Final
Engineering Evaluation/Cost Analysis
Former Camp Croft
Army Training Facility
Spartanburg, South Carolina

Volume I of II

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FINAL ENGINEERING EVALUATION/COST ANALYSIS REPORT
FORMER CAMP CROFT ARMY TRAINING FACILITY
SPARTANBURG, SOUTH CAROLINA

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PROFESSIONAL ENGINEER'S CERTIFICATION

This is to certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. In my professional judgment, and based upon my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and technically complete.

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List of Acronyms and Abbreviations

ARAR	applicable or relevant and appropriate requirements
ASR	Archive Search Report
cal	caliber
CCATF	Camp Croft Army Training Facility
CEHND	U.S. Army Corps of Engineers, Huntsville Division
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CWM	chemical or warfare materiel
DERP	Defense Environmental Restoration Program
DOD	U.S. Department of Defense
DRMO	Defense Reutilization and Marketing Office
EA	Environmental Assessment
EE/CA	Engineering Evaluation/Cost Analysis
EM	electromagnetics
EMM	earth-moving machinery
EODT	Explosive Ordnance Disposal Technology, Inc.
ESE	Environmental Science & Engineering, Inc.
FIFRA	Federal Insecticide, Fungicide, & Rodenticide Act
ft	foot
ft-bgs	feet below ground surface
FUDS	Formerly Used Defense Sites
GB	government buyback
GPR	ground penetrating radar
HE	high explosive
HEAT	high explosive anti-tank
HFA	Human Factors Applications, Inc.
INPR	Inventory Project Report
IC	institutional controls
m	meter
mm	millimeter
MTV	mobility, toxicity, or volume
NCP	National Contingency Plan
NGVD	national geodetic vertical datum
NTCRA	non-time-critical removal action
OEW	ordnance and explosive waste

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OEWCert	Ordnance and Explosive Waste Cost Effectiveness Risk Tool
OOU	Ordnance Operable Unit
PA	Preliminary Assessment Study
PPE	personal protective equipment
PRSC	post-removal site control
QA/QC	quality assurance/quality control
RAC	risk assessment code
SI	site inspection
SOP	standard operating procedure
SOW	Scope of Work
TCRA	time critical removal action
TRIA	Training Range Impact Area
TSCA	Toxic Substances Control Act
USACE	U.S. Army Corps of Engineers
USGS	U.S. Geological Survey
UXO	unexploded ordnance
WP	white phosphorus
WP	work plan

1.0 Executive Summary

1.0.1 Former Camp Croft, near the city of Spartanburg in Spartanburg County, South Carolina, operated during World War II to train soldiers in the use of weapons including cannons, mortars, anti-tank rockets, machine guns, hand grenades, and small arms. Following closure of the 19,000-acre facility, the government transferred approximately 7,100 acres to the South Carolina Commission of Forestry for the creation of the current Croft State Park. Although the government took prior steps to clear former Camp Croft of ordnance waste and potentially explosive ordnance items, some ordnance contamination remained.

1.0.2 The U.S. Army Corps of Engineers, Huntsville Division (CEHND) contracted Environmental Science & Engineering, Inc. (ESE) to perform an Engineering Evaluation/Cost Analysis (EE/CA) at the former Camp Croft Army Training Facility (CCATF). The purpose of this EE/CA is to analyze removal alternatives to reduce the risk of public exposure to ordnance and explosive waste (OEW) and unexploded ordnance (UXO) at the site. This document uses the term "public" to include visitors to Croft State Park, park personnel, and any authorized contractors working within the park, owners and residents of private property sites, and any visitors to private property sites.

1.0.3 The government's intention is that ESE prepare an EE/CA in general conformance with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and the special requirements of the Scope of Work (SOW) to serve as the basis for the selection of the corrective action alternative to reduce public safety risks associated with OEW/UXO at the former Camp Croft. CEHND has chosen to generally follow the NCP guidance for conducting EE/CAs to analyze risk reduction alternatives for Formerly Used Defense Sites (FUDS) that may be contaminated by OEW/UXO.

1.0.4 This EE/CA addresses nine ordnance operable units (OOUs) where OEW/UXO was either previously confirmed or suspected. OOUs are areas within former Camp Croft that are geographically continuous and have commonality of land use and OEW/UXO type. Six OOUs (1A, 1B, 2, 4, 7, and 8) lie within Croft State Park. The remaining three OOUs (3, 5, and 6) are private property sites outside the park but within the former Camp Croft boundary.

1.0.5 From the investigation and data developed after the investigation, numerous additional areas of suspected potential contamination were identified. However, due to the limited scope of this EE/CA, these areas are not being addressed at this time. CEHND fully intends to perform additional investigations to evaluate these areas as part of an ongoing EE/CA process at former Camp Croft.

1.0.6 UXO contamination was confirmed during the EE/CA investigation at five of the nine OOUs. Three of the five contaminated OOUs were within Croft State Park (OOU1B, OOU2, and OOU7). The other two were on private property (OOU3 and OOU6).

1.1 Risk Reduction Alternatives

Alternatives to reduce the risk of public exposure were considered for each OOU. Alternatives included the following:

- No Further Action,
- Institutional Controls,
- Government Buyback,
- Surface Clearance, and
- Clearance to Depth.

1.1.1 The *No Further Action* alternative means that no OEW removal action will be implemented to reduce risk of public exposure.

1.1.2 The *Institutional Controls* alternative may include restricting site access with fencing, providing warnings by posting signs, and educating the public through media such as notices and newspaper articles. The *Government Buyback* alternative allows the government to purchase the effected land and either postpone removal activities until a later date when more cost-effective removal actions can be implemented or restrict the land use by deed restrictions and then sell the land.

1.1.3 *Surface Clearance* involves removing OEW/UXO visible on the surface and all such items that may be submerged but protrude through the surface. *Clearance to Depth* consists of removal of OEW/UXO down to the maximum depth at which it was found at the OOU during the EE/CA investigation [time critical removal action (TCRA)] or 12 inches, whichever is greater. Deeper excavation may also be considered when deemed appropriate (e.g., it is known that a building is to be constructed with foundations extending deeper than the clearance depth).

1.2 Croft State Park Ordnance Operable Units

OOU1B, OOU2, and OOU7 were each confirmed as former mortar impact areas. Several 60 millimeter (mm) and 81mm unexploded mortars were discovered. Evidence of 2.36-inch rockets and 4.2-inch mortars were also discovered; however, only as OEW and not as UXO. No UXO was discovered in OOU1A, OOU4, or OOU8.

1.2.1 OOU1A

At OOU1A, a 1020-acre wooded area located in the northwest corner of the park, findings were limited to inert 37mm and 57mm projectiles (scrap). No UXO was found. The CEHND risk contractor, QuantiTech, Inc. (QuantiTech) estimated a zero exposure probability. However, because the scope of the EE/CA allowed for only a small portion (less than 1 percent) of the OOU to be sampled, UXO may be present and some level of risk greater than zero may exist.

1.2.1.1 Because the activities in OOU1A are generally limited to recreational surface uses (hiking and horseback riding), and since no UXO was discovered during the investigation, the No Further Action alternative is proposed for implementation at OOU1A.

1.2.2 OOU1B

At OOU1B, a 65-acre forested area located within the center of the park, twelve 60mm and one 81mm mortars (UXO) were discovered. QuantiTech estimated a maximum UXO density of 12 per acre for OOU1B, based on the size of the area, percent of area that was sampled, and the number of UXO found within the sampled area.

1.2.2.1 Activities in OOU1B are generally limited to recreational surface use (hiking and horseback riding), with little potential for intrusive subsurface activities. Therefore, the Surface Clearance alternative is proposed for implementation at OOU1B. The surface clearance is proposed along trails and along the edges of Croft State Park Road, which also passes through OOU1B. The surface clearance consists of brush clearance, geophysical surveys to locate surface anomalies, recovery/disposal of OEW/UXO, and site restoration.

1.2.3 OOU2

At OOU2, a 325-acre area located on the east side of the park, approximately 0.7 mile from State Highway 295, nineteen 60mm and one 81mm mortars were discovered. A single piece from a 4.2-inch mortar discovered during the investigation suggests that the area may have also been used as a 4.2-inch mortar target. However, no unexploded 4.2-inch mortars were found. QuantiTech estimated a maximum UXO density of nine per acre for OOU2.

1.2.3.1 Activities in OOU2 are generally limited to recreational surface use (hiking and horseback riding) with little potential for intrusive subsurface activities. Therefore, the Surface Clearance alternative is proposed for implementation at OOU2. The surface clearance consists of brush clearance, geophysical surveys to locate surface anomalies, recovery/disposal of OEW/UXO, and site restoration.

1.2.4 OOU7

OOU7, located in the vicinity of the park office and campgrounds, is the busiest area of the park. Sixty 60mm and two 81mm mortars (UXO) were discovered during the EE/CA investigation and a follow-up TCRA performed by CEHND's removal contractor, Human Factors Applications, Inc. (HFA). The TCRA was limited to surface clearance. Evidence of 2.36-inch rockets was discovered at OOU7 during the TCRA, but only as parts and not as UXO. Based on the data developed during the EE/CA investigation combined with data from the TCRA, Quantitech estimated a maximum UXO density of 49 per acre and an exposure probability of 1/2 to 1/3.

1.2.4.1 UXO was discovered in this high activity area where potentially intrusive activities are planned. Therefore, the Clearance to Depth alternative is proposed. Based on the exposure probability estimates, implementation of this alternative should reduce the exposure probability by at least 50 percent, and potentially by as much as 80 percent. The clearance to depth consists of brush clearance as required, geophysical surveys to locate anomalies, excavation of anomalies, disposal of OEW/UXO, and site restoration. The proposed clearance depth is 22 inches, based on the maximum depth at which OEW/UXO was found during the EE/CA investigation.

1.2.5 OOU4

At OOU4, a small area located in the center of the park near the swimming pool, findings were limited to .30-caliber slugs. No other OEW or UXO was found.

1.2.5.1 Activities in OOU4 are generally limited to recreational surface use (hiking and horseback riding) and since no other evidence of OEW or UXO was found, the No Further Action alternative is proposed.

1.2.6 OOU8

At OOU8, a small area located in the northwest corner of the park just north of Dairy Ridge Road, the only OEW finding consisted of 14 empty mine shipping containers found by HFA during an earlier investigation directed by CEHND. No OEW or UXO was discovered during the EE/CA investigation.

1.2.6.1 Activities in OOU8 are generally limited to surface use and since no evidence of OEW or UXO was found during the EE/CA investigation, the No Further Action alternative is proposed.

1.3 Private Property Ordnance Operable Units

1.3.1 OOU3

OOU3 is in a private residential area north of the park. The area was investigated due to past reports that hand grenade parts had been found. Findings during the EE/CA investigation included one MK-2 fragmentation grenade, numerous practice hand grenades, and grenade parts, suggesting that the area may have been a former grenade practice area. QuantiTech estimated a maximum UXO density of 7 per acre for OOU3 and an exposure probability ranging from zero to 1/300,000.

1.3.1.1 For OOU3, the Clearance to Depth alternative is proposed. A negligible exposure probability was estimated for this OOU. However, because it is a private residential property and prevention of intrusive activities (e.g., children digging, planting, pool construction, installation of utility lines) is impracticable, action is warranted at OOU3. Clearance to depth would include limited site preparation activities, geophysical surveys to identify anomalies, recovery and disposal of OEW/UXO, and site restoration. The proposed clearance depth is 19 inches, based on the depth at which OEW/UXO was found during the EE/CA investigation.

1.3.2 OOU5

OOU5 is also in a private residential area north of the park. It was investigated for similar reasons as OOU3. However, findings were limited to one rifle grenade part (tail boom). No UXO was found.

1.3.2.1 Since no UXO was found at OOU5, the No Further Action alternative is proposed.

1.3.3 OOU6

OOU6 contains an area of approximately 340 acres of privately owned land that is currently being developed for agricultural and industrial purposes, including tree farming and industrial landfills. It was investigated due to reported findings of 105mm Howitzer rounds. UXO findings as a result of a CEHND-authorized TCRA and a limited EE/CA investigation included nine 105mm smoke canisters, two 105mm fuzed ejection rounds, one explosive burster, two 60mm mortars, and one

81mm illumination mortar. QuantiTech estimated a maximum UXO density of 1.31 per acre for OOU6 and a probability of exposure of zero to 1/2.

1.3.3.1 For OOU6, the Government Buyback alternative is proposed. This alternative was selected because it appears to be significantly less expensive than either of the clearance alternatives and it gives the government the flexibility to postpone removal activities until a more cost-effective removal approach can be developed. Alternatively, the government can perform selected surface and/or subsurface clearances and then release the land with deed restrictions limiting the land use as appropriate.

1.4 Coordination with Future EE/CA Activities

For future sites discovered within Croft State Park, CEHND proposes to simplify the EE/CA process and place contaminated sites into the corrective action phase in a more timely and cost-effective manner. Specifically, if a new site has the same profile (i.e., land use activities, exposed population, UXO type and density) as a site addressed in this EE/CA, then CEHND will recommend that the same alternative approved for the previous site be implemented at the new site. This approach is being considered to eliminate much of the time required in the EE/CA development and review processes.

2.0 Introduction

2.1 Project Authorization

Environmental Science & Engineering, Inc. (ESE) received Contract No. DACA87-92-D-0018, Delivery Order No. 0013, Annex M, from the U.S. Army Corps of Engineers (USACE), Huntsville Division (CEHND), to conduct an Engineering Evaluation/Cost Analysis (EE/CA) at the former Camp Croft Army Training Facility (CCATF), Spartanburg, South Carolina. CEHND has chosen to generally follow the National Contingency Plan (NCP) guidance for conducting EE/CAs to analyze risk reduction alternatives for FUDS that may be contaminated by ordnance and explosive waste/unexploded ordnance (OEW/UXO). The purpose of the EE/CA was to select non-time-critical removal actions (NTCRAs) necessary to reduce public safety risk associated with OEW/UXO at the former CCATF.

2.1.1 The EE/CA was performed in accordance with the CEHND Scope of Work (SOW), included as Appendix A. EE/CA activities were conducted in accordance with requirements of the NCP for NTCRAs [40 Code of Federal Regulations (CFR) 300.415], specified in the EPA document *Guidance on Conducting Non-Time-Critical Removal Actions Under CERCLA* (EPA, 1993), and specific requirements of the U.S. Army for EE/CA activities at the Defense Environmental Restoration Program (DERP) Formerly Used Defense Sites (FUDS).

2.2 Study Objective

The objective of this study is to conduct an EE/CA for the former CCATF as stipulated in the SOW in order to determine appropriate corrective actions in areas of greatest OEW/UXO risk to the public. To accomplish the EE/CA goals, sampling and data collection were conducted at 80 representative sites to determine or classify specific sites contaminated or potentially contaminated with OEW/UXO and to estimate the type and density of OEW/UXO contamination. This EE/CA focuses on conventional OEW/UXO risks requiring NTCRAs within the boundaries of the former CCATF, with the primary concentration placed on the portion of the former CCATF that is now known as Croft State Park.

2.3 Project Organization

The project team consisted of the USACE, Charleston District, life cycle project manager; the USACE, Huntsville Division, technical manager; and the USACE contractor, ESE. Figure 2-1 is a project organization chart that was originally presented in the Work Plan [(WP), ESE, 1994],

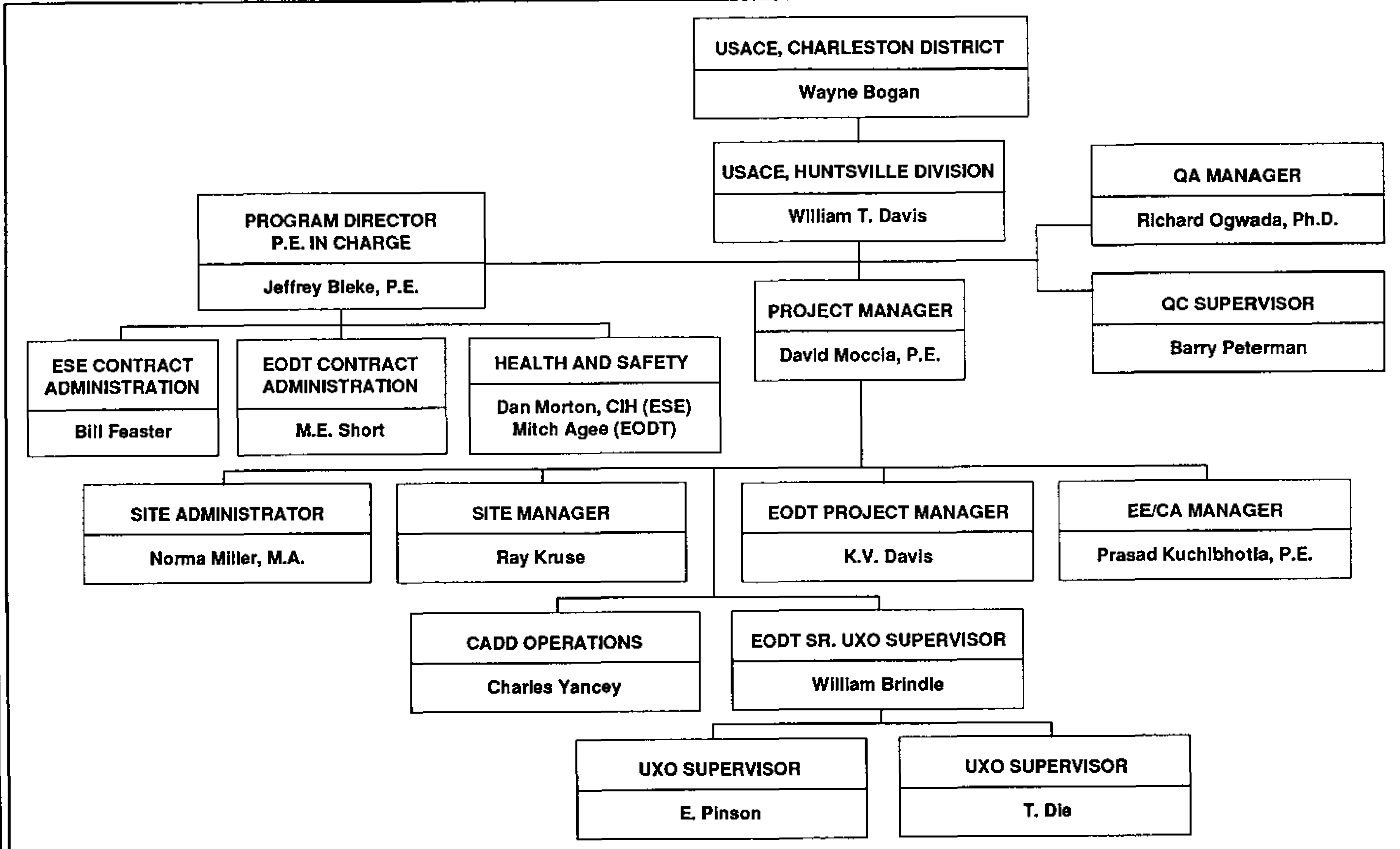

Figure 2-1
ORGANIZATIONAL CHART

SOURCE: ESE.

FORMER CAMP CROFT ARMY TRAINING FACILITY
SPARTANBURG, SC

U.S. ARMY CORPS OF ENGINEERS
HUNTSVILLE DIVISION

and is revised to include personnel that completed this project. CEHND was informed of all key personnel changes made throughout the project.

2.3.1 ESE used two subcontractors to complete the EE/CA field sampling activities. The OEW/UXO geophysical surveys, excavation of geophysical anomalies, and UXO venting/ destruction and disposal were performed by and Explosive Ordnance Disposal Technology, Inc. (EODT) of Oak Ridge, Tennessee. Dr. Robert Powell, a local botanist and long-time resident of the Spartanburg area, was contracted to perform inspections of the proposed sampling grids prior to the vegetation clearing. The purpose of Dr. Powell's involvement was to minimize disturbance and prevent destruction of the sensitive growth areas within Croft State Park.

2.4 Public Affairs

2.4.1 Coordination

USACE, Charleston District, has the overall responsibility for public affairs on this project. The following protocol was followed during execution of the WP:

1. All communications and contacts with the public were under the direction of the Charleston District life cycle project manager;
2. All public information/contacts made during the project were documented and forwarded immediately to Charleston District; and
3. For public meetings, ESE assisted in the coordination of the meeting and maintained records as requested by CEHND.

2.4.2 Public Meeting

Key personnel from the Charleston District, CEHND, ESE, and EODT, including the respective life cycle and technical/project managers, conducted a public meeting on August 30, 1994, to inform the public of the impending field effort. Several landowners from the Spartanburg community and the former CCATF area were present for the meeting. A transcript of this meeting is on record with CEHND.

2.4.3 Media Day

Media day was conducted on October 19, 1994, at the former CCATF to provide the local media with the opportunity to learn about the nature of the project and the work being performed during the field effort. The event was managed by CEHND at the direction of the Charleston District.

Local television stations (Channels 4 and 7), the regional newspaper, and radio personnel participated in the media day activities. Representatives from the Charleston District, the CEHND project manager, a CEHND safety specialist, a CEHND public affairs specialist, and the ESE project management team were also in attendance to support the briefing.

2.5 Report Organization

This report summarizes previous site work and documents the work performed during the EE/CA process under this delivery order, including the sampling effort. The report describes field activities performed at the site, the nature and extent of anomalies found, materials encountered during surface and subsurface sweeps/clearance, risk reduction alternatives developed for additional NTCRAs, technical comparison and cost analysis for alternatives, and recommendations for further actions derived from the EE/CA process.

3.0 Site Characterization

3.1 Site Description and Background

3.1.1 Geographic Location

The former CCATF covers approximately 19,000 acres and lies south of Spartanburg in Spartanburg County, South Carolina. Figure 3-1 shows the location and boundary of the former CCATF.

3.1.2 Military History

3.1.2.1 Camp Croft was established in January 1941 as an army training facility. The camp consisted of two general areas: a series of training, firing, and impact ranges (16,929 acres); and a troop housing (cantonment) area with attached administrative quarters (1,700 acres). The firing ranges at the former CCATF consisted of pistol, rifle, machine gun, mortar, anti-aircraft, and anti-tank ranges. OEW/UXO that may be encountered at the former CCATF include: .30-caliber (cal) and .50-cal small arms rounds; 20-millimeter (mm) hand and rifle smoke, tear gas, and incendiary grenades; 60- and 81-mm high explosive (HE) practice, smoke, tear gas, and illumination mortar rounds; and 2.36-inch high explosive anti-tank (HEAT) smoke, incendiary, and practice rockets. The former CCATF also contained a gas chamber/gas obstacle course area (163 acres) where realistic chemical warfare training was conducted, and a practice grenade court (119 acres).

3.1.2.2 In 1947, the entire acreage of the former CCATF was declared surplus by the War Assets Administration. By 1950, the Army sold the land in pieces to organizations and businesses. This sale also included the transfer of 7,088 acres of land to the South Carolina Commission of Forestry for the creation of Croft State Park. The remaining acreage has been converted to residential housing, churches, and industrial and commercial businesses. The gas chamber and gas obstacle course have been removed, and no evidence of past chemical training is found at the site.

3.1.3 Environmental Setting

The following sections reference information gathered from the Archive Search Report (USACE, 1994) and the Croft State Park Management Plan (South Carolina Department of Parks, Recreation, and Tourism). The referenced author, Terry A. Ferguson, provides the geologic detail at Croft State Park in the Croft State Park Management Plan.

Figure 3-1
PROJECT VICINITY AND LOCATION MAP

SOURCES: USGS; ESE.

FORMER CAMP CROFT ARMY TRAINING FACILITY
SPARTANBURG, SC

U.S. ARMY CORPS OF ENGINEERS
HUNTSVILLE DIVISION

3.1.3.1 Geology

Croft State Park is underlain by Paleozoic age metamorphic and igneous rock (Ferguson, 1988). Two distinct rock belts, the Inner Piedmont Belt and the Kings Mountain Belt, lie within Spartanburg county and trend northeast to southwest, bisecting the park.

3.1.3.1.1 The Inner Piedmont Belt underlies the western portion of the park. It is comprised mainly of biotite and granitic gneisses, with several other types of igneous rock and igneous intrusions. Outcrops of igneous intrusions in this belt primarily occur as undeformed granite and diabase dikes along a northeast to southwest trending line in the northwest portion of the park. A diabase dike also outcrops in the vicinity of one of the granite outcrops.

3.1.3.1.2 The Kings Mountain Belt underlies the eastern portion of the park and is comprised of pegmatite and diabase dikes. The pegmatite dikes lie in the northeast portion of the park, and the diabase dikes lie in the southeast-central portion of the park. Diabase dikes of Mesozoic age lie within the park and are underlain by the Pacolet granite. A diabase dike lies along the eastern edge of the park.

3.1.3.1.3 The easternmost portion of the park is underlain by granite of Devonian age associated with the Pacolet Mills pluton. The granite is reported as metacrystic, biotite-rich, and granodioritic in composition.

3.1.3.1.4 The Inner Piedmont Belt and the Kings Mountain Belt are separated by the Kings Mountain Shear Zone. These Late Paleozoic age rocks are assigned to the Battleground Formation. The Battleground Formation includes low- to medium-grade metamorphic, volcanic and sedimentary rocks. It includes manganiferous mica schist with concordant layers of gondite, and trends northeast to southwest across the east-central portion of the park.

3.1.3.2 Soils

Native soils in the study area are saprolitic. Saprolite is formed from rock that has been subjected to chemical weathering. Overlying layers of weathered residual bedrock known as saprolite (red clay) range from a few feet thick to more than 100 feet (ft) thick. Median thickness is 50 to 60 ft. Saprolite depth varies from 20 to 400 feet below land surface (ft-bls).

3.1.3.2.1 A soil survey conducted in 1968 by the Soil Conservation Service (Croft State Park Management Plan) shows 53 different soil types in the park. Most of the soils are eroded, and land is gullied as a result of previous land uses. The soil survey listed 19 different areas that feature gullies; some feature one or two large gullies, while others feature an expanse of several acres with a series of small gullies.

3.1.3.2.2 Much of the erosion took place when cotton farming was an active enterprise. More occurred when portions of the area were used for military training as part of Camp Croft. Encroaching forest slowed erosion in the late 1940s, stabilizing most of the gullies. Colonization by shortleaf pines also improved soil moisture retention and added organic material to the soil.

3.1.3.2.3 Most of the severely eroded soil lies in the former cantonment area in the northwestern portion of former Camp Croft. Cataula clay loam with a 2- to 15-percent slope and mixed alluvial land overlies the area. Congaree soil traverses the northwest area of the park and lies in the far northern portion of the former cantonment area and in the central portion of the park. The floodplain banks of Fairforest Creek also consist of Congaree soils. Eroded Madison sandy loams with a 15- to 25-percent slope comprise the remaining area.

3.1.3.2.4 The northern portion of Croft State Park is comprised of Madison sandy loams with a 15-to 25-percent slope (eroded soil). Madison clay loam with a 15- to 40-percent slope also lies in the northern portion of the park (severely eroded soil). Eroded soil types including the Cataula clay loam, with a 2- to 6-percent slope, sparsely occur in the northern portion of the park. Moderately gullied land lies in the north-central portion of the park and holds friable materials and 10- to 40-percent slopes.

3.1.3.2.5 The remaining portion of the park consists of eroded and severely eroded soils in the vicinity of Lake Johnson and Lake Craig. Moderately gullied land consisting of Congaree soils lies in the southwestern portion of the park along Fairforest Creek's floodplain.

3.1.3.3 Weather

The Spartanburg County climate is considered temperate, and rainfall is well-distributed throughout the year. The prevailing winds are from the southwest, but blow from the northeast in late summer and early fall. Average wind velocity is about 8 miles per hour. The average annual relative humidity is approximately 70 percent. Rainfall ranges from 1/10-inch (approximately 76 days per year) to 1 inch (approximately 14 days per year). The highest yearly rainfall recorded is 73.93 inches in 1929. Warm weather generally lasts from May into September, with few breaks in the heat during midsummer. Most summers have one or more days when the temperature exceeds 100 degrees Fahrenheit. Winters are mild and relatively short, with approximately 60 days at freezing temperatures or below.

3.1.3.4 Water Resources

Two major surface water features, Lake Johnson and the Lake Craig, lie in Croft State Park and were formed by the construction of a dam in 1951. Lake Craig, the larger lake, covers approximately 150 acres and lies in the south-central portion of the park. Lake Johnson covers approximately 75 acres and lies just north of Lake Craig. Fairforest Creek runs along the southern boundary of the park. Drinking water is not believed to be obtained from Lake Johnson or Lake Craig. Farmers in the former Camp Croft area are believed to have water wells used to irrigate crops and livestock. A well survey would identify potential water sources in the area.

3.1.3.5 Physiography and Surface Water Drainage

Croft State Park elevations range from 210 to 225 ft national geodetic vertical datum (NGVD) in the northwestern portion of the park in the former cantonment area. A gradual change in topographic relief occurs in the remaining portion of the former Camp Croft, with elevations ranging from 180 to 255 ft NGVD. Surface water drainage is primarily from the topographic high to lower elevations into the surface water features. Surface water features identified at former Camp Croft include Fairforest Creek, Kelsey Creek, Thomson Creek, Lake Craig, and Lake Johnson.

3.1.3.6 Groundwater

The saprolite unit within Croft State Park contains a heterogeneous mixture of sand, silt, and clay with an approximate hydraulic conductivity of 10^{-4} to 10^{-7} cm/sec. The Hornblende Gneiss Bedrock beneath the saprolite has an estimated permeability greater than 10^{-3} cm/sec. The saprolite and bedrock units are considered to be interconnected and make up the aquifer in this region.

3.1.3.6.1 Groundwater depth in the southwest section of Croft State Park (near the county landfill) is 20 to 30 ft-bgs. The saprolite in this area has a potential yield of 72,000 gallons per day, versus 201,600 gallons per day for the bedrock unit. No groundwater data was made available for other areas of the park.

3.1.4 Records Review

In 1994, the USACE, Rock Island District, conducted a site inspection (SI) and archives search of the former CCATF. The final report, dated April 1994, outlined the nature and degree of OEW/UXO contamination to be found at the former CCATF. This report listed the ordnance that may be found at or below the surface. This report also stated that the gas chamber and gas obstacle course no longer exist, and that no historical evidence was found to document or confirm the presence of chemical ordnance since site closure. The report did state, however, that based on the nature of the former CCATF training mission, the potential for chemical ordnance or chemical contamination of the soil does exist. It is believed that chemical training during that period would have involved the use of tear agents as training chemicals.

3.2 Previous Investigations

3.2.1 1984 Site Survey of Former CCATF

In 1984, the Charleston District conducted a site survey of the former CCATF. This study concluded that the "potential for unexploded and dangerous bombs, shells, rockets, mines and charges either upon or below the surface" existed at the former CCATF (USACE, 1994). The report recommended that a follow-up investigation be performed at the former CCATF.

3.2.2 1990 Site Screening Investigation

In 1990, a report by the South Carolina Bureau of Solid and Hazardous Waste Management, Department of Health and Environmental Control, documented a site screening of a domestic landfill with groundwater quality analyses of surrounding monitor wells located near the former CCATF (USACE, 1994). The landfill is reported as being used for domestic waste and was first used in 1971. No records were available to indicate any use of this landfill by the U.S. Department of Defense (DOD) or the existence of any previous U.S. Army landfill at this site.

3.2.3 1991 Preliminary Assessment

In 1991, USACE, Charleston District, conducted a Preliminary Assessment Study (PA) of this site (USACE, 1994). The study was conducted in response to the 1984 site survey recommendations for additional investigation on the former CCATF. The PA determined that the site was eligible for further investigation under the DERP for FUDS. The study also determined several site locations where drums were placed inside wells during the military closure procedures conducted at the site. The report generated by this assessment did not indicate the presence of soil or groundwater contamination due to medical waste, ordnance, or chemical weapons.

3.2.4 1994 Environmental Assessment for the EE/CA

In 1994, the Charleston District performed an Environmental Assessment (EA) of the former CCATF for the EE/CA. The purpose of the EA was to evaluate water quality, measure the presence of hazardous and toxic waste, identify threatened or endangered species, and identify cultural resources present on the former CCATF. In addition, the EA investigated the probable impact of the EE/CA for land disruption, noise, water and air quality, flora, wildlife, fishery, threatened or endangered species, and cultural resources on the former CCATF. The EA concluded that the EE/CA did not constitute a major federal action significantly affecting the quality of human health or the environment. The EA is included as Appendix B.

3.3 EE/CA Field Investigation

3.3.1 Selection of Sampling Sites

The WP (ESE, 1994) specified that eighty 100-ft by 200-ft sites (grids) would be investigated. Sixty of these grids were identified on a U.S. Geological Survey (USGS) map, included in the WP. The remaining 20 grids were to be reserved for later selection in the field to expand investigation coverage in confirmed (during this investigation) or suspected impact areas not previously identified. Figure 3-2 is the sampling grid location map presented in the WP, revised to include additional grids added in the field during the investigation. The rationale used for selection of the grid locations (see WP, Section 3.3) is summarized below.

3.3.1.1 The archive search report (ASR) identified four areas at the former CCATF with either confirmed or potential OEW/UXO presence (USACE, 1994). These areas include the Training Range Impact Area (TRIA) (confirmed), the Gas Chambers and Gas Obstacle Course Area (potential), the Cantonment Area (potential), and the Grenade Court (potential), and are shown in Figure 2-1 of the WP. In addition, there were two reported OEW findings outside these areas. Based on the data presented in the ASR and the May 18, 1994, through May 20, 1994, site visit conducted as part of this delivery order, ESE and EODT, in consultation with USACE, selected 57 representative sampling locations within the TRIA and three locations outside the impact area.

3.3.1.2 The remaining 20 grids were reserved for selection during the field investigation to expand investigation in areas where perimeter grids were determined to contain significant anomalies, and to investigate new areas that may be discovered through new sources.

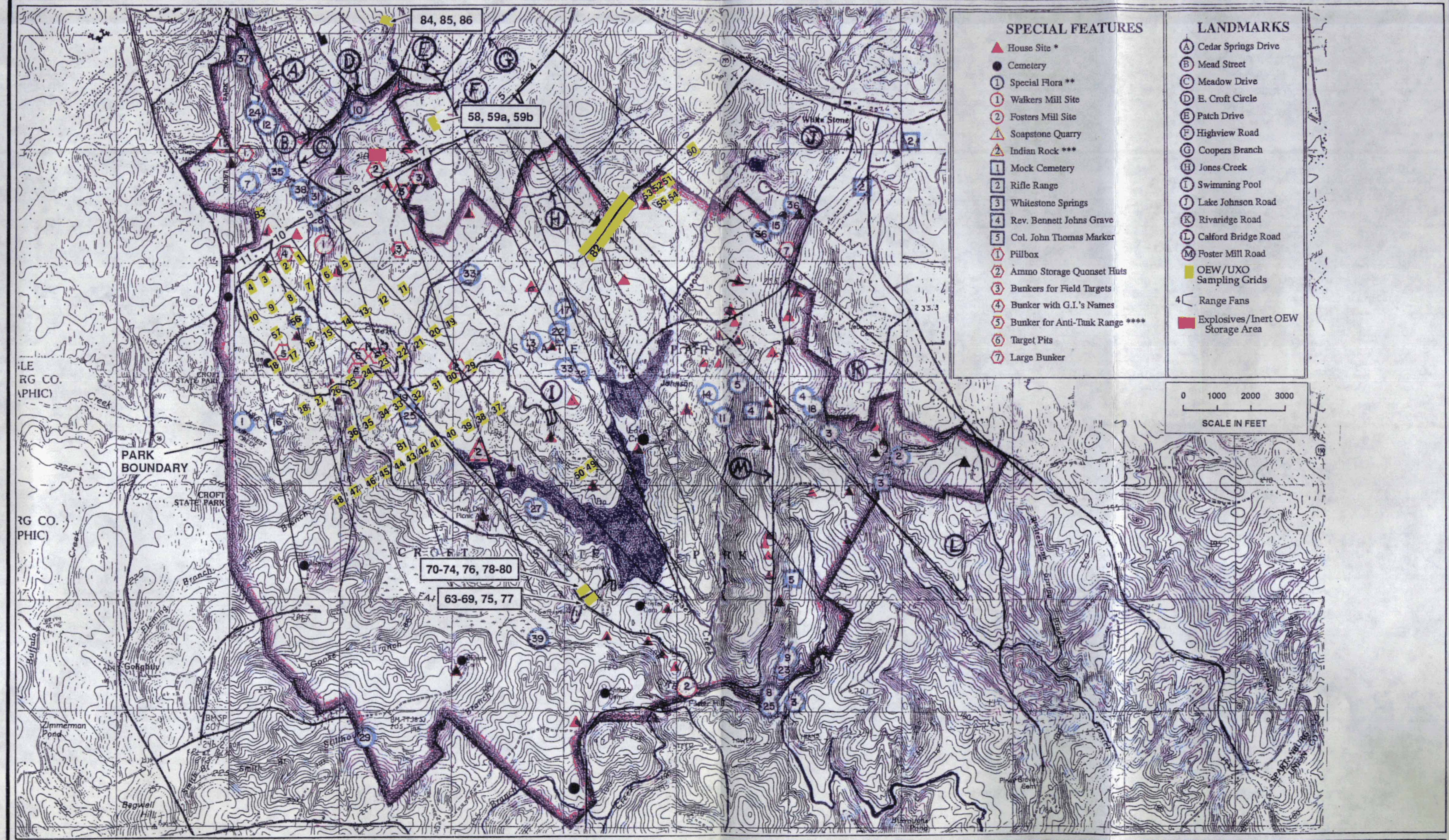

Figure 3-2
CROFT STATE PARK AND NEAR VICINITY
SAMPLING GRID LOCATIONS

SOURCES: SOUTH CAROLINA DEPARTMENT OF PARKS, RECREATION AND TOURISM, 1989; ESE.

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3.3.1.3 The method used to locate the TRIA grids incorporated the following information:

1. The names and locations of the individual infantry training ranges as identified in the ASR;
2. The types of munitions that were likely used at each training range as identified in the ASR;
3. The probable downrange distances from the firing line where OEW/UXO was likely to be present for each class of munitions, at each training range, as identified in the ASR and input from EODT; and
4. The location and type of munitions that have been found at the former CCATF, as identified in the ASR.

3.3.1.4 Table 3-1 provides a description of the training ranges and the types of munitions that were initially believed to have been used. The table also provides an estimate of the maximum and most probable projectile distances for the different munitions. The most probable distance from the firing range was selected to define the most likely areas where OEW was believed to be located. Table 3-2 provides a description of the specific types of munitions that were either confirmed or suspected to have been used at the former CCATF. It should be noted that findings during the EE/CA sampling confirmed that other munitions, including 37mm and 57mm rounds, 4.2-inch mortars, and 105mm Howitzer rounds, were used.

3.3.1.5 Figure 3-2 shows the sampling grids where OEW/UXO was believed to be present. These grids represented the proposed limits of the geophysical investigation and were based on the areas that were evaluated as most likely to contain OEW. However, since detailed information regarding the actual munitions that were used at the TRIA was not available, ESE based the locations on the following criteria:

1. The grid selections considered the likely degree of injury and risks associated with specific munitions. For example, the risk of injury to non-trained personnel due to exposure to a mortar shell or incendiary shell is greater than the risk of injury due to exposure to .22-, .30-, or .45-cal ammunition. Therefore, the proposed grids were selected at locations where the most dangerous OEW/UXO was believed to be present. Training Ranges 1 through 3 and 5 through 8 (shown on Figure 3-2) were believed to be former light and small arms training ranges, and therefore were not included as sampling grids.
2. The proposed locations for geophysical investigations were believed to encompass areas within the training range "fans" where OEW/UXO was likely to be present. However, ESE considered the placement of these grids as somewhat arbitrary. If subsurface

Table 3-1. Firing Ranges at the Former CCATF

No.	Description of Firing Range	Estimated Munitions Used	Estimated Maximum Range (yds)	Probable Range (yds)
1.	Rifle - Auto Rifle - 200- 300 yds Small Arms Ammunition (SAA)	.30 and .45 cal	2,500 and 5,500	1,000 to 3,000
2.	Rifle - Auto Rifle - 200 - 300 - 500 yds (SAA)	.30 and .45 cal	2,500 and 5,500	1,000 to 3,000
3.	Landscape Target - 600 ft (9 sets) (SAA)	.30 and .50 cal	2,500 and 7,200	1,000 to 4,000
4.	AA Miniature Range - 1,080 ft (3 sets) (SAA)	.50 cal, 20 mm	2,500 and 5,000	1,000 to 3,000
5.	Pistol - 660 ft (120 targets) (SAA)	.22, .30, and .45 cal	2,500, 3,500, and 1,600	1,000 to 2,500
6.	1,000-Inch Machine Gun Range - 1,400 ft (SAA)	.30 and .50 cal	2,500 and 7,200	1,500 to 2,500
7.	Rifle - Auto Rifle - Field Targets (SAA)	.22 and .30 cal	2,500 and 3,500	1,000 to 2,000
8.	Machine Gun - Field Targets (SAA)	.30 and .50 cal	2,500 and 7,200	1,000 to 3,000
9.	60- and 81-mm Mortar (Mortars)	see Table 4-2	4,500	500 to 3,000
10.	1,000-Inch AT (Grenades, Rockets)	Rifle grenades	500 to 3,500	200 to 1,500
11.	Moving Target AT (Grenades, Rockets)	Rifle grenades	500 to 3,500	200 to 1,500

Source: USACE, 1994.

Table 3-2. Types of Munitions (Confirmed and Potential) Used at the Former CCATF

SAA	Grenades	Mortars	Rockets
.22-Cal Long Rifle Ball Cartridge **.30-Cal** Subcaliber Cartridge, M1925 Carbine Ball Cartridge, M1 Ball Cartridge, M2 Armor Piercing Bullet, M2 M43A1 Tracer Bullet, M1 Tracer Bullet, T10 Incendiary Bullet, M1 High Pressure Test Cartridge, M18 High Pressure Test Cartridge, M1 Carbine Tracer Bullet, M16 Grenade Cartridge, M6 Rifle Grenade Cartridge, M3 **.45-Cal** Ball Cartridge, M1911 Tracer Bullet, T30 High Pressure Test Cartridge, M1 **.50-Cal** Ball Cartridge, M2 Armor Piercing Bullet, M2 Tracer Bullet, M10 Tracer Bullet, M10 Tracer Bullet, M17 Tracer Bullet, M21 Incendiary Bullet, M1 Incendiary Bullet, M23 High Pressure Test Cartridge, M1 **22-mm** HE-I Cartridge, MK1 Ball Cartridge, AP-T, M75	Fragmentation, MK2 Practice, M21 Offensive, MX3A2 WP Smoke Rifle, M19 Colored Smoke Rifle, M22 Fragmentation Projection Adaptor, M1 Chemical Projection Adapter, M2	HE Shell, M49A2 Practice Shell, M50A2 WP Smoke Shell, M302 Illuminating Shell, M83A1 Training Shell, M69 Training Shell, M68 HE Practice Shell, M43A1 HE Shell, M56 WP Smoke Shell, M57 HE Shell, M43 HE Practice Shell, M44 HE Practice Shell, M45 Chemical Shell, M57	AT 2.35 Inch AT 2.35 Inch, M6 Practice AT 2.36, M7

Source: USACE, 1994.

anomalies were detected at the edge of a specific grid, ESE may justify an additional grid in the direction of the detected anomaly to ensure that the limit of the anomalies has been reached.

3. The individual grids were positioned in a regular, repeating pattern to facilitate the possibility of detecting OEW and obtaining a representative sampling of the areas to be evaluated. However, if field conditions warranted a modification of the locations (e.g., topography, evidence of aboveground OEW), ESE notified CEHND and conducted the geophysical investigation in accordance with the direction from CEHND.

3.3.1.6 Following the methodology and criteria described previously, the grids were selected within the fans for Ranges 4, 9, 10, and 11 (see Figure 3-2).

3.3.2 TRIA Sites

3.3.2.1 Grids 1 through 48, 56, and 57

These grids were placed within the fans of Ranges 9 through 11. These ranges were used for 60mm and 81mm mortars and anti-tank rockets with probable ranges up to 3,000 yards.

3.3.2.2 Grids 51 through 55

These grids were placed within the range fan for Range 4, the AA Miniature Range. Although the use of this range was reported to be small arms, the confirmed findings of a 60mm illumination mortar round and mortar fins approximately 4,000 to 4,500 ft downrange suggest the possible use of Range 4 as a mortar range, making it an area warranting investigation.

3.3.2.3 Grids 49 and 50

These grids were placed in the area of the Croft State Park swimming pool, and were established based on confirmed OEW findings in the area (USACE, 1994).

3.3.3 Non-TRIA Sites

Three grids outside the TRIA were placed. Grids 58, 59, and 60 were located within the former CCATF boundary but outside the Croft State Park Boundary, and required obtaining rights-of-entry prior to site investigation. Rights-of-entry were obtained by USACE, Charleston District for Grids 58 and 59. However, a right-of-entry was not obtained for Grid 60.

3.3.3.1 Grids 58 and 59

Grids 58 and 59 were placed to investigate an area of a reported grenade finding. Residents in the area relayed an incident of a grenade being found "near where the sewer line crosses Highview Road just to the south of the former CCATF cantonment area" (USACE, 1994). Because this area is close to a residential area, it was selected for investigation.

3.3.3.2 Grid 60

Grid 60 was placed to investigate an area where a confirmed 60mm illumination mortar round was found (USACE, 1994).

3.3.4 Other Sites

Grids 61 through 88 were selected and located in the field. Grids 61 and 62 are located at Red Hill, an area for which a time-critical removal action (TCRA) was in process as a result of confirmed findings of 105mm howitzer rounds. These two grids are within the former CCATF boundary but outside Croft State Park.

3.3.4.1 Grids 63 through 80 were placed in the vicinity of the park office. This area became suspect (and later was confirmed as an impact area) when a park visitor discovered a 60mm mortar round protruding from the ground.

3.3.4.2 Grid 81 is an irregular-shaped area located just north of Grid 44 and west of Grid 43. It was so placed following confirmed findings of two 60mm HE mortar rounds in Grid 43.

3.3.4.3 Grid 82 was placed along Henningston Road, just to the west of Grids 51 through 55. This grid consists of single magnetometer sweep lanes (5 ft wide) that extend perpendicularly from Henningston Road to the north and south sides. The lanes are spaced evenly, approximately 50 ft apart. This grid was selected as an attempt to confirm the suspected location of a mortar impact area. A small portion of this grid extends north across Henningston Road onto private property.

3.3.4.4 Grid 83 was investigated as a possible practice "minefield" area. Grids 84 through 86 were selected and investigated due to reported findings of grenades. Grids 87 and 88 were additional grids investigated at Red Hill at the direction of CEHND.

3.3.5 Sites Not Investigated

Of the 60 grids identified in the WP, several were not investigated. Because no OEW was discovered in adjacent grids, and with concurrence from CEHND, Grids 1 through 4 and 48 were not investigated. Based on the findings in Grids 51, 53, and 55 (confirming that these grids are located in an impact area), Grids 52 and 54 were eliminated from further investigation at the direction of CEHND. Grid 60 is located on private property and required a right-of-entry, which was not obtained.

3.3.6 Investigative Methods and Procedures

The field investigation activities for the EE/CA project included conventional OEW/UXO geophysical sensor survey methods, OEW/UXO excavation and removal as necessary, and OEW/UXO removal/disposal procedures. No chemical warfare materiel (CWM) was discovered during these field investigation activities. Site maps were prepared depicting the information and data collected at each sampling site. These methods and procedures are described in this section.

3.3.6.1 Field Sampling Methodology

All EE/CA field investigations were performed at the direction and in accordance with methods approved by CEHND. In accordance with the approved WP (ESE, 1994), sampling grids were brush-cleared and investigated using magnetometers to detect suspect OEW/UXO. The WP did not specify the method for selection of the suspect OEW/UXO hits (anomalies) to excavate and identify. Several methods were employed. The initial method (Methodology A) was approved on October 27, 1994, by the CEHND Safety Office and CEHND technical project manager. Under this method, each sampling site was cleared of brush and surveyed with magnetometers, and all anomalies were flagged. A preselected number of anomalies were excavated, depending on the total number of anomalies recorded within the sampling grid. Methodology A is described in Section 3.3.6.2.

3.3.6.1.1 A revised approach (Methodology B) was implemented on November 9, 1994. This method was based on input from the CEHND field safety representative and approved by the CEHND Safety Office and the CEHND technical project manager. The revised approach was based on performing limited magnetometer surveys within each sampling grid combined with a 100-percent sampling of anomalies at less than 2 feet below ground surface (ft-bgs). Methodology B is described in Section 3.3.6.3.

3.3.6.1.2 In addition to these two approaches, several sites were investigated with varying methods at the direction of CEHND. These other methodologies are described in Section 3.3.6.4.

3.3.6.2 Methodology A

Under Methodology A, the entire area of each sampling grid (100 ft by 200 ft) was surveyed with magnetometers. All anomalies were recorded and flagged. A preselected number of anomalies were then investigated (excavated). The number of anomalies excavated was predetermined in accordance with the schedule presented below. Grid maps showing the location of anomalies and logs recording the description and depth of investigated anomalies were prepared for each site. The number of anomalies selected for investigation is outlined in the following:

Number of Anomalies Recorded in Grid	Number of Anomalies to Excavate
1-100	ALL
100-1000	100 + 10 percent of excess over 100
1000 (or more)	200

3.3.6.2.1 At sites for which less than 100 percent of the anomalies were to be investigated (i.e., sites where more than 100 anomalies were recorded) and there was no reason to suspect one portion of the grid to be more likely to contain OEW/UXO than other portions, the selection of anomalies to investigate was evenly distributed throughout the grid. Judgement was made based on what was found or suspected. If it became obvious or apparent that OEW/UXO was concentrated in a particular portion of a site, the intrusive activity was focused on that portion of the site. Methodology A was implemented at sampling Grids 5, 18, 51, 53, and 55.

3.3.6.3 Methodology B

Under Methodology B, the entire sampling grid (100 ft by 200 ft) was marked (staked). Seven lanes, each corresponding in width to one magnetometer sweep (5 ft) and corresponding in length to the width of the grid (100 ft), were sampled. The seven lanes were spaced at rows 1, 7, 13, 20, 27, 34, and 40. Brush clearing was limited to these seven rows. Each row was then surveyed with a magnetometer, and anomalies were excavated as they were detected. All anomalies were excavated.

3.3.6.3.1 The rationale for the adoption of Methodology B was to reduce field investigation time. Methodology A required that brush clearance and magnetometer surveying be conducted across the entire grid. Methodology B, however, limited brush clearance and magnetometer surveying to seven lanes, or approximately 18 percent of the grid area. Methodology B was implemented at sampling Grids 6 through 17, 19 through 47, 49, 50, 56 through 59, and 63 through 73.

3.3.6.4 Other Methodologies

Variations of Methodologies A and B were tailored to individual EE/CA sampling grid considerations. They included sample grids of various shapes other than the typical 100-ft by 200-ft rectangle and employed random and partial sampling as well as 100-percent sampling of anomalies. These other methods were employed at sampling Grids 74 through 88.

3.3.6.5 Brush Clearance

Most EE/CA sampling sites were heavily vegetated and required some degree of clearing prior to conducting geophysical surveys. Brush and trees (less than 3 inches in diameter) were cut to permit passage of the magnetometer and eliminate interferences with OEW/UXO sampling operations. Dr. Robert Powell, a local botanist familiar with the species found in Croft State Park, was onsite to assist in the identification of protected or sensitive species prior to vegetation clearance.

3.3.6.6 Geophysical Surveys

Grid corners were located by EODT personnel and marked with wooded stakes labeled A, B, C, and D. The grid was then subdivided into 40 lanes, each 5 ft wide, along the 200-ft grid line axis. Under Methodology A, the equipment operator walked the sampling lanes sweeping a magnetometer from side to side at a constant height above ground level. Red pin flags were placed at each anomaly detected.

3.3.6.6.1 Under Methodology B, the equipment operator surveyed only seven of the 40 lanes, and anomalies were investigated as detected. The number and location of anomalies investigated were recorded by the EODT team leader in tabular format on survey grid maps. Appendix C contains the survey grid maps and tables for each grid.

3.3.6.6.2 Each magnetometer field unit was calibrated twice daily, prior to and after collecting data, to ensure accuracy and consistency in data collection. Calibration consisted of operational and functional tests of the magnetometer. The Schonstedt GA-72 CV magnetic locator was the magnetometer model used at each grid. A complete explanation of the operation of the instrument is included in Appendix D.

3.3.6.7 OEW/UXO Identification

Any observed or suspected surface or subsurface OEW/UXO encountered during the sampling activities were recorded on the grid survey maps. Only UXO specialists were allowed to handle OEW/UXO items in accordance with the SSHP and the demolition/disposal standard operating procedure (SOP) (WP, Appendices D and E). The team leader evaluated all encountered and suspected UXO and determined if the work planned for the area could safely continue or what actions must occur prior to commencing OEW/UXO handling and disposal efforts. Such recommendations were made immediately to the senior UXO supervisor, who contacted the onsite ESE site manager and CEHND safety representative to determine the appropriate course of action.

3.3.6.8 OEW/UXO Access and Excavation

Onsite personnel were allowed to access a sampling grid for excavation of OEW/UXO items *only* after an exclusion zone was established and all preparatory actions required in the Demolition/ Disposal SOP were completed. Rights-of-entry agreements from property owners were obtained for those areas on private property designated as sampling grids. All access activities onto subsurface OEW/UXO targets to perform identification and to determine the need for detonation were performed by the UXO specialist under the direct supervision of the senior UXO supervisor. *Only* UXO-qualified personnel were allowed to perform UXO access procedures.

3.3.6.8.1 Manual or equipment methods (e.g., hand tools) as specified in the demolition/disposal SOP were used to perform all excavation activities. Soil removed from the disposal area was stockpiled in the immediate area for later backfilling of excavations.

3.3.6.9 Quality Assurance (QA)/Quality Control (QC)

A QA/QC program was designed to ensure that consistent procedures were used to operate and calibrate survey equipment, collect data, and record conditions under which these data were collected. The QA/QC program is described in detail in Section 4.0 of the WP.

3.3.6.9.1 A project systems QA audit was performed by the project QA officer on October 12, 1994, at the start of the project, to ensure compliance with the project QA plan and field activity procedures and to ensure the quality of all data outputs from the EODT and ESE project team. Day-to-day field QC management was performed by the ESE site manager to ensure QC procedures were followed in the project performance. Daily reports were also prepared by the ESE site manager summarizing the daily field activities, communications, and safety issues. A typical daily report is included as Appendix E. A complete set of the daily reports are contained in the Monthly Progress Reports dated November 9, 1994, through February 9, 1995 (ESE).

3.3.6.10 OEW/UXO Accounting

A detailed accounting of all OEW/UXO materials, including shrapnel, non-metallic debris, and EOD explosives expended in disposal of UXO items, was completed in accordance with WP requirements. The ordnance accountability log is included in Appendix F.

3.3.6.11 OEW/UXO Disposal

All UXO items were detonated in place with the exception of a practice grenade that was found on private property on sampling Grid 84 and a 60mm HE mortar round that was "dug up" by a park visitor and handed over to the park rangers. A more detailed discussion of these actions is included in Section 3.3.7, Field Investigations and Findings. No UXO items were transported offsite for disposal.

3.3.6.11.1 Disposal of Metal Debris

Inert OEW items, including all OEW metallic debris, shrapnel, and fragments, were collected, transported to the field operations center, and stored in a former ammunitions storage bunker. The bunker was secured with double locks and other security measures to meet requirements and to prevent access by the public. Metallic debris were disposed of through a local civilian scrap dealer. A copy of the OEW Certificate of Disposal is included in Appendix F.

3.3.6.12 Safety Procedures

All field activities were performed in accordance with the SSHP, located in Appendix D of the WP (ESE, 1994). *USACE Safety Concepts and Basic Considerations for UXO* was included in Appendix C to the WP (ESE, 1994b).

3.3.6.12.1 Safety checks were performed daily. The site safety officer inspected one or more of the field teams, checking supplies, equipment, signage, and proper use of personal protective equipment (PPE). Safety checks included weekly vehicle maintenance and safety inspections. Problems identified by the site safety officer were immediately corrected.

3.3.6.12.2 The site safety officer conducted daily site safety briefs. Items discussed included, but were not limited to: UXO and OEW, chemical safety, first aid/CPR, communications, physical hazards, biological hazards, vehicle safety, PPE, visitors to the site, and site artifacts. Each week, one specific item was discussed in more detail.

3.3.7 Field Investigations and Findings

This section discusses the investigations and findings by groups of sampling grids or "ordnance operable units" (OOUs). The WP (ESE, 1994) did not specifically group grids, other than to characterize them as TRIA and non-TRIA sites. Subsequently grids were grouped into OOUs primarily based on land use, proximity to adjacent grids, and OEW/UXO types.

3.3.7.0.1 The OOUs were developed to facilitate the development and evaluation of removal alternatives for the OEW/UXO-contaminated areas. For the purpose of this study, OOUs are defined as contiguous areas that have homogeneity of land use and UXO type. Land use varies generally from recreational within the park boundary to residential, recreational, agricultural, and industrial outside the park. UXO types include 60mm and 81mm mortars, 105mm projectiles, and practice hand grenades.

3.3.7.0.2 Six OOUs (1A, 1B, 2, 4, 7, and 8) were defined for Croft State Park, and three OOUs (3, 5, and 6) were defined for areas investigated outside Croft State Park. Table 3-3 lists these OOUs, the type of UXO target area (e.g., mortar impact area, grenade field, 105 mm), and the current or anticipated primary land use applicable to each. Figure 3-3 shows the location of each OOU within former Camp Croft.

3.3.7.0.3 Figure 3-3 also indicates "potential OEW sites". Subsequent to the investigation and under a separate authorization, CEHND directed ESE to obtain and analyze historical aerial photographs of former Camp Croft to identify potential OEW areas. Photographs from 1944 were computer scanned and visually reviewed to identify craters and other land disturbances or features that may indicate a former target or impact area.

3.3.7.0.4 There is general agreement between the location of these areas and the OOU areas. However, additional potential OEW areas exist outside the OOUs. These areas are not addressed in this EE/CA but will be further evaluated and CEHND will determine what additional investigations or actions are appropriate as part of a continuing EE/CA process at former Camp Croft.

3.3.7.0.5 The following discussions summarize the investigations within each OOU and identify the types of OEW/UXO discovered. Appendix C contains survey maps prepared for each sampling grid. Each map is accompanied by a table that describes the anomalies investigated,

Table 3-3. Ordnance Operable Units

Ordnance Operable Unit/Grids	UXO Type	Current or Anticipated Future Land Use Activities Croft State Park			
		Hiking	Horseback Riding	Camping	Construction
OOU1A/1-41,46-48, 56, 57	----	✓	✓	--	--
OOU1B/42-45, 81	60/81 mm mortar	✓	✓	--	--
OOU2/51-55, 82	60/81 mm mortar	✓	✓	✓	--
OOU4/49-50	----	✓	✓	--	--
OOU7/63-80	60/81 mm mortar	✓	✓	✓	✓
OOU8/83	----	✓	✓	--	--
		Private Property			
		Hunting	Residential	Tree Farming	Construction
OOU3/84-86	Practice Grenades	--	✓	--	--
OOU5/58-59	Practice Grenades	--	✓	--	--
OOU6/61,62,87,88	105 mm Projectiles	✓	--	✓	✓

Source: ESE.

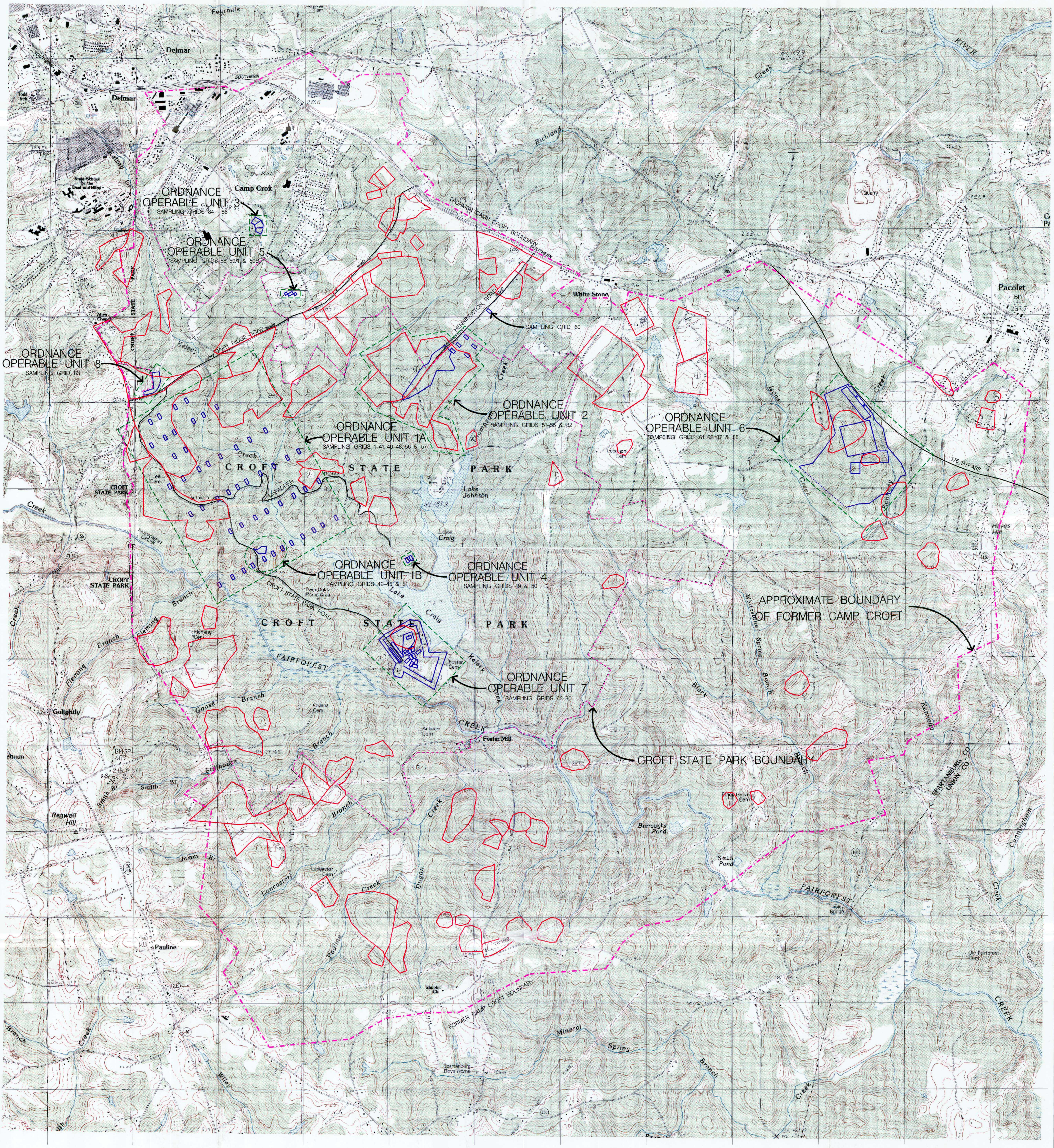

Figure 3–3
EE /CA INVESTIGATION,
ORDNANCE OPERABLE UNITS 1 THROUGH 8

SOURCE: ESE 1995; USGS 1983

- APPROXIMATE BOUNDARY OF FORMER CAMP CROFT
- CROFT STATE PARK BOUNDARY
- ORDNANCE OPERABLE UNITS
- EE /CA SAMPLING GRID
- POTENTIAL OEW SITES

0 500 1000 METERS
0 1500 3000 FEET
N
SCALE: 1" = 1500 FT

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including number of pieces, type of fuze, type of fill, depth, and the state of degradation. Daily field reports completed by the ESE site manager during the EE/CA field investigation period are on file at the ESE office in Gainesville, Florida, and at the CEHND office in Huntsville, Alabama.

3.3.7.1 Ordnance Operable Unit 1 (A & B)

Ordnance Operable Unit 1 (OOU1) consists of two subunits--OOU1A and OOU1B. OOU1A includes sampling Grids 1 through 41, 46 through 48, 56, and 57. It is located within Croft State Park and extends southeasterly from Dairy Ridge Road approximately 1.6 miles into the park. OOU1A covers approximately 1,020 acres and is almost exclusively wooded terrain with few horse or hiking trails. There are no authorized picnic or camping grounds within OOU1A.

3.3.7.1.1 OOU1B includes sampling Grids 42 through 45 and 81. It covers approximately 65 acres and is located within and at the southern end of OOU1A. The Lake Johnson/Fairforest Creek Connector Trail and Croft State Park Road both pass through OOU1B. There are no authorized picnic or camping areas within OOU1B.

3.3.7.1.2 The 51 sampling grids within OOU1 were investigated between November 7, 1994 and January 5, 1995. Figure 3-4 shows the locations of the grids. Table 3-4 summarizes the configuration, sampling methodology, anomalies recorded, anomalies investigated, and OEW/UXO findings for OOU1A and OOU1B, respectively.

3.3.7.1.3 Findings in this OOU were limited primarily to small arms and 37mm and 57mm fired rounds discovered in OOU1A, until two 60mm HE mortar rounds were discovered in OOU1B sampling Grid 43. Additional mortar parts found in OOU1B within sampling Grids 42, 44, and 45 suggested proximity to a former mortar impact area. Working out from Grid 43, magnetometer surveys were conducted in an attempt to locate the suspected impact area. This search led the team to a small hilltop west of Grid 43 and north of Grid 44, where numerous anomalies were detected. This grid was established as sampling Grid 81. Investigation of sampling Grid 81 confirmed it as a former mortar impact area following the discovery of ten 60mm and one 81mm mortar rounds. All recovered UXO were detonated in place by UXO-qualified personnel.

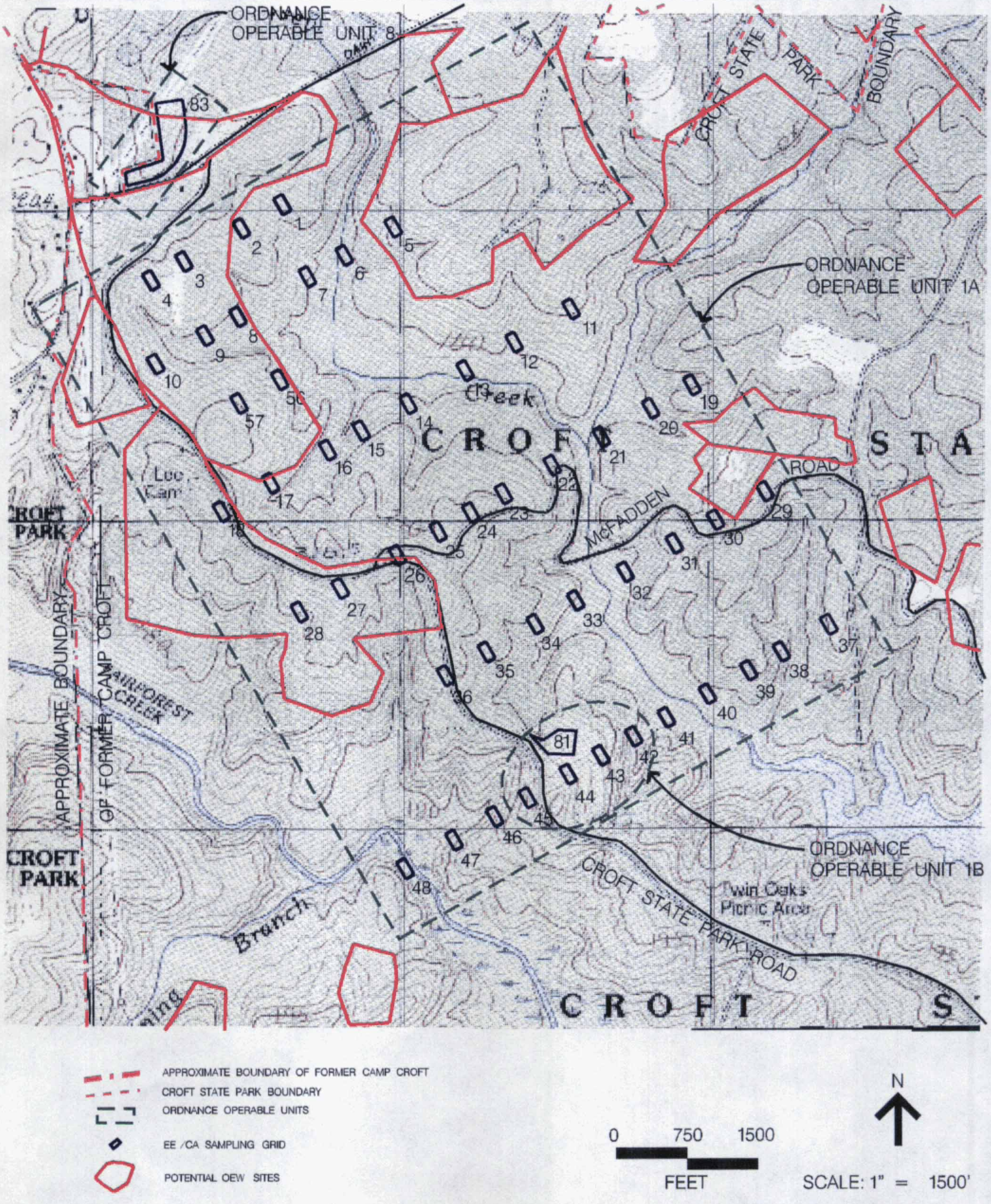

Figure 3–4
ORDNANCE OPERABLE UNITS 1A, 1B & 8

SOURCE: ESE 1995; USGS 1983

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Table 3-4. OEW/UXO Findings at Former Camp Croft (Page 1 of 5)

Grid	Configuration (ft)	Sampling Method	Anomalies Recorded/ Investigated	OEW/UXO Findings (quantity in parentheses)
Ordnance Operable Unit 1A				
1	100 x 200	A	none[1]	—
2	100 x 200	A	none[1]	—
3	100 x 200	A	none[1]	—
4	100 x 200	A	none[1]	—
5	100 x 200	A	207/110	small arms ammunition, .30-cal (126)
6	100 x 200	B	20/20	none
7	100 x 200	B	5/5	none
8	100 x 200	B	7/7	small arms ammunition, .50-cal (1)
9	100 x 200	B	19/19	small arms ammunition, .50-cal (2)
10	100 x 200	B	43/43	small arms ammunition (.50-cal)/fragments (2)
11	100 x 200	B	36/36	small arms ammunition, .30- and .50-cal (31)
12	100 x 200	B	46/46	37mm round (1), small arms ammunition, .30- and .50-cal (80)
13	100 x 200	B	40/40	small arms ammunition, .30-cal (47) and .50-cal (1)
14	100 x 200	B	11/11	57mm round (1), small arms ammunition, .30- and .50-cal (2)
15	100 x 200	B	39/39	small arms ammunition, .30- and .50-cal (33)
16	100 x 200	B	31/31	small arms ammunition (27)
17	100 x 200	B	20/20	grenade parts (3)/37mm round (1)
18	100 x 200	A	378/127	57mm round (1)
19	100 x 200	B	28/28	small arms ammunition, .30-cal (25)
20	100 x 200	B	14/14	small arms ammunition, .30-cal (8)
21	100 x 200	B	37/37	57mm round (1), small arms ammunition, .30- and .50-cal
22	100 x 200	B	31/31	57mm round (1), small arms ammunition, .30- and .50-cal (2)
23	100 x 200	B	28/28	small arms ammunition, .30- and .50-cal (6)
24	100 x 200	B	26/26	37mm round (1), small arms ammunition, .30- and .50-cal (4)

Table 3-4. OEW/UXO Findings at Former Camp Croft (Page 2 of 5)

Grid	Configuration (ft)	Sampling Method	Anomalies Recorded/ Investigated	OEW/UXO Findings (quantity in parentheses)
Ordnance Operable Unit 1A (Continued)				
25	100 x 200	B	24/24	small arms ammunition, .30- and .50-cal (5)
26	100 x 200	B	25/25	small arms ammunition, .30- and .50-cal (6)
27	100 x 200	B	29/29	small arms ammunition, .50-cal (3)
28	100 x 200	B	24/24	small arms ammunition, .30- and .50-cal (3)
29	100 x 200	B	19/19	small arms ammunition, .30-cal (4)
30	100 x 200	B	22/22	small arms ammunition, .30-cal (16)
31	100 x 200	B	20/20	small arms ammunition, .30-cal (1)
32	100 x 200	B	14/14	small arms ammunition, .30- (4) and .50-cal (1)
33	100 x 200	B	10/10	57mm round (1), fragments, small arms ammunition, .50-cal (1)
34	100 x 200	B	11/11	57mm rounds (4), small arms ammunition, .30- and .50-cal (3)
35	100 x 200	B	14/14	37mm round (1), 57mm rounds (3), small arms ammunition, .50-cal (2)
36	100 x 200	B	10/10	37mm rounds (2), small arms ammunition, .30- (1) and .50-cal (5)
37	100 x 200	B	7/7	small arms ammunition, .30-cal (2)
38	100 x 200	B	6/6	small arms ammunition, .30-cal (3)
39	100 x 200	B	52/52	none
40	100 x 200	B	8/8	small arms ammunition, .30-cal (1)
41	100 x 200	B	43/43	small arms ammunition, .30- (5) and .50-cal (2), fragments
46	100 x 200	B	12/12	57mm round (1), small arms ammunition, .50-cal (2)
47	100 x 200	B	5/5	57mm round (1), practice grenade (1)
48	100 x 200	B	none[1]	Not investigated
56	100 x 200	B	38/38	37mm (1) and 57mm (2) rounds, small arms ammunition, .30-cal (19) and .50-cal (5)
57	100 x 200	B	51/51	37mm (2) and 57mm (2) rounds, small arms ammunition, .30-cal (7)

Table 3-4. OEW/UXO Findings at Former Camp Croft (Page 3 of 5)

Grid	Configuration (ft)	Sampling Method	Anomalies Recorded/ Investigated	OEW/UXO Findings (quantity in parentheses)
Ordnance Operable Unit 1B				
42	100 x 200	B	63/63	60mm and 81mm mortar parts (2), small arms ammunition, .30-cal (9), fragments
43	100 x 200	B	81/81	60mm mortar (2), 60mm (9) and 81mm (1) mortar parts, small arms, ammunition, .30-cal (3) and .50-cal (1)
44	100 x 200	B	90/90	60mm mortar parts (3), fragments
45	100 x 200	B	13/13	60mm mortar part (1), fragments
81	Irregular	other[2]	391/391	60mm (10) and 81mm (1) HE mortars, 60mm (44) and 81mm (22) mortar parts and fragments
Ordnance Operable Unit 2				
51	100 x 200	A	2,553/200	60mm HE mortars (4) and fragments
52	100 x 200	A	none[3]	none
53	100 x 200	A	523/142	60mm HE mortars (5) and 81mm mortar part (1)
54	100 x 200	A	none[3]	none
55	100 x 200	A	214/111	60mm HE mortar (1) and fragments
82	Linear[3]	other	589/589	60mm HE mortars (9), 81mm mortar (1), 60mm (255) and 81mm (115) mortar parts, small arms ammunition, .30-cal (2) and fragments
Ordnance Operable Unit 3				
84	Irregular	B	222/222	1 MK-2 hand grenade, practice grenades (11), grenade parts
85	Irregular	B	35/35	none
86	Irregular	B	124/124	practice grenades (4) and grenade parts (12)
Ordnance Operable Unit 4				
49	100 x 200	B	17/17	small arms ammunition, .30-cal (3)
50	100 x 200	B	18/18	none
Ordnance Operable Unit 5				
58	100 x 200	B	38/38	rifle grenade part (1)
59A	100 x 100	B	4/4	none
59B	100 x 100	B	6/6	none

Table 3-4. OEW/UXO Findings at Former Camp Croft (Page 4 of 5)

Grid	Configuration (ft)	Sampling Method	Anomalies Recorded/ Investigated	OEW/UXO Findings (quantity in parentheses)
Ordnance Operable Unit 6				
61	Linear	none[4]	372/0	none
62	Linear	none[5]	709/0	none
87	Rectangular	other[6]	218/218	105mm smoke canisters (9), 60mm (4) and 81mm (7), mortar parts, fragments
88	Irregular	other[7]	42/42	fragments
Ordnance Operable Unit 7				
63	100 x 200	B	45/45	60mm (7) and 81mm (1) mortar parts, small arms ammunition, .30-cal (2), and fragments
64	100 x 200	B	24/24	Small arms ammunition, .30-cal (1), and fragments
65	100 x 200	B	17/17	60mm mortar part (1) and fragments
66	100 x 200	B	66/66	60mm HE mortars (3), 60mm mortar parts (39), fragments
67	100 x 200	B	35/35	60mm HE mortar (1), 60mm mortar parts (8), small arms ammunition, fragments
68	100 x 200	B	23/23	Small arms ammunition, .30-cal (2), and fragments
69	100 x 200	B	117/117	60mm HE mortars (7), 60mm mortar parts (69), small arms ammunition, .30-cal (1), and fragments
70	100 x 200	B	18/18	60mm mortar part (1), grenade parts (4), small arms ammunition, .30-cal (1), and fragments
71	100 x 200	B	192/192	60mm HE mortars (6), 60mm mortar parts (146), and fragments
72	100 x 200	B	275/275	60mm HE mortars (8) and 60mm mortar parts (208)
73	100 x 200	B	204/204	60mm HE mortar (1), 81mm HE mortar (1), 60mm (12) and 81mm (120) mortar parts, small arms ammunition and fragments
74	Linear	other[8]	4/4	fragments
75	Linear	other[8]	1/1	60mm mortar part (1)
76	Linear	other[8]	41/41	60mm (5) and 81mm (9) mortar parts, grenade parts (12), small arms ammunition, .30-cal (3), fragments
77	Linear	other[8]	1/1	60mm mortar parts (2)

Table 3-4. OEW/UXO Findings at Former Camp Croft (Page 5 of 5)

Grid	Configuration (ft)	Sampling Method	Anomalies Recorded/ Investigated	OEW/UXO Findings (quantity in parentheses)
Ordnance Operable Unit 7 (Continued)				
78	Nature trail	other[8]	596/596	Grenade parts (6), small arms ammunition, .30-cal (44), fragments
79	125 x 705	other[8]	180/180	Grenade parts (23), small arms ammunition, .30-cal (44), fragments
80	100 x 705	other[8]	36/36	60mm mortar part (1) and fragments
Ordnance Operable Unit 8				
83	Irregular	other[8]	16/16	none

For a description of sampling methods see Section 3.3.6, Investigative Methods and Procedures.

Notes: [1]These grids were not investigated at the direction of CEHND. See Section 3.3.5 for explanation.
[2]For Grid 81, magnetic anomalies were investigated in a random pattern encompassing the entire grid.
[3]Grid 82 was approximately 2,400 ft long and consisted of single magnetometer sweep lanes extending perpendicularly out from the Henningston Road, and spaced approximately 50 ft apart. Approximately 10 percent of grid 82 was sampled.
[4]Grid 61 established as three parallel lanes 1,335 ft long, spaced 60 ft apart, bisected at right angles by two additional lanes spaced 100 ft apart. Lanes were 5 ft wide. No intrusive activities were performed, as directed by CEHND.
[5]Grid 62 established as three parallel lanes 1,600 ft long, spaced 120 ft apart. No intrusive activities performed as directed by CEHND.
[6]Grid 87 is 1,200 by 1,000 ft, with 5 lanes established every 100 ft along the 1,200 ft width of the grid.
[7]Grid 88 is approximately 250 ft wide by 900 ft long; established along a ravine washout.
[8]Entire sampling grid was surveyed, and all anomalies were investigated.

Source: ESE.

3.3.7.2 Ordnance Operable Unit 2

Ordnance Operable Unit 2 (OOU2) is located within Croft State Park along Henningston Road, approximately 0.7 mile from State Highway 295. OOU2 covers approximately 325 acres and is mostly wooded terrain. It was selected for investigation as a suspect mortar impact area based on a confirmed finding of a 60mm illumination mortar round. The park service does not maintain campgrounds or trails within this area. However, because the public has access to the area, hiking, horseback riding, and camping are assumed to occur in this OOU. Additionally, a small portion of the OOU located on private property just outside the park boundary is used for hunting.

3.3.7.2.1 OOU2 includes sampling Grids 51 through 55 and 82. Grids 51 through 55 were selected in the WP (ESE, 1994). Grid 82 was selected in the field following confirmed findings of UXO in Grids 51, 53, and 55.

3.3.7.2.2 Investigation of Grids 51 through 55 was performed from October 31, 1994, to November 8, 1994. UXO was found during the investigation. Within Grids 51, 53, and 55, ten 60mm mortar rounds were found. Based on these findings, the decision was made (and approved by CEHND) to cancel investigation of Grids 52 and 54, as enough data had been gathered to confirm the immediate area as a former impact zone. However, it was also suspected that this impact zone may extend deeper into the park. To test this hypothesis, Grid 82 was established. It was located along Henningston Road, extended southwest approximately 2,400 ft from Grid 53, and covered approximately 20 acres. Grid 82 was investigated from January 5, 1995, through January 11, 1995. Nine 60mm and one 81mm mortar rounds were found in Grid 82, confirming that the impact zone did extend deeper into the park. All recovered UXO were detonated in place by UXO-qualified personnel.

3.3.7.2.3 Figure 3-5 shows the locations of the grids. Table 3-4 summarizes the configuration, sampling methodology, anomalies recorded, anomalies investigated, and OEW/UXO findings for each grid within OOU2.

3.3.7.3 Ordnance Operable Unit 3

Ordnance Operable Unit 3 (OOU3) is private residential property located immediately north of Croft State Park and within the former Camp Croft cantonment area. OOU3 was established in the field following reports from the property owner that grenades had been found on the property in the past.

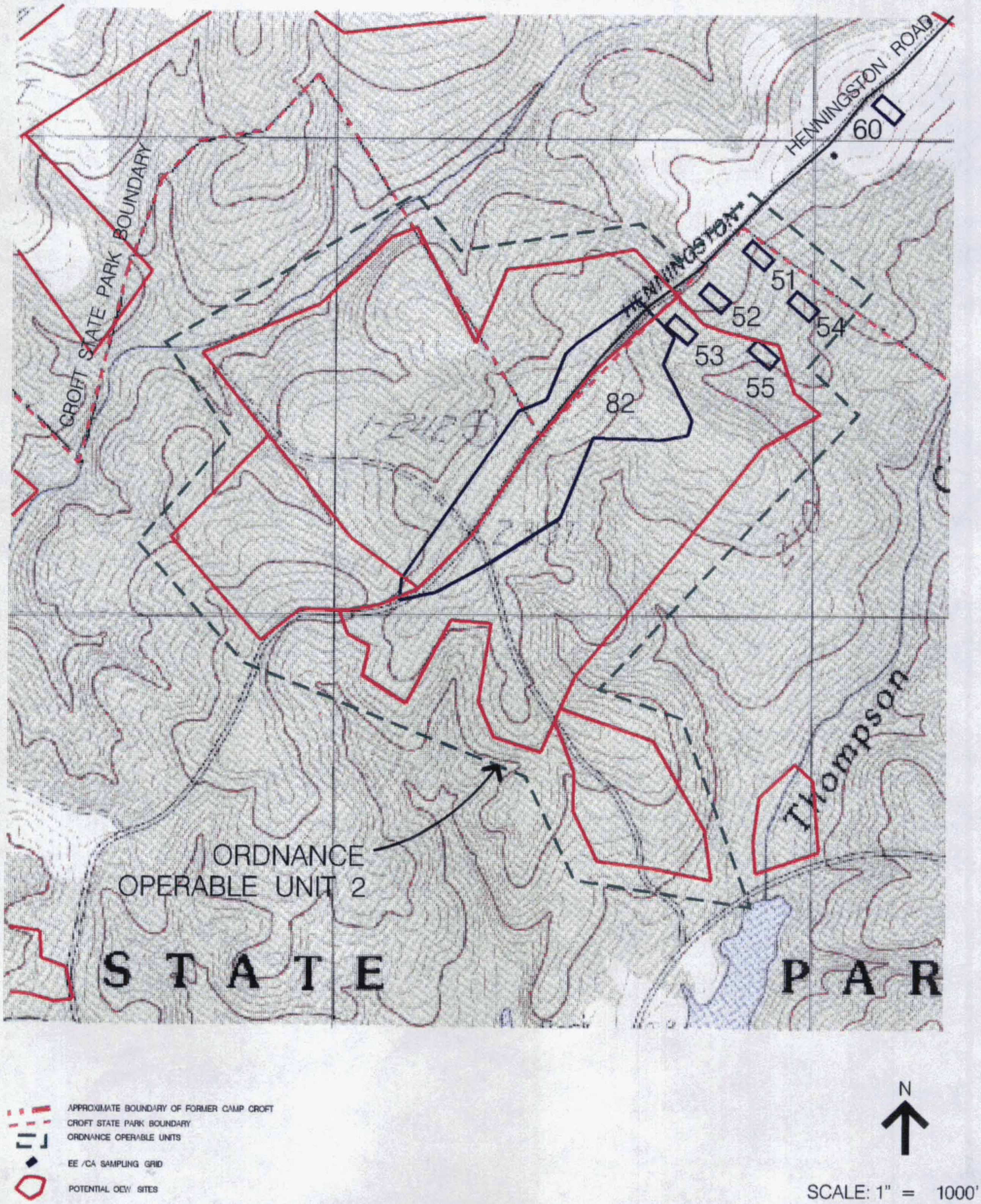

Figure 3–5
ORDNANCE OPERABLE UNIT 2

SOURCE: ESE 1995; USGS 1983

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3.3.7.3.1 Investigation of OOU3 was performed between January 11, 1995, and January 18, 1995. Three sampling grids (84, 85, and 86) covering approximately 4 acres were established. The three grids encompassed the owner's home and adjacent yard areas.

3.3.7.3.2 The grids were surveyed with magnetometers and all anomalies were investigated. Findings included 15 practice hand grenades and one MK-2 fuzed fragmentation hand grenade. The MK-2 grenade was transported to the ESE operations area, where it was temporarily stored in an onsite magazine and later destroyed along with other ordnance items on January 20, 1995. The MK-2 grenade made no explosive contribution during detonation and was determined to be inert. The CEHND onsite safety representative was notified of the findings and the actions taken.

3.3.7.3.3 Figure 3-6 shows the locations of the grids. Table 3-4 summarizes the configuration, sampling methodology, anomalies recorded, anomalies investigated, and OEW/UXO findings for each grid within OOU3.

3.3.7.4 Ordnance Operable Unit 4

Ordnance Operable Unit 4 (OOU4) is located south of the park swimming pool area. OOU4 was identified and selected as a sampling site due to a past report of OEW (USACE, 1994) found in the vicinity. The only OEW found during the investigation was small arms .30-cal slugs. No UXO was found.

3.3.7.4.1 Figure 3-7 shows the locations of the grids. Table 3-4 summarizes the configuration, sampling methodology, anomalies recorded, anomalies investigated, and OEW/UXO findings for each grid within OOU4.

3.3.7.5 Ordnance Operable Unit 5

Ordnance Operable Unit 5 (OOU5) is private residential property located immediately north of Croft State Park and within the former Camp Croft boundary. It consisted of three sampling grids (58, 59A, and 59B) covering approximately 1 acre, and was selected for investigation due to reports from nearby residents that a grenade had once been found in the vicinity.

3.3.7.5.1 The only OEW found during the EE/CA sampling effort was a single rifle grenade tail boom. No UXO were found.

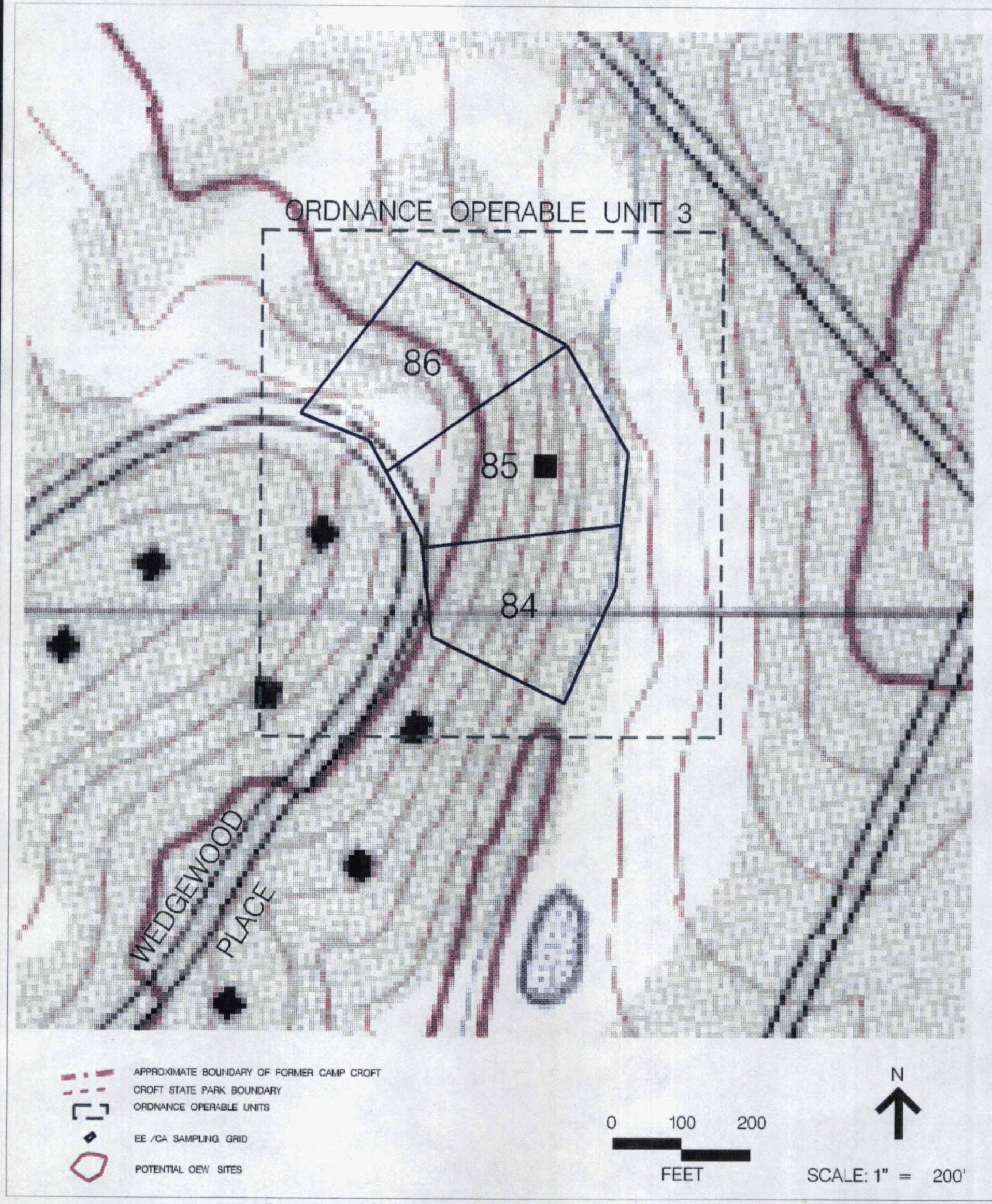

Figure 3–6
ORDNANCE OPERABLE UNIT 3

SOURCE: ESE 1995; USGS 1983

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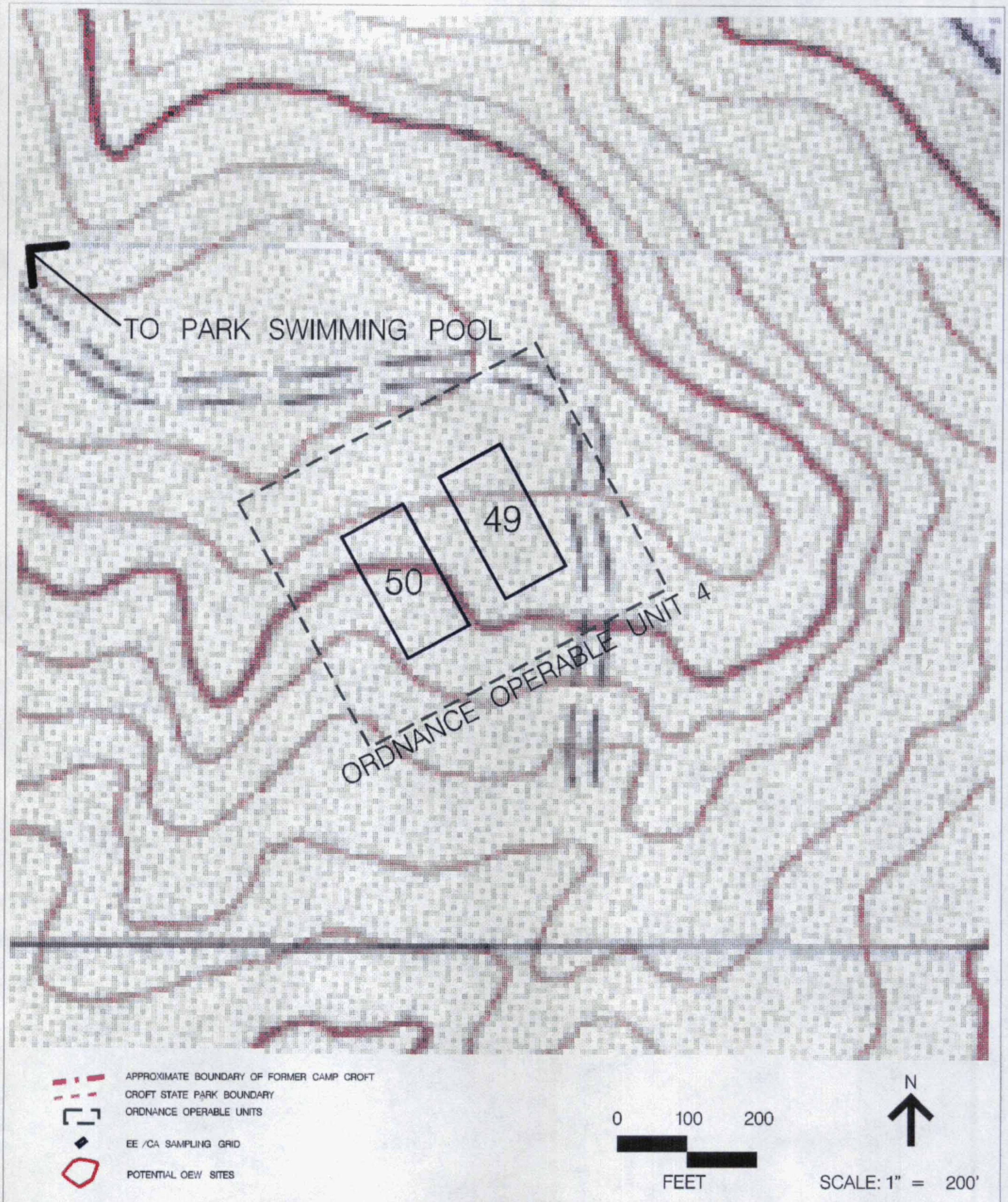

Figure 3-7
ORDNANCE OPERABLE UNIT 4

SOURCE: ESE 1995; USGS 1983

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3.3.7.5.2 Figure 3-8 shows the locations of the grids. Table 3-4 summarizes the configuration, sampling methodology, anomalies recorded, anomalies investigated, and OEW/UXO findings for each grid within OOU5.

3.3.7.6 Ordnance Operable Unit 6

Ordnance Operable Unit 6 (OOU6) is located within the boundaries of former Camp Croft, but outside Croft State Park. It is situated off of Mimosa Lake Road and is adjacent to the south of U.S. Highway 176 Bypass. The property is privately owned and is used for tree planting. The owner plans to develop the property for industrial use, including landfills. The potential exists for future construction of ponds and buildings on the property.

3.3.7.6.1 OOU6 was not included in the WP (ESE, 1994). However, a CEHND-authorized TCRA was on-going at the time of the EE/CA sampling effort due to reported and confirmed findings of 105mm projectiles on the property. ESE was directed by CEHND to investigate four areas within the boundaries of the TCRA, including the planned "compost B" area, the "poppy field", the proposed location of "landfill No. 2", and one unnamed area. These areas were designated as Grids 61, 62, 88, and 87, respectively. Grids 61 and 62 were investigated on October 28 and 29, 1994, and Grids 87 and 88 were investigated January 17 through 23, 1995.

3.3.7.6.2 The investigation of Grids 61 and 62 consisted only of magnetometer surveys and recording of anomalies. No intrusive operations were conducted. However, investigation of Grids 87 and 88 included both magnetometer surveys and intrusive operations. Significant UXO findings included one 81mm illumination round, five 105mm projectile rounds, and numerous fragments in Grid 87. No UXO was found in Grid 88. All recovered UXO was detonated in place by UXO-qualified personnel.

3.3.7.6.3 Figure 3-9 shows the locations of the grids. Table 3-4 summarizes the configuration, sampling methodology, anomalies recorded, anomalies investigated, and OEW/UXO findings for each grid within OOU6.

3.3.7.6.4 The TCRA was completed on January 19, 1995, and resulted in the discovery of four UXO items over the entire work area. A brief description of the TCRA is presented in Section 3.4, Removal Actions.

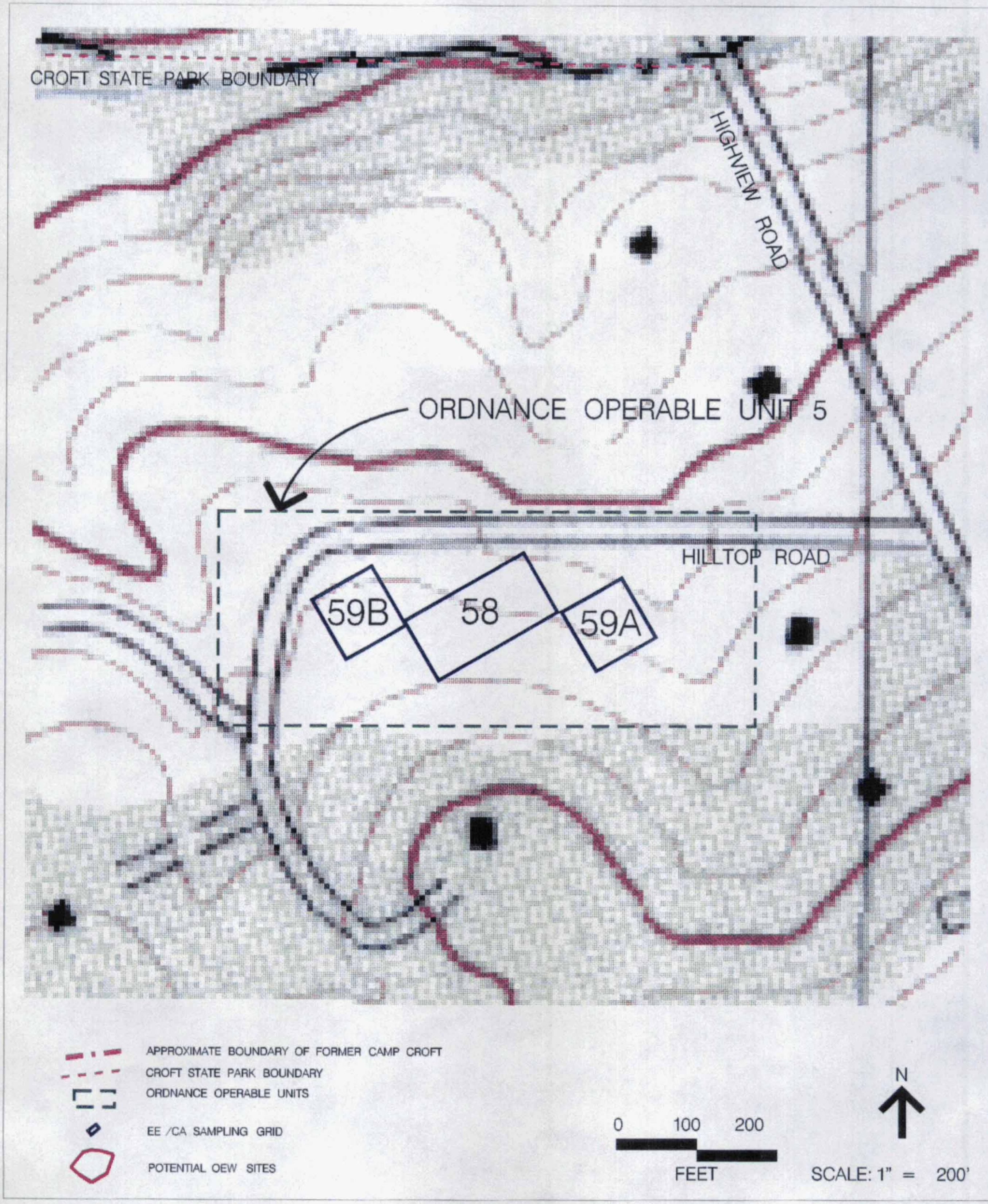

Figure 3-8
ORDNANCE OPERABLE UNIT 5

SOURCE: ESE 1995; USGS 1983

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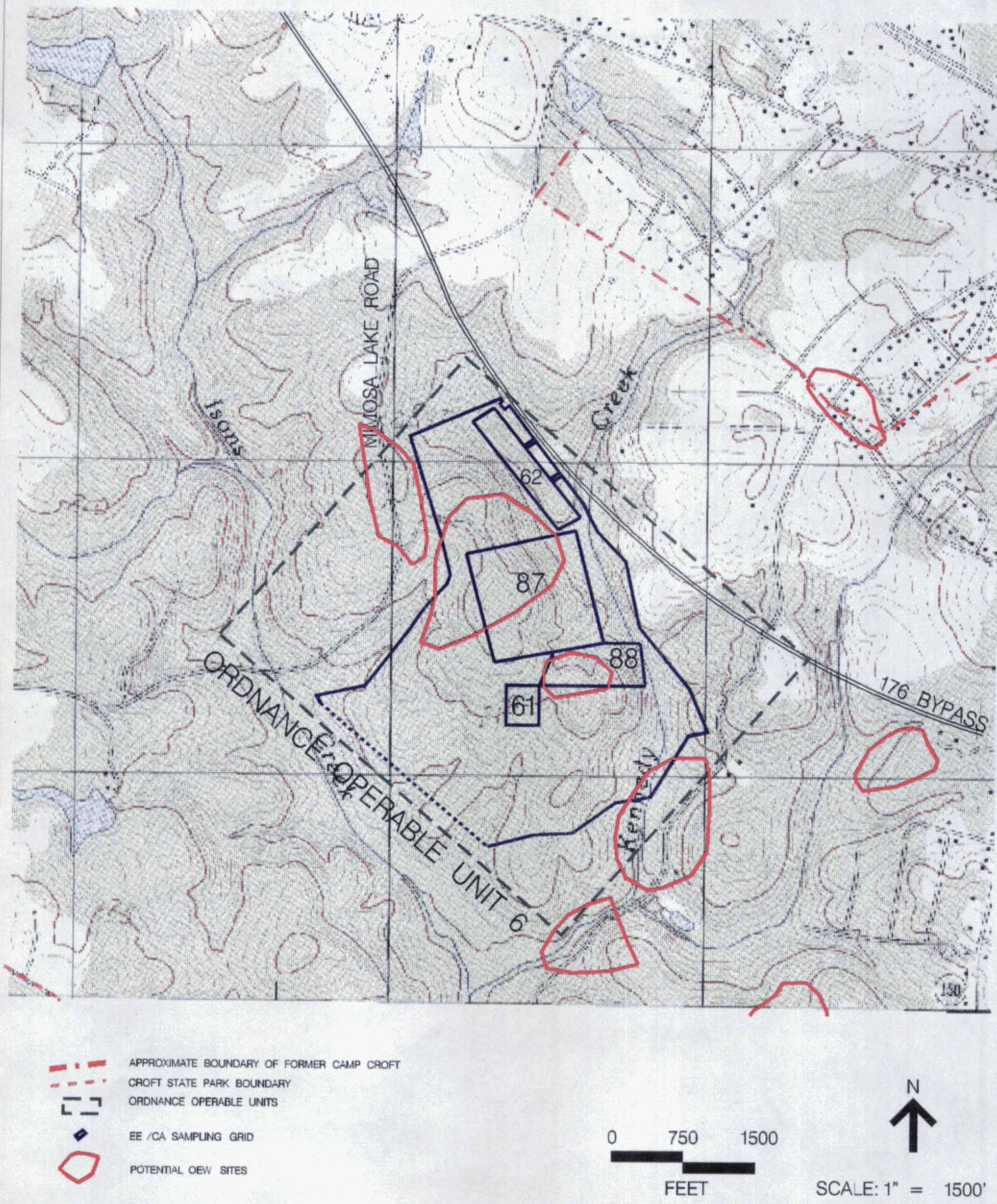

Figure 3–9
ORDNANCE OPERABLE UNIT 6

SOURCE: ESE 1995; USGS 1983

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3.3.7.7 Ordnance Operable Unit 7

Ordnance Operable Unit 7 (OOU7) is located within Croft State Park in the immediate vicinity of the state park office and includes campgrounds, picnic areas, hiking trails, and a horse show ring. Because of these facilities, recreational use of this area is high.

3.3.7.7.1 When the EE/CA sampling investigation was planned, the area in the vicinity of OOU7 was not suspected to be a former target area and therefore was not included in the investigation. However, during the EE/CA sampling activities, following the discovery of UXO in the immediate vicinity, OOU7 was created and grids were selected and sampled.

3.3.7.7.2 On November 14, 1994, ESE was notified by park personnel that a mortar round had been found by a park visitor the previous weekend. The round was found in the vicinity of the park office and campgrounds. ESE and its subcontractor, EODT, responded immediately. The UXO item was confirmed to be a 60mm HE mortar round. Disposal of the item was performed by EODT UXO-trained personnel. These activities were performed with the concurrence of the onsite USACE safety representative and the CEHND technical manager.

3.3.7.7.3 This finding suggested that the area may have been a former impact area, and because of high recreational use in the area and concerns for public safety, CEHND directed ESE to begin investigations immediately. ESE responded and between the period of November 15, 1994 and January 5, 1995, completed EE/CA sampling at 18 grids (63 through 80).

3.3.7.7.4 Figure 3-10 shows the locations of the grids. Table 3-4 summarizes the configuration, sampling methodology, anomalies recorded, anomalies investigated, and OEW/UXO findings for each grid within OOU7.

3.3.7.7.5 The OEW/UXO items found during the investigation led to the conclusion that OOU7 is a former mortar impact area. Supportive findings included twenty-six 60mm HE mortar rounds, one 81mm HE mortar round, and numerous mortar parts (including a 4.2-inch) and small arms. All recovered UXO were detonated in place by UXO-qualified personnel.

3.3.7.7.6 Following these findings and citing concern for public safety in this high use area, CEHND ordered a TCRA to be performed. This action consisted of a surface clearance and was performed by Human Factors Applications, Inc. (HFA) March 14 through 30, 1995. During this action, thirty-four 60mm and one 81mm mortar rounds were recovered from the surface at OOU7 (HFA, 1995b). Further details of this TCRA are included in Section 3.4, Removal Actions.

Figure 3–10
ORDNANCE OPERABLE UNIT 7

SOURCE: ESE 1995; USGS 1983

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3.3.7.8 Ordnance Operable Unit 8

Ordnance Operable Unit 8 (OOU8) is located in the northwest corner of Croft State Park, just north of Dairy Ridge Road and consists of sampling Grid 83 (see Figure 3-4). At the direction of the CEHND technical manager, this area was selected for investigation due to a reported finding of mine containers in the vicinity. It was suspected that this area may have been used by the military as a training minefield. The grid is irregular in shape, extends approximately 1,000 ft, and is situated between a washout and a powerline right-of-way. Figure 3-4 shows the location, orientation, and spacing of the grid.

3.3.7.8.1 OOU8 was located, prepared for investigation, and surveyed on January 10, 1995. Selected areas of the grid were surveyed. A total of 16 anomalies were detected and investigated. A area of approximately 0.5 acre in size located adjacent to the grid was surveyed by the CEHND TCRA contractor (HFA) on September 11, 1994. Findings were limited to 14 empty mine shipping containers.

3.3.7.8.2 Intrusive operations were performed on January 10, 1995. Findings included barbed wire, nails, and scrap metal. No OEW or UXO was discovered in the grid.

3.4 Removal Actions

Under contract to CEHND, HFA performed two TCRAs at former Camp Croft. The first TCRA was performed at Red Hill, a privately owned property located along the U.S. Highway 176 Bypass. This site is colocated with OOU6. The second TCRA was performed within Croft State Park in the area of the park office and campgrounds. This site is colocated with OOU7. Removal Reports were submitted for both areas and are on file with CEHND (HFA, 1995a, b). A brief description of each TCRA follows.

3.4.1 Red Hill

3.4.1.1 TCRA activities were performed at Red Hill from August 8, 1994, through January 19, 1995. The work area covered approximately 30 acres of a 350-acre privately owned parcel intended for industrial development, including a Class I industrial landfill. The area lies within OOU6.

3.4.1.2 The TCRA objectives were to remove surface and subsurface ordnance and OEW to a depth of 4 ft, and to perform a geophysical mapping of the site. The work area was separated into two areas of interest. Area 1 consisted of approximately 10 acres of access roads to and from the site. Area 2 consisted of approximately 20 acres where the property owner is proposing to install asphalt recycling equipment.

3.4.1.3 The TCRA was performed in two phases. Phase I consisted of nonintrusive activities and phase II consisted of intrusive and disposal activities. The Red Hill area was heavily contaminated with ordnance fragmentation, causing a significant slowdown in progress and efficiency. A backhoe was used to excavate some of the recorded magnetic anomalies when hand digging became unfeasible. All uncovered subsurface anomalies were identified, and OEW/UXO were destroyed onsite.

3.4.1.4 A total of 4 UXO items were found in the approximately 30-acre area of investigation. Findings included one live 105mm artillery projectile with an M48 series fuse, one explosive burster from a 155mm white phosphorus projectile, and two 60mm HE mortars with fuzes. A total of 13,300 pounds of OEW scrap was removed and turned over to a local scrap dealer.

3.4.2 Croft State Park

TCRA activities were performed in Croft State Park from March 14, 1995, through March 30, 1995. The work area covered approximately 50 acres in the vicinity of the park office and campground. The area lies within OOU7.

3.4.2.1 The TCRA objective was to perform a surface clearance of all UXO and hazardous OEW. CEHND authorized HFA to conduct TCRA activities following confirmed UXO findings during the EE/CA investigation of OOU7. Priority was given to those areas which were easily accessible to the public, addressing the high traffic areas of the park, and then expanding out to the remaining areas as time allowed.

3.4.2.2 TCRA activities were performed in the *priority* areas from March 14, 1995, through March 20, 1995. The priority areas consisted of playgrounds, picnic areas, camping areas, a fitness trail, areas around comfort stations, and a general store. Four 60mm mortars and numerous 60mm mortar fins and booms were found in the priority area.

3.4.2.3 TCRA activities were performed in the *non-priority* areas from March 20, 1995, to March 29, 1995. The non-priority areas were established on a hilltop along a nature trail. A total of 156 grids were surface-cleared, and 35 UXO items were found in 12 of the grids. These finds included one 81mm mortar and thirty 60mm mortars. The non-priority areas were more heavily contaminated with OEW scrap than the priority areas. A total of 546 pounds of OEW scrap was given to a local scrap dealer.

3.4.2.4 The TCRA contractor also performed a magnetometer survey across the work area, recording subsurface anomalies. The results are included as Appendix D of the removal report on file with CEHND (HFA, 1995b). The survey revealed a high probability of subsurface OEW within the TCRA work area. Subsurface magnetic anomalies averaged between 15 and 25 anomalies per grid.

3.5 Nature And Extent of Contamination

The EE/CA field investigation (Section 3.3.7) and TCRAs (Section 3.4) confirmed the following types of ordnance contamination at former Camp Croft:

- small arms scrap (.20-cal and .30-cal);
- 37mm and 57mm inert projectiles;
- 2.36-inch rockets;
- 60mm, 81mm, and 4.2-inch mortars;
- 105mm Howitzer rounds;
- 155mm projectiles; and
- practice hand and rifle grenades.

3.5.1 Of this discovered contamination, UXO was limited to 60mm and 81mm mortars within Croft State Park, and 105mm Howitzer rounds, a 155mm explosive burster, and one practice hand grenade outside the park boundary.

3.5.2 Specific ordnance findings and detailed descriptions of the investigated areas were presented in Section 3.3.7. A summary of the OEW and/or UXO found within former Camp Croft and within Croft State Park and an estimate of ordnance densities made by the CEHND risk contractor, QuantiTech, is provided in Table 3-5. Refer to Appendix G for the QuantiTech report.

3.6 Current and Future Land Use

Within the boundaries of former Camp Croft, land uses include recreational, commercial, industrial, agricultural, and residential.

3.6.1 Croft State Park

Current and anticipated future land uses within Croft State Park are predominantly recreational and include hiking, horseback riding, camping, boating, swimming, fishing, and picnicking. Commercial uses are limited to operation of a general store that sells to campers and other park

Table 3-5. Summary of OEW/UXO Contamination Discovered at Former Camp Croft

Location	OEW	UXO* (quantity in parentheses)	Estimated UXO Density⁺
Croft State Park			
OOU1A	37/57mm inert projectiles, small arms (scrap)	None	---
OOU1B	60/81mm mortar parts, small arms (scrap), fragmentation	60mm (12), 81mm (1) mortars	5.85 to 12.11/acre
OOU2	60/81mm and 4.2-inch mortar parts, small arms (scrap), fragmentation	60mm (19), 81mm (1) mortars	5.39 to 9.04/acre
OOU4	Small arms (scrap)	None	—
OOU7	60/81mm mortar parts, 2.36-inch rocket parts, small arms (scrap)	60mm (60), 81mm (2) mortars	38.39 to 48.73/acre
OOU8	14 empty mine shipping containers	None	---
Private Property			
OOU3	Practice hand grenade parts	MK-2 hand grenade (1)	0 to 6.7/acre
OOU5	Rifle grenade part	None	—
OOU6	60/81mm mortar parts, 105mm Howitzer parts, fragmentation	105mm projectiles (6) Explosive burster (1) 60mm mortar (2) 81mm illumination mortar (1)	0 to 1.31/acre

*Includes UXO discovered during TCRAs at OOU6 and OOU7.
⁺Source: QuantiTech, 1995.

Source: ESE.

visitors. An area of land located in the southwest portion of the park is used as a county operated landfill. There is no reason to expect that commercial or industrial type uses will increase in the future.

3.6.2 Surrounding Areas

Areas outside Croft State Park but within the boundaries of former Camp Croft feature commercial, industrial, agricultural, residential and recreational land uses. Commercial and industrial uses exist along corridors of State Highways 56 and 295, which border the west and east sides, respectively, of the former Camp Croft. Residential uses are predominant in the area of the former camp's cantonment area, located to the north.

3.6.2.1 Agricultural and tree farming and residential uses exist throughout the remainder of former Camp Croft. Recreational uses can be considered to include all the same activities as within Croft State Park; however, not formally and not to the same degree. The one exception may be hunting, which is not allowed within Croft State Park.

3.6.2.2 New development in the vicinity of the former camp is mostly commercial/industrial and occurs along State Highway 295 bordering the east side of the former camp. Residential development occurs along Whitestone Road in the southeast.

3.7 Streamlined Risk Evaluation

A streamlined risk evaluation is intermediate in scope between the limited risk evaluation undertaken for emergency removal actions and the conventional baseline assessment normally conducted for remedial actions. For the EE/CA, the streamlined risk evaluation will focus on the specific problem that the risk reduction action is intended to address.

3.7.1 Assessment of Applicable or Relevant and Appropriate Requirements (ARARs)

ARARs are "those cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under federal environmental, state environmental, or facility siting laws that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance found at a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or "Superfund") site" (40 CFR 300.5).

3.7.1.1 ARAR selection depends on the hazardous substances present at the site, site characteristics and location, and the specific actions selected for a remedy. Therefore, these requirements may be chemical-, location-, or action-specific. Chemical-specific ARARs are health-or risk-based concentration limits set for specific hazardous substances, pollutants, or contaminants. Location-specific ARARs address circumstances such as the presence of endangered species on the site or the location of the site within a 100-year floodplain. Action-specific ARARs control or restrict particular types of remedial actions selected as alternatives for site cleanup.

3.7.1.2 There are no chemical-specific ARARs applicable for the remediation of sites contaminated with OEW/UXO. Location- and action-specific ARARs applicable for the remediation of the former Camp Croft are presented in Table 3-6. Other regulations or statutes preliminarily evaluated but eliminated as potential ARARs included:

- Clean Air Act,
- Safe Drinking Water Act,
- Toxic Substances Control Act (TSCA), and
- Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA).

3.7.2 Previous Risk Assessment Procedure

USACE completed an Ordnance and Explosive Waste Risk Assessment in April 1993 (USACE, 1994). The risk assessment is done to prioritize the remedial action at OEW sites by assigning a risk assessment code (RAC) score to each site. The RAC scores are summarized as follows:

- RAC 1 Imminent Hazard - Expedite Inventory Project Report (INPR) - immediately contact CEHND,
- RAC 2 High priority on completion of INPR - recommend further action by CEHND,
- RAC 3 Complete INPR - recommend further action by CEHND,
- RAC 4 Complete INPR - recommend further action by CEHND, and
- RAC 5 Recommend no further action.

3.7.2.1 The RAC score is divided into two categories: hazard severity and hazard probability. Hazard severity categories are based on the type of ordnance and provide a qualitative measure of the worst credible mishap resulting from personal exposure. Hazard probability includes the probability of exposure and is based on ordnance location, distance to inhabited locations, number and types of buildings in the area, and accessibility to the site.

Table 3-6. Applicable or Relevant and Appropriate Requirements (ARARs)

Activity	ARAR	Citation	Applicability or Relevance
Action-Specific			
Transportation of OEW Offsite	Standards applicable to transporters of hazardous waste	40 CFR 263	If OEW is transported offsite for disposal, the transporter must comply with requirements for manifesting and recordkeeping.
Worker Safety	Occupational Safety and Health Act (OSHA).	29 USC ss. 651-678	Provides workers with personal protection equipment during all phases of remediation. Provides adequate protection to the community by reducing dust potentially generated during material excavation and handling activities.
	Safety concepts and basic considerations for unexploded explosive ordnance (UXO) operations.	USACE 16 Dec. 92	Provides workers with safety guidance to be followed during probing for, excavation, moving, and disposal of UXO.
Location-Specific			
Presence of endangered or threatened species or critical habitat of such species as designated in 50 CFR 17, 50 CFR 226, or 50 CFR 227	Endangered Species Act of 1973 as amended (latest amendment June 1986). Code of Laws of South Carolina, Title 50: Ch. 15, Species Conservation Act. Heritage Trust's Elements of Concern: Plants and Animals.	50 CFR 402 40 CFR 6.302(h) SC11-17, Sec. 40(c), and 50(d) and (e).	Actions which jeopardize species/habitat must be avoided or appropriate mitigation measures taken. Offsite actions which affect species/habitat require consultation with DOI, USFWS, NMFS, and/or state agencies, as appropriate, to ensure that proposed actions do not jeopardize the continued existence of the species or adversely modify or destroy critical habitat. Consultation with the responsible agency is also strongly recommended for onsite actions.

Table 3-6. Applicable or Relevant and Appropriate Requirements (ARARs) (Continued, Page 2 of 2)

National Historic and Cultural Resources	South Carolina follows federal regulations under National Historic Preservation Act of 1966; 1906 Antiquities Act; Archaeological Resources Protection Act of 1979; Archaeological and Historic Preservation Act of 1974; and Historic Sites Act of 1935.	36 CFR 60.9 - 36 CFR 800.1 36 CFR 800.4 and 800.5 ACT 16 USC 470-470w-6 - 16 USC 470(b)(2)(4) USC 470ii	State Historic Preservation Officer (SHPO) must be contacted. Integrates requirements of federal laws and regulations dealing with historic properties including historic and prehistoric district sties, buildings, structures, and objects.
National Historic and Cultural Resources (continued)		32 CFR 229 SC Title 60, Ch.12, Sec. 60-12-30	Facility must regulate the excavation of archaeological sites on federal lands.
Delineation of the landward extent of wetlands and surface waters	Wetlands protection	40 CFR 6.302(a)	Actions should be avoided that have adverse impacts associated with the destruction or loss of wetlands and to avoid support of new construction in wetlands if a practicable alternative exists.

Note: Excavation and material handling operations will be conducted in accordance with the OEW/UXO safety specifications described in the U.S. Army Corps of Engineers, Huntsville Division, *Safety Concepts and Basic Considerations for Unexploded Explosive Ordnance (UXO) Operations (revised 16 Dec 92).*

CFR = Code of Federal Regulations.
DOI = U.S. Department of Interior.
NMFS = National Marine Fisheries Service.
RCRA = Resource Conservation and Recovery Act.
SC = South Carolina.
USC = United States Code.
USACE = U.S. Army Corps of Engineers.
USFWS = U.S. Fish and Wildlife Service.

Source: ESE.

3.7.2.2 The RAC score for former Camp Croft was evaluated by USACE, Charleston District. The OEW risk assessment reported that OEW contamination has been verified on Camp Croft on a regular basis since closure of the camp and that it would require remediation to mitigate the hazard to the public. Former Camp Croft was assigned a hazard severity value of 19, corresponding to a "Critical" hazard severity. A hazard probability value of 25 was assigned, corresponding to a "Probable" hazard. Applying these scores, a RAC 2 was determined for Former Camp Croft.

3.7.3 Statistical Risk Analysis

QuantiTech, Inc. of Huntsville, Alabama, under contract to CEHND, developed the risk model "Ordnance and Explosive Waste Cost Effectiveness Risk Tool" (OEWCert). At the direction of CEHND, QuantiTech applied OEWCert to former Camp Croft to perform a statistical analysis of public safety risks from UXO exposure. Exposure is defined as "a member of the public being present in the immediate proximity to UXO". A description of the model and the results for Camp Croft are presented in QuantiTech's *Former Camp Croft Risk Analysis Final Report* (17 August 1995). A full copy is included in Appendix G. Relevant and significant report conclusions are summarized below.

3.7.3.1 To perform the analysis, QuantiTech divided the study area into sectors. Each sector was defined as geographically continuous areas with homogeneous physical traits (e.g., slope, vegetation, and soil type) and UXO types. The sectors selected by QuantiTech and the corresponding operable units selected by ESE are listed below with the common connection being the sampling grids that made up each:

Sector	Ordnance Operable Unit	Sampling Grids
Sector 1	OOU1A	1 through 41, 46 through 48, 56, 57
Sector 1B	OOU1B	42 through 45, 81
Sector 2	OOU2	51 through 55, 82
Sector 3	OOU3	84 through 86
Sector 4	OOU4	49, 50
Sector 5	OOU5	58, 59A, 59B
Sector 6	OOU6	61, 62, 87, 88
Sector 7	OOU7	63 through 80
Sector 8	OOU8	83

3.7.3.2 For each sector, QuantiTech estimated several exposure scenarios based on estimates of potentially exposed population and the types of present and future land use activities. Of particular importance are non-intrusive surface activities (i.e., hiking, horseback riding, hunting) and intrusive (or potentially intrusive) activities (i.e., camping, construction, tree farming). The exposure scenarios calculated for each sector included:

- The expected exposures for each independent activity;
- Total expected exposures;
- The probability of exposure for each independent activity;
- Total probability of exposure; and
- Expected reduction in exposure and probability of exposure following remediation to depths 1, 4, and 10 ft.

3.7.3.3 Total expected exposures is the sum of independent exposures, assuming that all the independent activities described for the sector take place. The probability of exposure assumes that an individual participating in the worst case activity will be exposed to at least one UXO item per year. Refer to the QuantiTech report for additional information related to expected exposures.

3.7.3.4 The results for each scenario are presented tabularly in the QuantiTech report (Appendix G). The most significant results reflect the probability of exposure (individual) and the reductions in this probability of exposure following remediation efforts. These results are summarized below.

3.7.3.4.1 Sector 1 (ESE OOU1A) and 1B (ESE OOU1B)

For both sectors, the risk model predicted zero probability of exposure for both "no action" and remediation to 1 ft. However, this estimate was based on surface use only (hiking and horseback riding) and QuantiTech's interpretation from the EE/CA sampling data that "..there was no surface ordnance contamination.." in either sector.

For Sector 1 (OOU1A), a more conservative conclusion is appropriate, primarily based on the fact that the EE/CA sampling results were derived from sampling less than 1 percent of the total area of OOU1A. It is believed that some level of risk remains and that the exposure levels and probability of exposure are greater than zero.

For Sector 1B (OOU1B), a more conservative conclusion is appropriate, primarily based on the fact that OEW/UXO were observed sufficiently close to the surface (1 to 2 inches) to be considered surface contamination and that the EE/CA sampling included only approximately

4 percent of the total area of OOU1B. It is believed that some level of risk remains and that the exposure levels and probability of exposure are greater than zero.

3.7.3.4.2 Sector 2 (ESE OOU2)

The risk model predicted probabilities of exposure ranging from 1/11,000 (one exposure in 11,000 chances) to 1/19,000 for "no action" and 1/144,000 to 1/240,000 for remediation to 1 ft. This represents approximately a 90 percent reduction from taking "no action" at Sector 2 to removal of UXO to a 1-ft depth.

3.7.3.4.3 Sector 3 (ESE OOU3)

The risk model predicted probabilities of exposure ranging from 0 to 1/300,000 for "no action" and 0 to 1/4,000,000 for remediation to 1 ft. This represents approximately 90 percent to 100 percent reduction from taking "no action" at Sector 3 to removal of UXO to a 1-ft depth.

3.7.3.4.4 Sector 4 (ESE OOU4)

At the direction of CEHND, the risk model was not performed on Sector 4, since no UXO was discovered during the EE/CA sampling.

3.7.3.4.5 Sector 5 (ESE OOU5)

The risk model predicted probabilities of exposure ranging from 0 to 1/300,000 for "no action" and 0 to 1/4,000,000 for remediation to 1 ft. This represents approximately 90 percent to 100 percent reduction from taking "no action" at Sector 5 to removal of UXO to a 1-ft depth.

3.7.3.4.6 Sector 6 (ESE OOU6)

The risk model predicted probabilities of exposure ranging from 0 to 1/2 for "no action"; 0 to 1/2 for remediation to 1 ft; and 0 to 1/4 for remediation to 4 ft. This represents approximately 75 percent reduction from taking "no action" at Sector 6 to removal of UXO to a 4-ft depth. However, the probability of exposure remains high for all depths.

3.7.3.4.7 Sector 7 (ESE OOU7)

The risk model predicted probabilities of exposure ranging from 1/3 to 1/2 for "no action"; 1/5 to 1/3 for remediation to 1 ft; and 1/13 to 1/8 for remediation to 4 ft. This represents approximately 50 percent reduction from taking "no action" at Sector 7 to removal of UXO to a 1-ft depth, and an 80 percent reduction when remediating to a 4-ft depth. However, the probability of exposure remains high for all depths.

3.7.3.4.8 Sector 8 (ESE OOU8)

At the direction of CEHND, the risk model was not performed on Sector 8, since no UXO was discovered during the EE/CA sampling.

3.7.3.5 The statistical information produced by QuantiTech was a source of technical data considered during the development and evaluation of alternatives for risk reduction at former Camp Croft. However, OEWCert is a statistical model and does not consider all factors needed to make a complete and comprehensive recommendation. An analysis of all relevant and available data was used to make the final recommendations in this EE/CA report. In several cases, interpretations of the data used to develop the exposure levels are not in total agreement with the conclusions developed by QuantiTech. These differences are presented and discussed later as they become relevant.

3.7.4 De Facto Cleanup Standard

Under contract to CEHND, QuantiTech evaluated risks to the public before and after cleanup of UXO for Mission Trails at Tierrasanta, California, a former defense site. From this study, a de facto cleanup standard was established that was judged by CEHND to *potentially* be applicable at other UXO-contaminated FUDS. The de facto standard established for the probability of an individual's exposure to UXO was 1/6,665 (one in 6,665) for the worst case intrusive land use activity, which for the Tierrasanta FUDS was camping. This de facto standard was considered as additional information in assessing the need for removal actions at individual sites within the former Camp Croft.

4.0 Identification of Risk Reduction Goals and Objectives

CEHND has chosen to generally follow EPA guidance for conducting EE/CAs to analyze risk reduction alternatives for FUDS sites that may be contaminated by OEW/UXO. The EPA promulgated EE/CA guidance to reduce risk of public exposure at HTRW sites; however, the general process is well-suited to addressing OEW/UXO sites and is accepted by regulatory agencies. Not all facets of the EE/CA guidance are applicable to OEW/UXO sites.

4.1 Determination of Risk Reduction Scope

The scope of this EE/CA is to address possible OEW/UXO contamination at former Camp Croft. In this section, goals and objectives for risk reduction are identified and developed.

4.1.1 Risk Reduction Goal and Objectives

The goal of the NTCRA at former Camp Croft is to minimize the risk of exposure to OEW/UXO that could create a threat to public health and the environment, while also minimizing the hazards to personnel performing the risk reduction. The objectives for attaining this goal are as follows:

- Identify and implement the appropriate technologies for risk reduction;
- Minimize the environmental damage during risk reduction;
- Detect and dispose of OEW/UXO where a threat exists to the public health;
- Minimize risk to Croft State Park personnel and to the general public who will use or visit the park;
- Minimize risk to owners, residents, and other users of private property; and
- Use appropriate personnel and implement safety measures to reduce the risk of ordnance exposure.

4.2 Determination of Schedule

The final schedule for activities associated with risk reduction at former Camp Croft will depend on many factors, including the completion date for the EE/CA, the time required to implement selected alternatives, the nature of the threat, negotiations with regulatory agencies, availability of required resources, weather, and other intangibles. Since the potential threat has existed since WWII, the schedule associated with risk reduction may not be as critical for those areas where construction or development are not planned. The effort needed to implement each alternative is discussed in Section 6.0 of this report.

4.3 Objectives/Criteria Used in Analysis of Alternatives

This section provides a detailed analysis of the risk reduction alternatives for possible OEW/UXO contamination. The evaluation criteria outlined in *Guidance on Conducting Non-Time-Critical Removal Actions Under CERCLA* (EPA, 1993) serve as the basis for conducting the detailed analysis. The following represent the primary criteria that the analysis considers:

- Effectiveness,
- Implementability, and
- Cost.

4.3.0.1 Each of the evaluation criteria is further divided into specific factors for a complete analysis of the alternatives. These criteria and corresponding factors are discussed in the following paragraphs.

4.3.1 Effectiveness

4.3.1.1 Overall Protection of Public Health and the Environment

The effectiveness criteria are measurements of the ability of an alternative to meet the objective within the scope of the proposed action. Effectiveness is discussed in terms of overall protection of human health and the environment.

4.3.1.2 Long-Term Effectiveness and Permanence

This evaluation criterion addresses the results of an alternative in terms of the risk remaining at the site after risk reduction objectives have been met. The following factors characterize the potential remaining risk at the site following completion of the implementation phase:

- The magnitude of risk remaining due to unremoved OEW/UXO contamination following the completion of the alternative, and
- The adequacy and reliability of controls that are used to manage unremoved OEW/UXO contamination remaining at the site.

4.3.1.3 Reduction of Mobility, Toxicity, or Volume (MTV)

This evaluation criterion assesses the level to which the alternative reduces risk by destroying contaminants, reducing the total mass of contaminants, reducing the total volume of contaminated media, and/or irreversibly reducing the contaminants' mobility. Although not necessarily applicable to this site, the specific factors typically considered for evaluating a risk reduction alternative in accordance with EPA guidance for conducting EE/CAs are as follows:

- The treatment processes the remedy would employ and the materials they would treat;
- The amount of hazardous materials that would be destroyed or treated, including how the principal threat(s) would be addressed;
- The degree of expected reduction in MTV measured as a percentage of reduction (or order of magnitude);
- The degree to which the treatment would be irreversible;
- The type and quantity of treatment residuals that would remain following treatment; and/or
- Whether the alternative would satisfy the statutory preference for treatment as a principal element.

4.3.1.3.1 For the former Camp Croft, which is potentially a OEW/UXO-contaminated site, this evaluation criterion will assess the level to which the alternative reduces risk by destroying the contaminant (OEW/UXO), or reducing the total mass of the contaminant. For OEW/UXO-contaminated sites, the media surrounding the OEW/UXO are not typically contaminated, and the OEW/UXO is not typically mobile.

4.3.1.4 Short-Term Effectiveness

This evaluation criterion addresses the alternative's effect on human health and the environment during construction and implementation of the risk reduction action. The implementation phase of an alternative is completed once response objectives are met. The short-term effectiveness is based on the following four factors:

- The potential risk to the community,
- The potential risk to the workers implementing the risk reduction actions,
- The potential for adverse impacts on the environment due to implementation of the action, and
- The time required to meet the risk reduction objectives.

4.3.1.5 Compliance With ARARs

This evaluation criterion serves as a check to assess whether each alternative meets the potential federal, state, and local ARARs identified in this EE/CA process.

4.3.1.5.1 No chemical-specific ARARs exist at this time for cleanup of ordnance-contaminated sites. Location- and action-specific ARARs potentially applicable for the proposed alternatives under consideration are discussed in Section 3.7.1.

4.3.2 Implementability

This criterion addresses the technical and administrative feasibility of implementing an alternative and the availability of various materials and services required during its implementation. The following factors must be considered during the implementability analysis.

4.3.2.1 Technical Feasibility

This factor evaluates the relative ease of implementing or completing an alternative considering physical constraints and the previous use of established technologies. The following items should be considered:

- Ability to construct and operate the alternative;
- Reliability, or the ability of a technology to meet specified process efficiencies or performance goals;
- Ease of undertaking future risk reduction actions that may be required; and
- Ability to monitor the effectiveness of the remedy.

4.3.2.2 Administrative Feasibility

This factor evaluates activities needed to be coordinated with other offices and agencies (e.g., obtaining permits for offsite activities or rights-of-way and easements required for construction, or compliance with statutory limits).

4.3.2.3 Availability of Services and Materials

This factor evaluates the availability of the technologies (materials or services) required to implement an alternative.

4.3.2.4 State Acceptance

This factor evaluates the technical and administrative issues and concerns the State of South Carolina may have regarding each of the alternatives. State acceptance will be a factor in the final selection of the alternative in the EE/CA Action Memorandum.

4.3.2.5 Community Acceptance

This factor evaluates the issues and concerns that the public may have regarding each of the alternatives. Community acceptance will be a factor in the final selection of the alternative in the EE/CA Action Memorandum.

4.3.3 Cost

The total estimated cost is used to determine overall cost effectiveness.

5.0 Identification and Development of Risk Reduction Alternatives

Based on the nature and analysis of contamination and risk reduction goals and objectives discussed in previous sections of this report, a limited number of appropriate alternatives will be evaluated. In this section, the appropriate technologies will be identified and risk reduction alternatives developed. In the following section, each alternative will be discussed in greater detail and evaluated with respect to specific criteria.

5.1 Identification of Technologies

Technologies for the detection, recovery, and disposal of OEW/UXO contamination at OOUs 1 through 8 of former CCATF are identified in the following sections.

5.1.1 Detection

There are several geophysical methods available for the detection of buried ordnance. These methods are classified based on the type of parameter (physical, electrical, or chemical) they measure. The following are the most commonly used methods and the associated systems for ordnance detection:

- Magnetometer,
- Metal Detector,
- Ground Penetrating Radar (GPR),
- Frequency Domain Electromagnetics (EM) System,
- Resistivity Measurement System, and
- Time Domain EM System.

5.1.1.1 Magnetometers and metal detectors are useful for detecting metallic objects within the ground. The latter four techniques are more applicable for discerning the locations of buried trenches or fills and do not necessarily require the presence of metallic objects to be effective. At former CCATF, confirmed OEW/UXO has consisted of metallic ordnance items that can be readily detected by metal detection instruments.

5.1.2 Recovery

If OEW/UXO is detected, it will be excavated and identified. It will either be left in place for later disposal or recovered from the excavation and moved to a safe location for later disposal. If recovered from the soil, OEW/UXO is separated either mechanically or manually depending on the expected density, type, and size of the OEW/UXO, and the type and quantity of soil excavated.

5.1.3 Disposal

OEW/UXO can be disposed of by the following methods:

- *In-situ* detonation,
- Offsite detonation, or
- Incineration.

5.1.3.1 *In-situ* detonation is destruction of the OEW/UXO while it is still in the ground. The item is detected, identified, and then detonated in place. Offsite detonation requires that the item be recovered from the excavation and transported to an approved disposal range for detonation. Incineration involves destruction through combustion. For the sites at former CCATF it is anticipated that disposal of OEW/UXO will be either through *in-situ* detonation or offsite detonation.

5.2 Development of Alternatives

Based on the above technologies, alternatives were assembled to address OEW/UXO contamination at the former CCATF. Both removal and non-removal alternatives were developed. Non-removal alternatives include the following:

- Alternative 1: No Further Action,
- Alternative 2: Institutional Controls, and
- Alternative 3: Government Buyback.

5.2.1 Removal alternatives include:

- Alternative 4: Surface Clearance, and
- Alternative 5: Clearance to Depth.

6.0 Description and Evaluation of Risk Reduction Alternatives

6.1 Alternative Components

Components considered for the removal alternatives include the following:

- Brush/grass clearance,
- Excavation,
- Transportation,
- Sifting,
- Detonation, and
- Disposal.

6.1.1 Brush/Grass Clearance

Brush/grass clearance will be accomplished either through the use of a tractor-mounted mower or gas-powered trimmers with saw blade attachments and hand-held machetes. The technique selected will be site-dependent and will be based on current site characteristics including type/density of growth and topography. Site clearance activities will be completed prior to startup of other activities. The site preparation team will include trained technicians, a UXO-qualified supervisor, and a site safety officer.

6.1.2 Excavation

After an exclusion zone is established and all required preparatory actions are implemented, excavation activities will be initiated. Excavation up to 2 ft will be accomplished manually by UXO-qualified personnel. Earth-moving machinery (EMM) may be used for excavations greater than 2 ft. For excavations greater than 5 ft, sloping and benching techniques will be used to prevent collapse of excavation walls. A maximum slope of 1.5 horizontal to 1 vertical will be required (USACE, 1992).

6.1.2.1 EMM may be operated by non-UXO personnel under the direct supervision of UXO personnel. All excavation operations will comply with the provisions of 29 CFR 1926 Subpart P; *USACE Safety and Health Requirements Manual*, October 1992; and *Safety Concepts and Basic Considerations for UXO Operations* (USACE, 1992).

6.1.2.2 If the soil excavated along with the OEW/UXO is determined to be "not contaminated," it will be stockpiled in the immediate area for later backfilling of excavations. However, if the excavated soil is found to be contaminated with OEW/UXO, the soil will be treated before backfilling. Soil with explosives concentrations greater than or equal to 12 percent will be considered contaminated.

6.1.2.3 If an item is discovered that is identified as potential CWM, all field operations will be stopped immediately and the area will be evacuated within a 500-meter (m) area secured by two UXO specialists. The USACE safety representative will be notified immediately and appropriate direction/action will be taken by USACE. In the interim, the remediation contractor will secure and mark the area and cease operations until further direction.

6.1.3 Transportation

All OEW metallic debris, shrapnel, or fragments discovered during excavation will be collected, transported, and stored in temporary containers for later disposal by the local Defense Reutilization and Marketing Office (DRMO) or recycling by a local scrap metal recycling company. The transportation would be performed using appropriate containers in accordance with a previously approved operational plan.

6.1.4 Sifting

Soil sifting is required at areas where the expected density of OEW/UXO may be high. The purpose of sifting is to mechanically separate OEW/UXO items from the excavated soil.

6.1.5 Detonation

Detonation, when applicable, will be accomplished by a UXO-qualified team using appropriate equipment, as approved by the CEHND field representative and previously approved UXO operations plans. All detonations will be completed in-place or offsite at an approved disposal range. Efforts will be made to reduce noise levels by using damping materials and sand bags.

6.1.6 Disposal

Disposal includes detonation described above as well as disposal of inert OEW, including all OEW metallic debris, shrapnel, or fragments. These items will be collected, transported to an approved onsite temporary storage location, placed in an approved temporary holding container such as a rolloff box within the storage area, and later disposed of through the local DRMO or recycled by a local scrap metal recycling company.

6.2 Description of Risk Reduction Alternatives

Several alternatives were selected for detailed analysis. Table 6-1 lists the alternatives considered for each OOU. In the following paragraphs, these alternatives are described, followed by an evaluation of each with respect to specific criteria of effectiveness, implementability, and cost. Not all alternatives are applicable at each OOU.

6.2.0.1 Common to each alternative is public education. Education will be focused on the facility as a whole and not individually for each OOU. The purpose of public education is to warn the public of the potential hazards associated with OEW at former Camp Croft and may include one or more of the following measures: issuing "prudent man letters," publishing local news articles, local radio/TV shorts or announcements, and providing informational pamphlets to Croft State Park visitors.

6.2.0.2 The costs associated with public education have not been differentiated between the different alternatives or OOUs and will depend on the design of the program. It is estimated that the education program will cost from $25,000 to $50,000, initially, with annual update costs of $2,500 to $5,000.

6.2.1 Alternative 1: No Further Action

This alternative involves taking "no further action" at a specific site. It is being included to provide a baseline comparison with the other alternatives. However, it may also prove to be the most appropriate alternative for one or more of the OOUs. This alternative will be evaluated for each OOU.

