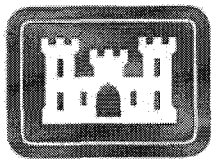
FINAL
SITE SPECIFIC FINAL REPORT
ADDENDUM 01 – VOLUME I

ORDNANCE AND EXPLOSIVE REMOVAL ACTION
FORMER CAMP CROFT
(ORDNANCE OPERABLE UNIT 3)
SPARTANBURG, SOUTH CAROLINA

Prepared for:

US Army Engineering and Support Center, Huntsville



Contract: DACA87-00-D-0034
Task Order: 0014
Project Number: I04SC001603

Geographical District:
Charleston

Prepared By:

ZAPATA ENGINEERING
TRUST • INTEGRITY • QUALITY

6302 Fairview Road, Suite 600
Charlotte, NC 28210

September 2006

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SEPTEMBER 2006

Prepared for:

US ARMY ENGINEERING AND SUPPORT CENTER,
HUNTSVILLE
AND
US ARMY CORPS OF ENGINEERS,
CHARLESTON DISTRICT

by:

ZAPATAENGINEERING, P.A.
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"The views, opinions, and/or findings contained in this report are those of the author(s) and should not be construed as an official Department of the Army position, policy, or decision, unless so designated by other documentation."

Signed: _____
Jeff Schwalm
Project Manager

Signed: _____
Michael Winningham
V.P., Munitions Response Services

U. S. ARMY ENGINEERING AND SUPPORT CENTER - HUNTSVILLE CORPS OF ENGINEERS

DESIGN REVIEW COMMENTS

PROJECT:Camp Croft Phazse 2 CN:0605506 Suspense:17jul

■ SITE DEV & GEO ☐ MECHANICAL ☐ SAFETY ☐ SYSTEMS ENG
☐ ENVIR PROT& UTIL ☐ MFG TECHNOLOGY ☐ ADV TECH ☐ VALUE ENG
☐ ARCHITECTURAL ☐ ELECTRICAL ☐ ESTIMATING ☐ OTHER
☐ STRUCTURAL ☐ INST & CONTROLS ☐ SPECIFICATIONS

REVIEW Draft Removal After Action report
DATE April 2006
NAME a.schwartz/ED-CS-G

ITEM	DRAWING NO. OR REFERENCE	COMMENT	ACTION
1	general	Deliver all GIS files for this project on CDROM IAW the SOW. Deliver all raw and final processed geophysical data for this project on CDROM. Please provide the raw data in ASCII XYZ format and the final data in Geosoft GDB and MAP formats. Ensure all MAP format files have their grid files packed with in the map files.	GIS was not a deliverable for this report but available layers will be provided to Mr. Schwartz under separate cover A: Data now included on CDROM
2	Para. 2.4.14.2.2, Second to last sentence	I do not believe this is true. I believe what happens is the foot-print of the anomaly essentially remains the same, but it decreases in amplitude. Or do you believe it increases as a function of Tx field geometry? If so, do you have any modeling or references to support?	A: Text Revised
3	Para. 2.4.15.2	The first sentence states distance metrics were used as part of the reacquisition QC. Please include those metrics here and how they were used.	A: While 1m or 39.4in defined a NC, anomalies with a reacqu offset greater than 18in were reviewed, the results of which can be seen in Appendix F4, Table F4-1. If a reasonable explanation existed for a reacqu offset of >39.4in the anomaly was not considered a NC. This reply is now reflected in the last 2 sentences of para. 2.4.15.1.4. The distance metrics reference was removed from para. 2.4.15.2.
4	Para. 2.4.16.3	State where all of the project photos can be found within the report. (Were all included with their respective dig sheets?) Please provide all project photos on CDROM as well.	A: Yes, all anomaly photos can be found with respective dig sheets (stated in para. 2.4.16.3). Other site photos are in Appendix J. All photos are also now included on CDROM.
5	Table 2-2	Second bullet: Thank you for the recognition, but please remove the "Schwartz", "Power Of Anomaly" will suffice (Sounds too much like Mel Brooks' "May the Schwartz be with you" from Spaceballs!) Last bullet: As a result of the QA MEC finding, you state the threshold was lowered to capture other similar items. Please clarify that these new criteria were	A: Schwartz removed. A: Revised text to indicate criteria applied throughout. Also that 4 of 13 additional targets were

ACTION CODES
A - ACCEPTED/CONCUR
D - ACTION DEFERRED
W - WITHDRAWN
N - NON-CONCUR
VE - VE POTENTIAL/VEP ATTACHED

U. S. ARMY ENGINEERING AND SUPPORT CENTER - HUNTSVILLE — CORPS OF ENGINEERS

DESIGN REVIEW COMMENTS PROJECT Camp Croft, SC CN 06-121-06 SD 17 July 06

☐ SITE DEV & GEO	☐ MECHANICAL	☐ SAFETY	☐ SYSTEMS ENG	REVIEW	Draft SSFR
■ ENVIR PROT& UTIL	☐ MFG TECHNOLOGY	☐ ADV TECH	☐ VALUE ENG	DATE	17 July 06
☐ ARCHITECTURAL	☐ ELECTRICAL	☐ ESTIMATING	☐ OTHER	NAME	M. Gooding/CEHNC-ED-CS-P /256-895-1635
☐ STRUCTURAL	☐ INST & CONTROLS	☐ SPECIFICATIONS			

ITEM	DRAWING NO. OR REFERENCE	COMMENT	ACTION
1.	Pg. 1-1 Par 1.3.3	The first sentence refers to Figure B-4. I could not find this figure. Please correct as necessary.	A. Corrected. Figure is now included
2.	Pg. 1-3 Sec 1.5.1	It would be better to at least name the people who served in the positions instead of referring to the Final SSFR dated April 2006. Listing the name will be sufficient.	A. Done
3.	Pg. 4-1 Table 4-2	There needs to be an explanation as to why there were 1238 plus 76 targets and only 502 digs.	A. Explanation provided at para 4.0.2. Also table heading changed.
4.	General	I think there needs to be an overall map showing this RA in relation to the other RAs that have taken place. We need a master map in some fashion showing all areas of Camp Croft that have been cleared. There are no other comments at this time.	A. This information is provided at www.campcroft.com. This site includes all reports of investigations completed at the Former Camp Croft by the various contractors. Maps of the ares are included at the site.

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U. S. ARMY ENGINEERING AND SUPPORT CENTER - HUNTSVILLE — CORPS OF ENGINEERS

DESIGN REVIEW COMMENTS

PROJECT:Camp Croft Phazse 2 CN:0605506 Suspense:17jul

■ SITE DEV & GEO ☐ MECHANICAL ☐ SAFETY ☐ SYSTEMS ENG
☐ ENVIR PROT& UTIL ☐ MFG TECHNOLOGY ☐ ADV TECH ☐ VALUE ENG
☐ ARCHITECTURAL ☐ ELECTRICAL ☐ ESTIMATING ☐ OTHER
☐ STRUCTURAL ☐ INST & CONTROLS ☐ SPECIFICATIONS

REVIEW Draft Removal After Action report
DATE April 2006
NAME a.schwartz/ED-CS-G

ITEM	DRAWING NO. OR REFERENCE	COMMENT	ACTION
		applied to all unexcavated anomalies throughout all datasets. Also, in the text, please specify if more MEC were recovered from the lower thresholds. If not, please assert so in the report and indicate this gives us high confidence all MEC were indeed detected and recovered.	investigated (F21_38, H20_21, H20_44, I22_5) and I22_5 resulted in a UXO. The remaining 9 items were not investigated (D17_37, G20_66, G20_68, I20_41, J21_59, P20_11, P21_24, P21_61, R20_47) and are characteristic of MEC-like items, based on the threshold.
6	Para. 2.6.2	Please revise report to include all references to work performed by Blackhawk Geophysics. They are not listed in Chapter 1 or in Table 1.1	Work performed by Blackhawk Geophysics for this phase of the project was done so after Blackhawk was acquired by ZAPATAENGINEERING, they are therefore referred to as ZAPATAENGINEERING. The Blackhawk reference in paragraph 2.6.2 was changed to ZAPATAENGINEERING's Golden, CO office.
7	Para. 5.1.3	Please confirm the statement, "These rapid responses resulted in omissions on dig sheets..." I was unaware this problem persisted during the Phase 2 work. No Further Comments	A: Revised text with removal of paragraph 5.1.3.

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Signed: _____
Jeff Schwalm
Project Manager

Signed: _____
Suzy Cantor-McKinney
V.P., OE Programs

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VOLUME II

ABBREVIATIONS AND ACRONYMS

ASR	Archives Search Report
ATV	All Terrain Vehicle
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
DA	Department of the Army
DERP	Defense Environmental Restoration Program
DD	Department of Defense (usually used in the designation of various DOD forms)
DGM	Digital Geophysical Mapping
DID	Data Item Description
DOD	Department of Defense
EE/CA	Engineering Evaluation/Cost Analysis
EM	Electromagnetic
EOD	Explosive Ordnance Disposal
FUDS	Formerly Used Defense Sites
GIS	Geographical Information System
GPO	Geophysical Prove Out
GPS	Global Positioning System
MK	Mark
MPA	Man Portable Adjunct
MTADS	Multi-sensor Towed Array Detector System
NIOSH	National Institute of Occupational Safety and Health
NCP	National Contingency Plan
OE	Ordnance and Explosives
OSHA	Occupational Safety and Health Administration
QA	Quality Assurance
QC	Quality Control
QCS	Quality Control Specialist
QCO	Quality Control Officer
QCSR	Quality Control Summary Report
RA	Removal Action
RAC	Risk Assessment Code
RCRA	Resource Conservation and Recovery Act
SAIC	Science Applications International Corporation
SAP	Sampling and Analysis Plan
SOW	Scope of Work
SSHP	Site Safety and Health Plan
SUXOS	Senior Unexploded Ordnance Supervisor
US	United States
US EPA	United States Environmental Protection Agency
USACE	United States Army Corps of Engineers
USAESCH	US Army Engineering and Support Center, Huntsville
UXO	Unexploded Ordnance
UXOQCS	Unexploded Ordnance Quality Control Specialist
UXOSO	Unexploded Ordnance Safety Officer
WP	White Phosphorus

1.0 INTRODUCTION

Refer to Final Site Specific Final Removal Report (SSFR) dated April 2006.

1.1 PROJECT OBJECTIVE

1.1.1 The objective of this task order was to perform a Removal Action (RA) at the Former Camp Croft in Spartanburg, South Carolina. The Contractor safely located, identified, and disposed of all explosive hazards to depth for all identified anomalies from five grids within Ordnance Operable Unit (OOU) 3. OOUs 11C and 11D were part of this project's SOW; however, they were not funded and will not be covered in this report.

1.1.2 The initial task order award for Croft Phase I was for polygons 17, 40, 40P GC2, 35P1, 35P3, and 35P4. This task order award for Croft Phase II was for the intrusive excavation of selected target anomalies within five polygons: 29P (0.81 acres), 31P (1.1 acres), 32P (.74 acres), 33P (.76 acres) and 35P2 (.33 acres). Digital geophysical methods were used for Quality Control (QC) inspections and to verify that removal activities were completed within the grids prior to the Government's Quality Assurance (QA) activities. Refer to Appendix B for a map indicating the location of Grids 29P, 31P, 32P, 33P and 35P2 of OOU 3. The UXO team identified additional anomalies within data gap areas after geophysical mapping and these anomalies were intrusively investigated prior to turning the grids over to the Government for QA procedures.

1.2 PROJECT AUTHORITY AND GENERAL GUIDANCE

1.2.1 Refer to Final SSFR dated April 2006, i.e., Croft Phase I.

1.2.2 Refer to Final SSFR dated April 2006, i.e., Croft Phase I.

1.3 SITE HISTORY

1.3.1 Refer to Final SSFR dated April 2006, i.e., Croft Phase I.

1.3.2 Refer to Final SSFR dated April 2006, i.e., Croft Phase I.

1.3.3 OOU 3 is located in the former cantonment area, north of the current Camp Croft State Park Natural Area (Figure B-4, Appendix B). Practice grenades, ordnance related scrap, and 2.36-inch rocket fragments that may have been overshot from another local firing range were found in OOU 3 during the Phase I Engineering Evaluation/Cost Analysis (EE/CA) investigation conducted in 1997. During a removal action conducted in July 1997, seven Mark (MK) II fragmentation grenades were recovered, as well as numerous practice hand grenades and grenade parts, suggesting that this area may have been a former hand grenade practice area. The previous work areas and specific work completed by UXB International, Inc. (UXB) are identified in the Final Removal Report dated April 2001. This report stated that three (3) small pits in Grid 17 and one (1) small pit in Grid 40 remain to be cleared (overall grids were previously mapped using digital geophysical methods and intrusively excavated). Twelve (12) M15 white phosphorous (WP) grenades were excavated from one (1) of the pits in Grid 17 and 150 pounds of smoke canisters were excavated from the pit in Grid 40; however, additional excavation activities were halted to reevaluate safety measures and develop proper procedures prior to continuing with the excavations. ZAPATAENGINEERING resumed the intrusive operations in

January 2005. ZAPATAENGINEERING was contracted to investigate three suspected burial pits in an area of Grid 17 where the M15 WP grenades were previously located. Following the geophysical survey, three additional pits were suspected in the same vicinity. Engineering controls consisted of a metal canopy covered with a non-flammable tarpaulin over the pit, and vertical aluminum barricades surrounding the pit with an opening on one side just wide enough to allow personnel and equipment access. A dig team consisting of two UXO technicians and an equipment operator under the guidance of the SUXOS conducted the subsurface removal and inspection of intact M15 grenades and/or munitions debris in all but one pit, which contained several large "hot" rocks. Excavation spoils were placed on geotextile material to prevent the spread of possible contamination. Twenty-two M15 WP grenades were turned over to the Sheriff Department as outlined in the Work Plan. Each excavated pit passed ZAPATAENGINEERING's QC and the government's QA inspections before being back-filled.

1.3.4 ZAPATAENGINEERING was also tasked with the excavation of a burial pit in Grid 40 where 105mm smoke canisters were located by the previous contractor. An MSD of 200 feet was established without engineering controls because no explosive items were suspected. A dig team consisting of two UXO technicians and an equipment operator under the guidance of the SUXOS conducted the subsurface removal and inspection of cultural and munitions debris. Excavation spoils were also placed on geotextile material to prevent the possible spread of contamination. The excavated pit passed ZAPATAENGINEERING's QC and government's QA inspection.

1.3.5 The removal action included single point anomalies that were identified through geophysical survey and anomaly reacquisition. Selected anomalies were excavated and mag/flag/dig operations covered the data gaps. A total of 28 grids within approximately 3.75 acres were completed throughout this project. All cleared grids passed a quality control check and a government quality assurance evaluation by the onsite USAESCH government representative prior to UXO personnel demobilization.

1.3.6 Refer to Final SSFR dated April 2006.

1.4 TECHNICAL INSTRUCTION

ZAPATAENGINEERING, under contract to the USAESCH, conducted the removal action during January 2006. ZAPATAENGINEERING worked in close coordination with the USAESCH while developing the project scope, work plan, Explosive Safety Submission, technical directives, and execution of the removal. The USAESCH Task Order Statement of Work (SOW) outlined the USAESCH guidance for the overall project. ZAPATAENGINEERING completed the work in accordance with the USAESCH SOW and the approved project work plan entitled "Ordnance and Explosives Removal Action Work Plan, Former Camp Croft, Spartanburg, SC (Ordnance Operable Units 3, 11C, and 11D)".

1.5 TECHNICAL SCOPE AND APPROACH

Refer to Final SSFR dated April 2006.

1.5.1 Project Team Organization

1.5.1.1 Project Manager (ZAPATAENGINEERING)

The Project Manager was Mr. Jeff Schwalm. Mr. Schwalm was responsible for ensuring execution of the project in a timely and cost effective manner. He was also responsible for communicating with the USAESCH Project Manager, oversight of the performance of the project team, coordinating all contract and subcontract work and problem resolution. His responsibilities included monitoring adherence to the project schedule and overall management of the project budget, including assurance that subcontractor costs were within budget.

1.5.1.2 Senior Geophysicist (ZAPATAENGINEERING)

Mr. David Smith was responsible for ensuring that high-quality geophysical data were collected, analyzed and evaluated in accordance with contract and SOW requirements. His responsibilities included monitoring geophysical subcontractor field operations, reviewing raw data for quality control and evaluating final data for contract and SOW compliance.

1.5.1.3 UXO Quality Control Specialist (ZAPATAENGINEERING)

Through the duration of fieldwork, Mr. Glen T. (Terry) Farmer was the Unexploded Ordnance Quality Control Specialist (UXOQCS) responsible for quality control of all site activities as required by the USAESCH and the SOW. The UXOQCS was responsible to the ZAPATAENGINEERING Project Manager for project quality control, which included administering the program and coordinating site activities with the Senior Unexploded Ordnance Supervisor (SUXOS). He was also responsible for maintaining the site inventory of government and subcontractor equipment.

1.5.1.4 UXO Safety Officer (ZAPATAENGINEERING)

Through the duration of fieldwork, Mr. Glen T. (Terry) Farmer was the UXO Safety Officer (UXOSO). He was responsible for ensuring site safety and compliance with the safety provisions of the Work Plan and the SSHP. The UXOSO had the on-site responsibility and authority to halt work and to remove personnel from the site if working conditions changed and affected on-site/off-site safety or health. He was the primary point of contact for any on-site emergency and conducted safety briefings daily.

1.5.1.5 Senior UXO Supervisors (ZAPATAENGINEERING)

Mr. Doug McCue was the senior UXO Supervisor (SUXOS). He was responsible for on-site management of UXO services including direction of all UXO site operations and coordination with the UXOQC/SO, Project Manager(s) and sub-contractors. In addition, his responsibilities included inspection/certification of MD, MD disposition, and the documentation/reporting of UXO activities. He also coordinated site evacuations and golf course closure schedule.

1.5.1.6 UXO Technicians

During the reacquisition of geophysical targets; intrusive operations; OE removal and/or inspection, Bruce McClain (Tech III), Scott Russell (Tech III/II), Rob Yates (Tech III/II), Daney Gipson (Tech II), Rick Funk (Tech II), Ed English (Tech II), Michael Fields (Tech II), David Patton (Tech II), Joel Morrell (Tech II), Charles Wentzel (Tech II), Bryce Vroman (Tech I), and Norm Schwalm (Tech I) were UXO Technicians on-site. The UXO Technicians reported to the SUXOS. While on-site, UXO Technicians were responsible for conducting UXO services including UXO escort, intrusive removal operations, UXO disposal operations and scrap management.

1.5.1.7 Geographical Information System (GIS) Manager (ZAPATAENGINEERING)

Mr. Clay Perry was responsible for development and maintenance of the project maps and figures in accordance with contract and SOW requirements.

1.5.1.8 Geophysical Mapping and Reacquisition (NAEVA Geophysics)

Ashley Mowery and Geru Williamson of NAEVA Geophysics were responsible for conducting the digital geophysical data collection. Their responsibilities included establishing the geophysical survey area within grid boundaries, collecting grid data, reacquiring anomalies, maintaining geophysical equipment and transferring data to their respective offices for processing. While onsite, the geophysical survey team reported to the ZAPATAENGINEERING Project Geophysicist.

1.5.1.9 Surveyor (B. P. Barber)

B. P. Barber was responsible for conducting surveys of the five polygons and establishing the locations of sub-grids within by marking grid corners with wooden stakes. While on site, the survey team reported to Mr. Terry Farmer.

1.5.1.10 Mechanical and Manual Brush Removal (ZAPATAENGINEERING)

Clearcreek Brushcutting provided brush removal for the wooded areas in Lots 29P, 31P, 32P, 33P and 35P2.

TABLE 1-1 PROJECT PERSONNEL ROLES AND PARTICIPATION

PERSONNEL	ROLE	SITE PREP BRUSH REMOVAL	MAG & FLAG REMOVAL	GEOPHYSICAL – OE REMOVAL		SCRAP MANAGE	SITE RESTORE
				EM61 SURVEY	REACQUISITION & REMOVAL		
US Army Engineering and Support Center, Huntsville (USAESCH)							
Brendan Slater	Project Manager						
Walter Zange	Safety Officer		*		*	*	*
Andrew Schwartz	Sr. Geophysicist						
ZAPATAENGINEERING, P.A.				*	*		
Suzy Cantor-McKinney	Program Manager						
Jeff Schwalm	Project Manager	*	*	*	*		
David Smith	Senior Geophysicist			*	*		
Derek Anderson	Project Scientist				*		
Misti Williams	Geophysicist						
Rachel Woolf	Project Geophysicist						
Nate Reel		*		*			
Doug McCue	SUXOS	*	*		*	*	*
Terry Farmer	UXOSO/QCS	*	*	*	*	*	*
Bruce McClain	UXO Tech III	*	*		*	*	
Scott Russell	UXO Tech III/II	*	*		*	*	
Rob Yates	UXO Tech III/II	*	*		*	*	
Daney Gipson	UXO Tech II	*	*		*	*	
Joel Morrell	UXO Tech II	*	*		*	*	
David Patton	UXO Tech II	*	*		*	*	*
Rick Funk	UXO Tech II	*	*		*	*	
Ed English	UXO Tech II	*	*		*	*	
Michael Fields	UXO Tech II	*	*		*	*	
Bryce Vroman	UXO Tech I	*	*		*	*	
Norm Schwalm	UXO Tech I	*	*		*	*	

Personnel	Role	Site Prep Brush Removal	Mag & Flag Removal	Geophysical – OE Removal		Scrap Manage	Site Restore
				EM61 Survey	Reacquisition & Removal		
BP Barber (Surveyor)							
Johnny Kinsey	Lead surveyor						
NAEVA Geophysical Services							
	Geophysics Manager						
Alex Kostera	Geophysicist				*		
Penny Johnson	Geophysicist Tech				*		
Ashley Mowery	Geophysicist						
Geri Williamson	Geophysicist						

* Indicates that personnel were present during portions of the work phase

2.0 OE INVESTIGATION AND REMOVAL

2.1 PROJECT BACKGROUND

2.1.1 Physical Site Information

2.1.2 Refer to Final SSFR dated April 2006 / Topography

2.1.3 Refer to Final SSFR dated April 2006 / Geology

The former Camp is located on a clearly discernable high-magnetic response feature on the aeromagnetic map of the area (U.S. Geological Survey Map GP-951). Spatially variable magnetic susceptibility in the soil and underlying rocks in this magnetic source has been a serious problem in geophysical data interpretation in this area for more than ten years, and seriously impacted anomaly selection in the current DGM effort. Refer to Final SSFR dated April 2006.

2.1.4 Climate

The Spartanburg County climate is temperate, and rainfall is well distributed throughout the year. The prevailing winds are primarily from the southwest but are from the northeast in late summer and early fall. Average wind velocity is about eight miles per hour. Up until 1968, the average relative humidity per year was approximately 70 percent, with from 1/10 inch of rain (about 76 days/year) up to one inch or more (approximately 14 days/year). The highest rainfall recorded is 73.93 inches in 1929. Warm weather generally lasts from May into September with few breaks in the heat during mid-summer. Most summers have one or more days when the temperature exceeds 100 degrees Fahrenheit. About 23 percent of the rainfall occurs in fall. Winters are mild and relatively short with about 60 days at freezing temperatures.

2.1.5 Vegetation

Refer to Final SSFR dated April 2006.

2.1.6 Site Utilities

Operations in all areas were not affected.

2.1.7 Overall Site Accessibility and Impediments

Site accessibility was sporadic through the duration of the project due to difficulties in contacting and coordinating evacuations of the residents within the MSD of operations.

2.2 AREAS OF INVESTIGATION

The areas of investigation were composed of five surveyed polygons varying from unimproved wooded areas to landscaped golf course and residential areas. All grids were geophysically mapped. The geophysical anomalies to be intrusively investigated in each grid were picked by NAEVA Geophysics and ZAPATAENGINEERING. They were relocated by reel tape measurements using local X and Y coordinates. Data gaps were identified in areas where the geophysical survey process was impeded by topography and obstacles. These gaps were cleared using the mag/flag/dig technique.

2.3 MAJOR WORK STAGES

2.3.1 The site work consisted of several stages:

- Site Preparation (including brush clearing and land surveying)
- Digital Geophysical Mapping (DGM)
- Anomaly Reacquisition
- Anomaly Removal
- Scrap Management
- Disposal Operations
- Quality Control/Assurance

2.3.2 UXO technicians performed removal of surface and subsurface anomalies throughout the project. The geophysical mapping and anomaly reacquisition were conducted as separate phases by NAEVA Geophysics. Munitions debris was managed throughout the duration of the project. Debris metal was sealed in a thirty-gallon barrel, secured using numeric seals and stored in a locked bunker on-site. Each of the work stages is described in detail below.

2.3.1 Site Preparation

ZAPATAENGINEERING established an office to support field operations to include government and subcontractor representatives in the Creek Golf Club maintenance building. This facility provided power and three phone lines. The Spartanburg County Sheriff's Department provided support as per the Work Plan to dispose of grenades safe to be moved to a disposal area. The munitions debris/equipment storage facility was located at the Camp Croft State Park property on Dairy Ridge Road.

2.3.1.1 Surveying Operations

B. P. Barber Surveying, a licensed land surveyor in SC, verified the property boundaries, surveyed in grid corners, and created as-built hard copy and electronic maps. Survey personnel were escorted by UXO technicians while on-site. Survey coordinates can found in Appendix C.

2.3.1.2 Brush Clearing Operations

Tree and brush removal was required in Grids 35P2, , 29P, 31P, 32P and 33P to support the geophysical survey effort and subsequent OE removal action. During the brush removal operations ZAPATAENGINEERING used a brush clearing subcontractor utilizing mechanical equipment to cut and remove brush, small trees, and large fallen trees.

2.4 GEOPHYSICAL INVESTIGATION, REACQUISITION, REMOVAL

2.4.1 Geophysical Prove-out

See Final SSFR dated April 2006.

2.4.2 Geophysical Investigation (DGM)

2.4.2.1 Objectives

The objective of the geophysical mapping effort was to collect high quality DGM over as much of the area as possible, to document and verify which ground was surveyed, account for ground not surveyed, and traverse it with EM or magnetic hand-held instruments colloquially known as

hand-held instruments (HHI). Anomalies were excavated and documented to verify that each HHI/dig had cleared the ground to the desired depth, and that complete coverage was achieved.

2.4.2.2 DGM Quality Control Procedures, Tests and Metrics (DGM QC Sheets)

2.4.2.2.1 DGM quality control began by determining acquisition parameters during the GPO, and by adherence to DID OE 005-05.01 Attachment B. Following discussions between USAESCH and ZAPATAENGINEERING, additional quality control procedures were established to achieve the objectives of the DGM effort. The basic specifications developed in the GPO were that a tight line spacing of 0.5m or 1.5 ft was needed, with data spacing along lines as specified in the Work Plan. Data gaps of sufficient size to hide an anomaly were documented on DGM maps. These maps were made available to dig crews for subsequent clearing by HHI/dig teams. Parameters that help define and quantify data quality on grids or transects are listed on DGM Control Sheets, one sheet for each grid or transect, or selected groups thereof. Each parameter in the DGM control sheet is followed by a column defining the QC test or procedure, the frequency at which applied and the metric that is to be met by the data. The metrics used in this control sheet were determined during the GPO, from standard practice, or from analysis of the geophysical situation at the site. Columns of QC results or actions follow, with additional columns for pass / fail results, a column for explanatory comments, date and responsible QC person. A QC test or procedure and testing frequency are listed by each parameter. See Appendix F3 for further detail regarding Data Acquisition Quality Control and DGM Quality Control Sheets.

2.4.2.2.2 QC Outcome/Result Summary. Failures of an individual QC metric did not constitute a failure of the QC process for a given grid. Response from QC nails seldom was beyond tolerance and therefore did not constitute a QC failure. Most terrain was consistently moderate areas that were too rough for proper QC were noted and covered by HHI/dig methods. No grids were passed from QC to QA without resolution of all metric failures and subsequent confidence in the proper clearance of a grid.

2.4.2.2.3 There were three Corrective Action Requests (CARs) as seen in Appendix F5. In summary, the CARs addressed the anomaly selection, QC, and investigation procedure, which resulted in lowering the anomaly selection threshold and the development of additional QC steps.

2.4.2.3 Data Acquisition

2.4.2.3.1 The digital geophysical mapping (DGM) investigation was conducted using an EM-61 Mk II time-domain electromagnetic metal detector as selected in the GPO process. The Camp Croft OOU 3 polygons, as identified within the SOW, are situated around residences and a golf course. DGM within this area was organized into five polygons, each shaped by property line boundaries (Figure B-1). Survey stakes were placed on the boundaries of all polygons by a professional land surveyor (PLS), who then set corner stakes for 100-foot by 100-foot sub-grids (Figure C-1). Ropes with an alternating color scheme marked at 3-foot intervals were then placed east/west across the grid at 25-foot intervals. These ropes facilitated straight-line profiling, and were used to place fiducial marks in the raw data, allowing distance corrections to be applied during data processing.

2.4.2.3.2 Quality control tests were conducted in a consistent, systematic manner throughout the duration of fieldwork for both data collection and reacquisition, in order to maintain confidence in data reliability.

2.4.2.3.3 A location free of subsurface metal and near the survey area was designated as a daily calibration point for the EM-61 Mk II. A morning vibration test was preformed daily to identify, and if necessary replace, shorting cables and broken pin-outs. The test involved shaking all of the cables while the instrument was held in a static position collecting data. If excessive noise was evident, corrective measures were taken until background noise was lowered to normal background levels. Static tests were also conducted by collecting readings with a stationary instrument positioned over the calibration point. After collecting data for three minutes or more in the static mode, a trailer hitch ball was placed in the center of the coils and the instrument's response was observed for approximately one minute. The item was then removed and static readings were continued. This test was performed at the beginning and end of each day to confirm that the instrument was functioning properly, as indicated by a stable and repeatable response.

2.4.3 Data Processing

2.4.3.1 Objectives

Data processing objectives include capturing all informative response from the DGM and converting that information into maps, profiles and statistics used to characterize the area under study. An additional objective is the detection of all ordnance to depths determined feasible during the GPO process. This was guided the intrusive investigation and removal of all potential MEC items matching QA performance criteria.

2.4.3.2 Data Processing QC

DGM maps were examined for along line data spacing and for coverage of grids. Any large gaps caused by obstacles or terrain were noted and addressed as shown on the DGM QC Sheets. Widely spaced or compressed data points were investigated and corrected by reference to fiducial point entries. Background noise was estimated and its level was entered on the sheets. NAEVA examined de-median filter profiles vs. original profiles to determine that no artifacts were introduced or valid anomalies lost. Hanning filter results were compared on a grid-to-grid basis.

2.4.3.3 Field Data Processing

The geophysical data were temporarily stored in the instruments and then downloaded into a laptop computer for on-site review and editing. Using Geonics DAT61MK2 software, the data positioning was corrected using the fiducial marks in the data. Once in-field processing and review was completed, the data were electronically transferred to NAEVA's Charlottesville, Virginia office for advanced processing and target selection.

2.4.4 Conventional Processing

Geosoft's Oasis Montaj software was utilized to process and contour the data for final presentation maps. Geosoft's UX-Detect software package was employed to identify and characterize potential MEC targets. Conventional geophysical data processing included the following steps:

- Instrument drift correction (leveling);
- Lag correction;
- Digital filtering and enhancement (if necessary);
- Gridding of data;
- Selection of anomalies with unique identifiers;
- Conversion of local grid coordinates to UTM coordinates;
- Preparation of geophysical maps and target lists.

2.4.5 Instrument Drift Correction Leveling

A de-median filter was applied to the geophysical data to remove sensor drift and level the data to a zero baseline. Initially, additional refinement of the automated leveling was performed on Channels 1, 2 and 3, and then SUM of these channels was calculated. After the processing of the first few data sets, the leveling approach was modified to expedite the processing by auto-leveling the individual channels, calculating the SUM, then performing additional refinement only on the SUM channel.

2.4.6 Lag Correction

Geosoft's lag GX was used to apply an offset correction to the data based on direction of travel.

2.4.7 Digital Filtering and Enhancement

Two additional filters were applied, as necessary, to resolve anomalous features having wavelengths associated with MEC anomalies meeting performance criteria (Mk II hand grenade). A non-linear, or de-spiking, filter was used for removal of very short wavelength, high amplitude features. Features that have narrow width with disproportionate amplitude compared to GPO seed items were removed. The Hanning, or grid smoothing, filter was used to reduce low amplitude, high frequency noise , smoothing the response of gridded data. For example, low amplitude noise may occur in areas of high instrument response, causing multi-peaked features. Applying a smoothing filter reduces the noise, creating a more evenly shaped anomaly. For this project, the Hanning filter was used, mainly in areas with high cultural contamination such as buildings and associated features. The Hanning filter tends to slightly reduce the overall amplitude of the data. When applied to the GPO data, it slightly reduced the peak amplitude of the seeded items. However, no conditions requiring the use of de-spiking and Hanning filters were encountered at the GPO site. Use of the de-spiking and Hanning filters is validated by standard practice and prior use. Verification of inadvertent introduction or removal of significant anomalous response was done by comparing profiles after de-spiking and by comparing grids after using the Hanning filter. As stated in 2.4.2.2, the DGM QC process was determined from the GPO, from standard practice, and from analysis of the geophysical situation at the site.

2.4.8 Gridding of Data

The sensor data were gridded using a minimum curvature gridding method with a 0.2 meter grid cell size and 1 meter blanking distance and displayed on the screen in gridded and pixel format. Data for Channels 1, 2, 3 and the SUM of Channels 1, 2, and 3 were generated.

2.4.9 Selection of Anomalies

The UX-Detect module within Oasis Montaj identifies peak amplitude responses within the gridded data associated with, but not limited to, MEC items. Anomalies may generate multiple

target designations dependent on individual signature characteristics. After the automated target set was generated from the gridded SUM channel data, a qualified geophysicist evaluated the entire data set and moved or removed targets where appropriate. Additionally, profiles of lines were analyzed to select anomalies that were not selected by the UX-Detect module or by individual examination of the plan map images, yet deemed to have potential as UXO targets. Peak SUM channel responses from the gridded data were reported at the selected targeted locations and each target was assigned a unique Target ID; a fixed threshold of 5 mV in the SUM channel was used. Two additional processes were used to discriminate the geologically magnetic responses, which are discussed below under soil-metal discrimination and Power of Anomaly.

2.4.10 Local Coordinate to UTM Conversion

See Final SSFR dated April 2006.

2.4.11 Preparation of Geophysical Maps and Target Lists

Geophysical colour contour maps containing the gridded data and selected target locations were generated for each 100 x 100 foot sub-grid cell in *.map (Geosoft Map) and *.JPG (image file) format. An output of the final data in *.gdb (Geosoft Database) format was generated. The geophysical maps were georeferenced and positioning data were reported in meters using the NAD83 UTM Zone 17N coordinate system. Target Lists were generated in Excel format containing: Unique Target ID, local x, y coordinates, UTM coordinates, peak SUM response value, and or Chi^2 response value, channels and comments (e.g., known cultural features).

2.4.12 Soil-Metal Discrimination (Chi-Squared) Analysis

See Final SSFR dated April 2006.

2.4.13 Chi^2 Discrimination Analysis

Soil-metal discrimination analysis examines each measured data point (approximately 10,000 per 100 x 100 ft sub-grid), and calculates the difference relative to the expected soil response vector by a Chi^2 criterion. Processing using the Chi^2-discrimination software involves data review, local soil response vector estimation and leveling parameter choices. The resulting output files contain Chi^2, Chi and auto-leveled de-drifted time gates 1 to 4. Additional non-Chi^2 targets were investigated in order to evaluate the residual risk due to metal items, which, at certain orientations, decay like magnetic soil. Specifically, MEC items can have different decay responses depending on their orientations with reference to the detection system coils. For example, a 60mm mortar in a vertical position was shown (*Smith et al,)* to have a slower decay than the Croft soil. The same item in a horizontal position decayed faster than the soil. Clearly, such an item at some intermediate orientation will have a response equal to that of the soil, and thus will not be detected. This problem was anticipated and countered by selecting targets by profile analysis and the Power of Anomaly analysis.

2.4.14 Selection of Target Anomalies for Intrusive Investigation

Targets were selected for intrusive investigation based on a combination of profile analysis, Chi^2 analysis, and the Power of Anomaly analysis. Targets were initially selected using Oasis target selection software and by NAEVA geophysicists examining spatial aspects. Power of Anomaly values were calculated for these targets. In addition, profiles were analyzed in order to judge anomaly similarity to GPO results. This detailed profile analysis included examining anomaly

wavelength, presence on two or more lines, shape, apparent (visual) decay characteristics and signal-to-noise ratio (SNR). An independent Chi^2 analysis was then performed resulting in additional targets.

2.4.14.1 Target Selection Using Chi^2 Discrimination Analysis

2.4.14.1.1 The Chi^2 algorithm examines the time decay of each data point in a grid or transect and compares it to the time decay determined for the soil of the area. A threshold of departure from the soil decay curve greater than a given noise envelope is chosen and the resulting sets of anomalous data points are plotted in Oasis. While the decay can be either faster or slower than the soil decay, it is the absolute value of the difference that matters. Targets are selected from these sets of anomalous data points by amplitude and spatial considerations. Likely isolated or discrete MEC targets are comprised of a cluster of adjacent data points. The main spatial aspect of the Croft Chi^2 targets for a Mk II grenade is that they cluster in about a meter wavelength; multiple items in a pit form large-area anomalies as they do with conventional data processing. The meter wavelength results from decay characteristics, not from any algorithm-imposed spatial parameter. Chi^2 process will not detect every piece of metal in the ground to include every MEC item. Some metal pieces will not provide sufficient response to be detected; MEC items in certain orientations will have time decay indistinguishable from soil. In an effort to capture these items, additional data analysis was conducted and additional anomalies were investigated.

2.4.14.1.2 During a previous phase of Croft, the Senior Geophysicist explained to the SUXOS and Project Manager the attributes of Chi^2 and that the confidence level is high that there is significant metal associated with certain levels of Chi response. This required the UXO team to conduct thorough investigations of anomalies to ensure bottle caps and hot rocks weren't documented as target anomalies. However, further analysis of the Chi^2 processing technique used for Croft showed that some geologic responses might be present in the Chi^2 data. It is important to note that the Chi^2 analysis was performed in an effort to reduce the geologic response at the Former Camp Croft, which it did; geologic response was not, however, eliminated. Recent Chi^2 processing results from subsequent projects indicate that some large amplitude discrete anomalies actually result from soil and/or magnetic rock.

2.4.14.2 Target Selection Using Power of Anomaly (POA)

2.4.14.2.1 Supplemental analysis was performed to detect metal missed by Chi^2. A sequence of SQL scripts was sent from Mr. Andrew Schwartz to ZAPATAENGINEERING in an effort to capture MEC like items that Chi^2 processing did not detect. The scripts were used to calculate the total anomaly signal power and signal to noise ratios based on signal power. The process is referred to as the Power of Anomaly (POA) analysis.

2.4.14.2.2 The POA is calculated from the intensity and the areal/spatial size of the anomaly. If an anomaly is near surface, it should have a high amplitude response with a small spatial size. As the anomaly's depth below the surface increases, the foot-print of the anomaly essentially remains the same, but it decreases in amplitude.

2.4.14.2.3 The outputs of the POA are the Sum of Signal Squared (empirical) and the Signal to Noise Ratio (SNR) (empirical). ZAPATAENGINEERING software engineers modified Microsoft Access queries provided by Mr. Schwartz. The geophysical data and target lists were exported

from Oasis to Microsoft Access format and the queries were applied. The results were a Sum of Signal Squared and a SNR value for each target initially selected by NAEVA. No new targets were selected during this process.

2.4.14.2.4 In order to select an appropriate value for the Sum of Signal Squared and the SNR, anomalies in the geophysical data caused by known Mk II hand grenades from Croft I and the GPO from Phase II were analyzed. The results, sorted by Sum of Signal Squared, are shown in Table 2-1.

TABLE 2-1 RESULTS OF POWER OF ANOMALY ANALYSIS FOR CROFT PHASE I AND CROFT GPO PHASE II.

PHASE	TARGET ID	SUM OF SIGNAL SQUARED	SIGNAL TO NOISE RATIO	COMMENTS
Phase I	L-17_21	2498.40	171.07	Mk II Grenade
Phase I	L-17_20	4178.08	163.43	Mk II Grenade
GPO Phase II	GPO_AF-49	4994.52	122.69	Seed E
Phase I	M-18_3	5386.15	260.55	Mk II Grenade
GPO Phase II	GPO_AF-34	5409.03	132.96	Seed A
GPO Phase II	GPO_AF-26	6659.98	171.43	Seed G
Phase I	K-22_10	8347.97	394.10	Mk II Grenade
GPO Phase II	GPO_AF-40	8431.19	207.80	Seed A
GPO Phase II	GPO_AF-23	10289.41	265.40	Seed G
GPO Phase II	GPO_AF-27	15598.45	402.86	Seed F
GPO Phase II	GPO_AF-19	16517.89	426.66	Seed F
Phase I	K-23_3	16948.30	769.38	Mk II Grenade
Phase I	P-15_11	37570.98	911.22	Mk II Grenade
Phase I	M-17_2	72781.31	3613.77	Mk II Grenade
GPO Phase II	GPO_AF-09	223437.99	5532.47	Seed C
Phase I	K-21_6	878677.10	32479.17	Mk II Grenade

2.4.14.2.5 The Sum of Signal Squared ranged from approximately 2,500 to over 878,000. The SNR ranged from 122 to over 32,000. From this data, target picking threshold of a Sum of Signal Squared greater than 2,000 and a SNR greater than 110 were used to identify potential MEC. These values afforded at least a 10% safety margin for the SNR and a 20% safely margin for the Sum of Signal Squared.

2.4.15 Anomaly Reacquisition

2.4.15.1 Objectives

2.4.15.1.1 The objectives of anomaly reacquisition are verification and documentation that the interpreted target locations are valid, that they can be reacquired within acceptable offsets by standard and reproducible survey methods, and to document that the target response is representative of MEC or similar objects.

2.4.15.1.2 Acceptance criteria for validation of reacquired targets were that the reacquired location was within 1m of the given target location. In No Contact instances, the original pin flag was left in place and dig teams investigated the site. Digging would progress until an appropriate source of anomalous response was found, or the required depth was reached with no signal, in which case the target was labeled a No Contact.

2.4.15.1.3 When reacquiring selected targets, NAEVA first established corner points for the subject grid. After establishing grid corner points, NAEVA personnel placed two tape measures along the north-south axis of the grid and one tape measure along the east-west axis of the grid. The X (Easting) tape measure was moved up and down between the two Y (Northing) tape measures to get accurate X and Y locations based on the dig sheet information. Pin flags labeled with the unique target identification were then positioned on the ground.

2.4.15.1.4 Reacquisition targets were picked based on their respective Sum response and/or by Chi^2 response. A Geonics EM-61 Mk II was used for reacquisition of targets at Camp Croft, employing the first time-gate (Channel 1) and/or real time Chi^2 values to determine peak responses of anomalies. After routine instrument testing as outlined in Section 2.4.2.3.3, NAEVA nulled the instrument in an area of the grid with a low and quiet background response. Using the nulled instrument response as a baseline, NAEVA approached each target looking for a peak response in Channel 1 and/or Chi^2 commensurate with the response from the initial survey. Reacquisition was methodical and slow for optimal SNR. NAEVA personnel recorded the Channel 1 and/or Chi^2 response of all reacquired targets in hand held PDAs. Once a peak had been established in one direction, the NAEVA instrument operator then turned 90 degrees and located the same peak. If the peak response was in a different location, but within one meter of the original X and Y coordinates of the target, the pin flag was relocated to the new location and the direction and distance (offset) was recorded on the dig sheet. In general, an offset greater than a meter would not be considered an original target anomaly, and the reacquisition result would be noted as a No Contact. PVC pin flags were used to identify the original and final locations of all targets on the ground. If the target needed to be relocated, a pin flag was placed at the original X and Y of the anomaly, an additional pin flag was placed to identify the target's final location. While reacquisition offsets greater than a meter (39.4in) were considered No Contact, if a reasonable explanation existed for an offset beyond this tolerance, the anomaly may not have been classified as No Contact. Anomalies with a reacquisition offset greater than 18in were reviewed, the results of which can be seen in Appendix F4, Table F4-1.

2.4.15.2 Additional QC of Reacquired Targets

In addition to the above referenced QC of reacquisition offsets, a comparison of amplitude response was also conducted. Reductions in amplitude response from Acquisition to Reacquisition of greater than 50% were reviewed as part of the QC process. The values and results are tabulated in Appendix F4. Note that not all anomalies have reacquired amplitudes

2.4.16 Intrusive Investigation

2.4.16.1 In areas inaccessible with the EM-61 Mk II, such as pits, or areas where cultural impediments such as fences or residential property interfered physically or geophysically, ZAPATAENGINEERING conducted surface and intrusive investigation of targets by locating X and Y coordinates with reel tape measurements, and by verifying the immediate area with

Schonstedt® magnetometers. In areas of DGM the limitation of the Schonstedt® in detecting items at required depths was overcome by excavation of soil to one foot below ground surface in the area of any surface No Contact. By using this process, the effective detection range of the Schonstedt® could be increased 'down hole', to the extent allowing detection of an item at the required depth.

2.4.16.2 The decision to use Schonstedt® instruments was based on the demands of site-specific conditions, and the confidence of the QC process. The ability to collect accurate data was compromised in certain areas by proximity to physical and geophysical interference. Grid data sheets were consulted to determine the maximum amplitude data for each contact. An EM 61 Mk II with real time response in both Channel 1 and Chi values was used to verify excavations to reduce geologic or no contact results. This Geophysics QC (GeoQC) was highly effective in ensuring that the actual anomaly that was identified by the geophysical survey was recovered during intrusive investigations. All target selections were reviewed by ZAPATAENGINEERING and were intrusively investigated by the UXO teams.

2.4.16.3 Under the guidance of the SUXOS, a seven-man team of UXO technicians conducted the removal action, inspecting all MEC and MD items. Items were excavated by hand to the depth of detection using standard hand tools. The teams placed Mini Open-Faced Barricades (MOFB) over each subsurface anomaly in order to reduce the minimum safe distance (MSD) for personnel and protect property. After verifying removal of the anomaly source using Schonstedt® magnetometers and/or the EM 61 Mk II as described in the previous paragraph Anomaly results were recorded by the UXO Tech III using Trimble PDA's on to a digital digsheet database. This was far superior to paper digsheets in that anomaly descriptions were standardized, omissions were eliminated or minimized and the transfer of information to personnel who analyzed the data was fast and accurate. Digital photographs were taken for each anomaly recovered with identifying information recorded on white boards, which are in Appendix D3 with respective Dig Sheet. Dig teams took care to restore excavated areas to their original state. Anomalies detected under the asphalt cart path on the golf course were not excavated. The acceptance criterion for each individual target was that an item meeting predetermined performance criteria was recovered from the excavation or that the hole was cleared by Schonstedt® response after being dug to adequate depth as determined from the GPO.

2.4.16.4 The protocol for QC of dig results includes verifying that the mV response match the item recovered, confirming that offsets are within tolerance, and assuring that the nature of the item recovered from the excavation is consistent with target on data map. The QC of investigated anomalies received increased scrutiny during this field effort, due in part to comments received after the 2005 field effort and the evolution of our corporate procedures. The additional QC steps included using the EM61 MK2 to GeoQC excavations in real time, ensuring removal of the target anomaly for those anomalies flagged by the QC process for further evaluation. This was possible for both Chi and Conventional/SUM targets. Pictures were also taken of debris removed from the excavation to support the project geophysicist's GeoQC efforts. Also all field results for excavations were entered in a data logger so that data collected could be analyzed more quickly and the results on all aspects of the field process documented.

2.4.16.5 Fieldwork for intrusive operations concluded on 31 January 2006.

2.4.17 Summary of DGM Results

Because of the presence of magnetically responsive soil at this site, targets were selected for intrusive investigation based on a combination of profile analysis, Chi^2 analysis, and the POA analysis. Based on previous site work, it was known that highly magnetic soil, characteristic of this area, produced an excessive number of anomalies that could be interpreted as MEC-like targets. While the Chi^2 and POA processes selected many of the same anomalies, they also selected independent anomalies, some of which resulted in MEC-like items. The basis for anomaly selection criteria and how it evolved throughout the investigation is summarized in Table 2-2, below.

TABLE 2-2 ANOMALY SELECTION CRITERIA EVOLUTION

DATE	SELECTION CRITERIA
01/16/2006	• All Chi^2 anomalies were selected for investigation above a threshold of 5mVs. • Power of Anomaly (POA) values were calculated for conventional target selections. All conventional targets with a Sum of Signal Squared threshold above 2000 and SNR threshold above 110 were selected for intrusive investigation. • Additional low mV discretionary targets were added based on profile analysis. These targets contain a "D" in the unique anomaly id (ex. N21_D22).
01/25/2006	• During intrusive investigation of QA target selections a MEC item below the established POA threshold was found. The QA failure was F19_9 with Sum of Signal Squared and SNR values of 1718 and 45, respectively. The threshold was further lowered to 1700 and 45 for all unexcavated anomalies throughout all datasets, in an effort to capture other similar items. As a result, a total of 13 additional anomalies were selected for intrusive investigation, but only 4 were dug. One of the additional digs was an MEC item (I22_5). The remaining 9 anomalies were not dug because of Exclusion Zone restrictions (residence not evacuating). The additional 13 anomalies are listed in Table 2-3, 9 of which are characteristic of MEC-like items that have not been intrusively investigated.

TABLE 2-3 ADDITIONAL TARGETS

TARGET_ID	SUMOFSIGNAL SQUARED	SNR	DUG
D17_37	1840	50	N
F21_38	1851	125	Y
G20_66	1976	248	N
G20_68	1967	123	N
H20_21	1974	78	Y
H20_44	1708	62	Y
I20_41	1797	145	N
I22_5	**1834**	**53**	**Y***
J21_59	1714	138	N
P20_11	1834	63	N
P21_24	1774	98	N
P21_61	1977	50	N
R20_47	1798	137	N

* MEC Item (MkII Fragmentation Grenade)

ZAPATAENGINEERING was contracted for the disposal of live MEC. The Spartanburg County Sheriff's Department agreed to dispose of items determined to be safe to move to a disposal area. Fourteen grenades were inspected by the UXO Technician III and the SUXOS and turned over to the Spartanburg County Bomb Squad for disposal. The Sheriff's Department conducted all phases of demolition operations independently.

2.4.17.1 Scrap Management

OE-related scrap certification was an ongoing process throughout the project. All OE-related scrap was inspected before removal from the site. A four-step visual inspection process conducted by the UXO Technicians, SUXOS and UXOQC/SO confirmed that all OE related scrap was free of any explosive contamination and explosive residue. One thirty gallon barrel (weighing approximately 94.5 lbs of OE scrap was certified, sealed, and secured with a serialized seal. The SUXOS coordinated removal of all OE scrap by a scrap dealer, Arrow Steel of Spartanburg, South Carolina for ultimate disposal at a steel mill for recycling. A Department of Defense (DD) Form 1348-1A was completed for the container before release to the scrap dealer (Appendix E). Disposal documentation receipts were generated identifying the day of off-site removal, approximate scrap weight and signature of the recipient.

2.5 DISPOSAL OPERATIONS

Live ordnance items encountered during the removal action was disposed of by the Spartanburg County Sheriff Department Bomb Squad with the assistance of the State Law Enforcement Division. All ordnance was transported off-site and disposed of by detonation. All live ordnance items recovered were Mk II fragmentation or practice grenades. Items disposed of are listed in Appendix I3.

2.6 PROJECT QUALITY CONTROL

2.6.1 ZAPATAENGINEERING performed Quality Control (QC) checks on all phases and types of work conducted. QC procedures were implemented throughout all phases of the project, including document review and control, data review/analysis and evaluation of areas in the field. All grids passed government Quality Assurance checks per the applicable criteria.

2.6.2 ZAPATAENGINEERING's Senior Geophysicist performed independent analyses of the geophysical data collected and processed by ZAPATAENGINEERING's Golden, CO office and reviewed prioritized target lists. He responded to feedback from the field to address data gaps and anomaly reacquisition issues. He designed the GPO plot to include a "blind test" for NAEVA by burying items with the location unknown to the geophysical teams. He was onsite during the prove-out and during the geophysical data collection by NAEVA.

2.6.3 ZAPATAENGINEERING's UXOQC inspected each grid after removal of the selected targets. In addition to ensuring the grids were excavated to USAESCH standards, our QC process included periodic reviews and evaluations of project documentation, equipment serviceability and other areas at the request of project managers.

2.6.1 OE Summary

2.6.1.1 Selected Target Anomalies

ZAPATAENGINEERING in accordance with the revised SOW, performed 565 subsurface digs in the clearance area. A map illustrating a pattern of investigated anomalies is provided in Appendix B, Figure B-2. All UXO items were destroyed by detonation. Daily SUXOS reports documenting site activities are provided in Appendix G. Explosives documentation is provided in Appendix I.

3.0 DOCUMENTATION

The following documentation was generated during the Removal Action at the former Camp Croft:

- Appendix D - Geophysical Prove-Out Letter Report, DGM Dig Sheets, and Mag and Dig Grid Sheets
- Appendix E - OE-Related Scrap Management Documentation
- Appendix F - Quality Control Inspection Forms and Quality Assurance Inspection Forms (USAESCH Form 948)
- Appendix G - Site Manager / SUXOS Weekly Documentation
- Appendix H - UXOSO Documentation
- Appendix I - Explosive Management Documentation
- Appendix J - Site Photographs

4.0 SUMMARY

4.0.1 See Final SSFR dated April 2006.

4.0.2 As the prime contractor, ZAPATAENGINEERING utilized a team approach consisting of in-house capabilities supplemented with specialized subcontractor expertise to conduct the MR removal action at the former Camp Croft. The MR removal action included: site preparation and setup; geophysical survey and anomaly reacquisition/investigation; and intrusive mag/flag to cover data gaps, MEC removal; scrap management; and quality control checks. A total of 28 grids within approximately 3.75 acres were completed throughout this project. All cleared grids passed a quality control check and a government quality assurance evaluation by the onsite USAESCH government representative prior to UXO personnel demobilization. All MD was inspected, certified and transferred to a local scrap dealer. Tables 4-1 and 4-2 summarize project activity in this second phase. As seen in Table 4-2, 1,239 anomalies were selected by the automated anomaly selection process. An additional 76 anomalies were selected using the Chi 2 analysis. Through analysis of the Geophysical Prove-out data and other Croft Phase I data, the number of anomalies requiring intrusive investigation was reduced, resulting in the total number dug of 502. The high number of anomalies, resulting from the automated anomaly selection process, were due in part to highly magnetic geology in the Camp Croft area. Data analysis tools (Chi2 and power of anomaly) were employed to reduce the total number of anomalies requiring intrusive investigation by filtering out geologic response caused anomalies. The anomaly selection criteria can be seen in more detail in Table 2-2.

TABLE 4-1 EXPOSURE DATA

	TOTAL CUMULATIVE
HOURS WORKED	1,865
NUMBER EMPLOYEES ON-SITE	13
ACCIDENTS/ILLNESS	0
LOST WORK HOURS DUE TO ACCIDENTS/ILLNESS	0
NUMBER OF VEHICLES	4
MILES DRIVEN	1,779

TABLE 4-2 PROJECT ACTIVITY: PHASE II

AREA (POLYGON)	NUMBER OF DGM AUTO PICKED TARGETS	NUMBER OF DGM SOLO CHI2 TARGETS	NUMBER OF DGM DIGS (INCLUDES CHI2 TGTS)	NUMBER OF ANALOG DIGS	NUMBER OF UXO ITEMS	AMOUNT OF MUNITIONS DEBRIS (LBS)	AMOUNT OF CULTURAL DEBRIS (LBS)
29P	193	7	36	4	0	1	78.5
31P	318	33	151	33	10	4.5	229.85
32P	269	17	127	14	0	22.35	74.5
33P	213	16	104	3	2	21.25	46.75
35P2	246	3	84	9	0	0	54.25
Total	**1239**	**76**	**502**	**63**	**12**	**49.1**	**483.85**

5.0 RECOMMENDATIONS

5.1 LESSONS LEARNED

5.1.1 With inconsistent funding for the former Camp Croft project, the designated project delivery team (PDT) should meet to discuss scope, schedule and other alternatives for risk reduction and strategies for removal actions. The outcome of this collaboration should be considered in addition to the traditional removal methods currently driving the process at OOU3.

5.1.2 Geophysical mapping and analysis should be completed 1 – 2 months prior to the anticipated effort. This would result in better planning and execution of the field effort using actual data to minimize impact to local residents and the golf course.

6.0 REFERENCES

Aeromagnetic map of South Carolina: In color (1982) by I. Zietz, F. E. Riggle and D. L. Daniels. U.S. Geological Survey Map GP-951. Scale: 1:1,000,000.

ZAPATAENGINEERING, P.A., "Ordnance and Explosives Removal Work Plan, at former Camp Croft, Spartanburg, South Carolina."

Comprehensive Environment Response, Compensation, and Liability Act (CERCLA) Section 104, Executive Order No. 12580.

National Contingency Plan (NCP), Sections 300.120(d) and 300.400(e).

Code of Federal Regulations (CFR), National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR 300.415, 7/93.

Code of Federal Regulations (CFR), Reporting Theft or Loss of Explosive Materials, 27 CFR 55.30, April 1, 2000.

Smith et al, *in* Proceeding, SAGEEP 2005

US Department of the Army, Explosive Ordnance Disposal Procedures, TM 60A 1-1-31.

US Department of Defense, Ammunition and Explosives Safety Standards, DOD 6055.9-STD, 7/99.

US Occupational Health and Safety Administration (OSHA), 1994, Hazardous Waste Operations and Emergency Response Training Regulations, 40 CFR 1910.120, 7/94.

APPENDIX A
SCOPE OF WORK

SCOPE OF WORK

for

ORDNANCE AND EXPLOSIVE REMOVAL ACTION

at

ORDNANCE OPERABLE UNIT (OOU) 3

and

OPTIONAL AREAS OOU 11C & OOU 11D

FORMER CAMP CROFT

SPARTANBURG, SOUTH CAROLINA

17 September 2002

Revised 6/4/2004 9:59 AM

Revised 6/23/2004 7:46 AM

Revised 8/31/04 10:15 AM

Revised 1/13/2005

Revised 3/15/05

1.0 OBJECTIVE

The objective of this task order is to implement and perform a Removal Action (RA) at the Former Camp Croft in Spartanburg, South Carolina. The Contractor's proposal shall include all costs required to safely locate, identify, and dispose of all explosive hazards to depth from previously identified pits within Ordnance Operable Unit (OOU) 3.

The initial task order award will be for the intrusive excavation of several previously identified pits located within Grids 17 and 40 of OOU 3 followed by re-mapping of Grids 17 (1.082 acres), 40 (0.854 acres), and 35P4 (0.657 acres) using digital geophysical methods for Quality Control (QC) purposes and to verify removal activities were completed within the pits and grids prior to the Government's Quality Assurance (QA) activities. Refer to **Figure 1** for a map indicating the location of Grids 17, 40, and 35P4 of OOU 3. If additional anomalies are identified after geophysical mapping, the anomalies are to be intrusively investigated prior to turning the grids over to the Government for QA procedures.

Three (3) small pits in Grid 17 and one (1) small pit in Grid 40 remain to be cleared (overall grids were previously mapped using digital geophysical methods and intrusively excavated). Twelve (12) M15 white phosphorous grenades were excavated from one (1) of the pits in Grid 17 and 150 pounds of smoke canisters were excavated from the pit in Grid 40; however, additional excavation activities were halted to reevaluate safety measures and develop proper procedures to be implemented prior to continuing with the excavations.

Coordinates for the pits previously excavated within **Grid 17** are provided below:

Pit No.	Northing	Easting
1	1119968.8	1741861.3
2	1119948.2	1741846.3
3	1119940.3	1741859.3

Coordinates for the corners of the pit previously excavated within **Grid 40** are provided below:

Pit Corners	Northing	Easting
1	1120103.9424	1741688.6959
2	1120143.8686	1741666.6810
3	1120146.2687	1741678.0887
4	1120117.5102	1741700.6585

The Contractor shall separately price all tasks necessary to complete the Statement of Work (SOW) including any optional tasks necessary for other Areas listed below. The Contractor shall include total as well as unit prices for all categories of work such as a cost per acre for brush cutting, a cost per acre for geophysical mapping, a cost per acre for land surveying, etc.

Optional tasks for other Areas may be exercised at the future discretion of the Government on a priority basis not necessarily in the order listed below:

a. Mapping using digital geophysical methods with the intrusive investigation and clearance of approximately 9.48 acres within OOU 11C.

b. Mapping using digital geophysical methods with intrusive investigation and clearance of approximately 11.2 acres within OOU 11D.

c. Mapping using digital geophysical methods, intrusive investigation, and clearance of approximately twenty-four (24) acres within OOU 3 (fringe area between Wedgewood Subdivision and Creek Golf Club identified on **Figure 1** as Grids 23P, 24P, 25P, 26P, 42P, 27P, 28P, 29-1P, 29P, 30P, 31P, 32P, 33P, 35P3, 35P2, 35P1, GC-2, 40P, 37P, 41P, and GC-1).

2.0 INTRODUCTION

The work required under this Scope of Work (SOW) falls under the Defense Environmental Restoration Program (DERP) and the Formerly Used Defense Site (FUDS) program. Ordnance and explosives (OE) may exist on property that was formerly owned, used, or controlled by the Department of Defense (DOD).

2.1 Explosive ordnance is a safety hazard and may constitute an imminent and substantial endangerment to site personnel and the local populace, thus the applicable provisions of 29 CFR 1910.120 apply. During this RA, it is the Government's intent that the contractor destroy all OE encountered on-site. The Contractor's work must be performed in a manner consistent with the Comprehensive Environment Response, Compensation, and Liability Act (CERCLA) Section 104, Executive Order No. 12580, and the National Contingency Plan (NCP), Sections 300.120(d) and 300.400(e). All activities involving work in areas potentially containing unexploded ordnance (UXO) hazards shall be conducted in full compliance with CEHNC, USACE, DA, and DOD safety requirements regarding personnel, equipment, and procedures and may result in the on-site destruction of UXO.

2.2 Due to the inherent risk in this type of operation, the Contractor shall be limited to a 40-hour workweek: either five 8-hour days or four 10-hour days. UXO personnel shall not perform OE-related tasks for more than 10 hours per day. The Contractor shall provide a UXO Tech II for UXO avoidance escort operations in support of site preparation and surveying. This project does not require an on-site, full time Contract Manager.

2.3 The site is not suspected to contain Chemical Warfare Materiel (CWM); however, if suspect

CWM is encountered during any phase of site activities, the Contractor shall immediately withdraw upwind from the work area, secure the site, and contact the Corps of Engineers, CEHNC OE Safety.

2.4 Definitions of applicable terms are found in Section C of the basic contract.

3.0 BACKGROUND

The Infantry Replacement Training Center in Spartanburg, South Carolina, was activated on January 10, 1941. The military reservation encompassed approximately 19,000 acres, which was subsequently declared excess to the War Assets Administration in 1947. Over the next three (3) years, the land was disposed of piecemeal by sale or quitclaim to organizations, business interests, and former owners. Approximately 7,000 acres of the former Camp Croft comprise Croft State Park. The remaining acreage is a mix of residential, farming, and business development.

3.1 Background and historical information may be found on the Internet at ***http://www.campcroft.com***. Environmental Science & Engineering, Inc. (ESE) completed two (2) Engineering Evaluation/Cost Analysis (EE/CA) reports (Phase I and Phase II) for various portions of Former Camp Croft. OOU 3 (Wedgewood subdivision) was previously investigated as part of the Phase I EE/CA and expanded to include additional areas during the Phase II EE/CA after discovery of Mark II hand grenades during a March 1997 removal action. Copies of the Phase I and Phase II EE/CA reports are available for review at the Huntsville Center and/or the designated repository located with the Spartanburg County Public Library.

3.2 UXB International has previously cleared ordnance from portions of OOU 3 under contract DACA87-97-D-0006, Task Order 0015. The Revised Final Explosives Safety Submission (ESS) dated January 4, 2000, indicates the Most Probable Munition (MPM) is the Mark II fragmentation grenade. The previous work areas and specific work completed by UXB are identified in the Final Removal Report dated April 2001. Copies of the Revised Final ESS and Final Removal Report, including all geophysical data collected during the investigation, are available for review at the Huntsville Center; however, the Contractor may not use any of the geophysical data collected for OOU 11C and OOU 11D because of the suspect quality of the data. The Contractor must use the UXB civil survey data to relocate the previously identified pits within Grids 17 and 40 of OOU 3; however, the Government does not guarantee the accuracy or completeness of the UXB data.

4.0 SPECIFIC REQUIREMENTS

This SOW is intended to complete previous clearance efforts within Grids 17 and 40 of OOU 3 performed by UXB beginning in 1999. The Contractor's proposal shall include all costs required to complete this RA. The initial investigation area is located within a residential housing area and borders a commercial golf course. The Contractor is expected to complete fieldwork related activities within the winter months to minimize brush clearing and loss of revenue to the golf course. Coordination of RA activities and evacuations with homeowner's and the golf course management is the Contractor's responsibility. The costs shall include, but not be limited to, items such as coordination of evacuations, development or use of engineering controls, location, excavation, and demolition of ordnance and related items, restoration of landscaping, etc. Please note, the cost for evacuations, compensation, and temporary housing for displaced residents will be the responsibility of the Government.

The Contractor shall perform activities required to remove all explosive hazards at selected areas of the site in accordance with Clearance to Depth and Clearance for Use criteria mandated by the signed Action Memorandums from the Engineering Evaluation/Cost Analysis (EE/CA) investigations. Please note, a clearance depth greater than four (4) feet may be necessary within the pits, which were previously identified within Grids 17 and 40 of OOU–3; therefore, appropriate safety measures shall be developed to comply with Occupational Safety and Health Administration (OSHA), USACE EM 385-1-1, and any other pertinent regulations for excavation activities greater than four (4) feet.

4.1 (TASK 1) POST AWARD SITE VISIT

This is a **FIRM FIXED PRICE** task order. A post award site visit will be conducted and is limited to three (3) days. The CEHNC Project Manager shall be notified of the proposed date fourteen (14) days in advance. An Abbreviated Site Safety and Health Plan (ASSHP) shall be submitted for review and approval prior to the site visit. A follow-up Contractor Site Visit Report is required to be submitted within five (5) days after the site visit.

4.2 (TASK 2) TECHNICAL PROJECT PLANNING (TPP) – NOT APPLICABLE

This task is not applicable for this Task Order; however, the Contractor will continue to work with local and state governments, regulatory officials, and all stakeholders to ensure everyone is

informed and concurs with what is being done at the site. Costs for this work shall be incorporated into Task 12, Project Management.

4.3 (TASK 3) GEOPHYSICAL PROVE-OUT (GPO) – OPTIONAL

This is a **FIRM FIXED PRICE** task order. The Contractor shall perform a Geophysical Prove-Out (GPO) in accordance with **Appendix A** of this SOW. The Contractor shall submit "Draft" and "Final" versions of the GPO Plan in accordance with **Section 5.0 of this SOW**. The Contractor shall not begin field operations on the GPO plot until the Government has approved the GPO Plan. The Contractor shall coordinate with CEHNC to obtain inert ordnance items to seed the GPO test plot. If inert ordnance items are not available the Contractor shall provide approved surrogates. CEHNC reserves the right to place additional blind seed items within the test plot and should be kept informed of scheduled events. The Contractor shall coordinate the GPO schedule with CEHNC to allow CEHNC time to plant blind seed items. The Contractor shall submit "Draft" and "Final" versions of a follow up Geophysical Prove-Out (GPO) Letter Report for Government review and approval, which conforms to the requirements specified in **Appendix A**. The Contractor must allow at least thirty (30) days for Government review and approval of the GPO Letter Report and may not proceed with geophysical mapping until authorized to do so by the Government.

4.4 (TASK 4) REMOVAL ACTION WORK PLAN

This is a **FIRM FIXED PRICE** task order. The Contractor shall prepare a Removal Action Work Plan (WP) in accordance with Data Item Description (DID) OE-005-01, Type II Work Plan, which is applicable for all Areas of the site. The WP shall describe the specific work proposed in order to meet the objectives and requirements of this SOW. The WP shall propose **mapping using digital geophysical methods** for the optional areas identified above within OOU 3, OOU 11C, and OOU 11D. The WP shall also describe (in specific terms) the policies, organization, objectives, functional activities, Site Specific Health and Safety Plan, Data Quality Objectives (DQO's), Geophysical Prove-Out (GPO) Plan, Geophysical Mapping and Reacquisition Plan, OE Investigation, Data Management and specific Contractor QC activities required to achieve the objectives for this project. A "*mission plan map*" that identifies the expected survey areas shall be included within the WP. Daily field progress will be plotted on this digital map during actual mapping operations to ensure compliance with the original WP and

easily identify project progress and any major discrepancies between initial plan and the execution of the fieldwork.

The Contractor shall propose and justify methods and procedures that are well suited to the anticipated site conditions including the steep terrain within a small portion of OOU 11C. The Contractor shall consider technical requirements for site characterizations as well as safety, security, environmental regulations, engineering controls, evacuations, and road closures applicable to this site. The Contractor shall submit "Draft", "Draft Final", and "Final" versions of the WP in accordance with **Section 5.0 of this SOW**. The WP shall describe the specific work proposed in order to meet the objectives and requirements of this SOW. The previous WP prepared by UXB, dated August 1999, is available for review at the Huntsville Center. The WP shall include an Environmental Sampling and Analysis Plan, prepared in accordance with the requirements described in **Appendix B** and DID OE-005-10, and an Investigative Derived Waste Plan prepared in accordance with DID OE-005-13.

4.5 (TASK 5) BRUSH CLEARING

This is a **FIRM FIXED PRICE** task order. The Contractor shall provide in the proposal a **total price** for brush clearing and surface metal removal **within the currently selected Area** (using the acreage estimates provided) and a **price per acre** for additional surface metal removal and brush clearing activities (if necessary). The actual areas to undergo brush clearing should be validated by the Contractor during land surveying activities, but shall be estimated in the proposal using the acreage estimates provided above. **Please note, acreage estimates were not provided for the Areas included within the initial task order because these grids involve only clearance of the previously identified pits within grids 17 and 40, which should require only minimal brush clearing activities**. The Contractor shall perform the minimum amount of brush clearing as necessary to perform project activities, but shall not remove any trees with a diameter greater than three (3) inches, without prior written approval from the Government.

4.6 (TASK 6) LOCATION SURVEYS AND MAPPING

This is a **FIRM FIXED PRICE** task order. The Contractor shall provide in the proposal a **total price** for land surveying activities **within the currently selected Area** (using the acreage estimates provided) and a **price per acre** for additional land surveying activities (if necessary). Previous survey coordinate information for the pits within Grids 17 and 40 of OOU 3 can be

found in the UXB Final Removal Report. **Please note, acreage estimates were not provided for the Areas included within the initial task order because these grids involve only clearance of the previously identified pits within grids 17 and 40, which should require only minimal land surveying activities. The Contractor shall validate acreage totals for brush clearing, land surveying, digital geophysical mapping, and intrusive activities during this task.**

The Contractor shall perform location surveys as described in the approved WP and in accordance with CEHNC guidance contained in EM 1110-1-4009 and DID OE-005-07. All data submitted shall be in the Universal Transverse Mercator (UTM) coordinate system, which is a base 1,000 or 10,000-meter grid system. A South Carolina licensed Professional Land Surveyor will certify all surveying requirements, which include all control points, grid corners, and boundaries as required by the project. The easting and northing (x, y) for all control points, grid corners, and any boundaries or closures shall be presented in a certified letter or drawing, along with an electronic submittal of the same to CEHNC upon completion of field work. A minimum of 2 (two) control monuments shall be established or identified for this site. Survey data may be submitted by CD or electronically via email. A tabulated list shall be developed, which identifies or numbers each grid and gives the UTM coordinates of grid corners. The list shall also include all network reference points used in performing all surveys. The Contractor shall furnish control cards for all benchmarks used during and established for the project. All grid corners shall be marked with a wooden stake and flagging. Survey locations shall be listed in UTM coordinates and the data submitted in a Microsoft Excel 2000 Spreadsheet or other digital format approved by the Contracting Officer (CO). All survey data shall be included in the Final Report.

4.7 (TASK 7) GEOPHYSICAL INVESTIGATION AND EVALUATION - OPTIONAL

This is a **FIRM FIXED PRICE** task order. The Contractor shall provide in the proposal a **total price** for digital geophysical mapping activities **within the currently selected Area** (using the acreage estimates provided) and a **price per acre** for additional digital geophysical mapping activities (if necessary).

4.7.1 Investigation and Evaluation

The geophysical mapping shall be conducted in accordance with the WP and the requirements specified in **Appendix C**. The Contractor shall propose and discuss the methodology by which geophysical mapping shall occur. The Contractor shall produce geophysical maps of the site that show major geophysical features for any areas not previously mapped by digital geophysical methods. A map layer that includes physical (cultural) features overlaid onto the geophysical data results shall also be included. Items to be annotated on this map include, but are not limited to, all visible pipes and power lines, manhole covers, buildings, inaccessible areas such as fence lines, areas of bare rock, etc. All geophysical data, both raw and processed, shall be sent via overnight mail to CEHNC, on a CD ROM, within five (5) days of data collection. When a USACE geophysicist is on-site, the geophysical data shall be available to the geophysicist on a daily basis. Raw and final processed geophysical data shall be in column delineated ASCII files in the format X, Y, V1, V2… where X=Easting Coordinate, Y=Northing Coordinate, V1= top sensor reading, V2 = next lower (spatially) co-located sensor reading, etc. The data shall be provided in South Carolina State Plane Coordinates.

4.8 (TASK 8) ESTABLISHMENT AND MANAGEMENT OF GIS

This task is not applicable for this Task Order.

4.9 (TASK 9) EXPLOSIVE SAFETY SUBMISSION (ESS)

This is a **FIRM FIXED PRICE** task order. A Revised Final ESS, dated January 4, 2000, was approved for OOU 3 and included portions of OOU 11C and OOU 11D. An amendment to this document is required to support changes needed for additional work activities such as pit excavation, explosives storage and/or magazine location, etc. Use of the Revised Final ESS prepared by UXB is encouraged and is available for review at the Huntsville Center. Please note, Department of Defense Explosive Safety Board (DDESB) approval can take at least 120 days after CEHNC approval. The amended ESS shall be bound as a separate document and shall be submitted and approved prior to intrusive work.

4.10 (TASK 10) INTRUSIVE INVESTIGATIONS

(TASK 10A) INTRUSIVE INVESTIGATIONS - GRIDS 17, 40, and 35P4 of OOU 3

Considering the unknown nature of these grids, the items of concern, the depths required for excavation, and the activities required, this task will be a **TIME and MATERIALS** task order. Three (3) small pits in Grid 17 and one (1) small pit in Grid 40 remain to be cleared. Assume in the clearance effort for the pits one (1) week per pit for UXO operations. The Contractor is to

provide in the proposal a summary of the work to be performed based upon institutional knowledge of the site, conditions to be encountered, and previous findings documented in the UXB Final Removal Report.

(TASK 10B) INTRUSIVE INVESTIGATIONS - OPTIONAL AREAS

This is a **FIRM FIXED PRICE** task order based on digging **379 anomalies** per acre **within the currently selected Area** (using the acreage estimates provided). The Contractor shall provide in the proposal **a total price and a unit price per acre** for the intrusive investigation and a **unit price for digging anomalies** for modification of the contract if acreage is added/removed or the total anomaly count is less than or exceeds the estimated average of 379 per acre (+/- 10% based upon 11,362 excavations in 30 acres previously investigated by UXB within OOU 3). Assume approximately two (2) percent of investigated anomalies will require destruction through the use of explosives.

4.10.1 Anomaly Reacquisition and Investigation

For areas where digital geophysical mapping is used, the Contractor shall reacquire all selected geophysical target anomalies on the dig sheets and utilize a precision surveying method to identify the location. The dig sheet shall include the location of the anomaly according to the survey standard established. The Contractor shall flag the actual field location of each identified anomaly shown on the dig sheet and mark the location with a non-metallic pin flag or by some other method approved by CEHNC. The Contractor shall ensure that the reacquired location and the geophysical data location for each anomaly are within the range of accuracy required by **Appendix C**.

The Contractor shall access anomalies selected for digging during the investigation. Using qualified UXO personnel, scheduled evacuations, and engineering controls, the Contractor shall investigate the specified anomalies according to the procedures identified in **Appendix C** and the approved WP. A Disposal Feasibility Letter Report should be submitted in accordance with Section C, Paragraph 4.3 of the basic contract and DID OE-040 if on-site disposal is not feasible.

4.10.2 OE Inspection and Procedures

The Contractor shall account for and process all OE and Range Residue for final disposition in accordance with **Appendix D** of this SOW.

4.10.3 Backfilling Excavations

All access/excavation/detonation holes shall be backfilled by the Contractor to their prior condition.

4.10.4 Quality Control

The Contractor shall develop a QC Program that shall ensure a quality product for all aspects of the project, which includes any work performed by a subcontractor on the project. The Contractors' QC procedures for all phases and types of work should be included in the WP. The Contractor shall ensure that documentation is maintained and provided in the final report that supports the QC process.

4.10.4.1 UXO Quality Control (QC) Specialist

The individual performing the UXO QC shall not be involved in the performance of other OE field tasks. Dual hat positions are not allowed for this site without prior written approval of the Contracting Officer. The UXO QC Specialist shall meet the requirements as shown DID OE-025.

4.10.5 Quality Control/Quality Assurance

For QC/QA purposes, the Contractor shall find and remove ferrous items, which are equivalent (+/- ½ inch) in diameter to a Mark II hand grenade IAW Appendix C. With respect to the pits within Grid 17 of OOU-3, the Contractor shall find all ferrous items, which are equivalent (+/- ½ inch) in diameter to an M15 WP IAW Appendix C.

In addition to the QC process performed by the Contractor, the Government will conduct QA inspections on all phases and types of work performed. The Contractor shall provide one UXO Tech II to assist the Government Safety person in performing QA. The UXO Tech II will be used at the technical direction of the Government Safety person to measure coordinates in grids per dig lists provided by the Government Safety person, to do intrusive digging as technically directed by the Government Safety person, and/or to perform other types of assistance needed during the Government Safety person's QA check of Contractor grids. The Contractor shall assume this support will be based on 10% of the total acreage of the removal and that the time required per 100 foot by 100 foot grid will be one (1) hour. The inspections will be accomplished only after the Government has been notified in writing that the Contractor's QC activities have been completed. The Government reserves the right to perform QA inspections at any time during the project.

Quality failure is defined as the discovery, during QA inspections, of a ferrous item, which is (+/- ½ inch) of the diameter of the OE item(s) for the specific areas above at a depth less than given by Appendix C. Quality failure can also be defined in workmanship as not complying with the approved work plan or other accepted industry practices or define in safety as not complying with basic safety concepts and other industry safety practices. The ferrous item does not have to be OE related to result in grid failure. Failed grids shall be completely re-cleared IAW the approved work plan at no cost to the Government. The Government Safety person will perform QA again on the grid. This failure and re-sweep will be repeated until the grid passes Government QA inspection, again at the Contractors' expense. The Contractor shall provide full documentation detailing what failed the QA process, why it failed, and how the problem was corrected at no cost to the Government.

4.11 (TASK 11) FINAL REMOVAL REPORT

This is a **FIRM FIXED PRICE** task order. The Contractor shall prepare a site-specific Final Removal Report **for the currently selected Area** in accordance with DID OE-030. The Contractor shall submit "Draft", "Draft Final", and "Final" versions of the Final Removal Report in accordance with **Section 5.0 of this SOW**.

4.12 (TASK 12) PROJECT MANAGEMENT

This is a **FIRM FIXED PRICE** task order. The Contractor shall perform project management activities necessary to maintain project control, to include but not be limited to the following:

4.12.1 Schedule The Contractor shall develop and submit for approval, a comprehensive project schedule. The Contractor shall use the schedule to coordinate evacuations and other interruptions pertaining to the use of private property. The schedule shall be updated weekly in accordance with DID OE-085 Weekly Status Report with changes sent directly to the PM by e-mail in Microsoft Project. The Contractor is responsible for coordination and scheduling of all RA activities with homeowner's and representatives of the golf course to avoid conflicts with scheduled activities.

4.12.2 Work **Task Proposal**

This task is not applicable for this Task Order.

4.12.3 Public **Meetings**

The Contractor shall be prepared to attend and participate in public meetings. The Contractor

shall be prepared to make presentations and answer questions concerning project activities at the Former Camp Croft. The Contractor shall anticipate one (1) public meeting in the Spartanburg, South Carolina area.

4.12.4 Reports**/Minutes, Record of Meetings**

The Contractor shall prepare and submit a report/minutes of all meetings attended in accordance with DID OE-045.

4.12.5 Telephone Conversations/Correspondence Records

The Contractor shall keep a record of each telephone conversation and written correspondence concerning this Task Order in accordance with DID OE-055. A copy of this record shall be attached to the Weekly Status Report.

4.12.6 Monthly Status Report

The Contractor shall prepare and submit a monthly status report in accordance with DID OE-080 and include any other items required in the SOW.

4.12.7 Weekly Status Reports

The Contractor shall prepare and submit a weekly status report in accordance with DID OE-085 and include any other items required in the SOW.

4.13 (TASK 13) ENVIRONMENTAL SAMPLING AND CHEMICAL ANALYSIS

This is a **TIME and MATERIALS** task order. Environmental sampling shall be conducted on a limited basis to support the M15 WP grenade removal within the pits previously identified in Grid 17 of OOU 3. The Contractor shall implement the approved Environmental Sampling and Analysis Plan as necessary. For planning purposes, a maximum of ten (10) environmental samples shall be taken, which includes field quality control and background samples. Sampling shall be conducted in the pit where previous WP rounds were found and after removal of any additional WP rounds within the same pit or any other pit(s). General guidance for sampling shall be to sample for WP within the excavated area after removing all smoking soil. Analysis shall include WP by SW7580.

4.14 (TASK 14) INVESTIGATIVE DERIVED WASTE AND SOIL DISPOSAL

This is a **TIME and MATERIALS** task order. Investigative derived waste and soil disposal may be conducted on a limited basis to support the M15 WP grenade removal within the pit(s) previously identified in Grid 17 of OOU 3. The Contractor shall implement the approved investigative and derived waste plan as necessary.

4.15 (OPTIONAL TASK 15) INTRUSIVE INVESTIGATION WITHIN OOU 11C

The Contractor shall perform digital geophysical mapping followed by intrusive investigation and clearance of approximately 9.48 acres within OOU 11C in accordance with all applicable tasks outlined in this SOW. The proposal shall be **Firm Fixed Price** and submitted with the associated total and per acre unit prices for each applicable task of the SOW, such as brush clearing, land surveying, geophysical mapping, intrusive investigation, etc, with separate mobilization/demobilization costs identified. The Government may elect to award this task in smaller parcels or add acreage if necessary to clear the area. The contractor shall propose a price for each mobilization/demobilization , project management and interim report preparation costs on a per event basis with a cost for finalization of the report upon receipt of notification by the Contracting Officer. The original work plan will be utilized for this optional task. Refer to **Figure 2** for a map indicating the location of OOU 11C and previous grid coordinates used by UXB.

4.16 (OPTIONAL TASK 16) INTRUSIVE INVESTIGATION WITHIN OOU 11D

The Contractor shall perform digital geophysical mapping followed by intrusive investigation and clearance of approximately 11.2 acres within OOU 11D in accordance with all applicable tasks outlined in this SOW. The proposal shall be **Firm Fixed Price** and submitted with the associated total and per acre unit prices for each applicable task of the SOW, such as brush clearing, land surveying, geophysical mapping, intrusive investigation, etc, with separate mobilization/demobilization costs identified. The Government may elect to award this task in smaller parcels or add acreage if necessary to clear the area. The contractor shall propose a price for each mobilization/demobilization, project management and interim report preparation costs on a per event basis with a cost for finalization of the report upon receipt of notification by the Contracting Officer. The original work plan will be utilized for this optional task. Refer to **Figure 3** for a map indicating the location of OOU 11 D and previous grid coordinates used by UXB.

