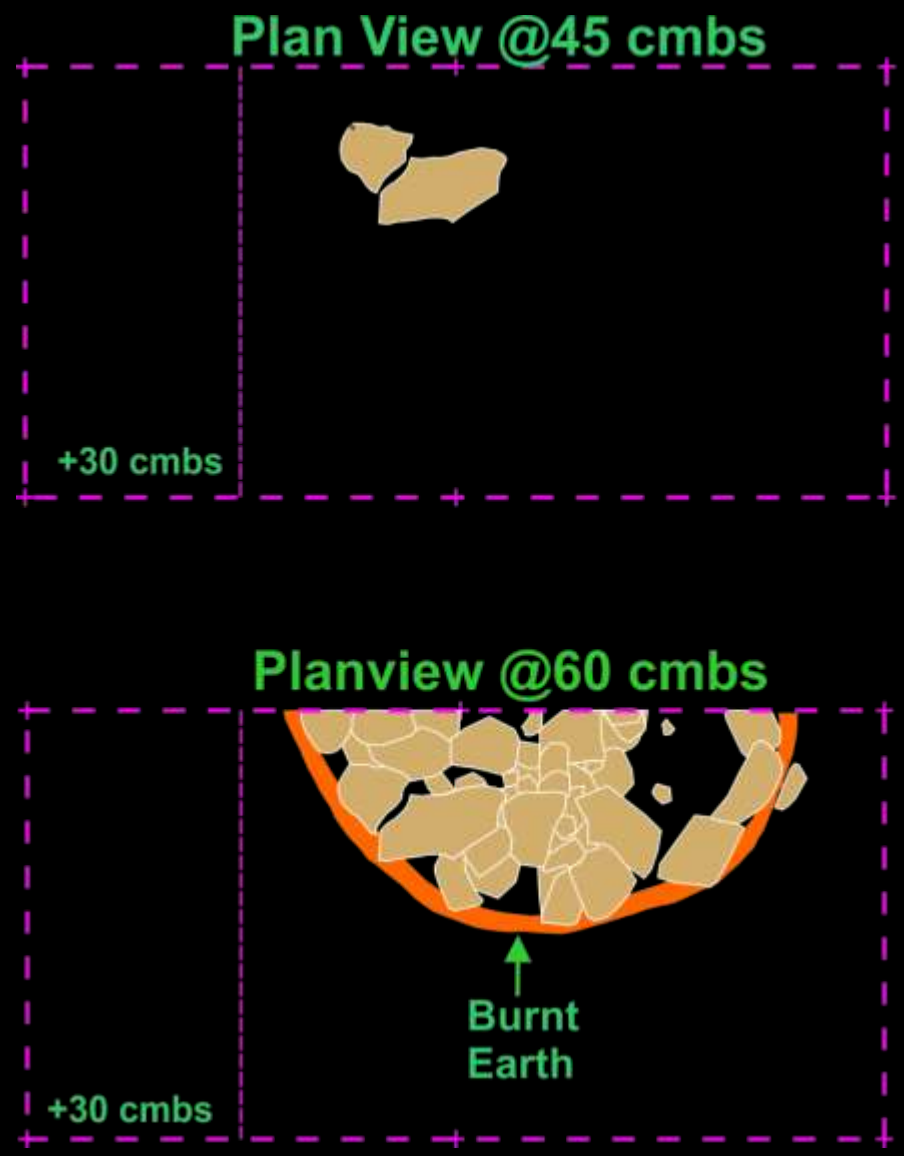
65 feet

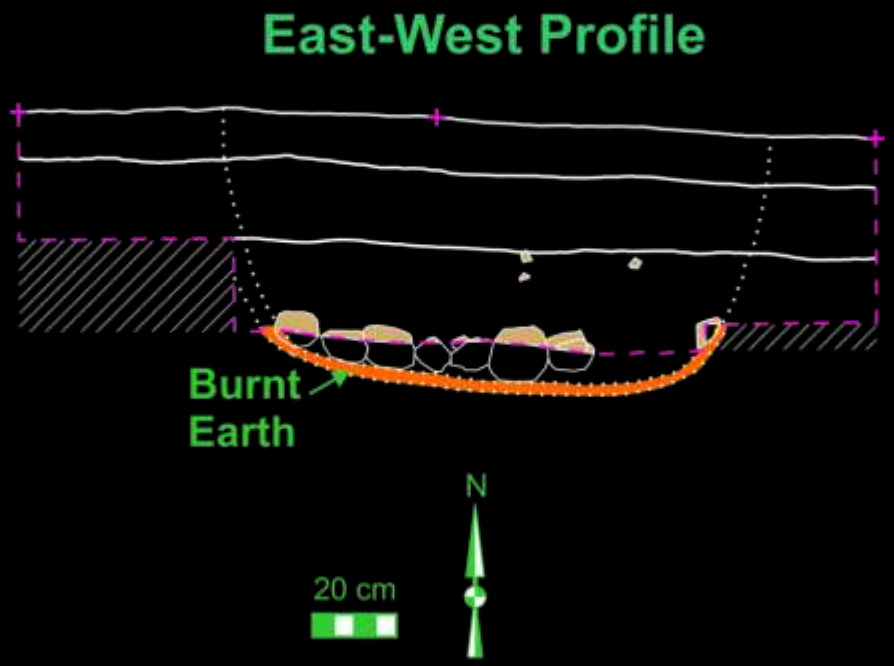
20 meters

Feature 2, Site C