6.2.2 Alternative 2: Institutional Controls

Institutional controls is a limited action alternative that uses current land access and future land use restrictions to minimize exposure to OEW/UXO. The type of actions available with this alternative include fencing, sign posting, and education. Fencing is the most restrictive since it prevents unauthorized entry onto the site. Sign posting can be used separately or in conjunction with fencing. Used by itself, however, sign posting is not nearly as effective as fencing, and may be totally ineffective in such cases as failure of potential site entrants to see and or be capable of reading the signs. Children not old enough to read or notice the signs are of particular concern. Another element of institutional controls is education of the public through such measures as issuing of a "prudent man letter," publishing news articles to educate the public related to the potential hazards associated with the specific site, and providing informational pamphlets to park

Table 6-1. Risk Reduction Alternatives Evaluated for Each Ordnance Operable Unit

Risk Reduction Alternatives	Ordnance Operable Units								
	1A	1B	2	3	4	5	6	7	8
1. No Further Action	✓	✓	✓	✓	✓	✓	✓	✓	✓
2. Institutional Controls	✓	✓	✓	--	--	--	--	✓	--
3. Government Buyback	--	--	--	✓	--	✓	✓	--	--
4. Surface Clearance	✓	✓	✓	✓	--	✓	✓	✓	--
5. Clearance to Depth	--	✓	✓	✓	--	--	✓	✓	--

Source: ESE.

visitors. With the exception of digging for sign or fence post installation, there is no intrusive activity associated with this alternative.

6.2.2.1 Fencing and/or sign posting will require long-term attention and periodic maintenance to preserve integrity. The quantity of fencing, number of signs to be posted, inspections, perimeter patrols, and other requirements associated with this alternative will be site-specific.

6.2.2.2 Since this alternative restricts access to a site, it necessarily limits the owner's property rights as well. Therefore, this alternative is considered impractical for implementation at private property sites and will only be considered at selected public sites in Croft State Park. This alternative will be evaluated for OOU1A, OOU1B, OOU2, and OOU7.

6.2.3 Alternative 3: Government Buyback

This is an interim alternative that involves the government purchasing the effected land from the land owner with the intent of postponing removal actions until some future date. It is applicable for sites at which the current removal costs are too high and it is anticipated that, due to new information or technological advancements, the removal costs may be significantly less in the future. Implementation of this alternative would require institutional controls during the interim period. The interim institutional controls could involve fencing, sign posting, and/or education.

6.2.3.1 This alternative has limited application at the former CCATF. It has the potential for application at OOU6 (Red Hill), where a high density of fragmentation in the soil at this large site (350 acres) could render conventional risk reduction alternatives non-cost effective. It also has potential application at OOU3 and OOU5, both private property sites. This alternative will be evaluated for OOU3, OOU5, and OOU6.

6.2.4 Alternative 4: Surface Clearance

This alternative involves the physical removal of OEW/UXO detected on the surface, and involves site preparation activities (vegetation clearance), followed by visual and limited geophysical investigations by properly trained and qualified personnel. It is anticipated that the geophysical investigations would be performed with a magnetometer to supplement the visual inspection where the view of the ground is obstructed. Subsurface OEW/UXO which protrude to the surface will also be removed as part of this alternative.

6.2.4.1 This alternative should also include the requirement for proper notification and warning to residents and property owners that the site has only been surface cleared and that caution should be observed during any future excavation activities.

6.2.4.2 This alternative is applicable to, and will be evaluated for, each OOU with the exception of OOU4 and OOU8, neither of which had the OEW/UXO findings to justify surface clearance.

6.2.5 Alternative 5: Clearance to Depth

This alternative involves all activities necessary to detect, recover, and dispose of surface and subsurface OEW/UXO, and involves vegetation clearance (limited to the extent required to perform geophysical investigation), a complete geophysical investigation, excavation and identification of anomalies, and destruction of OEW/UXO.

6.2.5.1 The selected depth at each site will be either the *maximum* depth at which OEW/UXO was found at the specific OOU during the sampling effort, or 12 inches, whichever is greater. However, *if during the actual removal operations, anomalies are detected at greater depths than the planned clearance depth, the excavation depth should be reevaluated.* Within each OOU, specific areas may warrant deeper clearance. For example, a relatively flat site that has within it an area highly susceptible to erosion may warrant deeper clearance in the area of high erosion potential. Or if it is suspected that the surface may have been reshaped (excavation and/or fills) over the last 50 years, deeper clearance depths may be warranted in specific portions of the site.

6.2.5.2 For portions of OOUs where construction footprints or utility line routes exist, or other planned subsurface construction or installation can be identified and specifically located *prior to* the removal action, these specific areas should be considered for clearance at least to the depth of planned excavations. This could apply also to preplanned residential construction such as home additions or swimming pools.

6.2.5.3 This alternative should also include the requirement for proper notification and warning to residents and property owners that the site has only been cleared to the specific depth and that caution should be observed during any future excavation activities and, in particular, excavations below the cleared depths.

6.2.5.4 This alternative is applicable to and will be evaluated for OOU1B, OOU2, OOU3, OOU6, and OOU7. Based on consideration of OEW/UXO findings and land use activities, this alternative was not considered necessary for the remaining OOUs.

6.3 Evaluation of Alternatives

In this section, the alternatives presented above are individually evaluated against three broad criteria:

- Effectiveness,
- Implementability, and
- Cost.

6.0.3 These criteria were previously defined and discussed in Section 4.0 of this report. The results of this evaluation will be used in Section 7.0 of this report to complete a comparative analysis of alternatives for each OOU.

6.3.1 Alternative 1: No Further Action

Since this is the "no further action" alternative, no removal action would be implemented, potential OEW/UXO items would not be removed, and no restrictions would be placed on access to the sites.

6.3.1.1 Effectiveness

6.3.1.1.1 Overall Protection of Public Health and the Environment

Implementation of this alternative will provide no overall protection of public health and the environment.

6.3.1.1.2 Long-Term Effectiveness and Permanence

Because the contamination would remain in place, removal of OEW/UXO would not be achieved until (and if) natural environmental processes render the items harmless. This alternative would not eliminate the natural actions of erosion that could expose OEW/UXO. For practical purposes, it is assumed that under this alternative cleanup at the former Camp Croft will never be achieved and therefore the magnitude of the risk will remain unchanged. Alternative 1 does not satisfy any of the risk reduction objectives and would have no long-term effectiveness or permanence.

6.3.1.1.3 Reduction of MTV

No OEW/UXO would be removed and/or destroyed under this alternative; therefore, the MTV would remain unchanged.

6.3.1.1.4 Short-Term Effectiveness

Implementing this no-action alternative will result in no additional risk to the affected community. There will be no additional threats to site workers and no additional protective measures are needed to protect the workers. There will be no adverse environmental impacts due to the implementation of this alternative.

6.3.1.1.5 Compliance with ARARs

No removal action would be implemented under this alternative and the contaminants would remain in place. No chemical-specific ARARs are associated with OEW/UXO. The potential location- and the action-specific ARARs (Table 3-6) are not applicable to this alternative.

6.3.1.2 Implementability

6.3.1.2.1 Technical Feasibility

This alternative involves no action; therefore, technical feasibility is not applicable.

6.3.1.2.2 Administrative Feasibility

This alternative is administratively feasible.

6.3.1.2.3 Availability of Services and Materials

No services or materials would be required to implement this alternative.

6.3.1.2.4 State Acceptance

State acceptance should be easily achieved since no permits or approvals would be required.

6.3.1.2.5 Community Acceptance

The community may express concerns regarding this alternative. OOUs located within the park boundary (OOU1A, OOU1B, OOU2, OOU4, OOU7, and OOU8) have varying degrees of public access, and there may be a clear public preference for clearance of these areas. For example, OOU7 is located within the area of the park ranger office and campgrounds and has a high level of public exposure. Other areas within the park, such as OOU1A or OOU1B, although accessible to the public, are thickly forested and activities are limited to hiking or horseback riding on the trails.

6.3.1.2.5.1 Several OOUs (OOU3, OOU5, and OOU6) are located on privately owned residential land. The property owners may have valid concerns with respect to implementation of this alternative on their sites.

6.3.1.2.5.2 The need for a positive community relations campaign may be warranted to properly inform the public of the potential effects of this alternative.

6.3.1.3 Cost

There are no costs associated with the implementation of this alternative.

6.3.2 Alternative 2: Institutional Controls

Institutional controls would be implemented to prevent or reduce potential exposure to OEW/UXO. Because these controls limit use of the site and therefore private property rights as well, this alternative is only proposed for publicly owned park sites, including OOU1A, OOU1B, OOU2, and OOU7. The recommended components of institutional control vary among these sites.

6.3.2.0.1 OOU1A is primarily contaminated with fired 37mm and 57mm projectiles that pose no real danger. Alternative 2 for OOU1A includes sign posting at the exterior perimeters and at any trails leading into the area and implementation of the educational program. Fencing is not included.

6.3.2.0.2 OOU1B is a former mortar impact area. Several OEW/UXO were encountered at this OOU. Alternative 2 for OOU1B includes sign posting at selected locations and implementation of the educational program.

6.3.2.0.3 OOU2 is a confirmed mortar impact area that consists of public (park) and private property. Institutional controls including sign posting and education should be implemented for the publicly owned portion of OOU2. Institutional control is not proposed for implementation on the private property, since it would restrict private property rights.

6.3.2.0.4 OOU7 is a confirmed mortar impact area. It is also a high use area, making fencing an impractical component for institutional control unless implemented only within small, isolated areas. Considering that the area was surface-cleared as part of a TCRA, appropriate institutional controls may be limited to sign-posting and education.

6.3.2.1 Effectiveness

6.3.2.1.1 Overall Protection of Public Health and the Environment

Institutional controls will not remove or destroy OEW/UXO contamination and therefore cannot be seen as providing overall protection to public health and the environment. However, to the extent that the controls are effective, the threat to public health and the environment will be reduced.

6.3.2.1.2 Long-Term Effectiveness and Permanence

By restricting the access and use of a site, long-term effectiveness and permanence can be maintained as long as the controls are in place. Fencing is more restrictive than signage or education and should be very reliable in performing the objective of preventing direct contact with OEW/UXO. The possibility of accidental exposure exists if the fence is damaged, or if signs are removed or deteriorated and persons are allowed to enter into the area. Future construction activities would be prohibited unless a complete clearance is performed prior to construction.

6.3.2.1.2.1 This alternative reduces the magnitude of risk by restricting personal exposure. It does not reduce the contaminants present at the site. If the controls break down or are not maintained, the magnitude of the risk will revert back to its original state. Furthermore, this alternative would not eliminate the actions of burrowing animals or reduce exposure of OEW/UXO through natural erosion.

6.3.2.1.3 Reduction of MTV

No OEW/UXO would be removed or destroyed under this alternative; therefore, the MTV would remain unchanged.

6.3.2.1.4 Short-Term Effectiveness

Safety concerns during implementation are associated with potential worker exposure to OEW/UXO during fence and/or sign installation. However, the exposure risk can be kept low through the practice of UXO avoidance and the presence of a UXO-qualified person to clear the proposed post sites prior to excavation. No risk to the affected community or adverse environmental impacts are expected from the implementation of this alternative.

6.3.2.1.5 Compliance with ARARs

No chemical-specific ARARs are associated with OEW/UXO. The action-specific ARARs potentially applicable to this alternative include excavation and worker safety (Table 3-6). The location-specific ARARs potentially applicable to this alternative will be complied with during site activities.

6.3.2.2 Implementability

6.3.2.2.1 Technical Feasibility

The activities required to implement this alternative (i.e., education, sign installation, and fence construction) are reliable, readily accessible, and easily implementable at all subject sites. These activities are proven and have been used at numerous sites under similar conditions. Therefore, the alternative is technically feasible.

6.3.2.2.1.1 Construction efforts associated with implementation of this alternative would be easily completed at OOU7, which is easily accessible by construction vehicles and less heavily vegetated. OOU1A, OOU1B, and OOU2 are heavily vegetated and will require a more extensive effort. Perimeter access exists; however, internal access by construction vehicles will be limited.

6.3.2.2.2 Administrative Feasibility

This alternative should be administratively feasible. However, it will require coordination with the South Carolina Department of Parks, Recreation, and Tourism and the local park management. No permits or waivers are anticipated and there should not be a need for easements, right-of-way agreements, or zoning variances.

6.3.2.2.3 Availability of Services and Materials

This alternative would not require special equipment, skills, personnel, or technology. However, during installation of signs and/or fence posts, UXO-qualified personnel will be required to clear the area prior to excavation, and the proper safety precautions must be implemented to prevent untrained personnel from handling UXO should it be discovered during the installation activities. The personnel and technology for implementing this alternative are readily available.

6.3.2.2.4 State Acceptance

State acceptance should be easily achieved since no permits or approvals would be required.

6.3.2.2.5 Community Acceptance

The community may express concerns regarding this alternative since it, like the No Further Action alternative, does not remove the contamination and therefore may not be viewed as a permanent solution. OOUs located within the park boundary have varying degrees of public access and the public may prefer clearance of these areas rather than the less effective restriction of site access. The need for a positive community relations campaign may be warranted.

6.3.2.3 Cost

The estimated capital cost to implement Alternative 2 at OOU1A is $11,200 and includes mobilization/demobilization; access to and within the site; posting of warning signs along the accessible boundary of OOU1A, and at the entrance of any hiking/horsetrails that may enter OOU1A; support from UXO-trained personnel; and public education through newspaper advertisement, public information programs, and pamphlets distributed to park visitors. The estimated capital cost to implement Alternative 2 at OOU1B is $5,280 and includes the same components as OOU1A.

6.3.2.3.1 The estimated capital cost for OOU2 is $15,500 and includes mobilization/demobilization; access to and within the site; posting of warning signs every 300 ft along the accessible boundaries of OOU2; support from UXO-trained personnel; and public education through newspaper advertisement, public information programs, and pamphlets distributed to park visitors. The educational campaign should include private property as well. A "prudent man letter" should be sent to the private property owner.

6.3.2.3.2 The estimated capital cost for OOU7 is $6,400 and includes mobilization/demobilization, access to and within the site; posting of warning signs at the entrance to the area and at selected areas within OOU7; support from UXO-trained personnel; and public education through newspaper advertisement, public information programs, and pamphlets distributed to park visitors.

6.3.2.3.3 The education/information program is applicable to all OOUs within the Croft State Park. The total estimated cost to develop and implement this program is $25,000 to $50,000. This cost has been distributed evenly among the Croft State Park OOUs. If this is the selected alternative for some but not all of the OOUs, then the cost must be borne by the OOUs where the alternative was selected.

6.3.2.3.4 Annual post-removal site control (PRSC) costs can be anticipated to maintain signs and to continue public education. These costs are estimated to be approximately $2,500 to $5,000 per year to maintain institutional controls within the Croft State Park OOUs.

6.3.3 Alternative 3: Government Buyback

This alternative is being considered for the privately owned sites, OOU3, OOU5, and OOU6 (Red Hill). As discussed earlier, postponement of removal activities may be warranted at sites for which the currently available detection and removal technology may not be cost effective when compared with the actual land value, and it is anticipated that, due to new information and/or technological advancements, the removal costs will be significantly less in the future. Institutional site controls will be necessary to control site access until removal actions are implemented in the future. Since institutional controls are not considered feasible for privately owned sites, the property may be bought by the government so that appropriate control can be maintained in the interim period until removal is performed. This alternative does not specify the timing or the degree or extent of removal that will be performed in the future.

6.3.3.0.1 Following purchase of the property by the government, institutional controls consisting of fencing, sign posting, and education should be implemented and maintained until removal is performed. Fencing may encompass only selected areas of the OOU or the entire OOU.

6.3.3.1 Effectiveness

6.3.3.1.1 Overall Protection of Public Health and the Environment

The interim institutional controls will not remove or destroy OEW/UXO contamination and therefore cannot be seen as providing overall protection to public health and the environment. However, to the extent that the controls are effective, the threat to public health and the environment will be reduced.

6.3.3.1.1.1 An assessment of the overall protection of public health and environment that can be expected in the future, following removal, cannot be made at this time since the removal action has not been defined. However, if the removal action results in a removal of the contamination, the overall protection will be high.

6.3.3.1.2 Long-Term Effectiveness and Permanence

By restricting the access and use of a site, interim controls will provide for long-term effectiveness and permanence as long as the controls are enforced. Future construction activities would be prohibited, thus reducing the possibility of exposure to OEW/UXO contamination that may remain in place. Fencing is more restrictive than signage or education and should be very reliable in performing the objective of preventing direct contact with OEW/UXO. The possibility of accidental exposure exists if the fence is damaged, or signs are removed or deteriorated and persons are allowed to enter into the area.

6.3.3.1.2.1 The interim controls would reduce the magnitude of risk by restricting personal exposure. However, contaminants present at the site will not be reduced. If the interim controls break down or are not maintained, the magnitude of the risk will revert back to its original state. Furthermore, these controls would not limit burrowing animals or natural erosion from exposing OEW/UXO.

6.3.3.1.2.2 Long-term effectiveness and permanence will not be achieved until future activities result in the removal of the OEW/UXO contamination present on the site.

6.3.3.1.3 Reduction of MTV

In the interim period between the purchase of the property and the anticipated future removal activities, no OEW/UXO would be removed and/or destroyed. Therefore, the MTV would remain unchanged.

6.3.3.1.4 Short-Term Effectiveness

Implementation of interim institutional controls presents safety concerns during fence and/or sign installation. However, the exposure risk can be kept low through the practice of UXO avoidance and the presence of a UXO-qualified person to clear the proposed post sites prior to excavation. No risk to the affected community or adverse environmental impacts are expected from the implementation of the interim institutional controls.

6.3.3.1.5 Compliance with ARARs

No chemical-specific ARARs are associated with OEW/UXO. The action-specific ARARs potentially applicable to this alternative include excavation and worker safety (Table 3-6). The location-specific ARARs potentially applicable to this alternative will be complied with during site activities.

6.3.3.2 Implementability

6.3.3.2.1 Technical Feasibility

This alternative requires the purchase of the subject land and implementation of interim institutional controls. The land purchase may present a financial and legal challenge to the government that may slow implementation of the alternative.

6.3.3.2.1.1 The activities required to implement interim institutional controls (i.e., education, sign installation, and fence construction) are reliable, readily accessible, and easily implementable. These activities are proven and have been used at numerous sites under the same or similar conditions.

6.3.3.2.1.2 The alternative is technically feasible and should be a reliable means of restricting site access and protecting the public until future removal activities are implemented.

6.3.3.2.2 Administrative Feasibility

This alternative should be administratively feasible. No permits or waivers are anticipated and there should not be a need for easements, right-of-way agreements, or zoning variances.

6.3.3.2.3 Availability of Services and Materials

This alternative would not require special equipment, skills, personnel, or technology. However, during installation of signs and/or fence posts, UXO-qualified personnel will be required to clear the area prior to excavation, and the proper safety precautions must be implemented to prevent untrained personnel from handling UXO should it be discovered during the installation activities. The personnel and technology for implementing this alternative are readily available.

6.3.3.2.4 State Acceptance

State acceptance should be easily achieved since no permits or approvals would be required.

6.3.3.2.5 Community Acceptance

Because OOU6 is privately owned property with limited public access, the impact of this alternative on the community should be negligible at most. Therefore, it is anticipated that community acceptance will be favorable. However, at OOU3 and OOU5, this alternative may not be well received by the immediate community, since it has the potential to restrict property use and reduce property values.

6.3.3.3 Cost

Alternative 3 has two major cost components. The first includes the purchase cost of the property and all associated costs. The second includes costs for implementation of interim institutional controls.

6.3.3.3.1 The first major component of costs is difficult to predict since it will depend on assessments of property value and will be subject to negotiations with the property owner. At OOU6, solely for the purpose of this evaluation, it has been assumed that the purchase price would be $1,500 per acre for the approximately 340-acre parcel of land. This estimate is not intended to reflect in any way an assessment of fair price or offer to purchase by the government. Purchase prices for OOU3 and OOU5 have been estimated to be approximately $300,000 and $100,000, respectively. Again, these estimates are not intended to reflect in any way an assessment of fair price or offer to purchase by the government.

6.3.3.3.2 The second major cost component includes the interim institutional controls and consists of mobilization/demobilization, access to and within the site, construction of a perimeter fence around the site, posting of warning signs on the fence, and public education through newspaper advertisement and public information programs. The estimated costs for these interim controls are $41,000, $19,000, and $255,000 for OOU3, OOU5, and OOU6, respectively.

6.3.3.3.3 The total estimated costs (including engineering, overhead and profit, and contingencies) to implement Alternative 3 are $545,000, $190,000, and $1,220,000 for OOU3, OOU5, and OOU6, respectively.

6.3.3.3.4 For OOU6, annual PRSC costs of $2,000 can be anticipated for the interim period to maintain fencing and signs and to continue public education. Annual PRSC costs would be approximately $500 at OOU3 and OOU5.

6.3.4 Alternative 4: Surface Clearance

This alternative is being considered for each OOU for which OEW/UXO contamination was confirmed during the EE/CA field sampling effort. This includes OOU1A, OOU1B, OOU2, OOU3, OOU5, OOU6, and OOU7. No OEW/UXO contamination was confirmed at OOU4 or OOU8.

6.3.4.0.1 At OOU1A, surface clearance is under consideration for the area consisting of Grids 1 through 41, 46 through 48, 56, and 57.

6.3.4.0.2 At OOU1B, surface clearance is under consideration for the area consisting of Grids 42 through 45 and 81, which is a former mortar impact area.

6.3.4.0.3 At OOU2, surface clearance is being considered for the entire site, including both public (park) and private property.

6.3.4.0.4 At OOU3, a private residential site, surface clearance is under consideration for the entire site.

6.3.4.0.5 At OOU5, a private residential site, surface clearance is under consideration for the entire site.

6.3.4.0.6 At OOU6, a private property site, surface clearance has been conducted over portions of the site as part of a TCRA performed as a result of confirmed findings of 105mm projectiles. TCRA clearance activities focused on specific areas that the property owner intends to develop for industrial and agricultural ventures. Additional surface clearance would focus on areas not cleared during the TCRA.

6.3.4.0.7 At OOU7, the site of the park office and campground area, a surface clearance has been completed over portions of the site as part of a TCRA performed following the discovery of a mortar round on the surface. Additional surface clearance would focus on areas not cleared during the TCRA.

6.3.4.1 Effectiveness

6.3.4.1.1 Overall Protection of Public Health and the Environment

Surface clearance will be effective in removing those UXO/OEW items that are most likely to be encountered by the public. Implementing this alternative would greatly reduce the risk of a member of the public accidentally encountering a UXO item and handling it.

6.3.4.1.1.1 Surface clearance would not remove all UXO/OEW potentially present. Subsurface UXO/OEW, if present, would remain. As such, only limited protection is provided for intrusive activities. Driving tent stakes, or digging holes for fire pits, posts, or other construction activities would derive limited benefit from this alternative.

6.3.4.1.2 Long-Term Effectiveness and Permanence

Surface clearance is a reliable means of reducing exposure by members of the public who are engaged in nonintrusive activities; therefore, the alternative should be reliable in reducing the risk of direct contact with ordnance contamination located on the surface. The possibility of exposure during intrusive activities remains and therefore removal of risk associated with UXO/OEW is not fully achieved. Implementation of this alternative can not ensure removal of all contamination and therefore there is a potential risk to the public or the environment.

6.3.4.1.3 Reduction of MTV

The threats associated with exposure to contamination are partially addressed with this alternative. UXO/OEW contamination discovered on the surface would be removed or destroyed under this alternative. However, any subsurface UXO/OEW would remain and therefore the MTV of the buried contaminants would remain unchanged.

6.3.4.1.4 Short-Term Effectiveness

Potential worker exposure to OEW/UXO will occur during the implementation of this alternative, specifically with respect to site preparation activities (vegetation clearance) and surface clearance where the risk of exposure to OEW/UXO is increased. To minimize exposure and risk only qualified and appropriately trained personnel will be allowed to work the site and then only after work and safety plans, including UXO operations plans, have been approved. Protective measures would be taken in event CWM is discovered. There is minimal anticipated risk to the affected community resulting from implementation of the proposed action. Discovery of OEW/UXO at the private residential sites could require temporary evacuation of the area, causing a temporary inconvenience to homeowners and nearby residents. Noise from detonation of UXO will potentially impact the local community.

6.3.4.1.5 Compliance with ARARs

No chemical-specific ARARs are associated with OEW/UXO. The action-specific ARARs potentially applicable to this alternative include excavation and worker safety (Table 3-6). The location-specific ARARs potentially applicable to this alternative will be complied with during site activities.

6.3.4.2 Implementability

6.3.4.2.1 Technical Feasibility

The technology associated with this alternative is reliable, readily accessible, and easily implementable.

6.3.4.2.2 Administrative Feasibility

This alternative should be administratively feasible. However, it will require coordination with the South Carolina Department of Parks, Recreation, and Tourism and the local park management for OOU1A, OOU1B, OOU2, and OOU7. Approval and coordination with private property owners will be required for OOU3, OOU5, OOU6, and part of OOU2. No permits or waivers are anticipated and there should not be a need for easements, right-of-way agreements, or zoning variances. However, permits and/or approvals may be required if it becomes necessary to transport OEW offsite for disposal.

6.3.4.2.3 Availability of Services and Materials

The specialized personnel, instrumentation, materials, equipment, and technology required to implement this alternative are readily available. Special equipment and skills are associated with the geophysical investigation and the recovery and disposal of OEW/UXO. UXO-qualified personnel will be required to perform these tasks.

6.3.4.2.4 State Acceptance

State acceptance should be easily achieved since no permits or approvals would be required.

6.3.4.2.5 Community Acceptance

The community may have concerns regarding this alternative since it does not necessarily remove all the contamination and therefore may not be viewed as a permanent solution. OOUs located within the park boundary (OOU1A, OOU1B, OOU2, and OOU7) have varying degrees of access, and there may be a clear public preference for more complete clearance of these areas rather than the less effective surface clearance. However, this alternative would be viewed as preferable to Alternative 1, No Further Action or Alternative 2, Institutional Controls. Similar concerns may be expressed for OOU3, OOU5, and OOU6 (the private property sites). The need for a positive community relations campaign may be warranted.

6.3.4.3 Cost

The estimated capital cost includes mobilization/demobilization; access to and within the site; site preparation (vegetation clearance); site survey layout and QC; visual and limited geophysical investigations of the surface to detect OEW/UXO; recovery and disposal of OEW/UXO; and restoration of the site.

6.3.4.3.1 The estimated capital costs to implement Alternative 4 at OOU1A, OOU1B, OOU2, OOU3, OOU5, OOU6, and OOU7 are, respectively: $10,100,000, $521,000, $3,410,000, $61,100, $39,600, $4,250,000, and $2,210,000. Annual sign inspection/maintenance costs are estimated at $1,000 (OOU1A), $700 (OOU1B), $1,200 (OOU2), $500 (OOU3), $500 (OOU5), $1,100 (OOU6), and $750 (OOU7).

6.3.5 Alternative 5: Clearance to Depth

This alternative involves surface/subsurface detection, recovery, and removal of OEW/UXO to a predetermined depth. The planned depth is either the maximum depth at which OEW/UXO was recorded during the EE/CA field sampling effort completed by ESE in January 1995, *or 12 inches, whichever is greater*, and will vary between sites with the greater depths at areas identified as mortar or 105mm impact areas (OOU1B, OOU2, OOU6, and OOU7). Acknowledging that OEW/UXO contamination could exist below the maximum recorded depth, Acknowledging that OEW/UXO contamination could exist below the maximum recorded depth, the remediation depth should be reevaluated, if during the actual removal operations, anomalies are detected at greater than the remediation depth. Additionally, at any site for which planned subsurface intrusive activities, such as building construction or installation of utility lines, can be identified prior to the actual removal operation, consideration should be given for clearance to at least the depth of the planned excavation. This will be particularly important at the privately owned sites where control of future activities is not practicable.

6.3.5.0.1 For OOU1B, clearance to depth is being proposed for the entire site. The maximum depth reported during the field investigation was 15 inches. Therefore, the proposed removal depth is 15 inches.

6.3.5.0.2 For OOU2, clearance to depth is being proposed for the entire site, which includes both public (park) and private properties. It may, however, be implemented at one property in conjunction with another alternative at the other property (e.g., clearance to depth on the park property and surface clearance on the private property).

6.3.5.0.3 For OOU2, the maximum depth reported during the field investigation was 24 inches. Therefore, the proposed removal depth is 24 inches.

6.3.5.0.4 For OOU3, the maximum depth reported during the field investigation was 19 inches. Therefore, the proposed removal depth is 19 inches. Because this is a private residential site, the potential for future excavation and exposure to OEW/UXO that may not have been detected during a clearance to depth operation must be considered. For locations where construction footprints, utility line routes, or other planned subsurface construction or installation can be identified and specifically located *prior to* the removal action, consideration should be given for clearance at least to the depth of the planned excavation. This could apply to preplanned residential construction such as home additions and swimming pools.

6.3.5.0.5 As further protection, notification and warning should be recorded, as appropriate, for the benefit of both current and future property owners, that the site has been cleared only to a specific depth and that caution should be observed during any future excavation activities and in particular, excavations below the cleared depths.

6.3.5.0.6 For OOU6, the maximum depth reported during the EE/CA field investigation was 23 inches. However, the maximum depth recorded during the TCRA was approximately 2 to 2.5 ft. Therefore, the proposed removal depth is 30 inches. The property owner plans to conduct commercial/industrial operations within this site. Included are plans for tree farming, ponds, industrial landfills, and potentially a private residence. Proposed construction areas that can be clearly delineated in advance of the removal action should be considered for clearance to at least the depth of planned excavation.

6.3.5.0.7 For OOU7, the maximum depth reported during the EE/CA field investigation was 22 inches. A TCRA was performed at this site; however, it was limited to surface clearance only. Therefore, the proposed removal depth is 22 inches.

6.3.5.0.8 For locations where construction footprints, utility line routes, or other planned subsurface construction or installation can be identified and specifically located *prior to* the removal action, consideration should be given for clearance at least to the depth of planned excavations.

6.3.5.1 Effectiveness

6.3.5.1.1 Overall Protection of Public Health and the Environment

Of the alternatives under consideration, the "clearance to depth" alternative will clearly provide the highest level of overall protection of public health and the environment. However, it must be recognized that this alternative provides for removal to the depth at which OEW/UXO was confirmed to be present during the EE/CA field sampling, and therefore is not a complete removal. Therefore, any contamination that may exist below the depth of clearance will remain in place and be a potential threat in the future should it become exposed.

6.3.5.1.2 Long-Term Effectiveness and Permanence

Implementation of this alternative will greatly reduce the possibility of direct exposure to OEW/UXO. The magnitude of risk would be reduced at the conclusion of this alternative. The alternative is permanent.

6.3.5.1.3 Reduction of MTV

OEW/UXO discovered on and below the surface will be destroyed in-place or removed and destroyed offsite. To the extent that OEW/UXO is removed and destroyed under this alternative, the MTV of the contaminants would be eliminated or greatly reduced.

6.3.5.1.3.1 Reduction in exposure to potential UXO can be considered as a measure of reduction in MTV. The risk analysis performed by QuantiTech estimated the exposures to potential UXO at each OOU (see Appendix G). Reductions in these probabilities for corresponding removal depths of 1 ft and 4 ft were reported for OOU2, OOU6, and OOU7.

6.3.5.1.3.2 Estimated reductions for the 1-ft removal depth were 90 percent, 34 percent, and 50 percent for OOU2, OOU6, and OOU7, respectively. Estimated reductions for the 4-ft depth were 90 percent, 75 percent, and 80 percent, respectively. The exposures at OOU1B and OOU3 were estimated to be zero; therefore, no reductions were reported for these sites.

6.3.5.1.3.3 At OOU2, the planned clearance depth is 24 inches. Based on the above estimated reduction in exposures for OOU2, clearance to 24 inches should achieve at least 90-percent reduction, which would represent a significant reduction of MTV.

6.3.5.1.3.4 At OOU6, the planned clearance depth is 30 inches. Based on the above estimated reduction in exposures for OOU6, clearance to 30 inches should achieve at least 30-percent reduction, which would represent a significant reduction of MTV.

6.3.5.1.3.5 At OOU7, the planned clearance depth is 22 inches. Based on the above estimated reduction in exposures for OOU7, clearance to 22 inches should achieve at least 50-percent reduction, which would represent a significant reduction of MTV.

6.3.5.1.4 Short-Term Effectiveness

Potential worker exposure to OEW/UXO will occur during the implementation of this alternative, specifically with respect to site preparation activities (vegetation clearance) and surface/subsurface clearance, where the risk of exposure to OEW/UXO is increased. To minimize exposure and risk, only qualified and appropriately trained personnel will be allowed to work the site and then only after work and safety plans, including UXO operations plans, have been approved. Protective measures would be taken in the event CWM is discovered. There is minimal anticipated risk to the affected community resulting from implementation of the proposed action. Discovery of OEW/UXO at the private residential sites (OOU3, OOU5, OOU6, and part of OOU2) could require temporary evacuation of the area, causing a temporary inconvenience to homeowners and nearby residents. Noise from detonation of UXO may be a potential source of impact on the local community.

6.3.5.1.5 Compliance with ARARs

No chemical-specific ARARs are associated with OEW/UXO. The action-specific ARARs potentially applicable to this alternative include excavation and worker safety (Table 3-6). The location-specific ARARs potentially applicable to this alternative will be complied with during site activities.

6.3.5.2 Implementability

6.3.5.2.1 Technical Feasibility

The technology associated with this alternative is reliable, readily accessible, and easily implementable.

6.3.5.2.2 Administrative Feasibility

This alternative should be administratively feasible. However, it will require coordination with the South Carolina Department of Parks, Recreation, and Tourism and the local park management for OOU1B, OOU2, and OOU7. Approval and coordination with private property owners will be required for OOU3, OOU5, OOU6, and part of OOU2. No permits or waivers are anticipated, and there should not be a need for easements, right-of-way agreements, or zoning variances. However, permits and/or approvals may be required if it becomes necessary to transport OEW offsite for disposal.

6.3.5.2.3 Availability of Services and Materials

The specialized personnel, instrumentation, materials, equipment, and technology required to implement this alternative are readily available. Special equipment and skills are associated with the geophysical investigation and the recovery and disposal of OEW/UXO. UXO-qualified personnel will be required to perform these tasks.

6.3.5.2.4 State Acceptance

State acceptance should be easily achieved since no permits or approvals would be required.

6.3.5.2.5 Community Acceptance

It is anticipated that this alternative will be well-received by the local community, since it represents the highest proposed level of OEW/UXO removal and should result in the greatest overall protection to the public. However, some local citizens may be concerned that the alternative will result in unnecessary disruption of daily activities and potential destruction of property and/or habitat due to excavation and in-place detonation activities. The need for a positive community relations campaign may be warranted to ensure the public that appropriate measures will be taken to minimize any inconvenience and prevent damage to local property or habitat.

6.3.5.3 Cost

6.3.5.3.1 The estimated capital cost includes mobilization/demobilization, access to and within the site, site preparation (vegetation clearance), geophysical survey to detect surface/subsurface OEW/UXO, recovery and disposal of OEW/UXO, and restoration of the site.

6.3.5.3.2 The estimated capital costs to implement Alternative 5 at OOU1B, OOU2, OOU3, OOU6, and OOU7 are respectively: $804,000, $4,980,000, $131,000, $9,410,000, and $3,400,000. Annual sign inspection/maintenance costs are estimated at $700 (OOU1B), $1,200 (OOU2), $500 (OOU3), $1,100 (OOU6), and $750 (OOU7).

7.0 Comparative Analysis of Risk Reduction Alternatives

The previous section described and evaluated five risk reduction alternatives:

- Alternative 1: No Further Action,
- Alternative 2: Institutional Controls,
- Alternative 3: Government Buyback,
- Alternative 4: Surface Clearance, and
- Alternative 5: Clearance to Depth.

7.0.1 Of these five alternatives, not all were retained for evaluation at each OOU. The rationale for retaining specific alternatives was provided, and Table 6-1 listed those retained for each OOU. In this section, a comparative analysis of the retained alternatives is presented for each OOU.

7.1 Ordnance Operable Unit 1A (OOU1A)

Due to the type of ordnance items discovered [inert 37mm and 57mm projectiles, small arms slugs (scrap)] and the limited land use (hiking, horseback riding), potential risk to the public and environment is considered to be minimal in OOU1A. Therefore, only Alternative 1, No Further Action, Alternative 2, Institutional Controls, and Alternative 4, Surface Clearance, were evaluated.

7.1.1 Effectiveness

7.1.1.1 Overall Protection of Public Health and the Environment

Alternative 1, No Further Action, implements no action at the OOU, leaving potential OEW/UXO in place and providing no additional protection of public health or the environment. Alternative 2, Institutional Controls, implements sign posting and education to reduce potential exposure to OEW/UXO. Sign posting followed by an educational campaign instituted within the park provides some protection to public health by reducing the probability of human exposure to OEW/UXO during park activities. Alternative 4, Surface Clearance, would be effective in removing OEW/UXO items that are most likely to be encountered by the public based on the land use (horseback riding and hiking). However, subsurface OEW/UXO, if present, would remain, necessarily limiting activities at OOU1A to surface use. Based solely on the current and anticipated land use of OOU1A, this alternative provides increased protection of public health.

7.1.1.1.1 Each alternative (except Alternative 1, No Further Action) includes sign posting to reduce potential exposure to OEW/UXO. Sign posting followed by an educational campaign instituted within the park provides some protection to public health by reducing the probability of human exposure to OEW/UXO during park activities.

7.1.1.1.2 In summary, Alternative 4, Surface Clearance, provides the most protection to the public and the environment. Alternative 2, Institutional Controls, provides some protection through warnings to the public. Alternative 1, No Further Action, provides no protection.

7.1.1.2 Long-Term Effectiveness and Permanence

Alternative 1, No Further Action, implements no action at the site, and therefore would not provide long-term effectiveness or permanence. Alternative 2, Institutional Controls, should be effective in the long-term and provide permanence as long as the signs and the educational program are maintained, and the land use remains unchanged. However, since the potential contaminants remain in place, liability and risk will persist.

7.1.1.2.1 Alternative 4, Surface Clearance, is a reliable means of reducing exposure to those not engaged in intrusive activities. Based on the existing and anticipated land use (horseback riding and hiking), it is likely that the public would not engage in intrusive activities at this OOU. Therefore, this alternative should be considered as an effective and permanent means of reducing risk at the OOU. However, the possibility of exposure during intrusive activities would remain. Implementation of this alternative cannot ensure removal of all potential OEW/UXO contaminants, which leaves a potential risk to the public or the environment should intrusive activities be performed (e.g., digging, driving tent pegs).

7.1.1.2.2 In summary, Alternative 1 would provide no long-term effectiveness or permanence. Alternative 2 would provide long-term effectiveness and permanence if the institutional controls are monitored, evaluated, and maintained. Alternative 4 would achieve the highest level of long-term effectiveness and permanence.

7.1.1.3 Reduction of MTV

The MTV of the potential OEW/UXO contamination would remain unchanged with implementation of Alternatives 1 or 2. Alternatives 2 or 4, Surface Clearance, would address the threats associated with exposure to OEW/UXO contamination discovered at the surface. However, the MTV of any buried ordnance would remain unchanged.

7.1.1.4 Short-Term Effectiveness

Alternative 1, No Further Action, implements no action at the OOU, and therefore would cause no inconvenience to the community or risk to workers. Alternative 2, Institutional Controls, poses worker safety concerns during sign posting. However, the probability of exposure to ordnance contamination during sign posting is expected to be minimal. The activities of park visitors might be limited during the period of implementation of this alternative, but there should be no impact on the community. This alternative would have no impact on the environment.

7.1.1.4.1 Alternative 4, Surface Clearance, poses worker safety concerns due to the potential for exposure to OEW/UXO during surface clearance. Additional safety concerns are associated with brush clearance operations in heavily vegetated terrain. The risk associated with exposure would be minimized using the services of UXO-qualified personnel for surface clearance operations. Little risk is expected to the community during the short-term, and only minor inconvenience is expected, as access by park visitors would be restricted during surface clearance operations.

7.1.1.4.2 Alternative 4 would have the least short-term effectiveness since it poses safety concerns to workers during OEW/UXO surface clearance operations. Alternative 1, No Further Action, poses no safety risk during implementation. Alternative 2 poses minimal safety concerns to workers but no impact on the community. The only impact on the community may be short-term inconvenience to park visitors during Alternative 4 surface clearance operations.

7.1.1.5 Compliance with ARARs

ARARs are listed in Table 3-6, Section 3.7.1. No chemical-specific ARARs are associated with OEW/UXO. The action- and location-specific ARARs are not applicable to Alternative 1. The action specific-ARARs potentially applicable to Alternatives 2 or 4 include worker safety and OEW transportation. The location-specific ARARs potentially applicable to OOU1A would be complied with during implementation of Alternatives 2 or 4.

7.1.2 Implementability

7.1.2.1 Technical Feasibility

Alternative 1, No Further Action, involves no action at the OOU and is technically feasible. Alternative 2, Institutional Controls, is also technically feasible. Alternative 4, Surface Clearance, is technically feasible and implementable. However, efforts associated with implementing this alternative in parts of the OOU may be difficult due to heavy vegetation and limited access.

7.1.2.2 Administrative Feasibility

Alternative 1 is administratively feasible. Alternative 2 is administratively feasible, but will require coordination and cooperation of park personnel and management during both short- and long-term implementation. Alternative 4 is administratively feasible but will require coordination and cooperation from Croft State Park personnel and management and the public (park visitors) during implementation.

7.1.2.3 Availability of Services and Materials

Alternative 1 requires no services or materials. The services and materials to implement Alternative 2 are readily available. During installation of sign posts, services of UXO-trained personnel are required. Alternative 4 requires special equipment and skills, UXO-qualified personnel, technology (geophysical investigation), and land clearing. However, with proper planning and scheduling, all required resources should be available.

7.1.2.4 State (Support Agency) Acceptance

State and local agency acceptance is not required for Alternative 1. Alternatives 2 or 4 should receive state acceptance but will require approval from the South Carolina Department of Parks, Recreation, and Tourism.

7.1.2.5 Community Acceptance

Initial community acceptance to Alternative 1 may be low since no action would be implemented to reduce the risk of exposure to potential ordnance contamination. However, based on non-intrusive land use (e.g., hiking, horseback riding) and the resulting low level of risk, Alternative 1 may be acceptable to the community.

7.1.2.5.1 Community acceptance to Alternative 4 can be expected to be greater than Alternatives 1 or 2, since ordnance clearance would be implemented. However, this alternative may receive some opposition from the community during the short-term due to restricted access to the OOU and required vegetation clearance.

7.1.3 Cost

The estimated cost for Alternative 2 is $11,200, while the estimated cost to implement Alternative 3 (Surface Clearance) is much higher at $10,100,000 (Appendix H). Annual costs of $1,000 are estimated for sign inspection/maintenance activities. No costs are associated with Alternative 1.

7.2 Ordnance Operable Unit 1B (OOU1B)

OEW/UXO items discovered in OOU1B (60mm and 81mm mortar rounds, numerous mortar parts, and fragmentation) confirmed the area as a former mortar impact zone. Although current and projected land use is limited to non-intrusive activities such as hiking and horseback riding, the hazard associated with the ordnance items indicates that a risk reduction should be considered at OOU1B. Therefore, Alternative 4, Surface Clearance, and Alternative 5, Clearance to Depth, were evaluated along with Alternative 1, No Further Action, and Alternative 2, Institutional Controls.

7.2.1 Effectiveness

7.2.1.1 Overall Protection of Public Health and the Environment

Alternative 1, No Further Action, implements no action at the OOU, leaving potential OEW/UXO in place and providing no additional protection of public health or the environment. Alternative 2, Institutional Controls, implements sign posting and education to reduce potential exposure to OEW/UXO. Sign posting followed by an educational campaign instituted within the park provides some protection to public health by reducing the probability of human exposure to OEW/UXO during park activities including hiking and horseback riding.

7.2.1.1.1 Alternative 4, Surface Clearance, would be effective in removing OEW/UXO items most likely to be encountered on the surface. Subsurface OEW/UXO would remain. Therefore, to be effective and provide protection to the public and the environment, this alternative would limit activities to surface use.

7.2.1.1.2 Alternative 5, Clearance to Depth, significantly reduces the potential for direct contact with OEW/UXO unless intrusive activities are initiated below the clearance depth, and provides the most effective overall protection of public health and the environment.

7.2.1.1.3 In summary, Alternative 5, Clearance to Depth, provides the highest level of protection to the public and the environment. Alternative 4 provides less protection than Alternative 5 but more than Alternative 2. Alternative 1 provides no protection.

7.2.1.1.4 Each alternative (except Alternative 1, No Further Action) includes sign posting to reduce potential exposure to OEW/UXO. Sign posting followed by an educational campaign instituted within the park provides some protection to public health by reducing the probability of exposure to OEW/UXO.

7.2.1.2 Long-Term Effectiveness and Permanence

Alternative 1, No Further Action, implements no action at the site, and therefore would not provide long-term effectiveness and permanence. Alternative 2, Institutional Controls, should be effective in the long-term and provide permanence as long as the signs and the educational program are maintained and the land use remains unchanged. However, since the potential contaminants remain in place, liability and risk will persist.

7.2.1.2.1 Alternative 4, Surface Clearance, should provide long-term effectiveness and permanence, but only to the extent that land use activities are restricted to surface use. Alternative 5, Clearance to Depth, would significantly reduce the potential for exposure to OEW/UXO. Implementation of this alternative should provide long-term effectiveness and permanence unless intrusive activities are initiated below the clearance depth. The public will be warned against engaging in intrusive activities and, in particular, at depths below the clearance depth.

7.2.1.2.2 In summary, Alternative 1 would provide no long-term effectiveness or permanence. Alternative 2 would achieve long-term effectiveness and permanence provided the institutional controls are monitored, evaluated, and maintained. Alternative 4 would achieve long-term effectiveness and permanence as long as intrusive activities are not performed. Alternative 5 should achieve the highest level of long-term effectiveness and permanence, since it includes the highest level of ordnance removal.

7.2.1.3 Reduction of MTV

The MTV of the potential OEW/UXO contamination would remain unchanged with implementation of Alternatives 1 or 2. Alternative 4, Surface Clearance, would partially address the threats associated with exposure to OEW/UXO contamination, since the OEW/UXO discovered at the surface would be removed and destroyed. However, the MTV of any buried ordnance would remain unchanged. Alternative 5, Clearance to Depth, would significantly reduce the MTV of the potential contaminant, since it involves clearance of both surface and subsurface ordnance.

7.2.1.4 Short-Term Effectiveness

Alternative 1, No Further Action, implements no action at the OOU and therefore would cause no inconvenience to the community and no risks to workers. Alternative 2, Institutional Controls, poses worker safety concerns during sign posting. However, the probability of exposure to ordnance contamination during sign posting is expected to be minimal. The activities of park visitors might be limited during the period of implementation. However, there should be no impact on the community. This alternative would have no impact on the environment.

7.2.1.4.1 Alternative 4, Surface Clearance, and Alternative 5, Clearance to Depth, pose significant worker safety concerns, with the potential for worker exposure to OEW/UXO during clearance. Additional safety concerns would be associated with brush clearance operations in heavily vegetated terrain. However, the risk associated with exposure to OEW/UXO would be minimized using the services of UXO-qualified personnel for surface clearance operations. Minimal risk is expected to the community during the short-term implementation of either alternative. Access to the OOU would be restricted during the period of implementation of this alternative, potentially causing temporary inconvenience to the public.

7.2.1.4.2 In summary, Alternatives 4 and 5 would have the least short-term effectiveness since each alternative poses significant worker safety concerns and, specifically, the most inconvenience to the public. Alternative 1, No Further Action, poses no safety risk during implementation.

7.2.1.5 Compliance with ARARs

ARARs are listed in Table 3-6, Section 3.7.1. No chemical-specific ARARs are associated with OEW/UXO. The action- and location-specific ARARs are not applicable to Alternative 1. The action specific-ARARs potentially applicable to Alternatives 2, 4, and 5 include worker safety and transportation of OEW. The location-specific ARARs potentially applicable to OOU1B would be complied with during implementation of Alternatives 2, 4, or 5.

7.2.2 Implementability

7.2.2.1 Technical Feasibility

Alternative 1, No Further Action, involves no action at the OOU and is technically feasible. Alternative 2, Institutional Controls, is also technically feasible. Alternative 4, Surface Clearance, and Alternative 5, Clearance to Depth, are technically feasible and implementable. However, efforts associated with implementing these alternatives in parts of the OOU may be difficult due to heavy vegetation and limited access.

7.2.2.2 Administrative Feasibility

Alternative 1 is administratively feasible. Alternatives 2, 4, and 5 are also administratively feasible, but will require coordination and cooperation of park personnel and management during both short- and long-term implementation.

7.2.2.3 Availability of Services and Materials

Alternative 1 requires no services or materials. The services and materials to implement Alternative 2 are readily available. During installation of sign posts, services of UXO-trained personnel are required. Alternatives 4 and 5 require special equipment and skills, UXO-qualified personnel, technology (geophysical investigation and handling of UXO), and land clearing. However, with proper planning and scheduling, all required resources should be available.

7.2.2.4 State (Support Agency) Acceptance

State and local agency acceptance is not required for Alternative 1. State acceptance of Alternatives 2, 4, and 5 is expected; however, each will likely require approval of the South Carolina Department of Parks, Recreation, and Tourism.

7.2.2.5 Community Acceptance

Initial community acceptance to Alternative 1 may be low since no action would be implemented to reduce the risk of exposure to potential ordnance contamination. However, based on non-intrusive land use (e.g., hiking, horseback riding) and the resulting low level of risk, Alternative 1 may be acceptable to the community.

7.2.2.5.1 Community acceptance to Alternative 2 can be expected to be greater than Alternative 1, since some level of action is proposed to address potential ordnance contamination at the OOU.

7.2.2.5.2 Community acceptance to Alternatives 4 and 5 can be expected to be greater than Alternatives 1 or 2, since ordnance clearance would be implemented. However, some opposition from the community may exist during the short-term due to restricted access to the OOU and required vegetation clearance.

7.2.2.5.3 In summary, Alternatives 4 and 5 should be well received by the community, since they each provide for increased levels of protection over Alternatives 1 or 2. Alternative 1 is expected to be least well received.

7.2.3 Cost

Alternative 1 incurs no cost and is therefore the least expensive of the four alternatives. The estimated cost to implement Alternative 2 (Institutional Controls) is $5,280. The estimated cost to implement Alternative 4 (Surface Clearance) is $521,000. The estimated cost to implement Alternative 5 (Clearance to Depth) is $804,000 (Appendix H). Annual costs of $700 are estimated for sign inspection/maintenance activities.

7.3 Ordnance Operable Unit 2 (OOU2)

OEW/UXO items discovered in OOU2 (60mm and 81mm mortar rounds, numerous mortar parts, fragmentation, and scrap) confirmed the area contains one or more former mortar impact zones. Although the majority of land use in OOU2 is expected to be non-intrusive, camping and other potentially intrusive activities are anticipated. The potential hazard associated with exposure to UXO items requires that risk reduction alternatives be considered as well as Alternative 1, No Further Action, and Alternative 2, Institutional Controls. Risk reduction alternatives evaluated include Alternative 4, Surface Clearance, and Alternative 5, Clearance to Depth.

7.3.1 Effectiveness

7.3.1.1 Overall Protection of Public Health and the Environment

Alternative 1, No Further Action, implements no action at the OOU, leaving potential OEW/UXO in place and providing no additional protection of public health or the environment. Alternative 2, Institutional Controls, implements sign posting and education to reduce potential exposure to

OEW/UXO. Sign posting followed by an educational campaign instituted within the park provides some protection to public health by reducing the probability of exposure to OEW/UXO, but only to the extent that unauthorized intrusive activities are prevented. Prevention may be difficult due to the remote geographic location of the OOU on the outskirts of the park boundary.

7.3.1.1.1 Alternative 4, Surface Clearance, would be effective in removing OEW/UXO items most likely to be encountered on the surface. Subsurface OEW/UXO, if present, would remain. Therefore, to be effective and provide protection to the public and the environment, this alternative would limit activities to surface use.

7.3.1.1.2 Alternative 5, Clearance to Depth, significantly reduces the potential for direct contact with OEW/UXO unless intrusive activities are initiated below the clearance depth, and provides the most effective overall protection of public health and the environment.

7.3.1.1.3 In summary, Alternative 5, Clearance to Depth, provides the highest level of protection to the public, owners and users of private property, and the environment. Alternative 4 provides less protection than Alternative 5 but more than Alternative 2. Alternative 1 provides no protection.

7.3.1.2 Long-Term Effectiveness and Permanence

Alternative 1, No Further Action, implements no action at the site, and therefore would not provide long-term effectiveness and permanence. Alternative 2, Institutional Controls, should be effective in the long term and provide permanence as long as the signs and the educational program are maintained, and the land use remains unchanged. However, since the potential contaminants remain in place, liability and risk will persist.

7.3.1.2.1 Alternative 4, Surface Clearance, should provide long-term effectiveness and permanence, but only to the extent that land use activities are restricted to surface use. This may be difficult, considering the remote location of OOU2 relative to the center of Croft State Park and also the fact that a small portion of OOU2 is located on private property, where control of land use activities is the owner's responsibility.

7.3.1.2.2 Alternative 5, Clearance to Depth, would significantly reduce the potential for exposure to OEW/UXO. Implementation of this alternative should provide long-term effectiveness and permanence unless intrusive activities are initiated below the clearance depth. It is anticipated that intrusive activities below the clearance depth are most likely to occur in the portion of the

OOU located on private property. Private property owners as well as the public will be warned against engaging in intrusive activities and in particular, at depths below the clearance depth.

7.3.1.2.3 In summary, Alternative 1 would provide no long-term effectiveness or permanence. Alternative 2 would achieve limited long-term effectiveness and permanence provided the institutional controls are monitored, evaluated, and maintained. Alternative 4 would achieve long-term effectiveness and permanence as long as intrusive activities are not performed. Alternative 5 should achieve the highest level of long-term effectiveness and permanence, since it includes the highest level of ordnance removal.

7.3.1.3 Reduction of MTV

The MTV of the potential OEW/UXO contamination would remain unchanged with implementation of Alternatives 1 or 2. Alternative 4, Surface Clearance, would partially address the threats associated with exposure to OEW/UXO contamination, since the OEW/UXO discovered at the surface would be removed and destroyed. However, the MTV of any buried ordnance would remain unchanged. Alternative 5, Clearance to Depth, would significantly reduce the MTV of the potential contaminant, since it involves clearance of both surface and subsurface ordnance. Based on the risk analysis completed by QuantiTech (see Appendix G), a reduction in the probability of exposure to UXO of approximately 90 percent may be achieved.

7.3.1.4 Short-Term Effectiveness

Alternative 1, No Further Action, implements no action at the OOU, and therefore would cause no inconvenience to the community and private property owners and no risks to workers. Alternative 2, Institutional Controls, poses worker safety concerns. The probability of exposure to ordnance contamination during sign posting is expected to be significant. Minimal risk is expected to the community and private property owners during the short term. However, during implementation of this alternative, access to the area may be restricted, causing temporary inconvenience to the public and/or private property owners. This alternative would have no impact on the environment.

7.3.1.4.1 Alternative 4, Surface Clearance, and Alternative 5, Clearance to Depth, pose significant worker safety concerns, with the potential for worker exposure to OEW/UXO during clearance. Additional safety concerns would be associated with brush clearance operations in heavily vegetated terrain. However, the risk associated with exposure to OEW/UXO would be minimized using the services of UXO-qualified personnel for surface clearance operations. Minimal risk is expected to the community during the short-term implementation of either alternative. Access to the OOU would be restricted during the period of implementation of this alternative, potentially causing temporary inconvenience to the public and to private property owners.

7.3.1.4.2 In summary, Alternatives 4 and 5 would have the least short-term effectiveness since each alternative poses significant worker safety concerns and, specifically, the most inconvenience to the public and to private property owners. Alternative 2, Institutional Controls, is more effective in the short term (lesser risk), and Alternative 1, No Further Action, poses no safety risk during implementation.

7.3.1.5 Compliance with ARARs

ARARs are listed in Table 3-6, Section 3.7.1. No chemical-specific ARARs are associated with OEW/UXO. The action- and location-specific ARARs are not applicable to Alternative 1. The action specific-ARARs potentially applicable to Alternatives 2, 4, and 5 include worker safety and OEW transportation. The location-specific ARARs potentially applicable to OOU2 would be complied with during implementation of Alternatives 2, 4, or 5.

7.3.2 Implementability

7.3.2.1 Technical Feasibility

Alternative 1, No Further Action, involves no action at the OOU and is technically feasible. Alternative 2, Institutional Controls, is also technically feasible. Alternative 4, Surface Clearance, and Alternative 5, Clearance to Depth, are technically feasible and implementable. However, efforts associated with implementing these alternatives in parts of the OOU may be difficult due to heavy vegetation and limited access.

7.3.2.2 Administrative Feasibility

Alternative 1 is administratively feasible. Alternatives 2, 4, and 5 are also administratively feasible, but will require coordination and cooperation of park personnel and management during both short- and long-term implementation. In addition, rights-of-entry permits will be required for the portion of OOU2 that lies on private property.

7.3.2.3 Availability of Services and Materials

Alternative 1 requires no services or materials. The services and materials to implement Alternative 2 are readily available. During installation of sign posts, services of UXO-trained personnel are required. Alternatives 4 and 5 require special equipment and skills, UXO-qualified personnel, technology (geophysical investigation and handling of UXO), and land clearing. However, with proper planning and scheduling, all required resources should be available.

7.3.2.4 State (Support Agency) Acceptance

State and local agency acceptance is not required for Alternative 1. State acceptance of Alternatives 2, 4, and 5 is expected; however, each will likely require approval of the South Carolina Department of Parks, Recreation, and Tourism.

7.3.2.5 Community Acceptance

OOU2 is unique in that a portion of the OOU is located on private property. Considering the interests of the public at large as compared to a private landowner, it would not be surprising to see a difference in the level of acceptance to any one of these alternatives. Throughout the evaluation of alternatives for risk reduction at former Camp Croft and particularly within Croft State Park, it has been assumed that the public would look favorably on any alternative that would reduce human health risk. A private landowner, on the other hand, may feel differently and be opposed to any form of action that restricts the use of his property (short or long term) or that requires disturbance of the property (brush clearance, excavation, in place detonation of UXO, etc.). Considering this, evaluation of community acceptance for Alternatives 2, 4, and 5 is limited to the public.

7.3.2.5.1 Because OOU2 is in a remote location relative to the center of park activities, and the use of the area is low, Alternative 1 may be favorably received by the community, especially if accompanied by an adequate educational program.

7.3.2.5.2 The degree of community acceptance to Alternative 2 can be expected to be greater than Alternative 1, since some level of action would be taken to address ordnance contamination at the OOU. The degree of acceptance to Alternatives 4 and 5 is expected to be greater than either Alternative 1 or 2, since actions for an increased level of ordnance clearance would be implemented. However, these alternatives may also receive some opposition from the community during the short term due to restricted access to the OOU and required vegetation clearance and excavation.

7.3.2.5.3 In summary, Alternatives 4 and 5 provide higher levels of protection to the public and the owners of the private property from ordnance contamination than do Alternatives 1 or 2. Therefore, community and public acceptance to Alternatives 4 and 5 is expected to be higher than to Alternatives 1 and 2.

7.3.3 Cost

Alternative 1 incurs no cost and is therefore the least expensive of the three alternatives. The estimated costs to implement Alternatives 2 (Institutional Controls), 3 (Surface Clearance), and 4 (Clearance to Depth) are $15,500, 3,410,000, and $4,980,000, respectively (Appendix H). Annual sign inspection/maintenance costs are estimated to be $1,200.

7.4 Ordnance Operable Unit 3 (OOU3)

Ordnance contamination discovered at OOU3 was limited to practice hand grenades, suggesting that the site could have been used as a grenade practice field. Because it is privately owned residential property and restriction of intrusive activities (e.g., planting, children digging, pool construction) is impracticable to implement, concern for the safety of current and future residents required that risk reduction alternatives be considered. Alternative 4, Surface Clearance, and Alternative 5, Clearance to Depth, were both evaluated in addition to Alternative 1, No Further Action and Alternative 3, Government Buyback.

7.4.1 Effectiveness

7.4.1.1 Overall Protection of Public Health and the Environment

Alternative 1, No Further Action, implements no action at the OOU, leaving potential OEW/UXO in place and providing no additional protection of public health or the environment.

7.4.1.1.1 Alternative 3, Government Buyback, will not remove or destroy OEW/UXO contamination and therefore cannot be seen as providing overall protection of human health and the environment. However, to the extent that interim instituted controls are effective, the threat to public health and the environment would be reduced.

7.4.1.1.2 Alternative 4, Surface Clearance, would be effective in removing OEW/UXO items most likely to be encountered on the surface. Subsurface OEW/UXO, if present, would remain. Therefore, this alternative would limit current and future land use to surface use.

7.4.1.1.3 Alternative 5, Clearance to Depth, significantly reduces the potential for direct contact with OEW/UXO, unless intrusive activities are initiated below the clearance depth, and provides overall protection of public health and the environment.

7.4.1.1.4 In summary, Alternative 5, Clearance to Depth, should provide the highest level of protection to the present and future owners, residents, and the environment. Alternative 4 should provide the second highest level of protection. Alternative 3 would provide interim protection to the extent that interim institutional controls are effective. Alternative 1 would provide the least protection.

7.4.1.2 Long-Term Effectiveness and Permanence

Alternative 1, No Further Action, implements no action at the site, and therefore would not provide long-term effectiveness and permanence.

7.4.1.2.1 Alternative 3, Government Buyback, should provide long-term protection and permanence as long as interim institutional controls are maintained. Long-term effectiveness and permanence cannot be fully achieved until further activities result in the removal of OEW/UXO contamination.

7.4.1.2.2 Alternative 4, Surface Clearance, should provide long-term effectiveness and permanence, but only to the extent that land use activities are restricted to surface use. Considering that this is private residential property, the practicability of enforcing such restrictions is questionable, and therefore the long-term effectiveness and permanence may be reduced.

7.4.1.2.3 Alternative 5, Clearance to Depth, would significantly reduce the potential for exposure to OEW/UXO, and should be effective and permanent. However, this effectiveness and permanence could be compromised if intrusive activities are performed below the clearance depth.

7.4.1.2.4 In summary, Alternative 5, Clearance to Depth, should provide the highest level of effectiveness and permanence, with Alternative 4, Surface Clearance, providing the second-highest level. Alternative 3, Government Buyback, will not provide long-term effectiveness and permanence until future activities result in the removal of OEW/UXO contamination. Alternative 1, No Further Action, would provide the least effectiveness and permanence.

7.4.1.3 Reduction of MTV

The MTV of the potential OEW/UXO contamination would remain unchanged with implementation of Alternative 1. With Alternative 3, Government Buyback, the MTV would remain unchanged until future removal activities are implemented and made effective. Alternative 4, Surface Clearance, would partially address the threats associated with exposure to OEW/UXO contamination, since the OEW/UXO discovered at the surface would be removed and destroyed. However, the MTV of any buried ordnance would remain unchanged. Alternative 5, Clearance to Depth, would significantly reduce the MTV of potential contaminants, since it results in removal and destruction of both surface and subsurface contaminants.

7.4.1.4 Short-Term Effectiveness

Alternative 1, No Further Action, implements no action at the OOU, and therefore would cause no inconvenience to the residents of the property or risks to the safety of workers.

7.4.1.4.1 Alternative 3, Government Buyback, poses worker safety concerns during fence and/or sign installation. However, the exposure risk can be maintained low through the practice of UXO avoidance and the presence of a UXO-qualified person to clear the sites prior to digging.

7.4.1.4.2 Alternative 4, Surface Clearance, and Alternative 5, Clearance to Depth, pose worker safety concerns due to the potential for ordnance exposure during clearance activities. However, the risk of exposure would be minimized by using the services of UXO-qualified personnel.

7.4.1.5 Compliance with ARARs

ARARs are listed in Table 3-6, Section 3.7.1. No chemical-specific ARARs are associated with OEW/UXO. The action- and location-specific ARARs are not applicable to Alternative 1. The action specific-ARARs potentially applicable to Alternatives 3, 4, and 5 include worker safety and transportation of OEW. The location-specific ARARs potentially applicable to OOU3 would be complied with during implementation of Alternatives 3, 4, or 5.

7.4.2 Implementability

7.4.2.1 Technical Feasibility

Alternative 1, No Further Action, involves no action at the OOU and is technically feasible. Alternative 3, Government Buyback, involves land purchase and may present a financial and legal challenge to the government. Alternative 4, Surface Clearance, and Alternative 5, Clearance to

Depth, are technically feasible and implementable. However, technical feasibility may be reduced in areas close to structures.

7.4.2.2 Administrative Feasibility

Alternative 1 is administratively feasible. Alternative 3, Government Buyback, may prove to be the most difficult since it requires the purchase of private property. Alternative 4 and Alternative 5 should also be administratively feasible. However, cooperation of the property owners and residents will be necessary, since temporary evacuation may be required during the clearance operations.

7.4.2.3 Availability of Services and Materials

Alternative 1 requires no services or materials. Alternatives 4 and 5 require special equipment and skills, UXO-qualified personnel, technology (geophysical investigation and handling of UXO), and potentially land clearing. However, with proper planning and scheduling, all required resources should be available.

7.4.2.4 State (Support Agency) Acceptance

State and local agency acceptance is not required for Alternative 1. State acceptance of Alternatives 3, 4, and 5 is expected to be favorable.

7.4.2.5 Community Acceptance

OOU3 is located in a residential neighborhood. To residents, any selected actions implemented at this site are likely to have a potential impact on their lives, especially those nearest the site. Their concerns may vary from frustration over being temporarily inconvenienced to more positive reactions over achieving a reduction in the potential exposure to OEW/UXO. However, assuming that the community will have a clear preference for reduction of risk, the acceptance of Alternative 1, No Further Action, is expected to be low. Alternative 4, Surface Clearance, and Alternative 5, Clearance to Depth, both of which should provide a clear reduction in risk, should be well received. Alternative 3, Government Buyback, may not be well received by the immediate community, since it has the potential to restrict property use and reduce property values.

7.4.3 Cost

Alternative 1 incurs no cost and is therefore the least expensive of the four alternatives. The estimated cost to implement Alternative 3, Government Buyback, is $545,000. The estimated cost to implement Alternative 4, Surface Clearance, is $61,100. The estimated cost to implement Alternative 5, Clearance to Depth, is $131,000 (Appendix H).

7.5 Ordnance Operable Unit 4 (OOU4)

OOU4 is located within Croft State Park. During the EE/CA field sampling effort, only several small calibre slugs and scrap metal were detected at the grids located at OOU4. Based on the results of this sampling effort. Alternative 1, No Further Action, is recommended for implementation. Since only one alternative was selected for OOU4, no comparative analysis of alternatives was required.

7.6 Ordnance Operable Unit 5 (OOU5)

Ordnance contamination discovered at OOU5 was limited to one rifle grenade tail boom. Because no UXO was found at the site, a no action alternative may seem most appropriate. However, because it is privately owned residential property, where restriction of intrusive activities is impracticable, concern for the safety of current and future residents requires that a risk reduction alternative be considered. Alternative 4, Surface Clearance, was evaluated in addition to Alternative 1, No Further Action, and Alternative 3, Government Buyback.

7.6.1 Effectiveness

7.6.1.1 Overall Protection of Public Health and the Environment

Alternative 1, No Further Action, implements no action at the OOU, leaving potential OEW/UXO in place and providing no additional protection of public health or the environment.

7.6.1.1.1 Alternative 3, Government Buyback, will not destroy or remove OEW/UXO contamination and, therefore, cannot be seen as providing overall protection of human health and the environment. However, to the extent that interim instituted controls are effective, the threat to public health and the environment would be reduced.

7.6.1.1.2 Alternative 4, Surface Clearance, would be effective in removing OEW/UXO items most likely to be encountered on the surface. Subsurface OEW/UXO, if present, would remain. Therefore, this alternative would limit current and future land use to surface use.

7.6.1.2 Long-Term Effectiveness and Permanence

Alternative 1, No Further Action, implements no action at the site, and therefore would not provide long-term effectiveness or permanence.

7.6.1.2.1 Alternative 3, Government Buyback, should provide long-term protection and permanence as long as interim institutional controls are maintained. Long-term effectiveness and permanence cannot be fully achieved until further activities result in the removal of OEW/UXO contamination.

7.6.1.2.2 Alternative 4, Surface Clearance, should provide long-term effectiveness and permanence, but only to the extent that land use activities are restricted to surface use. Considering that this is private residential property, the practicability of enforcing such restrictions is questionable, and therefore the long-term effectiveness and permanence may be reduced.

7.6.1.3 Reduction of MTV

The MTV of the potential OEW/UXO contamination would remain unchanged with implementation of Alternative 1. With Alternative 3, Government Buyback, the MTV would remain unchanged until future removal activities are implemented and made effective. Alternative 4, Surface Clearance, would partially address the threats associated with exposure to OEW/UXO contamination, since the OEW/UXO discovered at the surface would be removed and destroyed. However, the MTV of any buried ordnance would remain unchanged.

7.6.1.4 Short-Term Effectiveness

Alternative 1, No Further Action, implements no action at the OOU, and therefore would cause no inconvenience to the residents of the property or risks to the safety of workers.

7.6.1.4.1 Alternative 3, Government Buyback, poses worker safety concerns during fence and/or sign installation. However, the exposure risk can be maintained low through the practice of UXO avoidance and the presence of a UXO-qualified person to clear the sites prior to digging.

7.6.1.4.2 Alternative 4, Surface Clearance, poses worker safety concerns due to the potential for ordnance exposure during clearance activities. However, the risk of exposure would be minimized using the services of UXO-qualified personnel.

7.6.1.5 Compliance with ARARs

ARARs are listed in Table 3-6, Section 3.7.1. No chemical-specific ARARs are associated with OEW/UXO. The action- and location-specific ARARs are not applicable to Alternative 1. The action specific-ARARs potentially applicable to Alternatives 3 and 4 include worker safety and OEW transport. The location-specific ARARs potentially applicable to OOU5 would be complied with during implementation of Alternatives 3 or 4.

7.6.2 Implementability

7.6.2.1 Technical Feasibility

Alternative 1, No Further Action, involves no action at the OOU and is technically feasible. Alternative 3, Government Buyback, decreases land values and may present a financial and legal challenge to the government. Alternative 4, Surface Clearance, is technically feasible and implementable. However, technical feasibility may be reduced in areas close to structures.

7.6.2.2 Administrative Feasibility

Alternative 1 is administratively feasible. Alternative 3, Government Buyback, may prove to be the most difficult, since it requires the purchase of private property. Alternative 4 should also be administratively feasible. Cooperation of the property owners and residents will be necessary, since temporary evacuation may be required during the clearance operations.

7.6.2.3 Availability of Services and Materials

Alternative 1 requires no services or materials. Alternative 3, Government Buyback, will require services of UXO-trained personnel if signs are installed. Alternative 4 requires special equipment and skills, UXO-qualified personnel, technology (geophysical investigation), and potentially land clearing. However, with proper planning and scheduling, all required resources should be available.

7.6.2.4 State (Support Agency) Acceptance

State and local agency acceptance is not required for Alternative 1. State acceptance of Alternatives 3 and 4 is expected to be favorable.

7.6.2.5 Community Acceptance

OOU5 is located in a residential neighborhood. To residents, any selected actions implemented at this site are likely to have potential impact on their lives, especially those nearest the site. Their concerns may vary from frustration over being temporarily inconvenienced to more positive reactions over achieving a reduction in the potential exposure to OEW/UXO. However, assuming that the community will have a clear preference for reduction of risk, the acceptance of Alternative 1, No Further Action, is expected to be low. Alternative 4, Surface Clearance, should provide a clear reduction in risk, and should be well received. Alternative 3, Government Buyback, may not be well received in the immediate community, since it has the potential to restrict property use and reduce property values.

7.6.3 Cost

Alternative 1 incurs no cost and is therefore the least expensive of the three alternatives. The estimated cost to implement Alternative 3, Government Buyback, is $190,000. The estimated cost to implement Alternative 4, Surface Clearance, is $39,600 (Appendix H).

7.7 Ordnance Operable Unit 6 (OOU6)

OEW/UXO findings at OOU6 (Red Hill) during the EE/CA investigation and findings during the TCRA (HFA, 1995a) confirmed Red Hill as a former target area for 105mm Howitzers. Five 105mm projectiles and one 81mm illumination mortar were recovered during the EE/CA investigation. Four UXO (one 105mm projectile, one explosive burster, and two 60mm mortars) were recovered during the TCRA (HFA, 1995a). The objective of the TCRA was to remove ordnance contamination to a depth of 4 ft within access roads and other areas that the property owner had identified for potential near-term development. However, the efficiency of this action was severely reduced due to high densities of fragmentation and magnetic rock in the ground.

7.7.0.1 Because the property owner plans to develop the land for industrial use including landfills, tree farming, and potentially a homesite, consideration of additional risk reduction actions are warranted. However, the presence of extensive fragmentation and magnetic rock in the ground may make any removal action inefficient and not cost effective.

7.7.0.2 Based on the type of potential contamination at the site and the potential future land use, Alternative 4, Surface Clearance, and Alternative 5, Clearance to Depth, were both evaluated. In addition, Alternative 3, Government Buyback, was also evaluated as an alternative that would allow the government to temporarily postpone costly actions until more cost-effective methods are available.

7.7.1 Effectiveness

7.7.1.1 Overall Protection of Public Health and the Environment

Alternative 1, No Further Action, implements no action at the OOU, leaving potential OEW/UXO in place and providing no additional protection of public health or the environment.

7.7.1.1.1 Alternative 3, Government Buyback, will not remove or destroy OEW/UXO contamination and therefore cannot be seen as providing overall protection of human health and the environment. However, to the extent that interim instituted controls are effective, the threat to public health and the environment would be reduced.

7.7.1.1.2 Alternative 4, Surface Clearance, would be effective in removing OEW/UXO items most likely to be encountered on the surface and would be implemented in areas not previously surface-cleared. Subsurface OEW/UXO, if present, would remain. Therefore, this alternative would limit current and future land use to surface use only except in areas previously cleared to 4 ft during the TCRA. Limited environmental protection would be accomplished with this alternative.

7.7.1.1.3 Alternative 5, Clearance to Depth, would significantly reduce the potential for direct contact with OEW/UXO, unless intrusive activities are initiated below the clearance depth, and should provide the most effective overall protection of owners or users of the property.

7.7.1.1.4 In summary, Alternative 5, Clearance to Depth, should provide the highest level of protection. Alternative 4, Surface Clearance, would provide reduced protection. Alternative 3 would provide interim protection to the extent that interim institutional controls are effective. Alternative 1, No Further Action, would provide no increased protection.

7.7.1.2 Long-Term Effectiveness and Permanence

Alternative 1, No Further Action, implements no action at the site, and therefore would not provide long-term effectiveness and permanence.

7.7.1.2.1 Alternative 3, Government Buyback, should provide long-term protection and permanence as long as interim institutional controls are maintained. Long-term effectiveness and permanence cannot be fully achieved until further activities result in the removal of OEW/UXO contamination.

7.7.1.2.2 Alternative 4, Surface Clearance, is a reliable means of reducing exposure of OEW/UXO to those not engaged in intrusive activities. The possibility of exposure during intrusive activities, such as construction, would remain.

7.7.1.2.3 Alternative 5, Clearance to Depth, should significantly reduce the potential for exposure to OEW/UXO. Implementation of this alternative should provide long-term effectiveness and permanence, unless intrusive activities are initiated below the clearance depth.

7.7.1.2.4 In summary, Alternative 5, Clearance to Depth, should provide the highest level of long-term effectiveness and permanence since it removes both surface and subsurface ordnance. Alternative 4, Surface Clearance, should provide a reduced level of long-term effectiveness since it only reduces surface exposure. Alternative 3, Government Buyback, will not provide long-term effectiveness and permanence until future activities result in the removal of OEW/UXO contamination. Alternative 1, No Further Action, will not provide long-term protection or permanence.

7.7.1.3 Reduction of MTV

The MTV of the potential OEW/UXO contamination would remain unchanged with implementation of Alternative 1. With Alternative 3, the MTV would remain unchanged until anticipated future removal activities are implemented and made effective. Alternative 4, Surface Clearance, would partially address the threats associated with exposure to OEW/UXO contamination, since the OEW/UXO discovered at the surface would be removed and destroyed. However, the MTV of any buried ordnance would remain unchanged. Alternative 5, Clearance to Depth, would significantly reduce the MTV of the potential contaminants, since it removes both surface and subsurface ordnance contamination. Based on the risk analysis completed by QuantiTech (see Appendix G), a reduction in the probability of exposure to UXO of at least 30 percent may be achieved.

7.7.1.4 Short-Term Effectiveness

Alternative 1, No Further Action, implements no action at the OOU, and therefore would cause no inconvenience to the public or the property owner and no risks to the safety of workers.

7.7.1.4.1 Alternative 3, Government Buyback, poses worker safety concerns during fence and/or sign installation. However, the exposure risk can be maintained low through the practice of UXO avoidance and the presence of a UXO-qualified person to clear the sites prior to digging.

7.7.1.4.2 Alternatives 4, Surface Clearance, and 5, Clearance to Depth, pose worker safety concerns during clearance operations. However, the risk of exposure would be minimized using UXO-qualified personnel for surface clearance operations.

7.7.1.4.3 In summary, Alternative 1, No Further Action, would have no short-term effects. Alternative 3, Government Buyback, would have short-term effects, but only during installation of signs and fence posts. Alternative 4, Surface Clearance, and Alternative 5, Clearance to Depth, would clearly have the greatest short-term risks since each involves ordnance detection and removal.

7.7.1.5 Compliance with ARARs

ARARs are listed in Table 3-6, Section 3.7.1. No chemical-specific ARARs are associated with OEW/UXO. The action- and location-specific ARARs are not applicable to Alternative 1. The action specific-ARARs potentially applicable to Alternatives 3, 4, and 5 include worker safety and OEW transport. The location-specific ARARs potentially applicable to OOU6 would be complied with during implementation of Alternatives 4 or 5.

7.7.2 Implementability

7.7.2.1 Technical Feasibility

Alternative 1, No Further Action, involves no action at the OOU and is technically feasible. Alternative 3, Government Buyback, involves land purchase and may present a financial and legal challenge to the Government. However, it is technically feasible. Alternative 4, Surface Clearance, and Alternative 5, Clearance to Depth, are technically feasible and implementable. However, the presence of excessive fragmentation and magnetic rock may make effective implementation difficult.

7.7.2.2 Administrative Feasibility

Alternative 1, No Further Action, is administratively feasible. Alternatives 3, 4, and 5 may also be administratively feasible; however, each will require the cooperation of the current property owner. Alternative 3, Government Buyback, may prove to be the most difficult since it requires purchase of the property.

7.7.2.3 Availability of Services and Materials

Alternative 1, No Further Action, requires no services or materials. Alternative 3, Government Buyback, will require UXO-qualified personnel during installation of signs and fencing. Alternatives 4 and 5 require special equipment and skills, UXO-qualified personnel, technology (geophysical investigation and OEW/UXO handling), and land clearing.

7.7.2.4 State (Support Agency) Acceptance

State and local agency acceptance is not required for Alternative 1. State acceptance should be easily achieved since no permits or approvals are anticipated for Alternatives 3, 4, and 5.

7.7.2.5 Community Acceptance

Because OOU6 consists of private property, mostly undeveloped and remote, the community acceptance to Alternative 1, No Further Action, is expected to be favorable. However, the property owner may be less accepting since the alternative takes no action to reduce risk. Alternative 3, Government Buyback, should be favorably received by the community as well, since it takes action to prevent exposure to the public. Alternatives 4 and 5 should receive favorable acceptance since each will result in an overall reduction of risk to the property owner and his employees.

7.7.3 Cost

Alternative 1 incurs no cost and is therefore the least expensive of the four alternatives. The estimated costs to implement Alternative 3 (Government Buyback), Alternative 4 (Surface Clearance), and Alternative 5 (Clearance to Depth), are $1,220,000, $4,250,000, and $9,410,000, respectively (Appendix H).

7.8 Ordnance Operable Unit 7 (OOU7)

Ordnance contamination discovered at OOU7 during the EE/CA investigation and the TCRA surface clearance completed at high priority areas (i.e., high use) of OOU7 included sixty 60mm and two 81mm mortars, confirming the area as a former mortar impact zone. Additionally, 81mm mortars, parts of 2.36-inch rockets, and one 105mm projectile were found in this area. Because this area is used heavily by the public for recreational purposes, consideration of further risk reduction alternatives is warranted. Alternative 4, Surface Clearance, and Alternative 5, Clearance to Depth, were evaluated in addition to Alternative 1, No Further Action, and Alternative 2, Institutional Controls.

7.8.1 Effectiveness

7.8.1.1 Overall Protection of Public Health and the Environment

Alternative 1, No Further Action, implements no action at the OOU, leaving potential OEW/UXO in place and providing no additional protection of public health or the environment. Alternative 2, Institutional Controls, implements control measures of sign posting and education to reduce potential exposure to OEW/UXO. However, this alternative would only provide protection to the extent that surficial ordnance items are not present and intrusive activities are prevented.

7.8.1.1.1 Alternative 4, Surface Clearance, would be effective in removing OEW/UXO items most likely to be encountered on the surface. Subsurface OEW/UXO, if present, would remain. Therefore, this alternative would limit current and future land use to surface use.

7.8.1.1.2 Alternative 5, Clearance to Depth, would significantly reduce the potential for direct contact with OEW/UXO, unless intrusive activities are initiated below the clearance depth, and should provide the most effective overall protection of public health and the environment.

7.8.1.1.3 In summary, Alternative 5, Clearance to Depth, should provide the highest level of protection to the public, park employees, and the environment. Alternative 4 provides less protection than Alternative 5, but more than Alternative 2. Alternative 1 provides no protection.

7.8.1.2 Long-Term Effectiveness and Permanence

Alternative 1, No Further Action, implements no action at the site and therefore would not provide long-term effectiveness and permanence. Alternative 2, Institutional Controls, may provide long-term effectiveness and permanence, but only as long as the controls are appropriately maintained. With this alternative young children, particularly those that have not learned to read, are at greater risk and will require close supervision.

7.8.1.2.1 Alternative 4, Surface Clearance, should provide long-term effectiveness and permanence but only to the extent that land use activities are restricted to the surface, which may prove difficult considering the potentially intrusive nature of land use in the area (e.g., camping, picnicking).

7.8.1.2.2 Alternative 5, Clearance to Depth, should significantly reduce the potential for exposure to OEW/UXO. Implementation of this alternative should provide long-term effectiveness and permanence, unless intrusive activities are initiated below the clearance depth.

7.8.1.2.3 In summary, Alternative 1, No Further Action, would not provide any long-term effectiveness or permanence. Alternative 2, Institutional Controls, would provide for long-term effectiveness and permanence as long as the controls are properly maintained and appropriate supervision is provided to young children. Alternative 4, Surface Clearance, will provide more long-term effectiveness and permanence; however, land use must be restricted to surface use only. Alternative 5, Clearance to Depth, would provide the highest long-term effectiveness and permanence; however, intrusive activities below the clearance depth must be prevented.

7.8.1.3 Reduction of MTV

The MTV of the potential OEW/UXO contamination would remain unchanged with implementation of Alternatives 1 or 2. Alternative 4, Surface Clearance, would partially address the threats associated with exposure to OEW/UXO contamination, since the OEW/UXO discovered at the surface would be removed and destroyed. However, the MTV of any buried ordnance would remain unchanged. Alternative 5, Clearance to Depth, would significantly reduce the MTV of potential contaminants, since it results in the removal and destruction of both surface and subsurface contamination. Based on the risk analysis completed by QuantiTech (see Appendix G), a reduction in the probability of exposure to UXO of at least 50 percent may be achieved.

7.8.1.4 Short-Term Effectiveness

Alternative 1, No Further Action, implements no action at the OOU and therefore would cause no inconvenience to the public or risks to the safety of workers. Alternative 2, Institutional Controls, would pose minimal worker safety concerns during installation of signs.

7.8.1.4.1 Alternative 4, Surface Clearance, and Alternative 5, Clearance to Depth, pose safety concerns with the potential for exposure of workers to OEW/UXO during clearance operations. However, the risk associated with exposure would be minimized using UXO-qualified personnel for clearance operations. The only impact expected on the community would be temporary inconvenience, as access by the public would be restricted during implementation.

7.8.1.4.2 In summary, there would be no short-term effect of Alternative 1. Alternative 2 poses only minimal safety concerns to workers. Alternatives 4 and 5 pose the greatest safety concerns to workers.

7.8.1.5 Compliance with ARARs

ARARs are listed in Table 3-6, Section 3.7.1. No chemical-specific ARARs are associated with OEW/UXO. The action- and location-specific ARARs are not applicable for Alternative 1. The action specific-ARARs potentially applicable to Alternatives 2, 4 and 5 include worker safety and OEW transport. The location-specific ARARs potentially applicable to OOU7 would be complied with during implementation of Alternatives 2, 4, or 5.

7.8.2 Implementability

7.8.2.1 Technical Feasibility

Alternative 1, No Further Action, involves no action at the OOU and is technically feasible. The remaining alternatives are all technically feasible.

7.8.2.2 Administrative Feasibility

Alternative 1 is administratively feasible. Alternatives 2, 4, and 5 are also administratively feasible but will require coordination and cooperation of the park personnel and management during implementation.

7.8.2.3 Availability of Services and Materials

Alternative 1 requires no services or materials. The services and materials to implement Alternative 2 are readily available. During installation of sign posts, the services of UXO-trained personnel are required. Alternatives 4 and 5 require special equipment and skills, UXO-qualified personnel, technology (geophysical investigation and OEW/UXO handling), and land clearing. However, with proper planning and scheduling, all required resources should be available.

7.8.2.4 State (Support Agency) Acceptance

State and local agency acceptance is not required for Alternative 1. State acceptance of Alternatives 2, 4, and 5 is expected; however, each will likely require approval of the South Carolina Department of Parks, Recreation, and Tourism.

7.8.2.5 Community Acceptance

Community acceptance to Alternative 1 is expected to be low, since no action would be implemented to reduce the risk of exposure to potential ordnance contamination. Community acceptance to Alternative 2 can be expected to be higher, since some level of action is proposed to address ordnance contamination. Community acceptance to Alternatives 4 and 5 is expected to be even greater, since actions are proposed. However, this alternative might receive some opposition from the community due to the required vegetation clearance and excavation and restricted access to the area during the implementation period.

7.8.3 Cost

Alternative 1 incurs no cost and therefore is the least expensive of the four alternatives. The estimated cost to implement Alternative 2 (Institutional Controls), Alternative 4 (Surface Clearance), and Alternative 5 (Clearance to Depth) are $6,400; $2,210,000; and $3,400,000; respectively (Appendix H).

7.9 Ordnance Operable Unit 8 (OOU8)

Findings at OOU8 during the EE/CA field sampling effort were limited to barbed wire and scrap metal. However, 14 M6 mine shipping containers were recovered previously by CEHND's removal contractor, HFA, suggesting the possibility that the site may have been a practice minefield. Based on the results of the sampling effort, location and limited access of OOU8, Alternative 1, No Further Action, is recommended for implementation. Since only one alternative was selected for OOU8, no comparative analysis of alternatives was required.

8.0 Proposed Risk Reduction Alternatives

In the previous sections, alternatives to reduce the risk of danger to the public and the environment from the presence of OEW/UXO contamination within former Camp Croft were developed and evaluated (Sections 5.0 and 6.0). Selected alternatives were then compared for application at each OOU (Section 7.0). In this section either a risk reduction alternative or no further action is proposed for each OOU, along with an appropriate rationale. Table 8-1 lists the alternatives that were evaluated, the estimated cost of each, and the selected alternative proposal for each OOU.

8.0.1 In Section 6.0, public education was described as being a common component to each alternative, and the costs for public education were not allocated between the alternatives or the individual OOUs. Therefore, in the following summations, public education is not included in the alternative costs. The costs were estimated in Section 6.0 to be $25,000 to $50,000, initially, with annual update costs of $2,500 to $5,000.

8.1 Croft State Park

8.1.1 Ordnance Operable Unit 1A

Three alternatives were evaluated for OOU1A:

- Alternative 1—No Further Action,
- Alternative 2—Institutional Controls, and
- Alternative 4—Surface Clearance.

8.1.1.1 Alternative 1, No Further Action, is proposed for implementation at OOU1A.

8.1.1.2 OOU1A was investigated due to archive information indicating that the area had been used for mortar and/or rocket ranges (USACE, 1994). However, no evidence of mortars or rockets was found in OOU1A during the EE/CA investigation, and OEW findings were limited primarily to inert 37mm and 57mm projectiles. Therefore, the probability of potential UXO present in OOU1A is considered low.

8.1.1.3 There is no cost to implement this alternative.

Table 8-1. Risk Reduction Alternatives, Considered and Proposed

Ordnance Operable Unit	Alternatives Considered	Estimated Cost, $1,000	Proposed Alternative
Croft State Park			
OOU1A	No Further Action Institutional Controls Surface Clearance	0 11.2 10,100	No Further Action
OOU1B	No Further Action Institutional Controls Surface Clearance Clearance to Depth	0 5.28 521 804	Surface Clearance
OOU2	No Further Action Institutional Controls Surface Clearance Clearance to Depth	0 15.5 3,410 4,980	Surface Clearance
OOU4	No Further Action	0	No Further Action
OOU7	No Further Action Institutional Controls Surface Clearance Clearance to Depth	0 6.4 2,210 3,400	Clearance to Depth
OOU8	No Further Action	0	No Further Action
Private Property			
OOU3	No Further Action Government Buyback Surface Clearance Clearance to Depth	0 545 61.1 131	Clearance to Depth
OOU5	No Further Action Government Buyback Surface Clearance	0 190 39.6	No Further Action
OOU6	No Further Action Government Buyback Surface Clearance Clearance to Depth	0 1,220 4,250 9,410	Government Buyback

8.1.2 Ordnance Operable Unit 1B

Four alternatives were evaluated for OOU1B:

- Alternative 1—No Further Action,
- Alternative 2—Institutional Controls,
- Alternative 4—Surface Clearance, and
- Alternative 5—Clearance to Depth.

8.1.2.1 In the comparative analysis of these alternatives (Section 7.0), all were shown to be implementable. The alternative that would provide the highest reduction in potential risk to the public would be Alternative 5, Clearance to Depth. However, the cost of Alternative 5 is significantly higher than that of Alternative 4, Surface Clearance. Based on a combination of the following factors, Alternative 4 was selected and consists of:

- Surface clearance along trails and along the sides of Croft State Park Road, and
- Posting warning signs at trail entrances and at selected locations along Croft State Park Road.

8.1.2.2 Further justification for this selection is provided below:

- Activities in OOU1B are generally limited to surface use (i.e., non-intrusive), and therefore the probability of exposure to potential subsurface ordnance is low;
- Plans to add new trails, develop campgrounds, or conduct other intrusive activities within OOU1B do not exist and are not anticipated; and
- Limited access into OOU1B means the potential risk of exposure is most likely to occur on or adjacent to the trails and along the sides of Croft State Park Road, which runs through the OOU.

8.1.2.3 The CEHND risk contractor estimated the annual exposures to UXO within OOU1B to be zero (Sector 1B, QuantiTech report, Appendix G). However, this estimate was based on surface use only and QuantiTech's interpretation from the EE/CA sampling data that all surface UXO had been removed during the sampling effort. A more conservative conclusion is appropriate, primarily based on the fact that the EE/CA sampling included only approximately 4 percent of the total area of OOU1B and that removal of surface ordnance discovered during sampling is not a basis for conclusion that *no* other surface ordnance is present. It is believed that some level of risk remains and that the exposure levels and probability of exposure are greater than zero.

8.1.2.4 The estimated cost to implement this alternative is $521,000, with annual sign inspection/ maintenance costs of $700. Costs were discussed previously in Section 6.0, and cost estimates are included in Appendix H.

8.1.3 Ordnance Operable Unit 2

Four alternatives were evaluated for OOU2:

- Alternative 1—No Further Action,
- Alternative 2—Institutional Controls,
- Alternative 4—Surface Clearance, and
- Alternative 5—Clearance to Depth.

8.1.3.1 All four of these alternatives were shown to be implementable. However, Alternative 4, Surface Clearance, and Alternative 5, Clearance to Depth, clearly would provide the highest reduction in potential risk to the public, with Alternative 5 being the most effective. Alternative 5 is the most costly of the clearance alternatives. Based on the results of the comparative analysis and factors cited below, Alternative 4, Surface Clearance, was selected for implementation at OOU2 and consists of the following:

- Site preparation and clearing,
- Geophysical investigation,
- Recovery/disposal of UXO, and
- Quality control.

8.1.3.2 Further justification for this selection follows:

- OOU2 was investigated due to suspicion that it may have been a mortar range. The EE/CA investigation confirmed this suspicion, with the discovery of 60mm and 81mm mortar rounds.
- Activities in OOU2 are generally limited to surface use (hiking, horseback riding and hunting) with only minimal potential for intrusive activities.

8.1.3.3 It should be noted that the CEHND risk contractor estimated a probability of exposure to UXO to range from one in 11,000 to one in 19,000. This estimate was based on a weighted average across the entire OOU, which would necessarily dilute the probabilities in the concentrated impact areas. The analysis also assumes no surface UXO is present. This is an assumption that has significant impact on exposure levels. The EE/CA sampling completed in

OOU2 resulted in the removal of surface ordnance discovered during the sampling activities. However, considering that less than 1 percent of the total area was sampled, a conclusion that all surface ordnance has been removed cannot be made. A more accurate probability of exposure may be considerably greater than 1/11,000 and may also exceed the de facto cleanup standard of 1/6,665 established following the Tierrasanta FUDS removal action (see Section 3.7.4).

8.1.3.4 The estimated cost to implement this alternative is $3,410,000, with annual sign inspection/maintenance costs of $1,200. Costs were discussed previously in Section 6.0, and cost estimates are included in Appendix H.

8.1.4 Ordnance Operable Unit 4

Alternative 1—No Further Action, the only alternative evaluated for OOU4, is proposed for implementation. OOU4 was investigated due to reported findings of OEW. However, the investigation revealed only small caliber slugs (scrap) in the area. No UXO were found.

8.1.5 Ordnance Operable Unit 7

Four alternatives were evaluated for OOU7:

- Alternative 1—No Further Action,
- Alternative 2—Institutional Controls,
- Alternative 4—Surface Clearance, and
- Alternative 5—Clearance to Depth.

8.1.5.1 All four of these alternatives were shown to be implementable. However, Alternative 4, Surface Clearance, and Alternative 5, Clearance to Depth, clearly would provide the highest reduction in potential risk to the public, with Alternative 5 being the most effective. Alternative 5 is the most costly of the alternatives.

8.1.5.2 Based on the results of the comparative analysis and factors cited below, Alternative 5, Clearance to Depth, was selected for implementation at OOU7 and consists of the following:

- Site preparation and clearing,
- Geophysical investigation,
- Excavation of anomalies,
- Disposal of UXO,

- Quality control, and
- Posting warning signs at selected high use areas within OOU7.

8.1.5.3 Further justification for this selection follows:

- Land use in OOU7 is not limited to surface use, making surface clearance less effective at reducing overall risks to the public. Intrusive activities associated with camping, such as driving tent pegs, are common. The park management has also indicated a desire to construct facilities in this OOU, providing further justification for subsurface clearance.
- Users in this OOU include children, many of which may be too young to read warning signs or to understand the potential dangers associated with finding ordnance contamination.
- The CEHND risk contractor estimated the annual exposures to UXO within OOU7 to range from 56 to 71 (QuantiTech report, Appendix G). QuantiTech further estimated that the probability of exposures would be reduced from 1/2 (one in two) to 1/4, or approximately a 50 percent reduction, with clearance to 1 ft.
- The fact that the resulting probability of exposure will fall way short of achieving the de facto cleanup standard (one in 6,665) developed following the Tierrasanta FUDS removal action (see Section 3.7.4) supports the necessity of the proposed removal action.
- The TCRA performed in OOU7 was limited to high use areas and was restricted to surface clearance only. However, numerous subsurface anomalies were recorded by the contractor, indicating that subsurface UXO may still exist at the site.

8.1.5.4 The proposed clearance depth is 22 inches, based on the maximum depth at which OEW/UXO was found during the EE/CA investigation. However, if during the clearance operation significant anomalies are detected at deeper depths, clearance depth should be reevaluated.

8.1.5.5 Although this alternative should be effective at removing surface and subsurface UXO, the probability of achieving total removal is limited by the available technology. Therefore, since this is a high use area and will continue to be well into the future, this action should be supplemented by an educational program consisting of sign posting and distribution of brochures to park visitors.

8.1.5.6 If prior to implementation of the clearance action the park management can provide a footprint for the planned construction, then the clearance operation should include clearance of the footprint down to at least one foot below planned construction depth and below depth of underground utility lines.

8.1.5.7 The estimated cost to implement this alternative is $3,400,000. Costs were discussed previously in Section 6.0, and cost estimates are included in Appendix H.

8.1.6 Ordnance Operable Unit 8

Alternative 1, No Further Action, the only alternative evaluated for OOU8, is proposed for implementation. OOU8 was selected for investigation due to a suspicion that it may have contained a training minefield. Investigations revealed empty mine shipping containers (HFA, 1995a) and scrap. No UXO was found.

8.2 Private Property Sites

8.2.1 Ordnance Operable Unit 3

Four alternatives were evaluated for OOU3:

- Alternative 1—No Further Action,
- Alternative 3—Government Buyback,
- Alternative 4—Surface Clearance, and
- Alternative 5—Clearance to Depth.

8.2.1.1 Because practice hand grenades were confirmed to be present during the EE/CA investigation, and the potential exists that additional UXO may be present on this private property site, Alternative 1, No Further Action, was considered inappropriate.

8.2.1.2 Alternative 5, Clearance to Depth (to 19 inches), is the proposed alternative. The primary reason for selection of this alternative over Alternative 4, Surface Clearance, was that the site is private residential property and prevention of intrusive activities (e.g., planting, children digging, and pool construction) is impracticable, if not impossible to implement. However, the CEHND risk contractor (QuantiTech) estimated the probability of exposures to be as low as zero and as high as 1/300,000 if no action is taken at OOU3, and a maximum probability of 1/4,000,000 if clearance is performed to 1-ft depth.

8.2.1.3 Alternative 3, Government Buyback, was not chosen due to its high cost ($545,000) and the potential for poor acceptance by the immediate community.

8.2.1.4 The estimated cost to implement this alternative is $131,000. Costs were discussed previously in Section 6.0, and cost estimates are included in Appendix H.

8.2.2 Ordnance Operable Unit 5

Three alternatives were evaluated for OOU5:

- Alternative 1—No Further Action,
- Alternative 3—Government Buyback, and
- Alternative 4—Surface Clearance.

8.2.2.1 OEW/UXO discovered at OOU5 was limited to one rifle grenade tail boom. No UXO were found.

8.2.2.2 Because no UXO were found, Alternative 1, No Further Action, is the proposed alternative for implementation at OOU5.

8.2.3 Ordnance Operable Unit 6

Four alternatives were evaluated for OOU6:

- Alternative 1—No Further Action,
- Alternative 3—Government Buyback,
- Alternative 4—Surface Clearance, and
- Alternative 5—Clearance to Depth.

8.2.3.1 All four of these alternatives were shown to be implementable. However, Alternative 4, Surface Clearance, and Alternative 5, Clearance to Depth, clearly would provide the highest reductions in potential risk to the public, with Alternative 5 being the most costly and most effective. Costs associated with these two clearance alternatives are significantly higher than those associated with Alternative 3, Government Buyback.

8.2.3.2 Based on the results of the comparative analysis and factors cited below, Alternative 3, Government Buyback, supplemented with institutional controls, was selected for implementation at OOU6 and consists of:

- Purchasing 340 acres of private property by the government,
- Fencing the property boundary to prevent trespassing,
- Posting warning signs along the fence every 300 ft, and
- Suspending ongoing activities on the property at the direction of the government.

8.2.3.3 The buyback alternative is significantly less expensive than either of the two clearance alternatives and gives the government the flexibility to postpone removal activities until a more cost-effective approach can be developed. As was indicated earlier (Section 3.4.1), a TCRA was performed on a small portion of OOU6. The high density of fragmentation and magnetic rock in the ground caused a major impact on the efficiency of the operation, resulting in a high cost of approximately $66,000 per acre when cleared to 4 ft.

8.2.3.4 This alternative will also give the government the flexibility to complete selective surface and/or subsurface clearances across the site and then dispose of the land with deed restrictions limiting land use as appropriate.

8.2.3.5 The estimated cost to implement this alternative is $1,220,000. This estimated cost is based on an assumed land purchase price of $1,500 per acre. Costs were discussed previously in Section 6.0, and cost estimates are included in Appendix H. Annual costs of $2,000 are estimated for sign inspection/maintenance services.

9.0 References

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Human Factors Applications, Inc. (HFA). 1995a. *Time-Critical Removal Action, Former Camp Croft, Red Hill, Spartanburg, SC.* February 1995.

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South Carolina Department of Parks, Recreation, and Tourism. 1989. *Croft State Park Management Plan.*

U.S. Environmental Protection Agency (EPA). 1993. *Guidance on Conducting Non-time-Critical Removal Actions Under CERCLA.* Publication 9360.0-32, 8/93.

U.S. Army Corps of Engineers (USACE), Rock Island District. 1994. *Ordnance and Explosive Waste Archives Search Report for the Former Camp Croft Army Training Facility*, April, 1994.

Final
Engineering Evaluation/Cost Analysis
Former Camp Croft
Army Training Facility
Spartanburg, South Carolina

Volume II of II

Prepared for:
U.S. Army Corps of Engineers
Huntsville Division

Prepared by:
Environmental Science & Engineering, Inc.
Gainesville, Florida

January 1996

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List of Acronyms and Abbreviations

ARAR	applicable or relevant and appropriate requirements
ASR	Archive Search Report
cal	caliber
CCATF	Camp Croft Army Training Facility
CEHND	U.S. Army Corps of Engineers, Huntsville Division
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CWM	chemical or warfare materiel
DERP	Defense Environmental Restoration Program
DOD	U.S. Department of Defense
DRMO	Defense Reutilization and Marketing Office
EA	Environmental Assessment
EE/CA	Engineering Evaluation/Cost Analysis
EM	electromagnetics
EMM	earth-moving machinery
EODT	Explosive Ordnance Disposal Technology, Inc.
ESE	Environmental Science & Engineering, Inc.
FIFRA	Federal Insecticide, Fungicide, & Rodenticide Act
ft	foot
ft-bgs	feet below ground surface
FUDS	Formerly Used Defense Sites
GB	government buyback
GPR	ground penetrating radar
HE	high explosive
HEAT	high explosive anti-tank
HFA	Human Factors Applications, Inc.
INPR	Inventory Project Report
IC	institutional controls
m	meter
mm	millimeter
MTV	mobility, toxicity, or volume
NCP	National Contingency Plan
NGVD	national geodetic vertical datum
NTCRA	non-time-critical removal action
OEW	ordnance and explosive waste

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OEWCert	Ordnance and Explosive Waste Cost Effectiveness Risk Tool
OOU	Ordnance Operable Unit
PA	Preliminary Assessment Study
PPE	personal protective equipment
PRSC	post-removal site control
QA/QC	quality assurance/quality control
RAC	risk assessment code
SI	site inspection
SOP	standard operating procedure
SOW	Scope of Work
TCRA	time critical removal action
TRIA	Training Range Impact Area
TSCA	Toxic Substances Control Act
USACE	U.S. Army Corps of Engineers
USGS	U.S. Geological Survey
UXO	unexploded ordnance
WP	white phosphorus
WP	work plan

APPENDIX A
ANNEX M
STATEMENT OF WORK
ENGINEERING EVALUATION/COST ANALYSIS
FORMER CAMP CROFT ARMY TRAINING FACILITY
SPARTANBURG, SOUTH CAROLINA
31 March 1994

1. OBJECTIVE

Prepare an Engineering Evaluation/Cost Analysis (EE/CA) in accordance with the National Contingency Plan (NCP) and the special requirements of this Scope of Work (SOW). The EE/CA will be used as the basis for the selection of the corrective action in order to reduce public safety risk associated with OEW at the former Camp Croft. The A-E shall coordinate closely with the Contracting Officer and other contractor performing the interim removal of OEW. The interim removal will be performed at the same time as this EE/CA.

2. BACKGROUND

The work required under this Scope of Work (SOW) falls under the Defense Environmental Restoration Program - Formerly Used Defense Sites. Ordnance and Explosive Waste (OEW) contamination exists on property formerly owned by the Department of the Army.

2.1 General. OEW is a safety hazard and constitutes an imminent endangerment to the public. These actions will be performed in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Contingency Plan (NCP). For any actions on site, no Federal, State, or Local permits are required. The provisions of 29 CFR 1910.120 shall apply to all actions taken at this site.

2.2 This site is not a suspected Chemical Surety Material (CSM) site. However, if the A-E encounters suspected CSM during work, The A-E shall immediately withdraw from the work area and notify the Corps of Engineers on-site Safety Specialist for guidance. The Huntsville Division Safety Office will notify the Technical Escort Unit (TEU).

2.3 Site Description. Camp Croft was established as a World War II Army Infantry Replacement Training Center on 10 January 1941. The camp consisted of two general areas: a series of firing range; and a troop housing area with attached administrative headquarters. Camp Croft is located approximately five miles southeast of Spartanburg, South Carolina and encompassed approximately 19,045 acres. The followings are areas of concern, as related to OEW:

2.3.1 Training Range Impact Area. This area of present-day Croft State Park is suspected to be contaminated with OEW that would have been generated during small arms ammunition and mortar training conducted by infantry troops. Ordnance waste located include .30 caliber bullets and Trench Mortar Weapon, 60 mm and 81 mm, Fin Assemblies (cartridge container and blades), shell, illuminating, M83, links for 20 mm Cartridges, Fuze, and hand grenade. There are approximately 16,929 acres that classified as the range impacts areas. There are two campgrounds located within the park area for an estimated 100 acres total. Hiking trails, roads, parking lots, and Craig Lake are also located in the impact area.

2.3.2 Gas Chambers and Gas Obstacle Course Area. The gas chambers and obstacle course were located on land east of Kohler parking lot. These structures have been removed and no chemical ordnance or other evidence of past chemical training were found. Gas chambers and obstacle course area are located on approximately 199 acres.

2.3.3 Cantonment Area. The cantonment area is presently used as Camp Croft residential area. The size of the cantonment area is approximately 167 acres. Some Camp Croft-era structures still remains at present time.

2.3.4 Grenade Court. The Grenade court is approximately 1,750 acres in size. The site is being graded for construction. There are no evidence of OEW located at this site.

3. TASK 1- REVIEW EXISTING DATA AND PERFORM SITE VISIT.

3.1 Review Existing Data. The A-E shall review the archive search and other data provided by the Contracting Officer prior to the site visit.

3.2 Site Visit. The A-E shall coordinate with the Contracting Officer, State, and Local Agencies prior to the site visit. The A-E shall perform a visual inspection of the site and collect any additional data that may be locally available. Data to be collected may include existing land use, topographic maps and natural features, tree cover, points of contact and phone number(s), wetlands, endangered species, archaeological resources, etc. No field work shall be performed during the site visit.

4. TASK 2- LOCATION SURVEY AND MAPPING.

The A-E shall perform location survey and mapping of **approximately 7,100 acres of the former Camp Croft site.** The specific requirement to conduct location survey and mapping will be provided by the Government. The A-E shall prepare a work task proposal, with specific requirement, and obtain the Contracting Officer approval prior to the start of the work. The A-E shall submit work schedule and manpower allocation with the work task proposal. Any assumptions shall be stated and their basis shall be provided.

5. TASK 3- PREPARE SITE SPECIFIC WORK PLAN.

The A-E shall prepare site specific Work Plan for field investigation at the former Camp Croft. The sub-plans that must be prepared include: UXO Operational Plan; Site-Specific Safety and Health Plan (SSHP); Equipment Plan; Environmental Protection Plan; Quality Control Plan; Work, Data, and Cost Management Plan; and Geophysical Investigation Plan. The Work Plan must be approved by the Contracting Officer prior to the start of the work.

6. TASK 4 - DETERMINE PRESENCE OR ABSENCE OF OEW CONTAMINATION.

6.1 The contractor shall provide all the necessary equipment and personnel to determine the presence/absence of OEW contamination and dispose of any conventional OEW encountered. If a UXO is discovered that is identified as containing military toxic chemical agent, all operations shall cease immediately within 500 meters of the site and the item secured by two UXO Specialists, and CEHND-ED-SY notified, who will in turn request military EOD support.

6.1.1 Based on data from Government-furnished Archives Search Report (ASR), the contractor shall select 80 sampling locations for surface/subsurface investigation. This selection shall be addressed and justified in the WP. These 80 locations shall be scattered over the project site and 60 of the locations shall be in the areas where OEW has been reported in the ASR. The sampling locations shall be 100′ x 200′. The contractor shall excavate at the locations of suspected subsurface OEW/UXO located within each of the 80 locations. The contractor shall not perform any excavation deeper than two feet without prior approval from the on-site CEHND safety representative.

6.1.2 All access holes and detonation pits shall be refilled upon completion of the project.

6.2 The contractor shall maintain a detailed accounting of all materiels encountered during the surface and subsurface sweep/clearance. This accounting shall include the amounts of OEW, their identification/condition, and disposition. The accounting shall include all non OEW-related metallic debris that is present. The non OEW-related metallic debris shall be detailed in pounds per acre. This accounting shall be a part of the Final Investigation Report.

6.3 Inert OEW, including fragments, shall be collected, the inert filler explosively vented, and then placed in a contractor established holding area pending turn in by the contractor.

6.4 An accountability system shall be utilized that accounts for all explosive materials expended in the disposal of UXO.

6.5 If a UXO is encountered, where it is determined that it cannot be moved, and the situation precludes detonating the UXO in-place, the CEHND safety representative will be notified who will in turn request military EOD support.

6.6 Magnetometers shall be utilized to detect subsurface UXO. The magnetometer used shall be capable of detecting a 60mm projectile to a depth of two feet. Techniques and equipment to be used shall be addressed in the WP.

6.6.1 Access shall be gained to suspect subsurface UXO to perform identification and disposal procedures. All access, identification, and disposal, procedures of OEW/UXO shall be accomplished by a UXO Specialist. Magnetometer operators or other non UXO qualified personnel will not be allowed to perform UXO procedures. UXO procedures include, but are not limited to, gaining access (manual excavation) to subsurface UXO, identification, transportation, storage, and disposal of UXO. Training requirements of 29 CFR 1910.120e(i) apply to this project.

6.7 Quality Control (QC). The contractor shall propose a system to manage, control, and document his performance of this task. The methodology to accomplish the quality control shall be proposed in the WP. The QC activities shall be documented and included in the final investigation report. The individual performing the UXO QC shall have at least the same training and experience as an UXO supervisor shall not be involved in the performance of paragraph 5.1.8 above. UXO QC shall be a separate function and is not envisioned as a full-time position.

7. <u>TASK 5- PREPARE EE/CA FOR THE ENTIRE SITE</u>.

The A-E shall prepare an EE/CA for all areas specified in Paragraphs 1.3.1 through 1.3.4 of this SOW. An EE/CA report which documents the investigation and evaluation at the former Camp Croft. The report shall be prepared in accordance with the EPA Guidance Document, "Guidance on Conducting Non-Time-Critical Removal Actions Under CERCLA", June 1993.

8. TASK 6- EE/CA ACTION MEMORANDUM

After the EE/CA has been approved by the Contracting Officer, the A-E shall prepare an EE/CA Action Memorandum in accordance with the EPA Guidance Document, "Superfund Removal Procedures, Action Memorandum Guidance, OSWER Dir. 9360.3-01, December 1990."

9. TASK 7- DATA COLLECTION FOR SAFETY RISK ASSESSMENT (SRA).

The A-E shall collect information as directed by the Contracting Officer to be used as input for the Safety Risk Assessment Model. The Government shall run the model and provide the model output for use in developing the EE/CA.

10. TASK 8- MEETING AND PUBLIC INVOLVEMENT

The A-E shall, during the life of the Delivery Order, manage the Delivery Order in accordance with the SOW, Appendix A. All project management associated with this Delivery Order, with the exception of direct technical oversight of work described in the preceding tasks, shall be accounted for in this task. The A-E shall attend meetings to be held at the site or CEHND to discuss project status, progress, and plans for future activities. These meetings will involve personnel from the Government. The A-E shall provide a minimum of two professionals, thoroughly familiar with the project, at the minimum of six meetings. The meetings should last not more than one days. The A-E shall be required to provide technical support and other support as directed by the Contracting Officer for the Public Involvement.

11. SCHEDULE OF MEETING AND DELIVERABLE

Task	Date
Site Visit	25 Apr 94
Draft Work Plan (10 copies)	25 May 94
Comment on Draft Work Plan	24 Jun 94
Final Work Plan (10 copies + computer file)	14 Jul 94
Draft EE/CA (10 copies)	11 Nov 94
Comment on Draft EE/CA	12 Dec 94
Final EE/CA (10 copies + computer file)	11 Jan 95
Draft EE/CA Action Memorandum (10 copies)	31 Jan 95
Comment on Draft Action Memorandum	21 Feb 95
Final EE/CA Action Memorandum (10 copies + computer file)	20 Mar 95

11.1 Format and Content of EE/CA. An EE/CA shall be prepared in accordance with the EPA Guidance Document, "Guidance on Conducting Non-Time-Critical Removal Actions Under CERCLA", June 1993. All Drawings shall be of engineering quality with sufficient details. The report shall consist of 8 1/2" X 11". The report covers shall consist of durable binders and shall hold pages firmly while allowing easy removal, addition, or replacement of pages. A title shall identify the site, the A-E, the Huntsville Division, and date. The A-E identification shall not dominate the title page.

11.2 Review Comments. The A-E shall review all comments received through the CEHND Project Manager and evaluate their appropriateness based upon their merit. The A-E shall incorporate all applicable comments and provide a written response to each comment no later than 21 days after the A-E receives the comment.

11.3 Identification of Responsible Personnel. Each submittal shall identify the specific members and title of the subcontractor and A-E's staff which had significant input into the report. All final submittal shall be sealed by the registered Professional Engineer-In-Charge.

11.4 Presentations. The A-E shall make presentations of work performed according as directed by the Contracting Officer. The presentation shall consist of a summary of the work accomplished and anticipated followed by an open discussion.

11.5 Minutes of Meetings. Following the presentation and the public meeting, the A-E shall prepare and submit minutes of the meeting within 10 calendar days to the Contracting Officer.

11.6 Correspondence. The A-E shall keep a record of phone conversation and written correspondence affecting decisions relating to the performance of this delivery order. A summary of the phone conversation and copy of written correspondence shall be submitted to the Contracting Officer with the monthly progress report.

11.7 Monthly Progress Report. The A-E shall prepare and submit monthly progress report describing the work performed since the previous report, work currently underway and work anticipated. The report shall state whether current work is on schedule. If the work is not on schedule, the A-E shall state what actions are taken in order to get back on schedule. The report shall be submitted to the Contracting Officer not later than the 10th day of each calendar month.

11.8 Computer Files. All final text files generated by the A-E under this delivery order shall be furnished to the Contracting Officer in WordPerfect, IBM PC compatible format. All drawings shall be on reproducible (mylar) and 3D design file in Intergraph Corporation format, compatible with CEHND Graphics system.

11.9 Public Affairs. The A-E shall not publicly disclose any data generated or reviewed under this contract. The A-E shall refer all requests for information concerning the site condition to CEHND Project Manager. Reports and data generated under this delivery order are the property of the Department of Defense and distribution to any other sources by the A-E, unless authorized by the Contracting Officer, is prohibited.

11.10 Addressee.

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P.O. BOX 919
CHARLESTON, SC. 29402-0919

COMMANDER
547th EXPLOSIVE ORDNANCE DETACHMENT (EODCC)
Ft. GILLEM
FOREST PARK, GA. 30050-5000

PARK SUPERINTENDENT
CROFT STATE PARK
ATTN: Mr. Richard Bishop
450 CROFT STATE PARK ROAD
SPARTENBURG, SC. 29302

ENVIRONMENTAL ASSESSMENT
FOR THE
ENGINEERING EVALUATION/COST ANALYSIS

CROFT STATE PARK
SPARTANBURG COUNTY, SOUTH CAROLINA

INTRODUCTION

A. Project Background

The U.S. Army Corps of Engineers is performing an Engineering Evaluation/Cost Analysis (EE/CA) for Ordnance and Explosive Waste (OEW) removal at the Former Camp Croft Army Training Facility. The project is located primarily on the current property of the Croft State Park (see Figure 1).

B. Project Description

The project will involve the placement of approximately 60 sampling areas that are 100 feet by 200 feet each (see Figure 2). Each sampling area will be divided into 5 foot lanes (see Figure 3). The lanes will be swept with a magnetometer to determine the location of potential unexploded ordnance. Potential ordnance sites will be flagged and mapped for removal at a later date. OEW located on the surface will be either removed or blown in place. Minor clearing of the lanes may be required in order to provide a clear lane for personnel to use the magnetometer. Dr. Powell, Biologist at Converse College, will check the areas prior to any clearing for any threatened or endangered species or environmentally sensitive areas. The findings from the magnetometer surveys will provide information for delineating the areas with OEW contamination. The removal of any subsurface ordnance will be completed in subsequent projects.

C. Need for the Proposed Action

The EE/CA is required to determine the extent of the OEW contamination at the Croft State Park. Croft is a state park that receives extensive use by the public throughout the year. The site is known to have been used as an artillery impact range during World War II. OEW contamination on the state park is believed to be in areas used primarily for horse trails, but has been located adjacent to camping and swimming areas. A previously unidentified artillery impact range has been located outside park boundaries where activities had not been recorded. Therefore, all areas are suspect. OEW remains on the site and poses a serious safety hazard to the public. Continued public exposure to the site could result in serious injuries to the public in the area.

ENVIRONMENTAL SETTING

A. General Description of the Area

Croft State Park consists of approximately 7,000 acres located southeast and almost adjacent to the City of Spartanburg, South Carolina. The habitat that would be affected by the project consists primarily of three plant communities. These communities, in order of abundance, are old-field pines, mixed pine and hardwoods, and upland hardwoods. Lake Craig and Lake Johnson are located in the center of the park with good fishing in Lake Craig. There are approximately 139 species of birds located on the site: 40 permanent, 47 summer, 31 winter, and 21 migrant residents.

Croft State Park is generally underlain by Paleozoic age, crystalline rocks. The rocks are located in two distinct regions: The Inner Piedmont Belt and the Kings Mountain Belt. The belts trend northeast-southwest and bisect the park so that the western portion of the park is located in the Inner Piedmont Belt and the eastern portion in the Kings Mountain Belt.[1]

B. Water Quality

Fairforest and Kelsey Creeks are located on park property. Both creeks are classified by the South Carolina Department of Health and Environmental Control as freshwater creeks. "Freshwaters are suitable for primary and secondary contact recreation and as a source for drinking water supply after conventional treatment in accordance with the requirements of the Department. It is suitable for fishing and the survival and propagation of balanced indigenous aquatic community of fauna and flora. It is also suitable for industrial and agricultural uses."[2]

C. Hazardous and Toxic Waste

Based on site inspections by Corps' personnel and historical knowledge of the site, hazardous or toxic wastes are not expected to be encountered in the area of the proposed project.

D. Threatened and Endangered Species

The US Fish and Wildlife Service provided a list of threatened (T) and endangered (E) species (11 October 1994) known to occur in Spartanburg County, South Carolina:

Spartanburg County

Dwarf-flowered heartleaf (Hexastylis naniflora) - T

Loggerhead shrike (Lanius ludovicianus) - C2
Georgia aster (Aster georgianus) - C2
Butternut (Juglans cinerea) - C2

E - Endangered
T - Threatened
C2 - Service has limited evidence to support listing these species

E. Cultural Resources

Various cultural resources sites have been located at the project site. These sites anomolies have been identified in the Croft State Park Management Plan and are shown on Figure 1. Archeological resources primarily consist of home sites within the park boundary. Of particular interest is the soapstone quarry located on the northwest corner of the park.

PROBABLE IMPACT OF THE PROPOSED ACTION

A. Land Disruption

Land clearing will be restricted to minor clearing of lanes as needed to enable personnel with magnetometers to walk through the lanes. Minor clearing may occur in order to remove any ordnance located on the surface. The ordnance would be blown in place or removed from the site depending on the stability of the article found. Any disturbed soil will be returned to its original condition after the ordnance is removed.

B. Noise

There will be no noticable increase in the ambient noise levels during the survey. Increased noise levels will only occur if ordnance is found on the surface and is detonated in place or at the disposal area. These increased noise levels will be temporary and short in duration.

C. Water Quality

All sampling areas have been moved away from streams in the area. Therefore, there should be no degradation to the water quality in the area.

D. Air Quality

Detonation of ordnance located on the surface will temporarily decrease the air quality in the immediate vicinity of the explosion.

E. Flora

Some vegetation will be removed from the site during clearing of the sampling areas. These areas will be checked by Dr. Powell for any sensitive vegetation prior to clearing. Clearing will only occur if needed to provide walking access through the sampling areas. Trees that are 3 inches or more in diameter will not be removed. Personnel working in the area will work around the trees and any sensitive areas identified by Dr. Powell. Sampling sites have been moved away from any previously determined areas that are likely to contain threatened or endangered species.

F. Wildlife

Wildlife surveys have been conducted at the site as part of the Croft State Park Management Plan. Wildlife may be displaced temporarily due to noise from detonations.

G. Fishery

Fishery resources at the park will not be affected.

H. Threatened and Endangered Species

The sampling areas will not damage the habitat of threatened or endangered species. Dr. Powell will work ahead of the sampling crews to assure that no threatened or endangered species are disturbed. If threatened or endangered plants or animals are encountered during the surveys, the sampling site will be moved.

I. Cultural Resources

Sampling areas have been placed to avoid any and all known cultural resources. Cultural resources located during the sampling surveys will be identified to the extent possible, cataloged, and mapped for future research.

UNAVOIDABLE ADVERSE IMPACTS

Adverse environmental effects associated with this project are as follows:

Ordnance removal provides a serious safety concern to all personnel in the area (workers and visitors). Ordnance located on sensitive resources will be removed if possible. If removal is not possible, the ordnance will be detonated in place and the site will be returned, as close as possible, to its original condition.

There would be a temporary increase in noise and air pollution during the detonation of ordnance located on the site.

ALTERNATIVES TO THE PROPOSED ACTION

Limited alternative measures to meet the problems and needs of the area are available.

A. No Action

This alternative was ruled out because of the danger related to ordnance and the public use of the park. Leaving ordnance in the park would increase the chances that someone will be injured or killed in the near future.

B. Fencing Park Property

Placing a fence around the park property known to contain ordnance contamination would only temporarily alleviate the problem and would cause more problems than before. Ordnance has already been located in distant areas thought to be free from ordnance contamination. Fencing the property would also prevent movement of wildlife through the area. This would cause great harm to the overall environment on the park property. This alternative was ruled out as unacceptable due to the potential human and environmental damage to the property.

C. Engineering Evaluation/Cost Analysis - Sampling and Data Collection

The proposed alternative described in the EA will provide the optimum solution for removal of ordnance while ensuring minimal environmental effects.

CONCLUSIONS

This proposed action does not constitute a major Federal action significantly affecting the quality of the human environment, therefore, the preparation of an Environmental Impact Statement (EIS) provided for under Section 102(c) of the National Environmental Policy Act (NEPA) of 1969 is not required. The proposed action has been thoroughly assessed and coordinated and will not significantly affect the environment.

References

1 Croft State Park Management Plan, 1992.

2 Water Classifications and Standards (Regulation 61-68): Classified Waters (Regulation 61-69).

FINDINGS OF NO SIGNIFICANT IMPACT
CROFT STATE PARK
ENGINEERING EVALUATION/COST ANALYSIS
IN
SPARTANBURG COUNTY, SOUTH CAROLINA

Based upon the attached environmental assessment and in consideration of other pertinent documents, I conclude that the environmental effects of the proposed Croft State Park EE/CA are not significant and the preparation of an Environmental Impact Statement is not warranted. Specific factors considered in making the determination include the following:

1. Best available practices would be used to insure that minimal disturbance will occur in the construction area.

2. Wetlands would not be significantly affected.

3. No cultural resource would be affected.

4. No endangered species would be affected.

5. No significant land use changes would occur.

6. Air quality would not be significantly affected.

7. Fish and wildlife would not be significantly affected.

8. Construction activity would be short term and would not significantly affect recreational use of the park.

Date 20 Dec 94

GEORGE H. HAZEL
Lieutenant Colonel, EN
Commander, US Army Engineer District, Charleston

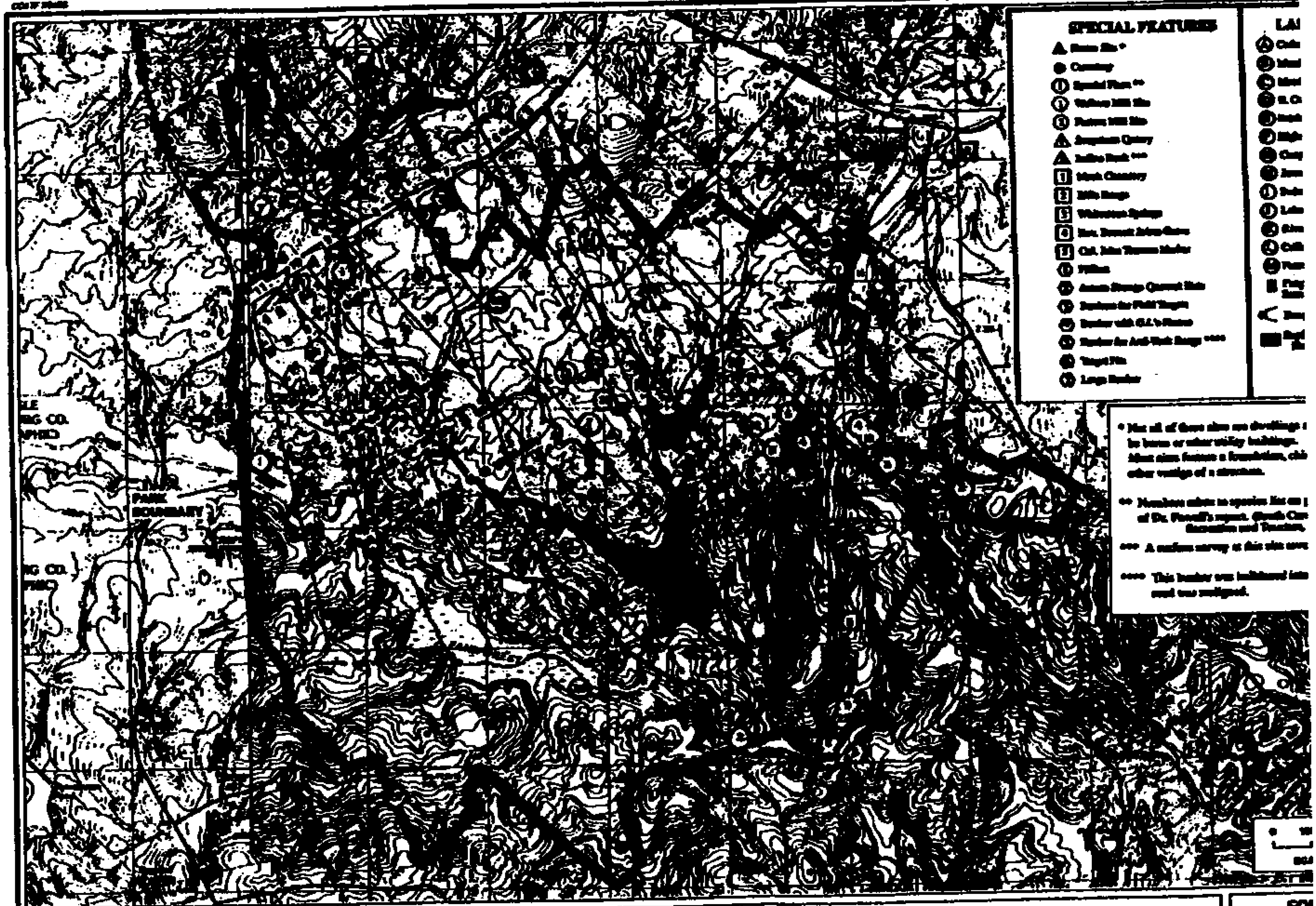

Figure 1
PROPOSED SITE LOCATIONS

CCATF 7/6498

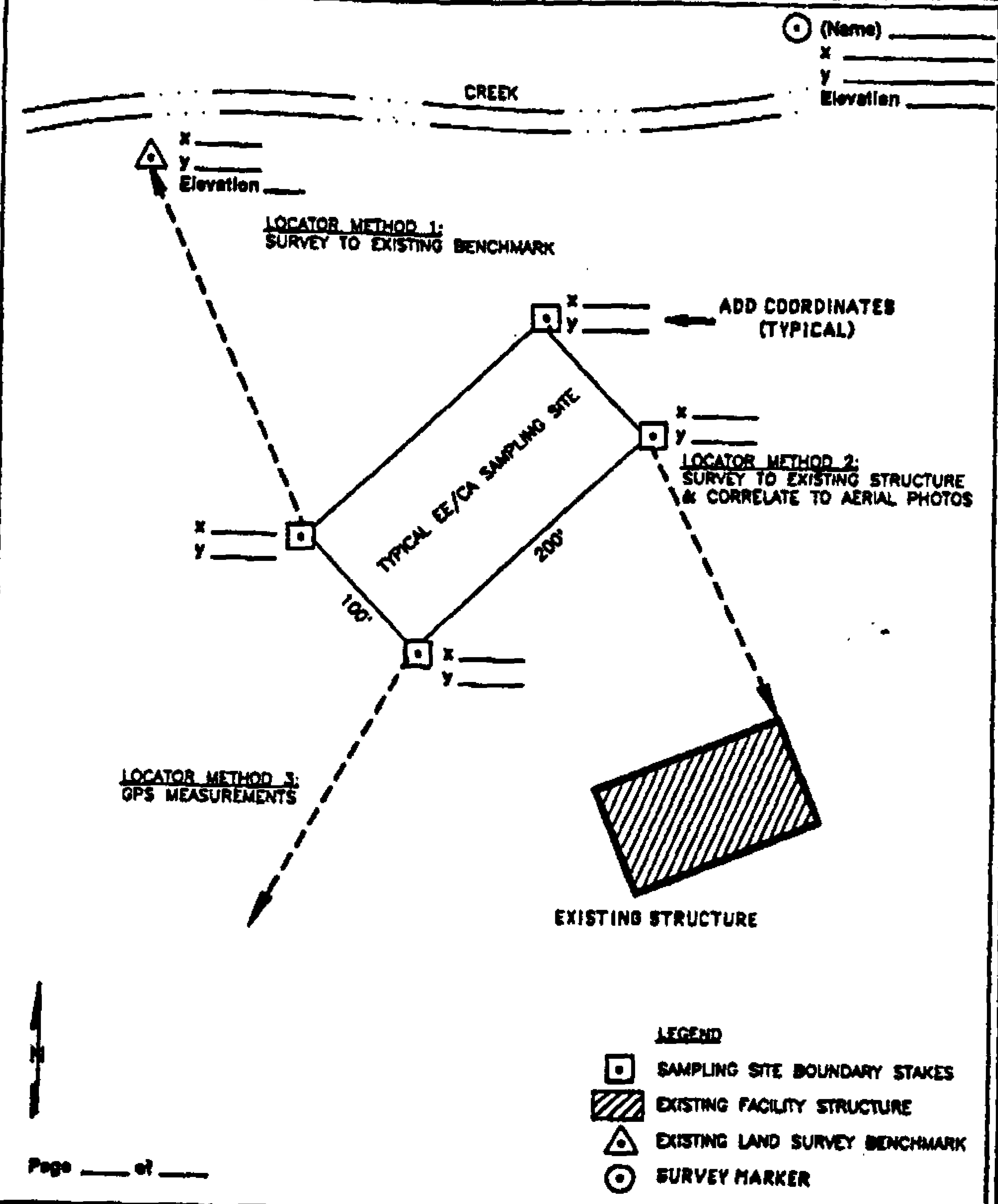

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Figure 2

TYPICAL EE/CA SAMPLING SITE
SITE LAYOUT AND LOCATION SURVEY

SOURCES: EODT, 1994; ESE.

FORMER CAMP CROFT ARMY TRAINING FACILITY
SPARTANBURG, SC

U.S. ARMY CORPS OF ENGINEERS
HUNTSVILLE DIVISION

CCATF

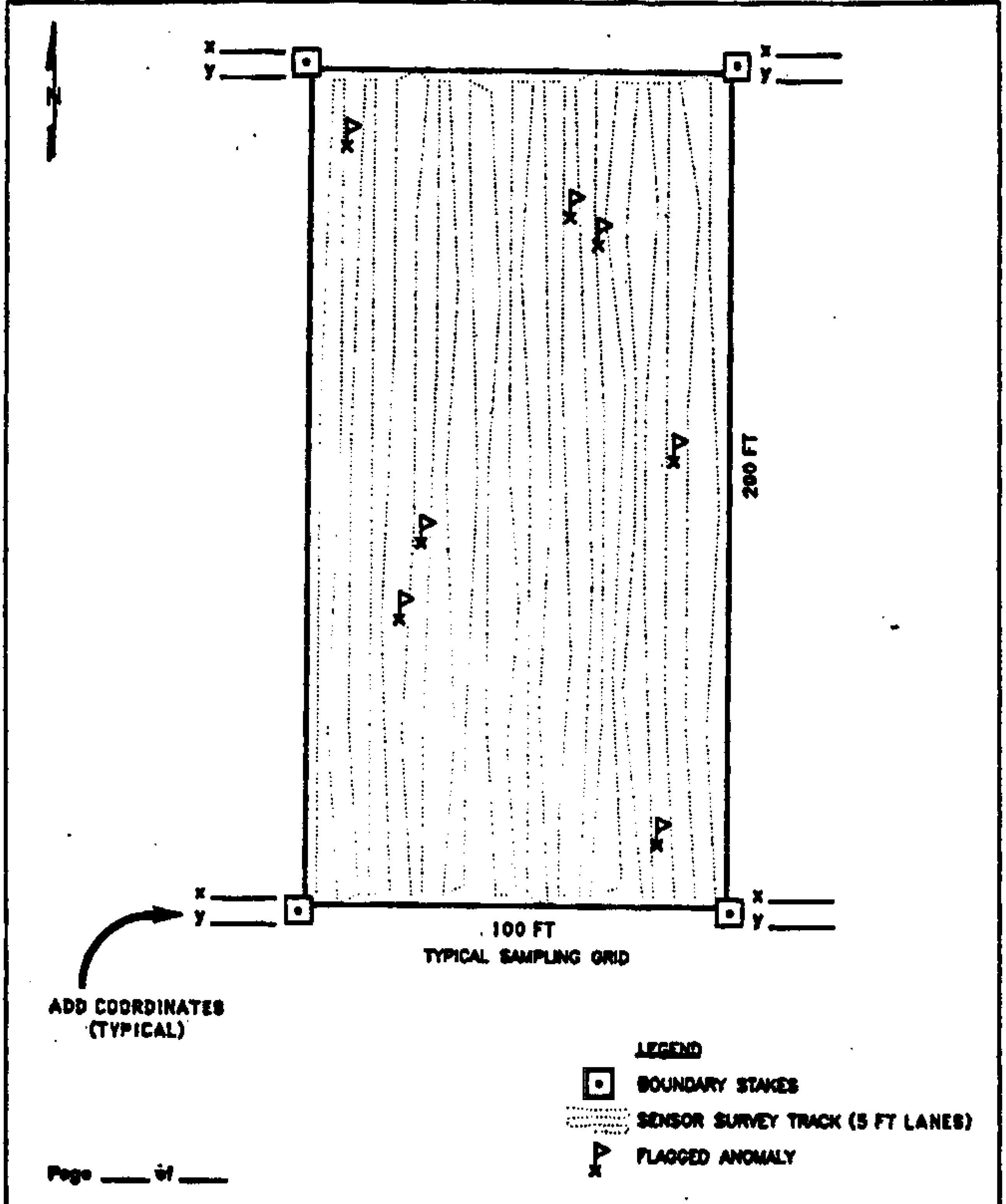


Figure 3

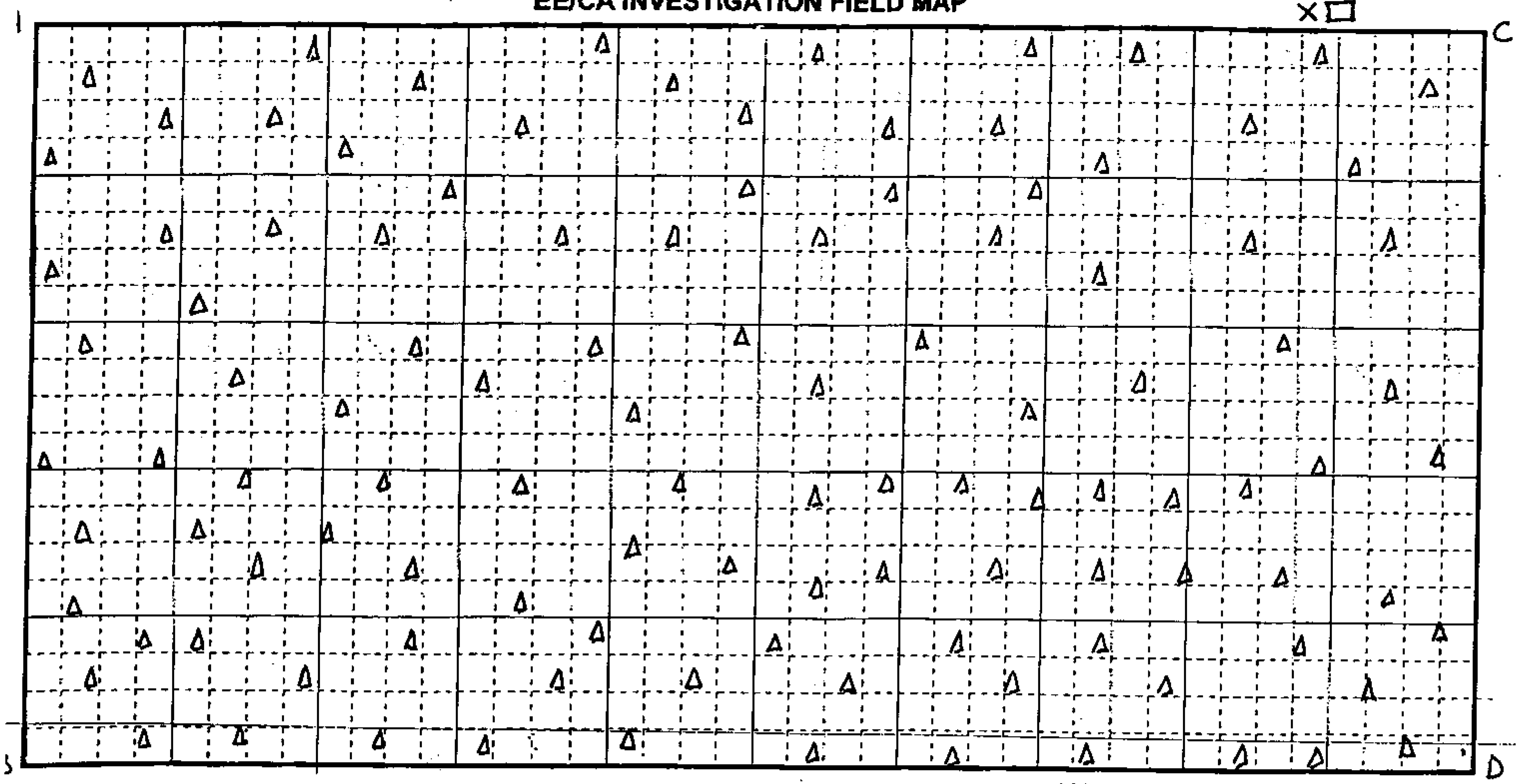
TYPICAL EE/CA SAMPLING SITE GEOPHYSICAL SENSOR SURVEY LAYOUT (5 FT CENTERS) MAGNETOMETER PROTOCOL

SOURCES: SCDOT, 1994; ESE.