4.17 (OPTIONAL TASKS 17A and 17B) DIGITAL GEOPHYSICAL MAPPING AND INTRUSIVE INVESTIGATION WITHIN OOU 3

The Contractor shall perform digital geophysical mapping followed by intrusive investigation and clearance within OOU 3 [fringe area between Wedgewood Subdivision and Creek Golf Club identified on **Figure 1**]. The proposal shall be **Firm Fixed Price** and submitted with the

associated total and unit prices per parcel identified above for each applicable task of the SOW, such as brush clearing, land surveying, geophysical mapping, intrusive investigation, etc., with separate mobilization/demobilization costs identified. The Government may elect to award this task in smaller parcels or add acreage if necessary to clear the area. The contractor shall propose a price for each mobilization/demobilization, project management and interim report preparation costs on a per event basis with a cost for finalization of the report upon receipt of notification by the Contracting Officer. The original work plan will be utilized for this optional task.

Optional Task 17A shall include the following grids: 40P (0.649 acres), GC-2 (3.11 acres), 35P3 (0.524 acres), and 35P1 (0.429 acres) in accordance with all applicable tasks outlined in this SOW.

Optional Task 17 B shall include the following grids: 23P (0.591 acres), 24P (0.515 acres), 25P (0.705 acres), 26P (1.419 acres), 42P (0.825 acres), 27P (0.599 acres), 28P (0.539 acres), 29-1P (0.348 acres), 30P (1.188 acres), 37P (3.091 acres), 41P (0.458 acres), and GC-1 (5.175) in accordance with all applicable tasks outlined in this SOW.

4.18 Task 18, Supplement Geophysical Analysis. The contractor shall conduct a Chi Squared analysis and combine the results with the currently scoped data analysis (as of 14 January 2005) as required to aid in discriminating geologic responses from metal responses in the geophysical data. The contractor shall evaluate the chi target lists versus the conventional lists, Oasis maps and profiles and shall generate and submit target list comparison tables. Final target selection shall consider the chi-based data supplemented with spatial and profile analysis plus consideration of the field notes, QCT observations, and feedback from ongoing dig results. The new targets selected using this analysis will be applied to areas yet to be intrusively investigated. For areas already investigated the target picks of both analysis will be compared and reported to support the conclusions of the current removal action. In addition to the other geophysical data submissions specified elsewhere in this scope, the data submittal for this effort shall include the processed Chi Squared data, the Chi Squared target lists, and target comparison tables comparing the chi targets versus the conventional targets.

4.19 TASK 19 DIGITAL GEOPHYSICAL MAPPING AND INTRUSIVE INVESTIGATION WITHIN OOU 3 (FFP)

The Contractor shall perform digital geophysical mapping followed by intrusive investigation and clearance within OOU 3 [fringe area between Wedgewood Subdivision and Creek Golf Club

identified on **Figure 1**]. The contractor shall conduct a geophysical analysis of the data using conventional methods as well as a Chi Squared analysis to aid in discriminating geologic responses from metal responses in the geophysical data. The Contractor shall evaluate the chi target lists versus the conventional lists, Oasis maps, and profiles, and shall generate and submit target list comparison tables. Final target selection shall consider the chi-based data supplemented with spatial and profile analysis. In addition to the other geophysical data submissions specified elsewhere in this SOW, the data submittal for this effort shall include the processed Chi Squared data, the Chi Squared target lists, and target comparison tables comparing the chi targets versus the conventional targets. The proposal shall be **Firm Fixed Price** and submitted with the associated total and unit prices per parcel identified below for each applicable task of the SOW, and includes all costs for all associated supporting activities to include, but not limited to: brush clearing, land surveying, geophysical mapping, intrusive investigation, mobilization/demobilization, project management, and report preparation. The original work plan will be utilized for this task.

Task 19 shall include the following grids: 29P (0.810 acres), 31P (1.105 acres), 32P (0.741 acres), 33P (0.760 acres), 35P2 (0.330 acres) and shall be in accordance with all applicable tasks outlined in this SOW. The field mapping portion of the geophysics shall be completed no later than September 30, 2005, the conventional geophysical and Chi Square analysis with comparative target lists and all supporting QC information shall be submitted to CEHNC for review no later than November 1, 2005, the intrusive investigation portion shall be completed no later than February 1, 2006, and all other submittals such as CD's of raw and processed geophysical data and removal reports shall be submitted in accordance with the submittal schedule provided in Section 5.8 of the SOW.

5.0 SUBMITTALS AND CORRESPONDENCE

5.1 Format of Engineering Reports

Any and all reports and/or plans not covered by a specific DID shall be prepared according to the following guidelines. The front cover of the report or plan shall be prepared in accordance with Attachment 1 of DID OE-030 and shall bear the following statement in addition to other requirements. "*The views, opinions, and/or findings contained in the report are those of the author(s) and should not be construed as an official Department of the Army position, policy, or*

decision, unless so designated by other documentations". The cover shall also denote the version of the report/plan presented (e.g. Draft, Draft Final, or Final). When drawings are required, data may be combined to reduce the number of drawings. All drawings shall be of engineering quality in drafted form with sufficient detail to show interrelations of major features. The contents and format of the engineering reports shall be arranged in accordance with all pertinent guidance documents. The report/plan shall be typed on standard size of 8-1/2 inch by 11-inch white paper, with drawings other than the construction drawings folded, if necessary, to this size. Chapters shall be numbered sequentially. Within each chapter, the paragraphs shall be numbered sequentially starting with the chapter number. Within each chapter, any figures, tables, and charts shall be numbered sequentially starting with the chapter number. Appendices shall be lettered alphabetically and shall be identified and referenced in the text of the report/plan. Within each appendix, each page shall be numbered sequentially starting with the appendix letter. Every page of the report/plan shall contain a date footer, contract number, task order number, and version (e.g. draft, final, original, change 1, etc) of the report. The report/plan shall be legible and suitable for reproduction. The final version of the report/plan shall also be submitted on CD-ROM in accordance with the other paragraphs of Section 5.0. All data, including raw analytical and electronic data, generated under this task order are the property of the Department of Defense (DOD) and the government has unlimited rights regarding its use.

5.2 Computer Files

All final text files generated by the Contractor under this contract shall be furnished to the Contracting Officer in Microsoft Word 6.0 or higher software, IBM PC compatible format. Spreadsheets shall be in Microsoft EXCEL. All final CADD drawings shall be in Microstation 95 or higher. All GIS data shall be in ESRI (Arcview/Arcinfo) format.

5.3 HTML Deliverables

In addition to the paper and digital copies of submittals, the final version of any and all reports and/or plans shall be submitted, uncompressed, on CD ROM in hypertext markup language (HTML) along with a linked table of contents, linked tables, linked photographs, linked graphs and linked figures, all of which shall be suitable for viewing on the Internet.

5.4 Review Comments

Various reviewers will have the opportunity to review submittals made by the Contractor under this contract. The Contractor shall review all comments received through the CEHNC Project

Manager and evaluate their appropriateness based upon their merit and the requirements of the SOW. The Contractor shall issue to the Project Manager (PM) a formal, annotated response to each in accordance with the established schedule in this SOW. The Contractor shall not non-concur with a comment without discussing the comment with the CEHNC PM. If the PM is not available then the Contractor shall contact the Technical Manager.

5.5 Identification of Responsible Personnel

Each report shall identify the specific members and title of the Contractor's staff and subcontractors that had significant and specific input into the preparation or review of the report.

5.6 Public Affairs

The Contractor shall not publicly disclose any data generated or reviewed under this contract. The Contractor shall refer all requests for information concerning site conditions to the local Corps of Engineers Public Affairs Office (Charleston District) with a copy furnished to the CEHNC PM. Reports and data generated under this contract are the property of the DOD and distribution to any other source by the Contractor, unless authorized by the Contracting Officer, is prohibited.

5.7 Submittals

The contractor shall furnish copies of the plans, maps, and reports as identified in Section 5.8, or as specified in this SOW, to each addressee listed below in the quantities indicated. The Contractor shall submit a CD, with each copy, of the Final version of all submittals (WP, Reports, Plans, etc) in accordance with Section 5.2. The Contractor shall submit 1 copy on CD of the Final Versions of all submittals (WP, Reports, Plans, etc) in accordance with Section 5.3. For purposes of the SOW all days are considered calendar days. In addition to the CDs required above, the column below shows recipients in which the Draft and Draft Final versions must be submitted to also. This shall also be in accordance with Section 5.2.

ADDRESSEE	COPIES	CD
Commander US Army Engineering and Support Center, Huntsville Attn: Mr. Bill Stephenson 4820 University Square Huntsville, AL 35816-1822	4	1

Commander

US Army Corps of Engineers Charleston District — 4 — 1
Attn: Mr. Ronald Nesbit
69A Hagood Avenue
Charleston, SC 29403-5107

Commander
US Army Corps of Engineers, South Atlantic — 1 Final Hardcopy Transmittal
Attn: CESAD-PM-H (Ms. Sharon Taylor)
77 Forsyth Street
Atlanta, GA 30336-6801

Commander
Headquarters, US Army Corps of Engineers — 1 Final Hardcopy Transmittal
Attn: CEMP-RF (Mr. Dale Moeller)
20 Massachusetts Avenue, NW
Washington, DC 20314-1000

Spartanburg County Public Library — 1 Final Hardcopy with CD
Reference Department
151 South Church Street
Spartanburg, SC 29302

5.8 Submittals and Due Dates

SUBMITTAL	**DUE DATES**
Site Visit Report	5 days after site visit
Draft ESS	TBD
Draft Final ESS	15 days after receipt of comments
Final ESS	15 days after receipt of comments
Draft Work Plan	TBD
Draft Final Work Plan	15 days after receipt of comments
Draft Final Work Plan	15 days after receipt of comments
Final Work Plan	15 days after receipt of comments
Draft GPO Plan	TBD
Final GPO Plan	15 days after receipt of comments

Draft GPO Report	15 days after completion of fieldwork
Final GPO Report	15 days after receipt of comments
Geophysical Dig Sheets & CD's of Raw and Processed Data	Within 5 days of data collection
Draft Removal Report	45 days after completion of fieldwork
Draft Final Removal Report	15 days after receipt of comments
Final Removal Report	15 days after receipt of comments
Final Electronic Copies	Provided with Final Removal Report with updated copy (if necessary) after Final Report approval

6.0 REFERENCES:

6.1 Refer to 'Basic Contract'.

6.2 29CFR 1910, Occupational Safety and Health Administration (OSHA) General Industry Standards

6.3 29CFR 1926, Construction Industry Standards

6.4 29CFR 1910.120/29CFR 1926.65 - Hazardous Waste Site Operations and Emergency Response

6.5 40CFR 300, National Contingency Plan

6.6 NIOSH/OSHA/USCG/EPA (DHHS(NIOSH) Publication #85-115) (OCT 85), Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities

6.7 Federal Acquisition Regulation (FAR) Clause 52.236.13, Accident Prevention

6.8 EM 385-1-1 (3 SEP 96), US Army Corps of Engineers Safety and Health Requirements Manual

6.9 EM 1110-1-4009 (23 June 2000) Engineering and Design – Ordnance and Explosives Response

6.10 EP 1110-1-18 (24 June 2000) Engineering and Design – Ordnance and Explosives Response

6.11 EP 385-1-95a 29 June 2001 Basic Safety Concepts and Considerations for Ordnance and Explosives Operations

6.12 EM 200-1-3, *Requirements for the Preparation of Sampling and Analysis Plans*, 01 February 2001

6.13 *Test Methods for Evaluating Solid Wastes*, U.S. Environmental Protection Agency (USEPA) Pub. No. SW- 846, Latest promulgated Ed.

6.14 Code of Federal Regulations. [n.d.] *Hazardous Waste Operations and Emergency Response*. 29 CFR 1910.120, Final Rule.

6.15 ER 1110-1-263, *U.S. Army Corps of Engineers Chemical Data Quality Management for Hazardous, Toxic, Radioactive Waste Remedial Activities,* 30 April 1998.

6.16 EM 200-1-3, *Requirements for the Preparation of Sampling and Analysis Plans,* 01 Feb 01.

6.17 *Engineering Evaluation Cost Analysis Former Camp Croft Army Training Facility (Phase 1),* January 1996.

6.18 *Engineering Evaluation Cost Analysis Former Camp Croft Army Training Facility (Phase II),* January 1998.

6.19 *Revised Final Conventional Explosives Safety Submission for Ordnance Removal Action,* December 1999.

6.20 *Final Engineering Evaluation Cost Analysis Action Memorandum (Phase 1),* February 1996

6.21 *Final Engineering Evaluation Cost Analysis Action Memorandum (Phase 1I),* April 1998.

6.22 *Final Work Plan for Ordnance Removal Action, Former Camp Croft, OOU-3, Wedgewood Subdivision,* August 1999.

6.23 *Final Removal Report Ordnance Removal Action, Former Camp Croft, OOU-3 A, B, and C; OOU-6; and OOU-11 C and D,* April 2001.

6.24 Data Item Descriptions

The following Data Item Descriptions are part of this contract and are available at the following:

http://www.hnd.usace.army.mil/oew/dids.asp

Data Item Descriptions

Number	Title
DID OE-005-01	Type II Work Plan
DID OE-005-02	Technical Management Plan
DID OE-005-03	Explosives Management Plan
DID OE-005-04	Explosives Siting Plan
DID OE-005-06	Site Safety and Health Plan
DID OE-005-07	Location Surveys and Mapping Plan
DID OE-005-08	Work, Data, and Cost Management Plan
DID OE-005-09	Property Management Plan
DID OE-005-10	Sampling and Analysis Plan
DID OE-005-11	Quality Control Plan
DID OE-005-12	Environmental Protection Plan
DID OE-005-13	Investigative Derived Waste Plan
DID OE-005-14	Geographical Information System Plan
DID OE-010	Engineering Evaluation/Cost Analysis (EE/CA) Report
DID OE-015	Accident/Incident Reports
DID OE-025	Personnel/Work Standards
DID OE-030	Site Specific Final Report
DID OE-040	Disposal Feasibility Report
DID OE-045	Report/Minutes, Record of Meetings
DID OE-055	Telephone Conversations/Correspondence Records
DID OE-080	Monthly Status Report
DID OE-085	Weekly Status Report
DID OE-090	Ordnance Filler Report
DID OE-100	Analysis of Institutional Controls

APPENDIX A

Geophysical Prove-Out (GPO) Plan and Report

Use/Relationship: The Geophysical Proveout (GPO) Plan will be used to provide details of the approach, methods, and operational procedures to be (1) employed to perform GPOs at OE sites and (2) documented as part of the Geophysical Investigation Plan. This Data Item Description contains instructions for preparing Geophysical Prove-Out Plans and Reports.

Requirements:

1. Purpose. The Contractor shall demonstrate and document the site-specific capabilities of the proposed survey platform, sensors, navigation equipment, data analysis, data management and associated equipment and personnel to operate as an integrated system capable of meeting data quality objectives for project performance goals.

2. GPO Work Plan. The elements described in the following sub-sections shall be addressed in the GPO Work Plan.

a. Test Plot Design. The proposed test plot layout shall be included in the GPO work plan.

(1) Prove-Out Grid Size and Location. Selection of the prove-out area should be based upon the technical and site-specific considerations developed and finalized during the TPP process and/or project team meetings, and follow anticipated layout for project data collection. It may be necessary to prepare more than one prove-out grid, mini-grid, or test strip if site conditions vary significantly. It may be advantageous to plan the prove-out location outside of areas where digging is restricted to UXO technicians and/or oversight by UXO technicians.

(2) Seed Items. A tabulated list, available in digital format, containing the seed items, ID numbers, proposed X, Y, Z locations, proposed inclination and declination (or survey information on the nose, tail, and center point of the item) shall be included. Inert UXO should be used whenever possible.

b. Site Preparation. Once a suitable site has been selected for the prove-out, some preparation may be necessary to allow accessibility with geophysical instruments. This may include vegetation removal and/or surface clearance. After this step, the test plot should duplicate, as closely as possible, the conditions under which the geophysical surveys will be conducted.

c. Location Surveying. The location of the test plot corners and seed items shall be surveyed by a professional land surveyor (PLS) to a horizontal accuracy of 2 cm and a vertical accuracy of 5cm. The center and both ends of seed items shall be surveyed. In addition, surface elevation shall be measured after seed item burial, to accurately determine depth below ground surface.

d. Pre-Seeding (Background) Geophysical Mapping. After a site has been selected and the surface prepared, pre-seeding geophysical surveys shall be performed with each detector type in order to determine and document base-line geophysical conditions at the site.

e. Anomaly Avoidance. The contractor shall use anomaly avoidance techniques to ensure the location of each excavation and corner marker/stake is clear of metallic anomalies before placing seed items or site corner markers.

This includes utilizing the background geophysical data.

f. Seeding. In addition to the known seed items, blind seed items may be buried by the government, and/or the contractor's UXO QC Specialist, for quality control. The contractor shall allot ample time for burial of blind seed items and ensure that adequate excavating equipment is available to attain the seed item burial depths planned. Once placed, all seeded items and corner markers should be surveyed and photographed. The planned GPO target layout plan shall be updated to reflect the "as built" configuration. The seeded items should be painted blue and tagged with a non-biodegradable label identifying the items as inert and providing a contract reference, a point of contact address, phone number, and a target identifier.

g. Data Collection Variables. It is important to collect and analyze test plot data using the same equipment and procedures that are planned for field use. It is strongly recommended that key personnel from the GPO perform the production survey to minimize the learning curve and provide project continuity. Some data collection elements are subject to modification and evaluation and multiple geophysical surveys using each proposed geophysical instrument may be performed. These elements include: instrument height, instrument orientation and direction of travel, instrument channel selections, measurement interval along survey line, lane width, etc.

h. Data Analysis and Interpretation. All data collected at the prove-out grid from each geophysical instrument will be post-processed and analyzed. It is required that all data channels are analyzed to ensure the best methodology is established for each site. A dig-sheet, provided as **Attachment C of Appendix C**, of selected target anomalies shall be prepared and provided to the project team for comparison with seeded item locations.

i. Reacquisition. The contractor shall perform anomaly reacquisition and verification, and record these measurements on the dig-sheet. This should be done to the same extent and with the same equipment as planned for the production geophysical investigation. If the GPO location is situated in an area where digging of unknown targets is permitted (e.g. beyond project site boundaries), it may be advantageous, based upon the professional judgment of the project geophysicist, in concurrence with CEHNC, to excavate a limited number of unknown anomalies that are identified during the pre-seeding background surveys. It is anticipated that such information would be used to aid in characterizing false positive responses in the project area.

j. Data Evaluation.

(1) The geophysical data must be evaluated and scored so that the different geophysical approaches can be compared and ranked. Scoring criteria should include, as a minimum, the following: percent of seeded items detected (by class or size, and overall); number of unknown targets; production rate; cost per unit area; equipment durability and safety.

(2) No single geophysical system is likely to achieve maximum scores in all evaluated areas. Therefore, the evaluation team must determine which approach is likely to be most efficient for the site.

3. GPO Letter Report.

a. After the GPO field work has been completed, the contractor shall prepare a GPO Letter Report including the following:

(1) As-built drawing of the GPO plot;
(2) Pictures of the seed items;

(3) Color maps of the geophysical data;
(4) Summary of the GPO results;
(5) Proposed geophysical equipment, techniques, and methodologies; and
(6) Sufficient supporting information to justify the project team's recommendations, including manufacturer specifications for all recommended geophysical equipment, a definition of the expected target anomalies based upon the ASR or EE/CA, and any other pertinent data/information used in decision making.

b. A CD shall be delivered with the letter report containing the following files:
(1) The GPO Letter Report (Microsoft Word format);
(2) All raw and processed geophysical data. All data, except raw instrument data, shall be provided in column delineated ASCII files in the format X, Y, V1, V2,… where X=Easting Coordinate, Y=Northing Coordinate, V1= top sensor reading, V2= next lower (spatially) co-located sensor reading, etc.) All processed data files shall include data headers;
(3) Geophysical maps in their native format (Surfur®, Geosoft Oasis Montaj™, UHUNTER, OEGEO or OEGIS formats) and/or as raster bit-map images such as BMP, JPEG or GIF;
(4) Seed item location spreadsheet (Microsoft Excel format); and
(5) Spreadsheet (Microsoft Excel format) of contractor picks for each sensor type.
(6) Spreadsheet (Microsoft Excel format) of all control points, survey points and benchmarks established or used during the Location Surveying task.

<u>The Contractor may not proceed with production geophysical mapping until the Government approves the GPO results as provided in the GPO Letter Report.</u>

This Letter Report shall be included as an Appendix to future geophysical reports associated with the survey area.

APPENDIX B

CHEMICAL ANALYSIS AND LABORATORY REQUIREMENTS. The Environmental Sampling and Analysis plan shall be prepared in accordance with DID OE-005-10 and EM 200-1-3. The plan shall address each requirement as identified in ER 1110-1-263 and EM 200-1-3 and are available for review at: http://www.usace.army.mil/inet/usace-docs/eng-manuals/em.htm

Laboratory Qualifications. The analytical laboratory utilized by the Contractor must be validated by the Corps of Engineers' Hazardous, Toxic, and Radioactive Center of Expertise (HTRW-CX) and must hold applicable state certifications to perform the analytical methods required by this SOW. The lab shall be an EPA contract lab or be familiar with the Contract Laboratory Program (CLP) requirements and be able to perform CLP work. If an analytical laboratory is unavailable, the Contractor shall submit the collected samples to the following laboratory:

Robert P. (Bobby) Jones
Chemistry Team Leader
Environmental Chemistry Branch, EP-C
Environmental Laboratory, ERDC
3909 Halls Ferry Rd.
Vicksburg, MS 39180-6199
Phone: (601) 634-4098
FAX: (601) 634-2742
email: Robert.P.Jones@erdc.usace.

CEHNC will be responsible for coordination and costs associated with analysis of the Contractor collected/submitted samples.

Coordination with Government Quality Assurance Laboratory. The Contractor must provide coordination and quality assurance samples (collected and transported by the Contractor) to the Government Quality Assurance lab unless the Government lab is performing the analyses. There will be a 10% minimum of additional field sampling. The Government Quality Assurance samples shall be splits of the required field control samples. Each field control sample collected shall be divided equally, one portion sent to the Government Quality Assurance laboratory and the remainder sent to the Contractor's lab. The Government Quality Assurance samples shall

include all sample matrices and analytical parameters. The Contractor shall provide the Government Quality Assurance lab a minimum of two weeks notice of sample shipment, unless an alternate notification requirement is proposed and accepted by the Contracting Officer. The Government shall identify the Government Quality Assurance lab. Results of the field control samples and associated laboratory QC shall be provided to the Government Quality Assurance lab.

Data Reporting Requirements. The Contractor shall provide data reporting elements for definitive data per Section I.13.4.2 of EM 200-1-3. The data shall be assembled in a package so that USEPA could validate the data in accordance with USEPA requirements. These data shall be included in the draft and final engineering reports. Data shall also be provided electronically by the Contractor.

Data Validation. The Contractor shall perform data validation on all analytical data collected and produced as a result of field and lab efforts. The validation shall be performed as required in approved Environmental Sampling and Analysis Plan. Persons performing the data validation shall have a minimum of 10 years plus directly relatable laboratory experience coupled with two years data review and two years data validation experience in accordance with current guidelines.

Data Quality. The Contractor shall provide a data quality of a level sufficient for the support project objectives as defined in the Environmental Sampling and Analysis Plan. The Contractor shall provide quality control of the various analytical task performed. The Contractor is responsible for achieving the data quality as defined in the Environmental Sampling and Analysis Plan. Analytical data that does not meet QA requirements shall be rejected by the Government and contract re-performance required at no additional cost to the Government.

APPENDIX C

GEOPHYSICAL INVESTIGATION PLAN

Applicable Forms: Attachment A – Field Data Sheet, Attachment B – Instrument Standardization Quality Control Requirements, Attachment C – Geophysical Dig Sheet and Target History, Attachment D – Geophysical Map Deliverable Format
Use/Relationship: The Geophysical Investigation Plan will be used to provide details of the approach, methods, and operational procedures to be employed to perform geophysical investigations at OE sites and includes instructions for preparing Work Plan chapters and data requirements when addressing geophysical investigations for OE projects. Additional references include EM 1110-1-4009, Ordnance and Explosives Response.

Requirements:

1. Unexploded Ordnance (UXO) Safety. During all initial fieldwork and all intrusive activities, the geophysical crew shall be accompanied by a UXO Technician II (or higher). The UXO Technician II shall conduct visual surveys for surface ordnance prior to the survey crew entering an area potentially containing UXO, and a magnetometer or electromagnetic survey of each intrusive activity site to ensure the site is anomaly free prior to the crew setting monuments or driving stakes. The UXO Technician II will not be required on a full time basis for most of the project, for non-intrusive activities.

2. Personnel Qualifications. All geophysical investigations shall be managed by a qualified geophysicist meeting the qualification requirements listed in DID OE-025.

3. Geophysical Investigation Plan Outline. The Contractor shall prepare a geophysical investigation plan in accordance with the following outline:

3.1 Site Description.

a. Geophysical Data Quality Objectives. Define target objectives and Site Specific Project constraints. Refer to **Appendix A of the SOW for Geophysical Prove-out (GPO)** requirements.

b. Specific Area(s) to be investigated, including a Survey Mission Plan Map.

c. Past, current and future use

d. Anticipated UXO type, composition and quantity

e. Depth anticipated

f. Digital Topographic Maps

g. Vegetation (Digital air photos if available)

h. Geologic conditions (including bedrock type, mineralization and depth)

i. Soil conditions - including soil type/composition, typical moisture content, and thickness. Include Soil Conservation Service (SCS) map if available.

j. Shallow groundwater conditions (including depth, mineralization, existence of perched tables, and seasonal & tidal variations)

k. Geophysical conditions, including background geophysical gradients, regional magnetic field intensity, inclination, declination, local variation.
l. Site Utilities

m. Man-made features potentially affecting geophysical investigations

n. Site-specific dynamic events such as tides, unusually strong winds, or other unusual factors affecting site operations

o. Overall Site Accessibility and Impediments

p. Potential Worker Hazards

3.2 Geophysical Investigation

a. Survey Type – Fixed Pattern, Transect, Meandering Path, Hybrid

b. Equipment
   - Survey Platforms
   - Detectors
   - Navigation and Mapping System
     - Note- If GPS systems are used, correlate satellite availability with work/rest periods
   - Data Processing System

c. Procedures. Refer to **Attachment A for Field Data Sheet**

d. Personnel – Identify key personnel and project team members with designated responsibilities and requirements

e. Production Rates

f. Data spatial density (define data in-line spacing and lane width)

3.3 Instrument Standardization. Refer to **Attachment B for requirements and acceptance criteria**.

3.4 Data Processing, Corrections and Analysis. Detail initial field processing, standard data analysis methods, advanced data analysis techniques that may be required by certain project specific conditions, anomaly selection and decision criteria.

a. Initial Field Processing
Data file QC review and correction
- Grid name and location
- Line numbers, survey direction, fiducial locations, start and end points
- Removal of data drop-outs, spikes and physical feature interference sources

b. Standard data analysis
- Diurnal correction (magnetic data)
- Positional offset correction
- Sensor bias, background leveling and/or standardization adjustment
- Sensor drift removal
- Latency Correction
- Heading error removal (magnetic data)
- Geophysical noise identification and removal (spatial, temporal, motional, terrain induced)
- Gridding method and search criteria
- Contour level selection with background shading and analysis

c. Advanced Data Processing, Digital Filtering and Enhancement (if applicable)
- Dipole match, or Analytic Signal calculation (magnetic data)
- adaptive (matched) filtering,
- Approximate magnetic volume/mass estimates (magnetic data)
- Approximate depth determination
- Time decay curve analysis (TDEM data)
- Amplitude and Phase response analysis (FDEM)
- Data Fusion
- Digital filtering and Enhancement (low pass, high pass, band pass, Convolution, Correlation, Non-linear, etc…)

d. Anomaly Selection and Decision Criteria

3.5 Dig Sheet Development. Refer to **Attachment C for form**.

3.6 Anomaly Reacquisition

3.7 Feed-Back Process (Comparison of dig-sheet predictions with ground-truth excavation results)

3.8 Quality Control

3.9 Corrective Measures

3.10 Records Management (Life Cycle Data Management, Resource loaded schedule in Microsoft Project 2000 format, Data transfer, and Data Storage)

3.11 Interim Reporting

3.12 Final Reports and Maps. Refer to Attachment D for format.

4. Geophysical Investigation Performance Goals.

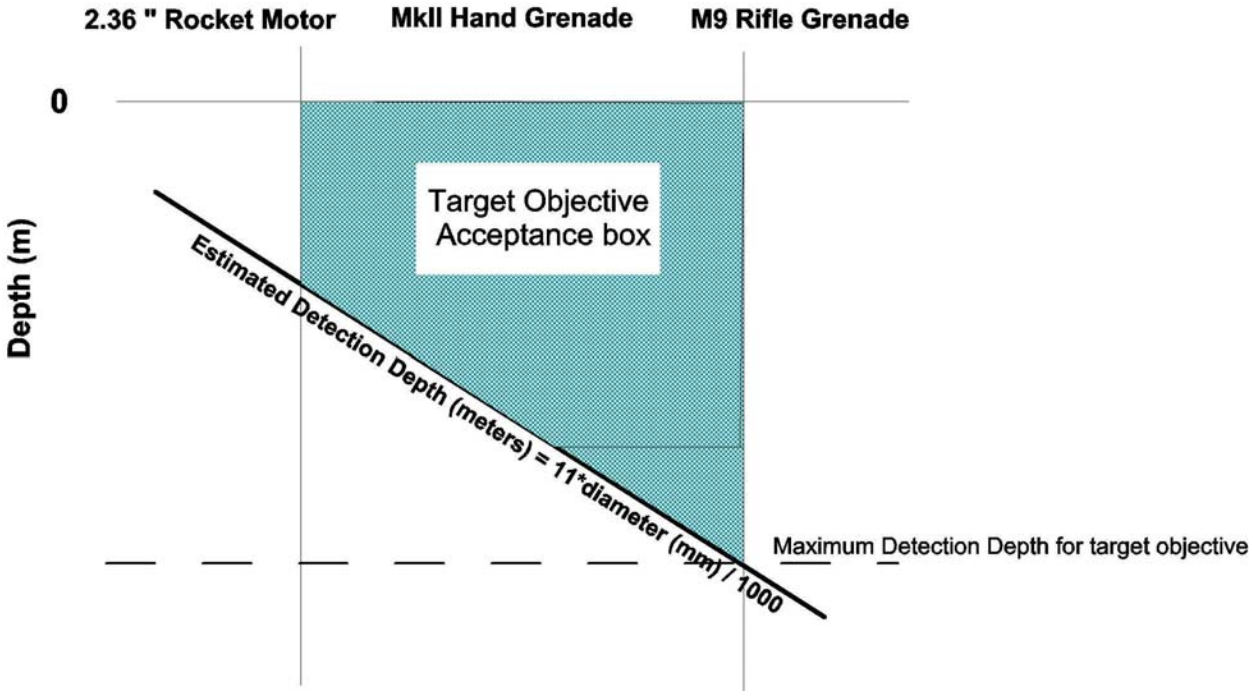
4.1 OE Detection.

a. A simplified expression for maximum depth of detection is calculated as:

Estimated Detection Depth (meters) = 11*diameter (mm) / 1000

b. Minimum OE diameter ("dia") must be determined on a project-specific basis. The contractor shall detect and remove all OE and OE look-alikes located within the target objective performance box (below).

c. Any unexcavated (missed) OE look alike item that has an intermediate principal axis (diameter of ordnance-like item) that fits within the target acceptance box , is considered to be Quality failure. The contractor will , at no expense to the Government, correct the Quality deficiency and resweep and perform QC on all affected area's again before re-submitting back to the Government for verification and acceptance.



d. If the contractor believes the target objective performance goals cannot be achieved at a particular site, then the contractor shall propose and document alternative goals for the

Contracting Officer's consideration. The contractor will not be held liable for technically unachievable goals, as determined during the GPO and initial phase of field work.

4.2 Horizontal Accuracy. Horizontally, 95% of all excavated items must lie within a 35 cm. radius of their mapped surface location as marked in the field after reacquisition.

4.3 False Positives. If there are more than 15% "false positives" (anomalies reacquired by the Contractor result in no detectable metallic material recovered during excavations, calculated as a running average for the sector), a re-evaluation of the data, detection methods being utilized, and overall project Quality Control shall be performed at no cost to the Government. A written response explaining the reason for the excessive false positive results and a Corrective Action Plan, if appropriate, shall be submitted to the contracting officer within 10 days of identification of the situation.

5. Test Plot. The Contracting Officer may require that the Contractor demonstrate and document the capabilities of the proposed sensors, navigation equipment, data analysis, data management and associated equipment and personnel to operate as an integrated system capable of meeting project performance goals. When the Contracting Officer requires a site-specific geophysical prove-out, a GPO Work Plan that includes test plot design shall be prepared and implemented in accordance with accordance with **Appendix A of the SOW**. A letter report is required as a deliverable.

6. Geophysical Mapping Data.

6.1 The Contractor shall correlate all sensor data with navigational data based upon a local "third order" (1:5,000) monument or survey marker. If a suitable point is not available, the Contractor shall have a Professional Land Surveyor (PLS) establish a minimum of three (3) new monuments or survey markers with a minimum of "third order" accuracy. All sensor data shall be preprocessed for sensor offsets, diurnal magnetic variations, latency corrections, drift corrections, etc. and correlated with navigation data. Diurnal magnetic variations measured at a base-station must be collected at approximately the same frequency that readings are collected by instruments used by field crews. The approved geophysical mapping technology shall digitally capture the instrument readings into a file coincident with the grid coordinates. All raw and final processed data shall be delivered corrected and processed in ASCII files. Corrections such as for navigation, instrument bias, and diurnal magnetic shift shall be applied. All corrections shall be documented. Grids geophysically mapped shall be exactly coincident with the grid system used by the UXO removal action contractor and shall use exactly the same datum and coordinate system. However, the geophysical contractor may choose to provide geophysical data files in grids of up to 400 ft. x 400 ft. square. The data shall be presented in delineated fields as x, y, z, v1, v2, etc., where x and y are UTM Grid Plane Coordinates in Easting and Northing directions, z (elevation is an optional field in meters), and v1, v2, v3, etc., are the instrument readings. The last data field should be a time stamp. Each data field shall be separated by a comma or tab. No individual file may be more than 100 megabytes in size and no more than 600,000 lines long. Each grid of data shall be logically and sequentially named so that the file name can be easily correlated with the grid name used by other project personnel. The formats specified in this paragraph are REQUIRED to be exactly followed, although the

contractor may choose to submit the data in additional formats as well. No later than 36 hours after collection, the Contractor shall furnish each day's data to USAESCH, via internet using FTP, E-mail attachment for small files under 5 Mb, digital compact disk (CD) or other approved method, for inspection. Such data is considered to be in draft form. The data shall be corrected for sensor offsets, diurnal variations, latency, heading error, and drift. The Contractor shall also provide a digital planimetric map, in Intergraph .DGN, Surfer .srf, ESRI ArcView or Geosoft format, and coincident with the location of the geophysical survey, so that each day's geophysical data set can be registered within the original mission plan survey map. Within 14 days of completion of survey activity the Contractor shall provide USAESCH all final geophysical maps, dig-sheets and supporting geophysical interpretations. All geophysical data shall be accompanied by a Microsoft Word 6.0 or higher file documenting the field activities associated with the data, and the processing performed. The Government will periodically perform validation checks to assure positional accuracy, proper instrument calibration or other analysis. Draft Data shall be provided within 24 hours of request to the government representative performing QA activities on the project.

6.2 Geophysical Data Analysis, Field Reacquisition and Reporting. The Contractor shall analyze the geophysical data and provide complete digital "dig-sheets" in Microsoft Excel spreadsheet format utilizing **Attachment C**. Microsoft Access '97(or higher) database tables that include pre-built queries for the required information are also acceptable.

6.3 Anomaly Reacquisition and Marking. The same Contractor that geophysically mapped and analyzed the survey area shall reacquire all geophysical anomalies identified for excavation on the dig sheets using the re-acquisition method tested by the Contractor and approved by CEHNC on the GPO. The Contractor shall flag (PVC flag with the unique identifier number recorded in indelible ink on the flag) the actual field location of each re-acquired anomaly shown on the "dig-sheet" and paint the ground (if feasible and allowable) at the flag location with high-visibility paint. Such reacquisition shall be carried out concurrently with other site activities and shall be completed no later than 14 days after geophysical field investigations are completed. If a longer than 14 day hiatus between the geophysical survey work and re-acquisition is expected, this should be so stated in the Resource loaded Project Schedule that is submitted for Government approval. Additionally, the Contractor will re-acquire 200 anomalies (the Government reserves the right to choose which 200 anomalies) to validate that the original geophysical survey location data is acceptable. The Contractor shall record and report on all discrepancies between final reacquired mapped locations of anomalies as shown on the dig-sheet, and actual locations of the excavated anomalies. The Contractor shall also report any anomalies that could not be reacquired.

6.4 Anomaly Excavation Reporting. The Contractor shall, in full accordance with the project work plan, excavate the reacquired anomalies in the field. The disposition and final location details of each anomaly shall be recorded on the final dig sheets, which shall be submitted to USAESCH within 14 days of completed excavations for that individual grid and included with the final report (refer to DID OE-030).

ATTACHMENT A

Field Data Sheet

☐ **QC checked by** _____**Date:** _____ ☐ **QA checked by** _____**Date:** _____

Project Name: _____ **Project Location**: _____

Geophysical Contractor: _____ **Design Center**

POC:_____

Project Geophysicist: _____ **Site Geophysicist:** _____

Survey Area ID: _____ **Date:** _____ **Field Team:** _____

Survey Type: ☐Grid ☐Meandering Path ☐Transect ☐Other _____

Coordinate System: ☐UTM ☐State Plane NAD ___ ☐Local ☐Other___ **Unit of Measure:** ☐ meters☐ feet

Sketch of Survey Area: **Approx. Scale:** _____ **North Arrow:**

S

Terrain:

☐Level ☐Moderate Slope ☐

☐Rolling ☐Ruts ☐Gullies

☐Rocky ☐Swampy ☐

Dangerous

Tree Cover: Tree Height: _____

☐None ☐Light ☐Medium ☐

Thick

Brush:

☐None ☐Light ☐Medium ☐

Thick

Weather:

☐Sunny ☐Cloudy ☐Drizzle

☐Rain ☐Thunderstorms ☐Hail

☐Fog ☐Humid ☐Snow

Grid Corner Coordinates: Start End

File Name **U**TM/State Plane Local **Battery Voltage:**

____ ____ _____ S*W* _____, _____ _____, _____

Static Background Value: ____ ____ _____

NW _____, _____ _____, _____ **Static Response Value:** ____

____ _____

NE _____, _____ _____, _____

SE _____, _____ _____, _____ **Instrument Clock Drift:**

_____

Raw Data File Name: _____ **Repeat Data File Name:**

_____

Geophysical Instrumentation: _____**Serial Number:**

_____

Base Station: _____**Serial Number**: _____

Navigation Method: _____**Serial Number:**

_____

Additional Comments:

_____

ATTACHMENT B

Instrument Standardization Quality Control Requirements

for

OE Digital Geophysical Mapping

To facilitate the detection of buried munitions, the U.S. Army Engineering and Support Center, Huntsville (USAESCH) has defined standard equipment tests and data quality requirements for its Ordnance and Explosives – Digital Geophysical Mapping (OE-DGM) contractors. USAESCH has found that it is imperative to perform and review QC tests before carrying out production geophysical work. This ensures that the geophysical system is functioning properly and optimized for the target objectives.

The most common instruments in use today for metallic OE detection are magnetometers, and electromagnetic metal detectors. This document will identify the USAESCH required QC tests and acceptance criteria for these types of instruments.

1.0 QC Steps/Tests

The required equipment tests and frequency of testing are summarized in Table 1.

Table 1: QC Test Frequency

Test #	Test Description	Specific detector	Power on	Beginning of Day	Beginning & End of Day	1st Day of Project for each operator	1 Line per Grid or 100 ft. per Linear Mile	
1	Equipment Warm-up		X					
2	Record Sensor Positions			X				
3	Personnel Test			X				
4	Vibration Test (Cable Shake)			X				
5	Static Background and Static Spike				X			
6	Azimuthal Test	Magnetometer Only				X		
7	Height Optimization					X		
8	6 Line Test					X		
9	Octant Test - (Heading Error Test)	Magnetometer Only				X		
10	Repeat Lines						X	

1.1 Equipment/Electronics Warm-up

Purpose: Minimize sensor drift to allow instrument electronics time to reach operating temperature. Most instruments need a few minutes to warm up before data collection begins. Follow the manufacturer's instructions or, if none are given, observe the data readings until they stabilize.

Acceptance Criteria: Equipment Specific (typically 5 minutes).

1.2 Record Relative Sensor Positions

Purpose: Document relative navigation and sensor offsets, detector separation, and detector heights above the ground surface. This will ensure that detector offset corrections and gradient calculations can be done correctly and that the surveys are repeatable.

Acceptance Criteria: +/- One inch (2.54 cm)

1.3 Personnel Test

Purpose: Ensure survey personnel have removed all potential interference sources from their "bodies". Common interference sources are ballpoint pens in the operator's pocket and steel-toed boots or large metallic belt buckles, which can produce data anomalies similar to OE targets. All personnel who will be coming within close proximity of the sensor during survey operations must approach the sensor and have a second person monitor and record the results.

Acceptance Criteria: EM61 +/- 2mV, Mag +/- 3nT

1.4 Vibration Test (Cable Shake)

Purpose: Identify and replace shorting cables and broken pin-outs on connectors. With the instrument held in a static position and collecting data, shake all cables to test for shorts and broken pin-outs. An assistant is helpful to observe any changes in instrument response. If shorts are found, the cable should be immediately repaired or replaced. After repair, cables need to be rigorously tested before use.

Acceptance Criteria: Data Profile does not exhibit data spike responses.

1.5 Static Background and Static Standard Response (Spike) Test

Purpose: Quantify instrument background readings, electronic drift, locate potential interference spikes in the time domain, and determine impulse response and repeatability of the instrument to a standard test item. A standard 2" diameter steel trailer ball (Uniball- available from U-haul) is the preferred test item, as it is easily acquired and transported. Improper instrument function, the presence of local sources of ambient noise (such as EM transmissions from high-voltage electric lines), and instability in the earth's magnetic field (as during a magnetic storm) are all potential causes of inconsistent, non-repeatable readings. A minimum of three minutes static background collection after instrument warm-up, followed by a 1-minute standard (spike) test followed by a 1-minute static background data is required. The operator must review the readings to confirm their stability prior to continuing with the geophysical survey.

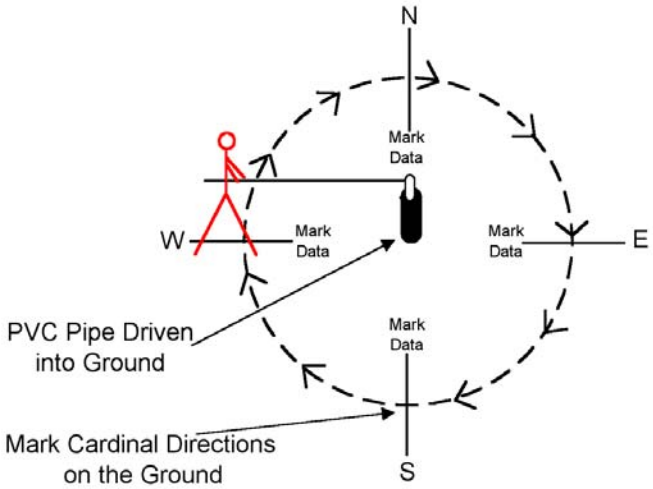
Acceptance Criteria: Static Background Test: EM61 +/- 2.5 mV, Mag +/- 1nT Static Spike Test: EM61 and Mag +/- 20% of standard item response, after background correction.

1.6 Azimuthal Test (Magnetometer sensor systems only)

Purpose: Optimize sensor orientation to avoid optically pumped magnetometer sensor "Dead Zones". This test is performed to document the differences in readings based on sensor orientation with respect to the earth's local magnetic field. An illustration of the Azimuthal Test is given in **Figure 1**. A variety of sensor orientations should be evaluated, to minimize the observed deviation in amplitude, and reduce chances of encountering magnetic "dead zones" for cesium vapor magnetometers.

Acceptance Criteria: Sensor Orientation that minimizes the observed deviation in amplitude and is devoid of drop-outs.

Figure 1



1.7 Height Optimization

Purpose: Determine the sensor height that optimizes the target signal-to-noise ratio and maintains adequate sensitivity. This test is most often applied to magnetics, and for the GEM-3 instrument. It could also be used for an EM-61 used in harness or "litter" mode. A line is established with at least one test object along its length. Data is collected with the instrument using a minimum of three different sensor heights, and the height that best meets the objectives is selected.

Acceptance Criteria: Maximum signal-to-noise ratio that reliably detects smallest target objective.

1.8 Six Line Test

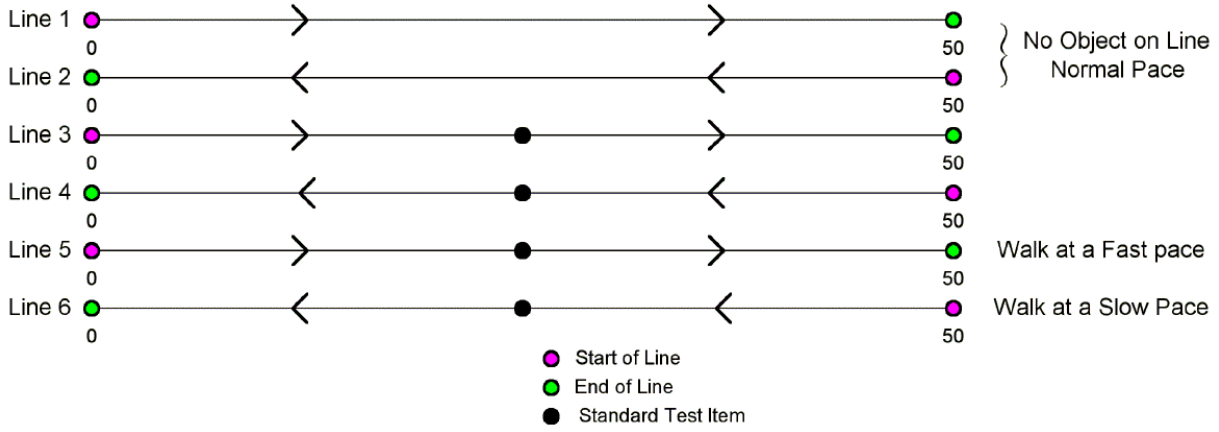
Purpose: Document latency, heading effects, repeatability of response amplitude, and positional accuracy.

This test should be performed in an area relatively clear of anomalous response. The test line will be well marked to facilitate data collection over the exact same line each time the test is performed in accordance with **Figure 2**. Background response over the test line is established in Lines 1 and 2. A standard test item, such as a steel trailer

hitch ball will be used for Lines 3 through 6. Heading effects, repeatability of response amplitude, positional accuracy, and latency are evaluated.

Acceptance Criteria: Repeatability of response amplitude +/-20%, Positional Accuracy +/- 20cm

Figure 2



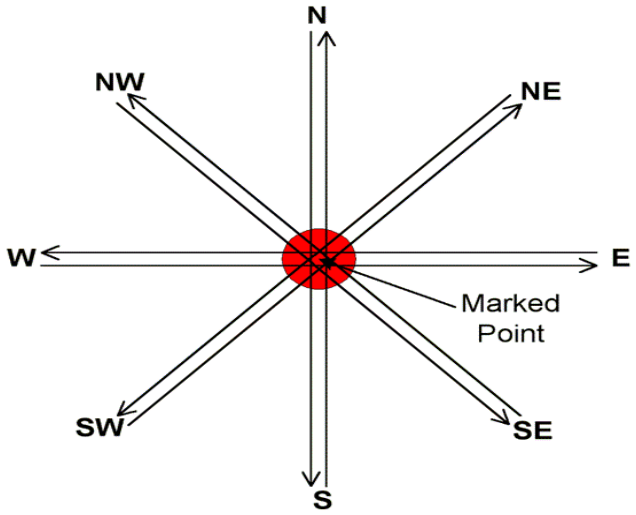
1.9 Octant Test (Heading Error Test for Magnetometer systems)

Purpose: Determine Heading effects (systematic shift based on direction of travel along the survey line). A magnetometer's response to ferromagnetic objects varies slightly according to the orientation of the sensor in relation to the console electronics and the operator. It is recommended that test be performed for all equipment and operator combinations.

A total of eight lines of magnetic data are collected, passing over the same central point. The arrangement of lines for the test is illustrated in **Figure 3**. The difference in the response over the central point documents heading effects.

Acceptance Criteria: Document heading error for post-processing correction.

Figure 3



1.10 Repeat Data

Purpose: Determine positional and geophysical data repeatability. One line per grid, or 100 feet per mile for transect or meandering path surveys, will be repeated before and after the survey. This repeat line should have the test standard placed at approximately the halfway point in an area lacking anomalous responses. The repeat line will be located at least 10 feet outside of the grid/transect/meandering path and parallel to the direction of travel.

When viewed in profile and compared to original data, repeat data provides a means of evaluating the ability of the instrument to respond consistently, and evaluates the positional accuracy of the data. Errors in positional repeatability outside acceptable tolerances indicate a problem in the method of navigation or navigational equipment operation. Errors outside acceptable tolerances for the amplitude repeatability response indicate a problem in the detector system or in the ability of the operator to perform an adequate survey.

Acceptance Criteria: Repeatability of response amplitude +/-20%, Positional Accuracy +/- 20cm

ATTACHMENT C

ATTACHMENT D

Geophysical Map Deliverable Format

The results of the geophysical investigation will be submitted to the Corps as follows.

Dig list (in ASCII or Excel format) of selected targets shall include the target location given in the referenced coordinate system, the represented amplitude of response based on selection criteria, and any comments or details regarding target properties. Refer to **Attachment C**. The targets will be posted (spatially located) directly on the graphics rendered geophysical map.

a. The following notes and instructions provide directions for creating geophysical maps for OE projects. The "Blocks" listed below correspond to the areas identified in **Figure D-1**. Maps will include all of the following basic map features in addition to any other necessary site information.

(1) General

(a) Map scales should be even multiples of the base units presented in the map. Example: for scales based on one inch being equal to X number of feet, the scale should be an even multiple of 12, e.g. 1:120 (or one inch = 120 inches = 10 feet)

(b) Map sizes should be designed to fit standard printer or plotter sizes. Preferred paper sizes for small maps are letter (8.5"x11") and tabloid (11"x17"). For larger maps, the preferred sizes are C1 (24" x 36") or smaller.

(2) Block 1: Title Block

(a) Use this area to provide Figure number, the map Title and sub-title (e.g. instrument and type/component) and the location of the information being presented (e.g. site/area name and property/grid ID).

(b) The fonts used here should be large.

(3) Block 2: Map Display Area

(a) Grid ticks or grid lines should be visible and labeled, though these can be in small fonts to allow for as large an area as possible being reserved for the display of information

(b) The use of surrounds/frames is not required, and may be omitted to maximize the area reserved for the display of information.

(c) All symbols associated with anomalies and known cultural features should be identified. Abbreviated ID's may be used, though an explanation of the abbreviating method should be included in the legend notes (e.g. anomaly ID S1G1-001, anomaly #1 from grid 1 of sector 1, could be abbreviated to simply the number 1 on the map)

(4) Block 3: Legend

(a) The legend should include all objects/symbols shown on the map.

(b) The following symbol conventions are preferred:

- Open, unfilled circles for locations of anomalies picked from the data
- Polygons with dashed lines for bounding areas with multiple/overlapping anomalies (e.g. used to identify area of a suspected burial pit)
- "X" symbol for locations of known surface features
- All other symbols should conform to either the Civil or Surveying and Mapping sections of the Spatial Data Standards for Facilities, Infrastructure, and Environment (SDSFIE).

(c) Color scale bars should use a color scheme that clearly differentiates between anomalies and background readings. Background values should be plotted in white or gray, so as not to distract the viewer. A classic "cold to hot" color scale should be used with negative values plotted in blue and high positive values plotted in Red. The range of values should be "fixed" so that the same color scale is utilized across the site. The region of major interest is almost always near the detection/background limit, not the maximum or minimum values of the data set. A standard color scale for both the Geosoft, Oasis Montaj and Golden softwares Surfer mapping packages are available upon request form CEHNC.

(d) Clearly label the scale as the "Map Scale".

(5) Block 4: Project Area Index Map

(a) Use this area to show direction arrows, including true north, magnetic north, and grid north

(b) Subject to client approval, the Index Map area may be omitted to provide more area for Area 3 (the Legend) and/or Area 2 (the Map Display Area).

(c) Clearly label the scale as the "Index Map Scale"

(6) Block 5: Project Information Block

(a) Use this area to include pertinent project information. The minimum requirements are to have boxes for the following information:

- Client
- Project
- Contractor
- Map creator

- Map approver
- Date map was created
- Map file name
- Scale

(b) The map file name should include the full path and file extension.

(c) The scale should match that shown in the legend.

(7) Block 6: Logos

(a) Include one of the USACE Castle logo in the lower right corner of the page

(b) The words U.S. Army Engineering & Support Center, Huntsville should be visible below the castle logo

(8) For submittals, the contractor will provide maps in editable form (if available, e.g. Geosoft .map or Surfer .plt formats) and map images in a common image format, such as JPEG, for viewing without the software used to produce the maps.

b. Site maps showing the location of the data and relevant physical/cultural features in addition to the basic map features. Often physical features can cause a response in the geophysical data. Fixed location features are also useful for relocating grids established with a local coordinate system. The digital files must be in a format compatible with GIS (ArcView) software.

c. Additional site information to support mapping should be provided if available.

(1) Details of several methods of positioning using site information can be used. If a local grid system is used, physical feature maps created in the field during data acquisition noting the location of the features with reference to the local grid coordinates must be included.

(2) Additional GPS data to identify points or features of interest. If GPS is used to shoot in points and/or boundaries of cultural features this can be presented with gridded RTK GPS geophysical data.

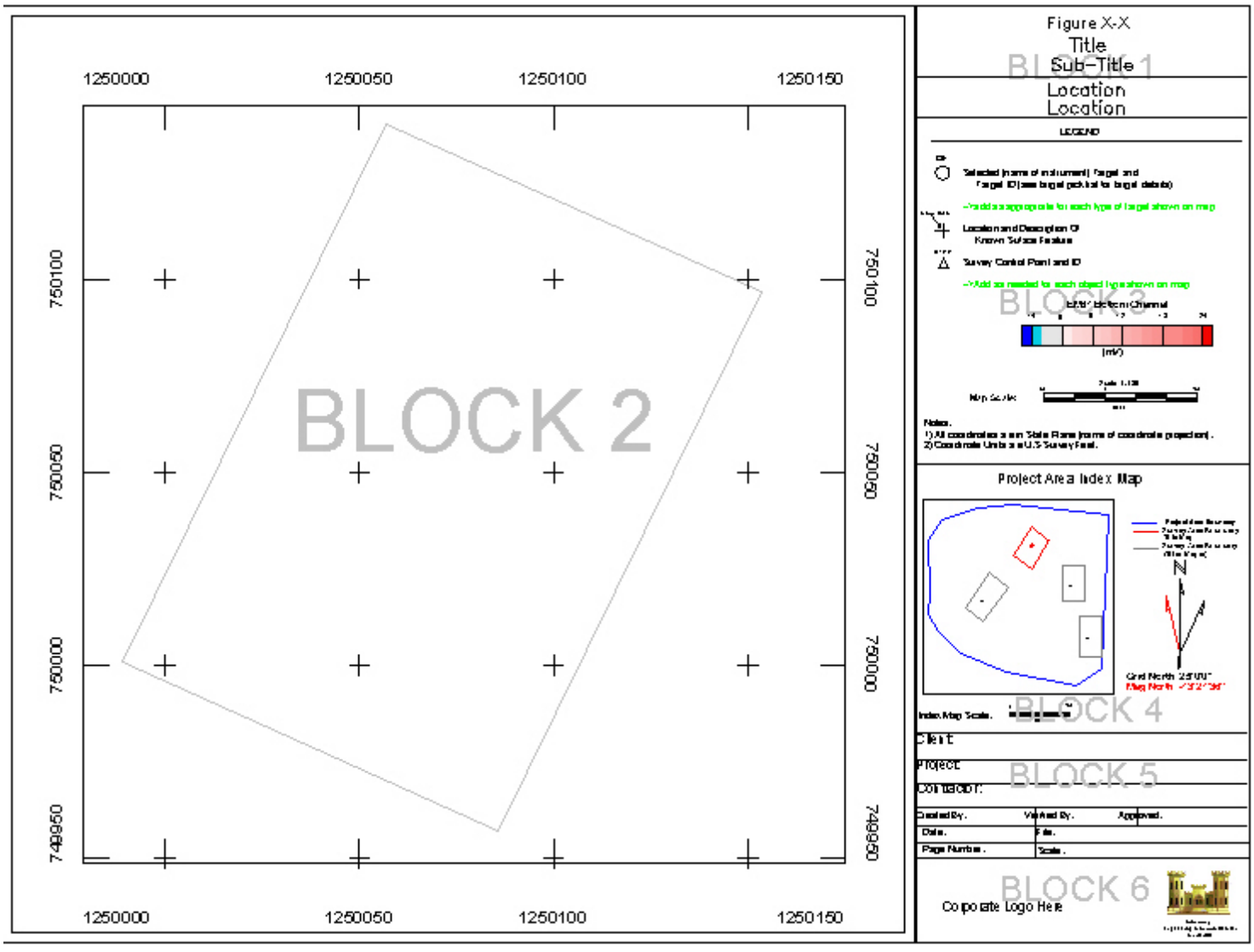
(3) Georeferenced aerial photographs of the site can be presented or superimposed with geophysical data when positioned with GPS or surveyed corners. Broad scale surface features can sometimes be matched with geophysical anomalies, combining two highly informative visual representations of the site.

(4) Known cultural features with anomalous responses in the geophysical data should be marked out on the maps and noted within the accompanying report text.

(5) Presentation of digital elevation models.

(6) Additional geologic information or geophysical data collected using other methods. This information is useful for broad scale interpretation of data collected at buried munitions sites. Geologic background responses may be visible in the geophysical data and are more easily identified with additional site information.

Figure D-1



Example Map Showing features to be included in Geophysical Maps

APPENDIX D

CEHNC-OE

Corps of Engineers Contractors OE Scrap/Range Residue Inspection, Certification, and Final Disposition Procedures

I. OE Scrap/Range Residue Inspection – Contractor Responsibilities and Procedures

1. U.S. Army Corps of Engineers (USACE) contractors executing projects will comply with the following procedures for processing OE Scrap/Range Residue for final disposition as scrap metal. The objective of these procedures is to ensure that an inspection procedure of the exterior and interior surfaces of all recovered items is in place to ensure these items do not present an explosive hazard. These USACE contractor responsibilities and procedures will be contained in the project work plan.

a. Unexploded Ordnance (UXO) Sweep Personnel will only mark suspected items and will not be allowed to perform any assessment of a suspect item to determine its status.

b. Unexploded Ordnance (UXO) Tech I will only tentatively identify a located item as scrap or OE.

c. UXO Technician II will:

(1) Inspect each item as it is recovered and determine the following:

- Is the item a UXO or a component of a military munition?
- Does the item contain explosives or other dangerous materials?
- Does the item require detonation?
- Does the item require demilitarization (demil) or venting to expose internal fillers?

(2) Segregate items requiring demil or venting procedures from those items ready for certification.

(3) Items found to contain dangerous fillers will be process in accordance with applicable procedures.

d. UXO Technician III will:

(1) Inspect recovered items to determine if free of dangerous fillers.

(2) Supervise detonation of items found to contain dangerous fillers and venting/demil procedures.

(3) Supervise the consolidation of recovered scrap metal for containerization and sealing.

e. UXO Quality Control (QC) Specialist will:

(1) Conduct daily audits of the procedures used by UXO teams and individuals for processing OE Scrap/Range Residue.

(2) (2) Perform and document a minimum of 10% random sampling of all scrap metal collected from the various teams to ensure no items of a dangerous or explosives nature are identified as scrap metal.

(3) Perform these random checks to satisfy that OE Scrap/Range Residue is free from any explosive hazards, necessary for completion of the Requisition and Turn-in Document, DD Form 1348-1A.

f. UXO Site Safety Officer (UXOSO) will:

(1) Ensure the specific procedures and responsibilities for processing OE Scrap/Range Residue for certification as scrap metal are being followed, performed safely, consistent with applicable regulations, and in accordance with the USACE-approved project work plan.

(2) Perform random checks of processed OE Scrap/Range Residue scrap to ensure items being identified as scrap are free from any explosive hazards.

g. Senior UXO Supervisor will:

(1) Be responsible for ensuring work and Quality Control (QC) Plans specify the procedures and responsibilities for processing OE Scrap/Range Residue for the final disposition as scrap metal.

(2) Ensure a Requisition and Turn-in Document, DD Form 1348-1A is completed for all scrap metal to be transferred for final disposition.

(3) Perform random checks to satisfy that the OE or range residue is free from explosive hazards, necessary to complete the DD 1348-1A.

(4) Certify all scrap metal generated from OE Scrap/Range Residue as free of explosive hazards.

(1)

(5) Be responsible for ensuring that these inspected materials are secured in a closed, labeled and sealed container and documented as follows;

(6)

- The container will be closed and clearly labeled on the outside with the following information: The first container will be labeled with a unique identification that will start with **USACE/Installation Name/Contractor's Name/0001/Seal's unique identification** and continue sequentially.

.

- The container will be closed in such a manner that a seal must be broken in order to open the container. A seal will bear the same unique identification as the container or the container will be clearly marked with the seal's identification if different that the container.

- A documented description of the container will be provide by the contractor with the following information for each container: contents, weight of container, location where OE Scrap/Range Residue was obtained, name of contractor, names of certifying and verifying individuals, unique container identification, and seal identification, if required [see paragraph I. 1.g. (5)]. These documents will also be provided by the contractor in a separate section of the final report.

II. OE Scrap/Range Residue Certification and Verification

1. The contractor will ensure that scrap metal generated from OE or Range Clearance is properly inspected in accordance with the procedures in I. above. Only personnel who are qualified UXO personnel per USACE's Contract Data Item Description (DID) OE-025 will perform these inspections. The Senior UXO Supervisor will certify and the USACE's OE Safety Specialist will verify that the scrap metal is free of explosive hazards.

2. DD form 1348-1A will be used as certification/verification documentation. All DD 1348-1A must clearly show the typed or printed names of the contractor's Senior UXO Supervisor and the USACE's OE Safety Specialist, organization, signature, and contractor's home office and field office phone number(s) of the persons certifying and verifying the scrap metal.

   a. Local directives and agreements may supplement these procedures. Coordination with the local concerns will identify any desired or requested supplementation to these procedures

.

b. In addition to the data elements required and any locally agreed to directives, the DD 1348-1A must clearly indicate the following for scrap metal:

(1) Basic material content (Type of metal; e.g., steel or mixed)

(2) Estimated weight

(3) Unique identification of each of the containers and seals stated as being turned over.

(4) Location where OE Scrap/Range Residue was obtained.

(5) Seal identification, if different from the unique identification of the sealed container.

c. The following certification/verification will be entered on each DD 1348-1A for turn over of scrap and will be signed by the Senior UXO Supervisor and the USACE OE Safety Specialist.
"This certifies that the material listed has been 100 percent properly inspected and, to the best of our knowledge and belief, are free of explosive hazards."

III. Maintaining The Chain Of Custody And Final Disposition

The contractor, in coordination with the Corps of Engineers, will arrange for maintaining the chain of custody and final disposition of the certified and verified material. The certified and verified material will only be released to an organization that will:

a. Upon receiving the unopened labeled containers, each with its unique identified un-broken seal ensuring a continued chained of custody, and, after reviewing and concurring with all the provided supporting documentation, sign as having received

and agreeing with the provided documentation that the sealed containers contained no explosive hazards when received. This will be signed on company letterhead and state that the contents of these sealed containers will not be sold, traded or otherwise given to another party until the contents have been smelted and are only identifiable by their basic content.

b. Send notification and supporting documentation to the sealed container-generating contractor that the sealed containers have been smelted and are now only identifiable by their basic content.

c. This document will be incorporated by the contractor into the final report as documentation supporting the final disposition of this scrap metal.

APPENDIX B
SITE MAPS

KEY

Croft II Site Areas

100 Feet

Source(s)

USGS, ZAPATAENGINEERING

Projection

South Carolina State Plane, NAD 1983

Note(s)

Engineering scale may only be accurate on a map size of 11 x 17

ZAPATA ENGINEERING

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US Army Corps of Engineers®

U.S. Army Engineering and Support Center
4820 University Square
Huntsville, Alabama 35816

Former Camp Croft II: OOU3
Areas of Investigation

Project No.	Drawn By	Checked By	Date	Engineering Scale	Figure
2615	CRP	JMS	APRIL 2006	1" = 100'	B1

R-14 R-15 R-16 R-17 R-18 R-19 R-20 R-21

P-14 P-15 P-16 P-17 P-20 P-21 P-22

N-14 N-15 N-16 N-17 N-18 N-21 N-22

M-14 M-15 M-16 M-17 M-18 M-21 M-22 M-23

L-16 L-17 L-21 L-22 L-23

K-20 K-21 K-22 K-23

J-20 J-21 J-22 J-23

I-20 I-21 I-22

H-20 H-21 H-22

G-19 G-20 G-21 G-22

F-18 F-19 F-20 F-21 F-22

E-17 E-18 E-20 E-21 E-22

D-17 D-18 D-19

C-17 C-18 C-19 C-20

B-18 B-19

35P2

33P

32P

31P

29P

KEY

× Intrusive Investigation Points

Grid

Croft II Site Areas

N

100 Feet

Source(s)

USGS, ZAPATAENGINEERING

Projection

South Carolina State Plane, NAD 1983

Note(s)

Engineering scale may only be accurate on a map size of 11 x 17

ZAPATA ENGINEERING

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Charlotte, North Carolina 28210 704.358.8342 Fax
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U.S. Army Engineering and Support Center
4820 University Square
Huntsville, Alabama 35816

Former Camp Croft II: OOU3
Subsurface Investigation Points

Project No.	Drawn By	Checked By	Date	Engineering Scale	Figure
2615	CRP	JMS	APRIL 2006	1" = 100'	B2

R-13 R-14 | R-15 | R-16 | R-17 | R-18 | R-19 | R-20 | R-21

35P2

P-13 P-14 | P-15 | P-16 | P-17 | P-20 | P-21 | P-22

N-13 N-14 | N-15 | N-16 | N-17 | N-18 | N-21 | N-22

M-14 | M-15 | M-16 | M-17 | M-18 | M-21 | M-22 | M-23

L-16 | L-17 | L-21 | L-22 | L-23

K-20 | K-21 | K-22 | K-23

J-20 | J-21 | J-22 | J-23

33P

I-20 | I-21 | I-22

32P

H-20 | H-21 | H-22

G-20 | G-21 | G-22 | G-19

31P

F-18 | F-20 | F-21 | F-22 | F-19

E-17 | E-18 | E-20 | E-21 | E-22

D-17 | D-18 | D-19

29P

C-17 | C-18 | C-19 | C-20

B-19 | B-18

Grenade, Hand, Fragmentation, MK2

Grenade, Hand, Fragmentation, MK2

Grenade, Hand, Fragmentation, MK2

Grenade, Hand, Practice, MK2

Grenade, Hand, Practice, MK2

Grenade, Hand, Practice, MK2

Grenade, Hand, Practice, MK2

Grenade, Hand, Practice, MK2

Grenade, Hand, Fragmentation, MK2

Grenade, Hand, Practice, MK2

Grenade, Hand, Practice, MK2

KEY

UXO Items

Grid

Croft II Site Areas

N

100 Feet

Source(s)

ZAPATAENGINEERING

Projection

South Carolina State Plane, NAD 1983

Note(s)

Engineering scale may only be accurate on a map size of 11 x 17

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Former Camp Croft II: OOU3
UXO Locations

Project No.	Drawn By	Checked By	Date	Engineering Scale	Figure
2615	CRP	JMS	APRIL 2006	1" = 100'	B3

KEY

- OOU3 Boundary
- Former Camp Croft Boundary
- Roads
- Highways
- Secondary Roads

4,800 Feet

Source(s)

ZapataEngineering Field Work (2005)

Projection

South Carolina State Plane, NAD 1983

Note(s)

Engineering scale may only be accurate on a map size of 11 x 17

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Former Camp Croft: OOU3
Overall Site Map

Project No.	Drawn By	Checked By	Date	Engineering Scale	Figure
2615	CRP	DSW	APRIL 2006	1" = 4800'	B-4

APPENDIX C
SURVEY
(Pending)

APPENDIX D
GEOPHYSICAL INVESTIGATION DATA

APPENDIX D1
FINAL GEOPHYSICAL PROVE-OUT LETTER REPORT
(Not Included)
(See Final Site Specific Final Report, Former Camp Croft (OOU3), Appendix D1, Dated April 2006 for this report)

APPENDIX D2
GEOPHYSICAL DATA
(Deleted)

APPENDIX D3
DIG SHEETS

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

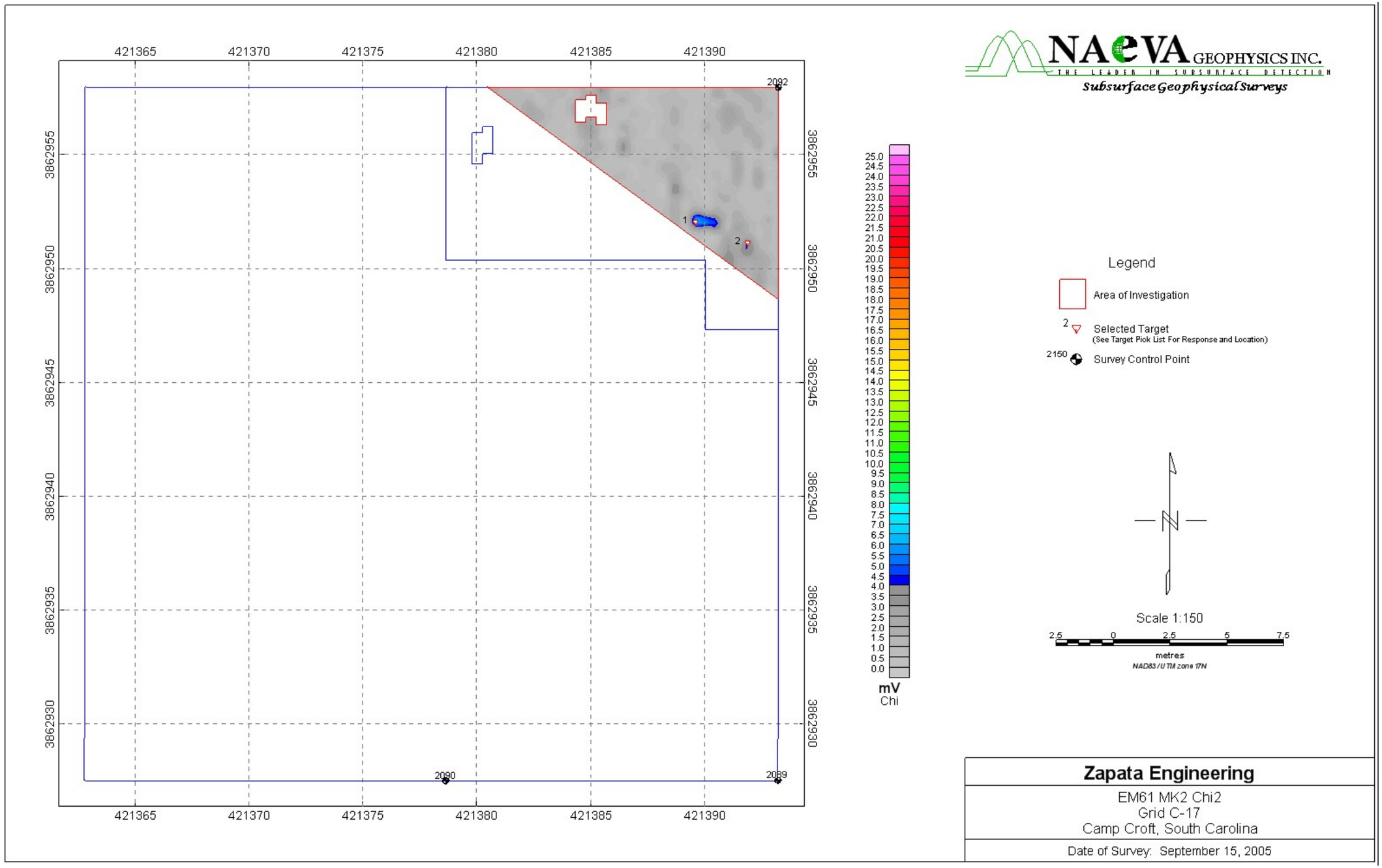
Project Name: Former Camp Croft, Phase II
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: C17
Field Book ID:

Geophysical Contrac ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center I Brendan Slater
COE Project Enginee
COE Geophysicist: Andrew Schwartz

Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

	Original Survey								Reacquisition Survey					Dig Results												Post-Dig UXO QC Results			Post-Dig Geophysical QC		
											Offset					Offset		Orientation of		Depth (in)												
Unique Target ID	Easting Coord. (m)	Northing Coord. (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs-oz)	Dimensions: Length, Width, Height (in)	Comments	X Distance (in)	Y Distance (in)	Nose (Azimuth deg) **	Inclination of Nose (deg) **	Top of Item	Center of Mass	Digital Photo Filename **	Date	Team Leader Initials	Excavation Hole Cleared?	UXO QC Spec. Initials	Date	Agreement between Dig Results & Geophysical Data? (G=good, A=avg, P=poor,	Geophysicist QC Initials	Date
C17_10	421302.291	3862957.217	64	97.5	10.1			15-Sep-2005	10	2	-12	6	1/10/06	CD	.25	3 x .25 x .25	1 ea nail	0	0	NA	90	0	1.5	C17_10 - #074	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
C17_7	421309.1402	3862955.231	66.5	91	3.3			15-Sep-2005					1/10/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
C17_C1	421389.5941	3862952.034	88	80.5	49.3	5.9707093	C17_3	15-Sep-2005	45	6.5	0	12	1/10/06	MD	1	4 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	SE	0	1	2	C17_C1 - #073	1/12/06	BAM	YES	RVW	01/16/06	YES	RVW	01/16/06
C17_C2	421391.8769	3862951.118	95.5	77.5	5.1	4.644464		15-Sep-2005					1/10/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06

* Fill in Units (mV, nT/m, ppt, etc)
** Opt Field - refer to SOW for applicability
*** UXO, DMM, MC-E (Munit Const-Exp), MD (Munit Debris), CD (Cult Debris) and MC-NE (Munit Const-Non Exp), SA (small arms), NC (no contact) OT (other)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mV
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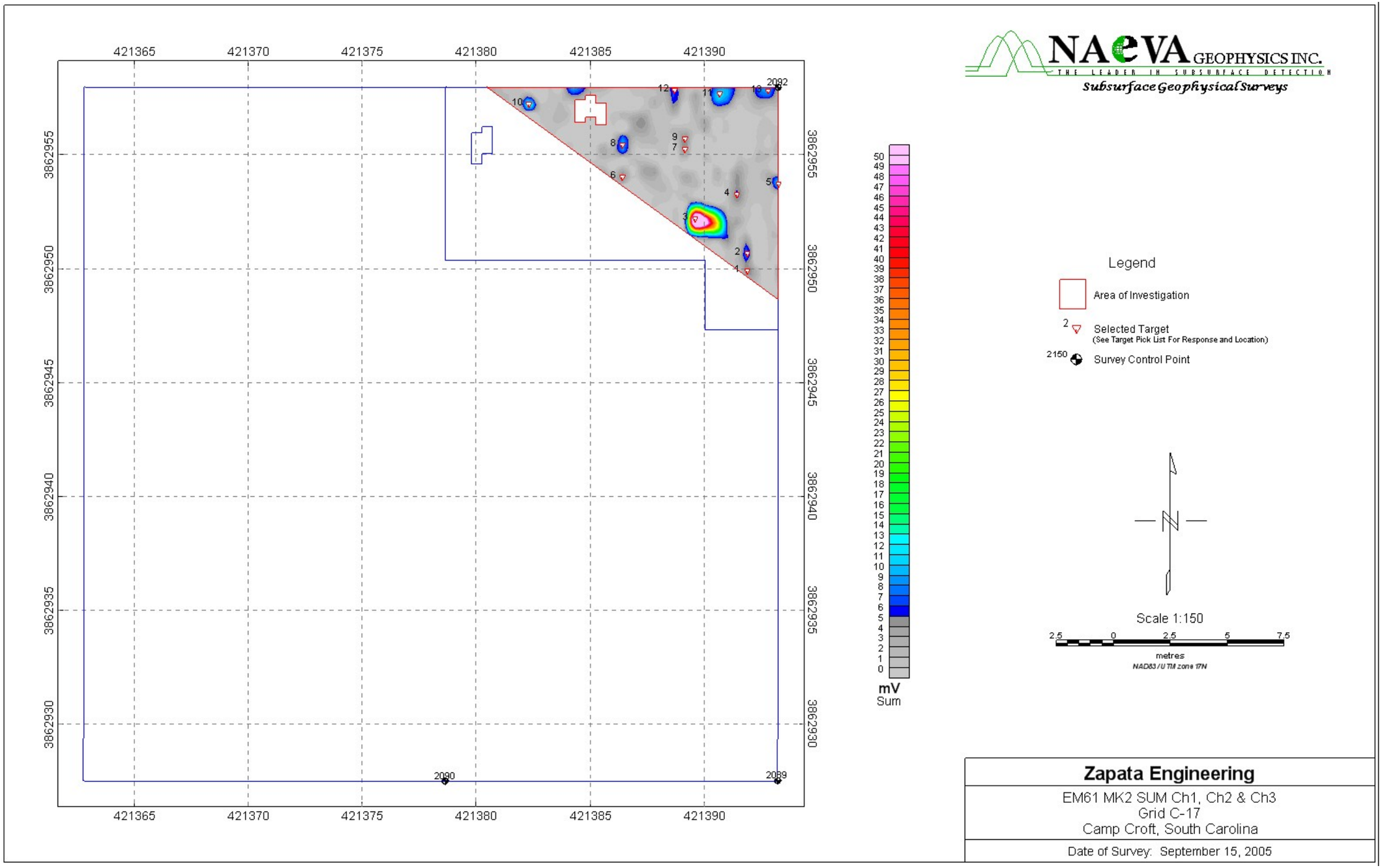
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
2 Selected Target
(See Target Pick List For Response and Location)
2150 Survey Control Point
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 Chi2
Grid C-17
Camp Croft, South Carolina
Date of Survey: September 15, 2005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mV
Sum
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Selected Target
(See Target Pick List For Response and Location)
Survey Control Point
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
NAEVA GEOPHYSICS INC.
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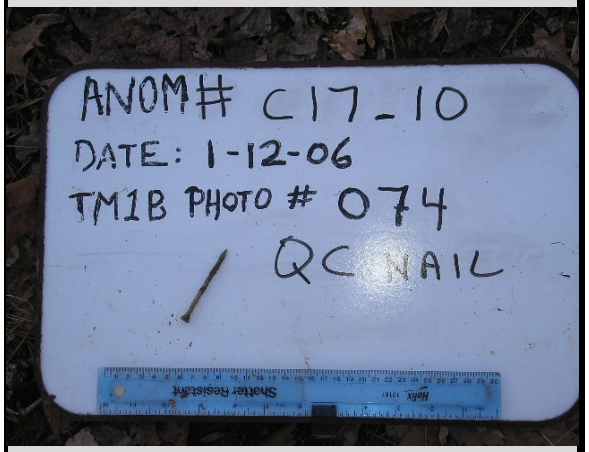
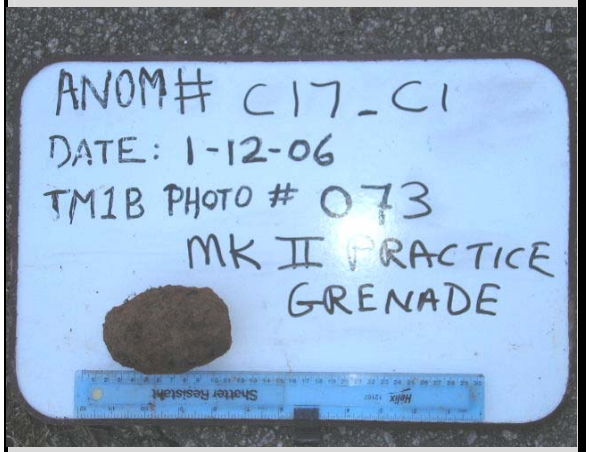
Subsurface Geophysical Surveys
Zapata Engineering
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid C-17
Camp Croft, South Carolina
Date of Survey: September 15, 2005

GRID C17 DIG PHOTOS





ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

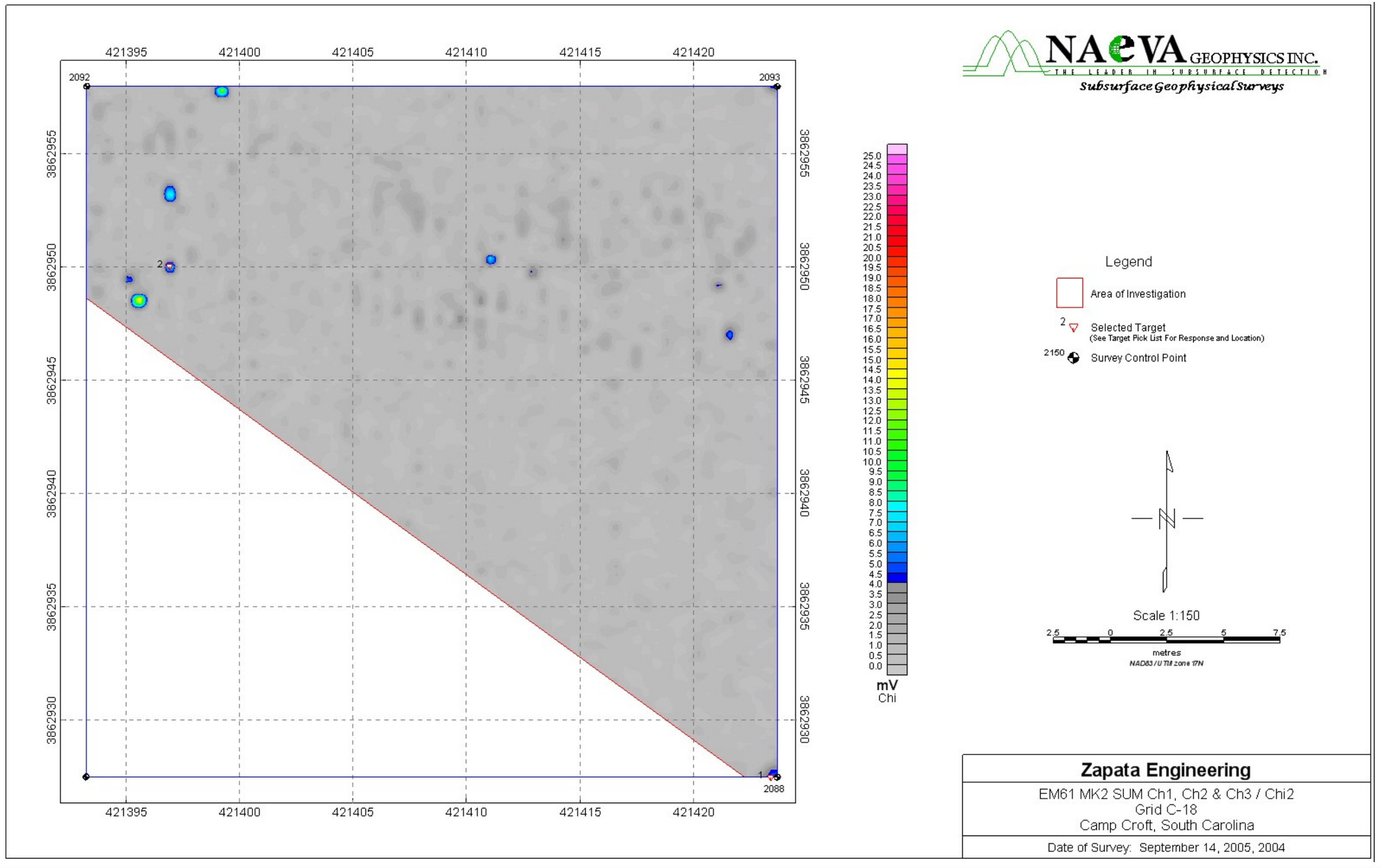
Project Name: Former Camp Croft, Phase II
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: C18
Field Book ID:

Geophysical Contrac ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist David Smith
Site Geophysicist:
Field Team:
COE Design Center Brendan Slater
COE Project Enginee
COE Geophysicist: Andrew Schwartz

Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

	Original Survey								Reacquisition Survey					Dig Results												Post-Dig UXO QC Results			Post-Dig Geophysical QC		
											Offset					Offset		Orientation of		Depth (in)												
Unique Target ID	Easting Coord (m)	Northing Coord (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Ch1² Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Ch1² Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs-oz)	Dimensions: Length, Width, Height (in)	Comments	X Distance (in)	Y Distance (in)	Nose (Azimuth deg) **	Inclination of Nose (deg) **	Top of Item	Center of Mass	Digital Photo Filename **	Date	Team Leader Initials	Excavation Hole Cleared?	UXO QC Spec. Initials	Date	Agreement between Dig Results & Geophysical Data? (G=good, A=avg, P=poor,	Geophysicist QC Initials	Date
C18_27	421406.4909	3862954.198	43.5	87.5	4.8			14-Sep-2005					1/10/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
C18_C1	421423.3904	3862927.497	99	0	26.9	5.2660222	C18_1	14-Sep-2005	130	10.5	0	6	1/10/06	CD	.25	6 x .25 x .25	1 ea survey nail	0	0	NA	90	0	3	C18_C1 - #069	1/12/06	BAM	YES	RVW	01/25/06	YES	RVW	01/25/06
C18_C2	421396.8994	3862950.05	12	74	5.4	7.4866362		14-Sep-2005					1/10/06	NC			No Contact During Reaquisition										YES	RVW	01/25/06	YES	RVW	01/25/06
C18_QA2	421420.6473	3862935.115	90	25	10.2			14-Sep-2005	10	2.3	0	0	01/16/06	HOTROCK	.5	3 x 2 x 2	multiple hotrocks	0	0			0	0.75	C18_QA2 - #014	1/17/06	BAM	YES	RVW	01/25/06	YES	RVW	01/25/06
C18_QA4	421422.0168	3862942.577	94.5	49.5	7.5			14-Sep-2005					01/16/06	CD			QC Nails found during reaq, NC after removal										YES	RVW	01/25/06	YES	RVW	01/25/06

* Fill in Units (mV, nT/m, ppt, etc)
** Opt Field - refer to SOW for applicability
*** UXO, DMM, MC-E (Munit Const-Exp), MD (Munit Debris), CD (Cult Debris) and MC-NE (Munit Const-Non Exp), SA (small arms), NC (no contact) OT (other)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NAEVA GEOPHYSICS INC.
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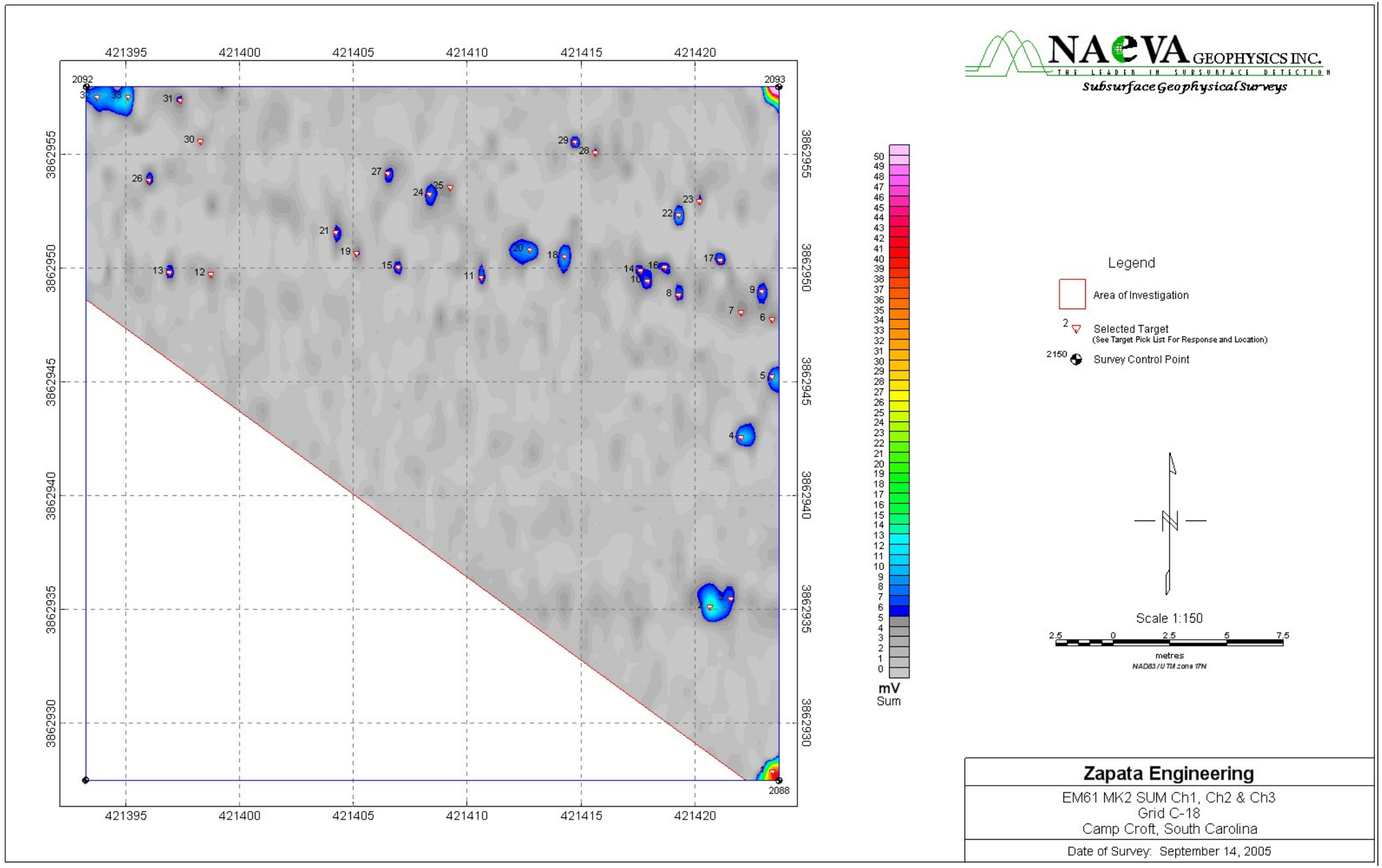
Subsurface Geophysical Surveys
Legend
Area of Investigation
2 Selected Target
(See Target Pick List For Response and Location)
2150 Survey Control Point
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 SUM Ch1, Ch2 & Ch3 / Chi2
Grid C-18
Camp Croft, South Carolina
Date of Survey: September 14, 2005, 2004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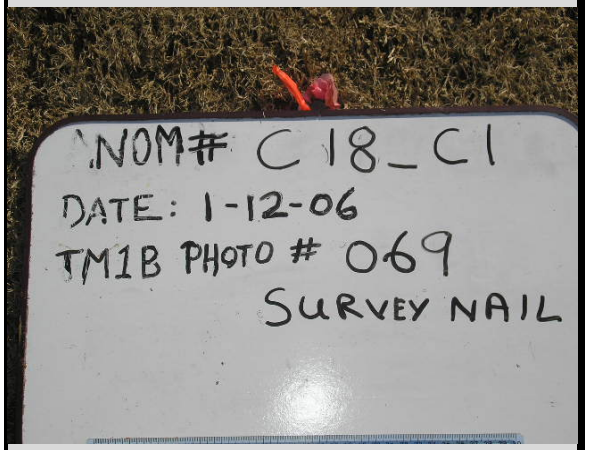
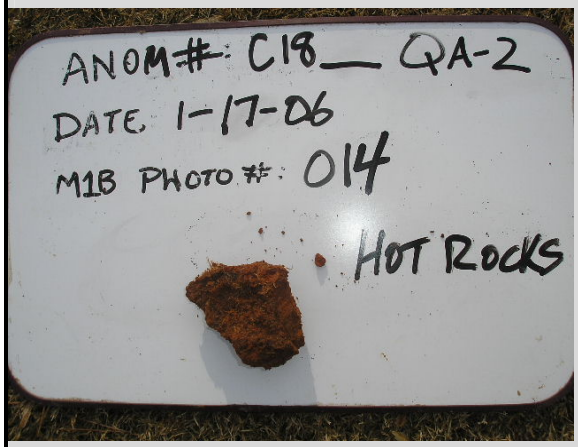
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
Selected Target
(See Target Pick List For Response and Location)
Survey Control Point
mV
Sum
Scale 1:150
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid C-18
Camp Croft, South Carolina
Date of Survey: September 14, 2005

GRID C18 DIG PHOTOS





ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

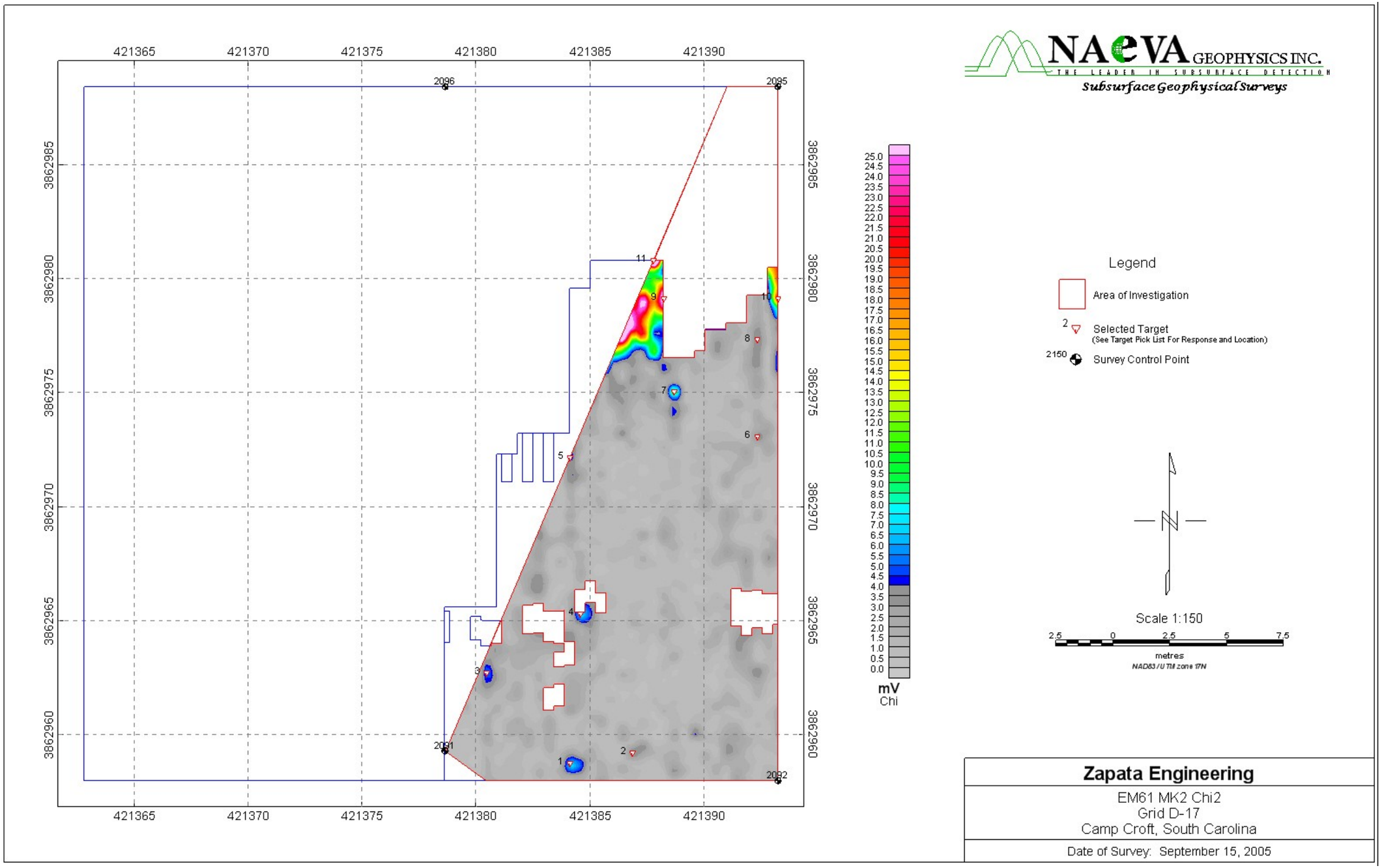
Project Name: Former Camp Croft, Phase II
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: D17
Field Book ID:

Geophysical Contrac ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center I Brendan Slater
COE Project Engines
COE Geophysicist: Andrew Schwartz

Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

	Original Survey								Reacquisition Survey					Dig Results												Post-Dig UXO QC Results			Post-Dig Geophysical QC		
											Offset					Offset		Orientation of		Depth (in)												
Unique Target ID	Easting Coord (m)	Northing Coord (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs-oz)	Dimensions: Length, Width, Height (in)	Comments	X Distance (in)	Y Distance (in)	Nose (Azimuth deg) **	Inclination of Nose (deg) **	Top of Item	Center of Mass	Digital Photo Filename **	Date	Team Leader Initials	Excavation Hole Cleared?	UXO QC Spec. Initials	Date	Agreement between Dig Results & Geophysical Data? (G=good, A=avg, P=poor,	Geophysicist QC Initials	Date
D17_11	421384.1106	3862961.167	70	10.5	55.8		D17_11	15-Sep-2005					1/10/06	NC			No reacquireable target.										YES	TF	01/17/06	NA	DRA	02/21/06
D17_12	421385.3295	3862961.471	74	11.5	6.5		D17_12	15-Sep-2005					1/10/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
D17_13	421384.41	3862961.915	70.98299	12.95664	1.4		D17_13	15-Sep-2005	34	5	12	0	1/10/06	CD	1	6 x 4 x .5	1 ea horseshoe	0	0	NA	0	.5	.5	D17_13 - #001	1/17/06	bam	YES	RVW	01/25/06	YES	RVW	01/25/06
D17_21	421385.0245	3862963.909	73	19.5	14.5			15-Sep-2005	18	3	-6	18	1/10/06	SA	.25		small arms, 30cal shell cases (2ea)	0	0					D17_21 - #003	1/17/06	bam	NA	DRA	02/21/06	YES	RVW	
D17_24	421387.31	3862964.672	80.5	22	13.3		D17_24	15-Sep-2005	25	2	0	0	1/10/06	CD	1	5 x 1 x 1	1 ea railroad spike	0	0	N	0	3	3.5	D17_24 - #002	1/17/06	bam	NA	DRA	02/21/06	YES	RVW	
D17_45	421392.7945	3862973.358	98.5	50.5	5.4			15-Sep-2005					1/10/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
D17_48	421386.8946	3862974.881	77.5	55.5	6.0		D17_48	15-Sep-2005	34	3	10	12	1/10/06	CD	.5	.5 x .75 x .75	1 ea railroad spike	0	0	N	0	1	1.25	D17_48 - #005	1/17/06	bam	NA	DRA	02/21/06	YES	RVW	
D17_50	421393.2512	3862976.253	100	60	6.7		D17_50	15-Sep-2005	58	7.5	36	6	1/10/06	CD	1	24 x .25 x .25	1 ea 24 in steel rod	0	0	E	60	6	14	D17_50 - #013	1/17/06	bam	NA	DRA	02/21/06	YES	RVW	
D17_56	421393.2500	3862979.925	100	72.05	1350.2		D17_56	15-Sep-2005	3280	130	36	12	1/10/06	CD	0	24 x 24	1 ea reinforced concrete pipe, shied with d17-c10, d18-c22 , d15-76	0	0	NW	0	12	20	D17_56 - #007 / D17_56a - #008	1/17/06	bam	NA	DRA	02/21/06	YES	RVW	
D17_A.1	421391.4211	3862966.207	0	0				15-Sep-2005						CD	0.25	1 x 0.125 x 0.125	1 inch diameter metal rings (2 ea.)			NA	0	3	3		01/26/06	ddm	NA	DRA	02/21/06	NA	DRA	02/21/06
D17_A.2	421391.7258	3862966.207	0	0				15-Sep-2005						CD	0.25	6 x 0.25 x 0.25	6" Nail			NA	180	6	9		01/26/06	ddm	NA	DRA	02/21/06	NA	DRA	02/21/06
D17_A.3	421389.2876	3862979.922	0	0				15-Sep-2005						CD	NA		Deeper than 2' possible utility pipe/valve			NA	NA	NA	NA		01/26/06	DDM	NA	DRA	02/21/06	NA	DRA	02/21/06
D17_A.4	421389.5923	3862983.579	0	0				15-Sep-2005						HOTROCK	.5	12 x 6 x 4	1 rock			NA	NA	1	3		01/26/06	DDM	NA	DRA	02/21/06	NA	DRA	02/21/06
D17_C1	421384.1108	3862958.729	70	2.5	86.4	6.9031929	D17_04	15-Sep-2005	80	12.5	0	8	1/10/06	CD	.25	6 x .25 x .25	1 ea survey nail	0	0	NA	90	0	3	D17_C1 - #068	1/12/06	BAM	YES	RVW	01/25/06	YES	RVW	01/25/06
D17_C10	421393.2509	3862979.148	100	69.5		24.357586		15-Sep-2005	3280	130	36	48	1/10/06	CD	0	24 x 24	1 ea concrete reinforced pipe	0	0	NW	0	12	20	D17_C10 - #007 / D17_C10a - #008	1/17/06	BAM	NA	DRA	02/21/06	YES	RVW	
D17_C11	421387.7652	3862980.823	82	75	106.9	47.997795	D17_57	15-Sep-2005	1120	137	6	6	1/10/06	CD	.4	36 x 1 x 1	1 ea 36 in metal rod	0	0	N	75	-2	15	D17_C11 - #009	1/17/06	BAM	YES	TF	01/17/06	YES	RVW	01/17/06
D17_C2	421386.8535	3862959.186	79	4	5.4	4.4828281		15-Sep-2005					1/10/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
D17_C3	421380.4534	3862962.69	58	15.5	4.1	5.2461681		15-Sep-2005					1/10/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
D17_C4	421384.5672	3862965.281	71.5	24	27.2	6.0589997	D17_25	15-Sep-2005	22	4	0	18	1/10/06	CD	1	2.5 x 2 x 2	1 ea t-pipe fitting QA item	0	0	E	15	15	16.5	D17_C4 - #012	1/17/06	BAM	YES	RVW	01/25/06	YES	RVW	01/25/06
D17_C5	421384.1093	3862972.138	70	46.5	6.5	4.9119773		15-Sep-2005	8	2	18	-12	1/10/06	NC			checked with fisher , em 61 still ric										YES	TF	01/17/06	NA	DRA	02/21/06
D17_C6	421392.3974	3862979.053	97	49.5		3.9693024		15-Sep-2005					1/10/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
D17_C7	421388.6801	3862975.033	85	56	15.0	11.591582		15-Sep-2005	8	3	0	0	1/10/06	CD	.5	3 x 2.5 x 2	piece of metal	0	0	NA	0	1	1.5	D17_C7 - #006	1/17/06	BAM	NA	DRA	02/21/06	YES	RVW	
D17_C8	421392.3069	3862977.319	97	63.5	14.3	4.2566013	D17_53	15-Sep-2005					1/10/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
D17_C9	421388.2225	3862979.147	83.5	69.5	610.3	30.127436	D17_55	15-Sep-2005	740	39.5	6	6	1/10/06	CD	0	8 x 8	1 ea railroad tie	0	0	SW	0	5	8	D17_C9 - #010	1/17/06	BAM	YES	TF	01/17/06	YES	RVW	01/17/06
D17_QA29	421387.2335	3862967.643	80.25	31.75	13.7			15-Sep-2005	9	1.4	-6	-6	01/16/06	CD	.25	2.5 x 2 x .25	1 ea 2.5 in piece of steel	0	0	NA	15	.25	.25	D17_QA29 - #004	1/17/06	BAM	NA	DRA	02/21/06	YES	RVW	

* Fill in Units (mV, nT/m, ppt, etc)
** Opt Field - refer to SOW for applicability.
*** UXO, DMM, MC-E (Munit Const-Exp), MD (Munit Debris), CD (Cult Debris) and MC-NE (Munit Const-Non Exp), SA (small arms), NC (no contact) OT (other)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mV
Chi
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
2 Selected Target
(See Target Pick List For Response and Location)
2150 Survey Control Point
Scale 1:150
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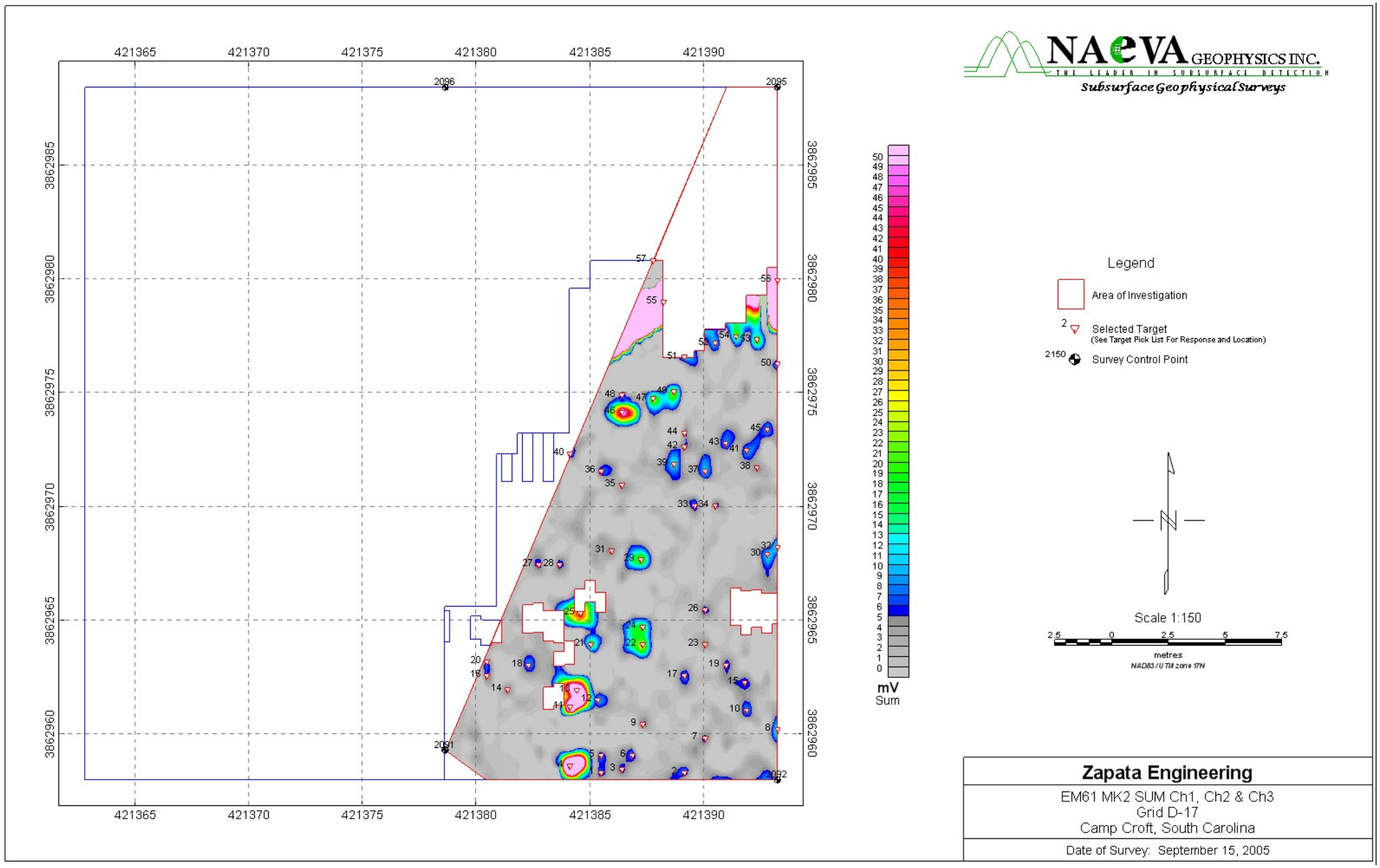
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 Chi2
Grid D-17
Camp Croft, South Carolina
Date of Survey: September 15, 2005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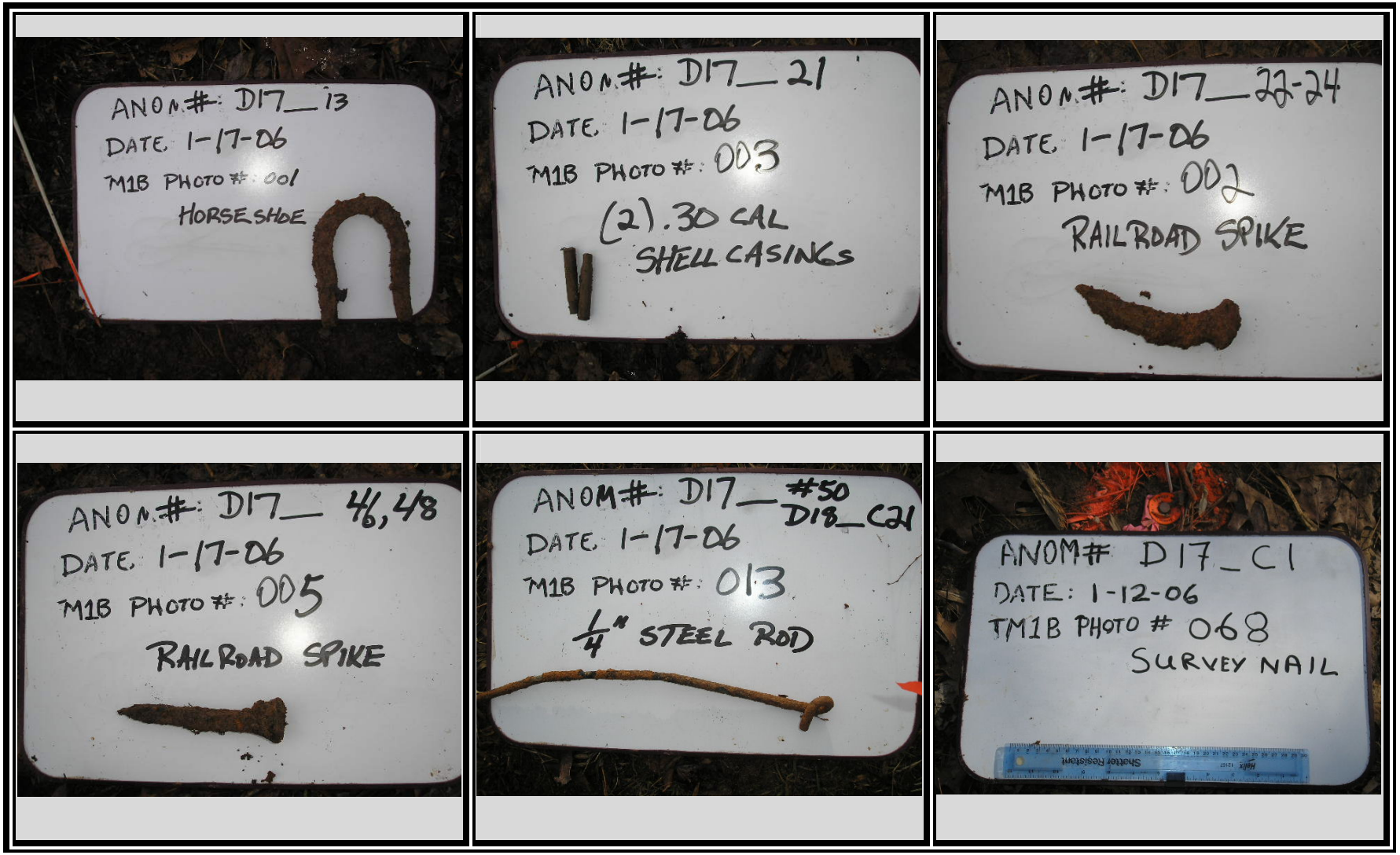
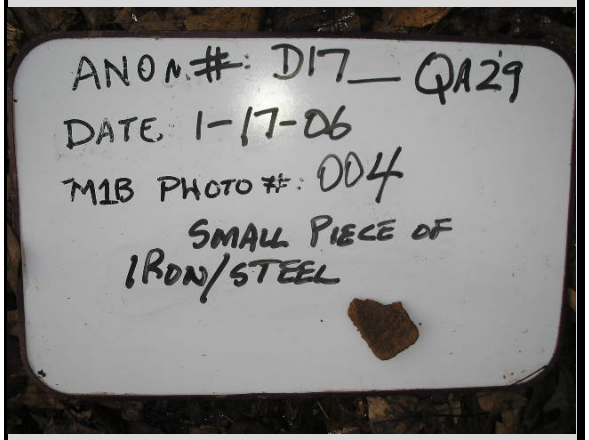
mV
Sum
Legend
Area of Investigation
Selected Target
(See Target Pick List For Response and Location)
Survey Control Point
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Zapata Engineering
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid D-17
Camp Croft, South Carolina
Date of Survey: September 15, 2005

GRID D17 DIG PHOTOS



GRID D17 DIG PHOTOS (CONTINUED)

GRID D17 DIG PHOTOS (CONTINUED)

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

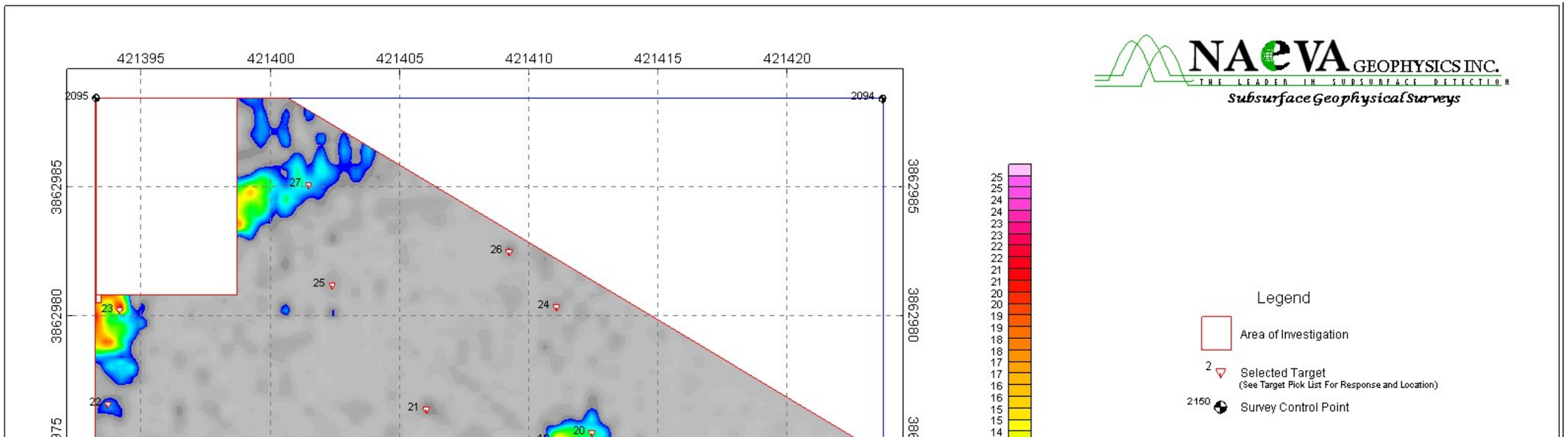
Project Name: Former Camp Croft, Phase II
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: D18
Field Book ID:

Geophysical Contrac ZAPATA ENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist David Smith
Site Geophysicist:
Field Team:
COE Design Center I Brendan Slater
COE Project Engine
COE Geophysicist: Andrew Schwartz

Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

	Original Survey								Reacquisition Survey					Dig Results													Post-Dig UXO QC Results			Post-Dig Geophysical QC		
											Offset						Offset		Orientation of	Inclination of Nose (deg) **	Depth (in)											
Unique Target ID	Easting Coord. (m)	Northing Coord. (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Ch1² Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Ch1² Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs-oz)	Dimensions: Length, Width, Height (in)	Comments	X Distance (in)	Y Distance (in)	Nose (Azimuth deg) **		Top of Item	Center of Mass	Digital Photo Filename **	Date	Team Leader Initials	Excavation Hole Cleared?	UXO QC Spec. Initials	Date	Agreement between Dig Results & Geophysical Data? (G=good, A=avg, P=poor,	Geophysicist QC Initials	Date
D18_22	421406.0365	3862965.734	42	25.5	23.7		D18_22	14-Sep-2005					1/10/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
D18_28	421395.0786	3862967.11	6	30	20.3		D18_28	14-Sep-2005	48	21	24	-36	1/10/06	CD	.25	.5 x 3 x .25	1 ea aluminum can	0	0	E	15	1	1	D18_28 - #067	1/12/06	BAM	YES	RVW	01/16/06	YES	RVW	01/16/06
D10_50	421401.0141	3862973.506	25.5	51	13.6		D10_50	14-Sep-2005					1/10/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
D10_63	421411.5167	3862975.175	60	56.5	188.8		D10_63	14-Sep-2005	211	18	-12	0	1/10/06	CD	20	50 x 1 x 1	1 ea 50 in metal rod	0	0	SW	15	14	14.25	D18_63 - #072	1/12/06	BAM	YES	TF	01/17/06	YES	RVW	01/17/06
D18_78	421395.0776	3862978.571	6	67.61	45.3		D18_78	14-Sep-2005	1141	18.5	18	0	1/10/06	CD	0	24 x 24	1 ea reinforced concrete pipe	0	0	NW	0	12	20	D18_78 - #008	1/17/06	BAM	NA	DRA	02/21/06	YES	RVW	
D18_79	421398.2742	3862978.687	16.5	68	4.7			14-Sep-2005					1/10/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
D18_88	421401.9274	3862981.275	28.5	76.5	6.0			14-Sep-2005					1/10/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
D10_C1	421423.3830	3862958.113	99	0.5	49.7	4.9327407	D10_02	14-Sep-2005	84	7	5	0	1/10/06	CD	.25	.5 x .25 x .25	1 ea survey nail	0	0	NA	90	0	2.5	D18_C1 - #066	1/12/06	BAM	YES	RVW	01/25/06	YES	RVW	01/25/06
D10_C11	421398.2740	3862965.009	16.5	26	6.9	3.6367841		14-Sep-2005					1/10/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
D18_C12	421416.5376	3862965.882	76.5	26	120.1	11.3500243	D18_24	14-Sep-2005	122	21	0	0	1/10/06	CD	4	36 x .5 x .5	1 ea 36 in rebar	0	0	SW	30	6	6.25	D18_C12 - #070	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
D18_C13	421419.7338	3862966.338	87	27.5	8.1	6.5731754		14-Sep-2005					1/10/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
D18_C14	421395.6352	3862967.414	7.5	31	9.5	11.078487	D18_30	14-Sep-2005	10	2.5	18	8	1/10/06	NC			NO CONTACT DURING DIG - checked with em-61 still nc								1/17/06	BAM	YES	TF	01/17/06	YES	RVW	01/17/06
D18_C15	421418.8215	3862969.841	84	39	4.9	5.3814483		14-Sep-2005					1/10/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
D10_C16	421410.6029	3862971.52	57	44.5	8.6	3.3014953		14-Sep-2005	10	3	24	30	1/10/06	CD	.5	3 x 1 x 1	1 ea 3 in metal rod	0	0	E	15	6	7	D18_C16 - #071	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
D18_C17	421414.2558	3862971.671	69	45	5.9	3.1442851		14-Sep-2005					1/10/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
D18_C18	421411.06	3862975.176	58.5	56.5	188.8	14.950641	D18_63	14-Sep-2005	211	18	18	0	1/10/06	CD	20	50 x 1 x 1	1 ea 50 in metal rod, shared with d18-63 , and d18-c19	0	0	SW	15	14	14.25	D18_C18 - #072	1/12/06	BAM	YES	TF	01/17/06	YES	RVW	01/17/06
D18_C19	421412.43	3862975.48	63	57.5		9.418189		14-Sep-2005	211	18	48	12	1/10/06	CD	20	50 x 1 x 1	1 ea 50 in metal rod	0	0	SW	15	14	14.25	D18_C19 - #072	1/12/06	BAM	YES	TF	01/17/06	YES	RVW	01/17/06
D18_C2	421396.4489	3862959.795	10.5	6	7.4	3.7003253		14-Sep-2005					1/10/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
D10_C20	421406.0371	3862976.397	42	60.5	3.4	4.5556288		14-Sep-2005					1/10/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
D18_C21	421393.7078	3862976.557	1.5	61	17.0	6.0795054	D18_67	14-Sep-2005	58	7.5	18	6	1/10/06	CD	1	24 x .25 x .25	1 ea 24 in steel rod, shared with d17-50	0	0	E	60	6	14	D18_C21 - #013	1/17/06	BAM	NA	DRA	02/21/06	YES	RVW	
D18_C22	421394.1641	3862980.214	3	73	657.6	22.811741	D18_85	14-Sep-2005	3280	130	-18	-18	1/10/06	CD	0	24 x 24	1 ea reinforced concrete pipe	0	0	NW	0	12	20	D18_C22 - #008	1/17/06	BAM	NA	DRA	02/21/06	YES	RVW	
D18_C23	421411.0607	3862980.355	58.5	73.5	8.0	3.4590325		14-Sep-2005					1/10/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
D18_C24	421402.3841	3862981.171	30	76.16		3.2237046		14-Sep-2005					1/10/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
D10_C25	421409.2343	3862982.488	52.5	80.5	4.3	4.2953572		14-Sep-2005					1/10/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
D18_C26	421401.4707	3862985.084	27	89	157.6	8.2185721	D18_91	14-Sep-2005	240	12.5	0	0	1/10/06	CD	5	2 x 1.75 x .5	1 ea piece of steel	0	0	NA	15	2	2.25	D18_C26 - #011	1/17/06	BAM	NA	DRA	02/21/06	YES	RVW	
D18_C3	421401.0142	3862962.689	25.5	15.5	7.2	3.3160894		14-Sep-2005					1/10/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
D18_C4	421394.6225	3862962.843	4.5	16	31.0	7.4038672	D18_13	14-Sep-2005					1/10/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
D18_C5	421395.5356	3862962.843	7.5	16	6.5	3.4355638		14-Sep-2005					1/10/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06

* Fill in Units (mV, nT/m, ppt, etc.)
** Opt Field - refer to SOW for applicability.
*** UXO, DMM, MC-E (Munit Const Exp), MD (Munit Debris), CD (Cult Debris) and MC-NE (Munit Const-Non Exp), SA (small arms), NC (no contact) OT (other)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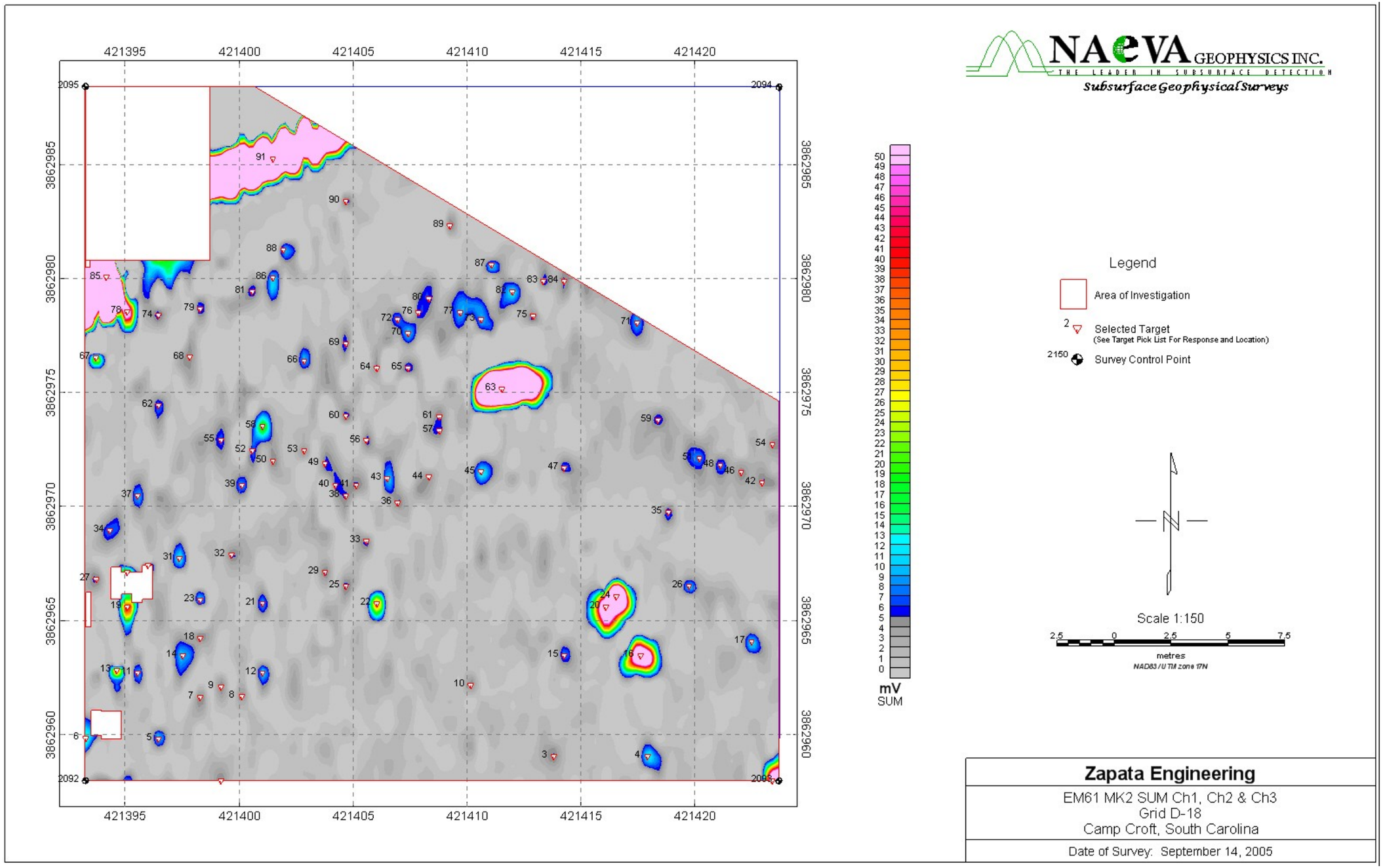
mV
Chi
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
2 Selected Target
(See Target Pick List For Response and Location)
2150 Survey Control Point
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 Chi
Grid D-18
Camp Croft, South Carolina
Date of Survey: September 14, 2005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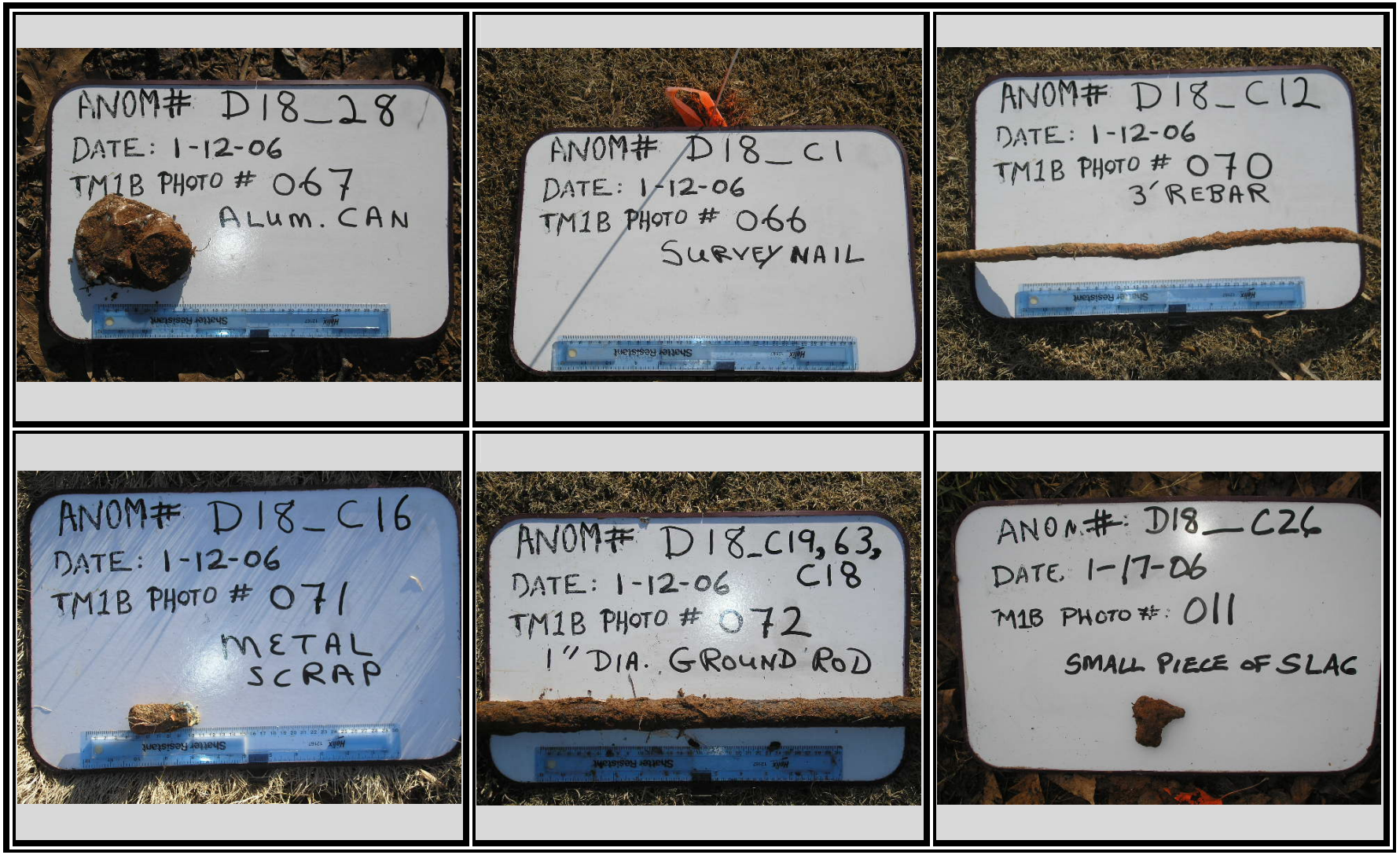
mV
SUM
Legend
Area of Investigation
Selected Target
(See Target Pick List For Response and Location)
Survey Control Point
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Zapata Engineering
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid D-18
Camp Croft, South Carolina
Date of Survey: September 14, 2005

GRID D18 DIG PHOTOS



GRID D18 DIG PHOTOS

 GRID D18_78 AND D18_C22 PHOTO		

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

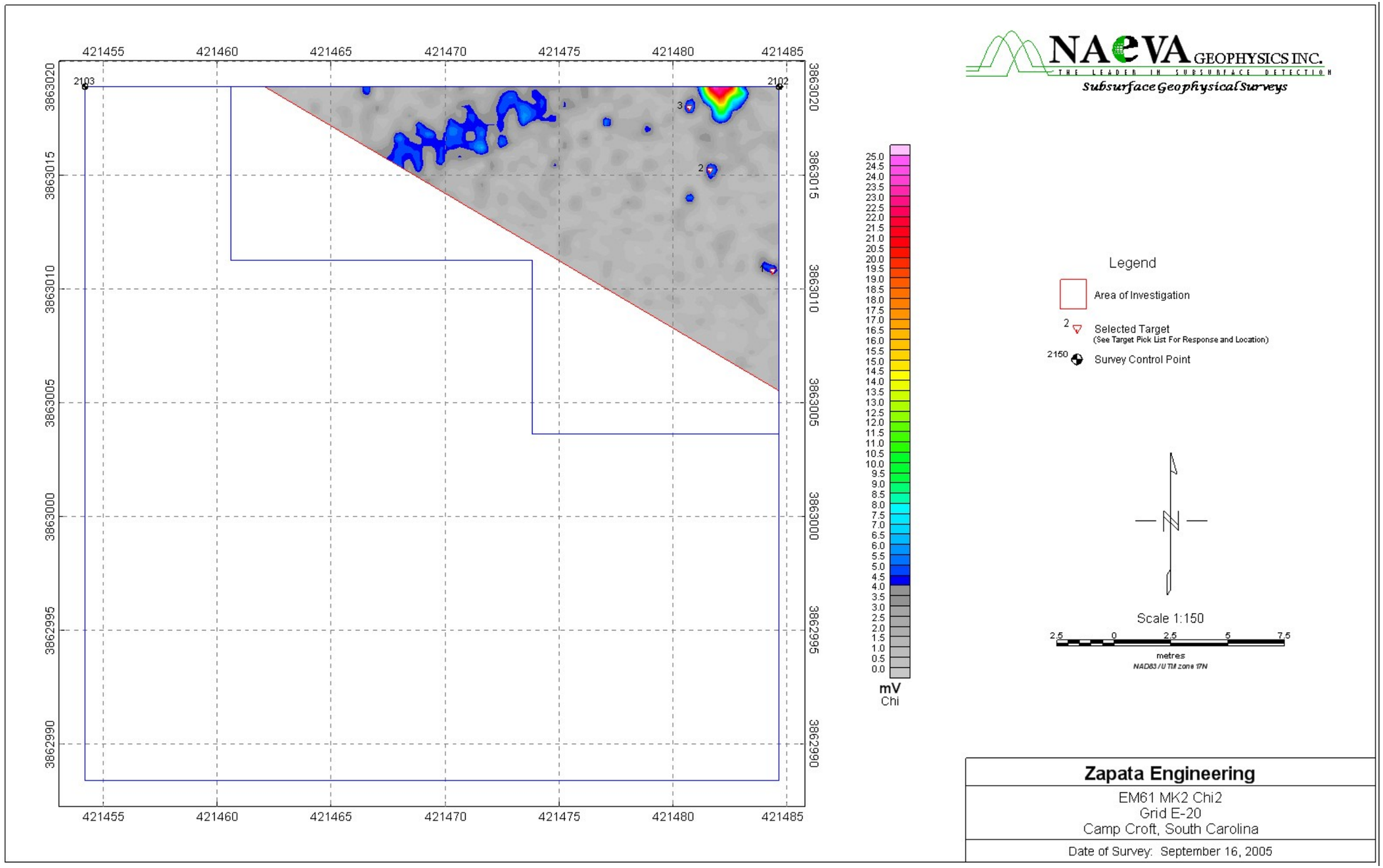
Project Name: Former Camp Croft, Phase II
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: E20
Field Book ID:

Geophysical Contrac ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center I Brendan Slater
COE Project Enginee
COE Geophysicist: Andrew Schwartz

Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

	Original Survey								Reacquisition Survey					Dig Results												Post-Dig UXO QC Results			Post-Dig Geophysical QC		
											Offset						Offset		Orientation of	Inclination of Nose (deg) **	Depth (in)											
Unique Target ID	Easting Coord. (m)	Northing Coord. (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Chi² Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Chi² Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs-oz)	Dimensions: Length, Width, Height (in)	Comments	X Distance (in)	Y Distance (in)	Nose (Azimuth deg) **		Top of Item	Center of Mass	Digital Photo Filename **	Date	Team Leader Initials	Excavation Hole Cleared?	UXO QC Spec. Initials	Date	Agreement between Dig Results & Geophysical Data? (G=good, A=avg, P=poor,	Geophysicist QC Initials	Date
E20_C2	421481.6189	3863015.229	90	88	24.9	6.3599906	E20_6	16-Sep-2005	31	7.2	0	0	1/9/06	CD	.25	3 x .25 x .25	4 ea nails	0	0	NA	90	0	1.5	E20_C2 - #030	1/10/06	BAM	YES	TF	01/17/06	YES	RVW	01/17/06
E20_C3	421480.7052	3863017.969	87	97		6.03478		16-Sep-2005	55	5.6	-2	16	1/9/06	CD	.25	3 x .25 x .25	4 ea nails	0	0	NA	90	0	1.5	E20_C3 - #034	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	

* Fill in Units (mV, nT/m, ppt, etc)
** Opt Field - refer to SOW for applicability.
*** UXO, DMM, MC-E (Munit Const-Exp), MD (Munit Debris), CD (Cult Debris) and MC-NE (Munit Const-Non Exp), SA (small arms), NC (no contact) OT (other)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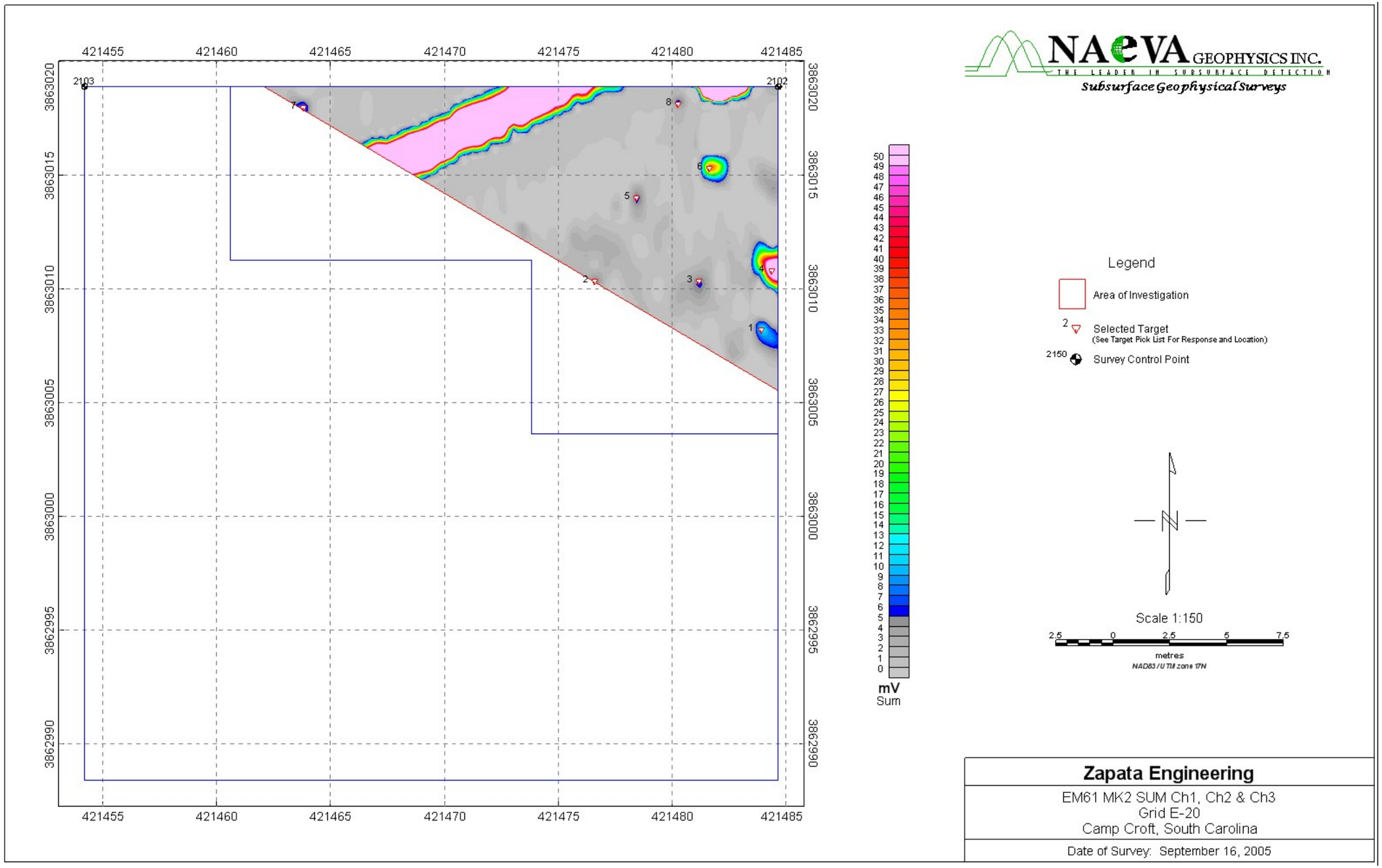
mV
Chi
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
2 Selected Target
(See Target Pick List For Response and Location)
2150 Survey Control Point
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 Chi2
Grid E-20
Camp Croft, South Carolina
Date of Survey: September 16, 2005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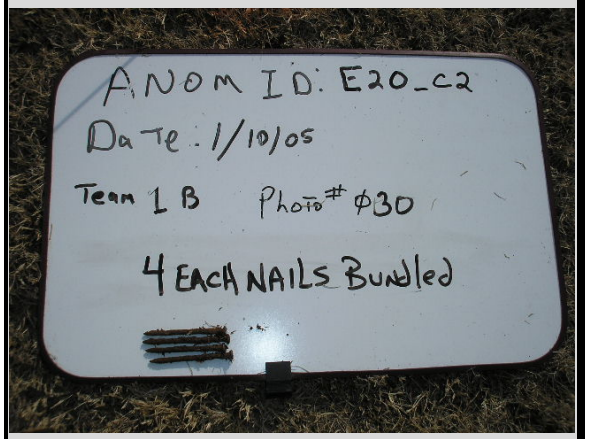
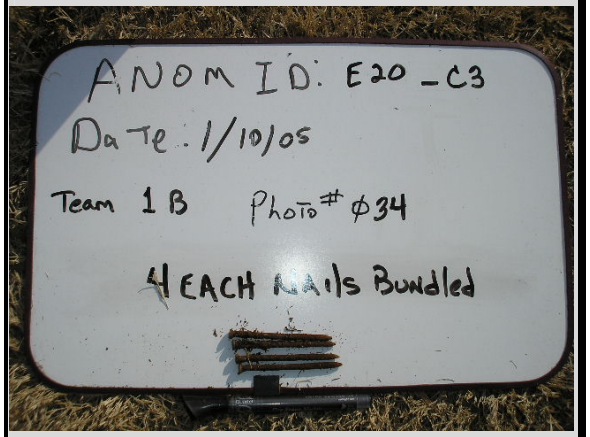
0
mV
Sum
NAeVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
2 Selected Target
(See Target Pick List For Response and Location)
2150 Survey Control Point
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid E-20
Camp Croft, South Carolina
Date of Survey: September 16, 2005

GRID E20 DIG PHOTOS





ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

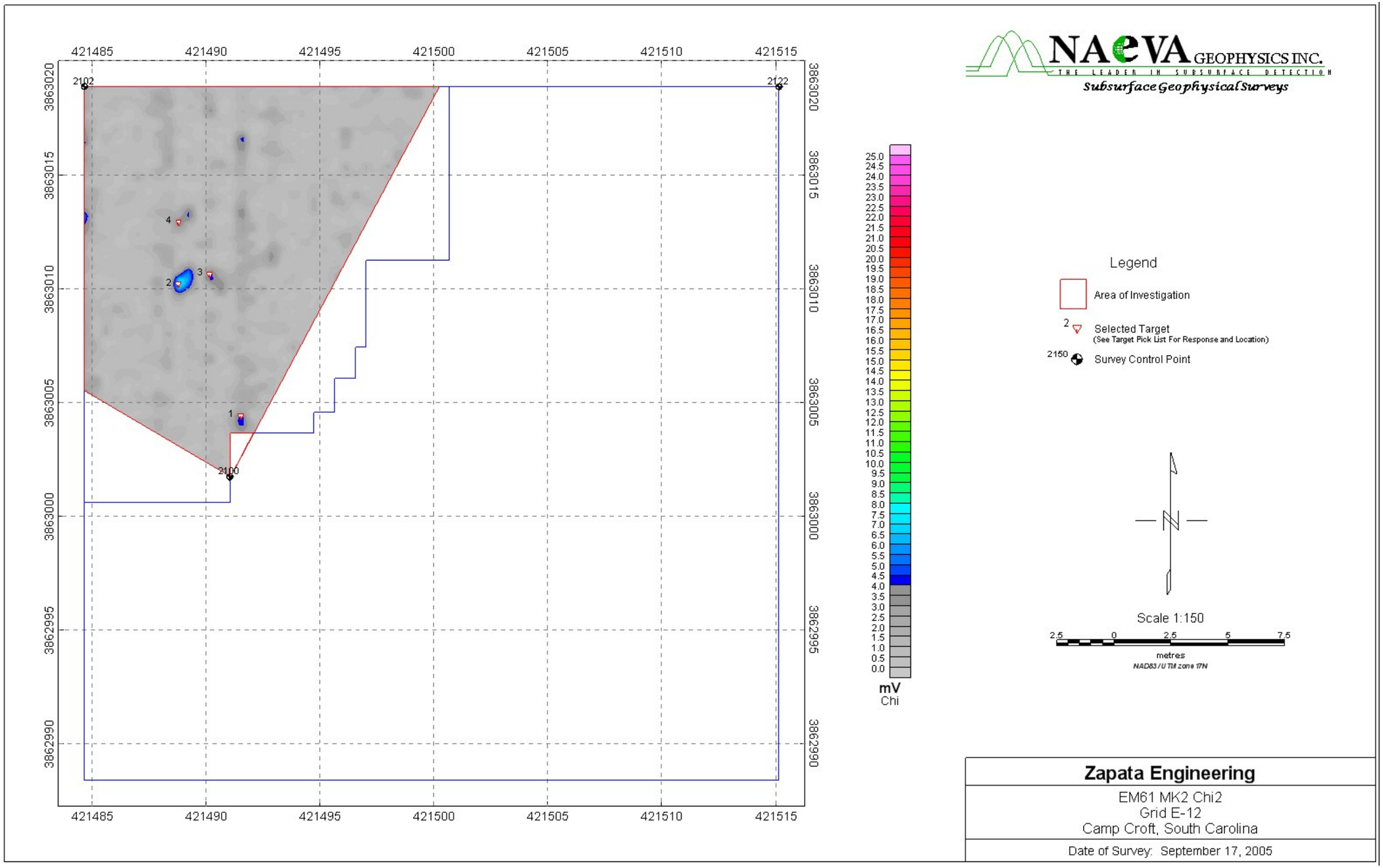
Project Name: Former Camp Croft, Phase II
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: E21
Field Book ID:

Geophysical Contrac ZAPATA ENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist David Smith
Site Geophysicist:
Field Team:
COE Design Center I Brendan Slater
COE Project Enginee
COE Geophysicist: Andrew Schwartz

Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

	Original Survey								Reacquisition Survey					Dig Results												Post-Dig UXO QC Results			Post-Dig Geophysical QC		
											Offset						Offset		Orientation of		Depth (in)											
Unique Target ID	Easting Coord (m)	Northing Coord (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Ch1² Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Ch1² Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs-oz)	Dimensions: Length, Width, Height (in)	Comments	X Distance (in)	Y Distance (in)	Nose (Azimuth deg) **	Inclination of Nose (deg) **	Top of Item	Center of Mass	Digital Photo Filename **	Date	Team Leader Initials	Excavation Hole Cleared?	UXO QC Spec. Initials	Date	Agreement between Dig Results & Geophysical Data? (G=good, A=avg, P=poor,	Geophysicist QC Initials	Date
E21_11	421485.1212	3863012.025	1.5	77.5	11.6		E21_11	17-Sep-2005	35	5.2	-13	2	1/8/06	CD	.25	3 x .25 x .25	2 ea nails	0	0	NA	90	0	1.5	E21_11 - #031	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
E21_13	421486.4934	3863014.157	6	84.5	12.0		E21_13	17-Sep-2005	17	3.1	-3	-3	1/8/06	MD	1	5 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	NW	15	10	19	E21_13 - #030	1/10/06	BAM	YES	RVW	01/16/06	YES	RVW	01/16/06
E21_2	421491.5161	3863003.795	22.5	50.5	9.4			17-Sep-2005					1/8/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
E21_5	421485.5764	3863008.216	3	65	13.8		E21_05	17-Sep-2005	14	5.1	12	14	1/8/06	CD	.50	6 x .50 x .50	1 ea 6 in nail	0	0	NW	30	.5	3	E21_5 - #033	1/10/06	BAM	YES	RVW	01/25/06	YES	RVW	01/25/06
E21_6	421486.1862	3863008.977	5	67.5	27.7		E21_06	17-Sep-2005	14	5.1	0	0	1/8/06	CD	.50	6 x .50 x .50	1 ea 6 in nail	0	0	NE	30	.5	2	E21_6 - #033	1/10/06	BAM	YES	RVW	01/25/06	YES	RVW	01/25/06
E21_C1	421491.5164	3863004.404	22.5	52.5		4.6530209		17-Sep-2005					1/8/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
E21_C2	421488.7768	3863010.195	13.5	71.5	49.0	7.696570	E21_07	17-Sep-2005	50	7.8	12	2	1/8/06	MD	1	5 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	N	0	3	4	E21_C2 - #037	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
E21_C3	421490.1482	3863010.651	18	73	26.3	4.789886	E21_08	17-Sep-2005	30	4.2	4	-6	1/8/06	MD	1	5 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	NA	90	12	13.5	E21_C3 - #036	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
E21_C4	421488.7782	3863012.937	13.5	80.5	32.1	4.0960474	E21_12	17-Sep-2005	42	8.6	15	0	1/8/06	CD	.25	3 x .25 x .25	4 ea nails	0	0	NA	90	0	1.5	E21_C4 - #032	1/10/06	BAM	YES	TF	01/17/06	YES	RVW	01/17/06
E21_QA4	421487.8609	3863006.539	10.5	59.5	4.3			17-Sep-2005						CD	.25	1 x .5 x .25	aluminum pull tab	0	0			3	3	E21_QA4 - #091	1/17/06	BAM	YES	RVW	01/25/06	YES	RVW	01/25/06

* Fill in Units (mV, nT/m, ppt, etc)
** Opt Field - refer to SOW for applicability.
*** UXO, DMM, MC-E (Munit Const Exp), MD (Munit Debris), CD (Cult Debris) and MC-NE (Munit Const Non Exp), SA (small arms), NC (no contact) OT (other)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2122
2100
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NAeVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
25.0
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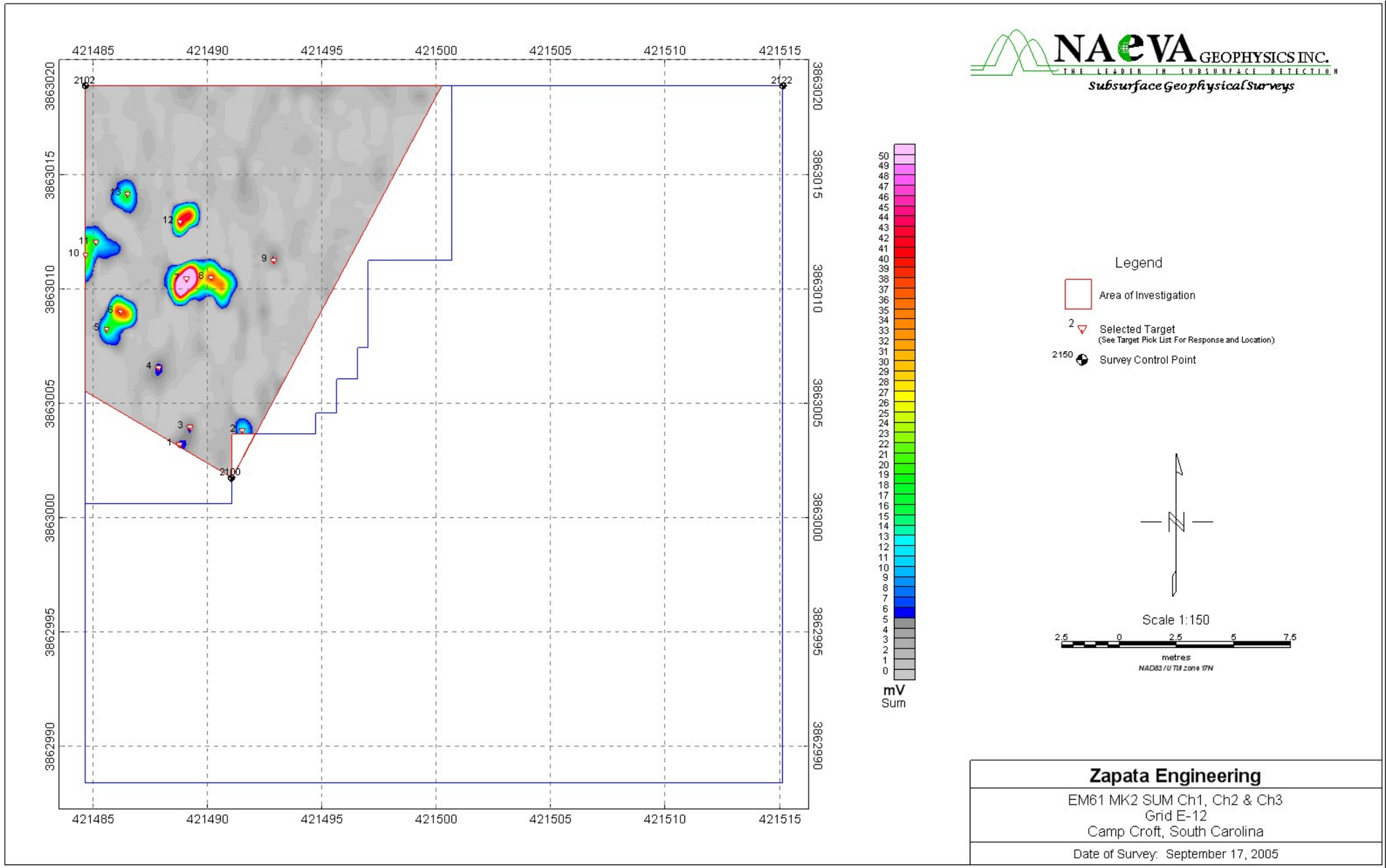
2.5
2.0
1.5
1.0
0.5
0.0
mV
Chi
Legend
Area of Investigation
2 Selected Target
(See Target Pick List For Response and Location)
2150 Survey Control Point
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 Chi2
Grid E-12
Camp Croft, South Carolina
Date of Survey: September 17, 2005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3863000
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3862990
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2122
2100
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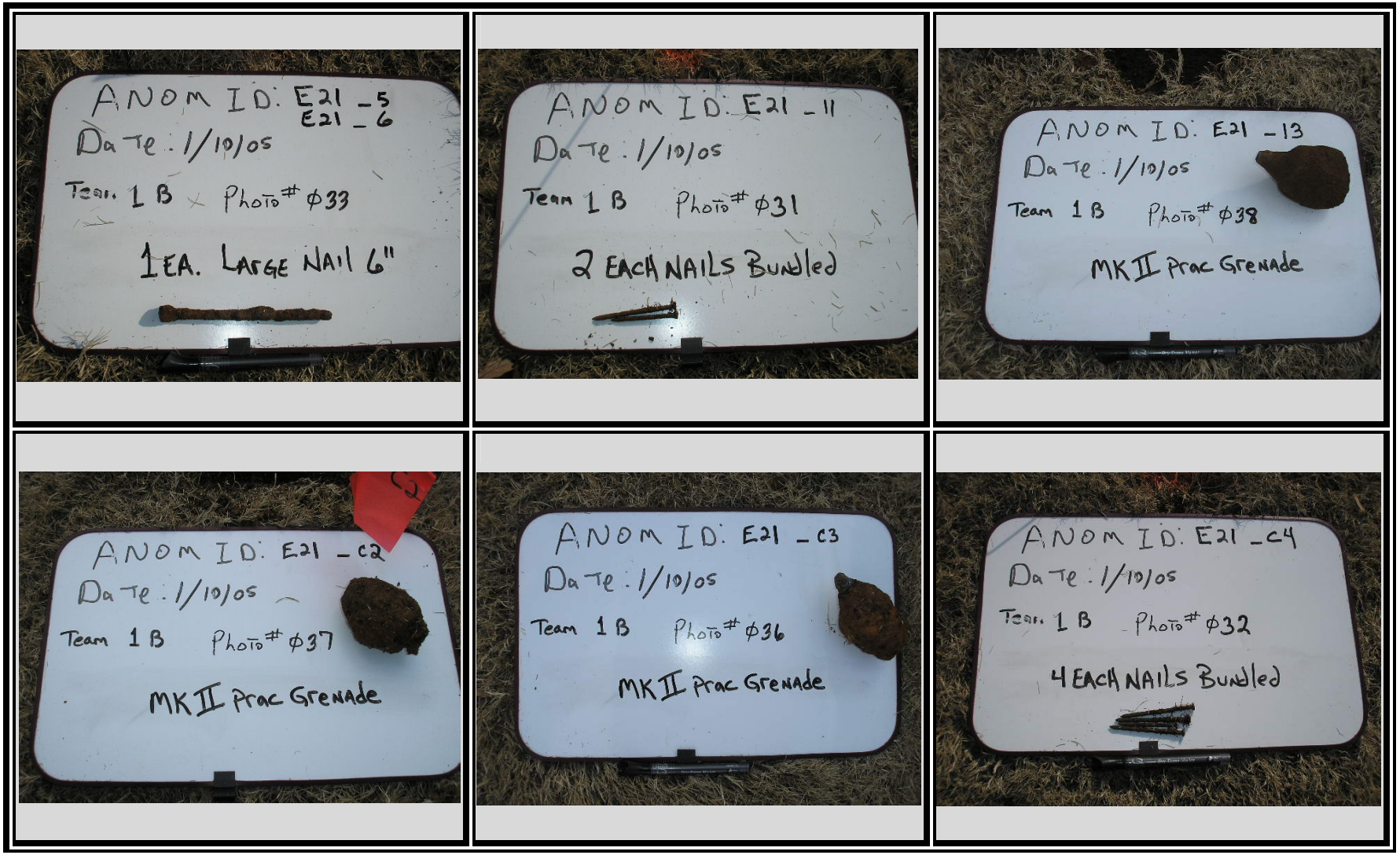
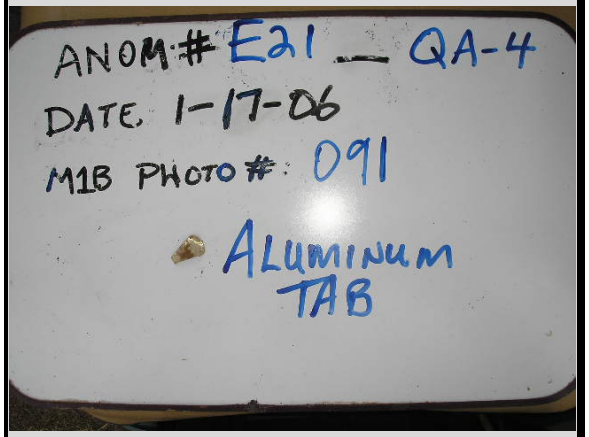
13
NAeVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
Selected Target
(See Target Pick List For Response and Location)
Survey Control Point
mV
Sum
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid E-12
Camp Croft, South Carolina
Date of Survey: September 17, 2005

GRID E21 DIG PHOTOS



GRID E21 DIG PHOTOS (CONTINUED)

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

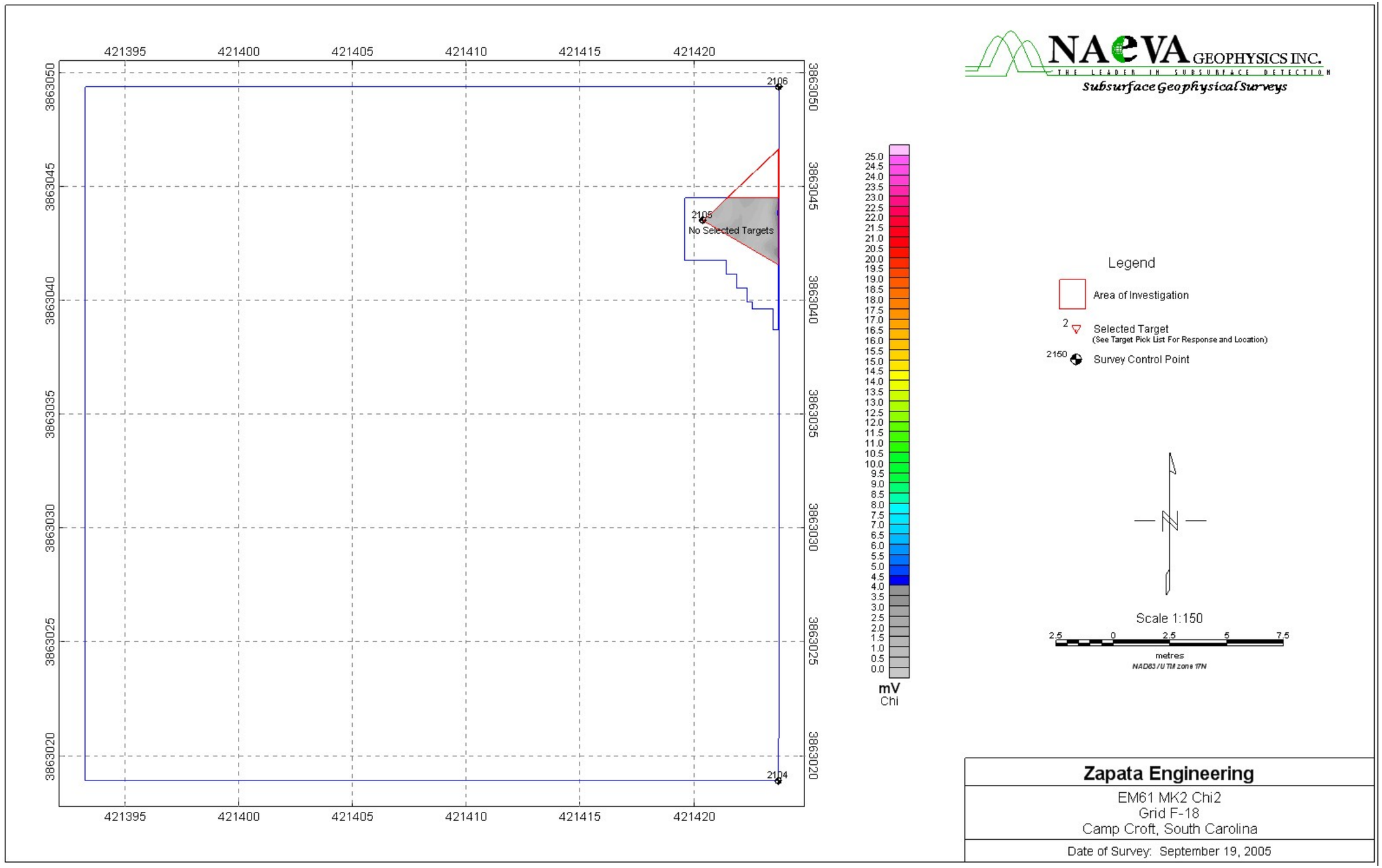
Project Name: Former Camp Croft, Phase II
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: F18
Field Book ID:

Geophysical Contrac ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center I Brendan Slater
COE Project Engineer
COE Geophysicist: Andrew Schwartz

Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

	Original Survey								Reacquisition Survey					Dig Results												Post-Dig UXO QC Results			Post-Dig Geophysical QC		
											Offset						Offset		Orientation of		Depth (in)											
Unique Target ID	Easting Coord. (m)	Northing Coord. (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Ch1² Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Ch1² Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs-oz)	Dimensions: Length, Width, Height (in)	Comments	X Distance (in)	Y Distance (in)	Nose (Azimuth deg) **	Inclination of Nose (deg) **	Top of Item	Center of Mass	Digital Photo Filename **	Date	Team Leader Initials	Excavation Hole Cleared?	UXO QC Spec. Initials	Date	Agreement between Dig Results & Geophysical Data? (G=good, A=avg, P=poor,	Geophysicist QC Initials	Date
F18_1	421421.6918	3863042.978	94	79	39.7		F18_1	19-Sep-2005	55	3.5	3	-4	1/10/06	MD	1	4 x 2.75 x 2.75	grenade, hand, prac, MK2	2	14	NE	0	7	8	F18_0001 - #001	1/24/06	BAM	YES	TF	01/24/06	YES	RVW	01/24/06

* Fill in Units (mV, nT/m, ppt, etc)
** Opt Field - refer to SOW for applicability.
*** UXO, DMM, MC-E (Munit Const-Exp), MD (Munit Debris), CD (Cult Debris) and MC-NE (Munit Const-Non Exp), SA (small arms), NC (no contact) OT (other)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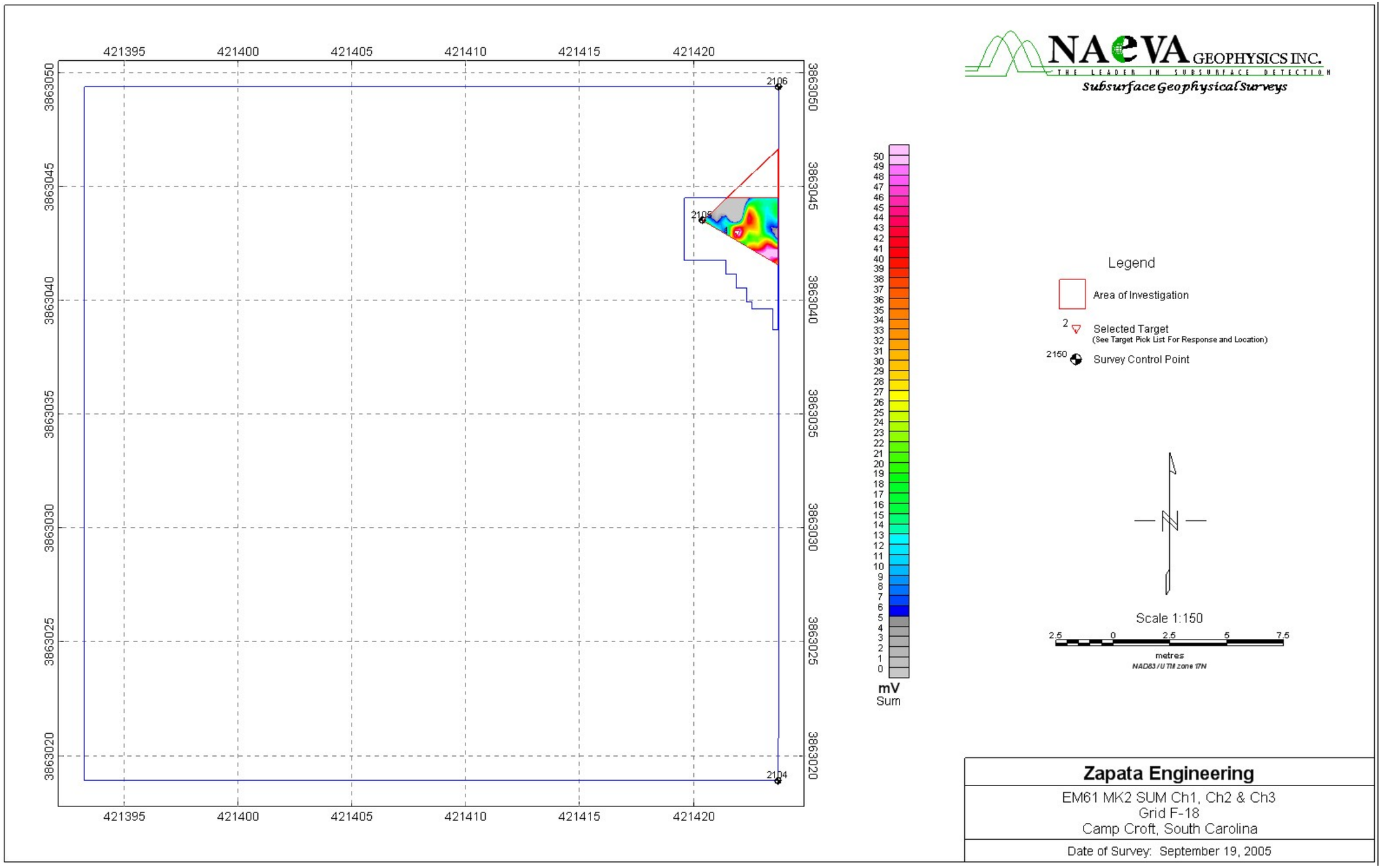
mV
Chi
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
2 Selected Target
(See Target Pick List For Response and Location)
2150 Survey Control Point
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 Chi2
Grid F-18
Camp Croft, South Carolina
Date of Survey: September 19, 2005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mV
Sum
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
2 Selected Target
(See Target Pick List For Response and Location)
2150 Survey Control Point
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid F-18
Camp Croft, South Carolina
Date of Survey: September 19, 2005