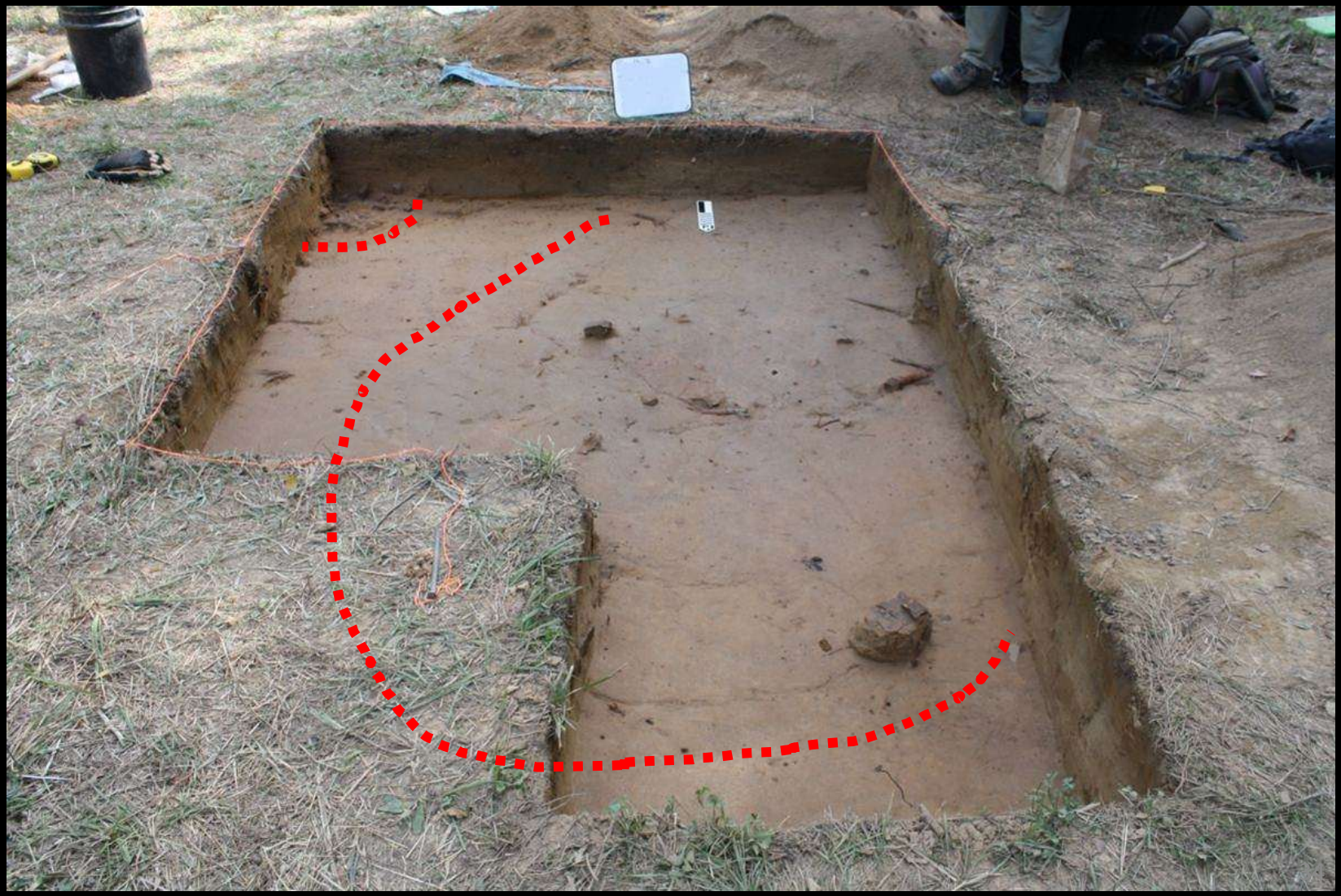


Feature 2, Site C





Features 8 & 10, Site C



Feature 1, Site C