FORMER CAMP CROFT ARMY TRAINING FACILITY
SPARTANBURG, SC

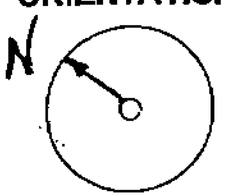
U.S. ARMY CORPS OF ENGINEERS HUNTSVILLE DIVISION

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

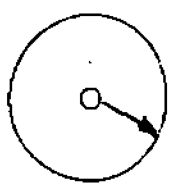


GRID I.D. 5

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

207 HITS 110 INVESTIGATIONS
126 EA. .30 CAL SMALL ARMS SLUGS
0 UXO.
08 NOV 94
32 LBS OEW/SCRAP

GRID SURVEY SUMMARY SHEET

Grid: 5

Accessability: MODERATE

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Scrap	1	N/A	N/A	4"	Rusted
2	Scrap	1	N/A	N/A	4"	Rusted
3	Scrap	1	N/A	N/A	6"	Rusted
4	Scrap	1	N/A	N/A	5"	Rusted
5	Scrap	1	N/A	N/A	3"	Rusted
6	Scrap	1	N/A	N/A	3"	Rusted
7	Scrap	1	N/A	N/A	3"	Rusted
8	Scrap	1	N/A	N/A	2"	Rusted
9	Scrap	1	N/A	N/A	4"	Rusted
10	Sm.arms .30 cal. slugs	93	N/A	N/A	3"-18"	Rusted
11	Sm. arms .30 cal. slugs	22	N/A	N/A	3"-18"	Rusted
12	Scrap	1	N/A	N/A	3"	Rusted
13	Scrap	1	N/A	N/A	4"	Rusted
14	Scrap	1	N/A	N/A	6"	Rusted
15	Scrap	1	N/A	N/A	5"	Rusted
16	Scrap	1	N/A	N/A	5"	Rusted
17	Scrap	1	N/A	N/A	5"	Rusted
18	Comm. Wire	1	N/A	N/A	8"	Rusted
19	Scrap	1	N/A	N/A	7"	Rusted
20	Scrap	1	N/A	N/A	4"	Rusted
21	Scrap	1	N/A	N/A	1"	Rusted
22	Scrap	1	N/A	N/A	4"	Rusted
23	Scrap	1	N/A	N/A	4"	Rusted
24	Scrap	1	N/A	N/A	3"	Rusted
25	Scrap	1	N/A	N/A	6"	Rusted
26	Scrap	1	N/A	N/A	6"	Rusted
27	Scrap	1	N/A	N/A	6"	Rusted
28	Scrap	1	N/A	N/A	5"	Rusted
29	Sm. arms .30 cal. slug	1	N/A	N/A	2"	Rusted
30	Scrap	1	N/A	N/A	3"	Rusted

GRID SURVEY SUMMARY SHEET

Grid: 5

Accessability: MODERATE

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	Scrap	1	N/A	N/A	1"	Rusted
32	Scrap	1	N/A	N/A	3"	Rusted
33	Scrap	1	N/A	N/A	3"	Rusted
34	Scrap	1	N/A	N/A	7"	Rusted
35	Scrap	1	N/A	N/A	4"	Rusted
36	Scrap	1	N/A	N/A	6"	Rusted
37	Scrap	1	N/A	N/A	3"	Rusted
38	Scrap	1	N/A	N/A	3"	Rusted
39	Sm. arms .30 cal. slug	1	N/A	N/A	5"	Rusted
40	Scrap	1	N/A	N/A	4"	Rusted
41	Scrap	1	N/A	N/A	5"	Rusted
42	Scrap	1	N/A	N/A	7"	Rusted
43	Scrap	1	N/A	N/A	4"	Rusted
44	Sm. arms .30 cal slug	3	N/A	N/A	3"	Rusted
45	Scrap	1	N/A	N/A	4"	Rusted
46	Scrap	1	N/A	N/A	3"	Rusted
47	Scrap	1	N/A	N/A	3"	Rusted
48	Scrap	1	N/A	N/A	3"	Rusted
49	Scrap	1	N/A	N/A	4"	Rusted
50	Scrap	1	N/A	N/A	5"	Rusted
51	Scrap	1	N/A	N/A	7"	Rusted
52	Scrap	1	N/A	N/A	5"	Rusted
53	Scrap	1	N/A	N/A	3"	Rusted
54	Scrap	1	N/A	N/A	4"	Rusted
55	Scrap	1	N/A	N/A	6"	Rusted
56	Scrap	1	N/A	N/A	7"	Rusted
57	Comm. Wire	1	N/A	N/A	7"	Rusted
58	Scrap	1	N/A	N/A	5"	Rusted
59	Scrap	1	N/A	N/A	5"	Rusted
60	Comm. Wire	1	N/A	N/A	5"	Rusted

GRID SURVEY SUMMARY SHEET

Grid: 5

Accessability: MODERATE

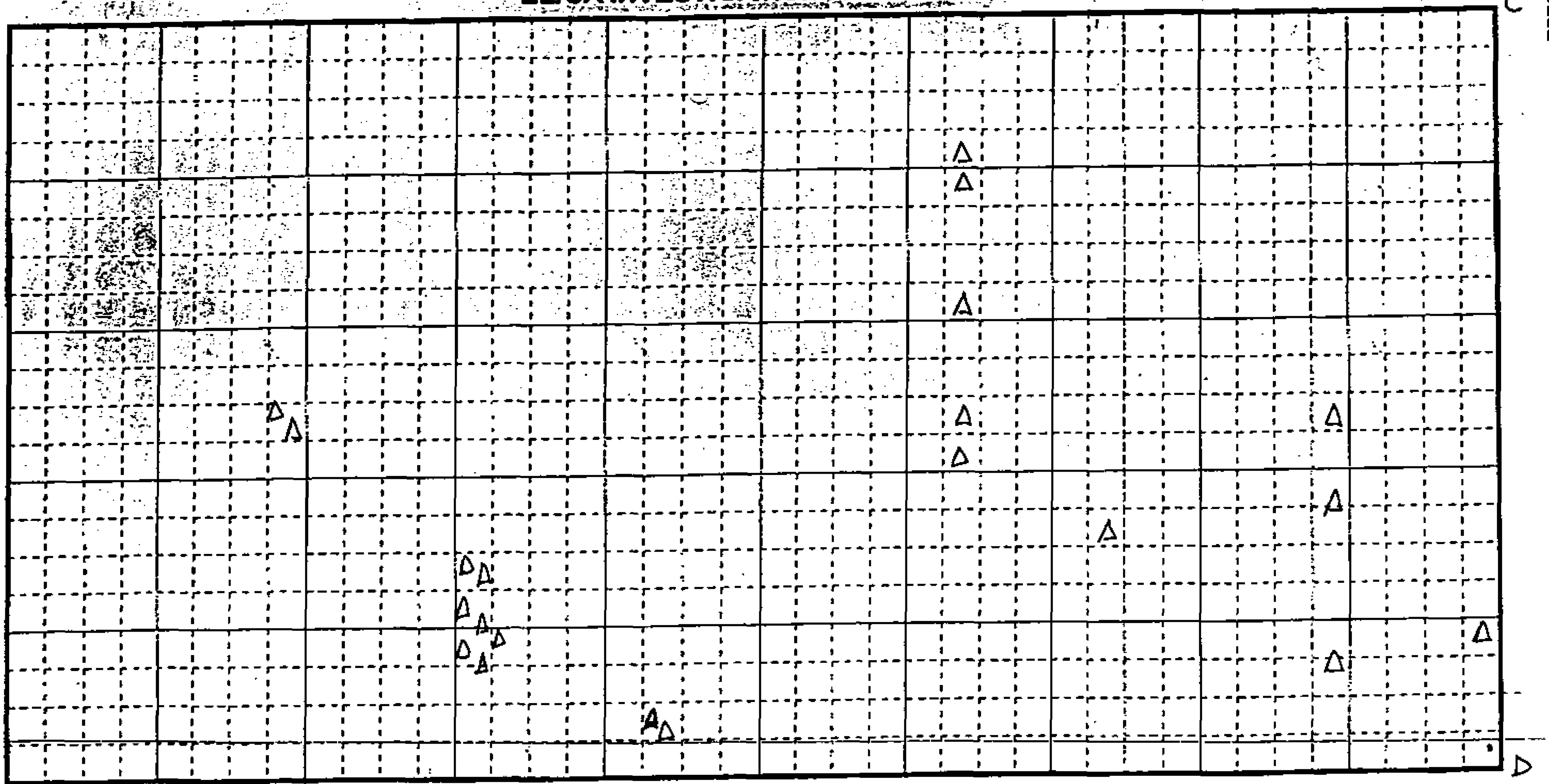
Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
60	Comm. Wire	1	N/A	N/A	5"	Rusted
61	Sm.arms .30 cal. slug	1	N/A	N/A	2"	Rusted
62	Scrap	1	N/A	N/A	5"	Rusted
63	Scrap	1	N/A	N/A	4"	Rusted
64	Scrap	1	N/A	N/A	6"	Rusted
65	Scrap	1	N/A	N/A	5"	Rusted
66	Scrap	1	N/A	N/A	5"	Rusted
67	Scrap	1	N/A	N/A	5"	Rusted
68	Scrap	1	N/A	N/A	4"	Rusted
69	Scrap	1	N/A	N/A	7"	Rusted
70	Scrap	1	N/A	N/A	7"	Rusted
71	Scrap	1	N/A	N/A	6"	Rusted
72	Scrap	1	N/A	N/A	3"	Rusted
73	Scrap	1	N/A	N/A	3"	Rusted
74	Scrap	1	N/A	N/A	2"	Rusted
75	Scrap	1	N/A	N/A	2"	Rusted
76	Sm. arms .30 cal. slug	1	N/A	N/A	1"	Rusted
77	Scrap	1	N/A	N/A	5"	Rusted
78	Scrap	1	N/A	N/A	4"	Rusted
79	Scrap	1	N/A	N/A	4"	Rusted
80	Scrap	1.	N/A	N/A	6"	Rusted
82	Sm. arms .30 cal. slug	1	N/A	N/A	3"	Rusted
83	Scrap	1	N/A	N/A	5"	Rusted
84	Scrap	1	N/A	N/A	7"	Rusted
85	Scrap	1	N/A	N/A	6"	Rusted
86	Scrap	1	N/A	N/A	6"	Rusted
87	Comm. Wire	1	N/A	N/A	6"	Rusted
88	Comm. Wire	1	N/A	N/A	6"	Rusted
89	Scrap	1	N/A	N/A	5"	Rusted
90	Scrap	1	N/A	N/A	4"	Rusted

GRID SURVEY SUMMARY SHEET

Grid: 5 Accessability: MODERATE

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
91	Scrap	1	N/A	N/A	4"	Rusted
92	Scrap	1	N/A	N/A	5"	Rusted
93	Scrap	1	N/A	N/A	4"	Rusted
94	Sm. arms .30 cal. slug	1	N/A	N/A	2"	Rusted
95	Scrap	1	N/A	N/A	7"	Rusted
96	Scrap	1	N/A	N/A	4"	Rusted
97	Sm. arms .30 cal. slug	1	N/A	N/A	2"	Rusted
98	Scrap	1	N/A	N/A	3"	Rusted
99	Scrap	1	N/A	N/A	3"	Rusted
100	Scrap	1	N/A	N/A	3"	Rusted
101	Scrap	1	N/A	N/A	5"	Rusted
102	Scrap	1	N/A	N/A	6"	Rusted
103	Sm. arms .30 cal. slug	1	N/A	N/A	1"	Rusted
104	Scrap	1	N/A	N/A	3"	Rusted
105	Scrap	1	N/A	N/A	5"	Rusted
106	Scrap	1	N/A	N/A	5"	Rusted
107	Scrap	1	N/A	N/A	4"	Rusted
108	Scrap	1	N/A	N/A	7"	Rusted
109	Scrap	1	N/A	N/A	3"	Rusted
110	Scrap	1	N/A	N/A	4"	Rusted

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

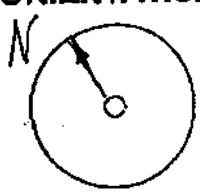


GRID I.D. 6

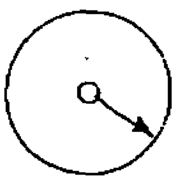
LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

MAP ORIENTATION



WIND DIRECTION



NOTES

20 SUBSURFACE ANOMALIES INVESTIGATED IN 7 LANES

1 lb. METAL RECOVERED

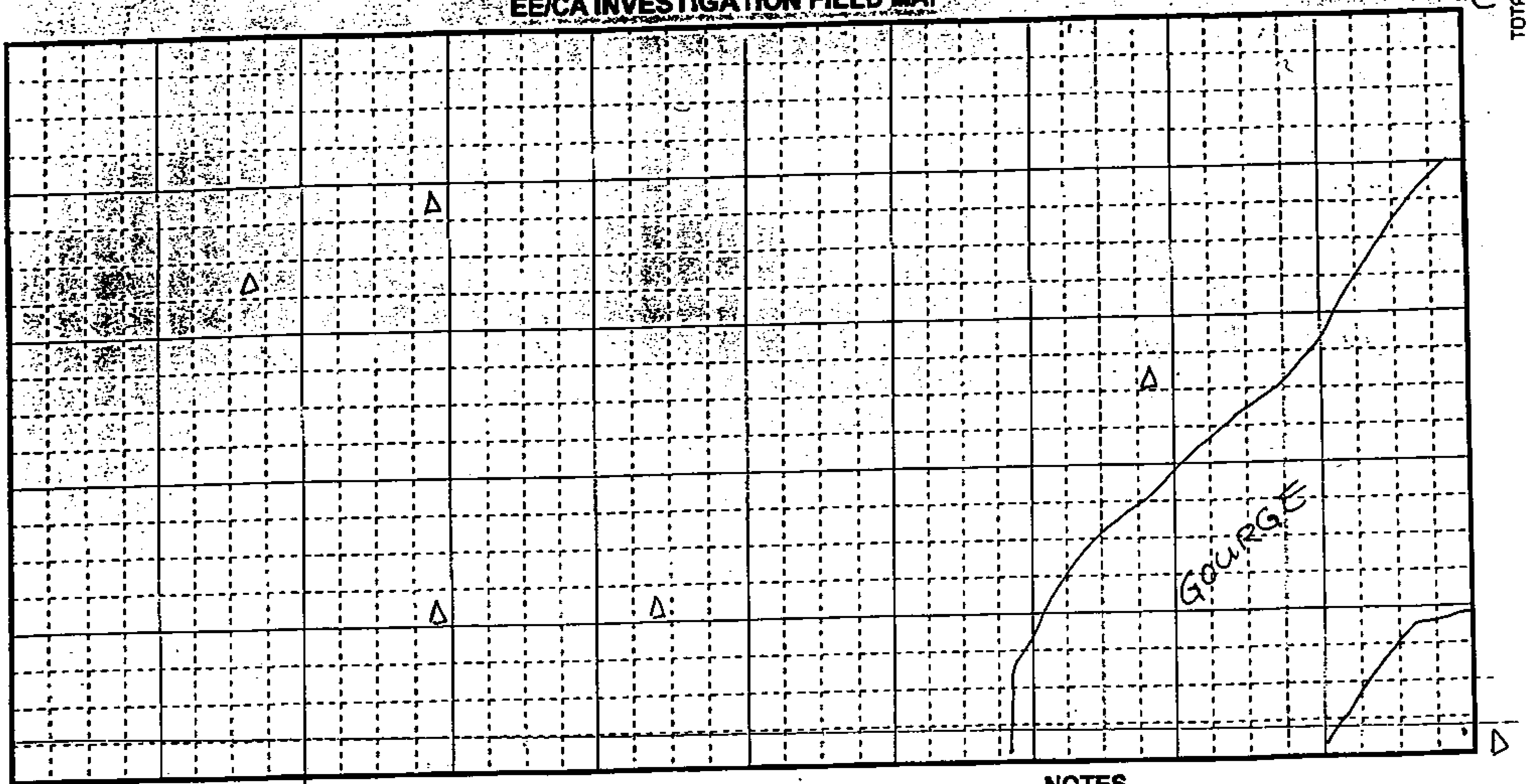
GRID SURVEY SUMMARY SHEET

GRID: 6

Accessability: EASY

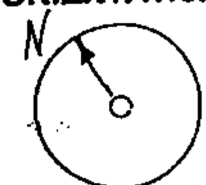
Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Commo wire	1	N/A	N/A	3	Rusted
2	Commo wire	1	N/A	N/A	5	Rusted
3	Commo wire	1	N/A	N/A	4	Rusted
4	Commo wire	1	N/A	N/A	1	Rusted
5	Commo wire	1	N/A	N/A	2	Rusted
6	Commo wire	1	N/A	N/A	2	Rusted
7	Commo wire	1	N/A	N/A	6	Rusted
8	Commo wire	1	N/A	N/A	3	Rusted
9	Commo wire	1	N/A	N/A	2	Rusted
10	Commo wire	1	N/A	N/A	3	Rusted
11	Commo wire	1	N/A	N/A	4	Rusted
12	Nail	2	N/A	N/A	4-11	Rusted
13	Nail	4	N/A	N/A	3-9	Rusted
14	Wire	1	N/A	N/A	2	Rusted
15	Wire	1	N/A	N/A	3	Rusted
16	Rock	1	N/A	N/A	1	Rusted
17	Rock	1	N/A	N/A	2	Rusted
18	Rock	1	N/A	N/A	6	Rusted
19	Rock	1	N/A	N/A	2	Rusted
20	Rock	1	N/A	N/A	3	Rusted

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

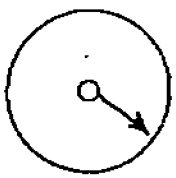


GRID I.D. 7

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

5 SUBSURFACE ANOMALIES INVESTIGATED IN 7 LANES
LESS THAN 1 lb METAL RECOVERED

GRID SURVEY SUMMARY SHEET

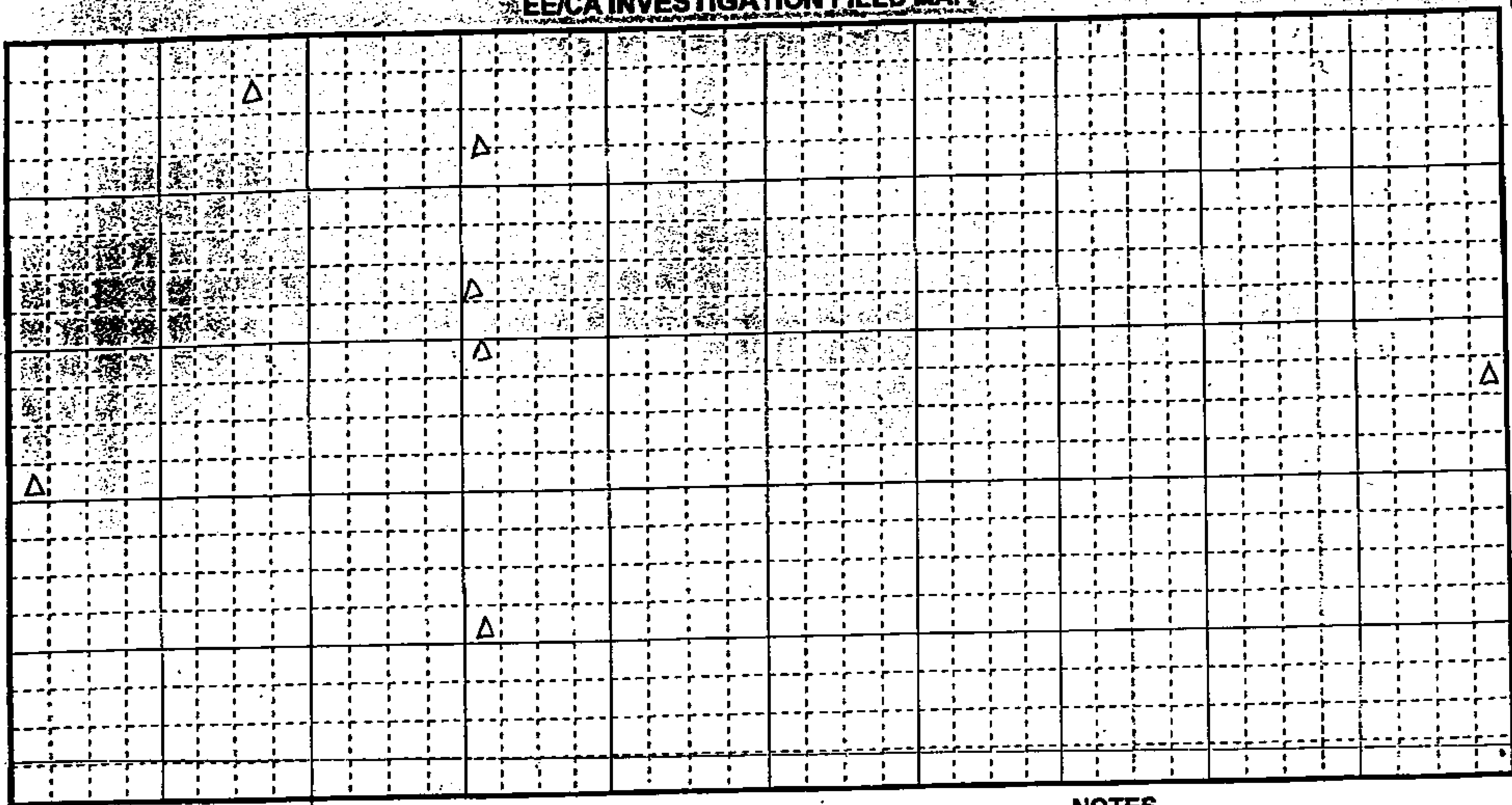
GRID: 7

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Rock	1	N/A	N/A	1	Rusted
2	Rock	1	N/A	N/A	1	Rusted
3	Rock	1	N/A	N/A	3	Rusted
4	Rock	1	N/A	N/A	2	Rusted
5	Compass	1	N/A	N/A	1	Rusted

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

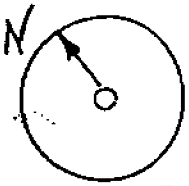
C



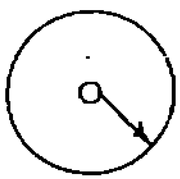
D

GRID I.D. 8

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

7 SUBSURFACE ANOMALIES INVESTIGATED IN 7 LANE:
LESS THAN 1 lb. METAL RECOVERED

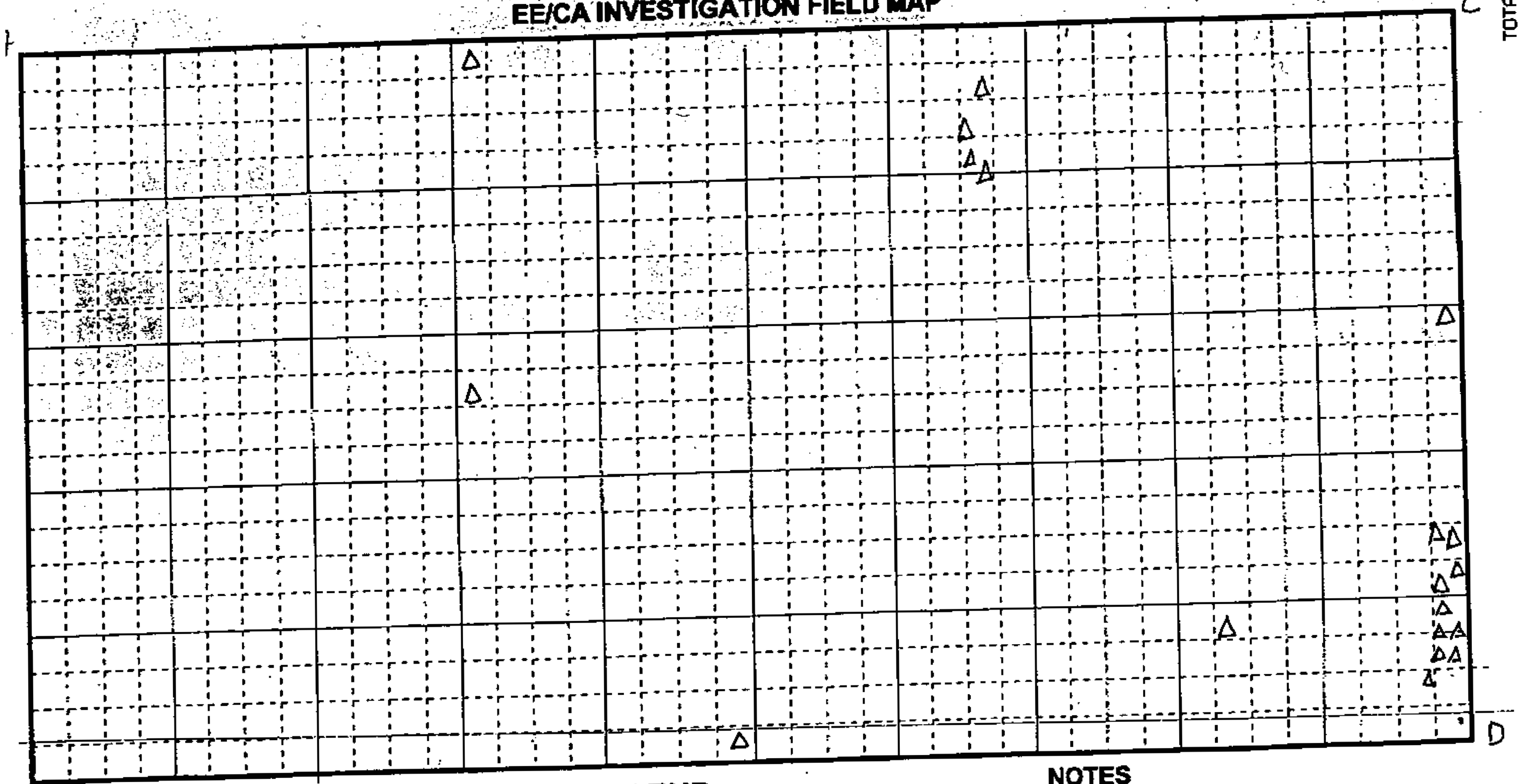
GRID SURVEY SUMMARY SHEET

GRID: 8

Accessability: WALK

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Rock	1	N/A	N/A	12	Rusted
2	50 cal.	1	N/A	N/A	3	Rusted
3	Rock	1	N/A	N/A	2	Rusted
4	Washer	1	N/A	N/A	4	Rusted
5	Rock	1	N/A	N/A	2	Rusted
6	Rock	1	N/A	N/A	3	Rusted
7	Rock	1	N/A	N/A	4	Rusted

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP



GRID I.D. 9

MAP ORIENTATION

N

WIND DIRECTION

LEGEND

△ SUBSURFACE ANOMALIES
○ SURFACE OEW/UXO
▲ SUBSURFACE OEW/UXO
□ FIRE SAFETY EQUIPMENT
⬡ PIT,TRENCHES, BUNKER, ETC.
— RESTRICTED AREA BOUNDARY
X ENTRY/EXIT POINT

NOTES

19 SUBSURFACE ANOMALIES INVESTIGATED IN 7 LANES
2 lbs. METAL RECOVERED.

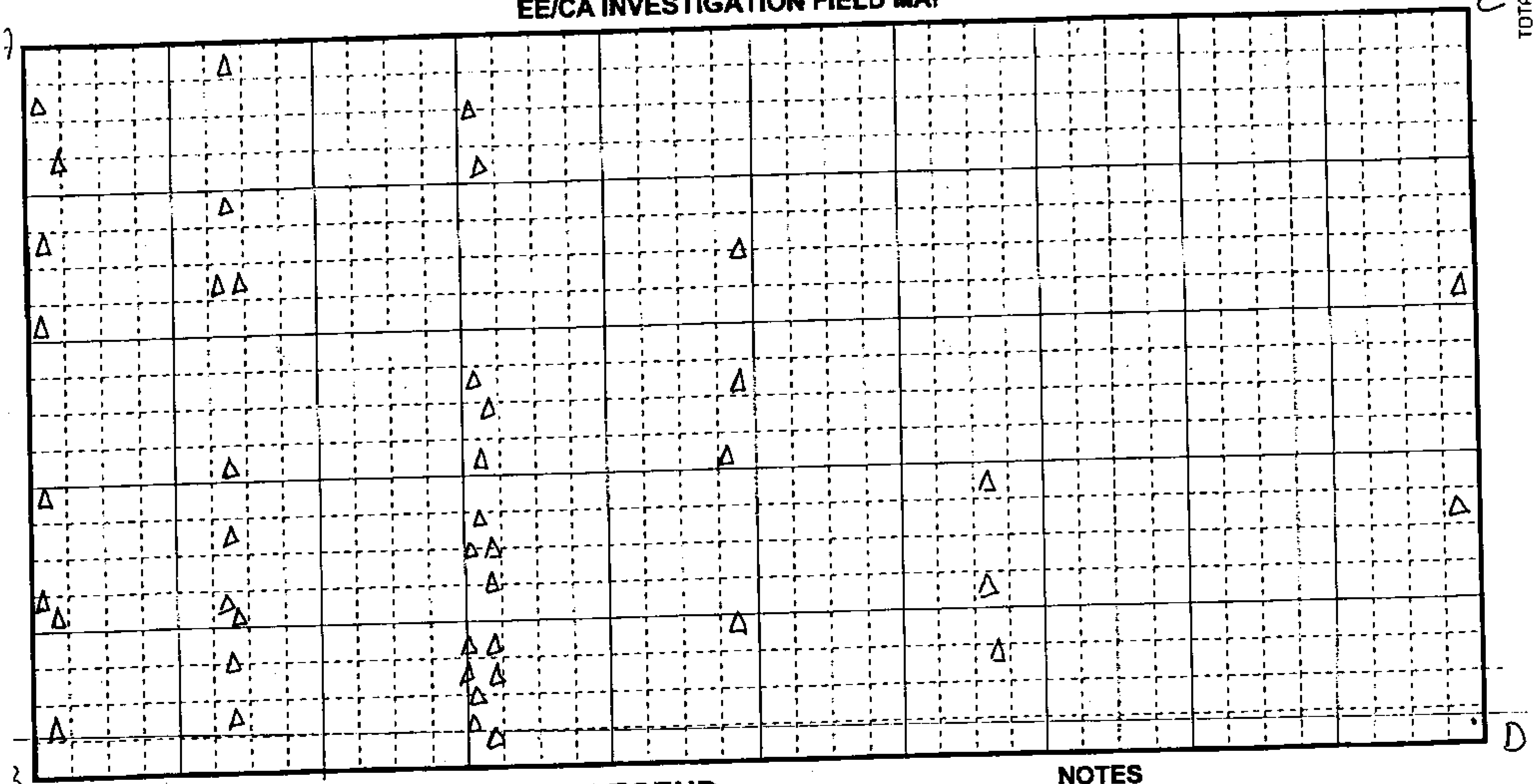
GRID SURVEY SUMMARY SHEET

GRID: 9

Accessability: EASY

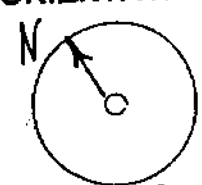
Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Scrap	1	N/A	N/A	3	Rusted
2	50 cal.	1	N/A	N/A	2	Rusted
3	50 cal.	1	N/A	N/A	4	Rusted
4	Barbed wire	1	N/A	N/A	2	Rusted
5	Barbed wire	1	N/A	N/A	3	Rusted
6	illum. round	1	N/A	N/A	2	Expended
7	Barbed wire	1	N/A	N/A	1	Rusted
8	Barbed wire	1	N/A	N/A	2	Rusted
9	Barbed wire	1	N/A	N/A	2	Rusted
10	Barbed wire	1	N/A	N/A	1	Rusted
11	Barbed wire	1	N/A	N/A	3	Rusted
12	Barbed wire	1	N/A	N/A	4	Rusted
13	Barbed wire	1	N/A	N/A	1	Rusted
14	Barbed wire	1	N/A	N/A	2	Rusted
15	Barbed wire	1	N/A	N/A	2	Rusted
16	Barbed wire	1	N/A	N/A	4	Rusted
17	Barbed wire	1	N/A	N/A	3	Rusted
18	Barbed wire	1	N/A	N/A	1	Rusted
19	Rust	1	N/A	N/A	2	Rusted

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

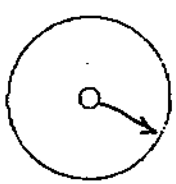


GRID I.D. 10

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

43 SUBSURFACE ANOMALIES INVESTIGATED IN 7 LANE

22 lbs. METAL RECOVERED

GRID SURVEY SUMMARY SHEET

GRID: 10

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Nail	1	N/A	N/A	3	Rusted
2	Rust	1	N/A	N/A	4	Rusted
3	Frag	1	N/A	N/A	2	Rusted
4	Wire	1	N/A	N/A	6	Rusted
5	Rock	1	N/A	N/A	1	Rusted
6	Rock	1	N/A	N/A	4	Rusted
7	Rock	1	N/A	N/A	1	Rusted
8	50 cal.	1	N/A	N/A	4	Rusted
9	Wire	1	N/A	N/A	2	Rusted
10	Rock	1	N/A	N/A	4	Rusted
11	Plow sheer	1	N/A	N/A	2	Rusted
12	Wire	1	N/A	N/A	4	Rusted
13	Rock	1	N/A	N/A	1	Rusted
14	Scrap	1	N/A	N/A	2	Rusted
15	Nail	1	N/A	N/A	3	Rusted
16	Scrap	1	N/A	N/A	3	Rusted
17	Wire	1	N/A	N/A	2	Rusted
18	Hinge	1	N/A	N/A	5	Rusted
19	Nail	1	N/A	N/A	2	Rusted
20	Nail	1	N/A	N/A	1	Rusted
21	Wire	1	N/A	N/A	4	Rusted
22	1/2 Horse shoe	1	N/A	N/A	5	Rusted
23	Wire	1	N/A	N/A	2	Rusted
24	Nail	1	N/A	N/A	3	Rusted
25	Nail	1	N/A	N/A	2	Rusted
26	1/2 Horse shoe	1	N/A	N/A	54	Rusted
27	1/2 Horse shoe	1	N/A	N/A	1	Rusted
28	Wire	1	N/A	N/A	4	Rusted
29	Wire	1	N/A	N/A	3	Rusted
30	Wire	1	N/A	N/A	4	Rusted

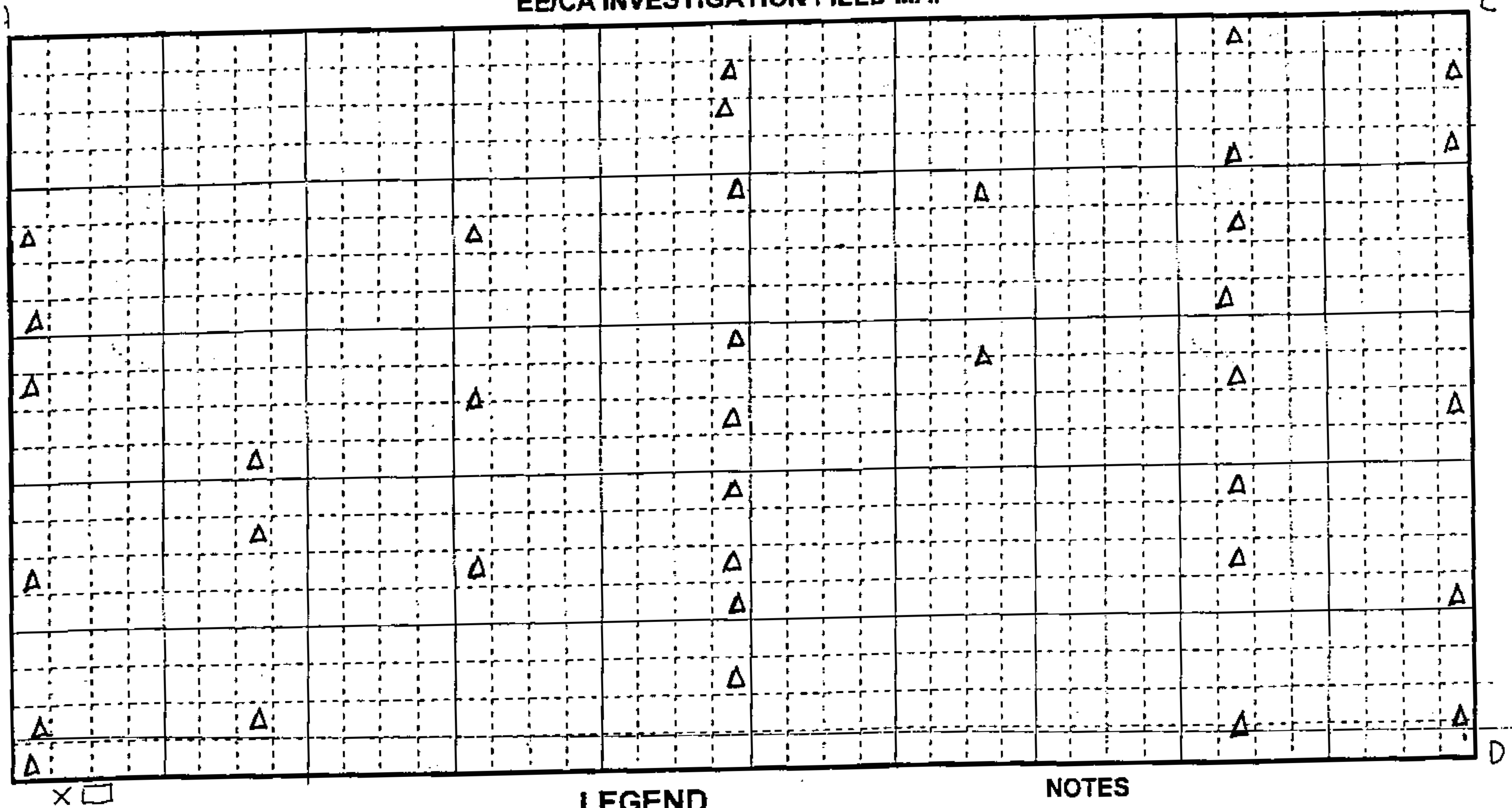
GRID SURVEY SUMMARY SHEET

GRID: 10

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	Wire	1	N/A	N/A	4	Rusted
32	Wire	2	N/A	N/A	2-6	Rusted
33	50 cal.	1	N/A	N/A	4	Rusted
34	Scrap	1	N/A	N/A	4	Rusted
35	Wire	1	N/A	N/A	3	Rusted
36	Scrap	1	N/A	N/A	10	Rusted
37	Scrap	1	N/A	N/A	4	Rusted
38	Bolt	1	N/A	N/A	4	Rusted
39	Scrap	1	N/A	N/A	6	Rusted
40	Scrap	1	N/A	N/A	4	Rusted
41	1/2 Horse shoe	1	N/A	N/A	4	Rusted
42	Scrap	1	N/A	N/A	2	Rusted
43	Rock	1	N/A	N/A	1	Rusted

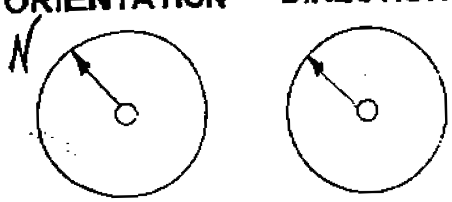
FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP



GRID I.D. 11

MAP ORIENTATION

WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

36 SUBSURFACE INVESTIGATIONS IN 7 LANES
32 EA. SMALL ARMS PROJOS
2 lbs METAL RECOVERED

GRID SURVEY SUMMARY SHEET

GRID: 11 Accessability: DIRT ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	30 cal.	1	N/A	N/A	1	
2	50 cal.	1	N/A	N/A	2	Jacket only
3	Rock	1	N/A	N/A	4	
4	Barbed wire	1	N/A	N/A	1	
5	30 cal.	1	N/A	N/A	2	
6	Barbed wire & 30 cal.	2	N/A	N/A	2-5	
7	30 cal.	1	N/A	N/A	2	
8	30 cal.	2	N/A	N/A	4-9	
9	Rock	1	N/A	N/A	3	
10	Can	1	N/A	N/A	1	
11	30 cal.	1	N/A	N/A	2	
12	Nail	3	N/A	N/A	6-13	
13	30 cal.	1	N/A	N/A	2	
14	30 cal.	1	N/A	N/A	3	
15	30 cal.	2	N/A	N/A	2-8	
16	30 cal.	2	N/A	N/A	3-20	
17	Plow	1	N/A	N/A	3	
18	30 cal.	1	N/A	N/A	2	
19	30 cal.	2	N/A	N/A	1-7	
20	30 cal.	1	N/A	N/A	1	
21	30 cal.	1	N/A	N/A	4	
22	30 cal.	1	N/A	N/A	3	
23	30 cal.	1	N/A	N/A	1	
24	30 cal.	1	N/A	N/A	1	
25	30 cal.	1	N/A	N/A	1	
26	30 cal.	2	N/A	N/A	9-15	
27	Wire	1	N/A	N/A	2	
28	30 cal.	1	N/A	N/A	3	
29	30 cal.	1	N/A	N/A	2	
30	30 cal.	1	N/A	N/A	1	

GRID SURVEY SUMMARY SHEET

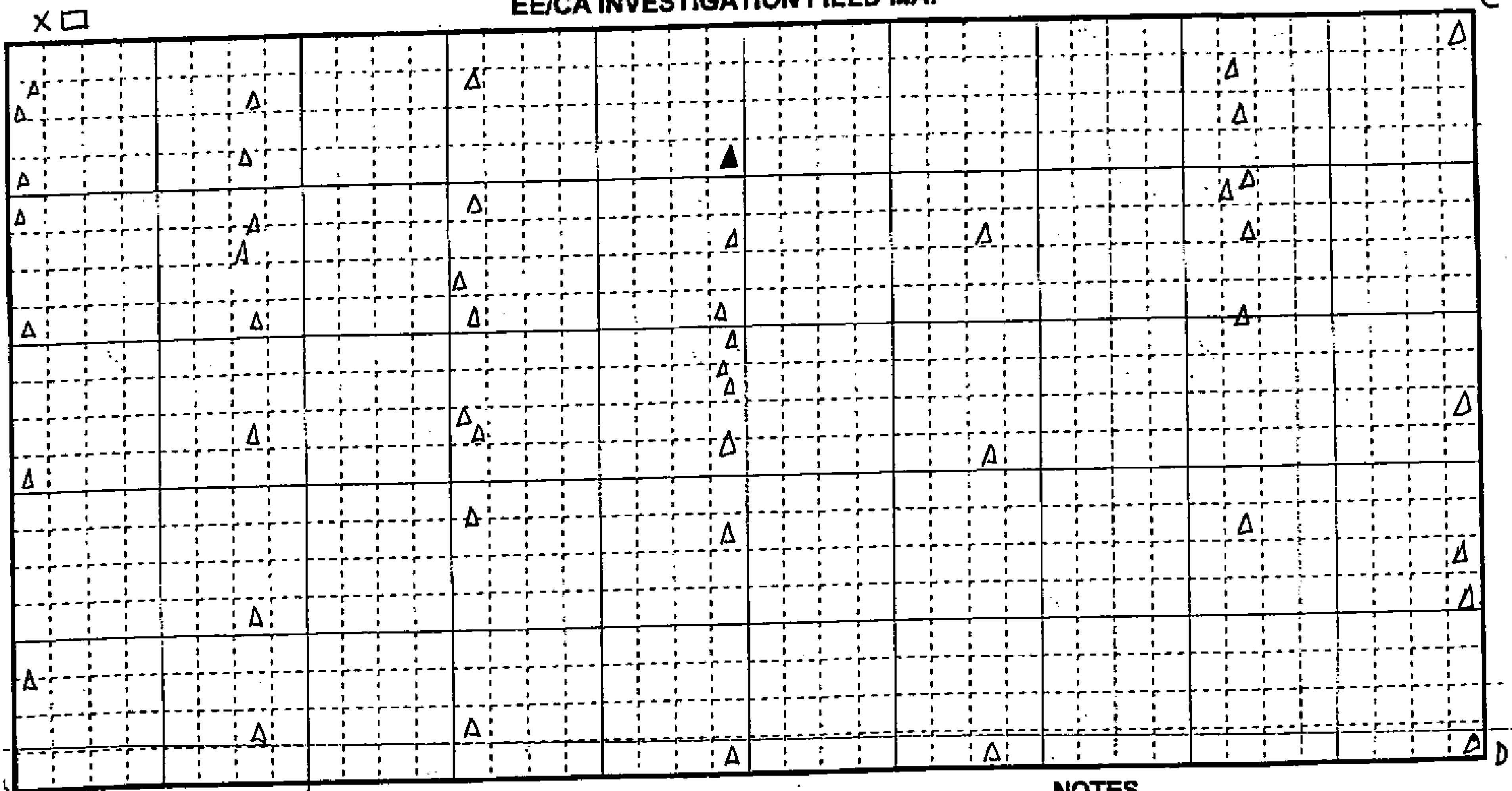
Grid : 11

Accessability: DIRT ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	30 cal.	2	N/A	N/A	2-14	
32	30 cal.	1	N/A	N/A	1	
33	30 cal.	1	N/A	N/A	1	
34	Rock	1	N/A	N/A	5	
35	Barbed wire	1	N/A	N/A	2	
36	Rock	1	N/A	N/A	2	

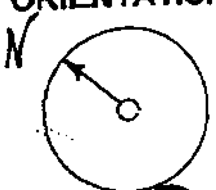
FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

TOTAL P.02

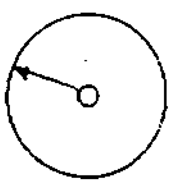


GRID I.D. 12

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

46 SUBSURFACE INVESTIGATIONS IN 7 LANES.
1 EA. 37MM AP ANTI-AIRCRAFT ROUND.
81 EA. SMALL ARMS PROJOS
2 lbs METAL RECOVERED

GRID SURVEY SUMMARY SHEET

GRID : 12

Accessability: DIRT ROAD & GATOR TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	30 cal.	3	N/A	N/A	2-7	
2	30 cal.	1	N/A	N/A	1	
3	30 cal.	1	N/A	N/A	2	
4	30 cal.	3	N/A	N/A	5-9	
5	30 cal.	1	N/A	N/A	2	
6	30 cal. & Rock	2	N/A	N/A	1-5	
7	30 cal.	3	N/A	N/A	9-17	
8	30 cal.	1	N/A	N/A	4	
9	Rock	4	N/A	N/A	4-21	
10	30 cal.	1	N/A	N/A	3	
11	30 cal.	1	N/A	N/A	3	
12	30 cal.	3	N/A	N/A	6-11	
13	30 cal.	1	N/A	N/A	1	
14	30 cal.	1	N/A	N/A	2	
15	30 cal.	2	N/A	N/A	2-5	
16	30 cal.	1	N/A	N/A	2	
17	30 cal.	1	N/A	N/A	2	
18	30 cal.	1	N/A	N/A	3	
19	Rock	1	N/A	N/A	4	
20	30 cal.	1	N/A	N/A	1	
21	30 cal.	1	N/A	N/A	4	
22	30 cal.	1	N/A	N/A	3	
23	Rock	1	N/A	N/A	3	
24	30 cal.	1	N/A	N/A	3	
25	30 cal.	1	N/A	N/A	1	
26	30 cal.	12	N/A	N/A	5-21	
27	30 cal.	21	N/A	N/A	2-19	
28	30 cal.	1	N/A	N/A	1	
29	Rock	1	N/A	N/A	4	
30	37 mm	1	N/A	N/A	8	

GRID SURVEY SUMMARY SHEET

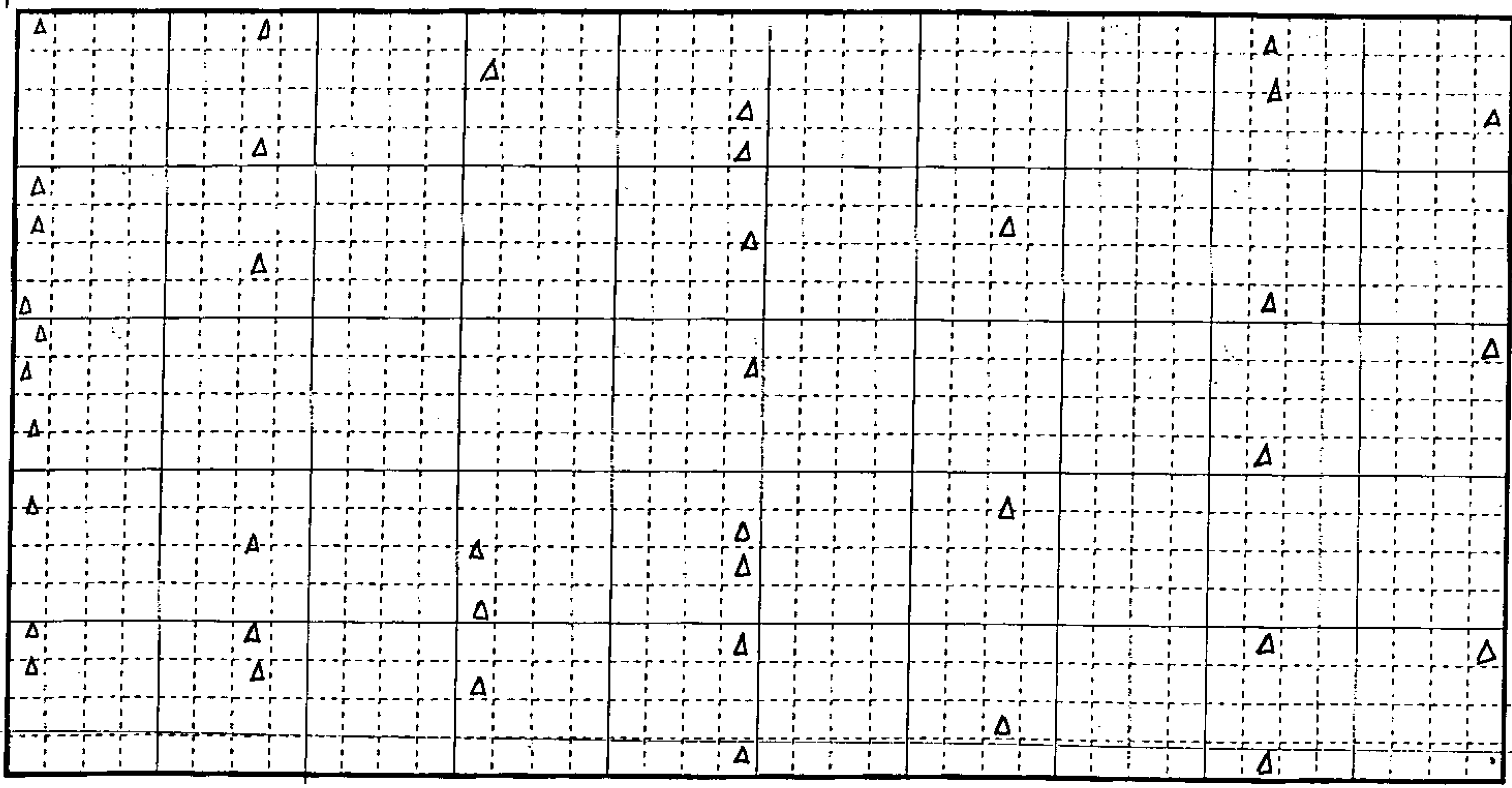
GRID : 12

Accessability: DIRT ROAD & GATOR TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	30 cal.	2	N/A	N/A	1-4	
32	30 cal.	2	N/A	N/A	4-9	
33	Rock	1	N/A	N/A	1	
34	30 cal.	2	N/A	N/A	6-8	
35	Staple & 30 cal.	2	N/A	N/A	3-7	
36	30 cal.	1	N/A	N/A	1	
37	Rock	3	N/A	N/A	9-15	
38	30 cal.	1	N/A	N/A	1	
39	Rock	1	N/A	N/A	4	
40	30 cal.	1	N/A	N/A	1	
41	30 cal.	1	N/A	N/A	2	
42	30 cal.	1	N/A	N/A	3	
43	30 cal.	2	N/A	N/A	2-5	
44	Rock	1	N/A	N/A	10	
45	30 cal.	1	N/A	N/A	1	
46	50 cal.	1	N/A	N/A	1	

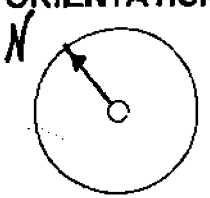
FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

X □

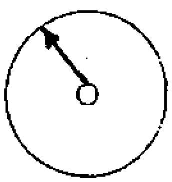


GRID I.D. 13

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT, TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

40 SUBSURFACE INVESTIGATIONS IN 7 LANES
51 EA. SMALL ARMS PROJOS
2 lbs. METAL RECOVERED

GRID SURVEY SUMMARY SHEET

GRID :13

Accessability: GATOR TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	ERR
1	50 cal.	1	N/A	N/A	1	Ball
2	30 cal.	1	N/A	N/A	1	
3	30 cal.	1	N/A	N/A	1	
4	30 cal.	1	N/A	N/A	3	
5	Rock	1	N/A	N/A	2	Tracer
6	30 cal.	1	N/A	N/A	1	
7	30 cal.	2	N/A	N/A	2-5	
8	30 cal.	1	N/A	N/A	2	
9	30 cal.	1	N/A	N/A	2	
10	30 cal.	1	N/A	N/A	2	
11	30 cal.	1	N/A	N/A	1	
12	30 cal.	2	N/A	N/A	3-9	
13	30 cal.	1	N/A	N/A	2	
14	30 cal.	1	N/A	N/A	1	
15	30 cal.	1	N/A	N/A	1	
16	30 cal.	1	N/A	N/A	2	
17	30 cal.	2	N/A	N/A	1-5	
18	30 cal.	1	N/A	N/A	2	
19	30 cal.	1	N/A	N/A	3	
20	30 cal.	2	N/A	N/A	4-10	
21	50 cal.	1	N/A	N/A	1	Ball
22	30 cal.	1	N/A	N/A	4	
23	30 cal.	1	N/A	N/A	2	
24	30 cal.	1	N/A	N/A	2	
25	30 cal.	1	N/A	N/A	1	
26	30 cal.	3	N/A	N/A	2-9	
27	30 cal.	1	N/A	N/A	2	
28	30 cal.	1	N/A	N/A	2	
29	Scrap	1	N/A	N/A	4	
30	30 cal.	1	N/A	N/A	2	

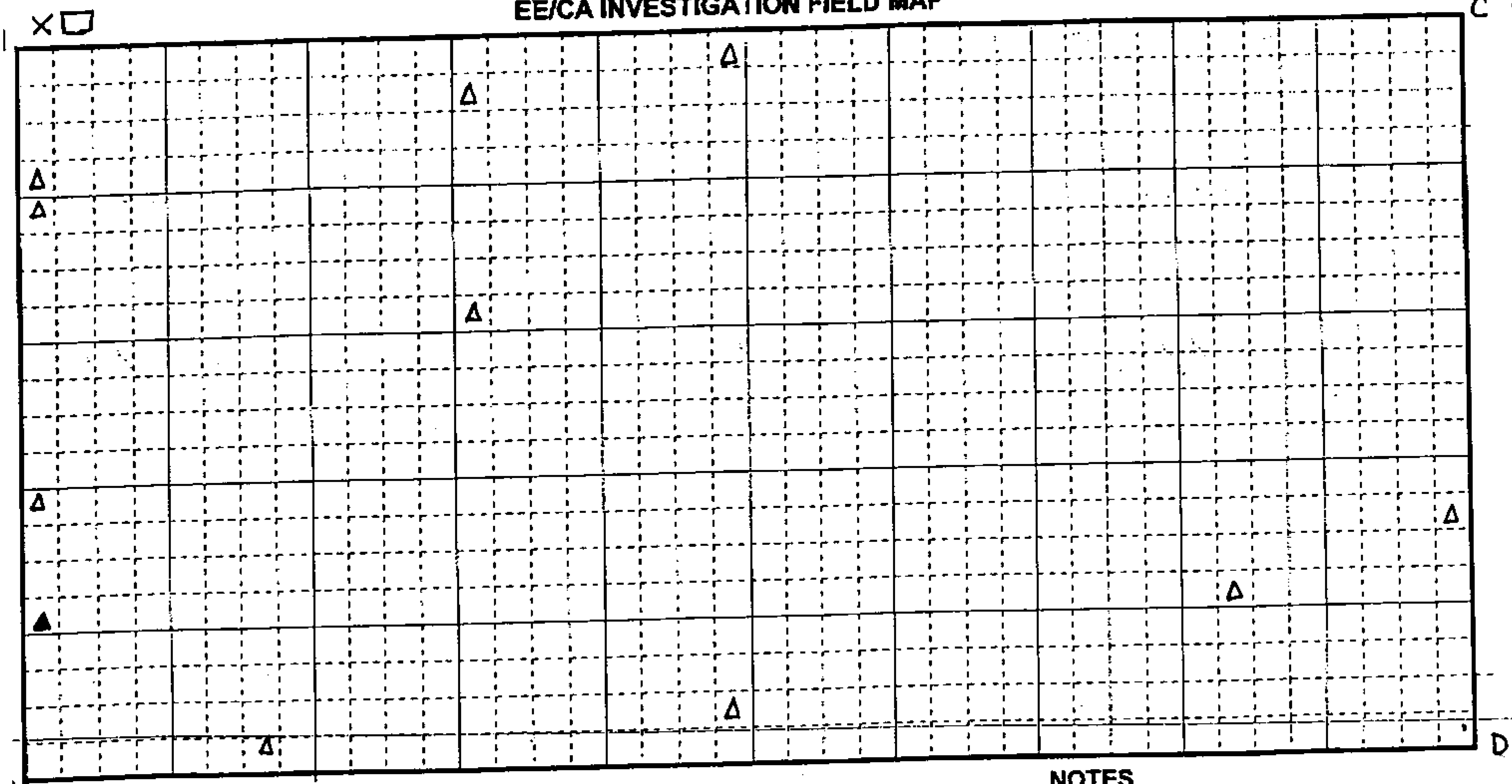
GRID SURVEY SUMMARY SHEET

GRID : 13

Accessability: GATOR TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	30 cal.	1	N/A	N/A	1	
32	30 cal.	2	N/A	N/A	4-8	
33	30 cal.	1	N/A	N/A	3	
34	30 cal.	2	N/A	N/A	3-5	
35	30 cal.	1	N/A	N/A	2	
36	30 cal.	2	N/A	N/A	1-7	
37	30 cal.	2	N/A	N/A	5-11	
38	30 cal.	1	N/A	N/A	1	
39	30 cal.	1	N/A	N/A	2	
40	30 cal.	1	N/A	N/A	2	

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

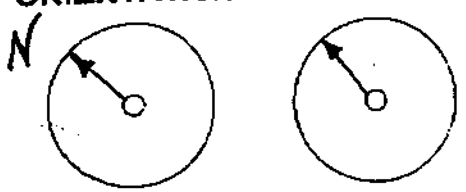


LEGEND

GRID I.D. 14

MAP ORIENTATION

WIND DIRECTION



- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT, TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

11 SUBSURFACE INVESTIGATION IN 7 LANES

1 EA. 57MM APC ~~HANK~~ ROUND

2 EA. SMALL ARMS PROJOS

8 lbs. METAL RECOVERED

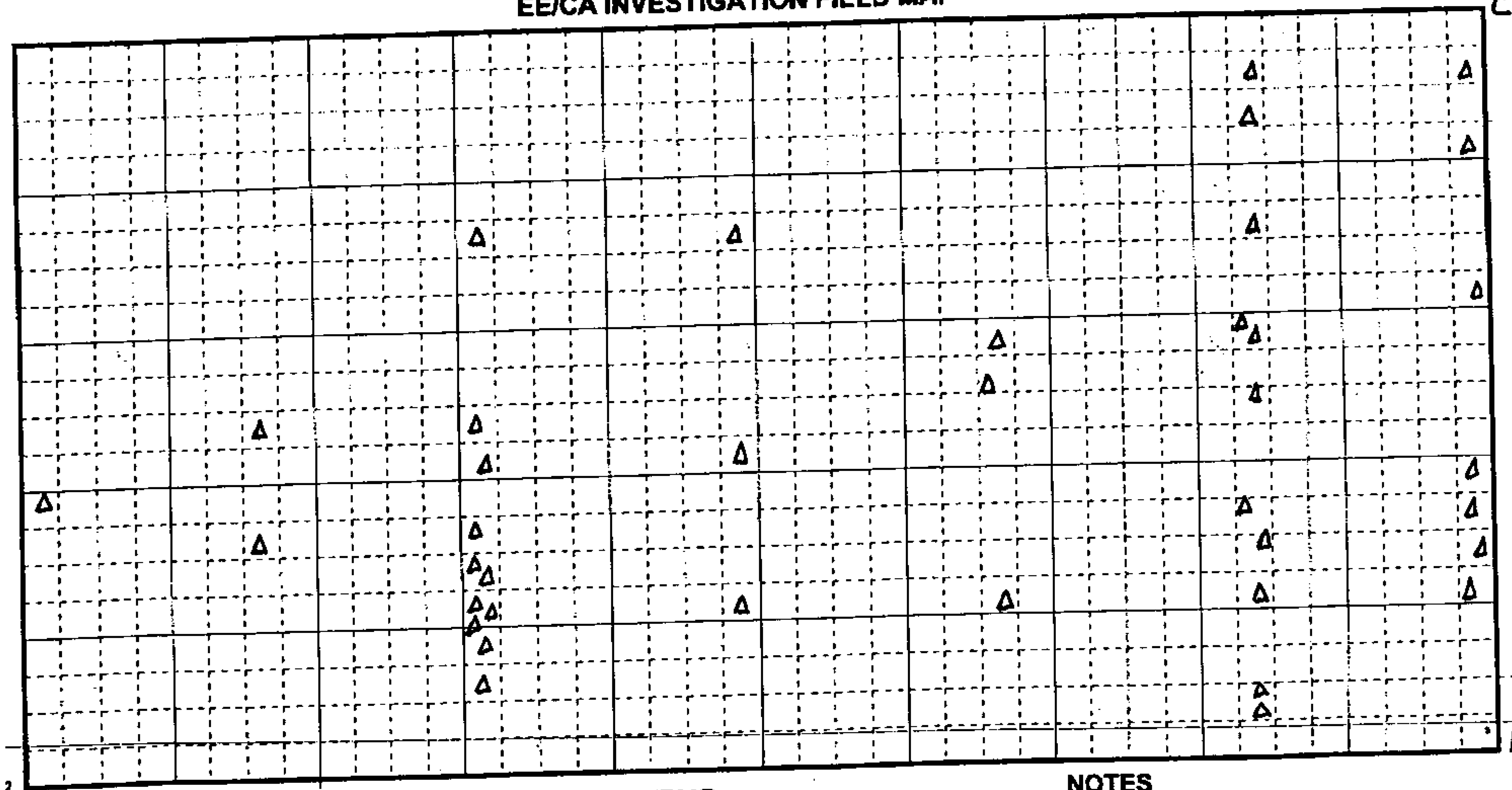
GRID SURVEY SUMMARY SHEET

GRID :14

Accessability: MODERATE GATOR TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Brick	1	N/A	N/A	4	
2	30 cal.	1	N/A	N/A	3	
3	Comm. wire	2	N/A	N/A	3-7	
4	57mm	1	N/A	N/A	18	
5	Comm. wire	1	N/A	N/A	4	
6	handle	2	N/A	N/A	4-6	Toy wagon handle
7	rock	1	N/A	N/A	3	
8	rock	1	N/A	N/A	2	
9	scrap	1	N/A	N/A	4	
10	Comm.wire	1	N/A	N/A	2	
11	50 cal.	1	N/A	N/A	4	

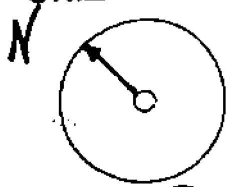
FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP



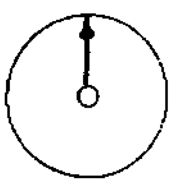
X☐

GRID I.D. 15

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

39 SUBSURFACE INVESTIGATIONS IN 7 LANES
32 EA. SMALL ARMS PROJOS.
2 lbs METAL RECOVERED

GRID SURVEY SUMMARY SHEET

GRID :15

Accessability: WALK FROM 16

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	50 cal.	1	N/A	N/A	3	
2	Rust		N/A	N/A	4-5	
3	Rock	1	N/A	N/A	6	
4	50 cal.	1	N/A	N/A	2	
5	Rock	1	N/A	N/A	8	
6	50 cal.	1	N/A	N/A	1	
7	50 cal.	1	N/A	N/A	1	
8	30 cal.	1	N/A	N/A	4	
9	Rock	1	N/A	N/A	8	
10	30 cal.	1	N/A	N/A	2	
11	30 cal.	1	N/A	N/A	2	
12	30 cal.	1	N/A	N/A	3	
13	30 cal.	1	N/A	N/A	2	
14	30 cal.	1	N/A	N/A	2	
15	50 cal.	1	N/A	N/A	3	
16	30 cal.	1	N/A	N/A	3	
17	Scrap	1	N/A	N/A	2	
18	Wire	1	N/A	N/A	3	
19	30 cal.	1	N/A	N/A	2	
20	30 cal.	1	N/A	N/A	2	
21	30 cal.	1	N/A	N/A	3	
22	30 cal.	1	N/A	N/A	1	
23	Horse shoe	1	N/A	N/A	4	
24	30 cal.	1	N/A	N/A	2	
25	30 cal.	2	N/A	N/A	3-11	
26	30 cal.	1	N/A	N/A	1	
27	30 cal.	1	N/A	N/A	1	
28	50 cal.	1	N/A	N/A	1	
29	30 cal.	1	N/A	N/A	1	
30	50 cal.	1	N/A	N/A	1	

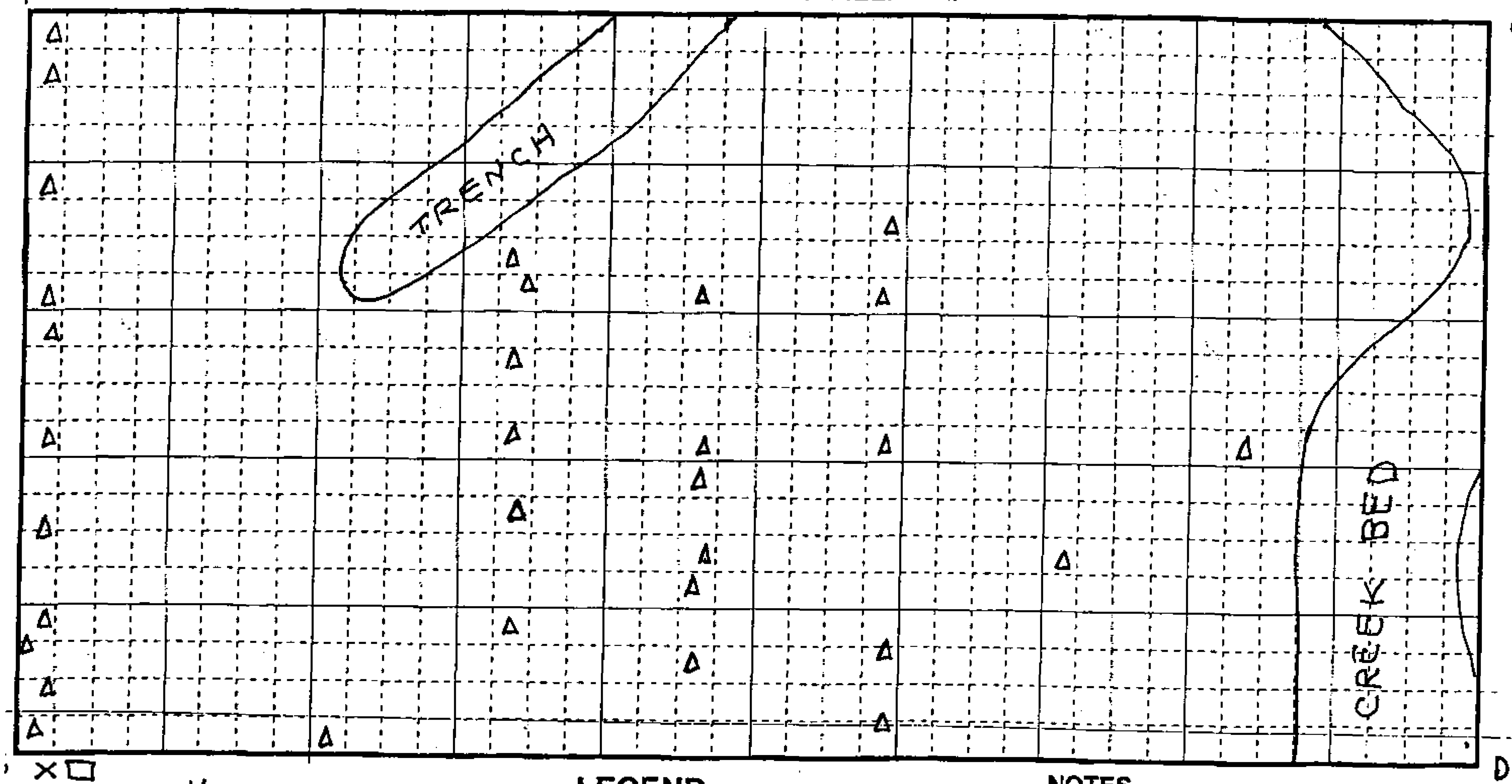
GRID SURVEY SUMMARY SHEET

GRID :15

Accessability: WALK FROM 16

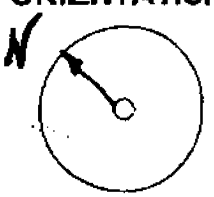
Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	30 cal.	1	N/A	N/A	1	
32	50 cal.	1	N/A	N/A	2	
33	30 cal.	1	N/A	N/A	3	
34	50 cal.	1	N/A	N/A	2	
35	30 cal.	1	N/A	N/A	1	
36	30 cal.	1	N/A	N/A	1	
37	50 cal.	1	N/A	N/A	2	
38	30 cal.	1	N/A	N/A	1	
39	30 cal.	1	N/A	N/A	3	

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

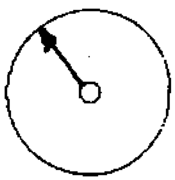


GRID I.D. 16

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

31 SUBSURFACE INVESTIGATIONS IN 7 LANES
27 EA SMALL ARMS PROJOS
3 lbs METAL RECOVERED

GRID SURVEY SUMMARY SHEET

GRID : 16

Accessability: MODERATE WITH GATORS

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	50 cal.	1	N/A	N/A	2	Ball
2	50 cal.	1	N/A	N/A	1	Tracer
3	30 cal.	1	N/A	N/A	1	
4	30 cal.	1	N/A	N/A	1	
5	30 cal.	1	N/A	N/A	1	
6	30 cal.	1	N/A	N/A	1	
7	50 cal.	1	N/A	N/A	3	Tracer
8	30 cal.	1	N/A	N/A	2	
9	30 cal.	1	N/A	N/A	1	
10	30 cal.	1	N/A	N/A	2	
11	50 cal.	1	N/A	N/A	1	Ball
12	30 cal.	1	N/A	N/A	1	
13	50 cal.	1	N/A	N/A	2	Ball
14	30 cal.	1	N/A	N/A	2	
15	30 cal.	1	N/A	N/A	1	
16	50 cal.	1	N/A	N/A	2	Tracer
17	30 cal.	1	N/A	N/A	3	
18	50 cal.	1	N/A	N/A	4	Tracer
19	30 cal.	1	N/A	N/A	4	
20	Rock	1	N/A	N/A	3	
21	30 cal.	1	N/A	N/A	2	
22	30 cal.	1	N/A	N/A	2	
23	30 cal.	1	N/A	N/A	1	
24	Wire	2	N/A	N/A	3-11	
25	Rock	1	N/A	N/A	1	
26	30 cal.	1	N/A	N/A	2	
27	30 cal.	1	N/A	N/A	1	
28	30 cal.	1	N/A	N/A	2	
29	30 cal.	1	N/A	N/A	1	
30	50 cal.	1	N/A	N/A	1	Ball

GRID SURVEY SUMMARY SHEET

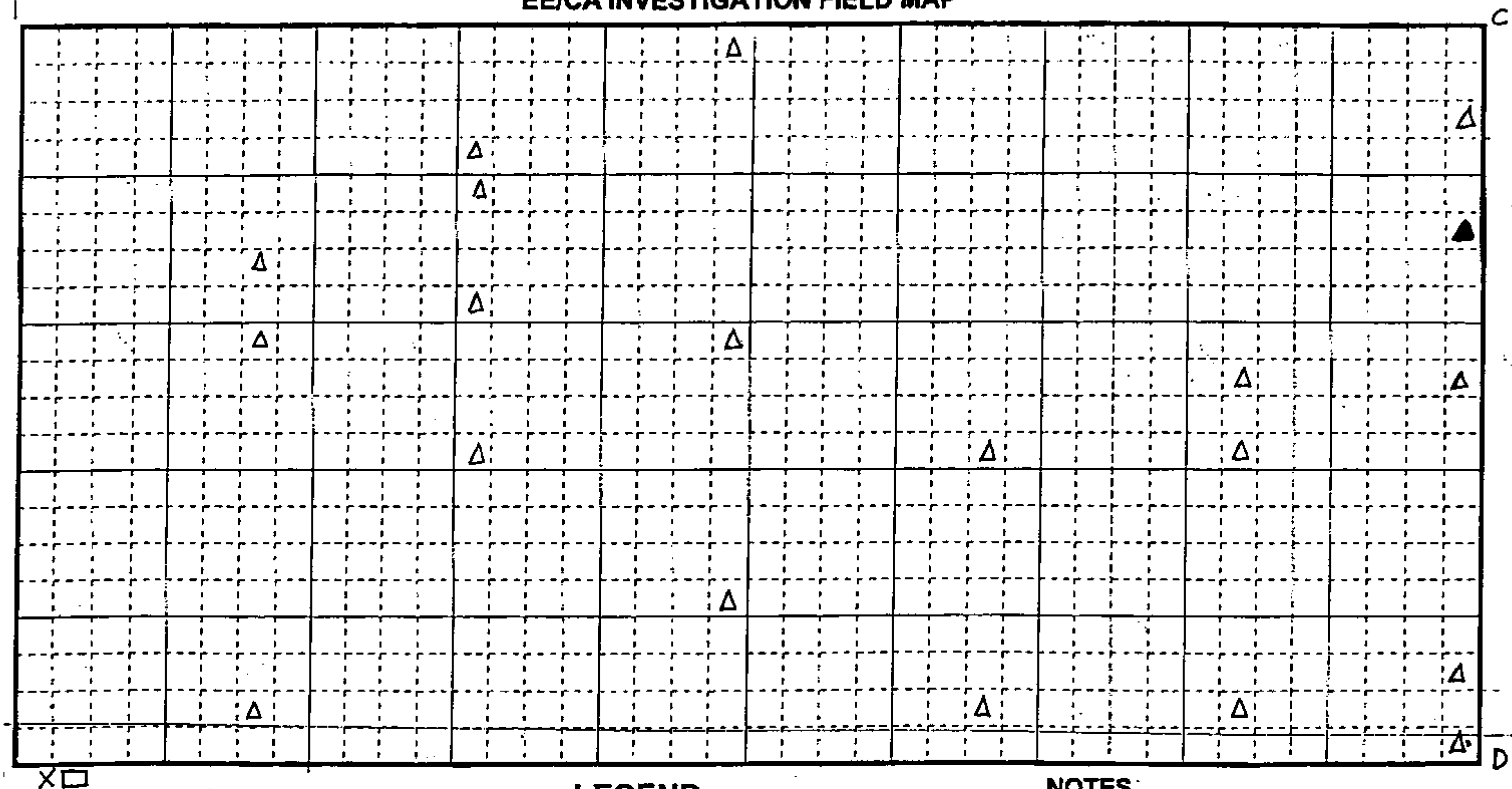
GRID :16

Accessability: MODERATE WITH GATOR

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	Sickel blade	1	N/A	N/A	2	

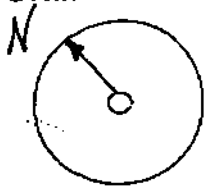
TOTAL P.02

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

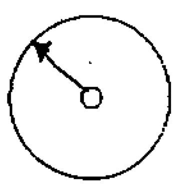


GRID I.D. 17

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

20 SUBSURFACE INVESTIGATIONS IN 7 LANES
1 EA. 37MM AP ANTI-AIRCRAFT ROUNDS
4 EA. SMALL ARMS PROJOS
4 lbs METAL RECOVERED

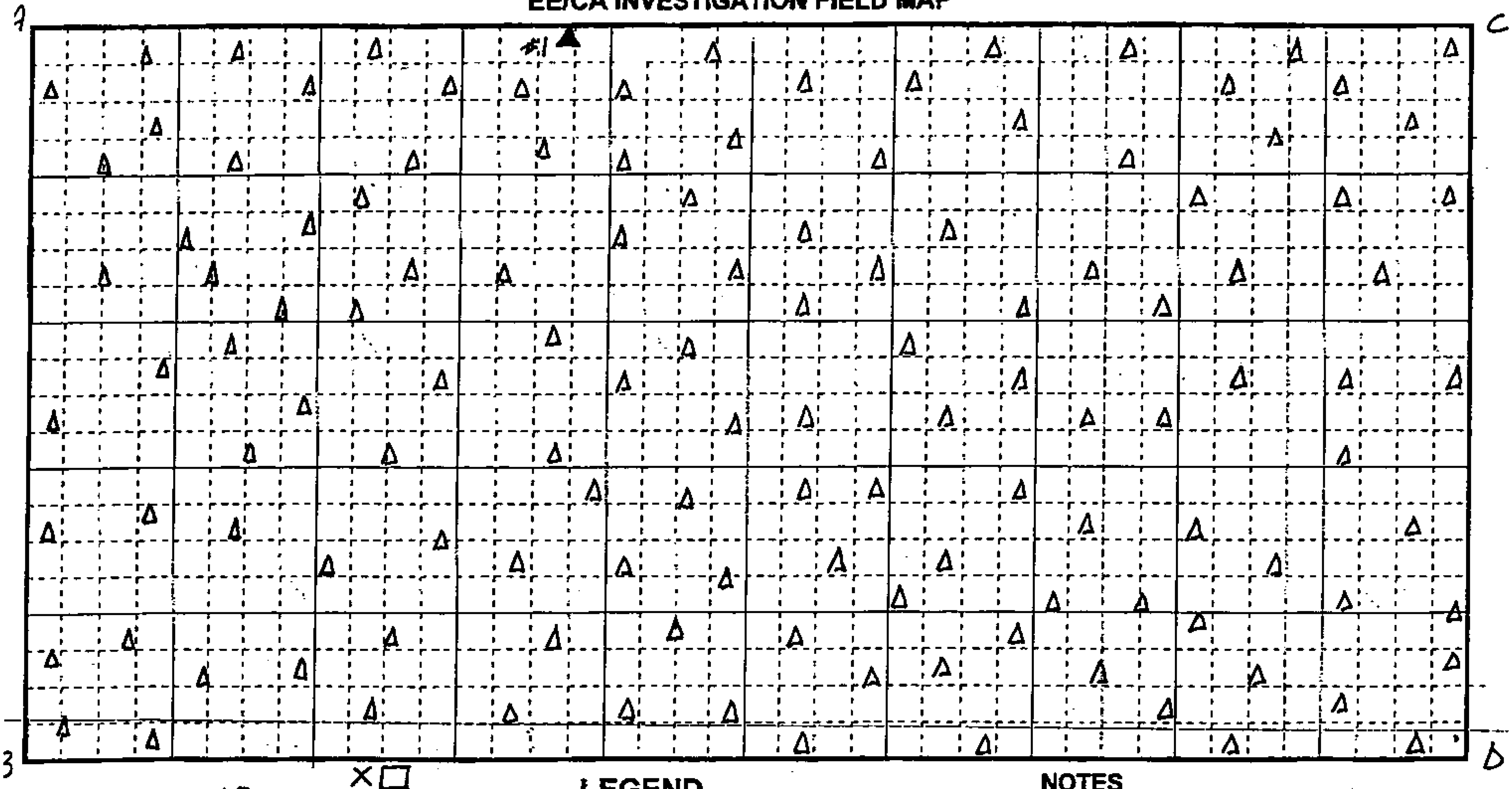
GRID SURVEY SUMMARY SHEET

GRID :17

Accessability: GATOR ACCESS

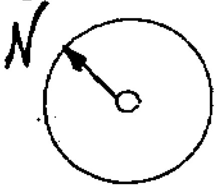
Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	50 cal.	1	N/A	N/A	2	AP
2	Grenade spoon	1	N/A	N/A	1	
3	50 cal.	1	N/A	N/A	3	Ball
4	Grenade pin	1	N/A	N/A	1	
5	Barbed wire	1	N/A	N/A	3	
6	Rock	1	N/A	N/A	2	
7	Grenade spoon	1	N/A	N/A	3	
8	Wire	1	N/A	N/A	3	
9	Rock	1	N/A	N/A	2	
10	Pipe fray	1	N/A	N/A	3	
11	Plate	1	N/A	N/A	4	2-6 in.
12	Rock	1	N/A	N/A	6	
13	30 cal.	1	N/A	N/A	1	
14	50 cal.	1	N/A	N/A	3	
15	37mm.	1	N/A	N/A	6	AP
16	Scrap	1	N/A	N/A	4	
17	Barbed wire	3	N/A	N/A	5-9	
18	Knife blade	1	N/A	N/A	3	
19	M-1 clip	1	N/A	N/A	4	
20	Barbed wire	4	N/A	N/A	7-13	

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

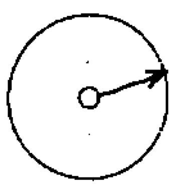


GRID I.D. 18

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT, TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

#1 57MM A/A ROUND, 0' A TO B, 74' A/B TO C/D, 10" DEEP, 09NOV94
378 HITS, 127 INVESTIGATIONS
8 EA. .30 CAL PROJOS 1 EA. UXO
09 NOV 1994
28 LBS OEW/SCRAP

GRID SURVEY SUMMARY SHEET

Grid: 18

Accessability: MODERATE

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Scrap	1	N/A	N/A	5"	Rusted
2	Scrap	1	N/A	N/A	7"	Rusted
3	Scrap	1	N/A	N/A	5"	Rusted
4	Scrap	1	N/A	N/A	5"	Rusted
5	Scrap	1	N/A	N/A	3"	Rusted
6	Scrap	1	N/A	N/A	4"	Rusted
7	Sm. arms .30 cal. slug	1	N/A	N/A	1"	Rusted
8	Scrap	1	N/A	N/A	6"	Rusted
9	Scrap	1	N/A	N/A	6"	Rusted
10	Scrap	1	N/A	N/A	6"	Rusted
11	Scrap	1	N/A	N/A	5"	Rusted
12	Scrap	1	N/A	N/A	6"	Rusted
13	Scrap	1	N/A	N/A	5"	Rusted
14	Scrap	1	N/A	N/A	4"	Rusted
15	Scrap	1	N/A	N/A	7"	Rusted
16	Scrap	1	N/A	N/A	4"	Rusted
17	Scrap	1	N/A	N/A	4"	Rusted
18	Scrap	1	N/A	N/A	5"	Rusted
19	Scrap	1	N/A	N/A	6"	Rusted
20	Scrap	1	N/A	N/A	5"	Rusted
21	Scrap	1	N/A	N/A	5"	Rusted
22	Scrap	1	N/A	N/A	4"	Rusted
23	Sm. arms .30 cal. slug	1	N/A	N/A	2"	Rusted
24	Scrap	1	N/A	N/A	5"	Rusted
25	Scrap	1	N/A	N/A	6"	Rusted
26	Scrap	1	N/A	N/A	6"	Rusted
27	Scrap	1	N/A	N/A	6"	Rusted
28	Scrap	1	N/A	N/A	4"	Rusted
29	Scrap	1	N/A	N/A	5"	Rusted
30	Scrap	1	N/A	N/A	5"	Rusted

GRID SURVEY SUMMARY SHEET

Grid: 18

Accessability: MODERATE

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	Scrap	1	N/A	N/A	4"	Rusted
32	Scrap	1	N/A	N/A	4"	Rusted
33	Scrap	1	N/A	N/A	4"	Rusted
34	Scrap	1	N/A	N/A	5"	Rusted
35	Scrap	1	N/A	N/A	6"	Rusted
36	Scrap	1	N/A	N/A	6"	Rusted
37	Scrap	1	N/A	N/A	5"	Rusted
38	Scrap	1	N/A	N/A	5"	Rusted
39	Scrap	1	N/A	N/A	5"	Rusted
40	Scrap	1	N/A	N/A	4"	Rusted
41	Scrap	1	N/A	N/A	5"	Rusted
42	Scrap	1	N/A	N/A	5"	Rusted
43	Scrap	1	N/A	N/A	6"	Rusted
44	Scrap	1	N/A	N/A	3"	Rusted
45	Scrap	1	N/A	N/A	6"	Rusted
46	Scrap	1	N/A	N/A	6"	Rusted
47	Scrap	1	N/A	N/A	6"	Rusted
48	Scrap	1	N/A	N/A	5"	Rusted
49	Scrap	1	N/A	N/A	5"	Rusted
50	Scrap	1	N/A	N/A	6"	Rusted
51	Scrap	1	N/A	N/A	5"	Rusted
52	Scrap	1	N/A	N/A	4"	Rusted
53	Scrap	1	N/A	N/A	5"	Rusted
54	Scrap	1	N/A	N/A	6"	Rusted
55	Scrap	1	N/A	N/A	6"	Rusted
56	Scrap	1	N/A	N/A	6"	Rusted
57	Scrap	1	N/A	N/A	5"	Rusted
58	Sm. arms .30 cal. slug	1	N/A	N/A	1"	Rusted
59	Scrap	1	N/A	N/A	5"	Rusted
60	Scrap	1	N/A	N/A	4"	Rusted

GRID SURVEY SUMMARY SHEET

Grid: 18

Accessability: MODERATE

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
61	Scrap	1	N/A	N/A	5"	Rusted
62	Scrap	1	N/A	N/A	6"	Rusted
63	Scrap	1	N/A	N/A	6"	Rusted
64	Scrap	1	N/A	N/A	5"	Rusted
65	Sm. arms .30 cal. slug	1	N/A	N/A	2"	Rusted
66	Scrap	1	N/A	N/A	4"	Rusted
67	Scrap	1	N/A	N/A	5"	Rusted
68	Scrap	1	N/A	N/A	5"	Rusted
69	Scrap	1	N/A	N/A	6"	Rusted
70	Scrap	1	N/A	N/A	6"	Rusted
71	Scrap	1	N/A	N/A	4"	Rusted
72	Scrap	1	N/A	N/A	6"	Rusted
73	Scrap	1	N/A	N/A	6"	Rusted
74	Scrap	1	N/A	N/A	6"	Rusted
75	Scrap	1	N/A	N/A	4"	Rusted
76	Scrap	1	N/A	N/A	4"	Rusted
77	Scrap	1	N/A	N/A	5"	Rusted
78	Scrap	1	N/A	N/A	5"	Rusted
79	Scrap	1	N/A	N/A	6"	Rusted
80	Scrap	1	N/A	N/A	6"	Rusted
81	Scrap	1	N/A	N/A	4"	Rusted
82	Scrap	1	N/A	N/A	3"	Rusted
83	Sm. arms .30 cal. slug	3	N/A	N/A	2"	Rusted
84	Scrap	1	N/A	N/A	5"	Rusted
85	Scrap	1	N/A	N/A	5"	Rusted
86	Scrap	1	N/A	N/A	6"	Rusted
87	Scrap	1	N/A	N/A	6"	Rusted
88	57mm A/A round	1	None	None	10"	Rusted
89	Scrap	1	N/A	N/A	5"	Rusted
90	Scrap	1	N/A	N/A	5"	Rusted

GRID SURVEY SUMMARY SHEET

Grid: 18

Accessability: MODERATE

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
91	Scrap	1	N/A	N/A	6"	Rusted
92	Scrap	1	N/A	N/A	4"	Rusted
93	Scrap	1	N/A	N/A	4"	Rusted
94	Scrap	1	N/A	N/A	5"	Rusted
95	Scrap	1	N/A	N/A	5"	Rusted
96	Scrap	1	N/A	N/A	5"	Rusted
97	Scrap	1	N/A	N/A	6"	Rusted
98	Scrap	1	N/A	N/A	5"	Rusted
99	Scrap	1	N/A	N/A	6"	Rusted
100	Scrap	1	N/A	N/A	6"	Rusted
101	Scrap	1	N/A	N/A	6"	Rusted
102	Scrap	1	N/A	N/A	6"	Rusted
103	Scrap	1	N/A	N/A	6"	Rusted
104	Scrap	1	N/A	N/A	5"	Rusted
105	Sm. arms .30 cal. slug	1	N/A	N/A	3"	Rusted
106	Scrap	1	N/A	N/A	4"	Rusted
107	Scrap	1	N/A	N/A	5"	Rusted
108	Scrap	1	N/A	N/A	5"	Rusted
109	Scrap	1	N/A	N/A	5"	Rusted
110	Scrap	1	N/A	N/A	6"	Rusted
111	Scrap	1	N/A	N/A	4"	Rusted
112	Scrap	1	N/A	N/A	6"	Rusted
113	Scrap	1	N/A	N/A	5"	Rusted
114	Scrap	1	N/A	N/A	5"	Rusted
115	Scrap	1	N/A	N/A	7"	Rusted
116	Scrap	1	N/A	N/A	5"	Rusted
117	Scrap	1	N/A	N/A	6"	Rusted
118	Scrap	1	N/A	N/A	6"	Rusted
119	Scrap	1	N/A	N/A	5"	Rusted
120	Scrap	1	N/A	N/A	6"	Rusted

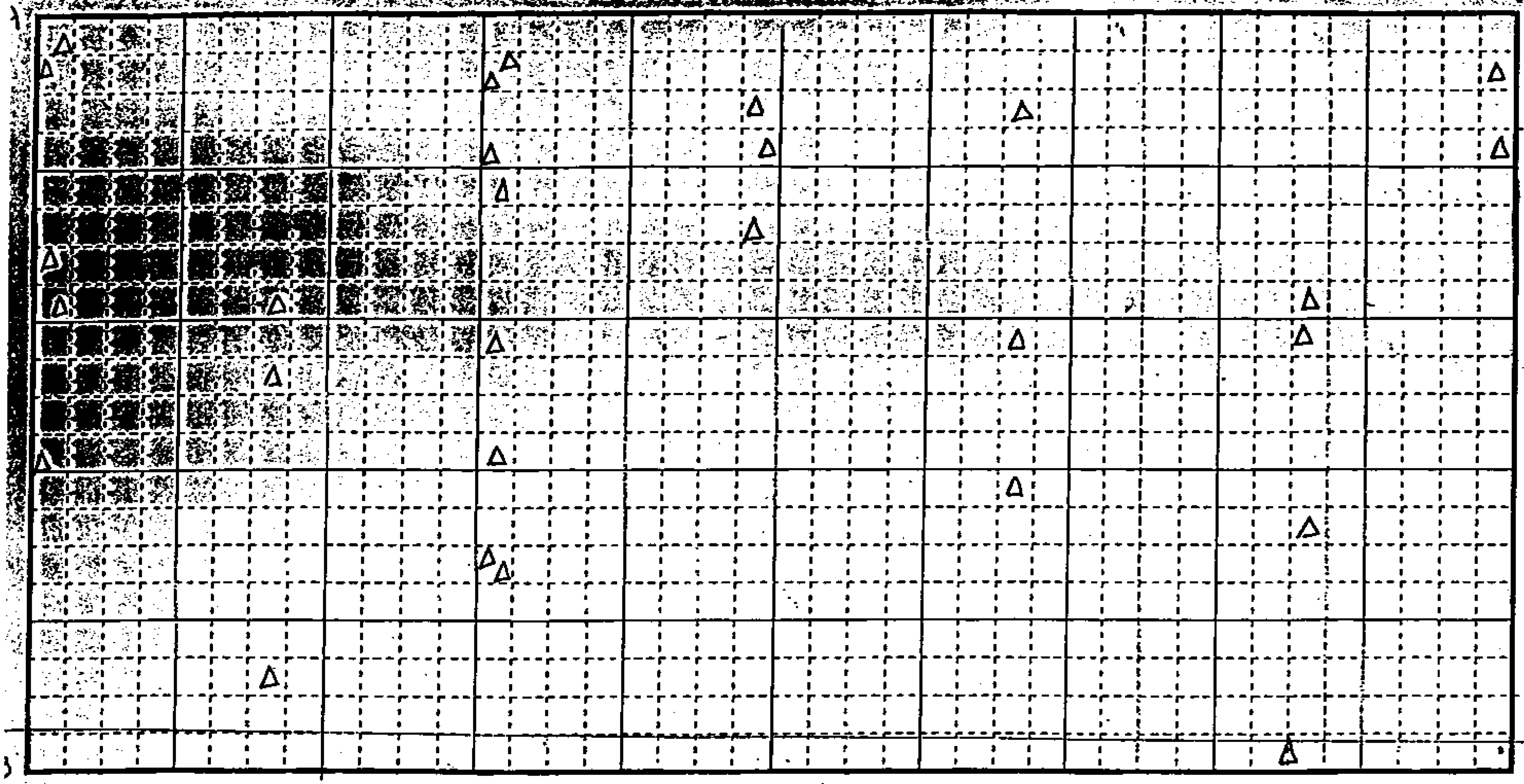
GRID SURVEY SUMMARY SHEET

Grid: 18

Accessability: MODERATE

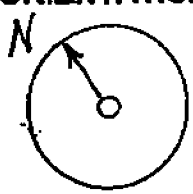
Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
121	Scrap	1	N/A	N/A	5"	Rusted
122	Scrap	1	N/A	N/A	5"	Rusted
123	Scrap	1	N/A	N/A	6"	Rusted
124	Scrap	1	N/A	N/A	5"	Rusted
125	Scrap	1	N/A	N/A	7"	Rusted
126	Scrap	1	N/A	N/A	5"	Rusted
127	Scrap	1	N/A	N/A	5"	Rusted

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

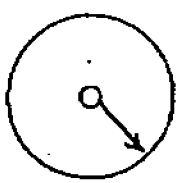


GRID I.D. 19

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT, TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

28 SUBSURFACE ANOMALIES INVESTIGATED IN 7 LANES

>1 lbs METAL RECOVERED

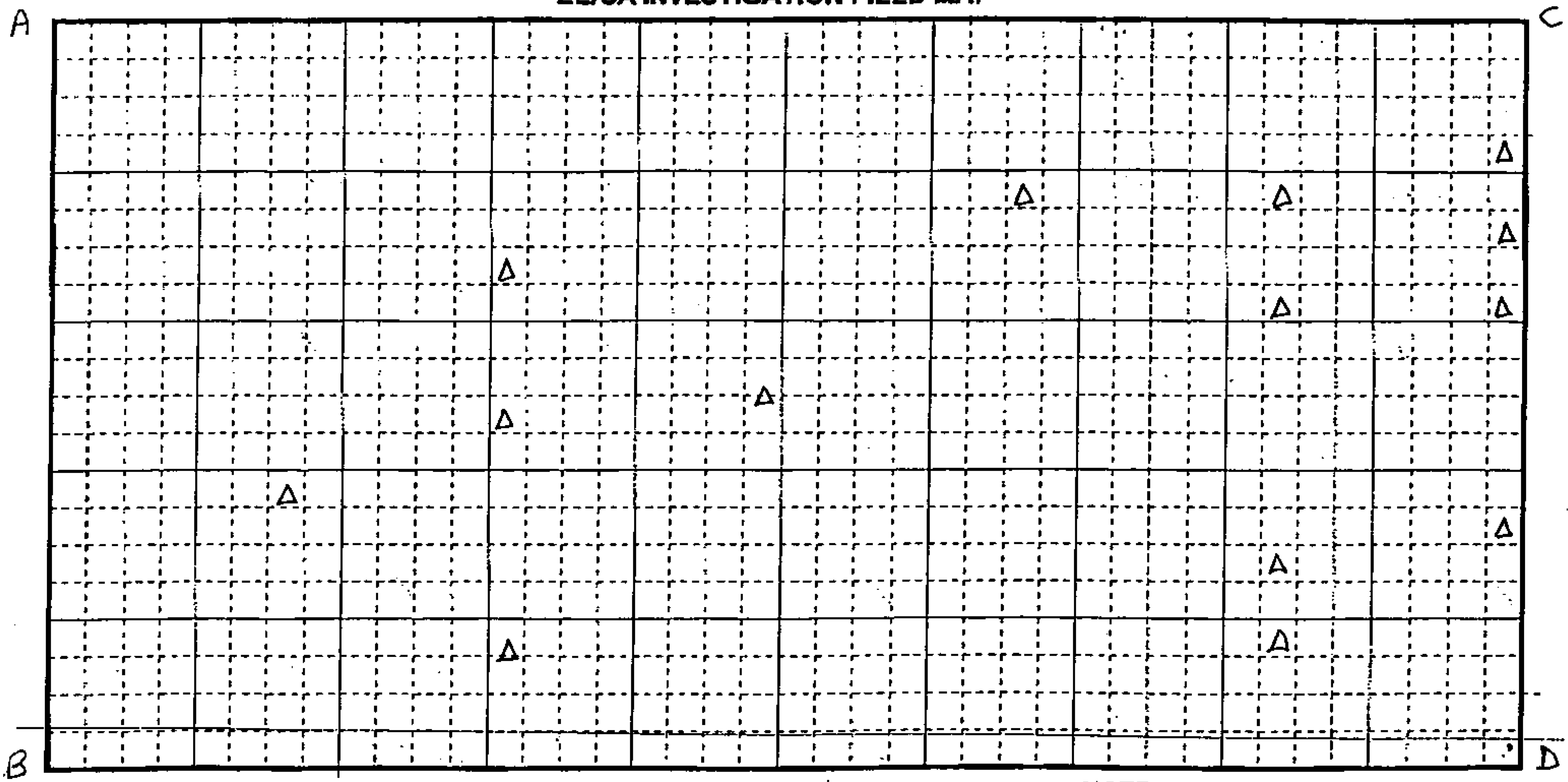
GRID SURVEY SUMMARY SHEET

GRID :19

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	30 cal.	1	N/A	N/A	4	Rusted
2	30 cal.	1	N/A	N/A	5	Rusted
3	30 cal.	1	N/A	N/A	4	Rusted
4	30 cal.	1	N/A	N/A	3	Rusted
5	30 cal.	1	N/A	N/A	1	Rusted
6	30 cal.	1	N/A	N/A	4	Rusted
7	30 cal.	1	N/A	N/A	3	Rusted
8	Rock	1	N/A	N/A	10	Rusted
9	30 cal.	1	N/A	N/A	3	Rusted
10	30 cal.	1	N/A	N/A	4	Rusted
11	30 cal.	1	N/A	N/A	4	Rusted
12	30 cal.	1	N/A	N/A	3	Rusted
13	30 cal.	1	N/A	N/A	4	Rusted
14	30 cal.	1	N/A	N/A	3	Rusted
15	30 cal.	1	N/A	N/A	5	Rusted
16	30 cal.	1	N/A	N/A	2	Rusted
17	30 cal.	1	N/A	N/A	4	Rusted
18	30 cal.	1	N/A	N/A	3	Rusted
19	30 cal.	1	N/A	N/A	4	Rusted
20	30 cal.	1	N/A	N/A	3	Rusted
21	30 cal.	1	N/A	N/A	4	Rusted
22	30 cal.	1	N/A	N/A	3	Rusted
23	30 cal.	1	N/A	N/A	5	Rusted
24	Barbed wire	2	N/A	N/A	2-5	Rusted
25	Barbed wire	1	N/A	N/A	1	Rusted
26	30 cal.	1	N/A	N/A	4	Rusted
27	30 cal.	1	N/A	N/A	1	Rusted
28	30 cal.	1	N/A	N/A	4	Rusted

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP



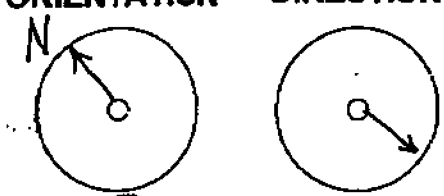
GRID I.D. 20

LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT, TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

MAP ORIENTATION

WIND DIRECTION



NOTES

14 SUBSURFACE ANOMALIES INVESTIGATED IN 7 LANE

6 lbs METAL RECOVERED

GRID SURVEY SUMMARY SHEET

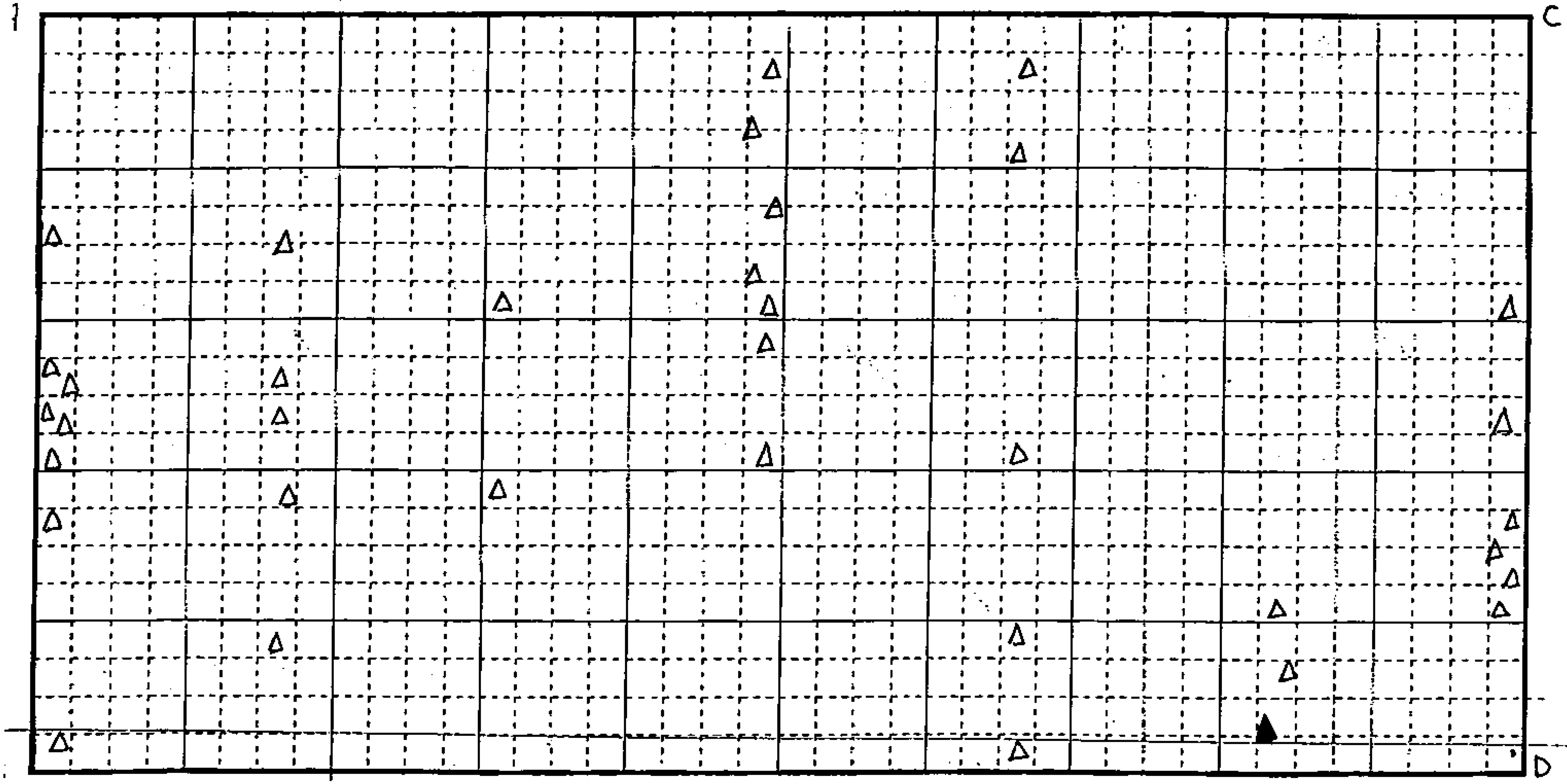
GRID :20

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Rock	1	N/A	N/A	6	Rusted
2	30 cal.	1	N/A	N/A	4	Rusted
3	30 cal.	1	N/A	N/A	5	Rusted
4	30 cal.	1	N/A	N/A	5	Rusted
5	Barbed wire	1	N/A	N/A	2	Rusted
6	30 cal.	1	N/A	N/A	4	Rusted
7	30 cal. casing	1	N/A	N/A	5	Rusted
8	30 cal.	1	N/A	N/A	3	Rusted
9	30 cal.	1	N/A	N/A	4	Rusted
10	30 cal.	1	N/A	N/A	4	Rusted
11	30 cal. casing	290	N/A	N/A	3-18	Rusted
12	Barbed wire	1	N/A	N/A	1	Rusted
13	Barbed wire	1	N/A	N/A	1	Rusted
14	30 cal.	1	N/A	N/A	4	Rusted

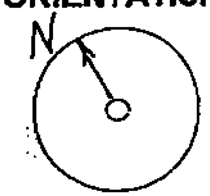
TOTAL P.02

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

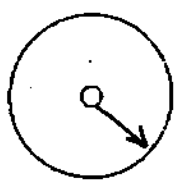


GRID I.D. 21

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

37 SUBSURFACE ANOMALIES INVESTIGATED IN 7 LANES

> 1 lbs METAL RECOVERED

1 EA. 57MM AP PROJECTILE RECOVERED

GRID SURVEY SUMMARY SHEET

GRID :21

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Wire	1	N/A	N/A	2	Rusted
2	Rock	1	N/A	N/A	2	Rusted
3	Rock	1	N/A	N/A	4	Rusted
4	Nail	1	N/A	N/A	3	Rusted
5	30 cal. & Rock	2	N/A	N/A	5-12	Rusted
6	30 cal.	1	N/A	N/A	2	Rusted
7	Rock	1	N/A	N/A	4	Rusted
8	30 cal.	1	N/A	N/A	3	Rusted
9	Rust	1	N/A	N/A	1	Rusted
10	Rock	1	N/A	N/A	3	Rusted
11	Rock	1	N/A	N/A	6	Rusted
12	Rock	1	N/A	N/A	4	Rusted
13	Nail	1	N/A	N/A	5	Rusted
14	Rock	1	N/A	N/A	6	Rusted
15	Rock	1	N/A	N/A	4	Rusted
16	Rock	1	N/A	N/A	3	Rusted
17	50 cal.	1	N/A	N/A	3	Rusted
18	Rock	1	N/A	N/A	6	Rusted
19	50 cal.	1	N/A	N/A	3	Rusted
20	30 cal.	1	N/A	N/A	2	Rusted
21	Wire	1	N/A	N/A	3	Rusted
22	Rock	1	N/A	N/A	4	Rusted
23	50 cal.	1	N/A	N/A	2	Rusted
24	Rock	1	N/A	N/A	6	Rusted
25	Barbed wire	1	N/A	N/A	4	Rusted
26	Rock	1	N/A	N/A	3	Rusted
27	Rock	1	N/A	N/A	4	Rusted
28	Rock	1	N/A	N/A	10	Rusted
29	Rock	1	N/A	N/A	4	Rusted
30	Rock deposit	1	N/A	N/A	22	Rusted

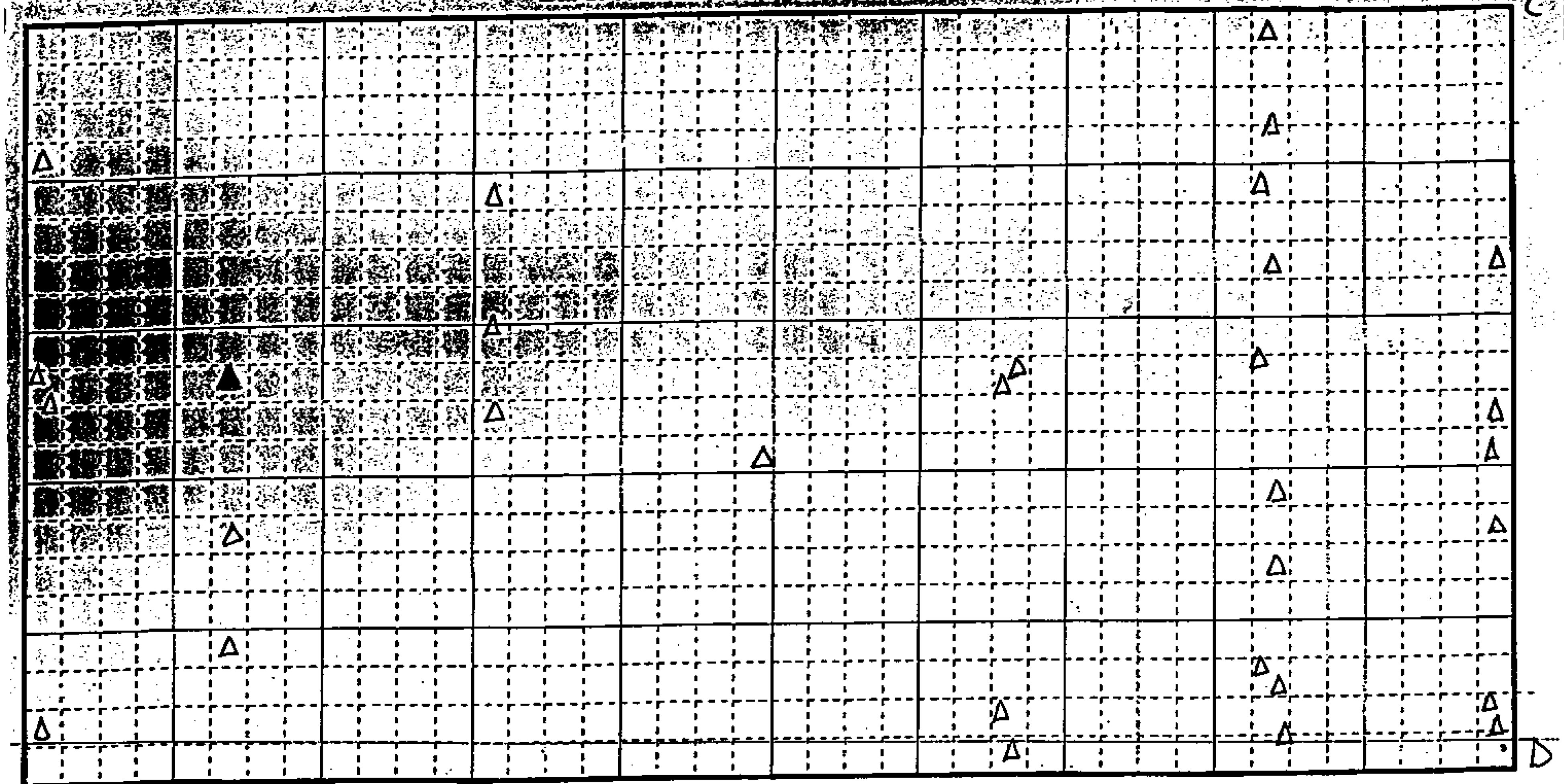
GRID SURVEY SUMMARY SHEET

GRID :21

Accessability: EASY

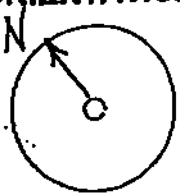
Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	Rock	1	N/A	N/A	6	Rusted
32	Rock	1	N/A	N/A	7	Rusted
33	57mm	1	N/A	N/A	1	Rusted
34	Rock	1	N/A	N/A	8	Rusted
35	30 cal.	1	N/A	N/A	4	Rusted
36	Rock	1	N/A	N/A	6	Rusted
37	Rock	1	N/A	N/A	4	Rusted

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

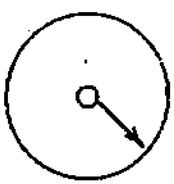


GRID I.D. 22

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT, TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

31 SUBSURFACE ANOMALIES INVESTIGATED IN 7 LANES
8 lbs METAL RECOVERED
1 EA. 57 MM AP PROJECTILE RECOVERED

GRID SURVEY SUMMARY SHEET

GRID :22

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Rock	1	N/A	N/A	6	Rusted
2	57mm	1	N/A	N/A	14	Rusted
3	Rock	1	N/A	N/A	6	Rusted
4	Rock	1	N/A	N/A	5	Rusted
5	U-Nail	1	N/A	N/A	2	Rusted
6	Barbed wire	1	N/A	N/A	3	Rusted
7	30 cal.	1	N/A	N/A	2	Rusted
8	U-Nail	1	N/A	N/A	4	Rusted
9	Rock	1	N/A	N/A	12	Rusted
10	Rock	1	N/A	N/A	9	Rusted
11	Rock	1	N/A	N/A	8	Rusted
12	Rock	1	N/A	N/A	2	Rusted
13	Rock	1	N/A	N/A	6	Rusted
14	U-Nail	1	N/A	N/A	2	Rusted
15	Rock	1	N/A	N/A	8	Rusted
16	Rock	1	N/A	N/A	6	Rusted
17	U-Nail	1	N/A	N/A	4	Rusted
18	Rock	1	N/A	N/A	6	Rusted
19	Rock	1	N/A	N/A	1	Rusted
20	Rock	1	N/A	N/A	6	Rusted
21	Rock	1	N/A	N/A	6	Rusted
22	Rock	1	N/A	N/A	4	Rusted
23	Rock	1	N/A	N/A	2	Rusted
24	Rock	1	N/A	N/A	4	Rusted
25	Rock	1	N/A	N/A	3	Rusted
26	Rock	1	N/A	N/A	8	Rusted
27	Rock	1	N/A	N/A	1	Rusted
28	Rock	1	N/A	N/A	1	Rusted
29	Rock	1	N/A	N/A	8	Rusted
30	U-Nail	1	N/A	N/A	3	Rusted

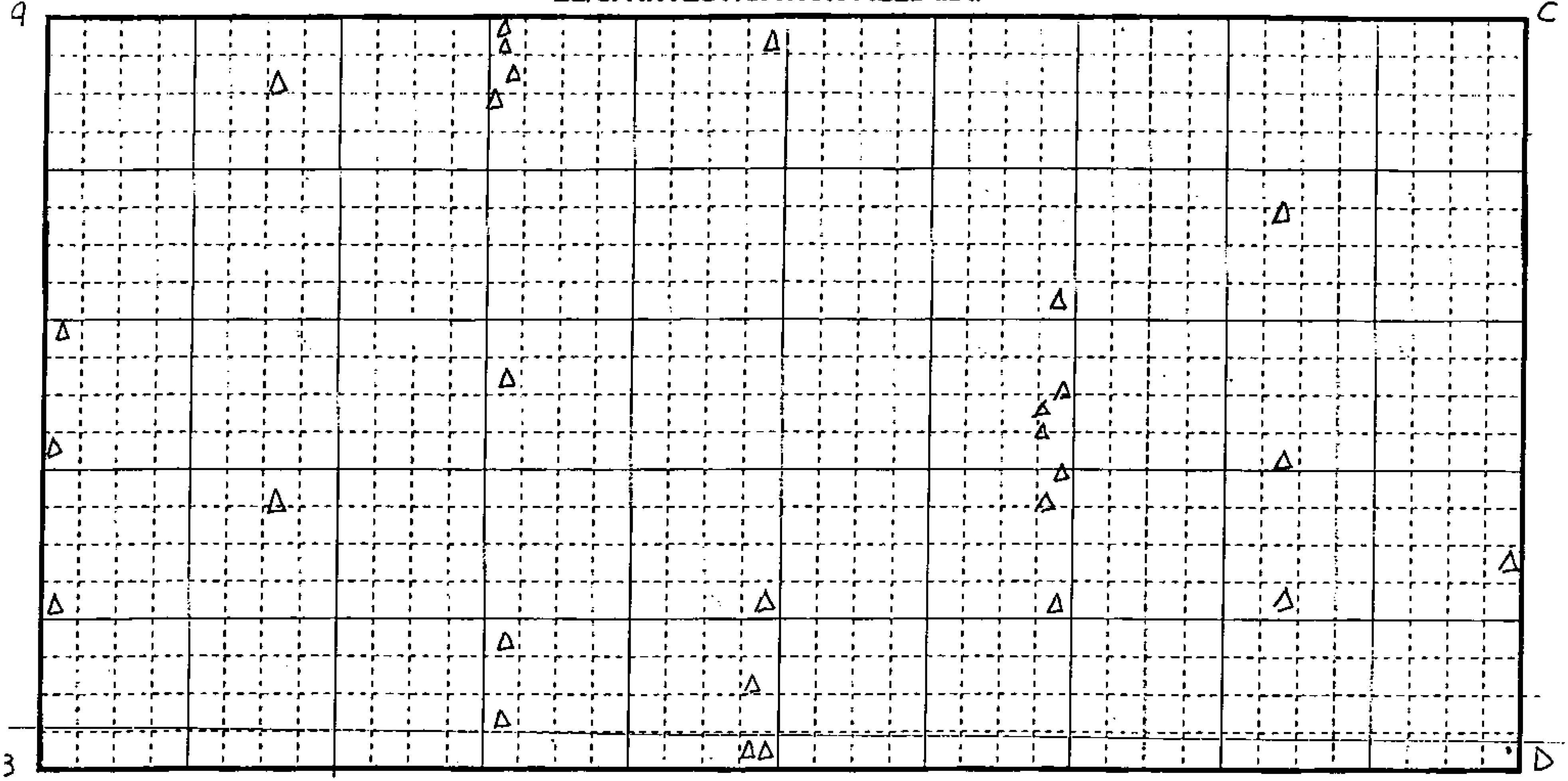
GRID SURVEY SUMMARY SHEET

GRID :22

Accessability: EASY

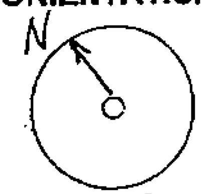
Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	50 cal.	1	N/A	N/A	4	Rusted

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

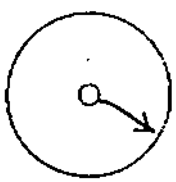


GRID I.D. 23

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

28 SUBSURFACE ANOMALIES INVESTIGATED IN 7 LANES
>1 lbs. METAL RECOVERED

GRID SURVEY SUMMARY SHEET

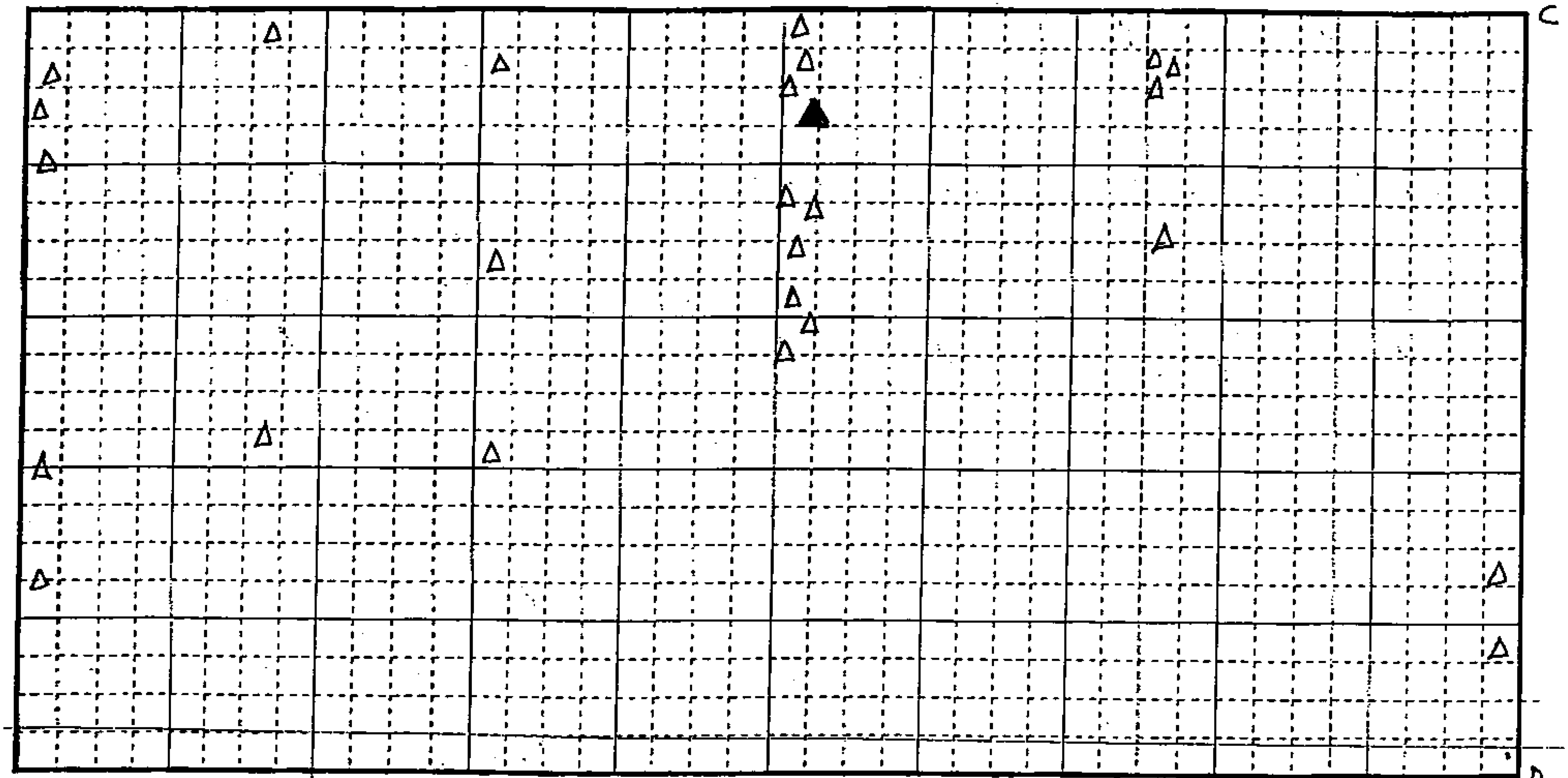
GRID :23

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	30 cal.	1	N/A	N/A	4	Rusted
2	Rock	1	N/A	N/A	5	Rusted
3	30 cal.	1	N/A	N/A	3	Rusted
4	Rock	1	N/A	N/A	6	Rusted
5	Rust	1	N/A	N/A	2	Rusted
6	Rock	1	N/A	N/A	1	Rusted
7	Rock	1	N/A	N/A	4	Rusted
8	Nail	1	N/A	N/A	4	Rusted
9	Rock	1	N/A	N/A	1	Rusted
10	Rock	1	N/A	N/A	4	Rusted
11	Nail	1	N/A	N/A	4	Rusted
12	Can	1	N/A	N/A	6	Rusted
13	Rock	1	N/A	N/A	4	Rusted
14	Rock	1	N/A	N/A	6	Rusted
15	Rock	1	N/A	N/A	5	Rusted
16	Rock	1	N/A	N/A	4	Rusted
17	Rock	1	N/A	N/A	3	Rusted
18	Rock	1	N/A	N/A	20	Rusted
19	30 cal.	1	N/A	N/A	4	Rusted
20	Rock	1	N/A	N/A	6	Rusted
21	50 cal.	1	N/A	N/A	6	Rusted
22	30 cal.	1	N/A	N/A	3	Rusted
23	50 cal.	1	N/A	N/A	5	Rusted
24	Rock	1	N/A	N/A	8	Rusted
25	Rock	1	N/A	N/A	6	Rusted
26	50 cal.	1	N/A	N/A	5	Rusted
27	Rock	1	N/A	N/A	10	Rusted
28	Rock	1	N/A	N/A	4	Rusted

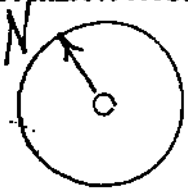
FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

TOTAL P.02

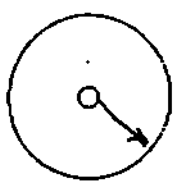


GRID I.D. 24

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

26 SUBSURFACE ANOMALIES INVESTIGATED IN 7 LANES
1 EA. 37MM AP PROJECTILE RECOVERED
3 lbs METAL RECOVERED

GRID SURVEY SUMMARY SHEET

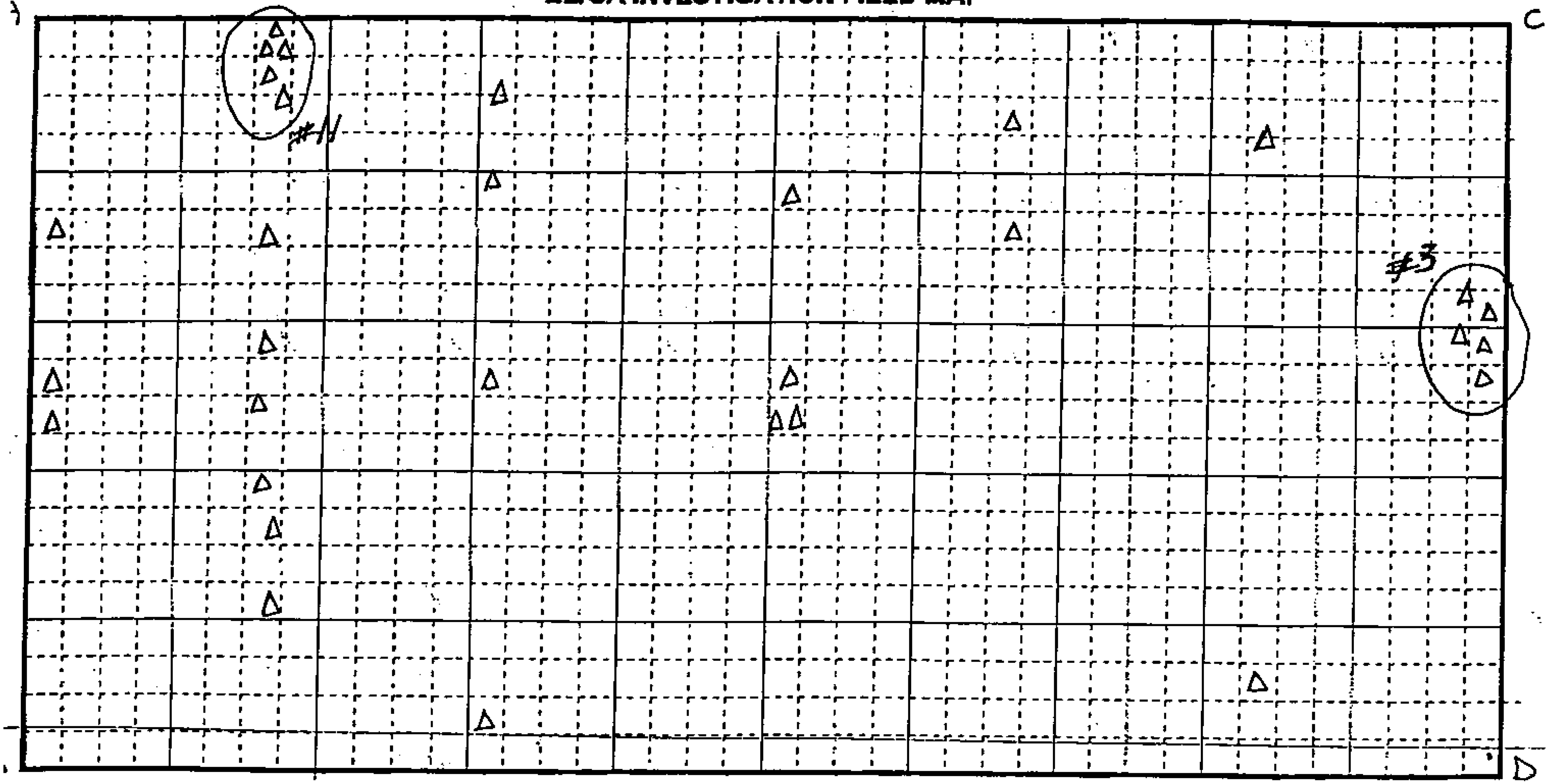
GRID :24

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	50 cal.	1	N/A	N/A	8	Rusted
2	Scrap	2	N/A	N/A	6-9	Rusted
3	50 cal.	1	N/A	N/A	5	Rusted
4	Rock	1	N/A	N/A	13	Rusted
5	Rock	1	N/A	N/A	18	Rusted
6	Rock	1	N/A	N/A	10	Rusted
7	Nail	1	N/A	N/A	3	Rusted
8	Scrap	1	N/A	N/A	5	Rusted
9	30 ccal.	1	N/A	N/A	4	Rusted
10	Scrap	1	N/A	N/A	6	Rusted
11	Rock	1	N/A	N/A	10	Rusted
12	Rock	1	N/A	N/A	14	Rusted
13	Rock	1	N/A	N/A	6	Rusted
14	Rock	1	N/A	N/A	8	Rusted
15	Rock	1	N/A	N/A	10	Rusted
16	Rock	1	N/A	N/A	4	Rusted
17	37mm	1	N/A	N/A	12	Rusted
18	Rock	1	N/A	N/A	8	Rusted
19	Rock	1	N/A	N/A	4	Rusted
20	Rock	1	N/A	N/A	13	Rusted
21	Rock	1	N/A	N/A	10	Rusted
22	Rock	1	N/A	N/A	20	Rusted
23	Wire	1	N/A	N/A	8	Rusted
24	Rock	1	N/A	N/A	6	Rusted
25	30 cal.	1	N/A	N/A	4	Rusted

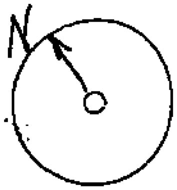
FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

TOTAL P.02

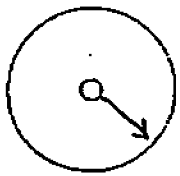


GRID I.D. 25

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

24 SUBSURFACE ANOMALIES INVESTIGATED IN 7 LANES
LESS THAN 1 lb. METAL RECOVERED

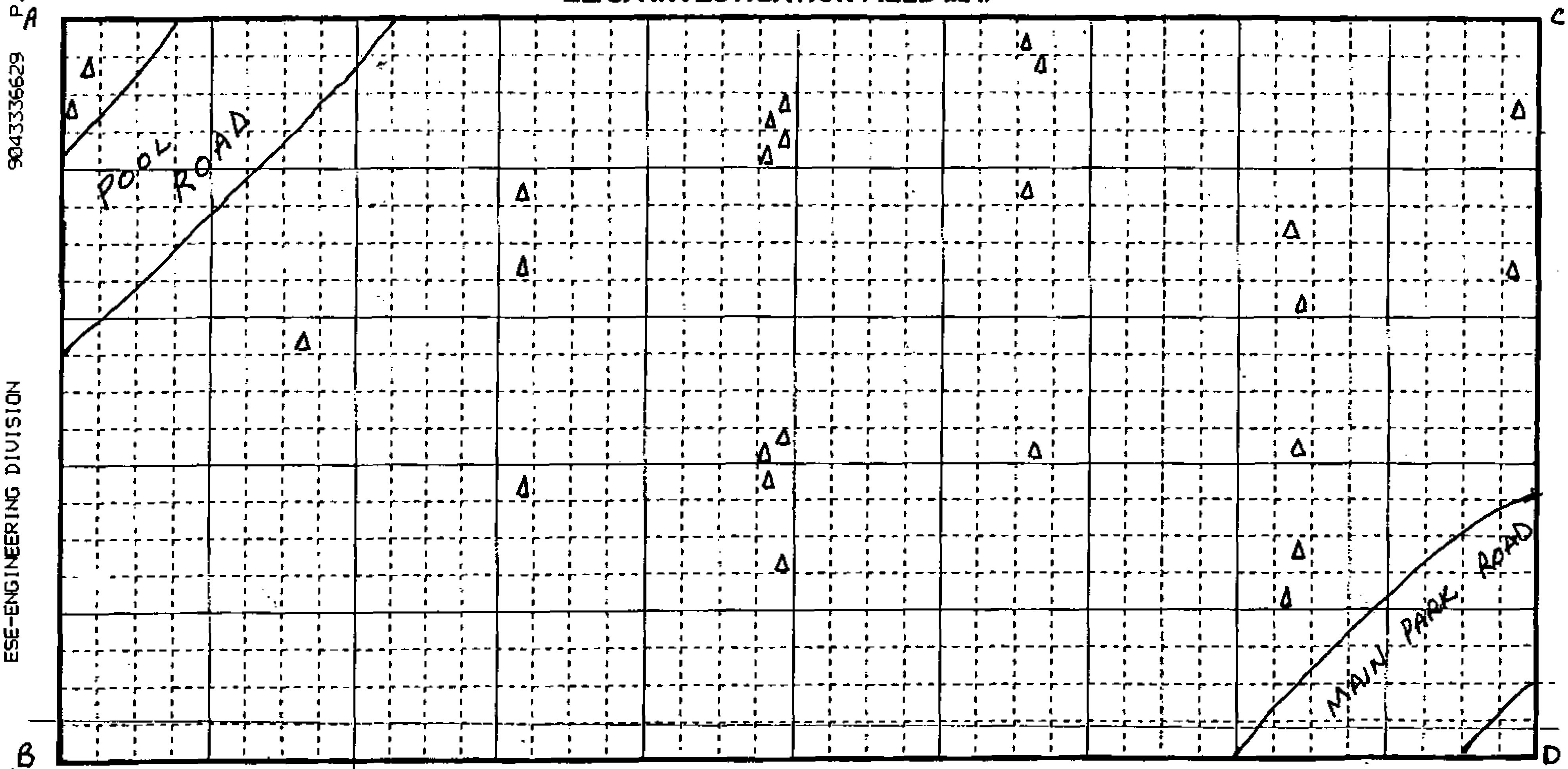
GRID SURVEY SUMMARY SHEET

GRID :25

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Rock	1	N/A	N/A	5	Rusted
2	30 cal.	1	N/A	N/A	2	Rusted
3	Rock	6	N/A	N/A	4-19	Rusted
4	Rust	1	N/A	N/A	1	Rusted
5	Horse shoe	1	N/A	N/A	4	Rusted
6	Frag	1	N/A	N/A	4	Rusted
7	Rock	1	N/A	N/A	6	Rusted
8	Commo Wire	1	N/A	N/A	2	Rusted
9	50 cal.	1	N/A	N/A	4	Rusted
10	Rust	1	N/A	N/A	2	Rusted
11	Commo Wire	1	N/A	N/A	2	Rusted
12	Rock	1	N/A	N/A	3	Rusted
13	Nail	1	N/A	N/A	2	Rusted
14	Nail	1	N/A	N/A	4	Rusted
15	Scrap	1	N/A	N/A	2	Rusted
16	Rock	1	N/A	N/A	2	Rusted
17	Rust	1	N/A	N/A	1	Rusted
18	Horse shoe	1	N/A	N/A	3	Rusted
19	Nail	1	N/A	N/A	4	Rusted
20	30 & 50 cal.	2	N/A	N/A	6-10	Rusted
21	30 cal.	1	N/A	N/A	4	Rusted
22	Rock	1	N/A	N/A	6	Rusted
23	Scrap	1	N/A	N/A	5	Rusted
24	Rock	1	N/A	N/A	8	Rusted

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP



GRID I.D. 26

MAP ORIENTATION

WIND DIRECTION

LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

25 INVESTIGATIONS IN 7 LANES.
6EA SMALL ARMS PROJOS, 1EA OEW (ILLUM END CAP)
4.5 lbs MATERIALS RECOVERED
14 NOV 94

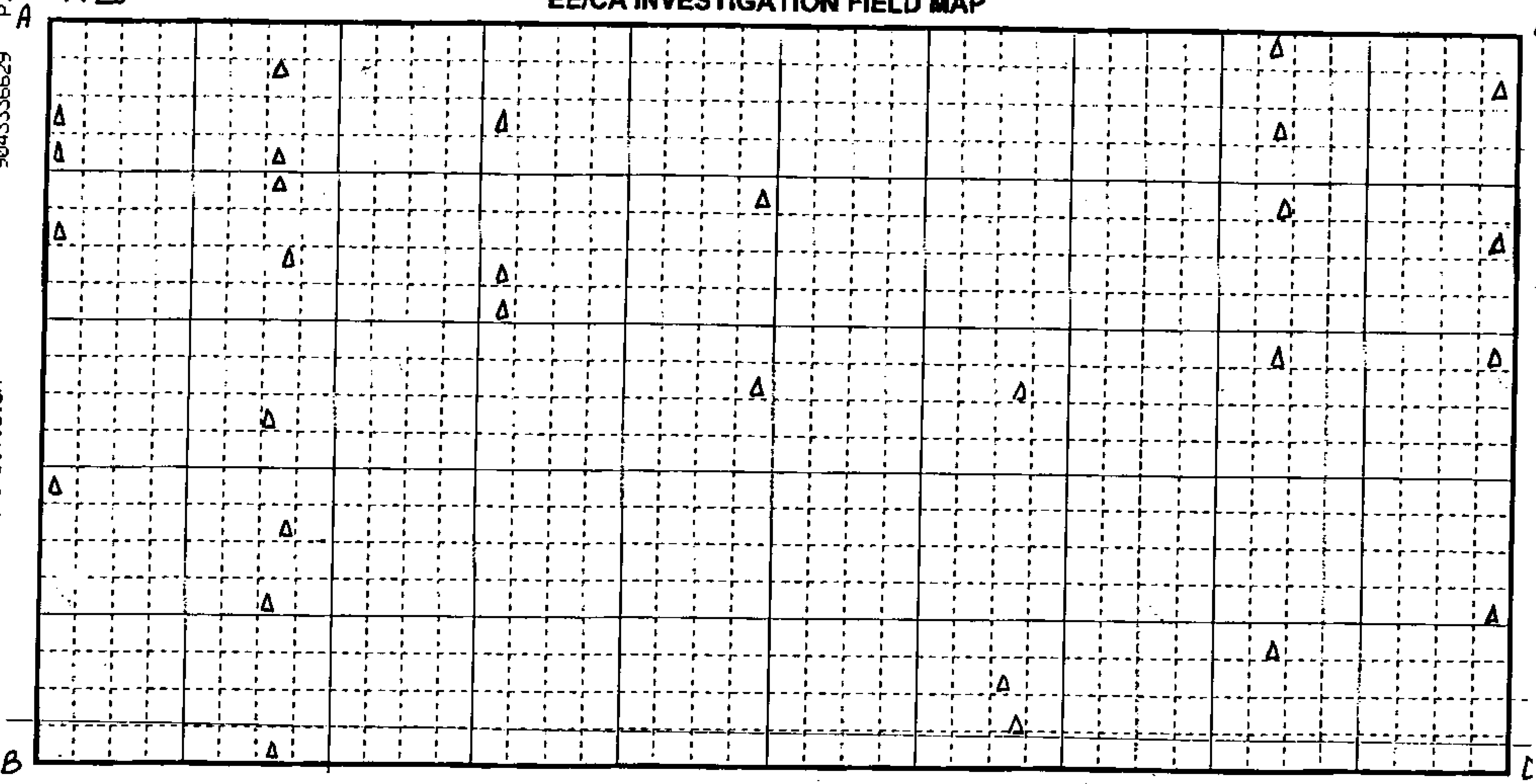
GRID SURVEY SUMMARY SHEET

Grid: 26

Accessability: PAVED ROAD

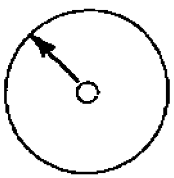
Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Rock	1	N/A	N/A	1"	Rusted
2	Wire	1	N/A	N/A	3"	Rusted
3	Comm. Wire	1	N/A	N/A	4"	Rusted
4	Plow Blade	1	N/A	N/A	4"	Rusted
5	Scrap	2	N/A	N/A	1"	Rusted
6	30 cal. Proj.	1	N/A	N/A	2"	Rusted
7	Can	1	N/A	N/A	1"	Rusted
8	50 cal. Proj.	1	N/A	N/A	3"	Rusted
9	Bottle cap	1	N/A	N/A	3"	Rusted
10	30 cal. proj.	1	N/A	N/A	1"	Rusted
11	End cap illum round	1	N/A	N/A	1"	Rusted
12	Scrap	2	N/A	N/A	1"	Rusted
13	Can	1	N/A	N/A	1"	Rusted
14	50 cal. proj.	1	N/A	N/A	1"	Rusted
15	Comm. wire	1	N/A	N/A	20"	Rusted
16	Horse shoe	1	N/A	N/A	4"	Rusted
17	50 cal. proj.	1	N/A	N/A	2"	Rusted
18	Comm. wire	1	N/A	N/A	14"	Rusted
19	Nail	1	N/A	N/A	2"	Rusted
20	Can	1	N/A	N/A	1"	Rusted
21	30 cal. proj.	1	N/A	N/A	2"	Rusted
22	Scrap	1	N/A	N/A	2"	Rusted
23	Scrap	1	N/A	N/A	2"	Rusted
24	Horse shoe	1	N/A	N/A	1"	Rusted
25	Rocks	4	N/A	N/A	18"	Rusted

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

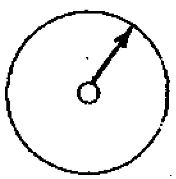


GRID I.D. 27

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

29 INVESTIGATIONS IN 7 LANES
3EA SMALL ARMS PROJOS, 2EA SMALL ARMS CASINGS
14 NOV 94 20 lbs MATERIALS RECOVERED

GRID SURVEY SUMMARY SHEET

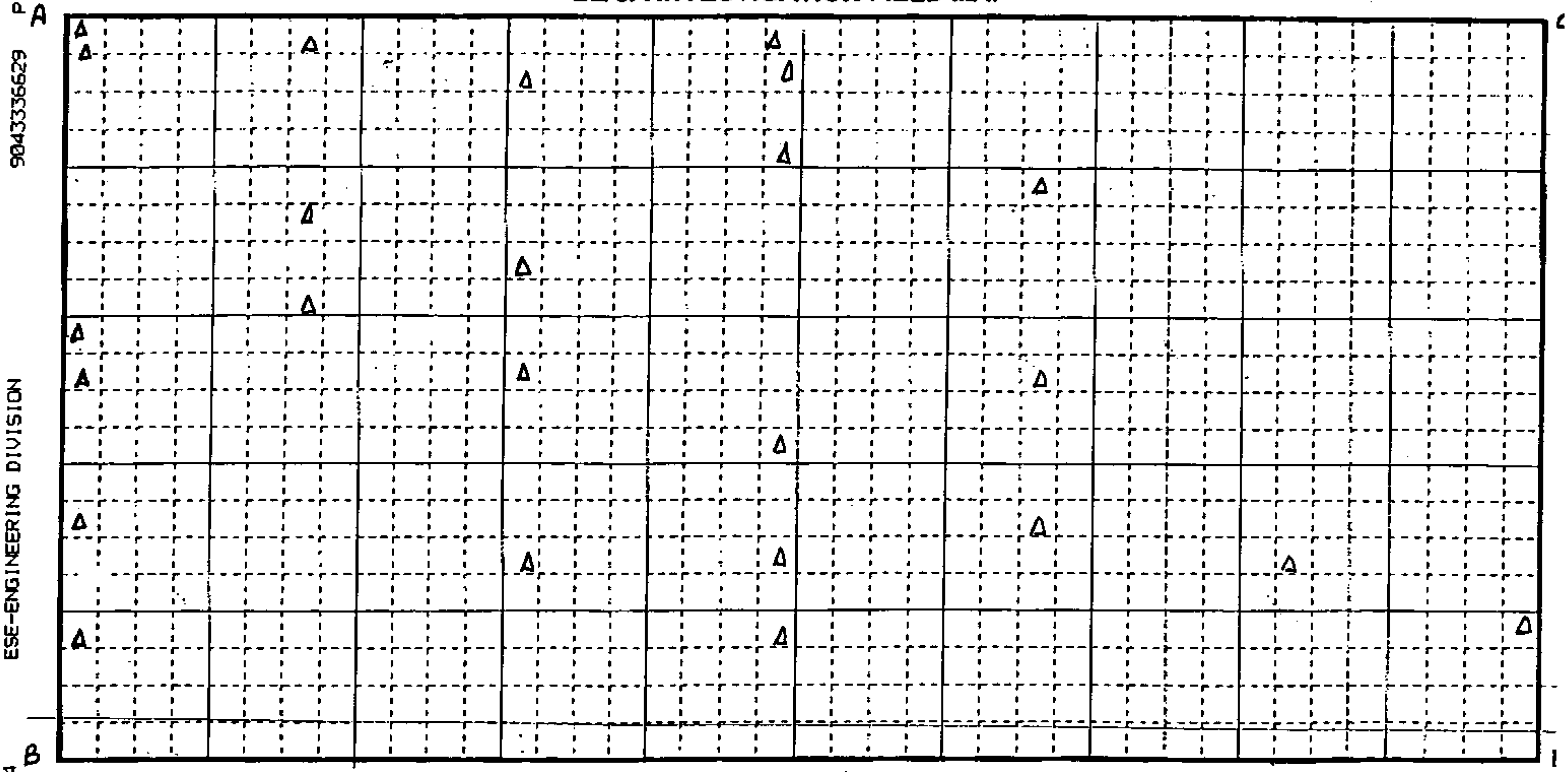
Grid: 27

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Plow	1	N/A	N/A	6"	Rusted
2	50 cal. proj.	1	N/A	N/A	7"	Rusted
3	Can	2	N/A	N/A	2"	Rusted
4	50 cal. proj.	1	N/A	N/A	1"	Rusted
5	Horse shoe	1	N/A	N/A	12"	Rusted
6	30 cal. clip	1	N/A	N/A	2"	Rusted
7	Scrap	1	N/A	N/A	3"	Rusted
8	50 cal. casing	1	N/A	N/A	2"	Rusted
9	Wire	1	N/A	N/A	5"	Rusted
10	Scrap	1	N/A	N/A	1"	Rusted
11	Wire	2	N/A	N/A	1"	Rusted
12	Nail	1	N/A	N/A	1"	Rusted
13	B.A.R. clip	2	N/A	N/A	4"	Rusted
14	Wire	1	N/A	N/A	12"	Rusted
15	Scrap	1	N/A	N/A	4"	Rusted
16	Plow	1	N/A	N/A	4"	Rusted
17	Can	5	N/A	N/A	1"	Rusted
18	Comm. wire	2	N/A	N/A	1"	Rusted
19	30 cal. casing	1	N/A	N/A	4"	Rusted
20	30 cal. clip	2	N/A	N/A	8"	Rusted
21	Wire	1	N/A	N/A	4"	Rusted
22	Scrap	2	N/A	N/A	1"	Rusted
23	50 cal. proj.	1	N/A	N/A	16"	Rusted
24	Scrap	3	N/A	N/A	5"	Rusted
25	Rock	1	N/A	N/A	4"	Rusted
26	30 cal. clip	1	N/A	N/A	1"	
27	Can	4	N/A	N/A	3"	
28	Barbed wire	2	N/A	N/A	1"	
29	Barbed wire	5	N/A	N/A	1"	