GRID F18 DIG PHOTOS

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

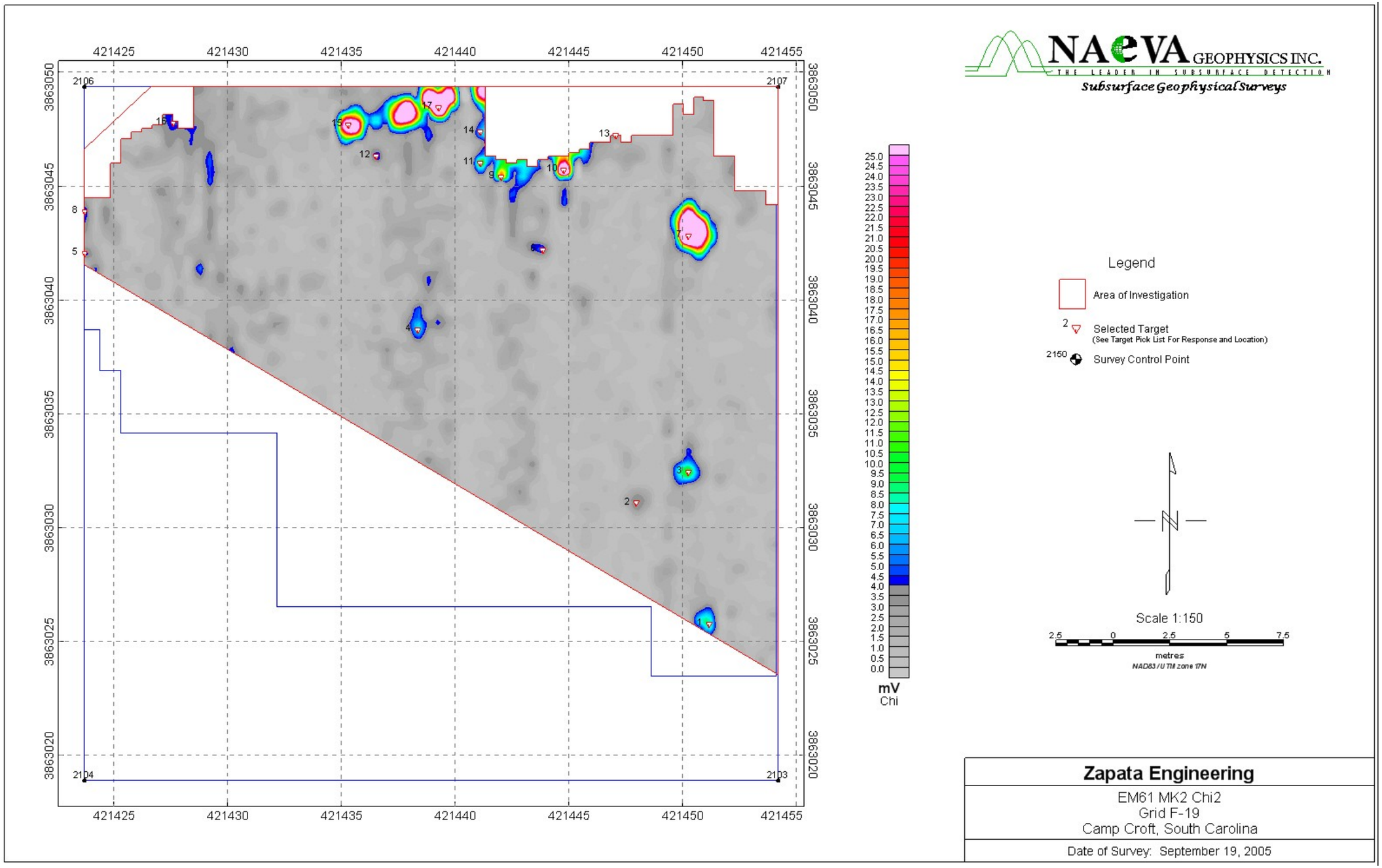
Project Name: Former Camp Croft, Phase II
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: F19
Field Book ID:

Geophysical Contrac ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center I Brendan Slater
COE Project Enginee
COE Geophysicist: Andrew Schwartz

Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

	Original Survey								Reacquisition Survey						Dig Results													Post-Dig UXO QC Results			Post-Dig Geophysical QC		
											Offset					Offset		Orientation of		Depth (in)													
Unique Target ID	Easting Coord. (m)	Northing Coord. (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs-oz)	Dimensions: Length, Width, Height (in)	Comments	X Distance (in)	Y Distance (in)	Nose (Azimuth deg) **	Inclination of Nose (deg) **	Top of Item	Center of Mass	Digital Photo Filename **	Date	Team Leader Initials	Excavation Hole Cleared?	UXO QC Spec. Initials	Date	Agreement between Dig Results & Geophysical Data? (G=good, A=avg, P=poor,	Geophysicist QC Initials	Date
F19_23	421445.6655	3863039.92	72	69	58.2		F19_23	19-Sep-2005	95	2.6	5	-2	1/10/06	CD	.25	5 x .25 x .25	1 ea 5 in nail	0	0	NA	90	0	2.5	F19_23 - #028	1/11/06	BAM	YES	RVW	01/25/06	YES	RVW	01/25/06
F19_40	421446.5926	3863046.318	75	90	24.4		F19_40	19-Sep-2005	97	11	0	0	01/11/06	CD	3	24 x .5 x .5	1 ea 24 in rebar holding landscape timber	0	0	NA	90	-12	0	F19_40 - #025	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
F19_8	421438.8051	3863035.048	49.5	53	12.6		F19_08	19-Sep-2005	21	5.4	4	-4	1/9/06	UXO		2 x 2 x 4	grenade, hand, prac, MK2	0	0	NA	0	12	12	F19_8 - #035	1/24/06	RLY	NA	DRA	02/21/06	YES	RVW	
F19_A1	421452.3798	3863047.855	0	0				19-Sep-2005						CD	.25	4 x .25 x .25	nail			NA	0	2	2	F19_A1 - #004	1/27/06	BAM	NA	DRA	02/21/06	NA	DRA	02/21/06
F19_A2	421453.2942	3863048.769	0	0				19-Sep-2005						CD	.25	4 x .25 x .25	nail			NA	0	3	3	F19_A2 - #005	1/27/06	BAM	NA	DRA	02/21/06	NA	DRA	02/21/06
F19_C1	421451.1463	3863025.751	90	22.5	104.2	9.4168549	F19_01	19-Sep-2005	107	13.3	2	16	1/9/06	CD	2	4 x 2 x 2	1 ea sprinkler head	0	0	NA	0	0	2	F19_C1 - #034	1/11/06	BAM	YES	TF	01/24/06	YES	RVW	01/24/06
F19_C10	421444.7535	3863045.709	69	88	619.6	52.092831	F19_34	19-Sep-2005	152	21	0	0	01/11/06	CD	3	24 x .5 x .5	1 ea 24 in rebar holding landscape timber	0	0	NA	90	-12	0	F19_C10 - #024	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
F19_C11	421441.0958	3863046.016	57	89	72.8	12.951997	F19_35	19-Sep-2005	228	28	0	0	01/11/06	CD	2	12 x .5 x .5	1 ea 12 ea rebar holding landscape timber	0	0	NA	90	-3	3	F19_C11 - #022	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
F19_C12	421436.5237	3863046.323	42	90	12.9	5.5007957		19-Sep-2005	67	9.0	2	0	1/10/06	CD	.25	3 x .25 x .25	4 ea nails	0	0	NA	90	0	1.5	F19_C12 - #029	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
F19_C13	421447.0402	3863047.232	76.5	93	36.1	4.3591919	F19_44	19-Sep-2005	2165	311	12	12	1/10/06	CD	6	48 x .5 x .5	1 ea 48 in rebar holding landscape timber	0	0	NA	90	-24	0	F19_C13 - #026	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
F19_C14	421441.0964	3863047.387	57	93.5	31.4	7.4496026	F19_43	19-Sep-2005	213	32	0	0	01/11/06	CD	2	12 x .5 x .5	1 ea 12 in rebar holding landscape timber	0	0	NA	90	-3	3	F19_C14 - #021	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
F19_C15	421435.3051	3863047.695	38	94.5	378.2	36.582424	F19_47	19-Sep-2005	606	78	0	0	01/11/06	CD	2	12 x .5 x .5	1 ea 12 in rebar holding landscape timber	0	0	NA	90	-3	3	F19_C15 - #019	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
F19_C16	421427.6086	3863047.775	12.75	94.75	5.6	5.3616295		19-Sep-2005					1/10/06	HOTROCK	2	3.5 x 2 x 2	multiple hotrocks	0	0	NA	0	0	2	F19_C16 - #030	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
F19_C17	421439.268	3863048.454	51	97	774.0	66.024376	F19_51	19-Sep-2005	481	65	0	0	01/11/06	CD	2	12 x .5 x .5	1 ea 12 in rebar holding landscape timber	0	0	NA	90	-3	3	F19_C17 - #020	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
F19_C2	421447.9479	3863031.084	79.5	40	34.8	4.384222	F19_03	19-Sep-2005	36	9.1	7	14	1/9/06	UXO	.5	2 x 2 x 4	grenade, hand, prac, MK2	0	0	NA	0	5	5	F19_C2 - #033	1/24/06	RLY	NA	DRA	02/21/06	YES	RVW	
F19_C3	421450.2346	3863032.454	87	44.5	150.3	11.261516	F19_04	19-Sep-2005	117	8.9	4	17	1/9/06	CD	2	5 x 2 x 2	sprinkler system shutoff valve	0	0	NA	90	0	2.5	F19_C3 - #033	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
F19_C4	421438.8494	3863038.705	48	65	78.2	7.2265086	F19_17	19-Sep-2005	81	6.7	16	12	1/9/06	CD	1.5	4 x 2 x 2	sprinkler head	0	0	NA	0	0	2	F19_C4 - #032	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
F19_C7	421450.2389	3863042.812	87	78.5	1797.3	104.93269	F19_27	19-Sep-2005	1877	72	0	12	1/9/06	CD	60	34 x 34 x 4	1 ea reinforced concrete	0	0	NA	0	-4	0	F19_C7- #027	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
F19_C8	421423.7205	3863043.891	0	82	11.2	4.9685678		19-Sep-2005	55	7.2	-12	0	1/10/06	CD	.25	3 x .25 x .25	4 ea nails	0	0	NA	90	0	1.5	F19_C8 - #031	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
F19_C9	421442.01	3863045.406	60	87	359.7	21.394608	F19_33	19-Sep-2005	2550	238	0	0	1/10/06	CD	5	48 x .5 x .5	1 ea 48 in rebar holding landscape timber	0	0	NA	90	-24	0	F19_C9 - #023	1/11/06	BAM	YES	RVW	01/16/06	YES	RVW	01/16/06
F19_QA9	421447.4923	3863035.045	78	53	9.6			19-Sep-2005	8	3.2	0	0	01/16/06	MD	.5	2 x 2 x 4	grenade, hand, prac, MK2	0	0	NA	0	12	13	F19_QA9 - #034	1/24/06	RLY	NA	DRA	02/21/06	YES	RVW	

* Fill in Units (mV, nT/m, ppt, etc)
** Opt Field - refer to SOW for applicability.
*** UXO, DMM, MC-E (Munit Const-Exp), MD (Munit Debris), CD (Cult Debris) and MC-NE (Munit Const-Non Exp), SA (small arms), NC (no contact) OT (other)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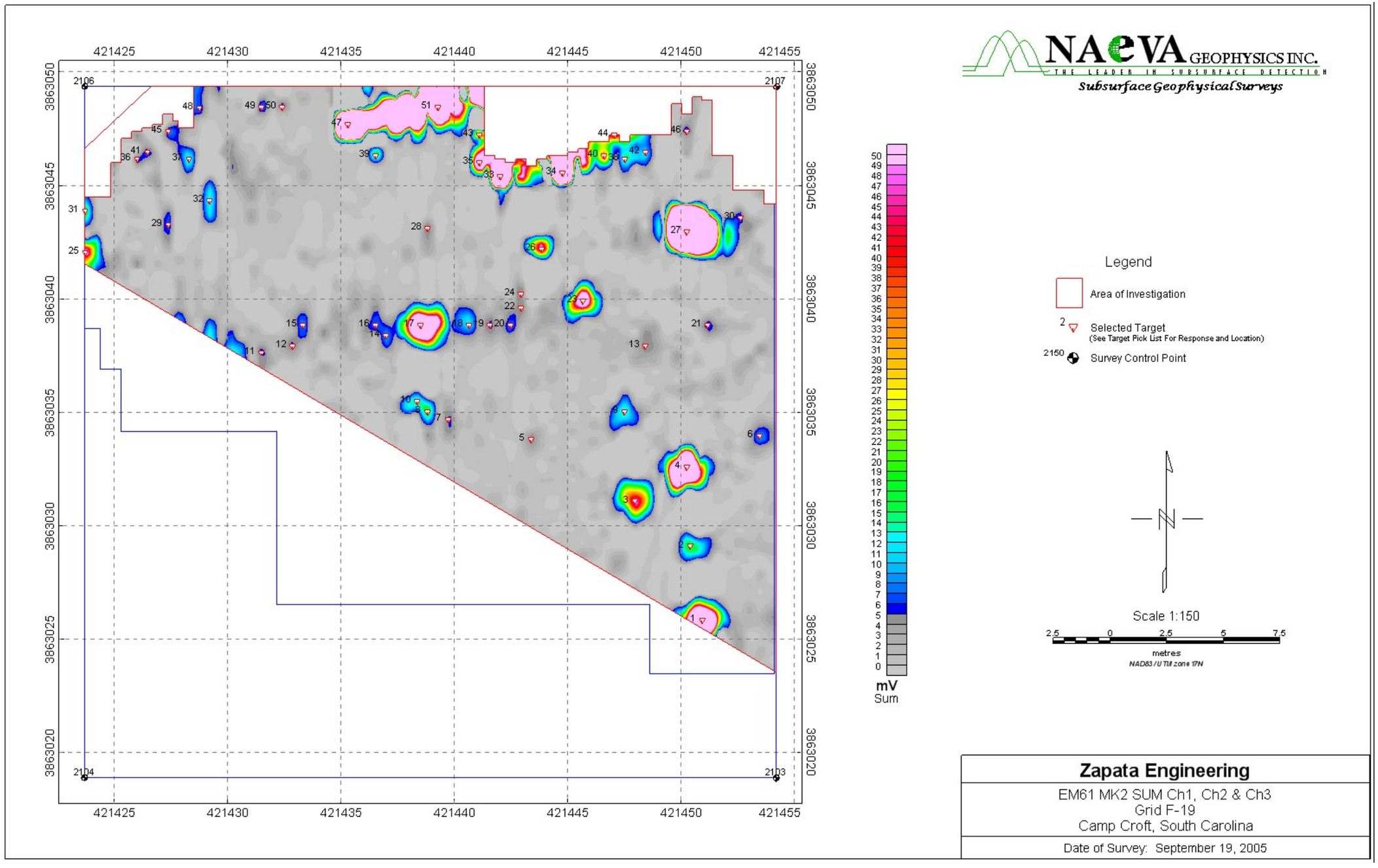
mV
Chi
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
Selected Target
(See Target Pick List For Response and Location)
Survey Control Point
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 Chi2
Grid F-19
Camp Croft, South Carolina
Date of Survey: September 19, 2005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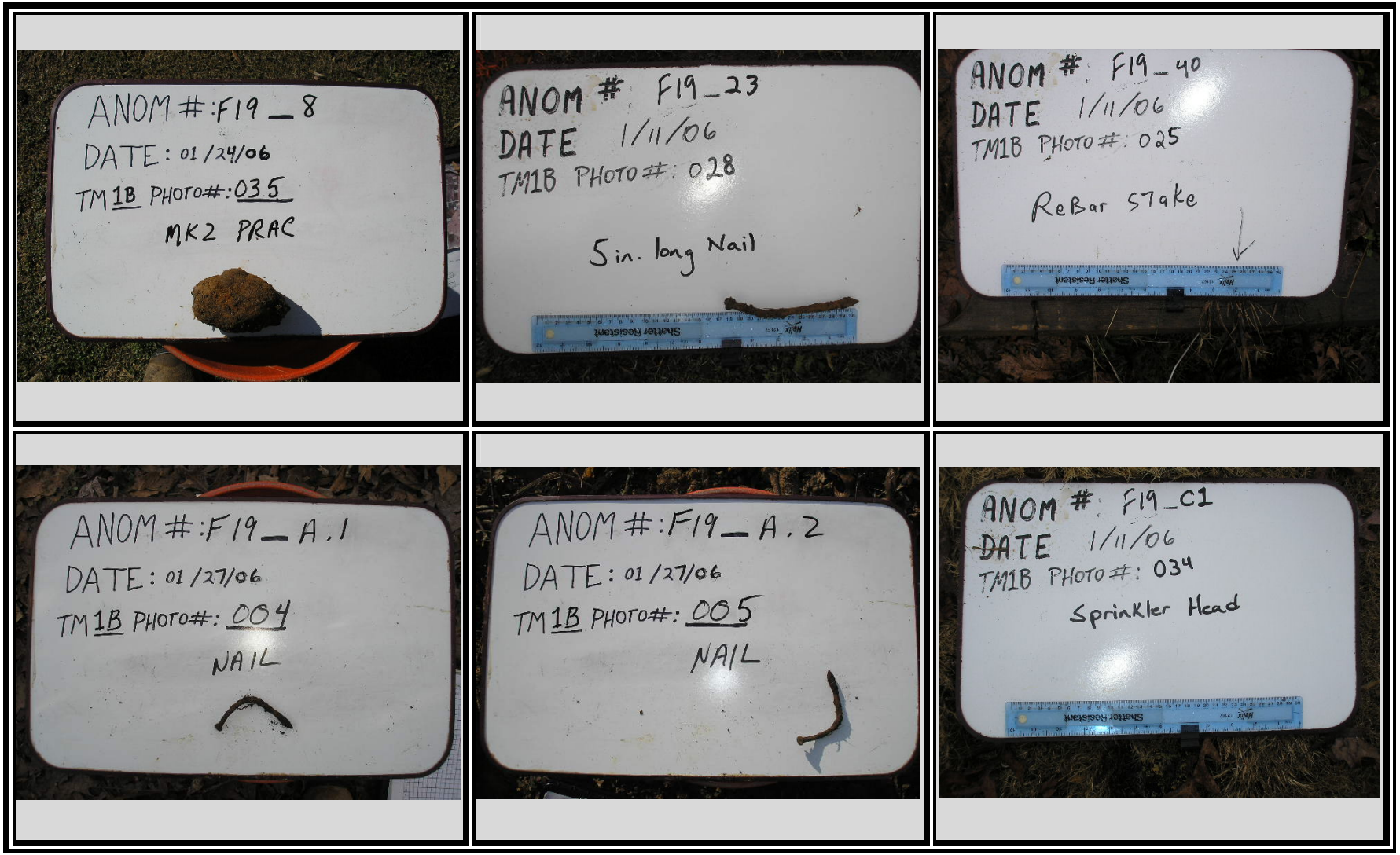
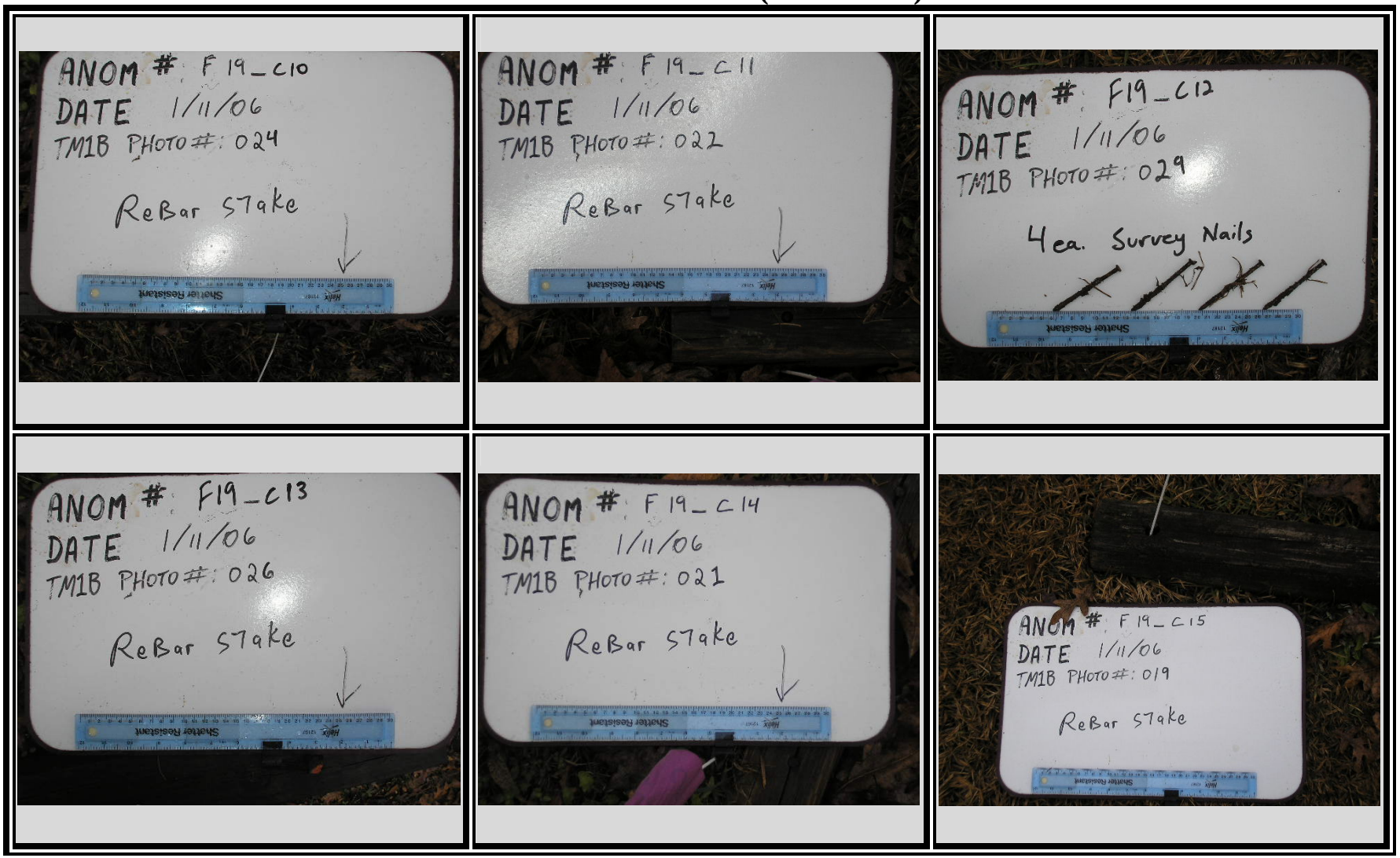
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
Selected Target
(See Target Pick List For Response and Location)
Survey Control Point
mV
Sum
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid F-19
Camp Croft, South Carolina
Date of Survey: September 19, 2005

GRID F19 DIG PHOTOS



GRID F19 DIG PHOTOS (CONTINUED)

GRID F19 DIG PHOTOS (CONTINUED)



GRID F19 DIG PHOTOS (CONTINUED)

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

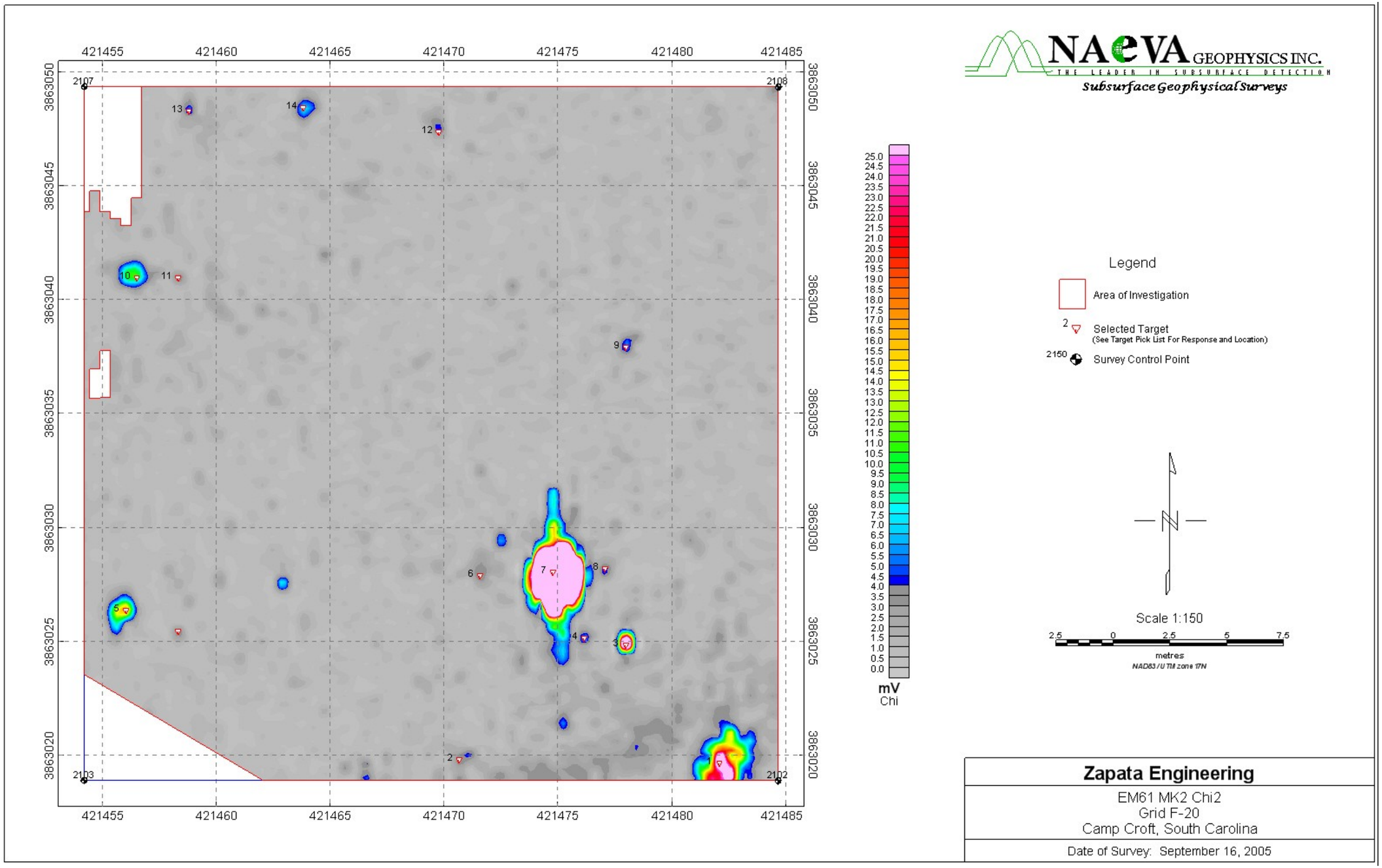
Project Name: Former Camp Croft, Phase II
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: F20
Field Book ID:

Geophysical Contrac ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center I Brendan Slater
COE Project Enginee
COE Geophysicist: Andrew Schwartz

Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

	Original Survey								Reacquisition Survey					Dig Results												Post Dig UXO QC Results			Post Dig Geophysical QC		
											Offset					Offset		Orientation of		Depth (in)												
Unique Target ID	Easting Coord. (m)	Northing Coord. (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs-oz)	Dimensions: Length, Width, Height (in)	Comments	X Distance (in)	Y Distance (in)	Nose (Azimuth deg) **	Inclination of Nose (deg) **	Top of Item	Center of Mass	Digital Photo Filename **	Date	Team Leader Initials	Excavation Hole Cleared?	UXO QC Spec. Initials	Date	Agreement between Dig Results & Geophysical Data? (G=good, A=avg, P=poor,	Geophysicist QC Initials	Date
F20_12	421468.3661	3863028.332	46.5	31	14.1		F20_12	16-Sep-2005	11	4.1	10	-4	1/9/06	CD	0	3 x 2.5 x 2.5	water valve	0	0	NA	0	36	36.25	F20_12 - #025	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
F20_13	421458.7668	3863028.565	15	31.75	8.4		F20_13	16-Sep-2005	11	1.5	-10	2	1/9/06	CD	1	3 x 2.5 x 2.5	water cutoff valve	0	0	NA	0	30	31	F20_13 - #021	1/10/06	BAM	YES	RVW	01/16/06	YES	RVW	01/16/06
F20_14	421463.7951	3863028.639	31.5	32	24.2		F20_14	16-Sep-2005	23	3.3	0	-9	1/9/06	CD	.75	2 x .50 x 2	pet cock	0	0	NA	0	5	5.25	F20_14 - #022	1/10/06	BAM	YES	RVW	01/25/06	YES	RVW	01/25/06
F20_15	421470.1947	3863028.788	52.5	32.5	8.0		F20_15	16-Sep-2005					1/9/06	CD	0		part of the water lines see F20-c6	0	0	NA	0	36	36.25	F20_15 - #026	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
F20_22	421462.4263	3863035.646	27	55	27.7		F20_22	16-Sep-2005	39	2.7	15	4	1/9/06	CD	.25	5 x .25 x .25	1 ea nail	0	0	SW	0	1	1	F20_22 - #020	1/10/06	BAM	YES	RVW	01/16/06	YES	RVW	01/16/06
F20_26	421474.7685	3863037.314	67.5	60.5	24.1		F20_26	16-Sep-2005	23	4.1	2	13	1/9/06	CD	1	.5 x 4 x 1.5	ax head	0	0	NE	30	34	36	F20_26 - #023	1/19/06	BAM	YES	TF	01/19/06	YES	RVW	01/19/06
F20_36	421459.8302	3863041.131	18.5	73	10.1		F20_36	16-Sep-2005	14	2.9	-2	-6	1/9/06	CD	1	.5 x .75 x .75	railroad spike	0	0	NE	15	4	4.25	F20_36 - #003	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
F20_4	421480.0988	3863021.168	85	7.5	59.2		F20_04	16-Sep-2005	101	7.3	0	0	1/9/06	NC			target under cart path							F20_4 - #005 / F20_4a - #041 / F20_4b - #041	1/19/06	BAM	NA	DRA	02/21/06	NA	DRA	02/21/06
F20_43	421462.7302	3863046.765	28	91.5	14.5		F20_43	16-Sep-2005	16	2.4	-5	-12	1/9/06	CD	2	8 x 1 x 1	chain	0	0	NW	15	4	4.5	F20_43 - #002	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
F20_5	421484.3639	3863023.298	99	14.5	47.9		F20_05	16-Sep-2005	77	5.4	0	0	1/9/06	CD	0		water pipes under cart path	0	0	NE	0	0	0	F20_5 - #041 / F20_5a - #041	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
F20_C1	421482.0773	3863019.644	91.5	2.5	807.7	35.989773	F20_02	16-Sep-2005	682	15	13	2	1/9/06	CD	0		6 in diameter pipe	0	0	NA	0	28	31	F20_C1 - #035	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
F20_C10	421456.4062	3863040.901	7.5	72.5	157.6	11.246001	F20_34	16-Sep-2005	103	14.5	-10	3	1/9/06	MD	1	4 x 3 x 3	projo, 60mm, mortar, prac, M50 series	0	0	NE	30	3	4	F20_C10 - #004	1/19/06	BAM	YES	RVW	01/25/06	YES	RVW	01/25/06
F20_C11	421458.3145	3863040.90	13.5	72.5	13.8	4.6956453	F20_35	16-Sep-2005					1/9/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
F20_C13	421458.7745	3863048.291	15	96.5	14.2	5.3844714	F20_46	16-Sep-2005					1/9/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
F20_C14	421463.8023	3863048.44	31.5	97	66.4	7.2616963	F20_45	16-Sep-2005	74	9.9	0	-12	1/9/06	CD	1	4 x 3 x 3	tin can/plus 2 pieces of steel	0	0	NA	0	3	4	F20_C14 - #001	1/24/06	BRLYAM	NA	DRA	02/21/06	YES	RVW	
F20_C2	421470.6489	3863019.801	54	3	10.2	4.1414342		16-Sep-2005	56	6.2	6	-4	1/9/06	CD	.25	4 x .25 x .25	4 ea nails	0	0	NA	90	0	1.5	F20_C2 - #028	1/10/06	BAM	YES	TF	01/17/06	YES	RVW	01/17/06
F20_C3	421477.9645	3863024.824	78	19.5	12.9	49.341755	F20_07	16-Sep-2005					1/9/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
F20_C4	421476.1361	3863025.129	72	20.5	4.3	6.2314734		16-Sep-2005					1/9/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
F20_C5	421456.0232	3863026.358	6	24.5	229.2	17.932213	F20_00	16-Sep-2005	190	23.4	-4	6	1/9/06	CD	0	2.5 x 2.5 x 2.5	water main turn off valve	0	0	NA	0	4	4	F20_C5 - #029	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
F20_C6	421471.5658	3863027.873	57	29.5	43.4	4.1902437	F20_11	16-Sep-2005	40	4.9	-2	6	1/9/06	CD	0		tn13 the lines are points 13,14,12,15,c6,and c7	0	0	NA	0	36	36.25	F20_C6 - #026 / F20_C6a - #027	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
F20_C7	421474.7656	3863028.024	67.5	30	1008.9	409.11465	F20_09	16-Sep-2005	9328	383	4	-6	1/9/06	CD	0		utility cover I w h unknown didn't want to tear up golf areas	0	0	NA	0	3	3	F20_C7 - #024	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	

* Fill in Units (mV, nT/m, ppt, etc)
** Opt Field - refer to SOW for applicability.
*** UXO, DMM, MC-E (Munit Const Exp), MD (Munit Debris), CD (Cult Debris) and MC-NE (Munit Const-Non Exp), SA (small arms), NC (no contact) OT (other)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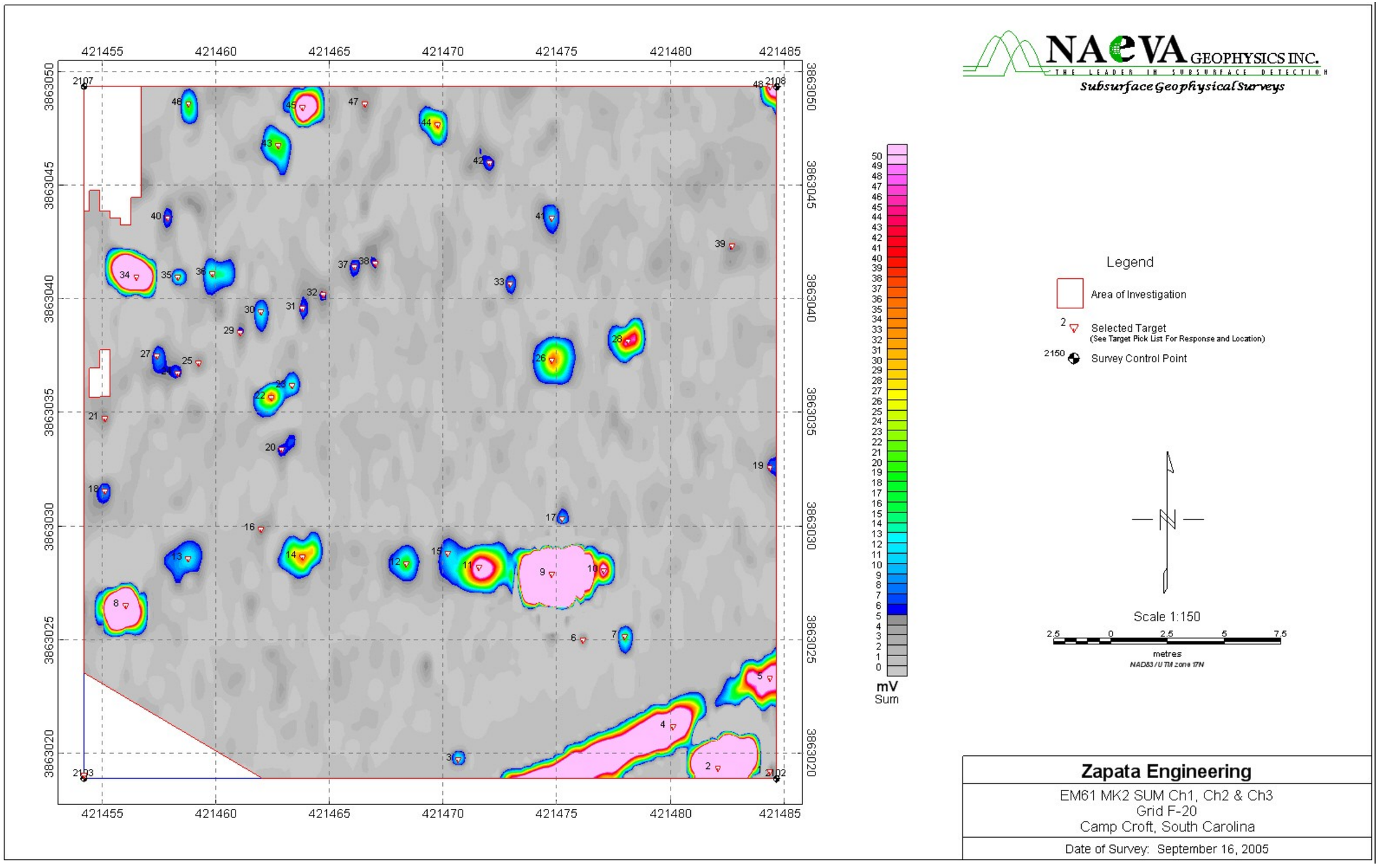
mV
Chi
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
2 Selected Target
(See Target Pick List For Response and Location)
2150 Survey Control Point
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 Chi2
Grid F-20
Camp Croft, South Carolina
Date of Survey: September 16, 2005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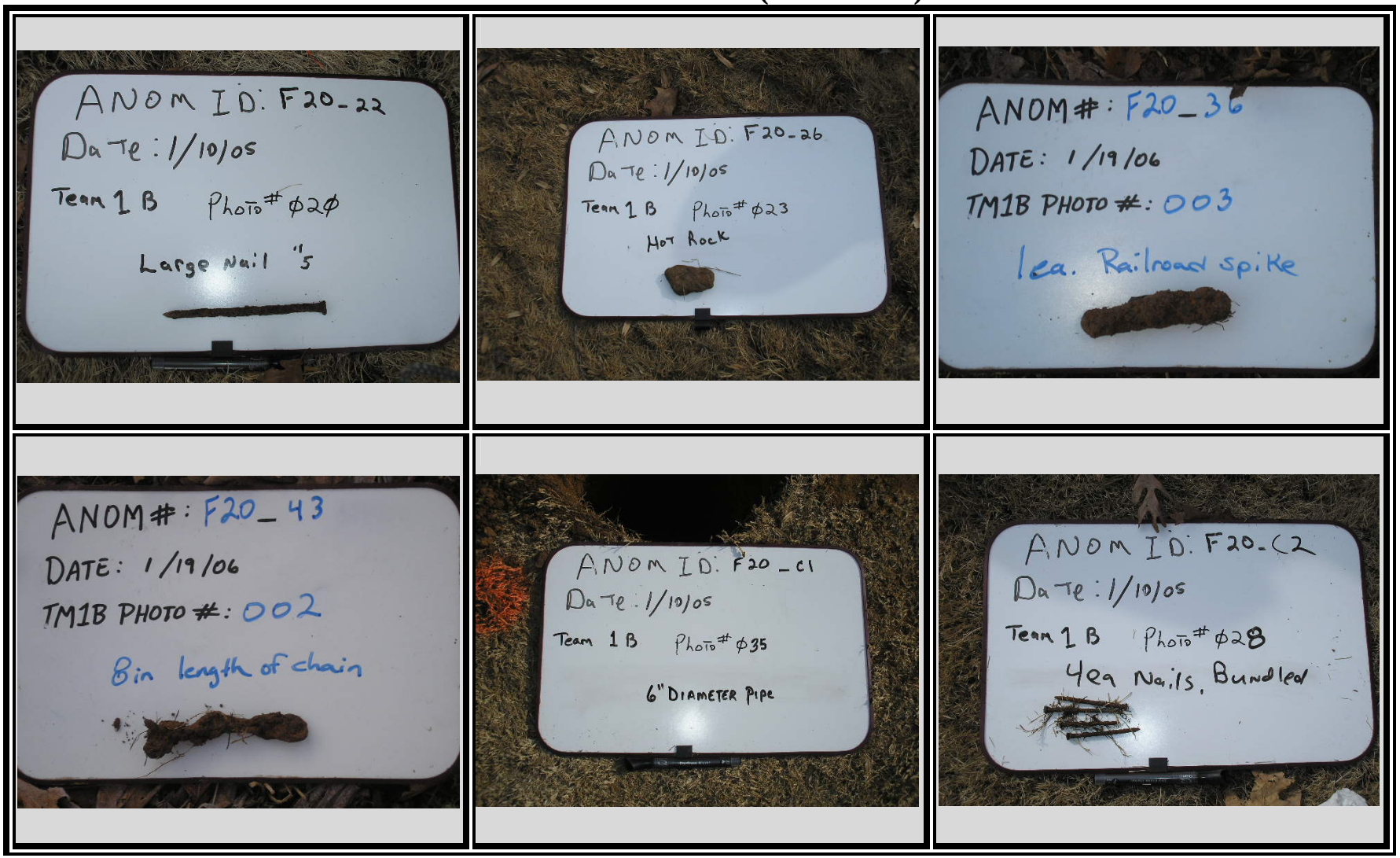
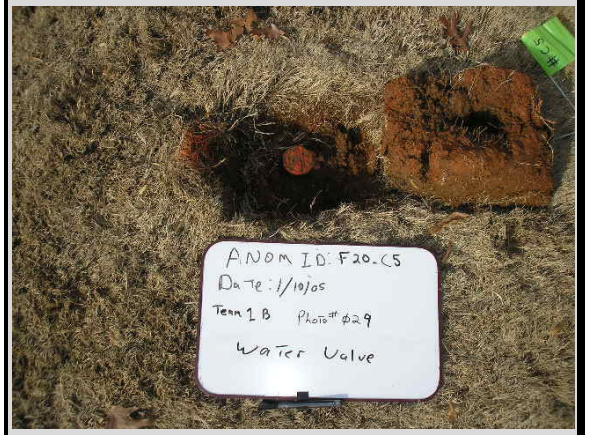
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
Selected Target
(See Target Pick List For Response and Location)
Survey Control Point
Scale 1:150
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid F-20
Camp Croft, South Carolina
Date of Survey: September 16, 2005

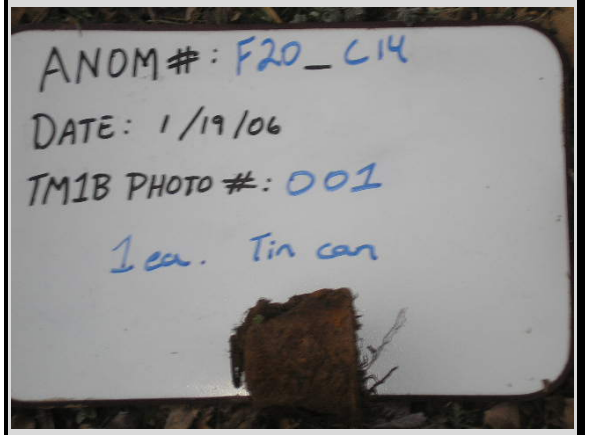
GRID F20 DIG PHOTOS

GRID F20 DIG PHOTOS (CONTINUED)



GRID F20 DIG PHOTOS (CONTINUED)





GRID F20 DIG PHOTOS (CONTINUED)

GRID F20_15 PHOTO

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

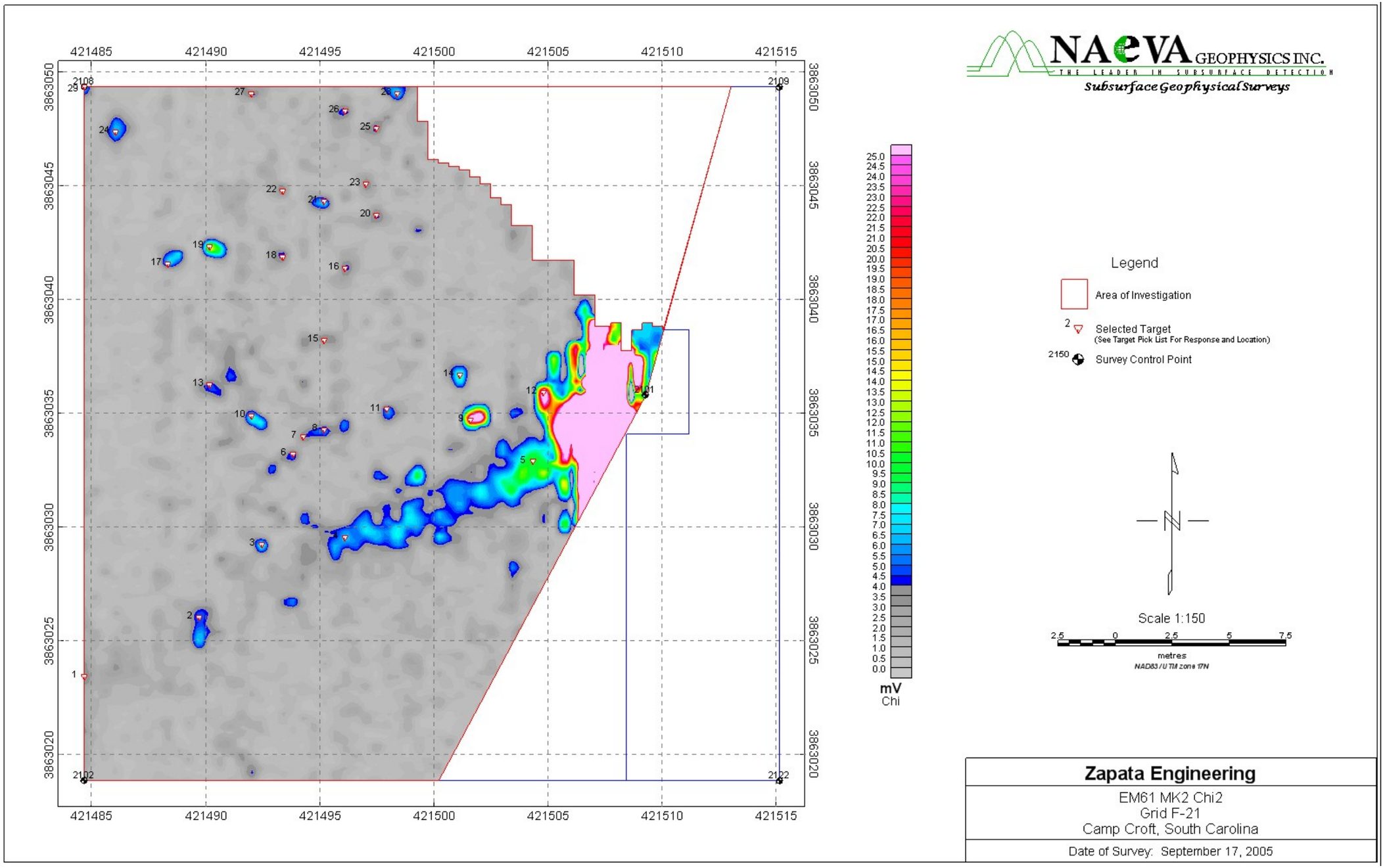
Project Name: Former Camp Croft, Phase II
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: F21
Field Book ID:

Geophysical Contrac ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center I Brendan Slater
COE Project Engine
COE Geophysicist: Andrew Schwartz

Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

	Original Survey								Reacquisition Survey						Dig Results											Post-Dig UXO QC Results			Post-Dig Geophysical QC		
											Offset					Offset		Orientation of		Depth (in)												
Unique Target ID	Easting Coord. (m)	Northing Coord. (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs-oz)	Dimensions: Length, Width, Height (in)	Comments	X Distance (in)	Y Distance (in)	Nose (Azimuth deg) **	Inclination of Nose (deg) **	Top of Item	Center of Mass	Digital Photo Filename **	Date	Team Leader Initials	Excavation Hole Cleared?	UXO QC Spec. Initials	Date	Agreement between Dig Results & Geophysical Data? (G=good, A=avg, P=poor,	Geophysicist QC Initials	Date
F21_12	421504.3204	3863027.703	64.5	29	7.6		F21_12	17-Sep-2005	26	2.5	0	0	1/10/06	NC			nc because target is under cart path							F21_12 - #006	1/11/06	BAM	NA	DRA	02/21/06	NA	DRA	02/21/06
F21_18	421503.8631	3863032.729	63	45.5	321.7		F21_18	17-Sep-2005	290	6.4	0	0	1/10/06	CD	0		water pipe, shared with f21-c5 / f21-c4 / f21-53	0	0	NE	0	0	0	F21_18 - #007	1/20/06	BAM	NA	DRA	02/21/06	YES	RVW	
F21_23	421492.4395	3863034.563	25.5	51.5	10.7			17-Sep-2005	42	19.6	-4	14	1/10/06	CD	.25	5 x 3 x 3	1 ea aluminum beer can	0	0	SE	0	3	5	F21_23 - #054	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
F21_24	421502.0852	3863034.825	57	52.38	54.3		F21_24	17-Sep-2005	136	69.4	-4	-6	1/10/06	CD	.25	6 x 3 x 3	1 ea aluminum beer can	0	0	N	0	6	8	F21_24 - #005	1/11/06	BAM	YES	RVW	01/18/06	YES	RVW	01/18/06
F21_26	421504.7767	3863039.399	66	64.27	192.2		F21_26	17-Sep-2005	322	27.9	13	14	1/10/06	CD	24	72 x 2 x 2	1 ea 72 in angle iron and 1 ea .50 in bar 36 in	0	0	N	0	14	15	F21_26 - #057	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
F21_29	421490.6122	3863037.457	19.5	61	62.4		F21_29	17-Sep-2005	49	3	10	-4	1/10/06	CD	.6	36 x .5 x .5	.50 in rebar 36 in long	0	0	NW	0	8	8.25	F21_29 - #043	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
F21_31	421491.1458	3863041.264	21.25	73.5	24.5		F21_31	17-Sep-2005	49	4.5	0	7	1/10/06	CD	1.5	10 x 4 x 5	1 ea toy forklift	0	0	W	0	12	14	F21_31 - #056	1/10/06	BAM	YES	RVW	01/18/06	YES	RVW	01/18/06
F21_32	421496.5523	3863041.528	39	74.38	5.8			17-Sep-2005	9	5.1	0	8	1/10/06	CD	.25	5 x 3 x 3	1 ea aluminum beer can	0	0	W	0	10	12	F21_32 - #051	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
F21_38	421500.8165	3863043.999	53	82.5	5.0			17-Sep-2005						CD	.1	1 x 1 x .1	piece of aluminum	0	0					F21_38 - #004	1/30/06	SFR	NA	DRA	02/21/06	YES	RVW	
F21_39	421501.5779	3863043.998	55.5	82.5	12.9		F21_39	17-Sep-2005	22	5.8	0	0	1/10/06	CD	.25	3 x .25 x .25	1 ea 3 in nail and 84 in 14 gage wire , revisit found 2 more nails	0	0	NA	0	3	3	F21_39 - #045 / F21_39a - #012	1/26/06	BAM	NA	DRA	02/21/06	YES	RVW	
F21_4	421490.6056	3863020.096	19.75	4	7.1		F21_04	17-Sep-2005	9	4.2	12	-2	1/10/06	CD	.25	3 x 1.5 x .25	box latch hardware	0	0	W	0	5	5	F21_4 - #039	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
F21_6	421485.1257	3863023.602	1.5	15.5	49.7		F21_06	17-Sep-2005	74	5.6	0	0	1/10/06	CD	0		water pipes under cart path	0	0	NE	0	0	0	F21_6 - #041	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
F21_C1	421484.6687	3863023.45	0	15		4.6026288		17-Sep-2005	74	5.6	0	0	1/10/06	CD	0		water pipes under cart path	0	0	NE	0	0	0	F21_C1 - #041 / F21_C1a - #041	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
F21_C10	421491.9826	3863034.867	24	52.5		9.0388756		17-Sep-2005	42	19.6	34	2	1/10/06	CD	.25	5 x 3 x 3	1 ea aluminum beer can	0	0	SE	0	3	5	F21_C10 - #054	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
F21_C11	421497.9227	3863035.168	43.5	53.5	5.0	6.1637182		17-Sep-2005	18	9.6	12	0	1/10/06	CD	.25	5 x 3 x 3	1 ea alu beer can	0	0	W	0	7	9	F21_C11 - #003	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
F21_C12	421504.7767	3863035.926	66	56		32.642632		17-Sep-2005	322	27.9	13	-4	1/10/06	CD	25	72 x 2 x 2	1 ea 72 in angle iron and 1 ea .50 in rebar 36 in	0	0	N	0	14	15	F21_C12 - #057	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
F21_C13	421490.155	3863036.299	18	57	10.7	5.0908486	F21_27	17-Sep-2005	29	13.8	-5	-9	1/10/06	CD	.25	5 x 3 x 3	1 ea aluminum beer can	12	12	SE	0	2	4	F21_C13 - #055	1/10/06	BAM	YES	RVW	01/18/06	YES	RVW	01/18/06
F21_C14	421501.1212	3863036.609	54	58.5	13.3	10.603305	F21_28	17-Sep-2005	21	9.4	0	9	1/10/06	CD	.25	5 x 3 x 3	1 ea coke can	0	0	N	0	8	10	F21_C14 - #004	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
F21_C15	421495.1014	3863038.216	34.5	63.5	9.1	3.9934266		17-Sep-2005	19	9.5	0	13	1/10/06	CD	.25	3 x 3 x .25	1 ea 3 in washer	0	12	NA	15	10	10	F21_C15 - #056	1/10/06	BAM	YES	RVW	01/25/06	YES	RVW	01/25/06
F21_C16	421496.0954	3863041.355	37.5	73.81		5.4359764		17-Sep-2005	9	5.1	27	20	1/10/06	CD	.25	5 x 3 x 3	1 ea aluminum beer can	0	0	W	15	10	12	F21_C16 - #051	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
F21_C17	421488.3284	3863041.57	12	74.5	54.2	7.8877468	F21_33	17-Sep-2005	37	5.3	2	10	1/10/06	CD	.25	3 x .25 x .25	4 ea nails	0	0	NA	90	0	1.5	F21_C17 - #044	1/10/06	BAM	YES	RVW	01/18/06	YES	RVW	01/18/06
F21_C18	421493.3641	3863041.872	28.5	75.5	5.4	5.0501981		17-Sep-2005	21	9.8	-10	0	1/10/06	CD	.25	5 x 3 x 3	1 ea aluminum beer can	0	0	N	15	4	6	F21_C18 - #052	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
F21_C19	421490.156	3863042.33	18	77	12.6	15.09538	F21_35	17-Sep-2005	60	29.1	0	12	1/10/06	CD	.25	5 x 3 x 3	1 ea aluminum beer can	0	0	NW	0	0	0	F21_C19 - #053	1/10/06	BAM	YES	RVW	01/18/06	YES	RVW	01/18/06
F21_C2	421489.6964	3863026.036	16.5	23.5	79.8	5.1686134	F21_10	17-Sep-2005	90	3.6	0	0	1/10/06	CD	1	16 x .5 x .5	16 in metal rod	0	0	NW	0	4	4.25	F21_C2 - #040	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
F21_C20	421497.4661	3863043.696	42	81.5	5.2	4.4416909		17-Sep-2005	19	10.4	-5	8	1/10/06	CD	.25	5 x 3 x 3	1 ea aluminum beer can	0	0	N	0	6	8	F21_C20 - #050	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
F21_C21	421495.1818	3863044.307	34.5	83.5		7.5403032		17-Sep-2005	70	11.8	18	0	1/10/06	CD	2	6 x 6 x 5	1 ea golf tee box marker.	0	0	NA	0	12	14	F21_C21 - #059	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
F21_C22	421493.3544	3863044.765	28.5	85	3.8	4.20898		17-Sep-2005	45	16.9	14	0	1/10/06	CD	.25	5 x 3 x 3	1 ea aluminum beer can	0	0	N	15	4	6	F21_C22 - #058	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
F21_C23	421497.0093	3863045.067	40.5	86	7.0	4.399044		17-Sep-2005	14	6.7	-6	8	1/10/06	CD	.25	5 x 3 x 3	1 ea aluminum beer can	0	0	NE	0	5	7	F21_C23 - #046	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
F21_C24	421486.0453	3863047.359	4.5	93.5	84.3	6.541594	F21_40	17-Sep-2005	98	7.2	0	0	1/10/06	CD	0		golf tee box sprinkler head	0	0	NA	0	0	0	F21_C24 - #001	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
F21_C25	421497.4663	3863047.593	42	94	4.1	4.5407715		17-Sep-2005	5	2.5	0	0	1/10/06	CD	25	5 x 3 x 3	1 ea aluminum beer can	0	0	W	0	5	7	F21_C25 - #047	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
F21_C26	421496.0958	3863048.266	37.5	96.5	13.7	5.0390973		17-Sep-2005	12	6.4	-2	0	1/10/06	CD	25	5 x 3 x 3	1 ea aluminum beer can	0	0	NE	0	6	8	F21_C26 - #049	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
F21_C28	421498.38	3863049.025	45	99		7.7889738		17-Sep-2005	13	7.4	0	14	1/10/06	CD	25	5 x 3 x 3	1 ea aluminum beer can	0	0	W	0	4	6	F21_C28 - #048	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
F21_C29	421484.6753	3863049.339	0	100	72.0	7.2322135		17-Sep-2005	110	10.3	0	0	1/10/06	CD	.25	3 x .25 x .25	grid marker nail	0	0	NA	90	0	1.5	F21_C29 - #002	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
F21_C4	421496.0947	3863029.535	37.5	35	138.4	6.5849347	F21_13	17-Sep-2005	179	4.3	4	-16	1/10/06	CD	0	6	6 in water line. include target /21-c5	0	0	NE	15	34	37	F21_C4 - #007	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
F21_C5	421504.32	3863032.881	64.5	46		10.677852		17-Sep-2005	290	6.4	0	0	1/10/06	CD	0	6	6 in water pipes	0	0	NE	15	34	37	F21_C5 - #007	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
F21_C7	421494.2672	3863033.952	31.5	49.5	8.4	4.5861955	F21_21	17-Sep-2005	20	11.2	14	4	1/10/06	CD	25	3 x .25 x .25	1 ea 3 in nail	0	0	NE	-15	4	4	F21_C7 - #060	1/10/06	BAM	YES	RVW	01/25/06	YES	RVW	01/25/06
F21_C8	421495.1811	3863034.266	34.5	50.5	10.7	5.8584896	F21_22	17-Sep-2005	16	10.1	3	0	1/10/06	CD	25	5 x 3 x 2	1 ea 3 in nail revisit found aluminum beer can	0	0	NE	0	4	4	F21_C8 - #011	1/26/06	BAM	NA	DRA	02/21/06	YES	RVW	

* Fill in Units (mV, nT/m, ppt, etc)
** Opt Field - refer to SOW for applicability.
*** UXO, DMM, MC-E (Munit Const-Exp), MD (Munit Debris), CD (Cult Debris) and MC-NE (Munit Const-Non Exp), SA (small arms), NC (no contact) OT (other)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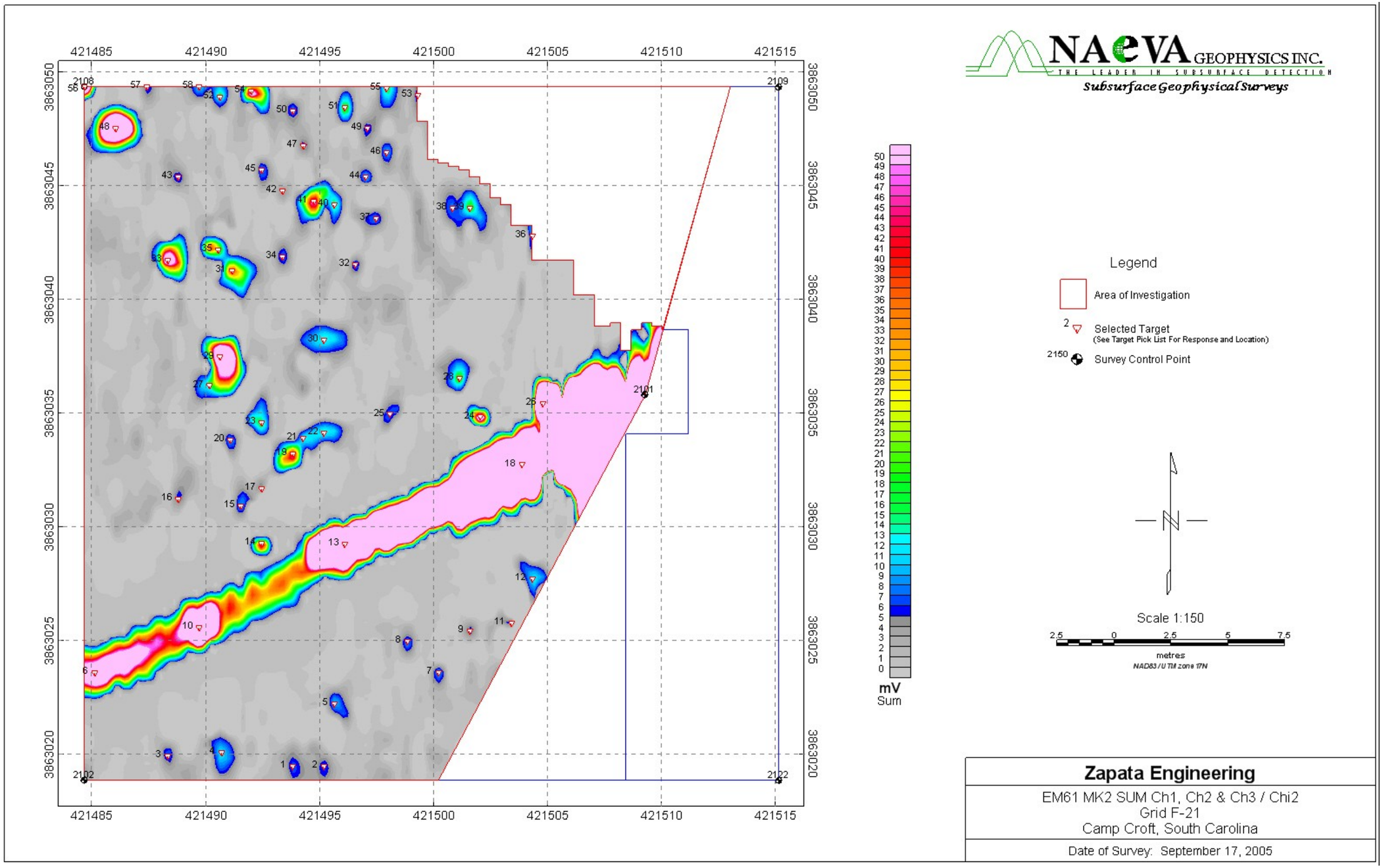
mV
Chi
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
Selected Target
(See Target Pick List For Response and Location)
Survey Control Point
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 Chi2
Grid F-21
Camp Croft, South Carolina
Date of Survey: September 17, 2005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3863020
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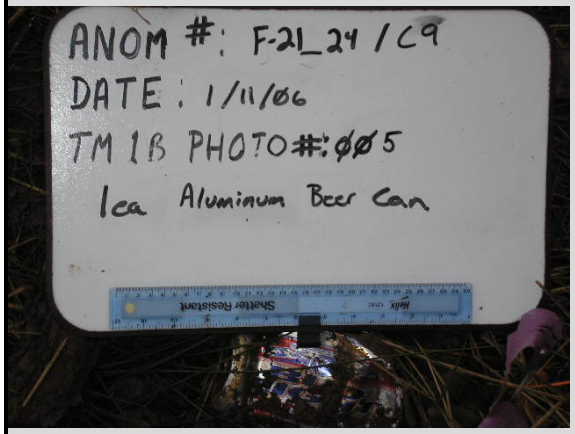
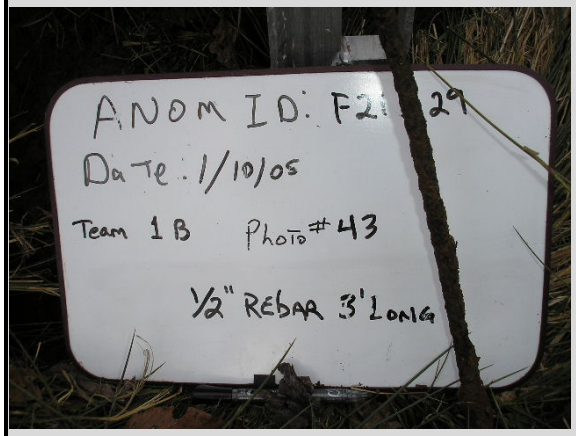
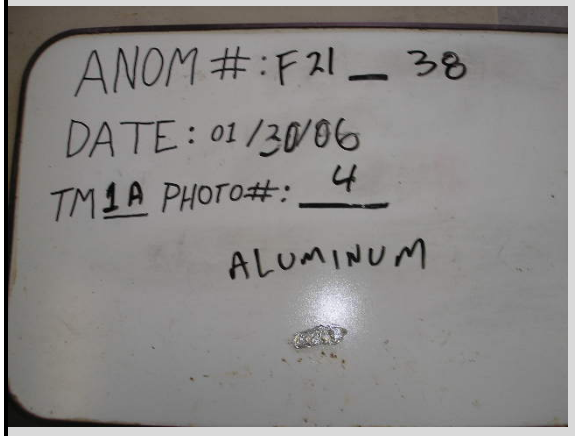
mV
Sum
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
Selected Target
(See Target Pick List For Response and Location)
Survey Control Point
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 SUM Ch1, Ch2 & Ch3 / Chi2
Grid F-21
Camp Croft, South Carolina
Date of Survey: September 17, 2005

GRID F21 DIG PHOTOS







GRID F21 DIG PHOTOS (CONTINUED)

GRID F21 DIG PHOTOS (CONTINUED)

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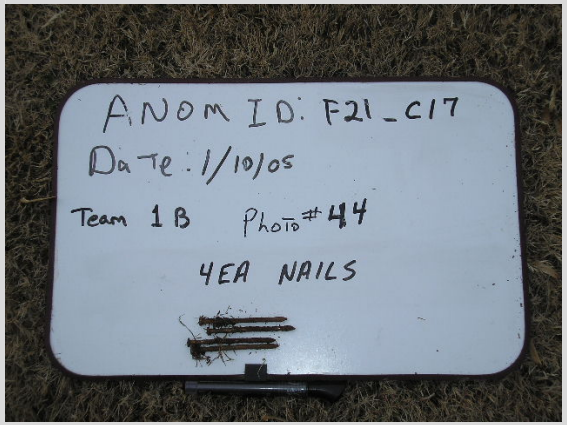

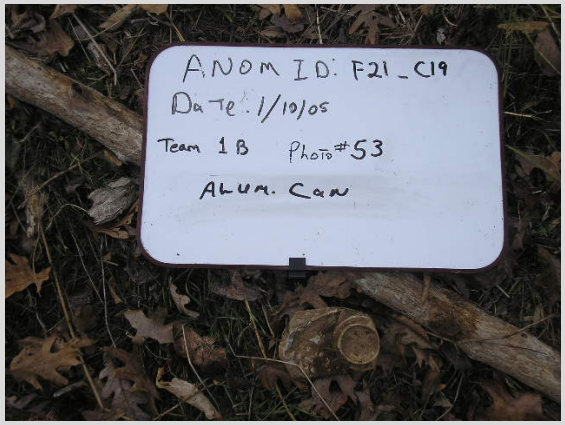

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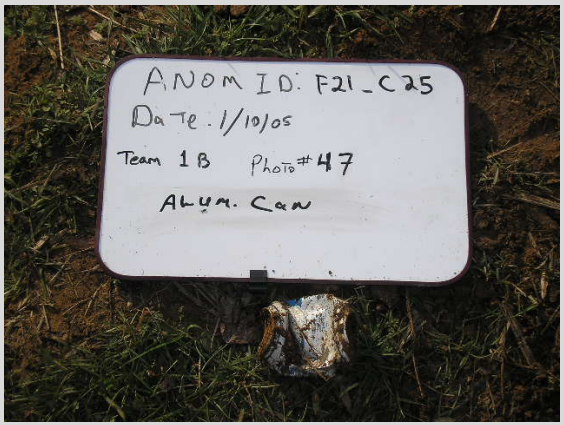

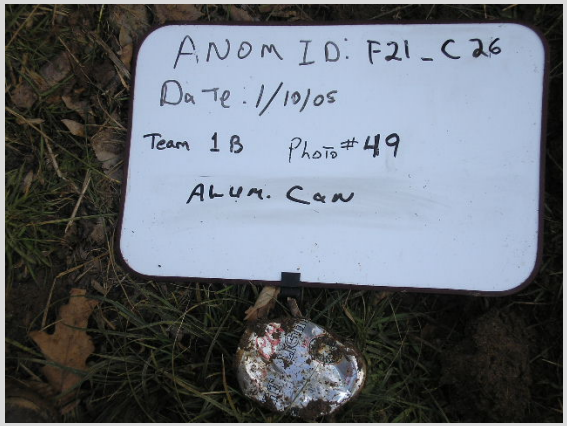

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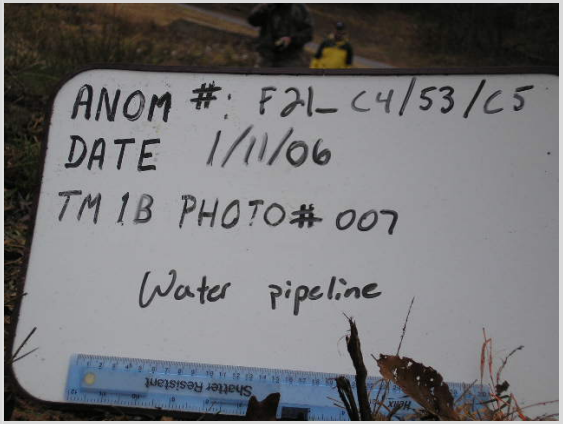
	 GRID F21_18 PHOTO	

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

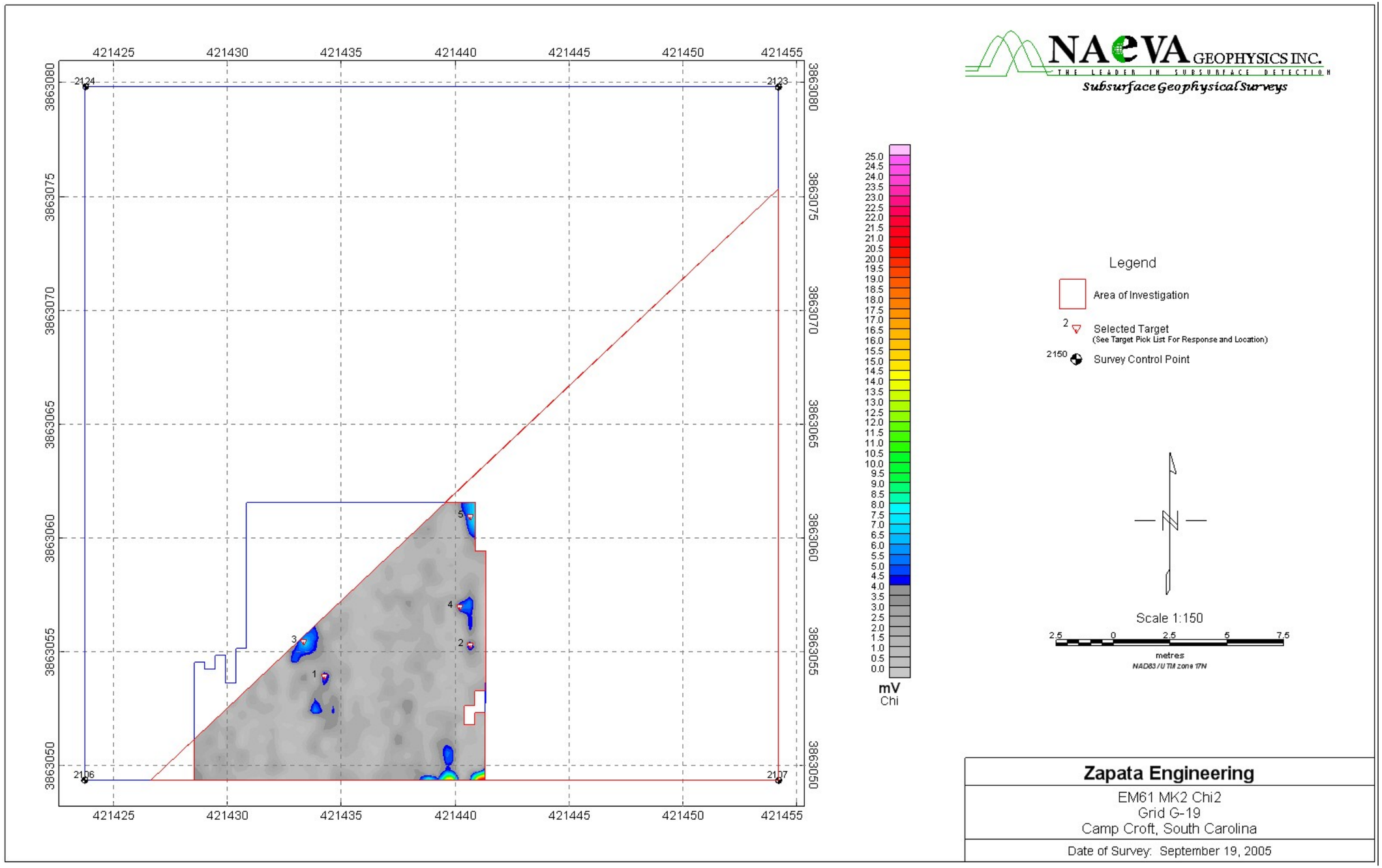
Project Name: Former Camp Croft, Phase II
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: G19
Field Book ID:

Geophysical Contrac ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center I Brendan Slater
COE Project Enginee
COE Geophysicist: Andrew Schwartz

Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

	Original Survey								Reacquisition Survey					Dig Results												Post-Dig UXO QC Results			Post-Dig Geophysical QC		
											Offset					Offset		Orientation of		Depth (in)												
Unique Target ID	Easting Coord. (m)	Northing Coord. (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Chi² Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Chi² Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs-oz)	Dimensions: Length, Width, Height (in)	Comments	X Distance (in)	Y Distance (in)	Nose (Azimuth deg) **	Inclination of Nose (deg) **	Top of Item	Center of Mass	Digital Photo Filename **	Date	Team Leader Initials	Excavation Hole Cleared?	UXO QC Spec. Initials	Date	Agreement between Dig Results & Geophysical Data? (G=good, A=avg, P=poor,	Geophysicist QC Initials	Date
G19_17	421440.1898	3863061.093	54	38.5	10.6			19-Sep-2005	7	2.8	12	17	1/7/06	CD	.25	3 x .25 x .25	2 ea nails	10	11	N	0	13	13	G19_17 - #018	1/11/06	BAM	YES	RVW	01/25/06	YES	RVW	01/25/06
G19_4	421436.6116	3863050.588	39	4	12.7		G19_4	19-Sep-2005	74	4.5	0	0	1/7/06	CD	0		utility line deeper then 24 in	0	0	NW	0	0	0	G19_4 - #035	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
G19_5	421437.8981	3863051.349	46.5	6.5	33.2		G19_5	19-Sep-2005	60	3.2	-5	8	1/7/06	CD	.25	6 x .25 x .25	1 ea 6 in survey nail	0	0	NA	90	0	3	G19_5 - #017	1/11/06	BAM	YES	RVW	01/25/06	YES	RVW	01/25/06
G19_A.1	421447.5032	3863049.98	0	0				19-Sep-2005						HOTROCK	.5	3 x 1.5 x 1						4	5		1/27/06	BAM	NA	DRA	02/21/06	NA	DRA	02/21/06
G19_A.10	421446.8937	3863068.571	0	0				19-Sep-2005						CD	.25	.4 x .25 x .25	nail			NA	0	1	1	G19_A.10 - #020	1/27/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
G19_A.11	421453.2942	3863063.695	0	0				19-Sep-2005						CD	.25	30 x .25 x .25	wire			NA	0			G19_A.11 - #021	1/27/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
G19_A.12	421453.2942	3863062.171	0	0				19-Sep-2005						CD	.25	2 x 2 x 1	steel ring			NA	0	3	3	G10_A.12 - #026	1/27/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
G19_A.2	421444.1506	3863050.589	0	0				19-Sep-2005						HOTROCK	.25	2.5 x 2 x 1.5						3	3.5		1/27/06	BAM	NA	DRA	02/21/06	NA	DRA	02/21/06
G19_A.3	421445.6745	3863050.894	0	0				19-Sep-2005						CD	.25	3 x .25 x .25	nail			NA	0	4	4	G19_A.3 - #003	1/27/06	BAM	NA	DRA	02/21/06	NA	DRA	02/21/06
G19_A.4	421445.6745	3863057.599	0	0				19-Sep-2005						CD	.25	4 x .25 x .25	nail			NA	0	2	2	G19_A.4 - #006	1/27/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
G19_A.5	421440.7224	3863064.914	0	0				19-Sep-2005						CD	.25	36 x .5 x .25	banding			NA	0	1	1	G19_A.5 - #007	1/27/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
G19_A.6	421442.627	3863062.476	0	0				19-Sep-2005						UXO	.5	4.5 x 2.5 x 2.5	grenade, hand, prac, MK2			NA	0	1	1	G19_A.6 - #008	1/27/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
G19_A.7	421458.5989	3863066.743	0	0				19-Sep-2005						CD	.25	24 x .25 x .25	barb wire			NA	0	1	1	G19_A.7 - #009	1/27/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
G19_A.8	421459.9037	3863068.571	0	0				19-Sep-2005						CD	.25	48 x .25 x .25	barb wire			NA	0	1	1	G19_A.8 - #010	1/27/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
G19_A.9	421450.2463	3863069.791	0	0				19-Sep-2005						CD	.5	8 x 2 x 1	1x2 with nails			NA	0	2	2	G19_A.9 - #019	1/27/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
G19_C1	421434.243	3863053.939	34.5	15	29.3	5.1572204	G19_10	19-Sep-2005	148	8.5	-5	0	1/7/06	CD	0		utility lines deeper then 24 in	0	0	NW	0	0	0	G19_C1 - #035	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
G19_C2	421440.6434	3863055.307	55.5	19.5	6.6	5.7027316		19-Sep-2005					1/7/06	CD	0		utility lines deeper then 24 in	0	0	NW	0	0	0	G19_C2 - #035	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
G19_C3	421433.3302	3863055.462	31.5	20		7.7805419		19-Sep-2005	197	12.5	0	0	1/7/06	CD	0		utility line deeper then 24 in, include points g19-4, g19-c1	0	0	NW	0	0	0	G19_C3 - #035	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
G19_C4	421440.1873	3863056.982	54	25	47.2	5.7549458	G19_15	19-Sep-2005	61	8.9	-18	12	1/7/06	CD	25	3 x .25 x .25	4 ea nails	0	0	NA	90	0	1.5	G19_C4 - #019	1/10/06	BAM	YES	RVW	01/16/06	YES	RVW	01/16/06
G19_C5	421440.6467	3863060.954	55.5	38.04348		6.6559352		19-Sep-2005	7	2.8	0	15	1/7/06	CD	25	3 x .25 x .25	2 ea nails	10	11	N	0	13	13	G19_C5 - #018	1/11/06	BAM	YES	RVW	01/25/06	YES	RVW	01/25/06

* Fill in Units (mV, nT/m, ppt, etc)
** Opt Field - refer to SOW for applicability
*** UXO, DMM, MC-E (Munit Const-Exp), MD (Munit Debris), CD (Cult Debris) and MC-NE (Munit Const-Non Exp), SA (small arms), NC (no contact) OT (other)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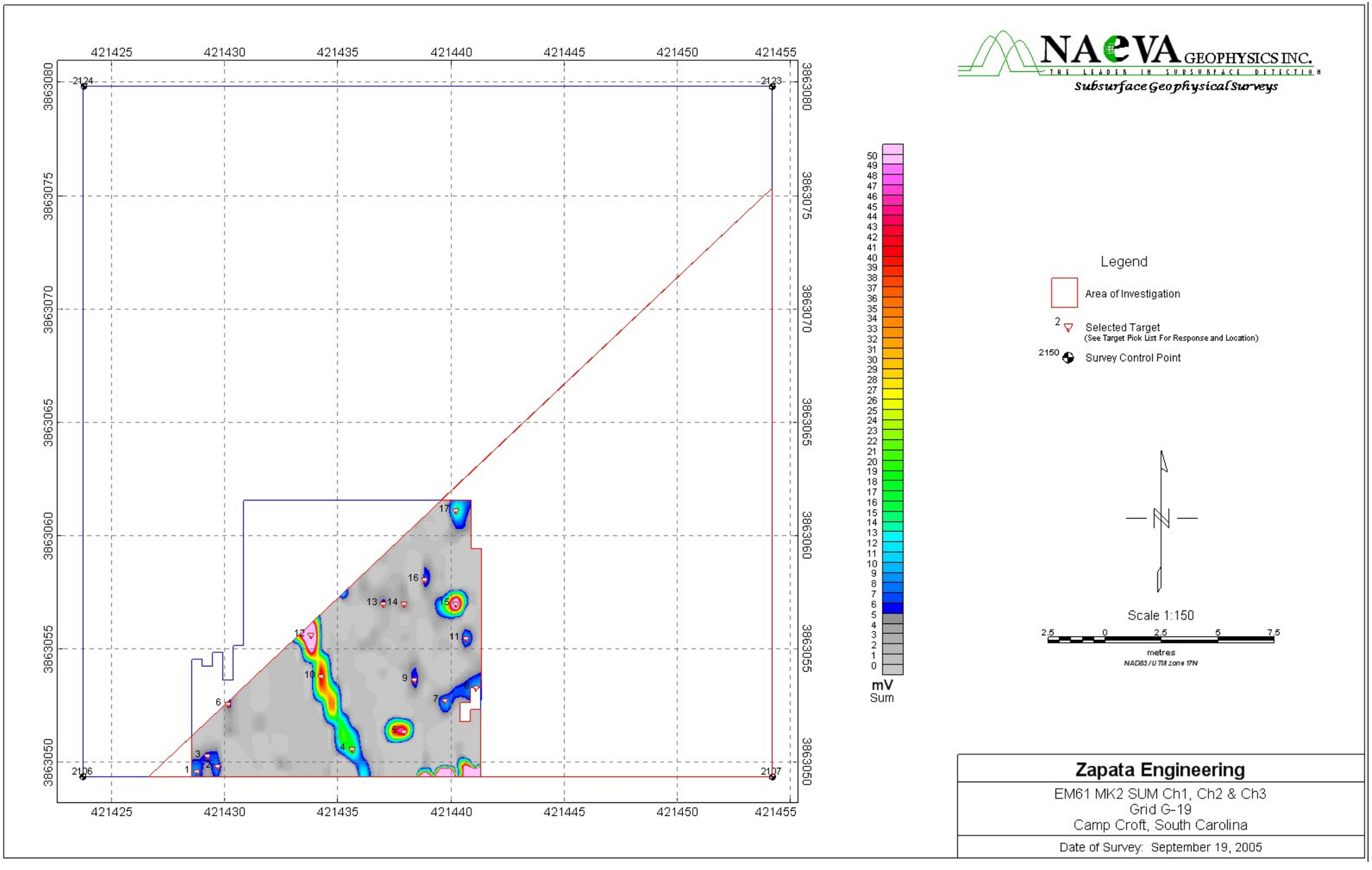
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
2 Selected Target
(See Target Pick List For Response and Location)
2150 Survey Control Point
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 Chi2
Grid G-19
Camp Croft, South Carolina
Date of Survey: September 19, 2005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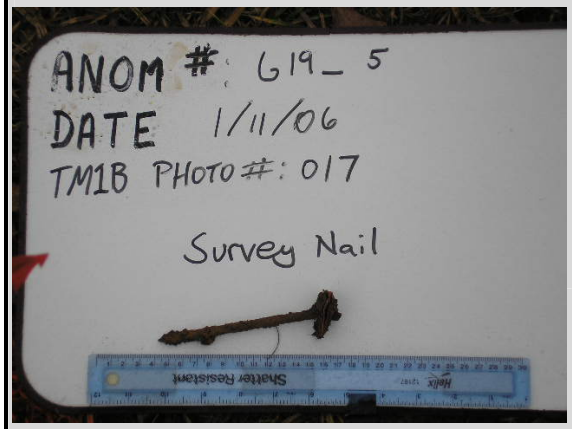
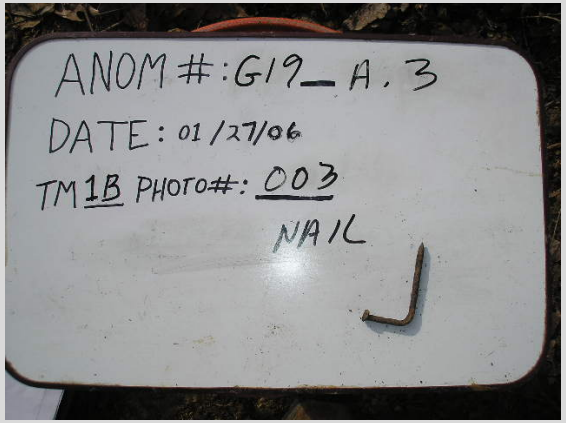
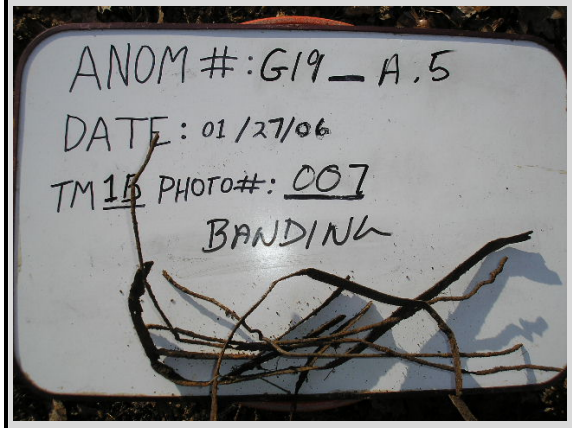
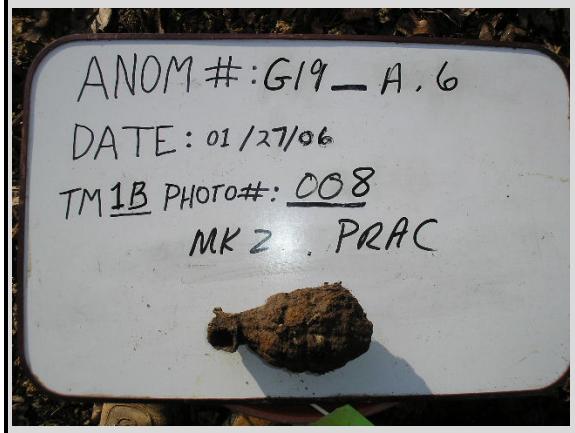
mV
Sum
NAeVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
2 Selected Target
(See Target Pick List For Response and Location)
2150 Survey Control Point
N
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid G-19
Camp Croft, South Carolina
Date of Survey: September 19, 2005