Site C Artifacts

Projectile Points
8000-6000 B.C.

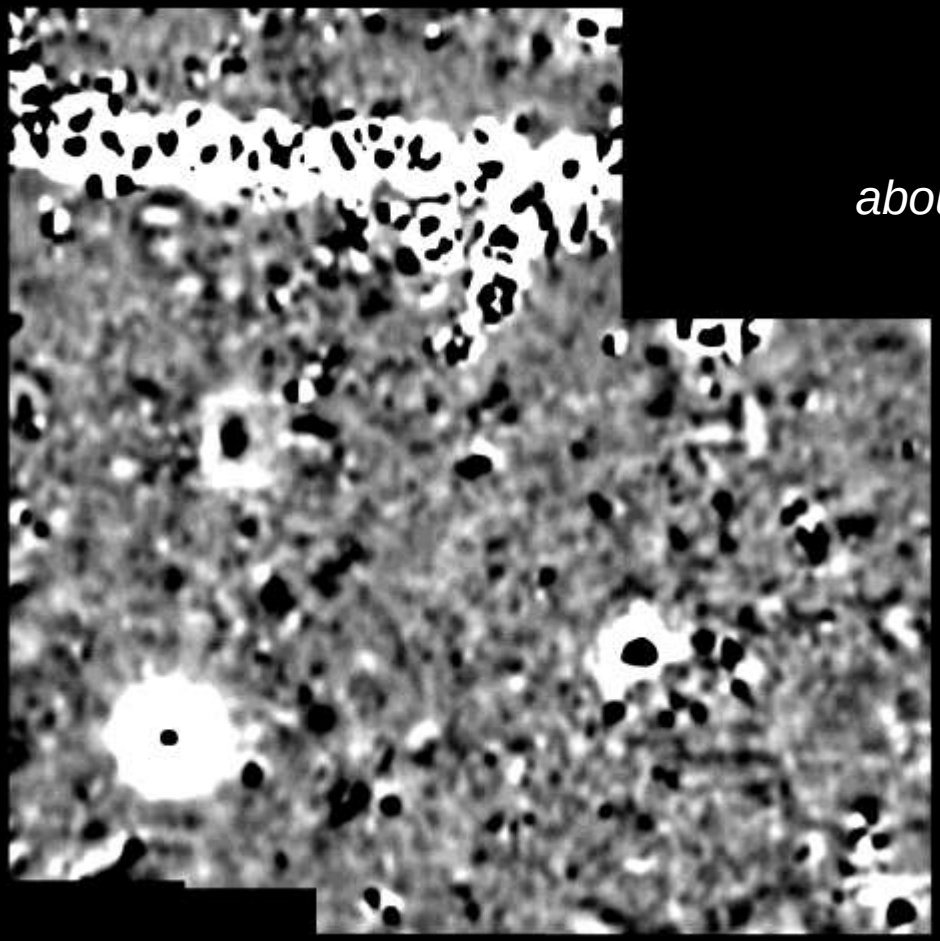
Burnt Biface
Fragments
380-180 B.C.