X □

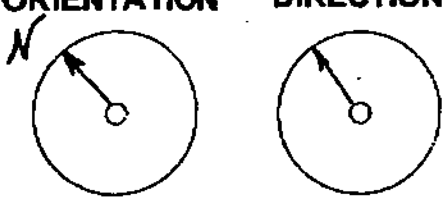
FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP



GRID I.D. 28

MAP ORIENTATION

WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

24 INVESTIGATION IN 7 LANES

3 EA SMALL ARMS PROJOS, 2 EA SMALL ARMS CASIN

14 NOV 94

5 LBS OEW/SCRAP

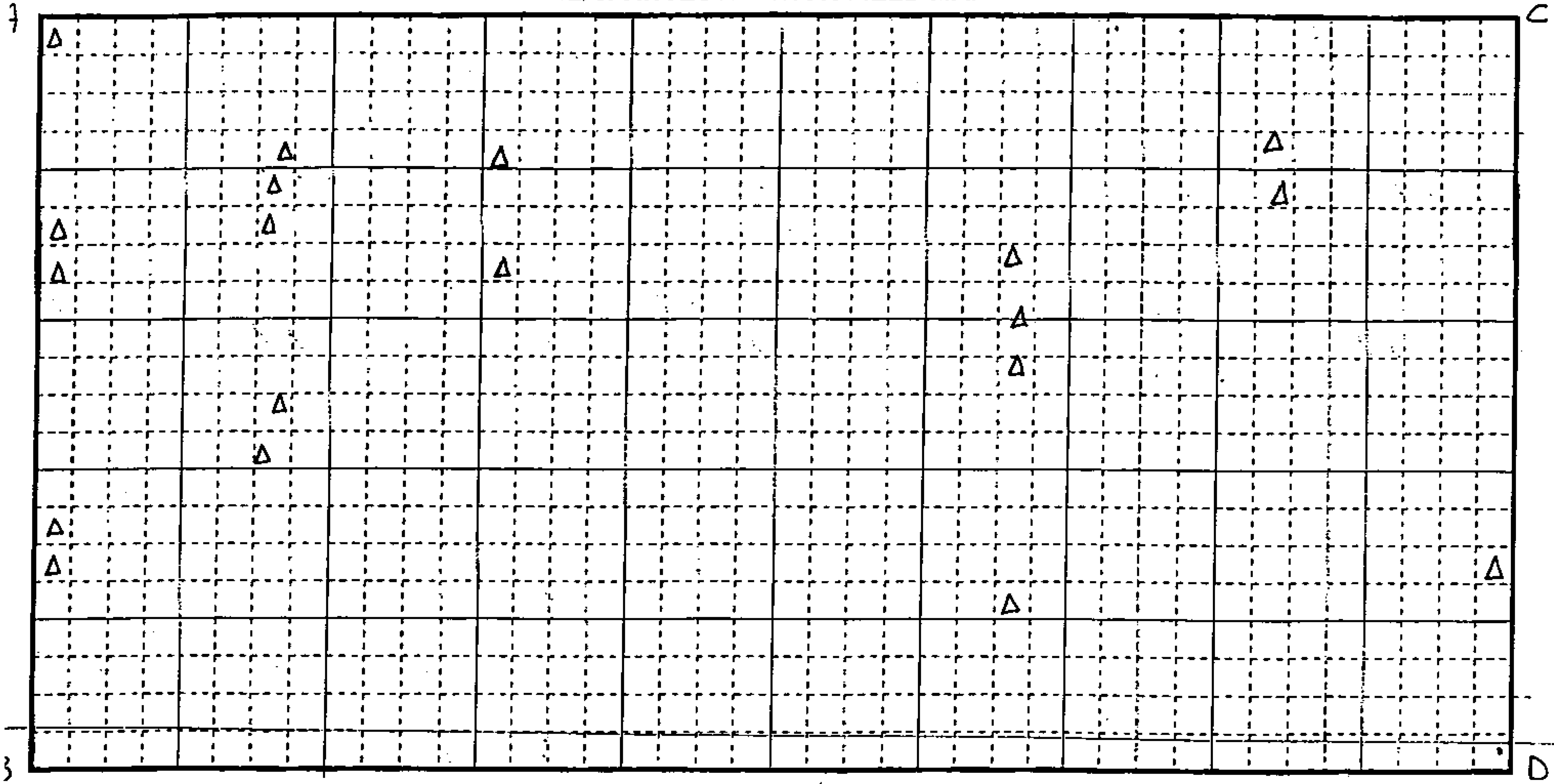
GRID SURVEY SUMMARY SHEET

Grid: 28

Accessability: MODERATE

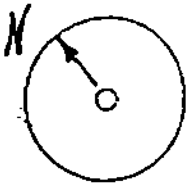
Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	30 cal. wire	2	N/A	N/A	1"	Rusted
2	Barbed wire	3	N/A	N/A	1"	Rusted
3	30 cal. casing	1	N/A	N/A	3"	Rusted
4	Scrap	1	N/A	N/A	2"	Rusted
5	30 cal. clip	1	N/A	N/A	2"	Rusted
6	30 cal. casing	1	N/A	N/A	1"	Rusted
7	50 cal. proj.	1	N/A	N/A	2"	Rusted
8	Barbed wire	3	N/A	N/A	1"	Rusted
9	Barbed wire	1	N/A	N/A	1"	Rusted
10	30 cal. proj.	1	N/A	N/A	2"	Rusted
11	Can	1	N/A	N/A	2"	Rusted
12	Barbed wire	2	N/A	N/A	3"	Rusted
13	Barbed wire	2	N/A	N/A	4"	Rusted
14	Rock	1	N/A	N/A	1"	Rusted
15	Rock	1	N/A	N/A	4"	Rusted
16	50 cal. proj.	1	N/A	N/A	3"	Rusted
17	Scrap	1	N/A	N/A	3"	Rusted
18	Nail	1	N/A	N/A	2"	Rusted
19	Rock	1	N/A	N/A	1"	Rusted
20	Rock	1	N/A	N/A	18"	Rusted
21	Rock	1	N/A	N/A	2"	Rusted
22	Rock	2	N/A	N/A	11"	Rusted
23	Can	1	N/A	N/A	2"	Rusted
24	Barbed wire	3	N/A	N/A	2"	Rusted

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

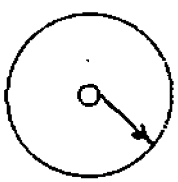


GRID I.D. 29

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

19 SUBSURFACE ANOMALIES INVESTIGATED IN 7 LANE

LESS THAN 1 lb. METAL RECOVERED

GRID SURVEY SUMMARY SHEET

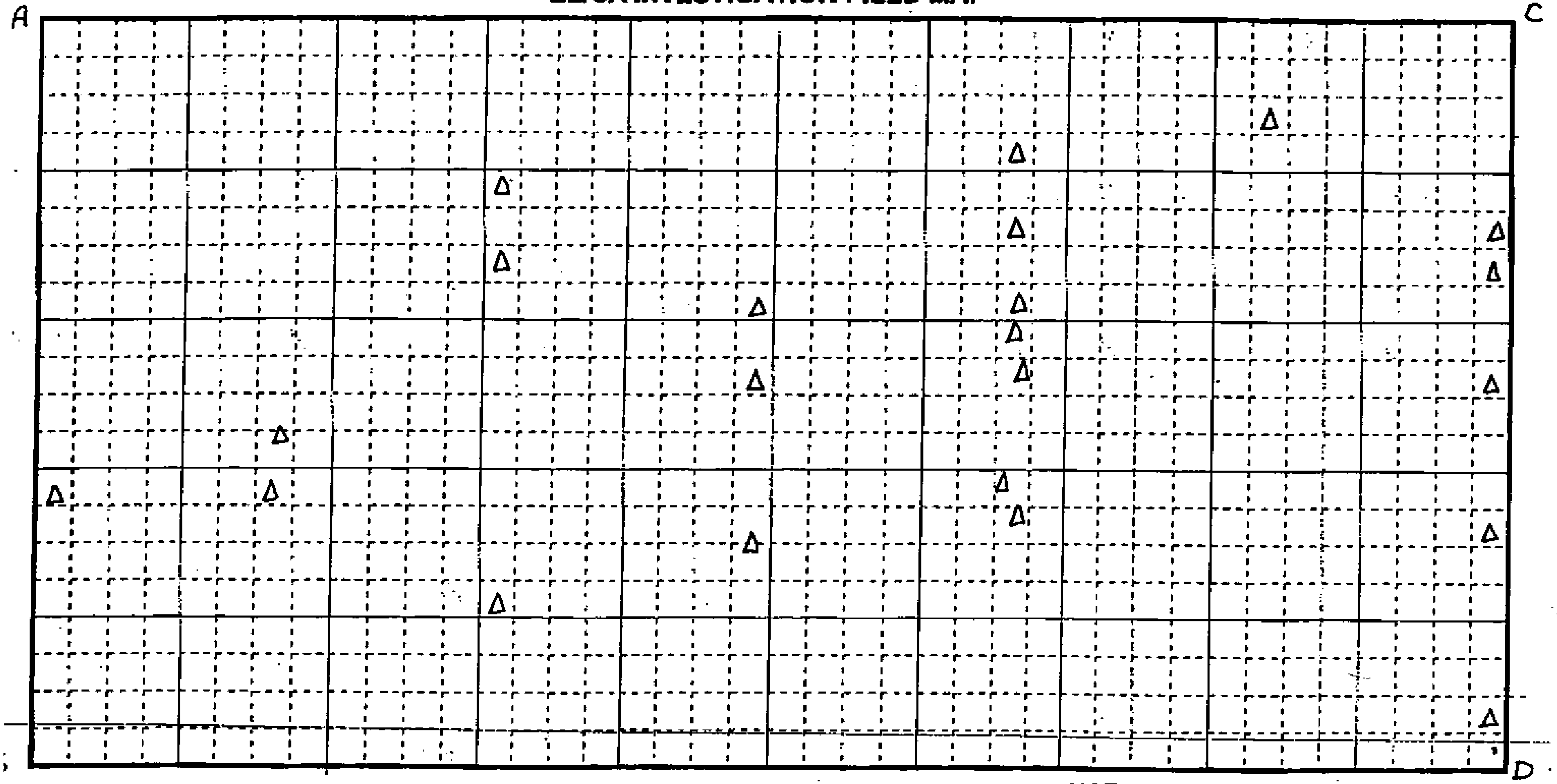
Grid: 29

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Rock	1	N/A	N/A	4	Rusted
2	Rock	1	N/A	N/A	2	Rusted
3	30 cal.	1	N/A	N/A	1	Rusted
4	30 cal.	1	N/A	N/A	2	Rusted
5	Rock	1	N/A	N/A	4	Rusted
6	Rock	1	N/A	N/A	5	Rusted
7	Rock	1	N/A	N/A	2	Rusted
8	Rock	1	N/A	N/A	2	Rusted
9	Rock	1	N/A	N/A	3	Rusted
10	Rock	1	N/A	N/A	1	Rusted
11	30 cal.	2	N/A	N/A	4-9	Rusted
12	Rock	1	N/A	N/A	2	Rusted
13	Rock	1	N/A	N/A	2	Rusted
14	Rock	1	N/A	N/A	3	Rusted
15	Rock	1	N/A	N/A	2	Rusted
16	Rock	1	N/A	N/A	5	Rusted
17	Rock	1	N/A	N/A	2	Rusted
18	Rock	1	N/A	N/A	1	Rusted
19	Rock	1	N/A	N/A	1	Rusted

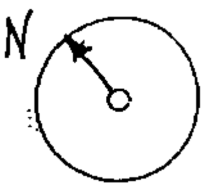
TOTAL P.02

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

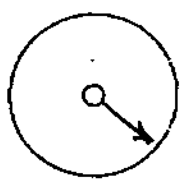


GRID I.D. 30

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

22 SUBSURFACE ANOMALIES INVESTIGATED IN 7 LANES

LESS THAN 1 lb. METAL RECOVERED

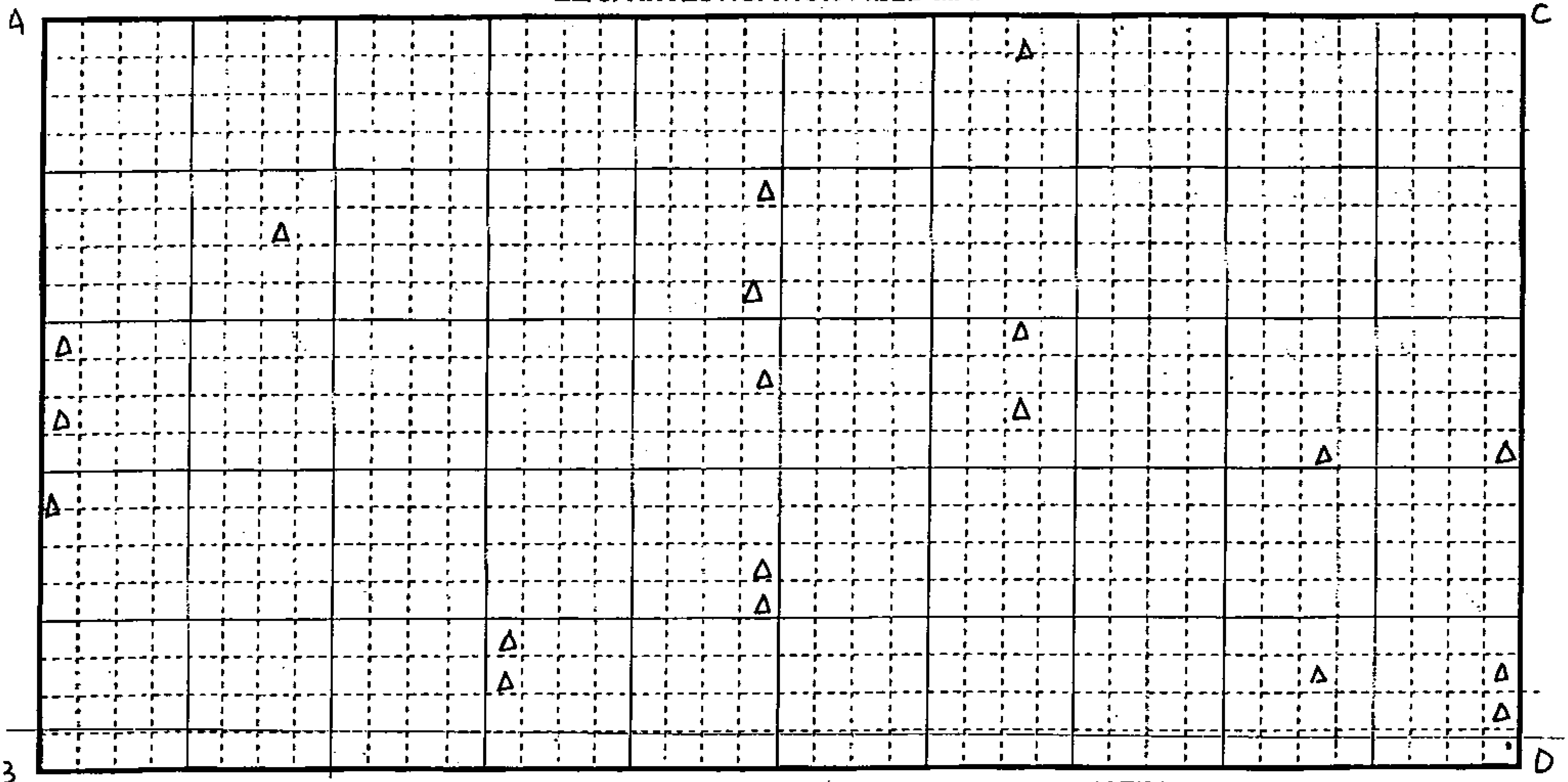
GRID SURVEY SUMMARY SHEET

Grid: 30

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Can	1	N/A	N/A	1	Rusted
2	30 cal.	1	N/A	N/A	1	Rusted
3	Scrap	1	N/A	N/A	4	Rusted
4	30 cal.	1	N/A	N/A	4	Rusted
5	Rust	1	N/A	N/A	2	Rusted
6	30 cal.	1	N/A	N/A	1	Rusted
7	30 cal.	1	N/A	N/A	2	Rusted
8	30 cal.	1	N/A	N/A	3	Rusted
9	30 cal.	1	N/A	N/A	3	Rusted
10	30 cal.	1	N/A	N/A	1	Rusted
11	Rust	1	N/A	N/A	3	Rusted
12	30 cal.	1	N/A	N/A	2	Rusted
13	30 cal.	1	N/A	N/A	1	Rusted
14	30 cal.	1	N/A	N/A	1	Rusted
15	30 cal.	1	N/A	N/A	2	Rusted
16	30 cal.	1	N/A	N/A	2	Rusted
17	Scrap	1	N/A	N/A	3	Rusted
18	30 cal.	1	N/A	N/A	3	Rusted
19	30 cal.	1	N/A	N/A	2	Rusted
20	30 cal.	1	N/A	N/A	3	Rusted
21	Rust	1	N/A	N/A	2	Rusted
22	30 cal.	1	N/A	N/A	2	Rusted

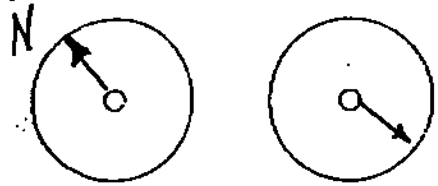
FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP



GRID I.D. 31

MAP ORIENTATION

WIND DIRECTION



LEGEND

- SUBSURFACE ANOMALIES
- SURFACE OEW/UXO
- SUBSURFACE OEW/UXO
- FIRE SAFETY EQUIPMENT
- PIT,TRENCHES, BUNKER, ETC.
- RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

20 SUBSURFACE ANOMALIES INVESTIGATED IN 7 LANES
LESS THAN 1 lb. METAL RECOVERED

GRID SURVEY SUMMARY SHEET

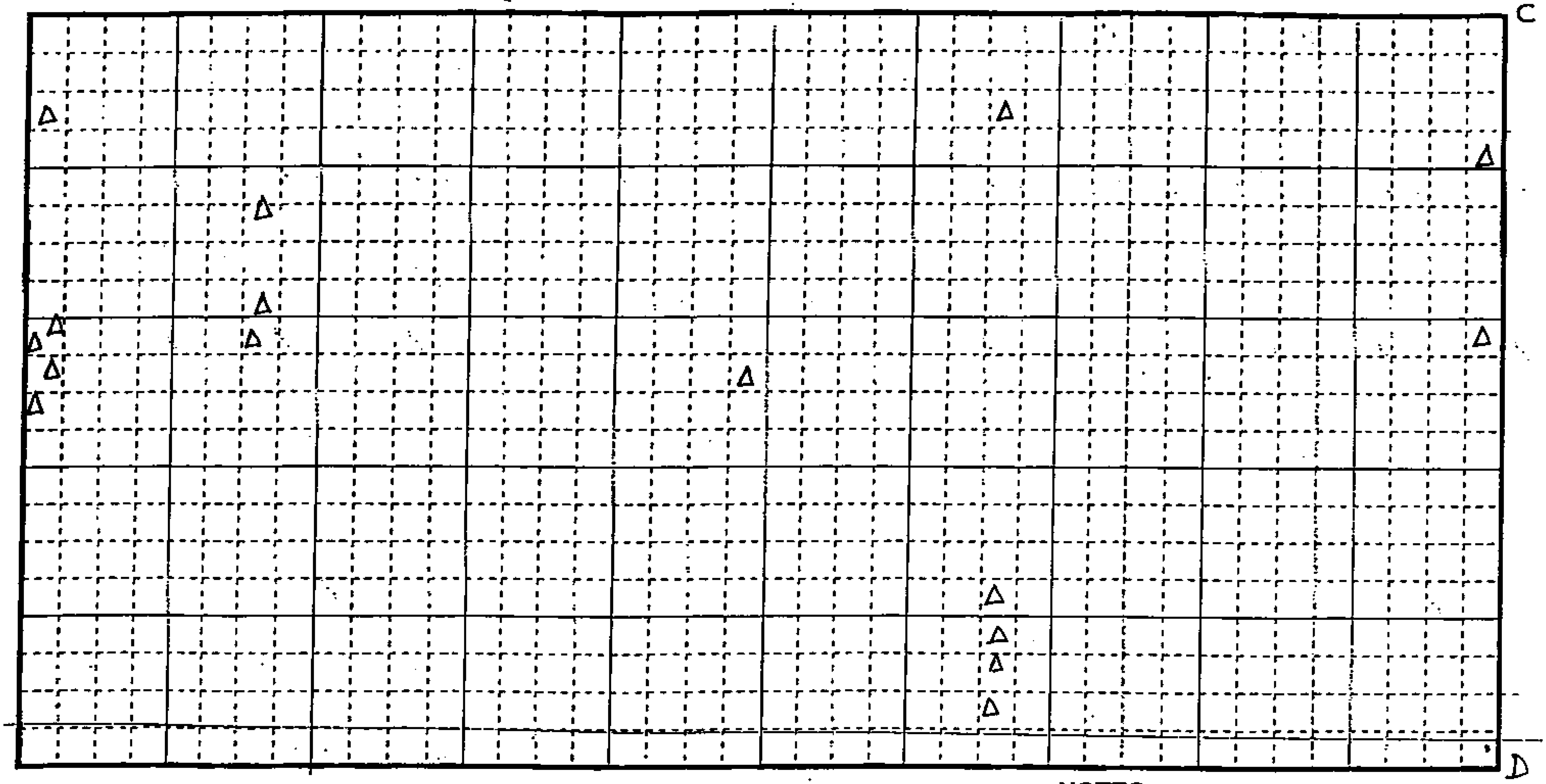
Grid: 31

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	30 cal.	1	N/A	N/A	2	Rusted
2	Rock	1	N/A	N/A	1	Rusted
3	Rock	1	N/A	N/A	2	Rusted
4	Rock	1	N/A	N/A	1	Rusted
5	Rock	1	N/A	N/A	2	Rusted
6	Rock	1	N/A	N/A	3	Rusted
7	Scrap	1	N/A	N/A	2	Rusted
8	Rock	1	N/A	N/A	2	Rusted
9	Rock	1	N/A	N/A	1	Rusted
10	Rock	1	N/A	N/A	6	Rusted
11	Rock	1	N/A	N/A	1	Rusted
12	Rock	1	N/A	N/A	6	Rusted
13	Rock	1	N/A	N/A	1	Rusted
14	Rock	1	N/A	N/A	3	Rusted
15	Rock	2	N/A	N/A	2-7	Rusted
16	Rock	1	N/A	N/A	4	Rusted
17	Rock	1	N/A	N/A	3	Rusted
18	Rock	1	N/A	N/A	1	Rusted
19	Rock	1	N/A	N/A	2	Rusted
20	Rock	1	N/A	N/A	2	Rusted

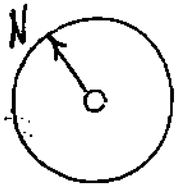
FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

TOTAL P.02

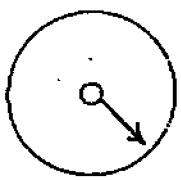


GRID I.D. 32

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

14 SUBSURFACE ANOMALIES INVESTIGATED IN 7 LANES
2 lbs METAL RECOVERED

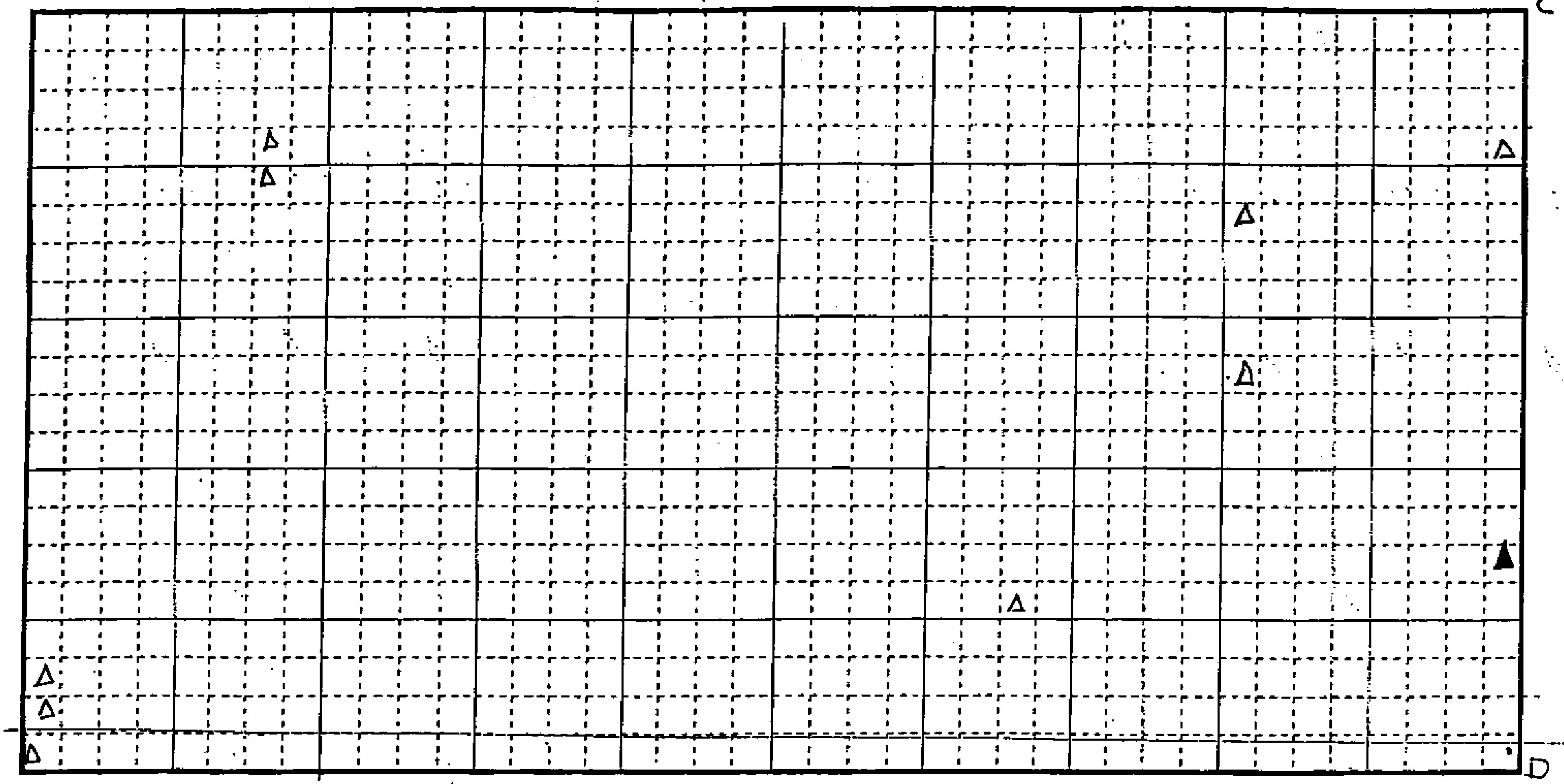
GRID SURVEY SUMMARY SHEET

GRID: 32

Accessability: EASY

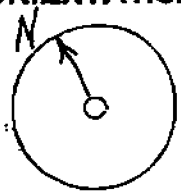
Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	30 cal.	1	N/A	N/A	2	Rusted
2	Rock	1	N/A	N/A	18	Rusted
3	Rock	1	N/A	N/A	19	Rusted
4	30 cal. & Rock	3	N/A	N/A	9-16	Rusted
5	Rock	1	N/A	N/A	14	Rusted
6	Rock	1	N/A	N/A	5	Rusted
7	Rock	1	N/A	N/A	4	Rusted
8	30 cal.	1	N/A	N/A	3	Rusted
9	Wire	2	N/A	N/A	2-7	Rusted
10	Rock	1	N/A	N/A	4	Rusted
11	Rust	1	N/A	N/A	1	Rusted
12	Horse shoe	1	N/A	N/A	8	Rusted
13	50 cal.	1	N/A	N/A	9	Rusted
14	Rock	1	N/A	N/A	4	Rusted

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

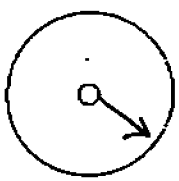


GRID I.D. 33

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

10 SUBSURFACE ANOMALIES INVESTIGATED IN 7 LANES
7 lbs METAL RECOVERED
1 EA. 57MM AP PROJECTILE RECOVERED

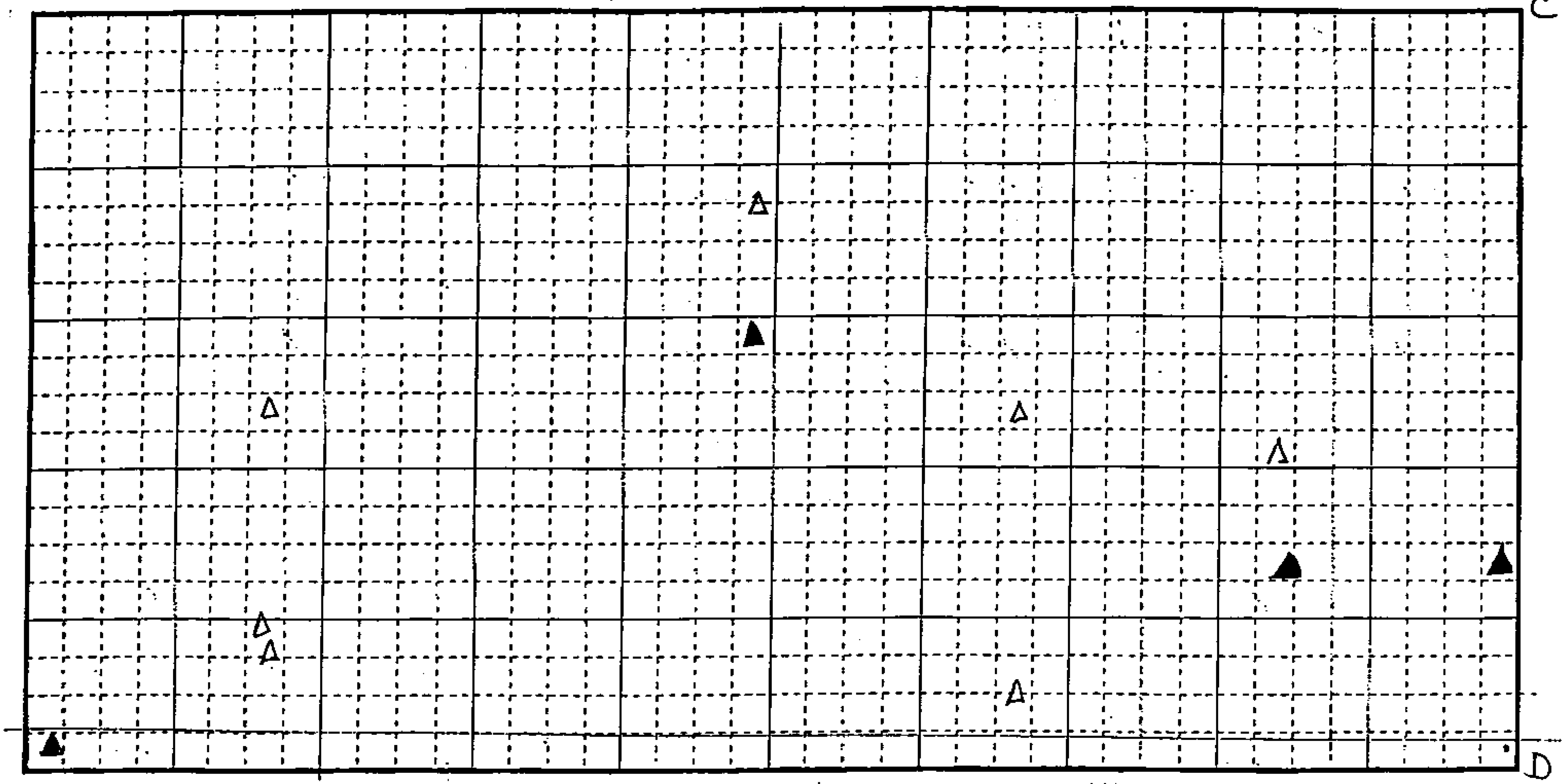
GRID SURVEY SUMMARY SHEET

GRID :33

Accessability: EASY

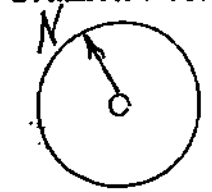
Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Barbed wire	1	N/A	N/A	1	Rusted
2	Barbed wire	1	N/A	N/A	2	Rusted
3	Barbed wie	1	N/A	N/A	1	Rusted
4	Horse shoe	1	N/A	N/A	2	Rusted
5	Frag	1	N/A	N/A	2	Rusted
6	Horse shoe	1	N/A	N/A	6	Rusted
7	50 cal.	1	N/A	N/A	4	Rusted
8	Rust	1	N/A	N/A	1	Rusted
9	57mm	1	N/A	N/A	6	Rusted
10	Rock & Rust	1	N/A	N/A	4	Rusted

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

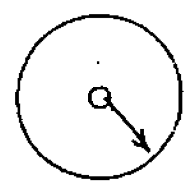


GRID I.D. 34

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

11 SUBSURFACE ANOMALIES INVESTIGATED IN 7 LANES
4 EA. 57 MM AP PROJECTILES RECOVERED
29 lbs. METAL RECOVERED.

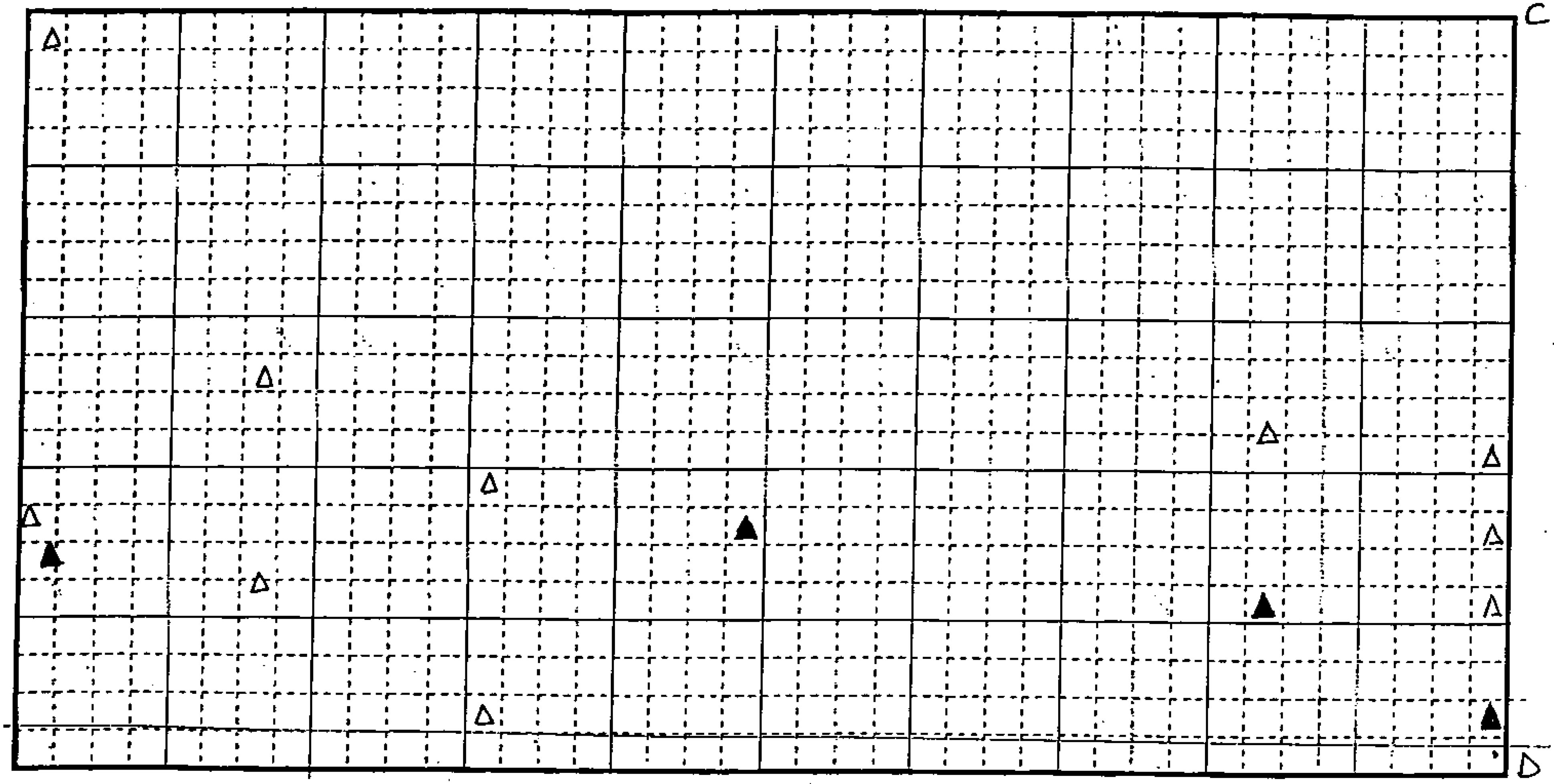
GRID SURVEY SUMMARY SHEET

GRID :34

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	57mm	1	N/A	N/A	3	Rusted
2	Scrap	1	N/A	N/A	4	Rusted
3	Chain	1	N/A	N/A	4	Rusted
4	Plow	1	N/A	N/A	2	Rusted
5	30 cal.	1	N/A	N/A	2	Rusted
6	30 cal.	1	N/A	N/A	3	Rusted
7	57mm	1	N/A	N/A	21	Rusted
8	50 cal.	1	N/A	N/A	3	Rusted
9	57mm	1	N/A	N/A	23	Rusted
10	57mm	1	N/A	N/A	20	Rusted

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP



GRID I.D. 35

MAP ORIENTATION

N

WIDTH DIRECTION

LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

14 SUBSURFACE ANOMALIES INVESTIGATED IN 7 LANES
3 EA. 57MM AP ROUNDS RECOVERED
1 EA. 37MM AP PROJECTILE RECOVERED
24 lbs METAL RECOVERED

GRID SURVEY SUMMARY SHEET

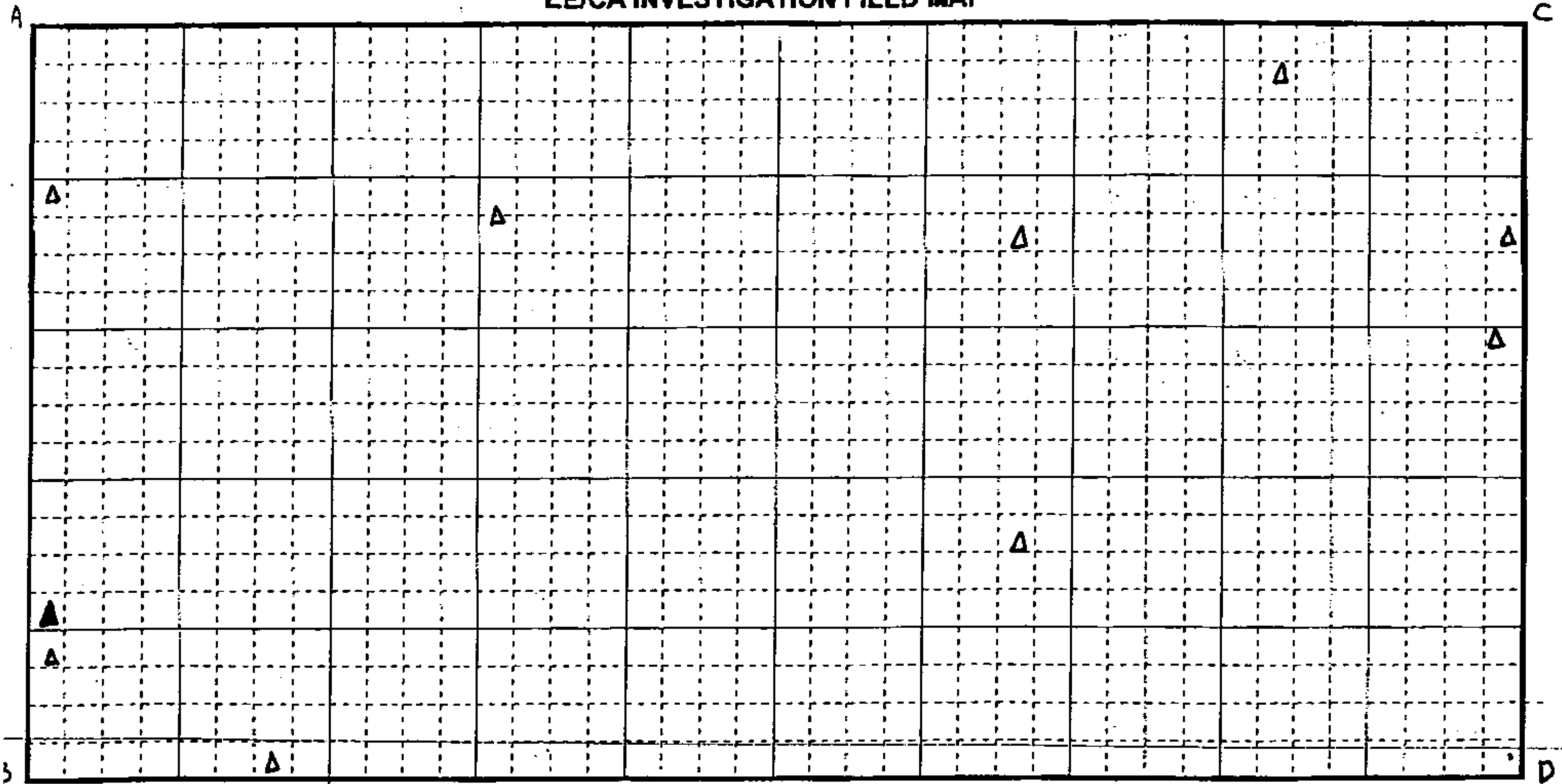
GRID :35

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Rock	1	N/A	N/A	2	Rusted
2	Rock	1	N/A	N/A	6	Rusted
3	Rock	1	N/A	N/A	4	Rusted
4	50 cal.	1	N/A	N/A	5	Rusted
5	Hoe	1	N/A	N/A	4	Rusted
6	57mm	1	N/A	N/A	14	Rusted
7	37mm	1	N/A	N/A	3	Rusted
8	57mm	1	N/A	N/A	4	Rusted
9	Snow chain	1	N/A	N/A	5	Rusted
10	Rock	1	N/A	N/A	6	Rusted
11	Scrap	3	N/A	N/A	4-9	Rusted
12	57mm	1	N/A	N/A	9	Rusted
13	Rust	1	N/A	N/A	3	Rusted
14	50 cal.	1	N/A	N/A	4	Rusted

TOTAL P.02

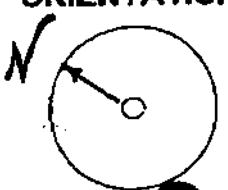
FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP



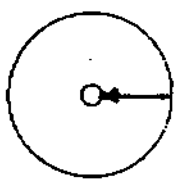
X ☐

GRID I.D. 36

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

10 SUBSURFACE INVESTIGATIONS IN 7 LANES
1 EA. 37MM AP ANTI-AIRCRAFT ROUND
6 EA. SMALL ARMS PROJOS
4 lbs METAL RECOVERED

GRID SURVEY SUMMARY SHEET

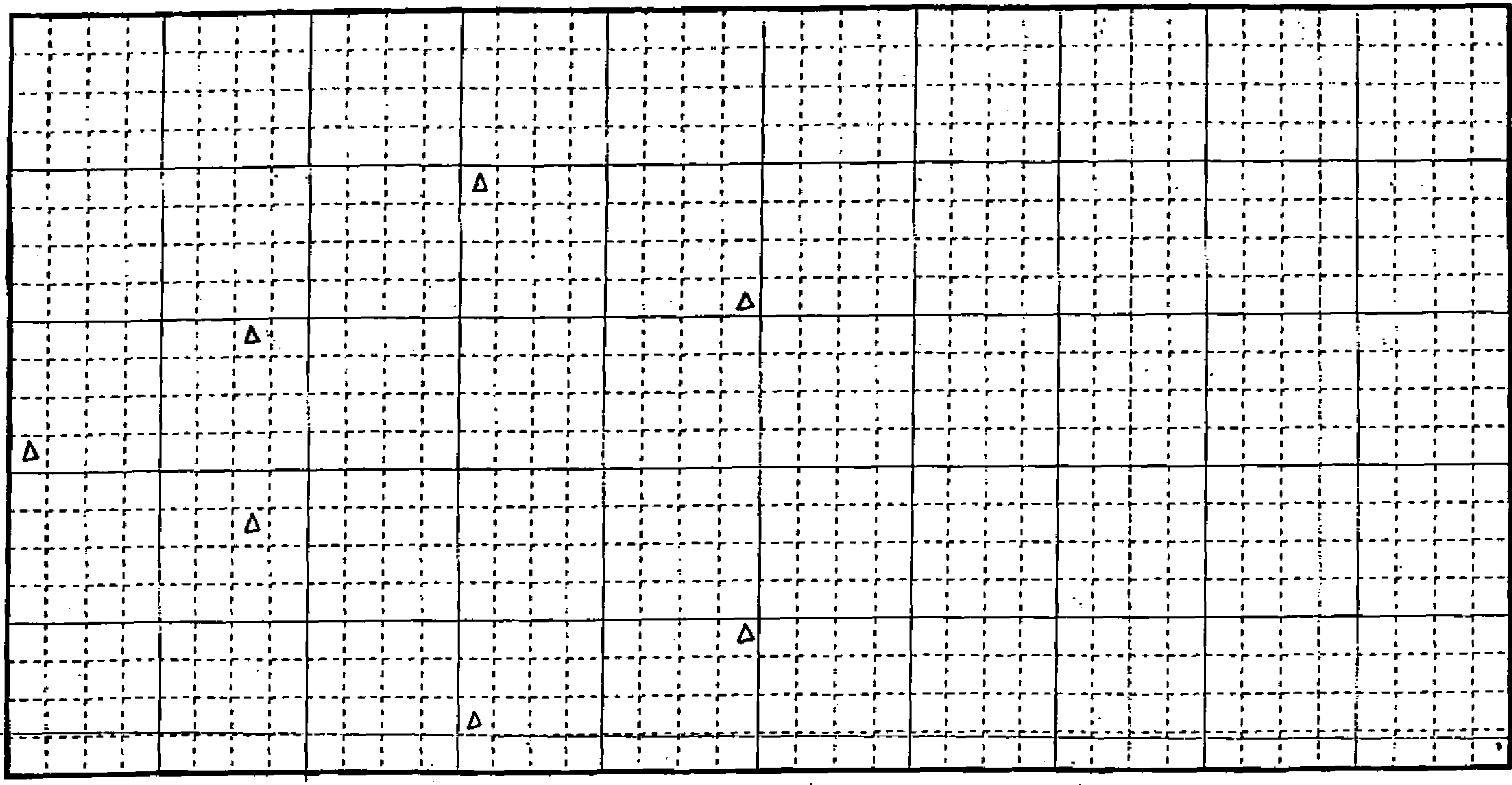
GRID :36

Accessability: MODERATE DOWN HILL TRAIL FOOT ACCESS

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	50 cal.	1	N/A	N/A	1	
2	37mm. AP	1	N/A	N/A	7	
3	Nail	1	N/A	N/A	4	
4	30 cal.	1	N/A	N/A	1	
5	50 cal.	1	N/A	N/A	3	
6	37mm. AP	1	N/A	N/A	7	
7	50 cal.	1	N/A	N/A	6	
8	Can lid	1	N/A	N/A	3	Rusted
9	50 cal.	1	N/A	N/A	6	
10	50 cal.	1	N/A	N/A	4	

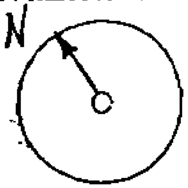
TOTAL P.02

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

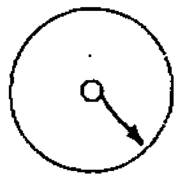


GRID I.D. 37

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

7 SUBSURFACE ANOMALIES INVESTIGATED IN 7 LANES

LESS THAN 1 lb. METAL RECOVERED

GRID SURVEY SUMMARY SHEET

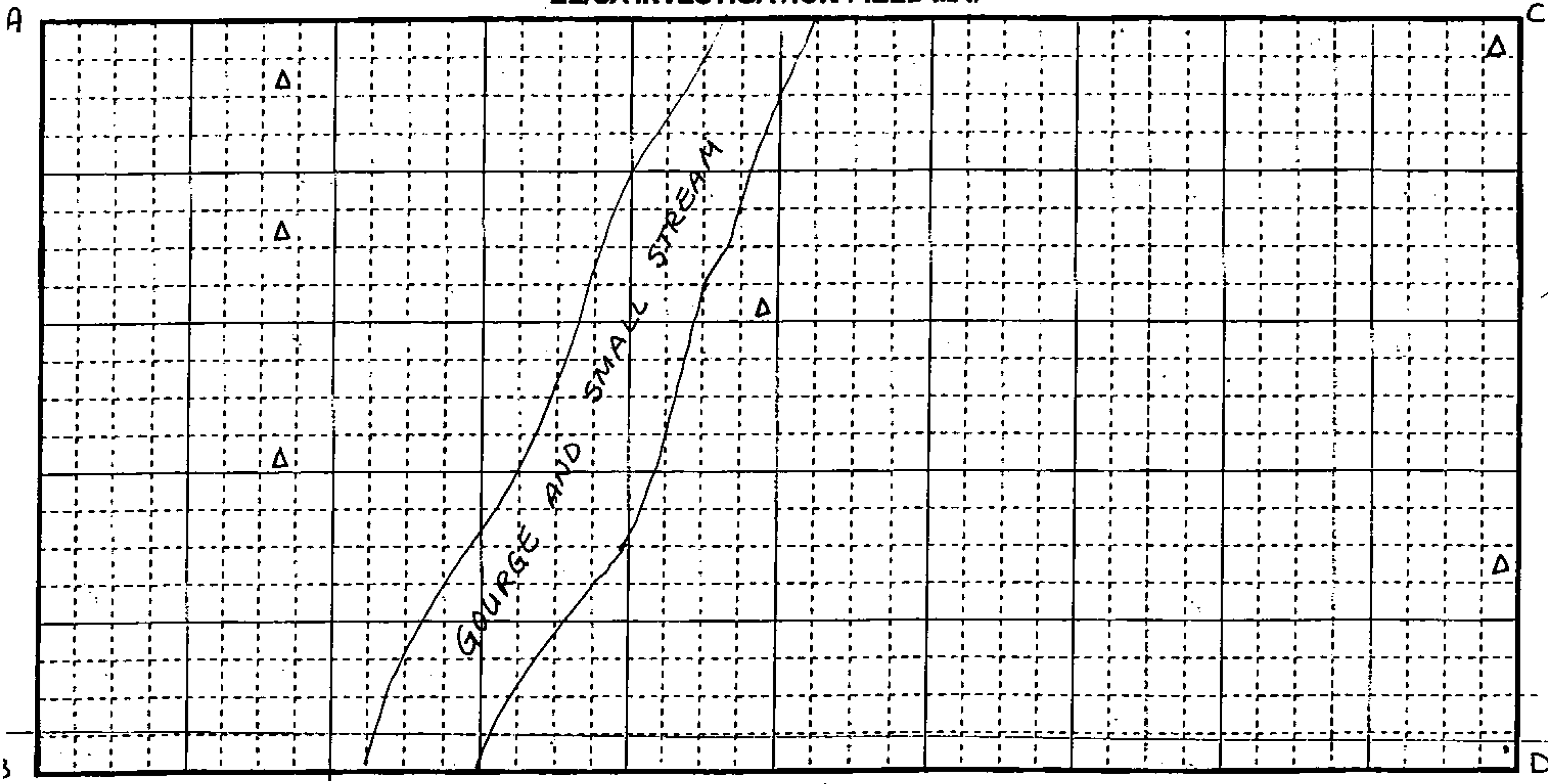
Grid: 37

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Rock	1	N/A	N/A	2	Rusted
2	30 cal.	1	N/A	N/A	3	Rusted
3	Rock	1	N/A	N/A	1	Rusted
4	30 cal.	1	N/A	N/A	2	Rusted
5	Rock	1	N/A	N/A	1	Rusted
6	Rock	1	N/A	N/A	2	Rusted
7	Rock	1	N/A	N/A	1	Rusted

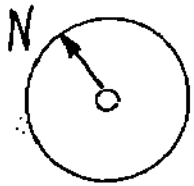
TOTAL P.02

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

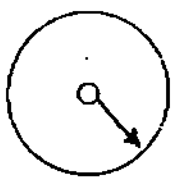


GRID I.D. 38

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

6 SUBSURFACE INVESTIGATIONS IN 7 LANES
LESS THAN 1 lb. METAL RECOVERED

GRID SURVEY SUMMARY SHEET

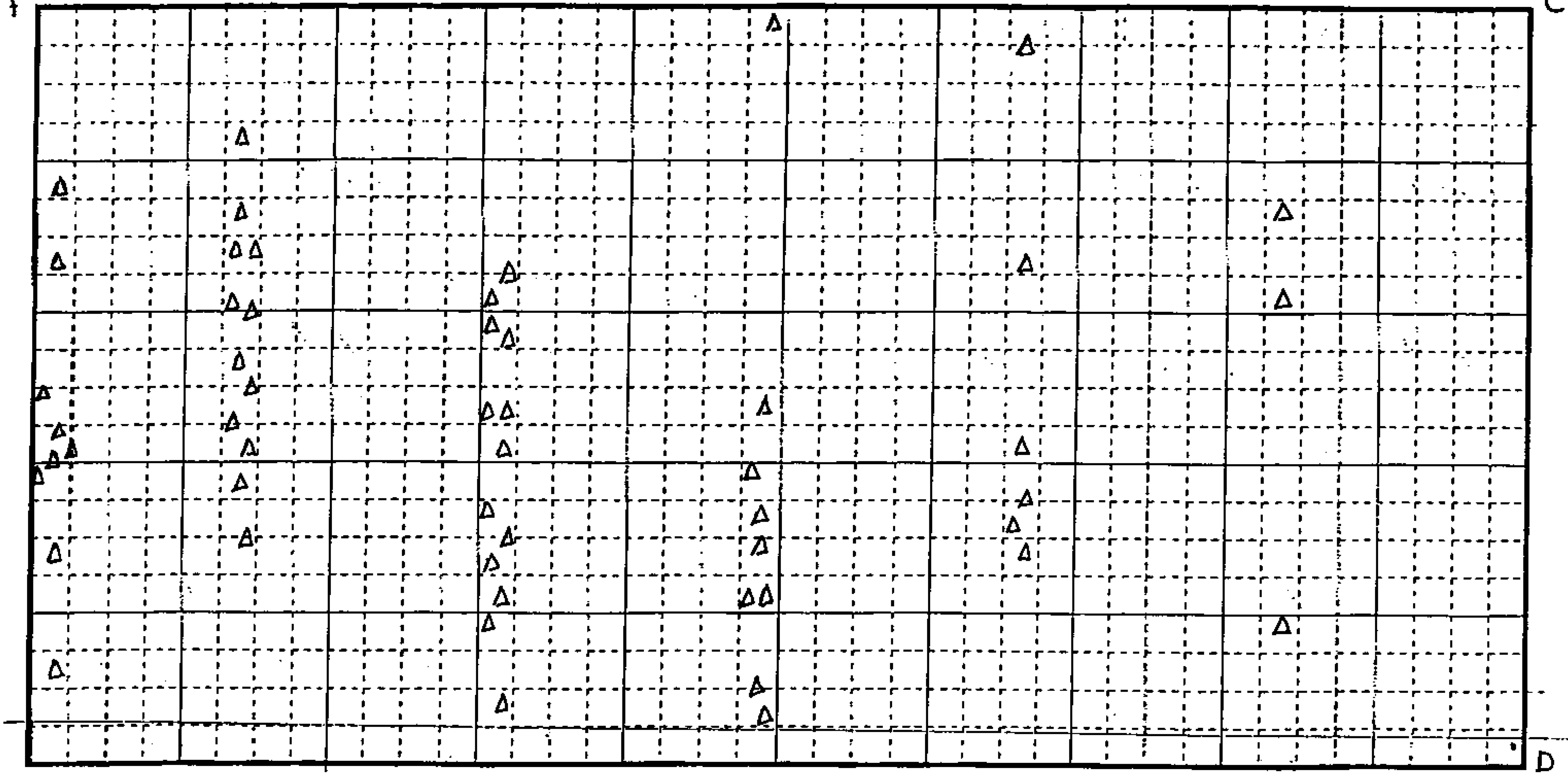
Grid: 38

Accessability: GATOR TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	30 cal.	1	N/A	N/A	1	Rusted
2	Scrap	1	N/A	N/A	2	Rusted
3	30 cal.	1	N/A	N/A	1	Rusted
4	30 cal.	1	N/A	N/A	2	Rusted
5	Rock	1	N/A	N/A	2	Rusted
6	Nail	1	N/A	N/A	4	Rusted

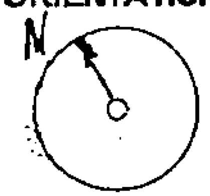
FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

TOTAL P.02

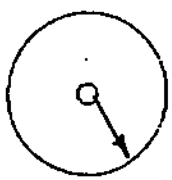


GRID I.D. 39

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

52 SUBSURFACE INVESTIGATIONS IN 7 LANE
0 lbs METAL RECOVERED (ALL ROCKS)

GRID SURVEY SUMMARY SHEET

Grid: 39

Accessability: GATOR TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Rock	1	N/A	N/A	3	Rusted
2	Rock	1	N/A	N/A	2	Rusted
3	Rock	1	N/A	N/A	2	Rusted
4	Rock	1	N/A	N/A	2	Rusted
5	Rock	1	N/A	N/A	2	Rusted
6	Rock	1	N/A	N/A	3	Rusted
7	Rock	1	N/A	N/A	1	Rusted
8	Rock	1	N/A	N/A	1	Rusted
9	Rock	1	N/A	N/A	2	Rusted
10	Rock	1	N/A	N/A	2	Rusted
11	Rock	1	N/A	N/A	3	Rusted
12	Rock	1	N/A	N/A	2	Rusted
13	Rock	1	N/A	N/A	1	Rusted
14	Rock	1	N/A	N/A	3	Rusted
15	Rock	1	N/A	N/A	3	Rusted
16	Rock	1	N/A	N/A	2	Rusted
17	Rock	1	N/A	N/A	3	Rusted
18	Rock	1	N/A	N/A	1	Rusted
19	Rock	1	N/A	N/A	3	Rusted
20	Rock	1	N/A	N/A	4	Rusted
21	Rock	1	N/A	N/A	3	Rusted
22	Rock	1	N/A	N/A	2	Rusted
23	Rock	1	N/A	N/A	1	Rusted
24	Rock	1	N/A	N/A	1	Rusted
25	Rock	1	N/A	N/A	2	Rusted
26	Rock	1	N/A	N/A	3	Rusted
27	Rock	4	N/A	N/A	6-15	Rusted
28	Rock	1	N/A	N/A	2	Rusted
29	Rock	1	N/A	N/A	3	Rusted
30	Rock	1	N/A	N/A	2	Rusted

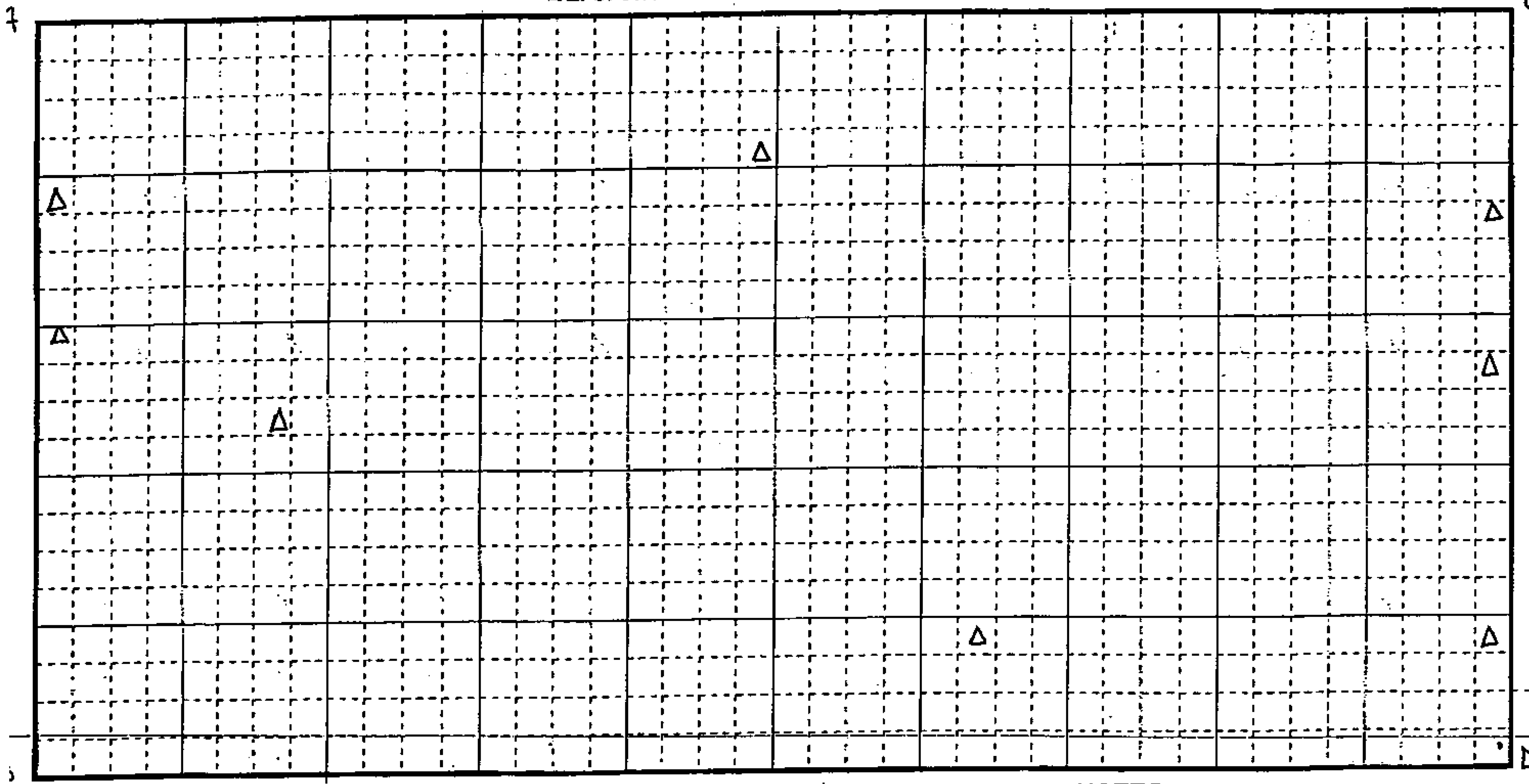
GRID SURVEY SUMMARY SHEET

Grid: 39

Accessability: GATOR TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth	State of Degradation
31	Rock	1	N/A	N/A	4	Rusted
32	Rock	1	N/A	N/A	1	Rusted
33	Rock	1	N/A	N/A	4	Rusted
34	Rock	1	N/A	N/A	3	Rusted
35	Rock	1	N/A	N/A	2	Rusted
36	Rock	1	N/A	N/A	1	Rusted
37	Rock	1	N/A	N/A	4	Rusted
38	Rock	1	N/A	N/A	4	Rusted
39	Rock	1	N/A	N/A	1	Rusted
40	Rock	1	N/A	N/A	3	Rusted
41	Rock	1	N/A	N/A	3	Rusted
42	Rock	1	N/A	N/A	2	Rusted
43	Rock	3	N/A	N/A	4-9	Rusted
44	Rock	1	N/A	N/A	3	Rusted
45	Rock	1	N/A	N/A	5	Rusted
46	Rock	1	N/A	N/A	3	Rusted
47	Rock	1	N/A	N/A	5	Rusted
48	Rock	1	N/A	N/A	2	Rusted
49	Rock	1	N/A	N/A	2	Rusted
50	Rock	1	N/A	N/A	1	Rusted
51	Rock	1	N/A	N/A	2	Rusted
52	Rock	1	N/A	N/A	2	Rusted

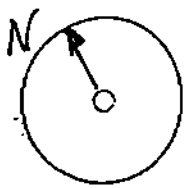
FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP



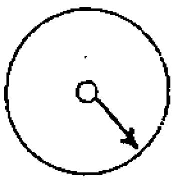
LEGEND

GRID I.D. 40

MAP ORIENTATION



WIND DIRECTION



△ SUBSURFACE ANOMALIES

○ SURFACE OEW/UXO

▲ SUBSURFACE OEW/UXO

□ FIRE SAFETY EQUIPMENT

⬡ PIT,TRENCHES, BUNKER, ETC.

— RESTRICTED AREA BOUNDARY

X ENTRY/EXIT POINT

NOTES

8 SUBSURFACE ANOMALIES INVESTIGATED IN 7 LANES

LESS THAN 1 lb. METAL RECOVERED

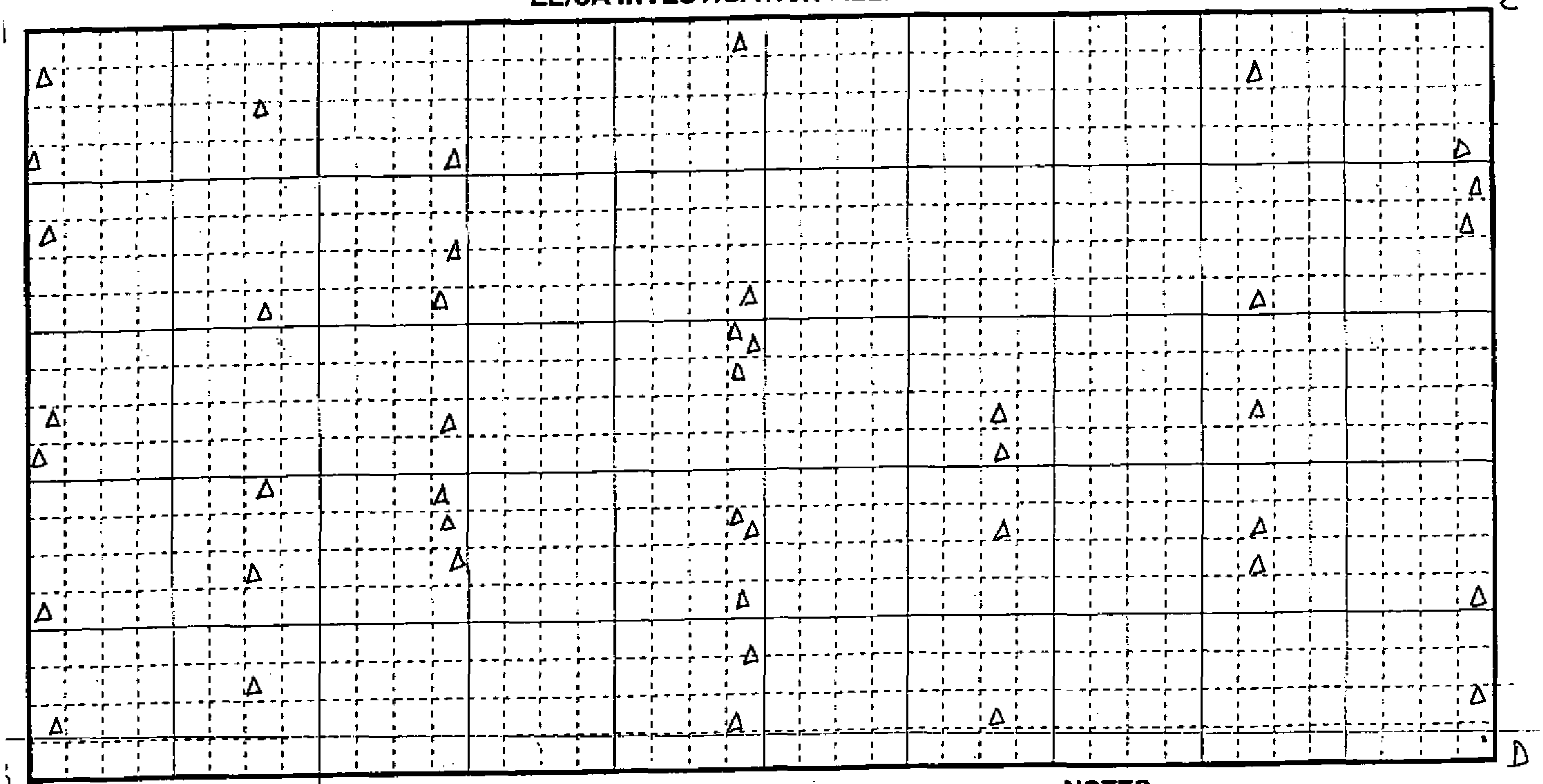
GRID SURVEY SUMMARY SHEET

Grid: 40

Accessability: EASY

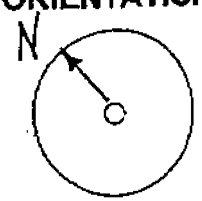
Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Rust	1	N/A	N/A	4	Rusted
2	Rust	1	N/A	N/A	2	Rusted
3	30 cal.	1	N/A	N/A	1	Rusted
4	Rust	1	N/A	N/A	2	Rusted
5	Rock	1	N/A	N/A	1	Rusted
6	Frag	1	N/A	N/A	3	Rusted
7	Rock	1	N/A	N/A	1	Rusted
8	Rock	1	N/A	N/A	2	Rusted

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

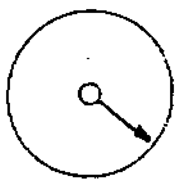


GRID I.D. 41

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

43 SUBSURFACES ANOMALIES INVESTIGATED IN 7 LANES
1 lbs METAL RECOVERED

GRID SURVEY SUMMARY SHEET

GRID :41

Accessability: Easy

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Frag	1	N/A	N/A	3	Rusted
2	Frag	1	N/A	N/A	2	Rusted
3	Frag	1	N/A	N/A	2	Rusted
4	30 cal.	1	N/A	N/A	2	Rusted
5	50 cal.	1	N/A	N/A	3	Rusted
6	Frag	1	N/A	N/A	2	Rusted
7	50 cal.	1	N/A	N/A	4	Rusted
8	Frag	1	N/A	N/A	2	Rusted
9	Frag	1	N/A	N/A	1	Rusted
10	Frag	1	N/A	N/A	4	Rusted
11	Frag	1	N/A	N/A	3	Rusted
12	30 cal.	1	N/A	N/A	2	Rusted
13	Frag	1	N/A	N/A	3	Rusted
14	Frag	1	N/A	N/A	1	Rusted
15	Frag	1	N/A	N/A	3	Rusted
16	Rust	1	N/A	N/A	1	Rusted
17	Frag	1	N/A	N/A	2	Rusted
18	Frag	1	N/A	N/A	2	Rusted
19	Frag	1	N/A	N/A	1	Rusted
20	Rust	1	N/A	N/A	1	Rusted
21	Frag	1	N/A	N/A	3	Rusted
22	Frag	1	N/A	N/A	4	Rusted
23	30 cal.	1	N/A	N/A	3	Rusted
24	Rust	1	N/A	N/A	1	Rusted
25	Rust	1	N/A	N/A	1	Rusted
26	Frag	1	N/A	N/A	2	Rusted
27	Rust	1	N/A	N/A	1	Rusted
28	Frag	1	N/A	N/A	2	Rusted
29	Pipe	1	N/A	N/A	4	Rusted
30	Frag	1	N/A	N/A	2	Rusted

GRID SURVEY SUMMARY SHEET

GRID :41

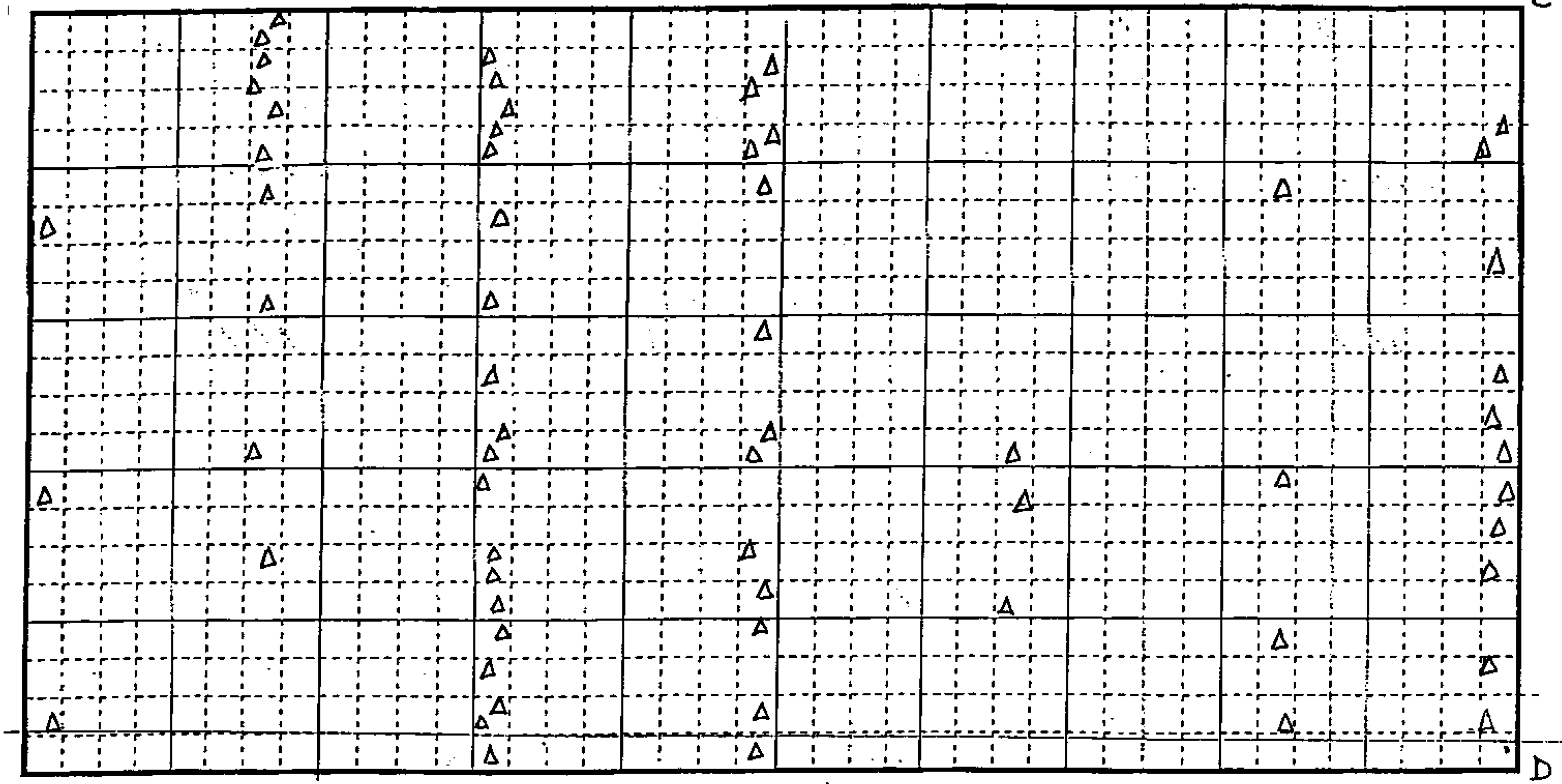
Accessability: Easy

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	Frag	1	N/A	N/A	4	Rusted
32	Frag	1	N/A	N/A	3	Rusted
33	Frag	1	N/A	N/A	1	Rusted
34	30 cal.	1	N/A	N/A	2	Rusted
35	Frag	1	N/A	N/A	4	Rusted
36	30 cal.	1	N/A	N/A	2	Rusted
37	30 cal.	1	N/A	N/A	1	Rusted
38	Frag	1	N/A	N/A	2	Rusted
39	Frag	1	N/A	N/A	4	Rusted
40	Frag	1	N/A	N/A	3	Rusted
41	Scrap	1	N/A	N/A	3	Rusted
42	Rock	1	N/A	N/A	1	Rusted
43	Frag	1	N/A	N/A	5	Rusted

TOTAL P.02

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

C



D

GRID I.D. 42

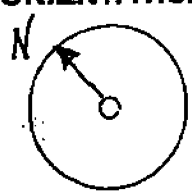
LEGEND

△ SUBSURFACE ANOMALIES
○ SURFACE OEW/UXO
▲ SUBSURFACE OEW/UXO
□ FIRE SAFETY EQUIPMENT
⬡ PIT, TRENCHES, BUNKER, ETC.
— RESTRICTED AREA BOUNDARY
X ENTRY/EXIT POINT

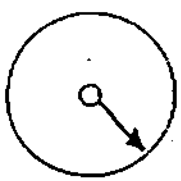
NOTES

63 SUBSURFACE ANOMALIES INVESTIGATED IN 7 LANES
2 lbs METAL RECOVERED

MAP ORIENTATION



WIND DIRECTION



GRID SURVEY SUMMARY SHEET

GRID :42

Accessability: GOOD GATOR TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Frag	1	N/A	N/A	1	Rusted
2	Frag	1	N/A	N/A	1	Rusted
3	81mm Fin	1	N/A	N/A	4	Rusted
4	Frag	1	N/A	N/A	2	Rusted
5	30 cal.	1	N/A	N/A	2	Rusted
6	Frag	1	N/A	N/A	1	Rusted
7	Frag	1	N/A	N/A	1	Rusted
8	30 cal.	1	N/A	N/A	1	Rusted
9	Frag	1	N/A	N/A	2	Rusted
10	Frag	1	N/A	N/A	1	Rusted
11	Frag	1	N/A	N/A	2	Rusted
12	Frag	1	N/A	N/A	1	Rusted
13	Frag	1	N/A	N/A	1	Rusted
14	Rust	1	N/A	N/A	1	Rusted
15	Frag	1	N/A	N/A	2	Rusted
16	Rust	1	N/A	N/A	1	Rusted
17	Frag	1	N/A	N/A	2	Rusted
18	Frag	1	N/A	N/A	3	Rusted
19	Scrap	1	N/A	N/A	1	Rusted
20	Rust	1	N/A	N/A	1	Rusted
21	Frag	1	N/A	N/A	1	Rusted
22	Frag	1	N/A	N/A	1	Rusted
23	Rust	1	N/A	N/A	1	Rusted
24	Rust	1	N/A	N/A	1	Rusted
25	Frag	1	N/A	N/A	2	Rusted
26	Frag	1	N/A	N/A	1	Rusted
27	Frag	1	N/A	N/A	3	Rusted
28	Rock	1	N/A	N/A	2	Rusted
29	30 cal.	1	N/A	N/A	3	Rusted
30	Wire	1	N/A	N/A	1	Rusted

GRID SURVEY SUMMARY SHEET

GRID :42

Accessability: GOOD GATOR TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	Rust	1	N/A	N/A	1	Rusted
32	Frag	1	N/A	N/A	3	Rusted
33	Frag	1	N/A	N/A	2	Rusted
34	30 cal.	1	N/A	N/A	2	Rusted
35	30 cal.	1	N/A	N/A	1	Rusted
36	Scrap	1	N/A	N/A	1	Rusted
37	Frag	1	N/A	N/A	2	Rusted
38	30 cal.	1	N/A	N/A	2	Rusted
39	Frag	1	N/A	N/A	1	Rusted
40	Frag	1	N/A	N/A	2	Rusted
41	Frag	1	N/A	N/A	1	Rusted
42	Frag	1	N/A	N/A	1	Rusted
43	Rust	1	N/A	N/A	1	Rusted
44	Frag	1	N/A	N/A	2	Rusted
45	30 cal.	1	N/A	N/A	3	Rusted
46	Frag	1	N/A	N/A	2	Rusted
47	Frag	1	N/A	N/A	2	Rusted
48	Frag	1	N/A	N/A	2	Rusted
49	Frag	1	N/A	N/A	1	Rusted
50	60mm Fin assy.	1	N/A	N/A	1	Rusted
51	Frag	1	N/A	N/A	2	Rusted
52	Barbed wire	1	N/A	N/A	4	Rusted
53	Frag	1	N/A	N/A	1	Rusted
54	Frag	1	N/A	N/A	1	Rusted
55	Frag	1	N/A	N/A	1	Rusted
56	Scrap	1	N/A	N/A	1	Rusted
57	Frag	1	N/A	N/A	2	Rusted
58	30 cal.	1	N/A	N/A	2	Rusted
59	Frag	1	N/A	N/A	3	Rusted
60	Frag	1	N/A	N/A	1	Rusted

GRID SURVEY SUMMARY SHEET

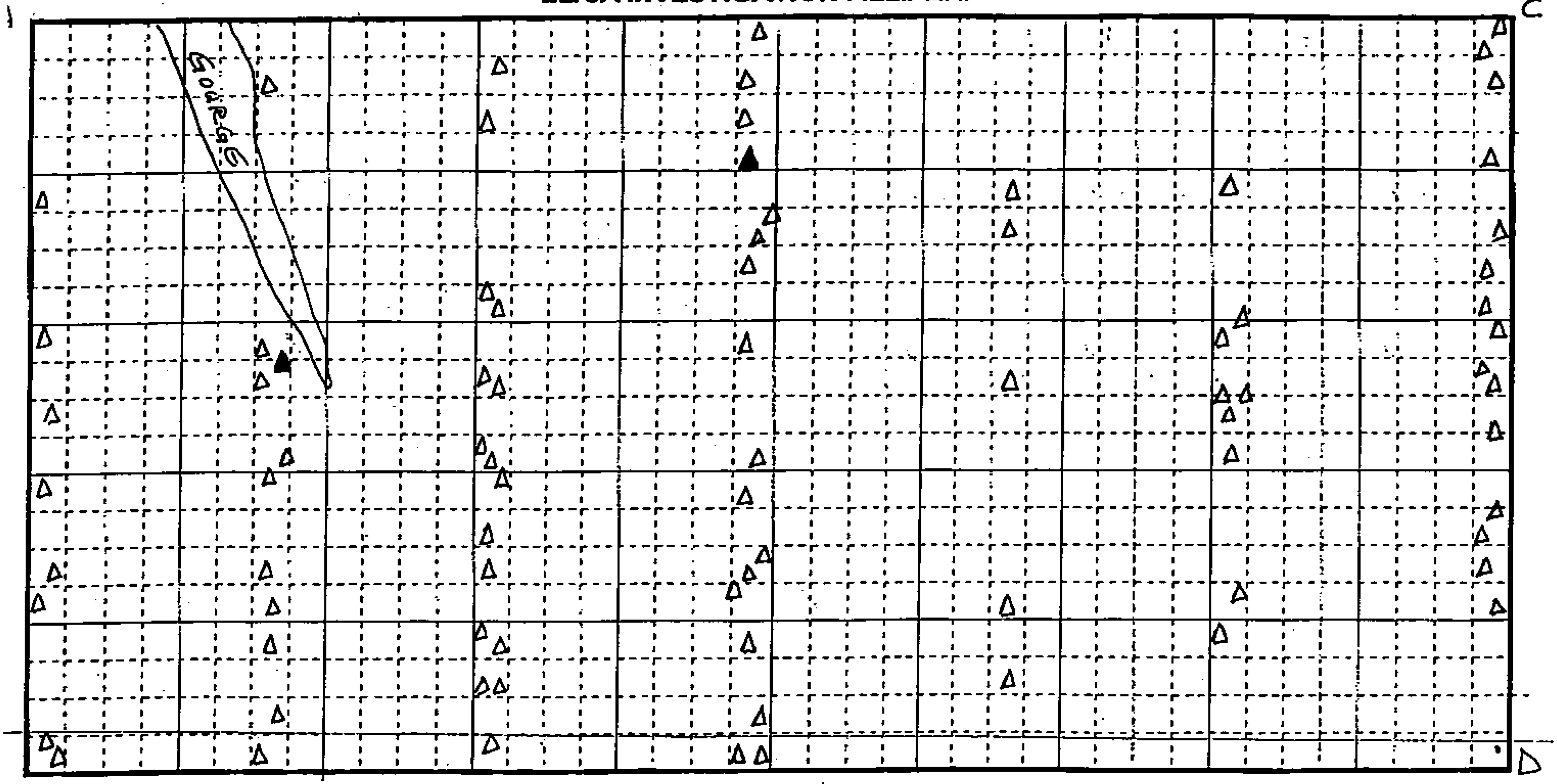
GRID :42

Accessability: GOOD GATOR TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
61	Frag	1	N/A	N/A	3	Rusted
62	30 cal.	1	N/A	N/A	2	Rusted
63	Frag	1	N/A	N/A	1	Rusted

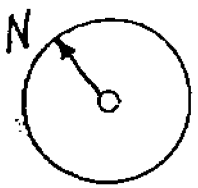
FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

TOTAL P.02

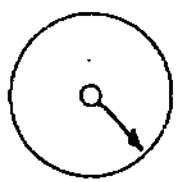


GRID I.D. 43

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

81 SUBSURFACE ANOMALIES INVESTIGATED IN 7 LANES
2 EA. 60 mm MORTAR, H.E., FUZED, RECOVERED
3 lbs. METAL RECOVERED,

GRID SURVEY SUMMARY SHEET

GRID :43

Accessability: GOOD GATOR TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Frag	1	N/A	N/A	5	Rusted
2	60mm Tail boom	1	N/A	N/A	4	Rusted
3	Frag	1	N/A	N/A	4	Rusted
4	Frag	1	N/A	N/A	1	Rusted
5	Frag	1	N/A	N/A	4	Rusted
6	60mm Tail boom	1	N/A	N/A	4	Rusted
7	Frag	1	N/A	N/A	2	Rusted
8	Frag	1	N/A	N/A	2	Rusted
9	Frag	1	N/A	N/A	1	Rusted
10	50 cal.	1	N/A	N/A	3	Rusted
11	Scrap	1	N/A	N/A	1	Rusted
12	Frag	1	N/A	N/A	4	Rusted
13	Rust	1	N/A	N/A	1	Rusted
14	Frag	1	N/A	N/A	1	Rusted
15	Frag	1	N/A	N/A	4	Rusted
16	60mm Mortar	1	Fuse	HE	3	Missing fuse / Rusted
17	Frag	1	N/A	N/A	2	Rusted
18	Rust	1	N/A	N/A	1	Rusted
19	Frag	1	N/A	N/A	3	Rusted
20	Frag	1	N/A	N/A	2	Rusted
21	Frag	1	N/A	N/A	3	Rusted
22	Frag	1	N/A	N/A	1	Rusted
23	Frag	1	N/A	N/A	1	Rusted
24	Frag	1	N/A	N/A	2	Rusted
25	Frag	1	N/A	N/A	3	Rusted
26	Frag	1	N/A	N/A	2	Rusted
27	81mm Fin	1	N/A	N/A	3	Rusted
28	Frag	1	N/A	N/A	2	Rusted
29	Frag	1	N/A	N/A	2	Rusted
30	Frag	1	N/A	N/A	2	Rusted

GRID SURVEY SUMMARY SHEET

GRID :43

Accessability: GOOD GATOR TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	Rust	1	N/A	N/A	1	Rusted
32	Frag	1	N/A	N/A	1	Rusted
33	30 cal.	1	N/A	N/A	2	Rusted
34	Frag	1	N/A	N/A	1	Rusted
35	Frag	1	N/A	N/A	2	Rusted
36	Frag	1	N/A	N/A	1	Rusted
37	60mm Fin	1	N/A	N/A	2	Rusted
38	Frag	1	N/A	N/A	2	Rusted
39	Scrap	1	N/A	N/A	1	Rusted
40	60mm Tail boom & Fin	1	N/A	N/A	1	Rusted
41	60mm Tail boom	1	N/A	N/A	1	Rusted
42	Frag	1	N/A	N/A	2	Rusted
43	Rust	1	N/A	N/A	1	Rusted
44	Frag	1	N/A	N/A	3	Rusted
45	Frag	1	N/A	N/A	2	Rusted
46	60mm Fin assy.	1	N/A	N/A	4	Rusted
47	60mm Mortar	1	Fuse	HE	8	Rusted
48	60mm Fin	1	N/A	N/A	4	Rusted
49	Frag	1	N/A	N/A	2	Rusted
50	Frag	1	N/A	N/A	1	Rusted
51	60mm Fin	1	N/A	N/A	2	Rusted
52	Frag	3	N/A	N/A	4-12	Rusted
53	Frag	1	N/A	N/A	2	Rusted
54	Frag	1	N/A	N/A	2	Rusted
55	Frag	1	N/A	N/A	3	Rusted
56	Frag	1	N/A	N/A	3	Rusted
57	Frag	1	N/A	N/A	2	Rusted
58	Frag	1	N/A	N/A	1	Rusted
59	Rust	1	N/A	N/A	1	Rusted
60	Frag	1	N/A	N/A	2	Rusted

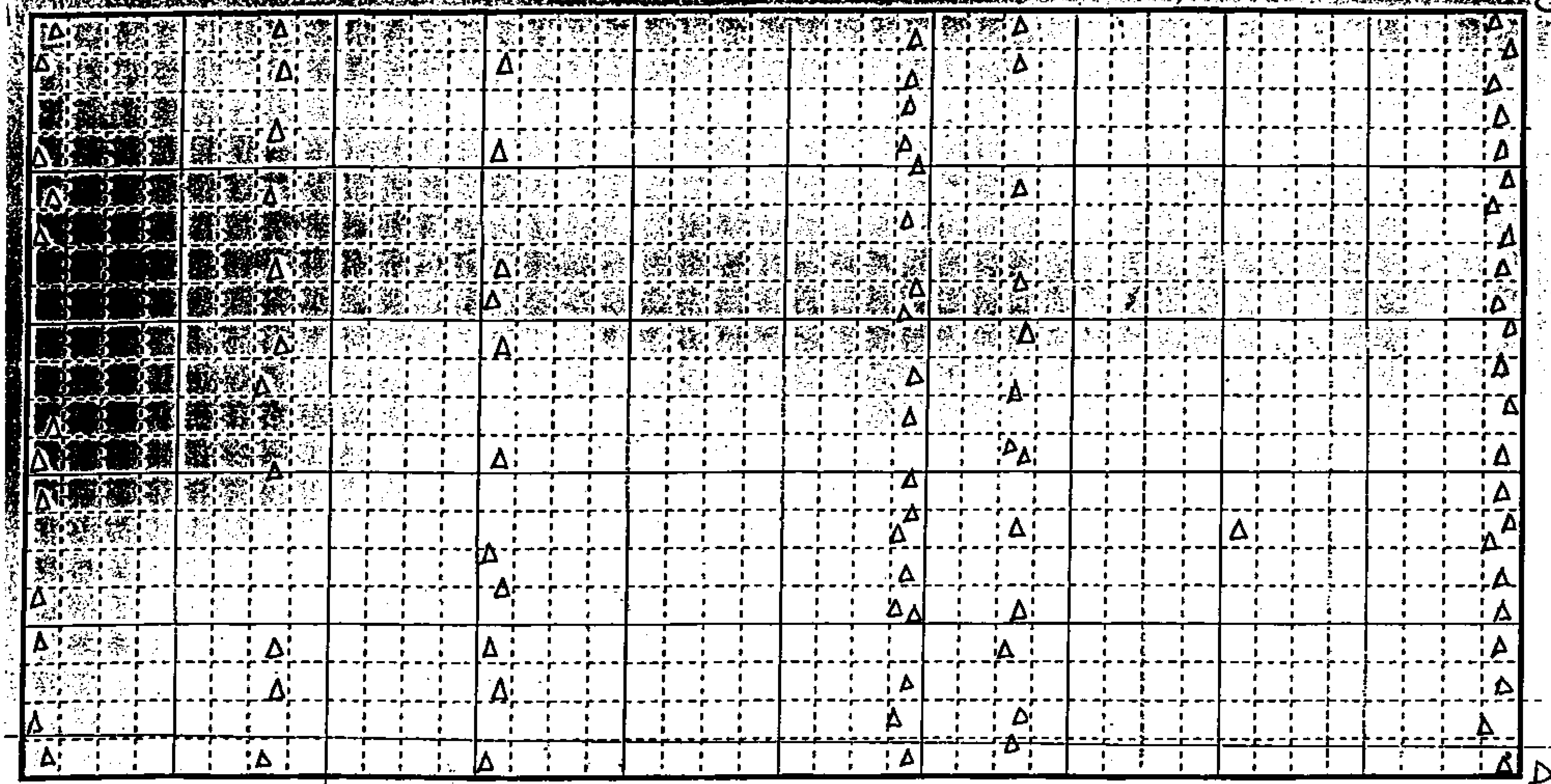
GRID SURVEY SUMMARY SHEET

GRID :43

Accessability: GOOD GATOR TRAIL

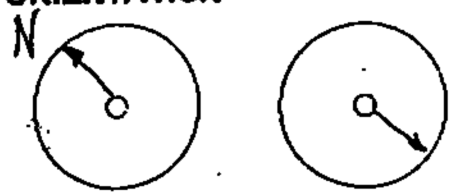
Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
61	Frag	1	N/A	N/A	1	Rusted
62	Frag	2	N/A	N/A	2-5	Rusted
63	Frag	1	N/A	N/A	1	Rusted
64	Rust	1	N/A	N/A	1	Rusted
65	Frag	1	N/A	N/A	1	Rusted
66	30 cal.	1	N/A	N/A	2	Rusted
67	Scrap	1	N/A	N/A	1	Rusted
68	Scrap	1	N/A	N/A	1	Rusted
69	Can	1	N/A	N/A	1	Rusted
70	Scrap	1	N/A	N/A	1	Rusted
71	Frag	1	N/A	N/A	2	Rusted
72	Frag	1	N/A	N/A	1	Rusted
73	Frag	1	N/A	N/A	1	Rusted
74	30 cal.	1	N/A	N/A	1	Rusted
75	Scrap	1	N/A	N/A	1	Rusted
76	Scrap	1	N/A	N/A	1	Rusted
77	Scrap	1	N/A	N/A	1	Rusted
78	Frag	1	N/A	N/A	1	Rusted
79	Frag	1	N/A	N/A	2	Rusted
80	60mm Fin assy.	1	N/A	N/A	4	Rusted
81	Frag	1	N/A	N/A	3	Rusted

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP



GRID I.D. 44

MAP ORIENTATION **WIND DIRECTION**



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT, TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

90 SUBSURFACE ANOMALIES INVESTIGATED IN 7 LANES
LESS THAN 1 lb. METAL RECOVERED

GRID SURVEY SUMMARY SHEET

GRID :44

Accessability: Easy

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Frag	1	N/A	N/A	1	Rusted
2	Frag	1	N/A	N/A	2	Rusted
3	60mm Fin	1	N/A	N/A	4	Rusted
4	Frag	1	N/A	N/A	1	Rusted
5	Frag	1	N/A	N/A	1	Rusted
6	Frag	1	N/A	N/A	3	Rusted
7	Frag	1	N/A	N/A	2	Rusted
8	Frag	1	N/A	N/A	3	Rusted
9	Frag	1	N/A	N/A	1	Rusted
10	Frag	1	N/A	N/A	3	Rusted
11	Frag	1	N/A	N/A	2	Rusted
12	Frag	1	N/A	N/A	1	Rusted
13	60mm Fin	1	N/A	N/A	3	Rusted
14	Frag	1	N/A	N/A	1	Rusted
15	Frag	1	N/A	N/A	1	Rusted
16	Frag	1	N/A	N/A	3	Rusted
17	Frag	1	N/A	N/A	4	Rusted
18	Frag	1	N/A	N/A	3	Rusted
19	Frag	1	N/A	N/A	2	Rusted
20	Frag	1	N/A	N/A	3	Rusted
21	60mm Fin	1	N/A	N/A	2	Rusted
22	Frag	1	N/A	N/A	3	Rusted
23	Frag	1	N/A	N/A	1	Rusted
24	Frag	1	N/A	N/A	2	Rusted
25	Rock	1	N/A	N/A	3	Rusted
26	Frag	1	N/A	N/A	2	Rusted
27	Frag	1	N/A	N/A	6	Rusted
28	Frag	1	N/A	N/A	3	Rusted
29	Frag	1	N/A	N/A	3	Rusted
30	Frag	1	N/A	N/A	4	Rusted

GRID SURVEY SUMMARY SHEET

GRID :44

Accessability: Easy

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	Frag	1	N/A	N/A	2	Rusted
32	Wire	1	N/A	N/A	1	Rusted
33	Frag	1	N/A	N/A	2	Rusted
34	Rock	1	N/A	N/A	3	Rusted
35	Rock	1	N/A	N/A	1	Rusted
36	Rock	1	N/A	N/A	1	Rusted
37	Wire	1	N/A	N/A	1	Rusted
38	Frag	1	N/A	N/A	1	Rusted
39	Frag	1	N/A	N/A	2	Rusted
40	Rock	1	N/A	N/A	1	Rusted
41	Rock	1	N/A	N/A	1	Rusted
42	Wire	1	N/A	N/A	1	Rusted
43	Wire	1	N/A	N/A	1	Rusted
44	Frag	1	N/A	N/A	2	Rusted
45	Frag	1	N/A	N/A	2	Rusted
46	Frag	1	N/A	N/A	3	Rusted
47	Rock	1	N/A	N/A	1	Rusted
48	Frag	1	N/A	N/A	1	Rusted
49	Frag	1	N/A	N/A	2	Rusted
50	Frag	1	N/A	N/A	3	Rusted
51	Frag	1	N/A	N/A	1	Rusted
52	Rock	1	N/A	N/A	2	Rusted
53	Wire	1	N/A	N/A	1	Rusted
54	Frag	1	N/A	N/A	1	Rusted
55	Frag	1	N/A	N/A	2	Rusted
56	Rock	1	N/A	N/A	4	Rusted
57	Rock	1	N/A	N/A	2	Rusted
58	Scrap	1	N/A	N/A	3	Rusted
59	Frag	1	N/A	N/A	1	Rusted
60	Frag	1	N/A	N/A	1	Rusted

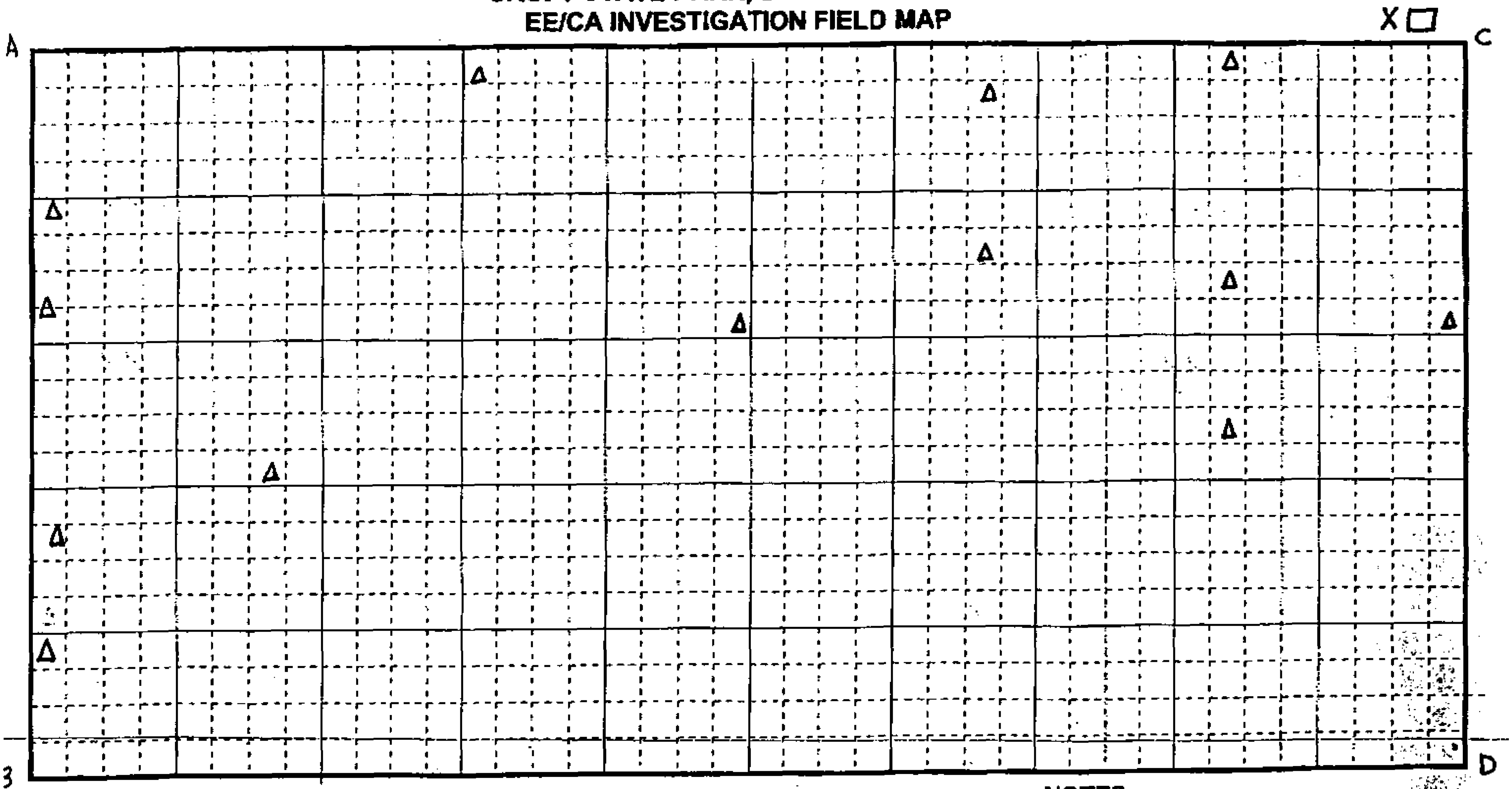
GRID SURVEY SUMMARY SHEET

GRID :44

Accessability: Easy

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
61	Rock	1	N/A	N/A	4	Rusted
62	Frag	1	N/A	N/A	1	Rusted
63	Frag	1	N/A	N/A	2	Rusted
64	Frag	1	N/A	N/A	3	Rusted
65	Frag	1	N/A	N/A	2	Rusted
66	Frag	1	N/A	N/A	4	Rusted
67	Rock	1	N/A	N/A	1	Rusted
68	Frag	1	N/A	N/A	2	Rusted
69	Rock	1	N/A	N/A	1	Rusted
70	Wire	1	N/A	N/A	1	Rusted
71	Frag	1	N/A	N/A	1	Rusted
72	Frag	1	N/A	N/A	2	Rusted
73	Frag	1	N/A	N/A	1	Rusted
74	Frag	1	N/A	N/A	1	Rusted
75	Rock	1	N/A	N/A	3	Rusted
76	Frag	1	N/A	N/A	1	Rusted
77	Frag	1	N/A	N/A	2	Rusted
78	Frag	1	N/A	N/A	3	Rusted
79	Wire	1	N/A	N/A	1	Rusted
80	Frag	1	N/A	N/A	3	Rusted
81	Frag	1	N/A	N/A	3	Rusted
82	Frag	1	N/A	N/A	1	Rusted
83	Frag	1	N/A	N/A	5	Rusted
84	Wire	1	N/A	N/A	6	Rusted
85	Frag	1	N/A	N/A	2	Rusted
86	Frag	1	N/A	N/A	1	Rusted
87	Frag	1	N/A	N/A	1	Rusted
88	Frag	1	N/A	N/A	3	Rusted
89	Frag	1	N/A	N/A	2	Rusted
90	Frag	1	N/A	N/A	4	Rusted

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP



GRID I.D. 45

MAP ORIENTATION   WIND DIRECTION

LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

13 SUBSURFACE INVESTIGATIONS IN 7 LANES
6 lbs METAL RECOVERED

GRID SURVEY SUMMARY SHEET

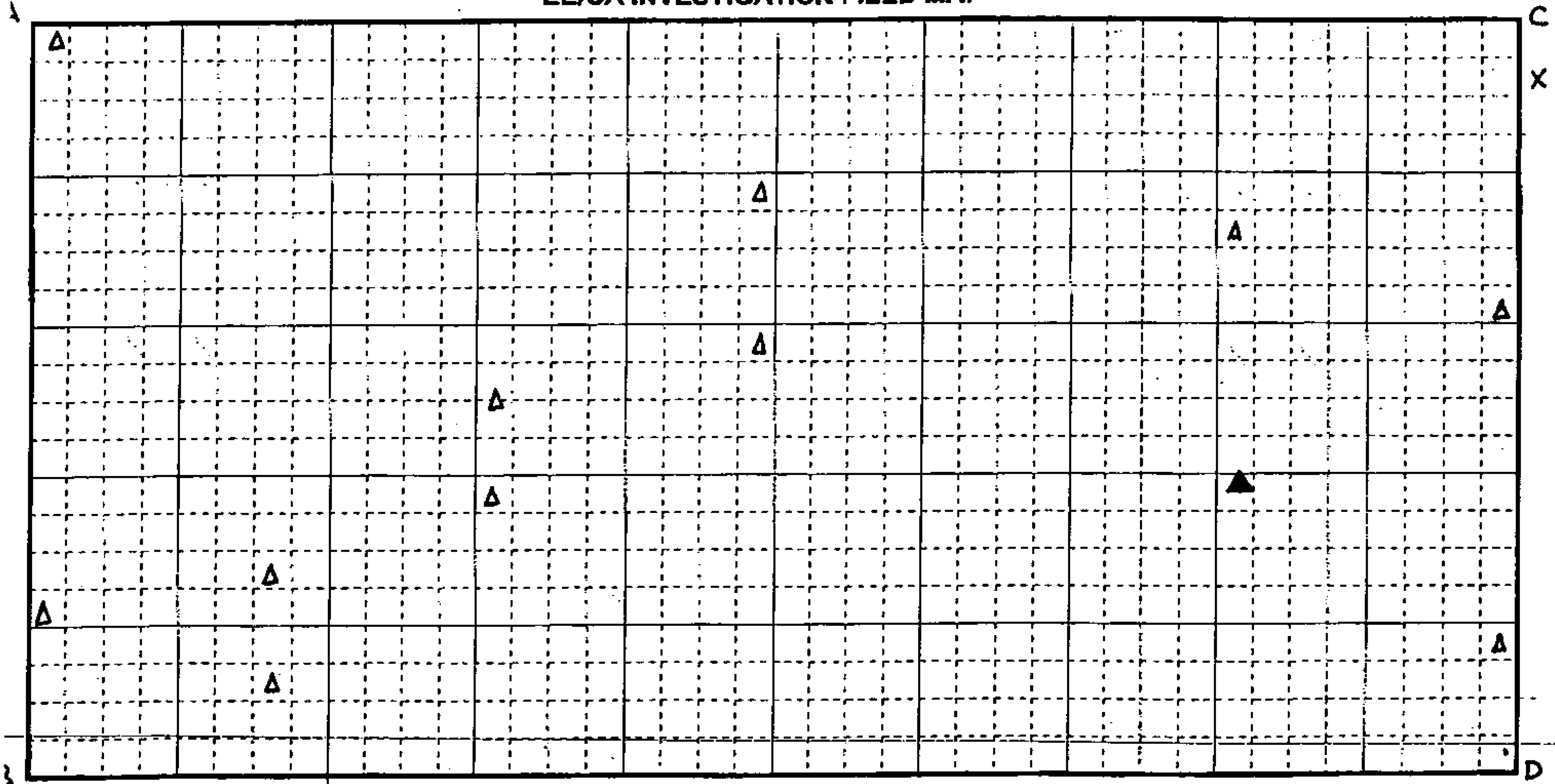
GRID : 45

Accessability: ROAD ACCESS

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Plow sheer	1	N/A	N/A	3	
2	Frag	1	N/A	N/A	3	
3	Brush rake	1	N/A	N/A	1	
4	Big nail	1	N/A	N/A	5	
5	Frag	1	N/A	N/A	6	1-3 in.
6	Bar	1	N/A	N/A	2	
7	Frag	1	N/A	N/A	2	
8	Tent peg	1	N/A	N/A	2	
9	60mm. fin	1	N/A	N/A	3	
10	Rock	1	N/A	N/A	2	
11	Rock	1	N/A	N/A	4	
12	Frag	1	N/A	N/A	3	
13	Scrap	1	N/A	N/A	2	

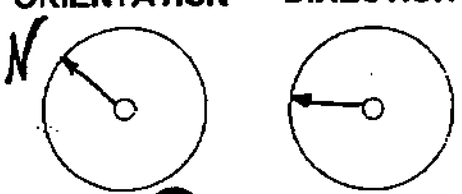
FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

TOTAL P.02



GRID I.D. 46

MAP ORIENTATION **WIND DIRECTION**



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

12 SUBSURFACE INVESTIGATIONS IN 7 LANES
1 EA. 57MM AP TANK ROUND
2 EA. SMALL ARMS PROJOS
14 lbs METAL RECOVERED

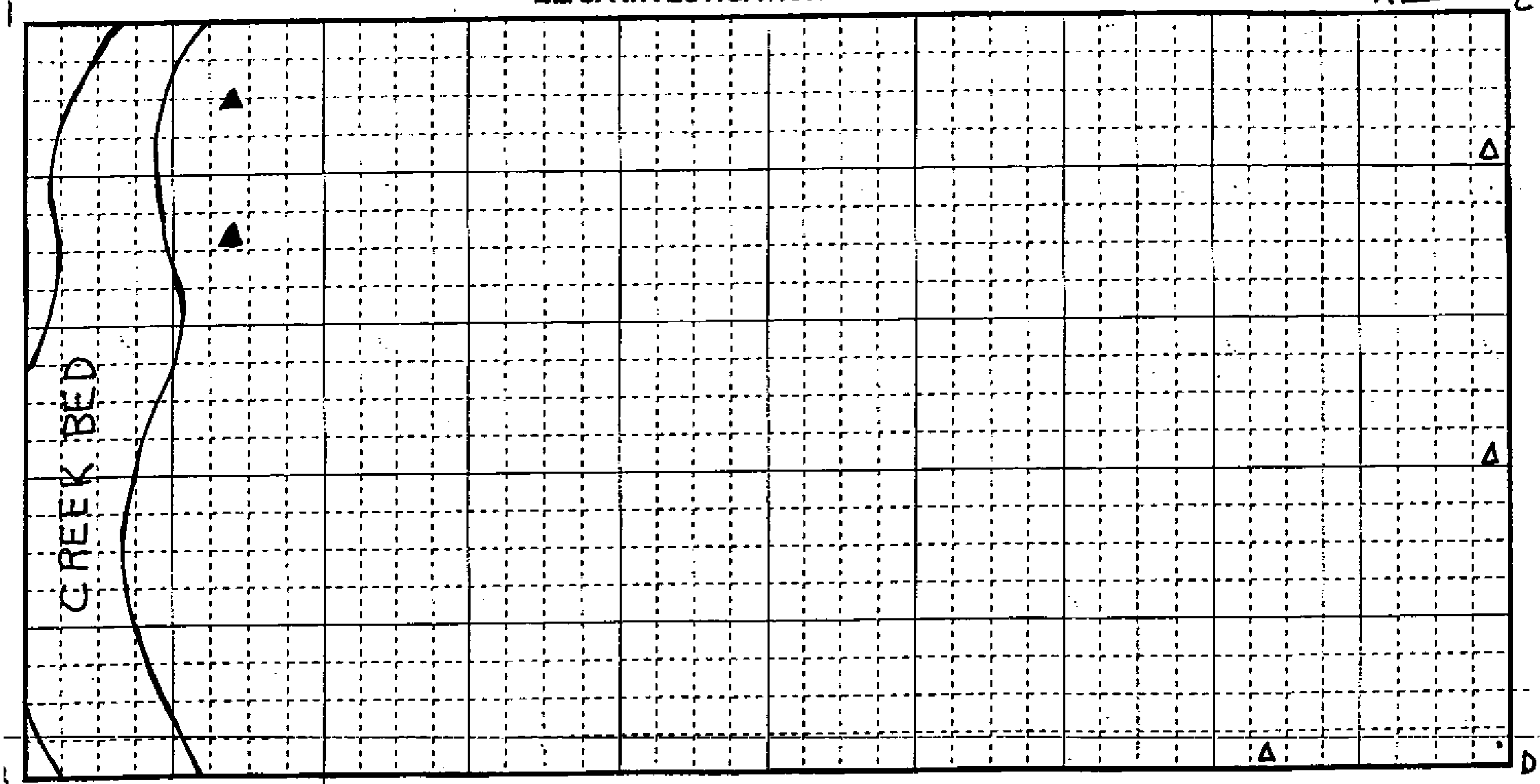
GRID SURVEY SUMMARY SHEET

GRID :46

Accessability: DIRT ROAD ACCESS

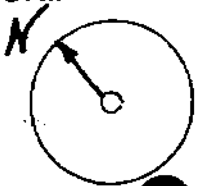
Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	50 cal.	1	N/A	N/A	1	
2	57mm.	1	N/A	N/A	14	
3	Snuff can	6	N/A	N/A	5-22	Rusted
4	30 cal. clip	1	N/A	N/A	3	
5	Horse shoe	1	N/A	N/A	2	1/2 shoe
6	Can	1	N/A	N/A	2	Very rusty
7	Can	1	N/A	N/A	3	C-rat
8	30 cal. clip	1	N/A	N/A	3	
9	50 cal.	1	N/A	N/A	1	
10	Can	1	N/A	N/A	2	
11	Plow sheer	1	N/A	N/A	1	
12	Knife	1	N/A	N/A	3	

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

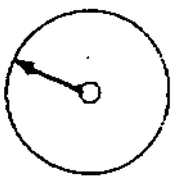


GRID I.D. 47

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

5 SUBSURFACE INVESTIGATIONS IN 7 LANES
1 EA. 57MM AP TANK ROUND
1 EA. PRACTICE HAND GRENADE
11 lbs METAL RECOVERED

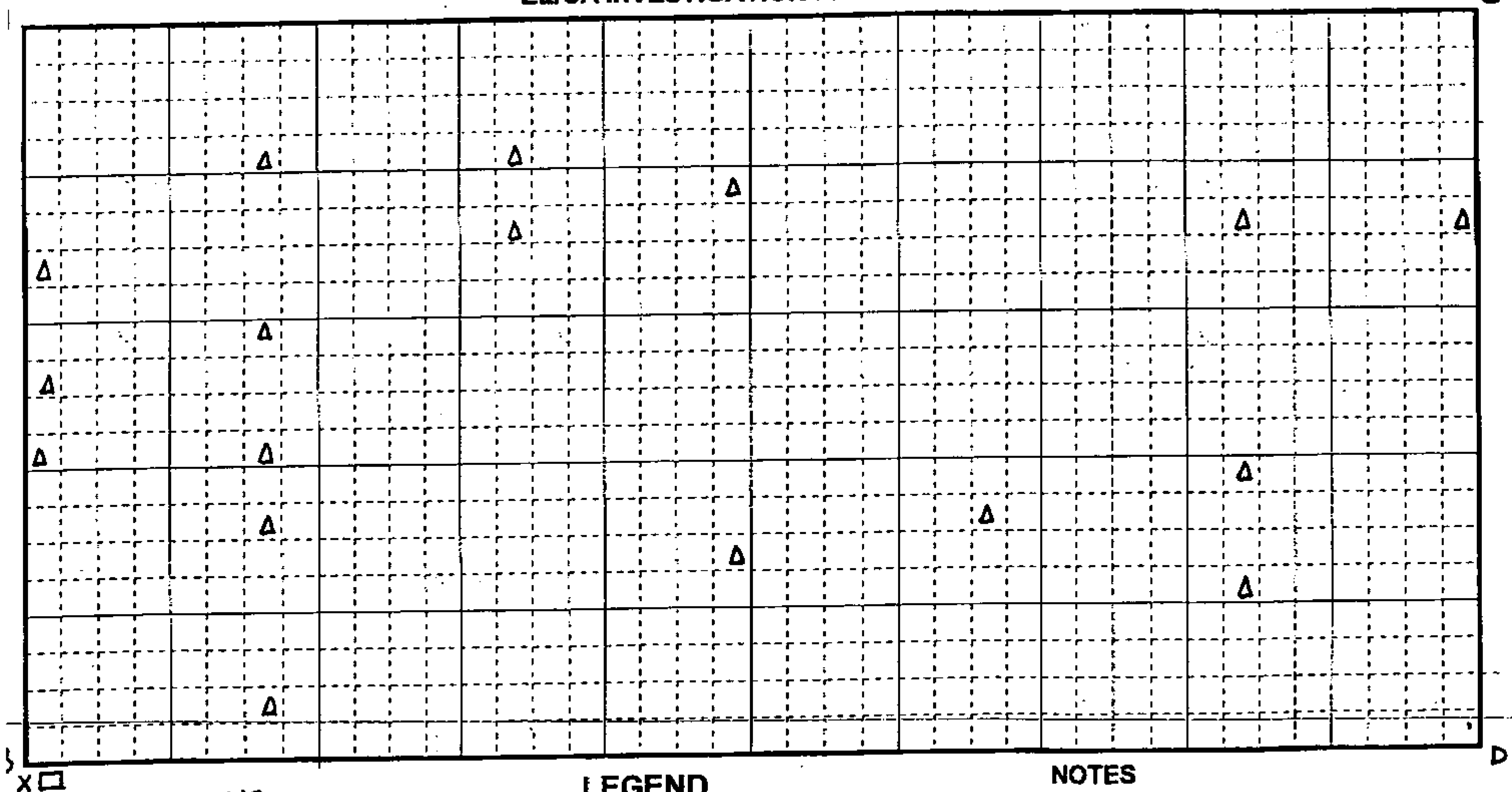
GRID SURVEY SUMMARY SHEET

GRID :47

Accessability: ROAD + 300 mtr. FOOT PATH

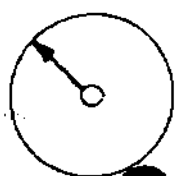
Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Bolt	1	N/A	N/A	8	
2	Bar	1	N/A	N/A	6	
3	Plow sheer	1	N/A	N/A	2	
4	Mr. 2 practics gernade	1	N/A	N/A	2	
5	57 mm. AP	1	N/A	N/A	20	

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

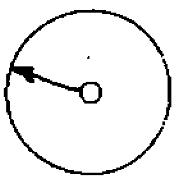


GRID I.D. 49

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

17 SUBSURFACE INVESTIGATIONS IN 7 LANES
1 lb METAL RECOVERED

GRID SURVEY SUMMARY SHEET

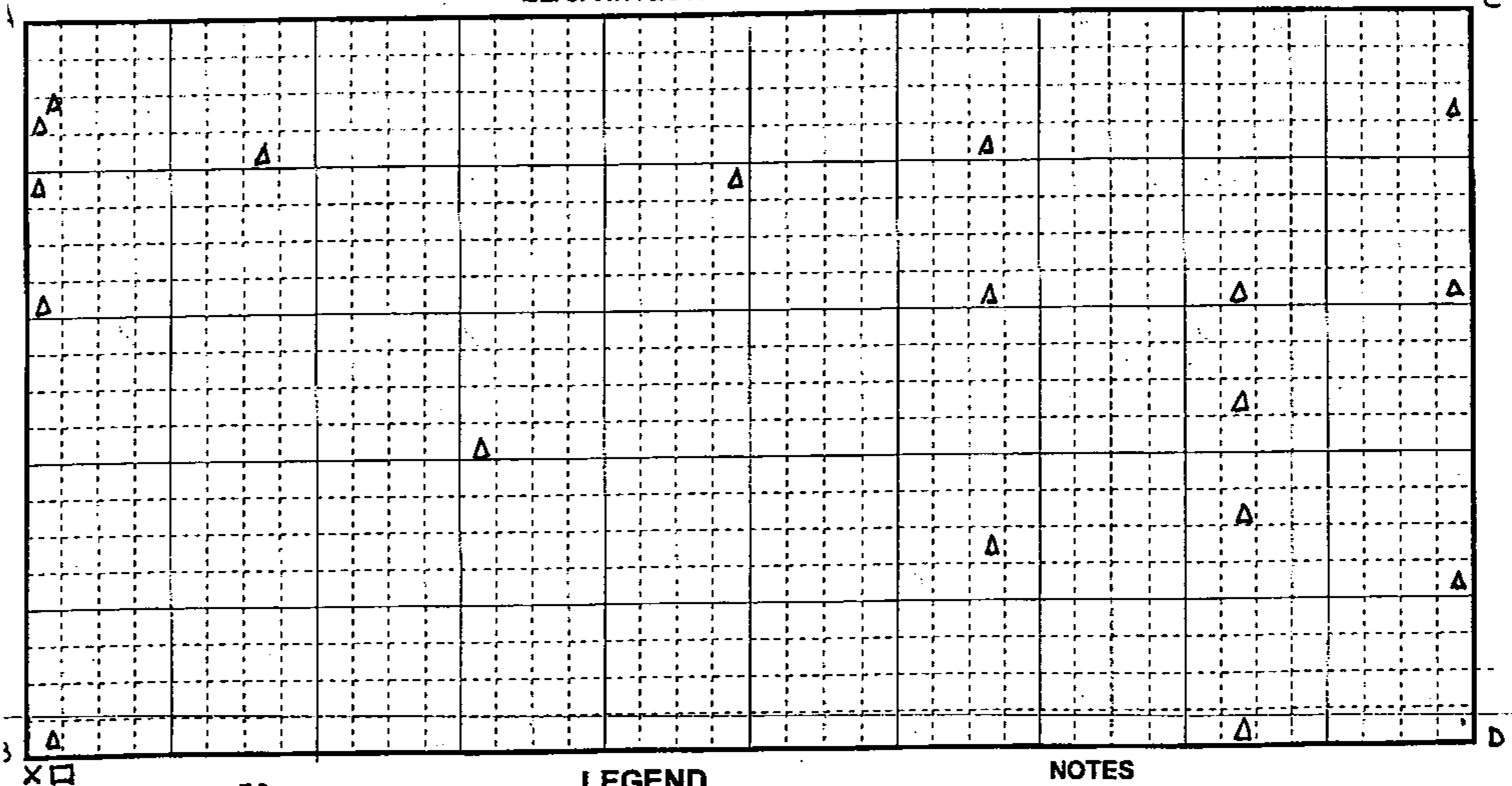
GRID :49

Accessability: WALK FROM 50

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	30 cal.	1	N/A	N/A	2	
2	Rock	1	N/A	N/A	3	
3	Rock	1	N/A	N/A	3	
4	Rock	1	N/A	N/A	3	
5	30 cal.	1	N/A	N/A	2	
6	Rock	1	N/A	N/A	4	
7	Rock	1	N/A	N/A	3	
8	Rock	2	N/A	N/A	1-6	
9	illum. round cap	1	N/A	N/A	2	
10	Rock	1	N/A	N/A	3	
11	Rock	1	N/A	N/A	4	
12	Rock	1	N/A	N/A	5	
13	Rock	1	N/A	N/A	2	
14	Can	2	N/A	N/A	2-8	Rusted in half
15	Can	4-5	N/A	N/A	5-12	Rusted
16	Rock	1	N/A	N/A	3	
17	30 cal.	1	N/A	N/A	3	

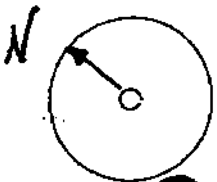
FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

TOTAL P.02

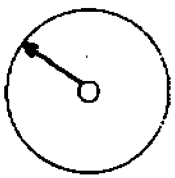


GRID I.D. 50

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

18 SUBSURFACE INVESTIGATIONS IN 7 LANES.
2 lbs METAL RECOVERED

GRID SURVEY SUMMARY SHEET

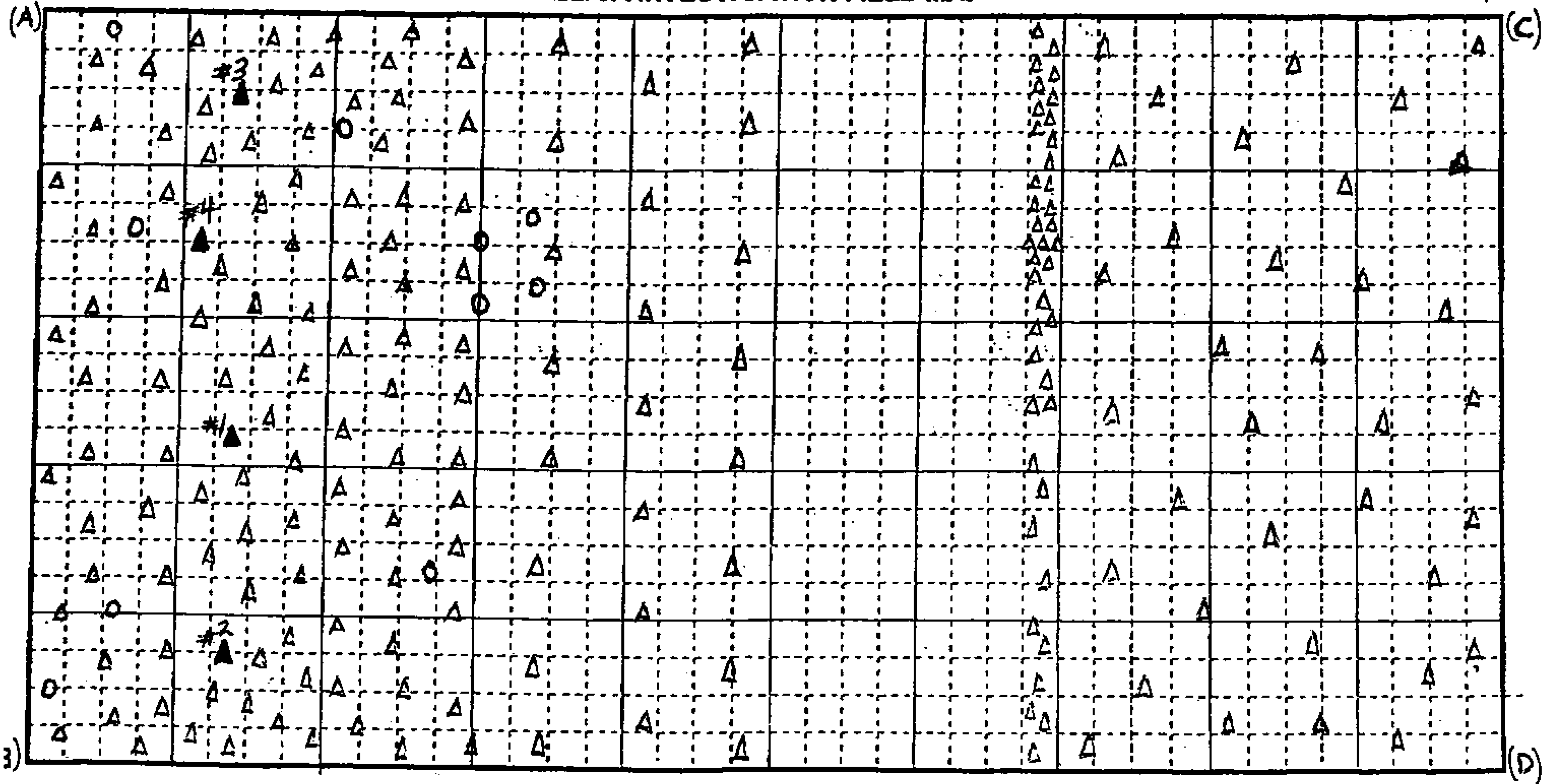
GRID:50

Accessability: MODERATE WITH GATORS

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Rock	4	N/A	N/A	3-11	
2	Can rim	5	N/A	N/A	5-20	Very rusted
3	Rock	1	N/A	N/A	3	
4	Pin	1	N/A	N/A	1	Iron
5	Can rim	1	N/A	N/A	3	
6	1934 Licanse plate	1	N/A	N/A	4	
7	Rock	1	N/A	N/A	4	
8	Rock	1	N/A	N/A	3	
9	Nail	1	N/A	N/A	2	
10	Wire	1	N/A	N/A	1	
11	Rock	1	N/A	N/A	3	
12	Wire	1	N/A	N/A	4	
13	Rock	1	N/A	N/A	2	
14	Rocks	3	N/A	N/A	2-9	
15	Rocks	4	N/A	N/A	6-14	
16	Rock	1	N/A	N/A	2	4-6 in.
17	Rock	1	N/A	N/A	4	
18	Rock	1	N/A	N/A	2	

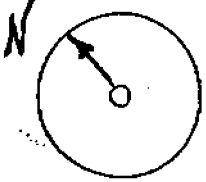
FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

3 NOV 94

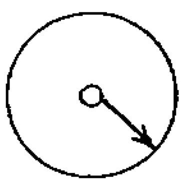


GRID I.D. 51

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

#1 60mm 43' B to A, 28' A/B to C/D, 6" DEEP 01 NOV 94
#2 60mm 15' B to A, 26' A/B to C/D, 6" DEEP 02 NOV 94
#3 60mm 8' A to B, 27' A/B to C/D, 2" DEEP 02 NOV 94
#4 60mm 31' A to B 22' A/B to C/D, 6" DEEP 03 NOV 94
261 ITEMS OEW + 4 UXO = 136 lbs

2553 ANOMALIES / 200 INTRUSIVE INVESTIGATIONS

GRID SURVEY SUMMARY SHEET

Grid: 51

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Frag	19	N/A	N/A	3"-24"	Rusted
2	Frag	4	N/A	N/A	3"-8"	Rusted
3	Frag	5	N/A	N/A	4"-6"	Rusted
4	Frag	6	N/A	N/A	2"-10"	Rusted
5	Frag	1	N/A	N/A	2"	Rusted
6	Frag	1	N/A	N/A	1"	Rusted
7	Frag	2	N/A	N/A	6"-8"	Rusted
8	Frag	5	N/A	N/A	1"-11"	Rusted
9	Frag	3	N/A	N/A	2"-7"	Rusted
10	Frag	1	N/A	N/A	5"	Rusted
11	Frag	2	N/A	N/A	1"	Rusted
12	Frag	4	N/A	N/A	1"-10"	Rusted
13	Frag	18	N/A	N/A	3"-24"	Rusted
14	Frag	2	N/A	N/A	1"	Rusted
15	Frag	1	N/A	N/A	7"	Rusted
16	Frag	2	N/A	N/A	1"	Rusted
17	60mm mortar	1	Fused	HE	8"	Rusted
18	Frag	3	N/A	N/A	1"-5"	Rusted
19	Frag	3	N/A	N/A	4"-9"	Rusted
20	Frag	1	N/A	N/A	2"	Rusted
21	Frag	1	N/A	N/A	1"	Rusted
22	Frag	1	N/A	N/A	3"	Rusted
23	Frag	1	N/A	N/A	1"	Rusted
24	Frag	2	N/A	N/A	4"	Rusted
25	Frag	4	N/A	N/A	3"-13"	Rusted
26	Frag	4	N/A	N/A	3"-7"	Rusted
27	Frag	33	N/A	N/A	1"-24"	Rusted
28	Frag	9	N/A	N/A	1"-18"	Rusted
29	Frag	1	N/A	N/A	1"	Rusted
30	Frag	5	N/A	N/A	2"-14"	Rusted

GRID SURVEY SUMMARY SHEET

Grid: 51 Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	Frag	2	N/A	N/A	1"	Rusted
32	Frag	3	N/A	N/A	3"-7"	Rusted
33	Frag	1	N/A	N/A	4"	Rusted
34	Frag	1	N/A	N/A	4"	Rusted
35	Frag	2	N/A	N/A	1"	Rusted
36	Frag	1	N/A	N/A	3"	Rusted
37	Frag	1	N/A	N/A	7"	Rusted
38	Frag	1	N/A	N/A	1"	Rusted
39	Frag	1	N/A	N/A	3"	Rusted
40	Frag	1	N/A	N/A	3"	Rusted
41	Frag	4	N/A	N/A	3"-9"	Rusted
42	Frag	1	N/A	N/A	1"	Rusted
43	Frag	1	N/A	N/A	1"	Rusted
44	Frag	3	N/A	N/A	1"-5"	Rusted
45	Frag	4	N/A	N/A	2"-9"	Rusted
46	Frag	3	N/A	N/A	7-14"	Rusted
47	Frag	1	N/A	N/A	4"	Rusted
48	Frag	1	N/A	N/A	2"	Rusted
49	Frag	1	N/A	N/A	20"	Rusted
50	Frag	2	N/A	N/A	3"	Rusted
51	Frag	1	N/A	N/A	7"	Rusted
52	Frag	2	N/A	N/A	2"-6"	Rusted
53	Frag	2	N/A	N/A	3"	Rusted
54	Frag	1	N/A	N/A	5"	Rusted
55	Frag	1	N/A	N/A	3"	Rusted
56	Frag	3	N/A	N/A	5"-11"	Rusted
57	Frag	3	N/A	N/A	4"-8"	Rusted
58	Frag	2	N/A	N/A	3"-6"	Rusted
59	Frag	3	N/A	N/A	4"-13"	Rusted
60	Frag	1	N/A	N/A	1"	Rusted

GRID SURVEY SUMMARY SHEET

Grid: 51

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
61	Frag	2	N/A	N/A	4"-7"	Rusted
62	Frag	2	N/A	N/A	5"-8"	Rusted
63	Frag	5	N/A	N/A	4"-14"	Rusted
64	Frag	2	N/A	N/A	4"	Rusted
65	Frag	2	N/A	N/A	8"	Rusted
66	Frag	1	N/A	N/A	3"	Rusted
67	Frag	4	N/A	N/A	7"-12"	Rusted
68	Frag	2	N/A	N/A	3"	Rusted
69	Frag	2	N/A	N/A	4"-6"	Rusted
70	Frag	1	N/A	N/A	1"	Rusted
71	Frag	1	N/A	N/A	2"	Rusted
72	Frag	1	N/A	N/A	14"	Rusted
73	Frag	4	N/A	N/A	2"-9"	Rusted
74	Frag	1	N/A	N/A	1"	Rusted
75	Frag	1	N/A	N/A	1"	Rusted
76	Frag	3	N/A	N/A	3"-9"	Rusted
77	Frag	1	N/A	N/A	4"	Rusted
78	Frag	1	N/A	N/A	2"	Rusted
79	Frag	2	N/A	N/A	3"-6"	Rusted
80	Frag	2	N/A	N/A	3"-5"	Rusted
81	Frag	1	N/A	N/A	5"	Rusted
82	Frag	1	N/A	N/A	2"	Rusted
83	Frag	1	N/A	N/A	4"	Rusted
84	Frag	1	N/A	N/A	3"	Rusted
85	Frag	1	N/A	N/A	5"	Rusted
86	Frag	1	N/A	N/A	4"	Rusted
87	Frag	1	N/A	N/A	4"	Rusted
88	Frag	2	N/A	N/A	3"-7"	Rusted
89	Frag	1	N/A	N/A	1"	Rusted
90	Frag	5	N/A	N/A	3"15"	Rusted

GRID SURVEY SUMMARY SHEET

Grid: 51

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
91	Frag	1	N/A	N/A	5"	Rusted
92	Frag	2	N/A	N/A	2"-4"	Rusted
93	Frag	1	N/A	N/A	1"	Rusted
94	Frag	1	N/A	N/A	1"	Rusted
95	Frag	1	N/A	N/A	2"	Rusted
96	Frag	1	N/A	N/A	3"	Rusted
97	Frag	1	N/A	N/A	4"-7"	Rusted
98	Frag	3	N/A	N/A	3"-5"	Rusted
99	Frag	1	N/A	N/A	6"	Rusted
100	Frag	2	N/A	N/A	2"-4"	Rusted
101	Frag	1	N/A	N/A	2"	Rusted
102	Frag	2	N/A	N/A	4"-7"	Rusted
103	Frag	1	N/A	N/A	1"	Rusted
104	Frag	2	N/A	N/A	4"	Rusted
105	Frag	1	N/A	N/A	1"	Rusted
106	Frag	1	N/A	N/A	8"	Rusted
107	Frag	1	N/A	N/A	4"	Rusted
108	Frag	2	N/A	N/A	2"	Rusted
109	Frag	1	N/A	N/A	4"	Rusted
110	Frag	1	N/A	N/A	3"	Rusted
111	Frag	1	N/A	N/A	5"	Rusted
112	Frag	1	N/A	N/A	1"	Rusted
113	Frag	1	N/A	N/A	4"	Rusted
114	Frag	2	N/A	N/A	2"-4"	Rusted
115	Frag	2	N/A	N/A	3"-5"	Rusted
116	Frag	2	N/A	N/A	4"-5"	Rusted
117	Frag	2	N/A	N/A	4"	Rusted
118	Frag	2	N/A	N/A	3"-4"	Rusted
119	Frag	1	N/A	N/A	1"	Rusted
120	Frag	1	N/A	N/A	3"	Rusted

GRID SURVEY SUMMARY SHEET

Grid: 51

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
121	Frag	1	N/A	N/A	6"	Rusted
122	60mm mortar	1	Fused	HE	6"	Rusted
123	Frag	1	N/A	N/A	1"	Rusted
124	Frag	4	N/A	N/A	3"-7"	Rusted
125	60mm mortar	1	Fused	HE	10"	Rusted
126	Frag	5	N/A	N/A	2"-9"	Rusted
127	Frag	2	N/A	N/A	3"-7"	Rusted
128	Frag	4	N/A	N/A	1"-8"	Rusted
129	Frag	2	N/A	N/A	4"-9"	Rusted
130	Frag	2	N/A	N/A	3"	Rusted
131	Frag	1	N/A	N/A	2"	Rusted
132	Frag	2	N/A	N/A	8"-11"	Rusted
133	Frag	1	N/A	N/A	1"	Rusted
134	Frag	2	N/A	N/A	3"-4"	Rusted
135	Frag	1	N/A	N/A	1"	Rusted
136	Frag	4	N/A	N/A	4"-7"	Rusted
137	Frag	2	N/A	N/A	4"-6"	Rusted
138	Frag	12	N/A	N/A	3"-17"	Rusted
139	Frag	3	N/A	N/A	1"-5"	Rusted
140	Frag	3	N/A	N/A	3"-8"	Rusted
141	Frag	1	N/A	N/A	1"	Rusted
142	Frag	.3	N/A	N/A	3"-8"	Rusted
143	Frag	1	N/A	N/A	4"	Rusted
144	Frag	1	N/A	N/A	1"	Rusted
145	Frag	2	N/A	N/A	2"-4"	Rusted
146	Frag	2	N/A	N/A	5"-7"	Rusted
147	Frag	1	N/A	N/A	4"	Rusted
148	Frag	2	N/A	N/A	3"	Rusted
149	Frag	1	N/A	N/A	1"	Rusted
150	Frag	4	N/A	N/A	3"-7"	Rusted

GRID SURVEY SUMMARY SHEET

Grid: 51

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
151	Frag	1	N/A	N/A	2"	Rusted
152	Frag	1	N/A	N/A	3"	Rusted
153	Frag	1	N/A	N/A	1"	Rusted
154	Frag	9	N/A	N/A	3"-10"	Rusted
155	Frag	1	N/A	N/A	2"	Rusted
156	Frag	1	N/A	N/A	1"	Rusted
157	Frag	1	N/A	N/A	5"	Rusted
158	Frag	1	N/A	N/A	1"	Rusted
159	Frag	1	N/A	N/A	10"	Rusted
160	Frag	1	N/A	N/A	1"	Rusted
161	Frag	1	N/A	N/A	2"	Rusted
162	Frag	1	N/A	N/A	4"	Rusted
163	Frag	1	N/A	N/A	1"	Rusted
164	Frag	2	N/A	N/A	3"	Rusted
165	Frag	1	N/A	N/A	1"	Rusted
166	Frag	1	N/A	N/A	1"	Rusted
167	Frag	1	N/A	N/A	4"	Rusted
168	Frag	1	N/A	N/A	3"	Rusted
169	Frag	1	N/A	N/A	1"	Rusted
170	Frag	1	N/A	N/A	3"	Rusted
171	Frag	1	N/A	N/A	6"	Rusted
172	Frag	1	N/A	N/A	1"	Rusted
173	Frag	1	N/A	N/A	3"	Rusted
174	Frag	2	N/A	N/A	4"	Rusted
175	Frag	1	N/A	N/A	2"	Rusted
176	Frag	1	N/A	N/A	5"	Rusted
177	Frag	3	N/A	N/A	3"-7"	Rusted
178	Frag	1	N/A	N/A	4"	Rusted
179	Frag	1	N/A	N/A	1"	Rusted
180	Frag	1	N/A	N/A	5"	Rusted

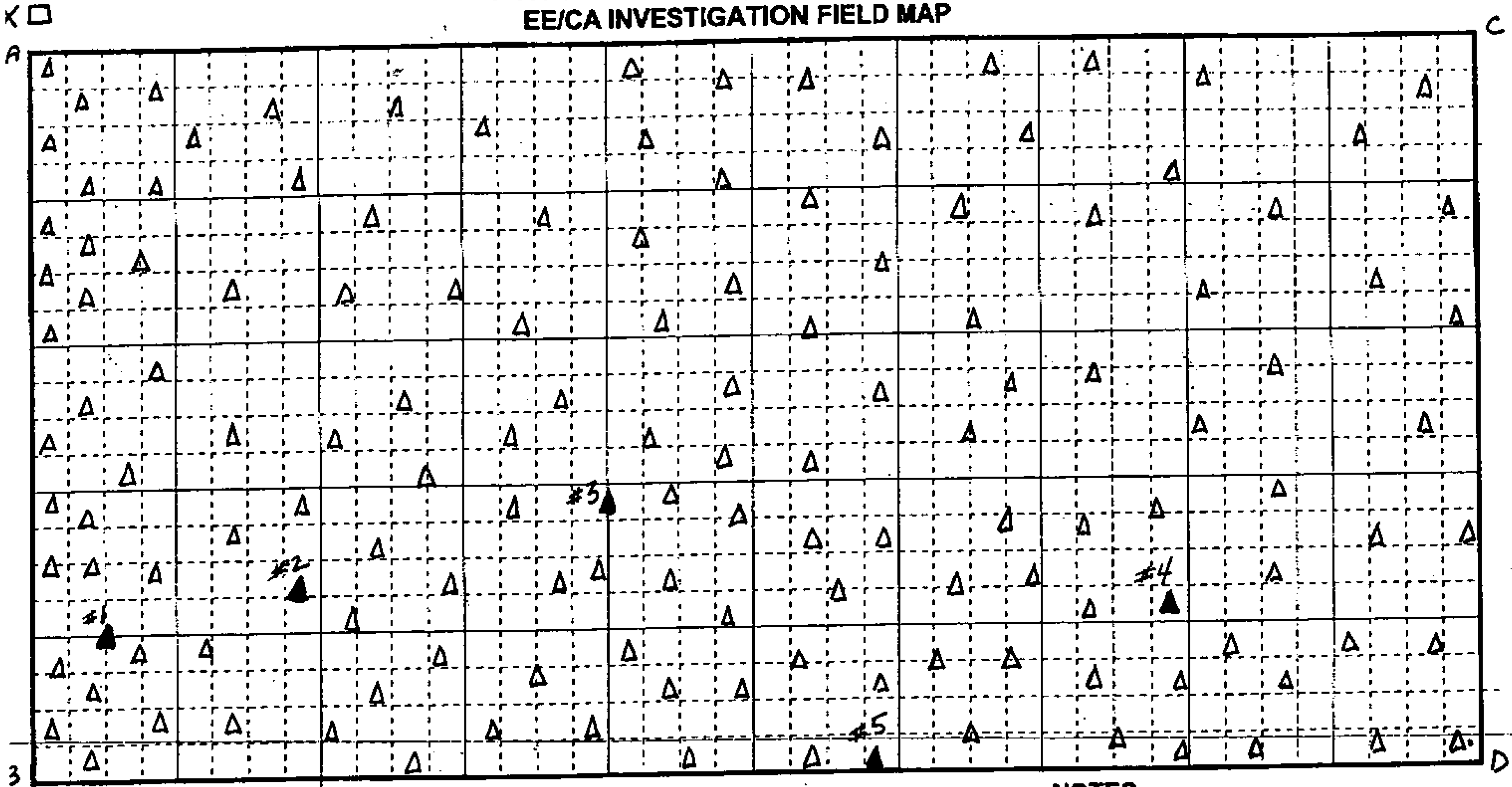
GRID SURVEY SUMMARY SHEET

Grid: 51

Accessability: EASY

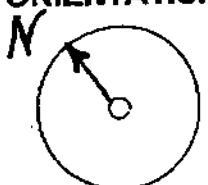
Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
181	Frag	2	N/A	N/A	4"	Rusted
182	Frag	1	N/A	N/A	3"	Rusted
183	Frag	2	N/A	N/A	5"	Rusted
184	Frag	1	N/A	N/A	1"	Rusted
185	Frag	1	N/A	N/A	2"	Rusted
186	Frag	3	N/A	N/A	3"-7"	Rusted
187	Frag	2	N/A	N/A	4"	Rusted
188	Frag	4	N/A	N/A	3"5"	Rusted
189	Frag	1	N/A	N/A	9"	Rusted
190	Frag	2	N/A	N/A	5"	Rusted
191	Frag	1	N/A	N/A	2"	Rusted
192	Frag	1	N/A	N/A	5"	Rusted
193	60mm mortar	1	Fused	HE	8"	Rusted
194	Frag	1	N/A	N/A	1"	Rusted
195	Frag	5	N/A	N/A	4"-12"	Rusted
196	Frag	1	N/A	N/A	3"	Rusted
197	Frag	3	N/A	N/A	5"-9"	Rusted
198	Frag	1	N/A	N/A	3"	Rusted
199	Frag	3	N/A	N/A	4"-8"	Rusted
200	Frag	1	N/A	N/A	1"	Rusted

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

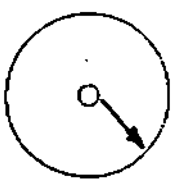


GRID I.D. 53

MAP ORIENTATION



WIND DIRECTION



LEGEND

- SUBSURFACE ANOMALIES
- SURFACE OEW/UXO
- SUBSURFACE OEW/UXO
- FIRE SAFETY EQUIPMENT
- PIT, TRENCHES, BUNKER, ETC.
- RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

#1-60MM MORTAR, 20' B TO A, 10' A/B TO C/D, 4" DEEP, 03 NOV 94
#2-60MM MORTAR, 26' B TO A, 36' A/B TO C/D, 4" DEEP, 07 NOV 94
#3-60MM MORTAR, 38' B TO A, 80' A/B TO C/D, 2" DEEP, 07 NOV 94
#4-60MM MORTAR, 22' B TO A, 43' C/D TO A/B, 8" DEEP, 07 NOV 94
#5-60MM MORTAR, 0' B TO A, 84' C/D TO A/B, 6" DEEP, 07 NOV 94
19 EA. NON-ORD ITEMS, 17 EA. OEW, 5 EA. UXO
523 ANOMALIES / 142 INTRUSIVE INVESTIGATIONS.
21 LBS OEW/SCRAP

GRID SURVEY SUMMARY SHEET

Grid:53

Accessability: EASY ACCESS

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Frag	1	N/A	N/A	4"	Rusted
2	Frag	1	N/A	N/A	2"	Rusted
3	Frag	1	N/A	N/A	7"	Rusted
4	Frag	1	N/A	N/A	1"	Rusted
5	R/R spike	1	N/A	N/A	6"	Rusted
6	Frag	3	N/A	N/A	4"-10"	Rusted
7	Frag	1	N/A	N/A	19"	Rusted
8	Frag	1	N/A	N/A	5"	Rusted
9	Frag	1	N/A	N/A	3"	Rusted
10	Frag	1	N/A	N/A	1"	Rusted
11	Frag	3	N/A	N/A	2"-12"	Rusted
12	Frag	1	N/A	N/A	3"	Rusted
13	81mm Tail fin	1	N/A	N/A	18"	Rusted
14	4.2in. Tail boom	1	N/A	N/A	15"	Rusted
15	Frag	1	N/A	N/A	6"	Rusted
16	Frag	1	N/A	N/A	9"	Rusted
17	Frag	1	N/A	N/A	24"	Rusted
18	60mm Mortar	1	Fuse	HE	9"	Rusted
19	Frag	5	N/A	N/A	2"-17"	Rusted
20	Frag	1	N/A	N/A	3"	Rusted
21	Frag	1	N/A	N/A	5"	Rusted
22	Frag	1	N/A	N/A	5"	Rusted
23	Skillet	1	N/A	N/A	16"	Rusted
24	Frag	1	N/A	N/A	2"	Rusted
25	Frag	4	N/A	N/A	3"-12"	Rusted
26	Frag	2	N/A	N/A	4"-9"	Rusted
27	Frag	2	N/A	N/A	3"-14"	Rusted
28	Frag	1	N/A	N/A	2"	Rusted
29	Frag	1	N/A	N/A	1"	Rusted
30	Frag	1	N/A	N/A	6"	Rusted

GRID SURVEY SUMMARY SHEET

Grid:53

Accessability: EASY ACCESS

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	Frag	1	N/A	N/A	5"	Rusted
32	Frag	1	N/A	N/A	2"	Rusted
33	Pan	1	N/A	N/A	9"	Rusted
34	Frag	3	N/A	N/A	2"-13"	Rusted
35	Frag	2	N/A	N/A	5"-9"	Rusted
36	Frag	1	N/A	N/A	12"	Rusted
37	60mm Mortar	1	Fuse	HE	19"	Rusted
38	60mm Mortar	1	Fuse	HE	10"	Rusted
39	Frag	1	N/A	N/A	3"	Rusted
40	Frag	2	N/A	N/A	1"-9"	Rusted
41	Frag	1	N/A	N/A	8"	Rusted
42	Frag	1	N/A	N/A	3"	Rusted
43	Frag	2	N/A	N/A	5"-11"	Rusted
44	Metal Bar	1	N/A	N/A	15"	Rusted
45	Frag	1	N/A	N/A	2"	Rusted
46	Metal Bar	1	N/A	N/A	9"	Rusted
47	Frag	1	N/A	N/A	1"	Rusted
48	Frag	3	N/A	N/A	9"-20"	Rusted
49	Frag	1	N/A	N/A	17"	Rusted
50	Frag	4	N/A	N/A	3"-19"	Rusted
51	Frag	1	N/A	N/A	5"	Rusted
52	Skillet	1	N/A	N/A	23"	Rusted
53	Frag	1	N/A	N/A	16"	Rusted
54	Frag	1	N/A	N/A	6"	Rusted
55	Frag	1	N/A	N/A	7"	Rusted
56	Frag	1	N/A	N/A	1"	Rusted
57	Frag	1	N/A	N/A	14"	Rusted
58	Frag	2	N/A	N/A	2"-7"	Rusted
59	Iron Bar	1	N/A	N/A	3"	Rusted
60	Frag	1	N/A	N/A	6"	Rusted

GRID SURVEY SUMMARY SHEET

Grid:53

Accessability: EASY ACCESS

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
61	Frag	1	N/A	N/A	7"	Rusted
62	Frag	1	N/A	N/A	2"	Rusted
63	Frag	1	N/A	N/A	1"	Rusted
64	Frag	1	N/A	N/A	13"	Rusted
65	Frag	1	N/A	N/A	9"	Rusted
66	Frag	1	N/A	N/A	12"	Rusted
67	Frag	1	N/A	N/A	20"	Rusted
68	Frag	3	N/A	N/A	2"-15"	Rusted
69	Frag	1	N/A	N/A	3"	Rusted
70	Frag	1	N/A	N/A	6"	Rusted
71	Frag	1	N/A	N/A	18"	Rusted
72	Frag	1	N/A	N/A	13"	Rusted
73	Frag	2	N/A	N/A	5"-12"	Rusted
74	Frag	1	N/A	N/A	15"	Rusted
75	Frag	1	N/A	N/A	2"	Rusted
76	Frag	1	N/A	N/A	21"	Rusted
77	Frag	5	N/A	N/A	1"-19"	Rusted
78	Frag	1	N/A	N/A	17"	Rusted
79	Frag	1	N/A	N/A	8"	Rusted
80	Frag	2	N/A	N/A	4"-13"	Rusted
81	Frag	1	N/A	N/A	5"	Rusted
82	Frag	2	N/A	N/A	7"-23"	Rusted
83	Frag	1	N/A	N/A	16"	Rusted
84	Frag	3	N/A	N/A	6"-14"	Rusted
85	Frag	1	N/A	N/A	7"	Rusted
86	Frag	1	N/A	N/A	2"	Rusted
87	Frag	8	N/A	N/A	2"-15"	Rusted
88	60mm Mortar	1	Fuse	HE	7"	Rusted
89	Frag	2	N/A	N/A	3"-7"	Rusted
90	Frag	1	N/A	N/A	6"	Rusted

GRID SURVEY SUMMARY SHEET

Grid:53 Accessability: EASY ACCESS

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
91	Frag	2	N/A	N/A	7"-20"	Rusted
92	Frag	2	N/A	N/A	2"-8"	Rusted
93	Frag	1	N/A	N/A	1"	Rusted
94	Frag	1	N/A	N/A	13"	Rusted
95	Frag	1	N/A	N/A	9"	Rusted
96	Frag	2	N/A	N/A	4"-13'	Rusted
97	Frag	1	N/A	N/A	20"	Rusted
98	Frag	1	N/A	N/A	15"	Rusted
99	60mm Mortar	1	Fuse	HE	3"	Rusted
100	Frag	1	N/A	N/A	6"	Rusted
101	Flat bar	1	N/A	N/A	18"	Rusted
102	Frag	1	N/A	N/A	13"	Rusted
103	Frag	1	N/A	N/A	12"	Rusted
104	Frag	1	N/A	N/A	15"	Rusted
105	Iron ring	1	N/A	N/A	2"	Rusted
106	Frag	1	N/A	N/A	22"	Rusted
107	Rock	1	N/A	N/A	19"	Rusted
108	Frag	1	N/A	N/A	17"	Rusted
109	Frag	3	N/A	N/A	8"-19"	Rusted
110	Frag	1	N/A	N/A	13"	Rusted
111	Rock	1	N/A	N/A	5"	Rusted
112	Frag	1	N/A	N/A	23"	Rusted
113	Frag	1	N/A	N/A	16"	Rusted
114	Frag	1	N/A	N/A	6"	Rusted
115	Frag	1	N/A	N/A	7"	Rusted
116	Frag	1	N/A	N/A	2"	Rusted
117	Frag	1	N/A	N/A	9"	Rusted
118	Frag	1	N/A	N/A	7"	Rusted
119	Bike hub	1	N/A	N/A	3"	Rusted
120	Frag	1	N/A	N/A	6"	Rusted

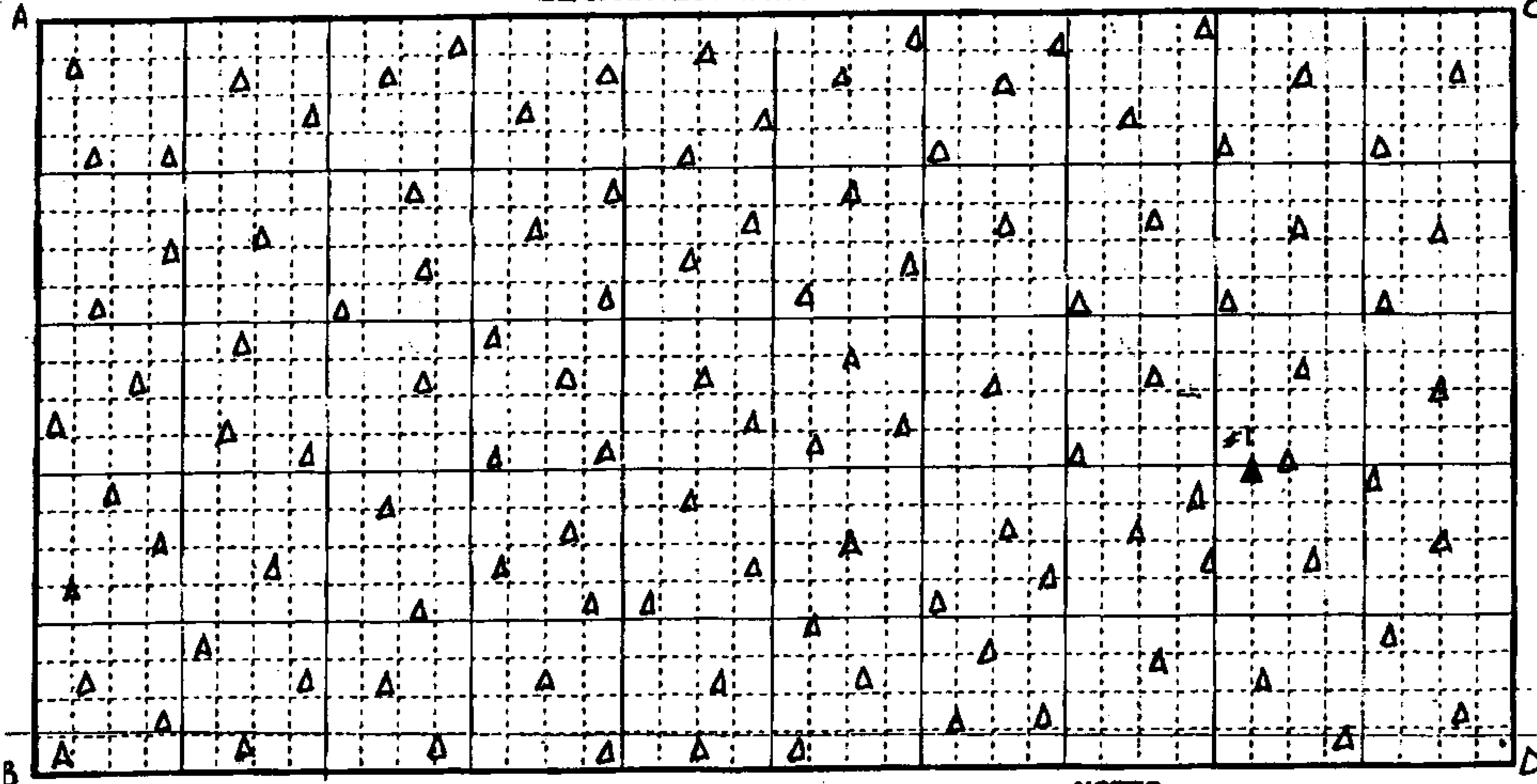
GRID SURVEY SUMMARY SHEET

Grid:53

Accessability: EASY ACCESS

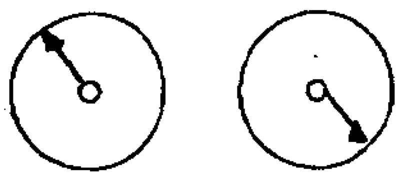
Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
121	Frag	1	N/A	N/A	20"	Rusted
122	Frag	1	N/A	N/A	8"	Rusted
123	Stove part	1	N/A	N/A	1"	Rusted
124	Frag	1	N/A	N/A	13"	Rusted
125	Hoe	1	N/A	N/A	9"	Rusted
126	Rock	1	N/A	N/A	4"	Rusted
127	Frag	1	N/A	N/A	21"	Rusted
128	Frag	1	N/A	N/A	15"	Rusted
129	Frag	1	N/A	N/A	3"	Rusted
130	Frag	1	N/A	N/A	6"	Rusted
131	Frag	2	N/A	N/A	2"-9"	Rusted
132	Frag	1	N/A	N/A	13"	Rusted
133	Frag	1	N/A	N/A	12"	Rusted
134	Frag	2	N/A	N/A	5"-21"	Rusted
135	Frag	1	N/A	N/A	2"	Rusted
136	Rock	1	N/A	N/A	22"	Rusted
137	Frag	1	N/A	N/A	19"	Rusted
138	Rock	1	N/A	N/A	17"	Rusted
139	Frag	3	N/A	N/A	4"-8"	Rusted
140	Rock	1	N/A	N/A	13"	Rusted
141	Frag	2	N/A	N/A	5"-17"	Rusted
142	Frag	1	N/A	N/A	23"	Rusted

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP



X GRID I.D. 55

MAP ORIENTATION **WIND DIRECTION**



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT, TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

#1 60mm Mortar, 40' B to A, 35' C/D to A/B, 8" deep, 09NOV94

134 ea. OEW, 1 ea. UXO.