GRID G19 DIG PHOTOS

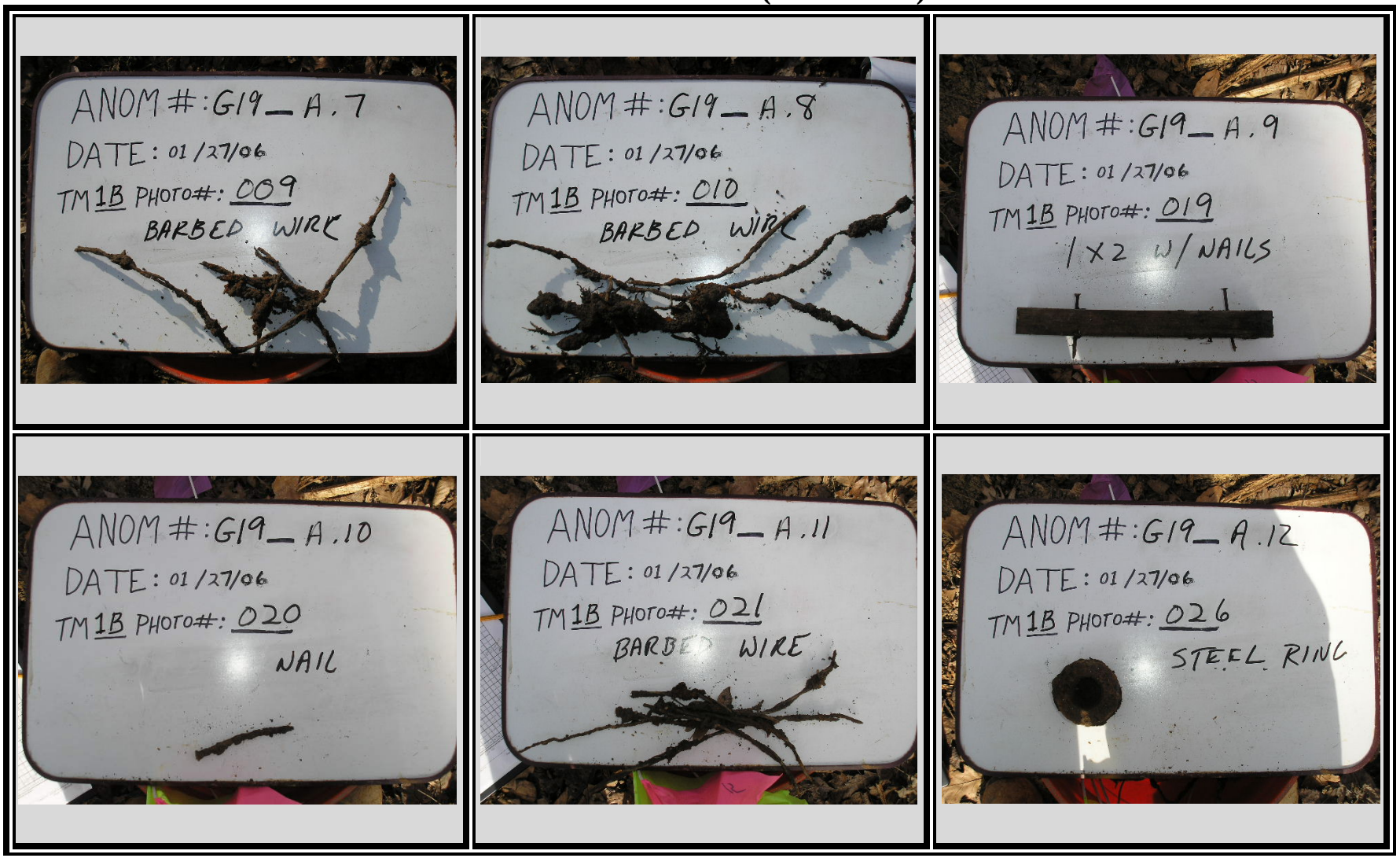








GRID G19 DIG PHOTOS (CONTINUED)



GRID G19 DIG PHOTOS (CONTINUED)

GRID G19_C2 PHOTO

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase II
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: G20
Field Book ID:

Geophysical Contrac ZapataEngineering / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center I Brendan Slater
COE Project Enginee
COE Geophysicist: Andrew Schwartz

Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

	Original Survey								Reacquisition Survey					Dig Results													Post-Dig UXO QC Results			Post-Dig Geophysical QC		
											Offset						Offset				Depth (in)											
Unique Target ID	Easting Coord. (m)	Northing Coord. (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ****	Approx. weight (lbs-oz)	Dimensions: Length, Width, Height (in)	Comments	X Distance (in)	Y Distance (in)	Orientation of Nose (Azimuth deg) **	Inclination of Nose (deg) **	Top of Item	Center of Mass	Digital Photo Filename **	Date	Team Leader Initials	Excavation Hole Cleared?	UXO QC Spec. Initials	Date	Agreement between Dig Results & Geophysical Data? (G=good, A=avg, P=poor,	Geophysicist QC Initials	Date
G20_1	421484.3706	3863049.339	99	0	45.5		G20_01	16-Sep-2005	110	10.3	12	0	1/7/06	CD	.25	3 x .25 x .25	nail	0	0	NA	0	.4	.4	G20_1 - #023	1/27/06	RLY	NA	DRA	02/21/06	YES	RVW	
G20_20	421482.5428	3863057.269	93	26	12.7		G20_20	16-Sep-2005	17	.5	0	0	1/7/06	UXO	1	4 x 2.75 x 2.75	grenade, hand, prac, MK2 with live fuze	0	0	E	0	.4	.5	G20_20 - #060	1/12/06	BAM	YES	RVW	01/16/06	YES	RVW	01/16/06
G20_21	421460.6026	3863057.582	21	27	15.6		G20_21	16-Sep-2005	12	4.5	4	8	1/7/06	UXO	1	2 x 2 x 4	grenade, hand, prac, MK2 with live fuze	0	0	NA	0	3	3	G20_21 - #027	1/24/06	RLY	NA	DRA	02/21/06	YES	RVW	
G20_24	421465.6306	3863058.951	37.5	31.5	12.7		G20_24	16-Sep-2005	14	4.9	4	15	1/8/06	CD	.5	4 x 3.5 x .25	part of 6 in diameter metal pipe	0	0	SW	0	1	1	G20_24 - #040	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
G20_28	421456.0314	3863061.391	6	39.5	129.4		G20_28	16-Sep-2005	610	23.4	-10	0	1/9/06	CD	0		pipes, shared with g20-c17	0	0	N	0	0	0	G20_28 - #047 / G20_28a - #029 and #030	1/24/06	BARLYM	NA	DRA	02/21/06	YES	RVW	
G20_3	421475.2293	3863050.718	69	4.5	27.1		G20_03	16-Sep-2005	18	4.2	-2	-10	1/7/06	CD	2	9 x 2.25 x 1	1 ea metal bar	0	0	W	15	14	14.25	G20_3 - #065	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
G20_33	421456.9454	3863064.284	9	49	49.0		G20_33	16-Sep-2005	430	18.5	-6	-18	1/7/06	CD	0		pipes, shared with g20-c17	0	0	N	0	0	0	G20_33 - #029 and #030	1/24/06	RLY	NA	DRA	02/21/06	YES	RVW	
G20_38	421463.8019	3863066.569	31.5	56.5	13.4		G20_38	16-Sep-2005					1/8/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
G20_4	421467.9162	3863051.18	45	6	16.9		G20_04	16-Sep-2005	72	22.5	16	-4	1/7/06	CD	1	36 x 1 x 1	hose and beer can	0	0	NA	0	18	18	G20_4 - #028	1/24/06	RLY	NA	DRA	02/21/06	YES	RVW	
G20_43	421460.2973	3863068.092	20	61.5	7.2		G20_43	16-Sep-2005	13	3.1	0	0	1/7/06	MD	1	5 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	W	15	13	14.5	G20_43 - #046	1/11/06	BAM	YES	RVW	01/16/06	YES	RVW	01/16/06
G20_44	421480.715	3863068.094	87	61.5	25.9		G20_44	16-Sep-2005	21	1.2	-4	10	1/8/06	CD	2	8 x 2 x 6	piece of steel	0	0	NA	0	24	24	G20_44 - #064 / G20_44a - #064	1/24/06	BAMRLY	YES	RVW	01/25/06	YES	RVW	01/25/06
G20_52	421458.7734	3863070.833	15	70.5	13.4		G20_52	16-Sep-2005	18	2.3	0	0	1/7/06	CD	.25	9 x .25 x .25	1 ea 9 in wire	0	0	SW	0	.25	.25	G20_52 - #044	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
G20_53	421459.6876	3863071.138	18	71.5	20.8		G20_53	16-Sep-2005	33	3.1	0	0	1/7/06	CD	.50	18 x .25 x .25	2 ea wires totaling 18 in	0	0	W	0	.50	.50	G20_53 - #045	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
G20_61	421461.0588	3863072.967	22.5	77.5	26.0		G20_61	16-Sep-2005	30	7.1	7	2	1/7/06	UXO	.25	2 x 2 x 4	grenade, hand, fragmentation, MK2	0	0	NA	0	1	1	G20_61 - #020	1/24/06	RLY	NA	DRA	02/21/06	YES	RVW	
G20_64	421462.4302	3863073.576	27	79.5	21.7		G20_64	16-Sep-2005	14	2.6	-8	3	1/7/06	CD	.25	3 x .5 x .25	chain clip	0	0	NA	0	2	2	G20_64 - #019	1/24/06	RLY	NA	DRA	02/21/06	YES	RVW	
G20_65	421471.1156	3863074.189	55.5	81.5	7.4		G20_65	16-Sep-2005	10	1.1	0	0	1/8/06	CD	.25	10 x .25 x .25	wire	0	0	NA	0	2	2	G20_65 - #018	1/24/06	RLY	NA	DRA	02/21/06	YES	RVW	
G20_67	421472.9441	3863074.647	61.5	83	14.4		G20_67	16-Sep-2005	14	0.6	12	-3	1/8/06	CD	.2	.4 x 4 x 4	red brick - 13mV response after brick removed	0	0	NA	0	6	6	G20_67 - #017	1/24/06	RLY	NO	RVW	01/25/06	YES	DRA	02/21/06
G20_71	421475.6869	3863075.105	70.5	84.5	12.6		G20_71	16-Sep-2005	15	1.2	4	2	1/8/06	CD	.25	5 x 1 x 1	chain	0	0	NA	0	5	5	G20_71 - #016	1/24/06	RLY	YES	TF	01/24/06	YES	RVW	01/24/06
G20_76	421479.8012	3863076.479	84	89	29.5		G20_76	16-Sep-2005	30	5.1	0	0	1/8/06	UXO	1.5	5 x 2.75 x 2.75	grenade, hand, fragmentation, MK2	0	0	N	15	2	2	G20_76 - #006	1/24/06	BAM	NA	DRA	02/21/06	YES	RVW	
G20_79	421461.9728	3863078.146	25.5	94.5	15.3		G20_78	16-Sep-2005	10	0.6	4	4	1/7/06	CD	.5	6 x 6 x 6	reinforced concrete	0	0	NA	0	4	6	G20_79 - #014	1/24/06	RLY	NA	DRA	02/21/06	YES	RVW	
G20_80	421464.7157	3863078.148	34.5	94.5	14.0		G20_79	16-Sep-2005	13	0.8	5	8	1/8/06	MD	.5	2 x 2 x 4	grenade, hand, prac, MK2	0	0	NA	0	3	3	G20_80 - #012	1/24/06	RLY	NA	DRA	02/21/06	YES	RVW	
G20_81	421477.0584	3863078.764	75	96.5	30.0		G20_80	16-Sep-2005	73	11.5	12	12	1/8/06	UXO	.25	4.5 x 2.5 x 2.5	grenade, hand, prac, MK2	0	0	NA	0	0	1.5	G20_81 - #004 / G20_81a - #028	1/27/06	RLY	NA	DRA	02/21/06	YES	RVW	
G20_82	421470.2013	3863079.522	52.5	99	5.3		G20_81	16-Sep-2005	10	1.6	12	12	1/8/06	CD	.25	1 x 1 x .25	steel	0	0	NA	0	2	2	G20_82 - #009	1/24/06	RLY	NA	DRA	02/21/06	YES	RVW	
G20_A.1	421457.8574	3863068.257	0	0				16-Sep-2005						CD	.25	60 x .25 x .25	barb wire			NA	0	1	1	G20_A.1 - #011	1/27/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
G20_A.10	421456.3335	3863066.428	0	0				16-Sep-2005						CD	.25	6 x .25 x .25	tin can			NA	0	4	4	G20_A.10 - #024	1/27/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
G20_A.11	421456.0287	3863065.514	0	0				16-Sep-2005						CD	.25	4 x .25 x .25	2ea. nails			NA	0	2	2	G20_A.11 - #025	1/27/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
G20_A.2	421454.5048	3863071.305	0	0				16-Sep-2005						CD	.25	36 x .25 x .25	wire			NA	0	1	1	G20_A.2 - #012	1/27/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
G20_A.3	421458.1622	3863074.048	0	0				16-Sep-2005						UXO	.5	4.5 x 2.5 x 2.5	grenade, hand, prac, MK2			NA	0	1	1	G20_A.3 - #013	1/27/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
G20_A.4	421457.8574	3863074.962	0	0				16-Sep-2005						UXO	.5	4.5 x 2.5 x 2.5	grenade, hand, prac, MK2 (2ea)			NA	0	1	1	G20_A.4 - #014	1/27/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
G20_A.5	421455.1144	3863070.085	0	0				16-Sep-2005						CD	.25	4 x .25 x .25	nail			NA	0	1	1	G20_A.5 - #015	1/27/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
G20_A.6	421455.1144	3863071.609	0	0				16-Sep-2005						CD	.25	18 x .25 x .25	wire			NA	0	1	1	G20_A.6 - #016	1/27/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
G20_A.7	421454.8096	3863072.524	0	0				16-Sep-2005						CD	.25	24 x .25 x .25	barb wire			NA	0	1	1	G20_A.7 - #017	1/27/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
G20_A.8	421454.8096	3863067.952	0	0				16-Sep-2005						MD	.25	1 x 1 x 1	grenade, hand, prac, MK2 rings (3ea)			NA	0	1	1	G20_A.8 - #018	1/27/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
G20_A.9	421468.2201	3863072.524	0	0				16-Sep-2005						CD	.25	12 x .25 x .25	wire			NA	0	1	1	G20_A.9 - #022	1/27/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
G20_C1	421461.0602	3863049.813	22.5	1.5	9.4	5.2057467		16-Sep-2005	10	6.5	0	0	1/7/06	CD	.25	5 x 3 x .25	1 ea aluminum Beer can	0	13	SW	0	7	7	G20_C1 - #037	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
G20_C11	421455.1175	3863058.345	3	29.5	163.5	14.620812	G20_22	16-Sep-2005	645	26.4	0	0	1/7/06	CD	0		pipes, shared with g20-c17	0	0	N	0	0	0	G20_C11 - #042	1/24/06	BRLYAM	YES	RVW	01/16/06	YES	RVW	01/16/06
G20_C12	421454.2032	3863060.02	0	35	87.0	9.1131887	G20_25	16-Sep-2005	350	10.4	7	12	1/7/06	CD	.5	24 x .25 x .25	2 ea 12 in wires totaling 24 in	0	0	S	0	.25	.25	G20_C12 - #048	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
G20_C13	421456.4885	3863061.695	7.5	40.5		7.6388702		16-Sep-2005	46	19.5	0	0	1/9/06	CD	.25	5 x 3 x .25	1 ea aluminum beer can	0	0	E	0	4	4	G20_C13 - #061	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
G20_C15	421476.1438	3863063.826	72	47.5	7.6	7.3575673		16-Sep-2005	38	15.1	3	15	1/8/06	CD	.25	2 x 2 x 6	beer can	0	0	NA	0	1	1	G20_C15 - #025	1/24/06	RLY	YES	TF	01/24/06	YES	RVW	01/24/06
G20_C16	421477.9722	3863064.131	78	48.5	12.3	5.921711		16-Sep-2005	17	8.9	8	2	1/8/06	CD	.25	2 x 2 x 6	beer can	0	0	NA	0	1	1	G20_C16 - #026	1/24/06	RLY	NA	DRA	02/21/06	YES	RVW	

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

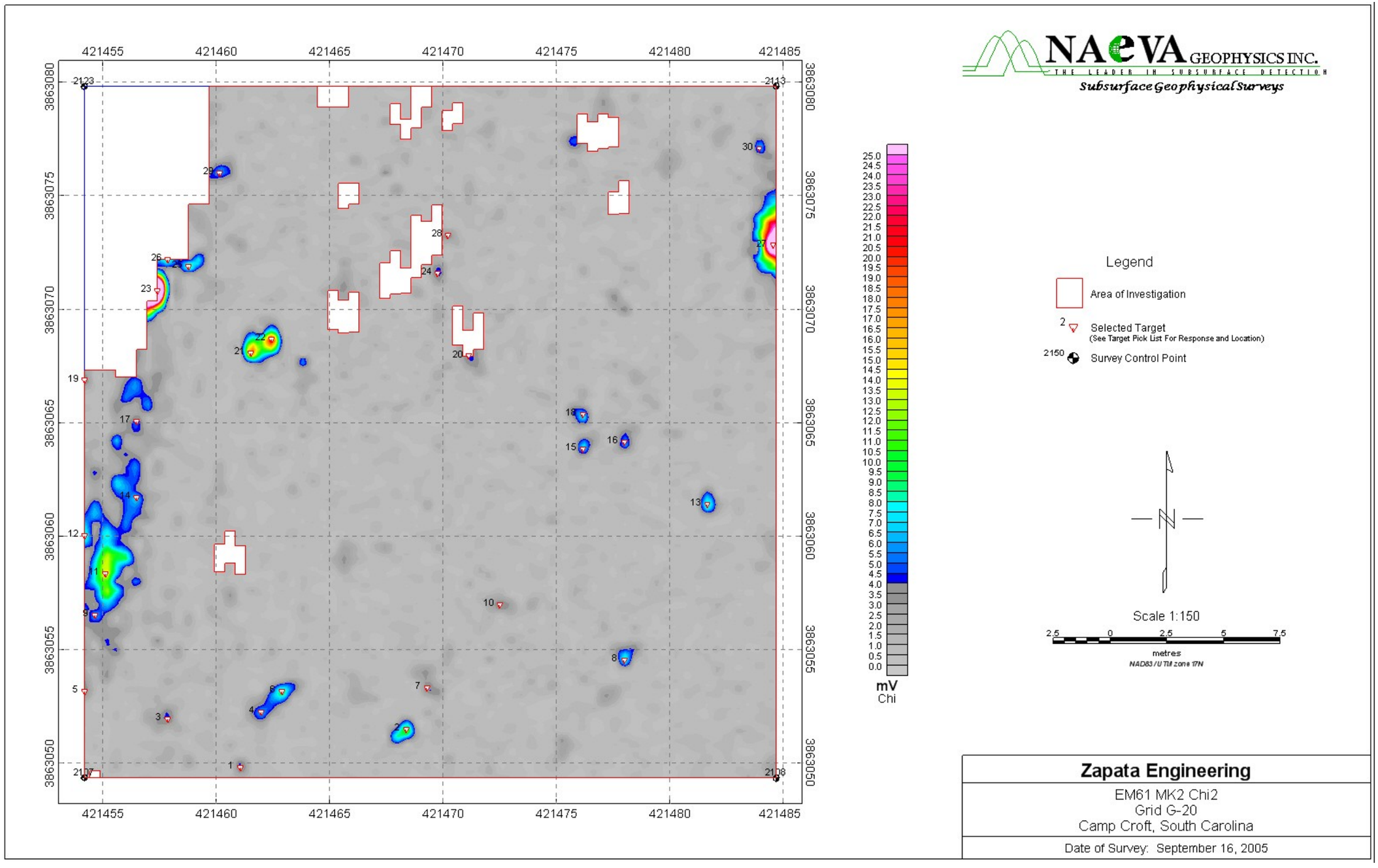
Project Name: Former Camp Croft, Phase II
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: G20
Field Book ID:

Geophysical Contrac ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center I Brendan Slater
COE Project Engine
COE Geophysicist: Andrew Schwartz

Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

	Original Survey								Reacquisition Survey					Dig Results												Post-Dig UXO QC Results			Post-Dig Geophysical QC		
											Offset					Offset		Orientation of		Depth (in)												
Unique Target ID	Easting Coord. (m)	Northing Coord. (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs-oz)	Dimensions: Length, Width, Height (in)	Comments	X Distance (in)	Y Distance (in)	Nose (Azimuth deg) **	Inclination of Nose (deg) **	Top of Item	Center of Mass	Digital Photo Filename **	Date	Team Leader Initials	Excavation Hole Cleared?	UXO QC Spec. Initials	Date	Agreement between Dig Results & Geophysical Data? (G=good, A=avg, P=poor,	Geophysicist QC Initials	Date
G20_C17	421456.4882	3863065.046	7.5	51.5		5.133626		16-Sep-2005	310	9.6	-4	-6	1/7/06	CD	0		to c9. holes dug 24 inches with no other contact	0	0	N	0	0	0	G20_17 - #029 and #030	1/24/06	RLY	NA	DRA	02/21/06	YES	RVW	
G20_C18	421476.1438	3863065.35	72	52.5	11.8	7.62612144		16-Sep-2005	29	14.2	0	5	1/8/06	CD	25	6 x 2 x 2	beer can	0	0	NA	0	3	3	G20_C18 - #024	1/24/06	RLY	YES	TF	01/24/06	YES	RVW	01/24/06
G20_C19	421454.2025	3863066.873	0	57.5	27.8	4.7313287	G20_39	16-Sep-2005					1/8/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
G20_C2	421468.3732	3863051.484	46.5	7		14.55051		16-Sep-2005	72	22.5	10	-13	1/7/06	CD	1	36 x 1 x 1	hose and beer can	0	0	NA	0	10	10	G20_C2 - #020	1/24/06	RLY	NA	DRA	02/21/06	YES	RVW	
G20_C22	421462.4304	3863068.702	27	63.5	217.0	23.411753	G20_46	16-Sep-2005	293	32.5	0	0	1/7/06	CD	3	12 x 2.25 x .25	metal handle for old cast iron stove	0	0	SW	0	0	.25	G20_C22 - #043	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
G20_C23	421457.402	3863070.833	10.5	70.5	405.1	56.594845	G20_51	16-Sep-2005	2508	147.8	-12	3	1/7/06	CD	4	12 x 12 x 1	metal ring	0	0	NA	0	2	2	G20_C23 - #023	1/24/06	RLY	NA	DRA	02/21/06	YES	RVW	
G20_C24	421469.7442	3863071.598	51	73	11.5	5.1935349	G20_55	16-Sep-2005					1/8/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
G20_C25	421458.7733	3863071.9	15	74	24.1	9.8858643	G20_56	16-Sep-2005	60	22.9	0	0	1/7/06	CD	25	2 x .25 x .25	staples	0	0	NA	0	3	3	G20_C25 - #021	1/24/06	RLY	NA	DRA	02/21/06	YES	RVW	
G20_C26	421457.059	3863072.204	12	75	194.9	10.706643	G20_57	16-Sep-2005	545	20.1	0	0	1/7/06	CD	2	12 x 5 x 6	bike crank	0	0	NA	0	6	6	G20_C26 - #022	1/24/06	RLY	NA	DRA	02/21/06	YES	RVW	
G20_C27	421484.5246	3863072.822	99.5	77	1022.2	35.663864	G20_62	16-Sep-2005	862	12.6	14	-2	1/8/06	CD	0	20 x 20	reinforced concrete drainage pipe	0	0	N	15	12	19	G20_C27 - #063	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
G20_C28	421470.2014	3863073.274	52.5	78.5	12.1	5.3128753		16-Sep-2005					1/8/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
G20_C29	421460.1444	3863076.013	19.5	87.5	68.0	6.1469083	G20_73	16-Sep-2005	103	14.8	15	5	1/7/06	MD	.5	2 x 2 x 4	grenade, hand, prac, MK2	0	0	NA	0	1	1	G20_C29 - #015	1/24/06	RLY	NA	DRA	02/21/06	YES	RVW	
G20_C3	421457.0605	3863051.947	12	0.5	41.3	4.6592131	G20_05	16-Sep-2005	50	7.1	0	0	1/7/06	CD	2	3.5 x 3 x 3	1 ea 90 degree elbow QA item	0	0	SE	0	7	0.75	G20_C3 - #036	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
G20_C30	421493.9154	3863077.091	97.5	91	3.6	6.2492081		16-Sep-2005	32	12.2	12	-2	1/8/06	CD	.25	2 x 2 x 6	beer can	0	0	NA	0	0	0	G20_C30 - #036	1/24/06	RLY	NA	DRA	02/21/06	YES	RVW	
G20_C4	421461.9742	3863052.25	25.5	9.5	9.9	6.5352058	G20_06	16-Sep-2005	12	7.4	0	-5	1/7/06	CD	.25	5 x 3 x .25	1 ea aluminum beer car	0	0	W	0	4	4	G20_C4 - #038	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
G20_C5	421454.2038	3863053.168	0	12.5	6.5	3.9712832		16-Sep-2005					1/7/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
G20_C6	421462.8883	3863053.163	28.5	12.5	15.8	10.628356	G20_11	16-Sep-2005	25	14.8	0	-4	1/7/06	CD	.25	5 x 3 x .25	1 ea aluminum beer can	0	0	W	0	5	5	G20_C6 - #039	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
G20_C8	421477.9710	3863054.527	76	17	15.1	8.2005905	G20_14	16-Sep-2005	44	20.5	-10	7	1/7/06	CD	.25	5 x 3 x .25	1 ea aluminum beer can	0	0	N	0	5	5	G20_C8 - #062	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
G20_C9	421454.6606	3863056.518	1.5	23.5	13.4	6.1661263	G20_17	16-Sep-2005	316	7.9	3	9	1/7/06	CD	0		pipes, shared with g20-c17	0	0	N	0	0	0	G20_C9 - #041	1/24/06	BARLYM	YES	RVW	01/16/06	YES	RVW	01/16/06
G20_QA78	421482.0869	3863077.7	91.5	93	21.0			16-Sep-2005	24	4.7	-6	0	01/16/06	MD	1	5 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	E	15	3	4	G20_QA78 - #007	1/24/06	BAM	NA	DRA	02/21/06	YES	RVW	

* Fill in Units (mV, nT/m, ppt, etc)
** Opt Field - refer to SOW for applicability
*** UXO, DMM, MC-E (Munit Const-Exp), MD (Munit Debris), CD (Cult Debris) and MC-NE (Munit Const-Non Exp), SA (small arms), NC (no contact) OT (other)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NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
2 Selected Target
(See Target Pick List For Response and Location)
2150 Survey Control Point
Scale 1:150
2.5 0 2.5 5 7.5
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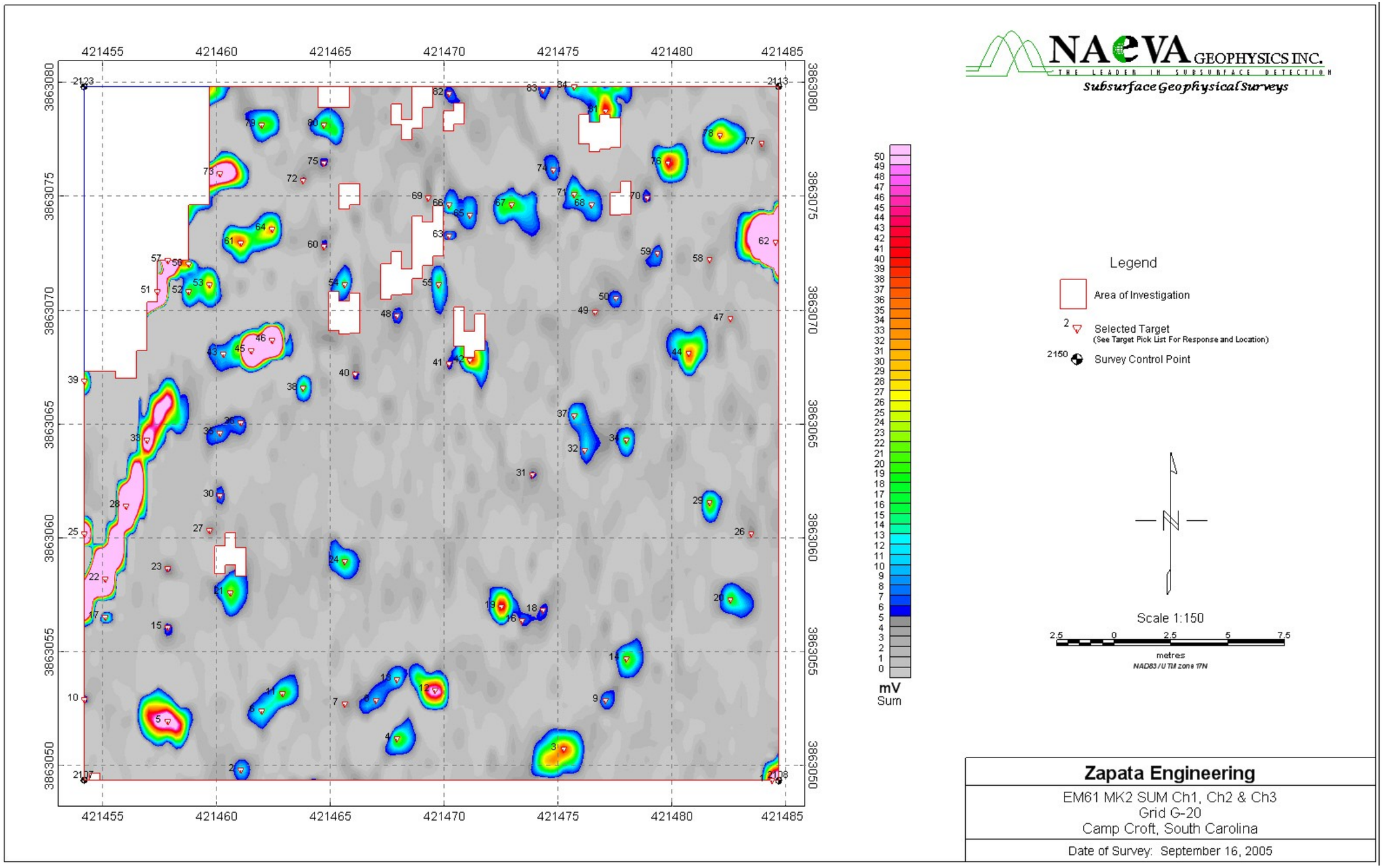
Zapata Engineering
EM61 MK2 Chi2
Grid G-20
Camp Croft, South Carolina
Date of Survey: September 16, 2005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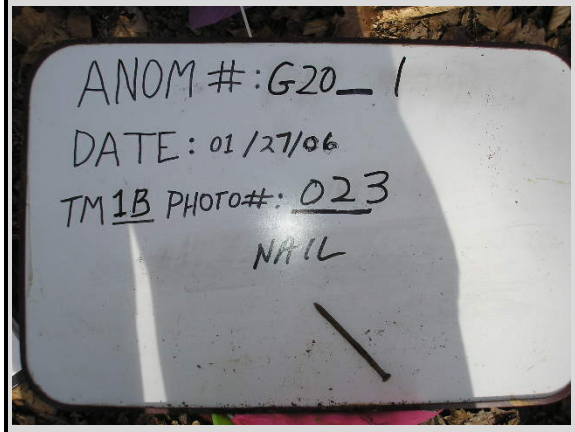
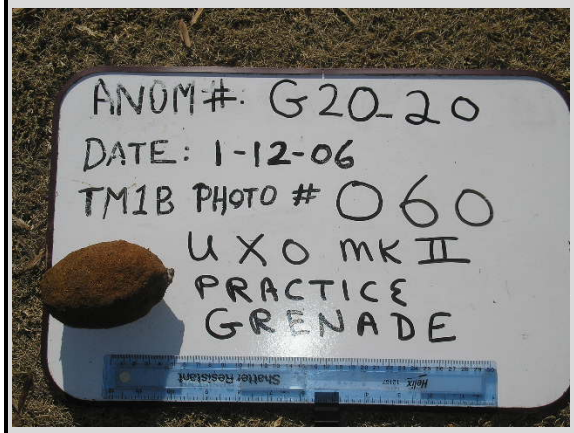
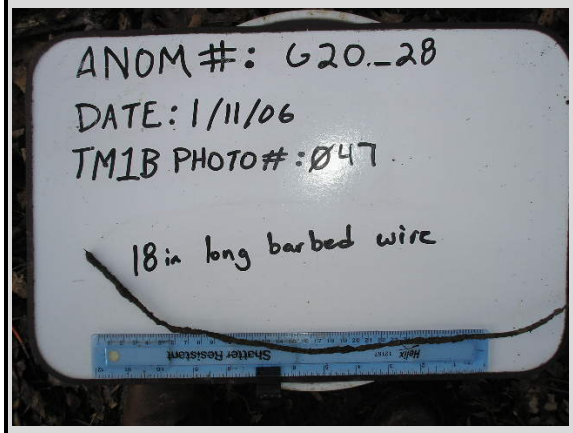
Selected Target
(See Target Pick List For Response and Location)
Survey Control Point
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
NAeVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Zapata Engineering
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid G-20
Camp Croft, South Carolina
Date of Survey: September 16, 2005

GRID G20 DIG PHOTOS







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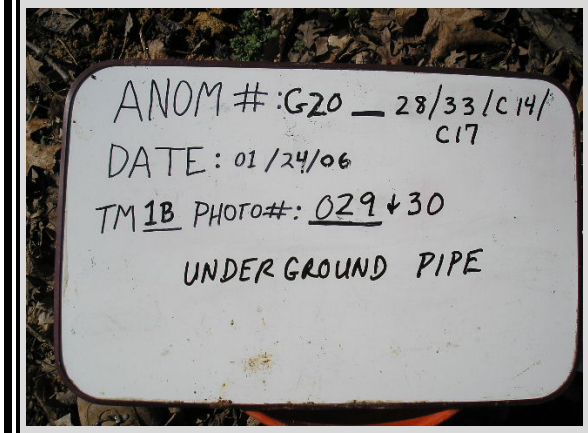

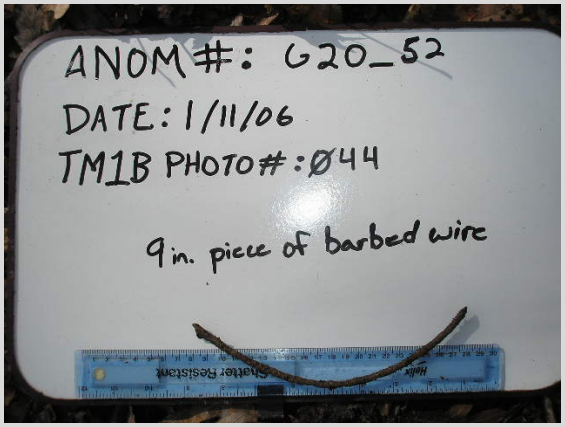

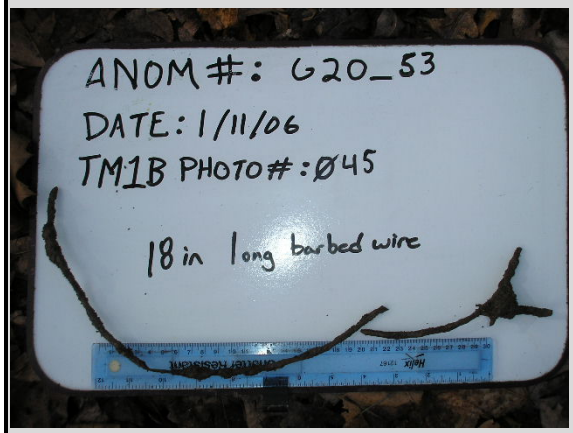

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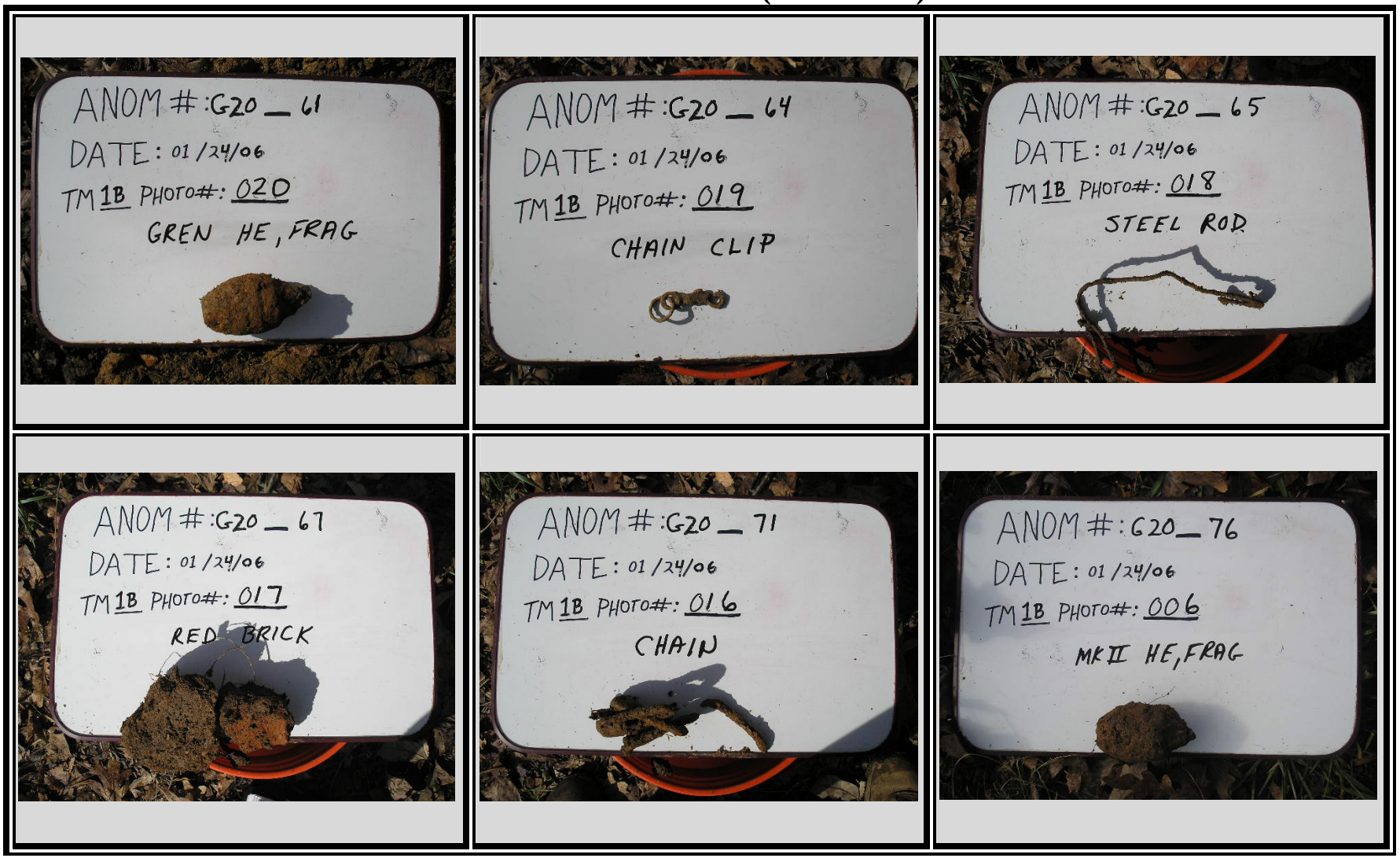

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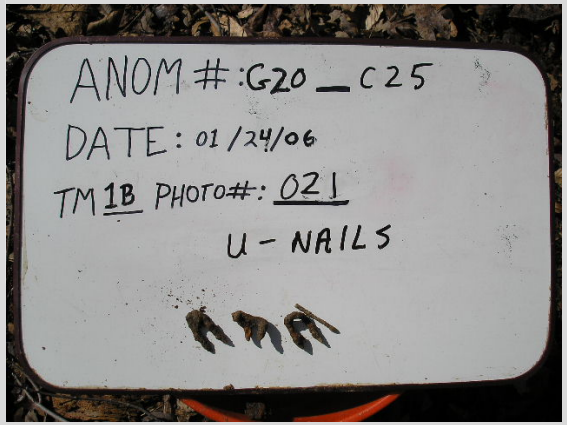


GRID G20 DIG PHOTOS (CONTINUED)

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

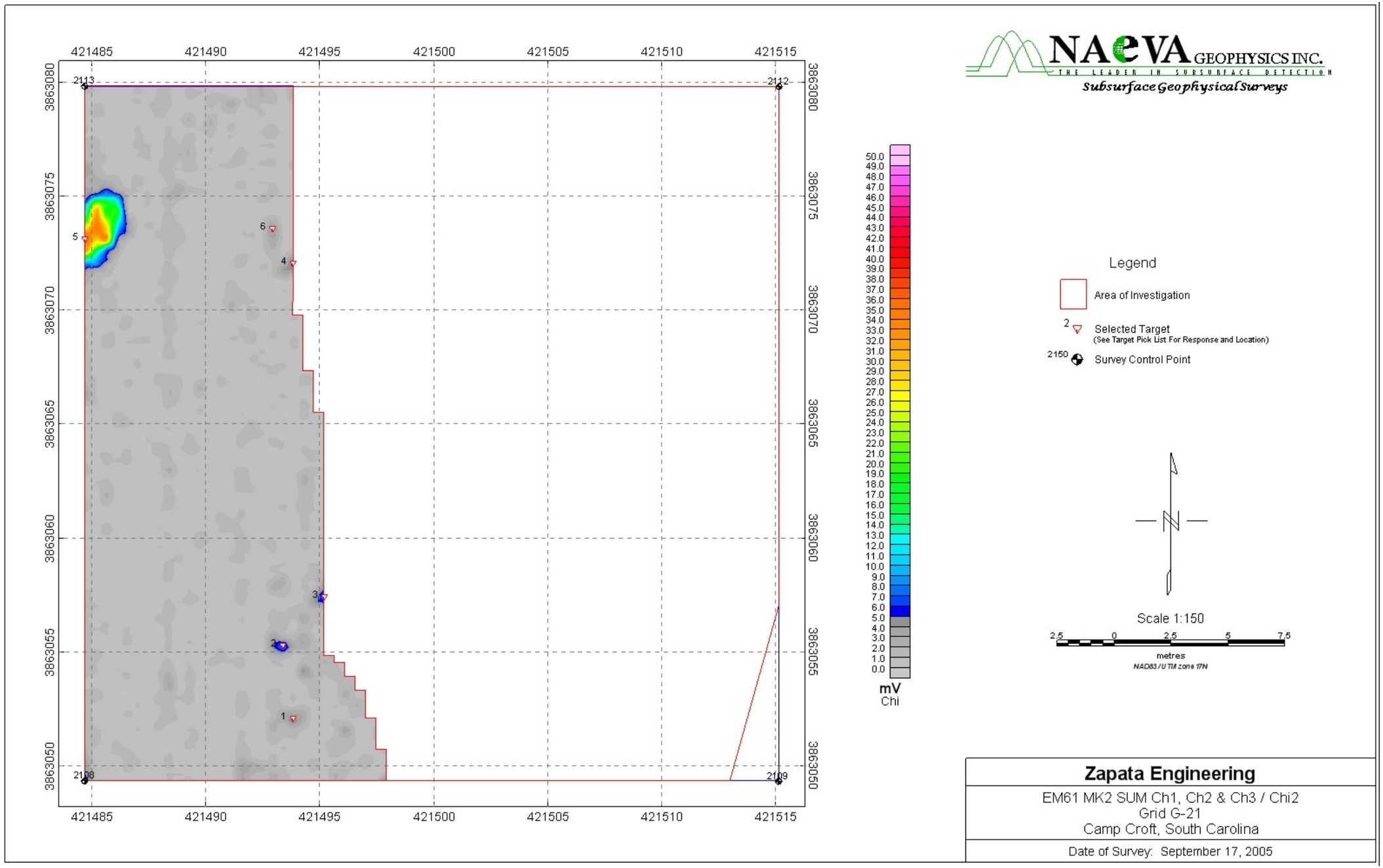
Project Name: Former Camp Croft, Phase II
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: G21
Field Book ID:

Geophysical Contrac ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center I Brendan Slater
COE Project Enginee
COE Geophysicist: Andrew Schwartz

Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

	Original Survey								Reacquisition Survey					Dig Results														Post-Dig UXO QC Results			Post-Dig Geophysical QC		
											Offset							Offset		Orientation of		Depth (in)											
Unique Target ID	Easting Coord. (m)	Northing Coord. (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs-oz)	Dimensions: Length, Width, Height (in)	Comments	X Distance (in)	Y Distance (in)	Nose (Azimuth deg) **	Inclination of Nose (deg) **	Top of Item	Center of Mass	Digital Photo Filename **	Date	Team Leader Initials	Excavation Hole Cleared?	UXO QC Spec. Initials	Date	Agreement between Dig Results & Geophysical Data? (C=good, A=avg, P=poor,	Geophysicist QC Initials	Date
G21_12	421492.4458	3863067.900	25.5	61	13.1		G21_12	17-Sep-2005	12	1.2	0	0	1/9/06	MD	1	4 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	E	0	4	5	G21_12 - #054	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
G21_14	421486.5049	3863069.619	6	66.5	14.1		G21_14	17-Sep-2005	16	1.4	-15	7	1/9/06	CD	1	3.5 x 2.5 x 1	1 ea 3.5 in metal item	0	0	W	0	5	5.5	G21_14 - #056	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
G21_A.1	421511.4911	3863051.179	0	0				17-Sep-2005						CD	.25	3 x .25 x .25	nail			NA	NA	6	6		1/18/06	BAM	NA	DRA	02/21/06	NA	DRA	02/21/06
G21_A.10	421507.2241	3863075.562	0	0				17-Sep-2005						CD	.25	2 x 1 x 1	1ea. Nail 3in. long			NE	0	10	11		1/26/06	BAM	NA	DRA	02/21/06	NA	DRA	02/21/06
G21_A.11	421505.9954	3863074.342	0	0				17-Sep-2005						CD	.25	2 x 1 x 1	Nail			NA	-15	10	11		1/26/06	BAM	NA	DRA	02/21/06	NA	DRA	02/21/06
G21_A.12	421502.0428	3863076.171	0	0				17-Sep-2005						CD	.25	4 x 3 x 1	Beer can			NA	0	6	7		1/26/06	BAM	NA	DRA	02/21/06	NA	DRA	02/21/06
G21_A.13	421505.7032	3863074.345	0	0				17-Sep-2005						CD	.25	4 x 3 x 1	BEER CAN			NA	-15	10	11		1/26/06	BAM	NA	DRA	02/21/06	NA	DRA	02/21/06
G21_A.2	421504.1762	3863060.322	0	0				17-Sep-2005						CD	.5	8 x -25 x .25	spike			NA	NA	5	7		1/18/06	BAM	NA	DRA	02/21/06	NA	DRA	02/21/06
G21_A.3	421513.3198	3863060.627	0	0				17-Sep-2005						CD	.4	36 x .5 x .5	rebar			NA	NA	8	12		1/18/06	BAM	NA	DRA	02/21/06	NA	DRA	02/21/06
G21_A.4	421507.2241	3863064.894	0	0				17-Sep-2005						CD	1	3 x 2 x .5	steel scrap			NA	NA	10	10		1/19/06	BAM	NA	DRA	02/21/06	NA	DRA	02/21/06
G21_A.5	421507.8337	3863064.894	0	0				17-Sep-2005						CD	25	3 x 3 x 2	beer can			NA	NA	7	8		1/18/06	BAM	NA	DRA	02/21/06	NA	DRA	02/21/06
G21_A.6	421503.6715	3863066.723	0	0				17-Sep-2005						MD	1	4 x 2.75 x 2.75	grenade, hand, prac, MK2			SW	-60	4	6		1/18/06	BAM	NA	DRA	02/21/06	NA	DRA	02/21/06
G21_A.7	421503.6715	3863067.332	0	0				17-Sep-2005						CD	.25	3 x 3 x 2	beer can			NA	NA	3	4		1/19/06	BAM	NA	DRA	02/21/06	NA	DRA	02/21/06
G21_A.8	421514.5389	3863068.347	0	0				17-Sep-2005						CD	.4	36 x .5 x .5	rebar			NA	NA	18	20		1/18/06	BAM	NA	DRA	02/21/06	NA	DRA	02/21/06
G21_A.9	421513.015	3863062.151	0	0				17-Sep-2005						CD	.5	12 x .75 x .25	steel strap			NA	NA	14	18		1/18/06	BAM	NA	DRA	02/21/06	NA	DRA	02/21/06
G21_C1	421493.0125	3863052.070	30	9	10.4	4.7559786	G21_03	17-Sep-2005	22	2.1	-12	-4	1/9/06	CD	1	4 x 2 x 1	1 ea putter head	0	0	E	-15	3	3.5	G21_C1 - #057	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
G21_C2	421493.3565	3863055.28	28.5	19.5	8.4	9.3488092	G21_06	17-Sep-2005	18	9.9	0	0	1/9/06	CD	25	5 x 3 x .25	1 ea aluminum beer can	0	0	W	0	4	4	G21_C2 - #058	1/12/06	BAM	YES	RVW	01/16/06	YES	RVW	01/16/06
G21_C3	421495.1847	3863057.414	34.5	26.5	36.1	7.8900199	G21_08	17-Sep-2005	65	12.4	14	0	1/9/06	CD	0	1.5	1 ea 1.5 in old water line uncovered in bottom of hole	0	13	NW	0	13	13.25	G21_C3 - #059	1/19/06	BAM	YES	TF	01/24/06	YES	RVW	01/24/06
G21_C4	421493.6179	3863072.054	30	74.5	40.7	5.4960666	G21_15	17-Sep-2005	51	6.3	-6	-4	1/9/06	CD	.25	3 x .25 x .25	4 ea nails	0	0	NA	90	0	1.5	G21_C4 - #053	1/12/06	BAM	YES	RVW	01/23/06	YES	RVW	01/23/06
G21_C5	421484.677	3863073.127	0	78	1192.6	38.66457	G21_16	17-Sep-2005	862	12.6	0	-12	1/9/06	CD	0	20 x 20	reinforced concrete water pipe	0	0	N	15	12	19	G21_C5 - #063	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
G21_C6	421492.9042	3863073.579	27	79.5	24.8	4.8514423	G21_17	17-Sep-2005	25	3.9	6	-6	1/9/06	MD	1	5 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	N	0	3	4	G21_C6 - #055	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	

* Fill in Units (mV, nT/m, ppt, etc)
** Opt Field - refer to SOW for applicability.
*** UXO, DMM, MC-E (Munit Const-Exp), MD (Munit Debris), CD (Cult Debris) and MC-NE (Munit Const-Non Exp), SA (small arms), NC (no contact) OT (other)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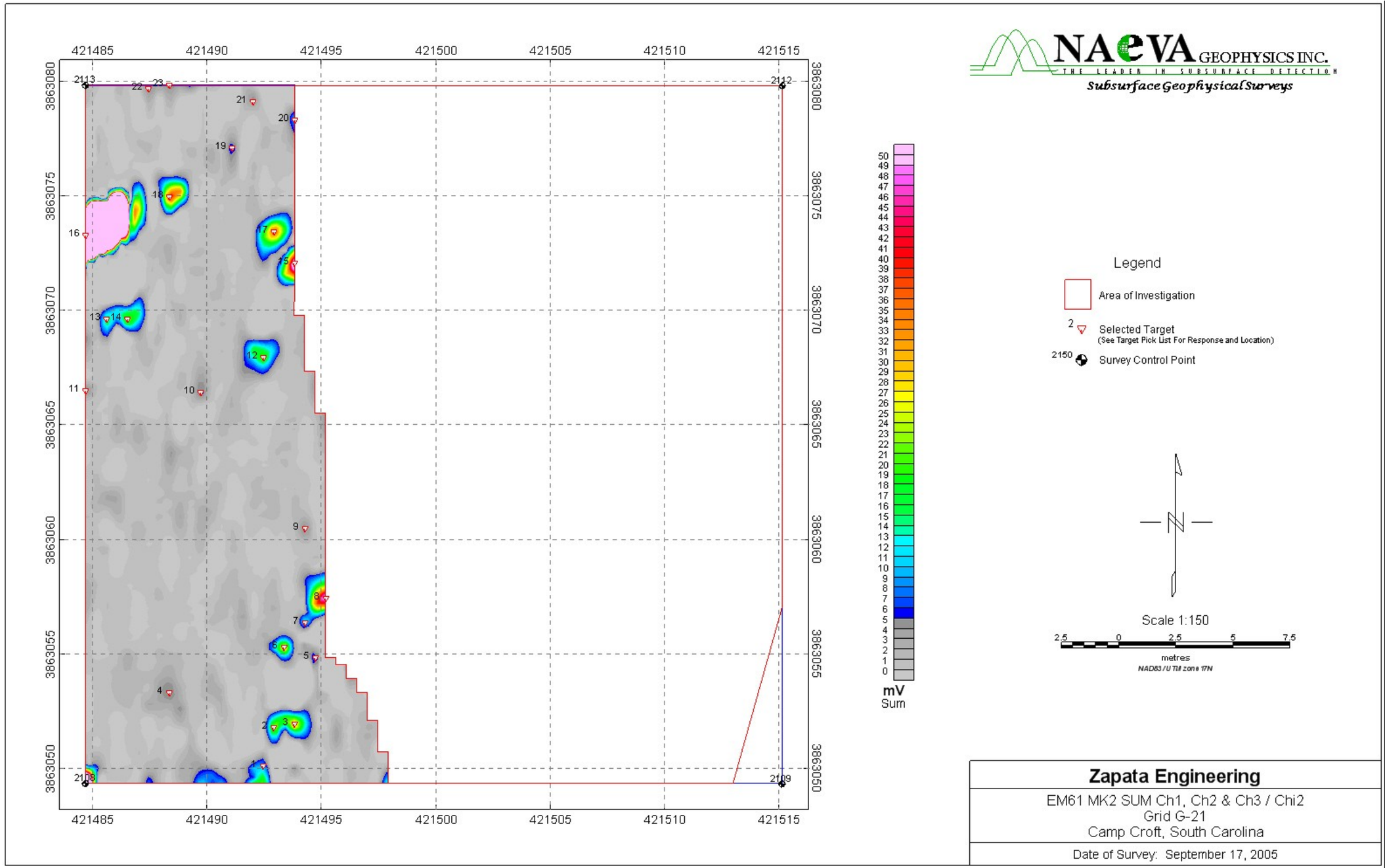
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
2 Selected Target
(See Target Pick List For Response and Location)
2150 Survey Control Point
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 SUM Ch1, Ch2 & Ch3 / Chi2
Grid G-21
Camp Croft, South Carolina
Date of Survey: September 17, 2005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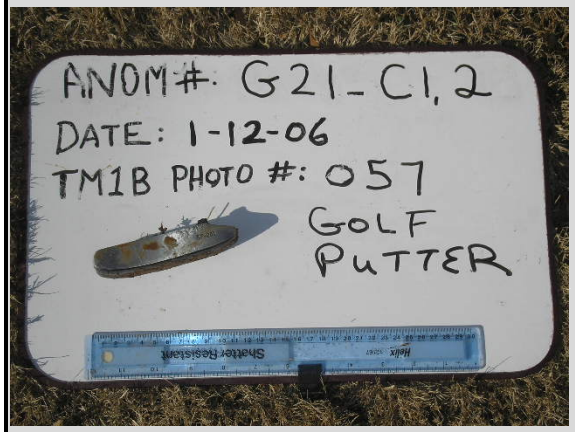
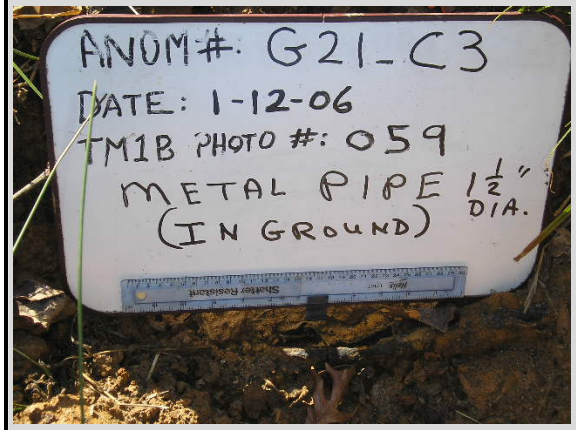
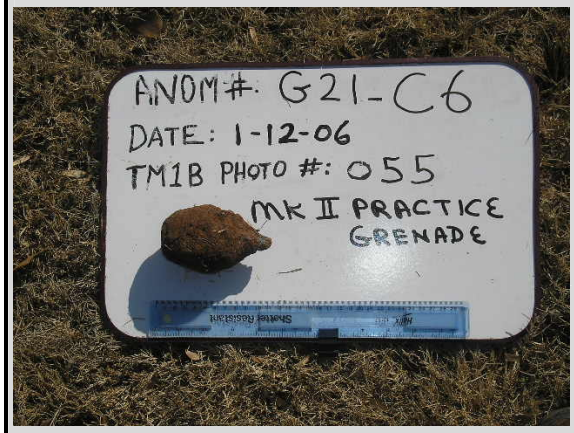
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
2 Selected Target
(See Target Pick List For Response and Location)
2150 Survey Control Point
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 SUM Ch1, Ch2 & Ch3 / Chi2
Grid G-21
Camp Croft, South Carolina
Date of Survey: September 17, 2005

GRID G21 DIG PHOTOS





GRID G21 DIG PHOTOS (CONTINUED)



ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase II
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: H20
Field Book ID:

Geophysical Contrac ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist David Smith
Site Geophysicist:
Field Team:
COE Design Center I Brendan Slater
COE Project Engine
COE Geophysicist: Andrew Schwartz

Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

	Original Survey								Reacquisition Survey					Dig Results													Post-Dig UXO QC Results			Post-Dig Geophysical QC		
											Offset						Offset		Orientation of		Depth (in)												
Unique Target ID	Easting Coord. (m)	Northing Coord. (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs-oz)	Dimensions: Length, Width, Height (in)	Comments	X Distance (in)	Y Distance (in)	Nose (Azimuth deg) ***	Inclination of Nose (deg) ***	Top of Item	Center of Mass	Digital Photo Filename ***	Date	Team Leader Initials	Excavation Hole Cleared?	UXO QC Spec. Initials	Date	Agreement between Dig Results & Geophysical Data? (G=good, A=avg, P=poor,	Geophysicist QC Initials	Date
H20_10	421477.8225	3863081.66	77.5	6	32.0		H20_10	18-Sep-2005	15	8	2	-8	1/8/06	MD	.25	.5 x .5 x .25	grenade spoon (1ea) and wire	0	0	NE	15	3	3	H20_10 - #005 / H20_10a - #031	1/27/06	BAM	NA	DRA	02/21/06	YES	RVW	
H20_18	421466.8525	3863083.786	41.5	13	8.7		H20_18	18-Sep-2005	24	5.1	-4	6	1/8/06	CD	.25	24 x .25 x .25	wire	0	0	NA	0	4	4	H20_18 - #010	1/24/06	RLY	NA	DRA	02/21/06	YES	RVW	
H20_19	421477.8251	3863083.944	77.5	13.5	14.4		H20_19	18-Sep-2005	122	189	0	5	1/8/06	CD	.5	30 x .25 x .25	multiple pieces barbed wire	0	0	SW	0	0	2	H20_19 - #078	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
H20_20	421479.1968	3863084.098	82	14	25.7		H20_20	18-Sep-2005	13	8	0	0	1/8/06	CD	.25	6 x .25 x .25	barbed wire	0	0	W	0	2	2	H20_20 - #077	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
H20_21	421470.6627	3863084.169	54	14.25	5.1			18-Sep-2005						NC			chked with em61								1/27/06	RLY	NA	DRA	02/21/06	YES	RVW	1/27/06
H20_25	421477.064	3863084.706	75	16	15.3		H20_25	18-Sep-2005	11	2.6	3	8	1/8/06	MD	.5	.5 x .5 x .25	multiple grenade spoon	0	0	NA	0	4	4	H20_25 - #080	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
H20_28	421470.9687	3863085.312	55	18	35.7		H20_28	18-Sep-2005	46	4.2	16	12	1/8/06	CD	.25	6 x .25 x .25	large nail	0	0	NA	90	0	3	H20_28 - #075 / H20_28a - #086	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
H20_30	421476.9124	3863085.467	74.5	18.5	35.4		H20_30	18-Sep-2005	12	3.4	10	2	1/8/06	CD	.5	14 x .25 x .25	barbed wire	0	0	SW	15	3	3	H20_30 - #079 / H20_30a - #082	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
H20_31	421475.9984	3863085.771	71.5	19.5	19.2		H20_31	18-Sep-2005	11	2.1	8	4	1/8/06	CD	.25	12 x .25 x .25	barbed wire	0	0	SE	15	2	2	H20_31 - #085	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
H20_35	421477.3719	3863087.448	76	25	132.6		H20_35	18-Sep-2005	12	4.5	16	-5	1/8/06	HOTROCK	.2	7 x 5 x 3		0	0			2	3.5	H20_35 - #081	1/19/06	BAM	YES	RVW	01/23/06	YES	RVW	01/23/06
H20_36	421470.0574	3863088.511	52	28.5	143.5		H20_36	18-Sep-2005	151	21.9	36	18	1/8/06	CD	0		pipe line, shared with h20-38, h20-c5, h20-c6	0	0	NE	0	0	0	H20_36 - #087	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
H20_38	421484.6929	3863091.563	100	38.5	5136.9		H20_38	18-Sep-2005	4974	168.6	0	0	1/8/06	CD	0		pipe line shared with h20-38 , h20c7, and h21-c7	0	0	NE	0	0	0	H20_38 - #082	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
H20_44	421468.2338	3863094.3	46	47.5	11.8			18-Sep-2005						NC			chked with em61								1/27/06	RLY	NA	DRA	02/21/06	YES	RVW	1/27/06
H20_45	421469.606	3863094.605	50.5	48.5	6.5		H20_45	18-Sep-2005	61	20.2	15	3	1/8/06	CD	.25	13 x .25 x .25	barbed wire shared with h20-c10	0	0	N	0	6	6	H20_45 - #076	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
H20_5	421467.7643	3863081.044	44.5	4	7.2		H20_05	18-Sep-2005	9	1.2	-2	14	1/8/06	MD	.25	3 x .25 x .25	fuze, grenade, hand, M10 series	0	0	NA	0	4	4	H20_5 - #011	1/24/06	RLY	NA	DRA	02/21/06	YES	RVW	
H20_59	421470.0713	3863102.832	52	75.5	100.8		H20_59	18-Sep-2005	20	3.2	0	0	1/8/06	CD	.5	18 x .25 x .25	barbed wire	0	0	N	0	1	1	H20_59 - #070	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
H20_6	421460.4499	3863081.153	20.5	4.37	30.1		H20_06	18-Sep-2005	333	44.2	0	0	1/8/06	CD	.01	60 x .25 x .25	metal can, barb wire, shared with h20-c1	0	0	NA	0	2	2	H20_6 - #013	1/24/06	BAM	NA	DRA	02/21/06	YES	RVW	
H20_64	421477.8493	3863104.891	77.5	82.26	13.7		H20_64	18-Sep-2005	27	1.8	16	12	1/8/06	CD	.25	12 x .25 x .25	barbed wire	0	0	NW	15	3	3	H20_64 - #037	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
H20_65	421475.5632	3863105.726	70	85	40.9		H20_65	18-Sep-2005	58	1.4	18	2	1/8/06	CD	.5	8 x .25 x .25	3 ea nails	0	0	SE	0	2	3	H20_65 - #064	1/19/06	BAM	YES	RVW	01/23/06	YES	RVW	01/23/06
H20_71	421478.3097	3863107.493	79	90.8	15.2		H20_71	18-Sep-2005	34	1.6	-10	-8	1/8/06	CD	.25	5 x .25 x .25	barbed wire	0	0	E	0	1	1	H20_71 - #062	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
H20_75	421471.9069	3863108.773	58	95	10.6		H20_75	18-Sep-2005	42	8.9	18	0	1/8/06	CD	.2	100 x .25 x .25	barbed wire	0	0	N	15	4	5	H20_75 - #050	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
H20_78	421479.6845	3863109.534	83.5	97.5	40.2		H20_78	18-Sep-2005	120	8	0	0	1/8/06	CD	.25	8 x .25 x .25	barbed wire	0	0	NA	15	2	2	H20_78 - #055	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
H20_79	421470.9929	3863109.688	55	98	16.6		H20_79	18-Sep-2005	129	48.7	-12	-10	1/8/06	CD	.2	100 x .25 x .25	babed wire	0	0	N	15	5	5	H20_79 - #050	1/19/06	BAM	YES	TF	01/19/06	YES	RVW	01/19/06
H20_81	421480.5996	3863109.686	86.5	98	30.2		H20_81	18-Sep-2005	47	7	0	0	1/8/06	CD	.25	7 x .25 x .25	barbed wire	0	0	NA	0	1	1	H20_81 - #054	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
H20_84	421477.5502	3863109.991	76.5	99	17.0		H20_84	18-Sep-2005	17	5.1	-2	-10	1/8/06	CD	.25	12 x .25 x .25	barbed wire	0	0	E	0	1	1	H20_84 - #071	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
H20_A.1	421468.2301	3863081.049	0	0				18-Sep-2005						CD	.25	12 x .25 x .25	wire			NA	0	8	8	H20_A.1 - #027	1/27/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
H20_A.2	421471.5828	3863083.792	0	0				18-Sep-2005						CD	.25	12 x .25 x .25	wire			NA	0	6	6	H20_A.2 - #029	1/27/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
H20_A.3	421472.1923	3863084.097	0	0				18-Sep-2005						CD	.25	12 x .25 x .25	wire			NA	0	4	4	H20_A.3 - #030	1/27/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
H20_A.4	421480.7263	3863085.316	0	0				18-Sep-2005						CD	.25	12 x .25 x .25	wire			NA	0	2	3	H20_A.4 - #032	1/27/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
H20_A.5	421477.6785	3863100.251	0	0				18-Sep-2005						MD	.25	1 x 1 x 1	grenade fuze ring			NA	0	2	2	H20_A.5 - #033	1/27/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
H20_A.6	421476.1545	3863099.641	0	0				18-Sep-2005						MD	.25	3 x .5 x .25	grenade spoon			NA	0	2	2	H20_A.6 - #034	1/27/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
H20_C1	421460.4495	3863080.583	20.5	2.5		12.027206		18-Sep-2005	333	44.2	0	30	1/8/06	CD	.01	60 x .25 x .25	metal can, barb wire	0	0	NA	0	2	2	H20_C1 - #013	1/24/06	BAM	NA	DRA	02/21/06	YES	RVW	
H20_C10	421469.1484	3863094.3	49	47.5		7.8235192		18-Sep-2005	61	202	20	5	1/8/06	CD	.25	13 x .25 x .25	barbed wire	0	0	N	0	5	5	H20_C10 - #076	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
H20_C12	421477.3883	3863101.766	76	72	5.3	4.1521449		18-Sep-2005	10	1.3	6	8	1/8/06	MD	.25	1 x 1 x .25	grenade pull rings (2ea)	0	0	NA	0	4	4	H20_C12 - #066	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
H20_C13	421469.6145	3863103.441	50.5	77.5	124.7	16.904533	H20_60	18-Sep-2005	236	19.8	0	0	1/8/06	CD	1	37 x .25 x .25	barbed wire	0	0	N	0	0	0	H20_C13 - #069	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
H20_C14	421473.7311	3863103.441	64	77.5	226.5	28.143568	H20_61	18-Sep-2005	170	24.8	0	0	1/8/06	MD	1	5 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	N	0	0	1.5	H20_C14 - #065 / H20_C14a - #041	1/24/06	BAM	YES	TF	01/24/06	YES	RVW	01/24/06
H20_C15	421469.6167	3863105.727	50.5	85	53.7	22.193743	H20_66	18-Sep-2005	2453	149	12	0	1/8/06	CD	2	120 x .25 x .25	barbed wire	0	0	N	0	0	0	H20_C15 - #068	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
H20_C16	421473.2764	3863106.031	62.5	86	8.3	5.6584487		18-Sep-2005					1/8/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
H20_C17	421476.4788	3863106.488	73	87.5	67.1	4.0053287	H20_68	18-Sep-2005	49	1.4	0	0	1/8/06	CD	.5	11 x .25 x .25	barbed wire	0	0	NE	15	2	2	H20_C17 - #063	1/19/06	BAM	YES	RVW	01/23/06	YES	RVW	01/23/06
H20_C18	421483.8002	3863108.467	97	94	20.4	7.0447989	H20_74	18-Sep-2005	38	13.4	-5	-2	1/8/06	CD	.5	3 x 2 x .25	piece of steel	0	0	NA	0	2	2	H20_C18 - #056	1/19/06	BAM	YES	RVW	01/23/06	YES	RVW	01/23/06

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

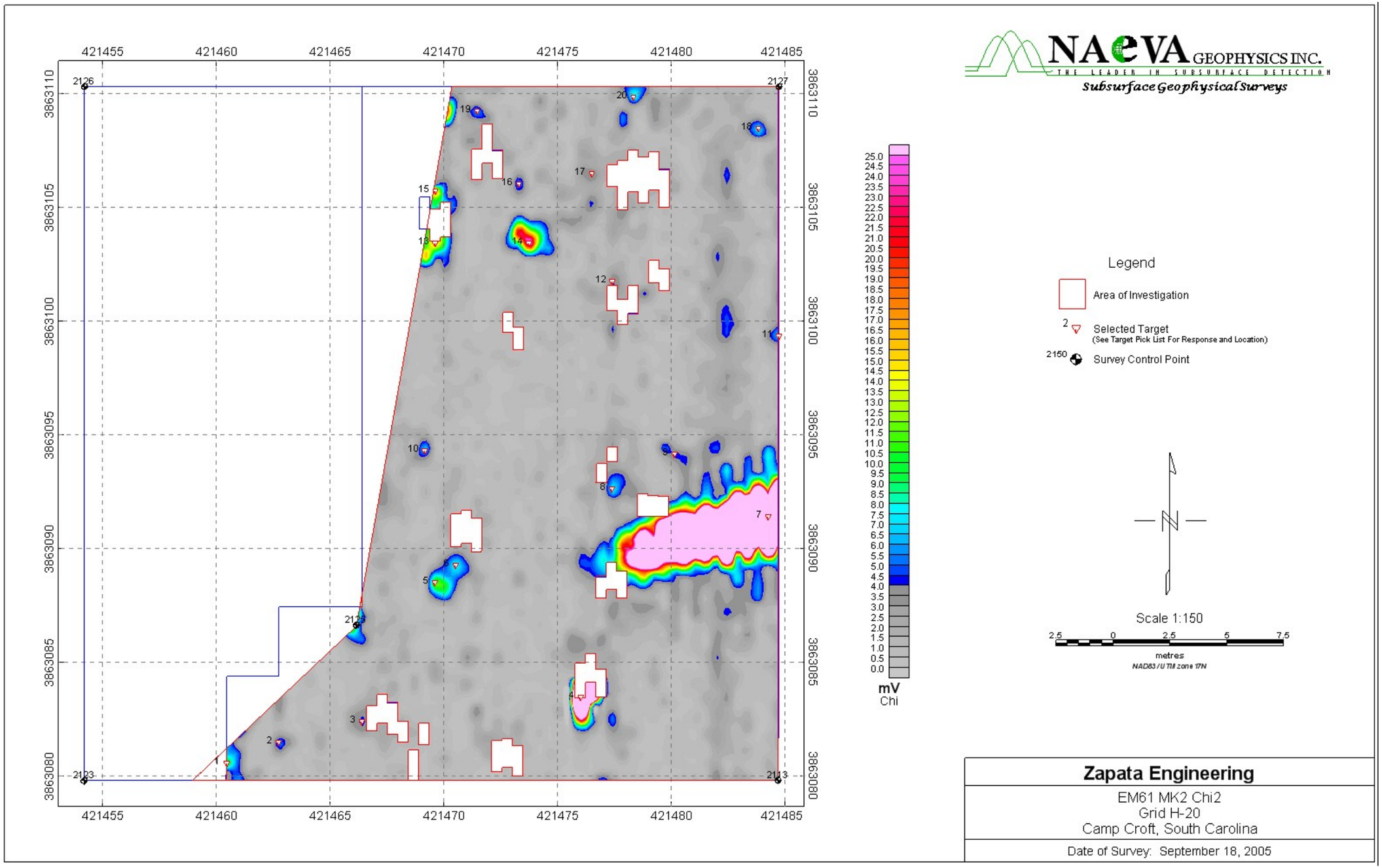
Project Name: Former Camp Croft, Phase II
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: H20
Field Book ID:

Geophysical Contrac ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center I Brendan Slater
COE Project Enginee
COE Geophysicist: Andrew Schwartz

Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

	Original Survey								Reacquisition Survey					Dig Results												Post-Dig UXO QC Results			Post-Dig Geophysical QC		
											Offset					Offset		Orientation of	Inclination	Depth (in)												
Unique Target ID	Easting Coord. (m)	Northing Coord. (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Ch^2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Ch^2 Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs-oz)	Dimensions: Length, Width, Height (in)	Comments	X Distance (in)	Y Distance (in)	Nose (Azimuth deg) **	of Nose (deg) **	Top of Item	Center of Mass	Digital Photo Filename **	Date	Team Leader Initials	Excavation Hole Cleared?	UXO QC Spec. Initials	Date	Agreement between Dig Results & Geophysical Data? (G=good, A=avg, P=poor.	Geophysicist QC Initials	Date
H20_C19	421471.4499	3863109.231	56.5	96.5		5.9697237		18-Sep-2005	42	8.9	10	7	1/8/06	CD	2	100 x .25 x .25	barbed wire	0	0	N	15	5	5	H20_C19 - #050	1/19/06	BAM	YES	TF	01/19/06	YES	RVW	01/19/06
H20_C3	421466.3941	3863082.415	40	8.5	33.0	4.3237133	H20_13	18-Sep-2005	45	4.2	8	10	1/8/06	CD	.25	24 x .25 x .25	wire	0	0	NA	0	2	2	H20_C3 - #008	1/24/06	RLY	YES	TF	01/24/06	YES	RVW	01/24/06
H20_C4	421475.9958	3863083.487	71.5	12	1984.1	179.26706	H20_17	18-Sep-2005	8	2.1	-8	0	1/8/06	CD	.25	2 x .25 x .25	piece of steel	0	0	N	15	4	4	H20_C4 - #084	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
H20_C5	421469.6001	3863088.511	50.5	28.5		12.355846		18-Sep-2005	151	21.9	20	24	1/8/06	CD	0		pipe line, shared with h20-38, h20-c5, h20-c6	0	0	NE	0	0	0	H20_C5 - #087	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
H20_C6	421470.5154	3863089.273	53.5	31		7.6502552		18-Sep-2005	151	21.9	0	0	1/8/06	CD	0		pipe line, shared with h20-38, h20-c5, h20-c6	0	0	NE	0	0	0	H20_C6 - #087	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
H20_C7	421484.2354	3863091.41	98.5	38		172.91808		18-Sep-2005	4330	148.8	0	0	1/8/06	CD	0		pipe line shared with h20-38 , h20c7, and h21-c7	0	0	NE	0	0	0	H20_C7 - #082	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
H20_C8	421477.3778	3863092.627	76	42	18.4	7.6870055		18-Sep-2005	50	12.2	10	4	1/8/06	CD	.5	24 x .25 x .25	barbed wire	0	0	NA	0	1	1	H20_C8 - #074	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
H20_C9	421480.1234	3863094.15	85	47	23.5	4.6418171	H20_43	18-Sep-2005	44	8.1	14	6	1/8/06	CD	.25	3 x .25 x .25	5 ea nails	0	0	NA	90	0	1.5	H20_C9 - #074	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	

* Fill in Units (mV, nT/m, ppt, etc)
** Opt Field - refer to SOW for applicability.
*** UXO, DMM, MC-E (Munit Const-Exp), MD (Munit Debris), CD (Cult Debris) and MC-NE (Munit Const-Non Exp), SA (small arms), NC (no contact) OT (other)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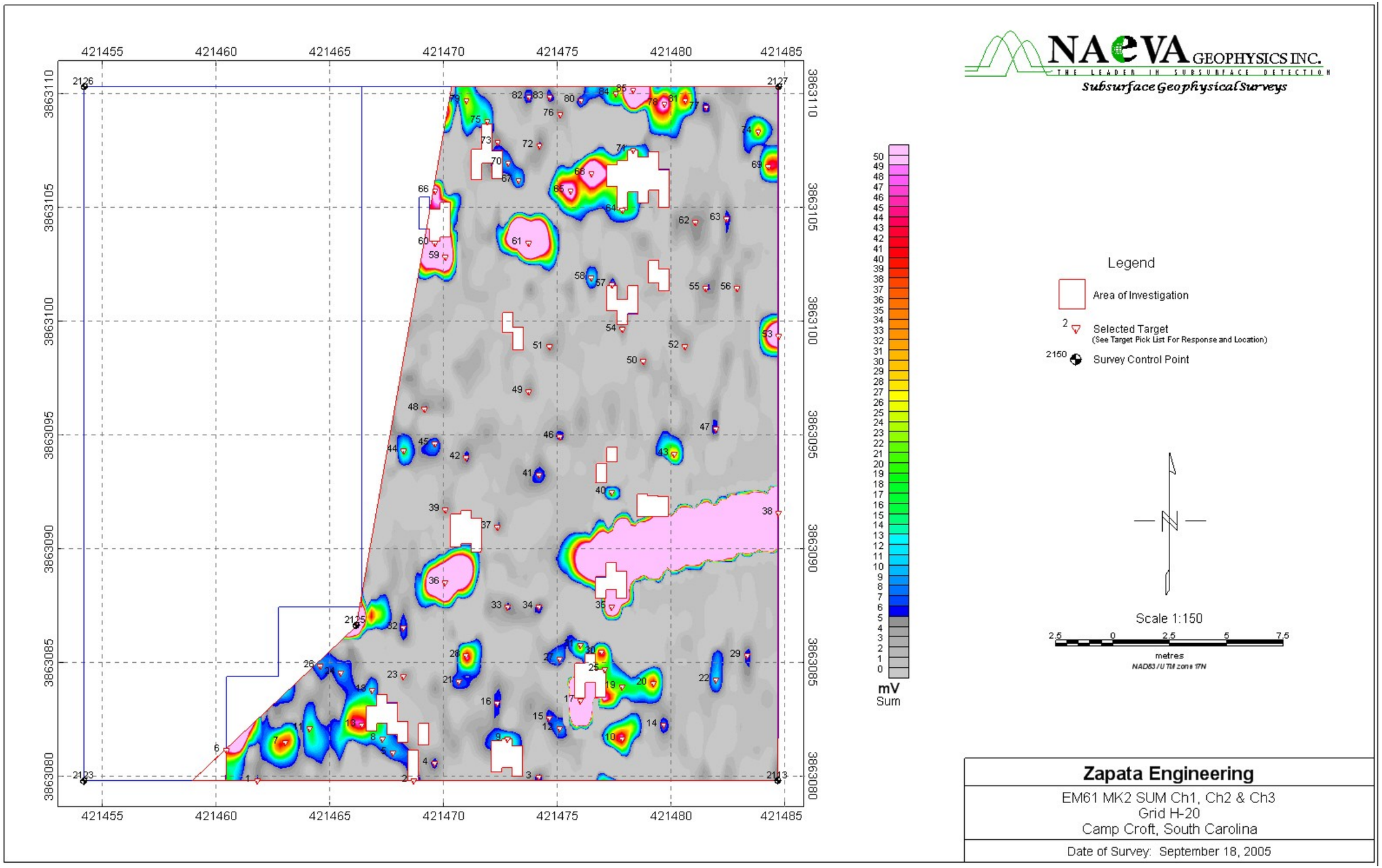
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
2 Selected Target
(See Target Pick List For Response and Location)
2150 Survey Control Point
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 Chi2
Grid H-20
Camp Croft, South Carolina
Date of Survey: September 18, 2005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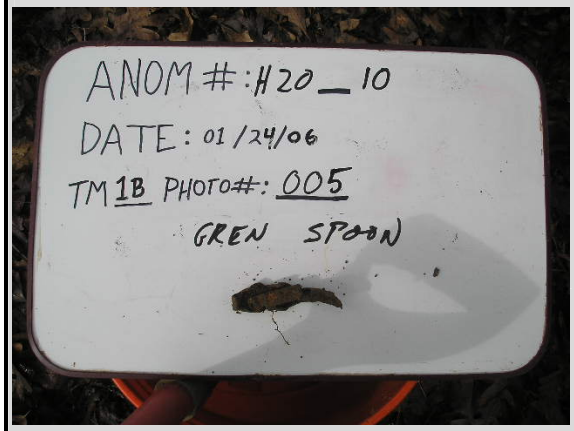
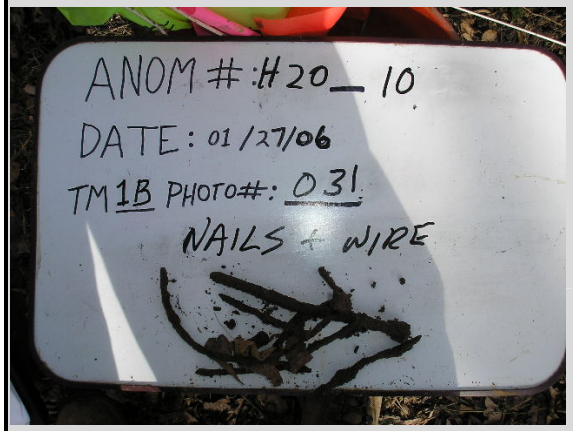
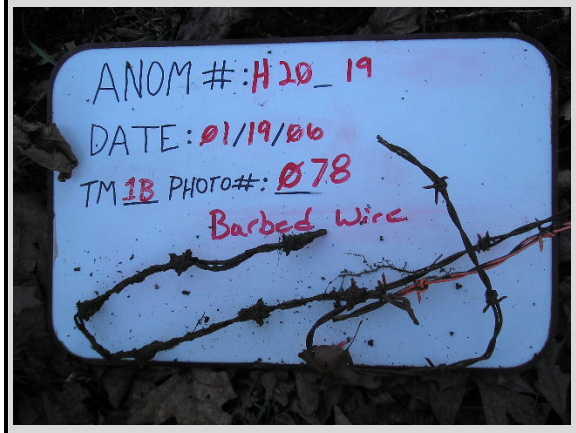
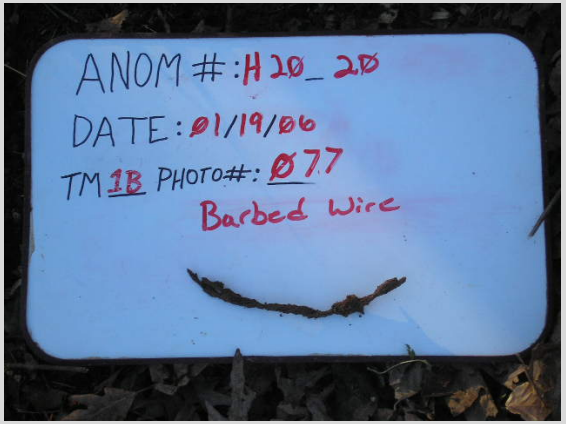
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
Selected Target
(See Target Pick List For Response and Location)
Survey Control Point
mV
Sum
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid H-20
Camp Croft, South Carolina
Date of Survey: September 18, 2005