Grit-Tempered
Pottery
Fragments
380-180 B.C.

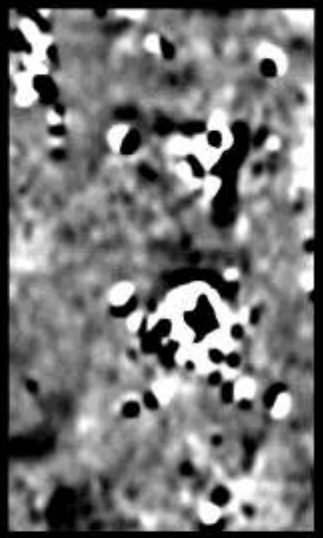
Ground Stone
Celt Bit
380-180 B.C.

Core

Site D
Magnetic Survey Results



about 1 acre

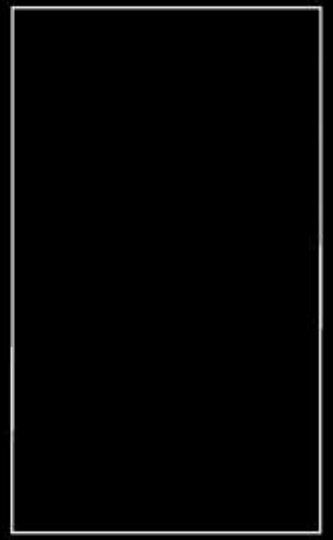


65 feet

20 meters

Site D
Magnetic Survey Results

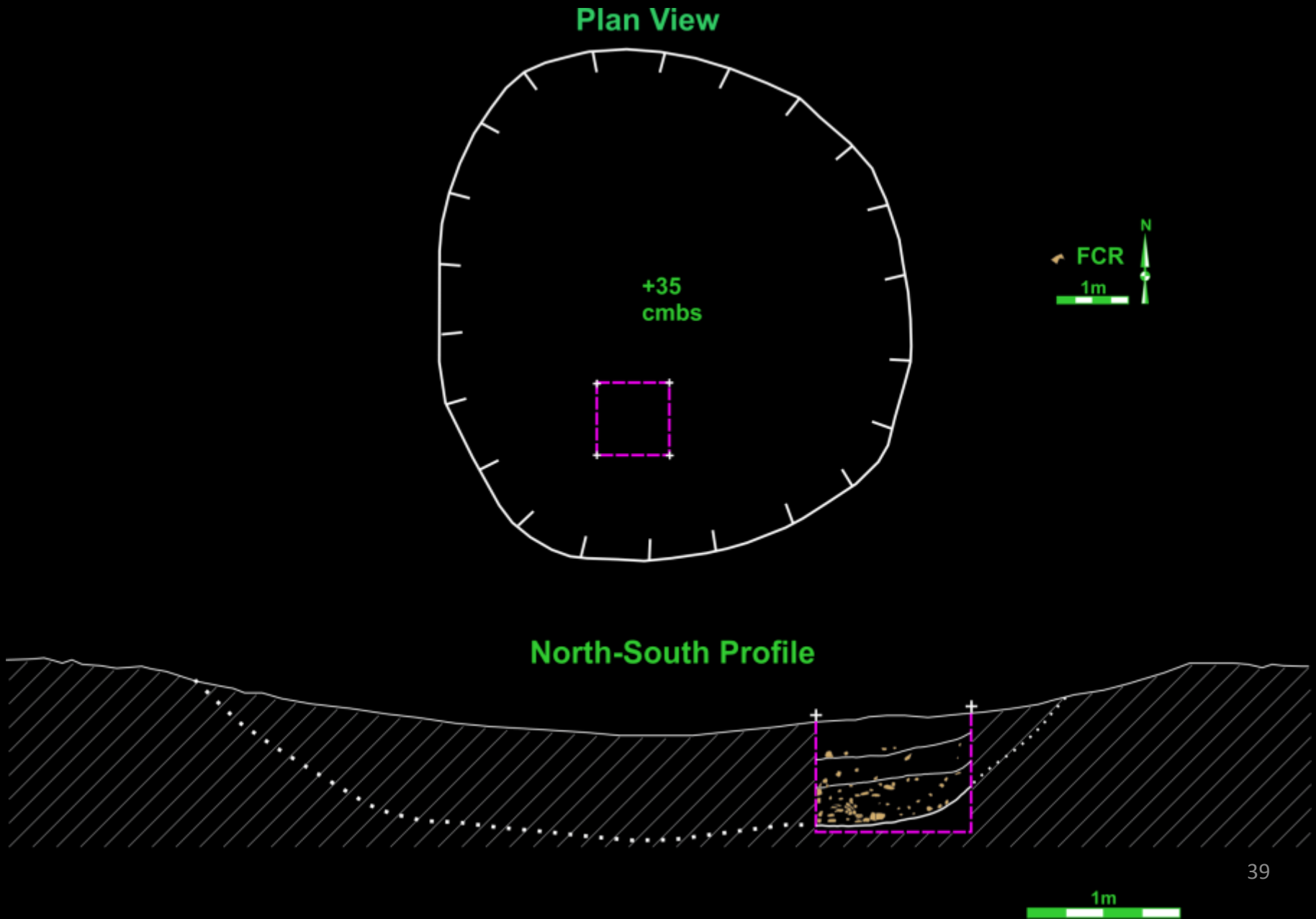
about 1 acre



65 feet

20 meters

Feature 8, Site D



Site D Artifacts

Core

Early & Late
Stage Biface Blanks

Cup-Stone/
Nutting Stone

Grit-Tempered
Pottery
Fragments
1500-300 B.C.

Flake Tools

Groundstone
Celt Fragments

Projectile
Point
Fragment

Hoe
Fragment

Unique Tools and Objects from Site D

Stone Ball

Stone Cube w/ Drilled Hole

Micro-Drill Technolgy

= Actual Size

Site	Temporal Diagnostic Artifacts	Radiometric Dates	Time Period
Site A	Triangle Cluster P.Pt. (A.D. 700-1200)	A.D. 1260-1290	Late Prehistoric
	Notched P.Pt. (4000-1700 B.C.)		Late Archaic
Site B	Micro-Drill Technology (750-680 B.C.?)	1000-840 B.C. 1010-900 B.C.	Late Archaic/ Early Woodland
		1290-1280 B.C.	Late Archaic
Site C	Thick, Grit-Tempered Pottery (1500-300 B.C.)	A.D. 660-780	Late Woodland
		380-180 B.C.	Early Woodland
		660-780 B.C. 810-760 B.C.	Late Archaic/ Early Woodland
	Projectile Points (8000-6000B.C.)	1010-830 B.C.	Late Archaic
		1210-1200 B.C.	Early Archaic
Site D	Micro-Drill Technology (750-680 B.C.?)	750-680 B.C.	Early Woodland
	Thick, Grit-Tempered Pottery (1500-300 B.C.)	2460-2260 B.C.	Late Archaic