214 Anomalies / 111 intrusive investigation:

GRID SURVEY SUMMARY SHEET

Grid:55

Accessability: EASY ACCESS

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Frag	1	N/A	N/A	8"	Rusted
2	Frag	3	N/A	N/A	2"-15"	Rusted
3	Frag	1	N/A	N/A	5"	Rusted
4	Frag	1	N/A	N/A	13"	Rusted
5	Frag	1	N/A	N/A	4"	Rusted
6	Frag	2	N/A	N/A	2"-8"	Rusted
7	Frag	1	N/A	N/A	5"	Rusted
8	Frag	1	N/A	N/A	19"	Rusted
9	Frag	1	N/A	N/A	2"	Rusted
10	Frag	1	N/A	N/A	23"	Rusted
11	Frag	1	N/A	N/A	7"	Rusted
12	Frag	1	N/A	N/A	5"	Rusted
13	Frag	1	N/A	N/A	11"	Rusted
14	Frag	1	N/A	N/A	14"	Rusted
15	Frag	1	N/A	N/A	7"	Rusted
16	Frag	1	N/A	N/A	20"	Rusted
17	Frag	1	N/A	N/A	2"	Rusted
18	Frag	1	N/A	N/A	5"	Rusted
19	Frag	1	N/A	N/A	12"	Rusted
20	Frag	1	N/A	N/A	9"	Rusted
21	Frag	1	N/A	N/A	1"	Rusted
22	Frag	1	N/A	N/A	4"	Rusted
23	Frag	1	N/A	N/A	16"	Rusted
24	Frag	1	N/A	N/A	3"	Rusted
25	Frag	1	N/A	N/A	10"	Rusted
26	Frag	1	N/A	N/A	8"	Rusted
27	Frag	1	N/A	N/A	2"	Rusted
28	Frag	1	N/A	N/A	21"	Rusted
29	Frag	1	N/A	N/A	13"	Rusted
30	Frag	2	N/A	N/A	2"-8"	Rusted

GRID SURVEY SUMMARY SHEET

Grid:55

Accessability: EASY ACCESS

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	Frag	1	N/A	N/A	7"	Rusted
32	Frag	2	N/A	N/A	3"-15"	Rusted
33	Frag	1	N/A	N/A	6"	Rusted
34	Frag	1	N/A	N/A	11"	Rusted
35	Frag	1	N/A	N/A	4"	Rusted
36	Frag	1	N/A	N/A	8"	Rusted
37	Frag	1	N/A	N/A	4"	Rusted
38	Frag	1	N/A	N/A	20"	Rusted
39	Frag	7	N/A	N/A	2"-17"	Rusted
40	Frag	1	N/A	N/A	23"	Rusted
41	Frag	1	N/A	N/A	6"	Rusted
42	Frag	1	N/A	N/A	1"	Rusted
43	Frag	1	N/A	N/A	11"	Rusted
44	Frag	1	N/A	N/A	13"	Rusted
45	Frag	1	N/A	N/A	7"	Rusted
46	Frag	5	N/A	N/A	3"-19"	Rusted
47	Frag	5	N/A	N/A	5"-21"	Rusted
48	Frag	1	N/A	N/A	5"	Rusted
49	Frag	1	N/A	N/A	3"	Rusted
50	Frag	1	N/A	N/A	9"	Rusted
51	Frag	1	N/A	N/A	1"	Rusted
52	Frag	1	N/A	N/A	3"	Rusted
53	Frag	1	N/A	N/A	11"	Rusted
54	Frag	1	N/A	N/A	3"	Rusted
55	Frag	1	N/A	N/A	2"	Rusted
56	Frag	1	N/A	N/A	8"	Rusted
57	Frag	1	N/A	N/A	2"	Rusted
58	Frag	1	N/A	N/A	21"	Rusted
59	Frag	1	N/A	N/A	12'	Rusted
60	Frag	1	N/A	N/A	8"	Rusted

GRID SURVEY SUMMARY SHEET

Grid:55

Accessability: EASY ACCESS

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
61	Frag	1	N/A	N/A	7"	Rusted
62	Frag	1	N/A	N/A	15"	Rusted
63	Frag	1	N/A	N/A	6"	Rusted
64	Frag	1	N/A	N/A	11"	Rusted
65	Frag	1	N/A	N/A	4"	Rusted
66	Frag	4	N/A	N/A	2"-13"	Rusted
67	Frag	1	N/A	N/A	3"	Rusted
68	Frag	1	N/A	N/A	20"	Rusted
69	60mm Mortar	1	Fuse	HE	17"	Rusted
70	Frag	1	N/A	N/A	21"	Rusted
71	Frag	1	N/A	N/A	6"	Rusted
72	Frag	1	N/A	N/A	1"	Rusted
73	Frag	1	N/A	N/A	11"	Rusted
74	Frag	3	N/A	N/A	4"-9"	Rusted
75	Frag	1	N/A	N/A	7"	Rusted
76	Frag	1	N/A	N/A	19"	Rusted
77	Frag	1	N/A	N/A	17"	Rusted
78	Frag	1	N/A	N/A	1"	Rusted
79	Frag	1	N/A	N/A	3"	Rusted
80	Frag	1	N/A	N/A	9"	Rusted
81	Frag	1	N/A	N/A	1"	Rusted
82	Frag	1	N/A	N/A	2"	Rusted
83	Frag	1	N/A	N/A	15"	Rusted
84	Frag	1	N/A	N/A	3"	Rusted
85	Frag	1	N/A	N/A	2"	Rusted
86	Frag	1	N/A	N/A	7"	Rusted
87	Frag	1	N/A	N/A	2"	Rusted
88	Frag	1	N/A	N/A	18"	Rusted
89	Frag	1	N/A	N/A	12'	Rusted
90	Frag	1	N/A	N/A	5"	Rusted

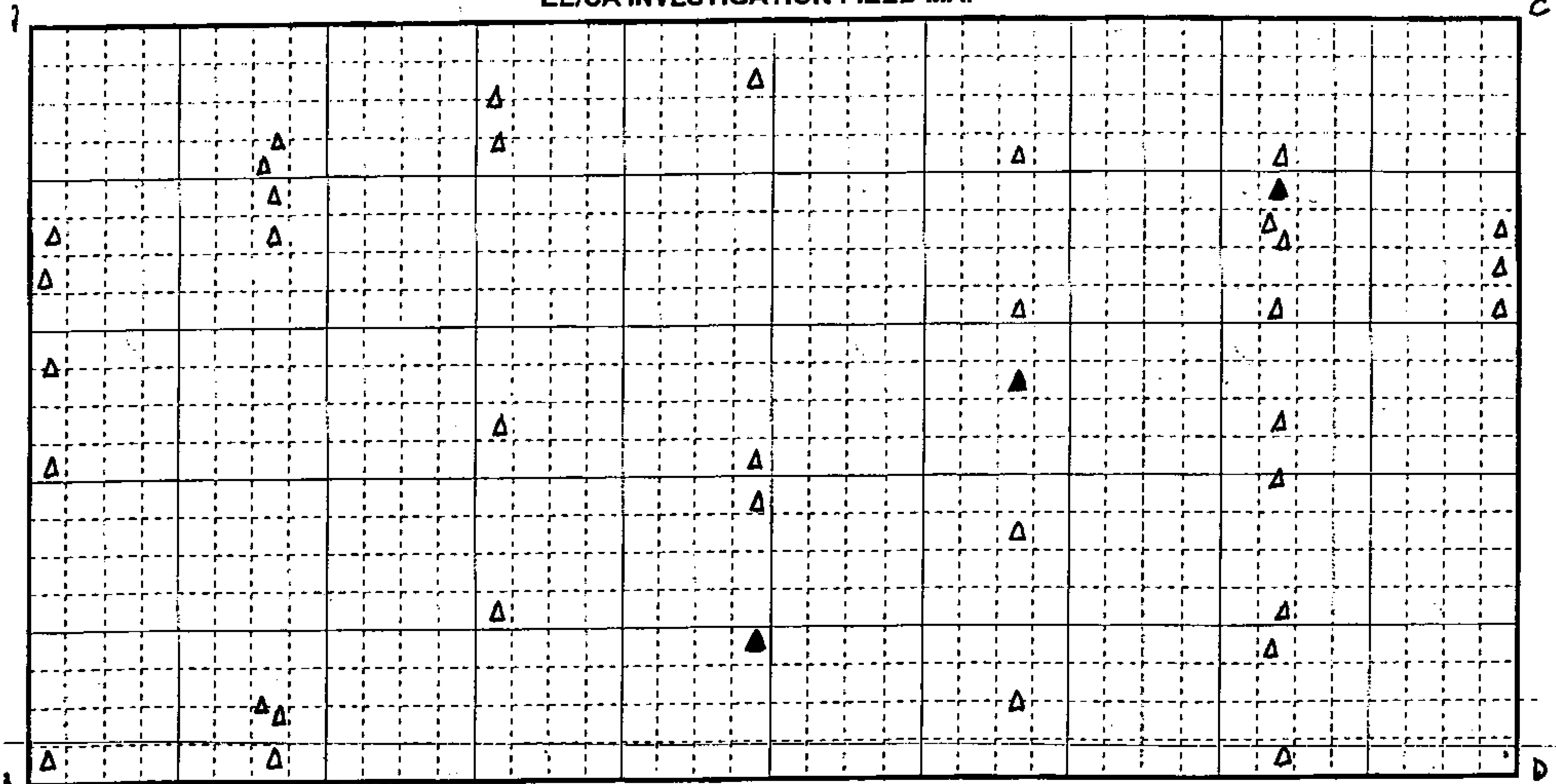
GRID SURVEY SUMMARY SHEET

Grid:55

Accessability: EASY ACCESS

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
91	Frag	1	N/A	N/A	6"	Rusted
92	Frag	1	N/A	N/A	14"	Rusted
93	Frag	1	N/A	N/A	6"	Rusted
94	Frag	1	N/A	N/A	11"	Rusted
95	Frag	1	N/A	N/A	1"	Rusted
96	Frag	1	N/A	N/A	13"	Rusted
97	Frag	1	N/A	N/A	3"	Rusted
98	Frag	1	N/A	N/A	20"	Rusted
99	Frag	1	N/A	N/A	17"	Rusted
100	Frag	1	N/A	N/A	15"	Rusted
101	Frag	1	N/A	N/A	6"	Rusted
102	Frag	1	N/A	N/A	1"	Rusted
103	Frag	1	N/A	N/A	11"	Rusted
104	Frag	1	N/A	N/A	9"	Rusted
105	Frag	1	N/A	N/A	7"	Rusted
106	Frag	1	N/A	N/A	19"	Rusted
107	Frag	1	N/A	N/A	16"	Rusted
108	Frag	1	N/A	N/A	1"	Rusted
109	Frag	1	N/A	N/A	3"	Rusted
110	Frag	1	N/A	N/A	9"	Rusted
111	Frag	1	N/A	N/A	2"	Rusted

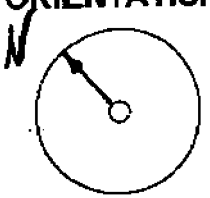
FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP



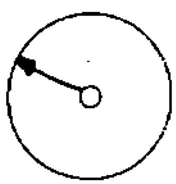
X ☐

GRID I.D. 56

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- ☐ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

38 SUBSURFACE INVESTIGATIONS IN 7 LANES
2 EA. 57 MM AP TANK ROUNDS
1 EA. 37MM AP ANTI-AIRCRAFT ROUNDS
24 EA. SMALL ARMS PROJOS
12 lbs. METAL RECOVERED

GRID SURVEY SUMMARY SHEET

GRID: 56

Accessability: GATOR ACCESS

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	50 cal.	1	N/A	N/A	2	Tracer
2	30 cal.	1	N/A	N/A	2	
3	30 cal.	1	N/A	N/A	3	Jacket
4	30 cal.	1	N/A	N/A	1	
5	Rock	1	N/A	N/A	2	
6	Rock deposit	1	N/A	N/A	8	
7	30 cal.	1	N/A	N/A	1	
8	30 cal.	1	N/A	N/A	1	
9	Nail	1	N/A	N/A	1	
10	30 cal.	1	N/A	N/A	1	
11	30 cal.	1	N/A	N/A	3	
12	Rock	1	N/A	N/A	4	
13	30 cal.	1	N/A	N/A	2	
14	30 cal.	1	N/A	N/A	3	
15	50 cal.	1	N/A	N/A	1	Tracer
16	50 cal.	1	N/A	N/A	1	Tracer
17	30 cal.	1	N/A	N/A	1	
18	50 cal.	1	N/A	N/A	1	Tracer
19	Frag	1	N/A	N/A	3	
20	37 mm.	1	N/A	N/A	3	AD
21	30 cal.	1	N/A	N/A	2	
22	30 cal.	1	N/A	N/A	3	
23	Can	1	N/A	N/A	2	
24	50 cal.	1	N/A	N/A	3	
25	Rock	1	N/A	N/A	21	
26	50 cal.	1	N/A	N/A	2	
27	50 cal.	1	N/A	N/A	1	Tracer
28	30 cal.	1	N/A	N/A	3	
29	30 cal.	1	N/A	N/A	6	
30	57 mm.	1	N/A	N/A	6	

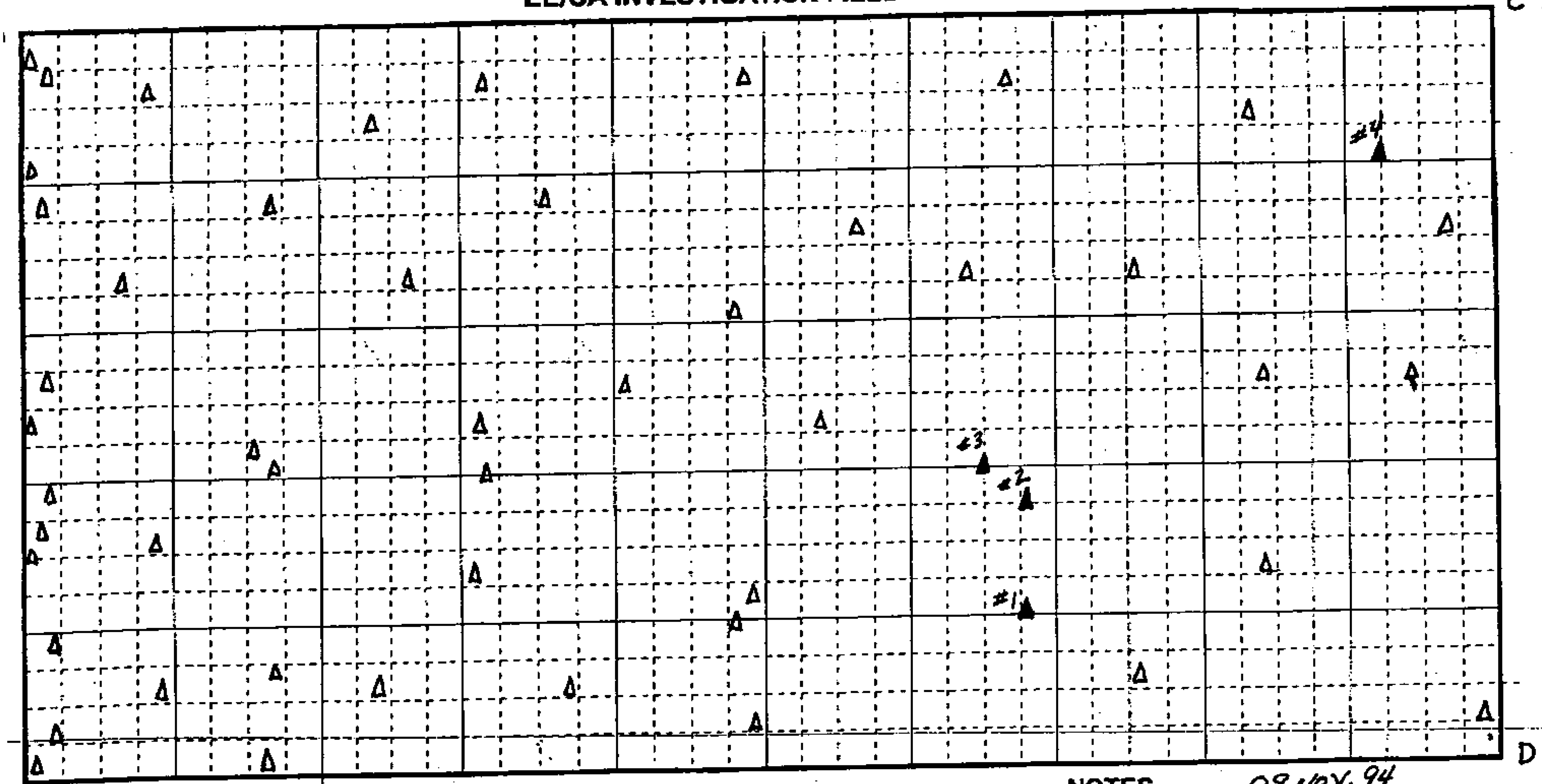
GRID SURVEY SUMMARY SHEET

GRID: 56

Accessability: GATOR ACCESS

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	30 cal.	1	N/A	N/A	2	
32	57 mm.	1	N/A	N/A	4	
33	Barbed wire	1	N/A	N/A	2	
34	Horse shoe	1	N/A	N/A	5	
35	Paint can	1	N/A	N/A	2	Green paint
36	30 cal.	1	N/A	N/A	5	
37	30 cal.	1	N/A	N/A	2	
38	Bolt	1	N/A	N/A	2	5in. long

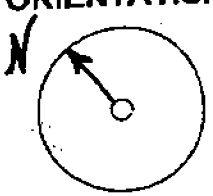
FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP



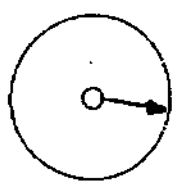
X ☐

GRID I.D. 57

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

09 NOV. 94

#1 57MM, 20' B TO A, 135' A/B TO C/D, 12" DEEP, 09NOV94.
#2 57MM, 35' B TO A, 136' A/B TO C/D, 10" DEEP, 09NOV94.
#3 37MM, 40' B TO A, 130' A/B TO C/D, 4" DEEP, 09NOV94.
#4 37MM, 20' A TO B, 185' A/B TO C/D, 3" DEEP, 09NOV94.
32 INVESTIGATIONS IN 7 LANES.
19 RANDOM INVESTIGATIONS.
7EA. SMALL ARMS SLUGS 4EA. UXO
32 LBS OEW/SCRAP

GRID SURVEY SUMMARY SHEET

Grid: 57

Accessability: MODERATE

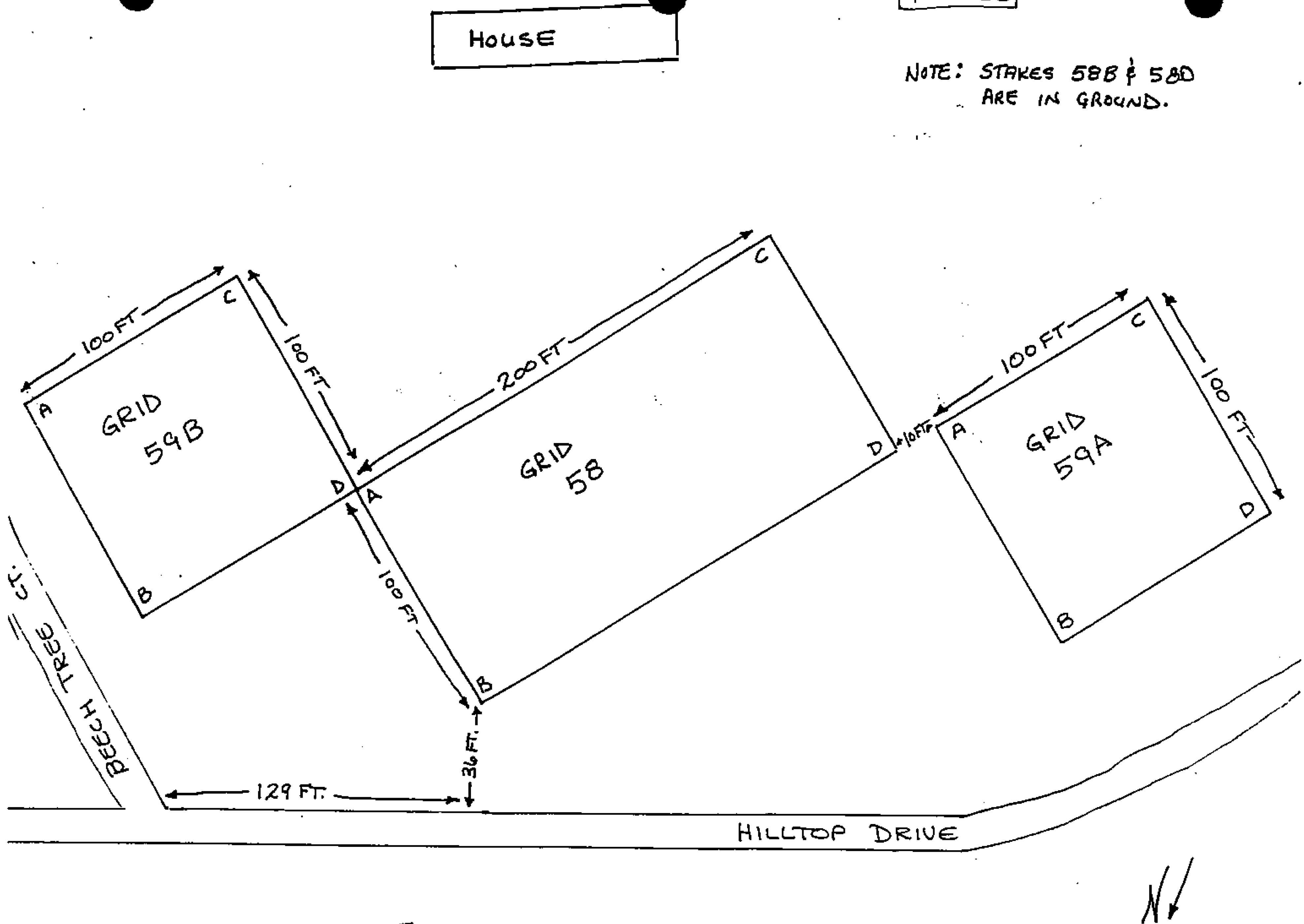
Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Barb Wire	2	N/A	N/A	1"	Rusted
2	Scrap	1	N/A	N/A	5"	Rusted
3	Scrap	1	N/A	N/A	3"	Rusted
4	Scrap	1	N/A	N/A	3"	Rusted
5	Sm. arms slug .30 cal.	1	N/A	N/A	2"	Rusted
6	Scrap	1	N/A	N/A	6"	Rusted
7	Scrap	1	N/A	N/A	6"	Rusted
8	Scrap	1	N/A	N/A	4"	Rusted
9	Scrap	1	N/A	N/A	8"	Rusted
10	Sm. arms slug .30 cal.	1	N/A	N/A	2"	Rusted
11	Scrap	1	N/A	N/A	4"	Rusted
12	Sm. arms slug .30 cal.	1	N/A	N/A	3"	Rusted
13	Scrap	1	N/A	N/A	3"	Rusted
14	Scrap	1	N/A	N/A	5"	Rusted
15	Scrap	1	N/A	N/A	7"	Rusted
16	Scrap	1	N/A	N/A	6"	Rusted
17	Scrap	1	N/A	N/A	6"	Rusted
18	Scrap	1	N/A	N/A	4"	Rusted
19	Scrap	1	N/A	N/A	5"	Rusted
20	Sm. arms slug .30 cal.	1	N/A	N/A	2"	Rusted
21	Scrap	1	N/A	N/A	7"	Rusted
22	Scrap	1	N/A	N/A	2"	Rusted
23	Scrap	1	N/A	N/A	3"	Rusted
24	Scrap	1	N/A	N/A	5"	Rusted
25	Scrap	1	N/A	N/A	4"	Rusted
26	Scrap	1	N/A	N/A	5"	Rusted
27	Scrap	1	N/A	N/A	3"	Rusted
28	Sm. arms slug .30 cal.	1	N/A	N/A	3"	Rusted
29	Scrap	1	N/A	N/A	6"	Rusted
30	Scrap	1	N/A	N/A	7"	Rusted

GRID SURVEY SUMMARY SHEET

Grid: 57 Accessability: MODERATE

31	Scrap	1	N/A	N/A	3"	Rusted
32	57mm A/A round	1	None	None	12"	Rusted
33	57mm A/A round	1	None	None	10"	Rusted
34	Sm. arms slug .30 cal.	1	N/A	N/A	2"	Rusted
35	37mm A/A round	1	None	None	4"	Rusted
36	Scrap	1	N/A	N/A	5"	Rusted
37	Scrap	1	N/A	N/A	6"	Rusted
38	Scrap	1	N/A	N/A	6"	Rusted
39	37mm A/A round	1	None	None	3"	Rusted
40	Scrap	1	N/A	N/A	5"	Rusted
41	Scrap	1	N/A	N/A	4"	Rusted
42	Scrap	1	N/A	N/A	5"	Rusted
43	Scrap	1	N/A	N/A	5"	Rusted
44	Scrap	1	N/A	N/A	5"	Rusted
45	Sm. arms slug .30cal.	1	N/A	N/A	2"	Rusted
46	Scrap	1	N/A	N/A	6"	Rusted
47	Scrap	1	N/A	N/A	5"	Rusted
48	Scrap	1	N/A	N/A	5"	Rusted
49	Scrap	1	N/A	N/A	6"	Rusted
50	Scrap	1	N/A	N/A	7"	Rusted
51	Scrap	1	N/A	N/A	4"	Rusted

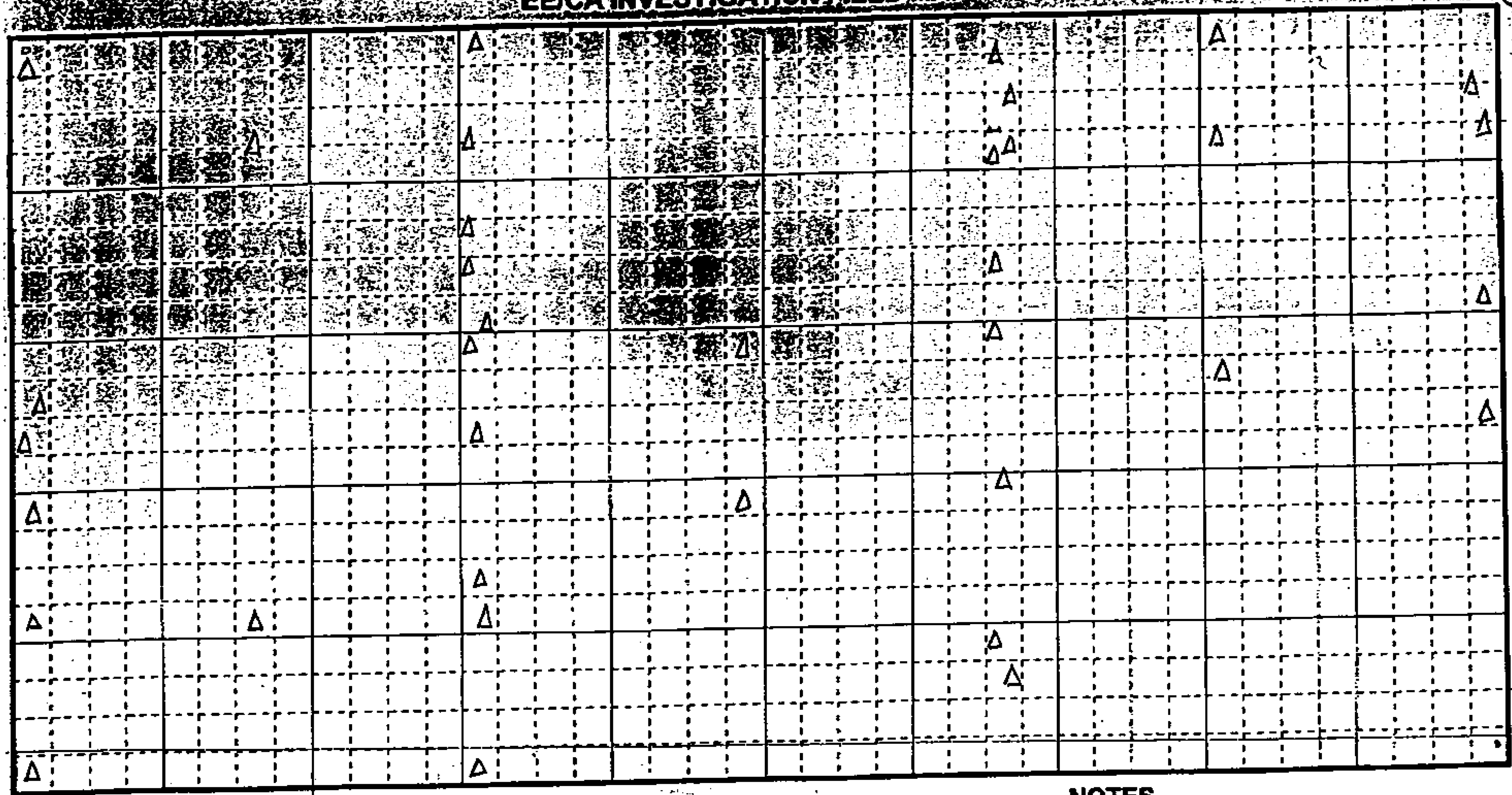
Grid 58



FORMER CAMP CROFT
SPARTANBURG, SOUTH CAROLINA
GRIDS 58-59A-59B

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

TOTAL P.02



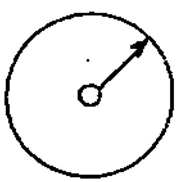
LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

GRID I.D. 58

MAP ORIENTATION

WIND DIRECTION



NOTES

36 SUBSURFACE ANOMALIES INVESTIGATED IN 7 LANES

LESS THAN 1 lb. METAL RECOVERED

GRID SURVEY SUMMARY SHEET

GRID: 58

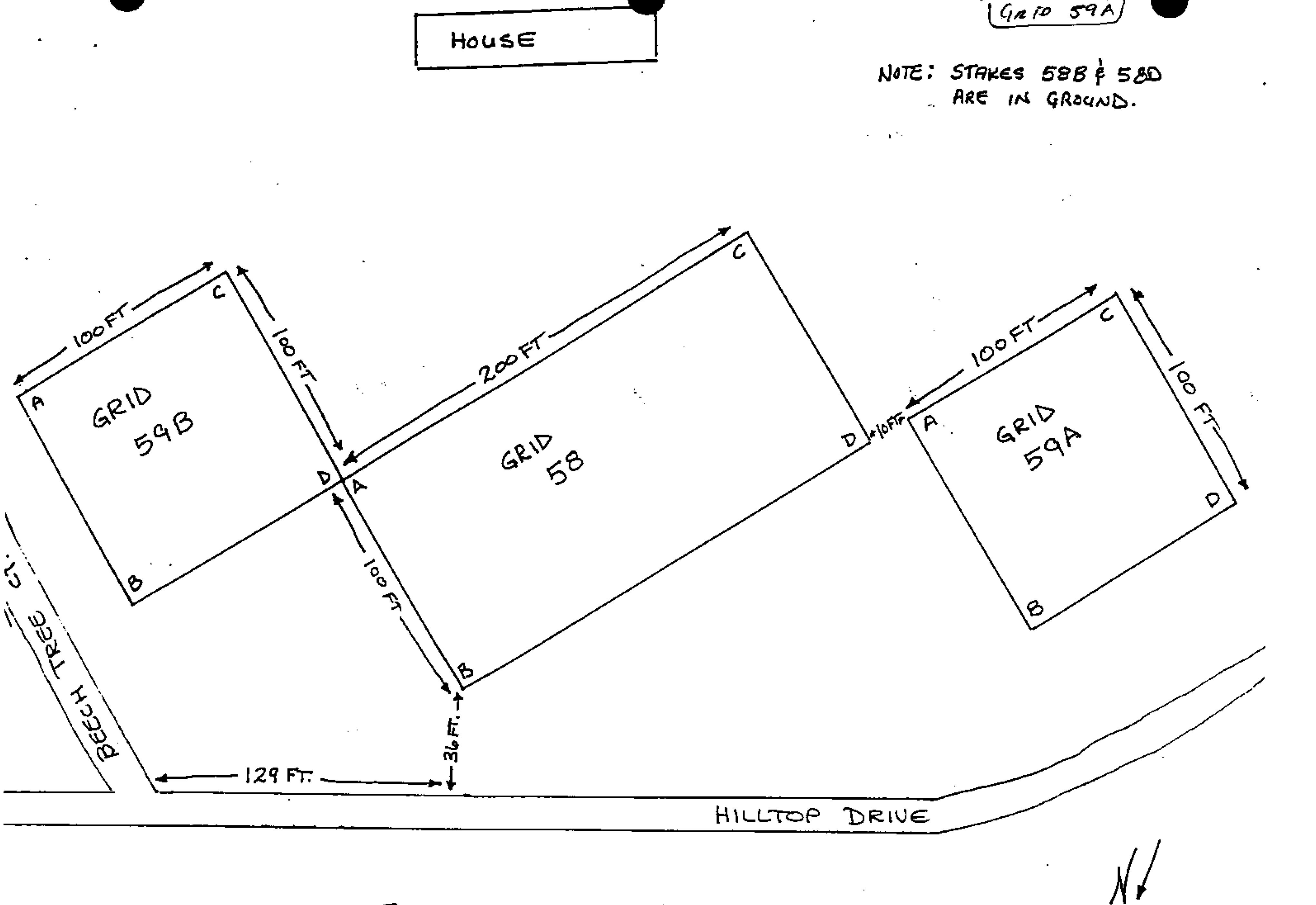
Accessability: PAVED ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Rock	1	N/A	N/A	1	Rusted
2	Scrap	1	N/A	N/A	2	Rusted
3	Rock	1	N/A	N/A	1	Rusted
4	Wire	1	N/A	N/A	1	Rusted
5	Wirre	1	N/A	N/A	3	Rusted
6	Rock	1	N/A	N/A	2	Rusted
7	Rock	1	N/A	N/A	1	Rusted
8	Wire	1	N/A	N/A	2	Rusted
9	Rock	1	N/A	N/A	3	Rusted
10	Wire	1	N/A	N/A	2	Rusted
11	Rock	1	N/A	N/A	2	Rusted
12	Horse Shoe	1	N/A	N/A	4	Rusted
13	Rifle GrenadeTail Boom	1	N/A	N/A	5	Rusted
14	Rock	1	N/A	N/A	1	Rusted
15	Rock	1	N/A	N/A	1	Rusted
16	Wire	1	N/A	N/A	10	Rusted
17	Rock	1	N/A	N/A	1	Rusted
18	Rock	1	N/A	N/A	1	Rusted
19	Rock	1	N/A	N/A	2	Rusted
20	Rock	1	N/A	N/A	2	Rusted
21	Rock	1	N/A	N/A	1	Rusted
22	Rock	1	N/A	N/A	3	Rusted
23	Rock	1	N/A	N/A	2	Rusted
24	Rock	1	N/A	N/A	4	Rusted
25	Rock	1	N/A	N/A	1	Rusted
26	Rock	1	N/A	N/A	1	Rusted
27	Wire	1	N/A	N/A	3	Rusted
28	Rock	1	N/A	N/A	2	Rusted
29	Rock	1	N/A	N/A	1	Rusted
30	Rock	1	N/A	N/A	1	Rusted

GRID SURVEY SUMMARY SHEET

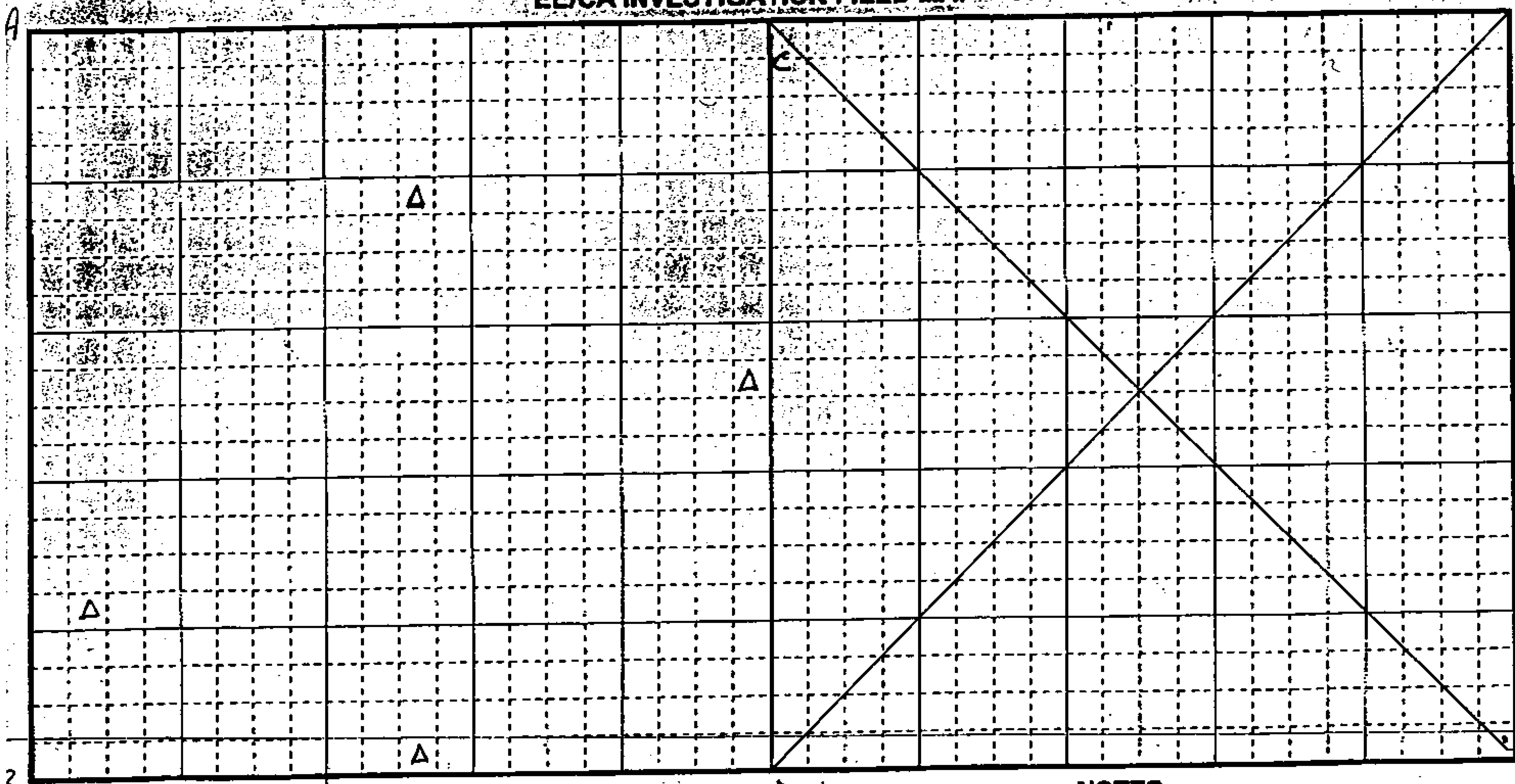
GRID: 58 Accessability: PAVED ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	Rock	1	N/A	N/A	1	Rusted
32	Rock	1	N/A	N/A	3	Rusted
33	Wire	1	N/A	N/A	2	Rusted
34	Rock	1	N/A	N/A	1	Rusted
35	Rock	1	N/A	N/A	1	Rusted
36	Rock	1	N/A	N/A	3	Rusted



FORMER CAMP CROFT
SPARTANBURG, SOUTH CAROLINA
GRIDS 58-59A-59B

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

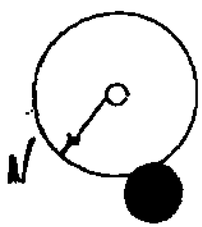


LEGEND

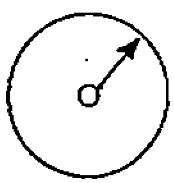
GRID I.D. 59A

- SUBSURFACE ANOMALIES
- SURFACE OEW/UXO
- SUBSURFACE OEW/UXO
- FIRE SAFETY EQUIPMENT
- PIT, TRENCHES, BUNKER, ETC.
- RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

MAP ORIENTATION



WIND DIRECTION



NOTES

4 SUBSURFACE ANOMALIES INVESTIGATED IN 5 LANES
LESS THAN 1 lb. METAL RECOVERED

* GRID IS 100 FT. X 100 FT.

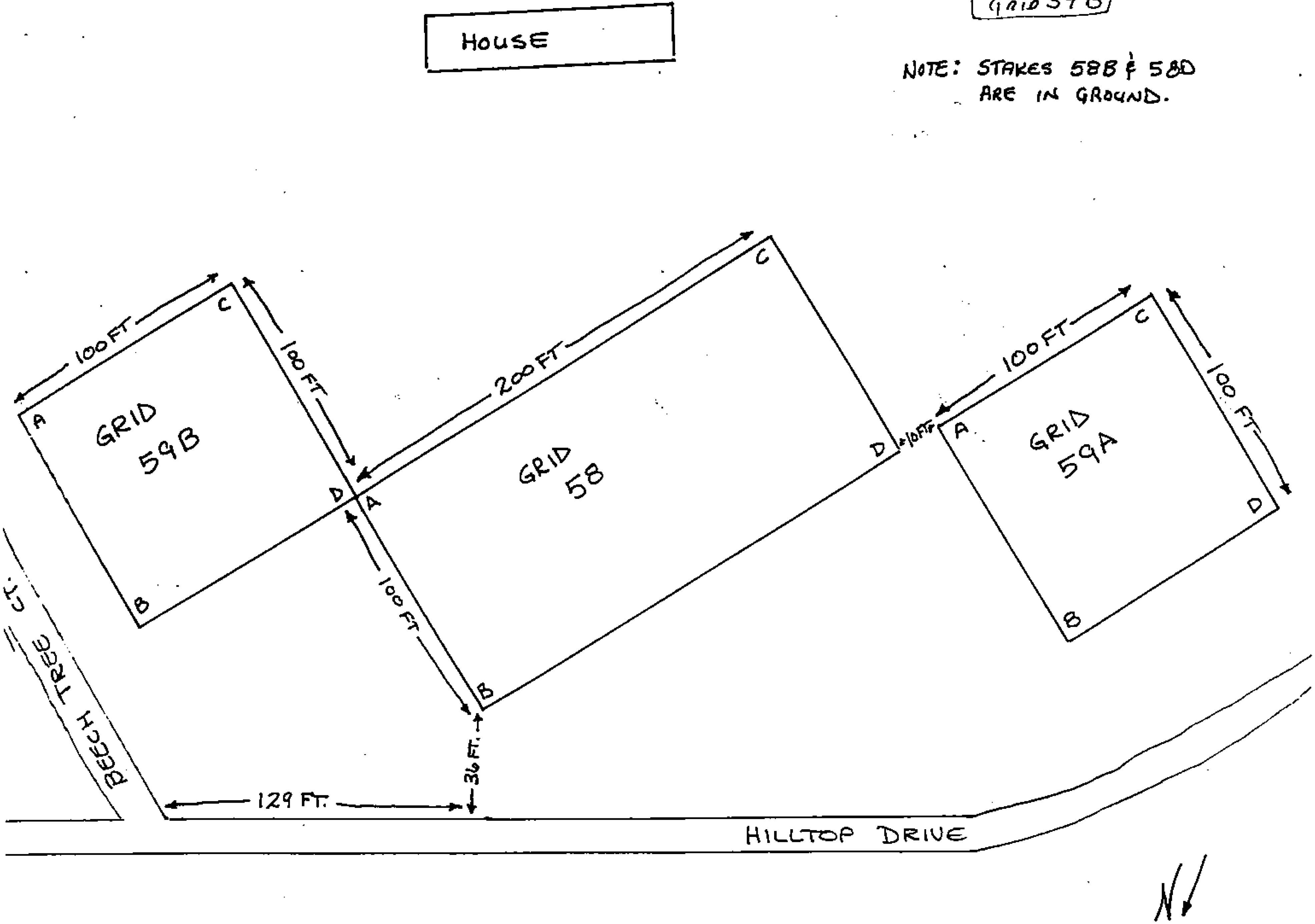
GRID SURVEY SUMMARY SHEET

GRID: 59A

Accessability: PAVED ROAD

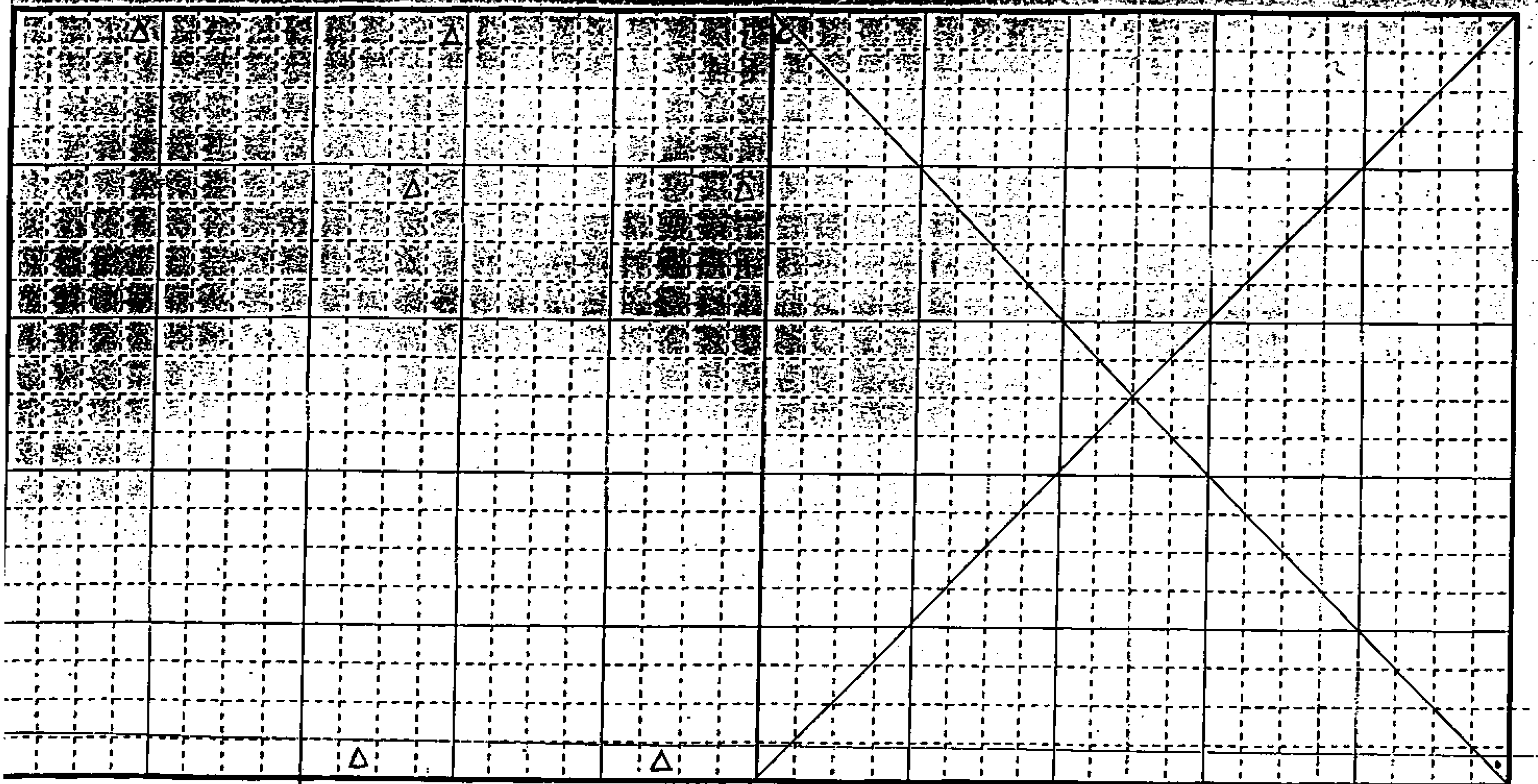
Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Rock	1	N/A	N/A	3	Rusted
2	Nail	1	N/A	N/A	2	Rusted
3	Nail	1	N/A	N/A	2	Rusted
4	Scrap	1	N/A	N/A	3	Rusted

Grid 59B

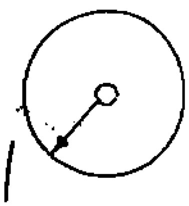
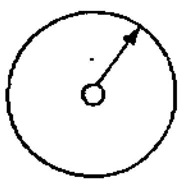


FORMER CAMP CROFT
SPARTANBURG, SOUTH CAROLINA
GRIDS 58-59A-59B

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP



GRID I.D. 59B

MAP ORIENTATION	WIND DIRECTION
	

LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

6 SUBSURFACE INVESTIGATIONS IN 5 LANES
LESS THAN 1 lb. METAL RECOVERED

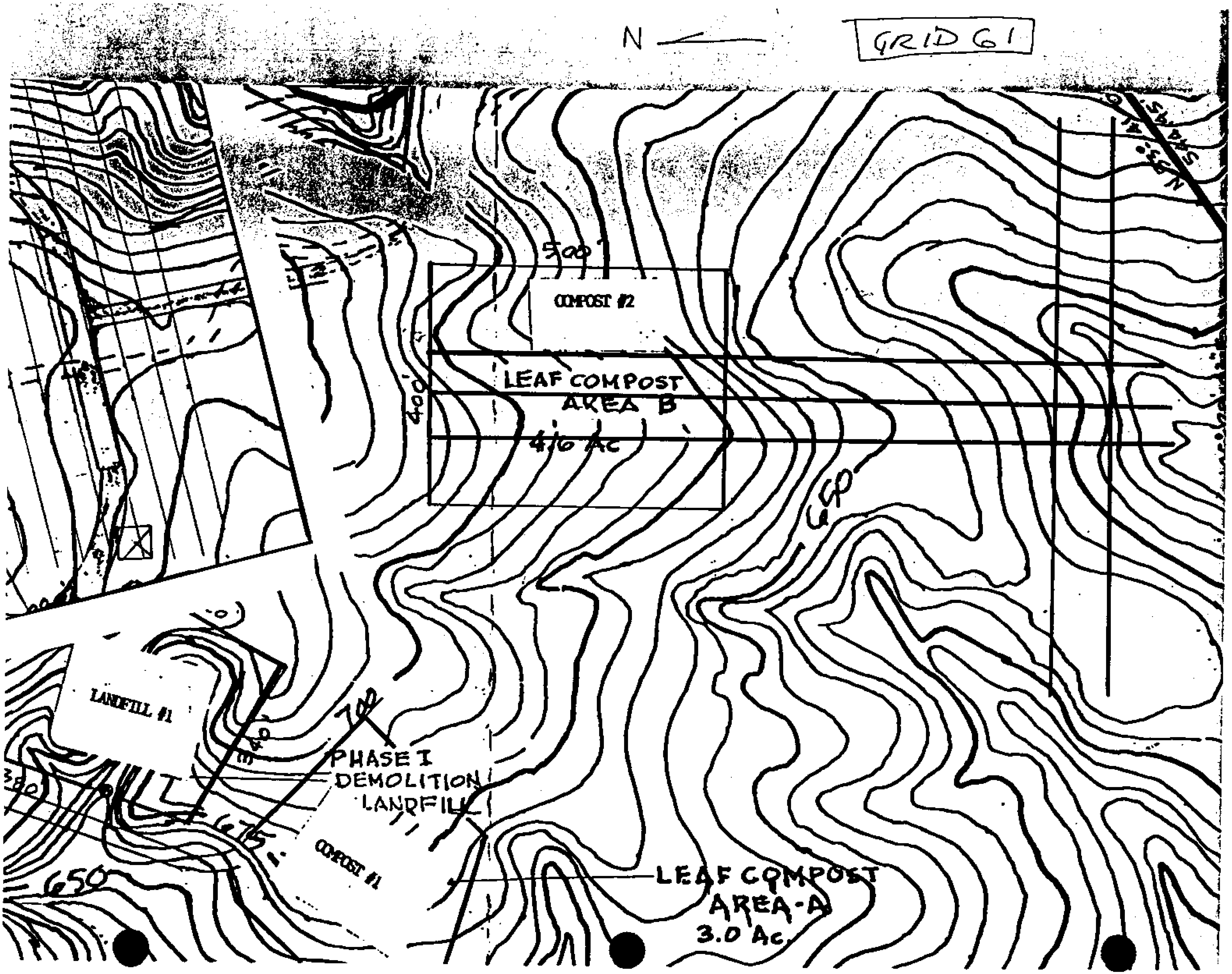
* GRID IS 100 FT. X 100 FT.

GRID SURVEY SUMMARY SHEET

GRID: 59B

Accessability: PAVED ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Scrap	1	N/A	N/A	4	Rusted
2	Rock	1	N/A	N/A	2	Rusted
3	Wire	1	N/A	N/A	2	Rusted
4	Wire	1	N/A	N/A	3	Rusted
5	Nail	1	N/A	N/A	1	Rusted
6	Rock	1	N/A	N/A	4	Rusted

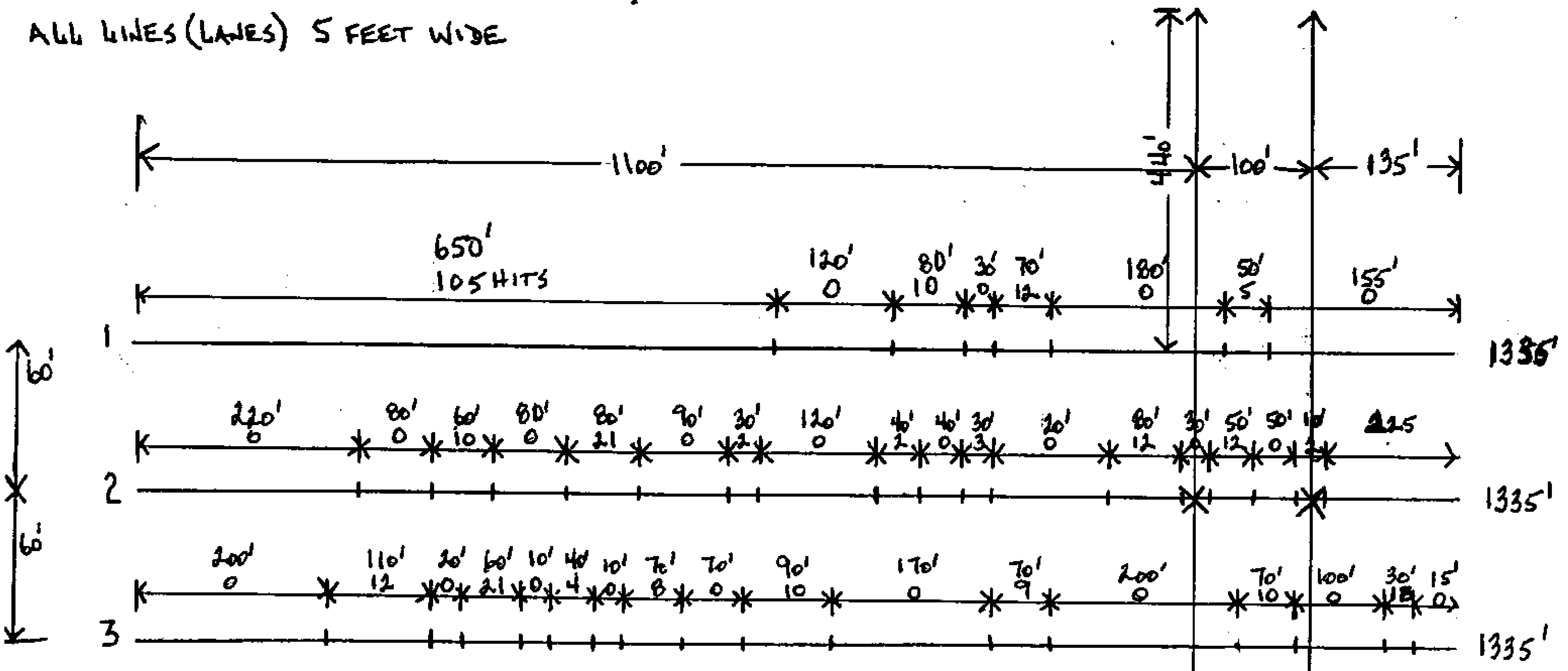


N
GRID 61
COMPOST #2
LEAF COMPOST
AREA B
4.6 Ac
500
400
650
LANDFILL #1
PHASE I
DEMOLITION
LANDFILL
675
COMPOST #1
LEAF COMPOST
AREA-A
3.0 Ac.

SURVEY DATE: OCTOBER 28, 1994
COMPOST "B" AREA (DR LOWRY'S PROPERTY)
ALL LINES (LANES) 5 FEET WIDE

GRID 61

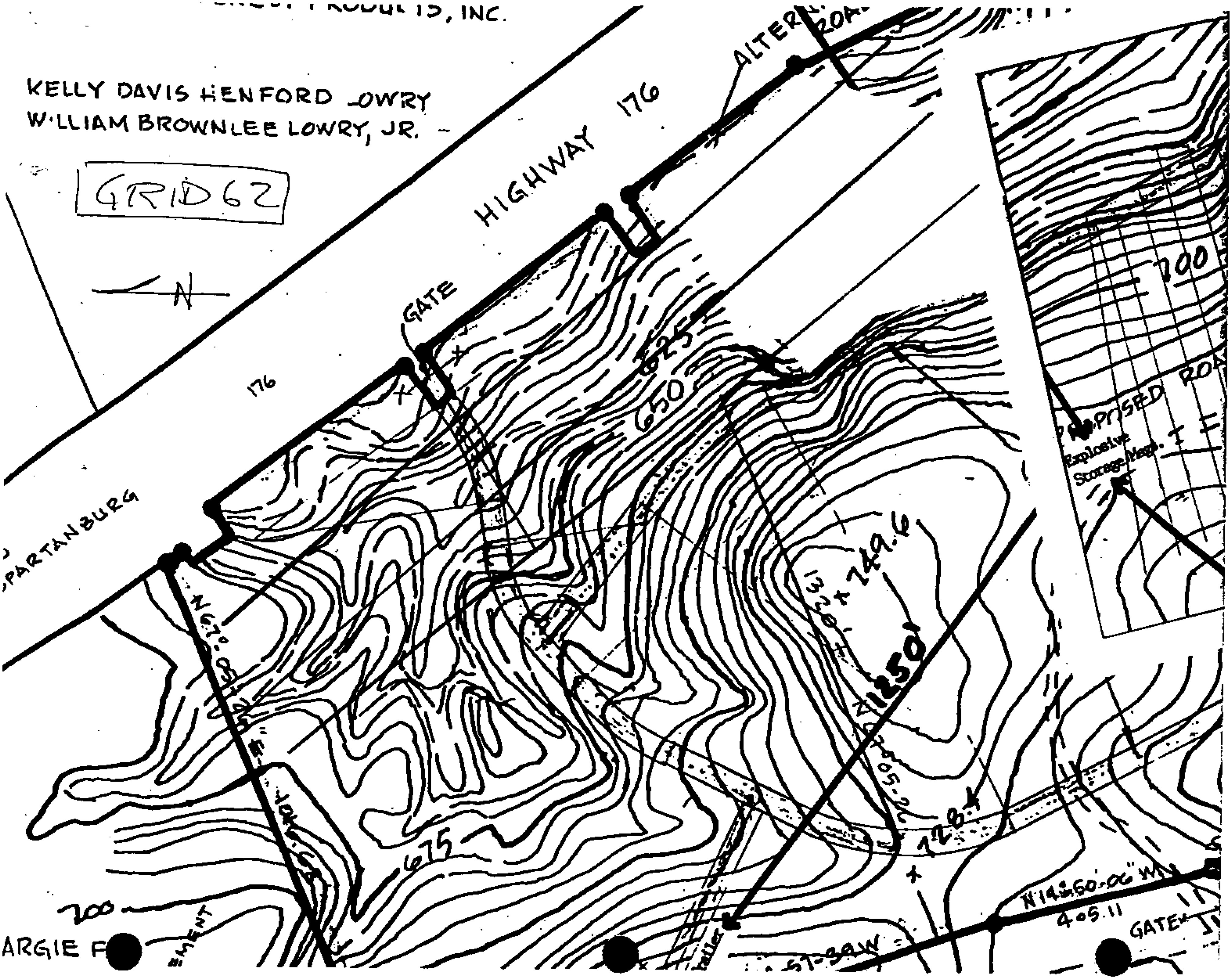
#1 #2



#3 #4

VERTICAL LINES: #1 (LEFT + RIGHT CENTER LINE)

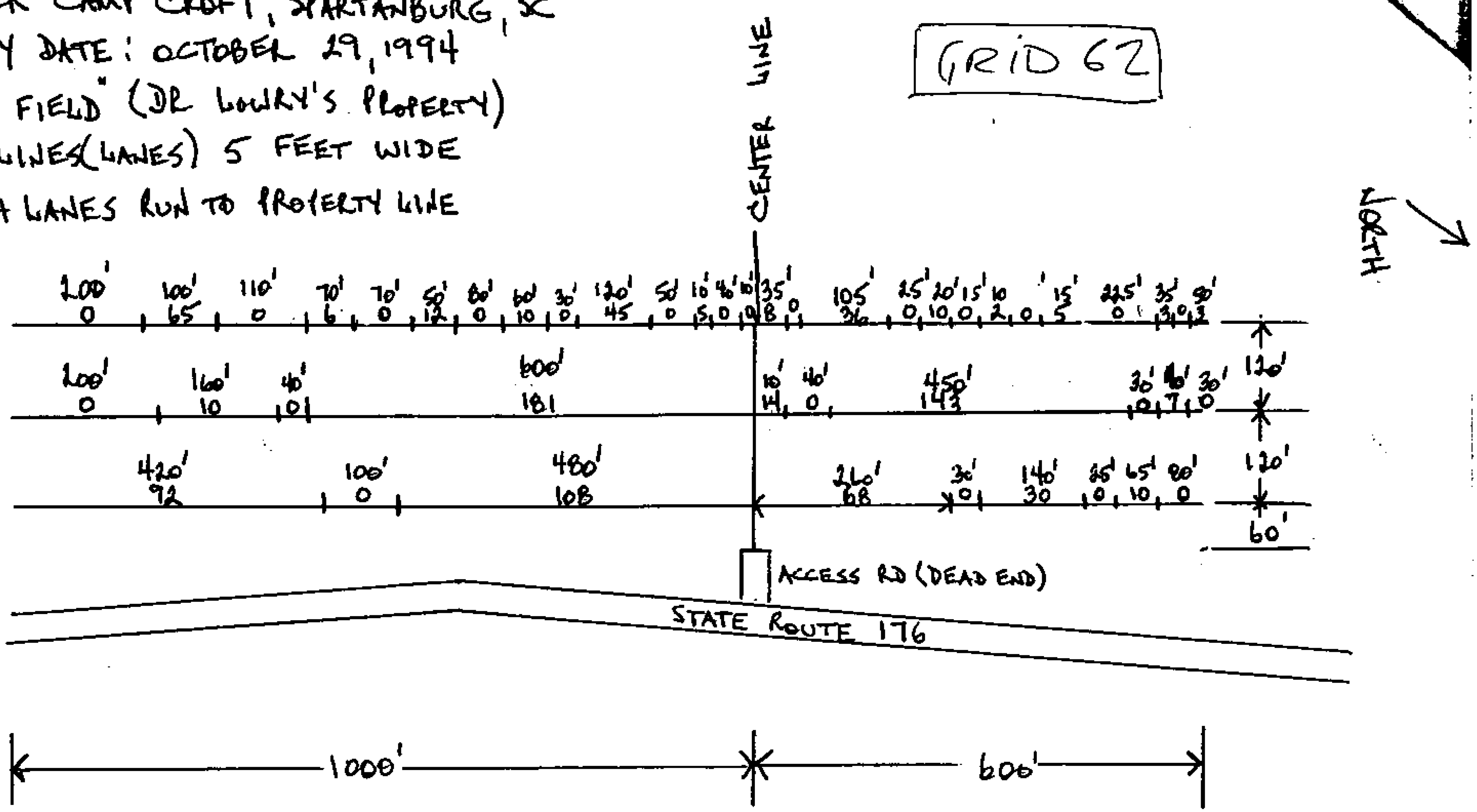
#1	#2	#3	#4
0-20/0	0-80/0	0-80/0	0-110/0
20-60/5	80-170/11	80-120/5	110-120/3
60-120/0	170-200/0	120-210/0	120-500/0
120-160/5	200-270/2	210-250/7	
160-180/0	270-500/0	250-500/0	
180-240/22			
240-270/0			
270-360/24			
360-500/0			



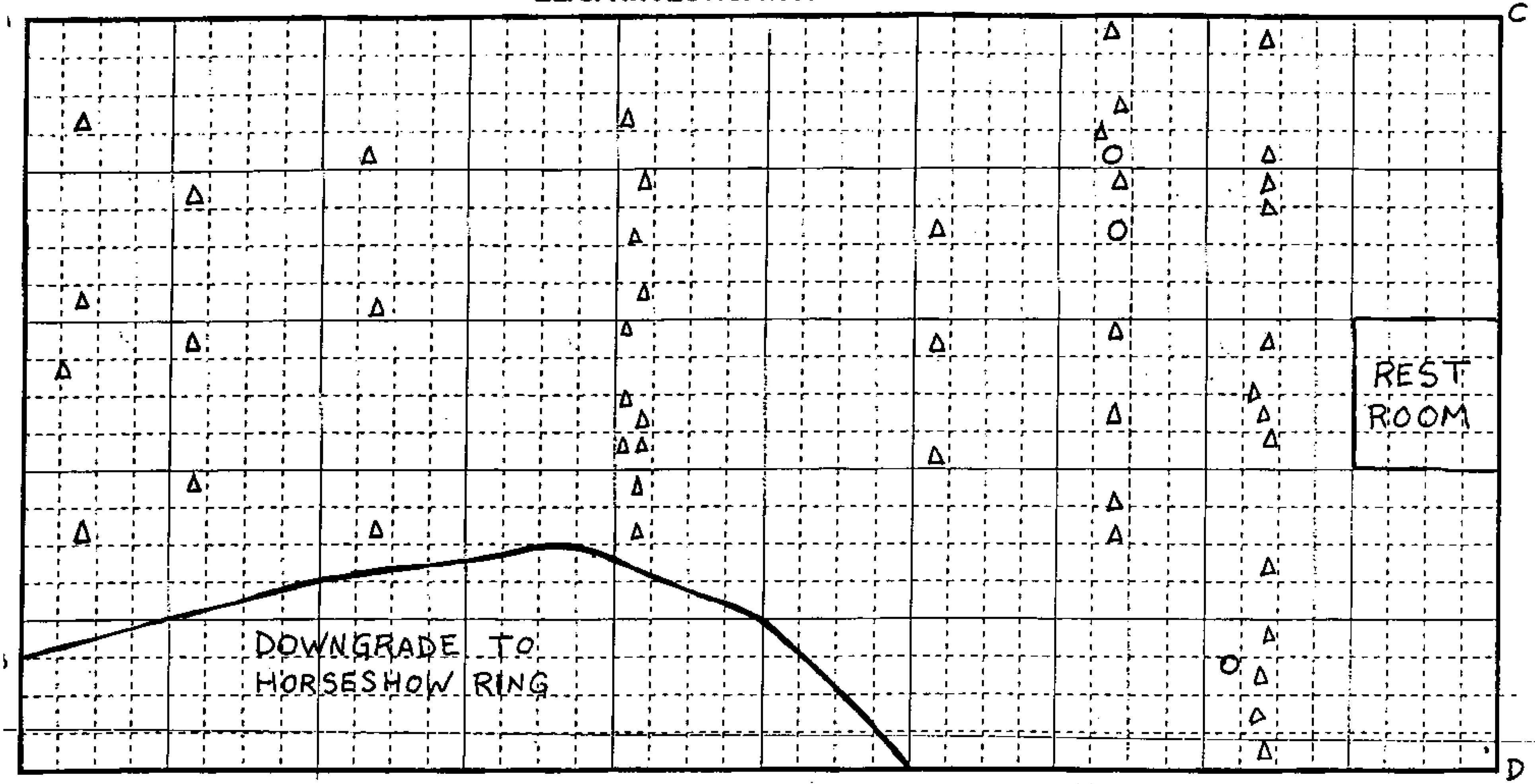
PRODUCTS, INC.
KELLY DAVIS HENFORD LOWRY
WILLIAM BROWNLEE LOWRY, JR.
GRID 62
N
HIGHWAY 176
176
SPARTANBURG
GATE
ALTERNATE ROAD
625
650
675
700
PROPOSED ROAD
Explosive Storage Mags. 1
749.6
250'
128.4
N14°50'06"W
405.11
GATE
ARGIE F

FORMER CAMP CROFT, SPARTANBURG, SC
SURVEY DATE: OCTOBER 29, 1994
"POPPY FIELD" (DR LOWRY'S PROPERTY)
ALL LINES (LANES) 5 FEET WIDE
NORTH LANES RUN TO PROPERTY LINE

GRID 62

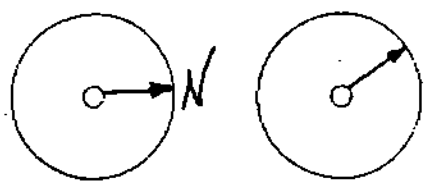


FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP



GRID I.D. 63

MAP ORIENTATION **WIND DIRECTION**



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

3EA. SURFACE ITEMS RECOVERED
45EA SUBSURFACE ANOMALIES INVESTIGATED IN 7 LANES
6 lbs METAL RECOVERED.
29 NOV 93

GRID SURVEY SUMMARY SHEET

GRID : 63 Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	60mm. Fin	1	N/A	N/A	surface	
2	Frag	1	N/A	N/A	surface	
3	Frag	1	N/A	N/A	surface	
4	Power line	1	N/A	N/A	10	
5	Nail	1	N/A	N/A	2	
6	Barbed wire	1	N/A	N/A	2	
7	Wire	2	N/A	N/A	3	
8	60mm. Fin	1	N/A	N/A	4	
9	Rock	1	N/A	N/A	12	
10	60mm. Fin	1	N/A	N/A	1	
11	Spike	1	N/A	N/A	4	
12	Bolt	1	N/A	N/A	1	
13	30 cal.	2	N/A	N/A	3-9	
14	Wire	1	N/A	N/A	2	
15	Wire	1	N/A	N/A	1	
16	Fray	1	N/A	N/A	1	
17	60mm. Tail fin assembly	1	N/A	N/A	2	
18	Toy car	1	N/A	N/A	2	
19	Wire	1	N/A	N/A	1	
20	Wire	1	N/A	N/A	2	
21	Nail	1	N/A	N/A	2	
22	Coat hanger	1	N/A	N/A	1	
23	Rod	1	N/A	N/A	2	
24	Can	1	N/A	N/A	2	
25	Nails	2	N/A	N/A	2-5	
26	Nail	1	N/A	N/A	3	
27	Frag	1	N/A	N/A	2	
28	Nail	1	N/A	N/A	6	
29	Pipe	1	N/A	N/A	4	
30	Rock	1	N/A	N/A	2	

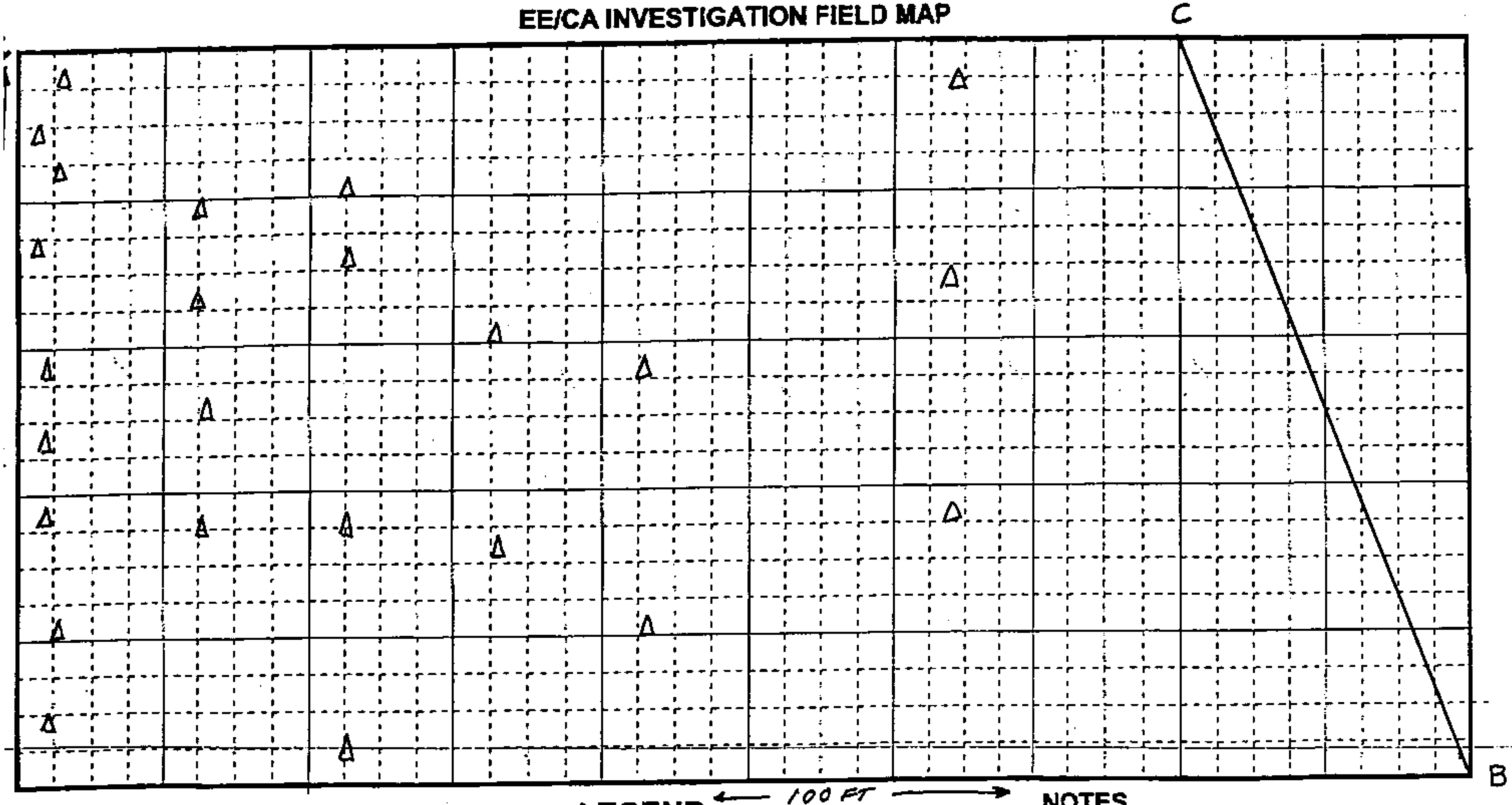
GRID SURVEY SUMMARY SHEET

GRID : 63

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	Nail	1	N/A	N/A	2	
32	Bolt	1	N/A	N/A	3	
33	Nail	1	N/A	N/A	3	
34	60mm. Tail fin	1	N/A	N/A	3	
35	Frag	1	N/A	N/A	2	
36	60mm. Fin	1	N/A	N/A	3	
37	Water line	1	N/A	N/A	12	
38	Pipe	1	N/A	N/A	5	
39	4.2in. Mortar tail boom	1	N/A	N/A	4	
40	Wire	1	N/A	N/A	2	
41	Nail	1	N/A	N/A	8	
42	Pipe	1	N/A	N/A	4	
43	Nail	1	N/A	N/A	2	
44	60mm. Tail fin	1	N/A	N/A	3	
45	60mm. Fin	1	N/A	N/A	3	
46	81mm. Fin	1	N/A	N/A	4	
47	60mm. Fin	1	N/A	N/A	3	
48	Scrap	1	N/A	N/A	2	

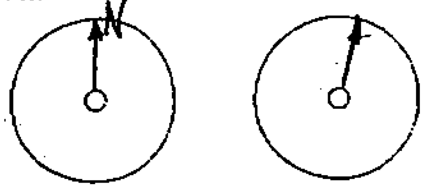
FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP



GRID I.D. 64

MAP ORIENTATION

WIND DIRECTION



LEGEND

△ SUBSURFACE ANOMALIES
○ SURFACE OEW/UXO
▲ SUBSURFACE OEW/UXO
□ FIRE SAFETY EQUIPMENT
⬡ PIT,TRENCHES, BUNKER, ETC.
— RESTRICTED AREA BOUNDARY
X ENTRY/EXIT POINT

NOTES

24 SUBSURFACE ANOMALIES INVESTIGATED IN 7 LANES.
lbs METAL RECOVERED
29 NOV 94

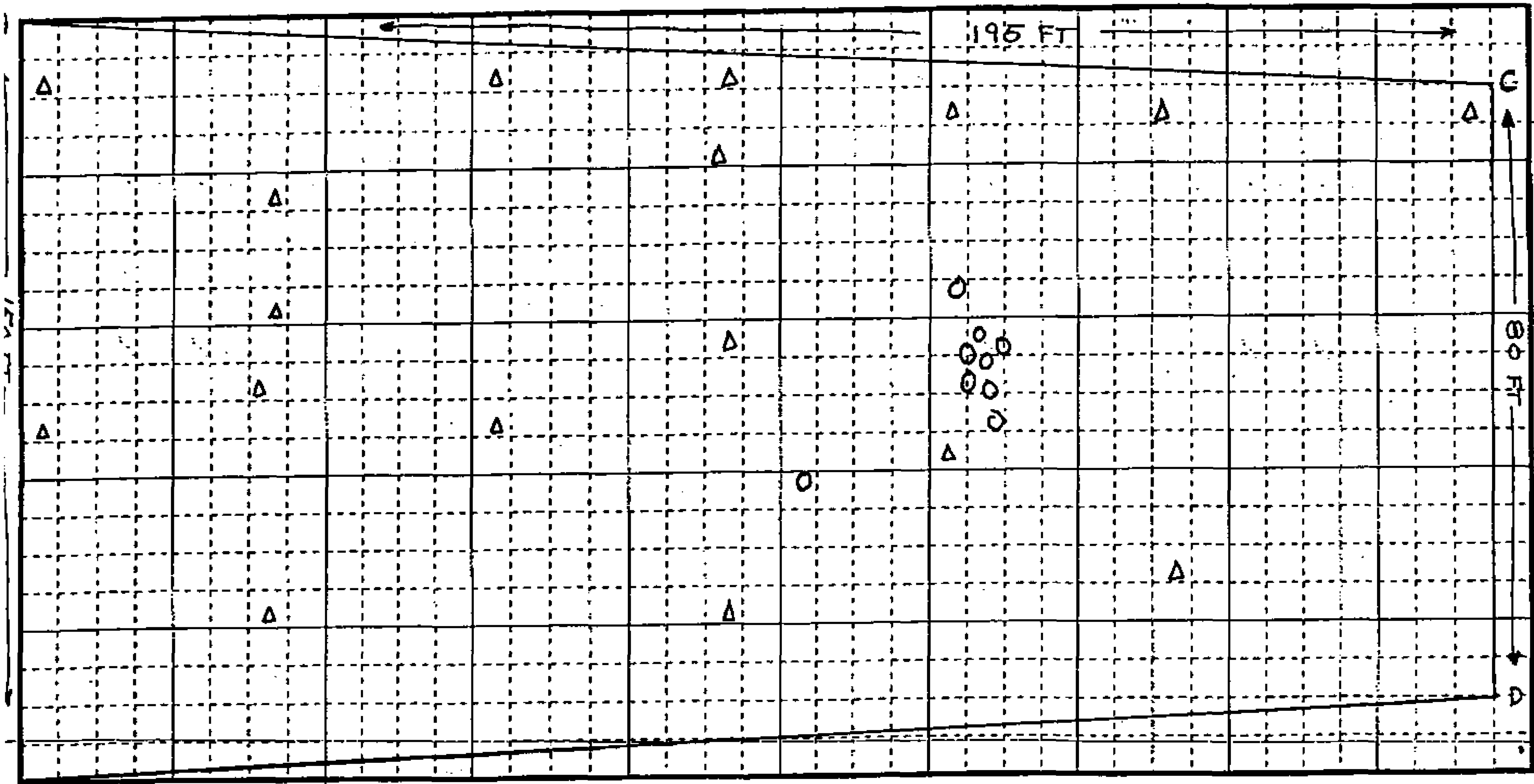
GRID SURVEY SUMMARY SHEET

GRID :64

Accessability: EASY

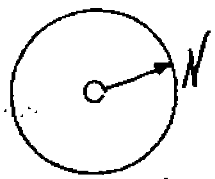
Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Nail	1	N/A	N/A	5	
2	Pencil	1	N/A	N/A	4	
3	Nail	1	N/A	N/A	3	
4	Nail	1	N/A	N/A	2	
5	Nail	1	N/A	N/A	2	
6	Tent stake	1	N/A	N/A	4	
7	30 cal.	1	N/A	N/A	5	
8	Wire	1	N/A	N/A	1	
9	Nail	1	N/A	N/A	1	
10	Nail	1	N/A	N/A	1	
11	Wire	1	N/A	N/A	1	
12	Rock	1	N/A	N/A	2	
13	Wire	1	N/A	N/A	3	
14	Wire	1	N/A	N/A	2	
15	Spire	1	N/A	N/A	4	
16	Tent peg	1	N/A	N/A	8	
17	Horse shoe	1	N/A	N/A	4	
18	Frag	1	N/A	N/A	3	
19	Wire	1	N/A	N/A	2	
20	Pipe	2	N/A	N/A	4	
21	Frag	1	N/A	N/A	2	
22	Bolt	1	N/A	N/A	1	
23	Rock	?	N/A	N/A	24	
24	Rock	1	N/A	N/A	4	

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

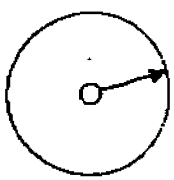


GRID I.D. 65

MAP ORIENTATION



WIDE DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

9 SURFACE ITEMS RECOVERED
17 SUBSURFACE ANOMALIES INVESTIGATED IN 7 LANES.
1 lb. METAL RECOVERED
02 DEC 94

GRID SURVEY SUMMARY SHEET

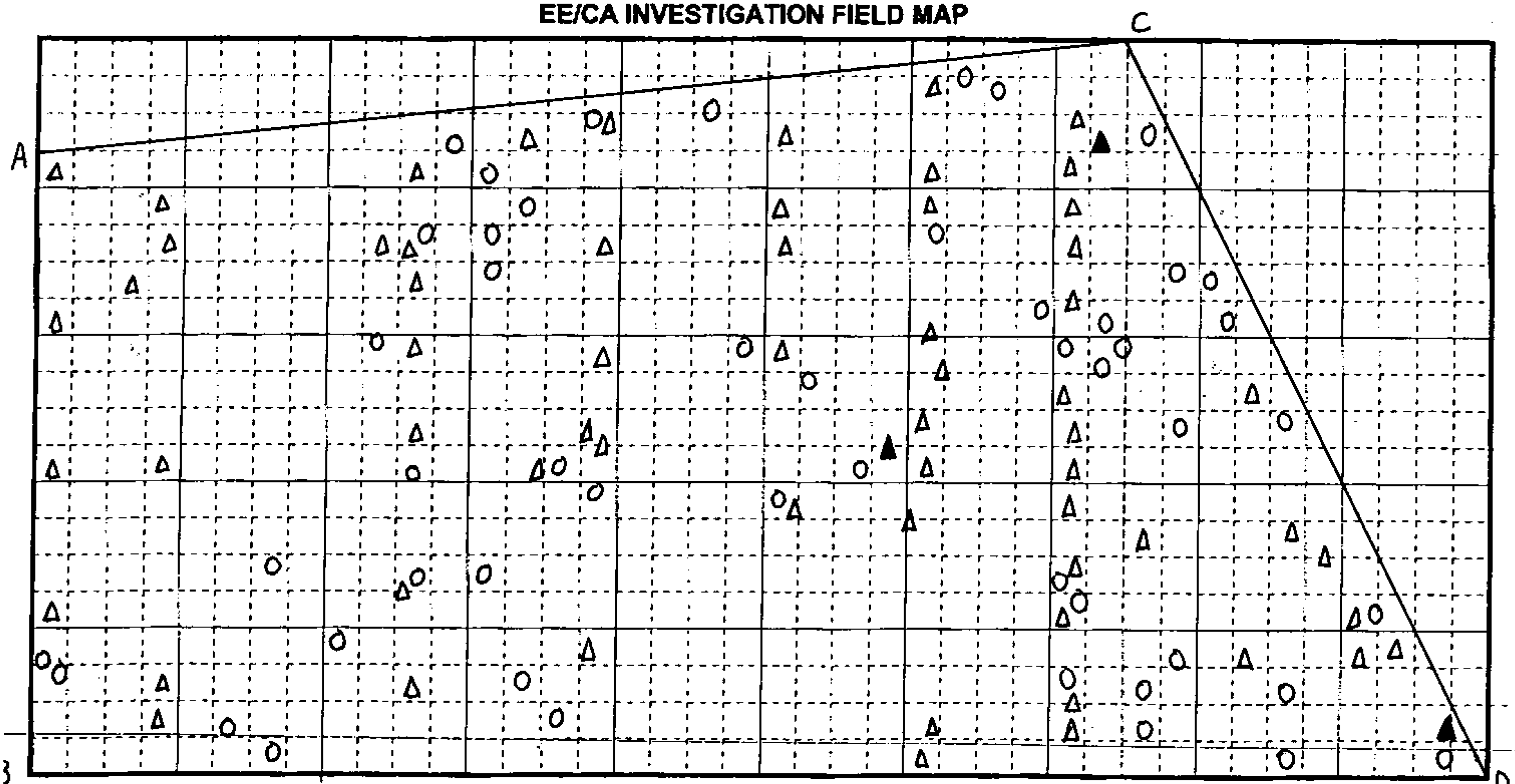
GRID:65

Accessability: EASY

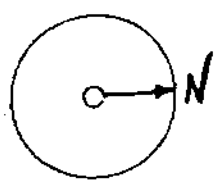
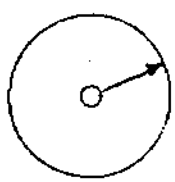
Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Srap	1	N/A	N/A	surface	
2	Frag	1	N/A	N/A	surface	
3	Frag	1	N/A	N/A	surface	
4	Frag	1	N/A	N/A	surface	
5	Frag	1	N/A	N/A	surface	
6	Frag	1	N/A	N/A	surface	
7	Frag	1	N/A	N/A	surface	
8	Frag	1	N/A	N/A	surface	
9	Frag	1	N/A	N/A	surface	
10	60mm Tail boom	1	N/A	N/A	2	
11	Wire	1	N/A	N/A	1	
12	Frag	1	N/A	N/A	3	
13	Rock	2	N/A	N/A	4-9	
14	Frag	1	N/A	N/A	3	
15	Wire	1	N/A	N/A	2	
16	Wire	1	N/A	N/A	2	
17	Frag	1	N/A	N/A	1	
18	Wire	1	N/A	N/A	2	
19	Rock	1	N/A	N/A	3	
20	Wire	1	N/A	N/A	1	
21	Frag	1	N/A	N/A	3	
22	Rock	1	N/A	N/A	4	
23	Wire	1	N/A	N/A	2	
24	Wire	1	N/A	N/A	1	
25	Rock	1	N/A	N/A	2	
26	Nail	1	N/A	N/A	1	

TOTAL P.02

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP



GRID I.D. 66

MAP ORIENTATION	WIND DIRECTION
	

LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT, TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

50 SURFACE ITEMS RECOVERED
65 SUBSURFACE ANOMALIES INVESTIGATED
IN 7 LANES AND "HEAVY HITS" BETWEEN LANES
3EA. 60MM MORTAR, H.E. FUSED RECOVERED
45 lbs METAL RECOVERED.
30 NOV 94

GRID SURVEY SUMMARY SHEET

GRID :66

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Frag	1	N/A	N/A	surface	
2	Frag	1	N/A	N/A	surface	
3	Frag	1	N/A	N/A	surface	
4	Frag	1	N/A	N/A	surface	
5	60mm. Fin	1	N/A	N/A	surface	
6	Frag	1	N/A	N/A	surface	
7	Frag	1	N/A	N/A	surface	
8	frag	1	N/A	N/A	surface	
9	Frag	1	N/A	N/A	surface	
10	Frag	1	N/A	N/A	surface	
11	Frag	1	N/A	N/A	surface	
12	Frag	1	N/A	N/A	surface	
13	Scrap	1	N/A	N/A	surface	
14	Frag	1	N/A	N/A	surface	
15	Frag	1	N/A	N/A	surface	
16	Frag	1	N/A	N/A	surface	
17	Frag	1	N/A	N/A	surface	
18	Frag	1	N/A	N/A	surface	
19	Scrap	1	N/A	N/A	surface	
20	Frag	1	N/A	N/A	surface	
21	Frag	1	N/A	N/A	surface	
22	60mm. Fin	1	N/A	N/A	surface	
23	Frag	1	N/A	N/A	surface	
24	Frag	1	N/A	N/A	surface	
25	Frag	1	N/A	N/A	surface	
26	Frag	1	N/A	N/A	surface	
27	Frag	1	N/A	N/A	surface	
28	Frag	1	N/A	N/A	surface	
29	Frag	1	N/A	N/A	surface	
30	Scrap	1	N/A	N/A	surface	

GRID SURVEY SUMMARY SHEET

GRID :66

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	Frag	1	N/A	N/A	surface	
32	60mm. Fin	1	N/A	N/A	surface	
33	Frag	1	N/A	N/A	surface	
34	Scrap	1	N/A	N/A	surface	
35	Frag	1	N/A	N/A	surface	
36	Frag	1	N/A	N/A	surface	
37	60m. Fin	1	N/A	N/A	surface	
38	Frag	1	N/A	N/A	surface	
39	60mm. Fin	1	N/A	N/A	surface	
40	Frag	1	N/A	N/A	surface	
41	60mm. Fin	1	N/A	N/A	surface	
42	Can	1	N/A	N/A	surface	
43	Srap	1	N/A	N/A	surface	
44	Plow blade	1	N/A	N/A	surface	
45	Scrap	1	N/A	N/A	surface	
46	Frag	1	N/A	N/A	surface	
47	Frag	1	N/A	N/A	surface	
48	Frag	1	N/A	N/A	surface	
49	Scrap	1	N/A	N/A	surface	
50	Nail	1	N/A	N/A	surface	
51	Frag	1	N/A	N/A	2	
52	60mm. Fin	1	N/A	N/A	3	
53	Rock	1	N/A	N/A	2	
54	Frag	1	N/A	N/A	3	
55	Frag	1	N/A	N/A	3	
56	60mm. fin assembly	1	N/A	N/A	4	
57	Frag	1	N/A	N/A	2	
58	Frag	1	N/A	N/A	2	
59	Bolt	1	N/A	N/A	3	
60	60mm. fin	1	N/A	N/A	4	

GRID SURVEY SUMMARY SHEET

GRID :66

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
61	60mm. Tail / grenade fuse	1	N/A	N/A	3	
62	Frag	1	N/A	N/A	2	
63	Nail	1	N/A	N/A	1	
64	60mm. Fin	1	N/A	N/A	3	
65	Frag	1	N/A	N/A	2	
66	Rock	1	N/A	N/A	4	
67	60mm. Fin assembly	1	N/A	N/A	4	
68	Frag	1	N/A	N/A	3	
69	Wire	1	N/A	N/A	2	
70	Frag	1	N/A	N/A	3	
71	60mm. Fin	1	N/A	N/A	3	
72	Frag	1	N/A	N/A	2	
73	60mm. Fin	1	N/A	N/A	2	
74	60mm. Fin & boom	2	N/A	N/A	3-8	
75	60mm. boom	1	N/A	N/A	4	
76	Frag	1	N/A	N/A	6	
77	Rock	1	N/A	N/A	3	
78	60mm. Fin	1	N/A	N/A	2	
79	60mm. fin assembly	1	N/A	N/A	6	
80	Frag	2	N/A	N/A	7-11	
81	60mm. Fin	1	N/A	N/A	3	
82	60mm. Fin	1	N/A	N/A	3	
83	60mm. fin assembly	1	N/A	N/A	3	
84	Frag	2	N/A	N/A	4-9	
85	60mm. Fin	1	N/A	N/A	3	
86	Blade core	1	N/A	N/A	5	
87	60mm. Fin	1	N/A	N/A	4	
88	60mm. fin assembly	1	N/A	N/A	5	
89	Nail	1	N/A	N/A	2	
90	Frag	1	N/A	N/A	3	

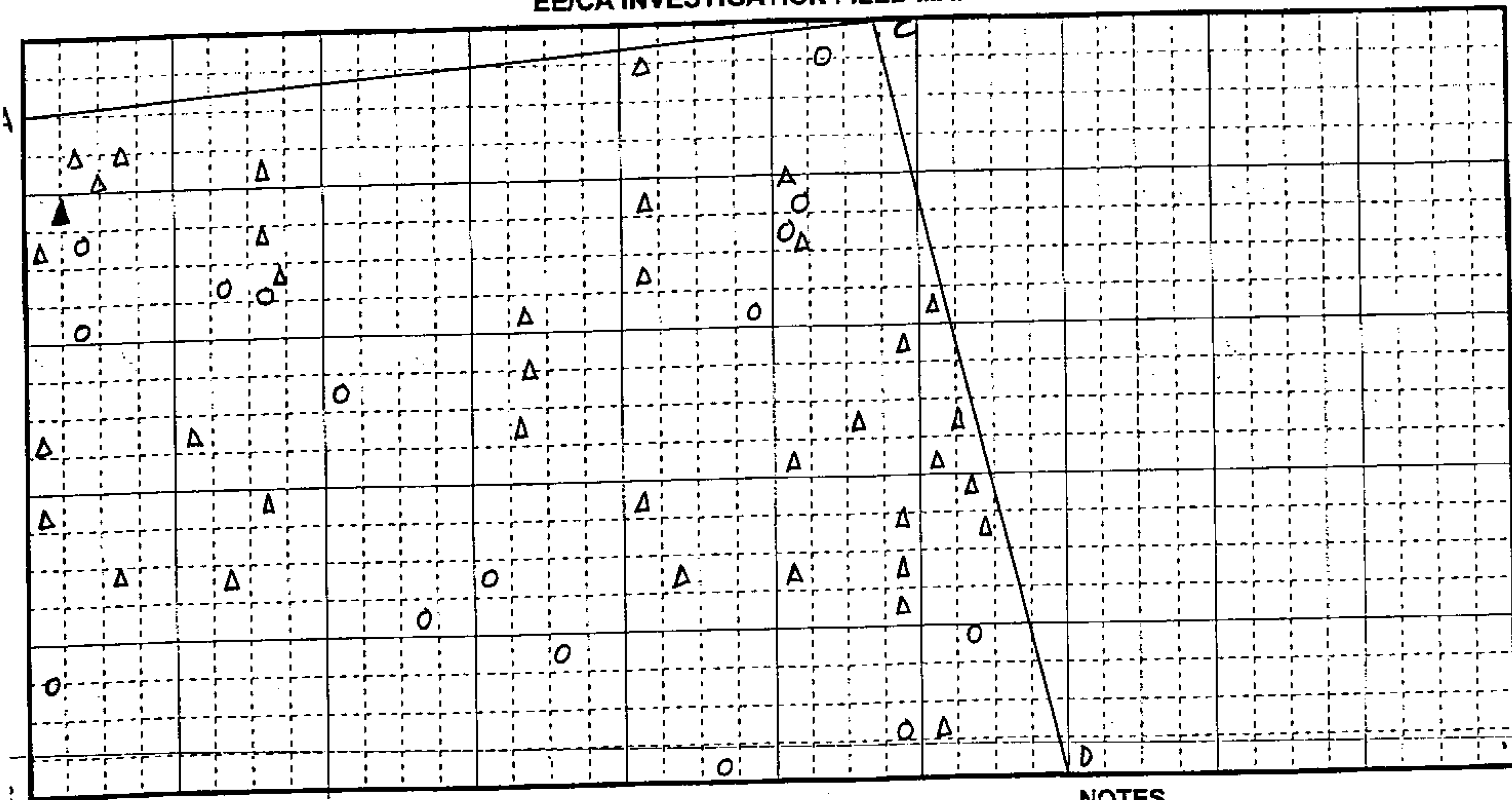
GRID SURVEY SUMMARY SHEET

GRID :66

Accessability: EASY

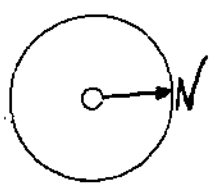
Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
91	Frag	1	N/A	N/A	6	
92	60mm. fin assembly / Frag	3	N/A	N/A	6-13	
93	60mm. Fin assembly	1	N/A	N/A	4	
94	60mm. Fin assembly	1	N/A	N/A	6	
95	60mm. Fin assembly	1	N/A	N/A	5	
96	60mm. Fin assembly	1	N/A	N/A	6	
97	60mm. Mortar	1	N/A	N/A	1	
98	60mm. Fin assembly	1	N/A	N/A	4	
99	Frag	2	N/A	N/A	2-9	
100	60mm. Fin assembly	1	N/A	N/A	4	
101	60mm. Fin assembly	1	N/A	N/A	6	
102	60mm. /Fuse	1	N/A	N/A	4	
103	60mm. Fin assembly	1	N/A	N/A	6	
104						
105	Tail fin & rock	2	N/A	N/A	4-7	
106	Tail fin	1	N/A	N/A	2	
107	Frag & Fin	2	N/A	N/A	3-11	
108	CO2 Bottle	1	N/A	N/A	3	
109	60mm. Mortar	1	N/A	N/A	3	
110	Boom & Fin	2	N/A	N/A	3-9	
111	Nail	1	N/A	N/A	2	
112	60mm. Fin assembly	1	N/A	N/A	4	
113	60mm. Fin assembly	1	N/A	N/A	6	
114	Frag & Fin	3	N/A	N/A	5-8	
115	60mm. Fin	1	N/A	N/A	4	
116	60mm. Mortar	1	N/A	N/A	4	

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

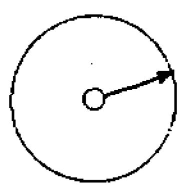


GRID I.D. 67

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

16 SURFACE ITEMS RECOVERED
37 SUBSURFACE ANOMALIES INVESTIGATED IN
7 LANES AND "HEAVY HITS" BETWEEN LANES.
1 EA. 60MM MORTAR, H.E., FUSED RECOVERED
10 lbs METAL RECOVERED.
30 NOV 94

GRID SURVEY SUMMARY SHEET

GRID : 67

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	60mm. Fin	1	N/A	N/A	surface	
2	Scrap	1	N/A	N/A	surface	
3	Frag	1	N/A	N/A	surface	
4	Frag	1	N/A	N/A	surface	
5	Frag	1	N/A	N/A	surface	
6	Frag	1	N/A	N/A	surface	
7	Frag	1	N/A	N/A	surface	
8	Scrap	1	N/A	N/A	surface	
9	Scrap	1	N/A	N/A	surface	
10	Scrap	1	N/A	N/A	surface	
11	Scrap	1	N/A	N/A	surface	
12	Scrap	1	N/A	N/A	surface	
13	Frag	1	N/A	N/A	surface	
14	Frag	1	N/A	N/A	surface	
15	Scrap	1	N/A	N/A	surface	
16	Frag	1	N/A	N/A	surface	
17	60mm. Mortar	1	Fuse	HE	3	
18	Wire	1	N/A	N/A	2	
19	Cans	2	N/A	N/A	4-7	
20	Cans	24	N/A	N/A	2-23	
21	30 cal. clip	1	N/A	N/A	3	
22	Cans	4	N/A	N/A	2-9	
23	60mm. fin assembly / Frag	3	N/A	N/A	3-11	
24	30 cal. clip	1	N/A	N/A	3	
25	Large rock	1	N/A	N/A	6	
26	Can	2	N/A	N/A	4-16	
27	Scrap	1	N/A	N/A	2	
28	Frag	1	N/A	N/A	2	
29	Frag	1	N/A	N/A	2	
30	Wire	1	N/A	N/A	1	

GRID SURVEY SUMMARY SHEET

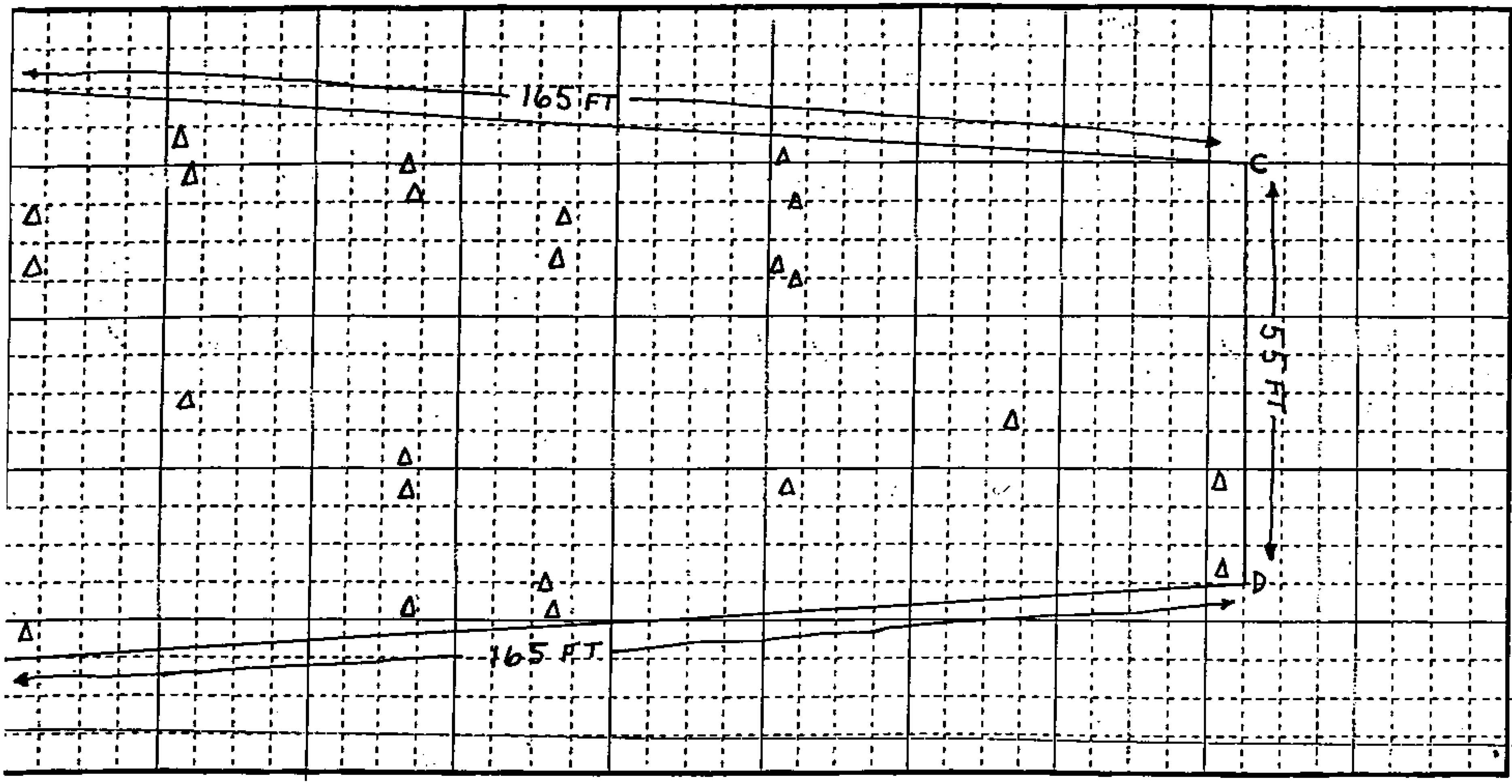
GRID : 67

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth	State of Degradation
31	Door hook	1	N/A	N/A	4	
32	Rock	1	N/A	N/A	5	
33	Frag	1	N/A	N/A	4	
34	Boom & Fin	4	N/A	N/A	5	
35	Fuse plurger	1	N/A	N/A	3	
36	Wire	1	N/A	N/A	1	
37	Can key	1	N/A	N/A	3	
38	Scrap	1	N/A	N/A	2	
39	Rifel grenade	1	N/A	N/A	3	
40	Frag	1	N/A	N/A	2	
41	Frag	1	N/A	N/A	3	
42	Fins	2	N/A	N/A	4-9	
43	Rocks	4	N/A	N/A	3-21	
44	Boom	1	N/A	N/A	3	
45	Scrap	1	N/A	N/A	4	
46	Grill	4	N/A	N/A	2-15	
47	Wire	1	N/A	N/A	2	
48	Can key	1	N/A	N/A	3	
49	Rock	1	N/A	N/A	3	
50	Rock	1	N/A	N/A	3	
51	30 cal. clip	1	N/A	N/A	4	
52	Rock	1	N/A	N/A	3	
53	Scrap	1	N/A	N/A	5	

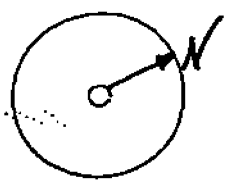
TOTAL P.02

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

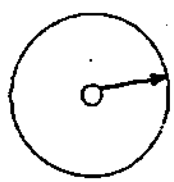


GRID I.D. 68

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

23 SUBSURFACE ANOMALIES INVESTIGATED IN 7 LANES.

2 lbs METAL RECOVERED.