GRID H20 DIG PHOTOS





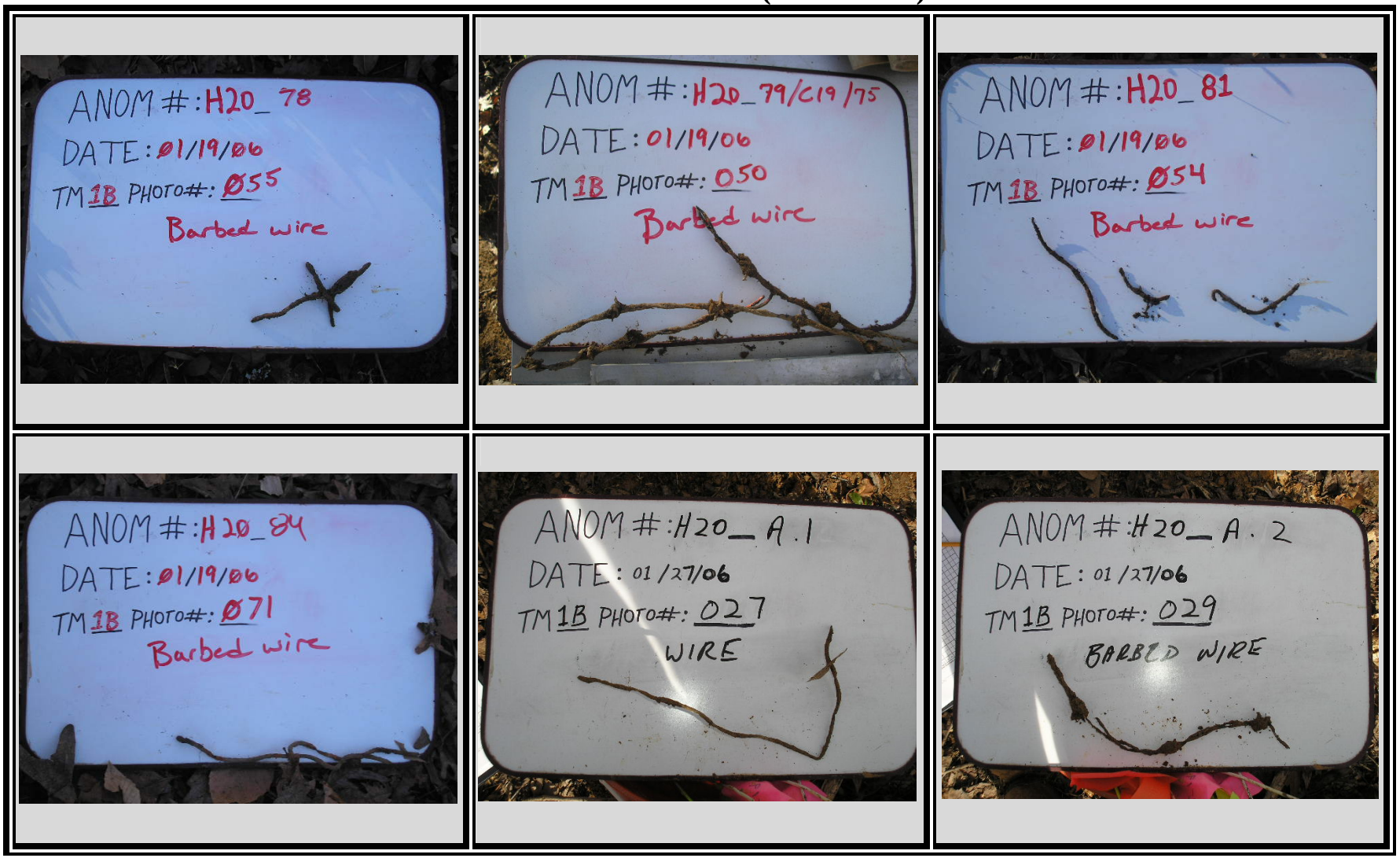




GRID H20 DIG PHOTOS (CONTINUED)

GRID H20 DIG PHOTOS (CONTINUED)

GRID H20 DIG PHOTOS (CONTINUED)



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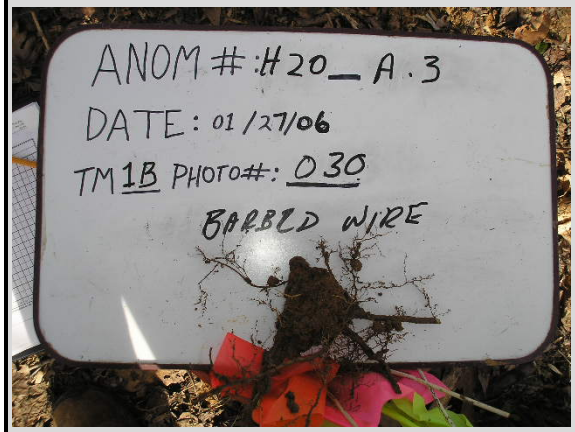

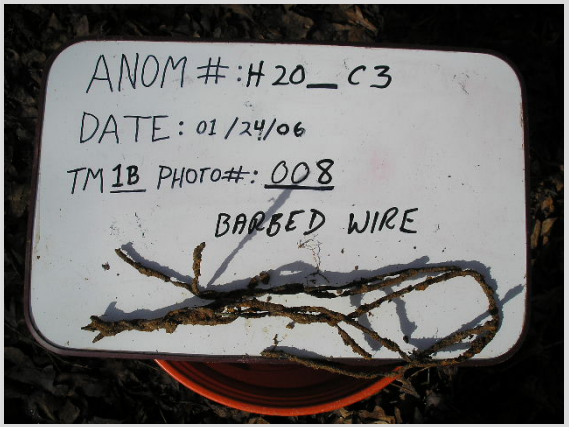

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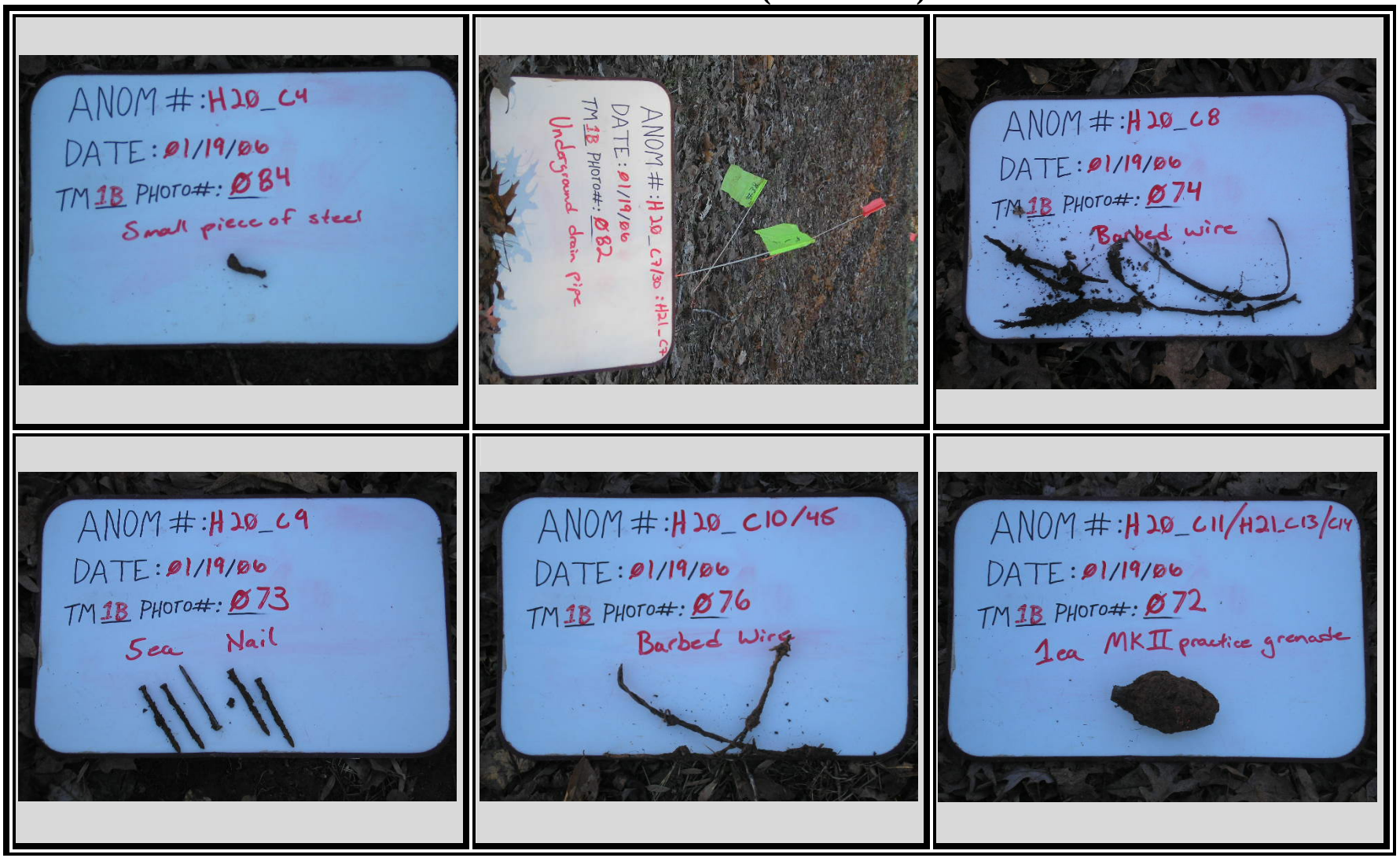

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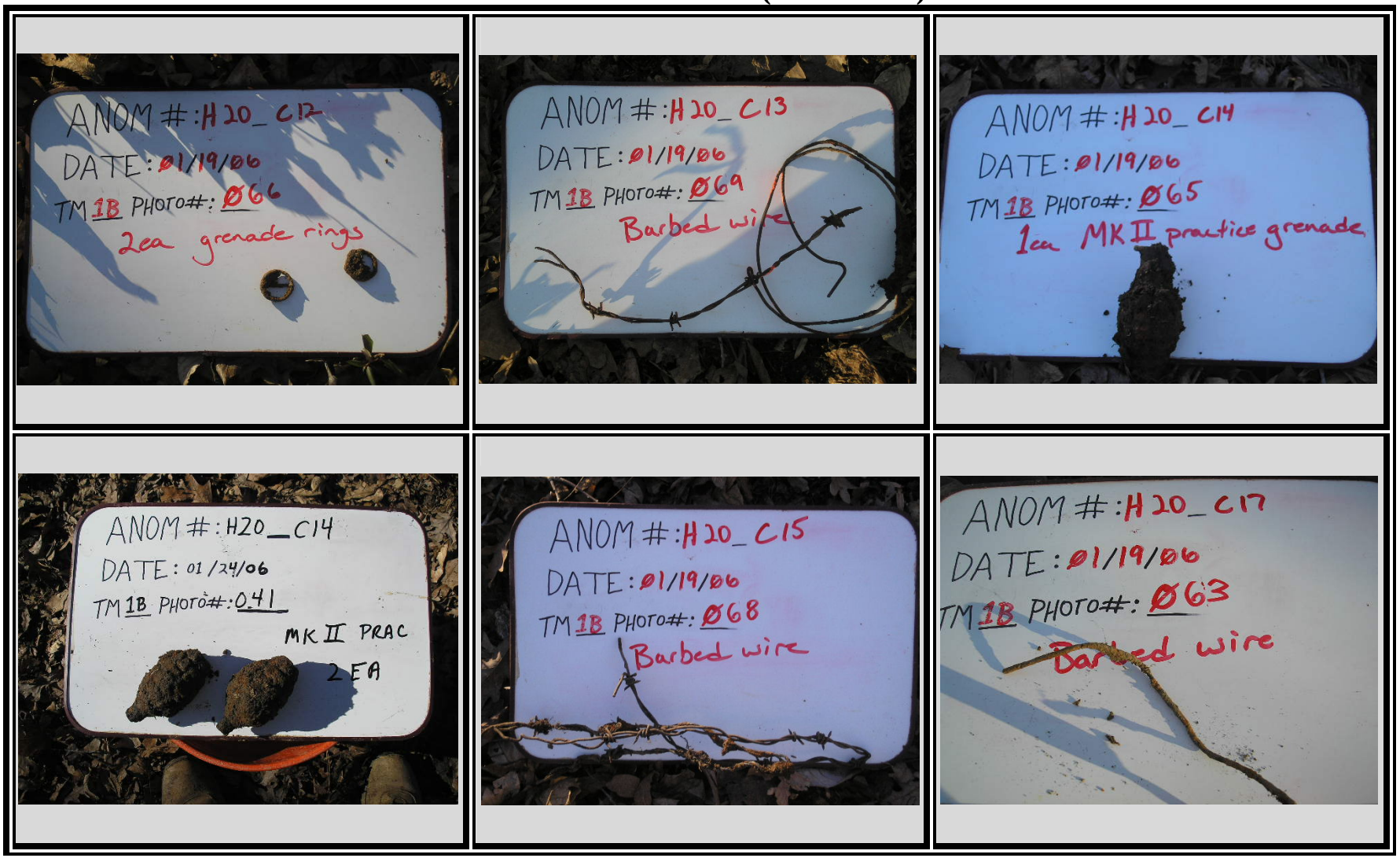
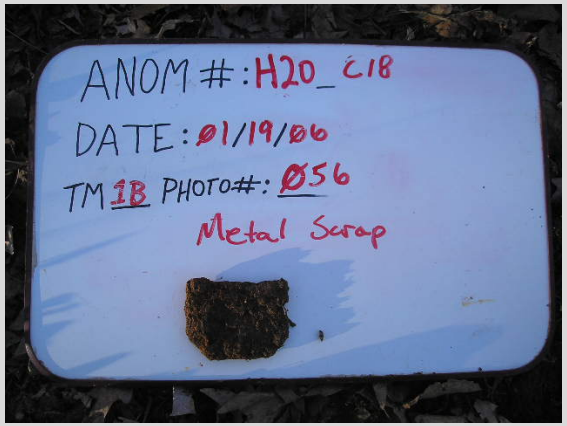


GRID H20 DIG PHOTOS (CONTINUED)

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase II
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: H21
Field Book ID:

Geophysical Contrac ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center I Brendan Slater
COE Project Enginee
COE Geophysicist: Andrew Schwartz

Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

	Original Survey								Reacquisition Survey					Dig Results														Post-Dig UXO QC Results			Post-Dig Geophysical QC		
											Offset						Offset		Orientation of	Inclination of Nose (deg) **	Depth (in)												
Unique Target ID	Easting Coord. (m)	Northing Coord. (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Chi² Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Chi² Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs-oz)	Dimensions: Length, Width, Height (in)	Comments	X Distance (in)	Y Distance (in)	Nose (Azimuth deg) **		Top of Item	Center of Mass	Digital Photo Filename **	Date	Team Leader Initials	Excavation Hole Cleared?	UXO QC Spec. Initials	Date	Agreement between Dig Results & Geophysical Data? (G=good, A=avg, P=poor,	Geophysicist QC Initials	Date
H21_12	421507.0766	3863084.546	73.5	15.5	33.6		H21_12	16-Sep-2005	33	6	-18	12	1/9/06	MD	1	4 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	N	0	4	5	H21_12 - #014	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
H21_13	421506.3149	3863084.851	71	16.5	33.6		H21_13	16-Sep-2005	33	6	12	0	1/9/06	MD	1	4 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	N	0	4	5	H21_13 - #014	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
H21_18	421508.9042	3863087.896	79.5	26.5	45.1		H21_18	16-Sep-2005	52	7	0	0	1/9/06	MD	1	5 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	E	0	4	5	H21_18 - #015	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
H21_21	421514.386	3863090.483	97.5	35	34.1		H21_21	16-Sep-2005	54	9	0	0	1/9/06	CD	2	8 x .75 x .75	1 ea 8 in steel rod and 1 ea 3 in nail	-2	-13	E	15	6	6.25	H21_21 - #023	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
H21_23	421508.9037	3863091.856	79.5	39.5	27.4		H21_23	16-Sep-2005	43	5	6	0	1/9/06	MD	1	5 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	NE	0	3	4	H21_23 - #011	1/12/06	BAM	YES	RVW	01/16/06	YES	RVW	01/16/06
H21_33	421513.9264	3863097.034	96	56.5	18.8		H21_33	16-Sep-2005	37	4.5	0	0	1/9/06	CD	.25	.5 x .5 x .5	1 ea 5 in steel rod	3	12	E	0	3	3	H21_33 - #019	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
H21_38	421498.0968	3863099.477	44	64.5	10.4		H21_38	16-Sep-2005	20	8	8	4	1/9/06	CD	.25	3 x .25 x .25	1 ea nail	0	0	N	0	1	1	H21_38 - #072	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
H21_41	421512.4033	3863100.081	91	66.5	11.6		H21_41	16-Sep-2005	12	4	0	14	1/9/06	CD	.25	5 x .25 x .25	1 ea 5 in nail	0	0	W	0	2	2	H21_41 - #017	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
H21_47	421488.8148	3863101.46	13.5	71	5.1			16-Sep-2005	6	2.4	0	-14	1/10/06	NC			during reaqu, revisited w/ QC team 1/10/06 resulted in 6 mV										NA	DRA	02/21/06	NA	DRA	02/21/06
H21_51	421500.2293	3863103.893	51	79	97.1		H21_51	16-Sep-2005	215	33	-14	0	1/9/06	CD	1	8 x .25 x .25	steel rod length unknown , shared with h21-c20	0	0	NA	90	8	11	H21_51 - #073	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
H21_52	421508.2937	3863104.195	77.5	80	14.6		H21_52	16-Sep-2005	18	3.5	-4	10	1/9/06	CD	.25	.5 x .25 x .25	1 ea 5 in nail	0	0	NW	0	4	4	H21_52 - #021	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
H21_56	421497.4917	3863106.179	42	86.5	10.3		H21_56	16-Sep-2005	18	2.5	0	-12	1/9/06	CD	.25	3 x .2 x .2	small nail	0	0	N	0	0	0	H21_56 - #001	1/11/06	DDM	NA	DRA	02/21/06	YES	RVW	
H21_57	421484.7131	3863106.944	0	89	17.9		H21_57	16-Sep-2005	40	1.2	-4	4	1/9/06	CD	1	5 x 4 x .25	horse shoe	0	0	N	15	4	4	H21_57 - #057	1/19/06	BAM	YES	RVW	01/23/06	YES	RVW	01/23/06
H21_60	421497.0358	3863106.94	40.5	89	23.2		H21_60	16-Sep-2005	26	3	12	0	1/9/06	CD	.25	6 x .25 x .25	large nail	0	0	NA	90	0	3	H21_60 - #002	1/11/06	DDM	NA	DRA	02/21/06	YES	RVW	
H21_63	421494.9064	3863107.55	33.5	91	57.1		H21_63	16-Sep-2005	93	5.5	0	0	1/9/06	CD	.25	3 x .25 x .25	nails [3] - 34mV AFTER EXCAVATION	0	0	NA	0	2	2	H21_63 - #002	1/24/06	RLY	NO	RVW	01/25/06	YES	DRA	02/16/06
H21_A.1	421489.5566	3863100.545	0	0				16-Sep-2005						CD	.25	5 x .25 x .25	nail			NA	0	2	2	H21_A.1 - #035	1/27/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
H21_A.2	421489.8613	3863100.85	0	0				16-Sep-2005						CD	.25	1 x 1 x 1	steel			NA	0	3	3	H21_A.2 - 036	1/27/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
H21_A.3	421490.1661	3863100.545	0	0				16-Sep-2005						CD	.25	5 x .25 x .25	nail			NA	0	3	3	H21_A.3 - #037	1/27/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
H21_A.4	421495.957	3863100.545	0	0				16-Sep-2005						CD	.25	6 x .25 x .25	nail			NA	0	4	4	H21_A.4 - #038	1/27/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
H21_C1	421491.0773	3863079.833	21	0	10.2	5.0406542		16-Sep-2005	15	8	0	-18	1/9/06	CD	.25	3 x 3 x 2.5	1/2 beer can	0	0	NA	NA	1.5	3	H21_C1 - #006	1/11/06	DDM	NA	DRA	02/21/06	YES	RVW	
H21_C10	421495.6578	3863093.842	36	46	1699.8	68.228615	H21_27	16-Sep-2005	1845	72	0	0	1/9/06	MD	1	5 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	SW	0	3	4	H21_C10b_Board_Mislabeled_QC_Result - #010	1/12/06	BAM	YES	RVW	01/16/06	YES	RVW	01/16/06
H21_C11	421488.3516	3863095.368	12	51	20.2	5.863482	H21_28	16-Sep-2005	49	10.5	0	0	1/9/06	CD	.25	3 x .25 x .25	4ea nails	0	0	NA	90	0	1.5	H21_C11 - #037	1/24/06	BAM	NA	DRA	02/21/06	YES	RVW	
H21_C12	421504.3364	3863096.123	64.5	53.5	1645.4	52.91	H21_30	16-Sep-2005	1667	65	0	0	1/9/06	CD	0	10	10 in diameter water pipe	0	0	NE	0	34	39	H21_C12 - #075	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
H21_C13	421485.1593	3863099.025	1.5	63	54.6	5.9973869	H21_35	16-Sep-2005	89	14.8	-18	12	1/9/06	MD	1	5 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	W	0	0	1.5	H21_C13 - #072	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
H21_C15	421497.4882	3863099.934	42	66		4.0498996		16-Sep-2005	22	10	0	0	1/9/06	CD	.25	3 x .25 x .25	3 ea nails	-2	-10	NE	0	2	2	H21_C15 - #071	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
H21_C16	421511.1857	3863100.234	87	67	28.8	4.6468878	H21_40	16-Sep-2005	35	5	12	0	1/9/06	MD	1	4 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	E	0	5	6	H21_C16 - #018	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
H21_C17	421507.533	3863100.844	75	69	23.4	5.7119069	H21_43	16-Sep-2005	22	4.5	-18	24	1/9/06	CD	2	6 x 5 x .25	1 ea .25 in steel plate	0	0	N	0	4	4	H21_C17 - #020	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
H21_C18	421488.8154	3863102.069	13.5	73		4.3626156		16-Sep-2005					1/10/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
H21_C19	421499.3157	3863102.37	48	74	420.2	45.024269	H21_49	16-Sep-2005	395	56	0	0	1/9/06	CD	0		reinforced concrete	0	0	NA	0	10	14	H21_C19 - #074	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
H21_C20	421499.7726	3863103.436	49.5	77.5		17.060476		16-Sep-2005	395	56	4	18	1/9/06	CD	.5	8 x .25 x .25	2 ea 8 in nails and 1 ea steel rod length unknown	0	0	NA	90	8	11	H21_C20 - #073	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
H21_C21	421509.815	3863105.718	82.5	85	74.2	9.8900003	H21_54	16-Sep-2005	80	10.5	0	14	1/9/06	MD	1	4 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	NE	0	4	5	H21_C21 - #022	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
H21_C22	421487.4516	3863107.095	9	89.5	5.3	4.802567		16-Sep-2005	18	8	12	0	1/9/06	CD	.25	6 x 2 x 2	beer can	0	0	NA	0	1	1	H21_C22 - #042	1/24/06	RLY	NA	DRA	02/21/06	YES	RVW	
H21_C23	421493.385	3863107.398	28.5	90.5	56.0	5.6944151	H21_62	16-Sep-2005	108	17	16	0	1/9/06	CD	.25	14 x .25 x .25	rod	0	0	NA	0	3	3	H21_C23 - #038	1/24/06	RLY	NA	DRA	02/21/06	YES	RVW	
H21_C3	421491.5362	3863081.812	22.5	6.5	17.7	4.0933261	H21_07	16-Sep-2005	48	3	-16	-12	1/9/06	CD	.25	3 x .25 x .25	small nail	0	0	NA	90	0	1.5	H21_C3 - #005	1/11/06	DDM	NA	DRA	02/21/06	YES	RVW	
H21_C4	421491.5398	3863085.772	22.5	19.5	176.2	75.174728	H21_14	16-Sep-2005	598	56	8	0	1/9/06	CD	6	48 x .5 x .5	grounding rod	0	0	NA	90	0	24	H21_C4 - #007	1/11/06	DDM	YES	TF	01/24/06	YES	RVW	01/24/06
H21_C5	421506.1628	3863088.811	70.5	29.5	35.0	6.0300002	H21_20	16-Sep-2005	48	7	-8	0	1/9/06	MD	1	4 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	E	0	3	4	H21_C5 - #016	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
H21_C6	421486.9739	3863088.973	7.5	30	36.2	12.664762	H21_19	16-Sep-2005	61	21	-18	24	1/9/06	MD	1	5 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	NE	0	4	5.75	H21_C6 - #076	1/11/06	BAM	YES	RVW	01/16/06	YES	RVW	01/16/06
H21_C7	421485.6067	3863091.714	3	39	4894.6	197.68336	H21_24	16-Sep-2005	5022	146	0	0	1/9/06	CD	0		pipe line shared with h20-38 , h20c7, and h21-c7	0	0	NE	0	0	0	H21_C7 - #082	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
H21_C8	421510.2742	3863091.856	84	39.5	42.1	5.3407011	H21_22	16-Sep-2005	44	2	0	16	1/9/06	MD	.1	2 x .25 x .25	small arms, 7.62mm (4ea)	18	18	NE	0	4	4	H21_C8 - #006	1/30/06	SFR	NA	DRA	02/21/06	YES	RVW	
H21_C9	421508.9036	3863093.38	79.5	44.5	21.5	5.0999999	H21_26	16-Sep-2005	34	8	3	0	1/9/06	MD	1	4 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	E	0	3	4	H21_C9 - #012	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

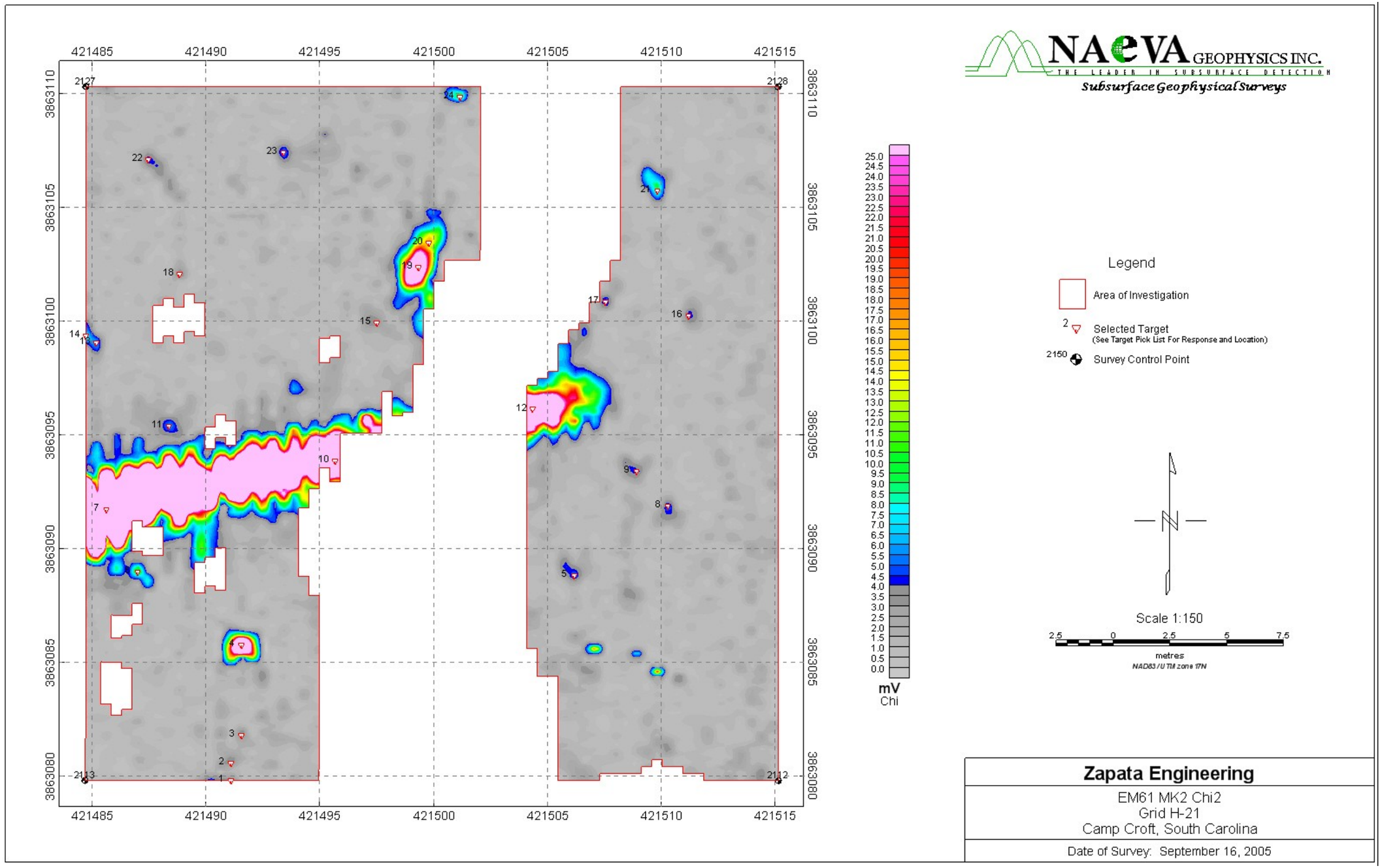
Project Name: Former Camp Croft, Phase II
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: H21
Field Book ID:

Geophysical Contrac: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center I: Brendan Slater
COE Project Enginee:
COE Geophysicist: Andrew Schwartz

Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

	Original Survey								Reacquisition Survey					Dig Results												Post-Dig UXO QC Results			Post-Dig Geophysical QC		
											Offset					Offset				Depth (in)												
Unique Target ID	Easting Coord. (m)	Northing Coord. (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs-oz)	Dimensions: Length, Width, Height (in)	Comments	X Distance (in)	Y Distance (in)	Orientation of Nose (Azimuth deg) **	Inclination of Nose (deg) **	Top of Item	Center of Mass	Digital Photo Filename **	Date	Team Leader Initials	Excavation Hole Cleared?	UXO QC Spec. Initials	Date	Agreement between Dig Results & Geophysical Data? (G=good, A=avg, P=poor,	Geophysicist QC Initials	Date
H21_QA50	421511.6414	3863103.28	88.5	77	11.1			16-Sep-2005	18	1.5	-6	6	01/16/06	CD	.25	6 x .25 x .25	large nail	0	0	NE	0	5	5	H21_QA50 - #008	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
H21_QA58	421490.6462	3863106.942	19.5	89	10.7			16-Sep-2005	18	2.8	12	0	01/16/06	CD	.25	6 x .25 x .25	nail	0	0	NA	0	6	6	H21_QA58 - #043	1/24/06	RLY	NA	DRA	02/21/06	YES	RVW	
H21_QA8	421489.7842	3863081.965	16.75	7	11.3			16-Sep-2005	18	2.8	12	0	01/16/06	NC			NC DURING DIG - checked with fisher still nc								1/23/06	BAM	NA	DRA	02/21/06	NA	DRA	02/21/06

* Fill in Units (mV, nT/m, ppt, etc)
** Opt Field - refer to SOW for applicability
*** UXO, DMM, MC-E (Munit Const-Exp), MD (Munit Debris), CD (Cult Debris) and MC-NE (Munit Const-Non Exp), SA (small arms), NC (no contact) OT (other)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1
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3
4
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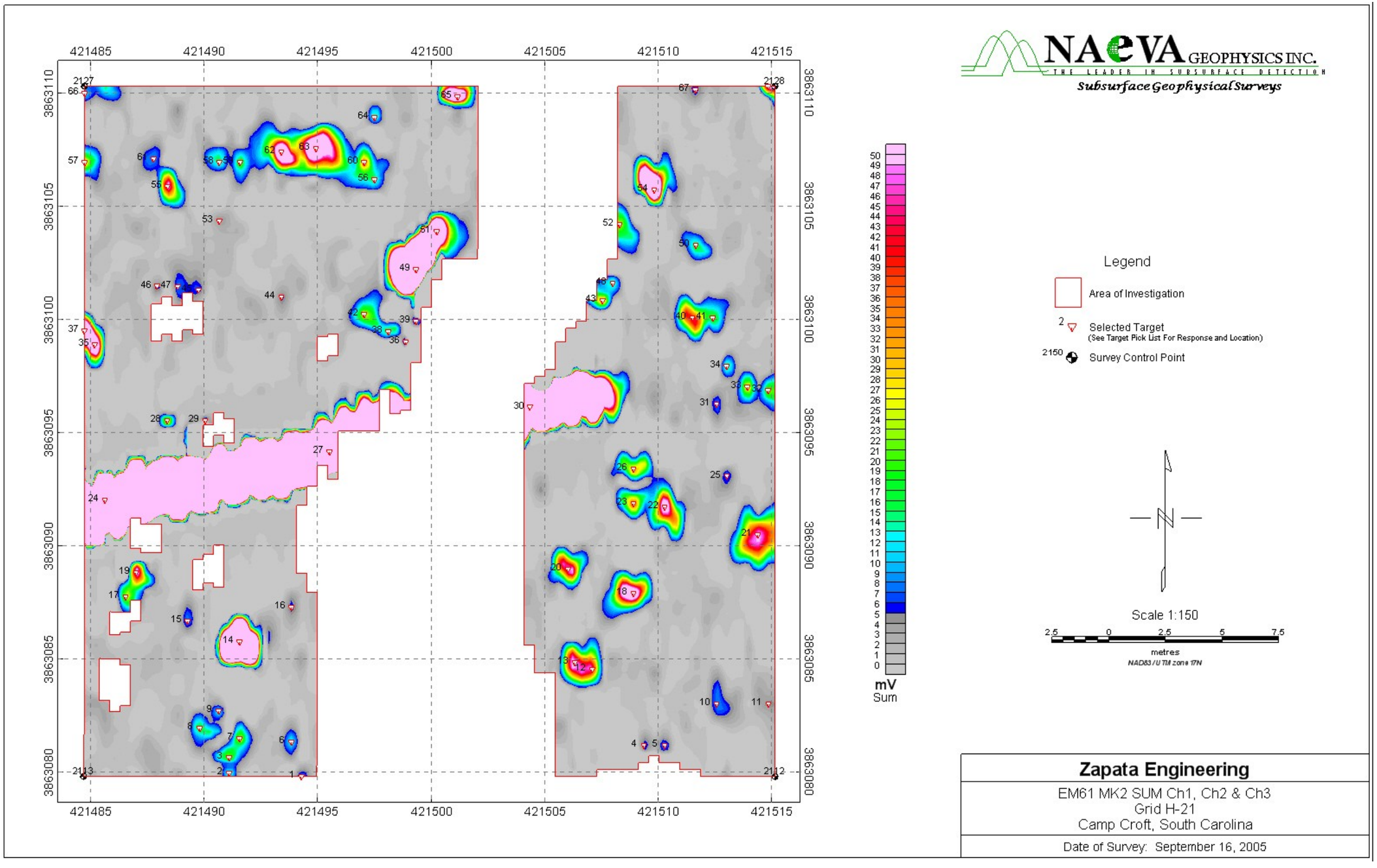
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
mV
Chi
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
2 Selected Target
(See Target Pick List For Response and Location)
2150 Survey Control Point
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 Chi2
Grid H-21
Camp Croft, South Carolina
Date of Survey: September 16, 2005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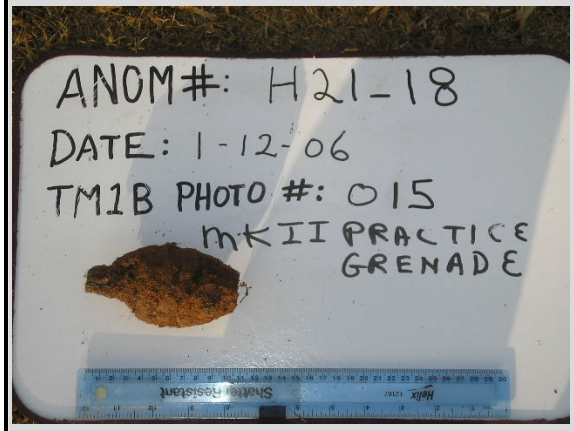
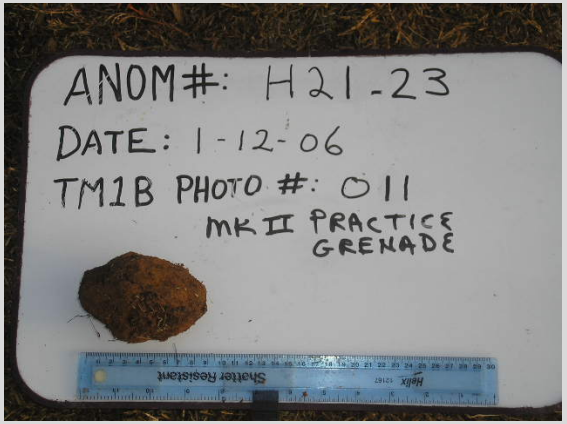
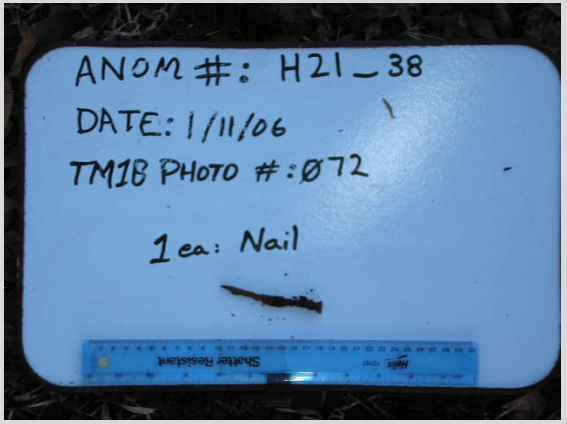
3863080
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
Selected Target
(See Target Pick List For Response and Location)
Survey Control Point
mV
Sum
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid H-21
Camp Croft, South Carolina
Date of Survey: September 16, 2005

GRID H21 DIG PHOTOS



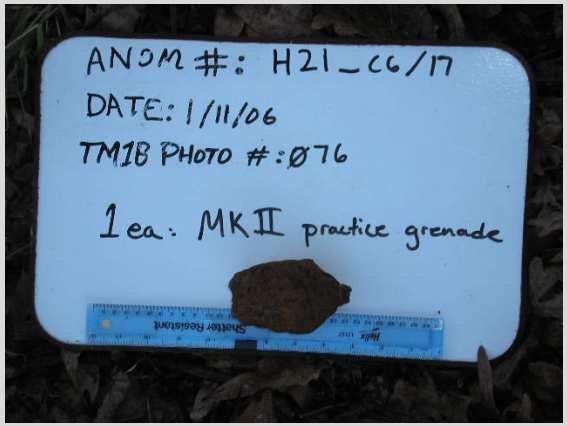


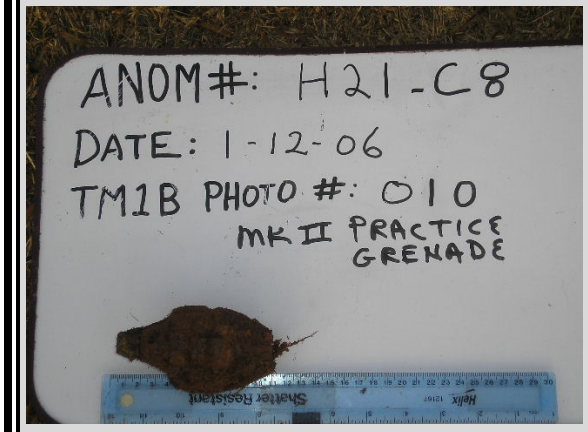


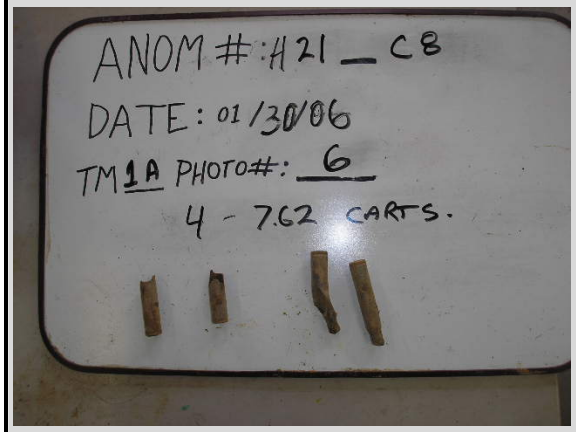
GRID H21 DIG PHOTOS (CONTINUED)

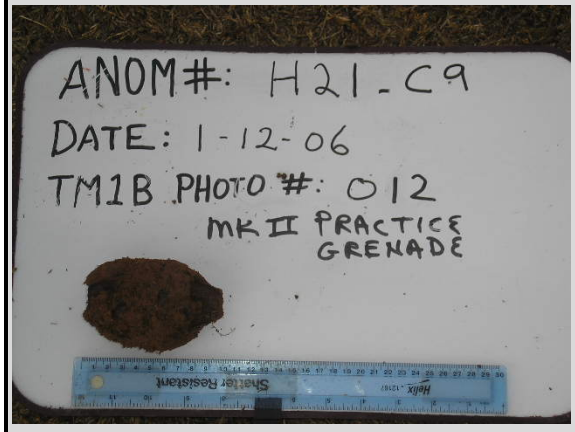
GRID H21 DIG PHOTOS (CONTINUED)

GRID H21 DIG PHOTOS (CONTINUED)









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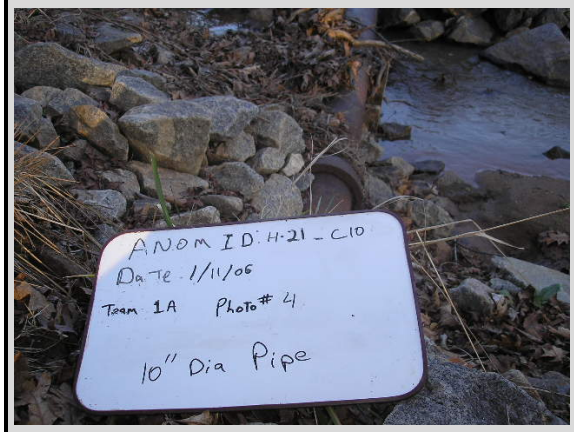
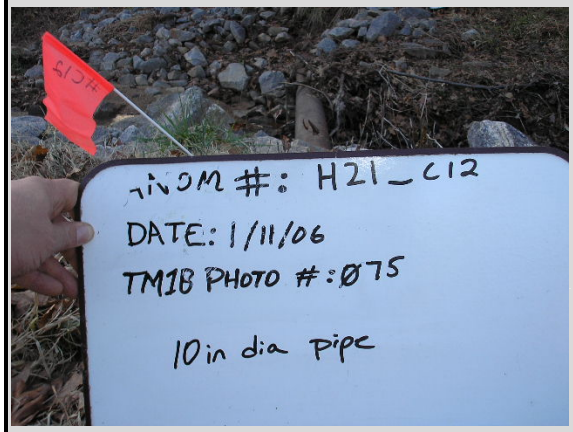
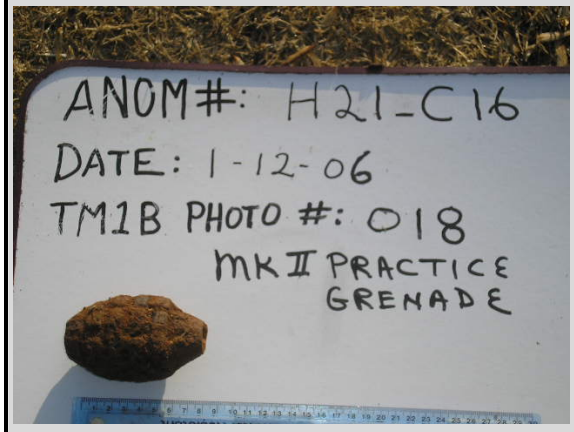
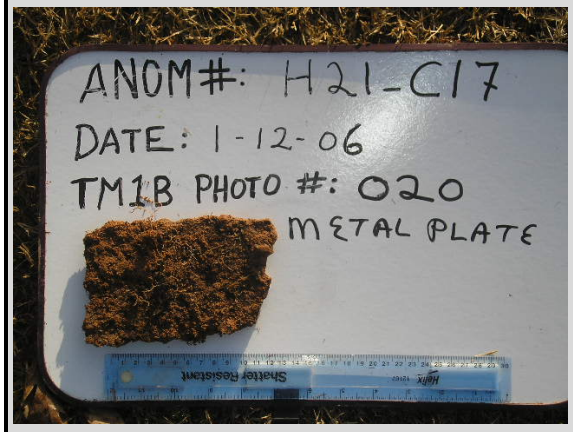
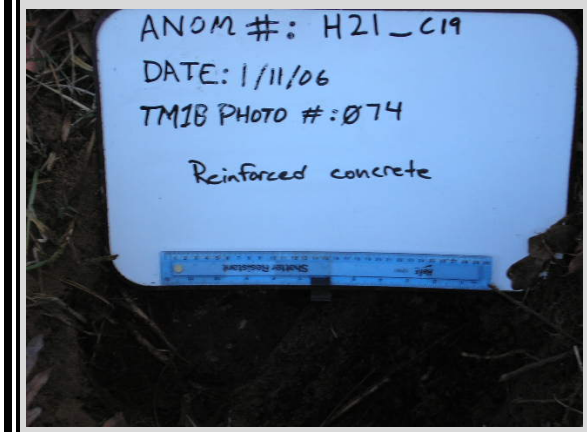


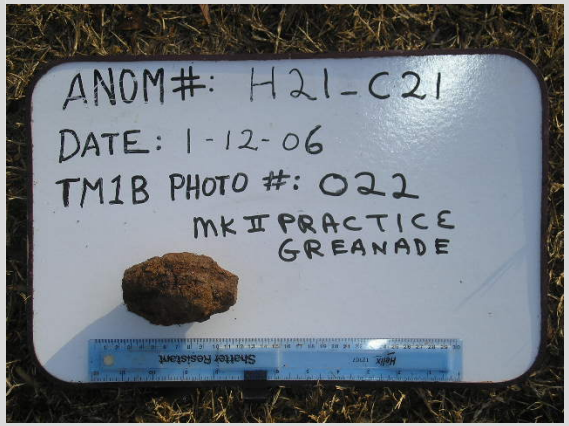


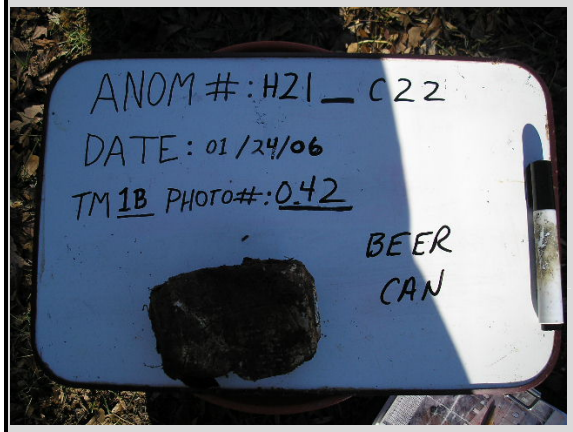


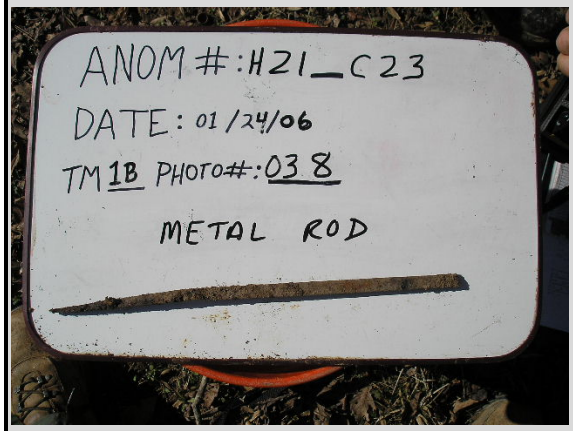


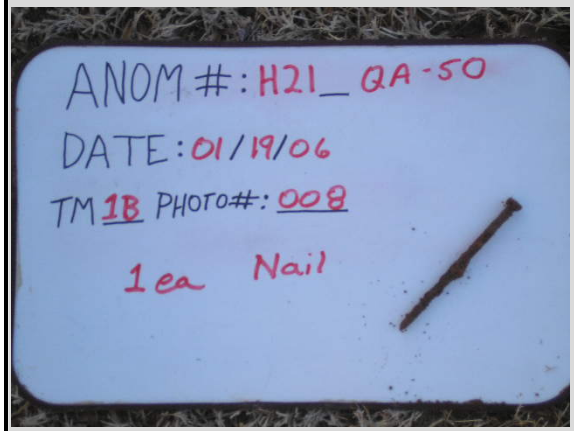
GRID H21 DIG PHOTOS (CONTINUED)

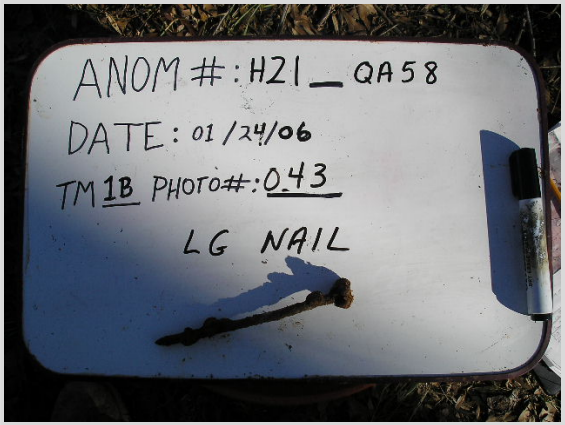












ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

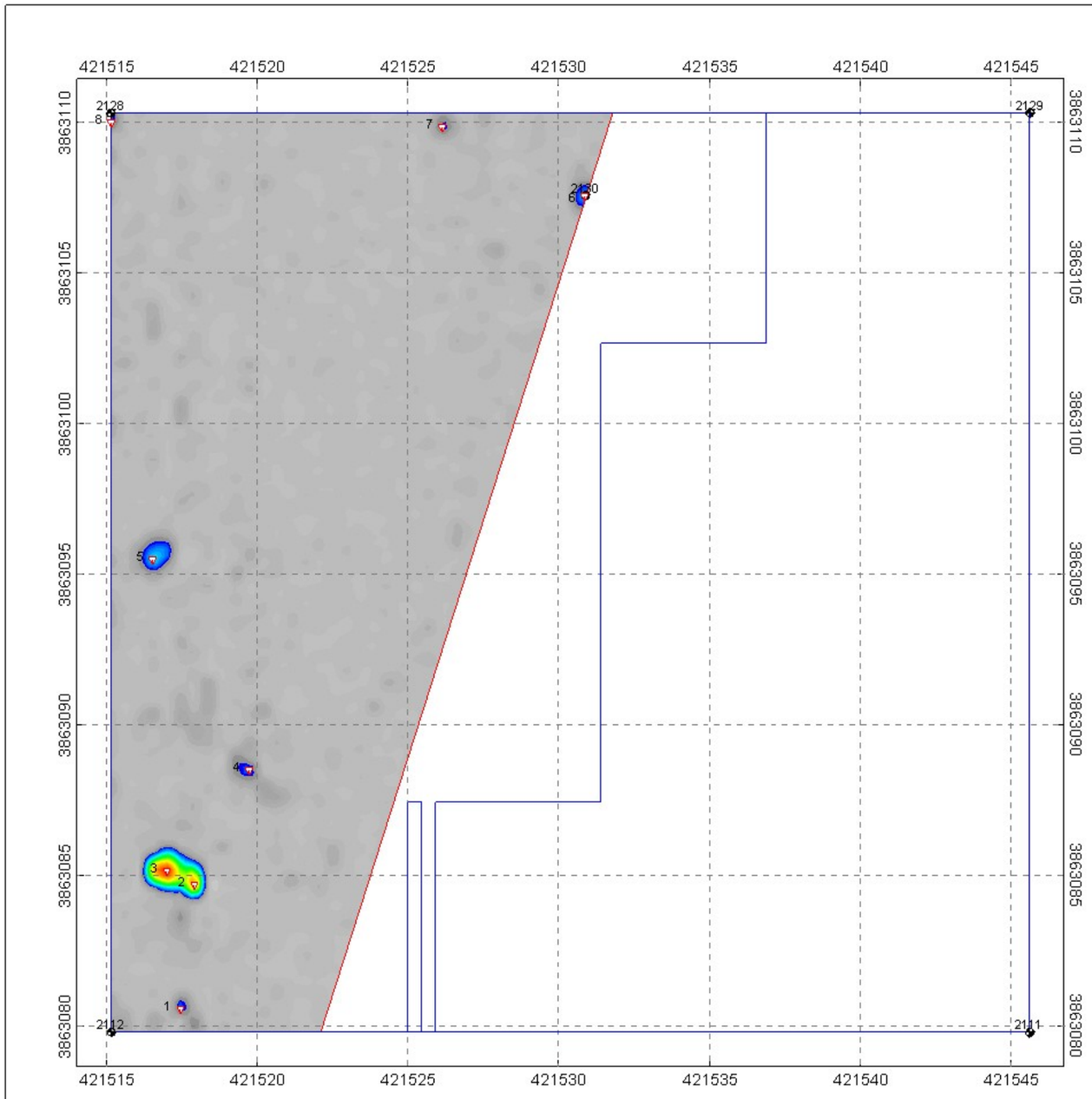
Project Name: Former Camp Croft, Phase II
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: H22
Field Book ID:

Geophysical Contrac: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center I: Brendan Slater
COE Project Enginee:
COE Geophysicist: Andrew Schwartz

Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

	Original Survey								Reacquisition Survey					Dig Results													Post-Dig UXO QC Results			Post-Dig Geophysical QC		
											Offset					Offset		Orientation of	Inclination of Nose (deg) **	Depth (in)												
Unique Target ID	Easting Coord. (m)	Northing Coord. (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Ch1² Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Ch1² Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs.-oz)	Dimensions: Length, Width, Height (in)	Comments	X Distance (in)	Y Distance (in)	Nose (Azimuth deg)) **		Top of Item	Center of Mass	Digital Photo Filename **	Date	Team Leader Initials	Excavation Hole Cleared?	UXO QC Spec. Initials	Date	Agreement between Dig Results & Geophysical Data? (G=good, A=avg, P=poor,	Geophysicist QC Initials	Date
H22_11	421517.4336	3863090.026	7.5	39.5	49.8		H22_11	16-Sep-2005	77	4.2	13	0	1/9/06	CD	.5	4 x .75 x .75	1 ea 4 in bolt	0	0	NW	0	3	3.5	H22_11 - #004	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
H22_12	421516.0619	3863090.33	3	34.5	25.0		H22_12	16-Sep-2005	39	2.3	10	-2	1/9/06	CD	.5	4 x .5 x .5	1 ea 4 in steel bolt	0	0	NW	0	3	3.25	H22_12 - #003	1/12/06	BAM	YES	RVW	01/16/06	YES	RVW	01/16/06
H22_15	421519.719	3863091.854	15	39.5	21.4		H22_15	16-Sep-2005	27	2.1	-13	0	1/9/06	CD	.25	5 x .25 x .25	nail	-3	14	NE	15	4	4	H22_15 - #007 / H22_15a - #034	1/23/06	BAM	NA	DRA	02/21/06	YES	RVW	
H22_17	421525.739	3863093.225	34.75	44	10.7		H22_17	16-Sep-2005	27	4.2	4	-8	1/9/06	CD	.5	2 x 2 x 2	1 ea bearing buddy	0	0	W	0	2	2.5	H22_17 - #009	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
H22_9	421520.6349	3863087.74	10	26	23.4		H22_09	16-Sep-2005	35	7.3	0	0	1/9/06	CD	.25	3 x .25 x .25	4 ea nails	0	0	NA	90	0	1.5	H22_9 - #006	1/12/06	BAM	YES	RVW	01/23/06	YES	RVW	01/23/06
H22_C1	421517.4376	3863080.58	7.5	2.5	20.5	5.4443603	H22_02	16-Sep-2005	33	9.1	3	-5	1/9/06	CD	.25	3 x .25 x .25	3 ea 3 in nails	0	0	NA	90	0	1.5	H22_C1 - #001	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
H22_C2	421517.893	3863084.693	9	16	51.4	16.982281	H22_05	16-Sep-2005	72	23.1	-18	0	1/9/06	CD	3	.22 x .75 x .75	1 ea 22 in steel rod	0	0	NW	0	3	3.5	H22_C2 - #002	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
H22_C3	421516.9785	3863085.15	6	17.5	64.4	21.885891	H22_07	16-Sep-2005	72	23.1	14	0	1/9/06	CD	3	.22 x .75 x .75	1 ea 22 in steel rod , shared with h22-c2	0	0	NW	0	3	3.5	H22_C3 - #002	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
H22_C4	421519.7203	3863088.502	15	28.5	53.8	5.1310844	H22_10	16-Sep-2005	76	8.9	-8	-2	1/9/06	CD	.25	6 x .5 x .5	1 ea survey marker	0	0	NA	90	0	3	H22_C4 - #005	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
H22_C5	421516.5160	3863095.51	4.5	51.5	49.6	7.0109925	H22_18	16-Sep-2005	58	9.1	-4	12	1/9/06	MD	1	5 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	SW	0	3	4	H22_C5 - #008	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
H22_C6	421530.0442	3863107.551	51.5	91	61.2	5.7974625	H22_24	16-Sep-2005	76	11.4	5	0	1/9/06	CD	.25	5 x .25 x .25	1 ea 5 in nail	0	0	NA	90	0	2.5	H22_C6 - #013	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
H22_C8	421515.1379	3863109.982	0	99	64.4	5.445765		16-Sep-2005	83	12.6	-15	4	1/9/06	CD	.25	6 x .5 x .5	1 ea 6 in nail	0	0	NA	90	0	3	H22_C8 - #068	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
H22_QA19	421519.2604	3863095.662	13.5	52	11.8			16-Sep-2005	13	2.2	0	0	01/16/06	NC			target under cart path							H22_QA19 - #007	1/19/06	BAM	NA	DRA	02/21/06	NA	DRA	02/21/06

* Fill in Units (mV, nT/m, ppt, etc)
** Opt Field - refer to SOW for applicability.
*** UXO, DMM, MC-E (Munit Const-Exp), MD (Munit Debris), CD (Cult Debris) and MC-NE (Munit Const-Non Exp), SA (small arms), NC (no contact) OT (other)



NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Legend

Area of Investigation

2 Selected Target
(See Target Pick List For Response and Location)

2150 Survey Control Point

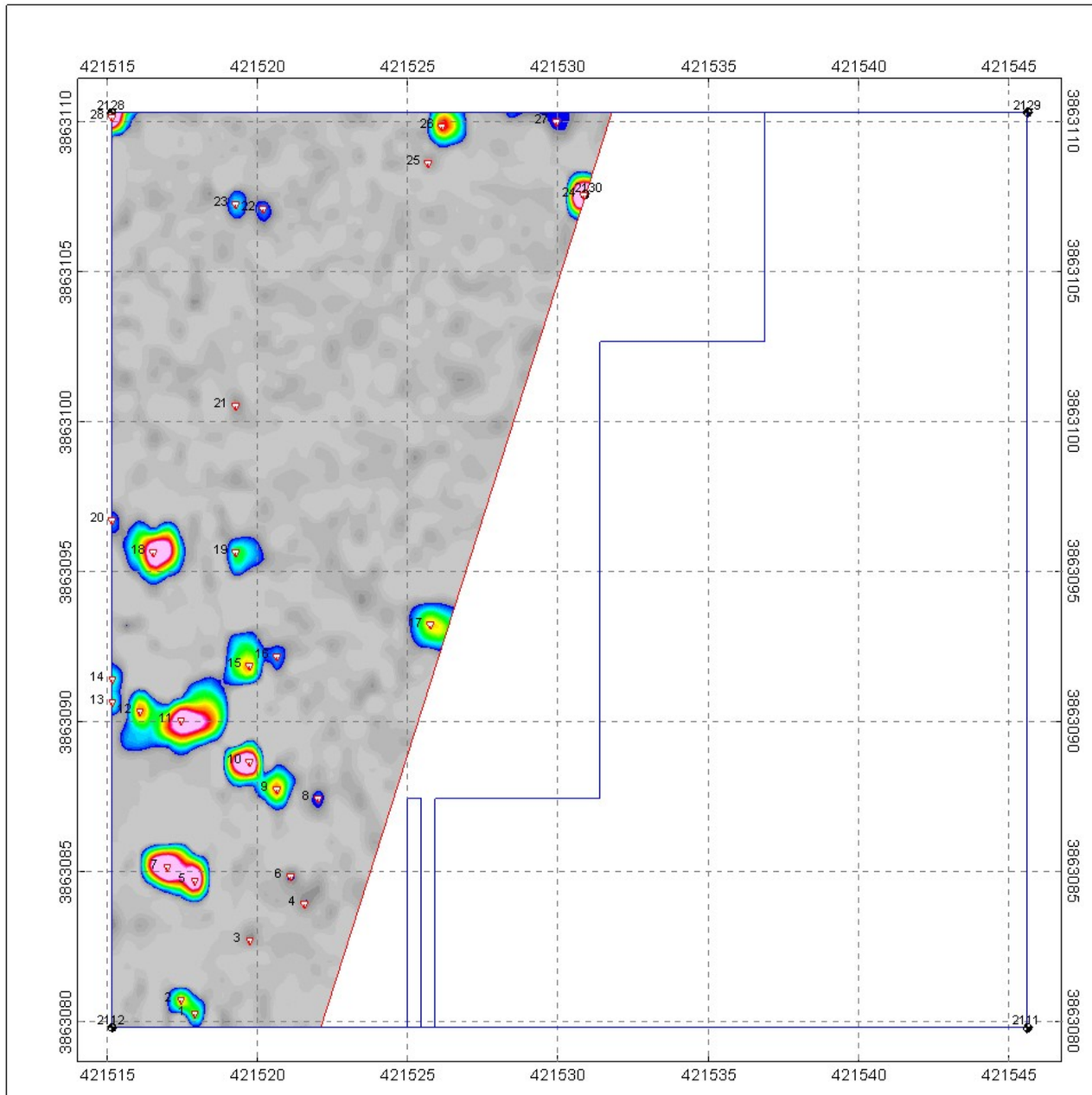
Scale 1:150

2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3 / Chi2
Grid H-22
Camp Croft, South Carolina

Date of Survey: September 16, 2005



NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Legend

Area of Investigation

2 Selected Target
(See Target Pick List For Response and Location)

2150 Survey Control Point

Scale 1:150

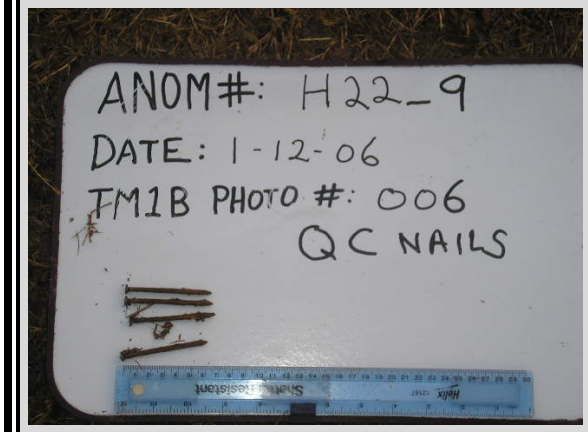
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N

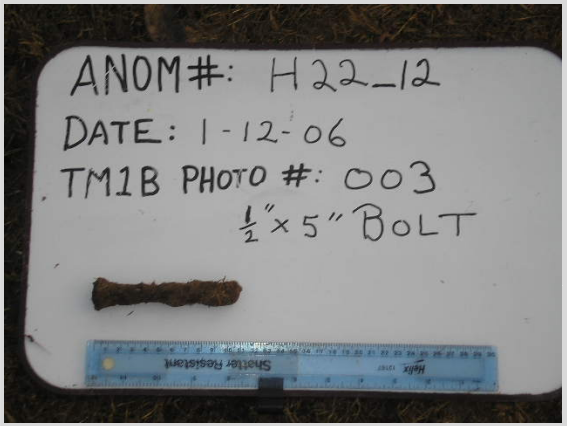
Zapata Engineering

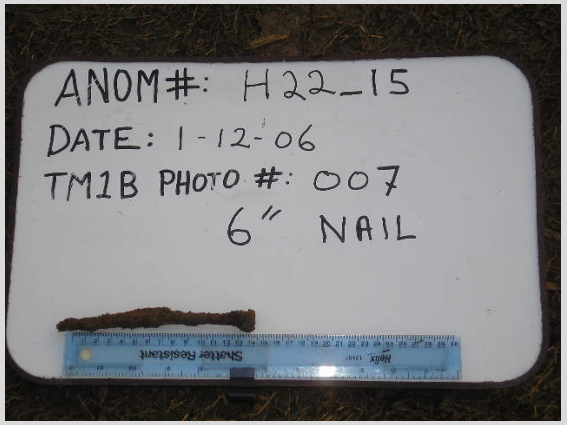
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid H-22
Camp Croft, South Carolina

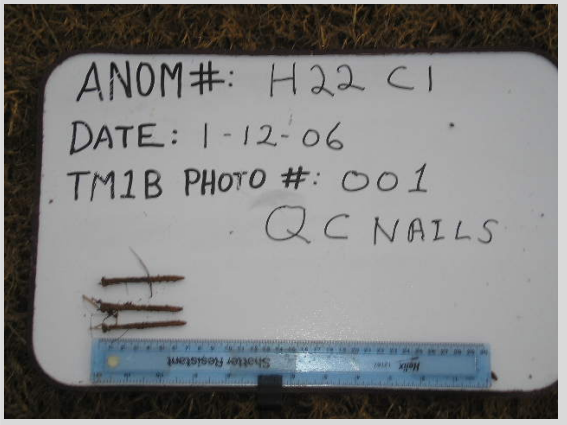
Date of Survey: September 16, 2005

GRID H22 DIG PHOTOS









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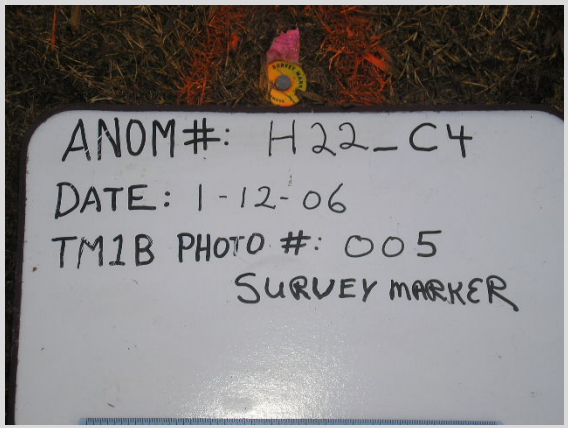
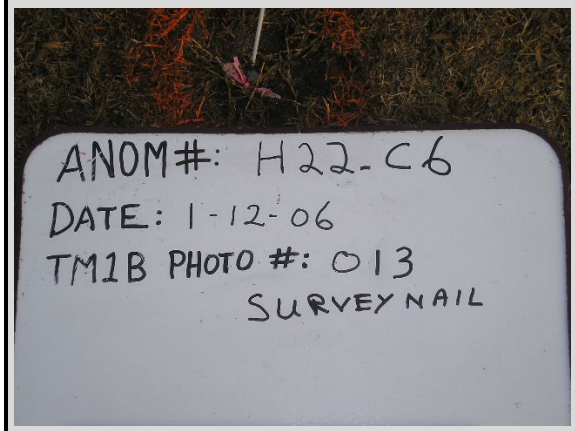
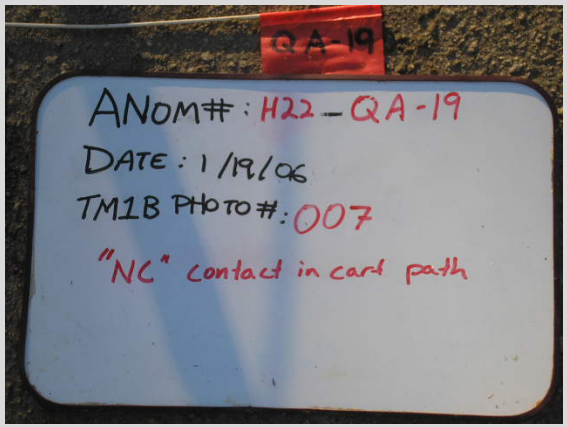






ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

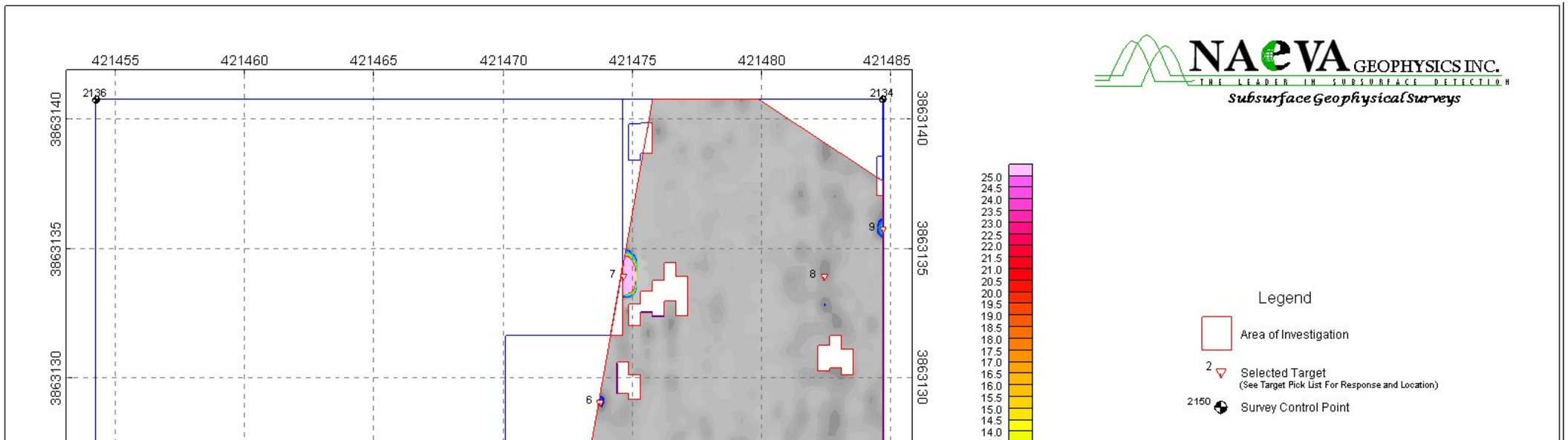
Project Name: Former Camp Croft, Phase II
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: I20
Field Book ID:

Geophysical Contrac ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist David Smith
Site Geophysicist:
Field Team:
COE Design Center I Brendan Slater
COE Project Enginee
COE Geophysicist: Andrew Schwartz

Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

	Original Survey								Reacquisition Survey					Dig Results												Post-Dig UXO QC Results			Post-Dig Geophysical QC		
											Offset					Offset		Orientation of		Depth (in)												
Unique Target ID	Easting Coord. (m)	Northing Coord. (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs-oz)	Dimensions: Length, Width, Height (in)	Comments	X Distance (in)	Y Distance (in)	Nose (Azimuth deg) **	Inclination of Nose (deg) **	Top of Item	Center of Mass	Digital Photo Filename **	Date	Team Leader Initials	Excavation Hole Cleared?	UXO QC Spec. Initials	Date	Agreement between Dig Results & Geophysical Data? (G=good, A=avg, P=poor,	Geophysicist QC Initials	Date
I20_16	421477.0009	3863122.792	75	41	5.5		I20_16	18-Sep-2005					1/0/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
I20_17	421478.0031	3863123.249	78	42.5	39.7		I20_17	18-Sep-2005	63	7.5	12	18	1/8/06	MD	1	5 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	NE	0	.5	1.5	I20_17 - #047	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
I20_2	421470.5861	3863110.907	58.5	2	17.6		I20_02	18-Sep-2005	55	10	10	0	1/8/06	CD	.2	100 x .25 x .25	barbed wire , shared with I20-c1 , h20-79 / c19 / 79	0	0	N	15	4	4	I20_2 - #049	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
I20_24	421476.4781	3863126.754	73	54	17.0		I20_24	18-Sep-2005	15	4	0	12	1/8/06	CD	.25	6 x .25 x .25	large nail	0	0	NE	0	.25	.25	I20_24 - #045	1/19/06	BAM	YES	RVW	01/25/06	YES	RVW	01/25/06
I20_29	421479.2203	3863127.668	82	57	43.2		I20_29	18-Sep-2005	60	5.5	12	0	1/8/06	CD	1	6 x .5 x .25	ox shoe	0	0	E	0	6	6	I20_29 - #083	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
I20_30	421481.0496	3863127.669	88	57	20.1		I20_30	18-Sep-2005	33	4	12	12	1/0/06	CD	.25	6 x .25 x .25	large nail	0	0	NE	15	4	4	I20_30 - #061	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
I20_31	421474.6495	3863128.125	67	58.5	10.9		I20_31	18-Sep-2005	5	1.5	0	0	1/8/06	HOTROCK	1	5 x 4 x 2		0	0			25	1.75	I20_31 - #044	1/19/06	BAM	YES	RVW	01/23/06	YES	RVW	01/23/06
I20_34	421481.5045	3863129.955	89.5	64.5	38.5		I20_34	18-Sep-2005					1/8/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
I20_35	421482.4183	3863130.26	92.5	65.5	42.6		I20_35	18-Sep-2005	83	6	0	10	1/8/06	CD	1.5	6 x 5 x .5	steel can and horse shoe	10	-3	NE	0	0	-.5	I20_35 - #039	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
I20_36	421482.4172	3863132.089	92.5	71.5	14.0		I20_36	18-Sep-2005	7	1.5	0	15	1/8/06	HOTROCK	2	7 x 5 x 3	multiple hotrocks	0	0			.5	3	I20_36 - #038	1/19/06	BAM	YES	RVW	01/23/06	YES	RVW	01/23/06
I20_39	421481.9597	3863133.155	91	75	7.3		I20_39	18-Sep-2005	23	5	-6	12	1/0/06	CD	.5	24 x .25 x .25	barbed wire	-13	4	E	0	6	6	I20_39 - #040	1/19/06	BAM	YES	RVW	01/23/06	YES	RVW	01/23/06
I20_47	421478.301	3863140.774	79	100	37.8		I20_47	18-Sep-2005	33	3	0	0	1/8/06	CD	.2	30 x .25 x .25	barbed wire and multiple pieces of steel, shared with I20-3	-20	12	NA	0	20	21	I20_47 - #058	1/19/06	BAM	YES	RVW	01/23/06	YES	RVW	01/23/06
I20_48	421479.3669	3863140.774	82.5	100	28.5		I20_48	18-Sep-2005	16	3	0	0	1/8/06	CD	.5	18 x .25 x .25	barbed wire	0	0	NE	0	25	.25	I20_48 - #037	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
I20_5	421471.9083	3863113.04	58	9	35.0		I20_05	18-Sep-2005	27	1.5	18	6	1/8/06	MD	.5	4 x .5 x .25	multiple grenade spoons	0	0	NA	15	3	3	I20_5 - #046	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
I20_6	421472.823	3863113.344	61	10	28.1		I20_06	18-Sep-2005	27	1.5	0	0	1/8/06	MD	.5	4 x .5 x .25	multiple grenade spoons	0	0	NA	15	3	3	I20_6 - #046	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
I20_A.1	421479.5172	3863133.464	0	0				18-Sep-2005						MD	.25	3 x 1 x 1	fuze, grenade, hand, M10 series			NA	0	6	6	I20_A.1 - #044	1/24/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
I20_C1	421470.9935	3863112.735	55	8		16.650839		18-Sep-2005	265	27	0	12	1/8/06	CD	1	80 x .25 x .25	barbed wire	0	0	N	0	4	4	I20_C1 - #051	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
I20_C2	421473.2798	3863117.306	62.5	23	40.2	4.2323737	I20_07	18-Sep-2005	73	10	12	0	1/8/06	CD	.25	6 x .25 x .25	large nail	0	0	N	0	3	3	I20_C2 - #041	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
I20_C3	421484.4074	3863117.762	99	24.5	86.8	12.155899	I20_08	18-Sep-2005	109	20.9	3	-13	1/8/06	MD	1	5 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	W	0	.25	1.5	I20_C3 - #055	1/11/06	BAM	NO	RVW	01/25/06	YES	DRA	02/16/06
I20_C5	421481.0497	3863125.687	88	50.5	31.4	4.4710283	I20_22	18-Sep-2005	52	6	0	18	1/8/06	CD	1	3 x .25 x .25	4 tenails	0	0	NA	90	0	1.5	I20_C5 - #040	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
I20_C6	421473.7352	3863129.039	64	61.5	16.6	5.2613768	I20_32	18-Sep-2005	17	2.5	12	3	1/0/06	CD	.25	10 x .25 x .25	barbed wire	0	-14	N	0	2	2	I20_C6 - #042	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
I20_C7	421474.6482	3863133.915	67	77.5	1312.8	294.96725	I20_39	18-Sep-2005	10603	1142	14	5	1/8/06	CD	.2	20 x .5 x .5	property marker	0	0	NA	90	0	-12	I20_C7 - #043	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
I20_C8	421482.4162	3863133.917	92.5	77.5	11.8	4.0864208		18-Sep-2005	23	5	-6	-12	1/8/06	CD	.5	24 x .25 x .25	barbed wire , shared with I20-39	-13	4	E	0	6	6	I20_C8 - #048	1/19/06	BAM	YES	RVW	01/23/06	YES	RVW	01/23/06

* Fill in Units (mV, nT/m, ppt, etc)
** Opt Field - refer to SOW for applicability.
*** UXO, DMM, MC-E (Munit Const-Exp), MD (Munit Debris), CD (Cult Debris) and MC-NE (Munit Const-Non Exp), SA (small arms), NC (no contact) OT (other)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NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
2 Selected Target
(See Target Pick List For Response and Location)
2150 Survey Control Point
Scale 1:150
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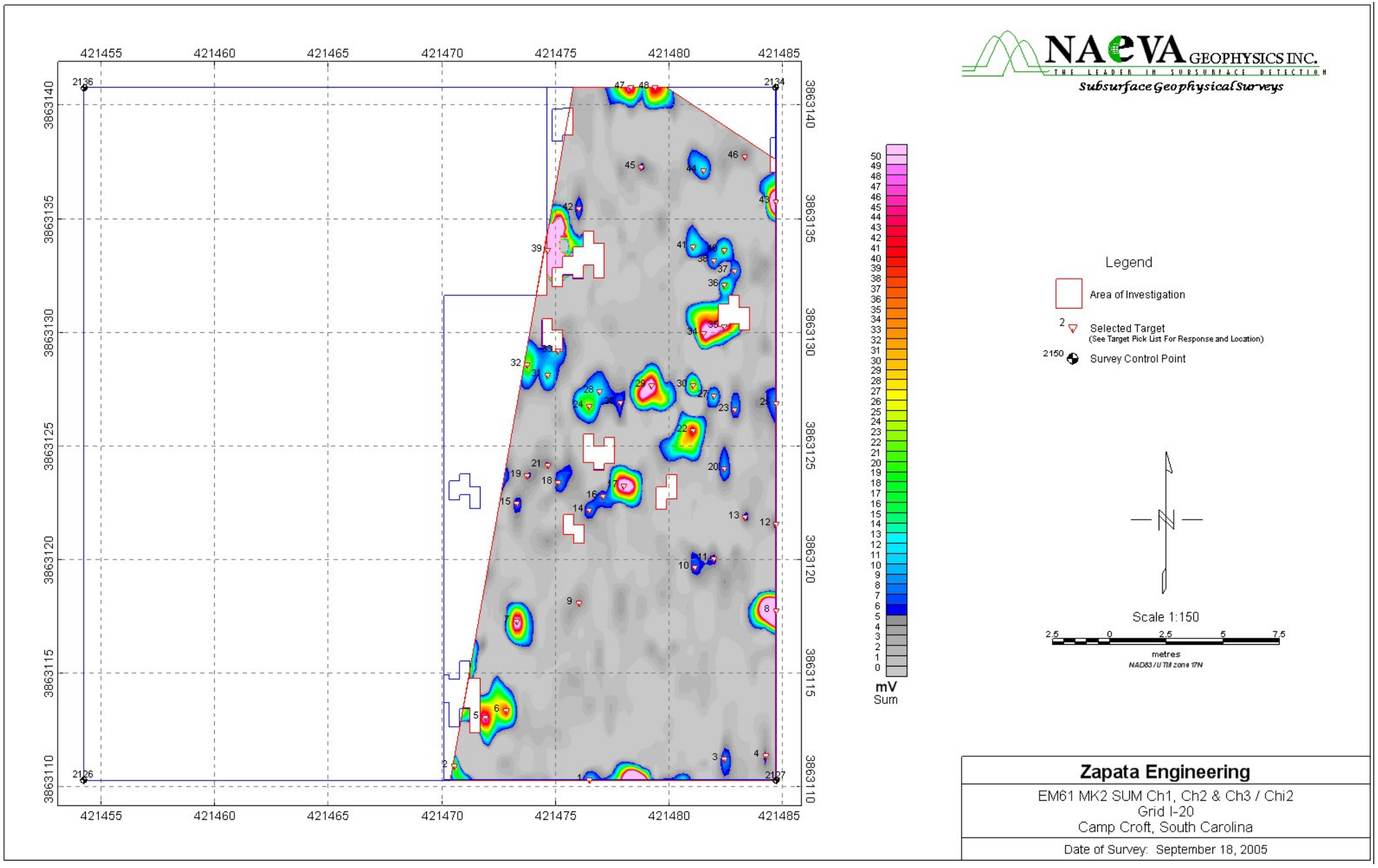
Grid I-20
Camp Croft, South Carolina
Date of Survey: September 18, 2005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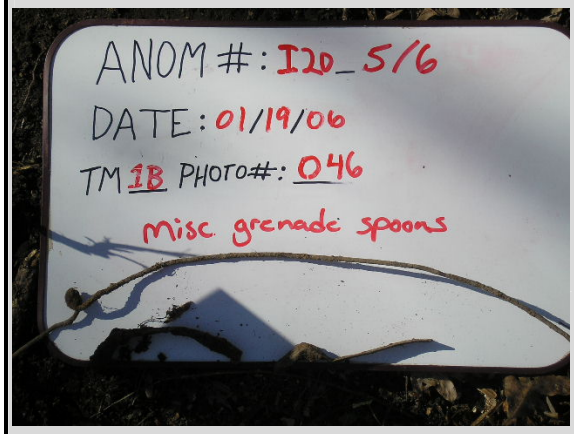
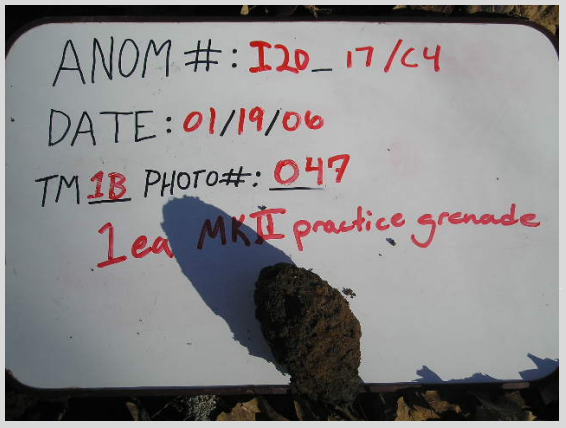
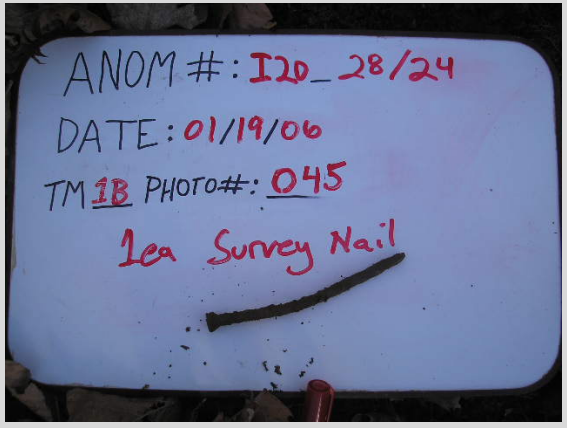
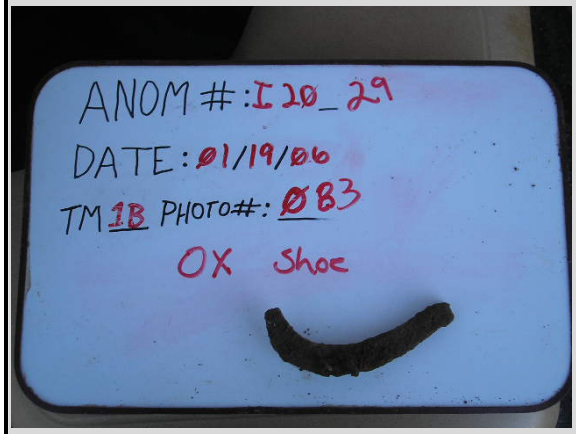
NAeVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
Selected Target
(See Target Pick List For Response and Location)
Survey Control Point
mV
Sum
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 SUM Ch1, Ch2 & Ch3 / Chi2
Grid I-20
Camp Croft, South Carolina
Date of Survey: September 18, 2005