Archaeological Interpretations

…based on about 1-2% excavation

- Unplowed Contexts
- Excellent Site Structure
- Intact Cultural Features
- Temporally Diagnostic Artifacts
- Datable Material (C-14 dates)
- Well-Defined Micro-Drill Technology

NRHP Eligibility

- Criterion D: Sites *that have yielded, or may be likely to yield, information important in prehistory…*

Regulatory Review Process and Mitigation Measures

Presented by
Eric Woods, Fluor-B&W Portsmouth

Regulatory Review Process

The decontamination and decommissioning (D&D) project at PORTS is being conducted under CERCLA – Comprehensive Environmental Response, Compensation and Liability Act.

- CERCLA is a law that streamlines the regulatory review process.
- Streamlined reviews enable risks and hazards to human health and the environment to be cleaned-up in an expedited manner.
- Section 106 requirements are being carried out within the CERCLA process as an Applicable, Relevant and Appropriate Requirement (ARAR).

Regulatory Review Process

DOE is required to consider the effects of the Portsmouth D&D Project on properties that are eligible for or listed on the National Register of Historic Places.

- **Input** DOE receives through meetings with consulting parties, tribal nations, elected officials, and the general public will be considered in the development of mitigation measures.

- **Measures** needed to avoid, minimize or mitigate impacts to historic properties are identified in the CERCLA documents.

- **Commitments** DOE makes to take these avoidance, minimization or mitigation actions are included in the decision documents and are binding on the Department.

Regulatory Review Process

Where we are in the process

Process Building D&D	Evaluation of Alternatives, Informational Meetings and Workshops	Proposed Plan	Public Comment Period	Record of Decision	Work Begins
Waste Disposition	Evaluation of Alternatives, Informational Meetings and Workshops	Proposed Plan	Public Comment Period	Record of Decision	Work Begins

- The Proposed Plan will include the mitigation measures developed using the input provided by consulting parties, tribal nations, elected officials and the general public.
- The Proposed Plan will be issued for formal public review and comment.
- Avoidance, minimization, and mitigation actions are included in the Record of Decision and binding on the DOE.

Proposed Mitigation Measures: Archaeological Sites

DOE is evaluating the impacts of the potential onsite disposal cell to the four archaeological sites on the US DOE Portsmouth Site property that are considered eligible for the National Register of Historic Places:

Site A: Site IS in potential OSDC footprint and support areas.

✓ Impacts could be mitigated.

Site B: Site IS NOT in potential OSDC footprint, but IS NEAR proposed support areas.

✓ Impacts could be avoided by design.

Site C: Site IS NOT in potential OSDC footprint or support areas.