02 DEC 94

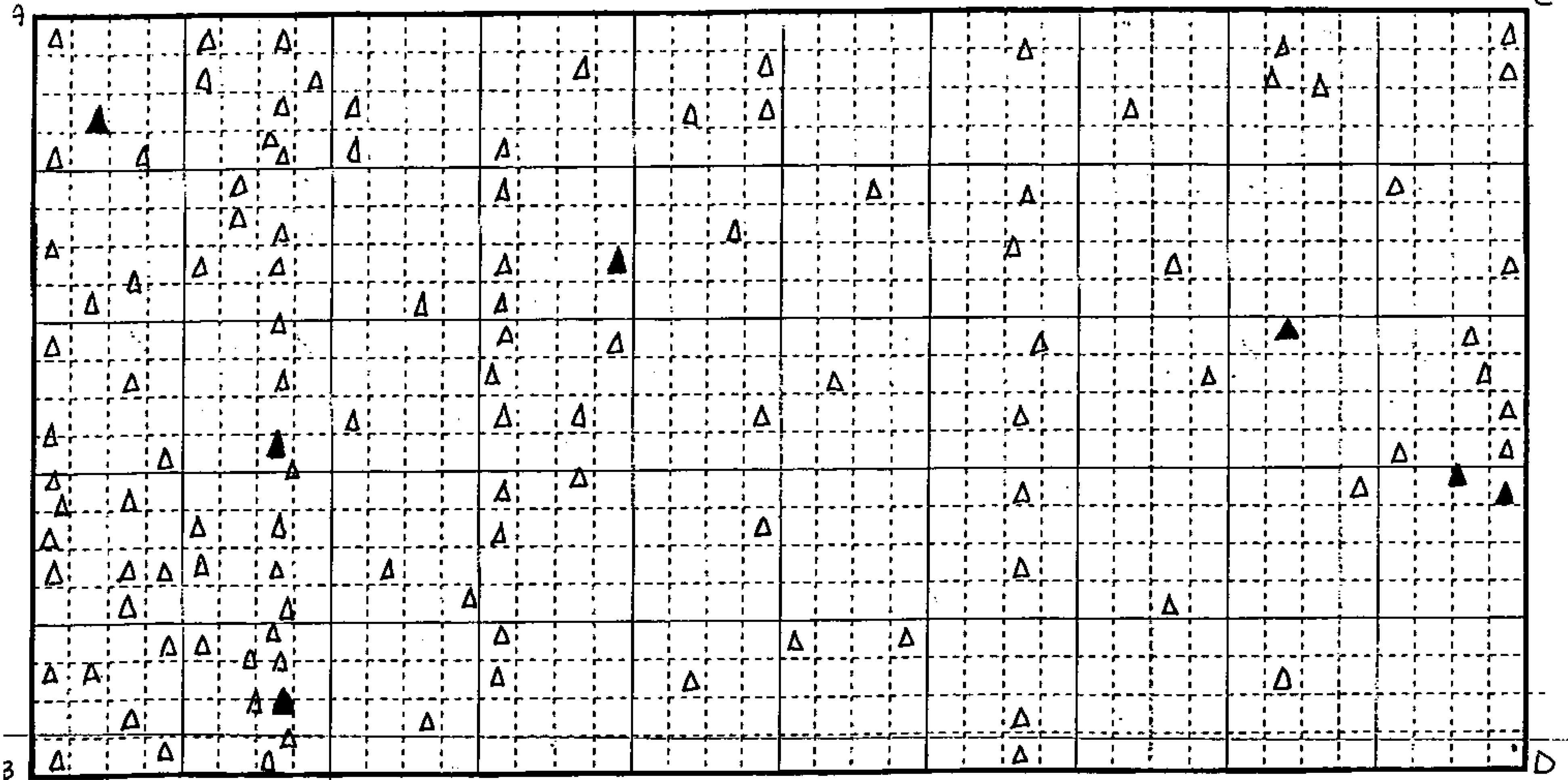
GRID SURVEY SUMMARY SHEET

GRID : 68

Accessability: EASY

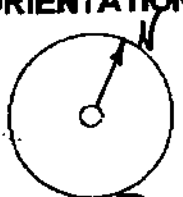
Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Frag	1	N/A	N/A	1	
2	Frag	1	N/A	N/A	2	
3	Bridle ring	1	N/A	N/A	4	
4	Frag	1	N/A	N/A	2	
5	Frag	1	N/A	N/A	1	
6	Rock	1	N/A	N/A	1	
7	Wire	1	N/A	N/A	3	
8	30cal. clip	1	N/A	N/A	2	
9	Rock	1	N/A	N/A	3	
10	Nails	3	N/A	N/A	3-12	
11	Rock	1	N/A	N/A	2	
12	Wire	1	N/A	N/A	3	
13	Nail	1	N/A	N/A	1	
14	Rock	1	N/A	N/A	2	
15	Wire	1	N/A	N/A	3	
16	Bolt	1	N/A	N/A	2	
17	Nail	1	N/A	N/A	2	
18	Frag	1	N/A	N/A	3	
19	Rock	1	N/A	N/A	3	
20	30cal. clip	1	N/A	N/A	2	
21	Chain saw wrench	1	N/A	N/A	4	
22	Rock	1	N/A	N/A	3	
23	Bolt	1	N/A	N/A	1	

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

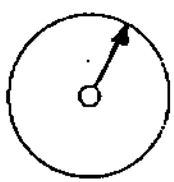


GRID I.D. 69

MAP ORIENTATION



WIND DIRECTION



LEGEND

- SUBSURFACE ANOMALIES
- SURFACE OEW/UXO
- SUBSURFACE OEW/UXO
- FIRE SAFETY EQUIPMENT
- PIT,TRENCHES, BUNKER, ETC.
- RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

118 SUBSURFACE ANOMALIES INVESTIGATED IN 7 LANES
AND "HEAVY HITS" BETWEEN LANES.
7 EA. 60MM MORTAR, H.E., FUSED LOCATED
48 lbs METAL RECOVERED
02 DEC 94

GRID SURVEY SUMMARY SHEET

GRID : 69

Accessability: Asphalt Road

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Rock	1	N/A	N/A	2	
2	Wire	1	N/A	N/A	3	
3	60mm Mortar	1	N/A	HE	3	Fuse is missing
4	60mm Fin assy.	1	N/A	N/A	5	
5	60mm Fin assy.	1	N/A	N/A	6	
6	60mm Fin assy.	1	N/A	N/A	3	
7	60mm Fin	2	N/A	N/A	2-11	
8	60mm Fin assy.	1	N/A	N/A	5	
9	60mm Fin assy.	1	N/A	N/A	4	
10	Boom	1	N/A	N/A	3	
11	60mm Fin	1	N/A	N/A	3	
12	Frag	1	N/A	N/A	3	
13	Frag	1	N/A	N/A	2	
14	60mm Fin assy.	1	N/A	N/A	4	
15	Frag	2	N/A	N/A	3-9	
16	Can	1	N/A	N/A	1	
17	60mm Fin assy.	1	N/A	N/A	4	
18	Frag	1	N/A	N/A	2	
19	60mm Fin assy.	1	N/A	N/A	3	
20	60mm Fin assy.	1	N/A	N/A	4	
21	Fin	2	N/A	N/A	1-8	
22	60mm Fin assy.	1	N/A	N/A	3	
23	60mm Fin assy.	1	N/A	N/A	1	
24	Fin	1	N/A	N/A	2	
25	60mm Fin assy.	1	N/A	N/A	1	
26	60mm Mortar	1	Fuse	HE	4	
27	Frag	1	N/A	N/A	2	
28	Fin	1	N/A	N/A	4	
29	Fin assy./ frag	3	N/A	N/A	2-13	
30	Fins	2	N/A	N/A	3-9	

GRID SURVEY SUMMARY SHEET

GRID : 69

Accessability: Asphalt Road

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	Scrap	1	N/A	N/A	5	
32	Frag	1	N/A	N/A	2	
33	60mm Tail Boom	1	N/A	N/A	4	
34	60mm Fin assy.	1	N/A	N/A	5	
35	60mm Fin assy.	1	N/A	N/A	6	
36	60mm Fin assy.	1	N/A	N/A	6	
37	60mm Fin assy.	1	N/A	N/A	3	
38	Frag	3	N/A	N/A	12-20	
39	Frag	2	N/A	N/A	6-18	
40	60mm Tail assy.	1	N/A	N/A	4	
41	Frag	1	N/A	N/A	3	
42	60mm Tail Boom	1	N/A	N/A	3	
43	Frag	1	N/A	N/A	2	
44	Frag	1	N/A	N/A	3	
45	Barbed wire	1	N/A	N/A	2	
46	Can	2	N/A	N/A	3-11	
47	60mm Fin assy.	2	N/A	N/A	1-6	
48	Re bar	1	N/A	N/A	1	
49	Frag	2	N/A	N/A	2-7	
50	Can	1	N/A	N/A	3	
51	Coca cola can	1	N/A	N/A	10	
52	30 cal. clip	1	N/A	N/A	1	
53	Frag	1	N/A	N/A	1	
54	Cable	1	N/A	N/A	4	
55	60mm Fin	1	N/A	N/A	2	
56	60mm Fin assy.	2	N/A	N/A	5-9	
57	60mm Fin assy.	1	N/A	N/A	4	
58	60mm TailBoom	1	N/A	N/A	2	
59	Can	1	N/A	N/A	2	
60	Barbed wire	1	N/A	N/A	4	

GRID SURVEY SUMMARY SHEET

GRID : 69

Accessability: Asphalt Road

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
61	Can	2	N/A	N/A	13-19	
62	Frag	2	N/A	N/A	3-16	
63	Auto exaust pipe	1	N/A	N/A	1	
64	60mm Fin assy.	1	N/A	N/A	4	
65	60mm Fin assy.	1	N/A	N/A	4	
66	60mm Fin assy.	1	N/A	N/A	3	
67	60mm Fin assy.	1	N/A	N/A	4	
68	Frag	1	N/A	N/A	4	
69	Can	1	N/A	N/A	2	
70	60mm Tail assy.	1	N/A	N/A	2	
71	60mm Mortar	1	Fuse	HE	2	
72	60mm Fin	1	N/A	N/A	3	
73	60mm Fin assy.	1	N/A	N/A	5	
74	60mm Fin assy.	1	N/A	N/A	4	
75	Comm. wire	3	N/A	N/A	4-11	
76	60mm Mortar	1	Fuse	HE	3	
77	60mm Fin assy.	1	N/A	N/A	4	
78	60mm Mortar	1	N/A	HE	1	Fuse missing
79	60mm Fin assy.	1	N/A	N/A	4	
80	60mm Fin assy.	1	N/A	N/A	3	
81	60mm Fin assy.	1	N/A	N/A	3	
82	60mm Tail Boom	1	N/A	N/A	4	
83	60mm Fin assy.	1	N/A	N/A	4	
84	60mm Fin assy.	1	N/A	N/A	6	
85	60mm Fin assy.	1	N/A	N/A	3	
86	Frag	1	N/A	N/A	2	
87	60mm Fin assy.	2	N/A	N/A	1	
88	Frag	1	N/A	N/A	2-8	
89	Frag	1	N/A	N/A	4	
90	Fin	1	N/A	N/A	2	

GRID SURVEY SUMMARY SHEET

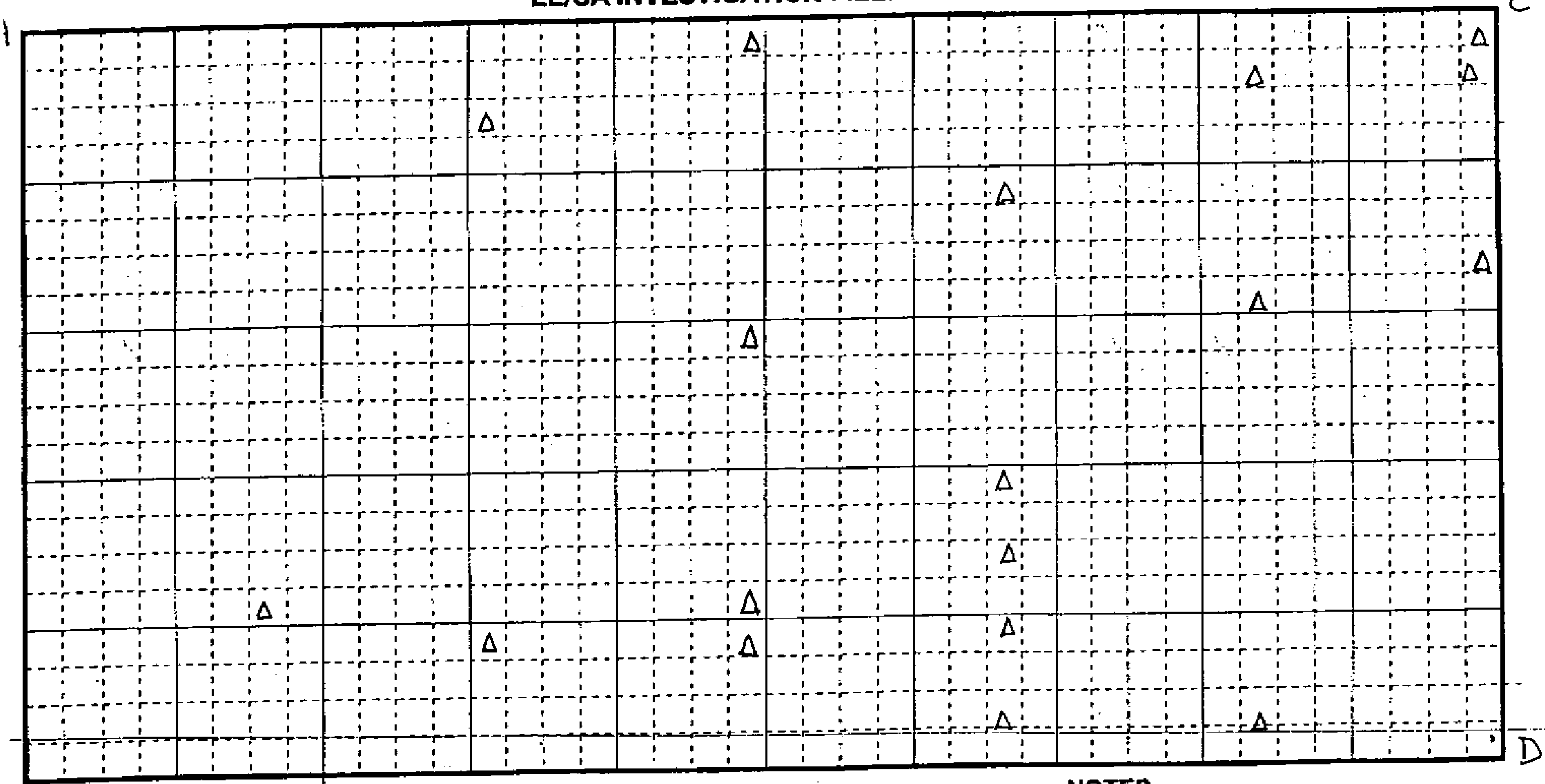
GRID : 69

Accessability: Asphalt Road

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
91	60mm Tail Boom	1	N/A	N/A	2	
92	Frag	1	N/A	N/A	1	
93	60mm Fin assy.	1	N/A	N/A	4	
94	60mm Fin assy.	1	N/A	N/A	5	
95	60mm Fin assy.	1	N/A	N/A	4	
96	60mm Mortar	1	Fuse	HE	1	
97	60mm Fin assy.	2	N/A	N/A	5-9	
98	60mm assy. & Frag	2	N/A	N/A	13-17	
99	Frag	1	N/A	N/A	4	
100	Barbed wire	2	N/A	N/A	4-11	
101	60mm Fin assy.	1	N/A	N/A	5	
102	60mm Fin assy.	1	N/A	N/A	4	
103	60mm Fin assy.	1	N/A	N/A	6	
104	Frag	2	N/A	N/A	2-7	
105	60mm Fins	2	N/A	N/A	11-16	
106	Fins	2	N/A	N/A	4	
107	60mm Fin assy.	1	N/A	N/A	6	
108	Scrap	1	N/A	N/A	1	
109	Frag	1	N/A	N/A	3	
110	60mm Fin assy.	1	N/A	N/A	4	
111	60mm Fin assy.	1	N/A	N/A	6	
112	60mm Fin assy.	1	N/A	N/A	5	
113	60mm Fin assy.	1	N/A	N/A	5	
114	60mm Fins	2	N/A	N/A	5-9	
115	Frag	3	N/A	N/A	4-15	
116	60mm Fin assy.	1	N/A	N/A	6	
117	60mm Fin assy.	1	N/A	N/A	5	
118	60mm Mortar	1	Fuse	HE	4	

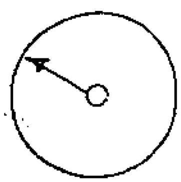
TOTAL P.02

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

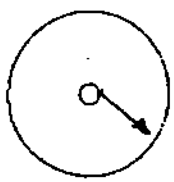


GRID I.D. 70

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

18 SUBSURFACE INVESTIGATIONS IN 7 LANES.

3 lbs METAL RECOVERED

GRID SURVEY SUMMARY SHEET

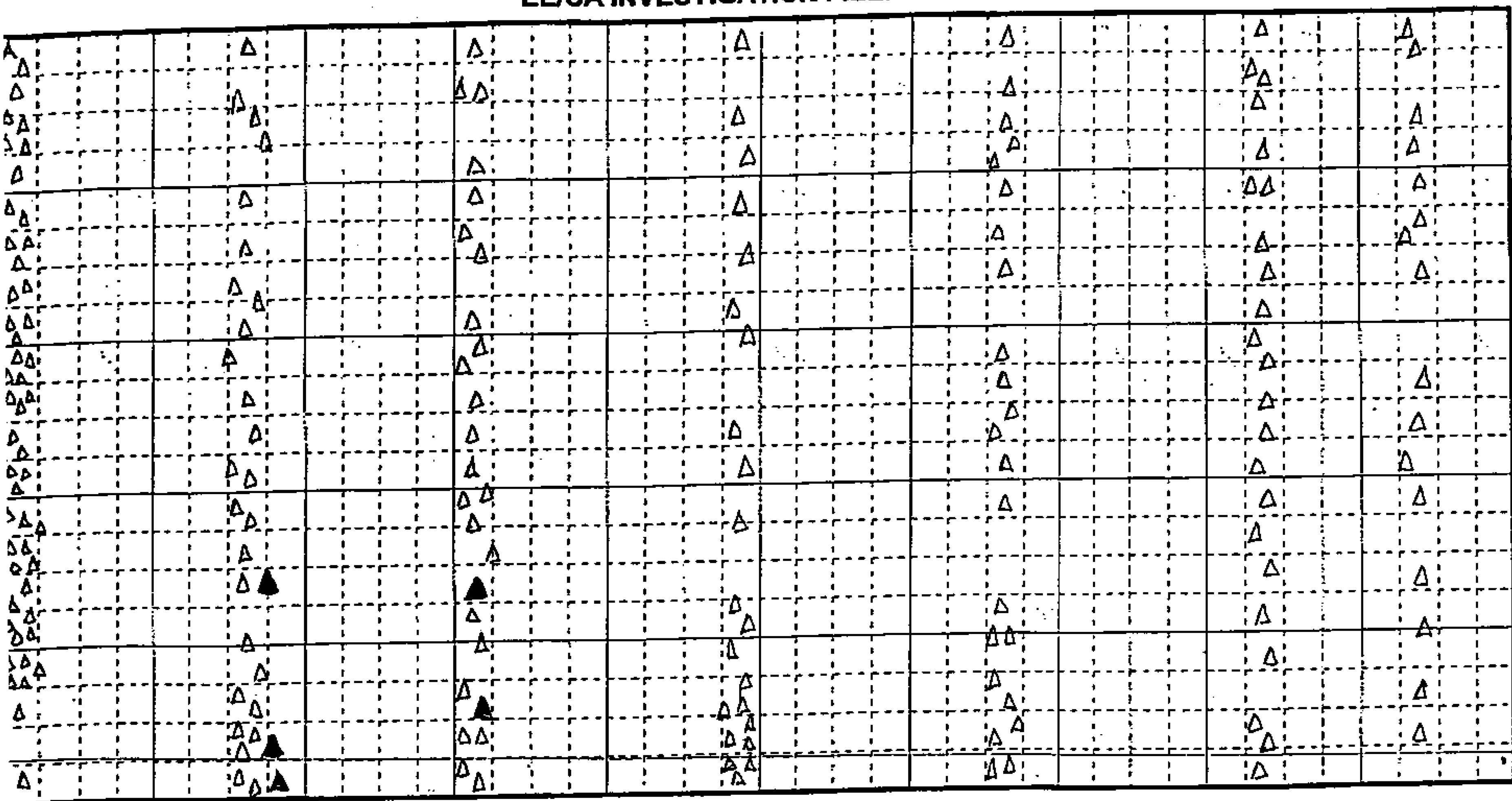
GRID : 70

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Frag	1	N/A	N/A	4	Rusted
2	Frag	1	N/A	N/A	2	Rusted
3	Wire	1	N/A	N/A	2	Rusted
4	Frag	1	N/A	N/A	4	Rusted
5	Frag	1	N/A	N/A	1	Rusted
6	Knife	1	N/A	N/A	2	Rusted
7	Nail	1	N/A	N/A	4	Rusted
8	Grenade spoon	1	N/A	N/A	3	Rusted
9	30 cal.	1	N/A	N/A	1	Smokless powder
10	Grenade spoon	1	N/A	N/A	2	Rusted
11	Grenade spoon	1	N/A	N/A	2	Rusted
12	Rifel grenade frag	1	N/A	N/A	2	Rusted
13	Wire	1	N/A	N/A	1	Rusted
14	Frag	1	N/A	N/A	3	Rusted
15	Barbed wire	1	N/A	N/A	2	Rusted
16	Scrap	1	N/A	N/A	4	Rusted
17	Nail	1	N/A	N/A	2	Rusted
18	60mm Fin assy.	1	N/A	N/A	4	Rusted

TOTAL P.02

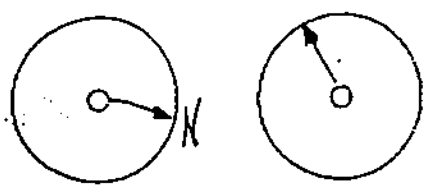
FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP



GRID I.D. 71

MAP ORIENTATION

WIND DIRECTION



LEGEND

- SUBSURFACE ANOMALIES
- SURFACE OEW/UXO
- SUBSURFACE OEW/UXO
- FIRE SAFETY EQUIPMENT
- PIT,TRENCHES, BUNKER, ETC.
- RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

192 SUBSURFACE INVESTIGATIONS IN 7 LANES.
5EA. 60MM MORTAR, H.E., FUZED, LOCATED
83 lbs. METAL RECOVERED.

GRID SURVEY SUMMARY SHEET

GRID : 71

Accessability: PARK ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Wire	1	N/A	N/A	3	Rusted
2	Frag	1	N/A	N/A	2	Rusted
3	60mm Tail boom	1	N/A	N/A	2	Rusted
4	60mm Fin	1	N/A	N/A	4	Rusted
5	60mm Tail boom	1	N/A	N/A	5	Rusted
6	Frag	1	N/A	N/A	4	Rusted
7	60mm Fin	1	N/A	N/A	2	Rusted
8	Scrap	1	N/A	N/A	1	Rusted
9	Frag	1	N/A	N/A	2	Rusted
10	Frag	1	N/A	N/A	3	Rusted
11	60mm Fin assy.	5	N/A	N/A	4-16	Rusted
12	60mm Fin	1	N/A	N/A	2	Rusted
13	60mm Fin asy.	1	N/A	N/A	6	Rusted
14	60mm Fin	2	N/A	N/A	2-7	Rusted
15	60mm Fin assy.	1	N/A	N/A	6	Rusted
16	60mm Fin assy.	1	N/A	N/A	5	Rusted
17	Frag	2	N/A	N/A	5-9	Rusted
18	60mm Fin assy.	1	N/A	N/A	2	Rusted
19	Wire	6	N/A	N/A	5-19	Rusted
20	Frag	1	N/A	N/A	2	Rusted
21	Wire	1	N/A	N/A	3	Rusted
22	60mm Fin assy.	1	N/A	N/A	4	Rusted
23	60mm Tail boom	1	N/A	N/A	1	Rusted
24	Frag	1	N/A	N/A	2	Rusted
25	Frag	2	N/A	N/A	7-9	Rusted
26	Frag	1	N/A	N/A	1	Rusted
27	60mm Fin assy.	1	N/A	N/A	4	Rusted
28	60mm Fin assy.	1	N/A	N/A	5	Rusted
29	60mm Fin assy.	1	N/A	N/A	5	Rusted
30	60mm Fin	1	N/A	N/A	3	Rusted

GRID SURVEY SUMMARY SHEET

GRID : 71

Accessability: PARK ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	Barbed wire	3	N/A	N/A	3-6	Rusted
32	Frag	1	N/A	N/A	3	Rusted
33	60mm Tail boom	1	N/A	N/A	2	Rusted
34	60mm Tail boom	2	N/A	N/A	3-5	Rusted
35	60mm Fin	1	N/A	N/A	1	Rusted
36	60mm Fin asy.	1	N/A	N/A	2	Rusted
37	60mm Fin assy.	1	N/A	N/A	1	Rusted
38	60mm Fin	1	N/A	N/A	4	Rusted
39	Frag	4	N/A	N/A	2-8	Rusted
40	60mm Fin assy.	1	N/A	N/A	5	Rusted
41	60mm Fin assy.	5	N/A	N/A	6	Rusted
42	60mm Fin assy.	1	N/A	N/A	4	Rusted
43	60mm Fin asy.	1	N/A	N/A	7	Rusted
44	Frag	2	N/A	N/A	3	Rusted
45	Frag	1	N/A	N/A	2	Rusted
46	Frag	1	N/A	N/A	3	Rusted
47	60mm Fin assy.	2	N/A	N/A	1	Rusted
48	60mm Fin	1	N/A	N/A	1	Rusted
49	60mm Fin	6	N/A	N/A	5	Rusted
50	60mm Fin assy.	1	N/A	N/A	4	Rusted
51	Frag	1	N/A	N/A	3	Rusted
52	60mm Mortar	1	Fuse	HE	4	Rusted
53	60mm Mortar	2	Fuse	HE	3	Rusted
54	60mm Fin assy.	1	N/A	N/A	1	Rusted
55	60mm Tail boom	2	N/A	N/A	3	Rusted
56	60mm Fin	2	N/A	N/A	3	Rusted
57	60mm Fin	1	N/A	N/A	5	Rusted
58	60mm Fin &Tail boom	1	N/A	N/A	3	Rusted
59	Barbed wire	2	N/A	N/A	2	Rusted
60	Barbed wire & Frag	3	N/A	N/A	4	Rusted

GRID SURVEY SUMMARY SHEET

GRID : 71

Accessability: PARK ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
61	60mm Fin assy.	1	N/A	N/A	6	Rusted
62	60mm Tail boom	1	N/A	N/A	3	Rusted
63	60mm Fin	1	N/A	N/A	2	Rusted
64	60mm Fin	1	N/A	N/A	3	Rusted
65	60mm Tail boom	1	N/A	N/A	2	Rusted
66	60mm Tail boom	1	N/A	N/A	3	Rusted
67	60mm Fin	1	N/A	N/A	2	Rusted
68	Frag	1	N/A	N/A	3	Rusted
69	60mm Fin assy.	1	N/A	N/A	4	Rusted
70	60mm Fin assy.	1	N/A	N/A	4	Rusted
71	60mm Fin assy.	1	N/A	N/A	3	Rusted
72	Rifel Grenade	1	N/A	N/A	3	Rusted
73	60mm Fin	1	N/A	N/A	3	Rusted
74	60mm Mortar	1	Fuse	HE	7	Rusted
75	60mm Fin assy.	1	N/A	N/A	4	Rusted
76	60mm Tail boom	1	N/A	N/A	3	Rusted
77	60mm Fin assy.	2	N/A	N/A	4-9	Rusted
78	60mm Fin assy.	1	N/A	N/A	5	Rusted
79	60mm Fin assy.	1	N/A	N/A	4	Rusted
80	60mm Fin & Frag	2	N/A	N/A	2-6	Rusted
81	60mm Fin assy.	1	N/A	N/A	3	Rusted
82	60mm Fin assy.	1	N/A	N/A	5	Rusted
83	Frag	1	N/A	N/A	4	Rusted
84	60mm Fin	2	N/A	N/A	3-9	Rusted
85	60mm Fin assy.	1	N/A	N/A	4	Rusted
86	Frag	1	N/A	N/A	2	Rusted
87	60mm Fin assy.	1	N/A	N/A	4	Rusted
88	60mm Fin assy.	1	N/A	N/A	4	Rusted
89	60mm Tail boom	1	N/A	N/A	2	Rusted
90	60mm Tail boom	1	N/A	N/A	1	Rusted

GRID SURVEY SUMMARY SHEET

GRID : 71

Accessability: PARK ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
91	60mm Tail boom & Fin	2	N/A	N/A	5-9	Rusted
92	60mm Fin asy.	1	N/A	N/A	1	Rusted
93	60mm Tail boom	1	N/A	N/A	2	Rusted
94	60mm Tail boom	1	N/A	N/A	3	Rusted
95	60mm Mortar	1	Fuse	HE	10	Rusted
96	Frag	1	N/A	N/A	2	Rusted
97	Frag	1	N/A	N/A	3	Rusted
98	60mm Fin assy.	1	N/A	N/A	4	Rusted
99	M 52 Fuse	1	N/A	N/A	4	Rusted
100	60mm Fin assy.	1	N/A	N/A	1	Rusted
101	60mm Fin assy.	1	N/A	N/A	3	Rusted
102	60mm Fin assy.	1	N/A	N/A	4	Rusted
103	Frag	3	N/A	N/A	2-11	Rusted
104	60mm Fin assy. & Frag	2	N/A	N/A	4-9	Rusted
105	60mm Tail boom	1	N/A	N/A	3	Rusted
106	60mm Tail boom	1	N/A	N/A	4	Rusted
107	60mm Tail boom	1	N/A	N/A	3	Rusted
108	Barbed wire	1	N/A	N/A	1	Rusted
109	60mm Fin assy.	1	N/A	N/A	1	Rusted
110	60mm Mortar	1	Fuse	HE	11	Rusted
111	Barbed wire	1	N/A	N/A	1	Rusted
112	60mm Fin assy.	1	N/A	N/A	4	Rusted
113	Frag	2	N/A	N/A	3-8	Rusted
114	60mm Fin assy.	1	N/A	N/A	1	Rusted
115	60mm Mortar	1	Fuse	HE	2	Rusted
116	Frag	4	N/A	N/A	7-15	Rusted
117	60mm Fin assy.	1	N/A	N/A	3	Rusted
118	Frag	1	N/A	N/A	2	Rusted
119	Barbed wire	1	N/A	N/A	1	Rusted
120	60mm Fin	1	N/A	N/A	3	Rusted

GRID SURVEY SUMMARY SHEET

GRID : 71

Accessability: PARK ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
121	Frag	1	N/A	N/A	1	Rusted
122	Frag	3	N/A	N/A	2-7	Rusted
123	60mm Fin assy.	1	N/A	N/A	4	Rusted
124	Frag	3	N/A	N/A	4-12	Rusted
125	60mm Fin	1	N/A	N/A	3	Rusted
126	60mm Fin assy.	1	N/A	N/A	5	Rusted
127	60mm Fin	1	N/A	N/A	3	Rusted
128	60mm Fin assy.	1	N/A	N/A	5	Rusted
129	60mm Fin assy.	1	N/A	N/A	6	Rusted
130	60mm Tail boom &Frag	2	N/A	N/A	4-9	Rusted
131	Henge	1	N/A	N/A	4	Rusted
132	60mm Tail boom	1	N/A	N/A	4	Rusted
133	60mm Tail boom	1	N/A	N/A	4	Rusted
134	60mm Fin assy.	1	N/A	N/A	5	Rusted
135	60mm Fin assy.	1	N/A	N/A	4	Rusted
136	Rock	1	N/A	N/A	6	Rusted
137	60mm Fin assy.	1	N/A	N/A	5	Rusted
138	60mm Fin assy.	1	N/A	N/A	3	Rusted
139	60mm Fin assy.	1	N/A	N/A	3	Rusted
140	Scrap	1	N/A	N/A	2	Rusted
141	Frag	1	N/A	N/A	3	Rusted
142	60mm Fin	2	N/A	N/A	3-9	Rusted
143	60mm Fin	1	N/A	N/A	1	Rusted
144	Frag	1	N/A	N/A	1	Rusted
145	Wire	1	N/A	N/A	1	Rusted
146	60mm Fin assy.	1	N/A	N/A	5	Rusted
147	Frag	1	N/A	N/A	3	Rusted
148	Frag	1	N/A	N/A	4	Rusted
149	60mm Tail boom & Fin	3	N/A	N/A	5-13	Rusted
150	Henge	1	N/A	N/A	6	Rusted

GRID SURVEY SUMMARY SHEET

GRID : 71

Accessability: PARK ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
151	Scrap	1	N/A	N/A	2	Rusted
152	60mm Fin assy.	1	N/A	N/A	6	Rusted
153	60mm Fin assy.	1	N/A	N/A	7	Rusted
154	60mm Fin assy.	1	N/A	N/A	4	Rusted
155	60mm Fin assy.	1	N/A	N/A	4	Rusted
156	60mm Fin	1	N/A	N/A	3	Rusted
157	Frag	1	N/A	N/A	2	Rusted
158	60mm Tail boom	1	N/A	N/A	4	Rusted
159	60mm Fin	1	N/A	N/A	2	Rusted
160	60mm Fin	1	N/A	N/A	4	Rusted
161	60mm Fin	1	N/A	N/A	3	Rusted
162	60mm Fin assy.	1	N/A	N/A	8	Rusted
163	60mm Fin	1	N/A	N/A	4	Rusted
164	60mm Tail boom	1	N/A	N/A	5	Rusted
165	60mm Fin	1	N/A	N/A	7	Rusted
166	Frag	1	N/A	N/A	4	Rusted
167	Wire	1	N/A	N/A	2	Rusted
168	Frag	1	N/A	N/A	3	Rusted
169	Frag	2	N/A	N/A	4-8	Rusted
170	Frag	2	N/A	N/A	3-11	Rusted
171	60mm Tail boom	1	N/A	N/A	4	Rusted
172	Frag	1	N/A	N/A	3	Rusted
173	60mm Fin assy.	1	N/A	N/A	4	Rusted
174	Frag	1	N/A	N/A	4	Rusted
175	60mm Fin assy.	1	N/A	N/A	6	Rusted
176	Frag	3	N/A	N/A	9-15	Rusted
177	60mm Fin assy.	2	N/A	N/A	2-5	Rusted
178	60mm Fin assy.	1	N/A	N/A	4	Rusted
179	Frag	2	N/A	N/A	7-10	Rusted
180	60mm Tail boom	1	N/A	N/A	2	Rusted

GRID SURVEY SUMMARY SHEET

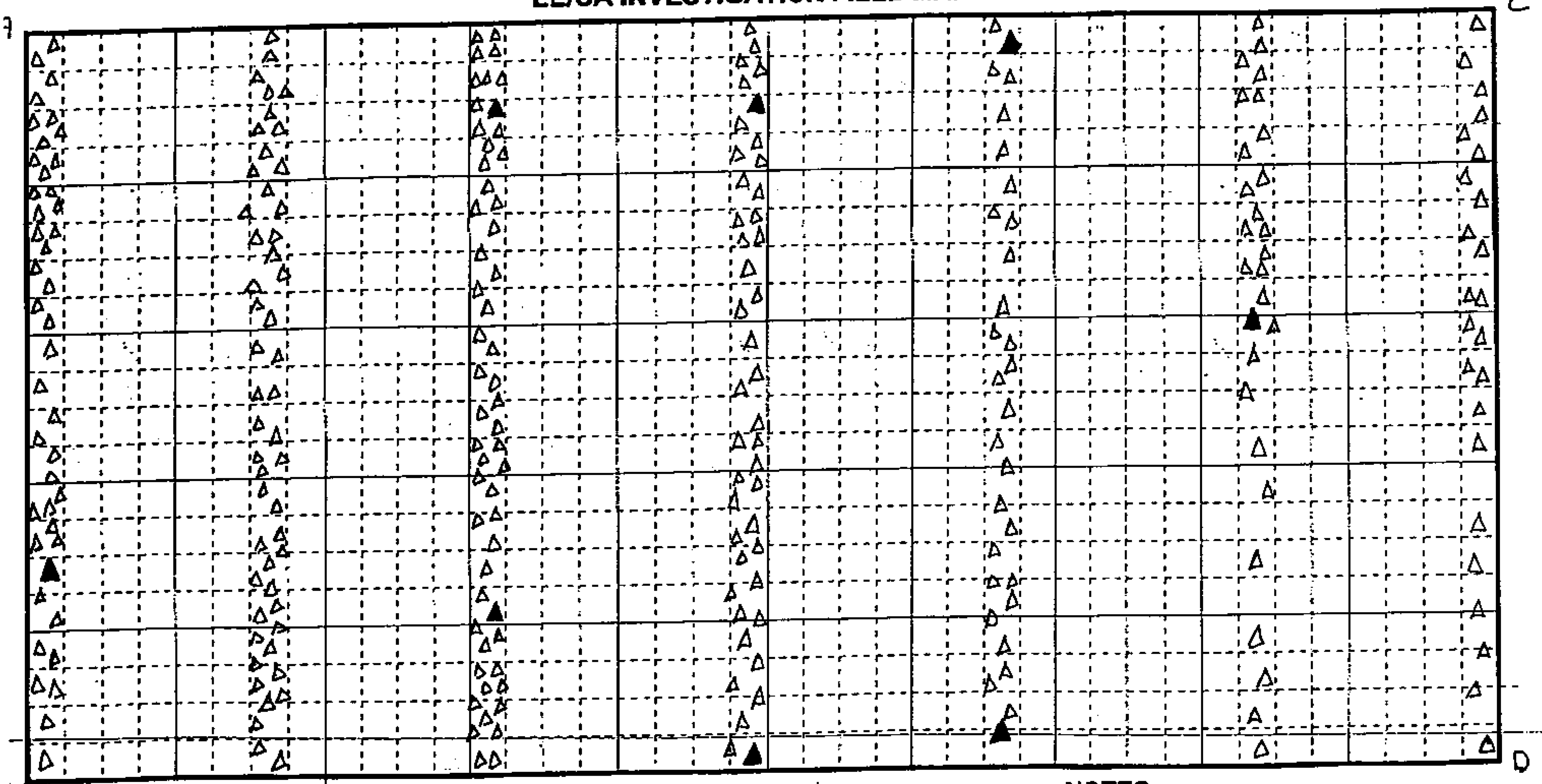
GRID : 71

Accessability: PARK ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
181	60mm Fin	1	N/A	N/A	3	Rusted
182	60mm Fin	1	N/A	N/A	4	Rusted
183	60mm Fin assy.	1	N/A	N/A	3	Rusted
184	Frag	2	N/A	N/A	3-8	Rusted
185	Frag	1	N/A	N/A	2	Rusted
186	Wire	1	N/A	N/A	1	Rusted
187	60mm Fin	1	N/A	N/A	3	Rusted
188	Frag	1	N/A	N/A	2	Rusted
189	Frag	2	N/A	N/A	2-5	Rusted
190	60mm Fin assy.	1	N/A	N/A	6	Rusted
191	Frag	1	N/A	N/A	4	Rusted
192	Frag	1	N/A	N/A	4	Rusted

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

TOTAL P.02

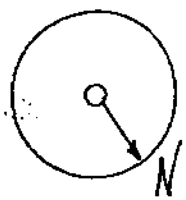


LEGEND

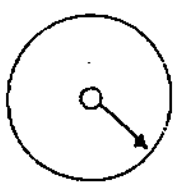
- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

GRID I.D. 72

MAP ORIENTATION



WIND DIRECTION



NOTES

~~276~~ 266 SUBSURFACE ANOMALIES INVESTIGATED IN 7 LANES.
8 EA. 60 MM MORTARS, H.E., FUSED LOCATED
103 lbs METAL RECOVERED

GRID SURVEY SUMMARY SHEET

GRID :72

Accessability: Gravel Road

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	60mm Tail fin assy.	1	N/A	N/A	4	Rusted
2	60mm Tail fin assy.	1	N/A	N/A	3	Rusted
3	60mm Tail fin assy.	1	N/A	N/A	6	Rusted
4	Fin	1	N/A	N/A	2	Rusted
5	Barbed wire	2	N/A	N/A	4-8	Rusted
6	Wire	1	N/A	N/A	2	Rusted
7	Rock	1	N/A	N/A	2	Rusted
8	Frag	1	N/A	N/A	2	Rusted
9	Frag	1	N/A	N/A	3	Rusted
10	Barbed wire	1	N/A	N/A	3	Rusted
11	Frag	1	N/A	N/A	2	Rusted
12	60mm Fin assy.	1	N/A	N/A	4	Rusted
13	Frag	1	N/A	N/A	2	Rusted
14	Frag	1	N/A	N/A	1	Rusted
15	60mm Fin assy.	2	N/A	N/A	7-11	Rusted
16	Frag	2	N/A	N/A	2-5	Rusted
17	60mm Tail boom	1	N/A	N/A	1	Rusted
18	60mm Fin	1	N/A	N/A	2	Rusted
19	60mm Fin assy.	1	N/A	N/A	1	Rusted
20	60mm Fin assy.	1	N/A	N/A	4	Rusted
21	Frag / Barbed wire	3	N/A	N/A	4-13	Rusted
22	60mm Fin assy.	1	N/A	N/A	4	Rusted
23	60mm Fin assy.	1	N/A	N/A	3	Rusted
24	Wire	1	N/A	N/A	1	Rusted
25	Barbed wire	1	N/A	N/A	2	Rusted
26	Frag	1	N/A	N/A	4	Rusted
27	60mm Fin assy.	2	N/A	N/A	2-4	Rusted
28	60mm Fin	1	N/A	N/A	1	Rusted
29	Frag	1	N/A	N/A	3	Rusted
30	60mm Fin assy.	1	N/A	N/A	4	Rusted

GRID SURVEY SUMMARY SHEET

GRID :72

Accessability: Gravel Road

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	Barbed wire	1	N/A	N/A	2	Rusted
32	60mm Mortar	1	Fuse	HE	2	broken fuse
33	60mm Fin assy.	2	N/A	N/A	11-13	Rusted
34	Barbed wire	2	N/A	N/A	5-7	Rusted
35	60mm Fin assy.	1	N/A	N/A	6	Rusted
36	Frag	1	N/A	N/A	4	Rusted
37	Frag	1	N/A	N/A	1	Rusted
38	Frag	1	N/A	N/A	2	Rusted
39	Frag	1	N/A	N/A	1	Rusted
40	60mm Fin assy.	1	N/A	N/A	5	Rusted
41	60mm Fin assy.	1	N/A	N/A	4	Rusted
42	60mm Fin assy.	1	N/A	N/A	1	Rusted
43	60mm Fin assy.	1	N/A	N/A	5	Rusted
44	60mm Tail boom	1	N/A	N/A	3	Rusted
45	60mm Fin	1	N/A	N/A	2	Rusted
46	60mm Fin assy.	1	N/A	N/A	5	Rusted
47	60mm Fin asy.	1	N/A	N/A	4	Rusted
48	Barbed wire	3	N/A	N/A	12-21	Rusted
49	30 cal. clip	1	N/A	N/A	2	Rusted
50	60mm Fin assy.	1	N/A	N/A	3	Rusted
51	60mm Fin asy.	1	N/A	N/A	4	Rusted
52	60mm Mortar	1	N/A	N/A	4	Rusted
53	60mm Mortar	1	N/A	N/A	5	Rusted
54	60mm Fin	1	N/A	N/A	1	Rusted
55	60mm Fin assy.	2	N/A	N/A	9-12	Rusted
56	60mm Fin assy.	1	N/A	N/A	5	Rusted
57	60mm Tail boom	1	N/A	N/A	1	Rusted
58	60mm Fin assy.	1	N/A	N/A	3	Rusted
59	Frag	1	N/A	N/A	2	Rusted
60	Frag	1	N/A	N/A	1	Rusted

GRID SURVEY SUMMARY SHEET

GRID :72

Accessability: Gravel Road

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
61	60mm Fin assy.	1	N/A	N/A	4	Rusted
62	60mm Fin assy.	1	N/A	N/A	4	Rusted
63	60mm Fin assy.	2	N/A	N/A	4-9	Rusted
64	Frag	1	N/A	N/A	2	Rusted
65	60mm Tail boom	1	N/A	N/A	5	Rusted
66	60mm Fin assy.	1	N/A	N/A	3	Rusted
67	60mm Fin assy.	1	N/A	N/A	3	Rusted
68	60mm Fin	1	N/A	N/A	1	Rusted
69	Wire	1	N/A	N/A	1	Rusted
70	60mm Fin assy.	1	N/A	N/A	2	Rusted
71	60mm Fin assy.	1	N/A	N/A	4	Rusted
72	Frag	1	N/A	N/A	1	Rusted
73	Frag	1	N/A	N/A	1	Rusted
74	60mm Fin assy.	1	N/A	N/A	4	Rusted
75	60mm Fin assy.	2	N/A	N/A	5-10	Rusted
76	60mm Tail boom	1	N/A	N/A	4	Rusted
77	Frag	1	N/A	N/A	2	Rusted
78	Frag	2	N/A	N/A	2-4	Rusted
79	60mm Fin assy.	2	N/A	N/A	3-9	Rusted
80	81mm Fin assy.	1	N/A	N/A	6	Rusted
81	Frag	2	N/A	N/A	3-7	Rusted
82	Frag	1	N/A	N/A	2	Rusted
83	Frag	1	N/A	N/A	4	Rusted
84	60mm Tail boom	1	N/A	N/A	4	Rusted
85	60mm Fin assy.	1	N/A	N/A	2	Rusted
86	60mm Fin assy.	1	N/A	N/A	4	Rusted
87	60mm Fin assy.	1	N/A	N/A	2	Rusted
88	Frag	4	N/A	N/A	9-20	Rusted
89	60mm Tail boom	1	N/A	N/A	4	Rusted
90	Frag	4	N/A	N/A	5-19	Rusted

GRID SURVEY SUMMARY SHEET

GRID :72

Accessability: Gravel Road

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
91	60mm Fin assy.	1	N/A	N/A	1	Rusted
92	60mm Fin assy.	1	N/A	N/A	4	Rusted
93	60mm Fin asy.	1	N/A	N/A	3	Rusted
94	60mm Fin assy.	1	N/A	N/A	2	Rusted
95	60mm Fin assy.	1	N/A	N/A	4	Rusted
96	60mm Fin assy. / Frag	4	N/A	N/A	2-15	Rusted
97	60mm Fin assy.	1	N/A	N/A	3	Rusted
98	60mm Fin	1	N/A	N/A	1	Rusted
99	Frag	1	N/A	N/A	2	Rusted
100	60mm Fin assy.	1	N/A	N/A	2	Rusted
101	Frag	4	N/A	N/A	9-22	Rusted
102	60mm Mortar	1	Fuse	HE	3	Rusted
103	60mm Fin assy.	1	N/A	N/A	5	Rusted
104	60mm Fin assy.	1	N/A	N/A	4	Rusted
105	60mm Mortar	1	Fuse	HE	1	Rusted
106	Barbed wire	1	N/A	N/A	1	Rusted
107	Frag	1	N/A	N/A	3	Rusted
108	60mm Tail boom	1	N/A	N/A	3	Rusted
109	60mm Fin assy.	1	N/A	N/A	4	Rusted
110	60mm Fin assy.	1	N/A	N/A	5	Rusted
111	60mm Fin assy.	1	N/A	N/A	1	Rusted
112	Frag	1	N/A	N/A	1	Rusted
113	60mm Fin assy.	1	N/A	N/A	4	Rusted
114	60mm Fin assy.	1	N/A	N/A	2	Rusted
115	Frag	1	N/A	N/A	2	Rusted
116	60mm Tail boom	1	N/A	N/A	3	Rusted
117	Frag	3	N/A	N/A	11-19	Rusted
118	60mm Fin assy.	1	N/A	N/A	2	Rusted
119	Frag	2	N/A	N/A	4-7	Rusted
120	60mm Fin assy.	1	N/A	N/A	1	Rusted

GRID SURVEY SUMMARY SHEET

GRID :72

Accessability: Gravel Road

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
121	60mm Fin assy.	1	N/A	N/A	1	Rusted
122	60mm Fin assy.	1	N/A	N/A	4	Rusted
123	60mm Fin assy. / Frag	2	N/A	N/A	4-7	Rusted
124	60mm Tail boom	1	N/A	N/A	6	Rusted
125	60mm Tail boom	1	N/A	N/A	2	Rusted
126	60mm Fin assy.	1	N/A	N/A	2	Rusted
127	60mm Tail boom	1	N/A	N/A	5	Rusted
128	60mm Fin assy./ Frag	3	N/A	N/A	5-11	Rusted
129	60mm Tail boom	1	N/A	N/A	2	Rusted
130	60mm Fin assy.	1	N/A	N/A	4	Rusted
131	60mm Tail boom / Frag	4	N/A	N/A	10-21	Rusted
132	60mm Fin assy.	1	N/A	N/A	5	Rusted
133	60mm Fin assy.	1	N/A	N/A	4	Rusted
134	MK 52 Fuse	1	N/A	N/A	3	Rusted
135	60mm Fin assy. / Frag	4	N/A	N/A	2-12	Rusted
136	60mm Tail boom	1	N/A	N/A	2	Rusted
137	60mm Fin assy.	1	N/A	N/A	3	Rusted
138	60mm Fin assy.	2	N/A	N/A	7-9	Rusted
139	60mm Mortar	1	Fuse	HE	1	Rusted
140	60mm Fin assy.	2	N/A	N/A	13-15	Rusted
141	60 Fin assy.	2	N/A	N/A	9-11	Rusted
142	Frag	1	N/A	N/A	3	Rusted
143	Frag	3	N/A	N/A	3-15	Rusted
144	Bucket	1	N/A	N/A	2	Rusted
145	60mm Fins	2	N/A	N/A	4-8	Rusted
146	60mm Fin assy.	1	N/A	N/A	3	Rusted
147	60mm Fin assy.	1	N/A	N/A	5	Rusted
148	60mm Fin assy.	1	N/A	N/A	1	Rusted
149	60mm Fin assy.	1	N/A	N/A	4	Rusted
150	Frag	1	N/A	N/A	2	Rusted

GRID SURVEY SUMMARY SHEET

GRID :72

Accessability: Gravel Road

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
151	60mm Tail booms	2	N/A	N/A	11-15	Rusted
152	60mm Fin assy.	2	N/A	N/A	5-9	Rusted
153	60mm Fin assy.	1	N/A	N/A	2	Rusted
154	60mm Fin assy.	1	N/A	N/A	1	Rusted
155	60mm Fin assy.	1	N/A	N/A	2	Rusted
156	60mm Fin / Frag	3	N/A	N/A	12-17	Rusted
157	Frag	1	N/A	N/A	1	Rusted
158	Frag	1	N/A	N/A	2	Rusted
159	60mm Tail boom	1	N/A	N/A	2	Rusted
160	60mm Fin assy.	1	N/A	N/A	4	Rusted
161	60mm Fin assy.	1	N/A	N/A	4	Rusted
162	Frag	1	N/A	N/A	2	Rusted
163	60mm Fin assy.	1	N/A	N/A	3	Rusted
164	60mm Fin assy.	1	N/A	N/A	4	Rusted
165	60mm Fin	1	N/A	N/A	2	Rusted
166	Frag	2	N/A	N/A	3-8	Rusted
167	60mm Fin assy.	1	N/A	N/A	4	Rusted
168	60mm Fin assy.	1	N/A	N/A	3	Rusted
169	60mm Fin assy.	1	N/A	N/A	1	Rusted
170	Frag	1	N/A	N/A	1	Rusted
171	60mm Fin assy.	1	N/A	N/A	2	Rusted
172	60mm Fin assy.	1	N/A	N/A	4	Rusted
173	60mm Fin assy.	1	N/A	N/A	5	Rusted
174	Frag	2	N/A	N/A	9-12	Rusted
175	Frag	1	N/A	N/A	3	Rusted
176	60mm Tail boom	1	N/A	N/A	4	Rusted
177	Frag	1	N/A	N/A	2	Rusted
178	Frag	1	N/A	N/A	2	Rusted
179	60mm Tail booms	2	N/A	N/A	2-5	Rusted
180	60mm Fin assy.	1	N/A	N/A	4	Rusted

GRID SURVEY SUMMARY SHEET

GRID :72

Accessability: Gravel Road

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
181	60mm Fin	1	N/A	N/A	2	Rusted
182	60mm Tail boom	1	N/A	N/A	3	Rusted
183	Frag	1	N/A	N/A	1	Rusted
184	60mm Fin assy.	1	N/A	N/A	1	Rusted
185	60mm Fin assy.	1	N/A	N/A	4	Rusted
186	60mm Fin assy.	1	N/A	N/A	4	Rusted
187	60mm Fin assy.	1	N/A	N/A	3	Rusted
188	60mm Fin assy.	1	N/A	N/A	1	Rusted
189	60mm Fin assy.	1	N/A	N/A	4	Rusted
190	Frag	4	N/A	N/A	4-19	Rusted
191	60mmTail boom	1	N/A	N/A	1	Rusted
192	60mm Fin assy.	1	N/A	N/A	3	Rusted
193	60mm Tail boom	1	N/A	N/A	2	Rusted
194	60mm Tail boom	1	N/A	N/A	3	Rusted
195	Frag	1	N/A	N/A	2	Rusted
196	Frag	1	N/A	N/A	2	Rusted
197	60mm Fin	1	N/A	N/A	5	Rusted
198	60mm Fin assy.	1	N/A	N/A	3	Rusted
199	Frag	1	N/A	N/A	4	Rusted
200	Frag	2	N/A	N/A	3-9	Rusted
201	60mm Fin assy.	1	N/A	N/A	4	Rusted
202	60mm Fin assy.	1	N/A	N/A	4	Rusted
203	Frag	1	N/A	N/A	3	Rusted
204	60mm Fin assy.	1	N/A	N/A	3	Rusted
205	60mm Mortar	1	Fuse	HE	4	Rusted
206	60mm Fin assy.	2	N/A	N/A	3-7	Rusted
207	Frag	1	N/A	N/A	3	Rusted
208	60mm Tail boom	1	N/A	N/A	3	Rusted
209	60mm Fin assy.	1	N/A	N/A	4	Rusted
210	60mm Fin assy.	1	N/A	N/A	3	Rusted

GRID SURVEY SUMMARY SHEET

GRID :72

Accessability: Gravel Road

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
211	Frag	1	N/A	N/A	1	Rusted
212	60mm Fin assy.	1	N/A	N/A	4	Rusted
213	60mm Fin assy.	1	N/A	N/A	6	Rusted
214	60mm Fin assy.	1	N/A	N/A	4	Rusted
215	60mm Tail boom	1	N/A	N/A	2	Rusted
216	60mm Fin assy.	1	N/A	N/A	4	Rusted
217	60mm Fin assy.	1	N/A	N/A	4	Rusted
218	Fuse / Frag	2	N/A	N/A	6-12	Rusted
219	Frag	1	N/A	N/A	4	Rusted
220	Frag	1	N/A	N/A	4	Rusted
221	60mm Tail boom / Frag	2	N/A	N/A	5-7	Rusted
222	Frag	2	N/A	N/A	8-11	Rusted
223	60mm Tail boom	1	N/A	N/A	1	Rusted
224	60mm Fin assy.	1	N/A	N/A	4	Rusted
225	60mm Fin assy.	1	N/A	N/A	3	Rusted
226	Frag	2	N/A	N/A	2-5	Rusted
227	Frag	1	N/A	N/A	3	Rusted
228	Frag	2	N/A	N/A	4-9	Rusted
229	60mm Tail boom	1	N/A	N/A	1	Rusted
230	60mm Fin assy.	1	N/A	N/A	4	Rusted
231	Frag	1	N/A	N/A	1	Rusted
232	60mm Fin assy.	1	N/A	N/A	1	Rusted
233	Frag	1	N/A	N/A	1	Rusted
234	60mm Fin assy.	1	N/A	N/A	3	Rusted
235	60mm Fin assy.	1	N/A	N/A	8	Rusted
236	60mm Mortar	1	Fuse	HE	1	Rusted
237	60mm Fin assy.	1	N/A	N/A	1	Rusted
238	60mm Tail boom	1	N/A	N/A	3	Rusted
239	60mm Fin assy.	1	N/A	N/A	1	Rusted
240	60mm Fin assy.	1	N/A	N/A	1	Rusted

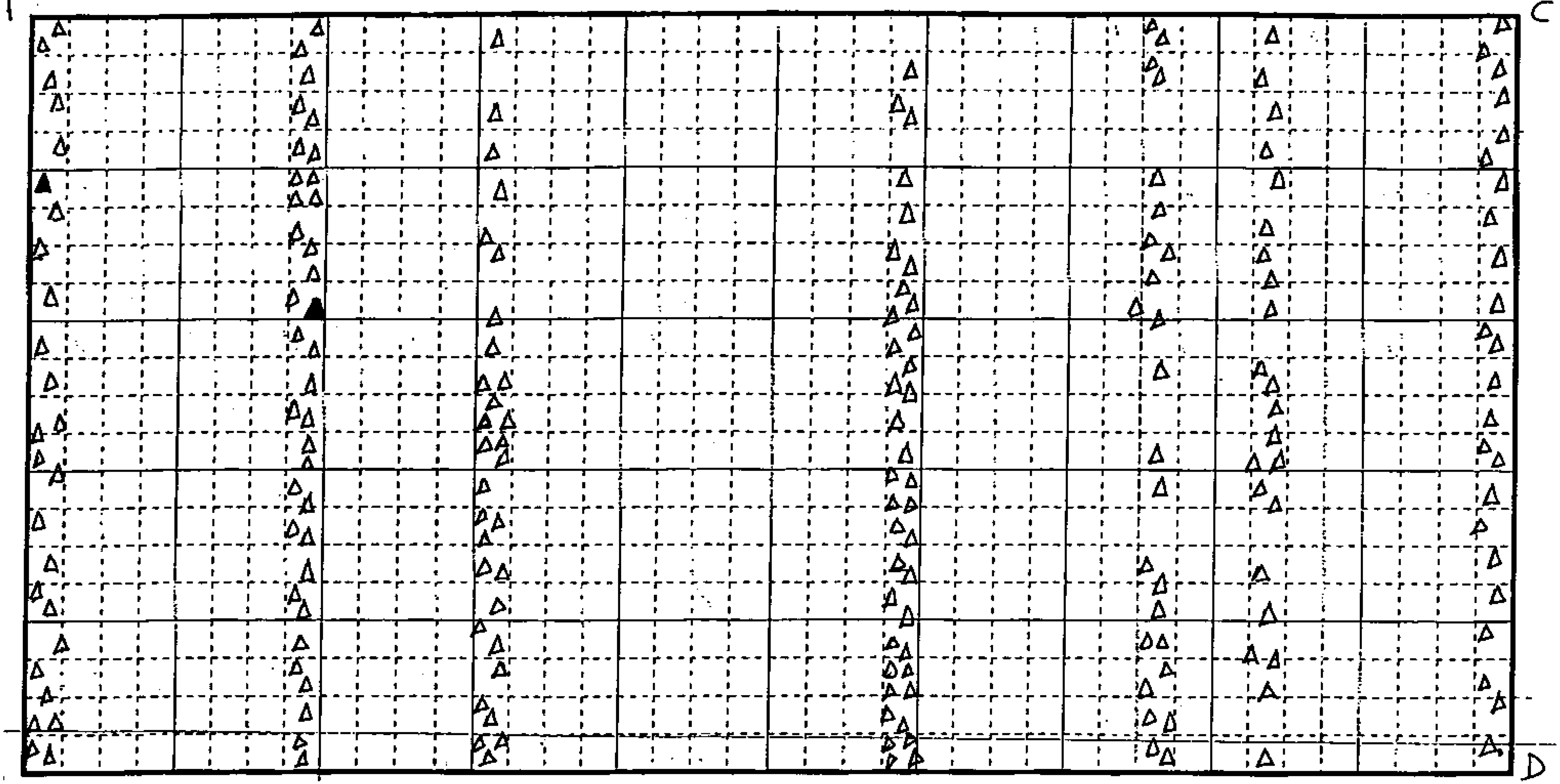
GRID SURVEY SUMMARY SHEET

GRID :72

Accessability: Gravel Road

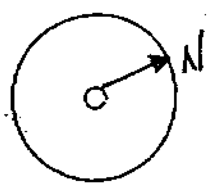
Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
241	Frag	2	N/A	N/A	2-5	Rusted
242	Frag	1	N/A	N/A	4	Rusted
243	60mm Fin assy.	1	N/A	N/A	1	Rusted
244	60mm Fin	1	N/A	N/A	3	Rusted
245	Frag	1	N/A	N/A	1	Rusted
246	Frag	1	N/A	N/A	1	Rusted
247	Frag	1	N/A	N/A	1	Rusted
248	60mm Fin assy.	1	N/A	N/A	2	Rusted
249	60mm Fin assy.	1	N/A	N/A	1	Rusted
250	60mm Fin assy.	1	N/A	N/A	2	Rusted
251	60mm Fin assy.	1	N/A	N/A	4	Rusted
252	60mm Fin assy. / Frag	4	N/A	N/A	5-17	Rusted
253	60mm Tail boom / Frag	4	N/A	N/A	12-20	Rusted
254	Can	2	N/A	N/A	5-8	Rusted
255	Frag	3	N/A	N/A	3-8	Rusted
256	60mm Tail boom	1	N/A	N/A	1	Rusted
257	60mm Fin	1	N/A	N/A	1	Rusted
258	Frag	3	N/A	N/A	7-19	Rusted
259	Frag	2	N/A	N/A	6-10	Rusted
260	60mm Fin assy.	1	N/A	N/A	2	Rusted
261	Scrap	1	N/A	N/A	1	Rusted
262	Frag	1	N/A	N/A	2	Rusted
263	60mm Fin assy. / Frag	2	N/A	N/A	3-9	Rusted
264	Frag	3	N/A	N/A	5-11	Rusted
265	Frag	1	N/A	N/A	1	Rusted
266	Fuse plunger	1	N/A	N/A	1	Rusted

FORMER CAMP CROFT
CROFT STATE PARK, SOUTH CAROLINA
EE/CA INVESTIGATION FIELD MAP

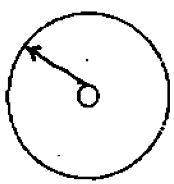


GRID I.D. 73

MAP ORIENTATION



WIND DIRECTION



LEGEND

- △ SUBSURFACE ANOMALIES
- ○ SURFACE OEW/UXO
- ▲ SUBSURFACE OEW/UXO
- □ FIRE SAFETY EQUIPMENT
- ⬡ PIT,TRENCHES, BUNKER, ETC.
- — RESTRICTED AREA BOUNDARY
- X ENTRY/EXIT POINT

NOTES

204 SUBSURFACE ANOMALIES INVESTIGATED IN 7 LANES
1 EA. 81mm MORTAR, H.E., FUZED RECOVERED
1 EA. 60mm MORTAR, H.E. FUZED RECOVERED
120 lbs. METAL RECOVERED

GRID SURVEY SUMMARY SHEET

GRID :73

Accessability: JOGGING TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Frag	2	N/A	N/A	3-9	Rusted
2	Frag	1	N/A	N/A	4	Rusted
3	Spoon	1	N/A	N/A	2	Rusted
4	Barbed wire	1	N/A	N/A	2	Rusted
5	81mm Fin	1	N/A	N/A	4	Rusted
6	Nail	1	N/A	N/A	2	Rusted
7	30 cal.	1	N/A	N/A	4	Rusted
8	Nail	1	N/A	N/A	1	Rusted
9	81mm Fin	1	N/A	N/A	3	Rusted
10	81mm Fin	1	N/A	N/A	4	Rusted
11	Can	1	N/A	N/A	2	Rusted
12	Barbed wire	1	N/A	N/A	2	Rusted
13	60mm Fin	1	N/A	N/A	3	Rusted
14	30 cal. clip	1	N/A	N/A	3	Rusted
15	Horse shoe	1	N/A	N/A	1	Rusted
16	30 cal. clip	1	N/A	N/A	2	Rusted
17	30 cal. clip	1	N/A	N/A	3	Rusted
18	81mm Fin	1	N/A	N/A	3	Rusted
19	60mm Mortar	1	Fuse	HE	4	Rusted
20	Horse shoe	1	N/A	N/A	3	Rusted
21	Frag	3	N/A	N/A	4-9	Rusted
22	60mm Tail boom	1	N/A	N/A	3	Rusted
23	60mm Fin	1	N/A	N/A	2	Rusted
24	81mm Fin assy.	2	N/A	N/A	5-8	Rusted
25	81mm Fin assy.	1	N/A	N/A	4	Rusted
26	Frag	1	N/A	N/A	5	Rusted
27	Frag	1	N/A	N/A	4	Rusted
28	81mm Mortar	1	Fuse	HE	2	Rusted
29	Nail	1	N/A	N/A	1	Rusted
30	81mm Fin	2	N/A	N/A	3-7	Rusted

GRID SURVEY SUMMARY SHEET

GRID :73

Accessability: JOGGING TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	Horse shoe & Frag	4	N/A	N/A	9-17	Rusted
32	81mm Fin	1	N/A	N/A	3	Rusted
33	Scrap	1	N/A	N/A	4	Rusted
34	81mm Fin & Frag	2	N/A	N/A	2-9	Rusted
35	Barbed wire	1	N/A	N/A	1	Rusted
36	81mm Fin	1	N/A	N/A	3	Rusted
37	81mm Fin	1	N/A	N/A	4	Rusted
38	Rod	1	N/A	N/A	2	Rusted
39	81mm Fin	2	N/A	N/A	2-5	Rusted
40	81mm Fin assy.	1	N/A	N/A	2	Rusted
41	81mm Fin	1	N/A	N/A	1	Rusted
42	81mm Fin	1	N/A	N/A	2	Rusted
43	81mm Fin assy.	1	N/A	N/A	5	Rusted
44	81mm Fin assy.	1	N/A	N/A	4	Rusted
45	Scrap	1	N/A	N/A	4	Rusted
46	81mm Tail boom	1	N/A	N/A	5	Rusted
47	81mm Tail boom	1	N/A	N/A	4	Rusted
48	81mm Tail boom	1	N/A	N/A	3	Rusted
49	81mm Fin assy.	1	N/A	N/A	6	Rusted
50	81mm Fin assy.	1	N/A	N/A	4	Rusted
51	81mm Fin	1	N/A	N/A	2	Rusted
52	81mm Fin & Nail	2	N/A	N/A	4-7	Rusted
53	81mm Tail boom	1	N/A	N/A	4	Rusted
54	Horse shoe	1	N/A	N/A	3	Rusted
55	81mm Fin assy.	3	N/A	N/A	10-18	Rusted
56	81mm Fin assy.	1	N/A	N/A	3	Rusted
57	81mm Fin assy.	1	N/A	N/A	1	Rusted
58	81mm Fin	2	N/A	N/A	3-5	Rusted
59	81mm Fin & Tail boom	2	N/A	N/A	2-5	Rusted
60	81mm Fin assy.	1	N/A	N/A	4	Rusted

GRID SURVEY SUMMARY SHEET

GRID :73

Accessability: JOGGING TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
61	81mm Fin assy.	1	N/A	N/A	5	Rusted
62	81mm Tail boom	2	N/A	N/A	2-7	Rusted
63	81mm Tail boom	1	N/A	N/A	1	Rusted
64	Barbed wire	1	N/A	N/A	1	Rusted
65	81mm Fin	1	N/A	N/A	1	Rusted
66	81mm Fin	1	N/A	N/A	1	Rusted
67	81mm Fin	2	N/A	N/A	3-5	Rusted
68	Hing	1	N/A	N/A	3	Rusted
69	81mm Fin assy.	1	N/A	N/A	8	Rusted
70	81mm Fin	1	N/A	N/A	3	Rusted
71	81mm Tail boom	1	N/A	N/A	4	Rusted
72	Frag	5	N/A	N/A	11-19	Rusted
73	81mm Tail boom & Frag	3	N/A	N/A	3-8	Rusted
74	81mm Tail boom	1	N/A	N/A	4	Rusted
75	Scrap	6	N/A	N/A	9-21	Rusted
76	Frag	1	N/A	N/A	5	Rusted
77	60mm Fin assy.	1	N/A	N/A	4	Rusted
78	81mm Fin	1	N/A	N/A	4	Rusted
79	Frag	1	N/A	N/A	3	Rusted
80	81mm Fin assy.	1	N/A	N/A	4	Rusted
81	Scrap	1	N/A	N/A	1	Rusted
82	81mm Tail boom & Frag	3	N/A	N/A	4-7	Rusted
83	Frag	1	N/A	N/A	3	Rusted
84	81mm Fin assy.	1	N/A	N/A	8	Rusted
85	81mm Fin assy.	1	N/A	N/A	6	Rusted
86	Hoe	3	N/A	N/A	6-9	Rusted
87	81mm Fin assy.	1	N/A	N/A	7	Rusted
88	Nail	1	N/A	N/A	4	Bent /Rusted
89	81mm Fin	1	N/A	N/A	2	Rusted
90	60mm Tail boom	1	N/A	N/A	3	Rusted

GRID SURVEY SUMMARY SHEET

GRID :73 Accessability: JOGGING TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
91	Scrap	8	N/A	N/A	3-19	Rusted
92	60mm Fin	1	N/A	N/A	4	Rusted
93	81mm Fin	1	N/A	N/A	2	Rusted
94	81mm assy.	1	N/A	N/A	2	Rusted
95	Wire	2	N/A	N/A	4	Rusted
96	Frag	1	N/A	N/A	2	Rusted
97	81mm Fin	1	N/A	N/A	4	Rusted
98	81mm Fin	1	N/A	N/A	1	Rusted
99	60mm Fin	1	N/A	N/A	3	Rusted
100	81mm Fin assy.	1	N/A	N/A	4	Rusted
101	81mm Fin assy.	1	N/A	N/A	8	Rusted
102	81mm Fin	1	N/A	N/A	4	Rusted
103	81mm Tail boom	1	N/A	N/A	3	Rusted
104	81mm Fin assy.	1	N/A	N/A	6	Rusted
105	60mm Fin assy.	2	N/A	N/A	5-7	Rusted
106	81mm Tail boom & assy.	2	N/A	N/A	2-6	Rusted
107	Sheet metal	5	N/A	N/A	1-9	Rusted
108	60mm Fin assy.	1	N/A	N/A	3	Rusted
109	80mm Fin	1	N/A	N/A	2	Rusted
110	60mm Fin assy.	1	N/A	N/A	3	Rusted
111	Scrap	1	N/A	N/A	3	Rusted
112	Nail & 81mm Fin	2	N/A	N/A	2-5	Rusted
113	Can lid	1	N/A	N/A	2	Rusted
114	Scrap	2	N/A	N/A	8-11	Rusted
115	81mm Fin	1	N/A	N/A	3	Rusted
116	81mm Tail boom	1	N/A	N/A	4	Rusted
117	81mm Fin	1	N/A	N/A	1	Rusted
118	Nail	1	N/A	N/A	8	Rusted
119	Nail	5	N/A	N/A	7-16	Rusted
120	81mm Fin	1	N/A	N/A	4	Rusted

GRID SURVEY SUMMARY SHEET

GRID :73

Accessability: JOGGING TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
121	81mm Fin	2	N/A	N/A	4-6	Rusted
122	Frag	1	N/A	N/A	5	Rusted
123	Rod	1	N/A	N/A	3	Rusted
124	Can	1	N/A	N/A	2	Rusted
125	81mm Fin & Frag	2	N/A	N/A	2-5	Rusted
126	Flax comb	1	N/A	N/A	3	Rusted
127	Rock	1	N/A	N/A	2	Rusted
128	Plow blade	1	N/A	N/A	2	Rusted
129	Can	1	N/A	N/A	1	Rusted
130	Can	1	N/A	N/A	2	Rusted
131	Frag	1	N/A	N/A	8	Rusted
132	Horse shoe	1	N/A	N/A	3	Rusted
133	81mm Fin	2	N/A	N/A	4-7	Rusted
134	Nail	4	N/A	N/A	3-11	Rusted
135	Barbed wire	1	N/A	N/A	3	Rusted
136	Hames ring	1	N/A	N/A	3	Rusted
137	81mm Tail boom	1	N/A	N/A	4	Rusted
138	Wire	1	N/A	N/A	2	Rusted
139	81mm Fin assy.	1	N/A	N/A	6	Rusted
140	81mm Fin	1	N/A	N/A	3	Rusted
141	Scrap	1	N/A	N/A	4	Rusted
142	Frag	1	N/A	N/A	3	Rusted
143	Horse shoe	1	N/A	N/A	4	Rusted
144	Scrap	1	N/A	N/A	4	Rusted
145	Wire	1	N/A	N/A	2	Rusted
146	Scrap	1	N/A	N/A	1	Rusted
147	81mm Tail boom & Frag	4	N/A	N/A	5-12	Rusted
148	Chain	1	N/A	N/A	3	Rusted
149	Frag	1	N/A	N/A	2	Rusted
150	Barbed wire	1	N/A	N/A	1	Rusted

GRID SURVEY SUMMARY SHEET

GRID :73

Accessability: JOGGING TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
151	81mm Fin assy.	1	N/A	N/A	4	Rusted
152	60mm Fin assy.	1	N/A	N/A	1	Rusted
153	30 cal. clip	1	N/A	N/A	2	Rusted
154	Barbed wire	1	N/A	N/A	2	Rusted
155	Pipe	1	N/A	N/A	8	Rusted
156	Bucket	1	N/A	N/A	1	Rusted
157	Frag	1	N/A	N/A	3	Rusted
158	81mm Fin	1	N/A	N/A	4	Rusted
159	81mm Tail boom	2	N/A	N/A	5-9	Rusted
160	Scrap	1	N/A	N/A	4	Rusted
161	81mm Fin assy.	1	N/A	N/A	5	Rusted
162	Pipe	1	N/A	N/A	4	Rusted
163	Horse shoe	1	N/A	N/A	2	Rusted
164	Can	2	N/A	N/A	2-5	Rusted
165	Wire	1	N/A	N/A	2	Rusted
166	81mm Tail boom	1	N/A	N/A	4	Rusted
167	Can	2	N/A	N/A	6-19	Rusted
168	81mm Fin assy.	1	N/A	N/A	4	Rusted
169	81mm Fin assy.	1	N/A	N/A	6	Rusted
170	81mm Fin assy.	1	N/A	N/A	5	Rusted
171	81mm Tail boom	1	N/A	N/A	3	Rusted
172	Pipe	1	N/A	N/A	3	Rusted
173	Frag	1	N/A	N/A	4	Rusted
174	81mm Fin	1	N/A	N/A	4	Rusted
175	Barrel strape	1	N/A	N/A	3	Rusted
176	81mm Fin	1	N/A	N/A	5	Rusted
177	81mm Tail boom	1	N/A	N/A	4	Rusted
178	81mm Tail boom & Fin	2	N/A	N/A	3-7	Rusted
179	81mmFin	1	N/A	N/A	4	Rusted
180	Frag	1	N/A	N/A	2	Rusted

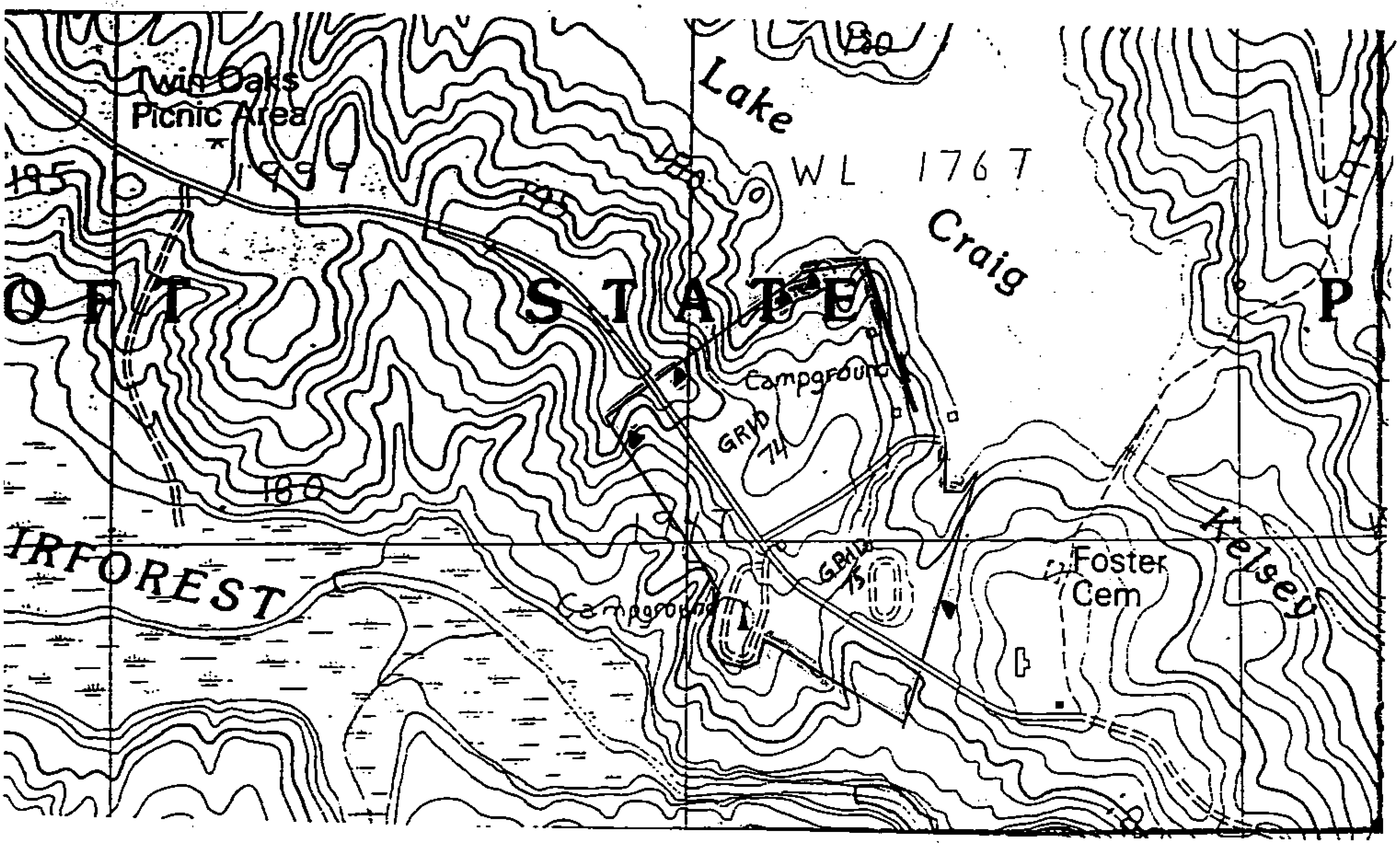
GRID SURVEY SUMMARY SHEET

GRID :73

Accessability: JOGGING TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
181	81mm Tail boom	1	N/A	N/A	6	Rusted
182	81mm Fin	1	N/A	N/A	3	Rusted
183	81mm Fin	1	N/A	N/A	2	Rusted
184	Scrap	1	N/A	N/A	7	Rusted
185	81mm Fin assy.	1	N/A	N/A	5	Rusted
186	81mm Tail boom	1	N/A	N/A	6	Rusted
187	Scrap	1	N/A	N/A	4	Rusted
188	Scrap	1	N/A	N/A	3	Rusted
189	81mm Fin assy.	1	N/A	N/A	6	Rusted
190	Wash pan	1	N/A	N/A	1	Rusted
191	81mm Tail boom	1	N/A	N/A	4	Rusted
192	Barbed wire	1	N/A	N/A	1	Rusted
193	81mm Fin assy.	1	N/A	N/A	4	Rusted
194	81mm Fin assy.	1	N/A	N/A	3	Rusted
195	30 cal. clip	1	N/A	N/A	2	Rusted
196	81mm Tail boom	1	N/A	N/A	7	Rusted
197	Rod	1	N/A	N/A	4	Rusted
198	81mm Fin assy.	1	N/A	N/A	6	Rusted
199	Barbed wire	1	N/A	N/A	2	Rusted
200	30 cal. clip	1	N/A	N/A	2	Rusted
201	81mm Fin assy.	1	N/A	N/A	6	Rusted
202	81mm Fin assy.	1	N/A	N/A	5	Rusted
203	81mm Fin assy.	1	N/A	N/A	5	Rusted
204	Scrap	1	N/A	N/A	3	Rusted

GRID 74



Twin Oaks
Picnic Area
195
Lake
WL 1767
Craig
180
O F T
S T A T E
P
Campground
GRID 74
IRFOREST
GRID 75
Campground
Foster
Cem
Kelsey

GRID SURVEY SUMMARY SHEET

GRID :74

Accessability: Variable

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Frag	1	N/A	N/A	1	Rusted
2	Frag	1	N/A	N/A	1	Rusted
3	Frag	1	N/A	N/A	2	Rusted
4	Frag	1	N/A	N/A	1	Rusted

GRID 75


Twin Oaks
Picnic Area
Lake
WL 1767
Craig
OF T
STATE
P
Campground
GRID 74
RFOREST
Campground
GRID 75
Foster
Cem
Kelsey
180

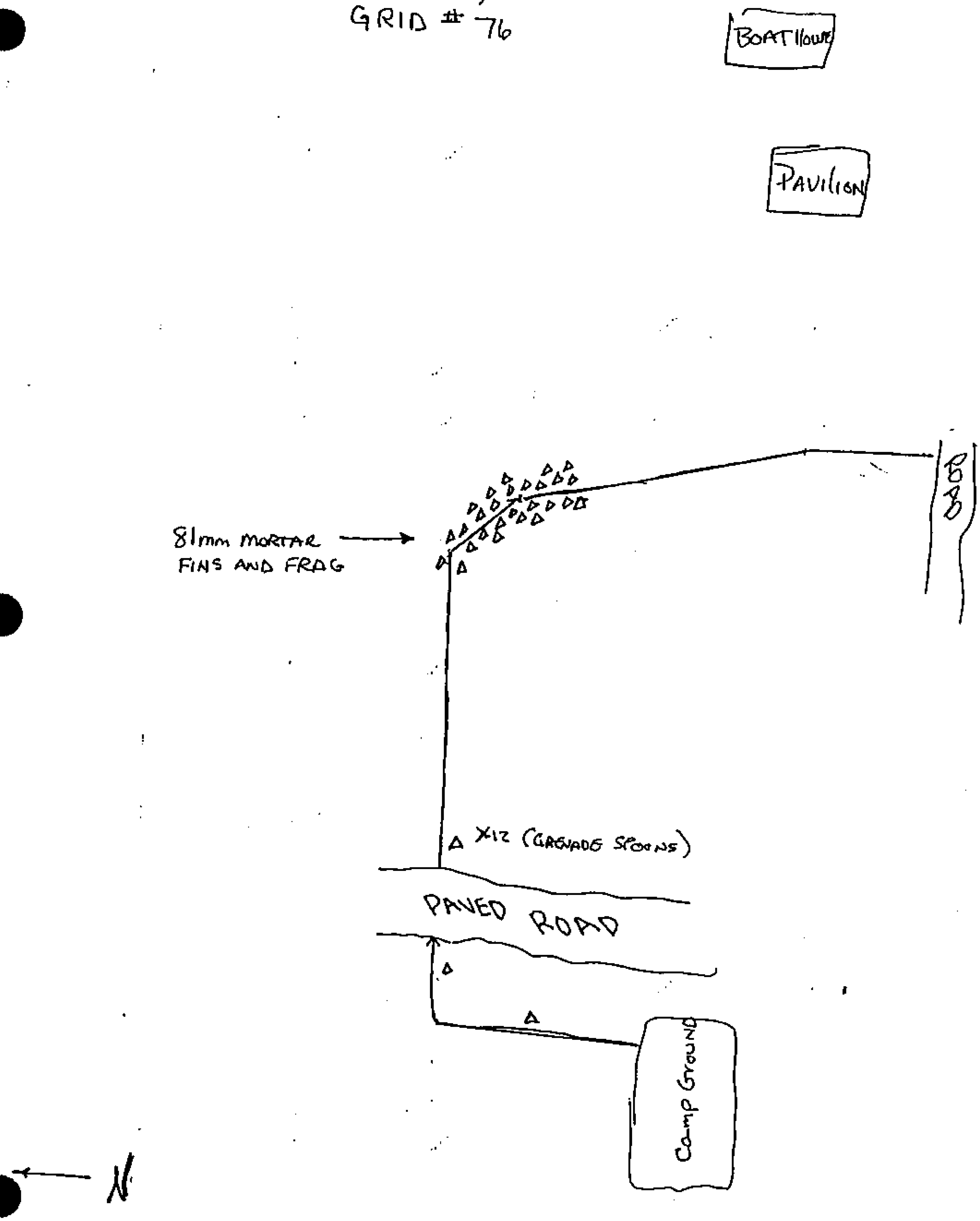
GRID SURVEY SUMMARY SHEET

GRID :75

Accessability: Variable

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	60mm Fin assembly	1	N/A	N/A	3	Rusted

FORMER CAMP CROFT
SPARTANBURG, S.C.
GRID # 76



NOT TO SCALE

GRID SURVEY SUMMARY SHEET

GRID :76

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Frag	1	N/A	N/A	2	Rusted
2	60mm Fin assy.	2	N/A	N/A	4	Rusted
3	Frag	1	N/A	N/A	3	Rusted
4	Frag	1	N/A	N/A	2	Rusted
5	Frag	1	N/A	N/A	2	Rusted
6	60mm Fin assy.	1	N/A	N/A	3	Rusted
7	60mm Fin assy.	1	N/A	N/A	4	Rusted
8	60mm Tail boom	1	N/A	N/A	2	Rusted
9	Frag	1	N/A	N/A	1	Rusted
10	Frag	1	N/A	N/A	1	Rusted
11	Frag	1	N/A	N/A	1	Rusted
12	Frag	1	N/A	N/A	2	Rusted
13	81 Fin	1	N/A	N/A	4	Rusted
14	Frag	1	N/A	N/A	2	Rusted
15	81mm Fin assy.	1	N/A	N/A	4	Rusted
16	81mm Fin	1	N/A	N/A	3	Rusted
17	81mm Fin assy.	2	N/A	N/A	3-7	Rusted
18	81mm Fin assy.	1	N/A	N/A	6	Rusted
19	Frag	1	N/A	N/A	2	Rusted
20	81mm Fin assy.	2	N/A	N/A	5-9	Rusted
21	Frag	1	N/A	N/A	3	Rusted
22	81mm Fin	1	N/A	N/A	3	Rusted
23	81mm Tail boom	1	N/A	N/A	3	Rusted
24	30 cal. clip	1	N/A	N/A	1	Rusted
25	Frag	1	N/A	N/A	1	Rusted
26	Frag	1	N/A	N/A	1	Rusted
27	Frag	1	N/A	N/A	1	Rusted
28	Rifel grenade spoon	1	N/A	N/A	5	Rusted
29	30 cal. clip	1	N/A	N/A	2	Rusted
30	30 cal. clip	1	N/A	N/A	1	Rusted

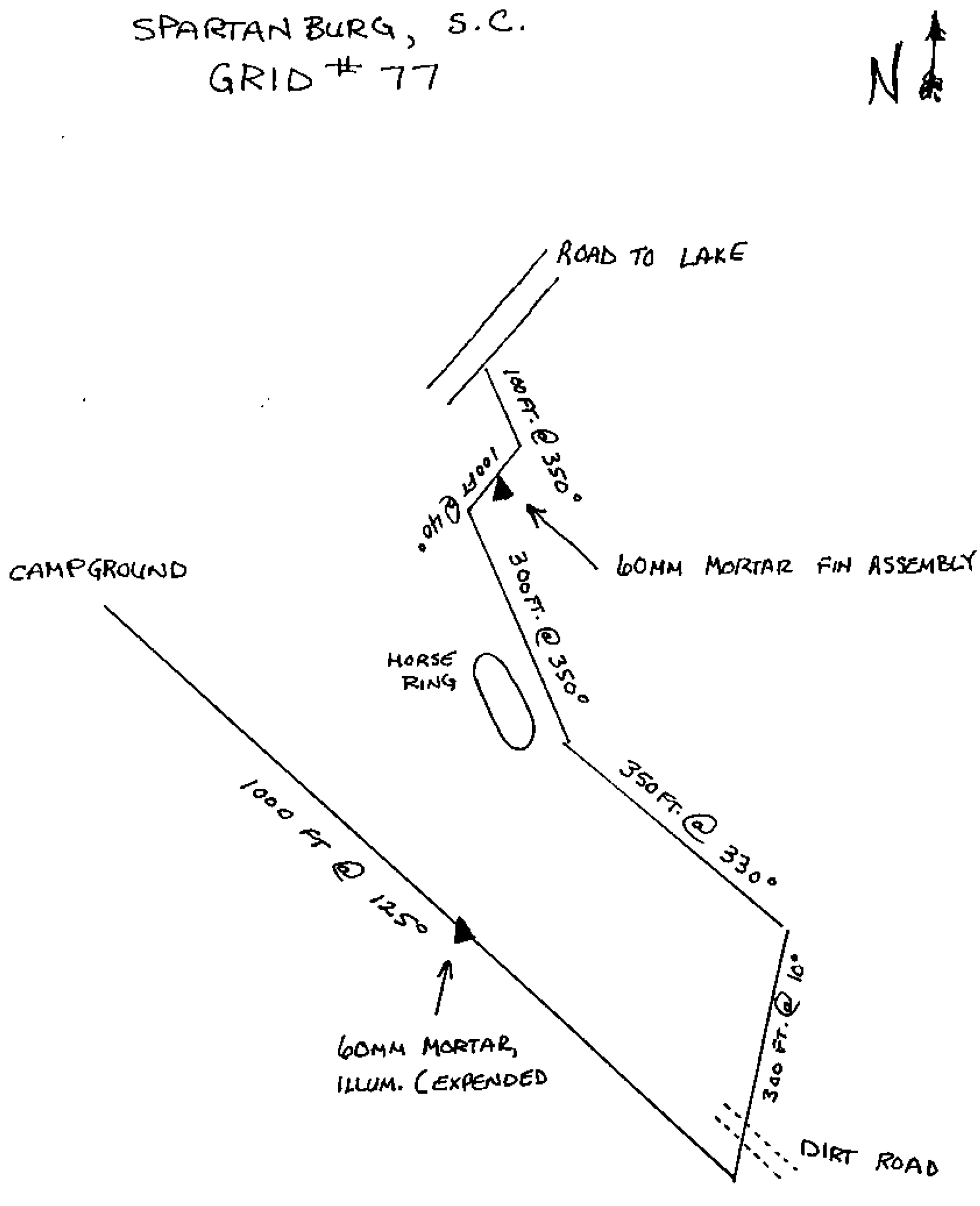
GRID SURVEY SUMMARY SHEET

GRID :76

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth	State of Degradation
31	Grenade spoon	1	N/A	N/A	1	Rusted
32	Grenade spoon	1	N/A	N/A	2	Rusted
33	Grenade spoon	1	N/A	N/A	2	Rusted
34	Grenade spoon	1	N/A	N/A	1	Rusted
35	Grenade spoon	1	N/A	N/A	2	Rusted
36	Grenade spoon	1	N/A	N/A	1	Rusted
37	Grenade spoon	1	N/A	N/A	4	Rusted
38	Grenade spoon	1	N/A	N/A	2	Rusted
39	Grenade spoon	1	N/A	N/A	1	Rusted
40	Grenade spoon	1	N/A	N/A	1	Rusted
41	Grenade spoon	1	N/A	N/A	2	Rusted

FORMER CAMP CROFT
SPARTANBURG, S.C.
GRID # 77



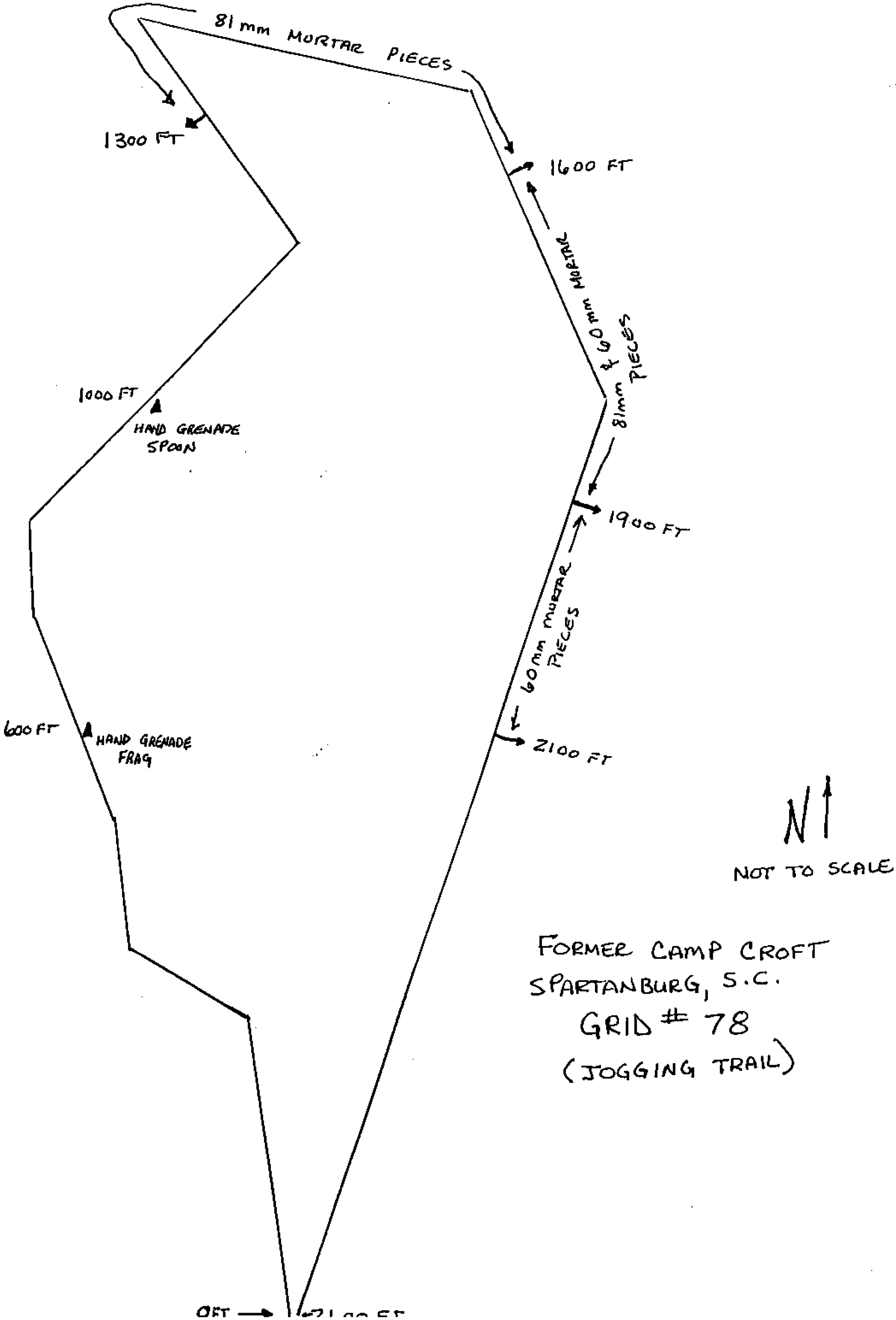
SCALE: 1 INCH = 200 FT.

GRID SURVEY SUMMARY SHEET

GRID :77

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	60mm Allum.	1	N/A	N/A	1	Rusted
2	60mm Fin assy.	1	N/A	N/A	4	Rusted



FORMER CAMP CROFT
SPARTANBURG, S.C.
GRID # 78
(JOGGING TRAIL)

GRID SURVEY SUMMARY SHEET

GRID :78

Accessability: JOGGING TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	30 cal. clip	2	N/A	N/A	4-7	Rusted
2	30 cal.case	1	N/A	N/A	2	Rusted
3	Frag	1	N/A	N/A	3	Rusted
4	Rock	1	N/A	N/A	4	Rusted
5	30 cal. clip	1	N/A	N/A	2	Rusted
6	Rock	1	N/A	N/A	4	Rusted
7	Bolt	1	N/A	N/A	3	Rusted
8	Rock	1	N/A	N/A	1	Rusted
9	Rock	1	N/A	N/A	5	Rusted
10	Frag	1	N/A	N/A	1	Rusted
11	Rock	1	N/A	N/A	4	Rusted
12	Scrap	1	N/A	N/A	2	Rusted
13	Rock	1	N/A	N/A	2	Rusted
14	Frag	1	N/A	N/A	1	Rusted
15	Rock	1	N/A	N/A	3	Rusted
16	Rock	1	N/A	N/A	2	Rusted
17	Frag	1	N/A	N/A	3	Rusted
18	30 cal. clip	1	N/A	N/A	4	Rusted
19	Rock	1	N/A	N/A	1	Rusted
20	Can	1	N/A	N/A	5	Rusted
21	Rock	1	N/A	N/A	3	Rusted
22	Frag	1	N/A	N/A	2	Rusted
23	Frag	1	N/A	N/A	1	Rusted
24	Rock	1	N/A	N/A	4	Rusted
25	30 cal.	1	N/A	N/A	2	Rusted
26	Rock	1	N/A	N/A	2	Rusted
27	30 cal. clip	1	N/A	N/A	3	Rusted
28	Frag	2	N/A	N/A	5-9	Rusted
29	Frag	1	N/A	N/A	2	Rusted
30	Frag	1	N/A	N/A	3	Rusted

GRID SURVEY SUMMARY SHEET

GRID :78

Accessability: JOGGING TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	Frag	1	N/A	N/A	4	Rusted
32	Rock	1	N/A	N/A	6	Rusted
33	Rock	1	N/A	N/A	3	Rusted
34	Rock	1	N/A	N/A	4	Rusted
35	Rock	1	N/A	N/A	2	Rusted
36	Can	1	N/A	N/A	2	Rusted
37	30 cal. clip	1	N/A	N/A	1	Rusted
38	Rock	1	N/A	N/A	3	Rusted
39	Nail	1	N/A	N/A	4	Rusted
40	Frag	1	N/A	N/A	1	Rusted
41	Scrap	1	N/A	N/A	4	Rusted
42	Rock	1	N/A	N/A	5	Rusted
43	Frag	1	N/A	N/A	3	Rusted
44	Frag	1	N/A	N/A	1	Rusted
45	Frag	1	N/A	N/A	1	Rusted
46	Rock	1	N/A	N/A	1	Rusted
47	Rock	1	N/A	N/A	2	Rusted
48	Wire	1	N/A	N/A	1	Rusted
49	Frag	1	N/A	N/A	3	Rusted
50	Frag	1	N/A	N/A	4	Rusted
51	Rust	1	N/A	N/A	1	Rusted
52	Rock	1	N/A	N/A	3	Rusted
53	Frag	1	N/A	N/A	2	Rusted
54	Frag	1	N/A	N/A	3	Rusted
55	Rock	1	N/A	N/A	1	Rusted
56	Nail	1	N/A	N/A	3	Rusted
57	Rock	1	N/A	N/A	2	Rusted
58	Frag	1	N/A	N/A	3	Rusted
59	Frag	1	N/A	N/A	1	Rusted
60	Rock	1	N/A	N/A	3	Rusted

GRID SURVEY SUMMARY SHEET

GRID :78

Accessability: JOGGING TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
61	Rock	1	N/A	N/A	1	Rusted
62	Frag	1	N/A	N/A	4	Rusted
63	Wire	1	N/A	N/A	2	Rusted
64	Cable	1	N/A	N/A	1	Rusted
65	Frag	1	N/A	N/A	4	Rusted
66	Rock	1	N/A	N/A	2	Rusted
67	Can	1	N/A	N/A	1	Rusted
68	Rock	1	N/A	N/A	1	Rusted
69	Rock	1	N/A	N/A	1	Rusted
70	Scrap	1	N/A	N/A	1	Rusted
71	30 cal. clip	1	N/A	N/A	2	Rusted
72	Rock	1	N/A	N/A	4	Rusted
73	Rock	1	N/A	N/A	2	Rusted
74	Scrap	1	N/A	N/A	4	Rusted
75	Frag	5	N/A	N/A	4-11	Rusted
76	Frag	1	N/A	N/A	2	Rusted
77	Frag	1	N/A	N/A	3	Rusted
78	Rock	1	N/A	N/A	2	Rusted
79	MK 2 Frag	1	N/A	N/A	1	Rusted
80	Rock	1	N/A	N/A	2	Rusted
81	Rock	1	N/A	N/A	2	Rusted
82	Rock	1	N/A	N/A	2	Rusted
83	Wire	1	N/A	N/A	1	Rusted
84	Rust	1	N/A	N/A	2	Rusted
85	Rock	1	N/A	N/A	1	Rusted
86	Rock	1	N/A	N/A	1	Rusted
87	Rock	1	N/A	N/A	2	Rusted
88	Frag	1	N/A	N/A	4	Rusted
89	Scrap	1	N/A	N/A	1	Rusted
90	Rock	1	N/A	N/A	1	Rusted

GRID SURVEY SUMMARY SHEET

GRID :78

Accessability: JOGGING TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
91	Rock	1	N/A	N/A	3	Rusted
92	Bolt	1	N/A	N/A	2	Rusted
93	Rock	1	N/A	N/A	3	Rusted
94	Rock	1	N/A	N/A	1	Rusted
95	Rock	1	N/A	N/A	4	Rusted
96	Frag	1	N/A	N/A	2	Rusted
97	Rock	1	N/A	N/A	1	Rusted
98	30 cal. clip	1	N/A	N/A	4	Rusted
99	Frag	1	N/A	N/A	3	Rusted
100	Rock	1	N/A	N/A	1	Rusted
101	Rock	1	N/A	N/A	3	Rusted
102	Rock	1	N/A	N/A	3	Rusted
103	Rock	1	N/A	N/A	2	Rusted
104	Rock	1	N/A	N/A	4	Rusted
105	Can	1	N/A	N/A	1	Rusted
106	Rock	1	N/A	N/A	6	Rusted
107	Rock	1	N/A	N/A	2	Rusted
108	Rock	1	N/A	N/A	3	Rusted
109	Frag	1	N/A	N/A	4	Rusted
110	Rock	1	N/A	N/A	2	Rusted
111	Rock	1	N/A	N/A	1	Rusted
112	Rock	1	N/A	N/A	8	Rusted
113	Rock	1	N/A	N/A	2	Rusted
114	Rock	1	N/A	N/A	4	Rusted
115	Nail	1	N/A	N/A	2	Rusted
116	Rock	1	N/A	N/A	4	Rusted
117	Rock	1	N/A	N/A	3	Rusted
118	Rock	1	N/A	N/A	3	Rusted
119	Wire	1	N/A	N/A	1	Rusted
120	Rock	1	N/A	N/A	3	Rusted

GRID SURVEY SUMMARY SHEET

GRID :78

Accessability: JOGGING TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
121	Rock	1	N/A	N/A	2	Rusted
122	Rock	1	N/A	N/A	4	Rusted
123	Rock	1	N/A	N/A	1	Rusted
124	Rock	1	N/A	N/A	2	Rusted
125	Nail	1	N/A	N/A	3	Rusted
126	Rock	1	N/A	N/A	2	Rusted
127	Rock	1	N/A	N/A	1	Rusted
128	Rock	1	N/A	N/A	2	Rusted
129	Nail	1	N/A	N/A	1	Rusted
130	Scrap	1	N/A	N/A	4	Rusted
131	Rock	1	N/A	N/A	2	Rusted
132	Rock	1	N/A	N/A	3	Rusted
133	Rock	1	N/A	N/A	1	Rusted
134	Wire	1	N/A	N/A	3	Rusted
135	Rock	1	N/A	N/A	2	Rusted
136	Barbed wire	1	N/A	N/A	4	Rusted
137	Nail	1	N/A	N/A	2	Rusted
138	Can	1	N/A	N/A	1	Rusted
139	Frag	1	N/A	N/A	2	Rusted
140	Rock	1	N/A	N/A	3	Rusted
141	Rock	1	N/A	N/A	4	Rusted
142	Barbed wire	1	N/A	N/A	1	Rusted
143	Rock	1	N/A	N/A	2	Rusted
144	Rock	1	N/A	N/A	1	Rusted
145	Slag	1	N/A	N/A	2	Rusted
146	Pipe	1	N/A	N/A	4	Rusted
147	Rock	1	N/A	N/A	2	Rusted
148	Rock	1	N/A	N/A	4	Rusted
149	Rock	1	N/A	N/A	2	Rusted
150	Wire	1	N/A	N/A	1	Rusted

GRID SURVEY SUMMARY SHEET

GRID :78

Accessability: JOGGING TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
151	Rock	1	N/A	N/A	2	Rusted
152	Rock	2	N/A	N/A	4-8	Rusted
153	Frag	1	N/A	N/A	2	Rusted
154	Rock	1	N/A	N/A	1	Rusted
155	Rock	1	N/A	N/A	4	Rusted
156	Rock	1	N/A	N/A	4	Rusted
157	Grenade spoon	1	N/A	N/A	2	Rusted
158	Wire	1	N/A	N/A	2	Rusted
159	Rock	1	N/A	N/A	1	Rusted
160	Rock	1	N/A	N/A	2	Rusted
161	Frag	1	N/A	N/A	3	Rusted
162	Rock	1	N/A	N/A	2	Rusted
163	30 cal. clip	1	N/A	N/A	4	Rusted
164	Frag	2	N/A	N/A	3-5	Rusted
165	Rock	1	N/A	N/A	2	Rusted
166	Rock	1	N/A	N/A	3	Rusted
167	Scrap	1	N/A	N/A	2	Rusted
168	Rock	1	N/A	N/A	3	Rusted
169	30 cal. clip	1	N/A	N/A	4	Rusted
170	Rock	1	N/A	N/A	2	Rusted
171	Frag	3	N/A	N/A	6-11	Rusted
172	Frag	1	N/A	N/A	4	Rusted
173	Rock	1	N/A	N/A	2	Rusted
174	Rock	2	N/A	N/A	4-7	Rusted
175	30 cal. clip	1	N/A	N/A	3	Rusted
176	Frag	1	N/A	N/A	2	Rusted
177	Frag	1	N/A	N/A	3	Rusted
178	Frag	1	N/A	N/A	2	Rusted
179	Rock	1	N/A	N/A	3	Rusted
180	Rock	1	N/A	N/A	2	Rusted

GRID SURVEY SUMMARY SHEET

GRID :78

Accessability: JOGGING TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
181	30 cal. clip	1	N/A	N/A	4	Rusted
182	30 cal. clip	1	N/A	N/A	3	Rusted
183	30 cal. casing	1	N/A	N/A	2	Rusted
184	Rock	1	N/A	N/A	4	Rusted
185	30 cal. clip	1	N/A	N/A	3	Rusted
186	Rock	1	N/A	N/A	1	Rusted
187	Frag	1	N/A	N/A	3	Rusted
188	30 cal. clip	1	N/A	N/A	3	Rusted
189	Rock	1	N/A	N/A	4	Rusted
190	30 cal. clip	1	N/A	N/A	3	Rusted
191	30 cal. clip	1	N/A	N/A	1	Rusted
192	Frag	1	N/A	N/A	3	Rusted
193	Wire	1	N/A	N/A	2	Rusted
194	Rock	1	N/A	N/A	1	Rusted
195	Rock	1	N/A	N/A	4	Rusted
196	Rock	1	N/A	N/A	1	Rusted
197	Rock	1	N/A	N/A	3	Rusted
198	Nail	1	N/A	N/A	1	Rusted
199	30 cal. clip	1	N/A	N/A	2	Rusted
200	Rock	1	N/A	N/A	4	Rusted
201	Rock	1	N/A	N/A	2	Rusted
202	Horse shoe	1	N/A	N/A	4	Rusted
203	Fence post	1	N/A	N/A	6	Rusted
204	Rock	1	N/A	N/A	8	Rusted
205	Rock	1	N/A	N/A	2	Rusted
206	Rock	1	N/A	N/A	1	Rusted
207	Frag	1	N/A	N/A	4	Rusted
208	Spike	1	N/A	N/A	4	Rusted
209	Plow	1	N/A	N/A	6	Rusted
210	Wire	1	N/A	N/A	2	Rusted

GRID SURVEY SUMMARY SHEET

GRID :78

Accessability: JOGGING TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
211	Barbed wire	1	N/A	N/A	3	Rusted
212	Barbed wire	1	N/A	N/A	8	Rusted
213	Barbed wire	1	N/A	N/A	8	Rusted
214	Rock	1	N/A	N/A	4	Rusted
215	Barbed wire	1	N/A	N/A	2	Rusted
216	Rock	1	N/A	N/A	4	Rusted
217	81mm Fin assy.	1	N/A	N/A	10	Rusted
218	Wire	1	N/A	N/A	3	Rusted
219	Rock	1	N/A	N/A	4	Rusted
220	Rock	1	N/A	N/A	3	Rusted
221	30 cal. clip	1	N/A	N/A	4	Rusted
222	81mm Tail boom	1	N/A	N/A	6	Rusted
223	Knife	1	N/A	N/A	2	Rusted
224	Frag	1	N/A	N/A	4	Rusted
225	81mm Fin	1	N/A	N/A	3	Rusted
226	Nail	1	N/A	N/A	3	Rusted
227	30 cal. clip	1	N/A	N/A	4	Rusted
228	30 cal. clip	1	N/A	N/A	3	Rusted
229	81mm Tail boom	1	N/A	N/A	5	Rusted
230	Rock	1	N/A	N/A	4	Rusted
231	81mm Fin	1	N/A	N/A	3	Rusted
232	Horse shoe	1	N/A	N/A	4	Rusted
233	Barbed wire	1	N/A	N/A	3	Rusted
234	Can	1	N/A	N/A	2	Rusted
235	81mm Fin assy.	1	N/A	N/A	5	Rusted
236	30 cal. clip	1	N/A	N/A	2	Rusted
237	81mm Fin assy.	1	N/A	N/A	5	Rusted
238	30 cal.	1	N/A	N/A	3	Rusted
239	30 cal. clip	1	N/A	N/A	4	Rusted
240	Grenade ring	1	N/A	N/A	2	Rusted

GRID SURVEY SUMMARY SHEET

GRID :78

Accessability: JOGGING TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
241	Frag	1	N/A	N/A	3	Rusted
242	30 cal. clip	1	N/A	N/A	4	Rusted
243	30 cal. clip	1	N/A	N/A	2	Rusted
244	81mm Fin	1	N/A	N/A	4	Rusted
245	81mm Fin assy.	1	N/A	N/A	3	Rusted
246	30 cal. clip	1	N/A	N/A	4	Rusted
247	Frag	1	N/A	N/A	3	Rusted
248	Frag	1	N/A	N/A	3	Rusted
249	Grenade ring	1	N/A	N/A	2	Rusted
250	30 cal. clip	1	N/A	N/A	3	Rusted
251	81mm Fin assy.	1	N/A	N/A	2	Rusted
252	Rock	1	N/A	N/A	2	Rusted
253	Wire	1	N/A	N/A	1	Rusted
254	30 cal. clip	1	N/A	N/A	2	Rusted
255	Rock	1	N/A	N/A	4	Rusted
256	Rock	1	N/A	N/A	4	Rusted
257	81mm Fin assy.	1	N/A	N/A	6	Rusted
258	30 cal. clip	1	N/A	N/A	4	Rusted
259	81mm Fin	1	N/A	N/A	4	Rusted
260	81mm Fin	1	N/A	N/A	4	Rusted
261	81mm Fin	1	N/A	N/A	2	Rusted
262	30 cal. clip	1	N/A	N/A	3	Rusted
263	81mm Fin assy.	1	N/A	N/A	5	Rusted
264	60mm Fin assy.	1	N/A	N/A	4	Rusted
265	81mm Fin	1	N/A	N/A	3	Rusted
266	60mm Tail boom	1	N/A	N/A	4	Rusted
267	81mm Fin assy.	1	N/A	N/A	8	Rusted
268	Rock	1	N/A	N/A	1	Rusted
269	Frag	1	N/A	N/A	3	Rusted
270	Frag	1	N/A	N/A	4	Rusted

GRID SURVEY SUMMARY SHEET

GRID :78

Accessability: JOGGING TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
271	30 cal. clip	1	N/A	N/A	3	Rusted
272	30 cal. clip	1	N/A	N/A	2	Rusted
273	Rock	1	N/A	N/A	4	Rusted
274	Wire	1	N/A	N/A	3	Rusted
275	Frag	1	N/A	N/A	3	Rusted
276	60mm Fin assy.	1	N/A	N/A	4	Rusted
277	30 cal. clip	1	N/A	N/A	3	Rusted
278	81mm Fin assy.	1	N/A	N/A	8	Rusted
279	Barbed wire	2	N/A	N/A	4-6	Rusted
280	Barbed wire	1	N/A	N/A	4	Rusted
281	Barbed wire	2	N/A	N/A	3-9	Rusted
282	Frag	1	N/A	N/A	3	Rusted
283	Scrap	4	N/A	N/A	5-12	Rusted
284	60mm Fin asy.	1	N/A	N/A	4	Rusted
285	Barbed wire	1	N/A	N/A	4	Rusted
286	Barbed wire	1	N/A	N/A	3	Rusted
287	60mm Fin assy.	1	N/A	N/A	5	Rusted
288	Frag	1	N/A	N/A	1	Rusted
289	Nail	1	N/A	N/A	1	Rusted
290	81mm Fin	1	N/A	N/A	4	Rusted
291	Barbed wire	1	N/A	N/A	3	Rusted
292	81mm Fin	1	N/A	N/A	4	Rusted
293	Horse shoe	1	N/A	N/A	5	Rusted
294	Frag	1	N/A	N/A	5	Rusted
295	Barbed wire	2	N/A	N/A	6-9	Rusted
296	Barbed wire	1	N/A	N/A	4	Rusted
297	Frag	1	N/A	N/A	2	Rusted
298	Barbed wire	1	N/A	N/A	5	Rusted
299	Scrap	1	N/A	N/A	4	Rusted
300	Rock	1	N/A	N/A	2	Rusted

GRID SURVEY SUMMARY SHEET

GRID :78

Accessability: JOGGING TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
301	60mm Fin assy.	1	N/A	N/A	7	Rusted
302	60mm Fin assy.	1	N/A	N/A	5	Rusted
303	Rock	1	N/A	N/A	2	Rusted
304	Rock	1	N/A	N/A	4	Rusted
305	Frag	1	N/A	N/A	4	Rusted
306	60mm Fin assy.	1	N/A	N/A	3	Rusted
307	Barbed wire	1	N/A	N/A	2	Rusted
308	Rock	1	N/A	N/A	3	Rusted
309	Frag	1	N/A	N/A	2	Rusted
310	60mm Fin assy.	1	N/A	N/A	4	Rusted
311	60mm Finasy.	1	N/A	N/A	1	Rusted
312	Rock	1	N/A	N/A	2	Rusted
313	Frag	1	N/A	N/A	2	Rusted
314	Frag	1	N/A	N/A	3	Rusted
315	60mm Fin assy.	1	N/A	N/A	5	Rusted
316	Frag	1	N/A	N/A	3	Rusted
317	30 cal.	1	N/A	N/A	2	Rusted
318	Scrap	1	N/A	N/A	24	Rusted
319	60mm Fin	2	N/A	N/A	4-9	Rusted
320	60mm Fin assy.	1	N/A	N/A	3	Rusted
321	60mm Tail boom	1	N/A	N/A	3	Rusted
322	60mm Fin & Frag	1	N/A	N/A	3	Rusted
323	60mm Fin	1	N/A	N/A	2	Rusted
324	Fuse plunger	1	N/A	N/A	3	Rusted
325	Frag	1	N/A	N/A	3	Rusted
326	Frag	1	N/A	N/A	4	Rusted
327	60mm Fin	1	N/A	N/A	3	Rusted
328	60mm Fin	1	N/A	N/A	3	Rusted
329	Frag	1	N/A	N/A	4	Rusted
330	Frag	1	N/A	N/A	3	Rusted

GRID SURVEY SUMMARY SHEET

GRID :78

Accessability: JOGGING TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
331	30 cal.	1	N/A	N/A	2	Rusted
332	60mm Fin	1	N/A	N/A	8	Rusted
333	Frag	1	N/A	N/A	3	Rusted
334	60mm Fin assy.	1	N/A	N/A	5	Rusted
335	30 cal. clip	1	N/A	N/A	3	Rusted
336	Frag	1	N/A	N/A	3	Rusted
337	Frag	1	N/A	N/A	4	Rusted
338	60mm Fin	1	N/A	N/A	3	Rusted
339	Frag	1	N/A	N/A	2	Rusted
340	60mm Fin assy.	1	N/A	N/A	5	Rusted
341	Frag	1	N/A	N/A	3	Rusted
342	60mm Fin	1	N/A	N/A	6	Rusted
343	Frag	2	N/A	N/A	3-9	Rusted
344	30 cal.	1	N/A	N/A	2	Rusted
345	60mm Fin assy.	1	N/A	N/A	4	Rusted
346	60mm Fin assy.	1	N/A	N/A	6	Rusted
347	60mm Fin assy.	1	N/A	N/A	5	Rusted
348	Frag	1	N/A	N/A	1	Rusted
349	Frag	1	N/A	N/A	3	Rusted
350	60mm Fin assy.	1	N/A	N/A	5	Rusted
351	Frag	1	N/A	N/A	2	Rusted
352	Rock	1	N/A	N/A	1	Rusted
353	60mm Fin	1	N/A	N/A	3	Rusted
354	Frag	1	N/A	N/A	4	Rusted
355	Frag	1	N/A	N/A	3	Rusted
356	Frag	1	N/A	N/A	2	Rusted
357	60mm Fin assy.	1	N/A	N/A	6	Rusted
358	60mm Fin assy.	1	N/A	N/A	5	Rusted
359	Frag	1	N/A	N/A	3	Rusted
360	Frag	1	N/A	N/A	4	Rusted

GRID SURVEY SUMMARY SHEET

GRID :78

Accessability: JOGGING TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
361	Barbed wire	1	N/A	N/A	3	Rusted
362	60mm Fin assy.	1	N/A	N/A	7	Rusted
363	60mm Tail boom	1	N/A	N/A	4	Rusted
364	60mm Fin assy.	1	N/A	N/A	5	Rusted
365	Frag	1	N/A	N/A	3	Rusted
366	60mm Tail boom	1	N/A	N/A	4	Rusted
367	Frag	1	N/A	N/A	3	Rusted
368	60mm Fin assy.	1	N/A	N/A	4	Rusted
369	60mm Fin assy.	1	N/A	N/A	6	Rusted
370	Frag	1	N/A	N/A	3	Rusted
371	Frag	1	N/A	N/A	4	Rusted
372	60mm Fin assy.	1	N/A	N/A	4	Rusted
373	60mm Fin	1	N/A	N/A	3	Rusted
374	60mm Fin assy.	1	N/A	N/A	5	Rusted
375	60mm Fin assy.	1	N/A	N/A	6	Rusted
376	60mm Fin assy.	1	N/A	N/A	7	Rusted
377	Frag	1	N/A	N/A	3	Rusted
378	Frag	1	N/A	N/A	2	Rusted
379	Frag	1	N/A	N/A	4	Rusted
380	Frag	1	N/A	N/A	3	Rusted
381	60mm Fin assy.	1	N/A	N/A	5	Rusted
382	60mm Fin assy.	1	N/A	N/A	6	Rusted
383	Frag	1	N/A	N/A	2	Rusted
384	Frag	2	N/A	N/A	4-8	Rusted
385	60mm Fin assy.	1	N/A	N/A	5	Rusted
386	Frag	1	N/A	N/A	3	Rusted
387	frag	1	N/A	N/A	4	Rusted
388	Frag	1	N/A	N/A	2	Rusted
389	Frag	1	N/A	N/A	2	Rusted
390	Frag	1	N/A	N/A	3	Rusted

GRID SURVEY SUMMARY SHEET

GRID :78

Accessability: JOGGING TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
391	60mm Fin assy.	1	N/A	N/A	2	Rusted
392	Wire	1	N/A	N/A	3	Rusted
393	Frag	1	N/A	N/A	4	Rusted
394	Frag	1	N/A	N/A	1	Rusted
395	60mm Fin assy.	1	N/A	N/A	4	Rusted
396	Barbed Wire	1	N/A	N/A	1	Rusted
397	Tail boom	1	N/A	N/A	1	Rusted
398	Rock	1	N/A	N/A	4	Rusted
399	60mm Tail Fin	1	N/A	N/A	2	Rusted
400	60mm Tail Fin	1	N/A	N/A	2	Rusted
401	60mm Fin Tail boom	3	N/A	N/A	5-6	Rusted
402	60mm Fin assy.	1	N/A	N/A	4	Rusted
403	60mm Tail fin	1	N/A	N/A	3	Rusted
404	60mm Tail fin	1	N/A	N/A	4	Rusted
405	Frag	1	N/A	N/A	3	Rusted
406	60 Tail assy.	1	N/A	N/A	4	Rusted
407	60mm Tail Fin / boom	1	N/A	N/A	3	Rusted
408	Barbed wire	1	N/A	N/A	2	Rusted
409	60mm Tail Fin assy.	1	N/A	N/A	1	Rusted
410	60mm Tail fin & Frag	5	N/A	N/A	1-4	Rusted
411	60mm Fin assy.	1	N/A	N/A	3	Rusted
412	Frag	1	N/A	N/A	3	Rusted
413	Barbed wire	1	N/A	N/A	1	Rusted
414	60mm Tail fin	1	N/A	N/A	4	Rusted
415	60mm Fin assy.	1	N/A	N/A	1	Rusted
416	Wire	1	N/A	N/A	6	Rusted
417	Barbed wire	1	N/A	N/A	2	Rusted
418	Grenade fuse & cap	2	N/A	N/A	2-4	Rusted
419	60mm Tail Fin / boom	1	N/A	N/A	3	Rusted
420	Frag	1	N/A	N/A	2	Rusted

GRID SURVEY SUMMARY SHEET

GRID :78

Accessability: JOGGING TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
421	60mm Fin	1	N/A	N/A	3	Rusted
422	30 cal. & Frag	2	N/A	N/A	2-6	Rusted
423	Barbed wire	1	N/A	N/A	3	Rusted
424	Barbed wire	1	N/A	N/A	3	Rusted
425	Barbed wire	1	N/A	N/A	2	Rusted
426	60mm Tail boom & Fin	1	N/A	N/A	2	Rusted
427	60mm Tail boom	1	N/A	N/A	3	Rusted
428	60mm Tail fin & Frag	3	N/A	N/A	2	Rusted
429	60mm Tail fin assy.	1	N/A	N/A	9-12	Rusted
430	60mm Tail fin assy.	1	N/A	N/A	3	Rusted
431	Barbed wire	1	N/A	N/A	3	Rusted
432	Frag	1	N/A	N/A	3	Rusted
433	Frag	1	N/A	N/A	1	Rusted
434	60mm Fin assy. & Frag	2	N/A	N/A	2-4	Rusted
435	Barbed wire	1	N/A	N/A	4	Rusted
436	60mm Tail boom & Fin	1	N/A	N/A	3	Rusted
437	Frag	1	N/A	N/A	3	Rusted
438	60mm Fin assy.	1	N/A	N/A	3	Rusted
439	60mm Tail boom & Frag	1	N/A	N/A	2	Rusted
440	60mm Tail boom & Frag	2	N/A	N/A	3-7	Rusted
441	60mm Tail fin	1	N/A	N/A	3	Rusted
442	Fin assy. & Frag	4	N/A	N/A	2-8	Rusted
443	60mm Tail boom & fin	2	N/A	N/A	3-7	Rusted
444	60mm Fin assy. & Frag	2	N/A	N/A	6-11	Rusted
445	60 Tail boom/frag/fin/assy.	20	N/A	N/A	3-19	Rusted
446	Frag	1	N/A	N/A	4	Rusted
447	Rock	1	N/A	N/A	4	Rusted
448	Frag	1	N/A	N/A	3	Rusted
449	60mm Fin assy.	1	N/A	N/A	8	Rusted
450	Rock	1	N/A	N/A	3	Rusted

GRID SURVEY SUMMARY SHEET

GRID :78

Accessability: JOGGING TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
451	Rock	1	N/A	N/A	3	Rusted
452	Frag	1	N/A	N/A	4	Rusted
453	60mm Fin	1	N/A	N/A	3	Rusted
454	Frag	1	N/A	N/A	2	Rusted
455	60mm Fin assy.	1	N/A	N/A	4	Rusted
456	Frag	1	N/A	N/A	3	Rusted
457	60mm Fin assy.	1	N/A	N/A	2	Rusted
458	Scrap	1	N/A	N/A	1	Rusted
459	Frag	1	N/A	N/A	4	Rusted
460	60mm Fin assy/plow blade	2	N/A	N/A	2-8	Rusted
461	Frag	1	N/A	N/A	3	Rusted
462	30 cal. (ball)	1	N/A	N/A	4	Rusted
463	Frag	1	N/A	N/A	3	Rusted
464	Rock	1	N/A	N/A	5	Rusted
465	Frag	1	N/A	N/A	4	Rusted
466	Frag & Fin	7	N/A	N/A	2-15	Rusted
467	Frag	1	N/A	N/A	2	Rusted
468	Rock	1	N/A	N/A	4	Rusted
469	Frag	1	N/A	N/A	3	Rusted
470	Rock	1	N/A	N/A	4	Rusted
471	60mm Fin	1	N/A	N/A	4	Rusted
472	Hinge	1	N/A	N/A	4	Rusted
473	Rock	1	N/A	N/A	4	Rusted
474	Rock	1	N/A	N/A	2	Rusted
475	Rock	1	N/A	N/A	2	Rusted
476	Nail	1	N/A	N/A	3	Rusted
477	Rock	1	N/A	N/A	2	Rusted
478	Rock	1	N/A	N/A	3	Rusted
479	Nail	1	N/A	N/A	4	Rusted
480	Rock	1	N/A	N/A	2	Rusted

GRID SURVEY SUMMARY SHEET

GRID :78

Accessability: JOGGING TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
481	Scrap	1	N/A	N/A	2	Rusted
482	Frag	1	N/A	N/A	3	Rusted
483	Frag	1	N/A	N/A	2	Rusted
484	Frag	1	N/A	N/A	2	Rusted
485	60mm Fin	1	N/A	N/A	3	Rusted
486	60mm Fin	1	N/A	N/A	3	Rusted
487	Commo wire	1	N/A	N/A	3	Rusted
488	60mm Fin	2	N/A	N/A	4-8	Rusted
489	Wire	1	N/A	N/A	2	Rusted
490	Rock	1	N/A	N/A	3	Rusted
491	Rock	1	N/A	N/A	2	Rusted
492	Frag	2	N/A	N/A	2-5	Rusted
493	Rock	1	N/A	N/A	3	Rusted
494	Rock	1	N/A	N/A	4	Rusted
495	Rock	1	N/A	N/A	3	Rusted
496	Frag	1	N/A	N/A	1	Rusted
497	Frag	1	N/A	N/A	1	Rusted
498	Frag	1	N/A	N/A	1	Rusted
499	Rock	1	N/A	N/A	5	Rusted
500	Rock	1	N/A	N/A	3	Rusted
501	Scrap	1	N/A	N/A	2	Rusted
502	Rock	1	N/A	N/A	1	Rusted
503	Rock	1	N/A	N/A	3	Rusted
504	Frag	1	N/A	N/A	2	Rusted
505	Scrap	1	N/A	N/A	3	Rusted
506	Rock	1	N/A	N/A	4	Rusted
507	Rock	1	N/A	N/A	2	Rusted
508	Frag	1	N/A	N/A	1	Rusted
509	Rock	1	N/A	N/A	3	Rusted
510	Scrap	1	N/A	N/A	2	Rusted

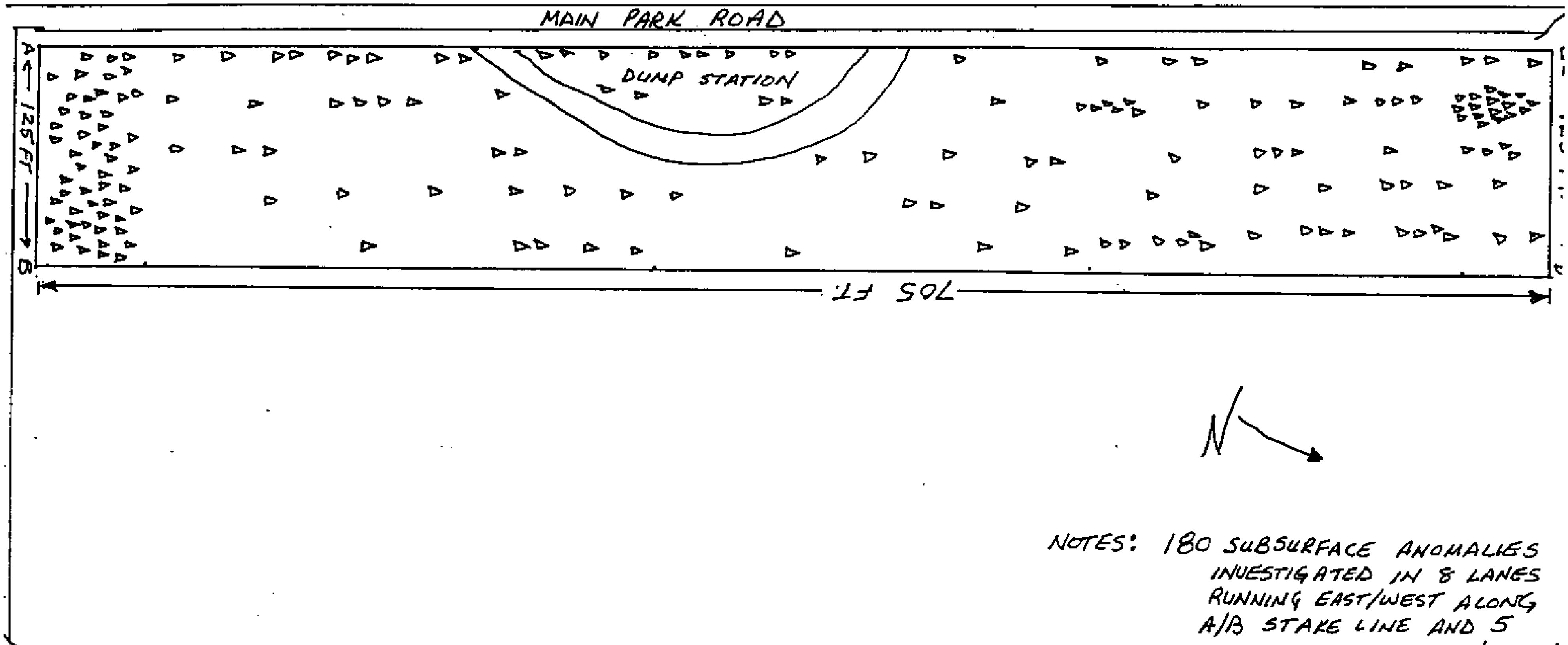
GRID SURVEY SUMMARY SHEET

GRID :78

Accessability: JOGGING TRAIL

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
511	Scrap	1	N/A	N/A	12	Rusted
512	Rock	1	N/A	N/A	4	Rusted
513	Frag	1	N/A	N/A	3	Rusted
514	Frag	1	N/A	N/A	2	Rusted

FORMER CAMP [illegible]OFT
SPARTANBURG, SOUTH CAROLINA
GRID # 79



NOTES: 180 SUBSURFACE ANOMALIES INVESTIGATED IN 8 LANES RUNNING EAST/WEST ALONG A/B STAKE LINE AND 5 LANES RUNNING NORTH/SOUTH FOR REMAINDER OF GRID

29 lbs METAL RECOVERED

* GRENADE SPOONS IN NORTHWEST CORNER

GRID SURVEY SUMMARY SHEET

GRID: 79

Accessability: Black Top

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Scrap	1	N/A	N/A	4	Rusted
2	Frag	1	N/A	N/A	3	Rusted
3	30 cal. clip	1	N/A	N/A	2	Rusted
4	30 cal. casing	2	N/A	N/A	3-7	Rusted
5	Wire	21	N/A	N/A	6-19	Rusted
6	60mm Fin assy.	1	N/A	N/A	5	Rusted
7	Frag	1	N/A	N/A	4	Rusted
8	Frag	1	N/A	N/A	4	Rusted
9	Wire	1	N/A	N/A	5	Rusted
10	Can	1	N/A	N/A	2	Rusted
11	60mm Fin	1	N/A	N/A	3	Rusted
12	Rock	1	N/A	N/A	7	Rusted
13	Scrap	1	N/A	N/A	5	Rusted
14	Tent spike	1	N/A	N/A	2	Rusted
15	Nail	1	N/A	N/A	3	Rusted
16	30 cal. clip	1	N/A	N/A	4	Rusted
17	Rock	1	N/A	N/A	4	Rusted
18	Rock	1	N/A	N/A	3	Rusted
19	30 cal. clip	1	N/A	N/A	4	Rusted
20	Blade	1	N/A	N/A	3	Rusted
21	Frag	1	N/A	N/A	2	Rusted
22	Nail	1	N/A	N/A	4	Rusted
23	Rock	1	N/A	N/A	5	Rusted
24	Scrap	1	N/A	N/A	4	Rusted
25	Can	1	N/A	N/A	4	Rusted
26	Rock	3	N/A	N/A	5-11	Rusted
27	Frag	1	N/A	N/A	4	Rusted
28	30 cal. clip	1	N/A	N/A	4	Rusted
29	Commo wire	1	N/A	N/A	3	Rusted
30	Frag	1	N/A	N/A	3	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 79

Accessability: Black Top

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	Scrap	1	N/A	N/A	4	Rusted
32	Frag	1	N/A	N/A	3	Rusted
33	30 cal. clip	1	N/A	N/A	2	Rusted
34	30 cal. casing	2	N/A	N/A	3-7	Rusted
35	Wire	21	N/A	N/A	6-19	Rusted
36	60mm Fin assy.	1	N/A	N/A	5	Rusted
37	Frag	1	N/A	N/A	4	Rusted
38	Frag	1	N/A	N/A	4	Rusted
39	Wire	1	N/A	N/A	5	Rusted
40	Can	1	N/A	N/A	2	Rusted
41	60mm Fin	1	N/A	N/A	3	Rusted
42	Rock	1	N/A	N/A	7	Rusted
43	Scrap	1	N/A	N/A	5	Rusted
44	Tent spike	1	N/A	N/A	2	Rusted
45	Nail	1	N/A	N/A	3	Rusted
46	30 cal. clip	1	N/A	N/A	4	Rusted
47	Rock	1	N/A	N/A	4	Rusted
48	Rock	1	N/A	N/A	3	Rusted
49	30 cal. clip	1	N/A	N/A	4	Rusted
50	Blade	1	N/A	N/A	3	Rusted
51	Frag	1	N/A	N/A	2	Rusted
52	Nail	1	N/A	N/A	4	Rusted
53	Rock	1	N/A	N/A	5	Rusted
54	Scrap	1	N/A	N/A	4	Rusted
55	Can	1	N/A	N/A	4	Rusted
56	Rock	3	N/A	N/A	5-11	Rusted
57	Frag	1	N/A	N/A	4	Rusted
58	30 cal. clip	1	N/A	N/A	4	Rusted
59	Commo wire	1	N/A	N/A	3	Rusted
60	Frag	1	N/A	N/A	3	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 79

Accessability: Black Top

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
61	Frag	2	N/A	N/A	3-7	Rusted
62	Nail	1	N/A	N/A	3	Rusted
63	Frag	1	N/A	N/A	4	Rusted
64	Sardine can	1	N/A	N/A	2	Rusted
65	Rock	1	N/A	N/A	6	Rusted
66	Nail	1	N/A	N/A	2	Rusted
67	30 cal. clip	1	N/A	N/A	4	Rusted
68	Wire	1	N/A	N/A	3	Rusted
69	Rock	1	N/A	N/A	5	Rusted
70	Rock	1	N/A	N/A	6	Rusted
71	Scrap	1	N/A	N/A	4	Rusted
72	Rock	1	N/A	N/A	5	Rusted
73	Frag	1	N/A	N/A	3	Rusted
74	30 cal. clip	1	N/A	N/A	4	Rusted
75	Rock	1	N/A	N/A	16	Rusted
76	Frag	1	N/A	N/A	4	Rusted
77	Wire	1	N/A	N/A	3	Rusted
78	Scrap	1	N/A	N/A	6	Rusted
79	Frag	1	N/A	N/A	4	Rusted
80	Nail	1	N/A	N/A	3	Rusted
81	MK 2 Frag	1	N/A	N/A	1	Rusted
82	Wire	1	N/A	N/A	2	Rusted
83	Nail	1	N/A	N/A	4	Rusted
84	MK 2 Frag	1	N/A	N/A	4	Rusted
85	Nail / 30 cal. clip	3	N/A	N/A	6	Rusted
86	Can	1	N/A	N/A	4	Rusted
87	Rock	1	N/A	N/A	8	Rusted
88	30 cal. clip	1	N/A	N/A	4	Rusted
89	Chain link	1	N/A	N/A	4	Rusted
90	Frag	1	N/A	N/A	3	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 79

Accessability: Black Top

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
91	Razer blade	1	N/A	N/A	4	Rusted
92	30 cal. clip	1	N/A	N/A	2	Rusted
93	30 cal. clip	1	N/A	N/A	3	Rusted
94	Rock	1	N/A	N/A	2	Rusted
95	Scrap	1	N/A	N/A	3	Rusted
96	Frag	1	N/A	N/A	4	Rusted
97	Scrap	1	N/A	N/A	6	Rusted
98	Frag	1	N/A	N/A	3	Rusted
99	Wire	1	N/A	N/A	4	Rusted
100	30 cal. clip	1	N/A	N/A	1	Rusted
101	30 cal. clip	1	N/A	N/A	4	Rusted
102	Wire	1	N/A	N/A	2	Rusted
103	Horse shoe	1	N/A	N/A	3	Rusted
104	30 cal. clip	1	N/A	N/A	3	Rusted
105	30 cal. clip	1	N/A	N/A	4	Rusted
106	30 cal. clip	1	N/A	N/A	3	Rusted
107	30 cal. clip	1	N/A	N/A	4	Rusted
108	30 cal. clip	1	N/A	N/A	3	Rusted
109	can	1	N/A	N/A	4	Rusted
110	30 cal. clip	1	N/A	N/A	4	Rusted
111	30 cal. clip	1	N/A	N/A	3	Rusted
112	30 cal. clip	1	N/A	N/A	3	Rusted
113	Wire	1	N/A	N/A	2	Rusted
114	30 cal. clip	2	N/A	N/A	4	Rusted
115	Can	1	N/A	N/A	3	Rusted
116	Hack saw blade	1	N/A	N/A	2	Rusted
117	30 cal. clip	1	N/A	N/A	1	Rusted
118	30 cal. clip	1	N/A	N/A	2	Rusted
119	Rock	1	N/A	N/A	3	Rusted
120	30 cal. clip	1	N/A	N/A	3	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 79 Accessability: Black Top

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
121	Rock	1	N/A	N/A	8	Rusted
122	Frag	1	N/A	N/A	4	Rusted
123	30 cal. clip	1	N/A	N/A	3	Rusted
124	Can	1	N/A	N/A	3	Rusted
125	30 cal. clip	1	N/A	N/A	2	Rusted
126	Scrap	1	N/A	N/A	1	Rusted
127	30 cal. clip	1	N/A	N/A	3	Rusted
128	Commo wire	10	N/A	N/A	5-13	Rusted
129	Scrap	2	N/A	N/A	2-7	Rusted
130	Cable	1	N/A	N/A	8	Rusted
131	Rock	1	N/A	N/A	10	Rusted
132	Grenade spoon	1	N/A	N/A	2	Rusted
133	Bottle cap	1	N/A	N/A	1	Rusted
134	Grenade spoon	1	N/A	N/A	2	Rusted
135	Grenade spoon	2	N/A	N/A	4-8	Rusted
136	Can	1	N/A	N/A	2	Rusted
137	Grenade spoon	1	N/A	N/A	3	Rusted
138	Nail	1	N/A	N/A	6	Rusted
139	30 cal. clip	1	N/A	N/A	2	Rusted
140	Grenade fuze	1	N/A	N/A	4	Rusted
141	Grenade spoon	1	N/A	N/A	2	Rusted
142	Grenade spoon	2	N/A	N/A	2-7	Rusted
143	Grenade spoon	1	N/A	N/A	3	Rusted
144	30 cal. clip	1	N/A	N/A	2	Rusted
145	Grenade cap	1	N/A	N/A	3	Rusted
146	Rock	1	N/A	N/A	23	Rusted
147	Grenade spoon	1	N/A	N/A	2	Rusted
148	Grenade spoon	1	N/A	N/A	1	Rusted
149	Grenade spoon	1	N/A	N/A	2	Rusted
150	Scrap	1	N/A	N/A	4	Rusted

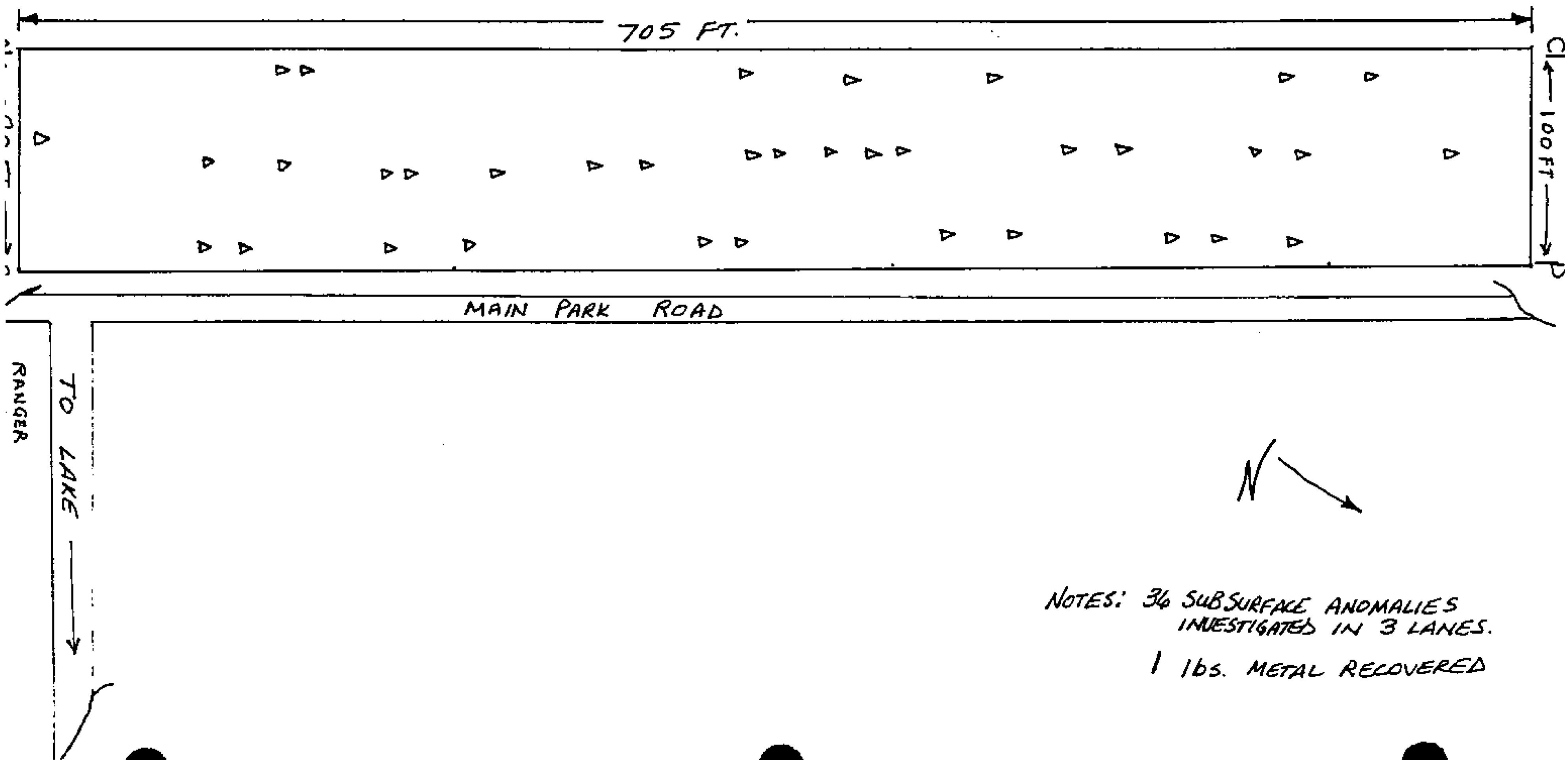
GRID SURVEY SUMMARY SHEET

GRID: 79

Accessability: Black Top

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
151	Grenade spoon	1	N/A	N/A	5	Rusted
152	Grenade spoon	1	N/A	N/A	2	Rusted
153	Grenade spoon	1	N/A	N/A	1	Rusted
154	Grenade spoon	1	N/A	N/A	2	Rusted
155	Grenade spoon	1	N/A	N/A	1	Rusted
156	Grenade spoon	1	N/A	N/A	2	Rusted
157	Scrap	1	N/A	N/A	3	Rusted
158	Rock	1	N/A	N/A	8	Rusted
159	30 cal. clip	1	N/A	N/A	3	Rusted
160	Grenade spoon	1	N/A	N/A	3	Rusted
161	Rock	1	N/A	N/A	6	Rusted
162	30 cal. clip	1	N/A	N/A	3	Rusted
163	Wire	1	N/A	N/A	2	Rusted
164	Wire	1	N/A	N/A	2	Rusted
165	Can	1	N/A	N/A	1	Rusted
166	Wire	lots	N/A	N/A	4	Rusted
167	Rock	1	N/A	N/A	6	Rusted
168	Rock	1	N/A	N/A	5	Rusted
169	30 cal. clip	1	N/A	N/A	4	Rusted
170	Commo wire	1	N/A	N/A	2	Rusted
171	30 cal. clip	1	N/A	N/A	3	Rusted
172	Frag	1	N/A	N/A	4	Rusted
173	Can	1	N/A	N/A	4	Rusted
174	Wire	1	N/A	N/A	2	Rusted
175	Frag	1	N/A	N/A	3	Rusted
176	30 cal. clip	1	N/A	N/A	2	Rusted
177	30 cal. clip	1	N/A	N/A	3	Rusted
178	30 cal. clip	1	N/A	N/A	1	Rusted
179	Can	1	N/A	N/A	1	Rusted
180	Frag	1	N/A	N/A	3	Rusted

FORMER CAMP CROFT
SPARTANBURG, SOUTH CAROLINA
GRID #80



NOTES: 36 SUBSURFACE ANOMALIES INVESTIGATED IN 3 LANES.

1 lbs. METAL RECOVERED

GRID SURVEY SUMMARY SHEET

GRID :80

Accessability: Black Top

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Wire	1	N/A	N/A	1	Rusted
2	81mm Fin	1	N/A	N/A	4	Rusted
3	Can	1	N/A	N/A	1	Rusted
4	Rock	1	N/A	N/A	1	Rusted
5	Scrap	1	N/A	N/A	2	Rusted
6	Can	1	N/A	N/A	2	Rusted
7	Can	1	N/A	N/A	6	Rusted
8	Rock	1	N/A	N/A	5	Rusted
9	Rock	1	N/A	N/A	4	Rusted
10	Nail	2	N/A	N/A	2-5	Rusted
11	Rock	1	N/A	N/A	2	Rusted
12	Frag	1	N/A	N/A	3	Rusted
13	Scrap	1	N/A	N/A	1	Rusted
14	Nail	1	N/A	N/A	2	Rusted
15	Rock	1	N/A	N/A	3	Rusted
16	Frag	1	N/A	N/A	4	Rusted
17	Bursten Tube	1	N/A	N/A	6	Rusted
18	Can	1	N/A	N/A	2	Rusted
19	Can	1	N/A	N/A	1	Rusted
20	Rock	1	N/A	N/A	4	Rusted
21	Horse shoe	1	N/A	N/A	3	Rusted
22	Nail	1	N/A	N/A	1	Rusted
23	Wire	1	N/A	N/A	2	Rusted
24	Rock	1	N/A	N/A	10	Rusted
25	Barbed wire	1	N/A	N/A	3	Rusted
26	Frag	1	N/A	N/A	3	Rusted
27	Commo wire/Rock	2	N/A	N/A	6-11	Rusted
28	Barbed wire	1	N/A	N/A	6	Rusted
29	Can	1	N/A	N/A	7	Rusted
30	Can	1	N/A	N/A	4	Rusted

GRID SURVEY SUMMARY SHEET

GRID :80

Accessability: Black Top

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	Rock	1	N/A	N/A	6	Rusted
32	Rock	1	N/A	N/A	4	Rusted
33	Rock	1	N/A	N/A	1	Rusted
34	Rock	1	N/A	N/A	6	Rusted
35	30 cal. clip	1	N/A	N/A	4	Rusted
36	Commo wire	1	N/A	N/A	2	Rusted

FORMER CAMP CROFT
SPARTANBURG, SOUTH CAROLINA
GRID # 81

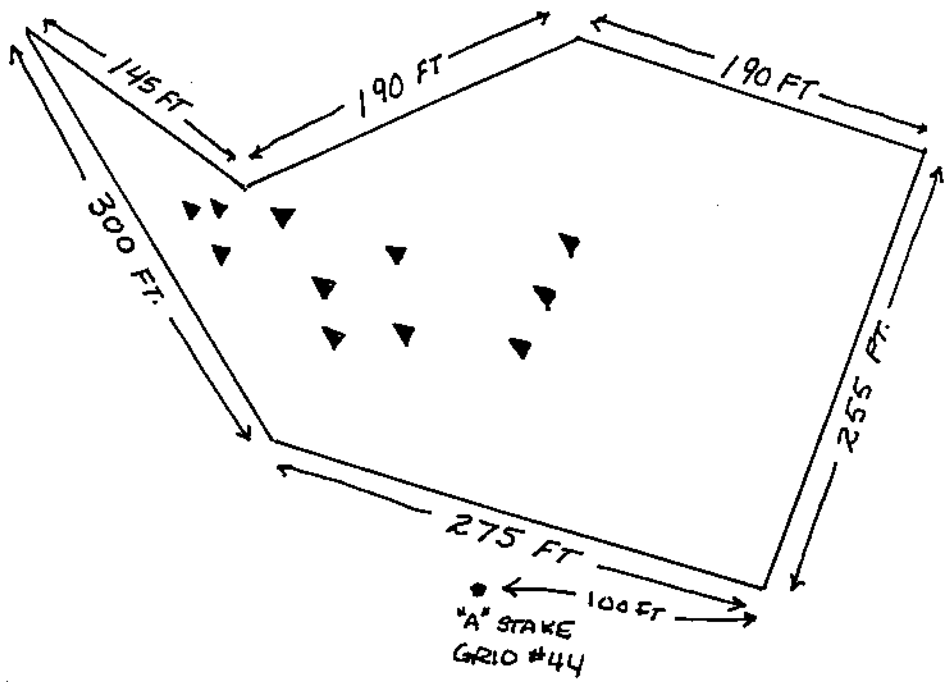
N ↑

NOTE: GRID ENCOMPASSES CREST OF HILL WITH STEEP DROP-OFF TO THE EAST AND WEST.