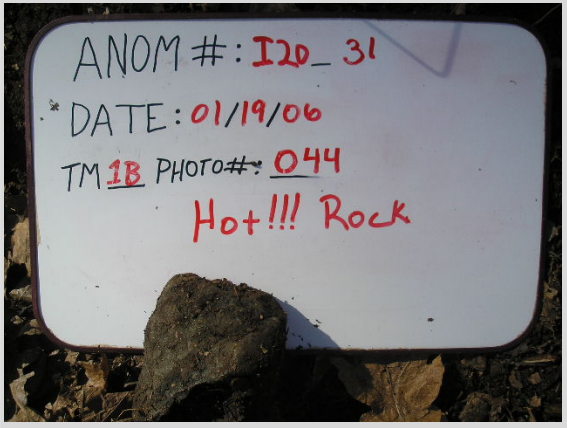
GRID I20 DIG PHOTOS











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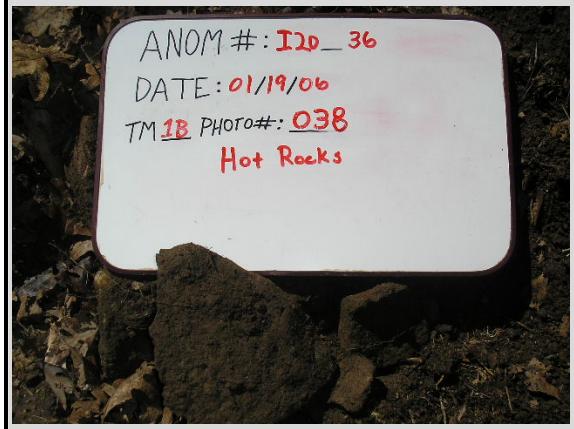

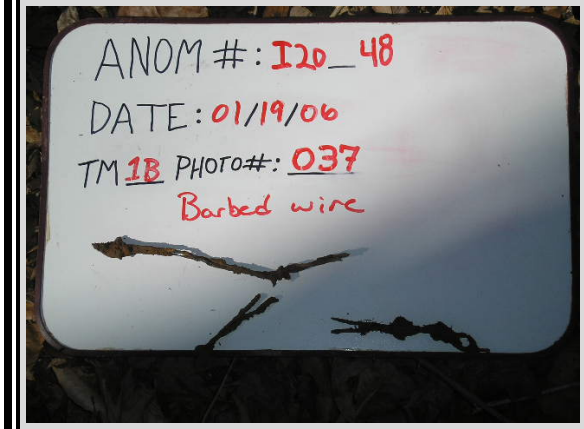

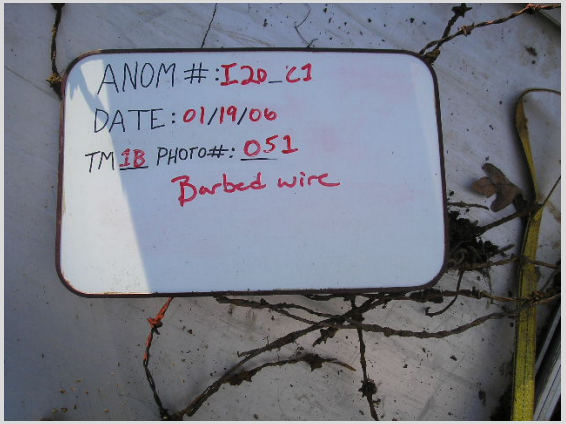

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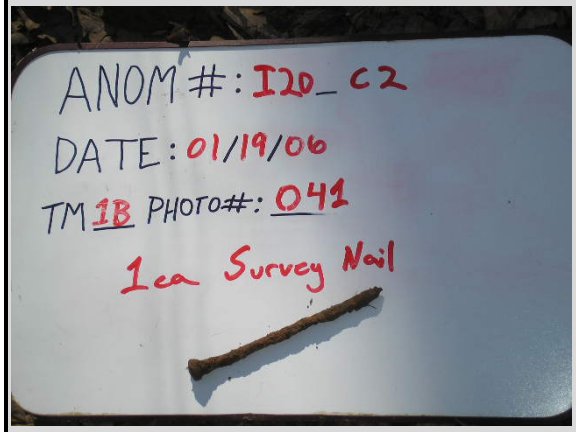
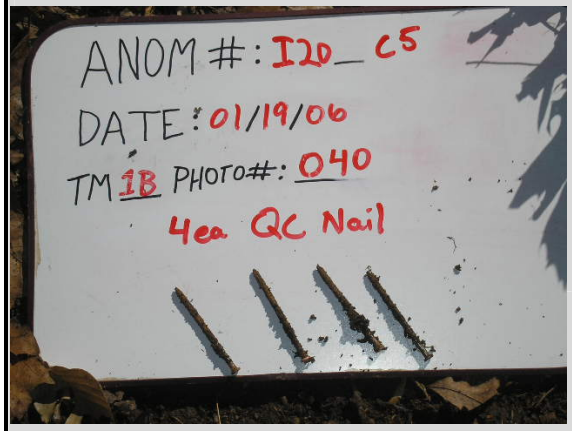
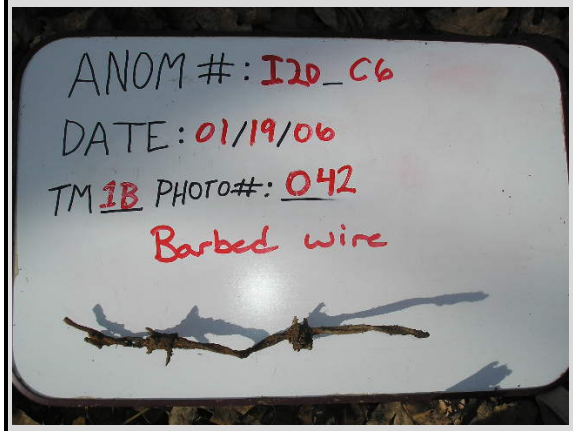
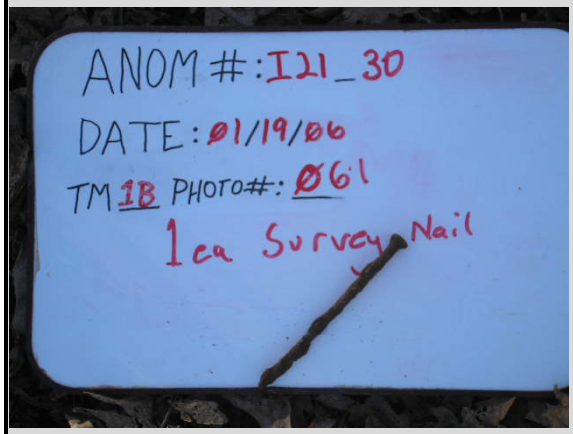








GRID I20_30 PHOTO

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

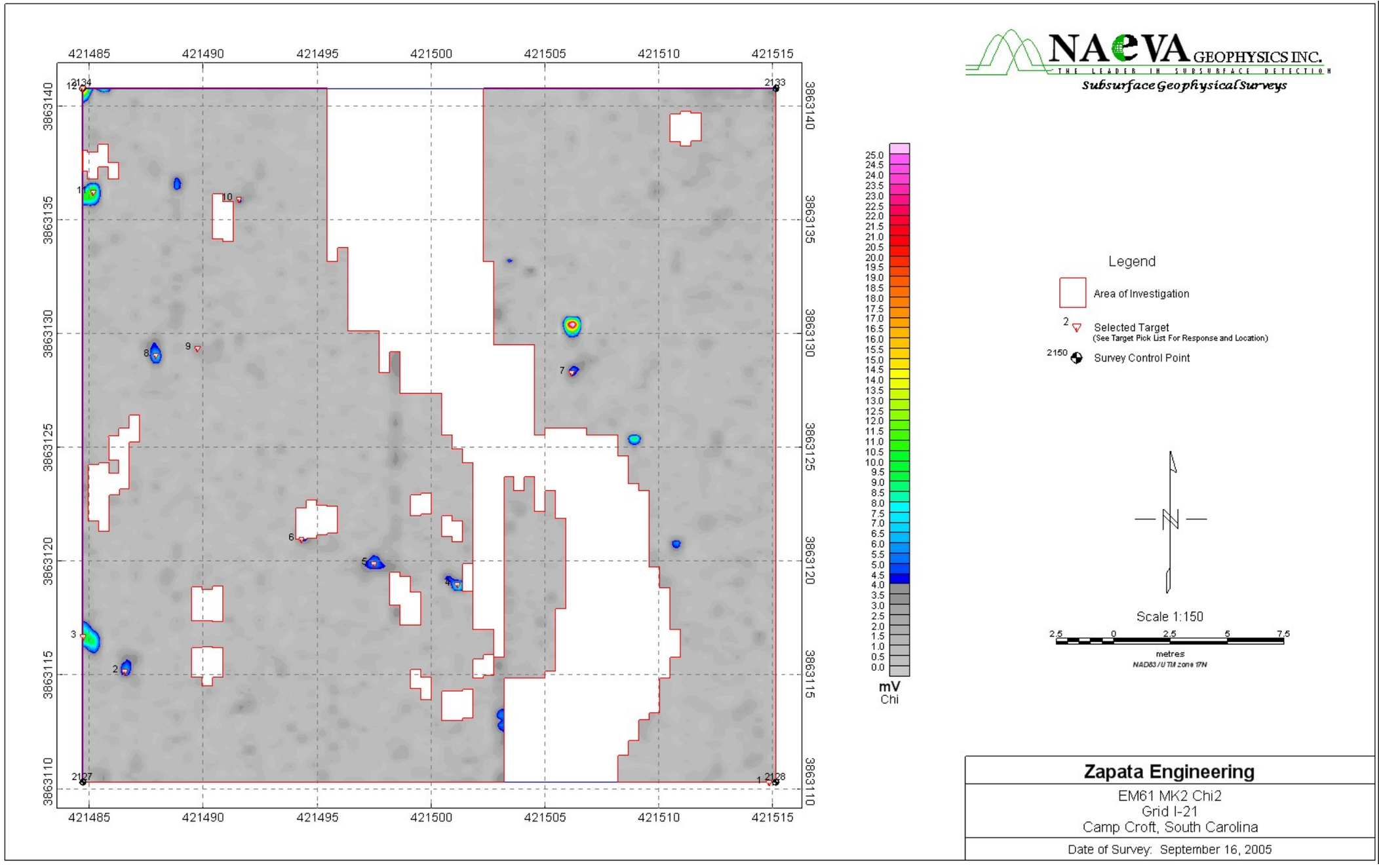
Project Name: Former Camp Croft, Phase II
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: I21
Field Book ID:

Geophysical Contrac ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center I Brendan Slater
COE Project Enginee
COE Geophysicist: Andrew Schwartz

Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

	Original Survey								Reacquisition Survey					Dig Results												Post-Dig UXO QC Results			Post-Dig Geophysical QC		
											Offset						Offset		Orientation of		Depth (in)											
Unique Target ID	Easting Coord (m)	Northing Coord (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs-oz)	Dimensions: Length, Width, Height (in)	Comments	X Distance (in)	Y Distance (in)	Nose (Azimuth deg) **	Inclination of Nose (deg) ***	Top of Item	Center of Mass	Digital Photo Filename **	Date	Team Leader Initials	Excavation Hole Cleared?	UXO QC Spec. Initials	Date	Agreement between Dig Results & Geophysical Data? (G=good, A=avg, P=poor,	Geophysicist QC Initials	Date
I21_12	421490.1903	3863116.237	18	19.5	3.3		I21_12	16-Sep-2005					1/8/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
I21_22	421496.2749	3863119.742	38	31	7.5		I21_22	16-Sep-2005					1/8/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
I21_29	421494.2950	3863122.79	31.5	41	9.3		I21_29	16-Sep-2005					1/8/06	HOTROCK	.5	3 x 3 x 1	1 ea hotrock	-3	-10			4	4.25	I21_29 - #054	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
I21_36	421485.1628	3863126.297	1.5	52.5	11.9		I21_36	16-Sep-2005	11	1.1	0	0	1/8/06	HOTROCK	2	4 x 4 x 1.25	1 ea hotrock	0	12			1	1.25	I21_36 - #051	1/11/06	BAM	YES	RVW	01/16/06	YES	RVW	01/16/06
I21_37	421486.076	3863126.297	4.5	52.5	12.7		I21_37	16-Sep-2005	7	1.1	-14	4	1/8/06	MD	.25	1.25 x 1.25 x .25	grenade, hand, prac, MK2 pull ring	0	0	NA	-15	2	2	I21_37 - #050	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
I21_41	421484.7057	3863127.059	0	55	8.2		I21_41	16-Sep-2005					1/8/06	HOTROCK	1	3 x 2 x 1	multiple hotrocks	-8	3			1	2	I21_41 - #057	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
I21_42	421487.4453	3863127.059	9	55	6.8		I21_42	16-Sep-2005					1/8/06	HOTROCK	1.5	4 x 3 x 2		-14	-14			1.25	2.5	I21_42 - #058	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
I21_43	421485.6188	3863127.212	3	55.5	9.7		I21_43	16-Sep-2005	10	1.2	2	-7	1/8/06	CD	.25	1 x 1 x .5	piece of steel	0	0	NA	0	3	3	I21_43 - #056	1/19/06	BAM	YES	TF	01/19/06	YES	RVW	01/19/06
I21_45	421490.1844	3863128.278	18	59	5.6		I21_45	16-Sep-2005	13	2.5	0	-20	1/8/06	MD	.25	2 x .5 x 2	fuze, grenade, hand, M10 series	0	0	N	0	3	3.5	I21_45 - #062	1/11/06	BAM	YES	TF	01/19/06	YES	RVW	01/19/06
I21_49	421490.184	3863129.04	18	61.5	21.2		I21_49	16-Sep-2005	33	2.1	2	4	1/8/06	MD	.5	4 x 2.75 x 2.75	grenade, hand, prac, MK2	12	12	N	0	4	4	I21_49 - #070	1/11/06	BAM	YES	RVW	01/16/06	YES	RVW	01/16/06
I21_68	421484.6993	3863136.052	0	84.5	102.8		I21_68	16-Sep-2005	132	17	0	10	1/8/06	MD	1	5 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	W	0	4	6	I21_68 - #060	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
I21_70	421491.0939	3863136.509	21	86	5.2		I21_70	16-Sep-2005	61	11.5	24	-24	1/8/06	CD	.25	3 x .25 x .25	4 ea nails	0	0	NA	90	0	1.5	I21_70 - #061	1/11/06	BAM	YES	RVW	01/16/06	YES	RVW	01/16/06
I21_71	421513.02	3863138.337	93	92	14.0		I21_71	16-Sep-2005	16	0.9	0	0	1/7/06	CD	.25	3 x .25 x .25	1 ea nail	0	0	SW	0	.25	.25	I21_71 - #063	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
I21_74	421511.6503	3863140.471	88.5	99	80.0		I21_74	16-Sep-2005	56	1.3	-4	14	1/7/06	CD	.25	3 x .25 x .25	4 ea nails revisit 5ea nails	0	10	W	0	0	0	I21_74 - #003 / I21_74a - #066	1/26/06	BAM	NA	DRA	02/21/06	YES	RVW	
I21_77	421512.5642	3863140.776	91.5	100	35.5		I21_77	16-Sep-2005	59	1.6	-5	8	1/7/06	CD	.25	3 x .25 x .25	1 ea nail	0	0	SW	0	0	0	I21_77 - #064 / I21_77a - #065	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
I21_77.1	421512.5642	3863140.776	91.5	100	35.5			16-Sep-2005						CD	.25	6 x .25 x .25	sister .doc 1 ea 6 in nail	0	16	SE	0	0	.25	I21_77-1 - #065	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
I21_8	421514.2262	3863112.497	97	7.25	26.3		I21_08	16-Sep-2005	44	3.1	12	-4	1/8/06	NC			item under cart path							I21_8 - #067	1/11/06	BAM	NA	DRA	02/21/06	NA	DRA	02/21/06
I21_C1	421514.8336	3863110.267	99	0	40.4	3.9015343	I21_01	16-Sep-2005	83	12.6	12	0	1/8/06	CD	.25	6 x .5 x .5	1 ea 6 in nail	0	0	NA	90	0	3	I21_C1 - #068	1/11/06	BAM	YES	RVW	01/16/06	YES	RVW	01/16/06
I21_C12	421484.696	3863140.777	0	100	68.5	19.558588		16-Sep-2005	85	10.5	0	0	1/8/06	CD	.5	3 x 2 x 2	1 ea qa seed item 5 in under grc	0	0	NA	0	5	6	I21_C12 - #069 / I21_C12a - #002	1/24/06	BAM	NA	DRA	02/21/06	YES	RVW	
I21_C2	421486.5396	3863115.171	6	16	75.6	7.0650063	I21_11	16-Sep-2005	84	6.9	0	0	1/8/06	CD	.25	8 x .25 x .25	survey nail	0	0	NA	90	0	4	I21_C2 - #059	1/19/06	BAM	YES	RVW	01/25/06	YES	RVW	01/25/06
I21_C4	421501.144	3863118.979	54	28.5	17.0	8.7153864	I21_21	16-Sep-2005	31	15.2	3	12	1/8/06	CD	.25	5 x 3 x .25	1 ea aluminum beer can	0	0	NW	15	14	15	I21_C4 - #053	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
I21_C5	421497.4921	3863119.894	42	31.5	46.4	6.0973654	I21_23	16-Sep-2005	64	10.9	0	0	1/8/06	MD	1	4 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	W	0	1	2	I21_C5 - #052	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
I21_C6	421494.2964	3863120.961	31.5	35	12.6	6.0391259		16-Sep-2005	46	7.8	0	10	1/8/06	CD	.25	3 x .25 x .25	4 ea nails	0	0	NA	90	0	1.5	I21_C6 - #049	1/11/06	BAM	YES	TF	01/19/06	YES	RVW	01/19/06
I21_C8	421487.9008	3863129.04	10.5	61.5	65.6	7.9090891	I21_51	16-Sep-2005	59	6.7	-5	3	1/8/06	MD	1	5 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	NW	0	1	2	I21_C8 - #059	1/11/06	BAM	YES	TF	01/19/06	YES	RVW	01/19/06
I21_C9	421489.7272	3863129.345	16.5	62.5		4.2264404		16-Sep-2005					1/8/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
I21_QA2	421485.63	3863110.446	3	0.5	11.9			16-Sep-2005	13	2.3	0	0	01/16/06	CD	.25	12 x .25 x .25	barbed wire	0	0	NE	0	3	3	I21_QA2 - #068	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	

* Fill in Units (mV, nT/m, ppt, etc)
** Opt Field - refer to SOW for applicability
*** UXO, DMM, MC-E (Munit Const-Exp), MD (Munit Debris), CD (Cult Debris) and MC-NE (Munit Const-Non Exp), SA (small arms), NC (no contact) OT (other)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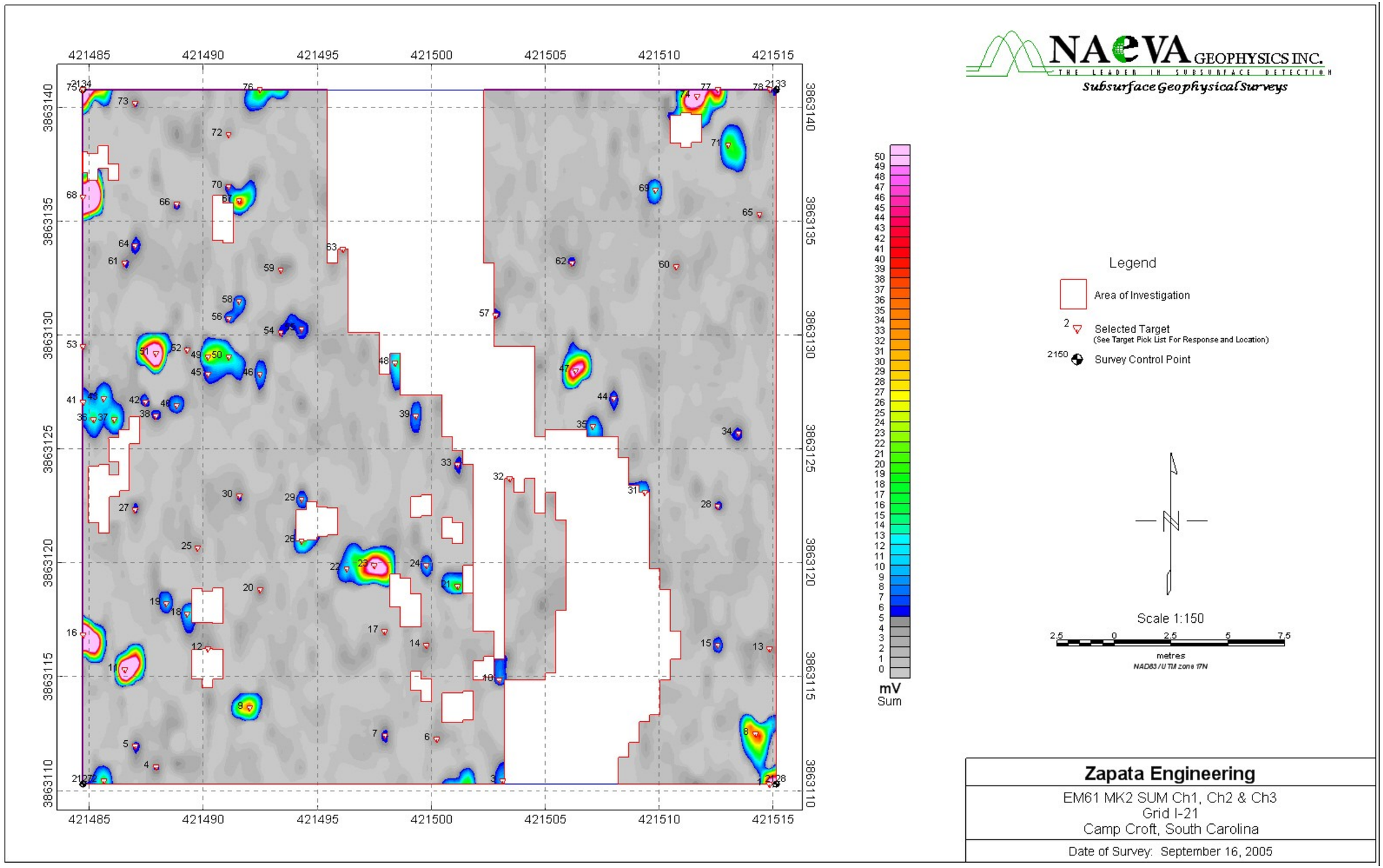
mV
Chi
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
Selected Target
(See Target Pick List For Response and Location)
Survey Control Point
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 Chi2
Grid I-21
Camp Croft, South Carolina
Date of Survey: September 16, 2005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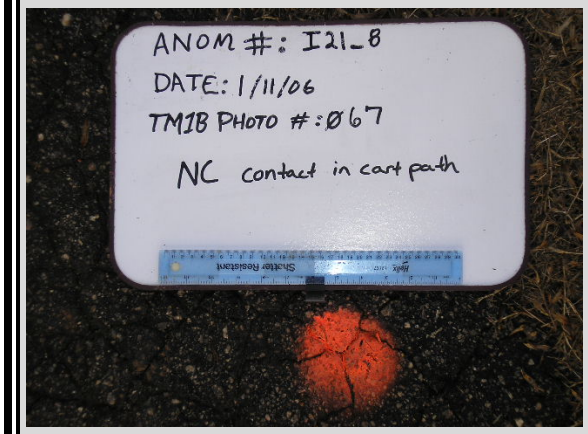
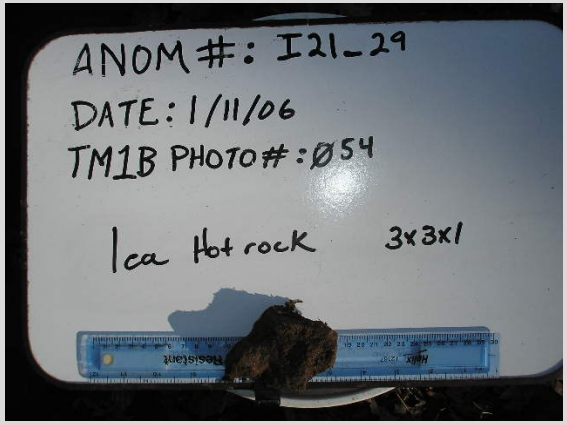
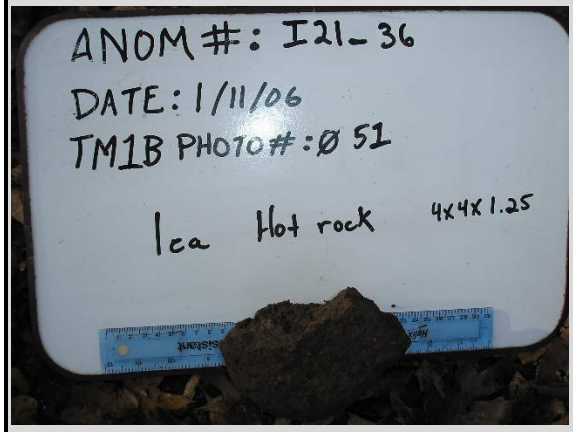
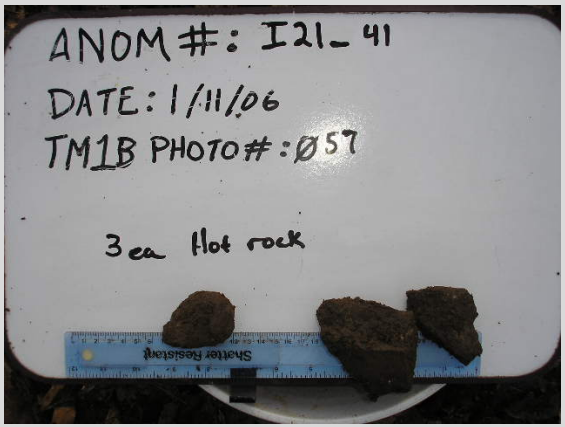
3863110
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
mV
Sum
Legend
Area of Investigation
Selected Target
(See Target Pick List For Response and Location)
Survey Control Point
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid I-21
Camp Croft, South Carolina
Date of Survey: September 16, 2005

GRID I21 DIG PHOTOS









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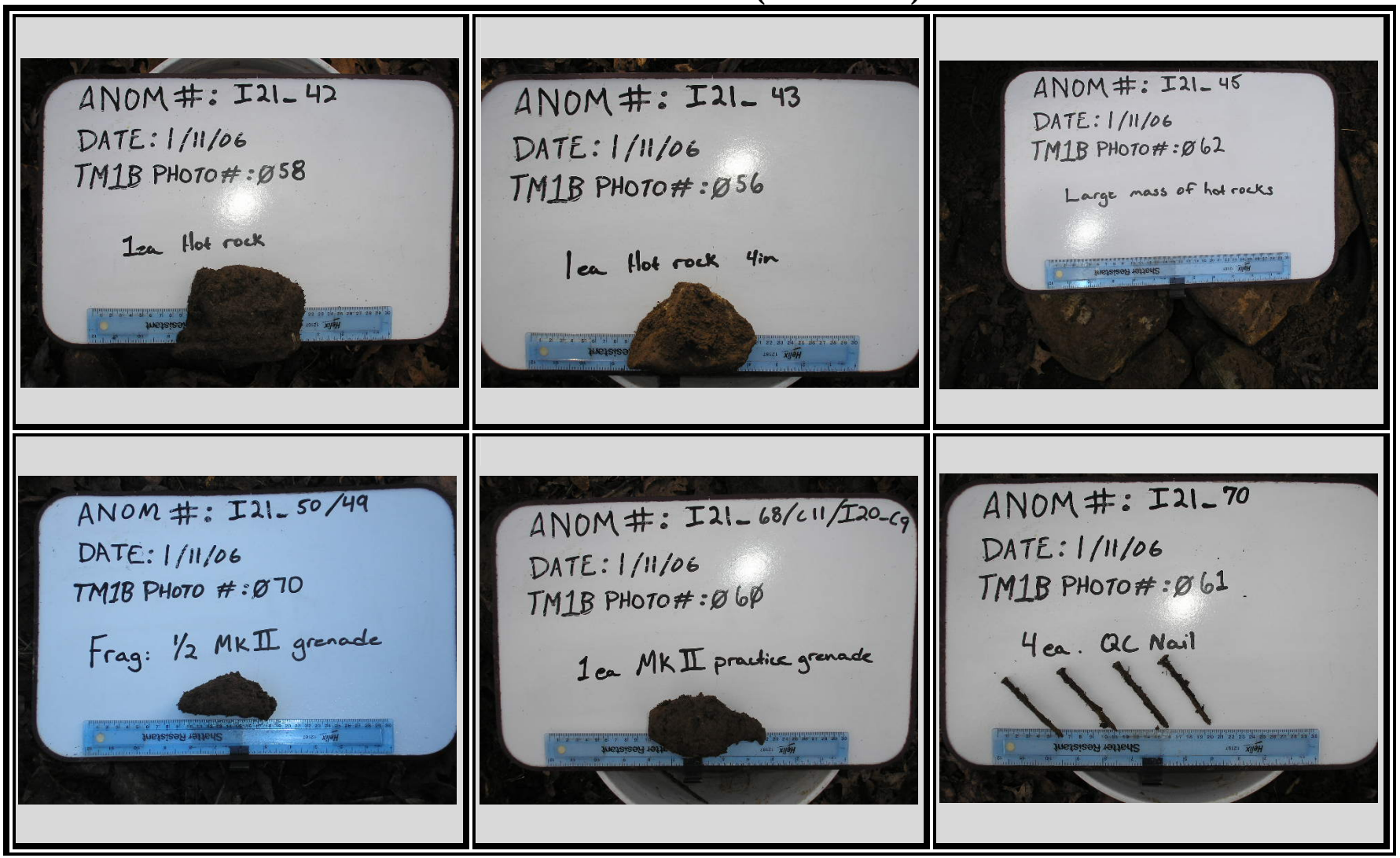

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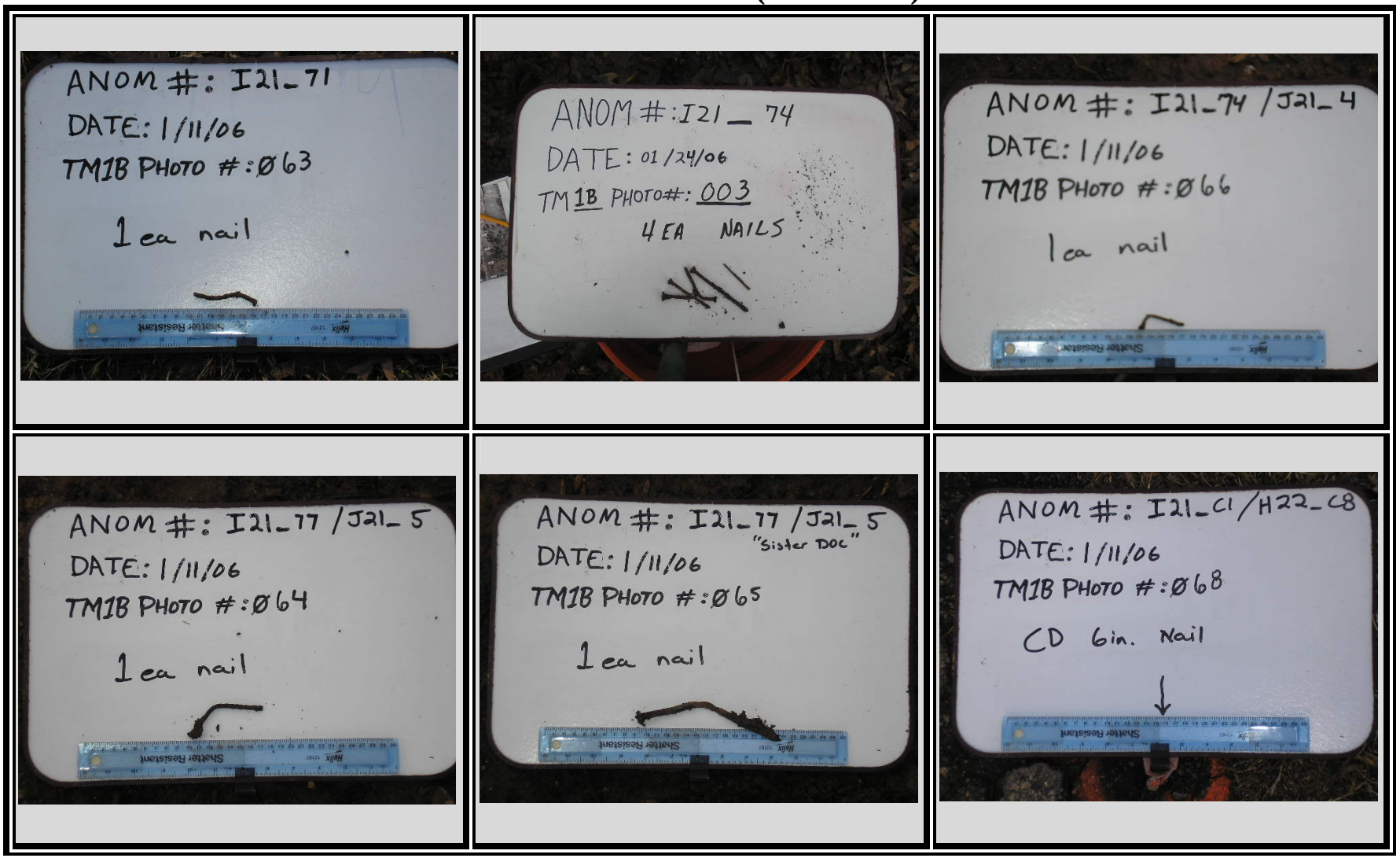

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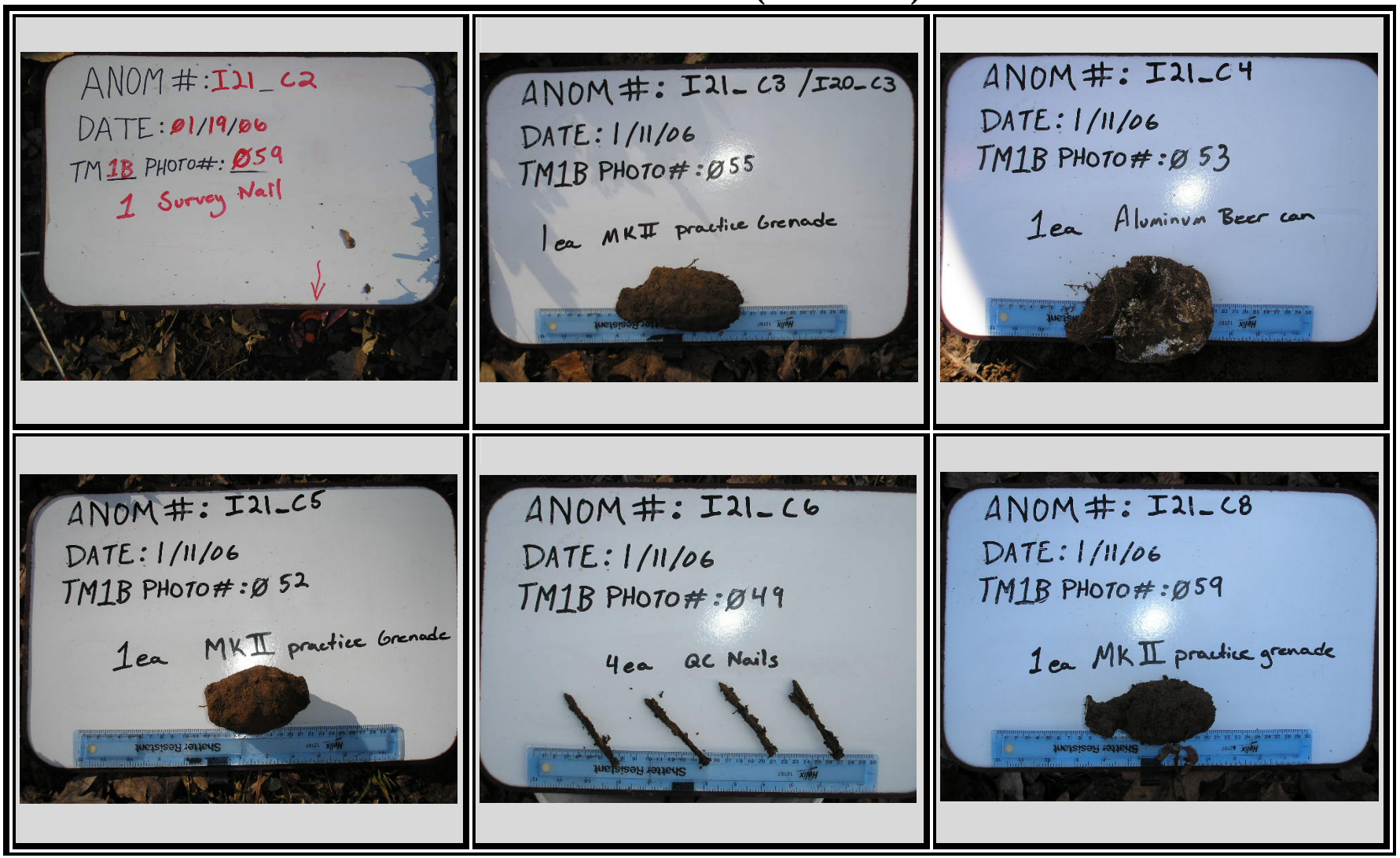

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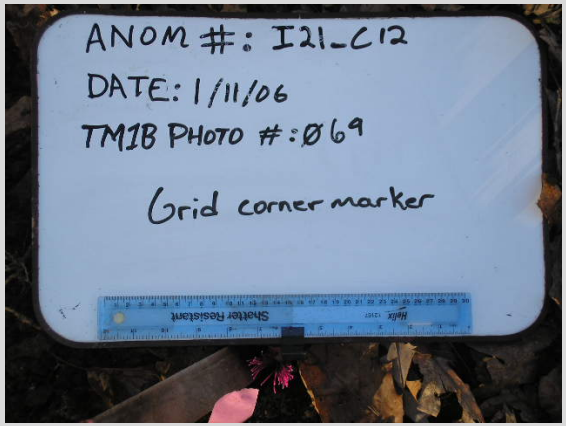

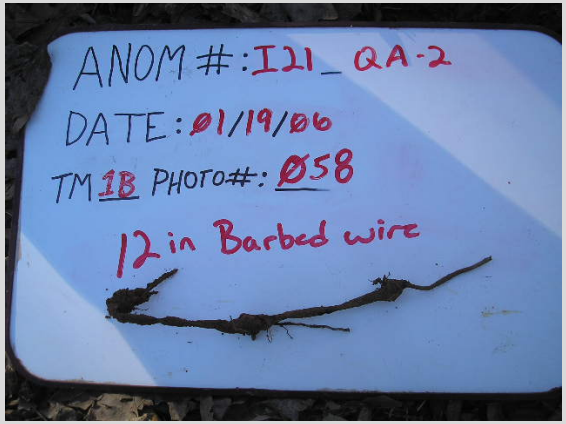

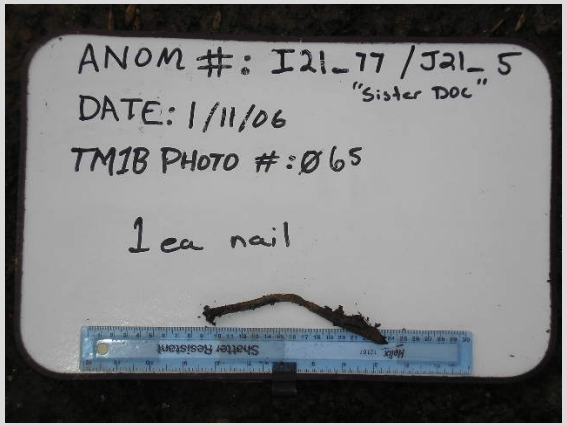

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ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

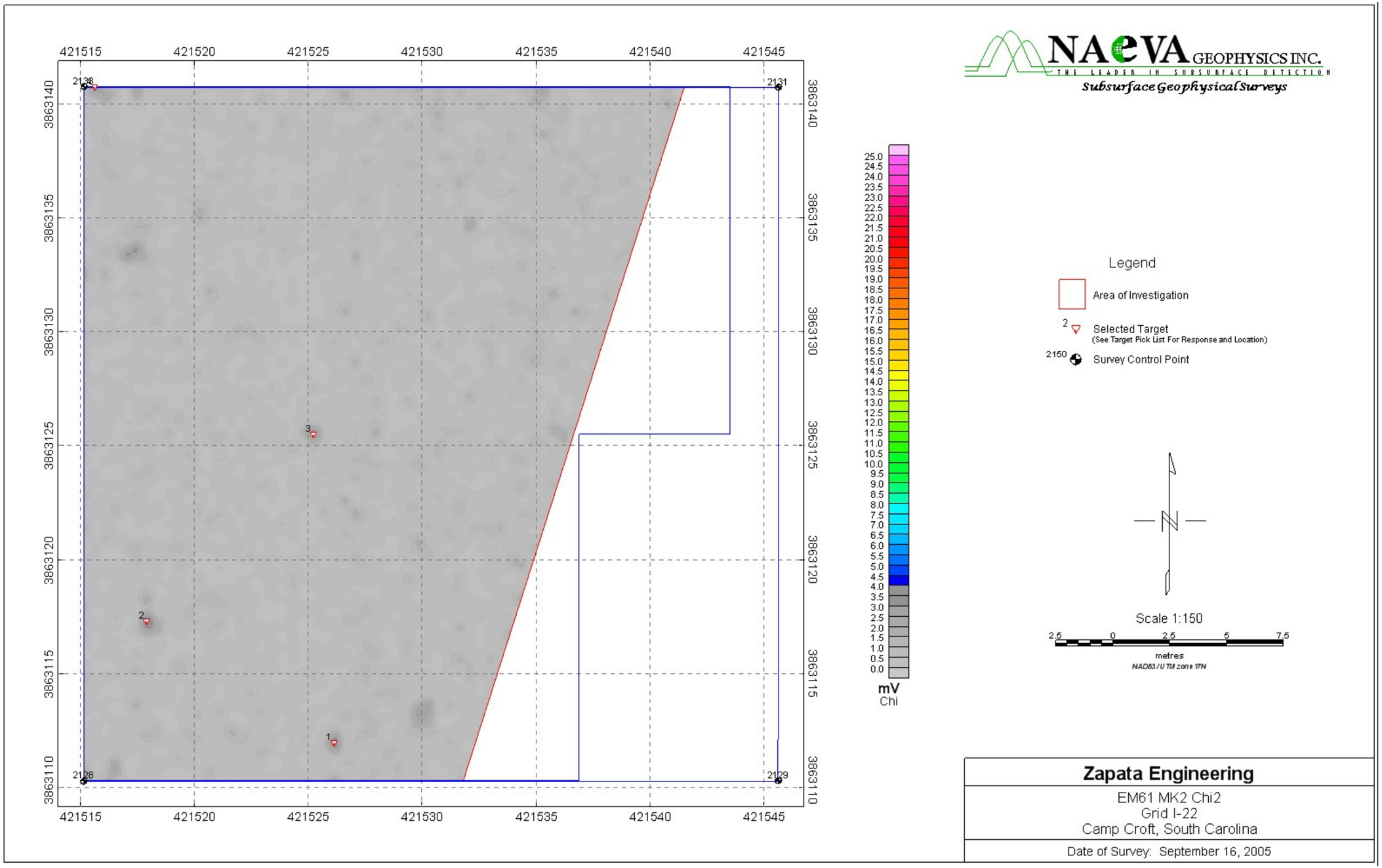
Project Name: Former Camp Croft, Phase II
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: I22
Field Book ID:

Geophysical Contrac: ZapataEngineering / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center I: Brendan Slater
COE Project Enginee:
COE Geophysicist: Andrew Schwartz

Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

	Original Survey								Reacquisition Survey						Dig Results													Post-Dig UXO QC Results			Post-Dig Geophysical QC		
											Offset						Offset				Depth (in)												
Unique Target ID	Easting Coord (m)	Northing Coord (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Ch^2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Ch^2 Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs-oz)	Dimensions: Length, Width, Height (in)	Comments	X Distance (in)	Y Distance (in)	Orientation of Nose (Azimuth deg) **	Inclination of Nose (deg) **	Top of Item	Center of Mass	Digital Photo Filename **	Date	Team Leader Initials	Excavation Hole Cleared?	UXO QC Spec. Initials	Date	Agreement between Dig Results & Geophysical Data? (G=good, A=avg, P=poor,	Geophysicist QC Initials	Date
I22_2	421516.5105	3963110.097	4.5	2	11.0			16-Sep-2005	32	6.4	0	0	1/9/06	CD	.25	3 x .25 x .25	4 ea 3 in nails	0	0	NA	90	0	1.5	I22_2 - #024	1/12/06	BAM	YES	RVW	01/16/06	YES	RVW	01/16/06
I22_4	421529.0530	3963113.100	48.25	9.5	24.1		I22_4	16-Sep-2005	30	7.2	0	0	1/9/06	MD	1	4 x 2.75 x 2.75	grenade, hand, prac, MK2 and 5ea nails	0	0	SW	0	6	7	I22_4 - #027	1/26/06	BAM	NA	DRA	02/21/06	YES	RVW	
I22_5	421530.9976	3963113.95	52	12	7.3			16-Sep-2005						UXO	1	4 x 2 x 2	grenade, hand, fragmentation, MK2	0	0	NE	0	10	10	I22_5 - #005	1/30/06	SFR	NA	DRA	02/21/06	YES	RVW	
I22_9	421517.0063	3963110.366	9	26.5	13.5		I22_9	16-Sep-2005	33	8.1	0	-24	1/9/06	CD	.25	3 x .25 x .25	4 ea 3 in nails	0	0	NA	90	0	1.5	I22_9 - #025	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
I22_C1	421526.1175	3963111.960	36	5.5	4.0	4.0137191		16-Sep-2005	26	12.2	-7	-3	1/9/06	CD	.25	4 x 4 x .25	1 ea oil can lid	0	0	NA	-15	5	5	I22_C1 - #026	1/12/06	BAM	YES	RVW	01/16/06	YES	RVW	01/16/06
I22_C4	421515.6103	3963140.775	1.5	100		4.0057034		16-Sep-2005	10	1	14	3	1/9/06	CD	.25	3 x .25 x .25	4 ea nails	0	0	NA	90	0	1.5	I22_C4 - #020	1/12/06	BAM	YES	TF	01/19/06	YES	RVW	01/19/06
I22_QA1	421520.0619	3963110.75	45	1.5	8.0			16-Sep-2005	6	0.8	0	0	01/17/06	HOTROCK	4	11 x 6 x 3		0	0			10	11	I22_QA1 - 092	1/17/06	BAM	YES	TF	01/17/06	YES	RVW	01/17/06

* Fill in Units (mV, nT/m, ppt, etc)
** Opt Field - refer to SOW for applicability
*** UXO, DMM, MC-E (Munit Const-Exp), MD (Munit Debris), CD (Cult Debris) and MC-NE (Munit Const-Non Exp), SA (small arms), NC (no contact) OT (other)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mV
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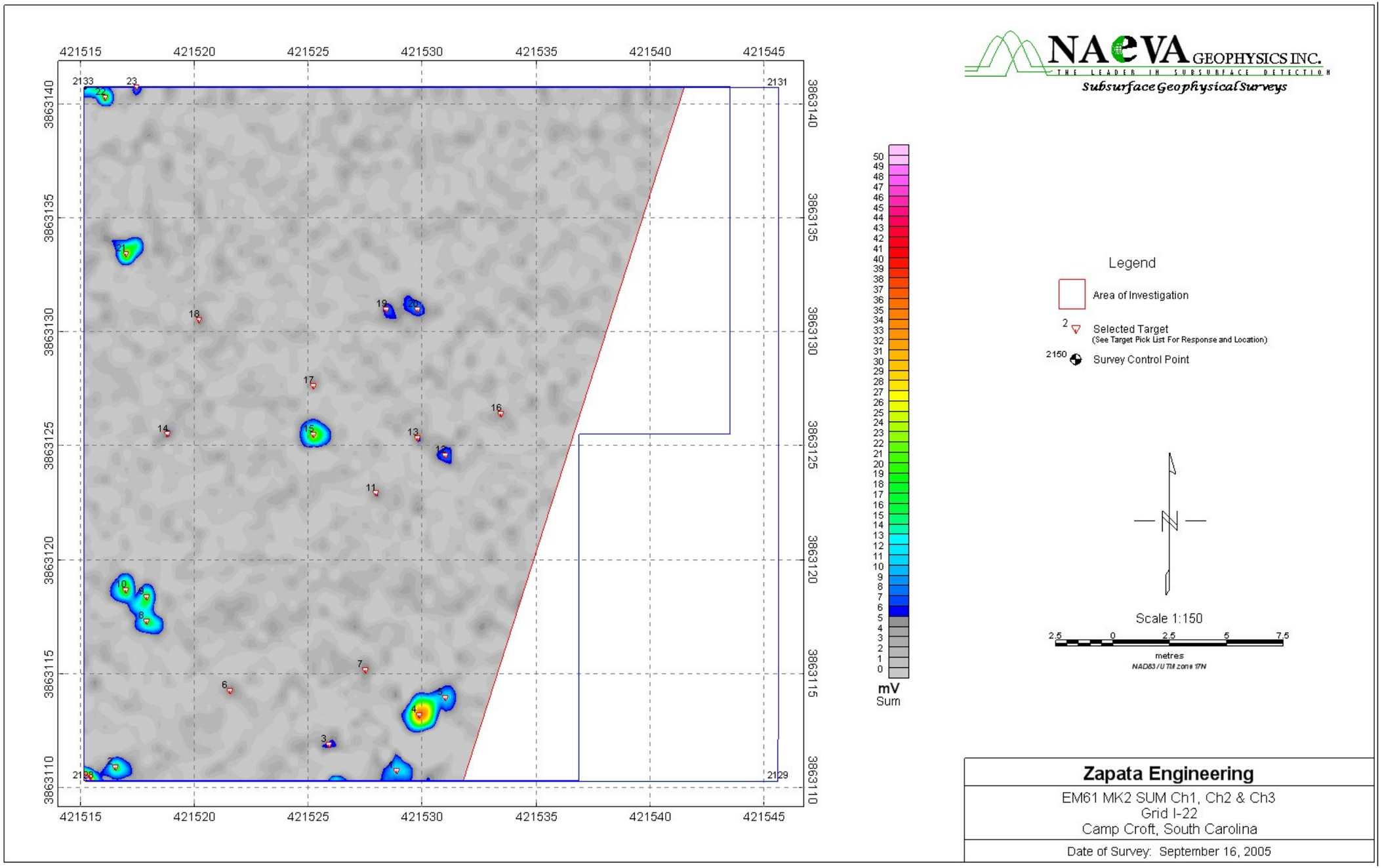
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
2 Selected Target
(See Target Pick List For Response and Location)
2150 Survey Control Point
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 Chi2
Grid I-22
Camp Croft, South Carolina
Date of Survey: September 16, 2005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NAeVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
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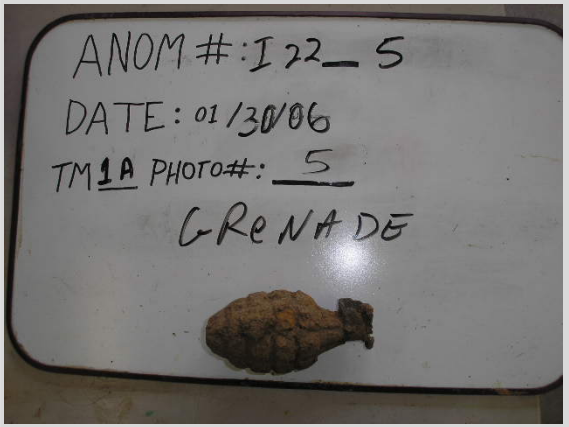
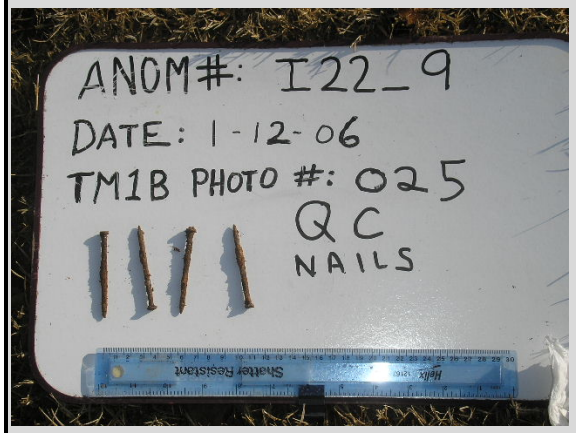
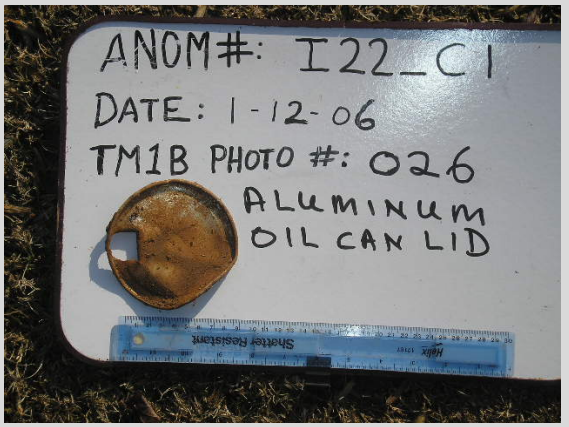
0
mV
Sum
Legend
Area of Investigation
Selected Target
(See Target Pick List For Response and Location)
Survey Control Point
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid I-22
Camp Croft, South Carolina
Date of Survey: September 16, 2005

GRID I22 DIG PHOTOS







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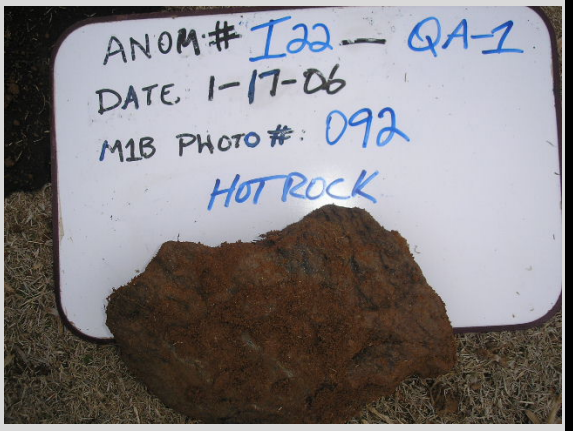
		

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

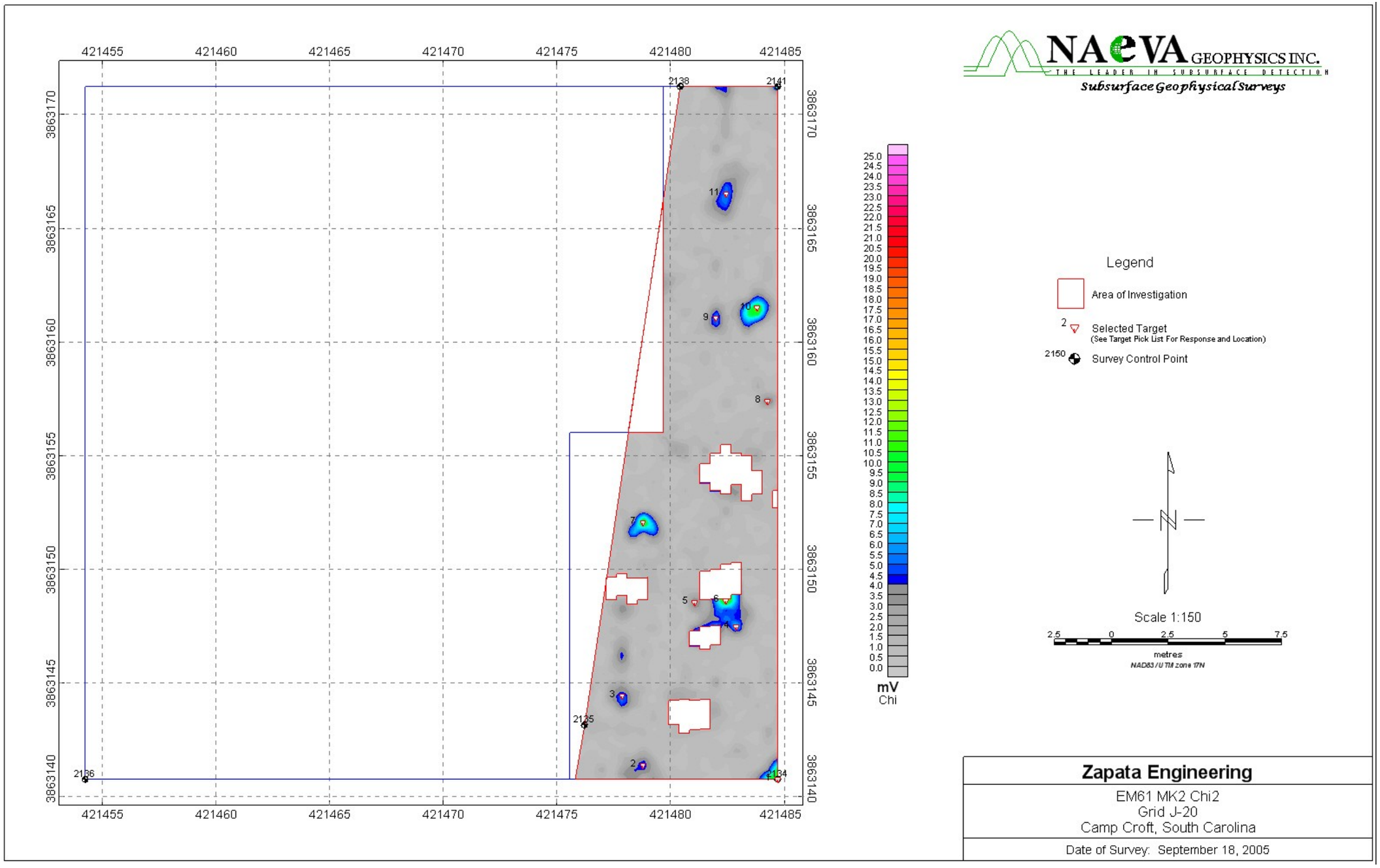
Project Name: Former Camp Croft, Phase II
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: J20
Field Book ID:

Geophysical Contrac ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist David Smith
Site Geophysicist:
Field Team:
COE Design Center R Brendan Slater
COE Project Enginee
COE Geophysicist: Andrew Schwartz

Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

	Original Survey								Reacquisition Survey					Dig Results													Post-Dig UXO QC Results			Post-Dig Geophysical QC		
											Offset					Offset		Orientation of	Inclination of Nose (deg) **	Depth (in)												
Unique Target ID	Easting Coord. (m)	Northing Coord. (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs-oz)	Dimensions: Length, Width, Height (in)	Comments	X Distance (in)	Y Distance (in)	Nose (Azimuth deg) **		Top of Item	Center of Mass	Digital Photo Filename **	Date	Team Leader Initials	Excavation Hole Cleared?	UXO QC Spec. Initials	Date	Agreement between Dig Results & Geophysical Data? (G=good, A=avg, P=poor,	Geophysicist QC Initials	Date
J20_1	421477.0443	3863140.774	77.5	0	48.0		J20_01	18-Sep-2005	12	2.6	7	0	1/8/06	CD	.25	3 x .25 x .25	1 ea 3 in nail	0	0	N	0	1	1	J20_1 - #009	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
J20_10	421481.0433	3863145.954	88	17	13.6		J20_10	18-Sep-2005	6	8	-6	-14	1/8/06	HOTROCK	1	4 x 2.5 x 2	1 ea hotrock	0	0			6	7.5	J20_10 - #015	1/11/06	BAM	YES	RVW	01/16/06	YES	RVW	01/16/06
J20_11	421481.9569	3863146.107	91	17.5	20.2		J20_11	18-Sep-2005					1/8/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
J20_14	421482.4144	3863148.62	92.5	25.75	219.0	12.668516	J20_14	18-Sep-2005	38	5.6	-20	3	1/8/06	CD	.25	3 x .25 x .25	4 ea nails	0	0	NA	90	.50	2	J20_14 - #017	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
J20_17	421482.4151	3863150.029	92.5	33	7.3		J20_17	18-Sep-2005					1/8/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
J20_20	421477.6955	3863152.503	77	30.5	4.1		J20_20	18-Sep-2005	43	0.2	-5	-16	1/8/06	MD	1	5 x 2.75 x 2.75	grenade, hand, prac, MK2	0	-13	SE	15	3	5	J20_20 - #010	1/11/06	BAM	YES	RVW	01/16/06	YES	RVW	01/16/06
J20_22	421483.3293	3863152.962	95.5	40	16.7		J20_22	18-Sep-2005	52	5.7	0	0	1/8/06	CD	1	7 x .75 x .25	ox shoe	0	0	W	0	0	0	J20_22 - #011	1/10/06	BAM	YES	RVW	01/16/06	YES	RVW	01/16/06
J20_23	421483.3301	3863155.592	95.5	48.5	4.7		J20_23	18-Sep-2005					1/8/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
J20_25	421482.4167	3863156.161	92.5	50.5	5.9		J20_25	18-Sep-2005					1/8/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
J20_3	421479.2147	3863140.927	82	0.5	27.7		J20_03	18-Sep-2005	56	4.2	0	0	1/8/06	CD	2	32 x .25 x .25	multiple pieces of barbed wire and misc metal	0	14	NA	0	20	21	J20_3 - #053	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
J20_31	421479.6779	3863162.557	83.5	71.5	34.4		J20_31	18-Sep-2005	43	5.2	10	0	1/8/06	MD	1	5 x 2.75 x 2.75	grenade, hand, prac, MK2	-7	0	E	-15	8	10	J20_31 - #014	1/11/06	BAM	YES	RVW	01/16/06	YES	RVW	01/16/06
J20_33	421482.2674	3863166.062	92	83	71.6		J20_33	18-Sep-2005	83	5.9	2	16	1/8/06	CD	1	50 x .25 x .25	wire, shared with J20-c11	0	0	NE	15	12	13	J20_33 - #015 / J20_33a - #036	1/19/06	BAM	YES	TF	01/19/06	YES	RVW	01/19/06
J20_34	421481.2016	3863166.214	88.5	83.5	8.7		J20_34	18-Sep-2005					1/8/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
J20_5	421478.7582	3863142.145	80.5	4.5	9.6		J20_05	18-Sep-2005	18	2.6	5	3	1/8/06	HOTROCK	3	6 x 5 x 3	1 ea hotrock	0	0			1	2.50	J20_5 - #012	1/11/06	BAM	YES	RVW	01/16/06	YES	RVW	01/16/06
J20_6	421480.1207	3863142.603	85	6	4.0		J20_06	18-Sep-2005					1/8/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
J20_7	421479.6721	3863143.212	83.5	8	4.0		J20_07	18-Sep-2005					1/8/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
J20_9	421481.9566	3863145.041	91	14	16.4		J20_09	18-Sep-2005	6	8	4	8	1/8/06	CD	25	6 x .25 x .25	large nail	0	0	NE	45	6	6	J20_9 - #013	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
J20_C1	421484.696	3863140.777	100	0	71.3	11.843617	J20_02	18-Sep-2005	85	10.4	0	0	1/8/06	CD	50	18 x .25 x .25	3 ea barbed wire 18 in long	0	0	E	0	3	3	J20_C1 - #016	1/11/06	BAM	YES	RVW	01/16/06	YES	RVW	01/16/06
J20_C10	421483.7886	3863161.493	97	68	81.4	11.433596	J20_30	18-Sep-2005	83	14.5	0	0	1/8/06	MD	1	5 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	SW	0	0	1.5	J20_C10 - #012	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
J20_C11	421482.4198	3863166.519	92.5	84.5		5.5467334		18-Sep-2005	63	5.9	2	0	1/8/06	CD	1	50 x .25 x .25	wire	0	0	NE	15	6	7	J20_C11 - #015 / J20_C11a - #036	1/19/06	BAM	YES	TF	01/19/06	YES	RVW	01/19/06
J20_C2	421479.759	3863141.383	90.5	2		4.8710666		18-Sep-2005	56	4.2	10	-10	1/8/06	MD	1	2.5 x 1 x .5	fuze, grenade, hand, M205 and 24 in of barbed wire	0	0	N	0	0	0.5	J20_C2 - #053	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
J20_C3	421477.8453	3863144.48	77.5	12	29.6	5.5125208	J20_08	18-Sep-2005	73	12.2	12	6	1/8/06	MD	1	5 x 2.75 x 2.75	grenade, hand, prac, MK2 (2ea)	0	0	W	0	2	2.5	J20_C3 - #010	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
J20_C4	421482.8709	3863147.478	94	22	118.2	6.9843092	J20_12	18-Sep-2005	180	13.6	8	14	1/8/06	CD	1	5 x 4 x .25	1 ea horse shoe	0	0	NA	0	1	1	J20_C4 - #035	1/19/06	BAM	YES	TF	01/19/06	YES	RVW	01/19/06
J20_C5	421481.0441	3863148.544	88	25.5	13.4	4.2905531	J20_15	18-Sep-2005					1/8/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
J20_C7	421476.7612	3863152.046	80.5	37	97.9	11.006407	J20_19	18-Sep-2005	115	15.7	0	5	1/8/06	MD	1	5 x 2.75 x 2.75	grenade, hand, prac, MK2	0	13	W	0	.25	1.5	J20_C7 - #016	1/19/06	BAM	YES	TF	01/19/06	YES	RVW	01/19/06
J20_C8	421484.2442	3863157.38	98.5	54.5	11.1	5.7418838		18-Sep-2005					1/8/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
J20_C9	421481.9614	3863161.035	91	66.5	41.2	5.5013251	J20_29	18-Sep-2005	49	8.4	0	0	1/8/06	MD	1	5 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	S	0	1	2.5	J20_C9 - #013	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
J20_QA28	421481.0473	3863159.359	88	61	8.2			18-Sep-2005					01/16/06	HOTROCK	0	25 x 17		0	0			0	0	J20_QA28 - #032	1/19/06	BAM	YES	RVW	01/23/06	YES	RVW	01/23/06

* Fill in Units (mV, nT/m, ppt, etc)
** Opt Field - refer to SOW for applicability.
*** UXO, DMM, MC-E (Munit Const-Exp), MD (Munit Debris), CD (Cult Debris) and MC-NE (Munit Const-Non Exp), SA (small arms), NC (no contact) OT (other)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THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
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(See Target Pick List For Response and Location)
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Scale 1:150
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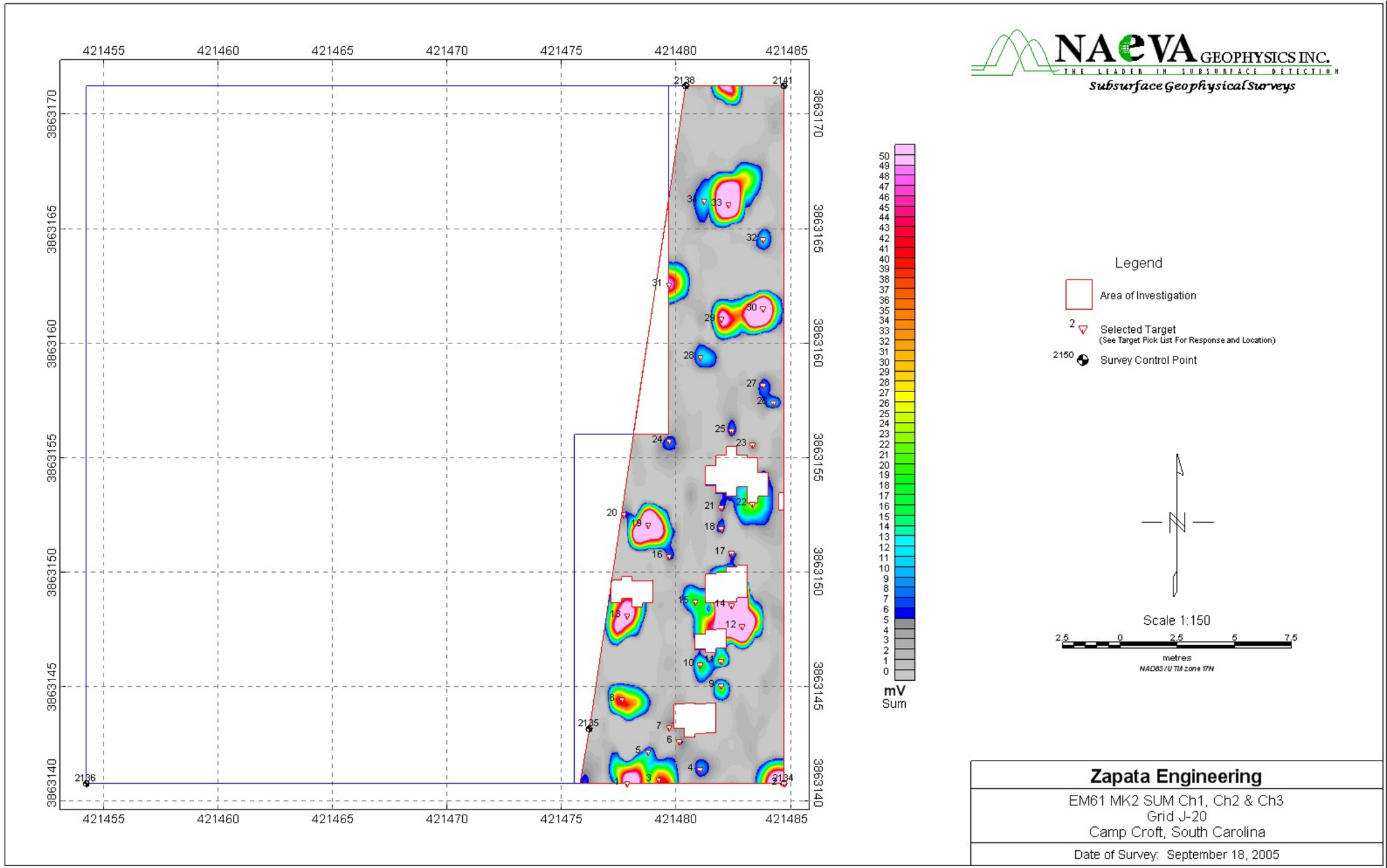
Zapata Engineering
EM61 MK2 Chi2
Grid J-20
Camp Croft, South Carolina
Date of Survey: September 18, 2005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NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
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Area of Investigation
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Survey Control Point
mV
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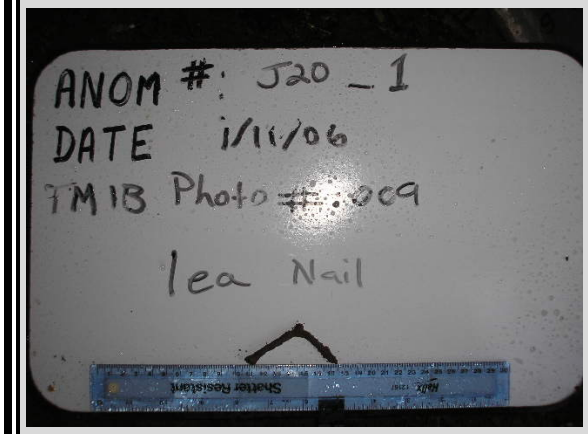
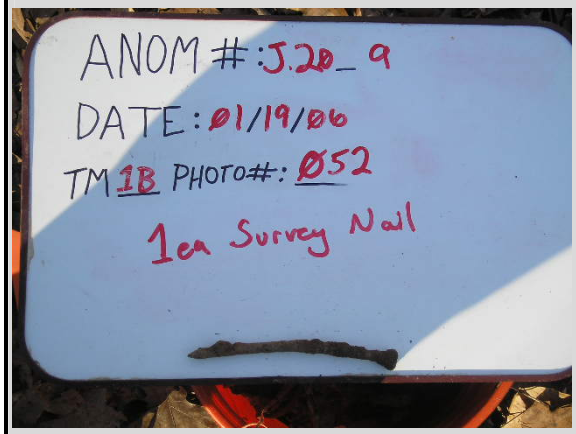
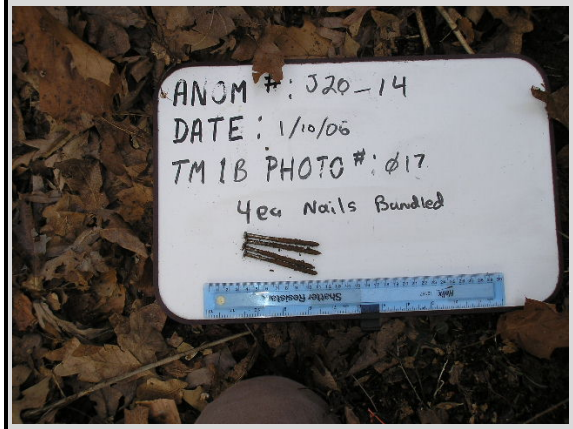
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid J-20
Camp Croft, South Carolina
Date of Survey: September 18, 2005

GRID J20 DIG PHOTOS







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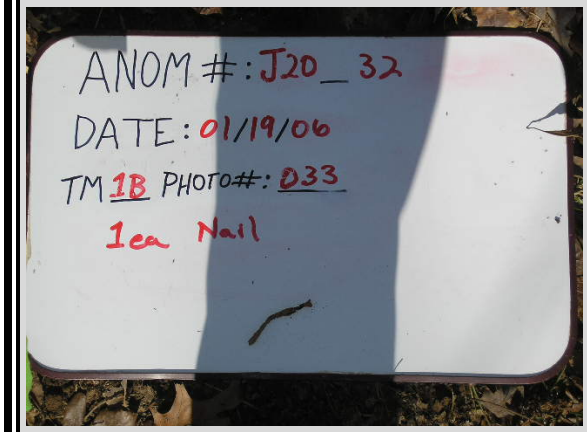

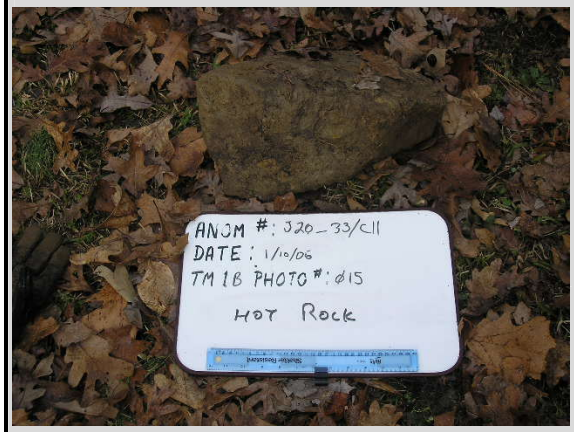

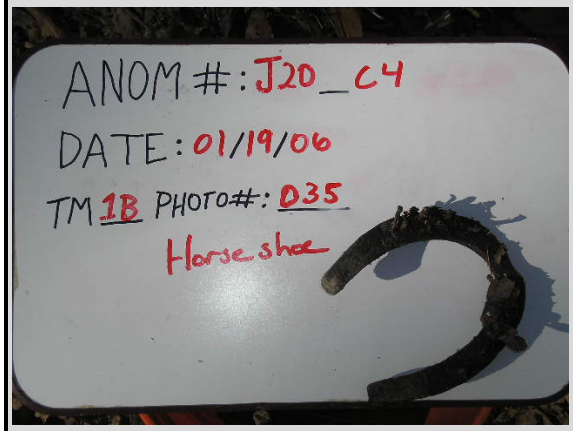

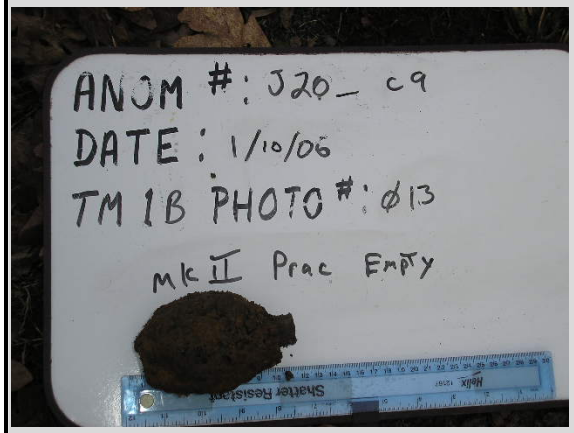

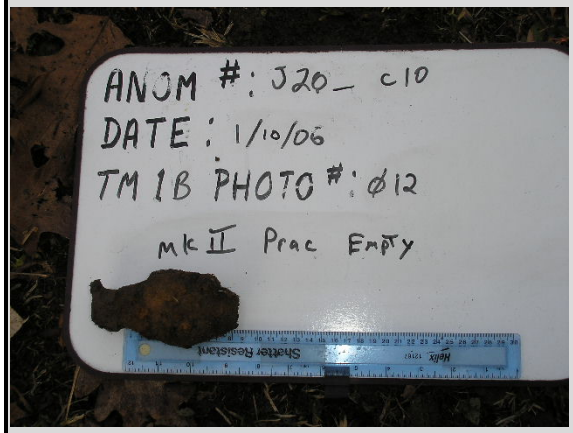

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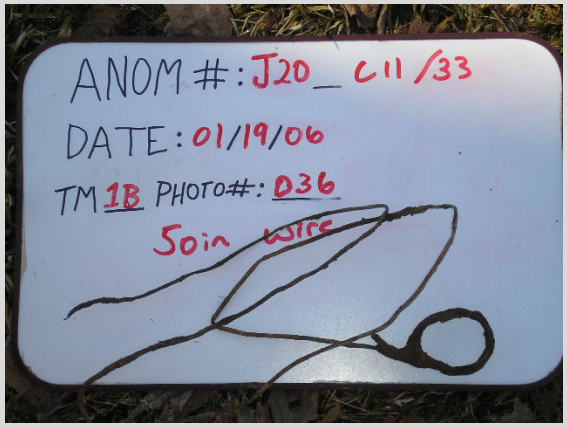
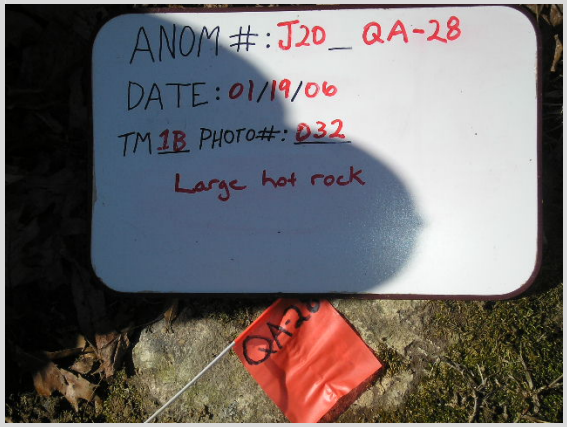




GRID J20_5 PHOTO

GRID J20_10 PHOTO

GRID J20_C1 PHOTO

GRID J20_C3 PHOTO

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase II
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: J21
Field Book ID:

Geophysical Contrac ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center I Brendan Slater
COE Project Enginee
COE Geophysicist: Andrew Schwartz

Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

	Original Survey								Reacquisition Survey						Dig Results													Post Dig UXO QC Results			Post Dig Geophysical QC		
											Offset					Offset				Depth (in)													
Unique Target ID	Easting Coord. (m)	Northing Coord. (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ****	Approx. weight (lbs-oz)	Dimensions: Length, Width, Height (in)	Comments	X Distance (in)	Y Distance (in)	Orientation of Nose (Azimuth deg) **	Inclination of Nose (deg) **	Top of Item	Center of Mass	Digital Photo Filename **	Date	Team Leader Initials	Excavation Hole Cleared?	UXO QC Spec. Initials	Date	Agreement between Dig Results & Geophysical Data? (G=good, A=avg, P=poor,	Geophysicist QC Initials	Date
J21_20	421497.4925	3863150.218	42	31	13.8		J21_20	18-Sep-2005	25	3	0	-12	1/6/06	CD	.25	12 x .25 x .25	barbed wire	0	0	E	0	25	25	J21_20 - #019	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_24	421491.4007	3863151.362	22	34.75	24.9		J21_24	18-Sep-2005	34	5	-12	0	1/6/06	CD	1	18 x .25 x .25	bucket and wire handle	0	0	NA	0	11	11	J21_24 - #043	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_25	421497.4935	3863152.35	42	38	27.2		J21_25	18-Sep-2005	33	4.5	6	-6	1/6/06	MD	1	5 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	NE	-15	4	5	J21_25 - #017	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_27	421487.8983	3863153.266	10.5	41	27.5		J21_27	18-Sep-2005	30	3	-18	30	1/6/06	CD	.25	18 x .25 x .25	wire located between j21-27 and j21-30	-8	9	NW	0	25	25	J21_27 - #024	1/19/06	BAM	YES	RVW	01/23/06	YES	RVW	01/23/06
J21_30	421488.3554	3863153.799	12	42.75	16.4		J21_30	18-Sep-2005	50	3	-12	6	1/6/06	CD	.25	18 x .25 x .25	wire	8	-9	NW	0	25	25	J21_30 - #024	1/19/06	BAM	YES	RVW	01/23/06	YES	RVW	01/23/06
J21_32	421500.2364	3863154.786	51	46	12.0		J21_32	18-Sep-2005	22	7.5	-12	-12	1/6/06	CD	.25	32 x .25 x .25	multiple wires totaling 32 in	0	15	SW	15	8	8	J21_32 - #052	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_38	421486.9853	3863155.856	7.5	49.5	34.5		J21_38	18-Sep-2005	40	6	12	0	1/6/06	CD	.5	30 x .25 x .25	RESPONSE AFTER WIRE REMOVED	0	0	S	0	25	25	J21_38 - #023	1/19/06	BAM	NO	RVW	01/23/06	YES	DRA	02/16/06
J21_4	421511.6604	3863140.776	88.5	0	68.8		J21_04	18-Sep-2005	83	0.5	-6	0	1/7/06	CD	.25	3 x .25 x .25	1 ea nail	0	0	W	0	0	0	J21_4 - #066	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_41	421508.4628	3863156.914	78	53	13.4		J21_41	18-Sep-2005	18	4	0	18	1/6/06	CD	.5	11 x .5 x .5	1 ea 11 in nail, shared with j21-c10	0	0	SW	15	2	2	J21_41 - #049	1/12/06	BAM	YES	RVW	01/16/06	YES	RVW	01/16/06
J21_42	421489.2707	3863157.531	15	55	29.8		J21_42	18-Sep-2005	40	6	0	0	1/6/06	CD	.25	3 x .25 x .25	4 ea nails	0	0	NA	90	0	1.5	J21_42 - #021	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_45	421506.1787	3863158.133	70.5	57	23.2		J21_45	18-Sep-2005	43	8.5	0	0	1/6/06	CD	.25	3 x .25 x .25	4 ea nails	0	0	NA	90	0	1.5	J21_45 - #048	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_5	421512.5642	3863140.776	91.5	0	34.2		J21_05	18-Sep-2005	114	1.3	-10	-5	1/7/06	CD	.25	3 x .25 x .25	1 ea nail	0	0	SW	0	25	25	J21_5 - #064 / J21_5a - #065	1/11/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_51	421485.6155	3863159.36	3	61	33.6		J21_51	18-Sep-2005	40	4	0	0	1/6/06	CD	.5	40 x .25 x .25	barbed wire	0	10	E	0	5	5	J21_51 - #028	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_57	421503.4382	3863160.418	61.5	64.5	52.3		J21_57	18-Sep-2005	34	5.1	0	0	1/7/06	MD	1	4 x 2.75 x 2.75	grenade, hand, prac, MK2	0	12	SE	0	0	1	J21_57 - #046	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_58	421507.5516	3863161.33	75	67.5	48.3		J21_58	18-Sep-2005	60	3.2	0	16	1/7/06	CD	.25	24 x .25 x .25	2 ea wire totaling .24 in	0	0	SE	0	7	7	J21_58 - #045	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_59	421491.5571	3863161.642	22.5	68.5	14.4			18-Sep-2005						CD	0.5	1 x 1 x 1	Piece of steel	0	0	NA	NA	5	5		01/24/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_64	421491.5577	3863163.165	22.5	73.5	11.2		J21_64	18-Sep-2005	52	6	6	0	1/6/06	MD	1	.4 x .5 x .25	multiple grenade spoons	0	0	NA	0	12	12	J21_64 - #030	1/19/06	BAM	YES	TF	01/19/06	YES	RVW	01/19/06
J21_68	421512.1235	3863164.221	90	77	14.3		J21_68	18-Sep-2005	30	6.2	-10	-2	1/7/06	CD	2	3.5 x 2.75 x 2.75	1 ea 90 degree elbow QA item	0	14	NA	15	28	29	J21_68 - #006	1/16/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_72	421490.6448	3863165.907	19.5	82.5	4.6		J21_72	18-Sep-2005					1/7/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
J21_73	421490.1881	3863166.821	18	85.9	38.2		J21_73	18-Sep-2005	22	7	-6	0	1/6/06	CD	20	.8 x .20 x .20	large nail	0	0	NA	90	0	4		1/19/06	BAM	YES	RVW	01/20/06	YES	RVW	01/20/06
J21_79	421502.072	3863169.098	57	93	14.7		J21_79	18-Sep-2005	30	7.2	3	13	1/7/06	CD	.25	11 x .25 x .25	1 ea barbed wire between j21-79 , and j21-83	1	10	SE	0	0	0	J21_79 - #047	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_81	421513.0411	3863169.244	93	93.5	14.6		J21_81	18-Sep-2005	16	3.5	-4	14	1/7/06	CD	.25	6 x .25 x .25	1 ea 6 in wire	0	0	NA	0	1	1	J21_81 - #005	1/16/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_83	421501.6153	3863169.708	55.5	95	9.1		J21_83	18-Sep-2005	39	8.9	7	-2	1/7/06	CD	.25	10 x .25 x .25	1 ea 10 in barbed wire	-3	-10	NE	0	0	0	J21_83 - #047	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_84	421511.3662	3863170.615	87.5	98	13.3		J21_84	18-Sep-2005	16	2.3	15	0	1/7/06	CD	.25	.5 x .5 x .5	1 ea metal bearing	0	0	NA	0	3	3	J21_84 - #042	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_9	421493.3765	3863141.386	26.5	2	19.4		J21_09	18-Sep-2005	27	3	0	-12	1/6/06	MD	1	5 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	NE	30	10	11	J21_9 - #026	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_A.1	421516.827	3863145.047	91.5	0				18-Sep-2005						MD	.25	1 x 1 x .25	grenade fuze ring			NA	0	2	2	J21_A.1 - #039	1/27/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
J21_A.2	421515.9126	3863146.704	91.5	0				18-Sep-2005						CD	.25	.4 x .25 x .25	nail			NA	0	2	2	J21_A.2 - #040	1/27/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
J21_A.3	421515.3031	3863150.533	91.5	0				18-Sep-2005						CD	.25	.4 x .25 x .25	nail			NA	0	3	3	J21_A.3 - #041	1/27/06	RLY	NA	DRA	02/21/06	NA	DRA	02/21/06
J21_C1	421484.696	3863140.777	100	0	71.3	11.843617	J21_01	18-Sep-2005	36	9.1	0	0	1/7/06	CD	.25	.6 x .25 x .25	1 ea 6 in nail	0	0	NA	90	0	3	J21_C1 - #029	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_C10	421509.3773	3863157.828	81	56	18.9	6.3928452	J21_44	18-Sep-2005	18	4	0	-16	1/6/06	CD	.5	11 x .5 x .5	1 ea 11 in nail	0	0	SW	15	2	2	J21_C10 - #049	1/12/06	BAM	YES	RVW	01/16/06	YES	RVW	01/16/06
J21_C11	421509.835	3863158.893	82.5	59.5	10.8	5.1297235	J21_47	18-Sep-2005	23	8.5	0	0	1/6/06	CD	.25	3 x 2 x 2	1 ea aluminum can, plus sheet metal, not removed	0	0	E	0	8	9	J21_C11 - #050	1/12/06	BAM	YES	TF	01/19/06	YES	RVW	01/19/06
J21_C12	421486.5294	3863159.207	6	60.5	80.8	9.9055309	J21_50	18-Sep-2005	86	7.5	0	0	1/6/06	CD	.5	.40 x .25 x .25	barbed wire between j21-c12 and j21-51	0	-10	E	0	.5	.5	J21_C12 - #028	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_C13	421503.8951	3863160.266	63	64		5.8550701		18-Sep-2005	79	11.6	-6	6	1/7/06	CD	.25	1.25 x 1.25 x .25	2 pieces of wire	0	0	NA	0	25	25	J21_C13 - #015	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_C14	421505.266	3863160.265	67.5	64	36.2	7.3922727	J21_55	18-Sep-2005	7	1.6	0	0	1/7/06	NC			NC DURING DIG - item QCed with em-61								1/19/06	BAM	YES	TF	01/19/06	YES	RVW	01/19/06
J21_C15	421514.8627	3863160.261	99	64	3.8	5.5827		18-Sep-2005	7.3	2.8	6	-6	1/7/06	CD	.25	.5 x .25 x .25	1 ea wire nut	0	0	NA	0	6	6	J21_C15 - #001	1/16/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_C16	421512.5796	3863162.85	91.5	72.5	8.6	5.3967		18-Sep-2005	45	17.8	8	-3	1/7/06	CD	.25	3 x 3 x 3	2 ea aluminum beer cans	0	0	E	15	4	5.25	J21_C16 - #002	1/19/06	BAM	YES	TF	01/19/06	YES	RVW	01/19/06
J21_C17	421511.2089	3863163.308	87	74	8.2	4.5498		18-Sep-2005	25	10.2	10	0	1/7/06	CD	.25	5 x 3 x .25	1 ea aluminum beer can	0	0	NA	15	6	7	J21_C17 - #003	1/16/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_C18	421507.5531	3863163.614	75	75	12.1	10.730912		18-Sep-2005					1/7/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
J21_C19	421486.8357	3863164.234	7	77	51.8	6.7478299	J21_69	18-Sep-2005	62	9	0	0	1/6/06	MD	1	4 x 2.75 x 2.75	grenade, hand, prac, MK2	-3	-13	E	15	10	11	J21_C19 - #022	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_C20	421512.1239	3863164.83	90	79		5.2244		18-Sep-2005	23	9.7	-10	4	1/7/06	CD	.25	5 x 3 x 3	1 ea aluminum beer can	0	0	NA	0	5	6.25	J21_C20 - #004	1/16/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_C21	421493.3878	3863168.19	26.5	90	21.5	4.0319443	J21_77	18-Sep-2005	54	10.3	-6	10	1/7/06	CD	.25	.4 x .25 x .25	4 ea nails	0	0	NA	90	0	2	J21_C21 - #012	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_C22	421502.5287	3863168.489	58.5	91	79.5	23.201965	J21_78	18-Sep-2005	16	5.2	13	2	1/7/06	CD	.75	.7 x .75 x .25	ox shoe	0	0	W	0	0	0	J21_C22 - #010	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

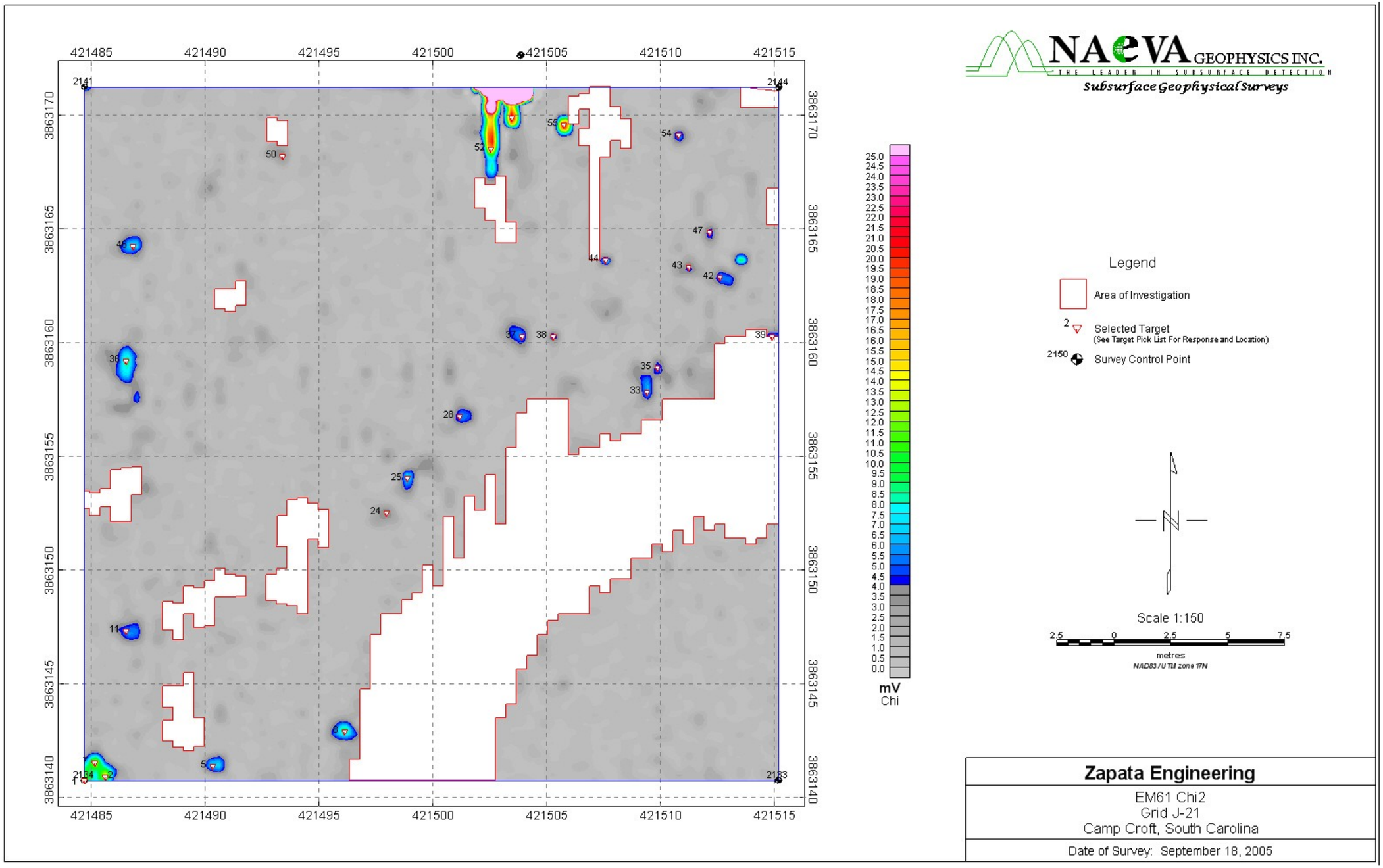
Project Name: Former Camp Croft, Phase II
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: J21
Field Book ID:

Geophysical Contrac: ZAPATA ENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center I: Brendan Slater
COE Project Enginee:
COE Geophysicist: Andrew Schwartz

Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

	Original Survey								Reacquisition Survey					Dig Results														Post-Dig UXO QC Results			Post-Dig Geophysical QC		
											Offset						Offset		Orientation of		Depth (in)												
Unique Target ID	Easting Coord. (m)	Northing Coord. (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Chi² Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Chi² Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs-oz)	Dimensions: Length, Width, Height (in)	Comments	X Distance (in)	Y Distance (in)	Nose (Azimuth deg) **	Inclination of Nose (deg) **	Top of Item	Center of Mass	Digital Photo Filename **	Date	Team Leader Initials	Excavation Hole Cleared?	UXO QC Spec. Initials	Date	Agreement between Dig Results & Geophysical Data? (G=good, A=avg, P=poor,	Geophysicist QC Initials	Date
J21_C23	421510.7558	3863169.093	85.5	93	4.5	6.3049517		18-Sep-2005	6	3.1	18	6	1/7/06	CD	.25	2 x .25 x .25	1 ea 2 in nail , and 2 ea hotrocks	0	0	E	0	.4	.4	J21_C23 - #041	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_C24	421505.7286	3863169.553	69	94.5	43.0	25.671274	J21_82	18-Sep-2005	145	71.6	10	4	1/7/06	CD	.5	10 x 9 x .25	1 ea metal can flat	0	0	SE	0	0	0	J21_C24 - #031	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_C3	421490.3308	3863141.386	18.5	2	10.8	6.7746334		18-Sep-2005	24	12	8	0	1/6/06	CD	.25	3 x 3 x .5	aluminum can	0	0	NA	0	1	1	J21_C3 - #025	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_C4	421485.1531	3863141.538	1.5	2.5		14.094275		18-Sep-2005	93	32.6	6	-6	1/7/06	CD	1	6 x 3 x .25	piece of steel	0	0	N	0	.5	1	J21_C4 - #027	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_C5	421496.1184	3863142.908	37.5	7	89.4	9.7651262	J21_13	18-Sep-2005	70	8.5	-6	0	1/6/06	CD	.25	3 x .25 x .25	3 ea nails - 37mV RESP AFTER EXCAVATION	0	0	NA	90	0	1.5	J21_C5 - #020	1/19/06	BAM	NO	RVW	01/25/06	YES	DRA	02/16/06
J21_C6	421486.5255	3863147.326	6	21.5	58.3	5.736588	J21_16	18-Sep-2005	84	9	0	18	1/6/06	MD	1	5 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	SW	0	.25	1.25	J21_C6 - #029	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_C8	421498.8652	3863154.025	46.5	43.5	29.2	7.6565137	J21_29	18-Sep-2005	50	9	0	0	1/6/06	MD	1	5 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	NE	15	.3	.4	J21_C8 - #016	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_C9	421501.1513	3863156.765	54	52.5	47.6	5.533947	J21_39	18-Sep-2005	68	9	0	0	1/6/06	MD	1	4 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	SW	0	0	1	J21_C9 - #051	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_QA23	421509.8299	3863151.129	82.5	34	20.8			18-Sep-2005					01/16/06	NC			checked with em-61								1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	1/27/06
J21_QA54	421495.6694	3863160.27	36	64	12.7			18-Sep-2005	16	4.8	0	-6	01/16/06	CD	.25	6 x .25 x .25	barbed wire	10	2	N	0	.25	.25	J21_QA54 - #018	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
J21_QA76	421509.8409	3863167.876	82.5	89	8.5			18-Sep-2005	13	1.3	-6	-6	01/16/06	CD	.25	8 x .25 x .25	large nail	0	0	NA	90	0	4		1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	

* Fill in Units (mV, nT/m, ppt, etc)
** Opt Field - refer to SOW for applicability.
*** UXO, DMM, MC-E (Munit Const-Exp), MD (Munit Debris), CD (Cult Debris) and MC-NE (Munit Const-Non Exp), SA (small arms), NC (no contact) OT (other)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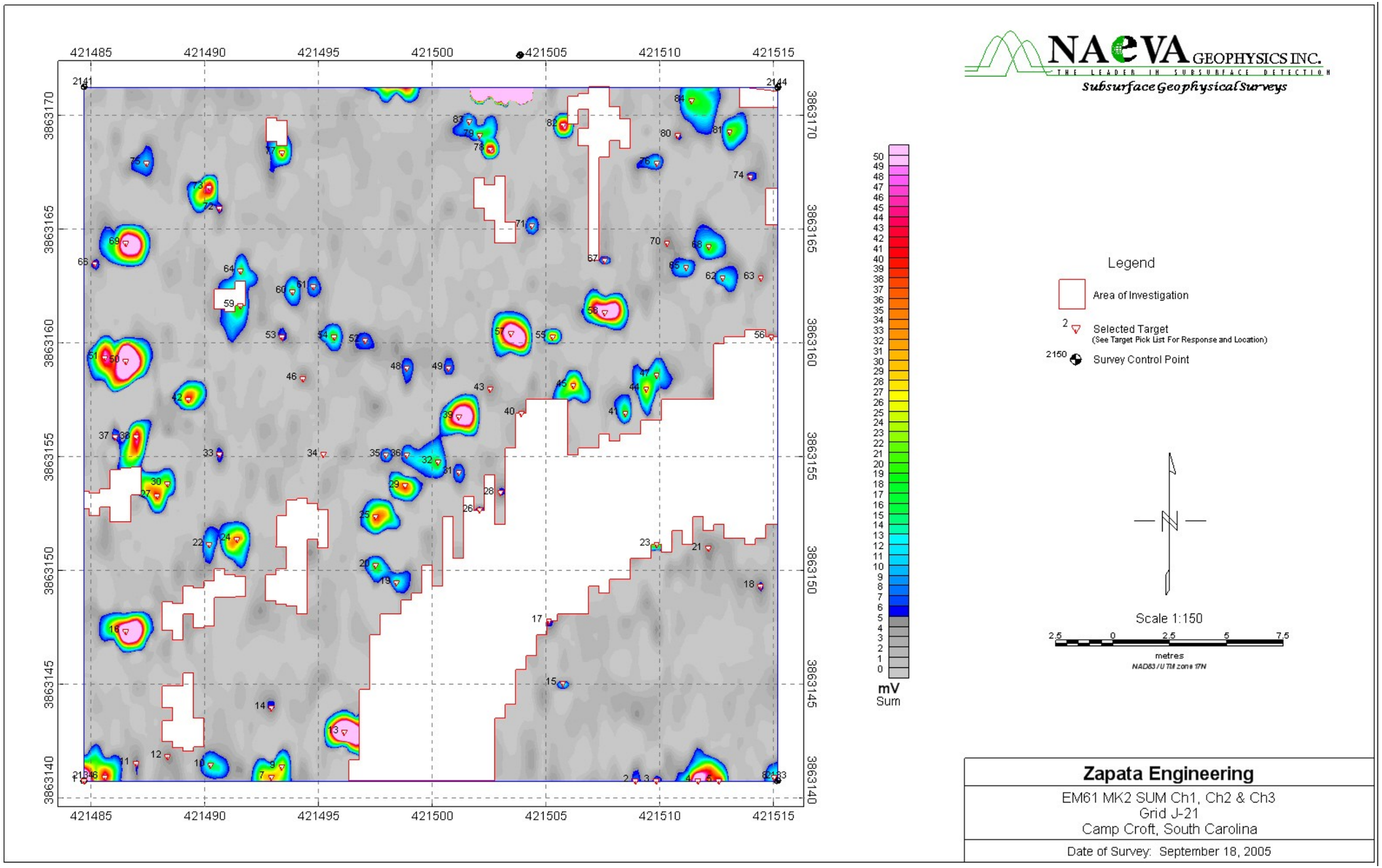
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
2 Selected Target
(See Target Pick List For Response and Location)
2150 Survey Control Point
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 Chi2
Grid J-21
Camp Croft, South Carolina
Date of Survey: September 18, 2005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2144
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
2 Selected Target
(See Target Pick List For Response and Location)
2150 Survey Control Point
mV
Sum
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid J-21
Camp Croft, South Carolina
Date of Survey: September 18, 2005

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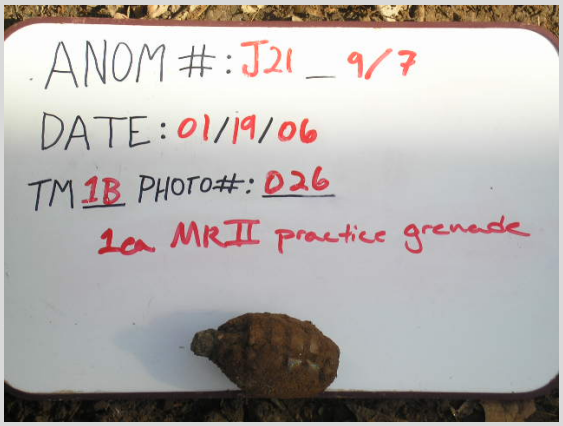

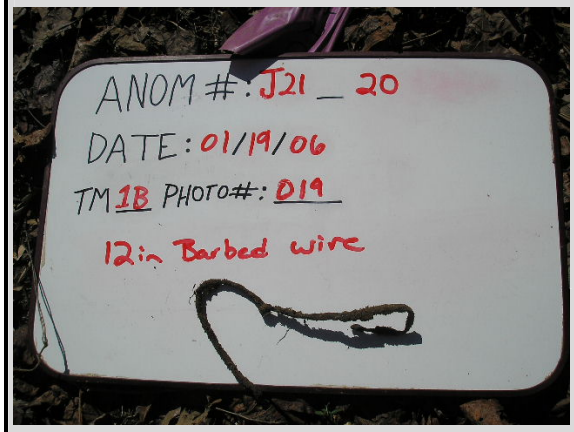

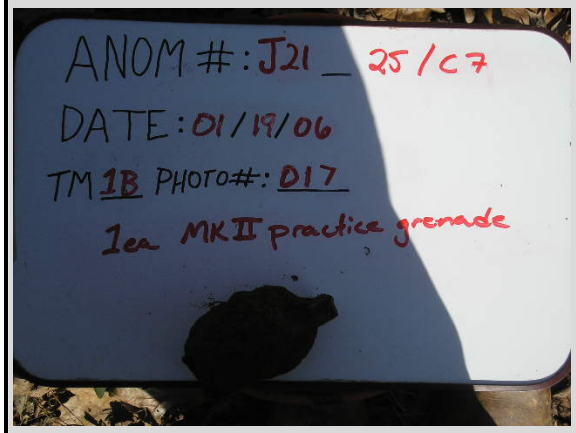

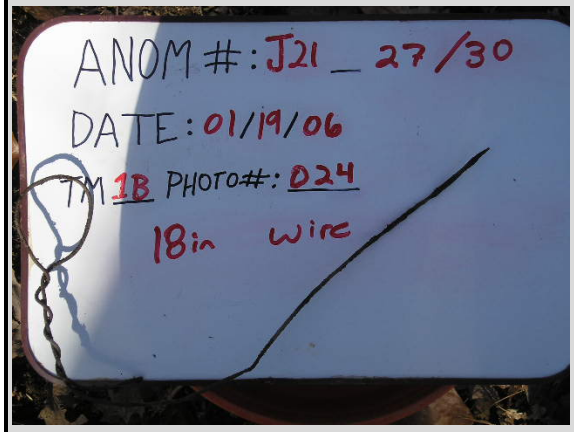

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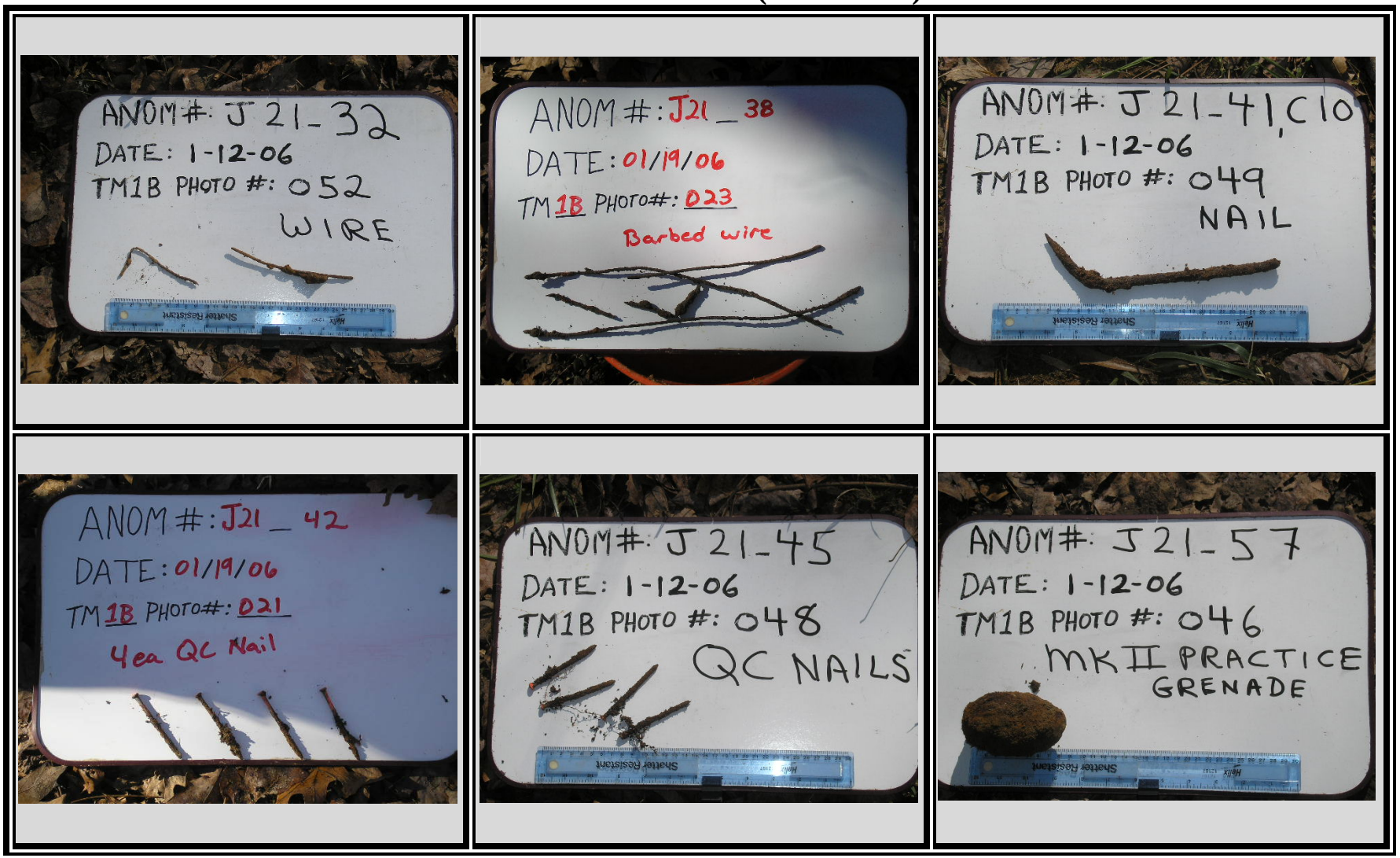

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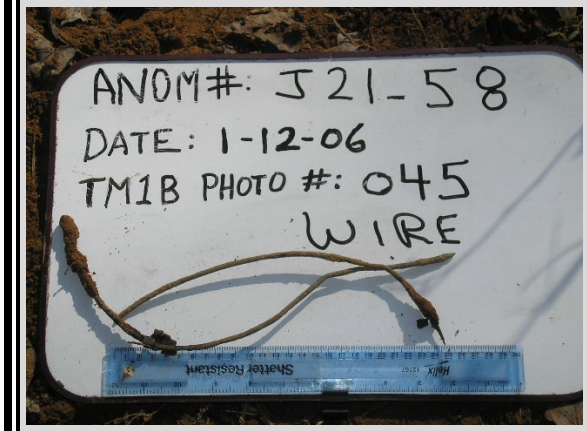

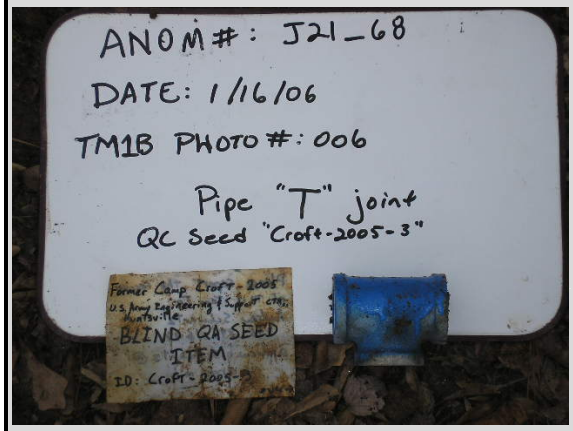

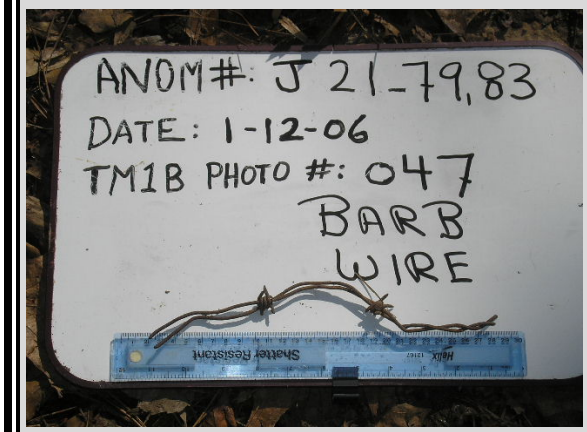

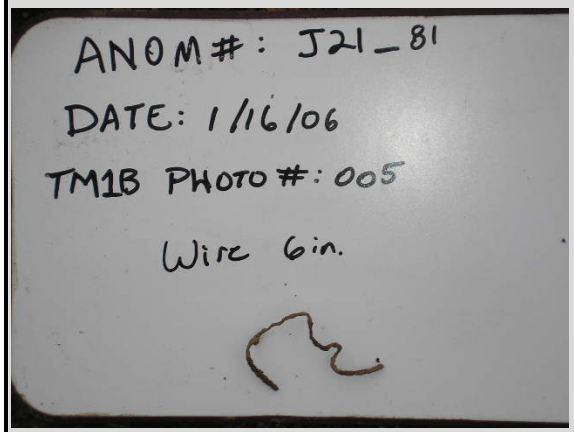

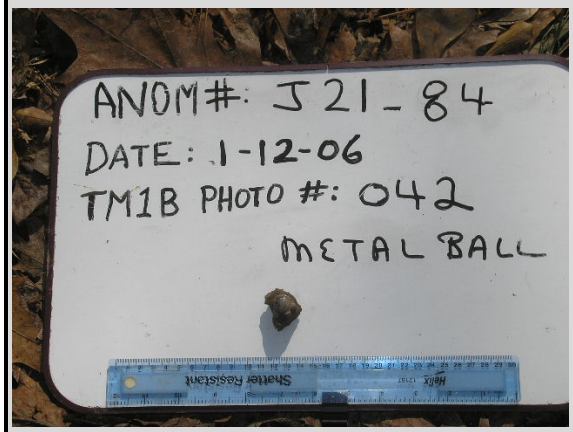

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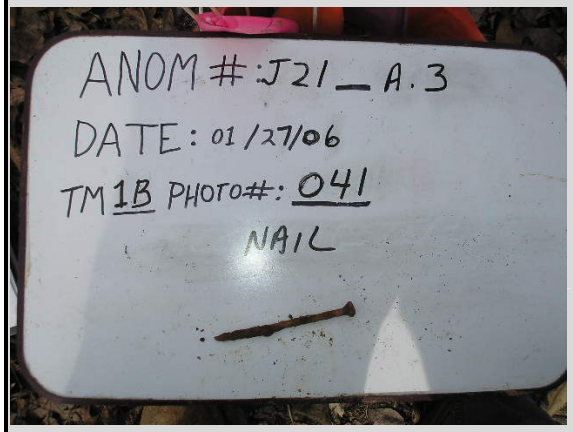

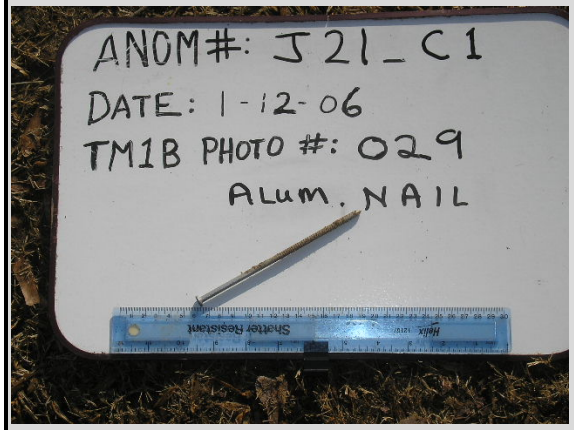

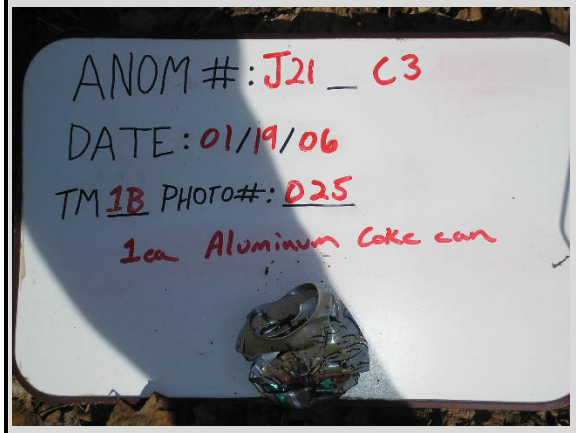

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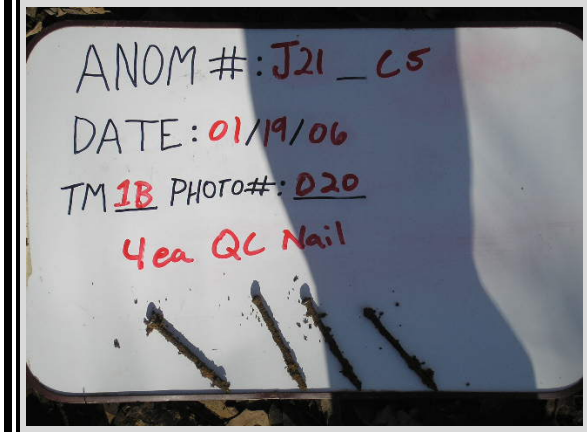

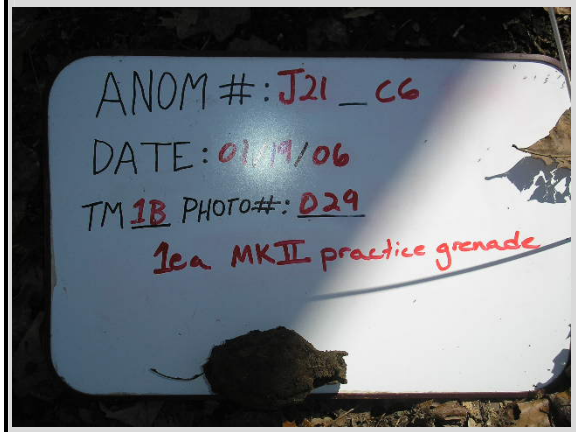

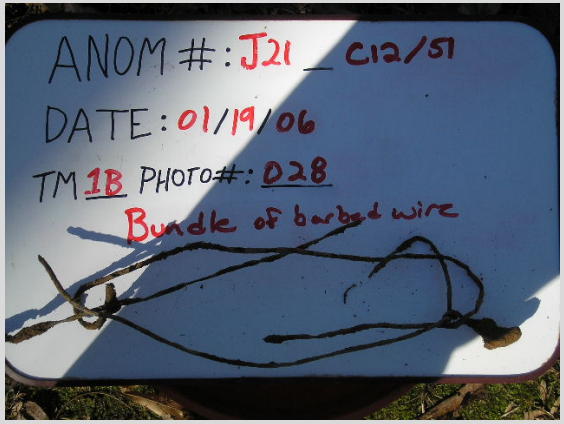

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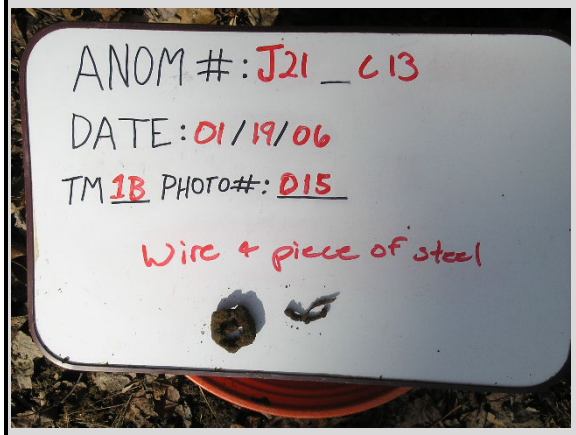

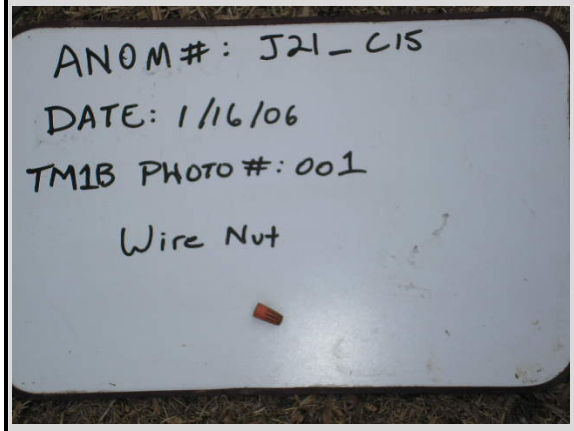

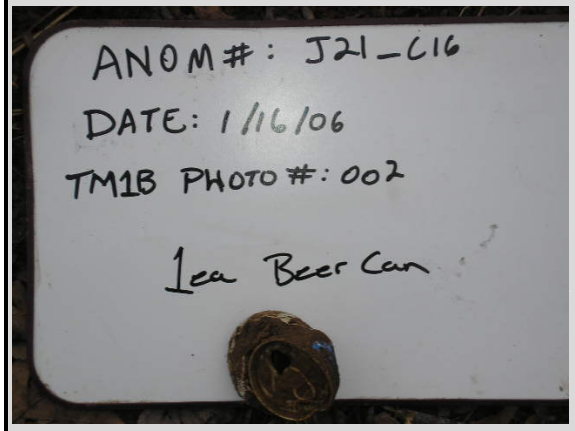

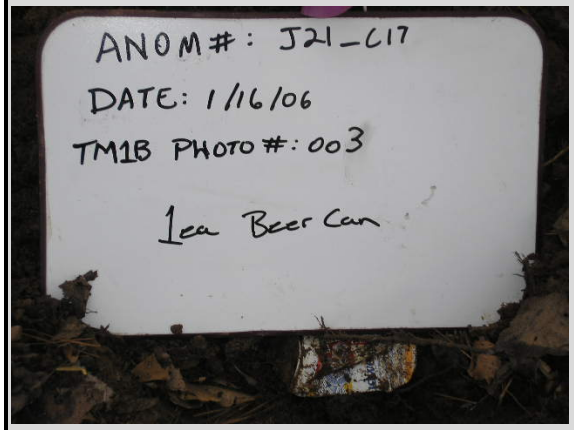

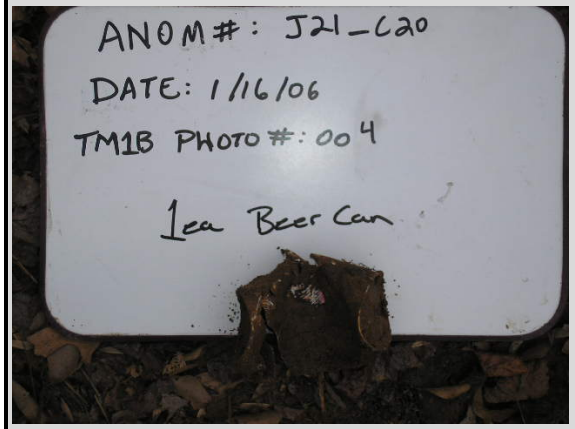

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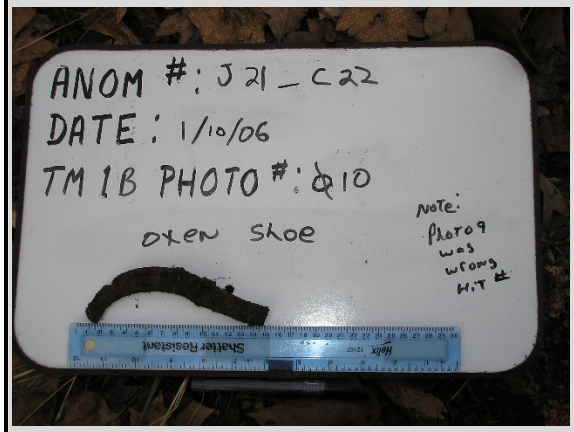
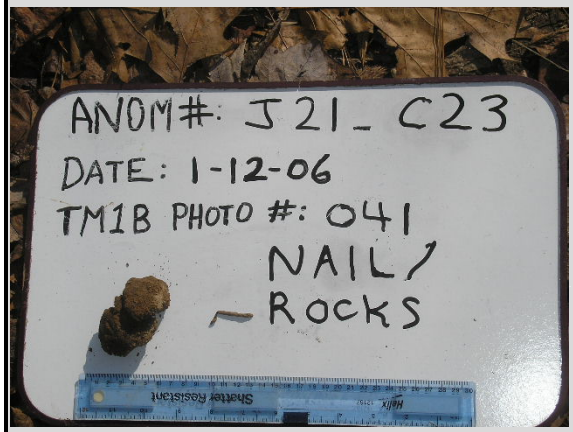
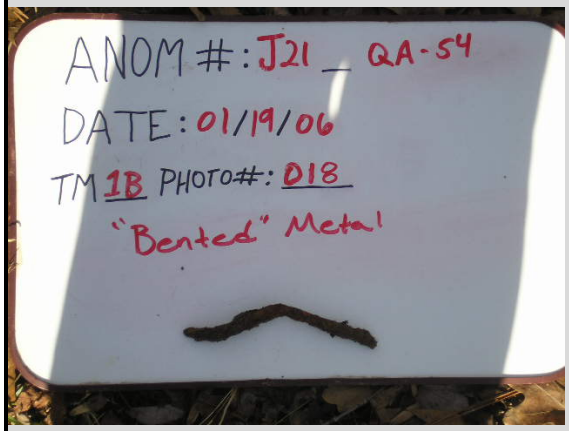






GRID J21_C24 PHOTO

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

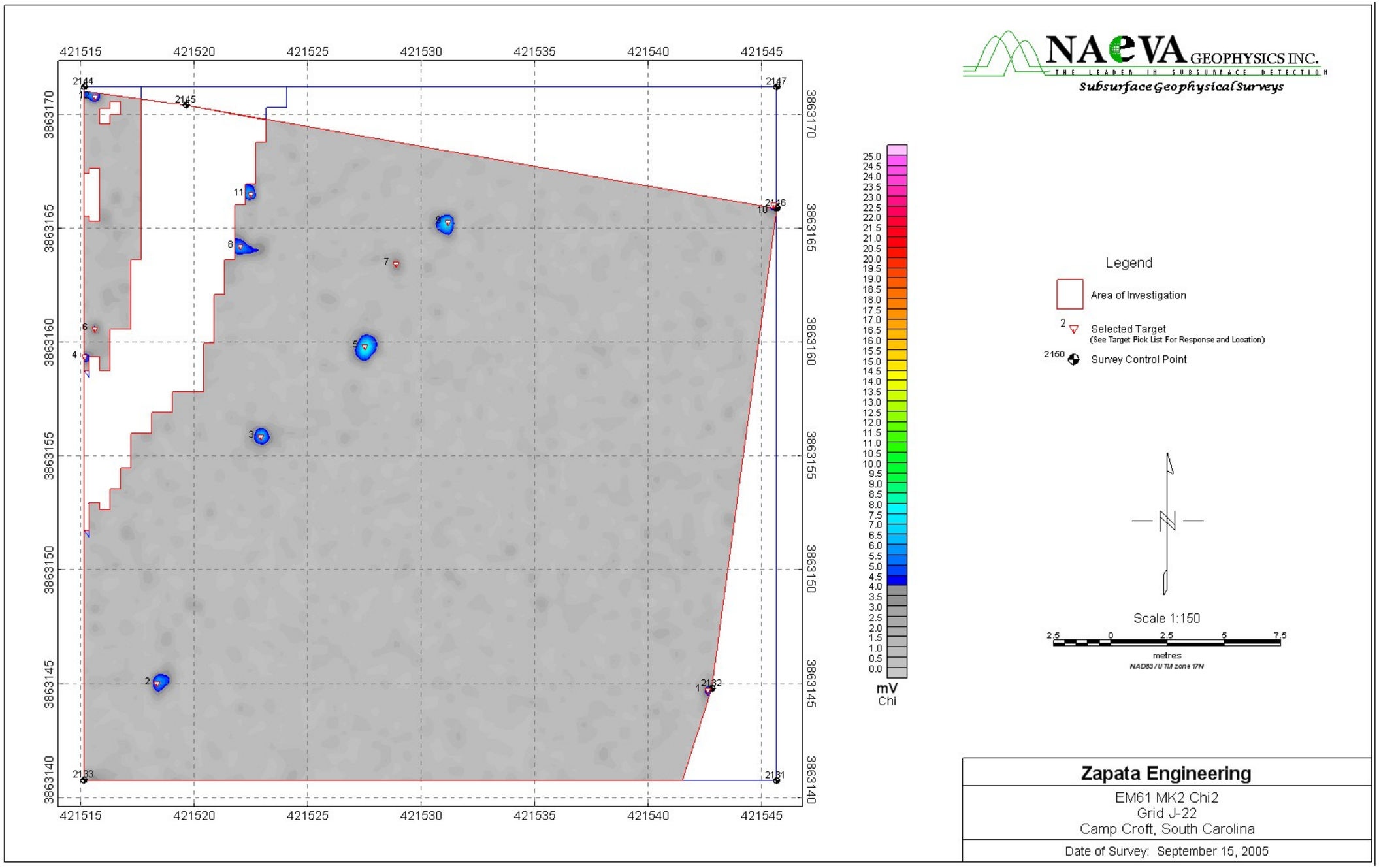
Project Name: Former Camp Croft, Phase II
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: J22
Field Book ID:

Geophysical Contrac: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center I: Brendan Slater
COE Project Enginee:
COE Geophysicist: Andrew Schwartz

Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

Unique Target ID	Original Survey								Reacquisition Survey					Dig Results												Post-Dig UXO QC Results			Post-Dig Geophysical QC		
											Offset					Offset		Orientation of		Depth (in)												
	Easting Coord. (m)	Northing Coord. (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs-oz)	Dimensions: Length, Width, Height (in)	Comments	X Distance (in)	Y Distance (in)	Nose (Azimuth deg) **	Inclination of Nose (deg) **	Top of Item	Center of Mass	Digital Photo Filename **	Date	Team Leader Initials	Excavation Hole Cleared?	UXO QC Spec. Initials	Date	Agreement between Dig Results & Geophysical Data? (C=good, A=avg, P=poor,	Geophysicist QC Initials	Date
J22_29	421523.7042	3863163.912	28	76	3.9		J22_29	15-Sep-2005					1/9/06	NC			No Contact During Reaquisition										NA	DRA	02/21/06	NA	DRA	02/21/06
J22_25	421522.9424	3863164.161	25.5	76.82	21.2		J22_25	15-Sep-2005	25	6	-4	12	1/9/06	UXO	1	4 x 2.75 x 2.75	grenade, hand, fragmentation, MK2	0	0	N	0	3	4	J22_25 - #035	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
J22_28	421516.0856	3863165.589	3	82.5	5.5			15-Sep-2005	10	2.5	-24	34	1/9/06	CD	25	14 x 10 x 1	1 ea foil lined bag	0	0	N	0	2	3	J22_28 - #039	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
J22_C1	421542.5918	3863144.71	90	13	65.6	5.4410739	J22_05	15-Sep-2005	93	8.1	2	2	1/9/06	CD	25	5 x .25 x .25	1 ea 5 in nail	0	0	NA	90	0	2.5	J22_C1 - #037	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
J22_C10	421545.4978	3863166.037	99.5	83	50.3	5.044693	J22_29	15-Sep-2005	85	7.6	8	0	1/9/06	CD	25	5 x .25 x .25	1 ea 5 in nail	0	0	NA	90	0	2.5	J22_C10 - #036	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
J22_C11	421522.4868	3863166.5	24	84.5	8.1	7.1624632		15-Sep-2005	53	27.9	-24	6	1/9/06	CD	25	7 x 3 x 2	1 ea aluminum beer can	0	0	N	0	5	6	J22_C11 - #038	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
J22_C12	421515.6322	3863170.765	1.5	98.5	41.2	6.3857284	J22_32	15-Sep-2005	38	9.2	-6	4	1/9/06	CD	25	3 x .25 x .25	4 ea nails	0	0	NA	90	0	1.5	J22_C12 - #044	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
J22_C2	421518.357	3863145.035	10.5	14	61.7	6.1032095	J22_06	15-Sep-2005	75	7.1	0	0	1/9/06	NC			item located under cart path							J22_C2 - #030	1/12/06	BAM	NA	DRA	02/21/06	NA	DRA	02/21/06
J22_C3	421522.9868	3863155.842	25.5	49.5	48.0	7.1157413	J22_14	15-Sep-2005	72	10.1	0	12	1/9/06	NC			item under cart path							J22_C3 - #031	1/12/06	BAM	NA	DRA	02/21/06	NA	DRA	02/21/06
J22_C4	421515.1667	3863159.348	0	61	3.8	5.1992149		15-Sep-2005					1/9/06	NC			checked with em-61								1/19/06	BAM	YES	RVW	01/23/06	YES	RVW	01/23/06
J22_C5	421527.5115	3863159.799	40.5	62.5	60.7	9.2484989	J22_17	15-Sep-2005	77	9.1	7	3	1/9/06	MD	1	5 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	SW	0	4	5	J22_C5 - #032	1/12/06	BAM	YES	RVW	01/16/06	YES	RVW	01/16/06
J22_C6	421515.6248	3863160.565	1.5	65	7.1	4.6739087		15-Sep-2005	7	4.2	0	20	1/9/06	CD	25	3 x 3 x .25	1 ea aluminum lid	0	0	NA	15	12	12	J22_C6 - #040	1/12/06	BAM	NA	DRA	02/21/06	YES	RVW	
J22_C8	421522.028	3863164.217	22.5	77	43.2	6.1523876	J22_24	15-Sep-2005	40	9.4	0	0	1/9/06	MD	2	4 x 2.75 x 2.75	grenade, hand, prac, MK2 (2ea)	0	0	E	15	5	6	J22_C8 - #034	1/12/06	BAM	YES	RVW	01/23/06	YES	RVW	01/23/06
J22_C9	421531.1724	3863165.28	52.5	80.5	49.7	8.2555809	J22_27	15-Sep-2005	78	12.2	0	5	1/9/06	MD	1	4 x 2.75 x 2.75	grenade, hand, prac, MK2	0	0	SW	0	4	5	J22_C9 - #033	1/12/06	BAM	YES	RVW	01/23/06	YES	RVW	01/23/06
J22_QA1	421515.153	3863140.776	0	0	14.1			15-Sep-2005	26	5.4	0	0	01/16/06	CD	25	3 x .25 x .25	grid nail just under new grid marker	0	0	NA	90	0	1.5	J22_QA1 - #009	1/19/06	BAM	NA	DRA	02/21/06	YES	RVW	
J22_QA30	421525.6069	3863166.347	34.5	84	11.9			15-Sep-2005	12	2.8	0	0	01/16/06	NC			target under cart path dug hole as close to path as possible							J22_QA30 - #011	1/19/06	BAM	YES	TF	01/19/06	YES	RVW	01/19/06

* Fill in Units (mV, nT/m, ppt, etc)
** Opt Field - refer to SOW for applicability
*** UXO, DMM, MC-E (Munit Const-Exp), MD (Munit Debris), CD (Cult Debris) and MC-NE (Munit Const-Non Exp), SA (small arms), NC (no contact) OT (other)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2133
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4
5
6
7
8
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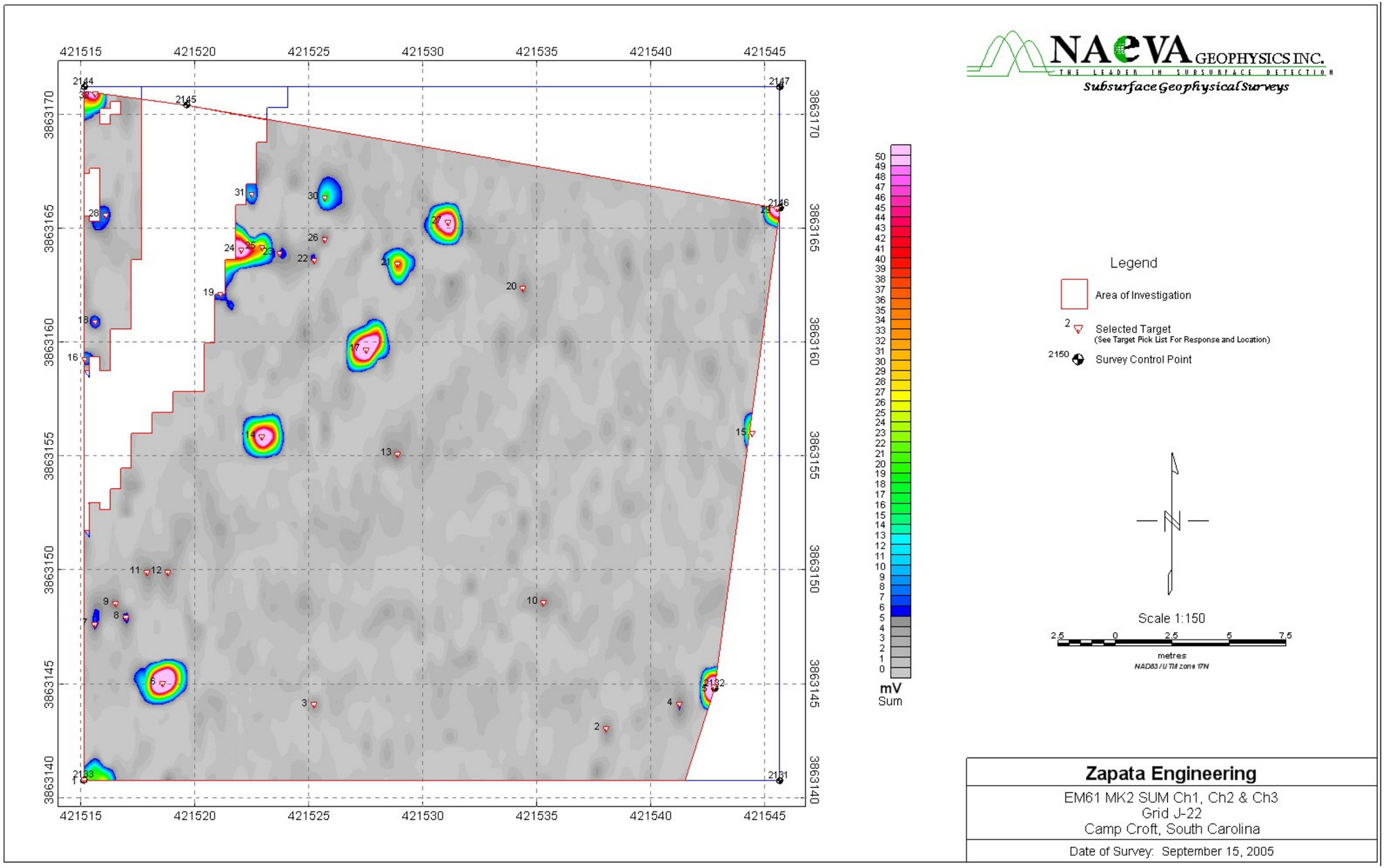
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
mV
Chi
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
Selected Target
(See Target Pick List For Response and Location)
Survey Control Point
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 Chi2
Grid J-22
Camp Croft, South Carolina
Date of Survey: September 15, 2005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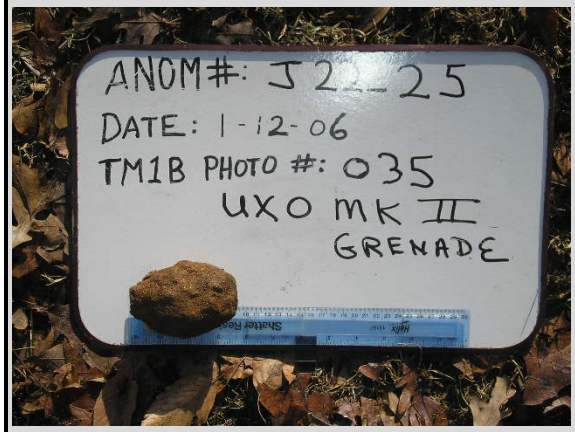
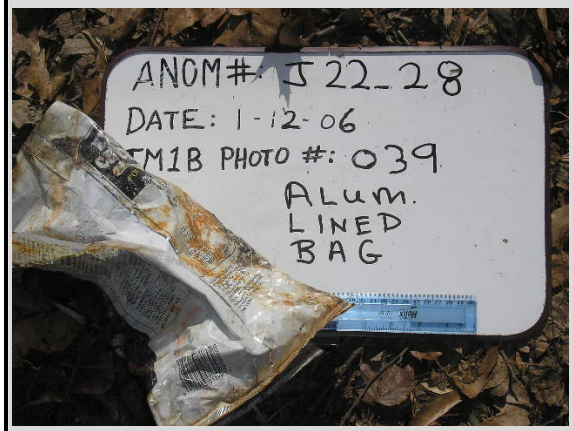
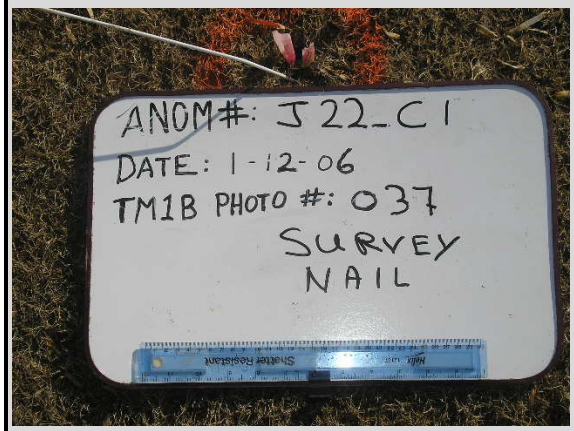
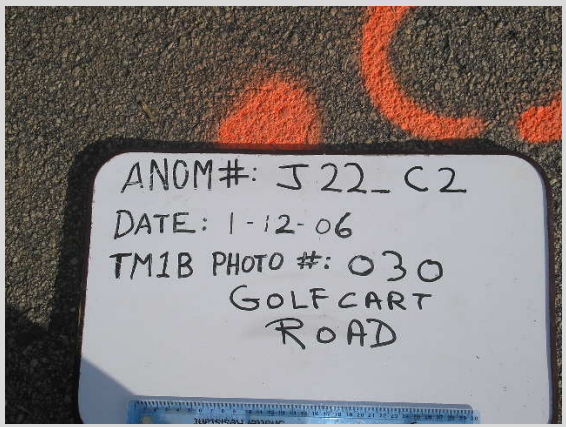
2144
2145
2147
2146
2132
2133
2131
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
Selected Target
(See Target Pick List For Response and Location)
Survey Control Point
mV
Sum
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid J-22
Camp Croft, South Carolina
Date of Survey: September 15, 2005

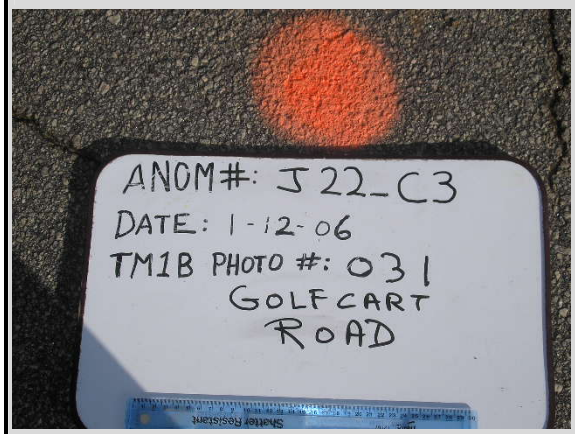
GRID J22 DIG PHOTOS





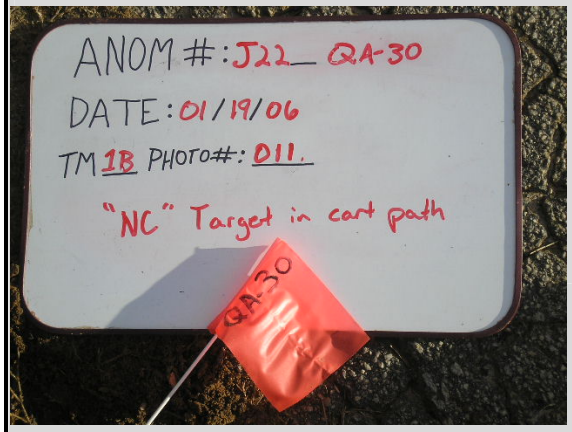






GRID J22 DIG PHOTOS (CONTINUED)

GRID J22 DIG PHOTOS (CONTINUED)



ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

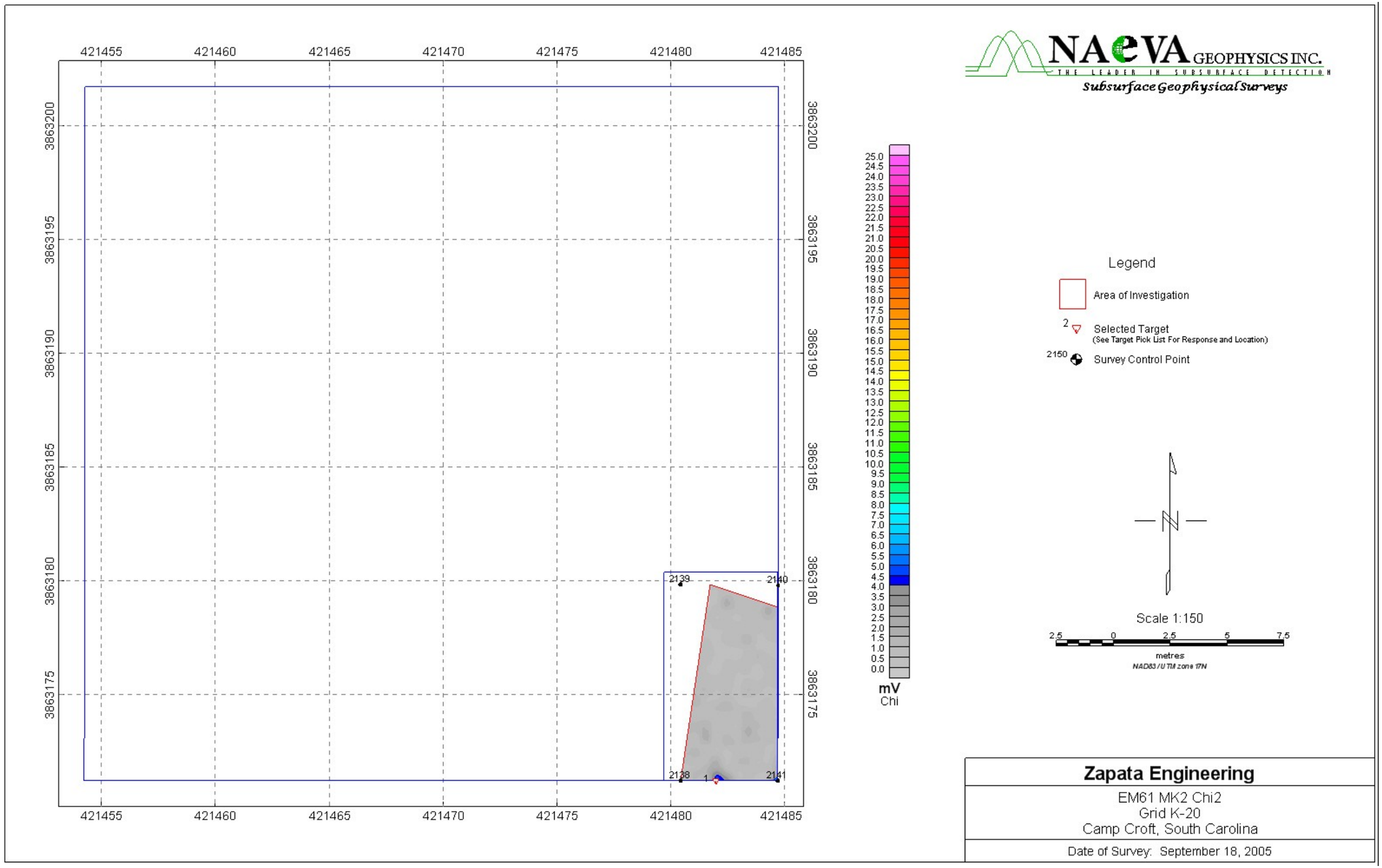
Project Name: Former Camp Croft, Phase II
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: K20
Field Book ID:

Geophysical Contrac ZAPATA ENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist David Smith
Site Geophysicist:
Field Team:
COE Design Center I Brendan Slater
COE Project Engine
COE Geophysicist: Andrew Schwartz

Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

	Original Survey								Reacquisition Survey					Dig Results												Post-Dig UXO QC Results			Post-Dig Geophysical QC		
											Offset					Offset		Orientation of		Depth (in)												
Unique Target ID	Easting Coord. (m)	Northing Coord. (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs-oz)	Dimensions: Length, Width, Height (in)	Comments	X Distance (in)	Y Distance (in)	Nose (Azimuth deg) **	Inclination of Nose (deg) **	Top of Item	Center of Mass	Digital Photo Filename **	Date	Team Leader Initials	Excavation Hole Cleared?	UXO QC Spec. Initials	Date	Agreement between Dig Results & Geophysical Data? (G=good, A=avg, P=poor,	Geophysicist QC Initials	Date
K20_C1	421481.9644	3863171.241	91	0	40.6	4.8775158	K20_1	18-Sep-2005	55	9.8	0	0	1/7/06	CD	25	3 x .25 x .25	4 nails	0	0	NA	90	0	1.5		1/10/06	bam	YES	RVW	01/23/06	YES	RVW	01/23/06

* Fill in Units (mV, nT/m, ppt, etc)
** Opt Field - refer to SOW for applicability.
*** UXO, DMM, MC-E (Munit Const-Exp), MD (Munit Debris), CD (Cult Debris) and MC-NE (Munit Const-Non Exp), SA (small arms), NC (no contact) OT (other)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5.5
5.0
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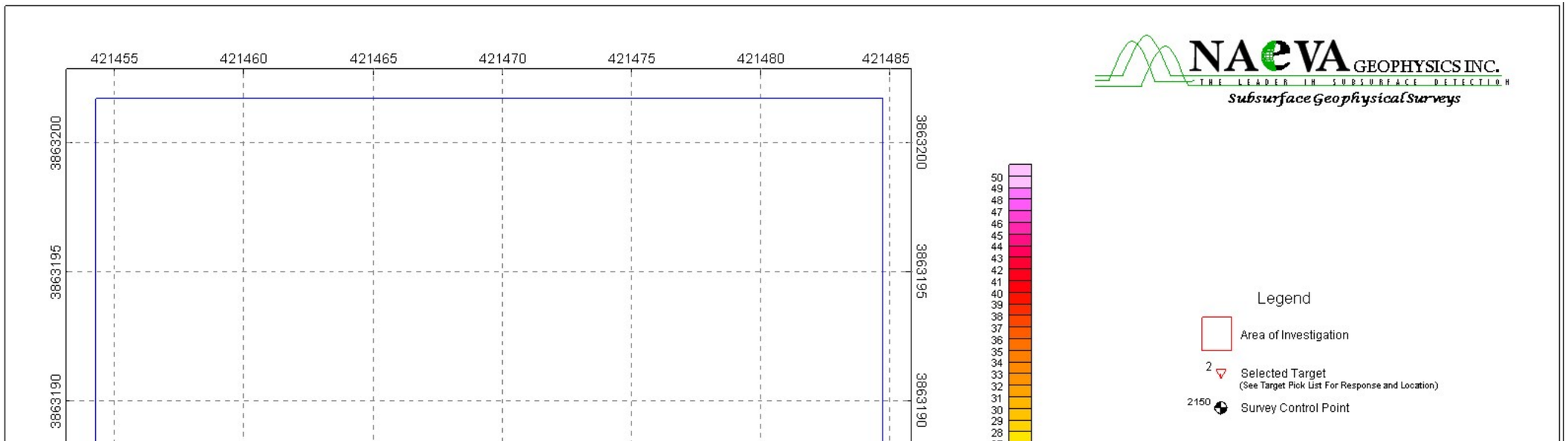
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
mV
Chi
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
2
Selected Target
(See Target Pick List For Response and Location)
2150
Survey Control Point
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 Chi2
Grid K-20
Camp Croft, South Carolina
Date of Survey: September 18, 2005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2139
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2141
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19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
mV
Sum
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
2
Selected Target
(See Target Pick List For Response and Location)
2150
Survey Control Point
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid K-20
Camp Croft, South Carolina
Date of Survey: September 18, 2005

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

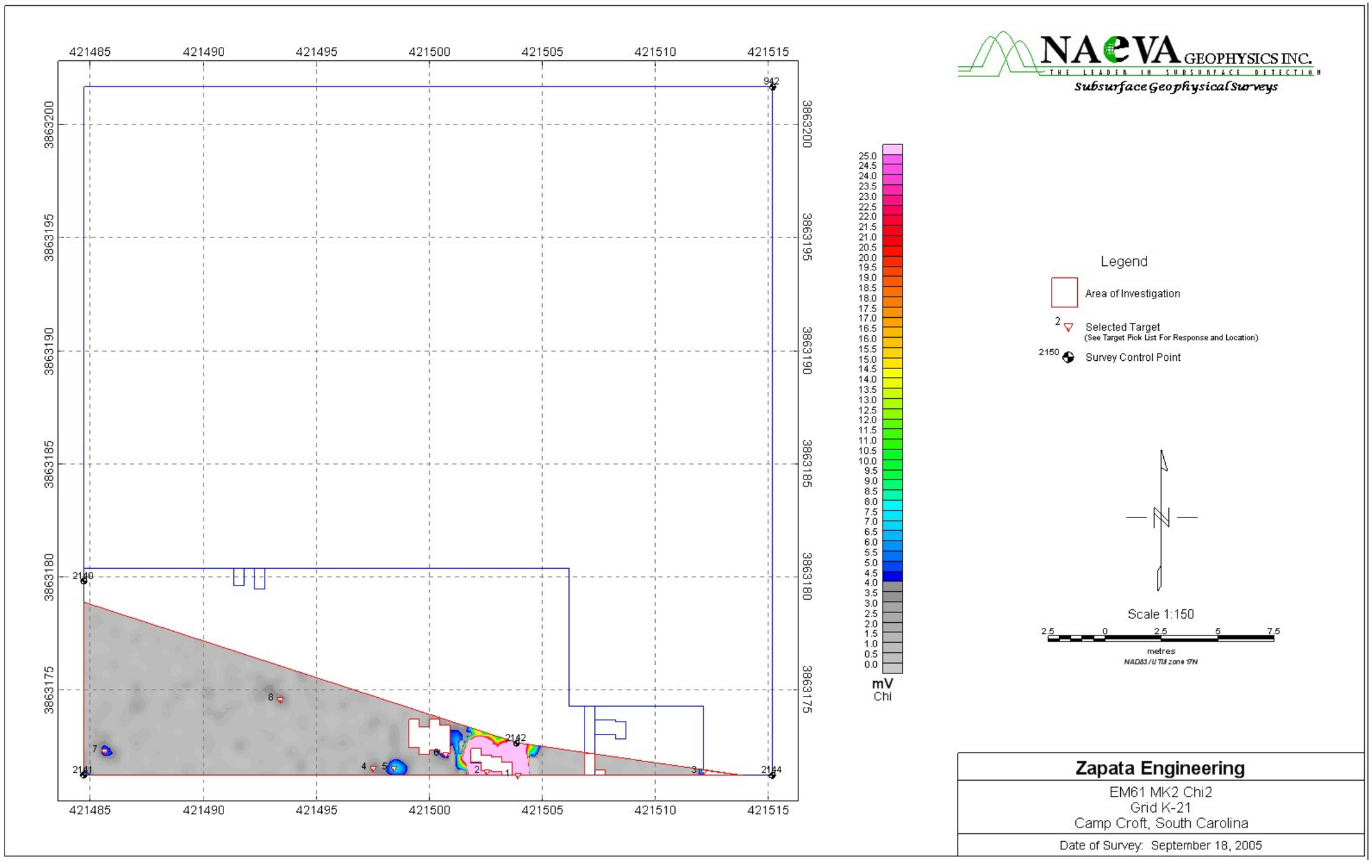
Project Name: Former Camp Croft, Phase II
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: K21
Field Book ID:

Geophysical Contrac ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center I Brendan Slater
COE Project Engine
COE Geophysicist: Andrew Schwartz

Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

	Original Survey								Reacquisition Survey						Dig Results													Post Dig UXO QC Results			Post Dig Geophysical QC		
											Offset						Offset		Orientation of		Depth (in)												
Unique Target ID	Easting Coord (m)	Northing Coord (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Chi² Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Chi² Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs-oz)	Dimensions: Length, Width, Height (in)	Comments	X Distance (in)	Y Distance (in)	Nose (Azimuth deg) **	Inclination of Nose (deg) **	Top of Item	Center of Mass	Digital Photo Filename **	Date	Team Leader Initials	Excavation Hole Cleared?	UXO QC Spec. Initials	Date	Agreement between Dig Results & Geophysical Data? (G=good, A=avg, Pepoor,	Geophysicist QC Initials	Date
K21_10	421495.2184	3863174.28	34.5	10	16.0		K21_10	18-Sep-2005	19	1.5	6	6	1/6/06	CD	25	6 x .25 x .25	6 in nail	0	12	SE	0	0	0	K21_10 - #002	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
K21_13	421492.9334	3863175.195	27	13	15.9		K21_13	18-Sep-2005	19	2	42	24	1/6/06	CD	50	9 x .25 x .25	wire on surface	12	-6	SW	0	0	0	K21_13 - #001	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
K21_8	421503.4447	3863172.295	61.5	3.5	1331.4		K21_08	18-Sep-2005	465	49	18	0	1/6/06	CD	4	30 x .75 x .75	safety boundry stake around hole	5	-12	E	15	0	0	K21_8 - 029 / K21_8a - #005	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
K21_9	421495.2182	3863173.671	34.5	0	14.0		K21_09	18-Sep-2005	27	1	6	6	1/6/06	CD	50	6 x .25 x .25	6 in nail	0	-13	SE	0	0	0	K21_9 - #002	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
K21_C1	421503.9014	3863171.229	63	0	8705.3	599.41632	K21_01	18-Sep-2005	11500	7100	30	6	1/6/06	CD	4	30 x .75 x .75	safety boundry stake	0	0	NA	90	-18	-4	K21_C1 - #006	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
K21_C2	421502.5303	3863171.382	58.5	0.5	1159.6	931.81366	K21_02	18-Sep-2005	11500	7500	-6	12	1/6/06	CD	4	30 x .75 x .75	safety boundry stake	0	0	NA	90	-17	-3	K21_C2 - #007	1/10/06	BAM	YES	RVW	01/16/06	YES	RVW	01/16/06
K21_C3	421512.1284	3863171.376	90	0.5	46.3	10.513402	K21_03	18-Sep-2005	22	6	-12	0	1/6/06	CD	25	12 x .25 x .25	24 in barbed wire	0	0	SE	0	3	3	K21_C3 - #009	1/11/06	BAM	YES	RVW	01/16/06	YES	RVW	01/16/06
K21_C5	421498.4168	3863171.537	45	1	53.9	7.9170389	K21_05	18-Sep-2005	57	13	0	0	1/6/06	MD	1	3.5 x 2.25 x 2.25	grenade, hand, prac, MK2	0	-2	NW	0	0	1.5	K21_C5 - #003	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
K21_C6	421500.7023	3863172.145	52.5	3	54.1	6.0818095	K21_06	18-Sep-2005	83	16	0	36	1/6/06	MD	1	3.5 x 2.25 x 2.25	grenade, hand, prac, MK2	-13	-5	W	0	0	1.5	K21_C6 - #004	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	
K21_C7	421485.6196	3863172.307	3	3.5	29.5	5.488502	K21_07	18-Sep-2005	60	9	6	0	1/6/06	CD	25	3 x .25 x .25	4 ea 3 in nails	-3	-1	NA	90	0	1.5	K21_C7 - #008	1/10/06	BAM	NA	DRA	02/21/06	YES	RVW	

* Fill in Units (mV, nT/m, ppt, etc)
** Opt Field - refer to SOW for applicability.
*** UXO, DMM, MC-E (Munit Const-Exp), MD (Munit Debris), CD (Cult Debris) and MC-NE (Munit Const-Non Exp), SA (small arms), NC (no contact) OT (other)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THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
Selected Target
(See Target Pick List For Response and Location)
Survey Control Point
Scale 1:150
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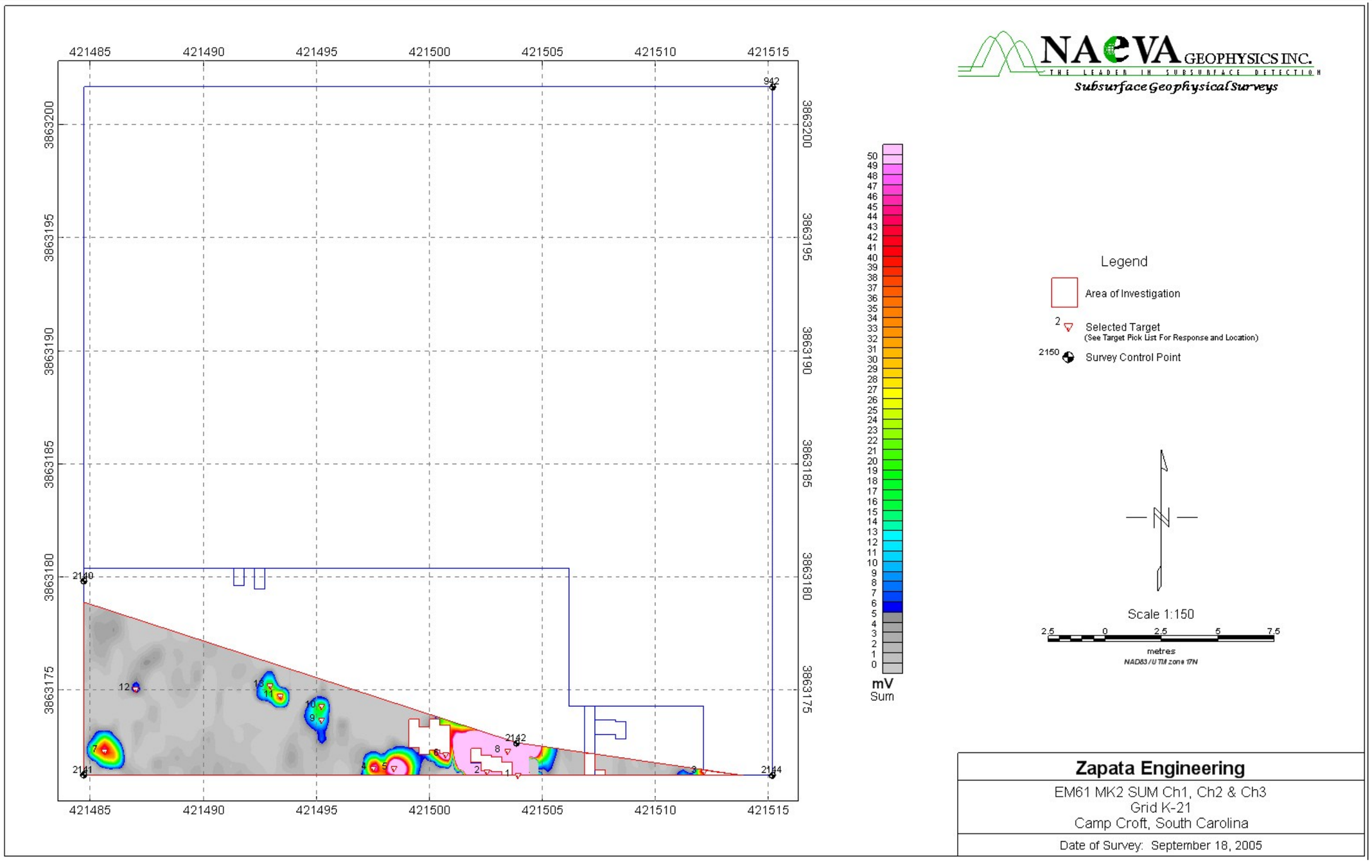
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 Chi2
Grid K-21
Camp Croft, South Carolina
Date of Survey: September 18, 2005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NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
Legend
Area of Investigation
2 Selected Target
(See Target Pick List For Response and Location)
2150 Survey Control Point
Scale 1:150
2.5 0 2.5 5 7.5
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid K-21
Camp Croft, South Carolina
Date of Survey: September 18, 2005

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase II
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: P20
Field Book ID:

Geophysical Contrac: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center I Brendan Slater
COE Project Engine
COE Geophysicist: Andrew Schwartz

Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

	Original Survey								Reacquisition Survey						Dig Results													Post-Dig UXO QC Results			Post-Dig Geophysical QC		
											Offset					Offset				Depth (in)													
Unique Target ID	Easting Coord. (m)	Northing Coord. (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Ch2 Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs-oz)	Dimensions: Length, Width, Height (in)	Comments	X Distance (in)	Y Distance (in)	Orientation of Nose (Azimuth deg) **	Inclination of Nose (deg) **	Top of Item	Center of Mass	Digital Photo Filename **	Date	Team Leader Initials	Excavation Hole Cleared?	UXO QC Spec. Initials	Date	Agreement between Dig Results & Geophysical Data? (G=good, A=avg, P=poor,	Geophysicist QC Initials	Date
P20_13	421479.9224	3863320.732	84	90.75	25.1		P20_13	19-Sep-2005	16	0.9	-3	2	1/5/06	CD	.25	3 x .25 x .25	nail	0	0	NA	0	0	1.5	P20_13 - #045	1/17/06	BAM	NA	DRA	02/21/06	YES	RVW	
P20_15	421480.8356	3863321.263	87	92.5	20.5		P20_15	19-Sep-2005	27	3.9	0	0	1/5/06	CD	.25	3 x .25 x .25	nail	0	0	SW	15	1	2.5	P20_15 - #046	1/17/06	BAM	NA	DRA	02/21/06	YES	RVW	
P20_18	421472.1727	3863323.406	58.5	99.5	23.2		P20_18	19-Sep-2005	29	1.5	0	0	1/5/06	CD	.25	3 x .25 x .25	4 ea nails	0	0	NA	90	0	1.5		1/17/06	BAM	NA	DRA	02/21/06	YES	RVW	
P20_5	421482.4223	3863315.482	92.25	73.5	20.2		P20_5	19-Sep-2005	22	4.9	12	18	1/5/06	CD	.5	6 x .25 x .25	wire and 6 in spike	-6	0	E	0	2	3	P20_5 - #050	1/24/06	BAM	YES	TF	01/24/06	YES	RVW	01/24/06
P20_C1	421482.6619	3863322.324	93	96	38.3	6.658278	P20_17	19-Sep-2005	46	5.8	0	0	1/5/06	CD	.25	3 x .25 x .25	4 ea nails	0	0	NA	90	0	1.5	P20_C1 - #047	1/17/06	BAM	YES	RVW	01/18/06	YES	RVW	01/18/06
P20_D1	421482.65	3863319.41	93	86.35	2.5			19-Sep-2005					1/5/06	HOTROCK	2	4 x 3 x 1	2 hotrocks	0	0			3	3.25		1/17/06	BAM	NA	DRA	02/21/06	YES	RVW	
P20_D2	421483.11	3863318.31	94.5	82.88	2.1			19-Sep-2005					1/5/06	HOTROCK	.4	8 x 6 x 3		0	0					P20_D2 - #049	1/17/06	BAM	NA	DRA	02/21/06	YES	RVW	

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