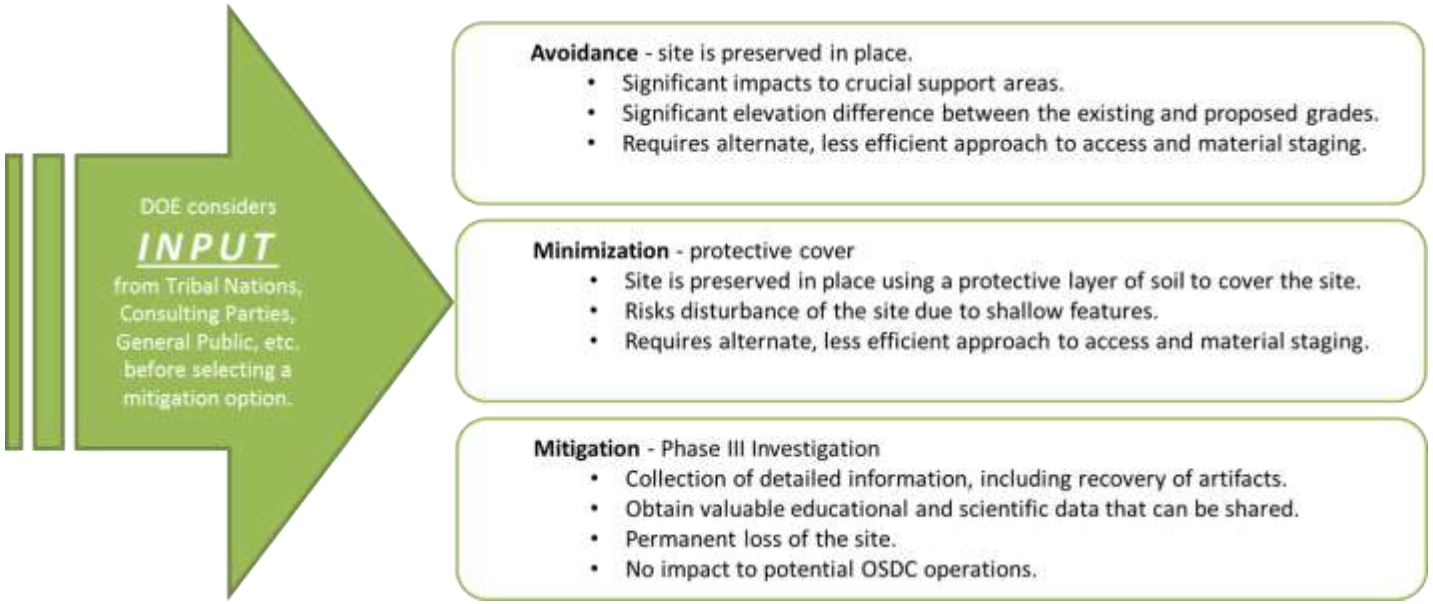
✓ Impacts could be avoided.

Site D: Site IS NOT in potential OSDC footprint or support areas.

✓ Impacts could be avoided.

Proposed Mitigation Measures: Archaeological Sites

Since **Site A** could be adversely affected if onsite disposal is selected and implemented at the most technically suitable location, DOE is currently considering the following mitigation options for **Site A**:



**Mitigation measures considered will recognize the Anti-Deficiency Act as the controlling mechanism for the ability to implement any action using federally appropriated funds. Furthermore, mitigation measures should not create health, safety, environmental/human health risks, e.g. put visitors at risk, or cause adverse effects to the clean-up mission, e.g. delays or complications.*

Discussion – Archaeological Sites Mitigation for Site A

Avoidance, Protective Cover, Phase III Investigation, Other

Proposed and Ongoing Mitigation Measures: DOE-Built Environment

Mitigation being considered for the DOE-Built Environment is a combination of documentation and interpretation methods:

- Collect and evaluate items recovered from selected PORTS facilities;
- Develop a GIS Atlas to support understanding of operations and infrastructure at PORTS;
- Develop a Historic Context Report describing the PORTS site using photographs of interior and exterior building features; and existing design and construction related drawings, photographs, and a written narrative
- Take panoramic photographs prior to, during, and following demolition.

Proposed and Ongoing Mitigation Measures: DOE-Built Environment

- PORTS Virtual Museum, incorporating the following components:
  - Ohio University multimedia web documentary film and photographic essay highlighting the history of the PORTS Site, the current clean up process, and the outreach and visioning project.
  - Oral histories and interviews with current and former workers, neighbors and stakeholders.
  - Interactive virtual site tour, including building interiors.

Portsmouth Gaseous Diffusion Plant
VIRTUAL MUSEUM

More than 8,500 visitors from 45 different countries since November 30, 2012

www.portsvirtualmuseum.org

Discussion – Mitigation Measures for DOE-Built Environment

Providing Input

Send your comments to US DOE using the following methods:

US Mail
US Department of Energy
PO Box 700
Piketon, Ohio 45661
ATTN: Amy Lawson, US DOE

Email
Jennifer.Chandler@wastrenadvantage.com

Fluor-B&W Portsmouth LLC Website
http://www.fbportsmouth.com/community/questionnaire.php