391 SUBSURFACE ANOMALIES INVESTIGATED IN A RANDOM PATTERN ENCOMPASSING THE ENTIRE GRID.

10 EA. 60mm MORTAR, H.E., FUSED
1 EA. 81mm MORTAR, H.E., FUSED

83 lbs. METAL RECOVERED



GRID SURVEY SUMMARY SHEET

GRID: 81

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	60mm Fin	1	N/A	N/A	2	Rusted
2	Frag	2	N/A	N/A	2-8	Rusted
3	Frag	1	N/A	N/A	4	Rusted
4	Scrap	1	N/A	N/A	4	Rusted
5	Frag	1	N/A	N/A	1	Rusted
6	60mm Fin	1	N/A	N/A	3	Rusted
7	81mm Fin	1	N/A	N/A	4	Rusted
8	Frag	1	N/A	N/A	3	Rusted
9	60mm Mortar	1	PD	HE	2	Rusted
10	Frag	1	N/A	N/A	3	Rusted
11	60mm Tail boom	1	N/A	N/A	4	Rusted
12	Frag	1	N/A	N/A	5	Rusted
13	Frag	3	N/A	N/A	3-11	Rusted
14	Frag	1	N/A	N/A	3	Rusted
15	60mm Fin	1	N/A	N/A	2	Rusted
16	60mm Fin	1	N/A	N/A	5	Rusted
17	60mm Fin	1	N/A	N/A	3	Rusted
18	60mm Tail boom	1	N/A	N/A	4	Rusted
19	Frag	1	N/A	N/A	5	Rusted
20	Frag	1	N/A	N/A	5	Rusted
21	81mm Fin	1	N/A	N/A	4	Rusted
22	Frag	3	N/A	N/A	4-15	Rusted
23	Frag	1	N/A	N/A	3	Rusted
24	Frag	1	N/A	N/A	1	Rusted
25	Frag	1	N/A	N/A	4	Rusted
26	Frag	1	N/A	N/A	3	Rusted
27	Frag	1	N/A	N/A	3	Rusted
28	81mm Tail boom	1	N/A	N/A	3	Rusted
29	Scrap	1	N/A	N/A	1	Rusted
30	Frag	1	N/A	N/A	2	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 81

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	Frag	1	N/A	N/A	2	Rusted
32	60mm Mortar	1	PD	HE	5	Rusted
33	Scrap	1	N/A	N/A	1	Rusted
34	Frag	2	N/A	N/A	4-8	Rusted
35	Frag	1	N/A	N/A	3	Rusted
36	Frag	1	N/A	N/A	3	Rusted
37	Frag	1	N/A	N/A	6	Rusted
38	81mm Fin	1	N/A	N/A	4	Rusted
39	Frag	1	N/A	N/A	4	Rusted
40	Frag	1	N/A	N/A	3	Rusted
41	81mm Fin	1	N/A	N/A	2	Rusted
42	Frag	1	N/A	N/A	2	Rusted
43	Frag	3	N/A	N/A	5-11	Rusted
44	Frag	1	N/A	N/A	3	Rusted
45	Frag	1	N/A	N/A	4	Rusted
46	Frag	1	N/A	N/A	4	Rusted
47	Frag	1	N/A	N/A	1	Rusted
48	Frag	1	N/A	N/A	3	Rusted
49	Frag	1	N/A	N/A	2	Rusted
50	60mm Fin	1	N/A	N/A	2	Rusted
51	Frag	1	N/A	N/A	2	Rusted
52	Rock	1	N/A	N/A	3	Rusted
53	Frag	1	N/A	N/A	3	Rusted
54	Frag	1	N/A	N/A	1	Rusted
55	Frag	1	N/A	N/A	4	Rusted
56	60mm Mortar	1	PD	HE	12	Rusted
57	Frag	1	N/A	N/A	3	Rusted
58	Frag	1	N/A	N/A	5	Rusted
59	Frag	1	N/A	N/A	2	Rusted
60	Frag	1	N/A	N/A	2	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 81

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
61	Scrap	1	N/A	N/A	1	Rusted
62	Frag	1	N/A	N/A	3	Rusted
63	Frag	1	N/A	N/A	3	Rusted
64	Frag	1	N/A	N/A	1	Rusted
65	Frag	1	N/A	N/A	4	Rusted
66	Frag	1	N/A	N/A	3	Rusted
67	60mm Mortar	1	PD	HE	4	Rusted
68	Frag	1	N/A	N/A	3	Rusted
69	60mm Fin	1	N/A	N/A	6	Rusted
70	Frag	1	N/A	N/A	2	Rusted
71	Frag	1	N/A	N/A	3	Rusted
72	Rock	1	N/A	N/A	2	Rusted
73	Frag	1	N/A	N/A	1	Rusted
74	Frag	1	N/A	N/A	1	Rusted
75	Frag	1	N/A	N/A	3	Rusted
76	Frag	1	N/A	N/A	5	Rusted
77	Frag	1	N/A	N/A	3	Rusted
78	81mm Fin	1	N/A	N/A	1	Rusted
79	Frag	1	N/A	N/A	2	Rusted
80	Frag	1	N/A	N/A	2	Rusted
81	Scrap	1	N/A	N/A	1	Rusted
82	Frag	1	N/A	N/A	3	Rusted
83	Frag	1	N/A	N/A	2	Rusted
84	Frag	1	N/A	N/A	2	Rusted
85	81mm Fin	1	N/A	N/A	5	Rusted
86	Frag	1	N/A	N/A	3	Rusted
87	Frag	1	N/A	N/A	2	Rusted
88	Frag	1	N/A	N/A	3	Rusted
89	Frag	1	N/A	N/A	3	Rusted
90	Frag	1	N/A	N/A	4	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 81

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
91	81mm Fin	1	N/A	N/A	1	Rusted
92	60mm Fin	1	N/A	N/A	3	Rusted
93	Frag	1	N/A	N/A	5	Rusted
94	Frag	1	N/A	N/A	1	Rusted
95	Frag	1	N/A	N/A	1	Rusted
96	Frag	1	N/A	N/A	2	Rusted
97	60mm Fin	1	N/A	N/A	1	Rusted
98	Frag	1	N/A	N/A	4	Rusted
99	60mm Mortar	1	PD	HE	2	Rusted
100	Frag	1	N/A	N/A	2	Rusted
101	Frag	1	N/A	N/A	4	Rusted
102	Frag	1	N/A	N/A	4	Rusted
103	Frag	1	N/A	N/A	3	Rusted
104	Frag	1	N/A	N/A	4	Rusted
105	Frag	1	N/A	N/A	2	Rusted
106	Frag	1	N/A	N/A	6	Rusted
107	81mm Fin	1	N/A	N/A	1	Rusted
108	Frag	1	N/A	N/A	3	Rusted
109	Frag	1	N/A	N/A	3	Rusted
110	60mm Fin	1	N/A	N/A	4	Rusted
111	Rock	1	N/A	N/A	3	Rusted
112	60mm Fin	1	N/A	N/A	3	Rusted
113	Scrap	1	N/A	N/A	4	Rusted
114	Frag	1	N/A	N/A	1	Rusted
115	Frag	1	N/A	N/A	3	Rusted
116	Scrap	1	N/A	N/A	1	Rusted
117	81mm Tail boom	1	N/A	N/A	1	Rusted
118	Frag	1	N/A	N/A	1	Rusted
119	Frag	1	N/A	N/A	3	Rusted
120	Frag	1	N/A	N/A	4	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 81

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
121	Rock	1	N/A	N/A	6	Rusted
122	Frag	1	N/A	N/A	2	Rusted
123	Frag	1	N/A	N/A	4	Rusted
124	Frag	1	N/A	N/A	4	Rusted
125	Frag	1	N/A	N/A	3	Rusted
126	Frag	1	N/A	N/A	4	Rusted
127	Frag	1	N/A	N/A	6	Rusted
128	Frag	1	N/A	N/A	1	Rusted
129	60mm Fin	1	N/A	N/A	4	Rusted
130	Frag	1	N/A	N/A	1	Rusted
131	Frag	1	N/A	N/A	3	Rusted
132	Frag	1	N/A	N/A	3	Rusted
133	81mm Mortar	1	PD	HE	14	Rusted
134	60mm Fin	1	N/A	N/A	5	Rusted
135	Frag	1	N/A	N/A	2	Rusted
136	Scrap	1	N/A	N/A	1	Rusted
137	Frag	1	N/A	N/A	3	Rusted
138	Frag	1	N/A	N/A	2	Rusted
139	Frag	1	N/A	N/A	2	Rusted
140	Frag	1	N/A	N/A	1	Rusted
141	81mm Fin	1	N/A	N/A	7	Rusted
142	Frag	1	N/A	N/A	2	Rusted
143	Frag	1	N/A	N/A	1	Rusted
144	Frag	1	N/A	N/A	1	Rusted
145	Frag	1	N/A	N/A	3	Rusted
146	60mm Tail boom	1	N/A	N/A	5	Rusted
147	Frag	1	N/A	N/A	1	Rusted
148	60mm Fin	1	N/A	N/A	4	Rusted
149	60mm Fin	1	N/A	N/A	4	Rusted
150	Frag	1	N/A	N/A	3	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 81

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
151	Frag	1	N/A	N/A	1	Rusted
152	Frag	1	N/A	N/A	2	Rusted
153	Frag	1	N/A	N/A	1	Rusted
154	Frag	1	N/A	N/A	1	Rusted
155	Frag	1	N/A	N/A	3	Rusted
156	Frag	1	N/A	N/A	1	Rusted
157	Rock	1	N/A	N/A	7	Rusted
158	Frag	1	N/A	N/A	2	Rusted
159	Frag	1	N/A	N/A	2	Rusted
160	60mm Tail boom	1	N/A	N/A	4	Rusted
161	81mm Fin	1	N/A	N/A	4	Rusted
162	Rock	1	N/A	N/A	5	Rusted
163	Frag	1	N/A	N/A	2	Rusted
164	Frag	1	N/A	N/A	3	Rusted
165	Frag	1	N/A	N/A	1	Rusted
166	Frag	1	N/A	N/A	1	Rusted
167	Rock	1	N/A	N/A	6	Rusted
168	Rock	1	N/A	N/A	5	Rusted
169	Scrap	1	N/A	N/A	1	Rusted
170	Frag	1	N/A	N/A	1	Rusted
171	Rock	1	N/A	N/A	8	Rusted
172	81mm Fin	1	N/A	N/A	5	Rusted
173	60mm Fin	1	N/A	N/A	4	Rusted
174	Rock	1	N/A	N/A	3	Rusted
175	Rock	1	N/A	N/A	7	Rusted
176	Frag	1	N/A	N/A	2	Rusted
177	Frag	1	N/A	N/A	3	Rusted
178	Frag	1	N/A	N/A	3	Rusted
179	60mm Fin	1	N/A	N/A	4	Rusted
180	Frag	1	N/A	N/A	1	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 81 Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
181	Frag	1	N/A	N/A	3	Rusted
182	Frag	1	N/A	N/A	1	Rusted
183	Frag	1	N/A	N/A	4	Rusted
184	Frag	1	N/A	N/A	3	Rusted
185	Frag	1	N/A	N/A	2	Rusted
186	Frag	1	N/A	N/A	2	Rusted
187	Frag	1	N/A	N/A	3	Rusted
188	60mm Tail boom	1	N/A	N/A	3	Rusted
189	Frag	1	N/A	N/A	4	Rusted
190	Frag	1	N/A	N/A	4	Rusted
191	Rock	1	N/A	N/A	7	Rusted
192	Frag	1	N/A	N/A	2	Rusted
193	60mm Fin	1	N/A	N/A	5	Rusted
194	Frag	1	N/A	N/A	3	Rusted
195	Frag	1	N/A	N/A	3	Rusted
196	Frag	1	N/A	N/A	1	Rusted
197	81mm Fin	1	N/A	N/A	6	Rusted
198	Frag	1	N/A	N/A	1	Rusted
199	Frag	1	N/A	N/A	1	Rusted
200	Frag	1	N/A	N/A	2	Rusted
201	Scrap	1	N/A	N/A	1	Rusted
202	Frag	1	N/A	N/A	2	Rusted
203	Frag	1	N/A	N/A	2	Rusted
204	Frag	1	N/A	N/A	2	Rusted
205	60mm Mortar	1	PD	HE	5	Rusted
206	Frag	1	N/A	N/A	1	Rusted
207	60mm Fin	1	N/A	N/A	3	Rusted
208	Frag	1	N/A	N/A	3	Rusted
209	60mm Fin	1	N/A	N/A	4	Rusted
210	Frag	1	N/A	N/A	1	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 81

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
211	Frag	1	N/A	N/A	4	Rusted
212	Frag	1	N/A	N/A	3	Rusted
213	81mm Tail boom	1	N/A	N/A	9	Rusted
214	Frag	1	N/A	N/A	1	Rusted
215	Rock	1	N/A	N/A	5	Rusted
216	Frag	1	N/A	N/A	2	Rusted
217	60mm Mortar	1	PD	HE	2	Rusted
218	Frag	1	N/A	N/A	2	Rusted
219	Frag	1	N/A	N/A	3	Rusted
220	Frag	1	N/A	N/A	1	Rusted
221	Frag	1	N/A	N/A	3	Rusted
222	Frag	1	N/A	N/A	3	Rusted
223	Frag	1	N/A	N/A	1	Rusted
224	Frag	1	N/A	N/A	3	Rusted
225	Frag	1	N/A	N/A	4	Rusted
226	Frag	1	N/A	N/A	4	Rusted
227	Frag	1	N/A	N/A	3	Rusted
228	Frag	1	N/A	N/A	2	Rusted
229	Frag	1	N/A	N/A	1	Rusted
230	Frag	1	N/A	N/A	3	Rusted
231	Frag	1	N/A	N/A	2	Rusted
232	60mm Tail boom	1	N/A	N/A	5	Rusted
233	Frag	1	N/A	N/A	2	Rusted
234	Frag	1	N/A	N/A	3	Rusted
235	Rock	1	N/A	N/A	7	Rusted
236	Frag	1	N/A	N/A	1	Rusted
237	60mm Fin	1	N/A	N/A	4	Rusted
238	Frag	1	N/A	N/A	1	Rusted
239	Frag	1	N/A	N/A	2	Rusted
240	Frag	1	N/A	N/A	2	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 81

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
241	Rock	1	N/A	N/A	3	Rusted
242	Frag	1	N/A	N/A	2	Rusted
243	Frag	1	N/A	N/A	2	Rusted
244	81mm Fin	1	N/A	N/A	5	Rusted
245	Frag	1	N/A	N/A	3	Rusted
246	Frag	1	N/A	N/A	1	Rusted
247	Frag	1	N/A	N/A	4	Rusted
248	Frag	1	N/A	N/A	4	Rusted
249	Frag	1	N/A	N/A	3	Rusted
250	60mm Fin	1	N/A	N/A	4	Rusted
251	Frag	1	N/A	N/A	1	Rusted
252	Frag	1	N/A	N/A	2	Rusted
253	60mm Mortar	1	PD	HE	4	Rusted
254	Frag	1	N/A	N/A	3	Rusted
255	Rock	1	N/A	N/A	3	Rusted
256	Frag	1	N/A	N/A	1	Rusted
257	Frag	1	N/A	N/A	2	Rusted
258	Frag	1	N/A	N/A	2	Rusted
259	60mm Fin	1	N/A	N/A	6	Rusted
260	Frag	1	N/A	N/A	1	Rusted
261	81mm Fin	1	N/A	N/A	5	Rusted
262	Frag	1	N/A	N/A	2	Rusted
263	Frag	1	N/A	N/A	1	Rusted
264	Frag	1	N/A	N/A	2	Rusted
265	Scrap	1	N/A	N/A	3	Rusted
266	Frag	1	N/A	N/A	3	Rusted
267	Rock	1	N/A	N/A	2	Rusted
268	Rock	1	N/A	N/A	5	Rusted
269	Frag	1	N/A	N/A	1	Rusted
270	60mm Tail boom	1	N/A	N/A	4	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 81

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
271	Frag	1	N/A	N/A	3	Rusted
272	Frag	1	N/A	N/A	2	Rusted
273	Frag	1	N/A	N/A	2	Rusted
274	Frag	1	N/A	N/A	2	Rusted
275	Frag	1	N/A	N/A	4	Rusted
276	Frag	1	N/A	N/A	3	Rusted
277	Frag	1	N/A	N/A	3	Rusted
278	Scrap	1	N/A	N/A	1	Rusted
279	Frag	1	N/A	N/A	2	Rusted
280	Frag	1	N/A	N/A	2	Rusted
281	Wire	3	N/A	N/A	3-11	Rusted
282	Frag	1	N/A	N/A	1	Rusted
283	Frag	1	N/A	N/A	2	Rusted
284	Frag	1	N/A	N/A	2	Rusted
285	81mm Tail boom	1	N/A	N/A	5	Rusted
286	Frag	1	N/A	N/A	2	Rusted
287	Frag	1	N/A	N/A	3	Rusted
288	Frag	1	N/A	N/A	2	Rusted
289	81mm Fin	1	N/A	N/A	7	Rusted
290	60mm Fin	1	N/A	N/A	5	Rusted
291	Frag	1	N/A	N/A	1	Rusted
292	Frag	1	N/A	N/A	1	Rusted
293	Rock	1	N/A	N/A	7	Rusted
294	Frag	1	N/A	N/A	3	Rusted
295	81mm Fin	1	N/A	N/A	4	Rusted
296	Frag	1	N/A	N/A	2	Rusted
297	Frag	1	N/A	N/A	2	Rusted
298	Frag	1	N/A	N/A	1	Rusted
299	Rock	1	N/A	N/A	7	Rusted
300	Frag	1	N/A	N/A	3	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 81

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
301	Frag	1	N/A	N/A	2	Rusted
302	Frag	1	N/A	N/A	3	Rusted
303	Frag	1	N/A	N/A	3	Rusted
304	Frag	1	N/A	N/A	3	Rusted
305	Rock	1	N/A	N/A	7	Rusted
306	Frag	1	N/A	N/A	1	Rusted
307	Frag	1	N/A	N/A	4	Rusted
308	Frag	1	N/A	N/A	1	Rusted
309	60mm Tail boom	1	N/A	N/A	3	Rusted
310	Frag	1	N/A	N/A	2	Rusted
311	Frag	1	N/A	N/A	1	Rusted
312	Scrap	1	N/A	N/A	1	Rusted
313	Frag	1	N/A	N/A	3	Rusted
314	Frag	1	N/A	N/A	3	Rusted
315	Frag	1	N/A	N/A	4	Rusted
316	Frag	1	N/A	N/A	2	Rusted
317	Frag	1	N/A	N/A	2	Rusted
318	Rock	1	N/A	N/A	8	Rusted
319	60mm Fin	1	N/A	N/A	4	Rusted
320	Frag	1	N/A	N/A	2	Rusted
321	81mm Tail boom	1	N/A	N/A	6	Rusted
322	Frag	1	N/A	N/A	2	Rusted
323	Rock	1	N/A	N/A	4	Rusted
324	Frag	1	N/A	N/A	2	Rusted
325	Frag	1	N/A	N/A	3	Rusted
326	Frag	1	N/A	N/A	3	Rusted
327	Frag	1	N/A	N/A	1	Rusted
328	Scrap	1	N/A	N/A	3	Rusted
329	Frag	1	N/A	N/A	1	Rusted
330	60mm Fin	1	N/A	N/A	5	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 81

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
331	Frag	1	N/A	N/A	1	Rusted
332	60mm Fin	1	N/A	N/A	4	Rusted
333	Rock	1	N/A	N/A	7	Rusted
334	Frag	1	N/A	N/A	3	Rusted
335	Frag	1	N/A	N/A	2	Rusted
336	Frag	1	N/A	N/A	1	Rusted
337	60mm Fin	1	N/A	N/A	6	Rusted
338	Frag	1	N/A	N/A	1	Rusted
339	Frag	1	N/A	N/A	2	Rusted
340	Frag	1	N/A	N/A	2	Rusted
341	Frag	1	N/A	N/A	3	Rusted
342	60mm Fin	1	N/A	N/A	5	Rusted
343	Frag	1	N/A	N/A	1	Rusted
344	Frag	1	N/A	N/A	2	Rusted
345	Frag	1	N/A	N/A	2	Rusted
346	Frag	1	N/A	N/A	1	Rusted
347	Frag	1	N/A	N/A	3	Rusted
348	60mm Fin	1	N/A	N/A	4	Rusted
349	Frag	1	N/A	N/A	4	Rusted
350	Frag	1	N/A	N/A	1	Rusted
351	Rock	1	N/A	N/A	6	Rusted
352	Frag	1	N/A	N/A	2	Rusted
353	60mm Fin	1	N/A	N/A	5	Rusted
354	60mm Fin	1	N/A	N/A	7	Rusted
355	Frag	1	N/A	N/A	1	Rusted
356	Frag	1	N/A	N/A	3	Rusted
357	Frag	1	N/A	N/A	2	Rusted
358	Frag	1	N/A	N/A	2	Rusted
359	Frag	1	N/A	N/A	3	Rusted
360	Frag	1	N/A	N/A	1	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 81

Accessability: EASY

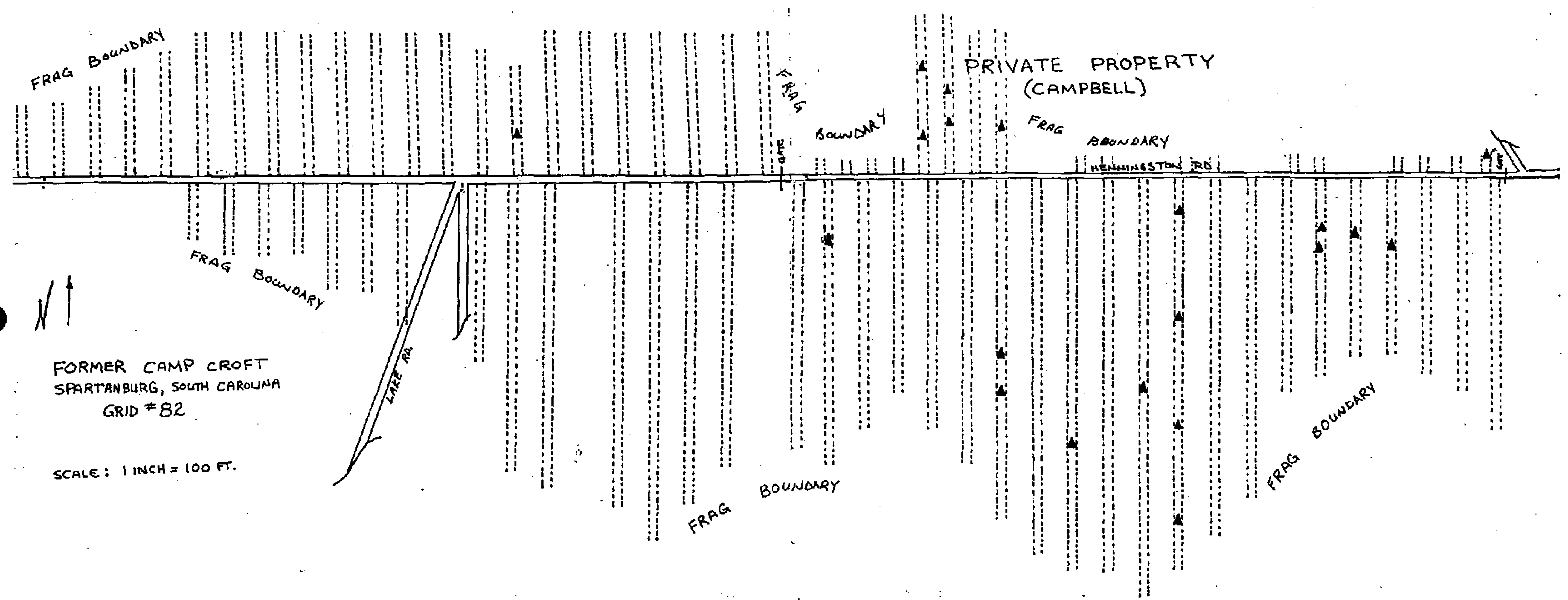
Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
361	Scrap	1	N/A	N/A	1	Rusted
362	Frag	1	N/A	N/A	2	Rusted
363	60mm Tail boom	1	N/A	N/A	5	Rusted
364	Frag	1	N/A	N/A	2	Rusted
365	Frag	1	N/A	N/A	2	Rusted
366	60mm Mortar	1	PD	HE	1	Rusted
367	Frag	1	N/A	N/A	1	Rusted
368	Frag	1	N/A	N/A	4	Rusted
369	Frag	1	N/A	N/A	3	Rusted
370	Frag	1	N/A	N/A	2	Rusted
371	Rock	1	N/A	N/A	6	Rusted
372	Frag	1	N/A	N/A	2	Rusted
373	Rock	1	N/A	N/A	9	Rusted
374	60mm Fin	1	N/A	N/A	5	Rusted
375	Frag	1	N/A	N/A	1	Rusted
376	Frag	1	N/A	N/A	3	Rusted
377	Frag	1	N/A	N/A	3	Rusted
378	60mm Mortar	1	PD	HE	2	Rusted
379	Frag	1	N/A	N/A	2	Rusted
380	Frag	1	N/A	N/A	3	Rusted
381	Frag	1	N/A	N/A	2	Rusted
382	Frag	1	N/A	N/A	1	Rusted
383	81mm Tail boom	1	N/A	N/A	6	Rusted
384	Frag	1	N/A	N/A	1	Rusted
385	Frag	1	N/A	N/A	2	Rusted
386	Frag	1	N/A	N/A	2	Rusted
387	Frag	1	N/A	N/A	3	Rusted
388	60mm Fin	1	N/A	N/A	4	Rusted
389	Frag	1	N/A	N/A	3	Rusted
390	60mm Fin	1	N/A	N/A	6	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 81

Accessability: EASY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
391	Frag	1	N/A	N/A	1	Rusted


FRAG BOUNDARY
PRIVATE PROPERTY
(CAMPBELL)
FRAG BOUNDARY
FRAG BOUNDARY
HENNINGSTON RD
FRAG BOUNDARY
N
LAKE RD.
FORMER CAMP CROFT
SPARTANBURG, SOUTH CAROLINA
GRID #82
SCALE: 1 INCH = 100 FT.
FRAG BOUNDARY
FRAG BOUNDARY
FRAG BOUNDARY

GRID SURVEY SUMMARY SHEET

GRID: 88

Accessability: CLAY ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	Frag	1	N/A	N/A	4	Rusted
32	Frag	1	N/A	N/A	2	Rusted
33	Frag	1	N/A	N/A	2	Rusted
34	Frag	1	N/A	N/A	1	Rusted
35	Wire	1	N/A	N/A	4	Rusted
36	Frag	1	N/A	N/A	2	Rusted
37	Frag	1	N/A	N/A	2	Rusted
38	Frag	1	N/A	N/A	1	Rusted
39	Frag	1	N/A	N/A	3	Rusted
40	Frag	1	N/A	N/A	1	Rusted
41	Frag	1	N/A	N/A	3	Rusted
42	Frag	1	N/A	N/A	1	Rusted

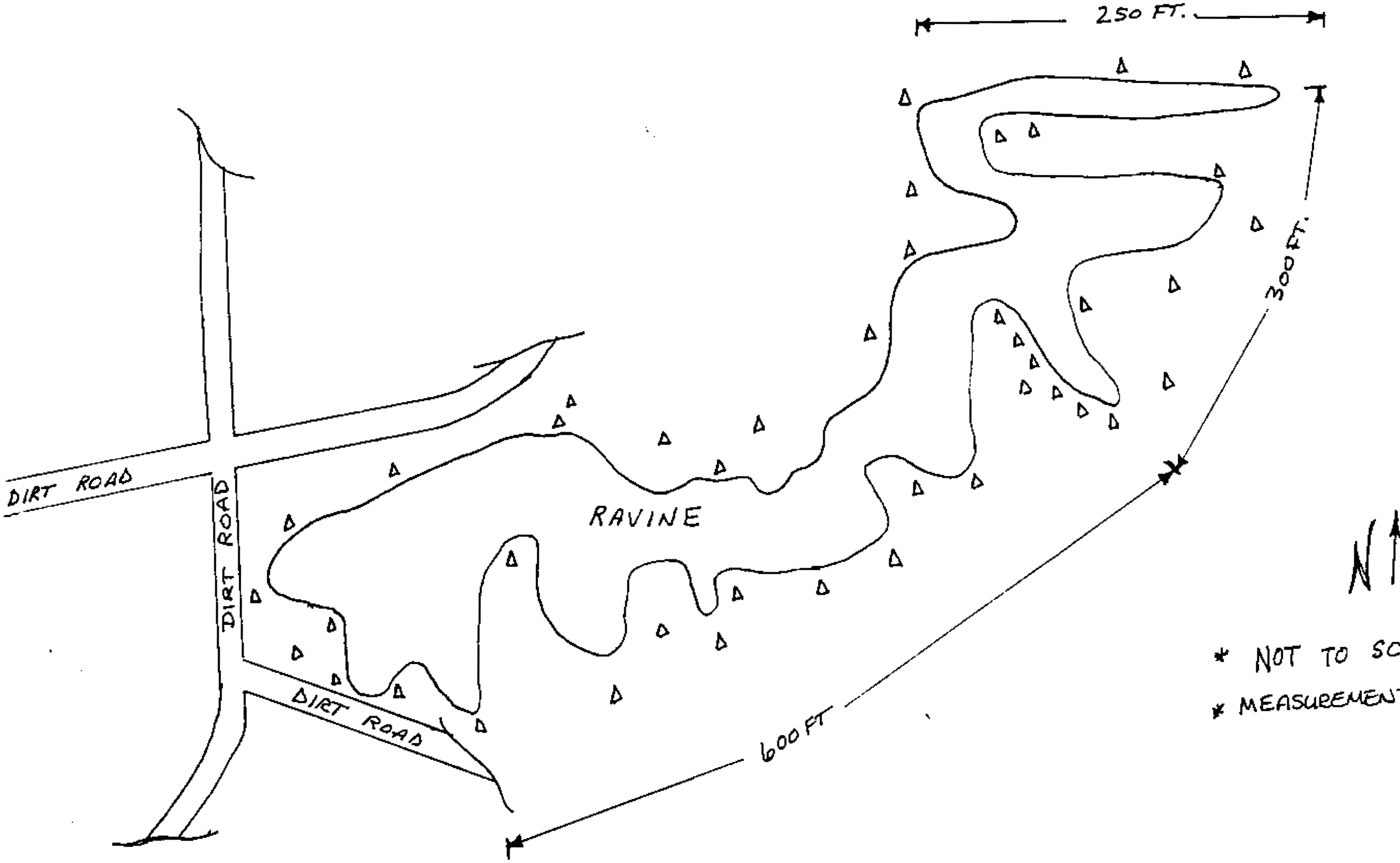
GRID SURVEY SUMMARY SHEET

GRID: 88

Accessability: CLAY ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Frag	1	N/A	N/A	2	Rusted
2	Scrap	1	N/A	N/A	1	Rusted
3	Wire	1	N/A	N/A	3	Rusted
4	Wire	1	N/A	N/A	1	Rusted
5	Wire	1	N/A	N/A	1	Rusted
6	Wire	1	N/A	N/A	1	Rusted
7	Wire	1	N/A	N/A	1	Rusted
8	Wire	1	N/A	N/A	1	Rusted
9	Frag	1	N/A	N/A	3	Rusted
10	Frag	1	N/A	N/A	5	Rusted
11	Frag	1	N/A	N/A	1	Rusted
12	Frag	1	N/A	N/A	3	Rusted
13	Frag	1	N/A	N/A	1	Rusted
14	Plow	1	N/A	N/A	2	Rusted
15	Frag	1	N/A	N/A	3	Rusted
16	Frag	1	N/A	N/A	4	Rusted
17	Frag	1	N/A	N/A	6	Rusted
18	Frag	1	N/A	N/A	1	Rusted
19	Frag	1	N/A	N/A	2	Rusted
20	Frag	1	N/A	N/A	3	Rusted
21	Wire	1	N/A	N/A	1	Rusted
22	Frag	1	N/A	N/A	1	Rusted
23	Frag	1	N/A	N/A	2	Rusted
24	Frag	1	N/A	N/A	2	Rusted
25	Frag	1	N/A	N/A	4	Rusted
26	Wire	1	N/A	N/A	1	Rusted
27	Frag	1	N/A	N/A	3	Rusted
28	Frag	1	N/A	N/A	2	Rusted
29	Frag	1	N/A	N/A	3	Rusted
30	Wire	1	N/A	N/A	1	Rusted

FORMER CAMP CROFT
SPARTANBURG, SOUTH CAROLINA
GRID # 88



* NOT TO SCALE
* MEASUREMENTS ARE APPROXIMATE

GRID SURVEY SUMMARY SHEET

GRID: 87

Accessability: DIRT ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth	State of Degradation
211	Frag	1	N/A	N/A	4	Rusted
212	Frag	1	N/A	N/A	2	Rusted
213	Frag	1	N/A	N/A	1	Rusted
214	Frag	1	N/A	N/A	4	Rusted
215	Frag	1	N/A	N/A	3	Rusted
216	Frag	1	N/A	N/A	2	Rusted
217	Frag	2	N/A	N/A	2-7	Rusted
218	Frag	1	N/A	N/A	4	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 87

Accessability: DIRT ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
181	Frag	1	N/A	N/A	2	Rusted
182	Frag	1	N/A	N/A	2	Rusted
183	Frag	1	N/A	N/A	1	Rusted
184	Frag	1	N/A	N/A	1	Rusted
185	Frag	1	N/A	N/A	1	Rusted
186	Frag	1	N/A	N/A	2	Rusted
187	Frag	1	N/A	N/A	2	Rusted
188	Smoke Canister	5	N/A	N/A	3-14	Rusted
189	Frag	1	N/A	N/A	3	Rusted
190	Frag	1	N/A	N/A	4	Rusted
191	Frag	1	N/A	N/A	1	Rusted
192	Frag	1	N/A	N/A	3	Rusted
193	Frag	1	N/A	N/A	1	Rusted
194	81mm Frag	1	N/A	N/A	4	Rusted
195	Frag	1	N/A	N/A	3	Rusted
196	Frag	1	N/A	N/A	2	Rusted
197	Smoke Canister	1	N/A	N/A	3	Rusted
198	Frag	1	N/A	N/A	4	Rusted
199	Frag	1	N/A	N/A	6	Rusted
200	105mm Proj.	1	PT SQ	smoke	10	Rusted
201	Frag	1	N/A	N/A	3	Rusted
202	Frag	1	N/A	N/A	3	Rusted
203	105mm Proj.	1	PT SQ	smoke	9	Rusted
204	Frag	1	N/A	N/A	4	Rusted
205	60mm Fin assy.	2	N/A	N/A	5-9	Rusted
206	105mm Proj.	1	PT SQ	smoke	10	Rusted
207	60mm Fin	1	N/A	N/A	4	Rusted
208	Frag	2	N/A	N/A	2	Rusted
209	Frag	1	N/A	N/A	4	Rusted
210	Frag	1	N/A	N/A	3	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 87

Accessability: DIRT ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
151	105mm Smoke E. Rd.	1	N/A	empty	1	Rusted
152	105mm Canister	1	N/A	N/A	1	Rusted
153	Frag	1	N/A	N/A	4	Rusted
154	Frag	1	N/A	N/A	3	Rusted
155	81mm Fin	1	N/A	N/A	5	Rusted
156	105mm Canister	1	N/A	N/A	3	Rusted
157	Frag	2	N/A	N/A	5-8	Rusted
158	Frag	3	N/A	N/A	4-11	Rusted
159	Frag	1	N/A	N/A	1	Rusted
160	Frag	1	N/A	N/A	3	Rusted
161	81mm Smoke E. Rd.	1	N/A	N/A	1	Rusted
162	Frag	1	N/A	N/A	2	Rusted
163	Frag	1	N/A	N/A	3	Rusted
164	Frag	1	N/A	N/A	4	Rusted
165	Frag	1	N/A	N/A	3	Rusted
166	Frag	1	N/A	N/A	3	Rusted
167	Frag	1	N/A	N/A	4	Rusted
168	Frag	1	N/A	N/A	1	Rusted
169	60mm Fin	1	N/A	N/A	1	Rusted
170	60mm Fin	1	N/A	N/A	1	Rusted
171	Frag	1	N/A	N/A	1	Rusted
172	Frag	1	N/A	N/A	1	Rusted
173	Frag	1	N/A	N/A	2	Rusted
174	105mm Smoke E. Rd.	1	N/A	N/A	4	Rusted
175	Frag	1	N/A	N/A	4	Rusted
176	Fuze	1	N/A	N/A	3	Rusted
177	Frag	1	N/A	N/A	4	Rusted
178	Frag	1	N/A	N/A	3	Rusted
179	Frag	1	N/A	N/A	1	Rusted
180	Frag	1	N/A	N/A	2	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 87

Accessability: DIRT ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
121	Frag	1	N/A	N/A	2	Rusted
122	Frag	1	N/A	N/A	1	Rusted
123	Frag	1	N/A	N/A	2	Rusted
124	Frag	1	N/A	N/A	8	Rusted
125	Frag	1	N/A	N/A	6	Rusted
126	Frag	1	N/A	N/A	5	Rusted
127	Frag	1	N/A	N/A	3	Rusted
128	Frag	1	N/A	N/A	5	Rusted
129	Frag	1	N/A	N/A	5	Rusted
130	Frag	4	N/A	N/A	9-12	Rusted
131	105mm Smoke E. Rd.	1	N/A	empty	14	Rusted
132	Frag	1	N/A	N/A	7	Rusted
133	105mm Smoke E. Rd.	1	N/A	empty	1	Rusted
134	Frag	1	N/A	N/A	1	Rusted
135	Frag	1	N/A	N/A	7	Rusted
136	Frag	1	N/A	N/A	4	Rusted
137	Frag	1	N/A	N/A	8	Rusted
138	Frag	1	N/A	N/A	5	Rusted
139	Frag	1	N/A	N/A	4	Rusted
140	81mm Fin	1	N/A	N/A	7	Rusted
141	105mm Smoke E. Rd.	1	N/A	empty	23	Rusted
142	81mm Fin	1	N/A	N/A	1	Rusted
143	81mm Tail boom	1	N/A	N/A	1	Rusted
144	105mm Canister	1	N/A	N/A	1	Rusted
145	105mm Smoke E. Rd.	1	N/A	empty	23	Rusted
146	105mm Canister	1	N/A	N/A	5	Rusted
147	105mm Canister	1	N/A	empty	6	Rusted
148	Frag	1	N/A	N/A	2	Rusted
149	105mm Smoke E. Rd.	1	N/A	empty	4	Rusted
150	105mm Base Plug	1	N/A	N/A	2	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 87

Accessability: DIRT ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
91	Frag	1	N/A	N/A	1	Rusted
92	Frag	1	N/A	N/A	1	Rusted
93	Frag	1	N/A	N/A	3	Rusted
94	Frag	1	N/A	N/A	2	Rusted
95	Frag	1	N/A	N/A	4	Rusted
96	Fuze	1	N/A	N/A	4	Tbar/Rusted
97	Frag	1	N/A	N/A	2	Rusted
98	Frag	1	N/A	N/A	4	Rusted
99	Frag	1	N/A	N/A	4	Rusted
100	Frag	2	N/A	N/A	5-10	Rusted
101	Frag	1	N/A	N/A	2	Rusted
102	Frag	1	N/A	N/A	4	Rusted
103	Frag	1	N/A	N/A	3	Rusted
104	Frag	1	N/A	N/A	2	Rusted
105	Frag	1	N/A	N/A	2	Rusted
106	Bicycle fender	1	N/A	N/A	8	Rusted
107	Frag	1	N/A	N/A	1	Rusted
108	Frag	1	N/A	N/A	3	Rusted
109	Frag	1	N/A	N/A	3	Rusted
110	Frag	2	N/A	N/A	5	Rusted
111	Frag	1	N/A	N/A	2	Rusted
112	Frag	1	N/A	N/A	3	Rusted
113	Frag	1	N/A	N/A	2	Rusted
114	Frag	1	N/A	N/A	1	Rusted
115	Frag	1	N/A	N/A	4	Rusted
116	Frag	1	N/A	N/A	1	Rusted
117	Frag	2	N/A	N/A	5	Rusted
118	Frag	1	N/A	N/A	2	Rusted
119	Frag	2	N/A	N/A	4	Rusted
120	Frag	1	N/A	N/A	2	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 87

Accessability: DIRT ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
61	Frag	1	N/A	N/A	2	Rusted
62	Frag	1	N/A	N/A	4	Rusted
63	81mm illum.	1	N/A	N/A	9	Rusted
64	Scrap	1	N/A	N/A	3	Rusted
65	Frag	1	N/A	N/A	2	Rusted
66	Frag	1	N/A	N/A	3	Rusted
67	Frag	1	N/A	N/A	2	Rusted
68	Frag	1	N/A	N/A	3	Rusted
69	Frag	3	N/A	N/A	4-8	Rusted
70	Frag	1	N/A	N/A	2	Rusted
71	Frag	1	N/A	N/A	4	Rusted
72	Frag	2	N/A	N/A	5-9	Rusted
73	Frag	1	N/A	N/A	4	Rusted
74	Frag	1	N/A	N/A	2	Rusted
75	Frag	3	N/A	N/A	6-11	Rusted
76	Frag	1	N/A	N/A	1	Rusted
77	Frag	1	N/A	N/A	2	Rusted
78	Frag	1	N/A	N/A	4	Rusted
79	Frag	1	N/A	N/A	4	Rusted
80	Frag	1	N/A	N/A	1	Rusted
81	Frag	2	N/A	N/A	5-11	Rusted
82	Frag	1	N/A	N/A	2	Rusted
83	Frag	1	N/A	N/A	1	Rusted
84	Frag	1	N/A	N/A	4	Rusted
85	Frag	1	N/A	N/A	1	Rusted
86	Frag	1	N/A	N/A	2	Rusted
87	Frag	1	N/A	N/A	2	Rusted
88	Frag	1	N/A	N/A	4	Rusted
89	Frag	2	N/A	N/A	6-9	Rusted
90	Frag	1	N/A	N/A	5	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 87

Accessability: DIRT ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	Frag	1	N/A	N/A	5	Rusted
32	Frag	1	N/A	N/A	3	Rusted
33	Wire	1	N/A	N/A	1	Rusted
34	Frag	1	N/A	N/A	1	Rusted
35	Frag	2	N/A	N/A	6	Rusted
36	Kettle spout	1	N/A	N/A	1	Rusted
37	Frag	1	N/A	N/A	1	Rusted
38	Frag	1	N/A	N/A	1	Rusted
39	Frag	1	N/A	N/A	1	Rusted
40	Frag	1	N/A	N/A	4	Rusted
41	Frag	2	N/A	N/A	3-9	Rusted
42	Frag	1	N/A	N/A	4	Rusted
43	Frag	1	N/A	N/A	6	Rusted
44	Frag	1	N/A	N/A	1	Rusted
45	Frag	1	N/A	N/A	2	Rusted
46	Frag	3	N/A	N/A	4-11	Rusted
47	Frag	1	N/A	N/A	1	Rusted
48	Frag	1	N/A	N/A	4	Rusted
49	Frag	1	N/A	N/A	3	Rusted
50	Frag	1	N/A	N/A	3	Rusted
51	Frag	1	N/A	N/A	3	Rusted
52	Frag	1	N/A	N/A	1	Rusted
53	Frag	1	N/A	N/A	2	Rusted
54	Frag	1	N/A	N/A	3	Rusted
55	Frag	1	N/A	N/A	2	Rusted
56	Fuze	1	N/A	N/A	6	Rusted
57	Frag	6	N/A	N/A	5-16	Rusted
58	Frag	1	N/A	N/A	4	Rusted
59	Frag	1	N/A	N/A	2	Rusted
60	Frag	8	N/A	N/A	4-18	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 87

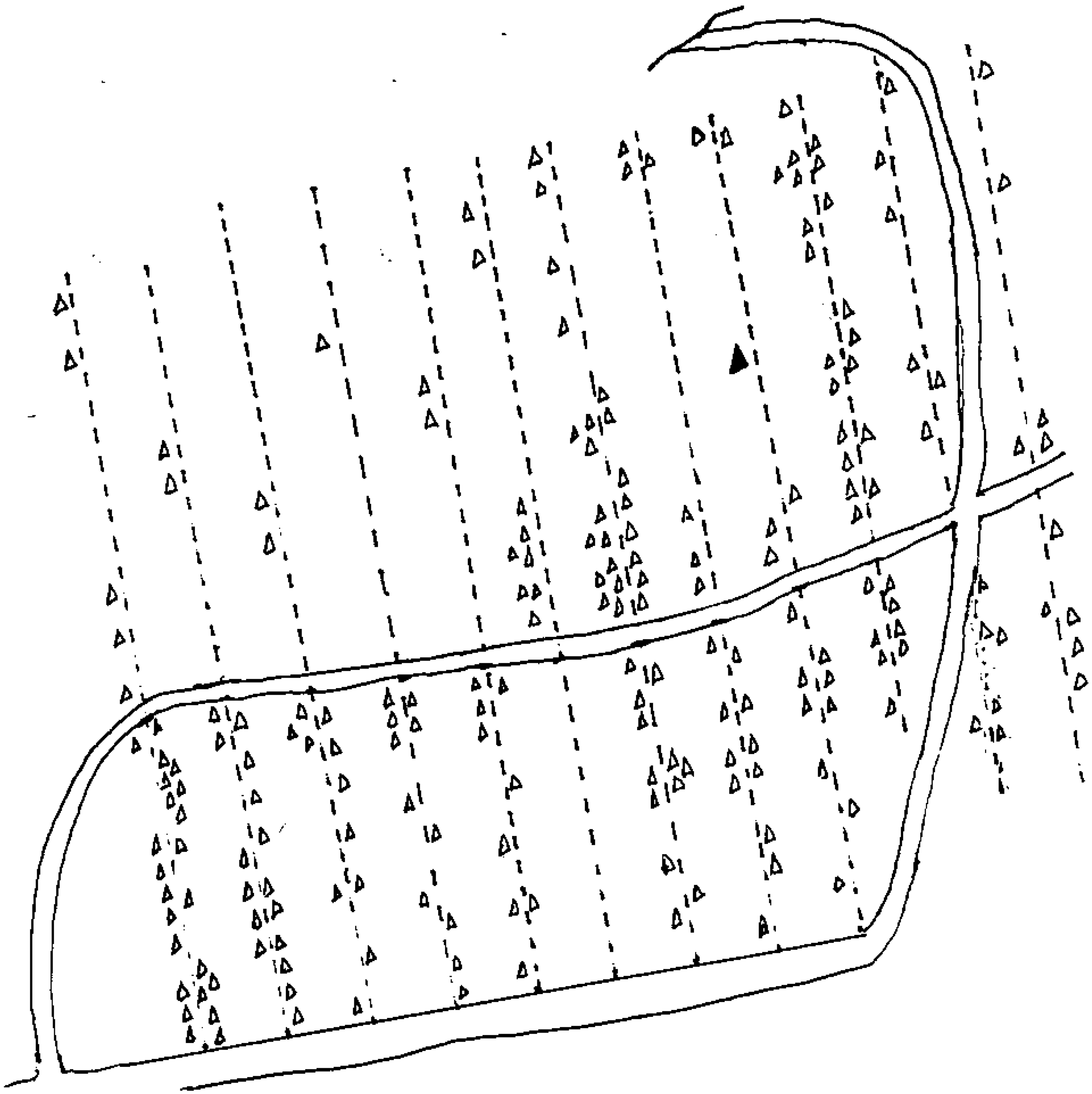
Accessability: DIRT ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Frag	1	N/A	N/A	6	Rusted
2	Frag	1	N/A	N/A	4	Rusted
3	Wire	1	N/A	N/A	2	Rusted
4	Frag	1	N/A	N/A	6	Rusted
5	Frag	1	N/A	N/A	2	Rusted
6	Frag	1	N/A	N/A	4	Rusted
7	Frag	1	N/A	N/A	4	Rusted
8	Frag	1	N/A	N/A	6	Rusted
9	Frag	1	N/A	N/A	1	Rusted
10	Frag	1	N/A	N/A	4	Rusted
11	Frag	2	N/A	N/A	6-7	Rusted
12	Frag	1	N/A	N/A	4	Rusted
13	Frag	1	N/A	N/A	5	Rusted
14	Frag	1	N/A	N/A	2	Rusted
15	Frag	2	N/A	N/A	3-7	Rusted
16	Frag	1	N/A	N/A	1	Rusted
17	Frag	1	N/A	N/A	2	Rusted
18	Frag	1	N/A	N/A	1	Rusted
19	Frag	1	N/A	N/A	5	Rusted
20	Frag	1	N/A	N/A	4	Rusted
21	Frag	1	N/A	N/A	4	Rusted
22	Frag	2	N/A	N/A	5-9	Rusted
23	Frag	1	N/A	N/A	1	Rusted
24	Frag	1	N/A	N/A	4	Rusted
25	Frag	1	N/A	N/A	1	Rusted
26	Frag	1	N/A	N/A	3	Rusted
27	Frag	1	N/A	N/A	5	Rusted
28	Frag	2	N/A	N/A	2-6	Rusted
29	Frag	1	N/A	N/A	1	Rusted
30	Frag	1	N/A	N/A	1	Rusted

FORMER CAMP CROFT
SPARTANBURG, SOUTH CAROLINA
GRID 87

N

SCALE 1/2 IN = 100 FT



GRID: 86

Accessability: PAVED ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
121	Grenade spoon	2	N/A	N/A	2-5	Rusted
122	Rock	1	N/A	N/A	2	Rusted
123	Rock	1	N/A	N/A	2	Rusted
124	Pipe	1	N/A	N/A	1	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 86

Accessability: PAVED ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
91	Rock	2	N/A	N/A	2-4	Rusted
92	Rock	1	N/A	N/A	1	Rusted
93	Rock	1	N/A	N/A	1	Rusted
94	Rock	1	N/A	N/A	2	Rusted
95	Rock	1	N/A	N/A	1	Rusted
96	Rock	1	N/A	N/A	3	Rusted
97	Gravel	numerous	N/A	N/A	3	Rusted
98	Barbed Wire	1	N/A	N/A	1	Rusted
99	Rock	1	N/A	N/A	1	Rusted
100	Rock	1	N/A	N/A	2	Rusted
101	Barbed Wire	1	N/A	N/A	1	Rusted
102	Hinge & Nail	3	N/A	N/A	2	Rusted
103	Rock	1	N/A	N/A	1	Rusted
104	Scrap Metal	1	N/A	N/A	surface	Rusted
105	Rock & Gravel	numerous	N/A	N/A	3-11	Rusted
106	Pract. Grenade	1	N/A	N/A	1	Rusted
107	Rock	1	N/A	N/A	2	Rusted
108	Rock	1	N/A	N/A	1	Rusted
109	Pract. Grenade	1	N/A	N/A	1	Rusted
110	Rock	3	N/A	N/A	2-6	Rusted
111	Rock	1	N/A	N/A	surface	Rusted
112	Rock	1	N/A	N/A	surface	Rusted
113	Wire	1	N/A	N/A	1	Rusted
114	Grenade spoon	1	N/A	N/A	1	Rusted
115	Grenade spoon	1	N/A	N/A	1	Rusted
116	Grenade spoon	1	N/A	N/A	2	Rusted
117	Grenade spoon	1	N/A	N/A	2	Rusted
118	Grenade spoon	1	N/A	N/A	2	Rusted
119	Grenade spoon	3	N/A	N/A	3-10	Rusted
120	Grenade spoon	2	N/A	N/A	3-7	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 86

Accessability: PAVED ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Deth	State of Degradation
61	Rock	1	N/A	N/A	2	Rusted
62	Rock	numerous	N/A	N/A	1-12	Rusted
63	Nail	1	N/A	N/A	1	Rusted
64	Nail	1	N/A	N/A	1	Rusted
65	Rock	1	N/A	N/A	2	Rusted
66	Rock	1	N/A	N/A	1	Rusted
67	Rock	1	N/A	N/A	2	Rusted
68	Rock	1	N/A	N/A	2	Rusted
69	Rock	1	N/A	N/A	1	Rusted
70	Rock	1	N/A	N/A	1	Rusted
71	Barbed Wire	1	N/A	N/A	1	Rusted
72	Wire	1	N/A	N/A	2	Rusted
73	Rock	1	N/A	N/A	1	Rusted
74	Rock & Wire	2	N/A	N/A	2-6	Rusted
75	Rock	1	N/A	N/A	3	Rusted
76	Barbed Wire	1	N/A	N/A	2	Rusted
77	Rock	2	N/A	N/A	1-4	Rusted
78	Barbed Wire	1	N/A	N/A	2	Rusted
79	Rock	1	N/A	N/A	1	Rusted
80	Rock	numerous	N/A	N/A	surface	Rusted
81	Wire	1	N/A	N/A	2	Rusted
82	Rock	1	N/A	N/A	1	Rusted
83	Rock	1	N/A	N/A	1	Rusted
84	Rock	1	N/A	N/A	1	Rusted
85	Rock	1	N/A	N/A	1	Rusted
86	Rock	1	N/A	N/A	1	Rusted
87	Rock	1	N/A	N/A	1	Rusted
88	Rock	1	N/A	N/A	1	Rusted
89	Rock	1	N/A	N/A	1	Rusted
90	Rock	numerous	N/A	N/A	surface	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 86

Accessability: PAVED ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	Wire	1	N/A	N/A	4	Rusted
32	Pract. Grenade	1	N/A	N/A	2	Rusted
33	Nail	1	N/A	N/A	1	Rusted
34	Wire	1	N/A	N/A	2	Rusted
35	Nail	1	N/A	N/A	5	Rusted
36	Barbed Wire	1	N/A	N/A	1	Rusted
37	Barbed Wire	1	N/A	N/A	1	Rusted
38	Mirror Bracket	1	N/A	N/A	4	Rusted
39	Wire	1	N/A	N/A	1	Rusted
40	Wire	1	N/A	N/A	1	Rusted
41	Barbed Wire	1	N/A	N/A	2	Rusted
42	Barbed Wire	1	N/A	N/A	1	Rusted
43	Nail	2	N/A	N/A	3-8	Rusted
44	Nail	1	N/A	N/A	1	Rusted
45	Rock	1	N/A	N/A	1	Rusted
46	Rock	1	N/A	N/A	2	Rusted
47	Rock	1	N/A	N/A	2	Rusted
48	Rock	1	N/A	N/A	1	Rusted
49	Rock	1	N/A	N/A	3	Rusted
50	Rock	1	N/A	N/A	1	Rusted
51	Nail	1	N/A	N/A	2	Rusted
52	Rock	2	N/A	N/A	2-5	Rusted
53	Barbed Wire	1	N/A	N/A	1	Rusted
54	Rock	1	N/A	N/A	1	Rusted
55	Rock	1	N/A	N/A	4	Rusted
56	Wire	1	N/A	N/A	2	Rusted
57	Wire	1	N/A	N/A	1	Rusted
58	Wire	3	N/A	N/A	3-7	Rusted
59	Rock	1	N/A	N/A	1	Rusted
60	Rock	1	N/A	N/A	1	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 86

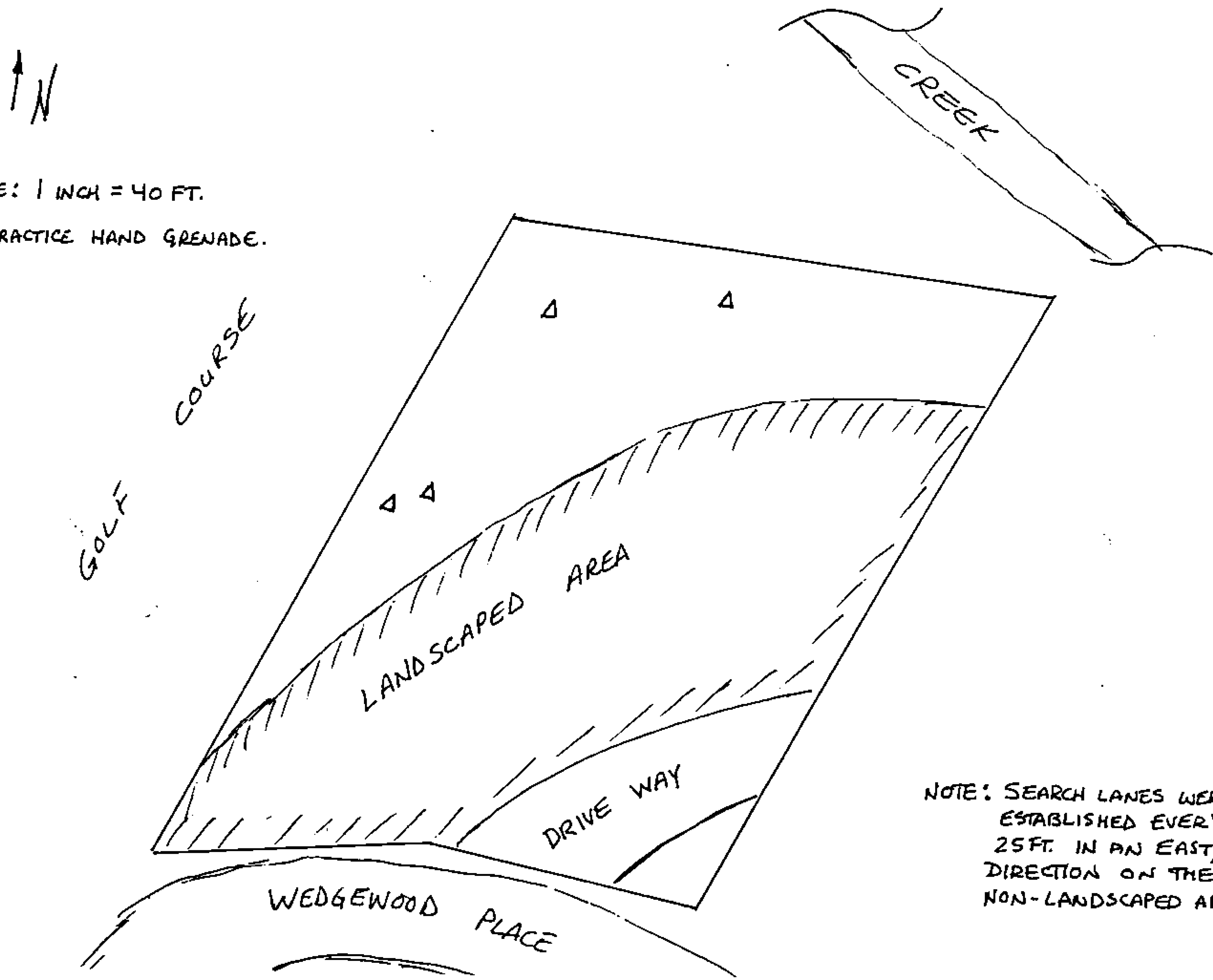
Accessability: PAVED ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Nail	1	N/A	N/A	2	Rusted
2	Barbed Wire	1	N/A	N/A	1	Rusted
3	Barbed Wire	1	N/A	N/A	2	Rusted
4	Wire	2	N/A	N/A	4-7	Rusted
5	Nail & Wire	3	N/A	N/A	5-7	Rusted
6	Rock	1	N/A	N/A	2	Rusted
7	Rock	1	N/A	N/A	3	Rusted
8	Rock	1	N/A	N/A	1	Rusted
9	Rock	1	N/A	N/A	2	Rusted
10	Rock	1	N/A	N/A	2	Rusted
11	Rock	1	N/A	N/A	1	Rusted
12	Rock	1	N/A	N/A	2	Rusted
13	Rock	1	N/A	N/A	3	Rusted
14	Wire	1	N/A	N/A	3	Rusted
15	Wire	1	N/A	N/A	4	Rusted
16	Wire	3	N/A	N/A	5-9	Rusted
17	Barbed Wire	1	N/A	N/A	1	Rusted
18	Bolt & Washer	3	N/A	N/A	2-7	Rusted
19	Wire	2	N/A	N/A	2-5	Rusted
20	Wire	1	N/A	N/A	2	Rusted
21	Wire	3	N/A	N/A	3-5	Rusted
22	Wire	2	N/A	N/A	2-4	Rusted
23	Wire	1	N/A	N/A	3	Rusted
24	Barbed Wire	1	N/A	N/A	4	Rusted
25						
26	Old Tire	1	N/A	N/A	2	Rusted
27	Rebar	1	N/A	N/A	surface	Rusted
28	Rebar	1	N/A	N/A	surface	Rusted
29	Barbed Wire	1	N/A	N/A	1	Rusted
30	Wire	1	N/A	N/A	2	Rusted

FORMER CAMP CROFT
SPARTANBURG, SOUTH CAROLINA
GRID # 86

SCALE: 1 INCH = 40 FT.

Δ = PRACTICE HAND GRENADE.



NOTE: SEARCH LANES WERE ESTABLISHED EVERY 25FT. IN AN EAST/WEST DIRECTION ON THE NON-LANDSCAPED AREAS.

GRID SURVEY SUMMARY SHEET

GRID: 85

Accessability: PAVED ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	Rock	2	N/A	N/A	4-9	Rusted
32	Wire	2	N/A	N/A	3-6	Rusted
33	Rock	1	N/A	N/A	1	Rusted
34	Wire	1	N/A	N/A	2	Rusted
35	Spike	1	N/A	N/A	3	Rusted

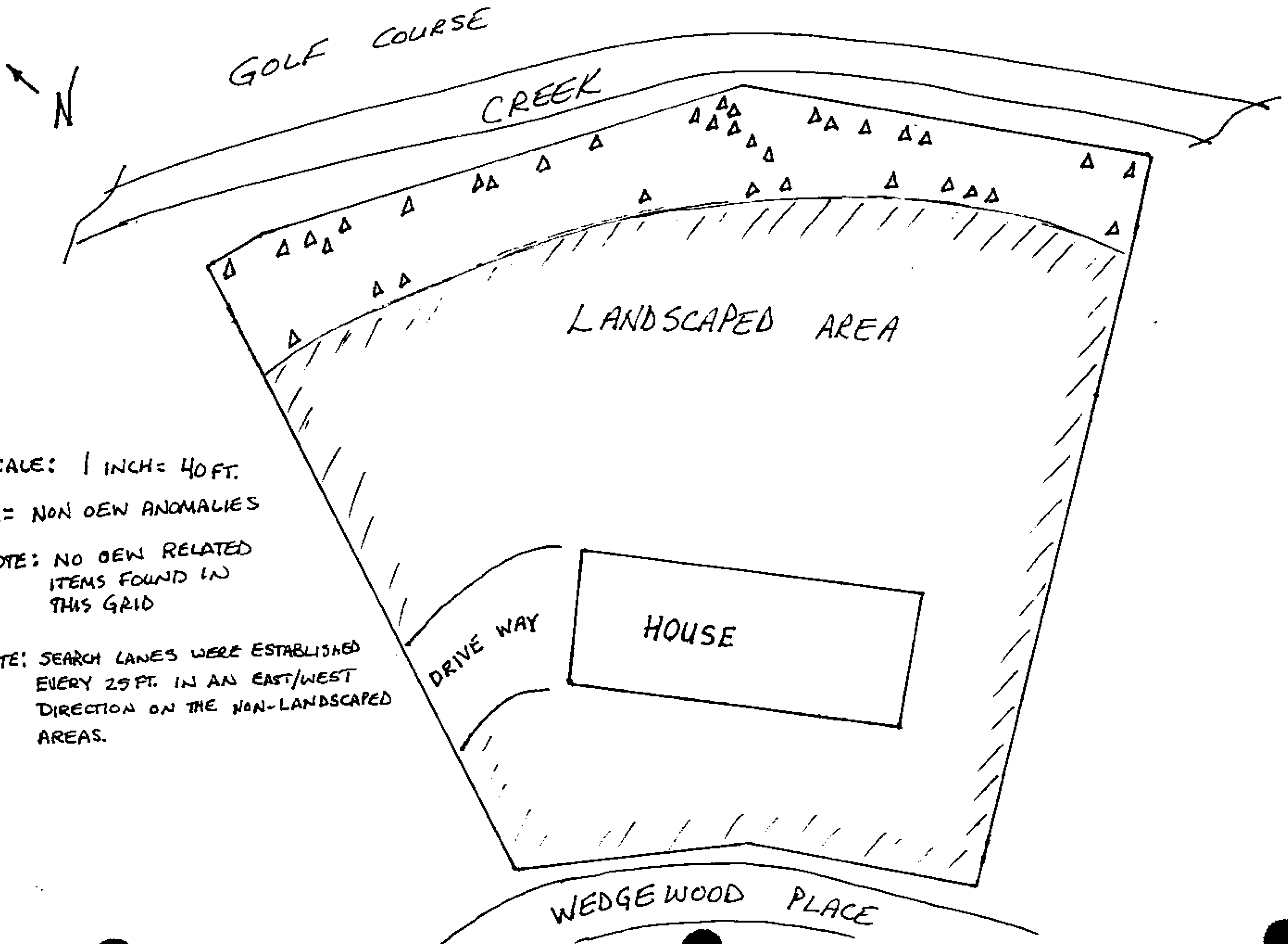
GRID SURVEY SUMMARY SHEET

GRID: 85

Accessability: PAVED ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Rock	1	N/A	N/A	1	Rusted
2	Rock	1	N/A	N/A	1	Rusted
3	Rock	1	N/A	N/A	2	Rusted
4	Rock	2	N/A	N/A	3-8	Rusted
5	Rock	1	N/A	N/A	2	Rusted
6	Rock	1	N/A	N/A	2	Rusted
7	Rock	1	N/A	N/A	2	Rusted
8	Rock	1	N/A	N/A	2	Rusted
9	Rock	1	N/A	N/A	1	Rusted
10	Rock	1	N/A	N/A	3	Rusted
11	Rock	1	N/A	N/A	1	Rusted
12	Rock	1	N/A	N/A	1	Rusted
13	Rock	numerous	N/A	N/A	3-6	Rusted
14	Rock	1	N/A	N/A	3	Rusted
15	Nail & Hinge	2	N/A	N/A	2-5	Rusted
16	Barbed Wire	1	N/A	N/A	2	Rusted
17	Wire	1	N/A	N/A	4	Rusted
18	Barbed Wire	1	N/A	N/A	2	Rusted
19	Wire	1	N/A	N/A	2	Rusted
20	Barbed Wire	1	N/A	N/A	2	Rusted
21	Wire	2	N/A	N/A	1-5	Rusted
22	Nail	2	N/A	N/A	2-5	Rusted
23	Nail	53	N/A	N/A	4-11	Rusted
24	Gravel	numerous	N/A	N/A	3-15	Rusted
25	Rock	1	N/A	N/A	2	Rusted
26	Rock	1	N/A	N/A	1	Rusted
27	Rock	1	N/A	N/A	2	Rusted
28	Wire	1	N/A	N/A	1	Rusted
29	Nail	1	N/A	N/A	1	Rusted
30	Wire	1	N/A	N/A	2	Rusted

FORMER CAMP CROFT
SPARTANBURG, SOUTH CAROLINA
GRID #85



SCALE: 1 INCH = 40 FT.

Δ = NON OEW ANOMALIES

NOTE: NO OEW RELATED ITEMS FOUND IN THIS GRID

NOTE: SEARCH LANES WERE ESTABLISHED EVERY 25 FT. IN AN EAST/WEST DIRECTION ON THE NON-LANDSCAPED AREAS.

GRID SURVEY SUMMARY SHEET

GRID: 84

Accessability: PAVED ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth	State of Degradation
211	Rock	1	N/A	N/A	3	Rusted
212	Rock	1	N/A	N/A	2	Rusted
213	Rock	1	N/A	N/A	4	Rusted
214	Rock	1	N/A	N/A	2	Rusted
215	Rock	1	N/A	N/A	1	Rusted
216	Rock	1	N/A	N/A	1	Rusted
217	Rock	1	N/A	N/A	1	Rusted
218	Rock	1	N/A	N/A	1	Rusted
219	Rock	1	N/A	N/A	1	Rusted
220	Rock	1	N/A	N/A	1	Rusted
221	Rock	1	N/A	N/A	1	Rusted
222	Rock	1	N/A	N/A	2	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 84

Accessability: PAVED ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
181	Rock	1	N/A	N/A	2	Rusted
182	Rock	1	N/A	N/A	2	Rusted
183	Grenade spoon	1	N/A	N/A	2	Rusted
184	Rock	1	N/A	N/A	2	Rusted
185	Rock	1	N/A	N/A	1	Rusted
186	Grenade spoon	1	N/A	N/A	2	Rusted
187	Pract. Grenade	1	N/A	N/A	1	Rusted
188	Rock	1	N/A	N/A	2	Rusted
189	Rock	1	N/A	N/A	3	Rusted
190	Grenade Ring & spoon	2	N/A	N/A	2-5	Rusted
191	Rock	1	N/A	N/A	3	Rusted
192	Rock	1	N/A	N/A	1	Rusted
193	Pract. Grenade	1	N/A	N/A	2	Rusted
194	Rock	1	N/A	N/A	1	Rusted
195	Rock	1	N/A	N/A	1	Rusted
196	Barbed wire	1	N/A	N/A	2	Rusted
197	Rock	1	N/A	N/A	1	Rusted
198	Rock	1	N/A	N/A	1	Rusted
199	Rock	1	N/A	N/A	1	Rusted
200	Barbed wire	1	N/A	N/A	1	Rusted
201	Rock	1	N/A	N/A	3	Rusted
202	Rock	1	N/A	N/A	2	Rusted
203	Rock	1	N/A	N/A	2	Rusted
204	Rock	1	N/A	N/A	1	Rusted
205	Rock	1	N/A	N/A	1	Rusted
206	Rock	1	N/A	N/A	2	Rusted
207	Rock	1	N/A	N/A	1	Rusted
208	Rock	1	N/A	N/A	1	Rusted
209	Rock	1	N/A	N/A	1	Rusted
210	Rock	1	N/A	N/A	2	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 84

Accessability: PAVED ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
151	Rock	1	N/A	N/A	1	Rusted
152	Grenade spoon	1	N/A	N/A	1	Rusted
153	Grenade spoon	1	N/A	N/A	2	Rusted
154	Grenade spoon	1	N/A	N/A	2	Rusted
155	Grenade spoon	1	N/A	N/A	1	Rusted
156	Grenade spoon	1	N/A	N/A	2	Rusted
157	Rock	1	N/A	N/A	1	Rusted
158	Rock	1	N/A	N/A	1	Rusted
159	Rock	1	N/A	N/A	2	Rusted
160	Rock	1	N/A	N/A	1	Rusted
161	Rock	1	N/A	N/A	3	Rusted
162	Rock	1	N/A	N/A	1	Rusted
163	Grenade Ring	1	N/A	N/A	2	Rusted
164	Wire	1	N/A	N/A	1	Rusted
165	Grenade Ring	8	N/A	N/A	1-10	Rusted
166	Wire	1	N/A	N/A	2	Rusted
167	Wire	1	N/A	N/A	2	Rusted
168	Pract. Grenade	1	N/A	N/A	4	Rusted
169	Rock	1	N/A	N/A	3	Rusted
170	MK2 Grenade (INERT)	1	N/A	N/A	2	Rusted
171	Grenade spoon	1	N/A	N/A	2	Rusted
172	Grenade spoon	1	N/A	N/A	3	Rusted
173	Grenade spoon	2	N/A	N/A	2-3	Rusted
174	Grenade spoon	3	N/A	N/A	2-5	Rusted
175	Rock	1	N/A	N/A	2	Rusted
176	Grenade spoon	10	N/A	N/A	6-17	Rusted
177	Grenade spoon	3	N/A	N/A	1-3	Rusted
178	Rock	1	N/A	N/A	2	Rusted
179	Grenade spoon	1	N/A	N/A	3	Rusted
180	Rock	1	N/A	N/A	1	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 84

Accessability: PAVED ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
121	Grenade ring	2	N/A	N/A	1-4	Rusted
122	Rock	1	N/A	N/A	1	Rusted
123	Grenade spoon	2	N/A	N/A	2-5	Rusted
124	Grenade spoon	1	N/A	N/A	2	Rusted
125	Screwdriver	1	N/A	N/A	2	Rusted
126	Wire	1	N/A	N/A	1	Rusted
127	Rock	1	N/A	N/A	2	Rusted
128	Rock	1	N/A	N/A	2	Rusted
129	Wire	1	N/A	N/A	1	Rusted
130	Grenade ring & Nail	2	N/A	N/A	2-7	Rusted
131	Rock	1	N/A	N/A	1	Rusted
132	Grenade spoon	1	N/A	N/A	1	Rusted
133	Grenade spoon	1	N/A	N/A	1	Rusted
134	Grenade spoon	2	N/A	N/A	3-6	Rusted
135	Grenade spoon	1	N/A	N/A	2	Rusted
136	Rock	1	N/A	N/A	1	Rusted
137	Rock	1	N/A	N/A	2	Rusted
138	Rock	1	N/A	N/A	2	Rusted
139	Rock	1	N/A	N/A	1	Rusted
140	Grenade spoon	1	N/A	N/A	2	Rusted
141	Rock	numerous	N/A	N/A	2-15	Rusted
142	Rock	1	N/A	N/A	1	Rusted
143	Grenade spoon	1	N/A	N/A	2	Rusted
144	Grenade spoon	2	N/A	N/A	4-9	Rusted
145	Grenade spoon	1	N/A	N/A	2	Rusted
146	Grenade spoon	2	N/A	N/A	2-5	Rusted
147	Grenade spoon	2	N/A	N/A	1-3	Rusted
148	Rock	1	N/A	N/A	1	Rusted
149	Grenade spoon	6	N/A	N/A	3-9	Rusted
150	Grenade spoon	17	N/A	N/A	2-19	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 84 Accessability: PAVED ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
91	Gravel	numerous	N/A	N/A	4	Rusted
92	Rocks	2	N/A	N/A	2-8	Rusted
93	Wire	1	N/A	N/A	1	Rusted
94	Grenade spoon	1	N/A	N/A	1	Rusted
95	Grenade spoon	1	N/A	N/A	1	Rusted
96	Grenade spoon	1	N/A	N/A	1	Rusted
97	Grenade spoon	5	N/A	N/A	2-11	Rusted
98	Grenade spoon	1	N/A	N/A	1	Rusted
99	Wire	1	N/A	N/A	2	Rusted
100	Grenade spoon	1	N/A	N/A	1	Rusted
101	Gravel	numerous	N/A	N/A	1-15	Rusted
102	Rock	2	N/A	N/A	3-5	Rusted
103	Rock	2	N/A	N/A	2-4	Rusted
104	Grenade spoon & Wire	1	N/A	N/A	2	Rusted
105	Rock	1	N/A	N/A	1	Rusted
106	Rock	1	N/A	N/A	2	Rusted
107	Rock	1	N/A	N/A	2	Rusted
108	Rock	2	N/A	N/A	2-7	Rusted
109	Grenade spoon	1	N/A	N/A	1	Rusted
110	Man hole cover	1	N/A	N/A	1	Rusted
111	Barbed wire	1	N/A	N/A	1	Rusted
112	Grenade spoon	2	N/A	N/A	3-7	Rusted
113	Pract. Grenade	1	N/A	N/A	1	Rusted
114	Rock	1	N/A	N/A	1	Rusted
115	Wire	1	N/A	N/A	1	Rusted
116	Rock	1	N/A	N/A	1	Rusted
117	Rock	1	N/A	N/A	1	Rusted
118	Grenade spoon	1	N/A	N/A	2	Rusted
119	Grenade spoon	2	N/A	N/A	3-6	Rusted
120	Rock	1	N/A	N/A	1	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 84

Accessability: PAVED ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth	State of Degradation
61	Rock	1	N/A	N/A	1	Rusted
62	Rock	1	N/A	N/A	3	Rusted
63	Scrap	1	N/A	N/A	3	Rusted
64	Rock	1	N/A	N/A	2	Rusted
65	Rock	1	N/A	N/A	4	Rusted
66	Rock	1	N/A	N/A	3	Rusted
67	Rock	1	N/A	N/A	2	Rusted
68	Rock	1	N/A	N/A	3	Rusted
69	Wire	1	N/A	N/A	2	Rusted
70	Wire	1	N/A	N/A	3	Rusted
71	Rock	1	N/A	N/A	8	Rusted
72	Scrap	1	N/A	N/A	5	Rusted
73	Wire	1	N/A	N/A	2	Rusted
74	Rock	1	N/A	N/A	3	Rusted
75	Scrap	1	N/A	N/A	4	Rusted
76	Rock	1	N/A	N/A	5	Rusted
77	Pract. Grenade	1	N/A	N/A	1	Rusted
78	Rock	1	N/A	N/A	4	Rusted
79	Rock	1	N/A	N/A	1	Rusted
80	Wire	1	N/A	N/A	1	Rusted
81	Rocks	3	N/A	N/A	1-6	Rusted
82	Rock	1	N/A	N/A	1	Rusted
83	Wire	numerous	N/A	N/A	2-13	Rusted
84	Grenade spoon	1	N/A	N/A	1	Rusted
85	Rock	1	N/A	N/A	1	Rusted
86	Rock	numerous	N/A	N/A	4-16	Rusted
87	Rock	1	N/A	N/A	1	Rusted
88	Rock	1	N/A	N/A	1	Rusted
89	Rock	1	N/A	N/A	1	Rusted
90	Rock	1	N/A	N/A	1	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 84

Accessability: PAVED ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	Rock	1	N/A	N/A	1	Rusted
32	Rebar	1	N/A	N/A	3	Rusted
33	Wire	1	N/A	N/A	1	Rusted
34	Pract. Grenade	1	N/A	N/A	2	Rusted
35	Rock	1	N/A	N/A	1	Rusted
36	Grenade spoon	1	N/A	N/A	2	Rusted
37	Wire	1	N/A	N/A	1	Rusted
38	Wire	1	N/A	N/A	1	Rusted
39	Wire	1	N/A	N/A	3	Rusted
40	Wire	1	N/A	N/A	2	Rusted
41	Wire	1	N/A	N/A	3	Rusted
42	Wire	1	N/A	N/A	1	Rusted
43	Rock	1	N/A	N/A	1	Rusted
44	Wire	1	N/A	N/A	1	Rusted
45	Rock	1	N/A	N/A	2	Rusted
46	Pract. Grenade	1	N/A	N/A	2	Rusted
47	Grenade spoon	1	N/A	N/A	1	Rusted
48	Rock	1	N/A	N/A	2	Rusted
49	Rock	1	N/A	N/A	5	Rusted
50	Rock	1	N/A	N/A	5	Rusted
51	Scrap	1	N/A	N/A	2	Rusted
52	Pract. Grenade	1	N/A	N/A	3	Rusted
53	Wire	1	N/A	N/A	3	Rusted
54	Rock	1	N/A	N/A	2	Rusted
55	Rock	1	N/A	N/A	1	Rusted
56	Rock	1	N/A	N/A	6	Rusted
57	Rock	1	N/A	N/A	4	Rusted
58	Rock	1	N/A	N/A	5	Rusted
59	Rock	1	N/A	N/A	5	Rusted
60	Rock	1	N/A	N/A	2	Rusted

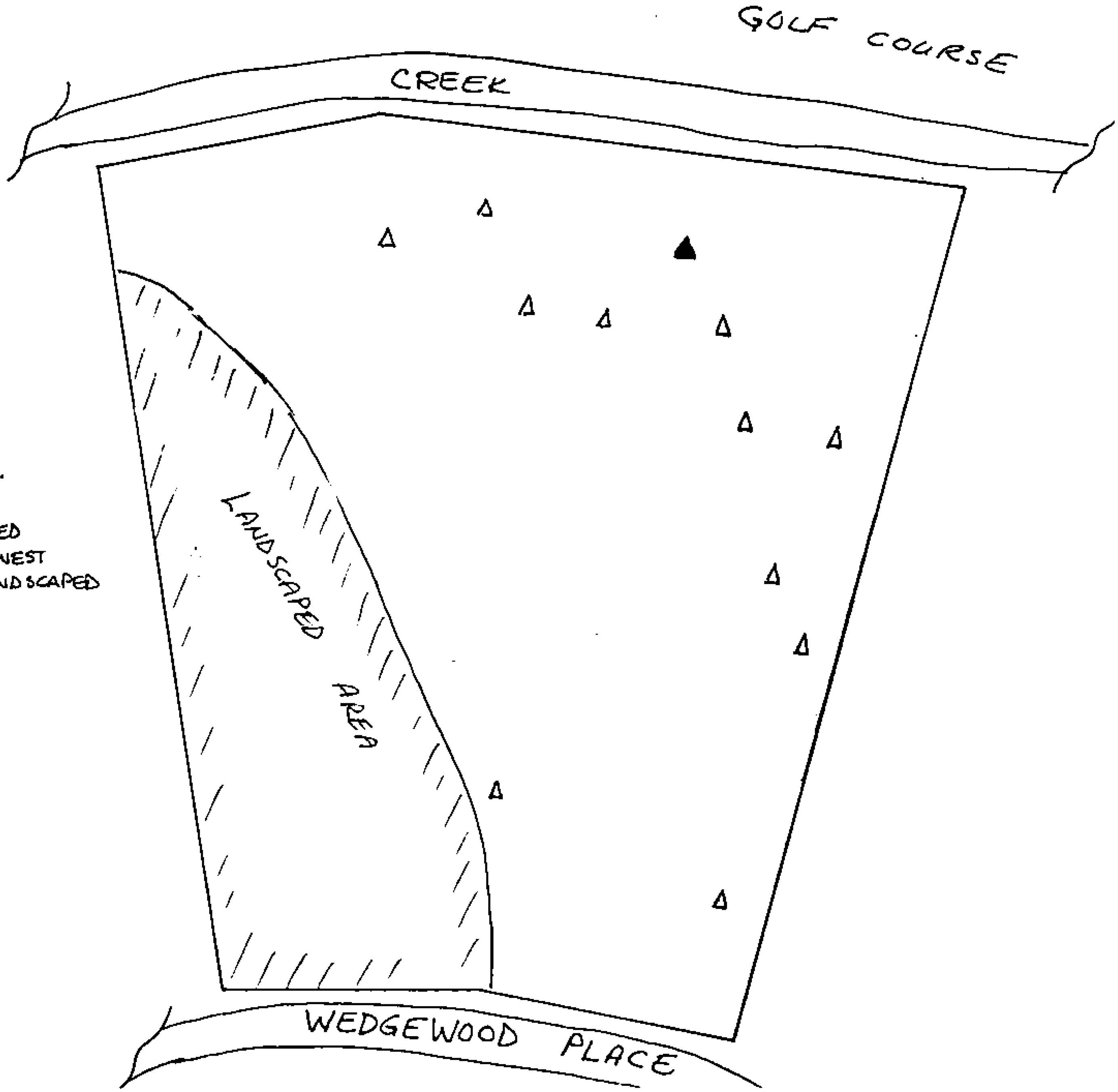
GRID SURVEY SUMMARY SHEET

GRID: 84

Accessability: PAVED ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Rock	1	N/A	N/A	4	Rusted
2	Steel Cable	1	N/A	N/A	1	Rusted
3	Rock	1	N/A	N/A	1	Rusted
4	Rock	1	N/A	N/A	1	Rusted
5	Rock	1	N/A	N/A	12	Rusted
6	Rock	1	N/A	N/A	1	Rusted
7	Rock	1	N/A	N/A	2	Rusted
8	Rock	1	N/A	N/A	3	Rusted
9	Possible prop marker	1	N/A	N/A	2	Rebar/Rusted
10	Rock	1	N/A	N/A	1	Rusted
11	Rock	1	N/A	N/A	6	Rusted
12	Rock	1	N/A	N/A	3	Rusted
13	Rock	1	N/A	N/A	1	Rusted
14	Rock	1	N/A	N/A	2	Rusted
15	Pract. Grenade	1	N/A	N/A	1	Rusted
16	Possible prop marker	1	N/A	N/A	1	Steel pipe/Rusted
17	Rock	1	N/A	N/A	1	Rusted
18	Metal Strap	1	N/A	N/A	1	Rusted
19	Metal Strap	1	N/A	N/A	1	Rusted
20	Pract. Grenade	1	N/A	N/A	1	Rusted
21	Grenade spoon	1	N/A	N/A	2	Rusted
22	Pract. Grenade	1	N/A	N/A	3	Rusted
23	Grenade spoon	1	N/A	N/A	2	Rusted
24	Wire	1	N/A	N/A	1	Rusted
25	Rock	1	N/A	N/A	2	Rusted
26	Rock	1	N/A	N/A	1	Rusted
27	Grenade spoon	1	N/A	N/A	2	Rusted
28	Rock	1	N/A	N/A	4	Rusted
29	Pract. Grenade	1	N/A	N/A	3	Rusted
30	Grenade spoon	1	N/A	N/A	1	Rusted

FORMER CAMP CROFT
SPARTANBURG, SOUTH CAROLINA
GRID # 84



← N

SCALE: 1 INCH = 40 FT.

Δ = PRACTICE HAND GRENADE.

▲ = HIGH EXPLOSIVE HAND GRENADE. (INERT)

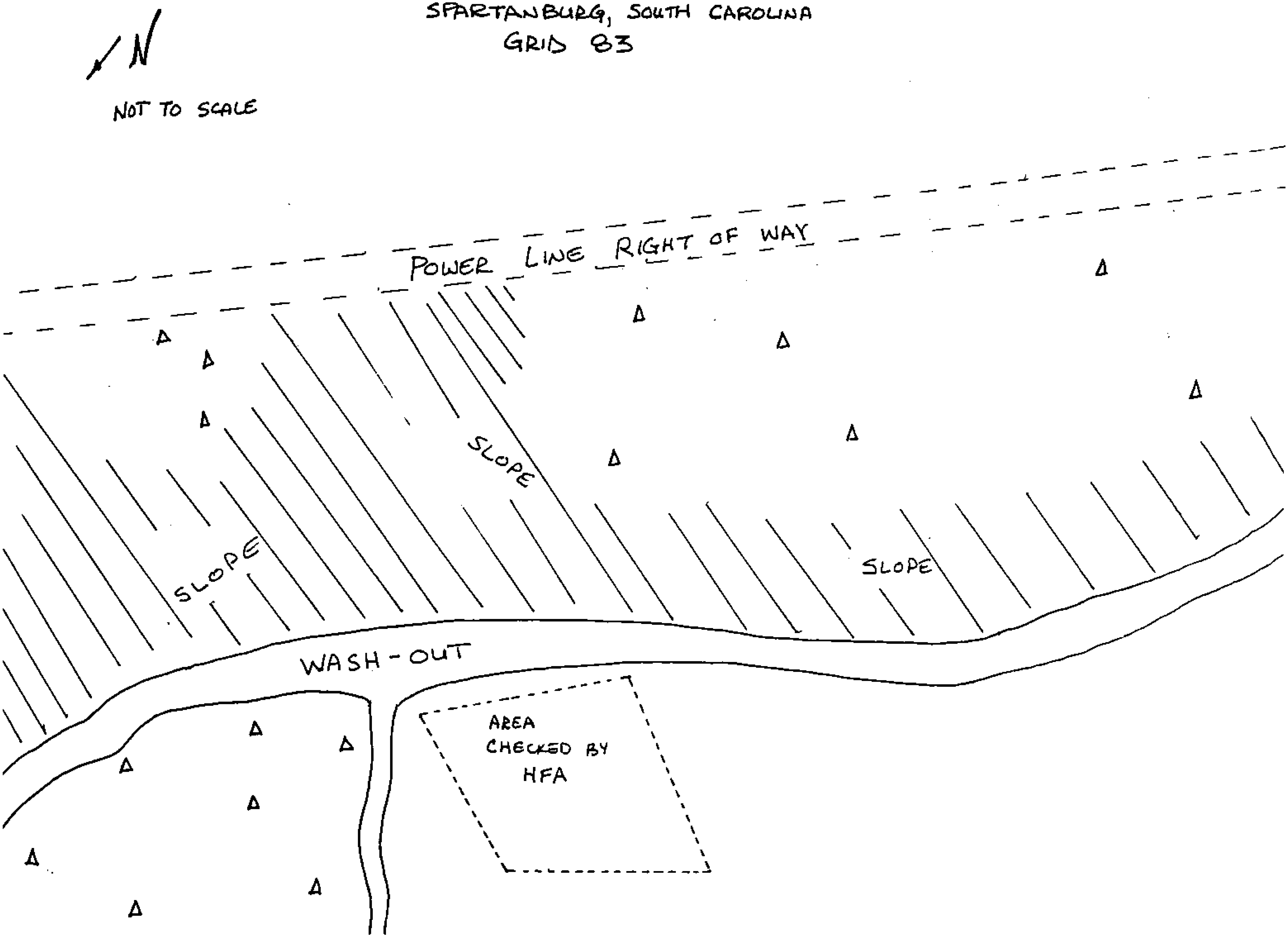
NOTE: SEARCH LANES WERE ESTABLISHED EVERY 25 FT. IN AN EAST/WEST DIRECTION ON THE NON-LANDSCAPED AREAS.

GRID SURVEY SUMMARY SHEET

GRID: 83 Accessability: POWER LINE RIGHT OF WAY

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Nail	1	N/A	N/A	3	Rusted
2	Nail	1	N/A	N/A	1	Rusted
3	Nail	1	N/A	N/A	4	Rusted
4	Nail	1	N/A	N/A	3	Rusted
5	Nail	1	N/A	N/A	3	Rusted
6	Barbed Wire	1	N/A	N/A	2	Rusted
7	Barbed Wire	1	N/A	N/A	4	Rusted
8	Scrap	1	N/A	N/A	5	Rusted
9	Barbed Wire	1	N/A	N/A	3	Rusted
10	Barbed Wire	1	N/A	N/A	2	Rusted
11	Barbed Wire	1	N/A	N/A	2	Rusted
12	Scrap	1	N/A	N/A	5	Rusted
13	Scrap	1	N/A	N/A	3	Rusted
14	Scrap	1	N/A	N/A	2	Rusted
15	Barbed Wire	1	N/A	N/A	1	Rusted
16	Barbed Wire	1	N/A	N/A	1	Rusted

FORMER CAMP CROFT
SPARTANBURG, SOUTH CAROLINA
GRID 83



GRID SURVEY SUMMARY SHEET

GRID: 82 Accessability: DIRT ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
571	Fin	1	N/A	N/A	surface	Rusted
572	Tail boom	1	N/A	N/A	surface	Rusted
573	Fin	1	N/A	N/A	surface	Rusted
574	Tail boom	1	N/A	N/A	surface	Rusted
575	Tail boom	1	N/A	N/A	surface	Rusted
576	Frag	several	N/A	N/A	surface	Rusted
577	Fin	1	N/A	N/A	surface	Rusted
578	Fin	1	N/A	N/A	surface	Rusted
579	Frag	1	N/A	N/A	surface	Rusted
580	60mm Fin	1	N/A	N/A	surface	Rusted
581	60mm Tail boom	1	N/A	N/A	surface	Rusted
582	60mm Tail boom	1	N/A	N/A	surface	Rusted
583	Fin	1	N/A	N/A	surface	Rusted
584	Fin assy.	1	N/A	N/A	surface	Rusted
585	Frag	1	N/A	N/A	surface	Rusted
586	60mm Fin	1	N/A	N/A	surface	Rusted
587	60mm Mortar	1	fuze	HE	surface	Rusted
588	Frag	1	N/A	N/A	surface	Rusted
589	Frag	1	N/A	N/A	surface	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 82 Accessability: DIRT ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
541	60mm Fin	1	N/A	N/A	surface	Rusted
542	60mm Fin	1	N/A	N/A	surface	Rusted
543	60mm Tail boom	1	N/A	N/A	surface	Rusted
544	Frag	1	N/A	N/A	surface	Rusted
545	60mm Fin	1	N/A	N/A	surface	Rusted
546	Frag	1	N/A	N/A	surface	Rusted
547	60mm Tail boom	1	N/A	N/A	surface	Rusted
548	Fin	1	N/A	N/A	surface	Rusted
549	60mm Fin	1	N/A	N/A	surface	Rusted
550	60mm Fin	1	N/A	N/A	surface	Rusted
551	Frag	numerous	N/A	N/A	surface	Rusted
552	60mm Fin	1	N/A	N/A	surface	Rusted
553	Fin	1	N/A	N/A	surface	Rusted
554	Fin	1	N/A	N/A	surface	Rusted
555	Fin	1	N/A	N/A	surface	Rusted
556	Fin	1	N/A	N/A	surface	Rusted
557	Fin	1	N/A	N/A	surface	Rusted
558	Frag	1	N/A	N/A	surface	Rusted
559	60mm Tail boom	1	N/A	N/A	surface	Rusted
560	Fin	1	N/A	N/A	surface	Rusted
561	60mm Fin/Tail boom assy.	1	N/A	N/A	surface	Rusted
562	81mm Fin	1	N/A	N/A	surface	Rusted
563	Frag	1	N/A	N/A	surface	Rusted
564	Frag	1	N/A	N/A	surface	Rusted
565	Fin	1	N/A	N/A	surface	Rusted
566	Frag	1	N/A	N/A	surface	Rusted
567	Frag	1	N/A	N/A	surface	Rusted
568	60mm Tail boom	1	N/A	N/A	surface	Rusted
569	60mm Fin assy.	1	N/A	N/A	surface	Rusted
570	Tail boom	1	N/A	N/A	surface	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 82

Accessability: DIRT ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
511	60mm Round	1	N/A	N/A	surface	Rusted
512	Frag	1	N/A	N/A	surface	Rusted
513	Frag	1	N/A	N/A	surface	Rusted
514	60mm Fin assy.	1	N/A	N/A	surface	Rusted
515	81mm Fin	1	N/A	N/A	surface	Rusted
516	81mm Fin	1	N/A	N/A	surface	Rusted
517	Frag	1	N/A	N/A	surface	Rusted
518	Frag	1	N/A	N/A	surface	Rusted
519	Frag	1	N/A	N/A	surface	Rusted
520	Frag	1	N/A	N/A	surface	Rusted
521	81mm Fin	1	N/A	N/A	surface	Rusted
522	Frag	1	N/A	N/A	surface	Rusted
523	81mm Fin	1	N/A	N/A	surface	Rusted
524	60mm Fin	1	N/A	N/A	surface	Rusted
525	60mm Fin	1	N/A	N/A	surface	Rusted
526	60mm Fin	1	N/A	N/A	surface	Rusted
527	60mm Fin	1	N/A	N/A	surface	Rusted
528	60mm Fin	1	N/A	N/A	surface	Rusted
529	81mm Fin	1	N/A	N/A	surface	Rusted
530	60mm Tail boom	1	N/A	N/A	surface	Rusted
531	81mm Tail boom	1	N/A	N/A	surface	Rusted
532	60mm Tail boom	1	N/A	N/A	surface	Rusted
533	60mm Fin & Tail boom	1	N/A	N/A	surface	Rusted
534	60mm Fin assy.	1	N/A	N/A	surface	Rusted
535	60mm Fin assy.	1	N/A	N/A	surface	Rusted
536	81mm Fin & Frag	2	N/A	N/A	surface	Rusted
537	60mm Fin	1	N/A	N/A	surface	Rusted
538	60mm Mortar	1	N/A	N/A	surface	Rusted
539	Frag	1	N/A	N/A	surface	Rusted
540	60mm Fin	1	N/A	N/A	surface	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 82

Accessability: DIRT ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
481	60mm Fin assy.	1	N/A	N/A	surface	Rusted
482	81mm Fin	1	N/A	N/A	surface	Rusted
483	Frag	1	N/A	N/A	surface	Rusted
484	60mm Fin	1	N/A	N/A	surface	Rusted
485	81mm Fin	1	N/A	N/A	surface	Rusted
486	81mm Tail boom & Fin	1	N/A	N/A	surface	Rusted
487	Pieces of fin	2	N/A	N/A	surface	Rusted
488	Frag	1	N/A	N/A	surface	Rusted
489	40mm Casing	1	N/A	N/A	surface	Rusted
490	60mm Fin assy.	1	N/A	N/A	surface	Rusted
491	81mm Fin	1	N/A	N/A	surface	Rusted
492	60mm Fin	1	N/A	N/A	surface	Rusted
493	81mm Fin	1	N/A	N/A	surface	Rusted
494	81mm Fin	1	N/A	N/A	surface	Rusted
495	60mm Fin	1	N/A	N/A	surface	Rusted
496	60mm Fin assy.	1	N/A	N/A	surface	Rusted
497	60mm Fin assy.	1	N/A	N/A	surface	Rusted
498	81mm Fin	1	N/A	N/A	surface	Rusted
499	60mm Round	1	N/A	N/A	surface	Rusted
500	60mm Round	1	N/A	N/A	surface	Rusted
501	Frag	1	N/A	N/A	surface	Rusted
502	60mm Fin	1	N/A	N/A	surface	Rusted
503	Frag	1	N/A	N/A	surface	Rusted
504	60mm Fin	1	N/A	N/A	surface	Rusted
505	40mm Casing	1	N/A	N/A	surface	Rusted
506	60mm Fuze	1	N/A	N/A	surface	Rusted
507	60mm Tail boom assy.	1	N/A	N/A	surface	Rusted
508	81mm Fin	1	N/A	N/A	surface	Rusted
509	81mm Fin	1	N/A	N/A	surface	Rusted
510	60mm Round	1	N/A	N/A	surface	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 82

Accessability: DIRT ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
451	Frag	1	N/A	N/A	1	Rusted
452	Frag	1	N/A	N/A	4	Rusted
453	60mm Fin assy.	1	N/A	N/A	4	Rusted
454	Scrap	1	N/A	N/A	1	Rusted
455	Frag	1	N/A	N/A	1	Rusted
456	Frag	1	N/A	N/A	1	Rusted
457	60mm Tail boom	1	N/A	N/A	5	Rusted
458	Frag	1	N/A	N/A	3	Rusted
459	Commo Wire	1	N/A	N/A	1	Rusted
460	Commo Wire	1	N/A	N/A	1	Rusted
461	81mm Fin assy.	1	N/A	N/A	4	Rusted
462	81mm Fin assy.	1	N/A	N/A	5	Rusted
463	Horse Shoe	1	N/A	N/A	5	Rusted
464	Wire	1	N/A	N/A	1	Rusted
465	81mm Fin assy.	1	N/A	N/A	6	Rusted
466	Frag	1	N/A	N/A	4	Rusted
467	Frag	1	N/A	N/A	2	Rusted
468	60mm Fin	1	N/A	N/A	4	Rusted
469	Frag	1	N/A	N/A	3	Rusted
470	60mm Fin	1	N/A	N/A	4	Rusted
471	Frag	1	N/A	N/A	3	Rusted
472	Can	1	N/A	N/A	1	Rusted
473	60mm Tail Fin	1	N/A	N/A	surface	Rusted
474	Frag	1	N/A	N/A	surface	Rusted
475	Frag	1	N/A	N/A	surface	Rusted
476	60mm Tail Fin	1	N/A	N/A	surface	Rusted
477	60mm Tail Fin	1	N/A	N/A	surface	Rusted
478	81mm Tail Fin	1	N/A	N/A	surface	Rusted
479	60mm Fin	1	N/A	N/A	surface	Rusted
480	Frag	several	N/A	N/A	surface	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 82

Accessability: DIRT ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
421	60mm Fin assy.	1	N/A	N/A	1	Rusted
422	Commo Wire	1	N/A	N/A	1	Rusted
423	Frag	1	N/A	N/A	2	Rusted
424	Frag	3	N/A	N/A	2-5	Rusted
425	Frag	2	N/A	N/A	4-7	Rusted
426	81mm Tail boom & Fin	1	N/A	N/A	3	Rusted
427	60 cal. & Link	2	N/A	N/A	4-8	Rusted
428	60mm Fin assy.	1	N/A	N/A	4	Rusted
429	Frag	2	N/A	N/A	6-10	Rusted
430	Tail boom & Fin	3	N/A	N/A	5-8	Rusted
431	M14 Mag	1	N/A	N/A	1	Rusted
432	60mm Tail boom	1	N/A	N/A	4	Rusted
433	Frag	2	N/A	N/A	1-4	Rusted
434	Frag	2	N/A	N/A	2-5	Rusted
435	Frag	3	N/A	N/A	3-5	Rusted
436	60mm Fin assy.	1	N/A	N/A	4	Rusted
437	Commo Wire	1	N/A	N/A	1	Rusted
438	Frag	2	N/A	N/A	2-4	Rusted
439	60mm Fin assy.	1	N/A	N/A	4	Rusted
440	60mm Tail boom	1	N/A	N/A	2	Rusted
441	60mm Fin assy.	1	N/A	N/A	4	Rusted
442	Wrench	1	N/A	N/A	5	Rusted
443	Frag	2	N/A	N/A	1-8	Rusted
444	Bolt & Washer	2	N/A	N/A	3-9	Rusted
445	60mm Fin assy.	1	N/A	N/A	4	Rusted
446	Frag	3	N/A	N/A	2-5	Rusted
447	Frag	1	N/A	N/A	1	Rusted
448	60mm Fin	2	N/A	N/A	2-3	Rusted
449	60mm Tail boom	1	N/A	N/A	3	Rusted
450	Barbed Wire	1	N/A	N/A	2	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 82

Accessability: DIRT ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
391	Frag	1	N/A	N/A	2	Rusted
392	60mm Fin assy.	1	N/A	N/A	6	Rusted
393	60mm Tail boom & Fin	6	N/A	N/A	4-12	Rusted
394	81mm Fin	1	N/A	N/A	2	Rusted
395	60mm Fin assy.	2	N/A	N/A	2-6	Rusted
396	Frag	2	N/A	N/A	3-5	Rusted
397	81mm Tail boom & Fin	3	N/A	N/A	3-7	Rusted
398	60mm Mortar	1	fuze	HE	14	Rusted
399	81mm Tail boom	1	N/A	N/A	6	Rusted
400	Frag	3	N/A	N/A	4-7	Rusted
401	Barbed wire	1	N/A	N/A	2	Rusted
402	60mm Tail boom	1	N/A	N/A	6	Rusted
403	Scrap	3	N/A	N/A	2-4	Rusted
404	60mm Fin assy.	1	N/A	N/A	5	Rusted
405	60mm Fin assy.	1	N/A	N/A	4	Rusted
406	60mm Fin assy.	1	N/A	N/A	5	Rusted
407	81mm Tail boom	1	N/A	N/A	4	Rusted
408	Scrap	1	N/A	N/A	4	Rusted
409	81mm Fin assy.	1	N/A	N/A	3	Rusted
410	Frag	2	N/A	N/A	2-5	Rusted
411	Frag	1	N/A	N/A	3	Rusted
412	Horse Shoe	1	N/A	N/A	4	Rusted
413	60mm Tail boom	1	N/A	N/A	5	Rusted
414	Wire	1	N/A	N/A	1	Rusted
415	Can	5	N/A	N/A	1-4	Rusted
416	81mm Tail boom	1	N/A	N/A	4	Rusted
417	Commo Wire	1	N/A	N/A	3	Rusted
418	Frag	1	N/A	N/A	4	Rusted
419	Frag	2	N/A	N/A	3-9	Rusted
420	81mm Fin assy.	1	N/A	N/A	3	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 82

Accessability: DIRT ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
361	60mm Tail boom	1	N/A	N/A	3	Rusted
362	Frag	1	N/A	N/A	1	Rusted
363	81mm Fin	1	N/A	N/A	4	Rusted
364	Frag	1	N/A	N/A	1	Rusted
365	60mm Fin assy.	1	N/A	N/A	6	Rusted
366	60mm Fin	1	N/A	N/A	2	Rusted
367	Frag	3	N/A	N/A	2-4	Rusted
368	60mm Fin assy.	1	N/A	N/A	5	Rusted
369	60mm Fin assy.	1	N/A	N/A	5	Rusted
370	Tobacco tin	1	N/A	N/A	2	Rusted
371	Can	1	N/A	N/A	1	Rusted
372	60mm Fin assy.	1	N/A	N/A	3	Rusted
373	Frag	2	N/A	N/A	1-3	Rusted
374	Frag	1	N/A	N/A	3	Rusted
375	Frag	1	N/A	N/A	4	Rusted
376	60mm Fin assy.	1	N/A	N/A	4	Rusted
377	60mm Fin assy.	1	N/A	N/A	1	Rusted
378	60mm Fin assy.	1	N/A	N/A	4	Rusted
379	60mm Fin assy.	1	N/A	N/A	4	Rusted
380	Can	1	N/A	N/A	2	Rusted
381	Frag	3	N/A	N/A	5-9	Rusted
382	60mm Fin assy.	1	N/A	N/A	4	Rusted
383	Frag	1	N/A	N/A	2	Rusted
384	60mm Fin assy.	1	N/A	N/A	5	Rusted
385	60mm Fin	1	N/A	N/A	3	Rusted
386	60mm Fin & Tail boom	1	N/A	N/A	3	Rusted
387	Wire	1	N/A	N/A	6	Rusted
388	Frag	1	N/A	N/A	2	Rusted
389	Frag	2	N/A	N/A	2-5	Rusted
390	81mm Fin	2	N/A	N/A	1-3	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 82

Accessability: DIRT ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
331	81mm Tail boom	1	N/A	N/A	4	Rusted
332	Frag	2	N/A	N/A	1-4	Rusted
333	60mm Tail boom & Fin	3	N/A	N/A	2-5	Rusted
334	Frag	1	N/A	N/A	3	Rusted
335	60mm Fin assy.	1	N/A	N/A	6	Rusted
336	Frag	2	N/A	N/A	3-5	Rusted
337	Frag	1	N/A	N/A	4	Rusted
338	60mm Fin assy.	1	N/A	N/A	4	Rusted
339	60mm Tail boom	1	N/A	N/A	4	Rusted
340	Frag	2	N/A	N/A	3-7	Rusted
341	81mm Fin assy.	1	N/A	N/A	6	Rusted
342	Frag	3	N/A	N/A	2-7	Rusted
343	60mm Tail boom	1	N/A	N/A	4	Rusted
344	Frag	5	N/A	N/A	6-17	Rusted
345	Frag	1	N/A	N/A	4	Rusted
346	60mm Fin assy.	1	N/A	N/A	5	Rusted
347	60mm Fin assy.	1	N/A	N/A	2	Rusted
348	60mm Fin assy.	1	N/A	N/A	4	Rusted
349	Chain link	1	N/A	N/A	1	Rusted
350	60mm Fin assy.	1	N/A	N/A	2	Rusted
351	60mm Fin assy.	1	N/A	N/A	2	Rusted
352	Frag	1	N/A	N/A	2	Rusted
353	Frag	1	N/A	N/A	3	Rusted
354	60mm Tail boom	1	N/A	N/A	4	Rusted
355	60mm Fin assy.	1	N/A	N/A	4	Rusted
356	Frag	1	N/A	N/A	3	Rusted
357	81mm Fin	1	N/A	N/A	2	Rusted
358	60mm Fin assy.	1	N/A	N/A	4	Rusted
359	60mm Fin assy.	1	N/A	N/A	4	Rusted
360	60mm Fin assy.	1	N/A	N/A	5	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 82

Accessability: DIRT ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
301	60mm Fin assy.	1	N/A	N/A	6	Rusted
302	Frag	1	N/A	N/A	2	Rusted
303	Fin	2	N/A	N/A	1-5	Rusted
304	Frag	1	N/A	N/A	3	Rusted
305	Frag	1	N/A	N/A	2	Rusted
306	60mm Fin assy.	1	N/A	N/A	5	Rusted
307	Frag	2	N/A	N/A	3-5	Rusted
308	Nail	1	N/A	N/A	1	Rusted
309	Frag	1	N/A	N/A	3	Rusted
310	Frag	1	N/A	N/A	2	Rusted
311	Frag	1	N/A	N/A	4	Rusted
312	60mm Fin assy.	1	N/A	N/A	5	Rusted
313	Frag	1	N/A	N/A	2	Rusted
314	Can	1	N/A	N/A	1	Rusted
315	Frag	2	N/A	N/A	2-5	Rusted
316	60mm Fin assy.	1	N/A	N/A	4	Rusted
317	Frag	1	N/A	N/A	3	Rusted
318	Frag	2	N/A	N/A	4-8	Rusted
319	60mm Fin assy.	1	N/A	N/A	4	Rusted
320	60mm Fin	1	N/A	N/A	1	Rusted
321	Frag	1	N/A	N/A	6	Rusted
322	Frag	1	N/A	N/A	1	Rusted
323	Frag	1	N/A	N/A	1	Rusted
324	60mm Tail boom	1	N/A	N/A	4	Rusted
325	Frag	1	N/A	N/A	4	Rusted
326	Frag	1	N/A	N/A	2	Rusted
327	Frag	1	N/A	N/A	2	Rusted
328	81mm Fin	1	N/A	N/A	2	Rusted
329	Frag	2	N/A	N/A	3-7	Rusted
330	Can	1	N/A	N/A	1	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 82

Accessability: DIRT ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
271	60mm Tail boom	1	N/A	N/A	1	Rusted
272	60mm Tail boom	1	N/A	N/A	2	Rusted
273	60mm Tail boom	1	N/A	N/A	2	Rusted
274	81mm Fin	1	N/A	N/A	3	Rusted
275	81mm Fin	1	N/A	N/A	3	Rusted
276	Scrap	1	N/A	N/A	1	Rusted
277	81mm Fin	1	N/A	N/A	1	Rusted
278	60mm Fin	1	N/A	N/A	5	Rusted
279	60mm Fin assy.	1	N/A	N/A	4	Rusted
280	60mm Fin assy.	1	N/A	N/A	3	Rusted
281	81mm Fin & Tail boom	2	N/A	N/A	6-9	Rusted
282	Frag	1	N/A	N/A	4	Rusted
283	Scrap	3	N/A	N/A	2-5	Rusted
284	60mm Fin	2	N/A	N/A	3-7	Rusted
285	Scrap	1	N/A	N/A	10	Rusted
286	Ax	1	N/A	N/A	5	Rusted
287	60mm Fin assy.	1	N/A	N/A	4	Rusted
288	Frag	1	N/A	N/A	5	Rusted
289	60mm Fin assy.	1	N/A	N/A	3	Rusted
290	60mm Fin assy.	1	N/A	N/A	5	Rusted
291	Box end wrench	1	N/A	N/A	4	Rusted
292	81mm Fin assy.	1	N/A	N/A	6	Rusted
293	60mm Fin assy.	1	N/A	N/A	4	Rusted
294	Nail	1	N/A	N/A	2	Rusted
295	Scrap	4	N/A	N/A	4-10	Rusted
296	30 cal. Clip	1	N/A	N/A	2	Rusted
297	Frag	1	N/A	N/A	4	Rusted
298	Scrap	1	N/A	N/A	8	Rusted
299	60mm Fin assy.	1	N/A	N/A	6	Rusted
300	Frag	1	N/A	N/A	4	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 82 Accessability: DIRT ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
241	81mm Tail boom	1	N/A	N/A	12	Rusted
242	60mm Tail boom	1	N/A	N/A	1	Rusted
243	Frag	1	N/A	N/A	3	Rusted
244	60mm Tail boom	1	N/A	N/A	3	Rusted
245	60mm illum.	1	N/A	N/A	surface	Rusted
246	60mm Tail boom	1	N/A	N/A	3	Rusted
247	81mm Fin	1	N/A	N/A	2	Rusted
248	60mm Tail boom	1	N/A	N/A	4	Rusted
249	60mm Fin assy.	1	N/A	N/A	4	Rusted
250	Frag	1	N/A	N/A	4	Rusted
251	60mm Tail boom	1	N/A	N/A	3	Rusted
252	Scrap	1	N/A	N/A	3	Rusted
253	81mm Fin	1	N/A	N/A	4	Rusted
254	60mm Fin assy.	1	N/A	N/A	3	Rusted
255	81mm Tail boom	1	N/A	N/A	3	Rusted
256	81mm Fin assy.	1	N/A	N/A	4	Rusted
257	Frag	1	N/A	N/A	4	Rusted
258	60mm Tail boom & Fin	2	N/A	N/A	5-8	Rusted
259	Frag	1	N/A	N/A	5	Rusted
260	Frag	1	N/A	N/A	4	Rusted
261	60mm Fin assy.	1	N/A	N/A	4	Rusted
262	81mm Fin	3	N/A	N/A	5-7	Rusted
263	81mm Tail boom	1	N/A	N/A	6	Rusted
264	Frag	1	N/A	N/A	3	Rusted
265	Frag	1	N/A	N/A	3	Rusted
266	Frag	1	N/A	N/A	3	Rusted
267	81mm Fin	1	N/A	N/A	3	Rusted
268	Frag	1	N/A	N/A	4	Rusted
269	Frag	1	N/A	N/A	3	Rusted
270	60mm Tail boom	1	N/A	N/A	1	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 82

Accessability: DIRT ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
211	81mm Fin	1	N/A	N/A	2	Rusted
212	60mm Tail boom	1	N/A	N/A	1	Rusted
213	Frag	1	N/A	N/A	3	Rusted
214	60mm Fin	1	N/A	N/A	2	Rusted
215	Frag	1	N/A	N/A	3	Rusted
216	Frag	1	N/A	N/A	2	Rusted
217	60mm Fin	1	N/A	N/A	1	Rusted
218	60mm Tail boom	1	N/A	N/A	1	Rusted
219	60mm Fin	1	N/A	N/A	1	Rusted
220	60mm Mortar	1	fuze	HE	4	Rusted
221	Frag	1	N/A	N/A	1	Rusted
222	Frag	1	N/A	N/A	3	Rusted
223	60mm Tail boom	1	N/A	N/A	2	Rusted
224	81mm Fin	1	N/A	N/A	3	Rusted
225	Frag	1	N/A	N/A	1	Rusted
226	60mm Fin	1	N/A	N/A	1	Rusted
227	60mm Tail boom	1	N/A	N/A	2	Rusted
228	60mm Tail boom	1	N/A	N/A	5	Rusted
229	81mm Fin	1	N/A	N/A	3	Rusted
230	Frag	1	N/A	N/A	1	Rusted
231	Frag	1	N/A	N/A	1	Rusted
232	81mm Fin	1	N/A	N/A	4	Rusted
233	60mm Tail boom	1	N/A	N/A	3	Rusted
234	81mm Fin	1	N/A	N/A	2	Rusted
235	81mm Fin	1	N/A	N/A	4	Rusted
236	60mm Tail boom	1	N/A	N/A	2	Rusted
237	60mm Fin	1	N/A	N/A	3	Rusted
238	60mm Tail boom	1	N/A	N/A	5	Rusted
239	60mm Fin	1	N/A	N/A	4	Rusted
240	Frag	1	N/A	N/A	3	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 82

Accessability: DIRT ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
181	60mm Tail boom	1	N/A	N/A	4	Rusted
182	60mm Tail boom	1	N/A	N/A	3	Rusted
183	Scrap	1	N/A	N/A	1	Rusted
184	Frag	2	N/A	N/A	2-5	Rusted
185	81mm Fin	1	N/A	N/A	1	Rusted
186	Frag	1	N/A	N/A	1	Rusted
187	Frag	1	N/A	N/A	2	Rusted
188	60mm Fin	1	N/A	N/A	1	Rusted
189	Scrap	1	N/A	N/A	3	Rusted
190	60mm Mortar	1	fuze	HE	4	Rusted
191	60mm Fin	1	N/A	N/A	2	Rusted
192	Frag	4	N/A	N/A	2-6	Rusted
193	81mm Tail boom	1	N/A	N/A	5	Rusted
194	60mm Tail boom	1	N/A	N/A	2	Rusted
195	Frag	2	N/A	N/A	2-5	Rusted
196	Scrap	1	N/A	N/A	3	Rusted
197	60mm Tail boom	1	N/A	N/A	5	Rusted
198	60mm Tail boom	1	N/A	N/A	4	Rusted
199	Frag	3	N/A	N/A	1-5	Rusted
200	Scrap	2	N/A	N/A	10-13	Rusted
201	Wire	1	N/A	N/A	8	Rusted
202	60mm Tail boom	1	N/A	N/A	5	Rusted
203	Frag	1	N/A	N/A	3	Rusted
204	Rock	1	N/A	N/A	4	Rusted
205	81mm Fin	1	N/A	N/A	1	Rusted
206	81mm Tail boom	1	N/A	N/A	2	Rusted
207	Frag	1	N/A	N/A	3	Rusted
208	60mm Tail boom	1	N/A	N/A	4	Rusted
209	60mm Fin	1	N/A	N/A	5	Rusted
210	Frag	1	N/A	N/A	4	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 82

Accessability: DIRT ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
151	81mm Fin	1	N/A	N/A	3	Rusted
152	Frag	2	N/A	N/A	2-5	Rusted
153	81mm Tail boom	1	N/A	N/A	3	Rusted
154	60mm Fin	1	N/A	N/A	3	Rusted
155	81mm Fin	1	N/A	N/A	1	Rusted
156	81mm Fin	1	N/A	N/A	4	Rusted
157	81mm Mortar	1	fuze	HE	7	Rusted
158	60mm Tail boom	1	N/A	N/A	3	Rusted
159	Rock	1	N/A	N/A	7	Rusted
160	60mm Tail boom	1	N/A	N/A	4	Rusted
161	81mm Fin	1	N/A	N/A	1	Rusted
162	81mm Fin	1	N/A	N/A	3	Rusted
163	81mm Tail boom	2	N/A	N/A	5-11	Rusted
164	60mm Fin	1	N/A	N/A	6	Rusted
165	81mm Tail boom	1	N/A	N/A	4	Rusted
166	Frag	7	N/A	N/A	3-14	Rusted
167	81mm Tail boom	1	N/A	N/A	1	Rusted
168	81mm Fin	1	N/A	N/A	5	Rusted
169	60mm Fin	1	N/A	N/A	2	Rusted
170	81mm Fin	1	N/A	N/A	5	Rusted
171	60mm Fin	1	N/A	N/A	5	Rusted
172	Scrap	1	N/A	N/A	7	Rusted
173	60mm Fin	1	N/A	N/A	3	Rusted
174	60mm Tail boom	1	N/A	N/A	6	Rusted
175	60mm Tail boom	1	N/A	N/A	3	Rusted
176	60mm Tail boom	1	N/A	N/A	9	Rusted
177	Horse Shoe	1	N/A	N/A	4	Rusted
178	60mm Tail boom	1	N/A	N/A	4	Rusted
179	60mm Tail boom	1	N/A	N/A	5	Rusted
180	81mm Tail boom	1	N/A	N/A	7	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 82

Accessability: DIRT ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth	State of Degradation
121	Frag	1	N/A	N/A	4	Rusted
122	60mm Mortar	1	fuze	HE	3	Rusted
123	81mm Fin	1	N/A	N/A	4	Rusted
124	60mm Fin	2	N/A	N/A	6-11	Rusted
125	81mm Fin	1	N/A	N/A	6	Rusted
126	60mm Fin	1	N/A	N/A	5	Rusted
127	Frag	1	N/A	N/A	6	Rusted
128	60mm Fin	1	N/A	N/A	7	Rusted
129	60mm Fin	1	N/A	N/A	4	Rusted
130	60mm Tail boom	1	N/A	N/A	5	Rusted
131	Frag	1	N/A	N/A	3	Rusted
132	81mm Fin	1	N/A	N/A	9	Rusted
133	60mm Fin	1	N/A	N/A	2	Rusted
134	60mm Tail boom	1	N/A	N/A	3	Rusted
135	60mm Fin	3	N/A	N/A	4-7	Rusted
136	81mm Fin	1	N/A	N/A	2	Rusted
137	Frag	3	N/A	N/A	5-9	Rusted
138	Frag	2	N/A	N/A	2-8	Rusted
139	60mm Fin	3	N/A	N/A	4-9	Rusted
140	60mm Fin	1	N/A	N/A	1	Rusted
141	81mm Fin	1	N/A	N/A	2	Rusted
142	60mm Fin	1	N/A	N/A	2	Rusted
143	Frag	4	N/A	N/A	3-8	Rusted
144	Scrap	1	N/A	N/A	2	Rusted
145	60mm Mortar	1	N/A	N/A	4	Rusted
146	81mm Fin	1	N/A	N/A	1	Rusted
147	60mm Fin	1	N/A	N/A	6	Rusted
148	81mm Tail boom	1	N/A	N/A	5	Rusted
149	60mm Fin	1	N/A	N/A	3	Rusted
150	81mm Tail boom	1	N/A	N/A	2	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 82

Accessability: DIRT ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
91	Frag	1	N/A	N/A	3	Rusted
92	81mm Tail boom	1	N/A	N/A	4	Rusted
93	Frag	1	N/A	N/A	3	Rusted
94	60mm Fin	2	N/A	N/A	3-8	Rusted
95	60mm Mortar	1	fuze	HE	9	Rusted
96	60mm Fin assy.	1	N/A	N/A	4	Rusted
97	81mm Fin assy.	1	N/A	N/A	6	Rusted
98	Frag	1	N/A	N/A	3	Rusted
99	60mm Tail boom	1	N/A	N/A	4	Rusted
100	60mm Mortar	1	fuze	HE	8	Rusted
101	60mm Fin	1	N/A	N/A	2	Rusted
102	60mm Fin assy.	1	N/A	N/A	4	Rusted
103	81mm Tail boom	1	N/A	N/A	4	Rusted
104	Frag	1	N/A	N/A	2	Rusted
105	81mm Fin assy.	1	N/A	N/A	6	Rusted
106	Frag	1	N/A	N/A	3	Rusted
107	60mm Fin assy.	1	N/A	N/A	3	Rusted
108	60mm Fin assy.	1	N/A	N/A	5	Rusted
109	Frag	1	N/A	N/A	2	Rusted
110	60mm Tail boom	1	N/A	N/A	4	Rusted
111	Barbed Wire	2	N/A	N/A	2	Rusted
112	Frag	1	N/A	N/A	3	Rusted
113	60mm Tail boom	1	N/A	N/A	1	Rusted
114	Frag	1	N/A	N/A	2	Rusted
115	Frag	1	N/A	N/A	2	Rusted
116	60mm Fin	1	N/A	N/A	1	Rusted
117	81mm Fin	1	N/A	N/A	1	Rusted
118	60mm Fin	1	N/A	N/A	2	Rusted
119	60mm Tail boom	1	N/A	N/A	4	Rusted
120	81mm Tail boom	1	N/A	N/A	3	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 82

Accessability: DIRT ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
61	Frag	2	N/A	N/A	4-9	Rusted
62	60mm Fin assy.	1	N/A	N/A	5	Rusted
63	Frag	1	N/A	N/A	3	Rusted
64	60mm Tail boom	1	N/A	N/A	3	Rusted
65	81mm Tail boom	1	N/A	N/A	5	Rusted
66	81mm Fin	2	N/A	N/A	3-9	Rusted
67	Frag	1	N/A	N/A	3	Rusted
68	Frag	2	N/A	N/A	2-5	Rusted
69	60mm Fin assy.	1	N/A	N/A	5	Rusted
70	60mm Fin assy.	1	N/A	N/A	3	Rusted
71	Frag	1	N/A	N/A	1	Rusted
72	60mm Tail boom	1	N/A	N/A	2	Rusted
73	81mm Fin assy.	1	N/A	N/A	7	Rusted
74	81mm Fin	2	N/A	N/A	5-12	Rusted
75	Frag	1	N/A	N/A	3	Rusted
76	60mm Fin assy.	1	N/A	N/A	4	Rusted
77	60mm Tail boom	1	N/A	N/A	2	Rusted
78	60mm Fin assy.	1	N/A	N/A	3	Rusted
79	81mm Tail boom	1	N/A	N/A	4	Rusted
80	81mm Fin	1	N/A	N/A	2	Rusted
81	81mm Tail boom	1	N/A	N/A	4	Rusted
82	60mm Fin assy.	1	N/A	N/A	3	Rusted
83	60mm Fin assy.	1	N/A	N/A	4	Rusted
84	60mm Tail boom	1	N/A	N/A	3	Rusted
85	Frag	1	N/A	N/A	4	Rusted
86	Wire	1	N/A	N/A	1	Rusted
87	Frag	1	N/A	N/A	2	Rusted
88	60mm Tail boom & Fin	2	N/A	N/A	4-9	Rusted
89	Horse Shoe	1	N/A	N/A	4	Rusted
90	Frag	1	N/A	N/A	3	Rusted

GRID SURVEY SUMMARY SHEET

GRID: 82 Accessability: DIRT ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
31	81mm Fin assy.	1	N/A	N/A	6	Rusted
32	60mm Tail boom	1	N/A	N/A	3	Rusted
33	60mm Fin assy.	1	N/A	N/A	4	Rusted
34	60mm Fin assy.	1	N/A	N/A	5	Rusted
35	60mm Fin assy.	1	N/A	N/A	4	Rusted
36	Frag	1	N/A	N/A	3	Rusted
37	81mm Tail boom	1	N/A	N/A	4	Rusted
38	60mm Mortar	1	fuze	HE	6	Rusted
39	Frag	1	N/A	N/A	3	Rusted
40	81mm Fin	2	N/A	N/A	5-8	Rusted
41	60mm Fin assy.	1	N/A	N/A	5	Rusted
42	Frag	1	N/A	N/A	3	Rusted
43	Frag	2	N/A	N/A	1-7	Rusted
44	81mm Fin	1	N/A	N/A	5	Rusted
45	60mm Fin assy.	1	N/A	N/A	3	Rusted
46	81mm Fin assy.	1	N/A	N/A	4	Rusted
47	Frag	1	N/A	N/A	2	Rusted
48	60mm Tail boom	1	N/A	N/A	4	Rusted
49	60mm Fin assy.	1	N/A	N/A	5	Rusted
50	Can	1	N/A	N/A	1	Rusted
51	Frag	1	N/A	N/A	2	Rusted
52	Frag	2	N/A	N/A	3-8	Rusted
53	Frag	1	N/A	N/A	3	Rusted
54	81mm Tail boom	1	N/A	N/A	4	Rusted
55	60mm Mortar	1	fuze	HE	5	Rusted
56	81mm Tail boom	1	N/A	N/A	3	Rusted
57	Frag	1	N/A	N/A	2	Rusted
58	60mm Fin assy.	1	N/A	N/A	5	Rusted
59	81mm Fin assy.	1	N/A	N/A	8	Rusted
60	Trash	1	N/A	N/A	1	Rusted

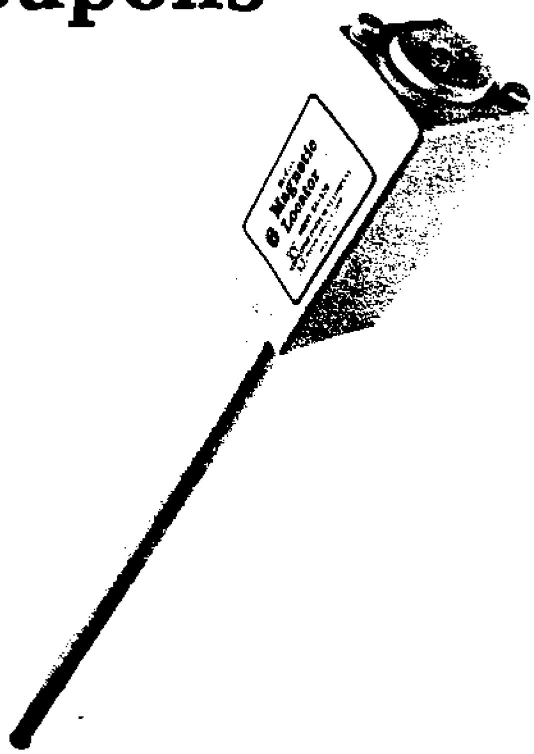
GRID SURVEY SUMMARY SHEET

GRID: 82

Accessability: DIRT ROAD

Number	Description	No. Piece(s)	Type Fuse	Type Fill	Depth (in.)	State of Degradation
1	Frag	1	N/A	N/A	3	Rusted
2	60mm Tail boom	1	N/A	N/A	4	Rusted
3	60mm Fin assy.	1	N/A	N/A	4	Rusted
4	60mm Fin assy.	1	N/A	N/A	5	Rusted
5	81mm Fin	1	N/A	N/A	4	Rusted
6	60mm Fin assy.	1	N/A	N/A	6	Rusted
7	81mm Tail boom	1	N/A	N/A	3	Rusted
8	Frag	1	N/A	N/A	2	Rusted
9	Frag	1	N/A	N/A	3	Rusted
10	60mm Fin assy.	1	N/A	N/A	5	Rusted
11	Scrap	1	N/A	N/A	1	Rusted
12	81mm Tail boom	1	N/A	N/A	4	Rusted
13	Frag	1	N/A	N/A	3	Rusted
14	Frag	2	N/A	N/A	4-9	Rusted
15	Frag	1	N/A	N/A	1	Rusted
16	81mm Fin assy.	1	N/A	N/A	6	Rusted
17	60mm Tail boom	1	N/A	N/A	4	Rusted
18	60mm Tail boom	1	N/A	N/A	3	Rusted
19	60mm Tail boom & Fin	2	N/A	N/A	1-6	Rusted
20	Frag	1	N/A	N/A	2	Rusted
21	60mm Fin assy.	1	N/A	N/A	5	Rusted
22	60mm Fin assy.	1	N/A	N/A	4	Rusted
23	81mm Tail boom	1	N/A	N/A	2	Rusted
24	60mm Fin	3	N/A	N/A	4-7	Rusted
25	Frag	1	N/A	N/A	2	Rusted
26	Frag	1	N/A	N/A	3	Rusted
27	60mm Fin assy.	1	N/A	N/A	4	Rusted
28	81mm Fin & Tail boom	3	N/A	N/A	3-8	Rusted
29	Frag	1	N/A	N/A	1	Rusted
30	Barbed wire	1	N/A	N/A	1	Rusted

Ordnance and Weapons Detection



"The Schonstedt"™

Model GA-52B Magnetic Locator

SCHONSTEDT INSTRUMENT COMPANY

Introduction

The GA-52B is a versatile, light-weight, cost-effective magnetic locator designed to aid EOD technicians and law enforcement officers during area search operations.

It enhances your detection capabilities and reduces the time required to detect ferrous metal parts from an improvised explosive device (IED), buried ordnance and covered weapons.

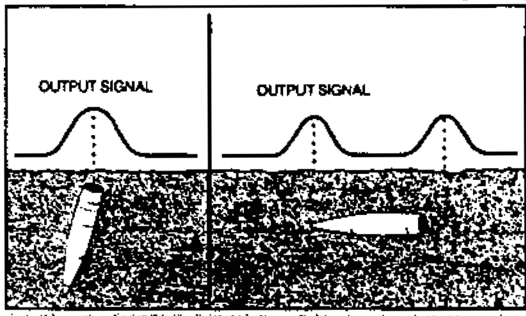
The GA-52B's rugged design makes it ideal for searching in dense vegetation, rocky terrain, swampy areas, shallow creeks, snow covered areas or any environment that hampers visual detection. The shaft can be immersed in up to 34 inches of water and thrust into deep snow.

The GA-52B has substantially more range than conventional metal detectors. Its proven design has been used in the field for nearly two decades.

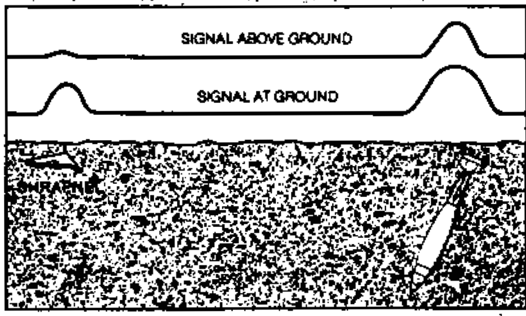
You will be amazed at the ease and short time it takes to become an experienced operator of the GA-52B.

The GA-52B is ideal for supporting small and large scale ordnance investigations and range clearance projects.

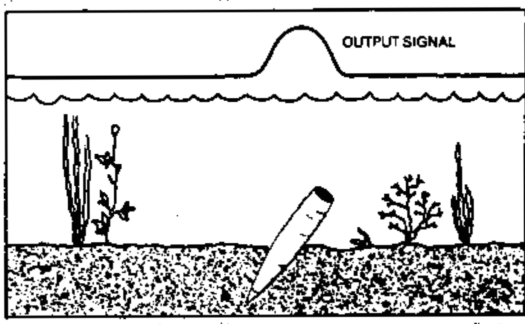
Basic signal patterns provide valuable target information.



Signal Pattern from Vertical and Horizontal Targets



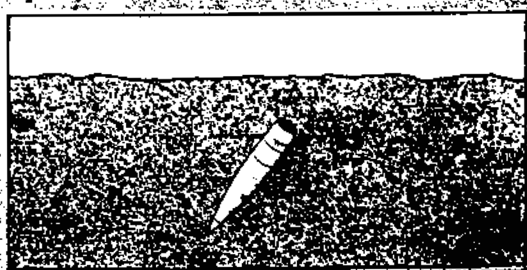
Raising the Locator Eliminates Unwanted Signals



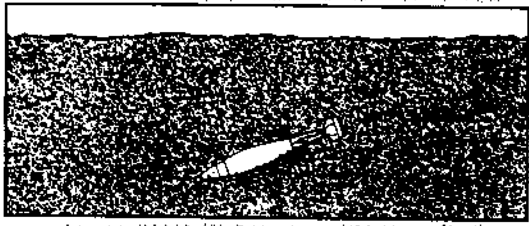
Shallow water does not affect signal pattern

Locating depths for ordnance and weapons under ground, snow, brush, and water.

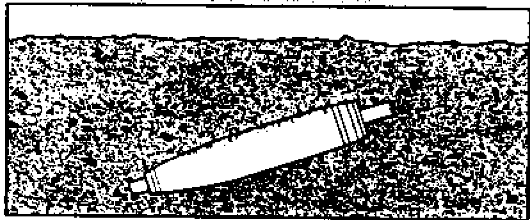
Up to 5 feet *175mm Projectile*



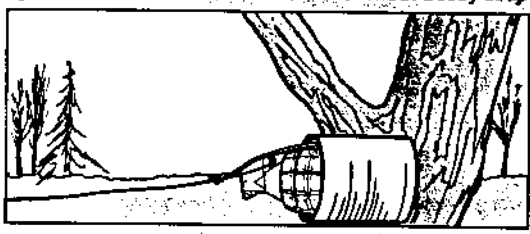
Up to 12 inches *81mm Mortar*



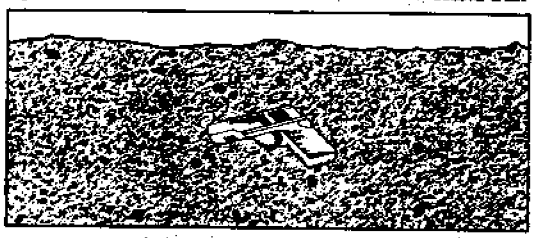
Up to 9 feet *MK81 Low Drag Bomb*



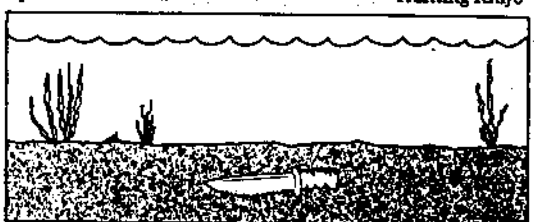
Up to 6 inches *Grenade Booby Trap*



Up to 12 inches *Hand Gun*



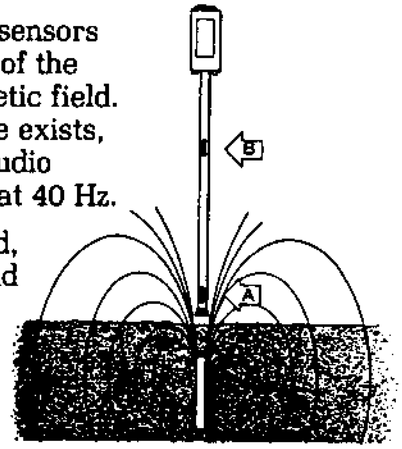
Up to 16 inches *Hunting Knife*



Also excellent for post blast investigations

How It Operates

The GA-52B detects the magnetic field of any ferrous object.

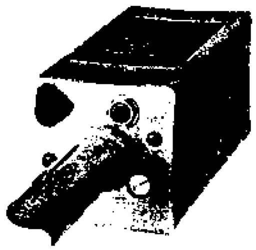


Its two magnetic-field sensors balance out the effect of the Earth's ambient magnetic field. As long as this balance exists, the frequency of the audio output signal remains at 40 Hz.

However, as illustrated, when the magnetic field becomes stronger at sensor A than it is at sensor B, the output signal increases in frequency. When the tip of the locator is positioned directly over the target the audio signal increases to its highest frequency.

Just Two Controls

Designed for one-hand operation, this compact, lightweight unit has only an On/Off-Volume and a Sensitivity Control.



Both controls are located on the underside of the cover. This protects them and also contributes to the ruggedness of the instrument.

The GA-52B is excellent for locating weapons in heavy vegetation and shallow water. It's also ideal for locating booby traps set up around illegal drug labs and marijuana fields.

Features

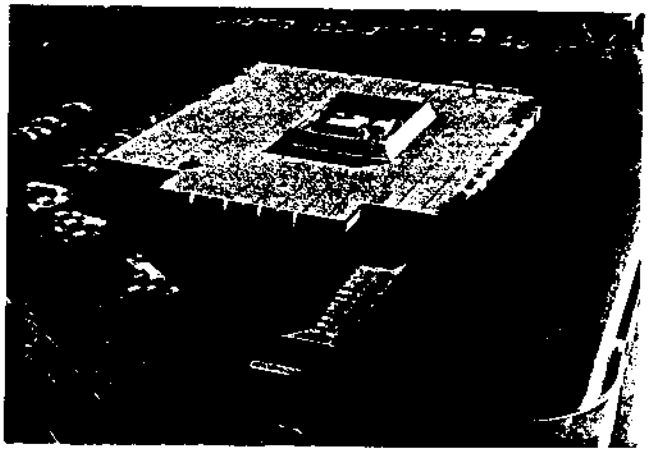
- Ease of operation increases the speed at which an area can be searched
- Very few false alarms (Locator does not respond to aluminum, brass, copper, etc.)
- Pinpoint locating accuracy
- Audio signal indicates target location
- With experience, operator can distinguish between small pieces of scrap iron and actual target.
- C-cell batteries provide up to 50 hrs of operation
- Weather protected speaker
- Two operating controls
- Rugged, no-roll instrument design
- Patented HeliFlux sensors
- Rugged, lightweight carrying case
- All locators must pass final tests at our specially equipped field-test facility.

Specifications

Operating Voltage	6 Volts (Four C-Cell batteries)
Battery Life	50 hours at 70°F (21°C) (Intermittent usage)
Output Frequency	Approximately 40 Hz idling tone from speaker. Frequency of pulsing tone increases (or decreases) with signal intensity.
Weight	Approximately 3 lb. (1.36 kg)
Operating Temperature	0°F to 120°F (−18°C to 49°C)
Overall Length	42.3 in. (107.4 cm.)
Waterproof Length	34.5 in. (87.6 cm.)
Sensor Spacing	20 in. (50.8 cm.)

The Model GA-52B is a product of thirty-five years of manufacturing the world's finest HeliFlux® magnetometers

Corporate Headquarters



Founded in 1953, Schonstedt Instrument Company occupies a modern 22,000 square-foot building in Reston, Virginia.

Field-Test Facility

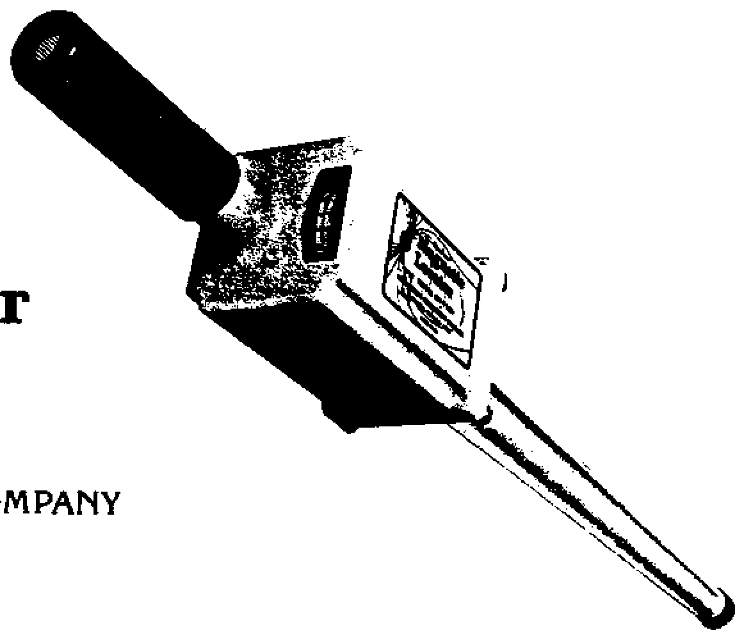
Research in an environment nearly free of man-made magnetic disturbances is performed at our 40-acre test facility.

SCHONSTEDT INSTRUMENT COMPANY
1775 Wiehle Avenue, Reston, Virginia 22090-5199
Phone (703) 471-1050 • TWX 710 833-9880 • FAX (703) 471-1795

Authorized Dealer:

EOD Technology, Inc.
P.O. Box 267
Oak Ridge, TN 37831
Phone (615) 483-0007 FAX (615) 481-0653

Ordnance and Weapons Detection



"The Schonstedt"™

Model GA-72CV Magnetic Locator

Made in U.S.A.

SCHONSTEDT INSTRUMENT COMPANY

Introduction

The GA-72CV is a versatile, light-weight, cost-effective magnetic locator designed to aid EOD technicians and law enforcement officers during area search operations.

It enhances your detection capabilities and reduces the time required to detect ferrous metal parts from an improvised explosive device (IED), buried ordnance and covered weapons.

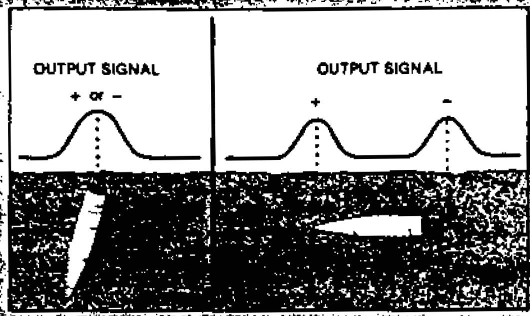
The GA-72CV is unique because it provides you with an audio signal to locate the target and a visual indication that identifies its polarity. These two indications help you to quickly pinpoint the target and aid in determining its orientation.

The GA-72CV's rugged design makes it ideal for searching rocky terrain, swampy areas, shallow creeks, snow covered areas or any environment that hampers visual detection. The shaft can be immersed in up to 21 inches of water and thrust into deep snow.

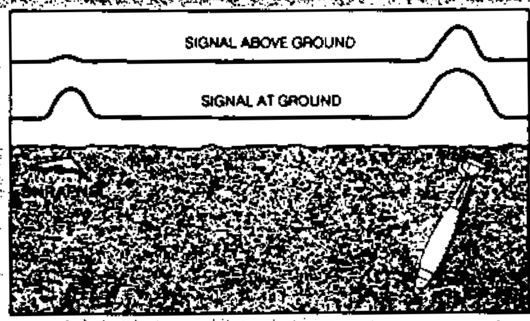
The GA-72CV has substantially more range than conventional metal detectors. Its proven technology has been used in the field for nearly two decades.

The GA-72CV is ideal for supporting small and large scale ordnance investigations and range clearance projects.

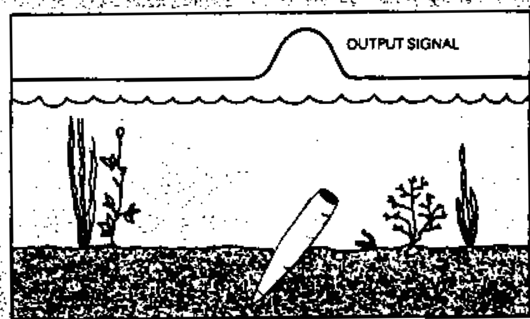
Basic signal patterns provide valuable target information



Signal patterns from vertical and horizontal targets aid in determining their orientation.

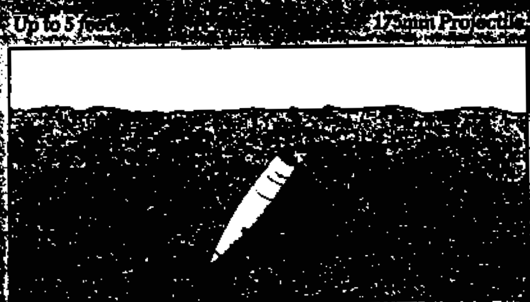


Raising the locator eliminates unwanted signals

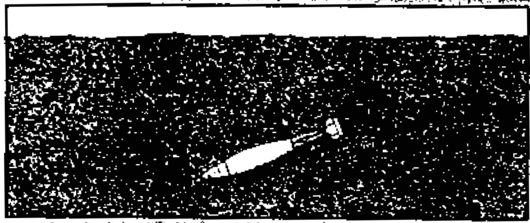


Shallow water does not affect signal pattern

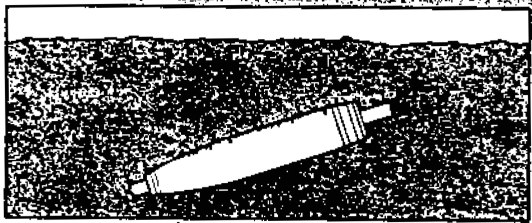
Locating depths for ordnance and weapons under ground, snow, brush, and water



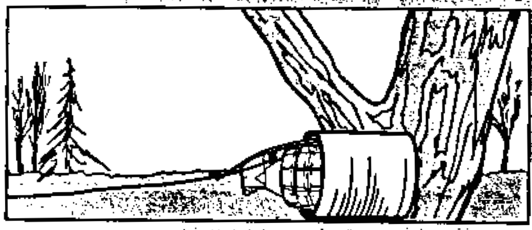
Up to 12 inches 81mm Mortar



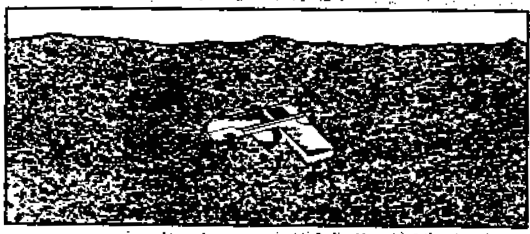
Up to 9 feet MK81 Low Drag Bomb



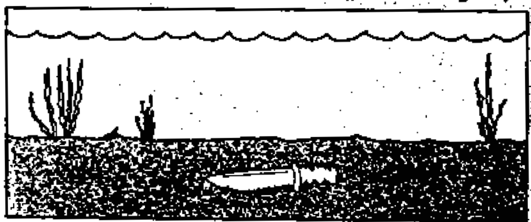
Up to 6 inches Grenade Booby Trap



Up to 12 inches Hand Gun



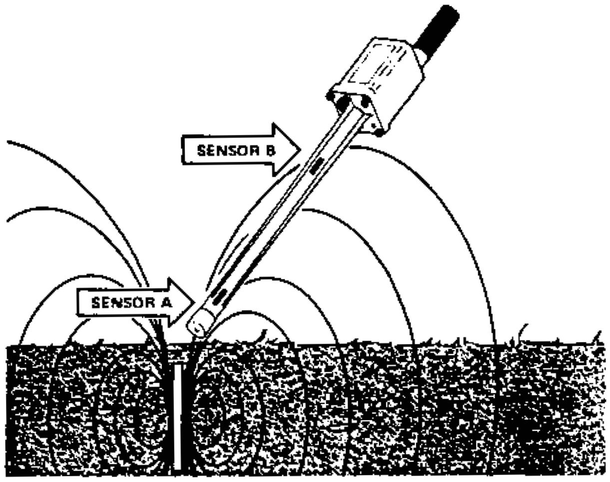
Up to 16 inches Hunting Knife



Also excellent for post blast investigations

How It Operates

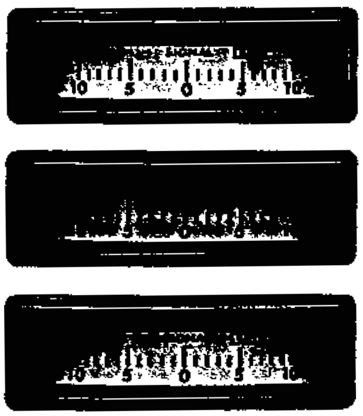
The GA-72CV detects the magnetic field of any ferromagnetic object. Its two sensors balance out the effect of the Earth's ambient magnetic field. As long as this balance exists, the frequency of the audio signal will remain at a steady 40 Hz.



However, when a target causes the magnetic field to become stronger at sensor **A** than it is at sensor **B**, the frequency of the audio signal and the strength of the meter's polarity indication begin to increase. Both the audio frequency and the meter's polarity indication will peak when the locator is directly over the target.

Visual and Audio Indications

The GA-72CV's easy-to-read meter (shown below at actual size) provides a clear indication of the (+) and (−) polarity signals. As the frequency of the audio signal changes, the meter's (+) or (−) indication increases or decreases. This visual indication of the target's polarities is extremely helpful for determining its orientation.



Features

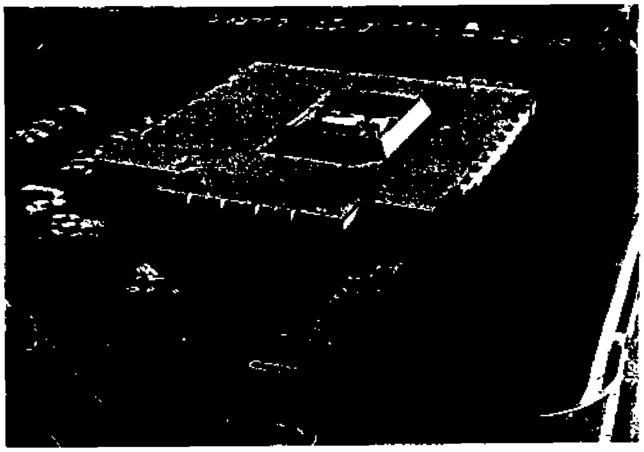
- Meter indicates (+) and (–) polarities
- Audio and visual signals provide pinpoint locating accuracy including target orientation
- Locator does not respond to aluminum, brass, copper, etc.
- Lightweight, human engineered design for ease-of-operation
- Only one multi-function control
- Meter indicates battery status
- AA batteries provide up to 30 hours of operation
- Patented HeliFlux® sensors
- Rugged, lightweight carrying case
- Constructed to last
- Weather protected speaker

Specifications

Input Power	Supplied by four alkaline AA-cell batteries
Battery Life	30 hours (Intermittent usage)
Output	
Audio	Approximately 40 Hz idle tone in speaker. Tone frequency increases (or decreases) with gradient-field intensity.
Visual	Meter indicates polarity (positive or negative) of the magnetic field
Battery Check	BATT.OK (meter indication)
Weight	Approximately 2.5 lbs. (1.14 kg)
Operating Temperature	– 13°F to 140°F (– 25°C to 60°C)
Overall Length	34½ in. (87.6 cm.)
Waterproof Length	21 in. (53.3 cm.)
Nominal Sensor Spacing	14 in. (35.6 cm.)
Construction	Rugged, all solid state.

The Model GA-72CV is a product of thirty-eight years of manufacturing the world's finest HeliFlux® magnetometers

Corporate Headquarters



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Authorized Dealer:

DAILY ACTIVITY REPORT
FOR DECEMBER 13, 1994

DATE PREPARED: December 13, 1994

LOCATION: FORMER CAMP CROFT, SPARTANBURG, SC

PROJECT/DELIVERY ORDER: 3947007G/0013

SITE MANAGER: RAY KRUSE

SITE ADMINISTRATOR: CHRISTINA MERSHON

SITE TEAM PERSONNEL/POSITION:

Bill Brindle	EODT Senior UXO Supervisor
Mitch Agee	EODT Site Safety & Health Officer
Ed Pinson	EODT UXO Supervisor
T.J. Die	- do -
Wayne Crupper	EODT UXO Specialist
Tom Hamrick	- do -
Joe Karkoska	- do -
Tim Noel	- do -
Rick Stauber	- do -
Myles West	- do -
Don Nickel	EODT Support Specialist
Doug Royster	- do -

VISITORS: None.

SITE ACTIVITIES: -Team #1 completed magging/flagging and intrusive operations in grid 71 and began intrusive operations in a portion of the nature trail that essentially encircles grids 70-73. See attached summary sheet.

- Team #2 completed magging and flagging operations in grids 41,42 and a portion of grid of the nature trail mentioned above. See attached summary sheet.

ORDNANCE ENCOUNTERED: Five 60mm mortar HE fuzed rounds in grid 71.

HEALTH AND SAFETY: -Daily Tailgate Safety Brief presented (documentation of training attached, EODT #41). Magnetometers were calibrated prior to using in the field.

WEATHER CONDITIONS: Cloudy, chance of rain, low in the mid-30's, high in the upper 40's, wind from the northeast at 5-10 mph.

PROBLEMS ENCOUNTERED/RESOLUTIONS: None.

SIGNIFICANT EVENTS: None.

TOMORROW'S SCHEDULE: Team #1 will conduct magging/flagging and intrusive operations on the nature trail and in grids 43 and 44, if time permits. Team #2 will perform magging and flagging operations on the remainder of the nature trail and in grids 39-40, if time permits.

COMMENTS: None.

13 DEC 94

R.M. Kruse date

FORMER CAMP CROFT EE/CA SAMPLING--Daily Progress Summary Table for 13 Dec 94 (insert date)

OPERATION

1. BRUSH CLEARANCE

	GRID No.
Conducted at:	
Completed at:	

2. MAG & FLAG

	GRID NO.	ANAMOLIES Detected (actual number)
Conducted at:	42	63
	71	192
	41	43
Completed at:	42	63
	71	192
	41	43

3. INTRUSIVE

	GRID No.	ANAMOLIES Dug	UXO Found	OEW Found
Conducted at:	71	192	5-60mm	83 lbs
Completed at:	71	192	5-60mm	83 lbs

4. UXO DISPOSAL

	GRID No.	UXO Destroyed
Conducted at:		
Completed at:		

Completed by: [signature] Date 13 Dec 94

(41)

DOCUMENTATION OF TRAINING FORM

Date: 13 Dec 94	Instructor(s): M Agee	Site Location: CROFT ST PARK

Training Provided: ☐ Initial Site Hazard Training ☒ Tailgate Safety Brief ☐ Weekly Safety Training ☐ Hazard Specific Training ☐ Task Specific Training ☐ Other:

TRAINING TOPICS COVERED

Work Plan and /SSHP: Review Task Hazard / PPE motorcycle Helmets Hard Hats Visor safety glasses / Vest / gloves / chaps / steel toe Boots /

UXO/OEW Hazards: Flag Notify S.Site Sup or SSHO

Chemical Hazards: gas / green stick / muratic acid

Physical Hazards: WEATHER / Slip Trip Fall pungis / ROAD TRAVEL / / Bio Hazards plants Insects possible snakes / COLD / sticks in EYES

Emergency Procedures: FIRST AID / RADIO / PHONE / Hospital Route

Other:

TRAINING COURSE ATTENDENTS

NAME (printed)	SIGNATURE	ORGANIZATION
R. KRUSE	[signature]	ESE
B. BRINDLE	[signature]	EODT
M. AGEE	[signature]	"
ED PINSON	[signature]	"
TJ DIE	[signature]	"
W. CRUPPER	[signature]	"
D. NICKEL	[signature]	"
M WEST	[signature]	"
T. HAMRICK	[signature]	"
J KARKOSZKA	[signature]	"
D. ROYSTER	[signature]	"
R. STAUBER	[signature]	"
T. NOEL	[signature]	"

CERTIFICATE OF DISPOSAL

I certify that approximately 1457 pounds of ordnance related scrap recovered at the former Camp Croft, Spartanburg, South Carolina during the period October 11, 1994 to January 17, 1995 (Environmental Science & Engineering, Inc. Project 3947007G/EOD Technology, Inc. Project 203407) has been inspected by me and, to the best of my knowledge, contains no items of a dangerous nature.

William A Brindle Jr

William A. Brindle, Jr.
EODT Senior UXO Supervisor

17 Jan 95
(date)

I, Dean Gossett of 285 Bryant Rd., Pacolet, South Carolina, 29372 certify that I have received approximately 1457 pounds of ordnance related scrap from Environmental Science & Engineering, Inc. and EOD Technology, Inc. at no cost to the aforementioned companies or the Government of the United States.

Dean Gossett

Dean Gossett
285 Bryant Rd.
Pacolet, SC 29372

17 Jan 95
(date)

EXAMPLE:
ORD. I.D. # 61 — Ø7 — 15
(GRID #) (NUMERICAL UXO IN THAT GRID) (DAY)

①

DATE	RECORDER	ORD. I.D. #	TYPE, CONDITION, LOCATION AND DEPTH		FINAL DISPOSITION		REMARKS / INFO	SIGNATURES S. SITE SUP	ORD ACC. OFF.
Ø1 NOV 94	CRUPPER	51-Ø1-Ø1	60MM HE FUZED	6"	BLOWN IN PLACE	11/3/94	ELEC CAPS/PERFORATOR/DET CORD	Brindle	Crupper
Ø2 NOV	CRUPPER	51-Ø2-Ø2	" "	4"	BLOWN IN PLACE	11/3/94	" " " "	Brindle	Crupper
Ø2 NOV	CRUPPER	51-Ø3-Ø2	" "	4"	BLOWN IN PLACE	11/3/94	" " " "	Brindle	Crupper
Ø3 NOV	CRUPPER	51-Ø4-Ø3	" " NOT FIRED, ARMING WIRE STILL IN PLUS CONTAINER		BLOWN IN PLACE	11/3/94	" " " "	Brindle	Crupper
Ø3 NOV	CRUPPER	53-Ø1-Ø3	60MM HE FUZED	4"	BLOWN IN PLACE	11/3/94	" " " "	Brindle	Crupper
Ø7 NOV	CRUPPER	53-Ø2-Ø7	60MM HE FUZED, FIRED	4"	BLOWN IN PLACE	11/9/94	ELEC CAPS/12.5 GR SC PERFORATOR/DET CORD	Brindle	Crupper
Ø7 NOV	CRUPPER	53-Ø3-Ø7	60MM, HE, FUZED, FIRED	2"	BLOWN IN PLACE	11/9/94	ELEC CAPS/12.5 GR SC PERFORATOR/DET CORD	Brindle	Crupper
Ø7 NOV	CRUPPER	53-Ø4-Ø7	60MM, HE, FUZED, FIRED	8"	BLOWN IN PLACE	11/9/94	ELEC CAPS/12.5 GR SC PERFORATOR/DET CORD	Brindle	Crupper
Ø7 NOV	CRUPPER	53-Ø5-Ø7	60MM, HE, FUZED, FIRED	6"	BLOWN IN PLACE	11/9/94	ELEC CAPS/12.5 GR SC PERFORATOR/DET CORD	Brindle	Crupper
Ø8 NOV	CRUPPER	55-Ø1-Ø8	60MM, HE, FUZED, FIRED	8"	BLOWN IN PLACE	11/9/94	ELEC CAPS/12.5 GR SC PERFORATOR/DET CORD	Brindle	Crupper
Ø9 NOV	CRUPPER	18-Ø1-Ø9	57MM AA/AP FIRED	10"					
Ø9 NOV	CRUPPER	57-Ø1-Ø9	57MM AA/AP FIRED	12"					
Ø9 NOV	CRUPPER	57-Ø2-Ø9	57MM AA/AP FIRED	10"					
Ø9 NOV	CRUPPER	57-Ø3-Ø9	37MM AA/AP FIRED	4"					
Ø9 NOV	CRUPPER	57-Ø4-Ø9	37MM AA/AP FIRED	3"	DETONATED IN GRID 67 ~~IN MAGAZINE FOR~~	12/2	ELEC CAPS, 12.5 GR SC DET CORD	Brindle	Crupper
14 NOV	CRUPPER	PARK RANGERS	60MM HE, FUZED, TURNED IN						
16 NOV	CRUPPER	36-Ø1-16	37MM AA/AP FIRED	7"					
16 NOV	CRUPPER	47-Ø1-16	57MM AA/AP FIRED	20"					
16 NOV	CRUPPER	47-Ø2-16	M2 TRAINING GRENADE	2"					
21 NOV	CRUPPER	56-Ø1-21	57MM AA/AP FIRED	6"					
21 NOV	CRUPPER	56-Ø2-21	57MM AA/AP FIRED	4"					
21 NOV	CRUPPER	56-Ø3-21	37MM AA/AP FIRED	3"					
21 NOV	CRUPPER	17-Ø1-21	37MM AA/AP FIRED	6"					
22 NOV	CRUPPER	14-Ø1-22	57MM AA/AP FIRED	18"					
23 NOV	CRUPPER	12-Ø1-23	37MM AA/AP FIRED	8"					
30 NOV	CRUPPER	66-Ø1-30	60MM HE, FUZED FIRED	4"	BLOWN IN PLACE	12/2/94	ELEC CAPS, 12.5 GR SC, DET CORD	Brindle	Crupper
30 NOV	CRUPPER	66-Ø2-30	60MM HE, FUZED FIRED	3"	BLOWN IN PLACE	12/2	" " "	Brindle	Crupper
30 NOV	CRUPPER	66-Ø3-30	60MM HE, FUZED, FIRED	1"	BLOWN IN PLACE	12/2	" " "	Brindle	Crupper
30 NOV	CRUPPER	67-Ø1-30	60MM, HE, FUZED, FIRED	3"	BLOWN IN PLACE	12/2	" " "	Brindle	Crupper
30 NOV	CRUPPER	69-Ø1-30	60MM HE FUZED, FIRED	4"	BLOWN IN PLACE	12/2	" " "	Brindle	Crupper
02 DEC	CRUPPER	69-Ø2-Ø2	60MM, HE " FUZE MISSING, FIRED	3"	BLOWN IN PLACE	12/2	" " "	Brindle	Crupper
02 DEC	CRUPPER	69-Ø3-Ø2	60MM, HE FUZED, FIRED	2"	BLOWN IN PLACE	12/2	" " "	Brindle	Crupper

DATE	RECORDER	ORD I.D.#	TYPE, CONDITION, LOCATION, & DEPTH		FINAL DISPOSITION		REMARKS/INFO	SIGNATURES S. SITE SUP/ORD. ACC. OFF.	
02 DEC	CRUPPER	69-04-02	60MM FUZED, FIRED H.E.	3"	BLOWN	IN PLACE 12/2	ELEC CAPS 12.5GR SC DET CORD	WA Brindle	JW Crupper
02 DEC	CRUPPER	69-05-02	60MM FUZE MISSING" H.E.	1'	BLOWN	IN PLACE 12/2	ELEC CAPS 12.5GR SC DET CORD	WA Brindle	JW Crupper
02 DEC	CRUPPER	69-06-02	60MM FUZED FIRED H.E.	1'	BLOWN	IN PLACE 12/2	ELEC CAPS, 12.5 GR SC DET CORD	WA Brindle	JW Crupper
02 DEC	CRUPPER	69-07-02	60MM FUZED, FIRED, H.E	4"	BLOWN	IN PLACE 12/2	ELEC CAPS 12.5 GR SC. DET CORD	WA Brindle	JW Crupper
05 DEC	CRUPPER	72-01-05	60MM, FUZED, FIRED, HE	3"	BLOWN	IN PLACE 12/8	ELEC. CAPS 12.5 gr sc, DET CORD	WA Brindle	JW Crupper
05 DEC	CRUPPER	72-02-05	60 MM, FUZED, FIRED, HE	4"	BLOWN	IN PLACE 12/8	" " " " "	WA Brindle	JW Crupper
05 DEC	CRUPPER	72-03-05	60 MM, FUZED, FIRED, HE	2"	BLOWN	IN PLACE 12/8	" " " " "	WA Brindle	JW Crupper
05 DEC	CRUPPER	72-04-05	60 MM, FUZED, FIRED, HE	3'	BLOWN	IN PLACE 12/8	" " " " "	WA Brindle	JW Crupper
05 DEC	CRUPPER	72-05-05	60 MM, FUZED, FIRED, HE	1'	BLOWN	IN PLACE 12/8	" " " " "	WA Brindle	JW Crupper
05 DEC	CRUPPER	72-06-05	60 MM, FUZED, FIRED, HE	5"	BLOWN	IN PLACE 12/8	" " " " "	WA Brindle	JW Crupper
05 DEC	CRUPPER	72-07-05	60 MM, FUZED, FIRED HE	4'	BLOWN	IN PLACE 12/8	" " " " "	WA Brindle	JW Crupper
05 DEC	CRUPPER	72-08-05	60 MM, FUZED, FIRED, HE	1"	Blown	in Place 12/8	" " " " "	WA Brindle	JW Crupper
06 DEC	CRUPPER	73-01-06	60MM FUZED, FIRED, H.E.	2"	Blown	in Place 12/8	" " " " "	WA Brindle	JW Crupper
06 DEC	CRUPPER	73-02-06	81MM, FUZED, FIRED, HE	4"	Blown	in Place 12/8	" " " " "	WA Brindle	JW Crupper
DEC	CRUPPER	71-01-13	60MM, FUZED, FIRED, H.E.	4"	B.I.P.	1405HRS 12/15	ELECTRIC DET	WA Brindle	JW Crupper
13 DEC	CRUPPER	71-02-13	60MM, FUZED, FIRED, H.E.	7"	B.I.P.	1405HRS 12/15	ELECTRIC DET	WA Brindle	JW Crupper
13 DEC	CRUPPER	71-03-13	60MM, FUZED, FIRED, H.E.	10"	B.I.P.	1405HRS 12/15	ELECTRIC DET	WA Brindle	JW Crupper
13 DEC	CRUPPER	71-04-13	60MM, FUZED, FIRED, H.E.	11"	B.I.P.	1405HRS 12/15	ELECTRIC DET	WA Brindle	JW Crupper
13 DEC	CRUPPER	71-05-13	60MM, FUZED, FIRED, H.E.	2"	B.I.P.	1405 HRS 12/15	ELECTRIC DET	WA Brindle	JW Crupper
15 DEC	CRUPPER	43-01-15	60MM, FUZE MISSING, FIRED, H.E.	8"	B.I.P.	1441HRS 12/15	ELECTRIC DET	WA Brindle	JW Crupper
15 DEC	CRUPPER	43-02-15	60MM, FUZED, FIRED, H.E.	12"	B.I.P.	1441HRS 12/15	ELECTRIC DET	WA Brindle	JW Crupper
20 DEC	CRUPPER	33-01-20	57MM AA/AP, FIRED	6"		LOG CHECKED	22 DEC 94	M.E. SHORT EODT	
20 DEC	CRUPPER	34-01-20	57MM AA/AP, FIRED	3"					
20 DEC	CRUPPER	34-02-20	57MM AA/AP, FIRED	21"					
20 DEC	CRUPPER	34-03-20	57MM AA/AP, FIRED	23¼"					
20 DEC	CRUPPER	34-04-20	57MM AA/AP, FIRED	20"					
20 DEC	CRUPPER	35-01-20	57MM AA/AP, FIRED	14"					
20 DEC	CRUPPER	35-02-20	57MM, AA/AP, FIRED	9"					
20 DEC	CRUPPER	35-03-20	57MM AA/AP, FIRED	4"					
20 DEC	CRUPPER	35-04-20	37MM, AA/AP, FIRED	3"					
20 DEC	CRUPPER	24-01-20	37MM, AA/AP, FIRED	12"					
21 DEC	CRUPPER	21-01-21	57MM AA/AP FIRED	1"					
21 DEC	CRUPPER	22-01-21	57MM AA/AP FIRED	14"					

DATE	RECORDER	ORD I.D.#	TYPE, CONDITION, LOCATION, DEPTH	FINAL DISPOSITION	REMARKS/INFO	SIGNATURES SSITE SUP	ORD ACCT. OFF
JAN 95	CRUPPER	81-01-05	60MM, FUZED, FIRED, H.E. 2"	B.I.P. 1111 HRS 1/6/95	ELECTRIC DET	W Brindle	KW Crupper
5 JAN 95	CRUPPER	81-02-05	60 MM, FUZED, FIRED, HE. 5"	B.I.P. 1111 HRS 1/6/95	ELECTRIC DET	W Brindle	KW Crupper
5 JAN 95	CRUPPER	81-03-05	60MM, FUZED, FIRED, H.E. 12"	B.I.P. 1111 HRS 1/6/95	ELECTRIC DET	W Brindle	KW Crupper
5 JAN 95	CRUPPER	81-04-05	60 MM, FUZED, FIRED, H.E. 4"	B.I.P. 1111 HRS 1/6/95	ELECTRIC DET	W Brindle	KW Crupper
5 JAN 95	CRUPPER	81-05-05	60 MM, FUZED, FIRED, H.E. 2"	B.I.P. 1111 HRS 1/6/95	ELECTRIC DET	W Brindle	KW Crupper
5 JAN 95	CRUPPER	81-06-05	81 MM, FUZED, FIRED, H.E. 14"	B.I.P. 1111 HRS 1/6/95	ELECTRIC DET	W Brindle	KW Crupper
5 JAN 95	CRUPPER	81-07-05	60 MM, FUZED, FIRED, H.E. 5"	B.I.P. 1111 HRS 1/6/95	ELECTRIC DET	W Brindle	KW Crupper
5 JAN 95	CRUPPER	81-08-05	60 MM, FUZED, FIRED, H.E. 2"	B.I.P. 1111 HRS 1/6/95	ELECTRIC DET	W Brindle	KW Crupper
5 JAN 95	CRUPPER	81-09-05	60MM, FUZED, FIRED, H.E. 4"	B.I.P. 1111 HRS 1/6/95	ELECTRIC DET	W Brindle	KW Crupper
5 JAN 95	CRUPPER	81-10-05	60MM, FUZED, FIRED, H.E. 1"	B.I.P. 1111 HRS 1/6/95	ELECTRIC DET	W Brindle	KW Crupper
5 JAN 95	CRUPPER	81-11-05	60MM, FUZED, FIRED, H.E. 2"	B.I.P. 1111 HRS 1/6/95	ELECTRIC DET	W Brindle	KW Crupper
5 JAN 95	CRUPPER	82-01-05	60 MM, FUZED, FIRED, H.E. 8"	B.I.P. 0941 HRS 1/6/95	ELECTRIC DET	W Brindle	KW Crupper
5 JAN 96	CRUPPER	82-02-05	60MM, FUZED, FIRED, H.E. 6"	B.I.P. 0941 HRS 1/6/95	ELECTRIC DET	W Brindle	KW Crupper
6 JAN 95	CRUPPER	82-03-06	60 MM, FUZED, FIRED, H.E. "	B.I.P. 0941 HRS 1/6/95	ELECTRIC DET	W Brindle	KW Crupper
JAN 95	CRUPPER	82-04-06	60 MM, FUZED, FIRED, H.E. 2"	B.I.P. 0941 HRS 1/6/95	ELECTRIC DET	W Brindle	KW Crupper
JAN 95	CRUPPER	82-05-09	60 MM, FUZED, FIRED, H.E. 1"	B.I.P. 1043 HRS 1/12/95	ELECTRIC DET	W Brindle	KW Crupper
9 JAN 95	CRUPPER	82-06-09	60 MM, FUZED, FIRED, H.E. 1"	B.I.P. 1043 HRS 1/12/95	ELECTRIC DET	W Brindle	KW Crupper
9 JAN 95	CRUPPER	82-07-09	60 MM, FUZED, FIRED, H.E. 1'	B.I.P. 1113 HRS 1/12/95	ELECTRIC DET	W Brindle	KW Crupper
9 JAN 95	CRUPPER	82-08-09	60 MM, FUZED, FIRED HE. 1"	B.I.P. 1113 HRS 1/12/95	ELECTRIC DET	W Brindle	KW Crupper
9 JAN 95	CRUPPER	82-09-09	60 MM, UNFUZED, FIRED, H.E. "	B.I.P. 1215 HRS 1/12/95	ELECTRIC DET	W Brindle	KW Crupper
9 JAN 95	CRUPPER	82-10-09	60 MM, UNFUZED, FIRED, H.E. "	B.I.P. 1215 HRS 1/12/95	ELECTRIC DET	W Brindle	KW Crupper
9 JAN 95	CRUPPER	82-11-09	81 MM, FUZED, FIRED, H.E. "	B.I.P. 1253 HRS 1/12/95	ELECTRIC DET	W Brindle	KW Crupper
9 JAN 95	CRUPPER	82-12-09	60MM, FUZED, FIRED, H.E. "	B.I.P. 1215 HRS 1/12/95	ELECTRIC DET	W Brindle	KW Crupper
10 JAN 95	CRUPPER	82-13-10	60 MM, UNFUZED, FIRED, H.E. "	B.I.P. 1253 HRS 1/12/95	ELECTRIC DET	W Brindle	KW Crupper
10 JAN 95	CRUPPER	82-14-10	60 MM, FUZED, FIRED, H.E. 1"	B.I.P. 1253 HRS 1/12/95	ELECTRIC DET	W Brindle	KW Crupper
17 JAN 95	CRUPPER	84-01-17	MK2 FRAG GRENADE, FUZED, DUD, "	B.I.P. 1607 HRS 1/20/95	ELEC DET: NO EXPLOSIVE CONTRIBUTION. INERT	W Brindle	KW Crupper
18 JAN 95	CRUPPER	82-15-18	60MM, FUZED, FIRED, H.E. SURFACE	B.I.P. 1514 HRS 1/20/95	ELECTRIC DET	W Brindle	KW Crupper
18 JAN 95	CRUPPER	82-16-18	60 MM, FUZED, FIRED, H.E. SURFACE	B.I.P. 1410 HRS 1/20/95	ELECTRIC DET	W Brindle	KW Crupper
18 JAN 95	CRUPPER	82-17-18	60 MM, FUZED, FIRED, H.E. SURFACE	B.I.P. 1410 HRS 1/20/95	ELECTRIC DET	W Brindle	KW Crupper
JAN 95	CRUPPER	82-18-18	60 MM, FUZED, FIRED, H.E. SURFACE	B.I.P. 1410 HRS 1/20/95	ELECTRIC DET	W Brindle	KW Crupper
18 JAN 95	CRUPPER	82-19-18	60MM, FUZE MISSING, FIRED, H.E. SURFACE	B.I.P. 1410 HRS 1/20/95	ELECTRIC DET	W Brindle	KW Crupper
18 JAN 95	CRUPPER	82-20-18	60MM, FUZED, FIRED, H.E. SURFACE	B.I.P. 1410 HRS 1/20/95	ELECTRIC DET	W Brindle	KW Crupper
17 JAN 95	CRUPPER	87-01-19	HC SMOKE CANNISTER M84 SURFACE	B.I.P. 1605 HRS 1/24/95	ELECTRIC DET	W Brindle	KW Crupper

(3) (4)

DATE	RECORDER	ORD I.D. #	TYPE, CONDITION, LOCATION, DEPTH	FINAL DISPOSITION		REMARKS/INFO	SIGNATURES S. SITE SUP	ORD ACCT. OFF.
17 Jan 95	CRUPPER	841-Ø2-17	HC SMOKE CANNISTER M84 SURF	B.I.P.	1/25/95		W.H. Brindle	F.W. Crupper
18 Jan 95	CRUPPER	841-Ø3-18	HC SMOKE CANNISTER M84 SURF	B.I.P.	1/25/95		W.H. Brindle	F.W. Crupper
19 Jan 95	CRUPPER	841-Ø4-19	HC SMOKE CANNISTER M84 SURF	B.I.P.	1/25/95		W.H. Brindle	F.W. Crupper
19 Jan 95	CRUPPER	841-Ø5-19	HC SMOKE CANNISTER M84 SURF	B.I.P.	1/25/95		W.H. Brindle	F.W. Crupper
19 Jan 95	CRUPPER	841-Ø6-19	HC SMOKE CANNISTER M84 SURF	B.I.P.	1/25/95		W.H. Brindle	F.W. Crupper
19 Jan 95	CRUPPER	841-Ø7-19	HC SMOKE CANNISTER M84 SURF	B.I.P.	1/25/95		W.H. Brindle	F.W. Crupper
20 Jan 95	CRUPPER	841-Ø8-20	HC SMOKE CANNISTER M84 3"	B.I.P.	1/25/95		W.H. Brindle	F.W. Crupper
20 Jan 95	CRUPPER	841-Ø9-20	HC SMOKE CANNISTER M84 4"	B.I.P.	1/25/95		W.H. Brindle	F.W. Crupper
~~20 Jan 95~~	~~CRUPPER~~	~~841-10-20~~	~~HC SMOKE CANNISTER SURF~~	ERRONEOUS ENTRY			W.H. Brindle	F.W. Crupper
23 Jan 95	CRUPPER	841-11-23	105MM BEJECTION, FUZED, FIRED 10" (IN-TACT)	B.I.P. 1025 HRS. 1/25/95			W.H. Brindle	F.W. Crupper
~~23 Jan 95~~	~~CRUPPER~~	~~841-12-23~~	~~SURF~~					
~~23 Jan 95~~	~~CRUPPER~~	~~841-13-23~~	~~SURF~~					

This log is closed 01/26/95 W.H. Brindle

This log is closed 01/26/95 W.H. Brindle

QUANTITECH
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FORMER CAMP CROFT
RISK ANALYSIS FINAL REPORT

**For U.S. Army Engineer Division
Huntsville, Alabama**

TECHNICAL REPORT 95R029

Purchase Order: DACA87-95-P-0735

Prepared by:
QuantiTech, Inc.
6703 Odyssey Drive
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Huntsville, AL 35805

17 August 1995

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FORMER CAMP CROFT

RISK ANALYSIS FINAL REPORT

EXECUTIVE SUMMARY

QuantiTech, Inc., was contracted by the U.S. Army Engineer Division, Huntsville, (USAEDH) to apply the Ordnance and Explosives Cost-Effectiveness Risk Tool (OE*Cert*) in evaluation of the public safety risk from unexploded ordnance (UXO) at the Former Camp Croft Army Training Facility in Spartanburg, South Carolina. OE*Cert* measures risk in terms of how often people are exposed to UXO when participating in commonly performed activities at a site, e.g., hiking, camping, horseback riding, etc. OE*Cert* measures cost, for this analysis, in terms of the direct and indirect costs associated with the remediation via hand digging of anomaly contacts. Sectors 4 and 8 are not included in this risk analysis since no ordnance was found during the grid sampling. Eight sectors which have been intrusively investigated were included in this analysis. The remediation options considered for each were:

Table E-1. Camp Croft Remediation Options

Sector	No Action	Surface Clearance	Clearance to 1 ft	Clearance to 4 ft	Clearance to 10 ft
1	X	X	X		
2	X	X	X	X	
3	X	X			
4					
5	X	X			
6	X	X	X	X	X
7	X	X	X	X	X
8					

Risk measures utilized in the analysis effort were the reduction in expected number of exposures (risk to the many) and reduction in the probability of exposure (risk to the individual) that can be achieved through all remediation options. These values were determined for each sector which is defined as a continuous area with homogeneous geographical conditions and ordnance density. The risk measures were calculated for all activities occurring within Camp Croft and for the specific activities affected by the proposed remediation options, which included children playing, picnicking, camping, tree farming, and construction. The analysis showed zero exposures for sectors 1, 3, and 5 because all activities taking place on these sectors are surface activities and it was assumed that there was no surface ordnance contamination, since none was observed during the intrusive investigation of the sectors. Density estimates were taken from statistical analysis of the intrusive investigations performed at Camp Croft. Sectors 1, 2, and 7 have been further refined to include excusions in either area changes or UXO density. Sector 1B is a sub-area in sector 1 that contains the hazardous UXO items (and grids) found in the grid sampling summary sheets. Sector 2A and 2B are two possible area representations of ordnance activity. Sector 7A has a higher density estimate to represent a possible increased UXO presence as described in a containment assessment report by CEHND. The following tables show the percentage reduction in exposures and the expected number of exposures removed for each remediation option and each density estimate.

contaminant

Table E-2. Percent Reduction In Exposures From OE Remediation

	OE Remediation Levels: 1 Foot Density			4 Feet Density			10 Feet Density		
Sector	Low	Point	High	Low	Point	High	Low	Point	High
1	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
1B	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
2A	86%	89%	91%	86%	89%	91%	N/A	N/A	N/A
2B	86%	89%	91%	86%	89%	91%	N/A	N/A	N/A
3	0	0	100%	N/A	N/A	N/A	N/A	N/A	N/A
5	0	0	100%	N/A	N/A	N/A	N/A	N/A	N/A
6	0%	54%	53%	0	86%	86%	0	86%	86%
7	86%	88%	90%	93%	88%	90%	93%	88%	90%
7A	89%	89%	90%	91%	90%	90%	91%	90%	90%

Table E-3. Number of Annual Exposures Removed By OE Remediation

	OE Remediation Levels								
	1 Foot Density			4 Feet Density			10 Feet Density		
Sector	Low	Point	High	Low	Point	High	Low	Point	High
1	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
1B	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
2A	6	8	10	6	8	10	N/A	N/A	N/A
2B	6	8	10	6	8	10	N/A	N/A	N/A
3	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
5	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
6	0	3	8	0	6	13	0	6	13
7	12	15	18	13	15	18	13	15	18
7A	50	56	63	51	57	64	51	57	64

FORMER CAMP CROFT
RISK ANALYSIS FINAL REPORT

1.0 BACKGROUND

QuantiTech, Inc., was contracted by the U.S. Army Engineer Division, Huntsville, (USAEDH) to apply the Ordnance and Explosives Cost-Effectiveness Risk Tool (OE*Cert*) in evaluation of the public safety risk from unexploded ordnance (UXO) at the Former Camp Croft Army Training Facility in Spartanburg, South Carolina. OE*Cert* measures risk in terms of how often people are exposed to UXO when participating in commonly performed activities at a site, e.g., hiking, camping, horseback riding, etc.

The evaluation of risk may be approached in several ways. In all cases, the common underlying characteristic is uncertainty. In some cases, risk is addressed as a judgment of "how bad" certain events would be. In other cases, risk is assigned based on the likelihood of an event happening with no consideration being given to "how bad" the event would be. The most widely accepted approach to risk analysis incorporates the simultaneous consideration of the likelihood of an event and the severity of that event. This may be calculated mathematically or it may be based on personal judgment by treating the consequences of an event as a chance event. The simultaneous consideration of likelihood and consequence was chosen as the approach for the OE*Cert* methodology:

$$\text{Risk} = p(\text{Event})\cdot(\text{Consequences of Event}).$$

For the purposes of this analysis, an event is defined as the exposure, by members of the public, to UXO. Exposure is defined as a member of the public being present in immediate proximity to UXO. An individual does not have to be aware of the presence of the ordnance item for an exposure to occur. The consequence of an exposure is the hazard associated with UXO at the site. Therefore, the risk measure used in OE*Cert* is defined as follows:

$$\text{Risk} = (\text{\# Public Exposures to UXO})\cdot(\text{UXO Hazard Factor}).$$

Based on the sampling data provided, the UXO types at Camp Croft are assumed to be common across all the sectors (geographically continuous areas with homogeneous physical characteristics and UXO density), the UXO hazard factors are the same for each sector. This indicates that the appropriate measure to evaluate the differences in each sector's risk is purely the expected number of public exposures to UXO. In the remaining discussion, "exposure" will be used instead of risk.

The multitude of uncertainties associated with each individual UXO item and the complexities in modeling an individual's actions/reactions upon being exposed to a UXO item are addressed subjectively using an analytical hierarchy process to capture the sensitivity and consequence of the UXO. Appendix A gives a detailed discussion of OE*Cert* and the methodology used to determine expected exposures.

2.0 RISK ESTIMATION

2.1 RISK ESTIMATION INPUTS

The sectors used for the OE*Cert* analysis were established during the statistical analysis of Camp Croft sampling. The sectors were defined by the geographical location of the available sampling information. At the direction of USAEDH, the sample data was not extrapolated to cover the entire Camp Croft area as further sampling is scheduled to occur in the future. The sectors discussed here were intended to correlate to the sector definitions being used by Environmental Science and Engineering (ESE) in preparation of the Camp Croft Engineering Evaluation/Cost Analysis (EE/CA). For each sector, a rectangular box was drawn around the sampled grids to form the sector area. For Sector 2, the USAEDH requested that two different sector areas be examined for density estimation purposes. These areas are referred to as Sectors 2A and 2B. In Sector 1, an additional area was defined that included only the grids and surrounding area where UXO was found, titled Sector 1B. For Sector 7, two UXO density estimates were used. Sector 7 uses the density from intrusive grid sampling results. Sector 7 A is an excursion with a higher UXO density level proposed in a CEHND containment assessment report. Table 2.1-1 shows the grid numbers and sector area for each of the sectors. Maps of each sector, provided by ESE, are included in Appendix B. The data facts and assumptions used in the analysis are provided in Appendices C and D.

Table 2.1-1. Sector Definitions

Sector	Grids	Sector Area (sq ft)	Acres
1	1 - 48, 56, 57, 81	44,501,600	1,022
1B	42 - 45, 81	2,846,250	64
2A	51 - 55, 82	19,125,000	439
2B	51 - 55, 82	30,375,000	697
3	84, 85, 86	403,500	9
4	49, 50	127,050	3
5	58, 59A, 59B	152,500	4
6	61, 62, 87, 88	18,841,080	433
7	63 - 80	5,325,904	122
7A	63 - 80	5,325,904	122
8	83	2,829,600	65

The physical traits of each sector were identified by QuantiTech during a site visit and were confirmed by USAEDH. These physical sector characteristics, as well as the recreational and occupational activities that take place in each sector, are shown in Table 2.1-2.

Table 2.1-2. Sector Characteristics and Activities

Sector	Activities	Vegetation	Soil Type	Slope
1	Horseback riding, hiking	Brushy/trees	Clay	Moderate 10-30°
1B	Horseback riding, hiking	Brushy/trees	Clay	Moderate 10-30°
2A	Hiking, horseback riding, camping, hunting	Brushy/trees	Clay	Moderate 10-30°
2B	Hiking, horseback riding, camping, hunting	Brushy/trees	Clay	Moderate 10-30°
3	Children playing, jogging, short cuts	Clear	Clay	Flat
4	Hiking, horseback riding	Brushy/trees	Clay	Moderate 10-30°
5	Children playing, jogging, short cuts	Grassy/ brushy	Clay	Flat
6	Fishing, short cut, tree farming, construction	Grassy/ brushy	Clay	Flat
7	Camping, children playing, horseback riding, hiking, construction, picnicking, fishing	Brushy/trees	Clay	Moderate 10-30°
7A	Camping, children playing, horseback riding, hiking, construction, picnicking, fishing	Brushy/trees	Clay	Moderate 10-30°
8	Children playing, jogging, short cuts	Grassy/ brushy	Clay	Moderate 10-30°

The density outputs from the statistical analysis of Camp Croft sampling were used as the estimates of ordnance density for the Camp Croft sectors. In the sampling study, 80% confidence interval calculations were made based on the amount of sampling that had been completed to date. Sectors 4, 5, and 8 had a zero UXO density estimate and would have yielded a risk of zero from OE*Cert*. Sectors 4 and 8 were deleted by USAEDH from the analysis, and Sector 3 was suggested as an analogy for Sector 5. The density estimates based on the confidence interval calculations and the analogy (for Sector 5) are shown in Table 2.1-3 for each sector included in the risk analysis.

Table 2.1-3. Ordnance Density Estimates

Sector	Ordnance Density Estimates		
	Low UXO/Acre	Point Estimate UXO/Acre	High UXO/Acre
1	1.56	2.41	3.27
~~1A~~ 1B	5.85	8.98	12.11
2(A&B)	5.39	7.21	9.04
3	0	2.96	6.70
5	0	2.96	6.70
6	0	0.63	1.31
7	8.23	10.87	13.51
7A	38.39	43.56	48.73

Personnel from the Croft State Park provided an estimate of the number of annual visitors to the park. This number was divided into age categories based on the demographic age percentages of Spartanburg (city and county) obtained from 1990 Census Data. These annual visitor values were then used as the city and county population data in OE*Cert*. The city and county age breakdown percentages and the annual visitor values are shown below in Table 2.1-4.

Table 2.1-4. Spartanburg Census Data

Ages	City Age Breakdown Percentages	County Age Breakdown Percentages	City Data Used in OE*Cert*	County Data Used in OE*Cert*
0-5	9.6	8.0	14.277	11,898
6-11	8.3	8.2	12.344	12,195
12-17	7.5	8.4	11,154	12,493
18-24	12.9	10.8	19,185	16.062
25-34	15.0	16.1	22.308	23,944
35-44	13.5	15.3	20.078	22,754
45-54	9.6	11.5	14.277	17,103
55-64	8.1	9.0	12.047	13,385
>65	15.5	12.7	23.052	18.888
Total	100	100	148.722	148.722

2.2 RISK ESTIMATION RESULTS

Table 2.2-1 shows the worst case expected exposures to UXO by members of the public in each sector, for each applicable remediation level. The total expected exposures for each sector assumes that all the potential activities for each sector do occur (i.e., the number of expected exposures for Sector 3 is the total of children playing, short cut, and jogging exposures in that sector). This value can be thought of as the "risk to the many," since it considers the annual visitors to Camp Croft. The range of values is derived from a range of ordnance density in each sector. The range of ordnance density is derived from EE/CA sampling data described in the assumptions provided in Appendix D.

Table 2.2-1. Total Expected Exposures

	OE Remediation Level								
	No Action* Density			1 Foot Density			4 Feet Density		
Sector	Low	Point	High	Low	Point	High	Low	Point	High
1	0	0	0	0	0	0	N/A	N/A	N/A
1B	0	0	0	0	0	0	N/A	N/A	N/A
2A	7	9	11	1	1	1	1	1	1
2B	7	9	11	1	1	1	1	1	1
3	0	0	1	0	0	0	N/A	N/A	N/A
5	0	0	2	0	0	0	N/A	N/A	N/A
6	0	7	15	0	4	7	0	1	2
7	14	17	20	2	2	2	1	2	2
7A	56	63	71	6	7	8	5	6	7

*Same as surface clearance remediation

7A worst case.

The activities occurring within Camp Croft affected by the 1 ft, 4 ft, and 10 ft remediation options (i.e., exposure to subsurface UXO will be reduced) are picnicking, camping, construction, children playing, and crop farming. All other activities contribute nothing to the risk measure since individuals will be exposed only to surface UXO and no surface UXO was estimated from the sampled data. Although the surface clearance remediation was specified for analysis – it is not included in the results, since the values would be the same as the "no action" option. Table 2.2-2 shows the expected exposures to

UXO by members of the public hiking and horseback riding in Sector 1. Table 2.2-3 shows the expected exposures for Sector 1B. Table 2.2-4 shows the expected exposures to UXO by members of the public camping, hunting, hiking, and horseback riding in Sector 2A. Table 2.2-5 shows the expected exposures to UXO by members of the public camping, hunting, hiking, and horseback riding in Sector 2B. Table 2.2-6 shows the expected exposures to UXO by children playing and members of the public taking shortcuts and jogging in Sector 3. Table 2.2-7 shows the expected exposures to UXO by children playing and members of the public taking short cuts and jogging in Sector 5. Table 2.2-8 shows the expected exposures to UXO by members of the public freshwater fishing, tree farming, and performing construction in Sector 6. Table 2.2-9 shows the expected exposures to UXO by children playing and members of the public picnicking, camping freshwater fishing, hiking, and horseback riding in Sector 7 with Figure 2.2-10 showing the excursion density for Sector 7A. In each table, the range of values based on a low, point, or high ordnance density estimate is given.

Table 2.2-2. Expected Exposures for Sector 1

	OE Remediation Level					
	No Action Density			**1 Foot** Density		
Activity	Low	Point	High	Low	Point	High
Hiking	0	0	0	0	0	0
Horse Back	0	0	0	0	0	0

Table 2.2-3. Expected Exposures for Sector 1B

	OE Remediation Level					
	No Action Density			1 Foot Density		
Activity	Low	Point	High	Low	Point	High
Hiking	0	0	0	0	0	0
Horse Back	0	0	0	0	0	0

Table 2.2-4. Expected Exposures for Sector 2A

	OE Remediation Level								
	No Action Density			1 Foot Density			4 Feet Density		
Activity	Low	Point	High	Low	Point	High	Low	Point	High
Camping	7	9	11	1	1	1	1	1	1
Hunting	0	0	0	0	0	0	0	0	0
Hiking	0	0	0	0	0	0	0	0	0
Horse Back	0	0	0	0	0	0	0	0	0

Table 2.2-5. Expected Exposures for Sector 2B

	OE Remediation Level								
	No Action Density			1 Foot Density			4 Feet Density		
Activity	Low	Point	High	Low	Point	High	Low	Point	High
Camping	7	9	11	1	1	1	1	1	1
Hunting	0	0	0	0	0	0	0	0	0
Hiking	0	0	0	0	0	0	0	0	0
Horse Back	0	0	0	0	0	0	0	0	0

Table 2.2-6. Expected Exposures for Sector 3

	OE Remediation Level					
	No Action Density			**1 Foot** Density		
Activity	Low	Point	High	Low	Point	High
Children Playing	0	0	1	0	0	0
Short Cut	0	0	0	0	0	0
Jogging	0	0	0	0	0	0

Table 2.2-7. Expected Exposures for Sector 5

	OE Remediation Level					
	No Action Density			**1 Foot** Density		
Activity	Low	Point	High	Low	Point	High
Children Playing	0	0	2	0	0	0
Short Cut	0	0	0	0	0	0
Jogging	0	0	0	0	0	0

Table 2.2-8. Expected Exposures for Sector 6*

	OE Remediation Level								
	No Action Density			**1 Foot** Density			**4 Feet** Density		
Activity	Low	Point	High	Low	Point	High	Low	Point	High
Fresh-water Fishing	0	0	0	0	0	0	0	0	0
Tree Farming	0	7	15	0	4	7	0	1	2
Con-struction	0	1	1	0	0	1	0	0	0
Short Cut	0	0	0	0	0	0	0	0	0

*Tree farming is annualized over a 20-year growth cycle.

Table 2.2-9. Expected Exposures for Sector 7

	OE Remediation Level								
	No Action Density			1 Foot Density			4 Feet Density		
Activity	Low	Point	High	Low	Point	High	Low	Point	High
Children Playing	1	1	1	0	0	0	0	0	0
Picnicking	2	2	2	0	0	0	0	0	0
Camping	10	13	16	1	1	1	1	1	1
Fresh-water Fishing	0	0	0	0	0	0	0	0	0
Hiking	0	0	0	0	0	0	0	0	0
Horse Back	0	0	0	0	0	0	0	0	0
Con-struction	1	1	1	1	1	1	0	1	1

Table 2.2-10. Expected Exposures for Sector 7A

	OE Remediation Level								
	No Action Density			1 Foot Density			4 Feet Density		
Activity	Low	Point	High	Low	Point	High	Low	Point	High
Children Playing	3	3	3	0	0	0	0	0	0
Picnicking	6	7	8	1	1	1	1	1	1
Camping	44	50	56	3	4	5	3	4	5
Fresh-water Fishing	0	0	0	0	0	0	0	0	0
Hiking	0	0	0	0	0	0	0	0	0
Horse Back	0	0	.0	0	0	0	0	0	0
Con-struction	3	3	4	2	2	2	1	1	1

Table 2.2-11 shows the expected exposure measure for Camp Croft. The values displayed indicate the probability that an individual participating in the worst case activity, (i.e., greatest chance of exposure) in the indicated sector, will be exposed to at least one UXO item in a single year if no remediation occurs, if 1 foot remediation is implemented, if 4 feet remediation is implemented, or if 10 feet remediation is implemented. This probability measure is based on the assumption that an individual is participating in each potential risk activity in each sector. For instance, in Sector 7 there is a high probability of exposure given that the individual is involved in construction. If an individual is in Sector 7 hiking, the probability of exposure is lower (see Table 2.2-9). This measure can be

thought of as the "risk to only a single visitor," because it does not consider the annual visitors to Camp Croft, but only a single visitor. The range of values is derived from a range of ordnance density in each sector. The range of ordnance density is derived from EE/CA sampling data described in the assumptions provided in Appendix D.

Table 2.2-11. Probability of Exposure

	OE Remediation Level								
	No Action Density			1 Foot Density			4 Feet Density		
Sector	Low	Point	High	Low	Point	High	Low	Point	High
1	0	0	0	0	0	0	N/A	N/A	N/A
1B	0	0	0	0	0	0	0	0	0
2A	1/ 19,000	1/ 14,000	1/ 11,000	1/ 240,000	1/ 180,000	1/ 144,000	1/ 240,000	1/ 180,000	1/ 144,000
2B	1/ 19,000	1/ 14,000	1/ 11,000	1/ 240,000	1/ 180,000	1/ 144,000	1/ 240,000	1/ 180,000	1/ 144,000
3	0	1/ 800,000	1/ 300,000	0	1/ 10M	1/ 4M	N/A	N/A	N/A
5	0	1/ 800,000	1/ 300,000	0	1/ 10M	1/ 4M	N/A	N/A	N/A
6	0	1/2	1/2	0	1/3	1/2	0	1/8	1/4
7	1/3	1/2	1/2	1/5	1/4	1/3	1/3	1/10	1/8
7A	1/1	1/1	1/1	1/2	1/2	1/2	1/4	1/3	1/3

Based on absolute worst case.

1/13

Tables 2.2-12 and 2.2-13 shows the probability of exposure to UXO by members of the public hiking and horseback riding in Sectors 1 and 1B. Table 2.2-14 shows the probability of exposure to UXO by members of the public camping, hunting, hiking, and horseback riding in Sector 2A. Table 2.2-15 shows the probability of exposure to UXO by members of the public camping, hunting, hiking, and horseback riding in Sector 2B. Table 2.2-16 shows the probability of exposure to UXO by children playing and members of the public taking short cuts and jogging in Sector 3. Table 2.2-17 shows the probability of exposure to UXO by children playing and members of the public taking short cuts and jogging in Sector 5. Table 2.2-18 shows the probability of exposure to UXO by members of the public freshwater fishing, crop farming, and performing construction in Sector 6. Tables 2.2-19 and 2.2-20 shows the probability of exposure to UXO by children playing and members of the public picnicking, camping, freshwater fishing, hiking, horseback riding, and performing construction in Sectors 7 and 7A. In each table, the range of values based on a low, point, or high ordnance density estimate is given.

Table 2.2-12. Probability of Exposure for Sector 1

	OE Remediation Level					
	No Action Density			1 Foot Density		
Activity	Low	Point	High	Low	Point	High
Hiking	0	0	0	0	0	0
Horse Back	0	0	0	0	0	0

Table 2.2-13. Probability of Exposure for Sector 1B

	OE Remediation Level					
	No Action Density			1 Foot Density		
Activity	Low	Point	High	Low	Point	High
Hiking	0	0	0	0	0	0
Horse Back	0	0	0	0	0	0

Table 2.2-14. Probability of Exposure for Sector 2A

	OE Remediation Level								
	No Action Density			1 Foot Density			4 Feet Density		
Activity	Low	Point	High	Low	Point	High	Low	Point	High
Camping	1/ 19,000	1/ 14,000	1/ 11,000	1/ 240,000	1/ 180,000	1/ 144,000	1/ 240,000	1/ 180,000	1/ 144,000
Hunting	0	0	0	0	0	0	0	0	0
Hiking	0	0	0	0	0	0	0	0	0
Horse Back	0	0	0	0	0	0	0	0	0

Table 2.2-15. Probability of Exposure for Sector 2B

	OE Remediation Level								
	No Action Density			1 Foot Density			4 Feet Density		
Activity	Low	Point	High	Low	Point	High	Low	Point	High
Camping	1/ 19,000	1/ 14,000	1/ 11,000	1/ 240,000	1/ 180,000	1/ 144,000	1/ 240,000	1/ 180,000	1/ 144,000
Hunting	0	0	0	0	0	0	0	0	0
Hiking	0	0	0	0	0	0	0	0	0
Horse Back	0	0	0	0	0	0	0	0	0

Table 2.2-16. Probability of Exposure for Sector 3

	OE Remediation Level					
	No Action Density			1 Foot Density		
Activity	Low	Point	High	Low	Point	High
Children Playing	0	1/ 800,000	1/ 300,000	0	1/ 10M	1/ 4M
Short Cut	0	0	0	0	0	0
Jogging	0	0	0	0	0	0

Table 2.2-17. Probability of Exposure for Sector 5

	OE Remediation Level					
	No Action Density			1 Foot Density		
Activity	Low	Point	High	Low	Point	High
Children Playing	0	1/ 800,000	1/ 300,000	0	1/ 10M	1/ 4M
Short Cut	0	0	0	0	0	0
Jogging	0	0	0	0	0	0

Table 2.2-18. Probability of Exposure for Sector 6*

	OE Remediation Level								
	No Action Density			1 Foot Density			4 Feet Density		
Activity	Low	Point	High	Low	Point	High	Low	Point	High
Freshwater Fishing	0	0	0	0	0	0	0	0	0
Tree Farming	0	1/2	1/2	0	1/3	1/2	0	1/8	1/4
Construction	0	1/8	1/4	0	1/16	1/8	0	1/48	1/24
Short Cut	0	0	0	0	0	0	0	0	0

*Tree farming is calculated over a 7-day per year planting and harvesting activity base using the South Carolina crop farming averages.

Table 2.2-19. Probability of Exposure for Sector 7

	OEW Rememdiation Level								
	No Action Density			1 Foot Density			4 Feet Density		
Activity	Low	Point	High	Low	Point	High	Low	Point	High
Construction	1/3	1/2	1/2	1/5	1/4	1/3	1/13	1/10	1/8
Children Playing	1/ 276,000	1/ 209,000	1/ 168,000	1/ 4M	1/ 3M	1/ 2M	1/ 4M	1/ 3M	1/ 2M
Picnicking	1/ 36,000	1/ 27,000	1/ 22,000	1/ 474,000	1/ 360,000	1/ 3M	1/ 474,000	1/ 360,000	1/ 3M
Camping	1/ 12,000	1/ 9,000	1/ 7,000	1/ 158,000	1/ 120,000	1/ 96,000	1/ 158,000	1/ 120,000	1/ 96,000
Fresh-water Fishing	0	0	0	0	0	0	0	0	0
Hiking	0	0	0	0	0	0	0	0	0
Horse Back	0	0	0	0	0	0	0	0	0

Table 2.2-20. Probability of Exposure for Sector 7A

	OEW Rememdiation Level								
	No Action Density			1 Foot Density			4 Feet Density		
Activity	Low	Point	High	Low	Point	High	Low	Point	High
Construction	1/1	1/1	1/1	1/2	1/2	1/2	1/4	1/3	1/3
Children Playing	1/ 59,000	1/ 52,000	1/ 46,000	1/ 770,000	1/ 680,000	1/ 607,000	1/ 770,000	1/ 680,000	1/ 607,000
Picnicking	1/ 7,900	1/ 6,900	1/ 6,200	1/ 102,000	1/ 90,000	1/ 80,000	1/ 102,000	1/ 90,000	1/ 80,000
Camping	1/ 2,700	1/ 2,300	1/ 2,000	1/ 34,000	1/ 30,000	1/ 27,000	1/ 34,000	1/ 30,000	1/ 27,000
Freshwater Fishing	0	0	0	0	0	0	0	0	0
Hiking	0	0	0	0	0	0	0	0	0
Horse Back	0	0	0	0	0	0	0	0	0

2.3 INTERPRETATION OF RISK RESULTS

In comparing each sector shown in Table 2.2-1, the variation of risk results for the low, point, and high UXO density estimates were minimally significant. The variation between density levels does provide some feel for the potential variation of risk to the public due to the confidence in the UXO density estimate.

With the assumption of no surface UXO at these sectors at the former Camp Croft, only ground intrusive activities will effect the risk to the public. These ground intrusive activities include: children playing, tree farming, picnicking, camping, and construction for Camp Croft. Sector 1 had none of these activities so the computed OE*Cert* risk is zero.

The expected exposures are highest in Sector 6 and 7 because most of the significant ground intrusive activities (construction and tree farming) occur in these sectors. Although the number of expected exposures due to construction and tree farming are reduced by remediation, the probability that an individual will be exposed while participating in these activities in a contaminated area still remains high. These residual exposures, especially due the construction activities, are due to the sweep efficiency used in the analysis (see Appendix B). Sweep efficiency is defined as the amount of UXO expected to be detected and removed in one clearance sweep. The expected exposures related to picnicking and camping are not effected by remediation to a depth greater than 1 foot because both activities have associated intrusion depths less than a foot (the depth to which a participant in an activity disturbs the soil).

The probability of exposure for all activities is shown in Table 2.2-11. The probability of exposure to UXO is zero for Sector 1 because no ground intrusive activities occur in that sector. The probability of exposure is significant for Sectors 6 and 7 because these are the sectors where construction and tree farming are scheduled to occur. The probability of exposure is less for picnicking, camping, and children playing because of the relatively small amount of ground intrusion and high remediation sweep efficiency for these activity depths. Because of the sweep efficiency considerations mentioned earlier, the probability of exposure remains relatively stable for those participating in construction and tree farming even though the number of expected exposures decreases.

3.0 COST ESTIMATION

3.1 COST ESTIMATION INPUTS

The first step in cost estimation at Camp Croft was the determination of what remediation methodology would be used for each sector within the site. Since Camp Croft was used for training and several firing ranges are present, Camp Croft is classified as a dispersed site. One of the basic assumptions relative to dispersed sites is that any ordnance located is assumed to have been subjected to some force that may have armed the ordnance. Ordnance that is considered armed is remediated by hand digging each anomaly discovered in each sector.

The OE*Cert* cost module estimates the direct cost for hand digging based on the following input variables: sector area (acreage), clearance depth, ordnance density, total density (ordnance and false positives), brush removal area, site restoration area, and amount of quality control required. These input variables are used to calculate estimates of direct cost consisting of direct labor, brush removal, site restoration, surveying/quality control, surface clearance, and ordnance disposal. OE*Cert* assumes that the entire sector area is remediated to whatever clearance depth is specified. However, analysis of the ordnance data collected from Camp Croft to date indicates a maximum ordnance depth of 2.045 feet, and OE*Cert* sets the clearance depth equal to the maximum ordnance depth if the input clearance depth is higher than maximum depth. Since the 4 and 10 foot clearance depths exceed the maximum depth, the clearance depth was set at 2.045 feet for cost estimation purposes for these scenarios.

The OE*Cert* cost module estimates indirect costs based on the elapsed time allotted to remediate each sector. Elapsed time is calculated by dividing the direct labor hours required to remediate the site by the number of remediation personnel used to accomplish remediation. The direct labor hours used for allocation purposes are the greater of the surface clearance hours and the subsurface clearance hours. In this analysis, indirect costs were based on surface clearance time for the surface clearance option and several of the one foot clearance options and on subsurface clearance time for the remainder of the 1 foot clearance options, the four foot clearance option, and the ten foot clearance option. The methodology provides estimates of indirect cost consisting of site logistics, indirect materials, and indirect labor. The data facts collected for use in the estimation of cost with OE*Cert*, along with the source for each, are provided in Appendix C. The data assumptions used in the estimation of risk and cost with OE*Cert*, along with the rationale for each, are provided in Appendix D.

3.2 COST ESTIMATION RESULTS

Table 3.2-1 shows the estimated cost to conduct a surface clearance of each sector. Table 3.2-2 shows the estimated cost to remediate each sector to a one foot clearance depth. Table 3.2-3 shows the estimated cost to remediate each applicable sector to a clearance depth of four feet. Table 3.2-4 shows the estimated cost to remediate each applicable sector to a clearance depth of ten feet. All costs are presented rounded to the nearest thousand dollars (if applicable).

Table 3.2-1. Expected Remediation Cost: Surface Clearance

	Sector 1	Sector 1A	Sector 2A	Sector 2B	Sector 3	Sector 5	Sector 6	Sector 7	Sector 7A
Acreage	1021.44	65.34	439.04	696.96	8.96	3.2	432.64	122.24	122.24
Cost Category									
Total Direct Cost	2,854,000	183,200	1,227,000	1,947,000	18,700	7,400	999,000	343,000	343,000
Surface Clearance	1,400,000	90,000	602,000	955,000	6,100	2,900	385,000	168,000	168,000
Brush Removal	965,000	62,000	415,000	659,000	8,500	3,000	409,000	116,000	116,000
Site Restoration	215,000	14,000	92,000	146,000	1,800	700	91,000	26,000	26,000
Survey/ QC	274,000	17,200	118,000	187,000	2,300	800	114,000	33,000	33,000
Disposal	0	0	0	0	0	0	0	0	0
Subsurface Clearance	0	0	0	0	0	0	0	0	0
Total Indirect Cost	4,023,000	257,000	1,730,000	2,745,000	17,600	8,200	1,107,000	481,000	481,000
Site Logistics	121,000	8,000	52,000	82,000	500	300	33,000	14,000	14,000
Indirect Materials	69,000	4,000	30,000	47,000	300	100	19,000	8,000	8,000
Indirect Labor	3,833,000	245,000	1,648,000	2,616,000	16,800	7,800	1,055,000	459,000	459,000
Total Sector Cost	6,877,000	440,200	2,957,000	4,692,000	36,300	15,600	2,106,000	824,000	824,000
Cost/Acre	6,700	6,700	6,700	6,700	4,000	4,800	4,800	6,700	6,700

Table 3.2-2. Expected Remediation Cost: 1 Foot Clearance Depth

	Sector 1	Sector 1A	Sector 2A	Sector 2B	Sector 3	Sector 5	Sector 6	Sector 7	Sector 7A
Acreage	1021.44	65.34	439.04	696.96	8.96	3.2	432.64	122.24	122.24
Cost Category									
Total Direct Cost	4,298,000	707,200	1,858,000	2,950,000	48,700	10,300	1,908,000	696,000	864,000
Surface Clearance	1,400,000	90,000	602,000	955,000	6,100	2,900	385,000	168,000	168,000
Brush Removal	965,000	62,000	415,000	659,000	8,500	3,000	409,000	116,000	116,000
Site Restoration	215,000	14,000	92,000	146,000	1,800	700	91,000	26,000	26,000
Survey/ QC	274,000	17,200	118,000	187,000	2,300	800	114,000	33,000	33,000
Disposal	104,000	25,000	133,000	212,000	1,000	400	11,000	56,000	224,000
Subsurface Clearance	1,340,000	499,000	498,000	791,000	29,000	2,500	898,000	297,000	297,000
Total Indirect Cost	4,023,000	416,000	1,730,000	2,745,000	48,200	8,200	1,424,000	481,000	481,000
Site Logistics	121,000	98,000	52,000	82,000	11,500	300	336,000	14,000	14,000
Indirect Materials	69,000	6,000	30,000	47,000	700	100	19,000	8,000	8,000
Indirect Labor	3,833,000	312,000	1,648,000	2,616,000	36,000	7,800	1,069,000	459,000	459,000
Total Sector Cost	8,321,000	1,123,200	3,588,000	5,695,000	96,900	18,500	3, 332,000	1,177,000	1,345,000
Cost/Acre	8,100	17,200	8,200	8,200	10,800	5,800	7,700	9,600	11,000

4.3.2

Table 3.2-3. Expected Remediation Cost: 4 Foot Clearance Depth

	Sector 2A	Sector 2B	Sector 6	Sector 7	Sector 7A
Acreage	439.04	696.96	122.24	112.24	122.24
Cost Category					
Total Direct Cost	4.857.000	7.705.000	9.063.000	3.000.000	3.269.000
Surface Clearance	602.000	955.000	385.000	168.000	168.000
Brush Removal	415.000	659.000	409.000	116.000	116.000
Site Restoration	92.000	146.000	91.000	26.000	26.000
Survey/QC	118.000	187.000	114.000	33.000	33.000
Disposal	213.000	338.000	18.000	89.000	358.000
Subsurface Clearance	3.417.000	5.424.000	8.046.000	2.568.000	2.568.000
Total Indirect Cost	4.260.000	6.762.000	10.274.000	3.270.000	3.270.000
Site Logistics	1.350.000	2.143.000	3.256.000	1.036.000	1.036.000
Indirect Materials	51.000	81.000	124.000	39.000	39.000
Indirect Labor	2.859.000	4.538.000	6.894.000	2.195.000	2.195.000
Total Sector Cost	9.117.000	14.471.000	19.337.000	6.270.000	6.539.000
Cost/Acre	20.800	20.800	44.700	51.300	53.500

Table 3.2-4. Expected Remediation Cost: 10 Foot Clearance Depth

	Sector 6	Sector 7	Sector 7A
Acreage	433	122	122
Cost Category			
Total Direct Cost	9,063,000	3,000,000	3,269,000
Surface Clearance	385,000	168,000	168,000
Brush Removal	409,000	116,000	116,000
Site Restoration	91,000	26,000	26,000
Survey/QC	114,000	33,000	33,000
Disposal	18,000	89,000	358,000
Subsurface Clearance	8,046,000	2,568,000	2,568,000
Total Indirect Cost	10,274,000	3,270,000	3,270,000
Site Logistics	3,256,000	1,036,000	1,036,000
Indirect Materials	124,000	39,000	39,000
Indirect Labor	6,894,000	2,195,000	2,195,000
Total Sector Cost	19,337,000	6,270,000	6,539,000
Cost Per Acre	44,700	51,300	53,500

3.3 INTERPRETATION OF COST RESULTS

The primary cost driver for the surface clearance option is the sector area. This is true because the direct costs incurred are attributable to preparing the sector for surface clearance, searching the sector for ordnance, restoring the sector after remediation, and quality control checks. The calculated ordnance depths used in the analysis (see Appendix D) cause the one foot clearance depth option to be more expensive than the surface clearance option. This is true because the majority (58%) of the ordnance in each sector is assumed to be located shallower than one foot deep. Therefore, a relatively large number of anomalies are removed causing the total and per acre costs to increase.

Subsurface clearance cost is the primary cost driver for the 4 and 10 foot clearance depth options. The direct costs incurred attributable to the surface clearance activities are equal to those costs for the surface and one foot options. However, when clearing to deeper depths, more anomalies are contacted, thus, more holes are required.

The number and size of holes that must be dug to remediate a sector directly impacts the time required to remediate. As remediation time increases, direct and indirect remediation costs also increase. Because the maximum calculated ordnance depth is 2.045 feet (see Appendix D), the costs associated with the 4 and 10 foot options are the same (clearance depth = maximum ordnance depth).

Sector 2A is a subset of Sector 2B. Therefore, the remediation cost difference between these two sectors is attributable to the difference in area. Sector 7A was added to this analysis and shows the cost of remediating Sector 7 if the actual density is 20 ordnance items per grid. Since the maximum ordnance depth used in all the sectors at Camp Croft is slightly over two feet (2.045 feet), any remediation clearance below the maximum ordnance depth would not be cost-effective.

APPENDIX A

OE*Cert* EXPOSURE CALCULATION DESCRIPTION

APPENDIX A

OE*Cert* EXPOSURE CALCULATION DESCRIPTION

Public exposure to both surface and subsurface UXO items is characterized by a Poisson process. The Poisson distribution is the appropriate distribution because it is believed that sectors can be delineated. via appropriate sampling techniques, that exhibit homogeneously distributed UXO. This homogeneous distribution of UXO allows the passage of participants through the site to be characterized as a Poisson process.

The public exposures result from individuals performing specific activities (both recreational and occupational) within UXO-contaminated areas. The expected number of surface UXO exposures per participant in a sector is dependent on UXO density, the proportion of UXO on the surface of the ground, and the activity participant's exposure area (the area traversed by an individual while performing an activity). The expected number of subsurface UXO exposures per participant in an area is dependent on the UXO density, the proportion of UXO beneath the surface of the ground, the density distribution of the subsurface UXO, and the area associated with an activity performed in the area.

The calculation of the total expected number of exposures to UXO at a site follows a step-by-step process. First, for each sector, the expected number of exposures for a single individual participating in a specific activity is calculated. Second, the number of individuals that are expected to participate annually in that activity on the site is determined based on the demographics surrounding the site and activity participation data. The two values are combined as shown in the following relationship to give the total annual number of exposures expected to occur for participants in the activity that was identified.

$$E[\text{Activity Exposures}] = E[\text{exposures for single participant}] \cdot E[\text{particpants}].$$

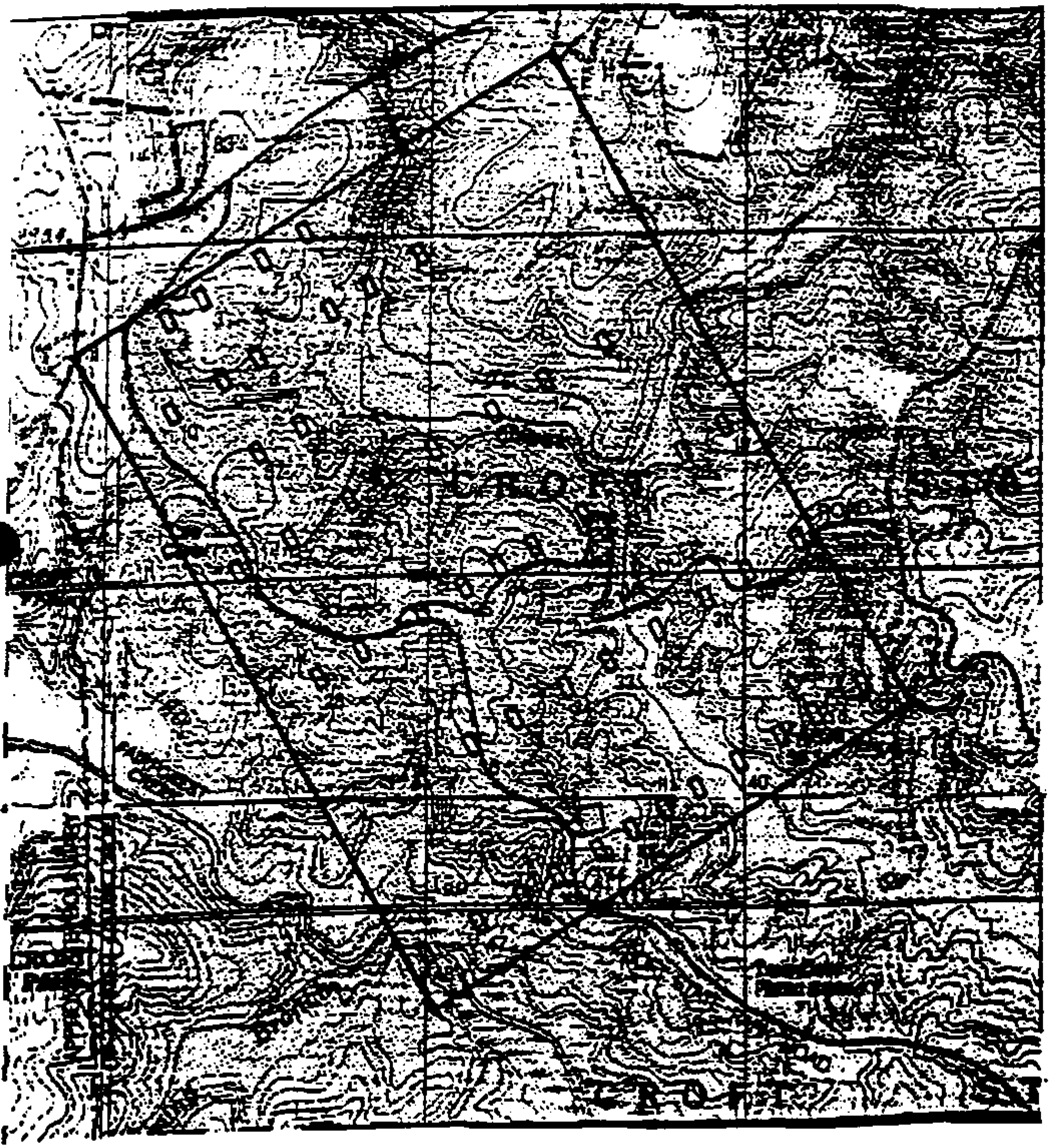
These calculations are then performed for each activity that has been determined to be participated in at the FUDS. The values for the expected number of exposures resulting from participation in each activity are summed to yield the overall risk value for the site.

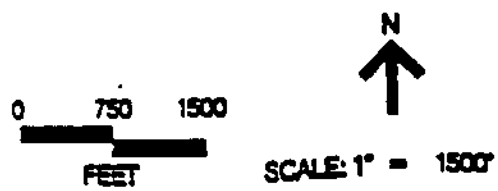
$$E[\text{Total Exposures}] = \sum_{\text{all activities}} E[\text{Activity Exposures}].$$

APPENDIX B

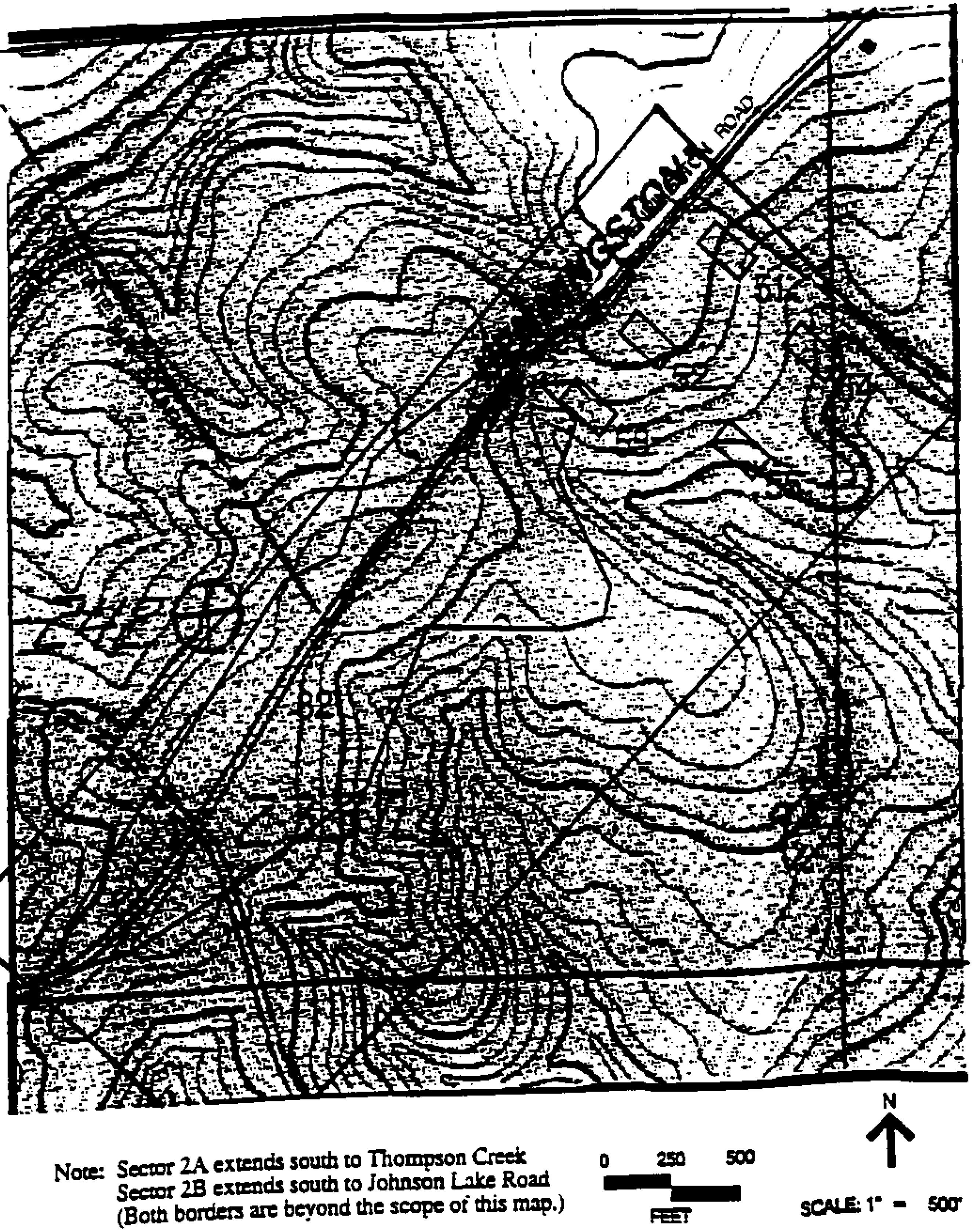
CAMP CROFT SECTOR MAPS

Sector 1
Grids 1-48, 56, 57, 81



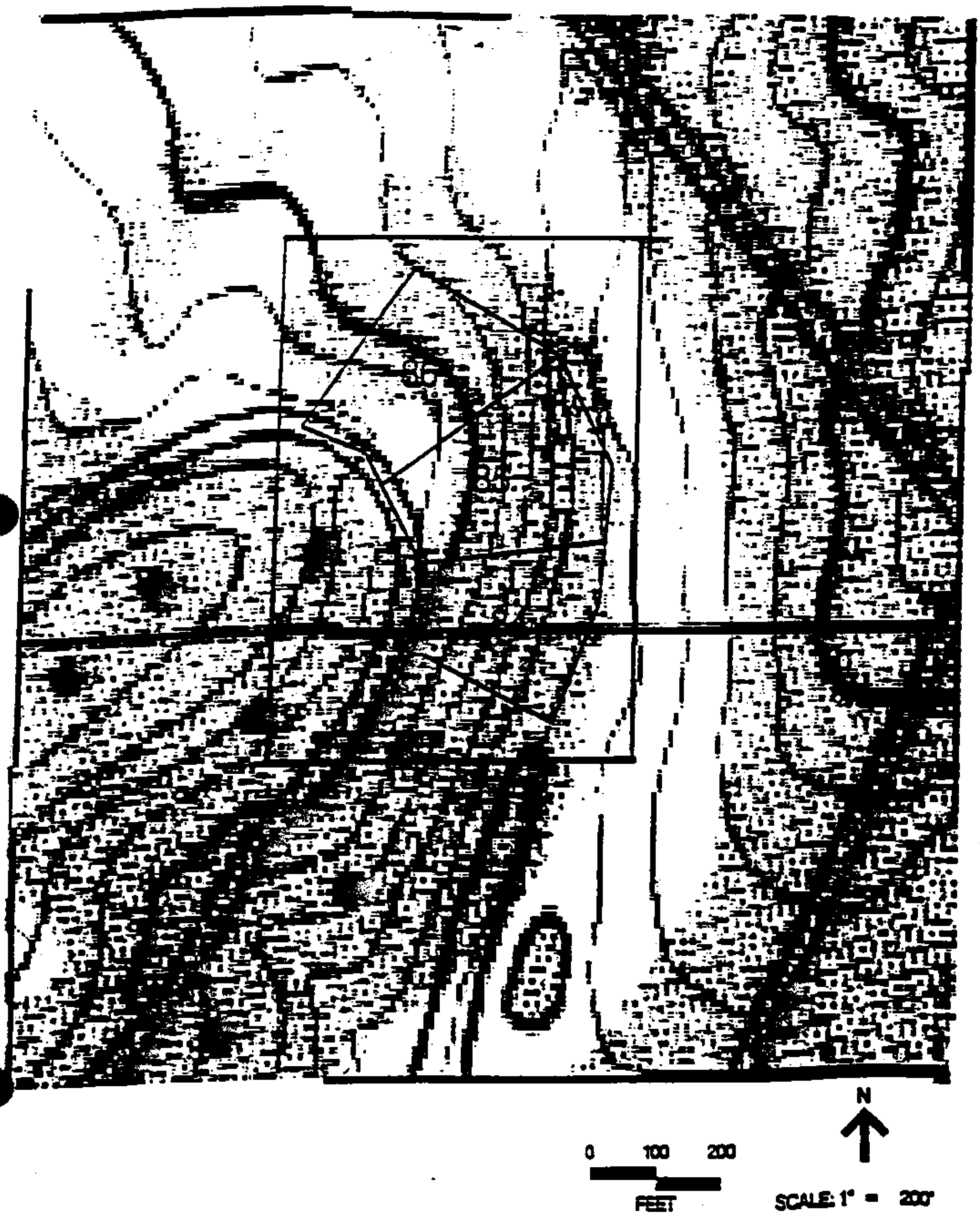


Sector 2
Grids 51-55, 82

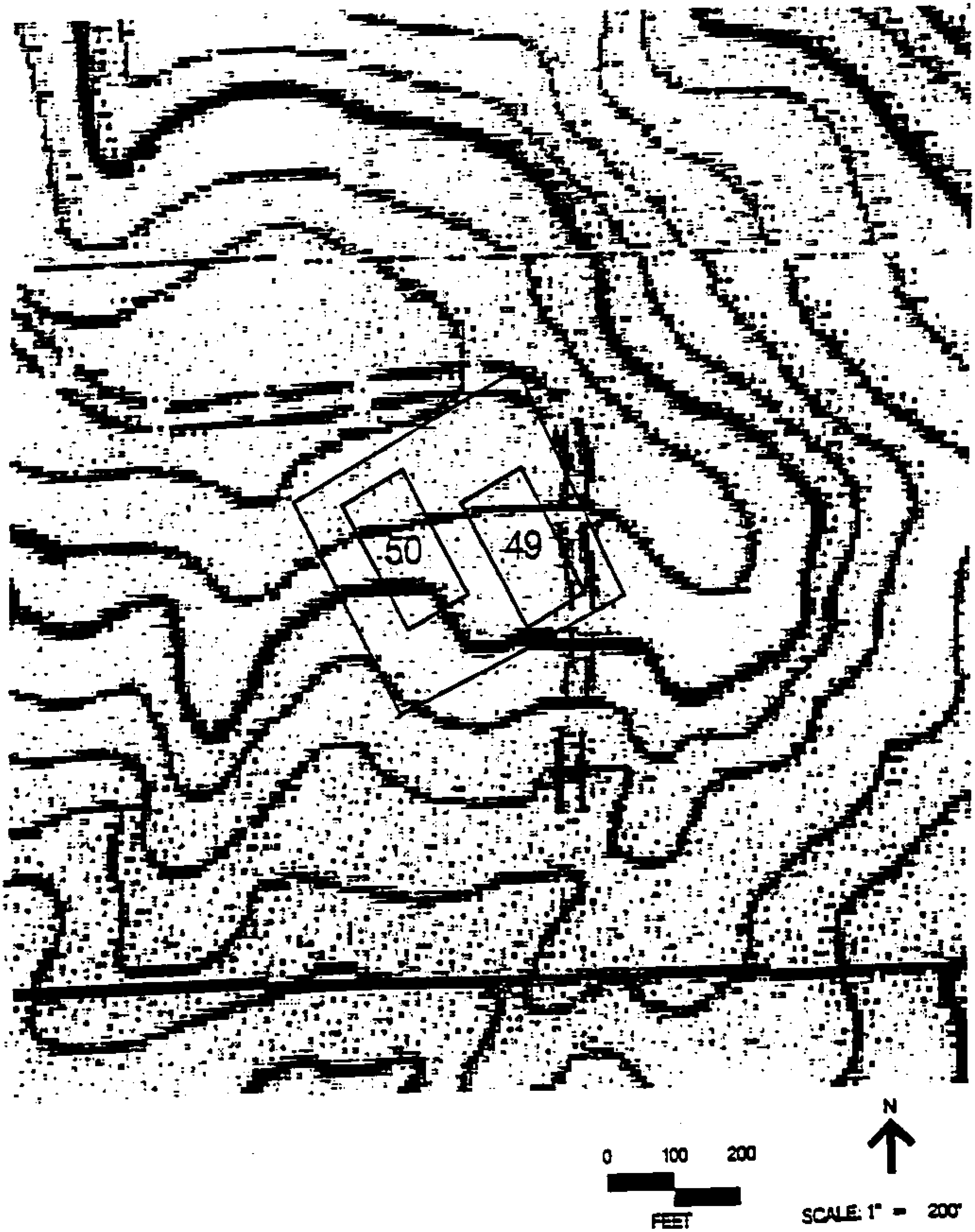


Note: Sector 2A extends south to Thompson Creek
Sector 2B extends south to Johnson Lake Road
(Both borders are beyond the scope of this map.)

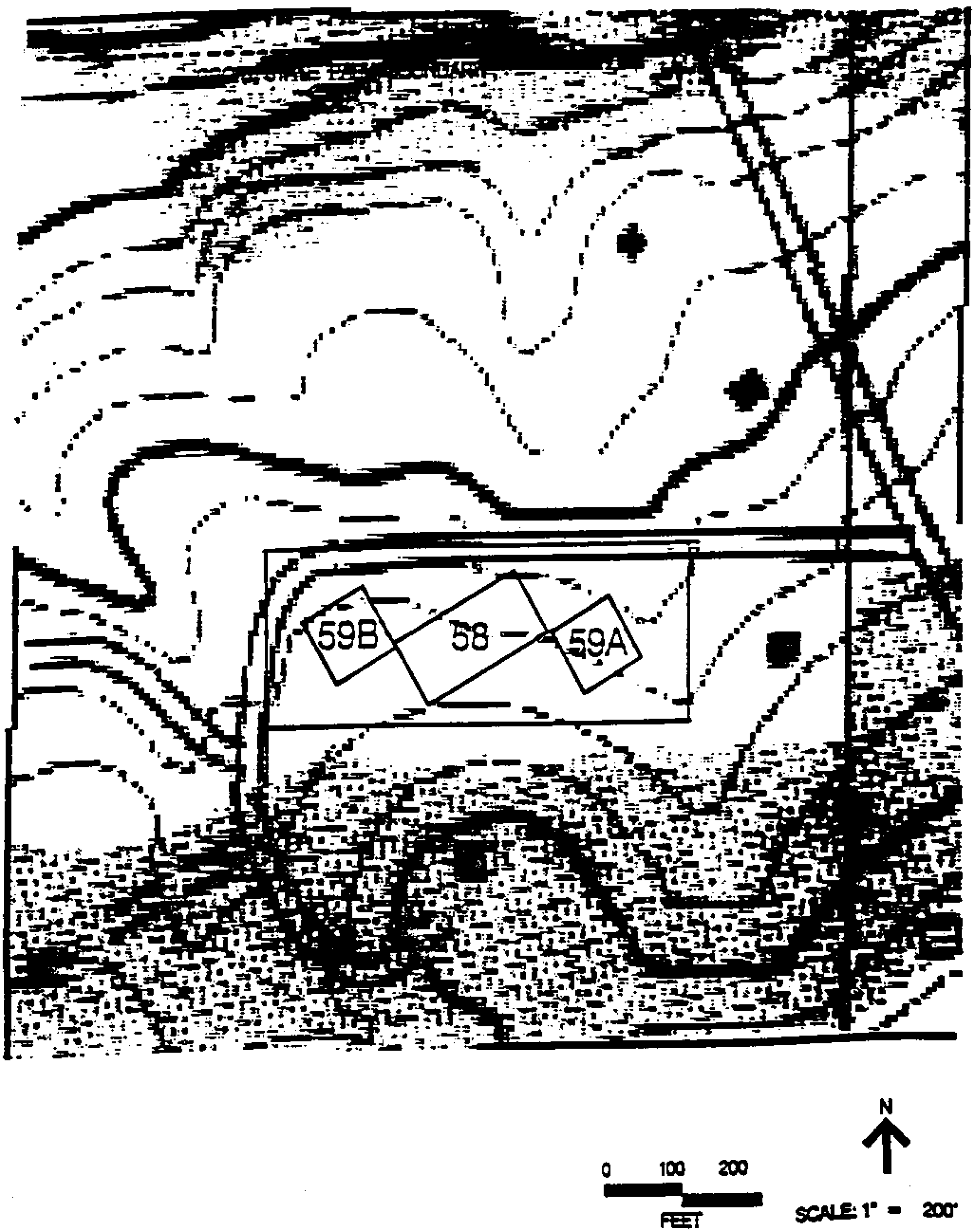
Sector 3
Grids 84, 85, 86



Sector 4
Grids 49, 50



Sector 5
Grids 58, 59A, 59B



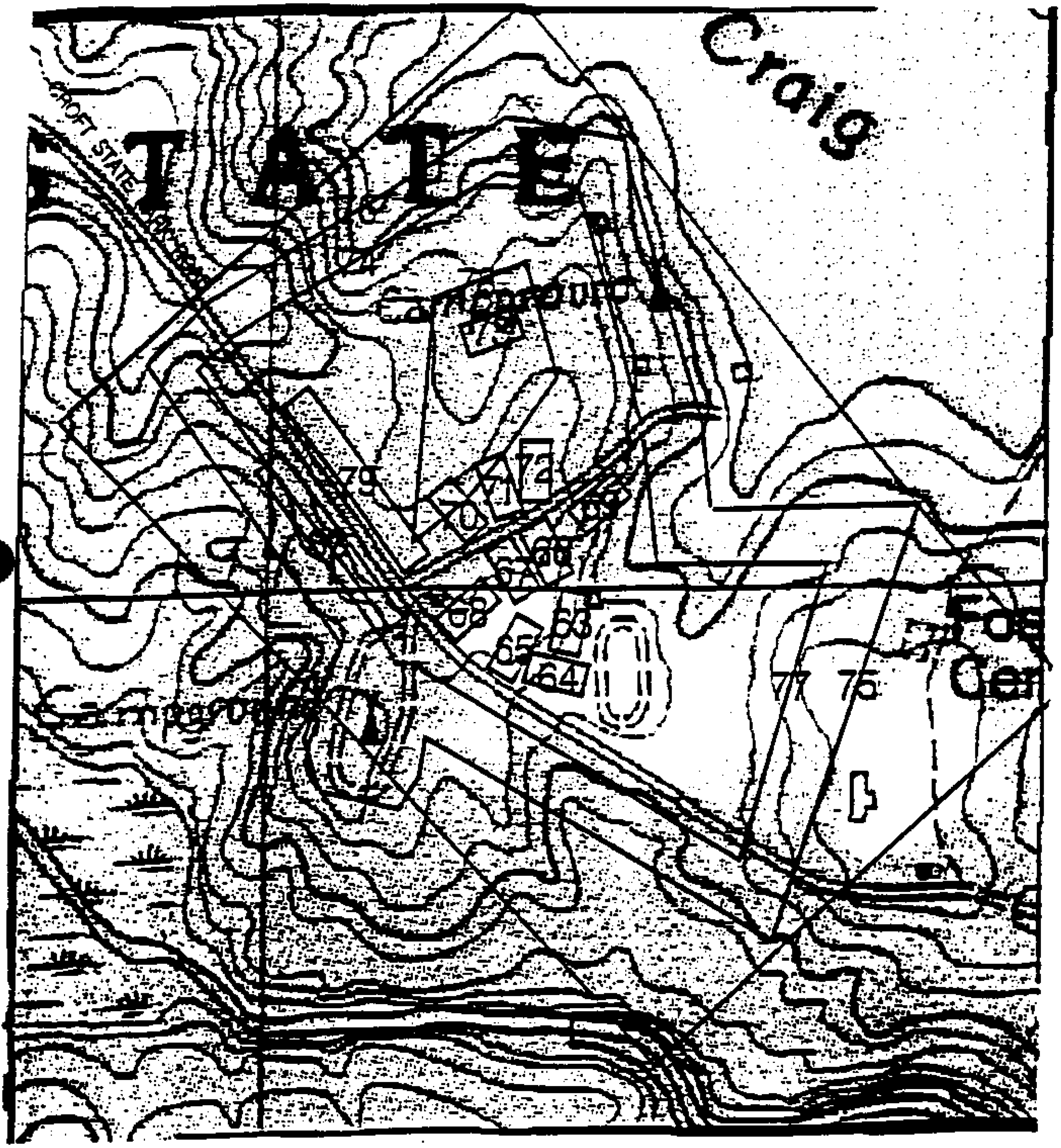
Sector 6
Grids 61, 62, 87, 88

0 750 1500
FEET

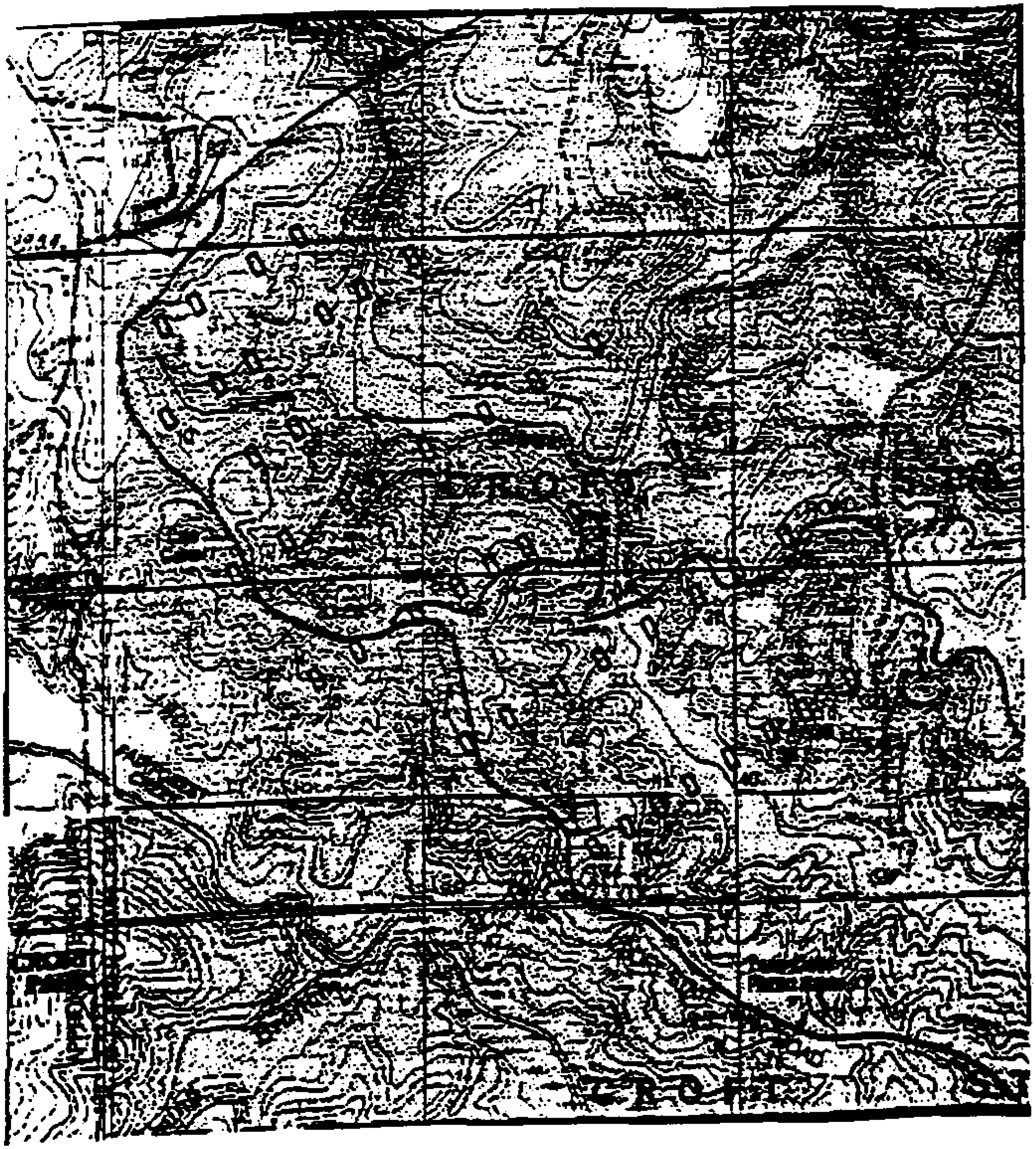
N

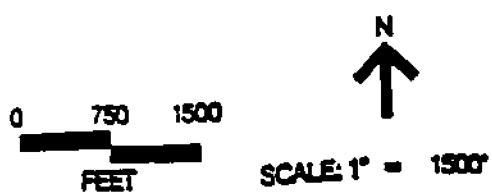
SCALE: 1" = 1500'

Sector 7
Grids 63-80



Sector 8
Grid 83





APPENDIX C

DATA FACTS COLLECTED FOR CAMP CROFT OE*Cert* ASSESSMENT

APPENDIX C

DATA FACTS COLLECTED FOR CAMP CROFT OE*Cert* ASSESSMENT

The following table includes the facts used as inputs to the analysis performed for the Former Camp Croft using the OE Cost-Effectiveness Tool (OE*Cert*). Each fact is accompanied by its source.

Table C-1. Former Camp Croft Data Facts

Fact	Source
Area of Camp Croft is approximately 19,004.46 acres	Camp Croft Archive Search Report, Prepared by U.S. Army Corps of Engineers, Rock Island District, April 1994
Vegetation of Sector 1 = Trees	Camp Croft Topographical Maps
Vegetation of Sector 2A = Trees	Camp Croft Topographical Maps
Vegetation of Sector 2B = Trees	Camp Croft Topographical Maps
Vegetation of Sector 3 = Clear	Camp Croft Topographical Maps
Vegetation of Sector 5 = Brush	Camp Croft Topographical Maps
Vegetation of Sector 6 = Brush	Camp Croft Topographical Maps
Vegetation of Sector 7 = Trees	Camp Croft Topographical Maps
Slope of Sector 1 = (10-30)	Camp Croft Topographical Maps
Slope of Sector 2 = (10-30)	Camp Croft Topographical Maps
Slope of Sector 3 = (0-10)	Camp Croft Topographical Maps
Slope of Sector 5 = (0-10)	Camp Croft Topographical Maps
Slope of Sector 6 = (0-10)	Camp Croft Topographical Maps
Slope of Sector 7 = (10-30)	Camp Croft Topographical Maps
Soil Type of Sector 1 is Clay	Camp Croft Archive Search Report, Prepared by U.S. Army Corps of Engineers, Rock Island District, April 1994
Soil Type of Sector 2A is Clay	Camp Croft Archive Search Report, Prepared by U.S. Army Corps of Engineers, Rock Island District, April 1994
Soil Type of Sector 2B is Clay	Camp Croft Archive Search Report, Prepared by U.S. Army Corps of Engineers, Rock Island District, April 1994
Soil Type of Sector 3 is Clay	Camp Croft Archive Search Report, Prepared by U.S. Army Corps of Engineers, Rock Island District, April 1994
Soil Type of Sector 5 is Clay	Camp Croft Archive Search Report, Prepared by U.S. Army Corps of Engineers, Rock Island District, April 1994
Soil Type of Sector 6 is Clay	Camp Croft Archive Search Report, Prepared by U.S. Army Corps of Engineers, Rock Island District, April 1994
Soil Type of Sector 7 is Clay	Camp Croft Archive Search Report, Prepared by U.S. Army Corps of Engineers, Rock Island District, April 1994

APPENDIX D

DATA ASSUMPTIONS FOR CAMP CROFT OE*Cert* ASSESSMENT

APPENDIX D

DATA ASSUMPTIONS FOR CAMP CROFT OE*Cert* ASSESSMENT

The following table includes the assumptions used as inputs to the analysis performed for the Former Camp Croft using the OE Cost-Effectiveness Tool (OE*Cert*). Each assumption is accompanied by its source/rationale.

Table D-1. Former Camp Croft Data Assumptions

Assumption	Source/Rationale
Hiking and Horseback riding take place in Sector 1	Camp Croft Archive Search Report, Prepared by U.S. Army Corps of Engineers, Rock Island District, April 1994
Camping, Hunting, Hiking, and Horseback riding take place in Sector 2A.	Camp Croft Archive Search Report, Prepared by U.S. Army Corps of Engineers, Rock Island District, April 1994
Camping, Hunting, Hiking, and Horseback riding take place in Sector 2B.	Camp Croft Archive Search Report, Prepared by U.S. Army Corps of Engineers, Rock Island District, April 1994
Children Playing, Short Cutting, and Jogging take place in Sector 3	Camp Croft Archive Search Report, Prepared by U.S. Army Corps of Engineers, Rock Island District, April 1994
Children Playing, Short Cutting, and Jogging take place in Sector 5	Camp Croft Archive Search Report, Prepared by U.S. Army Corps of Engineers, Rock Island District, April 1994
Construction is planned to occur on 10,000 square feet of Sector 6 (Private residence, landfill area, and support buildings).	Data collected during phone conversation with David Moccia of ESE
Children Playing, Picnicking, Camping, Freshwater fishing, Hiking, and Horseback riding take place in Sector 7.	Camp Croft Archive Search Report, Prepared by U.S. Army Corps of Engineers, Rock Island District, April 1994
Construction is planned to occur on 3,000 square feet on Sector 7. (State Park Museum)	Data collected during phone conversation with David Moccia of ESE
Point density for Sector 1 is .00005540 UXO/sq. feet	Site Sampling Results
Point density for Sector 1B is .0002062 UXO/sq. feet	Site Sampling Results and Sector 1 Subarea
Point density for Sector 2A is .0001656 UXO/sq. feet	Site Sampling Results
Point density for Sector 2B is .0001656 UXO/sq. feet	Site Sampling Results
Point density for Sector 3 is .00006803 UXO/sq. feet	Use of Sector 3 as an analogy as directed by CEHND PM
Point density for Sector 5 is .00006803 UXO/sq. feet	Site Sampling Results
Point density for Sector 6 is .0001450 UXO/sq. feet	Site Sampling Results
Point density for Sector 7 is .0002496 UXO/sq. feet	Site Sampling Results
Point density for Sector 7A is .00100 UXO/sq. feet	Site Sampling Results and Exclusion Density Estimate from Containment Assessment Report
Pine Tree Planting and Harvesting is planned to occur on half the Sector 6 area.	Data collected per phone consersation with David Moccia of ESE

Table D-1. Former Camp Croft Data Assumptions (Concluded)

Assumption	Source/Rationale
All ordnance is subsurface	QuantiTech Statistical Analysis of Camp Croft Sampling Draft Final Report, Huntsville, AL, April 1995
Sector 1 is approximately 1021.44 acres	QuantiTech Statistical Analysis of Camp Croft Sampling Draft Final Report, Huntsville, AL, April 1995
Sector 2A is approximately 439.04 acres	QuantiTech Statistical Analysis of Camp Croft Sampling Draft Final Report, Huntsville, AL, April 1995
Sector 2B is approximately 696.96 acres	QuantiTech Statistical Analysis of Camp Croft Sampling Draft Final Report, Huntsville, AL, April 1995
Sector 3 is approximately 696.96 acres	QuantiTech Statistical Analysis of Camp Croft Sampling Draft Final Report, Huntsville, AL, April 1995
Sector 5 is approximately 3.2 acres	QuantiTech Statistical Analysis of Camp Croft Sampling Draft Final Report, Huntsville, AL, April 1995
Sector 6 is approximately 432.64 acres	QuantiTech Statistical Analysis of Camp Croft Sampling Draft Final Report, Huntsville, AL, April 1995
Sector 7 is approximately 122.24 acres	QuantiTech Statistical Analysis of Camp Croft Sampling Draft Final Report, Huntsville, AL, April 1995
The sweep efficiency was determined according to anomaly depth	Camp Croft Archive Search Report, Prepared by U.S. Army Corps of Engineers, Rock Island District, April 1994
Anomaly depth of 0 feet - 95% sweep efficiency	Corps of Engineers, Huntsville Division
Anomaly depth of 1 feet - 92.3% sweep efficiency	Corps of Engineers, Huntsville Division
Anomaly depth of 2 feet - 76.2% sweep efficiency	Corps of Engineers, Huntsville Division
Anomaly depth of 4 feet - 34.8% sweep efficiency	Corps of Engineers, Huntsville Division
Anomaly depth of 10 feet - 5.0% sweep efficiency	Corps of Engineers, Huntsville Division
Ordnance Depth for All Sectors: • Max Depth = 2.045 feet • Mode = .775 feet • 58.0% between 0-1 foot • 41.9% between 1-2 feet • .1% greater than 2 feet	Reference: 1) Camp Croft Sampling Grid Survey Summary Sheets 2) Technical Discussions with Mr. Bill Davis, CEHND 3) QuantiTech Ordnance Depth Regression Analysis

APPENDIX E

EXAMPLE RISK CALCULATIONS FOR CAMPING

APPENDIX E

EXAMPLE RISK CALCULATIONS FOR CAMPING

The risk associated with camping at a Formerly Used Defense Site (FUDS) involves calculation of both surface and subsurface exposures. Since all the ordnance contamination at Camp Croft was assumed to be subsurface, no surface risk calculations were required. The number of exposures to OE for a single individual participating in camping is calculated by multiplying the contamination density by the effective area. Effective area is defined as the minimum of the sector area and the area that an individual camper covers while camping. This value is called mu (μ).

The expected number of exposures for campers is found by multiplying the mu value calculated above by the total number of annual participants. The mu value is also used to calculate the probability of exposure for a single individual. This is done by substituting the mu value into the following equation:

$$p(Exp) = 1 - e^{-\mu}$$

The values calculated for expected number of exposures and the probability of exposure for camping are given on the following page. The relevant assumptions used in these calculations were: a high ordnance density of .0001588 UXO/sq. foot; a point ordnance density of 0.0001289 UXO/sq. foot; a low ordnance density of .00001 UXO/sq. foot: and 1,462 annual participants in camping.

Table E-1. Example Calculations

Camping			
	High Density p(exp)	Point p(exp)	Low p(exp)
Clearance Depth (CD)= 0	.000071693	.0000581945	4.4726E-05
CD = 1	.0000053772	.0000043647	.0000033545
CD = 4	.0000053772	.0000043647	.0000033545
μ (Expected Exposures for Single Camper)			
CD = 0	.0000071696	.0000581962	4.4727E-05
CD = 1	.0000053772	.000043647	.0000033545
CD = 4	.0000053772	.000043647	.0000033545
Exposures (Expected Exposures for All Campers, Annually)			
CD = 0	6	5	4
CD = 1	0	0	0
CD = 4	0	0	0
X Value to Determine Probability of Exposure Expressed as (1/x)			
CD = 0	13,948.363	17.183.754	22,358.360
CD = 1	185,970.393	229,110.821	2,981,070.204
CD = 4	185,970.393	229.110.821	2,981.070.204

APPENDIX F

COMMENTS AND RESPONSES

APPENDIX F
COMMENTS AND RESPONSES

Comments of Bill Davis

1. 2.1-3.

SECTOR 1: The only items that should be included are actual UXO - 37-57mm items that were classed as scrap should not be included in density count.

SECTOR 2A and 2B: These density do not make sense. Grid 51 would indicate >40 UXO per grid, i.e., 80 per acre. Grid 53 would indicate minimum of 15 per grid and 30 per acre. Based on density and UXO Grid 55 is not in the fringe area and should not be included.

SECTOR 6: Actual density was 4 UXO per 14 acres. One UXO was found by investigating team in a second area.

Response: SECTOR 1 - All 37mm and 57mm items were extracted from the UXO count. These items were considered not hazardous as they contained no fuse or fill material (solid metal objects).

SECTOR 2A and 2B - Grid 51 and 53 UXO estimates were taken into account along with Grid 82 A and B. Even though 51 and 53 project to 40 - 100+ UXO per acre, Grid 82 A and B is projected to be less than 5 per acre. Since Grid 82 A and B are significantly larger, the weighted average of combining all these grids results in an overall UXO sector estimate of 7.2 per acre. Grid 55 sampling results were not included in the estimates as directed.

SECTOR 6 - The results of the time critical clearance of the 14 acres and the 4 additional UXO found have been incorporated along with the other sampling results from Sector 6.

2. 2.2-1. Check expected exposure number.

Response: The total expected exposures have been recalculated as a result of the comments and additional data provided. Additionally, the ordnance depth was modified to reflect the data provided in the grid sampling reports on UXO reported depth.

3. 2.2-9, 2.2-11, 2.2.12. Verify exposure - what is the population base used for areas 2A and 2B? The correct usage for Area 6 is construction and tree farming (once every 5-10 years).

Response: The population base for 2A and 2B is determined by the population of Spartenburg county multiplied by the proportion of the county area to the state area, multiplied by the inverse of the number of state parks (plus one to include the FUDS under consideration). Exposures have been recalculated with changes in the density estimation and ordnance depth.

Tree farming was used in the formulation of risk for Sector 3. Crop farming is the general category in OE*Cert*. An intrusion depth of two feet is used along with an estimation of area for the activity. All OE*Cert* risks are calculated on a yearly basis. Tree farming activity timing was assumed to be a 20 year growth cycle with 7 days field activity per year.

4. 2.2-15. Verify exposure numbers and <u>public</u> risk based on 4 items per 14 acres subsurface

Response: The inclusion of 4 UXO items in 14 acres was added to the Sector 6 calculations. This additional UXO density information reduced the overall sector density estimate.

5. 2.2-8 and 2.2-16. Explain exposure value for Section 7. Please review enclosed Contamination Assessment and include the information. Use average of 20 UXO per grid. Recalculate Exposure number.

Response: The expected exposure values are the number of exposures that will be incurred by the visitors in this sector (draft report Figure 2.2-8). Figure 2.2-16 was also titled expected exposures, however, it was misnamed. It should have been titled probability of exposure. This is the chance that one visitor in the sector may encounter a UXO item during a visit.

The data from the Contamination Assessment was reviewed for inclusion in the OE*Cert* analysis. An excursion from Sector 7, titled 7A, incorporates the 20 UXO per grid (20,000 ft2). All calculations made for Sector 7A are provided in the final report.

Comments of A. Fanning

1. Executive Summary. Sector 8. Why is Sector 8 listed in this summary and yet a Sector 8 is not mentioned throughout the report?

   Response: Sector 8 was included in several of the tables in this report to both maintain a record of the sector parameters and also to correlate to the work done in the previous QuantiTech Statistical Analysis of Camp Croft Sampling Report. No analysis was performed in either Sector 4 or 8 as directed in the statement of work.

2. Executive Summary. Please label the tables (i.e., % reduction and number of exposures removed).

   Response: Noted and corrected.

3. Background, page 3, Please write out unexploded ordnance before using the UXO acronym.

   Response: Noted and corrected.

4. Page 5, analysts should be analysis.

   Response: Noted and corrected.

5. Page 6, Table 2.1-2. jigging should be jogging.

   Response: Noted and corrected.

6. Table 2.1-3, page 6, please add another table that provides the expected low, point, and high estimate of UXO per acre.

Response: The sector density table was converted to UXO per acre instead of UXO per square foot.

7. Page 17. The highest expected exposures for Sector 6 (crop farming) is 17. How is this construed to be a high probability of exposure? Are there very few people that will be engaged in this activity? Please provide the risk calculation.

Response: Expected exposures for Sector 6 crop farming are now calculated to be 137 (point estimate). Given an intrusion area of half the area of Sector 6, the calculation is:

Expected exposures = intrusion area x density x proportion of UXO above 2 feet * 1 year exposures/20 years growth cycle;

= 9,422,899 * .00001450 * .9992 * 1/20

= 6.8.

Probably not all the area considered for tree farming will be worked in a given year. Even if only a portion of the area is worked, those few individuals will accumulate the portion of the exposures based on area intruded (the exposures would be spread among the individuals performing the intrusive activity). The overall exposures numbers were considered high in relation to the others sector risk calculations.

8. Page 19, 3rd paragraph, 3rd sentence, Please explain what is meant by the use of direct labor hours for allocation purposes. Why shouldn't all expected labor hours (surface and sub-surface) be used to allocate indirect cost?

Response: Since surface and subsurface clearance activities are concurrent, indirect costs are based upon the larger of the two to account for less indirect resources needed to manage one job instead of two (concurrent cost savings).

9. Table 3.2-2. The cost to remediate to 1 foot is not much different than surface clearance. For instance, Sector 1 surface clearance is $2,315,000 and Sector 1 clearance to one foot is $2,427,000. The difference to clear an acre to one foot is only $109. This seems to be extremely low. Please explain how you costed the sub-surface clearance.

Response: The ordnance depth used in the draft report had nearly all the ordnance calculated to be below the 1 foot depth. As a result very little cost was incurred since few items were 1 foot or less in depth. The cost numbers used in this report now reflects approximately 58% of the ordnance (and false positives) between 0 and 1 foot.

10. General. Please give reasons why not all sectors were costed for all depths.

Response: The sectors and depths costed were identified in the SOW.

Comments of Sang

1. Executive Summary. Stated that remediation options considered for Sector 4 and Sector 8 were not considered or delete Sector Numbers.

Response: These were not requested in the SOW since no evidence of ordnance was found in the sectors.

2. Table 2.2-15. Confirm that the Expected Exposures for Crop Farming for Sector are correct.

Response: These have been revised and checked. In crop farming (tree farming for Croft), these numbers may reflect the accumulation of UXO exposures by only a few individuals over the course of many days (or months) as the intrusive activities are performed. This number is an overall accumulation (see response to Item 7, Mr. Fanning comment).

Comments of Young

1. Page 2. Add Table #'s and Titles to the table on this page.

   Response: Noted and corrected.

2. General. Land areas are presented in square feet throughout this report. This should be changed to acres or hectares so that report reviewers will be able to more easily visualize the information provided.

   Response: Noted and corrected.

3. Table 2.1-4. Values in Columns 2 and 3 should be changed to percentages as shown in the column title (multiply all values x 100).

   Response: Noted and corrected.

Ordnance Operable Unit (OOU) 1A

COST ESTIMATE

Project: 3947007G -0500-3100
Site: ORDNANCE OPERABLE UNIT 1A
Alternative: INSTITUTIONAL CONTROLS
Estimated by: PK
Checked by: RW
Reviewed by: DMM

ITEM NO.	DESCRIPTION	NO. UNITS	UNIT MEAS.	PER UNIT	TOTAL COST
1	Sign fabrication & posting (located along roads & trails)	50	ea	$100.00	$5,000
2	UXO support	2	day	$500.00	$1,000
3	Mobilize/demobilize	1	ls	$1,000.00	$1,000
	Total Capital Cost				$7,000
	Contingency (25%)				$1,750
	Engineering (15%)				$1,050
	Overhead & profit (20%)				$1,400
	Total Estimated Cost				$11,200

Note: An Education/ Information program is applicable to all OOUs within former Camp Croft. The total estimated cost to develop and implement this program is $25 - 50,000. This cost has not been distributed among the former Camp Croft OOUs.

The estimated annual cost to administer the Education/ Information Program is $2,500 to $5,000 for the entire former Camp Croft.

COST ESTIMATE

Project: 3947007G -0500-3100
Site: ORDNANCE OPERABLE UNIT 1A
Alternative: SURFACE CLEARANCE
Estimated by: PK
Checked by: RW
Reviewed by: DMM

ITEM NO.	DESCRIPTION	NO. UNITS	UNIT MEAS.	PER UNIT	TOTAL COST
1	Site Preparation and clearing (heavy vegetation)	1020.0	acres	$4,000.00	$4,080,000
2	Survey/QC	1020.0	acres	$200.00	$204,000
3	Visual inspection, limited geophysical investigation (difficult site access)	1020.0	acres	$1,800.00	$1,836,000
*4	Disposal/detonation of UXO	235.0	UXOs	$400.00	$94,000
5	Mobilize/demobilize	1	ls	$75,000.00	$75,000
6	Sign fabrication & posting (located along roads and trails)	50.0	ea	$100.00	$5,000
		Total Capital Cost			$6,294,000
		Contingency (25%)			$1,573,500
		Engineering (15%)			$944,100
		Overhead & profit (20%)			$1,258,800
		Total Estimated Cost			$10,070,400

*Note: 1. Based on the assumption that the total density of UXOs is approximately 5% of the total density at OOU1B or .45 UXOs/acre. The density of surface UXOs is assumed to be 1/2 of the total, or .23 UXOs/acre.

2. The estimated cost per unit for disposal of UXO is dependent upon the anticipated density. The higher density of UXO would be disposed of at a lower unit cost since several UXOs can be disposed of at one time, thus minimizing disruption of ongoing operations.

Note: An Education/ Information program is applicable to all OOUs within former Camp Croft. The total estimated cost to develop and implement this program is $25 - 50,000. This cost has not been distributed among the former Camp Croft OOUs.

The estimated annual cost to administer the Education/ Information Program is $2,500 to $5,000 for the entire former Camp Croft.

Ordnance Operable Unit (OOU) 1B

COST ESTIMATE

Project: 3947007G -0500-3100
Site: ORDNANCE OPERABLE UNIT 1B
Alternative: INSTITUTIONAL CONTROLS
Estimated by: PK
Checked by: RW
Reviewed by: DMM

ITEM NO.	DESCRIPTION	NO. UNITS	UNIT MEAS.	PER UNIT	TOTAL COST
1	Sign fabrication & posting (located at approximately every 300 ft along perimeter of OU)	18	ea	$100.00	$1,800
2	UXO support	1	day	$500.00	$500
3	Mobilize/demobilize	1	ls	$1,000.00	$1,000
	Total Capital Cost				$3,300
	Contingency (25%)				$825
	Engineering (15%)				$495
	Overhead & profit (20%)				$660
	Total Estimated Cost				$5,280

Note: An Education/ Information program is applicable to all OOUs within former Camp Croft . The total estimated cost to develop and implement this program is $25 - 50,000. This cost has not been distributed among the former Camp Croft OOUs.

The estimated annual cost to administer the Education/ Information Program is $2,500 to $5,000 for the entire former Camp Croft .

COST ESTIMATE

Project: 3947007G -0500-3100
Site: ORDNANCE OPERABLE UNIT 1B
Alternative: SURFACE CLEARANCE
Estimated by: PK
Checked by: RW
Reviewed by: DMM

ITEM NO.	DESCRIPTION	NO. UNITS	UNIT MEAS.	PER UNIT	TOTAL COST
1	Site Preparation and clearing (heavy vegetation)	39.0	acres	$4,000.00	$156,000
2	Survey/QC	39.0	acres	$200.00	$7,800
3	Visual inspection, limited geophysical investigation (difficult site access)	39.0	acres	$1,800.00	$70,200
*4	Disposal/detonation of UXO	175.0	UXOs	$400.00	$70,000
5	Mobilize/demobilize	1	ls	$20,000.00	$20,000
6	Sign fabrication & posting (located at approximately every 300 ft along perimeter of OOU).	18.0	ea	$100.00	$1,800
		Total Capital Cost			$325,800
		Contingency (25%)			$81,450
		Engineering (15%)			$48,870
		Overhead & profit (20%)			$65,160
		Total Estimated Cost			$521,280

*Note: 1. The number of surface UXOs estimated is based on the assumption that approximately 50% of the total UXOs estimated to be present will be surface UXOs and removed during a surface clearance operation. The number of total UXOs estimated to be present is based upon the density estimate of 9 UXOs/acre predicted in the QuantiTech model.

2. The estimated cost per unit for disposal of UXO is dependent upon the anticipated density. The higher density of UXO would be disposed of at a lower unit cost since several UXOs can be disposed of at one time, thus minimizing disruption of ongoing operations.

Note: An Education/ Information program is applicable to all OOUs within former Camp Croft . The total estimated cost to develop and implement this program is $25 - 50,000. This cost has not been distributed among the former Camp Croft OOUs.

The estimated annual cost to administer the Education/ Information Program is $2,500 to $5,000 for the entire former Camp Croft .

COST ESTIMATE

Project: 3947007G -0500-3100
Site: ORDNANCE OPERABLE UNIT 1B
Alternative: CLEARANCE TO DEPTH
Estimated by: PK
Checked by: RW
Reviewed by: DMM

ITEM NO.	DESCRIPTION	NO. UNITS	UNIT MEAS.	PER UNIT	TOTAL COST
1	Site Preparation and clearing (heavy vegetation)	39	acres	$4,000.00	$156,000
2	Survey /QC	39	acres	$200.00	$7,800
3	Goephysical investigation (difficult access)	39	acres	$2,800.00	$109,200
4	Excavation of anomalies (assumption: 1% of site must be excavated to an average depth of 1 ft)	630	cy	$100.00	$63,000
*5	Disposal/detonation of UXO	350	UXOs	$400.00	$140,000
6	Sign fabrication & posting (located at approximately every 300 ft along perimeter of OOU)	18	ea	$100.00	$1,800
7	Mobilize/demobilize	1	ls	$25,000.00	$25,000
	Total Capital Cost				**$502,800**
	Contingency (25%)				**$125,700**
	Engineering (15%)				**$75,420**
	Overhead & profit (20%)				**$100,560**
	Total Estimated Cost				**$804,480**

*Note : 1. Number of UXOs estimated for disposal is based upon the UXO density of 9 UXOs/acre predicted in the QuantiTech OEWCert model.

2. The estimated cost per unit for disposal of UXO is dependent upon the anticipated density. The higher density of UXO would be disposed of at a lower unit cost since several UXOs can be disposed of at one time, thus minimizing disruption of ongoing operations.

Note: An Education/ Information program is applicable to all OOUs within former Camp Croft . The total estimated cost to develop and implement this program is $25 - 50,000. This cost has not been distributed among the former Camp Croft OOUs.

The estimated annual cost to administer the Education/ Information Program is $2,500 to $5,000 for the entire former Camp Croft .

Ordnance Operable Unit (OOU) 2

COST ESTIMATE

Project: 3947007G -0500-3100
Site: ORDNANCE OPERABLE UNIT 2
Alternative: INSTITUTIONAL CONTROLS
Estimated by: PK
Checked by: RW
Reviewed by: DMM

ITEM NO.	DESCRIPTION	NO. UNITS	UNIT MEAS.	PER UNIT	TOTAL COST
1	Sign fabrication & posting (located at approximately every 300 ft along perimeter of OU)	72	ea	$100.00	$7,200
2	UXO support	3	day	$500.00	$1,500
3	Mobilize/demobilize	1	ls	$1,000.00	$1,000
	Total Capital Cost				**$9,700**
	Contingency (25%)				**$2,425**
	Engineering (15%)				**$1,455**
	Overhead & profit (20%)				**$1,940**
	Total Estimated Cost				**$15,520**

Note: An Education/ Information program is applicable to all OOUs within former Camp Croft . The total estimated cost to develop and implement this program is $25 - 50,000. This cost has not been distributed among the former Camp Croft OOUs.

The estimated annual cost to administer the Education/ Information Program is $2,500 to $5,000 for the entire former Camp Croft .

COST ESTIMATE

Project: 3947007G -0500-3100
Site: ORDNANCE OPERABLE UNIT 2
Alternative: SURFACE CLEARANCE
Estimated by: PK
Checked by: RW
Reviewed by: DMM

ITEM NO.	DESCRIPTION	NO. UNITS	UNIT MEAS.	PER UNIT	TOTAL COST
1	Site Preparation and clearing (heavy vegetation)	326.0	acres	$4,000.00	$1,304,000
2	Survey/QC	326.0	acres	$200.00	$65,200
3	Visual inspection, limited geophysical investigation (difficult site access)	326.0	acres	$1,800.00	$586,800
*4	Disposal/detonation of UXO	1175.0	UXOs	$100.00	$117,500
5	Mobilize/demobilize	1	ls	$50,000.00	$50,000
6	Sign fabrication & posting (located at approximately every 300 ft along perimeter of OOU).	72.0	ea	$100.00	$7,200
		Total Capital Cost			$2,130,700
		Contingency (25%)			$532,675
		Engineering (15%)			$319,605
		Overhead & profit (20%)			$426,140
		Total Estimated Cost			$3,409,120

*Note: 1. The number of surface UXOs estimated is based on the assumption that approximately 50% of the total UXOs estimated to be present will be surface UXOs and removed during a surface clearance operation. The number of total UXOs estimated to be present is based upon the density estimate of 7.2 UXOs/acre predicted in the QuantiTech model.

2. The estimated cost per unit for disposal of UXO is dependent upon the anticipated density. The higher density of UXO would be disposed of at a lower unit cost since several UXOs can be disposed of at one time, thus minimizing disruption of ongoing operations.

Note: An Education/ Information program is applicable to all OOUs within former Camp Croft . The total estimated cost to develop and implement this program is $25 - 50,000. This cost has not been distributed among the former Camp Croft OOUs.

The estimated annual cost to administer the Education/ Information Program is $2,500 to $5,000 for the entire former Camp Croft .

COST ESTIMATE

Project: 3947007G -0500-3100
Site: ORDNANCE OPERABLE UNIT 2
Alternative: CLEARANCE TO DEPTH
Estimated by: PK
Checked by: RW
Reviewed by: DMM

ITEM NO.	DESCRIPTION	NO. UNITS	UNIT MEAS.	PER UNIT	TOTAL COST
1	Site Preparation and clearing (heavy vegetation)	326	acres	$4,000.00	$1,304,000
2	Survey /QC	326	acres	$200.00	$65,200
3	Goephysical Investigation (difficult access)	326	acres	$2,800.00	$912,800
4	Excavation of anomalies (assumption: 1% of site must be excavated to an average depth of 1 ft)	5,260	cy	$100.00	$526,000
*5	Disposal/detonation of UXO	2350	UXOs	$100.00	$235,000
6	Sign fabrication & posting (located at approximately every 300 ft along perimeter of OU)	72	ea	$100.00	$7,200
7	Mobilize/demobilize	1	ls	$60,000.00	$60,000
			Total Capital Cost		**$3,110,200**
			Contingency (25%)		**$777,550**
			Engineering (15%)		**$466,530**
			Overhead & profit (20%)		**$622,040**
			Total Estimated Cost		**$4,976,320**

*Note : 1. Number of UXOs estimated for disposal is based upon the UXO density of 7.21 UXOs/acre predicted in the QuantiTech OEWCert model.

2. The estimated cost per unit for disposal of UXO is dependent upon the anticipated density. The higher density of UXO would be disposed of at a lower unit cost since several UXOs can be disposed of at one time, thus minimizing disruption of ongoing operations.

Note: An Education/ Information program is applicable to all OOUs within former Camp Croft . The total estimated cost to develop and implement this program is $25 - 50,000. This cost has not been distributed among the former Camp Croft OOUs.

The estimated annual cost to administer the Education/ Information Program is $2,500 to $5,000 for the entire former Camp Croft .

Ordnance Operable Unit (OOU) 3

COST ESTIMATE

Project: 3947007G -0500-3100
Site: ORDNANCE OPERABLE UNIT 3
Alternative: GOVERNMENT BUYBACK
Estimated by: PK
Checked by: RW
Reviewed by: DMM

ITEM NO.	DESCRIPTION	NO. UNITS	UNIT MEAS.	PER UNIT	TOTAL COST
*1	Government buyback		ls	$300,000.00	$300,000
2	Fencing				
a	Perimeter fencing, chainlink, 6' high plus 3 strands of barbed wire 9 ga.	2,800	lf	$12.35	$34,580
b	Corner posts, 3" diameter	4	ea	$89.00	$356
c	Gate 20' opening	1	ea	$830.00	$830
d	Warning signs	2	ea	$25.00	$50
e	Mobilize/demobilize	1	ls	$1,000.00	$1,000
f	Land surveying	1	ls	$3,000.00	$3,000
3	UXO support	2	days	$500.00	$1,000

Total Capital Cost	**$340,816**
Contingency (25%)	**$85,204**
Engineering (15%)	**$51,122**
Overhead & profit (20%)	**$68,163**
Total Estimated Cost	**$545,306**

*Note: The Government buyback cost is based on an assumed value and is not intended to reflect an assessment of fair price or offer to purchase by the government.

COST ESTIMATE

Project: 3947007G -0500-3100
Site: ORDNANCE OPERABLE UNIT 3
Alternative: SURFACE CLEARANCE
Estimated by: PK
Checked by: RW
Reviewed by: DMM

ITEM NO.	DESCRIPTION	NO. UNITS	UNIT MEAS.	PER UNIT	TOTAL COST
1	Site Preparation and clearing (light to no vegetation)	11.0	acres	$700.00	$7,700
2	Survey/QC	11.0	acres	$200.00	$2,200
3	Visual inspection, limited geophysical investigation (easy site access)	11.0	acres	$1,500.00	$16,500
*4	Disposal/detonation of UXO	17.0	UXOs	$400.00	$6,800
5	Mobilize/demobilize	1	ls	$5,000.00	$5,000
	Total Capital Cost				$38,200
	Contingency (25%)				$9,550
	Engineering (15%)				$5,730
	Overhead & profit (20%)				$7,640
	Total Estimated Cost				$61,120

*Note: 1. The number of surface UXOs estimated is based on the assumption that approximately 50% of the total UXOs estimated to be present will be surface UXOs and removed during a surface clearance operation. The number of total UXOs estimated to be present is based upon the density estimate of 2.96 UXOs/acre predicted in the QuantiTech model.

2. The estimated cost per unit for disposal of UXO is dependent upon the anticipated density. The higher density of UXO would be disposed of at a lower unit cost since several UXOs can be disposed of at one time, thus minimizing disruption of ongoing operations.

COST ESTIMATE

Project: 3947007G -0500-3100
Site: ORDNANCE OPERABLE UNIT 3
Alternative: CLEARANCE TO DEPTH
Estimated by: PK
Checked by: RW
Reviewed by: DMM

ITEM NO.	DESCRIPTION	NO. UNITS	UNIT MEAS.	PER UNIT	TOTAL COST
1	Site Preparation and clearing (light vegetation)	11	acres	$700.00	$7,700
2	Survey /QC	11	acres	$200.00	$2,200
3	Goephysical investigation	11	acres	$3,000.00	$33,000
4	Excavation of anomalies (assumption: 0.5% of site must be excavated to an average depth of 6 in)	45	cy	$200.00	$9,000
*5	Disposal/detonation of UXO	33	UXOs	$600.00	$19,800
6	Mobilize/demobilize	1	ls	$10,000.00	$10,000
	Total Capital Cost				**$81,700**
	Contingency (25%)				**$20,425**
	Engineering (15%)				**$12,255**
	Overhead & profit (20%)				**$16,340**
	Total Estimated Cost				**$130,720**

*Note : 1. Number of UXOs estimated for disposal is based upon the UXO density of 2.96 UXOs/acre predicted in the QuantiTech OEWCert model.

2. The estimated cost per unit for disposal of UXO is dependent upon the anticipated density. The higher density of UXO would be disposed of at a lower unit cost since several UXOs can be disposed of at one time, thus minimizing disruption of ongoing operations.

Ordnance Operable Unit (OOU) 5

COST ESTIMATE

Project: 3947007G -0500-3100
Site: ORDNANCE OPERABLE UNIT 5
Alternative: GOVERNMENT BUYBACK
Estimated by: PK
Checked by: RW
Reviewed by: DMM

ITEM NO.	DESCRIPTION	NO. UNITS	UNIT MEAS.	PER UNIT	TOTAL COST
*1	Government buyback		ls	$100,000.00	$100,000
2	Fencing				
a	Perimeter fencing, chainlink, 6' high plus 3 strands of barbed wire 9 ga.	1,000	lf	$12.35	$12,350
b	Corner posts, 3" diameter	4	ea	$89.00	$356
c	Gate 20' opening	1	ea	$830.00	$830
d	Warning signs	2	ea	$25.00	$50
e	Mobilize/demobilize	1	ls	$1,000.00	$1,000
f	Land surveying	1	ls	$3,000.00	$3,000
3	UXO support	2	days	$500.00	$1,000
	Total Capital Cost				$118,586
	Contingency (25%)				$29,647
	Engineering (15%)				$17,788
	Overhead & profit (20%)				$23,717
	Total Estimated Cost				$189,738

*Note: The Government buyback cost is based on an assumed value and is not intended to reflect an assessment of fair price or offer to purchase by the government.

COST ESTIMATE

Project: 3947007G -0500-3100
Site: ORDNANCE OPERABLE UNIT 5
Alternative: SURFACE CLEARANCE
Estimated by: PK
Checked by: RW
Reviewed by: DMM

ITEM NO.	DESCRIPTION	NO. UNITS	UNIT MEAS.	PER UNIT	TOTAL COST
1	Site Preparation and clearing (light to no vegetation)	5.4	acres	$700.00	$3,780
2	Survey/QC	5.4	acres	$200.00	$1,080
3	Visual inspection, limited geophysical investigation (easy site access)	5.4	acres	$1,500.00	$8,100
*4	Disposal/detonation of UXO	17.0	UXOs	$400.00	$6,800
5	Mobilize/demobilize	1	ls	$5,000.00	$5,000

Total Capital Cost	**$24,760**
Contingency (25%)	**$6,190**
Engineering (15%)	**$3,714**
Overhead & profit (20%)	**$4,952**
Total Estimated Cost	**$39,616**

*Note: 1. The number of surface UXOs estimated is based on the assumption that approximately 50% of the total UXOs estimated to be present will be surface UXOs and removed during a surface clearance operation. The number of total UXOs estimated to be present is based upon the density estimate of 2.96 UXOs/acre predicted in the QuantiTech model.

2. The estimated cost per unit for disposal of UXO is dependent upon the anticipated density. The higher density of UXO would be disposed of at a lower unit cost since several UXOs can be disposed of at one time, thus minimizing disruption of ongoing operations.

Ordnance Operable Unit (OOU) 6

COST ESTIMATE

Project: 3947007G -0500-3100
Site: ORDNANCE OPERABLE UNIT 6
Alternative: GOVERNMENT BUYBACK
Estimated by: PK
Checked by: RW
Reviewed by: DMM

ITEM NO.	DESCRIPTION	NO. UNITS	UNIT MEAS.	PER UNIT	TOTAL COST
*1	Government buyback	340	acres	$1,500.00	$510,000
2	Fencing				
a	Perimeter fencing, chainlink, 6' high plus 3 strands of barbed wire 9 ga.	17,500	lf	$12.35	$216,125
b	Corner posts, 3" diameter	11	ea	$89.00	$979
c	Gate 20' opening	2	ea	$830.00	$1,660
d	Warning signs	58	ea	$25.00	$1,450
e	Mobilize/demobilize	1	ls	$5,000.00	$5,000
f	Land surveying	1	ls	$15,000.00	$15,000
3	UXO support	30	days	$500.00	$15,000

Total Capital Cost	**$765,214**
Contingency (25%)	**$191,304**
Engineering (15%)	**$114,782**
Overhead & profit (20%)	**$153,043**
Total Estimated Cost	**$1,224,342**

*Note: The Government buyback cost is based on an assumed value and is not intended to reflect an assessment of fair price or offer to purchase by the government.

COST ESTIMATE

Project: 3947007G -0500-3100
Site: ORDNANCE OPERABLE UNIT 6
Alternative: SURFACE CLEARANCE
Estimated by: PK
Checked by: RW
Reviewed by: DMM

ITEM NO.	DESCRIPTION	NO. UNITS	UNIT MEAS.	PER UNIT	TOTAL COST
1	Site Preparation and clearing (heavy vegetation)	424.0	acres	$4,000.00	$1,696,000
2	Survey/QC	424.0	acres	$200.00	$84,800
3	Visual inspection, limited geophysical investigation (difficult site access)	424.0	acres	$1,800.00	$763,200
*4	Disposal/detonation of UXO	134.0	UXOs	$400.00	$53,600
5	Mobilize/demobilize	1	ls	$60,000.00	$60,000
		Total Capital Cost			$2,657,600
		Contingency (25%)			$664,400
		Engineering (15%)			$398,640
		Overhead & profit (20%)			$531,520
		Total Estimated Cost			$4,252,160

*Note: 1. The number of surface UXOs estimated is based on the assumption that approximately 50% of the total UXOs estimated to be present will be surface UXOs and removed during a surface clearance operation. The number of total UXOs estimated to be present is based upon the density estimate of 0.63 UXOs/acre predicted in the QuantiTech model.

2. The estimated cost per unit for disposal of UXO is dependent upon the anticipated density. The higher density of UXO would be disposed of at a lower unit cost since several UXOs can be disposed of at one time, thus minimizing disruption of ongoing operations.

COST ESTIMATE

Project: 3947007G -0500-3100
Site: ORDNANCE OPERABLE UNIT 6
Alternative: CLEARANCE TO DEPTH
Estimated by: PK
Checked by: RW
Reviewed by: DMM

ITEM NO.	DESCRIPTION	NO. UNITS	UNIT MEAS.	PER UNIT	TOTAL COST
1	Site Preparation and clearing (heavy vegetation)	424	acres	$4,000.00	$1,696,000
2	Survey /QC	424	acres	$200.00	$84,800
3	Goephysical investigation (difficult access)	424	acres	$2,800.00	$1,187,200
4	Excavation of anomalies (assumption: 2% of site must be excavated to an average depth of 2 ft)	27,307	cy	$100.00	$2,730,700
*5	Disposal/detonation of UXO	267	UXOs	$400.00	$106,800
6	Mobilize/demobilize	1	ls	$75,000.00	$75,000

4, 64/acre x 80 acres
= $ 515,276.42

Total Capital Cost	$5,880,500
Contingency (25%)	$1,470,125
Engineering (15%)	$882,075
Overhead & profit (20%)	$1,176,100
Total Estimated Cost	$9,408,800

*Note : 1. Number of UXOs estimated for disposal is based upon the UXO density of 0.63 UXOs/acre predicted in the QuantiTech OEWCert model.

2. The estimated cost per unit for disposal of UXO is dependent upon the anticipated density. The higher density of UXO would be disposed of at a lower unit cost since several UXOs can be disposed of at one time, thus minimizing disruption of ongoing operations.

Ordnance Operable Unit (OOU) 7

COST ESTIMATE

Project: 3947007G -0500-3100
Site: ORDNANCE OPERABLE UNIT 7
Alternative: INSTITUTIONAL CONTROLS
Estimated by: PK
Checked by: RW
Reviewed by: DMM

ITEM NO.	DESCRIPTION	NO. UNITS	UNIT MEAS.	PER UNIT	TOTAL COST
1	Sign fabrication & posting (located at selected areas within OU)	25	ea	$100.00	$2,500
2	UXO support	1	day	$500.00	$500
3	Mobilize/demobilize	1	ls	$1,000.00	$1,000
		Total Capital Cost			$4,000
		Contingency (25%)			$1,000
		Engineering (15%)			$600
		Overhead & profit (20%)			$800
		Total Estimated Cost			$6,400

Note: An Education/ Information program is applicable to all OOUs within former Camp Croft . The total estimated cost to develop and implement this program is $25 - 50,000. This cost has not been distributed among the former Camp Croft OOUs.

The estimated annual cost to administer the Education/ Information Program is $2,500 to $5,000 for the entire former Camp Croft .

COST ESTIMATE

Project: 3947007G -0500-3100
Site: ORDNANCE OPERABLE UNIT 7
Alternative: SURFACE CLEARANCE
Estimated by: PK
Checked by: RW
Reviewed by: DMM

ITEM NO.	DESCRIPTION	NO. UNITS	UNIT MEAS.	PER UNIT	TOTAL COST
1	Site Preparation and clearing (heavy vegetation)	172.0	acres	$4,000.00	$688,000
2	Survey/QC	172.0	acres	$200.00	$34,400
3	Visual inspection, limited geophysical investigation (easy site access)	172.0	acres	$1,500.00	$258,000
*4	Disposal/detonation of UXO	3785.0	UXOs	$100.00	$378,500
5	Mobilize/demobilize	1	ls	$20,000.00	$20,000
6	Sign fabrication & posting (located at selected areas within OOU)	25.0	ea	$100.00	$2,500
	Total Capital Cost				**$1,381,400**
	Contingency (25%)				**$345,350**
	Engineering (15%)				**$207,210**
	Overhead & profit (20%)				**$276,280**
	Total Estimated Cost				**$2,210,240**

*Note: 1. The number of surface UXOs estimated is based on the assumption that approximately 50% of the total UXOs estimated to be present will be surface UXOs and removed during a surface clearance operation. The number of total UXOs estimated to be present is based upon the density estimate of 44 UXOs/acre predicted in the QuantiTech model.

2. The estimated cost per unit for disposal of UXO is dependent upon the anticipated density. The higher density of UXO would be disposed of at a lower unit cost since several UXOs can be disposed of at one time, thus minimizing disruption of ongoing operations.

Note: An Education/ Information program is applicable to all OOUs within former Camp Croft . The total estimated cost to develop and implement this program is $25 - 50,000. This cost has not been distributed among the former Camp Croft OOUs.

The estimated annual cost to administer the Education/ Information Program is $2,500 to $5,000 for the entire former Camp Croft .

COST ESTIMATE

Project: 3947007G -0500-3100
Site: ORDNANCE OPERABLE UNIT 7
Alternative: CLEARANCE TO DEPTH
Estimated by: PK
Checked by: RW
Reviewed by: DMM

ITEM NO.	DESCRIPTION	NO. UNITS	UNIT MEAS.	PER UNIT	TOTAL COST
1	Site Preparation and clearing (heavy vegetation)	172	acres	$4,000.00	$688,000
2	Survey /QC	172	acres	$200.00	$34,400
3	Goephysical investigation (easy access)	172	acres	$2,000.00	$344,000
4	Excavation of anomalies (assumption: 1% of site must be excavated to an average depth of 1 ft)	2,770	cy	$100.00	$277,000
*5	Disposal/detonation of UXO	7568	UXOs	$100.00	$756,800
6	Sign fabrication & posting (located at selected areas within OOU)	25	ea	$100.00	$2,500
7	Mobilize/demobilize	1	ls	$25,000.00	$25,000
	Total Capital Cost				**$2,127,700**
	Contingency (25%)				**$531,925**
	Engineering (15%)				**$319,155**
	Overhead & profit (20%)				**$425,540**
	Total Estimated Cost				**$3,404,320**

*Note : 1. Number of UXOs estimated for disposal is based upon the UXO density of 44 UXOs/acre predicted in the QuantiTech OEWCert model.

2. The estimated cost per unit for disposal of UXO is dependent upon the anticipated density. The higher density of UXO would be disposed of at a lower unit cost since several UXOs can be disposed of at one time, thus minimizing disruption of ongoing operations.

Note: An Education/ Information program is applicable to all OOUs within former Camp Croft . The total estimated cost to develop and implement this program is $25 - 50,000. This cost has not been distributed among the former Camp Croft OOUs.

The estimated annual cost to administer the Education/ Information Program is $2,500 to $5,000 for the entire former Camp Croft .

Environmental Science & Engineering, Inc.

P.O. Box 1703, Gainesville, Florida 32602-1703 (904)332-3318

Letter of Transmittal

To: U.S. Army Engineer District
Charleston
334 Meeting Street
Charleston, SC 29403

Date: January 5, 1996
Attn: CESAC-EN-PR (Wayne Bogan)
Re: Former Camp Croft

Project Number 3947007G-0500-3100

We Are Sending You
- [x] **Attached**
- [ ] **Under Separate Cover via**

Copies	Description
10	Volume I & II--Draft Engineering Evaluation/Cost Analysis, Former Camp Croft Army Training Facility, Spartanburg, SC

These Are Transmitted as Checked Below:

- [ ] For Approval
- [ ] For Your Information
- [x] As Requested
- [ ] For Review and Comment
- [ ] Review and Correct
- [ ] Review and File
- [ ] Returned for Corrections
- [ ] Prints Returned after Loan to Us
- [ ] Other

Remarks:

Copy to:

Signed: David Moccia, P.E., Project Manager

If Enclosures Are Not as Noted, Please Notify Us at Once.